Agenda
Board of Supervisors
Isle of Wight County
May 19, 2022

1. Call to Order (5:00 P.M.)
2. Approval of Agenda
3. Closed Meeting
4. Reconvene Open Meeting at 6:00 P.M.
5. Invocation - Vice Chairman McCarty
6. Citizens' Comments
7. Consent Agenda
   A. Regional Groundwater Memorandum of Agreement

      Regional Memorandum of Agreement (MOA) for Groundwater Mitigation
   B. Smithfield Volunteer Fire Department Loan Agreement

      Smithfield Volunteer Fire Department Loan Agreement for IRS Compliance
   C. Budget Amendment - Insurance Proceeds

      Resolution to Budget and Appropriate Insurance Proceeds from VACoRP Risk Management and Progressive Insurance for Repairs of County Property ($15,278)
   D. Budget Amendment - Recovery Marketing Leverage Program

      Resolution to Amend the Budget and Appropriate Funding from the Virginia Tourism Corporation ($10,000)
   E. Budget Amendment - Regional DMO Marketing Program

      Resolution to Amend the Budget and Appropriate Funding

from the Virginia Tourism Corporation ($20,000)

F. Budget Amendment - Stormwater Grant

Resolution to Amend the Budget and Appropriate Community Flood Preparedness Grant Funding ($90,701)

G. Minutes

. March 17, 2022 Regular Meeting Minutes
. April 21, 2022 Regular Meeting Minutes
. May 5, 2022 Budget Work Session Minutes

8. Regional and Inter-Governmental Reports

A. Regional Reports

9. Appointments

A. Appointments List

10. Special Presentations / Appearances

A. FY2022-23 Public Schools Budget

Discussion of Impact of FY2022-23 Public Schools Budget

B. Recognition of Retiring Sheriff's Office Investigator

Recognition of the Retirement of Investigator Bert Nurney

11. County Attorney's Report

12. Public Hearings

A. Emmanuel Baptist Church Cemetery Expansion Conditional Use Permit Request

Application of Morris G. Hall, Deacon, and the Trustees of Emmanuel Baptist Church, Property Owner, for a Conditional Use Permit for the Expansion of an Existing Cemetery on Property Not Currently Used as a Church Cemetery Located at 11150 Emmanuel Church Road

B. Griffin Conditional Rezoning

Application of Earl S. and Diane P. Griffin and Christine Piersall TRS SE & DP Irrevocable Trust, Owners, for a Change in Zoning Classification from Rural Agricultural Conservation to Conditional Rural Residential for 13.59 Acres on Vellines Lane (Rte. 712) for Single Family Residential Use

C. James River Crossings Conditional Zoning Request

Application of Saunders and Ojeda, P.C., Applicant, on Behalf of James River Crossings, Inc., Property Owner, for a Change in Zoning from Rural Agricultural Conservation to Conditional Planned Development – Mixed Use for 12.24 Acres Located at 23067 Channell Way for 52 Single-Family Detached Residences

13. County Administrator's Report

A. Economic Development Annual Report

Staff Report - 2021 Economic Development Annual Report

B. Share the Isle Draft Plan

Draft of "Share the Isle: Isle of Wight County's Plan for an Age and Mixed Ability Inclusive Community"

C. Matters for the Board's Information

14. Unfinished / Old Business

15. New Business

A. Schools Carryover Request

Resolution to Amend the Budget and Appropriate Carryover Funding ($197,444)

B. Before and After School Summer Programs

Resolution to Amend the Budget and Appropriate Federal Funding for Before and After School Programs ($573,168)

C. Emergency Communications Center MOU

Revised Memorandum of Understanding for the Emergency

Communications Center

16. Adjournment

ISSUE:

Regional Memorandum of Agreement (MOA) for Groundwater Mitigation

BACKGROUND:

A regional Groundwater Mitigation Program has been established to address the impact of local government-owned groundwater wells on existing nearby groundwater wells. If a locality owned well draws the aquifer down to below the intake of an existing well, the locality is responsible for drilling a deeper private replacement well to mitigate the locality's impact on the aquifer. The Hampton Roads Planning District Commission (HRPDC) administers this program. Data collection and coordination with localities to correct any impacts on existing private groundwater wells.

BUDGETARY IMPACT:

Minimal costs associated with funding HRPDC to administer and coordinate the Groundwater Mitigation Program are included in annual HRPDC dues.

RECOMMENDATION:

Authorizations execution of the regional groundwater MOA.

ATTACHMENTS:

Description	Type	Upload Date
Memorandum of Agreement	Backup Material	5/11/2022

REGIONAL GROUNDWATER MITIGATION PROGRAM ADMINISTRATION

MEMORANDUM OF AGREEMENT

WHEREAS, Section 15.2-1300 of the Code of Virginia enables local governments to enter into cooperative agreements to exercise those powers that each may be enabled to exercise, including conducting technical analyses to support such activities; and

WHEREAS, Section 15.2-4200 of the Code of Virginia enables local governments to establish Planning District Commissions; and

WHEREAS, the cities and counties that are signatories to this Agreement have acted, in accordance with Section 15.2-4200 of the Code of Virginia to establish the Hampton Roads Planning District Commission; and

WHEREAS, several Localities in the Hampton Roads region operate groundwater based water supply systems and

WHEREAS, the Hampton Roads Planning District Commission has been requested and has undertaken various studies to support local government water supply development, including groundwater resource management efforts; and

WHEREAS, on behalf of the signatory parties, the Hampton Roads Planning District Commission, has contracted with the U.S. Geological Survey to complete various technical analyses of the region's groundwater resources, including the following efforts:

- Development of a methodology for allocating responsibilities for groundwater impacts, as documented in Michael J. Focazio and Gary K. Speiran, Estimating Net Drawdown for Episodic Withdrawals at Six Well Fields in the Virginia Coastal Plain Aquifers, U.S. Geological Survey, Water Resources Investigations Report No. 93-4159, 1992;
- Refined description of the aquifer system of the Virginia Coastal Plain and a hydrogeologic framework for ground-water investigation, as documented in E. Randolph McFarland and T. Scott Bruce, The Virginia Coastal Plain Hydrogeologic Framework, U.S. Geological Survey, Professional Paper 1731, 2006; and
- Development of the Virginia Coastal Plain Groundwater Model to provide a better tool to understand the groundwater resource through simulation of groundwater withdrawals, drought, and saltwater intrusion, as documented in Charles E. Heywood and Jason P. Pope, Simulation of Groundwater Flow in the Coastal Plain Aquifer System of Virginia, U.S. Geological Survey, Scientific Investigations Report 2009–5039, 2009.

WHEREAS, the signatory parties have requested the Hampton Roads Planning District Commission to administer a Regional Groundwater Mitigation Program, on their behalf; and

WHEREAS, on August 11, 1994, the signatory parties entered into the Groundwater Mitigation Program Administration Agreement; and

WHEREAS, on May 31, 2000, July 5, 2006, March 18, 2010, and July 21, 2016, the signatory parties extended the Groundwater Mitigation Program Administration Agreement; and

WHEREAS, in accordance with the provisions of the August 11, 1994 Agreement, as extended on May 31, 2000, July 5, 2006, March 18, 2010, and July 21, 2016, the signatory parties have evaluated the Groundwater Mitigation Program and determined that the Program should be continued;

NOW THEREFORE, the signatory parties enter into the following Agreement.

This Memorandum of Agreement, entered into this XXst day of XXXX, 2020 among and between fifteen local governments in Hampton Roads, the James City Service Authority, and the Hampton Roads Planning District Commission, establishes and extends the Regional Groundwater Mitigation Program. It outlines the roles and responsibilities of each entity in administering and funding the Regional Groundwater Mitigation Program.

BASIC PREMISES

1. Some local governments in Hampton Roads operate public water supply wells inside and/or outside of their incorporated boundaries.

2. All local governments in Hampton Roads are interested in ensuring that groundwater drawdown associated with the operation of public water supply wells does not adversely impact the private wells of their citizens.

3. In the case where operation of a public water supply well causes or contributes to groundwater drawdown that renders a well unusable, then mitigation of damages attributable to that drawdown may be sought by the well owner in accordance with local mitigation plans and agreements.

4. This Agreement establishes the administrative framework, which will be used by the signatory parties to obtain technical analysis of requests for mitigation by private well owners or other local governments in Hampton Roads. Financial issues related to these requests are governed by existing interjurisdictional agreements and state-approved Groundwater Mitigation Plans that are separate and distinct from this Agreement.

5. This Agreement will have a term of five years, extending from January 1, 2021 through December 31, 2025. To conform to local government charter and Virginia Code requirements, the funding provisions of this Agreement will be subject to annual renewal.

6. Program costs will be allocated on a pro-rata basis among the signatory parties. The annual base buy-in per city or county will be determined each year as part of the HRPDC Directors of Utilities Committee budget planning process. The balance of annual costs will be allocated according to the local share of regional population. The most current estimate of population, developed by the Weldon Cooper Center for Public Service, will be used as the population base for allocating program costs. Local contributions may be escalated annually to reflect program experience and projected HRPDC expenditures. Future private sector and non-Hampton Roads local government participation may provide financial support to the program according to a yet-to-be-determined formula, which will reflect annual program costs. The funding formula will be evaluated on a regular basis by the HRPDC Directors of Utilities Committee and may be adjusted to ensure its continued equitability.

HRPDC RESPONSIBILITIES

Under the terms of this Agreement, the Hampton Roads Planning District Commission is responsible for the following:

1. Conduct technical analyses of the impacts of groundwater withdrawals.

2. Respond equitably and in a timely fashion to requests from all signatory parties for analyses of the impacts of groundwater withdrawals. The time frame for responses will be based on experience and the complexity of individual cases.

3. Develop a technical guidance document to determine the allocation of impact mitigation responsibilities among the signatory parties. From 1994 to 2015, this determination was based on application of the superpositioning methodology developed by the U.S. Geological Survey for the Hampton Roads Planning District Commission. The methodology is described in Michael J. Focazio and Gary K. Speiran, Estimating Net Drawdown for Episodic Withdrawals at Six Well fields in the Virginia Coastal Plain Aquifers, U.S. Geological Survey, Water Resources Investigation Report No. 93-4159, 1992. Beginning in 2016, the HRPDC staff began to apply an analysis approach using the U.S. Geological Survey Virginia Coastal Plain Groundwater Model. The HRPDC technical guidance document will be updated to address the use of the model and future model updates.

4. Provide report(s) documenting the results of the HRPDC technical analysis(es) to all signatory parties.

5. In any case where an aggrieved party appeals a local government mitigation determination, provide the HRPDC analysis to the mitigation panel, established under the local government's mitigation plan. However, the HRPDC will not serve as a member of the mitigation panel.

6. Provide other technical support, as requested, to the signatory parties for other groundwater analyses, including support for development of local groundwater withdrawal permit applications and review of other proposed groundwater withdrawals which may impact on groundwater resources in the Hampton Roads region.

7. On request, provide technical staff support, at cost, to signatory parties for data collection (field work), required by that signatory party's permit or mitigation plan, approved by the Virginia Department of Environmental Quality (State Water Control Board).

8. Take steps, in conjunction with the signatory parties, to involve private sector groundwater users in the Regional Groundwater Mitigation Program. Administrative procedures and financial arrangements for private sector and non-Hampton Roads local government participation will be developed in the future, but will reflect the actual cost of the work.

LOCAL GOVERNMENT RESPONSIBILITIES

Under the terms of this Agreement, the signatory parties are responsible for the following:

1. Serve as the initial point of contact for aggrieved parties. Request mitigation analysis(es) from HRPDC in a timely fashion following receipt of a claim.

2. Provide any locally-generated/collected data on groundwater conditions and well construction that may be useful to HRPDC technical analysis(es).

3. Provide, in a timely fashion, all technical supporting data required by Mitigation Plans, approved by the Virginia Department of Environmental Quality (State Water Control Board) as elements of Groundwater Withdrawal Permits, to the HRPDC for use in analyses of mitigation claims.

4. Provide timely technical review of the HRPDC analysis(es) and conclusions.

5. Support HRPDC efforts to expand the mitigation program to cover all groundwater uses.

6. Establish the appropriate mitigation panels, in accordance with local mitigation plans, to hear appeals of initial mitigation responsibility determinations.

PROCEDURE FOR REQUESTING MITIGATION ANALYSES

Under this Memorandum of Agreement, the following process will be followed to request HRPDC technical support to address mitigation claims.

1. Aggrieved party contacts the locality of residence.

2. The local government contacts the HRPDC and requests that an impact analysis be conducted. In addition, any signatory parties may request that an impact analysis be undertaken.

3. The HRPDC conducts the analysis, as requested, and advises all signatory parties of the results of the technical analysis(es).

4. This procedure may be modified from time to time with the concurrence of all signatory parties, as represented by the HRPDC Directors of Utilities Committee, in order to improve the efficiency of the mitigation process.

SIGNATORIES

This Memorandum of Agreement will be executed by the Chief Administrative Officer of each participating local government or service authority and by the Executive Director of the HRPDC. Individual signatory pages are included for each participating locality.

CITY OF CHESAPEAKE
CITY OF FRANKLIN
CITY OF HAMPTON
CITY OF NEWPORT NEWS
CITY OF NORFOLK
CITY OF POQUOSON
CITY OF PORTSMOUTH
CITY OF SUFFOLK
CITY OF VIRGINIA BEACH
CITY OF WILLIAMSBURG
COUNTY OF GLOUCESTER
COUNTY OF ISLE OF WIGHT
COUNTY OF SOUTHAMPTON
COUNTY OF YORK
JAMES CITY SERVICE AUTHORITY
TOWN OF SMITHFIELD
HAMPTON ROADS PLANING DISTRICT COMMISSION

IN WITNESS THEREOF, the Chief Administrative Officer of the local governments and service authority and the Executive Director of the Hampton Roads Planning District Commission hereby execute this Agreement**.**

COUNTY OF ISLE OF WIGHT

By: _____

Date: _____

Date: _____

Attest: _____

ISSUE:

Smithfield Volunteer Fire Department Loan Agreement for IRS Compliance

BACKGROUND:

The County has previously budgeted funding for the acquisition of fire apparatus (ladder truck). Smithfield Volunteer Fire Department is precuring a loan to cover the additional costs associated with the actual truck the Department is acquiring.

In this regard, the Fire Department is requesting that the County approve the entering into of an agreement by the Fire Department in the amount of $1,646,855 to finance one (1) new Seagrave Aerialscope and Rescue Tools.

BUDGETARY IMPACT:

None. Approval of the agreement does not constitute any financial involvement or obligation of the County.

RECOMMENDATION:

Authorize execution of the agreement with Smithfield Volunteer Fire Department.

ATTACHMENTS:

Description	Type	Upload Date
Agreement	Agreement	5/11/2022

Local Roots, Global Reach

ISLE OF WIGHT
COUNTY, VIRGINIA

Section 147(f) Approval and Written Agreement

The undersigned Official of Isle of Wight County (hereinafter referred to as "Municipality") pursuant to section 147(f) of the Internal Revenue Code of 1986, as amended (the "code"), hereby approves the entering into by Smithfield Volunteer Fire Department, Incorporated of an Agreement in an aggregate principal amount not to exceed $1,646,855.00 to finance equipment consisting of One (1) New Seagrave Aerialscope and Rescue Tools which will be located at the fire house of the Smithfield Volunteer Fire Department, Incorporated. **This approval does not in any way constitute any financial involvement or obligation of the Municipality.**

Furthermore, this document acknowledges that for consideration, the receipt and sufficiency of which are hereby acknowledged, the Smithfield Volunteer Fire Department, Incorporated has provided firefighting and other services for the Municipality for many years and Smithfield Volunteer Fire Department, Incorporated hereby agrees to meet the requirement to continue to provide firefighting and other services for the Municipality.

Dated as of _____.

Smithfield Volunteer Fire Department, Incorporated

_____
Charlie Kempton, President

Isle of Wight County, Virginia

_____
Signature of Authorized Representative

_____
Name and Title

P. O. Box 80
17090 Monument Circle
Isle of Wight, VA 23397
(757) 365-6204
www.co.isle-of-wight.va.us

ISSUE:

Resolution to Budget and Appropriate Insurance Proceeds from VACoRP Risk Management and Progressive Insurance for Repairs of County Property ($15,278)

BACKGROUND:

The County has received insurance proceeds for repairs of County property in the amounts of $15,278 from VACoRP Risk Management. The insurance proceeds need to be budgeted and appropriated to the General Fund budgets for FY 2021-22.

The department has requested that these insurance proceeds received be budgeted to the line item that will allow the County property repairs. Any additional budget amount required would be done through the Department's existing available budget.

BUDGETARY IMPACT:

Adoption of the resolution will increase the FY 2021-22 General Fund ($15,278) budget.

RECOMMENDATION:

Adopt the resolution to budget and appropriate insurance proceeds and authorize department budget line item to be increase by the insurance proceeds amount to repair County property.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution	5/12/2022

RESOLUTION TO AMEND THE FY 2021-22 OPERATING BUDGET AND APPROPRIATE FUNDING FOR REPLACEMENT AND REPAIR OF COUNTY PROPERTY FROM INSURANCE PROCEEDS

WHEREAS, the County has received insurance proceeds from VACorp Risk Management for damaged County vehicles; and,

WHEREAS, the Board of Supervisors desires to amend the FY 2021-2022 General Fund budget in the amount of $15,278 for replacement and repair of damaged County vehicles; and,

WHEREAS, the Board of Supervisors needs to appropriate $15,278 from insurance proceeds to the General Fund for replacement and repair of damaged County property.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia, that the FY 2021-22 budget is hereby amended and funds appropriated in the amount of $15,278 for replacement and repair of damaged County property.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to make the appropriate accounting adjustments and to do all things necessary to give this resolution effect.

Adopted this 19th day of May, 2022.

_____
Rudolph Jefferson, Chairman

_____
Carey Mills Storm, Clerk

Approved as to Form:

_____
Robert W. Jones Jr., County Attorney

ISSUE:

Resolution to Amend the Budget and Appropriate Funding from the Virginia Tourism Corporation ($10,000)

BACKGROUND:

The County has been approved to receive funding in the amount of $10,000 from the Virginia Tourism Corporation's Recovery Marketing Leverage Program for its **Check In and Check Us Out-Destination Smithfield Wedding** program.

The tourism industry is an overly saturated and extremely competitive market. In order to succeed and thrive, Virginia communities must continue to develop new tourism product and marketing and focus on winning strategies to evolve and grow. When we increase tourism development, we increase the visitor experience, economic impact to communities and our marketing competitiveness.

BUDGETARY IMPACT:

This will increase the budget by $10,000.

RECOMMENDATION:

Adopt a resolution to amend the budget and appropriate grant funds.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution	4/20/2022

RESOLUTION TO AMEND THE FY2021-2022 OPERATING BUDGET AND APPROPRIATE FUNDING FROM VIRGINIA TOURISM CORPORATION

WHEREAS, the Board of Supervisors needs to accept of funding awarded in the amount of ten thousand dollars ($10,000) from the Virginia Tourism Corporation (VTC) Recovery Marketing Leverage Program Grant for tourism marketing; and,

WHEREAS, the Board of Supervisors needs to amend the FY 2021-2022 Budget and appropriate ten thousand dollars ($10,000) from VTC to the Recovery Marketing Leverage Program - Destination Smithfield Wedding Fund Revenue line.

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia that the FY 2021-2022 Grant Budget is hereby amended, and funds appropriated in the amount of ten thousand dollars ($10,000) from Virginia Tourism Corporation.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to make the appropriate accounting adjustments and to do all things necessary to give this resolution effect.

Adopted this 19th day of May, 2022.

_____
Rudolph Jefferson, Chairman

_____
Carey Mills Storm, Clerk

Approved as to form:

_____
Robert W. Jones, Jr., County Attorney

ISSUE:

Resolution to Amend the Budget and Appropriate Funding from the Virginia Tourism Corporation ($20,000)

BACKGROUND:

The County has been approved to receive grant funding in the amount of $20,000 from the Virginia Tourism Corporation's Regional Marketing Program: DMO Marketing Grant for its **Town & Country Campaign**.

The tourism industry is an overly saturated and extremely competitive market. In order to succeed and thrive, Virginia communities must continue to develop new tourism product and marketing and focus on winning strategies to evolve and grow. When we increase tourism development, we increase the visitor experience, economic impact to communities and our marketing competitiveness.

BUDGETARY IMPACT:

This will increase the budget by $20,000.

RECOMMENDATION:

Adopt a resolution to amend the budget and appropriate grant funds.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution	4/20/2022

RESOLUTION TO AMEND THE FY2021-2022 OPERATING BUDGET AND APPROPRIATE FUNDING FROM VIRGINIA TOURISM CORPORATION

WHEREAS, the Board of Supervisors needs to accept funding awarded in the amount of $20,000 from the Virginia Tourism Corporation (VTC) DMO Marketing Grant for tourism marketing; and,

WHEREAS, the Board of Supervisors needs to amend the FY 2021-2022 Budget and appropriate funding in the amount of twenty thousand dollars ($20,000) from the VTC to the DMO Marketing Grant - Town & Country Fund Revenue line.

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia that the FY 2021-2022 Grant Budget is hereby amended, and funds appropriated in the amount of twenty thousand dollars ($20,000) from Virginia Tourism Corporation.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to make the appropriate accounting adjustments and to do all things necessary to give this resolution effect.

Adopted this 19th day of May, 2022.

_____
Rudolph Jefferson, Chairman

_____
Carey Mills Storm, Clerk

Approved as to form:

_____
Robert W. Jones, Jr., County Attorney

ISSUE:

Resolution to Amend the Budget and Appropriate Community Flood Preparedness Grant Funding ($90,701)

BACKGROUND:

The Virginia Department of Conservation and Recreation (DCR) has made funds available for the development of a Stormwater Resiliency Plan and staff training for the certification of a County employee as a Certified Flood Plain Manager.

DCR has committed to award the County $68,026 to complete the Resiliency Plan and associated staff training. Including a required match of $22,675, the total projected budget for the program is $90,701.

BUDGETARY IMPACT:

The grant requires a County match of $22,675 and will increase the budget by $90,701.

RECOMMENDATION:

Adopt a resolution to amend the budget and appropriate grant funding.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution	5/12/2022

RESOLUTION TO AMEND THE FY 2021-2022 OPERATING BUDGET AND APPROPRIATE FUNDS FOR COMMUNITY FLOOD PREPAREDNESS

WHEREAS, the Virginia Department of Conservation and Recreation (DCR) has made funds available for developing a Stormwater Resiliency Plan and staff training for Certified Flood Plain Manager certification; and,

WHEREAS, DCR has awarded the Isle of Wight County $68,026, which requires a County match of $22,675 to be provided from Stormwater Fund Balance, to complete the Resiliency Plan and associated staff training under a total projected budget of $90,701; and,

WHEREAS, the Board of Supervisors desires to amend the FY 2021-2022 Grant Fund and Stormwater Budgets and needs to appropriate funds for the Resiliency Plan and associated staff training.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia that the FY 2021-2022 Operating Budget is hereby amended and funds appropriated in the amount of $90,701 for the Resiliency Plan and associated staff training.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to make the appropriate accounting adjustments and to do all things necessary to give this resolution effect.

Adopted this 19th day of May 2022.

_____
Rudolph Jefferson, Chairman

_____
Carey Mills Storm, Clerk

Approved as to Form:

_____
Robert W. Jones Jr., County Attorney

ISSUE:

. March 17, 2022 Regular Meeting Minutes
. April 21, 2022 Regular Meeting Minutes
. May 5, 2022 Budget Work Session Minutes

BACKGROUND:

The above-noted minutes are offered for review and adoption by the Board.

BUDGETARY IMPACT:

None

RECOMMENDATION:

Adopt the following sets of minutes:

. March 17, 2022 Regular Meeting Minutes
. April 21, 2022 Regular Meeting Minutes
. May 5, 2022 Budget Work Session Minutes

ATTACHMENTS:

Description	Type	Upload Date
March 17, 2022 Regular Meeting Minutes	Cover Memo	5/5/2022
April 21, 2022 Regular Meeting Minutes	Cover Memo	5/11/2022
May 5, 2022 Budget Work Session	Cover Memo	5/13/2022

REGULAR MEETING OF THE ISLE OF WIGHT COUNTY BOARD OF SUPERVISORS HELD IN THE ROBERT C. CLAUD, SR. BOARD ROOM OF THE ISLE OF WIGHT COUNTY COURTHOUSE LOCATED AT 17090 MONUMENT CIRCLE, ISLE OF WIGHT, VIRGINIA ON THURSDAY, THE SEVENTEENTH DAY OF MARCH IN THE YEAR TWO THOUSAND AND TWENTY-TWO

PRESENT:

Rudolph Jefferson, District 3, Chairman
William M. McCarty, District 2, Vice-Chairman (Arrived at 5:55 p.m.)
Richard L. Grice, District 1
Don G. Rosie, II, District 5
Joel C. Acree, District 4

ALSO IN ATTENDANCE:

Robert W. Jones, Jr., County Attorney
Randy R. Keaton, County Administrator
Donald T. Robertson, Assistant County Administrator
Carey Mills Storm, Clerk

CALL TO ORDER

Chairman Jefferson called the regular meeting to order at 5:00 p.m.

APPROVAL OF AGENDA

Supervisor Grice moved that the agenda be approved. The motion was adopted (4-0) with Supervisors Jefferson, Acree, Grice and Rosie voting in favor of the motion; no Supervisors voting against the motion; and Supervisor McCarty absent for the vote.

CLOSED MEETING

The following matters were identified for discussion in closed meeting by County Attorney Jones: Consultation with legal counsel regarding actual and potential litigation regarding the park-to-park trail and zoning matters where such

consultation would adversely affect the negotiating or litigation posture of this public body pursuant to subsection 7; a discussion or consideration of the investment of public funds concerning the Farmers Market where bargaining is involved, where, if made public initially, the financial interest of the County would be adversely affected, pursuant to subsection 6; a discussion regarding the appointment of specific appointees to County boards, committees or authorities as set forth in the agenda, pursuant to subsection 1; and a discussion regarding the performance of the County Attorney, pursuant to subsection 1.

Supervisor Rosie moved that the Board enter the closed meeting for the reasons stated by County Attorney Jones. The motion was adopted (4-0) with Supervisors Acree, Jefferson, Grice and Rosie voting in favor of the motion; no Supervisor voting against the motion; and Supervisor McCarty absent for the vote.

Supervisor McCarty arrived at the meeting at 5:55 p.m.

Upon motion of Supervisor Rosie and all voting in favor (5-0), the Board reconvened into open meeting.

County Attorney Jones reminded the Board that in accordance with Section 2-10(G) of the Board's Rules & Procedure, all those who participated in the closed meeting are reminded that all matters discussed in closed meeting are to remain confidential, as provided under the Virginia Freedom of Information Act, and that such matters as were discussed in closed meeting should not be acted upon or discussed in public by any participant unless and until a public, formal action of the Board of Supervisors is taken on that particular subject matter.

Supervisor Acree moved that the following Resolution be adopted:

CERTIFICATION OF CLOSED MEETING

WHEREAS, the Board of Supervisors has convened a closed meeting on this date pursuant to an affirmative recorded vote and in accordance with the provisions of the Virginia Freedom of Information Act; and,

WHEREAS, Section 2.2-3712(D) of the Code of Virginia requires a certification by this Board of Supervisors that such closed meeting was conducted in conformity with

Virginia law;

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors hereby certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements by Virginia law were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion convening the closed meeting were heard, discussed or considered by the Board of Supervisors.

VOTE

AYES: Acree, Grice, Jefferson, Rosie

NAYS: 0

ABSENT DURING VOTE: 0

ABSENT DURING MEETING: McCarty

INVOCATION

Herb DeGroft delivered the invocation and led the Pledge of Allegiance to the Flag.

//

Supervisor Grice moved that a proposal received related to the Farmer's Market be added for discussion under Old Business and that the Board return to closed meeting at the end of the meeting to complete discussion of an item. The motion was adopted (5-0) with Supervisors Jefferson, McCarty, Acree, Grice and Rosie voting in favor of the motion and no Supervisors voting against the motion.

CITIZENS' COMMENTS

Herb DeGroft of Mill Swamp Road distributed a Health & Wellness Services Directory by the Senior Services of Southeastern Virginia. He requested the Board to exercise common sense when funding the schools.

Curt Lytle of the Carrsville District spoke on SB 8 which allows statewide hunting on Sundays.

CONSENT AGENDA

A. 2021 Planning Commission Annual Report

B. Resolution to Amend the FY 2021-22 Budget and Appropriate Funding for the Upcoming General Reassessment of Real Estate ($209,000)

C. Minutes

February 17, 2022 Regular Minutes

Supervisor Acree moved that the Consent Agenda be adopted. The motion was adopted unanimously (5-0) with Supervisors Acree, McCarty, Grice, Rosie and Jefferson voting in favor of the motion and no Supervisors voting against the motion.

Supervisor Grice drew attention to the fact that the Planning Commission's Annual Report reveals that the Board of Supervisors approves the Planning Commission's recommended action on issues 94% of the time. On the issue of growth, it further reports that the County has experienced just under 1% annual growth over the last decade.

REGIONAL AND INTER-GOVERNMENTAL REPORTS

Supervisor McCarty reported that the Hampton Roads Transportation Planning Organization had discussed the potential for turning a portion of Route 17 that goes to North Carolina into Interstate 87 and turning Route 58 into an interstate to reduce truck congestion and create faster transit times. He advised that Route 460 is not on any of the TPO's top future projects, but the part of Route 460 that runs through the County has the largest number of accidents for the trucking industry. The Route 460 corridor is the third highest truck thoroughfare in the region and the second highest for the fastest growing truck thoroughfare in the region. It accounted for 28% of the growth of economic and commerce truck thoroughfare. The TPO encouraged all localities to submit their details as they begin to look at the

potentials for growth in every region as it relates to trucking and the ports. The County is going to have to lobby for consideration in the Route 460 corridor for a solution going forward because if the County is going to remain competitive in the region, the Route 460 corridor is going to need to be addressed moving forward.

Supervisor Acree commented that the original proposal for Route 460 was essentially cutting the County in half with very limited access and it would have compromised the County in various ways, such as emergency services. On another subject, the Hampton Roads Transportation Planning Organization and the Hampton Roads Transportation Accountability Commission have a public comment period which can be done via email or in person and he encouraged all persons to become involved and provide comments regarding traffic on the James River Bridge.

APPOINTMENTS

Chairman Jefferson moved that Hazel Edwards be reappointed to serve on the Southeastern Tidewater Opportunity Project. The motion was adopted unanimously (5-0) with Supervisors Acree, McCarty, Grice, Rosie and Jefferson voting in favor of the motion and no Supervisors voting against the motion.

SPECIAL PRESENTATIONS

Chris Morello, Director of Economic Development, introduced Jenny Crittenden, Senior VP, Hampton Roads Retail Alliance, Kylie Sibert, VP of Corporate Communications, Hampton Roads Retail Alliance, and Phil Scotti, owner of Phillip Michael Fashion for Men and Chairman of the Board for the Hampton Roads Retail Alliance, who presented information relative to the factors that impact and inform decisions for the siting of retail businesses.

Ms. Crittenden suggested that the County take a market analysis of the areas the Board wishes to develop in retail. She encouraged the Board to look at its small brick and mortar businesses and find out how to strengthen them because the best form of recruitment is retention.

Mr. Scotti spoke about the difficulties associated with being a small retailer and he

encouraged the County, if it wishes to attract small retailers, to be prepared to provide them with some assistance. He specifically recommended that the County offer the concept of a community market space.

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Assistant County Administrator Robertson provided an update regarding ongoing COVID-19 vaccine and testing efforts for County residents. He advised that local churches have been hosting various vaccine and testing clinics.

COUNTY ATTORNEY'S REPORT

County Attorney Jones introduced an Agreement with HRPDC and Partner Agencies and an Agreement with RURALBAND for County-wide Expansion of Broadband for the Board's consideration.

Supervisor McCarty moved to authorize execution of an agreement with HRPDC and Partner Agencies and an agreement with RURALBAND for the county-wide expansion of broadband. The motion was adopted unanimously (5-0) with Supervisors Acree, McCarty, Grice, Rosie and Jefferson voting in favor of the motion and no Supervisors voting against the motion.

County Attorney Jones advised several matters remain unresolved with the Nike Park Park-to-Park Trail, including the closing out of the design contract.

Supervisor McCarty moved to authorize the County Administrator to execute the necessary documents and finalize that portion of the property. The motion was adopted unanimously (5-0) with Supervisors Acree, McCarty, Grice, Rosie and Jefferson voting in favor of the motion and no Supervisors voting against the motion.

PUBLIC HEARINGS

A. Request of Nuby Run Solar, LLC, Applicant, on behalf of Robert Benjamin Stagg, property owner, for a Conditional Use Permit to establish a utility scale solar energy facility on property located on Orbit Road zoned Rural

Agricultural Conservation and a request to withdraw twenty acres of the property from the Courthouse Agricultural/Forestal District.

Amy Ring, Director of Community Development, reviewed the project description and recommended conditions and provided the criteria for CUP consideration.

Chairman Jefferson opened the public hearing and called for those to speak in favor of or in opposition to the proposed request.

Adam Ventre, Director of Development at Hexagon Energy, spoke about the importance of the development of clean energy projects that can fit in with existing communities; the economic contributions of the project; and its compliance with the Comprehensive Plan. He concluded his presentation requesting the following two conditions be added to the existing conditions: 1) Vegetation planted in the landscape buffer to provide visual screening shall be a minimum of eight (8) feet tall at the time of planting, if available at local nurseries. If 8' trees and evergreens are locally unavailable, the applicant shall install vegetation with a minimum height of six (6) feet tall at the time of planting and 2) the vegetation and security fencing shall be installed within sixty days of commencement of construction in all areas along Orbit Road where their placement will not interfere with the installation of the facility. All other areas of vegetation and security fencing will be installed prior to commercial operation.

David Tucker of District 3 spoke as an advocate for renewable energy, but not in favor of badly managed renewable energy.

Ben Stagg, landowner, appeared and spoke in favor. He stated that Hexagon, while not local, is a Virginia company. He continued that this is a reversible use and will be returned to its existing condition when it is no longer renewed for this project. He stated the application is compatible with existing uses, and he has received support from adjacent neighbors. He concluded that this will supplement his retirement income.

Chairman Jefferson closed the public hearing and called for comments from the Board.

Supervisor McCarty recalled that this Board has previously discussed wanting to have a clearer picture of what solar farms in the County will look like, but to date have not developed a policy with which to move forward.

Supervisor Acree agreed with Supervisor McCarty's remarks and stated that he does not hold fault with Mr. Stagg that the Board has not yet been educated. He stated farmers are requesting approval of solar farms on their property for various reasons, to include trying to retain the family farm.

Supervisor Grice suggested the Board might wish to consider imposing a temporary moratorium on applications for solar farms for a period of twelve months and, in the meantime, receive presentations from solar panel companies interested in doing business in the County.

Ms. Ring offered to get with County Attorney Jones to investigate what is needed to put a solar farm in place; what the conditions might be and the length of life of the solar farm.

Supervisor Rosie commented that the Board still needs to establish what it wants the corridors to look like and that he would like to see charging stations incorporated. He stated he would prefer to see an eight-foot tree versus a six-foot tree and that he would support this request, but he did not want to see any more requests for solar farms to come before the Board until it has addressed these facilities.

Supervisor Acree moved that the Conditional Use Permit be approved with the following conditions, to include the two additional conditions offered by the applicant tonight:

1. The subject property shall be developed in general conformity with the Concept Plan included in the Nuby run Solar application.

2. The portion of the subject property supporting solar panels shall be enclosed by security fencing of a type which is harmonious with the rural, agricultural, and historical charter of the County while meeting Federal and State regulations for solar electric generating facility fencing as determined by the Zoning Administrator upon approval of the site plan for the project.

3. The applicant shall preserve and maintain both existing forest and vegetation as well as planted landscape buffering and shall not clear or cut live trees within required setbacks or buffer yards except as necessary to avoid shading of solar panels as approved by the Zoning Administrator.

4. The applicant shall submit an Emergency Response Plan with the first submission of the site plan, which shall detail fire suppression methods that will be immediately deployed during both construction and operation of the facility. The plan shall include a training program to be provided, at the discretion of the County, to County emergency response staff with regards to safety for on-site emergency response. The applicant shall install a Knox Box at the facility to ensure emergency responders have access to the facility should the need arise and include plans for the same on the project site plan.

5. The applicant shall conserve topsoil on the site to the maximum extent feasible. Topsoil stockpiled on the site shall be stored out of view from adjacent properties and public roads.

6. Hours of operation for construction activities to be limited to 7:00 a.m. to 6:00 p.m. Monday through Friday and 9:00 a.m. to 5:00 p.m. on Saturdays. No construction to occur on Sundays.

7. The applicant shall submit a Stormwater Management Plan and an Erosion and Sediment Control Plan with the submission of the final site plan. The applicant shall reimburse the County for reasonable costs related to retaining such third-party inspectors as deemed necessary for project inspections.

8. Prior to issuance of any construction permit, the applicant shall submit the concurrence of the completed and provided Phase I Cultural Resource Assessment from the Virginia Department of Historical Resources.

9. The applicant shall submit an invasive species management plan as recommended by DCR with the submission of the final site plan.

10. The applicant shall host at least two separate job fairs within Isle of Wight County to hire for the created jobs referenced in the applicant's permit narrative. These job fairs will be planned, located, and scheduled in consultation with County staff.

11. The applicant shall submit a seed mix for site groundcover that includes native pollinators blooming in spring/summer as recommended by DCR with the submission of the final site plan.

12. A sign shall be installed at the entrance of the site with contact information for the facility.

13. Vegetation planted in the landscape buffer to provide visual screening shall be a minimum of eight (8) feet tall at the time of planting, if available at local nurseries. If 8' trees and evergreens are locally unavailable, the applicant shall install vegetation with a minimum height of six (6) feet tall at the time of planting

14. The vegetation and security fencing shall be installed within sixty days of commencement of construction in all areas along Orbit Road where their placement will not interfere with the installation of the facility. All other areas of vegetation and security fencing will be installed prior to commercial operation.

The motion was adopted unanimously (5-0) with Supervisors Acree, McCarty, Grice, Rosie and Jefferson voting in favor of the motion and no Supervisors voting against the motion.

B. Proposed Revisions to the Isle of Wight County Zoning and Subdivision Ordinances

Amy Ring, Director of Community Development, reviewed proposed changes to the Zoning and Subdivision ordinances.

Chairman Jefferson opened the public hearing and called for persons to speak in favor of or in opposition to the proposed changes.

Erin Millican, 156 Liberty Way, requested the Board to table the proposed changes and allow him an opportunity to get with staff regarding curvilinear project segments which abut RPA boundaries.

Ben Stagg, land surveyor, spoke in support of the land changes.

Branch Lawson, East West Partners, spoke against anything that might make it more difficult to build or buy in the County.

Chairman Jefferson closed the public hearing and called for comments from the Board.

Supervisor McCarty moved to table the proposed Ordinance amendments. The motion was adopted unanimously (5-0) with Supervisors Acree, McCarty, Grice, Rosie and Jefferson voting in favor of the motion and no Supervisors voting against the motion.

Supervisor McCarty moved to approve the following Subdivision Ordinance excluding 5.11.1 and 5.11.4:

AN ORDINANCE
TO AMEND AND REENACT THE FOLLOWING SECTION OF APPENDIX A.
SUBDIVISIONS: ARTICLE 3 (ADMINISTRATION AND PROCEDURES)

WHEREAS, the Board of Supervisors of Isle of Wight County, Virginia, has the legislative authority to make reasonable changes to the ordinances that govern the orderly growth and development of Isle of Wight County; and

WHEREAS the Isle of Wight County Board of Supervisors is also concerned about the compatibility of uses on public and private lands within Isle of Wight County and seeks to allow flexibility in the administration of the ordinance regulations while protecting the health, safety, and general welfare of present and future residents and businesses of the County.

NOW, THEREFORE, BE IT ORDAINED by the Isle of Wight County Board of Supervisors that the following specific section of Article III of Appendix A,

Subdivisions, of the Isle of Wight County Code be amended and reenacted as follows:

Article 3. Administration and Procedures

3.2. Review and approval procedures.

3.2.1. General.

A. Authority to file applications.

1. Applications may be initiated by the owner of the land being subdivided or the owner's authorized representative. The subdivision agent may require an applicant to present evidence of authority to submit the application.

2. All real estate taxes and any outstanding fees or charges shall be current prior to submission of an application for any activity regulated under this ordinance.

B. Pre-application conference.

1. Before submitting an application for development approval, it is recommended that each applicant schedule a pre-application conference with the subdivision agent to discuss the procedures, standards and regulations required for development approval in accordance with this ordinance.

2. A mandatory pre-application conference with the subdivision agent shall be required for the following development reviews:

a. Any subdivision that will require public infrastructure; and

b. All applications for major subdivision.

C. Application requirements. The following requirements shall apply to all applications for subdivision approval. Applications for re-approval of an expired approval shall be processed in the same manner as any other application.

1. Forms. Applications required under this ordinance shall be submitted on forms and in such numbers as required by the appropriate department. All forms shall include, at a minimum, the following information:

a. Contact information for the individual or firm submitting the application and all property owners, including principals of a corporation or other entity;

b. Contact information for the individual or firm on whose behalf the application is being submitted;

c. Identification of the property affected by the application, such as a legal description, address, or parcel identification as may be appropriate; and

d. Any other information required by the subdivision agent or the provisions of this ordinance.

2. Fees.

a. Filing fees shall be as set forth in the Isle of Wight County Uniform Fee Schedule, as adopted by the board of supervisors, as it may be amended, in order to defray the actual cost of processing the application.

b. Fees shall be paid with the appropriate department.

c. An applicant who has paid the appropriate fee pursuant to the submission of an application, but who chooses to withdraw such application prior to its distribution for review shall be entitled to a refund of the total amount paid, less ten (10) percent for administrative costs, upon written request to the appropriate department. Once distribution for review has begun, no refund shall be available.

3. Applications sufficient for processing.

a. Applications shall contain all required information listed on forms available from each department involved in the review process, unless modified by the department, in writing, pursuant to item b., below. Incomplete applications shall not be entitled to review.

b. The presumption shall be that all of the information required in the application forms is necessary to satisfy the requirements of this section. However, it shall be recognized that each application is unique, and therefore more or less information may be required according to the needs of the particular case.

The applicant may rely on the recommendations of the appropriate department as to whether more or less information should be submitted.

c. Once the application has been determined sufficient for processing, copies of the application shall be distributed by the subdivision agent to the appropriate reviewing entities.

4. Development review meeting after application submitted.

   a. Upon receipt of comments from appropriate review entities, the subdivision agent may convene a development review meeting including all appropriate review agencies, which may include the applicant, to ensure compliance with the following:

      1. The applicable requirements of this ordinance;
      2. That the applicant has submitted all of the information he/she intends to submit; and
      3. That the application represents precisely and completely what the applicant proposes to do.

   b. Once the subdivision agent deems that all options have been exhausted to address all review comments and recommendations, and all requirements have been met, the application shall be placed on the agenda of the appropriate reviewing board, department, or committee in accordance with standard procedures. However, if the subdivision agent believes the application is incomplete, a recommendation to deny the application on that basis shall be provided to the appropriate board, department, or committee.

5. Related or concurrent applications.

   a. Applications for necessarily related development approvals may be filed and reviewed simultaneously, at the option of the applicant. Any application that also requires a rezoning shall not be eligible for final approval until the rezoning has been granted (see section 3.2.3.C, zoning requirements).

   b. Related applications submitted simultaneously are subject to approval of all other related applications; deferral or denial of any concurrently submitted application shall stop consideration

of any related applications until the deferred or denied application is resolved.

6. Administrator's comments--Term of validity.

a. The Administrator's comments or commitments on a proposed plat or construction plan that did not achieve approval shall maintain efficacy for six months from the date the comments are rendered. After this period, these comments or commitments shall be void.

D. Notice and public hearings.

1. Summary of notice required. Notice shall be required for applications for development approval as shown in the table below:

Procedure	Published	Posted
Waiver		✓
Subdivision ordinance text amendment	✓	

2. Public notice requirements.

a. Published notice. Published notice shall be provided in conformance with Section 15.2-2204 of the Virginia Code. A distinctive advertisement shall be placed in a local newspaper of general circulation once a week for two (2) successive calendar weeks, the first notice being published not more than twenty-one (21) days before the date fixed for the public hearing and the second notice being published at least five (5) days before the hearing. At minimum, the notice must contain the following information:

1) The time, date and location of the public hearing;
2) A description of the action requested;
3) A phone number to contact the county; and
4) A statement that interested parties may appear at the public hearing.

b. Posted notice. In addition to notice of hearings as required by the applicable statutes of the Commonwealth of Virginia, when

posted notice is required, the applicant must erect on or immediately adjacent to, the subject property a sign or signs as specified below giving public notice of the action required.

1) The sign must meet the following criteria:
    [a) Reserved.]
    b) The wording, size and color of such sign shall be as specified by the subdivision agent and approved by the board of supervisors.
    c) One (1) sign must be erected so as to be visible and legible to each abutting public street. where the property has extensive road frontage, one (1) sign shall be erected for each five hundred (500) feet of frontage.
    d) When a property has no frontage directly on a public street, it shall be posted adjacent to the nearest public street from which future access is contemplated.
2) Signs must be erected at least seven (7) calendar days before the hearing where the application is to be considered and removed by the applicant within two (2) days after the final public hearing on the application.
3) Signs are required for each hearing at which the application is considered.
4) It is unlawful for any person to pull down, write on, cut or otherwise injure or deface required posted notice, which will constitute violation of this ordinance.
    a) The applicant is responsible for the maintenance or replacement of signs obliterated or destroyed during the posting period.
5) The additional requirements for public notice and posting on the property are for the benefit of the public to identify the location of the property in question and advanced knowledge of a hearing only and is not a legal requirement of notice. The failure to comply with the provisions herein does not defeat the action of the approving authority

concerning the application. The only legal notice requirements are those provided by the statutes of the Commonwealth of Virginia.

3. Constructive notice. Minor defects in notice shall not impair the notice or invalidate proceedings pursuant to the notice if a bona fide attempt has been made to comply with applicable notice requirements.

E. Required hearings and meetings. A hearing shall be required for development review as shown in the table below:

Procedure	Planning Commission	Board of Supervisors
Waiver	Public meeting	Public meeting
Subdivision ordinance text amendment	Public hearing	Public hearing
Appeal of administrative decision		Public hearing

F. Notice of decision. Within fourteen (14) days after a decision is made, a copy of the decision shall be sent to the applicant.

G. Withdrawal or postponement of application.

1. An applicant may withdraw an application at any time, by filing a statement of withdrawal with the subdivision agent.

2. The statement of withdrawal shall be signed by all persons who signed the application, or in the event of death or incompetence, by the estate's lawful personal representative.

3. An applicant may postpone a scheduled hearing once per application for up to ninety (90) days after the date the first hearing was scheduled to occur, after which the subdivision agent may withdraw the application.

3.2.2. Interpretation of this ordinance.

A. Applicability. When uncertainty exists, the subdivision agent shall be authorized to make all interpretations concerning the provisions of this ordinance.

B. Deferral of interpretation. The subdivision agent may defer interpretations of this ordinance to the appropriate county officials.

C. Application requirements. A request for interpretation shall be submitted in writing.

D. Action by subdivision agent. The subdivision agent shall:

1. Review and evaluate the request in light of the text of this ordinance, the zoning ordinance, the comprehensive plan and any other relevant information.

2. Consult with the other officials, including the county attorney, as necessary;

3. Render an opinion; and

4. Cause the interpretation to be provided to the applicant in writing.

E. Official record. The subdivision agent shall maintain an official record of all interpretations. The record of interpretations shall be available for public inspection during normal business hours.

F. Appeal. Final action on an official interpretation of this ordinance by the subdivision agent (or other administrative official) may be appealed in accordance with section 3.2.12, appeal of administrative decision.

3.2.3. Subdivision, general.

A. Applicability. Subdivision review is required for any division of land within the county. However, certain subdivision activities may be eligible to receive an exception of compliance from certain requirements of this ordinance as described in section 3.2.3.B, below.

B. Exception to subdivision requirements.

1. Actions eligible for exception. Upon submittal of a survey plat prepared by a licensed professional, the subdivision agent may grant an exception allowing one (1) or more of the following actions without further compliance with the requirements of this ordinance. However, this shall not be construed as an exemption from this ordinance.

a. Agricultural, horticultural, or silvicultural. The division of land into parcels greater than ten (10) acres for bona fide agricultural, horticultural, or silvicultural purposes where no street right-of-way dedication is involved and where there is no

change in the intensity of use, provided such divisions shall have the following notation prominently set forth on the recorded plat:

"Residential development on any lots shown will require Residential Zoning pursuant to Section 3.2.3.C of the Subdivision Ordinance of Isle of Wight County, Virginia, as amended."

b. Lots not fronting on a public road.

1) Subject to the required zoning, the division of a tract in single ownership into two (2) lots not fronting a public road, where a twenty-foot access easement is provided, and both lots comply with the requirements of this ordinance.
2) Subject to the required zoning, the division of a tract for commercial lots not fronting on a public road provided that the lots front on a private road that is built to the minimum VDOT street standards, and where the private road shall be maintained by adjacent property owners and guaranteed in writing with a private road maintenance agreement. This agreement shall be revised upon any change in ownership and prior to any additional subdivision approval on lots served by the private road.

c. Boundary line adjustments.

1) The public acquisition of strips of land for the widening or opening of streets.
2) The combination or recombination of portions of previously subdivided and recorded lots where the total number of lots does not increase and each resulting lot conforms to the requirements of this ordinance and applicable requirements of the zoning ordinance.
3) The plat making the transfer(s) related to the sale, exchange or other transfer of parcels between adjoining property owners, where it does not create additional lots or make existing lots of lesser width or area than required by this ordinance.
4) Boundary line adjustments to any valid and properly recorded plat, including vacation or alteration, provided the requirements of Section 15.2-2275 of the Code of Virginia

and the following requirements are met:

(a) The adjustment is executed by the owner or owners of such land as provided in Section 15.2-2264 of the Code of Virginia;

(b) The adjustment does not result in any new violations to the dimensional requirements of the zoning ordinance;

(c) The adjustment does not involve the relocation or alteration of streets, alleys, easements for public passage, or other public areas; and

(d) No easements or utility rights-of-way shall be relocated or altered without the express written consent of all persons or entities holding any interest in the easement or rights-of-way.

d. Well lot and pump station lots. That will be dedicated to the county upon completion and meet the applicable yard setbacks for the zoning district of subject lot and applicable screening standards in the zoning ordinance.

e. Family burial plots. Family burial plots shall meet the requirements of the zoning ordinance.

f. Lots with existing established metes and bounds and/or divided by existing public roads. The agent or his designee may permit the separation of one (1) parcel from a tract of land without complying with all of the requirements of this ordinance if it is not in conflict with the general meaning and purpose of the ordinance.

2. Conditions for exception. In order to approve an exception from the requirements of this ordinance, the subdivision agent must find the following:

a. No subdivision shall result in the creation of a nonconforming lot or lots as set forth in the zoning ordinance.

b. Where applicable, the recorded plat must include a private easement at least twenty (20) feet wide for ingress and egress to each lot which does not abut on an existing public road unless

otherwise expressly permitted by this ordinance. The board of supervisors may require larger or smaller easement widths in special circumstances.

c. Where applicable, the following language must be prominently set forth on the face of the recorded plat of survey and added as a covenant in every deed for every lot in any subdivision in which streets are proposed to be established to a standard less than those set by VDOT for acceptance as part of the secondary system:

a) The streets in this subdivision do not meet the standards necessary for inclusion in the system of state highways and will not be maintained by the Virginia Department of Transportation (VDOT) or the county and are not eligible for rural addition funds or any other funds appropriated by the General Assembly and allocated by the Commonwealth Transportation Board;
b) It is not the policy of the Board of Supervisors of Isle of Wight County, Virginia, or VDOT to accept or maintain private streets until the streets are constructed pursuant to the specifications for construction of secondary roads as promulgated by VDOT;
c) The streets in this subdivision will have to be constructed in full compliance with VDOT requirements in effect at the time of the request by the property owners prior to requesting addition of the street into the State Secondary Road System of Isle of Wight County.
d) It is not the policy of the School Board of Isle of Wight County, Virginia, to allow school buses to travel on other than publicly maintained roads.

3. Plat recordation required. Documents showing lots created with an exception under this section must be stamped by the subdivision agent noting their exception, and signed so they may be recorded with the clerk in conformance with section 3.2.3.D, plat approval and recordation required.

C. Zoning requirements.

1. Residential zoning required. Except as provided below, all proposed subdivisions for residential purposes must be zoned residential as defined in section 5.4.2 (RR, NC, SE, SR, UR, VC, PD-R, PD-MH, or PD-MX) or conditional residential (C- RR, C-NC, C-SE, C-SR, C-UR, C-VC, C-PD-R, C-PD-MH or C-PD-MX,) pursuant to the zoning ordinance prior to final subdivision plat approval.
2. Exempt from zoning requirement.
    a. Family member subdivision. The subdivision agent may waive the requirement for residential zoning for a subdivision approved as a family member subdivision (see section 3.2.4).
    b. Manufactured home. The subdivision agent may waive the requirement for residential zoning for the placement of a manufactured house on a permanent foundation on an existing individual lot located in the rural agricultural conservation (RAC) district as established in the zoning ordinance.
    c. Clustering/sliding scale "by-right" provisions for single-family residential development in rural agricultural conservation district as designated in the Isle of Wight County Comprehensive Plan.Under the sliding scale development provision, a tract of land containing one hundred (100) contiguous acres or greater zoned rural agricultural conservation will be allowed four (4) divisions. One (1) additional lot or dwelling unit will be permitted for every additional forty (40) acres encompassed by the overall tract. For example, a one hundred forty-acre tract will yield five (5) lots. Minimum permissible lot sizes shall be encouraged so as not to allow subdivision development which is land consumptive; however, each lot must meet the minimum lot requirements for the rural agricultural conservation (RAC) district.
        1. In addition to the base density permitted above and the minimum lot size, width and frontage requirements of the underlying zoning district, the following standards shall be met:
            a) All residential lots created through the act of subdivision shall be contiguously grouped and served by one (1) point of access to county roads

and shall comply with section 5.9 (streets) of the Isle of Wight County Subdivision Ordinance.

b) Residential structures in the subdivision shall be located at least one hundred (100) feet from the existing county road right-of-way and screened from the right-of-way by an existing or planted landscaped buffer.

c) All residential structures should be set back at least one hundred (100) feet from all active farm operations.

d) A central water supply system shall be provided to serve the subdivisions with over fourteen (14) lots.

e) The maximum lot size for any new lot created shall be ten (10) acres, unless otherwise approved by the board of supervisors or required by the county health department.

f) No lot shall be designed, approved or employed for use in which an area more than thirty percent (30%) of the prescribed minimum lot area is comprised of one (1) or more of the environmentally sensitive areas referenced in the net developable calculations of the zoning ordinance. This shall not apply to lots specifically created exclusively to preserve and maintain environmentally sensitive areas.

g) Lots shall be located to preserve seventy percent (70%) of the original tract size in order to maximize continued use of the residual parcel for agricultural and silvicultural purposes.

h) All areas not included in lots or public street rights-of-way shall be incorporated into common open space and may be used for natural or landscaped buffers; agricultural uses including farmland and pasture not generating noxious odors such as land application of sewage sludge, hog or poultry farms or similar uses; horticulture; recreational use;

historic preservation; forests; wildlife reservations and conservation areas; private stables for personal enjoyment; or other similar use.

i) The common open space shall be arranged and designed so as to facilitate its use, ensure continuity of design, and preserve sensitive environmental features. Failure to achieve these goals shall be sufficient reason for the agent to deny applications for open space development plan approval or require modifications that may include loss of lots.

j) Recreational areas shall not abut the exterior boundary of the open space development unless entirely adjacent to a publicly-owned facility or community recreation facility of an adjoining residential development.

k) Adequate pedestrian and bicycle facilities shall be provided which fully interconnect the development and its recreation areas both internally and with existing, planned or desirable external pedestrian and bicycle facilities.

l) Final plats recorded and all deeds for lots within the cluster development shall bear a statement indicating that the land is within an approved residential cluster subdivision and shall also bear a statement indicating the ownership status of the development's open space system and shall reference the covenants creating a property owners' association which shall also be recorded at the time final plats are put to record.

m) With approval of the planning commission, common open space within a cluster subdivision may be held by other than a property owner association for agricultural uses including farmland, pasture, horticulture, recreational use, historic preservation, forests, wildlife reservations and conservation areas or other similar use.

n) Family member subdivisions shall be prohibited.

o) Manufactured homes, Class A and B, and residential accessory apartments shall require a conditional use permit.

D. Plat approval and recordation required.

1. All subdivision plats within the county must be submitted, approved, and certified by the subdivision agent in conformance with this ordinance prior to recordation with the clerk of the circuit court of Isle of Wight County.

2. A plat or other instrument showing the approved division of any land subdivided within Isle of Wight County shall be recorded with the clerk of the circuit court of Isle of Wight County within six (6) months of final plat approval. Plat approval shall be deemed void if the plat is not recorded within this period, and a new application for final plat approval shall be required prior to recordation. However, in any case where construction of facilities to be dedicated for public use has commenced pursuant to an approved plan or permit with surety approved by the county, or where the developer has furnished surety to the county by certified check, cash escrow, bond, or letter of credit in the amount of the estimated cost of construction of such facilities, the time for plat recordation shall be extended to one (1) year after final approval or to the time limit specified in the surety agreement approved [by the] county, whichever is greater. The following language shall be prominently stamped on the face of the approved plat and certified by the subdivision agent:

"This subdivision plat has been found to be in conformance with the Isle of Wight County Subdivision Ordinance and must be recorded with the Office of the Clerk of Circuit Court of Isle of Wight County within six months of the date of approval. Approval will be deemed void after six months and the plat must be resubmitted for approval."

Date of Approval:	Subdivision Agent:

3. No lot shall be transferred by deed in any subdivision before the subdivision plat has been recorded.
4. No land dedicated to the county, as shown on the plat, shall be accepted by the county unless and until the agent has accepted the dedication. Such acceptance of dedication shall be evidenced by signature of the subdivision agent after the following notation on the recorded plat:

   "I, the Director of Planning and Zoning for the Isle of Wight County, Virginia, as Subdivision Agent, do hereby accept the dedication(s) made to Isle of Wight County, Virginia, as set forth herein."
5. Other signatures or approval certifications may be required prior to plat recordation.

3.2.4. Subdivision, family member.

A. The subdivision agent may approve a family member subdivision subject to the provisions of this section, and any express requirement contained in the Code of Virginia (see specifically Section 15.2-2244, et seq. of the Code of Virginia). The purpose of a family member subdivision may not be to circumvent this ordinance or other county regulations. To approve an application for family member subdivision, the subdivision agent must find the following:

1. The property owner requesting the family member subdivision shall hold fee simple title to the subject property.
2. No person who has previously received land within the county via family member subdivision is eligible to receive additional land through family member subdivision.
3. The approval shall include the proposed deed(s) of sale or transfer from the property owner to the receiving family member.
4. No more than one (1) lot resulting from a single tract may be accessed from a single easement of right-of-way unless approved by the board of supervisors upon recommendation from the planning commission.
5. No lot shall be designed, approved or employed for use in which an area more than thirty (30) percent of the prescribed minimum lot

area is comprised of one (1) or more of the environmentally sensitive areas referenced in the net developable calculations of the zoning ordinance. This shall not apply to lots created exclusively to preserve and maintain environmentally sensitive areas, as approved by the zoning administrator.

6. No singular subdivision shall extend over a political boundary line.

7. All applicable requirements of the zoning ordinance, the erosion and sediment control ordinance, the Isle of Wight County Department of Public Utilities' Master Water and Sewer Ordinance, and the Chesapeake Bay Preservation Area Ordinance shall apply.

8.. A person receiving land through a family member subdivision may not sell, transfer, subdivide, or otherwise convey such property for a period of five (5) years after plat approval; unless:

   a. The conveyance or proposed conveyance results from the foreclosure of a mortgage (deed of trust) lien on the property.

   b. The subdivision is directed by court action.

   c. Upon application from said recipient, the board of supervisors, upon recommendation from the planning commission finds at least one (1) of the following:

      1. The proposed conveyance must be made to satisfy a financial obligation that was not contemplated at the time of the transfer of the lot through the family member subdivision, and that cannot be satisfied from other assets.
      2. The property is granted rezoning approval.

   d. The board of supervisors may specify additional conditions to be imposed on a family member subdivision (if an administrative decision goes through appeal or an exception is sought from the board of supervisors for sale prior to five (5) years.)

B. Water. One (1) of the following shall apply:

1. Well water. The applicant must provide proof that a water source for the lot has been identified in accordance with the requirements of the Virginia Department of Health. In such case, the following

note must be placed on the final plat prior to final approval by the subdivision agent:

No zoning permit or building permit shall be issued for any lot until a well or water source has been approved by the County Health Department.

2. Public water. Family member subdivisions resulting in more than four (4) lots may be required to connect to a public water supply system in accordance with the master water and sewer ordinance. In such case, the following note must be placed on the final plat prior final approval by the subdivision agent:

   Any lot shown on this plat must be served by public water before any use can be made on such lot. However, no service has been extended to such lots at the time of approval of the plat. No zoning permit or building permit shall be issued for any lot until public water has been extended to such lot in accordance with the Master Water and Sewer Ordinance. The owner of each lot shown on this plat shall grant, without compensation, such reasonable easements as are necessary to permit such extension of public water to all lots.

C. Sewer.

1. Private individual septic. Private individual septic systems shall be designed and constructed to meet the requirements of the Virginia Department of Environmental Quality, the Virginia Department of Health, Isle of Wight County Department of Public Utilities, and any other state or local regulation having authority over such installation, including the zoning ordinance for alternative discharge sewer disposal systems. The following note must be placed on the final plat prior to approval from the subdivision agent:

   No zoning permit or building permit shall be issued for any lot until a septic system has been approved by the County Health Department and any drainfield is identified on the plat.

   Refer to Section 5.13.2 for additional on-site sewage system requirements.

2. Public sewer. Public sewer systems shall be designed and constructed in accordance with the design standards and

specifications for sewerage construction and improvements in Isle of Wight County, Virginia, and meeting the approval of the subdivision agent.

D. Recordation and enforcement.

1. The approved family member subdivision plat, road maintenance agreement (if applicable) and deed(s) of sale or transfer shall be recorded simultaneously. The family member subdivision approval shall automatically terminate if all required documents are not filed within six (6) months.

2. The property owner shall place a restrictive covenant on the subdivided property that would prohibit the transfer of the property to a person other than the immediate family for which it is created for a period of five (5) years following the date of subdivision, unless a rezoning is granted.

3. No zoning permit or building permit shall be issued for any lot or parcel found to be in violation of this ordinance until such violation has been corrected.

3.2.5. Subdivision, conceptual plan review.

A. Applicability, conceptual plan recommended. It is recommended, but not required, that an applicant submit a conceptual plan for review by the subdivision agent for all subdivision activity. The purpose of this conceptual plan is to permit the agent to advise the applicant whether the plans are in general accordance with the requirements of this ordinance and advise the applicant if it appears that changes would be necessary.

B. Conceptual plan requirements.

1. The conceptual plan shall be drawn on white paper, or on a print of a topographic map of the property. The conceptual plan must be to drawn to an acceptable scale. The following are accepted: one (1) inch equals ten (10), twenty (20), thirty (30), forty (40), fifty (50), sixty (60) or one hundred (100) feet.

2. The conceptual plan shall show, in simple sketch/schematic form, the proposed layout and approximate dimensions of streets, lots, parks, playgrounds and other features in relation to existing

conditions both within and in the areas surrounding the proposed subdivision. In addition, the plan should contain the following information:

a. Boundary lines of the subject property.

b. Existing land conditions to include: 1) existing topography at a maximum of ten-foot contour intervals; and 2) soils information.

c. Zoning of the subject property and adjacent parcels.

d. Location of entrances and points of ingress and egress.

e. Distance to the nearest state road intersection.

3. Whenever part of a tract is proposed for platting and it is intended to subdivide additional parts in the future, a conceptual plan for the entire tract shall be submitted with the preliminary plat. This plan is merely for informational purposes and is not binding on the subdivider, subdivision agent, planning commission, or the board of supervisors.

3.2.6. Subdivision, preliminary plat review and approval.

A. Applicability, preliminary plat required. A preliminary plat shall be required for all subdivisions of fifty (50) lots or more. The submission of a preliminary plat for tentative approval shall be voluntary for all other subdivisions.

B. Pre-application conference. A pre-application conference is encouraged for all subdivision applications and may be required (see section 3.2.1.B).

C. Application requirements.

1. General.

a. An application for preliminary plat shall be filed in conformance with section 3.2.1.C. A listing of the minimum required information to be included in the preliminary plat may be found in article 4, plat requirements and more specifically in section 4.2.2, preliminary plat requirements.

b. All required application and review fees shall be paid by the applicant as shall be set forth in the Isle of Wight County Uniform

Fee Schedule, as adopted by the board of supervisors, as it may be amended.

2. Preparer. The preliminary plat shall be prepared by a land surveyor or other person(s) licensed by the state board for the examination and certification of architects, professional engineers and land surveyors to do land surveying as defined by Section 54.1-406 of the Code of Virginia, as amended, who shall endorse upon each plat a signed certificate setting forth the source of the title of the land subdivided, and the plat of record of the last instrument in the chain of title. When the proposed plat is comprised of land acquired from more than one (1) source of title, the outlines of the several tracts shall be indicated upon the preliminary plat, within an inset block, or by means of a dotted boundary line upon the preliminary plat.

3. Owner's statement. In conformance with Section 15.2-2264 of the Code of Virginia, every such preliminary plat, or the deed of dedication to which the preliminary plat is attached, shall contain a statement to the effect that the subdivision as it appears on this preliminary plat is with the free consent and in accordance with the desires of the owners, proprietors and trustees, if any. This statement shall be signed by the owners, proprietors and trustees or their duly authorized agent, and shall be duly acknowledged before some officer authorized to take acknowledgements of deeds. If the preliminary plat is incorporated by reference to a deed, the signatures of the owners on the deed will suffice to show that the subdivision is with their free consent and in accordance with their desires.

D. Subdivision types.

1. Minor subdivisions. Any subdivision involving fewer than ten (10) lots which satisfies the following requirements may be considered a minor subdivision:

a. No new public or private streets are created;

b. No public stormwater facilities for water quality or quantity are required; and

c. No new public utilities are to be installed.

2. Major subdivisions. Any subdivision not meeting the definition of family member subdivision (as defined in section 3.2.4) or minor subdivision is considered a major subdivision.

3. Cluster/sliding scale "by-right" subdivisions.Any subdivision meeting the requirements of section 3.2.3.C.

E. Approving authority.

1. Minor and major subdivision—Administrative approval.The subdivision agent shall have the authority to approve preliminary and final plat applications for minor and major subdivisions (see section 3.2.6.D.1, above).

2. Cluster/sliding scale "by-right" subdivisions—Administrative approval.The subdivision agent shall have the authority to approve cluster/sliding scale "by-right" applications.

F. Public notice.

1. Public notice shall be provided in conformance with the table in section 3.2.1.D. At minimum, all applications to be acted upon at a hearing before the planning commission (see section 3.2.1.E) shall be advertised.

2. Notification may also be required to the Virginia Department of Transportation, Isle of Wight County School Board, Isle of Wight County Health Department, or any other agency with review or approval authority on the application.

G. Action by subdivision agent.

1. Review agencies (internal and external) shall review the preliminary plat application to determine whether or not the preliminary plat generally conforms to the requirements of this subdivision ordinance, the zoning ordinance, and other applicable rules and regulations, and transmit comments back to the subdivision agent. This review may include a meeting with the applicant.

2. Within sixty (60) days of receipt of a completed application the subdivision agent shall provide written comments to the applicant stating any revisions that will be required, and the character and extent of public improvements that will have to be made. A bona fide estimate of the cost of construction or improvements must be

furnished by the applicant upon submittal of the construction plan. The amount of the performance bond (if required) must be reviewed and approved as a prerequisite to approval of the final plat. In determining the cost of required improvements and the amount of the performance bond (if required), the agent may consult with a duly licensed engineer who shall prepare this data for the agent.

3. If the subdivision agent determines that only minor corrections to the application are required, the agent may approve the preliminary plat with conditions that the corrections be remedied prior to final plat approval. If required corrections are extensive, the applicant shall correct the preliminary plat before further action is taken by the subdivision agent.

H. Action by other review bodies.

1. Upon receipt of a completed application, the subdivision agent shall transmit copies of the application to all other agencies and entities with review authority over the proposed subdivision. This may include, but is not limited to:

   a. Isle of Wight County Superintendent of Schools;

   b. Isle of Wight County Health Department;

   c. Virginia Department of Transportation (VDOT);

   d. Virginia Department of Conservation and Recreation (VDCR);

   e. Virginia Department of Environmental Quality (VDEQ); and

   f. Virginia Marine Resources Commission (VMRC).

   It will be the responsibility of the applicant to obtain required permits from the U.S. Army Corps of Engineers and submit plans to them accordingly.

2. The review body shall review the application for conformance with all of its pertinent rules and regulations and provide written comments to the subdivision agent. It is anticipated that external review of an application will be completed in thirty (30) days or less. However, additional time may be required due to the scope of complexity of an application. Appeals of decisions or comments

made by external review entities may be taken in the manner provided by the specific entity.

I. Appeal.

1. Appeal of subdivision agent decision. Appeal of a decision by the subdivision agent may be taken in conformance with section 3.2.12, appeal of administrative decision.

2. Appeal of board of supervisors' decision. Appeal of a decision by the board of supervisors on an application for preliminary plat may be taken by filing a written petition for certiorari with the circuit court of Isle of Wight County within sixty (60) days of the action.

J. Revisions to approved preliminary plat.

1. The subdivision agent may approve minor revisions to an approved preliminary plat which do not change the basic street and/or lot configuration, or result in any changes that would require review by an external review body (see section 3.2.6.H, above).

2. Significant changes to an approved preliminary plat, as determined by the subdivision agent, shall be resubmitted for review and approval as if a new application.

K. No guarantee. Preliminary plat approval does not constitute a guarantee of approval of construction plans or the final plat.

L. Duration of preliminary plat validity. The applicant shall have not more than twelve (12) months after receiving official notification concerning the preliminary plat to file an application for final plat approval with the subdivision agent in accordance with section 3.2.8, subdivision, final plat. Failure to do so shall make the preliminary plat approval null and void. The subdivision agent may, on written request by the applicant, grant a one-time extension of this time limit for up to ninety (90) days.

3.2.7. Construction plans.

A. Applicability. All subdivision activities that will include, the installation of public facilities shall be required to comply with the requirements of this section.

1. Preparer. The construction plans shall be prepared by a land surveyor or other person(s) licensed by the state board for the examination and certification of architects, professional engineers

and land surveyors to do land surveying as defined by Section 54.1-406 of the Code of Virginia.

B. Timing. Subsequent to approval or conditional approval of the preliminary plat and prior to the submission of the final plat, the applicant shall submit copies of the construction plans to the subdivision agent for approval in conformance with county requirements for construction plans (as established by the county department of planning and zoning). In order to allow the applicant time for revisions between submittals and sufficient time for all reviewing agencies to thoroughly review the construction plans, the plan should be resubmitted as soon as possible following preliminary plat approval.

C. Application requirements. Applications for construction plan approval shall be submitted in conformance with section 3.2.1.C. At minimum, plans shall show the following information:

1. All information contained on the approved preliminary plat (see section 3.2.2).
2. A cross section showing the proposed street construction, depth and type of base, and type of surface.
3. A profile or contour map showing the proposed grades for the streets and drainage facilities including elevations of existing and proposed ground surface at all street intersections and at points of major grade change along the center line of streets together with proposed grade lines.
4. Proposed connections with existing sanitary sewers and existing water supply or alternate means of sewage disposal and water supply.
5. Any additional county requirements for construction plans.

D. Action by subdivision agent.

1. The subdivision agent shall distribute the construction plan application to the applicable review bodies for review and approval.
2. The subdivision agent and other review bodies shall review the construction plan application for conformance with the approved

proffered conditions, the approved preliminary plat and all other applicable county, state, and federal requirements.

3. Within sixty (60) days of receipt of the completed application, the subdivision agent shall provide written comments to the applicant indicating areas where the application is not conforming with county requirements.
4. The applicant shall have one hundred twenty (120) days to correct the errors on the application. This time period may be extended by the subdivision agent for up to sixty (60) days for a total period of up to one hundred eighty (180) days upon written request by the applicant.
5. The subdivision agent may approve or deny the application at the end of the time period.
6. Within forty-five (45) days of receipt of a resubmittal of plans previously disapproved, the subdivision agent shall provide written comments to the applicant indicating areas where the application is not conforming with county requirements, or approval of the plans if applicable.

E. Appeal of subdivision agent decision. Appeal of a decision by the subdivision agent (or any other administrative decision) may be taken in conformance with section 3.2.12, appeal of administrative decision.

F. Duration of construction plan validity. An approved construction plan shall remain valid for five (5) years, if:

1. A permit to begin development pursuant to the construction plan, such as a building permit or zoning permit, has been issued within twelve (12) months of construction plan approval, and has remained continuously valid; and
2. Building or land disturbing activity has begun on the property.
3. No major modifications to the layout were made on the final plat that would affect the construction plan.

G. Record drawings. Upon the satisfactory completion of the installation of the required improvements shown on the approved construction plan and profiles, the developer must submit two (2) copies of the completed record drawings to the subdivision agent.

3.2.8. Subdivision, final plat.

A. Applicability.

1. A final plat shall be required for all subdivisions except family member subdivisions (see section 3.2.4).

2. In the case of an application for final plat approval for a minor subdivision (see section 3.2.6.D.1), the subdivision agent may allow the approved preliminary plat to serve as the final plat provided all required notes and certifications are inserted in conformance with this section.

B. Application requirements.

1. General.

a. An application for the final plat shall be filed in conformance with section 3.2.1.C. A listing of the minimum required information to be included in the preliminary plat may be found in article 4, plat requirements and more specifically in section 4.2.4, final plat requirements.

b. All required application and review fees shall be paid by the applicant. A current list of required fees is available from the planning and zoning department.

2. Preparer. The final plat shall be prepared by a land surveyor or other person(s) licensed by the state board for the examination and certification of architects, professional engineers and land surveyors to do "land surveying" as defined by Section 54.1-406 of the Code of Virginia, as amended, who shall endorse upon each plat a signed certificate setting forth the source of the title of the land subdivided, and the plat of record of the last instrument in the chain of title. When the proposed plat is comprised of land acquired from more than one (1) source of title, the outlines of the several tracts shall be indicated upon the final plat, within an inset block, or by means of a dotted boundary line upon the final plat.

3. Owner's statement. In conformance with Section 15.2-2264 of the Code of Virginia, every such final plat, or the deed of dedication to which the final plat is attached, shall contain a statement to the effect that the subdivision as it appears on this final plat is with the

free consent and in accordance with the desires of the owners, proprietors and trustees, if any. This statement shall be signed by the owners, proprietors and trustees or their duly authorized agent, and shall be duly acknowledged before some officer authorized to take acknowledgements of deeds. If the final plat is incorporated by reference to a deed, the signatures of the owners on the deed will suffice to show that the subdivision is with their free consent and in accordance with their desires.

C. Approving authority. The subdivision agent shall be responsible for final action on all final plat applications.

D. Action by the subdivision agent.

1. Upon receipt of a completed application, the subdivision agent shall forward the final plat documents to the appropriate entities for review.

2. The subdivision agent shall have sixty (60) days to review the application and approve the final plat as is, approve it subject to additional corrections, defer action for additional information and corrections, or deny it.

3. The final plat shall be approved by the subdivision agent if it meets the following criteria:

   a) Conforms with all of the provisions and requirements of this ordinance, proffered conditions, the zoning ordinance, and other applicable county rules and regulations;

   b) Conforms with the approved preliminary plat;

   c) Conforms with approved construction plans;

   d) Required improvements have been satisfactorily installed and completed or an acceptable performance guarantee has been filed with the county (see section 3.2.8.E, below).

4. Approved or corrected final plats shall be certified by the subdivision agent denoting approval.

5. Within forty-five (45) days of receipt of a resubmittal of plans previously disapproved, the subdivision agent shall provide written comments to the applicant indicating areas where the application is

not conforming with county requirements, or approval of the plans if applicable.

E. Performance guarantee. In lieu of installing and completing all required public improvements, the subdivision agent may approve a performance bond, cash, cash bond, or other acceptable performance guarantee to cover the costs of necessary improvements, in conjunction with all applicable legally binding performance agreements that include terms adequate to provide for future increases in costs.

F. Issuance of required permits. Upon construction plan approval by all pertinent authorities and receipt of required bond amounts, the applicant may apply for the necessary permits to begin site work and the installation of improvements. All site work shall be performed in compliance with the approved construction plan, the requirements of this ordinance, and other applicable county, state, or federal regulations. No required permit may be issued prior to construction plan approval.

G. Appeal of subdivision agent decision.

1. If the final plat is deferred or denied, the subdivision agent shall notify the applicant (in writing) of the reasons for deferral or denial. The applicant may appeal a decision to defer or deny in conformance with section 3.2.12, appeal of administrative decision.

2. Nothing in this section shall be interpreted so as to preclude the filing of a new final plat application for the same property if no appeal is pending and if the corresponding preliminary plat remains valid.

H. Expiration of approval. An approved final plat shall be recorded by the subdivider in the office of the clerk of the circuit court of Isle of Wight County within six (6) months of the date of final approval, or it is void (see section 3.2.3.D, plat approval and recordation required).

I. Duration of plat validity.

1. Generally. In compliance with Section 15.2-2261 of the Code of Virginia, an approved final plat which has been properly recorded in the office of the clerk of the circuit court of Isle of Wight County shall remain valid for a period of five (5) years from the date of final plat approval.

2. Specifically.

   a. The subdivider or developer may submit a written request for an extension of the expiration period if the request is submitted prior to the end of the initial period of validity. The planning commission may grant one (1) extension for a period of up to one (1) year taking into consideration the size and phasing of the proposed development, and the laws, ordinances and regulations in effect at the time of the request for an extension.

   b. Application for minor modifications to a recorded plat made during the period of validity does not constitute a waiver of the terms of plat validity nor does the approval of minor modifications extend the period of validity of a plat.

   c. Nothing contained in this section shall be construed to affect:

   1) The authority of the county to impose valid conditions upon approval of any special use permit, conditional use permit or special exception;
   2) The application of the Chesapeake Bay Preservation Ordinance (or other county ordinances adopted pursuant to the Chesapeake Bay Preservation Act) to individual lots on recorded plats; or
   3) The application of any county ordinance adopted to comply with the requirements of the federal Clean Water Act to individual lots on recorded plats.

3.2.9. Vacation of plat.

A. Generally. Any recorded final plat or portion of a recorded final plat, or any interest in streets, alleys, easements for public rights of passage, or easements for drainage granted to the board of supervisors as a condition of the approval, may be vacated according to the provisions of Sections 15.2-2270 through 15.2-2278 of the Code of Virginia.

B. Specifically.

   1. Any interest in streets, alleys, easements for public rights of passage, easements for drainage, and easements for a public utility as a condition of approval may be vacated in conformance with Section 15.2-2270 of the Code of Virginia.

2. Plats may be vacated before the sale of lots in conformance with Section 15.2-2271 of the Code of Virginia.

3. Plats may be vacated after the sale of lots in conformance with Sections 15.2-2272 and 15.2-2274 of the Code of Virginia.

4. Boundary lines may be vacated in conformance with [section] 3.2.3.B, waiver of subdivision requirements, and Section 15.2-2275 of the Code of Virginia provided the vacation does not involve the relocation or alteration of streets, alleys, easements for public passage, or other public areas.

5. A plat of subdivision may be vacated in conformance with Section 15.2-2278 of the Code of Virginia.

C. Approving authority. The board of supervisors shall serve as the approving authority for all plat vacation applications.

D. Application requirements. An application for vacation of plat approval shall be filed in conformance with section 3.2.1.C.

E. Action by the subdivision agent.

1. Upon receipt of a completed application, the subdivision agent shall forward the application documents to the appropriate entities for review.

2. The subdivision agent shall have sixty (60) days to review the application and approve the application as is, defer action for additional information and corrections, or deny it.

3. Approved applications shall be certified by the subdivision agent in writing.

F. Appeal of subdivision agent decision. If an application is deferred or denied, the subdivision agent shall notify the applicant (in writing) of the reasons for deferral or denial. The applicant may appeal a decision to defer or deny in conformance with section 3.2.12, appeal of administrative decision.

G. Duty of the clerk. Upon receipt of an approved and certified plat vacation, the clerk of circuit court of Isle of Wight County shall write in plain legible letters across such plat, or the part thereof so vacated, the word "vacated," and also make a reference on the plat to the volume

and page in which the instrument of vacation is recorded (see Section 15.2-2276 of the Code of Virginia).

3.2.10. Waiver.

A. Applicability. The board of supervisors may consider" waivers from certain requirements of this ordinance where the strict application of the requirement would cause unnecessary hardship to the subdivider.

B. Application requirements. A request for a waiver shall be filed in conformance with section 3.2.1.C.

C. Action by the subdivision agent. The subdivision agent shall review the request and place the completed application and the agent's recommendation on the next available board of supervisors meeting agenda.

D. Action by the board of supervisors.

1. The subdivision agent shall present the application at the board of supervisors meeting.

2. The applicant shall be present at the meeting to respond to questions.

3. Following the hearing on the application, the board of supervisors may approve, approve with conditions, deny, or continue an application.

E. Criteria for waiver. To approve a request for waiver, the board of supervisors shall make an affirmative finding that all of the following criteria are met:

1. That granting the waiver will not have an adverse impact on land use compatibility;

2. That strict adherence to the general regulations would result in substantial injustice or hardship;

3. The waiver has not been opposed in writing by the county, VDOT engineer, or health official;

4. That granting the administrative waiver shall be consistent with the purposes and intent of this ordinance.

3.2.11. Ordinance text amendment.

A. Applicability.

1. The board of supervisors shall consider amendments to the text of this ordinance, as may be required from time to time.

2. Amendments to the text of this ordinance shall be made in accordance with the provisions of this section and Section 15.2-2223 et seq. of the Code of Virginia.

3. A request to amend the text of this ordinance may be initiated by the board of supervisors, the planning commission, the subdivision agent, or a citizen.

B. Action by the subdivision agent. The subdivision agent shall prepare a staff report that reviews the proposed text amendment request in light of any applicable plans and the general requirements of this ordinance.

C. Action by the planning commission.

1. General procedures.

a. Before making any recommendation on a text amendment, the planning commission shall consider any recommendations from the subdivision agent and shall conduct a public hearing where interested parties may be heard.

b. Notice and public hearing requirements shall be in accordance with section 3.2.1.D, notice and public hearings.

c. The commission shall make its recommendation within ninety (90) days of its initial public hearing.

d. When a recommendation is not made within the time period, the board of supervisors may process the request without a commission recommendation.

2. Changed application. If the applicant makes significant changes to the application for a text amendment after the commission has made its recommendation, the subdivision agent may refer the modified request back to the commission for an additional public hearing.

D. Action by the board of supervisors.

1. Before taking action on a text amendment, the board of supervisors shall consider the recommendations of the planning commission and subdivision agent and shall conduct a public hearing.
2. Notice and public hearing requirements shall be in accordance with section 3.2.1.D, notice and public hearings.
3. Following the public hearing, the board of supervisors may approve the amendment, deny the amendment, or send the amendment back to the planning commission or a committee of the board of supervisors for additional consideration.

3.2.12. Appeal of administrative decision.

A. Applicability. An appeal by any person aggrieved by a final order, interpretation or decision of the administrative official authorized to make decisions in regard to the provisions of this ordinance may be taken to the board of supervisors, except as otherwise provided in this ordinance.

B. Application requirements.

1. An appeal of an administrative decision shall be taken by filing a written notice of appeal specifying the grounds for the appeal with the subdivision agent and the board of supervisors.
2. An application for an appeal of an administrative decision shall be filed with the planning and zoning department in accordance with section 3.2.1.C, application requirements.
3. A notice of appeal of an administrative decision shall be considered filed when a complete application is delivered to the subdivision agent.

C. Deadline for submission of application. Unless specified otherwise, an appeal of an administrative decision shall be filed with the board of supervisors within thirty (30) days of receipt of the decision.

D. Notice and public hearings. Upon receipt of a completed application, the subdivision agent shall schedule a public hearing at the first available board of supervisors meeting and give public notice as set forth in section 3.2.1.D, notice and public hearings.

E. Action by the subdivision agent. The subdivision agent shall transmit to the board of supervisors all the papers constituting the record of the action being appealed.

F. Action by board of supervisors.

1. The board of supervisors may reverse or affirm (wholly or partly) or may modify the order, requirement, decision, or determination being appealed and shall make any order, requirement, decision or determination that in its opinion ought to be made in the case before it. To this end, the board of supervisors shall have all the powers of the official being appealed.

2. If a motion to reverse or modify is not made or fails to receive the necessary number of votes to overturn the decision, then appeal shall be denied.

3. Any motion to overturn or modify a decision shall state the specific reasons or findings of fact that support the motion.

G. Effect of appeal.

1. An appeal shall stay all further activity resulting from the action appealed, unless the administrative official being appealed certifies to the board of supervisors that a stay would, in his or her opinion, cause imminent peril to life or property or that because the appeal is transitory in nature a stay would seriously interfere with the effective enforcement of this ordinance.

2. An appeal shall not stop action lawfully approved (including construction activities authorized by a building permit); only actions impacted by the appeal and presumed in violation of this ordinance are stayed.

H. Appeal of elected official decision. Appeal of the board of supervisors' action under this subsection may be taken by filing a petition for certiorari with the circuit court for Isle of Wight County. (Ord. No. 2011-15-C, 8-4-11; Ord. No. 2012-11-C, 10-18-12; 5-1-14; 11-19-15; 10-20-16; 8-8-19; 9-17-20; 3-18-22)

The motion was adopted unanimously (5-0) with Supervisors Acree, McCarty, Grice, Rosie and Jefferson voting in favor of the motion and no Supervisors voting against the motion.

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The Board took a recess and upon returning to open session, Chairman Jefferson called for the County Administrator's report.

Jamie Oliver, Transportation Planner, provided an update of recently completed transportation capital projects and studies and reviewed upcoming transportation grant opportunities.

Matters for the Board's information included the following:

. Development Activity Report – March 2022
. Incidents by Zone Data – February 2022
. Incidents by Zone May – February 2022
. Station Activity Report – February 2022
. Website Statistics – February 2022
. Museum Report – February 2022

UNFINISHED/OLD BUSINESS

On the subject of a proposal received regarding a farmer's market, Supervisor Grice moved to form a Task Force to include the Department of Economic Development, the Economic Development Authority, the Commissioner of Revenue, the Town of Smithfield, attorneys and two members of the Board of Supervisors and that the Task Force return with the data in sixty days (Task Force members are to be appointed at the Board's work session of April 7, 2022). The motion was adopted unanimously (4-1) with Supervisors Acree, McCarty, Grice and Rosie voting in favor of the motion and Supervisor Jefferson voting against the motion.

The primary mission of this Task Force is not to decide on the project or if any portion of the project should go forward, rather it is to look at the study to determine if it has merit and, if so, what a partnership between the Town of Smithfield and the County might look like.

NEW BUSINESS

Michelle Clark, Director of Human Resources, addressed the Board regarding the FY2022-23 health insurance renewal and recommended the Board adopt a Resolution to Approve the Employee Health Insurance Plan Offerings for Fiscal Year 2022-23.

Supervisor Grice moved that the following Resolution be adopted:

RESOLUTION TO APPROVE THE EMPLOYEE HEALTH INSURANCE PLAN OFFERINGS FOR FISCAL YEAR 2022-2023

WHEREAS the next Employee Health Insurance Plan Year takes effect July 1, 2022; and,

WHEREAS, the County participates in The Local Choice Health Insurance Program through Anthem and offers three plans; and,

WHEREAS, The Local Choice Anthem Key Advantage 250 Plan, Key Advantage 500 Plan, and High Deductible Health Plan (with Health Savings Account) are recommended to the Board of Supervisors as the three plan offerings available for the plan year beginning July 1, 2022.

NOW, THEREFORE, BE IT RESOLVED that the Health Insurance Plan offerings of The Local Choice Anthem Key Advantage 250 Plan, Key Advantage 500 Plan, and High Deductible Health Plan (with Health Savings Account) are available for employees with employer and employee contribution rates effective July 1, 2022 as referenced in the attached exhibit.

BE IT FURTHER RESOLVED that eligibility for participation in the Health Insurance Plan offerings is as follows: All regular full-time employees of the County, to include Appointees and Registrar, as well as elected officials to include Constitutional Officers and Board of Supervisors members, as well as local state-supported employees of the Isle of Wight Department of Social Services.

The motion was adopted unanimously (5-0) with Supervisors Acree, McCarty, Grice, Rosie and Jefferson voting in favor of the motion and no Supervisors voting against the motion.

George Rawls, Chairman, Stormwater Advisory Committee, requested authorization to begin a Stormwater Management Grant Pilot Program similar to the one utilized by James City County.

Supervisor McCarty moved that staff be authorized to move forward with the development of the Pilot Program. The motion was adopted unanimously (5-0) with Supervisors Acree, McCarty, Grice, Rosie and Jefferson voting in favor of the motion and no Supervisors voting against the motion.

Following up on the Board's action at its regular meeting of February 17, 2022 for staff to return to the Board's March meeting with an outline of how a Special Needs Commission will be formed, its makeup and its mission statement, Supervisor Acree moved to form a Citizens with Functional Needs Commission as presented and that the Board continue to work out the details required to make the Commission successful. The motion was adopted unanimously (5-0) with Supervisors Acree, McCarty, Grice, Rosie and Jefferson voting in favor of the motion and no Supervisors voting against the motion.

CLOSED MEETING

The following matter was identified for discussion in closed meeting by County Attorney Jones: A discussion regarding the performance of the County Attorney, pursuant to subsection 1.

Upon motion of Supervisor McCarty and all voting in favor (5-0), the Board entered the closed meeting for the reasons stated by County Attorney Jones.

Upon motion of Supervisor McCarty and all voting in favor (5-0), the Board reconvened into open meeting.

County Attorney Jones reminded the Board that in accordance with Section 2-10(G) of the Board's Rules & Procedure, all those who participated in the closed meeting are reminded that all matters discussed in closed meeting are to remain confidential,

as provided under the Virginia Freedom of Information Act, and that such matters as were discussed in closed meeting should not be acted upon or discussed in public by any participant unless and until a public, formal action of the Board of Supervisors is taken on that particular subject matter.

Upon motion of Supervisor McCarty and all voting in favor (5-0), the following Resolution was adopted:

CERTIFICATION OF CLOSED MEETING

WHEREAS, the Board of Supervisors has convened a closed meeting on this date pursuant to an affirmative recorded vote and in accordance with the provisions of the Virginia Freedom of Information Act; and,

WHEREAS, Section 2.2-3712(D) of the Code of Virginia requires a certification by this Board of Supervisors that such closed meeting was conducted in conformity with Virginia law;

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors hereby certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements by Virginia law were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion convening the closed meeting were heard, discussed or considered by the Board of Supervisors.

VOTE

AYES: Acree, Grice, Jefferson, McCarty. Rosie

NAYS: 0

ABSENT DURING VOTE: 0

ABSENT DURING MEETING: 0

ADJOURNMENT

At 11:15 p.m., Chairman Jefferson declared the meeting adjourned.

_____
Rudolph Jefferson, Chairman

_____
Carey Mills Storm, Clerk

MEETING OF THE ISLE OF WIGHT COUNTY BOARD OF SUPERVISORS HELD IN THE ROBERT C. CLAUD, SR. BOARD ROOM OF THE ISLE OF WIGHT COUNTY COURTHOUSE LOCATED AT 17090 MONUMENT CIRCLE, ISLE OF WIGHT, VIRGINIA ON THURSDAY, THE TWENTY-FIRST DAY OF APRIL IN THE YEAR TWO THOUSAND AND TWENTY-TWO

PRESENT:

Rudolph Jefferson, District 3, Chairman
William M. McCarty, District 2, Vice-Chairman
Richard L. Grice, District 1
Don G. Rosie, II, District 5

ABSENT

Joel C. Acree, District 4

ALSO IN ATTENDANCE:
Mandy Rogers, Attorney
Randy R. Keaton, County Administrator
Donald T. Robertson, Assistant County Administrator
Carey Mills Storm, Clerk

CALL TO ORDER

Chairman Jefferson called the meeting to order at 4:00 p.m.

APPROVAL OF AGENDA

Supervisor McCarty moved that the agenda be approved as presented. The motion was adopted unanimously (4-0) with Supervisors Jefferson, McCarty, Grice and Rosie voting in favor of the motion; no Supervisor voting against the motion; and Supervisor Acree absent from the meeting.

SPECIAL PRESENTATION

Michelle Clark, Director of Human Resources, introduced Stasey Whichel, Evergreen Solutions, who provided a virtual overview of the Compensation & Classification Study currently underway.

CLOSED MEETING

The following matters were identified for discussion in closed meeting by Attorney Mandy Rogers: A discussion concerning a prospective business or the expansion of an existing business where no previous announcement has been made of business' interest in locating or `expanding its facilities in the Shirley T. Holland Industrial Park and/or the Rt. 460 83-acre site, pursuant to subsection 5 and a discussion regarding the appointment of specific appointees to County boards, committee or authorities as set forth in the agenda, pursuant to subsection 1.

Upon motion of Supervisor McCarty, the Board entered the closed meeting for the reasons stated by Attorney Rogers. The motion was adopted unanimously (4-0) with Supervisors Jefferson, McCarty, Grice and Rosie voting in favor of the motion; no Supervisor voting against the motion; and Supervisor Acree absent from the meeting,

Upon motion of Supervisor McCarty and all voting in favor (4-0), the Board reconvened into open meeting.

Attorney Rogers reminded the Board that in accordance with Section 2-10(G) of the Board's Rules & Procedure, all those who participated in the closed meeting are reminded that all matters discussed in closed meeting are to remain confidential, as provided under the Virginia Freedom of Information Act, and that such matters as were discussed in closed meeting should not be acted upon or discussed in public by any participant unless and until a public, formal action of the Board of Supervisors is taken on that particular subject matter.

Upon motion of Supervisor McCarty and all voting in favor (4-0), the following Resolution was adopted:

CERTIFICATION OF CLOSED MEETING

WHEREAS, the Board of Supervisors has convened a closed meeting on this date pursuant to an affirmative recorded vote and in accordance with the provisions of the Virginia Freedom of Information Act; and,

WHEREAS, Section 2.2-3712(D) of the Code of Virginia requires a certification by this Board of Supervisors that such closed meeting was conducted in conformity with Virginia law;

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors hereby certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements by Virginia law were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion convening the closed meeting were heard, discussed or considered by the Board of Supervisors.

VOTE

AYES: Acree, Grice, Jefferson, McCarty. Rosie

NAYS: 0

ABSENT DURING VOTE: 0

ABSENT DURING MEETING: 0

INVOCATION

Supervisor McCarty delivered the invocation and led the pledge of allegiance to the American Flag.

CITIZENS' COMMENTS

Steven Kirkpatrick, Board of Directors, Western Tidewater Free Clinic, thanked the Board for its past financial support and reported on services provided by that clinic to County residents last year.

Volpe Boykin of District 5 expressed support of the Resolution to Amend the Budget

and Appropriate Funding from Community Partners for the Sheriff's Office National Night Out Program ($2,000) under the Consent Agenda.

Shelley Perry of District 3 expressed concern with increases in taxes and her water bill.

Herb DeGroft of Mill Swamp Road spoke in support of School Resource Officers being in the County's elementary schools.

CONSENT AGENDA

A. Resolution to Appoint Gary L. Eanes, Partner, of Wampler-Eanes Appraisal Group Ltd., Assessor for the FY23 General Reassessment of Real Estate for Isle of Wight County

B. Resolution to Amend the FY2021-22 Grant Fund Budget and Appropriate Funds from the Virginia Department of Motor Vehicles Animal Friendly License Plate Program ($960)

C. Resolution to Amend the Budget and Transfer Funds to the Debt Service Reserve Fund ($437,000)

D. Resolution to Amend the FY2021-22 Grant Fund Budget and Appropriate Coronavirus (COVID-19) Pandemic Safe Opening and Operation Work Eligible for FEMA Public Assistance ($208,669)

E. Resolution to Amend the Budget and Appropriate Funding from Community Partners for the Sheriff's Office National Night Out Program ($2,000)

F. Resolution to Designate the Month of May 2022 as Business Appreciation Month

G. Employment Agreement for the County Attorney

H. Resolution to Budget and Appropriate Insurance Proceeds from VaCorp Risk Management and Progressive Insurance for Repairs of County Property ($3,407)

I. Minutes

. January 10, 2022 Retreat Minutes
. March 3, 2022 Work Session Minutes
. April 7, 2022 Work Session Minutes

Supervisor McCarty moved that the Consent Agenda be adopted as presented. The motion was adopted unanimously (4-0) with Supervisors Jefferson, McCarty, Grice and Rosie voting in favor of the motion; no Supervisor voting against the motion; and Supervisor Acree absent from the meeting.

REGIONAL AND INTER-GOVERNMENTAL REPORTS

No reports were offered.

APPOINTMENTS

Chairman Jefferson moved that James Ford be reappointed to represent District 3 on the Economic Development Authority. The motion was adopted unanimously (4-0) with Supervisors Jefferson, McCarty, Grice and Rosie voting in favor of the motion; no Supervisor voting against the motion; and Supervisor Acree absent from the meeting.

SPECIAL PRESENTATIONS

Tommy Catlett, Franklin Residency, VDOT, provided updates on maintenance and construction.

Supervisor McCarty notified Mr. Catlett about potholes on Smith's Neck Road and Titus Creek. He advised that there is not adequate room for a vehicle to wait before merging into oncoming traffic coming out of Channel Way.

COUNTY ATTORNEY'S REPORT

No report was offered.

PUBLIC HEARINGS

A. Resolution to Approve the VDOT FY2023-2028 Secondary Six-Year Improvement Plan

Jamie Oliver, Transportation Planner, advised that the Plan shows an increase this year of $120,000. It was reported that Rattlesnake Trail will be paved this year and Woody's Acre Way and Blair Creek Way will remain in the Plan and be paved in FY2025.

Chairman Jefferson opened the public hearing and called for persons to speak in favor of or in opposition to the proposed Resolution.

No one appeared in favor or in opposition.

Chairman Jefferson closed the public hearing and called for comments from the Board.

Supervisor McCarty moved that the following Resolution be adopted:

RESOLUTION OF THE BOARD OF SUPERVISORS OF ISLE OF WIGHT COUNTY TO APPROVE PRIORITIES FOR THE VIRGINIA DEPARTMENT OF TRANSPORTATION'S SECONDARY SIX-YEAR IMPROVEMENT PROGRAM FOR FY 2022 THROUGH FY 2027

WHEREAS, Sections 33.2-331 of the Code of Virginia (1950, as amended) provide the opportunity for each county to work with the Virginia Department of Transportation (VDOT) in developing a Secondary Six-Year Improvement Program (SSYIP); and,

WHEREAS, this Board has held a public hearing on the proposed Plan (FY 2023-FY 2028), in accordance with VDOT policies and procedures, on April 21, 2022 and all citizens of the County had the opportunity to make comments and recommendations concerning the proposed Program; and,

WHEREAS, VDOT Local Program and Residency staff have reviewed and concurred with the proposed SSYIP (FY 2023-FY 2028).

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of the County of Isle of Wight Virginia that the Secondary Six-Year Improvement Program for FY 2023-2028 is hereby approved, as presented at the public hearing.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to execute all Program documents and make such accounting adjustments and execute such agreements and contracts for projects as necessary to proceed with the Program as approved.

The motion was adopted unanimously (4-0) with Supervisors Jefferson, McCarty, Grice and Rosie voting in favor of the motion; no Supervisor voting against the motion; and Supervisor Acree absent from the meeting.

B. Proposed Operating and Capital Budgets for Fiscal Year 2022-23, Related Ordinances, and the FY2023-32 Capital Improvements Plan. Under the General Fund

County Administrator Keaton advised that the proposed FY2022-23 Operating and Capital Budgets include an advertised General Fund Operating Budget of $88,986,738 which equates to a $4.7 million increase over the FY22 General Fund Budget; includes a $687,000 transfer to Capital Projects; and includes 11 new positions. Under Taxes, the County's real estate tax rate of $0.85 remains unchanged; the Personal Property tax rate is $3.90 (a $.60 decrease); $65.5 million is included from General Property taxes; other taxes remain unchanged; includes a proposal to increase connection fees; and a 5% increase in the water consumption rate. Under General Fund revenues, there were increases in Real Estate Taxes, Personal Property Taxes, Sales & Use Taxes, Meals Tax, M&T Taxes, County tax on recordation/wills and EMS charges. There were decreases in interest, business equipment, public service real estate, utility tax and the communications tax. Under General Fund Expenses, there were increases in the Pay Plan and a 4% COLA, new positions, Public Safety, school system, capital projects and Social Services. There were decreases in the Debt Service Reserve and a transfer to Public Utilities. Under staffing, there are 11 new proposed positions and one position from part-time to full-time. Compensation/benefits include salary study adjustments, a 4% salary adjustment and an increase in health insurance premiums. Debt service is at $12.8 million which includes the 2020 and 2022 General

Obligation Bonds, a 3.4% increase, no increase in the Real Estate Tax rate and a Debt Service Reserve Fund of $5 million.

Chairman Jefferson called for persons to speak in favor of or in opposition to the proposed budgets, ordinances and Capital Improvements Plan.

Steve Kepnes, Chief Financial Officer, School Division, on behalf of Dr. Thornton, thanked the Board for its past financial support and stated the schools are requesting a 1.97% local increase.

Jonathan Powell of 14220 Bowling Green Road in Windsor spoke in support of the Georgia D. Tyler Middle School and requested that the Board approve the school's 2022-23 budget.

Candice Phelps, Counselor at Smithfield High School, requested that the Board fully fund the school's budget.

Angela Gibson of the Newport District requested the Board's full support of the school's 2022-23 budget.

Dana Fowler of Suffolk who has two children who attend Windsor High School requested the Board to fully fund the school's 2022-23 request.

Volpe Boykin of District 5 asked the Board to ensure that School funds are not being spent on anything that is in violation of the Governor's Executive Order #1 and the directives from the current Virginia Department of Education. He added that the School Division should provide a detailed accounting of what the funds are spent on.

Shelley Perry of District 3 stated the Board should be reviewing any funds spent by the School Board and that it should be held accountable for any funds spent.

Pam Vaughan of District 5 spoke in favor of the Blackwater Regional Library Board's request for funding. She provided an overview of the services provided by that Board.

Jason Moore of Zuni spoke in favor of the Board approving the school's budget. He advised that he has children attending the Windsor Elementary and Windsor High

schools and he has witnessed exceptional growth, academically, socially and personally in his children.

Chairman Jefferson closed the public hearing and called for comments from the Board.

It was noted that under the Code of Virginia, the Board cannot act on the budget for a minimum of seven days following the public hearing.

C. Ordinance Amendment for Electronic Summons

Chairman Jefferson opened the public hearing and called for persons to speak in favor of or in opposition to the proposed ordinance amendment.

No one appeared and spoke.

Chairman Jefferson closed the public hearing and called for comments from the Board.

Supervisor McCarty moved that the following ordinance amendment be adopted:

ORDINANCE ADOPTING CHAPTER 1, SEC. 1-7.4. - ELECTRONIC SUMMONS SYSTEM ASSESSMENT TO THE CODE OF THE COUNTY OF ISLE OF WIGHT, VIRGINIA

WHEREAS, pursuant to Va. Code §17.1-279.1, the governing body of any locality may impose a fee not to exceed $5.00 as part of the costs for each criminal and traffic case in both the District Court, and the Circuit Court; and

WHEREAS, said fee must be used to fund software, hardware, and associated equipment costs for the implementation and maintenance of an electronic summons system; and

WHEREAS, the Isle of Wight County Board of Supervisors desires to assess said "Electronic Summons System" fee.

NOW, THEREFORE, BE IT ORDAINED that the Isle of Wight County Board of Supervisors hereby adopts Chapter 1, Sec. 1-7.4. - Electronic Summons System Assessment - to the Code of the County of Isle of Wight, Virginia, as stated below:

> Sec. 1-7.4 - Electronic Summons System Assessment
> There shall be imposed an electronic summons system fee of five dollars ($5.00) on any defendant convicted of any statute or ordinance in each criminal or traffic case in Isle of Wight County District or Circuit Court. The fee shall be ordered as a part of court costs collected by the appropriate clerk of the court and shall be remitted to the Isle of Wight County Treasurer subject to appropriation by the Isle of Wight County Board of Supervisors to the Isle of Wight County Sheriff's Department for the funding and maintenance of an electronic summons system, in accordance with the provisions of §17.1-279.1 of the Code of Virginia,1950, as amended.

BE IT FURTHER ORDAINED that this ordinance shall be effective on July 1, 2022, at 12:01 a.m.

The motion was adopted unanimously (4-0) with Supervisors Jefferson, McCarty, Grice and Rosie voting in favor of the motion; no Supervisor voting against the motion; and Supervisor Acree absent from the meeting.

D. Updates to the Cable Franchise Ordinance

Chairman Jefferson opened the public hearing and called for those to speak in favor of or in opposition to the proposed updates.

Shelley Perry of District 3 commented that she would like to see another company provide service in the County to give Charter competition.

Chairman Jefferson closed the public hearing and called for comments from the Board.

Supervisor McCarty clarified that any company could come into the County at any time and offer service.

Supervisor McCarty moved that the following revisions to the Cable Franchise ordinance be adopted:

CHAPTER 4.1. - CABLE FRANCHISE ORDINANCE.

An ordinance granting a nonexclusive franchise to Spectrum Southeast, LLC, locally known as CHARTER COMMUNICATIONS, hereinafter referred to as the "Grantee." to operate and maintain a community television system; setting forth conditions accompanying the grant of franchise; providing for the county regulation of the community television system; and prescribing penalties for the violation of its provisions.

Be it ordained by the board of supervisors of Isle of Wight County, Virginia, hereinafter referred to as the "Grantor" that

SECTION 1
Definition of Terms

1.1 **Terms**. For the purpose of this franchise the following terms, phrases, words and their derivations shall have the meaning ascribed to them in the Cable Communications Policy Act of 1984, as amended from time to time (the "Cable Act"), unless otherwise defined herein. When not inconsistent with the context, words used in the present tense include the future, words in the plural number include the singular number, and words in the singular number include the plural number. The word "shall" is mandatory and "may" is permissive. Words not defined shall be given their common and ordinary meaning.

A. "Cable System," "Cable Service," and "Basic Cable Service" shall be defined as set forth in the Cable Act.

B. "Board" shall mean the governing body of the Grantor.

C. "Cable Act" shall mean the Cable Communication Policy Act of 1984, as amended, 47 U.S.C. §§ 521, et. seq.

D. "Channel" shall mean a portion of the electromagnetic frequency spectrum which is used in a cable system and which is capable of delivering a television channel.

E. "Equipment" shall mean any poles, wires, cable, antennae, underground conduits, manholes, and other conductors, fixtures, equipment and other facilities used for the maintenance and operation of physical facilities located in the Streets, including the Cable System.

F. "FCC" shall mean the Federal Communications Commission and any successor governmental entity thereto.

G. "Franchise" shall mean the non-exclusive rights granted pursuant to this Franchise to construct operate and maintain a Cable System along the public ways within all or a specified area in the Franchise Area.

H. "Franchise Area" shall mean the geographic boundaries of the Grantor, except any separate lawful municipal jurisdiction located therein, and shall include any additions thereto by annexation or other legal means.

I. "Gross Revenue" means the same meaning as that term is defined in Virginia Code § 15.2-2108.19, meaning all revenue, as determined in accordance with generally accepted accounting principles, that is actually received by the Grantee and derived from the operation of the Cable System to provide Cable Service in the Service Area.

J. "Service Area" shall mean the area described in subsection 6.1 hereto.

K. "Standard Installation" shall mean installations to residences and buildings that are located up to 125 feet from the point of connection to Grantee's existing distribution system.

L. "State" shall mean the State of Virginia.

M. "Street" shall include each of the following located within the Franchise Area: public streets, roadways, highways, bridges, land paths, boulevards, avenues, lanes, alleys, sidewalks, circles, drives, easements, rights of way and similar public ways and extensions and additions thereto, including but not limited to public utility easements, dedicated utility strips, or rights-of-way dedicated for compatible uses now or

hereafter held by the Grantor in the Franchise Area, which shall entitle the Grantee to the use thereof for the purpose of installing, operating, extending, repairing and maintaining the Cable System.

N. "Subscriber" shall mean any Person lawfully receiving Cable Service from the Grantee.

SECTION 2
Grant of Franchise

2.1 Grant. The Grantor hereby grants to the Grantee a nonexclusive Franchise which authorizes the Grantee to erect, construct, extend, operate and maintain in, upon, along, across, above, over and under the Streets, now in existence and as may be created or established during its terms, all Equipment, including the Cable System. Nothing in this Franchise shall be construed to prohibit the Grantee from offering any service over its Cable System that is not prohibited by federal or State law. This ordinance and the right it grants to Grantee to use and occupy the public rights-of-way shall not be exclusive, and the Grantor reserves the right to grant other franchises for similar uses or for other uses of the public rights-of-way, or any portions thereof, to any person, or to make any such use itself, at any time, in accordance with the Virginia Act and other applicable law. This ordinance will serve as the basis for a franchise that may be granted to other than the Grantee.

2.2 Term. The Franchise and the rights, privileges and authority hereby granted shall be for an initial term ***of ten (10) years***, commencing on the Effective Date of this Franchise as set forth in Section 15.13. This Franchise will be automatically extended for an additional term of five (5) years, unless either party notifies the other in writing of its desire to not exercise this automatic extension (and enter renewal negotiations under the Cable Act) at least three (3) years before the expiration of this Franchise. If such a notice is given, the parties will then proceed under the federal Cable Act renewal procedures.

2.3 Police Powers. The Grantee agrees to comply with the terms of any lawfully adopted generally applicable local ordinance necessary to the safety, health, and welfare of the public, to the extent that the provisions of the ordinance do not have

the effect of limiting the benefits or expanding the obligations of the Grantee that are granted by this Franchise. This Franchise is a contract and except as to those changes which are the result of the Grantor's lawful exercise of its general police power, the Grantor may not take any unilateral action which materially changes the mutual promises in this contract.

2.4 **Cable System Franchise Required**. No Cable System shall be allowed to occupy or use the streets or public rights-of-way of the Franchise Area or be allowed to operate without a Cable System Franchise.

SECTION 3
Franchise Renewal

3.1 **Procedures for Renewal**. The Grantor and the Grantee agree that any proceedings undertaken by the Grantor that relate to the renewal of the Grantee's Franchise shall be governed by and comply with the provisions of Section 626 of the Cable Act, or any such successor statute.

SECTION 4
Indemnification and Insurance

4.1 **Indemnification**. The Grantee shall, by acceptance of the Franchise granted herein, defend the Grantor, its officers, boards, commissions, agents, and employees for all claims for injury to any Person or property caused by the negligence of Grantee in the construction or operation of the Cable System and in the event of a determination of liability shall indemnify and hold Grantor, its officers, boards, commissions, agents, and employees harmless from any and all liabilities, claims, demands, or judgments growing out of any injury to any Person or property as a result of the negligence of Grantee arising out of the construction, repair, extension, maintenance, operation or removal of its wires, poles or other equipment of any kind or character used in connection with the operation of the Cable System, provided that the Grantor shall give the Grantee written notice of its obligation to indemnify the Grantor within ten (10) days of receipt of a claim or action pursuant to this Section. In the event any such claim arises, the Grantor shall tender the defense thereof to the Grantee and the Grantee shall have the right to defend, settle or compromise any claims arising hereunder and the Grantor shall cooperate fully herein. If the Grantor determines in good faith that its interests cannot be represented by the Grantee, the Grantee shall be excused from any obligation to represent the Grantor. Notwithstanding the foregoing, the Grantee shall not be obligated to indemnify the

Grantor for any damages, liability or claims resulting from the willful misconduct or negligence of the Grantor or for the Grantor's use of the Cable System.

4.2 Insurance.

A. The Grantee shall maintain throughout the term of the Franchise insurance in amounts at least as follows:

Workers' Compensation	Statutory Limits
Commercial General Liability	$1,000,000 per occurrence, $2,000,000 General Aggregate
Auto Liability including coverage on all owned, non-owned hired autos	$1,000,000 per occurrence Combined Single Limit
Umbrella Liability	$1,000,000 per occurrence

B. The Grantor shall be added as an additional insured, arising out of work performed by Grantee, to the above Commercial General Liability, Auto Liability and Umbrella Liability insurance coverage.

C. The Grantee shall furnish the Grantor with current certificates of insurance evidencing such coverage upon request.

4.3 No liability against Grantor. Except as otherwise provided by applicable law, The Grantee shall have no monetary recourse whatsoever against the Grantor, the board of supervisors, any member thereof, or any officer, agent, employee or member of a board or commission of the Grantor for any loss, cost, expense or damage occasioned by any requirement or duty imposed on Grantee by this ordinance or because of the enforcement of any such requirement or duty in accordance with this ordinance, but excepting there from liability arising out of any claim, demand, cause of action or proceeding resulting from the negligence or willful misconduct of the Grantor, the board of supervisors, any member thereof, or any officer, agent, employee or member of a board or commission of the Grantor, or resulting from the negligence or willful misconduct of the Grantor's use of the cable system, including any PEG channels. Additionally, this shall not prohibit the Grantee from seeking any other remedy that Grantee may have under applicable law.

SECTION 5
Service Obligations

5.1 **No Discrimination**. Grantee shall not deny service, deny access, or otherwise discriminate against Subscribers, Channel users, or general citizens on the basis of race, color, religion, national origin, age or sex.

5.2 **Privacy**. The Grantee shall fully comply with the privacy rights of Subscribers as contained in Cable Act Section 631 (47 U.S.C. § 551).

SECTION 6
Service Availability

6.1 **Service Area**. Subject to applicable law, the Grantee shall continue to provide Cable Service to all residences within the Franchise Area where Grantee currently provides Cable Service (the "Service Area"). Grantee shall have the right, but not the obligation, to extend the Cable System into any other portion of the Franchise Area, including annexed areas. Cable Service offered to Subscribers pursuant to this Franchise shall be conditioned upon Grantee having legal access on reasonable terms and conditions to any such Subscriber's dwelling unit or other units wherein such Cable Service is provided.

SECTION 7
Construction and Technical Standards

7.1 **Compliance with Codes**. All construction practices and installation of equipment shall be done in accordance with all applicable law, including, but not limited to, all applicable sections of the National Electric Safety Code.

7.2 **Construction Standards and Requirements**. All of the Grantee's Equipment shall be installed, located, erected, constructed, reconstructed, replaced, removed, repaired, maintained and operated in accordance with good engineering practices and performed by experienced maintenance and construction personnel.

7.3 **Safety**. The Grantee shall at all times employ ordinary care and shall use commonly accepted methods and devices preventing failures and accidents which are likely to cause damage.

7.4 **Network Technical Requirements**. The Cable System shall be designed, constructed and operated so as to meet those technical standards adopted by the

FCC relating to Cable Systems contained in part 76 of the FCC's rules and regulate as may be amended from time to time.

7.5 Conditions of road and street occupancy. The Grantee shall install and maintain its wires, cables, fixtures, and other equipment in accordance with the requirements of the National Electrical Code as applicable in the county, and in such manner that they will not interfere with any installation of the Virginia Department of Transportation, Grantor or of a public utility serving the Grantor.

SECTION 8
Conditions on Street Occupancy

8.1 General Conditions. Grantee shall have the right to utilize existing poles, conduits and other facilities whenever possible, and shall not construct or install any new, different, or additional poles, conduits, or other facilities on public property provided Grantee is able to access existing poles, conduits, or other facilities on reasonable terms and conditions.

8.2 Underground Construction. The facilities of the Grantee shall be installed underground in those Service Areas where existing telephone and electric services are both underground at the time of system construction. In areas where either telephone or electric utility facilities are installed aerially at the time of system construction, the Grantee may install its facilities aerially with the understanding that at such time as the existing aerial facilities are required to be placed underground by the Grantor, the Grantee shall likewise place its facilities underground. In the event Grantor or any agency thereof directly or indirectly reimburses any utility for the placement of cable underground or the movement of cable, Grantee shall be similarly reimbursed.

8.3 Construction Codes and Permits. Grantee shall obtain all legally required permits before commencing any construction work, including the opening or disturbance of any Street within the Franchise Area, provided that such permit requirements are of general applicability and such permitting requirements are uniformly and consistently applied by the Grantor as to other public utility companies and other entities operating in the Franchise Area. The Grantor shall cooperate with the Grantee in granting any permits required, providing such grant and subsequent construction by the Grantee shall not unduly interfere with the use of such Streets.

8.4 **System Construction**. All transmission lines, equipment and structures shall be so installed and located as to cause minimum interference with the rights and reasonable convenience of property owners and at all times shall be kept and maintained in a safe, adequate and substantial condition, and in good order and repair. The Grantee shall, at all times, employ ordinary care and use commonly accepted methods and devices for preventing failures and accidents which are likely to cause damage, injuries, or nuisances to the public. Suitable barricades, flags, lights, flares or other devices shall be used at such times and places as are reasonably required for the safety of all members of the public. Any poles or other fixtures placed in any public way by the Grantee shall be placed in such a manner as not to interfere with the usual travel on such public way.

8.5 **Restoration of Public Ways**. Grantee shall, at its own expense, restore any damage or disturbance caused to the public way as a result of its operation, construction, or maintenance of the Cable System to a condition reasonably comparable to the condition of the Streets immediately prior to such damage or disturbance.

8.6 **Tree Trimming**. Grantee or its designee shall have the authority to trim trees on public property at its own expense as may be necessary to protect its wires and facilities.

8.7 **Relocation for the Grantor**. The Grantee shall, upon receipt of reasonable advance written notice, to be not less than ten (10) business days, protect, support, temporarily disconnect, relocate, or remove any property of Grantee when lawfully required by the Grantor pursuant to its police powers. Grantee shall be responsible for any costs associated with these obligations to the same extent all other users of the Grantor rights-of-way are responsible for the costs related to the relocation of their facilities.

8.8 **Relocation for a Third Party**. The Grantee shall, on the request of any Person holding a lawful permit issued by the Grantor, protect, support, raise, lower, temporarily disconnect, relocate in or remove from the Street as necessary any property of the Grantee, provided that the expense of such is paid by any such Person benefiting from the relocation and the Grantee is given reasonable advance written notice to prepare for such changes. The Grantee may require such payment in advance. For purposes of this subsection, "reasonable advance written notice" shall be no less than ten (10) business days in the event of a temporary relocation and no less than one hundred twenty (120) days for a permanent relocation.

8.9 **Reimbursement of Costs**. If funds are available to any Person using the Streets for the purpose of defraying the cost of any of the foregoing, the Grantor shall reimburse the Grantee in the same manner in which other Persons affected by the requirement are reimbursed. If the funds are controlled by another governmental entity, the Grantor shall make application for such funds on behalf of the Grantee.

8.10 **Emergency Use**. Grantee shall comply with 47 U.S.C. 544(g) and all regulations issued pursuant thereto with respect to an Emergency Alert System ("EAS").

SECTION 9
Service and Rates

9.1 **Phone Service**. The Grantee shall maintain a toll-free telephone number and a phone service operated to receive complaints and requests for repairs or adjustments at any time.

9.2 **Notification of Service Procedures**. The Grantee shall furnish each Subscriber at the time service is installed, written instructions that clearly set forth information concerning the procedures for making inquiries or complaints, including the Grantee's name, address and local telephone number. Grantee shall give the Grantor notice of any changes in rates, programming services or Channel positions in accordance with applicable law.

9.3 **Rate Regulation**. Grantor shall have the right to exercise rate regulation to the extent authorized by law, or to refrain from exercising such regulation for any period of time, at the sole discretion of the Grantor. If and when exercising rate regulation, the Grantor shall abide by the terms and conditions set forth by the FCC. Nothing herein shall be construed to limit the Grantee's ability to offer or provide bulk rate discounts or promotions.

9.4 **Continuity of Service**. It shall be the right of all Subscribers to continue receiving Cable Service insofar as their financial and other obligations to the Grantee are honored, and subject to Grantee's rights under Section 15.2 of this Franchise.

SECTION 10
Franchise Fees

10.1 **Communications Sales and Use Tax.** The Grantee shall comply with all applicable requirements of the provisions of Virginia Code § 58.1-645 *et seq.*, as the same may be amended from time to time (the "Virginia Communications Sales and

Use Tax"). Should, at any time during the term of this Franchise, the Virginia Communications Sales and Use Tax be repealed or amended to reduce or eliminate the payment of taxes by the Grantee on the provision of Cable Services over the Cable System, Grantor may, to the extent allowable under applicable law, require, upon one hundred twenty (120) days' written notice, that the Grantee pay to the Grantor a franchise fee based on Gross Revenue in an amount established by Grantor that is no greater than that allowed by federal law; provided, however, that (i) any such requirement to pay a franchise fee applies equally to all franchised Grantees in the Service Area; (ii) the Grantee shall not be compelled to pay a higher percentage of gross revenue as franchise fees than any other franchised Grantee providing service in the Service Area; and (iii) Grantee shall not be obligated to pay franchise fees on revenues not included in gross revenues by any other franchised Grantee in the Service Area. Any payment of franchise fees to Grantor pursuant to this Section 10 shall be made on a quarterly basis and shall be due forty-five (45) days after the close of each quarter. Each such franchise fee payment shall be accompanied by a brief report prepared by a representative of Grantee that shows the basis for the computation of all Gross Revenue derived during the period for which such franchise fee payment is made.

10.2 **No limitation on taxing authority.** Nothing in this ordinance shall be construed to limit any authority of the Grantor to impose any tax, fee, or assessment of general applicability.

SECTION 11
Transfer of Franchise

11.1 **Franchise Transfer**. The Franchise granted hereunder shall not be assigned, other than by operation of law or to an entity controlling, controlled by, or under common control with the Grantee, without the prior consent of the Grantor, such consent not to be unreasonably withheld or delayed. No such consent shall be required, however, for a transfer in trust, by mortgage, by other hypothecation, or by assignment of any rights, title, or interest of the Grantee in the Franchise or Cable System to secure indebtedness. Within thirty (30) days of receiving a request for transfer, the Grantor shall notify the Grantee in writing of any additional information it reasonably requires to determine the legal, financial and technical qualifications of the transferee. If the Grantor has not taken action on the Grantee's request for transfer within one hundred twenty (120) days after receiving such request, consent by the Grantor shall be deemed given.

SECTION 12
Records

12.1 Inspection of Records. Grantee shall permit any duly authorized representative of the Grantor, upon receipt of advance written notice, to examine during normal business hours and on a non-disruptive basis any and all of Grantee's records maintained by Grantee as is reasonably necessary to ensure Grantee's compliance with the material terms of this Franchise. Such notice shall specifically reference the subsection of the Franchise that is under review so that the Grantee may organize the necessary books and records for easy access by the Grantor. The Grantee shall not be required to provide Subscriber information in violation of Section 631 of the Cable Act. The Grantor agrees to treat as confidential any books, records or maps that constitute proprietary or confidential information to the extent Grantee makes the Grantor aware of such confidentiality. If the Grantor believes it must release any such confidential books, records, or maps in the course of enforcing this Franchise, or for any other reason, it shall advise Grantee in advance so that Grantee may take appropriate steps to protect its interests. Until otherwise ordered by a court or agency of competent jurisdiction, the Grantor agrees that, to the extent permitted by State and federal law, it shall deny access to any of Grantee's books, records, or maps marked confidential, as set forth above, to any Person.

12.2 Communications with regulatory agencies. The Grantee shall provide to the Grantor, upon written request as required in Paragraph 15.8, a copy of any reports submitted by Grantee to the FCC or any other federal or State regulatory authority which directly concerns the Grantee's cable system in the franchise area. Copies of responses from these regulatory agencies to Grantee shall likewise be furnished to the Grantor upon written request as required in Paragraph 15.8.

12.3 Summary of resolved cable service complaints. The Grantee shall furnish to the Grantor, upon written request as required in Paragraph 15.8, a compilation summarizing the cable service complaints received and resolved during the reported year regarding interruptions or degradation of cable service in the franchise area.

12.4 Maps. Grantee shall maintain a current strand map showing the location of the cable system in the franchise area. The map shall be updated on a semi-annual basis if changes have been made. The Grantee shall furnish a copy of the strand map to the Grantor upon written request as required in Paragraph 15.8.

SECTION 13
Public Education and Government (PEG) Access

13.1 PEG Access. Grantee shall provide one Channel on the Cable System for use by the Grantor for non-commercial, video programming for public, education and government ("PEG") access programming. The PEG Channel may be placed on any tier of service available to Subscribers.

13.2 Additional PEG channels. If the Grantor substantially utilizes its initial public, educational, and governmental access channel provided in Paragraph 13.1, it may by ordinance, after a public hearing to ascertain community need, and by notice to the Grantee as set forth in Paragraph 15.8, require one additional public, educational, and governmental access channel. Such additional PEG channel shall be placed on the limited basic cable service with a channel designation number close to the channel number designated for the PEG channel described in Paragraph 13.1, if channel capacity at such designated location is available. Otherwise, Grantee will inform Grantor of options for location of the then two channels for approval by Grantor. For purposes of this subdivision, a public, educational, and governmental access channel, PEG channel, shall be considered to be "substantially utilized" when its content consists of locally produced, non-duplicative, non-automated (or character-generated) programming on a continuous basis for at least six consecutive weeks exceeding an average of seventy percent of all viewable hours. Any such ordinance must apply equally to all providers of cable service and/or video service providers within the franchise area.

The additional public, educational, and governmental access channel provided pursuant to such an ordinance that is not substantially utilized by the Grantor, as defined in this Paragraph, shall no longer be made available to the Grantor, but may be programmed at the Grantee's discretion. At such time as the Grantor can provide written certification to the Grantee of a schedule that meets the "substantially utilized" definition, the Grantee shall restore the previously re-allocated channel.

13.3 Interconnection. In the event of a request from any existing or future cable service franchisee**,** Grantee may interconnect its system with such franchisees in order to permit transmission of PEG programming on such other franchisees cable systems, subject to applicable law. Grantee may, in its discretion, negotiate in good faith with such franchisees respecting reasonable, mutually convenient, cost-effective, and technically viable interconnection points, methods, terms and conditions. Upon mutual agreement of the parties, the Grantee and such other

franchisees may negotiate the precise terms and conditions of an interconnection agreement.

13.4 Service to certain facilities.

A. Upon the request of the Grantor, by written notice to the Grantee as required in Paragraph 15.8, Company will offer, without charge and on a voluntary basis, one outlet of and equipment for basic cable service to the locations listed below, provided that the locations are located up to 150 feet from Company's existing distribution system:

- Carrolton Volunteer Fire Department, 15020 Carrollton Boulevard, Carrolton, VA 23314
- Carrolton Public Library, 14362 New Town Haven Lane, Carrollton, VA 23314
- Isle of Wight County Courthouse, 17000 Josiah Parker Circle, Isle of Wight, VA 23397
- The County Administration Building, 17090 Monument Circle, Isle of Wight, VA 23397
- Isle of Wight Sherriff's Office, 17110 Monument Circle, Isle of Wight, VA 2339
- Isle of Wight County Sherriff's Department Satellite Office, Isle of Wight County Senior Center, 13036 Nike Park Road, Suite 2, Carrollton, VA 23314

Grantee shall provide at least ninety (90) days' written notice in advance of any decision to alter or discontinue providing the services listed above.

B. The limited basic cable service provided pursuant to Paragraph 13.4(A) shall not be used for commercial purposes and such outlets shall not be located in areas open to the public. The Grantor shall take reasonable precautions to prevent any inappropriate use of the system that results in loss or damage to the Grantee. The Grantee shall not be required to provide an outlet, as required by Paragraph 143.4(A), if a standard drop of more than one hundred twenty-five feet is required, unless the Grantor or building owner/occupant agrees to pay in advance the incremental cost of any necessary extension or installation.

13.5 PEG capital fee.

A. Grantee shall pay Grantor a quarterly recurring PEG capital fee to reimburse Grantor for capital costs it incurs for the purchase of PEG access equipment, facilities and for other lawful purposes. This amount shall be not less than twenty-five cents per basic customer per month during the term of the franchise. The initial PEG capital fee payment shall be made no later than sixty days from the effective date of the franchise, and thereafter on a calendar quarter basis no later than forty-five days after the end of the calendar quarter.

B. The Grantor will be responsible for installing, operating, maintaining, and replacing all PEG related equipment purchased. As provided under federal law, PEG capital fee funds shall not be used for operating costs. The Grantor shall provide to Grantee copies of invoices of capital purchases no later than thirty days after the Grantor's receipt of the invoice. Said copy of the invoice shall be provided to Grantee in the manner specified in Paragraph 15.8.

13.6 Payments not communications sales and use tax. The PEG capital fee paid by the Grantee associated with the provision of support for PEG access pursuant to this Section does not constitute and is not a franchise fee under federal law, nor shall it be considered part of a communications sales and use tax payment, provided it is used in a manner consistent with applicable law.

SECTION 14
Enforcement or Revocation

14.1 **Notice of Violation**. If the Grantor believes that the Grantee has not complied with the terms of the Franchise, the Grantor shall first informally discuss the matter with Grantee. If these discussions do not lead to resolution of the problem, the Grantor shall notify the Grantee in writing of the exact nature of the alleged noncompliance (the "Violation Notice").

14.2 Grantee's Right to Cure or Respond. The Grantee shall have thirty (30) days from receipt of the Violation Notice to (i) respond to the Grantor, contesting the assertion of noncompliance, or (ii) to cure such default, or (iii) if, by the nature of default, such default cannot be cured within the thirty (30) day period, initiate reasonable steps to remedy such default and notify the Grantor of the steps being taken and the projected date that they will be completed.

14.3 Public Hearing. If the Grantee fails to respond to the Violation Notice received from the Grantor, or if the default is not remedied within the cure period set forth above, the Board shall schedule a public hearing if it intends to continue its investigation into the default. The Grantor shall provide the Grantee at least twenty (20) days prior written notice of such hearing, which specifies the time, place and purpose of such hearing, notice of which shall be published by the Clerk of the Grantor in a newspaper of general circulation within the Grantor in accordance with Paragraph 15.8. At the hearing, the Board shall give the Grantee an opportunity to state its position on the matter, present evidence and question witnesses, after which it shall determine whether or not the Franchise shall be revoked. The public hearing shall be on the record and a written transcript shall be made available to the Grantee within ten (10) business days. The decision of the Board shall be made in writing and shall be delivered to the Grantee. The Grantee may appeal such determination to an appropriate court, which shall have the power to review the decision of the Board *de novo*. The Grantee may continue to operate the Cable System until all legal appeals procedures have been exhausted.

14.4 Enforcement. Subject to applicable federal and State law, in the event the Grantor, after the hearing set forth in Paragraph 14.3 above, determines that the Grantee is in default of any provision of the Franchise, the Grantor may:

B. Seek specific performance of any provision, which reasonably lends itself to such remedy, as an alternative to damages; or

C. Commence an action at law for monetary damages or seek other equitable relief; or

D. In the case of a substantial default of a material provision of the Franchise, seek to revoke the Franchise itself in accordance with Paragraph 14.5 below.

14.5 Revocation.

A Prior to revocation or termination of the Franchise, the Grantor shall give written notice to the Grantee of its intent to revoke the Franchise on the basis of a pattern of noncompliance by the Grantee, including one or more instances of substantial noncompliance with a material provision of the Franchise. The notice shall set forth the exact nature of the noncompliance. The Grantee shall have sixty (60) days from such notice to either object in writing and to state its

reasons for such objection and provide any explanation or to cure the alleged noncompliance. If the Grantor has not received a satisfactory response from Grantee, it may then seek to revoke the Franchise at a public hearing. The Grantee shall be given at least thirty (30) days prior written notice of such public hearing, specifying the time and place of such hearing and stating its intent to revoke the Franchise. The public hearing shall be conducted in accordance with the requirements of Paragraph 14.3 above.

B. Notwithstanding the above provisions, the Grantee reserves all of its rights under federal law or regulation.

C. Upon revocation of the Franchise, Grantee may remove the Cable System from the Streets of the Grantor or abandon the Cable System in place.

SECTION 15
Miscellaneous Provisions

15.1 Compliance with Laws. Grantor and Grantee shall conform to all applicable state and federal laws and rules regarding cable television as they become effective. Grantee shall also conform with all generally applicable Grantor ordinances, resolutions, rules and regulations heretofore or hereafter adopted or established during the entire term of the Franchise. In the event of a conflict between Grantor ordinances, resolutions, rules or regulations and the provisions of this Franchise, the provisions of this Franchise shall govern.

15.2 Force Majeure. The Grantee shall not be held in default under, or in noncompliance with the provisions of the Franchise, nor suffer any enforcement or penalty relating to noncompliance or default, where such noncompliance or alleged defaults occurred or were caused by circumstances reasonably beyond the ability of the Grantee to anticipate and control. This provision includes, but is not limited to, severe or unusual weather conditions, fire, flood, or other acts of God, strikes, work delays caused by failure of utility providers to service, maintain or monitor their utility poles to which Grantee's Cable System is attached, as well as unavailability of materials and/or qualified labor to perform the work necessary.

15.3 Minor Violations. Furthermore, the parties hereby agree that it is not the Grantor's intention to subject the Grantee to forfeitures or revocation of the Franchise for violations of the Franchise where the violation was a good faith error

that resulted in no or minimal negative impact on the Subscribers within the Franchise Area, or where strict performance would result in practical difficulties or hardship to the Grantee which outweighs the benefit to be derived by the Grantor and/or Subscribers.

15.4 Action of Parties. In any action by the Grantor or the Grantee that is mandated or permitted under the terms hereof, such party shall act in a reasonable, expeditious and timely manner. Furthermore, in any instance where approval or consent is required under the terms hereof, such approval or consent shall not be unreasonably withheld.

15.5 Equal Protection. If any other provider of cable services or video services (without regard to the technology used to deliver such services) is lawfully authorized by the Grantor or by any other State or federal governmental entity to provide such services using facilities located wholly or partly in the public rights-of-way of the Grantor, the Grantor shall within thirty (30) days of a written request from Grantee, modify this Franchise to insure that the obligations applicable to Grantee are no more burdensome than those imposed on the new competing provider. If the Grantor fails to make modifications consistent with this requirement, Grantee's Franchise shall be deemed so modified thirty (30) days after the Grantee's initial written notice. As an alternative to the Franchise modification request, the Grantee shall have the right and may choose to have this Franchise with the Grantor be deemed expired thirty (30) days after written notice to the Grantor. Nothing in this Franchise shall impair the right of the Grantee to terminate this Franchise and, at Grantee's option, negotiate a renewal or replacement franchise, license, consent, certificate or other authorization with any appropriate government entity. Nothing in this Section 15.5 shall be deemed a waiver of any remedies available to Grantee under federal, state or municipal law, including but not limited to Section 625 of the Cable Act, 47 U.S.C. § 545.

15.6 Governing law. This ordinance shall be governed in all respects by the law of the Commonwealth of Virginia, and applicable federal law**.**

15.7 Change in Law. Notwithstanding any other provision in this Franchise, in the event any change to state or federal law occurring during the term of this Franchise eliminates the requirement for any person desiring to provide video service or Cable Service in the Franchise Area to obtain a franchise from the Grantor, then Grantee shall have the right to terminate this Franchise and operate the system under the terms and conditions established in applicable law. If Grantee chooses to terminate this Franchise pursuant to this provision, this Franchise shall be deemed to have

expired by its terms on the effective date of any such change in law, whether or not such law allows existing franchise agreements to continue until the date of expiration provided in any existing franchise.

15.8 Notices. Unless otherwise provided by federal, State or local law, all notices pursuant to this Franchise shall be in writing and shall be deemed to be sufficiently given upon delivery to a Person at the address set forth below, or by U.S. certified mail, return receipt requested, nationally or internationally recognized courier service such as Federal Express or electronic mail communication to the designated electronic mail address provided below. As set forth above, notice served upon the Grantor shall be delivered or sent to:

Grantor:	Attn: County Administrator Isle of Wight County 17090 Monument Circle, Suite 128 P.O. Box 80 Isle of Wight, VA 23397
Email:	
Copy to:	County Attorney 17090 Monument Circle, Suite 128 P.O. Box 80 Isle of Wight, VA 23397
Email:	bjones@iwus.net
Grantee:	Eric Collins Director of Government Affairs 6202 Raeford Road Fayetteville, NC 28304
Email:	Eric Collins@charter.com
Copy to:	Charter Communications Attn: Vice President, Government Affairs 12405 Powerscourt Drive St. Louis, MO 63131

15.9 Public Notice. Minimum public notice of any public meeting relating to this Franchise or any such grant of additional franchises, licenses, consents, certificates,

authorizations, or exemptions by the Grantor to any other Person(s) to provide Cable Services, video services, or other television services utilizing any system or technology requiring use of the public rights of way shall be by publication at least once in a newspaper of general circulation in the area at least ten (10) days prior to the meeting and a posting at the administrative buildings of the Grantor.

15.9.1 Grantor shall provide written notice to Grantee within ten (10) days of Grantor's receipt from any other Person(s) of an application or request for a franchise(s), license(s), consent(s), certificate(s), authorization(s), or exemption(s) to provide Cable Services, video services, or other television services utilizing any system or technology requiring use of the public rights of way. Any public hearings to consider such application or request shall have the same notice requirement as outlined in Paragraph 15.9 above.

15.10 Severability. If any section, subsection, sentence, clause, phrase, or portion of this Franchise is, for any reason, held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining portions of this Franchise.

15.11 Entire Agreement. This Franchise and any Exhibits hereto constitute the entire agreement between Grantee and the Grantor, and they supersede all prior or contemporaneous agreements, representations or understandings (whether written or oral) of the parties regarding the subject matter hereof.

15.12 Administration of Franchise. This Franchise is a contract and neither party may take any unilateral action that materially changes the mutual promises and covenants contained herein. Any changes, modifications or amendments to this Franchise must be made in writing, signed by the Grantor and the Grantee. Any determination by the Grantor regarding the interpretation or enforcement of this Franchise shall be subject to de novo judicial review.

15.13 Acceptance.

A. This ordinance shall be signed by the chairman of the board of supervisors and attested by the Grantor clerk. The ordinance shall be published in accordance with the requirements of the Grantor and applicable law and shall take effect as the date of acceptance by Grantee recorded on the signature page of this ordinance, unless within thirty days after adoption by Grantor, Grantee has failed to

provide its written acceptance to the Grantor or has notified Grantor that it is withdrawing its request for the renewal of its franchise.

B. In the event Grantee has not furnished Grantor with its written acceptance within or has notified Grantor of its request to withdraw the request it made for the renewal of its franchise as required for acceptance described in subsection 4.1-16(a), this ordinance and all of the rights, duties, and responsibilities of Grantor and the franchise granted by this ordinance shall be null and void.

C. Grantee shall be bound by all the terms and conditions herein. Grantee shall provide all services and offerings specifically set forth herein within the franchise area.

D. Additionally, at this same time, Grantee shall deliver to Grantor all payments required by its application and such bonds and insurance certificates as may be required by this ordinance.

E. If any fee or grant that is passed through to Subscribers is required by this Franchise, such fee or grant shall go into effect sixty (60) days after the Effective Date of this Franchise.

15.14 No Third-Party Beneficiaries. Nothing in this Franchise is intended to confer third-party beneficiary status on any person other than the parties to this Franchise to enforce the terms

The motion was adopted unanimously (4-0) with Supervisors Jefferson, McCarty, Grice and Rosie voting in favor of the motion; no Supervisor voting against the motion; and Supervisor Acree absent from the meeting.

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The Board took a break and returned to open meeting.

COUNTY ADMINISTRATOR'S REPORT

Judy Winslow, Director of Tourism, provided an overview of the Smithfield & Isle of Wight Tourism 2021 Annual Report.

Jamie Oliver, Transportation Planner, advised that the Commonwealth Transportation Board had voted to approve the Nike Park extended additional funding request and a revised agreement will be forthcoming; that VDOT did agree to add an extra mowing cycle to the schedule; and added Smith's Neck paving to the paving schedule from Greystone to Titus Creek. Staff is currently working with the Town of Smithfield on a push button pedestrian project at Main and South Church streets.

Nicole Talton, Department of Economic Development, invited the Board to attend business appreciation popups during the month of May.

County Administrator Keaton provided a status on the following:

. Tax Credits/Volunteers: Staff is to proceed with sending the letters out for the June credit.

. Suffolk Borrow Pit Public Hearing

, Springfest begins on Friday; the carnival and rodeo are Friday and Saturday; and the Demolition Derby is on Sunday.

UNFINISHED/OLD BUSINESS

Chairman Jefferson called for discussion on an Ordinance Amendment Allowing Deer/Bear Hunting with Rifles.

Supervisor McCarty confirmed that the ordinance can be repealed should any kind of incident take place in the County.

Supervisor Rosie moved to adopt the following ordinance amendments:

AN ORDINANCE TO AMEND, RENAME AND REENACT
THE ISLE OF WIGHT COUNTY CODE
BY AMENDING AND REENACTING
CHAPTER 12.-OFFENSES—MISCELLANEOUS.,
SEC. 12-10. - HUNTING WITH MUZZLE-LOADING RIFLES.

WHEREAS, the Board of Supervisors of Isle of Wight County, Virginia, has deemed it necessary and appropriate to update its current ordinances in order to more clearly set forth local ordinances for the benefit of the public, in order to clarify and bring the provisions thereof into compliance with state law and practice; and

WHEREAS, the Board of Supervisors deems such a revision necessary as a means to protect the health and welfare of the citizens of Isle of Wight County, Virginia.

NOW, THEREFORE, BE IT ORDAINED by the Isle of Wight County Board of Supervisors that Chapter 12.-Offenses—Miscellaneous., Sec. 12-10. - Hunting with muzzle-loading rifles of the Isle of Wight County Code be amended, renamed, and reenacted as follows:

Sec. 12-10. Hunting with firearms.

(a) Hunting in the County, with a rifle of .22 caliber or larger, of groundhogs, between March 1 and August 31 of each year, and of all other game, bird and nuisance species shall be permitted as allowed by state law and regulations.

(b) Hunting in the County, with muzzle-loading rifles, is permitted during the prescribed open seasons for the hunting of game species as allowed by state law and regulations.

(c) Notwithstanding the above, deer and bear hunting with a rifle of a .23 caliber or larger during the prescribed open seasons, as allowed by state law and regulations, shall be allowed in the County only as follows:

(1) The person shall hunt only from an elevated stand located at least ten feet above the ground, except that such weapon may also be discharged on the ground when it is necessary to do so in order to dispatch the animal wounded from the elevated hunting platform.

(2) The rifle may have a round in its chamber only when it is on the elevated stand.

(3) The person first obtains written permission from the landowner.

(4) The provisions of Code of Virginia § 29.1-528.2 shall exempt a permanently disabled

hunter, as defined in Virginia Code § 58.1-3217, from the requirements of this section

regarding hunting from an elevated stand located at least ten feet above the ground.

(d) Nothing in this section shall prohibit a landowner or lessee from killing a deer or bear that is damaging fruit trees, crops, livestock or personal property utilized for commercial agricultural production in accordance with Virginia Code § 29.1-529 and other applicable laws.

(e) The clerk of this board is ordered to notify the director of the Virginia Department of Wildlife Resources by registered mail of the adoption of the ordinance codified in this section which is to take effect as soon thereafter as allowed by law.

(e) Any person who violates the provisions of this section shall be guilty of a Class 3 misdemeanor. (1-3-91; 4-21-22)

State law reference(s)—Hunting and Trapping, Code of Virginia, § 29.1-510 et seq

The motion was adopted (3-0-1) with Supervisors McCarty, Grice and Rosie voting in favor of the motion; Supervisor Acree absent from the meeting; and Chairman Jefferson voting in opposition to the motion.

Chairman Jefferson called for consideration of an application of James River Crossings, Inc. proposed proffer amendment.

Supervisor McCarty moved that the revised proffer conditions be approved. The motion was adopted unanimously (4-0) with Supervisors Jefferson, McCarty, Grice and Rosie voting in favor of the motion; no Supervisor voting against the motion; and Supervisor Acree absent from the meeting.

NEW BUSINESS

No new business was offered for discussion.

ADJOURNMENT

At 9:00 p.m., Chairman Jefferson declared the meeting adjourned.

_____
Rudolph Jefferson, Chairman

_____
Carey Mills Storm, Clerk

BUDGET WORK SESSION OF THE ISLE OF WIGHT COUNTY BOARD OF SUPERVISORS HELD IN THE ROBERT C. CLAUD, SR. BOARD ROOM OF THE ISLE OF WIGHT COUNTY COURTHOUSE LOCATED AT 17090 MONUMENT CIRCLE, ISLE OF WIGHT, VIRGINIA ON THURSDAY, THE FIFTH DAY OF MAY IN THE YEAR TWO THOUSAND AND TWENTY-TWO

PRESENT:

Rudolph Jefferson, District 3, Chairman
William M. McCarty, District 2, Vice-Chairman
Richard L. Grice, District 1
Don G. Rosie, II, District 5
Joel C. Acree, District 4

ALSO IN ATTENDANCE:

Robert W. Jones, Jr., County Attorney
Randy R. Keaton, County Administrator
Donald T. Robertson, Assistant County Administrator
Carey Mills Storm, Clerk

CALL TO ORDER

Chairman Jefferson called the budget work session to order at 6:00 p.m.

APPROVAL OF THE AGENDA

Supervisor Acree moved that the agenda be adopted as amended to include a discussion regarding the school system's instructional materials and personnel following the update on repairs to the Windsor Town Center roof. The motion was adopted (4-1) with Supervisors McCarty, Acree, Rosie and Grice voting in favor and Chairman Jefferson voting against the motion.

INVOCATION

Assistant County Administrator Robertson delivered the invocation and led the Pledge of Allegiance to the American Flag.

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Glyn T. Willis, Mayor of Windsor, updated the Board on repairs to the Windsor Town Center roof.

William Saunders, Windsor Town Manager, addressed the Board regarding the estimated cost versus the actual cost for repairs to the Windsor Town Center roof. He stated that the project had cost approximately $19,000 less than originally planned.

Responsive to a caution from Supervisor McCarty that some warranties require inspections or will be void, Mr. Sanders offered to look into it.

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At the request of Supervisor Rosie, the Board discussed the School's budget and was reminded that the final numbers from the State will not be received until after the budget is adopted on May 15, 2022. If not adopted by that date, the School Board would be prohibited from entering into any contracts.

Supervisor Grice pointed out that Constitutional Officers have been requested to account for how their respective staff is being utilized and their plans for them and the Board has a responsibility to know how funds being allocated to the School Division are being spent.

County Administrator Keaton was requested to find out the number of non-SOQ positions there are in the schools.

County Administrator Keaton was requested to invite the Commissioner of Revenue to do a presentation illustrating how someone can obtain tax relief for a disability or reduced value for a high-mileage car.

Supervisor McCarty requested the Board be provided a full copy of the Pay & Compensation Study.

County Administrator Keaton advised that in regard to whether the County has a MOU with the Community Services Board, staff has been unable to locate any document.

CLOSED MEETING

The following matters were identified for discussion in closed meeting by County Attorney Jones: A discussion concerning a prospective business or the expansion of an existing business where no previous announcement has been made of business' interest in locating or expanding its facilities in the Shirley T. Holland Industrial Park, the Rt. 460 83-acre site, and the former DJJ site pursuant to subsection 5; a discussion regarding the salaries of the County's constitutional officers, pursuant to subsection 1; and consultation with legal counsel regarding actual litigation regarding M&T tax where such consultation would adversely affect the negotiating or litigation posture of this public body pursuant to subsection 7.

On motion of Supervisor McCarty and all voting in favor (5-0), the Board entered the closed meeting for the reasons stated by County Attorney Jones.

Upon motion of Supervisor Acree and all voting in favor (5-0), the Board reconvened into open meeting.

County Attorney Jones reminded the Board that in accordance with Section 2-10(G) of the Board's Rules & Procedure, all those who participated in the closed meeting are reminded that all matters discussed in closed meeting are to remain confidential, as provided under the Virginia Freedom of Information Act, and that such matters as were discussed in closed meeting should not be acted upon or discussed in public by any participant unless and until a public, formal action of the Board of Supervisors is taken on that particular subject matter.

Upon motion of Supervisor Acree and all voting in favor (5-0), the following Resolution was adopted:

CERTIFICATION OF CLOSED MEETING

WHEREAS, the Board of Supervisors has convened a closed meeting on this date pursuant to an affirmative recorded vote and in accordance with the provisions of the

Virginia Freedom of Information Act; and,

WHEREAS, Section 2.2-3712(D) of the Code of Virginia requires a certification by this Board of Supervisors that such closed meeting was conducted in conformity with Virginia law;

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors hereby certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements by Virginia law were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion convening the closed meeting were heard, discussed or considered by the Board of Supervisors.

VOTE

AYES: Acree, Grice, Jefferson, McCarty. Rosie

NAYS: 0

ABSENT DURING VOTE: 0

ABSENT DURING MEETING: 0

ADJOURNMENT

At 9:00 p.m., Chairman Jefferson declared the work session adjourned.

_____
Rudolph Jefferson, Chairman

_____
Carey Mills Storm, Clerk

BACKGROUND:

The Board of Supervisors has previously directed that an opportunity be provided for monthly status briefings from Board members who serve as representatives on various regional committees and authorities on behalf of the County.

BUDGETARY IMPACT:

None

RECOMMENDATION:

Receive the report.

ATTACHMENTS:

Description	Type	Upload Date
Regional Reports	Cover Memo	1/11/2022

2022 BOARD MEMBER REGIONAL REPRESENTATIVE

(Appointed by Board Vote)

Organization	Member	Term Expires
Hampton Roads Alliance	Grice	No Set Term
Hampton Roads Military Federal Facilities Alliance	Rosie	No Set Term
Hampton Roads Planning District Commission	Acree	No Set Term
	Keaton	No Set Term
Hampton Roads Transportation Accountability Commission	McCarty	No Set Term
Hampton Roads Transportation Planning Organization	McCarty	No Set Term
	Keaton	No Set Term
Southeastern Public Service Authority	Keaton	December 2021
	Etheridge/Alternate	December 2021
Western Tidewater Community Transportation Collaborative	Grice	No Set Term
Western Tidewater Regional Jail Authority	Jefferson	No Set Term
	McCarty	No Set Term
	Keaton	No Set Term
Western Tidewater Water Authority	Grice	June 2022
	Acree	June 2022
	Jones/Alternate	June 2022

Regional Reports

Updated/January 2022

BACKGROUND:

Board members will consider and make appointments of individuals to various local and region organizations as noted on the Appointments Page.

BUDGETARY IMPACT:

None

RECOMMENDATION:

Appoint individuals to various local and region organizations as noted on the Appointments Page.

ATTACHMENTS:

Description	Type	Upload Date
Appointments Page	Cover Memo	5/11/2022

BOARDS/COMMISSIONS/COMMITTEES

Boards/Commissions/Committees	Appointees	Contact	District	Expiration	
Commission on Aging	Maggie Richards - Resigned	371-9010	Windsor/District 4	December	2023
Commission on Aging	Shirley McGee - Resigned	356-0342	Smithfield/District 1	January	2022
Blackwater Regional Library Board	Sylvia J. Claggett	357-2644	Hardy/District 3	June	2022
Paul D. Camp Community College	Dr. Richard Antcliff	218=0749		June	2022
Commission on Aging	Thomas Finderson - Resigned	298-8978	Newport/District 2	March	2022
Commission on Aging	Brenda Reynolds	357-3300	Newport/District 2	January	2022
Blackwater Regional Library Board	Sylvia J. Claggett	357-2644	Hardy/District 3	June	2022
Paul D. Camp Community College	Dr. Richard Antcliff	2180749		June	2022
Commission on Aging	Jane March - Resigned	242-3807	Carrsville/District 5	November	2021
Commission on Aging	Ruth Hartsfield	242-9328	Windsor/District 4	April	2022
Community Transportation Adv. Committee	Cynthia Taylor (See attachment)			February	2022
Economic Development Authority	Carroll E. Keen, Jr.	357-4481	Newport/District 2	April	2022
Hampton Roads Workforce Council	L'Tanya Johnson	242-9930	Business Leader	June	2022
Planning Commission	Glenn Seay (Resigned)	630-9048	Windsor/District 4	February	2024
Planning Commission	William Hulick - Resigned	503-0046	Newport/District 2	February	2025
Social Services Board	Brenda Mathew	641-1356	Newport/District 2	June	2022
Social Services Board	Barbara Stafford	357-9796	Smithfield/District 1	June	2022

ISSUE:

Discussion of Impact of FY2022-23 Public Schools Budget

BACKGROUND:

At its meeting on May 12, 2022, the Board adopted its Operating and Capital Budgets for FY2022-32. The Board's action included a 2% ($1.5 million) reduction of the operating budget (Instructional Services category) for Public Schools.

Dr. James Thornton, Superintendent, will present information on the impacts of the budget reductions.

BUDGETARY IMPACT:

To be determined.

RECOMMENDATION:

Per the Board's discussion and direction.

ISSUE:

Recognition of the Retirement of Investigator Bert Nurney

BACKGROUND:

The Sheriff would like to recognize the service and retirement of long-time Investigator Bert Nurney.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

Receive a presentation from the Sheriff.

ISSUE:

Application of Morris G. Hall, Deacon, and the Trustees of Emmanuel Baptist Church, Property Owner, for a Conditional Use Permit for the Expansion of an Existing Cemetery on Property Not Currently Used as a Church Cemetery Located at 11150 Emmanuel Church Road

BACKGROUND:

Morris G. Hall, Deacon, and the Trustees of Emmanuel Baptist Church, property owner, have submitted an application for a conditional use permit for the expansion of an existing cemetery on property not currently used as a church cemetery located at 11150 Emmanuel Church Road on property with tax map number 20-01-010.

Emmanuel Baptist Church seeks to expand their existing cemetery in order to accommodate more gravesites. The Church has been existence since 1867. The original structure was destroyed by fire in 1962 and was rebuilt.

The proposed cemetery expansion area will be located directly adjacent to the existing cemetery that is accessory to the Emmanuel Baptist Church located at 11150 Emmanuel Church Road (Rte. 708). The proposed cemetery site is currently in agricultural use and has no environmentally sensitive features or identified archeological or architectural resources. The site is shown as having moderate potential for archeological resources according to the County's 2005 archeological study.

The Planning Commission unanimously recommended approval of the application at their April 26, 2022, regular meeting. A full analysis of the potential impacts and the consistency of the application with the County's plans and ordinances is included in the attached Planning Commission staff report.

BUDGETARY IMPACT:

None

RECOMMENDATION:

The Planning Commission recommended approval of the CUP by a vote of six in favor and zero voting against the motion (6-0).

Based on the strengths of the application, staff also recommends approval of the CUP.

ATTACHMENTS:

Description	Type	Upload Date
PC Staff Report	Backup Material	4/28/2022
Emmanuel Baptist Church Cemetery Application	Backup Material	4/20/2022
Cemetery Concept Plan	Backup Material	4/20/2022
Emmanuel Baptist Church Location Map	Backup Material	4/20/2022
Cemetery Land Use Map	Backup Material	4/20/2022
Cemetery Zoning Map	Backup Material	4/20/2022
CUP-3-22 Cemetery BOS Ordinance	Ordinance	5/9/2022

PLANNING REPORT

APPLICATION:

Application of Morris G. Hall, Deacon, and the Trustees of Emmanuel Baptist Church, property owner, for a conditional use permit for the expansion of an existing cemetery on property not currently used as a church cemetery located at 11150 Emmanuel Church Road on property with tax map number 20-01-010

ELECTION DISTRICT:

D5

LOCATION:

The proposed cemetery expansion area will be located directly adjacent to the existing cemetery that is accessory to the Emmanuel Baptist Church located at 11150 Emmanuel Church Road (Rte. 708). The proposed cemetery site is currently in agricultural use and has no environmentally sensitive features or identified archeological or architectural resources. The site is shown as having moderate potential for archeological resources according to the County's 2005 archeological study.

BACKGROUND:

Emmanuel Baptist Church seeks to expand their existing cemetery in order to accommodate more gravesites. The Church has been existence since 1867. The original structure was destroyed by fire in 1962 and was rebuilt.

DESCRIPTION:

The proposed cemetery will be on 0.75 acres located at 11150 Emmanuel Church Road on property with tax map number 20-01-010. The property is in the Rural Agricultural Conservation (RAC) zoning district. The new cemetery will be served by an existing driveway that provides access to Emmanuel Church Road (Rte. 708). No new driveways are proposed to be installed. The applicant states that the newly expanded cemetery will be able to accommodate up to 700 gravesites. No other structures are proposed for the site.
The site is located directly adjacent to an existing cemetery on the north, Emmanuel Church Road on the east, and farmland to the south and west.

COMPREHENSIVE LAND USE PLAN:

The County's Future Recommended Land Use Plan designates the site for Rural Agricultural Conservation use. These areas should remain largely in agricultural and forest uses. Non-farm uses such as agricultural and forest product processing and distribution, resource extraction, and uses reliant on large areas of land such as solar farms and agritourism activities may also be appropriate when sited correctly. Scattered or small clusters of residential uses are typical but should be oriented to avoid stripping out the road frontage. Religious assembly uses are defined as civic use types in the County Zoning ordinance and may be considered compatible in RAC areas due to the nature of their use requiring large tracts of land and access to public roads. The proposed cemetery is consistent with the historic adjacent cemetery and religious assembly use of the property.

ORDINANCE REVIEW:

According to Section 4-2003.C of the Zoning Ordinance, church cemeteries require a conditional use permit in the RAC zoning district. The proposed cemetery site will be on 0.75 acres recently added to the Church property through a boundary line adjustment and was not previously used as a cemetery or religious assembly use.

Section 1-1017 of the Zoning Ordinance provides the following criteria for review of a conditional use permit application that the Planning Commission and Board of Supervisors shall consider before granting the permit:

1. That the establishment, maintenance, and operation of the conditional use will not be detrimental to or

endanger the public health, safety, and general welfare;
2. That the conditional use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially impair the use of other property within the immediate proximity;
3. That adequate utilities, water, sewer or septic system, access roads, storm drainage and/or other necessary public facilities and improvements have been or will be provided;
4. That adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion on the public streets;
5. That the proposed conditional use is not contrary to the goals and objectives of the Isle of Wight County Comprehensive Plan;
6. That the conditional use shall, in all other respects, conform to the applicable regulations of the zoning district classification in which it is located and to the special requirements established for the specific use; and
7. That the use(s) at the location proposed will not result in a multiplicity or saturation of similar uses in the same general neighborhood of the proposed use.

In addition to the standards and other guidelines set forth in the Zoning Ordinance, the Board may impose reasonable conditions or limitations on any approval, including the posting of performance guarantees. Such conditions may include, but are not necessarily limited to:

1. The number of persons living or working in the immediate area and the proposed hours of operation, as may applicable;
2. Traffic conditions, including facilities for pedestrians, such as sidewalks and parking facilities; the access of vehicles to roads; peak periods of traffic; and proposed roads, but only if construction of such roads will commence within the reasonably foreseeable future;
3. The orderly growth of the neighborhood and community and the fiscal impact on the County;
4. The effect of odors, dust, gas, smoke, fumes, vibration, glare, and noise upon the use of surrounding properties;
5. Facilities for police, fire protection, sewerage, water, trash and garbage collection and disposal, and the ability of the County or persons to supply such services;
6. The degree to which the development is consistent with generally accepted engineering and planning principles and practices;
7. The structures in the vicinity such as schools, houses of worship, theaters, hospitals, and similar places of public use;
8. The purposes set forth in this ordinance, the County's Comprehensive Plan, and related studies for land use, roads, parks, schools, sewers, water, population, recreation, and the like;
9. The environmental impact, the effect on sensitive natural features, and opportunities for recreation and open space; and
10. The preservation of cultural and historic resources or landmarks.

Staff's analysis of the project finds that the criteria for granting the conditional use permit is met, including protecting the health, safety, and welfare of the public from the effects of the project and ensuring that the use will conform to the general character of the neighborhood to which the proposed use will apply.

In addition to obtaining approval for a conditional use permit, the applicant will be required to submit a simplified site plan that meets all Ordinance requirements and obtain any necessary state permits prior to establishing the use.

AGENCY REVIEW:

Staff distributed the application to the following departments for review and comment:

1. Health Department - Staff could find no record of any existing well, drainfield or septic tank in the vicinity of the proposed cemetery; and
2. Virginia Department of Transportation - Staff stated they had no concerns with the application as proposed.

STAFF CONCLUSIONS:

Strengths:

1. The proposed use will conform with the general character of the surrounding community and historic nature of adjacent uses;
2. The proposed use is generally consistent with the future recommended land use designation; and
3. The proposed use will not negatively impact public services or facilities.

Weaknesses:

Staff did not identify any weaknesses.

STAFF RECOMMENDATION:

Based on the strengths of the application, staff recommends approval of the proposed cemetery.

ATTACHMENTS:

Description	Type	Upload Date
Emmanuel Baptist Church Cemetery Application	Backup Material	4/20/2022
Cemetery Concept Plan	Backup Material	4/20/2022
Emmanuel Baptist Church Location Map	Backup Material	4/20/2022
Cemetery Land Use Map	Backup Material	4/20/2022
Cemetery Zoning Map	Backup Material	4/20/2022
PC Resolution	Backup Material	4/20/2022

ISLE OF WIGHT
COUNTY, VIRGINIA
DEPARTMENT OF PLANNING AND ZONING

APPLICATION FOR CONDITIONAL / SPECIAL USE PERMIT

This application should be used to petition for a permit for certain uses which, because of their unique characteristics or potential impacts on adjacent land uses, are not generally permitted in certain zoning districts as a matter of right, but which may, under the right set of circumstances and conditions be acceptable in certain specific locations. The following application requirements are consistent with the procedures set forth in Section 1-1017, *Conditional Uses,* and Section 1-1018, *Special Use Permits for Uses Not Provided For,* of the Isle of Wight County Zoning Ordinance, as amended.

A. APPLICATION FOR (CHECK ALL THAT APPLY):

[X] Conditional Use Permit (Are applicant proposed conditions attached?): ____Yes __X__ No

The proposed use or activity is listed as a conditional use in the RAC zoning district as per Section 4-2003.C in Article IV of the Isle of Wight County Zoning Ordinance.

[ ] Special Use Permit (Are applicant proposed conditions attached?): ____Yes ____ No

Proposed Use or Activity: CEMETERY EXPANSION FOR EMMANUEL BAPTIST CHURCH

B. PROJECT DESCRIPTION:

Project Name: EMMANUEL BAPTIST CHURCH CEMETERY EXPANSION

Property Address (if any): 11150 EMMANUEL CHURCH RD., SMITHFIELD, VA

Election District: D5

Comprehensive Plan Designation: RAC

The use permit will apply to 0.75 acres out of 10.29 otal acres --> BLA APPROVED 3/18/2022

Tax Parcel Identification # 20--01-010 Number of acres to be effected: 0.75

Tax Parcel Identification # _____ Number of acres to be effected: _____

Tax Parcel Identification # _____ Number of acres to be effected: _____

Proposed Utilities (check all that apply): Public Water ____ Private Well ✓

Public Sewer ____ Private Septic ✓

C. **APPLICATION INFORMATION:**

Applicant(s) Name(s): MORRIS G. HALL

Address: 13407 CREST CIRCLE

City, State, Zip Code: SMITHFIELD, VA. 23430

Phone No.: (757) 357-5187 Email: FLATTOP6607@YAHOO.COM Fax No.: _____

Property Owner(s) Name(s): EMMANUEL BAPTIST CHURCH

Address: 11150 EMMANUEL CHURCH ROAD

City, State, Zip Code: SMITHFIELD, VA. 23430

Phone No.: (757) 357-5805 Email: EMMANUELBC11150@GMAIL.COM Fax No.: _____

Applicants/Owners Affidavit (including compliance with all deed restrictions and covenants)

This application must be signed by the owner(s) of the subject property or must have attached written evidence of the owner's consent, which may be in the form of a binding contract of sale with the owner's signature or a letter signed by the owner(s), containing written authorization to act with full authority on the owner(s) behalf in filing this use permit application. Signing this application shall certify the owner's compliance with all deed restrictions and covenants, and shall constitute the granting of authority of the County to enter onto the property for the purpose of conducting site analyses and compliance with Federal, State and County regulations.

Applicant: MORRIS G. HALL
Printed or Typed Name

Applicant: _____ Date: 3-18-2022
Signature

County of Isle of Wight, Commonwealth of Virginia

Subscribed and sworn to before me Jessica Dawn Drewry
A Notary Public in and for the County of Isle of Wight,
Commonwealth of Virginia, this 18th day of March, 2022

_____
Notary Public

My Commission Expires 11-30-2024

JESSICA DAWN DREWRY NOTARY PUBLIC COMMONWEALTH OF VIRGINIA REGISTRATION #7858169 COMMISSION EXPIRES 11/30/2024

Owner: _____
Printed or Typed Name

Owner: _____ Date: _____
Signature

County of Isle of Wight, Commonwealth of Virginia

Subscribed and sworn to before me _____,
A Notary Public in and for the County of Isle of Wight,
Commonwealth of Virginia, this __day of _____, 20__

_____
Notary Public

My Commission Expires _____

Owner: Ramona L. Drew
Printed or Typed Name

Owner: _____ Date: 3/18/2022
Signature

County of Isle of Wight, Commonwealth of Virginia

Subscribed and sworn to before me Jessica Dawn Drewry
A Notary Public in and for the County of Isle of Wight,
Commonwealth of Virginia, this 18th day of March, 2022

_____
Notary Public

My Commission Expires 11-30-2024

JESSICA DAWN DREWRY NOTARY PUBLIC COMMONWEALTH OF VIRGINIA REGISTRATION #7858169 COMMISSION EXPIRES 11/30/2024

Owner: _____
Printed or Typed Name

Owner: _____ Date: _____
Signature

County of Isle of Wight, Commonwealth of Virginia

Subscribed and sworn to before me _____,
A Notary Public in and for the County of Isle of Wight,
Commonwealth of Virginia, this __day of _____, 20__

_____
Notary Public

My Commission Expires _____

Revised August 13, 2014

COUNTY OF ISLE OF WIGHT
DISCLOSURE OF REAL ESTATE HOLDINGS

Applicant EMMANUEL BAPTIST CHURCH

Address 11150 EMMANUEL CHURCH ROAD
Street

SMITHFIELD VA 23430
City State Zip

REAL ESTATE HOLDINGS TO BE AFFECTED

	Location or Address	Description
	11150 EMMANUEL CHURCH RD.	CEMETERY EXPANSION

OTHER OWNERS OF AFFECTED REAL ESTATE

(Not Required for Corporation whose stock is traded on a national or local stock exchange or having more than 500 shareholders.)

Name of Individuals Corporation/Partnership Business Association	Address
N/A	

Does any member of the Isle of Wight County Planning Commission or governing body have any interest in such property, either individually, by ownership of stock in a corporation owning such land, partnership, as the beneficiary of a trust, or the settlor of a revocable trust, or whether a member of the immediate household of any member of the Planning Commission or governing body has any such interest? Yes (No)

If yes, names of members:

I do solemnly swear that the foregoing statement(s) and attachments(s), if any, are complete, correct and true.

Applicant: MORRIS G. HALL Applicant: Morris G. Hall Date: 3-18-2022
Printed or Typed Name Signature

Commonwealth of Virginia
County of Isle of Wight

Subscribed and sworn to before me Jessica Dawn Drewry,
A Notary Public in and for the County of Isle of Wight, Commonwealth of Virginia, this 18th day of March, 2022.

Jessica Dawn Drewry
Notary Public

My Commission Expires 11-30-2024

JESSICA DAWN DREWRY
COMMISSION EXPIRES 11/30/2024
REGISTRATION # 7858169
NOTARY PUBLIC
COMMONWEALTH OF VIRGINIA

ISLE OF WIGHT
COUNTY, VIRGINIA
DEPARTMENT OF PLANNING AND ZONING

SUBMITTAL CHECKLIST FOR CONDITIONAL / SPECIAL USE PERMITAPPLICATIONS

In conjunction with Section 1-1017, *Conditional Uses*, and Section 1-1018, *Special Uses Permits for Uses Not Provided For*, of the Isle of Wight County Zoning Ordinance, as amended, the following information shall be submitted for a Conditional / Special Use Permit Application. Please note that it is the applicant's responsibility to ensure that the application is in compliance with all Federal, State and County regulations.

No application for a Conditional / Special Use shall be certified as complete unless the following information is provided, unless the Zoning Administrator reduces the number of required copies.

☐ 1. ~~Fifteen (15) copies~~ Six (6) ALL of the original, executed application and one (1) original executed application. Both the applicant(s) and the property owner(s) must have their signature(s) notarized on page No. 2 of the application.

☐ 2. The appropriate fees have been submitted with the application. Checks should be made payable to: Treasurer, Isle of Wight County.

☐ 3. ~~Fifteen (15) copies~~ Six (6) ALL of a statement of the reasons for seeking such permit, and if applicable, a statement of conditions.

☐ 4. ~~Fifteen (15) copies~~ Six (6) ALL of a narrative description of the property which shall include the Tax Parcel Identification Number.

OK WILL PULL @ RECREATION ALL

☐ 5. One (1) copy of the most recent deed(s) for the property(s) associated with the application.

☐ 6. A concept plan of the property showing all existing and proposed physical improvements and such other information as is necessary to clearly indicate to the Planning Commission and Board of Supervisors that adequate provisions shall be made for compliance with all standards for that particular use and the extent of the property to be so used on a given parcel or parcels. Such document shall be drawn to scale and shall include the following information:

- A vicinity map at a scale of no less than one (1) inch equals two thousand (2,000) feet
- Title of drawing
- Date of drawing
- Existing wood line
- North arrow
- Scale bar
- Current zoning of parcel(s) to be rezoned, including tax map number(s) and owner(s)
- Current zoning of adjacent parcel(s), including tax map number(s) and owner(s)
- Street names including route number and width(s) of the right-of-way(s)
- Fifteen (15) full size copies, with one (1) reduced 11 inch X 17 inch copy shall be submitted
- Please note that additional information on the site layout may be requested by the Zoning Administrator during the review process in order to more effectively review the application and prepare the staff reports for the Planning Commission and Board of Supervisors.

- Please note that additional information on the site layout may be requested by the Zoning Administrator during the review process to **review the application and prepare the staff reports for the Planning Commission and Board of Supervisors more effectively**.

Ten (10) copies of such supplemental material as may be necessitated by the proposal itself or the district in which located or proposed to be located, and in accordance with Section 5-5000, *Supplementary Use Regulations,* of the Isle of Wight County Zoning Ordinance.

A WQIA (Water Quality Impact Assessment) if located in the Chesapeake Bay Preservation Area.

All real estate taxes must be paid and current at the time of submittal; otherwise, the submittal will be refused at the counter. Proof of the most recent tax payment to the County must accompany the application.

I, the undersigned, certify that this application is complete, accurate and contains all required and requested information, documents and other submittals, and that all statements made herein are, to the best of my knowledge, true and correct. I further certify that I have exercised due diligence to obtain the most recent, complete and correct information available. I understand that any section not completed in its entirety may delay processing of this application and the date of the Planning Commission public hearing and that the submittal of a complete application does not guarantee the application will be placed on the next available Planning Commission agenda.

Morris G. Hall

Printed or Typed Name

Morris G. Hall

Signature

3-18-2022

Date

NOTICE: THE ATTACHED CHECKLIST MUST BE COMPLETED, CERTIFIED, AND SUBMITTED OR THE APPLICATION WILL BE CONSIDERED INCOMPLETE.

Remit Application to: Isle of Wight County Central Permitting, 17140 Monument Circle, Suite 100
P. O. Box 80, Isle of Wight, Virginia 23397

FOR OFFICE USE ONLY:

Complete Application Received On: 3-18-2022 Fees Paid: $1200.00
Tax Query: [ ] Current [ ] Delinquent Distribution Date: 3-21-2022
Posted/Date to Post: _____

AGENCIES REFERRALS:

_____ Department of Conservation & Recreation
_____ Economic Development
_____ Emergency Services
_____ General Services
_____ Environmental Planner
X Health Department
_____ Transportation Manager
_____ Commission of Revenue
_____ Other _____

_____ Inspections
_____ Sheriff's Office
_____ Town of Smithfield
_____ Town of Windsor
X VDOT
_____ Schools
_____ Budget & Finance
_____ County Attorney

Verified By: Amy M. Bunn Date: 3-18-2022

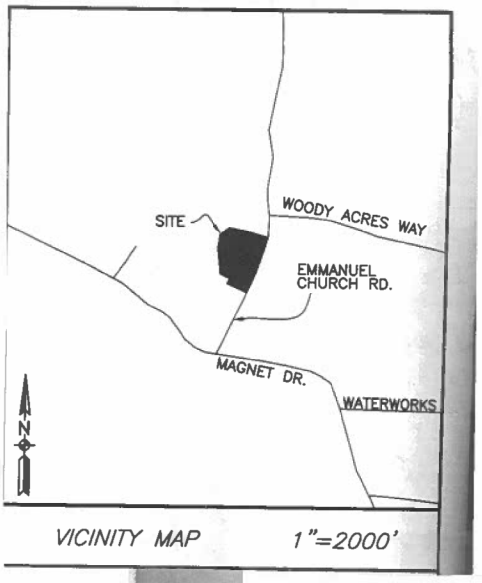
STATEMENT OF REASON

I, Morris Hall, on behalf of EBC is applying for a CUP for the purpose of expanding our existing cemetery.

For up to 700 36" x 72" Plots.

Morris L. Hall

3/18/



N

S55°43'00"E 166.83'

N34°17'00"E 95.00'

TAX MAP # 19-2-001

02)001
ERNELL L
'8 629
ACRES
MAJOR
PERNELL

T.P. 20(01)010
EMMANUEL BAPTIST CHURCH
NO REFERENCE
10.29 ACRES

RAC

S55°43'00"E 343.89'

FUTURE EXPANSION AREA

THIS LINE VACATED BY THIS PLAT

EXISTING DRIVEWAY

EXISTING CEMETERY

TO BE ADDED TO T.P. 20(01)010

N31°57'00"E 309.57'

N34°17'00"E 95.00'

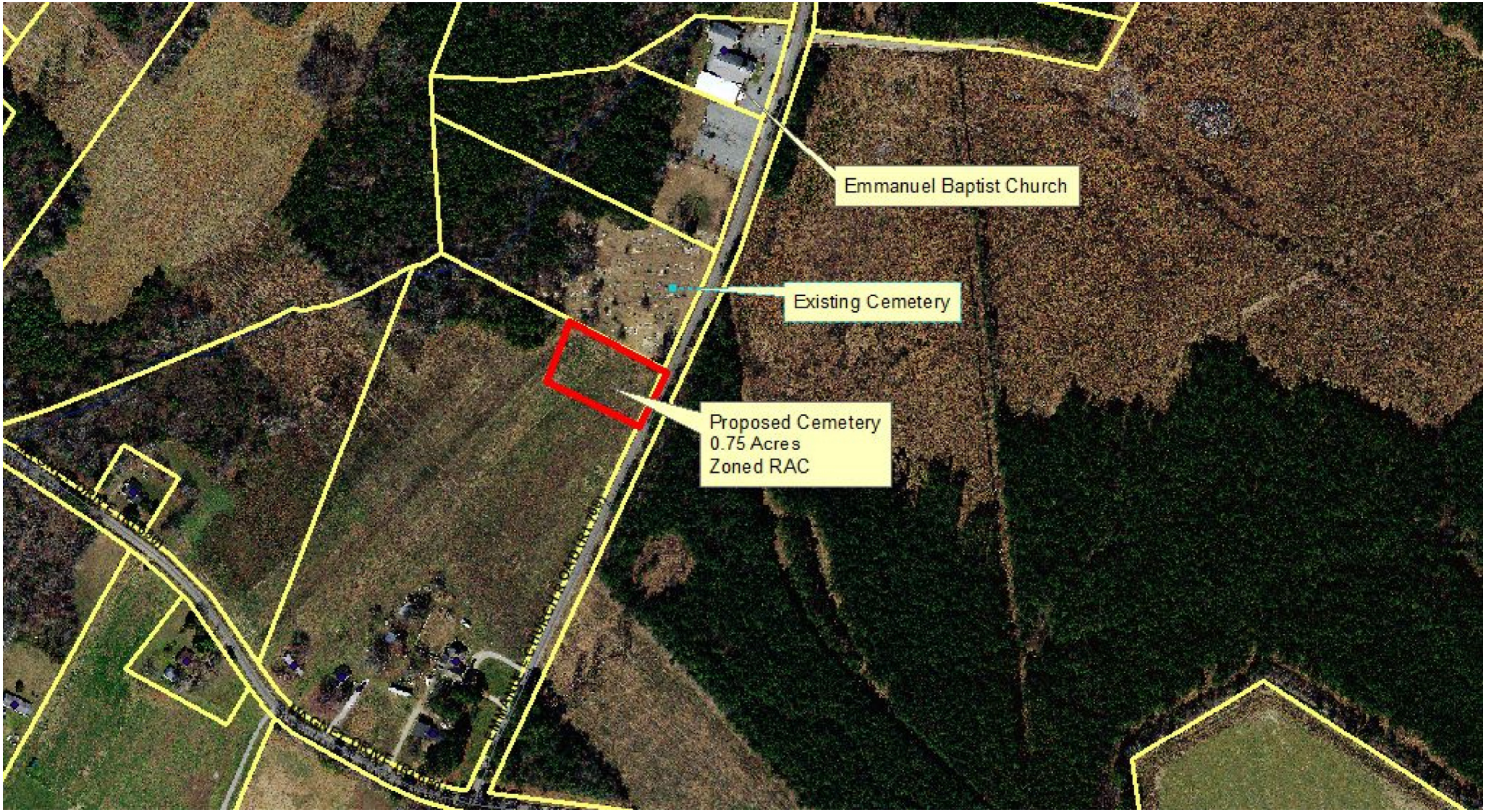
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EMMANUEL CHURCH RD

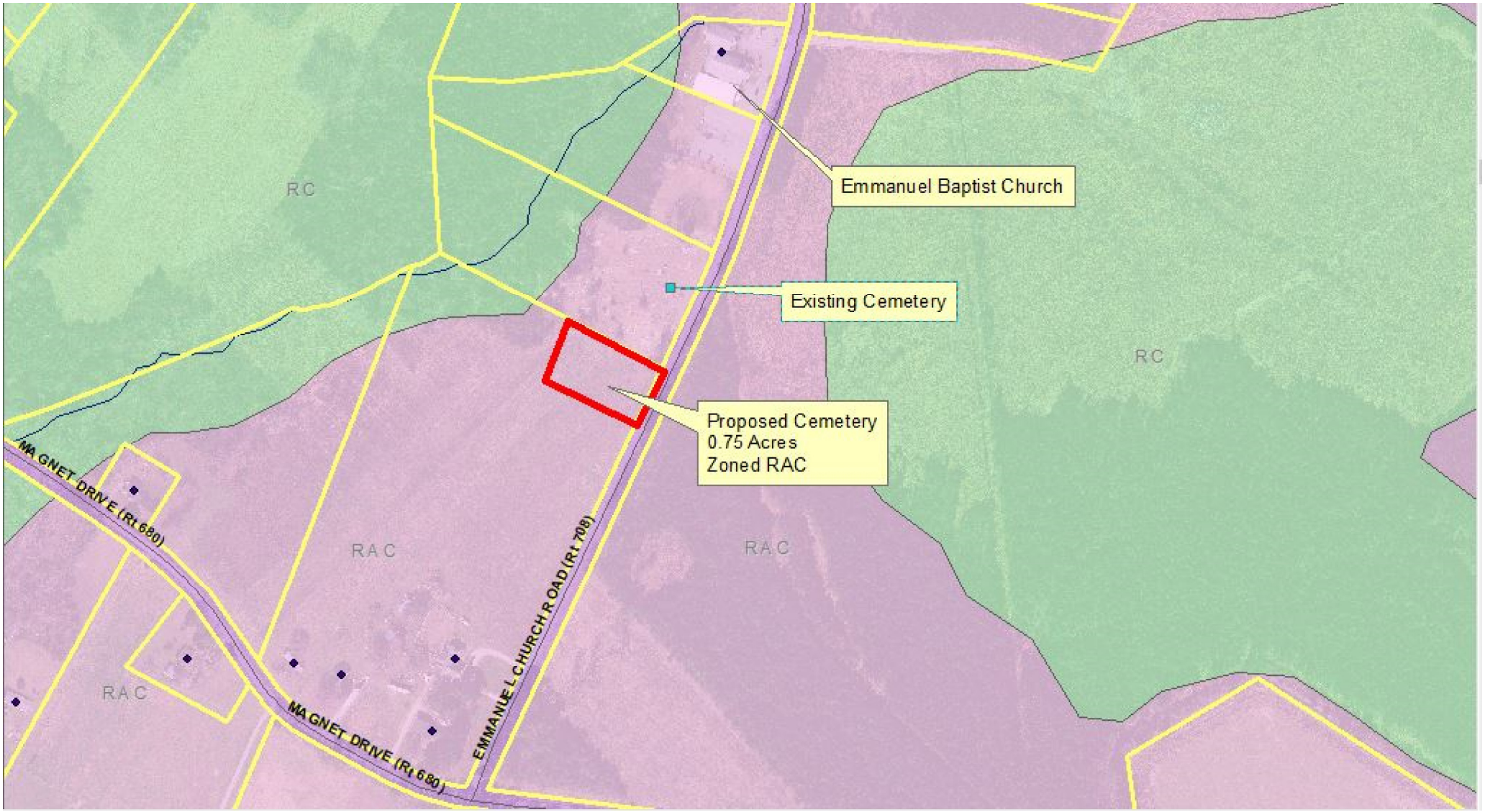
02/2015.

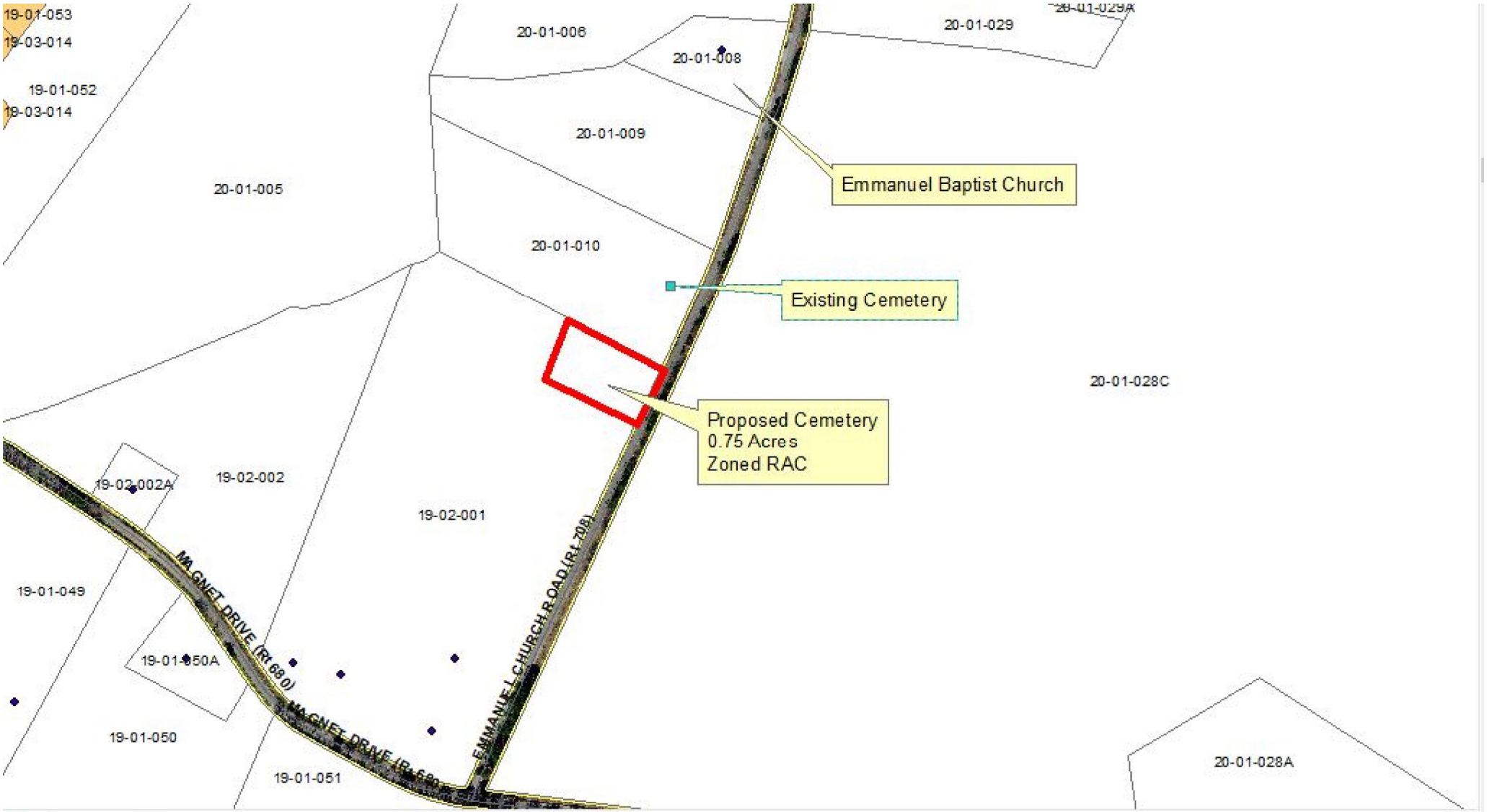
COMMONWEALTH OF VIRGINIA
ROB D'ANGELO
LIC. NO. 003220
8-18-2021
LAND SURVEYOR

CEMETERY EXPANSION
CONCEPT PLAN
3-18-2022

60' 0' 30' 60' 120'
SCALE IN FEET


Emmanuel Baptist Church
Existing Cemetery
Proposed Cemetery
0.75 Acres
Zoned RAC


Emmanuel Baptist Church
Existing Cemetery
Proposed Cemetery
0.75 Acres
Zoned RAC
RC
RC
RAC
RAC
RAC
MAGNET DRIVE (Rt 680)
MAGNET DRIVE (Rt 680)
EMMANUEL CHURCH ROAD (Rt 708)


19-01-053
19-03-014
19-01-052
19-03-014
20-01-006
20-01-008
20-01-029
20-01-009
20-01-005
20-01-010
Emmanuel Baptist Church
Existing Cemetery
Proposed Cemetery
0.75 Acres
Zoned RAC
20-01-028C
19-02-002A
19-02-002
19-02-001
19-01-049
19-01-050A
19-01-050
19-01-051
MAGNET DRIVE (Rt 680)
EMMANUEL CHURCH ROAD (Rt 708)
20-01-028A

ORDINANCE NUMBER _____

AN ORDINANCE TO ISSUE A CONDITIONAL USE PERMIT, CUP-3-22, TO ESTABLISH A CHURCH CEMETERY AT 11150 EMMANUEL CHURCH ROAD ON A PORTION OF PROPERTY WITH TAX PARCEL NUMBER 20-01-010 ZONED RURAL AGRICULTURAL CONSERVATION

WHEREAS, Morris G. Hall, Deacon, and the Trustees of Emmanuel Baptist Church, property owner, have requested a conditional use permit to allow the expansion of a church cemetery on 0.75 acres located at 11150 Emmanuel Church Road with tax map number 20-01-010 which land is depicted on Exhibit "B"; and,

WHEREAS, the procedural requirements of Appendix B, Zoning Ordinance, of the Code of Isle of Wight County, Virginia, 2005 (as amended), have been followed; and,

WHEREAS, in acting upon this request, the Planning Commission and Board of Supervisors have considered the matters enunciated in Section 15.2-2284 of the Code of Virginia (1950), as amended, and Section 1-1017 of the Isle of Wight County Zoning Ordinance with respect to the purposes stated in Code of Virginia (1950), as amended, Section 15.2-2200 and 15.2 2283; and,

WHEREAS, the Planning Commission has made a recommendation as stated in Exhibit "A;"

NOW, THEREFORE, BE IT ORDAINED by the Isle of Wight County Board of Supervisors of Isle of Wight County, Virginia, that:

Section 1. Exhibits.

Exhibit "A", "Planning Commission Recommendation" and Exhibit "B", "Property Map" which are attached hereto, are hereby incorporated as part of this ordinance.

Section 2. Findings.

The Board of Supervisors finds that the proposal for a conditional use permit (CUP-3-22), as submitted or modified with conditions herein, the expressed purpose of which is to permit a church cemetery, is in conformity with the standards of the Isle of Wight County Zoning Ordinance, and that it will have no more adverse effects on the health, safety or comfort of persons living or working in or driving through the neighborhood, and will be no more injurious to property or improvements in the neighborhood than would any other use generally permitted in the same district, taking into consideration the location, type and height of buildings or structures, the type and extent of landscaping and screening on site and whether the use is consistent with any theme, action, policy or map of the Comprehensive Plan with the conditions set forth below.

These findings are based upon the consideration for the existing use and character of the property, the Comprehensive Plan, the suitability of the property for various uses, the trends of growth or change, the current and future requirements of the community as to land for various purposes as determined by population and economic studies and other studies, the transportation requirements of the community, the requirements of airports, housing, schools, parks, playgrounds, recreation areas and other public services, the conservation of natural resources, the preservation floodplains, the preservation of agricultural and forestal land, the conservation of properties and their values, and the encouragement of the most appropriate use of land throughout the County.

These findings are based upon a determination that most reasonable and limited way of avoiding the adverse impacts of a major utility service is by the imposition of the conditions provided herein.

Section 3. Permit Granted.

The conditional use permit for the property be, and is hereby approved for the property and the general conditions set forth in Section 4 hereof. The conditional use permit specifically allows for a church cemetery in compliance with the County Zoning Ordinance.

Section 4. Severability.

It is the intention of the Board of Supervisors that the provisions, sections, paragraphs, sentences, clauses, and phrases of this ordinance are severable; and if any phrase, clause, sentence, paragraph, section, and provision of this ordinance hereby adopted shall be declared unconstitutional or otherwise invalid by the valid judgement or decree of a court of competent jurisdiction, such unconstitutionality or invalidity shall not affect any of the remaining phrase, clauses, sentences, paragraphs, sections, and provisions of this ordinance, to the extent that they can be enforced notwithstanding such determination

Section 5. Effective Date

This ordinance shall be effective upon passage and shall not be published or codified. The conditional use authorized by this permit shall be implemented within two (2) years from that date of approval by the Board of Supervisors and shall terminate if not initiated within that time period.

This ordinance shall be effective upon passage and shall not be published or codified.

DATE: _____

READ AND PASSED: _____
Chairman, Board of Supervisors

TESTE: _____
Clerk, Board of Supervisors

Approved as to Form:

_____
Robert W. Jones Jr, County Attorney

APPENDIX A

RESOLUTION NUMBER PC-22-04

ISLE OF WIGHT COUNTY PLANNING COMMISSION
RESOLUTION TO PRESENT A REPORT AND RECOMMENDATION
TO THE BOARD OF SUPERVISORS RELATING TO CONDITIONAL USE PERMIT
REQUEST CUP-3-22 FOR A CHURCH CEMETERY AT 11150 EMMANUEL CHURCH ROAD
WITH TAX MAP NUMBER 20-01-010

WHEREAS, Morris G. Hall, Deacon, and the Trustees of Emmanuel Baptist Church, property owner, have requested a conditional use permit to allow the expansion of a church cemetery on 0.75 acres on the property located at 11150 Emmanuel Church Road with tax map number 20-01-010; and

WHEREAS the procedural requirements for the consideration of this request by the Planning Commission have been met.

NOW, THEREFORE, BE IT RESOLVED by the Planning Commission of Isle of Wight County, that:

Section 1. Findings.

A. The Isle of Wight County Planning Commission finds that the proposed amendment to conditional zoning is reasonable and warranted due to a change in circumstances affecting the property and has considered the following factors and finds that the proposed rezoning does not conflict with:

1. the existing use and character of property within the County;
2. the Comprehensive Plan;
3. the suitability of the property for various uses;
4. the trends of growth or change;
5. the current or future requirements of the community as to land for various purposes as determined by population and economic studies and other studies;
6. the transportation requirements of the community;
7. the requirements for airports, housing, schools, parks, playgrounds, recreation areas and other public services;
8. the conservation of natural resources;
9. the preservation of floodplains;
10. the preservation of agricultural and forestal land;
11. the conservation of properties and their values; and

12. the encouragement of the most appropriate use of land throughout the County.

____ B. The Isle of Wight County Planning Commission does not find that the proposed zoning map amendment is reasonable based on the consideration of the factors listed herein.

Section 2. Recommendation to Board of Supervisors.

The Planning Commission recommends to the Board of Supervisors that the request with application number CUP-3-22 be:

✓ a. Granted as submitted, and that the Board of Supervisors adopt the proposed Ordinance without modification.

___b. Denied, and that Board of Supervisors not adopt the proposed Ordinance.

___c. Granted with the modifications set forth on the attached listing of specific recommendations, and that the Board of Supervisors adopt the proposed Ordinance with such modifications.

DATE: 4·26·22

READ AND PASSED: Bobby Brown

Chairman, Isle of Wight County Planning Commission

TESTE: [signature]

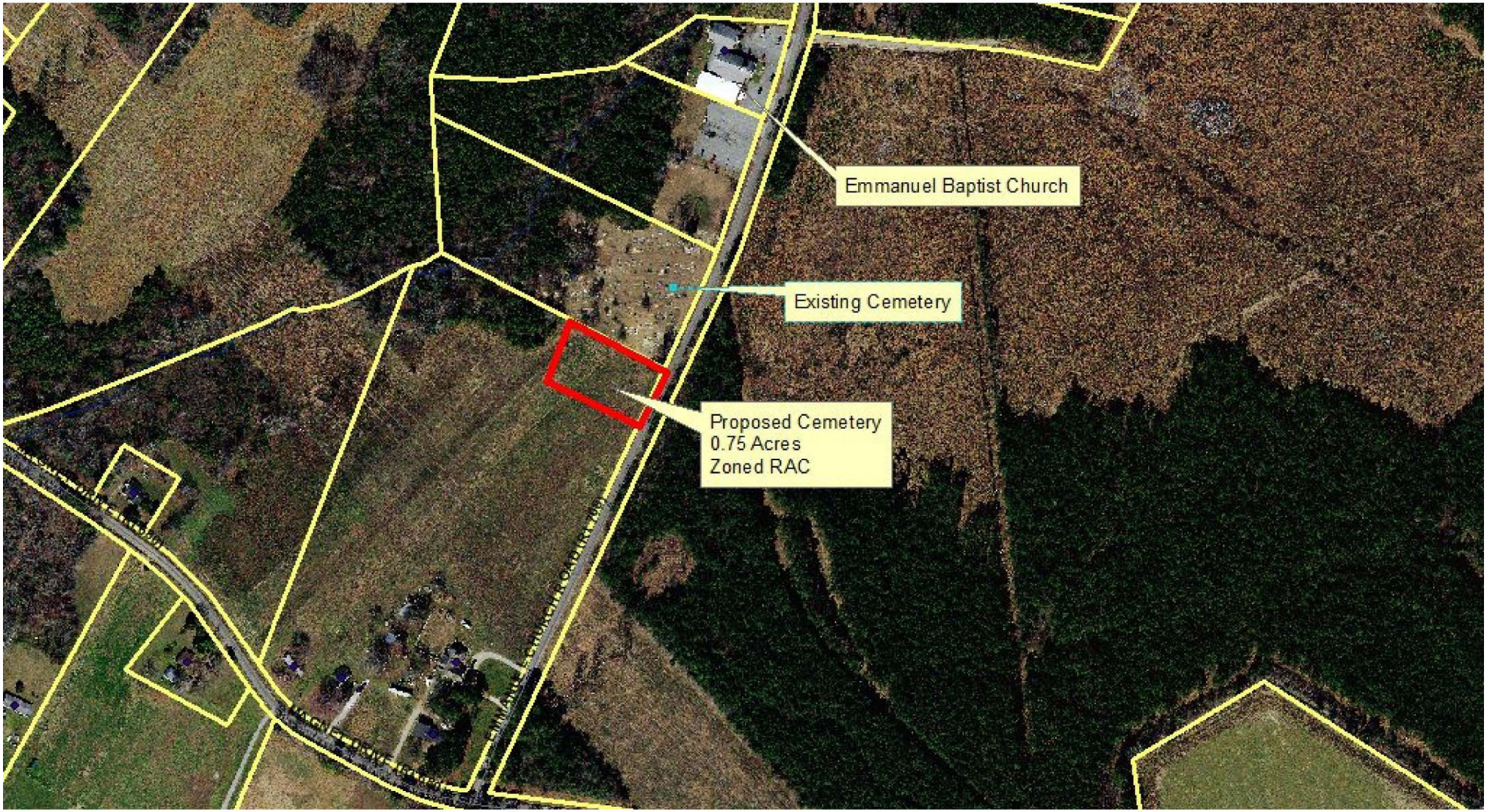
Secretary, Isle of Wight County Planning Commission

Approved as to Form:

[signature]

Robert W. Jones, Jr., County Attorney

APPENDIX B
EMMANUEL BAPTIST CHURCH CEMETERY EXPANSION CUP-3-22
11150 EMMANUEL CHURCH ROAD ON TAX MAP NUMBER 20-01-010



ISSUE:

Application of Earl S. and Diane P. Griffin and Christine Piersall TRS SE & DP Irrevocable Trust, Owners, for a Change in Zoning Classification from Rural Agricultural Conservation to Conditional Rural Residential for 13.59 Acres on Vellines Lane (Rte. 712) for Single Family Residential Use

BACKGROUND:

Earl S. and Diane P. Griffin and Christine Piersall TRS SE & DAB Irrevocable Trust, property owners, submitted an application for a change in zoning classification of tax parcel number 24-01-036DD from Rural Agricultural Conservation (RAC) to Conditional Rural Residential (C-RR) for 13.59 Acres on a parcel with tax parcel identification number 24-01-036DD on Vellines Lane (Rte. 712) for single family residential use.

The property proposed to be rezoned was subdivided from the parent tract of 74.225 acres in October 2021 for Agriculture, Horticulture or Silviculture use. The parcel contains 7.3 acres of clear land and 6.3 acres of woods and wetlands. The owners have been approached to sell the property for single family residential use which will require rezoning to a residential zoning.

The proposal will allow the lot to be used for single family residential. A proffered condition of the rezoning to C-RR will also allow no more than two family member transfers from the parcel. Based on the Capital Impacts Model analysis results, there is sufficient capacity for school, fire and rescue, and law enforcement facilities to serve these parcels.

A full analysis of the application's consistency with County plans and ordinances is included in the attached Planning Commission staff report.

BUDGETARY IMPACT:

None

RECOMMENDATION:

The Planning Commission recommended approval of the request with the proffered conditions by a vote of seven in favor and zero against (7-0) at its April 26, 2022, meeting.

Based on the strengths of the application, staff recommends approval of the rezoning application with proffered conditions.

ATTACHMENTS:

Description	Type	Upload Date
PC Staff Report	Cover Memo	5/5/2022
Location Map	Exhibit	5/5/2022
Enlarged Location Map	Exhibit	5/5/2022
Land Use Map	Exhibit	5/5/2022
Zoning Map	Exhibit	5/5/2022
Exhibit	Exhibit	5/5/2022
Griffin Rezoning Resolution	Backup Material	5/6/2022
Griffin Rezoning Ordinance	Backup Material	5/5/2022
Ordinance Exhibits	Backup Material	5/6/2022
Opposition	Backup Material	5/6/2022

PLANNING REPORT

APPLICATION:

Application of Earl S. and Diane P. Griffin and Christine Piersall TRS SE & DAB Irrevocable Trust, property owners, for a change in zoning classification of tax parcel number 24-01-036DD from Rural Agricultural Conservation (RAC) to Conditional Rural Residential (C-RR) for single family residential use.

ELECTION DISTRICT:

D2 (formerly Newport)

LOCATION:

The parcel totals 13.592 acres on Vellines Lane (Rte. 712). The surrounding properties are single family residential.

BACKGROUND:

The property proposed to be rezoned was subdivided from the parent tract of 74.225 acres in October of 2021 for Agriculture, Horticulture or Silviculture use. The parcel contains 7.3 acres of clear land and 6.3 acres of woods and wetlands. The owners have been approached to sell the property for single family residential use which requires rezoning to a residential zoning.

DESCRIPTION:

The proposal will allow the lot to be used for single family residential. A proffered condition of the rezoning to C-RR will also allow no more than two (2) family member transfers from the parcel. Based on the Capital Impacts Model analysis results, there is sufficient capacity in regard to school, fire and rescue, and law enforcement facilities to serve these parcels.

COMPREHENSIVE LAND USE PLAN:

The property is designated Rural Agricultural Conservation on the Future Recommended Land Use Map in the Comprehensive Plan. This designation is intended to maintain and conserve rural character and farmlands and to provide for a full range of agricultural and farming activities and related uses with low density residential development. The proposal is consistent with the future recommended land use.

ORDINANCE REVIEW:

The required lot area in the RR zoning district is a minimum of 40,000 square feet. The minimum lot frontage is 120 feet with 150 feet of lot width at the front setback line. The parcel meets the minimum requirements of the

RR zoning district.

The property is in the Chesapeake Bay Preservation Area and does contain a Resource Protection area. Future development will require a Wetlands and Chesapeake Bay Resource Protection Area Delineation.

Any future subdivision of the land will require subdivision plat approval.

AGENCY REVIEW:

Staff distributed the application to the following agencies and departments for review and comment:

- Emergency Services - Stated no concerns with the application.
- Environmental Planner - Stated a wetlands delineation will be required upon development or re-subdivision of the parcel.
- Virginia Department of Transportation - Stated no concerns with the application.
- Isle of Wight County Museum (Historical Resources) - Stated no concerns with the application.

- County Attorney - Stated no concerns with the the application.

STAFF CONCLUSIONS:

Strengths:

- The application is compatible with the existing land uses in the vicinity and within the guidelines of the future Recommended Land Use Plan Designation.

Weaknesses:

- Staff has not identified any weaknesses at this time.

STAFF RECOMMENDATION:

Staff recommends approval of the rezoning application with proffered conditions.

ATTACHMENTS:

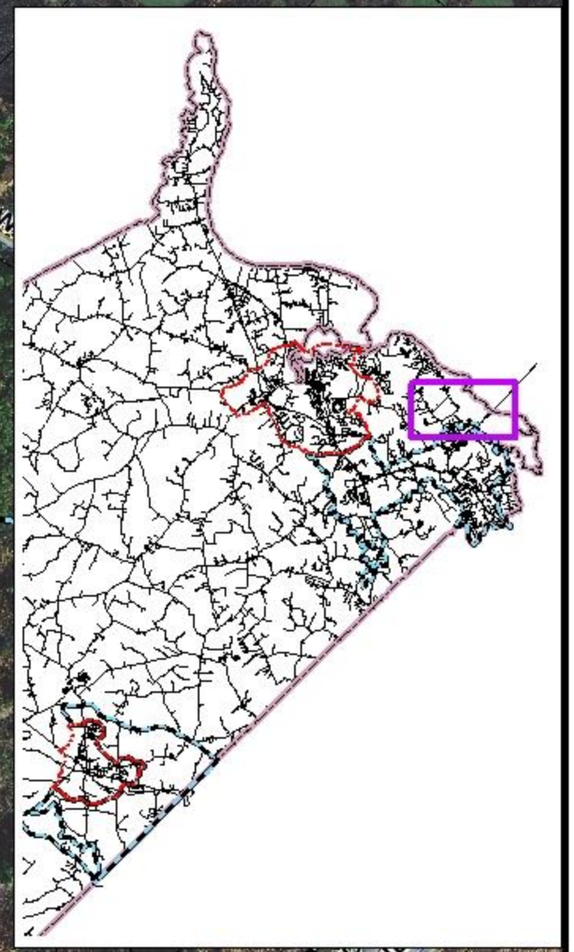
Description	Type	Upload Date
Rezoning Application	Cover Memo	4/13/2022
Location Map	Exhibit	4/12/2022
Enlarged Location Map	Exhibit	4/12/2022
Land Use Map	Exhibit	4/12/2022
Zoning Map	Exhibit	4/13/2022
Rezoning Exhibit	Exhibit	4/12/2022
ZA-1-22 Griffin PC Resolution	Resolution	4/20/2022

ZA-01-2022 GRIFFIN REZONING LOCATION MAP

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA

N

GRAND SQUARE LANE
DRIVEWAY
ROCKY ROAD
HINNANT LANE
DRIVEWAY
VELUNES LANE
DRIVEWAY
KINGS COVE W
SITE
DRIVEWAY
DRIVEWAY
HARBOR DRIVE
ANCHOR COURT
LIGHTHOUSE LANE



Legend

- Road Center Lines
- Towns
- Development Service Districts
- Parcels
- County Boundary

0 500 1,000 Feet

ZA-01-2022 GRIFFIN REZONING LOCATION MAP ENLARGEMENT

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA



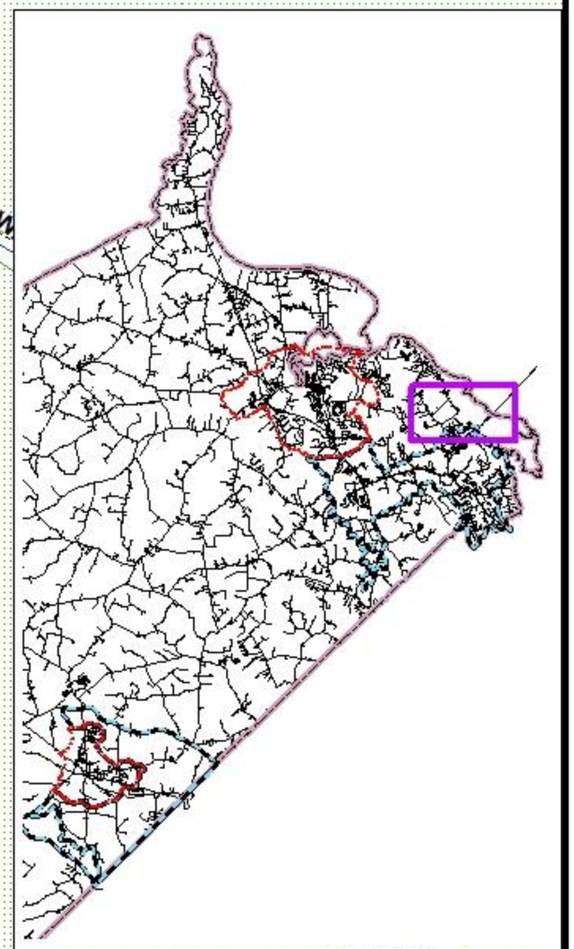
ZA-01-2022 GRIFFIN REZONING LAND USE MAP

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA

N

GRAND SQUARE LANE
DRIVEWAY
ROCKY ROAD
HINNANT LANE
DRIVEWAY
VELLINES LANE
DRIVEWAY
KINGS COVE W
HARBOR DRIVE
ANCHOR COURT
LIGHTHOUSE LANE
DRIVEWAY
DRIVEWAY
SITE

RAC
RC
SR
MU



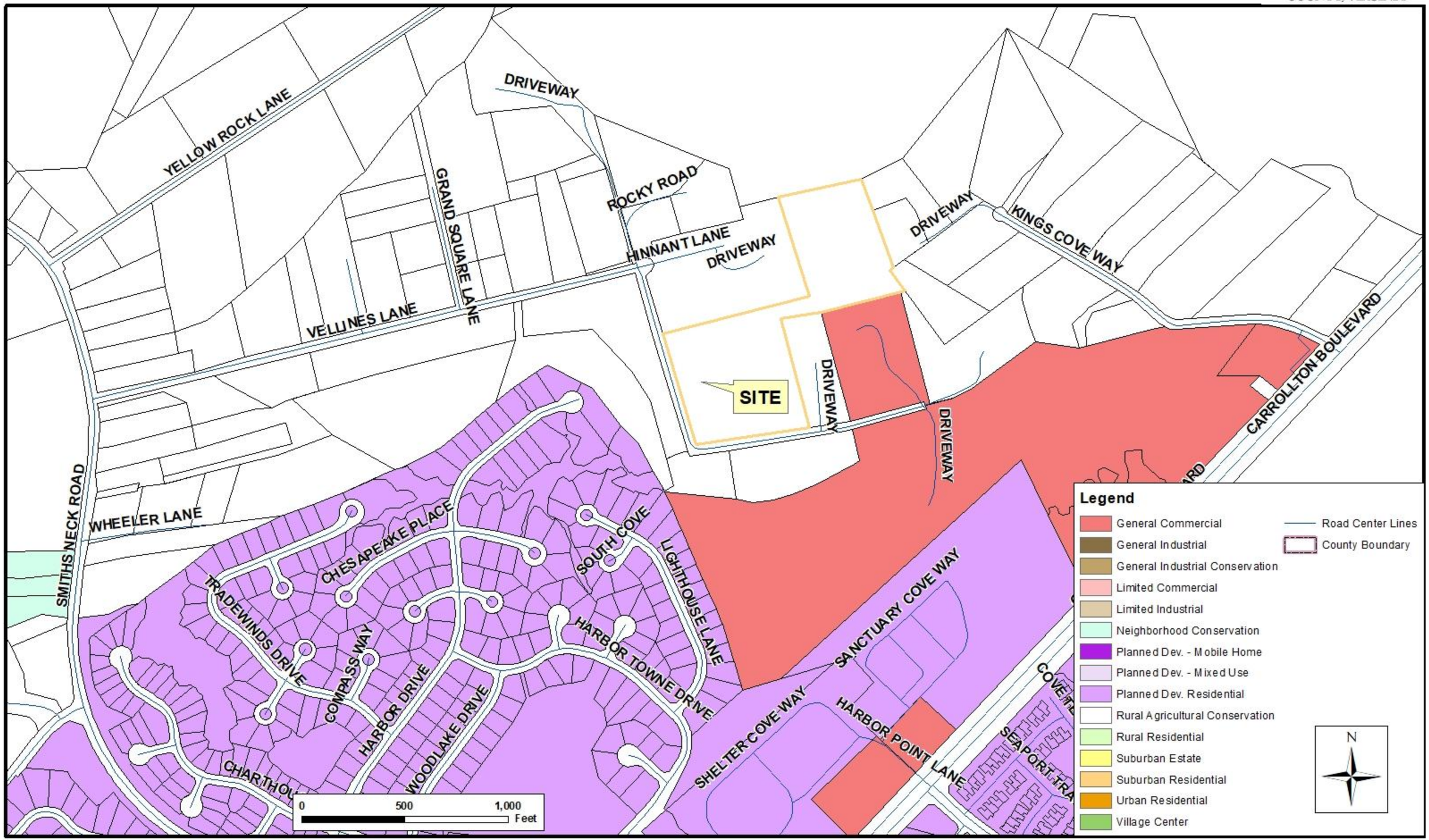
Legend

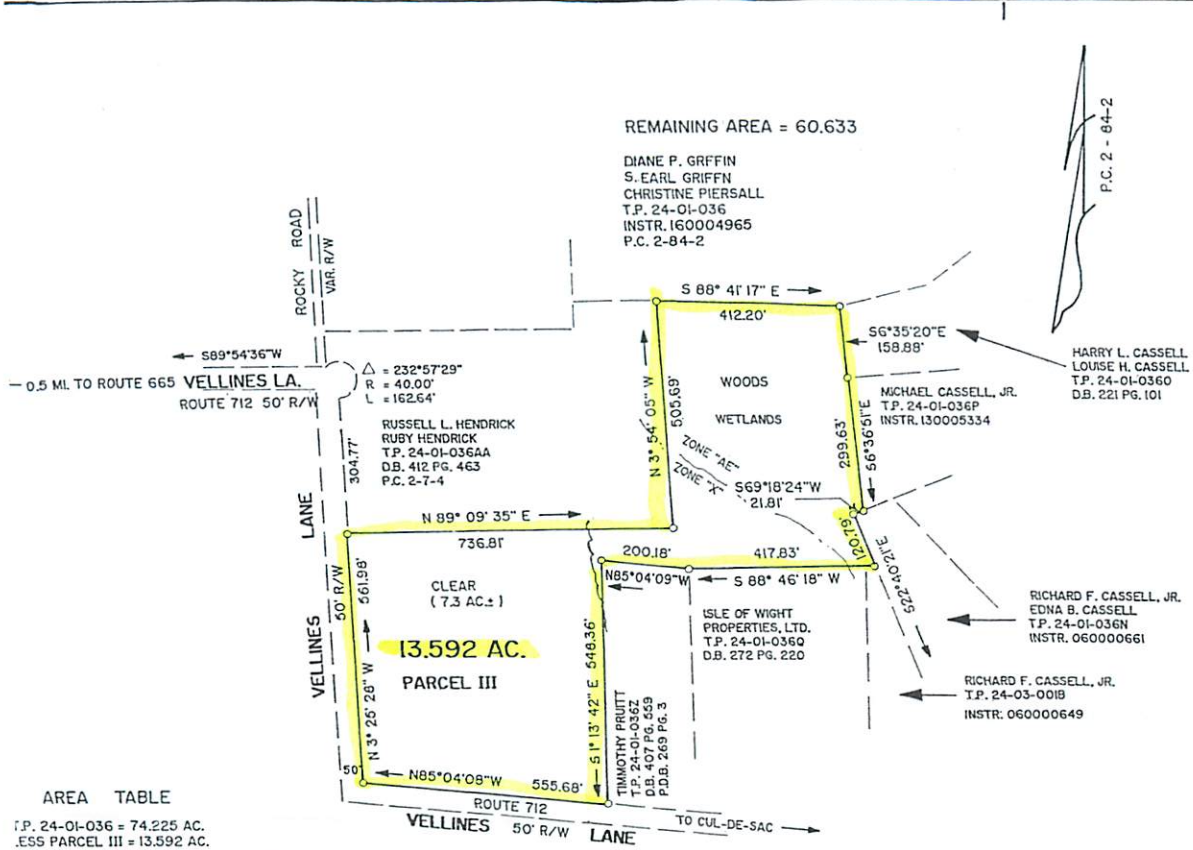
- Road Center Lines
- Development Service Districts
- Parcels
- County Boundary

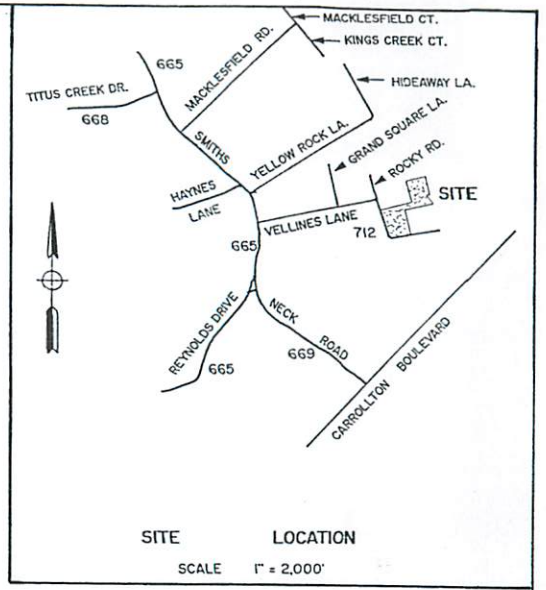
0 500 1,000 Feet

ZA-01-2022 GRIFFIN REZONING - ZONING MAP

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA







217641 PG 2 OCT. 27, 2021

INSTRUMENT # 210007841
RECORDED IN THE CLERK'S OFFICE OF
ISLE OF WIGHT COUNTY ON
OCTOBER 27, 2021 AT 10:12AM

KATHLEEN S. TORRENCE, CLERK
RECORDED BY: DDS

AREA TABLE

T.P. 24-01-036 = 74.225 AC.
LESS PARCEL III = 13.592 AC.

REMAINING AREA T.P. 24-01-036 = 60.633 AC.

NOTE AREA DETERMINED BY CALCULATING FROM PLAT RECORDED IN P.C. 2 - 84 - 2.

REFERENCE - INSTR. 160004965
P.C. 2 - 84 - 2

● - DENOTES IRON PIN FOUND

THIS SUBDIVISION OF LAND IS BEING CREATED UNDER SECTION 3-4-1 (a) OF THE ISLE OF WIGHT COUNTY SUBDIVISION ORDINANCE FOR AGRICULTURAL, HORTICULTURAL OR SILVERCULTURAL PURPOSES. RESIDENTIAL DEVELOPMENT WILL REQUIRE RESIDENTIAL ZONING PURSUANT TO SECTION 3-8 OF THE ISLE OF WIGHT COUNTY SUBDIVISION ORDINANCE.

THIS PROPERTY IS LOCATED IN THE CHESAPEAKE BAY PRESERVATION AREA (CBPA).

I HEREBY CERTIFY THAT THE PROPERTY SHOWN ON THIS PLAT IS LOCATED IN ZONE "X" AND ZONE "AE" AS SHOWN ON THE FLOOD INSURANCE RATE MAP, COMMUNITY-PANEL NO. 510303 0158 E, DEC. 2, 2015. J.D. Vann, L. S.

NO TITLE REPORT WAS PROVIDED FOR THIS SURVEY.

I HEREBY CERTIFY THAT THIS SUBDIVISION WAS MADE BY ME AT THE DIRECTION OF THE OWNERS AND THAT THE SUBDIVISION IS ENTIRELY WITHIN THE LAND OWNED BY S. EARL GRIFFIN AND DIANE P. GRIFFIN. THE LAST INSTRUMENT OF TITLE BEING INSTRUMENT NO. 160004965. I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL OF THE REQUIREMENTS OF THE BOARD OF SUPERVISORS AND ORDINANCES OF THE COUNTY OF ISLE OF WIGHT, VIRGINIA, REGARDING THE PLATTING OF THE SUBDIVISIONS WITHIN THE COUNTY HAVE BEEN COMPLIED WITH.

GIVEN UNDER MY HAND THIS 24TH DAY OF SEPTEMBER, 2021.

J.D. Vann, L. S.

CHRISTINE PIERSALL (CO-TRUSTEE) HEREBY CERTIFIES THAT SHE IS THE OWNER OF THE PROPERTY SHOWN ON THIS PLAT AND THAT THIS SUBDIVISION IS WITH HER FREE CONSENT AND ACCORDANCE WITH HER DESIRES.

OWNER Christine Piersall CHRISTINE PIERSALL (CO-TRUSTEE)

STATE OF VIRGINIA
COUNTY/CITY Portsmouth, TO-WIT
SUBSCRIBED AND SWORN TO BEFORE ME Marcia Fabbre Fulford, A NOTARY PUBLIC IN AND FOR THE COUNTY/CITY Suffolk STATE OF VIRGINIA. THIS 22 DAY OF October, 20 21.
MY COMMISSION EXPIRES 12/31/2024.
GIVEN UNDER MY HAND THIS 22 DAY OF October, 2021.
7703719
NOTARY REGISTRATION NO.
Marcia Fabbre Fulford NOTARY PUBLIC

Marcia Fabbre Fulford
Commonwealth of Virginia
Notary Public
Commission No. 7703719
My Commission Expires 12/31/2024

S. EARL GRIFFIN & DIANE P. GRIFFIN HEREBY CERTIFY THAT THEY ARE THE OWNERES OF THE PROPERTY SHOWN ON THIS PLAT AND THAT THIS SUBDIVISION IS WITH THEIR FREE CONSENT AND ACCORDANCE WITH THEIR DESIRES.

OWNER S Earl Griffin S. EARL GRIFFIN (TRUSTEE)
OWNER Diane P. Griffin DIANE P. GRIFFIN (TRUSTEE)

STATE OF VIRGINIA
COUNTY/CITY Portsmouth, TO-WIT
SUBSCRIBED AND SWORN TO BEFORE ME Marcia Fabbre Fulford A NOTARY PUBLIC IN AND FOR THE COUNTY/CITY OF Suffolk, STATE OF VIRGINIA. THIS 22 DAY OF October, 20 21.
MY COMMISSION EXPIRES 12/31/2024.
GIVEN UNDER MY HAND THIS 22 DAY OF October, 2021.
7703719
NOTARY REGISTRATION NO.
Marcia Fabbre Fulford NOTARY PUBLIC

Marcia Fabbre Fulford
Commonwealth of Virginia
Notary Public
Commission No. 7703719
My Commission Expires 12/31/2024

REVISED OCT. 21, 2021

THIS SUBDIVISION HAS BEEN FOUND TO BE IN CONFORMANCE WITH THE SUBDIVISION ORDINANCE AND MUST BE RECORDED WITH THE OFFICE OF THE CLERK OF CIRCUIT COURT OF ISLE OF WIGHT COUNTY WITHIN SIX MONTHS OF THE DATE OF APPROVAL. APPROVAL WILL BE DEEMED VOID AFTER SIX MONTHS AND THE PLAT MUST BE RESUBMITTED FOR APPROVAL.

DATE OF APPROVAL: 10/26/2021 SUBDIVISION AGENT

DATE OF APPROVAL: 10/25/21 V.D.O.T. ENGINEER

PLAT SHOWING AGRICULTURAL, HORTICULTURAL OR SILVERCULTURAL SUBDIVISION OF TAX PARCEL 24-01-036, PROPERTY OF
DIANE P. GRIFFIN & S. EARL GRIFFIN
DIANE P. GRIFFIN AND CHRISTINE PIERSALL, TRUSTEES OF THE
S. EARL GRIFFIN 2016, IRREVOCABLE FAMILY TRUST
S. EARL GRIFFIN AND CHRISTINE PIERSALL, TRUSTEES OF THE
DIANE P. GRIFFIN IRREVOCABLE FAMILY TRUST
LOCATED ON VELLINES LANE
NEWPORT MAGISTERIAL DISTRICT
ISLE OF WIGHT COUNTY, VIRGINIA
SCALE 1" = 100' SEPT. 24, 2021

J. D. VANN - LAND SURVEYING
25085 NEW MARKET ROAD
COURTLAND, VIRGINIA 23837
TEL. NO. 757-562-4923

COMMONWEALTH OF VIRGINIA
J. D. VANN
Lic. No. 1943
10-21-21
LAND SURVEYOR

SCALE 1" = 100'
0' 100' 200'

2021-200-IW

RESOLUTION NO. PC-22-03

ISLE OF WIGHT COUNTY PLANNING COMMISSION
A RESOLUTION TO PRESENT A REPORT AND RECOMMENDATION TO THE BOARD OF SUPERVISORS RELATING TO REZONING REQUEST ZA-01-22 TO CHANGE THE ZONING FROM RAC, RURAL AGRICULTURAL CONSERVATION, TO C-RR, CONDITIONAL RESIDENTIAL OF 13.592 ACRES OF LAND IDENTIFIED AS TAX MAP PARCEL 24-01-036DD

WHEREAS, Earl S. and Diane P. Griffin and Christine Piersall TRS SE & DP Irrevocable Trust, owners, have requested a change in zoning from RAC, Rural Agricultural Conservation, to C-RR, Conditional Rural Residential; and

WHEREAS, the procedural requirements for the consideration of this request by the Planning Commission have been met.

NOW, THEREFORE, BE IT RESOLVED by the Planning Commission of Isle of Wight County, that:

Section 1. Findings.

A. The Isle of Wight County Planning Commission finds that the proposed rezoning is reasonable, and warranted due to a change in circumstances affecting the property, and has considered the following factors and finds that the proposed rezoning does not conflict with:

1. the existing use and character of property within the County;
2. the Comprehensive Plan;
3. the suitability of the property for various uses;
4. the trends of growth or change;
5. the current or future requirements of the community as to land for various purposes as determined by population and economic studies and other studies;
6. the transportation requirements of the community;
7. the requirements for airports, housing, schools, parks, playgrounds, recreation areas and other public services;
8. the conservation of natural resources;
9. the preservation of flood plains;
10. the preservation of agricultural and forestal land;
11. the conservation of properties and their values;

12. the encouragement of the most appropriate use of land throughout the County;

Section 2. Recommendation to Board of Supervisors.

The Planning Commission recommends to the Board of Supervisors that the request, PC-22-03, be:

✓ a. Granted as submitted, and that the Board of Supervisors adopt the proposed Ordinance without modification.

___b. Denied, and that Board of Supervisors do not adopt the proposed Ordinance.

___c. Granted with the modifications set forth on the attached listing of specific recommendations, and that the Board of Supervisors adopt the proposed Ordinance with such modifications.

READY AND PASSED: Bobby Bowers

TESTE: [signature]

Approved as to Form:

[signature]

Bobby Jones, County Attorney

ORDINANCE NO. _____

AN ORDINANCE TO REZONE AND AMEND THE OFFICIAL ZONING MAP OF ISLE OF WIGHT COUNTY TO CHANGE THE ZONING FROM RAC, RURAL AGRICULTURAL CONSERVATION, TO C-RR, CONDITIONAL RURAL RESIDENTIAL, FOR PROPERTY LOCATED ON VELLINES LANE, TAX PARCEL IDENTIFICATION NUMBER 24-01-036DD; ZA-01-22

WHEREAS, Earl S. and Diane P. Griffin and Christine Piersall TRS SE & DP Irrevocable Trust, owners, have requested a change in zoning from RAC, Rural Agricultural Conservation, to C- RR, Conditional Rural Residential of 13.592 acres located on Vellines Lane, tax parcel identification number 24-01-036DD, which land is depicted on Exhibit "C"; and,

WHEREAS, the proposed rezoning and amendment to the official zoning map have been advertised and reviewed by the Planning Commission in compliance with the requirements of state law; and,

WHEREAS, the Planning Commission has made a recommendation as stated in Exhibit "A"; and,

WHEREAS, a public hearing before the Isle of Wight County Board of Supervisors was duly advertised as required by law and held on the 19th day of May 2022, at which public hearing the public was presented with the opportunity to comment on the proposed rezoning.

NOW, THEREFORE, BE IT ORDAINED by the Isle of Wight County Board of Supervisors of Isle of Wight County, Virginia, that:

Section 1. Exhibits.

Exhibit "A", "Planning Commission Recommendation", Exhibit "B", "Property Map", and Exhibit "C", "Griffin Rezoning Exhibit" which are attached hereto, are hereby incorporated as part of this ordinance.

Section 2. Findings.

A. The Board finds that the proposed rezoning is reasonable and warranted due to a change in circumstances affecting the property, and has considered the following factors and finds that the proposed rezoning does not conflict with:

1. the existing use and character of property within the County;

2. the Comprehensive Plan;

3. the suitability of the property for various uses;

4. the trends of growth or change;

5. the current or future requirements of the community as to land for various purposes as determined by the population and economic studies and other studies;

6. the transportation requirements of the community;

7. the requirements for airports, housing, schools, parks, playgrounds, recreation areas and other public services;

8. the conservation of natural resources;

9. the preservation of flood plains;

10. the preservation of agricultural and forestal land;

11. the conservation of properties and their values;

12. the encouragement of the most appropriate use of land throughout the County; and

Section 3. Rezoning.

A. The property as shown on the attached Exhibits "B" and "C" is hereby rezoned and the official zoning map be, and is hereby, amended from RAC, Rural Agricultural Conservation zoning district, to C-RR, Conditional Rural Residential zoning district.

B. The foregoing rezoning and amendment to the official zoning map shall remain in effect until a subsequent amendment changes the zoning of the property.

This ordinance shall be effective upon passage and shall not be published or codified.

READ AND PASSED: _____

TESTE: _____
Clerk

Approved as to Form:

_____
Bobby Jones, County Attorney

EXHIBIT A
RECOMMENDATION

Staff recommends approval with proffered condition.

The Planning Commission recommends approval with proffered condition.

EXHIBIT B
REZONING EXHIBIT

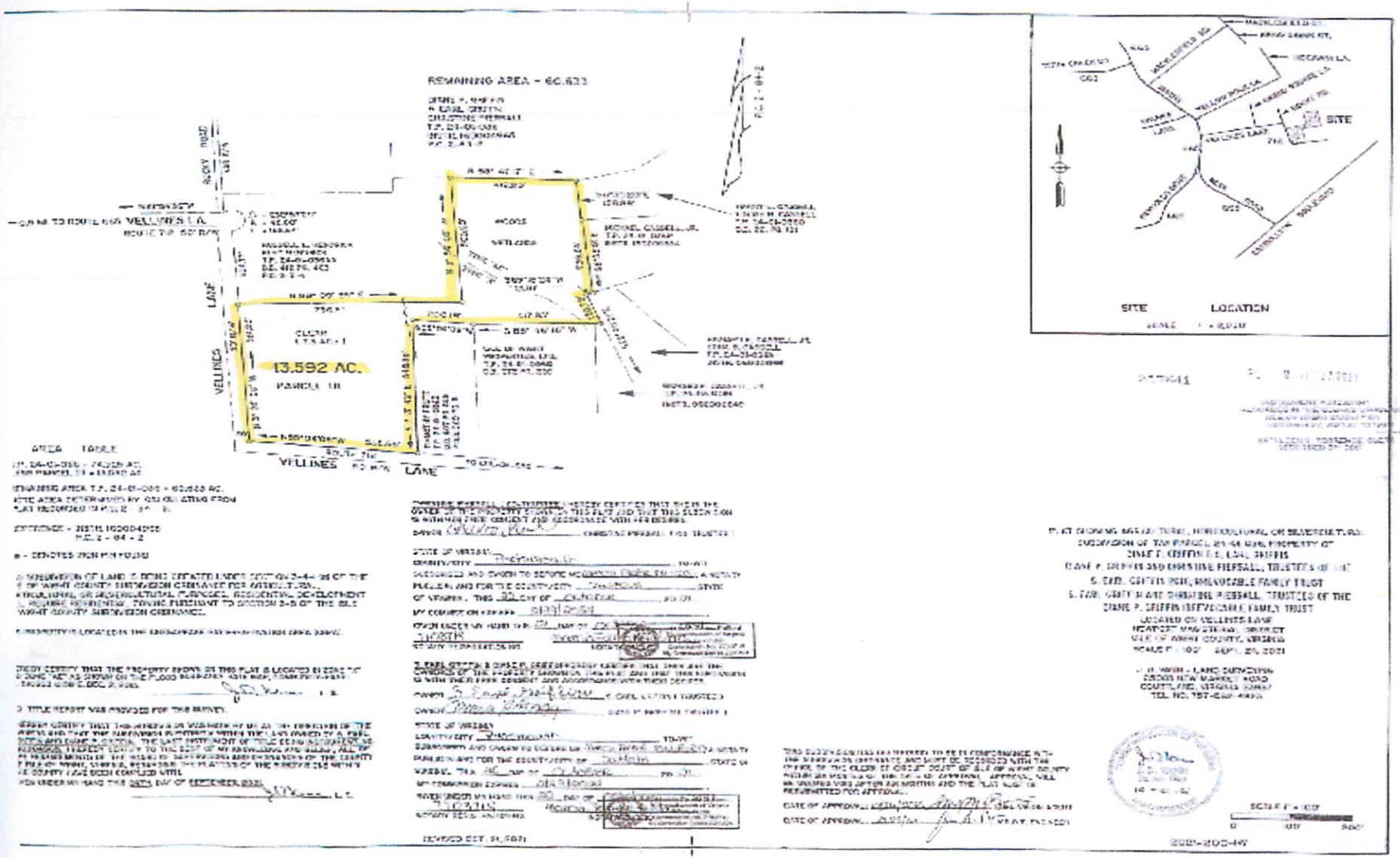
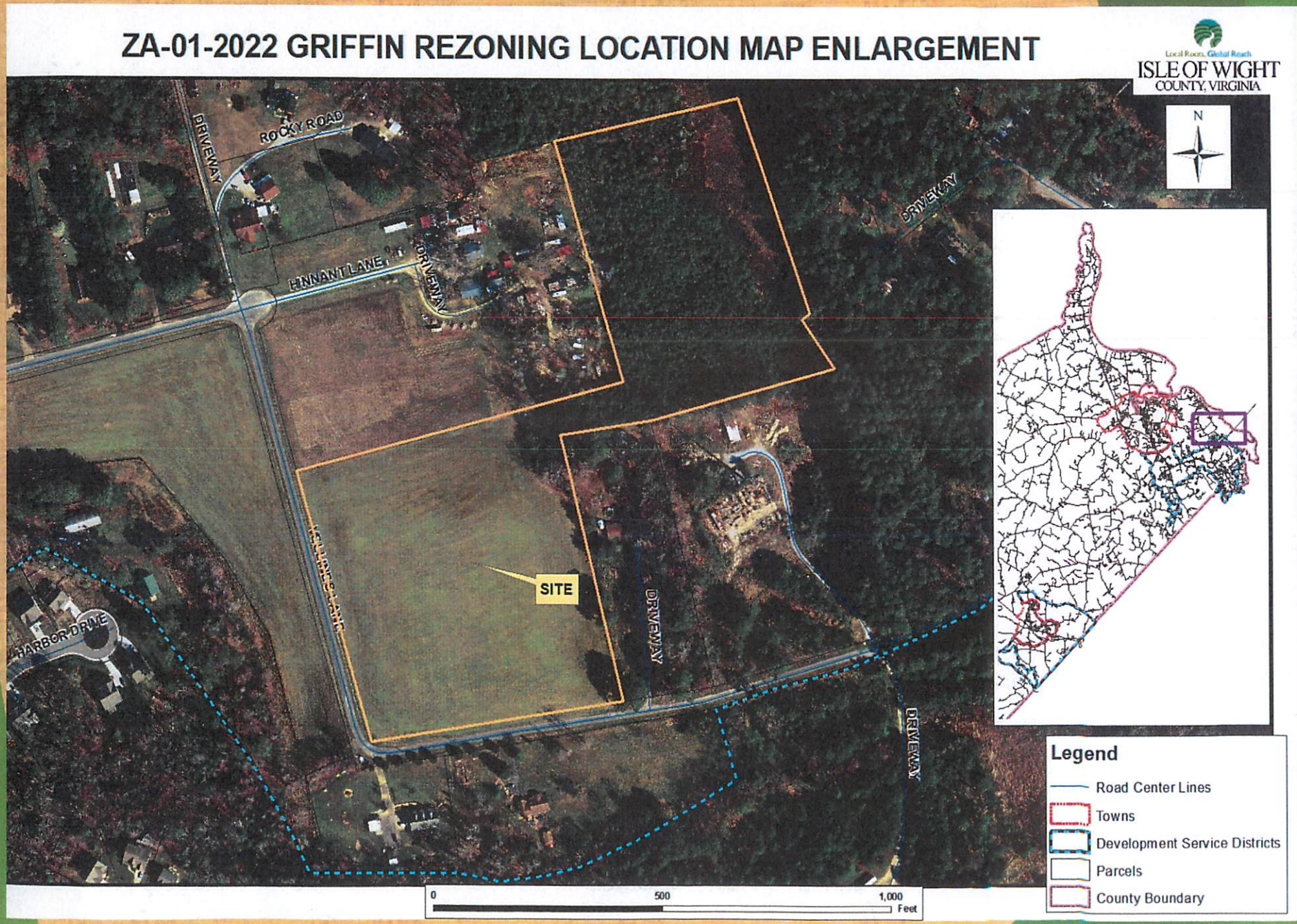


EXHIBIT C


ZA-01-2022 GRIFFIN REZONING LOCATION MAP ENLARGEMENT
Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA
N
ROCKY ROAD
DRIVEWAY
HINNANT LANE
DRIVEWAY
DRIVEWAY
SITE
DRIVEWAY
HARBOR DRIVE
DRIVEWAY
0
500
1,000
Feet
Legend
Road Center Lines
Towns
Development Service Districts
Parcels
County Boundary

Planning & Zoning
Attention: Sandra Walker Robinson

Re: Zoning Code ZA-01-2022
Vellines Ln., Carrollton

We are opposing the proposed zoning change to the property referenced above (aka Plat #24-01-36DD). This was originally the Vellines Farm, and restrictions were made for building. Through the years, we have abided by the rules, and not been allowed to add additional homes to our properties. One home was allowed for each plat.

We are a dead end road, with 28, soon to be 29 homes. 22332 is being constructed now, and appears to be a lovely house. Vellines Lane is a NEIGHBORHOOD, not a development. We know our neighbors, are friendly and help each other in times of need. We are able to walk the road with children and dogs without being run over.

ALL EXISTING HOMES ARE ZONED RAC. The three (3) recently sold lots, including the home being constructed are also zoned RAC. What is the need to change the existing zoning? Why can't this lot be zoned the same?

We are fearful that changing the zoning will enable the owner to apply and be granted changes NOT in keeping with our neighborhood.

Therefore, we are requesting that Isle of Wight County continue to adhere to the restrictions of the RAC zoning and Vellines Farm. We all moved here because it has been a quiet area and would like to keep it that way.

At the time, 2 people would like to speak

Page 1 - Opposed changes to Zoning Code ZA-01-2022

Resident/Owners	Address
David & Carolyn Smith	23005 Vellines Ln.
John Tobin	23254 Vellines Ln
Timothy & Angela Pruitt	23167 Yellines Lane
Carrol K & Betty Caldwell	22479 Vellines Lane, Carrollton
Anthony Jannise	22357 Vellines Lane Carrollton VA.
Paul Pruitt	22479 Vellines Lane Carrollton, VA.
Jerry & Lorie Shepherd	12457 Rocky Rd Carrollton VA
B.W. & Kathy Kelly	12425 Rocky Rd. Carrollton, Va.
Russell & Patty Hendricks	23010 Kinnard Lane, Carrollton VA 23314
Richard & Edna Carroll	23261 Vellines Lane Carrollton VA 23314
Fiedy Juckowitsch II	23136 Vellines LN Carrollton, VA 23314
and Jessica Thomas Donahue	23142 Vellines Lane Carrollton VA 23314
Phyllis Buckner	23142 Vellines LN Carrollton VA 23314
Roy & Eleanor McDaniel	22271 Vellines lane Carrollton VA 23314
Ayda & Stewart Williams	22321 Vellines Ln. Carrollton VA 233
Virginia Critelli	22389 Vellines Lane, Carrollton, VA 23314
Lewis Critelli	22389 Vellines Lane, Carrollton, VA 23314
Susan Bowles	12445 Grand Sq La Carrollton VA 23314
Rollis & Marie Bailey	12462 Rocky Rd. Carrollton VA 23314
Cathy Spruill	23201 Kings Cove Way, Carrollton, VA 23314

Louise H. Cassell 23180 Kings Cove Way, Carrollton VA 23314

Myra J. Cassell 23177 Kings Cove Way, Carrollton VA 23314

Marie J. Ashby 23287 KINGS COVE WAY CARROLLTON VA 23314

J Ashby 23287 KINGS COVE WAY CARROLLTON VA 23314

Michael J Cassell 23174 Kings Cove Way Carrollton VA. 23314

Lisa Cassell 23174 Kings Cove Way Carrollton VA 23314

Judy, Lynn and Aron Zielezinski, 22371 Vellines lane Carrollton, VA 23314

Zoning Code ZA-01-2022

Robert Chappell <rwcsr54@aol.com>
Mon 4/25/2022 5:24 PM

To: Sandra Walker Robinson <srobinso@isleofwightus.net>

Sandra Walker Robinson
Zoning Coordinator For Isle Of Wight County
P.O.Box80
Isle of Wight Virginia 23397

Ms Robinson,
I amwriting in reference to the proposed rezoning (Zoning Code ZA-01-2022) on Vellines Lane in Carrollton. I am in disagreement to this proposal as most all on the current residents of Vellines Lane and side accesses are. I have lived at 22409 Vellines Lane since August 1981. I was here when the area was rezoned to Agricultural Conservative to make way for rezoning for Eagle Harbor but was never informed that it would change the setbacks of my property for a additional gargage that was under construction. When Eagle Harbor was built it disrupted the natural drainage of Vellines Lane. I have discussed this numerous times with VEDOT as all the properties on Vellines Lane have suffered with ground water intrusion, etc. That rezoning change also changed the side setbacks from 15' to 25'. I had already dug the foundation, poured it and laid four coures of blocks and poured the slab. All this was done under legal permits and inspected by IOW. I let the construction sit dormaint for several years while I paid for my sons college education. When I was financially able to resume construction your predecesor would not allow me to complete construction. Nor would she accept a variance to be filed. I talked to Attorney Bill Riddick and he pretty much said with the then current Zoning Board I would be waisting my time and money. I have lived with an unfinished foundation in my side yard for close to 20 years because I can'r bare to demolish about $6000 plus sweat equity. To allow rezoning now of adjacent property would be a slap in my face.
I am adamently against this rezoning being proposed as I previously stated.

Sincerly,

Robert And Margaret Chappell
22409 Vellines Lane
Carrollton , VA 23314

ISSUE:

Application of Saunders and Ojeda, P.C., Applicant, on Behalf of James River Crossings, Inc., Property Owner, for a Change in Zoning from Rural Agricultural Conservation to Conditional Planned Development – Mixed Use for 12.24 Acres Located at 23067 Channell Way for 52 Single-Family Detached Residences

BACKGROUND:

Saunders and Ojeda, P.C. submitted an application on behalf of James River Crossings, Inc., property owner, for a change in zoning from Rural Agricultural Conservation to Conditional Planned Development – Mixed Use for 12.24 acres located at 23067 Channell Way on Tax Parcel Number 34-01-070B for 52 single family detached residences.

The subject property contains four radio towers arrayed southeast to northwest on the subject property as well as a small, concrete block utility building accessed by a driveway from Channell Way. These structures are proposed to be demolished prior to initiating site clearing and grading. The property is zoned Rural Agricultural Conservation (RAC) and is located in the Newport Development Service Overlay (NDSO) District and Chesapeake Bay Preservation Area (CBPA). The interior of the site consists of an open field which is regularly mowed, and the exterior property boundaries are lined with mature trees that provide a good natural buffer to and from adjoining properties. The property is currently drained by former agricultural ditches which convey runoff off-site to the northwest. The parcel lies adjacent to, and immediately northeast of, the Crossings but was not previously available to the owner/developer for purchase during the planning of that larger project, which was originally approved in 2002.

As presently designed, the Crossings development adjoining the subject property to the south is approximately 62 acres and consists of a maximum of 234,400 square feet of commercial development on properties zoned Conditional – General Commercial (GC) and up to 240 multifamily residential dwelling units on property zoned Conditional – Urban Residential (UR). Site clearing and grading for construction of the internal street network, utilities, and related infrastructure serving the commercial outparcels and residential parcel has been underway since 2020, and construction of the first multifamily residential building began in late 2021.

Abutting the subject property to the north, Parcel 34-01-077D (the Lippe parcel)

is the southern parcel comprising the South Harbor community. The Pitt (Parcel 34-01-077) parcel and Lippe parcels were conditionally rezoned PD-MX in 2019 to allow for a maximum of 340 townhouses and single-family detached dwellings, and the rezoning was amended in 2020 to reconfigure streets, relocate open space areas, and modify community amenities as well as the proposed mix of residential dwelling types. Parcel 34-01-077D is planned for 244 single-family attached and detached dwellings in Phase 2, Phase 4, and, immediately adjacent to the Tower Site, Phase 5. The preliminary plat and construction plan for Phase 2 of the subdivision are currently being reviewed by staff.

The subject property is surrounded by parcels that have been rezoned for development. It is the only remaining parcel west of Channell Way, south of the Garrett Farm Property (Parcel 34-01-077C) and not having frontage on Carrollton Boulevard, that continues to be zoned Rural Agricultural Conservation (RAC).

The Planning Commission recommended approval of the application with the proffered conditions by a vote of six in favor and one against the motion at their April 26, 2022, meeting. Following the meeting, the applicant submitted a revised conceptual plan on May 4, 2022, that addresses the Planning Commission's concern that the proposed extension of Spadea Way be shown to fully extend to the eastern property line. The revised conceptual plan is attached for your review. A full analysis of the application's consistency with the County's plans and ordinances is included in the attached Planning Commission staff report.

BUDGETARY IMPACT:

None

RECOMMENDATION:

The Planning Commission recommended approval of the application with the proffered conditions by a vote of six in favor and one against (6-1).

Due to the preponderance of the strengths cited in the staff report, staff also recommends approval of the application with proffered conditions, concept plan, and associated exhibits as presented.

ATTACHMENTS:

Description	Type	Upload Date
Planning Commission Staff Report	Backup Material	5/2/2022
Vicinity Map	Exhibit	4/14/2022

Property Map	Exhibit	4/14/2022
Zoning Map	Exhibit	4/14/2022
Site Photos	Exhibit	4/18/2022
Application Form	Backup Material	4/12/2022
Concept Plan Original	Backup Material	4/12/2022
Revised Concept Plan received May 4, 2022	Backup Material	5/9/2022
Community Impact Statement	Backup Material	4/12/2022
Proffer Statement	Backup Material	4/12/2022
Master Utility & Drainage Plan	Backup Material	4/12/2022
Architectural Sketches	Backup Material	4/12/2022
Environmental Site Assessment	Backup Material	4/12/2022
Traffic Impact Analysis	Backup Material	4/12/2022
Preliminary Wetland Delineation Report	Backup Material	4/12/2022
Ph. 1 Cultural Resources Assessment	Backup Material	4/12/2022
Tower Site Plat	Backup Material	4/12/2022
BOS Ordinance & Exhibits	Ordinance	5/4/2022

PLANNING REPORT

APPLICATION:

Application of Saunders and Ojeda, P.C., applicant, on behalf of James River Crossings, Inc., property owner, for a change in zoning from Rural Agricultural Conservation to Conditional Planned Development – Mixed Use for 12.24 acres located at 23067 Channell Way on Tax Parcel Number 34-01-070B for 52 single family detached residences

ELECTION DISTRICT:

D2 (formerly Newport)

LOCATION:

The subject property has frontage on Channell Way and is located on the east side of Carrollton Boulevard (U.S. Route 17) at the end of Spadea Way, the public street providing principal access to the Crossings. It is bordered to the south and west by parcel 34-01-070D, which is the site of the Crossings condominiums project, and parcel 34-01-070, which is the future site of the Crossings commercial development. To the north of the property is parcel 34-01-077D, the future site of Phases 2, 4, and 5 of the South Harbor Subdivision. To the east across Channell Way are three small parcels zoned Rural Agricultural Conservation (RAC), two of which contain single-family detached dwellings.

BACKGROUND:

The subject property contains four radio towers arrayed southeast to northwest on the subject property as well as a small, concrete block utility building accessed by a driveway from Channell Way. These structures are proposed to be demolished prior to initiating site clearing and grading. The property is zoned Rural Agricultural Conservation (RAC) and is located in the Newport Development Service Overlay (NDSO) District and Chesapeake Bay Preservation Area (CBPA). The interior of the site consists of an open field which is regularly mowed, and the exterior property boundaries are lined with mature trees that provide a good natural buffer to and from adjoining properties. The property is currently drained by former agricultural ditches which convey runoff off-site to the northwest. The parcel lies adjacent to, and immediately northeast of, the Crossings but was not previously available to the owner/developer for purchase during the planning of that larger project, which was originally approved in 2002.

As presently designed, the Crossings development adjoining the subject property to the south is approximately 62 acres and consists of a maximum of 234,400 square feet of commercial development on properties zoned Conditional – General Commercial (GC) and up to 240 multifamily residential dwelling units on property zoned Conditional – Urban Residential (UR). Site clearing and grading for construction of the internal street network, utilities, and related infrastructure serving the commercial outparcels and residential parcel has been underway since 2020, and construction of the first multifamily residential building began in late 2021.

Abutting the subject property to the north, Parcel 34-01-077D (the Lippe parcel) is the southern parcel comprising the South Harbor community. The Pitt (Parcel 34-01-077) parcel and Lippe parcels were conditionally rezoned PD-MX in 2019 to allow for a maximum of 340 townhouses and single-family detached dwellings, and the rezoning was amended in 2020 to reconfigure streets, relocate open space areas, and modify community amenities as well as the proposed mix of residential dwelling types. Parcel 34-01-077D is planned for 244 single-family attached and detached dwellings in Phase 2, Phase 4, and, immediately adjacent to the Tower Site, Phase 5. The preliminary plat and construction plan for Phase 2 of the subdivision are currently being reviewed by staff.

The subject property is surrounded by parcels that have been rezoned for development. It is the only remaining parcel west of Channell Way, south of the Garrett Farm Property (Parcel 34-01-077C) and not having frontage on Carrollton Boulevard, that continues to be zoned Rural Agricultural Conservation (RAC).

DESCRIPTION:

The property owner wishes to rezone the property as a future phase of the Crossings planned development that will be connected by a network of streets, trails, and stormwater infrastructure. The application includes a request to conditionally rezone the subject parcel to permit the construction of 52 single-family detached dwelling units utilizing a condominium system of property ownership. The proposed development will be accessed by extending Spadea Way, a public street, into the development to the northern property line, where it will be extended further to intersect the main street in South Harbor Phase 5 upon development of that phase. A second public street connection is proposed to Channel Way just south of the Whippingham Parkway intersection. Stormwater runoff generated by the proposed development will be collected by an underground storm sewer system and discharged by a pipe to BMP #5 in the

Crossings commercial area (see Master Utilities and Drainage Plan), which will be enlarged to accommodate the volume of runoff generated by the site. Public water and sewer will be extended from the Crossings to serve the proposed development.

Each single-family detached dwelling unit and the exclusive use area or yard surrounding it (equivalent to a lot) will be at least 55 feet in width and 5,500 square feet in area. The minimum building setbacks, established in the proffer statement, will be twenty (20) feet, five (5) feet, and fifteen (15) feet for the front, side, and rear yards, respectively. The James River Crossings community will include 2.15 acres of open space (17.5% of the total area in addition to the Crossings) that will be improved with landscaping, trails, a playground and dog park, and other amenities. The open space area proposed adjacent to the northern property line shared with South Harbor currently contains a strip of mature forest which could be preserved to create a wooded park-like setting.

The Community Impact Statement (CIS) states that the development is projected to generate 20 students and that existing facilities possess adequate capacity to accommodate this increase which was verified by school enrollment figures for facilities that will serve the development. Fire and Rescue projected that the development would increase calls for service by approximately 19 calls per year and that no expansion of existing facilities is needed to address increase. The County's Community Impact Model (CIM) was run by staff and the CIS findings have been validated.

Cultural Resources Survey: The Phase 1 Cultural Resources Survey prepared by Circa reported one isolated historic shovel test find consisting of a post-1950 glass bottle fragment and one late twentieth century radio station on the property. These resources were determined to be ineligible for listing on the National Register of Historic Places (NRHP). For this reason, the study concluded that the proposed project will not affect any archaeological or architectural sites listed or potentially eligible for listing on National Register, and no further action was recommended.

Traffic Impact Analysis (TIA): The Traffic Impact Analysis for James River Crossings was prepared by Kimley-Horn and Associates, Inc. and serves as an original TIA for this project, as well as an updated TIA for the adjacent South Harbor (referred to as the "No Bridge" scenario). The TIA analyzes the traffic impact of the 52 dwelling units in James River Crossings in addition to modified points of connection to Carrollton Boulevard resulting from the extension of Spadea Way through the subject parcel to intersect with the internal street network

in South Harbor. Combining the analyses of these two projects yields a more complete study of the traffic impacts, separately and collectively, of development activity in the area and its effects on the local road network. The average daily vehicle trips generated by James River Crossings (491) are anticipated to have minimal impacts due to the small amount of new traffic being generated by the project relative to the high volume of traffic experienced along the Carrollton Boulevard corridor today, in addition to projected traffic growth in the future. No declines in service levels are expected at the Spadea Way and Channell Way intersections of Carrollton Boulevard, compared to scenarios in which the project site remains undeveloped. In their letter dated March 29, 2022, the Virginia Department of Transportation (VDOT) Franklin Residency concurred with the findings of the TIA.

The transportation improvements proffered as part of the Crossings and South Harbor include the following improvements to Carrollton Boulevard, Channell Way, and Spadea Way, which are designed to mitigate the traffic impacts of the various development projects served by these streets:

- Spadea Way is the primary entrance into the Crossings and has one inbound and two outbound lanes (with a curbed median in between). Northbound right and southbound left turn lanes onto Spadea Way from Route 17 were constructed on Carrollton Boulevard, each having 200 feet of storage length. The eastbound approach to Carrollton Boulevard on Brewers Neck Boulevard was widened to add a dedicated through lane in addition to two dedicated left turn lanes.
- The westbound approach to Carrollton Boulevard on Channell Way will be improved to have one shared through/left-turn lane and one exclusive right turn lane. The existing two-lane road will be improved (widened) between Carrollton Boulevard and Whippingham Parkway.

The applicant is not proposing additional proffered improvements to mitigate the traffic impacts of the project but is planning to extend Spadea Way through the property to the northern property line to create a second point of connection to the future South Harbor subdivision from the south. The James River Crossings project contains a second public street connection to Channell Way. The other internal streets will be private and maintained by the community's condominium owners' association.

The planned street connections to South Harbor and Channell Way change the way trips are allocated throughout the local road network, but do not result in significant additional delays or declines in operational conditions compared to

previous traffic studies. Notably, the overall service levels anticipated at these intersections on Carrollton Boulevard remain essentially unchanged compared to previous TIAs. However, the overall problem of worsening traffic congestion on Carrollton Boulevard associated with continued growth in background traffic conditions is made apparent by this new report, with service levels falling to E and F by 2026 and 2032 for many of the side street approaches to Carrollton Boulevard, particularly during AM and PM peak hours. Continued background growth along this corridor is expected to lead to increasing delays and worsening traffic congestion on U.S. Route 17 in the future.

Wetland Delineation Report and Environmental Site Assessment: The preliminary wetland delineation identified 0.342 acres of non-tidal, emergent wetlands on the site near the northwest portion of the property. These appear to be the remnants of historic agricultural ditches rather than natural stream channels and were determined to be disconnected in terms of surface flow to downstream natural channels. A preliminary jurisdictional determination from the Army Corp of Engineers is currently pending. The applicant is required to obtain all necessary permits from the Army Corps of Engineers and Department of Environmental Quality before filling these isolated wetlands.

COMPREHENSIVE LAND USE PLAN:

The subject property is located in the Newport Development Service District (DSD), an area described in the Comprehensive Plan as a focus area for future growth in the County. The Land Use Plan ("Envision the Isle" chapter) designates the property for future Mixed Use (MU) as part of the larger mixed-use activity center surrounding the crossroads village of Bartlett lying at the intersection of Carrollton Boulevard and Brewers Neck Boulevard. Mixed use areas are described generally in the plan as comprised of "housing mixed with office, commercial, and other uses…located on major transportation routes and at major intersections." The plan describes future residential development anticipated in these areas as "a mix of detached and attached single family residences, multiplexes, townhomes, and apartment style residences, [having] community amenities and preserved natural features" up to density of 14 dwelling units per acre or higher.

The proposed development of the subject property for single-family detached residential use would establish James River Crossings as a low-density residential element of the mixed-use center associated with the Crossings to which this property is related proximately, practically, and legally. Streets, sidewalks, and trails will connect James River Crossings to the Crossings proper as well as South

Harbor and its commercial core area, allowing for pedestrian, bicycle, and vehicular interconnectivity between these mixed-use developments and among their residential and commercial core areas.

The project as conceptually designed accomplishes several Comprehensive Plan policies regarding the preservation of natural resources. The Plan states that mixed-use areas should include abundant open spaces which preserve natural features (e.g., mature forest cover, wetlands, etc.) and create active- and passive-use recreational amenities such as walking and multi-use trails, playgrounds, open spaces, and natural areas for residents of the community.

The proposed development and its proximity to commercial areas help implement policy statements and accomplish the purposes of the Plan's Newport DSD and Urban Development Area (UDA) designations with respect to housing. The Plan's housing policies and actions aim to provide opportunities for a variety of housing types for people of all incomes, backgrounds, and ages, and to increase opportunities within DSDs for residences to be in close proximity to retail, employment, and public facilities such as schools and parks. The proposed rezoning, therefore, is considered consistent with the Comprehensive Plan.

ORDINANCE REVIEW:

The requested zoning, use, and density (4.25 du/ac) are consistent with the recommendations of the Land Use Plan and comply with the minimum density prescribed in the Planned Development – Mixed Use (PD-MX) District of the Zoning Ordinance (4 du/ac minimum). The requested zoning is consistent generally with the description and purpose of the PD-MX zoning designation in addition to the traditional neighborhood design principles of the Subdivision Ordinance for mixed-use developments.

Following approval of the change in zoning, the applicant will be required to submit subdivision plats and construction plans for review and approval in accordance with County ordinances.

AGENCY REVIEW:

Staff forwarded the rezoning application for James River Crossings to County departments and VDOT and transmitted comments to the applicant, which were addressed in subsequent submittals. All comments issued to date have been addressed by the applicant to the satisfaction of staff. The project site plan will be reviewed by the County and VDOT once this conditional rezoning application has

been decided.

STAFF CONCLUSIONS:

The relative strengths and weaknesses of this application are discussed below:

Strengths:

1. The requested conditional rezoning is consistent with the Comprehensive Plan's recommendations for the Newport DSD and Land Use Plan for this area of the County. The expansion of housing opportunities is likewise supported by policies and actions aimed at providing a variety of housing types that meet the needs, preferences, and financial capabilities of present and future residents in proximity to commercial areas.
2. The extension and connection of Spadea Way to South Harbor and Channell Way will result in improved street connectivity for residents of Carrollton and increased options for residents to access the adjoining highway network.
3. The provision of open space and construction of sidewalks and trails, including along Channell Way, provides recreational amenities and improves pedestrian connectivity and convenient pedestrian access to commercial areas for residents of the subdivision and the public generally consistent with the Comprehensive Plan and the purpose statements of the Planned Development – Mixed Use (PD-MX) Zoning District and Traditional Neighborhood Design (TND) provisions of the Subdivision Ordinance.
4. The forested areas along the edges of the property provide an excellent opportunity to save mature and specimen trees, particularly within the open space area lying adjacent to the northern property line and for use as a buffer along the southern property line between the subject property and The Crossings. A tree survey will need to be conducted as part of the site plan to identify healthy trees greater than eight (8) inches in diameter that can be saved and which do not interfere with lot grading, streets, or underground utilities.

Weaknesses:

1. The overall picture with respect to future traffic congestion on Carrollton Boulevard is worsening, with service levels falling to E and F during the AM and PM peak hours for many of the side street approaches. Although the proposed development does not contribute significantly to the projected deterioration in service levels, the applicant is proposing to extend the Spadea Road right-of-way to connect to the adjacent South Harbor subdivision, which gives motorists additional options for accessing Carrollton Boulevard from adjacent neighborhoods and vice versa.

STAFF RECOMMENDATION:

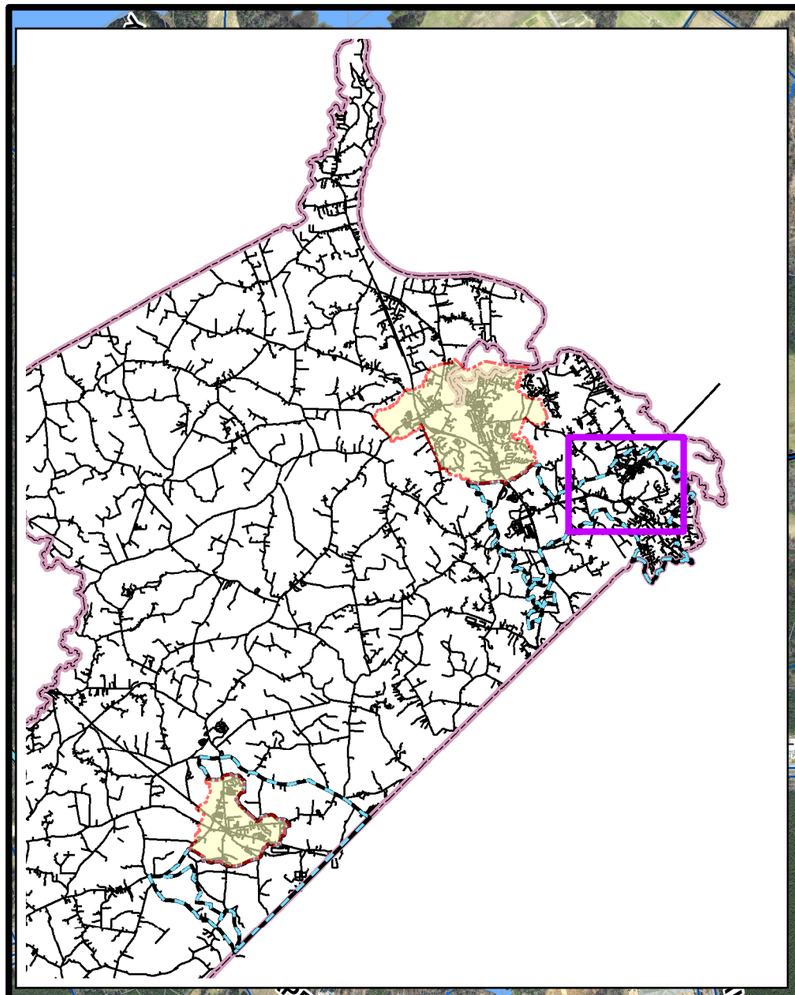
Due to the preponderance of the strengths cited herein, staff recommends approval of the application with proffered conditions, concept plan, and associated exhibits as presented.

ATTACHMENTS:

Description	Type	Upload Date
Vicinity Map	Exhibit	4/14/2022
Property Map	Exhibit	4/14/2022
Zoning Map	Exhibit	4/14/2022
Site Photos	Exhibit	4/18/2022
Application Form	Backup Material	4/12/2022
Concept Plan	Backup Material	4/12/2022
Community Impact Statement	Backup Material	4/12/2022
Proffer Statement	Backup Material	4/12/2022
Master Utility & Drainage Plan	Backup Material	4/12/2022
Architectural Sketches	Backup Material	4/12/2022
Environmental Site Assessment	Backup Material	4/12/2022
Traffic Impact Analysis	Backup Material	4/12/2022
Preliminary Wetland Delineation Report	Backup Material	4/12/2022
Ph. 1 Cultural Resources Assessment	Backup Material	4/12/2022
Tower Site Plat	Backup Material	4/12/2022
PC Resolution ZA-8-21	Resolution	4/20/2022

James River Crossings Conditional Rezoning - Vicinity Map

Local Roots, Global Reach
ISLE OF WIGHT COUNTY, VIRGINIA



Legend

- Road Center Lines
- Towns
- Development Service Districts
- Parcels
- Rivers & Lakes
- County Boundary

0 500 1,000 Feet

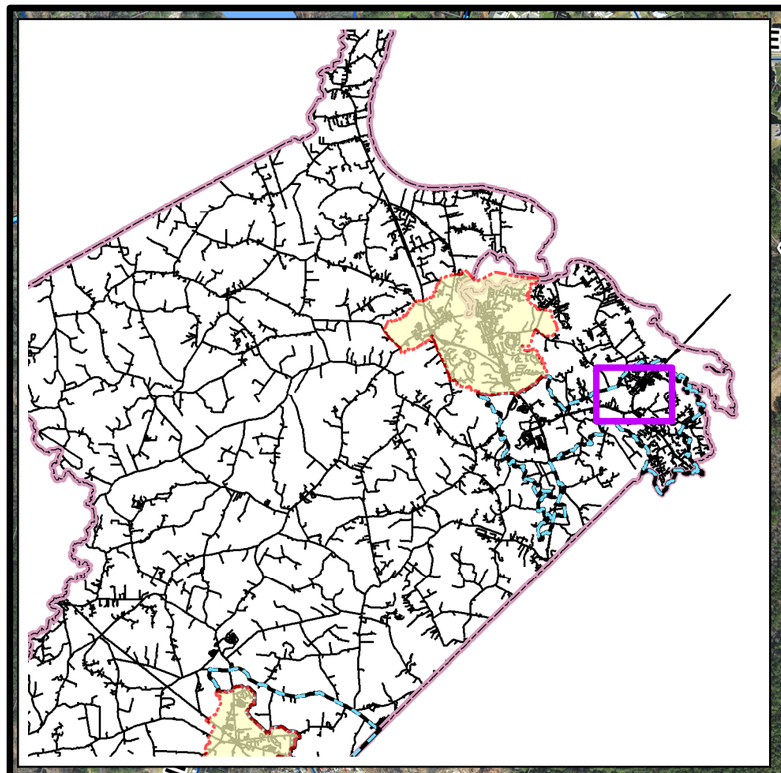
N

Tower Site
Parcel #34-01-070B

NIKE PARK ROAD
DRIVEWAY
BEACON HILL WAY
CHARTHOUSE LANE
SMITHS NECK ROAD
DRIVEWAY
CARROLLTON BOULEVARD
SEAPORT TRAIL
NORTHGATE DRIVE
JAMES RIVER TRAIL
BOOKER T DRIVE
CARVER DRIVE
BARTLETT CIRCLE
DRIVEWAY
ACCESS
SPADEA WAY
DRIVEWAY
CHANNELL WAY
HILL WAY
NELSON MAINE
COLONIAL WAY
WHIPPINGHAM PARKWAY
DRIVEWAY
BROOKWOOD CIRCLE
RICHMOND WAY
LIBERTY WAY
DEEP BOTTOM DRIVE
OMERA DRIVE
BRITT WAY
ASHBY WAY EAST
MANOR DRIVE
SUGAR HILL ROAD
BROGAN LANE
KENNEL LANE
NEWBILL LANE
DRIVEWAY
DRIVEWAY
GAYLE WAY
DRIVEWAY
OTHER
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OTHER

James River Crossings Conditional Rezoning - Property Map

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA





Legend

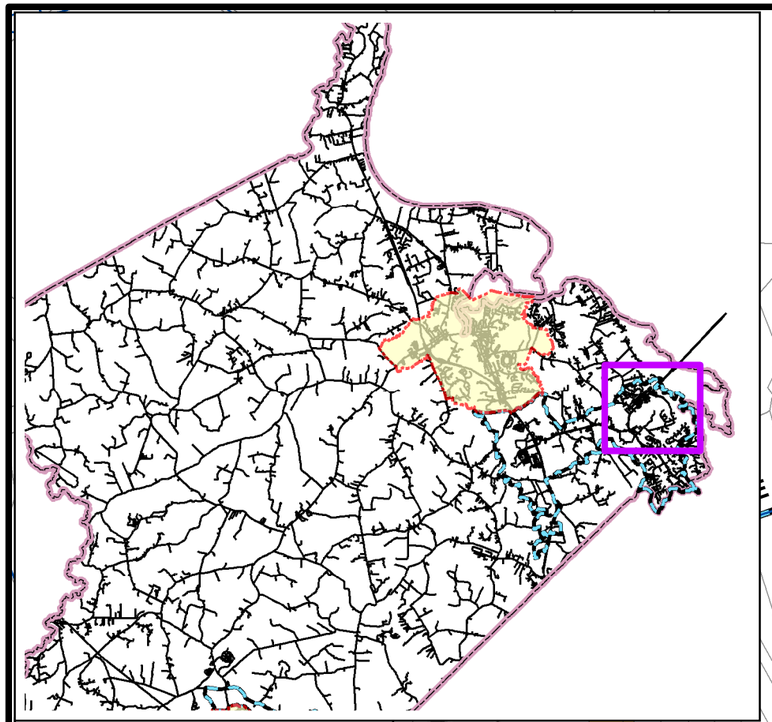
- Road Center Lines
- Towns
- Development Service Districts
- Parcels
- Rivers & Lakes
- County Boundary

N

0 500 1,000 Feet

James River Crossings Conditional Rezoning - Zoning Map

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA



Legend

- Road Center Lines
- Development Service Districts
- Parcels
- General Commercial
- General Industrial
- General Industrial Conservation
- Limited Commercial
- Limited Industrial
- Neighborhood Conservation
- Planned Dev. - Mobile Home
- Planned Dev. - Mixed Use
- Planned Dev. Residential
- Rural Agricultural Conservation
- Rural Residential
- Suburban Estate
- Suburban Residential
- Urban Residential
- Village Center

WHEELER LANE
BEACON HILL WAY
HARBOR DRIVE
SMITHS NECK ROAD
DRIVEWAY
FIDDLER LANE
CARROLLTON BOULEVARD
HIGH GATE MEWS
SEAPORT TRAIL
NORTHGATE DRIVE
JAMES RIVER TRAIL
34-01-003A1
34-01-077
34-01-077D
BOOKER T DRIVE
BREWERS NECK BOULEVARD
SPADEA WAY
ACCESS
DEEP BOTTOM DRIVE
CHANNELL WAY
DRIVEWAY
WHIPPINGHAM PARKWAY
DRIVEWAY
DRIVEWAY
OMERA DRIVE
SUNDEW DRIVE
LIBERTY WAY
RICHMOND WAY
COLONIAL WAY

Current: RAC
Requested: PD-MX

N

0 500 1,000 Feet



Parcel 34-01-070B looking toward the subject property from Channell Way.



The wooded area along the southern property line looking west-southwest from the site access driveway.



Spadea Way in The Crossings development looking southwest from the subject property.



The wooded area along the northern property line looking northeast from the subject property toward the Lippe parcel (Parcel 34-01-077D).



The Crossings commercial parcel (Parcel 34-01-070) looking west from the subject property.



The Crossings commercial parcel (Parcel 34-01-070) looking northwest from the subject property toward BMP #5.



BMP #5 on The Crossings commercial parcel (Parcel 34-01-070).



The existing utility building located on the subject property.



The wooded area bordering the northern property line and Lippe Parcel (34-01-077D) looking southeast east from the subject property toward Channell Way.



Example of a mature canopy tree in the wooded area bordering the northern property line.



Existing residential uses on Channell Way across the street from the subject property.



The road frontage of the subject property (on right) looking south on Channell Way.

APPLICATION FOR REZONING/CONDITIONAL ZONING AMENDMENT

This application should be used to petition for a change to the Official Zoning Map or for an amendment of zoning conditions. The following application requirements are consistent with the procedures set forth in Section 1-1015, *Amendments*, of the Isle of Wight County Zoning Ordinance, as amended.

A. APPLICATION FOR (CHECK ALL THAT APPLY):

[ ] Rezoning

[X] Conditional Rezoning (Are voluntary proffered conditions attached?): X Yes ____ No

Request to change the subject property(s) from the RAC to the PD-MX zoning district.

Proposed Use or Activity: 52 Single Family Detached Condominium Residential Units

[ ] Amendment to Conditional Zoning

Request to change conditional zoning as follows (Attach current and proposed conditions): ____

B. PROJECT DESCRIPTION:

Project Name: Tower Site

Property Address (if any): 23067 Channell Way, Carrollton, VA

Election District: Newport DSD

Comprehensive Plan Designation: Strategic Growth, Mixed Use

The rezoning will apply to 12.24 acres out of 12.24 total acres

Tax Parcel Identification # 34-01-070B Number of Acres to be Rezoned: 12.24

Requesting Zoning District Change from: RAC to PD-MX

Tax Parcel Identification #____ Number of Acres to be Rezoned: ____

Requesting Zoning District Change from:____ to ____

Tax Parcel Identification #____ Number of Acres to be Rezoned: ____

Requesting Zoning District Change from:____ to ____

Proposed Utilities (check all that apply): Public Water X Private Well ____

Public Sewer X Private Septic

C. APPLICATION INFORMATION:

Applicant(s) Name(s): Saunders & Ojeda, P.C., Counsel on behalf of James River Crossings, Inc.

Address: 705 West Washington Street

City, State, Zip Code: Suffolk, VA 23434

Phone No.: (757) 942-7070 Email: wharper@sando.law Fax No.: (757) 934-1299

Property Owner(s) Name(s): James River Crossings Inc.

Address: 616 Village Drive, Suite G

City, State, Zip Code: Virginia Beach, VA 23454

Phone No.: (757) 243-1270 Email: jbowman@evalaw.net Fax No.:

4-8-2022

Applicant Signature **Date**

4-8-2022

Owner Signature *if different* **Date**

NOTICE: T E ATTACHED CHECKLIST MUST BE COMPLETED, CERTIFIED, AND SUBMITTED OR THE APPLICATION WILL BE CONSIDERED INCOMPLETE.

Remit Application to: Isle of Wight County Central Permitting, 17140 Monument Circle, Suite 100
P. O. Box 80, Isle of Wight, Virginia 23

FOR OFFICE USE ONLY:

Complete Application Received On: _____ Fees Paid: _____
Tax Query: [ ] Current [ ] Delinquent Distribution Date: _____
Posted/Date to Post: _____

AGENCIES REFERRALS:

_____ Department of Conservation & Recreation
_____ Economic Development
_____ Emergency Services
_____ General Services
_____ Environmental Planner
_____ Health Department
_____ Transportation Manager
_____ Commission of Revenue
_____ Other _____

_____ Inspections
_____ Sheriff's Office
_____ Town of Smithfield
_____ Town of Windsor
_____ VDOT
_____ Schools
_____ Budget & Finance
_____ County Attorney

Verified By: _____ Date: _____

COUNTY OF ISLE OF WIGHT
DISCLOSURE OF REAL ESTATE HOLDINGS

Applicant Saunders & Ojeda, P.C. Counsel on behalf of James River Crossings, Inc.
Address: 705 West Washington Street
City, State, Zip Code: Suffolk, VA 23434
Phone No.: (757) 942-7070 Email: wharper@sando.law Fax No.: (757) 934-1299

REAL ESTATE HOLDINGS TO BE AFFECTED

Location or Address	Description
23067 Channell Way, Carrollton, VA	12.24 Acre Parcel off Channell Way

OTHER OWNERS OF AFFECTED REAL ESTATE

(Not Required for Corporation whose stock is traded on a national or local stock exchange or having more than 500 shareholders.)

Name of Individuals Corporation/Partnership Business Association	Address
Booth-Cobb Media, LLC	Larry Cobb, Registered Agent
	700 Monticello Ave, Suite 311
	Norfolk, VA 23510

Does any member of the Isle of Wight County Planning Commission or governing body have any interest in such property, either individually, by ownership of stock in a corporation owning such land, partnership, as the beneficiary of a trust, or the settlor of a revocable trust, or whether a member of the immediate household of any member of the Planning Commission or governing body has any such interest? Yes (No)

If yes, names of members:

I do solemnly swear that the foregoing statement(s) and attachments(s), if any, are complete, correct and true.

Applicant: J. Witt Harper, Esq. Applicant: [signature] Date: 8-30-2021

Printed or Typed Name Signature

Commonwealth of Virginia
City of Suffolk

Subscribed and sworn to before me Cheryl Kathleen Watters,
A Notary Public in and for the City of Suffolk, Commonwealth of Virginia, this 30th day of August, 2021.

[signature]
Notary Public

My Commission Expires December 31, 2025, REG# 7924387

Local Roots, Global Reach

ISLE OF WIGHT COUNTY, VIRGINIA

DEPARTMENT OF PLANNING AND ZONING

SUBMITTAL CHECKLIST FOR REZONING/CONDITIONAL ZONING AMENDMENT APPLICATIONS

In conjunction with Section 1-1015, *Amendments*, of the Isle of Wight County Zoning Ordinance, as amended, the following information shall be submitted for a Rezoning/Conditional Zoning Amendment Application. Please note that it is the applicant's responsibility to ensure that the application is in compliance with all Federal, State and County regulations.

No application for a rezoning shall be certified as complete unless the following information is provided; unless the required number of copies has been reduced by the Zoning Administrator.

☒ 1. Fifteen (15) copies of the original, executed application and one (1) original executed application. Both the applicant(s) and the property owner(s) must have their signature(s) notarized on page No. 2 of the application.

☒ 2. The appropriate fees have been submitted with the application. Checks should be made payable to: Treasurer, Isle of Wight County.

N/A 3. Fifteen (15) copies of a statement of the reasons for seeking such amendment, and if applicable, a statement of proffered conditions.

- Any applicant proposing a conditional rezoning under the provisions of Section 1-1016, *Conditional Zoning*, of the Isle of Wight County Zoning Ordinance shall submit fifteen (15) copies of the signed proffer statement and one (1) original signed proffer statement. Proffered conditions shall be signed by the owner(s) of the property.

☒ 4. Fifteen (15) copies) of a narrative description of the property which shall include the Tax Parcel Identification Number.

☒ 5. One (1) copy of the most recent deed of the property to be rezoned.

☒ 6. For residential subdivisions of five (5) or more lots, planned development, commercial, industrial, or miscellaneous rezoning/conditional zoning amendment applications, a concept plan of the property to be rezoned shall be submitted by the applicant. Such document shall be drawn to scale and shall include the following information:

- A vicinity map at a scale of no less than one (1) inch equals two thousand (2,000) feet
- Title of drawing
- Date of drawing
- Existing wood line
- North arrow
- Scale bar
- Current zoning of parcel(s) to be rezoned, including tax map number(s) and owner(s)
- Current zoning of adjacent parcel(s), including tax map number(s) and owner(s)
- Street names including route number and width(s) of the right-of-way(s)
- Fifteen (15) full size copies, with one (1) reduced 11-inch X 17 inch copy shall be submitted
- Please note that additional information on the site layout may be requested by the Zoning Administrator during the review process in order to more effectively review the application and prepare the staff reports for the Planning Commission and Board of Supervisors.

☒ 7. Fifteen (15) copies of such supplemental material as may be necessitated by the proposal itself or the district in which located or proposed to be located, and in accordance with Section 5-5000, *Supplementary Use Regulations,* of the Isle of Wight County Zoning Ordinance.

☒ 8. For residential subdivisions of five (5) or more lots, planned development, commercial, industrial, or miscellaneous rezoning/conditional zoning amendment applications, a Community Impact Statement is required in accordance with Section 1-1015.F, *Community Impact Statement,* of the Isle of Wight County Zoning Ordinance as amended on January 6, 2011. Please refer to Section 1-1015.F for detailed requirements of the Community Impact Statement. Fifteen (15) copies of the Community Impact Statement are required and shall include the following:

- ☒ Adequacy of Existing Public Facilities and Services
- ☒ Additional On-site and Off-site Public Facilities and Services
- Forthcoming ☐ Traffic Impact Analysis for projects exceeding 200 ADT, or when requested by the Zoning Administrator
- ☒ Fiscal Impact Analysis, if the project includes residential dwellings (optional for projects without a residential component)

N/A ☐ 9. Fifteen (15) copies of a Water Quality Impact Assessment shall be required for any rezoning in the Chesapeake Bay Preservation Area which:

- ☐ will disturb any portion of the 100-foot buffer area of a Resource Protection Area (RPA), or any component identified in Section 3000.B.1 of the Chesapeake Bay Preservation Area Ordinance;
- ☐ contains ten (10) acres or more for any use, other than a development of single family detached residential lots;
- ☐ contains twenty-five (25) acres or more for the development of single family detached residential lots; or,
- ☐ any other development that may warrant such assessment due to the unique characteristics of the site or intensity of the proposed use or development, as may be required by the Zoning Administrator.

Forthcoming ☐ 10. For Planned Development, fifteen (15) copies of the required supplemental information shall be submitted in accordance with Section 4-14005, *Submission Requirements,* of the Isle of Wight County Zoning Ordinance. Please refer to Section 4-14005 for a detailed list of the submission requirements.

☒ 11. All real estate taxes must be paid and current at the time of submittal; otherwise, the submittal will be refused at the counter. Proof of the most recent tax payment to the County must accompany the application.

☒ 12. Voluntary Proffer Statement

☒ 13. Estoppel Certifications

I, the undersigned, certify that this application is complete, accurate and contains all required and requested information, documents and other submittals, and that all statements made herein are, to the best of my knowledge, true and correct. I further certify that I have exercised due diligence to obtain the most recent, complete and correct information available. I understand that any section not completed in its entirety may delay processing of this application and the date of the Planning Commission public hearing and that the submittal of a complete application does not guarantee the application will be placed on the next available Planning Commission agenda.

J. Keith Laymon 10-12-21

Signature Date

PRELIMINARY/CONCEPTUAL SITE LAYOUT & MASTER DEVELOPMENT PLAN OF

TOWER SITE

ISLE OF WIGHT, VIRGINIA

Site Data

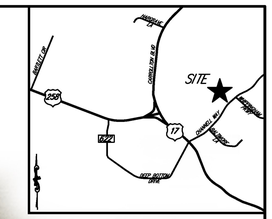
Site Area:	± 12.24 AC
TPIN:	34-01-070B
Existing Zoning:	RAC
Existing Use:	Radio Tower
Proposed Zoning:	PD-MX
Proposed Use:	Detached Condominiums
Overlay Districts	Newport Development Services Overlay Chesapeake Bay Preservation Area
Proposed Units:	52
Open Space Provided:	± 2.15 AC (17.5%)
Min. Unit Area:	5,500 SF
Max. Building Height:	35'
Proposed Unit Width:	55'

Proposed Setbacks:
Front: 20'
Side: 5'
Rear: 15'

Proposed Density:
Gross: 4.25 Units/Acre
Net: 6.78 Units/Acre

Owner: N/F Booth-Cobb Media, LLC





DATE: 01/28/2022

THIS DRAWING IS CONCEPTUAL AND HAS BEEN PREPARED WITH A SITE SURVEY PREPARED BY OTHERS, THEREFORE, PROPERTY LINES, WETLAND BOUNDARIES, AND OTHER SITE SPECIFIC DATA ARE APPROXIMATE. CONCEPT DRAWINGS ARE GENERAL IN NATURE AND ARE INTENDED ONLY TO ILLUSTRATE THE DEVELOPMENT POTENTIAL FOR A PROPERTY; THEY SHOULD NOT BE RELIED UPON AS THE SOLE BASIS FOR ANY FINANCIAL OR LEGALLY BINDING TRANSACTION.

NOTES:

- THE PROPOSED GROSS DENSITY REPRESENTS THE MAXIMUM DENSITY OF RESIDENTIAL USES.
- EACH UNIT OWNER WILL BE RESPONSIBLE FOR THE MAINTENANCE OF THE AREA WITHIN LIMITS OF THE UNIT.
- THERE ARE NO FEATURES PRESENT THAT AFFECT THE NET DENSITY CALCULATION.
- PRIVATE STREETS WILL BE DEDICATED TO THE COA AND WILL BE MANAGED AS COMMON AREAS
- ALL STREETS, WHETHER PUBLIC OR PRIVATE, MUST BE CONSTRUCTED TO MINIMUM VDOT SUBDIVISION STREET STANDARDS AND SPECIFICATIONS.

50 0 50 100
1 INCH = 50 FT

ORBIS LANDSCAPE ARCHITECTURE
ORBIS-LA.COM

PRELIMINARY/CONCEPTUAL SITE LAYOUT & MASTER DEVELOPMENT PLAN OF

TOWER SITE

ISLE OF WIGHT, VIRGINIA

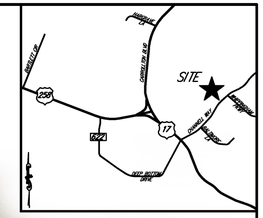
Site Data

Site Area:	± 12.24 AC
TPIN:	34-01-070B
Existing Zoning:	RAC
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Proposed Zoning:	PD-MX
Proposed Use:	Detached Condominiums
Overlay Districts	Newport Development Services Overlay Chesapeake Bay Preservation Area
Proposed Units:	52
Open Space Provided:	± 2.13 AC (17.4%)
Min. Unit Area:	5,500 SF
Max. Building Height:	35'
Proposed Unit Width:	55'

Proposed Setbacks:
Front: 20'
Side: 5'
Rear: 15'

Proposed Density:
Gross: 4.25 Units/Acre
Net: 6.78 Units/Acre

Owner: N/F Booth-Cobb Media, LLC





DATE: 05/04/2022

THIS DRAWING IS CONCEPTUAL AND HAS BEEN PREPARED WITH A SITE SURVEY PREPARED BY OTHERS, THEREFORE, PROPERTY LINES, WETLAND BOUNDARIES, AND OTHER SITE SPECIFIC DATA ARE APPROXIMATE. CONCEPT DRAWINGS ARE GENERAL IN NATURE AND ARE INTENDED ONLY TO ILLUSTRATE THE DEVELOPMENT POTENTIAL FOR A PROPERTY; THEY SHOULD NOT BE RELIED UPON AS THE SOLE BASIS FOR ANY FINANCIAL OR LEGALLY BINDING TRANSACTION.

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1 INCH = 50 FT

ORBIS LANDSCAPE ARCHITECTURE
ORBIS-LA.COM

MSA, P.C.
5032 Rouse Drive, Suite 200
Virginia Beach, VA 23462-3764
757-490-9264 | www.msaonline.com

Environmental Sciences • Surveying • Civil & Environmental Engineering

COMMUNITY IMPACT STATEMENT
TOWER PARCEL

Isle of Wight County, VA
MSA Project No. 18075E

The intention of this project is to develop the +/- 12.2-acre parcel (TPIN 34-01-070B) located on Channell Way immediately northeast of The Crossings development, into single-family detached condominium residential units. The parcel is currently zoned as RAC and contains several radio towers that will be demolished. Surrounding areas include The Crossings development to the west and south, Channell Way to the southeast, and the South Harbor residential development to the northeast. The ongoing improvements at The Crossings also include the construction of Spadea Way, a public right-of-way extending from Carrollton Boulevard to the southwest property limits. The proposed development will consist of fifty-two (52) single family detached condominium residential units with associated neighborhood streets, sidewalks, and amenity open spaces. The concept plan calls for the extension of Spadea Way through the development and connecting to the future South Harbour development to the northeast, as well as a public right-of-way connecting Spadea Way to Channell Way to the south. The community will also provide pedestrian connectivity via sidewalks and trails to Channell Way to the south, South Harbor to the east, Carrollton Boulevard to the west, and The Crossings' commercial, retail, restaurants, amenities, and open space trails.

The existing site is primarily cleared and drains to the northwest. There are some limited trees along the northeastern property line. The existing trees located on the property will be preserved to the greatest extent possible. Where applicable the existing trees will be utilized to achieve buffer requirements. The quality of the existing vegetation is unknown making it difficult to determine the extent of preservation. Trees of poor quality, diseased, dying or overcrowded are not acceptable specimens for preservation. The developer is not aware of any existing groundwater wells or septic systems on the property; however, in the event that any do exist, they will be properly abandoned in accordance with VDH and DEQ requirements.

There are no RPA buffers on this property, and no disturbance to the one-hundred-foot buffer area or any components is proposed with this development. Approximately 0.34 acres of emergent wetlands have been identified on the site (see attached Preliminary Wetland Delineation). These wetlands will be permitted and impacted with the proposed land development. The stormwater management requirement for this development will be accommodated through the expansion of the adjacent BMP #5 to the north being constructed as part of The Crossings development. The facility improvements will be designed to meet current Technical Criteria IIb for both stormwater quality and quantity management.

As part of the ongoing development of The Crossings to the southwest of this property, public utilities have been sized and constructed to accommodate the development of this property. The Crossings sanitary sewer pump station design has been approved by Isle of Wight County with sufficient capacity to handle the additional 52 residential units, and the gravity sewer main is being extended to the property limits with sufficient depth and capacity to serve the proposed community. The public water main will also be extended through the property and looped to Channell Way with capacity to meet the domestic and fire service demands as approved by Isle of Wight County.

This project lies within the attendance zones for Carrollton Elementary School, Smithfield Middle School and Smithfield High School. The proposed 52 single-family residential units are projected to generate a total of 20 students, and the existing facilities have capacity to accommodate this increase.

Police, fire, and emergency services are already in place to serve the surrounding communities and businesses. Fire and Rescue projects that this development will increase calls for service by approximately 19 calls per year, and existing facilities will not need to be expanded to serve the proposed development.

NARRATIVE DESCRIPTION OF THE PROPERTY

The 34-01-070B Subject Property.

Parcel 34-01-070B is approximately 12.24 acres, currently zoned RAC. The Subject Property lies adjacent to 34-01-070D, 34-01-070D, 34-01-077D and Chanell Way, within the Newport DSD.

The County has designated this parcel for mixed use by land planning designation. The applicant is requesting a rezoning of the subject property from RAC to PD-MX for the purpose of establishing 52 single family detached condominium units. This fits within the Comprehensive Plan's maximum density permitted within the PD-MX Zoning District for conventional single-family detached subdivisions of 4 du/ac for UDA areas. This will be part of the James River Crossing Development to its south. The condominium association to be established for this project will be a member of the master property owners association for the Crossings, will share in the community facilities of the Crossings and will paid for its share of the maintenance of those community facilities and common areas. This project also serves to diversify the available housing opportunities in the area. Additionally, the proposed zoning of PD-MX is described in the Isle of Wight County Ordinance as providing a variety of affordable housing types.

The condominium owners' association will be created to, among other things, maintain the open spaces, private streets, parks and other common areas. The property will be developed as single family detached houses on individual condominium units. The units will be created to provide unit owners some autonomy in maintaining and designing the area surrounding their homes consistent with the zoning ordinance of Isle of Wight County.

The Preliminary/Conceptual Site Layout & Master Development Plan incorporates traditional neighborhood design as defined by the Comprehensive Plan in that it has a defined street grid and homes oriented to the street. Also, in accordance with the Mixed-Use Designation, this project has access to public water and sewer infrastructure and is located near Route 17.

RESTATED PROFFER STATEMENT

Applicant's name(s): Saunders & Ojeda, P.C., Counsel on behalf of James River Crossings, Inc.

Owner's name(s): James River Crossings Inc.

Project name: Tower Site

Date: April 4, 2022

Parcel-Tax Map Numbers and deed book reference: 34-01-070B and Instrument #140002331

These proffers are made as of the 4th day of April , 2022 by **James River Crossings Inc.** ("Owner"), of Tax Map Number 34-01-070B, containing approximately 12.24 acres of land which is referred to herein as the "Property". Booth-Cobb Media LLC filed a rezoning application with the Isle of Wight County Planning and Zoning Department requesting a change in the zoning of the Property from Rural Agricultural Conservation (RAC) to Conditional Planned Development - Mixed Use (PD-MX) on behalf of James River Crossings, the contract purchaser. James River Crossings has since acquired the Property. Owner voluntarily proffers that the development of the Property proposed for rezoning under this application shall be in strict accordance with the conditions set forth below.

These proffered conditions ("Proffers") are the only conditions offered on this rezoning, and any prior proffered conditions on the Property are hereby superseded by these proffers and any and all previous proffers on the Property are hereby void and of no further force and effect.

All improvements, land, easements, dedications, gifts, proffers and other conveyances to the County shall be in fee simple, without cloud of title or encumbrance of any kind.

1. The maximum number of residential units shall not exceed fifty-two (52) single family detached condominium residential units.

2. The minimum unit area shall be no less than five thousand five hundred (5,500) square feet.

3. The maximum building height shall not exceed thirty-five (35) feet.

4. The maximum unit width shall not exceed fifty-five (55) feet.

5. The minimum setbacks shall be no less than:
   Front: twenty (20) feet
   Side: five (5) feet
   Rear: fifteen (15) feet

6. The Property will be developed as the second phase of the Crossings development, as a condominium project with single family detached homes. It will be subject to the Declaration covering all of the Crossings properties, will be a member of the James River Crossings Master Association, Inc. ("Master Association") which will have responsibility for all of the common facilities and common areas and will, through its payments to the Master Association, share in the common expenses of the Crossings development.

SIGATURE PAGE

Applicant: J. Witt Harper, Esq.

Applicant: _____ Date: _____
Signature

Commonwealth of Virginia,
City of Suffolk

Subscribed and sworn to before me, Cheryl K. Watters, a Notary Public in and for the City of Suffolk, Commonwealth of Virginia, this __ date of _____, 202__.

_____
My Commission Expires December 31, 2025
My Registration Number: 7924387

Owner: James River Crossings Inc.

Owner: _____ Date: 4/6/2022

Jerry L. Bowman, President

Commonwealth of Virginia,
City of Norfolk

Subscribed and sworn to before me, Kathryn M Estep, a Notary Public in and for the City of Norfolk, Commonwealth of Virginia, this 6th date of April, 2022

Kathryn M Estep

My Commission Expires 2/28/2026
My Registration Number: 264416

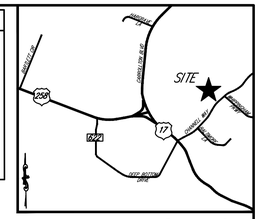
KATHRYN M ESTEP
NOTARY PUBLIC
REG # 264416
MY COMMISSION EXPIRES
02/28/20__
COMMONWEALTH OF VIRGINIA

MASTER UTILITY & DRAINAGE PLAN OF

TOWER SITE

ISLE OF WIGHT, VIRGINIA

LEGEND	
SYMBOL/ABBREVIATION	DESCRIPTION
8" SS	8" PVC GRAVITY SEWER
8" W	8" WATER MAIN
4" DI	4" DI WATER MAIN
	STORM SEWER
	STORM SEWER INLET
FH	FIRE HYDRANT
	STORM SEWER/ SANITARY SEWER MANHOLE



LOCATION MAP, SCALE 1" = 2,000'

N/F
EH2, LLC
PARCEL ID: 34-01-0TTD
ZONING: RAC
CURRENT USE: AGRICULTURE
PROPOSED USE: RESIDENTIAL

OPEN PLAY AREA

PRIVATE STREET

PUBLIC RIGHT-OF-WAY

CHANNELL WAY (50' R/W)
ROUTE 662
(DB 303, PG 155)

THE CROSSINGS
EX. BMP #5

PROPOSED BMP #5
EXPANSION AREA

RIM=±20.5
INV=13.98

RIM=±20.5
INV=17.0

RIM=±20.5
INV=17.0

RIM=±21
INV=17.0

INV=12.84

INV=11.63

6" @ 0.97%

FH

BOV

SPADEA WAY

EXTENSION OF PUBLIC GRAVITY SEWER AND WATER HAVE BEEN APPROVED BY ISLE OF WIGHT COUNTY WITH CAPACITY FOR THIS DEVELOPMENT. ISLE OF WIGHT COUNTY APPLICATION #SP-6-21

N/F
JAMES RIVER CROSSINGS, INC.
PARCEL ID: 34-01-0T0
ZONING: GC
CURRENT USE: UNDEVELOPED
PROPOSED USE: COMMERCIAL

N/F
JAMES RIVER CROSSING, INC.
PARCEL ID: 34-01-0T0D
ZONING: C-JR
CURRENT USE: PROPERTY UNDER DEVELOPMENT
PROPOSED USE: MULTI-FAMILY

CONNECTION TO TRAIL SYSTEM OF CROSSINGS DEVELOPMENT

NOTES:

- THE PROPOSED GROSS DENSITY REPRESENTS THE MAXIMUM DENSITY OF RESIDENTIAL USES.
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50 0 50 100

1 INCH = 50 FT

DATE: 12/09/2021

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NVR - Business Use Only





Columbia

NVR - Business Use Only





Hudson

NVR - Business Use Only





Lehigh

NVR - Business Use Only





Seneca

NVR - Business Use Only





Genoa

NVR - Business Use Only





Bramante

NVR - Business Use Only





Palladio

PHASE I
ENVIRONMENTAL SITE ASSESSMENT

Conducted on

THE CROSSINGS - TOWER PARCEL
23067 CHANNELL WAY
CARROLLTON, VIRGINIA

MSA Project # 18075E

For:

JERRY BOWMAN

FRANCISCUS HOMES, INC.
616 VILLAGE DRIVE, SUITE G
VIRGINIA BEACH, VIRGINIA

Issue Date: June 28, 2021

Prepared by:

MSA, P.C.

5032 ROUSE DRIVE, SUITE 200
VIRGINIA BEACH, VIRGINIA 23462
TEL (757) 490-9264 FAX (757) 490-0634
www.msaonline.com

PHASE I
ENVIRONMENTAL SITE ASSESSMENT

Conducted on

THE CROSSINGS - TOWER PARCEL
23067 CHANNELL WAY
CARROLLTON, VIRGINIA

MSA Project # 18075E

For:

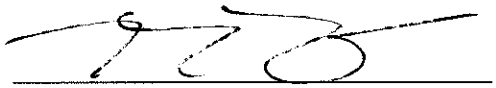
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Issue Date: June 28, 2021

Prepared by:

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Signature

Reviewed by:
Brian Owen,*
Senior Environmental Scientist


Signature

* *I declare that, to the best of my professional knowledge and belief, I meet the definition of an Environmental Professional as defined in § 312.10 of 40 CFR part 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property.*

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EXECUTIVE SUMMARY

MSA, P.C., has performed a Phase I Environmental Site Assessment (ESA) in conformance with the scope and limitations of ASTM Practice E 1527-13 on the subject property identified as The Crossings - Tower Parcel, located at 23067 Channell Way in Carrollton, Virginia. Any exceptions to, or deletions or deviations from, this practice are described in Section 1.1 of this report.

The purpose of this Phase I ESA is to identify Recognized Environmental Conditions (RECs), which is evidence of releases or threatened releases of hazardous substances or petroleum products on or near the subject property. Obtaining this ESA satisfies one of the requirements for obtaining CERCLA liability protections from pre-existing environmental conditions, and allows the User of this report to make an informed decision regarding future acquisition and use of the subject property. Jerry Bowman, Franciscus Homes, Inc., TowneBank, and their designees may rely upon this report.

The research conducted in this assessment has yielded the following information. The subject property, identified by Isle of Wight County as Parcel ID # 34-01-070B, is located at 23067 Channell Way in Carrollton, Virginia. The subject property was originally used as agricultural land until it was purchased and developed in the late 1970's with four radio towers and a small, single-story building used for radio broadcasting. A groundwater well and septic tank were installed to serve the building and was abandoned in the late 1980's when radio operations were moved offsite and the building was no longer occupied. The building was heated and cooled by electric wall units; no heating oil was used onsite. The subject property currently remains in use for radio transmission.

This assessment has revealed no evidence of Recognized Environmental Conditions (RECs) in connection with the subject property. The site inspection did not reveal existing site features, operations or activities, or adjacent property land use that might suggest the presence of RECs. Historic records did not reveal any historic or adjacent property use that could potentially pose environmental concerns. A review of applicable Federal and State environmental databases did not reveal information pertaining to any previous environmental incidents on or near the subject

property, and no environmental liens and/or institutional controls were identified on the subject property.

No RECs have been discovered and no potential environmental concerns were identified that warrant additional investigation. Although outside the scope of this practice, since the buildings onsite predate the 1989 ban on asbestos containing materials (ACM), it may be present. The interior of the buildings could not be accessed and it is unknown if any suspect ACM is present. Prior to building demolition, MSA recommends an asbestos survey be performed. Otherwise, based upon the results of this investigation, MSA recommends no further action be taken with respect to the environmental integrity of the subject property at this time.

EXECUTIVE SUMMARY MATRIX

THE CROSSINGS - TOWER PARCEL

23067 CHANNELL WAY
CARROLLTON, VIRGINIA

MSA PROJECT # 18075E

ASTM E-1527-13 Recognized Environmental Conditions (REC)

ENVIRONMENTAL CONDITION	REC*	HREC*	CREC*	POTENTIAL CONCERN	NO CONCERN
Current Conditions - Site Observations					X
Current Adjacent Land Use					X
Historic Use of Subject Property					X
Historic Use of Adjacent Properties					X
Interviews and User Provided Information					X
Federal Regulatory Records					X
State Regulatory Records					X
Local and Tribal Regulatory Records					X
Environmental Liens/Institutional Controls					X

*See Section 1.1 for definitions.

Environmental Considerations Beyond Scope of ASTM Standards*

ENVIRONMENTAL CONSIDERATIONS	ASSESSED	POTENTIAL CONCERN	NO CONCERN
Asbestos Containing Materials	Yes	X	
Lead Based Paint	Yes		X
Indoor Mold	Yes		X
Radon Potential	Yes		X

*Non-scope environmental considerations are reviewed at User's request; no testing or analysis conducted.

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1.0 INTRODUCTION

The project site “The Crossings - Tower Parcel” is located at 23067 Channell Way in Carrollton, Virginia (Figure 1, Appendix A) and is referred to hereinafter as the “subject property”. The subject property is currently composed of a large grassy field with four large radio towers and a small, single story maintenance building. Jerry Bowman of Franciscus Homes, Inc., hereinafter referred to as the "User" of this report, retained MSA, P.C. to conduct a Phase I Environmental Site Assessment (ESA) of the subject property. This report presents the findings, conclusions, and recommendations of that study.

1.1 Purpose and Scope of Work

The purpose of this Phase I ESA is to identify, to the extent feasible pursuant to the processes described herein, Recognized Environmental Conditions (RECs) in connection with the subject property. This includes any features of the subject property, or its surrounding properties that are or have been environmentally affected as a result of previous or current site conditions or activities. A REC is defined as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to a release to the environment, (2) under conditions indicative of a release to the environment, or (3) under conditions that pose a material threat of a future release to the environment. A CREC is a recognized environmental condition resulting from a past release of hazardous substance or petroleum product that has been addressed to the satisfaction of the applicable regulatory authority with the contaminant allowed to remain in place subject to the implementation of activity use limitations, engineering or institutional controls. An HREC is a past release of any hazardous substance of petroleum product that occurred in connection with the subject property that has been addressed to the satisfaction of the applicable regulatory authority without subjecting the property to any required controls. Conditions determined to be *de minimus* (that generally do not present a threat to human health or the environment) are not considered to be Recognized Environmental Conditions.

Obtaining this ESA satisfies one of the requirements for obtaining the bona fide prospective purchaser, innocent landowner, and contiguous property owner CERCLA liability protections. Per ASTM standards, this report is considered valid, and maintains its usefulness in securing CERCLA liability protection, provided that the transaction occurs within six months from the

release date. This report maintains its validity for six months from its original release date. Within one year of its release date, the report can be updated with a new site visit, regulatory records review, interviews, user information, and declarations. That update is valid for 6 months from its date of issuance.

This study was conducted in accordance with ASTM Practice E 1527-13 for performing Environmental Site Assessments, and is subject to the limitations inherent in those standards. The ASTM scope includes site observations, interviews, and historic and regulatory records review and is intended to reduce, but cannot eliminate, uncertainty regarding the potential for RECs on the property. Only material sampling and testing can best characterize site conditions; testing is beyond the scope of this assessment. MSA has relied upon the accuracy of the documentation, interviews, and other information provided by various sources to complete this assessment. Although reasonable efforts have been made to confirm the accuracy of said information, no warranty can be made that the information provided by others and relied upon for this assessment is accurate. All evidence used to support the findings of this assessment is provided within the text or report appendixes.

Features or conditions that are outside the scope of the ASTM practice include such things as asbestos containing materials, lead-based paint, biological materials, cultural and historic resources evaluation, endangered species, health and safety concerns, indoor air quality not related to releases of hazardous substances, industrial hygiene, lead in drinking water, mold, radon, regulatory compliance and wetlands. Per our agreement with the User of this report, MSA has included the identification of the presence of suspect lead-based paint and suspect asbestos materials based on visual site observations, as well as a discussion of radon potential. MSA also notes the presence of indoor mold if visually observed or suspected. While the potential presence of these non-ASTM scope items is discussed as part of this ESA (Section 5.0), testing would have to be performed to confirm the absence or presence of these substances. No other non-scope considerations are discussed in this report. No other exceptions to, or deviations or deletions from this ASTM practice were identified. Qualifications and limitations are identified in Appendix F and G.

1.2 Reliance Upon Report

The User retained MSA to conduct a Phase I ESA of the subject property. Jerry Bowman, Franciscus Homes, Inc., TowneBank, and their designees may rely upon this report.

2.0 SITE DESCRIPTION

2.1 Physical Site Description

The subject property, located at 23067 Channell Way (N 36º 94' 27" – W 76º 53' 20"), is a rectangular-shaped parcel of land that is approximately 12.24 acres in size (Figure 2, Appendix A). The property is identified at the Isle of Wight County, Virginia Tax Assessors office by Parcel ID # 34-01-070B.

The subject property is primarily a large field with a small utility building and four radio broadcast towers. The property is bounded by land currently under development to the northwest, agricultural land to the northeast, Channell Way and residences to the southeast, and forested land to the southwest.

The ground surface elevation of the subject property is approximately 22 feet Above Mean Sea Level (AMSL), according to the Benns Church, Virginia Quadrangle USGS Topographic Map. The subject property is relatively flat with little overall topographical slope.

2.2 Hydrogeology

The subject property is located within the Virginia Coastal Plain Physiographic Province. Review of the Geological Map and Generalized Cross Sections of the Coastal Plain and Adjacent Parts of the Piedmont, Virginia (U.S. Geological Survey, 1989), shows that the geology consists of a wedge of stratified unconsolidated sediments that gently dip and thicken eastward. These sediments generally consist of fluvial and marine deposits of sand, silt, and clay with variable amounts of shell material that range from Cretaceous to Holocene (recent).

Overall, stormwater runoff will flow northwest into a ditch network that runs northwest to southeast. Localized drainage patterns over much of the vicinity has been altered by ditches and grading from historic agricultural practices.

Considering relations between drainage features and topography as interpreted from the Benns Church, Virginia USGS Quadrangle Topographic Map, groundwater may be expected to occur approximately 6-12 feet below grade and is inferred to flow generally in a northerly direction.

Actual local groundwater flow is controlled by stratigraphy, topography, and drainage ditches which are influenced by rainfall, evapotranspiration, and human influences including pumping that may occur throughout the year. The nearest surface water body is an unnamed tributary to Ragged Island Creek located approximately 900 feet north of the subject property.

Environmental Risk Information Services (ERIS) records show the subject property on the F.E.M.A. Flood Hazard Map number 51093C0159E and 51093C0158E, but it is not located within the 100 or 500-year flood zones.

2.3 Subject Property Observations

Nikolai Karlov of MSA visited the subject property on June 9, 2021. The purpose of the visit was to visually observe the existing land use and condition of the subject property to facilitate assessment of the environmental integrity of the site. Visibility was excellent during the site visit and no weather conditions were present that would hinder evaluation of the property. Appendix A of this report includes Figure 2 which illustrates vicinity features, including adjacent properties, and Figure 3, which identifies subject property features that are relevant to this assessment. Photographs taken during the site visit to document the current condition of the property are provided in Appendix B.

The subject property is comprised of a periodically mowed field that is currently developed with four large radio towers and a small radio tower support building. A gravel driveway provides access to the site and leads to the small building. The building is a one-story, concrete slab, rectangular cinderblock structure with vinyl siding and steel crossbeams. The interior of the building could not be accessed at the time of the site visit. However, the interior was visible from the outside through a vent window. Radio-electronic equipment is located within the structure along with a cooling fan. A small square cinderblock enclosure was observed to the west of the building with piping that appeared to be a former well. The well appeared to be abandoned and no longer in use at the time of the site visit. No evidence of heating oil tanks was observed onsite. An abandoned septic tank is located to the east of the building but could not be visually observed at the time of the site visit due to overgrown vegetation. Several electrical conduits were observed coming out of the building extending to each of the four radio towers in the field. Each radio tower was accompanied by a small cinderblock outbuilding with a wooden fence

around the tower itself. Three pole-mounted electrical transformers were visible to the west of the building appearing to be in good condition with appropriate non-PCB decals visible.

The remainder of the property consists of a mowed, vegetated field with ditches across the western portion indicating prior agricultural activities. Vegetation was healthy. Minor amounts of inert debris were present, but otherwise, no evidence of significant environmental concerns was observed.

Table 1. Summary of subject property site observations.

SITE OBSERVATIONS	COMMENTS
Buildings and Roads	One building containing electrical junction boxes and cooling fans.
Potable Water Supply, Groundwater Wells	Former groundwater well observed onsite within cinderblock enclosure, well no longer active.
Sewage Disposal, Septic Systems	Onsite sewage system present, septic tank to the north of building.
Heating and Cooling Systems	None currently present based on observations
Drains and Sumps	None observed
Hazardous Substances	None observed
Hazardous Substance Containers	None observed
Unidentified Substance Containers	None observed
Storage Tanks and Drums	None observed
Odors	None encountered
PCBs	Four pole mounted transformers present with non-PCB decals
Pools of Liquid, Waste Water	None observed
Pits, Ponds, and Lagoons	None observed
Solid Waste	Minor amounts of inert debris
Stressed Vegetation	None observed
Stained Soil or Pavement	None observed
Stains and Corrosion	None observed

2.4 Adjoining Property Observations

Adjacent properties were observed from the border of the subject property. The subject property is located in a suburban area that has had limited development. Northeast of the subject property is undeveloped agricultural land. Channel Way is present southeast of the subject property, with several single-family residences beyond. To the southwest is forested land, and to the northwest is land that is under construction for future development

Table 2. Summary of adjoining property land use.

COMPASS DIRECTION	LAND USE	COMMENTS
Northeast	Undeveloped	Agricultural
Southeast	Residential	
Southwest	Undeveloped	Wooded
Northwest	Under construction	

3.0 INTERVIEWS

Interviews were conducted with current and former property owners, operators, and occupants/tenants as-well-as representatives of State and local governmental agencies when available or practicable to obtain information on the current and historic use of the subject property. In addition, interviews were conducted with the User of this report who may have site specific knowledge of the subject property. MSA conducted all interviews during this assessment. Records of these interviews are provided in Appendix C.

3.1 Current Owners and Occupants

Mr. Andy Booth of Booth-Cobb Media, LLC was interviewed to obtain information on the historic use of the property and provided the following information. The property was originally agricultural land until the mid-1970's when it was purchased and developed for use as a radio transmission center. A cinderblock structure on concrete slab foundation was constructed onsite which was originally occupied by radio broadcasters. A groundwater well and septic system were installed adjacent to the west and east of the building, respectively. The septic tank was pumped out and the well was abandoned in the 1980s when the property ceased to be occupied and broadcast operations were moved off-site. The building was heated and cooled by wall A/C units; no heating oil was used on the property. No asbestos-containing materials (ACM) were used in the finishing of the building. Electricity is drawn from pole mounted transformers to the west of the building. Telephone and communication lines run underground along the western border of the property underneath the overhead powerlines. Mr. Booth and partners, Larry and Paula Cobb, acquired the property in July of 2014 under Booth-Cobb Media, LLC and have used the property for radio transmission since. Mr. Booth was not aware of any environmental concerns regarding current or previous use of the subject property or adjacent properties.

3.2 Past Owners and Occupants

MSA was not able to obtain contact information for prior owners or occupants, and review of County tax records did not produce contact for the prior property owners. The last property transaction occurred approximately 7 years ago and the current owner did not have contact information for prior owners or occupants of the property.

3.3 State and Local Government Officials

The environmental database records for the area are thorough, and since the subject property was not listed on any of the databases for environmental incidents, no interviews or requests for additional information from State government officials were conducted.

3.4 User Provided Information

MSA interviewed Jerry Bowman of Franciscus Homes, Inc., the "User" of this report, to obtain specialized knowledge or experience of the user and commonly known or reasonably ascertainable information regarding the subject property. Information was obtained regarding the following categories:

1. Environmental cleanup liens against the subject property - None known.
2. Activity use limitations - None known.
3. Specialized knowledge – Property has been used for radio towers for past 30-40 years with a small structure onsite, previously used for agricultural purposes.
4. Relationship of purchase price to market value – Price reflects fair market value.
5. Commonly known or reasonably ascertainable information - Not aware of any specific chemicals or hazardous materials that are or were present on the subject property, or any spills, releases, or cleanups of said chemicals/hazardous materials.
6. Degree of obviousness – No known obvious indicators of contamination.
7. Purpose of this Phase I - The mortgage company, TowneBank, providing the loan has requested this Phase I as part of their standard due-diligence for commercial real estate loan approval (for complete interview, see Appendix C).

3.5 Other Interviews

No other interviews were conducted during this assessment that yielded relevant information.

4.0 RECORDS REVIEW

The environmental integrity of the subject property was assessed through a review of various historical and environmental records.

4.1 Historical Records

Past land uses were investigated to identify historical uses or conditions of the subject property and surrounding land uses that may have impacted the site. This was investigated through the analysis of historical aerial photography, historic topographic maps, fire insurance maps, prior environmental documentation, and a review of chain of ownership information (Appendix D).

4.1.1 Aerial Photographs

Aerial photographs were available from digital sources. Environmental Risk Information Services (ERIS) conducted a review of their aerial photograph archives and provided coverage of the immediate area. These photographs date from 1959 through 2018.

In review of the available aerial photographs, the subject property was undeveloped agricultural land from 1959 photograph until the 1978 photograph. Several residences are visible along Channell Way during this time. In 1978, a short driveway is visible leading to an area of disturbance in the location of the current structure on the property. The 1982 aerial shows a small rectangular structure that appears to be the same structure currently onsite and what appear to be four radio towers are visible in the field. Few changes are visible in the aerial photographs from 1994 to 2006. In the 2009 photograph, the adjacent property to the northwest appears to be undergoing earthworks and a small pond has been created. Further beyond, several new business and residential developments can be seen along Route 17. The 2014 through 2018 photographs show the adjacent property to the north/northwest no longer being farmed and becoming revegetated. The subject property remains unchanged with a small structure and four visible radio towers.

4.1.2 Fire Insurance Maps

A review of databases and files of Sanborn Fire Insurance Map coverage was conducted by ERIS to identify historic uses of the subject property. Fire insurance maps of the immediate area are not available in the archives searched by ERIS.

4.1.3 Historic Topographic Maps

ERIS provided historic topographic maps of the vicinity. These topographic maps date from 1919 to 2016. Although topographic maps may not show specific site information, they can provide information on area and roadway development over time and indicate general land use.

In review of the topographic maps, the subject property was originally undeveloped, with the western half shown as cleared indicating agricultural use, and the eastern half shaded in as forested land in 1919. Channell Way and a few residential structures are present in the vicinity of the subject property. Channel Way is not shown in the 1950 / 1951 map, however, by 1957, Channell Way appears to be further developed and several new structures appear to the west along Route 17. The 1957 map depicts the subject property as cleared of trees and undeveloped. Three residential structures are shown adjacent to the south of the subject property along Channell Way. Increased development is evident southwest of the subject property along Route 17. The 1965 map appears relatively unchanged; however, several new ditches, likely excavated for agricultural drainage purposes, appear just northwest and east of the subject property and appear to connect to Ragged Island Creek to the north. The 1972 map shows little to no change on or around the subject property. Route 17 has been expanded into a double lane highway at this time. In the 1979 map, a small structure, and unpaved road, resembling the current structure and road are indicated on the map. Additionally, several new residential structures have been developed to the southwest along Channell Way and a large residential development is depicted to the northeast. The remaining topographic maps depict no significant changes on the subject property or adjacent properties. The 2016 map does not show individual developments, however, based on the road network, the surrounding areas remain developed with rural and agricultural land uses.

4.1.4 City Directory

ERIS searched the city directories for subject property and adjacent property occupants to identify on-site and adjacent land uses that might cause concern for the subject property. In review of the ERIS City Directory Abstract, the addresses for the subject property and adjacent properties are not listed on the City Directory. Several nearby listings are provided, for Harris Farms, several residences, and a library on US 17.

4.1.5 Prior Environmental Documentation

Prior environmental documentation includes prior ESA reports, facility inspection reports, notices of violation, or correspondence with municipal agencies regarding known environmental issues with the subject property. MSA was neither provided nor made aware of any prior environmental documentation on the subject property.

4.1.6 Chain of Ownership

The subject property is currently owned by Booth-Cobb Media, LLC. Real estate records indicates that radio and media companies have owned the subject property since 1997 with private ownership of the land prior.

Based on County real estate records, the building on the subject property was constructed in 1980.

Of the historical resources reviewed in Section 4.1, all agree in that the subject property has been partially agricultural land and partially wooded until the late 1970's upon construction of a small building and four radio towers.

4.2 Environmental Database Records

Environmental records include Federal and State environmental databases, local and Tribal databases, and environmental liens or institutional controls (Appendix E). ERIS conducted a review of available databases and files from Federal and State environmental regulatory agencies, to identify use, generation, storage, treatment, or disposal of hazardous materials and chemicals, or release incidents of such materials, that may impact the site. This search consisted of a radius search based on property latitude/longitude, to identify database listings on or near the subject property that may create an environmental impact. This search meets or exceeds minimum search distances required by ASTM standards. Sites identified within this radius are evaluated for potential environmental impact to the subject property based on the distance of the site from the subject property, incident description and regulatory response/closure, inferred groundwater flow and surface flow that could carry contaminants toward the subject property, and date of occurrence, since contaminants can attenuate over time.

4.2.1 Federal Databases

ERIS searched all of the mandatory Federal databases specified in ASTM standards including:

- National Priority List (NPL), Proposed NPL and Delisted NPL
- Superfund Enterprise Management Systems (SEMS and SEMS-ARCHIVE)
- Corrective Action Reports (CORRACTS)
- Resource Conservation and Recovery Act (RCRA) sites
- Emergency Response Notification System (ERNS)
- In addition, ERIS reviewed twenty-six (26) supplemental federal databases.

Based on the review, the subject property and adjacent properties were not listed on any federal databases. Furthermore, no sites within the ASTM-required search distances were listed on federal databases.

ERIS also lists orphan sites, which occurred within the same zip code as the subject property, but cannot be mapped due to inadequate address information. The report lists zero (0) federal orphan sites.

4.2.2 State Databases

Mandatory State databases reviewed by ERIS include:

- Solid Waste Management Facilities (SWFL/LF)
- Voluntary Remediation Program (VRP)
- Underground Storage Tank (UST)
- Leaking Underground Storage Tanks (LUST)
- Leaking Petroleum Tanks (LTANKS)
- Records of Emergency Releases (SPILLS)
- Engineering Controls Sites Listing (VA ENG CONTROLS)
- Brownfields Site Specific Assessments (BROWNFIELDS)

According to the review, the subject property and adjacent properties were not listed on any of the state listings. ERIS reports four (4) state database listings near the subject property. The nearest of these listings is Village Market, a historic gas station, located at

the corner of Route 17 and Channell Way approximately 1,200 feet south/southwest of the subject property. This site was listed on the UST database for the presence of one 500-gallon diesel and two 1,000-gallon underground bare steel gasoline tanks that have been closed in the ground since 1983. No incidents or evidence of contamination was reported at the time of closing. The nearest leaking tank incident is Sentry Food Mart #18, a former gasoline station, located 2,000 feet west/southwest of the subject property. Contamination was found during tank removal in 1989, and again in 1996 when a petroleum loss trend was reported. A third leaking tank incident was reported in 2005. Based on the distances of these sites from the subject property, incident descriptions, and dates of occurrences, it appears unlikely that these sites and incidents pose a concern for the subject property at this time.

ERIS lists zero (0) state orphan sites.

4.2.3 Local and Tribal Databases

ERIS reviewed local and tribal databases to identify use, generation, storage, treatment, or disposal of hazardous materials and chemicals, or release incidents of such materials, that may impact the site. ERIS reports that the site is not listed on any local or tribal databases.

ERIS maintains in-house databases of current and former drycleaners and service stations since these land uses are known to pose potential environmental concerns. Records indicate the presence of 0 former auto stations and 0 former cleaners near the subject property.

4.2.4 Environmental Liens/Institutional Controls

Deeds for recorded environmental liens or *activity and use limitations* (AUL's) that may have been placed on the subject property were researched at the Isle of Wight Courthouse. Databases and records were searched to identify any institutional or engineering controls that may have been placed on the property due to previous contamination. None of the above have been identified on the subject property, based on available records.

4.2.5 Vapor Intrusion

An assessment of the potential for vapor intrusion by harmful substances was conducted based upon information gathered during this ESA and is subject to the limitations for conducting vapor encroachment screening (VES), as specified in ASTM E 2600-15. The purpose of a VES is to determine whether a potential Vapor Encroachment Condition (VEC) exists at the subject property. A VEC is defined as the presence or likely presence of chemicals of concern that may migrate as vapors into the vadose zone at the subject property and that is the result of contaminated soil and/or groundwater at, or near, the subject property. Potential risk to human health is assessed at all sites using site-specific information generated during the Phase I ESA, and that considers the presence of existing and/or planned future structures, to determine if there is a potential for the identified contamination to result in the presence of vapors that could present an unacceptable human health risk to site and/or building occupants. A vapor intrusion screen report is included in Appendix E.

Based on the results of this assessment, no sources of potential contamination have been identified on or near the subject property that would pose a VIC.

5.0 ENVIRONMENTAL CONSIDERATIONS BEYOND ASTM SCOPE

The scope of ASTM E 1527-13 Standard involves assessing the subject property for potential environmental contamination and CERCLA liability. However, other factors that fall outside scope of the ASTM standard may pose a potential environmental concern with the proposed use of the subject property. Per our contract with the user, this Phase I assessment has included certain environmental considerations beyond the scope of the Standard. These environmental considerations are based on visual inspection of the subject property for the potential presence of lead-based paint (LBP) and asbestos-containing materials (ACM), observations of indoor mold, or documented evidence of potential radon in soil gas.

Since the subject property was constructed after 1978, we do not suspect the presence of LBP. However, the building predates the 1989 EPA ban on ACM, so we cannot rule out its presence. Since the interior of the building could not be accessed during the site visit, it could not be inspected for ACM. It should be noted that the County may require an asbestos survey prior to issuing a building permit for significant remodeling or additions. If the building is to be demolished, testing for asbestos is recommended prior to demolition and confirmed materials disposed of properly.

Similarly, since the interior of the building could not be accessed, we could not evaluate the site for indoor mold concerns. Should a mold problem be suspected, testing can be performed separately.

The subject property is located within the EPA Radon Zone 3, which are areas that typically do not exceed average indoor concentrations of 2 Pico Curies per liter (pCi/L) radon. ERIS has identified 1 site that was tested for concentrations of radon gas within the same zip code as the subject property. This site was below 2.0-pCi/L for indoor air quality (ERIS Report, Appendix E). Appreciable accumulation of radon that could affect human health is not expected to occur at this site. The presence or actual concentration of radon gas in surrounding soils can be evaluated should a concern arise**.**

6.0 DATA GAPS

In conducting the Phase I ESA in accordance with ASTM E1527-13, data gaps and data failures encountered during research for the report must be identified, and their significance on the results of the study discussed. A data gap is defined as a lack or inability to obtain information required by this practice despite good faith efforts. A data failure is a failure to achieve the historical research objectives even after reviewing the standard sources available.

In review of the research conducted into the current and previous use of the subject property, some sources of data were not available, and data gaps were identified. Sanborn Fire Insurance Maps did not provide coverage for the subject property. This is insignificant since Sanborn maps typically only cover urban areas. Since this area has only recently been developed, Sanborn map coverage was not expected. However, aerial photographs appear to provide adequate evidence of adjacent land use. Prior owners and occupants of the subject property could not be contacted for interview. Although information from prior owners and occupants is a potentially valuable source of historic information, the historic review information provided in Section 4 clearly documents the historic use of the subject property. The history of the subject property could not be traced back to when it was originally cleared of trees and altered for human usage. As mentioned above, the historic information obtained during this analysis appears adequate to determine the environmental condition of the site. No other potential data gaps have been identified in this investigation.

In conclusion, while some data gaps have been identified, they have not affected the ability to assess the environmental integrity of the property, or the conclusions of this report.

7.0 EVALUATION

This section presents a summary of the findings, opinions, and conclusions of this environmental site assessment.

7.1 Findings

Based on the information obtained through historic research and interviews, the subject property was partially wooded and agricultural land until it was developed with a small building and four transmission towers for radio broadcasting uses in the late 1970's. A well and septic tank are present onsite; however, both have been abandoned. The building is constructed on slab foundation with cinderblock, wood, and steel construction. Several pole-mounted electrical transformers were observed on the subject property providing power to the building and radio towers. The transformers were in good condition with non-PCB decals visible. No evidence of heating oil tanks was observed onsite and user interviews confirmed the building was heated and cooled by electric wall units. Based on site observations, there are no environmental concerns associated with the current use of the subject property, and no known concerns are present with historic usage. No environmental incidents have been identified in Federal or state database records at or near the subject property that would pose a concern.

7.2 Opinions of Environmental Professional

Based on our evaluation of the subject property, the current and historic uses of the subject property pose no known environmental concerns. Additionally, no environmental incidents have been documented on or near the subject property that would pose an environmental concern. Although beyond the scope of this practice, based on the age of the building, asbestos may be present, and we were not able to observe the interior of the building for potential concerns.

7.3 Conclusions

MSA, P.C., has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13 on the subject property identified as the The Crossings - Tower Parcel, located at 23067 Channell Way in Carrollton, Virginia. Any exceptions to, or deletions from, this practice are described in Section 1.1 of this report.

This assessment has revealed no evidence of Recognized Environmental Conditions (RECs) or potential environmental concerns in connection with the subject property. Historic records did not reveal any historic or adjacent property use that could potentially pose environmental concerns. In addition, a review of applicable Federal and State environmental databases did not reveal information pertaining to any previous environmental incidents at or near the subject property and environmental liens and/or institutional controls were not identified on the subject property.

8.0 RECOMMENDATIONS

Based upon the results of this investigation, no RECs or potential environmental concerns have been identified at the subject property. MSA recommends no further action on the site in regards to the integrity of the site. Due to the age of the building, asbestos may be present. MSA recommends an asbestos survey be performed prior to demolition.

Appendix B

Site Photographs

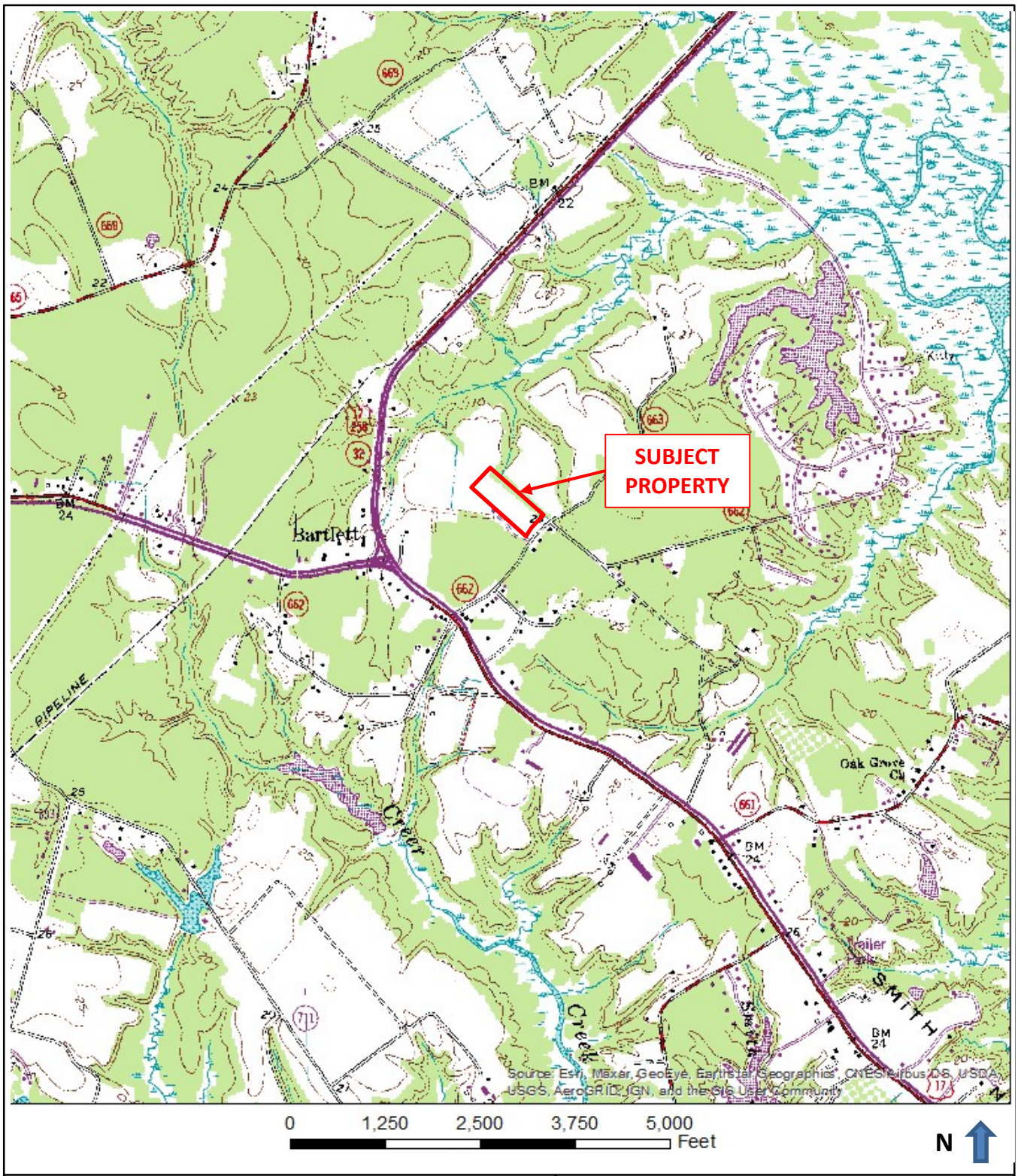


FIGURE 1. TOPOGRAPHIC MAP

PHASE I ENVIRONMENTAL SITE ASSESSMENT

THE CROSSINGS – TOWER PROPERTY

23067 CHANNELL WAY, CARROLLTON, VA

MSA, P.C.

ENVIRONMENTAL SCIENCES, SURVEYING
CIVIL & ENVIRONMENTAL ENGINEERING

5032 ROUSE DRIVE, SUITE 100
VIRGINIA BEACH, VIRGINIA 23462
(757) 490-9264 www.msaonline.com

MSA JOB #	DATE	SCALE
18075E	6/25/2021	GRAPHIC



FIGURE 2. AREA MAP

PHASE I ENVIRONMENTAL SITE ASSESSMENT

THE CROSSINGS – TOWER PROPERTY

23067 CHANNELL WAY, CARROLLTON, VA

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MSA JOB #	DATE	SCALE
18075E	6/25/2021	GRAPHIC

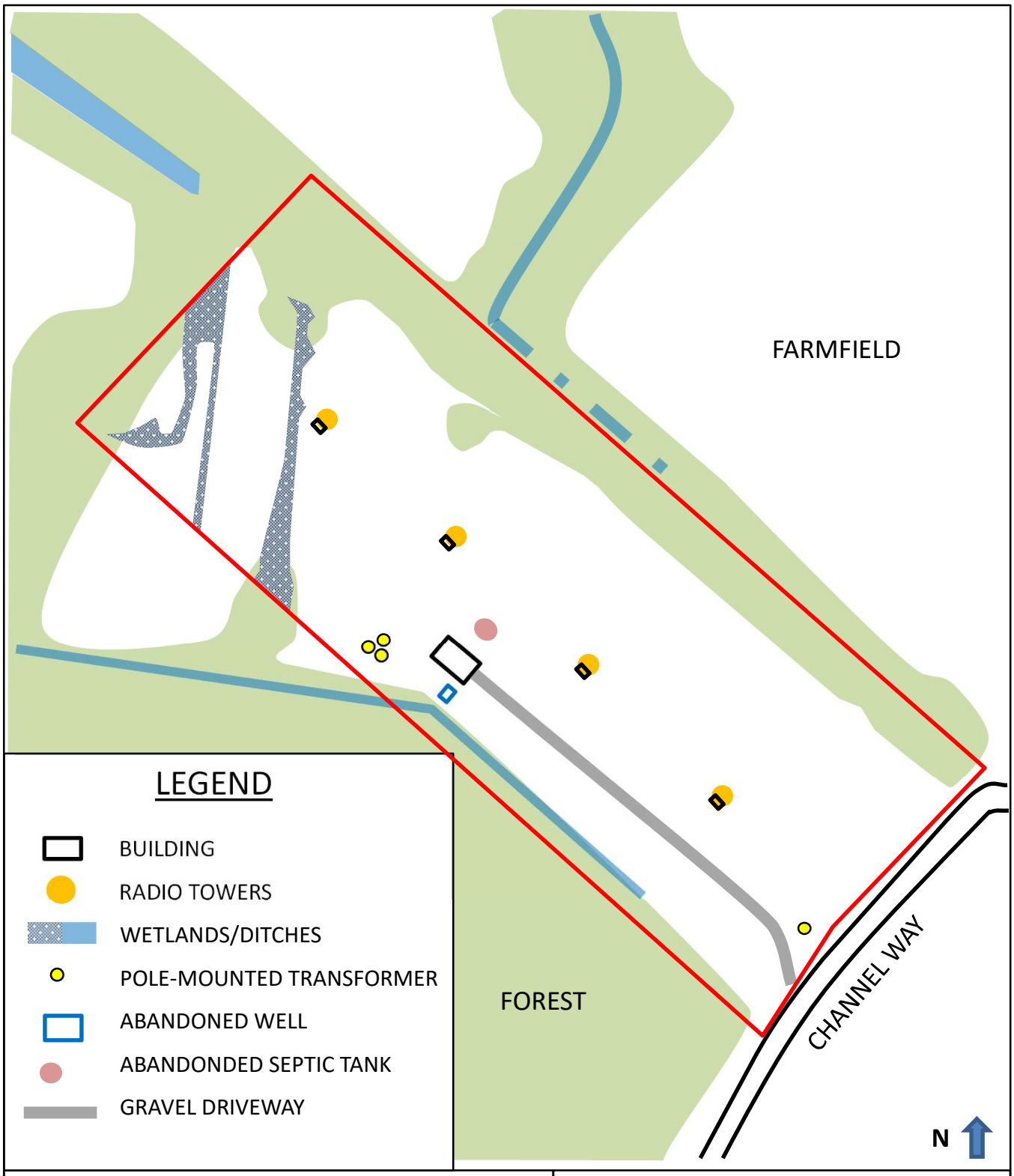


FIGURE 3. SITE MAP

PHASE I ENVIRONMENTAL SITE ASSESSMENT

THE CROSSINGS – TOWER PROPERTY

23067 CHANNELL WAY, CARROLLTON, VA

MSA, P.C.
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MSA JOB #	DATE	SCALE
18075E	6/25/2021	GRAPHIC

Appendix A

Figures



View of the subject property from across Channell Way facing north.



Pole mounted electrical transformer located at the entrance to the subject property in good condition with non-PCB decal visible.



View of the small utility building located on the subject property facing north. An abandoned well is visible to the west of the structure and three pole mounted transformer can be seen beyond - both indicated by red arrows.



View of onsite abandoned well enclosed in cinderblock structure.

SITE PHOTOGRAPHS

PHASE I ENVIRONMENTAL SITE ASSESSMENT

THE CROSSINGS – TOWER PROPERTY

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CIVIL & ENVIRONMENTAL ENGINEERING

5032 ROUSE DRIVE, SUITE 100
VIRGINIA BEACH, VIRGINIA 23462
(757) 490-9264 www.msaonline.com

MSA JOB #	DATE	SCALE
18075E	6/8/2021	GRAPHIC



View of the utility building facing south. Several electrical conduits are visible exiting the building and connecting with the radio towers.



Three pole mounted electrical transformers located near the utility structure in good condition with non-PCB decals visible.



Wood fence around the base of one of the radio towers. Cinderblock structure located adjacent to the tower.



View of cinderblock structure, radio tower, and field.

SITE PHOTOGRAPHS

PHASE I ENVIRONMENTAL SITE ASSESSMENT

THE CROSSINGS – TOWER PROPERTY

23067 CHANNELL WAY, CARROLLTON, VA

MSA, P.C.
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CIVIL & ENVIRONMENTAL ENGINEERING

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MSA JOB #	DATE	SCALE
18075E	6/8/2021	GRAPHIC



View of field on subject property facing south with four radio towers visible.



View of swale/ditch looking west across the subject property. Earthworks operations visible on adjacent property.



Portion of previously wooded area on the subject property cleared as a result of ongoing development on the adjacent property to the west.



Abandoned debris in wooded area in the northeast portion of the subject property.

SITE PHOTOGRAPHS

PHASE I ENVIRONMENTAL SITE ASSESSMENT

THE CROSSINGS – TOWER PROPERTY

23067 CHANNELL WAY, CARROLLTON, VA

MSA, P.C.
ENVIRONMENTAL SCIENCES, SURVEYING
CIVIL & ENVIRONMENTAL ENGINEERING

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(757) 490-9264 www.msaonline.com

MSA JOB #	DATE	SCALE
18075E	6/8/2021	GRAPHIC



View of recently excavated pond adjacent to the north of the subject property.



View of subject property from the northeastern corner facing southwest.



Haul road and earthworks activities visible on the adjacent property and small portions of the subject property to the northwest.

SITE PHOTOGRAPHS

PHASE I ENVIRONMENTAL SITE ASSESSMENT

THE CROSSINGS – TOWER PROPERTY

23067 CHANNELL WAY, CARROLLTON, VA

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CIVIL & ENVIRONMENTAL ENGINEERING

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(757) 490-9264 www.msaonline.com

MSA JOB #	DATE	SCALE
18075E	6/8/2021	GRAPHIC



View of adjacent residences across Channell Way to the south of the subject property.



View of Channell Way facing east.



View of Channell Way facing west.

SITE PHOTOGRAPHS

PHASE I ENVIRONMENTAL SITE ASSESSMENT

THE CROSSINGS – TOWER PROPERTY

23067 CHANNELL WAY, CARROLLTON, VA

MSA, P.C.

ENVIRONMENTAL SCIENCES, SURVEYING
CIVIL & ENVIRONMENTAL ENGINEERING

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(757) 490-9264 www.msaonline.com

MSA JOB #	DATE	SCALE
18075E	6/8/2021	GRAPHIC



View of adjacent wooded property to the south of subject property at the corner of Whippingham Parkway and Channell Way.



View of property to the southeast currently undergoing new residential development.



Adjacent property to the east used from farming.

SITE PHOTOGRAPHS

PHASE I ENVIRONMENTAL SITE ASSESSMENT

THE CROSSINGS – TOWER PROPERTY

23067 CHANNELL WAY, CARROLLTON, VA

MSA, P.C.

ENVIRONMENTAL SCIENCES, SURVEYING
CIVIL & ENVIRONMENTAL ENGINEERING

5032 ROUSE DRIVE, SUITE 100
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(757) 490-9264 www.msaonline.com

MSA JOB #	DATE	SCALE
18075E	6/8/2021	GRAPHIC

Appendix C

Interviews

ASTM E 1527-13 USER QUESTIONNAIRE

In order to qualify for one of the Landowner Liability Protections (LLPs)[35] offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must provide the following information (if available) to the environmental professional. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete. Therefore, please answer the following questions to the best of your knowledge.

(1.) Environmental cleanup liens that are filed or recorded against the site (40 CFR 312.25). Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law? **None known**

(2.) Activity and land use limitations that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26). Are you aware of any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law? **None known**

(3.) Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).
As the user of this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business? **Property has been used been used for radio towers for the past 30-40 years and used as agricultural land prior to that.**

(4.) Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 CFR 312.29). Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property? **Fair purchase price.**

(5.) Commonly known or reasonably ascertainable information about the property (40 CFR 312.30). Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional identify conditions indicative of releases or threatened releases? For example, as user,
(a.) Do you know the past uses of the property? **Undeveloped property**
If tanks present, any leak detection reports, etc? **None.**
(b.) Do you know of specific chemicals that are present or once were present at the property? **None.**
(c.) Do you know of spills or other chemical releases that have taken place at the property? **None.**
(d.) Do you know of any environmental cleanups that have taken place at the property? **None.**

(6.) The degree of obviousness of the presence of likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31). As the user of this ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property? **None.**

(7.) What are the reasons for conducting this Phase 1?_ __Due Diligence prior to purchase of property. _____

Specific parties that may rely on this report ____Franciscus Homes, Inc. and Towne Bank_____

What is the proposed use of this property? __Single Family Residential Homes_____
Contact for current owner? _John Marshall, Broker at Marshall & Associates_____
Contact for site access? __N/A_____

Interviewed: __Jerry Bowman__ Relation to project: __USER__ Date: _6/21/21_ Interviewer: _Nikolai Karlov__

Appendix D

Historical Records

ERIS

HISTORICAL AERIALS

Project Property:	The Crossings - Tower Parcel 23067 Channell Way Carrollton VA 23314
Requested By:	MSA, P.C.
Order No:	21060700510
Data Completed:	June 08,2021

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Date	Source	Scale	Comments
2018	National Agriculture Information Program	1" to 500'	
2016	National Agriculture Information Program	1" to 500'	
2014	National Agriculture Information Program	1" to 500'	
2011	National Agriculture Information Program	1" to 500'	
2009	National Agriculture Information Program	1" to 500'	
2006	National Agriculture Information Program	1" to 500'	
2003	National Agriculture Information Program	1" to 500'	
1994	US Geological Survey	1" to 500'	
1982	National High Altitude Photography	1" to 500'	
1978	US Geological Survey	1" to 500'	
1972	US Geological Survey	1" to 500'	
1963	US Geological Survey	1" to 500'	
1959	United States Air Force	1" to 500'	



Year: 2018
Source: NAIP
Scale: 1" to 500'
Comment:

Address: 23067 Channell Way, Carrollton, VA
Approx Center: -76.53201114,36.94273517

Order No: 21060700510

ERIS



Year: 2016
Source: NAIP
Scale: 1" to 500'
Comment:

Address: 23067 Channell Way, Carrollton, VA
Approx Center: -76.53201114,36.94273517

Order No: 21060700510

ERIS



Year: 2014
Source: NAIP
Scale: 1" to 500'
Comment:

Address: 23067 Channell Way, Carrollton, VA
Approx Center: -76.53201114,36.94273517

Order No: 21060700510

ERIS

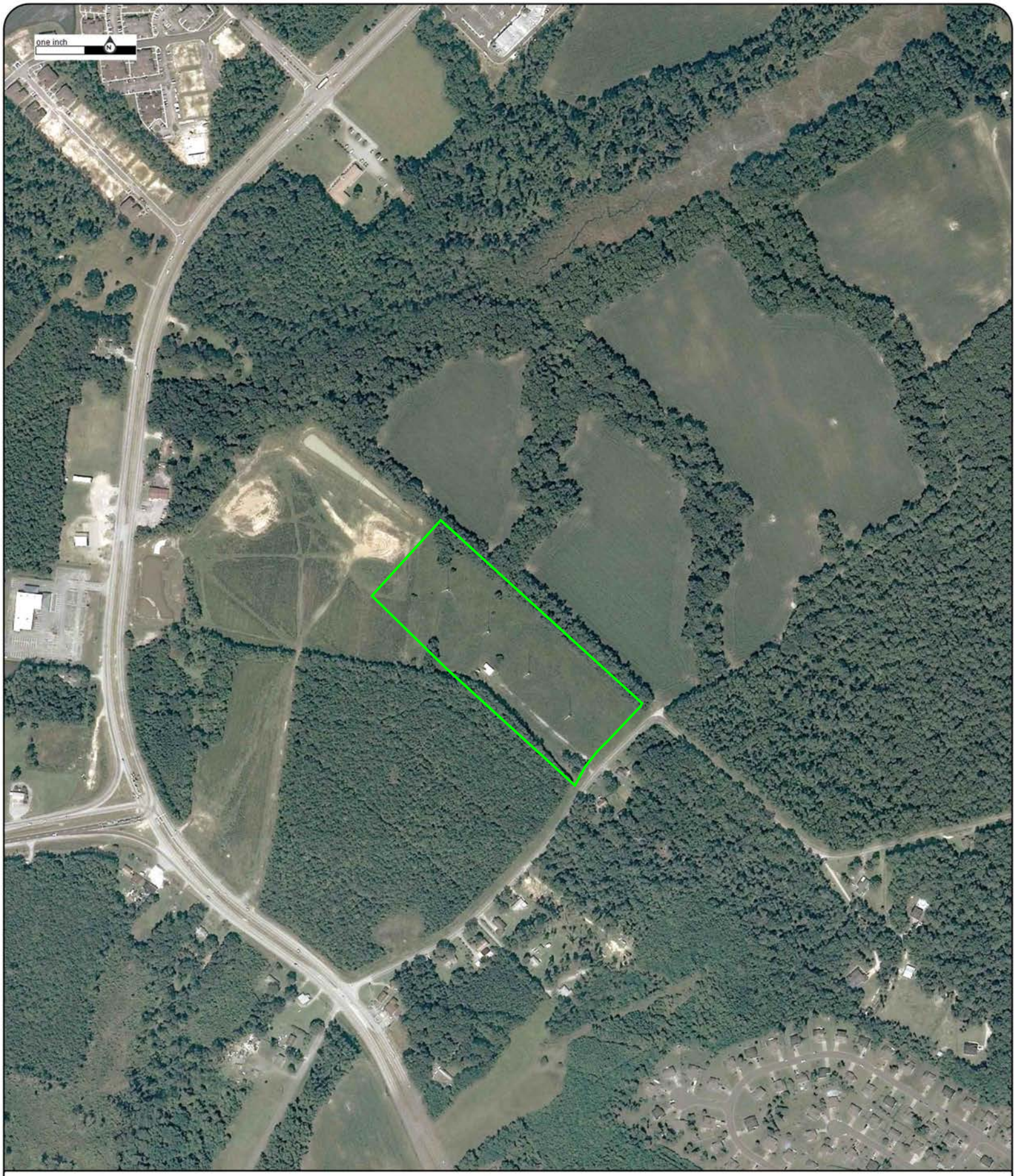


Year: 2011
Source: NAIP
Scale: 1" to 500'
Comment:

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Approx Center: -76.53201114,36.94273517

Order No: 21060700510

ERIS

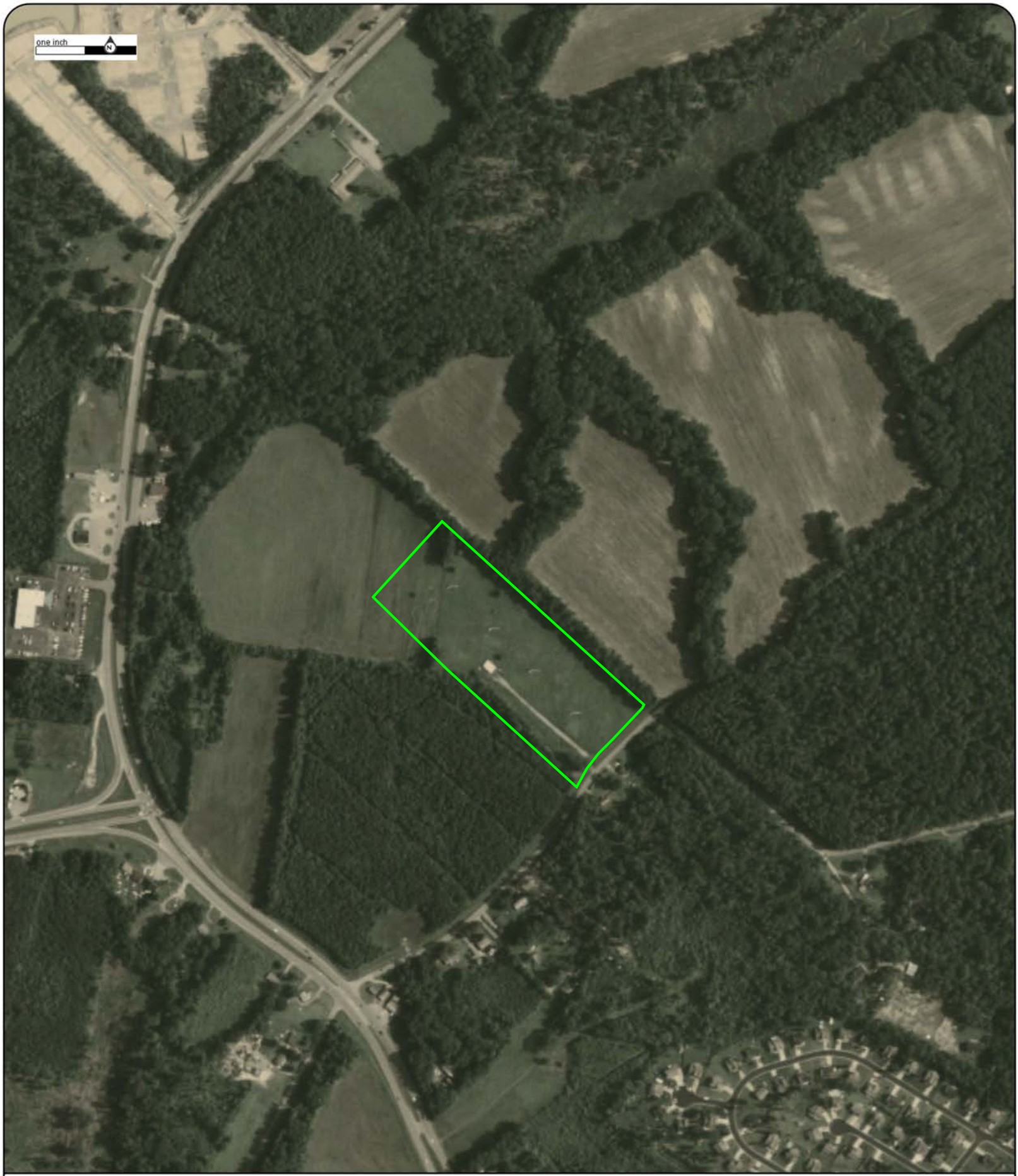


Year: 2009
Source: NAIP
Scale: 1" to 500'
Comment:

Address: 23067 Channell Way, Carrollton, VA
Approx Center: -76.53201114,36.94273517

Order No: 21060700510

ERIS



Year: 2006
Source: NAIP
Scale: 1" to 500'
Comment:

Address: 23067 Channell Way, Carrollton, VA
Approx Center: -76.53201114,36.94273517

Order No: 21060700510

ERIS

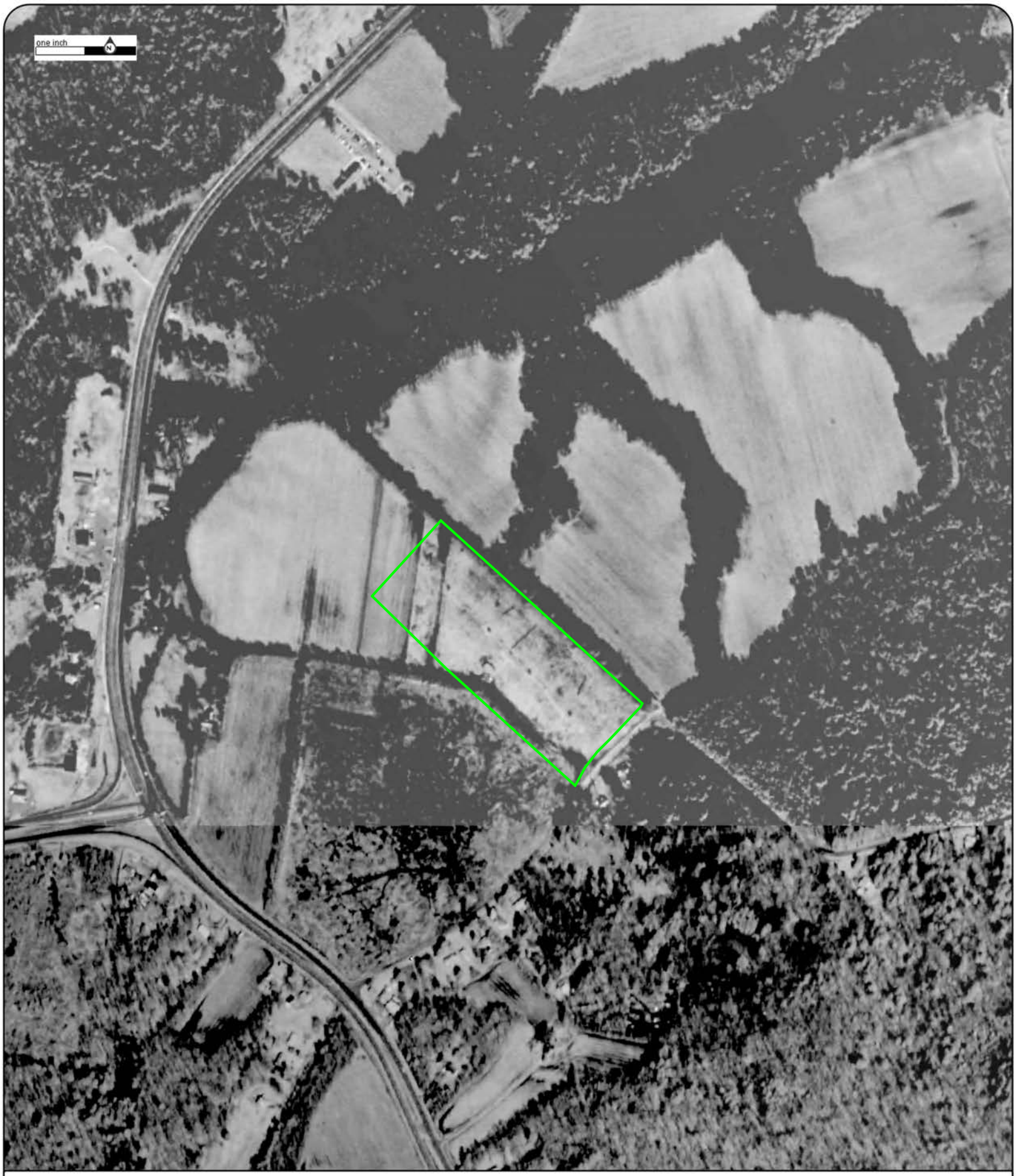


Year: 2003
Source: NAIP
Scale: 1" to 500'
Comment:

Address: 23067 Channell Way, Carrollton, VA
Approx Center: -76.53201114,36.94273517

Order No: 21060700510

ERIS



Year: 1994
Source: USGS
Scale: 1" to 500'
Comment:

Address: 23067 Channell Way, Carrollton, VA
Approx Center: -76.53201114,36.94273517

Order No: 21060700510

ERIS



Year: 1982
Source: NHAP
Scale: 1" to 500'
Comment:

Address: 23067 Channell Way, Carrollton, VA
Approx Center: -76.53201114,36.94273517

Order No: 21060700510

ERIS



Year: 1978
Source: USGS
Scale: 1" to 500'
Comment:

Address: 23067 Channell Way, Carrollton, VA
Approx Center: -76.53201114,36.94273517

Order No: 21060700510

ERIS



Year: 1972
Source: USGS
Scale: 1" to 500'
Comment:

Address: 23067 Channell Way, Carrollton, VA
Approx Center: -76.53201114,36.94273517

Order No: 21060700510

ERIS



Year: 1963
Source: USGS
Scale: 1" to 500'
Comment:

Address: 23067 Channell Way, Carrollton, VA
Approx Center: -76.53201114,36.94273517

Order No: 21060700510

ERIS



Year: 1959
Source: USAF
Scale: 1" to 500'
Comment:

Address: 23067 Channell Way, Carrollton, VA
Approx Center: -76.53201114,36.94273517

Order No: 21060700510

ERIS

FIRE INSURANCE MAPS

Project Property:	The Crossings - Tower Parcel 23067 Channell Way Carrollton VA 23314
Project No:	18075E
Requested By:	MSA, P.C.
Order No:	21060700510
Date Completed:	June 08, 2021

Please note that no information was found for your site or adjacent properties.

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TOPOGRAPHIC MAPS

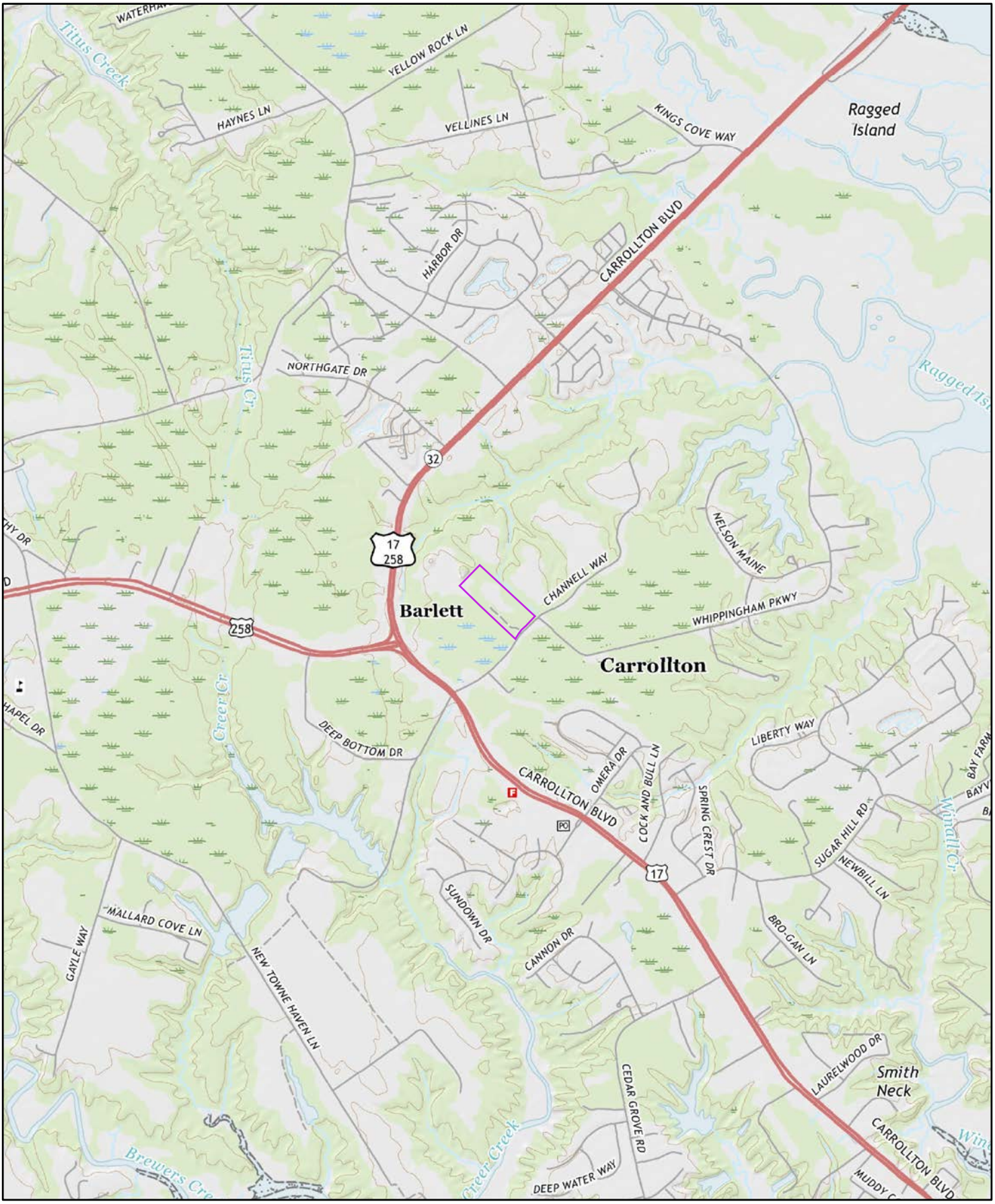
Project Property:	The Crossings - Tower Parcel 23067 Channell Way Carrollton VA 23314
Project No:	18075E
Requested By:	MSA, P.C.
Order No:	21060700510
Date Completed:	June 08, 2021

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We have searched USGS collections of current topographic maps and historical topographic maps for the project property. Below is a list of maps found for the project property and adjacent area. Maps are from 7.5 and 15 minute topographic map series, if available.

Year	Map Series
2016	7.5
1992	7.5
1986	7.5
1980	7.5
1979	7.5
1972	7.5
1965	7.5
1957	7.5
1952	7.5
1951	7.5
1950	7.5
1919	15

Topographic Maps included in this report are produced by the USGS and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property.
No warranty of Accuracy or Liability for ERIS: The information contained in this report has been produced by ERIS Information Inc.(in the US) and ERIS Information Limited Partnership (in Canada), both doing business as 'ERIS', using Topographic Maps produced by the USGS. This maps contained herein does not purport to be and does not constitute a guarantee of the accuracy of the information contained herein. Although ERIS has endeavored to present you with information that is accurate, ERIS disclaims, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. Liability on the part of ERIS is limited to the monetary value paid for this report.



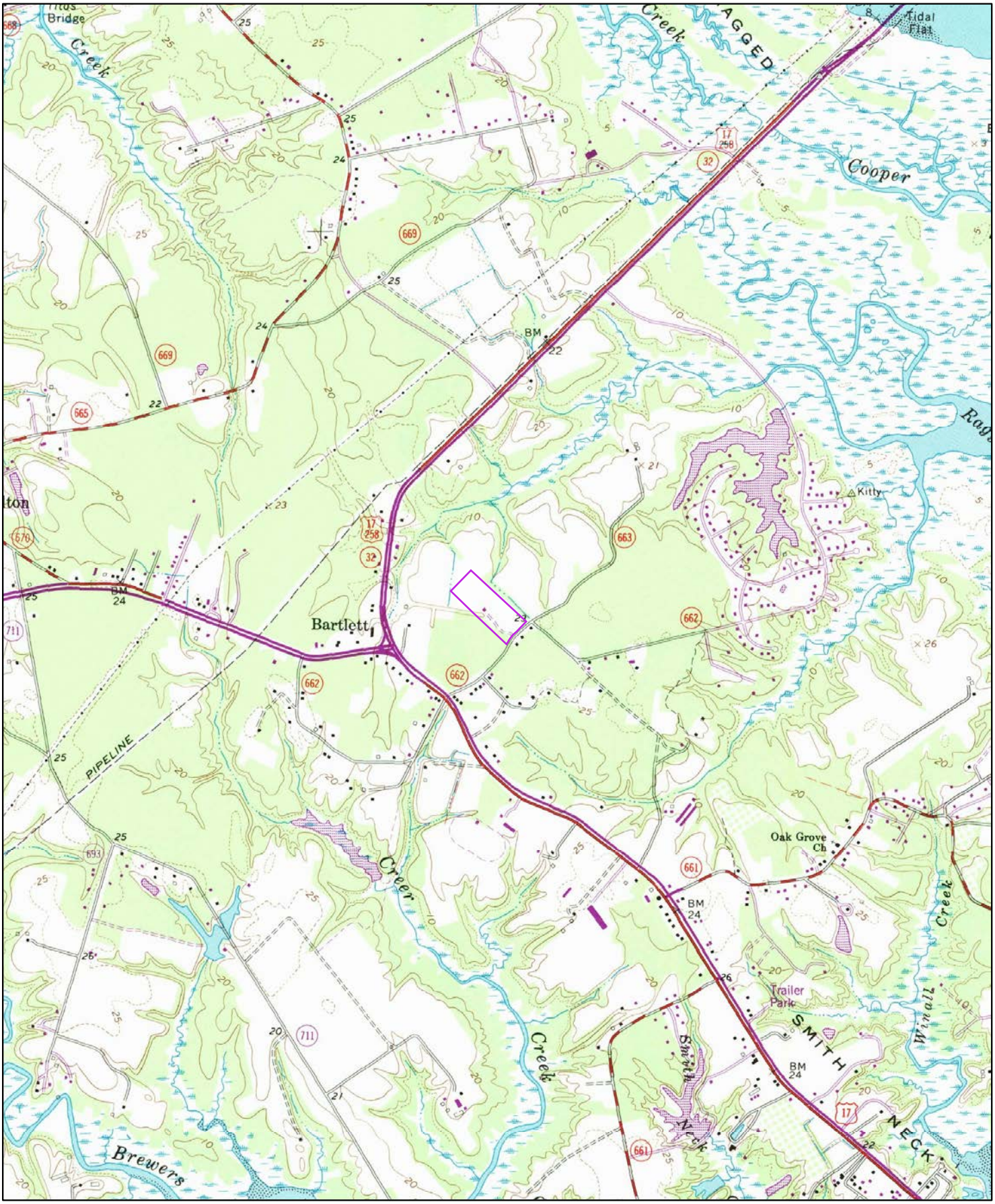
2016

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Order No. 21060700510

Quadrangle(s): Benns Church,VA

Source: USGS 7.5 Minute Topographic Map



1992

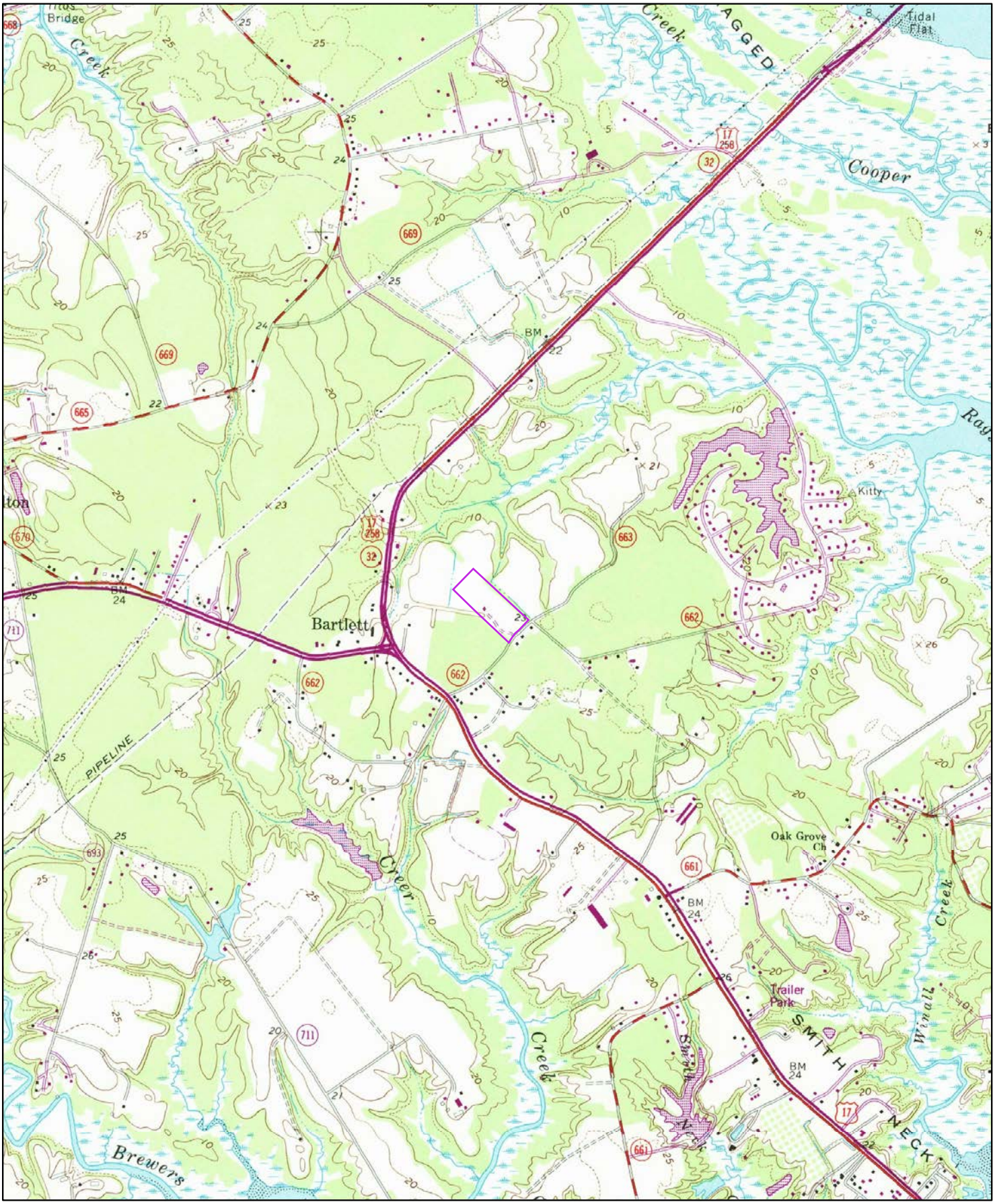
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Order No. 21060700510

Quadrangle(s): Benns Church,VA

Source: USGS 7.5 Minute Topographic Map

ERIS



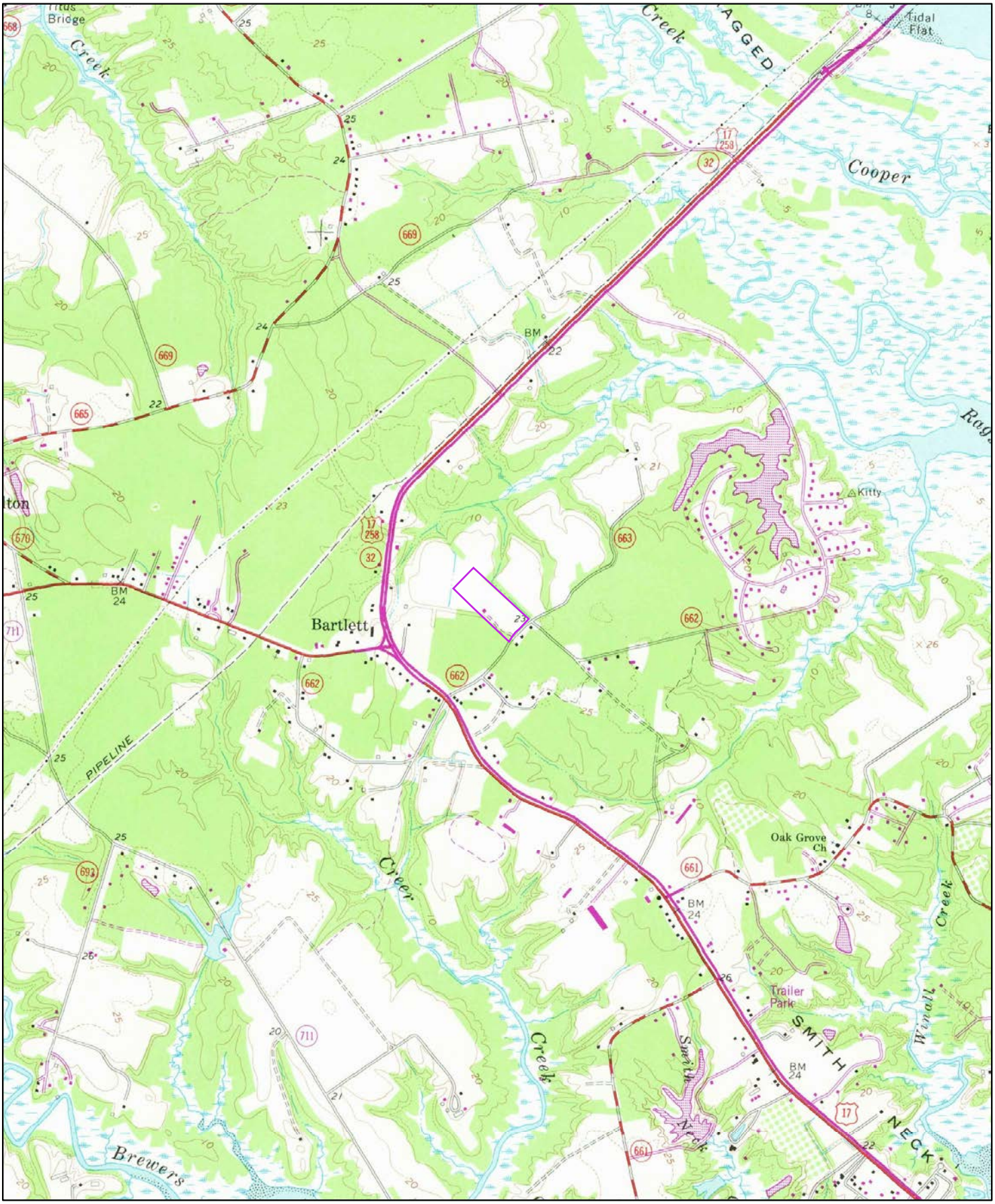
1986

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Order No. 21060700510

Quadrangle(s): Benns Church,VA

Source: USGS 7.5 Minute Topographic Map



1980

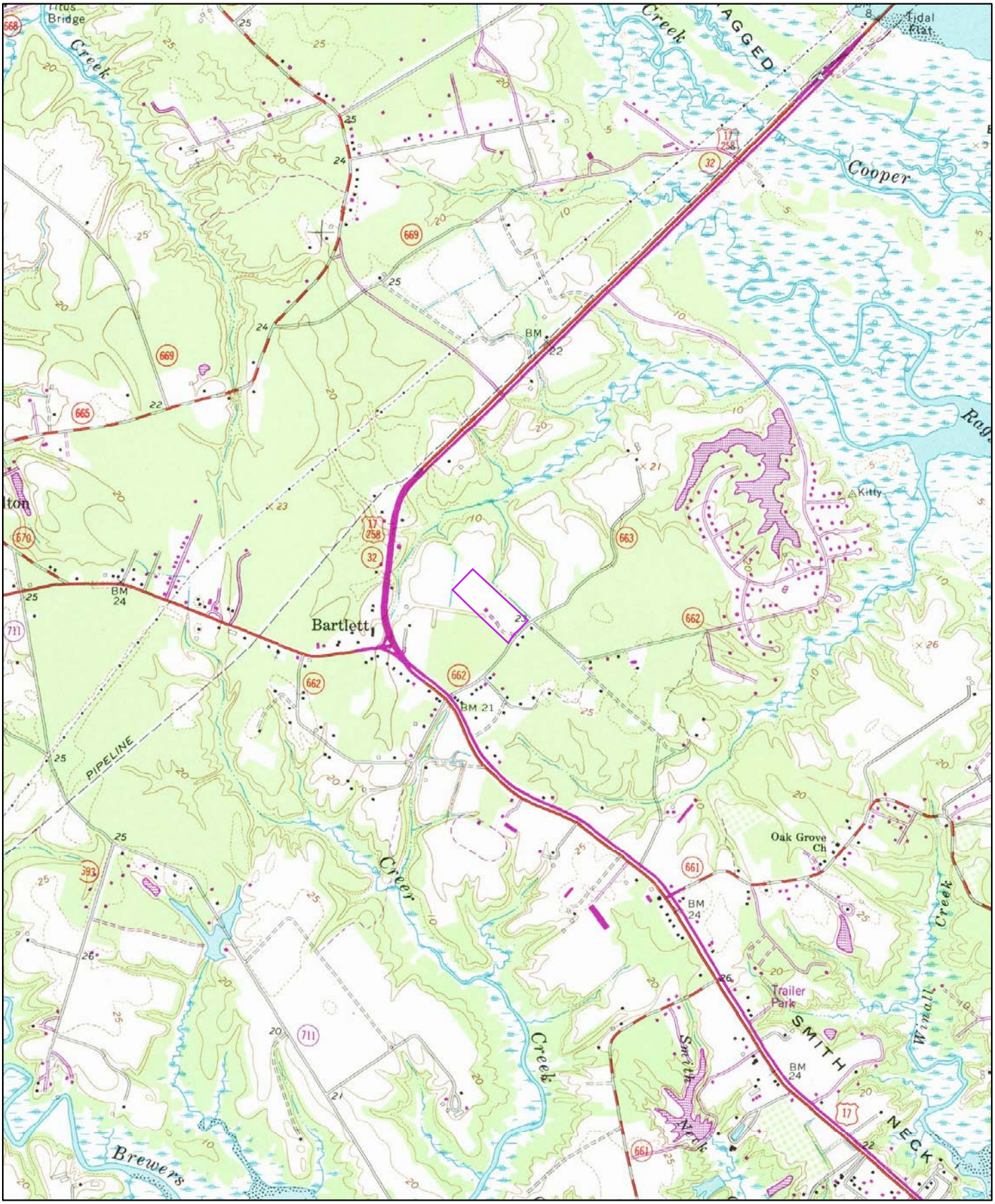
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Order No. 21060700510

Quadrangle(s): Benns Church,VA

Source: USGS 7.5 Minute Topographic Map

ERIS



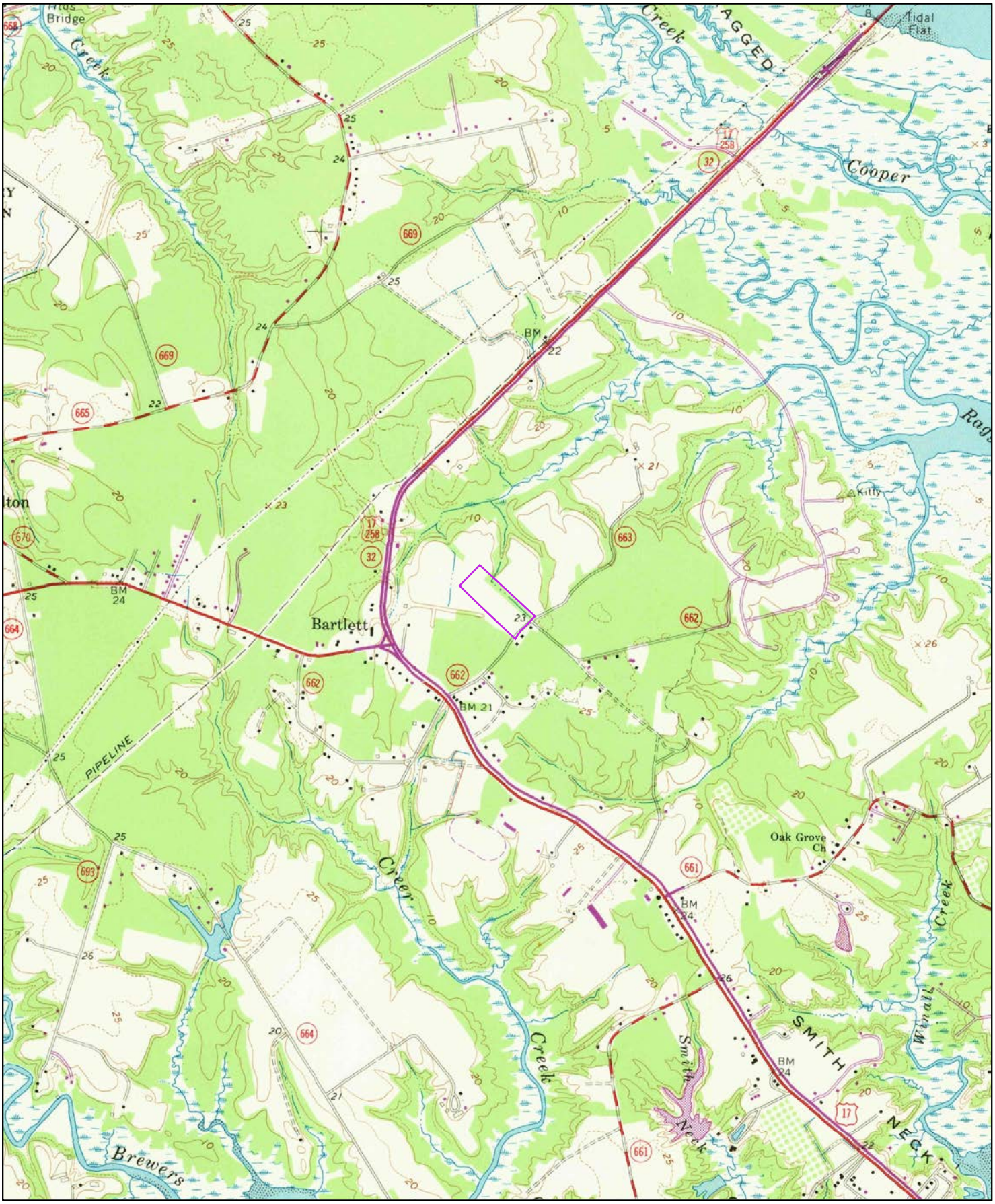
1979

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Order No. 21060700510

Quadrangle(s): Benns Church,VA

Source: USGS 7.5 Minute Topographic Map



1972

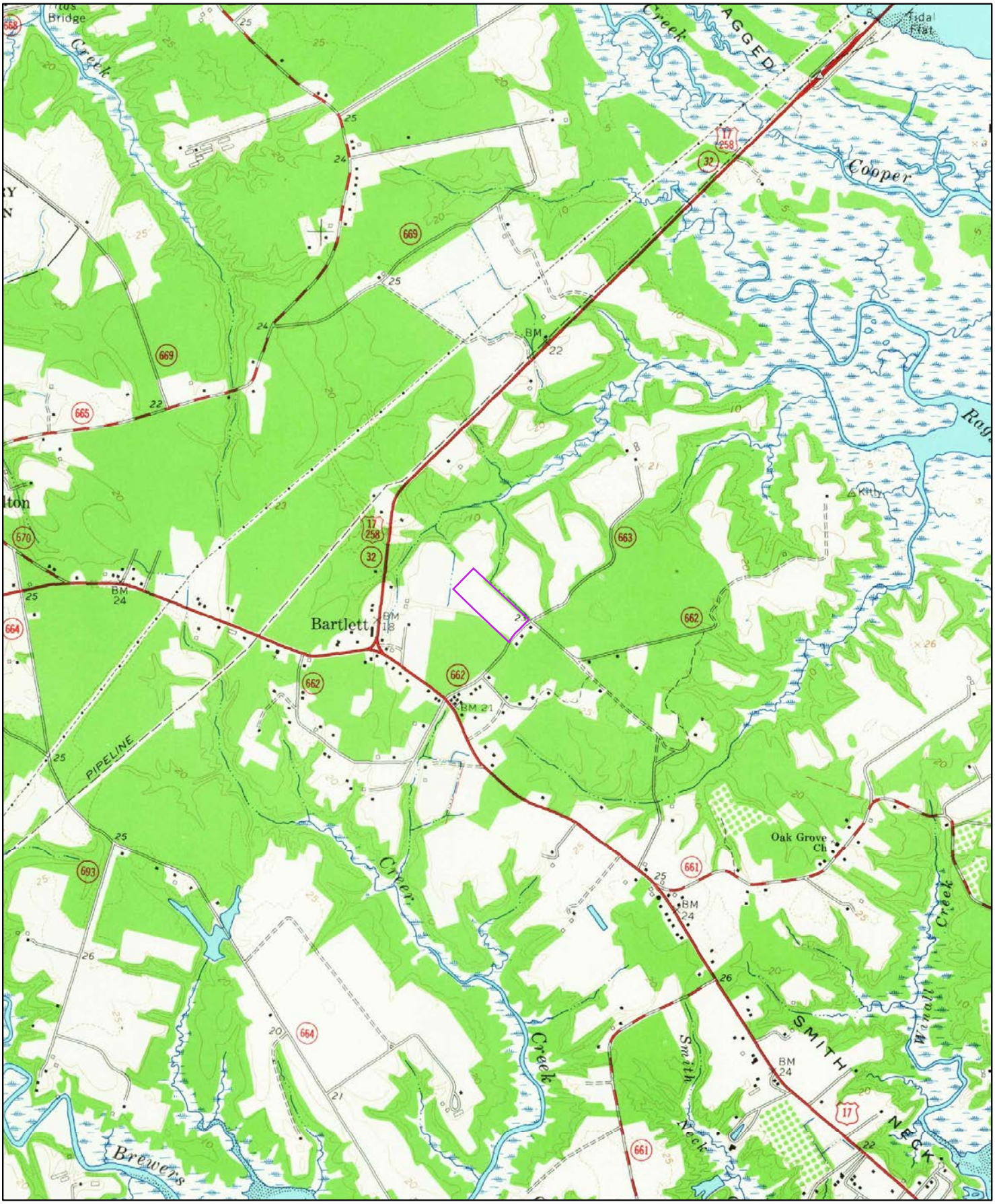
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Order No. 21060700510

Quadrangle(s): Benns Church,VA

Source: USGS 7.5 Minute Topographic Map

ERIS



1965

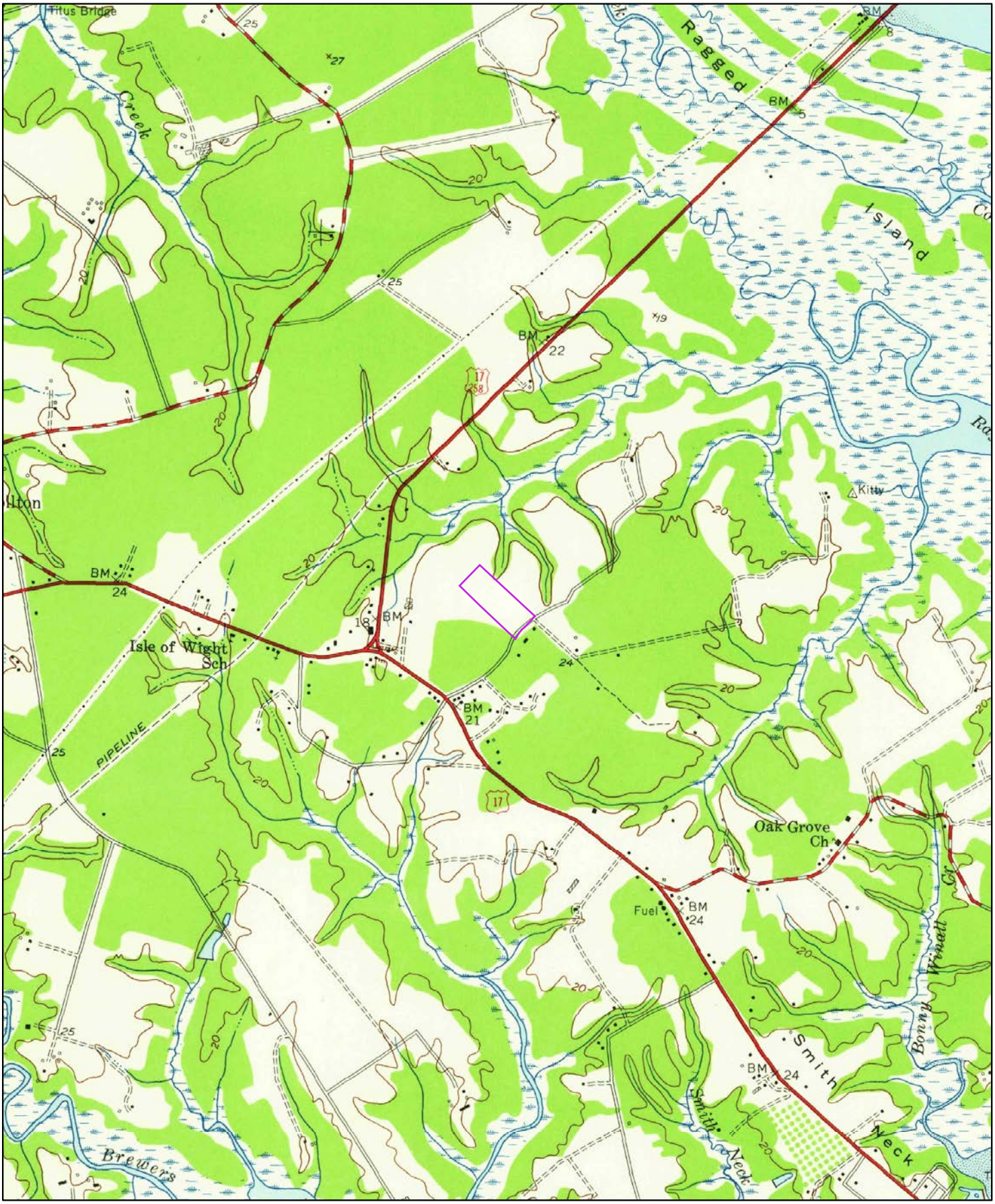
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ERIS



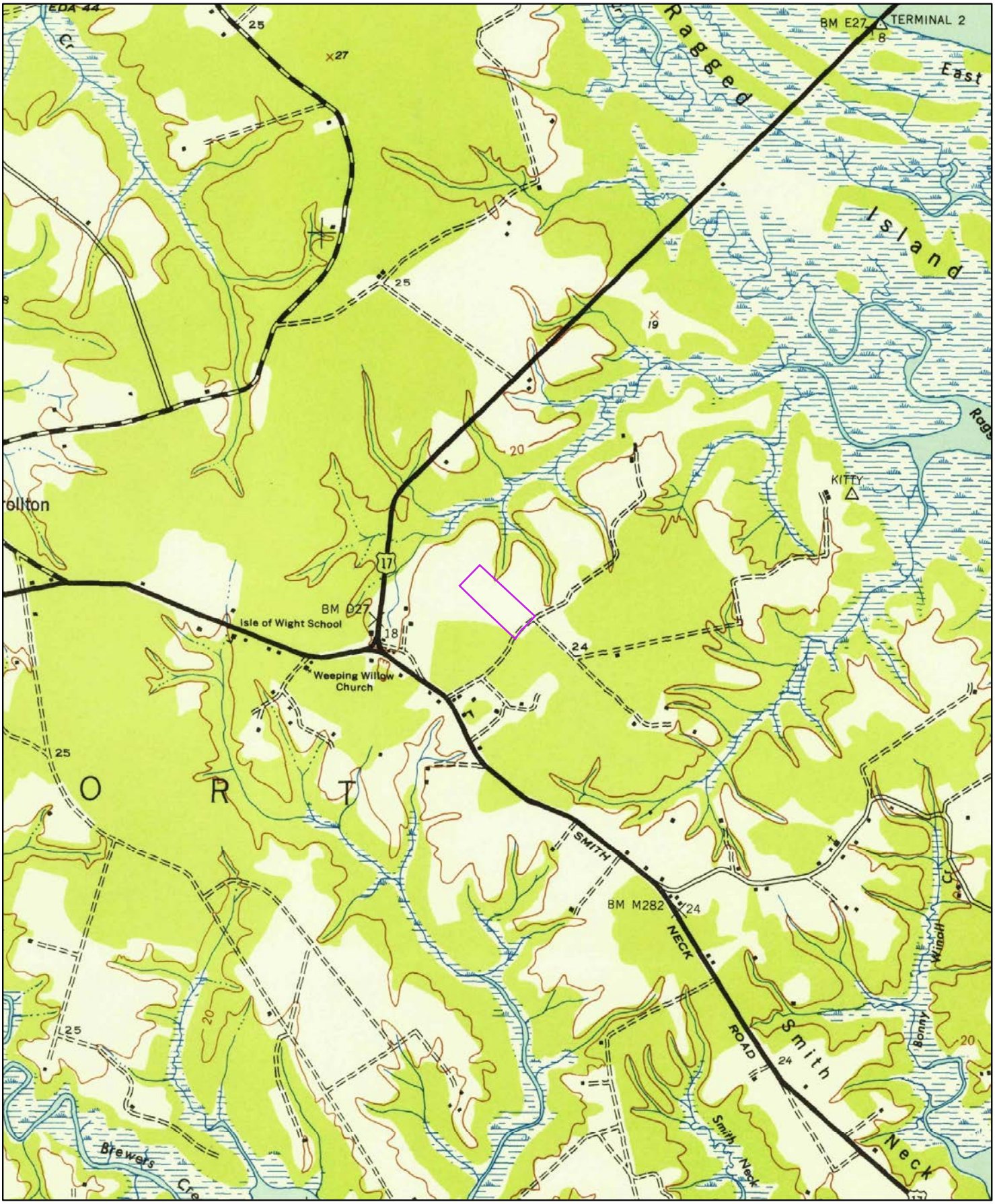
1957

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Order No. 21060700510

Quadrangle(s): Benns Church,VA

Source: USGS 7.5 Minute Topographic Map



1952

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Order No. 21060700510

Quadrangle(s): Benns Church,VA

Source: USGS 7.5 Minute Topographic Map

ERIS



1951

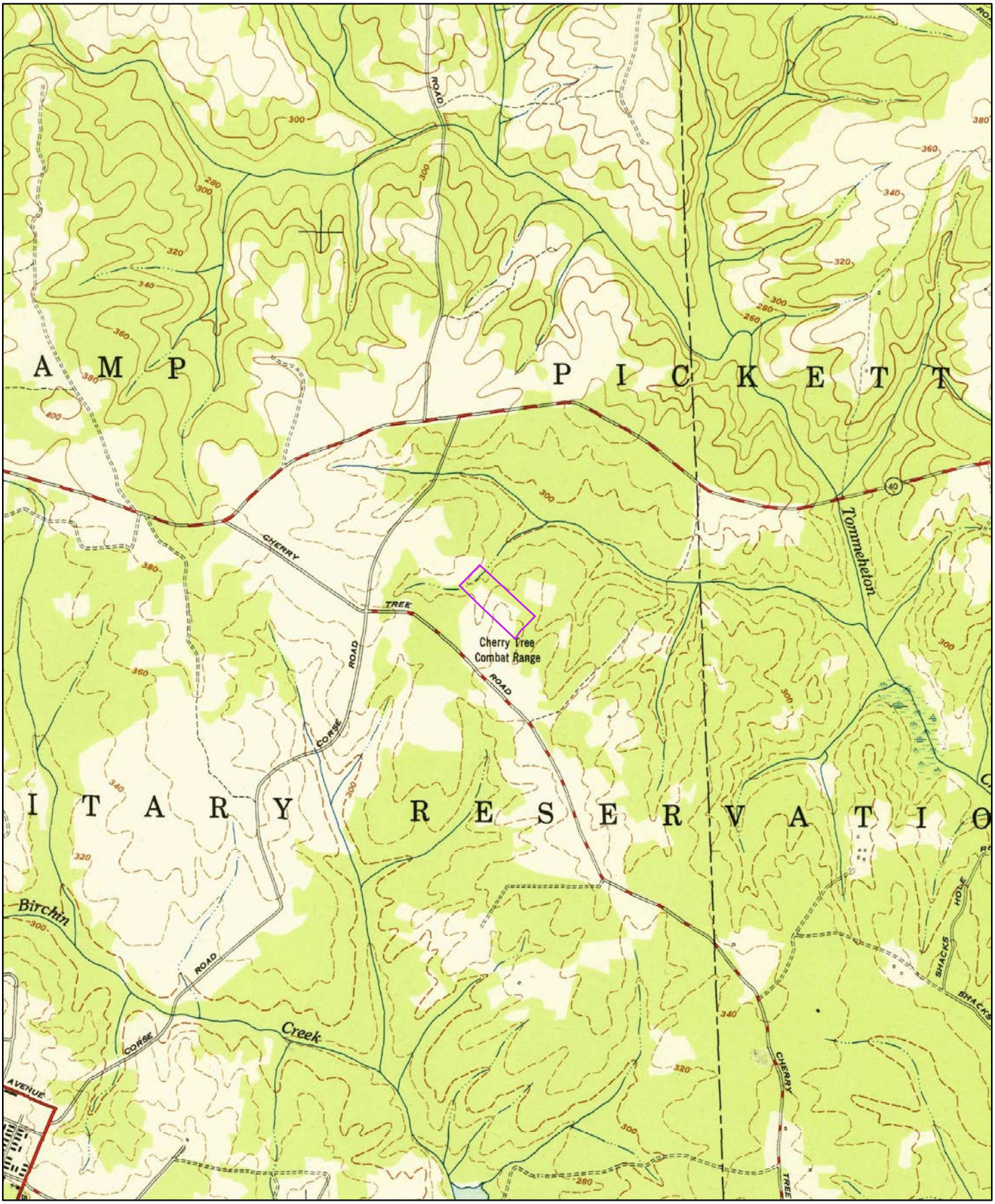
0 0.2 0.4 0.8 Miles

Order No. 21060700510

Quadrangle(s): Blackstone,VA

Source: USGS 7.5 Minute Topographic Map

ERIS



1950

0 0.2 0.4 0.8 Miles

Order No. 21060700510

Quadrangle(s): Blackstone,VA

Source: USGS 7.5 Minute Topographic Map



1919

0 0.2 0.4 0.8 Miles

Order No. 21060700510

Quadrangle(s): Smithfield,VA

Source: USGS 15 Minute Topographic Map

CITY DIRECTORY

Project Property:	*The Crossings - Tower Parcel* *23067 Channell Way* *Carrollton, VA 23314*
Project No:	*18075E*
Requested By:	*MSA, P.C.*
Order No:	*21060700510*
Date Completed:	*June 9, 2021*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

June 9, 2021
RE: CITY DIRECTORY RESEARCH
The Crossings - Tower Parcel
23067 Channell Way Carrollton, VA

Thank you for contacting ERIS for an City Directory Search for the site described above. Our staff has conducted a reverse listing City Directory search to determine prior occupants of the subject site and adjacent properties. We have provided the nearest addresses(s) when adjacent addresses are not listed. If we have searched a range of addresses, all addresses in that range found in the Directory are included.

Note: Reverse Listing Directories generally are focused on more highly developed areas. Newly developed areas may be covered in the more recent years, but the older directories will tend to cover only the "central" parts of the city. To complete the search, we have either utilized the ACPL, Library of Congress, State Archives, and/or a regional library or history center as well as multiple digitized directories. These do not claim to be a complete collection of all reverse listing city directories produced.

ERIS has made every effort to provide accurate and complete information but shall not be held liable for missing, incomplete or inaccurate information. To complete this search we used the general range(s) below to search for relevant findings. If you believe there are additional addresses or streets that require searching please contact us at 866-517-5204.

Search Criteria:
23000-23100 of Channell Way
14425-15000 of Whippingham Parkway

Search Results Summary

Date	Source	Comment
2020	DIGITAL BUSINESS DIRECTORY	
2016	DIGITAL BUSINESS DIRECTORY	
2012	DIGITAL BUSINESS DIRECTORY	
2008	DIGITAL BUSINESS DIRECTORY	
2003	DIGITAL BUSINESS DIRECTORY	
1998	DIGITAL BUSINESS DIRECTORY	
1996	POLKS	

2020
SOURCE: DIGITAL BUSINESS DIRECTORY

CHANNELL WAY

NO LISTING FOUND FOR THIS YEAR...

2020
SOURCE: DIGITAL BUSINESS DIRECTORY

WHIPPINGHAM PARKWAY

NO LISTING FOUND FOR THIS YEAR...

2016
SOURCE: DIGITAL BUSINESS DIRECTORY

CHANNELL WAY

NO LISTING FOUND FOR THIS YEAR...

2016
SOURCE: DIGITAL BUSINESS DIRECTORY

WHIPPINGHAM PARKWAY

NO LISTING FOUND FOR THIS YEAR...

2012
SOURCE: DIGITAL BUSINESS DIRECTORY

CHANNELL WAY

NO LISTING FOUND FOR THIS YEAR...

2012
SOURCE: DIGITAL BUSINESS DIRECTORY

WHIPPINGHAM PARKWAY

14591 **HARRIS FARMS**...*Farms*

2008
SOURCE: DIGITAL BUSINESS DIRECTORY

CHANNELL WAY

NO LISTING FOUND FOR THIS YEAR...

2008
SOURCE: DIGITAL BUSINESS DIRECTORY

WHIPPINGHAM PARKWAY

NO LISTING FOUND FOR THIS YEAR...

2003
SOURCE: DIGITAL BUSINESS DIRECTORY

CHANNELL WAY

NO LISTING FOUND FOR THIS YEAR...

2003
SOURCE: DIGITAL BUSINESS DIRECTORY

WHIPPINGHAM PARKWAY

NO LISTING FOUND FOR THIS YEAR...

1998
SOURCE: DIGITAL BUSINESS DIRECTORY

CHANNELL WAY

NO LISTING FOUND FOR THIS YEAR...

1998
SOURCE: DIGITAL BUSINESS DIRECTORY

WHIPPINGHAM PARKWAY

NO LISTING FOUND FOR THIS YEAR...

1996
SOURCE: POLKS

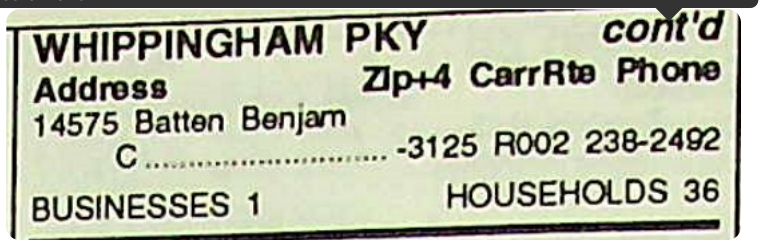
CHANNELL WAY

NO LISTINGS IN RANGE

1996
SOURCE: POLKS

WHIPPINGHAM PARKWAY - A

13250 CARROLLTON PUBLIC LIBRARY ..... -3300 R002 238-3479
14431 McLean David C ..... -3128 R002 238-9846
14507 Eddley Raylie..... -3125 R002 238-3362


WHIPPINGHAM PKY cont'd
Address Zip+4 CarrRte Phone
14575 Batten Benjam
C ..... -3125 R002 238-2492
BUSINESSES 1 HOUSEHOLDS 36

--- END REPORT ---

CHAIN OF OWNERSHIP RESEARCH FORM

JOB NAME: The Crossings - Tower Property

TAX PLATE # / GPIN #: PARCEL: 34-01-070B

CURRENT OWNER: BOOTH-COBB MEDIA LLC

PREVIOUS OWNER: WORD BROADCASTING NETWORK INC

DATE: 7/08/2014 DOCUMENT # : 140002331

CHAIN OF OWNERSHIP:

TO: WORD BROADCASTING NETWORK INC

FROM METROPOLITAN RADIO GROUP INC

DATE: 9/09/2003 DOCUMENT # :

TO: METROPOLITAN RADIO GROUP INC

FROM J4 BROADCASTING OF NORFOLK INC

DATE: 4/16/1998 DOCUMENT # :

Appendix E

Environmental Database Records

DATABASE REPORT

Project Property:	*The Crossings - Tower Parcel* *23067 Channell Way* *Carrollton VA 23314*
Project No:	*18075E*
Report Type:	*Database Report*
Order No:	*21060700510*
Requested by:	*MSA, P.C.*
Date Completed:	*June 8, 2021*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

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Executive Summary

Property Information:

Project Property:	*The Crossings - Tower Parcel* *23067 Channell Way Carrollton VA 23314*
Project No:	*18075E*

Coordinates:

Latitude:	*36.94273517*
Longitude:	*-76.53201114*
UTM Northing:	*4,089,616.13*
UTM Easting:	*363,580.96*
UTM Zone:	*UTM Zone 18S*

Elevation:	*22 FT*

Order Information:

Order No:	*21060700510*
Date Requested:	*June 7, 2021*
Requested by:	*MSA, P.C.*
Report Type:	*Database Report*

Historicals/Products:

Aerial Photographs	*Historical Aerials (Boundaries)*
City Directory Search	*CD - 2 Street Search*
ERIS Xplorer	*ERIS Xplorer*
Excel Add-On	*Excel Add-On*
Fire Insurance Maps	*US Fire Insurance Maps*
Physical Setting Report (PSR)	*Physical Setting Report (PSR)*
Topographic Map	*Topographic Maps*
Vapor Screening Tool	*Vapor Screening Tool*

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
DOE FUSRAP	Y	1	0	0	0	0	0	0
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	-	0
SEMS	Y	0.5	0	0	0	0	-	0
ODI	Y	0.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	0.5	0	0	0	0	-	0
CERCLIS	Y	0.5	0	0	0	0	-	0
IODI	Y	0.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	0.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	0.5	0	0	0	0	-	0
RCRA LQG	Y	0.25	0	0	0	-	-	0
RCRA SQG	Y	0.25	0	0	0	-	-	0
RCRA VSQG	Y	0.25	0	0	0	-	-	0
RCRA NON GEN	Y	0.25	0	0	0	-	-	0
FED ENG	Y	0.5	0	0	0	0	-	0
FED INST	Y	0.5	0	0	0	0	-	0
LUCIS	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
FEMA UST	Y	0.25	0	0	0	-	-	0
FRP	Y	0.25	0	0	0	-	-	0
HIST GAS STATIONS	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
REFN	Y	0.25	0	0	0	-	-	0
BULK TERMINAL	Y	0.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0
State								
SWF/LF	Y	0.5	0	0	0	0	-	0
LST	Y	0.5	0	0	0	**3**	-	**3**
DELISTED LST	Y	0.5	0	0	0	0	-	0
UST	Y	0.25	0	0	**1**	-	-	**1**
AST	Y	0.25	0	0	0	-	-	0
TANK	Y	0.25	0	0	0	-	-	0
DELISTED TANK	Y	0.25	0	0	0	-	-	0
INST	Y	0.5	0	0	0	0	-	0
VRP	Y	0.5	0	0	0	0	-	0
BROWNFIELDS	Y	0.5	0	0	0	0	-	0
Tribal								
INDIAN LUST	Y	0.5	0	0	0	0	-	0
INDIAN UST	Y	0.25	0	0	0	-	-	0
DELISTED ILST	Y	0.5	0	0	0	0	-	0
DELISTED IUST	Y	0.25	0	0	0	-	-	0
County	***No County standard environmental record sources available for this State.***							
Additional Environmental Records								
Federal								
PFAS NPL	Y	0.5	0	0	0	0	-	0
FINDS/FRS	Y	PO	0	-	-	-	-	0
TRIS	Y	PO	0	-	-	-	-	0
PFAS TRI	Y	0.5	0	0	0	0	-	0
PFAS WATER	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0
TSCA	Y	0.125	0	0	-	-	-	0
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
FUDS	Y	1	0	0	0	0	0	0
FORMER NIKE	Y	1	0	0	0	0	0	0
PIPELINE INCIDENT	Y	PO	0	-	-	-	-	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	0.25	0	0	0	-	-	0
SMCRA	Y	1	0	0	0	0	0	0
MRDS	Y	1	0	0	0	0	0	0
URANIUM	Y	1	0	0	0	0	0	0
ALT FUELS	Y	0.25	0	0	0	-	-	0
SSTS	Y	0.25	0	0	0	-	-	0
PCB	Y	0.5	0	0	0	0	-	0
State								
SPILLS	Y	0.125	0	0	-	-	-	0
PC SPILLS	Y	0.125	0	0	-	-	-	0
DRYCLEANERS	Y	0.25	0	0	0	-	-	0
Tribal	***No Tribal additional environmental record sources available for this State.***							
County	***No County additional environmental record sources available for this State.***							
	Total:		0	0	**1**	**3**	0	**4**

**** PO – Property Only***
**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	UST	Village Market	Routes 17 & 662 Carrollton VA 23314	SSW	0.23 / 1,235.76	1	15
			Facility ID | Active UST | Inactive UST | Facility Active: 5024386 | | | ***Tank No:*** 3, CLS IN GRD, 2, CLS IN GRD, 1, CLS IN GRD				
2	LST	SENTRY FOOD MART #18	22283 Brewers Neck Blvd Hwy 25 Carrollton VA 23314 ***CEDS Fac ID | Case Status:*** 200000087564 | Closed ***Rst Status Ind:*** Closed	WSW	0.38 / 2,024.87	1	19
2	LST	Sentry Food Mart 18	22283 Brewers Neck Blvd Hwy 25 Carrollton VA 23314 ***CEDS Fac ID | Case Status:*** 200000087564 | Closed ***Rst Status Ind:*** Closed	WSW	0.38 / 2,024.87	1	20
2	LST	SENTRY FOOD MART #18	22283 Brewers Neck Blvd Hwy 25 Carrollton VA 23314 ***Rst Status Ind:*** Closed	WSW	0.38 / 2,024.87	1	20

Executive Summary: Summary by Data Source

Standard

State

LST - Leaking Petroleum Storage Tanks

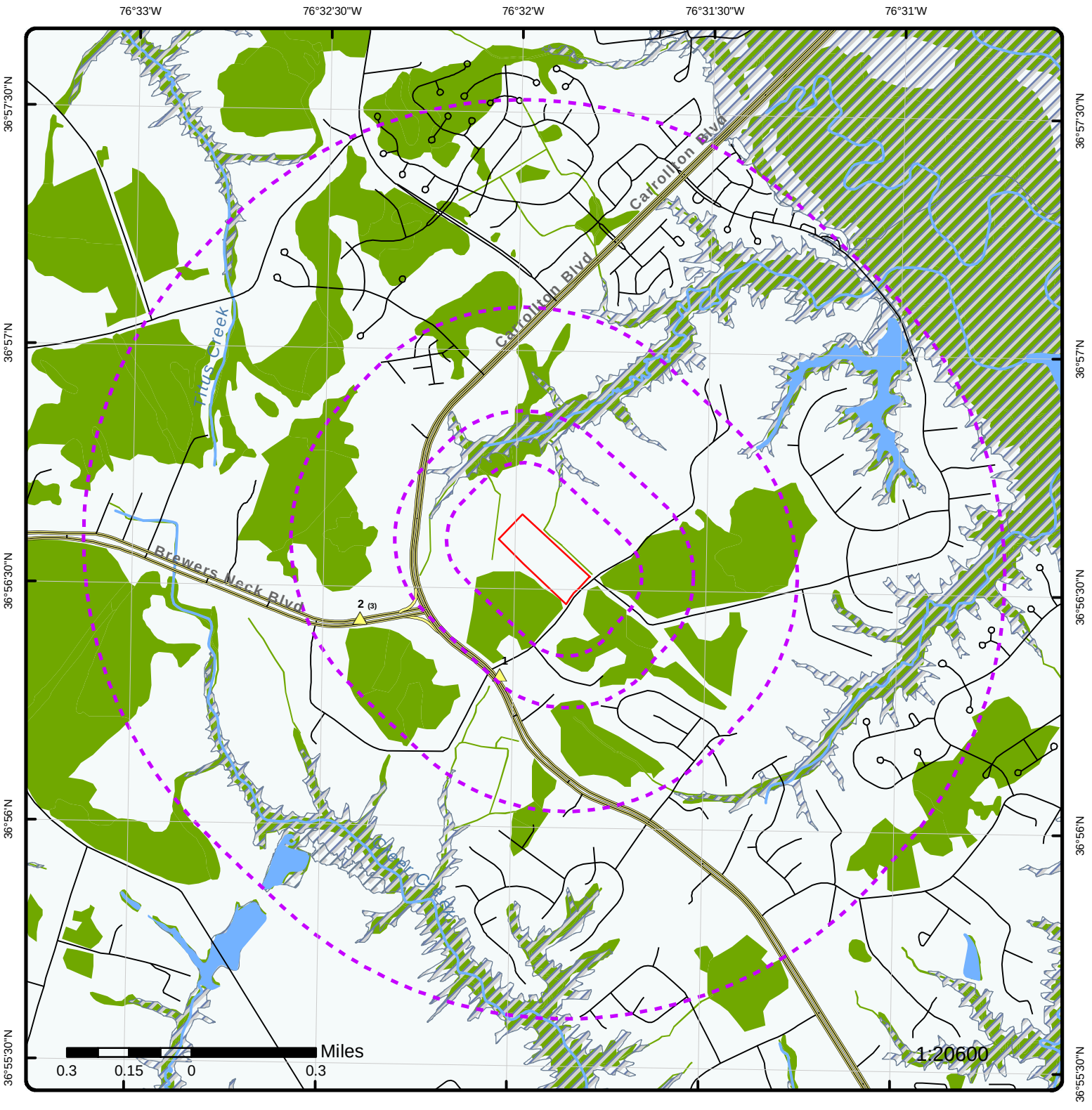
A search of the LST database, dated Mar 22, 2021 has found that there are 3 LST site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Sentry Food Mart 18	22283 Brewers Neck Blvd Hwy 25 Carrollton VA 23314	WSW	0.38 / 2,024.87	2
	CEDS Fac ID | Case Status: *200000087564 | Closed* ***Rst Status Ind***: *Closed*			
SENTRY FOOD MART #18	22283 Brewers Neck Blvd Hwy 25 Carrollton VA 23314	WSW	0.38 / 2,024.87	2
	CEDS Fac ID | Case Status: *200000087564 | Closed* ***Rst Status Ind***: *Closed*			
SENTRY FOOD MART #18	22283 Brewers Neck Blvd Hwy 25 Carrollton VA 23314	WSW	0.38 / 2,024.87	2
	Rst Status Ind: *Closed*			

UST - Underground Storage Tanks

A search of the UST database, dated Mar 22, 2021 has found that there are 1 UST site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Village Market	Routes 17 & 662 Carrollton VA 23314	SSW	0.23 / 1,235.76	1
	Facility ID | Active UST | Inactive UST | Facility Active: *5024386 | | |* ***Tank No***: *3, CLS IN GRD, 2, CLS IN GRD, 1, CLS IN GRD*			



Map: 1.0 Mile Radius

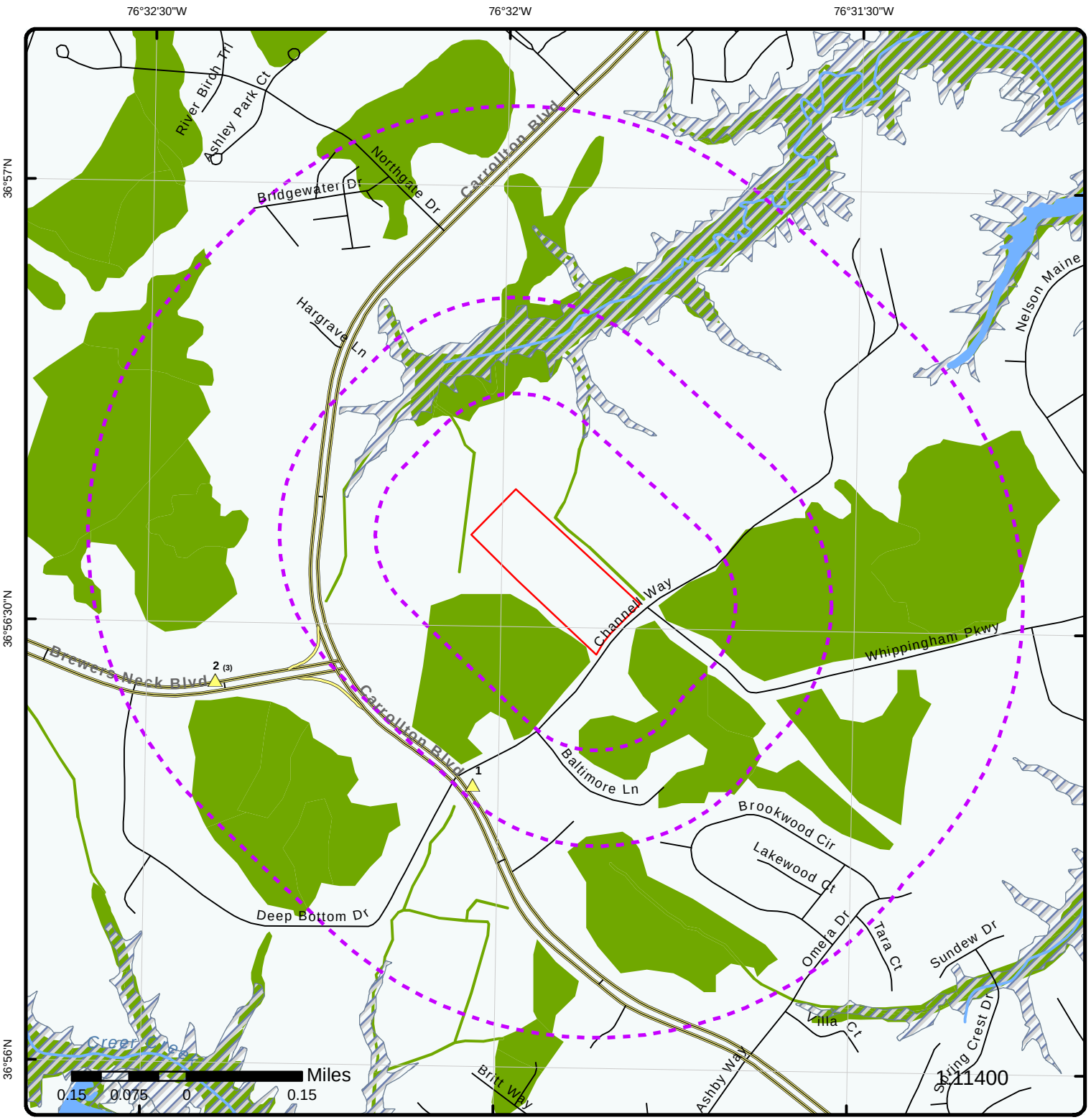
Order Number: 21060700510

Address: 23067 Channell Way, Carrollton, VA

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- County Boundary
- Rails
- Major Highways
- Major Highways Ramps
- Major Roads
- Major Roads Ramps
- Secondary Roads
- Secondary Roads Ramps
- Local Roads and Ramps
- State Boundary
- National Priority List Sites
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- Historic Fill
- FWS Special Designation Areas
- State Brownfield Sites
- State Brownfield Areas
- State Superfund Areas:Dept. of Defense
- State Superfund Areas:NPL
- WQARF Areas
- Federal Lands: Dept. of Defense (owned/administered areas)

Source: © 2016 ESRI

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Map: 0.5 Mile Radius

Order Number: 21060700510

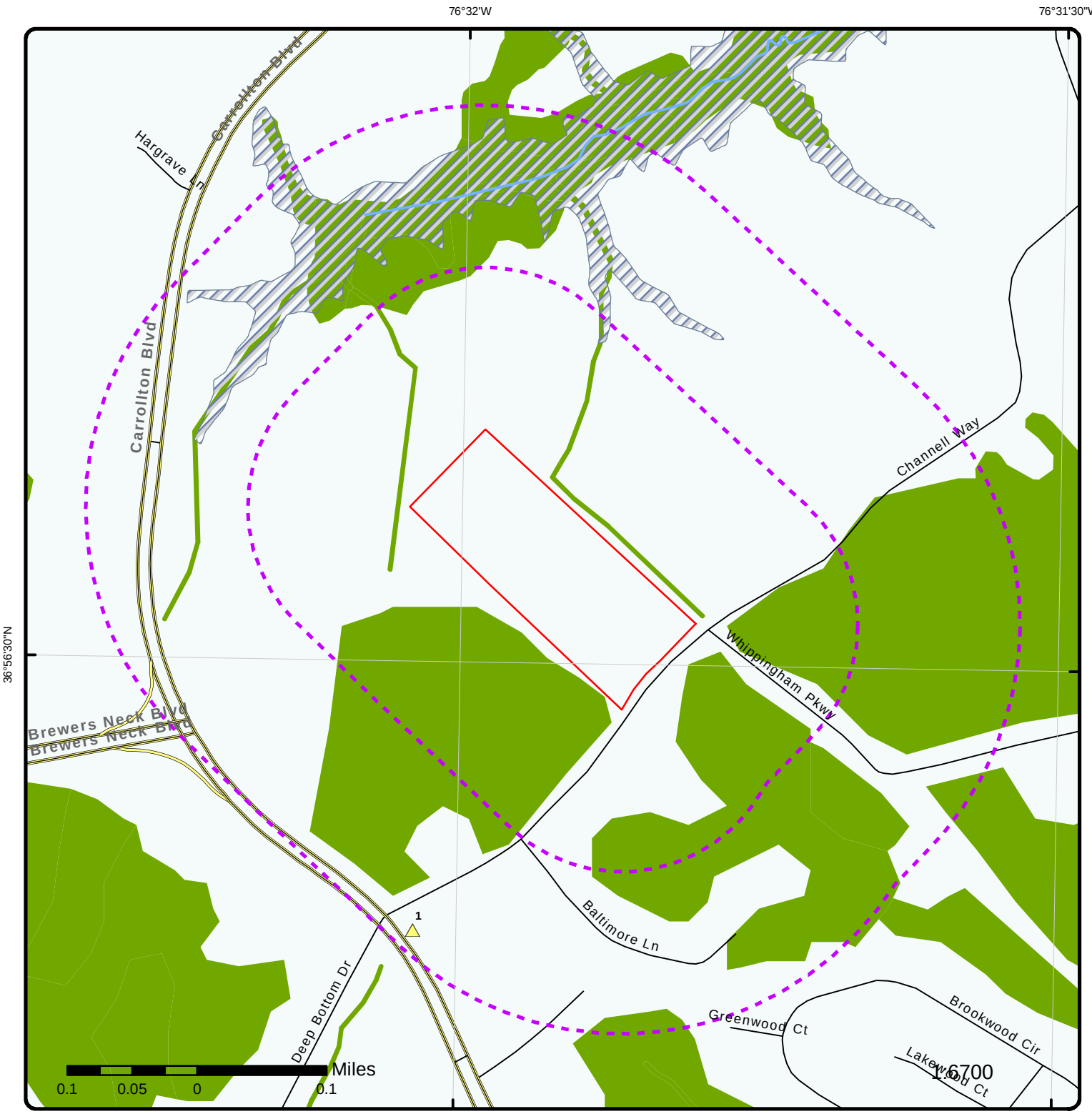
Address: 23067 Channell Way, Carrollton, VA

ERIS

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- County Boundary
- Rails
- Major Highways
- Major Highways Ramps
- Major Roads
- Major Roads Ramps
- Secondary Roads
- Secondary Roads Ramps
- Local Roads and Ramps
- State Boundary
- National Priority List Sites
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- Historic Fill
- FWS Special Designation Areas
- State Brownfield Sites
- State Brownfield Areas
- State Superfund Areas:Dept. of Defense
- State Superfund Areas:NPL
- WQARF Areas
- Federal Lands: Dept. of Defense (owned/administered areas)

Source: © 2016 ESRI

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Map: 0.25 Mile Radius

Order Number: 21060700510

Address: 23067 Channell Way, Carrollton, VA

ERIS

Project Property	Rails	State Boundary	FWS Special Designation Areas
Buffer Outline	Major Highways	National Priority List Sites	State Brownfield Sites
Eris Sites with Higher Elevation	Major Highways Ramps	National Wetland	State Brownfield Areas
Eris Sites with Same Elevation	Major Roads	Indian Reserve Land	State Superfund Areas:Dept. of Defense
Eris Sites with Lower Elevation	Major Roads Ramps	100 Year Flood Zone	State Superfund Areas:NPL
Eris Sites with Unknown Elevation	Secondary Roads	500 Year Flood Zone	WQARF Areas
County Boundary	Secondary Roads Ramps	Historic Fill	Federal Lands: Dept. of Defense (owned/administered areas)
	Local Roads and Ramps		

Source: © 2016 ESRI

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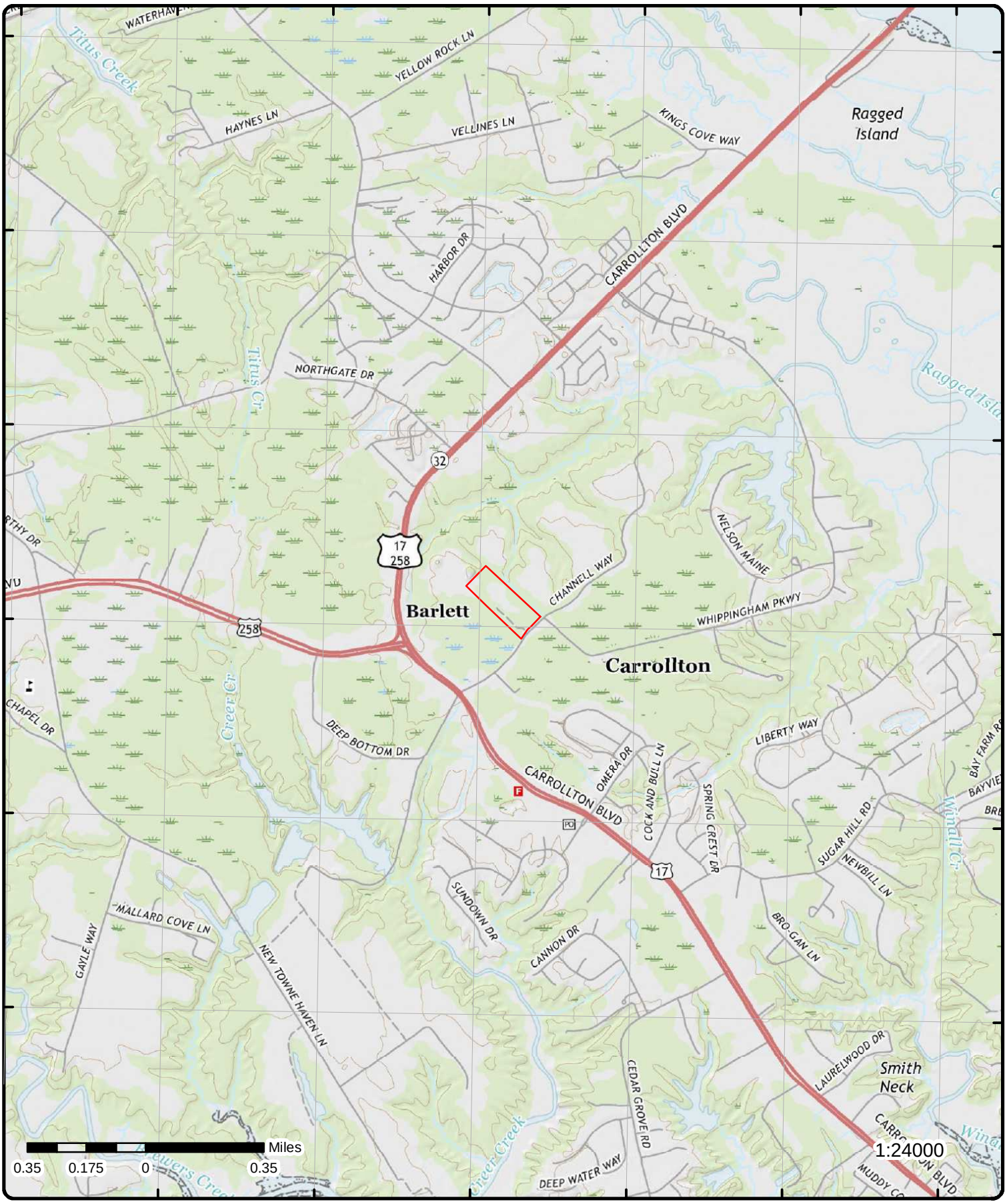
Aerial **Year: 2020**

Order Number: 21060700510

Address: 23067 Channell Way, Carrollton, VA

Source: ESRI World Imagery

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Topographic Map

Year: 2016

Order Number: 21060700510

Address: 23067 Channell Way, VA

Quadrangle(s): Benns Church, VA; Newport News South, VA

Source: USGS Topographic Map

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Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 1	SSW	0.23 / 1,235.76	22.58 / 1	Village Market Routes 17 & 662 Carrollton VA 23314	UST

Facility ID:	5024386	**Name:**	Village Market
CEDS Facility ID:	200000067559	**Address1:**	Routes 17 & 662
Facility Type:	GAS STATION	**Address2:**	
Active UST:		**City:**	Carrollton
Inactive UST:		**Zip:**	23314
Active AST:		**County:**	Isle of Wight County
Inactive AST:		**Region:**	TRO
Facility Active:		**Parent Reg Alt Description:**	
Federally Regulated:		**State:**	VA
Facility Name (HUB):			
Facility Addr 1 (HUB):			
Facility Addr 2 (HUB):			
Facility City (HUB):			
County Name (HUB):			
Facility State (HUB):			
Facility Zip5 (HUB):			
Latitude (HUB):			
Longitude (HUB):			
Facility Location (HUB):			
Source:	Registered petroleum storage tanks		

Tank Information

Tank Owner ID:	31705	**Tank Type:**	UST
Tank No:	3		

Tank Details

Tank Status:	CLS IN GRD	**Capacity:**	500
Install Date:		**Contents:**	DIESEL
Date Closed:	6/1/1983	**Other Contents:**	
Fed Regulated Tank:	Yes		

Tank Materials

Fiberglass:	No
Composite:	No
Double Walled:	No
Impressed Curre:	No
Polyethyl Jacket:	No
Concrete:	No
Excavation Liner:	No
Secondary Contain:	No
Repaired:	No
Unknown:	No
Other:	No
Other Specify:	
Asphalt/Bare Steel:	Yes
CCP/STI-P3:	No
Lined Interior:	No

Pipe Materials

Copper:	No
Cathodically Protected:	No
Double Walled:	No
Impressed Current:	
Polyflexible:	No
Secondary Contain:	No
Fiberglass:	No
Unknown:	No
Other:	No
Other Specify:	
Piping Type:	UNKNOWN
Asphalt/Bare Steel:	No
Galvanized Steel:	Yes
Repaired:	No

Tank/Pipe Release Detection

ATG:	No
Inventory Controls:	No
Groundwater Monitoring:	No
IM Double Walled:	No
IM Secondary Contain:	No
Tank Rd Sir:	No
Leak Deferred:	No
Other:	No
Other Specify:	
Spill Device Installed:	No
Overfill Device Installed:	No
Overfill Type:	
Overfill Other Specify:	
Pipe RD MTD:	No
Pipe RD ATG:	
Pipe RD GW Monitor:	No
Pipe RD Vapor Monitor:	No
Pipe RD IM Double Walled:	No
Pipe RD IM Secondary Contain:	No
Pipe RD ALLD:	No
Pipe RD Tightness Testing:	No
Pipe RD Sir:	No
Pipe RD Leak Deferred:	
Pipe RD Other:	No
Pipe RD Other Specify:	
Manual Gauging:	No
Tightness Testing:	No
Vapor Monitoring:	No

Tank Information

Tank Owner ID:	31705	***Tank Type:***	UST
Tank No:	2		

Tank Details

Tank Status:	CLS IN GRD	***Capacity:***	1000
Install Date:		***Contents:***	GASOLINE
Date Closed:	6/1/1983	***Other Contents:***	
Fed Regulated Tank:	Yes		

Tank Materials

Fiberglass:	No

Composite:	No
Double Walled:	No
Impressed Curre:	No
Polyethyl Jacket:	No
Concrete:	No
Excavation Liner:	No
Secondary Contain:	No
Repaired:	No
Unknown:	No
Other:	No
Other Specify:	
Asphalt/Bare Steel:	Yes
CCP/STI-P3:	No
Lined Interior:	No

Pipe Materials

Copper:	No
Cathodically Protected:	No
Double Walled:	No
Impressed Current:	
Polyflexible:	No
Secondary Contain:	No
Fiberglass:	No
Unknown:	No
Other:	No
Other Specify:	
Piping Type:	UNKNOWN
Asphalt/Bare Steel:	No
Galvanized Steel:	Yes
Repaired:	No

Tank/Pipe Release Detection

ATG:	No
Inventory Controls:	No
Groundwater Monitoring:	No
IM Double Walled:	No
IM Secondary Contain:	No
Tank Rd Sir:	No
Leak Deferred:	No
Other:	No
Other Specify:	
Spill Device Installed:	No
Overfill Device Installed:	No
Overfill Type:	
Overfill Other Specify:	
Pipe RD MTD:	No
Pipe RD ATG:	
Pipe RD GW Monitor:	No
Pipe RD Vapor Monitor:	No
Pipe RD IM Double Walled:	No
Pipe RD IM Secondary Contain:	No
Pipe RD ALLD:	No
Pipe RD Tightness Testing:	No
Pipe RD Sir:	No
Pipe RD Leak Deferred:	
Pipe RD Other:	No
Pipe RD Other Specify:	
Manual Gauging:	No
Tightness Testing:	No
Vapor Monitoring:	No

Tank Information

Tank Owner ID: 31705
Tank No: 1
Tank Type: UST

Tank Details

Tank Status: CLS IN GRD
Install Date:
Date Closed: 6/1/1983
Fed Regulated Tank: Yes
Capacity: 1000
Contents: GASOLINE
Other Contents:

Tank Materials

Fiberglass: No
Composite: No
Double Walled: No
Impressed Curre: No
Polyethyl Jacket: No
Concrete: No
Excavation Liner: No
Secondary Contain: No
Repaired: No
Unknown: No
Other: No
Other Specify:
Asphalt/Bare Steel: Yes
CCP/STI-P3: No
Lined Interior: No

Pipe Materials

Copper: No
Cathodically Protected: No
Double Walled: No
Impressed Current:
Polyflexible: No
Secondary Contain: No
Fiberglass: No
Unknown: No
Other: No
Other Specify:
Piping Type: UNKNOWN
Asphalt/Bare Steel: No
Galvanized Steel: Yes
Repaired: No

Tank/Pipe Release Detection

ATG: No
Inventory Controls: No
Groundwater Monitoring: No
IM Double Walled: No
IM Secondary Contain: No
Tank Rd Sir: No
Leak Deferred: No
Other: No
Other Specify:
Spill Device Installed: No
Overfill Device Installed: No
Overfill Type:
Overfill Other Specify:
Pipe RD MTD: No
Pipe RD ATG:
Pipe RD GW Monitor: No
Pipe RD Vapor Monitor: No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Pipe RD IM Double Walled:	No
Pipe RD IM Secondary Contain:	No
Pipe RD ALLD:	No
Pipe RD Tightness Testing:	No
Pipe RD Sir:	No
Pipe RD Leak Deferred:	
Pipe RD Other:	No
Pipe RD Other Specify:	
Manual Gauging:	No
Tightness Testing:	No
Vapor Monitoring:	No

Owner

Tank Owner ID:	31705	**Owner Address 1:**	14443 Carrollton Blvd
No of Active AST:	0	**Owner Address 2:**	
No of Active UST:	0	**Owner City:**	Isle Of Wight
No of Inactive AST:	0	**Owner State:**	VA
No of Inactive UST:	3	**Owner Zip 5:**	23314
Federal Regulated:	Yes	**Owner Zip 4:**	
Region:	TRO	**Owner Type:**	COMMERCIAL
Owner Name:	Sung K. Ward	**Facility Active?:**	No
Name:	Village Market		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	1 of 3	WSW	0.38 / 2,024.87	22.47 / 1	SENTRY FOOD MART #18 22283 Brewers Neck Blvd Hwy 25 Carrollton VA 23314	LST

PC No:	19900652	**Heat Oil Category:**	
CEDS Fac ID:	200000087564	**Exmpt1 UST2:**	No
Case Status:	Closed	**Exmpt2 Ht Oil UST2:**	No
Case Closed Date:	5/22/1990	**Small Ht Oil AST2:**	No
Release Reported:	11/29/1989	**Regulated AST3:**	No
Fed Regulated UST?:	Yes	**Unregulated AST3:**	No
Program:	RP Lead	**Other Tank Type?:**	No
Reg Petrol UST1:	No	**Oth Tank Type Desc:**	
Excluded UST1:	No	**Unknown Tank Type?:**	No
Deferred UST1:	No	**County:**	Isle of Wight County
Partial Defer UST1:	No	**Region:**	TRO
Source:	Virginia DEQ- Petroleum Database- Petroleum Releases; VADEQ Petroleum Storage Tank Program - Petroleum Release Sites		

Data Hub - Petroleum Releases Geodatabase Details

RST Fac ID:	200000087564	**Des First Name:**	Joseph
Rst Poll Complaint No:	19900652	**Des Last Name:**	Fly
Rst Status Ind:	Closed	**Changed by:**	atwebster
Rst Release Reported:	1989/11/29 00:00:00+00	**Changed Date:**	2006/03/24 00:00:00+00
Rst Case Closed:	1990/05/22 00:00:00+00	**Inserted By:**	
Rst Suspect Confirm Ind:	Confirmed	**Inserted Date:**	1970/01/01 00:00:00+00
Rst Rec Code:	TRO	**Verified by:**	
Rst Priority:	2	**Verify Date:**	1970/01/01 00:00:00+00
Rst Fed Reg Tank:	Yes	**Latitude:**	36.9408028471345
Rst Response:		**Longitude:**	-76.5401212688159
Reference Point:			
Rst Name:	SENTRY FOOD MART #18		
Fac Location:			
Fac Address:	22283 Brewers Neck Blvd Hwy 25		
Fac City:	Carrollton		
Fac State:	VA		
Fac Zip5:	23314		
Fic Description:	Isle of Wight County		
X:	-8520407.3249		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Y:		4430858.6765				

2	2 of 3	WSW	0.38 / 2,024.87	22.47 / 1	Sentry Food Mart 18 22283 Brewers Neck Blvd Hwy 25 Carrollton VA 23314	LST

PC No:	20055158	Heat Oil Category:	
CEDS Fac ID:	200000087564	Exmpt1 UST2:	No
Case Status:	Closed	Exmpt2 Ht Oil UST2:	No
Case Closed Date:	3/23/2006	Small Ht Oil AST2:	No
Release Reported:	4/13/2005	Regulated AST3:	No
Fed Regulated UST?:	Yes	Unregulated AST3:	No
Program:	RP Lead	Other Tank Type?:	No
Reg Petrol UST1:	Yes	Oth Tank Type Desc:	
Excluded UST1:	No	Unknown Tank Type?:	No
Deferred UST1:	No	County:	Isle of Wight County
Partial Defer UST1:	No	Region:	TRO

Source: Virginia DEQ- Petroleum Database- Petroleum Releases; VADEQ Petroleum Storage Tank Program - Petroleum Release Sites

Data Hub - Petroleum Releases Geodatabase Details

RST Fac ID:	200000087564	Des First Name:	Leann
Rst Poll Complaint No:	20055158	Des Last Name:	Moran
Rst Status Ind:	Closed	Changed by:	lkmoran
Rst Release Reported:	2005/04/13 00:00:00+00	Changed Date:	2006/03/23 00:00:00+00
Rst Case Closed:	2006/03/23 00:00:00+00	Inserted By:	
Rst Suspect Confirm Ind:	Confirmed	Inserted Date:	1970/01/01 00:00:00+00
Rst Rec Code:	TRO	Verified by:	
Rst Priority:	3	Verify Date:	1970/01/01 00:00:00+00
Rst Fed Reg Tank:	Yes	Latitude:	36.9406056050047
Rst Response:		Longitude:	-76.5400696920439
Reference Point:			
Rst Name:	Sentry Food Mart 18		
Fac Location:			
Fac Address:	22283 Brewers Neck Blvd Hwy 25		
Fac City:	Carrollton		
Fac State:	VA		
Fac Zip5:	23314		
Fic Description:	Isle of Wight County		
X:	-8520401.5834		
Y:	4430831.2049		

2	3 of 3	WSW	0.38 / 2,024.87	22.47 / 1	SENTRY FOOD MART #18 22283 Brewers Neck Blvd Hwy 25 Carrollton VA 23314	LST

PC No:	19962335	Heat Oil Category:	
CEDS Fac ID:		Exmpt1 UST2:	
Case Status:		Exmpt2 Ht Oil UST2:	
Case Closed Date:		Small Ht Oil AST2:	
Release Reported:		Regulated AST3:	
Fed Regulated UST?:		Unregulated AST3:	
Program:		Other Tank Type?:	
Reg Petrol UST1:		Oth Tank Type Desc:	
Excluded UST1:		Unknown Tank Type?:	
Deferred UST1:		County:	Isle of Wight County
Partial Defer UST1:		Region:	

Source: VADEQ Petroleum Storage Tank Program - Petroleum Release Sites

Data Hub - Petroleum Releases Geodatabase Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

RST Fac ID:	200000087564	**Des First Name:**	Leann
Rst Poll Complaint No:	19962335	**Des Last Name:**	Moran
Rst Status Ind:	Closed	**Changed by:**	seburkett
Rst Release Reported:	1996/02/01 00:00:00+00	**Changed Date:**	2007/02/12 00:00:00+00
Rst Case Closed:	1999/03/02 00:00:00+00	**Inserted By:**	
Rst Suspect Confirm Ind:	Suspected	**Inserted Date:**	1970/01/01 00:00:00+00
Rst Rec Code:	TRO	**Verified by:**	
Rst Priority:		**Verify Date:**	1970/01/01 00:00:00+00
Rst Fed Reg Tank:	Yes	**Latitude:**	36.9407246521028
Rst Response:		**Longitude:**	-76.5400223328621
Reference Point:			
Rst Name:	SENTRY FOOD MART #18		
Fac Location:			
Fac Address:	22283 Brewers Neck Blvd Hwy 25		
Fac City:	Carrollton		
Fac State:	VA		
Fac Zip5:	23314		
Fic Description:	Isle of Wight County		
X:	-8520396.3114		
Y:	4430847.7856		

Unplottable Summary

Total: 0 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID

No unplottable records were found that may be relevant for the search criteria.

Unplottable Report

No unplottable records were found that may be relevant for the search criteria.

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

Formerly Utilized Sites Remedial Action Program: DOE FUSRAP

The U.S. Department of Energy (DOE) established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

Government Publication Date: Mar 4, 2017

National Priority List: NPL

National Priorities List (Superfund)-NPL: EPA's (United States Environmental Protection Agency) list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action.

Government Publication Date: Apr 27, 2021

National Priority List - Proposed: PROPOSED NPL

Includes sites proposed (by the EPA, the state, or concerned citizens) for addition to the NPL due to contamination by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment.

Government Publication Date: Apr 27, 2021

Deleted NPL: DELETED NPL

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Government Publication Date: Apr 27, 2021

SEMS List 8R Active Site Inventory: SEMS

The Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted.

Government Publication Date: Mar 23, 2021

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

SEMS List 8R Archive Sites: SEMS ARCHIVE

The Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.

Government Publication Date: Mar 23, 2021

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Apr 5, 2021

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites listed as treatment, storage and/or disposal facilities of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Government Publication Date: Apr 5, 2021

RCRA Generator List: RCRA LQG

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Apr 5, 2021

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Apr 5, 2021

RCRA Very Small Quantity Generators List: RCRA VSQG

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Apr 5, 2021

RCRA Non-Generators: RCRA NON GEN

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Apr 5, 2021

Federal Engineering Controls-ECs: FED ENG

Engineering controls (ECs) encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Feb 23, 2021

Federal Institutional Controls- ICs: FED INST

Institutional controls are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's (United States Environmental Protection Agency) expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site.

Government Publication Date: Feb 23, 2021

Land Use Control Information System: LUCIS

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

Government Publication Date: Sep 1, 2006

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Nov 9, 2020

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jan 6, 2021

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan: FRP

List of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: Dec 2, 2020

Historical Gas Stations: HIST GAS STATIONS

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries: REFN

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

Government Publication Date: Jul 10, 2020

Petroleum Product and Crude Oil Rail Terminals: BULK TERMINAL

List of petroleum product and crude oil rail terminals made available by the U.S. Energy Information Administration (EIA). Includes operable bulk petroleum product terminals located in the 50 States and the District of Columbia with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil that were active between 2017 and 2018. Petroleum product terminals comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings. Survey locations adjusted using public data.

Government Publication Date: Apr 28, 2020

LIEN on Property: SEMS LIEN

The EPA Superfund Enterprise Management System (SEMS) provides LIEN information on properties under the EPA Superfund Program.

Government Publication Date: Mar 23, 2021

Superfund Decision Documents: SUPERFUND ROD

This database contains a listing of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD), along with other associated memos and files. This information is maintained and made available by the US EPA (Environmental Protection Agency).

Government Publication Date: Feb 23, 2021

State

Solid Waste Landfills: SWF/LF

The solid waste program in the Department of Environmental Quality (DEQ) is designed to encourage the reuse and recycling of solid waste and to regulate the disposal and treatment of solid waste, including regulated medical waste, and to ensure that hazardous waste is properly managed. Standards are designed to protect human health and the environment and driven by regulatory requirements.

Government Publication Date: Feb 16, 2021

Leaking Petroleum Storage Tanks: LST

When a release occurs from an aboveground or underground storage tank, the owner and/or operator of the tank is required to report the release to the Department of Environmental Quality (DEQ). This database contains a listing of releases from tanks both above and underground.

Government Publication Date: Mar 22, 2021

Delisted Leaking Petroleum Storage Tanks: DELISTED LST

Facilities which have been removed from the list of leaking petroleum storage tanks made available by the Virginia Department of Environmental Quality (DEQ). Facilities may be removed from the lists of leaking petroleum tanks when it is determined that the release reported is not an actual release, or the released substance is not petroleum - these sites may still have endured non-petroleum hazardous substance releases.

Government Publication Date: Mar 22, 2021

Underground Storage Tanks: UST

A listing of registered underground storage tanks, made available by the Virginia Department of Environmental Quality (DEQ). Includes records from Tank Registration files as well as records from the Virginia DEQ Open Data Portal.

Government Publication Date: Mar 22, 2021

Aboveground Storage Tanks: AST

Virginia Department of Environmental Quality (DEQ). Includes records from Tank Registration files as well as records from the Virginia DEQ Open Data Portal.

Government Publication Date: Mar 22, 2021

Storage Tank Facilities: TANK

A list of tank facilities where tank details are not available. This list is made available by the Virginia Department of Environmental Quality (DEQ). Includes records from Tank Registration files as well as records from the Virginia DEQ Open Data Portal.

Government Publication Date: Mar 22, 2021

Delisted Tanks: DELISTED TANK

Facilities which have been removed from the list of registered aboveground and/or underground storage tanks made available by the Virginia Department of Environmental Quality (DEQ). Facilities may be removed from the lists of registered tanks when it is determined that the tank does not require registration, for example, due to capacity or contents.

Government Publication Date: Mar 22, 2021

Institutional Controls: INST

Institutional controls are legal or contractual restrictions on property use that remain effective after remediation is completed and are used to satisfy remediation levels. This list is maintained by the Department of Environmental Quality (DEQ).

Government Publication Date: Mar 8, 2021

Voluntary Remediation Program: VRP

The Voluntary Remediation Program is to encourage hazardous substance cleanups that might not otherwise take place. The program is a streamlined mechanism for site owners or operators to voluntarily address contamination at sites with concurrence from the Department of Environmental Quality (DEQ).

Government Publication Date: Mar 8, 2021

Brownfields Site Specific Assessments: BROWNFIELDS

Brownfields are idled, underutilized, or abandoned industrial or commercial properties where expansion or redevelopment is complicated by real or perceived environmental contamination. Examples include factories, railyards, landfills, dry cleaners, etc. This list is maintained by the Department of Environmental Quality (DEQ).

Government Publication Date: Jan 8, 2021

Tribal

Leaking Underground Storage Tanks (LUSTs) on Tribal/Indian Lands: INDIAN LUST

Leaking Underground Storage Tanks (LUSTs) on Tribal/Indian Lands in EPA Region 3, which includes Virginia. There are no LUST records in Virginia at this time.

Government Publication Date: Apr 12, 2019

Underground Storage Tanks (USTs) on Indian Lands: INDIAN UST

Listing of Underground Storage Tanks (USTs) on Tribal/Indian Lands in EPA Region 3, which includes Virginia. There are no UST records in Virginia at this time.

Government Publication Date: May 4, 2018

Delisted Tribal Leaking Storage Tanks: DELISTED ILST

Leaking Underground Storage Tank facilities which have been removed from the Regional Tribal LUST lists made available by the EPA.

Government Publication Date: Apr 14, 2020

Delisted Tribal Underground Storage Tanks: DELISTED IUST

Underground Storage Tank facilities which have been removed from the Regional Tribal UST lists made available by the EPA.

Government Publication Date: Apr 14, 2020

County

No County standard environmental record sources available for this State.

Additional Environmental Record Sources

Federal

PFOA/PFOS Contaminated Sites: PFAS NPL

List of sites where PFOA or PFOS contaminants have been found in drinking water or soil. Made available by the Federal Environmental Protection Agency (EPA).

Government Publication Date: Mar 1, 2021

Facility Registry Service/Facility Index: FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the Environmental Protection Agency (US EPA).

Government Publication Date: Nov 2, 2020

Toxics Release Inventory (TRI) Program: TRIS

The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U. S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment.

Government Publication Date: Feb 19, 2020

Perfluorinated Alkyl Substances (PFAS) Releases: PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a Per- or polyfluorinated alkyl substance (PFAS) included in the Environmental Protection Agency (EPA)'s consolidated PFAS Master List of PFAS Substances. The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment.

Government Publication Date: Feb 19, 2020

Perfluorinated Alkyl Substances (PFAS) Water Quality: PFAS WATER

The Water Quality Portal (WQP) is a cooperative service sponsored by the United States Geological Survey (USGS), the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC). This listing includes records from the Water Quality Portal where the characteristic (environmental measurement) is in the Environmental Protection Agency (EPA)'s consolidated PFAS Master List of PFAS Substances.

Government Publication Date: Jul 20, 2020

Hazardous Materials Information Reporting System: HMIRS

US DOT - Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) Incidents Reports Database taken from Hazmat Intelligence Portal, U.S. Department of Transportation.

Government Publication Date: Sep 1, 2020

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department") provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Oct 5, 2020

Toxic Substances Control Act: TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI).

Government Publication Date: Apr 11, 2019

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP

Early in the cleanup process, the Environmental Protection Agency (EPA) conducts a search to find the potentially responsible parties (PRPs). EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site.

Government Publication Date: Apr 27, 2021

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS

The Integrated Compliance Information System (ICIS) is a system that provides information for the Federal Enforcement and Compliance (FE&C) and the National Pollutant Discharge Elimination System (NPDES) programs. The FE&C component supports the Environmental Protection Agency's (EPA) Civil Enforcement and Compliance program activities. These activities include Compliance Assistance, Compliance Monitoring and Enforcement. The NPDES program supports tracking of NPDES permits, limits, discharge monitoring data and other program reports.

Government Publication Date: Mar 24, 2021

Drycleaner Facilities: FED DRYCLEANERS

A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) online search. The Environmental Protection Agency (EPA) tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: Feb 17, 2021

Delisted Drycleaner Facilities: DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: Feb 17, 2021

Formerly Used Defense Sites: FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DoD) is responsible for an environmental restoration. This list is published by the U.S. Army Corps of Engineers.

Government Publication Date: Jan 28, 2020

Former Military Nike Missile Sites: FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 1, 1984

PHMSA Pipeline Safety Flagged Incidents: PIPELINE INCIDENT

A list of flagged pipeline incidents made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types.

Government Publication Date: Jul 7, 2020

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) contains mine identification numbers issued by the Department of Labor Mine Safety and Health Administration (MSHA) for mines active or opened since 1971. Note that addresses may or may not correspond with the physical location of the mine itself.

Government Publication Date: Nov 3, 2020

Surface Mining Control and Reclamation Act Sites: SMCRA

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by the Office of Surface Mining Reclamation and Enforcement (OSMRE) to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of Abandoned Mine Land (AML) impacts, as well as information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Government Publication Date: Dec 18, 2020

Mineral Resource Data System: MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2006

Uranium Mill Tailings Radiation Control Act Sites: URANIUM

The Legacy Management Office of the Department of Energy (DOE) manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The L.M. Office manages this database of sites registered under the Uranium Mill Tailings Control Act (UMTRCA).

Government Publication Date: Mar 4, 2017

Alternative Fueling Stations: ALT FUELS

List of alternative fueling stations made available by the US Department of Energy's Office of Energy Efficiency & Renewable Energy. Includes Biodiesel stations, Ethanol (E85) stations, Liquefied Petroleum Gas (Propane) stations, Ethanol (E85) stations, Natural Gas stations, Hydrogen stations, and Electric Vehicle Supply Equipment (EVSE). The National Renewable Energy Laboratory (NREL) obtains information about new stations from trade media, Clean Cities coordinators, a Submit New Station form on the Station Locator website, and through collaborating with infrastructure equipment and fuel providers, original equipment manufacturers (OEMs), and industry groups.

Government Publication Date: Apr 27, 2021

Registered Pesticide Establishments: SSTS

List of active EPA-registered foreign and domestic pesticide-producing and device-producing establishments based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that facilities producing pesticides, active ingredients, or devices be registered. The list of establishments is made available by the EPA.

Government Publication Date: Apr 13, 2021

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Nov 19, 2020

State

Spills: SPILLS

The Department of Environmental Quality (DEQ) Pollution Response Program (PREP), provides for responses to air, water and waste pollution incidents in order to protect human health and the environment. PREP staff often work to assist local emergency responders, other state agencies, federal agencies, and responsible parties, as may be needed, to manage pollution incidents. Oil spills, fish kills, and hazardous materials spills are examples of incidents that may involve the DEQ's PREP Program.

Government Publication Date: Apr 16, 2021

Pollution Complaint: PC SPILLS

The database contains a listing of Pollution Complaints from 1986 to 1994 that include petroleum releases and other releases on state land and waters. This list is maintained by the Department of Environmental Quality (DEQ).

Government Publication Date: 1986-1994

Dry Cleaning Facilities: DRYCLEANERS

A listing of registered drycleaners maintained by the Department of Environmental Quality.

Government Publication Date: Apr 23, 2021

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental record sources available for this State.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

PSR
PHYSICAL SETTING REPORT

Property Information

Order Number:		21060700510p
Date Completed:		June 7, 2021
Project Number:		18075E
Project Property:		The Crossings - Tower Parcel 23067 Channell Way Carrollton VA 23314
Coordinates:		
	Latitude:	36.94273517
	Longitude:	-76.53201114
	UTM Northing:	4089616.12885 Meters
	UTM Easting:	363580.963267 Meters
	UTM Zone:	UTM Zone 18S
	Elevation:	21.74 ft
	Slope Direction:	NW

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Geologic Information....7
Soil Information....9
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Detail Report....21
Radon Information....45
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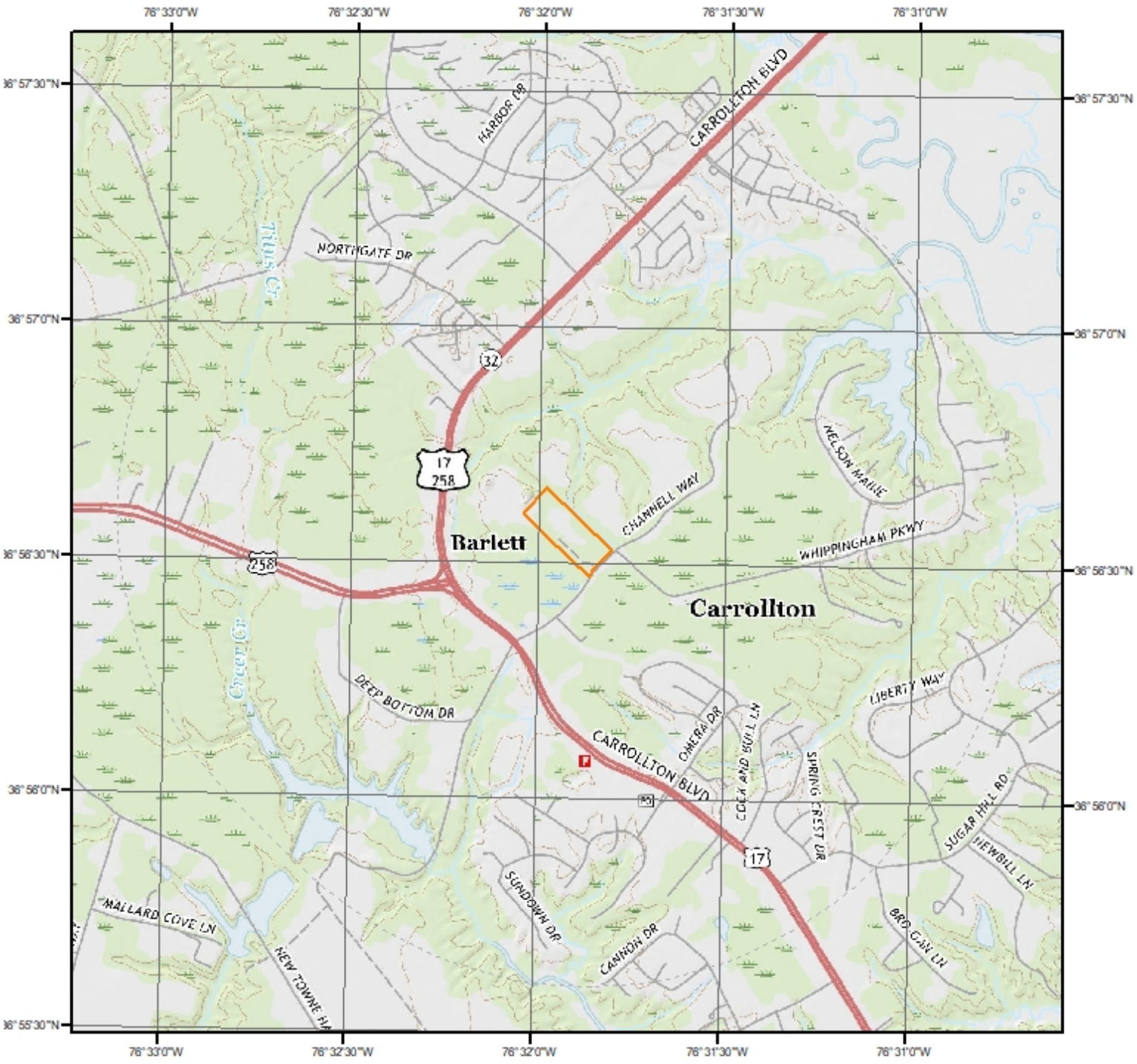
The ERIS ***Physical Setting Report - PSR*** provides comprehensive information about the physical setting around a site and includes a complete overview of topography and surface topology, in addition to hydrologic, geologic and soil characteristics. The location and detailed attributes of oil and gas wells, water wells, public water systems and radon are also included for review.

The compilation of both physical characteristics of a site and additional attribute data is useful in assessing the impact of migration of contaminants and subsequent impact on soils and groundwater.

Disclaimer

This Report does not provide a full environmental evaluation for the site or adjacent properties. Please see the terms and disclaimer at the end of the Report for greater detail.

Topographic Information



Current USGS Topo (2016)

Miles
0 0.2 0.4 0.8

N

Quadrangle(s): Benns Church, VA

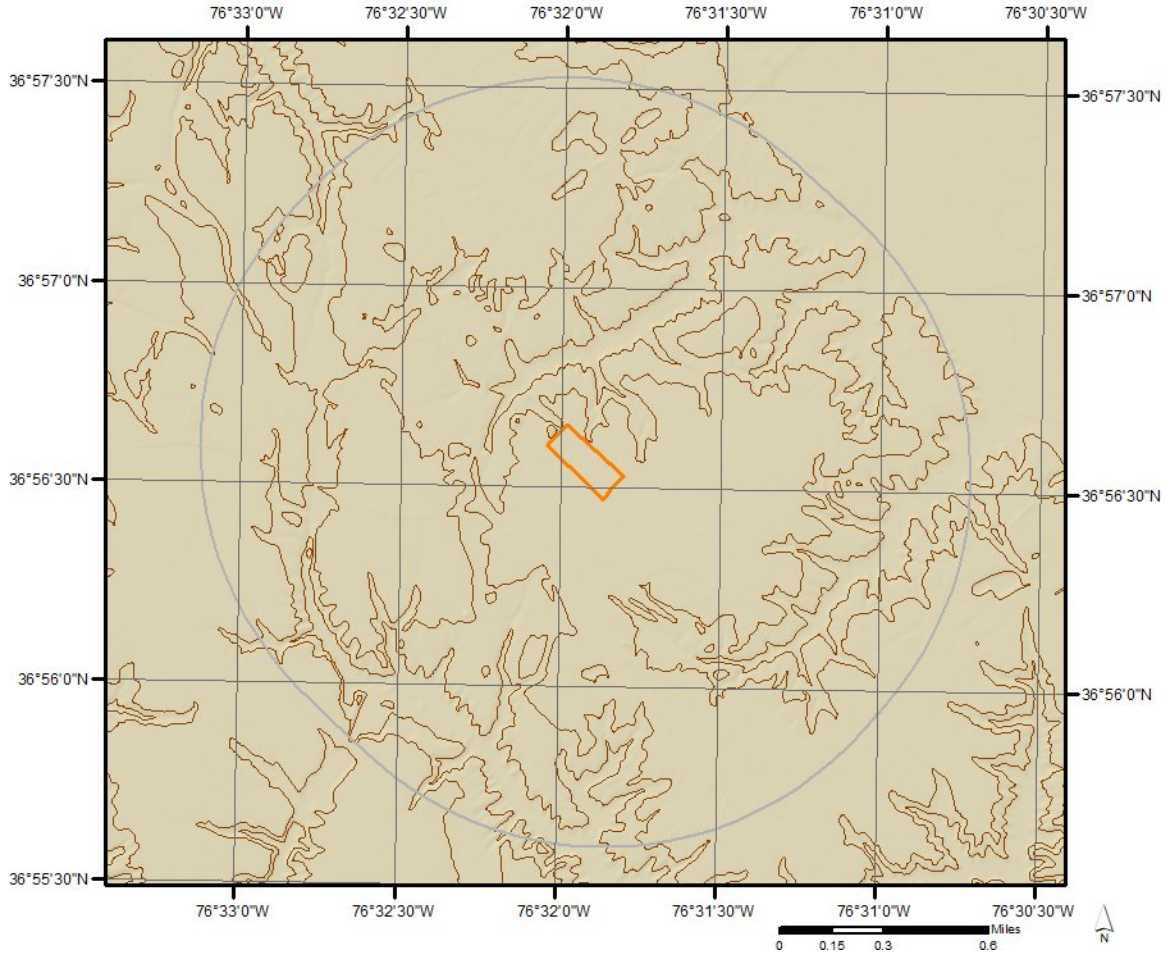
Source: USGS 7.5 Minute Topographic Map

Topographic Information

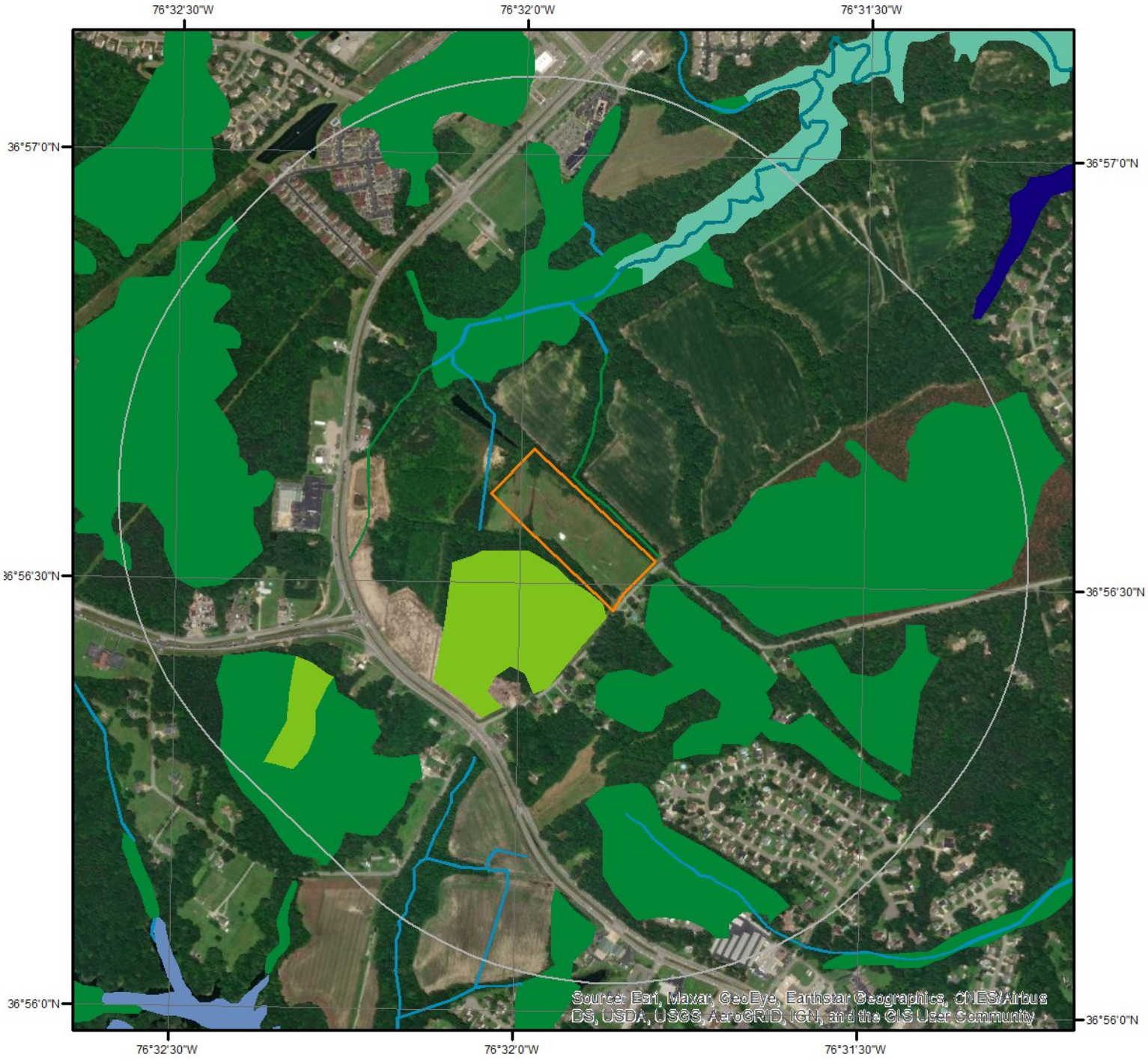
The previous topographic map(s) are created by seamlessly merging and cutting current USGS topographic data. Below are shaded relief map(s), derived from USGS elevation data to show surrounding topography in further detail.

Topographic information at project property:

Elevation:	21.74 ft
Slope Direction:	NW



Hydrologic Information



Wetland

Miles
0 0.075 0.15 0.3

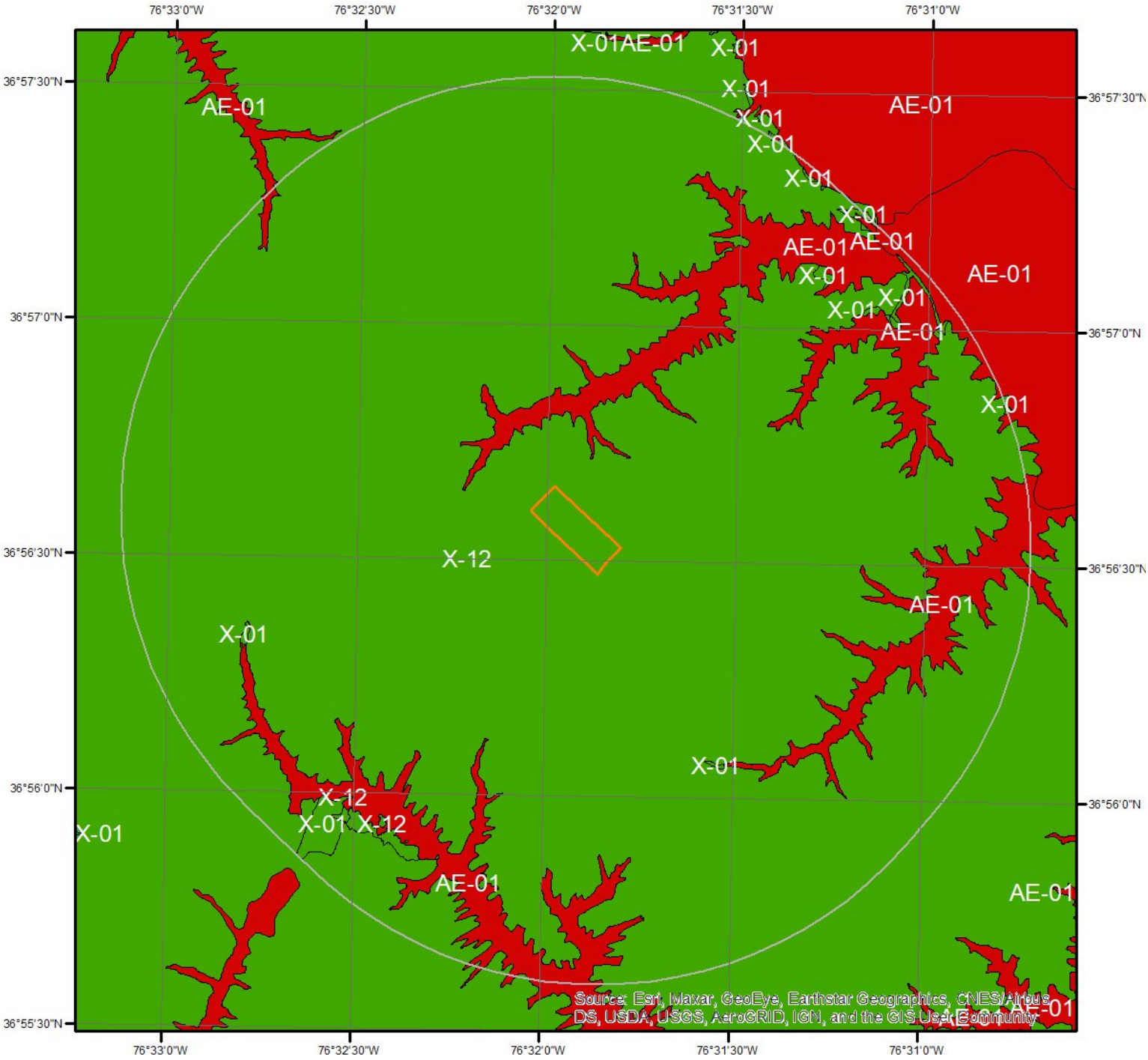
N

This map shows wetland existence using data from US Fish & Wildlife.
Data coverage is shown to the right. Gray indicates no data available in the area.

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

ERIS

Hydrologic Information



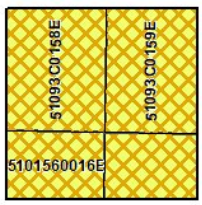
Flood Hazard Zones

This map shows FEMA flood hazard zones. FIRM panels are shown to the right, and blank indicates no data is available.

Miles
0 0.2 0.4

N

A	AO	X
A99	V	OPEN WATER
AE	VE	NOT POPULATED
AH	D	AREA NOT INCLUDED



ERIS

Hydrologic Information

The Wetland Type map shows wetland existence overlaid on an aerial imagery. The Flood Hazard Zones map shows FEMA flood hazard zones overlaid on an aerial imagery. Relevant FIRM panels and detailed zone information is provided below.

Available FIRM Panels in area:	5101560016E(effective:2015-08-03) 5101560017E(effective:2015-08-03) 51093C0159E(effective:2015-12-02) 51093C0166E(effective:2015-12-02) 51093C0167E(effective:2015-12-02) 51093C0158E(effective:2015-12-02)

Flood Zone AE-01

Zone:	AE
Zone subtype:	

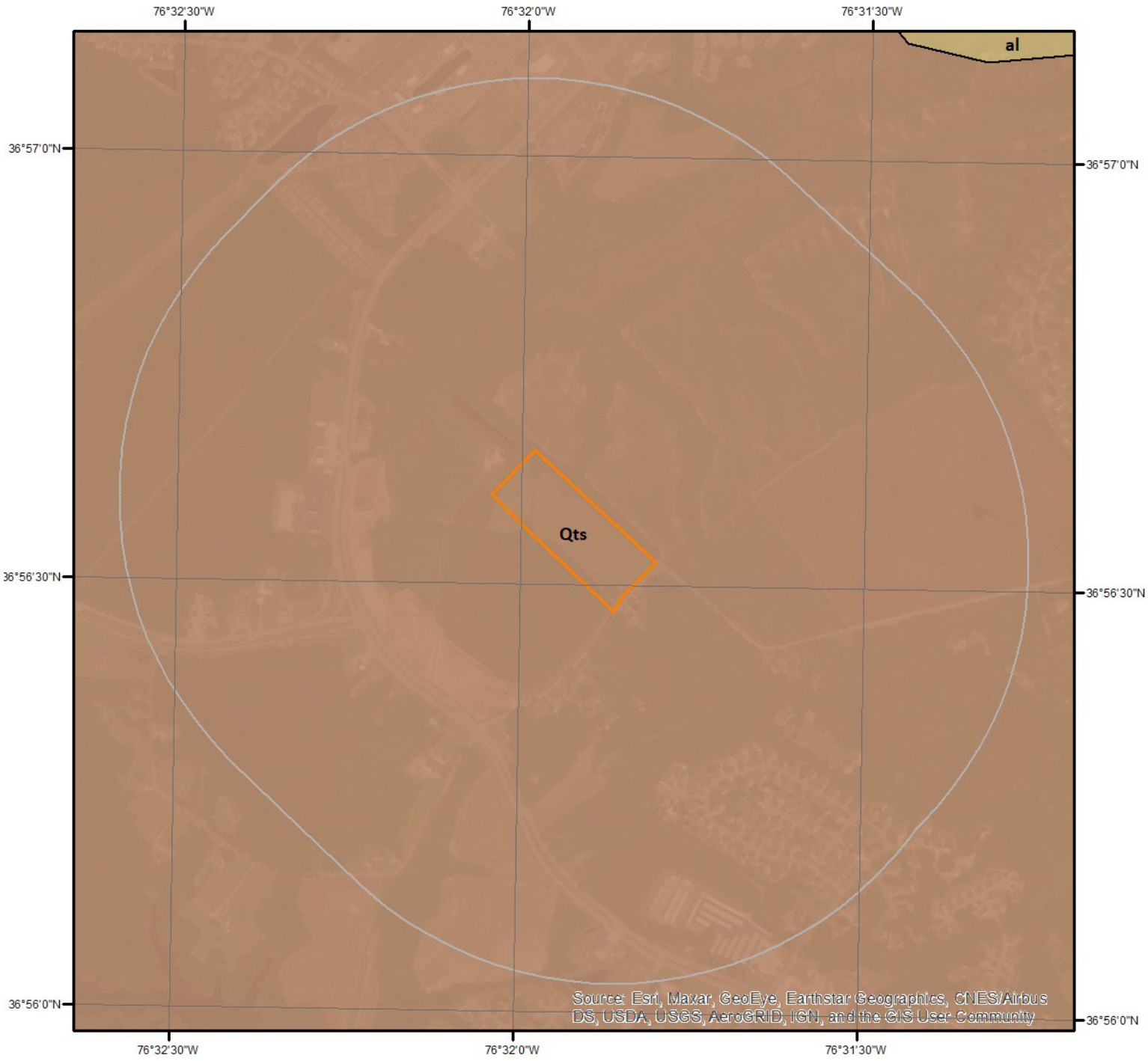
Flood Zone X-01

Zone:	X
Zone subtype:	0.2 PCT ANNUAL CHANCE FLOOD HAZARD

Flood Zone X-12

Zone:	X
Zone subtype:	AREA OF MINIMAL FLOOD HAZARD

Geologic Information



Miles
0 0.2 0.4
N

Geologic Units

This maps shows geologic units in the area. Please refer to the report for detailed descriptions.

ERIS

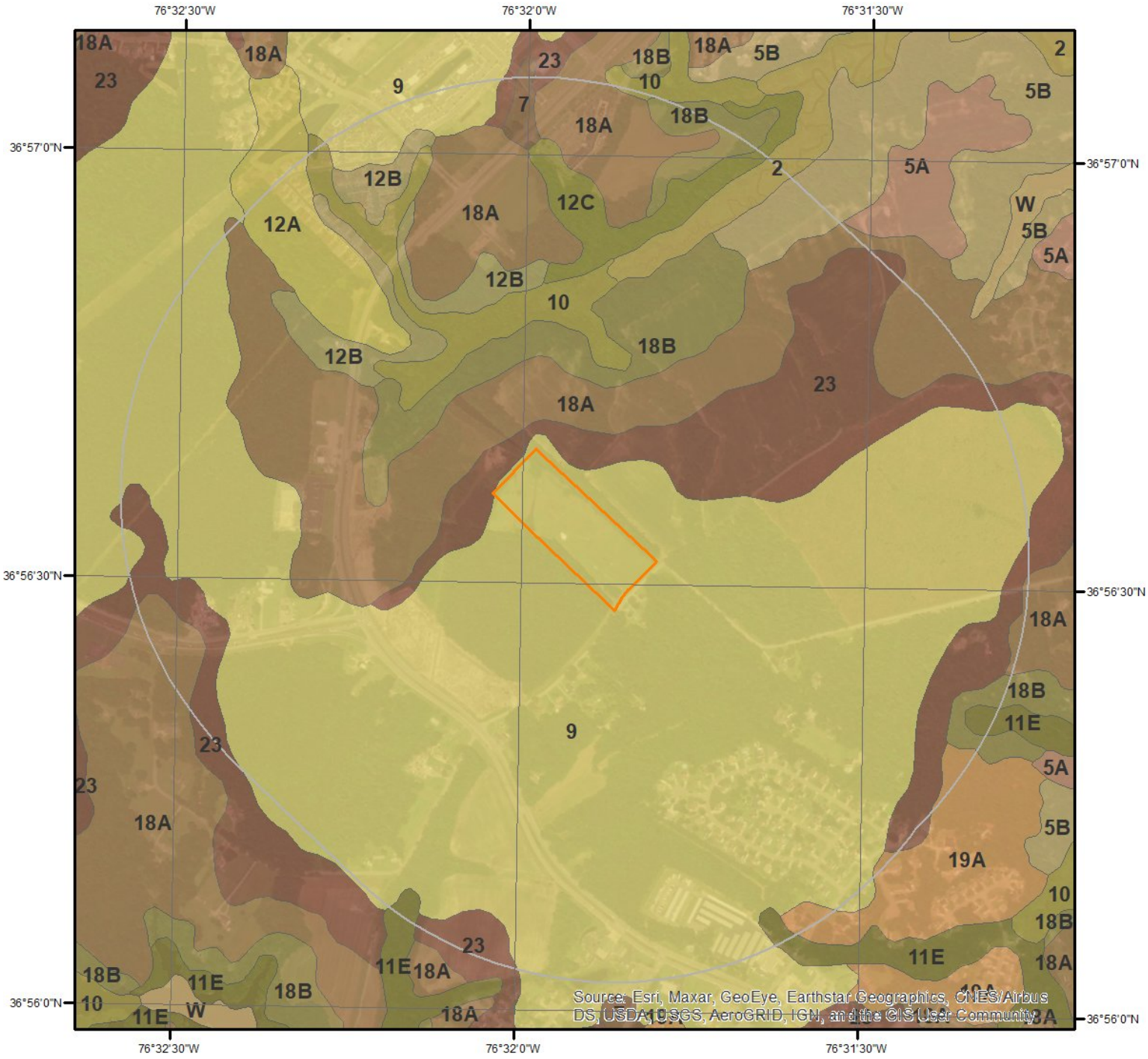
Geologic Information

The previous page shows USGS geology information. Detailed information about each unit is provided below.

Geologic Unit Qts

Unit Name:	Tabb Formation; Sedgefield Member
Unit Age:	Quaternary
Primary Rock Type:	sand
Secondary Rock Type:	
Unit Description:	Tabb Formation; Sedgefield Member - Pebbly to bouldery, clayey sand and shelly sand, at altitudes to 30 ft. (top of unit).

Soil Information



SSURGO Soils

0 0.2 0.4 Miles

N

This maps shows SSURGO soil units around the target property. Please refer to the report for detailed soil descriptions.

ERIS

Soil Information

The previous page shows a soil map using SSURGO data from USDA Natural Resources Conservation Service. Detailed information about each unit is provided below.

Map Unit 10 (1.03%)

Map Unit Name:	Nawney loam
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	8cm
Drainage Class - Dominant:	Very poorly drained
Hydrologic Group - Dominant:	B/D - These soils have moderately low runoff potential when drained and high runoff potential when undrained.

Major components are printed below

Nawney(90%)

horizon H1(0cm to 25cm)	Loam
horizon H2(25cm to 112cm)	Loam
horizon H3(112cm to 152cm)	Fine sandy loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 10 - Nawney loam

Component: Nawney (90%)
The Nawney component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains, coastal plains. The parent material consists of loamy fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria.

Map Unit 11E (1.48%)

Map Unit Name:	Nevarc and Remlik soils, 15 to 35 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	69cm
Drainage Class - Dominant:	Moderately well drained
Hydrologic Group - Dominant:	D - Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

Major components are printed below

Nevarc(45%)

horizon H1(0cm to 10cm)	Silt loam
horizon H2(10cm to 145cm)	Clay loam
horizon H3(145cm to 162cm)	Sandy clay loam

Remlik(35%)

horizon H1(0cm to 71cm)	Loamy sand
horizon H2(71cm to 132cm)	Sandy clay loam
horizon H3(132cm to 152cm)	Loamy sand

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 11E - Nevarc and Remlik soils, 15 to 35 percent slopes

Soil Information

Component: Nevarc (45%)
The Nevarc component makes up 45 percent of the map unit. Slopes are 15 to 35 percent. This component is on marine terraces on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 27 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria.

Component: Remlik (35%)
The Remlik component makes up 35 percent of the map unit. Slopes are 15 to 35 percent. This component is on marine terraces on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 60 inches during January, February, March, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria.

Component: Nawney (5%)
Generated brief soil descriptions are created for major soil components. The Nawney soil is a minor component.

Map Unit 12A (0.88%)

Map Unit Name:	Peawick silt loam, 0 to 2 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	69cm
Drainage Class - Dominant:	Moderately well drained
Hydrologic Group - Dominant:	D - Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

Major components are printed below

Peawick(85%)

horizon H1(0cm to 10cm)	Silt loam
horizon H2(10cm to 178cm)	Clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 12A - Peawick silt loam, 0 to 2 percent slopes

Component: Peawick (85%)
The Peawick component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on marine terraces on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is high. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 27 inches during January, February, March, November, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

Component: Chickahominy (5%)
Generated brief soil descriptions are created for major soil components. The Chickahominy soil is a minor component.

Component: Kinston (5%)
Generated brief soil descriptions are created for major soil components. The Kinston soil is a minor component.

Map Unit 12B (0.71%)

Map Unit Name:	Peawick silt loam, 2 to 6 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	69cm
Drainage Class - Dominant:	Moderately well drained

Soil Information

Hydrologic Group - Dominant:	D - Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

Major components are printed below

Peawick(85%)

horizon H1(0cm to 10cm)	Silt loam
horizon H2(10cm to 178cm)	Clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 12B - Peawick silt loam, 2 to 6 percent slopes

Component: Peawick (85%)
The Peawick component makes up 85 percent of the map unit. Slopes are 2 to 6 percent. This component is on marine terraces on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is high. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 27 inches during January, February, March, November, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Kinston (5%)
Generated brief soil descriptions are created for major soil components. The Kinston soil is a minor component.

Component: Nawney (3%)
Generated brief soil descriptions are created for major soil components. The Nawney soil is a minor component.

Map Unit 12C (0.54%)

Map Unit Name:	Peawick silt loam, 6 to 10 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	69cm
Drainage Class - Dominant:	Moderately well drained
Hydrologic Group - Dominant:	D - Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

Major components are printed below

Peawick(85%)

horizon H1(0cm to 10cm)	Silt loam
horizon H2(10cm to 178cm)	Clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 12C - Peawick silt loam, 6 to 10 percent slopes

Component: Peawick (85%)
The Peawick component makes up 85 percent of the map unit. Slopes are 6 to 10 percent. This component is on marine terraces on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is high. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 27 inches during January, February, March, November, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

Component: Nawney (2%)
Generated brief soil descriptions are created for major soil components. The Nawney soil is a minor component.

Map Unit 18A (9.9%)

Soil Information

Map Unit Name:	Slagle fine sandy loam, 0 to 2 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	69cm
Drainage Class - Dominant:	Moderately well drained
Hydrologic Group - Dominant:	C - Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted.

Major components are printed below

Slagle(85%)

horizon H1(0cm to 33cm)	Fine sandy loam
horizon H2(33cm to 64cm)	Sandy clay loam
horizon H3(64cm to 152cm)	Sandy clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 18A - Slagle fine sandy loam, 0 to 2 percent slopes

Component: Slagle (85%)
The Slagle component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on marine terraces on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 27 inches during January, February, March, April, November, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

Component: Kinston (7%)
Generated brief soil descriptions are created for major soil components. The Kinston soil is a minor component.

Component: Nawney (2%)
Generated brief soil descriptions are created for major soil components. The Nawney soil is a minor component.

Map Unit 18B (1.79%)

Map Unit Name:	Slagle fine sandy loam, 2 to 6 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	76cm
Drainage Class - Dominant:	Moderately well drained
Hydrologic Group - Dominant:	C - Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted.

Major components are printed below

Slagle(83%)

horizon Ap(0cm to 20cm)	Fine sandy loam
horizon Bt(20cm to 130cm)	Sandy clay loam
horizon C(130cm to 178cm)	Sandy loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 18B - Slagle fine sandy loam, 2 to 6 percent slopes

Component: Slagle (83%)
The Slagle component makes up 83 percent of the map unit. Slopes are 2 to 6 percent. This component is on marine terraces on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during January, February, March, April, November, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric

criteria.

Component: Myatt (3%)
Generated brief soil descriptions are created for major soil components. The Myatt soil is a minor component.

Map Unit 19A (1.12%)

Map Unit Name:	Uchee loamy sand, 0 to 2 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	130cm
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	C - Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted.

Major components are printed below

Uchee(85%)

horizon H1(0cm to 71cm)	Loamy sand
horizon H2(71cm to 132cm)	Sandy clay loam
horizon H3(132cm to 152cm)	Sandy loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 19A - Uchee loamy sand, 0 to 2 percent slopes

Component: Uchee (85%)
The Uchee component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on marine terraces on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 51 inches during January, February, March, April. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2s. This soil does not meet hydric criteria.

Component: Kinston (7%)
Generated brief soil descriptions are created for major soil components. The Kinston soil is a minor component.

Component: Nawney (3%)
Generated brief soil descriptions are created for major soil components. The Nawney soil is a minor component.

Map Unit 2 (1.43%)

Map Unit Name:	Bohicket silty clay loam
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	0cm
Drainage Class - Dominant:	Very poorly drained
Hydrologic Group - Dominant:	D - Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

Major components are printed below

Bohicket(85%)

horizon H1(0cm to 28cm)	Silty clay loam
horizon H2(28cm to 152cm)	Silty clay

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 2 - Bohicket silty clay loam

Soil Information

Component: Bohicket (85%)
The Bohicket component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on salt marshes on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is high. This soil is very frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 15 percent. Nonirrigated land capability classification is 8w. This soil meets hydric criteria. The soil has a moderately saline horizon within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 15 within 30 inches of the soil surface.

Component: Rappahannock (7%)
Generated brief soil descriptions are created for major soil components. The Rappahannock soil is a minor component.

Map Unit 23 (10.46%)

Map Unit Name:	Yemassee fine sandy loam
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	38cm
Drainage Class - Dominant:	Somewhat poorly drained
Hydrologic Group - Dominant:	B/D - These soils have moderately low runoff potential when drained and high runoff potential when undrained.

Major components are printed below

Yemassee(85%)

horizon H1(0cm to 25cm)	Fine sandy loam
horizon H2(25cm to 132cm)	Sandy clay loam
horizon H3(132cm to 152cm)	Fine sandy loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 23 - Yemassee fine sandy loam

Component: Yemassee (85%)
The Yemassee component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on marine terraces on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 15 inches during January, February, March, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

Component: Myatt (7%)
Generated brief soil descriptions are created for major soil components. The Myatt soil is a minor component.

Map Unit 5B (2.14%)

Map Unit Name:	Emporia fine sandy loam, 2 to 6 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	114cm
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	B - Soils in this group have moderately low runoff potential when thoroughly wet. Water transmission through the soil is unimpeded.

Major components are printed below

Emporia(85%)

horizon H1(0cm to 38cm)	Fine sandy loam
horizon H2(38cm to 84cm)	Sandy clay loam
horizon H3(84cm to 152cm)	Sandy loam

Soil Information

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 5B - Emporia fine sandy loam, 2 to 6 percent slopes

Component: Emporia (85%)
The Emporia component makes up 85 percent of the map unit. Slopes are 2 to 6 percent. This component is on marine terraces on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January, February, March, April, November, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Nawney (2%)
Generated brief soil descriptions are created for major soil components. The Nawney soil is a minor component.

Map Unit 7 (0.09%)

Map Unit Name:	Kinston loam
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	15cm
Drainage Class - Dominant:	Poorly drained
Hydrologic Group - Dominant:	B/D - These soils have moderately low runoff potential when drained and high runoff potential when undrained.

Major components are printed below

Kinston(85%)

horizon H1(0cm to 23cm)	Loam
horizon H2(23cm to 152cm)	Sandy clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 7 - Kinston loam

Component: Kinston (85%)
The Kinston component makes up 85 percent of the map unit. Slopes are 0 to 4 percent. This component is on flood plains, coastal plains. The parent material consists of loamy fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during January, February, March, April, May, June, November, December. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 6w. This soil meets hydric criteria.

Map Unit 9 (68.42%)

Map Unit Name:	Myatt fine sandy loam
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	15cm
Drainage Class - Dominant:	Poorly drained
Hydrologic Group - Dominant:	B/D - These soils have moderately low runoff potential when drained and high runoff potential when undrained.

Major components are printed below

Myatt(90%)

horizon H1(0cm to 38cm)	Fine sandy loam
horizon H2(38cm to 130cm)	Sandy clay loam
horizon H3(130cm to 152cm)	Sandy clay loam

Soil Information

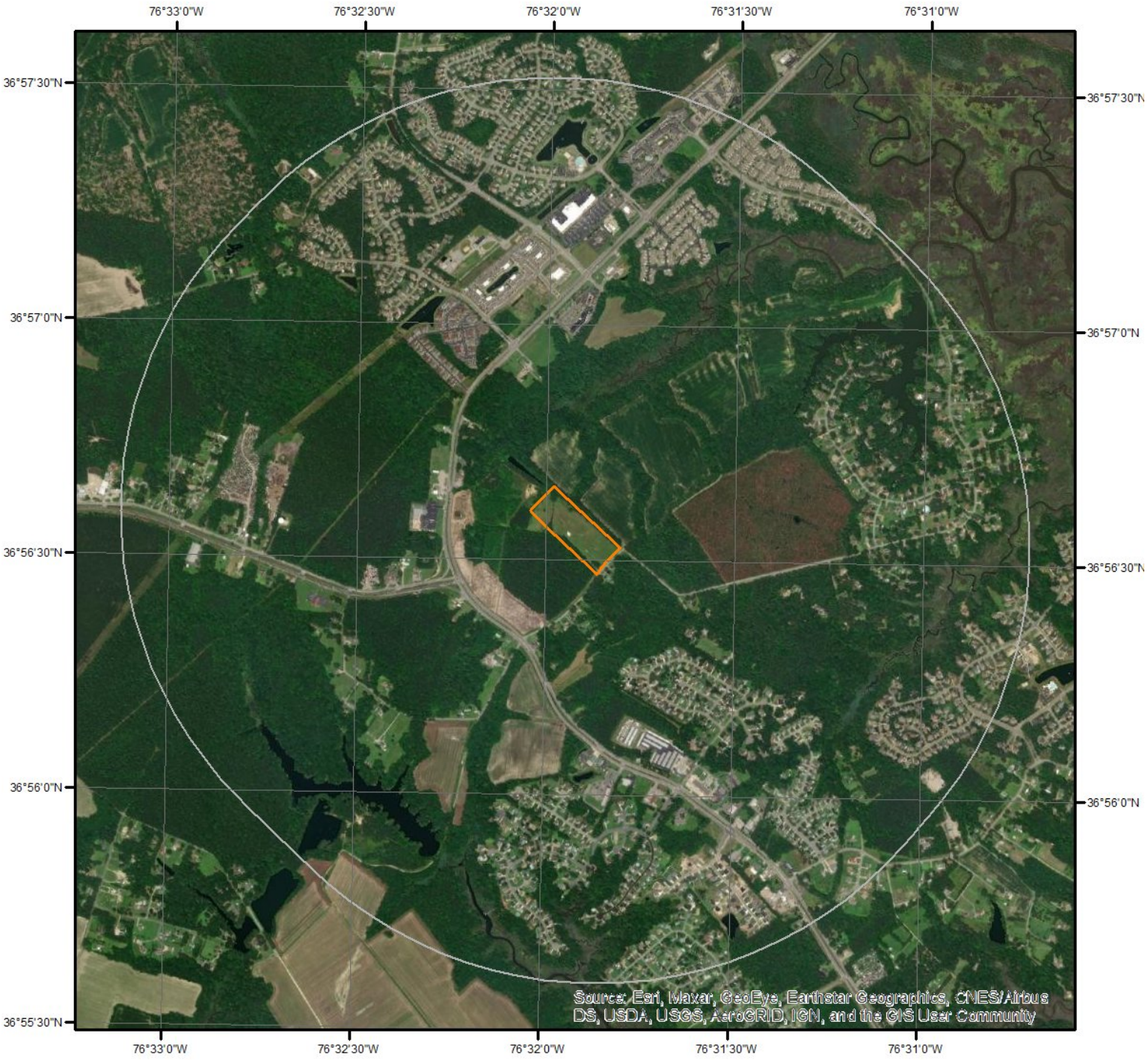
Component Description:

Minor map unit components are excluded from this report.

Map Unit: 9 - Myatt fine sandy loam

Component: Myatt (90%)
The Myatt component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on marine terraces on coastal plains. The parent material consists of loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during January, February, March, April, November, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria.

Wells and Additional Sources



Wells & Additional Sources

N

0 0.15 0.3 0.6 Miles

- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- OGW Sites with Higher Elevation
- OGW Sites with Same Elevation
- OGW Sites with Lower Elevation
- OGW Sites with Unknown Elevation

ERIS

Wells and Additional Sources Summary

Federal Sources

Public Water Systems Violations and Enforcement Data

Map Key	ID	Distance (ft)	Direction
	No records found		

Safe Drinking Water Information System (SDWIS)

Map Key	ID	Distance (ft)	Direction
	No records found		

USGS National Water Information System

Map Key	Monitoring Loc Identifier	Distance (ft)	Direction
0	USGS-365555076314201	3415.554384467965	SSE
0	USGS-365559076314802	2939.702189597821	S
0	USGS-365559076314801	2872.412043912395	S
0	USGS-365559076314901	2865.106821117148	S
0	USGS-365559076314902	2906.479101622232	S
0	USGS-365559076314903	2867.301591284463	S
0	USGS-365727076313901	5157.821353489867	NNE
0	USGS-365657076313001	2987.716942281356	NE

State Sources

Oil and Gas Wells

Map Key	ID	Distance (ft)	Direction
	No records found		

Public Water Supply Wells

Map Key	PWS ID	Distance (ft)	Direction
0	3093153	1915.434818512679	SSE
0	3093049	2929.186176313743	S
0	3093049	2917.270975280326	S
0	3093049	2889.115359141987	SSE
0	3093395	1429.5637322515	W
0	3093160	3449.097170327411	SSE
0	3093340	3278.170576732294	NW
0	3093120	4015.582589058741	E

Water Wells

Map Key	Well ID	Distance (ft)	Direction
0	455062	3473.61137961209	NNW
0	20249	4555.35464666813	W
0	38005	293.989902209454	E

Wells and Additional Sources Summary

0	669	2910.277093636653	S
0	16776	2164.232032376514	S
0	34440	2127.190748052515	WSW
0	34450	3913.796599426602	E
0	20253	3485.768381219653	WSW
0	51966	2779.935420546623	NE
0	455516	3766.111949164726	NNW
0	41527	861.734372050359	W
0	455070	3473.61137961209	NNW
0	33423	1429.5637322515	W
0	19261	3278.170576732294	NW
0	48497	1090.133500520574	WNW
0	48498	129.388706102501	S
0	5594	2889.115359141987	SSE
0	23786	4070.872727838047	W
0	709	2912.369998518534	S
0	670	2950.43513245539	S
0	646	4015.582589058741	E
0	295502	4760.09757701508	ESE
0	16789	3477.234826724936	SSE
0	646	4015.582589058741	E
0	48507	2910.277093636653	S
0	34439	1412.987000309309	SSW
0	36930	1915.434818512679	SSE
0	45003	2909.468259683244	S
0	20251	2083.04228562487	WSW
0	455066	3473.61137961209	NNW
0	30300	2917.270975280326	S
0	55557	2779.935420546623	NE
0	30958	1486.631119925156	SSW
0	44995	4927.067915498664	SSE
0	5567	2929.186176313743	S
0	668	3444.78279263714	SSE
0	712	2915.966311146473	S
0	455074	3178.23637187377	NNW
0	453688	3435.680709730352	NNW
0	30965	1421.939045050087	WSW

USGS National Water Information System

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	NNE	0.98	5,157.82	19.85	FED USGS

Organiz Identifier:	USGS-VA	Formation Type:	
Organiz Name:	USGS Virginia Water Science Center	Aquifer Name:	
Well Depth:	550	Aquifer Type:	
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:	556	Provider Name:	NWIS
W Hole Depth Unit:	ft	County:	ISLE OF WIGHT
Construction Date:		Latitude:	36.9576483
Source Map Scale:	24000	Longitude:	-76.5271734
Monitoring Loc Name:	58D 9		
Monitoring Loc Identifier:	USGS-365727076313901		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	02080206		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	10		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	15.00		
Vertical Measure Unit:	feet		
Vertical Accuracy:	5		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	NGVD29		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	NE	0.57	2,987.72	17.40	FED USGS

Organiz Identifier:	USGS-VA	Formation Type:	Pliocene Series
Organiz Name:	USGS Virginia Water Science Center	Aquifer Name:	
Well Depth:		Aquifer Type:	Confined single aquifer
Well Depth Unit:		Country Code:	US
Well Hole Depth:	55	Provider Name:	NWIS
W Hole Depth Unit:	ft	County:	ISLE OF WIGHT

Construction Date:		Latitude:	36.949315
Source Map Scale:		Longitude:	-76.5246733
Monitoring Loc Name:	58D 23		
Monitoring Loc Identifier:	USGS-365657076313001		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	02080206		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	1		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Interpolated from MAP.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	10		
Vertical Measure Unit:	feet		
Vertical Accuracy:	1		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	NGVD29		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	S	0.54	2,865.11	22.19	FED USGS

Organiz Identifier:	USGS-VA	Formation Type:	Upper Cretaceous Series
Organiz Name:	USGS Virginia Water Science Center	Aquifer Name:	
Well Depth:	485	Aquifer Type:	Confined single aquifer
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:	485	Provider Name:	NWIS
W Hole Depth Unit:	ft	County:	ISLE OF WIGHT
Construction Date:	19881211	Latitude:	36.9333317
Source Map Scale:	24000	Longitude:	-76.5299871
Monitoring Loc Name:	58D 29		
Monitoring Loc Identifier:	USGS-365559076314901		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	02080206		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	.01		
Horizontal Accuracy Unit:	seconds		

Horizontal Collection Mthd:	Mapping grade GPS unit (handheld accuracy range 12 to 40 ft)
Horiz Coord Refer System:	NAD83
Vertical Measure:	21
Vertical Measure Unit:	feet
Vertical Accuracy:	1
Vertical Accuracy Unit:	feet
Vertical Collection Mthd:	Interpolated from topographic map.
Vert Coord Refer System:	NGVD29

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	S	0.54	2,867.30	22.19	FED USGS

Organiz Identifier:	USGS-VA	Formation Type:	Upper Cretaceous Series
Organiz Name:	USGS Virginia Water Science Center	Aquifer Name:	
Well Depth:	430	Aquifer Type:	Confined single aquifer
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	ISLE OF WIGHT
Construction Date:	20050226	Latitude:	36.933329
Source Map Scale:	24000	Longitude:	-76.5299482
Monitoring Loc Name:	58D 31		
Monitoring Loc Identifier:	USGS-365559076314903		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	02080206		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	.01		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Mapping grade GPS unit (handheld accuracy range 12 to 40 ft)		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	21		
Vertical Measure Unit:	feet		
Vertical Accuracy:	1		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	NGVD29		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	S	0.55	2,906.48	22.50	FED USGS

Wells and Additional Sources Detail Report

Organiz Identifier:	USGS-VA	Formation Type:	Patapsco Formation
Organiz Name:	USGS Virginia Water Science Center	Aquifer Name:	
Well Depth:	830	Aquifer Type:	Confined single aquifer
Well Depth Unit:	ft	Country Code:	US
Well Hole Depth:		Provider Name:	NWIS
W Hole Depth Unit:		County:	ISLE OF WIGHT
Construction Date:	19940322	Latitude:	36.9332317
Source Map Scale:	24000	Longitude:	-76.5298288
Monitoring Loc Name:	58D 30		
Monitoring Loc Identifier:	USGS-365559076314902		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	02080206		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	.01		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Mapping grade GPS unit (handheld accuracy range 12 to 40 ft)		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	21		
Vertical Measure Unit:	feet		
Vertical Accuracy:	1		
Vertical Accuracy Unit:	feet		
Vertical Collection Mthd:	Interpolated from topographic map.		
Vert Coord Refer System:	NGVD29		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	S	0.54	2,872.41	23.11	FED USGS

Organiz Identifier:	USGS-VA	Formation Type:	
Organiz Name:	USGS Virginia Water Science Center	Aquifer Name:	
Well Depth:		Aquifer Type:	
Well Depth Unit:		Country Code:	US
Well Hole Depth:	520	Provider Name:	NWIS
W Hole Depth Unit:	ft	County:	ISLE OF WIGHT
Construction Date:	20090429	Latitude:	36.933329
Source Map Scale:	24000	Longitude:	-76.5297982
Monitoring Loc Name:	58D 32		
Monitoring Loc Identifier:	USGS-365559076314801		
Monitoring Loc Type:	Well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	02080206		

Drainage Area:	
Drainage Area Unit:	
Contrib Drainage Area:	
Contrib Drainage Area Unit:	
Horizontal Accuracy:	.01
Horizontal Accuracy Unit:	seconds
Horizontal Collection Mthd:	Mapping grade GPS unit (handheld accuracy range 12 to 40 ft)
Horiz Coord Refer System:	NAD83
Vertical Measure:	21
Vertical Measure Unit:	feet
Vertical Accuracy:	1
Vertical Accuracy Unit:	feet
Vertical Collection Mthd:	Interpolated from topographic map.
Vert Coord Refer System:	NGVD29

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	S	0.56	2,939.70	22.14	FED USGS

Organiz Identifier:	USGS-VA	Formation Type:	
Organiz Name:	USGS Virginia Water Science Center	Aquifer Name:	
Well Depth:		Aquifer Type:	Confined multiple aquifers
Well Depth Unit:		Country Code:	US
Well Hole Depth:	497	Provider Name:	NWIS
W Hole Depth Unit:	ft	County:	ISLE OF WIGHT
Construction Date:	20121018	Latitude:	36.9331512
Source Map Scale:	24000	Longitude:	-76.5297149
Monitoring Loc Name:	58D 33		
Monitoring Loc Identifier:	USGS-365559076314802		
Monitoring Loc Type:	Well: Test hole not completed as a well		
Monitoring Loc Desc:			
HUC Eight Digit Code:	02080206		
Drainage Area:			
Drainage Area Unit:			
Contrib Drainage Area:			
Contrib Drainage Area Unit:			
Horizontal Accuracy:	.01		
Horizontal Accuracy Unit:	seconds		
Horizontal Collection Mthd:	Differentially corrected Global Positioning System.		
Horiz Coord Refer System:	NAD83		
Vertical Measure:	21		
Vertical Measure Unit:	feet		
Vertical Accuracy:	1		
Vertical Accuracy Unit:	feet		

Vertical Collection Mthd: Interpolated from topographic map.
Vert Coord Refer System: NGVD29

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	SSE	0.65	3,415.55	23.38	FED USGS

Organiz Identifier: USGS-VA
Organiz Name: USGS Virginia Water Science Center
Well Depth: 483
Well Depth Unit: ft
Well Hole Depth: 483
W Hole Depth Unit: ft
Construction Date: 19870625
Source Map Scale: 24000
Monitoring Loc Name: 58D 28
Monitoring Loc Identifier: USGS-365555076314201
Monitoring Loc Type: Well
Monitoring Loc Desc:
HUC Eight Digit Code: 02080206
Drainage Area:
Drainage Area Unit:
Contrib Drainage Area:
Contrib Drainage Area Unit:
Horizontal Accuracy: 1
Horizontal Accuracy Unit: seconds
Horizontal Collection Mthd: Reported.
Horiz Coord Refer System: NAD83
Vertical Measure: 23
Vertical Measure Unit: feet
Vertical Accuracy: 1
Vertical Accuracy Unit: feet
Vertical Collection Mthd: Interpolated from topographic map.
Vert Coord Refer System: NGVD29
Formation Type:
Aquifer Name:
Aquifer Type: Confined single aquifer
Country Code: US
Provider Name: NWIS
County: ISLE OF WIGHT
Latitude: 36.9320928
Longitude: -76.5280065

Public Water Supply Wells

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	NW	0.62	3,278.17	20.52	PWSW

PWS ID: 3093340
PWS Name: NEWSOME TRAILER PARK
PWS Actvty Status: I
Fac Activity Status: A
PWS Act Stat Desc: Inactive
Fac Act Stat Desc: Active

Constructed Date:
Latitude: 36.95
Longitude: -76.541667
Fed Type:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	W	0.27	1,429.56	20.91	PWSW

PWS ID: 3093395
PWS Name: EL BURRITO
PWS Actvty Status: I
Fac Activity Status: A
PWS Act Stat Desc: Inactive
Fac Act Stat Desc: Active
Constructed Date:
Latitude: 36.943056
Longitude: -76.538889
Fed Type: NC

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	E	0.76	4,015.58	21.76	PWSW

PWS ID: 3093120
PWS Name: NORTHERN DEVELOPMENT SERVICE DIST.
PWS Actvty Status: A
Fac Activity Status: I
PWS Act Stat Desc: Active
Fac Act Stat Desc: Inactive
Constructed Date:
Latitude: 36.943611
Longitude: -76.516389
Fed Type: C

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	SSE	0.65	3,449.10	22.93	PWSW

PWS ID: 3093160
PWS Name: CARROLLTON MEDICAL BUILDING
PWS Actvty Status: A
Fac Activity Status: A
PWS Act Stat Desc: Active
Fac Act Stat Desc: Active
Constructed Date: 6/21/1993
Latitude: 36.93214
Longitude: -76.5274

Fed Type: NTNC

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	S	0.55	2,917.27	21.70	PWSW

PWS ID: 3093049
PWS Name: ASHBY SUBDIVISION
PWS Actvty Status: I
Fac Activity Status: I
PWS Act Stat Desc: Inactive
Fac Act Stat Desc: Inactive
Constructed Date: 12/16/1988
Latitude: 36.933161
Longitude: -76.530383
Fed Type: C

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	S	0.55	2,929.19	22.64	PWSW

PWS ID: 3093049
PWS Name: ASHBY SUBDIVISION
PWS Actvty Status: I
Fac Activity Status: A
PWS Act Stat Desc: Inactive
Fac Act Stat Desc: Active
Constructed Date: 3/22/1994
Latitude: 36.933161
Longitude: -76.529914
Fed Type: C

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	SSE	0.36	1,915.43	17.26	PWSW

PWS ID: 3093153
PWS Name: CARROLLTON SHOPPES
PWS Actvty Status: I
Fac Activity Status: A
PWS Act Stat Desc: Inactive
Fac Act Stat Desc: Active
Constructed Date:
Latitude: 36.936111
Longitude: -76.529167
Fed Type: NC

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	SSE	0.55	2,889.12	21.95	PWSW

PWS ID: 3093049
PWS Name: ASHBY SUBDIVISION
PWS Actvty Status: I
Fac Activity Status: I
PWS Act Stat Desc: Inactive
Fac Act Stat Desc: Inactive
Constructed Date: 6/25/1987
Latitude: 36.933319
Longitude: -76.529478
Fed Type: C

Water Wells

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	NNW	0.71	3,766.11	22.44	WATER WELLS

Facility ID: 455515
Well ID: 455516
Well Status: PRODUCTION
Well Depth: 47
Well Type: IRRIGATION
Permit ID: 461
Permit Status: UNKNOWN
Use Type: GW2_PRIVATE
Elevation (ft): 0
Well Construct Date: 11/2/2019
DEQ Well No:
Well Name: LANGLEY
Facility/Owner: DURWIN
Est Yield (gpm): 60
Stabil Yield (gpm): 0
Static Wtr Lev (ft): 17
MPID:
Aquifer:
Locality: ISLE OF WIGHT
City/Town:
County: ISLE OF WIGHT
Latitude: 36.9529722
Longitude: -76.5399444

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	NNW	0.66	3,473.61	20.99	WATER WELLS

Facility ID: 455061
Well ID: 455062
Well Status: PRODUCTION
Well Depth: 50
Well Type: IRRIGATION
Permit ID: 461
Permit Status: UNKNOWN
Use Type: GW2_PRIVATE
Elevation (ft): 0
Well Construct Date: 10/10/2019
DEQ Well No:
Est Yield (gpm): 50
Stabil Yield (gpm): 50
Static Wtr Lev (ft): 17
MPID:
Aquifer:
Locality: ISLE OF WIGHT
City/Town:
County: ISLE OF WIGHT
Latitude: 36.952
Longitude: -76.5399444

Wells and Additional Sources Detail Report

Well Name: LENT
Facility/Owner: JOHN

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	NNW	0.66	3,473.61	20.99	WATER WELLS

Facility ID:	455069	Est Yield (gpm):	50
Well ID:	455070	Stabil Yield (gpm):	50
Well Status:	PRODUCTION	Static Wtr Lev (ft):	17
Well Depth:	50	MPID:	
Well Type:	IRRIGATION	Aquifer:	
Permit ID:	461	Locality:	ISLE OF WIGHT
Permit Status:	UNKNOWN	City/Town:	
Use Type:	GW2_PRIVATE	County:	ISLE OF WIGHT
Elevation (ft):	0	Latitude:	36.952
Well Construct Date:	10/10/2019	Longitude:	-76.5399444
DEQ Well No:			
Well Name:	LENT		
Facility/Owner:	JOHN		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	NNW	0.66	3,473.61	20.99	WATER WELLS

Facility ID:	455065	Est Yield (gpm):	50
Well ID:	455066	Stabil Yield (gpm):	50
Well Status:	PRODUCTION	Static Wtr Lev (ft):	17
Well Depth:	50	MPID:	
Well Type:	IRRIGATION	Aquifer:	
Permit ID:	461	Locality:	ISLE OF WIGHT
Permit Status:	UNKNOWN	City/Town:	
Use Type:	GW2_PRIVATE	County:	ISLE OF WIGHT
Elevation (ft):	0	Latitude:	36.952
Well Construct Date:	10/10/2019	Longitude:	-76.5399444
DEQ Well No:			
Well Name:	LENT		
Facility/Owner:	JOHN		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	NNW	0.65	3,435.68	22.79	WATER WELLS

Facility ID:	453687	Est Yield (gpm):	40
Well ID:	453688	Stabil Yield (gpm):	40
Well Status:	PRODUCTION	Static Wtr Lev (ft):	17
Well Depth:	47	MPID:	
Well Type:	IRRIGATION	Aquifer:	

Wells and Additional Sources Detail Report

Permit ID:	461	Locality:	ISLE OF WIGHT
Permit Status:	UNKNOWN	City/Town:	
Use Type:	GW2_PRIVATE	County:	ISLE OF WIGHT
Elevation (ft):	0	Latitude:	36.9525277
Well Construct Date:	7/30/2019	Longitude:	-76.5386666
DEQ Well No:			
Well Name:	LYCKE		
Facility/Owner:	CURT		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	NNW	0.60	3,178.24	21.88	WATER WELLS

Facility ID:	455073	Est Yield (gpm):	60
Well ID:	455074	Stabil Yield (gpm):	60
Well Status:	PRODUCTION	Static Wtr Lev (ft):	17
Well Depth:	50	MPID:	
Well Type:	IRRIGATION	Aquifer:	
Permit ID:	461	Locality:	ISLE OF WIGHT
Permit Status:	UNKNOWN	City/Town:	
Use Type:	GW2_PRIVATE	County:	ISLE OF WIGHT
Elevation (ft):	0	Latitude:	36.95175
Well Construct Date:	10/10/2019	Longitude:	-76.5385833
DEQ Well No:			
Well Name:	JENKINS		
Facility/Owner:	DERECK		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	W	0.86	4,555.35	21.11	WATER WELLS

Facility ID:		Est Yield (gpm):	0
Well ID:	20249	Stabil Yield (gpm):	0
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:	400	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	23	Latitude:	36.94324
Well Construct Date:		Longitude:	-76.549603
DEQ Well No:			
Well Name:	J SCOTT JR - J SCOTT JR		
Facility/Owner:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	W	0.77	4,070.87	22.53	WATER WELLS

Facility ID:		Est Yield (gpm):	0
Well ID:	23786	Stabil Yield (gpm):	80
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:	452	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	23	Latitude:	36.944462
Well Construct Date:		Longitude:	-76.547882
DEQ Well No:			
Well Name:	J B HOLLOWELL - J B HOLLOWELL		
Facility/Owner:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	NW	0.62	3,278.17	20.52	WATER WELLS

Facility ID:		Est Yield (gpm):	0
Well ID:	19261	Stabil Yield (gpm):	0
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:		MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):		Latitude:	36.95
Well Construct Date:		Longitude:	-76.541667
DEQ Well No:			
Well Name:	NEWSOME TRAILER PARK - DRILLED WELL		
Facility/Owner:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	WSW	0.39	2,083.04	23.71	WATER WELLS

Facility ID:		Est Yield (gpm):	0
Well ID:	20251	Stabil Yield (gpm):	0
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:	435	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	20	Latitude:	36.940907
Well Construct Date:		Longitude:	-76.540437
DEQ Well No:			

Wells and Additional Sources Detail Report

Well Name: CHARLES BAILEY - CHARLES BAILEY
Facility/Owner:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	W	0.27	1,429.56	20.91	WATER WELLS

Facility ID:
Well ID: 33423
Well Status: ACTIVE
Well Depth:
Well Type: PRODUCTION
Permit ID:
Permit Status:
Use Type:
Elevation (ft):
Well Construct Date:
DEQ Well No:
Est Yield (gpm): 0
Stabil Yield (gpm): 0
Static Wtr Lev (ft): 0
MPID:
Aquifer:
Locality:
City/Town:
County: ISLE OF WIGHT
Latitude: 36.943056
Longitude: -76.538889
Well Name: EL BURRITO - WELL
Facility/Owner:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	WNW	0.21	1,090.13	13.93	WATER WELLS

Facility ID:
Well ID: 48497
Well Status: ACTIVE
Well Depth: 435
Well Type: PRODUCTION
Permit ID:
Permit Status:
Use Type:
Elevation (ft): 5
Well Construct Date:
DEQ Well No:
Est Yield (gpm): 0
Stabil Yield (gpm): 0
Static Wtr Lev (ft): 0
MPID:
Aquifer:
Locality:
City/Town:
County: ISLE OF WIGHT
Latitude: 36.945101
Longitude: -76.537076
Well Name: JACK FROST - JACK FROST
Facility/Owner:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	WSW	0.27	1,421.94	24.17	WATER WELLS

Facility ID:
Well ID: 30965
Well Status: ACTIVE
Well Depth: 457
Well Type: PRODUCTION
Est Yield (gpm): 0
Stabil Yield (gpm): 0
Static Wtr Lev (ft): 0
MPID:
Aquifer:

Wells and Additional Sources Detail Report

Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	20	Latitude:	36.940295
Well Construct Date:		Longitude:	-76.53702
DEQ Well No:			
Well Name:	JAMES RIVER BRIDGE CO - JAMES RIVER BRIDGE CO		
Facility/Owner:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	W	0.16	861.73	19.56	WATER WELLS

Facility ID:		Est Yield (gpm):	0
Well ID:	41527	Stabil Yield (gpm):	0
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:	450	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	20	Latitude:	36.942073
Well Construct Date:		Longitude:	-76.536465
DEQ Well No:			
Well Name:	W R TORNER - W R TORNER		
Facility/Owner:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	SSW	0.28	1,486.63	19.87	WATER WELLS

Facility ID:		Est Yield (gpm):	0
Well ID:	30958	Stabil Yield (gpm):	0
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:	430	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	21	Latitude:	36.937768
Well Construct Date:		Longitude:	-76.533854
DEQ Well No:			
Well Name:	JULIETTE HAYWARD BROWN - JULIETTE HAYWARD BROWN		
Facility/Owner:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	SSW	0.27	1,412.99	21.44	WATER WELLS

Facility ID:		Est Yield (gpm):	0
Well ID:	34439	Stabil Yield (gpm):	0
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:	350	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	40	Latitude:	36.937907
Well Construct Date:		Longitude:	-76.533659
DEQ Well No:			
Well Name:	F M LATIMER - F M LATIMER		
Facility/Owner:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	S	0.02	129.39	22.41	WATER WELLS

Facility ID:		Est Yield (gpm):	0
Well ID:	48498	Stabil Yield (gpm):	0
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:	445	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	23	Latitude:	36.941434
Well Construct Date:		Longitude:	-76.532048
DEQ Well No:			
Well Name:	H D WOMBLE - H D WOMBLE		
Facility/Owner:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	E	0.06	293.99	20.58	WATER WELLS

Facility ID:		Est Yield (gpm):	0
Well ID:	38005	Stabil Yield (gpm):	0
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:	450	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	22	Latitude:	36.943045
Well Construct Date:		Longitude:	-76.52977
DEQ Well No:			

Wells and Additional Sources Detail Report

Well Name: B F HAPGRAVE - B F HAPGRAVE
Facility/Owner:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	NE	0.53	2,779.94	17.41	WATER WELLS

Facility ID:
Well ID: 55557
Well Status: ACTIVE
Well Depth: 500
Well Type: PRODUCTION
Permit ID:
Permit Status:
Use Type:
Elevation (ft): 10
Well Construct Date:
DEQ Well No:
Est Yield (gpm): 0
Stabil Yield (gpm): 0
Static Wtr Lev (ft): 0
MPID:
Aquifer:
Locality:
City/Town:
County: ISLE OF WIGHT
Latitude: 36.949018
Longitude: -76.525326
Well Name: MICHAEL LAIZ - MICHAEL LAIZ
Facility/Owner:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	NE	0.53	2,779.94	17.41	WATER WELLS

Facility ID:
Well ID: 51966
Well Status: ACTIVE
Well Depth: 55
Well Type: PRODUCTION
Permit ID:
Permit Status:
Use Type:
Elevation (ft): 10
Well Construct Date:
DEQ Well No:
Est Yield (gpm): 0
Stabil Yield (gpm): 0
Static Wtr Lev (ft): 0
MPID:
Aquifer:
Locality:
City/Town:
County: ISLE OF WIGHT
Latitude: 36.949018
Longitude: -76.525326
Well Name: MICHAEL LAIZ - MICHAEL LAIZ
Facility/Owner:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	SSE	0.93	4,927.07	22.08	WATER WELLS

Facility ID:
Well ID: 44995
Well Status: ACTIVE
Well Depth: 428
Well Type: PRODUCTION
Est Yield (gpm): 0
Stabil Yield (gpm): 0
Static Wtr Lev (ft): 0
MPID:
Aquifer:

Wells and Additional Sources Detail Report

Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	24	Latitude:	36.929601
Well Construct Date:		Longitude:	-76.522244
DEQ Well No:			
Well Name:	MARY ASHBY - MARY ASHBY		
Facility/Owner:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	ESE	0.90	4,760.10	22.20	WATER WELLS

Facility ID:	295501	Est Yield (gpm):	24
Well ID:	295502	Stabil Yield (gpm):	14
Well Status:	PRODUCTION	Static Wtr Lev (ft):	8
Well Depth:	48	MPID:	
Well Type:	IRRIGATION	Aquifer:	
Permit ID:	518	Locality:	ISLE OF WIGHT
Permit Status:	UNKNOWN	City/Town:	
Use Type:	GW2_PRIVATE	County:	ISLE OF WIGHT
Elevation (ft):	0	Latitude:	36.936429
Well Construct Date:	4/30/2017	Longitude:	-76.515348
DEQ Well No:			
Well Name:	093-17-0070		
Facility/Owner:	SHEA & RYAN		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	E	0.74	3,913.80	21.15	WATER WELLS

Facility ID:		Est Yield (gpm):	0
Well ID:	34450	Stabil Yield (gpm):	0
Well Status:	ACTIVE	Static Wtr Lev (ft):	542
Well Depth:	608	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	-9999	Latitude:	36.943462
Well Construct Date:		Longitude:	-76.516716
DEQ Well No:			
Well Name:	ISLE OF WIGHT - CARISBROOKE		
Facility/Owner:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	E	0.76	4,015.58	21.88	WATER WELLS

Facility ID:	66961	Est Yield (gpm):	0
Well ID:	646	Stabil Yield (gpm):	402
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:	588	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:	GW0045801	Locality:	SUFFOLK
Permit Status:	ACTIVE	City/Town:	SUFFOLK
Use Type:	MUNICIPAL	County:	ISLE OF WIGHT
Elevation (ft):	20	Latitude:	36.9436111
Well Construct Date:		Longitude:	-76.5163888
DEQ Well No:	146-00151		
Well Name:	CARISBROOKE		
Facility/Owner:	WESTERN TIDEWATER WATER AUTHORITY		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	E	0.76	4,015.58	21.88	WATER WELLS

Facility ID:	66961	Est Yield (gpm):	0
Well ID:	646	Stabil Yield (gpm):	402
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:	588	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:	GW0045800	Locality:	SUFFOLK
Permit Status:	EXPIRED	City/Town:	SUFFOLK
Use Type:	MUNICIPAL	County:	ISLE OF WIGHT
Elevation (ft):	20	Latitude:	36.9436111
Well Construct Date:		Longitude:	-76.5163888
DEQ Well No:	146-00151		
Well Name:	CARISBROOKE		
Facility/Owner:	WESTERN TIDEWATER WATER AUTHORITY		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	WSW	0.66	3,485.77	20.40	WATER WELLS

Facility ID:		Est Yield (gpm):	0
Well ID:	20253	Stabil Yield (gpm):	0
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:	450	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	23	Latitude:	36.940157
Well Construct Date:		Longitude:	-76.545243
DEQ Well No:			

Wells and Additional Sources Detail Report

Well Name: W E PINNER - W E PINNER
Facility/Owner:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	WSW	0.40	2,127.19	22.03	WATER WELLS

Facility ID:
Well ID: 34440
Well Status: ACTIVE
Well Depth: 447
Well Type: PRODUCTION
Permit ID:
Permit Status:
Use Type:
Elevation (ft): 20
Well Construct Date:
DEQ Well No:
Est Yield (gpm): 0
Stabil Yield (gpm): 0
Static Wtr Lev (ft): 0
MPID:
Aquifer:
Locality:
City/Town:
County: ISLE OF WIGHT
Latitude: 36.939212
Longitude: -76.539104
Well Name: JOE LOUITT - JOE LOUITT
Facility/Owner:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	S	0.41	2,164.23	20.94	WATER WELLS

Facility ID:
Well ID: 16776
Well Status: ACTIVE
Well Depth: 450
Well Type: PRODUCTION
Permit ID:
Permit Status:
Use Type:
Elevation (ft): 22
Well Construct Date:
DEQ Well No:
Est Yield (gpm): 0
Stabil Yield (gpm): 0
Static Wtr Lev (ft): 0
MPID:
Aquifer:
Locality:
City/Town:
County: ISLE OF WIGHT
Latitude: 36.935268
Longitude: -76.53202
Well Name: RICHARD KING - RICHARD KING
Facility/Owner:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	S	0.55	2,917.27	21.70	WATER WELLS

Facility ID:
Well ID: 30300
Well Status: ACTIVE
Well Depth: 485
Well Type: PRODUCTION
Est Yield (gpm): 0
Stabil Yield (gpm): 0
Static Wtr Lev (ft): 0
MPID:
Aquifer:

Wells and Additional Sources Detail Report

Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	-9999	Latitude:	36.933161
Well Construct Date:		Longitude:	-76.530383
DEQ Well No:			
Well Name:	ASHBY SUBDIVISION - WELL #2		
Facility/Owner:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	S	0.55	2,909.47	21.23	WATER WELLS

Facility ID:		Est Yield (gpm):	0
Well ID:	45003	Stabil Yield (gpm):	75
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:	485	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	22	Latitude:	36.933184
Well Construct Date:		Longitude:	-76.530354
DEQ Well No:			
Well Name:	ASHBY SUBD WATER SYSTEM - ASHBY 2		
Facility/Owner:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	S	0.55	2,910.28	21.23	WATER WELLS

Facility ID:		Est Yield (gpm):	0
Well ID:	48507	Stabil Yield (gpm):	50
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:	830	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	22	Latitude:	36.933184
Well Construct Date:		Longitude:	-76.530326
DEQ Well No:			
Well Name:	ASHBY SUBD WATER SYSTEM - ASHBY 3		
Facility/Owner:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	S	0.55	2,910.28	21.23	WATER WELLS

Facility ID:	67268	Est Yield (gpm):	0
Well ID:	669	Stabil Yield (gpm):	75
Well Status:	ABANDONED	Static Wtr Lev (ft):	0
Well Depth:	485	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:	GW0052600	Locality:	ISLE OF WIGHT
Permit Status:	INACTIVE	City/Town:	SMITHFIELD
Use Type:	MUNICIPAL	County:	ISLE OF WIGHT
Elevation (ft):	22	Latitude:	36.9331833
Well Construct Date:		Longitude:	-76.5303138
DEQ Well No:	146-00286		
Well Name:	ASHBY 2		
Facility/Owner:	ASHBY SUBDIVISION WATER SYSTEM		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	S	0.55	2,912.37	22.41	WATER WELLS

Facility ID:	67268	Est Yield (gpm):	0
Well ID:	709	Stabil Yield (gpm):	50
Well Status:	ABANDONED	Static Wtr Lev (ft):	0
Well Depth:	430	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:	GW0052600	Locality:	ISLE OF WIGHT
Permit Status:	INACTIVE	City/Town:	SMITHFIELD
Use Type:	MUNICIPAL	County:	ISLE OF WIGHT
Elevation (ft):	22	Latitude:	36.9331805
Well Construct Date:		Longitude:	-76.530275
DEQ Well No:	146-00343		
Well Name:	WELL #4		
Facility/Owner:	ASHBY SUBDIVISION WATER SYSTEM		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	S	0.56	2,950.44	21.50	WATER WELLS

Facility ID:	67268	Est Yield (gpm):	0
Well ID:	670	Stabil Yield (gpm):	50
Well Status:	ABANDONED	Static Wtr Lev (ft):	0
Well Depth:	830	MPID:	
Well Type:	MONITORING	Aquifer:	
Permit ID:	GW0052600	Locality:	ISLE OF WIGHT
Permit Status:	INACTIVE	City/Town:	SMITHFIELD
Use Type:	MUNICIPAL	County:	ISLE OF WIGHT
Elevation (ft):	22	Latitude:	36.9330833
Well Construct Date:		Longitude:	-76.5301555
DEQ Well No:	146-00287		

Wells and Additional Sources Detail Report

Well Name: ASHBY 3
Facility/Owner: ASHBY SUBDIVISION WATER SYSTEM

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	S	0.55	2,915.97	21.40	WATER WELLS

Facility ID:	90578	Est Yield (gpm):	0
Well ID:	712	Stabil Yield (gpm):	0
Well Status:	ABANDONED	Static Wtr Lev (ft):	0
Well Depth:	520	MPID:	
Well Type:	TEST	Aquifer:	
Permit ID:	NULL_PERMIT	Locality:	
Permit Status:	UNKNOWN	City/Town:	
Use Type:	FACILITY	County:	ISLE OF WIGHT
Elevation (ft):	22	Latitude:	36.9331805
Well Construct Date:		Longitude:	-76.530125
DEQ Well No:	146-00347		
Well Name:	GBH BOREHOLE		
Facility/Owner:	NULL FACILITY FOR ORPHANED WELLS		

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	S	0.55	2,929.19	22.64	WATER WELLS

Facility ID:		Est Yield (gpm):	0
Well ID:	5567	Stabil Yield (gpm):	0
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:	830	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	-9999	Latitude:	36.933161
Well Construct Date:		Longitude:	-76.529914
DEQ Well No:			
Well Name:	ASHBY SUBDIVISION - WELL #3		
Facility/Owner:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	SSE	0.36	1,915.43	17.26	WATER WELLS

Facility ID:		Est Yield (gpm):	0
Well ID:	36930	Stabil Yield (gpm):	0
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:		MPID:	
Well Type:	PRODUCTION	Aquifer:	

Wells and Additional Sources Detail Report

Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):		Latitude:	36.936111
Well Construct Date:		Longitude:	-76.529167
DEQ Well No:			
Well Name:	CARROLLTON SHOPPES - DRILLED WELL		
Facility/Owner:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	SSE	0.55	2,889.12	21.95	WATER WELLS

Facility ID:		Est Yield (gpm):	0
Well ID:	5594	Stabil Yield (gpm):	0
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:	483	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	-9999	Latitude:	36.933319
Well Construct Date:		Longitude:	-76.529478
DEQ Well No:			
Well Name:	ASHBY SUBDIVISION - WELL #1		
Facility/Owner:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	SSE	0.66	3,477.23	19.34	WATER WELLS

Facility ID:		Est Yield (gpm):	0
Well ID:	16789	Stabil Yield (gpm):	75
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:	483	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:		Locality:	
Permit Status:		City/Town:	
Use Type:		County:	ISLE OF WIGHT
Elevation (ft):	22	Latitude:	36.931796
Well Construct Date:		Longitude:	-76.52866
DEQ Well No:			
Well Name:	ASHBY SUBD WATER SYSTEM - ASHBY 1		
Facility/Owner:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
0	SSE	0.65	3,444.78	20.88	WATER WELLS

Wells and Additional Sources Detail Report

Facility ID:	67268	Est Yield (gpm):	0
Well ID:	668	Stabil Yield (gpm):	75
Well Status:	ACTIVE	Static Wtr Lev (ft):	0
Well Depth:	483	MPID:	
Well Type:	PRODUCTION	Aquifer:	
Permit ID:	GW0052600	Locality:	ISLE OF WIGHT
Permit Status:	INACTIVE	City/Town:	SMITHFIELD
Use Type:	MUNICIPAL	County:	ISLE OF WIGHT
Elevation (ft):	22	Latitude:	36.9319444
Well Construct Date:		Longitude:	-76.5283333
DEQ Well No:	146-00285		
Well Name:	ASHBY 1		
Facility/Owner:	ASHBY SUBDIVISION WATER SYSTEM		

Radon Information

This section lists any relevant radon information found for the target property.

Federal EPA Radon Zone for *ISLE OF WIGHT* County: **3**

Zone 1: Counties with predicted average indoor radon screening levels greater than 4 pCi/L
Zone 2: Counties with predicted average indoor radon screening levels from 2 to 4 pCi/L
Zone 3: Counties with predicted average indoor radon screening levels less than 2 pCi/L

Federal Area Radon Information for *ISLE OF WIGHT* County

No Measures/Homes:	1
Geometric Mean:	0.9
Arithmetic Mean:	0.9
Median:	0.9
Standard Deviation:	0
Maximum:	0.9
% >4 pCi/L:	0
% >20 pCi/L:	0
Notes on Data Table:	TABLE 1. Screening indoor radon data from the EPA/State Residential Radon Survey of Virginia conducted during 1991-92. Data represent 2-7 day charcoal canister measurements from the lowest level of each home tested.

Appendix

Federal Sources

FEMA National Flood Hazard Layer — **FEMA FLOOD**

The National Flood Hazard Layer (NFHL) data incorporates Flood Insurance Rate Map (FIRM) databases published by the Federal Emergency Management Agency (FEMA), and any Letters Of Map Revision (LOMRs) that have been issued against those databases since their publication date. The FIRM Database is the digital, geospatial version of the flood hazard information shown on the published paper FIRMs. The FIRM Database depicts flood risk information and supporting data used to develop the risk data. The FIRM Database is derived from Flood Insurance Studies (FISs), previously published FIRMs, flood hazard analyses performed in support of the FISs and FIRMs, and new mapping data, where available.

Indoor Radon Data — **INDOOR RADON**

Indoor radon measurements tracked by the Environmental Protection Agency(EPA) and the State Residential Radon Survey.

Public Water Systems Violations and Enforcement Data — **PWSV**

List of drinking water violations and enforcement actions from the Safe Drinking Water Information System (SDWIS) made available by the Drinking Water Protection Division of the US EPA's Office of Groundwater and Drinking Water. Enforcement sensitive actions are not included in the data released by the EPA. Address information provided in SWDIS may correspond either with the physical location of the water system, or with a contact address.

Radon Zone Level — **RADON ZONE**

Areas showing the level of Radon Zones (level 1, 2 or 3) by county. This data is maintained by the Environmental Protection Agency (EPA).

Safe Drinking Water Information System (SDWIS) — **SDWIS**

The Safe Drinking Water Information System (SDWIS) contains information about public water systems as reported to US Environmental Protection Agency (EPA) by the states. Addresses may correspond with the location of the water system, or with a contact address.

Soil Survey Geographic database — **SSURGO**

The Soil Survey Geographic database (SSURGO) contains information about soil as collected by the National Cooperative Soil Survey at the Natural Resources Conservation Service (NRCS). Soil maps outline areas called map units. The map units are linked to soil properties in a database. Each map unit may contain one to three major components and some minor components.

U.S. Fish & Wildlife Service Wetland Data — **US WETLAND**

The U.S. Fish & Wildlife Service Wetland layer represents the approximate location and type of wetlands and deepwater habitats in the United States.

USGS Current Topo — **US TOPO**

US Topo topographic maps are produced by the National Geospatial Program of the U.S. Geological Survey (USGS). The project was launched in late 2009, and the term "US Topo" refers specifically to quadrangle topographic maps published in 2009 and later.

USGS Geology — **US GEOLOGY**

Seamless maps depicting geological information provided by the United States Geological Survey (USGS).

USGS National Water Information System — **FED USGS**

The U.S. Geological Survey (USGS)'s National Water Information System (NWIS) is the nation's principal repository of water resources data. This database includes comprehensive information of well-construction details, time-series data for gage height, streamflow, groundwater level, and precipitation and water use data.

State Sources

Oil and Gas Wells — **OGW**

Oil and Gas Wells Data made available by Virginia Department of Mines Minerals and Energy maintained

by the Division of Gas and Oil Data Information Systems.

Public Water Supply Wells **PWSW**

The Public Wells data is provided by the Virginia Department of Health's Office of Drinking Water.

Water Wells **WATER WELLS**

This statewide water well construction database is maintained by the Virginia Department of Environmental Quality (DEQ). One of DEQ's goals is to merge the various sources of historical and new well information into one statewide database that can be used for regional analysis of groundwater aquifer systems. Efforts to sort, clean up, and merge this data are ongoing.

Liability Notice

Reliance on information in Report: The Physical Setting Report (PSR) DOES NOT replace a full Phase I Environmental Site Assessment but is solely intended to be used as a review of environmental databases and physical characteristics for the site or adjacent properties.

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Appendix F

Resumes of Environmental Professionals

MSA, P.C.
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www.msaonline.com

Environmental Sciences • Surveying • Civil & Environmental Engineering

STATEMENT OF QUALIFICATIONS
FOR
ENVIRONMENTAL SITE ASSESSMENTS

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FIRM HISTORY AND CAPABILITIES SUMMARY

MSA, P.C. IS COMMITTED to serving our customers with *proactive thinking* that will produce *innovative solutions* in the disciplines of **Environmental Science, Land Surveying and Civil & Environmental Engineering.** We are a Certified Small Business Enterprise and a Certified Veteran Enterprise.

We employ "IN-HOUSE" EXPERTS in the following areas:

SITE DEVELOPMENT & IMPROVEMENTS	WATERFRONT STRUCTURES
STREETS, HIGHWAYS & AIRFIELDS	ENVIRONMENTAL SCIENCES/WETLANDS/CBPA
PARKING FACILITIES	GEOLOGY/HYDROGEOLOGY/SOILS/GROUNDWATER
UTILITY SYSTEMS	PERMITTING
DRAINAGE & STORMWATER MANAGEMENT	LAND & HYDROGRAPHIC SURVEYING

Our history encompasses **FORTY-FIVE YEARS** doing business in the Hampton Roads area of Southeastern Virginia. The firm was founded as a partnership in 1973 and became a Virginia Professional Corporation in 1981. Today, there are eight employee stockholders who are active in the daily operation of the firm. **OUR VIRGINIA BEACH HEADQUARTERS** is centrally located at 5032 Rouse Drive, Suite 100, just off Witchduck Road at I-264.

REPRESENTATIVE CLIENTS INCLUDE A VARIETY OF PUBLIC AND PRIVATE SECTOR ENTITIES:

FEDERAL AGENCIES (examples only – not a complete listing)

- U.S. Army Corps of Engineers, Norfolk District and Baltimore District
- U.S. Department of the Army and the Air Force, National Guard Bureau
- U.S. Coast Guard, Facilities Design & Construction Center (Atlantic)
- U.S. Coast Guard, Reserve Training Center, Yorktown, VA
- U.S. Marine Corps
- U.S. Navy, Naval Facilities Engineering Command, Atlantic & Mid-Atlantic Divisions
- U.S. Postal Service
- U.S. Department of Veterans Affairs

VIRGINIA MUNICIPAL AGENCIES (examples only – not a complete listing)

- Accomack-Northampton Planning District Commission
- County of Accomack
- Town of Cape Charles
- City of Chesapeake & Chesapeake Public Schools
- Town of Exmore
- Isle of Wight County Public Schools
- James City County Public Schools
- City of Newport News
- City of Norfolk & Norfolk Public Schools
- Norfolk Redevelopment & Housing Authority
- County of Northampton
- City of Portsmouth & Portsmouth Public Schools
- Portsmouth Redevelopment & Housing Authority
- City of Suffolk & Suffolk Public Schools
- County of Surry
- City of Virginia Beach & Virginia Beach City Public Schools
- York County Public Schools

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FIRM HISTORY AND CAPABILITIES SUMMARY (Continued)

STATE AGENCIES (examples only – not a complete listing)

- Virginia Community College System
- Virginia Department of Agriculture
- Virginia Department of Corrections
- Virginia Department of Juvenile Justice
- Virginia Department of Transportation
- Virginia Division of Motor Vehicles
- Virginia Marine Resources Commission
- Virginia Parks Service, Department of Recreation and Conservation
- Virginia State Corporation Commission

INDUSTRY & COMMERCE (examples only – not a complete listing)

- BASF (formerly Ciba Specialty Chemicals, Inc.,) Suffolk, VA
- CMA/CGM America
- Cavalier Ford, Inc., Chesapeake, VA
- Coastal Training Technologies Corp., Virginia Beach, VA
- Commonwealth Power Corporation, New Church, VA
- Cox Communications, Inc., Virginia Beach, VA
- Farm Fresh, Inc., Virginia Beach, VA
- Green Mountain Coffee Roasters, Waterbury, VT
- Host Marriott Corp., Bethesda, MD
- HUDD Distribution Service, Inc., Chesapeake, VA
- A.P. Moeller Shipping
- Priority Auto Group
- QVC, Inc. ("The Shopping Channel"), Suffolk, VA
- Royal Farms, Inc.
- Sara Lee Coffee & Tea, Inc., Suffolk, VA
- Stihl, Inc., Virginia Beach, VA
- U-Haul International, Inc. (and Subsidiaries), Phoenix, AZ
- Wawa, Inc., Wawa, PA
- E.V. Williams Co., Inc., Chesapeake, VA
- Yupo, Inc., Chesapeake, VA

DEVELOPERS & CONTRACTORS (examples only – not a complete listing)

- Armada/Hoffler Construction Co., Chesapeake, VA
- Clancy & Theys, Newport News, VA
- The Dragas Group, Virginia Beach, VA
- Mid-Eastern Builders, Chesapeake, VA
- NAI Harvey Lindsay Commercial Real Estate, Norfolk, VA
- Napolitano Enterprises, Inc., Virginia Beach, VA
- S.L. Nusbaum Realty Co., Norfolk, VA
- Pembroke Enterprises, Inc., Virginia Beach, VA
- The Runnymede Corporation, Virginia Beach, VA
- L.M. Sandler, Inc., Virginia Beach, VA
- Sussex Development Corp., Virginia Beach, VA
- Terry-Peterson Residential, Virginia Beach, VA
- Tidewater Hotels & Resorts, Virginia Beach, VA
- Turner Construction, Inc., Virginia Beach, VA

FIRM HISTORY AND CAPABILITIES SUMMARY (Continued)

MSA professionals are registered in the Commonwealth of Virginia, North Carolina and Maryland. Our staff of over 45 includes professionals who hold the following licenses and or certifications: Professional Engineer, Certified Land Surveyor, Environmental Scientist, Professional Geologist, Waterworks Operator, Qualified Environmental Professional, Erosion and Sediment Control Inspector, Stormwater Management Inspector, Leadership in Energy & Environmental Design and more. Our field personnel have completed OSHA construction site safety and Hazardous Waste Operations and Emergency Response (HAZWOPER) training.

MSA utilizes state-of-the-art technology to aid in the creation of our products. These tools encompass specialized software packages capable of performing full hydraulic analysis for storm drainage, sanitary sewer, and water systems, including pump station analysis; earth work computations; vertical curve computations; and, full geometric design and analysis. Our computer aided design and drafting network includes multiple workstations utilizing the latest version of computer aided design (CAD) software. We operate in a network environment with electronic mail and Internet access. Our survey field equipment includes Global Positioning System (GPS) satellite technology, robotic data collection equipment, electronic distance measuring devices, and more. Our environmental staff utilizes a wide array of field sampling equipment, including an EarthProbe truck-mounted drill rig, as well as groundwater modeling and soil mapping software.

We have general and specific experience in all aspects of land development and public and private utility consulting. Among our services are: feasibility, utility and stormwater studies; master planning, design, permitting, and construction of civil and site engineering projects; site analysis and site selection; permit applications and associated reviewing agency presentations; sanitary sewage facilities; water supply systems; pumping stations; storm drainage systems; structures; highways and streets; airport pavements; traffic control and signalization; pavement markings, signing, and parking facilities; as well as waterfront engineering for piers, bulkheads, and shore protection. Specific environmental expertise includes Phase I and II site assessment reports; wetland and Chesapeake Bay Preservation Act consulting; underground storage tanks; identification and remediation of soil and groundwater contamination; water supply development; compliance permitting, monitoring, and reporting; and, other environmental functions related to natural resources, stormwater, and utility systems.

In addition to projects completed throughout the Commonwealth of Virginia, we have worked on projects in Ohio, Pennsylvania, New Jersey, New York, Maine, Massachusetts, Maryland, Michigan, Illinois, Rhode Island, Connecticut, North Carolina, South Carolina, Missouri, Mississippi, Louisiana, Texas, and Florida. Our overseas work includes Africa, Panama, Bermuda, Puerto Rico, Newfoundland, Portugal, and Cuba.

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Environmental Sciences • Surveying • Civil & Environmental Engineering

ENVIRONMENTAL SCIENCES – OVERVIEW OF CAPABILITIES

MSA's environmental professionals are advocates for our clients when working with local, state and federal environmental regulators.

We began providing environmental consulting services in 1991. Today, we have an Environmental Sciences Department that employs Environmental Scientists, including Professional Geologists, Qualified Environmental Professionals, Licensed Waterworks Operators, and additional scientists and technicians with overlapping and individual expertise in a broad spectrum of environmental consulting.



Among other equipment and technological resources, MSA owns an EarthProbe truck-mounted drill rig (pictured at right), which is capable of shallow soil and groundwater sampling up to 30' depth and installing monitoring wells. The equipment leaves turf and landscaping virtually undisturbed and can maneuver easily in tight spots where larger rigs might not be feasible.

Specialized environmental services included the following:

- Chesapeake Bay Preservation Act consulting
- Compliance monitoring and reporting of all types
- Contamination identification and remediation
- Corrective Action Plans
- Environmental impact statements and environmental impact reviews
- Environmental permitting
- Environmental site assessment reports – Phases I and II
- Groundwater consulting, aquifer testing, modeling, and withdrawal permits
- National Environmental Policy Act (NEPA) consulting
- Oil Discharge Contingency Plans
- Route selection studies for roadways and utilities
- Site Characterization Reports
- Wetland assessments, delineations, permitting, mitigation plans and monitoring
- Potable water wells and irrigation wells, permitting, and engineering plans
- Spill Prevention Control & Countermeasures Plans
- Underground storage tank removal, replacement, and storage tank reimbursement fund applications
- Wastewater consulting, monitoring, permitting, engineering plans, and operations and maintenance oversight
- Alternative sewer systems, soil analysis, permitting, drainfield design, and engineering plans
- Expert witness testimony
- Indoor air quality testing
- Landfill monitoring, compliance reporting, closure and post-closure care

MSA has enjoyed the challenges associated with serving diverse environmental clients, including the U.S. Coast Guard, U.S. Navy, U.S. Army Corps of Engineers, the Commonwealth of Virginia, and several municipal governments in Virginia and North Carolina. We strive for client satisfaction that leads to repeat business. For example, the Virginia Department of Transportation has selected MSA to handle the agency's Annual Services Contract for A/E Environmental Services on six separate and consecutive contracts since the year 1999.

We frequently provide due diligence environmental investigations, including environmental site assessment reports to facilitate development, re-development and commercial real estate transactions.

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CLIENT TESTIMONIALS

- "…I found your team of wetland and hydrology experts' scientific competence to be above reproach and their conduct to be totally professional…"

  Samuel W. Meekins, Jr.
  Wolcott Rivers, P.C., Attorneys at Law
  757-554-0224

- "You and your staff of professionals accurately guided us through the many regulatory challenges required to develop and manage the environmental areas of this project…You have consistently responded to support our project needs in a timely manner, even when our requests have been on very short notice and under difficult scheduling conditions. Your expeditious response and flexibility allowed us to accomplish the environmental goals and objectives of the Commonwealth Chesapeake Power Station throughout all stages of project development and operation. This greatly contributed to the successful completion of the project while meeting the required schedules."

  Paul L. Carpinone
  Director, Environmental & Safety
  TECO Wholesale Generation
  813-228-4828

- "...MSA's reports are thorough, well organized and presented effectively. I am glad we have a great consultant working for VDOT."

  Mary H. Hom, RA
  Former Employee
  Virginia Department of Transportation
  Capital Outlay Architectural Section

- "I received the additional Phase I (environmental) reports yesterday, and am in the process of reviewing them. So far, the results I've seen have been very pleasing. While timeliness is critical in our business, perhaps this is the most important impact MSA has had. Finally, MSA's staff of professional engineers seem to be very thorough and well-versed in the environmental arena, and I look forward to doing continued business with them. Keep up the good work!"

  Robert A. Godhigh, Jr.
  Former Employee
  Wireless Implementation Engineer
  Sprint Personal Communication Systems

- "Whether MSA was called on to assist with Phase I or Phase II environmental site assessments, wetland consultations, industrial hygiene tasks or Virginia Petroleum Storage Tank Fund documentation, I found your staff to be a knowledgeable and service-oriented resource for Virginia Beach. We appreciate your professional performance on this three-year annual services contract."

  Jeffrey S. Waller, P.E., Project Manager
  City of Virginia Beach, Office of the City Engineer
  757-385-4131

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CHARLES H. HALL, P.G.
ENVIRONMENTAL SCIENTIST/HYDROGEOLOGIST



EDUCATION

M.S., Environmental Sciences, University of Virginia, 1993
B.S., Geology, Old Dominion University, 1987
HAZWOPER Trained

EXPERIENCE

Charles is the kind of technical, analytical, detail oriented scientist who can understand complicated issues and present them to others in practical and useful fashion. He joined MSA in early 1994 and currently serves as our Director of Environmental Sciences. As such, he has supervisory responsibilities for all environmental services, including oversight of research and field activities, as well as permitting, compliance, and report preparation. Charles is a hands-on manager who assures that client schedules are met and that quality control is an integral part of the service process. He maintains excellent relationships with environmental regulators at the local, state and federal level.

Charles has expertise in the following areas:

- Landfill testing, monitoring and permitting
- Subsurface contamination identification, delineation, and remediation, including soil analysis and monitoring
- Regulatory guidance, permitting, and permit compliance
- Phase I, II, III Environmental Site Assessments
- Groundwater resources, including aquifer testing, and surface water quality monitoring and modeling
- Groundwater well installation, testing, and permitting
- Expert testimony and public hearings

Relevant project experience includes the following examples:

- **City of Chesapeake, Annual A/E Services Contracts (2003-present)** – Oversaw environmental services on the 60-acre Heritage Municipal Park property and the 17-acre Animal Control Facility. For Heritage Park, oversaw a Phase I Environmental Site Assessment and soils mapping. For the Animal Control Facility, which is a former construction debris landfill site, oversaw design of a methane gas collection system to convey landfill gases away from the structure, along with jurisdictional wetland and CBPA delineations.

- **Virginia Department of Transportation Environmental Services Throughout Virginia** – Since 1999, Charles served on six consecutive annual environmental services contracts with responsibility for development of Environmental Impact Reports, Phase I and II Environmental Site Assessments, groundwater resources investigations, permitting and permit compliance, contamination remediation, potable water well design and permitting, sewage system design and permitting, and monitoring/reporting for VDOT's facilities statewide. He was also involved in several work orders that included wetlands and Chesapeake Bay Preservation Act consulting.

- **City of Virginia Beach - Beach Garden Park/Virginia Beach Middle School –** Oversaw environmental services on this former landfill and sewage treatment plant property containing a municipal park, which was slated for complete redevelopment. Services included Phase I and II Environmental Site Assessments; closure of underground storage tanks containing oily sludge; and wetland and CBPA delineations, mapping, and buffer restoration plans.

PROFESSIONAL REGISTRATION

1997 Virginia Certified Professional Geologist; OSHA HAZWOPER Certified

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BRIAN OWEN
SENIOR ENVIRONMENTAL SCIENTIST/WETLAND SPECIALIST



EDUCATION

B.S., Environmental Science with a Minor in Biology, Ferrum College, 2004

EXPERIENCE

Brian joined MSA in 2005 and has over ten years of environmental sciences experience. With Brian's previous employer, tasks included collection and analysis of soil, water and biological materials and laboratory analysis of chemical and physical properties. He also wrote the standard operating procedures for the environmental and laboratory work. This combination of skills and expertise served as a good foundation for Brian's responsibilities in MSA's Environmental Sciences Department where he provides research and performs field investigations, works with regulatory agencies, facilitates environmental permits, and writes environmental reports.

Brian's areas of expertise include the following:

- Phase I Environmental Site Assessments
- Environmental impact reports
- Wetland assessment, delineation and permitting
- Wetland violation case resolution
- Chesapeake Bay Preservation Act assessment, delineation
- NEPA document preparation

Brian has completed more than 300 Phase I Environmental Site Assessments for MSA, on properties from undeveloped land to urban sites that have been in developed use for over 100 years.

Relevant project experience includes the following examples:

- **Virginia Department of Transportation A/E Services Term Contracts (5) for Environmental Services (2005-current), Throughout, VA –** Provided environmental consulting and report preparation for VDOT's capital construction projects on state facilities. Participated in the development of seven Phase I Environmental Site Assessments and more than 150 Environmental Impact (NEPA) Reports on various VDOT projects throughout Virginia. Also provided wetlands and Chesapeake Bay Preservation Act assessments and delineations as needed for VDOT.

- **Janaf Shopping Center, Norfolk, VA –** Phase I Environmental Site Assessment conducted on 95-acre urban site with slightly less than one million square feet of retail space. Evaluated site history including three former gas stations, one of which had a significant release, several former and current auto repair facilities, and a former dry cleaners to assess liability and risk to the property.

- **Moyock Development, Currituck County, NC –** Completion of Phase I Environmental Site Assessment to determine potential environmental conditions from history of site as race track. Also completed wetland delineation and obtained permits for wetland impacts for the proposed residential subdivision.

- **Grandy Village, Norfolk, VA** – Conducted multiple Phase 1 Environmental Site Assessments within the project area, determining environmental risk associated with specific needs of the various phases of the project. Reviewed files at the Virginia Department of Environmental Quality regarding on-site petroleum tanks and federal and state database listings for environmental considerations related to the on-site boiler facility, and assessed environmental risk associated with an adjacent tank farm. Also completed wetland delineation at the site.

- **Pinewood Gardens and North Shore Apartments, Norfolk, VA –** Conducted Phase I Environmental Site Assessment on two large apartment complexes as required for refinancing purposes, including records reviewed to determine if potential adjacent land use concerns posed an environmental risk.

Appendix G
References and Limitations

References:

ASTM E1527-13, ASTM International, 100 Barr Harbor Drive, PO Box C700, West Gonshohocken, PA. 19425-2959

Environmental Risk Information Services (ERIS), 440 Wheelers Farm Road, Milford Ct. 06461 (Individual references that ERIS cites are in the individual reports in the Appendixes).

QUALIFICATIONS AND LIMITATIONS

MSA, P.C., is pleased to be of service in providing this Phase I Environmental Site Assessment. MSA warrants that neither the Company nor any of its employees have a financial interest in this project. Additionally, there is no conflict of interest between MSA and any of the parties attempting to purchase the property or obtain government regulatory approval for this project.

Our professional services have been performed, our findings obtained and report prepared in accordance with customary principles and practices in the field of environmental science. This warranty is in lieu of all other warranties either expressed or implied. No Environmental Site Assessment can completely eliminate uncertainty regarding the potential for Recognized Environmental Conditions to exist in connection with the subject property. While reasonable efforts are made to insure the correctness and completeness of the data used, MSA assumes no liability for the accuracy of such data. MSA assumes no liability for conditions on the site beyond the scope of services provided in this assessment. This report cannot take into account changes in the condition of the site after completion and release of this assessment.

The scope of services performed in execution of this investigation may not be appropriate to satisfy the needs of others. This assessment does not purport to address safety concerns as would apply to the general health and safety of present or future occupants or users of the subject property. This company is not responsible for the independent conclusions, opinions or recommendations made by others based on this report. The presented conclusions are a logical summation of the results of this investigation. Any use or re-use of this document and its findings, conclusions or recommendations is done so at the risk of said user. Any interpretations, qualifications or conclusions made through the use of this report must be verified and accepted by the author(s). This report cannot be copied without the written consent of the author(s).

Traffic Impact Analysis Update
for
South Harbor – Age Restricted Residential Development
Isle of Wight, Virginia

Prepared for:
East West Partners of Virginia, Inc.

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116426005
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1 EXECUTIVE SUMMARY

East West Partners of Virginia, Inc. is proposing the development of the South Harbor parcels as well as the Eagle Harbor, LLC (Tract 11) parcel located in Isle of Wight County, Virginia. It is proposed that the Pitt parcel will consist of age restricted (i.e., 55 years of age or older) townhouse residential units and the Lippe parcel will consist of age restricted (i.e., 55 years of age or older) single family and townhouse residential units. The Eagle Harbor, LLC (Tract 11) parcel with frontage along Carrollton Boulevard (U.S. Route 17), is assumed to be developed with a combination of medical office and general office space. For the purposes of this traffic impact analysis (TIA) Update, the parcels are assumed to not be connected and will not have cross parcel access. The Pitt parcel is bound by Eagle Harbor, LLC (Tract 11), the Shoppes at Eagle Harbor, and commercial development to the north and west. The Lippe parcel is located to the south and consists of undeveloped parcels as well as a tributary to Ragged Island Creek. The Lippe parcel is bound by the Pitt parcel to the north, Channell Way to the south, residential housing as well as undeveloped parcels to the east, and undeveloped parcels to the west.

An additional development located at the Crossings (i.e., referred to as the “Tower Parcel”) is proposed to consist of 52 single family residential units that do not have age restrictions. In addition to the proposed residential development associated with the Tower Parcel, this site will also accommodate the extension of Spadea Way, which will provide an additional roadway connection between the Lippe parcel and the Carrollton Boulevard (U.S. Route 17)/Brewers Neck Boulevard signalized intersection. The Lippe parcel is also provided access to Carrollton Boulevard via Channel Way. Therefore, in addition to evaluating the changes to internal traffic circulation/travel patterns associated with the South Harbor development as a result of removing the previously proposed bridge connection, the TIA Update also considers traffic impacts related to the Tower Parcel residential development, and the influence of the Spadea Way connection on future traffic operations.

The purpose of this report is to satisfy the TIA requirements of a Zoning Amendment application as required by Appendix B Article 1 Section 1-1015(F)(3) of the County of Isle of Wight Code for amendments to zoning codes.

It is anticipated that the construction of the proposed development will be completed, operational, and at or near full occupancy/build-out by 2026. The following access points were assumed for Tract 11 and the Pitt parcel portions of the South Harbor development:

- Carrollton Boulevard (U.S. Route 17) via the Site Driveway Access:
    1. Westbound approach of Smiths Neck Road at the Carrollton Boulevard/Smiths Neck Road signalized intersection
    2. Westbound approach of Northgate Drive at the Carrollton Boulevard/Northgate Drive unsignalized intersection

The following access points were assumed for the Lippe parcel component of the South Harbor development as well as the proposed Tower Parcel residential development:

- Carrollton Boulevard (U.S. Route 17) via the Channell Way Access:
    1. Westbound approach of Channell Way at the Channell Way/Whippingham Parkway unsignalized intersection (Channell Way will provide direct access to/from Carrollton Boulevard)

- Carrollton Boulevard (U.S. Route 17) via the Spadea Way Access:
    1. Westbound approach of Spadea Way at the Carrollton Boulevard and Spadea Way/Brewers Neck Boulevard signalized intersection (Spadea Way will provide direct access to/from Carrollton Boulevard)

The total amount of traffic generated by these developments is expected to consist of approximately 3,422 daily trips, of which 258 and 297 trips will occur during the AM and PM peak hours, respectively. In addition to the traffic generation associated with the proposed parcels, an annual growth rate of 2% was applied to account for future traffic volume projections per standard practice and guidance as a part of this study. Based on the results of the traffic analysis, the future impacts associated with the proposed development are anticipated to be minimal overall, with minor deteriorations in operations anticipated at the signalized and unsignalized intersections when comparing 2026 and 2032 Build conditions to 2026 and 2032 No-Build and in some cases even Existing operational conditions.

The minimal impacts to operations reflect the relatively small amount of new traffic that is expected to be generated by the proposed developments in relationship to the volume of traffic experienced along the corridor today. However, based on the analysis results provided in this traffic study, improvements were identified to help accommodate the additional traffic generated by the proposed development sites and to allow operational conditions to remain consistent with those anticipated under the "No Build" scenario for this area.

The following recommendations were identified/verified as part of the TIA Update and are summarized below, as well as shown graphically in **Figure ES – 1**. It is noted that the anticipated phase of implementation for each of these improvements is provided for reference.

Carrollton Boulevard (U.S. Route 17)

- VDOT should continue to monitor and periodically optimize traffic signal phasing and timing plans to accommodate peak hour/off-peak traffic volumes along the Carrollton Boulevard corridor
- VDOT should update signal timing optimization following initial occupancy and full build-out of the development to account for the change in traffic volumes/demand
    - Signal coordination improvements/enhancements should continue to facilitate and emphasize the progression of traffic along Carrollton Boulevard

Carrollton Boulevard (U.S. Route 17) at Smiths Neck Road

- The Developer will modify the existing traffic signal (i.e., install a third signal head on the mast arm serving the westbound approach of Smiths Neck Road) to accommodate the proposed exclusive left-turn lane, through lane, and exclusive right-turn lane. (Phase 1)
    - Implement right-turn overlap phase as a part of traffic signal operations/phasing. (Phase 1)
- The Developer will modify the existing traffic signal (i.e., modify signal heads on the mast arm serving the eastbound approach of Smiths Neck Road) to accommodate the proposed dual exclusive left-turn lanes and a shared through/right-turn lane. (Phase 1)
    - Remove/replace the existing lane control signage on the mast arm to reflect dual left-turn movement. (Phase 1)
- VDOT should continue to periodically optimize traffic signal phasing and timing plans to accommodate peak hour/off peak traffic volumes along the Carrollton Boulevard corridor
- VDOT should update signal timing optimization following initial occupancy and full build-out of the development to account for the change in traffic volumes/demand

- Signal coordination improvements/enhancements should continue to facilitate and emphasize the progression of traffic along Carrollton Boulevard

Northbound Carrollton Boulevard (Phase 3)

- The Developer will improve/extend the existing exclusive northbound left-turn lane to consist of 400 feet of storage and a 100-foot taper
  - Final design and construction of this improvement shall be coordinated directly with VDOT

Southbound Carrollton Boulevard (Phase 1)

- The Developer will improve/extend the existing exclusive southbound left-turn lane to consist of 400 feet of storage and a 100-foot taper
  - Final design and construction of this improvement shall be coordinated directly with VDOT

Eastbound Smiths Neck Road (Phase 1)

- The Developer will reconfigure the eastbound approach to consist of the following laneage:
  - Two exclusive left-turn lanes
  - One exclusive shared through/right-turn lane
- The Developer will remove/replace the existing lane control signage on the mast arm to reflect the dual left-turn movement
- Eastbound and westbound left-turns will run concurrently

Westbound Smiths Neck Road

- Approach/Outbound laneage (Phase 1)
  - The Developer will construct an exclusive right-turn lane extending from the 7-Eleven entrance driveway to the intersection with Carrollton Boulevard
  - The Developer will restripe the westbound approach to delineate the following laneage (Phase 1):
    - One exclusive left-turn lane
    - One exclusive through lane
    - One exclusive right-turn lane
- Receiving/Inbound Laneage (Phase 1)
  - The Developer will construct a 4-foot raised concrete median between the 7-Eleven/Bojangles intersection and the Carrollton Boulevard intersection.
  - The Developer will construct/install two inbound lanes to consist of the following:
    - Inside travel lane to serve as an exclusive left-turn lane (drop lane)
    - Outside travel lane will be designated as a shared through/right-turn lane
    - Improve/modify channelized/right-in only driveway (e.g., driveway entrance width and associated driveway radii) serving the Bojangles/Shoppes at Eagle Harbor

Smiths Neck Road at 7-Eleven/Bojangles (Phase 1)

- The Developer will construct/configure the intersection as three-way STOP controlled:
    - The Bojangles, 7-Eleven, and the northbound Driveway 1/Connection from the Pitt property being STOP controlled
    - The southbound Driveway 1/Connection to the Pitt property and thus the southbound left-turn movement to the 7-Eleven entrance driveway will be free-flow operations
- The Developer will install supplemental signage and pavement markings to consist of the following:
    - "DO NOT BLOCK INTERSECTION" signage
    - Intersection pavement markings delineating the area not to block (i.e., the box)
    - Supplement with signage reflecting a potential fine for those observed/caught impeding intersection operations

Carrollton Boulevard (U.S. Route 17) at Northgate Drive

Northbound Carrollton Boulevard (Phase 3)

- The Developer will improve/extend the existing exclusive northbound right-turn lane to consist of 200 feet of storage and a 200-foot taper
    - Final design and construction of this improvement shall be coordinated directly with VDOT

Southbound Carrollton Boulevard (Phase 3)

- The Developer will improve/extend the existing exclusive southbound left-turn lane to consist of 200 feet of storage and a 200-foot taper
    - Final design and construction of this improvement shall be coordinated directly with VDOT

Northgate Drive Interim Improvements (Phase 3)

Eastbound Northgate Drive (Phase 3)

- No geometric changes
- The Developer will implement site access/movement restrictions via signage during peak periods (i.e., install signage reflecting no left or through movements Monday – Friday 6:00 AM to 9:00 AM and 3:00 PM to 6:00 PM). Location of signage shall be coordinated with VDOT.

Westbound Northgate Drive (Phase 3)

- No geometric changes
- The Developer will implement site access/movement restrictions via signage during peak periods (i.e., install signage reflecting no left or through movements Monday – Friday 6:00 AM to 9:00 AM and 3:00 PM to 6:00 PM). Location of signage shall be coordinated with VDOT.

Northgate Drive Permanent Partial Access Improvements (Phase 5)

The Developer will contribute a cash proffer to the County for use in applying for revenue sharing or other alternative funding grant programs that would be administered by VDOT or the County. It is anticipated that the alternative funding grant would be used to implement the proposed improvements/modifications of the Carrollton Boulevard/Northgate Drive intersection that will result in channelized left-turn lanes along northbound/southbound Carrollton Boulevard and fully restrict side street left-turn and through movements (i.e., right-turn only).

Eastbound Northgate Drive (Phase 5)

- Side street improvements are expected to also consist of reconfiguring (i.e., restriping and updating signage) the eastbound Northgate Drive approach as right-turn only at the time the related intersection improvement project is being constructed.

Westbound Northgate Drive (Phase 5)

- Side street improvements are expected to also consist of reconfiguring (i.e., restriping and updating signage) the westbound Northgate Drive approach as right-turn only at the time the related intersection improvement project is being constructed.

Carrollton Boulevard (U.S. Route 17) at Northgate Drive

Northbound Carrollton Boulevard

- No proposed geometric changes to VDOT intersection improvement project

Southbound Carrollton Boulevard

- Extend the exclusive left-turn lane storage length from 200 feet to 400 feet. Modification will result in an exclusive left-turn lane consisting of 400 feet of storage and a 200-foot taper.

Eastbound Brewers Neck Boulevard

- No proposed geometric changes to VDOT intersection improvement project

Westbound Spadea Way (The Crossings)

- No proposed geometric changes

Channell Way (Phase 2)

- The Developer will improve the existing 2-lane typical section of Channell Way to consist of the following:
    - Pavement striping to reflect/delineate two (2) 11-foot travel lanes
    - 2-foot graded shoulder in each direction
- The Developer will implement the proposed improvements from the agreed upon eastern limits of the Lippe parcel in the east to the Carrollton Boulevard intersection in the west
- The Developer will coordinate with VDOT on implementation of resurfacing/repaving the defined segment of roadway (i.e., identify when/if VDOT has surfacing activities planned and implement Developer resurfacing improvements prior to/in lieu of those efforts)
    - Coordinate with VDOT to identify/confirm documented pavement section deficiencies and address/mitigate as applicable

Carrollton Boulevard (U.S. Route 17) at Channell Way/Deep Bottom Drive

Northbound Carrollton Boulevard

- No geometric changes

Southbound Carrollton Boulevard (Phase 4)

- Southbound exclusive left-turn lane
    - The final design and configuration of the southbound left-turn lane at this intersection will be defined/dictated by the design and construction of the second northbound right-turn lane, a raised median, and the stormwater infrastructure being constructed/installed (i.e., second northbound left-turn lane at Brewers Neck Boulevard) as a part of the VDOT Bartlett Intersection improvement project.

Eastbound Deep Bottom Drive

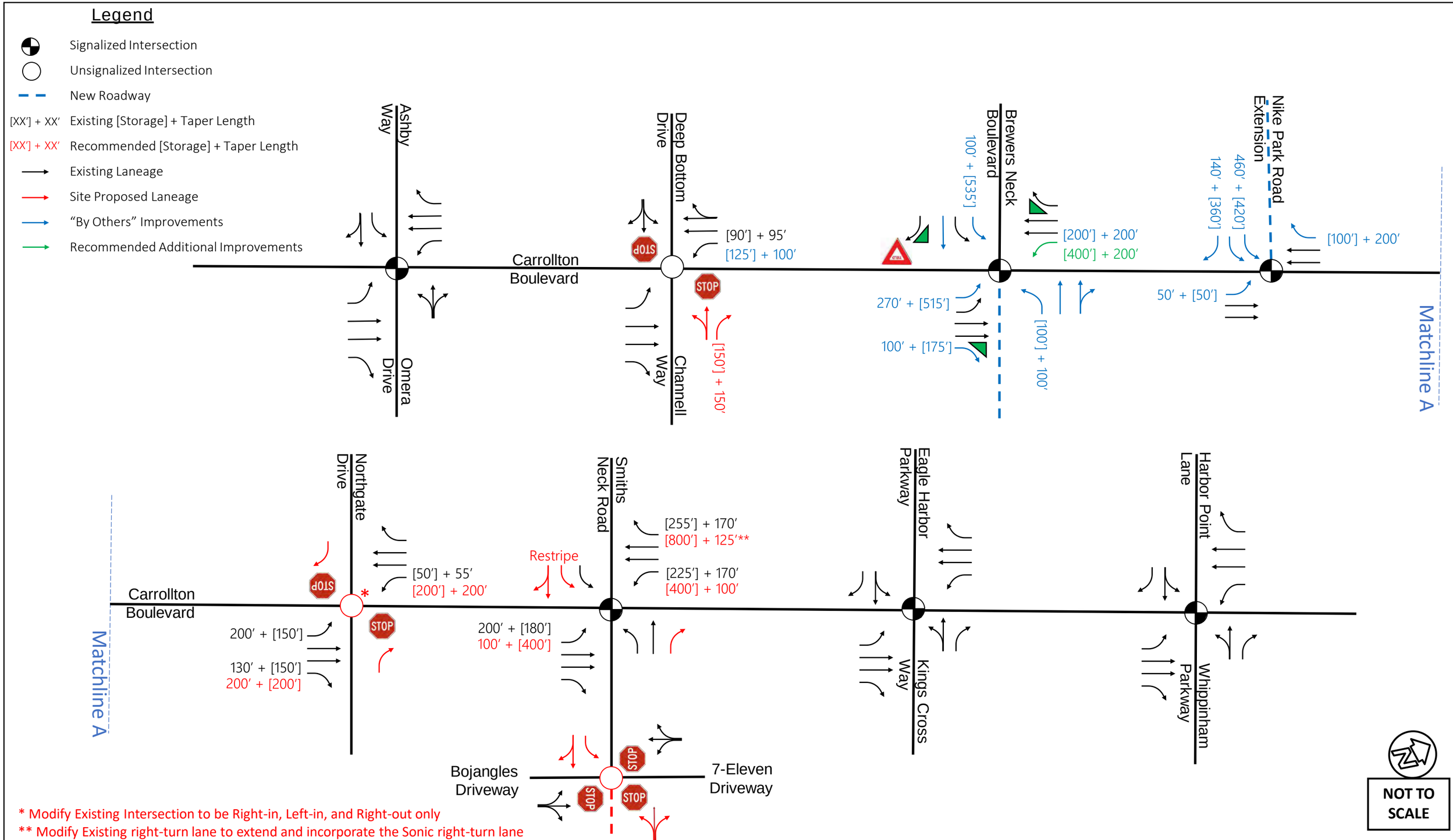
- No geometric changes

Westbound Channell Way (Phase 4)

- The Developer will improve the westbound approach to consist of the following laneage:
    - One shared through/left-turn lane
    - One exclusive right-turn lane consisting of 150 feet of storage and a 150-foot taper
        - Final design and construction of these improvement shall be coordinated directly with VDOT

Legend

- Signalized Intersection
- Unsignalized Intersection
- New Roadway
- [XX'] + XX' Existing [Storage] + Taper Length
- [XX'] + XX' Recommended [Storage] + Taper Length
- Existing Laneage
- Site Proposed Laneage
- "By Others" Improvements
- Recommended Additional Improvements



* Modify Existing Intersection to be Right-in, Left-in, and Right-out only

** Modify Existing right-turn lane to extend and incorporate the Sonic right-turn lane

NOT TO SCALE

Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	Recommended Improvements	Figure ES-1

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

2 INTRODUCTION

East West Partners of Virginia, Inc. is proposing the development of the South Harbor parcels as well as the Eagle Harbor, LLC (Tract 11) parcel located in Isle of Wight County, Virginia. It is proposed that the Pitt parcel will consist of age restricted (i.e., 55 years of age or older) townhouse residential units and the Lippe parcel will consist of age restricted (i.e., 55 years of age or older) single family and townhouse residential units. The Eagle Harbor, LLC (Tract 11) parcel with frontage along Carrollton Boulevard (U.S. Route 17), is assumed to be developed with a combination of medical office and general office space. For the purposes of this TIA, the parcels are assumed to not be connected and will not have cross parcel access. The Pitt parcel is bound by Eagle Harbor, LLC (Tract 11), the Shoppes at Eagle Harbor, and commercial development to the north and west. The Lippe parcel is located to the south and consists of undeveloped parcels as well as a tributary to Ragged Island Creek. The Lippe parcel is bound by the Pitt parcel to the north, Channell Way to the south, residential housing as well as undeveloped parcels to the east, and undeveloped parcels to the west. **Figure 1** illustrates the proposed parcel locations.

An additional development located at the Crossings (i.e., referred to as the "Tower Parcel") is proposed to consist of 52 single family residential units that do not have age restrictions. In addition to the proposed residential development associated with the Tower Parcel, this site will also accommodate the extension of Spadea Way, which will provide an additional roadway connection between the Lippe parcel and the Carrollton Boulevard (U.S. Route 17)/Brewers Neck Boulevard signalized intersection. The Lippe parcel is also provided access to Carrollton Boulevard via Channell Way. The purpose of this report is to satisfy the traffic impact analysis (TIA) requirements of a Zoning Amendment application as required by Appendix B Article 1 Section 1-1015(F)(3) of the County of Isle of Wight Code for amendments to zoning codes.

It is anticipated that the construction of the proposed development will be completed, operational, and at or near full occupancy/build-out by 2026. The following access points are proposed/assumed for Tract 11 and the Pitt Parcel portions of the South Harbor development, as shown in **Figure 2**:

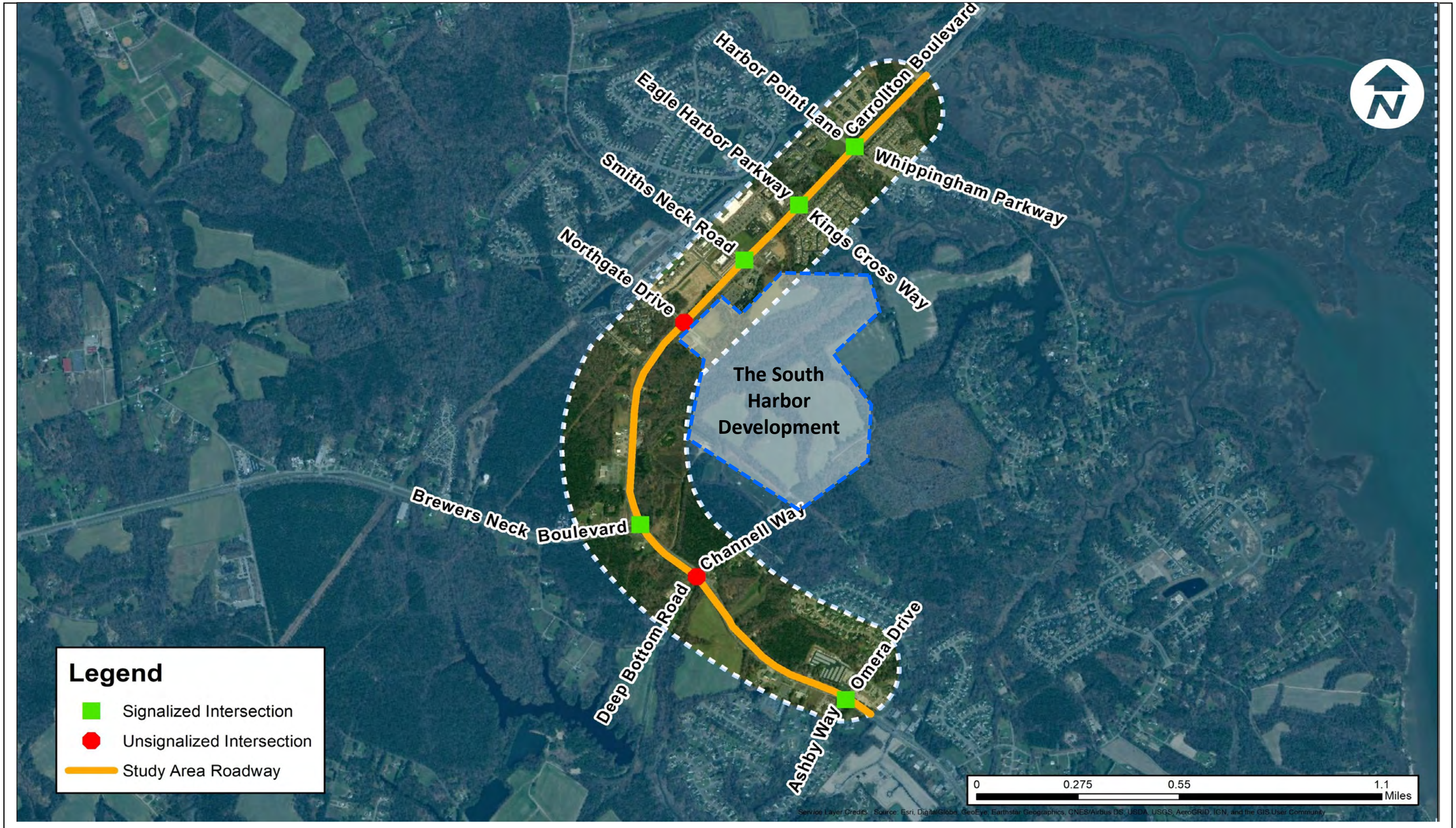
- Carrollton Boulevard via the Pitt Parcel Access:
  1. Westbound approach of Smiths Neck Road at the Carrollton Boulevard/Smiths Neck Road signalized intersection
  2. Westbound approach of Northgate Drive at the Carrollton Boulevard/Northgate Drive unsignalized intersection

The following access points were assumed for the Lippe parcel component of the South Harbor development as well as the proposed Tower Parcel residential development:

- Carrollton Boulevard (U.S. Route 17) via the Channell Way/Lippe Parcel Access:
  1. Westbound approach at the Channell Way/Whippingham Parkway unsignalized intersection (Channell Way will provide direct access to/from Carrollton Boulevard)
- Carrollton Boulevard (U.S. Route 17) via the Spadea Way Access:
  1. Westbound approach of Spadea Way at the Carrollton Boulevard and Spadea Way/Brewers Neck Boulevard signalized intersection (Spadea Way will provide direct access to/from Carrollton Boulevard)

Kimley-Horn has been retained to perform a TIA Update as a part of the South Harbor Zoning Amendment application and the removal of the previously assumed/planned bridge connection between the Pitt and Lippe parcels as well as for the consideration of the proposed Tower Parcel rezoning application. This report has been prepared for submittal to the Virginia Department of Transportation (VDOT) and the County of Isle of Wight to evaluate Existing conditions as well as future traffic conditions that include development related traffic volumes. Assumptions regarding the study area, access, annualized growth rate, and traffic analysis scenarios were discussed with and approved by Isle of Wight County and VDOT staff prior to the completion of this analysis. The assumptions document is provided in **Appendix A**.

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Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	Study Area	Figure 1

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Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	South Harbor and the Proposed Tower Parcel Site Plan	Figure 2

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3 PROJECT BACKGROUND

3.1 STUDY AREA

The study area for this analysis, as illustrated in **Figure 1**, includes the following existing intersections:

- Carrollton Boulevard (U.S. Route 17) at Whippingham Parkway/Harbor Point Lane (signalized)
- Carrollton Boulevard at Eagle Harbor Parkway/Kings Cross Way (signalized)
- Carrollton Boulevard at Smiths Neck Road (signalized)
- Carrollton Boulevard at Northgate Drive (unsignalized)
- Carrollton Boulevard at Brewers Neck Boulevard (U.S. Route 258/State Route 32) (signalized)
- Carrollton Boulevard at Channell Way/Deep Bottom Drive (unsignalized)
- Carrollton Boulevard at Ashby Way/Omera Drive (signalized)

3.2 EXISTING ZONING

The South Harbor development is a part of the Newport Development Service District and is located on an existing vacant parcels zoned as Rural Agricultural Conservation District (RAC). **Figure 3** illustrates the existing zoning adjacent to the proposed site.

Existing zoning around and adjacent to the proposed parcels consist primarily of the following zoning districts: Rural Agricultural Conservation (RAC) District, Planned Development Residential District (PD-R), General Commercial District (GC), and Suburban Residential District (SR).

3.3 EXISTING (2017) CONDITIONS

Carrollton Boulevard is the primary north-south thoroughfare within the study area, providing connections to Brewers Neck Boulevard, the City of Suffolk, and the James River Bridge which provides direct access to/from the City of Newport News. **Figure 4** depicts existing roadway lane conditions for study area roadways and intersections. The following provides a brief description of existing roadway characteristics for each facility:

Carrollton Boulevard (U.S. Route 17) is oriented in a general north-south direction and configured as a four-lane, divided facility with a posted speed of 55 miles per hour (mph) within the study area with the exception of the portion of the corridor between Smiths Neck Road and Whippingham Parkway which is posted at 45 mph. Carrollton Boulevard is classified as an “Other Principal Arterial” by the Virginia Department of Transportation (VDOT). Average weekday traffic counts (AWDT) were collected over a continuous 72-hour period with vehicle classification and speed data for three (3) segments along Carrollton Boulevard in October 2017. **Table 1** displays the AWDT in vehicles per day (vpd), heavy vehicle percentage, and average speed in mph collected for each of the three (3) segments.

Brewers Neck Boulevard (U.S. Route 258/State Route 32) is oriented as an east-west roadway and configured as a four-lane, divided facility with a posted speed limit of 55 mph throughout the study area. Brewers Neck Boulevard is classified as an “Other Principal Arterial” by VDOT. Annual Average Daily Traffic (AADT) volumes were obtained from VDOT’s Daily Traffic Volume Estimates and this data indicated that the segment of Brewers Neck Boulevard between Benns Church Boulevard and Carrollton Boulevard carries approximately 26,000 vehicles per day (vpd) and 4% heavy vehicles.

Table 1: Carrollton Boulevard Average Weekday Daily Traffic Data

Roadway	From	To	AWDT (vpd)		Heavy Vehicle %		Average Speed (mph)	
			NB	SB	NB	SB	NB	SB
			Bi-Directional		Bi-Directional		Bi-Directional	
Carrollton Boulevard	Whippingham Parkway	Eagle Harbor Parkway	16,150	16,150	3%	4%	48.9	46.7
			32,300		3%		47.8	
Carrollton Boulevard	Northgate Drive	Brewers Neck Boulevard	13,600	13,700	4%	7%	58.1	56.0
			27,300		6%		57.0	
Carrollton Boulevard	Brewers Beck Boulevard	Channell Way	10,800	10,500	4%	4%	59.2	57.2
			21,300		4%		58.2	

Channell Way (Route 663) is oriented in a general east-west direction and configured as a two-lane, undivided roadway that connects to Carrollton Boulevard. A speed limit is not posted on Channell Way but for the purposes of this study, a speed of 25 mph was used for analysis. A 72-hour weekday traffic count was collected from October 16, 2018 to October 18, 2018. This traffic count indicated that the segment of Channell Way between Baltimore Lane and Whippingham Parkway carries approximately 550 vpd.

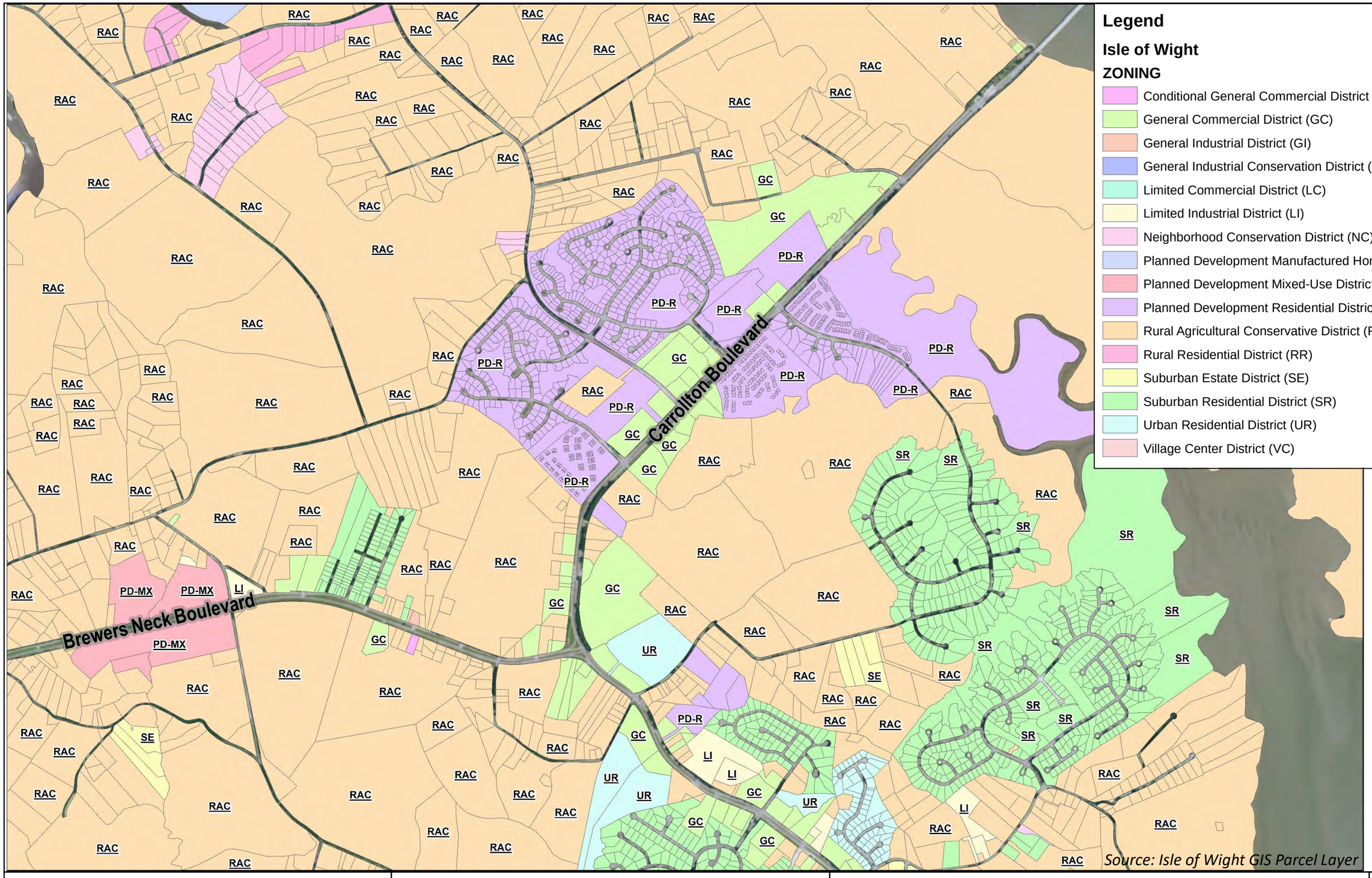
3.4 EXISTING PEDESTRIAN AND BICYCLE ACCOMMODATIONS

Existing pedestrian accommodations in the study area consist of a sidewalk provided from Smiths Neck Road to Fiddler Lane, with plans to extend to Northgate Drive on the west side of Carrollton Boulevard. Sidewalk is provided along the south side of Smiths Neck Road from Carrollton Boulevard to Chickahominy Loop.

Pedestrian accommodations are also located along the east side of Carrollton Boulevard from the southern site access driveway serving The Shoppes at Eagle Harbor, to the right-in/right-out only site access driveway serving the 7-Eleven to the north.

Additionally, a short segment of multi-use path is provided along the west side Carrollton Boulevard, extending to the south of the Eagle Harbor Parkway intersection (i.e., across the frontage of the Dunkin Donuts). Sidewalk is also provided along the south side of Eagle Harbor Parkway from the intersection with Carrollton Boulevard to the Eagle Harbor Parkway/Marsh Drive intersection.

Sidewalk is located on the east side of Carrollton Boulevard from the Eagle Harbor Parkway/Kings Cross intersection to Whippingham Parkway/Harbor Point Lane intersection. At this intersection sidewalk is provided along the south side of Harbor Point Lane as well as along the north side of Whippingham Parkway.



Legend

Isle of Wight

ZONING

- Conditional General Commercial District (C-GC)
- General Commercial District (GC)
- General Industrial District (GI)
- General Industrial Conservation District (GIC)
- Limited Commercial District (LC)
- Limited Industrial District (LI)
- Neighborhood Conservation District (NC)
- Planned Development Manufactured Home Park District (PD-MH)
- Planned Development Mixed-Use District (PD-MX)
- Planned Development Residential District (PD-R)
- Rural Agricultural Conservative District (RAC)
- Rural Residential District (RR)
- Suburban Estate District (SE)
- Suburban Residential District (SR)
- Urban Residential District (UR)
- Village Center District (VC)

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South Harbor TIA Update
Isle of Wight County, VA

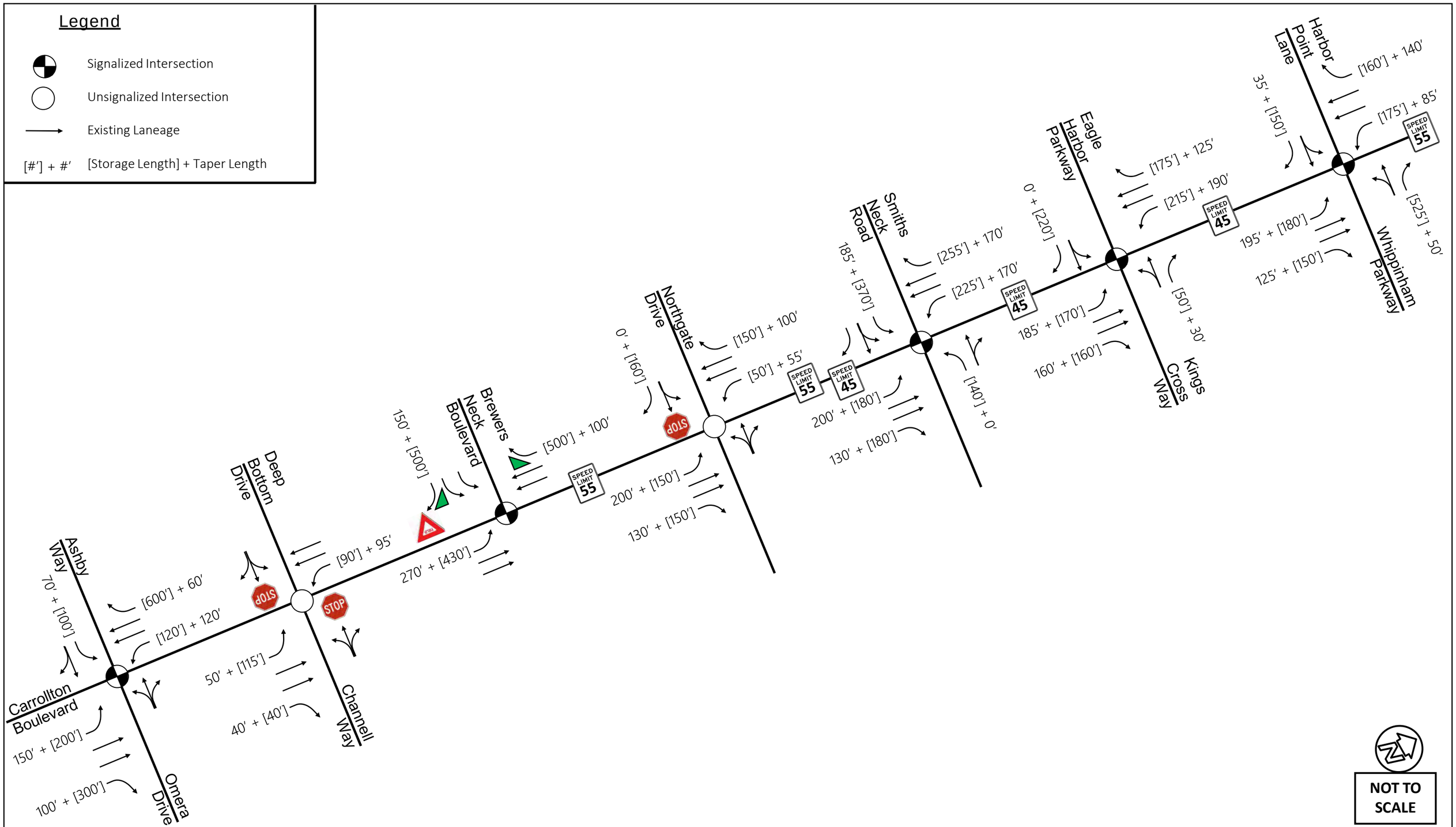
Existing Zoning

Figure 3

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Legend

- Signalized Intersection
- Unsignalized Intersection
- Existing Laneage
- [#'] + #' [Storage Length] + Taper Length



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Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	Existing (2017) Roadway Conditions	Figure 4

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3.5 EXISTING TRAFFIC

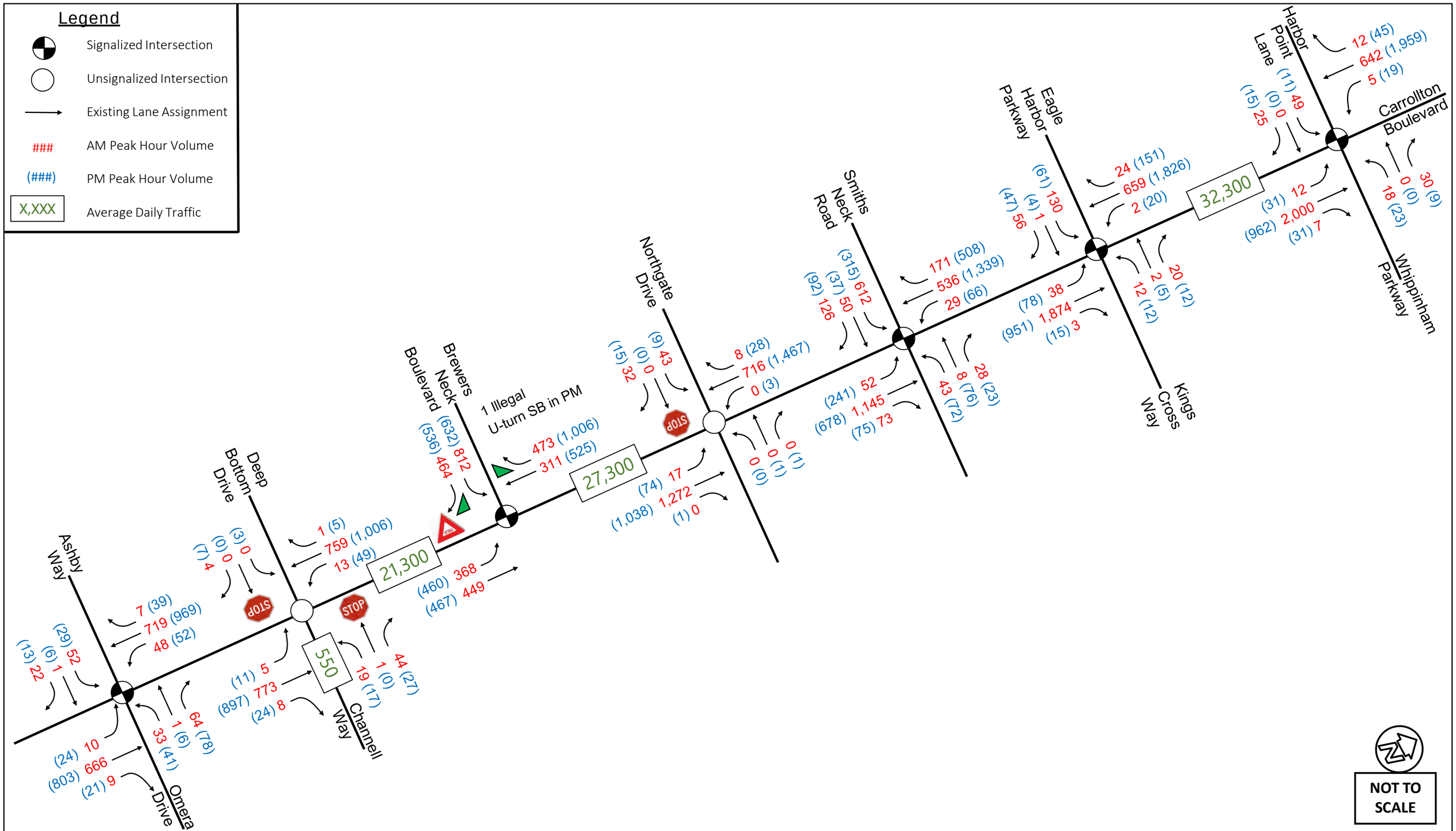
Based on initial discussions with Isle of Wight County, AM and PM peak hour conditions were analyzed to evaluate potential impacts of the proposed development. To coincide with these times, turning movement counts (TMC) were collected for the study area intersections.

AM and PM vehicular TMC data were collected at the following study area intersections on October 5, 2017 with the exception of the intersection of Carrollton Boulevard at Ashby Way/Omera Drive which was added to the study area at the request of Isle of Wight County and counted on November 15, 2017:

- Carrollton Boulevard (U.S. Route 17) at Whippingham Parkway/Harbor Point Lane (signalized)
- Carrollton Boulevard at Eagle Harbor Parkway/Kings Cross (signalized)
- Carrollton Boulevard at Smiths Neck Road (signalized)
- Carrollton Boulevard at Northgate Drive (unsignalized)
- Carrollton Boulevard at Brewers Neck Boulevard (U.S. Route 258/State Route 32) (signalized)
- Carrollton Boulevard at Channell Way/Deep Bottom Drive (unsignalized)
- Carrollton Boulevard at Ashby Way/Omera Drive (signalized)

The uniform peak periods for these intersections were found to be 7:00 AM to 8:00 AM and 4:45 PM to 5:45 PM for the AM and PM peak hours, respectively. The resulting AM and PM peak hour turning movement volumes from the abovementioned data sources are shown in **Figure 5.** Detailed count data is also provided in **Appendix B**.

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Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	2017 Existing AM and PM Peak Hour Traffic Volumes	Figure 5

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4 PROJECTED TRAFFIC VOLUMES

Based on discussions with the East West Partners of Virginia, Inc, the following horizon years were analyzed to determine future impacts of the proposed development based on the anticipated schedule for construction and opening:

- Scenario 1 – Existing (2017) traffic conditions
- Scenario 2 – Opening Year (2026) No-Build conditions – Opening Year traffic conditions with only a background growth rate applied (i.e., approved historical growth rate)
- Scenario 3 – Opening Year (2026) South Harbor No Bridge Build conditions – Opening Year traffic conditions with background growth rate applied plus traffic volumes generated by the South Harbor development but with No Bridge
- Scenario 4 – Opening Year (2026) The Crossing w/ Tower Parcel Build conditions – Opening Year traffic conditions with background growth rate applied plus traffic volumes generated by the South Harbor development but with No Bridge and traffic generated by the proposed Tower Parcel residential development
- Scenario 5 – Opening Year (2032) No-Build conditions – Opening Year +6 traffic conditions with only a background growth rate applied (i.e., approved historical growth rate)
- Scenario 6 – Opening Year (2032) South Harbor No Bridge Build conditions – Opening Year +6 traffic conditions with background growth rate applied plus traffic volumes generated by the South Harbor development but with No Bridge
- Scenario 7 – Opening Year (2032) The Crossing w/ Tower Parcel Build conditions – Opening Year +6 traffic conditions with background growth rate applied plus traffic volumes generated by the South Harbor development but with No Bridge and traffic generated by the proposed Tower Parcel residential development

4.1 BACKGROUND TRAFFIC GROWTH

Historical traffic data was obtained from VDOT along Carrollton Boulevard and Brewers Neck Boulevard within the study areas, as shown in **Table 2**. Based on a review of this data, volumes are varied with traffic experiencing times of both growth and decline. On average, a historic growth of approximately 1.5% has occurred on these study roadways.

Table 2: Study Area Historic ADTs

Roadway	Location	2012	2013	2014	2015	2016	Average
Carrollton Boulevard	Suffolk City Limits to Brewers Neck Boulevard	15,000	15,000	15,000	15,000	15,000	0.00%
	Growth Rate to 2016	*0.0%*	*0.0%*	*0.0%*	*0.0%*	-	
Carrollton Boulevard	Brewers Neck Boulevard to Ragged Island	29,000	28,000	28,000	29,000	29,000	0.74%
	Growth Rate to 2016	*0.0%*	*1.2%*	*1.8%*	*0.0%*	-	
Brewers Neck Boulevard	Benns Church Boulevard to Carrollton Boulevard	24,000	24,000	24,000	25,000	26,000	3.2%
	Growth Rate to 2016	*2.0%*	*2.7%*	*4.1%*	*4.0%*	-	
Overall Average Growth Rate							1.3%

Source: VDOT Traffic Engineering Division – Annual Average Daily Traffic Volume Estimates By Section of Route

In addition to the natural/historical trend of growth of 1.5%, there are other approved developments that are not yet constructed within the study area. In conversations with VDOT and Isle of Wight County staff it was determined, that to account for these approved, but unbuilt developments an additional 0.5% should be added to the historical growth rate. This results in a growth rate of 2% that will be applied exponentially to calculate background traffic volumes for future analysis years (i.e., 2026 and 2032)

Additionally, diverted trips from Nike Park Extension and traffic related to the Crossings development were also considered when determining the future No Build volumes.

4.2 TRIP GENERATION

The *ITE Trip Generation 10th Edition* (2017) Trip Generation Rates and relevant Land Use Codes were used to develop the trip generation estimates for the South Harbor development and the proposed Tower Parcel development. Land uses for the proposed South Harbor development include Senior Adult Housing (Attached and Detached – ITE Land Use Codes 251 and 252). ITE Code 210 (Single Family Detached Housing) was used for the Tower Parcel residential development. In addition, there are two outparcels identified in the master plan located to the south/east of Carrollton Boulevard between Northgate Drive and the southern site access driveway serving the Shoppes at Eagle Harbor. These outparcels are anticipated to have 1.7 and 2.0 acres of developable land area. For the purposes of this TIA, the outparcels were assumed to develop as general office building (Land Use Code: 710) and medical-dental office building (Land Use Code: 720) land uses. The building square footage was estimated by applying a 0.2 floor-to-area ratio (FAR) to the outparcel size. No pass-by or internal capture rate reductions were included in this analysis. Initial trip generation calculations based on published ITE rates for the proposed development are shown in **Table 3**.

Table 3: Proposed South Harbor Trip Generation

ITE Code	ITE Description	Density	Unit	Daily	AM Peak Hour			PM Peak Hour		
					Total	Enter	Exit	Total	Enter	Exit
251	Senior Adult Housing – Detached	165	Dwelling Units	874	60	20	40	71	43	37
252	Senior Adult Housing - Attached	175	Dwelling Units	678	35	12	23	44	24	20
Total Residential				*1,552*	*95*	*32*	*63*	*115*	*68*	*47*
710	General Office Building (0.2 FAR)	17,400	Square Feet	195	43	37	6	22	4	17
720	Medical-Dental Office Building (0.2 FAR)	14,800	Square Feet	481	41	32	8	52	15	38
Out Parcels				*676*	*84*	*69*	*14*	*74*	*18*	*55*
Total				2,228	178	101	77	189	86	101

However, on conversations with Isle of Wight County and VDOT, it was discussed and agreed to that the ITE Trip Generation rates presented may be low, compared to what is likely anticipated for the proposed Age Restricted Residential land use. Based on consensus among the group, Kimley-Horn reviewed two independent studies that documented the trip generation characteristics of 55+ (Age Restricted) Communities in comparison to both traditional single family and 55+/Unrestricted Residential Communities. Data from these reports indicated that Age Restricted/Senior Housing Communities generate approximately 2/3 of the amount of daily traffic when compared to a typical single-family development. The data also suggested that based on income and vehicle ownership as well as non-residential traffic activity, that a factor of 1.5 (i.e., 50%) should be applied to peak hour trip generation rates to better account for the non-household travel. The results of these proposed adjustments to Senior Adult Housing – Detached and Attached trip generation rates in comparison to Single Family Detached Housing are shown in **Table 4**. Reference documents and adjustment calculations are provided as an attachment to this assumptions document. Study data references and documentation can be found in **Appendix C**. These proposed adjusted trip generation rates were applied to the South Harbor development intensities and resulted in the overall trip generation potential as shown in **Table 5**.

Table 4: Adjusted Trip Generation for the South Harbor Age Restricted Development

210 – Single Family Detached Housing			251 – Senior Adult Housing Detached			252 – Senior Housing Attached		
Original Trip Rates per ITE								
Daily	AM	PM	Daily	AM	PM	Daily	AM	PM
9.44	0.74	0.99	4.27	0.24	0.30	3.70	0.20	0.26
Adjusted Trip Rates								
Daily	AM	PM	Daily	AM	PM	Daily	AM	PM
			7.12	0.40	0.50	6.17	0.40	0.50

Table 5: Revised South Harbor Trip Generation

ITE Code	ITE Description	Density	Unit	Daily	AM Peak Hour			PM Peak Hour		
					Total	Enter	Exit	Total	Enter	Exit
251	Senior Adult Housing – Detached	165	Dwelling Units	1,174	66	22	44	83	51	30
252	Senior Adult Housing - Attached	175	Dwelling Units	1,079	70	24	46	88	47	40
Total Residential				*2,253*	*136*	*46*	*90*	*170*	*98*	*70*
710	General Office Building (0.2 FAR)	17,400	Square Feet	195	43	37	6	22	4	17
720	Medical-Dental Office Building (0.2 FAR)	14,800	Square Feet	481	41	32	8	52	15	38
Out Parcels				*676*	*84*	*69*	*14*	*74*	*19*	*55*
Total				2,929	220	115	104	244	117	125

Additional trip generation estimates are included for The Crossings Tower Parcel which includes approximately 52 single family dwelling units (Land Use Code 210) as shown in **Table 6**.

Table 6: Proposed Tower Parcel Trip Generation

ITE Code	ITE Description	Density	Unit	Daily	AM Peak Hour			PM Peak Hour		
					Total	Enter	Exit	Total	Enter	Exit
210	Single Family Detached Housing	52	Dwelling Units	491	38	10	28	51	32	19
Total Residential				491	38	10	28	51	32	19

4.3 TRAFFIC DISTRIBUTION AND ASSIGNMENT

The directional distribution and assignment of trips generated by the proposed parcels were identified for the development. The directional distribution and assignment of trips were determined by reviewing existing travel patterns, proposed site access, and population densities. From this review, the following global traffic distributions were derived and applied to the analysis of the study area:

- 50% of the trips generated will travel to/from the north on Carrollton Boulevard
- 35% of the trips generated will travel to/from the south on Carrollton Boulevard
- 5% of the trips generated will travel to/from the west on Smiths Neck Road
- 10% of the trips generated will travel to/from the west on Brewers Neck Boulevard

The global traffic distributions were applied to three separate trip assignment “zones” due to their proximity to proposed access locations and restrictions on internal circulation. The trip assignment zones as detailed below reference the phasing of the development, as well as the proposed uses (i.e., office, residential and Tower Parcel residential), as shown previously in **Figure 2**:

- Residential North – Phase 1 and Phase 3 of the South Harbor Development
- Residential South – Phase 2, Phase 4, and Phase 5 of the South Harbor Development and traffic associated with The Crossings Tower Parcel
- Office – Outparcel office land uses

As shown previously in **Figure 2**, the proposed parcels will not introduce any new access points to existing roadways. The South Harbor development will feature four (4) access points to Carrollton Boulevard. For the purposes of this study, the two direct access points to Carrollton Boulevard (i.e., via Smiths Neck Road and Northgate Drive), the connection at Channell Way, and the connection via Spadea Way to Carrollton Boulevard were modeled and analyzed under existing and future conditions. Detailed peak hour trip distribution and trip assignment for the proposed parcels are shown in **Figure 6**, **Figure 7**, and **Figure 8** respectively.

4.4 TOTAL TRAFFIC

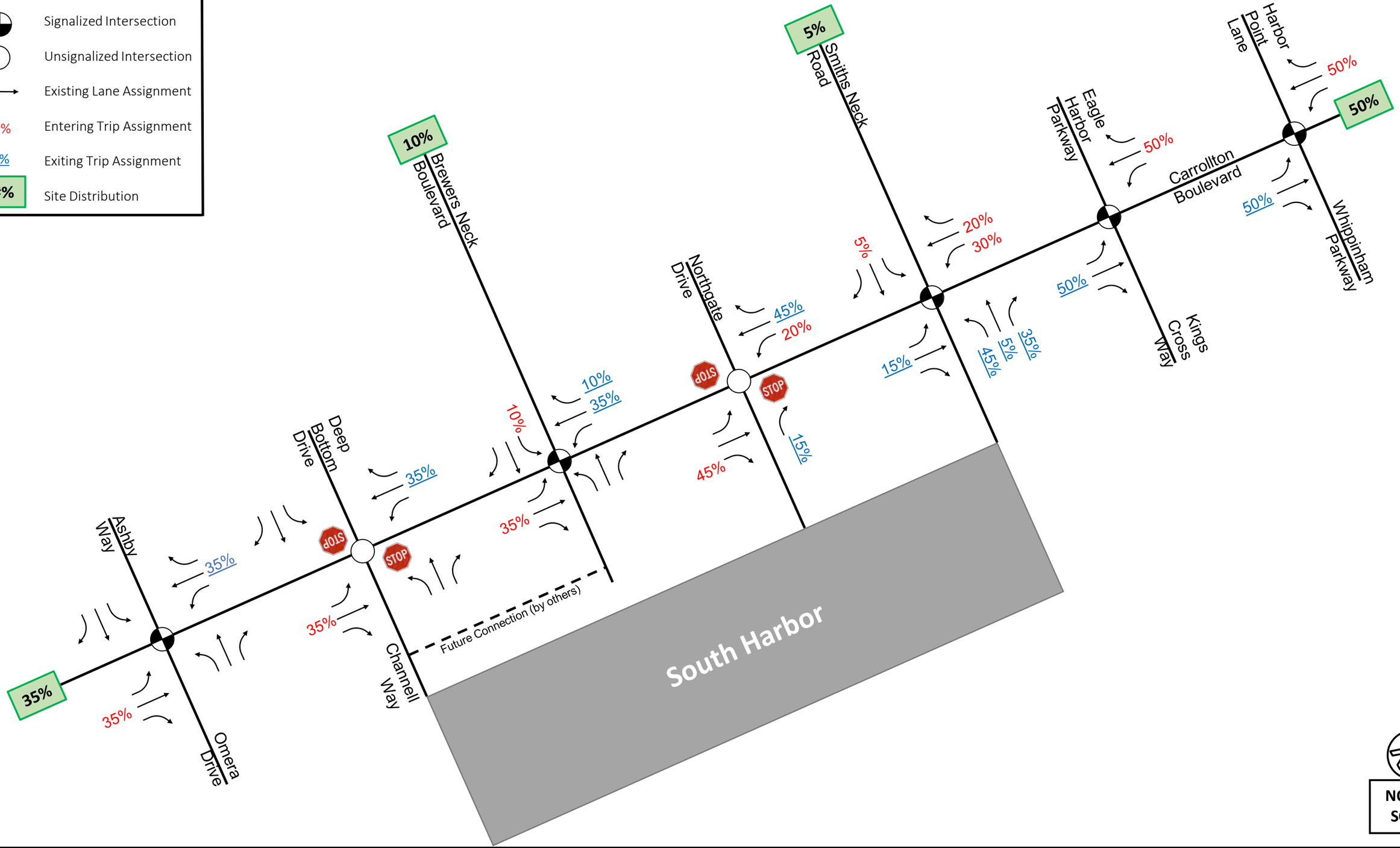
Peak hour site trip assignments were developed by multiplying the proposed trips by the agreed-to trip distributions as discussed previously in **Sections 4.2** and **4.3**. Trip assignments associated with the proposed development were then added to future background traffic volumes (i.e., No Build) to develop total 2026 Build and 2032 Build traffic volumes.

All future traffic volumes used in this analysis are illustrated in **Figure 9** through **Figure 16.**

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Legend

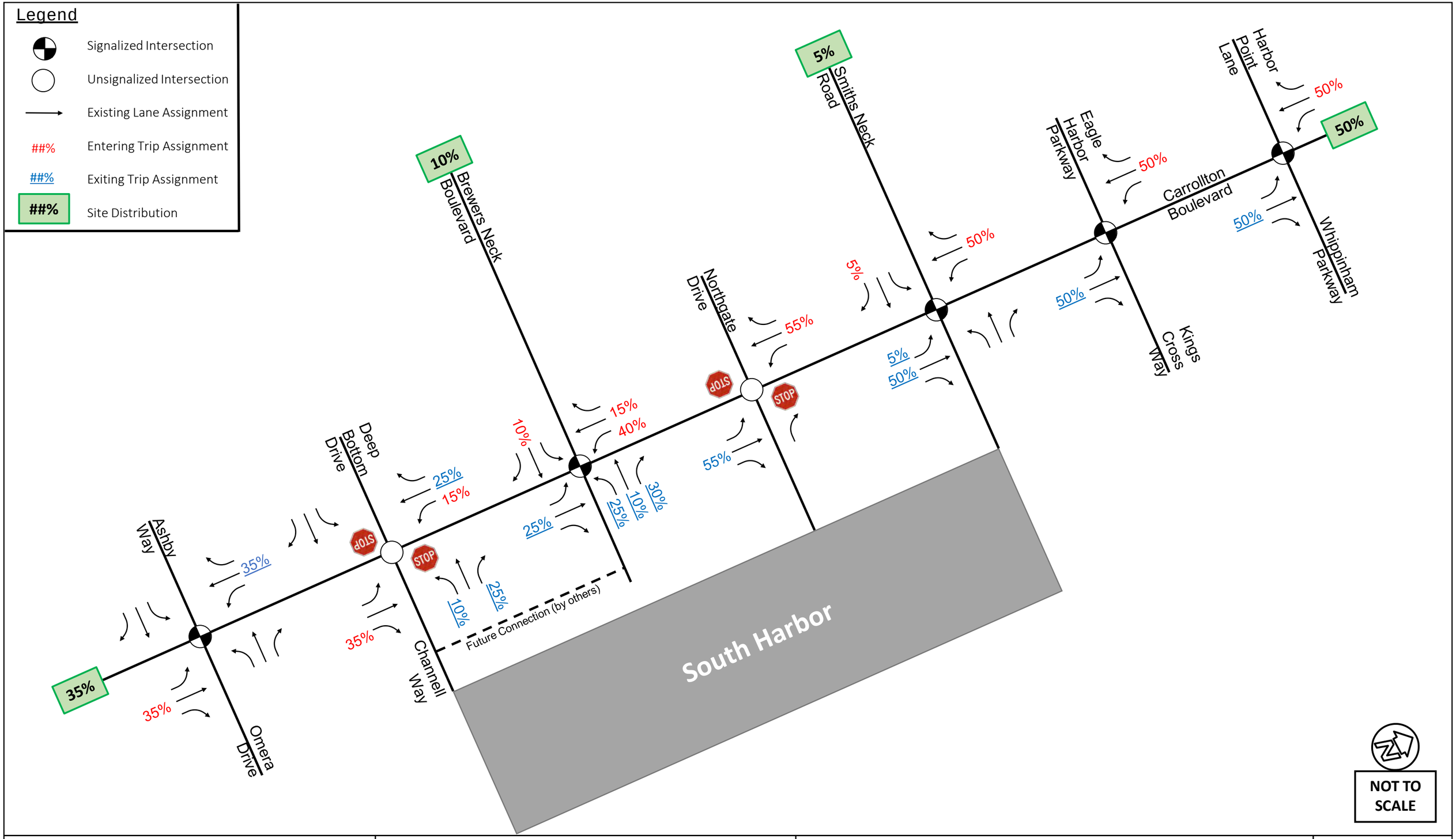
- Signalized Intersection
- Unsignalized Intersection
- Existing Lane Assignment
- ##% Entering Trip Assignment
- ##% Exiting Trip Assignment
- **##%** Site Distribution



NOT TO SCALE

Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	Trip Distribution and Assignment (Residential North Uses)	Figure 6

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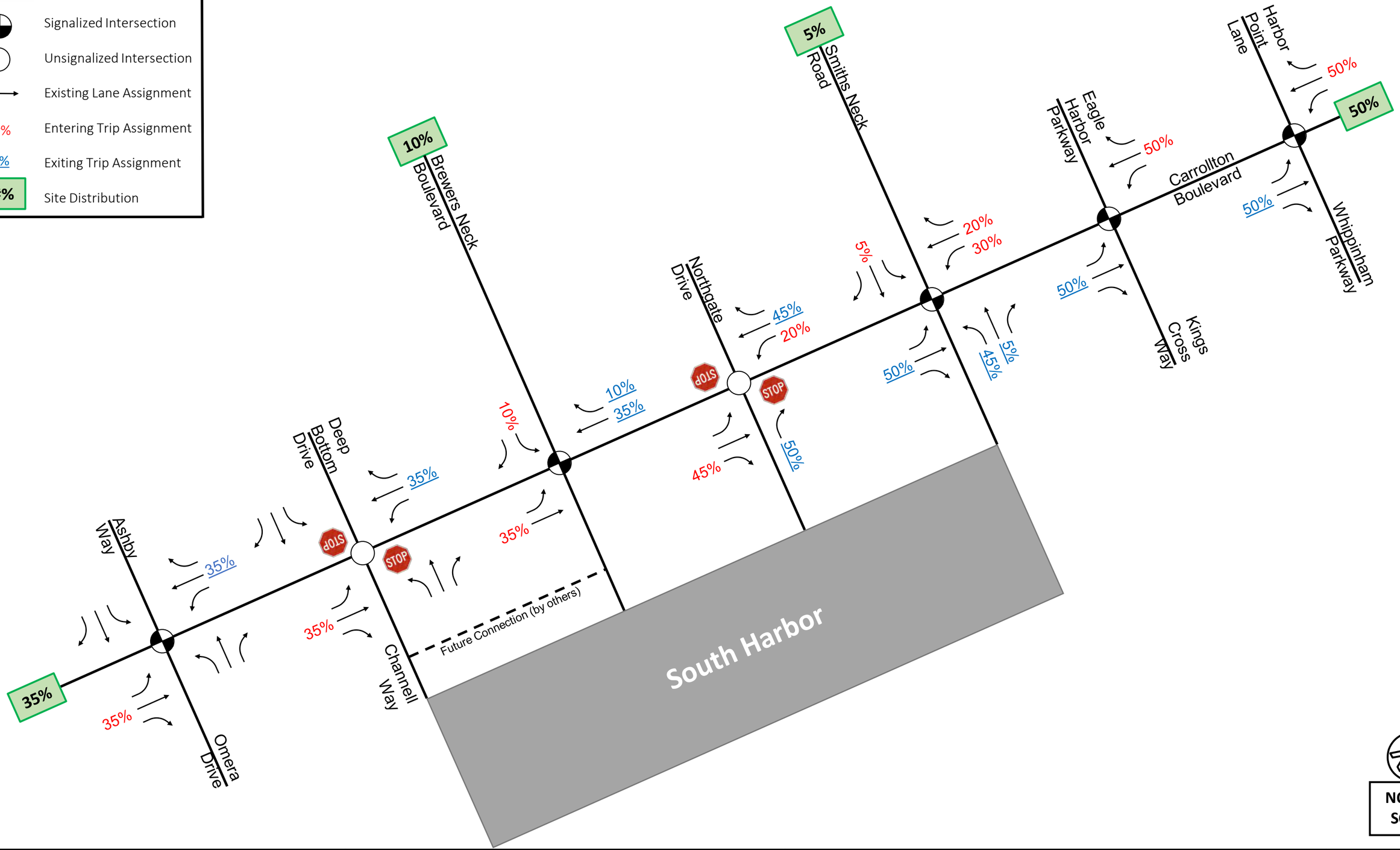


Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	Trip Distribution and Assignment (Residential South and Tower Parcel Uses)	Figure 7

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Legend

- Signalized Intersection
- Unsignalized Intersection
- Existing Lane Assignment
- ##% Entering Trip Assignment
- ##% Exiting Trip Assignment
- ##% Site Distribution

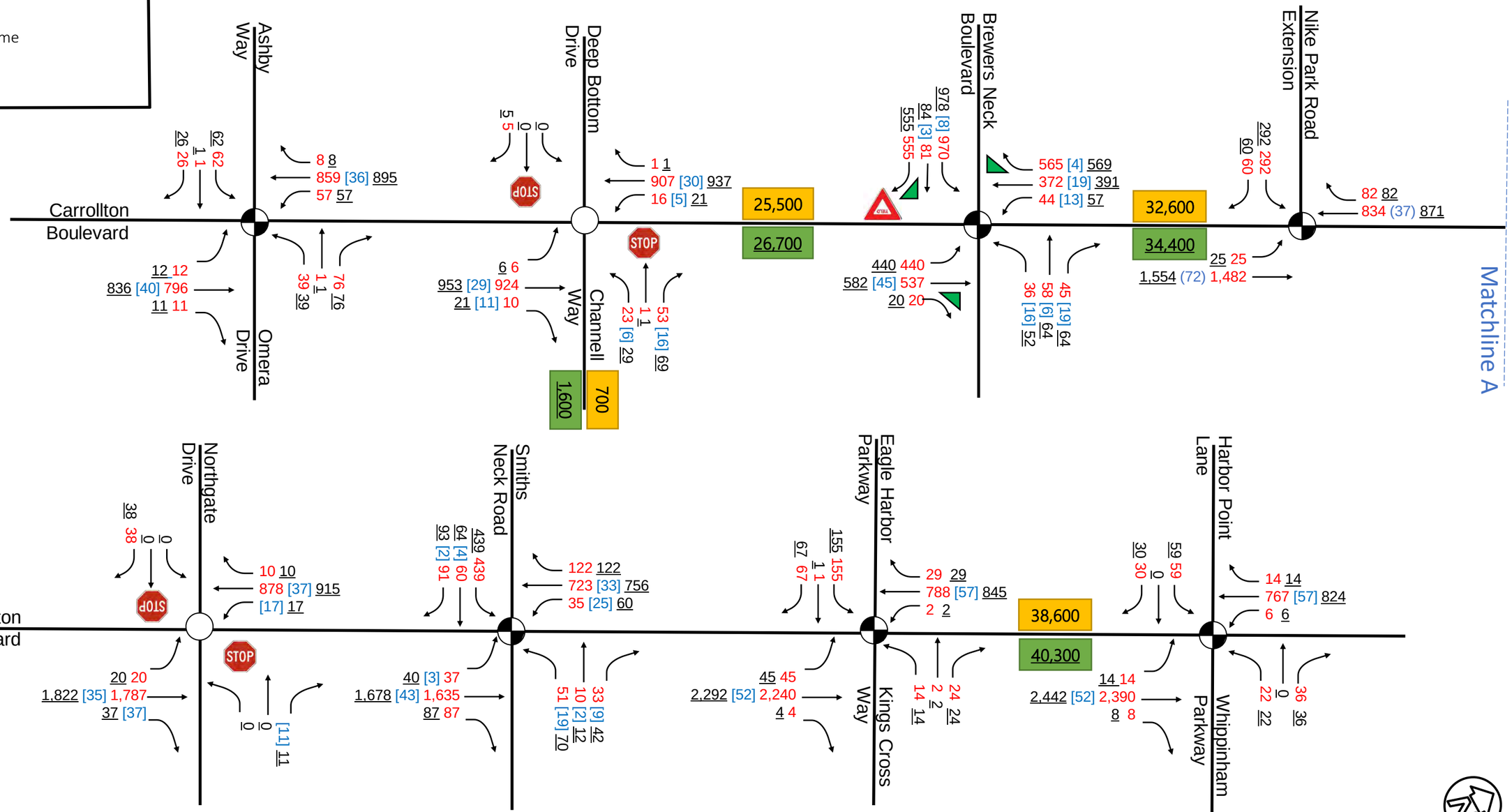


Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	Trip Distribution and Assignment (Office Uses)	Figure 8

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Legend

- Signalized Intersection
- Unsignalized Intersection
- ### 2026 Background Volume
- [###] Site Traffic
- ### Total Peak Hour Volume
- ### 2026 No Build ADT
- ### 2026 Build ADT



NOT TO SCALE

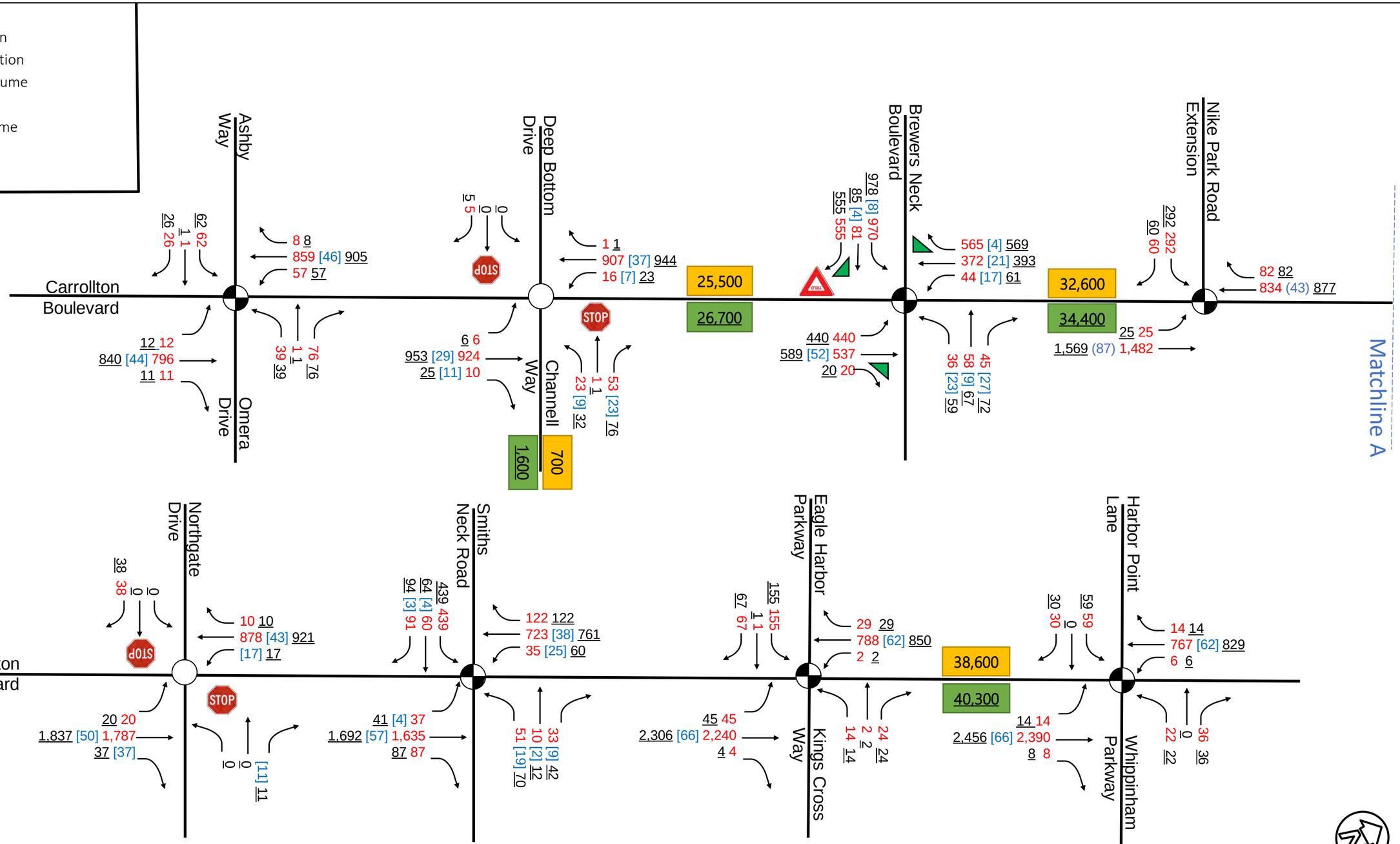
Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	2026 South Harbor Build AM Peak Hour Traffic Volumes

Figure 9

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Legend

- Signalized Intersection
- Unsignalized Intersection
- ### 2026 Background Volume
- [###] Site Traffic
- ### Total Peak Hour Volume
- ### 2026 No Build ADT
- ### 2026 Build ADT

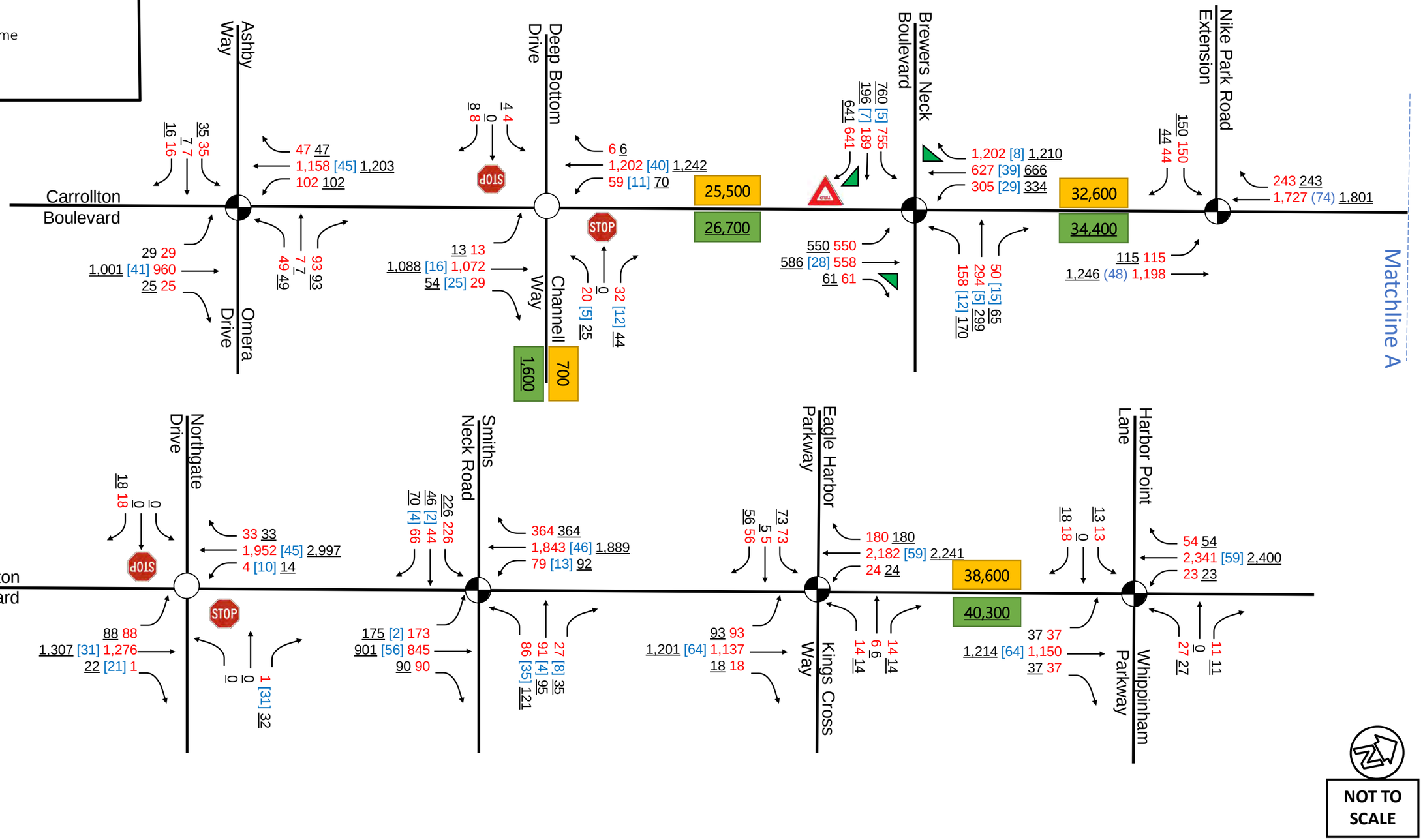


Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	2026 South Harbor and Tower Parcel Build AM Peak Hour Traffic Volumes	Figure 10

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Legend

- Signalized Intersection
- Unsignalized Intersection
- ### 2026 Background Volume
- [###] Site Traffic
- ### Total Peak Hour Volume
- ### 2026 No Build ADT
- ### 2026 Build ADT

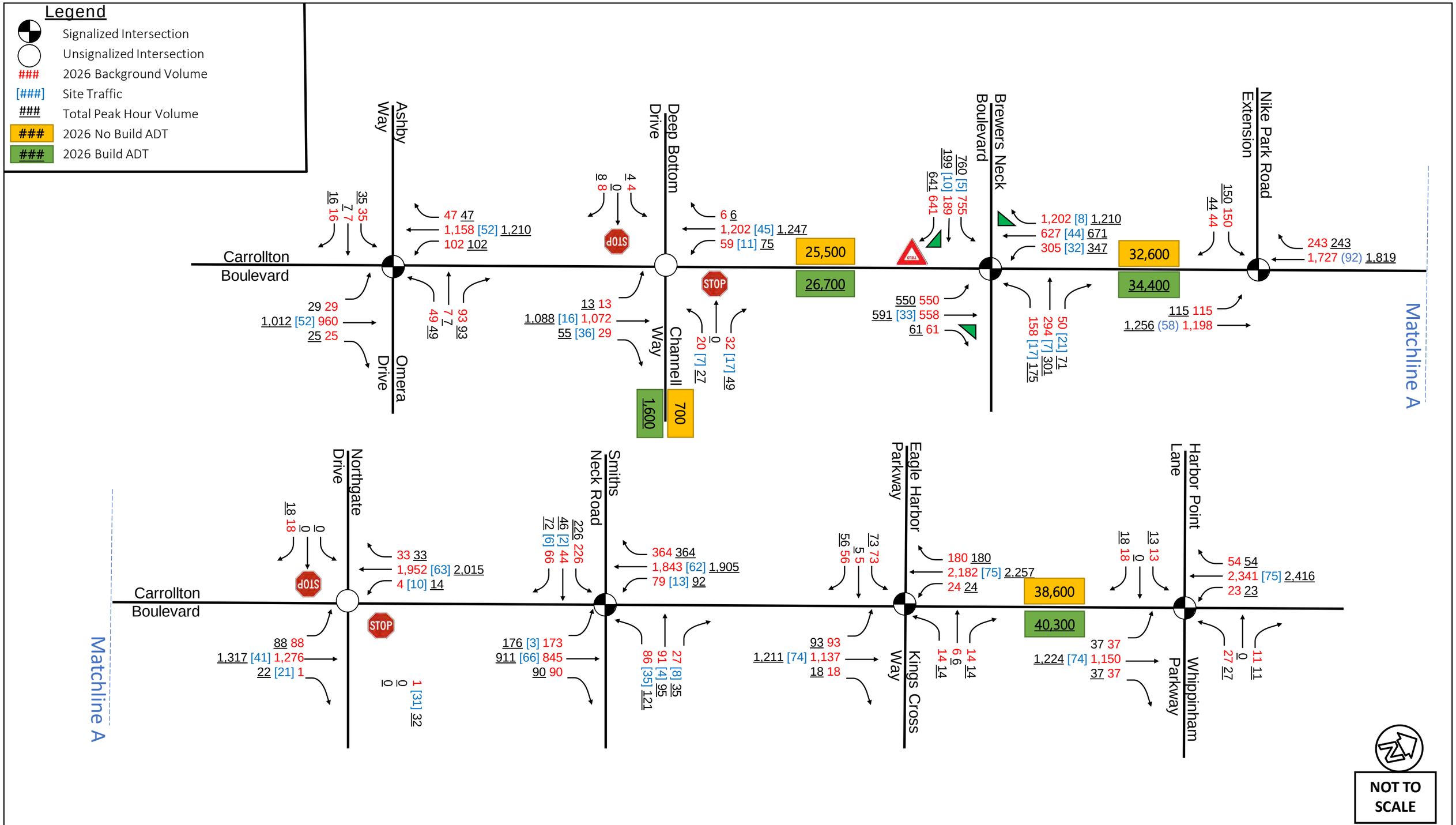


NOT TO SCALE

Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	2026 South Harbor Build PM Peak Hour Traffic Volumes

Figure 11

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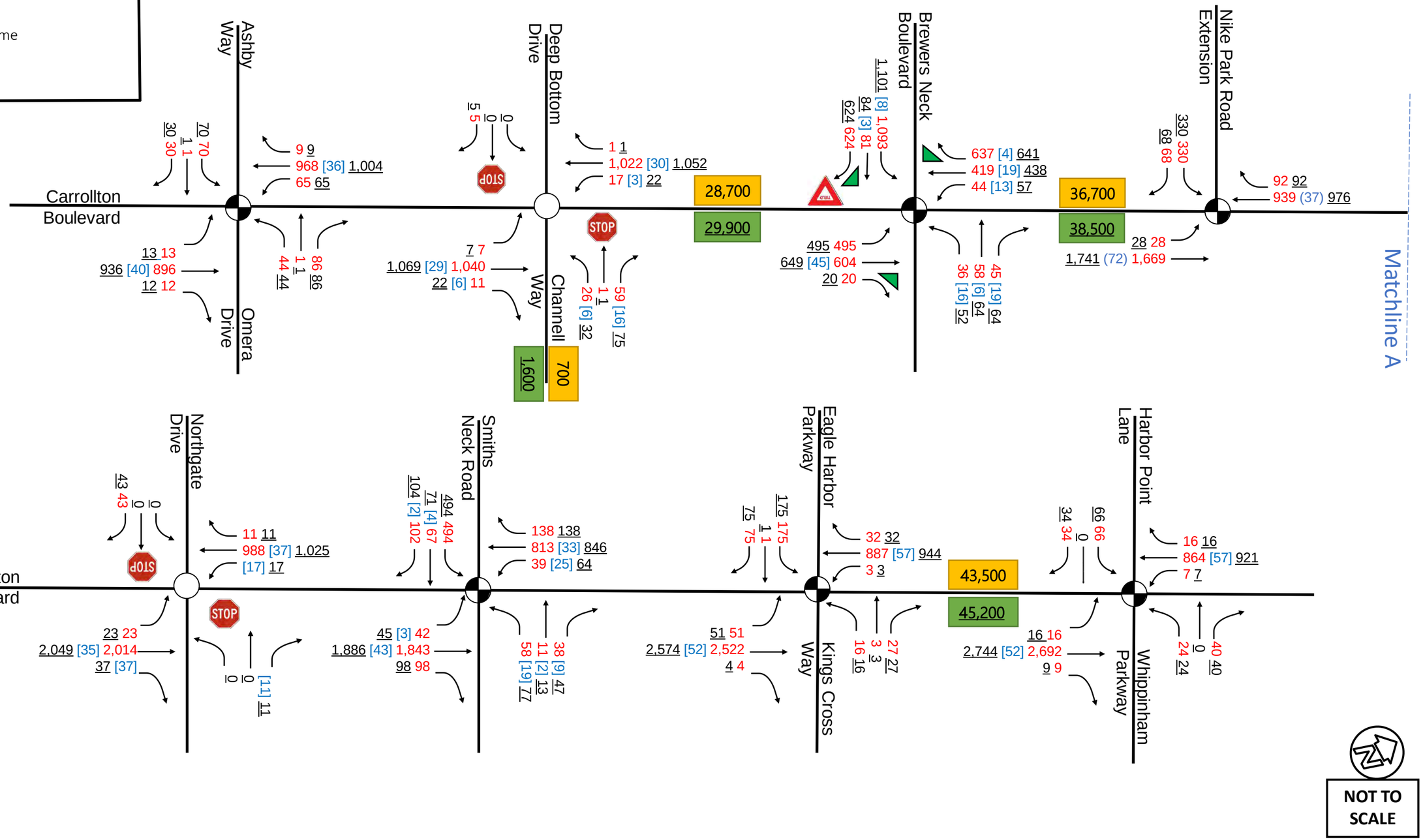


Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	2026 South Harbor and Tower Parcel Build PM Peak Hour Traffic Volumes	Figure 12

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Legend

- Signalized Intersection
- Unsignalized Intersection
- ### 2032 Background Volume
- [###] Site Traffic
- ### Total Peak Hour Volume
- ### 2032 No Build ADT
- ### 2032 Build ADT

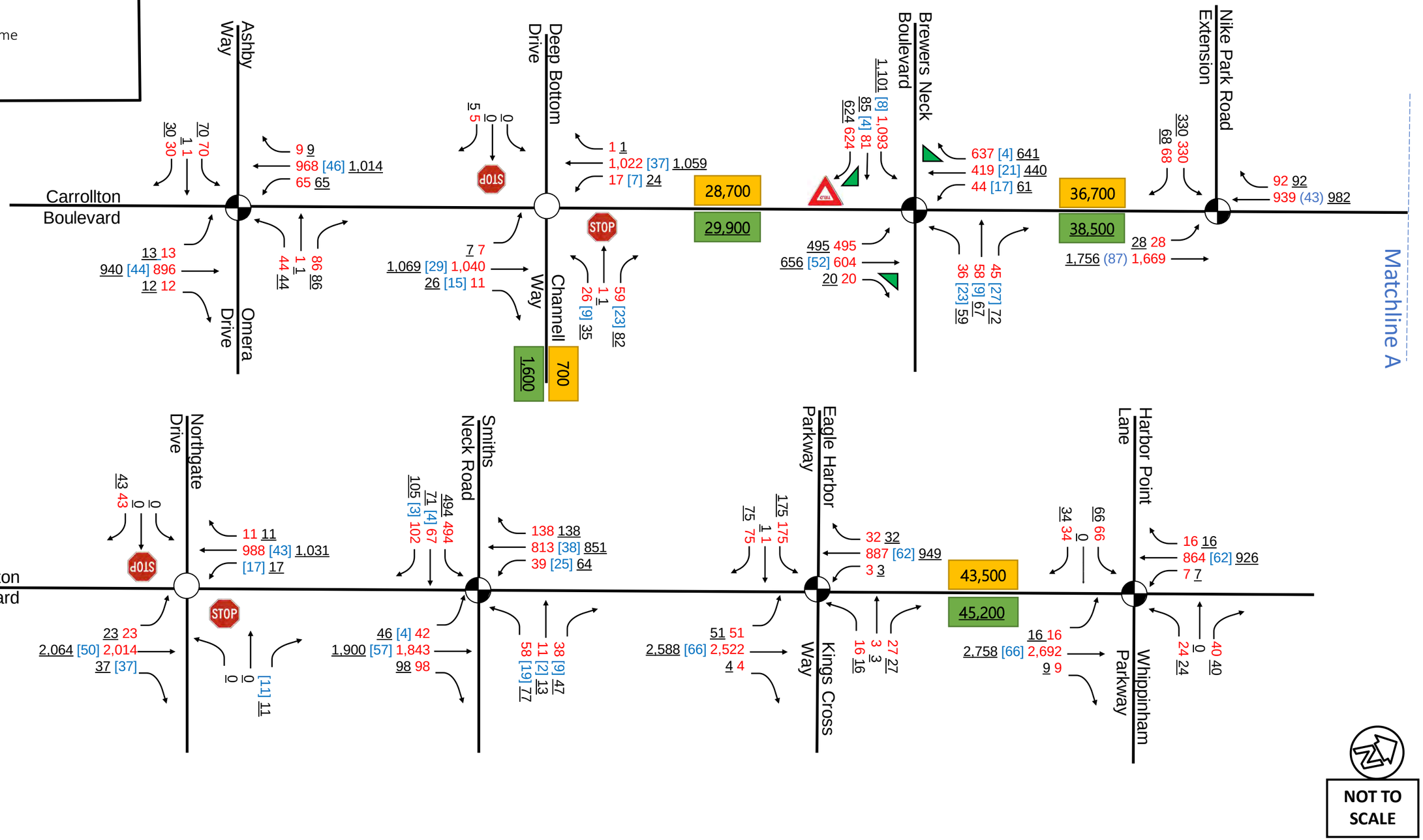


Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	2032 South Harbor Build AM Peak Hour Traffic Volumes	Figure 13

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Legend

- Signalized Intersection
- Unsignalized Intersection
- ### 2032 Background Volume
- [###] Site Traffic
- ### Total Peak Hour Volume
- ### 2032 No Build ADT
- ### 2032 Build ADT



NOT TO SCALE

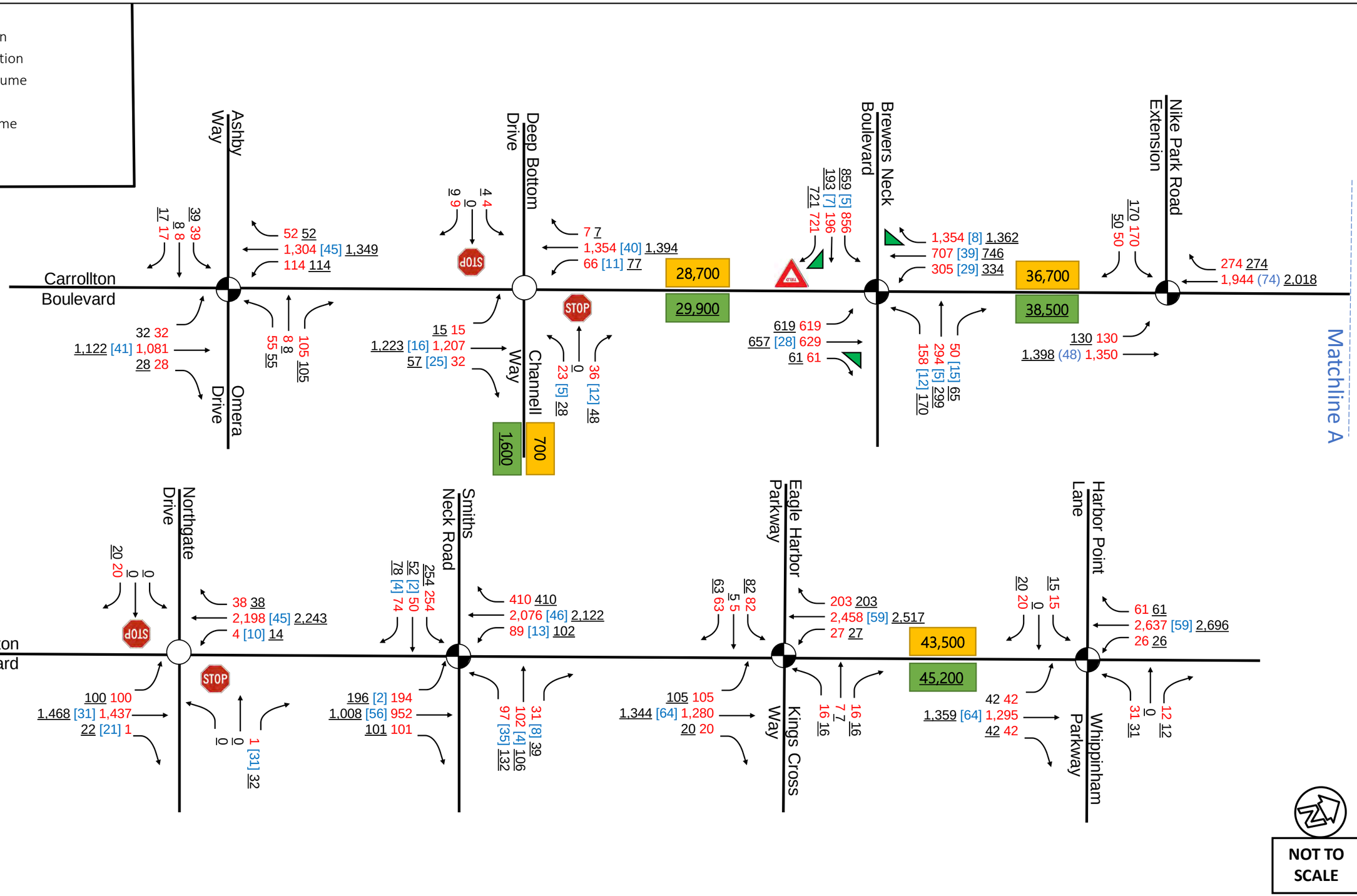
Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	2032 South Harbor and Tower Parcel Build AM Peak Hour Traffic Volumes

Figure 14

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Legend

- Signalized Intersection
- Unsignalized Intersection
- ### 2032 Background Volume
- [###] Site Traffic
- ### Total Peak Hour Volume
- ### 2032 No Build ADT
- ### 2032 Build ADT

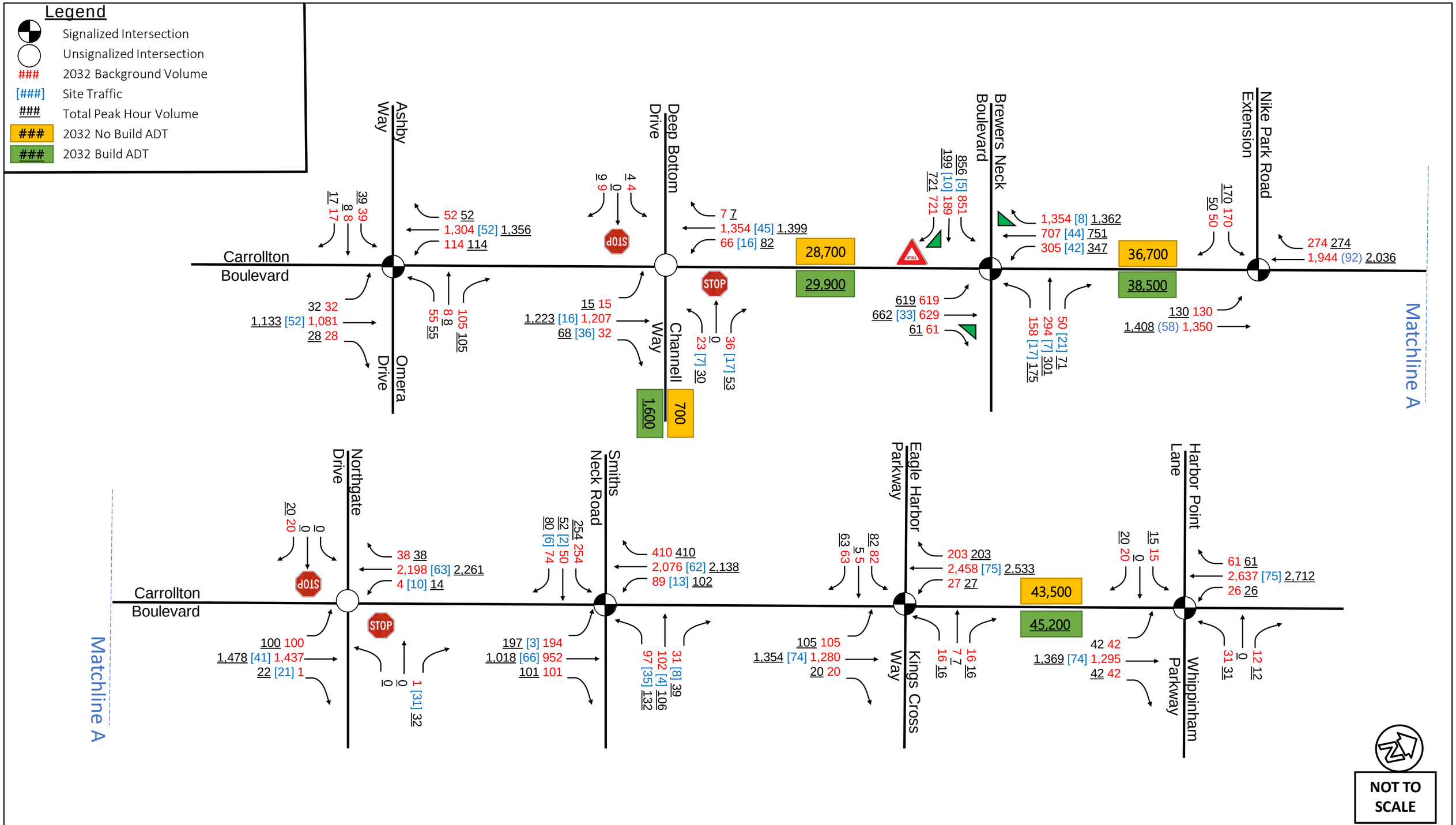


NOT TO SCALE

Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	2032 South Harbor Build PM Peak Hour Traffic Volumes

Figure 15

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Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	2032 South Harbor and Tower Parcel Build PM Peak Hour Traffic Volumes	Figure 16

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5 FUTURE ROADWAY GEOMETRY

The following proposed roadway and intersection improvement projects are currently under design and will be implemented by VDOT or others. It is anticipated that these other roadway projects will be completed by the opening year of the South Harbor development. Both improvements have funds allocated to the design and construction through the VDOT SMART Scale funding program and will be administered through VDOT.

- Nike Park Road Extension
- Carrollton Boulevard at Brewers Neck Boulevard Intersection Improvements

5.1 NIKE PARK ROAD EXTENSION

The Nike Park Road Extension is a VDOT improvement project that is administered and fully funded through the VDOT SMART Scale Program. From the Preliminary Field Inspection (PFI) plans provided by VDOT, the Nike Park Road Extension includes the extension of Nike Park Road from the existing intersection of Nike Park Road at Reynolds Drive to a proposed intersection of Carrollton Boulevard at Nike Park Road Extension, as shown in **Figure 17**.

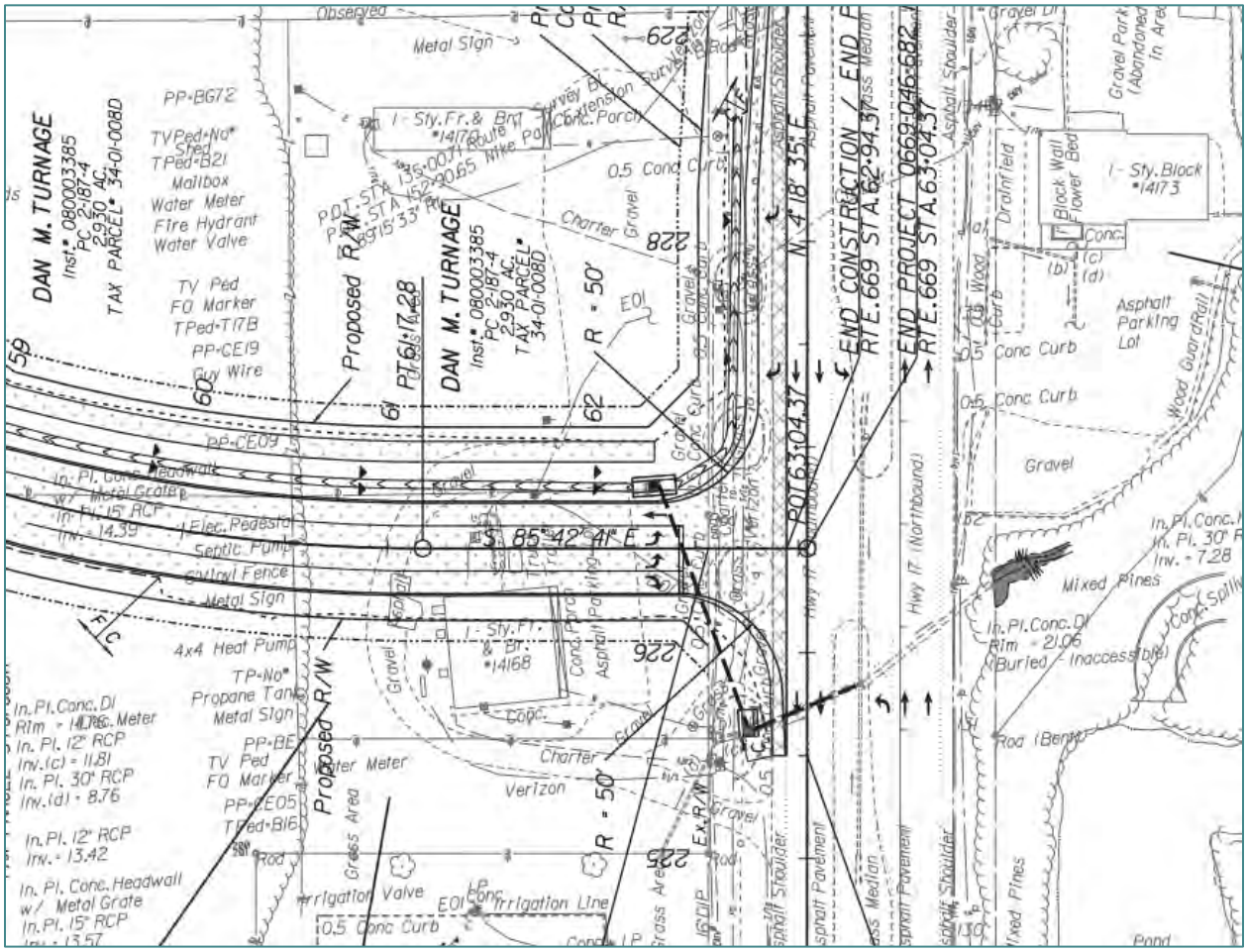
This extension consists of approximately 1 mile of new two-lane roadway with a shared-use path on one side. This proposed intersection is located approximately 1,150 feet north of Brewers Neck Boulevard and will be signalized under future conditions. The Nike Park Road Extension, eastbound approach, will have two exclusive eastbound left-turn lanes and one exclusive eastbound right-turn lane at the intersection with Carrollton Boulevard. Additionally, there will be an exclusive northbound left-turn lane and an exclusive southbound right-turn lane to serve the Nike Park Road Extension.

As part of the future traffic operational analysis, consideration was given to a portion of the background traffic being diverted from Smiths Neck Road with the addition of the Nike Park Road Extension. Based on model simulations conducted as part of the Isle of Wight County *Brewers Neck Corridor Study* (2014), it was shown that approximately 30% of traffic on Smiths Neck Road diverted onto the proposed Nike Park Road Extension. For the purposes of this TIA, 40% of the background traffic on Smiths Neck Road will be shifted onto Nike Park Road Extension for the 2026 and 2032 future scenarios. These roadway and intersection improvements have been included in the 2026 and 2032 No Build and Build analysis.

5.2 CARROLLTON BOULEVARD AT BREWERS NECK BOULEVARD INTERSECTION IMPROVEMENTS

The improvements at the intersection of Carrollton Boulevard at Brewers Neck Boulevard are a VDOT improvement project that is being administered and partially funded through the VDOT SMART Scale Program. From the PFI plans provided by VDOT, these improvements involve construction of an additional northbound left-turn lane onto Brewers Neck Boulevard, as shown in **Figure 18**. An additional receiving lane will be constructed from the median on Brewers Neck Boulevard for the proposed northbound left-turn lane.

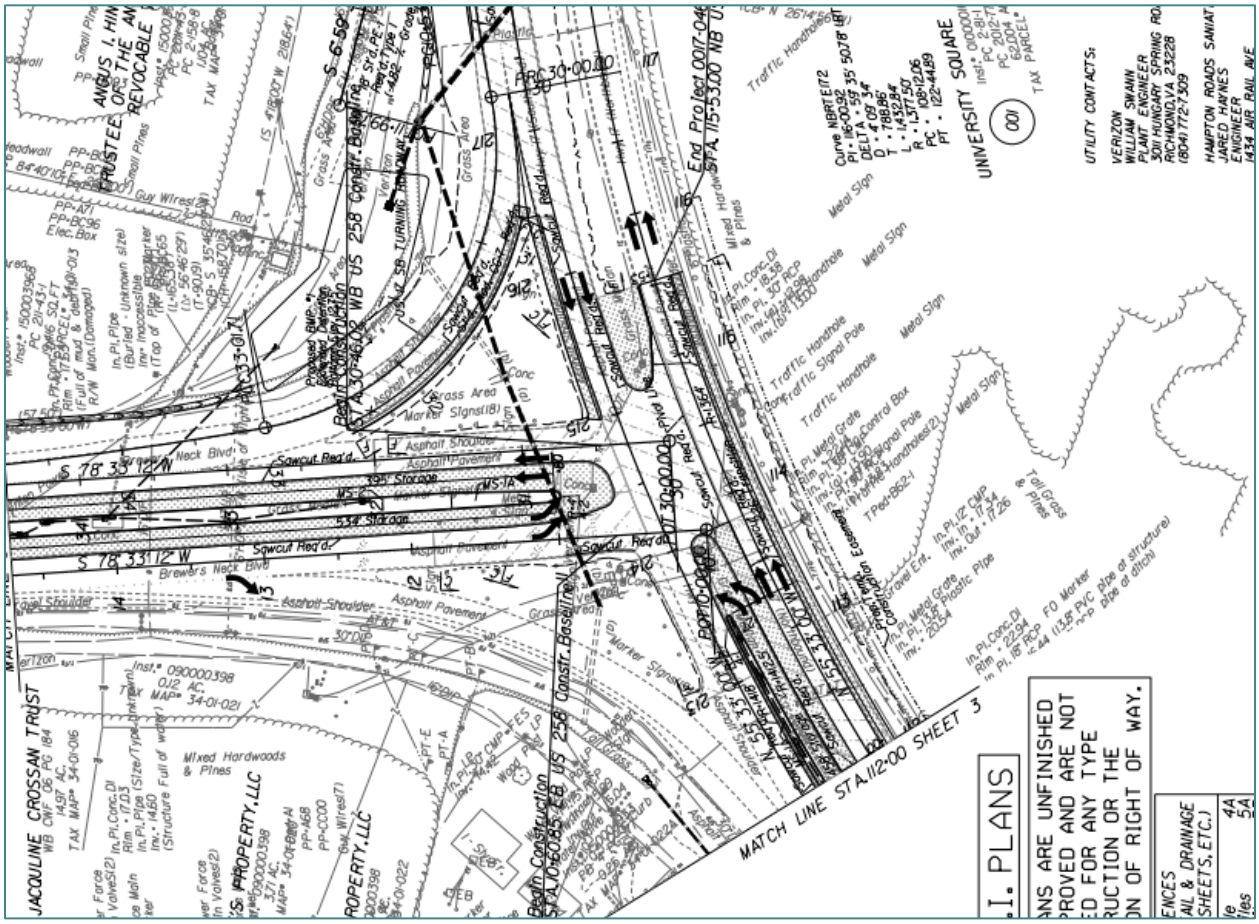
Figure 17: Nike Park Road Extension



Source: VDOT

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Figure 18: Carrollton Boulevard at Brewers Neck Boulevard Intersection Improvements



Source: VDOT

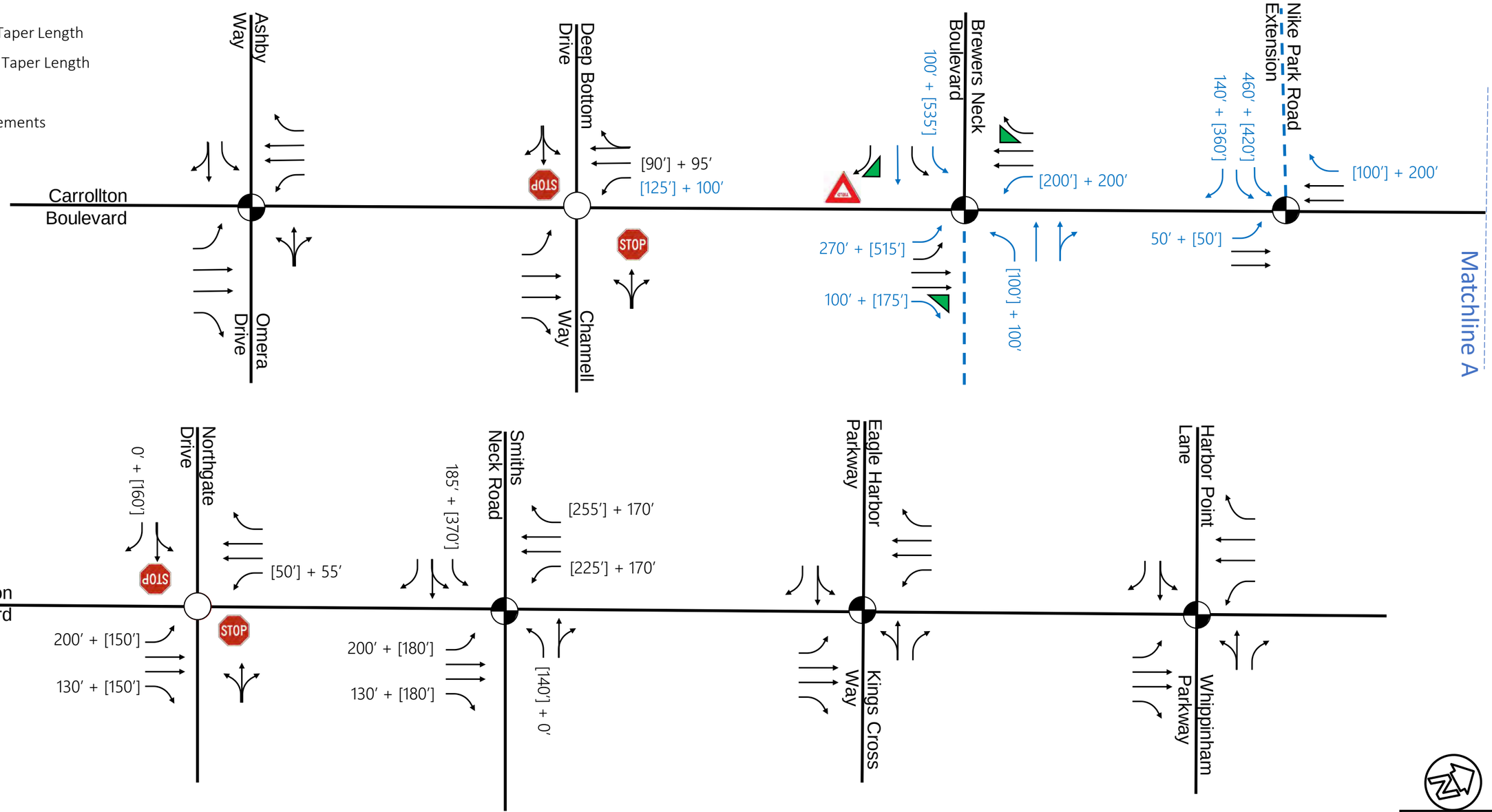
5.2.1 THE CROSSINGS INTERSECTION IMPROVEMENTS

In addition to the VDOT SMART Scale funded Carrollton Boulevard at Brewers Neck Boulevard intersection improvements, additional improvements for this intersection were proposed as part of the approved traffic study associated with the Crossings development. The additional laneage includes the construction of the westbound approach which consists of an exclusive left-turn lane, one dedicated through lane, and a shared through/right-turn lane at the intersection. One exclusive southbound left-turn lane and a dedicated northbound right-turn lane were also proposed to accommodate traffic destined to the Crossings development through this intersection. These roadway and intersection improvements have been included in the 2026 and 2032 No Build and Build analysis as well.

Traffic volumes associated with the Crossings development was also obtained from the approved TIA (*December 28, 2010)* and were included in the background traffic volumes used for just the intersection of Carrollton Boulevard at Brewers Neck Boulevard in this study. Future No Build geometric conditions are shown further in **Figure 19**.

Legend

- Signalized Intersection
- Unsignalized Intersection
- New Roadway
- [XX'] + XX' Existing [Storage] + Taper Length
- [XX'] + XX' No Build [Storage] + Taper Length
- Existing Laneage
- "By Others" Improvements



NOT TO SCALE

Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	Future No Build Improvements	Figure 19

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6 TRAFFIC ANALYSIS

The traffic analysis for the proposed parcels consisted of analyzing intersection operations (i.e., delay and queuing). Analyses for study area intersections for AM and PM peak hours were performed for the following scenarios:

- Scenario 1 – Existing (2017) traffic conditions
- Scenario 2 – Opening Year (2026) No-Build conditions – Opening Year traffic conditions with only a background growth rate applied (i.e., approved historical growth rate)
- Scenario 3 – Opening Year (2026) South Harbor No Bridge Build conditions – Opening Year traffic conditions with background growth rate applied plus traffic volumes generated by the South Harbor development but with No Bridge
- Scenario 4 – Opening Year (2026) The Crossing w/ Tower Parcel Build conditions – Opening Year traffic conditions with background growth rate applied plus traffic volumes generated by the South Harbor development but with No Bridge and traffic generated by the proposed Tower Parcel residential development
- Scenario 5 – Opening Year (2032) No-Build conditions – Opening Year +6 traffic conditions with only a background growth rate applied (i.e., approved historical growth rate)
- Scenario 6 – Opening Year (2032) South Harbor No Bridge Build conditions – Opening Year +6 traffic conditions with background growth rate applied plus traffic volumes generated by the South Harbor development but with No Bridge
- Scenario 7 – Opening Year (2032) The Crossing w/ Tower Parcel Build conditions – Opening Year +6 traffic conditions with background growth rate applied plus traffic volumes generated by the South Harbor development but with No Bridge and traffic generated by the proposed Tower Parcel residential development

The following sections summarize the results for each analysis.

6.1 INTERSECTION OPERATIONAL ANALYSIS

Operational analyses were conducted for the study area intersections for the AM and PM peak hours under the existing and future scenarios. The existing signal timings, including cycle lengths, clearance intervals, and splits, were provided by VDOT for this study's existing/base. For future year analysis, all cycle lengths, signal timings, coordination offsets, and phasing were optimized to account for future traffic volumes. As such, given the amount of future traffic volume projected for this area under No Build and Build scenarios, large cycle lengths (i.e., 140 to 160 seconds) were used to help maintain a level of progression along Carrollton Boulevard during the peak hours. It is acknowledged that a down side to using larger cycle lengths is that the side streets will experience higher delays, as they generally have to wait longer for their phases. It is acknowledged that using the longer cycle lengths will result in higher delays and longer queues for a majority of the side streets and turning movements along the corridor. This ultimately lead to lower cycle length(s) (i.e., AM and PM) being evaluated and applied as a part of the revised analysis.

Analyses were completed to determine the operating characteristics of the study area intersections using *Synchro Professional 10.1* modeling software, which uses methodologies contained in the 2010 Highway Capacity Manual (HCM) [TRB Special Report 209, 2000]. The intersection operational analysis inputs and

analysis methodologies were consistent with VDOT's Traffic Operations and Safety Analysis Manual (TOSAM). Intersection turning movement counts were used with information about the number of lanes, current traffic control, and signal timings to determine the operational conditions of each study area intersection. Four (4) main steps were completed for each of the AM and PM model simulations used in this study:

1. Network Development, Coding, and Model Inspection
2. Network Calibration
3. Inspection and Sample Size Determination
4. Analysis and Reporting

To calibrate the existing models, simulated volumes and speeds were compared with counted volumes (i.e., intersection turning movement count data) and average vehicle speeds (i.e., at the three locations where speed data was collected).

Detailed summary sheets of the simulated volume and speed calibration process are provided in **Appendix D**. For the calibration process, 85 percent of the network links (i.e., based on volume) must meet the following threshold:

- Simulated average speed needs to be within:
  - ± 5 mph (for arterials) of detected speeds
- Simulated volumes must be within:
  - ± 20% for < 100 vph
  - ± 15% for ≥ 100 vph to < 300 vph
  - ± 10% for ≥ 300 vph to < 1,000 vph
  - ± 5% for ≥ 1,000 vph

The results of the calibration effort indicate that the existing traffic models were validated and are able to simulate the study areas volumes and speeds adequately to meet the criteria set forth by the TOSAM. Any differences within the calibration results were only minor and justification and/or reasoning for these discrepancies is provided in **Appendix D.**

Level of service (LOS) was reported for the study area intersections. LOS describes the amount of traffic congestion at an intersection or on a roadway and ranges from A to F (i.e., A indicating a condition of little to no congestion and F a condition with severe congestion, unstable traffic flow, and stop-and-go conditions). LOS is based on the average delay experienced by all traffic using the intersection during the busiest (peak) 15-minute period. Generally, LOS A through LOS D are considered acceptable. Delay and associated LOS for both signalized and unsignalized intersections are reported from the Synchro analysis. In the LOS/delay tables for each of the study area intersections, values highlighted in "bold" represent movements operating at LOS E or worse. **Table 7** shows the corresponding thresholds in delay for unsignalized and signalized intersections.

The queuing results represent the maximum simulated queues for each movement as they compare to the effective storage lengths. Effective storage lengths represent the amount of distance available for vehicles to queue without generally impacting the adjacent lanes and consists of the full width storage length, plus half of the taper distance. By using the effective storage, vehicles that can use this portion of the taper length as additional room for storage can be counted as being accommodated. All traffic models were developed and analyzed with the effective storage lengths coded into the network.

As part of the queuing analysis, "percent blocking" was noted in instances where queues impact adjacent turn- and/or through-lanes. This percentage represents the approximate amount of time during the peak hour when a lane was observed to be blocked (e.g., "10% blocking" indicates that during the peak hour, the turn-lane storage was exceeded and impacted 10 percent of the adjacent lane volume). The results are presented in the following summaries and supporting calculations are presented in **Appendix E**.

The following sections summarize each study area intersection's operations as it relates to vehicle traffic for the analysis scenarios. Results are presented in **Table 8** through **Table 25**.

Table 7: LOS Control Delay Thresholds

LOS	Signalized Intersections Control Delay Per Vehicle [sec/veh]	Unsignalized Intersections Average Control Delay [sec/veh]	Relative Delay
A	≤ 10	≤ 10	Short Delays
	Free-flow traffic operations at average travel speeds. Vehicles completely unimpeded in ability to maneuver. Minimal delay at signalized intersections.		
B	> 10 – 20	> 10 – 15	
	Reasonably unimpeded traffic operations at average travel speeds. Vehicle maneuverability slightly restricted. Low traffic delays.		
C	> 20 – 35	> 15 – 25	
	Stable traffic operations. Lane changes becoming more restricted. Travel speeds reduced to half of average free flow travel speeds. Longer intersection delays.		
D	>35 – 55	> 25 – 35	Moderate Delays
	Small increases in traffic flow can cause increased delays. Delays likely attributable to increase traffic, reduced signal progression and adverse timing.		
E	>55 – 80	> 35 – 50	
	Significant delays. Travel speeds reduced to one third of average free flow travel speed.		
F	> 80	> 50	Long Delays
	Extremely low speeds. Intersection congestion. Long delays. Extensive traffic queues at intersections.		

Source: Highway Capacity Manual, Transportation Research Board, Washington, D.C., 2010

6.1.1 CARROLLTON BOULEVARD AT WHIPPINGHAM PARKWAY/HARBOR POINT LANE

This signalized intersection consisted of the following geometry for the existing and future scenarios:

- Carrollton Boulevard (northbound)
  - One exclusive left-turn lane
  - Two exclusive through lanes
  - One exclusive right-turn lane
- Carrollton Boulevard (southbound)
  - One exclusive left-turn lane
  - Two exclusive through lanes
  - One exclusive right-turn lane

- Harbor Point Lane (eastbound)
    - One shared left/through lane
    - One exclusive right-turn lane
- Whippingham Parkway (westbound)
    - One shared left/through lane
    - One exclusive right-turn lane

Results of the capacity and queuing analysis for this signalized intersection are shown in **Table 8** and **Table 9**, respectively. Under Existing conditions, the AM and PM peak hours experienced an overall LOS D and LOS A, respectively. Additionally, many of the side street movements currently operate at LOS F during the PM peak hour.

Under the future 2026 and 2032 No Build conditions, the increase in traffic volume associated with the background traffic (i.e., annualized/natural growth) and approved developments results in the minor street approaches to experiences high levels of delay during the AM and PM peak hours. Priority is given to sustaining traffic progression along Carrollton Boulevard, which contributes to the minor/side street approaches (i.e., Harbor Point Lane and Whippingham Parkway) projected to experience LOS E/F under the future scenarios.

These congestion conditions are expected to continue under the 2026 and 2032 South Harbor and Tower Parcel Build conditions, as well. Generally, the addition of the development related traffic has a minimal impact on the intersection operations during the AM and PM peak hours when compared to the corresponding No Build conditions.

Overall, the addition of the site traffic only makes up approximately 3% of this intersection's total volume. Significant queueing in the northbound and southbound through movements are expected to occur under the future AM and PM peak hours, respectively. This reflects how the corridor's directional traffic flows are tied to peak period commuter patterns. These through queues will likely spill back and block vehicles from entering the adjacent storage lanes. Regardless, queues for the Build conditions are still projected to be comparable to those anticipated under No Build conditions without significant increases.

Overall, future South Harbor and Tower Parcel Build conditions at this intersection are anticipated to be similar those experienced under No Build conditions with continual monitoring and modifications to existing traffic signal timings and coordination offsets.

Table 8: Carrollton Boulevard at Whippingham Parkway/Harbor Point Lane Intersection Level of Service

Scenario	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)											
		Eastbound			Westbound			Northbound			Southbound		
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour													
2017 Existing	D (35.4)	D (43.8)		D (40.7)	D (45.0)		D (43.3)	A (9.2)	D (43.5)	A (7.5)	C (22.3)	A (10.0)	A (7.6)
		D (42.8)			D (43.9)			D (43.1)			B (10.1)		
2026 No Build	C (22.5)	**E (71.6)**		**E (61.8)**	**E (66.7)**		**E (64.1)**	A (1.2)	C (24.3)	A (6.0)	D (38.3)	A (8.8)	A (6.4)
		E (68.3)			**E (65.1)**			C (24.2)			A (9.0)		
2026 Build (South Harbor)	C (28.4)	**E (71.6)**		**E (61.8)**	**E (66.7)**		**E (64.1)**	A (1.2)	C (33.0)	A (6.0)	D (38.3)	A (9.0)	A (6.4)
		E (68.3)			**E (65.1)**			C (32.7)			A (9.2)		
2026 Build (S. Harbor/Tower Parcel)	C (33.9)	**E (71.6)**		**E (61.8)**	**E (66.7)**		**E (64.1)**	A (7.1)	D (40.8)	A (6.0)	D (38.3)	A (9.0)	A (6.4)
		E (68.3)			**E (65.1)**			D (40.5)			A (9.2)		
2032 No Build	D (50.3)	**F (81.1)**		**E (69.9)**	**E (77.7)**		**E (73.9)**	A (1.1)	**E (62.5)**	A (5.9)	D (45.7)	A (9.3)	A (6.5)
		E (77.3)			**E (75.3)**			**E (62.0)**			A (9.6)		
2032 Build (South Harbor)	**E (56.9)**	**E (81.1)**		**E (69.9)**	**E (77.7)**		**E (73.9)**	A (1.1)	**E (72.3)**	A (5.9)	D (45.7)	A (9.6)	A (6.5)
		E (77.3)			**E (75.3)**			**E (71.7)**			A (9.8)		
2032 Build (S. Harbor/Tower Parcel)	**E (58.7)**	**F (81.1)**		**E (69.9)**	**E (77.7)**		**E (73.9)**	A (1.1)	**E (74.9)**	A (5.9)	D (45.7)	A (9.6)	A (6.5)
		E (77.3)			**E (75.3)**			**E (74.3)**			A (9.8)		
PM Peak Hour													
2017 Existing	A (9.9)	**F (99.5)**		**F (95.6)**	**F (97.9)**		**F (93.1)**	B (17.9)	A (1.4)	A (4.1)	A (3.9)	B (11.6)	A (4.4)
		F (97.2)			**F (96.6)**			A (2.0)			B (11.4)		
2026 No Build	B (18.3)	**E (79.0)**		**E (75.6)**	**E (77.3)**		**E (73.3)**	**F (97.0)**	A (2.9)	A (5.1)	A (5.3)	C (23.5)	A (5.6)
		E (77.0)			**E (76.2)**			A (5.9)			C (22.9)		
2026 Build (South Harbor)	C (20.3)	**E (79.0)**		**E (75.6)**	**E (77.3)**		**E (73.3)**	**F (95.5)**	A (4.2)	A (5.1)	A (5.5)	C (26.4)	A (5.6)
		E (77.0)			**E (76.2)**			A (6.9)			C (25.7)		
2026 Build (S. Harbor/Tower Parcel)	C (21.3)	**E (79.0)**		**E (75.6)**	**E (77.3)**		**E (73.3)**	**F (93.3)**	A (5.6)	A (5.1)	A (5.5)	C (27.3)	A (5.6)
		E (77.0)			**E (76.2)**			A (8.1)			C (26.6)		
2032 No Build	D (39.4)	**E (76.5)**		**E (74.1)**	**E (77.6)**		**E (73.1)**	**F (96.2)**	A (5.5)	A (5.6)	A (6.4)	**E (55.6)**	A (6.1)
		E (75.1)			**E (76.3)**			A (8.3)			D (54.1)		
2032 Build (South Harbor)	D (44.8)	**E (76.5)**		**E (74.1)**	**E (77.6)**		**E (73.1)**	**F (90.5)**	A (6.4)	A (5.6)	A (6.8)	**E (64.4)**	A (6.1)
		E (75.1)			**E (76.3)**			A (8.8)			**E (62.5)**		
2032 Build (S. Harbor/Tower Parcel)	D (46.4)	**E (76.5)**		**E (74.1)**	**E (77.6)**		**E (73.1)**	**F (90.8)**	A (6.5)	A (5.6)	A (6.8)	**E (66.9)**	A (6.1)
		E (75.1)			**E (76.3)**			A (9.0)			**E (65.0)**		

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Table 9: Carrollton Boulevard at Whippingham Parkway/Harbor Point Lane Intersection Maximum Queuing

Scenario	Maximum Queue Length by Movement (feet)											
	Eastbound			Westbound			Northbound			Southbound		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Effective Storage Length (Existing/Build)	352		170	1,197		550	280	490	215	220	4,237	230
AM Peak Hour												
2017 Existing	90		42	46		54	50	343	43	26	117	< 25
2026 No Build	120		54	62		77	44	344 **(2%)	57	33	124	< 25
2026 Build (South Harbor)	134		53	70		88	79	359 **(3%)	<25	30	142	< 25
2026 Build (S. Harbor/Tower Parcel)	114		49	56		87	54	359 **(3%)	43	30	145	< 25
2032 No Build	163		63	71		76	86	370	61	30	135	< 25
2032 Build (South Harbor)	144		72	62		86	136	440 **(9%)	85	38	182	< 25
2032 Build (S. Harbor/Tower Parcel)	154		93	73		79	99	375 **(8%)	115	40	171	< 25
PM Peak Hour												
2017 Existing	52		60	71		34	105	103	< 25	105	536 **(9%)	143
2026 No Build	58		61	80		33	91	116	33	199	2,476 **(25%)	230
2026 Build (South Harbor)	63		68	69		34	98	185	50	201	2,917 **(27%)	230
2026 Build (S. Harbor/Tower Parcel)	64		66	86		30	86	222	57	219	3,080 **(26%)	230
2032 No Build	67		63	79		48	89	191	38	219	4,288 **(40%)	230
2032 Build (South Harbor)	58		67	81		37	110	257	108	219	4,282 **(36%)	230
2032 Build (S. Harbor/Tower Parcel)	67		72	90		35	95	229	111	219	4,281 ^(36%) **(37%)	230

Notes:
**(X%) - Maximum queue extends full length of storage bay for X% of the analysis period*
***(Y%) - Queue in lane adjacent to storage bay extends beyond end of storage bay for Y% of the analysis period*
^(Z%) - Maximum queue extends back to upstream intersection for Z% of the analysis period

6.1.2 CARROLLTON BOULEVARD AT EAGLE HARBOR PARKWAY/KINGS CROSS WAY

This signalized intersection consisted of the following geometry for the existing and future scenarios:

- Carrollton Boulevard (northbound)
  - One exclusive left-turn lane
  - Two exclusive through lanes
  - One exclusive right-turn lane
- Carrollton Boulevard (southbound)
  - One exclusive left-turn lane
  - Two exclusive through lanes
  - One exclusive right-turn lane
- Eagle Harbor Parkway (eastbound)
  - One shared left/through lane
  - One exclusive right-turn lane

- King's Cross (westbound)
    - One shared left/through lane
    - One exclusive right-turn lane

Results of the capacity and queuing analysis for this signalized intersection, which are shown in **Table 10** and **Table 11,** respectively. Under Existing conditions, the AM and PM peak hours experienced an overall LOS E and LOS B, respectively. Movements that currently experience significant periods of delay include the northbound through movement, which operates at LOS F during the AM peak periods. Additionally, many of the side street movements currently operate at LOS F during the PM peak hour.

Under the future 2026 and 2032 No Build conditions, the increase in traffic volume associated with the background traffic (i.e., annualized/natural growth) and approved developments results in the minor street approaches to experiences high levels of delay during the AM and PM peak hours. As noted previously, priority is given to sustaining traffic progression along Carrollton Boulevard, which contributes to the minor/side street approaches (i.e., Eagle Harbor Parkway/Kings Cross Way) projected to experience LOS E/F under the future scenarios.

These congestion conditions are expected to continue under the 2026 and 2032 Build conditions, as well. Generally, the addition of the South Harbor and Tower Parcel development related traffic has a minimal impact on the intersection operations during the AM and PM peak hours when compared to the corresponding No Build conditions. It is noted that the overall LOS during the AM peak period under the 2032 scenario increases from a LOS E to a LOS F when comparing South Harbor Build to Tower Parcel Build conditions. This increase is negligible, as the increase in delay only exceeds the LOS delay threshold by 1.2 seconds. Similarly, the overall LOS during the PM peak period under the 2032 scenario increases from a LOS D to a LOS E when comparing South Harbor Build to Tower Parcel Build conditions. This also represents a small increase, as the delay only exceeds the LOS threshold by 1.1 seconds. Overall, the addition of the site traffic only makes up approximately 3% of this intersection's total volume.

Significant queueing in the northbound and southbound through movements are expected to occur under the future AM and PM peak hours, respectively. This reflects the corridor's very distinct directional traffic flows and how they are tied to peak period commuter patterns. These through queues will likely spill back and block vehicles from entering the adjacent storage lanes and extend to upstream intersections. Regardless, queues for the Build conditions are still projected to be comparable to those anticipated under No Build conditions without significant increases.

Overall, future Build conditions at this intersection can be maintained similar to those experienced under No Build condition with continual monitoring and modifications to existing traffic signal timings and coordination offsets.

Table 10: Carrollton Boulevard at Eagle Harbor Parkway/Kings Cross Way Intersection Level of Service

Scenario	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)											
		Eastbound			Westbound			Northbound			Southbound		
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour													
2017 Existing	**E (66.9)**	D (42.5)		D (35.7)	D (44.6)		D (43.3)	B (10.4)	**F (91.6)**	B (11.2)	B (17.7)	B (10.9)	B (12.8)
		D (40.4)			D (43.8)			**F (89.9)**			B (11.0)		
2026 No Build	D (42.0)	**E (75.3)**		D (54.3)	**E (68.5)**		**E (65.6)**	A (7.6)	D (51.0)	A (9.1)	C (33.5)	B (10.9)	B (10.8)
		E (69.0)			**E (66.7)**			D (50.0)			B (11.0)		
2026 Build (South Harbor)	D (49.4)	**E (75.3)**		D (54.3)	**E (68.5)**		**E (65.6)**	A (8.3)	**E (62.7)**	A (9.1)	D (35.6)	B (11.1)	B (10.8)
		E (69.0)			**E (66.7)**			**E (61.5)**			B (11.1)		
2026 Build (S. Harbor/Tower Parcel)	D (51.6)	**E (75.3)**		D (54.3)	**E (68.5)**		**E (65.6)**	A (8.5)	**E (66.1)**	A (9.1)	D (35.6)	B (11.1)	B (10.8)
		E (69.0)			**E (66.7)**			**E (64.9)**			B (11.1)		
2032 No Build	**E (71.1)**	**F (105.5)**		**E (62.6)**	**E (76.7)**		**E (73.9)**	A (8.0)	**F (92.1)**	A (9.1)	D (40.5)	B (11.0)	B (10.9)
		F (92.6)			**E (75.0)**			**F (90.4)**			B (11.1)		
2032 Build (South Harbor)	**E (79.4)**	**F (105.5)**		**E (62.6)**	**E (76.7)**		**E (73.9)**	A (8.9)	**F (105.6)**	A (9.1)	D (38.7)	B (11.1)	B (10.9)
		F (92.6)			**E (75.0)**			**F (103.6)**			B (11.2)		
2032 Build (S. Harbor/Tower Parcel)	**F (81.2)**	**F (105.5)**		**E (62.6)**	**E (76.7)**		**E (73.9)**	A (8.7)	**F (108.4)**	A (9.1)	D (38.7)	B (11.1)	B (10.9)
		F (92.6)			**E (75.0)**			**F (106.3)**			B (11.2)		
PM Peak Hour													
2017 Existing	B (16.9)	**F (98.3)**		**F (87.7)**	**F (97.5)**		**F (93.7)**	**E (58.3)**	B (16.6)	A (6.4)	A (5.8)	B (10.6)	A (3.6)
		F (93.9)			**F (95.9)**			B (19.6)			B (10.0)		
2026 No Build	C (21.5)	**E (79.6)**		**E (68.8)**	**E (79.9)**		**E (75.2)**	**E (58.2)**	B (17.5)	A (7.3)	A (7.2)	B (19.6)	A (3.5)
		E (75.0)			**E (78.0)**			C (20.4)			B (18.3)		
2026 Build (South Harbor)	C (22.8)	**E (79.6)**		**E (68.8)**	**E (79.9)**		**E (75.2)**	**E (63.6)**	B (16.0)	A (7.3)	A (5.4)	C (22.7)	A (1.3)
		E (75.0)			**E (78.0)**			B (19.2)			C (21.0)		
2026 Build (S. Harbor/Tower Parcel)	C (22.8)	**E (79.6)**		**E (68.8)**	**E (79.9)**		**E (75.2)**	**E (62.5)**	B (14.8)	A (7.3)	A (4.5)	C (23.6)	A (0.8)
		E (75.0)			**E (78.0)**			B (18.1)			C (21.8)		
2032 No Build	D (48.0)	**F (81.1)**		**E (68.3)**	**E (77.0)**		**E (73.6)**	**E (65.6)**	B (18.1)	A (8.1)	A (2.8)	**E (65.4)**	A (0.8)
		E (75.8)			**E (75.6)**			C (21.5)			**E (59.9)**		
2032 Build (South Harbor)	D (54.2)	**F (81.3)**		**E (68.3)**	**E (77.0)**		**E (73.6)**	**E (69.8)**	B (17.0)	A (8.0)	D (3.0)	**E (77.1)**	A (0.8)
		E (75.8)			**E (75.6)**			C (20.6)			**E (70.7)**		
2032 Build (S. Harbor/Tower Parcel)	**E (56.1)**	**F (81.1)**		**E (68.3)**	**E (77.0)**		**E (73.6)**	**E (69.9)**	B (17.1)	A (8.0)	A (3.0)	**F (80.2)**	A (0.8)
		E (75.8)			**E (75.6)**			C (20.8)			**E (73.6)**		

Table 11: Carrollton Boulevard at Eagle Harbor Parkway/Kings Cross Way Intersection Maximum Queuing

Scenario	Maximum Queue Length by Movement (feet)											
	Eastbound			Westbound			Northbound			Southbound		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Effective Storage Length (Existing/Build)	1,471		220	1,968		65	265	1,069	240	310	622	240
AM Peak Hour												
2017 Existing	187		66	47		63	180	453 **(3%)	50	< 25	153	31
2026 No Build	260 **(2%)		167	83 **(1%)		64 *(2%)	264	654 **(15%)	105	< 25	215	51
2026 Build (South Harbor)	288 **(4%)		158	76 **(1%)		66 *(2%)	264	660 **(16%)	175	<25	197	38
2026 Build (S. Harbor/Tower Parcel)	316 **(4%)		204	76 **(1%)		65 *(2%)	245	770 **(19%)	87	26	213	39
2032 No Build	440 **(17%)		202	101 **(3%)		66 *(2%)	264	899 **(24%)	59	<25	222	61
2032 Build (South Harbor)	404 **(12%)		204	101 **(2%)		66 *(1%)	264	884 **(27%)	133	27	242	50
2032 Build (S. Harbor/Tower Parcel)	450 **(16%)		207	103 **(2%)		65 *(3%)	264	895 **(27%)	105	<25	221	56
PM Peak Hour												
2017 Existing	156		114	84		61	155	308	64	180	948 **(28%)	240 *(1%)
2026 No Build	180		120	68 **(1%)		60	181	2,466	48	282	585 **(27%) ^(12%)	240 *(1%)
2026 Build (South Harbor)	163		123	81 **(1%)		66	195	278	85	309	587 **(29%) ^(11%)	240 *(1%)
2026 Build (S. Harbor/Tower Parcel)	160		112	89 **(2%)		65	164	243	<25	210	588 **(29%) ^(10%)	240 *(1%)
2032 No Build	179		121	79 **(2%)		61	185	283 **(1%)	48	228	596 **(31%) ^(14%)	240 *(1%)
2032 Build (South Harbor)	154		119	69 **(1%)		63	190	312 **(1%)	91	229	590 **(29%) ^(11%)	240
2032 Build (S. Harbor/Tower Parcel)	160		119	95 **(2%)		65	174	304 **(1%)	46	230	589 **(11%) ^(29%)	240 *(1%)

Notes:
**(X%) - Maximum queue extends full length of storage bay for X% of the analysis period*
***(Y%) - Queue in lane adjacent to storage bay extends beyond end of storage bay for Y% of the analysis period*
^(Z%) - Maximum queue extends back to upstream intersection for Z% of the analysis period

6.1.3 CARROLLTON BOULEVARD AT SMITHS NECK ROAD

This signalized intersection consisted of the following geometry for the existing and No Build scenarios:

- Carrollton Boulevard (northbound)
  - One exclusive left-turn lane
  - Two exclusive through lanes
  - One exclusive right-turn lane
- Carrollton Boulevard (southbound)
  - One exclusive left-turn lane
  - Two exclusive through lanes
  - One exclusive right-turn lane

- Smiths Neck Road (eastbound)
    - One exclusive left-turn lane
    - One shared through/left lane
    - One exclusive right-turn lane
- Smiths Neck Road (westbound)
    - One exclusive left-turn lane
    - One shared through/right lane

Results of the capacity and queuing analysis for this signalized intersection are shown in **Table 12** and **Table 13,** respectively. Under Existing conditions, the AM and PM peak hours operate at an overall LOS D. During the AM peak hour, the eastbound approach operates at LOS E due to the high volumes (i.e., approach volume greater than 750 vehicles). Likewise, the eastbound and westbound approaches currently operate at LOS F during the PM peak hour with delays greater than 100 seconds.

Under the future 2026 and 2032 No Build conditions, the increase in traffic volume associated with the background traffic (i.e., annualized/natural growth) and approved developments results in the minor street approaches continuing to experience high levels of delay during the AM and PM peak hours. Generally, Overall LOS is maintained at LOS D during No Build conditions, with the PM peak hour experiencing LOS E under the 2032 No Build Scenario.

As noted previously, the additional site traffic at this intersection resulted in increased delays and queues directly attributed to the proposed development. As such, specific transportation improvements were identified to help mitigate these increases in operational delays and improve the conditions projected for this intersection. The future Build scenario presented in this analysis includes proposed geometric modifications as defined below:

- Carrollton Boulevard (northbound)
    - One exclusive left-turn lane (Extended to 400 feet of storage, 100-foot taper)
    - Two exclusive through lanes
    - One exclusive right-turn lane
- Carrollton Boulevard (southbound)
    - One exclusive left-turn lane (Extended to 400 feet of storage, 100-foot taper)
    - Two exclusive through lanes
    - One exclusive right-turn lane (Extended to 850 feet of storage)
- Smiths Neck Road (eastbound)
    - Two exclusive left-turn lanes (restriped)
    - One shared through/right lane (restriped)
- Smiths Neck Road (westbound)
    - One exclusive left-turn lane
    - One exclusive through lane
    - One exclusive right turn lane (proposed)

One area that was noted to be particularly deficient was attributed to conditions associated with the eastbound approach. Under existing and No Build conditions, the eastbound approach has a shared left-through lane and an exclusive left-turn lane. As a result, the minor streets (i.e., Smiths Neck Road) must run with split phasing. Due to the heavy volumes on Carrollton Boulevard, concurrent left-turns would significantly improve operations at Smiths Neck Road. For future Build conditions, the geometry of the eastbound and westbound approaches is proposed to be reconfigured to allow concurrent left-turns on Smiths Neck Road. Additionally, a new westbound right-turn lane is proposed to be constructed as part of the South Harbor development. Finally, the existing northbound left-, the southbound left-, and southbound right-turn lanes are proposed to be extended to provide more storage length for vehicles to enter the turn lanes and minimize the potential of being blocked by extensive queues in the adjacent through lanes. Based on the queuing analysis for these turning movements, the instances of vehicles being blocked by the adjacent through movements have been significantly reduced/eliminated with the extra storage lengths being proposed.

Therefore, the proposed turn lane improvements listed above are sufficient to accommodate this intersection's future vehicular demand. Additionally, it should be noted that the projected westbound queues are also improved due to the new geometry and concurrent left-turn phasing on Smiths Neck Road.

Ultimately, with the addition of the South Harbor and Tower Parcel development related traffic as well as the proposed improvements, operations during the AM and PM peak hours are projected to be comparable and/or improved when compared to the corresponding No Build conditions. The proposed improvements will help increase this intersection's capacity without negatively impacting the primary flows of traffic along Carrollton Boulevard.

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Table 12: Carrollton Boulevard at Smiths Neck Road Intersection Level of Service

Scenario	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)											
		Eastbound			Westbound			Northbound			Southbound		
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour													
2017 Existing	D (42.5)	**E (72.4)**	**E (70.3)**	C (29.0)	D (44.5)	D (41.8)		D (46.0)	D (41.2)	B (18.3)	C (27.1)	C (21.0)	C (28.0)
		E (64.6)			D (43.3)			D (40.0)			C (22.8)		
2026 No Build	C (30.7)	**E (68.6)**	D (47.8)	D (45.8)	**E (58.2)**	**E (63.2)**		**E (73.3)**	C (28.4)	B (16.3)	**E (74.5)**	B (13.8)	A (0.1)
		E (56.2)			**E (60.5)**			C (28.8)			B (14.3)		
2026 Build (South Harbor)	C (28.5)	**E (58.8)**	**E (61.4)**		**E (60.8)**	**E (70.5)**	**E (58.7)**	**E (71.4)**	C (23.0)	B (14.2)	**E (80.0)**	B (11.0)	A (0.0)
		E (59.5)			**E (61.0)**			C (23.7)			B (13.9)		
2026 Build (S. Harbor/Tower Parcel)	D (37.7)	**E (64.0)**	**E (57.7)**		**E (62.7**	**E (71.4)**	**E (57.1)**	**E (65.1)**	D (39.0)	B (15.2)	**E (65.4)**	B (14.1)	A (1.0)
		E (62.5)			**E (61.5)**			D (38.3)			B (16.2)		
2032 No Build	D (42.5)	**F (85.5)**	**E (59.3)**	D (51.7)	**E (69.9)**	**E (73.6)**		**F (85.8)**	D (46.3)	C (23.4)	**F (90.7)**	B (13.6)	A (0.1)
		E (69.1)			**E (71.6)**			D (46.0)			B (14.8)		
2032 Build (South Harbor)	D (39.1)	**E (72.0)**	**E (69.0)**		**E (78.4)**	**F (83.4)**	**E (67.1)**	**F (81.7)**	D (38.8)	C (20.2)	**F (91.3)**	B (10.8)	A (0.0)
		E (71.2)			**E (75.0)**			D (38.9)			B (14.3)		
2032 Build (S. Harbor/Tower Parcel)	D (39.8)	**E (72.0)**	**E (69.1)**		**E (78.4)**	**F (83.4)**	**E (67.1)**	**F (82.5)**	D (40.1)	B (19.5)	**F (89.5)**	B (11.3)	A (0.0)
		E (71.2)			**E (75.0)**			D (40.1)			B (14.6)		
PM Peak Hour													
2017 Existing	D (43.3)	**F (117.7)**	**F (113.3)**	**E (77.0)**	**F (96.6)**	**F (113.4)**		**F (120.9)**	B (17.5)	B (14.1)	B (18.9)	C (29.4)	A (7.9)
		F (107.5)			**F (106.4)**			D (42.3)			C (23.3)		
2026 No Build	C (34.5)	**F (107.5)**	**E (65.3)**	**E (64.5)**	**E (60.4)**	**F (94.9)**		**F (133.9)**	A (6.4)	A (6.6)	**F (98.9)**	C (28.8)	A (5.0)
		F (81.9)			**F (80.4)**			C (26.4)			C (27.4)		
2026 Build (South Harbor)	D (37.4)	**E (75.6)**	**E (79.9)**		**E (62.9)**	**F (86.0)**	D (52.3)	**F (122.2)**	A (4.3)	B (2.3)	**F (98.4)**	D (38.8)	A (4.9)
		E (77.0)			**E (70.1)**			C (21.8)			D (35.9)		
2026 Build (S. Harbor/Tower Parcel)	D (37.7)	**E (64.0)**	**E (57.7)**		**E (62.7**	**E (71.4)**	**E (57.1)**	**E (65.1)**	D (39.0)	B (15.2)	**E (65.4)**	B (14.1)	A (1.0)
		E (62.5)			**E (61.5)**			D (38.3)			B (16.2)		
2032 No Build	D (54.6)	**F (171.5)**	**F (94.6)**	**E (66.4)**	**E (61.5)**	**F (126.4)**		**F (163.0)**	A (5.8)	A (4.3)	**F (98.6)**	**E (60.9)**	A (2.3)
		F (119.7)			**F (99.1)**			C (30.1)			D (52.9)		
2032 Build (South Harbor)	**E (56.2)**	**F (100.2)**	**F (95.4)**		**E (73.5)**	**F (95.7)**	D (51.7)	**F (150.2)**	A (5.1)	A (3.7)	**F (98.8)**	**E (71.9)**	A (2.3)
		F (98.6)			**E (79.0)**			C (26.8)			**E (62.1)**		
2032 Build (S. Harbor/Tower Parcel)	**E (58.0)**	**F (100.2)**	**F (97.9)**		**E (73.5)**	**F (95.7)**	D (51.7)	**F (152.5)**	A (5.1)	A (3.6)	**F (98.9)**	**E (75.7)**	A (2.2)
		F (99.4)			**E (79.0)**			C (27.0)			B (85.2)		

Table 13: Carrollton Boulevard at Smiths Neck Road Intersection Maximum Queuing

Scenario	Maximum Queue Length by Movement (feet)											
	Eastbound			Westbound			Northbound			Southbound		
	LT	LT/TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Effective Storage Length (Existing/Build)	465	1,190	1,190	140/ 150	1,613	NA/ 175	280/ 450	1,315	245	310/ 450	1,069	340/ 820
AM Peak Hour												
2017 Existing	405	442	72	94	68		197	350 ***(3%)*	245	66	174	58
2026 No Build	328	382	64	109	98		204	604 ***(15%)*	245	96	227	41
2026 Build (South Harbor)	320	229		126	62	91	348	673 ***(20%)*	245	146	248	32
2026 Build (S. Harbor/Tower Parcel)	305	230		131	86	90	351	833 ***(20%)*	245	137	234	35
2032 No Build	422	493 ***(1%)*	81	123 **(1%)*	130		279	1,098 *^(1%)* ***(29%)*	245	99	213	35
2032 Build (South Harbor)	363	321		134	63	93	449	1,236 *^(4%)* ***(34%)*	245	166	211	26
2032 Build (S. Harbor/Tower Parcel)	359	296		137 **(2%)*	89	121	449	1,188 *^(5%)* ***(34%)*	245	148	202	30
PM Peak Hour												
2017 Existing	293	336	129	139 **(2%)*	172 ***(8%)*		279 **(16%)*	503 ***(2%)*	124	309	977 *^(3%)* ***(36%)*	240 ***(1%)*
2026 No Build	353	441 ***(1%)*	105	140 **(2%)*	281 ***(6%)*		270 **(3%)*	325 ***(1%)*	182	310	971 ***(16%)*	340 ***(1%)*
2026 Build (South Harbor)	216	201		148 **(1%)*	179 *^(2%)* ***(2%)*	98	331	311 ***(1%)*	183	449	967 ***(12%)*	820
2026 Build (S. Harbor/Tower Parcel)	210	198		148 **(2%)*	181 *^(2%)* ***(3%)*	112	322	351 ***(5%)*	244	450	961 ***(11%)*	820
2032 No Build	457 **(2%)*	995 ***(32%)*	245	140 **(5%)*	401 ***(21%)*		279 **(9%)*	437 ***(2%)*	226	294	962 ***(12%)*	340 ***(1%)*
2032 Build (South Harbor)	270	270		149 **(6%)*	190 *^(5%)* ***(5%)*	131	390 **(2%)*	355 ***(2%)*	206	438	848 ***(4%)*	441
2032 Build (S. Harbor/Tower Parcel)	284	255		150 **(4%)*	188 *^(3%)* ***(4%)*	142	367 **(1%)*	365 ***(3%)*	228	425	835 ***(4%)*	521

Notes:
**(X%) - Maximum queue extends full length of storage bay for X% of the analysis period*
***(Y%) - Queue in lane adjacent to storage bay extends beyond end of storage bay for Y% of the analysis period*
^(Z%) - Maximum queue extends back to upstream intersection for Z% of the analysis period

6.1.3.1 Smiths Neck Road Modifications to Accommodate Proposed Development

As part of the proposed development, a new roadway will be constructed where Smiths Neck Road currently dead ends just past the Bojangles/7-Eleven driveways on the east side of Carrollton Boulevard. This roadway will be designed to VDOT standards for a public, local road. The new roadway will be constructed as the fourth leg to the existing T-intersection with the Bojangles/7-Eleven driveways and Smiths Neck Road. A roundabout at this location was considered initially but was determined to not be feasible due it is proximity to the Carrollton Boulevard traffic signal (i.e., less than 200 feet) and the anticipated level of queuing spilling back into the roundabout, impeding its ability to function efficiently. These queues would enter the roundabout, impeding other vehicles from being able to traverse the intersection, negating any potential benefit. Additionally, the necessary ROW required to accommodate its footprint and impacts to adjacent businesses would result in excessive construction costs.

Therefore, it is proposed that this intersection be configured as a three-way STOP with the Bojangles, 7-Eleven, and the northbound Driveway 1/Connection from the Pitt parcel of South Harbor being STOP controlled. Additional signage (i.e., “DO NOT BLOCK INTERSECTION) and pavement markings (i.e., “Don’t Block the Box”) can be provided to mitigate queues from blocking the intersection, with additional notice regarding potential fines for those observed/caught impeding intersection operations, whereas this would not be possible with a roundabout. Under this configuration, inbound traffic would not be required to stop at this proposed intersection, negating instances of any queues forming and possibly impacting traffic flows along Carrollton Boulevard.

A conceptual layout, as shown in **Figure 19**, was developed that illustrates how this new roadway will tie into the existing portion of Smiths Neck Road and proposed modifications to the side entrances. This layout also shows the proposed improvements for the Smiths Neck Road at Carrollton Boulevard signalized intersection, which includes a new dedicated right-turn lane, a 4-foot raised median, driveway modifications, and sidewalk connections.

Conditions at this this proposed intersection were modeled and included as part of the future Build scenarios. Volumes for this intersection were estimated based on previous traffic count data and the TIA conducted as part of the existing 7-Eleven development. Future vehicle delays and queues are presented in **Table 12** and **Table 13**. It should be noted that due to the proposed configuration of the stop-controlled intersection (i.e., 3 of the 4 legs being stopped controlled), Synchro cannot produce LOS results under the HCM methodology. Therefore, simulated delays from the SimTraffic microsimulation models were used to report these operational conditions instead, as is common practice for this situation.

Based on the future Build conditions, this new intersection is projected to operate with minimal delays, with all movements/approaches operating with less than an average of 13 seconds of delay per vehicle (e.g., comparable to LOS B). Likewise, queues are also shown to be minimal, without any instances of blocking or impacts to traffic on Carrollton Boulevard. Therefore, this new intersection is expected to function in this configuration and will be able to serve existing and proposed site traffic volumes without issue.

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Table 14: Smiths Neck Road at Bojangles/7-Eleven Driveways Intersection Delays

Scenario	Overall Delay	Delay per Movement by Approach (Delay in sec/veh)											
		Eastbound			Westbound			Northbound			Southbound		
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour													
2026 Build	2.9	1.0	1.2	1.1	8.3			5.2			4.4		
2032 Build	3.1	0.9	0.9	0.9	9.2			5.4			4.7		
PM Peak Hour													
2026 Build	4.5	1.2	1.1	1.2	10.7			7.6			6.2		
2032 Build	6.1	1.2	1.2	1.2	12.2			9.8			10.2		

Table 15: Smiths Neck Road at Bojangles/7-Eleven Driveways Intersection Maximum Queuing

Scenario	Maximum Queue Length by Movement (feet)											
	Eastbound			Westbound			Northbound			Southbound		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Effective Storage Length (Build)	175	270		680			510			460		
AM Peak Hour												
2026 Build (South Harbor)	<25	0		29			48			48		
2026 Build (S. Harbor/Tower Parcel)	< 25	0		32			54			53		
2032 Build (South Harbor)	0	0		30			51			59		
2032 Build (S. Harbor/Tower Parcel)	0	0		30			57			53		
PM Peak Hour												
2026 Build (South Harbor)	0	0		30			57			73		
2026 Build (S. Harbor/Tower Parcel)	< 25	0		29			70			74		
2032 Build (South Harbor)	< 25	<25		26			82			124		
2032 Build (S. Harbor/Tower Parcel)	< 25	0		31			72			89		

Notes:
**(X%) - Maximum queue extends full length of storage bay for X% of the analysis period*
***(Y%) - Queue in lane adjacent to storage bay extends beyond end of storage bay for Y% of the analysis period*
^(Z%) - Maximum queue extends back to upstream intersection for Z% of the analysis period

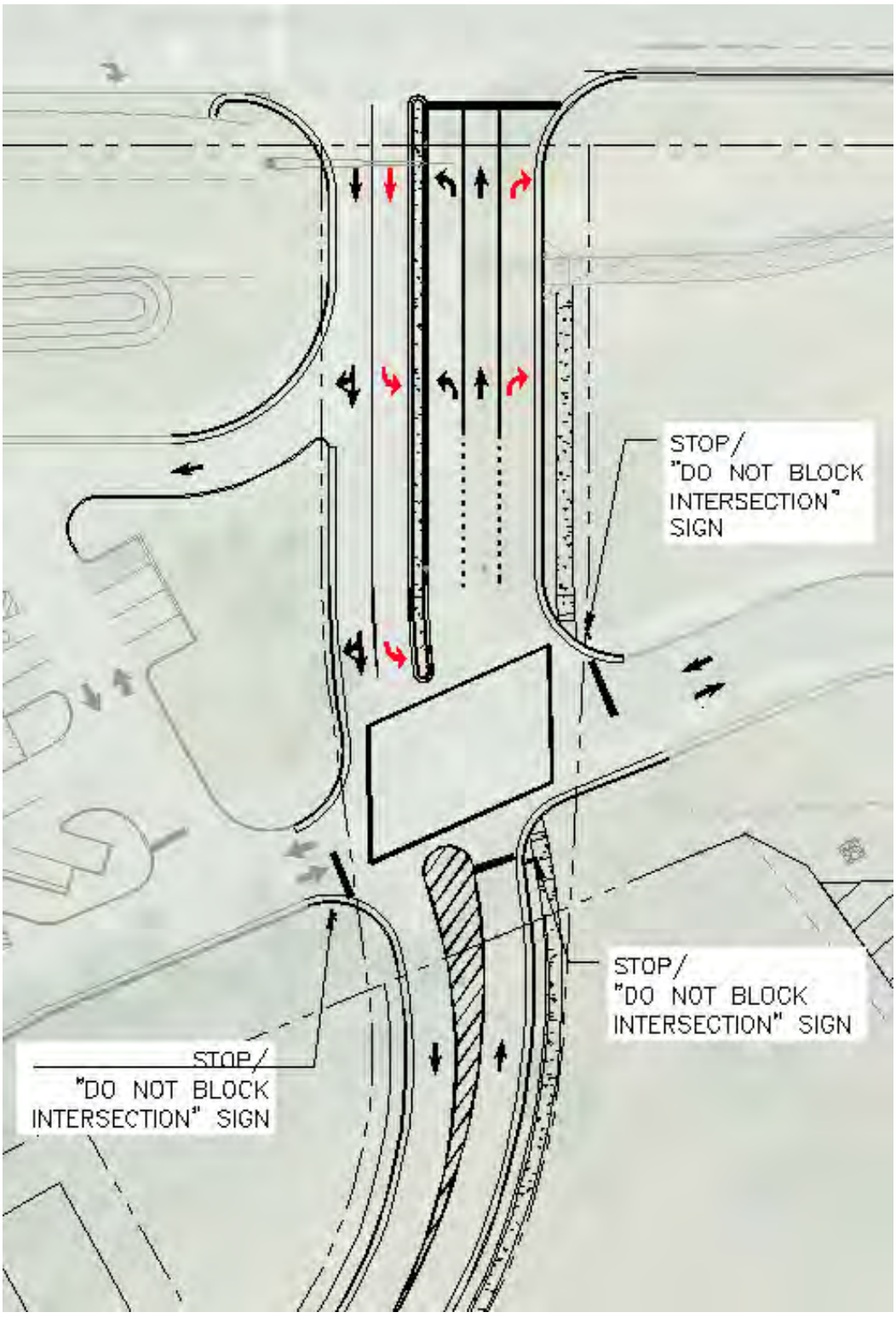


Figure 20: Proposed Modifications to Smiths Neck Road Access to the South Harbor Development

6.1.4 CARROLLTON BOULEVARD AT NORTHGATE DRIVE

This two-way stop controlled (TWSC) intersection consisted of the following geometry for the existing scenarios:

- Carrollton Boulevard (northbound)
  - One exclusive left-turn lane
  - Two exclusive through lanes
  - One exclusive right-turn lane
- Carrollton Boulevard (southbound)
  - One exclusive left-turn lane
  - Two exclusive through lanes
  - One exclusive right-turn lane
- Northgate Drive (eastbound)
  - One shared left/through lane
  - One exclusive right-turn lane
- Northgate Drive (westbound)
  - One shared left/through/right-turn lane

Results of the capacity and queuing analysis for this unsignalized intersection are shown in **Table 16** and **Table 17,** respectively. Under Existing conditions, the AM and PM peak hours experienced an overall LOS A. During the AM peak hour, the eastbound right-turn movement operates at LOS E. During the PM peak hour, the westbound approach operates at LOS F; however, this approach has low volumes (i.e., less than 5 vehicles).

Under future No Build conditions, the eastbound and westbound approaches experience significant delays. Vehicles are unable to complete their left-turn movement due to the high volume of through traffic on Carrollton Boulevard and as such, this intersection operates at an overall LOS F during the 2026 and 2032 No Build conditions.

Based on these operational conditions and the results of the signal warrant analysis, it was determined that modification of how this intersection operates (i.e., modification of access to/from the side streets) would be necessary. As such, it was recommended that this intersection be modified to restrict access and minimize potential conflict points in association with the proposed South Harbor development. Therefore, this TWSC intersection consists of the following geometry for the future scenarios:

- Carrollton Boulevard (northbound)
  - One exclusive left-turn lane
  - Two exclusive through lanes
  - One exclusive right-turn lane
- Carrollton Boulevard (southbound)
  - One exclusive left-turn lane
  - Two exclusive through lanes
  - One exclusive right-turn lane

- Northgate Drive (eastbound)
    - Remove One shared left/through lane
    - One exclusive right-turn lane
- Northgate Drive (westbound)
    - Provide One exclusive right-turn lane (proposed)

Under Build conditions, the westbound and eastbound approaches are reconfigured to a single right-turn lane that restricts left turning vehicles from Northgate Drive. Vehicles will still be allowed to make lefts from Carrollton Boulevard to Northgate Drive. As it was previously mentioned, the anticipated impact of this access restriction is that many vehicles will instead choose to utilize the existing signal located at Smiths Neck Road. The operational analysis presented in this study under Build conditions reflects this change in travel patterns, with vehicles rerouted to the signal. Alternatively, vehicles can also choose to make the right-turn from Northgate Drive and instead make U-turns at the next upstream signalized intersection, which in this case would be Smiths Neck Road (i.e., for vehicles destined to the south) and the proposed intersection of Nike Park Extension (i.e., for vehicles destined to the north). By eliminating the left-turns on the minor street, significant reductions in delay are anticipated on the minor street. Under future Build conditions, this intersection operates with an overall LOS A with delays less than 3 seconds. The Build conditions have reduced maximum queues with no queues having a significant impact on the operations of this intersection.

Overall, the proposed site traffic is anticipated to have minimal impact on this intersection's operations for 2026 and 2032 AM and PM peak hour periods with the proposed access modifications. By restricting movements on Northgate Drive, this intersection will operate with minimal delays.

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Table 16: Carrollton Boulevard at Northgate Drive Intersection Level of Service

Scenario	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)											
		Eastbound			Westbound			Northbound			Southbound		
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour													
2017 Existing	A (1.6)	**E (41.1)**		A (0.0)	A (0.0)			A (8.8)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		E (41.1)						A (0.1)			A (0.0)		
2026 No Build	A (9.6)	**F (299.1)**		A (0.0)	A (0.0)			A (9.5)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		F (299.1)						A (0.1)			A (0.0)		
2026 Build (South Harbor)	A (0.4)	-		A (9.9)	-		C (20.2)	A (9.7)	A (0.0)	A (0.0)	C (18.5)	A (0.0)	A (0.0)
		A (9.9)			C (20.2)			A (0.1)			A (0.3)		
2026 Build (S. Harbor/Tower Parcel)	A (0.4)	-		A (9.9)	-		C (20.6)	A (9.7)	A (0.0)	A (0.0)	C (18.1)	A (0.0)	A (0.0)
		A (9.9)			C (20.6)			A (0.1)			A (0.3)		
2032 No Build	C (27.7)	**F (> 300)**		A (0.0)	A (0.0)			B (10.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
		F (> 300)						A (0.1)			A (0.0)		
2032 Build (South Harbor)	A (0.4)	-		B (10.2)	-		C (23.6)	B (10.3)	A (0.0)	A (0.0)	C (22.1)	A (0.0)	A (0.0)
		B (10.2)			C (23.6)			A (0.1)			A (0.3)		
2032 Build (S. Harbor/Tower Parcel)	A (0.4)	-		B (10.2)	-		C (23.8)	B (10.3)	A (0.0)	A (0.0)	C (22.4)	A (0.0)	A (0.0)
		B (10.2)			C (23.8)			A (0.1)			A (0.3)		
PM Peak Hour													
2017 Existing	A (1.5)	**F (103.0)**		A (0.0)	**F (196.4)**			B (13.2)	A (0.0)	A (0.0)	B (10.7)	A (0.0)	A (0.0)
		F (103.0)						A (0.9)			A (0.0)		
2026 No Build	**F (> 300)**	**F (> 300)**		A (0.0)	**F (> 300)**			C (22.1)	A (0.0)	A (0.0)	B (12.1)	A (0.0)	A (0.0)
		F (> 300)						A (1.5)			A (0.0)		
2026 Build (South Harbor)	A (0.9)	-		B (12.5)	-		C (15.1)	C (24.6)	A (0.0)	A (0.0)	B (12.6)	A (0.0)	A (0.0)
		B (12.5)			C (15.1)			A (1.5)			A (0.1)		
2026 Build (S. Harbor/Tower Parcel)	A (0.9)	-		B (12.5)	-		C (15.2)	C (25.0)	A (0.0)	A (0.0)	B (12.5)	A (0.0)	A (0.0)
		B (12.5)			C (15.2)			A (1.6)			A (0.1)		
2032 No Build	**F (> 300)**	**F (> 300)**		A (0.0)	**F (> 300)**			**E (48.8)**	A (0.0)	A (0.0)	B (13.2)	A (0.0)	A (0.0)
		F (> 300)						A (3.2)			A (0.0)		
2032 Build (South Harbor)	A (1.7)	-		B (12.9)	-		C (16.7)	**F (58.9)**	A (0.0)	A (0.0)	B (13.9)	A (0.0)	A (0.0)
		B (12.9)			C (16.7)			A (3.7)			A (0.1)		
2032 Build (S. Harbor/Tower Parcel)	A (1.8)	-		B (12.9)	-		C (16.8)	**F (63.7)**	A (0.0)	A (0.0)	B (14.0)	A (0.0)	A (0.0)
		B (12.9)			C (16.8)			A (4.0)			A (0.1)		

Table 17: Carrollton Boulevard at Northgate Drive Intersection Maximum Queuing

Scenario	Maximum Queue Length by Movement (feet)											
	Eastbound			Westbound			Northbound			Southbound		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Effective Storage Length (Existing/Build)	1,273		160/ 1273	1,575		1,575	245	1,373	215 / 300	80 / 300	1,315	200
AM Peak Hour												
2017 Existing	75		54	0			< 25	0	0	0	0	0
2026 No Build	151 ***(3%)*		106	0			45	<25	0	0	0	0
2026 Build (South Harbor)	-		56	-		38	33	0	0	49	0	0
2026 Build (S. Harbor/Tower Parcel)	-		56	-		36	40	<25	0	54	0	0
2032 No Build	504 ***(29%)*		149	0			91	188 ***(1%)*	0	0	0	<25
2032 Build (South Harbor)	-		78	-		46	133	496 ***(4%)*	124	74	0	0
2032 Build (S. Harbor/Tower Parcel)	-		68	-		62	121	527 ***(6%)*	150	57	0	0
PM Peak Hour												
2017 Existing	42		47	< 25			114	< 25	0	< 25	0	0
2026 No Build	57		46	< 25			149	<25	0	< 25	114	<25
2026 Build (South Harbor)	-		45	-		57	156	34	<25	43	0	<25
2026 Build (S. Harbor/Tower Parcel)	-		41	-		54	169	27	<25	30	123	<25
2032 No Build	58		49	15			193	57	0	<25	108	0
2032 Build (South Harbor)	-		52	-		59	195	73	0	41	128	<25
2032 Build (S. Harbor/Tower Parcel)	-		58	-		61	185	69	0	34	124	<25

Notes:

**(X%) - Maximum queue extends full length of storage bay for X% of the analysis period*

***(Y%) - Queue in lane adjacent to storage bay extends beyond end of storage bay for Y% of the analysis period*

^(Z%) - Maximum queue extends back to upstream intersection for Z% of the analysis period

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6.1.5 CARROLLTON BOULEVARD AT NIKE PARK ROAD EXTENSION

This signalized intersection consisted of the following geometry for the future scenarios:

- Carrollton Boulevard (northbound)
  - One exclusive left-turn lane
  - Two exclusive through lanes
- Carrollton Boulevard (southbound)
  - Two exclusive through lanes
  - One exclusive right-turn lane
- Nike Park Road Extension (eastbound)
  - Two exclusive left-turn lanes
  - One exclusive right-turn lane

Results of the capacity and queuing analysis for this signalized intersection are shown in **Table 18** and **Table 19,** respectively. This intersection is modeled under the future scenarios.

For the 2026 and 2032 No Build AM and PM peak hours, the overall intersection is anticipated to experience LOS B or better. However, due to emphasis on Carrollton Boulevard progression, the eastbound approach is expected to operate at LOS E during the AM and PM peak hours under all future scenarios.

Otherwise, the addition of the proposed site traffic has minimal impact on this intersection's operations during the AM and PM peak hours compared to the corresponding No Build scenarios.

Queues are also projected to be contained within the available storage lengths for all future AM and PM peak hour conditions. The northbound and southbound through movements are anticipated to experience queues during the peak periods that could impact access to adjacent turn lanes during periods of heavy congestion. The queues under Build conditions are comparable to the queues anticipated under No Build conditions.

Based on the results of the future analysis scenarios, this intersection (i.e., Carrollton Boulevard at Nike Park Road Extension has the capacity to serve the estimated 40% of traffic diverted from Smiths Neck Road. Overall, the proposed site traffic is anticipated to have minimal impact on this intersection's operations for 2026 and 2032 AM and PM peak hour periods.

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Table 18: Carrollton Boulevard at Nike Park Extension Intersection Level of Service

Scenario	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)											
		Eastbound			Westbound			Northbound			Southbound		
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour													
2017 Existing	-	-			-			-			-		
2026 No Build	B (15.4)	**E (63.7)**	-	D (53.4)	-			A (4.3)	A (7.5)	-	-	B (11.5)	A (0.3)
		E (61.9)						A (7.5)			B (10.5)		
2026 Build (South Harbor)	B (16.1)	**E (63.7)**	-	D (53.4)	-			A (4.1)	A (9.0)	-	-	B (12.0)	A (0.6)
		E (61.9)						A (8.9)			B (11.0)		
2026 Build (S. Harbor/Tower Parcel)	B (15.9)	**E (63.7)**	-	D (53.4)	-			A (7.7)	A (7.9)	-	-	B (13.1)	A (1.0)
		E (61.9)						A (7.9)			B (12.9)		
2032 No Build	B (16.1)	**E (73.0)**	-	**E (59.8)**	-			A (3.9)	A (9.8)	-	-	A (6.0)	A (0.1)
		E (70.7)						A (9.7)			A (5.5)		
2032 Build (South Harbor)	B (16.9)	**E (73.0)**	-	**E (59.8)**	-			A (4.0)	B (11.3)	-	-	A (6.9)	A (0.1)
		E (70.7)						B (11.2)			A (6.3)		
2032 Build (S. Harbor/Tower Parcel)	B (17.1)	**E (73.0)**	-	**E (59.8)**	-			A (4.5)	B (11.5)	-	-	B (7.2)	A (0.1)
		E (70.7)						B (11.4)			B (6.6)		
PM Peak Hour													
2017 Existing	-	-			-			-			-		
2026 No Build	A (8.7)	**E (74.4)**	-	**E (67.9)**	-			C (27.5)	A (7.7)	-	-	A (2.2)	A (0.0)
		E (72.9)						A (9.4)			A (1.9)		
2026 Build (South Harbor)	A (9.8)	**E (74.4)**	-	**E (67.9)**	-			C (29.8)	A (8.4)	-	-	A (4.0)	A (0.0)
		E (72.9)						B (10.2)			A (3.6)		
2026 Build (S. Harbor/Tower Parcel)	A (9.8)	**E (74.4)**	-	**E (67.9)**	-			C (30.5)	A (8.7)	-	-	A (3.7)	A (0.0)
		E (72.9)						B (10.6)			A (3.3)		
2032 No Build	B (10.4)	**E (74.0)**	-	**E (66.8)**	-			D (35.7)	B (10.4)	-	-	A (3.1)	A (0.0)
		E (72.4)						B (12.6)			A (2.7)		
2032 Build (South Harbor)	B (11.0)	**E (74.0)**	-	**E (66.8)**	-			D (35.5)	A (10.7)	-	-	A (4.5)	A (0.0)
		E (72.4)						B (12.8)			A (4.0)		
2032 Build (S. Harbor/Tower Parcel)	B (10.9)	**E (74.0)**	-	**E (66.8)**	-			D (35.7)	B (10.6)	-	-	A (4.3)	A (0.0)
		E (72.4)						B (12.8)			A (3.8)		

Table 19: Carrollton Boulevard at Nike Park Extension Intersection Maximum Queuing

Scenario	Maximum Queue Length by Movement (feet)											
	Eastbound			Westbound			Northbound			Southbound		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Effective Storage Length (Existing/Build)	NA / 650	-	NA / 430	-			NA / 75	NA / 1,281	-	-	NA / 707	NA / 200
AM Peak Hour												
2017 Existing	-			-			-			-		
2026 No Build	216	-	64	-			58	216 **(7%)	-	-	252 **(1%)	139
2026 Build (South Harbor)	226	-	53	-			47	233 **(8%)	-	-	269 **(1%)	170
2026 Build (S. Harbor/Tower Parcel)	224	-	54	-			62	229 **(6%)	-	-	280 **(1%)	162
2032 No Build	258	-	55	-			58	289 **(7%)	-	-	255 **(1%)	164
2032 Build (South Harbor)	248	-	60	-			55	306 **(9%)	-	-	265 **(1%)	165
2032 Build (S. Harbor/Tower Parcel)	272	-	59	-			53	316 **(10%)	-	-	257 **(1%)	166
PM Peak Hour												
2017 Existing	-			-			-			-		
2026 No Build	145	-	72	-			74 *(30%)	382 **(10%)	-	-	557 **(16%)	200 *(1%)
2026 Build (South Harbor)	148	-	73	-			74 *(26%)	467 **(10%)	-	-	582 **(15%)	200
2026 Build (S. Harbor/Tower Parcel)	146	-	90	-			74 *(32%)	510 **(11%)	-	-	466 **(14%)	200
2032 No Build	160	-	75	-			74 *(39%)	592 **(16%)	-	-	608 **(20%)	200 *(1%)
2032 Build (South Harbor)	163	-	92	-			75 *(43%)	747 **(14%)	-	-	644 ^(2%) **(21%)	200 *(1%)
2032 Build (S. Harbor/Tower Parcel)	158	-	93	-			74 *(45%)	723 **(14%)	-	-	636 ^(1%) **(21%)	200 *(1%)

Notes:
**(X%) - Maximum queue extends full length of storage bay for X% of the analysis period*
***(Y%) - Queue in lane adjacent to storage bay extends beyond end of storage bay for Y% of the analysis period*
^(Z%) - Maximum queue extends back to upstream intersection for Z% of the analysis period

6.1.6 CARROLLTON BOULEVARD AT BREWERS NECK BOULEVARD/SPADEA WAY

This signalized intersection consisted of the following geometry for the existing scenarios:

- Carrollton Boulevard (northbound)
  - One exclusive left-turn lane
  - Two exclusive through lanes
- Carrollton Boulevard (southbound)
  - Two exclusive through lanes
  - One exclusive right-turn lane
- Brewers Neck Boulevard (eastbound)
  - Two exclusive left-turn lanes
  - One exclusive right-turn lane

With the noted improvements (by others) for this intersection, the following geometry was used in the analysis of the future scenarios:

- Carrollton Boulevard (northbound)
    - Two exclusive left-turn lanes
    - Two exclusive through lanes
    - One exclusive right-turn lane (proposed by others)
- Carrollton Boulevard (southbound)
    - One exclusive left-turn lane (proposed by others)*
    - Two exclusive through lanes
    - One exclusive right-turn lane
- Brewers Neck Boulevard (eastbound)
    - Two exclusive left-turn lanes
    - One exclusive through lane (proposed by others)
    - One exclusive right-turn lane
- Spadea Way (westbound)
    - One exclusive left-turn lane (proposed by others)
    - One exclusive through lane (proposed by others)
    - One shared through/right lane (proposed by others)

***Note:** Under future No Build conditions the southbound left-turn lane consists of 200 feet of storage and a 200-foot taper per the VDOT Bartlett Intersection improvement project. Under future Build conditions, a southbound left-turn consisting of 400 feet of storage and 200-foot was analyzed to address the significant queuing associated with this movement.*

Results of the capacity and queuing analysis for this signalized intersection are shown in **Table 20** and **Table 21**, respectively. Under Existing conditions this intersection currently operates at overall LOS C and all individual movements operating at LOS D or better during the AM and PM peak hours.

As noted previously, the approved Crossings TIA (*December 28, 2010)* was used to determine the future turning movement volumes associated with that development in regard to the proposed future geometry of the intersection. Under the future 2026 and 2032 No Build conditions, the increase in traffic volumes associated with the background traffic and approved developments is anticipated to significantly degrade intersection operations, even with the signal retiming and proposed capacity enhancements. This results in many movements projected to operate at LOS E or worse.

Additionally, a new connection to this signal from Spadea Way is proposed as part of the Crossings Development. This connection helps alleviate excessive delays that will occur at the Channell Way and Carrollton Boulevard intersection during peak periods. As such, it was assumed that traffic associated with the South Harbor and Tower Parcel developments would also benefit from this connection to the signal via Spadea Way. To account for this anticipated shift, the westbound approach will have 65% of the southern residential site traffic exiting on Brewers Neck Boulevard. Under the 2026 and 2032 Build conditions, the addition of the site traffic diverted to this intersection is expected to have minimal impact on its operations during the AM and PM peak hours when compared to the corresponding No Build scenarios.

Under all future AM and PM peak hour scenarios, approaches at this intersection are expected to experience instances of vehicles being blocked from accessing adjacent exclusive turn-lanes. However, it is noted that queues associated with the Build condition scenarios are projected to be relatively comparable to those anticipated under future No Build conditions.

Overall, the proposed site traffic is anticipated to have minimal impact on this intersection's operations for 2026 and 2032 AM and PM peak hour periods. No additional geometric improvements are recommended for this intersection.

Table 20: Carrollton Boulevard at Brewers Neck Boulevard Intersection Level of Service

Scenario	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)											
		Eastbound			Westbound			Northbound			Southbound		
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour													
2017 Existing	C (22.5)	D (36.3)	-	A (0.6)	-			D (45.7)	B (12.6)	-	-	D (39.8)	A (0.6)
		C (23.3)						C (27.5)				B (16.1)	
2026 No Build	C (33.4)	D (50.6)	C (29.0)	A (0.8)	**E (58.6)**	**E (63.8)**		**E (59.7)**	D (36.9)	C (32.3)	**E (76.5)**	D (39.7)	A (0.7)
		C (32.3)			**E (62.4)**			D (45.5)			B (18.9)		
2026 Build (South Harbor)	C (34.4)	D (50.6)	C (28.9)	A (0.8)	**E (59.4)**	**E (64.1)**		**E (56.3)**	D (37.6)	C (32.8)	**E (74.6)**	D (43.6)	A (0.7)
		C (32.4)			**E (62.7)**			D (45.4)			C (21.3)		
2026 Build (S. Harbor/Tower Parcel)	C (34.7)	D (50.6)	C (28.9)	A (0.8)	**E (59.7)**	**E (64.1)**		**E (56.3)**	C (38.0)	C (33.0)	**F (75.1)**	C (44.0)	A (0.7)
		C (32.4)			**E (62.8)**			D (45.6)			C (21.8)		
2032 No Build	D (38.3)	**E (56.8)**	C (30.1)	A (0.9)	**E (68.7)**	**E (74.1)**		**E (66.8)**	D (42.3)	D (36.5)	**F (92.8)**	D (48.2)	A (0.9)
		D (36.2)			**E (72.7)**			D (53.0)			C (22.6)		
2032 Build (South Harbor)	D (40.1)	**E (56.8)**	C (30.2)	A (0.9)	**E (70.1)**	**E (74.7)**		**E (66.4)**	D (44.4)	D (37.1)	**F (96.7)**	**E (56.0)**	A (0.9)
		D (36.3)			**E (73.4)**			D (53.6)			C (22.0)		
2032 Build (S. Harbor/Tower Parcel)	D (40.5)	**E (56.8)**	C (30.2)	A (0.9)	**E (70.8)**	**E (74.9)**		**E (66.5)**	D (46.8)	D (38.2)	**F (88.1)**	**E (55.8)**	A (0.9)
		D (36.3)			**E (73.7)**			D (55.0)			C (26.7)		
PM Peak Hour													
2017 Existing	C (21.6)	D (45.3)	-	A (0.6)	-			D (46.5)	A (9.0)	-	-	D (41.3)	A (2.2)
		C (24.8)						C (27.6)				B (15.6)	
2026 No Build	D (42.6)	**E (73.7)**	D (46.9)	A (0.9)	**E (57.6)**	**F (85.9)**		**E (69.3)**	**E (55.6)**	D (46.5)	**F (85.3)**	D (38.1)	A (3.2)
		D (41.0)			**E (77.0)**			**E (61.6)**			C (25.2)		
2026 Build (South Harbor)	D (45.5)	**E (74.1)**	D (47.1)	A (0.9)	**E (58.3)**	**F (90.5)**		**E (69.1)**	**E (61.9)**	D (48.2)	**F (92.6)**	D (46.9)	A (3.2)
		D (41.4)			**F (80.2)**			**E (64.5)**			C (29.9)		
2026 Build (S. Harbor/Tower Parcel)	D (45.2)	**E (74.1)**	D (47.3)	A (0.9)	**E (58.4)**	**F (93.2)**		**E (69.0)**	**E (64.7)**	D (49.2)	**F (84.6)**	D (42.4)	A (3.2)
		D (41.4)			**F (82.1)**			**E (65.9)**			C (27.7)		
2032 No Build	D (48.9)	**F (91.1)**	D (45.7)	A (1.1)	**E (57.7)**	**F (85.9)**		**E (78.5)**	**E (67.5)**	D (47.5)	**F (86.9)**	D (52.3)	A (5.6)
		D (49.4)			**E (77.0)**			**E (71.7)**			C (30.0)		
2032 Build (South Harbor)	D (52.0)	**F (92.5)**	D (46.1)	A (1.1)	**E (58.3)**	**F (90.5)**		**E (78.4)**	**E (74.9)**	D (49.2)	**F (91.2)**	**E (61.3)**	A (5.5)
		D (50.2)			**F (80.2)**			**E (75.3)**			C (34.3)		
2032 Build (S. Harbor/Tower Parcel)	D (52.9)	**F (92.5)**	D (46.3)	A (1.1)	**E (58.7)**	**F (94.0)**		**E (79.1)**	**E (78.0)**	D (49.7)	**F (92.7)**	**E (62.0)**	A (5.5)
		D (50.2)			**F (82.7)**			**E (77.2)**			D (35.0)		

Table 21: Carrollton Boulevard at Brewers Neck Boulevard Intersection Maximum Queuing

Scenario	Maximum Queue Length by Movement (feet)											
	Eastbound			Westbound			Northbound			Southbound		
	LT	TH	RT	LT	TH	TH/RT	LT	TH	RT	LT	TH	RT
Effective Storage Length (Existing/Build)	NA / 585	NA	575	NA / 150	NA / 1361	NA / 150	560 / 650	1,134	NA / 300	NA / 500	1,281	550/ 300
AM Peak Hour												
2017 Existing	362	-	0		-		367	193	-	-	169	0
2026 No Build	446	102	172	80	115	94	298	287	58	112	227	0
2026 Build (South Harbor)	505	171	145	86	110	116	299	304 **(3%)	167	123	246	58
2026 Build (S. Harbor/Tower Parcel)	509	188	66	92	101	138	326	304 **(5%)	205	128	239	30
2032 No Build	530	140	269	82	103	113	395	339 **(1%)	119	139	293	30
2032 Build (South Harbor)	573	161	174	94	107	136	401	375 **(13%)	224	149	328	148
2032 Build (S. Harbor/Tower Parcel)	553	150	182	102	122	134	396	376 **(11%)	185	141	290	89
PM Peak Hour												
2017 Existing	307	-	0		-		436	245	-	-	258	0
2026 No Build	518	279	285	150 *(5%)	343 **(15%)	318	373	347 **(1%)	208	300 *(7%)	532 **(3%)	266
2026 Build (South Harbor)	542	236	260	150 *(5%)	354 **(18%)	317	406	384 **(13%)	225	437	537 **(1%)	299
2026 Build (S. Harbor/Tower Parcel)	554 *(2%)	314	305	150 *(9%)	407 **(24%)	376	399	386 **(15%)	225	466	542 **(1%)	299
2032 No Build	630 ^(8%) *(9%)	462 ^(1%) **(1%)	432	150 *(4%)	319 **(16%)	286	540 *(5%)	756 **(5%)	278	300 *(5%)	610 **(6%)	270
2032 Build (South Harbor)	709 ^(31%) *(30%)	610 ^(2%) **(1%)	508	150 *(5%)	371 **(19%)	333	604	685 **(25%)	225	442	724 **(2%)	300 *(1%)
2032 Build (S. Harbor/Tower Parcel)	705 ^(23%) *(23%)	604 ^(2%) **(2%)	519	150 *(10%)	399 **(24%)	359	532 *(2%)	633 **(26%)	225	456 *(1%)	698 **(2%)	300 *(1%)

Notes:
**(X%) - Maximum queue extends full length of storage bay for X% of the analysis period*
***(Y%) - Queue in lane adjacent to storage bay extends beyond end of storage bay for Y% of the analysis period*
^(Z%) - Maximum queue extends back to upstream intersection for Z% of the analysis period

6.1.7 CARROLLTON BOULEVARD AT CHANNELL WAY/DEEP BOTTOM DRIVE

This two-way stopped controlled intersection consisted of the following geometry for the existing scenarios:

- Carrollton Boulevard (northbound)
  - One exclusive left-turn lane
  - Two exclusive through lanes
  - One exclusive right-turn lane (unmarked)
- Carrollton Boulevard (southbound)
  - One exclusive left-turn lane
  - One exclusive through lane
  - One shared through/right-turn lane
- Deep Bottom Drive (eastbound)
  - One shared left/through/right-turn lane

- Channell Way (westbound)
    - One shared left/through/right-turn lane

Future improvements were identified for this intersection to better accommodate the Pitt and Lippe traffic. As such, the following geometry conditions were analyzed as part of the future Build scenarios:

- Carrollton Boulevard (northbound)
    - One exclusive left-turn lane
    - Two exclusive through lanes
    - One exclusive right-turn lane (unmarked)
- Carrollton Boulevard (southbound)
    - One exclusive left-turn lane
    - One exclusive through lane
    - One shared through/right-turn lane
- Deep Bottom Drive (eastbound)
    - One shared left/through/right-turn lane
- Channell Way (westbound)
    - One shared left/through lane
    - One exclusive right-turn lane (proposed)

Results of the capacity and queuing analysis for this unsignalized intersection are shown in **Table 22** and **Table 23**, respectively. Under Existing conditions, the AM and PM peak hour operate at an overall LOS A with minimal delays. However, during the PM peak hour, the westbound approach is noted to currently operate at LOS E.

Under the future 2026 and 2032 No Build and Build conditions, this intersection is expected to operate at an overall LOS A with minimal delays on the major street. However, the minor approaches are anticipated to experience failing operations due to the increased traffic volumes along Carrollton Boulevard and the decrease in frequency and length of gaps associated with oncoming traffic.

Overall, the 2026 and 2032 Build conditions show that the addition of the site traffic to this intersection results in minimal impact on the intersection operations during the AM and PM peak hours compared to the corresponding No Build conditions. However, it is expected that any site traffic that cannot complete their turning movement (i.e., left-turn) from the minor street approaches will instead reroute to other intersections (i.e., Brewers Neck Boulevard, Smiths Neck Road, or Whippingham Parkway), rather than wait through excessive delays. Therefore, it is anticipated that actual delays experienced at this intersection will be less than what is report in **Table 22** and **Table 23**.

During the Existing AM and PM peak hours, queues were not shown to exceed the available storage or impact adjacent intersections. Under the 2032 No Build and Build scenarios, the northbound through movement is expected to experience queues that originate from the downstream signalized intersection of Brewers Neck Boulevard. As such, it is expected that these queues will further result in upstream blocking and blocking of the adjacent storage lanes. Queues for the Build conditions are still projected to be comparable to those anticipated under No Build conditions without significant increases.

Additionally, the proposed turn lane enhancements at this intersection help minimize the length of queues and instances of blocking compared to the No Build conditions.

Similar to the other unsignalized intersections along Carrolton Boulevard, vehicles will be challenged to make left-turn movements during the peak periods due to a lack of gaps in approaching traffic volumes as well as anticipated periods of significant congestion. Ultimately, it is anticipated that other routing options will be utilized for vehicles accessing Carrollton Boulevard through the Pitt and Lippe parcels.

Table 22: Carrollton Boulevard at Channell Way/Deep Bottom Drive Intersection Level of Service

Scenario	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)											
		Eastbound			Westbound			Northbound			Southbound		
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour													
2017 Existing	A (1.0)	B (10.9)			C (21.8)			A (9.2)	A (0.0)	A (0.0)	A (9.6)	A (0.0)	
								A (0.1)			A (0.2)		
2026 No Build	A (1.5)	B (11.3)			D (34.6)			A (9.7)	A (0.0)	A (0.0)	B (10.3)	A (0.0)	A (0.0)
								A (0.1)			A (0.2)		
2026 Build (South Harbor)	A (1.8)	B (11.3)			D (33.9)	A (0.0)		A (9.9)	A (0.0)	A (0.0)	B (10.6)	A (0.0)	A (0.0)
					D (33.9)			A (0.1)			A (0.2)		
2026 Build (S. Harbor/Tower Parcel)	A (1.6)	B (11.4)			D (33.1)	A (0.0)		A (9.9)	A (0.0)	A (0.0)	B (10.6)	A (0.0)	A (0.0)
					D (33.1)			A (0.1)			A (0.2)		
2032 No Build	A (2.5)	B (11.6)			**F (59.5)**			B (10.3)	A (0.0)	A (0.0)	B (11.0)	A (0.0)	A (0.0)
								A (0.1)			A (0.2)		
2032 Build (South Harbor)	A (2.8)	B (11.6)			**F (54.4)**	A (0.0)		B (10.4)	A (0.0)	A (0.0)	B (11.3)	A (0.0)	A (0.0)
					F (54.4)			A (0.1)			A (0.2)		
2032 Build (S. Harbor/Tower Parcel)	A (3.3)	B (11.6)			**F (60.5)**	A (0.0)		B (10.4)	A (0.0)	A (0.0)	B (11.3)	A (0.0)	A (0.0)
					F (60.5)			A (0.1)			A (0.3)		
PM Peak Hour													
2017 Existing	A (1.2)	D (26.3)			**E (36.6)**			B (10.0)	A (0.0)	A (0.0)	B (10.5)	A (0.0)	
								A (0.1)			A (0.5)		
2026 No Build	A (2.5)	**E (48.8)**			**F (92.4)**			B (11.1)	A (0.0)	A (0.0)	B (11.7)	A (0.0)	A (0.0)
								A (0.1)			A (0.5)		
2026 Build (South Harbor)	A (3.4)	**F (54.4)**			**F (101.6)**	A (0.0)		B (11.3)	A (0.0)	A (0.0)	B (12.1)	A (0.0)	A (0.0)
					F (103.3)			A (0.1)			A (0.6)		
2026 Build (S. Harbor/Tower Parcel)	A (3.2)	**F (53.4)**			**F (103.3)**	A (0.0)		B (11.3)	A (0.0)	A (0.0)	B (12.1)	A (0.0)	A (0.0)
					F (103.3)			A (0.1)			A (0.6)		
2032 No Build	A (6.5)	**F (81.1)**			**F (271.7)**			B (12.0)	A (0.0)	A (0.0)	B (12.8)	A (0.0)	A (0.0)
								A (0.1)			A (0.6)		
2032 Build (South Harbor)	A (7.4)	**F (94.4)**			**F (247.7)**	A (0.0)		B (12.3)	A (0.0)	A (0.0)	B (13.4)	A (0.0)	A (0.0)
					F (247.7)			A (0.1)			A (0.7)		
2032 Build (S. Harbor/Tower Parcel)	A (8.7)	**F (100.9)**			**F (271.3)**	A (0.0)		B (12.3)	A (0.0)	A (0.0)	B (13.6)	A (0.0)	A (0.0)
					F (248.6)			A (0.1)			A (0.7)		

Table 23: Carrollton Boulevard at Channell Way/Deep Bottom Drive Intersection Maximum Queuing

Scenario	Maximum Queue Length by Movement (feet)											
	Eastbound			Westbound			Northbound			Southbound		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	TH/RT
Effective Storage Length (Existing/Build)	777			479		479/ 250	140	648	60	175	1,134	1,134
AM Peak Hour												
2017 Existing	50			70			< 25	0	0	31	0	< 25
2026 No Build	55			104			< 25	0	0	33	0	0
2026 Build (South Harbor)	54			67		78	< 25	0	0	37	0	<25
2026 Build (S. Harbor/Tower Parcel)	57			80		94	25	0	0	41	0	0
2032 No Build	58			141			< 25	0	0	31	0	0
2032 Build (South Harbor)	60			82		87	26	0	0	45	0	0
2032 Build (S. Harbor/Tower Parcel)	58			96		96	26	0	<25	48	0	0
PM Peak Hour												
2017 Existing	35			67			26	0	< 25	63	0	0
2026 No Build	41			106			29	0	< 25	81	0	0
2026 Build (South Harbor)	54			87		78	29	0	<25	93	0	<25
2026 Build (S. Harbor/Tower Parcel)	55			129		96	30	<25	<25	84	0	<25
2032 No Build	52			159			35	40	< 25	91	0	< 25
2032 Build (South Harbor)	75			93		76	40	<25	<25	117	95	0
2032 Build (S. Harbor/Tower Parcel)	62			131		110	38	<25	<25	104	0	0

Notes:

**(X%) - Maximum queue extends full length of storage bay for X% of the analysis period*

***(Y%) - Queue in lane adjacent to storage bay extends beyond end of storage bay for Y% of the analysis period*

^(Z%) - Maximum queue extends back to upstream intersection for Z% of the analysis period

6.1.8 CARROLLTON BOULEVARD AT ASHBY WAY/OMERA DRIVE

This two-way stop controlled intersection consisted of the following geometry for the existing and future scenarios:

- Carrollton Boulevard (northbound)
  - One exclusive left-turn lane
  - Two exclusive through lanes
  - One exclusive right-turn lane
- Carrollton Boulevard (southbound)
  - One exclusive left-turn lane
  - Two exclusive through lanes
  - One exclusive right-turn lane
- Ashby Way (eastbound)
  - One exclusive left-turn lane
  - One shared through/right-turn lane
- Omera Drive (westbound)
  - One shared left/through/right-turn lane

Results of the capacity and queuing analysis for this unsignalized intersection are shown in **Table 24** and **Table 25**, respectively. Under Existing conditions, the AM and PM peak hour operate at an overall LOS B with minor delays.

Under the future 2026 and 2032 No Build conditions, the increase in traffic volume associated with the background traffic and approved developments is anticipated to degrade operations along the minor street. The minor street approaches are anticipated to experience LOS E conditions due to the increased traffic volumes along Carrollton Boulevard and decrease in gaps of oncoming traffic.

Under the 2026 and 2032 Build conditions, the addition of the site traffic has minimal impact on the intersection operations during the AM and PM peak hours compared to the corresponding No Build conditions.

During the Existing AM and PM peak hours, moderate queues are experienced; however, none of the queues exceed the available storage. Under the future scenarios, all of the queues are anticipated to be contained within the available storage length. The northbound through movement queue is anticipated to result in blocking of the adjacent storage lane under the future PM peak scenarios. This blocking will have a minimal impact on the operations of the intersection and the queues experienced under the Build conditions are comparable to the No Build conditions.

Overall, the proposed site traffic is anticipated to have minimal impact on this intersection's operations for 2026 and 2032 AM and PM peak hour periods.

Table 24: Carrollton Boulevard at Ashby Way/Omera Drive Intersection Level of Service

Scenario	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)											
		Eastbound			Westbound			Northbound			Southbound		
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour													
2017 Existing	B (16.8)	D (40.7)	C (32.1)		C (31.3)			B (11.7)	B (15.7)	B (12.1)	A (9.9)	B (14.3)	B (10.8)
		D (38.1)						B (15.6)			B (14.0)		
2026 No Build	B (17.4)	**E (69.5)**	**E (61.1)**		**E (63.4)**			B (10.6)	B (15.7)	B (11.4)	A (5.6)	A (8.8)	B (10.0)
		E (67.0)						B (15.6)			A (8.6)		
2026 Build (South Harbor)	B (17.5)	**E (69.5)**	**E (61.1)**		**E (63.4)**			B (10.7)	B (16.0)	B (11.4)	A (5.7)	A (9.0)	B (10.0)
		E (67.0)						B (15.9)			A (8.9)		
2026 Build (S. Harbor/Tower Parcel)	B (17.8)	**E (69.5)**	**E (61.1)**		**E (63.4)**			B (10.7)	B (16.0)	B (11.4)	A (5.9)	A (9.8)	B (10.0)
		E (67.0)						B (15.9)			A (9.6)		
2032 No Build	C (20.5)	**E (76.1)**	**E (68.4)**		**E (77.6)**			B (12.1)	B (18.2)	B (12.6)	A (6.7)	B (11.3)	B (10.6)
		E (73.8)						B (18.1)			B (11.0)		
2032 Build (South Harbor)	C (20.9)	**E (76.1)**	**E (68.4)**		**E (77.6)**			B (12.3)	B (18.6)	B (12.6)	A (6.9)	B (11.6)	B (10.6)
		E (73.8)						B (18.5)			C (11.3)		
2032 Build (S. Harbor/Tower Parcel)	C (20.9)	**E (76.1)**	**E (68.4)**		**E (77.6)**			B (12.3)	B (18.7)	B (12.6)	A (6.9)	B (11.6)	B (10.6)
		E (73.8)						B (18.5)			B (11.3)		
PM Peak Hour													
2017 Existing	B (17.0)	D (35.0)	C (33.2)		C (32.5)			B (11.4)	B (15.7)	B (11.9)	B (10.3)	B (16.1)	B (11.3)
		C (34.3)						B (15.5)			B (15.6)		
2026 No Build	B (18.4)	**E (77.3)**	**E (73.4)**		**E (76.5)**			B (11.2)	B (16.5)	B (11.6)	A (6.1)	B (11.4)	B (10.1)
		E (75.7)						B (16.2)			B (10.9)		
2026 Build (South Harbor)	B (18.0)	**E (77.3)**	**E (73.4)**		**E (76.5)**			B (11.5)	B (16.8)	B (11.6)	A (6.1)	B (10.7)	B (10.1)
		E (75.7)						B (16.5)			B (10.4)		
2026 Build (S. Harbor/Tower Parcel)	C (27.6)	**E (77.3)**	**E (73.4)**		**E (76.5)**			B (11.5)	B (16.8)	B (11.6)	C (20.1)	C (30.2)	B (10.1)
		E (75.7)						B (16.5)			C (28.8)		
2032 No Build	B (19.4)	**E (77.7)**	**E (73.3)**		**E (73.1)**			B (13.8)	B (19.7)	B (13.2)	A (7.8)	B (11.0)	B (12.0)
		E (76.0)						B (19.4)			B (10.8)		
2032 Build (South Harbor)	B (19.7)	**E (77.7)**	**E (73.3)**		**E (73.1)**			B (14.3)	C (20.1)	B (13.2)	A (8.9)	B (11.5)	B (12.0)
		E (76.0)						B (19.8)			B (11.3)		
2032 Build (S. Harbor/Tower Parcel)	B (19.7)	**E (77.7)**	**E (73.3)**		**E (73.1)**			B (14.4)	C (20.2)	B (13.2)	A (8.9)	A (11.5)	B (12.0)
		E (76.0)						B (19.9)			B (11.3)		

Table 25: Carrollton Boulevard at Ashby Way/Omera Drive Intersection Maximum Queuing

Scenario	Maximum Queue Length by Movement (feet)											
	Eastbound			Westbound			Northbound			Southbound		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Effective Storage Length (Existing/Build)	135	709		775			275	1,480	350	300	1,077	630
AM Peak Hour												
2017 Existing	80	41		101			38	209	27	69	167	28
2026 No Build	111	64		182			32	241	<25	64	170	32
2026 Build (South Harbor)	104	53		186			34	263	<25	76	142	31
2026 Build (S. Harbor/Tower Parcel)	122 *(1%)	66		173			39	252	<25	58	195	42
2032 No Build	126 *(1%)	96		210			36	266	<25	110	186	<25
2032 Build (South Harbor)	128 *(1%)	124		210			32	284	26	96	184	26
2032 Build (S. Harbor/Tower Parcel)	118 *(1%)	79		218			36	280	26	99	201	30
PM Peak Hour												
2017 Existing	58	39		105			42	195	< 25	65	211	33
2026 No Build	74	57		197			73	280 **(1%)	<25	119	233	29
2026 Build (South Harbor)	82	47		237			73	290	<25	100	232	28
2026 Build (S. Harbor/Tower Parcel)	85	55		235			119	292	<25	136	230	30
2032 No Build	104	65		297			169	381 **(2%)	<25	161	285	33
2032 Build (South Harbor)	101	75		283			144	381 **(2%)	<25	186	324	38
2032 Build (S. Harbor/Tower Parcel)	92	68		280			159	356 **(2%)	56	185	342 **(1%)	38

Notes:

**(X%) - Maximum queue extends full length of storage bay for X% of the analysis period*

***(Y%) - Queue in lane adjacent to storage bay extends beyond end of storage bay for Y% of the analysis period*

^(Z%) - Maximum queue extends back to upstream intersection for Z% of the analysis period

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7 CONCLUSIONS AND RECOMMENDATIONS

This TIA update examined the potential impacts associated with the proposed South Harbor development parcels, as well as the Eagle Harbor, LLC (Tract 11) parcel located along Carrollton Boulevard and Channell Way in Isle of Wight County, Virginia. Additional development located at the Crossings (i.e., referred to as the "Tower Parcel") was also evaluated for potential traffic impacts. It is anticipated that the construction of the proposed developments will be completed, operational, and at or near full occupancy/build-out by 2026. For the purposes of this TIA Update, the parcels are assumed to not be connected and will not have cross parcel access.

In addition to evaluating the changes to internal traffic circulation/travel patterns associated with the South Harbor development as a result of removing the previously proposed bridge connection, the TIA Update also considers traffic impacts related to the Tower Parcel residential development, and the influence of the Spadea Way connection on future traffic operations.

The following access points are proposed/assumed for Tract 11 and the Pitt parcel portions of the South Harbor development:

- Carrollton Boulevard (U.S. Route 17) via the Site Driveway Access:
  1. Westbound approach of Smiths Neck Road at the Carrollton Boulevard/Smiths Neck Road signalized intersection
  2. Westbound approach of Northgate Drive at the Carrollton Boulevard/Northgate Drive unsignalized intersection

The following access points are proposed/assumed for the Lippe parcel component of the South Harbor development:

- Carrollton Boulevard (U.S. Route 17) via the Channell Way Access:
  2. Westbound approach of Channell Way at the Channell Way/Whippingham Parkway unsignalized intersection (Channell Way will provide direct access to/from Carrollton Boulevard)
- Carrollton Boulevard (U.S. Route 17) via the Spadea Way Access:
  1. Westbound approach of Spadea Way at the Carrollton Boulevard and Spadea Way/Brewers Neck Boulevard signalized intersection (Spadea Way will provide direct access to/from Carrollton Boulevard)

The total amount of traffic generated by these developments is expected to consist of approximately 3,422 daily trips, of which 258 and 297 trips will occur during the AM and PM peak hours, respectively. In addition to the traffic generation associated with the proposed parcels, an annual growth rate of 2% was applied to account for future traffic volume projections per standard practice and guidance as a part of this study. Based on the results of the traffic analysis, the future impacts associated with the proposed development are anticipated to be minimal overall, with minor deteriorations in operations anticipated at the signalized and unsignalized intersections when comparing 2026 and 2032 Build conditions to 2026 and 2032 No-Build and in some cases even Existing operational conditions.

The following recommendations were identified/verified as part of the TIA Update and are summarized below as well as shown graphically in **Figure 20**: It is noted that the anticipated phase of implementation for each of these improvements is provided for reference.

Carrollton Boulevard (U.S. Route 17)

- VDOT should continue to monitor and periodically optimize traffic signal phasing and timing plans to accommodate peak hour/off-peak traffic volumes along the Carrollton Boulevard corridor
- VDOT should update signal timing optimization following initial occupancy and full build-out of the development to account for the change in traffic volumes/demand
    - Signal coordination improvements/enhancements should continue to facilitate and emphasize the progression of traffic along Carrollton Boulevard

Carrollton Boulevard (U.S. Route 17) at Smiths Neck Road

- The Developer will modify the existing traffic signal (i.e., install a third signal head on the mast arm serving the westbound approach of Smiths Neck Road) to accommodate the proposed exclusive left-turn lane, through lane, and exclusive right-turn lane. (Phase 1)
    - Implement right-turn overlap phase as a part of traffic signal operations/phasing. (Phase 1)
- The Developer will modify the existing traffic signal (i.e., modify signal heads on the mast arm serving the eastbound approach of Smiths Neck Road) to accommodate the proposed dual exclusive left-turn lanes and a shared through/right-turn lane. (Phase 1)
    - Remove/replace the existing lane control signage on the mast arm to reflect dual left-turn movement. (Phase 1)
- VDOT should continue to periodically optimize traffic signal phasing and timing plans to accommodate peak hour/off peak traffic volumes along the Carrollton Boulevard corridor
- VDOT should update signal timing optimization following initial occupancy and full build-out of the development to account for the change in traffic volumes/demand
    - Signal coordination improvements/enhancements should continue to facilitate and emphasize the progression of traffic along Carrollton Boulevard

Northbound Carrollton Boulevard (Phase 3)

- The Developer will improve/extend the existing exclusive northbound left-turn lane to consist of 400 feet of storage and a 100-foot taper
    - Final design and construction of this improvement shall be coordinated directly with VDOT

Southbound Carrollton Boulevard (Phase 1)

- The Developer will improve/extend the existing exclusive southbound left-turn lane to consist of 400 feet of storage and a 100-foot taper
    - Final design and construction of this improvement shall be coordinated directly with VDOT

Eastbound Smiths Neck Road (Phase 1)

- The Developer will reconfigure the eastbound approach to consist of the following laneage:
    - Two exclusive left-turn lanes
    - One exclusive shared through/right-turn lane
- The Developer will remove/replace the existing lane control signage on the mast arm to reflect the dual left-turn movement
- Eastbound and westbound left-turns will run concurrently

Westbound Smiths Neck Road

- Approach/Outbound laneage (Phase 1)
  - The Developer will construct an exclusive right-turn lane extending from the 7-Eleven entrance driveway to the intersection with Carrollton Boulevard
  - The Developer will restripe the westbound approach to delineate the following laneage (Phase 1):
    - One exclusive left-turn lane
    - One exclusive through lane
    - One exclusive right-turn lane
- Receiving/Inbound Laneage (Phase 1)
  - The Developer will construct a 4-foot raised concrete median between the 7-Eleven/Bojangles intersection and the Carrollton Boulevard intersection.
  - The Developer will construct/install two inbound lanes to consist of the following:
    - Inside travel lane to serve as an exclusive left-turn lane (drop lane)
    - Outside travel lane will be designated as a shared through/right-turn lane
    - Improve/modify channelized/right-in only driveway (e.g., driveway entrance width and associated driveway radii) serving the Bojangles/Shoppes at Eagle Harbor

Smiths Neck Road at 7-Eleven/Bojangles (Phase 1)

- The Developer will construct/configure the intersection as three-way STOP controlled:
  - The Bojangles, 7-Eleven, and the northbound Driveway 1/Connection from the Pitt property being STOP controlled
  - The southbound Driveway 1/Connection to the Pitt property and thus the southbound left-turn movement to the 7-Eleven entrance driveway will be free-flow operations
- The Developer will install supplemental signage and pavement markings to consist of the following:
  - "DO NOT BLOCK INTERSECTION" signage
  - Intersection pavement markings delineating the area not to block (i.e., the box)
  - Supplement with signage reflecting a potential fine for those observed/caught impeding intersection operations

Carrollton Boulevard (U.S. Route 17) at Northgate Drive

Northbound Carrollton Boulevard (Phase 3)

- The Developer will improve/extend the existing exclusive northbound right-turn lane to consist of 200 feet of storage and a 200-foot taper
  - Final design and construction of this improvement shall be coordinated directly with VDOT

Southbound Carrollton Boulevard (Phase 3)

- The Developer will improve/extend the existing exclusive southbound left-turn lane to consist of 200 feet of storage and a 200-foot taper
  - Final design and construction of this improvement shall be coordinated directly with VDOT

Northgate Drive Interim Improvements (Phase 3)

Eastbound Northgate Drive (Phase 3)

- No geometric changes
- The Developer will implement site access/movement restrictions via signage during peak periods (i.e., install signage reflecting no left or through movements Monday – Friday 6:00 AM to 9:00 AM and 3:00 PM to 6:00 PM). Location of signage shall be coordinated with VDOT.

Westbound Northgate Drive (Phase 3)

- No geometric changes
- The Developer will implement site access/movement restrictions via signage during peak periods (i.e., install signage reflecting no left or through movements Monday – Friday 6:00 AM to 9:00 AM and 3:00 PM to 6:00 PM). Location of signage shall be coordinated with VDOT.

Northgate Drive Permanent Partial Access Improvements (Phase 5)

The Developer will contribute a cash proffer to the County for use in applying for revenue sharing or other alternative funding grant programs that would be administered by VDOT or the County. It is anticipated that the alternative funding grant would be used to implement the proposed improvements/modifications of the Carrollton Boulevard/Northgate Drive intersection that will result in channelized left-turn lanes along northbound/southbound Carrollton Boulevard and fully restrict side street left-turn and through movements (i.e., right-turn only).

Eastbound Northgate Drive (Phase 5)

- Side street improvements are expected to also consist of reconfiguring (i.e., restriping and updating signage) the eastbound Northgate Drive approach as right-turn only at the time the related intersection improvement project is being constructed.

Westbound Northgate Drive (Phase 5)

- Side street improvements are expected to also consist of reconfiguring (i.e., restriping and updating signage) the westbound Northgate Drive approach as right-turn only at the time the related intersection improvement project is being constructed.

Channell Way (Phase 2)

- The Developer will improve the existing 2-lane typical section of Channell Way to consist of the following:
    - Pavement striping to reflect/delineate two (2) 11-foot travel lanes
    - 2-foot graded shoulder in each direction
- The Developer will implement the proposed improvements from the agreed upon eastern limits of the Lippe parcel in the east to the Carrollton Boulevard intersection in the west
- The Developer will coordinate with VDOT on implementation of resurfacing/repaving the defined segment of roadway (i.e., identify when/if VDOT has surfacing activities planned and implement Developer resurfacing improvements prior to/in lieu of those efforts)
    - Coordinate with VDOT to identify/confirm documented pavement section deficiencies and address/mitigate as applicable

Carrollton Boulevard (U.S. Route 17) at Channell Way/Deep Bottom Drive

Northbound Carrollton Boulevard

- No geometric changes

Southbound Carrollton Boulevard (Phase 4)

- Southbound exclusive left-turn lane
    - The final design and configuration of the southbound left-turn lane at this intersection will be defined/dictated by the design and construction of the second northbound right-turn lane, a raised median, and the stormwater infrastructure being constructed/installed (i.e., second northbound left-turn lane at Brewers Neck Boulevard) as a part of the VDOT Bartlett Intersection improvement project.

Eastbound Deep Bottom Drive

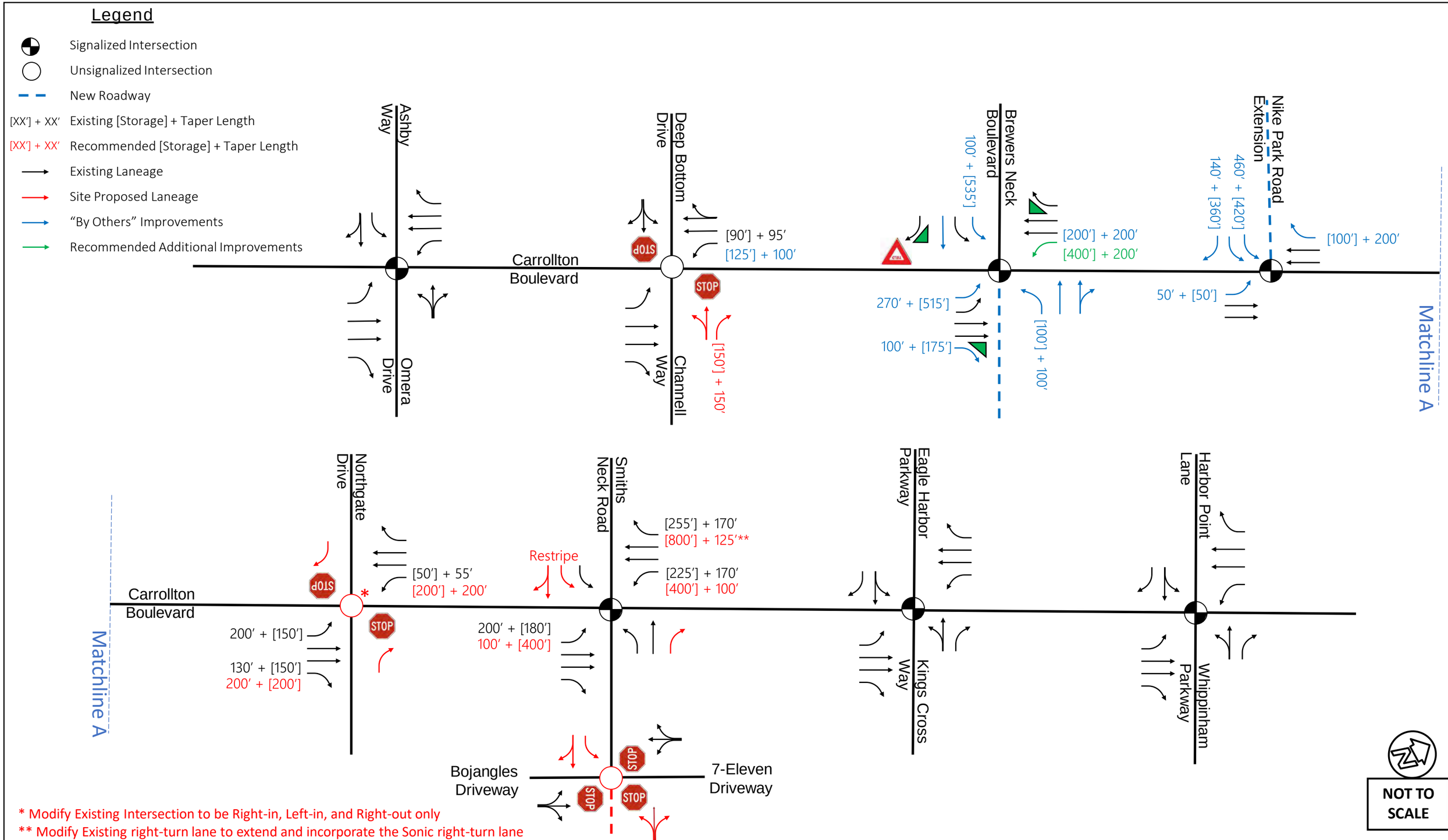
- No geometric changes

Westbound Channell Way (Phase 4)

- The Developer will improve the westbound approach to consist of the following laneage:
    - One shared through/left-turn lane
    - One exclusive right-turn lane consisting of 150 feet of storage and a 150-foot taper
        - Final design and construction of these improvement shall be coordinated directly with VDOT

Legend

- Signalized Intersection
- Unsignalized Intersection
- New Roadway
- [XX'] + XX' Existing [Storage] + Taper Length
- [XX'] + XX' Recommended [Storage] + Taper Length
- Existing Laneage
- Site Proposed Laneage
- "By Others" Improvements
- Recommended Additional Improvements



* Modify Existing Intersection to be Right-in, Left-in, and Right-out only

** Modify Existing right-turn lane to extend and incorporate the Sonic right-turn lane

NOT TO SCALE

Kimley»Horn	South Harbor TIA Update Isle of Wight County, VA	Recommended Improvements	Figure 21

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Technical Appendices
for
South Harbor – Age Restricted Residential Development
Isle of Wight, Virginia

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116426005
February 2022

Appendix A
Assumptions Document

The following documentation outlines our proposed approach to preparing a traffic impact analysis (TIA) update for the South Harbor – Residential Development (Age Restricted), located in Isle of Wight County, Virginia. The TIA update will include the analysis of future traffic operations based on there being no bridge connection (i.e., between the Phase 5 and Phase 3 areas as previously assumed and shown in **Attachment A** – Overall Residential Development Plan) and the redistribution of site traffic via a proposed connection at Spadea Way that will provide access to the Carrollton Boulevard/Brewers Neck Boulevard intersection. The TIA update will also consider under separate analysis scenarios, the traffic impacts associated with the development of 51 single family residential dwelling units a part of a required rezoning of the Tower Parcel (per **Attachment B** – Tower Site Conceptual Layout).

Study Area

The study area for the TIA update and the associated proposed development site consists of the following signalized and unsignalized intersections:

- Carrollton Boulevard at Whippingham Parkway/Harbor Point Lane *(signalized)*
- Carrollton Boulevard at Eagle Harbor Parkway/Kings Cross *(signalized)*
- Carrollton Boulevard at Smiths Neck Road *(signalized)*
- Carrollton Boulevard at Northgate Lane *(unsignalized)*
- Carrollton Boulevard at Brewers Neck Boulevard (U.S. Route 258) *(signalized)*
- Carrollton Boulevard at Channel Way/Deep Bottom Drive *(unsignalized)*
- Carrollton Boulevard at Ashby Way/Omera Drive *(signalized)*

In addition, the proposed/planned intersection of Nike Park Extension at Carrollton Boulevard, which is anticipated to be located approximately 1,300 feet to the north of the Brewers Neck Boulevard intersection and approximately 1,900 feet to the south of the Northgate Lane intersection, will be included as a study area intersection in the future 2026 and 2032 conditions analyses. No changes to the study area intersections/roadways are proposed in an effort to provide/maintain consistency with the previously approved Pitt & Lippe TIA Assumptions document (**Attachment C**).

Data Collection

No new traffic count data collection is proposed with the TIA update.

Analysis Years

1) Existing Conditions Traffic Operations Analysis
    a. Base year existing conditions (i.e., 2017) to remain consistent with original Pitt & Lippe TIA.
2) Future Year Scenario Traffic Operations Analysis
    a. No-Build Analysis (Intersection / Arterial, Weekday AM and PM peaks)
    b. South Harbor Build (Intersection / Arterial, Weekday AM and PM peaks) – reassignment of traffic volumes based on “no bridge” connection

c. The Crossings w/ Tower Parcel Build (Intersection/Arterial, Weekday AM and PM peaks)
d. Future Year Analysis Scenarios to remain the same as those per the approved Pitt & Lippe TIA Assumptions:
    i. 2026 – Opening Year
    ii. 2032 – Opening Year + 6

Trip Generation, Trip Distribution, Traffic Assignment Projections

1) Kimley-Horn will prepare updated trip distribution percentages for South Harbor (i.e., to account for No Bridge Connection)
    a. Conduct re-assignment of South Harbor traffic volumes to the Spadea Way at Carrollton Boulevard/Brewers Neck Boulevard intersection and respective study area intersections
2) Kimley-Horn will prepare trip generation estimates for The Crossings (Tower Parcel – residential development)
    a. The conceptual site plan currently reflects 51 single family residential dwelling units (**Attachment B**)
3) Kimley-Horn will prepare future traffic volume projections:
    a. No-Build (Background growth **plus** approved but unbuilt developments
    b. South Harbor Build (Background growth **plus** approved but unbuilt developments **and** South Harbor traffic re-distribution/re-assignment
    c. The Crossings w/ the Tower Parcel Build (Background growth **plus** approved but unbuilt developments **and** South Harbor traffic re-distribution/assignment, **plus** proposed additional Tower Parcel residential development traffic

Future Traffic

A future background growth rate 2.0% per year (applied exponentially) will be used for adjusting background traffic to the future analysis years. This growth rate is consistent with the approved growth rate referenced in the associated assumptions document (**Attachment C**) and used to prepare the Pitt & Lippe TIA.

This TIA update also assumes no changes to trip generation estimates associated with previously included approved but unbuilt developments within the study area with the exception of the multi-family development component associated with The Crossings. It is our understanding the multi-family component originally included approximately 300 units. However, it is our understanding that the revised site plan/development plan only includes 210 multi-family units. No other changes to approved but unbuilt trip generation estimates are proposed.

Site Access

Site access for the South Harbor development with no bridge connection will consist of the following locations along Carrollton Boulevard.

- Carrollton Boulevard at Smiths Neck Road – ties into existing signalized intersection

- Carrollton Boulevard at Northgate Lane – ties into an existing full access, unsignalized intersection
- Carrollton Boulevard at Spadea Way – ties into existing signalized intersection of Carrollton Boulevard/Brewers Neck Boulevard signalized intersection
- Carrollton Boulevard at Channel Way – ties into an existing full access, unsignalized intersection

Site Distributions

Site traffic distributions were determined from existing travel patterns, access to/from the external adjacent street network, and employment/activity center destinations in the surrounding area. Proposed trip distributions are to remain consistent with those referenced in the Pitt & Lippe TIA assumptions document. However, adjustments will be made to the assignment of development related traffic to study area intersections based on no bridge connection, and the use of Spadea Way for a component of the South Harbor development as well as traffic associated with the proposed Tower Parcel residential development.

General/region distribution of traffic will be consistent with the Pitt & Lippe Age Restricted development TIA assumptions. These are listed below for reference:

- To/from the north on Carrollton Boulevard (toward James River Bridge) – 50%
- To/from the south on Carrollton Boulevard (toward Suffolk) – 35%
- To/from the west on Brewers Neck Boulevard – 10%
- To/from the west on Smiths Neck Road – 5%

Traffic Impact Analysis (TIA) Report Update

A TIA report update to include the proposed Tower Parcel residential development with an accompanying appendices (including all analysis files) will be prepared that summarizes the analysis methodology and results. The report and associated analysis files will be provided in electronic format as a part of the DRAFT and FINAL traffic analysis submittal.

1) South Harbor TIA Report Update:
    a. DRAFT Report
    b. Comment Resolution/Resubmittal
    c. FINAL Report

Attachments

Attachment A – Overall Residential Development Plan

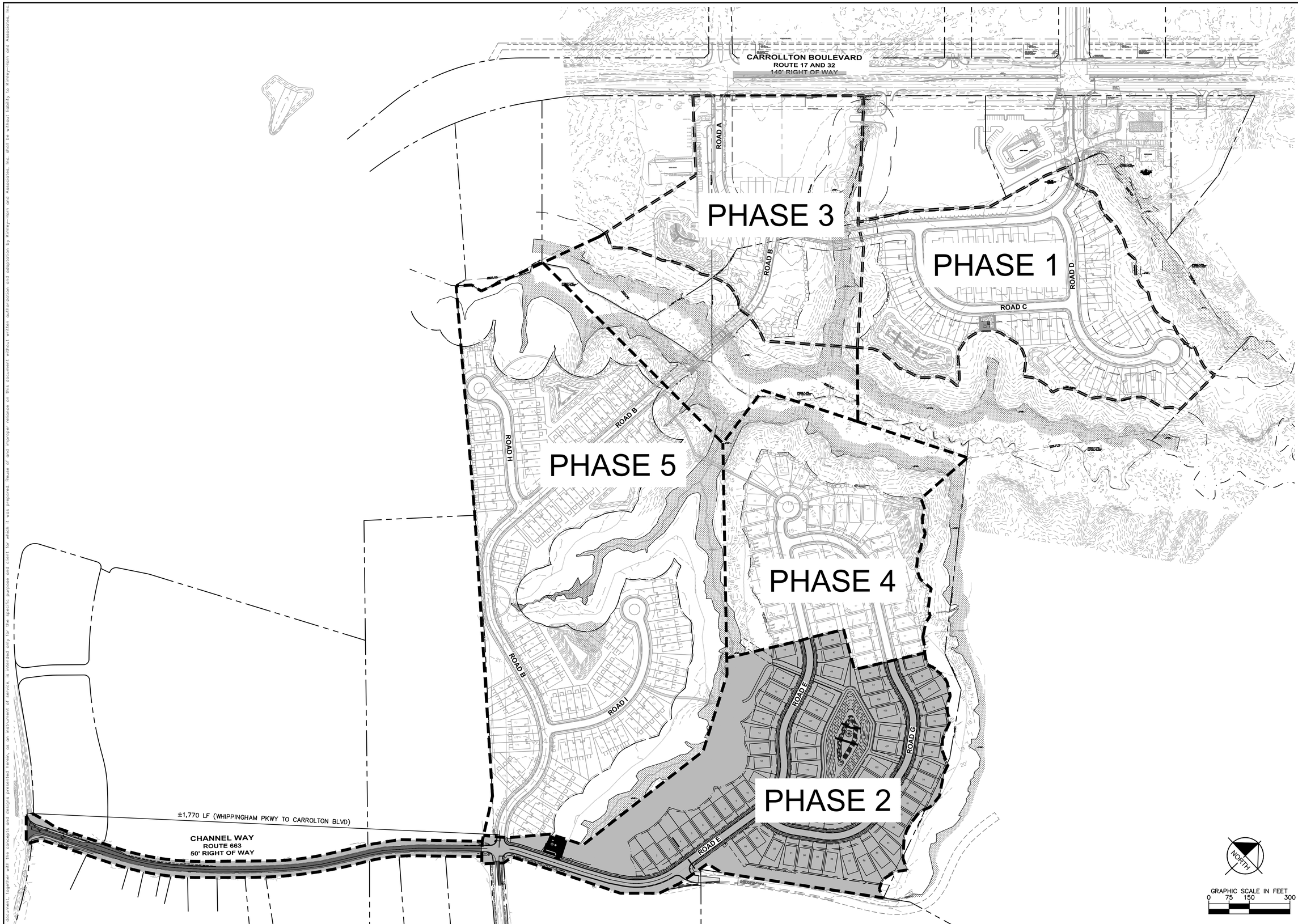
Attachment B – Proposed Tower Parcel Residential Development

Attachment C – Previously Approved Pitt & Lippe TIA Assumptions

Attachment A:

South Harbor Overall Residential Development Plan

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



No.	REVISIONS	DATE	BY

Kimley»Horn

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COMMONWEALTH OF VIRGINIA
EDWARD W. MILLER
Lic. No. 033592
10/29/2021
PROFESSIONAL ENGINEER

KHA PROJECT	116426005
DATE	10/29/2021
SCALE	AS SHOWN
DESIGNED BY	EWM
DRAWN BY	TMG
CHECKED BY	HNT

OVERALL RESIDENTIAL DEVELOPMENT PLAN

SOUTH HARBOR PHASE 2

PREPARED FOR
EH2, LLC.

ISLE OF WIGHT VIRGINIA

SHEET NUMBER
CA003

Attachment B:

Tower Parcel Residential Development Conceptual Site Plan

CONCEPTUAL SITE LAYOUT PLAN OF 55' x 100' LOTS OF

TOWER SITE

ISLE OF WIGHT, VIRGINIA

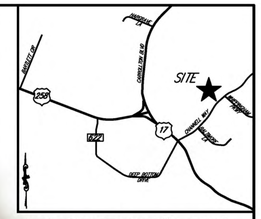
Site Data

Site Area:	± 12.24 AC
TPIN:	34-01-070B
Existing Zoning:	RAC
Existing Use:	Radio Tower
Proposed Zoning:	PD-MX
Proposed Use:	Single Family Residential
Proposed Lots:	51
Open Space:	± 19 %

Proposed Setbacks:
Front: 20'
Side: 5'
Rear: 15'

Owner: N/F Booth-Cobb Media, LLC





LOCATION MAP, SCALE 1" = 2,000'

DATE: 10/05/2021

THIS DRAWING IS CONCEPTUAL AND HAS BEEN PREPARED WITH A SITE SURVEY PREPARED BY OTHERS, THEREFORE, PROPERTY LINES, WETLAND BOUNDARIES, AND OTHER SITE SPECIFIC DATA ARE APPROXIMATE. CONCEPT DRAWINGS ARE GENERAL IN NATURE AND ARE INTENDED ONLY TO ILLUSTRATE THE DEVELOPMENT POTENTIAL FOR A PROPERTY; THEY SHOULD NOT BE RELIED UPON AS THE SOLE BASIS FOR ANY FINANCIAL OR LEGALLY BINDING TRANSACTION.

50 0 50 100

1 INCH = 50 FT

ORBIS
LANDSCAPE ARCHITECTURE
ORBIS-LA.COM

Attachment C:

Previously Approved Pitt & Lippe Age Restricted Development TIA Assumptions

The following documentation outlines our proposed traffic impact analysis (TIA) assumptions for the Pitt & Lippe – Residential Development (Age Restricted), located in Isle of Wight County to the south/east of Carrollton Boulevard (U.S. Route 17). As part of this analysis, existing traffic data will be collected and future traffic volumes developed to identify if any roadway improvements at the access points/study area intersections are needed as part of the proposed development.

Study Area

The study area for the TIA and the associated proposed development site consists of the following signalized and unsignalized intersections:

- Carrollton Boulevard at Whippingham Parkway/Harbor Point Lane *(signalized)*
- Carrollton Boulevard at Eagle Harbor Parkway/Kings Cross *(signalized)*
- Carrollton Boulevard at Smiths Neck Road *(signalized)*
- Carrollton Boulevard at Northgate Lane *(unsignalized)*
- Carrollton Boulevard at Brewers Neck Boulevard (U.S. Route 258) *(signalized)*
- Carrollton Boulevard at Channel Way/Deep Bottom Drive *(unsignalized)*
- Carrollton Boulevard at Ashby Way/Omera Drive *(signalized)*

In addition, the proposed/planned intersection of Nike Park Extension at Carrollton Boulevard, which is anticipated to be located approximately 1,300 feet to the north of the Brewers Neck Boulevard intersection and approximately 1,900 feet to the south of the Northgate Lane intersection, will be included as a study area intersection in the future 2026 and 2032 conditions analyses.

Data Collection

Turning movement counts (TMC) were collected at the study area intersections on Thursday, October 5, 2017 while school was in session. The TMCs include vehicular, truck, and pedestrian volumes. Four-hour TMCs were conducted during the AM and PM peak periods (6:30 AM to 8:30 AM and 4:00 PM to 6:00 PM) at all study area intersections. For intersections where a traffic signal warrant may be reviewed, 12-hours of counts were collected (7:00 AM to 7:00 PM) instead.

Three (3) average weekday daily traffic counts (AWDT) were collected for a 72-hour period on the following roadway segments to collect volume, classification, and speed data where possible:

- Carrollton Boulevard between the Eagle Harbor Parkway/Kings Cross intersection and Whippingham Parkway/Harbor Point Lane intersection *(volume, classification, and speed collected at this location)*
- Carrollton Boulevard between Brewers Neck Boulevard and a location to the south of Smiths Neck Road *(volume, classification, and speed collected at this location)*
- Carrollton Boulevard between the Channel Way/Deep Bottom Road intersection and the Omera Drive/Ashby Way intersection *(volume, classification, and speed collected at this location)*

Additional traffic volume data may also be utilized from previous studies conducted in this area, if applicable (i.e., Brewers Neck Corridor Study, Eagle Harbor Tract 8 TIA, Eagle Harbor Tract 10

Operational Analysis, The Crossings, etc.). Current traffic signal timing and phasing data was requested and provided by VDOT at the signalized study area intersections.

Analysis Years

The proposed development is anticipated to be completed in 2026. Therefore, the following analysis scenarios for the AM and PM peak hours will be studied as part of this TIA.

- Scenario 1 – Existing (2017) traffic conditions
- Scenario 2 – Build – Out Year (2026) No-Build conditions – Build-out year traffic conditions (i.e., existing traffic volumes *with* application of approved annualized growth rate)
- Scenario 3 – Build – Out Year (2026) Build conditions – Build-out year traffic conditions (i.e., existing traffic volumes *with* application of approved annualized growth rate) *plus* the Pitt & Lippe residential development traffic volumes
- Scenario 4 – Build – Out Year +6 years (2032) No-Build conditions – Build-out year traffic conditions (i.e., existing traffic volumes *with* application of approved annualized growth rate)
- Scenario 5 – Build – Out Year +6 years (2032) Build conditions – Build-out year traffic conditions (i.e., existing traffic volumes *with* application of approved annualized growth rate) *plus* the Pitt & Lippe residential development traffic volumes

Future Traffic

Per conversations with the Isle of Wight County, it is proposed that a growth rate of 2.0% per year (applied exponentially) be used for adjusting background traffic to the future analysis years. **Table 1** reflects historical traffic volume trends over the previous five (5) years (i.e., 2012 to 2016). These data reflect a natural growth rate of approximately 1.5% is for the study area corridor.

Table 1: Study Area Roadways Historic AADT

Roadway	Location	2012	2013	2014	2015	2016	Average
Carrollton Blvd	Suffolk City Limits to U.S. Route 258	15,000	15,000	15,000	15,000	15,000	0.00%
Growth Rate to 2016		*0.0%*	*0.0%*	*0.0%*	*0.0%*	-	
Carrollton Blvd	U.S. Route 258 to Ragged Island	29,000	28,000	28,000	29,000	29,000	0.74%
Growth Rate to 2016		*0.0%*	*1.2%*	*1.8%*	*0.0%*	-	
Brewers Neck Blvd	Benns Church Blvd to Carrollton Blvd	24,000	24,000	24,000	25,000	26,000	3.2%
Growth Rate to 2016		*2.0%*	*2.7%*	*4.1%*	*4.0%*	-	
Overall Average							1.3%

Source: VDOT Traffic Engineering Division

In addition to the natural/historical trend of growth of 1.5%, there are other approved developments that are not yet constructed within the study area. In conversations with Isle of

Wight County staff it was determined, that to account for these approved but unbuilt developments an additional 0.5% should be added to the historical growth rate. This results in a growth rate of 2.0% that will be applied exponentially to calculate background traffic volumes for future analysis years (i.e., 2026 and 2032).

The future traffic volumes will also account for any traffic diversions identified as a result of the proposed Nike Park Road Extension, based on the planned opening date of that project. It is expected that the County and/or VDOT will provide and share any relevant traffic data associated with the Nike Park Road Extension or Bartlett Intersection Improvement projects.

Kimley-Horn will also coordinate with Isle of Wight County staff to identify and confirm any of the relevant transportation improvements proffered by the approved developments that should be included in the future year network.

Proposed Land Use

A conceptual master plan of the Pitt & Lippe Age Restricted residential development is included with these assumptions as **Attachment A**. Kimley-Horn will use *ITE Trip Generation 10th Edition* (2017) as a basis to calculate trip generation estimates for the proposed development. Land uses for the proposed development are intended to include Senior Adult Housing (Attached and Detached – ITE LU Codes 251 and 252).

In addition, there are two outparcels identified in the master plan located to the south/east of Carrollton Boulevard between Northgate Drive and the southern site access driveway serving the Shoppes at Eagle Harbor. These outparcels will have 1.7 and 2.0 acres of developable land. The exact land uses for these outparcels are not known at this time. However, for the purposes of this TIA they were assumed to be general office building (LU Code: 710) and medical-dental office building (LU Code: 720). Building square footage was estimated by applying a 0.2 floor-to-area ratio (FAR) to the outparcel size. No pass-by or internal capture rate reductions will be included as part of this analysis. Initial trip generation calculations for the proposed development are shown in **Table 2**.

Table 2: Proposed Trip Generation

ITE Code	ITE Description	Density	Unit	Daily	AM Peak Hour			PM Peak Hour		
					Total	In	Out	Total	In	Out
251	Senior Adult Housing – Detached	165	DU	874	60	20	40	71	43	27
252	Senior Adult Housing - Attached	175	DU	678	35	12	23	44	24	20
Total Residential				1,552	95	32	63	115	68	47
710	General Office Building (0.2 FAR)	17,400	Sq. Ft.	195	43	37	6	22	3	17
720	Medical-Dental Office Building (0.2 FAR)	14,800	Sq. Ft	481	41	32	8	52	15	38
Out Parcels				676	84	69	14	74	18	55
Total				2,228	178	101	77	189	86	101

Source: ITE Trip Generation Manual, 10th Edition, (2017)

However, in conversations with Isle of Wight County and VDOT, it was discussed and preliminarily agreed to that the ITE Trip Generation rates presented may be low, compared to what is likely anticipated for the proposed Age Restricted Residential land use. Based on consensus among the group, Kimley-Horn reviewed two independent studies that documented the trip generation characteristics of a 55+ (Age Restricted) Communities in comparison to both traditional single family and 55+/Unrestricted Residential Communities. Data from these reports indicated that Age Restricted/Senior Housing Communities generate approximately 2/3 of the amount of daily traffic when compared to a typical single-family development. The data also suggested that based on income and vehicle ownership as well as non-residential traffic activity, that a factor of 1.5 (i.e., 50%) should be applied to peak hour trip generation rates to better account for the non-household travel. The results of these proposed adjustments to Senior Adult Housing – Detached and Attached trip generation rates in comparison to Single Family Detached Housing are shown in **Table 3**. Reference documents and adjustment calculations are provided as an attachment to this assumptions document. Study data references and documentation can be found in **Attachments B 1** through **3**.

Table 3: Adjusted Trip Generation for the Pitt & Lippe Age Restricted Development

210 - Single Family Detached Housing			251 – Senior Adult Housing Detached			252 – Senior Adult Housing Attached		
Original Trip Rates								
Daily	AM	PM	Daily	AM	PM	Daily	AM	PM
9.44	0.74	0.99	4.27	0.24	0.30	3.70	0.20	0.26
Adjusted Trip Rates								
Daily	AM	PM	Daily	AM	PM	Daily	AM	PM
			7.12	0.4	0.5	6.17	0.4	0.5

These proposed adjusted trip generation rates will be applied to the Pitt & Lippe development intensities as described previously, to result in the overall trip generation potential as shown in **Table 4**.

Table 4: Revised Trip Generation

ITE Code	ITE Description	Density	Unit	Daily	AM Peak Hour			PM Peak Hour		
					Total	In	Out	Total	In	Out
251	Senior Adult Housing – Detached	165	DU	1,174	66	22	44	83	51	30
252	Senior Adult Housing - Attached	175	DU	1,079	70	24	46	88	47	40
Total Residential				2,254	136	46	90	170	98	71
710	General Office Building (0.2 FAR)	17,400	Sq. Ft.	195	43	37	6	22	3	17
720	Medical-Dental Office Building (0.2 FAR)	14,800	Sq. Ft	481	41	32	8	52	15	38
Out Parcels				676	84	69	14	74	18	55
Total				2,929	220	114	104	244	116	125

Source: Kimley-Horn

Site Access

As shown in the attached conceptual master plan, access to/from the Pitt & Lippe Age Restricted Residential development is proposed to occur at the following locations:

- Carrollton Boulevard at Smiths Neck Road – ties into existing signalized intersection
- Carrollton Boulevard at Northgate Lane – ties into an existing full access, unsignalized intersection
- Carrollton Boulevard at Channel Way – ties into an existing full access, unsignalized intersection

It is anticipated that a bridge will be constructed that will provide connectivity between the two subject parcels. Additionally, all of the proposed access occurs at existing roadways and/or median breaks along Carrollton Boulevard. Access management spacing requirements (Appendix F for the VDOT Road Design Manual) will also be considered for these intersections and any recommended treatments.

Site Distributions

Site traffic distributions were determined from existing travel patterns, access to/from the external adjacent street network, and employment/activity center destinations in the surrounding area. Proposed distributions determined for the Pitt & Lippe Age Redistricted development are listed below and illustrated in **Attachment C** of these TIA assumptions.

- To/from the north on Carrollton Boulevard – 50%
- To/from the south on Carrollton Boulevard (toward Suffolk) – 35%
- To/from the west on Brewers Neck Boulevard – 10%
- To/from the west on Smiths Neck Road – 5%

Warrant Analysis Volumes

To assign the hourly site traffic for the future traffic signal warrant analysis at Northgate Lane, hourly variations will be used to estimate this volume. Data from available ITE and other comparable sources will be used to develop these hourly variations for use for the proposed development.

Traffic Operations Analysis

Proposed inputs and analysis methodologies will be consistent with VDOT's Traffic Operations and Safety Analysis Manual (TOSAM). Operational analyses for the study area intersections will be conducted using traffic analysis tools (e.g., *Synchro 10.1 Professional*, SimTraffic 10.1, SIDRA) and Highway Capacity Manual (HCM) methodologies. Models are proposed to be calibrated using traffic data collected (i.e., volumes and speeds) as part of this analysis to the corresponding outputs:

- Simulated Volumes:
    - All movements at study area intersections

- Simulated Speeds:
    - Carrollton Boulevard, between Northgate Lane and Brewers Neck Boulevard
    - Brewers Neck Boulevard, between New Towne Haven Lane and Carrollton Boulevard

The future conditions analyses will confirm the need and define the geometric configurations necessary for the proposed roadway and intersection capacity improvements. Measures of effectiveness that will be reported for each scenario will consist of delay per vehicle, level of service (LOS), and maximum queue lengths. These measures of effectiveness will be presented in tables and figures. Vehicle delay and LOS will be summarized by movement, approach, and overall intersection, while maximum queue lengths will be summarized for each movement.

As part of the future traffic operational analysis, consideration was given to a portion of the background traffic being diverted away from Smiths Neck Road with the addition of Nike Park Extension. Based on model simulation conducted as part of the Isle of Wight County *Brewer's Neck Corridor Study* (2014), it was shown that approximately 30% of traffic on Smiths Neck Road would divert onto the new Nike Park Extension Road. For the purposes of this TIA, 40% of the background traffic on Smiths Neck Road will be shifted onto Nike Park Extension for the 2026 and 2032 analysis scenarios.

Signal Justification Report

Carrollton Boulevard (U.S. Route 17) is a designated a Mobility Enhancement Segment (MES) and per the VDOT Arterial Preservation Program (APP), MESs are defined as "arterials within Urban Areas that serve a critical function for commerce, commuting, and multimodal mobility". The developer desires that the proposed access at Northgate Lane ultimately becomes signalized. Therefore, before a traffic signal will be considered and/or approved for installation VDOT requires that a Signal Justification Repot (SJR) be prepared per the criteria set forth in IIM-TE-387.0. However, as it is stated in the IIM:

> *"If the locality has approved a proffer agreement that included a traffic signal as a condition of rezoning or other land use decision, and this proposed proffer was reviewed by VDOT prior to finalizing with no objections having been submitted to the locality, then this Memorandum does not apply."*

A proffer for the proposed installation of a traffic signal at this location currently exists and will be triggered when the MUTCD warrants are met, as shown in the attachments (proffer #4, associated with Tracts 3, 8, and 11 as part of the "Eagle Harbor Property" rezoning).

Therefore, no SJR will be developed as part of this TIA. However, alternative intersections concepts will still be considered at the study area intersection of Carrollton Boulevard at Northgate Lane using VJuST methodology.

Reporting

A TIA report with an accompanying appendix (including all analysis files) will be prepared that summarizes the analysis methodology and results. The report and associated analysis files will be provided in electronic format as a part of the FINAL traffic analysis submittal.

Attachments

Attachment A – Conceptual Site Plan

Attachment B – Trip Generation Rate Adjustment Review Documentation

Attachment C – Proposed Regional Trip Distribution Figure

Attachment A:

Conceptual Site Plan

The Pitt & Lippe

Conceptual Master Plan

Isle of Wight, Virginia
September 25, 2018

SITE DATA:

Property Address: Route 17, Isle of Wight
Current Zoning: RAC & GC

Proposed Zoning: PD-MX

Total Site Area:	+/- 118 a.c.
RPA & Wetlands:	+/- 46 a.c.
Net Usable:	+/- 72 a.c.

Units Provided:

Single Family:	+/-165
Townhomes (28'x76'):	+/-175
Total Units Not to Exceed :	340

LEGEND:

- Single Family
- Townhomes
- Flex Use
- Commercial
- Open Space
- Wetlands
- Proposed Pond Locations*
- Pedestrian Connections/Sidewalks

**Note: The BMPs located hereon are conceptual only. During the site design and review process, the BMP locations will be further evaluated for potential pollutant removal efficiency and their locations modified as appropriate, and practicable, to achieve regulatory compliance.*



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O:\Projects\East West\Eagle Harbour II\Cadd\Prelim\Preliminary Eagle Harbour II v11 - Bubble Plan.dwg, Plotted By: Eric-PC, Plotted: Oct 12, 2018 - 3:34pm

Attachment B:

Trip Generation Rate Adjustment Review Documentation

Active Adult (55+) Community Trip Generation Rates

prepared for

Delaware Center For Transportation

and

The State of Delaware Department of Transportation

by

David P. Racca

Center for Applied Demography & Survey Research

College of Human Services, Education, and Public Policy
University of Delaware
Newark, DE 19716

January 2006

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Introduction

In response to the growing number of applications for the development of age restricted communities (55 years old and older) the Delaware Department of Transportation (DelDOT) through the Delaware Center for Transportation sponsored this study to examine trip generation characteristics and traffic impacts. Goals of the study include:

- Identify for the general Delaware population what the household structure and travel characteristics are for people 55 and older, and examine how household structure changes with age.
- Acquire available data to describe the household structures in age-restricted communities. Compare households in age-restricted communities with similar households outside of such communities.
- Research current literature and data on travel characteristics of those in age-restricted communities across the country.
- Identify any Delaware specific information that would be available to describe travel characteristics of age-restricted communities.
- Describe the number of age-restricted communities in Delaware and features that make them different from traditional housing developments. Examine the types of facilities offered to residents and how that might affect trip generation.

National trip generation estimates as available through the Institute Of Transportation Engineers, and local traffic studies were reviewed. Current and proposed 55+ communities in Delaware were identified. The Delaware Travel Monitoring System (DTMS) Survey data were examined to provide a detailed picture of the expected travel characteristics of 55+ communities as compared with the general population. National travel data as provided by the National Personal Travel Survey was used to provide further information.

This study produced a flexible model to assist planners in judging the impacts of age restricted communities.

Age Restricted (55+) Communities

Baby boomers - Americans born between 1946 and 1964 - are aging. Many of them plan to continue working, but want to live among people their own age and let someone else maintain the property. The leading edge of the baby boomer generation are entering their mid 50's and are entering into retirement with fast and far reaching agendas. They are financially established and healthy, and will continue to redefine retirement.

Residential complexes for active adults (55+) are becoming more commonplace in Delaware and nationwide. The Delaware News Journal and New Castle County Department of Land Use indicate (News Journal 12/22/2004) that eleven active adult communities are currently under construction in New Castle County and eight more are planned. Several other age restricted communities are planned in other parts of the state. Active adult communities could make up as much as 2% or more of the housing in New Castle County, if all that are planned are built. In Delaware, 101,725 people are age 65 and older, a 26 percent increase from 1990. Delaware Population Consortium figures show this group at nearly 20% of the total population of Delaware and by the year 2020 they will represent close to 30% of the population. Survey data in the years between 1995 and 2003 have shown that 29% of Delaware households are eligible to live in 55 years and older age restricted communities.

As active adult communities are proposed, there is some concern about the impacts they will have on already stretched transportation resources. There is some question as to what the traffic impact of new communities will be. Some National studies show such communities generate about one-fifth to one third as much traffic during peak hours as regular communities the same size, as most residents are considered to be retired. But 25% of those 55 and older are still working and this number is expected to grow to 34% by 2010. What has been considered as peak morning and evening travel periods have been expanding over the years. This is partly because some commuters have chosen to leave earlier or later to avoid the center of the peak demand, but more so from the continued growth in travel demand particularly for "other" purposes. Trips that are non-work, non-shopping, and non-school have been growing at a much higher rate. Older people who are still active and healthy, who generally have more time and money at their disposal, and are less fettered by the care of a house and children, would be expected not to necessarily stay home. Some communities require only one household member to be 55 or older so it is also not clear how different household structures might be in the age restricted communities.

Older Americans enjoy a much higher mobility than in the past. This group has aged during a time where dependency on the private automobile has greatly increased and during a period where population and employment, and life in general, has spread to the suburbs demanding the use of a car for every aspect of their lives. Much of the current research on older Americans has focused on the 65+ age group. Between the years 1983 and 1995, average daily person trips for those 65 years and over have almost doubled, while trips of the population as a whole grew by about 39%. Even more dramatic, recently, between the years 1990 and 1995, the percent change in personal travel for those 65 and older increased by 37%, while travel by the overall population grew at about 14%. Average daily time spent driving went up from 24 minutes to 43 minutes, and vehicle trips per person rose from 1.8 to 2.9 for the elderly. Between the years 1969 and

1995 annual vehicle miles traveled for the age group 55 to 64 grew by 39% and for 65 years and older grew by 47%.[*]

Senior Housing Types

A paper by Stephen B. Corcoran outlines five types of senior housing.[**] This study would address the first two.

Senior Single Family Homes – Senior-only subdivisions typically include recreational facilities. Many of the residents are retired

Senior Apartments – Traditional apartment complexes with minimum age requirement of 55. Some amenities include recreation, security, special design. Residents are independent and may still be working.

Independent Living – Cottages or apartments where older adults live independently, but with some maintenance or housekeeping. Medical can be available.

Assisted Care - Older adults having difficulty managing in an independent living arrangement, but who do not need a nursing home.

Congregate Care Facilities- a range of housing types and programs to meet needs.

The focus of this research is on age restricted communities and on Senior Single Family Homes and Apartments where residents are not in an assisted living situation. Age restricted communities that were identified in Delaware during the course of the project are listed in Appendix A.

[*] 1995 National Personal Transportation Survey Summary of Trends, FHWA and Bureau of Transportation Statistics.

[**] "Senior Housing Trip Generation and Parking Demand Characteristics",Stephen B. Corcoran, ITE 66th Annual Meeting

Review of Available Trip Generation and Traffic Impact Data

Summary

Available trip generation data were reviewed as a first step in this project. For easy reference, this data is summarized in Figures 1 and 2 below. For a more detailed discussion of each, refer to the rest of the chapter. This represents what was currently available as provided by DelDOT. The daily trips per household estimate available from ITE for the Senior Housing (land use type 251) is an average of several studies that ranged as high as 5.7 trips per household. From the one measurement in Delaware, Hershey Run, and from Corcoran's study the daily rate is expected to be more in the range of 4 to 5 trips per household. From the daily rates of the general population as in figure 2, an initial look at the information would estimate age restricted housing to be about half that expected for the ITE figure for similar development with no age restrictions. Peak hour trips for 55+ detached housing would seem to be in the range of 0.25 to 0.3 trips per household and about a third of what would be expected from the general population. For attached housing and apartments the differences are not expected to be as great as in the single family housing category.

Figure 1 Summary of Trips per Household data for Age Restricted Communities (55+)

55+ Weekday DailyTrips per Household , Detached Housing

Institute of Transportation Engineers, Detached Housing (251)	3.7
Karens Study of Heshey Run 55+ community in Delaware	4.6
Institute of Tranportation Engineers, Attached Housing	3.5
Corcoran Study, 55+ Housing, All Housing Types Estimate	4.5 to 5.6

55+ Weekday AM – PM Peak Hour , (Adjacent Street Peak)

	AM - PM (trips per HH)
Institute of Transportation Engineers, Detached	0.2 – 0.26
Karins Study of Hershey Run, Detached	0.22 – 0.29
Monmouth and Ocean County, NJ, Detached	0.28 – 0.26
Traffic Planning and Design Study, Detached	0.32 – 0.35
Whitpain Farms, PA	0.32 – 0.35
Hershey's Mill, PA	0.33 – 0.35
Monmouth and Ocean County, NJ, Attached	0.17 – 0.33
Monmouth and Ocean County, NJ, Town Homes	0.25 – 0.32
Monmouth and Ocean County, NJ, Apartments/condo	0.2 – 0.26
Corcoran Study	½ to ¼ of general population peak travel

Figure 2 Summary of Trips per Household Data for General Population

Other ITE Residential Rates	**Daily**	**AM Peak**	**PM Peak**
ITE Single Family Homes (land use code 26)	9.5	0.74	1.01
Avg of 3 New Castle Cnty SF Developments	-	0.86	0.95
ITE Apartments (land use code 220)	6.4	0.51	0.63
ITE Condo/Townhouses (Land Use code 230)	2.2	0.44	0.55

Review of Trip Generation Data

Institute of Transportation Engineers Data

The most referenced and used data for trip generation comes from the Institute of Transportation Engineers Trip Generation Report that reference two categories that would correspond to 55+ restricted communities as summarized below.

Institute of Transportation Engineers, Trip Generation, 7th Edition
Senior Adult Housing-Detached Category (Land Use 251) (quoted from the report)

Description "Senior Adult housing consists of detached independent living developments, including retirement communities, age-restricted housing and active adult communities. These developments may include amenities such as golf courses, swimming pools, 24-hour security, transportation and common recreational facilities. However, they generally lack centralized dining and on-site health facilities. Detached senior adult housing communities may or may not be gated. Residents in these communities are typically active (requiring little to no medical supervision). The percentage of retired residents varies by development.

Many factors affected the trip generation rates for detached senior adult housing. Factors such as average age of residents, development location and size, affluence of residents, employment, status and vehicular access should be taken into consideration when conducting an analysis. Some developments were located within close proximity to medical facilities, restaurants, shopping centers, banks and recreational activities."

Figure 3 Trips Generation Data for
ITE Senior Adult Housing-Detached Category (Land Use 251)
Estimated Trips per Household

Weekday	average 3.71	range = 2.9 to 5.7 (7 studies)
Weekday AM peak adjacent street	average = 0.20	range = 0.13 to 0.34 (10 studies)
Weekday PM peak adjacent street	average = 0.26	range = 0.17 to 0.95 (11studies)
Weekday AM peak of generator	average = 0.31	range = 0.3 to 0.4 (2 studies)
Weekday AM peak of generator	average = 0.35	range = 0.33 to 0.95 (2 studies)
Sunday	average = 2.33,	range = 2.27 to 4.77 (2 studies)
Saturday	average = 2.77	range = 2.70 – 5.53 (2 studies)
Saturday peak hour of generator	0.27 (1 study)	
Sunday peak hour of generator	0.21 (1 study)	

Institute of Transportation Engineers, Trip Generation, 7th Edition
Senior Adult Housing-Attached Category (Land Use 252)

Description: Similar to category 251, except this category contains apartment like residential units, and "row" or attached type housing

Figure 4 Trips Generation Data for ITE
Senior Adult Housing-Attached Category (Land Use 252)
Estimated Trips per Household

Weekday	average = 3.48 (1 observation)		
Saturday	average = 2.41		
Sunday	average = 2.7		
Saturday peak hour of generator	average = 0.3		
Sunday peak hour of generator	average = 0.55		
Weekday am peak adjacent street	average = 0.08	range = 0.02 to 0.27	7 studies
Weekday pm peak adjacent street	average = 0.11	range = 0.03 to 0.31	7 studies
Weekday am peak hr of generator	average = 0.06	range = 0.02 to 0.37	4 studies
Weekday pm peak hr of generator	average = 0.11	range = 0.03 to 0.25	4 studies

Karins and Associates April 00 to 02

Karins and Associates collected trip generation data for Hershey Run (192 units), a 55+ community in Delaware. Results were:

Average AM Peak Adjacent Street = 0.22 (ITE code 250 rate is 0.17)
Average PM Peak Adjacent Street = 0.29 (ITE code 250 rate is 0.27)
Weekday rate = 4.57 trips per unit
Average Saturday and Sunday daily rate = 3.8 trips per unit
Peak generator hour Saturday (4 pm) rate = 0.34
Peak generator hour Sunday (10am) rate = 0.35

Orth-Rodgers Associates Inc. September 18 ,1998
Abbington-Ney Associates 9/27/1988
Schoor Depalma 5/23/2000

Abbington-Ney conducted traffic counts, and Schoor Depalma and Orth-Rodgers cited several studies of 55+ communities mostly in Monmouth and Ocean Counties as summarized in the figures below.

Figure 5 Trip Generation for 55+ Communities in Monmouth and Ocean Counties, New Jersey Housing Type = Detached

Development	Type	Number of Units	AM-PM peak
Leisure Knoll		1486	0.19 – 0.19
Leisure Town		1552	0.23 - 0.17
Surrey Downs		385	0.31 – 0.39
Greenbriar Woodlands		1100	0.31 – 0.22
Four Seasons at Lakewood		744	0.23 – 0.26
Four Seasons At Wall		400	0.43 – 0.33
Detached Average			0.27 – 0.27

Figure 6 Trip Generation for 55+ Communities in New Jersey Housing Type = (A)ttached, (Ap)artments, (T)ownhomes, (C) ondo

Development	Number of Units	Daily Trips/ Unit	AM-PM peak
Shadow Lake (T)	720	5.22	0.37 – 0.43
GreenBriar I (T)	900	2.79	0.13 –0.21
Leisure Village (A)	2850	1.2	0.07 – 0.09
Covered Bridge (A)	1550	2.31	0.17 - 0.24
Shady Oaks	366	4.22	
Rossmoor (A)	1714		0.14 – 0.20
Daniel Towers	100		0.15 - 0.19
Cedar Street Commons (AP)	168		0.17 – 0.24
Greenbriar North (A)	760		0.22 – 0.33
Campagna Condos (C)	136		0.22 – 0.29

"Senior Housing Trip Generation and Parking Demand Characteristics"
Stephen B. Corcoran, ITE 66th Annual Meeting

Stephen Corcoran examined trip generation data for various types of senior housing. He concluded that daily trip generation rates for senior housing were 4.52 to 5.64 trips a day. Senior housing generates 2/3 the amount of traffic compared to a typical single-family development. Daily rates are similar to other multi-family categories including apartments (6.47), and condominiums/townhouses (5.86).
Trip generation rates during the peak hour of adjacent street traffic are significantly less because most employees arrive/depart during off-peak periods and residents avoid the peak-hour congestion. Peak hour rates are one half to one fourth that of other residential land-uses. Peak hours of site traffic for senior housing occur in the late morning or early afternoon.

Traffic Planning and Design Inc. Dec 1 1999

Traffic Planning and Design Inc completed trip generation counts at two active adult communities in Pennsylvania. The first site, Hershey's Mill is a gated development in Montgomery County that consists of 1413 dwelling units with an 18 hole golf course and community center. The second site, Whitpain Farms, also in Montgomery County, is a 171 dwelling unit community. TPD provided the following trip generation table.

Figure 7 Trip Generation Rates of Active Adult Housing Communities

	Whitpain Farms	**Hershey's Mill**
Weekday		2.76
Weekday am peak	0.32	0.33
Weekday pm peak	0.35	0.35

Modeling Trip Generation Using the DelDOT Trip Monitoring System and Nationwide Personal Transportation Survey

With the growing number of age restricted housing developments being proposed it is important to understand the potential traffic costs or benefits. As shown in the previous chapter, there are not many national and regional studies of age restricted housing travel. In Delaware, only one such development has had traffic counted. This project examines the issue through the use of the Delaware Department of Transportation (DelDOT) Trip Monitoring System (DTMS) survey data. The DTMS survey provides a wealth of data that can be used to examine the travel characteristics and estimate trip generation for persons 55 years and older and for the various household structures as they are found in Delaware. The DTMS survey began in 1995 and has continued to the present day. Each month, approximately 200 Delawareans over the age of 15 are surveyed each month and asked about their travel on the previous day. The data includes the location and purpose of trips made by various modes, household structure, and other demographic data about the respondents. Household trip generation estimates can be constructed from this individual based data for those qualifying for age restricted communities and for the general Delaware population.

Another useful travel survey is the Nationwide Personal Transportation Survey (NPTS) collected by the U.S. Census Bureau for the U.S. Department of Transportation. The survey was conducted in 1969, 1977, 1983, 1990, and 1995. Data from the 1995 NPTS was used in this study and includes 42,033 households and like the DTMS is a Computer-Assisted Telephone Interviewing survey. Each household in the sample was assigned a specific 24 hour travel day and a 14 day travel period for which detailed data on all travel were collected.

Considerations When Modeling Trip Generation for Persons 55 and older

When beginning to study how age may effect trip generation the following were considered:

- Persons age 55 and older are less likely to be employed. Less employment may mean less trips. On the other hand, more free time may mean more non-work trips.
- Persons age 55 and older will have different travel characteristics than the general population. For example, they may take a larger percentage of their trips during off-peak hours.
- Persons age 55 and older are less likely to have children in the household.
- Persons age 55 and older generally reside in smaller households (persons per household).
- The availability of vehicles and the number of vehicles in the household is a strong factor in estimating trip generation.
- Income may be a factor that affects trip generation, and it is generally thought that higher income households make more trips.
- Age restricted housing is generally of a smaller type, with less square footage and less upkeep necessary. Various housing types may yield significantly different trip generation rates.

The factors referenced above would seem to generally result in a population that travels less, and the general hypothesis is that indeed persons that would qualify for age restricted housing would travel less than the general population and that when a new development is proposed, an age

restricted community would produce less of an impact than a comparable unrestricted community. Such factors were used to model trip generation in comparison with the general population.

Figure 8 below is an initial tabulation of average trips per day by individuals in various age groups and shows estimates for individuals that have or don't have children present in the household. A pattern of decreased travel with age and increased travel with the presence of a child in the household is clearly seen.

Figure 8 Trips per Day (weekday) for Various Age Groups, With Children in the Household and Without. DelDOT DTMS 1998 to 2003

Age Group	Entire Population	With Children	Without Children
18 to 21	2.6	2.9	2.5
22 to 29	2.5	2.6	2.4
30 to 39	2.6	2.8	2.3
40 to 49	2.5	2.8	2.3
50 to 54	2.5	3.1	2.4
55 to 59	2.3	2.9	2.2
60 to 64	2.1	2.6	2.1
65 to 69	2.0	2.6	2.0
70 to 74	1.7	2.2	1.7
70 +	1.5	2.9	1.4
All	2.4	2.8	2.2

Typically trip generation is viewed at the household or housing unit level. While the DTMS samples individuals, not households, the demographics of the household can be obtained and can be used to estimate household travel characteristics. Figure 9 below represents a first look at age and children factors in households in relation to trips taken per day. From this and other views it appears that 55 and older persons do make fewer trips and that there are fewer trips when there are no children present. Almost a third (29%) of the households in Delaware would qualify to live in 55 and older restricted communities. The household combinations shown in Figure 9 account for 97% of the households in Delaware.

Figure 9 Household Trip Estimates and Percent of Delaware Households For Various Household Configurations. Initial Rough Estimates.
DelDOT DTMS 1998 to 2003
(adult = 18 to 54 years old, 55+ = 55 and older)

Household Makeup	Percent of DE Households	Household Daily Trip Estimate
1 adult	7.7	2.3
1 55+	8.6	1.3
1 adult or 55+ with children	3.3	2.9
2 adult	19.5	4.6
1 adult and 1 55+	3.9	4.4
2 55+	12.6	3.9
2 over 17 years, with children	23.1	5.8
3 adult	5.1	7.5
2 adult and 1 – 55+	1.4	6.8
2 –55+ and 1 adult	1.6	5.6
3 – 55+	0.3	5.9
3 over 17 years, with children	5.2	8.8
4 adults	2.0	9.1
3 adults and 1- 55+	0.7	8.2
2 adults and 2 – 55+	0.7	9.0
1 adult and 3 – 55+	0.1	8.1
4 – 55+	0.1	4.8
4 or more over 17 w children	2.2	11.3
5 or more adults no child	0.8	

The household trip estimate shown in the figure above only took into account daily trip averages over various age groups as shown in the DTMS. Of course, factors such as employment status, the availability of a car, and others affect the number of trips a person will take each day. The DTMS provides information about the travel characteristics of individuals and the approach taken was to develop a trip generation model for individuals rather than households. The factors chosen for the model are shown in figure 10 below.

Figure 10 Factors Used To Model Trip Generation of Individuals.

Age Category
Number of vehicles in the household
Employment
Income
Housing Type
Owner versus Renter of home
Presence of children in the household

From a model of individual trip generation, a prediction of trip generation for various household configurations can be generated. This approach not only predicts trip generation for those 55 years and older but also for the entire population and allows different populations within Delaware to be compared.

Development of the Models For Trip Generation

DelDOT Trip Monitoring System (DTMS) Model of Trip Generation

The Delaware Trip Monitoring System (DTMS) measures trip activity for a random set of individuals throughout the State of Delaware. For this effort, 17,604 respondents were included in the study. The data were drawn from surveys conducted 1995-2003.

The data includes information on the respondent, the respondent's household, and the trip activity. The modeling deals with individuals rather than households as is common for many trip studies that use household diaries. The focus is on individual behavior as opposed to household behavior. At the root, individuals make trips, not households. However, an individual's behavior is influenced by features of the household. If there is another adult in the household, the possibility for trip sharing/splitting exists in contrast with a single person household. Children in the household also have an impact on the number of trips required of an individual. One of the key variables affecting trip generation is the number of vehicles. The absence of a vehicle or even a single vehicle when it's shared among adults reduces the trip possibilities. Labor market activity has an immediate impact since work trips are going to be required. Higher incomes to some extent open the possibilities for more trips; more dining out, for example, or trips to the ball park.

The typical analysis at the household level uses essentially the same variables described above. Here in addition, the data is expanded to include the type of housing unit in which the respondent lives, tenure status (owner/renter), and age of the respondent since that is a principal area of concern.

The model is constructed using a series of dummy variables that take on a value of one if the person or the household the person lives in has the characteristic, and zero otherwise. For example, the age variable is represented by three variables, namely one for those in the age group of 18-39, a second for those in ages 40-54, and finally one for the target group ages 55 and older. Only two of the three variables are included since the omitted group forms the base from which the other two are measured, and is included in the estimated constant term. If the coefficient for age55ov is -0.5 then people 55 and older take on the average 0.5 trips per day less than those in the base group age18-39. In the model, we expect the coefficient on the age variables to be negative and declining.

The number of adults in the household is represented by three dummy variables namely one adult, two adults, and three or more adults. The omitted group is one adult. It is likely that the number of trips for the individual will fall as the number of adults increases. The coefficients for variables representing more adults should be negative and significant.

The presence of children in the household (17 and under) is represented by a single variable taking on the value of one if there are children present, and zero otherwise. The trip rate should increase with the presence of children, so we would expect the coefficient to be positive and significant.

Trips are influenced by the presence of a vehicle or vehicles. In this instance this attribute is represented by five dummy variables, namely zero vehicles, one vehicle, two vehicles, three vehicles or more and a catch all category for those that did not report the number of available vehicles. The omitted variable is that representing zero vehicles. As the number of vehicles increases, the coefficients are most likely to be positive since the possibility of making a trip is facilitated by vehicle availability.

Employment is coded as a single variable. It is coded one if the person is employed (part-time or full-time) and zero otherwise. This is a particularly important variable in the model because labor force participation decreases with age, particularly after age 64, and work trips are an important component of the total trip rate. The coefficient should be positive and significant.

Income is a more complex concept to represent than the others. For those respondents that provided a definitive answer, five dummy variables were constructed: 1) $0-$24,999 2) $25,000-$49,999 3) $50,000-$74,999 4) $75,000-$99,999 and 5) $100,000 and above.
Category one became the omitted variable. In addition, two additional variables were constructed to represent "don't know" and "refused". Overall it is expected that the trip rate will increase with income but that increase may not be linear.

Since the 55 and older communities may have a particular structure in terms of the type of housing being provided, a series of five dummy variables were constructed based on housing type. The omitted variable was "apartment." Variables were constructed for single family detached, single family attached, mobile home, hotel, and type unknown. The direction and significance of the coefficients is not suggested by any past research. These are intended primarily as control variables.

The last variables are related to housing tenure. It is possible that home ownership may be an issue in these stratified communities. Adding a tenure variable (owner or renter) will allow the eventual predicted values to include consideration for different settings. The omitted variable is renter. The other two variables include one for owner and another for tenure unknown. It was suspected that the coefficient on owner will be positive. However, housing tenure is also correlated with other variables like income, number of vehicles, and type of housing.

The descriptive statistics for the model are found below. The overall number of observations (N) of 8,881 reflects the fact that years 2000 through 2003 were used for estimation since some of the variables were not collected in prior years. The original sample was also weighted to reflect the State's current distribution by age, gender, and county. This was done separately for each of the years.

In Figure 11 below, we see that just about 34% of the respondents had children in the household. This is very close to the current state distribution. Looking at the age variables we see a category for "Age other". These are people who were either uncooperative or were under the age of 18. If you add the three age variables together they account for 58.5 % of the respondents. The balance (41.5%) of the respondents are in the omitted variable Age1839. Approximately 61% of the respondents are employed and 70% own their home. The income variables are also worth reviewing. Almost 49% of the income data is missing, falling into the "don't know" or "refused" categories. However, the distribution of income excluding these responses is closely correlated with other estimates of the State's income distribution.

Figure 11 Descriptive Statistics For Variables In The Trip Generation Model

Variable	Mean	Std. Deviation
Total Trips	2.3	1.5
Kids	.34	.47
Age4054	.29	.45
Age55over	.24	.43
Ageoth	.055	.23
Adult2	.60	.49
Adult3	.21	.41
Veh1	.26	.43
Veh2	.47	.5
Veh3	.25	.43
Vehdk	.005	.07
Emp	.61	.49
Inc50	.19	.39
Inc75	.13	.34
Inc100	.08	.27
Incup	.06	.23
Incdk	.23	.42
Incrf	.26	.44
Sfamdet	.62	.48
Sfamatt	.155	.36
Mobile .	08	.28
Hotel	.0001	.009
Typehuk	.0015	.04
Owner	.70	.46
Tenureuk	.01	.11

The model was estimated using linear regression with total trips as the dependent variable. The dependent variable was approximately normal although the data are skewed slightly to the right, which represents the 1% that took more than 8 trips in a given day.

The regression itself was significant with an F-statistic of 33.6 although the Adjusted R Square is only 8.1%. This suggests that there is a lot of random variation governing a typical day of trips, or that there are variables other than those typically included in transportation modeling that are not included. Variables such as the weather, time of year, and fuel prices might be of interest. Approximately 1.8% of the observations were considered outliers with residuals greater than 3 standard deviations. All had more than 7 trips on the target day. The colinearity statistics were within the reasonable range.

The basic model is found in the Figure below.

Figure 12 Model Based On DTMS, Coefficients and Statistics

Variable	Coefficient	Std.Error	Sig. of t-statistic
Constant	1.974	.127	.000
Kids	.243	.036	.000
Age40-54	-.103	.040	.009
Age55ov	-.269	.050	.000
Ageoth	.208	.081	.010
Adult2	.149	.050	.003
Adult3	-.029	.063	.648
Veh1	.138	.112	.217
Veh2	.235	.116	.042
Veh3	.466	.120	.000
Vehdk	.198	.261	.447
Emp	.166	.039	.000
Inc50	-.109	.080	.174
Inc75	-.055	.087	.525
Inc100	-.015	.094	.876
Incup	.469	.100	.000
Incdk	-.547	.080	.000
Incrf	-.316	.079	.000
Sfamdet	-.087	.068	.203
Sfamatt	.018	.064	.780
Mobile	-.191	.076	.012
Hotel	-.970	1.7	.572
Typehuk	-.954	.421	.023
Owner	.210	.053	.000
Tenureuk	.808	.160	.000

The presence of children (Kids) has the predicted positive coefficient relative to households without children (.243) and the coefficient is significant.

The age of the respondent variables also has coefficients with the predicted direction, as people get older they take fewer trips. Relative to the omitted group (those in the 18-39 age group) both the age4054 and age55ov coefficients are negative and significant. The coefficient also gets more negative as age increases.

The number of adults in the household produces a more complex result. First the addition of the second adult does not produce the expected negative coefficient, as was expected with the idea that with two adults some household trips might be shared. However the presence of the third adult does show the expected negative sign but it is not significantly different from the omitted group.

The number of vehicles variable does produce the expected positive and increasing coefficients, the more vehicles, the more trips. One interesting finding is that having one vehicle is marginally different from having none. This may seem counterintuitive except that the person without a

vehicle is likely to be using more transit or riding as a passenger. The availability of the first vehicle is simply a substitute.

The impact of employment on the trip rate is positive and significant as expected. It is perhaps surprising that the coefficient is not larger. Respondents who are not working apparently are quite capable of substituting other types of trips to make up for the 61% who do make work trips.

Increasing income does have a positive impact on the trip rate, however the impact is greatest for those with incomes over $100,000. All of the coefficients below $100,000 were essentially the same as the omitted group (under $25,000). The respondents in the don't know and refused categories are different from the others. Both take significantly fewer trips than the known income categories. This may be worth exploring further.

The only category within the set of housing type variables that had a significant result was for mobile homes. Respondents who live in mobile homes tend to take fewer trips even after adjusting for all other variables in the model.

Finally, the tenure variable (home ownership) has a positive and significant coefficient relative to the omitted group (renters). Perhaps this is the impact of home maintenance.

Nationwide Personal Transportation Survey Model Of Trip Generation

To further investigate factors associated with trip generation, a model was built using the Nationwide Personal Transportation Survey (NPTS) collected by the U.S. Census Bureau for the U.S. Department of Transportation. The survey was conducted in 1969, 1977, 1983, 1990, and 1995. Data from the 1995 NPTS was used in this study and includes 42,033 households and like the DTMS is a Computer-Assisted Telephone Interviewing survey. Each household in the sample was assigned a specific 24-hour travel day and a 14 day travel period for which detailed data on all travel were collected. The basic model is found in the figure below.
As with the DTMS, increasing age is associated with less trips, and more vehicles in a household, the presence of children in the household, and higher household income are associated with more trip taking.

The NPTS model and data most notably show more trips per day for all individuals. The constant term is about 50% higher in the NPTS model. Over the years the methodology of the DTMS has been scrutinized to understand why consistently Delawareans are shown to make less trips than the national average. One idea was that perhaps the survey reported a larger portion of respondents saying they made no trips on the survey day, that perhaps respondents needed to be asked again about trips they may have made. Or perhaps, respondents were forgetful about incidental trips they were making as part of trip chains. Measures that were put into place to discover types of trips that were previously unreported during the survey showed only minor increases in the number of trips reported. The populations surveyed in the NPTS, that include very high density large metropolitan areas as well as the most rural and sparse areas around the country, are expected to be different from what is seen in Delaware, though it is not clear how that would result in a greater average trips per day per individual. A big difference in the NPTS and the DTMS surveys is that the NPTS surveys 7 days a week and the DTMS only surveys Monday thru Friday. As might be expected, if people in general make a larger number of trips on Saturday and Sunday, then they would on a weekday, this could account for the difference, though the data shows roughly the same amount or less travel on weekend days than on a typical weekday. One thing that can be shown is that work trips account for about twice the percentage

of daily trips than as shown in the national data, so the difference could probably be found by examining non-work trips.

There may be various reasons why the absolute number of trips reported is greater in the NPTS data, though the focus in analyzing the NPTS data and for the project in general was primarily in the relative differences in trip generation between the general population and the age 55 and older group. Relative comparisons between trip generation of various individuals and groups show a great similarity in estimates from the NPTS and DTMS models.

Figure 13 Model Based On NPTS, Coefficients and Statistics

Variable	Coefficient	Std.Error	Sig. of t-statistic
Constant	3.279	.059	.000
Kids	.440	.026	.000
Age4054	-.015	.028	.589
Age55ov	-.351	.035	.000
Adult2	-.475	.039	.000
Adult3	-.949	.046	.000
Veh1	1.037	.053	.000
Veh2	1.272	.056	.000
Veh3	1.433	.061	.000
Emp	.488	.028	.000
Inc50	.184	.029	.000
Inc75	.170	.032	.000
Inc100	.271	.050	.000
Incup	.368	.058	.000
Incdk	-.100	.047	.034
Incrf	-.262	.043	.000
Sfamdet	.030	.045	.505
Sfamatt	-.099	.052	.055
Mobile	-.441	.071	.000
Hotel	.117	.418	.780
Typehuk	.559	.483	.248
Owner	-.002	.037	.947
Tenureuk	-.104	.31	.738

The next section shows the application of the trip generation models created.

Trip Generation Model Application

The models created using the DTMS prove to be a powerful tool to examine and compare trip generation rates of various populations. Figure 14 below, shows predicted rates for individuals in Delaware with various age and household characteristics. Numbers shown in the figure use Delaware population averages for income, number of vehicles, employment, and housing type. These other factors could be specified to provide other individual and household trip generation rate estimates, for instance, if an estimate was needed for a single family detached development targeting a specific income group. The household types represented are 96% of the households in Delaware. The trip generation rates for 55+ individuals are less than the state average for individuals, and the 55+ household trip rates are less than the state average household rates.

Figure 14 Application of the Model Based on the DTMS,
Daily trip generation rate estimates for each household type tabulated with the percentage of each type in Delaware.
(WC = with children in household, NC =no children, Over 17 =over 17 years of age, YA = younger adult,
HH Est. = Estimated Household trip generation for this household type)

Individual Age – HH Type	Individual	HH Est.	% of the HH in DE
55+ living alone	1.7	1.7	8.6
55+ living with 55+, NC	2.0	4.0	12.6
55+ living with YA, NC	2.2	4.3	3.9
Single adult < 55, NC	2.2	2.2	7.7
Over 17 with over 17, WC	2.7	5.4	23.1
Two adult < 55, NC	2.3	4.6	19.5
One > 17, WC	2.4	2.4	3.3
3 or more > 17 WC	2.5	7.4+*	5.2
3 or more > 17 , no 55+, NC	2.2	6.6+*	7.1
3 or more > 17, one 55+, NC	2.2	6.7+*	2.7
3 or more > 17, two/more 55+ , NC	2.0	6.1+*	2.1
Delaware Population Overall	2.3	4.7	

* Calculated for 3 adults in household, multiply by number of adults for other estimates

A similar tabulation as Figure 14 can be produced using the trip generation model as developed from the National Personal Transportation Survey. Using coefficients from the national model and the distribution of factors as seen in Delaware the table in Figure 15 was created.

Figure 15 Application of the Model Based on the NPTS.
Daily trip generation rate estimates for each household type tabulated with the percentage of each type in Delaware.
(WC = with children in household, NC =no children, Over 17 =over 17 years of age, YA = younger adult
HH Est. = Estimated Household trip generation for this household type)

Individual Age – HH Type	Individual	HH Est.	% of the HH in DE
55+ living alone	3.9	3.9	8.6
55+ living with 55+, NC	3.7	7.4	12.6
55+ living with YA, NC	3.8	7.6	3.9
Single adult < 55, NC	4.7	4.7	7.7
Two of 17, WC	4.9	9.7	23.1
Two adult < 55, NC	4.4	8.7	19.5
One > 17, WC	5.1	5.1	3.3
3 or more > 17 WC	4.3	13.0+	5.2
3 or more > 17 , no 55+, NC	3.9	11.7	7.1
3 or more > 17, one 55+, NC	3.9	11.7+	2.7
3 or more > 17, two/more 55+ , NC	3.6	10.8+	2.1
Delaware Population Overall	4.3	8.6	

* Calculated for 3 adults in household, multilply by number of adults for other estimates

The number of daily trips estimated by the NPTS model is always higher. NPTS survey data shows almost twice as many trips per person for the national population than the DTMS indicates for Delaware. One reason for this is that the surveys are different in that the NPTS survey looks at every day of the week. The DTMS measures weekday travel, Monday thru Friday. Also the NPTS includes an individuals work trips during the day and also tabulates travel by those 16 years and younger. Travel by children is included in DTMS estimates if it is with a driving age member of the household but otherwise it is not. So, for a member of the household younger than 16, school bus trips, a bicycle trip to school, and car pool trips with someone who is not a member of the household are examples of travel that is not captured in the DTMS survey but is estimated by the NPTS. Why the NPTS data shows more trips is of interest, but this research focused on the relative differences between rates of 55 years and older populations and the general population within each data set.

To compare the estimates from the two models, the percentage difference between the estimate for individual daily trip generation for a particular population subgroup and the entire population was tabulated for the NPTS and the DTMS models, as shown in Figure 16.

Looking at Figure 16, there is a generally good agreement as to the direction and sign of trip rate differences that might be expected. In the DTMS model, there is a more pronounced decrease in trips associated with apartment living, and also a larger decrease in trip rate for 55+ individuals living alone. An adult living alone in the DTMS model is estimated with a lower trip rate than the overall population where in the NPTS model an adult living alone travels more than the population average. Other than these differences the two models show similar results.

Figure 16 Comparison of DTMS and NPTS Models of Trip Generation Estimates. Comparison of the percentage difference from the population average estimates.

	Estimated Individual Rates		% Difference From Population Average	
	DE	NPTS	DE	NPTS
Population Average	2.3	4.3	-	-
55+ alone	1.7	3.9	-26.1	-10.0
2 55+ nc	2.0	3.7	-13.5	-14.6
1 55+ and younger adult nc	2.2	3.8	-10.9	-12.3
1 adult living alone	2.2	4.7	-5.7	8.3
2 over 17 with kids	2.7	4.9	16.5	12.7
2 adult nc	2.3	4.4	0.9	0.9
one over 17 with kids	2.4	5.1	3.5	17.4
3 adults , nc no 55+	2.2	3.9	-3.9	-10.0
3 or more over 17 with kids	2.5	4.3	7.0	0.0
3 or more over 17, 2 55+ nc	2.0	3.6	-11.7	-16.7
3 or more over 17, 1 55+ nc	2.2	3.9	-3.0	-10.0
55+ alone apt	1.5	3.8	-32.6	-12.0
55+ and younger adult apt,	1.8	3.8	-20.9	-12.7
55+ and 55+ apt	1.7	3.4	-27.4	-22.0
55+ alone detached	1.8	4.1	-21.3	-6.0
55+ and younger detached	2.2	4.1	-3.5	-5.1
55+ and 55+ detached	2.0	3.8	-11.3	-12.3
population detached	2.4	4.4	4.3	2.3
1 55+ to 64 alone	1.8	4.1	-20.4	-5.6
1 55+ to 64 , add. adult nc,	2.1	3.9	-8.3	-10.9
1 65 and older alone nc	1.6	3.8	-29.1	-12.0
1 65+ and 1 65+ nc	1.99	3.7	-13.5	-14.6
1 65+ and younger adult nc	2.1	3.8	-10.9	-12.3
apartment population	2.0	4.2	-13.9	-3.5

The models produce estimates for trip generation of individuals with various characteristics for various types of households. An estimate of trip generation for a household is more commonly used when considering new development. Developers of 55+ communities point out that such housing has less of an impact because residents take less trips and take their trips more during the day. A comparison at the household level can be made by examining estimates for those households that qualify for age restricted developments as shown in Figure 17, below.

Figure 17 DTMS Model Estimate of Household Trip Generation By Those Qualifying For Age Restricted Housing. From trip generation data based on the DTMS 2000 to 2003. Trips per day. Weekday travel.
(Mix is how households on average are distributed in Delaware.)

Individual/HH	Indiv rate	HH rate	Mix
55+ person living alone	1.7	1.7	34%
55+ person living with 55+	2.0	4.0	50%
55+ person living with a younger adult	2.2	4.3	16%

Weighted Trips per Household Estimate for 55+ = 3.3
Estimated Average Trips per Household in Delaware = 4.7

The figure above shows that the estimated average trips per household per day for 55+ households is about 3.3 where the estimated average trip rate per household per day is about 4.7 for all of Delaware. Using the trip generation model that was based on the National Personal Transportation Survey, a similar table and estimate can be made for households qualifying for age restricted housing as shown in Figure 18. For the DTMS model, those households that qualify for age restricted communities are expected to be 69% of the rate of the general population. Using the model based on NPTS data, households qualifying for age restricted communities in Delaware would be expected to be 71% of the rate of the households of the population overall, which is a very similar result.

Figure 18 NPTS Model Estimate of Household Trip Generation By Those Qualifying For Age Restricted Housing. From trip generation data based on the DTMS 2000 to 2003. Trips per day
(Mix is how households on average are distributed in Delaware.)

Individual/HH	Indiv rate	HH rate	DE Mix
55+ person living alone	3.9	3.9	34%
55+ person living with 55+	3.7	7.4	50%
55+ person living with a younger adult	3.8	7.6	16%

Weighted Trips per Household Estimate for 55+ = 6.22
Estimated Average Trips per Household in Delaware = 8.62

Age Distribution Within Age Restricted Communities

Figures above are for percentage of each household type as they exist in the overall Delaware population. But what if a larger or smaller percentage of persons in the age restricted communities was retirement age (65) or older? For those 55 years or older in Delaware, about 45% are between the ages of 55 and 64, and 55% are 65 years or older. The question is whether age restricted communities attract a different age distribution than exists in the general population. One rough estimate of the age distribution of 55+ communities was obtained by taking three age restricted communities in Delaware and determining what percentage of the housing had owners declaring the tax reduction for those 65 years in older.

Figure 19 Three Age Restricted Developments in New Castle County, Delaware and Retirement Age Status.

Development	Est. Occupied HU	# declaring 65+	Tax Break
Spring Mill, Middletown	241	58	(24%)
Little Falls Village I, Hockessin	91	10	(11%)
Adaire Village	40	11	(27%)
	Unweighted Avg about 21% for 65+ households		

The percentages in the figure above then would indicate that perhaps active adult populations could consist of a mix of 20% 65years and older persons, rather than 55% as seen in the entire population of those 55years and older. In that sense the term "Active Adult" for these communities may be appropriate in that there is a relatively higher percentage of 55 to 64 year olds that may be more active than exist in the overall 55 and over population. Each development would of course have a different draw from the population based on its character and features though. For instance, "retirement" communities near the beach that are smaller modular units might have more 65 and older persons than those not in a resort community. A larger proportion of 55 to 64 year olds, relative to retirement age and above, in an age restricted community would be expected to yield more trips as a larger percentage of this age group is working and are more mobile.

Figure 20 investigates this idea by looking at those 55 years and over as two separate populations and presenting estimated individual and household daily trip rates. Trip rates do differ between the two groups but not by much. A household estimate for the 55 to 64 year old group is 3.7 trips per day ,where the household estimate for the 65 and over group is 3.4 trips per day, a little less than half a trip difference. If one assumed an age restricted community where 55 to 64 year olds made up 80% of the housing, the weighted average for the community would be 3.6 trips per household per day. If the 55 to 64 year olds made up 20% of the community, then the community average is estimated at 3.4 trips per household per day. There is not that much difference. Using the model based on the national data, the result is similar; only about a half trip difference per household between an 80% mix or a 20% mix of 55 to 64 year olds.

Figure 20 Trip Generation Rate Estimates for Another View of 55+ Qualifying Households. Estimates from the DTMS model and data. Trips per day. Weekday travel.
(P% = percentages as exist in Delaware population
Ind Rate = Individual daily trip generation rate estimate
HHRate = Household daily trip generation rate estimate)

Household Type	P%	Ind Rate	HHRate
55 – 64 living alone	23	1.8	1.8
55 –64 living with another adult < 65	77	2.1	4.2
	weighted HH average = 3.67		
65 and over living alone	26	1.6	1.6
65 and over with 65+	66	2.0	4.0
65 and over living with a younger adult	8	2.1	4.2
	weighted HH average = 3.37		

Employment

Employment is a factor of interest to investigate. Perhaps persons 55 years and older that are employed travel more than those who are retired. Figure 21 below shows employment status as reported in the DTMS survey.

Figure 21, Employment Status – Percentages of Those 16 Years and Older DTMS Data, Year 2000 to 2003
(HM = Homemaker, %P = percentage of population 16 years and older)

	Emp	UnEmp	Student	Retired	HM	Self Emp	%P
55 to 64	39.1	3.8	0.1	44.8	6.6	5.5	12
65 and older	8.2	0.8	0	88.3	1.4	1.1	12.5
55 and older	23.4	2.3	0.1	66.9	4	3.3	25
16 to 54	74.8	4.3	11.3	0.8	5.5	3.2	75
16 and older	61.2	3.8	8.3	17.1	5.1	3.1	100

Figure 22 below shows the travel differences between 55 years and older employed versus unemployed and there is estimated to be a one trip per day difference. Of course, only in a very special unheard of circumstance would a community be populated with 100% employed 55+ households. What would be more likely is to see a 25% employment percentage among households, as seen in the general population. On the other hand, some communities may attract almost exclusively retirees in which case a household estimate (depending on housing type as discussed later) may be more around 3 trips per day.

Figure 22, Comparison of Daily Trip Generation Estimates With Respect to Employment Status For Those Qualifying for Age Restricted Housing, DTMS Data Years 2000 to 2003
(Ind Rate = Individual estimate, %P = percentage of population 16 years and older)

Unemployed	**Ind Rate**	**Household Rate**	**%P**
55 + living alone	1.6	1.6	6
55 + living with another 55+	1.9	3.8	9
55 + living with a younger adult	2.0	4.0	2
		weighted HH average = 3.1	

Employed	**Ind Rate**	**Household Rate**	**%P**
55 + living alone	2.0	2.0	1
55 + living with another 55+	2.3	4.6	2
55 + living with a younger adult	2.3	4.6	2
		weighted HH average = 4.1	

There is expected to be relatively small differences between total household trips per day with regards solely to employment. 100% retired is estimated to be 3.1 trips per day per household. 80% retired is estimated at 3.3 and 70% is estimated at 3.4. The real impact of employment status in an age restricted community is when during the day the trips occur, not how many trips per day are taken. Retired persons travel less during peak travel periods of the day as discussed later in this section.

Income

Trip generation estimates are generally higher for higher income groups in a population. For example:

Average individual trips per day in Delaware is 2.3
Average individual trips per day in Delaware, household income >= $100,000 is 2.9
Person 55 or older no children with household income less < $75,000 is 2.0
Person 55 or older no children with household income = > $75,000 is 2.4

Income is correlated with other factors though, including higher employment, more vehicles in the household, home ownership, presence of children in the household.

Apartment Living and Detached Housing

When examining trip generation for groups living in single family detached homes versus apartments for the 55+ age groups, it is clear that one is dealing with considerably different populations. For apartment dwellers, vehicles per household are lower, employment rates are much lower, trips taken are lower, persons per household is less, and the percentage of trips taken where the person is a passenger is much greater.

Figure 23 Comparison Of Factors for 55+ Populations.
DTMS Year 2000 to 20003
(VEH=average vehicles per household EMP = Percentage employed PPH = Persons per Household, DRIVE = %trips as the driver, PASS = %trips as the passenger, INC = Average Income level where 5 = "$25k to 29k+", 6 ="$30k to 34k+ , 7 = "$35k to 40k+"And 8 = "$40k to 49K+")

Individual Type	VEH	AGE	EMP	INC	PPH	DRIVE	PASS
55+	1.7	66	23%	7	1.86	75%	22%
55+ Apartment dwellers	1.0	71	8%	5	1.4	60	33
55+ Single Family Detached	2.0	65	26%	7	2.0	78	21
55 to 64	2.0	59	39%	8	2.0	75	22
65 and over	1.4	74	7%	6	1.7	75	23
55+ single family attached	1.4	66	30%	6	1.9	74	20

For 55+ apartment households the trip generation estimate is 2.7. The estimate for 55+ households over all housing types was calculated as 3.22, about 20% more trips.

Figure 24 Age Restricted Community Daily Trip Generation Rate Estimate For Apartments. DTMS model and data

Individual/HH	Indiv rate	HH rate	Mix
55+ person living alone	1.6	1.6	35%
55+ person living with 55+	1.7	3.3	60%
55+ person living with a younger adult	1.8	3.6	5%

HHrate weighted estimate = 2.7

Many of the new, age restricted communities are detached housing and often the trip generation impact of an age restricted community is compared with a typical single family detached development, so estimates for detached housing were examined.

Estimates for trip generation for 55+ households living in detached housing were developed from the DTMS data and are tabulated in Figure 25.

Figure 25 Age Restricted Community Daily Trip Generation Rate Estimate for Detached Housing. DTMS model and data.

Individual/HH	Indiv rate	HH rate	Mix
55+ person living alone	1.8	1.8	21%
55+ person living with 55+	2.0	4.1	58%
55+ person living with a younger adult	2.2	4.4	21%

HH weight estimate overall = 3.7

Delaware Population Detached HH est = 5.1

Figure 26 Age Restricted Community Daily Trip Generation Estimate for Detached Housing. Model based on NPTS data

Individual/HH	Indiv rate	HH rate	Mix
55+ person living alone	4.1	4.1	21%
55+ person living with 55+	3.8	7.6	58%
55+ person living with a younger adult	4.1	8.2	21%

HH weight estimate overall = 7.0

Delaware Population Detached HH est = 9.3

To generate the overall population trip generation estimate for detached housing it was necessary to first generate estimates for most housing types and then produce a weighted average based on the percentages of each type in the Delaware population as shown in the following two figures.

Figure 27 Daily Trip Generation Rate Profile for Delaware Detached Housing. DTMS model and data.
(NC = no children WC=with children, adult = greater than 17 and less than 55, ind rate = individual rate, hhrate = household estimate,)

	pop%	ind rat	hhrate
55+ alone	5	1.8	1.8
55+ and adult	5	2.2	4.4
55+ and 55+	14	2.0	4.1
single adult nc	6	2.3	2.3
two over 17 wc	26	2.7	5.5
two adult nc	17	2.4	4.9
3 adults or gtr no 55+ nc	10	2.3	6.9+
3 or more over 17 wc	9	2.6	7.7+
3 or more over 17 1-55+nc	2	2.3	6.9+
1 over 17 wc	2	2.4	2.4
3 or more over 17 2-55+ or more,nc	3	2.1	6.2+
		Population weighted average	5.1

Figure 28 Daily Trip Generation Rate Profile for Delaware Detached Housing. NPTS model using DTMS data.
(NC = no children WC=with children, adult = greater than 17 and less than 55, ind rate = individual rate, hhrate = household estimate,)

Household Type	pop%	ind rat	hhrate
55+ alone	5	4.1	4.1
55+ and younger adult	5	4.1	8.2
55+ and 55+ d	14	3.8	7.6
single adult nc	6	4.8	4.8
two over 17 wc	26	5.0	9.9
two adult no children	17	4.5	9
3 adults or more no 55+ nc	10	4.0	12.0
3 or more over 17 wc	9	4.5	13.4
3 or more over 17 1-55+nc	2	4.0	11.9
1 over 17 wc	2	5.2	5.2
3 or more over 17 2-55+ or more,nc	3	3.7	11.0
		Population weighted average	9.3

Trip Time of Day

Developers of age restricted communities argue that these communities have relatively less impact on traffic for two primary reasons. First, older persons as a group tend to make less trips than younger persons, and second, older persons tend to make more trips during non-peak traffic times. The previously reviewed traffic count data and the trip generation model developed, speak well to the first point. To address the second point, the DTMS study was used to examine what time of day trips were being made. As shown in the figures below it appears that those 55 years

and older as a percentage of trips taken, make about 50% less trips during the morning peak as the general population. Less trips are taken during the evening peak as well, and more than half of the trips are taken during the day between the peaks.

Figure 29 Percentage Of Trips Taken At Various Periods During The Day.
Entire Delaware Population Estimate from DTMS Years 2000 to 2003

TIME OF DAY		%Trips
Midnight to 3AM		2.9
3AM to 6:30 AM		12.6
6:30AM to 8:30 AM	2 hours	**21.4**
8:30AM to 4PM (7.5 hours)		37.8
4PM to 6PM		**15**
6PM to midnight		10.5

Figure 30 Percentage Of Trips Taken At Various Periods During The Day.
For 55+ households, DTMS

TIME OF DAY		%Trips
Midnight to 3AM		3.9
3AM to 6:30 AM		10
6:30AM to 8:30 AM	2 hours	**11.4**
8:30AM to 4PM (7.5 hours)		55.7
4PM to 6PM		**10.6**
6PM to midnight		8.4

Figure 32 Percentage Of Trips Taken At Various Periods During The Day.
Entire Delaware Population Estimate from DTMS Years 2000 to 2003
Single Family Detached

TIME OF DAY		%Trips
Midnight to 3AM		2.9
3AM to 6:30 AM		12
6:30AM to 8:30 AM	2 hours	**20.7**
8:30AM to 4PM (7.5 hours)		39.2
4PM to 6PM		**14.7**
6PM to midnight		10.6

Figure 31 Percentage Of Trips Taken At Various Periods During The Day
Households 55+ Single Family Detached
from DTMS Years 2000 to 2003

TIME OF DAY		%Trips
Midnight to 3AM		3.9
3AM to 6:30 AM		10
6:30AM to 8:30 AM	2 hours	**11.4**
8:30AM to 4PM (7.5 hours)		54.8
4PM to 6PM		**10.7**
6PM to midnight		9.1

As Figure 33 and Figure 34 below show, the distribution of work trips through the day are very similar between the entire Delaware population and the 55 year and older group.

Figure 33 Percentage Of Work Trips Taken At Various Periods During The Day For Entire Delaware Population. From DTMS Years 2000-2003

TIME OF DAY		%Trips
Midnight to 3AM		1
3AM to 6:30 AM		16
6:30AM to 8:30 AM	2 hours	**35.1**
8:30AM to 4PM (7.5 hours)		19.5
4PM to 6PM		**19.3**
6PM to midnight		8.2

Figure 34 Percentage Of Work Trips Taken At Various Periods During The Day. Workers 55 years old and over. From DTMS Years 2000-2003.

TIME OF DAY		%Trips
Midnight to 3AM		1.7
3AM to 6:30 AM		17.1
6:30AM to 8:30 AM	2 hours	**32.8**
8:30AM to 4PM (7.5 hours)		21.7
4PM to 6PM		**18.7**
6PM to midnight		8.0

The similarity in trip distribution for the whole population of workers and 55 years and older workers in the NPTS national data is also evident as shown in the two figures below. However, National figures show a larger percentage of trips between the peak travel times.

Figure 35 Percentage Of Work Trips Taken At Various Periods During The Day, From NPTS 1995, individuals trip start, weekday, > 15yrs

TIME OF DAY		%Trips
Midnight to 3AM		1.6
3AM to 6:30 AM		10.9
6:30AM to 8:30 AM	2 hours	**30.7**
8:30AM to 4PM (7.5 hours)		27.0
4PM to 6PM		**17.2**
6PM to midnight		12.7

Figure 36 Percentage Of Work Trips By 55 Years And Older Workers At Various Periods During The Day, National data from NPTS 1995, individuals trip start

TIME OF DAY		%Trips
Midnight to 3AM		1.3
3AM to 6:30 AM		11.6
6:30AM to 8:30 AM	2 hours	**28.5**
8:30AM to 4PM (7.5 hours)		32.5
4PM to 6PM		**16.7**
6PM to midnight		9.4

Examining the national data for distribution of trips during the day, it is shown that the 55 and older group do make less trips during the peak hours but the difference is not as great as with the Delaware data as seen in Figures 37 and 38 below. A larger percentage of trips are taken between the morning and evening peaks in the national data than shown in Delaware data. Another noteworthy difference is that the DTMS indicates that about 40% of trips are for work, where nationally work trips at about 14%.

Figure 37 Percentage of trips taken at various periods during the day. National population estimate from NPTS 1995

TIME OF DAY		%Trips
Midnight to 3AM		0.8
3AM to 6:30 AM		2.6
6:30AM to 8:30 AM	2 hours	**11.7**
8:30AM to 4PM (7.5 hours)		48.2
4PM to 6PM		**16.3**
6PM to midnight		20.3

Figure 38 Percentage of trips taken at various periods during the day. National 55 years and over population estimate from NPTS 1995, weekday

TIME OF DAY		%Trips
Midnight to 3AM		0.3
3AM to 6:30 AM		1.8
6:30AM to 8:30 AM	2 hours	**7.9**
8:30AM to 4PM (7.5 hours)		61.9
4PM to 6PM		**13.9**
6PM to midnight		14.2

Non-Household Trips

The approach taken in this project involved a study of individuals, their characteristics and the characteristics of households, and the trips they take as indicated by surveys. Travel for those that are 16 years and older is surveyed in the DTMS. If those in the household under 16 years of age are traveling with a member of their household, these household trips are accounted for with DTMS models. Travel by those under 16 that is not with a household member is not surveyed, and school bus trips, a commute to school or an activity by a driver outside of the household, or a bicycle or walk trip to school are examples of household travel that is not surveyed. From NPTS data this travel by those under 16 years of age that is not with an accompanying household member can be estimated. Roughly 6% of daily travel of an average single family household is by those less that 16 years of age either alone, or with a non-household member. Figures for this type of travel were also tabulated for morning and evening peak times, and household travel numbers shown in the rest of this report have been adjusted to account for this.

There is another element of trip generation that would show up on a traffic count that is not addressed in the household travel models produced in this project. When a traffic counter is placed at the access points of neighborhoods, trips taken by those in the household will be counted but there will be other trips as well, trips made by others not living in the neighborhood that are "induced" by the residents. Examples of these types of trips are shown in Figure 39.

Figure 39 Examples of Non-Household Trips

Mail Delivery
Utilities (Gas, Electric, Telephone, Cable TV, Water, etc)
Construction, Home Improvement
Lawn Services
Parcel Delivery
Real Estate Sales
Laundry Service
Food Delivery
Medical Services
Security
Other Commercial Services
Visitors
Child care drop offs
Garbage pickup

The demographic data discussed so far provides a good foundation to compare trip generation of age restricted communities with traditional communities in regards to those **in the household**, but the types of travel shown in the figure above, to be referred to as "non-household travel" here, have not been addressed. The question is, "Would there be any difference between age restricted communities and unrestricted communities in regards to non-household travel?" and also, "What is the relative magnitude of non-household travel?"

Discussions with transportation professionals and an examination of existing research did not identify any source of information on non-household trips. There were no references found that would even suggest the relative magnitude of non-household travel with respect to travel by members of the household. Typically trips are measured by traffic counters, or are modeled based on household characteristics as trip productions. Commercial development, job centers and the like are modeled in terms of the number of trips they attract. In this case the residential

development can be seen as an attractor for trips like those shown in Figure 39 above, and no discussion or estimates of this type of travel were found.

One facet of non-household travel would be that much of it is not based so much on household individuals' behavior but more on the residence itself. Trips associated with utilities, lawn services, construction, and the like, are services to the residence and would not seem to be different depending on the individuals that make up the household. Do older persons require more professional services coming to their house? Do they have food delivered more or less than younger households? Do they have more or less visitors? Answers to these questions are unknown and may vary considerably depending on the type of housing development.

Estimating the magnitude of non-household travel would seem to be difficult without direct survey of drivers at the entrances to residential communities. Commercial vehicles are easy to identify from the road but whether someone in a car going into the community is a resident or not would be unknown.

One method of estimating the magnitude of non-household travel would be to compare a traffic count measure with the modeled household trip estimate. The household travel plus the non-household travel should equal the traffic count measure. The estimate for an age restricted detached housing community in Delaware as modeled is about 3.7 trips per household per day. A traffic count for the Hershey Run age restricted community in Delaware was about 4.6 trips per household per day. That would then suggest from this one case that the non-household value would be about 25% of the daily trips, or close to one trip per day per household. This sounds reasonable, using this estimate on average there is about one round trip every two days from a non-household source to each household.

Peak Period Traffic Generation Rates

Traffic peaks, rather than daily traffic estimates, are of most concern when examining traffic impacts in an area. Traffic count studies most often tabulate the trip rate during the morning and evening peak hours. The distributions of trips during the day as shown in previous figures provide a means of estimating peak period rates as presented in figure 40. The estimates of the DTMS and NPTS trip generation models show that 55+ households are expected to take a bit more than a third as many trips during the morning peak as the general population takes, and about half of the trips in the evening peak.

Figure 40 Peak Hour Weekday Trip Generation Rates estimated from DTMS and NPTS models. Data source is DelDOT Household Survey Years 2000 to 2003.
(MPH = Morning Peak Hour Trips per Household Generation Rate Estimate)
(EPH = Evening Peak Hour Trips per Household Generation Rate Estimate)
(adjusted for children trips individually or with a non-household member)

Source	Total daily Trips/HH	% Daily trips 6:30-8:30am	% Daily trips 4pm-6pm	MPH	EPH
DTMS Population	5.0	21.4	15	0.54	0.36
DTMS 55+	3.2	11.4	10.6	0.18	0.17
DTMS Single Fam	5.4	20.7	14.7	0.57	0.38
DTMS 55+ Single Fam	3.7	11.4	10.7	0.21	0.20
NPTS Population	8.62	11.7	16.3	0.55	0.72
NPTS 55+	6.22	7.9	13.9	0.25	0.43
NPTS SF	9.2	11.7	16.3	0.55	0.78
NPTS SF 55+	6.97	7.9	13.9	0.28	0.48

The figures shown above are trips taken by members of the household. There are expected to be additional trips per household that are non-household trips as discussed in the preceding section. They would not include commercial traffic, a portion of carpooling trips, visitors, a daycare provider going to a household, a maid, or any trip that was to or from the house not made by a member of the household. Peak hour trip generation numbers shown above would be expected to be lower than what a traffic count measure would indicate. Figure 41 below shows trip counts of three suburban single family detached developments in New Castle County. The measurements for three developments are only what were currently available for this study from the Delaware Department of Transportation but they do show a consistency with each other.

Figure 41, Three Single Family Developments in New Castle County
Trips per Household During AM and PM Peak Hours.

Development	Leaving AM	Going In AM	Tot AM	Going In PM	Leaving PM	TotPM
Mount Hope	0.72	0.17	0.89	0.50	0.31	0.81
Chestnut Valley	0.74	0.16	0.9	0.67	0.49	1.15
Hockessin Greene	0.67	0.11	0.78	0.61	0.29	0.9

Note:(ITE Single Family prediction is Daily = 9.55, AM Peak hour = 0.74, PM Peak hour = 0.63)

The numbers above are interesting when considering household versus non-household trip generation. The peak morning hour for the data occurred between 6:30 and 7:30AM. These three developments consist entirely of residential development. What is seen is that about 20% of the total trips (in and out) are going into the development at this early hour. Of course some of these trips going into the development may be trips from household members accounted for in models and survey data, such as return home from a night work shift (only about 2% of workers return from work at this time), a return from an early morning shopping trip, or a return from an early drop off at school. At that peak hour though it would seem just as likely, or more so, that the traffic going in is non-household travel such as a vehicle coming to pick someone up, deliveries, a construction crew beginning work on a home improvement project, a school bus, or a day care provider. Any type of trip that would be one that went into the development and out again within the hour would register two trips on the counter. If all of the trips going into the development during the morning peak hour left during the peak hour then the range for this data would be 0.54 to 0.56 net trips which is in line with the 0.55 peak hour trips per household (by members of the household) estimated by DTMS and NPTS models for general single family structures. The estimate trip rate from models for the morning peak is about 2/3 of the total traffic count that would be expected. One third of the total trips are expected to be non-household trips. An adjustment to the modeled figure to account for non-household trips would then be to increase the modeled rate by 50%.

For a few communities, peak hour trips per household data for age restricted communities was obtained in this study as discussed in a previous section and shown in Figure 42 below. From this and other information found in this study, traffic counts of age restricted communities show an average of about 0.28 trips per household during the morning peak hour and 0.31 trips per household in the evening peak hour of adjacent traffic. Estimates for peak hour trips per household for age restricted single family households were 0.21 for the morning peak and 0.20 for the evening peak as estimated by the DTMS model. Just as with the daily rates for the population, the modeled estimate is expected to be about 2/3 of the value obtained from a traffic counter.

Figure 42, Peak Hour Information for 55+ commities

	Daily	AM Peak Hour	PM Peak Hour
Hershey Run 55+ community	4.57	0.22	0.29
55+ communities in PA	2.76	0.33	0.35
Monmouth/Ocean counties 55+	na	0.27	0.27

Models of household trip generation during the morning peak hour indicate that per household trip rates for 55+ single family are 0.21 and the estimate for the single family unrestricted household is 0.57. Available traffic count data indicates on average about 0.28 trips per household for single family age restricted housing and 0.85 trips per household for unrestricted households. **The models and the available traffic count data both indicate that for the morning peak hour, age restricted housing generates very close to one third of that for non-restricted housing.** Not surprisingly the employment rate of those 55 years and older in Delaware (23.4%) calculated from the survey data is a little over a third of the general population employment rate (61.2%).

The evening peak would be expected to be more complicated as it involves more diverse trip purposes and is less dominated by work trips. Work trips are more highly concentrated in the morning peak hours as can be seen in Figures 43 and 44 below. Delaware models for the evening peak hour for age restricted households show a similar rate as the morning peak at 0.20 trips per single family household. Traffic counts for the evening peak that are available for age restricted as well as unrestricted communities sometimes show a 10% to 20% increase in trips per household over the morning peak hour. Models based on national survey data show evening peak hour trips per household for the entire population as well as age restricted households significantly higher than the morning peak in some cases nearly double. Based on the data available and models for this region, a value of around 0.3 trips per single family household is an estimate of the rate for age restricted communities with 0.9 being around the rate for unrestricted communities. **Like the morning peak, the trip rate for age restricted communities during the evening peak is expected to be about one third the rate for unrestricted communities.**

Figure 43, Percentage of Home to Work Trips in Delaware by time of day

TIME OF DAY	%Trips
Midnight to 3AM	0.8
3AM to 6:30 AM	16.4
6:30AM to 8:30 AM	**64.9**
8:30AM to 4PM (7.5 hours)	17.7
4PM to 6PM	**1.1**
6PM to midnight	1.2

Figure 44, Percentage of Work to Home Trips in Delaware by time of day

TIME OF DAY	%Trips
Midnight to 3AM	1.1
3AM to 6:30 AM	17.4
6:30AM to 8:30 AM	**4.1**
8:30AM to 4PM (7.5 hours)	18.7
4PM to 6PM	**41.8**
6PM to midnight	16.9

Daily Trip Rates

There was very little traffic count data available for the entire day to determine an appropriate adjustment to modeled rates. The DTMS model estimated a daily rate of 3.7 trips per household for age restricted single family housing which is the same for ITE's Land Use 251 for Senior detached housing. Traffic count measures at one 55+ single family community in Delaware was 4.6 trips per household per day and the DTMS model estimate did not include non-household trips, so the ITE value is expected to be low and 4.6 trips per day for age restricted single family household is expected to be about right and is about a 25% adjustment to the modeled estimate. A 25% adjustment to the DTMS modeled estimate for unrestricted single family housing (5.4 trips per household per day) would provide an estimate close to 7 trips per household per day for single family unrestricted communities. Viewed another way, the models indicate that the ratio of age restricted daily trip rate to unrestricted daily trip rate is about 2/3. If that ratio hold over all trips and the figure of 4.6 trips per household per day is used for age restricted households then that would suggest an estimate of about 7 trips per household per day for unrestricted single family housing.

Estimates of Traffic Counts Using The Delaware Trip Generation Model

The effects of age, employment, income, housing type, household structure and other factors are shown well by the model, as are the relative magnitudes of age restricted trip generation to unrestricted trip generation. Modeled trip generation yield values that are always less than what would be expected by a traffic counter since the models only address household travel. From an examination of the data available, adjustments to the modeled figures could be suggested. An estimate of what a traffic counter would yield during a peak hour would be to multiply the modeled estimates by 1.5, a 50% increase to account for non-household travel. A daily trips per household figure would be to take the modeled estimate and multiply by 1.25, a 25% adjustment to account for non-household travel through the day.

As an example, apartment trip rates for age restricted communities could be examined using the models. The DTMS model estimates about 0.15 trips per household during morning and peak hours for age restricted apartments. Increasing this peak period model estimate by 50% would yield an adjusted estimate of 0.22 trips per household expected from a traffic counter. In line with this adjusted estimate, the traffic count for age restricted apartments in New Jersey counties was 0.2 trip per household during the morning peak hour and 0.26 during the evening peak hour.

Summary and Conclusions

- Survey data in the years between 1995 and 2003 have shown that 29% of the Delaware households are eligible to live in 55 years and older age restricted communities. This represents a large and growing market for such communities.

- The models created in this project have the ability to predict the effects of age, income, vehicle availability, housing type, children in the household, employment, and home ownership on trip generation. With the various plans that are proposed for age restricted housing, and the relatively low amount of data available on trip generation for these facilities, the model has the ability to estimate the effects of a variety of factors that may come into play when examining the impacts of new housing developments.

- Delaware data and National Personal Travel Survey (NPTS) data both show a decrease of trips with age. From models built on the DelDOT Trip Monitoring System (DTMS) data, it was estimated that 55 years and older households take about 2/3 of the daily trips that average households in Delaware take. From models built on the NPTS using Delaware data, it was estimated that 55 years and older households also take about 2/3 of the daily trips that average households in Delaware take. These results correspond well with Corcoran's study that indicates that senior housing generates about 2/3 the amount of traffic as typical single family development. From the modeling work done in this study and the examination of other sources of information, this appears to be the best relative estimate of senior housing to the general population for total weekday travel.

- Analysis of available data and trip generation model estimates indicate that values of trips per peak hour of adjacent traffic (AM and PM) for age restricted housing are 1/3 that of similar unrestricted housing. This would seem to be largely due to the percentages of each population that are employed. Those 55 years and older take a larger percentage of trips during the off peak hours than the average person over 17 years of age. This difference is due to when non-work trips occur. When viewing the distribution of work trips throughout the day, 55+ workers show a very similar trip distribution as the working population as a whole.

- Trip generation models based on household travel surveys only estimate the trip rates of those in the household. There is apparently a considerable amount of non-household travel induced in neighborhoods. Non-household travel would include visitors, utilities, trash, lawn and other home services, mail and parcel delivery, and variety of other types of travel. Estimates of the magnitude of this non-household travel are 25% of the total daily trips. Using model estimates, an estimate of what a traffic counter would yield during a peak hour would be to multiply the modeled estimates by 1.5, a 50% increase to account for non-household travel. An estimate of what a traffic counter would yield for daily trips per household figure would be produced by multiplying the modeled estimate by 1.25, for a 25% adjustment to account for non-household travel through the day. These corrections to adjust modeled rates to correspond to what would be expected to be produced from traffic counts, are based on a comparison of modeled trip generation rates and traffic counts available.

- Based on data available and trip generation models created, average rates for single family detached housing during peak hours are estimated as follows:

	AMpeakhour	PMpeakHour	Daily
Age Restricted (55+)	0.28	0.3	4.6
Not Restricted	0.85	0.9	7.0

- Analysis was done using current population averages in Delaware. The question was though, whether or not there was something particularly different about the 55+ populations that live in restricted communities and those of similar age in the general population. One consideration was whether a younger mix was present in the age restricted communities and whether that would make a difference. Trip generation for households with persons age 55 to 64 were studied and it was found that estimates for age restricted communities would not be much different with a younger mix. Whether life styles of those living in age restricted communities were such that residents were more "active" in terms of taking more trips is not known but there was no evidence found of this.

- Housing type is a factor in the models. Individuals living in apartments are shown in general to make less trips, and persons living in detached housing make more than the average number of trips per day.

- Data estimates in this project were only focused on weekday travel. Weekend travel is expected to show differences.

- Figures for trip generation for age 55 and over households as modeled and presented in this report were generated for households with no children. To use these estimates to evaluate a particular residential development plan, one must consider factors in addition to age such as income and housing type that were included in the models. Also many age restricted communities allow for a certain percentage of units permitting residence of individuals under 18 years of age, so there would be a mix of restricted and unrestricted housing to be accounted for. While a development may be initially age restricted, over a period of time and unforeseen demographic or economic changes in a locale, residence rules may be altered. Modeling trip generation allows for the estimation of impacts under various scenarios and changing circumstances.

References

Footnotes were provided for references in the report.

1) Delaware News Journal 12/22/2004

2) "Senior Housing Trip Generation and Parking Demand Characteristics"
Stephen B. Corcoran, ITE 66th Annual Meeting

3) 1995 National Personal Transportation Survey Summary of Trends, FHWA and Bureau of Transportation Statistics.

4) 1995 National Personal Transportation Survey Data, FHWA and Bureau of Transportation Statistics.

5) Institute of Transportation Engineers, Trip Generation, 7th Edition

6) Delaware Department of Transportation Trip Monitoring System data, survey years 2001 thru 2003. Dover, Delaware. As conducted and compiled by the Center for Applied Demography and Survey Research, University of Delaware.

Traffic Studies Provided By DelDOT

7) Traffic Planning and Design Inc. Dec 1 1999

8) Orth-Rodgers Associates Inc. September 18 ,1998

9) Abbington-Ney Associates 9/27/1988

10) Schoor Depalma 5/23/2000

11) Karins and Associates April 00 to 02

12) Karins and Associates collected trip generation data for Hershey Run

Age Restricted Communities in Delaware

The following is a list of age-restricted communities in Delaware that were identified. This is not necessarily a complete list but is what could be found in a first pass by contacting government offices and realtors.

New Castle County

SpringMill, Middletown, McKee Group, http://mckeebuilders.com/springmill/
362 Ranch Homes from Mid $200,000
Clubhouse, pool, bocce, tennis courts, walking trails
$140 per month community fee includes all exterior maintenance on home and yard.
Eighty percent of the homes must have one person in the household be 55, but federal law permits a limited number of homeowners under the age of 55.

Spring Arbor, Middletown, Mckee Group
317 homes, ½ towns ½ singles

Spring Meadow, Smyrna, McKee Group
246 homes, ½ towns ½ singles

Little Falls Village, Hockessin, Benchmark Builders
107 detached , 2 bedroom, sold out
clubhouse, next to golf course,

Little Falls Village II
36 townhouses

Meridian Crossing
127 detached, 314 townhouses, 220 apartments

Village of Red Lion Creek, Pencader, rt40/rt1, Benchmark Builders
2 bedroom, 2 story, detached, $226 to $227
club house, exterior maintenance

Crossings At Christiana, Bear/Glasgow Benchmark Builders
140 detached, 2 bedroom, 2 story, , $218 to $250
club house, exterior maintenance

Village At Rocky Run, Rt. 202 near PA border, Benchmark Builders
2 bedroom, 2 story, detached, sold out
club house, exterior maintenance, near park

Hershey Run, Newport, Eastern States Development Company

Paper Mill Falls, Newark

Adaire Village, Paper Mill/Limestone Rd, Benchmark Builders
Upper 200's

New Castle County (continued)

White Chapel, Newark

Traditions of Red Lion

Cloutier Court, Weldin Prop.
15 townhoues

Churchman's Meadows
145 units

Village of Brandywine
184 detached

Traditions at Jester Crossing
54 detached

Kent County

Spring Meadow
246 lots

Village of Nobles Pond
1,021 lots

Champions Club
338 Lots

Sussex County

Central Park, Milford

Bay Crossing

Bridgeville Crossing

Laurel Senior Housing

Cadbury

The Peninsula

Sussex East Mobile home development

Sussex West, 30769 Lewes Georgetown Hwy, Lewes, DE, 2 and 3 bedroom, Manor House

SENIOR HOUSING TRIP GENERATION AND PARKING DEMAND CHARACTERISTICS

by

Stephen B. Corcoran, P.E. (M)[a]

presented at the
Institute of Transportation Engineers
66th Annual Meeting

INTRODUCTION

As the baby boomer generation ages, special housing projects have been developed for them in lieu of the traditional single-family home or apartment. Congregate care facilities, independent living apartments, assisted-care units, and senior apartments are being marketed, developed, and built to handle the needs of older adults.

The changing lifestyle of older adults affects their transportation needs and usage as well. Trip generation and parking demand within this age group vary significantly from traditional residential uses because residents no longer have to be at work, pick up their children, or do their shopping at specific times. Also many senior communities provide on-site services to meet their residents' needs. This paper will present the author's experiences with senior housing and its trip and parking characteristics along with data on projects in suburban Chicago, Illinois and around the United States.

SENIOR HOUSING TYPES

Older adults have many special needs that change over time. Many seniors are clearly independent and need little assistance other than help with major chores or repairs. They are generally active and healthy. As time goes by, however, their needs change and grab bars become important, as well as, other features such as higher electrical outlets, emergency response systems, and lower reach cabinets. Good nutrition, socialization, and access to medical and supportive care also becomes more important. Several distinct types of housing have been developed to accommodate these needs:

Senior Single Family Homes are senior-only subdivisions which have been developed for retirees ages 55 and up in the southeast and southwest sections of the United States. These developments typically include recreational facilities. Many of the residents are retired.

Senior Apartments are traditional apartment complexes with a minimum age requirement of 55 years old. Some amenities include recreational facilities, security, and special design features. Residents are independent and may still be working.

Independent Living Units are cottages or apartments were older adults live independently but without the worries of maintenance or housekeeping. Medical care can be available at the facility or by visiting medical staff. A variety of amenities are provided for the residents depending on the size of the community.

[a] Senior Transportation Consultant, Metro Transportation Group, Inc, Hanover Park, Illinois

Assisted-Care Units are for older adults having difficulty managing in an independent living arrangement but who do not need nursing home care. Assisted-care is usually apartment living with additional staff to help with normal daily activities.

Congregate Care Facilities contain a full spectrum of housing types in one development with town homes or cottages, independent living units, assisted-care units, and nursing care. Congregate Care Facilities (CCF) allow the elderly to age in one place with nursing care available if they need it. This is particularly important for elderly couples wishing to stay together with one spouse needing special care. CCFs are in essence self-contained communities. **Table 1** lists the amenities that are typically available at a CCF.

Table 1

Typical Congregate Care Facility On-Site Services and Facilities

Standard Services	Extra Services	Common Facilities
• Main Meal of the Day	• Breakfast and Lunch	• Lounge Area
• 24-Hour Nursing	• Extended Room Service	• Dining Room
• Daily Check-In	• Specialized Diets	• Library
• Weekly Laundry	• Guest Meals	• Chapel
• Utilities	• Catering	• Recreation Room
• Housecleaning	• Physician	• Country Store
• Organized Programs	• Podiatrist	• Pharmacy
• In Room Food Service	• Physical/Speech Therapy	• Arts and Crafts Room
• Bus Shuttle	• Insurance	• Workshop
• 24-Hour Security	• Chauffeur Service	• Cafe
• Complete Maintenance	• Garages	• Exercise Room
• Free Parking	• Telephone	• Beauty/Barber Shop
• Garbage Collection	• Cable TV	• Bank Branch Office
• Notary Public Service	• Photocopying	• Solarium
• Supportive Care Nurse		• Whirlpool
• Chaplain		• Outside Patio
		• Garden Plots

Source: Milwaukee, Wisconsin CCF Brochure

LITERATURE REVIEW

A review was made of available data on senior trip generation and parking demands. Information was obtained from the Institute of Transportation Engineers Trip and Parking Generation Manuals, the author's files, data from other consultants, as well as, information from California, Arizona, and Florida Departments of Transportation. After reviewing the data, it became clear that the amount of data is small and that the definition of senior housing was not consistent among each source. The data did not distinguish between the five categories mentioned previously.

FACTORS AFFECTING TRIP GENERATION AND PARKING

Several factors affect the trip generation and parking demand at any particular facility. These include the number of dwelling units, nursing beds, average age of residents, resident's affluence, number of employees, and available bus shuttle/chauffeur service. More data needs to be collected in order to properly analyze their relationship to trip generation and parking demand. The trip generation rates for individual facilities varied. Insufficient information on all the survey locations made it difficult to statistically draw conclusions on individual impact of those factors.

However, experience has indicated that as the average age of residents increases, the number of trips and parking demand decreases. This is an obvious affect of the aging process. Nursing beds require more staff to service a patient needs than a more independent resident. When the proportion of nursing beds to residential units increases, the amount of traffic and parking generally increase. The economic well being of residents increases the likelihood that they own a car and thus drive and park. Lastly, bus shuttle/chauffeur service will provide an option to the auto for residents keeping traffic and parking rates lower.

DAILY TRAFFIC GENERATION

Information on daily trip ends was obtained from surveys by the California Department of Transportation (Caltrans) and the Florida and Arizona Departments of Transportation. This data generally categorized the facilities as retirement communities but included CCFs, senior apartment complexes, and may have nursing beds. The author's data consisted of one CCF in Pennsylvania. **Table 2** summarizes the trip data and rates. The average trip rate daily varied between 2.78 and 8.91 trips per unit. The variation in rates supports the conclusion that the number of units/beds is not the only variable influencing trip production. The weighted average trip ends were 4.52 trips per unit which included one large development of 3,122 units. Without the 3,122 unit project, the weighted average rate was 5.64 trips per units.

The weighted daily trip generation rate, was 5.64 trip ends a day for senior housing developments. Senior housing generates two-thirds the amount of traffic compared to a typical single-family development. It's closer to other multi-family categories, including apartments (6.47 trips/unit) and condominiums or townhouses (5.86 trips/units). **Table 3** shows the weekly variation in volumes based on one facility. The weekday volumes were consistent. Weekend traffic volumes were slightly lower.

Table 4 illustrates the hourly distribution of traffic throughout an average weekday, Saturday, and Sunday. The peak-hour volumes of the facility occurred at lunch time and mid-afternoon (2:00 to 4:00 PM). Caltrans data indicated that the peak-hour occurred between 11:00 AM and 4:00 PM, depending on the facility. These peak-hour times do not coincide with the peak-hour of adjacent street traffic because the residents do not have or want to travel during the rush hour. Also, the employee shifts are generally off peak. Most facilities are staffed 24 hours a day with a 7:00 AM-3:00 PM, 3:00 PM -11:00 PM, 11:00 PM-7:00 AM shift schedule. Some administrative staff follow a typical 9:00 AM to 5:00 PM shift.

PEAK-HOUR TRIP GENERATION RATES

Table 5 shows the trip generation rates for eight facilities during the morning and evening peak-hour of the adjacent street system. The weighted average trip rate was 0.222 trips per unit/bed in the morning peak and 0.247 trips per unit/bed in the evening peak. Trip rates ranged from 0.085 to 0.450 per unit. The directional splits were 65% inbound and 35% outbound in the morning and 40% inbound and 60% outbound in the evening. Compared to other residential land-uses, senior developments generate significantly less traffic on a per unit basis.

Table 2

Daily Trip Generation Rates for Senior Housing

Source	Number of Dwelling Units	Daily Trips	Trip Rates
Caltrans	3122	9630	3.09
	300	830	2.78
	108	310	2.87
	76	260	3.42
	460	2252	4.90
Florida	366	3262	8.91
DOT	560	1985	3.55
	187	1449	7.75
	120	901	7.51
	127	561	4.42
Arizona	125	972	7.78
DOT	176	855	4.86
	74	447	6.04
	60	285	4.75
	216	1386	6.42
	175	1058	6.05
	129	941	7.30
	112	922	8.23
	106	820	7.74
	89	538	6.05
	81	529	6.53
	60	494	8.23
	59	432	7.30
Penn. CCF	247	1163	4.71
Weighted Average	**7135**	**32282**	**4.52**
Without 3,122 units	**4013**	**22652**	**5.64**

ITE Average Weekday Daily Rates

Single-Family (Code 210)	9.55
Apartment (Code 220)	6.47
Condo/townhouse (Code 230)	5.86
Congregate Care Facility (Code 251)	2.15

Table 3

Weekly Volume Distribution

Day of the Week	Percentage
Monday	15%
Tuesday	15%
Wednesday	16%
Thursday	17%
Friday	15%
Saturday	12%
Sunday	10%
Total	100%

Table 4

Hourly Traffic Distribution

Start Hour	Average Weekday	Saturday	Sunday
12:00 AM	1.46%	1.45%	2.76%
1:00 AM	0.07%	0.12%	0.26%
2:00 AM	0%	0.00%	0.26%
3:00 AM	0.12%	0.00%	0.00%
4:00 AM	0.46%	0.00%	0.66%
5:00 AM	0.41%	0.60%	0.39%
6:00 AM	1.94%	2.05%	1.71%
7:00 AM	5.74%	5.06%	3.94%
8:00 AM	6.70%	5.06%	4.99%
9:00 AM	6.19%	5.78%	6.17%
10:00 AM	7.20%	9.40%	7.74%
11:00 AM	9.33%	9.04%	8.53%
12:00 PM	7.05%	8.07%	8.01%
1:00 PM	7.44%	6.27%	4.86%
2:00 PM	9.76%	7.59%	8.40%
3:00 PM	9.54%	10.24%	9.84%
4:00 PM	8.39%	9.40%	9.32%
5:00 PM	5.26%	6.14%	6.96%
6:00 PM	3.14%	3.25%	3.54%
7:00 PM	2.90%	2.89%	4.20%
8:00 PM	2.59%	2.05%	2.49%
9:00 PM	1.10%	1.57%	1.31%
10:00 PM	1.24%	1.33%	1.05%
11:00 PM	1.96%	2.65%	2.62%

Table 5

Peak-Hour Trip Generation Rates

Facility	Location	Occupied Units: Dwelling Units	Occupied Units: Nursing Beds	Total	AM Peak Volume	AM Peak Rate	PM Peak Volume
Covenant Village	Northbrook, IL	220	151	371	86	.231	133
Friendship Village	Lombard, IL	620	100	720	86	.120	180
Presbyterian Home	Evanston, IL	312	166	478	92	.193	139
Glenview Terrace	Glenview, IL	243		243			21
Good Shephard Manor	Barrington, IL	102		102	18	.180	17
Mayslake	Oakbrook, IL	630		630	67	.106	75
Leisure Village	New Jersey	200		200	65	.325	62
Pennsylvania CCF		210	37	247	78	.316	111
	Totals	**2537**	**454**	**2991**	**492**		**738**
	Weighted Average Trip Rate				**.164**		**.247**
	Inbound Percentage				**65%**		**40%**
	Outbound Percentage				**35%**		**60%**
Comparison to other ITE Residential Rates							
Single Family Homes (Land Use Code 26)					0.74		1.01
Apartments (Land Use Code 220)					0.51		0.63
Condominiums/Townhouses (Land Use Code 230)					0.44		0.55

PARKING DEMAND SURVEYS

Parking demand characteristics were obtained from a number of surveys conducted in the Chicago metropolitan area The peak parking demand occurred during the mid-day between 11:00 AM to 3:00 PM corresponding, in part, with the largest employee shift on-site. **Table 6** summarizes those surveys. The peak day of the year is Mother's Day when many facilities run out of visitor parking, according to the on-site staff.

The peak parking demand rates varied between 0.214 and 0.579 vehicles per unit/bed with a weighted average rate of 0.404 vehicles per unit/bed. Employee, resident, and visitor parking is included. This rate is one third to one half the parking rate of other residential uses. Readers should note that the survey sites with the higher parking rates generally have more nursing beds which requires more employees than the residential units.

Table 6

Peak Parking Demand Surveys

Development	Location	Dwelling Units	Nursing Beds	Total Units/Beds	Peak Parking Rate	Peak Parking Demand
Covenant Village	Northbrook, IL	220	151	371	0.490	182
Beacon Hill	Lombard. IL	235	23	258	0.565	146
Friendship Village	Schaumburg, IL	620	100	720	0.390	281
Presbyterian Home	Evanston, IL	312	166	478	0.579	277
Glenview Terrace	Glenview, IL	243		243	0.214	52
Mayslake	Oakbrook, IL	630		630	0.408	257
EJM Engineering Studies						
Lilac Lodge	Waukegan, IL	203		203	0.315	64
Deerfield Place	Deerfield. IL	98		98	0.230	23
ITE Parking Manual, 2nd Ed						
Retirement Community (Land Use Code 250)		500		500	0.270	135
		3061	440	3501		1417
		Weighted Average			**0.404**	
ITE Parking Manual, 2nd Edition						
Low/Mid-Rise Apartments (Land Use Code 221)					1.21	
High-Rise Apartments (Land Use Code 222)					0.88	
Residential Condominium (Land Use Code 230)					1.11	

Conclusions

Based on the analyses and studies for this paper, the following findings were made:

1. The overall category of senior housing should be broken down into at least five categories for trip generation and parking demand purposes. These categories could be:

- Senior Single-Family Housing
- Senior Apartments
- Independent Living Units
- Assisted-Care Units
- Congregate Care Facility

2. Several factors affect the trip generation and parking demand at any particular facility. Any new survey should include the number of dwelling units, nursing beds, average age of residents, resident's affluence, number of employees, and available bus shuttle/chauffeur service. More data needs to be collected in order to properly analyze their relationship to trip generation and parking demand.

3. Daily trip generation rates were found to be 4.52 to 5.64 trip ends a day for senior housing developments. Senior housing generates two-thirds the amount of traffic compared to a typical single-family development. It's daily rates are similar to other multi-family categories, including apartments (6.47 trips/unit) and condominiums/townhouses (5.86 trips/units).

4. Trip generation rates during the peak hour of adjacent street traffic are significantly less because most employees arrive/depart during off-peak periods and residents avoid the peak-hour congestion. The peak hour rates are one-half to one-fourth that of other residential land-uses.

5. The peak-hours of site traffic occurs in the late-morning or early afternoon.

6. The peak parking demand at most senior facilities occurred midday with an average peak demand of 0.40 vehicles per dwelling unit for residents, employees, and visitors. Mother's Day is the highest parking day of the year with many facilities short of spaces for that one day.

References

1. Trip Generation Manual, 5th Edition; Institute of Transportation Engineers; January, 1991
2. Parking Generation Manual, 2nd Edition; Institute of Transportation Engineers; August, 1987
3. Parking Requirements for Retirement Centers Requirements and Demands; EJM Engineering; May, 1987
4. 6th Progress Report of Trip Ends Generation Research Counts; California Department of Transportation; 1965-1970
5. Florida Department of Transportation Trip Generation Data
6. Arizona Department of Transportation Trip Generation Data

Trip Generation Comparison

Example Number of Units is 340 for Single Family and 165/175 (340) for proposed Senior Adult Detached/Attached Housing.

ITE Land Use Code 210 - Single Family Detached Housing

Daily Trip Generation (210)

Equation

EXP (0.92*LN (340) + 2.71) = 3,206

Average Rate

9.44 * 340 = 3,209

AM Peak Hour (210)

Equation

0.71*(340) + 4.80 = 246

Average Rate

0.74 * 340 = 252

PM Peak Hour (210)

Equation

EXP (0.96*LN (340) + 0.20) = 329

Average Rate

0.99 * 340 = 337

ITE Land Use Code 251 – Senior Adult Housing Detached

Daily Trip Generation (251)

Equation

EXP ((0.88*LN (165)) + 2.28) = 874 (*Calculation used for TIA*)

Average Rate

4.27 * 165 = 705

Adjustment Factor = 2/3 ~ 0.667 + 1 * 4.27 = 7.12 * 165 = **1,174**

AM Peak Hour (251)

Equation

EXP ((0.76*LN (165)) + 0.21) = 60 (*Calculation used for TIA*)

Average Rate

0.24 * 165 = 40

Adjustment Factor = 1.5 * 0.24 = 0.36 ~ 0.4 * 165 = **66**

PM Peak Hour (251)

Equation

EXP ((0.78*LN (165)) + 0.28) = 71 (*Calculation used for TIA*)

Average Rate

0.30 * 165 = 50

Adjustment Factor = 1.5 * 0.30 = 0.45 ~ 0.5 * 165 = **83**

ITE Land Use Code 252 – Senior Adult Housing Attached

Daily Trip Generation (252)

Equation

4.02 * (175) - 25.37 = 678 (*Calculation used for TIA*)

Rate

3.70 * 175 = 648

Adjustment Factor = 2/3 ~ 0.667 + 1 * 3.70 = 6.17 * 175 = **1,080**

AM Peak Hour (252)

Equation

0.20 * (175) – 0.18 = 35 (*Calculation used for TIA*)

Rate

0.20 * 175 = 35

Adjustment Factor = 1.5 * 0.20 = 0.3 ~ 0.4 * 175 = **70**

PM Peak Hour (252)

Equation

0.24 * (175) + 2.26 = 44 (*Calculation used for TIA*)

Rate

0.26 * 175 = 46

Adjustment Factor = 1.5 * 0.26 = 0.39 ~ 0.5 * 175 = **88**

Summary Table:

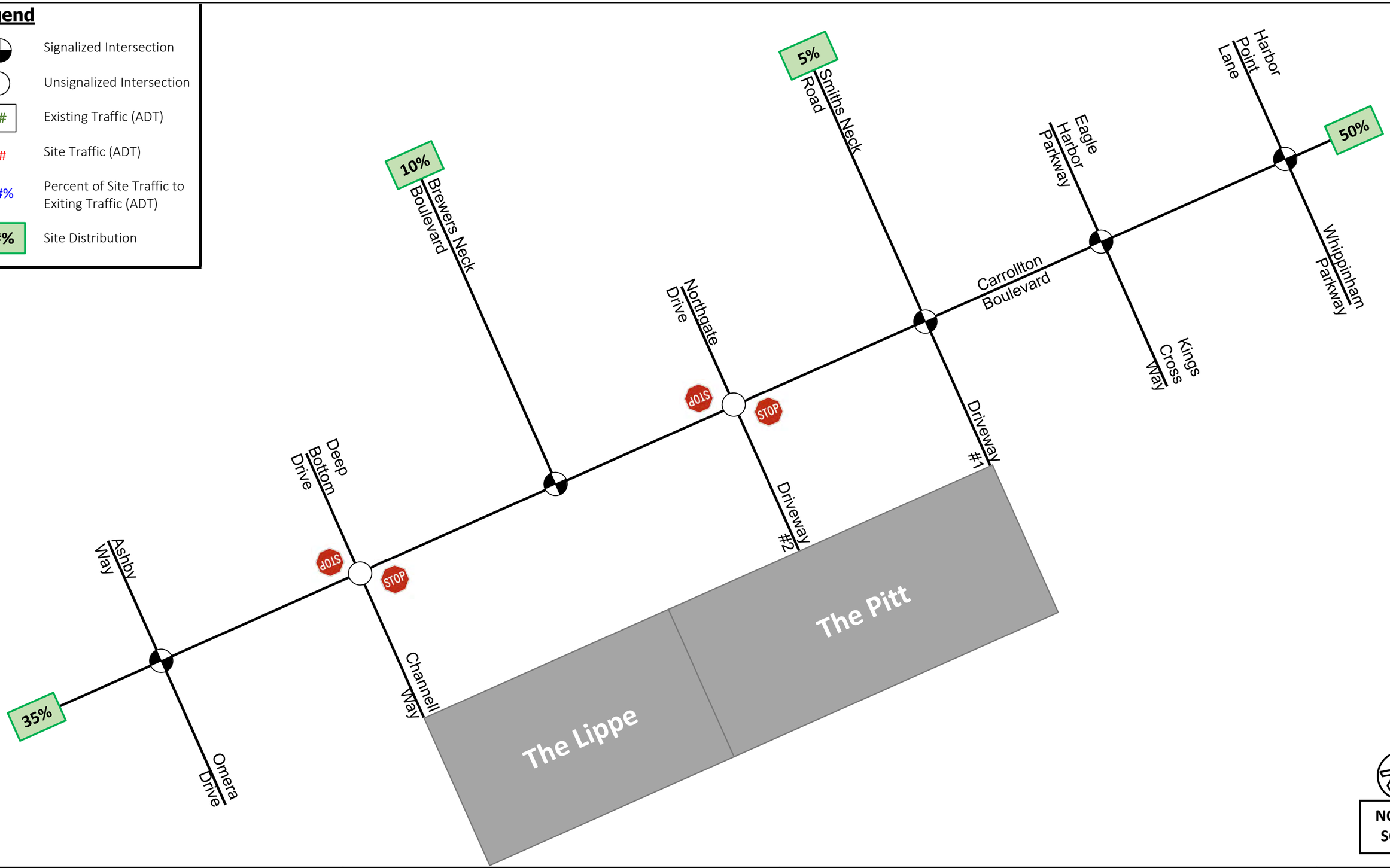
210 - Single Family Detached Housing			**251 – Senior Adult Housing Detached**			**252 – Senior Adult Housing Attached**		
Original Rates								
Daily	AM	PM	Daily	AM	PM	Daily	AM	PM
9.44	0.74	0.99	4.27	0.24	0.30	3.70	0.20	0.26
Adjusted Rates								
Daily	AM	PM	Daily	AM	PM	Daily	AM	PM
-	-	-	7.12	0.4	0.5	6.17	0.4	0.5

Attachment C:

Proposed Regional Trip Distribution Figure

Legend

- Signalized Intersection
- Unsignalized Intersection
- ## — Existing Traffic (ADT)
- ## — Site Traffic (ADT)
- ##% — Percent of Site Traffic to Exiting Traffic (ADT)
- **##%** — Site Distribution



Kimley»Horn	The Pitt & Lippe TIA Isle of Wight County, VA	Regional Trip Distribution	Figure

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Appendix B
Traffic Count Data

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : 1-Carrollton Blvd. & Whippingham Pkwy._Harbor Point Ln. AM
Site Code :
Start Date : 10/5/2017
Page No : 1

Groups Printed- Car

	Carrollton Blvd Southbound					Whippingham Pkwy Westbound					Carrollton Blvd Northbound					Harbor Point Ln Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30 AM	0	132	0	0	132	9	0	4	0	13	3	457	1	0	461	3	0	8	0	11	617
06:45 AM	1	123	0	0	124	10	0	8	0	18	2	411	1	0	414	11	0	4	0	15	571
Total	1	255	0	0	256	19	0	12	0	31	5	868	2	0	875	14	0	12	0	26	1188
07:00 AM	3	147	3	0	153	7	0	8	0	15	1	483	2	0	486	5	0	11	0	16	670
07:15 AM	4	183	1	0	188	8	0	1	0	9	3	499	1	0	503	7	0	12	0	19	719
07:30 AM	1	136	0	0	137	9	0	6	0	15	2	589	3	0	594	6	0	19	0	25	771
07:45 AM	3	141	0	0	144	5	0	3	0	8	1	396	4	0	401	7	0	7	0	14	567
Total	11	607	4	0	622	29	0	18	0	47	7	1967	10	0	1984	25	0	49	0	74	2727
08:00 AM	3	147	1	0	151	7	0	6	0	13	2	288	1	0	291	4	0	5	0	9	464
08:15 AM	3	120	2	0	125	6	0	5	0	11	2	292	2	0	296	7	0	7	0	14	446
Grand Total	18	1129	7	0	1154	61	0	41	0	102	16	3415	15	0	3446	50	0	73	0	123	4825
Apprch %	1.6	97.8	0.6	0		59.8	0	40.2	0		0.5	99.1	0.4	0		40.7	0	59.3	0		
Total %	0.4	23.4	0.1	0	23.9	1.3	0	0.8	0	2.1	0.3	70.8	0.3	0	71.4	1	0	1.5	0	2.5	

	Carrollton Blvd Southbound				Whippingham Pkwy Westbound				Carrollton Blvd Northbound				Harbor Point Ln Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	1	123	0	124	**10**	0	**8**	**18**	2	411	1	414	**11**	0	4	15	571
07:00 AM	3	147	**3**	153	7	0	8	15	1	483	2	486	5	0	11	16	670
07:15 AM	**4**	**183**	1	**188**	8	0	1	9	**3**	499	1	503	7	0	12	19	719
07:30 AM	1	136	0	137	9	0	6	15	2	**589**	**3**	**594**	6	0	**19**	**25**	**771**
Total Volume	9	589	4	602	34	0	23	57	8	1982	7	1997	29	0	46	75	2731
% App. Total	1.5	97.8	0.7		59.6	0	40.4		0.4	99.2	0.4		38.7	0	61.3		
PHF	.563	.805	.333	.801	.850	.000	.719	.792	.667	.841	.583	.840	.659	.000	.605	.750	.886

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : 1-Carrollton Blvd. & Whippingham Pkwy._Harbor Point Ln. AM
Site Code :
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Groups Printed- Truck

	Carrollton Blvd Southbound					Whippingham Pkwy Westbound					Carrollton Blvd Northbound					Harbor Point Ln Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30 AM	0	9	0	0	9	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	13
06:45 AM	0	9	0	0	9	0	1	0	0	1	1	9	0	0	10	0	0	0	0	0	20
Total	0	18	0	0	18	0	1	0	0	1	1	13	0	0	14	0	0	0	0	0	33
07:00 AM	0	9	1	0	10	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	16
07:15 AM	0	4	0	0	4	0	0	0	0	0	0	10	1	0	11	0	0	0	0	0	15
07:30 AM	0	4	0	0	4	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	13
07:45 AM	1	8	0	0	9	0	0	0	0	0	0	9	1	0	10	0	0	0	0	0	19
Total	1	25	1	0	27	1	0	0	0	1	0	33	2	0	35	0	0	0	0	0	63
08:00 AM	0	13	0	0	13	0	0	1	0	1	1	6	1	0	8	1	0	0	0	1	23
08:15 AM	0	9	0	0	9	0	0	1	0	1	1	12	1	0	14	0	0	0	0	0	24
Grand Total	1	65	1	0	67	1	1	2	0	4	3	64	4	0	71	1	0	0	0	1	143
Apprch %	1.5	97	1.5	0		25	25	50	0		4.2	90.1	5.6	0		100	0	0	0		
Total %	0.7	45.5	0.7	0	46.9	0.7	0.7	1.4	0	2.8	2.1	44.8	2.8	0	49.7	0.7	0	0	0	0.7	

	Carrollton Blvd Southbound				Whippingham Pkwy Westbound				Carrollton Blvd Northbound				Harbor Point Ln Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	4	0	4	0	0	0	0	0	9	0	9	0	0	0	0	13
07:45 AM	**1**	8	0	9	0	0	0	0	0	9	**1**	10	0	0	0	0	19
08:00 AM	0	**13**	0	**13**	0	0	**1**	**1**	**1**	6	1	8	**1**	0	0	**1**	23
08:15 AM	0	9	0	9	0	0	1	1	1	**12**	1	**14**	0	0	0	0	**24**
Total Volume	1	34	0	35	0	0	2	2	2	36	3	41	1	0	0	1	79
% App. Total	2.9	97.1	0		0	0	100		4.9	87.8	7.3		100	0	0		
PHF	.250	.654	.000	.673	.000	.000	.500	.500	.500	.750	.750	.732	.250	.000	.000	.250	.823

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Groups Printed- Combined

	Carrollton Blvd Southbound					Whippingham Pkwy Westbound					Carrollton Blvd Northbound					Harbor Point Ln Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30 AM	0	141	0	0	141	9	0	4	0	13	3	461	1	0	465	3	0	8	0	11	630
06:45 AM	1	132	0	0	133	10	1	8	0	19	3	420	1	0	424	11	0	4	0	15	591
Total	1	273	0	0	274	19	1	12	0	32	6	881	2	0	889	14	0	12	0	26	1221
07:00 AM	3	156	4	0	163	8	0	8	0	16	1	488	2	0	491	5	0	11	0	16	686
07:15 AM	4	187	1	0	192	8	0	1	0	9	3	509	2	0	514	7	0	12	0	19	734
07:30 AM	1	140	0	0	141	9	0	6	0	15	2	598	3	0	603	6	0	19	0	25	784
07:45 AM	4	149	0	0	153	5	0	3	0	8	1	405	5	0	411	7	0	7	0	14	586
Total	12	632	5	0	649	30	0	18	0	48	7	2000	12	0	2019	25	0	49	0	74	2790
08:00 AM	3	160	1	0	164	7	0	7	0	14	3	294	2	0	299	5	0	5	0	10	487
08:15 AM	3	129	2	0	134	6	0	6	0	12	3	304	3	0	310	7	0	7	0	14	470
Grand Total	19	1194	8	0	1221	62	1	43	0	106	19	3479	19	0	3517	51	0	73	0	124	4968
Apprch %	1.6	97.8	0.7	0		58.5	0.9	40.6	0		0.5	98.9	0.5	0		41.1	0	58.9	0		
Total %	0.4	24	0.2	0	24.6	1.2	0	0.9	0	2.1	0.4	70	0.4	0	70.8	1	0	1.5	0	2.5	

	Carrollton Blvd Southbound				Whippingham Pkwy Westbound				Carrollton Blvd Northbound				Harbor Point Ln Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	1	132	0	133	**10**	**1**	**8**	**19**	**3**	420	1	424	**11**	0	4	15	591
07:00 AM	3	156	**4**	163	8	0	8	16	1	488	2	491	5	0	11	16	686
07:15 AM	**4**	**187**	1	**192**	8	0	1	9	3	509	2	514	7	0	12	19	734
07:30 AM	1	140	0	141	9	0	6	15	2	**598**	**3**	**603**	6	0	**19**	**25**	**784**
Total Volume	9	615	5	629	35	1	23	59	9	2015	8	2032	29	0	46	75	2795
% App. Total	1.4	97.8	0.8		59.3	1.7	39		0.4	99.2	0.4		38.7	0	61.3		
PHF	.563	.822	.313	.819	.875	.250	.719	.776	.750	.842	.667	.842	.659	.000	.605	.750	.891

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Groups Printed- Car

	Carrollton Blvd Southbound					Whippingham Pkwy Westbound					Carrollton Blvd Northbound					Harbor Point Ln Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	16	565	6	0	587	0	1	3	0	4	9	195	9	0	213	0	0	3	0	3	807
04:15 PM	16	502	2	0	520	4	0	8	0	12	7	237	6	0	250	3	0	3	0	6	788
04:30 PM	16	551	12	0	579	1	0	1	0	2	10	234	5	0	249	9	0	2	0	11	841
04:45 PM	13	526	3	0	542	2	0	4	0	6	5	238	4	0	247	4	0	1	0	5	800
Total	61	2144	23	0	2228	7	1	16	0	24	31	904	24	0	959	16	0	9	0	25	3236
05:00 PM	8	464	4	0	476	1	0	7	2	10	10	243	4	0	257	1	0	3	0	4	747
05:15 PM	11	469	8	0	488	5	0	8	0	13	7	234	11	0	252	6	0	3	0	9	762
05:30 PM	13	491	4	0	508	0	0	4	0	4	8	233	12	0	253	4	0	4	0	8	773
05:45 PM	9	363	9	0	381	4	0	11	3	18	5	195	5	0	205	6	0	5	0	11	615
Total	41	1787	25	0	1853	10	0	30	5	45	30	905	32	0	967	17	0	15	0	32	2897
Grand Total	102	3931	48	0	4081	17	1	46	5	69	61	1809	56	0	1926	33	0	24	0	57	6133
Apprch %	2.5	96.3	1.2	0		24.6	1.4	66.7	7.2		3.2	93.9	2.9	0		57.9	0	42.1	0		
Total %	1.7	64.1	0.8	0	66.5	0.3	0	0.8	0.1	1.1	1	29.5	0.9	0	31.4	0.5	0	0.4	0	0.9	

	Carrollton Blvd Southbound				Whippingham Pkwy Westbound				Carrollton Blvd Northbound				Harbor Point Ln Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**16**	**565**	6	**587**	0	**1**	3	4	9	195	**9**	213	0	0	**3**	3	807
04:15 PM	16	502	2	520	**4**	0	**8**	**12**	7	237	6	**250**	3	0	3	6	788
04:30 PM	16	551	**12**	579	1	0	1	2	**10**	234	5	249	**9**	0	2	**11**	**841**
04:45 PM	13	526	3	542	2	0	4	6	5	**238**	4	247	4	0	1	5	800
Total Volume	61	2144	23	2228	7	1	16	24	31	904	24	959	16	0	9	25	3236
% App. Total	2.7	96.2	1		29.2	4.2	66.7		3.2	94.3	2.5		64	0	36		
PHF	.953	.949	.479	.949	.438	.250	.500	.500	.775	.950	.667	.959	.444	.000	.750	.568	.962

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Groups Printed- Truck

	Carrollton Blvd Southbound					Whippingham Pkwy Westbound					Carrollton Blvd Northbound					Harbor Point Ln Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	7	0	0	7	0	0	0	0	0	1	7	1	0	9	0	0	0	0	0	16
04:15 PM	0	5	0	0	5	0	0	2	0	2	1	6	2	0	9	1	0	0	0	1	17
04:30 PM	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	9
04:45 PM	0	6	0	0	6	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	12
Total	0	22	0	0	22	0	0	2	0	2	2	24	3	0	29	1	0	0	0	1	54
05:00 PM	0	3	0	0	3	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	8
05:15 PM	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	9
05:30 PM	0	9	0	0	9	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	10
05:45 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	6
Total	0	19	0	0	19	1	0	0	0	1	1	11	0	0	12	0	0	1	0	1	33
Grand Total	0	41	0	0	41	1	0	2	0	3	3	35	3	0	41	1	0	1	0	2	87
Apprch %	0	100	0	0		33.3	0	66.7	0		7.3	85.4	7.3	0		50	0	50	0		
Total %	0	47.1	0	0	47.1	1.1	0	2.3	0	3.4	3.4	40.2	3.4	0	47.1	1.1	0	1.1	0	2.3	

	Carrollton Blvd Southbound				Whippingham Pkwy Westbound				Carrollton Blvd Northbound				Harbor Point Ln Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**7**	0	**7**	0	0	0	0	**1**	**7**	1	**9**	0	0	0	0	16
04:15 PM	0	5	0	5	0	0	**2**	**2**	1	6	**2**	9	**1**	0	0	**1**	**17**
04:30 PM	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0	9
04:45 PM	0	6	0	6	0	0	0	0	0	6	0	6	0	0	0	0	12
Total Volume	0	22	0	22	0	0	2	2	2	24	3	29	1	0	0	1	54
% App. Total	0	100	0		0	0	100		6.9	82.8	10.3		100	0	0		
PHF	.000	.786	.000	.786	.000	.000	.250	.250	.500	.857	.375	.806	.250	.000	.000	.250	.794

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Groups Printed- Combined

	Carrollton Blvd Southbound					Whippingham Pkwy Westbound					Carrollton Blvd Northbound					Harbor Point Ln Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	16	572	6	0	594	0	1	3	0	4	10	202	10	0	222	0	0	3	0	3	823
04:15 PM	16	507	2	0	525	4	0	10	0	14	8	243	8	0	259	4	0	3	0	7	805
04:30 PM	16	555	12	0	583	1	0	1	0	2	10	239	5	0	254	9	0	2	0	11	850
04:45 PM	13	532	3	0	548	2	0	4	0	6	5	244	4	0	253	4	0	1	0	5	812
Total	61	2166	23	0	2250	7	1	18	0	26	33	928	27	0	988	17	0	9	0	26	3290
05:00 PM	8	467	4	0	479	1	0	7	2	10	11	247	4	0	262	1	0	3	0	4	755
05:15 PM	11	473	8	0	492	5	0	8	0	13	7	239	11	0	257	6	0	3	0	9	771
05:30 PM	13	500	4	0	517	1	0	4	0	5	8	233	12	0	253	4	0	4	0	8	783
05:45 PM	9	366	9	0	384	4	0	11	3	18	5	197	5	0	207	6	0	6	0	12	621
Total	41	1806	25	0	1872	11	0	30	5	46	31	916	32	0	979	17	0	16	0	33	2930
Grand Total	102	3972	48	0	4122	18	1	48	5	72	64	1844	59	0	1967	34	0	25	0	59	6220
Apprch %	2.5	96.4	1.2	0		25	1.4	66.7	6.9		3.3	93.7	3	0		57.6	0	42.4	0		
Total %	1.6	63.9	0.8	0	66.3	0.3	0	0.8	0.1	1.2	1	29.6	0.9	0	31.6	0.5	0	0.4	0	0.9	

	Carrollton Blvd Southbound				Whippingham Pkwy Westbound				Carrollton Blvd Northbound				Harbor Point Ln Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**16**	**572**	6	**594**	0	**1**	3	4	**10**	202	**10**	222	0	0	**3**	3	823
04:15 PM	16	507	2	525	**4**	0	**10**	**14**	8	243	8	**259**	4	0	3	7	805
04:30 PM	16	555	**12**	583	1	0	1	2	10	239	5	254	**9**	0	2	**11**	**850**
04:45 PM	13	532	3	548	2	0	4	6	5	**244**	4	253	4	0	1	5	812
Total Volume	61	2166	23	2250	7	1	18	26	33	928	27	988	17	0	9	26	3290
% App. Total	2.7	96.3	1		26.9	3.8	69.2		3.3	93.9	2.7		65.4	0	34.6		
PHF	.953	.947	.479	.947	.438	.250	.450	.464	.825	.951	.675	.954	.472	.000	.750	.591	.968

Peggy Malone & Associates, Inc.
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Groups Printed- Car

	Carrollton Blvd Southbound					Kings Crossing Westbound					Carrollton Blvd Northbound					Eagle Harbor Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30 AM	5	126	1	0	132	6	0	6	0	12	1	441	6	0	448	6	0	28	0	34	626
06:45 AM	6	136	0	0	142	7	1	3	0	11	1	383	4	0	388	19	0	20	0	39	580
Total	11	262	1	0	274	13	1	9	0	23	2	824	10	0	836	25	0	48	0	73	1206
07:00 AM	5	160	0	1	166	3	0	3	0	6	0	468	9	0	477	17	0	29	0	46	695
07:15 AM	9	175	0	0	184	5	0	2	0	7	0	448	11	0	459	9	0	40	0	49	699
07:30 AM	4	151	2	0	157	7	2	2	0	11	1	550	5	0	556	19	0	33	0	52	776
07:45 AM	5	149	0	0	154	3	0	5	0	8	0	377	11	0	388	11	1	27	0	39	589
Total	23	635	2	1	661	18	2	12	0	32	1	1843	36	0	1880	56	1	129	0	186	2759
08:00 AM	12	140	2	0	154	2	0	3	0	5	2	275	6	0	283	16	0	14	0	30	472
08:15 AM	7	123	1	0	131	3	0	4	0	7	2	270	9	0	281	12	0	19	0	31	450
Grand Total	53	1160	6	1	1220	36	3	28	0	67	7	3212	61	0	3280	109	1	210	0	320	4887
Apprch %	4.3	95.1	0.5	0.1		53.7	4.5	41.8	0		0.2	97.9	1.9	0		34.1	0.3	65.6	0		
Total %	1.1	23.7	0.1	0	25	0.7	0.1	0.6	0	1.4	0.1	65.7	1.2	0	67.1	2.2	0	4.3	0	6.5	

	Carrollton Blvd Southbound				Kings Crossing Westbound				Carrollton Blvd Northbound				Eagle Harbor Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	5	160	0	165	3	0	3	6	0	468	9	477	17	0	29	46	694
07:15 AM	**9**	**175**	0	**184**	5	0	2	7	0	448	**11**	459	9	0	**40**	49	699
07:30 AM	4	151	**2**	157	**7**	**2**	2	**11**	**1**	**550**	5	**556**	**19**	0	33	**52**	**776**
07:45 AM	5	149	0	154	3	0	**5**	8	0	377	11	388	11	**1**	27	39	589
Total Volume	23	635	2	660	18	2	12	32	1	1843	36	1880	56	1	129	186	2758
% App. Total	3.5	96.2	0.3		56.2	6.2	37.5		0.1	98	1.9		30.1	0.5	69.4		
PHF	.639	.907	.250	.897	.643	.250	.600	.727	.250	.838	.818	.845	.737	.250	.806	.894	.889

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Groups Printed- Truck

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Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30 AM	1	7	0	0	8	0	0	0	0	0	1	6	0	0	7	2	0	0	0	2	17
06:45 AM	0	10	0	0	10	1	0	0	0	1	0	8	0	0	8	3	0	0	0	3	22
Total	1	17	0	0	18	1	0	0	0	1	1	14	0	0	15	5	0	0	0	5	39
07:00 AM	1	9	0	0	10	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	15
07:15 AM	0	4	0	0	4	0	0	0	0	0	0	10	0	0	10	0	0	1	0	1	15
07:30 AM	0	3	0	0	3	1	0	0	0	1	1	8	2	0	11	0	0	0	0	0	15
07:45 AM	0	8	0	0	8	1	0	0	0	1	1	8	0	0	9	0	0	0	0	0	18
Total	1	24	0	0	25	2	0	0	0	2	2	31	2	0	35	0	0	1	0	1	63
08:00 AM	2	15	0	0	17	1	0	0	0	1	1	8	2	0	11	0	0	0	0	0	29
08:15 AM	0	10	0	0	10	0	0	0	0	0	0	13	0	0	13	3	0	0	0	3	26
Grand Total	4	66	0	0	70	4	0	0	0	4	4	66	4	0	74	8	0	1	0	9	157
Apprch %	5.7	94.3	0	0		100	0	0	0		5.4	89.2	5.4	0		88.9	0	11.1	0		
Total %	2.5	42	0	0	44.6	2.5	0	0	0	2.5	2.5	42	2.5	0	47.1	5.1	0	0.6	0	5.7	

	Carrollton Blvd Southbound				Kings Crossing Westbound				Carrollton Blvd Northbound				Eagle Harbor Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	3	0	3	**1**	0	0	**1**	**1**	8	**2**	11	0	0	0	0	15
07:45 AM	0	8	0	8	1	0	0	1	1	8	0	9	0	0	0	0	18
08:00 AM	**2**	**15**	0	**17**	1	0	0	1	1	8	2	11	0	0	0	0	**29**
08:15 AM	0	10	0	10	0	0	0	0	0	**13**	0	**13**	**3**	0	0	**3**	26
Total Volume	2	36	0	38	3	0	0	3	3	37	4	44	3	0	0	3	88
% App. Total	5.3	94.7	0		100	0	0		6.8	84.1	9.1		100	0	0		
PHF	.250	.600	.000	.559	.750	.000	.000	.750	.750	.712	.500	.846	.250	.000	.000	.250	.759

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Groups Printed- Combined

	Carrollton Blvd Southbound					Kings Crossing Westbound					Carrollton Blvd Northbound					Eagle Harbor Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30 AM	6	133	1	0	140	6	0	6	0	12	2	447	6	0	455	8	0	28	0	36	643
06:45 AM	6	146	0	0	152	8	1	3	0	12	1	391	4	0	396	22	0	20	0	42	602
Total	12	279	1	0	292	14	1	9	0	24	3	838	10	0	851	30	0	48	0	78	1245
07:00 AM	6	169	0	1	176	3	0	3	0	6	0	473	9	0	482	17	0	29	0	46	710
07:15 AM	9	179	0	0	188	5	0	2	0	7	0	458	11	0	469	9	0	41	0	50	714
07:30 AM	4	154	2	0	160	8	2	2	0	12	2	558	7	0	567	19	0	33	0	52	791
07:45 AM	5	157	0	0	162	4	0	5	0	9	1	385	11	0	397	11	1	27	0	39	607
Total	24	659	2	1	686	20	2	12	0	34	3	1874	38	0	1915	56	1	130	0	187	2822
08:00 AM	14	155	2	0	171	3	0	3	0	6	3	283	8	0	294	16	0	14	0	30	501
08:15 AM	7	133	1	0	141	3	0	4	0	7	2	283	9	0	294	15	0	19	0	34	476
Grand Total	57	1226	6	1	1290	40	3	28	0	71	11	3278	65	0	3354	117	1	211	0	329	5044
Apprch %	4.4	95	0.5	0.1		56.3	4.2	39.4	0		0.3	97.7	1.9	0		35.6	0.3	64.1	0		
Total %	1.1	24.3	0.1	0	25.6	0.8	0.1	0.6	0	1.4	0.2	65	1.3	0	66.5	2.3	0	4.2	0	6.5	

	Carrollton Blvd Southbound				Kings Crossing Westbound				Carrollton Blvd Northbound				Eagle Harbor Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	6	169	0	175	3	0	3	6	0	473	9	482	17	0	29	46	709
07:15 AM	**9**	**179**	0	**188**	5	0	2	7	0	458	**11**	469	9	0	**41**	50	714
07:30 AM	4	154	**2**	160	**8**	**2**	2	**12**	**2**	**558**	7	**567**	**19**	0	33	**52**	**791**
07:45 AM	5	157	0	162	4	0	**5**	9	1	385	11	397	11	**1**	27	39	607
Total Volume	24	659	2	685	20	2	12	34	3	1874	38	1915	56	1	130	187	2821
% App. Total	3.5	96.2	0.3		58.8	5.9	35.3		0.2	97.9	2		29.9	0.5	69.5		
PHF	.667	.920	.250	.911	.625	.250	.600	.708	.375	.840	.864	.844	.737	.250	.793	.899	.892

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Groups Printed- Car

	Carrollton Blvd Southbound					Kings Crossing Westbound					Carrollton Blvd Northbound					Eagle Harbor Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	32	485	2	0	519	2	2	2	0	6	10	205	8	0	223	12	1	8	0	21	769
04:15 PM	40	494	4	0	538	0	1	4	0	5	3	234	7	0	244	10	2	15	0	27	814
04:30 PM	36	487	6	0	529	1	1	2	0	4	2	231	12	0	245	9	0	10	0	19	797
04:45 PM	43	500	7	0	550	1	0	5	0	6	4	235	10	0	249	13	1	11	0	25	830
Total	151	1966	19	0	2136	4	4	13	0	21	19	905	37	0	961	44	4	44	0	92	3210
05:00 PM	27	432	3	0	462	4	1	2	0	7	2	234	12	0	248	13	2	19	0	34	751
05:15 PM	34	429	4	0	467	5	2	1	0	8	2	233	24	0	259	8	0	13	0	21	755
05:30 PM	47	442	6	0	495	1	2	4	0	7	6	235	32	0	273	13	1	18	0	32	807
05:45 PM	34	344	6	0	384	1	2	1	0	4	7	189	35	0	231	13	4	8	0	25	644
Total	142	1647	19	0	1808	11	7	8	0	26	17	891	103	0	1011	47	7	58	0	112	2957
Grand Total	293	3613	38	0	3944	15	11	21	0	47	36	1796	140	0	1972	91	11	102	0	204	6167
Apprch %	7.4	91.6	1	0		31.9	23.4	44.7	0		1.8	91.1	7.1	0		44.6	5.4	50	0		
Total %	4.8	58.6	0.6	0	64	0.2	0.2	0.3	0	0.8	0.6	29.1	2.3	0	32	1.5	0.2	1.7	0	3.3	

	Carrollton Blvd Southbound				Kings Crossing Westbound				Carrollton Blvd Northbound				Eagle Harbor Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	32	485	2	519	**2**	**2**	2	**6**	**10**	205	8	223	12	1	8	21	769
04:15 PM	40	494	4	538	0	1	4	5	3	234	7	244	10	**2**	**15**	**27**	814
04:30 PM	36	487	6	529	1	1	2	4	2	231	**12**	245	9	0	10	19	797
04:45 PM	**43**	**500**	**7**	**550**	1	0	**5**	6	4	**235**	10	**249**	**13**	1	11	25	**830**
Total Volume	151	1966	19	2136	4	4	13	21	19	905	37	961	44	4	44	92	3210
% App. Total	7.1	92	0.9		19	19	61.9		2	94.2	3.9		47.8	4.3	47.8		
PHF	.878	.983	.679	.971	.500	.500	.650	.875	.475	.963	.771	.965	.846	.500	.733	.852	.967

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Groups Printed- Truck

	Carrollton Blvd Southbound					Kings Crossing Westbound					Carrollton Blvd Northbound					Eagle Harbor Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	5	0	0	5	0	0	0	0	0	0	9	2	0	11	0	0	0	0	0	16
04:15 PM	1	9	0	0	10	2	0	0	0	2	2	7	0	0	9	2	0	0	0	2	23
04:30 PM	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	2	0	0	0	2	12
04:45 PM	0	6	0	0	6	0	0	0	0	0	1	6	0	0	7	0	0	0	0	0	13
Total	1	25	0	0	26	2	0	0	0	2	3	27	2	0	32	4	0	0	0	4	64
05:00 PM	0	3	0	0	3	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	7
05:15 PM	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8
05:30 PM	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
05:45 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
Total	0	20	0	0	20	1	0	0	0	1	0	10	0	0	10	0	0	0	0	0	31
Grand Total	1	45	0	0	46	3	0	0	0	3	3	37	2	0	42	4	0	0	0	4	95
Apprch %	2.2	97.8	0	0		100	0	0	0		7.1	88.1	4.8	0		100	0	0	0		
Total %	1.1	47.4	0	0	48.4	3.2	0	0	0	3.2	3.2	38.9	2.1	0	44.2	4.2	0	0	0	4.2	

	Carrollton Blvd Southbound				Kings Crossing Westbound				Carrollton Blvd Northbound				Eagle Harbor Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	5	0	5	0	0	0	0	0	**9**	**2**	**11**	0	0	0	0	16
04:15 PM	**1**	**9**	0	**10**	**2**	0	0	**2**	**2**	7	0	9	**2**	0	0	**2**	**23**
04:30 PM	0	5	0	5	0	0	0	0	0	5	0	5	2	0	0	2	12
04:45 PM	0	6	0	6	0	0	0	0	1	6	0	7	0	0	0	0	13
Total Volume	1	25	0	26	2	0	0	2	3	27	2	32	4	0	0	4	64
% App. Total	3.8	96.2	0		100	0	0		9.4	84.4	6.2		100	0	0		
PHF	.250	.694	.000	.650	.250	.000	.000	.250	.375	.750	.250	.727	.500	.000	.000	.500	.696

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Groups Printed- Combined

	Carrollton Blvd Southbound					Kings Crossing Westbound					Carrollton Blvd Northbound					Eagle Harbor Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	32	490	2	0	524	2	2	2	0	6	10	214	10	0	234	12	1	8	0	21	785
04:15 PM	41	503	4	0	548	2	1	4	0	7	5	241	7	0	253	12	2	15	0	29	837
04:30 PM	36	492	6	0	534	1	1	2	0	4	2	236	12	0	250	11	0	10	0	21	809
04:45 PM	43	506	7	0	556	1	0	5	0	6	5	241	10	0	256	13	1	11	0	25	843
Total	152	1991	19	0	2162	6	4	13	0	23	22	932	39	0	993	48	4	44	0	96	3274
05:00 PM	27	435	3	0	465	5	1	2	0	8	2	237	12	0	251	13	2	19	0	34	758
05:15 PM	34	432	4	0	470	5	2	1	0	8	2	238	24	0	264	8	0	13	0	21	763
05:30 PM	47	453	6	0	506	1	2	4	0	7	6	235	32	0	273	13	1	18	0	32	818
05:45 PM	34	347	6	0	387	1	2	1	0	4	7	191	35	0	233	13	4	8	0	25	649
Total	142	1667	19	0	1828	12	7	8	0	27	17	901	103	0	1021	47	7	58	0	112	2988
Grand Total	294	3658	38	0	3990	18	11	21	0	50	39	1833	142	0	2014	95	11	102	0	208	6262
Apprch %	7.4	91.7	1	0		36	22	42	0		1.9	91	7.1	0		45.7	5.3	49	0		
Total %	4.7	58.4	0.6	0	63.7	0.3	0.2	0.3	0	0.8	0.6	29.3	2.3	0	32.2	1.5	0.2	1.6	0	3.3	

	Carrollton Blvd Southbound				Kings Crossing Westbound				Carrollton Blvd Northbound				Eagle Harbor Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	32	490	2	524	**2**	**2**	2	6	**10**	214	10	234	12	1	8	21	785
04:15 PM	41	503	4	548	2	1	4	**7**	5	**241**	7	253	12	**2**	**15**	**29**	837
04:30 PM	36	492	6	534	1	1	2	4	2	236	**12**	250	11	0	10	21	809
04:45 PM	**43**	**506**	**7**	**556**	1	0	**5**	6	5	241	10	**256**	**13**	1	11	25	**843**
Total Volume	152	1991	19	2162	6	4	13	23	22	932	39	993	48	4	44	96	3274
% App. Total	7	92.1	0.9		26.1	17.4	56.5		2.2	93.9	3.9		50	4.2	45.8		
PHF	.884	.984	.679	.972	.750	.500	.650	.821	.550	.967	.813	.970	.923	.500	.733	.828	.971

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Groups Printed- Car

	Carrolltown Blvd Southbound					Smiths Neck Rd Westbound					Carrolltown Blvd Northbound					Smiths Neck Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30 AM	30	106	5	0	141	5	1	9	0	15	15	235	5	0	255	25	18	104	0	147	558
06:45 AM	29	123	9	0	161	15	1	7	0	23	10	236	4	0	250	31	20	134	0	185	619
Total	59	229	14	0	302	20	2	16	0	38	25	471	9	0	505	56	38	238	0	332	1177
07:00 AM	45	129	8	0	182	8	1	10	0	19	17	257	11	0	285	27	11	173	0	211	697
07:15 AM	49	131	8	0	188	5	1	13	0	19	12	279	13	0	304	30	8	156	0	194	705
07:30 AM	42	130	3	0	175	5	4	5	0	14	25	347	10	0	382	40	14	165	0	219	790
07:45 AM	35	122	9	0	166	9	2	13	0	24	16	235	12	0	263	29	16	113	0	158	611
Total	171	512	28	0	711	27	8	41	0	76	70	1118	46	0	1234	126	49	607	0	782	2803
08:00 AM	26	116	12	0	154	5	8	15	0	28	22	158	23	0	203	29	6	104	0	139	524
08:15 AM	28	116	8	0	152	3	7	14	0	24	15	187	15	0	217	39	15	88	0	142	535
Grand Total	284	973	62	0	1319	55	25	86	0	166	132	1934	93	0	2159	250	108	1037	0	1395	5039
Apprch %	21.5	73.8	4.7	0		33.1	15.1	51.8	0		6.1	89.6	4.3	0		17.9	7.7	74.3	0		
Total %	5.6	19.3	1.2	0	26.2	1.1	0.5	1.7	0	3.3	2.6	38.4	1.8	0	42.8	5	2.1	20.6	0	27.7	

	Carrolltown Blvd Southbound				Smiths Neck Rd Westbound				Carrolltown Blvd Northbound				Smiths Neck Rd Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	29	123	**9**	161	**15**	1	7	**23**	10	236	4	250	31	**20**	134	185	619
07:00 AM	45	129	8	182	8	1	10	19	17	257	11	285	27	11	**173**	211	697
07:15 AM	**49**	**131**	8	**188**	5	1	**13**	19	12	279	**13**	304	30	8	156	194	705
07:30 AM	42	130	3	175	5	**4**	5	14	**25**	**347**	10	**382**	**40**	14	165	**219**	**790**
Total Volume	165	513	28	706	33	7	35	75	64	1119	38	1221	128	53	628	809	2811
% App. Total	23.4	72.7	4		44	9.3	46.7		5.2	91.6	3.1		15.8	6.6	77.6		
PHF	.842	.979	.778	.939	.550	.438	.673	.815	.640	.806	.731	.799	.800	.663	.908	.924	.890

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Groups Printed- Truck

	Carrolltown Blvd Southbound					Smiths Neck Rd Westbound					Carrolltown Blvd Northbound					Smiths Neck Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30 AM	1	8	0	0	9	0	0	0	0	0	0	6	0	0	6	1	0	1	0	2	17
06:45 AM	0	14	0	0	14	0	0	1	0	1	0	8	0	0	8	0	0	0	0	0	23
Total	1	22	0	0	23	0	0	1	0	1	0	14	0	0	14	1	0	1	0	2	40
07:00 AM	0	8	1	0	9	0	0	0	0	0	0	4	2	0	6	0	0	1	0	1	16
07:15 AM	0	5	0	0	5	0	0	1	0	1	3	7	2	0	12	0	0	2	0	2	20
07:30 AM	0	4	0	0	4	0	0	0	0	0	0	9	1	0	10	0	1	1	0	2	16
07:45 AM	0	7	0	0	7	1	0	1	0	2	0	7	1	0	8	0	0	1	0	1	18
Total	0	24	1	0	25	1	0	2	0	3	3	27	6	0	36	0	1	5	0	6	70
08:00 AM	2	11	1	0	14	0	0	0	0	0	1	11	0	0	12	2	0	0	0	2	28
08:15 AM	2	10	0	0	12	1	0	0	0	1	1	14	1	0	16	1	0	0	0	1	30
Grand Total	5	67	2	0	74	2	0	3	0	5	5	66	7	0	78	4	1	6	0	11	168
Apprch %	6.8	90.5	2.7	0		40	0	60	0		6.4	84.6	9	0		36.4	9.1	54.5	0		
Total %	3	39.9	1.2	0	44	1.2	0	1.8	0	3	3	39.3	4.2	0	46.4	2.4	0.6	3.6	0	6.5	

	Carrolltown Blvd Southbound				Smiths Neck Rd Westbound				Carrolltown Blvd Northbound				Smiths Neck Rd Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	4	0	4	0	0	0	0	0	9	**1**	10	0	**1**	**1**	**2**	16
07:45 AM	0	7	0	7	**1**	0	**1**	**2**	0	7	1	8	0	0	1	1	18
08:00 AM	**2**	**11**	**1**	**14**	0	0	0	0	**1**	11	0	12	**2**	0	0	2	28
08:15 AM	2	10	0	12	1	0	0	1	1	**14**	1	**16**	1	0	0	1	**30**
Total Volume	4	32	1	37	2	0	1	3	2	41	3	46	3	1	2	6	92
% App. Total	10.8	86.5	2.7		66.7	0	33.3		4.3	89.1	6.5		50	16.7	33.3		
PHF	.500	.727	.250	.661	.500	.000	.250	.375	.500	.732	.750	.719	.375	.250	.500	.750	.767

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	Carrolltown Blvd Southbound					Smiths Neck Rd Westbound					Carrolltown Blvd Northbound					Smiths Neck Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30 AM	31	114	5	0	150	5	1	9	0	15	15	241	5	0	261	26	18	105	0	149	575
06:45 AM	29	137	9	0	175	15	1	8	0	24	10	244	4	0	258	31	20	134	0	185	642
Total	60	251	14	0	325	20	2	17	0	39	25	485	9	0	519	57	38	239	0	334	1217
07:00 AM	45	137	9	0	191	8	1	10	0	19	17	261	13	0	291	27	11	174	0	212	713
07:15 AM	49	136	8	0	193	5	1	14	0	20	15	286	15	0	316	30	8	158	0	196	725
07:30 AM	42	134	3	0	179	5	4	5	0	14	25	356	11	0	392	40	15	166	0	221	806
07:45 AM	35	129	9	0	173	10	2	14	0	26	16	242	13	0	271	29	16	114	0	159	629
Total	171	536	29	0	736	28	8	43	0	79	73	1145	52	0	1270	126	50	612	0	788	2873
08:00 AM	28	127	13	0	168	5	8	15	0	28	23	169	23	0	215	31	6	104	0	141	552
08:15 AM	30	126	8	0	164	4	7	14	0	25	16	201	16	0	233	40	15	88	0	143	565
Grand Total	289	1040	64	0	1393	57	25	89	0	171	137	2000	100	0	2237	254	109	1043	0	1406	5207
Apprch %	20.7	74.7	4.6	0		33.3	14.6	52	0		6.1	89.4	4.5	0		18.1	7.8	74.2	0		
Total %	5.6	20	1.2	0	26.8	1.1	0.5	1.7	0	3.3	2.6	38.4	1.9	0	43	4.9	2.1	20	0	27	

	Carrolltown Blvd Southbound				Smiths Neck Rd Westbound				Carrolltown Blvd Northbound				Smiths Neck Rd Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	29	**137**	**9**	175	**15**	1	8	**24**	10	244	4	258	31	**20**	134	185	642
07:00 AM	45	137	9	191	8	1	10	19	17	261	13	291	27	11	**174**	212	713
07:15 AM	**49**	136	8	**193**	5	1	**14**	20	15	286	**15**	316	30	8	158	196	725
07:30 AM	42	134	3	179	5	**4**	5	14	**25**	**356**	11	**392**	**40**	15	166	**221**	**806**
Total Volume	165	544	29	738	33	7	37	77	67	1147	43	1257	128	54	632	814	2886
% App. Total	22.4	73.7	3.9		42.9	9.1	48.1		5.3	91.2	3.4		15.7	6.6	77.6		
PHF	.842	.993	.806	.956	.550	.438	.661	.802	.670	.805	.717	.802	.800	.675	.908	.921	.895

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Groups Printed- Car

	Carrolltown Blvd Southbound					Smiths Neck Rd Westbound					Carrolltown Blvd Northbound					Smiths Neck Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	100	386	24	0	510	1	9	17	0	27	9	140	52	0	201	22	7	63	0	92	830
04:15 PM	128	363	24	0	515	4	15	21	0	40	18	138	45	0	201	29	5	87	0	121	877
04:30 PM	117	367	21	0	505	5	17	17	0	39	17	147	49	0	213	13	10	80	0	103	860
04:45 PM	137	366	14	0	517	5	17	17	0	39	9	157	53	0	219	14	4	79	0	97	872
Total	482	1482	83	0	2047	15	58	72	0	145	53	582	199	0	834	78	26	309	0	413	3439
05:00 PM	110	315	12	0	437	8	7	20	0	35	9	166	59	0	234	24	11	72	0	107	813
05:15 PM	123	303	17	0	443	7	21	15	0	43	24	161	65	0	250	21	10	84	0	115	851
05:30 PM	134	337	22	0	493	3	31	20	0	54	33	179	63	0	275	32	12	80	0	124	946
05:45 PM	101	248	16	0	365	6	18	19	0	43	22	166	75	0	263	24	9	51	0	84	755
Total	468	1203	67	0	1738	24	77	74	0	175	88	672	262	0	1022	101	42	287	0	430	3365
Grand Total	950	2685	150	0	3785	39	135	146	0	320	141	1254	461	0	1856	179	68	596	0	843	6804
Apprch %	25.1	70.9	4	0		12.2	42.2	45.6	0		7.6	67.6	24.8	0		21.2	8.1	70.7	0		
Total %	14	39.5	2.2	0	55.6	0.6	2	2.1	0	4.7	2.1	18.4	6.8	0	27.3	2.6	1	8.8	0	12.4	

	Carrolltown Blvd Southbound				Smiths Neck Rd Westbound				Carrolltown Blvd Northbound				Smiths Neck Rd Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**137**	**366**	14	**517**	5	17	17	39	9	157	53	219	14	4	79	97	872
05:00 PM	110	315	12	437	**8**	7	**20**	35	9	166	59	234	24	11	72	107	813
05:15 PM	123	303	17	443	7	21	15	43	24	161	**65**	250	21	10	**84**	115	851
05:30 PM	134	337	**22**	493	3	**31**	20	**54**	**33**	**179**	63	**275**	**32**	**12**	80	**124**	**946**
Total Volume	504	1321	65	1890	23	76	72	171	75	663	240	978	91	37	315	443	3482
% App. Total	26.7	69.9	3.4		13.5	44.4	42.1		7.7	67.8	24.5		20.5	8.4	71.1		
PHF	.920	.902	.739	.914	.719	.613	.900	.792	.568	.926	.923	.889	.711	.771	.938	.893	.920

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Groups Printed- Truck

	Carrolltown Blvd Southbound					Smiths Neck Rd Westbound					Carrolltown Blvd Northbound					Smiths Neck Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	3	0	0	3	1	0	0	0	1	0	7	0	0	7	0	0	1	0	1	12
04:15 PM	3	8	0	0	11	0	0	0	0	0	0	9	0	0	9	1	0	0	0	1	21
04:30 PM	0	8	0	0	8	0	0	0	0	0	1	6	2	0	9	0	0	0	0	0	17
04:45 PM	0	5	1	0	6	0	0	0	0	0	0	6	1	0	7	1	0	0	0	1	14
Total	3	24	1	0	28	1	0	0	0	1	1	28	3	0	32	2	0	1	0	3	64
05:00 PM	1	3	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7
05:15 PM	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8
05:30 PM	3	7	0	0	10	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	11
05:45 PM	1	3	0	0	4	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	7
Total	5	16	0	0	21	0	0	0	0	0	0	11	0	0	11	1	0	0	0	1	33
Grand Total	8	40	1	0	49	1	0	0	0	1	1	39	3	0	43	3	0	1	0	4	97
Apprch %	16.3	81.6	2	0		100	0	0	0		2.3	90.7	7	0		75	0	25	0		
Total %	8.2	41.2	1	0	50.5	1	0	0	0	1	1	40.2	3.1	0	44.3	3.1	0	1	0	4.1	

	Carrolltown Blvd Southbound				Smiths Neck Rd Westbound				Carrolltown Blvd Northbound				Smiths Neck Rd Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	3	0	3	**1**	0	0	**1**	0	7	0	7	0	0	**1**	**1**	12
04:15 PM	**3**	**8**	0	**11**	0	0	0	0	0	**9**	0	**9**	**1**	0	0	1	**21**
04:30 PM	0	8	0	8	0	0	0	0	**1**	6	**2**	9	0	0	0	0	17
04:45 PM	0	5	**1**	6	0	0	0	0	0	6	1	7	1	0	0	1	14
Total Volume	3	24	1	28	1	0	0	1	1	28	3	32	2	0	1	3	64
% App. Total	10.7	85.7	3.6		100	0	0		3.1	87.5	9.4		66.7	0	33.3		
PHF	.250	.750	.250	.636	.250	.000	.000	.250	.250	.778	.375	.889	.500	.000	.250	.750	.762

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Groups Printed- Combined

	Carrolltown Blvd Southbound					Smiths Neck Rd Westbound					Carrolltown Blvd Northbound					Smiths Neck Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	100	389	24	0	513	2	9	17	0	28	9	147	52	0	208	22	7	64	0	93	842
04:15 PM	131	371	24	0	526	4	15	21	0	40	18	147	45	0	210	30	5	87	0	122	898
04:30 PM	117	375	21	0	513	5	17	17	0	39	18	153	51	0	222	13	10	80	0	103	877
04:45 PM	137	371	15	0	523	5	17	17	0	39	9	163	54	0	226	15	4	79	0	98	886
Total	485	1506	84	0	2075	16	58	72	0	146	54	610	202	0	866	80	26	310	0	416	3503
05:00 PM	111	318	12	0	441	8	7	20	0	35	9	169	59	0	237	24	11	72	0	107	820
05:15 PM	123	306	17	0	446	7	21	15	0	43	24	166	65	0	255	21	10	84	0	115	859
05:30 PM	137	344	22	0	503	3	31	20	0	54	33	180	63	0	276	32	12	80	0	124	957
05:45 PM	102	251	16	0	369	6	18	19	0	43	22	168	75	0	265	25	9	51	0	85	762
Total	473	1219	67	0	1759	24	77	74	0	175	88	683	262	0	1033	102	42	287	0	431	3398
Grand Total	958	2725	151	0	3834	40	135	146	0	321	142	1293	464	0	1899	182	68	597	0	847	6901
Apprch %	25	71.1	3.9	0		12.5	42.1	45.5	0		7.5	68.1	24.4	0		21.5	8	70.5	0		
Total %	13.9	39.5	2.2	0	55.6	0.6	2	2.1	0	4.7	2.1	18.7	6.7	0	27.5	2.6	1	8.7	0	12.3	

	Carrolltown Blvd Southbound				Smiths Neck Rd Westbound				Carrolltown Blvd Northbound				Smiths Neck Rd Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**137**	**371**	15	**523**	5	17	17	39	9	163	54	226	15	4	79	98	886
05:00 PM	111	318	12	441	**8**	7	**20**	35	9	169	59	237	24	11	72	107	820
05:15 PM	123	306	17	446	7	21	15	43	24	166	**65**	255	21	10	**84**	115	859
05:30 PM	137	344	**22**	503	3	**31**	20	**54**	**33**	**180**	63	**276**	**32**	**12**	80	**124**	**957**
Total Volume	508	1339	66	1913	23	76	72	171	75	678	241	994	92	37	315	444	3522
% App. Total	26.6	70	3.5		13.5	44.4	42.1		7.5	68.2	24.2		20.7	8.3	70.9		
PHF	.927	.902	.750	.914	.719	.613	.900	.792	.568	.942	.927	.900	.719	.771	.938	.895	.920

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Groups Printed- Car

	Carrollton Blvd Southbound					Carrollton Blvd Northbound				Brewers Neck Blvd Eastbound				
Start Time	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
06:30 AM	84	65	0	0	149	87	64	0	151	118	173	0	291	591
06:45 AM	92	74	0	0	166	74	70	0	144	100	194	0	294	604
Total	176	139	0	0	315	161	134	0	295	218	367	0	585	1195
07:00 AM	128	64	0	0	192	125	94	0	219	93	189	0	282	693
07:15 AM	129	76	0	0	205	102	66	0	168	123	215	0	338	711
07:30 AM	97	79	0	0	176	126	85	0	211	122	231	0	353	740
07:45 AM	102	82	0	0	184	88	94	0	182	100	146	0	246	612
Total	456	301	0	0	757	441	339	0	780	438	781	0	1219	2756
08:00 AM	92	73	0	0	165	84	90	0	174	82	142	0	224	563
08:15 AM	96	89	0	0	185	79	81	0	160	96	130	0	226	571
Grand Total	820	602	0	0	1422	765	644	0	1409	834	1420	0	2254	5085
Apprch %	57.7	42.3	0	0		54.3	45.7	0		37	63	0		
Total %	16.1	11.8	0	0	28	15	12.7	0	27.7	16.4	27.9	0	44.3	

	Carrollton Blvd Southbound				Carrollton Blvd Northbound			Brewers Neck Blvd Eastbound			
Start Time	Right	Thru	Left	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:00 AM											
07:00 AM	128	64	0	192	125	**94**	**219**	93	189	282	693
07:15 AM	**129**	76	0	**205**	102	66	168	**123**	215	338	711
07:30 AM	97	79	0	176	**126**	85	211	122	**231**	**353**	**740**
07:45 AM	102	**82**	0	184	88	94	182	100	146	246	612
Total Volume	456	301	0	757	441	339	780	438	781	1219	2756
% App. Total	60.2	39.8	0		56.5	43.5		35.9	64.1		
PHF	.884	.918	.000	.923	.875	.902	.890	.890	.845	.863	.931

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Groups Printed- Truck

	Carrollton Blvd Southbound					Carrollton Blvd Northbound				Brewers Neck Blvd Eastbound				
Start Time	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
06:30 AM	6	3	0	0	9	2	4	0	6	4	6	0	10	25
06:45 AM	15	2	0	0	17	1	6	0	7	5	7	0	12	36
Total	21	5	0	0	26	3	10	0	13	9	13	0	22	61
07:00 AM	6	2	0	0	8	3	5	0	8	5	4	0	9	25
07:15 AM	3	3	0	0	6	1	9	0	10	2	11	0	13	29
07:30 AM	4	1	0	0	5	2	7	0	9	8	10	0	18	32
07:45 AM	4	4	0	0	8	2	8	0	10	11	6	0	17	35
Total	17	10	0	0	27	8	29	0	37	26	31	0	57	121
08:00 AM	12	3	0	0	15	3	6	0	9	5	12	0	17	41
08:15 AM	10	3	0	0	13	4	7	0	11	8	12	0	20	44
Grand Total	60	21	0	0	81	18	52	0	70	48	68	0	116	267
Apprch %	74.1	25.9	0	0		25.7	74.3	0		41.4	58.6	0		
Total %	22.5	7.9	0	0	30.3	6.7	19.5	0	26.2	18	25.5	0	43.4	

	Carrollton Blvd Southbound				Carrollton Blvd Northbound			Brewers Neck Blvd Eastbound			
Start Time	Right	Thru	Left	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:30 AM											
07:30 AM	4	1	0	5	2	7	9	8	10	18	32
07:45 AM	4	**4**	0	8	2	**8**	10	**11**	6	17	35
08:00 AM	**12**	3	0	**15**	3	6	9	5	**12**	17	41
08:15 AM	10	3	0	13	**4**	7	**11**	8	12	**20**	**44**
Total Volume	30	11	0	41	11	28	39	32	40	72	152
% App. Total	73.2	26.8	0		28.2	71.8		44.4	55.6		
PHF	.625	.688	.000	.683	.688	.875	.886	.727	.833	.900	.864

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Groups Printed- Combined

	Carrollton Blvd Southbound					Carrollton Blvd Northbound				Brewers Neck Blvd Eastbound				
Start Time	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
06:30 AM	90	68	0	0	158	89	68	0	157	122	179	0	301	616
06:45 AM	107	76	0	0	183	75	76	0	151	105	201	0	306	640
Total	197	144	0	0	341	164	144	0	308	227	380	0	607	1256
07:00 AM	134	66	0	0	200	128	99	0	227	98	193	0	291	718
07:15 AM	132	79	0	0	211	103	75	0	178	125	226	0	351	740
07:30 AM	101	80	0	0	181	128	92	0	220	130	241	0	371	772
07:45 AM	106	86	0	0	192	90	102	0	192	111	152	0	263	647
Total	473	311	0	0	784	449	368	0	817	464	812	0	1276	2877
08:00 AM	104	76	0	0	180	87	96	0	183	87	154	0	241	604
08:15 AM	106	92	0	0	198	83	88	0	171	104	142	0	246	615
Grand Total	880	623	0	0	1503	783	696	0	1479	882	1488	0	2370	5352
Apprch %	58.5	41.5	0	0		52.9	47.1	0		37.2	62.8	0		
Total %	16.4	11.6	0	0	28.1	14.6	13	0	27.6	16.5	27.8	0	44.3	

	Carrollton Blvd Southbound				Carrollton Blvd Northbound			Brewers Neck Blvd Eastbound			
Start Time	Right	Thru	Left	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:00 AM											
07:00 AM	**134**	66	0	200	**128**	99	**227**	98	193	291	718
07:15 AM	132	79	0	**211**	103	75	178	125	226	351	740
07:30 AM	101	80	0	181	128	92	220	**130**	**241**	**371**	**772**
07:45 AM	106	**86**	0	192	90	**102**	192	111	152	263	647
Total Volume	473	311	0	784	449	368	817	464	812	1276	2877
% App. Total	60.3	39.7	0		55	45		36.4	63.6		
PHF	.882	.904	.000	.929	.877	.902	.900	.892	.842	.860	.932

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File Name : 4-Carrollton Blvd. & Brewers Neck Blvd._US258 PM
Site Code :
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Groups Printed- Car

	Carrollton Blvd Southbound					Carrollton Blvd Northbound				Brewers Neck Blvd Eastbound				
Start Time	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
04:00 PM	274	133	0	0	407	94	114	0	208	99	126	0	225	840
04:15 PM	261	152	0	0	413	92	109	0	201	104	124	0	228	842
04:30 PM	253	146	0	0	399	114	144	0	258	133	122	0	255	912
04:45 PM	281	128	0	0	409	86	115	0	201	108	149	1	258	868
Total	1069	559	0	0	1628	386	482	0	868	444	521	1	966	3462
05:00 PM	248	129	0	0	377	121	113	0	234	107	137	0	244	855
05:15 PM	210	125	1	0	336	132	115	0	247	154	164	0	318	901
05:30 PM	253	137	0	0	390	122	109	0	231	151	171	0	322	943
05:45 PM	197	99	0	0	296	118	117	0	235	99	152	0	251	782
Total	908	490	1	0	1399	493	454	0	947	511	624	0	1135	3481
Grand Total	1977	1049	1	0	3027	879	936	0	1815	955	1145	1	2101	6943
Apprch %	65.3	34.7	0	0		48.4	51.6	0		45.5	54.5	0		
Total %	28.5	15.1	0	0	43.6	12.7	13.5	0	26.1	13.8	16.5	0	30.3	

	Carrollton Blvd Southbound				Carrollton Blvd Northbound			Brewers Neck Blvd Eastbound			
Start Time	Right	Thru	Left	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:45 PM											
04:45 PM	**281**	128	0	**409**	86	**115**	201	108	149	257	867
05:00 PM	248	129	0	377	121	113	234	107	137	244	855
05:15 PM	210	125	**1**	336	**132**	115	**247**	**154**	164	318	901
05:30 PM	253	**137**	0	390	122	109	231	151	**171**	**322**	**943**
Total Volume	992	519	1	1512	461	452	913	520	621	1141	3566
% App. Total	65.6	34.3	0.1		50.5	49.5		45.6	54.4		
PHF	.883	.947	.250	.924	.873	.983	.924	.844	.908	.886	.945

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File Name : 4-Carrollton Blvd. & Brewers Neck Blvd._US258 PM
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Groups Printed- Truck

	Carrollton Blvd Southbound					Carrollton Blvd Northbound				Brewers Neck Blvd Eastbound				
Start Time	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
04:00 PM	4	2	0	0	6	2	4	0	6	7	8	0	15	27
04:15 PM	6	3	0	0	9	3	6	0	9	10	6	0	16	34
04:30 PM	9	2	0	0	11	5	7	0	12	4	4	0	8	31
04:45 PM	2	4	0	0	6	2	4	0	6	6	6	0	12	24
Total	21	11	0	0	32	12	21	0	33	27	24	0	51	116
05:00 PM	3	0	0	0	3	2	4	0	6	5	1	0	6	15
05:15 PM	3	0	0	0	3	2	0	0	2	1	4	0	5	10
05:30 PM	6	2	0	0	8	0	0	0	0	4	0	0	4	12
05:45 PM	2	2	0	0	4	1	2	0	3	1	1	0	2	9
Total	14	4	0	0	18	5	6	0	11	11	6	0	17	46
Grand Total	35	15	0	0	50	17	27	0	44	38	30	0	68	162
Apprch %	70	30	0	0		38.6	61.4	0		55.9	44.1	0		
Total %	21.6	9.3	0	0	30.9	10.5	16.7	0	27.2	23.5	18.5	0	42	

	Carrollton Blvd Southbound				Carrollton Blvd Northbound			Brewers Neck Blvd Eastbound			
Start Time	Right	Thru	Left	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:00 PM											
04:00 PM	4	2	0	6	2	4	6	7	**8**	15	27
04:15 PM	6	3	0	9	3	6	9	**10**	6	**16**	**34**
04:30 PM	**9**	2	0	**11**	**5**	**7**	**12**	4	4	8	31
04:45 PM	2	**4**	0	6	2	4	6	6	6	12	24
Total Volume	21	11	0	32	12	21	33	27	24	51	116
% App. Total	65.6	34.4	0		36.4	63.6		52.9	47.1		
PHF	.583	.688	.000	.727	.600	.750	.688	.675	.750	.797	.853

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File Name : 4-Carrollton Blvd. & Brewers Neck Blvd._US258 PM
Site Code :
Start Date : 10/5/2017

Groups Printed- Combined

	Carrollton Blvd Southbound					Carrollton Blvd Northbound				Brewers Neck Blvd Eastbound				
Start Time	Right	Thru	Left	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
04:00 PM	278	135	0	0	413	96	118	0	214	106	134	0	240	867
04:15 PM	267	155	0	0	422	95	115	0	210	114	130	0	244	876
04:30 PM	262	148	0	0	410	119	151	0	270	137	126	0	263	943
04:45 PM	283	132	0	0	415	88	119	0	207	114	155	1	270	892
Total	1090	570	0	0	1660	398	503	0	901	471	545	1	1017	3578
05:00 PM	251	129	0	0	380	123	117	0	240	112	138	0	250	870
05:15 PM	213	125	1	0	339	134	115	0	249	155	168	0	323	911
05:30 PM	259	139	0	0	398	122	109	0	231	155	171	0	326	955
05:45 PM	199	101	0	0	300	119	119	0	238	100	153	0	253	791
Total	922	494	1	0	1417	498	460	0	958	522	630	0	1152	3527
Grand Total	2012	1064	1	0	3077	896	963	0	1859	993	1175	1	2169	7105
Apprch %	65.4	34.6	0	0		48.2	51.8	0		45.8	54.2	0		
Total %	28.3	15	0	0	43.3	12.6	13.6	0	26.2	14	16.5	0	30.5	

	Carrollton Blvd Southbound				Carrollton Blvd Northbound			Brewers Neck Blvd Eastbound			
Start Time	Right	Thru	Left	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:45 PM											
04:45 PM	**283**	132	0	**415**	88	**119**	207	114	155	269	891
05:00 PM	251	129	0	380	123	117	240	112	138	250	870
05:15 PM	213	125	**1**	339	**134**	115	**249**	**155**	168	323	911
05:30 PM	259	**139**	0	398	122	109	231	155	**171**	**326**	**955**
Total Volume	1006	525	1	1532	467	460	927	536	632	1168	3627
% App. Total	65.7	34.3	0.1		50.4	49.6		45.9	54.1		
PHF	.889	.944	.250	.923	.871	.966	.931	.865	.924	.896	.949

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Groups Printed- Car

	Carrollton Blvd Southbound					Driveway Westbound					Carrollton Blvd Northbound					Northgate Dr Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	2	161	0	0	163	0	0	0	0	0	0	307	5	0	312	12	0	10	0	22	497
07:15 AM	0	191	0	0	191	0	0	0	0	0	0	315	4	0	319	8	0	12	0	20	530
07:30 AM	4	172	0	0	176	0	0	0	0	0	0	355	5	0	360	2	0	13	0	15	551
07:45 AM	2	164	0	0	166	0	0	0	0	0	0	258	3	0	261	8	0	8	0	16	443
Total	8	688	0	0	696	0	0	0	0	0	0	1235	17	0	1252	30	0	43	0	73	2021
08:00 AM	0	164	0	0	164	0	0	0	0	0	0	221	1	0	222	11	0	6	0	17	403
08:15 AM	0	165	0	0	165	0	0	0	0	0	1	204	2	0	207	5	0	2	0	7	379
08:30 AM	1	175	0	0	176	0	0	0	0	0	0	225	4	0	229	7	0	5	0	12	417
08:45 AM	3	127	0	0	130	0	0	0	0	0	0	199	9	0	208	7	0	3	0	10	348
Total	4	631	0	0	635	0	0	0	0	0	1	849	16	0	866	30	0	16	0	46	1547
09:00 AM	0	86	0	0	86	0	0	0	0	0	0	157	6	0	163	2	0	4	0	6	255
09:15 AM	0	86	0	0	86	0	0	0	0	0	0	163	1	0	164	2	0	7	0	9	259
09:30 AM	3	166	0	0	169	0	0	0	0	0	1	162	5	0	168	2	0	3	0	5	342
09:45 AM	1	117	0	0	118	0	0	0	0	0	0	160	4	0	164	4	0	5	0	9	291
Total	4	455	0	0	459	0	0	0	0	0	1	642	16	0	659	10	0	19	0	29	1147
10:00 AM	2	119	0	0	121	0	0	0	0	0	0	139	3	0	142	5	0	1	0	6	269
10:15 AM	1	130	1	0	132	0	0	0	0	0	0	128	1	0	129	1	0	4	3	8	269
10:30 AM	3	121	1	0	125	1	0	0	1	2	0	150	5	0	155	1	0	0	3	4	286
10:45 AM	3	124	0	0	127	0	0	0	0	0	0	143	3	0	146	4	0	3	0	7	280
Total	9	494	2	0	505	1	0	0	1	2	0	560	12	0	572	11	0	8	6	25	1104
11:00 AM	1	140	0	0	141	0	0	0	0	0	0	118	4	0	122	1	0	1	0	2	265
11:15 AM	0	116	0	0	116	0	0	0	0	0	0	149	2	0	151	1	0	2	0	3	270
11:30 AM	3	128	0	0	131	0	0	0	0	0	0	141	9	0	150	1	0	5	0	6	287
11:45 AM	2	118	1	0	121	0	0	0	0	0	0	136	6	0	142	1	0	4	0	5	268
Total	6	502	1	0	509	0	0	0	0	0	0	544	21	0	565	4	0	12	0	16	1090
12:00 PM	3	150	0	0	153	1	0	0	0	1	0	153	5	0	158	1	0	3	0	4	316
12:15 PM	5	149	1	0	155	0	0	0	0	0	0	133	4	0	137	1	0	2	0	3	295
12:30 PM	2	162	0	0	164	0	0	0	0	0	0	118	5	0	123	3	0	5	0	8	295
12:45 PM	1	162	0	0	163	0	0	0	0	0	0	149	2	0	151	0	0	2	0	2	316
Total	11	623	1	0	635	1	0	0	0	1	0	553	16	0	569	5	0	12	0	17	1222
01:00 PM	4	155	0	0	159	0	0	0	0	0	0	148	1	0	149	3	0	2	0	5	313
01:15 PM	1	178	0	0	179	0	0	0	0	0	1	159	3	0	163	5	0	2	0	7	349
01:30 PM	1	149	1	0	151	1	0	1	0	2	0	139	7	0	146	3	0	1	0	4	303
01:45 PM	2	133	2	0	137	0	0	0	0	0	0	169	6	0	175	0	0	1	0	1	313
Total	8	615	3	0	626	1	0	1	0	2	1	615	17	0	633	11	0	6	0	17	1278
02:00 PM	3	148	0	0	151	0	0	0	0	0	0	157	9	0	166	3	0	1	0	4	321
02:15 PM	4	225	1	0	230	1	0	0	0	1	0	177	7	0	184	2	0	5	0	7	422
02:30 PM	3	200	0	0	203	0	0	0	0	0	0	151	2	0	153	6	0	2	0	8	364
02:45 PM	2	230	1	0	233	0	0	0	0	0	0	146	9	0	155	2	0	1	0	3	391
Total	12	803	2	0	817	1	0	0	0	1	0	631	27	0	658	13	0	9	0	22	1498
03:00 PM	6	239	1	0	246	0	0	0	0	0	0	182	14	0	196	3	0	1	0	4	446
03:15 PM	8	268	1	0	277	0	0	0	0	0	0	160	2	0	162	6	0	0	0	6	445
03:30 PM	8	335	0	0	343	0	0	0	0	0	0	190	6	0	196	6	0	1	0	7	546
03:45 PM	4	351	0	0	355	0	0	1	0	1	0	209	13	0	222	3	0	0	0	3	581
Total	26	1193	2	0	1221	0	0	1	0	1	0	741	35	0	776	18	0	2	0	20	2018
04:00 PM	5	416	1	0	422	0	0	0	0	0	0	200	19	0	219	1	0	0	0	1	642
04:15 PM	8	412	1	0	421	0	0	0	0	0	0	215	13	0	228	0	0	1	0	1	650
04:30 PM	4	403	0	0	407	0	0	0	0	0	0	225	16	0	241	6	0	2	0	8	656

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Groups Printed- Car

	Carrollton Blvd Southbound					Driveway Westbound					Carrollton Blvd Northbound					Northgate Dr Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:45 PM	4	390	1	0	395	0	0	0	0	0	0	209	12	0	221	1	0	2	0	3	619
Total	21	1621	3	0	1645	0	0	0	0	0	0	849	60	0	909	8	0	5	0	13	2567
05:00 PM	5	354	0	0	359	0	1	0	0	1	0	274	11	0	285	7	0	2	0	9	654
05:15 PM	8	329	1	0	338	1	0	0	0	1	1	262	27	0	290	2	0	1	0	3	632
05:30 PM	11	375	1	0	387	0	0	0	0	0	0	280	23	0	303	5	0	4	0	9	699
05:45 PM	12	280	0	0	292	0	0	0	0	0	0	239	19	0	258	5	0	5	0	10	560
Total	36	1338	2	0	1376	1	1	0	0	2	1	1055	80	0	1136	19	0	12	0	31	2545
06:00 PM	14	266	2	0	282	0	0	0	0	0	0	221	18	0	239	8	0	2	1	11	532
06:15 PM	9	259	0	0	268	0	0	0	0	0	0	172	11	0	183	0	0	2	0	2	453
06:30 PM	7	196	0	0	203	0	0	0	0	0	0	182	19	0	201	3	0	3	0	6	410
06:45 PM	3	203	0	0	206	0	0	0	0	0	0	135	16	0	151	3	0	2	0	5	362
Total	33	924	2	0	959	0	0	0	0	0	0	710	64	0	774	14	0	9	1	24	1757
Grand Total	178	9887	18	0	10083	5	1	2	1	9	4	8984	381	0	9369	173	0	153	7	333	19794
Apprch %	1.8	98.1	0.2	0		55.6	11.1	22.2	11.1		0	95.9	4.1	0		52	0	45.9	2.1		
Total %	0.9	49.9	0.1	0	50.9	0	0	0	0	0	0	45.4	1.9	0	47.3	0.9	0	0.8	0	1.7	

	Carrollton Blvd Southbound				Driveway Westbound				Carrollton Blvd Northbound				Northgate Dr Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	4	**390**	**1**	**395**	0	0	0	0	0	209	12	221	1	0	2	3	619
05:00 PM	5	354	0	359	0	**1**	0	**1**	0	274	11	285	**7**	0	2	**9**	654
05:15 PM	8	329	1	338	**1**	0	0	1	**1**	262	**27**	290	2	0	1	3	632
05:30 PM	**11**	375	1	387	0	0	0	0	0	**280**	23	**303**	5	0	**4**	9	**699**
Total Volume	28	1448	3	1479	1	1	0	2	1	1025	73	1099	15	0	9	24	2604
% App. Total	1.9	97.9	0.2		50	50	0		0.1	93.3	6.6		62.5	0	37.5		
PHF	.636	.928	.750	.936	.250	.250	.000	.500	.250	.915	.676	.907	.536	.000	.563	.667	.931

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Groups Printed- Truck

	Carrollton Blvd Southbound					Driveway Westbound					Carrollton Blvd Northbound					Northgate Dr Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	8	0	0	8	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	14
07:15 AM	0	6	0	0	6	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	17
07:30 AM	0	6	0	0	6	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	17
07:45 AM	0	8	0	0	8	0	0	0	0	0	0	9	0	0	9	2	0	0	0	2	19
Total	0	28	0	0	28	0	0	0	0	0	0	37	0	0	37	2	0	0	0	2	67
08:00 AM	0	11	0	0	11	0	0	0	0	0	0	12	1	0	13	1	0	0	0	1	25
08:15 AM	1	10	0	0	11	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	27
08:30 AM	0	7	0	0	7	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	19
08:45 AM	0	8	0	0	8	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	15
Total	1	36	0	0	37	0	0	0	0	0	0	47	1	0	48	1	0	0	0	1	86
09:00 AM	0	8	0	0	8	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	19
09:15 AM	0	5	0	0	5	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	21
09:30 AM	0	15	0	0	15	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	25
09:45 AM	0	10	0	0	10	0	0	0	0	0	0	8	1	0	9	0	0	0	0	0	19
Total	0	38	0	0	38	0	0	0	0	0	0	45	1	0	46	0	0	0	0	0	84
10:00 AM	0	14	0	0	14	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	29
10:15 AM	0	13	0	0	13	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	19
10:30 AM	0	11	0	0	11	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	17
10:45 AM	0	13	0	0	13	0	0	0	0	0	0	9	1	0	10	0	0	0	0	0	23
Total	0	51	0	0	51	0	0	0	0	0	0	36	1	0	37	0	0	0	0	0	88
11:00 AM	0	12	0	0	12	0	0	0	0	0	0	13	1	0	14	0	0	1	0	1	27
11:15 AM	0	12	0	0	12	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	30
11:30 AM	0	11	0	0	11	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	29
11:45 AM	0	14	0	0	14	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	26
Total	0	49	0	0	49	0	0	0	0	0	0	61	1	0	62	0	0	1	0	1	112
12:00 PM	0	19	0	0	19	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	30
12:15 PM	0	10	0	0	10	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	15
12:30 PM	0	12	0	0	12	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	22
12:45 PM	0	7	0	0	7	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	19
Total	0	48	0	0	48	0	0	0	0	0	0	38	0	0	38	0	0	0	0	0	86
01:00 PM	0	13	0	0	13	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	23
01:15 PM	0	9	0	0	9	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	18
01:30 PM	1	10	0	0	11	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	25
01:45 PM	0	11	0	0	11	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	20
Total	1	43	0	0	44	0	0	0	0	0	0	42	0	0	42	0	0	0	0	0	86
02:00 PM	0	11	0	0	11	0	0	0	0	0	0	14	1	0	15	1	0	0	0	1	27
02:15 PM	1	9	0	0	10	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	15
02:30 PM	0	12	0	0	12	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	24
02:45 PM	0	14	0	0	14	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	22
Total	1	46	0	0	47	0	0	0	0	0	0	38	2	0	40	1	0	0	0	1	88
03:00 PM	0	14	0	0	14	0	0	0	0	0	0	11	1	0	12	0	0	0	0	0	26
03:15 PM	0	23	0	0	23	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	33
03:30 PM	0	11	0	0	11	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	22
03:45 PM	0	9	0	0	9	0	0	0	0	0	0	12	0	0	12	0	0	1	0	1	22
Total	0	57	0	0	57	0	0	0	0	0	0	44	1	0	45	0	0	1	0	1	103
04:00 PM	0	5	0	0	5	0	0	0	0	0	0	9	0	0	9	1	0	0	0	1	15
04:15 PM	1	8	0	0	9	0	0	0	0	0	0	9	0	0	9	1	0	0	0	1	19

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : 5-Carrollton Blvd. & Northgate Ln.
Site Code :
Start Date : 10/5/2017

Groups Printed- Truck

	Carrollton Blvd Southbound					Driveway Westbound					Carrollton Blvd Northbound					Northgate Dr Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:30 PM	0	8	0	0	8	0	0	0	0	0	0	8	0	0	8	2	0	0	0	2	18
04:45 PM	0	7	0	0	7	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	12
Total	1	28	0	0	29	0	0	0	0	0	0	31	0	0	31	4	0	0	0	4	64
05:00 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
05:15 PM	0	3	0	0	3	0	0	0	0	0	0	5	1	0	6	0	0	0	0	0	9
05:30 PM	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
05:45 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
Total	0	14	0	0	14	0	0	0	0	0	0	10	1	0	11	0	0	0	0	0	25
06:00 PM	0	1	0	0	1	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	7
06:15 PM	0	6	0	0	6	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	8
06:30 PM	0	2	0	0	2	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	11
06:45 PM	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9
Total	0	12	0	0	12	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	35
Grand Total	4	450	0	0	454	0	0	0	0	0	0	452	8	0	460	8	0	2	0	10	924
Apprch %	0.9	99.1	0	0		0	0	0	0		0	98.3	1.7	0		80	0	20	0		
Total %	0.4	48.7	0	0	49.1	0	0	0	0	0	0	48.9	0.9	0	49.8	0.9	0	0.2	0	1.1	

	Carrollton Blvd Southbound				Driveway Westbound				Carrollton Blvd Northbound				Northgate Dr Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:15 AM																	
11:15 AM	0	12	0	12	0	0	0	0	0	**18**	0	**18**	0	0	0	0	**30**
11:30 AM	0	11	0	11	0	0	0	0	0	18	0	18	0	0	0	0	29
11:45 AM	0	14	0	14	0	0	0	0	0	12	0	12	0	0	0	0	26
12:00 PM	0	**19**	0	**19**	0	0	0	0	0	11	0	11	0	0	0	0	30
Total Volume	0	56	0	56	0	0	0	0	0	59	0	59	0	0	0	0	115
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.737	.000	.737	.000	.000	.000	.000	.000	.819	.000	.819	.000	.000	.000	.000	.958

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : 5-Carrollton Blvd. & Northgate Ln.
Site Code :
Start Date : 10/5/2017
Page No : 1

Groups Printed- Combined

	Carrollton Blvd Southbound					Driveway Westbound					Carrollton Blvd Northbound					Northgate Dr Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	2	169	0	0	171	0	0	0	0	0	0	313	5	0	318	12	0	10	0	22	511
07:15 AM	0	197	0	0	197	0	0	0	0	0	0	326	4	0	330	8	0	12	0	20	547
07:30 AM	4	178	0	0	182	0	0	0	0	0	0	366	5	0	371	2	0	13	0	15	568
07:45 AM	2	172	0	0	174	0	0	0	0	0	0	267	3	0	270	10	0	8	0	18	462
Total	8	716	0	0	724	0	0	0	0	0	0	1272	17	0	1289	32	0	43	0	75	2088
08:00 AM	0	175	0	0	175	0	0	0	0	0	0	233	2	0	235	12	0	6	0	18	428
08:15 AM	1	175	0	0	176	0	0	0	0	0	1	220	2	0	223	5	0	2	0	7	406
08:30 AM	1	182	0	0	183	0	0	0	0	0	0	237	4	0	241	7	0	5	0	12	436
08:45 AM	3	135	0	0	138	0	0	0	0	0	0	206	9	0	215	7	0	3	0	10	363
Total	5	667	0	0	672	0	0	0	0	0	1	896	17	0	914	31	0	16	0	47	1633
09:00 AM	0	94	0	0	94	0	0	0	0	0	0	168	6	0	174	2	0	4	0	6	274
09:15 AM	0	91	0	0	91	0	0	0	0	0	0	179	1	0	180	2	0	7	0	9	280
09:30 AM	3	181	0	0	184	0	0	0	0	0	1	172	5	0	178	2	0	3	0	5	367
09:45 AM	1	127	0	0	128	0	0	0	0	0	0	168	5	0	173	4	0	5	0	9	310
Total	4	493	0	0	497	0	0	0	0	0	1	687	17	0	705	10	0	19	0	29	1231
10:00 AM	2	133	0	0	135	0	0	0	0	0	0	154	3	0	157	5	0	1	0	6	298
10:15 AM	1	143	1	0	145	0	0	0	0	0	0	134	1	0	135	1	0	4	3	8	288
10:30 AM	3	132	1	0	136	1	0	0	1	2	0	156	5	0	161	1	0	0	3	4	303
10:45 AM	3	137	0	0	140	0	0	0	0	0	0	152	4	0	156	4	0	3	0	7	303
Total	9	545	2	0	556	1	0	0	1	2	0	596	13	0	609	11	0	8	6	25	1192
11:00 AM	1	152	0	0	153	0	0	0	0	0	0	131	5	0	136	1	0	2	0	3	292
11:15 AM	0	128	0	0	128	0	0	0	0	0	0	167	2	0	169	1	0	2	0	3	300
11:30 AM	3	139	0	0	142	0	0	0	0	0	0	159	9	0	168	1	0	5	0	6	316
11:45 AM	2	132	1	0	135	0	0	0	0	0	0	148	6	0	154	1	0	4	0	5	294
Total	6	551	1	0	558	0	0	0	0	0	0	605	22	0	627	4	0	13	0	17	1202
12:00 PM	3	169	0	0	172	1	0	0	0	1	0	164	5	0	169	1	0	3	0	4	346
12:15 PM	5	159	1	0	165	0	0	0	0	0	0	138	4	0	142	1	0	2	0	3	310
12:30 PM	2	174	0	0	176	0	0	0	0	0	0	128	5	0	133	3	0	5	0	8	317
12:45 PM	1	169	0	0	170	0	0	0	0	0	0	161	2	0	163	0	0	2	0	2	335
Total	11	671	1	0	683	1	0	0	0	1	0	591	16	0	607	5	0	12	0	17	1308
01:00 PM	4	168	0	0	172	0	0	0	0	0	0	158	1	0	159	3	0	2	0	5	336
01:15 PM	1	187	0	0	188	0	0	0	0	0	1	168	3	0	172	5	0	2	0	7	367
01:30 PM	2	159	1	0	162	1	0	1	0	2	0	153	7	0	160	3	0	1	0	4	328
01:45 PM	2	144	2	0	148	0	0	0	0	0	0	178	6	0	184	0	0	1	0	1	333
Total	9	658	3	0	670	1	0	1	0	2	1	657	17	0	675	11	0	6	0	17	1364
02:00 PM	3	159	0	0	162	0	0	0	0	0	0	171	10	0	181	4	0	1	0	5	348
02:15 PM	5	234	1	0	240	1	0	0	0	1	0	181	8	0	189	2	0	5	0	7	437
02:30 PM	3	212	0	0	215	0	0	0	0	0	0	163	2	0	165	6	0	2	0	8	388
02:45 PM	2	244	1	0	247	0	0	0	0	0	0	154	9	0	163	2	0	1	0	3	413
Total	13	849	2	0	864	1	0	0	0	1	0	669	29	0	698	14	0	9	0	23	1586
03:00 PM	6	253	1	0	260	0	0	0	0	0	0	193	15	0	208	3	0	1	0	4	472
03:15 PM	8	291	1	0	300	0	0	0	0	0	0	170	2	0	172	6	0	0	0	6	478
03:30 PM	8	346	0	0	354	0	0	0	0	0	0	201	6	0	207	6	0	1	0	7	568
03:45 PM	4	360	0	0	364	0	0	1	0	1	0	221	13	0	234	3	0	1	0	4	603
Total	26	1250	2	0	1278	0	0	1	0	1	0	785	36	0	821	18	0	3	0	21	2121
04:00 PM	5	421	1	0	427	0	0	0	0	0	0	209	19	0	228	2	0	0	0	2	657
04:15 PM	9	420	1	0	430	0	0	0	0	0	0	224	13	0	237	1	0	1	0	2	669
04:30 PM	4	411	0	0	415	0	0	0	0	0	0	233	16	0	249	8	0	2	0	10	674

Peggy Malone & Associates, Inc.
(888) 247-8602

File Name : 5-Carrollton Blvd. & Northgate Ln.
Site Code :
Start Date : 10/5/2017

Groups Printed- Combined

	Carrollton Blvd Southbound					Driveway Westbound					Carrollton Blvd Northbound					Northgate Dr Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:45 PM	4	397	1	0	402	0	0	0	0	0	0	214	12	0	226	1	0	2	0	3	631
Total	22	1649	3	0	1674	0	0	0	0	0	0	880	60	0	940	12	0	5	0	17	2631
05:00 PM	5	357	0	0	362	0	1	0	0	1	0	277	11	0	288	7	0	2	0	9	660
05:15 PM	8	332	1	0	341	1	0	0	0	1	1	267	28	0	296	2	0	1	0	3	641
05:30 PM	11	381	1	0	393	0	0	0	0	0	0	280	23	0	303	5	0	4	0	9	705
05:45 PM	12	282	0	0	294	0	0	0	0	0	0	241	19	0	260	5	0	5	0	10	564
Total	36	1352	2	0	1390	1	1	0	0	2	1	1065	81	0	1147	19	0	12	0	31	2570
06:00 PM	14	267	2	0	283	0	0	0	0	0	0	227	18	0	245	8	0	2	1	11	539
06:15 PM	9	265	0	0	274	0	0	0	0	0	0	174	11	0	185	0	0	2	0	2	461
06:30 PM	7	198	0	0	205	0	0	0	0	0	0	191	19	0	210	3	0	3	0	6	421
06:45 PM	3	206	0	0	209	0	0	0	0	0	0	141	16	0	157	3	0	2	0	5	371
Total	33	936	2	0	971	0	0	0	0	0	0	733	64	0	797	14	0	9	1	24	1792
Grand Total	182	10337	18	0	10537	5	1	2	1	9	4	9436	389	0	9829	181	0	155	7	343	20718
Apprch %	1.7	98.1	0.2	0		55.6	11.1	22.2	11.1		0	96	4	0		52.8	0	45.2	2		
Total %	0.9	49.9	0.1	0	50.9	0	0	0	0	0	0	45.5	1.9	0	47.4	0.9	0	0.7	0	1.7	

	Carrollton Blvd Southbound				Driveway Westbound				Carrollton Blvd Northbound				Northgate Dr Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	4	**397**	**1**	**402**	0	0	0	0	0	214	12	226	1	0	2	3	631
05:00 PM	5	357	0	362	0	**1**	0	**1**	0	277	11	288	**7**	0	2	**9**	660
05:15 PM	8	332	1	341	**1**	0	0	1	**1**	267	**28**	296	2	0	1	3	641
05:30 PM	**11**	381	1	393	0	0	0	0	0	**280**	23	**303**	5	0	**4**	9	**705**
Total Volume	28	1467	3	1498	1	1	0	2	1	1038	74	1113	15	0	9	24	2637
% App. Total	1.9	97.9	0.2		50	50	0		0.1	93.3	6.6		62.5	0	37.5		
PHF	.636	.924	.750	.932	.250	.250	.000	.500	.250	.927	.661	.918	.536	.000	.563	.667	.935

Peggy Malone & Associates, Inc.
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File Name : 6-Carrollton Blvd. & Channell Way_Deep Bottom Dr.
Site Code :
Start Date : 10/5/2017
Page No : 1

Groups Printed- Car

	Carrollton Blvd Southbound					Channell Way Westbound					Carrollton Blvd Northbound					Deep Bottom Dr Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	157	7	0	164	10	0	4	0	14	0	211	1	0	212	0	0	0	0	0	390
07:15 AM	1	191	2	0	194	14	0	7	0	21	0	162	0	0	162	0	0	0	0	0	377
07:30 AM	0	200	1	0	201	11	1	6	0	18	3	205	2	0	210	1	0	0	0	1	430
07:45 AM	0	174	3	0	177	7	0	2	0	9	3	181	2	0	186	1	0	0	0	1	373
Total	1	722	13	0	736	42	1	19	0	62	6	759	5	0	770	2	0	0	0	2	1570
08:00 AM	0	155	2	0	157	7	0	2	0	9	1	158	1	0	160	1	0	1	0	2	328
08:15 AM	0	175	2	0	177	14	0	4	0	18	0	161	0	0	161	0	0	0	0	0	356
08:30 AM	0	163	4	0	167	12	0	2	0	14	3	173	0	0	176	0	0	0	0	0	357
08:45 AM	0	141	1	0	142	7	0	2	0	9	4	133	0	0	137	0	0	0	0	0	288
Total	0	634	9	0	643	40	0	10	0	50	8	625	1	0	634	1	0	1	0	2	1329
09:00 AM	0	118	2	0	120	9	0	1	0	10	0	112	0	0	112	0	0	0	0	0	242
09:15 AM	0	121	2	0	123	10	0	0	0	10	0	100	0	0	100	0	0	1	0	1	234
09:30 AM	0	136	3	0	139	2	0	2	0	4	1	115	2	0	118	0	0	0	0	0	261
09:45 AM	0	122	5	0	127	11	0	2	0	13	1	113	2	1	117	1	0	1	0	2	259
Total	0	497	12	0	509	32	0	5	0	37	2	440	4	1	447	1	0	2	0	3	996
10:00 AM	0	94	4	0	98	7	0	5	1	13	4	98	2	0	104	2	1	0	0	3	218
10:15 AM	0	106	2	0	108	7	0	4	0	11	0	94	1	0	95	0	0	0	0	0	214
10:30 AM	0	101	4	0	105	8	0	1	0	9	2	110	1	0	113	0	0	0	0	0	227
10:45 AM	1	122	6	0	129	1	0	1	0	2	0	118	0	0	118	2	0	0	0	2	251
Total	1	423	16	0	440	23	0	11	1	35	6	420	4	0	430	4	1	0	0	5	910
11:00 AM	0	112	8	1	121	9	0	3	1	13	5	115	1	1	122	2	0	0	0	2	258
11:15 AM	0	121	3	0	124	3	0	1	0	4	2	128	1	2	133	2	0	0	2	4	265
11:30 AM	0	125	5	0	130	11	0	2	1	14	1	137	1	0	139	2	0	0	0	2	285
11:45 AM	0	113	6	0	119	3	0	1	0	4	0	121	1	0	122	0	0	0	0	0	245
Total	0	471	22	1	494	26	0	7	2	35	8	501	4	3	516	6	0	0	2	8	1053
12:00 PM	0	141	9	0	150	6	0	1	0	7	1	123	0	0	124	0	0	0	0	0	281
12:15 PM	1	151	3	0	155	6	0	2	0	8	2	118	5	0	125	0	0	0	0	0	288
12:30 PM	0	119	7	0	126	1	0	4	0	5	4	116	3	0	123	4	0	0	0	4	258
12:45 PM	0	129	9	0	138	6	0	1	0	7	2	118	2	0	122	0	0	0	0	0	267
Total	1	540	28	0	569	19	0	8	0	27	9	475	10	0	494	4	0	0	0	4	1094
01:00 PM	1	135	6	0	142	4	0	3	2	9	5	142	2	0	149	0	0	1	0	1	301
01:15 PM	0	146	8	0	154	4	0	1	0	5	2	127	4	0	133	1	0	0	0	1	293
01:30 PM	0	121	10	0	131	6	0	0	0	6	2	124	4	0	130	1	0	0	0	1	268
01:45 PM	0	140	2	0	142	2	1	2	0	5	1	129	1	0	131	1	0	0	0	1	279
Total	1	542	26	0	569	16	1	6	2	25	10	522	11	0	543	3	0	1	0	4	1141
02:00 PM	0	150	3	0	153	3	0	1	0	4	1	131	2	0	134	0	0	0	0	0	291
02:15 PM	0	132	6	0	138	3	0	0	0	3	1	178	1	0	180	1	0	0	0	1	322
02:30 PM	0	134	6	0	140	4	0	5	2	11	3	147	1	0	151	0	0	0	0	0	302
02:45 PM	0	155	8	0	163	3	0	1	0	4	0	166	0	0	166	1	0	1	0	2	335
Total	0	571	23	0	594	13	0	7	2	22	5	622	4	0	631	2	0	1	0	3	1250
03:00 PM	1	155	13	0	169	7	0	4	0	11	2	193	2	0	197	0	0	0	0	0	377
03:15 PM	0	194	9	0	203	3	0	2	0	5	1	177	3	0	181	1	0	0	0	1	390
03:30 PM	1	199	10	0	210	5	0	4	0	9	5	192	3	0	200	1	0	0	0	1	420
03:45 PM	0	219	9	0	228	6	1	1	0	8	2	184	0	0	186	0	0	0	0	0	422
Total	2	767	41	0	810	21	1	11	0	33	10	746	8	0	764	2	0	0	0	2	1609
04:00 PM	0	213	8	0	221	6	0	2	0	8	6	211	4	0	221	1	1	0	0	2	452
04:15 PM	1	255	9	0	265	3	0	1	0	4	3	173	4	0	180	0	0	1	0	1	450

Peggy Malone & Associates, Inc.
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Groups Printed- Car

	Carrollton Blvd Southbound					Channell Way Westbound					Carrollton Blvd Northbound					Deep Bottom Dr Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:30 PM	2	255	15	0	272	5	0	1	0	6	4	268	2	0	274	1	0	1	0	2	554
04:45 PM	1	221	14	0	236	4	0	5	0	9	8	190	5	0	203	2	0	0	1	3	451
Total	4	944	46	0	994	18	0	9	0	27	21	842	15	0	878	4	1	2	1	8	1907
05:00 PM	0	235	12	0	247	7	0	4	0	11	7	238	1	1	247	1	0	0	0	1	506
05:15 PM	1	255	12	0	268	5	0	5	0	10	6	232	0	2	240	3	0	2	2	7	525
05:30 PM	3	273	11	0	287	10	0	2	0	12	2	230	5	0	237	1	0	1	0	2	538
05:45 PM	1	190	7	0	198	3	0	1	0	4	7	222	2	0	231	2	0	1	0	3	436
Total	5	953	42	0	1000	25	0	12	0	37	22	922	8	3	955	7	0	4	2	13	2005
06:00 PM	0	183	5	0	188	5	1	3	0	9	7	221	1	0	229	0	0	0	0	0	426
06:15 PM	0	168	2	0	170	5	0	2	2	9	3	171	0	2	176	2	0	0	0	2	357
06:30 PM	2	160	10	0	172	4	0	3	0	7	2	173	1	0	176	0	0	0	0	0	355
06:45 PM	0	134	10	0	144	5	0	0	0	5	6	150	0	0	156	0	0	0	0	0	305
Total	2	645	27	0	674	19	1	8	2	30	18	715	2	2	737	2	0	0	0	2	1443
Grand Total	17	7709	305	1	8032	294	4	113	9	420	125	7589	76	9	7799	38	2	11	5	56	16307
Apprch %	0.2	96	3.8	0		70	1	26.9	2.1		1.6	97.3	1	0.1		67.9	3.6	19.6	8.9		
Total %	0.1	47.3	1.9	0	49.3	1.8	0	0.7	0.1	2.6	0.8	46.5	0.5	0.1	47.8	0.2	0	0.1	0	0.3	

	Carrollton Blvd Southbound				Channell Way Westbound				Carrollton Blvd Northbound				Deep Bottom Dr Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**2**	**255**	**15**	**272**	5	0	1	6	4	**268**	2	**274**	1	0	1	2	**554**
04:45 PM	1	221	14	236	4	0	**5**	9	**8**	190	**5**	203	2	0	0	2	450
05:00 PM	0	235	12	247	**7**	0	4	**11**	7	238	1	246	1	0	0	1	505
05:15 PM	1	255	12	268	5	0	5	10	6	232	0	238	**3**	0	**2**	**5**	521
Total Volume	4	966	53	1023	21	0	15	36	25	928	8	961	7	0	3	10	2030
% App. Total	0.4	94.4	5.2		58.3	0	41.7		2.6	96.6	0.8		70	0	30		
PHF	.500	.947	.883	.940	.750	.000	.750	.818	.781	.866	.400	.877	.583	.000	.375	.500	.916

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Groups Printed- Truck

	Carrollton Blvd Southbound					Channell Way Westbound					Carrollton Blvd Northbound					Deep Bottom Dr Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	9	0	0	9	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	15
07:15 AM	0	6	0	0	6	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	21
07:30 AM	0	8	0	0	8	1	0	0	0	1	1	8	0	0	9	0	0	0	0	0	18
07:45 AM	0	14	0	0	14	1	0	0	0	1	1	9	0	0	10	2	0	0	0	2	27
Total	0	37	0	0	37	2	0	0	0	2	2	38	0	0	40	2	0	0	0	2	81
08:00 AM	0	9	0	0	9	0	0	0	0	0	1	9	0	0	10	0	0	0	0	0	19
08:15 AM	0	11	0	0	11	1	0	0	0	1	0	11	0	0	11	0	0	0	0	0	23
08:30 AM	0	8	1	0	9	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	19
08:45 AM	0	8	0	0	8	1	0	1	0	2	0	7	0	0	7	0	0	0	0	0	17
Total	0	36	1	0	37	2	0	1	0	3	1	37	0	0	38	0	0	0	0	0	78
09:00 AM	0	4	0	0	4	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	13
09:15 AM	0	11	0	0	11	0	0	0	0	0	1	10	0	0	11	0	0	0	0	0	22
09:30 AM	0	3	0	0	3	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	15
09:45 AM	0	8	0	0	8	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	18
Total	0	26	0	0	26	0	0	0	0	0	1	41	0	0	42	0	0	0	0	0	68
10:00 AM	0	14	0	0	14	0	0	0	0	0	1	14	0	0	15	0	0	0	0	0	29
10:15 AM	0	15	0	0	15	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	22
10:30 AM	0	11	0	0	11	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	15
10:45 AM	0	10	1	0	11	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	26
Total	0	50	1	0	51	0	0	0	0	0	1	40	0	0	41	0	0	0	0	0	92
11:00 AM	0	15	0	0	15	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	25
11:15 AM	0	6	0	0	6	0	0	0	0	0	1	11	0	0	12	0	0	0	0	0	18
11:30 AM	0	9	0	0	9	0	0	1	0	1	0	8	0	0	8	0	0	0	0	0	18
11:45 AM	0	14	0	0	14	2	0	0	0	2	0	8	0	0	8	0	0	0	0	0	24
Total	0	44	0	0	44	2	0	1	0	3	1	37	0	0	38	0	0	0	0	0	85
12:00 PM	0	18	0	0	18	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	24
12:15 PM	0	11	0	0	11	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	19
12:30 PM	0	11	0	0	11	0	0	0	0	0	1	9	0	0	10	0	0	0	0	0	21
12:45 PM	0	6	0	0	6	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	12
Total	0	46	0	0	46	1	0	0	0	1	1	28	0	0	29	0	0	0	0	0	76
01:00 PM	0	6	0	0	6	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	13
01:15 PM	0	6	1	0	7	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	13
01:30 PM	0	4	0	0	4	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	12
01:45 PM	0	8	1	0	9	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	16
Total	0	24	2	0	26	0	0	0	0	0	0	28	0	0	28	0	0	0	0	0	54
02:00 PM	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	9
02:15 PM	0	11	0	0	11	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	21
02:30 PM	0	13	0	0	13	2	0	0	0	2	0	4	0	0	4	0	0	0	0	0	19
02:45 PM	0	7	0	0	7	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	15
Total	0	35	0	0	35	2	0	0	0	2	0	27	0	0	27	0	0	0	0	0	64
03:00 PM	0	12	1	0	13	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	21
03:15 PM	0	14	3	0	17	0	0	2	0	2	0	15	0	0	15	0	0	0	0	0	34
03:30 PM	0	6	0	0	6	2	0	0	0	2	0	10	0	0	10	0	0	0	0	0	18
03:45 PM	0	7	0	0	7	0	0	0	0	0	1	9	0	0	10	0	0	0	0	0	17
Total	0	39	4	0	43	2	0	2	0	4	1	42	0	0	43	0	0	0	0	0	90
04:00 PM	0	9	1	0	10	1	0	0	0	1	0	7	0	0	7	1	0	0	0	1	19
04:15 PM	0	11	0	0	11	0	0	0	0	0	1	7	0	0	8	1	0	0	0	1	20

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Groups Printed- Truck

	Carrollton Blvd Southbound					Channell Way Westbound					Carrollton Blvd Northbound					Deep Bottom Dr Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:30 PM	0	6	0	0	6	2	0	0	0	2	0	8	0	0	8	0	0	0	0	0	16
04:45 PM	0	10	0	0	10	1	0	0	0	1	1	6	0	0	7	0	0	0	0	0	18
Total	0	36	1	0	37	4	0	0	0	4	2	28	0	0	30	2	0	0	0	2	73
05:00 PM	0	5	0	0	5	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	11
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
05:30 PM	0	6	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7
05:45 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
Total	0	15	0	0	15	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	25
06:00 PM	0	1	0	0	1	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	5
06:15 PM	0	6	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7
06:30 PM	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9
06:45 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
Total	0	12	0	0	12	0	0	1	0	1	0	12	0	0	12	0	0	0	0	0	25
Grand Total	0	400	9	0	409	15	0	6	0	21	10	367	0	0	377	4	0	0	0	4	811
Apprch %	0	97.8	2.2	0		71.4	0	28.6	0		2.7	97.3	0	0		100	0	0	0		
Total %	0	49.3	1.1	0	50.4	1.8	0	0.7	0	2.6	1.2	45.3	0	0	46.5	0.5	0	0	0	0.5	

	Carrollton Blvd Southbound				Channell Way Westbound				Carrollton Blvd Northbound				Deep Bottom Dr Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 10:00 AM																	
10:00 AM	0	14	0	14	0	0	0	0	**1**	14	0	**15**	0	0	0	0	**29**
10:15 AM	0	**15**	0	**15**	0	0	0	0	0	7	0	7	0	0	0	0	22
10:30 AM	0	11	0	11	0	0	0	0	0	4	0	4	0	0	0	0	15
10:45 AM	0	10	**1**	11	0	0	0	0	0	**15**	0	15	0	0	0	0	26
Total Volume	0	50	1	51	0	0	0	0	1	40	0	41	0	0	0	0	92
% App. Total	0	98	2		0	0	0		2.4	97.6	0		0	0	0		
PHF	.000	.833	.250	.850	.000	.000	.000	.000	.250	.667	.000	.683	.000	.000	.000	.000	.793

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Groups Printed- Combined

	Carrollton Blvd Southbound					Channell Way Westbound					Carrollton Blvd Northbound					Deep Bottom Dr Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	166	7	0	173	10	0	4	0	14	0	217	1	0	218	0	0	0	0	0	405
07:15 AM	1	197	2	0	200	14	0	7	0	21	0	177	0	0	177	0	0	0	0	0	398
07:30 AM	0	208	1	0	209	12	1	6	0	19	4	213	2	0	219	1	0	0	0	1	448
07:45 AM	0	188	3	0	191	8	0	2	0	10	4	190	2	0	196	3	0	0	0	3	400
Total	1	759	13	0	773	44	1	19	0	64	8	797	5	0	810	4	0	0	0	4	1651
08:00 AM	0	164	2	0	166	7	0	2	0	9	2	167	1	0	170	1	0	1	0	2	347
08:15 AM	0	186	2	0	188	15	0	4	0	19	0	172	0	0	172	0	0	0	0	0	379
08:30 AM	0	171	5	0	176	12	0	2	0	14	3	183	0	0	186	0	0	0	0	0	376
08:45 AM	0	149	1	0	150	8	0	3	0	11	4	140	0	0	144	0	0	0	0	0	305
Total	0	670	10	0	680	42	0	11	0	53	9	662	1	0	672	1	0	1	0	2	1407
09:00 AM	0	122	2	0	124	9	0	1	0	10	0	121	0	0	121	0	0	0	0	0	255
09:15 AM	0	132	2	0	134	10	0	0	0	10	1	110	0	0	111	0	0	1	0	1	256
09:30 AM	0	139	3	0	142	2	0	2	0	4	1	127	2	0	130	0	0	0	0	0	276
09:45 AM	0	130	5	0	135	11	0	2	0	13	1	123	2	1	127	1	0	1	0	2	277
Total	0	523	12	0	535	32	0	5	0	37	3	481	4	1	489	1	0	2	0	3	1064
10:00 AM	0	108	4	0	112	7	0	5	1	13	5	112	2	0	119	2	1	0	0	3	247
10:15 AM	0	121	2	0	123	7	0	4	0	11	0	101	1	0	102	0	0	0	0	0	236
10:30 AM	0	112	4	0	116	8	0	1	0	9	2	114	1	0	117	0	0	0	0	0	242
10:45 AM	1	132	7	0	140	1	0	1	0	2	0	133	0	0	133	2	0	0	0	2	277
Total	1	473	17	0	491	23	0	11	1	35	7	460	4	0	471	4	1	0	0	5	1002
11:00 AM	0	127	8	1	136	9	0	3	1	13	5	125	1	1	132	2	0	0	0	2	283
11:15 AM	0	127	3	0	130	3	0	1	0	4	3	139	1	2	145	2	0	0	2	4	283
11:30 AM	0	134	5	0	139	11	0	3	1	15	1	145	1	0	147	2	0	0	0	2	303
11:45 AM	0	127	6	0	133	5	0	1	0	6	0	129	1	0	130	0	0	0	0	0	269
Total	0	515	22	1	538	28	0	8	2	38	9	538	4	3	554	6	0	0	2	8	1138
12:00 PM	0	159	9	0	168	6	0	1	0	7	1	129	0	0	130	0	0	0	0	0	305
12:15 PM	1	162	3	0	166	6	0	2	0	8	2	126	5	0	133	0	0	0	0	0	307
12:30 PM	0	130	7	0	137	1	0	4	0	5	5	125	3	0	133	4	0	0	0	4	279
12:45 PM	0	135	9	0	144	7	0	1	0	8	2	123	2	0	127	0	0	0	0	0	279
Total	1	586	28	0	615	20	0	8	0	28	10	503	10	0	523	4	0	0	0	4	1170
01:00 PM	1	141	6	0	148	4	0	3	2	9	5	149	2	0	156	0	0	1	0	1	314
01:15 PM	0	152	9	0	161	4	0	1	0	5	2	133	4	0	139	1	0	0	0	1	306
01:30 PM	0	125	10	0	135	6	0	0	0	6	2	132	4	0	138	1	0	0	0	1	280
01:45 PM	0	148	3	0	151	2	1	2	0	5	1	136	1	0	138	1	0	0	0	1	295
Total	1	566	28	0	595	16	1	6	2	25	10	550	11	0	571	3	0	1	0	4	1195
02:00 PM	0	154	3	0	157	3	0	1	0	4	1	136	2	0	139	0	0	0	0	0	300
02:15 PM	0	143	6	0	149	3	0	0	0	3	1	188	1	0	190	1	0	0	0	1	343
02:30 PM	0	147	6	0	153	6	0	5	2	13	3	151	1	0	155	0	0	0	0	0	321
02:45 PM	0	162	8	0	170	3	0	1	0	4	0	174	0	0	174	1	0	1	0	2	350
Total	0	606	23	0	629	15	0	7	2	24	5	649	4	0	658	2	0	1	0	3	1314
03:00 PM	1	167	14	0	182	7	0	4	0	11	2	201	2	0	205	0	0	0	0	0	398
03:15 PM	0	208	12	0	220	3	0	4	0	7	1	192	3	0	196	1	0	0	0	1	424
03:30 PM	1	205	10	0	216	7	0	4	0	11	5	202	3	0	210	1	0	0	0	1	438
03:45 PM	0	226	9	0	235	6	1	1	0	8	3	193	0	0	196	0	0	0	0	0	439
Total	2	806	45	0	853	23	1	13	0	37	11	788	8	0	807	2	0	0	0	2	1699
04:00 PM	0	222	9	0	231	7	0	2	0	9	6	218	4	0	228	2	1	0	0	3	471
04:15 PM	1	266	9	0	276	3	0	1	0	4	4	180	4	0	188	1	0	1	0	2	470

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File Name : 6-Carrollton Blvd. & Channell Way_Deep Bottom Dr.
Site Code :
Start Date : 10/5/2017

Groups Printed- Combined

	Carrollton Blvd Southbound					Channell Way Westbound					Carrollton Blvd Northbound					Deep Bottom Dr Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:30 PM	2	261	15	0	278	7	0	1	0	8	4	276	2	0	282	1	0	1	0	2	570
04:45 PM	1	231	14	0	246	5	0	5	0	10	9	196	5	0	210	2	0	0	1	3	469
Total	4	980	47	0	1031	22	0	9	0	31	23	870	15	0	908	6	1	2	1	10	1980
05:00 PM	0	240	12	0	252	7	0	5	0	12	7	243	1	1	252	1	0	0	0	1	517
05:15 PM	1	256	12	0	269	5	0	5	0	10	6	233	0	2	241	3	0	2	2	7	527
05:30 PM	3	279	11	0	293	10	0	2	0	12	2	231	5	0	238	1	0	1	0	2	545
05:45 PM	1	193	7	0	201	3	0	1	0	4	7	224	2	0	233	2	0	1	0	3	441
Total	5	968	42	0	1015	25	0	13	0	38	22	931	8	3	964	7	0	4	2	13	2030
06:00 PM	0	184	5	0	189	5	1	4	0	10	7	224	1	0	232	0	0	0	0	0	431
06:15 PM	0	174	2	0	176	5	0	2	2	9	3	172	0	2	177	2	0	0	0	2	364
06:30 PM	2	163	10	0	175	4	0	3	0	7	2	179	1	0	182	0	0	0	0	0	364
06:45 PM	0	136	10	0	146	5	0	0	0	5	6	152	0	0	158	0	0	0	0	0	309
Total	2	657	27	0	686	19	1	9	2	31	18	727	2	2	749	2	0	0	0	2	1468
Grand Total	17	8109	314	1	8441	309	4	119	9	441	135	7956	76	9	8176	42	2	11	5	60	17118
Apprch %	0.2	96.1	3.7	0		70.1	0.9	27	2		1.7	97.3	0.9	0.1		70	3.3	18.3	8.3		
Total %	0.1	47.4	1.8	0	49.3	1.8	0	0.7	0.1	2.6	0.8	46.5	0.4	0.1	47.8	0.2	0	0.1	0	0.4	

	Carrollton Blvd Southbound				Channell Way Westbound				Carrollton Blvd Northbound				Deep Bottom Dr Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**2**	**261**	**15**	**278**	**7**	0	1	8	4	**276**	2	**282**	1	0	1	2	**570**
04:45 PM	1	231	14	246	5	0	**5**	10	**9**	196	**5**	210	2	0	0	2	468
05:00 PM	0	240	12	252	7	0	5	**12**	7	243	1	251	1	0	0	1	516
05:15 PM	1	256	12	269	5	0	5	10	6	233	0	239	**3**	0	**2**	**5**	523
Total Volume	4	988	53	1045	24	0	16	40	26	948	8	982	7	0	3	10	2077
% App. Total	0.4	94.5	5.1		60	0	40		2.6	96.5	0.8		70	0	30		
PHF	.500	.946	.883	.940	.857	.000	.800	.833	.722	.859	.400	.871	.583	.000	.375	.500	.911

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File Name : Ashby Way_Omera Dr and Carrollton Blvd AM
Site Code :
Start Date : 11/15/2017
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Groups Printed- Car

	Carrollton Blvd Eastbound					Carrollton Blvd Westbound					Ashby Way Northbound					Omera Dr Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:30 AM	6	161	0	0	167	1	130	1	0	132	9	1	4	0	14	4	1	16	0	21	334
06:45 AM	8	190	1	0	199	0	132	3	0	135	6	0	4	0	10	9	0	17	0	26	370
Total	14	351	1	0	366	1	262	4	0	267	15	1	8	0	24	13	1	33	0	47	704
07:00 AM	11	176	0	0	187	3	157	4	0	164	25	0	6	0	31	10	0	20	0	30	412
07:15 AM	7	169	2	0	178	4	149	1	0	154	10	0	6	0	16	6	0	14	0	20	368
07:30 AM	12	202	3	0	217	1	186	0	0	187	8	0	4	0	12	5	0	13	0	18	434
07:45 AM	15	142	1	0	158	2	138	3	0	143	8	1	5	0	14	11	1	13	0	25	340
Total	45	689	6	0	740	10	630	8	0	648	51	1	21	0	73	32	1	60	0	93	1554
08:00 AM	12	131	1	0	144	6	140	4	0	150	7	2	6	0	15	6	0	23	0	29	338
08:15 AM	10	132	3	0	145	5	156	4	0	165	7	1	8	0	16	9	1	12	0	22	348
Grand Total	81	1303	11	0	1395	22	1188	20	0	1230	80	5	43	0	128	60	3	128	0	191	2944
Apprch %	5.8	93.4	0.8	0		1.8	96.6	1.6	0		62.5	3.9	33.6	0		31.4	1.6	67	0		
Total %	2.8	44.3	0.4	0	47.4	0.7	40.4	0.7	0	41.8	2.7	0.2	1.5	0	4.3	2	0.1	4.3	0	6.5	

	Carrollton Blvd Eastbound				Carrollton Blvd Westbound				Ashby Way Northbound				Omera Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	8	190	1	199	0	132	3	135	6	0	4	10	9	0	17	26	370
07:00 AM	11	176	0	187	3	157	**4**	164	**25**	0	**6**	**31**	**10**	0	**20**	**30**	412
07:15 AM	7	169	2	178	**4**	149	1	154	10	0	6	16	6	0	14	20	368
07:30 AM	**12**	**202**	**3**	**217**	1	**186**	0	**187**	8	0	4	12	5	0	13	18	**434**
Total Volume	38	737	6	781	8	624	8	640	49	0	20	69	30	0	64	94	1584
% App. Total	4.9	94.4	0.8		1.2	97.5	1.2		71	0	29		31.9	0	68.1		
PHF	.792	.912	.500	.900	.500	.839	.500	.856	.490	.000	.833	.556	.750	.000	.800	.783	.912

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File Name : Ashby Way_Omera Dr and Carrollton Blvd AM
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Groups Printed- Truck

	Carrollton Blvd Eastbound					Carrollton Blvd Westbound					Ashby Way Northbound					Omera Dr Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:30 AM	0	11	0	0	11	0	1	1	0	2	0	0	1	0	1	0	0	0	0	0	14
06:45 AM	0	7	0	0	7	1	4	2	0	7	1	0	0	0	1	1	0	3	0	4	19
Total	0	18	0	0	18	1	5	3	0	9	1	0	1	0	2	1	0	3	0	4	33
07:00 AM	0	3	0	0	3	0	5	0	0	5	0	0	0	0	0	0	0	1	0	1	9
07:15 AM	0	9	0	0	9	0	10	0	0	10	1	0	0	0	1	0	0	0	0	0	20
07:30 AM	1	12	0	0	13	0	14	0	0	14	0	0	0	0	0	0	0	0	0	0	27
07:45 AM	2	6	1	0	9	0	7	1	0	8	0	0	1	0	1	1	0	3	0	4	22
Total	3	30	1	0	34	0	36	1	0	37	1	0	1	0	2	1	0	4	0	5	78
08:00 AM	0	11	1	0	12	0	12	0	0	12	1	0	0	0	1	0	0	0	0	0	25
08:15 AM	1	4	0	0	5	0	10	1	0	11	0	0	0	0	0	0	0	2	0	2	18
Grand Total	4	63	2	0	69	1	63	5	0	69	3	0	2	0	5	2	0	9	0	11	154
Apprch %	5.8	91.3	2.9	0		1.4	91.3	7.2	0		60	0	40	0		18.2	0	81.8	0		
Total %	2.6	40.9	1.3	0	44.8	0.6	40.9	3.2	0	44.8	1.9	0	1.3	0	3.2	1.3	0	5.8	0	7.1	

	Carrollton Blvd Eastbound				Carrollton Blvd Westbound				Ashby Way Northbound				Omera Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	9	0	9	0	10	0	10	**1**	0	0	**1**	0	0	0	0	20
07:30 AM	1	**12**	0	**13**	0	**14**	0	**14**	0	0	0	0	0	0	0	0	**27**
07:45 AM	**2**	6	**1**	9	0	7	**1**	8	0	0	**1**	1	**1**	0	**3**	**4**	22
08:00 AM	0	11	1	12	0	12	0	12	1	0	0	1	0	0	0	0	25
Total Volume	3	38	2	43	0	43	1	44	2	0	1	3	1	0	3	4	94
% App. Total	7	88.4	4.7		0	97.7	2.3		66.7	0	33.3		25	0	75		
PHF	.375	.792	.500	.827	.000	.768	.250	.786	.500	.000	.250	.750	.250	.000	.250	.250	.870

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File Name : Ashby Way_Omera Dr and Carrollton Blvd AM
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Groups Printed- Combined

	Carrollton Blvd Eastbound					Carrollton Blvd Westbound					Ashby Way Northbound					Omera Dr Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:30 AM	6	172	0	0	178	1	131	2	0	134	9	1	5	0	15	4	1	16	0	21	348
06:45 AM	8	197	1	0	206	1	136	5	0	142	7	0	4	0	11	10	0	20	0	30	389
Total	14	369	1	0	384	2	267	7	0	276	16	1	9	0	26	14	1	36	0	51	737
07:00 AM	11	179	0	0	190	3	162	4	0	169	25	0	6	0	31	10	0	21	0	31	421
07:15 AM	7	178	2	0	187	4	159	1	0	164	11	0	6	0	17	6	0	14	0	20	388
07:30 AM	13	214	3	0	230	1	200	0	0	201	8	0	4	0	12	5	0	13	0	18	461
07:45 AM	17	148	2	0	167	2	145	4	0	151	8	1	6	0	15	12	1	16	0	29	362
Total	48	719	7	0	774	10	666	9	0	685	52	1	22	0	75	33	1	64	0	98	1632
08:00 AM	12	142	2	0	156	6	152	4	0	162	8	2	6	0	16	6	0	23	0	29	363
08:15 AM	11	136	3	0	150	5	166	5	0	176	7	1	8	0	16	9	1	14	0	24	366
Grand Total	85	1366	13	0	1464	23	1251	25	0	1299	83	5	45	0	133	62	3	137	0	202	3098
Apprch %	5.8	93.3	0.9	0		1.8	96.3	1.9	0		62.4	3.8	33.8	0		30.7	1.5	67.8	0		
Total %	2.7	44.1	0.4	0	47.3	0.7	40.4	0.8	0	41.9	2.7	0.2	1.5	0	4.3	2	0.1	4.4	0	6.5	

	Carrollton Blvd Eastbound				Carrollton Blvd Westbound				Ashby Way Northbound				Omera Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	8	197	1	206	1	136	**5**	142	7	0	4	11	**10**	0	20	30	389
07:00 AM	11	179	0	190	3	162	4	169	**25**	0	**6**	**31**	10	0	**21**	**31**	421
07:15 AM	7	178	2	187	**4**	159	1	164	11	0	6	17	6	0	14	20	388
07:30 AM	**13**	**214**	**3**	**230**	1	**200**	0	**201**	8	0	4	12	5	0	13	18	**461**
Total Volume	39	768	6	813	9	657	10	676	51	0	20	71	31	0	68	99	1659
% App. Total	4.8	94.5	0.7		1.3	97.2	1.5		71.8	0	28.2		31.3	0	68.7		
PHF	.750	.897	.500	.884	.563	.821	.500	.841	.510	.000	.833	.573	.775	.000	.810	.798	.900

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File Name : Ashby Way_Omera Dr and Carrollton Blvd PM
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Groups Printed- Car

	Carrollton Blvd Eastbound					Carrollton Blvd Westbound					Ashby Way Northbound					Omera Dr Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	19	186	15	0	220	6	155	2	0	163	3	2	2	0	7	9	2	15	0	26	416
04:15 PM	16	212	3	0	231	12	178	7	0	197	13	0	3	0	16	7	1	19	0	27	471
04:30 PM	19	245	10	0	274	9	159	3	0	171	9	2	6	0	17	9	0	22	0	31	493
04:45 PM	14	252	14	0	280	5	174	7	0	186	8	3	7	0	18	12	3	15	0	30	514
Total	68	895	42	0	1005	32	666	19	0	717	33	7	18	0	58	37	6	71	0	114	1894
05:00 PM	24	227	13	0	264	12	190	6	0	208	5	0	5	0	10	10	3	22	0	35	517
05:15 PM	29	226	4	0	259	4	221	5	0	230	7	1	1	0	9	10	0	18	0	28	526
05:30 PM	16	253	8	0	277	3	203	3	1	210	9	2	0	0	11	8	0	21	0	29	527
05:45 PM	21	225	8	0	254	5	215	2	0	222	6	0	3	0	9	10	0	13	0	23	508
Total	90	931	33	0	1054	24	829	16	1	870	27	3	9	0	39	38	3	74	0	115	2078
Grand Total	158	1826	75	0	2059	56	1495	35	1	1587	60	10	27	0	97	75	9	145	0	229	3972
Apprch %	7.7	88.7	3.6	0		3.5	94.2	2.2	0.1		61.9	10.3	27.8	0		32.8	3.9	63.3	0		
Total %	4	46	1.9	0	51.8	1.4	37.6	0.9	0	40	1.5	0.3	0.7	0	2.4	1.9	0.2	3.7	0	5.8	

	Carrollton Blvd Eastbound				Carrollton Blvd Westbound				Ashby Way Northbound				Omera Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	14	252	**14**	**280**	5	174	**7**	186	8	**3**	**7**	**18**	**12**	**3**	15	30	514
05:00 PM	24	227	13	264	**12**	190	6	208	5	0	5	10	10	3	**22**	**35**	517
05:15 PM	**29**	226	4	259	4	**221**	5	**230**	7	1	1	9	10	0	18	28	**526**
05:30 PM	16	**253**	8	277	3	203	3	209	**9**	2	0	11	8	0	21	29	526
Total Volume	83	958	39	1080	24	788	21	833	29	6	13	48	40	6	76	122	2083
% App. Total	7.7	88.7	3.6		2.9	94.6	2.5		60.4	12.5	27.1		32.8	4.9	62.3		
PHF	.716	.947	.696	.964	.500	.891	.750	.905	.806	.500	.464	.667	.833	.500	.864	.871	.990

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File Name : Ashby Way_Omera Dr and Carrollton Blvd PM
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Groups Printed- Truck

	Carrollton Blvd Eastbound					Carrollton Blvd Westbound					Ashby Way Northbound					Omera Dr Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	3	5	1	0	9	0	3	0	0	3	0	0	0	0	0	1	0	1	0	2	14
04:15 PM	0	7	1	0	8	0	5	0	0	5	1	0	1	0	2	0	0	2	0	2	17
04:30 PM	1	7	0	0	8	1	5	0	0	6	0	0	0	0	0	1	0	0	0	1	15
04:45 PM	1	2	0	0	3	0	8	0	0	8	0	0	0	0	0	1	0	1	0	2	13
Total	5	21	2	0	28	1	21	0	0	22	1	0	1	0	2	3	0	4	0	7	59
05:00 PM	1	5	0	0	6	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	10
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	2
05:30 PM	0	4	0	0	4	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	6
05:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	1	11	0	0	12	0	7	0	0	7	0	0	0	0	0	0	0	1	0	1	20
Grand Total	6	32	2	0	40	1	28	0	0	29	1	0	1	0	2	3	0	5	0	8	79
Apprch %	15	80	5	0		3.4	96.6	0	0		50	0	50	0		37.5	0	62.5	0		
Total %	7.6	40.5	2.5	0	50.6	1.3	35.4	0	0	36.7	1.3	0	1.3	0	2.5	3.8	0	6.3	0	10.1	

	Carrollton Blvd Eastbound				Carrollton Blvd Westbound				Ashby Way Northbound				Omera Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**3**	5	**1**	**9**	0	3	0	3	0	0	0	0	**1**	0	1	**2**	14
04:15 PM	0	**7**	1	8	0	5	0	5	**1**	0	**1**	**2**	0	0	**2**	2	**17**
04:30 PM	1	7	0	8	**1**	5	0	6	0	0	0	0	1	0	0	1	15
04:45 PM	1	2	0	3	0	**8**	0	**8**	0	0	0	0	1	0	1	2	13
Total Volume	5	21	2	28	1	21	0	22	1	0	1	2	3	0	4	7	59
% App. Total	17.9	75	7.1		4.5	95.5	0		50	0	50		42.9	0	57.1		
PHF	.417	.750	.500	.778	.250	.656	.000	.688	.250	.000	.250	.250	.750	.000	.500	.875	.868

Peggy Malone & Associates
(800) 247-8602

File Name : Ashby Way_Omera Dr and Carrollton Blvd PM
Site Code :
Start Date : 11/15/2017
Page No : 1

Groups Printed- Combined

	Carrollton Blvd Eastbound					Carrollton Blvd Westbound					Ashby Way Northbound					Omera Dr Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	22	191	16	0	229	6	158	2	0	166	3	2	2	0	7	10	2	16	0	28	430
04:15 PM	16	219	4	0	239	12	183	7	0	202	14	0	4	0	18	7	1	21	0	29	488
04:30 PM	20	252	10	0	282	10	164	3	0	177	9	2	6	0	17	10	0	22	0	32	508
04:45 PM	15	254	14	0	283	5	182	7	0	194	8	3	7	0	18	13	3	16	0	32	527
Total	73	916	44	0	1033	33	687	19	0	739	34	7	19	0	60	40	6	75	0	121	1953
05:00 PM	25	232	13	0	270	12	194	6	0	212	5	0	5	0	10	10	3	22	0	35	527
05:15 PM	29	226	4	0	259	4	222	5	0	231	7	1	1	0	9	10	0	19	0	29	528
05:30 PM	16	257	8	0	281	3	205	3	1	212	9	2	0	0	11	8	0	21	0	29	533
05:45 PM	21	227	8	0	256	5	215	2	0	222	6	0	3	0	9	10	0	13	0	23	510
Total	91	942	33	0	1066	24	836	16	1	877	27	3	9	0	39	38	3	75	0	116	2098
Grand Total	164	1858	77	0	2099	57	1523	35	1	1616	61	10	28	0	99	78	9	150	0	237	4051
Apprch %	7.8	88.5	3.7	0		3.5	94.2	2.2	0.1		61.6	10.1	28.3	0		32.9	3.8	63.3	0		
Total %	4	45.9	1.9	0	51.8	1.4	37.6	0.9	0	39.9	1.5	0.2	0.7	0	2.4	1.9	0.2	3.7	0	5.9	

	Carrollton Blvd Eastbound				Carrollton Blvd Westbound				Ashby Way Northbound				Omera Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	15	254	**14**	**283**	5	182	**7**	194	8	**3**	**7**	**18**	**13**	**3**	16	32	527
05:00 PM	25	232	13	270	**12**	194	6	212	5	0	5	10	10	3	**22**	**35**	527
05:15 PM	**29**	226	4	259	4	**222**	5	**231**	7	1	1	9	10	0	19	29	528
05:30 PM	16	**257**	8	281	3	205	3	211	**9**	2	0	11	8	0	21	29	**532**
Total Volume	85	969	39	1093	24	803	21	848	29	6	13	48	41	6	78	125	2114
% App. Total	7.8	88.7	3.6		2.8	94.7	2.5		60.4	12.5	27.1		32.8	4.8	62.4		
PHF	.733	.943	.696	.966	.500	.904	.750	.918	.806	.500	.464	.667	.788	.500	.886	.893	.993

Peggy Malone & Associates

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 10/16/2018

Station: Site 1
ID: 000000023827
Loc:: Channell Way, N of Baltimore Lane
Direction: EAST

File: D1016001.prn
Info:: 18-350 TS Min
GPS: 37.94057, -77.53134

TIME	MON		TUE		WED		THU		FRI		SAT		SUN		WK TOT		WK AVG	
			16		17		18											
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15			0	6	0	2	1	2							1	10	0	3
00:30			1	7	0	3	0	10							1	20	0	7
00:45			2	6	0	4	0	4							2	14	1	5
01:00			0	2	0	2	1	5							1	9	0	3
01:15			1	4	1	0	1	4							3	8	1	3
01:30			0	4	0	1	0	3							0	8	0	3
01:45			0	2	0	2	0	0							0	4	0	1
02:00			0	8	0	1	0	2							0	11	0	4
02:15			0	1	0	3	0	4							0	8	0	3
02:30			0	7	0	3	0	6							0	16	0	5
02:45			0	4	0	5	0	1							0	10	0	3
03:00			0	3	0	8	0	3							0	14	0	5
03:15			0	7	0	7	0	10							0	24	0	8
03:30			0	11	0	5	0	5							0	21	0	7
03:45			0	6	0	11	0	9							0	26	0	9
04:00			0	8	0	9	0	6							0	23	0	8
04:15			0	7	0	10	0	10							0	27	0	9
04:30			0	10	0	7	0	7							0	24	0	8
04:45			0	10	0	7	0	8							0	25	0	8
05:00			0	5	0	11	0	13							0	29	0	10
05:15			0	9	0	9	0	10							0	28	0	9
05:30			0	10	0	2	0	8							0	20	0	7
05:45			0	8	0	6	0	4							0	18	0	6
06:00			0	5	0	9	0	6							0	20	0	7
06:15			0	5	1	8	0	8							1	21	0	7
06:30			1	6	0	7	1	3							2	16	1	5
06:45			2	8	3	3	0	5							5	16	2	5
07:00			4	3	1	4	2	3							7	10	2	3
07:15			2	2	0	5	3	4							5	11	2	4
07:30			8	3	4	6	4	8							16	17	5	6
07:45			5	4	3	3	3	3							11	10	4	3
08:00			2	5	1	7	1	5							4	17	1	6
08:15			5	3	4	5	4	1							13	9	4	3
08:30			2	1	0	1	0	2							2	4	1	1
08:45			3	2	3	1	2	2							8	5	3	2
09:00			0	2	3	2	2	2							5	6	2	2
09:15			2	6	1	2	2	3							5	11	2	4
09:30			5	1	2	0	3	0							10	1	3	0
09:45			3	0	4	2	1	3							8	5	3	2
10:00			4	0	4	2	0	2							8	4	3	1
10:15			0	2	3	1	3	1							6	4	2	1
10:30			4	3	3	4	3	0							10	7	3	2
10:45			2	1	6	0	3	1							11	2	4	1
11:00			3	0	3	2	1	2							7	4	2	1
11:15			4	0	1	0	4	2							9	2	3	1
11:30			2	0	1	1	1	2							4	3	1	1
11:45			4	1	7	1	4	1							15	3	5	1
12:00			4	0	2	0	2	1							8	1	3	0
TOTALS			283		255		256								794		266	
AM Times			12:00		10:00		11:45								11:45		11:45	
AM Peaks			23		16		18								53		16	
AM PHF			0.82		0.67		0.45								0.66		0.67	
PM Times			16:00		15:45		16:45								16:30		16:15	
PM Peaks			35		37		39								106		34	
PM PHF			0.88		0.84		0.75								0.91		0.94	

Station: Site 1
ID: 000000023827
Loc:: Channell Way, N of Baltimore Lane
Direction: WEST

File: D1016001.prn
Info:: 18-350 TS Min
GPS: 37.94057, -77.53134

TIME	MON		TUE		WED		THU		FRI		SAT		SUN		WK TOT		WK AVG	
			16		17		18											
Lane 2	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15			0	6	0	3	0	3							0	12	0	4
00:30			0	9	0	3	0	5							0	17	0	6
00:45			0	4	0	3	0	5							0	12	0	4
01:00			0	3	0	2	0	5							0	10	0	3
01:15			0	7	0	8	0	4							0	19	0	6
01:30			0	3	0	2	0	3							0	8	0	3
01:45			0	7	0	0	0	5							0	12	0	4
02:00			0	1	0	10	0	2							0	13	0	4
02:15			0	3	0	9	0	5							0	17	0	6
02:30			0	7	0	0	0	5							0	12	0	4
02:45			0	4	0	2	0	3							0	9	0	3
03:00			0	8	0	1	0	3							0	12	0	4
03:15			0	7	0	4	0	2							0	13	0	4
03:30			0	5	0	4	0	6							0	15	0	5
03:45			0	3	0	7	0	6							0	16	0	5
04:00			0	5	0	7	0	5							0	17	0	6
04:15			0	4	0	4	0	3							0	11	0	4
04:30			0	5	0	5	0	4							0	14	0	5
04:45			1	9	0	6	1	6							2	21	1	7
05:00			0	7	1	4	0	4							1	15	0	5
05:15			0	7	1	6	2	6							3	19	1	6
05:30			3	7	3	7	2	6							8	20	3	7
05:45			3	10	3	10	2	6							8	26	3	9
06:00			2	4	0	7	3	3							5	14	2	5
06:15			1	8	3	7	2	5							6	20	2	7
06:30			6	3	5	5	9	5							20	13	7	4
06:45			6	4	5	4	8	4							19	12	6	4
07:00			9	5	7	5	5	4							21	14	7	5
07:15			9	2	10	2	14	5							33	9	11	3
07:30			6	2	2	4	5	8							13	14	4	5
07:45			9	1	7	0	5	2							21	3	7	1
08:00			4	0	6	2	7	2							17	4	6	1
08:15			4	1	4	0	5	0							13	1	4	0
08:30			11	2	8	0	8	0							27	2	9	1
08:45			9	1	5	0	10	0							24	1	8	0
09:00			7	1	4	0	5	1							16	2	5	1
09:15			4	2	6	2	3	0							13	4	4	1
09:30			6	0	7	0	3	0							16	0	5	0
09:45			5	0	3	1	4	0							12	1	4	0
10:00			1	0	1	0	2	0							4	0	1	0
10:15			5	0	8	1	4	0							17	1	6	0
10:30			3	1	4	1	2	0							9	2	3	1
10:45			2	0	6	0	1	0							9	0	3	0
11:00			3	0	1	0	3	1							7	1	2	0
11:15			1	1	5	0	2	1							8	2	3	1
11:30			1	0	6	0	5	0							12	0	4	0
11:45			3	0	9	0	6	1							18	1	6	0
12:00			3	0	5	0	0	0							8	0	3	0
TOTALS			296		283		272								851		284	
AM Times			07:00		06:30		06:30								06:30		06:30	
AM Peaks			33		27		36								93		30	
AM PHF			0.92		0.68		0.64								0.70		0.68	
PM Times			17:00		17:30		16:45								17:00		17:00	
PM Peaks			31		31		22								80		25	
PM PHF			0.78		0.78		0.92								0.77		0.78	

Station: Site 1
ID: 000000023827
Loc:: Channell Way, N of Baltimore Lane
Direction: ROAD TOTAL

File: D1016001.prn
Info:: 18-350 TS Min
GPS: 37.94057, -77.53134

TIME	MON		TUE		WED		THU		FRI		SAT		SUN		WK TOT		WK AVG	
			16		17		18											
	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15			0	12	0	5	1	5							1	22	0	7
00:30			1	16	0	6	0	15							1	37	0	12
00:45			2	10	0	7	0	9							2	26	1	9
01:00			0	5	0	4	1	10							1	19	0	6
01:15			1	11	1	8	1	8							3	27	1	9
01:30			0	7	0	3	0	6							0	16	0	5
01:45			0	9	0	2	0	5							0	16	0	5
02:00			0	9	0	11	0	4							0	24	0	8
02:15			0	4	0	12	0	9							0	25	0	8
02:30			0	14	0	3	0	11							0	28	0	9
02:45			0	8	0	7	0	4							0	19	0	6
03:00			0	11	0	9	0	6							0	26	0	9
03:15			0	14	0	11	0	12							0	37	0	12
03:30			0	16	0	9	0	11							0	36	0	12
03:45			0	9	0	18	0	15							0	42	0	14
04:00			0	13	0	16	0	11							0	40	0	13
04:15			0	11	0	14	0	13							0	38	0	13
04:30			0	15	0	12	0	11							0	38	0	13
04:45			1	19	0	13	1	14							2	46	1	15
05:00			0	12	1	15	0	17							1	44	0	15
05:15			0	16	1	15	2	16							3	47	1	16
05:30			3	17	3	9	2	14							8	40	3	13
05:45			3	18	3	16	2	10							8	44	3	15
06:00			2	9	0	16	3	9							5	34	2	11
06:15			1	13	4	15	2	13							7	41	2	14
06:30			7	9	5	12	10	8							22	29	7	10
06:45			8	12	8	7	8	9							24	28	8	9
07:00			13	8	8	9	7	7							28	24	9	8
07:15			11	4	10	7	17	9							38	20	13	7
07:30			14	5	6	10	9	16							29	31	10	10
07:45			14	5	10	3	8	5							32	13	11	4
08:00			6	5	7	9	8	7							21	21	7	7
08:15			9	4	8	5	9	1							26	10	9	3
08:30			13	3	8	1	8	2							29	6	10	2
08:45			12	3	8	1	12	2							32	6	11	2
09:00			7	3	7	2	7	3							21	8	7	3
09:15			6	8	7	4	5	3							18	15	6	5
09:30			11	1	9	0	6	0							26	1	9	0
09:45			8	0	7	3	5	3							20	6	7	2
10:00			5	0	5	2	2	2							12	4	4	1
10:15			5	2	11	2	7	1							23	5	8	2
10:30			7	4	7	5	5	0							19	9	6	3
10:45			4	1	12	0	4	1							20	2	7	1
11:00			6	0	4	2	4	3							14	5	5	2
11:15			5	1	6	0	6	3							17	4	6	1
11:30			3	0	7	1	6	2							16	3	5	1
11:45			7	1	16	1	10	2							33	4	11	1
12:00			7	0	7	0	2	1							16	1	5	0
TOTALS			579		538		528								1645		548	
AM Times			07:00		11:15		06:30								07:00		07:00	
AM Peaks			52		36		42								127		40	
AM PHF			0.93		0.56		0.62								0.84		0.83	
PM Times			16:45		15:45		16:45								16:45		16:45	
PM Peaks			64		60		61								177		57	
PM PHF			0.84		0.83		0.90								0.94		0.95	

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002021.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
00:30	1	7	1	0	0	0	0	0	0	0	0	0	0	0	0	9
00:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
01:00	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	11
Hour Total	1	26	2	0	0	0	0	0	0	0	0	0	0	0	0	29
01:15	0	19	1	0	1	0	0	0	0	0	0	0	0	0	0	21
01:30	0	15	1	0	0	0	0	0	0	0	0	0	0	0	0	16
01:45	0	12	0	0	0	0	0	1	0	0	0	0	0	0	0	13
02:00	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
Hour Total	0	52	3	0	1	0	0	1	0	0	0	0	0	0	0	57
02:15	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
02:30	0	15	1	0	0	0	0	0	0	0	0	0	0	0	0	16
02:45	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
03:00	0	11	0	0	0	0	0	0	2	0	0	0	0	0	0	13
Hour Total	0	43	1	0	0	0	0	0	2	0	0	0	0	0	0	46
03:15	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
03:30	0	8	4	0	0	0	0	0	0	0	0	0	0	0	0	12
03:45	0	8	3	0	0	0	0	0	0	0	0	0	0	0	0	11
04:00	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	10
Hour Total	0	26	13	0	0	0	0	0	0	0	0	0	0	0	0	39
04:15	0	13	4	0	0	0	0	0	0	0	0	0	0	0	0	17
04:30	0	24	9	0	0	0	0	0	0	0	0	0	0	0	0	33
04:45	0	36	19	0	0	0	0	0	0	0	0	0	0	0	0	55
05:00	0	39	14	0	0	0	0	0	0	0	0	0	0	0	0	53
Hour Total	0	112	46	0	0	0	0	0	0	0	0	0	0	0	0	158
05:15	0	53	22	0	0	0	0	0	0	0	0	0	0	0	0	75
05:30	1	77	46	0	0	0	0	0	0	0	0	0	0	0	0	124
05:45	2	103	48	0	0	0	0	2	0	0	0	0	0	0	0	155
06:00	3	88	41	0	0	1	0	0	0	0	0	0	0	0	0	133
Hour Total	6	321	157	0	0	1	0	2	0	0	0	0	0	0	0	487
06:15	1	113	50	0	0	0	0	0	2	0	0	1	0	0	0	167
06:30	2	154	63	0	1	0	0	1	0	0	0	0	0	0	0	221
06:45	0	185	64	0	2	0	0	1	0	0	0	1	0	0	0	253
07:00	0	178	53	0	2	1	0	0	0	0	1	1	0	0	0	236
Hour Total	3	630	230	0	5	1	0	2	2	0	1	3	0	0	0	877
07:15	2	238	63	0	0	0	0	0	0	0	0	1	0	0	0	304
07:30	4	257	59	0	0	0	0	0	0	0	0	0	0	0	0	320
07:45	0	263	60	0	0	0	0	0	0	0	0	0	0	0	0	323
08:00	1	190	36	0	1	0	0	0	0	0	0	0	0	0	0	228
Hour Total	7	948	218	0	1	0	0	0	0	0	0	1	0	0	0	1175
08:15	0	142	26	0	2	0	0	1	0	0	0	0	0	0	0	171
08:30	1	145	27	1	1	0	0	0	0	0	0	0	0	0	0	175
08:45	1	141	28	1	0	0	0	0	0	0	0	0	0	0	0	171
09:00	0	97	23	0	0	0	0	1	0	0	0	0	0	0	0	121

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002021.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	2	525	104	2	3	0	0	2	0	0	0	0	0	0	0	638
09:15	0	114	20	0	0	0	0	0	0	0	0	0	0	0	0	134
09:30	2	83	27	0	1	0	0	0	2	0	0	0	0	0	0	115
09:45	0	77	18	0	1	1	0	1	2	0	0	0	0	0	0	100
10:00	0	61	22	0	0	1	0	0	2	0	0	0	0	0	0	86
Hour Total	2	335	87	0	2	2	0	1	6	0	0	0	0	0	0	435
10:15	0	76	18	0	1	0	1	0	1	0	0	0	0	0	0	97
10:30	0	70	12	0	1	0	0	0	0	0	0	0	0	0	0	83
10:45	0	82	15	0	1	0	0	0	1	0	0	0	0	0	0	99
11:00	0	68	13	0	2	0	0	1	0	0	0	0	0	0	0	84
Hour Total	0	296	58	0	5	0	1	1	2	0	0	0	0	0	0	363
11:15	0	71	16	0	1	0	1	1	0	0	0	0	0	0	0	90
11:30	0	57	10	0	0	0	1	0	0	0	0	0	0	0	0	68
11:45	0	65	12	0	1	0	0	0	0	0	0	0	0	0	0	78
12:00	0	65	17	0	1	0	0	0	1	0	0	0	0	0	0	84
Hour Total	0	258	55	0	3	0	2	1	1	0	0	0	0	0	0	320
12:15	0	60	25	0	1	0	1	0	0	0	0	0	0	0	0	87
12:30	0	55	18	0	0	0	0	0	0	0	0	0	0	0	0	73
12:45	0	67	12	0	1	0	1	1	0	0	0	0	0	0	0	82
13:00	0	71	22	0	2	1	0	0	0	0	0	0	0	0	0	96
Hour Total	0	253	77	0	4	1	2	1	0	0	0	0	0	0	0	338
13:15	0	48	24	0	0	1	1	0	0	0	0	0	0	0	0	74
13:30	1	69	22	0	0	0	0	0	0	0	0	0	0	0	0	92
13:45	1	60	14	0	2	0	0	0	0	0	0	0	0	0	0	77
14:00	0	69	19	0	2	0	0	0	0	0	0	0	0	0	0	90
Hour Total	2	246	79	0	4	1	1	0	0	0	0	0	0	0	0	333
14:15	0	63	18	0	1	0	0	0	0	0	0	0	0	0	0	82
14:30	0	65	16	0	1	0	1	0	0	0	0	0	0	0	0	83
14:45	1	67	24	0	1	0	0	0	0	0	0	0	0	0	0	93
15:00	1	63	26	0	1	0	0	0	0	0	0	1	0	0	0	92
Hour Total	2	258	84	0	4	0	1	0	0	0	0	1	0	0	0	350
15:15	0	66	12	0	2	0	0	0	0	0	0	0	0	0	0	80
15:30	1	78	22	0	3	0	0	0	0	0	0	0	0	0	0	104
15:45	0	86	20	0	0	0	0	0	0	0	0	0	0	0	0	106
16:00	1	79	22	0	0	0	0	0	0	0	0	0	0	0	0	102
Hour Total	2	309	76	0	5	0	0	0	0	0	0	0	0	0	0	392
16:15	0	72	21	0	1	1	0	0	0	0	0	0	0	0	0	95
16:30	1	114	19	0	1	0	0	0	0	0	0	0	0	0	0	135
16:45	0	76	26	0	1	0	0	0	0	0	0	0	0	0	0	103
17:00	1	97	23	0	0	0	0	0	0	0	0	0	0	0	0	121
Hour Total	2	359	89	0	3	1	0	0	0	0	0	0	0	0	0	454

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002021.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	101	19	0	0	0	0	1	0	0	0	0	0	0	0	121
17:30	0	99	21	1	1	0	0	0	0	0	0	0	0	0	0	122
17:45	2	97	17	0	2	0	0	0	0	0	0	0	0	0	0	118
18:00	0	83	28	0	2	0	0	0	0	0	0	0	0	0	0	113
Hour Total	2	380	85	1	5	0	0	1	0	0	0	0	0	0	0	474
18:15	0	92	12	0	0	0	0	0	0	0	0	0	0	0	0	104
18:30	0	79	20	0	0	0	0	0	0	0	0	0	0	0	0	99
18:45	0	75	17	0	0	0	0	0	0	0	0	0	0	0	0	92
19:00	0	51	12	0	0	0	0	0	0	0	0	0	0	0	0	63
Hour Total	0	297	61	0	0	0	0	0	0	0	0	0	0	0	0	358
19:15	0	43	23	0	0	0	0	0	0	0	0	0	0	0	0	66
19:30	0	43	5	0	0	0	0	0	0	0	0	0	0	0	0	48
19:45	0	38	12	0	0	0	0	0	0	0	0	0	0	0	0	50
20:00	0	29	8	0	0	0	0	0	1	0	0	0	0	0	0	38
Hour Total	0	153	48	0	0	0	0	0	1	0	0	0	0	0	0	202
20:15	0	35	5	0	0	0	0	0	0	0	0	0	0	0	0	40
20:30	0	37	6	0	0	0	0	0	1	0	0	0	0	0	0	44
20:45	0	31	5	0	0	0	0	0	0	0	0	0	0	0	0	36
21:00	0	27	4	0	0	0	0	0	0	0	0	0	0	0	0	31
Hour Total	0	130	20	0	0	0	0	0	1	0	0	0	0	0	0	151
21:15	0	24	3	0	0	0	0	0	1	0	0	0	0	0	0	28
21:30	0	23	1	0	0	0	0	0	0	0	0	0	0	0	0	24
21:45	0	20	4	0	0	0	0	0	0	0	0	0	0	0	0	24
22:00	0	14	4	0	0	0	0	0	0	0	0	0	0	0	0	18
Hour Total	0	81	12	0	0	0	0	0	1	0	0	0	0	0	0	94
22:15	1	13	0	0	0	0	0	0	0	0	0	0	0	0	0	14
22:30	0	17	4	0	1	0	0	0	0	0	0	0	0	0	0	22
22:45	0	17	1	0	0	0	0	0	0	0	0	0	0	0	0	18
23:00	0	10	2	0	0	0	0	0	0	0	0	0	0	0	0	12
Hour Total	1	57	7	0	1	0	0	0	0	0	0	0	0	0	0	66
23:15	0	10	2	0	0	0	0	0	0	0	0	0	0	0	0	12
23:30	0	7	0	0	0	0	0	0	1	0	0	0	0	0	0	8
23:45	0	11	1	0	0	0	0	0	0	0	0	0	0	0	0	12
24:00	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour Total	0	34	3	0	0	0	0	0	1	0	0	0	0	0	0	38
DAY TOTAL	32	6129	1615	3	46	7	7	12	17	0	1	5	0	0	0	7874
PERCENTS	0.5%	77.9%	20.6%	0.1%	0.6%	0.0%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 98.7% Trucks & Buses 1.2%

AM Times	05:45	07:15	06:30	08:00	06:15	09:15	10:45	05:45	09:30		06:15	06:15				07:00
AM Peaks	8	948	243	2	5	2	2	3	7		1	3				1183
PM Times	14:45	17:00	16:15	16:45	14:45	12:30	12:15	12:15	19:45			14:15				17:00
PM Peaks	3	394	89	1	7	2	2	1	2			1				482

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002021.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
00:30	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	10
00:45	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	17
01:00	0	23	1	0	0	0	0	0	0	0	0	0	0	0	0	24
Hour Total	0	50	4	0	0	0	0	0	0	0	0	0	0	0	0	54
01:15	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
01:30	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	9
01:45	0	12	1	0	0	0	0	0	0	0	0	0	0	0	0	13
02:00	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Hour Total	0	37	2	0	0	0	0	0	0	0	0	0	0	0	0	39
02:15	1	12	0	0	0	0	0	0	1	0	0	0	0	0	0	14
02:30	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8
02:45	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	9
03:00	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8
Hour Total	1	34	3	0	0	0	0	0	1	0	0	0	0	0	0	39
03:15	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
03:30	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	11
03:45	0	7	5	0	0	0	0	0	0	0	0	0	0	0	0	12
04:00	0	8	3	0	0	0	0	0	0	0	0	0	0	0	0	11
Hour Total	0	32	10	0	0	0	0	0	0	0	0	0	0	0	0	42
04:15	1	10	7	0	0	0	0	0	0	0	0	0	0	0	0	18
04:30	0	22	12	0	0	1	0	0	0	0	0	0	0	0	0	35
04:45	0	31	17	0	0	1	0	0	0	0	0	0	0	0	0	49
05:00	0	49	15	0	0	0	0	0	0	0	0	0	0	0	0	64
Hour Total	1	112	51	0	0	2	0	0	0	0	0	0	0	0	0	166
05:15	0	50	27	0	0	0	0	0	0	0	0	0	0	0	0	77
05:30	1	74	47	0	0	0	0	0	0	0	0	0	0	0	0	122
05:45	1	113	42	0	0	0	0	1	1	0	0	0	0	0	0	158
06:00	3	110	41	0	1	1	0	0	0	0	0	0	0	0	0	156
Hour Total	5	347	157	0	1	1	0	1	1	0	0	0	0	0	0	513
06:15	1	123	47	0	2	0	0	1	1	0	0	0	0	0	0	175
06:30	4	139	54	0	0	0	0	0	1	0	0	0	0	0	0	198
06:45	2	197	65	1	0	0	0	0	0	0	0	0	0	0	0	265
07:00	1	183	42	0	0	2	2	0	0	0	0	0	0	0	0	230
Hour Total	8	642	208	1	2	2	2	1	2	0	0	0	0	0	0	868
07:15	2	244	53	0	0	0	0	0	0	0	0	0	0	0	0	299
07:30	1	216	63	0	0	0	0	1	0	0	0	0	0	0	0	281
07:45	0	290	48	0	1	0	1	1	0	0	0	0	0	0	0	341
08:00	2	165	35	0	0	1	0	0	2	0	0	0	0	0	0	205
Hour Total	5	915	199	0	1	1	1	2	2	0	0	0	0	0	0	1126
08:15	2	151	41	0	3	0	0	0	0	0	1	0	0	0	0	198
08:30	0	129	26	1	0	0	0	0	0	0	0	0	0	0	0	156
08:45	1	117	29	0	0	0	1	0	0	0	0	0	0	0	0	148
09:00	0	103	25	0	0	0	1	0	0	0	0	0	0	0	0	129

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002021.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	3	500	121	1	3	0	2	0	0	0	1	0	0	0	0	631
09:15	0	77	21	0	1	0	0	0	0	0	0	0	0	0	0	99
09:30	0	75	22	0	0	0	0	0	0	0	1	0	0	0	0	98
09:45	0	95	15	0	0	0	1	0	0	0	0	0	0	0	0	111
10:00	1	61	17	0	1	0	0	1	1	0	0	0	0	0	0	82
Hour Total	1	308	75	0	2	0	1	1	1	0	1	0	0	0	0	390
10:15	1	97	14	0	1	0	0	0	0	0	0	0	0	0	0	113
10:30	0	58	17	0	0	0	1	0	0	0	0	0	0	0	0	76
10:45	1	54	22	0	0	2	0	0	0	0	0	0	0	0	0	79
11:00	1	68	15	0	0	1	0	0	0	0	0	0	0	0	0	85
Hour Total	3	277	68	0	1	3	1	0	0	0	0	0	0	0	0	353
11:15	0	72	23	0	0	0	0	0	1	0	0	0	0	0	0	96
11:30	0	72	16	0	0	0	0	0	0	0	0	0	0	0	0	88
11:45	0	58	16	0	1	0	0	0	0	0	0	0	0	0	0	75
12:00	0	62	20	0	1	0	0	0	0	0	0	0	0	0	0	83
Hour Total	0	264	75	0	2	0	0	0	1	0	0	0	0	0	0	342
12:15	1	49	26	0	1	0	1	0	0	0	0	0	0	0	0	78
12:30	0	62	15	0	0	0	0	1	0	0	0	0	0	0	0	78
12:45	0	61	18	0	1	0	1	0	0	0	0	0	0	0	0	81
13:00	1	58	15	0	1	0	0	0	1	0	0	0	0	0	0	76
Hour Total	2	230	74	0	3	0	2	1	1	0	0	0	0	0	0	313
13:15	0	67	18	0	0	0	0	0	0	0	0	0	0	0	0	85
13:30	0	71	17	0	0	0	0	0	0	0	0	0	0	0	0	88
13:45	1	59	20	0	0	0	0	0	1	0	0	0	0	0	0	81
14:00	0	58	8	0	0	0	0	0	0	0	0	0	0	0	0	66
Hour Total	1	255	63	0	0	0	0	0	1	0	0	0	0	0	0	320
14:15	0	70	16	0	0	1	0	0	0	0	0	0	0	0	0	87
14:30	3	69	18	0	0	0	0	0	1	0	0	0	0	0	0	91
14:45	1	83	20	0	1	0	0	0	0	0	0	0	0	0	0	105
15:00	0	69	21	0	0	0	0	0	0	0	0	0	0	0	0	90
Hour Total	4	291	75	0	1	1	0	0	1	0	0	0	0	0	0	373
15:15	0	69	14	1	0	0	0	0	0	0	0	0	0	0	0	84
15:30	0	65	11	0	1	0	0	1	0	0	0	0	0	0	0	78
15:45	0	67	21	0	0	2	0	0	0	0	0	0	0	0	0	90
16:00	0	78	19	0	0	1	0	0	1	0	0	0	0	0	0	99
Hour Total	0	279	65	1	1	3	0	1	1	0	0	0	0	0	0	351
16:15	1	80	18	1	0	0	0	2	0	0	0	0	0	0	0	102
16:30	1	131	19	0	0	1	0	0	0	0	0	0	0	0	0	152
16:45	1	121	17	0	1	0	0	0	0	0	0	0	0	0	0	140
17:00	0	114	26	0	0	1	0	0	0	0	0	0	0	0	0	141
Hour Total	3	446	80	1	1	2	0	2	0	0	0	0	0	0	0	535

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002021.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	126	19	0	1	0	0	0	0	0	0	0	0	0	0	146
17:30	0	95	16	0	1	1	0	0	0	0	0	0	0	0	0	113
17:45	2	107	26	0	0	0	0	0	0	0	0	0	0	0	0	135
18:00	1	90	23	0	0	0	0	0	0	0	0	0	0	0	0	114
Hour Total	3	418	84	0	2	1	0	0	0	0	0	0	0	0	0	508
18:15	0	91	20	0	0	0	0	0	0	0	0	0	0	0	0	111
18:30	0	72	26	0	0	0	0	2	0	0	0	0	0	0	0	100
18:45	2	72	17	0	0	0	0	0	0	0	0	0	0	0	0	91
19:00	1	62	8	0	0	0	0	0	0	0	0	0	0	0	0	71
Hour Total	3	297	71	0	0	0	0	2	0	0	0	0	0	0	0	373
19:15	0	42	15	0	0	0	0	0	0	0	0	0	0	0	0	57
19:30	1	49	12	0	1	0	0	0	0	0	0	0	0	0	0	63
19:45	3	48	14	0	0	0	0	0	0	0	0	0	0	0	0	65
20:00	1	37	16	0	0	0	0	0	0	0	0	0	0	0	0	54
Hour Total	5	176	57	0	1	0	0	0	0	0	0	0	0	0	0	239
20:15	0	33	3	0	0	0	0	0	0	0	0	0	0	0	0	36
20:30	0	28	6	0	0	0	0	0	0	0	0	0	0	0	0	34
20:45	0	30	4	0	0	0	0	0	0	0	0	0	0	0	0	34
21:00	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	25
Hour Total	0	116	13	0	0	0	0	0	0	0	0	0	0	0	0	129
21:15	0	35	5	0	0	0	0	0	0	0	0	0	0	0	0	40
21:30	0	28	3	0	0	0	0	0	0	0	0	0	0	0	0	31
21:45	0	32	2	0	0	0	0	0	0	0	0	0	0	0	0	34
22:00	0	27	5	0	0	0	0	0	0	0	0	0	0	0	0	32
Hour Total	0	122	15	0	0	0	0	0	0	0	0	0	0	0	0	137
22:15	0	17	4	0	0	0	0	0	0	0	0	0	0	0	0	21
22:30	0	21	5	0	0	0	0	0	0	0	0	0	0	0	0	26
22:45	0	17	2	0	0	0	0	0	0	0	0	0	0	0	0	19
23:00	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Hour Total	0	66	11	0	0	0	0	0	0	0	0	0	0	0	0	77
23:15	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	11
23:30	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
23:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
24:00	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	22	2	0	0	0	0	0	0	0	0	0	0	0	0	24
DAY TOTAL	48	6236	1583	4	21	16	9	11	12	0	2	0	0	0	0	7942
PERCENTS	0.7%	78.6%	20.0%	0.0%	0.2%	0.2%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 99.0% Trucks & Buses 0.9%

AM Times	06:00	07:00	06:45	06:00	07:30	10:15	07:00	05:30	05:45		07:30					07:00
AM Peaks	10	933	223	1	4	3	3	2	3		1					1151
PM Times	19:00	16:30	17:45	14:30	12:15	15:45	12:15	15:30	13:00							16:30
PM Peaks	5	492	95	1	3	4	2	3	2							579

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002021.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
00:30	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
00:45	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	10
01:00	0	17	2	0	0	0	0	0	0	0	0	0	0	0	0	19
Hour Total	0	33	6	0	0	0	0	0	0	0	0	0	0	0	0	39
01:15	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	18
01:30	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	16
01:45	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	15
02:00	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Hour Total	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	60
02:15	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10
02:30	0	15	0	0	0	0	0	0	1	0	0	0	0	0	0	16
02:45	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	9
03:00	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	10
Hour Total	0	41	3	0	0	0	0	0	1	0	0	0	0	0	0	45
03:15	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
03:30	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	10
03:45	0	4	3	0	0	0	0	0	1	0	0	0	0	0	0	8
04:00	0	7	8	0	0	0	0	0	0	0	0	0	0	0	0	15
Hour Total	0	28	13	0	0	0	0	0	1	0	0	0	0	0	0	42
04:15	0	15	4	0	0	0	0	0	0	0	0	0	0	0	0	19
04:30	0	29	5	0	0	1	0	0	0	0	0	0	0	0	0	35
04:45	0	32	12	0	0	0	0	0	0	0	0	0	0	0	0	44
05:00	0	43	26	0	0	0	0	0	0	0	0	0	0	0	0	69
Hour Total	0	119	47	0	0	1	0	0	0	0	0	0	0	0	0	167
05:15	1	55	26	0	0	0	0	0	0	0	0	0	0	0	0	82
05:30	2	80	28	0	0	1	0	0	0	0	0	0	0	0	0	111
05:45	2	94	40	0	0	1	0	1	0	0	0	0	0	0	0	138
06:00	2	100	45	0	0	0	0	0	0	0	0	0	0	0	0	147
Hour Total	7	329	139	0	0	2	0	1	0	0	0	0	0	0	0	478
06:15	1	134	63	0	0	0	0	1	1	0	0	0	0	0	0	200
06:30	5	153	64	0	0	0	0	0	0	0	0	0	0	0	0	222
06:45	1	200	59	2	1	1	0	1	0	0	0	0	0	0	0	265
07:00	1	175	54	0	0	2	0	0	0	0	0	0	0	0	0	232
Hour Total	8	662	240	2	1	3	0	2	1	0	0	0	0	0	0	919
07:15	1	227	55	0	0	0	0	0	0	0	0	0	1	0	0	284
07:30	2	249	38	0	1	0	0	0	0	0	0	0	0	0	0	290
07:45	0	274	59	0	0	0	0	0	0	0	0	0	0	0	0	333
08:00	0	164	48	0	0	0	0	0	0	0	0	0	0	0	0	212
Hour Total	3	914	200	0	1	0	0	0	0	0	0	0	1	0	0	1119
08:15	0	131	28	0	1	0	0	3	0	0	0	0	0	0	0	163
08:30	3	128	43	1	0	0	0	0	0	0	0	0	0	0	0	175
08:45	0	151	21	0	2	0	0	0	1	0	0	0	0	0	0	175
09:00	0	113	22	0	0	0	0	0	0	0	0	0	0	0	0	135

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002021.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	3	523	114	1	3	0	0	3	1	0	0	0	0	0	0	648
09:15	0	89	16	0	1	0	0	1	1	0	0	0	0	0	0	108
09:30	0	105	27	0	1	0	0	0	0	0	0	0	0	0	0	133
09:45	0	91	18	0	0	0	0	1	0	0	0	0	0	0	0	110
10:00	0	78	21	0	0	0	0	0	1	0	0	0	0	0	0	100
Hour Total	0	363	82	0	2	0	0	2	2	0	0	0	0	0	0	451
10:15	0	63	23	0	0	1	0	0	1	0	0	0	0	0	0	88
10:30	0	71	19	0	0	0	0	0	0	0	0	0	0	0	0	90
10:45	0	65	19	0	0	0	0	0	0	0	0	0	0	0	0	84
11:00	0	54	23	0	0	0	0	0	1	0	0	0	0	0	0	78
Hour Total	0	253	84	0	0	1	0	0	2	0	0	0	0	0	0	340
11:15	0	61	16	0	2	0	0	0	1	0	0	0	0	0	0	80
11:30	0	78	16	0	1	0	2	1	1	0	0	0	0	0	0	99
11:45	1	75	18	0	0	1	0	0	1	0	0	0	0	0	0	96
12:00	0	77	18	0	1	0	0	0	0	0	0	0	0	0	0	96
Hour Total	1	291	68	0	4	1	2	1	3	0	0	0	0	0	0	371
12:15	1	64	19	0	1	0	0	1	0	0	0	0	0	0	0	86
12:30	1	64	15	0	1	0	0	0	0	0	0	0	0	0	0	81
12:45	2	62	12	0	0	0	0	0	0	0	0	0	0	0	0	76
13:00	2	64	16	0	1	0	0	0	0	0	0	0	0	0	0	83
Hour Total	6	254	62	0	3	0	0	1	0	0	0	0	0	0	0	326
13:15	0	66	13	0	0	0	0	0	0	0	0	0	0	0	0	79
13:30	0	74	27	0	1	1	0	0	0	0	0	0	0	0	0	103
13:45	1	55	22	0	1	2	0	0	1	0	0	0	0	0	0	82
14:00	0	74	18	0	1	0	0	2	0	0	0	0	0	0	0	95
Hour Total	1	269	80	0	3	3	0	2	1	0	0	0	0	0	0	359
14:15	1	59	23	1	0	0	0	0	0	0	0	0	1	0	0	85
14:30	2	69	26	0	1	0	0	0	1	0	0	0	0	0	0	99
14:45	0	66	21	0	0	0	0	0	0	0	0	0	0	0	0	87
15:00	0	70	13	0	0	0	0	0	1	0	0	0	0	0	0	84
Hour Total	3	264	83	1	1	0	0	0	2	0	0	0	1	0	0	355
15:15	1	69	15	1	0	0	1	0	1	0	0	1	0	0	0	89
15:30	0	69	18	0	1	0	1	0	0	0	0	0	0	0	0	89
15:45	0	87	25	0	0	0	0	0	0	0	0	0	0	0	0	112
16:00	0	78	19	0	0	1	0	0	0	0	0	0	1	0	0	99
Hour Total	1	303	77	1	1	1	2	0	1	0	0	1	1	0	0	389
16:15	0	87	18	1	3	0	0	0	0	0	0	0	0	0	0	109
16:30	0	97	25	0	3	0	0	0	0	0	0	0	0	0	0	125
16:45	3	106	24	0	2	0	0	0	0	0	0	0	0	0	0	135
17:00	2	105	32	0	0	0	0	0	0	0	0	0	0	0	0	139
Hour Total	5	395	99	1	8	0	0	0	0	0	0	0	0	0	0	508

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002021.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	111	34	0	0	0	0	0	0	0	0	0	0	0	0	145
17:30	0	101	12	0	0	0	0	0	0	0	0	0	0	0	0	113
17:45	2	95	18	0	0	0	0	0	0	0	0	0	0	0	0	115
18:00	0	80	17	0	0	0	0	1	0	0	0	0	0	0	0	98
Hour Total	2	387	81	0	0	0	0	1	0	0	0	0	0	0	0	471
18:15	1	98	27	0	1	0	0	2	0	0	0	0	0	0	0	129
18:30	0	66	13	0	1	0	0	0	0	0	0	0	0	0	0	80
18:45	2	77	20	0	1	0	0	0	0	0	0	0	0	0	0	100
19:00	0	55	9	0	0	0	0	0	1	0	0	0	0	0	0	65
Hour Total	3	296	69	0	3	0	0	2	1	0	0	0	0	0	0	374
19:15	0	61	8	0	0	0	0	0	0	0	0	0	0	0	0	69
19:30	1	45	12	0	0	0	0	0	0	0	0	0	0	0	0	58
19:45	2	67	9	0	0	0	0	1	0	0	0	0	0	0	0	79
20:00	1	39	13	0	0	0	0	0	0	0	0	0	0	0	0	53
Hour Total	4	212	42	0	0	0	0	1	0	0	0	0	0	0	0	259
20:15	0	48	9	0	0	0	0	0	0	0	0	0	0	0	0	57
20:30	0	60	8	0	1	0	0	0	0	0	0	0	0	0	0	69
20:45	0	32	5	0	0	0	0	0	0	0	0	0	0	0	0	37
21:00	0	22	5	0	0	0	0	0	0	0	0	0	0	0	0	27
Hour Total	0	162	27	0	1	0	0	0	0	0	0	0	0	0	0	190
21:15	0	40	5	0	0	0	0	0	0	0	0	0	0	0	0	45
21:30	0	27	1	0	0	0	0	0	0	0	0	0	0	0	0	28
21:45	0	19	3	0	0	0	0	0	0	0	0	0	0	0	0	22
22:00	0	27	6	0	0	0	0	0	0	0	0	0	0	0	0	33
Hour Total	0	113	15	0	0	0	0	0	0	0	0	0	0	0	0	128
22:15	0	23	7	0	0	0	0	0	0	0	0	0	0	0	0	30
22:30	0	26	6	0	0	0	0	0	0	0	0	0	0	0	0	32
22:45	0	21	4	0	0	0	0	0	0	0	0	0	0	0	0	25
23:00	0	12	0	0	0	0	0	0	1	0	0	0	0	0	0	13
Hour Total	0	82	17	0	0	0	0	0	1	0	0	0	0	0	0	100
23:15	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	17
23:30	0	13	3	0	0	0	0	0	0	0	0	0	0	0	0	16
23:45	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
24:00	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	10
Hour Total	0	47	5	0	0	0	0	0	0	0	0	0	0	0	0	52
DAY TOTAL	47	6400	1653	6	31	12	4	16	17	0	0	1	3	0	0	8190
PERCENTS	0.6%	78.2%	20.2%	0.1%	0.4%	0.2%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 98.9% Trucks & Buses 1.0%

AM Times	05:45	07:00	06:15	06:00	08:45	06:15	10:45	07:30	11:00				06:30			07:00
AM Peaks	10	925	240	2	4	3	2	3	4				1			1139
PM Times	12:15	16:45	16:30	13:30	16:00	13:00	14:45	17:30	14:30			14:30	13:30			16:30
PM Peaks	6	423	115	1	8	3	2	3	3			1	1			544

GRAND TOTAL	127	4851		98		20		46			3		3		0	
	18765		13		35		39		0		6		0		24006	
PERCENTS	0.6%	78.2%	20.3%	0.1%	0.5%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002022.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	3	0	2	0	0	0	5
00:30	0	0	0	0	0	0	0	2	1	4	2	0	0	0	9
00:45	0	0	0	0	1	0	0	0	0	2	1	0	0	0	4
01:00	0	0	0	0	0	0	0	1	3	4	3	0	0	0	11
Hour Total	0	0	0	0	1	0	0	3	7	10	8	0	0	0	29
01:15	0	0	0	0	0	0	0	4	5	9	3	0	0	0	21
01:30	0	0	0	0	0	0	0	2	5	8	1	0	0	0	16
01:45	0	0	0	0	0	1	0	0	1	7	3	0	1	0	13
02:00	0	0	0	0	0	0	0	0	3	3	1	0	0	0	7
Hour Total	0	0	0	0	0	1	0	6	14	27	8	0	1	0	57
02:15	0	0	0	0	0	0	1	1	2	3	0	1	0	0	8
02:30	0	0	0	0	2	1	0	3	3	6	1	0	0	0	16
02:45	0	0	0	0	0	0	2	0	3	3	1	0	0	0	9
03:00	0	0	0	0	3	0	0	1	2	5	2	0	0	0	13
Hour Total	0	0	0	0	5	1	3	5	10	17	4	1	0	0	46
03:15	0	0	0	0	0	0	0	1	1	4	0	0	0	0	6
03:30	0	0	0	0	0	0	0	2	2	5	2	1	0	0	12
03:45	0	0	0	0	0	0	0	0	3	6	0	2	0	0	11
04:00	0	0	0	0	1	1	0	0	0	6	2	0	0	0	10
Hour Total	0	0	0	0	1	1	0	3	6	21	4	3	0	0	39
04:15	0	0	0	0	0	0	0	0	4	9	4	0	0	0	17
04:30	0	0	0	0	0	0	0	1	4	20	8	0	0	0	33
04:45	0	0	0	0	1	6	4	5	6	18	13	2	0	0	55
05:00	0	0	0	0	1	3	5	4	13	20	7	0	0	0	53
Hour Total	0	0	0	0	2	9	9	10	27	67	32	2	0	0	158
05:15	0	0	0	0	1	2	7	6	3	38	16	2	0	0	75
05:30	0	0	0	0	1	5	10	9	16	57	24	2	0	0	124
05:45	0	0	0	0	1	12	12	5	18	62	39	6	0	0	155
06:00	0	0	0	0	2	12	21	7	9	51	27	3	1	0	133
Hour Total	0	0	0	0	5	31	50	27	46	208	106	13	1	0	487
06:15	0	0	0	0	2	10	13	21	30	67	24	0	0	0	167
06:30	0	0	0	0	5	12	27	28	44	72	30	2	1	0	221
06:45	0	0	0	0	10	21	32	44	35	81	28	2	0	0	253
07:00	0	0	0	0	9	9	33	37	58	54	33	3	0	0	236
Hour Total	0	0	0	0	26	52	105	130	167	274	115	7	1	0	877
07:15	0	0	0	11	10	31	49	43	58	73	25	4	0	0	304
07:30	0	0	0	0	13	51	62	59	39	70	24	2	0	0	320
07:45	0	0	0	0	7	28	65	53	74	63	29	4	0	0	323
08:00	0	0	0	0	6	14	22	45	48	67	26	0	0	0	228
Hour Total	0	0	0	11	36	124	198	200	219	273	104	10	0	0	1175
08:15	0	0	0	0	10	15	30	15	23	45	28	4	1	0	171
08:30	0	0	0	0	5	15	23	16	25	66	20	5	0	0	175
08:45	0	0	0	0	4	12	20	24	22	57	23	7	2	0	171
09:00	0	0	0	1	8	9	13	9	13	45	17	6	0	0	121

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002022.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	1	27	51	86	64	83	213	88	22	3	0	638
09:15	0	0	0	0	3	3	11	8	21	56	27	4	1	0	134
09:30	0	0	0	0	5	5	13	5	18	45	21	1	2	0	115
09:45	0	0	0	0	4	9	9	6	14	37	18	3	0	0	100
10:00	0	0	0	1	5	3	3	5	15	36	15	2	1	0	86
Hour Total	0	0	0	1	17	20	36	24	68	174	81	10	4	0	435
10:15	0	0	0	0	2	3	8	9	24	27	19	4	1	0	97
10:30	0	0	0	0	1	9	6	6	16	31	10	4	0	0	83
10:45	0	0	0	0	3	4	16	6	14	33	21	2	0	0	99
11:00	0	0	0	0	1	7	6	1	12	40	14	2	1	0	84
Hour Total	0	0	0	0	7	23	36	22	66	131	64	12	2	0	363
11:15	0	0	0	0	1	13	5	13	12	34	9	3	0	0	90
11:30	0	0	0	0	1	3	1	6	11	33	8	5	0	0	68
11:45	0	0	0	0	3	4	7	7	12	26	17	2	0	0	78
12:00	0	0	0	0	2	3	9	9	19	26	14	2	0	0	84
Hour Total	0	0	0	0	7	23	22	35	54	119	48	12	0	0	320
12:15	0	0	1	2	4	11	5	14	15	26	8	1	0	0	87
12:30	0	0	0	0	0	6	2	4	15	39	7	0	0	0	73
12:45	0	0	0	0	1	11	9	7	8	32	12	2	0	0	82
13:00	0	0	0	0	8	7	9	8	24	31	6	3	0	0	96
Hour Total	0	0	1	2	13	35	25	33	62	128	33	6	0	0	338
13:15	0	0	0	1	1	5	2	6	15	32	12	0	0	0	74
13:30	0	0	0	0	0	5	8	8	13	30	22	6	0	0	92
13:45	0	0	0	0	2	3	1	7	24	21	19	0	0	0	77
14:00	0	0	0	1	4	5	9	7	17	27	17	2	1	0	90
Hour Total	0	0	0	2	7	18	20	28	69	110	70	8	1	0	333
14:15	0	0	0	0	5	9	15	12	10	25	5	1	0	0	82
14:30	0	0	0	0	2	1	3	11	17	42	7	0	0	0	83
14:45	0	0	0	0	3	3	7	5	8	53	11	3	0	0	93
15:00	0	0	0	0	4	7	6	18	17	22	16	2	0	0	92
Hour Total	0	0	0	0	14	20	31	46	52	142	39	6	0	0	350
15:15	0	0	0	1	2	8	2	7	14	31	13	2	0	0	80
15:30	0	0	0	0	5	6	6	9	16	46	11	4	1	0	104
15:45	0	0	0	0	1	13	16	10	24	29	12	1	0	0	106
16:00	0	0	0	0	4	5	4	7	22	42	16	2	0	0	102
Hour Total	0	0	0	1	12	32	28	33	76	148	52	9	1	0	392
16:15	0	0	0	0	4	5	12	3	20	35	13	2	1	0	95
16:30	0	0	0	0	1	7	13	16	36	49	12	1	0	0	135
16:45	0	0	0	0	2	9	9	11	21	29	16	5	1	0	103
17:00	1	0	0	0	2	5	8	7	35	39	20	3	1	0	121
Hour Total	1	0	0	0	9	26	42	37	112	152	61	11	3	0	454

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002022.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	6	12	15	31	40	13	3	1	0	121
17:30	0	0	0	0	3	15	17	10	26	32	18	1	0	0	122
17:45	0	0	0	0	3	6	7	14	22	49	10	6	1	0	118
18:00	0	0	0	0	5	17	7	8	23	38	14	1	0	0	113
Hour Total	0	0	0	0	11	44	43	47	102	159	55	11	2	0	474
18:15	0	0	0	0	2	14	7	10	13	36	16	6	0	0	104
18:30	0	0	0	0	5	4	5	13	15	31	25	1	0	0	99
18:45	0	0	0	0	2	4	10	11	14	41	7	2	1	0	92
19:00	0	0	0	0	0	1	1	5	13	28	14	1	0	0	63
Hour Total	0	0	0	0	9	23	23	39	55	136	62	10	1	0	358
19:15	0	0	0	0	0	4	5	4	18	28	6	1	0	0	66
19:30	0	0	0	0	2	6	2	3	16	16	3	0	0	0	48
19:45	0	0	0	0	1	0	4	8	16	17	4	0	0	0	50
20:00	0	0	0	0	0	0	1	1	17	15	4	0	0	0	38
Hour Total	0	0	0	0	3	10	12	16	67	76	17	1	0	0	202
20:15	0	0	0	0	1	7	0	1	12	12	7	0	0	0	40
20:30	0	0	0	1	3	7	6	4	14	5	4	0	0	0	44
20:45	0	0	0	0	1	1	3	4	8	16	2	1	0	0	36
21:00	0	0	0	0	2	5	1	2	8	9	3	1	0	0	31
Hour Total	0	0	0	1	7	20	10	11	42	42	16	2	0	0	151
21:15	0	0	0	0	2	2	2	2	8	9	3	0	0	0	28
21:30	0	0	0	0	0	2	2	5	5	10	0	0	0	0	24
21:45	0	0	0	0	1	0	0	1	6	12	4	0	0	0	24
22:00	0	0	0	0	0	1	0	0	7	8	2	0	0	0	18
Hour Total	0	0	0	0	3	5	4	8	26	39	9	0	0	0	94
22:15	0	0	0	0	0	1	0	1	4	7	1	0	0	0	14
22:30	0	0	0	0	1	1	0	1	6	11	1	0	1	0	22
22:45	0	0	0	0	0	0	0	0	6	11	0	1	0	0	18
23:00	0	0	0	0	0	0	0	4	1	7	0	0	0	0	12
Hour Total	0	0	0	0	1	2	0	6	17	36	2	1	1	0	66
23:15	0	0	0	0	0	0	0	0	7	3	0	2	0	0	12
23:30	0	0	0	0	0	0	0	0	2	6	0	0	0	0	8
23:45	0	0	0	0	2	0	1	1	4	3	0	1	0	0	12
24:00	0	0	0	0	0	0	0	1	4	1	0	0	0	0	6
Hour Total	0	0	0	0	2	0	1	2	17	13	0	3	0	0	38
DAY TOTAL	1	0	1	19	225	571	784	835	1464	2715	1078	160	21	0	7874
PERCENTS	0.1%	0.0%	0.1%	0.3%	2.9%	7.3%	10.0%	10.6%	18.5%	34.4%	13.6%	2.0%	0.2%	0.0%	100%

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002022.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
37.3 mph

85th Percentile Speed
55.4 mph

Median Speed
50.1 mph

Average Speed
47.7 mph

10 MPH Pace Speed
45 mph to 55 mph
4179 vehicles in pace
Representing 53.0% of the total vehicles

Vehicles > 45 MPH
5438
69.1%

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002022.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	1	0	0	0	2	0	0	0	0	3
00:30	0	0	0	0	0	0	0	2	4	3	1	0	0	0	10
00:45	0	0	0	0	0	0	1	1	4	9	2	0	0	0	17
01:00	0	0	0	0	0	1	1	2	9	8	3	0	0	0	24
Hour Total	0	0	0	0	0	2	2	5	17	22	6	0	0	0	54
01:15	0	0	0	0	0	0	0	0	3	6	0	0	0	0	9
01:30	0	0	0	0	0	0	0	0	4	3	2	0	0	0	9
01:45	0	0	0	0	0	0	0	5	5	2	1	0	0	0	13
02:00	0	0	0	0	0	0	1	0	4	3	0	0	0	0	8
Hour Total	0	0	0	0	0	0	1	5	16	14	3	0	0	0	39
02:15	0	0	0	0	0	0	0	0	8	3	1	2	0	0	14
02:30	0	0	0	0	0	0	1	1	0	6	0	0	0	0	8
02:45	0	0	0	0	0	1	0	0	4	2	2	0	0	0	9
03:00	0	0	0	0	1	0	1	0	2	3	1	0	0	0	8
Hour Total	0	0	0	0	1	1	2	1	14	14	4	2	0	0	39
03:15	0	0	0	0	0	1	0	2	1	2	1	1	0	0	8
03:30	0	0	0	0	0	1	0	1	7	1	1	0	0	0	11
03:45	0	0	0	0	0	0	0	1	1	7	3	0	0	0	12
04:00	0	0	0	0	1	0	1	0	2	4	3	0	0	0	11
Hour Total	0	0	0	0	1	2	1	4	11	14	8	1	0	0	42
04:15	0	0	0	0	0	0	0	0	0	12	4	2	0	0	18
04:30	0	0	0	0	1	0	0	0	4	18	9	3	0	0	35
04:45	0	0	0	1	1	7	3	4	6	22	5	0	0	0	49
05:00	0	0	0	0	1	1	0	0	10	34	16	2	0	0	64
Hour Total	0	0	0	1	3	8	3	4	20	86	34	7	0	0	166
05:15	0	0	0	0	3	5	3	4	12	23	24	3	0	0	77
05:30	0	0	0	0	0	6	14	2	14	54	30	1	1	0	122
05:45	0	0	0	0	2	7	8	15	20	71	30	4	1	0	158
06:00	0	0	0	0	3	13	18	7	30	60	20	5	0	0	156
Hour Total	0	0	0	0	8	31	43	28	76	208	104	13	2	0	513
06:15	0	0	0	0	5	9	14	27	20	61	35	4	0	0	175
06:30	0	0	0	0	3	16	19	30	23	76	28	2	1	0	198
06:45	0	0	0	0	4	7	20	38	48	104	37	6	0	1	265
07:00	1	0	0	0	5	36	34	33	31	63	25	2	0	0	230
Hour Total	1	0	0	0	17	68	87	128	122	304	125	14	1	1	868
07:15	0	0	0	0	8	25	32	54	57	91	29	3	0	0	299
07:30	0	0	0	1	18	41	54	44	37	60	25	1	0	0	281
07:45	0	0	0	0	17	47	80	58	68	65	6	0	0	0	341
08:00	0	0	0	1	5	20	28	33	47	45	22	4	0	0	205
Hour Total	0	0	0	2	48	133	194	189	209	261	82	8	0	0	1126
08:15	0	0	0	0	5	25	30	24	37	47	27	3	0	0	198
08:30	0	0	0	0	6	7	21	11	28	38	36	7	2	0	156
08:45	0	0	0	0	5	15	13	12	14	42	33	12	2	0	148
09:00	0	0	0	0	2	14	23	11	27	34	17	1	0	0	129

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002022.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	18	61	87	58	106	161	113	23	4	0	631
09:15	0	0	0	0	2	8	16	10	12	33	17	1	0	0	99
09:30	0	0	0	1	0	9	5	10	22	37	14	0	0	0	98
09:45	0	0	0	0	4	11	11	8	24	39	14	0	0	0	111
10:00	1	0	0	2	2	8	10	4	9	26	19	1	0	0	82
Hour Total	1	0	0	3	8	36	42	32	67	135	64	2	0	0	390
10:15	0	0	0	0	6	8	11	9	17	36	19	6	0	1	113
10:30	0	0	0	0	2	4	4	7	14	23	20	1	1	0	76
10:45	0	0	0	0	0	3	6	5	14	27	21	3	0	0	79
11:00	0	0	0	0	1	4	9	8	15	35	12	1	0	0	85
Hour Total	0	0	0	0	9	19	30	29	60	121	72	11	1	1	353
11:15	0	0	0	0	0	4	6	14	27	29	14	1	0	1	96
11:30	0	0	0	0	1	9	8	7	10	32	17	4	0	0	88
11:45	0	0	1	0	2	8	9	4	11	28	11	1	0	0	75
12:00	0	0	0	0	2	5	8	5	13	35	11	3	0	1	83
Hour Total	0	0	1	0	5	26	31	30	61	124	53	9	0	2	342
12:15	0	0	0	0	1	4	9	5	14	33	10	2	0	0	78
12:30	0	0	0	0	0	5	1	2	22	45	2	1	0	0	78
12:45	0	0	0	1	1	6	6	6	18	31	11	1	0	0	81
13:00	0	0	0	0	2	6	2	9	12	26	17	2	0	0	76
Hour Total	0	0	0	1	4	21	18	22	66	135	40	6	0	0	313
13:15	0	0	0	1	2	6	3	10	20	26	16	1	0	0	85
13:30	0	0	0	0	4	3	4	10	19	36	11	1	0	0	88
13:45	0	0	0	0	4	10	7	2	11	28	15	4	0	0	81
14:00	0	0	0	0	2	3	9	8	10	18	14	2	0	0	66
Hour Total	0	0	0	1	12	22	23	30	60	108	56	8	0	0	320
14:15	0	0	0	0	3	5	5	5	11	39	17	2	0	0	87
14:30	0	0	0	0	5	7	4	5	12	40	14	4	0	0	91
14:45	0	0	0	0	7	6	11	6	14	39	18	4	0	0	105
15:00	0	0	0	0	4	7	3	8	23	30	12	3	0	0	90
Hour Total	0	0	0	0	19	25	23	24	60	148	61	13	0	0	373
15:15	0	0	0	0	2	6	4	6	11	31	19	5	0	0	84
15:30	0	0	0	0	1	4	2	1	13	42	14	1	0	0	78
15:45	0	0	0	0	1	7	4	6	16	36	16	4	0	0	90
16:00	0	0	0	0	2	12	8	7	25	31	11	3	0	0	99
Hour Total	0	0	0	0	6	29	18	20	65	140	60	13	0	0	351
16:15	0	0	0	0	4	6	2	10	31	27	18	3	1	0	102
16:30	0	0	0	0	0	12	15	22	24	58	18	2	1	0	152
16:45	0	0	0	2	4	4	21	19	13	49	27	1	0	0	140
17:00	0	0	0	0	5	15	16	13	32	43	15	1	1	0	141
Hour Total	0	0	0	2	13	37	54	64	100	177	78	7	3	0	535

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002022.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	2	2	15	19	26	25	38	15	4	0	0	146
17:30	0	0	0	1	0	15	17	5	14	47	14	0	0	0	113
17:45	0	0	0	0	6	20	14	15	24	44	9	3	0	0	135
18:00	0	0	0	0	7	7	13	15	16	25	28	3	0	0	114
Hour Total	0	0	0	3	15	57	63	61	79	154	66	10	0	0	508
18:15	0	0	0	0	2	12	9	12	14	45	14	2	1	0	111
18:30	0	0	0	0	8	9	11	7	18	32	13	2	0	0	100
18:45	0	0	0	0	5	10	6	18	13	30	7	2	0	0	91
19:00	0	0	0	0	1	3	7	6	11	29	13	1	0	0	71
Hour Total	0	0	0	0	16	34	33	43	56	136	47	7	1	0	373
19:15	0	0	0	1	2	2	2	4	20	23	2	1	0	0	57
19:30	0	0	0	0	1	1	0	2	24	26	9	0	0	0	63
19:45	0	0	0	0	5	0	6	11	17	18	7	1	0	0	65
20:00	0	0	0	0	2	2	3	4	16	16	11	0	0	0	54
Hour Total	0	0	0	1	10	5	11	21	77	83	29	2	0	0	239
20:15	0	0	0	0	1	4	2	4	8	10	7	0	0	0	36
20:30	0	0	0	0	0	3	1	3	9	9	7	1	1	0	34
20:45	0	0	0	1	2	3	1	3	8	11	3	2	0	0	34
21:00	0	0	0	0	0	1	0	3	9	11	1	0	0	0	25
Hour Total	0	0	0	1	3	11	4	13	34	41	18	3	1	0	129
21:15	0	0	0	0	4	1	1	2	11	14	5	2	0	0	40
21:30	0	0	0	0	2	3	3	2	11	8	0	1	0	1	31
21:45	0	0	0	0	0	2	2	1	12	13	4	0	0	0	34
22:00	0	0	0	0	3	1	0	1	12	12	1	2	0	0	32
Hour Total	0	0	0	0	9	7	6	6	46	47	10	5	0	1	137
22:15	0	0	0	0	1	0	2	2	7	5	3	1	0	0	21
22:30	0	0	0	0	1	1	0	2	13	9	0	0	0	0	26
22:45	0	0	0	0	1	1	1	2	6	7	1	0	0	0	19
23:00	0	0	0	0	0	1	0	1	3	5	1	0	0	0	11
Hour Total	0	0	0	0	3	3	3	7	29	26	5	1	0	0	77
23:15	0	0	0	0	0	2	0	0	6	3	0	0	0	0	11
23:30	0	0	0	0	0	0	0	3	1	2	1	0	0	0	7
23:45	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2
24:00	0	0	0	0	0	1	0	0	1	1	1	0	0	0	4
Hour Total	0	0	0	0	1	3	0	3	8	6	3	0	0	0	24
DAY TOTAL	2	0	1	15	229	641	779	827	1459	2665	1141	165	13	5	7942
PERCENTS	0.1%	0.0%	0.1%	0.2%	2.9%	8.1%	9.9%	10.5%	18.3%	33.5%	14.3%	2.0%	0.1%	0.0%	100%

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002022.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
37.0 mph

85th Percentile Speed
55.6 mph

Median Speed
50.0 mph

Average Speed
47.6 mph

10 MPH Pace Speed
45 mph to 55 mph
4124 vehicles in pace
Representing 51.9% of the total vehicles

Vehicles > 45 MPH
5448
68.6%

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002022.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	1	1	2	0	0	0	0	0	4
00:30	0	0	0	0	0	0	0	0	0	5	0	1	0	0	6
00:45	0	0	0	0	1	0	1	1	2	3	1	1	0	0	10
01:00	0	0	0	0	0	0	0	2	3	10	3	1	0	0	19
Hour Total	0	0	0	0	1	0	2	4	7	18	4	3	0	0	39
01:15	0	0	0	0	1	0	2	1	5	8	1	0	0	0	18
01:30	0	0	0	0	0	0	0	5	5	5	1	0	0	0	16
01:45	0	0	0	0	0	0	0	1	7	5	2	0	0	0	15
02:00	0	0	0	0	0	0	1	2	2	2	3	1	0	0	11
Hour Total	0	0	0	0	1	0	3	9	19	20	7	1	0	0	60
02:15	0	0	0	0	0	0	1	4	5	0	0	0	0	0	10
02:30	0	0	0	0	0	0	1	0	3	10	2	0	0	0	16
02:45	0	0	0	0	0	0	0	1	2	5	1	0	0	0	9
03:00	0	0	0	0	0	0	1	5	2	2	0	0	0	0	10
Hour Total	0	0	0	0	0	0	3	10	12	17	3	0	0	0	45
03:15	0	0	0	0	1	0	0	2	0	5	1	0	0	0	9
03:30	0	0	0	0	0	0	0	1	5	3	1	0	0	0	10
03:45	0	0	0	0	0	0	2	0	1	3	2	0	0	0	8
04:00	0	0	0	0	0	0	0	2	2	8	2	1	0	0	15
Hour Total	0	0	0	0	1	0	2	5	8	19	6	1	0	0	42
04:15	0	0	0	0	0	0	0	1	3	10	4	1	0	0	19
04:30	0	0	0	0	0	0	0	1	4	21	8	1	0	0	35
04:45	0	0	0	0	0	3	3	1	9	25	3	0	0	0	44
05:00	0	0	0	0	0	2	12	9	9	24	13	0	0	0	69
Hour Total	0	0	0	0	0	5	15	12	25	80	28	2	0	0	167
05:15	0	0	0	0	2	2	4	6	9	36	23	0	0	0	82
05:30	0	0	0	0	2	7	8	12	14	34	31	3	0	0	111
05:45	0	0	0	0	0	12	12	5	22	57	26	4	0	0	138
06:00	0	0	0	0	4	12	19	16	18	62	16	0	0	0	147
Hour Total	0	0	0	0	8	33	43	39	63	189	96	7	0	0	478
06:15	0	0	0	0	8	11	19	23	30	77	32	0	0	0	200
06:30	0	0	0	0	4	20	26	24	38	75	30	4	1	0	222
06:45	0	0	0	0	4	23	34	42	59	88	11	4	0	0	265
07:00	0	0	0	0	6	23	31	32	50	73	16	1	0	0	232
Hour Total	0	0	0	0	22	77	110	121	177	313	89	9	1	0	919
07:15	2	0	0	2	6	35	38	49	42	82	28	0	0	0	284
07:30	0	0	0	0	15	31	55	38	57	66	26	2	0	0	290
07:45	0	0	4	12	13	32	55	88	52	58	18	1	0	0	333
08:00	0	0	0	0	5	19	37	35	35	55	24	2	0	0	212
Hour Total	2	0	4	14	39	117	185	210	186	261	96	5	0	0	1119
08:15	0	0	0	1	6	8	26	18	39	34	24	6	1	0	163
08:30	0	0	0	0	1	15	25	11	20	60	33	10	0	0	175
08:45	0	0	0	0	2	15	36	16	21	51	30	4	0	0	175
09:00	0	0	0	0	3	15	4	4	19	47	41	1	1	0	135

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002022.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	1	12	53	91	49	99	192	128	21	2	0	648
09:15	0	0	0	0	3	11	7	10	15	31	28	3	0	0	108
09:30	0	0	0	1	3	5	11	12	19	47	25	7	2	1	133
09:45	0	0	0	0	4	13	18	10	21	35	6	3	0	0	110
10:00	0	0	0	0	3	16	8	7	8	36	16	5	0	1	100
Hour Total	0	0	0	1	13	45	44	39	63	149	75	18	2	2	451
10:15	0	0	0	0	2	7	9	11	9	32	16	2	0	0	88
10:30	0	0	0	1	5	10	4	10	18	23	13	6	0	0	90
10:45	0	0	0	0	1	4	3	2	11	34	27	2	0	0	84
11:00	0	0	0	1	3	4	11	13	11	13	19	3	0	0	78
Hour Total	0	0	0	2	11	25	27	36	49	102	75	13	0	0	340
11:15	0	0	0	0	6	5	8	14	11	22	13	1	0	0	80
11:30	0	0	0	0	4	16	6	3	10	36	20	4	0	0	99
11:45	0	0	0	0	2	9	8	11	22	25	17	2	0	0	96
12:00	0	0	0	1	1	5	8	12	15	37	13	4	0	0	96
Hour Total	0	0	0	1	13	35	30	40	58	120	63	11	0	0	371
12:15	0	0	0	1	1	7	2	2	17	39	16	1	0	0	86
12:30	0	0	0	0	5	6	5	6	19	20	13	6	1	0	81
12:45	0	0	0	0	2	3	5	7	15	23	19	1	1	0	76
13:00	0	0	0	0	1	3	0	6	9	41	20	3	0	0	83
Hour Total	0	0	0	1	9	19	12	21	60	123	68	11	2	0	326
13:15	0	0	0	0	0	6	7	7	15	32	9	3	0	0	79
13:30	0	0	0	0	2	12	11	9	15	30	20	3	1	0	103
13:45	0	0	0	0	3	7	8	7	9	30	17	1	0	0	82
14:00	0	0	0	0	2	3	4	4	11	35	24	11	1	0	95
Hour Total	0	0	0	0	7	28	30	27	50	127	70	18	2	0	359
14:15	0	0	0	0	4	4	2	8	8	43	9	6	1	0	85
14:30	0	0	0	0	1	9	9	8	23	42	7	0	0	0	99
14:45	0	0	0	2	3	8	10	4	11	25	20	3	1	0	87
15:00	0	0	0	0	0	6	1	2	8	44	19	4	0	0	84
Hour Total	0	0	0	2	8	27	22	22	50	154	55	13	2	0	355
15:15	0	0	0	0	1	3	5	5	9	34	23	5	4	0	89
15:30	0	0	0	0	5	6	15	10	8	28	16	1	0	0	89
15:45	0	0	0	0	0	7	10	7	26	38	23	0	1	0	112
16:00	0	0	0	1	8	5	6	12	18	32	14	3	0	0	99
Hour Total	0	0	0	1	14	21	36	34	61	132	76	9	5	0	389
16:15	0	0	0	0	3	7	12	12	22	37	12	3	1	0	109
16:30	0	0	0	0	1	11	16	9	24	35	26	2	1	0	125
16:45	1	0	0	0	1	4	18	15	25	42	27	2	0	0	135
17:00	0	0	0	0	4	15	15	14	24	35	27	4	0	1	139
Hour Total	1	0	0	0	9	37	61	50	95	149	92	11	2	1	508

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002022.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	2	16	34	15	15	22	27	14	0	0	0	145
17:30	0	0	0	0	2	8	7	9	25	44	16	2	0	0	113
17:45	0	0	0	0	6	13	10	12	23	29	19	2	1	0	115
18:00	0	0	0	0	2	9	4	6	13	43	18	3	0	0	98
Hour Total	0	0	0	2	26	64	36	42	83	143	67	7	1	0	471
18:15	0	0	0	1	3	8	9	10	24	52	17	5	0	0	129
18:30	0	0	0	0	4	8	4	11	19	28	5	0	1	0	80
18:45	0	0	0	1	3	13	16	7	18	26	14	2	0	0	100
19:00	0	0	0	0	4	3	3	8	11	28	6	2	0	0	65
Hour Total	0	0	0	2	14	32	32	36	72	134	42	9	1	0	374
19:15	0	0	0	0	4	7	2	6	13	26	8	2	1	0	69
19:30	0	0	0	0	3	4	1	8	13	15	12	2	0	0	58
19:45	0	0	0	0	1	1	5	9	18	37	7	1	0	0	79
20:00	0	0	0	0	1	2	1	7	11	21	9	1	0	0	53
Hour Total	0	0	0	0	9	14	9	30	55	99	36	6	1	0	259
20:15	0	0	0	1	1	3	8	6	12	24	1	0	0	1	57
20:30	0	0	0	0	2	6	4	6	18	23	10	0	0	0	69
20:45	0	0	0	0	0	2	4	1	8	17	5	0	0	0	37
21:00	0	0	0	0	0	1	2	4	8	10	2	0	0	0	27
Hour Total	0	0	0	1	3	12	18	17	46	74	18	0	0	1	190
21:15	0	0	0	0	1	1	4	0	10	21	6	2	0	0	45
21:30	0	0	0	0	1	0	2	3	4	11	4	3	0	0	28
21:45	0	0	0	0	1	1	0	3	3	10	4	0	0	0	22
22:00	0	0	0	0	2	2	1	4	3	18	3	0	0	0	33
Hour Total	0	0	0	0	5	4	7	10	20	60	17	5	0	0	128
22:15	0	0	0	0	0	2	0	0	10	11	6	1	0	0	30
22:30	0	0	0	0	0	1	3	1	10	12	3	2	0	0	32
22:45	0	0	0	0	1	2	2	2	2	15	1	0	0	0	25
23:00	0	0	0	0	1	0	0	1	4	5	2	0	0	0	13
Hour Total	0	0	0	0	2	5	5	4	26	43	12	3	0	0	100
23:15	0	0	0	0	2	0	1	0	7	7	0	0	0	0	17
23:30	0	0	0	0	1	3	0	2	3	6	1	0	0	0	16
23:45	0	0	0	0	0	2	0	1	1	5	0	0	0	0	9
24:00	0	0	0	0	0	0	1	1	1	5	2	0	0	0	10
Hour Total	0	0	0	0	3	5	2	4	12	23	3	0	0	0	52
DAY TOTAL	3	0	4	28	230	658	825	871	1396	2741	1226	183	21	4	8190
PERCENTS	0.1%	0.0%	0.1%	0.4%	2.9%	8.1%	10.1%	10.6%	17.0%	33.4%	14.9%	2.2%	0.2%	0.0%	100%

Station #: Site A-NBI
Site ID: 000000003570
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002022.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
GRAND TOTAL	6	6	684	2388	4319	3445	55	0	62	1870	2533	8121	508	9	24006
PERCENTS	0.1%	0.0%	0.1%	0.3%	2.9%	7.8%	10.0%	10.5%	17.9%	33.8%	14.3%	2.1%	0.2%	0.0%	100%

Statistical Information...

15th Percentile Speed
36.9 mph

85th Percentile Speed
55.8 mph

Median Speed
50.2 mph

Average Speed
47.7 mph

10 MPH Pace Speed
45 mph to 55 mph
4137 vehicles in pace
Representing 50.5% of the total vehicles

Vehicles > 45 MPH
5571
68.0%

Station #: Site A-NBO
Site ID: 000000003590
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002023.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
00:30	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
00:45	1	9	2	0	0	0	0	1	0	0	0	0	0	0	0	13
01:00	0	14	1	0	0	0	0	0	0	0	0	0	0	0	0	15
Hour Total	1	34	4	0	0	0	0	1	0	0	0	0	0	0	0	40
01:15	1	15	0	0	0	1	0	0	3	0	0	0	0	0	0	20
01:30	1	13	2	0	0	0	0	0	0	0	0	0	0	0	0	16
01:45	0	14	0	0	0	0	0	0	1	0	0	0	0	0	0	15
02:00	0	11	2	0	1	0	0	0	1	0	0	0	0	0	0	15
Hour Total	2	53	4	0	1	1	0	0	5	0	0	0	0	0	0	66
02:15	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11
02:30	0	11	2	0	0	0	0	0	0	0	0	0	0	0	0	13
02:45	0	12	2	0	0	0	0	0	1	0	0	0	0	0	0	15
03:00	0	4	3	0	0	1	0	0	1	0	0	0	0	0	0	9
Hour Total	0	38	7	0	0	1	0	0	2	0	0	0	0	0	0	48
03:15	0	9	4	0	0	1	0	1	0	0	0	0	0	0	0	15
03:30	0	12	2	0	0	0	0	0	0	0	0	0	0	0	0	14
03:45	0	22	10	0	0	1	0	0	0	0	0	0	0	0	0	33
04:00	0	15	6	0	2	0	0	0	1	0	0	0	0	0	0	24
Hour Total	0	58	22	0	2	2	0	1	1	0	0	0	0	0	0	86
04:15	1	22	11	0	0	0	0	0	2	0	0	0	0	0	0	36
04:30	1	35	15	0	0	2	0	0	0	0	0	0	0	0	0	53
04:45	0	60	30	0	0	0	0	0	1	0	0	0	0	0	0	91
05:00	0	47	20	0	0	2	0	0	0	0	0	0	0	0	0	69
Hour Total	2	164	76	0	0	4	0	0	3	0	0	0	0	0	0	249
05:15	0	58	39	0	1	0	0	0	1	0	0	0	0	0	0	99
05:30	2	90	34	0	0	1	0	0	2	0	0	0	0	0	0	129
05:45	2	109	47	0	0	0	0	1	2	0	0	1	0	0	0	162
06:00	0	88	42	1	2	1	0	0	1	0	0	0	0	0	0	135
Hour Total	4	345	162	1	3	2	0	1	6	0	0	1	0	0	0	525
06:15	1	123	52	0	0	0	0	0	2	0	0	0	0	0	0	178
06:30	1	133	50	1	0	1	0	0	1	0	0	0	0	0	0	187
06:45	0	163	57	0	2	0	0	0	1	0	0	0	0	0	0	223
07:00	3	137	42	2	1	5	0	0	2	0	0	0	0	0	0	192
Hour Total	5	556	201	3	3	6	0	0	6	0	0	0	0	0	0	780
07:15	3	207	52	0	3	2	0	0	1	0	0	0	0	0	0	268
07:30	1	175	56	0	1	0	5	0	2	0	1	0	0	0	0	241
07:45	0	199	53	0	3	1	4	0	6	1	0	0	0	0	0	267
08:00	0	150	38	0	1	0	2	2	4	0	0	0	0	0	0	197
Hour Total	4	731	199	0	8	3	11	2	13	1	1	0	0	0	0	973
08:15	1	112	35	0	1	0	1	2	1	0	0	0	0	0	0	153
08:30	1	118	36	0	0	1	1	1	1	0	0	0	0	0	0	159
08:45	0	122	22	0	2	3	2	2	4	0	0	0	0	0	0	157
09:00	2	82	25	0	1	1	0	0	0	0	0	0	0	0	0	111

Station #: Site A-NBO
Site ID: 000000003590
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002023.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	4	434	118	0	4	5	4	5	6	0	0	0	0	0	0	580
09:15	2	62	28	1	1	4	1	1	5	0	0	0	0	0	0	105
09:30	0	75	25	0	2	1	2	3	4	1	0	0	0	0	0	113
09:45	2	60	27	1	1	4	2	0	6	0	0	0	0	0	0	103
10:00	0	60	20	0	0	2	1	0	7	0	0	0	0	0	0	90
Hour Total	4	257	100	2	4	11	6	4	22	1	0	0	0	0	0	411
10:15	1	62	27	0	2	1	2	0	2	0	0	0	0	0	0	97
10:30	0	60	23	0	1	2	0	1	1	0	0	0	0	0	0	88
10:45	0	75	18	1	2	0	2	0	9	0	0	0	0	0	0	107
11:00	0	53	20	0	0	1	0	1	3	0	0	0	0	0	0	78
Hour Total	1	250	88	1	5	4	4	2	15	0	0	0	0	0	0	370
11:15	0	58	25	0	1	2	3	0	4	0	0	0	0	0	0	93
11:30	0	67	17	1	2	0	1	1	2	0	0	0	0	0	0	91
11:45	0	57	19	0	4	0	2	0	5	0	0	0	0	0	0	87
12:00	1	56	24	2	4	5	0	2	2	0	0	0	0	0	0	96
Hour Total	1	238	85	3	11	7	6	3	13	0	0	0	0	0	0	367
12:15	0	54	21	0	4	5	4	0	4	0	0	0	0	0	0	92
12:30	0	50	27	0	2	2	1	1	2	0	0	0	0	0	0	85
12:45	2	60	18	0	0	2	0	1	5	0	0	0	0	0	0	88
13:00	0	54	27	0	2	3	2	0	4	0	0	0	0	0	0	92
Hour Total	2	218	93	0	8	12	7	2	15	0	0	0	0	0	0	357
13:15	1	61	24	0	2	2	2	2	1	0	0	0	0	0	0	95
13:30	0	78	19	1	0	1	1	0	1	0	0	0	0	0	0	101
13:45	0	55	19	2	6	3	0	0	6	0	0	0	0	0	0	91
14:00	0	57	17	0	0	1	1	1	2	0	0	0	0	0	0	79
Hour Total	1	251	79	3	8	7	4	3	10	0	0	0	0	0	0	366
14:15	0	58	20	0	2	1	4	0	5	0	0	0	0	0	0	90
14:30	2	57	31	0	1	1	0	0	3	0	0	0	0	0	0	95
14:45	2	65	33	2	2	1	2	0	1	0	0	0	0	0	0	108
15:00	1	72	22	0	2	1	0	0	2	1	0	0	0	0	0	101
Hour Total	5	252	106	2	7	4	6	0	11	1	0	0	0	0	0	394
15:15	0	58	15	0	1	1	2	0	3	0	0	0	0	0	0	80
15:30	0	76	29	0	2	3	2	1	3	0	0	0	0	0	0	116
15:45	0	74	24	1	2	2	3	0	2	0	0	0	0	0	0	108
16:00	1	68	22	1	2	3	0	0	4	0	0	0	0	0	0	101
Hour Total	1	276	90	2	7	9	7	1	12	0	0	0	0	0	0	405
16:15	0	60	20	0	4	1	0	0	5	0	0	0	0	0	0	90
16:30	0	104	22	0	2	1	2	0	1	0	0	0	0	0	0	132
16:45	0	90	19	0	1	3	0	0	0	0	0	0	0	0	0	113
17:00	1	95	25	0	0	0	0	0	1	0	0	0	0	0	0	122
Hour Total	1	349	86	0	7	5	2	0	7	0	0	0	0	0	0	457

Station #: Site A-NBO
Site ID: 000000003590
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002023.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	103	27	1	0	1	0	1	0	0	0	0	0	0	0	133
17:30	2	97	28	0	0	0	0	0	1	0	0	0	0	0	0	128
17:45	1	87	26	1	0	0	0	0	1	0	0	0	0	0	0	116
18:00	1	96	18	0	0	1	0	0	2	0	0	0	0	0	0	118
Hour Total	4	383	99	2	0	2	0	1	4	0	0	0	0	0	0	495
18:15	1	75	23	0	0	0	0	0	3	0	0	0	0	0	0	102
18:30	2	80	23	0	1	0	0	0	0	0	0	0	0	0	0	106
18:45	0	83	21	0	1	0	0	1	1	0	0	0	0	0	0	107
19:00	0	61	10	0	0	0	0	1	0	0	0	0	0	0	0	72
Hour Total	3	299	77	0	2	0	0	2	4	0	0	0	0	0	0	387
19:15	1	48	10	0	0	0	0	0	0	0	0	0	0	0	0	59
19:30	3	45	7	0	0	0	0	0	3	0	0	0	0	0	0	58
19:45	1	47	7	0	0	0	0	1	0	0	0	0	0	0	0	56
20:00	0	31	15	0	0	0	0	0	3	0	0	0	0	0	0	49
Hour Total	5	171	39	0	0	0	0	1	6	0	0	0	0	0	0	222
20:15	1	28	10	0	1	1	0	0	4	0	0	0	0	0	0	45
20:30	0	36	5	0	0	1	0	0	0	0	0	0	0	0	0	42
20:45	0	36	10	0	1	0	0	0	0	0	1	0	0	0	0	48
21:00	0	30	7	0	0	0	0	0	2	0	0	0	0	0	0	39
Hour Total	1	130	32	0	2	2	0	0	6	0	1	0	0	0	0	174
21:15	1	31	7	0	0	0	0	0	2	0	0	0	0	0	0	41
21:30	0	30	4	0	1	0	0	0	1	0	0	0	0	0	0	36
21:45	0	29	9	0	0	0	0	0	2	0	0	0	0	0	0	40
22:00	0	20	1	0	0	0	0	0	1	0	0	0	0	0	0	22
Hour Total	1	110	21	0	1	0	0	0	6	0	0	0	0	0	0	139
22:15	0	23	7	0	0	0	0	0	2	0	0	0	0	0	0	32
22:30	0	30	7	0	0	0	0	0	1	0	0	0	0	0	0	38
22:45	0	24	4	0	0	0	0	0	2	0	0	0	0	0	0	30
23:00	0	15	4	0	0	0	0	0	0	0	0	0	0	0	0	19
Hour Total	0	92	22	0	0	0	0	0	5	0	0	0	0	0	0	119
23:15	0	17	2	0	0	0	0	0	0	0	0	0	0	0	0	19
23:30	0	8	3	0	0	0	0	0	1	0	0	0	0	0	0	12
23:45	0	12	2	0	1	0	0	0	1	0	0	0	0	0	0	16
24:00	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	10
Hour Total	0	46	8	0	1	0	0	0	2	0	0	0	0	0	0	57
DAY TOTAL	52	5735	1818	19	84	87	57	29	180	3	2	1	0	0	0	8067
PERCENTS	0.7%	71.1%	22.6%	0.3%	1.1%	1.0%	0.7%	0.3%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 94.2% Trucks & Buses 5.7%

AM Times	06:30	07:15	06:45	06:15	11:15	09:15	07:30	08:00	09:15	07:00	06:45	05:00				07:15
AM Peaks	7	731	207	3	11	11	12	7	22	1	1	1				973
PM Times	14:15	16:30	14:15	13:00	13:00	12:15	12:15	12:30	13:45	14:15	20:00					16:30
PM Peaks	5	392	106	3	10	12	7	4	16	1	1					500

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County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	6	2	0	0	0	0	0	1	0	0	0	0	0	0	9
00:30	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	10
00:45	0	14	2	0	0	0	0	0	0	0	0	0	0	0	0	16
01:00	0	21	0	0	0	1	0	0	0	0	0	0	0	0	0	22
Hour Total	0	50	5	0	0	1	0	0	1	0	0	0	0	0	0	57
01:15	0	17	1	0	0	0	0	0	0	0	0	0	0	0	0	18
01:30	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11
01:45	0	6	2	0	0	0	0	1	1	0	0	0	0	0	0	10
02:00	0	10	1	0	0	0	0	0	1	0	0	0	0	0	0	12
Hour Total	0	44	4	0	0	0	0	1	2	0	0	0	0	0	0	51
02:15	0	19	3	0	0	0	0	0	0	0	0	0	0	0	0	22
02:30	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
02:45	0	10	1	0	0	0	0	0	1	0	0	0	0	0	0	12
03:00	0	16	2	0	0	0	0	0	0	0	0	0	0	0	0	18
Hour Total	0	53	6	0	0	0	0	0	1	0	0	0	0	0	0	60
03:15	0	8	5	0	0	0	0	0	3	0	0	0	0	0	0	16
03:30	0	13	4	0	0	0	0	0	0	0	0	0	0	0	0	17
03:45	0	16	7	0	0	0	0	0	0	0	0	0	0	0	0	23
04:00	0	23	9	0	0	0	0	0	2	0	0	0	0	0	0	34
Hour Total	0	60	25	0	0	0	0	0	5	0	0	0	0	0	0	90
04:15	0	23	9	0	0	1	0	0	2	0	0	0	0	0	0	35
04:30	1	35	14	0	0	0	0	0	1	0	0	0	0	0	0	51
04:45	0	43	32	0	0	0	0	0	1	0	0	0	0	0	0	76
05:00	0	57	22	0	0	0	0	0	4	0	0	0	0	0	0	83
Hour Total	1	158	77	0	0	1	0	0	8	0	0	0	0	0	0	245
05:15	0	59	32	0	1	0	0	0	3	0	0	0	0	0	0	95
05:30	1	85	37	0	0	1	0	0	3	0	0	0	0	0	0	127
05:45	1	107	53	0	0	0	0	0	1	0	0	0	0	0	0	162
06:00	4	98	51	1	0	0	0	0	0	0	0	0	0	0	0	154
Hour Total	6	349	173	1	1	1	0	0	7	0	0	0	0	0	0	538
06:15	3	122	45	0	1	0	0	0	1	0	0	0	0	0	0	172
06:30	0	129	56	0	1	1	0	0	3	0	0	0	0	0	0	190
06:45	2	153	59	2	1	1	0	0	1	0	0	0	0	0	0	219
07:00	0	137	46	1	0	2	0	1	3	0	0	0	0	0	0	190
Hour Total	5	541	206	3	3	4	0	1	8	0	0	0	0	0	0	771
07:15	4	178	56	0	1	0	6	1	0	0	0	0	0	0	0	246
07:30	0	178	54	0	6	0	4	0	3	0	0	0	0	0	0	245
07:45	0	201	46	1	2	0	5	1	2	1	0	0	0	0	0	259
08:00	2	132	40	1	6	0	1	0	0	0	0	0	0	0	0	182
Hour Total	6	689	196	2	15	0	16	2	5	1	0	0	0	0	0	932
08:15	0	141	32	0	2	1	3	1	2	1	0	0	1	0	0	184
08:30	0	107	29	0	1	0	0	1	3	0	0	0	0	0	0	141
08:45	0	102	33	0	1	1	4	1	3	0	0	0	0	0	0	145
09:00	0	73	30	0	0	2	5	1	2	1	0	0	0	0	0	114

Station #: Site A-NBO
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Lane: 1

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City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	423	124	0	4	4	12	4	10	2	0	0	1	0	0	584
09:15	0	77	27	0	2	1	3	0	1	0	0	0	0	0	0	111
09:30	0	71	29	0	4	4	2	0	1	0	0	0	0	0	0	111
09:45	0	81	17	0	2	0	0	1	3	0	0	0	0	0	0	104
10:00	0	63	22	0	1	0	2	0	2	0	0	0	0	0	0	90
Hour Total	0	292	95	0	9	5	7	1	7	0	0	0	0	0	0	416
10:15	0	65	17	1	2	4	8	0	4	0	0	0	0	0	0	101
10:30	0	62	27	0	1	1	2	1	3	1	0	0	0	0	0	98
10:45	0	79	20	0	2	0	2	1	3	0	0	0	0	0	0	107
11:00	1	64	25	0	4	2	0	1	2	0	0	0	0	0	0	99
Hour Total	1	270	89	1	9	7	12	3	12	1	0	0	0	0	0	405
11:15	0	59	19	1	3	1	2	0	7	0	0	0	0	0	0	92
11:30	0	59	18	0	4	3	0	4	2	0	0	0	0	0	0	90
11:45	0	60	18	0	1	2	3	0	2	0	0	0	0	0	0	86
12:00	0	70	8	0	3	1	6	1	0	0	0	0	0	0	0	89
Hour Total	0	248	63	1	11	7	11	5	11	0	0	0	0	0	0	357
12:15	0	69	28	1	1	1	0	0	2	0	0	0	0	0	0	102
12:30	0	71	15	0	4	2	1	0	1	0	0	0	0	0	0	94
12:45	0	67	21	0	2	1	0	0	1	0	0	0	0	0	0	92
13:00	1	57	22	0	1	1	1	1	0	0	0	0	0	0	0	84
Hour Total	1	264	86	1	8	5	2	1	4	0	0	0	0	0	0	372
13:15	1	55	19	0	2	2	3	0	1	0	0	0	0	0	0	83
13:30	0	57	20	0	0	2	4	0	3	0	0	0	0	0	0	86
13:45	2	55	24	0	3	3	2	0	1	0	0	0	0	0	0	90
14:00	1	63	18	0	0	1	0	1	1	1	0	0	0	0	0	86
Hour Total	4	230	81	0	5	8	9	1	6	1	0	0	0	0	0	345
14:15	0	65	20	0	1	1	2	0	1	0	0	0	0	0	0	90
14:30	1	66	24	0	0	3	2	0	2	0	0	0	0	0	0	98
14:45	0	72	28	0	2	1	1	0	1	0	0	0	0	0	0	105
15:00	1	73	31	0	0	1	2	1	1	0	0	0	0	0	0	110
Hour Total	2	276	103	0	3	6	7	1	5	0	0	0	0	0	0	403
15:15	1	65	18	0	2	3	1	0	1	0	0	0	0	0	0	91
15:30	1	78	17	0	1	0	2	0	2	0	0	0	0	0	0	101
15:45	0	69	23	0	3	0	2	0	4	0	0	0	0	0	0	101
16:00	0	82	25	0	2	0	2	0	1	0	0	0	0	0	0	112
Hour Total	2	294	83	0	8	3	7	0	8	0	0	0	0	0	0	405
16:15	1	77	16	0	1	0	3	0	2	0	0	0	0	0	0	100
16:30	0	96	30	0	5	2	0	0	1	0	0	0	0	0	0	134
16:45	1	98	28	0	4	0	1	0	0	0	0	0	0	0	0	132
17:00	1	92	35	0	2	0	1	0	1	0	0	0	0	0	0	132
Hour Total	3	363	109	0	12	2	5	0	4	0	0	0	0	0	0	498

Station #: Site A-NBO
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Lane: 1

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City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	1	96	25	0	0	0	0	2	0	0	0	0	0	0	0	124
17:30	1	96	22	0	0	0	2	0	0	0	0	0	0	0	0	121
17:45	1	105	26	0	0	1	0	1	3	0	0	0	0	0	0	137
18:00	0	73	30	0	1	0	1	0	0	0	0	0	0	0	0	105
Hour Total	3	370	103	0	1	1	3	3	3	0	0	0	0	0	0	487
18:15	0	82	23	0	2	0	0	0	0	0	0	0	0	0	0	107
18:30	2	79	19	0	0	0	0	0	0	0	0	0	0	0	0	100
18:45	0	74	21	0	1	0	0	0	3	0	0	0	0	0	0	99
19:00	0	64	17	0	0	0	0	0	2	0	0	0	0	0	0	83
Hour Total	2	299	80	0	3	0	0	0	5	0	0	0	0	0	0	389
19:15	0	58	13	0	1	2	0	0	2	0	0	0	0	0	0	76
19:30	0	55	12	0	0	0	0	1	0	0	0	0	0	0	0	68
19:45	1	65	13	0	0	0	0	0	0	0	0	0	0	0	0	79
20:00	1	31	12	1	0	0	0	0	4	0	0	0	0	0	0	49
Hour Total	2	209	50	1	1	2	0	1	6	0	0	0	0	0	0	272
20:15	1	37	11	0	0	0	0	0	0	0	0	0	0	0	0	49
20:30	0	31	9	0	0	0	0	0	2	0	0	0	0	0	0	42
20:45	0	36	6	0	0	0	0	0	0	0	0	0	0	0	0	42
21:00	0	32	5	0	0	0	0	0	2	0	0	0	0	0	0	39
Hour Total	1	136	31	0	0	0	0	0	4	0	0	0	0	0	0	172
21:15	1	35	6	0	0	0	0	0	1	0	0	0	0	0	0	43
21:30	0	30	3	0	1	0	0	0	1	0	0	0	0	0	0	35
21:45	0	29	4	0	1	0	0	0	3	0	0	0	0	0	0	37
22:00	0	22	7	0	1	0	0	0	1	0	0	0	0	0	0	31
Hour Total	1	116	20	0	3	0	0	0	6	0	0	0	0	0	0	146
22:15	0	27	4	0	0	0	0	0	1	0	0	0	0	0	0	32
22:30	0	28	5	0	0	0	0	0	0	0	0	0	0	0	0	33
22:45	0	25	5	0	0	0	0	0	1	0	0	0	0	0	0	31
23:00	0	19	1	0	0	0	0	0	1	0	0	0	0	0	0	21
Hour Total	0	99	15	0	0	0	0	0	3	0	0	0	0	0	0	117
23:15	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
23:30	0	5	1	0	0	1	0	0	0	0	0	0	0	0	0	7
23:45	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	10
24:00	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	9
Hour Total	0	26	6	0	0	1	0	0	0	0	0	0	0	0	0	33
DAY TOTAL	40	5859	1830	10	96	58	91	24	131	5	0	0	1	0	0	8145
PERCENTS	0.5%	72.0%	22.5%	0.2%	1.2%	0.7%	1.1%	0.2%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 94.8% Trucks & Buses 5.1%

AM Times	05:30	07:00	06:30	06:00	07:30	08:45	07:15	10:45	10:30	07:30			07:30			07:00
AM Peaks	9	694	217	3	16	8	16	6	15	2			1			940
PM Times	13:00	17:00	16:30	12:15	16:00	13:00	13:00	17:00	15:30	13:15						16:30
PM Peaks	4	389	118	1	12	8	10	3	9	1						522

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County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	1	5	3	0	0	0	0	0	0	0	0	0	0	0	0	9
00:30	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
00:45	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	4
01:00	0	17	1	0	0	0	0	0	2	0	0	0	0	0	0	20
Hour Total	1	31	5	0	0	0	0	0	3	0	0	0	0	0	0	40
01:15	1	13	2	0	0	0	0	0	0	0	0	0	0	0	0	16
01:30	0	17	2	0	1	0	0	0	0	0	0	0	0	0	0	20
01:45	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	24
02:00	0	10	4	0	0	0	0	0	0	0	0	0	0	0	0	14
Hour Total	1	64	8	0	1	0	0	0	0	0	0	0	0	0	0	74
02:15	0	9	1	0	1	0	0	0	0	0	0	0	0	0	0	11
02:30	1	18	1	0	0	0	0	0	5	0	0	0	0	0	0	25
02:45	0	20	2	0	0	0	0	0	2	0	0	0	0	0	0	24
03:00	0	7	4	0	1	0	0	0	0	0	0	0	0	0	0	12
Hour Total	1	54	8	0	2	0	0	0	7	0	0	0	0	0	0	72
03:15	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	13
03:30	0	13	3	0	0	0	0	0	0	0	0	0	0	0	0	16
03:45	0	14	5	0	0	0	0	0	1	0	0	0	0	0	0	20
04:00	0	19	5	0	0	1	0	1	0	0	0	0	0	0	0	26
Hour Total	0	54	18	0	0	1	0	1	1	0	0	0	0	0	0	75
04:15	0	25	11	0	0	1	0	0	1	0	0	0	0	0	0	38
04:30	2	36	23	0	0	2	0	0	0	0	0	0	0	0	0	63
04:45	0	52	25	0	0	2	0	0	3	0	0	0	0	0	0	82
05:00	0	58	27	0	0	0	0	0	2	0	0	0	0	0	0	87
Hour Total	2	171	86	0	0	5	0	0	6	0	0	0	0	0	0	270
05:15	0	60	28	0	0	2	0	0	1	0	0	0	0	0	0	91
05:30	1	86	33	0	1	1	0	0	1	0	0	0	0	0	0	123
05:45	1	93	54	0	0	0	0	1	0	0	0	0	0	0	0	149
06:00	1	100	53	1	0	2	0	1	1	0	0	0	0	0	0	159
Hour Total	3	339	168	1	1	5	0	2	3	0	0	0	0	0	0	522
06:15	4	110	55	2	2	0	0	1	1	0	0	0	0	0	0	175
06:30	0	135	57	1	0	2	0	0	1	0	0	0	0	0	0	196
06:45	0	161	55	1	1	1	0	0	1	0	0	0	0	0	0	220
07:00	1	129	54	0	1	2	0	1	0	0	0	0	0	0	0	188
Hour Total	5	535	221	4	4	5	0	2	3	0	0	0	0	0	0	779
07:15	1	188	47	0	1	2	0	0	1	0	0	0	0	0	0	240
07:30	0	187	42	0	2	0	5	0	1	1	0	0	0	0	0	238
07:45	1	196	45	0	2	1	4	2	3	0	0	0	0	0	0	254
08:00	0	141	35	0	1	0	2	1	4	0	0	0	0	0	0	184
Hour Total	2	712	169	0	6	3	11	3	9	1	0	0	0	0	0	916
08:15	0	106	34	0	1	1	1	1	0	0	0	0	0	0	0	144
08:30	0	89	34	0	0	0	3	0	9	0	0	0	0	0	0	135
08:45	0	108	26	0	7	2	1	0	1	0	0	0	0	0	0	145
09:00	2	79	27	0	1	1	2	1	1	0	0	0	0	0	0	114

Station #: Site A-NBO
Site ID: 000000003590
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002023.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	2	382	121	0	9	4	7	2	11	0	0	0	0	0	0	538
09:15	0	90	29	0	2	3	1	0	2	0	0	0	0	0	0	127
09:30	0	72	28	0	4	1	2	0	7	0	0	0	0	0	0	114
09:45	0	61	32	0	2	0	3	0	2	0	0	0	1	0	0	101
10:00	0	82	22	0	0	2	4	0	0	0	0	0	0	0	0	110
Hour Total	0	305	111	0	8	6	10	0	11	0	0	0	1	0	0	452
10:15	1	48	18	0	3	4	3	0	4	0	0	0	0	0	0	81
10:30	0	68	23	0	2	2	2	2	0	0	0	0	0	0	0	99
10:45	0	64	23	1	1	0	0	1	4	0	0	0	0	0	0	94
11:00	0	64	22	0	3	0	3	1	1	1	0	0	0	0	0	95
Hour Total	1	244	86	1	9	6	8	4	9	1	0	0	0	0	0	369
11:15	0	54	25	0	2	2	3	0	4	1	0	0	0	0	0	91
11:30	0	64	25	0	1	1	4	1	6	0	0	0	0	0	0	102
11:45	0	57	23	0	0	1	1	1	5	1	0	0	0	0	0	89
12:00	1	63	19	0	3	1	1	1	3	0	0	0	0	0	0	92
Hour Total	1	238	92	0	6	5	9	3	18	2	0	0	0	0	0	374
12:15	0	53	18	0	2	2	3	0	0	0	1	0	0	0	0	79
12:30	0	67	20	0	2	0	1	1	0	0	0	0	0	0	0	91
12:45	0	42	21	0	1	2	3	0	0	0	0	0	0	0	0	69
13:00	1	56	22	0	2	1	6	1	1	0	0	0	0	0	0	90
Hour Total	1	218	81	0	7	5	13	2	1	0	1	0	0	0	0	329
13:15	0	60	19	0	1	1	3	0	2	0	0	0	0	0	0	86
13:30	0	69	21	0	2	0	1	2	2	0	0	0	0	0	0	97
13:45	0	60	25	0	2	1	1	0	4	0	0	1	0	0	0	94
14:00	1	70	23	0	1	1	2	0	2	0	0	0	0	0	0	100
Hour Total	1	259	88	0	6	3	7	2	10	0	0	1	0	0	0	377
14:15	0	60	18	0	0	2	3	1	4	0	0	0	0	0	0	88
14:30	3	74	19	0	0	0	3	1	0	0	0	0	0	0	0	100
14:45	0	59	25	0	0	3	3	1	6	0	0	0	0	0	0	97
15:00	3	54	20	0	4	1	0	0	2	0	0	0	0	0	0	84
Hour Total	6	247	82	0	4	6	9	3	12	0	0	0	0	0	0	369
15:15	0	62	27	0	5	0	1	1	0	0	0	0	0	0	0	96
15:30	2	63	24	0	0	3	1	1	6	0	0	0	0	0	0	100
15:45	2	69	22	0	3	0	3	0	3	0	0	0	0	0	0	102
16:00	1	58	19	0	1	1	4	0	5	0	0	0	0	0	0	89
Hour Total	5	252	92	0	9	4	9	2	14	0	0	0	0	0	0	387
16:15	0	93	21	0	3	0	1	0	0	0	0	0	0	0	0	118
16:30	0	104	19	0	2	0	3	1	1	0	0	0	0	0	0	130
16:45	2	89	27	0	0	0	2	1	1	0	0	0	0	0	0	122
17:00	1	87	19	0	1	2	1	0	1	0	0	0	0	0	0	112
Hour Total	3	373	86	0	6	2	7	2	3	0	0	0	0	0	0	482

Station #: Site A-NBO
Site ID: 000000003590
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002023.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	116	18	0	1	0	0	0	2	0	0	0	0	0	0	137
17:30	0	107	22	0	3	1	1	0	0	0	0	0	0	0	0	134
17:45	2	116	21	0	1	0	1	0	0	0	0	0	0	0	0	141
18:00	0	88	25	0	1	0	0	0	1	0	0	0	0	0	0	115
Hour Total	2	427	86	0	6	1	2	0	3	0	0	0	0	0	0	527
18:15	4	90	19	0	0	2	0	0	4	0	0	0	0	0	0	119
18:30	0	69	25	0	0	0	0	0	1	0	0	0	0	0	0	95
18:45	1	90	20	0	2	1	0	0	4	0	0	0	0	0	0	118
19:00	0	62	8	0	2	0	0	0	3	1	0	0	0	0	0	76
Hour Total	5	311	72	0	4	3	0	0	12	1	0	0	0	0	0	408
19:15	1	72	10	0	1	0	0	0	1	0	0	0	0	0	0	85
19:30	2	46	11	0	1	1	0	1	2	0	0	0	0	0	0	64
19:45	0	57	14	0	1	0	0	0	2	0	0	0	0	0	0	74
20:00	0	47	10	0	1	0	0	0	4	0	0	0	0	0	0	62
Hour Total	3	222	45	0	4	1	0	1	9	0	0	0	0	0	0	285
20:15	1	42	11	0	0	0	0	0	1	0	0	0	0	0	0	55
20:30	0	53	10	0	0	0	0	0	1	0	0	0	0	0	0	64
20:45	1	33	6	0	0	0	0	0	3	0	0	0	0	0	0	43
21:00	0	38	10	0	0	0	0	0	0	0	1	0	0	0	0	49
Hour Total	2	166	37	0	0	0	0	0	5	0	1	0	0	0	0	211
21:15	1	41	5	0	2	0	0	0	1	0	0	0	0	0	0	50
21:30	0	30	3	0	1	0	0	0	0	0	0	0	0	0	0	34
21:45	0	24	4	0	1	0	0	0	1	0	0	0	0	0	0	30
22:00	0	21	8	0	1	0	0	0	2	0	0	0	0	0	0	32
Hour Total	1	116	20	0	5	0	0	0	4	0	0	0	0	0	0	146
22:15	0	33	6	0	0	0	0	0	1	0	0	0	0	0	0	40
22:30	0	44	8	0	0	0	0	1	0	0	0	0	0	0	0	53
22:45	0	27	2	0	0	0	0	0	1	0	0	0	0	0	0	30
23:00	0	9	2	0	0	0	0	0	1	0	0	0	0	0	0	12
Hour Total	0	113	18	0	0	0	0	1	3	0	0	0	0	0	0	135
23:15	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	16
23:30	2	8	3	0	0	0	0	0	1	0	0	0	0	0	0	14
23:45	0	12	1	0	0	0	0	0	2	0	0	0	0	0	0	15
24:00	0	7	4	0	0	0	0	0	3	0	0	0	0	0	0	14
Hour Total	2	43	8	0	0	0	0	0	6	0	0	0	0	0	0	59
DAY TOTAL	50	5876	1808	6	97	65	92	30	163	5	2	1	1	0	0	8196
PERCENTS	0.7%	71.7%	22.1%	0.1%	1.2%	0.8%	1.2%	0.3%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 94.3% Trucks & Buses 5.6%

AM Times	05:30	07:15	06:15	06:00	08:45	09:45	07:30	07:30	11:15	11:00		09:00			07:00	
AM Peaks	7	712	221	5	14	8	12	4	18	3		1			920	
PM Times	15:00	17:15	14:45	15:00	14:45	12:15	12:45	14:45	18:15	12:15	13:00				17:15	
PM Peaks	7	427	96	12	7	13	3	14	1	1	1				527	

GRAND TOTAL	142	5456	277	240	474	4	2	0								
	17470	35	210	83	13	2	0	24408								
PERCENTS	0.6%	71.6%	22.4%	0.2%	1.2%	0.9%	0.9%	0.3%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site A-NBO
Site ID: 000000003590
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002024.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	1	3	0	2	0	0	0	6
00:30	0	0	0	0	0	0	0	1	0	3	2	0	0	0	6
00:45	0	0	0	0	0	1	0	3	3	4	2	0	0	0	13
01:00	0	0	0	0	1	0	0	6	6	1	1	0	0	0	15
Hour Total	0	0	0	0	1	1	0	11	12	8	7	0	0	0	40
01:15	0	0	0	0	0	0	0	5	7	6	1	1	0	0	20
01:30	0	0	0	0	0	0	0	3	7	4	1	0	1	0	16
01:45	0	0	0	0	0	0	0	4	5	5	1	0	0	0	15
02:00	0	0	0	0	0	0	3	2	7	1	1	1	0	0	15
Hour Total	0	0	0	0	0	0	3	14	26	16	4	2	1	0	66
02:15	0	0	0	1	0	0	1	2	2	3	1	1	0	0	11
02:30	0	0	0	0	0	0	0	6	4	3	0	0	0	0	13
02:45	0	0	0	0	0	0	1	0	8	6	0	0	0	0	15
03:00	0	0	0	0	1	0	0	2	4	2	0	0	0	0	9
Hour Total	0	0	0	1	1	0	2	10	18	14	1	1	0	0	48
03:15	0	0	0	0	0	0	0	3	4	8	0	0	0	0	15
03:30	0	0	0	0	0	0	0	2	4	8	0	0	0	0	14
03:45	0	0	0	1	0	1	0	5	12	9	5	0	0	0	33
04:00	0	0	0	0	1	2	0	1	7	9	3	1	0	0	24
Hour Total	0	0	0	1	1	3	0	11	27	34	8	1	0	0	86
04:15	0	0	0	0	1	0	0	4	14	11	6	0	0	0	36
04:30	0	0	0	1	0	0	0	2	25	19	5	1	0	0	53
04:45	0	0	0	0	3	10	9	10	20	31	7	1	0	0	91
05:00	0	0	0	1	4	7	5	10	18	20	4	0	0	0	69
Hour Total	0	0	0	2	8	17	14	26	77	81	22	2	0	0	249
05:15	0	0	0	0	1	7	7	7	26	44	7	0	0	0	99
05:30	0	0	0	0	11	9	13	11	36	38	10	1	0	0	129
05:45	1	0	0	0	2	12	19	9	32	65	19	3	0	0	162
06:00	0	0	0	2	4	15	14	20	44	26	10	0	0	0	135
Hour Total	1	0	0	2	18	43	53	47	138	173	46	4	0	0	525
06:15	0	0	0	2	9	14	18	16	67	41	10	0	1	0	178
06:30	0	0	0	3	14	26	23	27	48	43	2	0	1	0	187
06:45	0	0	0	1	10	28	38	28	50	57	10	1	0	0	223
07:00	1	0	0	2	7	19	27	34	50	36	16	0	0	0	192
Hour Total	1	0	0	8	40	87	106	105	215	177	38	1	2	0	780
07:15	0	0	0	2	28	37	54	50	64	29	3	0	1	0	268
07:30	0	0	0	1	21	53	52	45	25	32	11	1	0	0	241
07:45	0	0	0	5	16	44	59	50	38	48	7	0	0	0	267
08:00	0	0	0	0	6	24	44	26	56	30	9	1	1	0	197
Hour Total	0	0	0	8	71	158	209	171	183	139	30	2	2	0	973
08:15	0	0	0	2	10	23	21	16	37	31	9	3	1	0	153
08:30	1	0	0	1	4	18	22	23	30	46	13	1	0	0	159
08:45	0	0	0	1	8	23	21	13	43	41	6	1	0	0	157
09:00	1	0	0	0	6	20	7	14	23	32	8	0	0	0	111

Station #: Site A-NBO
Site ID: 000000003590
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002024.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	2	0	0	4	28	84	71	66	133	150	36	5	1	0	580
09:15	0	0	0	1	3	4	14	16	30	26	8	3	0	0	105
09:30	0	0	0	0	7	9	15	11	31	31	8	1	0	0	113
09:45	0	0	0	0	6	6	8	23	29	22	8	1	0	0	103
10:00	0	0	0	1	6	7	12	11	25	23	4	1	0	0	90
Hour Total	0	0	0	2	22	26	49	61	115	102	28	6	0	0	411
10:15	0	0	0	1	2	10	11	14	31	21	5	2	0	0	97
10:30	0	0	0	0	6	4	4	12	33	19	7	3	0	0	88
10:45	0	0	1	3	8	6	10	15	27	33	4	0	0	0	107
11:00	0	0	0	1	4	7	1	8	26	25	5	1	0	0	78
Hour Total	0	0	1	5	20	27	26	49	117	98	21	6	0	0	370
11:15	0	1	0	2	8	6	7	19	25	14	7	4	0	0	93
11:30	0	0	1	0	4	1	2	22	36	17	6	2	0	0	91
11:45	0	0	0	2	9	10	6	7	23	24	5	1	0	0	87
12:00	0	0	0	0	5	5	9	18	28	25	4	2	0	0	96
Hour Total	0	1	1	4	26	22	24	66	112	80	22	9	0	0	367
12:15	0	0	0	2	13	6	13	22	20	11	5	0	0	0	92
12:30	0	0	0	0	3	2	5	16	31	18	9	1	0	0	85
12:45	0	0	0	1	9	6	11	12	16	21	10	2	0	0	88
13:00	0	0	0	0	5	12	14	20	22	16	2	0	1	0	92
Hour Total	0	0	0	3	30	26	43	70	89	66	26	3	1	0	357
13:15	0	0	0	1	4	12	8	12	25	26	6	1	0	0	95
13:30	0	0	0	2	6	8	9	24	25	20	6	1	0	0	101
13:45	0	0	0	3	3	11	5	12	33	15	8	1	0	0	91
14:00	0	0	0	0	7	9	5	9	23	18	7	1	0	0	79
Hour Total	0	0	0	6	20	40	27	57	106	79	27	4	0	0	366
14:15	0	0	1	1	6	7	9	17	22	23	2	2	0	0	90
14:30	0	0	0	0	7	5	13	8	19	35	5	3	0	0	95
14:45	0	0	0	0	1	7	4	16	39	30	9	2	0	0	108
15:00	0	0	0	2	3	10	11	12	26	23	13	0	1	0	101
Hour Total	0	0	1	3	17	29	37	53	106	111	29	7	1	0	394
15:15	0	0	0	2	4	2	5	13	18	30	4	1	1	0	80
15:30	0	0	0	0	6	9	13	24	20	25	17	2	0	0	116
15:45	0	0	0	2	9	19	16	10	23	21	6	1	1	0	108
16:00	0	0	1	1	5	8	8	14	27	28	7	2	0	0	101
Hour Total	0	0	1	5	24	38	42	61	88	104	34	6	2	0	405
16:15	0	0	0	1	1	10	9	15	23	20	11	0	0	0	90
16:30	0	0	1	3	6	7	14	21	29	43	7	1	0	0	132
16:45	0	0	0	1	1	9	16	13	36	30	6	1	0	0	113
17:00	0	0	0	0	3	5	9	21	42	29	10	2	1	0	122
Hour Total	0	0	1	5	11	31	48	70	130	122	34	4	1	0	457

Station #: Site A-NBO
Site ID: 000000003590
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002024.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	6	15	12	19	43	29	7	1	1	0	133
17:30	0	0	0	0	4	8	6	27	44	32	6	1	0	0	128
17:45	0	0	0	0	8	12	12	16	23	34	8	3	0	0	116
18:00	0	0	0	0	4	14	14	12	25	39	8	2	0	0	118
Hour Total	0	0	0	0	22	49	44	74	135	134	29	7	1	0	495
18:15	0	0	0	1	7	6	10	23	28	16	9	1	1	0	102
18:30	1	0	0	1	5	7	13	14	34	22	9	0	0	0	106
18:45	0	0	0	1	3	10	16	10	21	36	10	0	0	0	107
19:00	0	0	0	0	1	5	4	12	19	26	4	1	0	0	72
Hour Total	1	0	0	3	16	28	43	59	102	100	32	2	1	0	387
19:15	0	0	0	0	0	4	6	8	21	18	2	0	0	0	59
19:30	0	0	0	0	2	2	4	11	26	10	3	0	0	0	58
19:45	0	0	0	0	4	4	2	8	24	11	2	0	1	0	56
20:00	0	0	0	0	4	3	2	11	16	11	2	0	0	0	49
Hour Total	0	0	0	0	10	13	14	38	87	50	9	0	1	0	222
20:15	0	0	0	0	4	4	7	5	11	8	6	0	0	0	45
20:30	0	0	0	0	3	8	3	3	13	5	6	1	0	0	42
20:45	0	0	0	0	6	4	3	7	10	14	4	0	0	0	48
21:00	0	0	0	2	1	2	0	9	11	12	1	1	0	0	39
Hour Total	0	0	0	2	14	18	13	24	45	39	17	2	0	0	174
21:15	0	0	0	1	1	5	1	6	21	5	0	1	0	0	41
21:30	0	0	0	0	5	2	1	2	12	11	3	0	0	0	36
21:45	0	0	0	0	3	0	1	4	14	15	2	1	0	0	40
22:00	0	0	0	0	2	0	1	1	9	6	3	0	0	0	22
Hour Total	0	0	0	1	11	7	4	13	56	37	8	2	0	0	139
22:15	0	0	0	1	0	1	2	5	10	13	0	0	0	0	32
22:30	0	0	0	1	0	2	1	9	12	11	2	0	0	0	38
22:45	0	0	0	1	2	1	2	5	7	11	1	0	0	0	30
23:00	0	0	0	1	0	1	2	2	4	6	3	0	0	0	19
Hour Total	0	0	0	4	2	5	7	21	33	41	6	0	0	0	119
23:15	0	0	0	1	0	1	1	3	10	2	0	1	0	0	19
23:30	0	0	0	0	0	0	0	3	5	3	1	0	0	0	12
23:45	0	0	0	1	1	0	2	1	7	2	2	0	0	0	16
24:00	0	0	0	0	0	0	0	2	6	1	1	0	0	0	10
Hour Total	0	0	0	2	1	1	3	9	28	8	4	1	0	0	57
DAY TOTAL	5	1	5	71	414	753	882	1186	2178	1963	518	77	14	0	8067
PERCENTS	0.1%	0.1%	0.1%	0.9%	5.2%	9.4%	10.9%	14.7%	26.9%	24.3%	6.4%	0.9%	0.1%	0.0%	100%

Station #: Site A-NBO
Site ID: 000000003590
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002024.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
34.8 mph

85th Percentile Speed
53.5 mph

Median Speed
46.7 mph

Average Speed
45.0 mph

10 MPH Pace Speed
45 mph to 55 mph
4141 vehicles in pace
Representing 51.3% of the total vehicles

Vehicles > 45 MPH
4750
58.9%

Station #: Site A-NBO
Site ID: 000000003590
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002024.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	1	7	1	0	0	0	9
00:30	0	0	0	0	0	0	0	1	8	0	1	0	0	0	10
00:45	0	0	0	0	0	0	1	3	6	6	0	0	0	0	16
01:00	0	0	0	0	0	0	0	5	13	4	0	0	0	0	22
Hour Total	0	0	0	0	0	0	1	9	28	17	2	0	0	0	57
01:15	0	0	0	1	0	0	0	3	6	6	2	0	0	0	18
01:30	0	0	0	0	0	0	0	1	7	3	0	0	0	0	11
01:45	0	0	0	0	0	0	0	2	7	1	0	0	0	0	10
02:00	0	0	0	0	0	0	0	2	4	6	0	0	0	0	12
Hour Total	0	0	0	1	0	0	0	8	24	16	2	0	0	0	51
02:15	0	0	0	0	0	1	0	6	7	8	0	0	0	0	22
02:30	0	0	0	0	0	0	0	2	1	5	0	0	0	0	8
02:45	0	0	0	0	0	0	0	3	5	3	1	0	0	0	12
03:00	0	0	0	0	1	0	0	2	7	7	1	0	0	0	18
Hour Total	0	0	0	0	1	1	0	13	20	23	2	0	0	0	60
03:15	0	0	0	1	0	0	2	2	6	5	0	0	0	0	16
03:30	0	0	0	0	0	0	0	4	6	6	1	0	0	0	17
03:45	0	0	0	0	0	0	1	1	11	7	3	0	0	0	23
04:00	0	0	0	0	2	0	1	6	11	13	1	0	0	0	34
Hour Total	0	0	0	1	2	0	4	13	34	31	5	0	0	0	90
04:15	0	0	0	0	1	0	1	6	12	12	3	0	0	0	35
04:30	0	0	0	0	1	0	2	3	12	28	5	0	0	0	51
04:45	0	0	0	0	0	8	7	9	22	28	2	0	0	0	76
05:00	0	0	0	1	3	8	3	8	27	28	4	1	0	0	83
Hour Total	0	0	0	1	5	16	13	26	73	96	14	1	0	0	245
05:15	0	0	0	0	6	4	4	16	17	37	10	1	0	0	95
05:30	0	0	0	1	4	9	9	15	32	45	10	2	0	0	127
05:45	0	0	0	0	9	12	14	17	44	52	11	0	1	2	162
06:00	0	0	0	0	6	19	10	16	35	57	9	1	1	0	154
Hour Total	0	0	0	1	25	44	37	64	128	191	40	4	2	2	538
06:15	0	0	0	2	4	21	18	18	36	53	19	1	0	0	172
06:30	0	0	0	1	14	19	18	30	40	56	9	3	0	0	190
06:45	0	0	0	3	8	11	32	43	64	46	11	1	0	0	219
07:00	0	0	0	0	14	21	29	35	36	42	11	2	0	0	190
Hour Total	0	0	0	6	40	72	97	126	176	197	50	7	0	0	771
07:15	0	0	0	6	9	31	35	44	65	48	7	1	0	0	246
07:30	0	0	1	3	16	33	69	58	37	22	6	0	0	0	245
07:45	1	0	2	3	30	39	50	64	51	17	2	0	0	0	259
08:00	0	0	0	4	10	27	23	26	46	40	4	2	0	0	182
Hour Total	1	0	3	16	65	130	177	192	199	127	19	3	0	0	932
08:15	0	0	1	4	10	28	24	29	44	36	6	2	0	0	184
08:30	0	0	0	3	11	17	14	21	25	34	14	2	0	0	141
08:45	0	0	0	3	8	14	25	16	30	32	13	4	0	0	145
09:00	0	0	2	1	6	21	10	15	16	38	5	0	0	0	114

Station #: Site A-NBO
Site ID: 000000003590
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002024.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	3	11	35	80	73	81	115	140	38	8	0	0	584
09:15	0	0	0	0	9	11	9	14	33	27	8	0	0	0	111
09:30	0	0	0	2	5	8	7	11	32	33	12	1	0	0	111
09:45	0	0	0	2	7	4	13	13	36	26	2	1	0	0	104
10:00	0	0	0	1	4	5	8	19	21	23	8	1	0	0	90
Hour Total	0	0	0	5	25	28	37	57	122	109	30	3	0	0	416
10:15	0	0	0	4	6	9	10	22	28	18	4	0	0	0	101
10:30	0	0	0	0	9	4	4	13	27	27	11	3	0	0	98
10:45	0	0	0	0	4	5	5	21	30	34	8	0	0	0	107
11:00	0	0	1	1	4	4	6	13	23	34	13	0	0	0	99
Hour Total	0	0	1	5	23	22	25	69	108	113	36	3	0	0	405
11:15	0	0	0	0	3	6	10	19	27	16	9	1	1	0	92
11:30	0	0	0	2	13	7	7	9	29	21	1	1	0	0	90
11:45	0	0	0	1	2	10	10	13	28	19	3	0	0	0	86
12:00	0	0	0	0	4	7	7	9	31	23	4	4	0	0	89
Hour Total	0	0	0	3	22	30	34	50	115	79	17	6	1	0	357
12:15	0	0	0	0	7	6	6	16	37	18	12	0	0	0	102
12:30	0	0	0	0	3	2	5	18	37	26	3	0	0	0	94
12:45	0	0	0	1	4	16	11	7	33	15	2	3	0	0	92
13:00	0	0	2	0	4	8	8	10	21	23	7	1	0	0	84
Hour Total	0	0	2	1	18	32	30	51	128	82	24	4	0	0	372
13:15	0	0	0	1	4	7	6	10	32	18	3	2	0	0	83
13:30	0	0	0	1	3	9	10	13	25	19	5	1	0	0	86
13:45	0	0	0	0	7	3	8	18	17	25	10	2	0	0	90
14:00	0	0	0	0	6	11	8	13	14	28	5	1	0	0	86
Hour Total	0	0	0	2	20	30	32	54	88	90	23	6	0	0	345
14:15	0	0	0	0	5	4	8	11	18	32	11	1	0	0	90
14:30	0	0	0	1	5	6	5	12	25	30	12	2	0	0	98
14:45	0	0	0	1	4	11	6	17	27	34	5	0	0	0	105
15:00	0	0	0	0	4	9	10	13	32	32	7	2	1	0	110
Hour Total	0	0	0	2	18	30	29	53	102	128	35	5	1	0	403
15:15	0	0	0	1	4	4	6	7	21	38	8	2	0	0	91
15:30	0	0	0	1	2	9	3	6	29	38	12	0	1	0	101
15:45	0	0	0	1	3	8	13	14	19	33	10	0	0	0	101
16:00	0	0	0	2	5	4	4	15	36	37	7	2	0	0	112
Hour Total	0	0	0	5	14	25	26	42	105	146	37	4	1	0	405
16:15	1	0	0	0	3	5	8	18	25	28	11	1	0	0	100
16:30	0	0	0	4	6	14	11	32	31	32	3	1	0	0	134
16:45	0	0	0	2	3	9	14	23	37	35	6	3	0	0	132
17:00	0	0	0	0	7	11	19	9	31	40	11	3	0	1	132
Hour Total	1	0	0	6	19	39	52	82	124	135	31	8	0	1	498

Station #: Site A-NBO
Site ID: 000000003590
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002024.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	2	10	20	22	43	18	9	0	0	0	124
17:30	0	0	0	0	7	21	9	12	30	38	4	0	0	0	121
17:45	0	0	0	0	7	18	14	25	30	36	6	1	0	0	137
18:00	1	0	0	1	5	13	7	15	24	30	9	0	0	0	105
Hour Total	1	0	0	1	21	62	50	74	127	122	28	1	0	0	487
18:15	0	0	0	0	4	6	14	19	30	27	6	0	1	0	107
18:30	1	0	0	0	8	12	6	10	22	32	7	2	0	0	100
18:45	0	0	0	2	5	10	4	12	24	38	4	0	0	0	99
19:00	0	0	0	0	8	11	7	13	14	23	5	2	0	0	83
Hour Total	1	0	0	2	25	39	31	54	90	120	22	4	1	0	389
19:15	0	0	0	2	1	6	3	9	25	24	5	0	1	0	76
19:30	0	0	0	0	2	6	1	7	29	17	6	0	0	0	68
19:45	0	0	0	1	2	5	3	14	21	31	2	0	0	0	79
20:00	0	0	0	0	3	3	2	14	11	8	7	0	1	0	49
Hour Total	0	0	0	3	8	20	9	44	86	80	20	0	2	0	272
20:15	0	0	0	0	4	6	2	6	20	9	2	0	0	0	49
20:30	0	0	1	0	5	3	2	1	13	14	3	0	0	0	42
20:45	0	0	0	0	3	5	4	6	12	9	2	1	0	0	42
21:00	0	0	0	1	2	2	1	5	14	10	4	0	0	0	39
Hour Total	0	0	1	1	14	16	9	18	59	42	11	1	0	0	172
21:15	0	0	0	1	3	1	2	4	17	11	2	2	0	0	43
21:30	0	0	0	1	2	6	5	5	7	8	1	0	0	0	35
21:45	0	0	0	0	3	3	1	5	10	14	1	0	0	0	37
22:00	0	0	0	0	2	1	0	4	14	9	1	0	0	0	31
Hour Total	0	0	0	2	10	11	8	18	48	42	5	2	0	0	146
22:15	0	0	0	1	1	2	2	3	17	6	0	0	0	0	32
22:30	0	0	0	0	0	1	2	8	15	6	1	0	0	0	33
22:45	0	0	0	0	0	1	2	4	10	12	1	0	1	0	31
23:00	0	0	0	0	2	1	0	3	9	6	0	0	0	0	21
Hour Total	0	0	0	1	3	5	6	18	51	30	2	0	1	0	117
23:15	0	0	0	0	0	0	0	0	2	3	2	0	0	0	7
23:30	0	0	0	0	0	0	1	1	2	1	0	2	0	0	7
23:45	0	0	0	0	1	0	0	4	3	2	0	0	0	0	10
24:00	0	0	0	0	0	0	0	1	6	2	0	0	0	0	9
Hour Total	0	0	0	0	1	0	1	6	13	8	2	2	0	0	33
DAY TOTAL	4	0	10	76	414	732	781	1222	2163	2164	495	72	9	3	8145
PERCENTS	0.1%	0.0%	0.2%	1.0%	5.1%	9.0%	9.6%	15.1%	26.5%	26.5%	6.0%	0.8%	0.1%	0.0%	100%

Station #: Site A-NBO
Site ID: 000000003590
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002024.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
34.9 mph

85th Percentile Speed
53.5 mph

Median Speed
46.9 mph

Average Speed
45.2 mph

10 MPH Pace Speed
45 mph to 55 mph
4327 vehicles in pace
Representing 53.1% of the total vehicles

Vehicles > 45 MPH
4906
60.2%

Station #: Site A-NBO
Site ID: 000000003590
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002024.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	1	4	2	2	0	0	0	0	9
00:30	0	0	0	0	1	0	0	0	3	3	0	0	0	0	7
00:45	0	0	0	0	1	0	0	1	0	1	1	0	0	0	4
01:00	0	0	0	0	0	0	1	0	12	6	1	0	0	0	20
Hour Total	0	0	0	0	2	0	2	5	17	12	2	0	0	0	40
01:15	1	0	0	0	0	1	0	6	5	2	1	0	0	0	16
01:30	0	0	0	0	0	1	0	4	5	8	1	0	1	0	20
01:45	0	0	0	0	0	0	1	3	12	5	3	0	0	0	24
02:00	0	0	0	0	0	0	1	0	5	7	1	0	0	0	14
Hour Total	1	0	0	0	0	2	2	13	27	22	6	0	1	0	74
02:15	0	0	0	0	0	0	1	3	3	4	0	0	0	0	11
02:30	0	0	1	0	1	1	0	5	8	7	1	0	1	0	25
02:45	0	0	0	0	0	0	1	6	9	7	1	0	0	0	24
03:00	0	0	0	0	0	0	1	4	5	2	0	0	0	0	12
Hour Total	0	0	1	0	1	1	3	18	25	20	2	0	1	0	72
03:15	0	0	0	1	0	1	0	3	5	3	0	0	0	0	13
03:30	0	0	0	0	0	0	0	6	5	4	1	0	0	0	16
03:45	0	0	0	0	0	0	0	6	5	9	0	0	0	0	20
04:00	0	0	0	0	0	2	0	3	8	11	2	0	0	0	26
Hour Total	0	0	0	1	0	3	0	18	23	27	3	0	0	0	75
04:15	0	0	0	0	0	0	1	4	16	14	2	1	0	0	38
04:30	0	0	0	0	1	3	1	7	20	27	4	0	0	0	63
04:45	0	0	1	0	2	1	4	7	31	30	6	0	0	0	82
05:00	0	0	0	0	7	11	8	12	14	30	4	1	0	0	87
Hour Total	0	0	1	0	10	15	14	30	81	101	16	2	0	0	270
05:15	0	0	0	0	5	4	3	11	21	31	12	4	0	0	91
05:30	1	0	0	0	4	9	10	14	39	34	11	1	0	0	123
05:45	0	0	0	1	8	10	13	14	44	43	13	2	1	0	149
06:00	0	0	0	0	9	21	16	22	39	41	9	2	0	0	159
Hour Total	1	0	0	1	26	44	42	61	143	149	45	9	1	0	522
06:15	0	0	0	0	13	11	17	32	39	54	6	2	0	1	175
06:30	0	0	1	1	11	24	21	27	67	33	9	2	0	0	196
06:45	0	0	0	7	13	31	28	29	68	40	2	2	0	0	220
07:00	0	0	0	1	10	27	20	24	58	43	4	1	0	0	188
Hour Total	0	0	1	9	47	93	86	112	232	170	21	7	0	1	779
07:15	0	0	6	6	18	37	46	24	48	46	9	0	0	0	240
07:30	0	0	0	2	22	33	59	32	43	36	8	3	0	0	238
07:45	2	0	0	4	13	48	66	74	22	20	4	1	0	0	254
08:00	0	0	0	2	11	26	27	41	41	26	6	4	0	0	184
Hour Total	2	0	6	14	64	144	198	171	154	128	27	8	0	0	916
08:15	0	0	0	3	5	18	11	26	50	16	14	1	0	0	144
08:30	0	0	1	2	5	20	12	14	29	29	18	5	0	0	135
08:45	0	0	0	1	11	17	19	17	34	36	10	0	0	0	145
09:00	0	0	0	1	6	7	8	21	28	30	13	0	0	0	114

Station #: Site A-NBO
Site ID: 000000003590
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002024.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	1	7	27	62	50	78	141	111	55	6	0	0	538
09:15	0	0	0	0	4	12	13	19	26	42	11	0	0	0	127
09:30	0	0	0	1	4	11	10	29	25	22	11	1	0	0	114
09:45	0	1	0	0	5	13	5	13	39	22	3	0	0	0	101
10:00	0	0	2	0	4	18	7	17	21	30	9	1	1	0	110
Hour Total	0	1	2	1	17	54	35	78	111	116	34	2	1	0	452
10:15	0	0	0	1	13	5	6	13	24	16	3	0	0	0	81
10:30	0	0	1	1	5	8	11	18	18	24	12	1	0	0	99
10:45	0	0	0	1	3	6	7	11	24	33	7	2	0	0	94
11:00	0	0	0	1	9	9	12	11	18	27	8	0	0	0	95
Hour Total	0	0	1	4	30	28	36	53	84	100	30	3	0	0	369
11:15	0	0	0	1	7	3	11	20	20	23	4	2	0	0	91
11:30	1	0	2	1	3	8	6	12	27	28	12	2	0	0	102
11:45	0	0	1	2	5	8	9	13	17	23	7	4	0	0	89
12:00	0	0	0	0	6	11	9	11	28	20	5	2	0	0	92
Hour Total	1	0	3	4	21	30	35	56	92	94	28	10	0	0	374
12:15	1	0	0	2	7	6	5	7	24	18	9	0	0	0	79
12:30	0	0	0	0	4	7	6	9	26	30	7	2	0	0	91
12:45	0	0	0	0	4	6	7	14	20	14	4	0	0	0	69
13:00	0	0	0	0	7	4	8	7	28	25	10	1	0	0	90
Hour Total	1	0	0	2	22	23	26	37	98	87	30	3	0	0	329
13:15	0	0	0	0	6	10	6	9	18	25	10	2	0	0	86
13:30	0	0	0	0	3	8	17	19	28	16	3	3	0	0	97
13:45	0	0	0	0	6	13	7	11	20	25	10	2	0	0	94
14:00	0	0	0	0	6	3	5	11	31	31	10	3	0	0	100
Hour Total	0	0	0	0	21	34	35	50	97	97	33	10	0	0	377
14:15	0	0	0	0	6	7	7	12	17	30	9	0	0	0	88
14:30	0	0	0	3	6	11	10	13	20	33	3	1	0	0	100
14:45	0	0	0	3	8	10	6	6	19	27	8	9	1	0	97
15:00	0	0	0	0	5	3	2	7	25	25	15	2	0	0	84
Hour Total	0	0	0	6	25	31	25	38	81	115	35	12	1	0	369
15:15	0	0	0	1	5	6	3	9	22	37	12	1	0	0	96
15:30	0	0	0	0	9	14	9	9	19	26	11	3	0	0	100
15:45	0	0	0	1	6	12	8	10	24	34	5	2	0	0	102
16:00	0	0	0	2	7	6	6	7	25	25	10	1	0	0	89
Hour Total	0	0	0	4	27	38	26	35	90	122	38	7	0	0	387
16:15	0	0	0	0	3	11	11	20	32	31	7	3	0	0	118
16:30	0	0	0	2	1	16	21	13	29	32	14	2	0	0	130
16:45	0	0	0	0	5	6	8	16	32	43	10	2	0	0	122
17:00	0	0	0	0	4	13	21	10	20	37	7	0	0	0	112
Hour Total	0	0	0	2	13	46	61	59	113	143	38	7	0	0	482

Station #: Site A-NBO
Site ID: 000000003590
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002024.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	10	30	17	18	34	23	1	3	1	0	137
17:30	0	0	0	0	7	6	9	17	39	41	12	3	0	0	134
17:45	1	0	0	0	2	13	10	26	38	38	11	2	0	0	141
18:00	0	0	0	1	2	8	2	23	30	38	9	1	1	0	115
Hour Total	1	0	0	1	21	57	38	84	141	140	33	9	2	0	527
18:15	0	0	0	1	4	14	11	11	36	28	12	1	1	0	119
18:30	0	0	0	1	1	9	10	10	33	18	11	1	0	1	95
18:45	0	0	0	1	8	5	22	13	32	28	6	3	0	0	118
19:00	0	0	0	2	5	9	6	10	18	22	4	0	0	0	76
Hour Total	0	0	0	5	18	37	49	44	119	96	33	5	1	1	408
19:15	0	0	0	0	5	3	7	15	27	22	5	1	0	0	85
19:30	0	0	0	1	3	2	7	13	16	15	7	0	0	0	64
19:45	0	0	1	0	2	4	5	13	22	24	1	2	0	0	74
20:00	0	0	0	0	2	3	3	9	18	17	9	1	0	0	62
Hour Total	0	0	1	1	12	12	22	50	83	78	22	4	0	0	285
20:15	0	0	0	0	4	4	4	11	17	11	3	1	0	0	55
20:30	0	0	0	2	6	8	7	4	15	19	3	0	0	0	64
20:45	0	0	0	1	0	5	3	11	15	7	0	1	0	0	43
21:00	0	0	0	0	3	0	2	7	19	14	4	0	0	0	49
Hour Total	0	0	0	3	13	17	16	33	66	51	10	2	0	0	211
21:15	0	0	0	0	3	1	1	5	22	13	5	0	0	0	50
21:30	0	0	0	1	3	1	2	2	12	11	1	1	0	0	34
21:45	0	0	0	1	2	1	1	4	10	10	1	0	0	0	30
22:00	0	0	0	1	0	2	2	6	11	8	2	0	0	0	32
Hour Total	0	0	0	3	8	5	6	17	55	42	9	1	0	0	146
22:15	0	0	0	0	1	0	0	5	14	18	2	0	0	0	40
22:30	0	0	0	0	2	9	1	11	15	9	3	3	0	0	53
22:45	0	0	0	1	2	2	1	3	10	9	1	1	0	0	30
23:00	0	0	0	0	1	0	1	1	4	3	1	0	1	0	12
Hour Total	0	0	0	1	6	11	3	20	43	39	7	4	1	0	135
23:15	0	0	0	0	0	0	0	5	2	6	3	0	0	0	16
23:30	0	0	0	0	0	1	1	4	2	4	2	0	0	0	14
23:45	0	0	0	0	1	1	0	3	2	6	0	2	0	0	15
24:00	0	0	0	0	0	2	0	2	4	6	0	0	0	0	14
Hour Total	0	0	0	0	1	4	1	14	10	22	5	2	0	0	59
DAY TOTAL	7	1	17	69	432	791	811	1174	2126	2082	562	113	9	2	8196
PERCENTS	0.1%	0.1%	0.3%	0.9%	5.3%	9.7%	9.8%	14.3%	25.9%	25.4%	6.8%	1.3%	0.1%	0.0%	100%

Station #: Site A-NBO
Site ID: 000000003590
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: NORTH
Lane: 1

File: D1002024.prn
City: 17-311 RS Max
County: 36.95419, -76.52858

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
GRAND TOTAL	16	2	32	216	1260	2276	2474	3582	6467	6209	1575	262	32	5	24408
PERCENTS	0.1%	0.1%	0.2%	0.9%	5.2%	9.4%	10.2%	14.6%	26.4%	25.4%	6.4%	1.0%	0.1%	0.0%	100%

Statistical Information...

15th Percentile Speed
34.5 mph

85th Percentile Speed
53.7 mph

Median Speed
46.9 mph

Average Speed
45.2 mph

10 MPH Pace Speed
45 mph to 55 mph
4208 vehicles in pace
Representing 51.3% of the total vehicles

Vehicles > 45 MPH
4894
59.7%

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002001.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	3	6	0	0	0	0	0	0	0	0	0	0	0	0	9
00:30	0	13	0	0	1	0	0	0	1	0	0	0	0	0	0	15
00:45	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8
01:00	0	12	0	0	0	0	0	0	1	0	0	0	0	0	0	13
Hour Total	0	35	7	0	1	0	0	0	2	0	0	0	0	0	0	45
01:15	0	15	4	0	0	0	0	0	1	0	0	0	0	0	0	20
01:30	2	17	7	0	0	0	0	0	0	0	0	0	0	0	0	26
01:45	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	7
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	2	37	15	0	0	0	0	0	1	0	0	0	0	0	0	55
02:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
02:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
02:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
03:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:30	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
03:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	9	0	1	0	0	0	0	0	0	0	0	0	0	0	10
04:15	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
04:30	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2
04:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	3	1	0	0	0	0	0	1	0	0	0	0	0	0	5
Hour Total	0	4	3	0	0	0	0	0	2	0	0	0	0	0	0	9
05:15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
05:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
05:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
06:00	0	13	2	1	0	0	0	0	0	0	0	0	0	0	0	16
Hour Total	0	25	2	1	0	0	0	0	0	0	0	0	0	0	0	28
06:15	0	15	7	0	0	0	0	0	1	0	0	0	0	0	0	23
06:30	0	22	6	0	0	0	0	0	1	0	0	0	0	0	0	29
06:45	0	22	8	0	0	0	0	0	0	0	0	0	0	0	0	30
07:00	0	17	7	0	0	1	0	0	0	0	0	0	0	0	0	25
Hour Total	0	76	28	0	0	1	0	0	2	0	0	0	0	0	0	107
07:15	1	30	8	0	0	0	0	0	0	0	0	0	0	0	0	39
07:30	2	32	8	0	1	0	0	0	1	0	0	0	0	0	0	44
07:45	0	40	9	0	0	0	0	0	0	0	0	0	0	0	0	49
08:00	0	45	13	0	0	0	0	0	0	0	0	0	0	0	0	58
Hour Total	3	147	38	0	1	0	0	0	1	0	0	0	0	0	0	190
08:15	1	52	12	0	0	0	0	0	1	0	0	0	0	0	0	66
08:30	0	51	15	0	0	1	2	0	2	0	0	0	0	0	0	71
08:45	0	45	8	0	0	0	0	0	0	0	0	0	0	0	0	53
09:00	0	49	7	0	1	1	0	0	0	0	0	0	0	0	0	58

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002001.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	1	197	42	0	1	2	2	0	3	0	0	0	0	0	0	248
09:15	0	40	10	0	0	0	1	0	0	0	0	0	0	0	0	51
09:30	0	50	25	0	0	1	1	0	3	0	0	0	0	0	0	80
09:45	1	58	9	1	0	0	1	0	0	0	0	0	0	0	0	70
10:00	0	31	11	0	1	1	0	0	0	0	0	0	0	0	0	44
Hour Total	1	179	55	1	1	2	3	0	3	0	0	0	0	0	0	245
10:15	1	26	14	0	0	0	0	0	0	0	0	0	0	0	0	41
10:30	0	34	15	0	1	0	1	0	1	0	0	0	0	0	0	52
10:45	0	32	13	0	0	0	0	1	1	0	0	0	0	0	0	47
11:00	1	27	7	0	0	0	0	0	1	0	0	0	0	0	0	36
Hour Total	2	119	49	0	1	0	1	1	3	0	0	0	0	0	0	176
11:15	0	26	11	0	0	0	0	0	0	0	0	0	0	0	0	37
11:30	0	27	14	0	1	0	1	1	0	0	0	0	0	0	0	44
11:45	0	23	10	0	0	2	1	0	1	0	0	0	0	0	0	37
12:00	0	38	8	0	0	2	0	0	1	0	0	0	0	0	0	49
Hour Total	0	114	43	0	1	4	2	1	2	0	0	0	0	0	0	167
12:15	0	29	14	0	2	2	0	0	0	0	0	0	0	0	0	47
12:30	0	32	14	0	1	1	1	0	0	0	0	0	0	0	0	49
12:45	0	37	11	1	0	0	0	0	0	1	0	0	0	0	0	50
13:00	1	28	14	0	1	0	0	0	0	0	0	0	0	0	0	44
Hour Total	1	126	53	1	4	3	1	0	0	1	0	0	0	0	0	190
13:15	0	51	13	0	0	0	0	0	0	0	0	0	0	0	0	64
13:30	1	37	17	0	0	0	0	0	1	0	0	0	0	0	0	56
13:45	0	34	21	0	0	1	1	0	0	0	0	0	0	0	0	57
14:00	0	36	10	0	0	0	0	0	0	0	0	0	0	0	0	46
Hour Total	1	158	61	0	0	1	1	0	1	0	0	0	0	0	0	223
14:15	0	42	15	0	0	0	0	0	1	0	0	1	0	0	0	59
14:30	0	54	9	0	1	1	1	0	0	0	0	0	0	0	0	66
14:45	0	48	21	0	0	1	0	0	0	0	0	0	0	0	0	70
15:00	0	48	17	1	1	0	1	0	0	0	0	0	0	0	0	68
Hour Total	0	192	62	1	2	2	2	0	1	0	0	1	0	0	0	263
15:15	0	51	25	0	1	1	0	1	0	0	0	0	0	0	0	79
15:30	0	64	22	0	0	0	0	0	0	0	0	0	0	0	0	86
15:45	1	69	34	0	1	1	0	1	0	0	0	0	0	0	0	107
16:00	2	101	29	0	0	1	0	0	2	0	0	0	0	0	0	135
Hour Total	3	285	110	0	2	3	0	2	2	0	0	0	0	0	0	407
16:15	2	113	42	0	0	1	1	1	1	0	0	0	0	0	0	161
16:30	4	137	47	1	0	2	0	1	0	0	0	0	0	0	0	192
16:45	6	133	60	0	1	0	1	0	0	0	0	0	0	0	0	201
17:00	2	194	75	1	4	0	0	2	0	0	0	0	3	0	0	281
Hour Total	14	577	224	2	5	3	2	4	1	0	0	0	3	0	0	835

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002001.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	177	72	1	2	0	0	2	1	0	0	3	1	0	0	259
17:30	1	185	57	1	2	1	0	0	0	1	0	0	0	0	0	248
17:45	2	173	58	1	0	1	0	1	1	0	0	0	0	0	0	237
18:00	3	186	64	0	1	1	0	0	0	0	0	0	0	0	0	255
Hour Total	6	721	251	3	5	3	0	3	2	1	0	3	1	0	0	999
18:15	0	193	47	0	2	0	0	0	0	0	0	0	0	0	0	242
18:30	2	156	51	0	2	1	0	0	0	0	0	0	1	0	0	213
18:45	2	136	49	0	0	0	0	0	1	0	0	0	0	0	0	188
19:00	1	131	37	0	0	0	0	0	1	0	0	0	0	0	0	170
Hour Total	5	616	184	0	4	1	0	0	2	0	0	0	1	0	0	813
19:15	0	91	25	0	0	0	0	0	0	0	0	0	0	0	0	116
19:30	1	88	16	0	0	0	0	0	0	0	0	0	0	0	0	105
19:45	0	83	24	0	0	0	0	0	1	0	0	0	0	0	0	108
20:00	0	68	17	0	0	0	0	0	0	0	0	0	0	0	0	85
Hour Total	1	330	82	0	0	0	0	0	1	0	0	0	0	0	0	414
20:15	2	61	14	0	0	0	0	0	0	0	0	0	0	0	0	77
20:30	0	53	17	0	0	0	0	0	0	0	0	0	0	0	0	70
20:45	1	54	11	0	0	0	0	0	0	0	0	0	0	0	0	66
21:00	1	38	16	0	0	0	0	0	0	0	0	0	0	0	0	55
Hour Total	4	206	58	0	0	0	0	0	0	0	0	0	0	0	0	268
21:15	0	36	3	0	0	0	0	0	1	0	0	0	0	0	0	40
21:30	0	41	11	0	0	0	0	0	0	0	0	0	0	0	0	52
21:45	0	52	9	0	0	0	0	0	0	0	0	0	0	0	0	61
22:00	0	39	5	0	0	0	0	0	0	0	0	0	0	0	0	44
Hour Total	0	168	28	0	0	0	0	0	1	0	0	0	0	0	0	197
22:15	1	22	10	0	0	0	0	0	1	0	0	0	0	0	0	34
22:30	2	21	7	0	1	0	0	0	0	0	0	0	0	0	0	31
22:45	0	19	4	0	0	0	0	0	1	0	0	0	0	0	0	24
23:00	0	19	6	0	0	0	0	0	0	0	0	0	0	0	0	25
Hour Total	3	81	27	0	1	0	0	0	2	0	0	0	0	0	0	114
23:15	0	21	3	0	0	0	0	0	4	0	0	0	0	0	0	28
23:30	0	25	6	0	0	0	0	0	0	0	0	0	0	0	0	31
23:45	0	12	2	0	0	0	0	0	1	0	0	0	0	0	0	15
24:00	0	13	1	0	0	0	0	0	0	0	0	0	0	0	0	14
Hour Total	0	71	12	0	0	0	0	0	5	0	0	0	0	0	0	88
DAY TOTAL	47	4482	1434	10	29	25	14	11	37	2	0	4	5	0	0	6100
PERCENTS	0.8%	73.5%	23.6%	0.2%	0.5%	0.5%	0.2%	0.1%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 97.7% Trucks & Buses 2.2%

AM Times	06:45	08:15	09:30	02:30	09:45	11:15	08:30	10:45	00:30							09:00
AM Peaks	3	197	59	1	2	4	3	2	3							259
PM Times	16:00	17:30	16:45	17:00	16:45	15:45	13:45	16:30	22:30	12:15		16:30	16:30			17:00
PM Peaks	14	737	264	4	9	5	2	5	5	1		3	4			1025

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002001.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	9
00:30	0	3	3	0	0	0	0	0	1	0	0	0	0	0	0	7
00:45	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
01:00	0	15	2	0	0	0	0	0	0	0	0	0	0	0	0	17
Hour Total	0	30	8	0	0	0	0	0	1	0	0	0	0	0	0	39
01:15	0	15	3	0	0	0	0	0	0	0	0	0	0	0	0	18
01:30	1	18	5	0	0	0	0	0	0	0	0	0	0	0	0	24
01:45	0	4	1	0	0	0	0	0	1	0	0	0	0	0	0	6
02:00	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour Total	1	41	11	0	0	0	0	0	1	0	0	0	0	0	0	54
02:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:30	0	3	4	0	0	0	0	0	1	0	0	0	0	0	0	8
02:45	0	4	0	0	0	0	0	0	1	0	0	0	0	0	0	5
03:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	11	4	0	0	0	0	0	2	0	0	0	0	0	0	17
03:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
03:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Hour Total	0	12	1	0	0	0	0	0	0	0	0	0	0	0	0	13
04:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:30	0	2	1	0	0	0	0	0	1	0	0	0	0	0	0	4
04:45	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2
05:00	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	9	2	0	0	0	0	0	2	0	0	0	0	0	0	13
05:15	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
05:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
05:45	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
06:00	0	11	2	0	0	0	0	0	1	0	0	0	0	0	0	14
Hour Total	0	26	3	0	0	0	0	0	1	0	0	0	0	0	0	30
06:15	0	15	5	0	0	0	0	0	0	0	0	0	0	0	0	20
06:30	0	29	3	0	1	0	0	0	1	0	0	0	0	0	0	34
06:45	0	30	7	0	0	0	0	0	0	0	0	0	0	0	0	37
07:00	0	20	7	0	0	0	0	0	1	0	0	0	0	0	0	28
Hour Total	0	94	22	0	1	0	0	0	2	0	0	0	0	0	0	119
07:15	0	29	3	0	0	2	0	0	1	0	0	0	0	0	0	35
07:30	0	40	7	0	0	0	0	0	1	0	0	0	0	0	0	48
07:45	0	27	11	0	1	0	0	0	2	0	0	0	0	0	0	41
08:00	0	44	12	0	0	0	0	0	0	0	0	0	0	0	0	56
Hour Total	0	140	33	0	1	2	0	0	4	0	0	0	0	0	0	180
08:15	1	51	9	0	0	0	0	0	0	0	0	0	0	0	0	61
08:30	0	50	14	0	0	0	0	0	0	0	0	0	0	0	0	64
08:45	0	37	15	0	0	0	1	0	0	0	0	0	0	0	0	53
09:00	1	44	14	0	3	1	1	0	0	0	0	0	0	0	0	64

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002001.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	2	182	52	0	3	1	2	0	0	0	0	0	0	0	0	242
09:15	0	46	17	0	0	2	0	0	0	0	0	0	0	0	0	65
09:30	0	40	4	1	1	2	0	0	0	0	0	0	0	0	0	48
09:45	0	38	11	1	1	0	0	0	0	0	0	0	0	0	0	51
10:00	0	9	4	0	0	0	0	0	0	0	0	0	0	0	0	13
Hour Total	0	133	36	2	2	4	0	0	0	0	0	0	0	0	0	177
10:15	1	63	26	0	0	4	1	0	1	0	0	0	0	0	0	96
10:30	0	26	9	0	0	1	0	0	1	0	0	0	0	0	0	37
10:45	0	27	9	0	3	3	0	0	0	0	0	0	0	0	0	42
11:00	0	26	7	2	0	1	1	0	0	0	0	0	0	0	0	37
Hour Total	1	142	51	2	3	9	2	0	2	0	0	0	0	0	0	212
11:15	0	28	9	0	1	0	2	0	0	0	0	0	0	0	0	40
11:30	0	25	9	0	0	1	0	0	1	0	0	0	0	0	0	36
11:45	0	19	13	0	1	0	0	1	1	0	0	0	0	0	0	35
12:00	1	38	11	0	1	1	0	0	3	0	0	0	0	0	0	55
Hour Total	1	110	42	0	3	2	2	1	5	0	0	0	0	0	0	166
12:15	1	39	14	0	0	2	0	1	0	0	0	0	0	0	0	57
12:30	0	38	12	0	1	0	1	0	0	0	0	0	0	0	0	52
12:45	0	33	13	0	0	0	0	0	1	0	0	0	1	0	0	48
13:00	1	34	13	0	0	0	1	0	2	0	0	0	0	0	0	51
Hour Total	2	144	52	0	1	2	2	1	3	0	0	0	1	0	0	208
13:15	0	54	19	0	1	0	0	0	1	0	0	0	0	0	0	75
13:30	0	42	17	0	2	1	0	0	0	0	1	0	0	0	0	63
13:45	0	44	12	0	0	2	0	0	2	0	0	0	0	0	0	60
14:00	0	46	17	0	0	0	0	1	0	0	0	0	0	0	0	64
Hour Total	0	186	65	0	3	3	0	1	3	0	1	0	0	0	0	262
14:15	3	51	13	0	0	1	0	0	1	0	0	0	0	0	0	69
14:30	0	52	16	1	0	0	0	0	0	0	0	0	0	0	0	69
14:45	0	50	17	0	0	0	0	1	0	0	0	0	0	0	0	68
15:00	3	53	20	0	1	3	0	0	1	0	0	0	0	0	0	81
Hour Total	6	206	66	1	1	4	0	1	2	0	0	0	0	0	0	287
15:15	1	54	12	0	1	0	0	0	1	0	0	0	0	0	0	69
15:30	0	73	24	0	0	1	0	1	0	0	1	0	0	0	0	100
15:45	0	65	33	0	1	1	0	2	0	0	0	0	0	0	0	102
16:00	0	102	25	1	1	0	0	0	1	0	1	0	0	0	0	131
Hour Total	1	294	94	1	3	2	0	3	2	0	2	0	0	0	0	402
16:15	1	123	40	1	1	4	0	0	1	0	0	0	0	0	0	171
16:30	2	132	42	0	1	0	0	0	0	0	0	0	0	0	0	177
16:45	6	142	49	0	1	1	0	1	1	0	0	0	0	0	0	201
17:00	1	203	70	0	0	1	0	0	0	0	0	5	2	0	0	282
Hour Total	10	600	201	1	3	6	0	1	2	0	0	5	2	0	0	831

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002001.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	2	191	67	0	1	0	1	2	2	0	0	0	2	0	0	268
17:30	2	221	57	0	1	2	0	0	0	0	0	0	1	0	0	284
17:45	2	173	51	0	1	2	0	0	0	0	0	0	0	0	0	229
18:00	3	181	49	0	0	0	0	0	3	0	0	0	0	0	0	236
Hour Total	9	766	224	0	3	4	1	2	5	0	0	0	3	0	0	1017
18:15	1	177	47	0	0	0	0	0	1	0	0	0	0	0	0	226
18:30	2	187	49	0	0	1	0	0	0	0	0	0	0	0	0	239
18:45	0	137	36	0	1	0	0	0	0	0	0	0	0	0	0	174
19:00	1	127	30	0	0	2	0	0	0	0	0	0	0	0	0	160
Hour Total	4	628	162	0	1	3	0	0	1	0	0	0	0	0	0	799
19:15	0	125	29	0	0	0	0	0	0	0	0	0	0	0	0	154
19:30	0	88	31	0	0	0	0	0	0	0	0	0	0	0	0	119
19:45	0	75	21	0	0	0	0	0	0	0	0	0	0	0	0	96
20:00	0	73	16	0	0	0	0	0	0	0	0	0	0	0	0	89
Hour Total	0	361	97	0	0	0	0	0	0	0	0	0	0	0	0	458
20:15	0	70	15	0	0	0	0	0	0	0	0	0	0	0	0	85
20:30	0	53	9	0	0	0	0	0	0	0	0	0	0	0	0	62
20:45	1	50	14	0	0	1	0	0	1	0	0	0	0	0	0	67
21:00	0	45	13	0	0	0	0	0	0	0	0	0	0	0	0	58
Hour Total	1	218	51	0	0	1	0	0	1	0	0	0	0	0	0	272
21:15	0	47	15	0	0	0	0	0	0	0	0	0	0	0	0	62
21:30	0	34	12	0	0	0	0	0	0	0	0	0	0	0	0	46
21:45	0	37	3	0	0	0	0	0	0	0	0	0	0	0	0	40
22:00	0	37	12	0	0	0	0	0	0	0	0	0	0	0	0	49
Hour Total	0	155	42	0	0	0	0	0	0	0	0	0	0	0	0	197
22:15	1	32	12	0	0	0	0	0	0	0	0	0	0	0	0	45
22:30	0	45	15	0	0	0	0	0	0	0	0	0	0	0	0	60
22:45	0	25	5	0	0	0	0	0	0	0	0	0	0	0	0	30
23:00	1	28	6	0	0	0	0	0	0	0	0	0	0	0	0	35
Hour Total	2	130	38	0	0	0	0	0	0	0	0	0	0	0	0	170
23:15	0	15	4	0	0	0	0	1	0	0	0	0	0	0	0	20
23:30	0	24	5	0	0	0	0	0	0	0	0	0	0	0	0	29
23:45	0	19	6	0	0	0	0	0	0	0	0	0	0	0	0	25
24:00	1	15	4	0	0	0	0	0	1	0	0	0	0	0	0	21
Hour Total	1	73	19	0	0	0	0	1	1	0	0	0	0	0	0	95
DAY TOTAL	41	4691	1376	7	28	43	9	11	40	0	3	5	6	0	0	6260
PERCENTS	0.7%	75.0%	22.0%	0.2%	0.5%	0.7%	0.2%	0.1%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 97.5% Trucks & Buses 2.4%

AM Times	08:15	08:00	08:30	09:00	09:00	10:15	10:30	11:00	07:00							08:30
AM Peaks	2	182	60	2	5	9	3	1	5							246
PM Times	16:30	17:00	17:00	15:30	15:45	15:30	12:15	15:00	13:00	15:15	16:15	16:45				17:00
PM Peaks	11	788	245	2	4	6	2	3	5	2	5	5				1063

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002001.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8
00:30	0	10	5	0	0	1	0	0	0	0	0	0	0	0	0	16
00:45	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	10
01:00	1	4	0	0	0	0	0	0	1	0	0	0	0	0	0	6
Hour Total	1	29	8	0	0	1	0	0	1	0	0	0	0	0	0	40
01:15	0	23	3	0	0	0	0	0	0	0	0	0	0	0	0	26
01:30	1	20	5	0	0	0	0	0	0	0	0	0	0	0	0	26
01:45	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
02:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	1	53	10	0	0	0	0	0	0	0	0	0	0	0	0	64
02:15	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
02:30	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
02:45	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
03:00	0	1	2	0	0	0	0	0	1	0	0	0	0	0	0	4
Hour Total	0	18	2	0	0	0	0	0	1	0	0	0	0	0	0	21
03:15	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
03:30	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
03:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
04:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	17	2	0	0	0	0	0	0	0	0	0	0	0	0	19
04:15	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
04:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	4
05:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	10	2	0	0	0	0	0	1	0	0	0	0	0	0	13
05:15	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8
05:30	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
05:45	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
06:00	0	10	3	0	1	1	0	0	1	0	0	0	0	0	0	16
Hour Total	0	26	5	0	1	1	0	0	1	0	0	0	0	0	0	34
06:15	0	19	7	0	0	0	0	0	0	0	0	0	0	0	0	26
06:30	0	18	3	1	0	0	0	0	0	0	0	0	0	0	0	22
06:45	0	17	11	0	0	0	0	0	2	0	0	0	0	0	0	30
07:00	1	16	2	0	0	0	0	1	0	0	0	0	0	0	0	20
Hour Total	1	70	23	1	0	0	0	1	2	0	0	0	0	0	0	98
07:15	0	27	5	0	0	0	0	0	0	0	0	0	0	0	0	32
07:30	0	37	9	0	1	0	0	0	0	0	0	0	0	0	0	47
07:45	0	44	8	0	0	0	0	0	0	0	0	0	0	0	0	52
08:00	0	43	12	0	0	0	0	0	1	0	0	0	0	0	0	56
Hour Total	0	151	34	0	1	0	0	0	1	0	0	0	0	0	0	187
08:15	1	53	8	0	1	0	0	0	0	0	0	0	0	0	0	63
08:30	0	60	11	0	0	0	0	0	1	0	0	0	0	0	0	72
08:45	0	52	12	0	0	0	0	0	0	0	0	0	0	0	0	64
09:00	0	47	10	0	0	0	0	0	0	0	0	0	0	0	0	57

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002001.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	1	212	41	0	1	0	0	0	1	0	0	0	0	0	0	256
09:15	0	52	10	0	2	2	0	0	1	0	0	0	0	0	0	67
09:30	0	47	4	0	1	1	0	0	1	0	0	0	0	0	0	54
09:45	1	47	20	0	0	0	0	0	1	0	0	0	0	0	0	69
10:00	0	24	17	0	0	0	0	0	1	0	0	0	0	0	0	42
Hour Total	1	170	51	0	3	3	0	0	4	0	0	0	0	0	0	232
10:15	0	25	8	0	0	3	0	0	0	0	0	0	0	0	0	36
10:30	0	29	13	0	1	2	0	0	0	0	0	0	0	0	0	45
10:45	1	30	16	0	1	1	0	0	0	0	0	0	0	0	0	49
11:00	0	26	5	0	0	1	0	0	0	0	0	0	0	0	0	32
Hour Total	1	110	42	0	2	7	0	0	0	0	0	0	0	0	0	162
11:15	1	30	10	0	1	2	0	0	0	0	0	0	0	0	0	44
11:30	0	30	8	0	1	1	0	0	0	0	0	0	0	0	0	40
11:45	0	28	9	0	0	3	0	0	1	0	0	0	0	0	0	41
12:00	1	32	9	0	0	0	0	0	2	0	0	0	0	0	0	44
Hour Total	2	120	36	0	2	6	0	0	3	0	0	0	0	0	0	169
12:15	1	39	16	1	1	1	0	0	1	1	0	0	0	0	0	61
12:30	0	31	10	0	0	0	0	0	0	0	0	0	0	0	0	41
12:45	0	43	13	1	1	0	1	0	0	0	0	0	0	0	0	59
13:00	0	32	10	0	0	1	1	0	3	0	0	0	0	0	0	47
Hour Total	1	145	49	2	2	2	2	0	4	1	0	0	0	0	0	208
13:15	1	48	12	0	0	1	0	0	1	1	0	0	0	0	0	64
13:30	1	38	25	0	0	0	0	0	0	0	0	0	0	0	0	64
13:45	1	45	19	0	0	0	0	0	0	0	0	0	0	0	0	65
14:00	0	57	16	1	0	0	0	0	0	0	0	0	0	0	0	74
Hour Total	3	188	72	1	0	1	0	0	1	1	0	0	0	0	0	267
14:15	0	52	15	1	0	0	1	1	0	0	0	0	1	0	0	71
14:30	1	58	19	0	0	4	1	0	0	0	0	0	0	0	0	83
14:45	0	47	15	0	1	1	0	0	1	0	0	0	0	0	0	65
15:00	1	55	12	0	0	1	0	0	0	0	0	0	0	0	0	69
Hour Total	2	212	61	1	1	6	2	1	1	0	0	0	1	0	0	288
15:15	0	54	21	0	0	0	0	0	1	0	0	0	0	0	0	76
15:30	0	78	28	0	0	3	0	0	1	0	0	0	0	0	0	110
15:45	2	78	25	0	1	1	0	0	0	0	0	0	0	0	0	107
16:00	2	84	34	0	2	2	1	0	1	0	0	0	1	0	0	127
Hour Total	4	294	108	0	3	6	1	0	3	0	0	0	1	0	0	420
16:15	1	104	42	0	1	1	0	0	0	0	0	0	0	0	0	149
16:30	2	132	49	0	0	2	0	1	1	0	0	0	0	0	0	187
16:45	2	154	63	0	1	1	0	1	0	0	0	0	0	0	0	222
17:00	3	158	58	0	0	1	0	0	0	0	0	0	0	0	0	220
Hour Total	8	548	212	0	2	5	0	2	1	0	0	0	0	0	0	778

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002001.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	6	170	64	1	0	2	1	1	1	0	2	1	2	0	0	251
17:30	2	207	62	0	2	0	0	0	0	0	0	0	1	0	0	274
17:45	3	187	76	0	0	0	0	0	1	0	0	1	1	0	0	269
18:00	3	197	77	0	2	0	0	2	0	0	0	1	0	0	0	282
Hour Total	14	761	279	1	4	2	1	3	2	0	2	3	4	0	0	1076
18:15	0	163	39	0	0	1	0	0	0	0	0	0	0	0	0	203
18:30	3	164	46	0	0	0	0	0	1	0	0	0	0	0	0	214
18:45	1	176	47	1	1	0	0	0	0	0	0	0	0	0	0	226
19:00	1	121	32	0	1	0	0	1	1	0	0	0	0	0	0	157
Hour Total	5	624	164	1	2	1	0	1	2	0	0	0	0	0	0	800
19:15	1	121	30	0	1	0	0	0	1	0	0	0	0	0	0	154
19:30	1	98	36	0	1	0	0	0	1	0	0	0	0	0	0	137
19:45	0	91	18	0	0	0	0	1	0	0	0	0	0	0	0	110
20:00	1	80	19	0	0	0	0	0	0	0	0	0	0	0	0	100
Hour Total	3	390	103	0	2	0	0	1	2	0	0	0	0	0	0	501
20:15	2	63	17	0	0	0	0	0	0	0	0	0	0	0	0	82
20:30	0	71	10	0	0	0	0	0	0	0	0	0	0	0	0	81
20:45	1	48	13	0	1	0	0	0	0	0	0	0	0	0	0	63
21:00	1	42	8	0	0	0	0	0	0	0	0	0	0	0	0	51
Hour Total	4	224	48	0	1	0	0	0	0	0	0	0	0	0	0	277
21:15	0	45	6	0	0	0	0	0	0	0	0	0	0	0	0	51
21:30	1	37	11	0	0	0	0	0	0	0	0	0	0	0	0	49
21:45	2	43	10	0	0	0	0	0	0	0	0	0	0	0	0	55
22:00	0	30	10	0	1	0	0	0	1	0	0	0	0	0	0	42
Hour Total	3	155	37	0	1	0	0	0	1	0	0	0	0	0	0	197
22:15	1	26	6	0	0	0	0	0	0	0	0	0	0	0	0	33
22:30	1	19	10	0	1	0	0	0	0	0	0	0	0	0	0	31
22:45	0	23	8	0	1	0	0	0	2	0	0	0	0	0	0	34
23:00	0	25	1	0	0	0	0	0	0	0	0	0	0	0	0	26
Hour Total	2	93	25	0	2	0	0	0	2	0	0	0	0	0	0	124
23:15	0	33	7	0	0	0	0	0	1	0	0	0	0	0	0	41
23:30	0	19	8	0	0	0	0	0	0	0	0	0	0	0	0	27
23:45	0	28	4	0	0	0	0	0	0	0	0	0	0	0	0	32
24:00	0	14	2	0	0	0	0	0	0	0	0	0	0	0	0	16
Hour Total	0	94	21	0	0	0	0	0	1	0	0	0	0	0	0	116
DAY TOTAL	57	4714	1435	7	30	41	6	9	35	2	2	3	6	0	0	6347
PERCENTS	0.9%	74.3%	22.7%	0.2%	0.5%	0.7%	0.1%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 97.7% Trucks & Buses 2.2%

AM Times	00:45	08:15	09:45	05:45	08:45	10:15		06:15	09:15							08:30
AM Peaks	2	212	58	1	3	7		1	4							260
PM Times	17:00	17:15	17:15	12:15	15:30	15:30	12:15	16:30	12:15	12:15	16:30	17:15	17:00			17:15
PM Peaks	14	761	279	2	4	7	2	3	4	1	2	3	4			1076

GRAND TOTAL	145	4245		87		29		112		5		17		0		
	13887		24		109		31		4		12		0		18707	
PERCENTS	0.8%	74.3%	22.7%	0.2%	0.5%	0.6%	0.2%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002002.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	2	2	2	3	0	0	9
00:30	0	0	0	0	0	0	0	0	5	7	0	3	0	0	15
00:45	0	0	0	1	0	0	0	0	2	5	0	0	0	0	8
01:00	0	0	0	0	0	0	0	1	4	4	3	1	0	0	13
Hour Total	0	0	0	1	0	0	0	1	13	18	5	7	0	0	45
01:15	0	0	0	0	0	0	0	1	4	8	6	1	0	0	20
01:30	0	0	0	0	0	0	0	3	10	10	3	0	0	0	26
01:45	0	0	0	0	0	0	0	1	3	2	0	1	0	0	7
02:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
Hour Total	0	0	0	0	0	0	0	5	19	20	9	2	0	0	55
02:15	0	0	0	0	0	1	0	0	1	1	0	0	0	0	3
02:30	0	0	0	0	0	0	0	1	1	1	1	0	0	0	4
02:45	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Hour Total	0	0	0	0	0	1	0	2	3	2	1	0	0	0	9
03:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
03:30	0	0	1	0	0	0	0	0	1	3	1	0	0	0	6
03:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
04:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
Hour Total	0	0	1	0	0	0	0	0	2	6	1	0	0	0	10
04:15	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2
04:30	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2
04:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	1	0	0	0	0	3	0	0	1	0	5
Hour Total	0	0	0	0	1	0	0	0	1	4	0	1	2	0	9
05:15	0	0	0	1	0	0	0	0	1	2	0	0	0	0	4
05:30	0	0	0	0	0	0	0	0	1	0	1	2	0	0	4
05:45	0	0	0	0	0	0	0	0	2	1	1	0	0	0	4
06:00	0	0	0	1	1	2	0	1	0	5	6	0	0	0	16
Hour Total	0	0	0	2	1	2	0	1	4	8	8	2	0	0	28
06:15	0	0	0	1	0	0	0	3	2	9	4	3	1	0	23
06:30	0	0	1	0	2	1	0	1	1	12	7	3	1	0	29
06:45	0	0	0	2	4	1	1	0	3	1	9	8	1	0	30
07:00	0	0	0	1	0	1	1	0	2	9	7	4	0	0	25
Hour Total	0	0	1	4	6	3	2	4	8	31	27	18	3	0	107
07:15	0	0	0	0	2	1	1	0	6	17	11	0	1	0	39
07:30	0	0	0	2	3	0	0	3	6	15	12	2	1	0	44
07:45	0	0	0	8	0	8	1	3	2	11	12	4	0	0	49
08:00	0	0	0	1	3	4	1	0	11	24	8	6	0	0	58
Hour Total	0	0	0	11	8	13	3	6	25	67	43	12	2	0	190
08:15	0	0	0	2	7	4	0	3	11	16	12	10	1	0	66
08:30	0	0	0	1	5	10	4	3	4	16	14	14	0	0	71
08:45	0	0	0	2	6	7	1	6	7	9	13	2	0	0	53
09:00	0	0	0	4	7	6	1	0	6	20	13	1	0	0	58

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002002.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	9	25	27	6	12	28	61	52	27	1	0	248
09:15	0	0	0	2	3	7	5	1	4	18	9	2	0	0	51
09:30	0	0	3	5	8	12	12	16	12	7	3	1	1	0	80
09:45	0	0	0	2	4	2	3	2	8	27	15	6	1	0	70
10:00	0	0	0	1	2	2	1	1	6	14	9	5	3	0	44
Hour Total	0	0	3	10	17	23	21	20	30	66	36	14	5	0	245
10:15	0	0	0	0	1	2	0	1	9	15	9	4	0	0	41
10:30	0	0	0	0	1	4	1	1	11	18	13	2	1	0	52
10:45	0	0	0	2	5	2	0	1	8	7	14	7	1	0	47
11:00	0	0	1	0	2	2	1	2	2	10	14	1	1	0	36
Hour Total	0	0	1	2	9	10	2	5	30	50	50	14	3	0	176
11:15	0	0	0	0	2	1	1	2	7	16	6	2	0	0	37
11:30	0	0	0	0	0	1	2	2	2	24	9	4	0	0	44
11:45	0	0	0	1	3	0	1	1	4	14	10	3	0	0	37
12:00	0	0	0	1	3	1	1	0	3	19	19	2	0	0	49
Hour Total	0	0	0	2	8	3	5	5	16	73	44	11	0	0	167
12:15	0	0	0	1	2	5	3	3	7	16	10	0	0	0	47
12:30	0	0	0	1	3	2	1	0	9	18	11	3	0	1	49
12:45	0	0	0	0	4	2	2	4	6	9	18	3	2	0	50
13:00	0	0	0	1	2	4	3	2	7	12	8	4	0	1	44
Hour Total	0	0	0	3	11	13	9	9	29	55	47	10	2	2	190
13:15	0	0	0	1	3	9	8	2	5	20	11	3	2	0	64
13:30	1	0	1	3	3	3	4	2	4	17	17	1	0	0	56
13:45	0	0	0	1	8	5	1	2	9	15	14	2	0	0	57
14:00	0	0	0	1	1	2	3	5	7	13	11	3	0	0	46
Hour Total	1	0	1	6	15	19	16	11	25	65	53	9	2	0	223
14:15	0	0	0	0	8	5	2	5	5	15	13	5	1	0	59
14:30	0	0	0	1	1	1	3	5	11	31	12	1	0	0	66
14:45	0	0	0	0	3	3	2	5	7	23	19	5	3	0	70
15:00	0	0	0	3	5	2	1	3	5	27	19	3	0	0	68
Hour Total	0	0	0	4	17	11	8	18	28	96	63	14	4	0	263
15:15	0	0	0	0	3	8	10	5	8	20	20	5	0	0	79
15:30	0	0	0	0	5	1	1	4	4	41	23	7	0	0	86
15:45	0	0	0	1	1	1	2	3	18	44	30	6	0	1	107
16:00	0	0	0	0	3	2	5	5	32	56	29	2	1	0	135
Hour Total	0	0	0	1	12	12	18	17	62	161	102	20	1	1	407
16:15	1	0	0	2	2	21	18	14	37	42	21	3	0	0	161
16:30	0	0	0	2	5	12	14	16	49	69	20	5	0	0	192
16:45	0	0	0	0	7	12	25	22	39	65	24	5	2	0	201
17:00	12	16	19	62	34	49	52	28	8	1	0	0	0	0	281
Hour Total	13	16	19	66	48	94	109	80	133	177	65	13	2	0	835

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002002.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	6	22	32	29	55	64	32	11	8	0	0	0	0	0	259
17:30	1	0	2	5	15	12	26	57	78	38	8	6	0	0	248
17:45	0	0	0	5	3	33	53	52	53	35	3	0	0	0	237
18:00	0	0	0	0	16	35	49	54	76	21	4	0	0	0	255
Hour Total	7	22	34	39	89	144	160	174	215	94	15	6	0	0	999
18:15	0	0	5	8	16	11	34	51	45	56	15	1	0	0	242
18:30	1	0	0	2	2	24	11	19	54	85	14	1	0	0	213
18:45	0	0	0	2	2	16	18	21	57	62	9	1	0	0	188
19:00	0	0	0	0	11	4	14	28	52	51	8	2	0	0	170
Hour Total	1	0	5	12	31	55	77	119	208	254	46	5	0	0	813
19:15	0	0	0	1	7	13	8	11	27	33	13	3	0	0	116
19:30	0	0	0	0	5	21	1	7	18	34	16	3	0	0	105
19:45	0	0	0	1	4	7	3	9	21	40	22	1	0	0	108
20:00	0	0	0	3	5	7	1	1	18	28	16	6	0	0	85
Hour Total	0	0	0	5	21	48	13	28	84	135	67	13	0	0	414
20:15	0	0	0	2	6	5	4	0	14	30	13	3	0	0	77
20:30	0	0	0	0	5	8	2	8	12	25	9	1	0	0	70
20:45	0	0	0	0	2	1	3	2	8	32	15	3	0	0	66
21:00	0	0	0	0	0	1	2	5	14	15	17	1	0	0	55
Hour Total	0	0	0	2	13	15	11	15	48	102	54	8	0	0	268
21:15	0	0	0	0	3	1	1	2	14	12	4	3	0	0	40
21:30	0	0	0	0	5	0	5	2	8	24	8	0	0	0	52
21:45	0	0	0	0	2	1	1	4	11	26	14	2	0	0	61
22:00	0	0	0	0	1	1	2	0	9	26	5	0	0	0	44
Hour Total	0	0	0	0	11	3	9	8	42	88	31	5	0	0	197
22:15	0	0	0	0	1	4	0	4	6	8	11	0	0	0	34
22:30	0	0	0	1	2	3	4	2	2	14	3	0	0	0	31
22:45	0	0	0	0	2	0	0	1	4	10	7	0	0	0	24
23:00	0	0	0	0	0	0	0	0	10	9	6	0	0	0	25
Hour Total	0	0	0	1	5	7	4	7	22	41	27	0	0	0	114
23:15	0	0	0	0	1	0	2	3	6	12	3	1	0	0	28
23:30	0	0	0	0	0	3	0	2	7	9	5	5	0	0	31
23:45	0	0	0	0	1	0	0	0	3	7	2	2	0	0	15
24:00	0	0	0	0	0	0	0	0	4	5	4	1	0	0	14
Hour Total	0	0	0	0	2	3	2	5	20	33	14	9	0	0	88
DAY TOTAL	22	38	65	180	350	506	475	552	1095	1707	860	220	27	3	6100
PERCENTS	0.4%	0.7%	1.1%	3.0%	5.8%	8.3%	7.8%	9.1%	17.9%	27.9%	14.0%	3.6%	0.4%	0.0%	100%

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002002.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
32.6 mph

85th Percentile Speed
56.1 mph

Median Speed
48.9 mph

Average Speed
45.9 mph

10 MPH Pace Speed
45 mph to 55 mph
2802 vehicles in pace
Representing 45.9% of the total vehicles

Vehicles > 45 MPH
3912
64.1%

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002002.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	2	0	0	1	0	4	1	1	0	0	9
00:30	0	0	0	1	0	0	0	0	0	3	3	0	0	0	7
00:45	0	0	0	0	0	0	0	2	1	2	1	0	0	0	6
01:00	0	0	0	1	0	0	0	1	10	5	0	0	0	0	17
Hour Total	0	0	0	2	2	0	0	4	11	14	5	1	0	0	39
01:15	0	0	0	0	1	0	0	1	6	8	2	0	0	0	18
01:30	0	0	0	0	0	0	0	3	11	9	1	0	0	0	24
01:45	0	0	0	1	0	0	0	1	2	2	0	0	0	0	6
02:00	0	0	0	0	0	0	0	0	2	3	1	0	0	0	6
Hour Total	0	0	0	1	1	0	0	5	21	22	4	0	0	0	54
02:15	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2
02:30	0	0	0	0	0	0	0	2	1	4	0	0	1	0	8
02:45	0	0	0	0	0	0	0	1	2	1	1	0	0	0	5
03:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
Hour Total	0	0	0	0	0	0	0	4	5	6	1	0	1	0	17
03:15	0	0	0	0	0	0	0	1	1	0	0	1	0	0	3
03:30	0	0	0	0	0	0	0	1	2	1	1	0	0	0	5
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	1	0	0	1	0	0	3	0	0	0	0	5
Hour Total	0	0	0	1	0	0	1	2	3	4	1	1	0	0	13
04:15	0	0	0	0	0	1	0	0	1	0	0	1	0	0	3
04:30	0	0	0	2	0	0	0	0	0	1	1	0	0	0	4
04:45	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
05:00	0	0	0	0	0	1	0	0	2	1	0	0	0	0	4
Hour Total	0	0	0	2	0	2	0	0	3	4	1	1	0	0	13
05:15	0	0	0	0	0	0	0	0	1	5	1	0	0	0	7
05:30	0	0	0	0	0	0	0	0	1	3	0	0	0	0	4
05:45	0	0	0	0	0	1	0	0	2	1	1	0	0	0	5
06:00	0	0	0	0	1	0	1	1	1	4	4	2	0	0	14
Hour Total	0	0	0	0	1	1	1	1	5	13	6	2	0	0	30
06:15	0	0	0	1	0	0	0	0	1	9	7	2	0	0	20
06:30	0	0	0	0	1	0	3	2	2	17	6	2	1	0	34
06:45	0	0	0	1	3	4	0	2	5	7	10	3	1	1	37
07:00	0	0	0	1	2	2	1	2	2	4	11	1	2	0	28
Hour Total	0	0	0	3	6	6	4	6	10	37	34	8	4	1	119
07:15	0	0	0	0	3	0	0	3	3	12	9	3	2	0	35
07:30	0	0	0	3	2	0	0	1	5	22	10	5	0	0	48
07:45	0	0	0	0	4	5	1	2	5	13	9	2	0	0	41
08:00	0	0	0	2	7	8	2	4	5	11	12	4	1	0	56
Hour Total	0	0	0	5	16	13	3	10	18	58	40	14	3	0	180
08:15	0	0	0	0	5	5	6	3	7	11	20	4	0	0	61
08:30	0	0	0	3	2	6	5	6	4	16	16	6	0	0	64
08:45	0	0	0	1	3	7	3	3	3	16	10	4	2	1	53
09:00	0	0	0	2	6	6	0	0	10	20	12	7	1	0	64

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002002.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	6	16	24	14	12	24	63	58	21	3	1	242
09:15	0	0	0	1	8	3	4	3	10	21	10	2	2	1	65
09:30	0	0	0	1	4	4	1	0	11	14	8	4	1	0	48
09:45	0	0	0	2	1	6	2	2	5	19	8	6	0	0	51
10:00	0	0	0	4	1	1	1	1	4	0	0	0	1	0	13
Hour Total	0	0	0	8	14	14	8	6	30	54	26	12	4	1	177
10:15	0	0	0	0	2	6	1	6	23	30	19	7	2	0	96
10:30	0	0	1	0	5	3	0	2	4	8	13	1	0	0	37
10:45	0	0	0	3	8	2	3	2	9	3	8	4	0	0	42
11:00	0	0	0	0	2	1	0	2	4	13	12	2	0	1	37
Hour Total	0	0	1	3	17	12	4	12	40	54	52	14	2	1	212
11:15	0	0	0	1	2	5	1	2	1	12	9	6	1	0	40
11:30	0	0	0	1	3	1	2	4	5	13	5	2	0	0	36
11:45	0	0	0	0	0	1	2	2	4	14	8	4	0	0	35
12:00	0	0	0	1	3	5	2	11	11	11	10	0	1	0	55
Hour Total	0	0	0	3	8	12	7	19	21	50	32	12	2	0	166
12:15	0	0	0	1	3	4	4	0	3	28	10	4	0	0	57
12:30	0	0	0	0	5	3	1	5	12	19	6	1	0	0	52
12:45	0	0	2	1	2	3	2	3	10	13	12	0	0	0	48
13:00	0	0	0	1	4	1	1	1	8	17	16	2	0	0	51
Hour Total	0	0	2	3	14	11	8	9	33	77	44	7	0	0	208
13:15	0	0	1	1	9	14	11	1	11	14	11	2	0	0	75
13:30	0	0	0	1	4	5	4	3	6	22	13	5	0	0	63
13:45	0	0	0	0	2	4	1	1	8	18	18	7	1	0	60
14:00	0	0	0	1	3	3	4	2	9	23	12	4	3	0	64
Hour Total	0	0	1	3	18	26	20	7	34	77	54	18	4	0	262
14:15	0	0	0	1	0	0	0	3	9	26	17	10	3	0	69
14:30	0	0	0	1	5	8	0	2	5	20	15	10	3	0	69
14:45	0	0	0	1	3	3	3	1	10	15	24	6	2	0	68
15:00	0	0	0	3	3	10	9	4	7	24	16	4	1	0	81
Hour Total	0	0	0	6	11	21	12	10	31	85	72	30	9	0	287
15:15	0	0	0	3	2	4	3	1	7	23	22	4	0	0	69
15:30	0	0	0	1	7	5	5	6	16	36	17	6	1	0	100
15:45	0	0	0	1	7	8	6	13	20	30	13	3	1	0	102
16:00	0	0	0	1	3	14	7	7	18	38	35	7	1	0	131
Hour Total	0	0	0	6	19	31	21	27	61	127	87	20	3	0	402
16:15	0	0	0	0	3	4	8	11	38	78	27	1	1	0	171
16:30	0	0	0	0	4	24	13	13	38	65	19	1	0	0	177
16:45	1	0	0	1	5	10	20	6	46	78	30	4	0	0	201
17:00	4	10	21	31	40	83	48	8	11	9	14	3	0	0	282
Hour Total	5	10	21	32	52	121	89	38	133	230	90	9	1	0	831

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002002.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	9	10	30	59	69	64	24	3	0	0	0	0	0	0	268
17:30	3	2	3	28	39	39	62	47	43	18	0	0	0	0	284
17:45	0	0	0	4	4	27	40	23	54	64	11	2	0	0	229
18:00	0	0	0	9	11	41	42	38	49	25	19	2	0	0	236
Hour Total	12	12	33	100	123	171	168	111	146	107	30	4	0	0	1017
18:15	0	0	0	4	10	23	32	49	66	35	7	0	0	0	226
18:30	1	0	0	1	26	32	34	29	63	53	0	0	0	0	239
18:45	0	0	0	2	10	14	17	31	53	38	8	1	0	0	174
19:00	0	0	0	3	3	13	10	19	49	50	13	0	0	0	160
Hour Total	1	0	0	10	49	82	93	128	231	176	28	1	0	0	799
19:15	0	0	0	1	6	20	20	18	32	47	9	1	0	0	154
19:30	0	0	0	2	1	7	15	13	21	43	14	3	0	0	119
19:45	0	0	0	0	4	8	5	14	22	29	12	2	0	0	96
20:00	0	0	1	1	6	8	5	12	25	18	11	2	0	0	89
Hour Total	0	0	1	4	17	43	45	57	100	137	46	8	0	0	458
20:15	0	0	0	0	4	4	2	6	24	30	12	3	0	0	85
20:30	0	0	0	0	1	1	2	5	16	27	7	3	0	0	62
20:45	0	0	0	2	4	3	3	4	16	21	11	3	0	0	67
21:00	0	0	0	0	1	1	0	3	9	27	16	1	0	0	58
Hour Total	0	0	0	2	10	9	7	18	65	105	46	10	0	0	272
21:15	0	0	0	0	4	4	2	1	6	36	6	3	0	0	62
21:30	0	0	0	1	4	0	0	0	8	19	10	4	0	0	46
21:45	0	0	0	0	2	0	0	0	8	16	12	2	0	0	40
22:00	0	0	0	0	0	0	1	3	13	24	7	1	0	0	49
Hour Total	0	0	0	1	10	4	3	4	35	95	35	10	0	0	197
22:15	0	0	0	0	0	0	0	3	18	13	10	1	0	0	45
22:30	0	0	0	2	3	3	1	3	12	20	14	2	0	0	60
22:45	0	0	1	1	0	0	0	0	11	12	4	1	0	0	30
23:00	0	0	0	0	1	3	0	1	4	15	9	1	1	0	35
Hour Total	0	0	1	3	4	6	1	7	45	60	37	5	1	0	170
23:15	0	0	0	0	1	2	1	1	4	7	4	0	0	0	20
23:30	0	0	0	0	0	1	0	1	10	13	4	0	0	0	29
23:45	0	0	0	0	1	1	1	0	8	7	7	0	0	0	25
24:00	0	0	0	0	0	0	1	0	4	12	2	2	0	0	21
Hour Total	0	0	0	0	2	4	3	2	26	39	17	2	0	0	95
DAY TOTAL	18	22	60	204	410	613	512	499	1131	1694	846	210	37	4	6260
PERCENTS	0.3%	0.4%	1.0%	3.3%	6.6%	9.8%	8.2%	8.0%	18.1%	27.0%	13.5%	3.3%	0.5%	0.0%	100%

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002002.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
31.8 mph

85th Percentile Speed
55.9 mph

Median Speed
48.5 mph

Average Speed
45.5 mph

10 MPH Pace Speed
45 mph to 55 mph
2825 vehicles in pace
Representing 45.1% of the total vehicles

Vehicles > 45 MPH
3922
62.7%

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002002.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	1	0	0	0	2	3	1	1	0	0	8
00:30	0	0	0	0	0	0	0	2	1	4	3	6	0	0	16
00:45	0	0	0	0	0	0	0	1	1	5	3	0	0	0	10
01:00	0	0	0	0	0	0	0	0	3	2	1	0	0	0	6
Hour Total	0	0	0	0	1	0	0	3	7	14	8	7	0	0	40
01:15	0	0	0	0	0	1	0	0	3	16	4	2	0	0	26
01:30	0	0	0	0	0	0	0	0	8	12	6	0	0	0	26
01:45	0	0	0	0	0	0	0	0	3	3	1	1	0	0	8
02:00	0	0	0	0	0	1	0	0	0	2	0	1	0	0	4
Hour Total	0	0	0	0	0	2	0	0	14	33	11	4	0	0	64
02:15	0	0	0	0	0	1	0	0	4	1	1	0	0	0	7
02:30	0	0	0	0	0	0	0	0	2	3	0	0	0	0	5
02:45	0	0	0	0	1	0	0	1	1	2	0	0	0	0	5
03:00	0	0	0	0	0	0	0	0	1	1	1	1	0	0	4
Hour Total	0	0	0	0	1	1	0	1	8	7	2	1	0	0	21
03:15	0	0	0	0	1	0	0	1	1	1	1	1	0	0	6
03:30	0	0	0	0	0	0	0	0	3	2	1	1	0	0	7
03:45	0	0	0	0	0	0	0	0	2	1	1	0	0	0	4
04:00	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2
Hour Total	0	0	0	0	1	0	0	1	7	5	3	2	0	0	19
04:15	0	0	0	0	0	0	1	1	1	2	0	0	0	0	5
04:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
04:45	0	0	0	0	0	0	0	0	3	0	1	0	0	0	4
05:00	0	0	0	0	1	0	0	0	1	0	1	0	0	0	3
Hour Total	0	0	0	0	1	0	1	1	6	2	2	0	0	0	13
05:15	0	0	0	0	0	0	0	2	3	2	1	0	0	0	8
05:30	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4
05:45	0	0	0	1	0	0	0	1	0	3	1	0	0	0	6
06:00	0	0	0	0	2	0	0	3	3	6	2	0	0	0	16
Hour Total	0	0	0	1	2	0	0	6	6	15	4	0	0	0	34
06:15	0	0	0	0	2	2	0	1	3	5	11	1	1	0	26
06:30	0	0	0	1	1	0	0	1	0	10	8	0	1	0	22
06:45	0	0	0	0	4	1	2	2	4	6	2	8	1	0	30
07:00	0	0	0	0	0	3	1	0	1	5	6	3	0	1	20
Hour Total	0	0	0	1	7	6	3	4	8	26	27	12	3	1	98
07:15	0	0	0	2	2	0	1	2	1	12	8	2	2	0	32
07:30	0	0	1	1	3	5	1	4	4	14	10	4	0	0	47
07:45	0	0	0	1	5	4	7	5	4	17	5	2	2	0	52
08:00	0	0	0	1	8	10	5	2	5	12	7	4	2	0	56
Hour Total	0	0	1	5	18	19	14	13	14	55	30	12	6	0	187
08:15	0	0	0	1	6	3	3	1	0	17	23	7	1	1	63
08:30	0	0	0	1	3	3	4	1	3	28	20	8	1	0	72
08:45	0	0	0	0	8	11	3	4	15	15	5	2	0	1	64
09:00	0	0	0	0	6	9	1	0	7	13	16	4	0	1	57

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002002.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	2	23	26	11	6	25	73	64	21	2	3	256
09:15	0	0	0	2	5	9	7	5	6	14	15	3	1	0	67
09:30	0	0	0	4	6	6	3	1	5	13	10	5	0	1	54
09:45	0	0	0	1	4	2	3	2	5	21	18	13	0	0	69
10:00	0	0	0	1	2	6	1	2	5	16	4	5	0	0	42
Hour Total	0	0	0	8	17	23	14	10	21	64	47	26	1	1	232
10:15	0	0	0	1	1	2	1	3	3	12	5	5	3	0	36
10:30	0	0	1	1	5	3	0	4	9	13	9	0	0	0	45
10:45	0	0	0	1	3	2	1	2	9	13	15	2	1	0	49
11:00	0	0	0	1	3	2	0	0	4	13	8	0	1	0	32
Hour Total	0	0	1	4	12	9	2	9	25	51	37	7	5	0	162
11:15	0	0	0	2	5	4	1	3	6	11	9	3	0	0	44
11:30	0	0	0	2	3	1	2	3	4	16	8	1	0	0	40
11:45	0	0	0	1	2	1	3	1	8	13	8	2	2	0	41
12:00	0	0	0	0	0	2	1	0	8	14	12	7	0	0	44
Hour Total	0	0	0	5	10	8	7	7	26	54	37	13	2	0	169
12:15	0	0	0	1	2	4	1	4	13	15	11	8	2	0	61
12:30	0	0	0	0	0	0	0	0	4	14	12	11	0	0	41
12:45	0	0	1	1	3	3	4	5	3	15	18	5	0	1	59
13:00	0	0	0	0	1	1	1	2	10	11	17	3	1	0	47
Hour Total	0	0	1	2	6	8	6	11	30	55	58	27	3	1	208
13:15	0	0	0	4	4	5	5	1	8	23	10	4	0	0	64
13:30	0	0	0	0	6	5	2	1	8	11	20	11	0	0	64
13:45	0	0	0	1	6	9	7	2	9	19	10	1	1	0	65
14:00	0	0	0	1	2	6	1	1	8	28	23	4	0	0	74
Hour Total	0	0	0	6	18	25	15	5	33	81	63	20	1	0	267
14:15	0	0	0	2	10	9	7	2	4	15	17	3	2	0	71
14:30	0	0	0	2	1	9	10	2	13	29	10	6	1	0	83
14:45	0	0	0	1	3	1	1	0	12	29	13	5	0	0	65
15:00	0	0	0	2	4	4	8	2	11	21	15	1	1	0	69
Hour Total	0	0	0	7	18	23	26	6	40	94	55	15	4	0	288
15:15	0	0	0	2	3	4	1	1	6	31	19	9	0	0	76
15:30	0	0	0	1	2	10	5	0	14	45	31	2	0	0	110
15:45	0	0	0	0	0	5	4	9	15	39	25	10	0	0	107
16:00	0	0	1	1	8	7	9	5	21	41	25	9	0	0	127
Hour Total	0	0	1	4	13	26	19	15	56	156	100	30	0	0	420
16:15	0	0	0	1	5	6	2	8	34	55	33	5	0	0	149
16:30	0	0	0	1	3	19	20	18	30	70	22	4	0	0	187
16:45	0	0	0	1	6	19	41	30	37	60	25	2	1	0	222
17:00	0	0	0	0	2	16	22	35	59	62	22	2	0	0	220
Hour Total	0	0	0	3	16	60	85	91	160	247	102	13	1	0	778

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002002.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	7	17	21	40	73	58	13	6	9	6	1	0	0	0	251
17:30	1	0	13	25	62	83	68	21	1	0	0	0	0	0	274
17:45	12	19	20	45	56	78	36	3	0	0	0	0	0	0	269
18:00	3	9	22	20	80	96	44	5	3	0	0	0	0	0	282
Hour Total	23	45	76	130	271	315	161	35	13	6	1	0	0	0	1076
18:15	0	0	0	1	4	16	42	40	59	35	3	3	0	0	203
18:30	0	0	2	6	11	32	32	50	50	24	7	0	0	0	214
18:45	1	0	0	3	15	29	49	53	43	25	8	0	0	0	226
19:00	0	0	0	3	3	14	19	33	30	41	12	2	0	0	157
Hour Total	1	0	2	13	33	91	142	176	182	125	30	5	0	0	800
19:15	0	0	0	2	4	18	12	19	39	45	14	1	0	0	154
19:30	0	0	0	3	7	16	19	15	21	42	11	3	0	0	137
19:45	0	0	0	2	9	13	12	5	19	33	13	4	0	0	110
20:00	0	0	0	2	6	10	5	10	15	35	15	1	1	0	100
Hour Total	0	0	0	9	26	57	48	49	94	155	53	9	1	0	501
20:15	0	0	0	0	6	9	7	5	19	22	10	3	1	0	82
20:30	0	0	0	2	5	4	1	3	12	40	14	0	0	0	81
20:45	0	0	0	1	0	4	1	2	11	25	14	5	0	0	63
21:00	0	0	0	1	2	1	2	1	16	14	12	2	0	0	51
Hour Total	0	0	0	4	13	18	11	11	58	101	50	10	1	0	277
21:15	0	0	0	0	4	5	2	3	11	19	5	1	1	0	51
21:30	0	0	0	1	4	5	1	2	10	18	8	0	0	0	49
21:45	0	0	0	0	3	3	1	1	9	27	8	3	0	0	55
22:00	0	0	0	0	1	4	1	6	12	16	2	0	0	0	42
Hour Total	0	0	0	1	12	17	5	12	42	80	23	4	1	0	197
22:15	0	0	0	0	0	0	0	0	3	18	8	4	0	0	33
22:30	0	0	0	0	1	1	0	2	8	13	3	2	1	0	31
22:45	0	0	0	0	3	1	1	2	1	15	10	1	0	0	34
23:00	0	0	0	0	0	1	0	1	6	10	4	4	0	0	26
Hour Total	0	0	0	0	4	3	1	5	18	56	25	11	1	0	124
23:15	0	0	0	1	2	1	1	2	10	14	6	4	0	0	41
23:30	0	0	0	0	1	0	0	1	8	11	5	1	0	0	27
23:45	0	0	0	0	1	4	0	0	3	17	6	1	0	0	32
24:00	0	0	0	1	0	1	0	0	6	4	3	1	0	0	16
Hour Total	0	0	0	2	4	6	1	3	27	46	20	7	0	0	116
DAY TOTAL	24	45	82	207	527	743	572	480	920	1601	852	256	32	6	6347
PERCENTS	0.4%	0.8%	1.3%	3.3%	8.4%	11.8%	9.0%	7.5%	14.4%	25.2%	13.4%	4.0%	0.5%	0.0%	100%

Station #: Site A-SBI
Site ID: 000000009375
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002002.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
GRAND TOTAL	64	207	1287	1559	3146	2558	96	105	591	1862	1531	5002	686	13	18707
PERCENTS	0.4%	0.6%	1.2%	3.2%	6.9%	10.0%	8.4%	8.1%	16.8%	26.7%	13.6%	3.6%	0.5%	0.0%	100%

Statistical Information...

15th Percentile Speed
30.5 mph

85th Percentile Speed
56.1 mph

Median Speed
47.7 mph

Average Speed
44.5 mph

10 MPH Pace Speed
45 mph to 55 mph
2521 vehicles in pace
Representing 39.7% of the total vehicles

Vehicles > 45 MPH
3667
57.8%

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002003.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	33	7	0	0	0	0	0	1	0	0	0	0	0	0	41
00:30	2	39	17	0	0	0	0	0	1	0	0	0	0	0	0	59
00:45	1	15	8	0	0	0	0	0	0	0	0	0	0	0	0	24
01:00	0	12	1	0	1	1	0	0	0	0	0	0	0	0	0	15
Hour Total	3	99	33	0	1	1	0	0	2	0	0	0	0	0	0	139
01:15	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	17
01:30	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8
01:45	0	4	1	0	0	0	0	0	1	0	0	0	0	0	0	6
02:00	0	9	4	0	0	0	0	0	0	0	0	0	0	0	0	13
Hour Total	0	37	6	0	0	0	0	0	1	0	0	0	0	0	0	44
02:15	0	4	1	0	0	0	0	0	2	0	0	0	0	0	0	7
02:30	0	9	4	0	0	0	0	0	1	0	0	0	0	0	0	14
02:45	0	2	2	0	0	0	0	0	1	0	0	0	0	0	0	5
03:00	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	11
Hour Total	0	25	8	0	0	0	0	0	4	0	0	0	0	0	0	37
03:15	0	5	1	0	0	1	0	0	0	0	0	0	0	0	0	7
03:30	0	2	2	0	0	0	0	1	0	0	0	0	0	0	0	5
03:45	0	2	3	0	1	2	0	0	1	0	0	0	0	0	0	9
04:00	0	10	1	0	1	0	0	0	1	0	0	0	0	0	0	13
Hour Total	0	19	7	0	2	3	0	1	2	0	0	0	0	0	0	34
04:15	0	8	1	0	1	0	0	0	1	0	0	0	0	0	0	11
04:30	0	21	3	0	1	0	0	0	0	0	0	0	0	0	0	25
04:45	0	19	2	0	1	1	0	0	0	0	0	0	0	0	0	23
05:00	0	25	6	1	0	0	0	1	1	0	0	0	0	0	0	34
Hour Total	0	73	12	1	3	1	0	1	2	0	0	0	0	0	0	93
05:15	0	45	6	0	0	1	0	0	0	0	0	0	0	0	0	52
05:30	0	61	8	0	0	0	0	0	1	0	0	0	0	0	0	70
05:45	1	50	12	0	0	0	0	1	1	0	0	0	0	0	0	65
06:00	0	61	13	0	1	0	0	0	3	0	0	0	0	0	0	78
Hour Total	1	217	39	0	1	1	0	1	5	0	0	0	0	0	0	265
06:15	1	60	19	0	1	0	0	2	0	0	0	0	0	0	0	83
06:30	2	76	15	0	1	2	0	0	0	0	1	0	0	0	0	97
06:45	1	59	20	1	2	3	0	0	1	0	0	0	0	0	0	87
07:00	0	65	18	0	1	0	1	0	0	1	0	0	0	0	0	86
Hour Total	4	260	72	1	5	5	1	2	1	1	1	0	0	0	0	353
07:15	0	79	19	0	0	0	0	0	1	0	0	0	0	0	0	99
07:30	0	103	29	0	0	1	1	1	2	0	0	0	0	0	0	137
07:45	0	63	25	0	0	0	1	0	1	0	0	0	0	0	0	90
08:00	1	85	30	0	1	1	3	0	2	0	0	0	0	0	0	123
Hour Total	1	330	103	0	1	2	5	1	6	0	0	0	0	0	0	449
08:15	1	68	20	0	4	1	0	0	1	0	0	0	0	0	0	95
08:30	0	69	24	0	1	1	4	0	1	0	0	0	0	0	0	100
08:45	0	71	29	0	2	1	2	0	6	0	0	0	1	0	0	112
09:00	0	76	33	0	0	0	2	0	1	0	0	0	0	0	0	112

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002003.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	1	284	106	0	7	3	8	0	9	0	0	0	1	0	0	419
09:15	0	51	23	0	1	1	3	0	7	0	0	0	0	0	0	86
09:30	0	55	36	0	3	1	1	1	5	0	0	0	0	0	0	102
09:45	0	59	25	0	3	1	0	1	1	0	0	0	0	0	0	90
10:00	0	45	26	0	4	1	5	0	2	0	0	0	0	0	0	83
Hour Total	0	210	110	0	11	4	9	2	15	0	0	0	0	0	0	361
10:15	1	46	22	1	1	2	1	0	3	0	0	0	0	0	0	77
10:30	2	55	26	0	3	2	1	0	3	0	0	0	0	0	0	92
10:45	0	54	20	0	5	3	3	0	4	0	0	0	0	0	0	89
11:00	0	62	26	0	2	4	1	1	3	0	0	0	0	0	0	99
Hour Total	3	217	94	1	11	11	6	1	13	0	0	0	0	0	0	357
11:15	0	59	22	0	2	2	0	0	1	0	0	0	0	0	0	86
11:30	0	65	22	1	2	1	3	1	1	0	0	0	0	0	0	96
11:45	0	83	22	0	3	0	3	0	6	0	0	0	0	0	0	117
12:00	1	72	18	0	2	2	5	0	3	0	0	0	0	0	0	103
Hour Total	1	279	84	1	9	5	11	1	11	0	0	0	0	0	0	402
12:15	0	70	28	1	1	0	2	0	2	0	0	0	0	0	0	104
12:30	0	82	30	1	2	1	1	1	1	0	0	0	0	0	0	119
12:45	0	86	24	0	0	3	2	0	1	0	0	0	0	0	0	116
13:00	0	82	23	0	3	0	1	0	5	0	0	0	0	0	0	114
Hour Total	0	320	105	2	6	4	6	1	9	0	0	0	0	0	0	453
13:15	0	87	24	0	1	2	0	0	1	0	0	0	0	0	0	115
13:30	0	74	24	0	1	1	0	0	0	0	0	0	0	0	0	100
13:45	0	92	27	1	2	0	3	0	3	1	0	0	0	0	0	129
14:00	2	98	34	0	2	1	2	1	3	0	0	0	0	0	0	143
Hour Total	2	351	109	1	6	4	5	1	7	1	0	0	0	0	0	487
14:15	2	91	30	0	1	1	1	0	3	0	0	0	0	0	0	129
14:30	0	132	41	1	1	0	1	2	0	0	0	0	0	0	0	178
14:45	0	134	33	0	3	1	0	0	0	0	0	0	0	0	0	171
15:00	0	154	42	0	4	2	2	0	4	0	0	0	0	0	0	208
Hour Total	2	511	146	1	9	4	4	2	7	0	0	0	0	0	0	686
15:15	1	165	42	1	2	1	0	1	1	0	0	1	0	0	0	215
15:30	0	196	63	0	2	2	2	0	1	0	0	0	0	0	0	266
15:45	0	174	60	0	0	0	0	0	2	1	0	0	0	0	0	237
16:00	1	196	73	1	1	1	0	1	2	0	0	3	3	0	0	282
Hour Total	2	731	238	2	5	4	2	2	6	1	0	4	3	0	0	1000
16:15	0	183	58	1	2	2	0	0	2	1	1	1	0	0	0	251
16:30	1	202	60	0	3	2	0	0	5	1	0	0	2	0	0	276
16:45	1	207	67	0	2	0	0	1	0	0	0	0	0	0	0	278
17:00	2	199	66	1	1	1	0	1	1	0	2	0	0	0	0	274
Hour Total	4	791	251	2	8	5	0	2	8	2	3	1	2	0	0	1079

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002003.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	210	59	0	1	0	1	2	3	0	0	1	0	0	0	277
17:30	0	221	49	0	2	0	1	1	2	0	0	0	0	0	0	276
17:45	1	193	66	0	0	1	0	0	0	0	0	0	0	0	0	261
18:00	1	176	59	0	0	1	0	0	0	0	0	0	0	0	0	237
Hour Total	2	800	233	0	3	2	2	3	5	0	0	1	0	0	0	1051
18:15	2	151	31	0	0	0	0	1	1	0	0	0	0	0	0	186
18:30	0	141	30	0	0	0	0	1	0	0	0	0	0	0	0	172
18:45	0	134	31	0	0	0	0	0	0	0	0	0	0	0	0	165
19:00	0	113	32	0	1	0	0	0	0	0	0	0	0	0	0	146
Hour Total	2	539	124	0	1	0	0	2	1	0	0	0	0	0	0	669
19:15	0	99	32	0	0	2	0	0	0	0	0	0	0	0	0	133
19:30	0	97	34	0	1	0	0	0	1	0	0	0	0	0	0	133
19:45	0	98	28	0	1	1	0	1	1	0	0	0	0	0	0	130
20:00	0	88	24	0	0	0	0	0	2	0	0	0	0	0	0	114
Hour Total	0	382	118	0	2	3	0	1	4	0	0	0	0	0	0	510
20:15	0	70	25	0	0	0	0	1	2	1	0	0	0	0	0	99
20:30	0	80	17	0	0	0	0	0	0	0	0	0	0	0	0	97
20:45	0	84	18	0	2	0	0	0	0	0	0	0	0	0	0	104
21:00	1	74	11	0	1	0	0	0	1	0	0	0	0	0	0	88
Hour Total	1	308	71	0	3	0	0	1	3	1	0	0	0	0	0	388
21:15	0	63	16	0	0	0	0	1	3	0	0	0	0	0	0	83
21:30	0	66	5	0	1	1	0	0	0	0	0	0	0	0	0	73
21:45	0	56	9	0	0	0	0	0	0	0	0	0	0	0	0	65
22:00	0	50	8	0	0	0	0	0	3	0	0	0	0	0	0	61
Hour Total	0	235	38	0	1	1	0	1	6	0	0	0	0	0	0	282
22:15	0	47	0	0	0	0	0	0	1	0	0	0	0	0	0	48
22:30	0	50	10	0	0	0	0	0	2	0	0	0	0	0	0	62
22:45	0	50	8	0	0	0	0	0	0	0	0	0	0	0	0	58
23:00	1	28	5	0	0	0	0	0	5	0	0	0	0	0	0	39
Hour Total	1	175	23	0	0	0	0	0	8	0	0	0	0	0	0	207
23:15	0	23	12	0	0	0	0	0	0	0	0	0	0	0	0	35
23:30	0	21	5	0	1	0	0	0	2	0	0	0	0	0	0	29
23:45	0	24	4	0	0	2	0	0	0	0	0	0	0	0	0	30
24:00	0	25	5	0	0	0	0	0	2	0	0	0	0	0	0	32
Hour Total	0	93	26	0	1	2	0	0	4	0	0	0	0	0	0	126
DAY TOTAL	30	7286	2156	12	96	65	59	26	139	6	4	6	6	0	0	9891
PERCENTS	0.4%	73.7%	21.8%	0.2%	1.0%	0.7%	0.6%	0.2%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 95.7% Trucks & Buses 4.2%

AM Times	05:45	07:15	08:45	04:15	10:00	10:15	08:30	05:30	08:45	06:15	05:45		08:00			07:15
AM Peaks	4	330	121	1	13	11	11	3	19	1	1		1			449
PM Times	13:30	16:45	16:00	12:15	14:45	12:30	13:45	16:45	15:45	15:45	16:15	15:15	15:45			16:30
PM Peaks	4	837	258	2	11	6	7	5	11	3	3	4	5			1105

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002003.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	18	11	0	0	0	0	0	0	0	0	0	0	0	0	29
00:30	3	29	16	0	0	0	0	0	1	0	0	0	0	0	0	49
00:45	0	12	7	0	0	2	0	0	2	0	0	0	0	0	0	23
01:00	0	17	2	0	0	1	0	0	0	0	0	0	0	0	0	20
Hour Total	3	76	36	0	0	3	0	0	3	0	0	0	0	0	0	121
01:15	0	12	3	0	0	0	0	0	0	0	0	0	0	0	0	15
01:30	0	15	4	0	0	0	0	0	0	0	0	0	0	0	0	19
01:45	0	9	3	0	0	0	0	0	0	0	0	0	0	0	0	12
02:00	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour Total	0	41	11	0	0	0	0	0	0	0	0	0	0	0	0	52
02:15	0	4	1	0	0	0	0	0	1	0	0	0	0	0	0	6
02:30	0	4	0	0	0	0	0	0	1	0	0	0	0	0	0	5
02:45	0	3	5	0	0	0	0	0	0	0	0	0	0	0	0	8
03:00	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Hour Total	0	18	6	0	0	0	0	0	2	0	0	0	0	0	0	26
03:15	0	2	3	0	0	0	0	1	0	0	0	0	0	0	0	6
03:30	0	4	2	0	0	2	0	0	1	0	0	0	0	0	0	9
03:45	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	3
04:00	0	7	3	0	1	1	0	1	1	0	0	0	0	0	0	14
Hour Total	0	14	9	0	1	3	0	2	3	0	0	0	0	0	0	32
04:15	0	12	5	0	0	0	0	0	1	0	0	0	0	0	0	18
04:30	0	19	2	0	0	0	0	0	0	0	0	0	0	0	0	21
04:45	0	20	2	0	1	0	0	1	0	0	0	0	0	0	0	24
05:00	0	27	5	1	0	0	0	0	0	0	0	0	0	0	0	33
Hour Total	0	78	14	1	1	0	0	1	1	0	0	0	0	0	0	96
05:15	0	39	5	0	1	0	0	0	1	0	0	0	0	0	0	46
05:30	0	60	12	0	1	0	0	0	1	0	0	0	0	0	0	74
05:45	0	55	15	0	0	1	0	1	1	0	0	0	0	0	0	73
06:00	0	66	11	0	0	0	0	0	1	0	0	0	0	0	0	78
Hour Total	0	220	43	0	2	1	0	1	4	0	0	0	0	0	0	271
06:15	1	61	17	0	0	0	0	1	1	0	0	0	1	0	0	82
06:30	2	71	16	0	4	2	0	1	1	0	0	0	0	0	0	97
06:45	0	58	15	0	2	2	0	0	1	0	0	0	0	0	0	78
07:00	0	69	22	1	1	2	0	0	0	0	0	0	0	0	0	95
Hour Total	3	259	70	1	7	6	0	2	3	0	0	0	1	0	0	352
07:15	0	77	20	0	0	3	0	0	3	0	0	0	0	0	0	103
07:30	0	86	26	0	3	0	0	0	2	0	0	0	0	0	0	117
07:45	0	81	30	0	0	1	0	0	2	0	0	0	0	0	0	114
08:00	1	70	33	0	2	2	0	0	1	0	0	0	1	0	0	110
Hour Total	1	314	109	0	5	6	0	0	8	0	0	0	1	0	0	444
08:15	0	66	23	0	3	6	1	0	4	0	0	0	0	0	0	103
08:30	0	66	27	0	1	3	0	0	3	0	0	0	0	0	0	100
08:45	1	66	25	0	4	1	1	0	2	0	0	0	0	0	0	100
09:00	1	20	5	0	0	0	0	0	0	0	0	0	0	0	0	26

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002003.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	2	218	80	0	8	10	2	0	9	0	0	0	0	0	0	329
09:15	0	82	37	0	1	1	0	0	3	0	0	0	0	0	0	124
09:30	0	57	20	0	4	2	1	1	0	0	0	0	1	0	0	86
09:45	0	46	23	1	0	4	2	0	4	0	0	0	0	0	0	80
10:00	0	52	23	1	2	2	1	0	1	0	0	0	0	0	0	82
Hour Total	0	237	103	2	7	9	4	1	8	0	0	0	1	0	0	372
10:15	1	46	23	0	1	4	0	0	2	0	0	0	0	0	0	77
10:30	0	49	29	0	0	4	0	0	3	0	0	0	0	0	0	85
10:45	0	75	21	0	2	2	2	1	2	0	0	0	0	0	0	105
11:00	0	60	15	0	1	4	0	0	2	0	0	0	1	0	0	83
Hour Total	1	230	88	0	4	14	2	1	9	0	0	0	1	0	0	350
11:15	0	87	23	0	2	2	3	0	1	0	0	0	0	0	0	118
11:30	0	73	25	0	2	3	1	0	2	0	0	0	0	0	0	106
11:45	1	70	31	1	3	1	0	0	2	0	0	0	0	0	0	109
12:00	1	67	19	0	3	3	1	2	2	0	0	0	0	0	0	98
Hour Total	2	297	98	1	10	9	5	2	7	0	0	0	0	0	0	431
12:15	1	87	28	0	0	2	0	0	3	0	0	0	0	0	0	121
12:30	1	85	37	0	2	3	2	0	1	0	0	0	0	0	0	131
12:45	0	87	35	0	0	1	2	0	1	0	0	0	0	0	0	126
13:00	0	91	28	1	0	0	1	1	4	1	0	0	0	0	0	127
Hour Total	2	350	128	1	2	6	5	1	9	1	0	0	0	0	0	505
13:15	1	97	38	0	2	2	1	0	5	0	0	0	0	0	0	146
13:30	1	87	28	0	1	1	2	0	1	0	0	0	0	0	0	121
13:45	1	92	26	0	3	1	0	2	3	0	1	0	0	0	0	129
14:00	0	101	25	0	2	1	1	1	3	0	0	0	0	0	0	134
Hour Total	3	377	117	0	8	5	4	3	12	0	1	0	0	0	0	530
14:15	1	103	36	0	2	3	0	0	2	0	0	0	0	0	0	147
14:30	0	104	40	0	2	0	1	0	1	0	0	1	0	0	0	149
14:45	2	137	39	0	5	0	0	1	1	0	0	0	0	0	0	185
15:00	2	141	41	0	2	2	0	0	1	0	0	0	0	0	0	189
Hour Total	5	485	156	0	11	5	1	1	5	0	0	1	0	0	0	670
15:15	0	186	43	0	3	2	0	1	2	0	0	0	0	0	0	237
15:30	2	162	60	0	0	3	0	2	3	0	0	0	0	0	0	232
15:45	0	183	57	1	2	3	0	1	2	0	0	0	0	0	0	249
16:00	1	175	82	0	1	1	0	1	2	0	0	2	3	0	0	268
Hour Total	3	706	242	1	6	9	0	5	9	0	0	2	3	0	0	986
16:15	2	169	60	0	5	1	0	0	0	0	0	0	5	0	0	242
16:30	1	210	64	0	2	0	0	0	3	0	0	0	1	0	0	281
16:45	0	192	59	0	1	1	0	1	1	0	1	0	1	0	0	257
17:00	1	193	54	1	1	0	0	2	0	0	0	0	2	0	0	254
Hour Total	4	764	237	1	9	2	0	3	4	0	1	0	9	0	0	1034

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002003.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	1	195	67	1	1	0	0	1	1	0	0	0	0	0	0	267
17:30	1	219	51	0	1	0	0	0	2	0	0	1	0	0	0	275
17:45	2	192	56	0	0	0	0	0	2	0	0	1	0	0	0	253
18:00	1	183	49	0	0	0	0	1	0	0	0	0	0	0	0	234
Hour Total	5	789	223	1	2	0	0	2	5	0	0	2	0	0	0	1029
18:15	1	162	41	0	0	0	0	0	2	0	0	0	0	0	0	206
18:30	0	141	43	0	0	1	0	2	1	0	0	0	0	0	0	188
18:45	3	115	23	0	1	0	0	0	2	0	0	0	0	0	0	144
19:00	0	125	22	0	0	0	0	3	2	0	0	0	0	0	0	152
Hour Total	4	543	129	0	1	1	0	5	7	0	0	0	0	0	0	690
19:15	0	99	20	0	1	2	0	0	0	0	0	0	0	0	0	122
19:30	0	106	21	0	0	0	0	0	0	0	0	0	0	0	0	127
19:45	1	102	24	0	2	0	0	0	1	0	0	0	0	0	0	130
20:00	0	85	22	0	0	0	0	2	0	0	0	0	0	0	0	109
Hour Total	1	392	87	0	3	2	0	2	1	0	0	0	0	0	0	488
20:15	0	101	15	0	2	0	0	0	0	0	0	0	0	0	0	118
20:30	0	73	18	0	0	0	0	0	0	0	0	0	0	0	0	91
20:45	0	83	13	0	0	0	0	0	1	0	0	0	0	0	0	97
21:00	0	82	13	0	0	0	0	0	2	0	0	0	0	0	0	97
Hour Total	0	339	59	0	2	0	0	0	3	0	0	0	0	0	0	403
21:15	0	82	11	0	0	0	0	0	0	0	0	0	0	0	0	93
21:30	1	90	17	1	3	0	0	0	0	0	0	0	0	0	0	112
21:45	0	59	9	0	1	0	0	0	1	0	0	0	0	0	0	70
22:00	0	50	13	0	0	0	0	0	1	0	0	0	0	0	0	64
Hour Total	1	281	50	1	4	0	0	0	2	0	0	0	0	0	0	339
22:15	1	43	8	0	0	1	0	0	1	0	0	0	0	0	0	54
22:30	1	49	9	0	0	0	0	0	2	0	0	0	0	0	0	61
22:45	0	44	10	0	0	0	0	0	2	0	0	0	0	0	0	56
23:00	0	29	3	0	0	0	0	0	2	0	0	0	0	0	0	34
Hour Total	2	165	30	0	0	1	0	0	7	0	0	0	0	0	0	205
23:15	1	18	2	0	0	0	0	0	1	0	0	0	0	0	0	22
23:30	0	16	7	0	0	1	0	0	0	0	0	0	0	0	0	24
23:45	0	27	6	0	0	0	0	0	1	0	0	0	0	0	0	34
24:00	0	25	8	0	0	1	0	0	2	0	0	0	0	0	0	36
Hour Total	1	86	23	0	0	2	0	0	4	0	0	0	0	0	0	116
DAY TOTAL	43	7279	2148	10	93	94	23	32	125	1	2	5	16	0	0	9871
PERCENTS	0.5%	73.8%	21.8%	0.2%	1.0%	0.9%	0.2%	0.3%	1.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	100%

Passenger Vehicles 95.9% Trucks & Buses 4.0%

AM Times	00:45	07:15	07:45	09:15	08:00	09:45	10:45	05:45	07:45				05:30			07:15
AM Peaks	3	314	113	2	10	14	6	3	10				1			444
PM Times	14:45	16:45	16:00	16:30	14:30	15:00	12:30	15:15	13:00	12:15	13:00	15:15	16:00			16:30
PM Peaks	6	799	265	2	12	10	6	5	13	1	1	2	10			1059

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002003.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	29	5	0	0	0	0	1	2	0	0	0	0	0	0	37
00:30	3	36	16	0	0	0	0	0	0	0	0	0	0	0	0	55
00:45	0	15	7	0	0	0	0	0	0	0	0	0	0	0	0	22
01:00	0	14	4	0	0	0	0	0	0	0	0	0	0	0	0	18
Hour Total	3	94	32	0	0	0	0	1	2	0	0	0	0	0	0	132
01:15	0	12	0	0	0	1	0	0	0	0	0	0	0	0	0	13
01:30	0	19	3	0	0	1	0	0	1	0	0	0	0	0	0	24
01:45	0	8	4	0	0	0	0	0	0	0	0	0	0	0	0	12
02:00	0	8	3	0	0	0	0	0	1	0	0	0	0	0	0	12
Hour Total	0	47	10	0	0	2	0	0	2	0	0	0	0	0	0	61
02:15	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	11
02:30	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
02:45	0	7	2	0	0	0	0	1	0	0	0	0	0	0	0	10
03:00	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Hour Total	0	23	4	0	0	0	0	1	0	0	0	0	0	0	0	28
03:15	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	10
03:30	0	6	1	0	0	3	0	0	3	0	0	0	0	0	0	13
03:45	0	8	3	0	0	0	0	2	1	0	0	0	0	0	0	14
04:00	0	9	3	0	0	0	0	0	0	0	0	0	0	0	0	12
Hour Total	0	29	11	0	0	3	0	2	4	0	0	0	0	0	0	49
04:15	0	14	1	0	0	1	0	1	0	0	0	0	0	0	0	17
04:30	1	14	4	0	2	0	0	0	0	0	0	0	0	0	0	21
04:45	0	22	4	0	1	1	0	0	2	0	0	0	0	0	0	30
05:00	0	24	8	1	0	1	0	0	0	0	0	0	0	0	0	34
Hour Total	1	74	17	1	3	3	0	1	2	0	0	0	0	0	0	102
05:15	0	35	10	0	1	0	0	0	4	0	0	0	0	0	0	50
05:30	0	48	8	0	0	1	0	0	0	0	0	0	0	0	0	57
05:45	1	62	12	0	0	0	0	0	3	0	0	0	0	0	0	78
06:00	0	57	13	0	0	0	0	2	1	0	0	0	0	0	0	73
Hour Total	1	202	43	0	1	1	0	2	8	0	0	0	0	0	0	258
06:15	0	56	18	0	0	3	0	0	0	0	0	0	0	0	0	77
06:30	1	80	16	1	1	1	0	1	0	0	0	0	0	0	0	101
06:45	0	69	14	3	1	1	0	2	1	0	0	0	0	0	0	91
07:00	0	73	23	0	1	2	0	0	4	0	0	0	0	0	0	103
Hour Total	1	278	71	4	3	7	0	3	5	0	0	0	0	0	0	372
07:15	0	89	18	0	2	4	0	0	4	0	0	0	0	0	0	117
07:30	0	87	27	0	0	0	0	0	2	0	0	0	0	0	0	116
07:45	0	60	30	0	0	1	1	0	1	0	0	0	0	0	0	93
08:00	0	68	29	0	0	3	0	0	3	0	0	0	0	0	0	103
Hour Total	0	304	104	0	2	8	1	0	10	0	0	0	0	0	0	429
08:15	0	75	22	0	3	3	0	1	0	0	0	0	1	0	0	105
08:30	0	74	22	0	3	2	0	0	3	0	0	0	0	0	0	104
08:45	1	76	25	1	1	3	0	0	0	0	0	0	1	0	0	108
09:00	0	61	20	0	1	3	0	0	3	0	0	0	0	0	0	88

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002003.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	1	286	89	1	8	11	0	1	6	0	0	0	2	0	0	405
09:15	0	51	12	0	2	5	0	1	1	1	0	0	0	0	0	73
09:30	0	52	18	0	0	1	0	0	0	0	0	0	0	0	0	71
09:45	0	60	23	1	4	3	0	2	4	1	0	0	0	0	0	98
10:00	0	57	30	0	2	1	0	0	4	0	0	0	0	0	0	94
Hour Total	0	220	83	1	8	10	0	3	9	2	0	0	0	0	0	336
10:15	0	64	25	1	2	4	0	0	3	0	0	0	1	0	0	100
10:30	0	57	26	0	1	5	1	0	0	0	0	0	0	0	0	90
10:45	0	48	28	1	2	1	1	0	5	0	0	0	0	0	0	86
11:00	0	71	26	0	6	1	0	0	4	0	0	0	0	0	0	108
Hour Total	0	240	105	2	11	11	2	0	12	0	0	0	1	0	0	384
11:15	1	72	28	0	0	2	0	1	2	0	0	0	0	0	0	106
11:30	0	57	29	0	1	2	0	1	5	0	0	0	0	0	0	95
11:45	0	46	25	1	5	1	1	1	1	0	0	0	0	0	0	81
12:00	0	59	24	0	5	2	0	1	2	0	0	0	0	0	0	93
Hour Total	1	234	106	1	11	7	1	4	10	0	0	0	0	0	0	375
12:15	1	69	25	0	2	4	0	0	5	0	0	0	0	0	0	106
12:30	0	82	24	2	1	2	0	0	4	0	0	0	0	0	0	115
12:45	1	81	31	1	3	1	1	0	8	0	0	0	1	0	0	128
13:00	0	69	42	0	2	2	0	1	1	0	0	0	0	0	0	117
Hour Total	2	301	122	3	8	9	1	1	18	0	0	0	1	0	0	466
13:15	0	66	20	0	2	2	0	1	4	0	0	0	0	0	0	95
13:30	0	103	41	0	0	1	0	3	2	0	0	0	0	0	0	150
13:45	1	88	15	0	2	4	1	0	1	0	0	0	0	0	0	112
14:00	1	78	31	0	1	3	0	3	2	0	0	0	0	0	0	119
Hour Total	2	335	107	0	5	10	1	7	9	0	0	0	0	0	0	476
14:15	0	75	39	0	1	2	1	0	4	0	1	0	0	0	0	123
14:30	3	131	45	0	1	3	0	1	2	0	0	0	0	0	0	186
14:45	1	127	32	1	3	1	0	2	3	0	1	0	0	0	0	171
15:00	0	146	49	0	2	1	0	1	2	0	0	0	0	0	0	201
Hour Total	4	479	165	1	7	7	1	4	11	0	2	0	0	0	0	681
15:15	1	153	68	2	4	3	0	0	1	0	0	0	0	0	0	232
15:30	2	172	48	2	4	2	0	2	2	0	0	0	0	0	0	234
15:45	0	171	63	1	7	2	0	2	0	0	0	0	1	0	0	247
16:00	0	151	74	1	0	2	0	0	0	0	0	0	0	0	0	228
Hour Total	3	647	253	6	15	9	0	4	3	0	0	0	1	0	0	941
16:15	1	182	61	0	2	1	0	1	0	0	0	1	5	0	0	254
16:30	1	177	64	1	6	0	0	0	3	0	0	1	4	0	0	257
16:45	2	199	51	0	0	0	0	2	2	0	0	2	3	0	0	261
17:00	3	170	69	0	2	2	0	2	1	1	0	2	3	0	0	255
Hour Total	7	728	245	1	10	3	0	5	6	1	0	6	15	0	0	1027

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002003.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	1	196	67	1	2	0	0	2	1	0	1	0	0	0	0	271
17:30	1	185	68	0	2	2	0	1	0	0	0	1	1	0	0	261
17:45	1	192	67	0	3	2	0	1	1	0	0	0	1	0	0	268
18:00	2	161	46	0	3	0	0	0	0	0	1	0	0	0	0	213
Hour Total	5	734	248	1	10	4	0	4	2	0	2	1	2	0	0	1013
18:15	3	163	48	0	1	0	0	2	3	0	0	0	0	0	0	220
18:30	1	162	40	0	1	1	0	3	1	0	0	0	0	0	0	209
18:45	0	115	26	0	0	0	0	3	1	0	0	0	0	0	0	145
19:00	0	112	37	0	2	0	0	1	1	0	0	0	0	0	0	153
Hour Total	4	552	151	0	4	1	0	9	6	0	0	0	0	0	0	727
19:15	1	122	24	0	0	0	0	1	1	0	0	0	0	0	0	149
19:30	0	126	27	0	0	0	0	0	1	0	0	0	0	0	0	154
19:45	0	110	27	0	0	1	0	0	1	0	0	0	0	0	0	139
20:00	1	85	23	0	1	0	0	1	1	0	0	0	0	0	0	112
Hour Total	2	443	101	0	1	1	0	2	4	0	0	0	0	0	0	554
20:15	1	71	18	0	2	1	0	0	1	0	0	0	0	0	0	94
20:30	0	88	19	0	1	0	0	1	0	0	0	0	0	0	0	109
20:45	0	83	23	0	0	0	0	0	1	0	0	0	0	0	0	107
21:00	0	71	17	0	0	0	0	0	0	0	0	0	0	0	0	88
Hour Total	1	313	77	0	3	1	0	1	2	0	0	0	0	0	0	398
21:15	0	68	16	0	0	0	0	0	2	0	0	0	0	0	0	86
21:30	0	64	19	0	0	0	0	1	0	0	0	0	0	0	0	84
21:45	0	63	6	0	0	0	0	1	0	0	0	0	0	0	0	70
22:00	0	42	14	0	0	0	0	0	0	0	0	0	0	0	0	56
Hour Total	0	237	55	0	0	0	0	2	2	0	0	0	0	0	0	296
22:15	0	61	7	0	0	0	0	0	0	0	0	0	0	0	0	68
22:30	0	49	9	0	0	1	0	0	0	0	0	0	0	0	0	59
22:45	0	52	15	0	0	0	0	0	0	0	0	0	0	0	0	67
23:00	0	37	10	0	0	0	0	0	1	0	0	0	0	0	0	48
Hour Total	0	199	41	0	0	1	0	0	1	0	0	0	0	0	0	242
23:15	1	25	7	0	0	0	0	0	0	0	0	0	0	0	0	33
23:30	0	25	7	0	0	1	0	0	0	0	0	0	0	0	0	33
23:45	0	16	6	0	0	0	0	1	0	0	0	0	0	0	0	23
24:00	1	28	6	0	0	1	0	0	0	0	0	0	0	0	0	36
Hour Total	2	94	26	0	0	2	0	1	0	0	0	0	0	0	0	125
DAY TOTAL	40	7093	2266	22	110	111	7	58	134	3	4	7	22	0	0	9877
PERCENTS	0.5%	71.9%	23.0%	0.3%	1.2%	1.1%	0.0%	0.5%	1.3%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	100%

Passenger Vehicles 95.1% Trucks & Buses 4.8%

AM Times	00:45	06:45	10:45	06:00	11:00	08:30	10:00	06:00	10:45	09:00			08:00			07:00
AM Peaks	3	318	111	4	12	13	2	5	16	2			2			429
PM Times	16:15	16:45	17:00	15:15	15:00	13:45	13:30	18:15	12:15	16:15	14:00	16:15	16:15			17:00
PM Peaks	7	750	271	6	17	12	2	9	18	1	2	6	15			1055

GRAND TOTAL	113	6570	299	89	398	10	44	0								
	21658	44	270	116	10	18	0	29639								
PERCENTS	0.4%	73.1%	22.2%	0.2%	1.1%	1.0%	0.3%	0.3%	1.3%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	100%

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002004.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	1	1	0	1	12	20	5	1	0	0	41
00:30	0	0	0	0	1	1	2	11	18	24	2	0	0	0	59
00:45	0	0	0	0	0	0	0	3	7	12	2	0	0	0	24
01:00	0	0	0	0	0	0	0	2	5	6	2	0	0	0	15
Hour Total	0	0	0	0	2	2	2	17	42	62	11	1	0	0	139
01:15	0	0	0	0	0	1	0	2	9	3	2	0	0	0	17
01:30	0	0	0	0	0	0	0	1	3	3	0	1	0	0	8
01:45	0	0	0	0	0	0	0	2	0	3	1	0	0	0	6
02:00	0	0	0	0	0	0	0	1	3	8	1	0	0	0	13
Hour Total	0	0	0	0	0	1	0	6	15	17	4	1	0	0	44
02:15	0	0	0	0	0	0	0	0	4	3	0	0	0	0	7
02:30	0	0	1	0	0	0	0	1	3	8	1	0	0	0	14
02:45	0	0	0	0	0	0	0	0	2	2	1	0	0	0	5
03:00	0	0	0	0	0	0	0	3	2	3	3	0	0	0	11
Hour Total	0	0	1	0	0	0	0	4	11	16	5	0	0	0	37
03:15	0	0	0	0	0	0	0	1	2	3	1	0	0	0	7
03:30	0	0	0	0	0	0	0	2	1	2	0	0	0	0	5
03:45	0	0	0	0	0	0	0	2	3	3	1	0	0	0	9
04:00	0	0	0	1	0	0	0	2	5	4	1	0	0	0	13
Hour Total	0	0	0	1	0	0	0	7	11	12	3	0	0	0	34
04:15	0	0	0	0	0	0	0	3	4	1	2	1	0	0	11
04:30	0	0	0	0	0	0	0	2	9	10	3	1	0	0	25
04:45	0	0	0	1	0	1	0	5	4	12	0	0	0	0	23
05:00	0	0	0	1	1	1	0	0	9	13	5	3	0	1	34
Hour Total	0	0	0	2	1	2	0	10	26	36	10	5	0	1	93
05:15	0	0	0	2	3	2	0	2	8	21	11	3	0	0	52
05:30	0	0	0	2	2	3	4	1	12	30	15	1	0	0	70
05:45	0	0	1	4	6	3	1	4	16	19	8	1	2	0	65
06:00	0	0	0	3	2	5	0	2	21	33	11	1	0	0	78
Hour Total	0	0	1	11	13	13	5	9	57	103	45	6	2	0	265
06:15	0	0	0	5	4	0	1	10	23	31	5	4	0	0	83
06:30	0	0	0	4	6	5	3	6	28	29	12	3	1	0	97
06:45	0	0	0	3	7	8	6	10	24	24	5	0	0	0	87
07:00	0	0	0	5	16	3	3	8	21	20	7	2	1	0	86
Hour Total	0	0	0	17	33	16	13	34	96	104	29	9	2	0	353
07:15	0	0	0	10	18	1	0	5	21	35	8	1	0	0	99
07:30	0	0	0	5	9	23	6	8	30	45	8	3	0	0	137
07:45	0	0	0	0	7	17	2	7	23	23	10	1	0	0	90
08:00	0	0	1	7	9	13	6	10	28	33	14	2	0	0	123
Hour Total	0	0	1	22	43	54	14	30	102	136	40	7	0	0	449
08:15	0	0	1	8	13	9	5	5	24	20	6	4	0	0	95
08:30	1	3	4	10	20	11	6	27	10	5	1	2	0	0	100
08:45	0	0	0	6	13	4	1	21	28	30	9	0	0	0	112
09:00	0	0	1	3	9	3	2	17	34	31	8	4	0	0	112

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002004.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	1	3	6	27	55	27	14	70	96	86	24	10	0	0	419
09:15	0	0	1	1	9	4	2	7	33	23	6	0	0	0	86
09:30	0	0	0	3	3	7	1	6	41	30	5	6	0	0	102
09:45	0	0	0	3	8	8	3	7	19	32	9	1	0	0	90
10:00	0	0	0	2	5	7	0	9	27	30	2	0	0	1	83
Hour Total	0	0	1	9	25	26	6	29	120	115	22	7	0	1	361
10:15	0	0	0	2	8	1	3	5	28	26	3	1	0	0	77
10:30	0	0	1	2	5	2	1	13	28	30	9	1	0	0	92
10:45	0	0	0	5	8	5	1	15	21	24	5	4	1	0	89
11:00	0	0	0	2	5	7	3	11	34	26	10	1	0	0	99
Hour Total	0	0	1	11	26	15	8	44	111	106	27	7	1	0	357
11:15	0	1	0	4	3	11	3	10	36	15	3	0	0	0	86
11:30	0	0	0	2	7	6	5	10	27	24	14	1	0	0	96
11:45	0	0	1	1	9	6	0	5	45	37	12	0	0	1	117
12:00	0	0	2	8	7	4	6	8	30	27	9	2	0	0	103
Hour Total	0	1	3	15	26	27	14	33	138	103	38	3	0	1	402
12:15	0	0	3	3	10	14	3	8	24	27	11	1	0	0	104
12:30	0	0	0	5	11	14	4	5	28	30	16	6	0	0	119
12:45	0	0	0	6	11	7	3	17	31	28	12	1	0	0	116
13:00	0	0	0	1	5	7	4	11	45	31	9	1	0	0	114
Hour Total	0	0	3	15	37	42	14	41	128	116	48	9	0	0	453
13:15	0	0	0	6	8	5	6	17	22	39	11	1	0	0	115
13:30	0	0	0	2	4	0	21	14	24	29	5	1	0	0	100
13:45	0	0	2	4	9	8	7	20	41	29	8	1	0	0	129
14:00	0	0	0	12	12	6	2	10	42	39	16	4	0	0	143
Hour Total	0	0	2	24	33	19	36	61	129	136	40	7	0	0	487
14:15	0	0	1	1	18	20	12	12	29	26	8	2	0	0	129
14:30	0	0	0	0	6	7	6	24	62	59	13	1	0	0	178
14:45	0	0	1	1	8	6	2	16	58	60	17	2	0	0	171
15:00	0	0	0	1	7	8	8	31	77	62	13	1	0	0	208
Hour Total	0	0	2	3	39	41	28	83	226	207	51	6	0	0	686
15:15	0	0	0	2	23	23	32	47	50	31	6	1	0	0	215
15:30	0	1	5	10	17	34	19	41	87	46	6	0	0	0	266
15:45	0	0	4	8	6	37	27	33	56	56	9	1	0	0	237
16:00	14	34	18	72	74	41	21	7	0	1	0	0	0	0	282
Hour Total	14	35	27	92	120	135	99	128	193	134	21	2	0	0	1000
16:15	10	19	35	59	58	59	10	1	0	0	0	0	0	0	251
16:30	3	1	4	27	38	24	22	82	52	19	4	0	0	0	276
16:45	0	0	0	2	23	67	89	58	29	9	1	0	0	0	278
17:00	1	1	8	5	45	40	36	79	46	11	1	1	0	0	274
Hour Total	14	21	47	93	164	190	157	220	127	39	6	1	0	0	1079

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002004.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	1	2	5	20	33	60	49	43	44	20	0	0	0	0	277
17:30	0	0	0	4	14	33	38	69	91	23	3	1	0	0	276
17:45	0	0	0	3	17	12	30	75	91	32	1	0	0	0	261
18:00	0	0	2	4	8	9	30	75	76	32	1	0	0	0	237
Hour Total	1	2	7	31	72	114	147	262	302	107	5	1	0	0	1051
18:15	0	0	0	5	15	38	24	35	44	20	4	0	1	0	186
18:30	0	0	0	1	17	40	9	24	38	37	6	0	0	0	172
18:45	0	0	0	6	16	16	8	24	58	33	4	0	0	0	165
19:00	0	0	0	4	20	18	5	18	40	35	4	2	0	0	146
Hour Total	0	0	0	16	68	112	46	101	180	125	18	2	1	0	669
19:15	0	0	0	2	14	9	8	17	38	36	5	3	1	0	133
19:30	0	0	0	1	11	14	9	14	52	30	1	1	0	0	133
19:45	0	0	0	3	7	1	3	15	46	42	13	0	0	0	130
20:00	0	0	0	1	5	6	4	22	42	26	7	1	0	0	114
Hour Total	0	0	0	7	37	30	24	68	178	134	26	5	1	0	510
20:15	1	0	0	0	4	4	0	12	42	30	6	0	0	0	99
20:30	0	0	0	3	4	5	5	16	36	24	4	0	0	0	97
20:45	0	0	0	0	2	1	4	18	46	27	5	1	0	0	104
21:00	1	0	1	3	2	3	4	14	27	22	10	1	0	0	88
Hour Total	2	0	1	6	12	13	13	60	151	103	25	2	0	0	388
21:15	0	0	1	1	5	8	1	15	26	18	8	0	0	0	83
21:30	0	0	0	2	3	6	1	15	24	20	1	1	0	0	73
21:45	0	0	0	0	0	0	0	5	29	25	5	1	0	0	65
22:00	0	0	0	0	1	0	0	16	21	16	7	0	0	0	61
Hour Total	0	0	1	3	9	14	2	51	100	79	21	2	0	0	282
22:15	0	0	0	0	1	2	0	8	17	17	3	0	0	0	48
22:30	0	0	0	0	2	1	2	11	26	16	4	0	0	0	62
22:45	0	0	0	3	1	0	1	10	28	12	3	0	0	0	58
23:00	0	0	0	0	1	0	1	7	13	15	2	0	0	0	39
Hour Total	0	0	0	3	5	3	4	36	84	60	12	0	0	0	207
23:15	0	0	0	3	3	0	2	7	12	5	2	1	0	0	35
23:30	0	0	0	0	1	2	0	4	9	5	7	1	0	0	29
23:45	0	0	0	0	0	0	0	7	14	7	2	0	0	0	30
24:00	0	0	0	0	0	1	2	7	13	8	0	1	0	0	32
Hour Total	0	0	0	3	4	3	4	25	48	25	11	3	0	0	126
DAY TOTAL	32	62	104	411	824	899	650	1429	2671	2161	542	96	7	3	9891
PERCENTS	0.4%	0.7%	1.1%	4.2%	8.4%	9.1%	6.6%	14.4%	27.0%	21.8%	5.4%	0.9%	0.0%	0.0%	100%

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002004.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
30.3 mph

85th Percentile Speed
53.1 mph

Median Speed
46.0 mph

Average Speed
43.2 mph

10 MPH Pace Speed
45 mph to 55 mph
4832 vehicles in pace
Representing 48.8% of the total vehicles

Vehicles > 45 MPH
5480
55.4%

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002004.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	1	0	0	2	0	2	17	7	0	0	0	0	29
00:30	0	0	0	1	0	1	1	9	28	9	0	0	0	0	49
00:45	0	0	0	0	0	1	1	6	7	7	1	0	0	0	23
01:00	0	0	0	0	0	0	1	3	11	5	0	0	0	0	20
Hour Total	0	0	1	1	0	4	3	20	63	28	1	0	0	0	121
01:15	0	0	0	0	0	0	0	3	3	8	0	1	0	0	15
01:30	0	0	0	0	0	0	0	2	9	6	2	0	0	0	19
01:45	0	0	0	0	0	0	0	0	5	5	1	1	0	0	12
02:00	0	0	0	0	0	0	0	2	2	2	0	0	0	0	6
Hour Total	0	0	0	0	0	0	0	7	19	21	3	2	0	0	52
02:15	0	0	0	0	0	0	0	2	2	1	1	0	0	0	6
02:30	0	0	0	0	0	0	0	1	1	3	0	0	0	0	5
02:45	0	0	0	0	0	0	1	0	2	1	2	2	0	0	8
03:00	0	0	0	0	0	0	0	2	1	1	3	0	0	0	7
Hour Total	0	0	0	0	0	0	1	5	6	6	6	2	0	0	26
03:15	0	0	0	0	0	2	0	2	0	1	1	0	0	0	6
03:30	0	0	0	1	0	0	0	0	4	3	1	0	0	0	9
03:45	0	0	0	0	0	0	0	0	2	1	0	0	0	0	3
04:00	0	0	0	1	2	0	0	1	6	3	1	0	0	0	14
Hour Total	0	0	0	2	2	2	0	3	12	8	3	0	0	0	32
04:15	0	0	0	1	0	0	0	1	6	9	0	1	0	0	18
04:30	0	0	0	0	0	0	0	0	8	7	6	0	0	0	21
04:45	0	0	0	0	0	3	0	6	8	6	1	0	0	0	24
05:00	0	0	0	0	3	0	0	1	11	13	3	1	1	0	33
Hour Total	0	0	0	1	3	3	0	8	33	35	10	2	1	0	96
05:15	0	0	0	0	3	2	1	2	15	15	7	1	0	0	46
05:30	0	0	1	2	3	3	1	4	14	25	17	4	0	0	74
05:45	0	0	1	2	8	10	4	3	16	18	7	4	0	0	73
06:00	0	0	0	5	5	12	1	6	21	19	7	2	0	0	78
Hour Total	0	0	2	9	19	27	7	15	66	77	38	11	0	0	271
06:15	0	0	0	1	2	6	1	1	18	34	14	4	1	0	82
06:30	0	0	0	3	6	7	2	12	23	28	12	4	0	0	97
06:45	0	0	0	5	7	10	5	2	19	23	5	2	0	0	78
07:00	0	0	0	5	10	10	2	9	25	25	6	3	0	0	95
Hour Total	0	0	0	14	25	33	10	24	85	110	37	13	1	0	352
07:15	0	0	0	5	15	5	1	5	21	38	8	5	0	0	103
07:30	0	0	0	6	15	11	11	7	19	38	8	2	0	0	117
07:45	0	0	1	3	14	11	3	8	34	30	7	2	1	0	114
08:00	0	0	3	6	7	5	0	5	38	34	6	6	0	0	110
Hour Total	0	0	4	20	51	32	15	25	112	140	29	15	1	0	444
08:15	0	0	2	7	8	11	2	6	29	34	4	0	0	0	103
08:30	0	0	0	4	10	9	7	15	24	24	4	2	1	0	100
08:45	0	0	0	3	7	11	3	9	29	34	4	0	0	0	100
09:00	0	0	1	4	3	0	0	2	11	4	0	1	0	0	26

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002004.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	3	18	28	31	12	32	93	96	12	3	1	0	329
09:15	0	0	0	1	10	10	11	31	23	26	10	2	0	0	124
09:30	0	0	1	2	9	8	0	5	18	30	11	2	0	0	86
09:45	0	0	0	2	13	6	5	9	17	17	8	3	0	0	80
10:00	0	0	0	3	11	7	4	6	16	26	8	1	0	0	82
Hour Total	0	0	1	8	43	31	20	51	74	99	37	8	0	0	372
10:15	0	0	0	1	4	9	5	3	23	25	3	4	0	0	77
10:30	0	0	0	2	14	6	1	8	25	22	7	0	0	0	85
10:45	0	0	0	0	5	4	2	10	38	28	14	3	1	0	105
11:00	0	0	0	4	8	3	2	8	28	23	7	0	0	0	83
Hour Total	0	0	0	7	31	22	10	29	114	98	31	7	1	0	350
11:15	0	0	0	6	6	13	14	9	37	24	9	0	0	0	118
11:30	0	0	1	4	7	7	3	10	39	27	8	0	0	0	106
11:45	0	0	2	5	11	6	5	9	39	21	10	1	0	0	109
12:00	1	0	0	1	6	5	5	7	26	37	9	1	0	0	98
Hour Total	1	0	3	16	30	31	27	35	141	109	36	2	0	0	431
12:15	0	0	1	3	18	15	4	13	30	26	7	4	0	0	121
12:30	0	0	0	3	8	18	6	3	46	30	12	4	1	0	131
12:45	0	0	1	2	2	7	1	10	36	51	13	3	0	0	126
13:00	0	0	0	5	13	13	9	9	29	37	9	3	0	0	127
Hour Total	0	0	2	13	41	53	20	35	141	144	41	14	1	0	505
13:15	0	0	1	3	2	2	1	14	51	57	12	3	0	0	146
13:30	0	2	0	4	8	5	1	14	36	30	18	2	1	0	121
13:45	0	0	0	2	8	6	0	8	44	43	15	3	0	0	129
14:00	0	0	0	2	10	20	5	10	42	36	8	1	0	0	134
Hour Total	0	2	1	11	28	33	7	46	173	166	53	9	1	0	530
14:15	0	0	0	2	12	12	2	17	36	42	20	4	0	0	147
14:30	0	0	2	2	10	3	6	12	46	51	15	2	0	0	149
14:45	0	0	0	2	5	41	14	31	39	42	8	2	1	0	185
15:00	0	0	1	3	22	20	11	21	45	49	15	2	0	0	189
Hour Total	0	0	3	9	49	76	33	81	166	184	58	10	1	0	670
15:15	0	0	0	1	12	9	13	49	99	45	9	0	0	0	237
15:30	0	0	8	7	11	36	17	30	66	51	6	0	0	0	232
15:45	0	0	0	6	13	14	21	28	87	68	10	1	1	0	249
16:00	11	17	23	36	77	53	12	4	19	11	4	1	0	0	268
Hour Total	11	17	31	50	113	112	63	111	271	175	29	2	1	0	986
16:15	14	22	57	54	58	29	8	0	0	0	0	0	0	0	242
16:30	4	12	15	22	56	59	61	46	5	1	0	0	0	0	281
16:45	0	2	1	6	20	37	38	71	59	17	5	1	0	0	257
17:00	3	0	0	9	38	63	39	41	41	17	2	1	0	0	254
Hour Total	21	36	73	91	172	188	146	158	105	35	7	2	0	0	1034

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002004.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	9	23	63	41	64	45	18	4	0	0	0	267
17:30	8	7	3	26	44	30	38	73	35	11	0	0	0	0	275
17:45	2	9	3	22	27	46	21	34	70	17	2	0	0	0	253
18:00	0	0	1	5	17	14	33	57	85	22	0	0	0	0	234
Hour Total	10	16	7	62	111	153	133	228	235	68	6	0	0	0	1029
18:15	1	0	0	2	23	43	30	33	48	20	6	0	0	0	206
18:30	0	0	1	1	21	26	12	23	58	38	8	0	0	0	188
18:45	0	0	0	3	15	14	10	30	36	31	5	0	0	0	144
19:00	0	0	0	2	11	19	16	33	46	24	1	0	0	0	152
Hour Total	1	0	1	8	70	102	68	119	188	113	20	0	0	0	690
19:15	0	0	1	3	5	5	1	14	61	27	5	0	0	0	122
19:30	0	0	0	1	7	7	3	14	56	31	7	1	0	0	127
19:45	0	0	0	1	8	6	3	34	50	22	6	0	0	0	130
20:00	0	0	0	0	2	3	4	12	45	34	6	2	0	1	109
Hour Total	0	0	1	5	22	21	11	74	212	114	24	3	0	1	488
20:15	0	0	0	2	10	4	2	20	46	28	4	2	0	0	118
20:30	0	0	0	1	2	2	1	9	38	27	11	0	0	0	91
20:45	0	0	0	1	1	0	1	17	43	32	0	2	0	0	97
21:00	0	0	0	1	4	8	0	20	38	23	3	0	0	0	97
Hour Total	0	0	0	5	17	14	4	66	165	110	18	4	0	0	403
21:15	0	0	0	1	1	2	3	17	39	22	7	1	0	0	93
21:30	0	0	0	0	6	3	8	27	45	21	2	0	0	0	112
21:45	0	0	0	2	0	0	3	11	23	26	5	0	0	0	70
22:00	0	0	0	0	5	1	0	8	28	19	3	0	0	0	64
Hour Total	0	0	0	3	12	6	14	63	135	88	17	1	0	0	339
22:15	0	0	1	1	1	4	0	6	23	13	4	1	0	0	54
22:30	0	0	0	0	0	0	0	4	29	20	6	1	1	0	61
22:45	0	0	0	0	1	3	1	7	22	16	4	1	0	1	56
23:00	0	0	0	0	0	0	0	2	13	13	6	0	0	0	34
Hour Total	0	0	1	1	2	7	1	19	87	62	20	3	1	1	205
23:15	0	0	0	1	1	0	1	4	8	7	0	0	0	0	22
23:30	0	0	0	0	0	0	1	2	9	10	2	0	0	0	24
23:45	0	0	0	1	1	2	0	4	14	10	1	1	0	0	34
24:00	0	0	0	2	0	0	1	6	7	15	5	0	0	0	36
Hour Total	0	0	0	4	2	2	3	16	38	42	8	1	0	0	116
DAY TOTAL	44	71	134	358	871	983	608	1270	2734	2128	544	114	10	2	9871
PERCENTS	0.5%	0.8%	1.4%	3.7%	8.9%	10.0%	6.1%	12.8%	27.6%	21.5%	5.5%	1.1%	0.1%	0.0%	100%

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002004.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
30.0 mph

85th Percentile Speed
53.1 mph

Median Speed
46.1 mph

Average Speed
43.1 mph

10 MPH Pace Speed
45 mph to 55 mph
4862 vehicles in pace
Representing 49.2% of the total vehicles

Vehicles > 45 MPH
5532
56.0%

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002004.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	1	4	13	16	3	0	0	0	37
00:30	0	0	0	0	0	0	0	4	23	22	4	1	0	1	55
00:45	0	0	0	1	0	0	0	3	10	6	0	1	0	1	22
01:00	0	0	0	0	0	0	1	3	3	8	2	1	0	0	18
Hour Total	0	0	0	1	0	0	2	14	49	52	9	3	0	2	132
01:15	0	0	0	0	0	0	0	1	7	3	2	0	0	0	13
01:30	0	0	0	0	0	0	0	1	14	8	1	0	0	0	24
01:45	0	0	0	0	0	0	0	3	5	3	0	1	0	0	12
02:00	0	0	0	0	0	0	1	1	7	2	1	0	0	0	12
Hour Total	0	0	0	0	0	0	1	6	33	16	4	1	0	0	61
02:15	0	0	0	0	1	0	1	0	4	2	2	1	0	0	11
02:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
02:45	0	0	0	0	0	0	0	2	3	5	0	0	0	0	10
03:00	0	0	0	0	0	0	0	0	3	2	0	0	0	0	5
Hour Total	0	0	0	0	1	0	1	2	10	11	2	1	0	0	28
03:15	0	0	0	0	0	0	0	1	1	4	4	0	0	0	10
03:30	0	0	0	1	0	0	1	2	4	4	1	0	0	0	13
03:45	0	0	0	0	0	0	0	4	3	5	2	0	0	0	14
04:00	0	0	0	0	0	0	0	0	7	3	2	0	0	0	12
Hour Total	0	0	0	1	0	0	1	7	15	16	9	0	0	0	49
04:15	0	0	0	1	0	0	0	3	6	5	2	0	0	0	17
04:30	0	0	0	0	1	0	0	1	7	9	3	0	0	0	21
04:45	0	0	0	0	0	1	0	2	9	14	3	1	0	0	30
05:00	0	0	0	0	2	0	0	2	10	12	5	3	0	0	34
Hour Total	0	0	0	1	3	1	0	8	32	40	13	4	0	0	102
05:15	0	1	1	3	4	1	0	2	11	16	9	2	0	0	50
05:30	0	0	0	2	1	2	0	3	16	19	11	2	1	0	57
05:45	0	0	1	3	6	3	1	4	22	21	13	4	0	0	78
06:00	0	0	0	1	7	4	1	4	17	23	11	2	3	0	73
Hour Total	0	1	2	9	18	10	2	13	66	79	44	10	4	0	258
06:15	0	0	0	2	7	6	2	7	12	23	13	5	0	0	77
06:30	0	0	0	5	12	12	3	10	24	27	7	1	0	0	101
06:45	0	0	0	1	11	14	3	7	20	22	10	3	0	0	91
07:00	0	0	1	11	9	5	2	8	27	31	7	2	0	0	103
Hour Total	0	0	1	19	39	37	10	32	83	103	37	11	0	0	372
07:15	0	0	1	8	17	10	1	7	14	41	15	3	0	0	117
07:30	0	0	0	6	10	12	2	10	20	38	16	2	0	0	116
07:45	0	0	0	6	16	12	4	4	19	27	4	0	1	0	93
08:00	0	0	0	5	9	9	5	6	20	28	19	2	0	0	103
Hour Total	0	0	1	25	52	43	12	27	73	134	54	7	1	0	429
08:15	0	0	0	8	10	13	11	17	21	13	9	2	1	0	105
08:30	0	0	0	2	7	9	5	16	28	27	6	3	0	1	104
08:45	0	0	3	3	15	6	4	11	25	36	5	0	0	0	108
09:00	0	0	0	2	4	6	4	9	29	29	3	2	0	0	88

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002004.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	3	15	36	34	24	53	103	105	23	7	1	1	405
09:15	0	0	0	4	2	4	2	13	24	20	2	2	0	0	73
09:30	0	0	0	8	10	9	5	9	19	10	1	0	0	0	71
09:45	0	0	0	0	6	14	5	12	24	25	10	2	0	0	98
10:00	0	0	0	2	7	2	0	11	32	28	10	2	0	0	94
Hour Total	0	0	0	14	25	29	12	45	99	83	23	6	0	0	336
10:15	0	0	0	4	20	6	2	4	24	30	8	2	0	0	100
10:30	0	0	0	0	7	5	3	7	25	35	7	1	0	0	90
10:45	0	0	0	3	5	2	1	10	25	25	13	2	0	0	86
11:00	0	1	0	4	4	3	5	7	31	38	14	1	0	0	108
Hour Total	0	1	0	11	36	16	11	28	105	128	42	6	0	0	384
11:15	0	0	0	1	4	5	6	19	27	26	16	2	0	0	106
11:30	0	0	0	1	1	0	2	6	32	37	11	5	0	0	95
11:45	0	0	1	3	6	5	5	9	11	24	9	7	0	1	81
12:00	0	0	1	0	4	6	3	6	20	30	20	2	1	0	93
Hour Total	0	0	2	5	15	16	16	40	90	117	56	16	1	1	375
12:15	0	0	0	8	7	16	2	12	19	23	17	2	0	0	106
12:30	0	0	0	4	6	8	2	7	32	34	20	1	1	0	115
12:45	0	0	0	5	15	10	5	5	28	43	14	2	0	1	128
13:00	0	0	0	2	11	4	2	3	39	40	14	2	0	0	117
Hour Total	0	0	0	19	39	38	11	27	118	140	65	7	1	1	466
13:15	0	0	0	6	7	7	1	0	25	32	12	4	0	1	95
13:30	0	0	0	3	19	19	9	12	28	37	20	2	1	0	150
13:45	0	0	0	1	2	8	2	9	38	40	8	4	0	0	112
14:00	0	0	0	5	12	9	3	5	37	35	11	1	1	0	119
Hour Total	0	0	0	15	40	43	15	26	128	144	51	11	2	1	476
14:15	0	0	1	1	5	8	4	3	25	45	27	3	1	0	123
14:30	0	0	0	2	4	8	18	15	65	53	16	5	0	0	186
14:45	0	0	0	1	3	23	9	17	40	55	21	2	0	0	171
15:00	0	0	2	1	13	21	12	33	41	53	22	3	0	0	201
Hour Total	0	0	3	5	25	60	43	68	171	206	86	13	1	0	681
15:15	0	0	0	3	9	19	9	32	71	72	15	2	0	0	232
15:30	0	0	0	2	23	41	27	32	43	56	9	1	0	0	234
15:45	0	0	5	9	17	31	33	37	55	44	15	0	0	1	247
16:00	0	0	0	0	11	23	37	39	75	39	4	0	0	0	228
Hour Total	0	0	5	14	60	114	106	140	244	211	43	3	0	1	941
16:15	13	30	38	48	62	36	3	15	9	0	0	0	0	0	254
16:30	5	11	15	26	77	102	19	2	0	0	0	0	0	0	257
16:45	30	23	27	60	65	43	12	1	0	0	0	0	0	0	261
17:00	10	33	22	49	97	29	11	4	0	0	0	0	0	0	255
Hour Total	58	97	102	183	301	210	45	22	9	0	0	0	0	0	1027

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002004.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	1	2	19	53	48	46	41	41	20	0	0	0	0	271
17:30	2	2	4	5	42	57	55	59	28	6	1	0	0	0	261
17:45	3	10	1	17	27	106	54	21	22	7	0	0	0	0	268
18:00	2	4	4	7	13	25	14	43	60	34	7	0	0	0	213
Hour Total	7	17	11	48	135	236	169	164	151	67	8	0	0	0	1013
18:15	0	0	1	5	17	38	27	53	48	25	6	0	0	0	220
18:30	0	0	0	8	30	24	32	29	39	40	5	1	1	0	209
18:45	0	0	1	5	16	16	9	19	36	32	6	5	0	0	145
19:00	0	0	1	2	17	10	13	16	46	41	6	1	0	0	153
Hour Total	0	0	3	20	80	88	81	117	169	138	23	7	1	0	727
19:15	0	0	0	3	10	13	2	22	44	46	8	1	0	0	149
19:30	0	0	0	0	6	5	8	21	57	48	6	2	1	0	154
19:45	0	0	0	2	1	7	8	23	45	36	15	2	0	0	139
20:00	0	0	0	4	8	13	1	16	32	30	8	0	0	0	112
Hour Total	0	0	0	9	25	38	19	82	178	160	37	5	1	0	554
20:15	1	0	0	2	6	15	3	14	31	19	3	0	0	0	94
20:30	0	0	0	1	5	11	4	17	30	31	8	1	1	0	109
20:45	0	0	0	1	9	14	3	12	31	30	4	3	0	0	107
21:00	0	0	0	1	6	6	5	10	32	19	7	2	0	0	88
Hour Total	1	0	0	5	26	46	15	53	124	99	22	6	1	0	398
21:15	0	0	0	1	0	0	2	14	35	22	10	2	0	0	86
21:30	0	0	0	0	1	7	1	9	25	33	7	1	0	0	84
21:45	0	0	0	2	3	7	5	11	16	19	6	1	0	0	70
22:00	0	0	0	0	3	1	3	12	21	12	3	1	0	0	56
Hour Total	0	0	0	3	7	15	11	46	97	86	26	5	0	0	296
22:15	0	0	0	0	2	1	3	11	25	18	6	2	0	0	68
22:30	0	0	0	1	0	2	0	6	27	16	6	1	0	0	59
22:45	0	0	0	0	2	2	1	8	30	18	4	1	0	1	67
23:00	0	0	0	1	0	1	0	3	17	17	5	4	0	0	48
Hour Total	0	0	0	2	4	6	4	28	99	69	21	8	0	1	242
23:15	0	0	0	0	0	0	0	3	9	13	7	1	0	0	33
23:30	0	0	0	0	0	0	0	5	13	11	3	1	0	0	33
23:45	0	0	0	0	0	0	0	4	8	8	2	1	0	0	23
24:00	0	0	0	0	2	0	2	6	6	13	6	1	0	0	36
Hour Total	0	0	0	0	2	0	2	18	36	45	18	4	0	0	125
DAY TOTAL	66	116	133	424	969	1080	613	1066	2282	2249	716	141	14	8	9877
PERCENTS	0.7%	1.2%	1.4%	4.3%	9.9%	11.0%	6.3%	10.7%	23.1%	22.7%	7.2%	1.4%	0.1%	0.0%	100%

Station #: Site A-SBO
Site ID: 000000003806
Location: Carrollton, btw Eagle Hbr & Whippingham
Direction: SOUTH
Lane: 1

File: D1002004.prn
City: 17-311 Rs Max
County: 36.95585, -76.52655

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
GRAND TOTAL	142	371	2664	1871	7687	1802	31								
	249	1193	2962	3765	6538	351	13								29639
PERCENTS	0.5%	0.9%	1.3%	4.1%	9.0%	10.0%	6.4%	12.7%	25.9%	22.0%	6.0%	1.1%	0.1%	0.0%	100%

Statistical Information...

15th Percentile Speed
28.8 mph

85th Percentile Speed
53.7 mph

Median Speed
46.0 mph

Average Speed
42.7 mph

10 MPH Pace Speed
45 mph to 55 mph
4531 vehicles in pace
Representing 45.8% of the total vehicles

Vehicles > 45 MPH
5410
54.8%

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002009.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
00:30	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	7
00:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
01:00	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	1	16	2	0	0	0	0	0	0	0	0	0	0	0	0	19
01:15	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	3
01:30	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
01:45	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
02:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	8	5	0	0	0	0	0	1	0	0	0	0	0	0	14
02:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
02:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	7	0	0	0	0	0	0	1	0	0	0	0	0	0	8
Hour Total	0	14	0	0	0	0	0	0	1	0	0	0	0	0	0	15
03:15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
03:30	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	7
03:45	0	7	4	0	0	0	0	0	0	0	0	0	0	0	0	11
04:00	0	8	3	0	1	0	0	0	0	0	0	0	0	0	0	12
Hour Total	0	24	9	0	1	0	0	0	0	0	0	0	0	0	0	34
04:15	0	12	3	0	0	0	0	0	0	0	0	0	0	0	0	15
04:30	0	26	9	0	0	0	0	0	0	0	0	0	0	0	0	35
04:45	0	32	13	0	0	1	0	0	0	0	0	0	0	0	0	46
05:00	0	22	13	0	0	1	0	0	0	0	0	0	0	0	0	36
Hour Total	0	92	38	0	0	2	0	0	0	0	0	0	0	0	0	132
05:15	0	47	18	0	0	0	0	0	0	0	0	0	0	0	0	65
05:30	1	62	32	0	1	0	0	0	0	0	0	0	0	0	0	96
05:45	2	67	42	0	0	0	0	0	0	0	0	0	0	0	0	111
06:00	2	58	30	1	0	1	0	0	0	0	0	0	0	0	0	92
Hour Total	5	234	122	1	1	1	0	0	0	0	0	0	0	0	0	364
06:15	3	77	31	0	1	0	0	0	0	0	0	0	0	0	0	112
06:30	0	98	40	0	1	0	0	1	0	0	0	0	0	0	0	140
06:45	1	112	38	0	1	0	0	0	0	0	0	0	0	0	0	152
07:00	0	122	35	2	4	0	0	1	0	0	0	0	0	0	0	164
Hour Total	4	409	144	2	7	0	0	2	0	0	0	0	0	0	0	568
07:15	2	144	46	0	2	0	0	0	0	0	0	0	0	0	0	194
07:30	1	143	37	0	0	0	0	0	0	0	0	0	0	0	0	181
07:45	0	181	50	0	1	0	0	1	0	0	0	0	0	0	0	233
08:00	0	118	20	1	4	0	0	0	0	0	0	0	0	0	0	143
Hour Total	3	586	153	1	7	0	0	1	0	0	0	0	0	0	0	751
08:15	0	82	21	1	2	1	0	1	0	0	0	0	0	0	0	108
08:30	2	84	37	0	1	0	0	0	0	0	0	0	0	0	0	124
08:45	0	77	32	0	0	1	0	0	0	0	0	0	0	0	0	110
09:00	0	85	31	0	3	0	0	0	0	0	0	0	0	0	0	119

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002009.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	2	328	121	1	6	2	0	1	0	0	0	0	0	0	0	461
09:15	0	74	25	0	2	0	0	0	0	0	0	0	0	0	0	101
09:30	0	68	26	0	2	0	0	1	1	0	0	0	0	0	0	98
09:45	1	63	19	0	1	1	0	0	3	0	0	0	0	0	0	88
10:00	0	55	21	0	0	1	0	0	2	0	0	0	0	0	0	79
Hour Total	1	260	91	0	5	2	0	1	6	0	0	0	0	0	0	366
10:15	1	62	22	0	5	0	1	0	1	0	0	0	0	0	0	92
10:30	1	62	17	0	2	0	0	0	0	0	0	0	0	0	0	82
10:45	0	51	21	0	1	0	0	0	2	0	0	0	0	0	0	75
11:00	0	54	23	1	0	2	0	1	0	0	0	0	0	0	0	81
Hour Total	2	229	83	1	8	2	1	1	3	0	0	0	0	0	0	330
11:15	0	52	14	0	1	0	1	1	0	0	0	0	0	0	0	69
11:30	0	60	15	0	1	0	0	0	0	0	0	0	0	0	0	76
11:45	0	58	18	0	1	0	0	0	0	0	0	0	0	0	0	77
12:00	0	68	25	0	1	0	0	0	0	0	0	0	0	0	0	94
Hour Total	0	238	72	0	4	0	1	1	0	0	0	0	0	0	0	316
12:15	1	65	19	0	2	1	0	0	0	0	0	0	0	0	0	88
12:30	0	52	18	0	0	0	0	0	0	0	0	0	0	0	0	70
12:45	1	60	10	0	3	0	0	0	0	0	0	0	0	0	0	74
13:00	0	61	22	0	1	1	0	0	0	0	0	0	0	0	0	85
Hour Total	2	238	69	0	6	2	0	0	0	0	0	0	0	0	0	317
13:15	1	50	26	0	1	1	2	0	0	0	0	0	0	0	0	81
13:30	3	58	26	0	1	0	0	0	0	0	0	0	0	0	0	88
13:45	0	64	25	0	2	0	0	0	0	0	0	0	0	0	0	91
14:00	0	75	27	1	2	0	0	0	0	0	0	0	0	0	0	105
Hour Total	4	247	104	1	6	1	2	0	0	0	0	0	0	0	0	365
14:15	0	69	28	1	2	0	0	0	1	0	0	0	0	0	0	101
14:30	0	62	20	0	1	0	0	0	0	0	0	0	0	0	0	83
14:45	1	68	29	0	1	0	0	0	1	0	0	0	0	0	0	100
15:00	1	70	20	0	1	0	0	1	0	0	0	0	0	0	0	93
Hour Total	2	269	97	1	5	0	0	1	2	0	0	0	0	0	0	377
15:15	0	83	18	0	2	0	1	0	1	0	0	0	0	0	0	105
15:30	0	78	20	0	3	0	0	0	1	0	0	0	0	0	0	102
15:45	0	78	29	1	0	0	0	0	0	0	0	0	0	0	0	108
16:00	1	83	24	0	0	0	0	1	0	0	0	0	0	0	0	109
Hour Total	1	322	91	1	5	0	1	1	2	0	0	0	0	0	0	424
16:15	0	88	26	1	4	1	0	0	0	0	0	0	0	0	0	120
16:30	1	96	29	1	2	0	0	1	0	0	0	0	0	0	0	130
16:45	0	82	23	1	0	0	0	0	0	0	0	0	0	0	0	106
17:00	0	108	32	0	1	0	0	0	0	0	0	0	0	0	0	141
Hour Total	1	374	110	3	7	1	0	1	0	0	0	0	0	0	0	497

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002009.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	2	120	25	0	0	0	0	0	0	0	0	0	0	0	0	147
17:30	1	117	43	2	0	0	0	0	0	0	0	0	0	0	0	163
17:45	1	114	35	0	2	0	0	0	0	0	0	0	0	0	0	152
18:00	3	99	35	0	1	0	0	0	0	0	0	0	0	0	0	138
Hour Total	7	450	138	2	3	0	0	0	0	0	0	0	0	0	0	600
18:15	0	103	23	0	0	0	0	0	0	0	0	0	0	0	0	126
18:30	0	87	22	0	0	0	0	0	0	0	0	0	0	0	0	109
18:45	0	83	26	0	0	0	0	0	0	0	0	0	0	0	0	109
19:00	0	55	17	0	0	0	0	0	0	0	0	0	0	0	0	72
Hour Total	0	328	88	0	0	0	0	0	0	0	0	0	0	0	0	416
19:15	0	58	25	0	0	0	0	0	0	0	0	0	0	0	0	83
19:30	1	54	12	0	1	0	0	0	0	0	0	0	0	0	0	68
19:45	0	45	11	0	0	0	0	0	0	0	0	0	0	0	0	56
20:00	0	60	13	0	2	0	0	0	0	0	0	0	0	0	0	75
Hour Total	1	217	61	0	3	0	0	0	0	0	0	0	0	0	0	282
20:15	0	53	16	0	0	0	0	0	2	0	0	0	0	0	0	71
20:30	1	52	7	0	0	0	0	0	0	0	0	0	0	0	0	60
20:45	0	34	8	0	0	0	0	0	0	0	0	0	0	0	0	42
21:00	0	32	3	0	1	0	0	0	0	0	0	0	0	0	0	36
Hour Total	1	171	34	0	1	0	0	0	2	0	0	0	0	0	0	209
21:15	0	27	4	0	1	0	0	0	1	0	0	0	0	0	0	33
21:30	0	27	2	0	0	0	0	0	0	0	0	0	0	0	0	29
21:45	1	20	3	0	0	0	0	0	0	0	0	0	0	0	0	24
22:00	0	17	6	0	0	0	0	0	0	0	0	0	0	0	0	23
Hour Total	1	91	15	0	1	0	0	0	1	0	0	0	0	0	0	109
22:15	1	17	3	0	0	0	0	0	0	0	0	0	0	0	0	21
22:30	0	19	5	0	0	0	0	0	0	0	0	0	0	0	0	24
22:45	0	17	4	0	0	0	0	0	0	0	0	0	0	0	0	21
23:00	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	10
Hour Total	1	61	14	0	0	0	0	0	0	0	0	0	0	0	0	76
23:15	0	13	2	0	0	0	0	0	1	0	0	0	0	0	0	16
23:30	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	11
23:45	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8
24:00	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	9
Hour Total	0	36	7	0	0	0	0	0	1	0	0	0	0	0	0	44
DAY TOTAL	39	5242	1668	14	76	13	5	10	19	0	0	0	0	0	0	7086
PERCENTS	0.6%	74.0%	23.6%	0.2%	1.1%	0.2%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 98.0% Trucks & Buses 1.9%

AM Times	05:30	07:00	07:00	06:15	06:30	04:15	09:30	06:15	09:30							07:00
AM Peaks	8	590	168	2	8	2	1	2	7							772
PM Times	17:15	17:00	17:15	15:45	13:30	12:15	12:30	15:45	14:45							17:00
PM Peaks	7	459	138	3	7	2	2	2	3							603

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002009.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3
00:30	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	7
00:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
01:00	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
Hour Total	1	16	4	0	0	0	0	0	0	0	0	0	0	0	0	21
01:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:30	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
01:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
02:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	14
02:15	0	3	0	0	1	0	0	0	1	0	0	0	0	0	0	5
02:30	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
02:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
03:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	12	0	0	1	0	0	0	1	0	0	0	0	0	0	14
03:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
03:30	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	8
03:45	0	8	4	0	0	0	0	0	0	0	0	0	0	0	0	12
04:00	0	4	4	0	0	0	0	0	1	0	0	0	0	0	0	9
Hour Total	0	20	11	0	0	0	0	0	1	0	0	0	0	0	0	32
04:15	1	8	6	0	0	0	0	0	0	0	0	0	0	0	0	15
04:30	0	17	5	0	0	1	0	0	0	0	0	0	0	0	0	23
04:45	0	25	12	0	0	1	0	0	0	0	0	0	0	0	0	38
05:00	0	24	16	0	0	0	0	0	0	0	0	0	0	0	0	40
Hour Total	1	74	39	0	0	2	0	0	0	0	0	0	0	0	0	116
05:15	0	38	16	0	0	0	0	0	0	0	0	0	0	0	0	54
05:30	0	58	33	0	0	0	0	0	0	0	0	0	0	0	0	91
05:45	2	70	40	0	0	0	0	0	0	0	0	0	0	0	0	112
06:00	4	66	29	1	1	1	0	0	0	0	0	0	0	0	0	102
Hour Total	6	232	118	1	1	1	0	0	0	0	0	0	0	0	0	359
06:15	0	87	33	0	1	0	0	1	1	0	0	0	0	0	0	123
06:30	2	92	40	0	2	0	0	0	0	0	0	1	0	0	0	137
06:45	2	123	41	0	2	0	0	0	0	0	0	0	0	0	0	168
07:00	1	97	34	0	1	2	1	0	0	0	0	0	0	0	0	136
Hour Total	5	399	148	0	6	2	1	1	1	0	0	1	0	0	0	564
07:15	1	152	41	0	1	0	0	1	0	0	0	0	0	0	0	196
07:30	1	137	48	1	0	0	0	1	0	0	0	0	0	0	0	188
07:45	0	178	37	1	2	0	0	0	0	0	0	0	0	0	0	218
08:00	0	112	26	1	1	1	1	0	0	0	0	0	0	0	0	142
Hour Total	2	579	152	3	4	1	1	2	0	0	0	0	0	0	0	744
08:15	3	100	32	1	5	0	0	0	0	0	0	0	0	0	0	141
08:30	0	73	18	1	0	0	0	0	0	0	0	0	0	0	0	92
08:45	0	83	32	1	1	0	0	2	0	0	0	0	0	0	0	119
09:00	0	90	25	0	3	0	0	0	0	0	0	0	0	0	0	118

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002009.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	3	346	107	3	9	0	0	2	0	0	0	0	0	0	0	470
09:15	0	51	24	0	1	1	0	0	0	0	0	0	0	0	0	77
09:30	0	50	29	0	0	0	0	0	1	0	0	0	0	0	0	80
09:45	0	65	20	0	2	0	0	1	0	0	0	0	0	0	0	88
10:00	0	55	14	0	0	0	0	2	1	0	0	0	0	0	0	72
Hour Total	0	221	87	0	3	1	0	3	2	0	0	0	0	0	0	317
10:15	0	67	23	0	0	0	2	0	0	0	0	0	0	0	0	92
10:30	3	49	29	0	0	0	0	1	1	0	0	0	0	0	0	83
10:45	1	46	18	0	0	2	0	0	0	0	0	0	0	0	0	67
11:00	0	66	24	0	0	0	0	0	1	0	0	0	0	0	0	91
Hour Total	4	228	94	0	0	2	2	1	2	0	0	0	0	0	0	333
11:15	0	68	25	0	2	0	0	0	0	0	0	0	0	0	0	95
11:30	0	48	22	1	2	0	0	2	0	0	0	0	0	0	0	75
11:45	0	62	27	0	0	0	0	0	0	0	0	0	0	0	0	89
12:00	0	38	16	0	2	1	0	0	0	0	0	0	0	0	0	57
Hour Total	0	216	90	1	6	1	0	2	0	0	0	0	0	0	0	316
12:15	1	73	24	0	2	0	0	0	0	0	0	0	0	0	0	100
12:30	0	60	17	0	0	0	0	1	0	0	0	0	0	0	0	78
12:45	0	58	26	0	1	0	0	0	0	0	0	0	0	0	0	85
13:00	2	51	21	0	1	0	0	1	0	0	0	0	0	0	0	76
Hour Total	3	242	88	0	4	0	0	2	0	0	0	0	0	0	0	339
13:15	0	57	16	0	0	0	0	0	0	0	0	0	0	0	0	73
13:30	1	61	26	0	1	0	0	1	0	0	0	0	0	0	0	90
13:45	0	57	19	0	0	0	0	1	1	0	0	0	0	0	0	78
14:00	0	62	22	0	1	0	0	0	0	0	0	0	0	0	0	85
Hour Total	1	237	83	0	2	0	0	2	1	0	0	0	0	0	0	326
14:15	1	62	14	0	2	1	0	0	0	0	0	0	0	0	0	80
14:30	3	69	19	0	0	1	0	0	0	0	0	0	0	0	0	92
14:45	2	62	34	0	0	0	0	0	0	0	0	0	0	0	0	98
15:00	0	80	27	0	0	0	0	1	1	0	0	0	0	0	0	109
Hour Total	6	273	94	0	2	2	0	1	1	0	0	0	0	0	0	379
15:15	1	74	42	0	2	1	1	2	1	0	0	0	0	0	0	124
15:30	1	65	17	0	0	1	0	0	0	0	1	0	0	0	0	85
15:45	0	72	26	0	1	1	0	0	0	0	0	0	0	0	0	100
16:00	1	94	32	0	0	0	0	1	1	0	0	0	0	0	0	129
Hour Total	3	305	117	0	3	3	1	3	2	0	1	0	0	0	0	438
16:15	0	93	31	1	0	1	0	0	1	0	0	0	0	0	0	127
16:30	0	116	30	0	0	1	0	0	0	0	0	0	0	0	0	147
16:45	2	107	33	3	0	0	0	0	0	0	0	0	0	0	0	145
17:00	0	103	30	0	3	0	0	0	0	0	0	0	0	0	0	136
Hour Total	2	419	124	4	3	2	0	0	1	0	0	0	0	0	0	555

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002009.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	1	136	32	0	0	0	0	0	0	0	0	0	0	0	0	169
17:30	0	103	37	0	3	0	0	0	0	0	0	0	0	0	0	143
17:45	1	102	40	0	0	0	0	0	0	0	0	0	0	0	0	143
18:00	2	100	33	0	0	0	0	0	0	0	0	0	0	0	0	135
Hour Total	4	441	142	0	3	0	0	0	0	0	0	0	0	0	0	590
18:15	0	117	23	0	1	0	0	0	0	0	0	0	0	0	0	141
18:30	1	65	30	0	0	0	0	0	0	0	0	0	0	0	0	96
18:45	1	91	19	0	0	0	0	0	0	0	0	0	0	0	0	111
19:00	2	84	20	0	1	0	0	0	0	0	0	0	0	0	0	107
Hour Total	4	357	92	0	2	0	0	0	0	0	0	0	0	0	0	455
19:15	1	52	21	0	1	0	0	0	0	0	0	0	0	0	0	75
19:30	1	53	21	0	1	0	0	1	0	0	0	0	0	0	0	77
19:45	2	55	18	0	1	0	0	0	0	0	0	0	0	0	0	76
20:00	0	59	11	0	0	0	0	0	0	0	0	0	0	0	0	70
Hour Total	4	219	71	0	3	0	0	1	0	0	0	0	0	0	0	298
20:15	0	45	9	0	0	0	0	0	0	0	0	0	0	0	0	54
20:30	0	48	10	0	0	0	0	0	0	0	0	0	0	0	0	58
20:45	0	51	13	0	0	0	0	0	0	0	0	0	0	0	0	64
21:00	0	34	4	0	0	0	0	0	0	0	0	0	0	0	0	38
Hour Total	0	178	36	0	0	0	0	0	0	0	0	0	0	0	0	214
21:15	1	38	8	0	1	0	0	0	0	0	0	0	0	0	0	48
21:30	1	39	8	0	0	0	0	0	0	0	0	0	0	0	0	48
21:45	0	35	3	0	0	0	0	0	0	0	0	0	0	0	0	38
22:00	0	25	9	0	0	0	0	0	0	0	0	0	0	0	0	34
Hour Total	2	137	28	0	1	0	0	0	0	0	0	0	0	0	0	168
22:15	0	20	5	0	0	0	0	0	0	0	0	0	0	0	0	25
22:30	0	24	5	0	0	0	0	0	0	0	0	0	0	0	0	29
22:45	0	13	1	0	0	0	0	0	0	0	0	0	0	0	0	14
23:00	0	12	1	0	0	0	0	0	0	0	0	0	0	0	0	13
Hour Total	0	69	12	0	0	0	0	0	0	0	0	0	0	0	0	81
23:15	0	11	2	0	0	0	0	0	0	0	0	0	0	0	0	13
23:30	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
23:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
24:00	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour Total	0	21	5	0	0	0	0	0	0	0	0	0	0	0	0	26
DAY TOTAL	51	5255	1742	12	53	17	5	20	12	0	1	1	0	0	0	7169
PERCENTS	0.8%	73.4%	24.3%	0.2%	0.8%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 98.3% Trucks & Buses 1.6%

AM Times	05:45	07:15	06:45	07:30	08:15	04:00	09:30	09:45	09:15			05:45				07:15
AM Peaks	8	579	164	4	9	2	2	4	2			1				744
PM Times	14:00	16:30	17:15	16:00	16:45	15:00	14:30	13:00	14:30		14:45					16:30
PM Peaks	6	462	142	4	6	3	1	3	2		1					597

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002009.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
00:30	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
00:45	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	5
01:00	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	9
Hour Total	0	19	6	0	0	0	0	0	0	0	0	0	0	0	0	25
01:15	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
01:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
02:00	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Hour Total	0	15	1	0	0	0	0	0	0	0	0	0	0	0	0	16
02:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
02:30	0	6	1	0	0	0	0	0	1	0	0	0	0	0	0	8
02:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
03:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	15	3	0	0	0	0	0	1	0	0	0	0	0	0	19
03:15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
03:30	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
03:45	0	3	3	0	0	0	0	0	2	0	0	0	0	0	0	8
04:00	0	6	5	0	1	0	0	0	0	0	0	0	0	0	0	12
Hour Total	0	17	10	0	1	0	0	0	2	0	0	0	0	0	0	30
04:15	0	12	6	0	0	1	0	0	0	0	0	0	0	0	0	19
04:30	0	22	7	0	0	0	0	0	0	0	0	0	0	0	0	29
04:45	0	27	8	0	0	0	0	0	0	0	0	0	0	0	0	35
05:00	0	24	15	0	0	0	0	0	0	0	0	0	0	0	0	39
Hour Total	0	85	36	0	0	1	0	0	0	0	0	0	0	0	0	122
05:15	0	47	22	0	0	0	0	0	0	0	0	0	0	0	0	69
05:30	1	58	28	0	1	0	0	0	0	0	0	0	0	0	0	88
05:45	2	57	33	0	1	1	0	0	0	0	0	0	0	0	0	94
06:00	2	69	45	0	1	1	0	0	0	0	0	0	0	0	0	118
Hour Total	5	231	128	0	3	2	0	0	0	0	0	0	0	0	0	369
06:15	1	90	47	0	0	0	0	0	1	0	0	0	0	0	0	139
06:30	1	107	41	0	1	0	0	0	0	0	0	0	0	0	0	150
06:45	4	107	38	1	1	1	0	1	0	0	0	0	0	0	0	153
07:00	0	88	43	0	0	1	0	0	0	0	1	0	0	0	0	133
Hour Total	6	392	169	1	2	2	0	1	1	0	1	0	0	0	0	575
07:15	1	145	34	0	2	0	0	0	0	0	0	0	0	0	0	182
07:30	0	145	36	1	0	0	0	1	0	0	0	0	0	0	0	183
07:45	0	174	50	0	2	0	0	1	0	0	0	0	0	0	0	227
08:00	0	101	23	1	2	0	0	0	0	0	0	0	0	0	0	127
Hour Total	1	565	143	2	6	0	0	2	0	0	0	0	0	0	0	719
08:15	1	104	22	0	3	0	0	1	0	0	0	0	0	0	0	131
08:30	0	70	43	1	1	0	0	0	2	0	0	0	0	0	0	117
08:45	0	110	24	0	2	0	0	1	0	0	0	0	0	0	0	137
09:00	1	70	24	0	1	0	0	0	0	0	0	1	0	0	0	97

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002009.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	2	354	113	1	7	0	0	2	2	0	0	1	0	0	0	482
09:15	0	57	16	0	2	1	0	0	0	0	0	0	0	0	0	76
09:30	0	77	15	1	2	1	0	1	1	0	0	0	0	0	0	98
09:45	0	61	27	0	4	0	0	1	0	0	0	0	0	0	0	93
10:00	0	63	23	0	0	0	0	1	0	0	0	0	0	0	0	87
Hour Total	0	258	81	1	8	2	0	3	1	0	0	0	0	0	0	354
10:15	0	58	29	0	2	2	0	1	0	0	0	0	0	0	0	92
10:30	0	49	16	0	1	0	0	1	0	0	0	0	0	0	0	67
10:45	1	63	19	1	1	0	0	0	0	1	0	0	0	0	0	86
11:00	0	50	20	0	3	0	0	0	0	0	1	0	0	0	0	74
Hour Total	1	220	84	1	7	2	0	2	0	1	1	0	0	0	0	319
11:15	0	55	20	0	1	0	0	1	0	0	0	0	0	0	0	77
11:30	0	67	28	0	3	1	0	1	1	0	0	0	0	0	0	101
11:45	1	67	17	0	2	2	0	1	0	0	0	0	0	0	0	90
12:00	0	55	17	0	0	0	0	1	0	0	0	0	0	0	0	73
Hour Total	1	244	82	0	6	3	0	4	1	0	0	0	0	0	0	341
12:15	1	74	22	0	1	0	0	0	0	0	0	0	0	0	0	98
12:30	0	55	19	0	0	0	0	0	0	0	0	0	0	0	0	74
12:45	1	58	16	1	0	0	1	0	0	0	0	0	0	0	0	77
13:00	0	64	22	0	1	0	1	0	0	0	0	0	0	0	0	88
Hour Total	2	251	79	1	2	0	2	0	0	0	0	0	0	0	0	337
13:15	2	54	23	0	1	0	0	0	0	0	0	0	0	0	0	80
13:30	0	71	28	0	0	1	0	0	0	0	1	0	0	0	0	101
13:45	0	65	23	0	1	1	0	0	0	0	0	0	0	0	0	90
14:00	1	76	23	0	2	0	0	1	0	0	0	0	0	0	0	103
Hour Total	3	266	97	0	4	2	0	1	0	0	1	0	0	0	0	374
14:15	1	70	29	1	1	1	0	0	0	0	0	0	0	0	0	103
14:30	0	65	27	0	1	0	0	0	1	0	0	0	0	0	0	94
14:45	2	66	25	0	1	0	1	0	1	0	0	0	0	0	0	96
15:00	1	74	18	0	1	0	0	0	0	0	0	0	0	0	0	94
Hour Total	4	275	99	1	4	1	1	0	2	0	0	0	0	0	0	387
15:15	1	89	26	0	1	0	2	0	1	0	0	0	0	0	0	120
15:30	0	81	21	0	1	1	0	0	0	0	0	0	0	0	0	104
15:45	1	97	29	0	0	0	0	0	1	0	0	0	0	0	0	128
16:00	0	99	48	0	1	0	0	0	0	0	0	0	0	0	0	148
Hour Total	2	366	124	0	3	1	2	0	2	0	0	0	0	0	0	500
16:15	1	94	18	1	5	0	0	0	1	0	0	0	0	0	0	120
16:30	0	98	31	0	3	0	0	0	0	0	0	0	0	0	0	132
16:45	1	99	41	2	3	0	0	0	0	0	0	0	0	0	0	146
17:00	1	105	35	0	0	0	0	0	0	0	0	0	0	0	0	141
Hour Total	3	396	125	3	11	0	0	0	1	0	0	0	0	0	0	539

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002009.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	1	130	42	0	0	0	0	0	0	0	0	0	0	0	0	173
17:30	0	143	45	0	1	0	0	0	0	0	0	0	0	0	0	189
17:45	2	149	34	0	1	0	0	1	0	0	0	0	0	0	0	187
18:00	2	119	33	0	1	0	0	0	0	0	0	0	0	0	0	155
Hour Total	5	541	154	0	3	0	0	1	0	0	0	0	0	0	0	704
18:15	3	123	29	0	1	0	0	2	0	0	0	0	0	0	0	158
18:30	0	96	23	0	1	0	0	0	0	0	0	0	0	0	0	120
18:45	4	86	21	0	0	0	0	0	0	0	0	0	0	0	0	111
19:00	0	77	14	0	0	0	0	0	0	0	0	0	0	0	0	91
Hour Total	7	382	87	0	2	0	0	2	0	0	0	0	0	0	0	480
19:15	0	75	15	0	0	0	0	0	0	0	0	0	0	0	0	90
19:30	0	52	14	0	0	0	0	0	1	0	0	0	0	0	0	67
19:45	1	62	14	0	1	0	0	0	0	0	0	0	0	0	0	78
20:00	1	55	15	0	0	0	0	0	1	0	0	0	0	0	0	72
Hour Total	2	244	58	0	1	0	0	0	2	0	0	0	0	0	0	307
20:15	0	51	8	0	0	0	0	0	1	0	0	0	0	0	0	60
20:30	0	56	8	0	1	0	0	0	0	0	0	0	0	0	0	65
20:45	0	42	9	0	0	0	0	0	0	0	0	0	0	0	0	51
21:00	0	24	5	0	0	0	0	0	0	0	0	0	0	0	0	29
Hour Total	0	173	30	0	1	0	0	0	1	0	0	0	0	0	0	205
21:15	0	47	12	0	0	0	0	0	0	0	0	0	0	0	0	59
21:30	0	35	10	0	1	0	0	0	0	0	0	0	0	0	0	46
21:45	0	26	2	0	1	0	0	0	0	0	0	0	0	0	0	29
22:00	1	20	7	0	0	0	0	0	0	0	0	0	0	0	0	28
Hour Total	1	128	31	0	2	0	0	0	0	0	0	0	0	0	0	162
22:15	0	25	6	0	0	0	0	0	0	0	0	0	0	0	0	31
22:30	0	27	10	0	0	0	0	0	0	0	0	0	0	0	0	37
22:45	0	21	4	0	0	0	0	0	0	0	0	0	0	0	0	25
23:00	0	14	2	0	0	0	0	0	0	0	0	0	0	0	0	16
Hour Total	0	87	22	0	0	0	0	0	0	0	0	0	0	0	0	109
23:15	1	11	3	0	0	0	0	0	0	0	0	0	0	0	0	15
23:30	0	10	2	0	0	0	0	0	0	0	0	0	0	0	0	12
23:45	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
24:00	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
Hour Total	1	36	7	0	0	0	0	0	0	0	0	0	0	0	0	44
DAY TOTAL	46	5560	1769	11	73	16	5	18	16	1	3	1	0	0	0	7519
PERCENTS	0.7%	74.0%	23.6%	0.2%	0.9%	0.2%	0.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 98.0% Trucks & Buses 1.9%

AM Times	06:00	07:15	06:00	06:45	09:00	09:30		09:30	03:00	10:00	06:15	08:15				07:00
AM Peaks	8	565	171	2	9	3		4	2	1	1	1				725
PM Times	18:00	17:15	16:45	16:00	16:00	13:30	14:30	17:30	14:30		12:45					17:15
PM Peaks	9	541	163	3	12	3	3	3	3		1					704

GRAND TOTAL	136		5179		202		15		47		4		0		0	
	16057		37		46		48		1		2		0		21774	
PERCENTS	0.7%	73.8%	23.8%	0.2%	0.9%	0.2%	0.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002010.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	0	0	2	0	2	0	4
00:30	0	0	0	0	0	0	0	0	1	3	2	1	0	0	7
00:45	0	0	0	0	0	0	0	0	2	1	1	0	0	0	4
01:00	0	0	0	0	0	0	0	1	1	0	1	1	0	0	4
Hour Total	0	0	0	0	0	0	0	1	4	4	6	2	2	0	19
01:15	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
01:30	0	0	0	0	0	0	0	0	1	0	2	1	0	0	4
01:45	0	0	0	0	0	0	0	0	0	2	3	0	0	0	5
02:00	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2
Hour Total	0	0	0	0	0	0	0	0	1	6	5	2	0	0	14
02:15	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
02:30	0	0	0	0	0	0	1	0	1	0	2	0	0	0	4
02:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	1	1	4	1	1	0	8
Hour Total	0	0	0	0	0	0	1	0	2	3	7	1	1	0	15
03:15	0	0	0	0	0	0	0	0	1	0	3	0	0	0	4
03:30	0	0	0	0	0	0	1	0	0	2	2	2	0	0	7
03:45	0	0	0	0	0	0	0	0	0	4	6	1	0	0	11
04:00	0	0	0	0	0	0	0	0	1	5	2	3	1	0	12
Hour Total	0	0	0	0	0	0	1	0	2	11	13	6	1	0	34
04:15	0	0	0	0	0	0	0	0	0	4	3	7	1	0	15
04:30	0	0	0	0	0	0	0	0	2	2	12	13	6	0	35
04:45	0	0	0	0	0	0	0	1	0	4	15	21	5	0	46
05:00	0	0	0	0	0	0	0	0	1	2	12	16	5	0	36
Hour Total	0	0	0	0	0	0	0	1	3	12	42	57	17	0	132
05:15	0	0	0	0	0	0	0	0	0	7	37	20	1	0	65
05:30	0	0	0	0	0	0	0	0	2	6	39	43	6	0	96
05:45	0	0	0	0	0	0	0	0	0	4	48	52	6	1	111
06:00	0	0	0	0	0	0	0	0	0	18	31	33	9	1	92
Hour Total	0	0	0	0	0	0	0	0	2	35	155	148	22	2	364
06:15	0	0	0	0	0	0	0	0	1	9	54	34	14	0	112
06:30	0	0	0	0	0	0	0	0	3	24	60	46	7	0	140
06:45	0	0	0	0	0	0	0	0	2	23	71	46	9	1	152
07:00	0	0	0	0	0	0	0	0	2	33	82	43	4	0	164
Hour Total	0	0	0	0	0	0	0	0	8	89	267	169	34	1	568
07:15	0	0	0	0	0	0	0	0	0	24	96	64	9	1	194
07:30	0	0	0	0	0	0	0	0	7	29	90	50	5	0	181
07:45	0	0	0	0	0	0	0	0	10	78	92	46	7	0	233
08:00	0	0	0	0	1	0	0	5	5	26	64	37	4	1	143
Hour Total	0	0	0	0	1	0	0	5	22	157	342	197	25	2	751
08:15	0	0	0	0	0	0	0	1	2	23	39	36	7	0	108
08:30	0	0	0	1	0	0	0	0	6	29	45	39	4	0	124
08:45	0	0	0	0	0	1	0	0	1	19	49	35	5	0	110
09:00	0	0	0	0	0	1	0	0	6	33	61	15	3	0	119

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002010.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	1	0	2	0	1	15	104	194	125	19	0	461
09:15	0	0	0	0	0	0	0	1	2	27	45	24	2	0	101
09:30	0	0	0	0	0	3	1	1	2	17	47	25	2	0	98
09:45	0	0	0	0	0	0	0	0	4	31	40	12	1	0	88
10:00	0	0	0	0	0	0	0	0	1	35	23	19	1	0	79
Hour Total	0	0	0	0	0	3	1	2	9	110	155	80	6	0	366
10:15	0	0	1	0	0	0	1	2	5	33	34	14	2	0	92
10:30	0	0	0	0	0	0	2	0	1	30	35	14	0	0	82
10:45	0	0	0	0	0	0	2	0	7	24	26	13	2	1	75
11:00	0	0	0	0	0	0	0	0	1	32	33	13	2	0	81
Hour Total	0	0	1	0	0	0	5	2	14	119	128	54	6	1	330
11:15	0	0	0	0	0	0	0	1	0	24	30	13	1	0	69
11:30	0	0	0	0	0	0	1	1	4	13	48	9	0	0	76
11:45	0	0	0	0	0	0	0	0	6	18	29	21	3	0	77
12:00	0	0	0	0	0	0	0	1	10	33	37	10	1	2	94
Hour Total	0	0	0	0	0	0	1	3	20	88	144	53	5	2	316
12:15	0	0	0	0	0	0	1	0	9	28	31	15	4	0	88
12:30	0	0	0	0	0	0	1	0	0	21	30	16	2	0	70
12:45	0	0	0	0	0	0	1	0	3	22	32	14	2	0	74
13:00	0	0	0	0	0	0	0	2	2	29	30	17	5	0	85
Hour Total	0	0	0	0	0	0	3	2	14	100	123	62	13	0	317
13:15	0	0	0	0	0	0	2	2	8	19	26	22	2	0	81
13:30	0	0	0	0	0	0	0	0	6	21	44	14	2	1	88
13:45	0	0	0	0	0	0	0	1	0	29	46	12	3	0	91
14:00	0	0	0	0	1	0	1	1	9	21	43	25	4	0	105
Hour Total	0	0	0	0	1	0	3	4	23	90	159	73	11	1	365
14:15	0	0	0	0	0	0	0	2	1	30	40	25	3	0	101
14:30	0	0	0	0	0	0	0	2	9	13	35	23	1	0	83
14:45	0	0	0	0	0	0	0	1	1	16	55	24	3	0	100
15:00	0	0	0	0	0	0	0	0	4	19	42	22	6	0	93
Hour Total	0	0	0	0	0	0	0	5	15	78	172	94	13	0	377
15:15	0	0	0	0	0	0	0	0	4	24	44	24	6	3	105
15:30	0	0	0	0	0	0	0	0	2	26	41	26	7	0	102
15:45	0	0	0	0	0	0	0	1	2	21	54	27	2	1	108
16:00	0	0	0	0	0	0	0	1	4	27	53	18	5	1	109
Hour Total	0	0	0	0	0	0	0	2	12	98	192	95	20	5	424
16:15	0	0	0	0	2	2	2	6	4	25	51	23	4	1	120
16:30	0	0	0	0	0	0	0	2	13	27	63	23	1	1	130
16:45	0	0	0	0	0	0	0	1	0	18	46	34	7	0	106
17:00	0	0	0	0	0	1	0	0	9	22	69	32	7	1	141
Hour Total	0	0	0	0	2	3	2	9	26	92	229	112	19	3	497

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002010.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	1	0	0	0	0	0	0	1	2	29	73	37	2	2	147
17:30	0	0	0	0	0	1	1	1	4	35	75	39	5	2	163
17:45	0	0	1	0	0	0	1	0	4	42	68	34	2	0	152
18:00	2	0	0	0	0	0	0	0	5	15	61	49	6	0	138
Hour Total	3	0	1	0	0	1	2	2	15	121	277	159	15	4	600
18:15	0	0	0	0	0	0	2	0	3	35	62	21	3	0	126
18:30	0	0	0	0	0	0	0	0	4	29	52	21	3	0	109
18:45	0	0	0	0	0	0	1	2	5	31	50	17	2	1	109
19:00	0	0	0	0	0	0	0	0	9	26	27	8	1	1	72
Hour Total	0	0	0	0	0	0	3	2	21	121	191	67	9	2	416
19:15	0	0	0	0	0	0	0	2	6	32	32	11	0	0	83
19:30	0	0	0	0	0	0	0	0	10	24	28	6	0	0	68
19:45	0	0	0	0	0	0	0	3	9	17	13	12	2	0	56
20:00	0	0	0	0	0	0	0	0	5	32	23	13	2	0	75
Hour Total	0	0	0	0	0	0	0	5	30	105	96	42	4	0	282
20:15	0	0	0	0	0	0	0	2	13	25	23	8	0	0	71
20:30	0	0	0	0	0	0	0	0	10	26	21	3	0	0	60
20:45	0	0	0	1	0	0	0	1	4	16	16	4	0	0	42
21:00	0	0	0	0	1	0	0	0	2	18	12	3	0	0	36
Hour Total	0	0	0	1	1	0	0	3	29	85	72	18	0	0	209
21:15	0	0	0	0	0	0	0	0	9	7	13	4	0	0	33
21:30	0	0	0	0	0	0	0	1	2	7	14	5	0	0	29
21:45	0	0	0	0	0	0	0	0	3	7	10	4	0	0	24
22:00	0	0	0	0	0	0	0	0	2	7	11	3	0	0	23
Hour Total	0	0	0	0	0	0	0	1	16	28	48	16	0	0	109
22:15	0	0	0	0	0	0	0	0	1	8	5	6	1	0	21
22:30	0	0	0	0	0	0	0	1	0	10	7	6	0	0	24
22:45	0	0	0	0	0	0	0	1	3	9	8	0	0	0	21
23:00	0	0	0	0	0	0	0	1	0	2	4	3	0	0	10
Hour Total	0	0	0	0	0	0	0	3	4	29	24	15	1	0	76
23:15	0	0	0	0	0	0	0	1	2	6	6	0	1	0	16
23:30	0	0	0	0	0	0	0	0	0	3	1	6	1	0	11
23:45	0	0	0	0	0	0	0	0	1	2	1	3	1	0	8
24:00	0	0	0	0	0	0	0	0	2	4	0	2	1	0	9
Hour Total	0	0	0	0	0	0	0	1	5	15	8	11	4	0	44
DAY TOTAL	3	0	2	2	5	9	22	54	312	1700	3049	1658	247	23	7086
PERCENTS	0.1%	0.0%	0.1%	0.1%	0.1%	0.2%	0.4%	0.7%	4.4%	23.9%	43.0%	23.3%	3.4%	0.3%	100%

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002010.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
51.9 mph

85th Percentile Speed
62.6 mph

Median Speed
57.4 mph

Average Speed
57.2 mph

10 MPH Pace Speed
50 mph to 60 mph
4749 vehicles in pace
Representing 67.0% of the total vehicles

Vehicles > 55 MPH
4977
70.2%

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002010.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
00:30	0	0	0	0	0	0	0	0	0	1	2	3	1	0	7
00:45	0	0	0	0	0	0	0	0	1	2	1	0	0	0	4
01:00	0	0	0	0	0	0	0	0	1	1	3	2	0	0	7
Hour Total	0	0	0	0	0	0	0	0	2	7	6	5	1	0	21
01:15	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
01:30	0	0	0	0	0	0	0	0	2	2	1	1	0	0	6
01:45	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3
02:00	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3
Hour Total	0	0	0	0	0	0	0	0	2	5	4	3	0	0	14
02:15	0	0	0	0	0	0	0	0	0	3	2	0	0	0	5
02:30	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3
02:45	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3
03:00	0	0	0	0	0	0	0	0	1	1	0	1	0	0	3
Hour Total	0	0	0	0	0	0	0	0	1	6	6	1	0	0	14
03:15	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3
03:30	0	0	0	0	0	0	0	1	0	1	4	1	1	0	8
03:45	0	0	0	0	0	0	0	0	1	4	3	3	1	0	12
04:00	0	0	0	0	0	0	0	0	0	1	3	5	0	0	9
Hour Total	0	0	0	0	0	0	0	1	1	7	11	10	2	0	32
04:15	0	0	0	0	0	0	0	0	0	3	8	4	0	0	15
04:30	0	0	0	0	0	0	0	0	1	0	10	11	1	0	23
04:45	0	0	0	0	0	0	0	0	0	4	14	14	6	0	38
05:00	0	0	0	0	0	0	0	0	0	4	19	14	3	0	40
Hour Total	0	0	0	0	0	0	0	0	1	11	51	43	10	0	116
05:15	0	0	0	0	0	0	0	0	1	5	19	26	1	2	54
05:30	0	0	0	0	0	0	0	0	0	4	44	36	6	1	91
05:45	0	0	0	0	0	0	0	0	0	8	45	51	7	1	112
06:00	0	0	0	0	0	0	0	1	1	12	40	42	5	1	102
Hour Total	0	0	0	0	0	0	0	1	2	29	148	155	19	5	359
06:15	0	0	0	0	0	0	0	1	0	17	50	49	6	0	123
06:30	0	0	0	0	0	0	0	0	0	13	77	43	4	0	137
06:45	0	0	0	0	0	0	0	0	4	33	80	45	6	0	168
07:00	0	0	0	0	0	0	0	2	1	21	69	40	3	0	136
Hour Total	0	0	0	0	0	0	0	3	5	84	276	177	19	0	564
07:15	0	0	0	0	0	0	0	0	6	32	78	71	9	0	196
07:30	0	0	0	0	0	0	0	0	5	33	93	43	14	0	188
07:45	0	0	1	0	0	0	0	0	6	49	98	56	5	3	218
08:00	0	0	0	0	0	0	0	1	2	31	72	32	4	0	142
Hour Total	0	0	1	0	0	0	0	1	19	145	341	202	32	3	744
08:15	1	0	0	0	0	0	0	2	10	26	65	32	4	1	141
08:30	0	0	0	0	0	0	0	1	4	22	35	24	5	1	92
08:45	0	0	0	0	0	0	0	0	1	32	44	38	3	1	119
09:00	0	0	0	0	0	0	0	0	4	36	53	22	2	1	118

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002010.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	1	0	0	0	0	0	0	3	19	116	197	116	14	4	470
09:15	0	0	0	0	0	0	0	0	3	15	32	21	5	1	77
09:30	0	0	0	0	1	0	0	0	3	24	34	15	3	0	80
09:45	0	0	0	0	0	0	0	0	7	26	39	10	6	0	88
10:00	0	0	0	0	0	0	0	0	2	19	35	14	2	0	72
Hour Total	0	0	0	0	1	0	0	0	15	84	140	60	16	1	317
10:15	0	0	0	0	0	0	0	0	9	21	40	21	1	0	92
10:30	0	0	0	0	0	0	0	1	3	24	33	19	3	0	83
10:45	0	0	0	0	0	0	1	0	3	14	35	11	3	0	67
11:00	0	0	0	0	0	0	0	1	3	25	43	17	2	0	91
Hour Total	0	0	0	0	0	0	1	2	18	84	151	68	9	0	333
11:15	0	0	0	0	1	0	0	2	9	33	41	6	2	1	95
11:30	0	0	0	0	0	0	0	0	0	22	35	15	3	0	75
11:45	0	0	0	0	0	0	1	0	9	19	44	13	3	0	89
12:00	0	0	0	0	0	0	0	0	3	14	24	11	5	0	57
Hour Total	0	0	0	0	1	0	1	2	21	88	144	45	13	1	316
12:15	0	0	0	0	0	0	1	1	2	23	53	17	3	0	100
12:30	0	0	0	0	0	0	0	2	8	23	27	15	3	0	78
12:45	0	0	0	0	0	0	0	1	2	34	29	16	3	0	85
13:00	0	0	1	0	0	0	0	1	4	17	34	16	3	0	76
Hour Total	0	0	1	0	0	0	1	5	16	97	143	64	12	0	339
13:15	0	0	0	0	0	0	0	0	4	19	32	15	3	0	73
13:30	0	0	0	0	0	0	0	1	4	22	42	18	3	0	90
13:45	0	0	0	0	0	0	0	2	4	26	22	23	1	0	78
14:00	0	0	1	0	0	1	0	1	3	23	38	18	0	0	85
Hour Total	0	0	1	0	0	1	0	4	15	90	134	74	7	0	326
14:15	1	0	0	0	0	0	0	1	3	26	29	18	2	0	80
14:30	0	0	0	0	0	0	0	0	2	19	40	28	3	0	92
14:45	0	0	0	0	0	0	1	1	5	15	49	23	4	0	98
15:00	0	0	0	0	0	0	1	0	5	28	48	20	6	1	109
Hour Total	1	0	0	0	0	0	2	2	15	88	166	89	15	1	379
15:15	0	0	0	0	0	0	1	2	4	39	47	26	5	0	124
15:30	0	0	0	0	0	0	0	0	1	23	40	18	3	0	85
15:45	0	0	0	0	0	0	0	0	2	11	49	32	5	1	100
16:00	0	0	0	0	0	0	0	1	4	31	57	31	4	1	129
Hour Total	0	0	0	0	0	0	1	3	11	104	193	107	17	2	438
16:15	0	0	1	0	1	3	2	2	5	19	61	27	6	0	127
16:30	0	0	0	0	0	0	1	1	8	37	55	37	7	1	147
16:45	0	0	0	0	0	0	2	0	8	43	51	32	9	0	145
17:00	0	0	0	0	0	0	2	0	5	25	52	45	6	1	136
Hour Total	0	0	1	0	1	3	7	3	26	124	219	141	28	2	555

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002010.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	0	0	2	1	52	65	43	6	0	169
17:30	0	0	0	0	0	0	0	1	4	35	59	42	2	0	143
17:45	0	0	0	0	0	0	0	0	6	27	63	39	8	0	143
18:00	0	0	0	0	0	0	0	0	4	40	57	27	7	0	135
Hour Total	0	0	0	0	0	0	0	3	15	154	244	151	23	0	590
18:15	0	0	0	0	0	0	0	0	1	37	58	39	6	0	141
18:30	0	0	0	0	0	0	0	0	2	22	49	19	4	0	96
18:45	0	0	0	0	0	0	0	1	3	41	30	31	4	1	111
19:00	0	0	0	0	0	0	1	1	3	31	51	17	3	0	107
Hour Total	0	0	0	0	0	0	1	2	9	131	188	106	17	1	455
19:15	0	1	0	0	0	0	0	0	13	28	17	13	3	0	75
19:30	0	0	0	0	0	0	0	0	8	25	30	12	2	0	77
19:45	0	0	0	0	0	0	0	1	11	32	23	7	2	0	76
20:00	0	0	0	0	0	0	0	0	4	12	41	12	1	0	70
Hour Total	0	1	0	0	0	0	0	1	36	97	111	44	8	0	298
20:15	0	0	0	0	0	0	0	2	3	20	21	7	1	0	54
20:30	0	0	0	0	0	0	0	1	6	24	17	9	1	0	58
20:45	0	0	0	0	0	0	3	1	3	27	23	7	0	0	64
21:00	0	0	0	0	0	0	0	0	3	14	14	6	1	0	38
Hour Total	0	0	0	0	0	0	3	4	15	85	75	29	3	0	214
21:15	0	0	0	0	0	0	0	0	4	17	19	6	2	0	48
21:30	0	0	0	0	0	0	0	0	3	20	18	4	3	0	48
21:45	0	0	0	0	0	0	0	1	3	8	18	8	0	0	38
22:00	0	0	0	0	0	0	0	0	0	13	17	4	0	0	34
Hour Total	0	0	0	0	0	0	0	1	10	58	72	22	5	0	168
22:15	0	0	0	0	0	0	0	0	7	6	8	4	0	0	25
22:30	0	0	0	0	0	0	0	2	3	12	6	5	1	0	29
22:45	0	0	0	0	0	0	0	0	1	7	5	0	1	0	14
23:00	0	0	0	0	0	0	0	0	2	4	4	2	1	0	13
Hour Total	0	0	0	0	0	0	0	2	13	29	23	11	3	0	81
23:15	0	0	0	0	0	0	0	1	0	5	5	1	1	0	13
23:30	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3
23:45	0	0	0	0	0	0	0	1	1	1	0	1	0	0	4
24:00	0	0	0	0	0	0	0	1	0	0	5	0	0	0	6
Hour Total	0	0	0	0	0	0	0	3	1	6	11	4	1	0	26
DAY TOTAL	2	1	4	0	3	4	17	46	288	1729	3054	1727	274	20	7169
PERCENTS	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.2%	0.6%	4.0%	24.1%	42.6%	24.0%	3.8%	0.2%	100%

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002010.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
52.1 mph

85th Percentile Speed
62.7 mph

Median Speed
57.5 mph

Average Speed
57.3 mph

10 MPH Pace Speed
50 mph to 60 mph
4783 vehicles in pace
Representing 66.7% of the total vehicles

Vehicles > 55 MPH
5075
70.8%

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002010.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	0	1	2	1	0	0	4
00:30	0	0	0	0	0	0	0	0	1	3	2	1	0	0	7
00:45	0	0	0	0	0	0	0	1	2	0	1	0	1	0	5
01:00	0	0	0	0	0	0	0	0	1	3	3	1	0	1	9
Hour Total	0	0	0	0	0	0	0	1	4	7	8	3	1	1	25
01:15	0	0	0	0	0	0	0	0	0	3	3	0	0	0	6
01:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
01:45	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3
02:00	0	0	0	0	0	0	0	1	0	3	1	0	0	0	5
Hour Total	0	0	0	0	0	0	0	1	0	8	6	1	0	0	16
02:15	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3
02:30	0	0	0	0	0	0	0	0	0	4	3	1	0	0	8
02:45	0	0	0	0	0	0	0	0	1	0	3	0	0	0	4
03:00	0	0	0	0	0	0	0	0	2	1	1	0	0	0	4
Hour Total	0	0	0	0	0	0	0	0	3	5	10	1	0	0	19
03:15	0	0	0	0	0	0	0	1	0	0	1	2	0	0	4
03:30	0	0	0	0	0	0	0	0	0	1	3	2	0	0	6
03:45	0	0	0	0	0	0	0	0	1	3	3	0	1	0	8
04:00	0	0	0	0	0	0	0	0	1	2	5	4	0	0	12
Hour Total	0	0	0	0	0	0	0	1	2	6	12	8	1	0	30
04:15	0	0	0	0	0	0	0	0	1	4	8	6	0	0	19
04:30	0	0	0	0	0	0	0	0	0	3	12	11	2	1	29
04:45	0	0	0	0	0	0	0	0	0	3	10	16	4	2	35
05:00	0	0	0	0	0	0	0	0	0	5	16	13	5	0	39
Hour Total	0	0	0	0	0	0	0	0	1	15	46	46	11	3	122
05:15	0	0	0	0	0	0	0	0	0	9	26	27	7	0	69
05:30	0	0	0	0	0	0	0	0	0	6	24	48	10	0	88
05:45	1	0	0	0	0	0	0	0	1	9	39	41	3	0	94
06:00	0	0	0	0	0	0	0	0	0	19	55	39	5	0	118
Hour Total	1	0	0	0	0	0	0	0	1	43	144	155	25	0	369
06:15	0	0	0	0	0	0	0	0	0	14	63	54	8	0	139
06:30	0	0	0	0	0	0	0	0	1	25	76	36	10	2	150
06:45	1	0	0	0	0	0	0	0	2	31	72	39	7	1	153
07:00	0	0	0	0	0	0	0	0	0	13	66	47	7	0	133
Hour Total	1	0	0	0	0	0	0	0	3	83	277	176	32	3	575
07:15	0	0	0	0	0	0	0	0	8	25	79	56	13	1	182
07:30	0	0	0	0	0	0	0	0	2	27	69	75	10	0	183
07:45	0	0	0	0	0	0	0	1	4	37	93	80	10	2	227
08:00	0	0	0	0	0	0	0	1	5	15	60	41	5	0	127
Hour Total	0	0	0	0	0	0	0	2	19	104	301	252	38	3	719
08:15	0	0	0	0	0	0	0	1	2	18	58	41	10	1	131
08:30	0	0	0	0	0	0	0	0	2	39	50	19	6	1	117
08:45	0	0	0	0	0	0	0	2	7	30	51	40	7	0	137
09:00	1	0	0	0	0	0	0	1	2	17	44	27	4	1	97

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002010.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	1	0	0	0	0	0	0	4	13	104	203	127	27	3	482
09:15	0	0	0	0	0	0	1	0	3	17	31	20	4	0	76
09:30	0	0	0	0	0	0	0	2	2	24	38	29	2	1	98
09:45	0	0	0	0	0	0	0	1	6	25	35	22	4	0	93
10:00	0	0	0	0	0	0	0	0	3	26	41	16	1	0	87
Hour Total	0	0	0	0	0	0	1	3	14	92	145	87	11	1	354
10:15	0	0	0	0	0	0	0	0	1	15	54	22	0	0	92
10:30	0	0	0	0	0	0	0	0	3	20	24	18	2	0	67
10:45	1	0	0	0	0	0	1	0	7	20	41	13	2	1	86
11:00	0	0	0	0	0	0	2	2	5	15	36	11	2	1	74
Hour Total	1	0	0	0	0	0	3	2	16	70	155	64	6	2	319
11:15	0	0	0	0	0	0	0	0	4	19	33	19	2	0	77
11:30	0	0	0	0	0	0	0	0	3	22	47	23	6	0	101
11:45	0	0	0	0	0	0	0	1	4	28	44	10	2	1	90
12:00	0	0	0	0	1	0	0	1	2	17	42	9	1	0	73
Hour Total	0	0	0	0	1	0	0	2	13	86	166	61	11	1	341
12:15	0	0	0	0	0	0	1	0	6	30	41	19	1	0	98
12:30	0	0	0	0	0	0	0	0	6	25	26	14	3	0	74
12:45	0	1	0	0	0	0	2	0	1	27	27	19	0	0	77
13:00	0	0	0	0	0	0	0	3	6	25	28	24	2	0	88
Hour Total	0	1	0	0	0	0	3	3	19	107	122	76	6	0	337
13:15	1	0	0	0	0	0	1	1	3	27	29	16	2	0	80
13:30	0	0	0	0	0	0	0	0	6	26	38	26	5	0	101
13:45	0	0	0	0	0	0	0	1	2	14	39	24	9	1	90
14:00	0	0	0	0	0	0	1	0	5	31	33	28	5	0	103
Hour Total	1	0	0	0	0	0	2	2	16	98	139	94	21	1	374
14:15	0	0	0	0	0	0	0	1	3	28	50	18	3	0	103
14:30	0	0	0	0	0	0	0	1	2	25	40	24	2	0	94
14:45	0	0	0	0	0	0	1	0	11	16	40	24	3	1	96
15:00	0	0	0	0	0	0	1	1	3	25	37	22	4	1	94
Hour Total	0	0	0	0	0	0	2	3	19	94	167	88	12	2	387
15:15	1	0	0	0	0	1	0	1	5	26	45	29	8	4	120
15:30	0	0	0	0	0	0	0	3	1	19	46	30	4	1	104
15:45	0	0	0	0	0	0	0	0	0	27	51	47	3	0	128
16:00	0	0	0	0	0	0	0	3	2	27	69	42	5	0	148
Hour Total	1	0	0	0	0	1	0	7	8	99	211	148	20	5	500
16:15	1	1	2	4	4	5	3	2	2	21	45	24	5	1	120
16:30	0	0	0	0	0	0	1	1	1	22	64	40	2	1	132
16:45	0	0	0	0	0	0	0	1	5	36	68	31	5	0	146
17:00	0	0	0	0	0	0	1	0	7	34	58	35	5	1	141
Hour Total	1	1	2	4	4	5	5	4	15	113	235	130	17	3	539

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002010.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	1	0	0	1	0	0	0	0	5	54	68	37	6	1	173
17:30	0	0	0	0	0	0	0	0	9	56	72	44	6	2	189
17:45	0	0	0	3	1	1	3	3	7	43	86	34	5	1	187
18:00	0	0	0	0	0	0	0	0	7	49	70	26	2	1	155
Hour Total	1	0	0	4	1	1	3	3	28	202	296	141	19	5	704
18:15	0	0	0	0	0	0	0	2	14	49	58	31	3	1	158
18:30	0	0	0	0	0	0	4	0	16	39	42	18	1	0	120
18:45	0	0	1	0	0	0	0	0	17	25	44	20	4	0	111
19:00	0	0	0	0	0	0	0	0	3	33	41	11	3	0	91
Hour Total	0	0	1	0	0	0	4	2	50	146	185	80	11	1	480
19:15	0	0	0	0	0	0	0	0	7	35	41	6	0	1	90
19:30	0	0	0	0	0	1	0	2	6	19	28	11	0	0	67
19:45	0	0	0	0	0	0	0	1	6	28	31	10	2	0	78
20:00	0	0	0	0	0	0	0	3	3	18	38	8	2	0	72
Hour Total	0	0	0	0	0	1	0	6	22	100	138	35	4	1	307
20:15	0	0	0	0	0	0	0	0	7	22	18	10	3	0	60
20:30	0	0	0	0	0	0	0	0	5	24	24	7	5	0	65
20:45	0	0	0	0	0	0	0	0	3	17	23	7	1	0	51
21:00	0	0	0	0	0	0	0	1	7	9	8	4	0	0	29
Hour Total	0	0	0	0	0	0	0	1	22	72	73	28	9	0	205
21:15	0	0	0	0	0	0	0	1	9	15	18	12	4	0	59
21:30	0	0	0	0	0	0	0	1	5	11	22	6	1	0	46
21:45	0	0	0	0	0	0	0	0	2	7	9	10	1	0	29
22:00	0	0	0	0	0	0	0	0	5	9	10	4	0	0	28
Hour Total	0	0	0	0	0	0	0	2	21	42	59	32	6	0	162
22:15	0	0	0	0	0	0	0	0	3	10	11	7	0	0	31
22:30	0	0	0	0	0	0	0	0	4	10	12	10	0	1	37
22:45	0	0	0	0	0	0	0	0	1	5	15	4	0	0	25
23:00	0	0	0	0	0	0	0	0	1	7	6	2	0	0	16
Hour Total	0	0	0	0	0	0	0	0	9	32	44	23	0	1	109
23:15	0	0	0	0	0	0	0	0	2	4	6	3	0	0	15
23:30	0	0	0	0	0	0	0	0	2	4	4	2	0	0	12
23:45	0	0	0	0	0	0	0	0	3	3	1	2	0	0	9
24:00	0	0	0	0	0	0	0	0	1	2	4	1	0	0	8
Hour Total	0	0	0	0	0	0	0	0	8	13	15	8	0	0	44
DAY TOTAL	8	2	3	8	6	8	23	49	326	1741	3157	1864	288	36	7519
PERCENTS	0.2%	0.1%	0.1%	0.2%	0.1%	0.2%	0.3%	0.6%	4.3%	23.1%	41.9%	24.7%	3.8%	0.4%	100%

Station #: Site B-NBI
Site ID: 000000003810
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002010.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
GRAND TOTAL	13	9	14	62	926	9260	809								
	3	10	21	149	5170	5249	79								21774
PERCENTS	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.3%	0.6%	4.2%	23.7%	42.5%	24.1%	3.7%	0.3%	100%

Statistical Information...

15th Percentile Speed
52.0 mph

85th Percentile Speed
62.9 mph

Median Speed
57.5 mph

Average Speed
57.3 mph

10 MPH Pace Speed
55 mph to 65 mph
5021 vehicles in pace
Representing 66.7% of the total vehicles

Vehicles > 55 MPH
5345
71.1%

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002005.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
00:30	0	4	1	0	0	0	0	1	0	0	0	0	0	0	0	6
00:45	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
01:00	0	3	1	0	0	0	0	1	0	0	0	0	0	0	0	5
Hour Total	0	16	3	0	0	0	0	2	0	0	0	0	0	0	0	21
01:15	0	3	1	0	1	1	0	0	2	0	0	0	0	0	0	8
01:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:45	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3
02:00	0	2	1	0	0	0	0	0	1	0	0	0	0	0	0	4
Hour Total	0	9	2	0	1	1	0	0	4	0	0	0	0	0	0	17
02:15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
02:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:45	0	4	3	0	0	1	0	0	1	0	0	0	0	0	0	9
03:00	0	2	2	0	0	0	0	0	2	0	0	0	0	0	0	6
Hour Total	0	12	5	0	0	1	0	0	3	0	0	0	0	0	0	21
03:15	0	9	2	0	0	1	0	1	0	0	0	0	0	0	0	13
03:30	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	9
03:45	0	19	6	0	0	0	0	0	0	0	0	0	0	0	0	25
04:00	0	6	8	0	1	0	0	0	1	0	0	0	0	0	0	16
Hour Total	0	41	18	0	1	1	0	1	1	0	0	0	0	0	0	63
04:15	1	18	11	0	0	0	0	0	2	0	0	0	0	0	0	32
04:30	1	32	12	0	0	2	0	0	0	0	0	0	0	0	0	47
04:45	1	39	23	0	0	0	0	0	1	0	0	0	0	0	0	64
05:00	0	29	23	0	0	1	0	0	0	0	0	0	0	0	0	53
Hour Total	3	118	69	0	0	3	0	0	3	0	0	0	0	0	0	196
05:15	0	53	27	0	1	1	0	0	1	0	0	0	0	0	0	83
05:30	3	75	31	0	0	1	0	0	2	0	0	0	0	0	0	112
05:45	1	79	35	0	0	0	0	0	2	0	0	0	0	0	0	117
06:00	1	53	28	1	1	1	0	0	1	0	0	0	0	0	0	86
Hour Total	5	260	121	1	2	3	0	0	6	0	0	0	0	0	0	398
06:15	1	80	36	0	0	0	0	0	4	0	0	0	0	0	0	121
06:30	1	79	35	0	2	1	0	1	2	0	0	0	0	0	0	121
06:45	0	95	46	1	0	0	0	1	0	0	0	0	0	0	0	143
07:00	1	96	30	2	0	6	0	0	2	0	0	0	0	0	0	137
Hour Total	3	350	147	3	2	7	0	2	8	0	0	0	0	0	0	522
07:15	3	114	39	0	1	2	0	0	1	0	0	0	0	0	0	160
07:30	1	111	34	1	1	0	5	0	2	0	0	0	0	0	0	155
07:45	0	125	39	1	1	2	3	0	6	1	0	0	0	0	0	178
08:00	0	91	30	0	2	0	2	1	4	0	0	0	0	0	0	130
Hour Total	4	441	142	2	5	4	10	1	13	1	0	0	0	0	0	623
08:15	0	66	23	2	1	0	1	3	2	0	0	0	0	0	0	98
08:30	0	84	18	0	1	2	1	1	1	0	0	0	0	0	0	108
08:45	0	92	20	1	1	2	2	1	2	1	0	0	0	0	0	122
09:00	0	77	20	0	3	3	0	0	0	0	0	0	0	0	0	103

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002005.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	319	81	3	6	7	4	5	5	1	0	0	0	0	0	431
09:15	2	48	20	1	2	2	2	0	6	1	0	0	0	0	0	84
09:30	5	50	24	0	3	2	2	2	5	0	0	0	0	0	0	93
09:45	0	39	19	1	2	3	3	0	6	0	0	0	0	0	0	73
10:00	0	42	16	0	0	2	1	0	9	0	0	0	0	0	0	70
Hour Total	7	179	79	2	7	9	8	2	26	1	0	0	0	0	0	320
10:15	1	46	24	0	2	1	1	0	2	0	0	0	0	0	0	77
10:30	0	53	19	0	1	2	0	1	2	0	0	0	0	0	0	78
10:45	0	47	21	1	2	0	2	0	8	0	0	0	0	0	0	81
11:00	0	54	18	0	2	1	0	1	3	0	0	0	0	0	0	79
Hour Total	1	200	82	1	7	4	3	2	15	0	0	0	0	0	0	315
11:15	0	41	29	1	1	2	4	0	3	0	0	0	0	0	0	81
11:30	0	50	12	0	2	0	2	1	2	0	0	0	0	0	0	69
11:45	0	43	25	0	6	1	1	0	5	0	0	0	0	0	0	81
12:00	1	45	13	2	2	7	1	2	4	0	0	0	0	0	0	77
Hour Total	1	179	79	3	11	10	8	3	14	0	0	0	0	0	0	308
12:15	0	50	22	0	4	5	4	0	4	0	0	0	0	0	0	89
12:30	0	44	19	0	1	3	1	1	2	0	0	0	0	0	0	71
12:45	2	54	15	0	1	0	2	2	4	0	0	0	0	0	0	80
13:00	0	46	24	0	1	2	1	0	4	0	0	0	0	0	0	78
Hour Total	2	194	80	0	7	10	8	3	14	0	0	0	0	0	0	318
13:15	1	42	19	0	0	2	2	2	1	0	0	0	0	0	0	69
13:30	0	57	18	1	2	2	1	0	3	0	0	0	0	0	0	84
13:45	0	48	14	2	5	2	0	0	4	0	0	0	0	0	0	75
14:00	0	50	14	0	2	1	1	1	2	0	0	0	0	0	0	71
Hour Total	1	197	65	3	9	7	4	3	10	0	0	0	0	0	0	299
14:15	0	46	21	0	1	1	4	0	3	0	0	0	0	0	0	76
14:30	2	44	19	0	1	2	1	0	3	0	0	0	0	0	0	72
14:45	2	69	26	1	2	2	1	0	1	0	0	0	0	0	0	104
15:00	0	45	21	0	2	2	1	0	0	1	0	0	0	0	0	72
Hour Total	4	204	87	1	6	7	7	0	7	1	0	0	0	0	0	324
15:15	1	48	17	1	1	0	0	0	2	0	0	0	0	0	0	70
15:30	0	61	24	0	2	2	3	0	4	0	0	0	0	0	0	96
15:45	0	59	25	1	0	1	2	0	1	0	0	0	0	0	0	89
16:00	1	71	21	1	3	3	0	0	4	0	0	0	0	0	0	104
Hour Total	2	239	87	3	6	6	5	0	11	0	0	0	0	0	0	359
16:15	0	53	17	2	1	1	0	0	5	0	0	0	0	0	0	79
16:30	0	80	19	1	0	3	1	1	0	0	0	0	0	0	0	105
16:45	1	76	14	0	3	2	0	0	0	0	0	0	0	0	0	96
17:00	0	81	18	0	0	0	0	0	1	0	0	0	0	0	0	100
Hour Total	1	290	68	3	4	6	1	1	6	0	0	0	0	0	0	380

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002005.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	79	29	1	0	1	0	1	0	0	0	0	0	0	0	111
17:30	2	82	30	0	1	0	0	0	1	0	0	0	0	0	0	116
17:45	0	66	21	0	0	0	0	0	1	0	0	0	0	0	0	88
18:00	1	76	22	0	0	1	0	0	2	0	0	0	0	0	0	102
Hour Total	3	303	102	1	1	2	0	1	4	0	0	0	0	0	0	417
18:15	1	57	20	0	0	0	0	0	3	0	0	0	0	0	0	81
18:30	1	57	20	0	2	0	0	0	0	0	0	0	0	0	0	80
18:45	0	63	17	0	0	0	0	0	1	0	0	0	0	0	0	81
19:00	0	43	7	0	0	0	0	1	0	0	0	0	0	0	0	51
Hour Total	2	220	64	0	2	0	0	1	4	0	0	0	0	0	0	293
19:15	1	51	12	0	0	0	0	0	0	0	0	0	0	0	0	64
19:30	1	47	7	0	0	0	0	1	3	0	0	0	0	0	0	59
19:45	0	43	7	0	0	0	0	1	0	0	0	0	0	0	0	51
20:00	0	30	14	0	0	0	0	0	5	0	0	0	0	0	0	49
Hour Total	2	171	40	0	0	0	0	2	8	0	0	0	0	0	0	223
20:15	1	33	7	1	0	1	0	0	4	0	0	0	0	0	0	47
20:30	0	33	5	0	0	2	0	0	0	0	0	0	0	0	0	40
20:45	0	25	9	0	0	0	0	0	0	0	0	0	0	0	0	34
21:00	1	30	2	0	0	0	0	0	2	0	0	0	0	0	0	35
Hour Total	2	121	23	1	0	3	0	0	6	0	0	0	0	0	0	156
21:15	1	23	8	0	1	0	0	0	2	0	0	0	0	0	0	35
21:30	0	25	5	0	0	0	0	0	1	0	0	0	0	0	0	31
21:45	0	30	6	0	0	0	0	0	2	0	0	0	0	0	0	38
22:00	0	15	1	0	1	0	0	0	1	0	0	0	0	0	0	18
Hour Total	1	93	20	0	2	0	0	0	6	0	0	0	0	0	0	122
22:15	0	23	6	0	0	0	0	0	3	0	0	0	0	0	0	32
22:30	0	24	4	0	0	0	0	0	0	0	0	0	0	0	0	28
22:45	0	15	3	0	0	0	0	0	2	0	0	0	0	0	0	20
23:00	0	18	2	0	0	0	0	0	0	0	0	0	0	0	0	20
Hour Total	0	80	15	0	0	0	0	0	5	0	0	0	0	0	0	100
23:15	0	12	1	0	0	0	0	0	0	0	0	0	0	0	0	13
23:30	0	10	1	0	0	0	0	0	1	0	0	0	0	0	0	12
23:45	0	12	0	0	0	0	0	0	1	0	0	0	0	0	0	13
24:00	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	7
Hour Total	0	39	4	0	0	0	0	0	2	0	0	0	0	0	0	45
DAY TOTAL	44	4275	1483	27	79	91	58	29	181	4	0	0	0	0	0	6271
PERCENTS	0.8%	68.2%	23.7%	0.5%	1.3%	1.4%	0.9%	0.4%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 92.5% Trucks & Buses 7.4%

AM Times	08:45	07:00	06:30	06:45	11:00	07:00	07:30	08:00	09:15	08:30						07:00
AM Peaks	7	446	150	4	11	10	11	6	26	2						630
PM Times	14:30	16:45	17:15	15:45	13:30	12:15	12:15	12:30	12:15	14:15						16:45
PM Peaks	5	318	102	5	10	10	8	5	14	1						423

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002005.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	6	0	0	0	0	0	0	1	0	0	0	0	0	0	7
00:30	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
00:45	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
01:00	0	5	1	0	0	1	0	0	0	0	0	0	0	0	0	7
Hour Total	0	20	4	0	0	1	0	0	1	0	0	0	0	0	0	26
01:15	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
01:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:45	0	3	1	0	0	0	0	0	1	1	0	0	0	0	0	6
02:00	0	5	0	0	0	0	0	0	1	0	0	0	0	0	0	6
Hour Total	0	16	1	0	0	0	0	0	2	1	0	0	0	0	0	20
02:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
02:30	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
02:45	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	3
03:00	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
Hour Total	0	14	4	0	0	0	0	0	1	0	0	0	0	0	0	19
03:15	0	5	3	0	0	0	0	0	3	0	0	0	0	0	0	11
03:30	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	11
03:45	0	14	6	0	0	0	0	0	0	0	0	0	0	0	0	20
04:00	0	12	6	0	0	1	0	1	1	0	0	0	0	0	0	21
Hour Total	0	40	17	0	0	1	0	1	4	0	0	0	0	0	0	63
04:15	1	24	7	0	0	0	0	0	2	0	0	0	0	0	0	34
04:30	0	29	13	0	0	0	0	0	1	0	0	0	0	0	0	43
04:45	0	34	33	0	1	0	0	0	2	0	0	0	0	0	0	70
05:00	0	44	16	0	0	0	0	0	3	0	0	0	0	0	0	63
Hour Total	1	131	69	0	1	0	0	0	8	0	0	0	0	0	0	210
05:15	0	49	18	0	1	0	0	0	4	0	0	0	0	0	0	72
05:30	0	66	34	0	0	1	0	0	2	0	0	0	0	0	0	103
05:45	2	85	41	0	0	0	0	0	2	0	0	0	0	0	0	130
06:00	1	77	40	0	0	0	0	1	0	0	0	0	0	0	0	119
Hour Total	3	277	133	0	1	1	0	1	8	0	0	0	0	0	0	424
06:15	2	80	33	0	1	0	0	0	1	0	0	0	0	0	0	117
06:30	0	71	41	1	0	1	0	0	4	0	0	0	0	0	0	118
06:45	0	93	35	2	1	2	1	0	1	0	0	0	0	0	0	135
07:00	1	90	34	1	1	1	1	1	2	0	0	0	0	0	0	132
Hour Total	3	334	143	4	3	4	2	1	8	0	0	0	0	0	0	502
07:15	2	118	29	0	0	0	5	3	1	0	0	0	0	0	0	158
07:30	0	93	38	0	4	1	6	0	5	0	0	0	0	0	0	147
07:45	0	116	43	1	4	0	3	2	1	1	0	0	0	0	0	171
08:00	2	86	25	1	2	1	2	0	2	0	0	0	0	0	0	121
Hour Total	4	413	135	2	10	2	16	5	9	1	0	0	0	0	0	597
08:15	0	77	24	2	2	0	2	1	2	1	0	0	0	0	0	111
08:30	0	69	25	0	1	0	1	0	3	0	0	0	0	0	0	99
08:45	0	64	27	0	1	1	6	0	2	0	0	0	0	0	0	101
09:00	0	64	18	1	1	2	4	0	3	1	0	0	0	0	0	94

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002005.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	274	94	3	5	3	13	1	10	2	0	0	0	0	0	405
09:15	0	57	31	0	3	2	3	0	0	0	0	0	0	0	0	96
09:30	0	50	19	0	1	1	2	0	1	0	0	0	0	0	0	74
09:45	0	50	11	0	1	0	1	1	2	0	0	0	0	0	0	66
10:00	0	45	19	0	1	1	2	0	2	0	0	0	0	0	0	70
Hour Total	0	202	80	0	6	4	8	1	5	0	0	0	0	0	0	306
10:15	1	45	15	1	3	4	7	0	5	0	0	0	0	0	0	81
10:30	2	58	16	0	1	1	2	1	2	1	0	0	0	0	0	84
10:45	0	47	21	0	2	1	3	1	2	0	0	0	0	0	0	77
11:00	1	63	16	1	2	4	0	1	3	0	0	0	0	0	0	91
Hour Total	4	213	68	2	8	10	12	3	12	1	0	0	0	0	0	333
11:15	0	43	15	2	3	1	2	2	6	0	0	0	0	0	0	74
11:30	0	49	16	1	2	2	0	2	1	0	0	0	0	0	0	73
11:45	0	45	12	0	1	3	5	1	2	0	0	0	0	0	0	69
12:00	0	54	11	0	2	0	3	1	0	0	0	0	0	0	0	71
Hour Total	0	191	54	3	8	6	10	6	9	0	0	0	0	0	0	287
12:15	0	60	22	1	3	1	1	0	2	0	0	0	0	0	0	90
12:30	0	50	20	1	1	1	1	0	1	0	0	0	0	0	0	75
12:45	0	57	15	0	0	1	2	1	1	0	0	0	0	0	0	77
13:00	1	55	17	0	2	1	0	0	2	0	0	0	0	0	0	78
Hour Total	1	222	74	2	6	4	4	1	6	0	0	0	0	0	0	320
13:15	2	52	12	0	1	2	3	0	0	0	0	0	0	0	0	72
13:30	0	46	19	0	1	3	5	1	3	0	0	0	0	0	0	78
13:45	1	52	15	0	3	2	1	0	1	0	0	0	0	0	0	75
14:00	0	54	15	0	0	2	1	1	2	1	0	0	0	0	0	76
Hour Total	3	204	61	0	5	9	10	2	6	1	0	0	0	0	0	301
14:15	0	65	17	0	1	1	2	0	0	0	0	0	0	0	0	86
14:30	1	55	18	0	0	2	3	0	3	0	0	0	0	0	0	82
14:45	1	70	18	0	3	1	1	0	1	0	0	0	0	0	0	95
15:00	1	55	17	0	0	2	1	1	2	0	0	0	0	0	0	79
Hour Total	3	245	70	0	4	6	7	1	6	0	0	0	0	0	0	342
15:15	1	57	16	2	0	5	0	0	1	0	0	0	0	0	0	82
15:30	0	68	16	0	1	0	1	0	3	0	0	0	0	0	0	89
15:45	0	59	19	0	3	0	2	1	1	0	0	0	0	0	0	85
16:00	1	66	18	0	1	1	3	0	1	0	0	0	0	0	0	91
Hour Total	2	250	69	2	5	6	6	1	6	0	0	0	0	0	0	347
16:15	1	60	13	1	2	0	4	1	0	0	0	0	0	0	0	82
16:30	1	71	24	1	3	2	1	0	0	0	0	0	0	0	0	103
16:45	1	72	24	0	5	0	0	0	0	0	0	0	0	0	0	102
17:00	0	65	31	0	2	1	1	1	2	0	0	0	0	0	0	103
Hour Total	3	268	92	2	12	3	6	2	2	0	0	0	0	0	0	390

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002005.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	1	78	27	0	1	0	0	0	0	0	0	0	0	0	0	107
17:30	1	77	23	0	0	2	2	1	0	0	0	0	0	0	0	106
17:45	1	78	30	0	1	0	0	0	3	0	0	0	0	0	0	113
18:00	0	68	21	0	1	0	0	0	0	0	0	0	0	0	0	90
Hour Total	3	301	101	0	3	2	2	1	3	0	0	0	0	0	0	416
18:15	0	67	18	0	3	0	0	0	0	0	0	0	0	0	0	88
18:30	1	57	16	0	1	0	0	0	0	0	0	0	0	0	0	75
18:45	0	70	14	0	0	0	0	0	3	0	0	0	0	0	0	87
19:00	0	56	16	0	0	0	0	0	3	0	0	0	0	0	0	75
Hour Total	1	250	64	0	4	0	0	0	6	0	0	0	0	0	0	325
19:15	0	48	7	0	1	2	0	0	1	0	0	0	0	0	0	59
19:30	0	51	14	0	0	0	0	0	0	0	0	0	0	0	0	65
19:45	0	47	14	0	0	0	0	0	0	0	0	0	0	0	0	61
20:00	1	36	11	0	1	0	0	0	4	0	0	0	0	0	0	53
Hour Total	1	182	46	0	2	2	0	0	5	0	0	0	0	0	0	238
20:15	0	34	12	0	0	0	0	0	0	0	0	0	0	0	0	46
20:30	0	32	10	0	0	0	0	0	2	0	0	0	0	0	0	44
20:45	0	31	9	0	0	0	0	0	0	0	0	0	0	0	0	40
21:00	0	31	3	0	0	0	0	0	3	0	0	0	0	0	0	37
Hour Total	0	128	34	0	0	0	0	0	5	0	0	0	0	0	0	167
21:15	1	38	3	0	0	0	0	0	1	0	0	0	0	0	0	43
21:30	0	28	5	0	0	0	0	0	0	0	0	0	0	0	0	33
21:45	0	26	3	0	2	0	0	1	2	0	0	0	0	0	0	34
22:00	0	13	2	0	0	0	0	0	1	0	0	0	0	0	0	16
Hour Total	1	105	13	0	2	0	0	1	4	0	0	0	0	0	0	126
22:15	0	21	6	0	0	0	0	0	1	0	0	0	0	0	0	28
22:30	0	27	6	0	0	0	0	0	0	0	0	0	0	0	0	33
22:45	0	17	2	0	0	0	0	0	1	0	0	0	0	0	0	20
23:00	0	6	3	0	0	0	0	0	1	0	0	0	0	0	0	10
Hour Total	0	71	17	0	0	0	0	0	3	0	0	0	0	0	0	91
23:15	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
23:30	0	6	2	0	0	1	0	0	0	0	0	0	0	0	0	9
23:45	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	9
24:00	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
Hour Total	0	26	5	0	0	1	0	0	0	0	0	0	0	0	0	32
DAY TOTAL	33	4377	1448	20	85	65	96	28	129	6	0	0	0	0	0	6287
PERCENTS	0.6%	69.7%	23.1%	0.4%	1.3%	1.0%	1.5%	0.4%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 93.1% Trucks & Buses 6.8%

AM Times	05:30	07:00	05:45	06:15	07:30	10:15	07:15	07:00	10:30	07:30						07:00
AM Peaks	5	417	155	4	12	10	16	6	13	2						608
PM Times	13:00	17:15	17:00	12:15	16:15	14:30	12:45	12:45	14:30	13:15						17:00
PM Peaks	4	301	111	2	12	10	10	2	7	1						429

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002005.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
00:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
00:45	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	4
01:00	0	10	1	0	0	0	0	0	1	0	0	0	0	0	0	12
Hour Total	0	19	2	0	0	0	0	0	3	0	0	0	0	0	0	24
01:15	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5
01:30	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
01:45	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
02:00	0	4	2	0	1	0	0	0	0	0	0	0	0	0	0	7
Hour Total	0	20	5	0	1	0	0	0	0	0	0	0	0	0	0	26
02:15	0	4	0	0	0	0	0	0	2	0	0	0	0	0	0	6
02:30	0	2	3	0	0	0	0	0	3	0	0	0	0	0	0	8
02:45	0	4	3	0	1	0	0	0	2	0	0	0	0	0	0	10
03:00	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	12	7	0	1	0	0	0	7	0	0	0	0	0	0	27
03:15	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	8
03:30	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	11
03:45	0	12	5	0	0	1	0	0	0	0	0	0	0	0	0	18
04:00	0	11	4	0	0	0	0	0	1	0	0	0	0	0	0	16
Hour Total	0	38	13	0	0	1	0	0	1	0	0	0	0	0	0	53
04:15	0	21	12	0	0	1	0	0	1	0	0	0	0	0	0	35
04:30	2	33	15	0	0	3	0	0	0	0	0	0	0	0	0	53
04:45	0	39	27	0	0	1	0	0	4	0	0	0	0	0	0	71
05:00	0	45	18	0	0	0	0	0	1	0	0	0	0	0	0	64
Hour Total	2	138	72	0	0	5	0	0	6	0	0	0	0	0	0	223
05:15	0	49	26	0	0	2	0	0	1	0	0	0	0	0	0	78
05:30	1	61	27	0	0	1	0	0	2	0	0	0	0	0	0	92
05:45	2	72	37	0	0	0	0	1	0	0	0	0	0	0	0	112
06:00	1	63	38	1	0	1	0	1	2	0	0	0	0	0	0	107
Hour Total	4	245	128	1	0	4	0	2	5	0	0	0	0	0	0	389
06:15	4	82	33	0	1	0	1	3	0	0	0	0	0	0	0	124
06:30	0	78	37	1	1	2	0	1	1	0	0	0	0	0	0	121
06:45	0	93	32	1	1	1	1	1	1	0	0	0	0	0	0	131
07:00	0	90	38	1	1	2	0	1	3	0	0	0	0	0	0	136
Hour Total	4	343	140	3	4	5	2	6	5	0	0	0	0	0	0	512
07:15	0	116	28	0	0	2	0	0	1	1	0	0	0	0	0	148
07:30	0	106	37	0	2	1	6	0	1	0	0	0	0	0	0	153
07:45	0	113	33	0	3	1	3	3	4	0	0	0	0	0	0	160
08:00	0	88	21	0	0	0	1	0	3	0	0	0	0	0	0	113
Hour Total	0	423	119	0	5	4	10	3	9	1	0	0	0	0	0	574
08:15	1	65	33	2	3	1	5	2	0	0	0	0	0	0	0	112
08:30	2	76	25	0	1	0	2	0	7	0	0	0	0	0	0	113
08:45	1	84	21	0	4	3	3	1	2	0	0	0	0	0	0	119
09:00	0	79	23	0	1	1	0	0	1	0	1	0	0	0	0	106

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002005.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	4	304	102	2	9	5	10	3	10	0	1	0	0	0	0	450
09:15	0	57	22	0	2	1	1	1	3	0	0	0	0	0	0	87
09:30	0	55	24	1	1	1	4	0	3	0	0	0	0	0	0	89
09:45	0	61	22	0	2	1	1	0	1	0	0	0	0	0	0	88
10:00	0	55	17	0	2	1	4	0	2	0	0	0	0	0	0	81
Hour Total	0	228	85	1	7	4	10	1	9	0	0	0	0	0	0	345
10:15	1	48	14	0	0	3	3	0	4	0	0	0	0	0	0	73
10:30	0	46	24	0	1	0	1	1	1	0	0	0	0	0	0	74
10:45	0	52	14	1	1	1	0	0	1	0	0	0	0	0	0	70
11:00	0	46	18	0	2	0	1	0	2	1	0	0	0	0	0	70
Hour Total	1	192	70	1	4	4	5	1	8	1	0	0	0	0	0	287
11:15	0	41	15	0	1	2	4	1	4	0	0	0	0	0	0	68
11:30	1	49	19	0	1	1	6	1	4	0	0	0	0	0	0	82
11:45	0	53	27	1	0	2	1	0	7	1	0	0	0	0	0	92
12:00	1	40	16	0	6	0	1	1	2	0	0	0	0	0	0	67
Hour Total	2	183	77	1	8	5	12	3	17	1	0	0	0	0	0	309
12:15	0	46	16	0	2	3	2	1	0	0	1	0	0	0	0	71
12:30	1	53	15	0	2	0	1	1	0	0	0	0	0	0	0	73
12:45	2	33	16	0	1	2	6	0	0	0	0	0	0	0	0	60
13:00	2	42	27	0	2	0	4	1	1	0	0	0	0	0	0	79
Hour Total	5	174	74	0	7	5	13	3	1	0	1	0	0	0	0	283
13:15	0	46	22	0	1	2	2	0	2	0	0	0	0	0	0	75
13:30	0	49	19	0	1	0	2	3	1	0	0	0	0	0	0	75
13:45	0	55	21	0	4	0	2	0	3	1	0	0	0	0	0	86
14:00	0	61	20	0	2	1	2	0	3	0	0	0	0	0	0	89
Hour Total	0	211	82	0	8	3	8	3	9	1	0	0	0	0	0	325
14:15	2	52	15	0	0	3	3	1	3	0	0	0	0	0	0	79
14:30	4	63	22	0	0	0	4	1	0	0	0	0	0	0	0	94
14:45	0	38	19	0	0	3	2	2	3	0	0	0	1	0	0	68
15:00	0	52	16	0	4	1	0	1	2	0	0	0	0	0	0	76
Hour Total	6	205	72	0	4	7	9	5	8	0	0	0	1	0	0	317
15:15	1	55	21	2	4	0	1	0	0	0	0	0	0	0	0	84
15:30	0	45	24	0	1	2	4	0	5	0	0	0	0	0	0	81
15:45	2	57	21	0	2	1	2	0	2	0	0	0	0	0	0	87
16:00	0	59	21	1	1	1	4	0	2	0	0	0	0	0	0	89
Hour Total	3	216	87	3	8	4	11	0	9	0	0	0	0	0	0	341
16:15	1	78	18	2	2	0	1	0	0	0	0	0	0	0	0	102
16:30	0	81	20	1	0	0	1	1	0	0	0	0	0	0	0	104
16:45	1	72	20	0	1	0	1	1	1	0	0	0	0	0	0	97
17:00	1	71	22	0	1	2	1	0	1	0	0	0	0	0	0	99
Hour Total	3	302	80	3	4	2	4	2	2	0	0	0	0	0	0	402

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002005.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	91	24	0	1	0	0	0	2	0	1	0	0	0	0	119
17:30	0	83	23	0	3	1	1	1	0	0	0	0	0	0	0	112
17:45	1	104	20	0	0	0	0	0	0	0	0	0	0	0	0	125
18:00	2	70	25	0	0	0	0	0	1	0	0	0	0	0	0	98
Hour Total	3	348	92	0	4	1	1	1	3	0	1	0	0	0	0	454
18:15	0	67	21	0	0	2	0	0	3	0	0	0	0	0	0	93
18:30	0	60	22	0	1	0	0	0	1	0	0	0	0	0	0	84
18:45	1	63	14	0	1	1	0	0	5	0	0	0	0	0	0	85
19:00	0	48	9	0	3	1	0	0	3	0	0	0	0	0	0	64
Hour Total	1	238	66	0	5	4	0	0	12	0	0	0	0	0	0	326
19:15	0	56	7	0	0	1	0	0	1	0	0	0	0	0	0	65
19:30	2	44	11	0	1	0	0	1	2	0	0	0	0	0	0	61
19:45	2	43	10	0	1	0	0	0	1	0	0	0	0	0	0	57
20:00	0	50	6	0	0	0	0	1	2	0	0	0	0	0	0	59
Hour Total	4	193	34	0	2	1	0	2	6	0	0	0	0	0	0	242
20:15	0	32	9	0	1	0	0	0	1	0	0	0	0	0	0	43
20:30	0	52	13	0	0	0	0	0	1	0	0	0	0	0	0	66
20:45	1	25	10	0	0	0	1	0	2	0	0	0	0	0	0	39
21:00	0	26	12	0	0	0	0	0	0	0	1	0	0	0	0	39
Hour Total	1	135	44	0	1	0	1	0	4	0	1	0	0	0	0	187
21:15	1	36	3	0	2	0	0	0	1	0	0	0	0	0	0	43
21:30	0	26	7	0	1	0	0	0	0	0	0	0	0	0	0	34
21:45	0	21	7	0	0	0	0	0	1	0	0	0	0	0	0	29
22:00	0	30	7	0	0	0	0	0	1	0	0	0	0	0	0	38
Hour Total	1	113	24	0	3	0	0	0	3	0	0	0	0	0	0	144
22:15	0	29	2	0	0	0	0	0	2	0	0	0	0	0	0	33
22:30	0	31	10	0	0	0	0	0	0	0	0	0	0	0	0	41
22:45	0	25	2	0	0	0	0	0	1	0	0	0	0	0	0	28
23:00	0	11	2	0	0	0	0	0	1	0	0	0	0	0	0	14
Hour Total	0	96	16	0	0	0	0	0	4	0	0	0	0	0	0	116
23:15	0	12	0	0	0	0	0	0	1	0	0	0	0	0	0	13
23:30	1	12	3	0	0	0	0	0	1	0	0	0	1	0	0	18
23:45	0	13	2	0	0	0	0	0	1	0	0	0	0	0	0	16
24:00	0	8	1	0	0	0	0	0	3	0	0	0	0	0	0	12
Hour Total	1	45	6	0	0	0	0	0	6	0	0	0	1	0	0	59
DAY TOTAL	45	4421	1497	15	85	64	96	35	147	4	4	0	2	0	0	6415
PERCENTS	0.8%	69.0%	23.4%	0.3%	1.4%	1.0%	1.4%	0.5%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	93.9%								Trucks & Buses	7.0%						
AM Times	05:30	07:00	05:45	06:00	08:15	06:30	07:30	05:45	11:00	11:00	08:15					07:00
AM Peaks	8	425	145	3	9	7	15	6	17	2	1					597
PM Times	13:45	17:00	17:15	15:45	15:00	14:00	12:45	14:15	18:15	13:00	12:15		14:00			17:00
PM Peaks	6	349	92	4	11	7	14	5	12	1	1		1			455
GRAND TOTAL	122	4428	249	250	457	4	2	0								
	13073	62	220	92	14	0	0	18973								
PERCENTS	0.7%	69.0%	23.4%	0.4%	1.3%	1.1%	1.3%	0.4%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002006.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	1	0	0	1	0	1	0	0	3
00:30	0	0	0	0	0	0	0	0	1	3	1	1	0	0	6
00:45	0	0	0	0	0	0	0	1	4	1	1	0	0	0	7
01:00	0	0	0	0	0	0	0	0	2	3	0	0	0	0	5
Hour Total	0	0	0	0	0	0	1	1	7	8	2	2	0	0	21
01:15	0	0	0	0	0	0	1	0	2	4	1	0	0	0	8
01:30	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2
01:45	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3
02:00	0	0	0	0	0	0	0	0	2	0	1	1	0	0	4
Hour Total	0	0	0	0	0	0	1	0	5	7	2	2	0	0	17
02:15	0	0	0	0	0	0	0	1	1	1	1	0	0	0	4
02:30	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
02:45	0	0	0	0	0	0	0	0	4	3	2	0	0	0	9
03:00	0	0	0	0	0	1	0	0	1	1	2	1	0	0	6
Hour Total	0	0	0	0	0	1	1	2	6	5	5	1	0	0	21
03:15	0	0	0	0	0	0	0	0	3	7	3	0	0	0	13
03:30	0	0	0	0	0	0	0	0	4	3	1	1	0	0	9
03:45	0	0	0	0	0	0	0	1	8	5	6	5	0	0	25
04:00	0	0	0	0	0	0	1	0	1	4	7	2	0	1	16
Hour Total	0	0	0	0	0	0	1	1	16	19	17	8	0	1	63
04:15	0	0	0	0	0	0	1	1	1	11	16	2	0	0	32
04:30	0	0	0	0	1	0	0	1	3	13	21	7	1	0	47
04:45	1	0	0	0	0	0	0	2	3	25	25	8	0	0	64
05:00	0	0	0	0	0	0	0	0	4	23	20	6	0	0	53
Hour Total	1	0	0	0	1	0	1	4	11	72	82	23	1	0	196
05:15	0	0	0	0	0	0	0	2	7	30	22	18	3	1	83
05:30	0	0	0	0	0	0	0	1	5	42	47	16	0	1	112
05:45	0	0	0	0	0	0	0	0	3	46	45	17	6	0	117
06:00	0	0	0	0	0	0	0	0	8	39	27	11	1	0	86
Hour Total	0	0	0	0	0	0	0	3	23	157	141	62	10	2	398
06:15	0	0	0	0	0	0	0	2	17	46	44	10	2	0	121
06:30	0	0	0	0	0	0	1	4	12	55	41	8	0	0	121
06:45	0	0	0	0	0	0	0	1	14	51	55	17	5	0	143
07:00	0	0	0	0	0	0	0	0	10	72	35	19	1	0	137
Hour Total	0	0	0	0	0	0	1	7	53	224	175	54	8	0	522
07:15	0	0	0	0	0	0	0	3	6	69	71	8	3	0	160
07:30	0	0	0	0	0	0	0	7	20	64	42	20	2	0	155
07:45	0	0	0	0	0	0	15	20	22	70	44	7	0	0	178
08:00	0	0	0	0	0	0	1	4	27	49	34	11	4	0	130
Hour Total	0	0	0	0	0	0	16	34	75	252	191	46	9	0	623
08:15	0	0	0	0	0	0	0	3	9	29	46	9	2	0	98
08:30	0	0	0	0	0	1	0	2	17	42	35	9	1	1	108
08:45	0	0	0	0	0	0	0	2	14	53	36	14	3	0	122
09:00	0	0	0	0	0	0	0	1	17	52	29	4	0	0	103

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002006.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	0	1	0	8	57	176	146	36	6	1	431
09:15	1	0	0	0	0	0	2	3	13	39	19	7	0	0	84
09:30	0	0	0	1	0	0	1	8	9	36	31	7	0	0	93
09:45	0	0	0	0	0	0	1	7	15	31	14	4	1	0	73
10:00	0	0	0	0	0	0	0	3	10	29	23	5	0	0	70
Hour Total	1	0	0	1	0	0	4	21	47	135	87	23	1	0	320
10:15	0	0	0	0	0	0	1	2	18	30	23	3	0	0	77
10:30	0	0	0	0	0	0	2	1	14	34	22	5	0	0	78
10:45	0	0	0	0	0	0	0	2	15	32	24	7	1	0	81
11:00	0	0	0	0	0	0	3	2	16	34	19	4	1	0	79
Hour Total	0	0	0	0	0	0	6	7	63	130	88	19	2	0	315
11:15	1	0	0	0	0	1	0	6	13	24	27	8	1	0	81
11:30	0	0	0	0	0	1	0	4	22	22	18	2	0	0	69
11:45	0	0	0	0	0	2	2	3	14	34	23	2	1	0	81
12:00	0	0	0	0	0	0	3	6	20	25	16	6	1	0	77
Hour Total	1	0	0	0	0	4	5	19	69	105	84	18	3	0	308
12:15	0	0	0	0	0	0	1	8	12	39	21	7	1	0	89
12:30	1	0	0	0	0	0	0	3	12	27	26	2	0	0	71
12:45	0	0	0	0	0	0	1	7	16	29	17	10	0	0	80
13:00	0	0	0	0	0	1	1	4	12	28	25	6	1	0	78
Hour Total	1	0	0	0	0	1	3	22	52	123	89	25	2	0	318
13:15	0	0	1	0	0	0	0	7	12	23	18	8	0	0	69
13:30	0	0	0	0	0	0	0	5	20	37	17	5	0	0	84
13:45	0	0	0	0	0	0	0	7	21	30	13	4	0	0	75
14:00	0	0	1	0	0	0	2	7	6	28	25	2	0	0	71
Hour Total	0	0	2	0	0	0	2	26	59	118	73	19	0	0	299
14:15	0	0	0	0	0	0	0	4	20	29	18	5	0	0	76
14:30	0	0	0	0	1	0	0	5	12	27	19	7	1	0	72
14:45	0	0	0	0	0	0	2	4	13	33	45	6	1	0	104
15:00	0	0	0	0	0	0	1	4	13	27	20	7	0	0	72
Hour Total	0	0	0	0	1	0	3	17	58	116	102	25	2	0	324
15:15	0	0	0	0	0	1	0	7	11	17	26	7	1	0	70
15:30	0	0	0	0	0	0	1	3	11	32	35	13	1	0	96
15:45	0	0	0	0	0	0	0	0	10	45	24	10	0	0	89
16:00	0	0	0	0	0	0	1	4	21	47	20	8	1	2	104
Hour Total	0	0	0	0	0	1	2	14	53	141	105	38	3	2	359
16:15	0	0	0	1	0	3	4	3	9	20	26	12	0	1	79
16:30	0	0	0	0	0	0	1	3	12	35	43	10	1	0	105
16:45	0	0	0	0	0	2	0	3	13	38	28	12	0	0	96
17:00	0	0	0	0	0	0	1	1	7	39	30	17	5	0	100
Hour Total	0	0	0	1	0	5	6	10	41	132	127	51	6	1	380

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002006.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	0	5	8	10	47	26	14	1	0	111
17:30	0	0	0	0	0	0	0	0	14	53	38	9	1	1	116
17:45	0	0	0	0	0	0	0	2	7	37	34	8	0	0	88
18:00	0	0	0	0	0	0	0	0	8	39	40	13	1	1	102
Hour Total	0	0	0	0	0	0	5	10	39	176	138	44	3	2	417
18:15	0	0	0	0	0	0	0	2	25	30	17	7	0	0	81
18:30	0	0	0	0	0	0	0	5	11	31	30	3	0	0	80
18:45	0	0	0	0	0	0	1	4	13	42	12	7	2	0	81
19:00	0	0	0	0	0	0	1	0	10	20	16	4	0	0	51
Hour Total	0	0	0	0	0	0	2	11	59	123	75	21	2	0	293
19:15	0	0	0	0	0	0	0	2	12	30	15	4	1	0	64
19:30	0	0	0	0	0	1	0	2	16	18	18	4	0	0	59
19:45	0	0	0	0	0	0	0	4	6	27	12	2	0	0	51
20:00	0	0	0	0	0	0	4	5	9	21	6	4	0	0	49
Hour Total	0	0	0	0	0	1	4	13	43	96	51	14	1	0	223
20:15	0	0	0	0	0	0	1	3	9	22	9	3	0	0	47
20:30	0	0	0	0	0	0	0	0	5	22	9	4	0	0	40
20:45	0	0	0	0	0	0	1	0	5	13	13	2	0	0	34
21:00	0	0	0	0	0	0	0	0	12	14	9	0	0	0	35
Hour Total	0	0	0	0	0	0	2	3	31	71	40	9	0	0	156
21:15	0	0	0	0	0	0	0	3	6	16	7	3	0	0	35
21:30	0	0	0	0	0	0	0	2	7	14	7	1	0	0	31
21:45	0	0	0	0	0	0	2	0	7	18	10	1	0	0	38
22:00	0	0	0	0	0	0	1	0	2	6	5	4	0	0	18
Hour Total	0	0	0	0	0	0	3	5	22	54	29	9	0	0	122
22:15	0	0	0	0	0	0	0	2	6	11	12	1	0	0	32
22:30	0	0	0	0	0	0	0	1	4	8	11	3	1	0	28
22:45	0	0	0	0	0	0	1	1	2	10	3	3	0	0	20
23:00	0	0	0	0	0	0	0	4	3	4	6	3	0	0	20
Hour Total	0	0	0	0	0	0	1	8	15	33	32	10	1	0	100
23:15	0	0	0	0	0	1	0	2	3	4	1	2	0	0	13
23:30	0	0	0	0	0	0	1	0	4	3	2	2	0	0	12
23:45	0	0	0	0	0	0	0	0	3	4	2	3	0	1	13
24:00	0	0	0	0	0	0	0	0	2	3	1	1	0	0	7
Hour Total	0	0	0	0	0	1	1	2	12	14	6	8	0	1	45
DAY TOTAL	4	0	2	2	2	15	71	248	916	2487	1887	567	60	10	6271
PERCENTS	0.1%	0.0%	0.1%	0.1%	0.1%	0.3%	1.2%	3.9%	14.6%	39.6%	30.0%	9.0%	0.9%	0.1%	100%

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002006.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
48.3 mph

85th Percentile Speed
59.2 mph

Median Speed
53.8 mph

Average Speed
53.7 mph

10 MPH Pace Speed
50 mph to 60 mph
4374 vehicles in pace
Representing 69.7% of the total vehicles

Vehicles > 55 MPH
2524
40.2%

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002006.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	2	4	1	0	0	0	7
00:30	0	0	0	0	0	0	0	1	0	1	3	1	0	0	6
00:45	0	0	0	0	0	0	1	0	0	4	0	1	0	0	6
01:00	0	0	0	0	0	0	0	0	4	1	2	0	0	0	7
Hour Total	0	0	0	0	0	0	1	1	6	10	6	2	0	0	26
01:15	0	0	0	0	0	0	0	1	4	1	0	0	0	0	6
01:30	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
01:45	0	0	0	0	0	0	0	1	2	0	3	0	0	0	6
02:00	0	0	0	0	0	0	0	1	1	3	1	0	0	0	6
Hour Total	0	0	0	0	0	0	0	3	9	4	4	0	0	0	20
02:15	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3
02:30	0	0	0	0	0	0	0	0	2	1	2	0	0	0	5
02:45	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3
03:00	0	0	0	0	0	0	0	1	4	2	1	0	0	0	8
Hour Total	0	0	0	0	0	0	0	1	7	5	5	1	0	0	19
03:15	0	0	0	0	0	0	0	4	1	3	3	0	0	0	11
03:30	0	0	0	0	0	0	1	0	2	3	4	0	1	0	11
03:45	0	0	0	0	0	0	0	2	7	5	3	2	1	0	20
04:00	0	0	0	0	0	0	0	0	8	5	3	5	0	0	21
Hour Total	0	0	0	0	0	0	1	6	18	16	13	7	2	0	63
04:15	0	0	0	0	0	0	0	3	3	8	14	6	0	0	34
04:30	0	0	0	0	0	0	1	0	1	19	15	7	0	0	43
04:45	0	0	0	0	0	0	1	2	7	25	22	13	0	0	70
05:00	0	0	0	0	0	0	0	0	8	25	21	8	1	0	63
Hour Total	0	0	0	0	0	0	2	5	19	77	72	34	1	0	210
05:15	0	0	0	0	0	0	0	1	7	18	33	12	1	0	72
05:30	0	0	0	0	0	0	0	1	4	44	39	14	1	0	103
05:45	0	0	0	0	0	0	0	3	4	41	62	14	5	1	130
06:00	0	0	0	0	0	0	1	2	16	46	37	16	1	0	119
Hour Total	0	0	0	0	0	0	1	7	31	149	171	56	8	1	424
06:15	0	0	0	0	0	0	0	4	12	36	43	22	0	0	117
06:30	0	0	0	0	0	0	0	5	10	42	50	11	0	0	118
06:45	1	0	0	0	0	0	0	5	20	45	42	20	2	0	135
07:00	0	0	0	0	0	0	0	1	21	56	43	8	1	2	132
Hour Total	1	0	0	0	0	0	0	15	63	179	178	61	3	2	502
07:15	0	0	0	0	0	0	0	7	22	59	51	16	3	0	158
07:30	0	0	0	0	0	0	0	9	29	46	31	27	5	0	147
07:45	0	0	0	0	0	0	3	16	30	45	59	17	0	1	171
08:00	1	0	0	0	0	0	0	2	18	56	29	12	3	0	121
Hour Total	1	0	0	0	0	0	3	34	99	206	170	72	11	1	597
08:15	0	0	0	0	0	0	1	3	9	56	32	9	1	0	111
08:30	0	0	0	0	0	0	1	1	13	38	26	18	2	0	99
08:45	0	0	0	0	0	0	1	6	10	31	40	12	1	0	101
09:00	0	0	0	0	0	0	0	3	16	31	34	9	0	1	94

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002006.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	0	0	3	13	48	156	132	48	4	1	405
09:15	0	0	0	0	0	0	0	2	10	33	36	15	0	0	96
09:30	0	0	0	0	0	0	0	3	8	29	28	6	0	0	74
09:45	0	0	0	0	0	0	0	3	15	19	26	3	0	0	66
10:00	0	0	0	0	0	0	0	4	5	28	26	6	1	0	70
Hour Total	0	0	0	0	0	0	0	12	38	109	116	30	1	0	306
10:15	0	0	0	0	0	0	0	8	25	27	18	3	0	0	81
10:30	0	0	0	0	0	0	1	6	12	31	27	7	0	0	84
10:45	0	0	0	0	0	0	2	8	15	27	19	6	0	0	77
11:00	0	0	0	1	0	0	2	9	14	38	19	7	1	0	91
Hour Total	0	0	0	1	0	0	5	31	66	123	83	23	1	0	333
11:15	0	0	0	0	0	0	3	11	11	24	21	2	2	0	74
11:30	0	0	0	0	0	0	0	3	10	27	26	5	2	0	73
11:45	0	0	0	0	0	0	0	7	14	26	20	2	0	0	69
12:00	0	0	0	0	0	0	1	0	17	27	23	2	1	0	71
Hour Total	0	0	0	0	0	0	4	21	52	104	90	11	5	0	287
12:15	0	0	0	0	0	0	0	5	15	37	30	3	0	0	90
12:30	0	0	0	0	0	0	0	5	10	31	19	9	1	0	75
12:45	0	0	0	0	0	0	1	11	8	28	24	5	0	0	77
13:00	0	0	0	0	0	0	0	3	14	26	26	7	2	0	78
Hour Total	0	0	0	0	0	0	1	24	47	122	99	24	3	0	320
13:15	0	0	0	0	0	0	0	5	20	21	16	9	0	1	72
13:30	0	0	0	1	0	0	0	3	20	27	19	6	2	0	78
13:45	0	0	0	0	0	0	2	7	13	25	18	9	1	0	75
14:00	0	0	1	0	0	0	0	3	11	31	23	5	2	0	76
Hour Total	0	0	1	1	0	0	2	18	64	104	76	29	5	1	301
14:15	0	0	0	0	0	0	1	3	13	30	34	5	0	0	86
14:30	0	0	0	0	0	0	0	2	18	29	23	9	1	0	82
14:45	0	0	0	0	0	0	1	5	5	33	41	10	0	0	95
15:00	0	0	0	0	0	0	1	2	5	27	36	6	1	1	79
Hour Total	0	0	0	0	0	0	3	12	41	119	134	30	2	1	342
15:15	0	1	0	0	0	1	1	4	11	25	31	8	0	0	82
15:30	0	0	0	0	0	0	0	2	14	27	35	11	0	0	89
15:45	0	0	0	0	0	0	1	2	10	29	33	10	0	0	85
16:00	0	0	0	0	0	0	1	5	15	29	29	10	1	1	91
Hour Total	0	1	0	0	0	1	3	13	50	110	128	39	1	1	347
16:15	0	0	0	0	0	3	2	3	11	30	22	10	0	1	82
16:30	0	0	0	0	0	0	0	3	20	28	33	17	2	0	103
16:45	0	0	0	0	1	1	0	1	20	41	33	5	0	0	102
17:00	1	0	0	0	0	0	0	5	12	47	30	4	3	1	103
Hour Total	1	0	0	0	1	4	2	12	63	146	118	36	5	2	390

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002006.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	0	0	2	13	46	32	14	0	0	107
17:30	0	0	0	0	0	0	0	3	12	35	43	10	3	0	106
17:45	0	0	0	0	0	0	0	2	18	40	38	15	0	0	113
18:00	0	0	0	0	0	0	0	2	15	32	24	15	2	0	90
Hour Total	0	0	0	0	0	0	0	9	58	153	137	54	5	0	416
18:15	0	0	0	0	0	0	1	3	11	35	26	11	1	0	88
18:30	0	0	0	0	0	0	2	0	13	34	18	8	0	0	75
18:45	0	0	0	0	0	0	0	0	16	36	28	6	1	0	87
19:00	0	0	0	0	0	0	0	5	15	27	25	3	0	0	75
Hour Total	0	0	0	0	0	0	3	8	55	132	97	28	2	0	325
19:15	0	0	0	0	0	0	1	2	7	20	23	5	1	0	59
19:30	0	0	0	0	0	0	0	4	14	29	12	5	1	0	65
19:45	0	0	0	0	0	0	2	2	13	26	15	3	0	0	61
20:00	0	0	0	0	0	0	0	5	10	19	16	3	0	0	53
Hour Total	0	0	0	0	0	0	3	13	44	94	66	16	2	0	238
20:15	0	0	0	0	0	0	0	0	8	21	13	3	0	1	46
20:30	0	0	0	0	0	0	0	5	7	12	13	5	2	0	44
20:45	0	0	0	0	1	0	2	2	7	13	13	1	1	0	40
21:00	0	0	0	0	0	0	0	2	9	9	13	4	0	0	37
Hour Total	0	0	0	0	1	0	2	9	31	55	52	13	3	1	167
21:15	0	0	0	0	0	0	0	4	13	14	9	3	0	0	43
21:30	0	0	0	0	0	0	0	0	6	12	10	4	1	0	33
21:45	0	0	0	0	0	0	0	1	4	15	11	3	0	0	34
22:00	0	0	0	0	0	0	0	1	3	8	4	0	0	0	16
Hour Total	0	0	0	0	0	0	0	6	26	49	34	10	1	0	126
22:15	0	0	0	0	0	2	0	1	5	9	9	2	0	0	28
22:30	0	0	0	0	1	0	0	2	9	10	8	3	0	0	33
22:45	0	0	0	0	0	0	0	0	1	10	8	1	0	0	20
23:00	0	0	0	0	0	0	0	0	2	7	1	0	0	0	10
Hour Total	0	0	0	0	1	2	0	3	17	36	26	6	0	0	91
23:15	0	0	0	0	0	0	0	0	1	4	1	0	0	0	6
23:30	0	0	0	0	0	0	0	1	1	3	3	1	0	0	9
23:45	0	0	0	0	0	0	0	0	2	3	3	1	0	0	9
24:00	0	0	0	0	0	0	0	2	0	4	2	0	0	0	8
Hour Total	0	0	0	0	0	0	0	3	4	14	9	2	0	0	32
DAY TOTAL	3	1	1	2	3	7	39	279	956	2272	2016	632	65	11	6287
PERCENTS	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.6%	4.4%	15.2%	36.1%	32.0%	10.0%	1.0%	0.1%	100%

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002006.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
48.2 mph

85th Percentile Speed
59.4 mph

Median Speed
54.1 mph

Average Speed
53.9 mph

10 MPH Pace Speed
50 mph to 60 mph
4288 vehicles in pace
Representing 68.2% of the total vehicles

Vehicles > 55 MPH
2724
43.3%

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002006.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	0	2	0	1	0	0	3
00:30	0	0	0	0	0	0	0	0	0	1	4	0	0	0	5
00:45	0	0	0	0	0	0	0	0	1	2	1	0	0	0	4
01:00	0	0	0	0	0	0	0	0	2	7	1	1	0	1	12
Hour Total	0	0	0	0	0	0	0	0	3	12	6	2	0	1	24
01:15	0	0	0	0	0	0	0	0	1	2	1	1	0	0	5
01:30	0	0	0	0	0	0	0	1	1	0	2	0	2	0	6
01:45	0	0	0	0	0	0	0	0	4	3	0	1	0	0	8
02:00	0	0	0	0	0	0	1	0	0	4	1	1	0	0	7
Hour Total	0	0	0	0	0	0	1	1	6	9	4	3	2	0	26
02:15	0	0	0	0	0	0	0	0	2	2	1	1	0	0	6
02:30	0	0	0	0	0	0	0	1	4	3	0	0	0	0	8
02:45	0	0	0	0	0	0	1	0	1	3	4	1	0	0	10
03:00	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3
Hour Total	0	0	0	0	0	0	1	1	8	10	5	2	0	0	27
03:15	0	0	0	0	0	0	0	1	2	5	0	0	0	0	8
03:30	0	0	0	0	0	0	0	0	3	6	2	0	0	0	11
03:45	0	0	0	0	0	0	0	0	4	6	3	5	0	0	18
04:00	0	0	0	0	0	0	0	0	1	6	6	3	0	0	16
Hour Total	0	0	0	0	0	0	0	1	10	23	11	8	0	0	53
04:15	0	0	0	0	0	0	0	0	4	17	9	3	1	1	35
04:30	0	0	0	0	0	0	0	3	5	15	19	9	1	1	53
04:45	0	0	0	0	0	0	0	2	2	20	35	12	0	0	71
05:00	0	0	0	0	0	0	0	1	3	26	29	4	1	0	64
Hour Total	0	0	0	0	0	0	0	6	14	78	92	28	3	2	223
05:15	0	0	0	0	0	0	0	1	4	25	34	10	3	1	78
05:30	0	0	0	0	0	0	0	1	4	26	41	18	2	0	92
05:45	0	0	0	0	0	0	0	0	13	39	47	12	1	0	112
06:00	0	0	0	0	0	0	0	2	10	44	40	10	1	0	107
Hour Total	0	0	0	0	0	0	0	4	31	134	162	50	7	1	389
06:15	1	0	0	0	0	0	0	3	10	47	50	12	1	0	124
06:30	0	0	0	0	0	0	1	0	17	46	44	10	3	0	121
06:45	0	0	0	0	0	0	0	1	13	58	47	10	2	0	131
07:00	0	0	0	0	0	0	1	1	12	60	44	16	1	1	136
Hour Total	1	0	0	0	0	0	2	5	52	211	185	48	7	1	512
07:15	0	0	0	0	0	0	3	1	11	58	50	22	3	0	148
07:30	0	0	0	0	0	0	0	3	26	49	45	23	7	0	153
07:45	0	0	0	0	0	0	7	8	19	51	55	19	1	0	160
08:00	0	0	0	0	0	0	0	2	7	41	49	12	2	0	113
Hour Total	0	0	0	0	0	0	10	14	63	199	199	76	13	0	574
08:15	0	0	0	0	0	0	4	4	18	37	38	10	0	1	112
08:30	0	0	0	0	0	0	1	6	15	38	37	15	1	0	113
08:45	0	0	0	0	0	0	1	2	19	41	44	12	0	0	119
09:00	0	0	0	0	0	0	2	6	11	38	33	16	0	0	106

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002006.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	0	0	8	18	63	154	152	53	1	1	450
09:15	0	0	0	0	0	0	2	1	10	32	36	6	0	0	87
09:30	0	0	0	0	0	0	0	9	16	27	30	7	0	0	89
09:45	0	0	0	0	0	0	0	2	16	38	28	4	0	0	88
10:00	0	0	0	0	0	0	4	5	11	26	27	6	2	0	81
Hour Total	0	0	0	0	0	0	6	17	53	123	121	23	2	0	345
10:15	0	0	0	0	0	0	2	7	10	28	18	7	1	0	73
10:30	0	0	0	0	0	0	1	0	12	31	15	15	0	0	74
10:45	0	0	0	0	0	0	0	7	10	17	23	13	0	0	70
11:00	0	0	0	0	0	0	1	13	11	26	18	1	0	0	70
Hour Total	0	0	0	0	0	0	4	27	43	102	74	36	1	0	287
11:15	0	0	0	0	0	0	0	14	12	14	18	9	1	0	68
11:30	0	0	0	0	0	0	0	9	17	25	26	5	0	0	82
11:45	0	0	0	0	0	0	2	5	26	25	25	9	0	0	92
12:00	0	0	0	0	0	0	0	4	9	35	14	4	0	1	67
Hour Total	0	0	0	0	0	0	2	32	64	99	83	27	1	1	309
12:15	0	0	0	0	0	0	0	6	14	37	13	0	1	0	71
12:30	0	0	0	0	0	0	0	6	9	17	32	8	1	0	73
12:45	0	0	0	0	0	0	1	2	12	26	13	4	2	0	60
13:00	0	0	0	0	0	0	0	9	13	26	20	11	0	0	79
Hour Total	0	0	0	0	0	0	1	23	48	106	78	23	4	0	283
13:15	0	0	0	0	0	1	2	4	7	28	22	9	2	0	75
13:30	0	0	0	0	0	0	0	6	15	24	24	6	0	0	75
13:45	0	0	0	0	0	0	1	7	6	32	26	14	0	0	86
14:00	0	0	0	0	0	0	1	4	16	28	28	9	2	1	89
Hour Total	0	0	0	0	0	1	4	21	44	112	100	38	4	1	325
14:15	0	0	0	0	0	0	0	3	7	32	22	14	1	0	79
14:30	0	1	1	0	0	1	0	4	17	30	32	8	0	0	94
14:45	0	0	0	0	0	0	3	4	1	26	25	8	1	0	68
15:00	0	1	0	0	0	0	0	1	12	22	26	11	3	0	76
Hour Total	0	2	1	0	0	1	3	12	37	110	105	41	5	0	317
15:15	0	0	0	0	0	0	0	7	12	23	28	13	1	0	84
15:30	0	0	0	0	0	0	2	3	17	26	26	7	0	0	81
15:45	0	0	0	0	1	0	1	4	14	29	29	7	2	0	87
16:00	0	0	0	1	0	0	0	5	13	30	31	8	0	1	89
Hour Total	0	0	0	1	1	0	3	19	56	108	114	35	3	1	341
16:15	1	0	0	0	1	8	1	5	7	29	31	17	1	1	102
16:30	0	0	0	0	0	1	0	3	13	37	35	14	1	0	104
16:45	0	0	0	0	0	0	1	3	16	32	33	10	2	0	97
17:00	0	0	0	0	0	0	1	4	12	33	32	15	2	0	99
Hour Total	1	0	0	0	1	9	3	15	48	131	131	56	6	1	402

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002006.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	0	0	2	14	48	38	17	0	0	119
17:30	0	0	0	0	0	0	1	5	8	33	39	19	6	1	112
17:45	0	0	0	1	0	0	0	0	19	59	38	7	1	0	125
18:00	0	0	0	0	0	0	0	2	21	37	33	5	0	0	98
Hour Total	0	0	0	1	0	0	1	9	62	177	148	48	7	1	454
18:15	0	0	0	0	0	0	1	9	21	27	27	5	3	0	93
18:30	0	0	0	0	0	1	0	4	14	31	26	7	0	1	84
18:45	0	0	0	0	0	0	4	4	13	31	21	11	1	0	85
19:00	0	0	0	0	0	0	1	5	14	22	19	3	0	0	64
Hour Total	0	0	0	0	0	1	6	22	62	111	93	26	4	1	326
19:15	0	0	0	0	0	0	2	6	15	25	12	4	1	0	65
19:30	0	0	0	0	0	1	1	3	16	18	16	5	1	0	61
19:45	1	0	0	0	0	0	0	2	13	22	17	2	0	0	57
20:00	0	0	0	0	0	0	0	6	8	18	20	6	0	1	59
Hour Total	1	0	0	0	0	1	3	17	52	83	65	17	2	1	242
20:15	0	0	0	0	0	0	0	0	10	16	13	3	1	0	43
20:30	0	0	0	0	0	0	0	1	12	28	17	8	0	0	66
20:45	0	1	0	0	0	0	0	1	7	22	5	3	0	0	39
21:00	0	0	0	0	1	0	0	1	5	13	15	3	1	0	39
Hour Total	0	1	0	0	1	0	0	3	34	79	50	17	2	0	187
21:15	0	0	0	0	0	0	0	1	8	16	15	3	0	0	43
21:30	0	0	0	0	0	0	0	1	5	14	12	1	1	0	34
21:45	0	0	0	0	0	0	0	2	7	4	14	2	0	0	29
22:00	0	0	0	0	0	0	3	3	4	12	13	1	2	0	38
Hour Total	0	0	0	0	0	0	3	7	24	46	54	7	3	0	144
22:15	0	0	0	0	0	0	0	0	4	17	10	2	0	0	33
22:30	0	0	0	0	0	0	0	1	8	7	18	6	1	0	41
22:45	0	0	0	0	0	1	0	1	4	12	9	1	0	0	28
23:00	0	0	0	0	0	0	0	1	4	4	2	2	1	0	14
Hour Total	0	0	0	0	0	1	0	3	20	40	39	11	2	0	116
23:15	0	0	0	0	0	0	0	2	4	5	2	0	0	0	13
23:30	0	0	0	0	0	0	0	0	2	8	7	1	0	0	18
23:45	0	0	0	0	0	0	0	1	2	8	4	1	0	0	16
24:00	0	0	0	0	0	0	0	2	1	4	3	2	0	0	12
Hour Total	0	0	0	0	0	0	0	5	9	25	16	4	0	0	59
DAY TOTAL	3	3	1	2	3	14	61	282	906	2282	2087	679	79	13	6415
PERCENTS	0.1%	0.1%	0.1%	0.1%	0.1%	0.3%	0.9%	4.3%	14.1%	35.5%	32.5%	10.5%	1.2%	0.2%	100%

Station #: Site B-NBO
Site ID: 000000003558
Location: Carrollton, btw Brewers Neck & Northgate
Direction: NORTH
Lane: 1

File: D1002006.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
GRAND TOTAL	10	4	8	171	2778	5990	204	4	6	36	809	7041	1878	34	18973
PERCENTS	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	1.0%	4.2%	14.6%	37.1%	31.5%	9.8%	1.0%	0.1%	100%

Statistical Information...

15th Percentile Speed
48.3 mph

85th Percentile Speed
59.6 mph

Median Speed
54.2 mph

Average Speed
54.0 mph

10 MPH Pace Speed
50 mph to 60 mph
4369 vehicles in pace
Representing 68.1% of the total vehicles

Vehicles > 55 MPH
2858
44.6%

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002007.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	3
00:30	0	11	3	0	0	0	0	0	0	0	0	0	0	0	0	14
00:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
01:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	15	4	0	1	0	0	1	0	0	0	0	0	0	0	21
01:15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
02:15	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
02:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	3
Hour Total	0	3	1	0	0	0	0	2	0	0	0	0	0	0	0	6
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	2	1	0	0	0	0	1	0	0	0	0	0	0	0	4
Hour Total	0	2	1	0	0	0	0	2	0	0	0	0	0	0	0	5
04:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
05:00	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	9
Hour Total	0	10	6	0	0	0	0	0	0	0	0	0	0	0	0	16
05:15	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	9
05:30	0	18	2	0	0	0	0	1	0	0	0	0	0	0	0	21
05:45	0	10	10	0	1	0	0	0	0	0	0	0	0	0	0	21
06:00	0	11	5	0	0	0	0	1	0	0	0	0	0	0	0	17
Hour Total	0	45	20	0	1	0	0	2	0	0	0	0	0	0	0	68
06:15	0	21	6	0	1	0	0	0	0	0	0	0	0	0	0	28
06:30	0	31	5	0	1	0	0	1	0	0	0	0	0	0	0	38
06:45	0	38	13	0	0	0	0	0	0	0	0	0	0	0	0	51
07:00	0	47	10	0	0	0	0	0	0	0	0	0	0	0	0	57
Hour Total	0	137	34	0	2	0	0	1	0	0	0	0	0	0	0	174
07:15	0	43	7	0	0	0	0	1	0	0	0	0	0	0	0	51
07:30	0	43	18	0	1	0	0	1	0	0	0	0	0	0	0	63
07:45	0	44	8	0	0	0	0	0	0	0	0	0	0	0	0	52
08:00	0	39	12	0	0	0	0	0	0	0	0	0	0	0	0	51
Hour Total	0	169	45	0	1	0	0	2	0	0	0	0	0	0	0	217
08:15	0	44	9	0	1	0	0	1	0	0	0	0	0	0	0	55
08:30	0	36	14	1	0	0	0	0	0	0	0	0	0	0	0	51
08:45	0	47	11	1	2	0	0	0	0	0	0	0	0	0	0	61
09:00	0	38	6	0	0	0	0	1	0	0	0	0	0	0	0	45

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002007.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	165	40	2	3	0	0	2	0	0	0	0	0	0	0	212
09:15	0	27	14	0	1	0	0	2	0	0	0	0	0	0	0	44
09:30	0	42	13	0	0	0	0	2	0	0	0	0	0	0	0	57
09:45	0	33	8	0	0	0	0	0	0	0	0	0	0	0	0	41
10:00	0	25	8	0	0	0	0	1	0	0	0	0	0	0	0	34
Hour Total	0	127	43	0	1	0	0	5	0	0	0	0	0	0	0	176
10:15	0	26	5	0	0	0	0	0	0	0	0	0	0	0	0	31
10:30	0	17	11	0	0	0	0	0	0	0	0	0	0	0	0	28
10:45	0	28	5	0	1	0	0	0	0	0	0	0	0	0	0	34
11:00	0	26	9	0	0	0	0	2	0	0	0	0	0	0	0	37
Hour Total	0	97	30	0	1	0	0	2	0	0	0	0	0	0	0	130
11:15	0	21	8	0	0	0	0	0	0	0	0	0	0	0	0	29
11:30	0	22	12	0	0	0	0	0	0	0	0	0	0	0	0	34
11:45	0	25	9	0	1	0	0	1	0	0	0	0	0	0	0	36
12:00	0	26	13	0	1	0	0	1	0	0	0	0	0	0	0	41
Hour Total	0	94	42	0	2	0	0	2	0	0	0	0	0	0	0	140
12:15	0	26	12	0	1	0	0	0	0	0	0	0	0	0	0	39
12:30	0	34	13	0	0	0	0	0	0	0	0	0	0	0	0	47
12:45	0	42	14	0	1	0	0	0	0	0	0	0	0	0	0	57
13:00	0	34	15	0	0	0	0	0	0	0	0	0	0	0	0	49
Hour Total	0	136	54	0	2	0	0	0	0	0	0	0	0	0	0	192
13:15	0	36	14	0	0	0	0	1	0	0	0	0	0	0	0	51
13:30	0	38	6	0	0	0	0	0	0	0	0	0	0	0	0	44
13:45	0	41	17	0	0	0	0	0	0	0	0	0	0	0	0	58
14:00	0	38	20	0	2	0	0	1	0	0	0	0	0	0	0	61
Hour Total	0	153	57	0	2	0	0	2	0	0	0	0	0	0	0	214
14:15	0	30	15	0	1	0	0	0	0	0	0	0	0	0	0	46
14:30	0	44	15	1	0	0	0	0	0	0	0	0	0	0	0	60
14:45	0	46	16	0	0	0	0	1	0	0	0	0	0	0	0	63
15:00	1	46	13	0	1	0	0	0	0	0	0	0	0	0	0	61
Hour Total	1	166	59	1	2	0	0	1	0	0	0	0	0	0	0	230
15:15	0	60	20	0	2	0	0	1	0	0	0	0	0	0	0	83
15:30	0	68	25	1	2	0	0	0	0	0	0	0	0	0	0	96
15:45	0	71	27	0	1	0	0	0	0	0	0	0	0	0	0	99
16:00	0	91	33	0	1	0	0	0	0	0	0	0	0	0	0	125
Hour Total	0	290	105	1	6	0	0	1	0	0	0	0	0	0	0	403
16:15	0	100	42	0	3	0	0	0	0	0	0	0	0	0	0	145
16:30	0	100	28	0	1	0	0	1	0	0	0	0	0	0	0	130
16:45	0	106	23	0	2	0	0	2	0	0	1	0	0	0	0	134
17:00	0	87	32	0	1	0	0	0	0	0	0	0	0	0	0	120
Hour Total	0	393	125	0	7	0	0	3	0	0	1	0	0	0	0	529

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002007.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	85	26	0	3	0	0	0	0	0	0	0	0	0	0	114
17:30	0	87	30	0	1	0	0	0	0	0	0	0	0	0	0	118
17:45	0	99	29	0	1	0	0	0	0	0	0	0	0	0	0	129
18:00	0	71	23	0	0	0	0	0	0	0	0	0	0	0	0	94
Hour Total	0	342	108	0	5	0	0	0	0	0	0	0	0	0	0	455
18:15	0	65	12	0	0	0	0	0	0	0	0	0	0	0	0	77
18:30	0	58	12	0	0	0	0	0	0	0	0	0	0	0	0	70
18:45	0	52	13	0	0	0	0	1	0	0	0	0	0	0	0	66
19:00	0	44	10	0	0	0	0	0	0	0	0	0	0	0	0	54
Hour Total	0	219	47	0	0	0	0	1	0	0	0	0	0	0	0	267
19:15	0	46	8	0	0	0	0	0	0	0	0	0	0	0	0	54
19:30	0	44	15	0	0	0	0	0	0	0	0	0	0	0	0	59
19:45	0	46	7	0	0	0	0	0	0	0	0	0	0	0	0	53
20:00	0	29	9	0	0	0	0	0	0	0	0	0	0	0	0	38
Hour Total	0	165	39	0	0	0	0	0	0	0	0	0	0	0	0	204
20:15	0	22	8	0	0	0	0	2	0	0	0	0	0	0	0	32
20:30	0	28	12	0	0	0	0	0	0	0	0	0	0	0	0	40
20:45	0	32	9	0	0	0	0	0	0	0	0	0	0	0	0	41
21:00	0	31	2	0	0	0	0	0	0	0	0	0	0	0	0	33
Hour Total	0	113	31	0	0	0	0	2	0	0	0	0	0	0	0	146
21:15	0	19	5	0	0	0	0	1	0	0	0	0	0	0	0	25
21:30	0	16	4	0	1	0	0	0	0	0	0	0	0	0	0	21
21:45	0	12	3	0	0	0	0	1	0	0	0	0	0	0	0	16
22:00	0	16	3	0	0	0	0	0	0	0	0	0	0	0	0	19
Hour Total	0	63	15	0	1	0	0	2	0	0	0	0	0	0	0	81
22:15	0	13	1	0	0	0	0	0	0	0	0	0	0	0	0	14
22:30	0	15	3	0	0	0	0	0	0	0	0	0	0	0	0	18
22:45	0	9	2	0	0	0	0	1	0	0	0	0	0	0	0	12
23:00	0	5	0	1	0	0	0	1	0	0	0	0	0	0	0	7
Hour Total	0	42	6	1	0	0	0	2	0	0	0	0	0	0	0	51
23:15	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
23:30	0	5	2	0	0	0	0	1	0	0	0	0	0	0	0	8
23:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
24:00	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
Hour Total	0	23	3	0	0	0	0	1	0	0	0	0	0	0	0	27
DAY TOTAL	1	2976	915	5	37	0	0	36	0	0	1	0	0	0	0	3971
PERCENTS	0.1%	75.0%	23.0%	0.1%	0.9%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 98.0% Trucks & Buses 1.9%

AM Times	07:00	06:45	08:00	05:45				08:45								07:00
AM Peaks	177	48	2	3				5								223
PM Times	14:15	16:00	15:45	13:45	15:30			16:00			16:00					16:00
PM Peaks	1	397	130	1	7			3			1					534

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002007.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
00:30	0	9	3	0	0	0	0	0	0	0	0	0	0	0	0	12
00:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	16	3	0	0	0	0	0	0	0	0	0	0	0	0	19
01:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:30	0	3	2	0	0	0	0	1	0	0	0	0	0	0	0	6
01:45	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	7	2	0	0	0	0	2	0	0	0	0	0	0	0	11
02:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:30	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
03:15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
03:30	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	3
03:45	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	7	1	0	0	0	0	2	0	0	0	0	0	0	0	10
04:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:30	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
04:45	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
05:00	0	4	5	0	0	0	0	0	0	0	0	0	0	0	0	9
Hour Total	0	17	6	0	0	0	0	0	0	0	0	0	0	0	0	23
05:15	0	7	4	0	0	0	0	1	0	0	0	0	0	0	0	12
05:30	0	12	4	0	0	0	0	1	0	0	0	0	0	0	0	17
05:45	0	14	8	0	0	0	0	0	0	0	0	0	0	0	0	22
06:00	0	14	5	0	0	0	0	1	0	0	0	0	0	0	0	20
Hour Total	0	47	21	0	0	0	0	3	0	0	0	0	0	0	0	71
06:15	0	16	3	0	1	0	0	2	0	0	0	0	0	0	0	22
06:30	0	30	11	0	1	0	0	2	0	0	0	0	0	0	0	44
06:45	0	29	8	0	1	0	0	2	0	0	0	0	0	0	0	40
07:00	0	49	11	0	0	0	0	0	0	0	0	0	0	0	0	60
Hour Total	0	124	33	0	3	0	0	6	0	0	0	0	0	0	0	166
07:15	0	44	7	0	0	0	0	0	0	0	0	0	0	0	0	51
07:30	0	43	12	0	1	0	0	0	0	0	0	0	0	0	0	56
07:45	0	38	13	0	0	0	0	0	0	0	0	0	0	0	0	51
08:00	0	56	19	0	0	0	0	0	0	0	0	0	0	0	0	75
Hour Total	0	181	51	0	1	0	0	0	0	0	0	0	0	0	0	233
08:15	0	39	10	0	0	0	0	0	0	0	0	0	0	0	0	49
08:30	0	44	11	0	0	0	0	0	0	0	0	0	0	0	0	55
08:45	0	30	16	0	1	0	0	0	0	0	0	0	0	0	0	47
09:00	0	22	6	0	0	0	0	0	0	0	0	0	0	0	0	28

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002007.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	135	43	0	1	0	0	0	0	0	0	0	0	0	0	179
09:15	0	36	13	0	2	0	0	0	0	0	0	0	0	0	0	51
09:30	0	26	8	0	1	0	0	0	0	0	0	0	0	0	0	35
09:45	0	31	8	0	3	0	0	1	0	0	0	0	0	0	0	43
10:00	0	17	13	0	0	0	0	0	0	0	0	0	0	0	0	30
Hour Total	0	110	42	0	6	0	0	1	0	0	0	0	0	0	0	159
10:15	0	28	7	0	1	0	0	0	0	0	0	0	0	0	0	36
10:30	0	20	13	0	0	0	0	0	0	0	0	0	0	0	0	33
10:45	1	26	8	0	1	0	0	0	0	0	0	0	0	0	0	36
11:00	0	28	8	0	1	0	0	0	0	0	0	0	0	0	0	37
Hour Total	1	102	36	0	3	0	0	0	0	0	0	0	0	0	0	142
11:15	0	41	16	0	0	0	0	1	0	0	0	0	0	0	0	58
11:30	0	41	9	0	1	0	0	0	0	0	0	0	0	0	0	51
11:45	0	33	13	0	0	0	0	2	0	0	0	0	0	0	0	48
12:00	0	25	3	0	0	0	0	2	0	0	0	0	0	0	0	30
Hour Total	0	140	41	0	1	0	0	5	0	0	0	0	0	0	0	187
12:15	0	29	7	0	0	0	0	1	0	0	0	0	0	0	0	37
12:30	0	31	24	0	3	0	0	0	0	0	0	0	0	0	0	58
12:45	0	30	9	0	0	0	0	0	0	0	0	0	0	0	0	39
13:00	0	32	14	0	0	0	0	1	0	0	0	0	0	0	0	47
Hour Total	0	122	54	0	3	0	0	2	0	0	0	0	0	0	0	181
13:15	0	30	7	0	0	0	0	0	0	0	0	0	0	0	0	37
13:30	0	39	14	0	1	0	0	0	0	0	0	0	0	0	0	54
13:45	0	33	11	0	0	0	0	1	0	0	0	0	0	0	0	45
14:00	0	44	9	0	0	0	0	0	0	0	0	0	0	0	0	53
Hour Total	0	146	41	0	1	0	0	1	0	0	0	0	0	0	0	189
14:15	0	36	7	0	1	0	0	1	0	0	0	0	0	0	0	45
14:30	0	41	14	0	1	0	0	1	0	0	0	0	0	0	0	57
14:45	0	35	13	0	0	0	0	0	0	0	0	0	0	0	0	48
15:00	0	45	11	0	3	0	0	0	0	0	0	0	0	0	0	59
Hour Total	0	157	45	0	5	0	0	2	0	0	0	0	0	0	0	209
15:15	0	50	19	0	2	0	0	1	0	0	0	0	0	0	0	72
15:30	0	71	18	1	3	0	0	1	0	0	0	0	0	0	0	94
15:45	0	79	32	0	1	0	0	3	0	0	0	0	0	0	0	115
16:00	1	74	31	0	1	0	0	0	0	0	0	0	0	0	0	107
Hour Total	1	274	100	1	7	0	0	5	0	0	0	0	0	0	0	388
16:15	0	105	38	0	1	0	0	1	0	0	0	0	0	0	0	145
16:30	0	103	38	0	1	0	0	3	0	0	0	0	0	0	0	145
16:45	1	97	25	0	1	0	0	0	0	0	1	0	0	0	0	125
17:00	0	101	27	0	1	0	0	1	0	0	0	0	0	0	0	130
Hour Total	1	406	128	0	4	0	0	5	0	0	1	0	0	0	0	545

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002007.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	104	29	0	0	0	0	2	0	0	0	0	0	0	0	135
17:30	0	100	25	0	0	0	0	0	0	0	0	0	0	0	0	125
17:45	0	86	22	0	1	0	0	0	0	0	0	0	0	0	0	109
18:00	0	68	21	0	0	0	0	1	0	0	0	0	0	0	0	90
Hour Total	0	358	97	0	1	0	0	3	0	0	0	0	0	0	0	459
18:15	0	72	23	0	3	0	0	0	0	0	0	0	0	0	0	98
18:30	0	53	23	0	0	0	0	1	0	0	0	0	0	0	0	77
18:45	0	56	13	0	0	0	0	0	0	0	0	0	0	0	0	69
19:00	0	45	10	0	0	0	0	1	0	0	0	0	0	0	0	56
Hour Total	0	226	69	0	3	0	0	2	0	0	0	0	0	0	0	300
19:15	0	44	6	0	0	0	0	0	0	0	0	0	0	0	0	50
19:30	0	30	12	0	0	0	0	0	0	0	0	0	0	0	0	42
19:45	0	26	15	0	0	0	0	1	0	0	0	0	0	0	0	42
20:00	0	33	11	0	0	0	0	0	0	0	0	0	0	0	0	44
Hour Total	0	133	44	0	0	0	0	1	0	0	0	0	0	0	0	178
20:15	0	25	7	0	0	0	0	0	0	0	0	0	0	0	0	32
20:30	0	16	8	0	0	0	0	0	0	0	0	0	0	0	0	24
20:45	0	25	3	0	0	0	0	0	0	0	0	0	0	0	0	28
21:00	0	19	10	0	0	0	0	0	0	0	0	0	0	0	0	29
Hour Total	0	85	28	0	0	0	0	0	0	0	0	0	0	0	0	113
21:15	0	17	5	0	0	0	0	0	0	0	0	0	0	0	0	22
21:30	0	20	9	0	0	0	0	0	0	0	0	0	0	0	0	29
21:45	0	14	5	0	0	0	0	0	0	0	0	0	0	0	0	19
22:00	0	19	2	0	0	0	0	0	0	0	0	0	0	0	0	21
Hour Total	0	70	21	0	0	0	0	0	0	0	0	0	0	0	0	91
22:15	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	10
22:30	0	14	3	0	0	0	0	1	0	0	0	0	0	0	0	18
22:45	1	13	3	0	0	0	0	0	0	0	0	0	0	0	0	17
23:00	0	8	4	0	0	0	0	1	0	0	0	0	0	0	0	13
Hour Total	1	42	13	0	0	0	0	2	0	0	0	0	0	0	0	58
23:15	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
23:30	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
23:45	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	4
24:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	15	2	0	0	0	0	1	0	0	0	0	0	0	0	18
DAY TOTAL	4	2926	921	1	39	0	0	43	0	0	1	0	0	0	0	3935
PERCENTS	0.2%	74.4%	23.5%	0.0%	0.9%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 97.8% Trucks & Buses 2.1%

AM Times	10:00	07:15	08:00	09:00		06:00										07:15
AM Peaks	1	181	56	6		7										233
PM Times	16:00	16:15	15:45	14:45	15:00	15:45			16:00							16:15
PM Peaks	2	406	139	1	9	7			1							545

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002007.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
00:30	0	14	2	0	0	0	0	0	0	0	0	0	0	0	0	16
00:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:00	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour Total	0	24	4	0	0	0	0	0	0	0	0	0	0	0	0	28
01:15	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
01:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
01:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
02:00	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
Hour Total	0	11	3	0	0	0	0	1	0	0	0	0	0	0	0	15
02:15	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
02:30	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
02:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	7
03:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
03:45	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2
04:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	3	1	0	0	0	0	2	0	0	0	0	0	0	0	6
04:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	4
05:00	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	4
Hour Total	0	8	0	0	2	0	0	1	0	0	0	0	0	0	0	11
05:15	0	15	4	0	0	0	0	0	0	0	0	0	0	0	0	19
05:30	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	13
05:45	0	12	4	0	0	0	0	1	0	0	0	0	0	0	0	17
06:00	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	10
Hour Total	0	41	17	0	0	0	0	1	0	0	0	0	0	0	0	59
06:15	0	21	4	0	0	0	0	0	0	0	0	0	0	0	0	25
06:30	0	30	8	0	1	0	0	0	0	0	0	0	0	0	0	39
06:45	0	27	10	0	0	0	0	0	0	0	0	0	0	0	0	37
07:00	0	51	11	0	0	0	0	0	0	0	0	0	0	0	0	62
Hour Total	0	129	33	0	1	0	0	0	0	0	0	0	0	0	0	163
07:15	0	42	7	0	1	0	0	0	0	0	0	0	0	0	0	50
07:30	0	41	10	0	0	0	0	1	0	0	0	0	0	0	0	52
07:45	0	40	12	0	0	0	0	0	0	0	0	0	0	0	0	52
08:00	0	50	11	1	0	0	0	0	0	0	0	0	0	0	0	62
Hour Total	0	173	40	1	1	0	0	1	0	0	0	0	0	0	0	216
08:15	0	48	12	0	1	0	0	0	0	0	0	0	0	0	0	61
08:30	0	50	9	0	1	0	0	0	0	0	0	0	0	0	0	60
08:45	0	35	11	0	0	0	0	0	0	0	0	0	0	0	0	46
09:00	0	27	12	0	1	0	0	1	0	0	0	0	0	0	0	41

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002007.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	160	44	0	3	0	0	1	0	0	0	0	0	0	0	208
09:15	0	24	13	0	0	0	0	0	0	0	0	0	0	0	0	37
09:30	0	25	4	0	2	0	0	1	0	0	0	0	0	0	0	32
09:45	0	36	12	0	1	0	0	0	0	0	0	0	0	0	0	49
10:00	0	33	15	0	0	0	0	0	0	0	0	0	0	0	0	48
Hour Total	0	118	44	0	3	0	0	1	0	0	0	0	0	0	0	166
10:15	0	20	8	0	2	0	0	1	0	0	0	0	0	0	0	31
10:30	0	20	12	0	0	0	0	0	0	0	0	0	0	0	0	32
10:45	1	31	10	0	3	0	0	0	0	0	0	0	0	0	0	45
11:00	0	29	19	0	1	0	0	2	0	0	1	0	0	0	0	52
Hour Total	1	100	49	0	6	0	0	3	0	0	1	0	0	0	0	160
11:15	0	30	9	0	0	0	0	0	0	0	0	0	0	0	0	39
11:30	0	23	19	0	1	0	0	0	0	0	0	0	0	0	0	43
11:45	0	28	12	0	0	0	0	0	0	0	0	0	0	0	0	40
12:00	0	27	10	0	0	0	0	4	0	0	0	0	0	0	0	41
Hour Total	0	108	50	0	1	0	0	4	0	0	0	0	0	0	0	163
12:15	0	41	14	0	2	0	0	3	0	0	0	0	0	0	0	60
12:30	0	37	15	0	2	0	0	1	0	0	0	0	0	0	0	55
12:45	0	33	16	0	2	0	0	0	0	0	0	0	0	0	0	51
13:00	0	37	10	0	0	0	0	0	0	0	0	0	0	0	0	47
Hour Total	0	148	55	0	6	0	0	4	0	0	0	0	0	0	0	213
13:15	0	31	12	0	0	0	0	1	0	0	0	0	0	0	0	44
13:30	0	45	22	0	3	0	0	1	0	0	0	0	0	0	0	71
13:45	0	34	13	0	3	0	0	1	0	0	0	0	0	0	0	51
14:00	0	30	11	0	0	0	0	0	0	0	0	0	0	0	0	41
Hour Total	0	140	58	0	6	0	0	3	0	0	0	0	0	0	0	207
14:15	0	35	17	0	1	0	0	0	0	0	0	0	0	0	0	53
14:30	0	52	20	0	0	0	0	1	0	0	0	0	0	0	0	73
14:45	0	44	16	0	3	0	0	0	0	0	0	0	0	0	0	63
15:00	0	42	12	0	1	0	0	1	0	0	0	0	0	0	0	56
Hour Total	0	173	65	0	5	0	0	2	0	0	0	0	0	0	0	245
15:15	0	59	16	0	1	0	0	0	0	0	0	0	0	0	0	76
15:30	0	72	25	1	2	0	0	1	0	0	0	0	0	0	0	101
15:45	0	71	32	0	1	0	0	0	0	0	0	0	0	0	0	104
16:00	0	72	35	0	1	0	0	0	0	0	0	0	0	0	0	108
Hour Total	0	274	108	1	5	0	0	1	0	0	0	0	0	0	0	389
16:15	0	100	34	0	0	0	0	0	0	0	0	0	0	0	0	134
16:30	0	102	30	0	2	0	0	0	0	0	0	0	0	0	0	134
16:45	1	98	35	0	1	0	0	2	0	0	0	0	0	0	0	137
17:00	0	81	28	0	1	0	0	0	0	0	1	0	0	0	0	111
Hour Total	1	381	127	0	4	0	0	2	0	0	1	0	0	0	0	516

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002007.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	86	20	0	0	0	0	0	0	0	0	0	0	0	0	106
17:30	0	93	23	0	0	0	0	0	0	0	0	0	0	0	0	116
17:45	0	86	28	0	0	0	0	1	0	0	0	0	0	0	0	115
18:00	0	65	20	0	0	0	0	1	0	0	0	0	0	0	0	86
Hour Total	0	330	91	0	0	0	0	2	0	0	0	0	0	0	0	423
18:15	0	66	22	0	0	0	0	0	0	0	0	0	0	0	0	88
18:30	0	59	13	0	1	0	0	2	0	0	0	0	0	0	0	75
18:45	0	53	16	0	0	0	0	0	0	0	0	0	0	0	0	69
19:00	0	53	18	0	0	0	0	0	0	0	0	0	0	0	0	71
Hour Total	0	231	69	0	1	0	0	2	0	0	0	0	0	0	0	303
19:15	0	48	13	0	0	0	0	0	0	0	0	0	0	0	0	61
19:30	0	45	11	0	0	0	0	0	0	0	0	0	0	0	0	56
19:45	0	43	11	0	0	0	0	0	0	0	0	0	0	0	0	54
20:00	0	40	9	0	0	0	0	1	0	0	0	0	0	0	0	50
Hour Total	0	176	44	0	0	0	0	1	0	0	0	0	0	0	0	221
20:15	0	26	4	0	0	0	0	0	0	0	0	0	0	0	0	30
20:30	0	30	7	0	0	0	0	0	0	0	0	0	0	0	0	37
20:45	0	31	5	0	0	0	0	0	0	0	0	0	0	0	0	36
21:00	0	20	4	0	0	0	0	0	0	0	0	0	0	0	0	24
Hour Total	0	107	20	0	0	0	0	0	0	0	0	0	0	0	0	127
21:15	0	15	5	0	0	0	0	0	0	0	0	0	0	0	0	20
21:30	0	16	9	0	0	0	0	1	0	0	0	0	0	0	0	26
21:45	0	14	5	0	0	0	0	2	0	0	0	0	0	0	0	21
22:00	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	11
Hour Total	0	54	21	0	0	0	0	3	0	0	0	0	0	0	0	78
22:15	0	22	2	0	0	0	0	1	0	0	0	0	0	0	0	25
22:30	0	15	6	0	1	0	0	0	0	0	0	0	0	0	0	22
22:45	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11
23:00	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8
Hour Total	0	55	9	0	1	0	0	1	0	0	0	0	0	0	0	66
23:15	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
23:30	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
23:45	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5
24:00	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	7
Hour Total	0	18	10	0	0	0	0	0	0	0	0	0	0	0	0	28
DAY TOTAL	2	2967	964	2	45	0	0	36	0	0	2	0	0	0	0	4018
PERCENTS	0.1%	73.9%	24.0%	0.1%	1.1%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 97.8% Trucks & Buses 2.1%

AM Times	10:00	07:45	11:00	07:15	10:15			11:15			10:15					07:45
AM Peaks	1	188	59	1	6			4			1					235
PM Times	16:00	16:15	16:00	14:45	13:30			12:15			16:15					16:15
PM Peaks	1	381	134	1	7			4			1					516

GRAND TOTAL	7	8869	2800	8	121	0	115	0	0	0	4	0	0	0	0	11924
PERCENTS	0.1%	74.4%	23.5%	0.1%	1.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002008.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3
00:30	0	0	0	0	0	0	0	0	1	1	9	2	1	0	14
00:45	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
01:00	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
Hour Total	0	0	0	0	0	0	0	0	1	2	12	4	2	0	21
01:15	0	0	0	0	0	0	0	0	1	2	1	0	0	0	4
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
02:00	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Hour Total	0	0	0	0	0	0	0	0	1	2	4	0	0	0	7
02:15	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2
02:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	1	1	1	0	0	0	3
Hour Total	0	0	0	0	0	0	0	0	2	3	1	0	0	0	6
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	0	0	1	3	0	0	0	4
Hour Total	0	0	0	0	0	0	0	0	0	1	3	1	0	0	5
04:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
04:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
04:45	0	0	0	0	0	0	0	0	2	1	0	2	0	0	5
05:00	0	0	0	0	0	0	0	1	1	0	5	2	0	0	9
Hour Total	0	0	0	0	0	0	0	1	3	2	5	5	0	0	16
05:15	0	0	0	0	0	0	0	0	1	2	3	3	0	0	9
05:30	0	0	0	0	0	0	0	0	3	2	9	6	1	0	21
05:45	0	0	0	0	0	0	0	1	0	3	9	8	0	0	21
06:00	0	0	0	0	0	1	0	0	0	5	8	3	0	0	17
Hour Total	0	0	0	0	0	1	0	1	4	12	29	20	1	0	68
06:15	0	0	0	0	0	0	0	0	2	5	11	8	1	1	28
06:30	0	0	0	0	0	0	1	1	4	6	20	5	1	0	38
06:45	0	0	0	0	0	0	0	1	2	8	27	10	2	1	51
07:00	0	0	0	0	0	0	0	1	1	14	23	15	3	0	57
Hour Total	0	0	0	0	0	0	1	3	9	33	81	38	7	2	174
07:15	0	0	0	0	0	0	0	0	2	14	19	13	3	0	51
07:30	0	0	0	0	0	0	0	0	2	10	33	15	3	0	63
07:45	0	0	0	0	0	0	0	0	1	6	21	21	3	0	52
08:00	0	0	0	0	0	0	0	1	1	13	20	11	5	0	51
Hour Total	0	0	0	0	0	0	0	1	6	43	93	60	14	0	217
08:15	0	0	0	0	0	0	0	3	5	14	20	11	1	1	55
08:30	0	0	0	0	0	0	1	1	2	12	20	12	3	0	51
08:45	0	0	0	0	0	0	0	0	6	21	20	10	4	0	61
09:00	0	0	0	0	0	0	0	0	4	9	15	14	3	0	45

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002008.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	0	0	1	4	17	56	75	47	11	1	212
09:15	0	0	0	0	0	0	0	0	3	8	16	10	7	0	44
09:30	0	0	0	0	0	0	0	0	2	10	30	12	3	0	57
09:45	0	0	0	0	0	0	0	0	3	5	17	12	4	0	41
10:00	0	0	0	0	0	0	0	1	2	11	13	6	1	0	34
Hour Total	0	0	0	0	0	0	0	1	10	34	76	40	15	0	176
10:15	0	0	0	0	0	0	0	0	5	12	10	3	1	0	31
10:30	0	0	0	0	0	0	0	1	4	7	13	3	0	0	28
10:45	0	0	0	0	0	0	0	0	3	7	11	9	2	2	34
11:00	0	0	0	0	0	0	1	0	4	10	18	3	1	0	37
Hour Total	0	0	0	0	0	0	1	1	16	36	52	18	4	2	130
11:15	0	0	0	0	0	0	0	0	1	5	15	6	2	0	29
11:30	0	0	0	0	0	0	0	1	7	12	10	3	1	0	34
11:45	0	0	0	0	0	0	0	0	0	5	25	5	1	0	36
12:00	0	0	0	0	0	0	0	0	0	15	15	11	0	0	41
Hour Total	0	0	0	0	0	0	0	1	8	37	65	25	4	0	140
12:15	0	0	0	0	0	0	0	2	2	12	16	6	1	0	39
12:30	0	0	0	0	0	0	0	0	4	19	16	6	1	1	47
12:45	0	0	0	0	0	0	2	0	7	12	24	10	2	0	57
13:00	0	0	0	0	0	0	0	0	3	17	20	5	4	0	49
Hour Total	0	0	0	0	0	0	2	2	16	60	76	27	8	1	192
13:15	0	0	0	0	0	0	0	0	6	15	15	9	6	0	51
13:30	0	0	0	0	0	0	1	1	2	10	17	12	1	0	44
13:45	0	0	0	0	0	0	0	2	5	15	25	8	3	0	58
14:00	0	0	0	0	0	0	0	4	2	22	16	17	0	0	61
Hour Total	0	0	0	0	0	0	1	7	15	62	73	46	10	0	214
14:15	0	0	0	0	0	0	0	0	0	9	22	15	0	0	46
14:30	0	0	0	0	0	0	0	0	2	15	25	14	3	1	60
14:45	0	0	0	0	0	0	0	1	2	16	26	15	1	2	63
15:00	0	0	0	0	1	0	0	1	3	15	27	10	4	0	61
Hour Total	0	0	0	0	1	0	0	2	7	55	100	54	8	3	230
15:15	0	0	0	0	0	0	1	7	7	22	26	18	2	0	83
15:30	0	0	0	0	0	1	0	1	9	19	36	26	4	0	96
15:45	0	0	0	0	0	0	0	1	7	30	37	17	6	1	99
16:00	0	0	0	0	0	0	0	2	4	29	49	34	5	2	125
Hour Total	0	0	0	0	0	1	1	11	27	100	148	95	17	3	403
16:15	0	0	0	1	0	0	1	2	19	38	60	20	4	0	145
16:30	0	0	0	0	0	0	0	3	7	38	57	19	6	0	130
16:45	0	0	0	0	0	0	0	4	17	36	62	12	2	1	134
17:00	0	0	0	0	0	0	0	3	8	43	46	14	6	0	120
Hour Total	0	0	0	1	0	0	1	12	51	155	225	65	18	1	529

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002008.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	0	1	5	5	29	44	24	4	2	114
17:30	0	0	0	0	0	0	0	1	10	47	38	20	2	0	118
17:45	0	0	0	0	0	0	3	2	7	48	48	17	4	0	129
18:00	0	0	0	0	0	0	0	2	8	29	36	17	1	1	94
Hour Total	0	0	0	0	0	0	4	10	30	153	166	78	11	3	455
18:15	0	0	0	0	0	0	1	2	5	16	36	15	2	0	77
18:30	0	0	0	0	0	0	0	0	10	26	21	12	1	0	70
18:45	0	0	0	0	0	0	0	1	6	22	28	8	1	0	66
19:00	0	0	0	0	0	0	0	4	2	21	18	9	0	0	54
Hour Total	0	0	0	0	0	0	1	7	23	85	103	44	4	0	267
19:15	0	0	0	0	0	0	0	0	3	21	22	8	0	0	54
19:30	0	0	0	0	0	0	0	2	4	20	20	11	1	1	59
19:45	0	0	0	0	0	0	0	0	5	20	19	8	1	0	53
20:00	0	0	0	0	0	0	0	1	4	14	14	3	2	0	38
Hour Total	0	0	0	0	0	0	0	3	16	75	75	30	4	1	204
20:15	0	0	0	0	0	0	0	1	0	9	18	3	1	0	32
20:30	0	0	0	0	0	0	0	1	6	13	15	5	0	0	40
20:45	0	0	0	0	0	0	0	3	5	12	14	6	1	0	41
21:00	0	0	0	0	0	0	0	3	3	10	8	8	1	0	33
Hour Total	0	0	0	0	0	0	0	8	14	44	55	22	3	0	146
21:15	0	0	0	0	0	0	0	0	0	9	9	6	1	0	25
21:30	0	0	0	0	0	0	0	2	4	5	9	1	0	0	21
21:45	0	0	0	0	0	0	0	1	3	3	5	4	0	0	16
22:00	0	0	0	0	0	0	0	0	0	6	9	4	0	0	19
Hour Total	0	0	0	0	0	0	0	3	7	23	32	15	1	0	81
22:15	0	0	0	0	0	0	0	1	2	1	6	4	0	0	14
22:30	0	0	0	0	0	0	0	1	1	5	6	5	0	0	18
22:45	0	0	0	0	0	0	0	0	0	5	4	3	0	0	12
23:00	0	0	0	0	0	0	0	1	0	3	2	1	0	0	7
Hour Total	0	0	0	0	0	0	0	3	3	14	18	13	0	0	51
23:15	0	0	0	0	0	0	0	0	2	1	3	2	0	0	8
23:30	0	0	0	0	0	0	0	0	1	2	4	1	0	0	8
23:45	0	0	0	0	0	0	0	1	0	1	1	1	0	0	4
24:00	0	0	0	0	0	0	0	0	0	3	2	1	1	0	7
Hour Total	0	0	0	0	0	0	0	1	3	7	10	5	1	0	27
DAY TOTAL	0	0	0	1	1	2	13	82	289	1094	1577	752	143	17	3971
PERCENTS	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.4%	2.0%	7.2%	27.5%	39.7%	18.9%	3.6%	0.4%	100%

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002008.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
51.0 mph

85th Percentile Speed
62.1 mph

Median Speed
56.6 mph

Average Speed
56.4 mph

10 MPH Pace Speed
50 mph to 60 mph
2671 vehicles in pace
Representing 67.2% of the total vehicles

Vehicles > 55 MPH
2489
62.7%

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002008.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	0	1	1	2	0	0	4
00:30	0	0	0	0	0	0	0	0	0	2	7	3	0	0	12
00:45	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2
01:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Hour Total	0	0	0	0	0	0	0	0	0	4	9	5	1	0	19
01:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
01:30	0	0	0	0	0	0	0	0	0	3	1	2	0	0	6
01:45	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2
02:00	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2
Hour Total	0	0	0	0	0	0	0	0	3	4	2	2	0	0	11
02:15	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2
02:30	0	0	0	0	0	0	0	0	2	0	1	0	0	0	3
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Hour Total	0	0	0	0	0	0	0	0	2	1	1	2	0	0	6
03:15	0	0	0	0	0	0	0	1	0	3	0	0	0	0	4
03:30	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3
03:45	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
04:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Hour Total	0	0	0	0	0	0	0	1	0	5	2	2	0	0	10
04:15	0	0	0	0	0	0	0	0	0	1	0	2	0	0	3
04:30	0	0	0	0	0	0	0	0	1	0	2	1	0	0	4
04:45	0	0	0	0	0	0	0	0	2	3	1	0	1	0	7
05:00	0	0	0	0	0	0	0	0	1	3	3	1	1	0	9
Hour Total	0	0	0	0	0	0	0	0	4	7	6	4	2	0	23
05:15	0	0	0	0	0	0	0	0	0	2	4	3	3	0	12
05:30	0	0	0	0	0	0	1	0	0	1	8	7	0	0	17
05:45	0	0	0	0	0	0	0	0	3	7	6	4	2	0	22
06:00	0	0	0	0	0	1	0	2	1	6	8	2	0	0	20
Hour Total	0	0	0	0	0	1	1	2	4	16	26	16	5	0	71
06:15	0	0	0	0	0	0	1	1	1	3	9	7	0	0	22
06:30	0	0	0	0	0	0	0	1	1	7	19	12	4	0	44
06:45	0	0	0	0	0	0	0	0	1	15	13	10	1	0	40
07:00	0	0	0	0	0	0	0	2	0	7	32	16	3	0	60
Hour Total	0	0	0	0	0	0	1	4	3	32	73	45	8	0	166
07:15	0	0	0	0	0	0	1	0	2	7	19	14	5	3	51
07:30	0	0	0	0	0	0	0	0	1	12	25	15	3	0	56
07:45	0	0	0	0	0	0	0	0	2	12	19	15	3	0	51
08:00	0	0	0	0	0	0	0	0	2	18	34	15	5	1	75
Hour Total	0	0	0	0	0	0	1	0	7	49	97	59	16	4	233
08:15	0	0	0	0	0	0	0	0	2	8	26	11	1	1	49
08:30	0	0	0	0	0	0	2	0	1	9	15	25	3	0	55
08:45	0	0	0	0	0	0	0	1	0	11	17	16	1	1	47
09:00	0	0	0	0	0	0	0	0	2	10	10	5	1	0	28

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002008.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	0	0	2	1	5	38	68	57	6	2	179
09:15	0	0	0	0	0	0	0	0	5	16	15	10	4	1	51
09:30	0	0	0	0	0	0	0	0	2	11	14	5	3	0	35
09:45	0	0	0	0	0	0	0	1	4	11	16	9	1	1	43
10:00	0	0	0	0	0	0	0	0	2	8	13	6	1	0	30
Hour Total	0	0	0	0	0	0	0	1	13	46	58	30	9	2	159
10:15	0	0	0	0	0	0	0	0	1	9	18	7	0	1	36
10:30	0	0	0	0	0	0	0	1	1	10	13	7	1	0	33
10:45	1	0	0	0	0	0	1	1	0	7	14	8	3	1	36
11:00	0	0	0	0	0	0	0	0	5	8	16	4	4	0	37
Hour Total	1	0	0	0	0	0	1	2	7	34	61	26	8	2	142
11:15	0	0	0	0	0	0	0	0	4	21	25	8	0	0	58
11:30	0	0	0	0	0	0	0	0	3	10	23	8	6	1	51
11:45	0	0	0	0	0	0	0	1	4	14	18	10	1	0	48
12:00	0	0	0	0	0	0	0	0	1	10	10	8	1	0	30
Hour Total	0	0	0	0	0	0	0	1	12	55	76	34	8	1	187
12:15	0	0	0	0	0	0	0	0	0	9	18	9	1	0	37
12:30	0	0	0	0	0	0	0	1	4	15	27	9	2	0	58
12:45	0	0	0	0	0	0	0	1	10	11	10	6	1	0	39
13:00	0	0	0	0	0	0	0	1	0	12	18	11	5	0	47
Hour Total	0	0	0	0	0	0	0	3	14	47	73	35	9	0	181
13:15	0	0	0	0	0	1	0	2	0	15	9	8	2	0	37
13:30	0	0	0	0	0	0	0	0	3	16	12	19	4	0	54
13:45	0	1	0	0	0	0	0	2	4	8	17	11	1	1	45
14:00	0	0	0	0	0	0	0	1	1	15	19	16	1	0	53
Hour Total	0	1	0	0	0	1	0	5	8	54	57	54	8	1	189
14:15	0	0	0	0	0	0	0	2	6	7	18	11	1	0	45
14:30	0	0	0	0	0	0	0	1	5	9	26	14	1	1	57
14:45	0	0	0	0	0	0	0	0	5	20	16	2	5	0	48
15:00	0	0	0	0	0	0	0	0	2	12	20	17	8	0	59
Hour Total	0	0	0	0	0	0	0	3	18	48	80	44	15	1	209
15:15	0	0	0	0	0	0	0	2	8	23	23	16	0	0	72
15:30	0	0	0	0	0	0	0	0	7	27	39	19	2	0	94
15:45	0	0	0	0	0	0	0	0	3	32	58	20	2	0	115
16:00	1	0	0	0	0	0	1	1	9	27	46	21	1	0	107
Hour Total	1	0	0	0	0	0	1	3	27	109	166	76	5	0	388
16:15	0	0	0	0	0	0	1	2	10	43	66	19	4	0	145
16:30	0	0	0	0	0	0	1	4	2	47	62	24	5	0	145
16:45	0	0	0	0	0	2	14	9	10	36	41	13	0	0	125
17:00	0	0	0	0	0	2	2	1	13	31	56	21	4	0	130
Hour Total	0	0	0	0	0	4	18	16	35	157	225	77	13	0	545

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002008.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	0	0	0	11	46	44	28	6	0	135
17:30	0	0	0	0	0	0	0	0	8	52	42	19	4	0	125
17:45	0	0	0	0	0	0	1	4	15	38	35	14	1	1	109
18:00	0	0	0	0	0	0	0	0	7	31	33	14	5	0	90
Hour Total	0	0	0	0	0	0	1	4	41	167	154	75	16	1	459
18:15	0	0	0	0	0	0	0	1	8	30	41	15	3	0	98
18:30	0	0	0	0	0	0	0	2	4	34	23	12	2	0	77
18:45	0	0	0	0	0	0	1	1	3	20	34	9	1	0	69
19:00	0	0	0	0	1	0	0	0	8	16	20	10	1	0	56
Hour Total	0	0	0	0	1	0	1	4	23	100	118	46	7	0	300
19:15	0	0	0	0	0	0	0	0	3	16	20	10	1	0	50
19:30	0	0	0	0	0	0	0	0	3	13	20	5	1	0	42
19:45	0	0	0	0	0	0	0	0	3	15	17	5	2	0	42
20:00	0	0	0	0	0	0	0	0	4	17	15	7	1	0	44
Hour Total	0	0	0	0	0	0	0	0	13	61	72	27	5	0	178
20:15	0	0	0	0	0	0	0	0	0	7	18	6	1	0	32
20:30	0	0	0	0	0	0	0	0	1	5	15	3	0	0	24
20:45	0	0	0	0	0	0	0	1	2	11	10	2	1	1	28
21:00	0	0	0	0	0	0	0	1	6	9	10	2	1	0	29
Hour Total	0	0	0	0	0	0	0	2	9	32	53	13	3	1	113
21:15	0	0	0	0	0	0	0	0	3	4	7	7	1	0	22
21:30	0	0	0	0	0	0	0	0	0	8	13	6	2	0	29
21:45	0	0	0	0	0	0	0	1	1	4	7	6	0	0	19
22:00	0	0	0	0	0	0	0	0	1	5	11	3	1	0	21
Hour Total	0	0	0	0	0	0	0	1	5	21	38	22	4	0	91
22:15	0	0	0	0	0	0	1	0	0	5	1	3	0	0	10
22:30	0	0	0	0	0	0	1	0	2	8	2	5	0	0	18
22:45	1	0	0	0	0	0	0	2	0	6	4	4	0	0	17
23:00	0	0	0	0	0	0	0	0	1	4	6	2	0	0	13
Hour Total	1	0	0	0	0	0	2	2	3	23	13	14	0	0	58
23:15	0	0	0	0	0	0	0	0	0	1	4	0	0	0	5
23:30	0	0	0	0	0	0	0	0	0	4	1	1	0	0	6
23:45	0	0	0	0	0	0	0	0	1	1	1	1	0	0	4
24:00	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3
Hour Total	0	0	0	0	0	0	0	0	1	7	7	3	0	0	18
DAY TOTAL	3	1	0	0	1	6	29	55	257	1117	1535	768	148	15	3935
PERCENTS	0.1%	0.1%	0.0%	0.0%	0.1%	0.2%	0.8%	1.4%	6.5%	28.3%	39.0%	19.5%	3.7%	0.3%	100%

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002008.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
51.1 mph

85th Percentile Speed
62.2 mph

Median Speed
56.6 mph

Average Speed
56.4 mph

10 MPH Pace Speed
50 mph to 60 mph
2652 vehicles in pace
Representing 67.3% of the total vehicles

Vehicles > 55 MPH
2466
62.7%

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002008.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	0	0	1	1	2	0	4
00:30	0	0	0	0	0	0	0	0	2	2	7	3	2	0	16
00:45	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2
01:00	0	0	0	0	0	0	0	0	0	4	1	0	0	1	6
Hour Total	0	0	0	0	0	0	0	0	2	6	10	4	5	1	28
01:15	0	0	0	0	0	0	0	0	1	2	0	0	0	1	4
01:30	0	0	0	0	0	0	0	2	1	1	0	0	0	1	5
01:45	0	0	0	0	0	0	0	0	0	2	1	1	0	0	4
02:00	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2
Hour Total	0	0	0	0	0	0	0	2	2	6	1	1	1	2	15
02:15	0	0	0	0	0	0	0	0	1	1	1	0	0	0	3
02:30	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
02:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	0	0	0	0	0	0	0	2	4	1	0	0	0	7
03:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
03:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
03:45	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
04:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Hour Total	0	0	0	0	0	0	0	0	0	3	0	3	0	0	6
04:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
04:30	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
04:45	0	0	0	0	0	0	0	0	0	2	0	0	2	0	4
05:00	0	0	0	0	0	0	0	0	2	1	1	0	0	0	4
Hour Total	0	0	0	0	0	0	0	0	2	3	3	1	2	0	11
05:15	0	0	0	0	0	0	0	0	1	2	6	8	1	1	19
05:30	0	0	0	0	0	0	0	0	1	4	3	4	1	0	13
05:45	0	0	0	0	0	0	0	1	0	4	7	4	1	0	17
06:00	0	0	0	0	0	0	0	1	1	3	2	3	0	0	10
Hour Total	0	0	0	0	0	0	0	2	3	13	18	19	3	1	59
06:15	0	0	0	0	0	0	0	1	3	4	8	8	0	1	25
06:30	0	0	0	0	1	0	0	0	3	7	16	12	0	0	39
06:45	0	0	0	0	0	0	0	1	2	6	20	7	1	0	37
07:00	0	0	0	0	0	0	1	0	1	17	24	16	3	0	62
Hour Total	0	0	0	0	1	0	1	2	9	34	68	43	4	1	163
07:15	0	0	0	0	0	0	0	0	2	6	22	17	3	0	50
07:30	0	0	0	0	0	0	0	0	1	11	21	13	6	0	52
07:45	0	0	0	0	0	0	0	0	1	6	25	19	1	0	52
08:00	0	0	0	0	0	0	0	1	5	8	26	18	3	1	62
Hour Total	0	0	0	0	0	0	0	1	9	31	94	67	13	1	216
08:15	0	0	0	0	0	0	0	3	3	17	21	12	4	1	61
08:30	0	0	0	0	0	0	1	6	0	14	17	16	6	0	60
08:45	0	0	0	0	0	0	0	0	1	15	15	12	3	0	46
09:00	0	0	0	0	0	0	0	2	2	15	13	8	1	0	41

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002008.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	0	0	1	11	6	61	66	48	14	1	208
09:15	0	0	0	0	1	0	0	2	1	9	16	7	1	0	37
09:30	0	0	0	0	0	0	0	0	2	9	12	8	1	0	32
09:45	0	0	0	0	0	0	0	1	8	16	19	5	0	0	49
10:00	0	0	0	0	0	0	0	0	4	14	19	10	1	0	48
Hour Total	0	0	0	0	1	0	0	3	15	48	66	30	3	0	166
10:15	0	0	0	0	0	0	1	4	4	9	5	8	0	0	31
10:30	0	0	0	0	0	0	0	0	4	6	14	6	0	2	32
10:45	0	0	0	1	0	0	0	0	4	12	20	7	1	0	45
11:00	0	0	0	0	0	0	0	0	10	21	11	8	2	0	52
Hour Total	0	0	0	1	0	0	1	4	22	48	50	29	3	2	160
11:15	0	0	0	0	0	0	0	1	3	10	22	2	1	0	39
11:30	0	0	0	0	0	0	0	4	5	11	9	12	2	0	43
11:45	0	0	0	0	0	2	0	1	6	14	9	7	1	0	40
12:00	0	0	0	0	0	0	0	0	1	9	20	8	3	0	41
Hour Total	0	0	0	0	0	2	0	6	15	44	60	29	7	0	163
12:15	0	0	0	0	0	0	0	0	3	22	21	11	3	0	60
12:30	0	0	0	0	0	0	0	0	8	16	17	12	1	1	55
12:45	0	0	0	0	0	0	0	0	4	19	17	6	5	0	51
13:00	0	0	0	0	0	0	0	0	3	3	23	15	1	2	47
Hour Total	0	0	0	0	0	0	0	0	18	60	78	44	10	3	213
13:15	0	0	0	0	0	0	0	0	4	18	17	4	1	0	44
13:30	0	0	0	0	0	0	0	1	9	15	32	14	0	0	71
13:45	0	0	0	0	0	0	0	3	3	19	20	6	0	0	51
14:00	0	0	0	0	0	0	0	2	4	13	9	10	3	0	41
Hour Total	0	0	0	0	0	0	0	6	20	65	78	34	4	0	207
14:15	0	0	0	0	0	0	0	1	2	13	28	7	1	1	53
14:30	0	0	0	0	0	0	0	0	2	29	28	13	0	1	73
14:45	0	0	0	0	0	0	0	2	4	20	26	10	0	1	63
15:00	0	0	0	0	0	0	0	3	1	17	23	10	2	0	56
Hour Total	0	0	0	0	0	0	0	6	9	79	105	40	3	3	245
15:15	0	0	0	0	0	0	0	1	8	22	23	19	3	0	76
15:30	0	0	0	0	0	0	1	4	5	30	37	19	4	1	101
15:45	0	0	0	0	0	0	0	3	8	34	40	17	2	0	104
16:00	0	0	0	0	0	0	0	0	8	28	49	19	4	0	108
Hour Total	0	0	0	0	0	0	1	8	29	114	149	74	13	1	389
16:15	0	0	0	0	0	0	0	5	18	57	38	16	0	0	134
16:30	0	0	0	0	0	0	0	8	3	53	51	18	1	0	134
16:45	0	0	0	0	0	0	1	6	21	54	41	10	3	1	137
17:00	0	0	0	1	0	0	1	0	15	39	36	18	1	0	111
Hour Total	0	0	0	1	0	0	2	19	57	203	166	62	5	1	516

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002008.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	1	0	0	2	1	24	48	27	2	1	106
17:30	0	0	0	0	0	0	0	2	9	41	45	16	2	1	116
17:45	0	0	0	0	0	0	0	3	17	42	34	17	2	0	115
18:00	0	0	0	0	0	0	3	0	10	20	28	23	2	0	86
Hour Total	0	0	0	0	1	0	3	7	37	127	155	83	8	2	423
18:15	0	0	0	0	0	0	0	0	6	36	31	12	3	0	88
18:30	0	0	0	0	0	0	1	0	7	26	31	7	3	0	75
18:45	0	0	0	0	1	0	1	0	6	22	23	14	2	0	69
19:00	0	0	0	0	0	0	1	0	3	21	31	15	0	0	71
Hour Total	0	0	0	0	1	0	3	0	22	105	116	48	8	0	303
19:15	0	0	0	0	0	0	0	2	4	19	27	8	1	0	61
19:30	0	0	0	0	0	0	0	0	4	18	26	7	1	0	56
19:45	0	0	0	0	0	0	0	2	2	18	17	11	3	1	54
20:00	0	0	0	0	0	0	0	1	1	10	30	8	0	0	50
Hour Total	0	0	0	0	0	0	0	5	11	65	100	34	5	1	221
20:15	0	0	0	0	0	0	0	2	5	7	9	7	0	0	30
20:30	0	0	0	0	0	0	0	0	2	13	16	4	2	0	37
20:45	0	0	0	0	0	0	1	2	2	17	10	3	1	0	36
21:00	0	0	0	0	0	0	0	2	3	10	4	5	0	0	24
Hour Total	0	0	0	0	0	0	1	6	12	47	39	19	3	0	127
21:15	0	0	0	0	0	0	0	0	1	7	9	3	0	0	20
21:30	0	0	0	0	0	0	0	1	1	8	15	1	0	0	26
21:45	0	0	0	0	0	0	0	0	1	6	9	5	0	0	21
22:00	0	0	0	0	0	0	0	1	1	4	2	3	0	0	11
Hour Total	0	0	0	0	0	0	0	2	4	25	35	12	0	0	78
22:15	0	0	0	0	0	0	0	1	3	2	16	3	0	0	25
22:30	0	0	0	0	0	0	0	0	2	8	7	5	0	0	22
22:45	0	0	0	0	0	0	0	1	3	0	3	3	1	0	11
23:00	0	0	0	0	0	0	0	0	1	1	6	0	0	0	8
Hour Total	0	0	0	0	0	0	0	2	9	11	32	11	1	0	66
23:15	0	0	0	0	0	0	0	0	0	3	5	0	0	0	8
23:30	0	0	0	0	0	0	0	0	1	2	5	0	0	0	8
23:45	0	0	0	0	0	0	0	0	0	1	3	1	0	0	5
24:00	0	0	0	0	0	0	0	0	0	4	1	1	1	0	7
Hour Total	0	0	0	0	0	0	0	0	1	10	14	2	1	0	28
DAY TOTAL	0	0	0	2	4	2	13	92	316	1212	1504	737	116	20	4018
PERCENTS	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.4%	2.3%	7.9%	30.2%	37.4%	18.3%	2.8%	0.4%	100%

Station #: Site B-SBI
Site ID: 000000003605
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002008.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
GRAND TOTAL	3	1	0	3	6	10	55	229	862	3423	4616	2257	407	52	11924
PERCENTS	0.1%	0.1%	0.0%	0.1%	0.1%	0.0%	0.4%	1.9%	7.2%	28.7%	38.7%	18.9%	3.4%	0.4%	100%

Statistical Information...

15th Percentile Speed
50.7 mph

85th Percentile Speed
61.8 mph

Median Speed
56.2 mph

Average Speed
56.0 mph

10 MPH Pace Speed
50 mph to 60 mph
2716 vehicles in pace
Representing 67.5% of the total vehicles

Vehicles > 55 MPH
2377
59.2%

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002011.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	30	5	0	0	0	0	0	1	0	0	0	0	0	0	36
00:30	0	45	18	0	0	0	0	0	1	0	0	0	0	0	0	64
00:45	0	13	7	0	0	0	0	0	0	0	0	0	0	0	0	20
01:00	0	7	3	0	1	1	0	0	0	0	0	0	0	0	0	12
Hour Total	0	95	33	0	1	1	0	0	2	0	0	0	0	0	0	132
01:15	0	9	0	0	0	0	0	0	1	0	0	0	0	0	0	10
01:30	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
01:45	0	6	0	0	0	0	0	0	1	0	0	0	0	0	0	7
02:00	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
Hour Total	0	27	3	0	0	0	0	0	2	0	0	0	0	0	0	32
02:15	0	3	1	0	0	0	0	0	2	0	0	0	0	0	0	6
02:30	0	9	3	0	0	0	0	0	1	0	0	0	0	0	0	13
02:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
03:00	0	4	2	0	0	0	0	0	1	0	0	0	0	0	0	7
Hour Total	0	19	7	0	0	0	0	0	4	0	0	0	0	0	0	30
03:15	0	3	2	0	0	1	0	0	0	0	0	0	0	0	0	6
03:30	0	4	3	0	0	0	0	0	1	0	0	0	0	0	0	8
03:45	0	0	2	0	1	1	0	0	1	0	0	0	0	0	0	5
04:00	0	8	3	0	1	0	0	0	1	0	0	0	0	0	0	13
Hour Total	0	15	10	0	2	2	0	0	3	0	0	0	0	0	0	32
04:15	0	7	0	0	0	1	0	1	0	0	0	0	0	0	0	9
04:30	0	17	1	0	1	0	0	0	0	0	0	0	0	0	0	19
04:45	0	18	6	0	0	1	0	0	0	0	0	0	0	0	0	25
05:00	0	26	6	0	1	0	0	0	0	0	0	0	0	0	0	33
Hour Total	0	68	13	0	2	2	0	1	0	0	0	0	0	0	0	86
05:15	1	38	8	1	0	1	0	1	1	0	0	0	1	0	0	52
05:30	0	45	11	0	0	1	0	0	1	0	0	0	0	0	0	58
05:45	1	37	16	0	0	0	0	0	0	0	0	0	0	0	0	54
06:00	0	37	11	0	1	1	0	0	3	0	0	0	0	0	0	53
Hour Total	2	157	46	1	1	3	0	1	5	0	0	0	1	0	0	217
06:15	1	49	19	0	0	0	0	1	0	0	0	0	0	0	0	70
06:30	4	77	21	0	1	4	0	0	0	0	0	0	0	0	0	107
06:45	1	78	21	0	3	3	0	0	0	0	0	0	0	0	0	106
07:00	2	100	20	0	5	1	1	0	1	1	0	0	0	0	0	131
Hour Total	8	304	81	0	9	8	1	1	1	1	0	0	0	0	0	414
07:15	0	114	23	0	0	0	0	0	1	0	0	0	0	0	0	138
07:30	0	116	39	0	0	1	1	1	2	0	0	0	0	0	0	160
07:45	0	96	30	0	0	1	1	0	1	0	0	0	0	0	0	129
08:00	2	90	25	0	3	1	3	0	2	0	0	1	0	0	0	127
Hour Total	2	416	117	0	3	3	5	1	6	0	0	1	0	0	0	554
08:15	0	106	22	0	4	1	1	0	1	0	0	0	0	0	0	135
08:30	0	84	26	0	4	1	4	0	2	0	0	0	0	0	0	121
08:45	1	118	30	1	3	1	3	0	5	0	0	0	1	0	0	163
09:00	0	77	37	0	1	1	2	0	1	0	0	0	0	0	0	119

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002011.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	1	385	115	1	12	4	10	0	9	0	0	0	1	0	0	538
09:15	0	68	31	0	1	0	3	0	4	0	0	0	0	0	0	107
09:30	1	66	33	0	1	1	2	0	7	0	0	0	0	0	0	111
09:45	0	62	26	0	2	3	1	1	1	1	0	0	0	0	0	97
10:00	0	65	33	0	4	2	5	0	1	0	0	0	0	0	0	110
Hour Total	1	261	123	0	8	6	11	1	13	1	0	0	0	0	0	425
10:15	1	54	20	1	3	2	0	0	3	0	0	0	0	0	0	84
10:30	2	60	32	0	2	1	2	3	5	0	0	0	0	0	0	107
10:45	0	48	25	0	5	4	5	0	5	0	0	0	0	0	0	92
11:00	0	67	31	0	0	6	0	1	6	0	0	0	0	0	0	111
Hour Total	3	229	108	1	10	13	7	4	19	0	0	0	0	0	0	394
11:15	0	68	29	0	2	3	1	0	1	0	0	0	1	0	0	105
11:30	0	79	20	0	1	3	3	0	1	0	0	0	0	0	0	107
11:45	0	84	21	1	2	1	2	0	5	1	0	0	0	0	0	117
12:00	0	62	24	0	2	2	2	0	2	0	0	0	0	0	0	94
Hour Total	0	293	94	1	7	9	8	0	9	1	0	0	1	0	0	423
12:15	0	75	22	0	1	1	3	0	2	0	0	0	0	0	0	104
12:30	0	82	27	2	0	1	1	1	1	0	0	0	0	0	0	115
12:45	0	70	33	0	1	4	2	0	2	0	0	0	0	0	0	112
13:00	0	81	21	0	2	0	0	0	5	0	0	0	0	0	0	109
Hour Total	0	308	103	2	4	6	6	1	10	0	0	0	0	0	0	440
13:15	0	79	24	0	1	2	0	0	2	0	0	1	0	0	0	109
13:30	0	65	15	0	0	1	0	0	0	0	0	0	0	0	0	81
13:45	0	96	26	1	2	1	3	0	3	1	0	0	0	0	0	133
14:00	2	93	29	0	2	2	2	2	3	0	0	0	0	0	0	135
Hour Total	2	333	94	1	5	6	5	2	8	1	0	1	0	0	0	458
14:15	2	86	35	0	1	4	0	0	2	0	0	0	0	0	0	130
14:30	0	114	38	0	1	1	1	1	0	0	0	0	0	0	0	156
14:45	1	116	33	0	3	2	0	0	0	0	0	0	0	0	0	155
15:00	0	122	43	0	4	2	2	1	4	0	1	0	0	0	0	179
Hour Total	3	438	149	0	9	9	3	2	6	0	1	0	0	0	0	620
15:15	4	129	39	1	2	4	0	2	0	1	0	0	0	0	0	182
15:30	2	161	43	1	3	5	1	0	2	0	0	0	0	0	0	218
15:45	3	159	52	0	0	0	0	1	1	0	0	0	0	0	0	216
16:00	1	225	76	0	0	0	0	0	2	1	0	1	1	0	0	307
Hour Total	10	674	210	2	5	9	1	3	5	2	0	1	1	0	0	923
16:15	1	214	67	0	2	1	0	0	2	0	0	0	1	0	0	288
16:30	1	198	59	2	2	2	0	0	3	1	0	1	0	0	0	269
16:45	0	203	64	1	5	1	0	1	2	0	0	0	0	0	0	277
17:00	0	208	57	0	0	0	0	1	1	0	1	0	0	0	0	268
Hour Total	2	823	247	3	9	4	0	2	8	1	1	1	1	0	0	1102

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002011.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	186	46	0	2	0	1	0	3	0	2	0	0	0	0	240
17:30	1	192	46	0	1	0	1	1	2	0	0	0	0	0	0	244
17:45	2	192	51	0	0	0	0	0	1	0	0	1	0	0	0	247
18:00	1	143	38	0	0	2	0	0	0	0	0	1	1	0	0	186
Hour Total	4	713	181	0	3	2	2	1	6	0	2	2	1	0	0	917
18:15	1	138	41	0	0	0	0	0	1	0	0	0	0	0	0	181
18:30	1	129	26	0	0	0	0	2	0	0	0	0	0	0	0	158
18:45	0	107	27	0	0	0	0	0	1	0	0	0	0	0	0	135
19:00	0	94	24	0	1	0	0	0	0	0	0	0	1	0	0	120
Hour Total	2	468	118	0	1	0	0	2	2	0	0	0	1	0	0	594
19:15	1	104	29	0	0	1	0	0	0	0	0	0	0	0	0	135
19:30	1	91	31	0	0	0	0	0	1	0	0	0	0	0	0	124
19:45	0	79	22	0	1	0	0	1	0	0	0	0	0	0	0	103
20:00	0	58	17	0	0	1	0	0	2	0	0	0	0	0	0	78
Hour Total	2	332	99	0	1	2	0	1	3	0	0	0	0	0	0	440
20:15	0	64	16	0	0	0	0	1	2	0	0	0	0	0	0	83
20:30	0	59	16	0	0	0	0	0	0	0	0	0	0	0	0	75
20:45	0	66	9	0	2	0	0	0	1	0	0	0	0	0	0	78
21:00	0	60	9	0	1	0	0	0	1	0	0	0	0	0	0	71
Hour Total	0	249	50	0	3	0	0	1	4	0	0	0	0	0	0	307
21:15	1	44	15	0	0	0	0	1	3	0	0	0	0	0	0	64
21:30	0	60	5	0	1	1	0	0	0	0	0	0	0	0	0	67
21:45	0	43	4	0	0	0	0	0	0	0	0	0	0	0	0	47
22:00	0	39	5	0	0	0	0	0	3	0	0	0	0	0	0	47
Hour Total	1	186	29	0	1	1	0	1	6	0	0	0	0	0	0	225
22:15	0	36	4	0	0	0	0	0	5	0	0	0	0	0	0	45
22:30	0	36	10	0	0	0	0	0	2	0	0	0	0	0	0	48
22:45	0	21	5	0	0	0	0	0	0	0	0	0	0	0	0	26
23:00	0	23	5	0	0	0	0	0	4	0	0	0	0	0	0	32
Hour Total	0	116	24	0	0	0	0	0	11	0	0	0	0	0	0	151
23:15	0	21	5	0	0	0	0	0	0	0	0	0	0	0	0	26
23:30	1	12	2	0	0	0	0	0	1	0	0	0	0	0	0	16
23:45	0	10	2	0	0	1	0	0	1	0	0	0	0	0	0	14
24:00	0	22	4	0	0	1	0	0	2	0	0	0	0	0	0	29
Hour Total	1	65	13	0	0	2	0	0	4	0	0	0	0	0	0	85
DAY TOTAL	44	6974	2067	12	96	92	59	25	146	7	4	6	7	0	0	9539
PERCENTS	0.5%	73.2%	21.7%	0.2%	1.1%	1.0%	0.6%	0.2%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 95.2% Trucks & Buses 4.7%

AM Times	06:15	07:00	08:45	04:30	08:00	10:45	08:30	09:45	10:15	06:15		07:15	04:30			07:00
AM Peaks	8	426	131	1	14	16	12	4	19	1		1	1			558
PM Times	15:15	16:00	16:00	16:00	14:45	14:45	12:15	14:30	22:15	15:15	16:30	15:45	15:30			16:00
PM Peaks	10	840	266	3	12	13	6	4	11	2	3	2	2			1141

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002011.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	22	7	0	0	0	0	0	0	0	0	0	0	0	0	29
00:30	1	37	16	0	0	0	0	0	1	0	0	0	0	0	0	55
00:45	0	14	6	0	0	2	0	0	2	0	0	0	0	0	0	24
01:00	0	15	1	0	0	1	0	0	0	0	0	0	0	0	0	17
Hour Total	1	88	30	0	0	3	0	0	3	0	0	0	0	0	0	125
01:15	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	10
01:30	0	16	5	0	0	0	0	0	0	0	0	0	0	0	0	21
01:45	0	10	2	0	0	0	0	0	0	0	0	0	0	0	0	12
02:00	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
Hour Total	0	40	10	0	0	0	0	0	0	0	0	0	0	0	0	50
02:15	0	4	1	0	0	0	0	0	1	0	0	0	0	0	0	6
02:30	0	5	1	0	0	0	0	0	1	0	0	0	0	0	0	7
02:45	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	8
03:00	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour Total	0	19	6	0	0	0	0	0	2	0	0	0	0	0	0	27
03:15	0	2	1	0	0	0	0	0	1	0	0	0	0	0	0	4
03:30	0	2	4	0	0	1	0	0	2	0	0	0	0	0	0	9
03:45	0	2	1	0	0	1	0	0	1	0	0	0	0	0	0	5
04:00	0	9	4	0	1	0	0	1	1	0	0	0	0	0	0	16
Hour Total	0	15	10	0	1	2	0	1	5	0	0	0	0	0	0	34
04:15	0	16	4	0	0	1	0	0	1	0	0	0	0	0	0	22
04:30	0	13	2	0	0	0	0	0	0	0	0	0	0	0	0	15
04:45	0	12	4	0	1	0	0	0	2	0	0	0	0	0	0	19
05:00	0	26	6	0	1	1	0	0	0	0	0	0	0	0	0	34
Hour Total	0	67	16	0	2	2	0	0	3	0	0	0	0	0	0	90
05:15	0	37	8	0	1	0	0	0	2	0	0	0	0	0	0	48
05:30	0	51	8	0	1	0	0	0	1	0	0	0	0	0	0	61
05:45	0	51	15	0	0	1	0	0	0	0	0	0	0	0	0	67
06:00	0	50	13	0	0	1	0	0	2	0	0	0	0	0	0	66
Hour Total	0	189	44	0	2	2	0	0	5	0	0	0	0	0	0	242
06:15	2	52	16	0	0	2	0	0	2	0	0	0	0	0	0	74
06:30	2	70	19	0	0	0	0	0	1	0	0	0	0	0	0	92
06:45	0	69	15	0	4	2	0	0	1	0	0	0	0	0	0	91
07:00	0	102	32	2	4	2	1	0	0	0	0	0	0	0	0	143
Hour Total	4	293	82	2	8	6	1	0	4	0	0	0	0	0	0	400
07:15	0	121	17	0	1	3	0	0	3	0	0	0	0	0	0	145
07:30	0	100	35	0	2	0	0	0	2	0	0	0	0	0	0	139
07:45	1	100	35	0	2	0	1	0	2	0	0	0	0	0	0	141
08:00	2	95	32	0	5	0	0	1	1	0	0	0	0	0	0	136
Hour Total	3	416	119	0	10	3	1	1	8	0	0	0	0	0	0	561
08:15	0	87	27	0	3	8	1	0	4	0	1	0	0	0	0	131
08:30	0	78	25	3	2	7	0	0	3	0	0	0	0	0	0	118
08:45	1	98	26	1	4	1	1	0	3	0	0	0	0	0	0	135
09:00	1	46	9	0	0	0	0	0	0	0	0	0	0	0	0	56

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002011.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	2	309	87	4	9	16	2	0	10	0	1	0	0	0	0	440
09:15	0	82	30	0	0	4	0	0	4	0	0	0	0	0	0	120
09:30	0	67	23	0	1	3	1	0	1	0	0	0	0	0	0	96
09:45	0	61	21	0	0	6	2	0	3	0	1	0	0	0	0	94
10:00	0	57	22	2	3	5	1	0	1	0	0	0	0	0	0	91
Hour Total	0	267	96	2	4	18	4	0	9	0	1	0	0	0	0	401
10:15	0	58	25	0	2	4	2	0	2	0	0	0	0	0	0	93
10:30	0	56	26	0	0	5	0	0	3	0	0	0	0	0	0	90
10:45	0	70	28	0	2	1	1	1	2	0	0	0	0	0	0	105
11:00	0	75	21	1	0	4	1	1	3	0	0	0	0	0	0	106
Hour Total	0	259	100	1	4	14	4	2	10	0	0	0	0	0	0	394
11:15	0	80	18	0	1	3	3	0	2	0	2	0	0	0	0	109
11:30	0	65	20	0	3	3	2	0	2	0	0	0	0	0	0	95
11:45	2	74	32	0	2	1	0	0	3	0	0	0	0	0	0	114
12:00	1	70	22	0	2	2	1	1	1	0	0	0	0	0	0	100
Hour Total	3	289	92	0	8	9	6	1	8	0	2	0	0	0	0	418
12:15	2	75	28	0	0	3	1	2	3	0	0	0	1	0	0	115
12:30	0	87	31	0	2	5	1	0	1	0	1	0	0	0	0	128
12:45	0	90	25	0	0	2	2	1	2	0	0	0	0	0	0	122
13:00	1	74	39	0	0	3	2	1	3	1	0	0	0	0	0	124
Hour Total	3	326	123	0	2	13	6	4	9	1	1	0	1	0	0	489
13:15	2	114	38	0	0	3	1	0	4	0	0	0	1	0	0	163
13:30	0	94	29	1	1	0	2	0	3	0	0	0	0	0	0	130
13:45	1	101	23	0	3	2	0	2	3	0	1	0	0	0	0	136
14:00	1	83	29	0	4	3	1	3	1	0	0	0	0	0	0	125
Hour Total	4	392	119	1	8	8	4	5	11	0	1	0	1	0	0	554
14:15	1	100	30	0	2	4	0	2	3	0	0	1	0	0	0	143
14:30	0	122	35	0	6	1	1	0	2	0	0	0	0	0	0	167
14:45	1	121	41	0	3	0	0	1	3	0	0	0	0	0	0	170
15:00	1	127	40	0	2	2	0	0	2	0	0	1	0	0	0	175
Hour Total	3	470	146	0	13	7	1	3	10	0	0	2	0	0	0	655
15:15	0	147	38	0	2	7	0	1	0	0	0	0	0	0	0	195
15:30	0	153	61	0	2	5	0	1	3	0	0	0	0	0	0	225
15:45	2	163	70	0	2	3	0	1	2	0	0	0	0	0	0	243
16:00	0	204	61	0	0	2	0	1	1	0	1	1	0	0	0	271
Hour Total	2	667	230	0	6	17	0	4	6	0	1	1	0	0	0	934
16:15	1	219	61	0	2	1	1	0	1	0	0	0	0	0	0	286
16:30	1	214	62	2	2	0	0	0	2	0	1	0	0	0	0	284
16:45	0	184	57	0	7	2	0	0	0	0	1	0	2	0	0	253
17:00	2	203	52	0	0	1	0	2	1	0	1	0	0	0	0	262
Hour Total	4	820	232	2	11	4	1	2	4	0	3	0	2	0	0	1085

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002011.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	1	188	49	0	2	0	0	0	1	0	0	0	0	0	0	241
17:30	0	218	54	0	3	1	0	0	1	0	0	0	0	0	0	277
17:45	0	175	40	0	0	0	0	0	1	0	0	0	0	0	0	216
18:00	1	160	44	0	1	1	0	1	1	0	1	0	0	0	0	210
Hour Total	2	741	187	0	6	2	0	1	4	0	1	0	0	0	0	944
18:15	0	146	32	0	1	0	0	0	1	0	0	0	0	0	0	180
18:30	0	137	37	0	0	2	0	2	1	0	0	0	0	0	0	179
18:45	0	104	23	0	0	0	0	0	2	0	0	0	0	0	0	129
19:00	1	103	24	0	0	0	0	2	2	0	0	0	0	0	0	132
Hour Total	1	490	116	0	1	2	0	4	6	0	0	0	0	0	0	620
19:15	0	92	22	0	1	2	0	0	0	0	0	0	0	0	0	117
19:30	1	106	19	0	0	0	0	0	0	0	0	0	0	0	0	126
19:45	1	95	18	0	0	0	0	0	1	0	0	0	0	0	0	115
20:00	0	73	17	0	1	0	0	2	0	0	0	0	0	0	0	93
Hour Total	2	366	76	0	2	2	0	2	1	0	0	0	0	0	0	451
20:15	0	90	19	0	0	0	0	0	0	0	0	0	0	0	0	109
20:30	0	58	15	0	0	0	0	0	0	0	0	0	0	0	0	73
20:45	0	59	13	0	1	0	0	0	1	0	0	0	0	0	0	74
21:00	0	79	13	0	0	0	0	0	2	0	0	0	0	0	0	94
Hour Total	0	286	60	0	1	0	0	0	3	0	0	0	0	0	0	350
21:15	0	56	9	0	0	0	0	0	0	0	0	0	0	0	0	65
21:30	0	73	15	0	4	0	0	0	0	0	0	0	0	0	0	92
21:45	0	43	5	0	1	0	0	0	1	0	0	0	0	0	0	50
22:00	0	40	10	0	0	0	0	0	1	0	0	0	0	0	0	51
Hour Total	0	212	39	0	5	0	0	0	2	0	0	0	0	0	0	258
22:15	1	32	5	0	0	1	0	0	1	0	0	0	0	0	0	40
22:30	0	37	8	0	0	0	0	0	1	0	0	0	0	0	0	46
22:45	2	29	4	0	0	0	0	0	2	0	0	0	0	0	0	37
23:00	0	24	5	0	0	0	0	0	1	0	0	0	0	0	0	30
Hour Total	3	122	22	0	0	1	0	0	5	0	0	0	0	0	0	153
23:15	1	13	2	0	0	0	0	1	1	0	0	0	0	0	0	18
23:30	0	20	5	0	0	1	0	0	0	0	0	0	0	0	0	26
23:45	0	17	6	0	0	0	0	0	1	0	0	0	0	0	0	24
24:00	0	19	5	0	0	1	0	0	3	0	0	0	0	0	0	28
Hour Total	1	69	18	0	0	2	0	1	5	0	0	0	0	0	0	96
DAY TOTAL	38	7212	2060	12	103	133	30	31	133	1	11	3	4	0	0	9771
PERCENTS	0.4%	73.9%	21.1%	0.2%	1.1%	1.3%	0.3%	0.3%	1.3%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 95.2% Trucks & Buses 4.7%

AM Times	05:45	07:00	07:30	08:00	08:00	09:45	10:45	10:15	08:00		10:30					07:00
AM Peaks	4	423	129	4	14	20	7	2	11		2					568
PM Times	13:00	16:00	15:45	15:45	13:45	15:00	12:45	13:30	13:00	12:15	16:00	14:15	16:00			16:00
PM Peaks	4	821	254	2	15	17	7	7	13	1	3	2	2			1094

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002011.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	27	2	0	0	0	0	1	2	0	0	0	0	0	0	32
00:30	1	42	14	0	0	0	0	0	0	0	0	0	0	0	0	57
00:45	1	16	6	0	0	0	0	0	0	0	0	0	0	0	0	23
01:00	0	12	3	0	0	0	0	0	0	0	0	0	0	0	0	15
Hour Total	2	97	25	0	0	0	0	1	2	0	0	0	0	0	0	127
01:15	0	10	0	0	0	1	0	0	0	0	0	0	0	0	0	11
01:30	0	11	0	0	0	1	0	0	1	0	0	0	0	0	0	13
01:45	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	7
02:00	0	6	3	0	0	0	0	0	1	0	0	0	0	0	0	10
Hour Total	0	31	6	0	0	2	0	0	2	0	0	0	0	0	0	41
02:15	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	10
02:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
02:45	0	4	3	0	0	0	0	0	1	0	0	0	0	0	0	8
03:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	19	6	0	0	0	0	0	1	0	0	0	0	0	0	26
03:15	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
03:30	0	5	2	0	1	3	0	0	3	0	0	0	0	0	0	14
03:45	0	10	3	0	0	0	0	2	1	0	0	0	0	0	0	16
04:00	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	10
Hour Total	0	26	10	0	1	3	0	2	4	0	0	0	0	0	0	46
04:15	0	18	1	0	0	1	0	0	1	0	0	0	0	0	0	21
04:30	1	12	2	0	2	0	0	0	0	0	0	0	0	0	0	17
04:45	0	17	7	0	0	1	0	0	2	0	0	0	0	0	0	27
05:00	0	22	10	0	2	0	0	0	0	0	0	0	0	0	0	34
Hour Total	1	69	20	0	4	2	0	0	3	0	0	0	0	0	0	99
05:15	0	35	13	0	1	0	0	0	4	0	0	0	0	0	0	53
05:30	0	39	7	0	1	1	0	0	1	0	0	0	0	0	0	49
05:45	1	46	17	0	0	0	0	0	4	0	0	0	0	0	0	68
06:00	0	39	11	0	1	0	0	2	1	0	0	0	0	0	0	54
Hour Total	1	159	48	0	3	1	0	2	10	0	0	0	0	0	0	224
06:15	1	45	18	0	0	3	0	0	0	0	0	0	0	0	0	67
06:30	0	67	19	1	1	0	0	2	0	0	0	0	0	0	0	90
06:45	0	95	21	1	2	3	0	1	1	0	0	0	0	0	0	124
07:00	1	98	34	2	3	2	0	3	3	0	0	0	0	0	0	146
Hour Total	2	305	92	4	6	8	0	6	4	0	0	0	0	0	0	427
07:15	0	125	25	0	2	2	0	0	4	0	0	0	0	0	0	158
07:30	2	109	29	0	0	1	0	0	2	0	0	0	0	0	0	143
07:45	0	96	33	0	0	3	0	0	1	0	1	0	0	0	0	134
08:00	0	99	20	0	2	3	1	0	2	0	0	0	0	0	0	127
Hour Total	2	429	107	0	4	9	1	0	9	0	1	0	0	0	0	562
08:15	0	98	27	0	3	6	0	3	0	0	0	0	0	0	0	137
08:30	0	94	18	0	6	2	0	0	3	0	0	0	0	0	0	123
08:45	2	109	30	1	1	2	0	0	2	0	0	0	0	0	0	147
09:00	0	80	20	0	0	4	0	0	2	0	0	0	0	0	0	106

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002011.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	2	381	95	1	10	14	0	3	7	0	0	0	0	0	0	513
09:15	0	53	17	0	1	3	0	0	1	1	0	0	0	0	0	76
09:30	1	49	18	0	0	6	0	0	0	0	0	0	0	0	0	74
09:45	1	77	36	0	2	4	0	1	4	1	0	0	0	0	0	126
10:00	0	60	25	0	2	2	1	0	3	0	0	0	0	0	0	93
Hour Total	2	239	96	0	5	15	1	1	8	2	0	0	0	0	0	369
10:15	3	68	25	1	2	2	0	0	3	0	1	0	0	0	0	105
10:30	0	77	26	0	3	10	1	0	1	0	0	0	0	0	0	118
10:45	0	54	28	1	2	2	1	0	3	0	0	0	1	0	0	92
11:00	1	65	30	0	3	3	0	0	4	0	0	0	0	0	0	106
Hour Total	4	264	109	2	10	17	2	0	11	0	1	0	1	0	0	421
11:15	2	72	22	0	2	4	0	1	2	0	0	0	0	0	0	105
11:30	0	66	20	0	0	2	0	0	6	1	0	0	0	0	0	95
11:45	0	68	25	1	3	1	2	1	1	0	0	0	0	0	0	102
12:00	1	70	26	0	5	3	0	0	2	0	0	0	0	0	0	107
Hour Total	3	276	93	1	10	10	2	2	11	1	0	0	0	0	0	409
12:15	2	80	11	0	3	8	0	0	3	0	0	0	0	0	0	107
12:30	1	77	34	0	2	3	0	0	4	0	0	0	0	0	0	121
12:45	1	83	28	0	2	2	1	1	7	0	0	0	0	0	0	125
13:00	0	86	38	1	0	2	0	0	0	0	0	1	0	0	0	128
Hour Total	4	326	111	1	7	15	1	1	14	0	0	1	0	0	0	481
13:15	0	89	24	1	0	2	1	1	6	0	0	0	0	0	0	124
13:30	1	85	39	0	1	2	0	2	2	0	1	0	0	0	0	133
13:45	1	86	24	0	0	6	0	0	2	0	1	0	0	0	0	120
14:00	1	84	23	0	1	3	0	1	2	0	1	0	0	0	0	116
Hour Total	3	344	110	1	2	13	1	4	12	0	3	0	0	0	0	493
14:15	0	86	30	0	1	1	1	0	4	0	0	0	0	0	0	123
14:30	0	117	32	0	2	4	0	0	1	0	0	0	0	0	0	156
14:45	0	131	40	1	2	4	0	1	2	0	0	0	0	0	0	181
15:00	1	122	45	0	1	3	1	2	7	0	0	0	0	0	0	182
Hour Total	1	456	147	1	6	12	2	3	14	0	0	0	0	0	0	642
15:15	0	112	58	0	3	4	0	1	1	0	0	0	1	0	0	180
15:30	1	142	45	1	6	4	0	3	2	0	1	0	0	0	0	205
15:45	3	191	53	0	3	1	0	2	1	0	0	0	0	0	0	254
16:00	1	185	60	1	0	4	0	1	0	0	0	0	1	0	0	253
Hour Total	5	630	216	2	12	13	0	7	4	0	1	0	2	0	0	892
16:15	5	223	76	1	0	2	0	0	1	0	0	0	0	0	0	308
16:30	1	212	67	0	6	0	0	1	3	0	0	0	0	0	0	290
16:45	1	219	57	0	4	0	0	0	3	0	0	1	0	0	0	285
17:00	0	193	79	0	1	1	0	1	1	0	0	1	4	0	0	281
Hour Total	7	847	279	1	11	3	0	2	8	0	0	2	4	0	0	1164

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002011.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	1	202	47	0	2	3	0	2	0	0	0	1	0	0	0	258
17:30	0	173	51	0	0	1	0	0	2	0	1	0	0	0	0	228
17:45	0	218	50	1	1	1	0	1	1	0	0	0	1	0	0	274
18:00	0	165	40	0	1	0	0	2	0	0	0	1	0	0	0	209
Hour Total	1	758	188	1	4	5	0	5	3	0	1	2	1	0	0	969
18:15	2	166	31	0	1	0	0	1	1	0	0	0	0	0	0	202
18:30	0	123	49	0	0	1	0	2	4	0	1	0	0	0	0	180
18:45	0	128	17	0	1	0	0	1	1	0	1	0	0	0	0	149
19:00	1	99	37	0	1	1	0	2	1	0	0	0	0	0	0	142
Hour Total	3	516	134	0	3	2	0	6	7	0	2	0	0	0	0	673
19:15	2	91	20	0	0	0	0	1	1	0	0	0	1	0	0	116
19:30	3	103	25	0	0	0	0	0	1	0	0	0	0	0	0	132
19:45	0	78	16	0	1	1	0	0	1	0	0	0	0	0	0	97
20:00	2	71	18	0	2	0	0	1	1	0	0	0	0	0	0	95
Hour Total	7	343	79	0	3	1	0	2	4	0	0	0	1	0	0	440
20:15	0	75	9	0	0	1	0	0	1	0	0	0	0	0	0	86
20:30	0	82	15	0	1	0	0	1	0	0	0	0	0	0	0	99
20:45	0	59	18	0	0	0	0	0	2	0	0	0	0	0	0	79
21:00	1	53	13	0	1	0	0	0	1	0	0	0	0	0	0	69
Hour Total	1	269	55	0	2	1	0	1	4	0	0	0	0	0	0	333
21:15	1	55	11	0	0	0	0	0	2	0	0	0	0	0	0	69
21:30	1	52	14	0	0	0	0	0	0	0	0	0	0	0	0	67
21:45	0	49	6	0	0	0	0	1	0	0	0	0	0	0	0	56
22:00	0	40	4	0	1	0	0	0	0	0	0	0	0	0	0	45
Hour Total	2	196	35	0	1	0	0	1	2	0	0	0	0	0	0	237
22:15	0	47	8	0	0	0	0	0	0	0	0	0	0	0	0	55
22:30	0	37	6	0	0	1	0	0	0	0	0	0	0	0	0	44
22:45	1	32	5	0	0	0	0	0	0	0	0	0	0	0	0	38
23:00	0	29	4	0	0	0	0	0	1	0	0	0	0	0	0	34
Hour Total	1	145	23	0	0	1	0	0	1	0	0	0	0	0	0	171
23:15	1	30	3	0	0	0	0	0	0	0	0	0	0	0	0	34
23:30	0	19	4	0	0	1	0	0	0	0	0	0	0	0	0	24
23:45	0	11	4	0	0	0	0	1	0	0	0	0	0	0	0	16
24:00	0	17	4	0	0	1	0	0	0	0	0	0	0	0	0	22
Hour Total	1	77	15	0	0	2	0	1	0	0	0	0	0	0	0	96
DAY TOTAL	55	7202	2099	15	104	149	10	50	145	3	9	5	9	0	0	9855
PERCENTS	0.6%	73.1%	21.3%	0.2%	1.1%	1.6%	0.2%	0.5%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 94.9% Trucks & Buses 5.0%

AM Times	09:30	07:15	07:00	06:15	08:00	10:30	10:00	06:15	10:45	09:00	07:00		10:00			07:00
AM Peaks	5	429	121	4	12	19	3	6	15	2	1		1			581
PM Times	15:30	16:15	16:15	15:30	15:00	12:15	12:30	15:00	12:30		13:15	16:30	17:00			16:15
PM Peaks	10	847	279	3	13	15	2	8	17		3	3	5			1164

GRAND TOTAL	137	6226	303	99	424	24	20	0								
	21388	39	374	106	11	14	0	29165								
PERCENTS	0.5%	73.4%	21.4%	0.2%	1.1%	1.3%	0.4%	0.3%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002012.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	1	0	2	4	13	14	2	0	0	36
00:30	0	0	0	0	0	0	1	5	8	29	16	5	0	0	64
00:45	0	0	0	0	0	0	1	1	6	8	4	0	0	0	20
01:00	0	0	0	0	0	0	0	1	1	7	3	0	0	0	12
Hour Total	0	0	0	0	0	1	2	9	19	57	37	7	0	0	132
01:15	0	0	0	0	0	0	1	3	0	5	1	0	0	0	10
01:30	0	0	0	0	0	0	0	0	4	2	1	0	0	0	7
01:45	0	0	0	0	0	0	0	0	2	3	2	0	0	0	7
02:00	0	0	0	0	0	0	0	1	0	4	2	1	0	0	8
Hour Total	0	0	0	0	0	0	1	4	6	14	6	1	0	0	32
02:15	0	0	0	0	0	0	1	1	2	2	0	0	0	0	6
02:30	0	0	0	0	0	0	0	1	3	6	3	0	0	0	13
02:45	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4
03:00	0	0	0	0	0	0	0	0	1	3	2	1	0	0	7
Hour Total	0	0	0	0	0	0	1	6	6	11	5	1	0	0	30
03:15	0	0	0	0	0	0	1	0	0	2	3	0	0	0	6
03:30	0	0	0	0	0	0	1	1	3	2	0	1	0	0	8
03:45	0	0	0	0	0	0	0	0	1	4	0	0	0	0	5
04:00	0	0	0	0	0	0	0	0	2	5	5	1	0	0	13
Hour Total	0	0	0	0	0	0	2	1	6	13	8	2	0	0	32
04:15	0	0	0	0	0	0	0	0	2	5	1	1	0	0	9
04:30	0	0	0	0	0	0	0	0	4	7	3	5	0	0	19
04:45	0	0	0	0	0	0	0	5	5	11	4	0	0	0	25
05:00	0	0	0	0	0	0	0	0	4	16	11	2	0	0	33
Hour Total	0	0	0	0	0	0	0	5	15	39	19	8	0	0	86
05:15	0	0	0	0	0	0	0	1	4	25	15	6	1	0	52
05:30	0	0	0	0	0	0	1	2	9	21	15	7	3	0	58
05:45	0	0	0	0	0	0	0	1	5	21	23	4	0	0	54
06:00	0	0	0	0	0	0	0	3	12	24	10	3	1	0	53
Hour Total	0	0	0	0	0	0	1	7	30	91	63	20	5	0	217
06:15	0	0	0	0	0	0	0	2	10	27	20	11	0	0	70
06:30	0	0	0	0	0	0	0	9	32	40	23	3	0	0	107
06:45	0	1	0	0	0	0	0	9	21	44	26	5	0	0	106
07:00	0	0	0	0	0	0	0	7	27	48	38	11	0	0	131
Hour Total	0	1	0	0	0	0	0	27	90	159	107	30	0	0	414
07:15	0	0	0	0	0	1	0	1	24	70	33	8	1	0	138
07:30	0	0	0	0	0	0	0	9	39	56	42	10	4	0	160
07:45	0	0	0	0	0	0	1	1	25	58	33	11	0	0	129
08:00	0	0	0	0	0	0	1	12	26	55	31	2	0	0	127
Hour Total	0	0	0	0	0	1	2	23	114	239	139	31	5	0	554
08:15	0	0	0	0	1	2	1	6	29	52	31	10	1	2	135
08:30	0	0	0	0	0	6	11	13	32	29	21	7	2	0	121
08:45	0	0	0	0	0	0	7	27	44	60	20	5	0	0	163
09:00	0	0	0	0	0	0	1	5	38	46	25	4	0	0	119

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002012.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	1	8	20	51	143	187	97	26	3	2	538
09:15	0	0	0	0	1	1	0	10	25	46	18	4	1	1	107
09:30	0	0	0	0	0	0	0	7	23	46	26	9	0	0	111
09:45	0	0	0	0	0	0	0	4	21	49	18	5	0	0	97
10:00	0	0	0	0	0	0	1	3	42	41	20	3	0	0	110
Hour Total	0	0	0	0	1	1	1	24	111	182	82	21	1	1	425
10:15	0	0	0	0	0	2	4	7	28	34	9	0	0	0	84
10:30	0	0	0	0	0	0	3	11	22	49	16	6	0	0	107
10:45	0	0	0	0	0	0	0	4	27	38	17	4	0	2	92
11:00	0	0	0	0	0	0	1	12	37	41	14	5	1	0	111
Hour Total	0	0	0	0	0	2	8	34	114	162	56	15	1	2	394
11:15	0	0	0	0	0	0	1	22	33	38	7	4	0	0	105
11:30	0	0	0	0	0	0	2	16	34	36	14	5	0	0	107
11:45	0	0	0	0	0	1	0	10	39	44	18	5	0	0	117
12:00	0	0	0	0	0	0	2	14	19	35	19	5	0	0	94
Hour Total	0	0	0	0	0	1	5	62	125	153	58	19	0	0	423
12:15	0	0	0	0	0	0	1	13	31	44	14	1	0	0	104
12:30	0	0	0	0	0	0	0	13	38	39	20	5	0	0	115
12:45	0	0	0	0	0	0	0	9	30	46	20	5	2	0	112
13:00	0	0	0	0	0	0	1	8	37	39	20	4	0	0	109
Hour Total	0	0	0	0	0	0	2	43	136	168	74	15	2	0	440
13:15	0	0	0	0	0	0	4	9	31	45	14	6	0	0	109
13:30	0	0	0	0	0	0	0	3	15	43	16	3	0	1	81
13:45	0	0	0	1	5	13	6	10	33	48	10	5	2	0	133
14:00	0	0	0	0	0	0	5	7	37	48	32	4	2	0	135
Hour Total	0	0	0	1	5	13	15	29	116	184	72	18	4	1	458
14:15	0	0	0	0	0	0	0	7	29	55	31	7	1	0	130
14:30	0	0	0	0	1	0	0	5	36	56	47	11	0	0	156
14:45	0	0	0	0	0	0	3	6	57	56	28	5	0	0	155
15:00	0	0	0	0	0	0	6	17	60	51	43	2	0	0	179
Hour Total	0	0	0	0	1	0	9	35	182	218	149	25	1	0	620
15:15	1	0	0	0	0	0	0	18	41	72	38	12	0	0	182
15:30	0	0	0	0	0	0	2	17	74	81	32	10	2	0	218
15:45	0	0	0	0	3	3	22	38	21	74	46	8	1	0	216
16:00	3	3	1	3	25	16	28	26	51	94	44	13	0	0	307
Hour Total	4	3	1	3	28	19	52	99	187	321	160	43	3	0	923
16:15	0	0	2	12	14	22	32	47	77	56	23	3	0	0	288
16:30	0	0	0	0	0	2	14	51	65	97	35	4	1	0	269
16:45	0	0	0	0	0	0	8	42	98	98	26	4	1	0	277
17:00	0	0	0	0	0	15	20	40	76	84	30	3	0	0	268
Hour Total	0	0	2	12	14	39	74	180	316	335	114	14	2	0	1102

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002012.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	5	8	27	70	76	50	3	1	0	240
17:30	0	0	0	1	5	21	22	35	68	57	27	7	1	0	244
17:45	0	0	8	2	11	10	14	19	75	68	35	5	0	0	247
18:00	2	0	0	0	0	0	5	9	56	93	19	2	0	0	186
Hour Total	2	0	8	3	16	36	49	90	269	294	131	17	2	0	917
18:15	0	0	0	0	0	0	1	25	55	64	30	6	0	0	181
18:30	0	0	0	0	0	6	10	24	45	45	22	4	1	1	158
18:45	0	0	0	0	0	0	0	17	31	67	18	1	1	0	135
19:00	0	0	0	0	0	0	0	10	44	46	19	1	0	0	120
Hour Total	0	0	0	0	0	6	11	76	175	222	89	12	2	1	594
19:15	0	0	0	0	0	1	3	21	31	54	23	2	0	0	135
19:30	0	0	0	0	0	0	3	3	46	47	17	6	2	0	124
19:45	0	0	0	0	0	1	3	18	31	32	15	3	0	0	103
20:00	0	0	0	0	0	0	2	6	18	32	14	5	1	0	78
Hour Total	0	0	0	0	0	2	11	48	126	165	69	16	3	0	440
20:15	0	0	0	0	0	0	1	2	23	44	11	2	0	0	83
20:30	0	0	0	0	0	0	3	8	25	25	13	1	0	0	75
20:45	0	0	0	0	0	0	0	5	25	35	11	2	0	0	78
21:00	0	0	0	0	0	0	1	7	20	28	12	3	0	0	71
Hour Total	0	0	0	0	0	0	5	22	93	132	47	8	0	0	307
21:15	0	0	0	0	0	0	0	3	13	30	15	3	0	0	64
21:30	0	0	0	0	0	0	1	7	17	30	10	2	0	0	67
21:45	0	0	0	0	0	0	0	1	12	22	9	3	0	0	47
22:00	0	0	0	0	0	0	0	2	17	21	6	1	0	0	47
Hour Total	0	0	0	0	0	0	1	13	59	103	40	9	0	0	225
22:15	0	0	0	0	0	0	1	7	12	18	3	3	1	0	45
22:30	0	0	0	0	0	0	1	6	10	18	13	0	0	0	48
22:45	0	0	0	0	0	0	1	4	5	11	4	1	0	0	26
23:00	0	0	0	0	0	0	0	3	8	15	3	3	0	0	32
Hour Total	0	0	0	0	0	0	3	20	35	62	23	7	1	0	151
23:15	0	0	0	0	0	0	0	3	0	14	7	2	0	0	26
23:30	1	0	0	0	0	0	0	0	5	4	5	1	0	0	16
23:45	0	0	0	0	0	0	1	1	2	5	4	1	0	0	14
24:00	0	0	0	0	0	0	1	1	14	7	4	2	0	0	29
Hour Total	1	0	0	0	0	0	2	5	21	30	20	6	0	0	85
DAY TOTAL	7	4	11	19	66	129	277	913	2494	3541	1665	371	35	7	9539
PERCENTS	0.1%	0.1%	0.2%	0.2%	0.7%	1.4%	3.0%	9.6%	26.1%	37.1%	17.4%	3.8%	0.3%	0.0%	100%

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002012.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
45.0 mph

85th Percentile Speed
57.0 mph

Median Speed
51.2 mph

Average Speed
50.5 mph

10 MPH Pace Speed
45 mph to 55 mph
6035 vehicles in pace
Representing 63.2% of the total vehicles

Vehicles > 55 MPH
2078
21.8%

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002012.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	1	1	8	9	6	3	0	1	29
00:30	0	0	0	0	0	0	0	1	14	20	14	6	0	0	55
00:45	0	0	0	0	0	0	1	4	6	7	5	1	0	0	24
01:00	0	0	0	0	0	0	0	3	3	7	3	1	0	0	17
Hour Total	0	0	0	0	0	0	2	9	31	43	28	11	0	1	125
01:15	0	0	0	0	0	0	0	0	4	4	2	0	0	0	10
01:30	0	0	0	0	0	0	0	2	5	12	2	0	0	0	21
01:45	0	0	0	0	0	0	0	2	1	4	4	1	0	0	12
02:00	0	0	0	0	0	0	1	0	3	2	1	0	0	0	7
Hour Total	0	0	0	0	0	0	1	4	13	22	9	1	0	0	50
02:15	0	0	0	0	0	0	0	0	1	2	3	0	0	0	6
02:30	0	0	0	0	0	0	0	1	4	1	0	1	0	0	7
02:45	0	0	0	0	0	0	0	0	1	4	1	1	1	0	8
03:00	0	0	0	0	0	0	0	1	0	1	4	0	0	0	6
Hour Total	0	0	0	0	0	0	0	2	6	8	8	2	1	0	27
03:15	0	0	0	0	0	0	0	1	0	3	0	0	0	0	4
03:30	0	0	0	0	0	0	0	1	2	3	2	1	0	0	9
03:45	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5
04:00	0	0	0	0	0	0	0	0	2	8	4	2	0	0	16
Hour Total	0	0	0	0	0	0	0	2	4	19	6	3	0	0	34
04:15	0	0	0	0	0	0	0	0	2	15	5	0	0	0	22
04:30	0	0	0	0	0	0	0	2	2	4	6	1	0	0	15
04:45	0	0	0	0	0	0	0	2	7	4	5	1	0	0	19
05:00	0	0	0	0	0	0	0	3	5	17	8	1	0	0	34
Hour Total	0	0	0	0	0	0	0	7	16	40	24	3	0	0	90
05:15	0	0	0	0	0	0	0	1	4	24	13	5	1	0	48
05:30	0	0	0	0	0	0	0	1	11	20	19	10	0	0	61
05:45	0	0	0	0	0	0	1	2	8	26	25	4	1	0	67
06:00	0	0	0	0	0	0	0	3	12	29	16	5	1	0	66
Hour Total	0	0	0	0	0	0	1	7	35	99	73	24	3	0	242
06:15	0	1	0	0	0	0	0	3	7	21	31	10	1	0	74
06:30	0	0	0	0	0	1	0	4	14	33	31	7	2	0	92
06:45	0	0	0	0	0	0	2	7	28	20	32	2	0	0	91
07:00	0	0	0	0	0	0	0	8	34	55	35	11	0	0	143
Hour Total	0	1	0	0	0	1	2	22	83	129	129	30	3	0	400
07:15	0	0	0	0	0	0	0	9	23	56	43	14	0	0	145
07:30	0	0	0	0	0	0	1	1	16	53	58	9	1	0	139
07:45	0	0	0	0	0	0	0	7	18	66	36	12	1	1	141
08:00	0	0	0	0	0	0	0	5	37	55	30	9	0	0	136
Hour Total	0	0	0	0	0	0	1	22	94	230	167	44	2	1	561
08:15	0	0	0	0	2	3	1	9	34	47	25	9	1	0	131
08:30	0	0	0	0	0	5	3	4	21	41	33	9	2	0	118
08:45	0	0	0	0	0	0	0	8	28	61	36	1	1	0	135
09:00	0	0	0	0	1	0	0	1	11	30	12	1	0	0	56

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002012.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	3	8	4	22	94	179	106	20	4	0	440
09:15	0	0	0	0	0	0	0	12	27	53	23	5	0	0	120
09:30	0	0	0	0	0	0	1	7	25	32	26	5	0	0	96
09:45	0	0	0	0	0	0	0	3	23	40	24	4	0	0	94
10:00	0	0	0	0	0	0	3	3	28	40	16	1	0	0	91
Hour Total	0	0	0	0	0	0	4	25	103	165	89	15	0	0	401
10:15	0	0	0	0	0	0	0	8	25	22	31	7	0	0	93
10:30	0	0	0	0	0	0	0	8	26	42	13	1	0	0	90
10:45	0	0	0	0	0	0	1	6	22	41	33	2	0	0	105
11:00	0	0	0	0	0	0	0	10	10	52	26	8	0	0	106
Hour Total	0	0	0	0	0	0	1	32	83	157	103	18	0	0	394
11:15	0	0	0	0	0	0	5	12	30	48	12	2	0	0	109
11:30	0	0	0	0	0	0	0	6	27	40	15	7	0	0	95
11:45	0	0	0	0	0	0	2	2	32	48	18	11	0	1	114
12:00	0	0	0	0	0	0	0	4	25	43	22	6	0	0	100
Hour Total	0	0	0	0	0	0	7	24	114	179	67	26	0	1	418
12:15	0	0	0	0	0	0	1	7	33	43	27	4	0	0	115
12:30	0	0	0	0	0	1	3	7	36	51	26	4	0	0	128
12:45	0	0	0	0	0	0	0	11	38	58	13	2	0	0	122
13:00	0	0	0	0	0	0	0	13	31	52	25	2	1	0	124
Hour Total	0	0	0	0	0	1	4	38	138	204	91	12	1	0	489
13:15	0	0	0	0	0	3	9	25	45	53	21	7	0	0	163
13:30	0	0	0	0	0	0	0	9	21	52	30	18	0	0	130
13:45	0	0	0	0	0	0	0	6	48	53	24	5	0	0	136
14:00	0	0	0	0	0	0	2	8	28	40	36	9	2	0	125
Hour Total	0	0	0	0	0	3	11	48	142	198	111	39	2	0	554
14:15	0	0	0	0	0	0	1	7	32	61	34	7	1	0	143
14:30	0	0	0	0	0	0	2	14	37	66	40	7	1	0	167
14:45	0	0	0	0	0	0	4	27	49	58	28	4	0	0	170
15:00	0	0	0	0	0	0	0	8	36	74	44	12	1	0	175
Hour Total	0	0	0	0	0	0	7	56	154	259	146	30	3	0	655
15:15	0	0	0	0	0	2	4	22	55	81	23	8	0	0	195
15:30	0	0	0	0	0	2	2	28	66	81	42	4	0	0	225
15:45	0	0	0	0	0	3	14	24	54	85	50	11	2	0	243
16:00	0	0	0	0	4	16	24	32	86	75	28	6	0	0	271
Hour Total	0	0	0	0	4	23	44	106	261	322	143	29	2	0	934
16:15	0	0	0	2	6	6	10	46	104	70	35	7	0	0	286
16:30	0	0	0	0	1	6	13	47	87	87	37	6	0	0	284
16:45	0	0	0	0	7	19	40	42	47	61	30	6	1	0	253
17:00	0	0	0	4	4	12	21	37	80	70	28	5	0	1	262
Hour Total	0	0	0	6	18	43	84	172	318	288	130	24	1	1	1085

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002012.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	0	3	35	72	89	34	7	1	0	241
17:30	0	0	0	0	0	0	7	59	87	78	34	11	1	0	277
17:45	0	0	2	3	4	1	7	42	63	68	18	8	0	0	216
18:00	0	0	0	0	0	0	11	30	52	74	37	6	0	0	210
Hour Total	0	0	2	3	4	1	28	166	274	309	123	32	2	0	944
18:15	0	0	0	0	0	0	9	21	68	45	33	4	0	0	180
18:30	0	0	0	0	1	7	2	29	47	73	15	5	0	0	179
18:45	0	0	0	0	0	3	1	7	30	63	21	4	0	0	129
19:00	0	0	0	0	1	3	3	10	34	55	21	5	0	0	132
Hour Total	0	0	0	0	2	13	15	67	179	236	90	18	0	0	620
19:15	0	0	0	0	0	0	0	7	34	52	18	6	0	0	117
19:30	0	0	0	0	0	0	3	5	38	60	15	5	0	0	126
19:45	0	0	0	0	0	0	0	9	34	54	15	3	0	0	115
20:00	0	0	0	0	0	1	2	9	21	36	22	2	0	0	93
Hour Total	0	0	0	0	0	1	5	30	127	202	70	16	0	0	451
20:15	0	0	0	0	0	0	1	6	26	46	22	7	1	0	109
20:30	0	0	0	0	0	0	0	5	19	26	20	2	1	0	73
20:45	0	0	0	0	0	0	1	7	20	31	9	3	2	1	74
21:00	0	0	0	0	0	0	1	5	27	41	15	4	1	0	94
Hour Total	0	0	0	0	0	0	3	23	92	144	66	16	5	1	350
21:15	0	0	0	0	0	0	0	4	17	30	10	4	0	0	65
21:30	0	0	0	0	0	0	0	5	19	45	18	3	2	0	92
21:45	0	0	0	0	0	0	0	2	14	16	15	3	0	0	50
22:00	0	0	0	0	0	0	0	4	11	16	15	4	1	0	51
Hour Total	0	0	0	0	0	0	0	15	61	107	58	14	3	0	258
22:15	0	0	0	0	0	0	0	0	6	19	14	1	0	0	40
22:30	0	0	0	0	0	0	0	7	12	17	8	2	0	0	46
22:45	0	0	0	0	0	0	1	0	5	21	9	1	0	0	37
23:00	0	0	0	0	0	0	0	0	5	13	9	2	0	1	30
Hour Total	0	0	0	0	0	0	1	7	28	70	40	6	0	1	153
23:15	0	0	0	0	0	0	0	0	4	7	6	1	0	0	18
23:30	0	0	0	0	0	0	0	2	6	8	8	2	0	0	26
23:45	0	0	0	0	0	0	0	1	6	12	5	0	0	0	24
24:00	0	0	0	0	0	0	3	4	1	11	8	1	0	0	28
Hour Total	0	0	0	0	0	0	3	7	17	38	27	4	0	0	96
DAY TOTAL	0	1	2	9	31	94	228	913	2467	3647	1904	437	32	6	9771
PERCENTS	0.0%	0.1%	0.1%	0.1%	0.4%	1.0%	2.4%	9.3%	25.2%	37.3%	19.4%	4.4%	0.3%	0.0%	100%

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002012.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
45.4 mph

85th Percentile Speed
57.4 mph

Median Speed
51.6 mph

Average Speed
51.1 mph

10 MPH Pace Speed
45 mph to 55 mph
6114 vehicles in pace
Representing 62.5% of the total vehicles

Vehicles > 55 MPH
2379
24.3%

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002012.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	1	0	0	2	3	7	15	2	1	1	32
00:30	0	0	0	0	0	0	1	0	6	14	28	8	0	0	57
00:45	0	0	0	0	0	0	0	1	7	11	3	0	0	1	23
01:00	0	0	0	0	0	0	0	1	7	2	4	0	1	0	15
Hour Total	0	0	0	0	1	0	1	4	23	34	50	10	2	2	127
01:15	0	0	0	0	0	0	0	2	3	3	1	2	0	0	11
01:30	0	0	0	0	0	0	2	0	3	7	1	0	0	0	13
01:45	0	0	0	0	0	0	0	0	2	5	0	0	0	0	7
02:00	0	0	0	0	0	0	0	3	3	3	1	0	0	0	10
Hour Total	0	0	0	0	0	0	2	5	11	18	3	2	0	0	41
02:15	0	0	0	0	0	0	0	1	2	5	1	0	1	0	10
02:30	0	0	0	0	0	0	0	1	2	1	1	0	0	0	5
02:45	0	0	0	0	0	0	0	0	2	3	2	1	0	0	8
03:00	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3
Hour Total	0	0	0	0	0	0	0	2	6	11	5	1	1	0	26
03:15	0	0	0	0	0	0	0	0	2	4	0	0	0	0	6
03:30	0	0	0	0	0	0	1	1	5	5	1	1	0	0	14
03:45	0	0	0	0	0	0	0	2	4	5	4	1	0	0	16
04:00	0	0	0	0	0	0	0	0	2	4	3	1	0	0	10
Hour Total	0	0	0	0	0	0	1	3	13	18	8	3	0	0	46
04:15	0	0	0	0	0	0	0	1	7	5	7	1	0	0	21
04:30	0	0	0	0	0	0	0	1	2	10	3	1	0	0	17
04:45	0	0	0	0	0	0	0	0	4	12	9	2	0	0	27
05:00	0	0	0	0	0	0	0	2	5	14	10	3	0	0	34
Hour Total	0	0	0	0	0	0	0	4	18	41	29	7	0	0	99
05:15	0	0	0	0	0	0	0	1	6	20	19	5	2	0	53
05:30	0	0	0	0	0	0	1	2	3	22	17	4	0	0	49
05:45	0	0	0	0	0	0	1	1	7	27	24	8	0	0	68
06:00	0	0	0	0	0	0	1	1	6	22	22	2	0	0	54
Hour Total	0	0	0	0	0	0	3	5	22	91	82	19	2	0	224
06:15	0	0	0	0	0	0	0	2	12	24	28	1	0	0	67
06:30	0	0	0	0	0	0	1	2	16	29	34	8	0	0	90
06:45	0	0	0	0	0	0	0	7	29	54	28	6	0	0	124
07:00	0	0	0	0	0	0	5	23	30	47	31	9	1	0	146
Hour Total	0	0	0	0	0	0	6	34	87	154	121	24	1	0	427
07:15	0	0	0	0	0	0	0	11	29	57	52	8	1	0	158
07:30	0	0	0	0	0	0	0	1	13	67	50	11	1	0	143
07:45	0	0	0	0	0	0	1	5	24	62	29	12	1	0	134
08:00	0	0	0	0	0	0	1	6	35	45	34	5	1	0	127
Hour Total	0	0	0	0	0	0	2	23	101	231	165	36	4	0	562
08:15	0	0	0	0	0	0	0	17	34	39	41	6	0	0	137
08:30	0	0	0	0	1	4	4	2	23	45	34	10	0	0	123
08:45	0	0	0	0	0	1	4	12	41	55	25	7	2	0	147
09:00	0	0	0	0	0	0	0	8	24	45	17	11	0	1	106

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002012.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	1	5	8	39	122	184	117	34	2	1	513
09:15	0	0	0	0	0	0	0	4	20	28	18	6	0	0	76
09:30	0	0	0	0	0	0	0	8	14	26	22	4	0	0	74
09:45	0	0	0	0	0	3	6	23	31	37	20	5	1	0	126
10:00	0	0	0	0	0	0	0	4	28	42	14	5	0	0	93
Hour Total	0	0	0	0	0	3	6	39	93	133	74	20	1	0	369
10:15	0	0	0	0	0	0	4	19	24	40	17	1	0	0	105
10:30	0	0	0	0	0	0	0	3	37	55	19	3	0	1	118
10:45	0	0	0	0	0	0	1	7	26	38	18	1	1	0	92
11:00	0	0	0	0	0	0	0	6	34	47	15	4	0	0	106
Hour Total	0	0	0	0	0	0	5	35	121	180	69	9	1	1	421
11:15	0	0	0	0	0	1	3	4	18	51	22	4	1	1	105
11:30	0	0	0	0	0	0	1	8	34	37	13	2	0	0	95
11:45	0	0	0	0	0	0	0	8	37	37	14	3	3	0	102
12:00	0	0	1	0	0	0	3	13	31	41	16	1	1	0	107
Hour Total	0	0	1	0	0	1	7	33	120	166	65	10	5	1	409
12:15	0	0	0	0	0	0	1	8	31	35	29	0	1	2	107
12:30	0	0	0	0	0	0	2	19	27	49	15	7	1	1	121
12:45	0	0	0	0	0	0	3	29	38	38	16	1	0	0	125
13:00	0	0	0	0	0	1	6	6	26	55	24	8	1	1	128
Hour Total	0	0	0	0	0	1	12	62	122	177	84	16	3	4	481
13:15	0	0	0	0	0	0	0	11	33	53	22	5	0	0	124
13:30	0	0	0	0	0	0	7	19	49	33	24	1	0	0	133
13:45	0	0	0	0	1	0	1	20	42	40	14	2	0	0	120
14:00	0	0	0	0	0	0	2	6	39	45	15	9	0	0	116
Hour Total	0	0	0	0	1	0	10	56	163	171	75	17	0	0	493
14:15	0	0	0	0	0	0	3	15	33	36	31	5	0	0	123
14:30	0	0	0	0	1	0	5	12	42	76	13	5	2	0	156
14:45	0	0	0	0	0	0	4	20	56	60	34	7	0	0	181
15:00	0	0	0	0	0	1	1	27	41	78	31	3	0	0	182
Hour Total	0	0	0	0	1	1	13	74	172	250	109	20	2	0	642
15:15	0	0	0	0	0	0	0	16	54	77	29	4	0	0	180
15:30	0	0	0	0	0	0	2	18	60	73	38	14	0	0	205
15:45	0	0	0	0	0	5	4	43	72	88	35	4	2	1	254
16:00	0	0	0	2	7	16	8	23	66	79	37	10	3	2	253
Hour Total	0	0	0	2	7	21	14	100	252	317	139	32	5	3	892
16:15	0	0	2	3	2	16	46	68	86	61	23	1	0	0	308
16:30	0	0	0	0	0	11	27	58	84	86	20	3	1	0	290
16:45	0	0	0	0	8	11	31	77	86	52	17	3	0	0	285
17:00	1	5	2	5	15	22	20	51	87	45	20	8	0	0	281
Hour Total	1	5	4	8	25	60	124	254	343	244	80	15	1	0	1164

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002012.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	2	3	8	9	7	10	37	86	62	28	5	0	1	258
17:30	0	0	0	0	4	6	22	44	72	43	31	6	0	0	228
17:45	0	0	0	2	2	8	25	65	78	71	14	9	0	0	274
18:00	0	0	0	0	0	0	3	21	58	91	33	3	0	0	209
Hour Total	0	2	3	10	15	21	60	167	294	267	106	23	0	1	969
18:15	0	0	0	0	0	0	3	34	70	60	26	8	1	0	202
18:30	0	0	0	2	1	0	14	27	50	61	23	2	0	0	180
18:45	0	0	0	0	0	0	5	15	39	63	21	6	0	0	149
19:00	0	0	0	0	0	0	3	26	44	45	19	5	0	0	142
Hour Total	0	0	0	2	1	0	25	102	203	229	89	21	1	0	673
19:15	0	0	0	0	0	0	0	10	46	46	11	3	0	0	116
19:30	0	0	0	0	0	0	2	14	50	41	21	3	1	0	132
19:45	0	0	0	0	0	0	1	10	27	43	12	4	0	0	97
20:00	0	0	0	0	0	0	1	12	22	40	20	0	0	0	95
Hour Total	0	0	0	0	0	0	4	46	145	170	64	10	1	0	440
20:15	0	0	0	0	0	0	0	10	21	41	13	1	0	0	86
20:30	0	0	0	0	0	0	0	11	36	33	15	4	0	0	99
20:45	0	0	0	0	0	0	1	12	23	25	16	2	0	0	79
21:00	0	0	0	0	0	0	0	5	17	36	9	2	0	0	69
Hour Total	0	0	0	0	0	0	1	38	97	135	53	9	0	0	333
21:15	0	0	0	0	0	0	2	6	15	28	11	7	0	0	69
21:30	0	0	0	0	0	0	0	2	10	39	11	4	1	0	67
21:45	0	0	0	0	0	0	0	5	9	20	19	3	0	0	56
22:00	0	0	0	0	0	0	0	2	8	17	17	1	0	0	45
Hour Total	0	0	0	0	0	0	2	15	42	104	58	15	1	0	237
22:15	0	0	0	0	0	0	1	4	20	19	9	2	0	0	55
22:30	0	0	0	0	0	0	0	3	13	23	5	0	0	0	44
22:45	0	0	0	0	0	0	0	4	5	17	8	3	1	0	38
23:00	0	0	0	0	0	0	0	0	8	11	12	3	0	0	34
Hour Total	0	0	0	0	0	0	1	11	46	70	34	8	1	0	171
23:15	0	0	0	0	0	0	0	2	6	12	11	3	0	0	34
23:30	0	0	0	0	0	0	0	2	2	12	7	1	0	0	24
23:45	0	0	0	0	0	0	0	0	7	5	2	1	0	1	16
24:00	0	0	0	0	0	0	1	0	4	7	9	1	0	0	22
Hour Total	0	0	0	0	0	0	1	4	19	36	29	6	0	1	96
DAY TOTAL	1	7	8	22	52	113	308	1155	2635	3431	1708	367	34	14	9855
PERCENTS	0.1%	0.1%	0.1%	0.3%	0.6%	1.1%	3.1%	11.7%	26.7%	34.8%	17.3%	3.7%	0.3%	0.1%	100%

Station #: Site B-SBO
Site ID: 000000003594
Location: Carrollton, btw Brewers Neck & Northgate
Direction: SOUTH
Lane: 1

File: D1002012.prn
City: 17-311 RS Max
County: 36.94530, -76.53749

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
GRAND TOTAL	8	21	149	813	7596	5277	101								
	12	50	336	2981	10619	1175	27								29165
PERCENTS	0.1%	0.1%	0.1%	0.2%	0.6%	1.2%	2.8%	10.2%	26.0%	36.4%	18.0%	4.0%	0.3%	0.0%	100%

Statistical Information...

15th Percentile Speed
44.2 mph

85th Percentile Speed
56.9 mph

Median Speed
50.9 mph

Average Speed
50.4 mph

10 MPH Pace Speed
45 mph to 55 mph
6066 vehicles in pace
Representing 61.5% of the total vehicles

Vehicles > 55 MPH
2123
21.5%

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
00:30	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
00:45	0	4	0	0	0	0	0	0	1	0	0	0	0	0	0	5
01:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	14	3	0	0	0	0	0	1	0	0	0	0	0	0	18
01:15	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
01:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
01:45	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	5
02:00	0	2	2	0	0	0	0	0	0	0	1	0	0	0	0	5
Hour Total	0	8	7	0	0	0	0	0	0	0	1	0	0	0	0	16
02:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:30	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	4	0	0	0	0	0	1	1	0	0	0	0	0	0	6
Hour Total	0	7	1	0	0	0	0	1	1	0	0	0	0	0	0	10
03:15	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
03:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
03:45	0	3	2	0	2	0	0	0	0	0	0	0	0	0	0	7
04:00	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	9	4	0	2	0	0	0	0	0	0	0	0	0	0	15
04:15	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5
04:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
04:45	0	12	2	0	1	0	0	0	0	0	0	0	0	0	0	15
05:00	0	11	7	0	0	0	0	0	1	1	0	0	0	0	0	20
Hour Total	0	30	12	0	1	0	0	0	1	1	0	0	0	0	0	45
05:15	0	23	5	0	0	0	0	0	1	0	0	0	0	0	0	29
05:30	0	27	16	0	1	0	0	0	0	0	0	0	0	0	0	44
05:45	0	26	14	0	2	0	0	0	0	0	0	0	0	0	0	42
06:00	1	45	10	0	0	0	0	0	2	0	0	0	0	0	0	58
Hour Total	1	121	45	0	3	0	0	0	3	0	0	0	0	0	0	173
06:15	1	37	12	0	0	0	0	0	1	1	0	0	0	0	0	52
06:30	0	47	17	0	1	0	0	0	2	0	0	0	0	0	0	67
06:45	0	66	25	1	2	0	0	0	0	0	0	0	0	0	0	94
07:00	0	73	30	3	3	0	0	0	0	0	0	0	0	0	0	109
Hour Total	1	223	84	4	6	0	0	0	3	1	0	0	0	0	0	322
07:15	0	89	40	0	4	0	0	0	0	0	0	0	0	0	0	133
07:30	0	82	26	0	2	0	0	0	0	0	0	0	0	0	0	110
07:45	0	107	37	0	1	0	0	0	0	0	0	0	0	0	0	145
08:00	0	86	28	1	2	0	1	0	2	0	0	0	0	0	0	120
Hour Total	0	364	131	1	9	0	1	0	2	0	0	0	0	0	0	508
08:15	0	78	27	1	4	0	0	0	3	0	0	0	0	0	0	113
08:30	1	60	21	2	3	1	0	0	1	0	0	0	0	0	0	89
08:45	0	57	46	1	4	1	0	0	1	0	0	0	0	0	0	110
09:00	0	51	26	0	3	2	0	1	1	0	0	0	0	0	0	84

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	1	246	120	4	14	4	0	1	6	0	0	0	0	0	0	396
09:15	0	43	20	0	3	1	1	0	0	0	0	0	0	0	0	68
09:30	0	35	33	0	1	0	0	0	3	0	0	0	0	0	0	72
09:45	1	40	24	1	0	0	1	0	3	0	0	0	0	0	0	70
10:00	0	42	22	3	2	0	0	0	4	1	0	0	0	0	0	74
Hour Total	1	160	99	4	6	1	2	0	10	1	0	0	0	0	0	284
10:15	0	46	19	0	2	2	0	0	2	0	0	0	0	0	0	71
10:30	0	40	23	0	2	0	0	1	5	0	0	0	0	0	0	71
10:45	0	45	20	0	1	0	0	0	0	0	0	0	0	0	0	66
11:00	0	35	22	0	0	2	0	0	2	0	0	0	0	0	0	61
Hour Total	0	166	84	0	5	4	0	1	9	0	0	0	0	0	0	269
11:15	0	46	30	0	0	0	0	0	1	0	0	0	0	0	0	77
11:30	0	74	28	0	0	0	0	0	2	0	0	0	0	0	0	104
11:45	0	56	20	1	1	3	0	0	1	0	0	0	0	0	0	82
12:00	0	47	31	0	2	0	0	2	1	0	0	0	0	0	0	83
Hour Total	0	223	109	1	3	3	0	2	5	0	0	0	0	0	0	346
12:15	0	61	18	0	1	1	0	0	1	0	0	0	0	0	0	82
12:30	0	42	27	0	1	0	0	0	1	0	0	0	0	0	0	71
12:45	0	48	21	0	0	2	2	0	1	0	0	0	0	0	0	74
13:00	0	66	37	0	2	0	1	0	1	0	0	0	0	0	0	107
Hour Total	0	217	103	0	4	3	3	0	4	0	0	0	0	0	0	334
13:15	1	58	27	0	1	0	1	0	0	0	0	0	0	0	0	88
13:30	0	74	20	1	1	0	0	1	1	0	0	0	0	0	0	98
13:45	0	71	22	0	2	3	3	0	1	0	0	0	0	0	0	102
14:00	0	57	25	0	0	0	0	0	1	0	0	0	0	0	0	83
Hour Total	1	260	94	1	4	3	4	1	3	0	0	0	0	0	0	371
14:15	0	62	24	0	3	0	1	0	2	0	0	0	0	0	0	92
14:30	1	62	35	1	0	2	1	0	1	0	0	0	0	0	0	103
14:45	0	95	50	0	0	0	2	0	2	0	0	0	0	0	0	149
15:00	0	147	57	0	1	0	1	0	2	0	0	0	1	0	0	209
Hour Total	1	366	166	1	4	2	5	0	7	0	0	0	1	0	0	553
15:15	0	124	41	0	1	1	0	1	1	0	0	0	0	0	0	169
15:30	0	118	46	2	0	1	3	0	1	1	0	0	0	0	0	172
15:45	0	95	40	1	1	0	1	0	1	0	0	0	0	0	0	139
16:00	0	102	39	0	2	0	1	0	1	0	0	0	0	0	0	145
Hour Total	0	439	166	3	4	2	5	1	4	1	0	0	0	0	0	625
16:15	0	99	33	0	2	0	0	0	1	0	0	0	0	0	0	135
16:30	2	98	48	0	4	0	1	1	0	0	0	0	0	0	0	154
16:45	0	106	30	1	3	0	0	0	1	0	0	0	0	0	0	141
17:00	1	107	40	1	1	0	0	0	0	0	0	0	0	0	0	150
Hour Total	3	410	151	2	10	0	1	1	2	0	0	0	0	0	0	580

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	130	47	1	2	0	0	0	1	0	0	0	0	0	0	181
17:30	0	126	37	1	3	0	0	0	0	0	0	0	0	0	0	167
17:45	0	125	30	1	1	0	0	0	0	0	0	0	0	0	0	157
18:00	0	122	27	0	1	0	0	0	0	0	0	0	0	0	0	150
Hour Total	0	503	141	3	7	0	0	0	1	0	0	0	0	0	0	655
18:15	0	108	44	0	2	0	0	0	2	0	0	0	0	0	0	156
18:30	0	108	28	0	0	0	0	0	1	0	0	0	0	0	0	137
18:45	0	89	24	0	0	0	0	0	1	0	0	0	0	0	0	114
19:00	1	72	24	0	0	0	0	0	0	0	0	0	0	0	0	97
Hour Total	1	377	120	0	2	0	0	0	4	0	0	0	0	0	0	504
19:15	0	71	21	0	0	0	0	0	0	0	0	0	0	0	0	92
19:30	0	57	15	0	0	0	0	0	0	0	0	0	0	0	0	72
19:45	0	55	15	0	0	0	0	0	0	0	0	0	0	0	0	70
20:00	0	35	15	0	0	0	0	0	0	0	0	0	0	0	0	50
Hour Total	0	218	66	0	0	0	0	0	0	0	0	0	0	0	0	284
20:15	0	36	16	0	0	0	0	0	0	0	0	0	0	0	0	52
20:30	0	39	13	0	0	0	0	0	0	0	0	0	0	0	0	52
20:45	0	28	6	0	2	0	0	0	0	0	0	0	0	0	0	36
21:00	0	22	7	0	0	1	0	0	0	0	0	0	0	0	0	30
Hour Total	0	125	42	0	2	1	0	0	0	0	0	0	0	0	0	170
21:15	0	37	10	0	1	0	0	0	1	0	0	0	0	0	0	49
21:30	0	24	9	0	1	0	0	0	0	0	1	0	0	0	0	35
21:45	0	29	4	0	0	0	0	0	0	0	0	0	0	0	0	33
22:00	0	16	4	0	0	0	0	0	0	0	0	0	0	0	0	20
Hour Total	0	106	27	0	2	0	0	0	1	0	1	0	0	0	0	137
22:15	0	15	3	0	0	0	0	0	0	0	1	0	0	0	0	19
22:30	0	19	5	0	0	0	0	0	0	0	0	0	0	0	0	24
22:45	0	16	5	0	0	0	0	0	0	0	0	0	0	0	0	21
23:00	0	12	2	0	0	0	0	0	0	0	0	0	0	0	0	14
Hour Total	0	62	15	0	0	0	0	0	0	0	1	0	0	0	0	78
23:15	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
23:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
23:45	0	10	3	0	0	0	0	0	0	0	0	0	0	0	0	13
24:00	0	10	2	0	0	0	0	0	0	0	0	0	0	0	0	12
Hour Total	0	28	8	0	0	0	0	0	0	0	0	0	0	0	0	36
DAY TOTAL	10	4682	1798	24	88	23	21	8	67	4	3	0	1	0	0	6729
PERCENTS	0.2%	69.6%	26.8%	0.4%	1.4%	0.3%	0.3%	0.1%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 96.4% Trucks & Buses 3.5%

AM Times	05:30	07:15	07:00	08:00	08:15	08:30	09:00	11:15	09:45	04:15	01:15					07:15
AM Peaks	2	364	133	5	14	5	2	2	14	1	1					508
PM Times	16:15	17:15	14:45	16:45	16:00	13:45	14:45	12:45	14:15	14:45	21:30		14:15			14:45
PM Peaks	3	503	194	4	11	5	6	1	7	1	2		1			699

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
00:30	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
00:45	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
01:00	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	14	3	0	0	0	0	0	0	0	0	0	0	0	0	17
01:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:30	0	2	1	0	0	0	0	0	0	0	1	0	0	0	0	4
01:45	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	3
02:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	6	3	0	0	0	0	0	1	0	1	0	0	0	0	11
02:15	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
02:30	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
02:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	8	2	0	0	0	0	1	0	0	0	0	0	0	0	11
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
03:45	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
04:00	0	2	1	0	0	0	0	0	1	0	0	0	0	0	0	4
Hour Total	0	11	1	0	0	0	0	0	1	0	0	0	0	0	0	13
04:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
04:30	0	5	1	0	0	0	0	1	0	0	0	0	0	0	0	7
04:45	0	13	3	0	0	0	0	1	0	0	0	0	0	0	0	17
05:00	0	7	2	0	0	0	0	0	0	1	0	0	0	0	0	10
Hour Total	0	27	7	0	0	0	0	2	0	1	0	0	0	0	0	37
05:15	0	25	6	0	0	0	0	0	0	0	0	0	0	0	0	31
05:30	0	23	10	0	1	0	0	0	0	0	0	0	0	0	0	34
05:45	0	30	19	0	1	0	0	0	0	0	0	0	0	0	0	50
06:00	0	48	13	0	0	0	0	0	2	0	0	0	0	0	0	63
Hour Total	0	126	48	0	2	0	0	0	2	0	0	0	0	0	0	178
06:15	0	36	13	0	0	0	0	0	0	0	0	0	0	0	0	49
06:30	0	47	23	0	1	0	0	0	0	0	0	0	0	0	0	71
06:45	0	65	27	0	3	1	0	1	1	0	0	0	0	0	0	98
07:00	0	72	19	2	3	0	0	1	1	0	0	0	0	0	0	98
Hour Total	0	220	82	2	7	1	0	2	2	0	0	0	0	0	0	316
07:15	0	92	31	2	2	1	0	0	1	0	0	0	0	0	0	129
07:30	0	71	29	0	3	0	0	0	1	0	0	0	0	0	0	104
07:45	0	78	33	0	1	0	0	3	2	1	0	0	1	0	0	119
08:00	0	69	20	1	3	0	0	1	1	1	0	0	0	0	0	96
Hour Total	0	310	113	3	9	1	0	4	5	2	0	0	1	0	0	448
08:15	0	87	25	0	4	0	0	1	2	0	0	0	0	0	0	119
08:30	0	63	28	3	2	0	0	0	1	0	0	0	0	0	0	97
08:45	0	70	23	1	2	2	1	0	2	0	0	0	0	0	0	101
09:00	0	63	23	1	3	0	1	1	2	0	0	0	0	0	0	94

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	283	99	5	11	2	2	2	7	0	0	0	0	0	0	411
09:15	0	51	24	0	1	0	0	0	1	0	0	0	0	0	0	77
09:30	0	54	20	0	2	0	0	1	0	0	0	0	0	0	0	77
09:45	0	47	26	0	1	1	0	0	5	0	0	0	0	0	0	80
10:00	0	49	14	0	0	1	0	0	2	0	0	0	0	0	0	66
Hour Total	0	201	84	0	4	2	0	1	8	0	0	0	0	0	0	300
10:15	0	48	24	0	3	0	1	1	0	0	0	0	0	0	0	77
10:30	1	51	17	0	2	1	1	0	2	0	0	0	0	0	0	75
10:45	0	33	21	0	0	1	1	1	0	0	0	0	0	0	0	57
11:00	0	44	24	0	3	0	0	3	1	0	0	0	0	0	0	75
Hour Total	1	176	86	0	8	2	3	5	3	0	0	0	0	0	0	284
11:15	0	36	14	1	2	0	0	0	1	0	0	0	0	0	0	54
11:30	0	42	20	0	0	1	1	0	0	0	0	0	0	0	0	64
11:45	1	52	30	1	2	0	0	0	1	0	0	0	0	0	0	87
12:00	0	57	22	1	2	0	1	0	2	0	0	0	0	0	0	85
Hour Total	1	187	86	3	6	1	2	0	4	0	0	0	0	0	0	290
12:15	0	59	25	0	1	0	0	0	1	0	0	0	0	0	0	86
12:30	1	62	21	0	0	0	2	0	0	0	0	0	0	0	0	86
12:45	0	56	21	0	0	2	1	0	0	0	0	0	0	0	0	80
13:00	0	53	26	1	0	0	0	0	3	0	0	0	0	0	0	83
Hour Total	1	230	93	1	1	2	3	0	4	0	0	0	0	0	0	335
13:15	0	49	18	0	2	1	1	1	0	0	0	0	0	0	0	72
13:30	0	55	16	0	0	1	0	0	0	0	0	0	0	0	0	72
13:45	0	60	31	1	0	0	0	0	1	0	0	0	0	0	0	93
14:00	0	48	22	0	0	0	3	1	3	0	0	0	0	0	0	77
Hour Total	0	212	87	1	2	2	4	2	4	0	0	0	0	0	0	314
14:15	0	46	23	1	2	1	1	0	1	0	0	0	0	0	0	75
14:30	0	83	29	0	1	1	1	0	1	0	0	0	0	0	0	116
14:45	0	89	26	0	0	1	0	0	0	0	0	0	0	0	0	116
15:00	0	83	31	0	2	0	0	1	3	0	0	0	0	0	0	120
Hour Total	0	301	109	1	5	3	2	1	5	0	0	0	0	0	0	427
15:15	1	84	32	0	3	1	1	1	0	0	0	0	0	0	0	123
15:30	0	92	40	0	4	0	0	1	1	0	0	0	0	0	0	138
15:45	0	98	35	4	0	0	0	0	1	0	0	0	0	0	0	138
16:00	1	110	33	0	4	0	2	0	0	0	0	0	0	0	0	150
Hour Total	2	384	140	4	11	1	3	2	2	0	0	0	0	0	0	549
16:15	0	101	41	0	6	0	1	0	2	0	0	0	0	0	0	151
16:30	0	81	53	0	1	0	1	0	0	0	0	0	1	0	0	137
16:45	0	104	57	1	1	0	1	0	0	0	0	0	0	0	0	164
17:00	0	114	34	1	2	1	0	1	0	0	0	0	0	0	0	153
Hour Total	0	400	185	2	10	1	3	1	2	0	0	0	1	0	0	605

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	149	50	0	1	0	1	0	0	0	0	0	0	0	0	201
17:30	1	139	58	0	3	0	0	0	0	0	0	0	0	0	0	201
17:45	0	147	36	0	1	0	0	0	0	0	0	0	0	0	0	184
18:00	0	142	44	0	0	0	1	1	0	0	0	0	0	0	0	188
Hour Total	1	577	188	0	5	0	2	1	0	0	0	0	0	0	0	774
18:15	0	106	25	0	1	0	3	0	0	0	0	0	0	0	0	135
18:30	1	112	34	0	0	0	0	0	0	0	0	0	0	0	0	147
18:45	0	84	29	0	1	0	0	0	0	0	0	0	0	0	0	114
19:00	0	55	30	0	0	0	1	0	1	0	0	0	0	0	0	87
Hour Total	1	357	118	0	2	0	4	0	1	0	0	0	0	0	0	483
19:15	1	68	15	0	0	0	0	0	0	0	0	0	0	0	0	84
19:30	0	52	24	0	0	1	0	0	0	0	0	0	0	0	0	77
19:45	0	51	14	0	0	0	0	0	0	0	0	0	0	0	0	65
20:00	0	33	12	0	1	0	0	0	0	0	0	0	0	0	0	46
Hour Total	1	204	65	0	1	1	0	0	0	0	0	0	0	0	0	272
20:15	0	42	12	0	1	0	0	0	0	0	0	0	0	0	0	55
20:30	0	39	8	0	0	0	0	0	0	0	0	0	0	0	0	47
20:45	0	26	18	0	0	0	0	0	0	0	0	0	0	0	0	44
21:00	0	42	11	0	0	0	0	0	0	0	0	0	0	0	0	53
Hour Total	0	149	49	0	1	0	0	0	0	0	0	0	0	0	0	199
21:15	0	27	5	0	0	0	0	0	0	0	0	0	0	0	0	32
21:30	0	15	16	0	0	0	0	0	0	0	1	0	0	0	0	32
21:45	0	32	8	0	0	0	0	0	0	0	0	0	0	0	0	40
22:00	0	13	6	0	0	0	0	0	0	0	0	0	0	0	0	19
Hour Total	0	87	35	0	0	0	0	0	0	0	1	0	0	0	0	123
22:15	0	10	9	0	0	0	0	0	0	0	0	0	0	0	0	19
22:30	0	22	2	0	0	0	0	0	0	0	0	0	0	0	0	24
22:45	0	11	5	0	0	0	0	0	0	0	0	0	0	0	0	16
23:00	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	11
Hour Total	0	53	17	0	0	0	0	0	0	0	0	0	0	0	0	70
23:15	0	12	2	0	0	0	0	0	0	0	0	0	0	0	0	14
23:30	0	11	3	0	0	0	0	0	0	0	0	0	0	0	0	14
23:45	0	7	3	0	0	0	0	0	1	0	0	0	0	0	0	11
24:00	0	7	2	0	0	0	0	0	1	0	0	0	0	0	0	10
Hour Total	0	37	10	0	0	0	0	0	2	0	0	0	0	0	0	49
DAY TOTAL	8	4560	1710	22	85	19	28	24	53	3	2	0	2	0	0	6516
PERCENTS	0.2%	70.0%	26.3%	0.4%	1.4%	0.2%	0.4%	0.3%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 96.3% Trucks & Buses 3.6%

AM Times	09:45	07:00	07:15	08:00	06:45	09:45	10:00	07:30	09:45	07:15	00:45		07:00			07:00
AM Peaks	1	313	113	5	11	3	3	5	9	2	1		1			450
PM Times	15:15	17:15	16:45	15:00	15:30	12:45	13:45	14:45	13:45		20:45		15:45			17:15
PM Peaks	2	577	199	4	14	4	5	3	6		1		1			774

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
00:30	0	5	2	0	1	0	0	0	0	0	0	0	0	0	0	8
00:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
01:00	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	16	4	0	1	0	0	0	0	0	0	0	0	0	0	21
01:15	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
01:30	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	2
01:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	5	3	0	0	0	0	0	0	0	1	0	0	0	0	9
02:15	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
02:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
03:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
03:45	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
04:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	8	3	0	0	0	0	0	0	0	0	0	0	0	0	11
04:15	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	6
04:30	0	7	2	0	0	0	0	1	0	0	0	0	0	0	0	10
04:45	0	12	2	1	0	0	0	0	0	0	0	0	0	0	0	15
05:00	0	13	8	0	1	0	0	0	0	1	0	0	0	0	0	23
Hour Total	0	35	15	1	1	0	0	1	0	1	0	0	0	0	0	54
05:15	0	18	7	0	0	0	0	0	0	0	0	0	0	0	0	25
05:30	0	31	9	0	1	0	0	0	1	0	0	0	0	0	0	42
05:45	0	22	15	1	0	1	0	1	1	0	0	0	0	0	0	41
06:00	0	37	11	0	2	0	0	1	1	0	0	0	0	0	0	52
Hour Total	0	108	42	1	3	1	0	2	3	0	0	0	0	0	0	160
06:15	0	40	19	0	0	0	0	1	2	0	0	0	0	0	0	62
06:30	0	34	19	0	1	1	0	0	1	1	0	0	0	0	0	57
06:45	1	64	25	0	1	1	0	1	0	0	0	0	0	0	0	93
07:00	0	72	22	3	3	0	0	1	1	0	0	0	0	0	0	102
Hour Total	1	210	85	3	5	2	0	3	4	1	0	0	0	0	0	314
07:15	0	85	35	0	2	0	0	0	1	0	0	0	0	0	0	123
07:30	0	58	27	0	1	0	0	1	5	0	0	0	0	0	0	92
07:45	0	82	33	0	0	2	0	0	0	0	0	0	0	0	0	117
08:00	0	76	31	0	5	0	0	0	0	0	0	0	0	0	0	112
Hour Total	0	301	126	0	8	2	0	1	6	0	0	0	0	0	0	444
08:15	0	76	30	1	3	2	0	1	0	0	0	0	0	0	0	113
08:30	0	69	25	2	0	1	0	1	0	0	0	0	0	0	0	98
08:45	0	67	30	2	0	0	0	0	0	0	0	0	0	0	0	99
09:00	0	32	25	1	6	0	0	0	0	0	0	0	0	0	0	64

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	244	110	6	9	3	0	2	0	0	0	0	0	0	0	374
09:15	0	49	27	0	4	0	0	0	0	0	0	0	0	0	0	80
09:30	0	39	25	1	2	0	0	1	2	0	0	0	0	0	0	70
09:45	0	55	23	0	3	0	1	0	3	0	0	0	0	0	0	85
10:00	0	48	26	0	3	0	0	0	2	0	0	0	0	0	0	79
Hour Total	0	191	101	1	12	0	1	1	7	0	0	0	0	0	0	314
10:15	0	43	14	1	2	0	1	0	2	2	0	0	0	0	0	65
10:30	1	48	22	0	3	0	0	0	2	0	0	0	0	0	0	76
10:45	0	37	19	0	3	2	0	0	0	0	0	0	0	0	0	61
11:00	0	48	24	0	2	1	0	0	0	0	0	0	0	0	0	75
Hour Total	1	176	79	1	10	3	1	0	4	2	0	0	0	0	0	277
11:15	0	52	22	0	0	0	1	0	1	0	0	0	0	0	0	76
11:30	0	55	27	0	1	1	0	0	1	0	0	0	0	0	0	85
11:45	0	43	30	0	1	1	0	0	2	0	0	0	0	0	0	77
12:00	0	56	19	0	0	2	0	1	1	0	0	0	0	0	0	79
Hour Total	0	206	98	0	2	4	1	1	5	0	0	0	0	0	0	317
12:15	0	46	17	0	2	0	0	0	3	0	0	0	0	0	0	68
12:30	0	75	29	0	1	3	0	1	0	0	0	0	0	0	0	109
12:45	0	46	27	2	1	0	1	0	0	0	0	0	0	0	0	77
13:00	1	70	23	0	3	0	0	2	1	0	0	0	0	0	0	100
Hour Total	1	237	96	2	7	3	1	3	4	0	0	0	0	0	0	354
13:15	0	57	23	0	4	1	0	1	0	0	0	0	0	0	0	86
13:30	0	45	22	1	2	1	0	0	2	0	0	0	0	0	0	73
13:45	0	50	21	0	3	1	0	0	0	0	0	0	0	0	0	75
14:00	0	58	21	0	2	1	0	1	0	0	0	0	0	0	0	83
Hour Total	0	210	87	1	11	4	0	2	2	0	0	0	0	0	0	317
14:15	0	65	33	3	2	0	0	0	1	0	0	0	0	0	0	104
14:30	1	68	32	0	2	0	0	0	2	0	0	1	0	0	0	106
14:45	0	73	40	0	0	0	0	1	1	0	0	0	0	0	0	115
15:00	0	81	34	0	1	0	0	0	0	0	0	0	0	0	0	116
Hour Total	1	287	139	3	5	0	0	1	4	0	0	1	0	0	0	441
15:15	0	104	35	0	0	2	0	0	2	0	0	0	0	0	0	143
15:30	0	90	46	2	3	1	0	0	2	0	0	0	0	0	0	144
15:45	0	103	50	1	1	3	0	0	2	0	0	0	0	0	0	160
16:00	0	108	34	0	2	1	0	0	3	0	0	0	0	0	0	148
Hour Total	0	405	165	3	6	7	0	0	9	0	0	0	0	0	0	595
16:15	1	102	42	0	2	1	0	0	1	0	0	0	0	0	0	149
16:30	0	100	48	0	3	0	0	0	0	0	0	0	0	0	0	151
16:45	0	127	58	2	2	0	0	0	0	0	0	0	0	0	0	189
17:00	0	123	51	2	2	0	0	0	0	0	0	0	0	0	0	178
Hour Total	1	452	199	4	9	1	0	0	1	0	0	0	0	0	0	667

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	121	42	0	3	0	0	0	0	0	0	0	0	0	0	166
17:30	1	153	49	0	0	0	0	0	1	0	0	0	0	0	0	204
17:45	0	165	56	0	0	0	0	0	1	0	0	0	0	0	0	222
18:00	0	151	40	0	3	0	0	0	0	0	0	0	0	0	0	194
Hour Total	1	590	187	0	6	0	0	0	2	0	0	0	0	0	0	786
18:15	0	142	47	0	1	0	0	0	3	0	0	0	0	0	0	193
18:30	0	112	31	0	2	0	0	0	0	0	0	0	0	0	0	145
18:45	0	89	14	0	2	0	0	0	0	0	0	0	0	0	0	105
19:00	0	96	26	0	0	1	0	0	1	0	0	0	0	0	0	124
Hour Total	0	439	118	0	5	1	0	0	4	0	0	0	0	0	0	567
19:15	0	54	25	0	2	0	0	0	0	0	0	0	0	0	0	81
19:30	1	53	13	0	1	0	0	0	0	0	0	0	0	0	0	68
19:45	1	45	11	0	0	1	0	0	0	0	0	0	0	0	0	58
20:00	0	53	9	0	1	0	0	0	1	0	0	0	0	0	0	64
Hour Total	2	205	58	0	4	1	0	0	1	0	0	0	0	0	0	271
20:15	0	41	14	0	0	0	0	0	1	0	0	0	0	0	0	56
20:30	0	37	9	0	0	0	0	0	0	0	0	0	0	0	0	46
20:45	0	36	8	0	1	0	0	0	2	0	0	0	0	0	0	47
21:00	0	31	8	0	0	0	0	0	0	0	0	0	0	0	0	39
Hour Total	0	145	39	0	1	0	0	0	3	0	0	0	0	0	0	188
21:15	0	24	11	0	0	0	0	0	0	0	0	0	0	0	0	35
21:30	0	24	5	0	0	0	0	0	0	0	0	0	0	0	0	29
21:45	0	25	13	0	0	0	0	0	0	0	2	0	0	0	0	40
22:00	0	22	6	0	0	0	0	0	0	0	0	0	0	0	0	28
Hour Total	0	95	35	0	0	0	0	0	0	0	2	0	0	0	0	132
22:15	0	15	4	0	0	0	0	0	0	0	0	0	0	0	0	19
22:30	0	24	3	0	0	0	0	0	0	0	0	0	0	0	0	27
22:45	0	14	3	0	0	0	0	0	0	0	0	0	0	0	0	17
23:00	0	13	2	0	0	0	0	0	1	0	0	0	0	0	0	16
Hour Total	0	66	12	0	0	0	0	0	1	0	0	0	0	0	0	79
23:15	0	10	3	0	1	0	0	0	0	0	0	0	0	0	0	14
23:30	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
23:45	0	11	3	0	0	0	0	0	0	0	0	0	0	0	0	14
24:00	0	5	3	0	0	0	1	0	0	0	0	0	0	0	0	9
Hour Total	0	31	10	0	1	0	1	0	0	0	0	0	0	0	0	43
DAY TOTAL	8	4666	1813	26	106	32	5	17	60	4	3	1	0	0	0	6741
PERCENTS	0.2%	69.3%	26.9%	0.4%	1.6%	0.5%	0.1%	0.2%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 96.2% Trucks & Buses 3.7%

AM Times	06:00	07:45	07:15	08:15	09:00	07:45	09:30	05:30	09:30	09:30	00:45					07:15
AM Peaks	1	303	126	6	15	5	2	3	9	2	1					444
PM Times	19:00	17:30	16:45	13:30	13:00	15:15	12:15	12:30	15:15		21:00	13:45				17:30
PM Peaks	2	611	200	4	12	7	1	4	9		2	1				813

GRAND TOTAL	26	5321	279	54	180	8	3	0								
	13908	72	74	49	11	1	0	19986								
PERCENTS	0.2%	69.6%	26.7%	0.4%	1.4%	0.4%	0.2%	0.2%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	0	0	6	2	0	0	8
00:30	0	0	0	0	0	0	0	0	0	1	0	1	1	0	3
00:45	0	0	0	0	0	0	0	0	0	2	2	0	1	0	5
01:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Hour Total	0	0	0	0	0	0	0	0	0	3	8	5	2	0	18
01:15	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
01:30	0	0	0	0	0	0	0	0	1	3	0	0	0	0	4
01:45	0	0	0	0	0	0	0	0	0	2	1	2	0	0	5
02:00	0	0	0	0	0	0	0	0	0	2	2	1	0	0	5
Hour Total	0	0	0	0	0	0	0	0	1	7	4	4	0	0	16
02:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
02:30	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	5	1	0	0	6
Hour Total	0	0	0	0	0	0	0	0	0	0	8	2	0	0	10
03:15	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
03:30	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
03:45	0	0	0	0	0	0	0	0	1	0	1	5	0	0	7
04:00	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4
Hour Total	0	0	0	0	0	0	0	0	1	1	6	7	0	0	15
04:15	0	0	0	0	0	0	0	0	0	1	1	3	0	0	5
04:30	0	0	0	0	0	0	0	0	0	1	4	0	0	0	5
04:45	0	0	0	0	0	0	0	0	0	1	3	9	2	0	15
05:00	0	0	0	0	0	0	0	0	0	2	6	10	2	0	20
Hour Total	0	0	0	0	0	0	0	0	0	5	14	22	4	0	45
05:15	0	0	0	0	0	0	0	0	0	0	9	16	4	0	29
05:30	0	0	0	0	0	0	0	0	1	3	11	14	12	3	44
05:45	0	0	0	0	0	0	0	0	0	3	10	18	9	2	42
06:00	1	0	0	0	0	0	0	0	1	9	16	20	8	3	58
Hour Total	1	0	0	0	0	0	0	0	2	15	46	68	33	8	173
06:15	0	0	0	0	0	0	0	0	1	2	12	23	12	2	52
06:30	0	0	0	0	0	0	0	1	0	11	28	18	9	0	67
06:45	0	0	0	0	0	0	0	0	4	12	37	32	8	1	94
07:00	0	0	0	0	0	0	0	0	9	13	38	36	11	2	109
Hour Total	0	0	0	0	0	0	0	1	14	38	115	109	40	5	322
07:15	0	0	0	0	0	0	0	0	1	4	40	68	15	5	133
07:30	0	0	0	0	0	0	0	1	1	6	34	50	14	4	110
07:45	0	0	0	0	0	0	0	0	5	13	65	49	9	4	145
08:00	0	0	0	0	0	0	0	0	1	14	50	47	8	0	120
Hour Total	0	0	0	0	0	0	0	1	8	37	189	214	46	13	508
08:15	0	0	0	0	0	0	0	3	4	14	36	49	5	2	113
08:30	0	0	0	0	0	0	0	0	2	23	36	19	6	3	89
08:45	0	0	0	0	0	0	0	2	7	18	45	26	10	2	110
09:00	0	0	0	0	0	0	1	1	3	11	40	22	6	0	84

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	0	0	1	6	16	66	157	116	27	7	396
09:15	0	0	0	0	0	0	0	0	6	13	26	22	1	0	68
09:30	0	0	0	0	0	0	0	0	4	16	31	17	4	0	72
09:45	0	0	0	0	0	0	0	1	2	7	34	22	4	0	70
10:00	0	0	0	0	0	0	0	6	1	20	24	16	7	0	74
Hour Total	0	0	0	0	0	0	0	7	13	56	115	77	16	0	284
10:15	0	0	0	0	0	0	0	0	5	18	33	13	2	0	71
10:30	0	0	0	0	0	1	0	0	6	16	29	17	1	1	71
10:45	0	0	0	0	0	0	0	0	7	23	25	7	3	1	66
11:00	0	0	0	0	0	0	0	1	3	12	24	18	3	0	61
Hour Total	0	0	0	0	0	1	0	1	21	69	111	55	9	2	269
11:15	0	0	0	0	0	0	0	0	4	26	35	12	0	0	77
11:30	0	0	0	0	0	0	0	0	3	18	43	32	8	0	104
11:45	0	0	0	0	0	0	0	0	5	21	33	18	4	1	82
12:00	0	0	0	0	0	0	0	0	8	25	26	18	6	0	83
Hour Total	0	0	0	0	0	0	0	0	20	90	137	80	18	1	346
12:15	0	0	0	0	0	0	0	2	2	23	31	19	4	1	82
12:30	0	0	0	0	0	0	0	0	3	18	31	15	2	2	71
12:45	0	0	0	0	1	2	1	0	4	17	29	16	3	1	74
13:00	0	0	0	0	0	0	0	0	3	25	45	30	3	1	107
Hour Total	0	0	0	0	1	2	1	2	12	83	136	80	12	5	334
13:15	0	0	0	0	0	0	0	1	8	16	35	21	6	1	88
13:30	0	0	0	0	0	0	0	1	4	14	40	35	4	0	98
13:45	0	0	0	0	0	0	0	1	9	18	48	23	3	0	102
14:00	0	0	0	0	0	0	0	4	1	23	33	19	3	0	83
Hour Total	0	0	0	0	0	0	0	7	22	71	156	98	16	1	371
14:15	1	0	0	0	0	0	0	0	3	20	36	25	5	2	92
14:30	1	0	0	0	4	0	0	6	6	17	37	29	2	1	103
14:45	0	0	0	0	0	0	0	0	8	25	57	50	9	0	149
15:00	0	0	0	0	0	0	0	1	4	66	80	40	17	1	209
Hour Total	2	0	0	0	4	0	0	7	21	128	210	144	33	4	553
15:15	0	0	0	0	0	0	0	2	3	61	59	32	9	3	169
15:30	0	0	0	0	0	0	0	2	21	47	49	49	3	1	172
15:45	0	0	0	0	0	0	0	1	5	33	54	42	4	0	139
16:00	0	0	0	0	0	0	0	2	21	41	47	25	6	3	145
Hour Total	0	0	0	0	0	0	0	7	50	182	209	148	22	7	625
16:15	0	0	0	0	0	0	0	2	5	49	46	26	7	0	135
16:30	0	0	0	0	0	0	0	0	6	35	65	36	12	0	154
16:45	0	0	0	0	0	0	0	0	3	29	68	39	2	0	141
17:00	0	0	0	0	0	0	0	0	17	56	47	25	4	1	150
Hour Total	0	0	0	0	0	0	0	2	31	169	226	126	25	1	580

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	0	0	0	8	74	70	27	1	1	181
17:30	0	0	0	0	0	0	0	5	9	30	80	34	8	1	167
17:45	0	0	0	0	0	0	0	0	40	49	41	26	1	0	157
18:00	0	0	0	0	0	0	0	1	20	37	55	30	7	0	150
Hour Total	0	0	0	0	0	0	0	6	77	190	246	117	17	2	655
18:15	0	0	0	0	0	0	0	0	11	53	52	34	6	0	156
18:30	0	0	0	0	0	0	0	0	11	48	53	22	3	0	137
18:45	0	0	0	0	0	0	1	1	3	48	31	26	4	0	114
19:00	0	0	0	0	0	0	0	0	5	30	44	17	1	0	97
Hour Total	0	0	0	0	0	0	1	1	30	179	180	99	14	0	504
19:15	0	0	0	0	0	0	0	2	11	36	30	9	4	0	92
19:30	0	0	0	0	0	0	0	0	5	31	22	13	1	0	72
19:45	0	0	0	0	0	0	0	0	7	24	24	13	2	0	70
20:00	0	0	0	0	0	0	0	1	3	9	18	16	3	0	50
Hour Total	0	0	0	0	0	0	0	3	26	100	94	51	10	0	284
20:15	0	0	0	0	0	0	0	0	1	13	26	11	1	0	52
20:30	0	0	0	0	0	0	0	0	1	11	22	13	5	0	52
20:45	0	0	0	0	0	0	0	0	4	11	12	6	2	1	36
21:00	0	0	0	0	0	0	0	1	1	2	13	9	4	0	30
Hour Total	0	0	0	0	0	0	0	1	7	37	73	39	12	1	170
21:15	0	0	0	0	0	0	0	0	8	18	9	11	3	0	49
21:30	0	0	0	0	0	0	0	1	4	6	12	12	0	0	35
21:45	0	0	0	0	0	0	0	0	4	8	11	8	2	0	33
22:00	0	0	0	0	0	0	0	0	0	2	9	8	1	0	20
Hour Total	0	0	0	0	0	0	0	1	16	34	41	39	6	0	137
22:15	0	0	0	0	0	0	0	0	0	5	9	4	1	0	19
22:30	0	0	0	0	0	0	0	0	1	3	11	8	1	0	24
22:45	0	0	0	0	0	0	0	0	0	3	10	6	2	0	21
23:00	0	0	0	0	0	0	0	0	1	3	6	4	0	0	14
Hour Total	0	0	0	0	0	0	0	0	2	14	36	22	4	0	78
23:15	0	0	0	0	0	0	0	0	0	2	2	2	0	0	6
23:30	0	0	0	0	0	0	0	0	0	1	2	2	0	0	5
23:45	0	0	0	0	0	0	0	0	0	4	4	4	0	1	13
24:00	0	0	0	0	0	0	0	0	0	2	3	6	1	0	12
Hour Total	0	0	0	0	0	0	0	0	0	9	11	14	1	1	36
DAY TOTAL	3	0	0	0	5	3	3	53	390	1583	2528	1736	367	58	6729
PERCENTS	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.8%	5.8%	23.6%	37.5%	25.7%	5.4%	0.8%	100%

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
51.8 mph

85th Percentile Speed
63.3 mph

Median Speed
57.6 mph

Average Speed
57.5 mph

10 MPH Pace Speed
55 mph to 65 mph
4264 vehicles in pace
Representing 63.3% of the total vehicles

Vehicles > 55 MPH
4689
69.7%

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	1	1	1	0	0	0	3
00:30	0	0	0	0	0	0	0	0	0	0	4	2	0	0	6
00:45	0	0	0	0	0	0	0	0	1	1	0	2	1	0	5
01:00	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3
Hour Total	0	0	0	0	0	0	0	0	2	2	6	6	1	0	17
01:15	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
01:30	0	0	0	0	0	0	0	0	1	0	2	1	0	0	4
01:45	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3
02:00	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
Hour Total	0	0	0	0	0	0	0	0	1	2	5	3	0	0	11
02:15	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
02:30	0	0	0	0	0	0	0	0	2	1	2	1	0	0	6
02:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Hour Total	0	0	0	0	0	0	0	0	3	1	4	3	0	0	11
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4
03:45	0	0	0	0	0	0	0	0	0	3	1	1	0	0	5
04:00	0	0	0	0	0	0	0	0	0	1	2	1	0	0	4
Hour Total	0	0	0	0	0	0	0	0	0	4	4	5	0	0	13
04:15	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3
04:30	0	0	0	0	0	0	0	0	0	2	3	2	0	0	7
04:45	0	0	0	0	0	0	0	0	0	5	8	3	1	0	17
05:00	0	0	0	0	0	0	0	0	0	0	4	4	2	0	10
Hour Total	0	0	0	0	0	0	0	0	1	9	15	9	3	0	37
05:15	0	0	0	0	0	0	0	0	0	4	13	9	5	0	31
05:30	0	0	0	0	0	0	0	0	0	6	4	16	8	0	34
05:45	0	0	0	0	0	0	0	1	2	2	18	18	8	1	50
06:00	0	0	0	0	0	0	0	0	0	6	20	29	8	0	63
Hour Total	0	0	0	0	0	0	0	1	2	18	55	72	29	1	178
06:15	0	1	0	0	0	0	0	0	2	4	15	22	5	0	49
06:30	0	0	0	0	0	0	0	2	4	10	25	24	6	0	71
06:45	0	0	0	0	0	0	0	0	1	10	34	40	12	1	98
07:00	0	0	0	0	0	0	0	2	6	26	31	24	8	1	98
Hour Total	0	1	0	0	0	0	0	4	13	50	105	110	31	2	316
07:15	0	0	0	0	0	0	0	0	5	45	27	43	9	0	129
07:30	0	0	0	0	0	0	0	0	2	12	27	44	15	4	104
07:45	0	0	0	0	0	0	0	3	3	31	49	25	6	2	119
08:00	0	0	0	0	0	0	0	0	2	11	35	42	6	0	96
Hour Total	0	0	0	0	0	0	0	3	12	99	138	154	36	6	448
08:15	0	0	0	0	0	0	0	0	4	27	36	47	4	1	119
08:30	0	0	0	0	0	0	0	1	3	31	36	20	6	0	97
08:45	0	0	0	0	0	0	0	0	5	14	46	30	5	1	101
09:00	0	0	0	0	0	0	0	0	2	21	34	32	3	2	94

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	0	0	0	1	14	93	152	129	18	4	411
09:15	0	0	0	0	0	0	0	0	1	17	32	24	2	1	77
09:30	0	0	0	0	0	0	0	0	10	16	25	19	5	2	77
09:45	0	0	0	0	0	0	0	6	5	18	33	12	5	1	80
10:00	0	0	0	0	0	0	0	1	8	22	24	9	2	0	66
Hour Total	0	0	0	0	0	0	0	7	24	73	114	64	14	4	300
10:15	0	0	0	0	0	0	1	3	11	15	32	13	2	0	77
10:30	0	0	0	0	0	0	0	0	6	13	27	21	8	0	75
10:45	0	0	0	0	0	0	0	0	4	17	21	10	5	0	57
11:00	0	0	0	0	0	0	0	0	4	22	27	21	1	0	75
Hour Total	0	0	0	0	0	0	1	3	25	67	107	65	16	0	284
11:15	0	0	0	0	0	0	0	0	4	17	22	10	1	0	54
11:30	0	0	0	0	0	0	0	0	2	11	31	17	3	0	64
11:45	0	0	0	0	0	0	0	0	4	25	29	20	9	0	87
12:00	0	0	0	0	0	0	0	0	1	17	39	24	4	0	85
Hour Total	0	0	0	0	0	0	0	0	11	70	121	71	17	0	290
12:15	0	0	0	0	0	0	0	0	3	33	31	18	1	0	86
12:30	0	0	0	0	0	0	0	0	5	29	31	18	3	0	86
12:45	0	0	0	0	0	0	0	3	6	16	35	18	2	0	80
13:00	0	0	0	0	0	0	0	1	5	13	43	17	4	0	83
Hour Total	0	0	0	0	0	0	0	4	19	91	140	71	10	0	335
13:15	0	0	0	0	0	0	0	0	3	18	29	17	4	1	72
13:30	0	0	0	0	0	0	1	0	2	12	27	18	10	2	72
13:45	0	0	0	0	0	0	0	0	2	22	37	22	9	1	93
14:00	0	0	0	0	0	0	0	0	2	16	38	19	2	0	77
Hour Total	0	0	0	0	0	0	1	0	9	68	131	76	25	4	314
14:15	0	0	0	0	0	0	0	4	4	14	35	17	1	0	75
14:30	0	0	0	0	0	0	0	0	12	23	44	31	5	1	116
14:45	0	0	0	0	0	0	0	0	3	16	53	35	8	1	116
15:00	0	0	0	0	0	0	0	1	1	30	43	34	9	2	120
Hour Total	0	0	0	0	0	0	0	5	20	83	175	117	23	4	427
15:15	1	0	0	0	0	0	0	0	9	28	44	32	8	1	123
15:30	0	0	0	0	0	0	0	0	7	22	48	50	10	1	138
15:45	0	0	0	0	0	0	0	2	9	37	54	32	4	0	138
16:00	0	0	0	0	0	0	0	2	10	22	74	38	4	0	150
Hour Total	1	0	0	0	0	0	0	4	35	109	220	152	26	2	549
16:15	0	0	0	0	0	0	0	0	4	25	66	46	9	1	151
16:30	1	0	0	0	0	0	0	0	1	29	54	35	9	8	137
16:45	0	0	0	0	0	1	0	0	5	35	58	51	13	1	164
17:00	0	0	0	0	0	0	0	0	11	46	66	24	4	2	153
Hour Total	1	0	0	0	0	1	0	0	21	135	244	156	35	12	605

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	0	0	0	15	62	77	42	5	0	201
17:30	0	0	0	0	0	0	0	0	5	47	90	48	11	0	201
17:45	0	0	0	0	0	0	0	0	14	39	86	35	6	4	184
18:00	0	0	0	0	0	1	4	4	24	80	54	17	3	1	188
Hour Total	0	0	0	0	0	1	4	4	58	228	307	142	25	5	774
18:15	0	0	0	0	0	0	0	0	6	36	62	25	5	1	135
18:30	1	0	0	0	0	0	0	1	27	48	55	10	4	1	147
18:45	0	0	0	0	0	0	8	18	48	29	9	2	0	0	114
19:00	0	0	0	0	0	5	10	23	22	19	5	3	0	0	87
Hour Total	1	0	0	0	0	5	18	42	103	132	131	40	9	2	483
19:15	0	0	0	0	0	0	0	0	15	17	25	20	5	2	84
19:30	0	0	0	0	0	0	0	3	4	12	30	24	3	1	77
19:45	0	0	0	0	0	0	0	0	0	6	36	16	6	1	65
20:00	0	0	0	0	0	0	0	1	4	14	17	8	1	1	46
Hour Total	0	0	0	0	0	0	0	4	23	49	108	68	15	5	272
20:15	0	0	0	0	0	0	0	4	2	22	16	9	2	0	55
20:30	0	0	0	0	0	0	0	0	0	13	17	16	1	0	47
20:45	0	0	0	0	0	0	0	0	0	13	12	17	2	0	44
21:00	0	0	0	0	0	0	0	1	3	19	18	11	1	0	53
Hour Total	0	0	0	0	0	0	0	5	5	67	63	53	6	0	199
21:15	0	0	0	0	0	0	0	0	2	3	13	13	1	0	32
21:30	0	0	0	0	0	0	0	0	2	11	13	4	1	1	32
21:45	0	0	0	0	0	0	0	0	2	12	18	7	1	0	40
22:00	0	0	0	0	0	0	0	0	2	1	4	9	3	0	19
Hour Total	0	0	0	0	0	0	0	0	8	27	48	33	6	1	123
22:15	0	0	0	0	0	0	0	0	1	1	10	7	0	0	19
22:30	0	0	0	0	0	0	0	0	2	5	7	6	2	2	24
22:45	0	0	0	0	0	0	0	0	0	1	6	7	2	0	16
23:00	0	0	0	0	0	0	0	0	2	2	2	3	2	0	11
Hour Total	0	0	0	0	0	0	0	0	5	9	25	23	6	2	70
23:15	0	0	0	0	0	0	0	0	1	2	3	6	2	0	14
23:30	0	0	0	0	0	0	0	0	0	2	6	6	0	0	14
23:45	0	0	0	0	0	0	0	0	2	1	3	3	2	0	11
24:00	0	0	0	0	0	0	0	0	0	1	6	3	0	0	10
Hour Total	0	0	0	0	0	0	0	0	3	6	18	18	4	0	49
DAY TOTAL	3	1	0	0	0	7	24	87	417	1492	2436	1640	355	54	6516
PERCENTS	0.1%	0.1%	0.0%	0.0%	0.0%	0.2%	0.4%	1.4%	6.4%	22.8%	37.3%	25.1%	5.4%	0.8%	100%

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
51.5 mph

85th Percentile Speed
63.3 mph

Median Speed
57.5 mph

Average Speed
57.3 mph

10 MPH Pace Speed
55 mph to 65 mph
4076 vehicles in pace
Representing 62.5% of the total vehicles

Vehicles > 55 MPH
4485
68.8%

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	0	3	3	1	0	0	7
00:30	0	0	0	0	0	0	0	0	1	4	1	2	0	0	8
00:45	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
01:00	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4
Hour Total	0	0	0	0	0	0	0	0	1	7	6	7	0	0	21
01:15	0	0	0	0	0	0	0	0	0	2	0	0	1	0	3
01:30	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2
01:45	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2
02:00	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
Hour Total	0	0	0	0	0	0	0	0	1	4	1	1	2	0	9
02:15	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
02:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
02:45	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Hour Total	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6
03:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
03:30	0	0	0	0	0	0	0	0	0	1	2	0	0	0	3
03:45	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3
04:00	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4
Hour Total	0	0	0	0	0	0	0	0	0	2	6	3	0	0	11
04:15	0	0	0	0	0	0	0	0	0	0	2	4	0	0	6
04:30	0	0	0	0	0	0	0	0	0	1	4	3	2	0	10
04:45	0	0	0	0	0	0	0	0	2	4	3	5	1	0	15
05:00	0	0	0	0	0	0	0	0	0	4	5	9	5	0	23
Hour Total	0	0	0	0	0	0	0	0	2	9	14	21	8	0	54
05:15	0	0	0	0	0	0	0	0	0	1	6	12	5	1	25
05:30	0	0	0	0	0	0	0	0	0	6	13	15	5	3	42
05:45	0	0	0	0	0	0	0	1	1	5	7	25	2	0	41
06:00	0	0	0	0	0	0	0	0	3	4	19	17	9	0	52
Hour Total	0	0	0	0	0	0	0	1	4	16	45	69	21	4	160
06:15	0	0	0	0	0	0	0	0	1	9	26	19	7	0	62
06:30	0	0	0	0	0	0	1	0	5	8	18	20	5	0	57
06:45	0	0	0	0	0	0	0	0	3	27	42	20	1	0	93
07:00	0	0	0	0	0	0	0	2	7	27	39	20	6	1	102
Hour Total	0	0	0	0	0	0	1	2	16	71	125	79	19	1	314
07:15	0	0	0	0	0	0	0	1	1	22	38	48	10	3	123
07:30	0	0	0	0	0	0	0	2	5	6	34	33	11	1	92
07:45	0	0	0	0	0	0	0	1	1	12	47	41	15	0	117
08:00	0	0	0	0	0	0	0	0	5	18	32	52	4	1	112
Hour Total	0	0	0	0	0	0	0	4	12	58	151	174	40	5	444
08:15	0	0	0	0	0	0	0	0	1	16	49	39	7	1	113
08:30	0	0	0	0	0	0	0	0	2	16	37	34	9	0	98
08:45	0	0	0	0	0	0	0	1	1	13	38	31	14	1	99
09:00	0	0	0	0	0	0	0	0	1	11	28	18	6	0	64

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	0	0	0	1	5	56	152	122	36	2	374
09:15	0	0	0	0	0	0	0	0	3	20	35	16	6	0	80
09:30	0	0	0	0	0	0	0	1	6	17	29	15	2	0	70
09:45	0	0	0	0	0	0	0	2	17	23	26	16	1	0	85
10:00	0	0	0	0	0	0	0	2	0	19	27	26	4	1	79
Hour Total	0	0	0	0	0	0	0	5	26	79	117	73	13	1	314
10:15	0	0	0	0	0	0	0	2	3	15	29	16	0	0	65
10:30	0	0	0	0	0	0	0	1	8	13	22	23	8	1	76
10:45	0	0	0	0	0	0	0	1	1	13	29	16	1	0	61
11:00	0	0	0	0	0	0	1	1	1	17	28	25	2	0	75
Hour Total	0	0	0	0	0	0	1	5	13	58	108	80	11	1	277
11:15	0	0	0	0	0	0	0	0	8	21	20	22	5	0	76
11:30	0	0	0	0	0	0	1	0	4	24	37	13	6	0	85
11:45	0	0	0	0	0	0	0	0	7	13	32	19	5	1	77
12:00	0	0	0	0	0	0	1	1	4	18	26	29	0	0	79
Hour Total	0	0	0	0	0	0	2	1	23	76	115	83	16	1	317
12:15	0	0	0	0	0	0	0	0	6	19	16	24	3	0	68
12:30	0	0	0	0	0	0	0	1	5	38	42	19	4	0	109
12:45	0	0	0	0	0	0	0	0	6	22	25	19	5	0	77
13:00	0	0	0	0	0	0	0	0	1	30	41	22	5	1	100
Hour Total	0	0	0	0	0	0	0	1	18	109	124	84	17	1	354
13:15	0	0	0	0	0	0	0	5	4	23	26	24	4	0	86
13:30	0	0	0	0	0	0	0	0	5	15	20	26	7	0	73
13:45	0	0	0	0	0	0	1	1	3	21	19	22	7	1	75
14:00	0	0	0	0	0	0	0	0	3	15	29	27	4	5	83
Hour Total	0	0	0	0	0	0	1	6	15	74	94	99	22	6	317
14:15	0	0	0	0	0	0	0	0	11	20	37	30	5	1	104
14:30	0	0	0	0	0	0	0	1	1	20	49	29	6	0	106
14:45	0	0	0	0	0	0	0	0	2	25	44	32	12	0	115
15:00	0	0	0	0	0	0	0	1	2	34	51	26	2	0	116
Hour Total	0	0	0	0	0	0	0	2	16	99	181	117	25	1	441
15:15	0	0	0	0	0	0	0	1	4	24	68	39	7	0	143
15:30	0	0	0	0	0	0	0	5	9	47	55	22	5	1	144
15:45	0	0	0	0	0	0	0	0	7	34	63	51	5	0	160
16:00	0	0	0	0	0	0	0	0	13	42	54	34	5	0	148
Hour Total	0	0	0	0	0	0	0	6	33	147	240	146	22	1	595
16:15	1	0	0	0	0	0	0	2	5	46	48	43	4	0	149
16:30	0	0	0	0	0	0	0	1	4	36	79	28	3	0	151
16:45	0	0	0	0	0	0	0	0	3	61	89	32	4	0	189
17:00	0	0	0	0	0	0	0	1	7	43	81	39	6	1	178
Hour Total	1	0	0	0	0	0	0	4	19	186	297	142	17	1	667

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	0	0	2	11	36	61	47	9	0	166
17:30	1	0	0	0	0	0	0	1	10	59	83	42	8	0	204
17:45	0	0	0	0	0	1	0	2	10	62	90	50	7	0	222
18:00	0	0	0	0	0	0	0	0	2	43	91	48	10	0	194
Hour Total	1	0	0	0	0	1	0	5	33	200	325	187	34	0	786
18:15	0	0	0	0	0	0	0	0	8	47	80	48	8	2	193
18:30	0	0	0	0	0	0	0	0	4	41	52	42	6	0	145
18:45	0	0	0	0	0	0	0	1	8	21	50	17	7	1	105
19:00	0	0	0	0	0	0	3	5	2	28	55	26	5	0	124
Hour Total	0	0	0	0	0	0	3	6	22	137	237	133	26	3	567
19:15	0	0	0	0	0	0	0	0	3	21	32	22	1	2	81
19:30	0	0	0	0	0	0	0	1	4	11	25	24	3	0	68
19:45	1	0	0	0	0	0	0	0	8	12	22	12	2	1	58
20:00	0	0	0	0	0	0	0	0	8	13	29	12	2	0	64
Hour Total	1	0	0	0	0	0	0	1	23	57	108	70	8	3	271
20:15	0	0	0	0	0	0	0	1	2	13	19	17	4	0	56
20:30	0	0	0	0	0	0	0	0	1	10	18	11	6	0	46
20:45	0	0	0	0	0	0	0	0	3	8	22	12	2	0	47
21:00	0	0	0	0	0	0	1	0	2	9	16	11	0	0	39
Hour Total	0	0	0	0	0	0	1	1	8	40	75	51	12	0	188
21:15	0	0	0	0	0	0	0	0	2	12	14	5	2	0	35
21:30	0	0	0	0	0	0	2	1	0	8	10	8	0	0	29
21:45	0	0	0	0	0	0	0	0	4	6	8	16	6	0	40
22:00	0	0	0	0	0	0	0	0	0	0	14	12	2	0	28
Hour Total	0	0	0	0	0	0	2	1	6	26	46	41	10	0	132
22:15	0	0	0	0	0	0	0	1	1	3	9	5	0	0	19
22:30	0	0	0	0	0	0	0	0	1	2	11	12	0	1	27
22:45	0	0	0	0	0	0	0	0	0	1	10	5	1	0	17
23:00	0	0	0	0	0	0	0	1	0	3	7	2	3	0	16
Hour Total	0	0	0	0	0	0	0	2	2	9	37	24	4	1	79
23:15	0	0	0	0	0	0	0	0	1	3	7	3	0	0	14
23:30	0	0	0	0	0	0	0	0	1	2	1	1	1	0	6
23:45	0	0	0	0	0	0	0	0	0	2	4	8	0	0	14
24:00	0	0	0	0	0	0	0	0	1	1	0	5	1	1	9
Hour Total	0	0	0	0	0	0	0	0	3	8	12	17	2	1	43
DAY TOTAL	3	0	0	0	0	1	11	54	301	1528	2622	1823	365	33	6741
PERCENTS	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.9%	4.5%	22.6%	38.8%	27.0%	5.4%	0.4%	100%

Station #: Site C-NBI
Site ID: 000000020181
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
GRAND TOTAL	9	0	5	38	1108	7586	1087	1	0	11	194	4603	5199	145	19986
PERCENTS	0.1%	0.1%	0.0%	0.0%	0.1%	0.1%	0.2%	0.9%	5.5%	23.0%	37.9%	26.0%	5.4%	0.7%	100%

Statistical Information...

15th Percentile Speed
52.1 mph

85th Percentile Speed
63.3 mph

Median Speed
57.8 mph

Average Speed
57.7 mph

10 MPH Pace Speed
55 mph to 65 mph
4445 vehicles in pace
Representing 65.9% of the total vehicles

Vehicles > 55 MPH
4843
71.8%

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
00:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
00:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
01:00	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2
Hour Total	0	10	0	0	0	0	0	1	0	0	0	0	0	0	0	11
01:15	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	3
01:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:45	0	2	0	0	0	0	0	1	1	0	0	0	0	0	0	4
02:00	0	1	2	0	0	0	0	1	0	0	0	0	0	0	0	4
Hour Total	0	6	3	0	0	0	0	2	2	0	0	0	0	0	0	13
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3
Hour Total	0	4	1	0	0	0	0	0	1	0	0	0	0	0	0	6
03:15	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3
03:30	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5
03:45	0	4	3	0	1	0	0	0	0	0	0	0	0	0	0	8
04:00	0	2	1	0	0	0	0	0	1	0	0	0	0	0	0	4
Hour Total	0	10	8	0	1	0	0	0	1	0	0	0	0	0	0	20
04:15	0	4	3	0	0	0	0	0	1	0	0	0	0	0	0	8
04:30	0	13	2	0	0	0	0	0	0	0	0	0	0	0	0	15
04:45	0	15	7	0	1	0	0	0	0	0	0	0	0	0	0	23
05:00	0	11	9	0	1	1	0	0	0	0	0	0	0	0	0	22
Hour Total	0	43	21	0	2	1	0	0	1	0	0	0	0	0	0	68
05:15	0	14	12	0	0	1	0	0	0	0	0	0	0	0	0	27
05:30	2	40	14	0	0	0	0	0	1	0	0	0	0	0	0	57
05:45	0	25	12	0	1	0	0	0	0	0	0	0	0	0	0	38
06:00	2	26	11	0	0	0	0	0	1	0	0	0	0	0	0	40
Hour Total	4	105	49	0	1	1	0	0	2	0	0	0	0	0	0	162
06:15	2	35	17	0	0	0	0	0	3	0	0	0	0	0	0	57
06:30	2	18	23	0	1	0	0	0	2	0	0	0	0	0	0	46
06:45	0	45	26	0	1	0	0	0	0	0	0	0	0	0	0	72
07:00	1	46	18	2	1	0	0	0	1	0	0	0	0	0	0	69
Hour Total	5	144	84	2	3	0	0	0	6	0	0	0	0	0	0	244
07:15	1	55	24	1	1	1	0	0	0	0	0	0	0	0	0	83
07:30	1	45	24	0	1	1	0	0	1	0	0	0	0	0	0	73
07:45	0	64	32	1	2	0	0	0	2	0	0	0	0	0	0	101
08:00	0	51	17	0	4	1	0	1	1	0	0	0	0	0	0	75
Hour Total	2	215	97	2	8	3	0	1	4	0	0	0	0	0	0	332
08:15	1	34	16	2	2	0	0	2	1	0	0	0	0	0	0	58
08:30	0	43	16	0	2	2	0	0	0	0	0	0	0	0	0	63
08:45	0	48	20	1	0	1	0	0	2	0	0	0	0	0	0	72
09:00	1	36	16	0	2	1	0	0	1	0	0	0	0	0	0	57

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	2	161	68	3	6	4	0	2	4	0	0	0	0	0	0	250
09:15	2	22	13	0	2	1	0	0	3	0	0	0	0	0	0	43
09:30	2	28	19	0	0	0	1	0	3	0	0	0	0	0	0	53
09:45	0	32	17	1	1	1	1	0	4	0	0	0	0	0	0	57
10:00	1	19	19	0	1	0	0	0	5	0	0	0	0	0	0	45
Hour Total	5	101	68	1	4	2	2	0	15	0	0	0	0	0	0	198
10:15	0	28	11	0	1	0	0	0	1	0	0	0	0	0	0	41
10:30	0	30	13	0	0	0	0	3	1	0	0	0	0	0	0	47
10:45	0	37	10	0	1	0	0	0	0	0	0	0	0	0	0	48
11:00	0	28	12	0	2	0	0	2	2	0	0	0	0	0	0	46
Hour Total	0	123	46	0	4	0	0	5	4	0	0	0	0	0	0	182
11:15	0	30	14	0	0	0	0	0	1	0	0	0	0	0	0	45
11:30	0	36	15	0	1	2	0	0	0	0	0	0	0	0	0	54
11:45	2	44	13	0	2	0	1	1	2	0	0	0	0	0	0	65
12:00	0	41	20	0	2	0	0	0	2	0	0	0	0	0	0	65
Hour Total	2	151	62	0	5	2	1	1	5	0	0	0	0	0	0	229
12:15	0	34	16	0	0	1	0	0	0	0	0	0	0	0	0	51
12:30	0	32	12	0	0	0	0	1	4	0	0	0	0	0	0	49
12:45	0	29	14	0	1	1	0	0	1	0	0	0	0	0	0	46
13:00	2	35	13	0	1	0	0	0	2	0	0	0	0	0	0	53
Hour Total	2	130	55	0	2	2	0	1	7	0	0	0	0	0	0	199
13:15	0	32	16	0	2	0	1	0	0	0	0	0	0	0	0	51
13:30	2	28	13	1	0	0	0	0	0	0	0	0	0	0	0	44
13:45	1	32	21	0	0	0	0	0	1	0	0	0	0	0	0	55
14:00	0	40	10	0	1	0	0	1	1	0	0	0	0	0	0	53
Hour Total	3	132	60	1	3	0	1	1	2	0	0	0	0	0	0	203
14:15	0	43	13	0	0	0	0	0	0	0	0	0	0	0	0	56
14:30	1	40	16	0	2	2	0	1	2	0	1	0	0	0	0	65
14:45	0	82	31	0	2	1	0	0	3	0	0	0	0	0	0	119
15:00	2	118	46	0	0	1	0	1	6	0	0	1	0	0	0	175
Hour Total	3	283	106	0	4	4	0	2	11	0	1	1	0	0	0	415
15:15	0	95	31	0	2	0	0	1	2	0	0	0	0	0	0	131
15:30	1	51	29	0	3	1	3	0	0	0	0	0	0	0	0	88
15:45	0	43	21	0	0	0	0	0	0	0	0	0	0	0	0	64
16:00	0	56	23	0	0	0	0	0	0	0	0	0	0	0	0	79
Hour Total	1	245	104	0	5	1	3	1	2	0	0	0	0	0	0	362
16:15	1	52	23	0	2	0	0	0	2	0	0	0	0	0	0	80
16:30	1	51	18	2	0	0	0	0	1	0	0	0	0	0	0	73
16:45	0	56	20	0	0	0	0	0	0	0	0	0	0	0	0	76
17:00	0	53	14	0	0	0	0	1	1	0	0	0	1	0	0	70
Hour Total	2	212	75	2	2	0	0	1	4	0	0	0	1	0	0	299

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	1	69	21	0	1	0	0	0	0	0	0	0	0	0	0	92
17:30	2	69	21	0	0	0	0	0	0	0	0	0	0	0	0	92
17:45	0	53	22	0	0	0	0	0	0	0	0	0	0	0	0	75
18:00	2	57	13	0	0	0	0	0	0	0	0	0	0	0	0	72
Hour Total	5	248	77	0	1	0	0	0	0	0	0	0	0	0	0	331
18:15	1	62	13	0	0	0	0	0	0	0	0	0	0	0	0	76
18:30	0	61	11	0	0	0	0	0	0	0	0	0	0	0	0	72
18:45	2	48	10	0	0	0	0	0	0	0	0	0	0	0	0	60
19:00	0	32	14	0	0	0	0	0	0	0	0	0	0	0	0	46
Hour Total	3	203	48	0	0	0	0	0	0	0	0	0	0	0	0	254
19:15	0	27	9	0	0	1	0	0	0	0	0	0	0	0	0	37
19:30	1	30	5	0	0	0	0	0	0	0	0	0	0	0	0	36
19:45	0	30	6	0	0	0	0	0	1	0	0	0	0	0	0	37
20:00	0	16	9	0	0	0	0	1	2	0	0	0	0	0	0	28
Hour Total	1	103	29	0	0	1	0	1	3	0	0	0	0	0	0	138
20:15	1	10	6	0	0	0	0	2	1	0	0	0	0	0	0	20
20:30	0	34	4	0	1	0	0	0	0	0	0	0	0	0	0	39
20:45	0	23	0	0	1	0	0	0	0	0	0	0	0	0	0	24
21:00	0	14	4	0	0	0	0	0	0	0	0	0	0	0	0	18
Hour Total	1	81	14	0	2	0	0	2	1	0	0	0	0	0	0	101
21:15	0	13	2	0	0	0	0	0	0	0	0	0	0	0	0	15
21:30	0	15	4	0	0	0	0	0	0	0	0	0	0	0	0	19
21:45	0	18	3	0	1	1	0	0	0	0	0	0	0	0	0	23
22:00	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour Total	0	51	10	0	1	1	0	0	0	0	0	0	0	0	0	63
22:15	0	16	4	0	0	0	0	0	0	0	0	0	0	0	0	20
22:30	0	14	3	0	0	0	0	0	0	0	0	0	0	0	0	17
22:45	0	9	3	0	0	0	0	0	0	0	0	0	0	0	0	12
23:00	0	4	2	0	0	0	0	0	1	0	0	0	0	0	0	7
Hour Total	0	43	12	0	0	0	0	0	1	0	0	0	0	0	0	56
23:15	0	4	1	0	0	0	0	0	1	0	0	0	0	0	0	6
23:30	0	7	1	0	0	0	0	0	2	0	0	0	0	0	0	10
23:45	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	8
24:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	20	5	0	0	0	0	0	3	0	0	0	0	0	0	28
DAY TOTAL	41	2824	1102	11	54	22	7	21	79	0	1	1	1	0	0	4164
PERCENTS	1.0%	67.9%	26.5%	0.3%	1.3%	0.6%	0.1%	0.5%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 95.2% Trucks & Buses 4.7%

AM Times	05:30	07:15	07:00	07:00	07:45	08:30	09:00	10:15	09:15							07:15
AM Peaks	6	215	98	4	10	5	2	5	15							332
PM Times	13:00	14:45	14:45	15:45	14:45	14:15	14:45	14:30	14:30		13:45	14:15	16:15			14:45
PM Peaks	5	346	137	2	7	4	3	3	13		1	1	1			513

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
00:30	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5
00:45	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	7	4	0	0	0	0	0	0	0	0	0	0	0	0	11
01:15	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
01:30	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	3
01:45	0	4	0	0	0	0	0	0	2	0	0	0	0	0	0	6
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	13	1	0	0	0	0	0	2	0	1	0	0	0	0	17
02:15	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
02:30	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
02:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	10
03:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
03:45	0	1	2	0	0	0	0	2	0	0	0	0	0	0	0	5
04:00	0	2	2	0	0	0	0	0	1	0	0	0	0	0	0	5
Hour Total	0	6	4	0	0	0	0	2	1	0	0	0	0	0	0	13
04:15	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
04:30	0	9	2	0	0	0	0	0	2	0	0	0	0	0	0	13
04:45	0	12	6	0	0	0	0	0	0	0	0	0	0	0	0	18
05:00	0	12	6	0	1	0	0	0	0	0	0	0	0	0	0	19
Hour Total	0	35	16	0	1	0	0	0	2	0	0	0	0	0	0	54
05:15	0	18	10	0	1	0	0	0	1	0	0	0	0	0	0	30
05:30	0	25	10	0	0	0	0	0	0	0	0	0	0	0	0	35
05:45	0	31	20	0	0	0	0	0	1	0	0	0	0	0	0	52
06:00	0	20	17	0	0	0	0	0	0	0	0	0	0	0	0	37
Hour Total	0	94	57	0	1	0	0	0	2	0	0	0	0	0	0	154
06:15	0	36	18	0	0	0	0	0	2	0	0	0	0	0	0	56
06:30	0	37	16	0	0	1	0	0	0	0	0	0	0	0	0	54
06:45	0	43	23	0	3	0	1	0	2	0	0	0	0	0	0	72
07:00	1	39	15	0	2	0	0	0	2	0	0	0	0	0	0	59
Hour Total	1	155	72	0	5	1	1	0	6	0	0	0	0	0	0	241
07:15	1	57	24	0	1	0	0	0	0	0	0	0	0	0	0	83
07:30	0	55	24	0	0	0	0	0	3	0	0	0	0	0	0	82
07:45	0	47	24	0	1	0	0	0	2	0	0	0	0	0	0	74
08:00	1	61	17	1	0	0	0	0	1	0	0	0	0	0	0	81
Hour Total	2	220	89	1	2	0	0	0	6	0	0	0	0	0	0	320
08:15	0	46	14	1	2	0	0	0	0	0	0	0	0	0	0	63
08:30	0	42	12	1	2	0	0	0	1	0	0	0	0	0	0	58
08:45	0	48	13	0	1	2	0	0	0	0	0	0	0	0	0	64
09:00	1	48	9	0	2	0	0	0	1	0	0	0	0	0	0	61

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	1	184	48	2	7	2	0	0	2	0	0	0	0	0	0	246
09:15	0	32	13	0	2	2	0	0	2	0	0	0	0	0	0	51
09:30	0	31	15	0	2	1	0	1	1	0	0	0	0	0	0	51
09:45	1	29	16	0	0	1	0	0	2	0	0	0	0	0	0	49
10:00	0	26	10	0	1	1	2	0	2	0	0	0	0	0	0	42
Hour Total	1	118	54	0	5	5	2	1	7	0	0	0	0	0	0	193
10:15	1	29	13	0	1	1	0	0	3	0	0	0	0	0	0	48
10:30	1	32	11	0	0	1	1	0	0	0	0	0	0	0	0	46
10:45	0	25	14	0	1	0	0	0	1	0	0	0	0	0	0	41
11:00	1	22	11	0	3	0	0	0	2	0	0	0	0	0	0	39
Hour Total	3	108	49	0	5	2	1	0	6	0	0	0	0	0	0	174
11:15	0	30	14	0	1	1	0	0	0	0	0	0	0	0	0	46
11:30	0	27	12	0	2	2	0	0	0	0	0	0	0	0	0	43
11:45	2	31	13	1	0	0	1	1	2	0	0	0	0	0	0	51
12:00	0	31	15	0	2	2	0	0	1	0	0	0	0	0	0	51
Hour Total	2	119	54	1	5	5	1	1	3	0	0	0	0	0	0	191
12:15	1	29	24	0	0	1	0	0	1	0	0	0	0	0	0	56
12:30	0	33	14	0	0	1	1	0	2	0	0	0	0	0	0	51
12:45	0	42	22	0	0	0	0	0	3	0	0	0	0	0	0	67
13:00	2	25	14	0	1	0	0	0	1	0	0	0	0	0	0	43
Hour Total	3	129	74	0	1	2	1	0	7	0	0	0	0	0	0	217
13:15	0	44	7	0	0	1	0	0	0	0	0	0	0	0	0	52
13:30	0	44	10	0	1	0	0	1	4	0	0	0	0	0	0	60
13:45	0	40	17	0	1	0	0	0	3	0	0	0	0	0	0	61
14:00	0	32	14	0	0	0	0	1	0	0	0	0	0	0	0	47
Hour Total	0	160	48	0	2	1	0	2	7	0	0	0	0	0	0	220
14:15	0	35	17	0	2	0	1	0	0	0	0	0	0	0	0	55
14:30	3	50	13	0	0	0	0	0	1	0	0	0	0	0	0	67
14:45	0	41	14	0	3	0	0	0	1	0	0	1	0	0	0	60
15:00	1	47	9	0	0	0	0	0	1	0	1	0	0	0	0	59
Hour Total	4	173	53	0	5	0	1	0	3	0	1	1	0	0	0	241
15:15	0	42	14	0	0	0	0	0	0	0	0	0	0	0	0	56
15:30	1	41	16	0	1	0	1	0	1	0	0	0	0	0	0	61
15:45	1	46	18	0	0	0	0	0	0	0	0	0	0	0	0	65
16:00	0	40	16	1	0	1	0	0	1	0	0	0	0	0	0	59
Hour Total	2	169	64	1	1	1	1	0	2	0	0	0	0	0	0	241
16:15	0	41	20	0	2	0	0	0	2	0	0	0	0	0	0	65
16:30	0	64	17	2	0	1	0	0	1	0	0	0	0	0	0	85
16:45	1	58	22	2	1	0	0	0	1	0	0	0	0	0	0	85
17:00	0	54	21	0	0	0	0	0	0	0	0	0	0	0	0	75
Hour Total	1	217	80	4	3	1	0	0	4	0	0	0	0	0	0	310

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	1	66	26	0	0	0	0	0	0	0	0	0	0	0	0	93
17:30	2	67	16	0	1	1	0	0	1	0	0	0	0	0	0	88
17:45	0	70	20	0	1	0	0	0	1	0	0	0	0	0	0	92
18:00	1	70	26	0	0	0	1	0	0	0	0	0	0	0	0	98
Hour Total	4	273	88	0	2	1	1	0	2	0	0	0	0	0	0	371
18:15	1	63	19	0	0	1	0	0	0	0	0	0	0	0	0	84
18:30	0	44	16	0	0	0	0	0	0	0	0	0	0	0	0	60
18:45	0	54	22	0	1	0	0	1	0	0	0	0	0	0	0	78
19:00	1	44	20	0	0	0	0	0	0	0	0	0	0	0	0	65
Hour Total	2	205	77	0	1	1	0	1	0	0	0	0	0	0	0	287
19:15	1	30	5	0	1	0	0	0	0	0	0	0	0	0	0	37
19:30	0	37	10	0	1	0	0	0	0	0	0	0	0	0	0	48
19:45	0	39	6	0	0	1	0	0	1	0	0	0	0	0	0	47
20:00	0	24	6	0	0	0	0	0	0	0	0	0	0	0	0	30
Hour Total	1	130	27	0	2	1	0	0	1	0	0	0	0	0	0	162
20:15	0	33	5	0	0	0	0	0	0	0	0	0	0	0	0	38
20:30	0	36	8	0	1	0	0	1	0	0	0	0	0	0	0	46
20:45	0	27	7	0	0	0	0	0	1	0	0	0	0	0	0	35
21:00	0	20	7	0	0	0	0	0	0	0	0	0	0	0	0	27
Hour Total	0	116	27	0	1	0	0	1	1	0	0	0	0	0	0	146
21:15	0	27	6	0	0	0	0	1	1	0	1	0	0	0	0	36
21:30	0	19	4	0	0	0	0	0	1	0	1	0	0	0	0	25
21:45	1	10	2	0	1	0	0	0	0	0	0	0	0	0	0	14
22:00	0	7	5	0	0	0	0	0	0	0	0	0	0	0	0	12
Hour Total	1	63	17	0	1	0	0	1	2	0	2	0	0	0	0	87
22:15	0	11	1	0	0	0	0	0	0	0	0	0	0	0	0	12
22:30	0	15	3	0	0	0	0	0	3	0	0	0	0	0	0	21
22:45	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	9
23:00	0	7	3	0	0	0	0	0	1	0	0	0	0	0	0	11
Hour Total	0	41	8	0	0	0	0	0	4	0	0	0	0	0	0	53
23:15	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8
23:30	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
23:45	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	4
24:00	0	7	2	0	0	0	0	0	1	0	0	0	0	0	0	10
Hour Total	1	19	5	0	0	0	0	0	1	0	0	0	0	0	0	26
DAY TOTAL	29	2763	1017	9	50	23	9	9	71	0	4	1	0	0	0	3985
PERCENTS	0.8%	69.4%	25.6%	0.3%	1.2%	0.5%	0.2%	0.2%	1.7%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 95.5% Trucks & Buses 4.4%

AM Times	09:45	07:15	07:15	07:45	08:15	08:45	09:45	03:00	09:30	00:45						07:15
AM Peaks	3	220	89	3	7	5	3	2	8	1						320
PM Times	14:15	17:15	17:15	16:00	14:00	12:15	12:15	13:15	12:45	20:45	14:00					17:15
PM Peaks	4	273	88	5	5	2	1	2	8	2	1					371

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
00:30	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3
00:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	8	1	0	0	0	0	0	1	0	0	0	0	0	0	10
01:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:30	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	4
01:45	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
02:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	11	1	0	0	0	0	0	0	0	1	0	0	0	0	13
02:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
02:30	0	5	0	0	0	0	0	0	1	0	0	0	0	0	0	6
02:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
03:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Hour Total	0	8	1	0	0	0	0	1	2	0	0	0	0	0	0	12
03:15	0	2	1	0	1	0	0	0	0	0	0	0	0	0	0	4
03:30	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
03:45	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
04:00	0	3	1	0	0	0	0	0	1	0	0	0	0	0	0	5
Hour Total	0	12	5	0	1	0	0	0	1	0	0	0	0	0	0	19
04:15	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	9
04:30	0	8	1	0	0	0	0	2	0	0	0	0	0	0	0	11
04:45	0	6	6	0	1	0	0	0	2	0	0	0	0	0	0	15
05:00	0	11	7	0	0	0	0	1	1	0	0	0	0	0	0	20
Hour Total	0	32	16	0	1	0	0	3	3	0	0	0	0	0	0	55
05:15	0	18	13	0	0	0	0	0	2	0	0	0	0	0	0	33
05:30	0	28	12	0	0	0	0	0	1	0	0	0	0	0	0	41
05:45	0	20	25	0	0	0	0	0	0	0	0	0	0	0	0	45
06:00	0	22	10	0	0	0	0	0	0	0	0	0	0	0	0	32
Hour Total	0	88	60	0	0	0	0	0	3	0	0	0	0	0	0	151
06:15	0	38	14	0	0	0	0	1	0	0	0	0	0	0	0	53
06:30	1	37	23	0	0	0	0	0	1	0	0	0	0	0	0	62
06:45	0	43	20	0	0	1	0	0	0	0	0	0	0	0	0	64
07:00	1	49	18	0	1	0	0	0	0	0	0	0	0	0	0	69
Hour Total	2	167	75	0	1	1	0	1	1	0	0	0	0	0	0	248
07:15	1	58	18	0	1	1	0	0	0	0	0	0	0	0	0	79
07:30	0	52	12	0	0	1	1	0	2	0	0	0	0	0	0	68
07:45	1	58	22	0	2	0	0	2	0	0	0	0	0	0	0	85
08:00	0	53	22	1	0	1	0	0	1	0	0	0	0	0	0	78
Hour Total	2	221	74	1	3	3	1	2	3	0	0	0	0	0	0	310
08:15	0	37	12	2	3	1	0	0	1	0	0	0	0	0	0	56
08:30	0	39	17	0	2	0	0	0	0	0	0	0	0	0	0	58
08:45	1	40	11	0	1	1	0	2	0	0	0	0	0	0	0	56
09:00	2	39	20	0	2	1	0	0	1	0	0	0	0	0	0	65

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	3	155	60	2	8	3	0	2	2	0	0	0	0	0	0	235
09:15	0	31	11	0	1	0	0	0	1	0	0	0	0	0	0	44
09:30	0	36	16	0	2	0	0	0	1	0	0	0	0	0	0	55
09:45	2	27	13	0	1	3	0	2	3	0	0	0	0	0	0	51
10:00	0	31	17	0	4	2	0	1	1	0	0	0	0	0	0	56
Hour Total	2	125	57	0	8	5	0	3	6	0	0	0	0	0	0	206
10:15	0	30	16	0	0	0	0	0	1	0	0	0	0	0	0	47
10:30	0	37	6	0	0	4	0	0	0	0	0	0	0	0	0	47
10:45	0	33	10	0	1	2	0	0	1	0	0	0	0	0	0	47
11:00	0	28	19	0	0	2	0	0	0	0	0	0	0	0	0	49
Hour Total	0	128	51	0	1	8	0	0	2	0	0	0	0	0	0	190
11:15	0	20	21	0	1	3	0	0	1	0	0	0	0	0	0	46
11:30	0	37	12	0	0	2	0	0	1	0	0	0	0	0	0	52
11:45	0	25	15	1	1	0	0	0	2	0	0	0	0	0	0	44
12:00	1	36	12	0	1	1	0	0	3	0	0	0	0	0	0	54
Hour Total	1	118	60	1	3	6	0	0	7	0	0	0	0	0	0	196
12:15	1	25	15	0	0	2	0	0	1	0	0	0	0	0	0	44
12:30	1	41	8	0	1	1	0	0	0	0	0	0	0	0	0	52
12:45	0	33	15	0	0	0	0	1	0	0	0	0	0	0	0	49
13:00	1	33	7	0	0	2	0	0	0	0	0	0	0	0	0	43
Hour Total	3	132	45	0	1	5	0	1	1	0	0	0	0	0	0	188
13:15	0	36	12	0	2	0	0	0	0	0	0	0	0	0	0	50
13:30	0	32	11	0	0	4	0	0	1	0	0	0	1	0	0	49
13:45	0	36	16	0	1	0	0	1	1	0	0	0	0	0	0	55
14:00	1	42	16	0	1	0	0	1	1	0	0	0	0	0	0	62
Hour Total	1	146	55	0	4	4	0	2	3	0	0	0	1	0	0	216
14:15	0	32	18	0	2	3	0	0	1	0	0	0	0	0	0	56
14:30	0	49	17	0	0	1	0	0	0	0	0	0	0	0	0	67
14:45	0	39	17	0	1	0	0	0	1	0	0	0	0	0	0	58
15:00	0	41	27	1	1	2	0	0	1	0	0	0	0	0	0	73
Hour Total	0	161	79	1	4	6	0	0	3	0	0	0	0	0	0	254
15:15	2	37	17	0	0	1	0	0	2	0	0	0	0	0	0	59
15:30	0	61	20	1	1	1	0	0	1	0	0	0	0	0	0	85
15:45	1	49	21	0	1	2	0	0	2	0	1	0	0	0	0	77
16:00	1	40	13	0	2	1	0	0	1	0	0	0	0	0	0	58
Hour Total	4	187	71	1	4	5	0	0	6	0	1	0	0	0	0	279
16:15	1	49	16	0	1	0	0	0	1	0	0	0	0	0	0	68
16:30	0	46	14	3	0	0	0	0	0	0	0	1	0	0	0	64
16:45	1	61	18	0	0	1	0	0	0	0	0	0	0	0	0	81
17:00	0	54	14	1	0	1	0	0	0	0	0	0	0	0	0	70
Hour Total	2	210	62	4	1	2	0	0	1	0	0	1	0	0	0	283

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	63	25	0	0	0	0	0	1	0	0	0	0	0	0	89
17:30	1	93	19	0	1	3	0	1	2	0	0	0	0	0	0	120
17:45	0	126	45	0	2	0	0	1	0	0	0	0	0	0	0	174
18:00	0	113	29	0	1	0	0	0	2	0	0	0	0	0	0	145
Hour Total	1	395	118	0	4	3	0	2	5	0	0	0	0	0	0	528
18:15	1	79	33	0	0	0	0	0	3	0	0	1	0	0	0	117
18:30	0	63	17	0	1	0	0	0	2	0	0	0	0	0	0	83
18:45	0	41	12	0	0	0	0	0	0	0	0	0	0	0	0	53
19:00	0	44	11	0	0	0	0	0	2	0	0	0	0	0	0	57
Hour Total	1	227	73	0	1	0	0	0	7	0	0	1	0	0	0	310
19:15	0	38	12	0	1	0	0	0	0	0	0	0	0	0	0	51
19:30	0	35	9	0	2	0	0	0	0	0	0	0	0	0	0	46
19:45	0	29	7	0	1	0	0	0	0	0	0	0	0	0	0	37
20:00	0	23	8	0	0	0	0	0	0	0	0	0	0	0	0	31
Hour Total	0	125	36	0	4	0	0	0	0	0	0	0	0	0	0	165
20:15	0	30	8	0	0	0	0	0	2	0	0	0	0	0	0	40
20:30	0	21	4	0	0	0	0	0	0	0	0	0	0	0	0	25
20:45	0	29	1	0	0	0	0	0	1	0	0	0	0	0	0	31
21:00	0	20	2	0	0	0	0	0	0	0	0	0	0	0	0	22
Hour Total	0	100	15	0	0	0	0	0	3	0	0	0	0	0	0	118
21:15	0	17	8	0	0	0	0	1	0	0	0	0	0	0	0	26
21:30	0	16	4	0	0	0	0	0	1	0	0	0	0	0	0	21
21:45	0	17	4	0	0	0	0	1	0	0	0	0	0	0	0	22
22:00	0	13	2	0	1	0	0	0	0	0	0	0	0	0	0	16
Hour Total	0	63	18	0	1	0	0	2	1	0	0	0	0	0	0	85
22:15	0	12	3	0	0	0	0	0	0	0	0	0	0	0	0	15
22:30	0	13	4	0	0	0	0	0	0	0	0	0	0	0	0	17
22:45	0	10	2	0	0	0	0	0	0	0	0	0	0	0	0	12
23:00	0	9	2	0	0	0	0	0	1	0	0	0	0	0	0	12
Hour Total	0	44	11	0	0	0	0	0	1	0	0	0	0	0	0	56
23:15	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	7
23:30	0	6	1	0	1	0	0	0	1	0	0	0	0	0	0	9
23:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
24:00	0	6	3	0	0	0	0	0	1	0	0	0	0	0	0	10
Hour Total	0	18	9	0	1	0	0	0	2	0	0	0	0	0	0	30
DAY TOTAL	22	2881	1053	10	51	51	1	19	64	0	2	2	1	0	0	4157
PERCENTS	0.6%	69.4%	25.4%	0.3%	1.2%	1.2%	0.0%	0.4%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 95.1% Trucks & Buses 4.8%

AM Times	09:00	07:15	06:30	07:30	08:15	10:30	06:45	04:15	11:15		00:45					07:15
AM Peaks	4	221	79	3	8	11	1	3	7		1					310
PM Times	15:15	17:30	17:30	16:15	15:30	13:30		13:15	17:30		15:00	15:45	12:45			17:30
PM Peaks	4	411	126	4	5	7		2	7		1	1	1			556

GRAND TOTAL	92	8468	3172	30	155	96	17	49	214	0	7	4	2	0	0	12306
PERCENTS	0.8%	68.9%	25.8%	0.3%	1.3%	0.8%	0.1%	0.3%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	0	3	0	1	0	0	4
00:30	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2
00:45	0	0	0	0	0	0	0	0	1	1	1	0	0	0	3
01:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
Hour Total	0	0	0	0	0	0	0	0	1	7	1	2	0	0	11
01:15	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3
01:30	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
01:45	0	0	0	0	0	0	0	0	1	0	2	1	0	0	4
02:00	0	0	0	0	0	0	0	0	0	1	2	1	0	0	4
Hour Total	0	0	0	0	0	0	0	0	1	1	8	3	0	0	13
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2
02:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
03:00	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3
Hour Total	0	0	0	0	0	0	0	1	0	2	1	1	1	0	6
03:15	0	0	0	0	0	0	0	0	1	1	0	1	0	0	3
03:30	0	0	0	0	0	0	0	0	0	4	0	1	0	0	5
03:45	0	0	0	0	0	0	0	0	1	1	0	5	1	0	8
04:00	0	0	0	0	0	0	0	0	0	0	1	2	1	0	4
Hour Total	0	0	0	0	0	0	0	0	2	6	1	9	2	0	20
04:15	0	0	0	0	0	0	0	0	1	1	2	4	0	0	8
04:30	0	0	0	0	0	0	0	0	0	3	5	5	1	1	15
04:45	0	0	0	0	0	0	0	0	0	4	6	10	3	0	23
05:00	0	0	0	0	0	0	0	0	0	1	10	8	3	0	22
Hour Total	0	0	0	0	0	0	0	0	1	9	23	27	7	1	68
05:15	0	0	0	0	0	0	0	1	2	4	9	8	3	0	27
05:30	0	0	0	0	0	0	0	0	0	8	21	20	8	0	57
05:45	0	0	0	0	0	0	0	0	0	7	15	13	1	2	38
06:00	0	0	0	0	0	0	0	0	2	4	19	11	3	1	40
Hour Total	0	0	0	0	0	0	0	1	4	23	64	52	15	3	162
06:15	1	0	0	0	0	0	0	0	0	6	16	25	9	0	57
06:30	1	0	0	0	0	0	0	2	1	4	19	17	2	0	46
06:45	0	0	0	0	0	0	0	0	0	15	26	29	1	1	72
07:00	0	0	0	0	0	0	0	1	4	12	32	16	3	1	69
Hour Total	2	0	0	0	0	0	0	3	5	37	93	87	15	2	244
07:15	0	0	0	0	0	0	0	0	0	18	43	19	3	0	83
07:30	0	0	0	0	0	0	0	0	2	17	25	25	4	0	73
07:45	0	0	0	0	0	0	0	0	7	24	51	16	3	0	101
08:00	0	0	0	0	0	0	0	1	4	18	30	20	2	0	75
Hour Total	0	0	0	0	0	0	0	1	13	77	149	80	12	0	332
08:15	0	0	0	0	0	0	0	2	4	13	25	10	4	0	58
08:30	0	0	0	0	0	0	0	1	4	18	24	14	2	0	63
08:45	0	0	0	0	0	0	0	1	4	17	25	20	5	0	72
09:00	1	0	0	0	0	0	0	0	6	14	24	7	5	0	57

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	1	0	0	0	0	0	0	4	18	62	98	51	16	0	250
09:15	0	0	0	0	0	0	1	1	7	14	12	6	2	0	43
09:30	0	0	0	0	0	0	0	0	0	16	17	16	4	0	53
09:45	0	0	0	0	0	0	0	3	3	21	21	8	1	0	57
10:00	0	0	0	0	0	0	1	1	6	13	17	5	2	0	45
Hour Total	0	0	0	0	0	0	2	5	16	64	67	35	9	0	198
10:15	0	0	0	0	0	0	0	3	6	12	15	5	0	0	41
10:30	0	0	0	0	0	0	0	1	8	16	15	6	1	0	47
10:45	0	0	0	0	0	0	0	0	8	17	21	1	1	0	48
11:00	0	0	0	0	0	0	0	0	7	7	19	13	0	0	46
Hour Total	0	0	0	0	0	0	0	4	29	52	70	25	2	0	182
11:15	0	0	0	0	0	0	0	0	4	15	19	7	0	0	45
11:30	0	0	0	0	0	0	1	0	4	20	23	5	0	1	54
11:45	1	0	0	0	0	0	0	1	6	12	26	16	2	1	65
12:00	0	0	0	0	0	0	1	1	3	31	18	9	1	1	65
Hour Total	1	0	0	0	0	0	2	2	17	78	86	37	3	3	229
12:15	0	0	0	0	0	0	0	1	7	14	16	12	1	0	51
12:30	0	0	0	0	0	0	0	2	6	19	13	6	2	1	49
12:45	0	0	0	0	0	0	0	1	7	18	15	4	1	0	46
13:00	1	0	0	0	0	0	0	2	4	18	14	13	1	0	53
Hour Total	1	0	0	0	0	0	0	6	24	69	58	35	5	1	199
13:15	0	0	0	0	0	0	0	0	2	15	24	6	4	0	51
13:30	0	0	0	0	0	0	0	0	2	16	20	3	3	0	44
13:45	1	0	0	0	0	0	0	1	9	15	17	11	1	0	55
14:00	0	0	0	0	0	0	0	1	6	19	16	8	2	1	53
Hour Total	1	0	0	0	0	0	0	2	19	65	77	28	10	1	203
14:15	0	0	0	0	0	0	1	1	4	21	15	9	4	1	56
14:30	0	1	0	0	0	0	0	1	1	19	29	12	2	0	65
14:45	0	0	0	0	0	0	0	7	8	43	41	19	1	0	119
15:00	2	0	0	0	0	0	0	0	20	53	63	28	7	2	175
Hour Total	2	1	0	0	0	0	1	9	33	136	148	68	14	3	415
15:15	0	0	0	0	0	0	0	4	6	56	46	13	5	1	131
15:30	1	0	0	0	0	0	0	1	9	25	36	13	2	1	88
15:45	0	0	0	0	0	0	1	0	3	14	31	10	5	0	64
16:00	0	0	0	0	0	0	0	0	13	21	27	14	4	0	79
Hour Total	1	0	0	0	0	0	1	5	31	116	140	50	16	2	362
16:15	0	0	0	0	0	0	1	0	5	33	23	16	2	0	80
16:30	0	1	0	0	0	0	0	0	3	19	32	15	3	0	73
16:45	0	0	0	0	0	0	0	0	5	27	28	12	2	2	76
17:00	1	0	0	0	0	0	0	0	3	33	21	10	2	0	70
Hour Total	1	1	0	0	0	0	1	0	16	112	104	53	9	2	299

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	1	0	0	0	1	2	5	42	30	8	3	0	92
17:30	0	0	0	0	0	0	0	0	4	33	35	17	3	0	92
17:45	0	0	0	0	0	0	0	0	10	34	24	6	1	0	75
18:00	1	0	1	0	0	0	0	2	6	27	22	12	1	0	72
Hour Total	1	0	2	0	0	0	1	4	25	136	111	43	8	0	331
18:15	1	0	0	0	0	0	0	0	13	19	26	17	0	0	76
18:30	0	0	0	0	0	2	0	0	7	31	20	12	0	0	72
18:45	1	0	0	0	0	0	0	1	9	16	21	8	3	1	60
19:00	0	0	0	0	0	0	0	0	4	17	13	7	5	0	46
Hour Total	2	0	0	0	0	2	0	1	33	83	80	44	8	1	254
19:15	0	0	0	0	0	0	0	0	9	12	10	6	0	0	37
19:30	1	0	0	0	0	0	1	1	8	8	10	5	2	0	36
19:45	0	0	0	0	0	0	0	0	4	15	10	8	0	0	37
20:00	0	0	0	0	0	0	0	1	0	5	16	6	0	0	28
Hour Total	1	0	0	0	0	0	1	2	21	40	46	25	2	0	138
20:15	1	0	0	0	0	0	0	0	2	10	5	2	0	0	20
20:30	0	0	0	0	0	0	0	2	3	10	12	11	1	0	39
20:45	0	0	0	0	0	0	0	0	3	11	7	2	1	0	24
21:00	0	0	0	0	0	0	0	0	2	8	7	0	1	0	18
Hour Total	1	0	0	0	0	0	0	2	10	39	31	15	3	0	101
21:15	0	0	0	0	0	0	0	0	0	3	8	3	1	0	15
21:30	0	0	0	0	0	0	0	0	2	5	9	2	1	0	19
21:45	0	0	0	0	0	0	0	1	3	6	8	2	3	0	23
22:00	0	0	0	0	0	0	0	0	0	2	4	0	0	0	6
Hour Total	0	0	0	0	0	0	0	1	5	16	29	7	5	0	63
22:15	0	0	0	0	0	0	0	0	2	5	9	4	0	0	20
22:30	0	0	0	0	0	0	0	0	1	3	8	5	0	0	17
22:45	0	0	0	0	0	0	0	0	3	3	2	4	0	0	12
23:00	0	0	0	0	0	0	0	1	0	3	3	0	0	0	7
Hour Total	0	0	0	0	0	0	0	1	6	14	22	13	0	0	56
23:15	0	0	0	0	0	0	0	0	1	2	2	1	0	0	6
23:30	0	0	0	0	0	0	0	0	1	5	2	2	0	0	10
23:45	0	0	0	0	0	0	0	0	3	2	3	0	0	0	8
24:00	0	0	0	0	0	0	0	0	0	1	3	0	0	0	4
Hour Total	0	0	0	0	0	0	0	0	5	10	10	3	0	0	28
DAY TOTAL	15	2	2	0	0	2	9	54	335	1254	1517	793	162	19	4164
PERCENTS	0.4%	0.1%	0.1%	0.0%	0.0%	0.1%	0.3%	1.3%	8.0%	30.1%	36.4%	19.0%	3.8%	0.4%	100%

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
50.8 mph

85th Percentile Speed
62.2 mph

Median Speed
56.4 mph

Average Speed
56.1 mph

10 MPH Pace Speed
50 mph to 60 mph
2771 vehicles in pace
Representing 66.5% of the total vehicles

Vehicles > 55 MPH
2491
59.8%

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	1	0	1	1	0	0	0	3
00:30	0	0	0	0	0	0	0	0	1	2	0	2	0	0	5
00:45	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour Total	0	0	0	0	0	0	0	1	2	5	1	2	0	0	11
01:15	0	0	0	0	0	0	0	0	0	4	2	1	0	0	7
01:30	0	0	0	0	0	0	0	0	1	1	1	0	0	0	3
01:45	0	0	0	0	0	0	0	0	0	3	1	2	0	0	6
02:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Hour Total	0	0	0	0	0	0	0	0	1	9	4	3	0	0	17
02:15	0	0	0	0	0	0	0	0	0	1	3	0	1	0	5
02:30	0	0	0	0	0	0	0	0	0	1	2	0	0	0	3
02:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
03:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Hour Total	0	0	0	0	0	0	0	0	0	2	5	2	1	0	10
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
03:30	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
03:45	0	0	0	0	0	0	0	0	0	1	2	2	0	0	5
04:00	0	0	0	0	0	0	0	0	0	1	3	1	0	0	5
Hour Total	0	0	0	0	0	0	0	0	1	2	5	4	0	1	13
04:15	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4
04:30	0	0	0	0	0	0	0	1	0	0	8	3	1	0	13
04:45	0	0	0	0	0	0	0	1	2	5	5	5	0	0	18
05:00	0	0	0	0	0	0	0	0	1	5	6	5	2	0	19
Hour Total	0	0	0	0	0	0	0	2	3	12	21	13	3	0	54
05:15	0	0	0	0	0	0	0	0	1	10	11	8	0	0	30
05:30	0	0	0	0	0	0	0	0	2	8	8	16	1	0	35
05:45	0	0	0	0	0	0	0	1	1	6	24	13	7	0	52
06:00	0	0	0	0	0	0	0	0	0	9	13	14	1	0	37
Hour Total	0	0	0	0	0	0	0	1	4	33	56	51	9	0	154
06:15	0	0	0	0	0	0	0	0	3	10	19	19	4	1	56
06:30	0	0	0	0	0	0	0	0	2	7	27	14	4	0	54
06:45	1	0	0	0	0	0	0	0	4	17	29	18	3	0	72
07:00	1	0	0	0	0	0	0	1	4	7	32	14	0	0	59
Hour Total	2	0	0	0	0	0	0	1	13	41	107	65	11	1	241
07:15	1	0	0	0	0	0	0	1	8	22	29	17	5	0	83
07:30	0	0	0	0	0	0	0	1	5	26	34	13	3	0	82
07:45	0	0	0	0	0	0	0	0	5	24	27	15	3	0	74
08:00	0	0	0	0	0	0	0	1	7	19	33	18	3	0	81
Hour Total	1	0	0	0	0	0	0	3	25	91	123	63	14	0	320
08:15	0	0	0	0	0	1	0	2	3	24	21	9	3	0	63
08:30	0	1	0	0	0	0	0	0	6	13	26	8	3	1	58
08:45	0	0	0	0	0	0	0	1	6	14	26	14	2	1	64
09:00	1	0	0	0	0	0	0	0	8	28	13	8	3	0	61

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	1	1	0	0	0	1	0	3	23	79	86	39	11	2	246
09:15	0	0	0	0	0	0	0	0	3	13	18	17	0	0	51
09:30	0	0	0	0	0	0	0	1	11	19	13	6	1	0	51
09:45	0	0	0	0	0	0	0	4	7	12	21	4	1	0	49
10:00	0	1	0	0	0	0	0	0	9	17	11	3	1	0	42
Hour Total	0	1	0	0	0	0	0	5	30	61	63	30	3	0	193
10:15	1	0	0	0	0	0	1	0	8	12	18	5	3	0	48
10:30	0	1	0	0	0	0	0	0	2	16	15	9	3	0	46
10:45	0	0	0	0	0	0	0	2	4	12	14	8	1	0	41
11:00	0	0	0	0	0	0	0	0	5	16	11	7	0	0	39
Hour Total	1	1	0	0	0	0	1	2	19	56	58	29	7	0	174
11:15	0	0	0	0	0	0	0	2	3	19	14	8	0	0	46
11:30	0	0	0	0	0	0	0	2	5	12	17	6	1	0	43
11:45	0	1	0	0	0	0	0	0	3	18	20	7	2	0	51
12:00	0	0	0	0	0	1	0	1	4	19	12	10	4	0	51
Hour Total	0	1	0	0	0	1	0	5	15	68	63	31	7	0	191
12:15	0	0	0	0	0	0	0	0	7	23	17	8	1	0	56
12:30	0	0	0	0	0	0	0	3	7	14	18	7	2	0	51
12:45	0	0	0	0	0	0	0	1	3	28	24	9	1	1	67
13:00	1	0	0	0	0	0	0	1	9	13	13	6	0	0	43
Hour Total	1	0	0	0	0	0	0	5	26	78	72	30	4	1	217
13:15	0	0	0	0	0	0	0	1	4	19	21	7	0	0	52
13:30	0	0	0	0	0	0	0	1	7	23	11	14	4	0	60
13:45	0	0	0	0	0	0	0	0	6	18	32	5	0	0	61
14:00	0	0	0	0	0	0	0	0	5	15	15	10	2	0	47
Hour Total	0	0	0	0	0	0	0	2	22	75	79	36	6	0	220
14:15	0	0	0	0	0	0	0	6	9	9	18	10	3	0	55
14:30	0	0	1	0	0	0	0	1	4	17	25	14	5	0	67
14:45	1	0	0	0	0	0	0	0	8	19	21	8	3	0	60
15:00	0	0	0	0	0	0	0	2	5	9	20	16	6	1	59
Hour Total	1	0	1	0	0	0	0	9	26	54	84	48	17	1	241
15:15	0	0	0	0	0	0	0	1	5	14	17	14	4	1	56
15:30	1	0	0	0	0	0	1	0	2	18	22	15	1	1	61
15:45	1	0	0	0	0	0	0	2	4	26	18	11	3	0	65
16:00	0	0	0	0	0	0	0	1	9	10	24	14	1	0	59
Hour Total	2	0	0	0	0	0	1	4	20	68	81	54	9	2	241
16:15	0	0	0	0	0	0	0	1	4	18	27	13	1	1	65
16:30	1	0	0	0	0	0	0	0	6	31	31	13	1	2	85
16:45	0	0	0	0	0	0	1	1	3	23	31	22	2	2	85
17:00	0	0	0	0	0	0	0	0	8	22	33	10	2	0	75
Hour Total	1	0	0	0	0	0	1	2	21	94	122	58	6	5	310

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	0	0	0	9	39	25	19	1	0	93
17:30	1	0	0	0	0	0	0	0	4	27	36	17	3	0	88
17:45	0	0	0	0	0	0	0	2	7	29	32	16	6	0	92
18:00	2	0	0	0	0	0	0	1	25	26	31	8	5	0	98
Hour Total	3	0	0	0	0	0	0	3	45	121	124	60	15	0	371
18:15	1	0	0	0	0	0	0	0	13	29	31	9	1	0	84
18:30	0	0	0	0	0	0	2	4	12	21	14	7	0	0	60
18:45	0	0	0	0	0	0	3	31	28	10	3	3	0	0	78
19:00	0	0	0	0	0	3	11	12	15	13	8	0	3	0	65
Hour Total	1	0	0	0	0	3	16	47	68	73	56	19	4	0	287
19:15	0	0	0	0	0	0	0	1	7	10	13	6	0	0	37
19:30	0	0	0	0	0	0	0	1	6	17	12	9	3	0	48
19:45	0	0	0	0	0	0	0	2	5	21	9	8	1	1	47
20:00	0	0	0	0	0	0	0	2	1	13	9	5	0	0	30
Hour Total	0	0	0	0	0	0	0	6	19	61	43	28	4	1	162
20:15	0	0	0	0	0	0	0	2	4	9	17	5	1	0	38
20:30	0	0	0	0	0	0	0	0	2	13	19	9	3	0	46
20:45	0	0	0	0	0	0	0	1	4	9	13	6	2	0	35
21:00	0	0	0	0	0	0	0	1	2	8	11	4	1	0	27
Hour Total	0	0	0	0	0	0	0	4	12	39	60	24	7	0	146
21:15	0	0	0	0	0	0	0	2	4	9	15	6	0	0	36
21:30	0	0	0	0	0	0	0	0	1	2	15	5	2	0	25
21:45	0	0	0	0	0	0	0	0	0	6	7	1	0	0	14
22:00	0	0	0	0	0	0	0	0	1	4	4	2	1	0	12
Hour Total	0	0	0	0	0	0	0	2	6	21	41	14	3	0	87
22:15	0	0	0	0	0	0	0	1	0	6	1	3	1	0	12
22:30	0	0	0	0	0	0	0	1	0	6	11	3	0	0	21
22:45	0	0	0	0	0	0	0	0	0	0	3	5	1	0	9
23:00	0	0	0	0	0	0	0	0	0	3	5	2	1	0	11
Hour Total	0	0	0	0	0	0	0	2	0	15	20	13	3	0	53
23:15	0	0	0	0	0	0	0	0	1	0	2	4	0	1	8
23:30	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4
23:45	1	0	0	0	0	0	0	0	0	2	0	1	0	0	4
24:00	0	0	0	0	0	0	0	0	1	2	6	1	0	0	10
Hour Total	1	0	0	0	0	0	0	0	2	6	10	6	0	1	26
DAY TOTAL	15	4	1	0	0	5	19	109	403	1164	1384	722	144	15	3985
PERCENTS	0.4%	0.2%	0.1%	0.0%	0.0%	0.2%	0.4%	2.7%	10.1%	29.2%	34.7%	18.1%	3.6%	0.3%	100%

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
50.2 mph

85th Percentile Speed
62.0 mph

Median Speed
56.0 mph

Average Speed
55.6 mph

10 MPH Pace Speed
50 mph to 60 mph
2548 vehicles in pace
Representing 63.9% of the total vehicles

Vehicles > 55 MPH
2265
56.8%

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	1	1	1	0	0	1	4
00:30	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3
00:45	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
01:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Hour Total	0	0	0	0	0	0	0	1	2	2	2	1	0	2	10
01:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
01:30	0	0	0	0	0	0	0	1	0	1	2	0	0	0	4
01:45	0	0	0	0	0	0	0	0	0	0	3	1	0	1	5
02:00	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3
Hour Total	0	0	0	0	0	0	0	1	0	4	6	1	0	1	13
02:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
02:30	0	0	0	0	0	0	0	0	1	0	2	3	0	0	6
02:45	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4
03:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Hour Total	0	0	0	0	0	0	0	0	1	0	4	7	0	0	12
03:15	0	0	0	0	0	0	0	1	0	2	1	0	0	0	4
03:30	0	0	0	0	0	0	0	1	0	1	1	1	0	0	4
03:45	0	0	0	0	0	0	0	0	0	1	4	1	0	0	6
04:00	0	0	0	0	0	0	0	0	0	0	4	1	0	0	5
Hour Total	0	0	0	0	0	0	0	2	0	4	10	3	0	0	19
04:15	0	0	0	0	0	0	0	0	1	4	2	2	0	0	9
04:30	0	0	0	0	0	0	0	0	0	2	4	5	0	0	11
04:45	0	0	0	0	0	0	0	1	1	4	5	4	0	0	15
05:00	0	0	0	0	0	0	0	0	1	8	5	6	0	0	20
Hour Total	0	0	0	0	0	0	0	1	3	18	16	17	0	0	55
05:15	0	0	0	0	0	0	0	0	0	5	10	15	3	0	33
05:30	0	0	0	0	0	0	0	0	3	8	16	12	2	0	41
05:45	0	0	0	0	0	0	0	0	0	10	16	14	5	0	45
06:00	0	0	0	0	0	0	0	0	1	4	19	7	1	0	32
Hour Total	0	0	0	0	0	0	0	0	4	27	61	48	11	0	151
06:15	0	0	0	0	0	0	0	0	4	14	19	13	3	0	53
06:30	0	0	0	0	0	0	0	2	5	11	19	15	10	0	62
06:45	0	0	0	0	0	0	1	1	4	22	26	10	0	0	64
07:00	0	0	0	0	0	0	0	1	11	14	29	10	4	0	69
Hour Total	0	0	0	0	0	0	1	4	24	61	93	48	17	0	248
07:15	1	0	0	0	0	0	0	0	4	23	25	21	5	0	79
07:30	0	0	1	0	0	0	0	0	1	19	35	10	2	0	68
07:45	1	0	0	0	0	0	1	1	7	21	17	33	4	0	85
08:00	0	0	0	0	0	0	0	0	4	24	33	13	4	0	78
Hour Total	2	0	1	0	0	0	1	1	16	87	110	77	15	0	310
08:15	0	0	0	0	0	0	0	2	2	18	15	16	3	0	56
08:30	0	0	0	0	0	0	0	0	1	18	23	14	2	0	58
08:45	0	0	0	0	0	0	0	1	1	15	21	13	5	0	56
09:00	0	0	1	0	0	0	0	1	8	14	29	10	2	0	65

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	1	0	0	0	0	4	12	65	88	53	12	0	235
09:15	0	0	0	0	0	0	0	0	0	16	20	8	0	0	44
09:30	0	0	0	0	0	1	0	2	4	21	17	7	3	0	55
09:45	0	0	1	0	0	0	0	4	3	23	8	12	0	0	51
10:00	0	0	0	0	0	0	0	1	9	20	11	12	3	0	56
Hour Total	0	0	1	0	0	1	0	7	16	80	56	39	6	0	206
10:15	0	0	0	0	0	0	0	0	3	16	15	11	1	1	47
10:30	0	0	0	0	0	0	0	1	1	15	20	10	0	0	47
10:45	0	0	0	0	0	0	0	1	5	14	19	6	2	0	47
11:00	0	0	0	0	0	0	1	0	8	15	17	7	1	0	49
Hour Total	0	0	0	0	0	0	1	2	17	60	71	34	4	1	190
11:15	0	0	0	0	0	0	0	0	8	13	19	6	0	0	46
11:30	0	0	0	0	0	2	3	0	6	18	16	5	1	1	52
11:45	0	0	0	0	0	0	0	1	1	12	19	10	1	0	44
12:00	0	1	0	0	0	1	0	1	5	24	13	8	1	0	54
Hour Total	0	1	0	0	0	3	3	2	20	67	67	29	3	1	196
12:15	0	0	0	0	0	0	0	1	3	9	17	9	5	0	44
12:30	0	0	0	0	0	0	0	0	10	20	13	8	1	0	52
12:45	0	0	0	0	0	0	0	2	8	18	15	6	0	0	49
13:00	1	0	0	0	0	0	0	0	6	10	15	10	1	0	43
Hour Total	1	0	0	0	0	0	0	3	27	57	60	33	7	0	188
13:15	0	0	0	0	0	1	0	1	7	15	12	13	1	0	50
13:30	0	0	0	0	0	0	0	1	5	15	20	7	1	0	49
13:45	0	0	0	0	0	0	0	2	9	20	17	4	3	0	55
14:00	0	0	0	0	0	0	0	1	7	18	21	10	3	2	62
Hour Total	0	0	0	0	0	1	0	5	28	68	70	34	8	2	216
14:15	0	0	0	0	0	0	0	2	8	17	23	5	1	0	56
14:30	0	0	0	0	0	0	0	1	4	27	20	13	2	0	67
14:45	0	0	0	0	0	0	0	1	0	18	28	7	3	1	58
15:00	0	0	0	0	0	0	0	2	6	25	24	13	3	0	73
Hour Total	0	0	0	0	0	0	0	6	18	87	95	38	9	1	254
15:15	1	1	0	0	0	0	0	0	5	18	17	15	1	1	59
15:30	0	0	0	0	0	0	0	2	4	30	25	22	2	0	85
15:45	1	0	0	0	0	0	1	1	6	23	32	10	2	1	77
16:00	1	0	0	0	0	0	0	0	4	19	23	8	3	0	58
Hour Total	3	1	0	0	0	0	1	3	19	90	97	55	8	2	279
16:15	0	0	0	0	0	2	1	3	3	26	20	9	3	1	68
16:30	1	1	0	0	0	0	0	0	5	14	30	10	2	1	64
16:45	0	0	0	0	0	0	0	0	4	34	29	12	2	0	81
17:00	0	0	0	0	0	0	0	2	10	27	22	9	0	0	70
Hour Total	1	1	0	0	0	2	1	5	22	101	101	40	7	2	283

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	1	3	2	4	29	35	10	5	0	89
17:30	0	0	0	0	0	0	0	5	15	40	46	13	1	0	120
17:45	0	0	0	0	0	0	1	1	17	68	67	19	1	0	174
18:00	0	0	0	0	0	0	0	0	4	39	71	29	2	0	145
Hour Total	0	0	0	0	0	1	4	8	40	176	219	71	9	0	528
18:15	1	0	0	0	0	0	0	0	13	37	46	17	3	0	117
18:30	0	0	0	0	0	0	1	0	4	27	37	13	1	0	83
18:45	0	0	0	0	0	0	0	0	1	13	26	10	3	0	53
19:00	0	0	0	0	0	0	0	0	4	22	21	8	2	0	57
Hour Total	1	0	0	0	0	0	1	0	22	99	130	48	9	0	310
19:15	0	0	0	0	0	0	0	2	2	17	20	8	2	0	51
19:30	0	0	0	0	0	0	0	1	3	8	19	10	5	0	46
19:45	0	0	0	0	0	0	0	0	5	9	15	8	0	0	37
20:00	0	0	0	0	0	0	0	0	2	11	12	6	0	0	31
Hour Total	0	0	0	0	0	0	0	3	12	45	66	32	7	0	165
20:15	0	0	0	0	0	0	0	2	2	12	16	6	2	0	40
20:30	0	0	0	0	0	0	0	0	1	10	8	6	0	0	25
20:45	0	0	0	0	0	0	0	0	2	5	16	8	0	0	31
21:00	0	0	0	0	0	0	0	0	1	10	7	4	0	0	22
Hour Total	0	0	0	0	0	0	0	2	6	37	47	24	2	0	118
21:15	0	0	0	0	0	0	0	1	3	6	10	6	0	0	26
21:30	0	0	0	0	0	0	0	0	1	6	7	6	1	0	21
21:45	0	0	0	0	0	0	0	1	4	4	10	0	3	0	22
22:00	0	0	0	0	0	0	0	0	1	5	7	2	1	0	16
Hour Total	0	0	0	0	0	0	0	2	9	21	34	14	5	0	85
22:15	0	0	0	0	0	0	0	0	2	2	7	2	1	1	15
22:30	0	0	0	0	0	0	0	0	1	3	9	4	0	0	17
22:45	0	0	0	0	0	0	0	0	1	2	9	0	0	0	12
23:00	0	0	0	0	0	0	0	1	0	2	7	1	1	0	12
Hour Total	0	0	0	0	0	0	0	1	4	9	32	7	2	1	56
23:15	0	0	0	0	0	0	0	0	2	3	2	0	0	0	7
23:30	0	0	0	0	0	0	0	0	1	1	5	1	1	0	9
23:45	0	0	0	0	0	0	0	0	0	1	1	2	0	0	4
24:00	0	0	0	0	0	0	0	0	0	2	4	3	0	1	10
Hour Total	0	0	0	0	0	0	0	0	3	7	12	6	1	1	30
DAY TOTAL	8	3	3	0	0	8	13	63	325	1272	1547	759	142	14	4157
PERCENTS	0.2%	0.1%	0.1%	0.0%	0.0%	0.2%	0.4%	1.6%	7.8%	30.5%	37.2%	18.2%	3.4%	0.3%	100%

Station #: Site C-NBO
Site ID: 000000003808
Location: Carrollton, btw Channel Way & Omera
Direction: NORTH
Lane: 1

File: S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
GRAND TOTAL	38	9	6	0	15	41	226	1063	3690	4448	2274	448	48		12306
PERCENTS	0.4%	0.1%	0.1%	0.0%	0.0%	0.2%	0.4%	1.9%	8.6%	29.9%	36.1%	18.4%	3.6%	0.3%	100%

Statistical Information...

15th Percentile Speed
50.8 mph

85th Percentile Speed
61.9 mph

Median Speed
56.2 mph

Average Speed
56.0 mph

10 MPH Pace Speed
50 mph to 60 mph
2819 vehicles in pace
Representing 67.8% of the total vehicles

Vehicles > 55 MPH
2462
59.2%

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2017-SBI,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	5	0	0	0	0	0	0	1	0	0	0	0	0	0	6
00:30	1	9	2	0	0	0	0	0	0	0	0	0	0	0	0	12
00:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
01:00	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	1	19	4	0	0	0	0	0	1	0	0	0	0	0	0	25
01:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
01:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	9
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
03:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30	0	2	1	0	0	0	0	0	1	0	0	0	0	0	0	4
03:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:00	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	3
Hour Total	0	7	2	0	0	0	0	0	2	0	0	0	0	0	0	11
04:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:30	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5
04:45	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	7
05:00	0	11	3	0	0	0	0	0	0	0	0	0	0	0	0	14
Hour Total	0	21	8	0	0	0	0	0	0	0	0	0	0	0	0	29
05:15	1	11	9	0	0	0	0	0	0	0	0	0	0	0	0	21
05:30	0	32	6	0	0	0	0	0	1	0	0	0	0	0	0	39
05:45	0	30	12	0	0	0	0	0	0	0	0	0	0	0	0	42
06:00	0	27	12	0	0	0	0	0	1	0	0	0	0	0	0	40
Hour Total	1	100	39	0	0	0	0	0	2	0	0	0	0	0	0	142
06:15	1	40	15	0	0	0	0	0	0	0	0	0	0	0	0	56
06:30	0	61	21	0	1	0	0	0	1	0	0	0	0	0	0	84
06:45	0	73	28	0	0	0	0	0	0	0	0	0	0	0	0	101
07:00	0	78	22	0	0	0	0	0	0	0	0	0	0	0	0	100
Hour Total	1	252	86	0	1	0	0	0	1	0	0	0	0	0	0	341
07:15	0	65	18	0	1	0	0	1	1	0	0	0	0	0	0	86
07:30	0	70	15	0	0	0	2	0	1	0	0	0	0	0	0	88
07:45	0	78	19	1	0	0	0	0	0	0	0	0	0	0	0	98
08:00	0	82	24	1	1	1	0	0	0	0	0	0	0	0	0	109
Hour Total	0	295	76	2	2	1	2	1	2	0	0	0	0	0	0	381
08:15	1	59	13	0	1	0	0	1	0	0	0	0	0	0	0	75
08:30	0	67	13	1	0	0	0	0	0	0	0	0	0	0	0	81
08:45	0	79	15	0	1	0	1	0	1	0	0	1	0	0	0	98
09:00	0	56	14	0	1	0	0	0	0	0	0	0	0	0	0	71

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2017-SBI,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	1	261	55	1	3	0	1	1	1	0	0	1	0	0	0	325
09:15	0	52	17	0	1	0	0	0	2	0	0	0	0	0	0	72
09:30	0	62	21	0	0	0	0	0	1	0	0	0	0	0	0	84
09:45	0	48	10	0	1	1	0	0	0	0	0	0	0	0	0	60
10:00	1	44	10	0	1	0	0	0	1	0	0	0	0	0	0	57
Hour Total	1	206	58	0	3	1	0	0	4	0	0	0	0	0	0	273
10:15	0	39	12	0	0	0	0	0	0	0	0	0	0	0	0	51
10:30	0	46	12	0	0	0	0	0	2	0	0	0	0	0	0	60
10:45	0	32	15	1	0	1	0	0	1	0	0	0	0	0	0	50
11:00	0	46	23	0	0	0	0	0	0	0	0	0	0	0	0	69
Hour Total	0	163	62	1	0	1	0	0	3	0	0	0	0	0	0	230
11:15	0	32	11	1	0	1	0	0	0	0	0	0	0	0	0	45
11:30	0	31	13	0	2	0	0	1	3	0	0	0	0	0	0	50
11:45	0	35	10	0	1	0	0	1	1	0	0	0	0	0	0	48
12:00	0	48	16	0	2	0	0	0	0	0	0	0	0	0	0	66
Hour Total	0	146	50	1	5	1	0	2	4	0	0	0	0	0	0	209
12:15	0	40	18	0	0	0	0	0	0	0	0	0	0	0	0	58
12:30	1	35	11	0	1	1	0	1	0	0	0	0	0	0	0	50
12:45	0	27	11	0	0	0	0	0	1	0	0	0	0	0	0	39
13:00	0	41	17	0	0	0	0	0	0	0	0	0	0	0	0	58
Hour Total	1	143	57	0	1	1	0	1	1	0	0	0	0	0	0	205
13:15	0	37	13	0	0	0	0	0	0	0	0	0	0	0	0	50
13:30	0	43	14	0	0	0	0	0	1	0	0	0	0	0	0	58
13:45	0	47	11	0	1	0	0	0	0	0	0	0	0	0	0	59
14:00	0	42	15	0	2	0	0	0	1	0	0	0	0	0	0	60
Hour Total	0	169	53	0	3	0	0	0	2	0	0	0	0	0	0	227
14:15	0	54	17	0	0	0	0	1	0	0	0	0	0	0	0	72
14:30	1	40	17	0	0	0	0	0	1	0	0	0	0	0	0	59
14:45	0	31	15	0	0	1	0	0	0	0	0	0	0	0	0	47
15:00	0	43	21	0	0	0	0	0	2	0	0	0	0	0	0	66
Hour Total	1	168	70	0	0	1	0	1	3	0	0	0	0	0	0	244
15:15	0	56	13	0	0	0	0	0	1	0	0	0	0	0	0	70
15:30	0	56	21	0	1	0	0	0	1	0	0	0	0	0	0	79
15:45	0	76	22	0	0	1	0	0	0	0	0	0	0	0	0	99
16:00	0	99	33	1	0	0	0	0	1	0	0	0	0	0	0	134
Hour Total	0	287	89	1	1	1	0	0	3	0	0	0	0	0	0	382
16:15	0	86	21	2	2	0	0	0	1	0	0	0	0	0	0	112
16:30	1	87	37	0	0	0	0	0	0	1	0	0	0	0	0	126
16:45	0	95	33	0	0	0	0	0	0	0	0	0	0	0	0	128
17:00	0	93	42	0	2	0	0	0	0	0	0	0	0	0	0	137
Hour Total	1	361	133	2	4	0	0	0	1	1	0	0	0	0	0	503

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2017-SBI,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	100	36	0	0	0	0	0	0	0	0	0	0	0	0	136
17:30	0	105	36	0	0	0	0	0	0	0	0	0	0	0	0	141
17:45	0	89	21	0	0	0	0	0	0	0	0	0	0	0	0	110
18:00	0	94	16	0	1	0	0	0	0	0	0	0	0	0	0	111
Hour Total	0	388	109	0	1	0	0	0	0	0	0	0	0	0	0	498
18:15	0	67	16	0	1	0	0	0	0	0	0	0	0	0	0	84
18:30	0	50	17	0	0	0	0	0	0	0	0	0	0	0	0	67
18:45	0	51	14	0	1	0	0	0	0	0	0	0	0	0	0	66
19:00	0	39	15	0	0	0	0	0	0	0	0	0	0	0	0	54
Hour Total	0	207	62	0	2	0	0	0	0	0	0	0	0	0	0	271
19:15	0	48	11	0	0	0	0	0	1	0	0	0	0	0	0	60
19:30	0	49	9	0	0	0	0	0	0	0	0	0	0	0	0	58
19:45	0	44	5	0	0	0	0	0	0	0	0	0	0	0	0	49
20:00	0	28	11	0	0	0	0	0	2	0	0	0	0	0	0	41
Hour Total	0	169	36	0	0	0	0	0	3	0	0	0	0	0	0	208
20:15	0	29	6	0	0	0	0	0	0	0	0	0	0	0	0	35
20:30	0	29	7	0	1	0	0	0	0	0	0	0	0	0	0	37
20:45	0	27	6	0	0	0	0	0	0	0	0	0	0	0	0	33
21:00	0	22	7	0	0	0	0	0	0	0	0	0	0	0	0	29
Hour Total	0	107	26	0	1	0	0	0	0	0	0	0	0	0	0	134
21:15	0	20	5	0	0	0	0	0	0	0	0	0	0	0	0	25
21:30	0	15	4	0	0	0	0	0	2	0	0	0	0	0	0	21
21:45	0	14	2	0	0	0	0	0	0	0	0	0	0	0	0	16
22:00	0	15	3	0	0	0	0	0	0	0	0	0	0	0	0	18
Hour Total	0	64	14	0	0	0	0	0	2	0	0	0	0	0	0	80
22:15	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	10
22:30	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	10
22:45	0	4	2	0	0	0	0	0	1	0	0	0	0	0	0	7
23:00	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	25	5	0	0	0	0	0	1	0	0	0	0	0	0	31
23:15	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
23:30	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
23:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
24:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	18	3	0	0	0	0	0	0	0	0	0	0	0	0	21
DAY TOTAL	8	3590	1099	8	27	7	3	6	36	1	0	1	0	0	0	4786
PERCENTS	0.2%	75.1%	23.0%	0.2%	0.6%	0.1%	0.0%	0.1%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 98.1% Trucks & Buses 1.8%

AM Times	00:45	07:15	06:30	07:45	11:15	10:30	06:45	11:00	08:45			08:00				07:15
AM Peaks	1	295	89	3	5	2	2	2	4			1				381
PM Times	12:15	16:45	16:30	15:30	16:15	12:15		12:15	14:30	15:45						16:45
PM Peaks	1	393	148	3	4	1		1	4	1						542

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2017-SBI,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
00:30	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	9
00:45	0	4	1	0	0	0	0	1	0	0	0	0	0	0	0	6
01:00	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5
Hour Total	0	18	4	0	0	0	0	1	0	0	0	0	0	0	0	23
01:15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
01:30	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	5
01:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	1	11	1	0	0	0	0	0	0	0	0	0	0	0	0	13
02:15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
02:30	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
02:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3
Hour Total	0	9	1	0	0	0	0	0	1	0	0	0	0	0	0	11
03:15	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2
03:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
04:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	8	1	0	0	0	0	0	1	0	0	0	0	0	0	10
04:15	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
04:30	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	6
04:45	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
05:00	0	8	3	0	0	0	0	0	2	0	0	0	0	0	0	13
Hour Total	0	21	8	0	0	0	0	0	2	0	0	0	0	0	0	31
05:15	0	16	12	0	0	0	0	0	1	0	0	0	0	0	0	29
05:30	0	22	8	0	0	0	0	0	0	0	0	0	0	0	0	30
05:45	0	32	9	0	0	0	0	0	1	0	0	0	0	0	0	42
06:00	0	28	6	0	0	0	0	0	0	0	0	0	0	0	0	34
Hour Total	0	98	35	0	0	0	0	0	2	0	0	0	0	0	0	135
06:15	0	31	27	0	0	0	0	0	0	0	0	0	0	0	0	58
06:30	0	54	17	0	0	0	0	0	0	0	0	0	0	0	0	71
06:45	0	70	22	0	0	0	0	0	1	0	0	0	0	0	0	93
07:00	0	74	17	0	0	0	0	1	0	0	0	0	0	0	0	92
Hour Total	0	229	83	0	0	0	0	1	1	0	0	0	0	0	0	314
07:15	0	63	15	0	2	0	0	0	0	0	0	0	0	0	0	80
07:30	0	80	22	0	1	0	0	0	0	0	0	0	0	0	0	103
07:45	0	79	16	1	0	0	0	0	0	0	0	0	0	0	0	96
08:00	0	68	14	1	1	1	0	0	1	0	0	0	0	0	0	86
Hour Total	0	290	67	2	4	1	0	0	1	0	0	0	0	0	0	365
08:15	1	67	21	0	0	0	0	0	0	0	0	0	0	0	0	89
08:30	0	70	13	0	0	0	0	0	0	0	0	0	0	0	0	83
08:45	0	55	13	1	1	0	0	0	1	0	0	0	0	0	0	71
09:00	1	76	17	0	1	0	0	0	0	0	0	0	0	0	0	95

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2017-SBI,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	2	268	64	1	2	0	0	0	1	0	0	0	0	0	0	338
09:15	0	44	15	0	0	1	0	0	1	0	0	0	0	0	0	61
09:30	0	42	16	0	1	0	1	0	1	0	0	0	0	0	0	61
09:45	0	49	18	0	1	0	0	0	1	0	0	0	0	0	0	69
10:00	0	44	12	0	1	1	0	0	0	0	0	0	0	0	0	58
Hour Total	0	179	61	0	3	2	1	0	3	0	0	0	0	0	0	249
10:15	0	37	16	0	1	0	0	0	1	0	0	0	0	0	0	55
10:30	0	41	14	0	2	0	0	1	1	0	0	0	0	0	0	59
10:45	0	45	7	1	0	0	0	0	0	0	0	0	0	0	0	53
11:00	0	31	9	0	1	0	0	0	2	0	0	0	0	0	0	43
Hour Total	0	154	46	1	4	0	0	1	4	0	0	0	0	0	0	210
11:15	0	33	15	0	2	0	0	0	0	0	0	0	0	0	0	50
11:30	1	42	15	0	0	0	0	0	2	0	0	0	0	0	0	60
11:45	0	27	16	0	1	0	0	0	0	0	0	0	0	0	0	44
12:00	0	38	19	0	1	0	0	0	1	0	0	0	0	0	0	59
Hour Total	1	140	65	0	4	0	0	0	3	0	0	0	0	0	0	213
12:15	1	41	15	0	0	0	0	0	1	0	0	0	0	0	0	58
12:30	0	33	15	0	0	0	0	0	0	0	0	0	0	0	0	48
12:45	0	32	18	0	1	1	0	0	0	0	0	0	0	0	0	52
13:00	0	36	21	0	0	0	0	0	1	0	0	0	0	0	0	58
Hour Total	1	142	69	0	1	1	0	0	2	0	0	0	0	0	0	216
13:15	0	43	20	0	1	0	0	0	1	0	0	0	0	0	0	65
13:30	1	38	16	0	2	0	0	0	1	0	0	0	0	0	0	58
13:45	0	43	12	0	0	0	0	0	0	0	0	0	0	0	0	55
14:00	0	35	16	0	1	1	0	0	0	0	0	0	0	0	0	53
Hour Total	1	159	64	0	4	1	0	0	2	0	0	0	0	0	0	231
14:15	0	46	11	0	0	0	0	0	0	0	0	0	0	0	0	57
14:30	1	41	10	0	0	0	0	0	0	0	0	0	0	0	0	52
14:45	1	40	19	0	1	0	0	0	0	0	0	0	0	0	0	61
15:00	0	44	24	0	2	0	0	0	2	0	0	0	0	0	0	72
Hour Total	2	171	64	0	3	0	0	0	2	0	0	0	0	0	0	242
15:15	0	65	24	0	2	0	0	0	1	0	0	0	0	0	0	92
15:30	0	49	21	0	3	0	0	0	1	0	0	0	0	0	0	74
15:45	1	65	23	0	0	0	0	0	0	0	0	0	0	0	0	89
16:00	0	65	17	0	2	0	0	0	0	0	0	0	0	0	0	84
Hour Total	1	244	85	0	7	0	0	0	2	0	0	0	0	0	0	339
16:15	1	68	25	2	0	0	0	0	0	0	0	0	0	0	0	96
16:30	0	81	23	0	0	0	0	0	1	0	0	0	0	0	0	105
16:45	0	93	32	0	0	0	0	0	2	0	1	1	0	0	0	129
17:00	0	101	37	0	1	0	0	0	0	0	0	0	0	0	0	139
Hour Total	1	343	117	2	1	0	0	0	3	0	1	1	0	0	0	469

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2017-SBI,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	104	29	1	0	1	0	0	0	0	0	0	0	0	0	135
17:30	0	96	32	0	0	0	0	0	0	0	0	0	0	0	0	128
17:45	0	85	29	0	1	0	0	0	0	0	0	0	0	0	0	115
18:00	0	98	32	0	0	0	0	0	0	0	0	0	0	0	0	130
Hour Total	0	383	122	1	1	1	0	0	0	0	0	0	0	0	0	508
18:15	0	108	21	0	0	0	0	1	0	0	0	0	0	0	0	130
18:30	0	76	13	0	1	0	0	0	0	0	0	0	0	0	0	90
18:45	0	52	17	0	0	0	0	0	0	0	0	0	0	0	0	69
19:00	0	36	14	0	0	0	0	0	0	0	0	0	0	0	0	50
Hour Total	0	272	65	0	1	0	0	1	0	0	0	0	0	0	0	339
19:15	0	37	9	0	0	0	0	0	0	0	0	0	0	0	0	46
19:30	0	35	11	0	0	0	0	0	0	0	0	0	0	0	0	46
19:45	0	34	7	0	0	0	0	0	0	0	0	0	0	0	0	41
20:00	0	33	14	0	0	0	0	0	0	0	0	0	0	0	0	47
Hour Total	0	139	41	0	0	0	0	0	0	0	0	0	0	0	0	180
20:15	0	32	7	0	0	0	0	0	0	0	0	0	0	0	0	39
20:30	0	32	11	0	0	0	0	0	0	0	0	0	0	0	0	43
20:45	0	22	8	0	0	0	0	0	0	0	0	0	0	0	0	30
21:00	0	17	4	0	0	0	0	0	0	0	0	0	0	0	0	21
Hour Total	0	103	30	0	0	0	0	0	0	0	0	0	0	0	0	133
21:15	0	30	6	0	0	0	0	0	0	0	0	0	0	0	0	36
21:30	0	18	4	0	0	0	0	0	0	0	0	0	0	0	0	22
21:45	0	16	1	0	0	0	0	0	0	0	0	0	0	0	0	17
22:00	0	12	5	0	0	0	0	0	0	0	0	0	0	0	0	17
Hour Total	0	76	16	0	0	0	0	0	0	0	0	0	0	0	0	92
22:15	0	10	3	0	0	0	0	0	0	0	0	0	0	0	0	13
22:30	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	11
22:45	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	10
23:00	0	12	1	0	0	0	0	0	1	0	0	0	0	0	0	14
Hour Total	0	40	7	0	0	0	0	0	1	0	0	0	0	0	0	48
23:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
23:30	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
23:45	0	1	1	0	1	0	0	0	1	0	0	0	0	0	0	4
24:00	0	5	0	0	0	0	0	0	1	0	0	0	0	0	0	6
Hour Total	0	11	3	0	1	0	0	0	2	0	0	0	0	0	0	17
DAY TOTAL	10	3508	1119	7	36	6	1	4	33	0	1	1	0	0	0	4726
PERCENTS	0.3%	74.3%	23.7%	0.2%	0.8%	0.1%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 98.1% Trucks & Buses 1.8%

AM Times	08:15	07:00	06:15	07:15	09:45	09:15	08:45		05:00							07:30
AM Peaks	2	296	83	2	5	2	1	1	4							374
PM Times	14:00	16:45	16:45	15:30	14:45	12:15		17:30	14:45		16:00	16:00				16:45
PM Peaks	2	394	130	2	8	1		1	4		1	1				531

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2017-SBI,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	4	1	0	0	0	0	0	1	0	0	0	0	0	0	6
00:30	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	5
00:45	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
01:00	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
Hour Total	1	16	3	0	0	0	0	0	1	0	0	0	0	0	0	21
01:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
01:30	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
01:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
02:00	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3
Hour Total	0	10	2	0	0	0	0	0	1	0	0	0	0	0	0	13
02:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
02:30	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	7
02:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	12	2	0	0	0	0	0	0	0	0	0	0	0	0	14
03:15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
03:30	0	2	2	0	1	0	0	0	0	0	0	0	0	0	0	5
03:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:00	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
Hour Total	0	12	3	0	1	0	0	0	0	0	0	0	0	0	0	16
04:15	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
04:30	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
04:45	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	4
05:00	0	10	6	0	0	0	0	0	0	0	0	0	0	0	0	16
Hour Total	0	20	9	0	0	0	0	0	0	0	0	0	0	0	0	29
05:15	0	14	4	0	0	0	0	0	0	0	0	0	0	0	0	18
05:30	0	26	8	0	0	0	0	0	0	0	0	0	0	0	0	34
05:45	0	29	5	0	0	0	0	0	0	0	0	0	0	0	0	34
06:00	0	36	10	0	0	0	0	0	1	0	0	0	0	0	0	47
Hour Total	0	105	27	0	0	0	0	0	1	0	0	0	0	0	0	133
06:15	0	43	20	0	0	0	0	0	0	0	0	0	0	0	0	63
06:30	0	51	14	0	1	0	0	0	0	0	0	0	0	0	0	66
06:45	0	57	15	0	0	0	0	0	0	0	0	0	0	0	0	72
07:00	0	83	17	0	0	0	0	1	1	0	0	0	0	0	0	102
Hour Total	0	234	66	0	1	0	0	1	1	0	0	0	0	0	0	303
07:15	0	62	21	0	1	0	0	0	0	0	0	0	0	0	0	84
07:30	0	70	23	0	1	0	0	0	0	0	0	0	0	0	0	94
07:45	0	88	16	1	0	1	0	0	0	0	0	0	0	0	0	106
08:00	0	71	21	1	1	0	0	0	0	0	1	0	0	0	0	95
Hour Total	0	291	81	2	3	1	0	0	0	0	1	0	0	0	0	379
08:15	1	80	20	0	1	0	0	0	0	0	0	0	0	0	0	102
08:30	0	63	23	1	0	0	0	0	1	0	0	0	0	0	0	88
08:45	0	58	14	0	0	0	0	0	0	0	0	0	0	0	0	72
09:00	0	52	18	0	0	0	0	1	1	0	0	0	0	0	0	72

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2017-SBI,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	1	253	75	1	1	0	0	1	2	0	0	0	0	0	0	334
09:15	0	40	9	0	0	0	0	0	2	0	0	0	0	0	0	51
09:30	0	38	9	0	1	0	0	0	1	0	0	0	0	0	0	49
09:45	0	39	12	0	2	0	0	0	1	0	0	0	0	0	0	54
10:00	1	49	10	0	0	0	0	0	0	0	0	0	0	0	0	60
Hour Total	1	166	40	0	3	0	0	0	4	0	0	0	0	0	0	214
10:15	0	35	21	0	2	0	0	0	0	0	0	0	0	0	0	58
10:30	0	42	10	0	0	1	0	1	0	0	0	0	0	0	0	54
10:45	0	43	15	0	0	1	0	0	1	0	0	0	0	0	0	60
11:00	0	33	16	1	1	0	0	0	2	0	0	0	0	0	0	53
Hour Total	0	153	62	1	3	2	0	1	3	0	0	0	0	0	0	225
11:15	0	31	12	0	1	0	0	0	1	0	0	0	0	0	0	45
11:30	0	47	14	0	0	0	0	1	1	0	0	0	0	0	0	63
11:45	0	32	12	0	2	0	0	0	2	0	0	0	0	0	0	48
12:00	0	26	22	0	2	0	0	1	2	0	0	0	0	0	0	53
Hour Total	0	136	60	0	5	0	0	2	6	0	0	0	0	0	0	209
12:15	0	46	26	0	2	0	0	1	0	0	0	0	0	0	0	75
12:30	1	28	13	0	2	0	0	0	1	0	0	0	0	0	0	45
12:45	0	40	10	0	1	0	0	0	0	0	0	0	0	0	0	51
13:00	0	61	16	0	0	1	0	0	0	0	0	0	0	0	0	78
Hour Total	1	175	65	0	5	1	0	1	1	0	0	0	0	0	0	249
13:15	1	40	10	0	1	0	0	0	1	0	0	0	0	0	0	53
13:30	0	38	21	0	0	0	0	0	1	0	0	0	0	0	0	60
13:45	0	46	14	0	0	1	0	0	0	0	0	0	0	0	0	61
14:00	0	37	15	0	1	0	0	0	0	0	0	0	0	0	0	53
Hour Total	1	161	60	0	2	1	0	0	2	0	0	0	0	0	0	227
14:15	0	47	19	0	0	0	0	0	0	0	0	0	0	0	0	66
14:30	0	31	20	0	1	0	0	0	0	0	0	0	0	0	0	52
14:45	0	44	12	0	0	0	0	0	0	0	0	0	0	0	0	56
15:00	0	49	20	0	2	0	0	0	0	0	0	0	0	0	0	71
Hour Total	0	171	71	0	3	0	0	0	0	0	0	0	0	0	0	245
15:15	1	73	20	0	2	0	0	0	0	0	0	0	0	0	0	96
15:30	0	79	24	1	2	1	1	1	0	0	0	0	0	0	0	109
15:45	0	76	23	0	0	0	0	0	0	0	0	0	0	0	0	99
16:00	0	73	41	0	1	0	0	0	0	0	0	0	0	0	0	115
Hour Total	1	301	108	1	5	1	1	1	0	0	0	0	0	0	0	419
16:15	0	99	29	2	0	0	0	0	1	0	0	0	0	0	0	131
16:30	1	92	24	0	2	0	0	0	0	0	0	0	0	0	0	119
16:45	0	99	36	0	0	0	0	0	0	0	0	0	0	0	0	135
17:00	0	95	30	0	2	0	0	1	1	0	0	0	0	0	0	129
Hour Total	1	385	119	2	4	0	0	1	2	0	0	0	0	0	0	514

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2017-SBI,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	82	24	0	1	0	0	0	1	0	0	0	0	0	0	108
17:30	0	97	29	0	2	0	0	1	0	0	0	0	0	0	0	129
17:45	0	97	24	0	0	0	0	0	0	0	0	0	0	0	0	121
18:00	0	67	20	0	0	0	0	0	0	0	0	0	0	0	0	87
Hour Total	0	343	97	0	3	0	0	1	1	0	0	0	0	0	0	445
18:15	0	55	18	0	0	0	0	1	0	0	0	0	0	0	0	74
18:30	0	61	24	0	1	0	0	0	0	0	0	0	0	0	0	86
18:45	0	69	15	0	0	0	0	0	0	0	0	0	0	0	0	84
19:00	0	48	13	0	0	0	0	0	1	0	0	0	0	0	0	62
Hour Total	0	233	70	0	1	0	0	1	1	0	0	0	0	0	0	306
19:15	0	45	14	0	0	0	0	0	0	0	0	0	0	0	0	59
19:30	0	46	8	0	0	0	0	0	1	0	0	0	0	0	0	55
19:45	0	37	11	0	0	0	0	0	0	0	0	0	0	0	0	48
20:00	0	38	11	0	0	0	0	0	0	0	0	0	0	0	0	49
Hour Total	0	166	44	0	0	0	0	0	1	0	0	0	0	0	0	211
20:15	0	28	6	0	1	0	0	0	0	0	0	0	0	0	0	35
20:30	0	25	7	0	0	0	0	0	1	0	0	0	0	0	0	33
20:45	0	19	7	0	0	0	0	0	0	0	0	0	0	0	0	26
21:00	0	16	4	0	0	0	0	0	0	0	0	0	0	0	0	20
Hour Total	0	88	24	0	1	0	0	0	1	0	0	0	0	0	0	114
21:15	0	25	3	0	0	0	0	0	0	0	0	0	0	0	0	28
21:30	0	20	4	0	0	0	0	0	0	0	0	0	0	0	0	24
21:45	0	11	2	0	0	0	0	0	0	0	0	0	0	0	0	13
22:00	0	9	6	0	0	0	0	0	0	0	0	0	0	0	0	15
Hour Total	0	65	15	0	0	0	0	0	0	0	0	0	0	0	0	80
22:15	0	20	3	0	0	0	0	0	0	0	0	0	0	0	0	23
22:30	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
22:45	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	10
23:00	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	11
Hour Total	0	45	8	0	0	0	0	0	0	0	0	0	0	0	0	53
23:15	0	8	3	0	0	0	0	0	1	0	0	0	0	0	0	12
23:30	0	5	1	0	1	0	0	0	0	0	0	0	0	0	0	7
23:45	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5
24:00	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour Total	0	21	7	0	1	0	0	0	1	0	0	0	0	0	0	30
DAY TOTAL	7	3562	1118	7	42	6	1	10	29	0	1	0	0	0	0	4783
PERCENTS	0.2%	74.5%	23.4%	0.2%	0.8%	0.1%	0.0%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 98.9% Trucks & Buses 2.0%

AM Times	00:45	07:30	07:15	07:45	09:30	10:00		11:15	11:00		07:15					07:30
AM Peaks	1	309	81	3	5	2		2	6		1					397
PM Times	12:30	16:15	16:00	15:30	14:45	13:00	14:45	16:45	12:30							16:15
PM Peaks	2	385	130	3	6	2	1	2	2							514

GRAND TOTAL	25	3336		105		5		98			2		0		0	
	10660		22		19		20		1			2		0		14295
PERCENTS	0.2%	74.6%	23.4%	0.2%	0.8%	0.1%	0.0%	0.1%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2018-SBI,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	0	3	2	0	1	0	6
00:30	0	0	0	0	0	0	0	0	2	7	2	1	0	0	12
00:45	0	0	0	0	0	0	0	0	1	0	2	1	0	0	4
01:00	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3
Hour Total	0	0	0	0	0	0	0	0	3	11	7	3	1	0	25
01:15	0	0	0	0	0	0	0	0	1	1	0	0	0	1	3
01:30	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
01:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
02:00	0	0	0	0	0	0	0	0	1	2	0	1	0	0	4
Hour Total	0	0	0	0	0	0	0	1	2	3	1	1	0	1	9
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	1	2	1	1	0	0	5
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2
Hour Total	0	0	0	0	0	0	0	1	1	3	1	1	0	0	7
03:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
03:30	0	0	0	0	0	0	0	0	0	1	1	2	0	0	4
03:45	0	0	0	0	0	0	0	0	1	1	1	0	0	0	3
04:00	0	0	0	0	0	0	0	0	1	0	1	1	0	0	3
Hour Total	0	0	0	0	0	0	0	0	2	3	3	3	0	0	11
04:15	0	0	0	0	0	0	0	0	1	0	1	1	0	0	3
04:30	0	0	0	0	0	0	0	0	0	0	3	2	0	0	5
04:45	0	0	0	0	0	0	0	0	0	4	2	1	0	0	7
05:00	0	0	0	0	0	0	0	0	1	2	5	6	0	0	14
Hour Total	0	0	0	0	0	0	0	0	2	6	11	10	0	0	29
05:15	0	0	0	0	0	0	0	0	1	2	11	7	0	0	21
05:30	0	0	0	0	0	0	0	0	2	3	12	19	3	0	39
05:45	0	0	0	0	0	0	0	0	2	8	14	16	2	0	42
06:00	0	0	0	0	0	0	0	1	2	10	14	10	2	1	40
Hour Total	0	0	0	0	0	0	0	1	7	23	51	52	7	1	142
06:15	1	0	0	0	0	0	0	0	2	13	25	10	5	0	56
06:30	0	0	0	0	0	0	0	0	4	28	34	17	1	0	84
06:45	0	0	0	0	0	0	0	1	16	23	40	18	3	0	101
07:00	0	0	0	0	0	0	0	0	7	39	30	21	2	1	100
Hour Total	1	0	0	0	0	0	0	1	29	103	129	66	11	1	341
07:15	0	0	0	0	0	0	0	0	10	26	27	20	2	1	86
07:30	0	0	0	0	0	0	0	1	11	16	44	16	0	0	88
07:45	0	0	0	0	0	0	0	0	2	23	52	18	3	0	98
08:00	0	0	0	0	0	0	0	2	8	32	41	24	2	0	109
Hour Total	0	0	0	0	0	0	0	3	31	97	164	78	7	1	381
08:15	0	0	0	0	0	0	0	3	3	20	36	12	1	0	75
08:30	0	0	0	0	0	0	0	2	10	25	25	15	4	0	81
08:45	0	0	0	0	0	0	0	1	11	29	37	16	4	0	98
09:00	0	0	0	0	0	0	0	1	3	27	31	8	1	0	71

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2018-SBI,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	0	0	0	7	27	101	129	51	10	0	325
09:15	0	0	0	0	0	0	0	0	6	25	24	14	1	2	72
09:30	0	0	0	0	0	0	0	0	8	21	31	24	0	0	84
09:45	0	0	0	0	0	0	1	2	4	23	25	4	1	0	60
10:00	0	0	0	0	0	0	0	0	7	19	24	6	1	0	57
Hour Total	0	0	0	0	0	0	1	2	25	88	104	48	3	2	273
10:15	0	0	0	0	0	0	0	1	6	19	19	6	0	0	51
10:30	0	0	0	0	0	0	0	0	5	20	26	8	1	0	60
10:45	0	0	0	0	0	0	0	0	5	19	18	6	2	0	50
11:00	0	0	0	0	0	0	0	1	7	25	20	13	3	0	69
Hour Total	0	0	0	0	0	0	0	2	23	83	83	33	6	0	230
11:15	0	0	0	0	0	0	0	2	3	17	17	5	1	0	45
11:30	0	0	0	0	0	0	0	3	3	13	22	8	1	0	50
11:45	0	0	0	0	0	0	0	0	1	18	19	9	1	0	48
12:00	0	0	0	0	0	0	0	1	7	25	23	5	4	1	66
Hour Total	0	0	0	0	0	0	0	6	14	73	81	27	7	1	209
12:15	0	0	0	0	0	0	0	0	2	29	18	9	0	0	58
12:30	0	0	0	0	0	0	0	0	3	17	21	7	2	0	50
12:45	0	0	0	0	0	0	0	0	6	7	18	6	1	1	39
13:00	0	0	0	0	0	0	0	3	5	21	19	9	1	0	58
Hour Total	0	0	0	0	0	0	0	3	16	74	76	31	4	1	205
13:15	0	0	0	3	0	0	0	0	6	17	20	4	0	0	50
13:30	0	0	0	0	0	0	0	0	7	25	16	10	0	0	58
13:45	0	0	0	0	0	0	1	0	0	15	34	7	2	0	59
14:00	0	0	0	0	0	0	0	0	6	16	24	12	2	0	60
Hour Total	0	0	0	3	0	0	1	0	19	73	94	33	4	0	227
14:15	0	0	0	0	0	0	0	0	3	37	25	7	0	0	72
14:30	0	0	0	0	0	1	0	0	2	29	18	8	1	0	59
14:45	0	0	0	0	0	0	0	1	4	23	12	7	0	0	47
15:00	0	0	0	0	0	0	0	0	6	22	28	8	2	0	66
Hour Total	0	0	0	0	0	1	0	1	15	111	83	30	3	0	244
15:15	0	0	0	0	0	0	0	0	6	16	31	15	2	0	70
15:30	0	0	0	0	0	0	0	6	4	22	34	13	0	0	79
15:45	0	0	0	0	0	0	0	0	2	42	40	12	3	0	99
16:00	0	0	0	0	0	0	1	1	7	63	50	12	0	0	134
Hour Total	0	0	0	0	0	0	1	7	19	143	155	52	5	0	382
16:15	0	0	0	0	0	0	0	6	10	38	36	19	3	0	112
16:30	0	0	0	0	0	0	0	7	10	41	45	18	4	1	126
16:45	0	0	0	0	0	0	0	0	16	50	46	13	3	0	128
17:00	0	0	0	0	0	0	0	0	20	58	36	20	3	0	137
Hour Total	0	0	0	0	0	0	0	13	56	187	163	70	13	1	503

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2018-SBI,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	0	0	2	24	53	40	13	3	1	136
17:30	0	0	0	0	0	0	0	4	14	47	45	27	3	1	141
17:45	0	0	0	0	0	0	0	15	32	35	24	3	1	0	110
18:00	0	0	0	0	0	0	0	0	19	51	38	3	0	0	111
Hour Total	0	0	0	0	0	0	0	21	89	186	147	46	7	2	498
18:15	0	0	0	0	0	0	0	1	11	27	39	5	1	0	84
18:30	0	0	0	0	0	0	0	4	9	35	15	3	1	0	67
18:45	0	0	0	0	0	0	0	0	16	31	13	5	1	0	66
19:00	0	0	0	0	0	0	0	4	25	14	9	1	1	0	54
Hour Total	0	0	0	0	0	0	0	9	61	107	76	14	4	0	271
19:15	0	0	0	0	0	0	0	4	22	25	8	1	0	0	60
19:30	0	0	0	0	0	0	3	7	18	22	6	2	0	0	58
19:45	0	0	0	0	0	0	0	4	19	18	7	1	0	0	49
20:00	0	0	0	0	0	0	1	1	14	16	7	2	0	0	41
Hour Total	0	0	0	0	0	0	4	16	73	81	28	6	0	0	208
20:15	0	0	0	0	0	0	0	0	4	18	9	3	1	0	35
20:30	0	0	0	0	0	0	0	3	10	11	8	3	2	0	37
20:45	0	0	0	0	0	0	1	2	13	11	3	3	0	0	33
21:00	0	0	0	0	0	0	0	1	8	9	7	3	1	0	29
Hour Total	0	0	0	0	0	0	1	6	35	49	27	12	4	0	134
21:15	0	0	0	0	0	0	0	0	8	9	5	3	0	0	25
21:30	0	0	0	0	0	0	0	0	7	6	7	1	0	0	21
21:45	0	0	0	0	0	0	0	1	3	7	4	1	0	0	16
22:00	0	0	0	0	0	0	0	0	1	8	7	2	0	0	18
Hour Total	0	0	0	0	0	0	0	1	19	30	23	7	0	0	80
22:15	0	0	0	0	0	0	0	0	1	7	1	1	0	0	10
22:30	0	0	0	0	0	0	0	0	0	4	5	1	0	0	10
22:45	0	0	0	0	0	0	0	0	1	6	0	0	0	0	7
23:00	0	0	0	0	0	0	0	0	1	2	0	1	0	0	4
Hour Total	0	0	0	0	0	0	0	0	3	19	6	3	0	0	31
23:15	0	0	0	0	0	0	0	0	1	2	3	0	0	0	6
23:30	0	0	0	0	0	0	0	1	1	1	3	1	1	0	8
23:45	0	0	0	0	0	0	0	1	1	0	0	2	0	0	4
24:00	0	0	0	0	0	0	0	0	1	1	0	1	0	0	3
Hour Total	0	0	0	0	0	0	0	2	4	4	6	4	1	0	21
DAY TOTAL	1	0	0	3	0	1	8	103	575	1658	1648	681	97	11	4786
PERCENTS	0.1%	0.0%	0.0%	0.1%	0.0%	0.1%	0.2%	2.1%	12.0%	34.6%	34.4%	14.2%	2.0%	0.2%	100%

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2018-SBI,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
50.1 mph

85th Percentile Speed
60.5 mph

Median Speed
55.1 mph

Average Speed
55.1 mph

10 MPH Pace Speed
50 mph to 60 mph
3306 vehicles in pace
Representing 69.0% of the total vehicles

Vehicles > 55 MPH
2437
50.9%

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2018-SBI,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	1	1	1	0	0	0	3
00:30	0	0	0	0	0	0	0	0	2	2	5	0	0	0	9
00:45	0	0	0	0	0	0	0	0	1	0	4	1	0	0	6
01:00	0	0	0	0	0	0	0	0	1	1	1	2	0	0	5
Hour Total	0	0	0	0	0	0	0	0	5	4	11	3	0	0	23
01:15	0	0	0	0	0	0	0	0	0	1	0	2	1	0	4
01:30	0	0	0	0	0	0	0	0	1	1	3	0	0	0	5
01:45	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2
02:00	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2
Hour Total	0	0	0	0	0	0	0	0	3	4	3	2	1	0	13
02:15	0	0	0	0	0	0	0	0	1	1	2	0	0	0	4
02:30	0	0	0	0	0	0	0	0	2	0	1	0	0	0	3
02:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
03:00	0	0	0	0	0	0	0	0	1	1	1	0	0	0	3
Hour Total	0	0	0	0	0	0	0	0	4	2	5	0	0	0	11
03:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2
03:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
03:45	0	0	0	0	0	0	0	0	0	1	2	0	1	0	4
04:00	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3
Hour Total	0	0	0	0	0	0	1	0	0	3	4	1	1	0	10
04:15	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4
04:30	0	0	0	0	0	0	0	0	0	2	2	1	0	1	6
04:45	0	0	0	0	0	0	0	0	2	3	1	1	1	0	8
05:00	0	0	0	0	0	0	0	1	0	7	5	0	0	0	13
Hour Total	0	0	0	0	0	0	0	1	2	12	10	4	1	1	31
05:15	0	0	0	0	0	0	0	0	1	3	10	11	4	0	29
05:30	0	0	0	0	0	0	0	0	1	2	15	9	3	0	30
05:45	0	0	0	0	0	0	0	0	0	3	18	14	6	1	42
06:00	0	0	0	0	0	0	0	0	1	7	19	4	3	0	34
Hour Total	0	0	0	0	0	0	0	0	3	15	62	38	16	1	135
06:15	0	0	0	0	0	0	0	0	2	11	29	15	1	0	58
06:30	0	0	0	0	0	0	0	0	3	25	25	15	3	0	71
06:45	0	0	0	0	0	0	1	0	6	23	41	21	1	0	93
07:00	0	0	0	0	0	0	0	2	7	24	45	12	1	1	92
Hour Total	0	0	0	0	0	0	1	2	18	83	140	63	6	1	314
07:15	0	0	0	0	0	0	0	0	1	12	43	17	3	4	80
07:30	0	0	0	0	0	0	0	0	2	24	39	34	4	0	103
07:45	0	0	0	0	0	0	0	0	5	39	36	12	4	0	96
08:00	0	0	0	0	0	0	0	1	6	16	33	24	6	0	86
Hour Total	0	0	0	0	0	0	0	1	14	91	151	87	17	4	365
08:15	0	0	0	0	0	0	0	3	6	20	36	22	2	0	89
08:30	0	0	0	0	0	0	0	1	6	24	32	17	3	0	83
08:45	0	0	0	0	0	0	0	2	1	25	32	10	1	0	71
09:00	0	0	0	0	0	0	0	0	1	31	47	15	1	0	95

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2018-SBI,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	0	0	0	6	14	100	147	64	7	0	338
09:15	0	0	0	0	0	0	0	1	3	19	22	13	3	0	61
09:30	0	0	0	0	0	0	0	0	6	27	21	7	0	0	61
09:45	0	0	0	0	0	0	0	3	14	27	22	3	0	0	69
10:00	0	0	0	0	0	0	0	1	7	27	17	5	1	0	58
Hour Total	0	0	0	0	0	0	0	5	30	100	82	28	4	0	249
10:15	0	0	0	0	0	2	0	0	13	20	14	6	0	0	55
10:30	0	0	0	0	0	0	0	0	3	25	21	10	0	0	59
10:45	0	0	0	0	0	0	0	5	5	14	18	9	2	0	53
11:00	0	0	0	0	0	0	0	0	2	13	22	6	0	0	43
Hour Total	0	0	0	0	0	2	0	5	23	72	75	31	2	0	210
11:15	0	0	0	0	0	0	0	0	5	22	16	5	2	0	50
11:30	0	0	0	0	0	0	0	0	5	21	26	5	3	0	60
11:45	0	0	0	0	0	0	0	0	4	18	16	5	1	0	44
12:00	0	0	0	0	0	0	0	1	4	21	26	4	3	0	59
Hour Total	0	0	0	0	0	0	0	1	18	82	84	19	9	0	213
12:15	0	0	0	0	0	0	0	0	10	20	20	6	2	0	58
12:30	0	0	0	0	0	0	0	2	4	23	18	0	1	0	48
12:45	0	0	0	0	0	0	0	0	7	20	16	9	0	0	52
13:00	0	0	0	0	0	0	0	2	7	17	19	11	2	0	58
Hour Total	0	0	0	0	0	0	0	4	28	80	73	26	5	0	216
13:15	0	0	0	0	0	0	0	6	3	16	28	11	1	0	65
13:30	0	0	0	0	0	0	0	1	2	21	23	9	2	0	58
13:45	0	0	0	0	0	0	0	0	8	24	16	7	0	0	55
14:00	0	0	0	0	0	0	0	0	7	22	19	4	1	0	53
Hour Total	0	0	0	0	0	0	0	7	20	83	86	31	4	0	231
14:15	0	0	0	0	0	0	0	2	5	22	20	7	1	0	57
14:30	0	0	0	0	0	0	0	0	4	24	14	9	1	0	52
14:45	0	0	0	0	0	0	0	3	3	15	27	10	3	0	61
15:00	0	0	0	0	0	0	0	1	6	32	25	8	0	0	72
Hour Total	0	0	0	0	0	0	0	6	18	93	86	34	5	0	242
15:15	0	0	0	0	0	0	0	3	14	35	30	10	0	0	92
15:30	0	0	0	0	0	0	0	1	9	27	20	15	2	0	74
15:45	0	0	0	0	0	0	0	0	10	33	28	16	2	0	89
16:00	0	0	0	0	0	0	1	4	12	22	31	13	1	0	84
Hour Total	0	0	0	0	0	0	1	8	45	117	109	54	5	0	339
16:15	0	0	0	0	0	0	0	1	6	23	40	22	4	0	96
16:30	0	0	0	0	0	0	0	0	12	39	37	16	1	0	105
16:45	0	0	0	0	0	0	1	7	17	41	45	16	2	0	129
17:00	0	0	0	0	0	1	0	3	2	53	51	26	3	0	139
Hour Total	0	0	0	0	0	1	1	11	37	156	173	80	10	0	469

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2018-SBI,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	0	0	3	18	40	50	20	2	2	135
17:30	0	0	0	0	0	0	0	1	13	47	41	24	2	0	128
17:45	0	0	0	0	0	0	0	0	14	56	28	17	0	0	115
18:00	0	0	0	0	0	0	0	1	30	50	39	9	1	0	130
Hour Total	0	0	0	0	0	0	0	5	75	193	158	70	5	2	508
18:15	0	0	0	0	0	0	0	1	16	48	53	9	3	0	130
18:30	0	0	0	0	0	0	1	18	35	16	19	1	0	0	90
18:45	0	0	0	0	1	8	21	22	13	3	1	0	0	0	69
19:00	0	0	0	0	3	2	14	20	7	3	1	0	0	0	50
Hour Total	0	0	0	0	4	10	36	61	71	70	74	10	3	0	339
19:15	0	0	0	0	0	0	0	5	15	17	8	1	0	0	46
19:30	0	0	0	0	0	0	0	1	20	14	9	2	0	0	46
19:45	0	0	0	0	0	0	0	1	16	13	9	2	0	0	41
20:00	0	0	0	0	0	0	0	2	16	20	5	3	1	0	47
Hour Total	0	0	0	0	0	0	0	9	67	64	31	8	1	0	180
20:15	0	0	0	0	0	0	0	6	9	9	9	6	0	0	39
20:30	0	0	0	0	0	0	0	2	12	16	9	4	0	0	43
20:45	0	0	0	0	0	0	0	4	6	8	7	5	0	0	30
21:00	0	0	0	0	0	0	0	0	5	8	6	0	2	0	21
Hour Total	0	0	0	0	0	0	0	12	32	41	31	15	2	0	133
21:15	0	0	0	0	0	0	0	0	2	21	10	3	0	0	36
21:30	0	0	0	0	0	0	0	0	4	8	3	6	1	0	22
21:45	0	0	0	0	0	0	0	0	2	4	4	4	3	0	17
22:00	0	0	0	0	0	0	0	1	1	11	4	0	0	0	17
Hour Total	0	0	0	0	0	0	0	1	9	44	21	13	4	0	92
22:15	0	0	0	0	0	0	0	1	3	4	5	0	0	0	13
22:30	0	0	0	0	0	0	1	0	0	2	5	3	0	0	11
22:45	0	0	0	0	0	0	0	2	0	2	4	2	0	0	10
23:00	0	0	0	0	0	0	1	0	0	3	5	5	0	0	14
Hour Total	0	0	0	0	0	0	2	3	3	11	19	10	0	0	48
23:15	0	0	0	0	0	0	0	0	1	0	2	0	0	0	3
23:30	0	0	0	0	0	0	0	0	0	3	1	0	0	0	4
23:45	0	0	0	0	0	0	0	0	2	2	0	0	0	0	4
24:00	0	0	0	0	0	0	0	1	1	1	2	1	0	0	6
Hour Total	0	0	0	0	0	0	0	1	4	6	5	1	0	0	17
DAY TOTAL	0	0	0	0	4	13	42	149	543	1526	1640	692	108	9	4726
PERCENTS	0.0%	0.0%	0.0%	0.0%	0.1%	0.3%	0.9%	3.2%	11.5%	32.3%	34.8%	14.6%	2.2%	0.1%	100%

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2018-SBI,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
49.6 mph

85th Percentile Speed
60.7 mph

Median Speed
55.3 mph

Average Speed
55.0 mph

10 MPH Pace Speed
50 mph to 60 mph
3166 vehicles in pace
Representing 66.9% of the total vehicles

Vehicles > 55 MPH
2449
51.8%

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2018-SBI,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	1	3	1	0	1	0	6
00:30	0	0	0	0	0	0	0	0	1	1	3	0	0	0	5
00:45	0	0	0	0	0	0	0	0	1	4	0	0	0	0	5
01:00	0	0	0	0	0	0	0	0	0	2	2	1	0	0	5
Hour Total	0	0	0	0	0	0	0	0	3	10	6	1	1	0	21
01:15	0	0	0	0	0	0	0	0	0	2	0	1	0	0	3
01:30	0	0	0	0	0	0	0	0	1	0	1	0	1	0	3
01:45	0	0	0	0	0	0	0	0	0	2	1	1	0	0	4
02:00	0	0	0	0	0	0	0	0	0	2	0	1	0	0	3
Hour Total	0	0	0	0	0	0	0	0	1	6	2	3	1	0	13
02:15	0	0	0	0	0	0	0	0	1	1	1	0	0	0	3
02:30	0	0	0	0	0	0	0	1	1	3	0	1	1	0	7
02:45	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
Hour Total	0	0	0	0	0	0	0	1	2	6	3	1	1	0	14
03:15	0	0	0	0	0	0	0	0	0	3	0	1	0	0	4
03:30	0	0	0	0	0	0	0	0	3	1	1	0	0	0	5
03:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
04:00	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5
Hour Total	0	0	0	0	0	0	0	0	3	8	2	3	0	0	16
04:15	0	0	0	0	0	0	0	0	0	1	2	1	0	0	4
04:30	0	0	0	0	0	0	0	0	0	0	2	2	1	0	5
04:45	0	0	0	0	0	0	0	0	0	1	1	2	0	0	4
05:00	0	0	0	0	0	0	0	1	2	2	5	5	1	0	16
Hour Total	0	0	0	0	0	0	0	1	2	4	10	10	2	0	29
05:15	0	0	0	0	0	0	0	0	2	2	5	9	0	0	18
05:30	0	0	0	0	0	0	0	0	2	6	13	12	1	0	34
05:45	0	0	0	0	0	0	0	1	1	2	15	11	1	3	34
06:00	0	0	0	0	0	0	0	0	2	13	17	12	3	0	47
Hour Total	0	0	0	0	0	0	0	1	7	23	50	44	5	3	133
06:15	0	0	0	0	0	0	0	0	3	12	29	14	5	0	63
06:30	0	0	0	0	0	0	0	5	7	17	28	8	1	0	66
06:45	0	0	0	0	0	0	1	2	10	33	16	6	4	0	72
07:00	0	0	0	0	0	0	0	1	13	35	33	20	0	0	102
Hour Total	0	0	0	0	0	0	1	8	33	97	106	48	10	0	303
07:15	0	0	0	0	0	0	0	0	4	27	33	20	0	0	84
07:30	0	0	0	0	0	0	0	1	5	35	31	18	4	0	94
07:45	0	0	0	0	0	0	0	1	4	39	35	21	6	0	106
08:00	0	0	0	0	0	0	0	1	0	35	37	19	3	0	95
Hour Total	0	0	0	0	0	0	0	3	13	136	136	78	13	0	379
08:15	0	0	0	0	0	0	0	0	8	37	30	22	3	2	102
08:30	0	0	0	0	0	0	0	0	2	18	41	24	3	0	88
08:45	0	0	0	0	0	0	0	0	5	28	30	7	2	0	72
09:00	0	0	0	0	0	0	0	0	4	14	33	19	2	0	72

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2018-SBI,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	0	0	0	0	19	97	134	72	10	2	334
09:15	0	0	0	0	0	0	0	0	5	5	28	11	2	0	51
09:30	0	0	0	0	0	0	0	1	3	19	18	7	1	0	49
09:45	0	0	0	0	0	0	0	0	5	14	22	11	1	1	54
10:00	0	0	0	0	0	0	0	0	9	17	29	4	1	0	60
Hour Total	0	0	0	0	0	0	0	1	22	55	97	33	5	1	214
10:15	0	0	0	0	0	0	0	2	7	19	23	7	0	0	58
10:30	0	0	0	0	0	0	0	2	5	17	23	7	0	0	54
10:45	0	0	0	0	0	0	0	1	3	15	26	13	2	0	60
11:00	0	0	0	0	0	1	0	0	6	10	28	7	1	0	53
Hour Total	0	0	0	0	0	1	0	5	21	61	100	34	3	0	225
11:15	0	0	0	0	0	0	0	0	3	25	13	2	2	0	45
11:30	0	0	0	0	0	0	1	0	6	23	26	4	3	0	63
11:45	0	0	0	0	0	0	0	0	3	14	21	8	2	0	48
12:00	0	0	0	0	0	0	0	0	7	22	17	7	0	0	53
Hour Total	0	0	0	0	0	0	1	0	19	84	77	21	7	0	209
12:15	0	0	0	0	0	0	0	3	11	23	24	13	1	0	75
12:30	0	0	0	0	0	0	0	1	4	16	20	3	1	0	45
12:45	0	0	0	0	0	0	0	1	9	16	16	9	0	0	51
13:00	0	0	0	0	0	0	0	4	15	30	22	5	2	0	78
Hour Total	0	0	0	0	0	0	0	9	39	85	82	30	4	0	249
13:15	0	0	0	0	0	0	0	2	4	26	11	8	1	1	53
13:30	0	0	0	0	0	0	0	3	7	17	25	6	1	1	60
13:45	0	0	0	0	0	0	0	2	4	23	15	16	1	0	61
14:00	0	0	0	0	0	0	0	5	6	19	12	11	0	0	53
Hour Total	0	0	0	0	0	0	0	12	21	85	63	41	3	2	227
14:15	0	0	0	0	0	0	0	0	4	28	21	11	1	1	66
14:30	0	0	0	0	0	0	0	0	3	13	30	5	1	0	52
14:45	0	0	0	0	0	0	0	1	3	18	24	8	2	0	56
15:00	0	0	0	0	0	0	0	1	7	27	23	10	3	0	71
Hour Total	0	0	0	0	0	0	0	2	17	86	98	34	7	1	245
15:15	0	0	0	0	0	0	1	1	8	40	29	12	5	0	96
15:30	0	0	0	0	0	0	0	2	13	48	31	13	2	0	109
15:45	0	0	0	0	0	0	0	1	12	45	28	13	0	0	99
16:00	0	0	0	0	0	0	0	7	16	31	51	6	4	0	115
Hour Total	0	0	0	0	0	0	1	11	49	164	139	44	11	0	419
16:15	0	0	0	0	0	0	0	8	23	48	33	17	2	0	131
16:30	0	0	0	0	0	0	0	0	11	57	35	14	2	0	119
16:45	0	0	0	0	0	0	0	1	13	55	47	19	0	0	135
17:00	0	0	0	0	0	0	0	2	12	49	39	24	3	0	129
Hour Total	0	0	0	0	0	0	0	11	59	209	154	74	7	0	514

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2018-SBI,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	0	0	2	15	51	26	13	1	0	108
17:30	0	0	0	0	0	0	0	5	18	59	34	12	0	1	129
17:45	0	0	0	0	0	1	0	2	12	55	44	7	0	0	121
18:00	0	0	0	0	0	0	0	0	7	29	33	16	2	0	87
Hour Total	0	0	0	0	0	1	0	9	52	194	137	48	3	1	445
18:15	0	0	0	0	0	0	0	0	9	26	25	11	3	0	74
18:30	0	0	0	0	0	0	0	2	8	34	27	14	1	0	86
18:45	0	0	0	0	0	0	0	2	10	38	20	12	2	0	84
19:00	0	0	0	0	0	0	0	1	4	32	21	4	0	0	62
Hour Total	0	0	0	0	0	0	0	5	31	130	93	41	6	0	306
19:15	0	0	0	0	0	0	0	4	9	23	16	7	0	0	59
19:30	0	0	0	0	0	0	0	3	12	16	11	11	2	0	55
19:45	0	0	0	0	0	0	0	0	13	19	12	2	2	0	48
20:00	0	0	0	0	0	0	0	0	6	35	6	2	0	0	49
Hour Total	0	0	0	0	0	0	0	7	40	93	45	22	4	0	211
20:15	0	0	0	0	0	0	0	2	7	13	10	3	0	0	35
20:30	0	0	0	0	0	0	1	3	5	17	6	1	0	0	33
20:45	0	0	0	0	0	0	0	0	5	13	6	2	0	0	26
21:00	0	0	0	0	0	0	0	1	4	5	8	2	0	0	20
Hour Total	0	0	0	0	0	0	1	6	21	48	30	8	0	0	114
21:15	0	0	0	0	0	0	0	0	8	14	6	0	0	0	28
21:30	0	0	0	0	0	0	0	0	2	10	7	5	0	0	24
21:45	0	0	0	0	0	0	0	1	1	9	2	0	0	0	13
22:00	0	0	0	0	0	0	0	0	1	8	2	4	0	0	15
Hour Total	0	0	0	0	0	0	0	1	12	41	17	9	0	0	80
22:15	0	0	0	0	0	0	0	1	3	3	13	3	0	0	23
22:30	0	0	0	0	0	0	0	0	0	3	5	1	0	0	9
22:45	0	0	0	0	0	0	0	0	2	2	4	1	1	0	10
23:00	0	0	0	0	0	0	0	0	1	4	2	3	1	0	11
Hour Total	0	0	0	0	0	0	0	1	6	12	24	8	2	0	53
23:15	0	0	0	0	0	0	0	0	0	4	4	4	0	0	12
23:30	0	0	0	0	0	0	0	1	2	1	2	1	0	0	7
23:45	0	0	0	0	0	0	0	0	0	3	2	0	0	0	5
24:00	0	0	0	0	0	0	0	0	2	3	1	0	0	0	6
Hour Total	0	0	0	0	0	0	0	1	4	11	9	5	0	0	30
DAY TOTAL	0	0	0	0	0	2	4	95	496	1745	1614	712	105	10	4783
PERCENTS	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	2.0%	10.4%	36.5%	33.8%	14.8%	2.1%	0.2%	100%

Station #: Site C-SBI
Site ID: 000000009360
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2018-SBI,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
GRAND TOTAL	1	0	4	54	1614	4902	310								
	0	3	16	347	4929	2085	30								14295
PERCENTS	0.1%	0.0%	0.0%	0.1%	0.1%	0.2%	0.4%	2.5%	11.2%	34.4%	34.2%	14.5%	2.1%	0.2%	100%

Statistical Information...

15th Percentile Speed
50.4 mph

85th Percentile Speed
60.8 mph

Median Speed
55.2 mph

Average Speed
55.3 mph

10 MPH Pace Speed
50 mph to 60 mph
3359 vehicles in pace
Representing 70.2% of the total vehicles

Vehicles > 55 MPH
2441
51.0%

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2013-SBO,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
00:30	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
00:45	0	4	0	0	0	0	0	1	0	0	0	0	0	0	0	5
01:00	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Hour Total	0	22	0	0	0	0	0	1	0	0	0	0	0	0	0	23
01:15	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
01:30	0	11	1	0	1	0	0	0	0	0	0	0	0	0	0	13
01:45	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
02:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	28	1	0	1	0	0	0	0	0	0	0	0	0	0	30
02:15	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	4
02:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour Total	0	13	0	0	0	0	0	0	1	0	0	0	0	0	0	14
03:15	0	5	2	0	0	0	0	1	0	0	0	0	0	0	0	8
03:30	0	7	0	0	0	0	0	0	3	0	0	0	0	0	0	10
03:45	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	4
04:00	0	5	0	0	1	0	0	0	0	0	0	0	0	0	0	6
Hour Total	0	20	2	0	1	0	0	1	4	0	0	0	0	0	0	28
04:15	0	6	2	0	0	0	0	0	1	0	0	0	0	0	0	9
04:30	0	8	4	0	0	0	0	0	0	0	0	0	0	0	0	12
04:45	0	9	5	0	0	0	0	0	0	0	0	0	0	0	0	14
05:00	1	21	6	0	0	0	0	0	1	0	0	0	0	0	0	29
Hour Total	1	44	17	0	0	0	0	0	2	0	0	0	0	0	0	64
05:15	1	22	4	0	1	0	0	0	2	0	0	0	0	0	0	30
05:30	1	32	15	0	0	0	0	0	0	0	0	0	0	0	0	48
05:45	1	42	13	0	0	0	0	0	0	0	0	0	0	0	0	56
06:00	0	30	13	0	0	0	0	0	2	0	0	0	0	0	0	45
Hour Total	3	126	45	0	1	0	0	0	4	0	0	0	0	0	0	179
06:15	0	53	19	0	0	0	0	0	0	0	0	0	0	0	0	72
06:30	1	63	33	1	3	1	1	0	2	0	0	0	0	0	0	105
06:45	1	66	18	1	2	0	0	0	1	0	0	0	0	0	0	89
07:00	0	71	19	0	3	0	0	0	0	0	0	0	0	0	0	93
Hour Total	2	253	89	2	8	1	1	0	3	0	0	0	0	0	0	359
07:15	0	80	17	0	0	1	0	0	0	0	0	0	0	0	0	98
07:30	0	71	20	0	0	0	0	1	0	1	0	0	0	0	0	93
07:45	1	65	22	1	1	2	0	0	5	0	0	0	0	0	0	97
08:00	0	66	23	0	4	0	0	0	2	0	0	0	0	0	0	95
Hour Total	1	282	82	1	5	3	0	1	7	1	0	0	0	0	0	383
08:15	1	76	19	0	1	1	0	2	0	0	0	0	0	0	0	100
08:30	1	75	22	0	5	0	1	0	2	0	0	0	0	0	0	106
08:45	1	77	18	0	1	0	0	0	4	1	0	0	0	0	0	102
09:00	1	63	29	0	2	1	0	0	0	0	0	0	0	0	0	96

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2013-SBO,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	4	291	88	0	9	2	1	2	6	1	0	0	0	0	0	404
09:15	0	65	27	0	1	0	0	2	3	0	0	0	0	0	0	98
09:30	1	62	20	0	1	1	1	0	0	0	0	0	0	0	0	86
09:45	0	50	17	0	1	1	0	0	4	1	0	0	0	0	0	74
10:00	0	38	21	0	6	3	1	1	1	0	0	0	0	0	0	71
Hour Total	1	215	85	0	9	5	2	3	8	1	0	0	0	0	0	329
10:15	0	48	18	0	3	0	0	0	5	0	0	0	0	0	0	74
10:30	0	51	22	0	3	4	0	1	5	0	0	0	0	0	0	86
10:45	0	59	12	0	5	1	0	0	3	0	0	0	0	0	0	80
11:00	0	46	27	0	1	1	0	0	5	0	0	0	0	0	0	80
Hour Total	0	204	79	0	12	6	0	1	18	0	0	0	0	0	0	320
11:15	0	55	29	0	1	3	0	0	2	0	0	0	0	0	0	90
11:30	0	38	15	0	0	0	0	0	2	0	0	0	0	0	0	55
11:45	0	41	15	0	4	3	0	0	1	0	0	0	0	0	0	64
12:00	0	52	24	0	1	4	0	1	2	0	0	0	0	0	0	84
Hour Total	0	186	83	0	6	10	0	1	7	0	0	0	0	0	0	293
12:15	0	56	22	0	0	2	0	0	1	0	0	0	0	0	0	81
12:30	0	48	22	0	3	1	0	0	2	0	0	0	0	0	0	76
12:45	1	60	17	0	2	2	0	1	1	0	0	0	0	0	0	84
13:00	1	52	17	0	2	2	0	1	3	0	0	0	0	0	0	78
Hour Total	2	216	78	0	7	7	0	2	7	0	0	0	0	0	0	319
13:15	0	55	15	0	1	1	0	0	3	1	0	0	0	0	0	76
13:30	0	63	27	1	3	0	0	1	3	0	0	0	0	0	0	98
13:45	0	62	21	0	0	0	0	2	0	0	0	0	0	0	0	85
14:00	0	40	29	0	3	3	0	1	1	0	0	0	0	0	0	77
Hour Total	0	220	92	1	7	4	0	4	7	1	0	0	0	0	0	336
14:15	0	64	15	0	0	3	0	0	2	0	0	0	0	0	0	84
14:30	1	54	28	0	2	0	0	3	0	0	0	0	0	0	0	88
14:45	0	60	20	0	1	0	0	1	2	0	0	0	0	0	0	84
15:00	0	60	30	0	1	0	0	1	0	0	0	0	0	0	0	92
Hour Total	1	238	93	0	4	3	0	5	4	0	0	0	0	0	0	348
15:15	0	62	12	3	6	1	0	1	1	0	0	0	0	0	0	86
15:30	0	60	24	0	2	0	0	0	2	0	0	0	0	0	0	88
15:45	0	73	22	0	3	0	0	1	1	0	0	0	0	0	0	100
16:00	0	69	25	0	0	3	0	2	1	0	0	0	0	0	0	100
Hour Total	0	264	83	3	11	4	0	4	5	0	0	0	0	0	0	374
16:15	1	89	29	1	3	2	0	1	1	0	0	0	0	0	0	127
16:30	0	91	34	1	3	1	0	0	0	0	0	0	0	0	0	130
16:45	0	77	26	0	1	0	0	0	0	0	0	0	0	0	0	104
17:00	0	102	38	1	2	0	0	0	2	0	0	0	0	0	0	145
Hour Total	1	359	127	3	9	3	0	1	3	0	0	0	0	0	0	506

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2013-SBO,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	89	31	0	5	0	0	0	0	1	0	0	0	0	0	126
17:30	1	92	27	1	2	0	0	0	0	0	0	0	0	0	0	123
17:45	0	82	19	0	0	1	0	0	0	0	0	0	0	0	0	102
18:00	0	82	24	0	1	0	0	0	0	0	0	0	0	0	0	107
Hour Total	1	345	101	1	8	1	0	0	0	1	0	0	0	0	0	458
18:15	0	74	17	0	2	0	0	0	1	0	0	0	0	0	0	94
18:30	0	49	23	0	0	0	0	0	0	0	0	0	0	0	0	72
18:45	1	50	13	0	0	0	0	0	1	0	0	0	0	0	0	65
19:00	0	45	16	0	0	0	0	0	0	0	0	0	0	0	0	61
Hour Total	1	218	69	0	2	0	0	0	2	0	0	0	0	0	0	292
19:15	0	46	16	0	0	0	0	0	1	0	0	0	0	0	0	63
19:30	0	54	16	0	0	0	0	0	0	0	0	0	0	0	0	70
19:45	1	37	13	0	0	0	0	0	0	0	0	0	0	0	0	51
20:00	0	47	9	0	0	0	0	0	0	0	0	0	0	0	0	56
Hour Total	1	184	54	0	0	0	0	0	1	0	0	0	0	0	0	240
20:15	0	37	10	0	1	0	0	0	0	0	0	0	0	0	0	48
20:30	0	31	9	0	0	0	0	0	0	0	0	0	0	0	0	40
20:45	0	37	8	0	1	0	0	0	1	0	0	0	0	0	0	47
21:00	0	27	4	0	0	0	0	0	1	0	0	0	0	0	0	32
Hour Total	0	132	31	0	2	0	0	0	2	0	0	0	0	0	0	167
21:15	0	24	4	0	0	0	0	0	0	0	0	0	0	0	0	28
21:30	0	25	4	0	0	0	0	0	1	0	0	0	0	0	0	30
21:45	0	25	5	0	1	0	0	0	0	0	0	0	0	0	0	31
22:00	0	20	1	0	0	0	0	0	2	0	0	0	0	0	0	23
Hour Total	0	94	14	0	1	0	0	0	3	0	0	0	0	0	0	112
22:15	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	16
22:30	0	18	3	0	0	0	0	0	0	0	0	0	0	0	0	21
22:45	0	12	3	0	0	0	0	0	0	0	0	0	0	0	0	15
23:00	0	9	2	0	0	0	0	0	0	1	0	0	0	0	0	12
Hour Total	0	51	12	0	0	0	0	0	0	1	0	0	0	0	0	64
23:15	0	12	2	0	0	0	0	1	0	0	0	0	0	0	0	15
23:30	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
23:45	0	9	1	0	0	0	0	0	0	0	0	0	0	0	0	10
24:00	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
Hour Total	0	27	5	0	0	0	0	1	0	0	0	0	0	0	0	33
DAY TOTAL	19	4032	1330	11	103	49	4	27	94	6	0	0	0	0	0	5675
PERCENTS	0.4%	71.1%	23.5%	0.2%	1.9%	0.8%	0.0%	0.4%	1.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 94.8% Trucks & Buses 5.1%

AM Times	05:00	08:00	08:30	06:00	10:00	11:15	09:15	07:30	10:15	06:45						08:15
AM Peaks	4	294	96	2	17	10	2	3	18	1						404
PM Times	12:15	17:00	16:30	14:30	15:00	12:15		13:45	12:45	12:30						16:15
PM Peaks	2	365	129	3	12	7		6	10	1						506

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2013-SBO,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	7	2	0	0	0	0	0	2	0	0	0	0	0	0	11
00:30	0	8	3	0	0	0	0	0	0	0	0	0	0	0	0	11
00:45	0	5	1	0	0	0	0	1	0	0	0	0	0	0	0	7
01:00	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Hour Total	0	27	6	0	0	0	0	1	2	0	0	0	0	0	0	36
01:15	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8
01:30	0	7	0	0	0	0	0	1	0	0	0	0	0	0	0	8
01:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4
02:00	0	7	1	0	0	0	0	1	0	0	0	0	0	0	0	9
Hour Total	0	24	3	0	0	0	0	2	0	0	0	0	0	0	0	29
02:15	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	4
02:30	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	4
02:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	4
Hour Total	1	7	2	0	0	0	0	1	0	1	1	0	0	0	0	13
03:15	0	7	0	0	0	0	0	0	1	0	0	0	0	0	0	8
03:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
03:45	0	4	2	0	1	0	0	0	0	0	0	0	0	0	0	7
04:00	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour Total	0	21	3	0	1	0	0	0	1	0	0	0	0	0	0	26
04:15	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	10
04:30	0	11	3	0	0	0	0	0	0	0	0	0	0	0	0	14
04:45	0	12	7	0	0	0	0	0	1	0	0	0	0	0	0	20
05:00	0	15	2	0	1	0	0	1	1	0	0	0	0	0	0	20
Hour Total	0	45	15	0	1	0	0	1	2	0	0	0	0	0	0	64
05:15	0	27	8	0	0	0	0	0	3	0	0	0	0	0	0	38
05:30	0	30	18	0	1	0	0	0	0	0	0	0	0	0	0	49
05:45	0	36	8	0	1	1	0	1	2	0	0	0	0	0	0	49
06:00	0	42	20	0	0	0	0	0	0	0	0	0	0	0	0	62
Hour Total	0	135	54	0	2	1	0	1	5	0	0	0	0	0	0	198
06:15	0	50	12	0	0	0	0	0	1	0	0	0	0	0	0	63
06:30	1	56	20	2	3	0	0	0	1	0	0	0	0	0	0	83
06:45	0	68	30	1	4	0	0	0	1	0	0	0	0	0	0	104
07:00	0	70	27	0	1	0	0	0	2	0	0	0	0	0	0	100
Hour Total	1	244	89	3	8	0	0	0	5	0	0	0	0	0	0	350
07:15	0	70	15	0	2	0	0	0	1	0	0	0	0	0	0	88
07:30	0	81	21	0	1	1	0	0	3	0	0	0	0	0	0	107
07:45	0	58	25	0	2	1	0	1	1	0	0	0	0	0	0	88
08:00	0	63	31	1	0	0	0	1	3	0	0	0	0	0	0	99
Hour Total	0	272	92	1	5	2	0	2	8	0	0	0	0	0	0	382
08:15	0	66	17	1	2	1	0	1	3	0	0	0	0	0	0	91
08:30	0	76	22	0	2	0	0	0	2	0	0	0	0	0	0	102
08:45	0	59	20	0	3	1	0	0	2	0	0	0	0	0	0	85
09:00	0	62	27	0	2	1	0	1	1	0	0	0	0	0	0	94

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2013-SBO,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	263	86	1	9	3	0	2	8	0	0	0	0	0	0	372
09:15	0	62	19	0	0	1	0	0	0	0	0	0	0	0	0	82
09:30	0	58	17	0	4	1	1	0	1	0	0	0	0	0	0	82
09:45	0	45	12	0	2	0	0	0	5	1	0	0	0	0	0	65
10:00	0	58	26	0	2	2	0	0	3	1	0	0	0	0	0	92
Hour Total	0	223	74	0	8	4	1	0	9	2	0	0	0	0	0	321
10:15	0	39	19	1	0	3	0	1	1	0	0	0	0	0	0	64
10:30	0	50	15	0	3	1	0	0	0	0	0	0	0	0	0	69
10:45	0	54	22	1	0	1	0	0	1	0	0	0	0	0	0	79
11:00	0	54	21	0	0	2	1	0	2	0	0	0	0	0	0	80
Hour Total	0	197	77	2	3	7	1	1	4	0	0	0	0	0	0	292
11:15	0	45	15	0	2	3	0	0	4	0	0	0	0	0	0	69
11:30	0	64	15	0	0	2	0	0	3	0	0	0	0	0	0	84
11:45	1	47	23	0	2	2	0	1	2	0	0	0	0	0	0	78
12:00	0	53	19	0	2	2	0	3	1	0	0	0	0	0	0	80
Hour Total	1	209	72	0	6	9	0	4	10	0	0	0	0	0	0	311
12:15	0	66	29	0	1	0	0	0	4	0	0	0	0	0	0	100
12:30	1	51	19	0	1	0	1	1	3	0	0	0	0	0	0	77
12:45	0	54	22	0	1	3	0	0	3	0	0	0	0	0	0	83
13:00	0	57	15	0	1	1	0	1	3	0	0	0	0	0	0	78
Hour Total	1	228	85	0	4	4	1	2	13	0	0	0	0	0	0	338
13:15	0	51	21	0	1	1	0	1	1	0	0	0	0	0	0	76
13:30	0	53	23	0	2	1	0	1	6	0	0	0	0	0	0	86
13:45	0	54	29	0	3	0	0	0	0	0	0	0	0	0	0	86
14:00	0	46	22	1	1	2	0	1	1	0	0	0	0	0	0	74
Hour Total	0	204	95	1	7	4	0	3	8	0	0	0	0	0	0	322
14:15	1	55	18	0	0	2	0	1	0	0	0	0	0	0	0	77
14:30	0	47	15	1	1	2	0	0	1	0	0	0	0	0	0	67
14:45	0	49	28	0	0	1	0	1	2	0	0	0	0	0	0	81
15:00	0	52	20	0	0	2	0	0	0	0	0	0	0	0	0	74
Hour Total	1	203	81	1	1	7	0	2	3	0	0	0	0	0	0	299
15:15	0	73	19	3	6	0	0	0	2	0	0	0	0	0	0	103
15:30	0	65	20	0	2	2	0	0	2	0	0	0	0	0	0	91
15:45	0	79	28	0	2	0	1	0	0	0	0	0	0	0	0	110
16:00	0	74	18	0	2	0	0	0	0	0	0	0	0	0	0	94
Hour Total	0	291	85	3	12	2	1	0	4	0	0	0	0	0	0	398
16:15	0	75	25	1	3	1	0	1	0	1	0	0	0	0	0	107
16:30	0	68	28	2	3	2	0	0	1	0	0	0	0	0	0	104
16:45	1	91	32	0	1	1	0	3	1	0	0	0	0	0	0	130
17:00	0	87	32	0	1	0	0	0	1	1	0	0	0	0	0	122
Hour Total	1	321	117	3	8	4	0	4	3	2	0	0	0	0	0	463

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2013-SBO,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	87	35	0	1	1	0	0	0	0	0	0	0	0	0	124
17:30	0	102	27	0	1	1	0	0	0	0	0	0	0	0	0	131
17:45	0	85	31	0	2	0	0	0	0	0	0	0	0	0	0	118
18:00	0	89	29	0	1	0	0	0	1	0	0	0	0	0	0	120
Hour Total	0	363	122	0	5	2	0	0	1	0	0	0	0	0	0	493
18:15	0	74	26	0	0	0	0	0	1	0	0	0	0	0	0	101
18:30	0	80	21	0	0	0	0	1	0	0	0	0	0	0	0	102
18:45	0	68	22	0	1	0	0	0	0	0	0	0	0	0	0	91
19:00	0	70	17	0	0	0	0	0	0	0	0	0	0	0	0	87
Hour Total	0	292	86	0	1	0	0	1	1	0	0	0	0	0	0	381
19:15	1	40	12	0	1	0	0	0	0	0	0	0	0	0	0	54
19:30	0	46	17	0	1	0	0	0	1	0	0	0	0	0	0	65
19:45	0	38	11	0	0	0	0	0	1	0	0	0	0	0	0	50
20:00	0	42	14	0	0	0	0	0	0	0	0	0	0	0	0	56
Hour Total	1	166	54	0	2	0	0	0	2	0	0	0	0	0	0	225
20:15	1	33	13	0	0	0	0	0	1	0	0	0	0	0	0	48
20:30	0	26	11	0	0	0	0	0	0	0	0	0	0	0	0	37
20:45	0	29	5	0	0	0	0	0	0	0	0	0	0	0	0	34
21:00	0	23	5	0	0	0	0	0	0	0	0	0	0	0	0	28
Hour Total	1	111	34	0	0	0	0	0	1	0	0	0	0	0	0	147
21:15	0	31	5	0	0	0	0	0	2	0	0	0	0	0	0	38
21:30	0	19	7	0	0	0	0	0	0	0	0	0	0	0	0	26
21:45	0	15	3	0	0	0	0	0	0	0	0	0	0	0	0	18
22:00	0	20	6	0	0	0	0	0	0	0	0	0	0	0	0	26
Hour Total	0	85	21	0	0	0	0	0	2	0	0	0	0	0	0	108
22:15	0	13	6	0	0	0	0	0	0	0	0	0	0	0	0	19
22:30	0	15	3	0	0	0	0	0	0	0	0	0	0	0	0	18
22:45	0	17	5	0	0	0	0	0	1	0	0	0	0	0	0	23
23:00	0	13	2	0	0	0	0	0	0	0	0	0	0	0	0	15
Hour Total	0	58	16	0	0	0	0	0	1	0	0	0	0	0	0	75
23:15	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
23:30	0	5	2	0	0	0	0	0	2	0	0	0	0	0	0	9
23:45	0	5	2	0	0	0	0	0	1	0	0	0	0	0	0	8
24:00	0	6	2	0	0	0	0	1	2	0	0	0	0	0	0	11
Hour Total	0	21	7	0	0	0	0	1	5	0	0	0	0	0	0	34
DAY TOTAL	8	4010	1376	15	83	49	4	28	98	5	1	0	0	0	0	5677
PERCENTS	0.2%	70.7%	24.3%	0.3%	1.5%	0.9%	0.0%	0.4%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 95.0% Trucks & Buses 4.9%

AM Times	01:45	06:45	07:45	06:00	06:30	11:00	08:45	11:15	11:00	09:15	01:30					06:45
AM Peaks	1	289	95	3	10	9	1	4	11	2	1					399
PM Times	12:15	16:45	16:30	14:30	15:15	14:00	12:15	16:00	12:15	16:15						16:45
PM Peaks	1	367	127	4	12	7	1	4	13	2						507

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2013-SBO,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
00:15	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
00:30	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11
00:45	0	12	1	0	0	0	0	1	0	0	0	0	0	0	0	14
01:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	33	3	0	0	0	0	1	0	0	0	0	0	0	0	37
01:15	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	9
01:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
01:45	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10
02:00	0	12	1	0	0	0	0	0	0	0	0	0	0	0	0	13
Hour Total	0	31	6	0	0	0	0	0	0	0	0	0	0	0	0	37
02:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
02:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
03:00	0	2	0	0	0	0	0	1	1	0	0	0	0	0	0	4
Hour Total	0	11	1	0	0	0	0	1	1	0	0	0	0	0	0	14
03:15	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5
03:30	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	8
03:45	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	11
04:00	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour Total	0	25	5	0	0	0	0	0	0	0	0	0	0	0	0	30
04:15	0	9	3	0	0	0	0	0	0	0	0	0	0	0	0	12
04:30	0	5	5	0	0	0	0	0	1	1	0	0	0	0	0	12
04:45	0	11	3	0	0	1	0	2	0	0	0	0	0	0	0	17
05:00	0	16	6	0	0	0	0	0	0	0	0	0	0	0	0	22
Hour Total	0	41	17	0	0	1	0	2	1	1	0	0	0	0	0	63
05:15	0	24	9	0	0	0	0	0	1	0	0	0	0	0	0	34
05:30	1	40	16	0	1	0	0	1	0	0	0	0	0	0	0	59
05:45	0	40	15	0	0	0	0	0	1	0	0	0	0	0	0	56
06:00	0	35	16	0	1	0	0	0	1	0	0	0	0	0	0	53
Hour Total	1	139	56	0	2	0	0	1	3	0	0	0	0	0	0	202
06:15	0	56	17	0	0	0	0	0	2	0	0	0	0	0	0	75
06:30	0	55	28	3	2	0	0	1	3	0	0	0	0	0	0	92
06:45	0	60	27	1	1	1	0	1	0	0	0	0	0	0	0	91
07:00	0	77	23	0	5	1	0	0	1	0	0	0	0	0	0	107
Hour Total	0	248	95	4	8	2	0	2	6	0	0	0	0	0	0	365
07:15	0	72	19	0	0	1	0	0	1	0	0	0	0	0	0	93
07:30	0	77	26	0	1	0	1	0	0	0	0	0	0	0	0	105
07:45	0	67	21	1	3	0	1	0	2	0	0	0	0	0	0	95
08:00	1	58	18	1	1	0	0	1	3	0	0	0	0	0	0	83
Hour Total	1	274	84	2	5	1	2	1	6	0	0	0	0	0	0	376
08:15	0	77	18	1	0	3	1	0	2	1	0	0	0	0	0	103
08:30	0	61	18	0	1	1	1	0	4	0	0	0	0	0	0	86
08:45	0	66	16	0	0	2	0	1	2	1	0	0	0	0	0	88
09:00	0	66	24	0	3	1	0	0	1	0	0	0	0	0	0	95

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2013-SBO,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Hour Total	0	270	76	1	4	7	2	1	9	2	0	0	0	0	0	372
09:15	1	65	23	0	2	0	2	0	2	0	0	0	0	0	0	95
09:30	0	46	19	1	2	0	1	0	3	0	0	0	0	0	0	72
09:45	0	51	26	0	3	0	1	0	1	0	0	0	0	0	0	82
10:00	0	47	22	1	0	0	1	1	0	0	0	0	0	0	0	72
Hour Total	1	209	90	2	7	0	5	1	6	0	0	0	0	0	0	321
10:15	0	50	16	0	3	1	2	1	5	0	0	0	0	0	0	78
10:30	0	55	18	0	2	2	0	0	2	0	0	0	0	0	0	79
10:45	0	69	17	0	2	1	1	0	2	0	0	0	0	0	0	92
11:00	0	48	24	0	0	1	2	2	0	0	0	0	0	0	0	77
Hour Total	0	222	75	0	7	5	5	3	9	0	0	0	0	0	0	326
11:15	0	41	15	0	1	2	1	1	2	0	0	0	0	0	0	63
11:30	0	59	16	0	0	2	0	2	2	0	0	0	0	0	0	81
11:45	0	44	14	0	6	0	2	0	2	0	0	0	0	0	0	68
12:00	0	48	15	0	2	1	1	0	2	1	0	0	0	0	0	70
Hour Total	0	192	60	0	9	5	4	3	8	1	0	0	0	0	0	282
12:15	0	72	21	0	2	0	0	1	1	0	0	0	0	0	0	97
12:30	1	46	23	0	0	0	0	1	3	0	0	0	0	0	0	74
12:45	0	45	18	0	2	1	0	0	3	0	0	0	0	0	0	69
13:00	0	45	19	0	1	1	1	2	0	0	0	0	0	0	0	69
Hour Total	1	208	81	0	5	2	1	4	7	0	0	0	0	0	0	309
13:15	0	58	19	0	0	1	2	0	1	0	0	0	0	0	0	81
13:30	0	52	20	0	3	1	0	0	2	0	0	0	0	0	0	78
13:45	0	65	21	0	3	0	1	0	2	0	0	0	0	0	0	92
14:00	0	56	25	0	3	1	2	1	1	0	0	0	0	0	0	89
Hour Total	0	231	85	0	9	3	5	1	6	0	0	0	0	0	0	340
14:15	0	62	21	0	1	1	0	2	3	0	0	0	0	0	0	90
14:30	0	44	17	0	0	2	1	1	1	0	0	0	0	0	0	66
14:45	0	57	32	0	1	2	1	0	1	0	0	0	0	0	0	94
15:00	0	56	32	0	3	2	0	0	1	0	0	0	0	0	0	94
Hour Total	0	219	102	0	5	7	2	3	6	0	0	0	0	0	0	344
15:15	0	57	27	3	5	0	1	1	1	0	0	0	0	0	0	95
15:30	0	74	23	1	2	2	1	1	1	0	0	0	0	0	0	105
15:45	0	76	18	0	1	0	0	1	1	0	0	0	0	0	0	97
16:00	0	89	26	0	0	1	0	0	1	0	0	0	0	0	0	117
Hour Total	0	296	94	4	8	3	2	3	4	0	0	0	0	0	0	414
16:15	0	81	28	1	5	1	0	0	1	0	0	0	0	0	0	117
16:30	0	84	27	3	0	0	0	0	1	0	0	0	0	0	0	115
16:45	0	86	31	1	0	0	0	0	1	0	0	0	0	0	0	119
17:00	0	110	27	0	3	0	0	0	0	0	0	0	0	0	0	140
Hour Total	0	361	113	5	8	1	0	0	3	0	0	0	0	0	0	491

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2013-SBO,C-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
17:15	0	88	28	0	2	0	0	0	2	0	0	0	0	0	0	120
17:30	1	88	26	0	2	1	0	0	0	0	0	0	0	0	0	118
17:45	0	100	18	0	1	0	0	0	0	0	0	0	0	0	0	119
18:00	0	67	23	0	1	1	0	0	0	0	0	0	0	0	0	92
Hour Total	1	343	95	0	6	2	0	0	2	0	0	0	0	0	0	449
18:15	0	73	22	0	0	0	1	0	0	0	0	0	0	0	0	96
18:30	0	54	25	0	1	0	0	0	2	0	0	0	0	0	0	82
18:45	0	62	27	0	1	1	0	0	0	0	0	0	0	0	0	91
19:00	0	52	21	0	1	0	0	1	1	0	0	0	0	0	0	76
Hour Total	0	241	95	0	3	1	1	1	3	0	0	0	0	0	0	345
19:15	1	51	15	0	0	0	0	0	0	0	0	0	0	0	0	67
19:30	0	45	11	0	0	0	0	0	1	0	0	0	0	0	0	57
19:45	0	43	11	0	1	0	0	0	0	0	0	0	0	0	0	55
20:00	0	40	11	0	0	0	0	0	2	0	0	0	0	0	0	53
Hour Total	1	179	48	0	1	0	0	0	3	0	0	0	0	0	0	232
20:15	0	39	11	0	0	0	0	1	1	0	0	0	0	0	0	52
20:30	0	26	12	0	0	0	0	0	0	0	0	0	0	0	0	38
20:45	0	25	5	0	0	0	0	0	0	0	0	0	0	0	0	30
21:00	0	26	8	0	0	0	0	0	1	0	0	0	0	0	0	35
Hour Total	0	116	36	0	0	0	0	1	2	0	0	0	0	0	0	155
21:15	0	22	7	0	0	0	0	0	0	1	0	0	0	0	0	30
21:30	0	21	7	0	0	0	0	0	0	0	0	0	0	0	0	28
21:45	0	23	2	0	1	0	0	0	0	0	0	0	0	0	0	26
22:00	0	18	3	0	1	0	0	0	1	0	0	0	0	0	0	23
Hour Total	0	84	19	0	2	0	0	0	1	1	0	0	0	0	0	107
22:15	0	11	3	0	0	0	0	0	0	0	0	0	0	0	0	14
22:30	0	17	1	0	0	0	0	0	0	0	0	0	0	0	0	18
22:45	0	19	3	0	0	0	0	0	0	0	0	0	0	0	0	22
23:00	0	11	4	0	0	0	0	1	0	0	0	0	0	0	0	16
Hour Total	0	58	11	0	0	0	0	1	0	0	0	0	0	0	0	70
23:15	0	11	2	0	0	0	0	0	2	0	0	0	0	0	0	15
23:30	0	9	2	0	0	0	0	1	0	0	0	0	0	0	0	12
23:45	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6
24:00	0	8	2	0	0	0	0	0	0	0	0	0	0	0	0	10
Hour Total	0	33	7	0	0	0	0	1	2	0	0	0	0	0	0	43
DAY TOTAL	6	4064	1354	18	89	40	29	31	88	5	0	0	0	0	0	5724
PERCENTS	0.2%	71.0%	23.7%	0.4%	1.6%	0.6%	0.5%	0.5%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Passenger Vehicles 94.7% Trucks & Buses 5.2%

AM Times	04:45	07:00	06:30	06:00	09:00	08:15	09:15	10:45	07:45	08:00						07:00
AM Peaks	1	293	97	4	10	7	5	5	11	2						400
PM Times	12:15	17:00	14:45	16:00	14:45	14:15	13:15	12:15	13:30	20:30						16:45
PM Peaks	1	386	114	5	11	7	5	4	8	1						497

GRAND TOTAL	33	4060	275	37	280	1	0	0								
	12106	44	138	86	16	0	0	17076								
PERCENTS	0.2%	70.9%	23.8%	0.3%	1.7%	0.8%	0.2%	0.5%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2014-SBO,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2
00:30	0	0	0	0	0	0	0	1	2	4	1	0	0	0	8
00:45	0	0	0	0	0	0	0	0	1	2	1	1	0	0	5
01:00	0	0	0	0	0	0	0	0	0	6	1	1	0	0	8
Hour Total	0	0	0	0	0	0	0	1	3	13	3	3	0	0	23
01:15	0	0	0	0	0	0	0	2	2	1	3	0	0	0	8
01:30	0	0	0	0	0	0	0	0	1	4	8	0	0	0	13
01:45	0	0	0	0	0	0	0	0	1	3	1	1	0	0	6
02:00	0	0	0	0	0	0	0	0	2	0	0	1	0	0	3
Hour Total	0	0	0	0	0	0	0	2	6	8	12	2	0	0	30
02:15	0	0	0	0	0	0	0	1	1	2	0	0	0	0	4
02:30	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2
02:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	1	4	1	0	0	0	6
Hour Total	0	0	0	0	0	0	0	2	3	8	1	0	0	0	14
03:15	0	0	0	0	0	0	0	0	1	7	0	0	0	0	8
03:30	0	0	0	0	0	0	0	2	3	3	1	1	0	0	10
03:45	0	0	0	0	0	0	0	0	0	2	1	0	0	1	4
04:00	0	0	0	0	0	0	0	0	1	2	2	1	0	0	6
Hour Total	0	0	0	0	0	0	0	2	5	14	4	2	0	1	28
04:15	0	0	0	0	0	0	0	0	1	1	5	2	0	0	9
04:30	0	0	0	0	0	0	0	0	1	4	5	2	0	0	12
04:45	0	0	0	0	0	0	0	0	1	3	6	4	0	0	14
05:00	0	0	0	0	0	0	0	0	0	9	11	9	0	0	29
Hour Total	0	0	0	0	0	0	0	0	3	17	27	17	0	0	64
05:15	0	0	0	0	0	0	0	2	1	5	15	7	0	0	30
05:30	0	0	0	0	1	0	0	0	3	15	14	14	1	0	48
05:45	0	0	0	0	0	0	0	0	4	15	20	15	2	0	56
06:00	0	0	0	0	0	0	0	1	5	14	16	9	0	0	45
Hour Total	0	0	0	0	1	0	0	3	13	49	65	45	3	0	179
06:15	0	0	0	0	0	0	0	0	2	20	33	16	1	0	72
06:30	0	0	0	0	0	0	0	2	17	42	33	11	0	0	105
06:45	0	0	0	0	0	0	0	2	15	32	28	12	0	0	89
07:00	0	0	0	0	0	0	0	2	7	36	42	6	0	0	93
Hour Total	0	0	0	0	0	0	0	6	41	130	136	45	1	0	359
07:15	0	0	0	0	0	0	0	1	6	40	39	12	0	0	98
07:30	0	0	0	0	0	0	0	0	8	39	29	15	2	0	93
07:45	0	0	0	0	0	0	0	1	14	35	30	15	2	0	97
08:00	0	0	0	0	0	0	1	4	17	35	33	5	0	0	95
Hour Total	0	0	0	0	0	0	1	6	45	149	131	47	4	0	383
08:15	0	0	0	0	0	0	0	1	18	32	36	13	0	0	100
08:30	1	0	0	0	0	0	0	1	18	45	28	13	0	0	106
08:45	0	0	0	0	0	0	1	2	10	40	40	8	1	0	102
09:00	0	0	0	0	0	0	0	0	12	42	29	12	1	0	96

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2014-SBO,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	1	0	0	0	0	0	1	4	58	159	133	46	2	0	404
09:15	0	0	0	0	0	0	0	0	14	44	28	11	1	0	98
09:30	0	0	0	0	0	0	0	2	14	38	26	6	0	0	86
09:45	0	0	0	0	0	1	1	4	16	34	16	2	0	0	74
10:00	0	0	0	0	0	0	0	3	20	19	28	1	0	0	71
Hour Total	0	0	0	0	0	1	1	9	64	135	98	20	1	0	329
10:15	0	0	0	0	0	0	2	3	11	32	19	7	0	0	74
10:30	0	0	0	0	0	1	1	9	21	30	18	5	1	0	86
10:45	0	0	0	0	0	0	0	1	9	38	20	11	1	0	80
11:00	0	0	0	0	0	0	0	1	10	35	24	9	1	0	80
Hour Total	0	0	0	0	0	1	3	14	51	135	81	32	3	0	320
11:15	0	0	0	0	0	0	0	2	10	36	33	8	1	0	90
11:30	0	0	0	0	0	0	0	1	12	21	18	2	1	0	55
11:45	0	0	0	0	0	0	0	1	6	32	21	4	0	0	64
12:00	0	0	0	0	0	0	0	5	18	25	25	9	2	0	84
Hour Total	0	0	0	0	0	0	0	9	46	114	97	23	4	0	293
12:15	0	0	0	0	0	0	0	1	14	34	21	10	1	0	81
12:30	0	0	0	0	0	0	0	0	12	28	25	11	0	0	76
12:45	0	0	0	0	0	0	0	3	12	36	23	10	0	0	84
13:00	0	0	0	0	0	0	0	4	18	23	22	9	2	0	78
Hour Total	0	0	0	0	0	0	0	8	56	121	91	40	3	0	319
13:15	0	0	0	0	0	0	1	3	17	27	25	3	0	0	76
13:30	0	0	0	0	0	0	0	2	23	44	23	5	1	0	98
13:45	0	0	0	0	0	0	1	1	8	33	31	11	0	0	85
14:00	0	0	0	0	0	0	0	0	16	38	16	6	1	0	77
Hour Total	0	0	0	0	0	0	2	6	64	142	95	25	2	0	336
14:15	0	0	0	0	0	0	0	1	15	37	24	6	1	0	84
14:30	0	0	0	0	0	1	0	3	17	45	17	5	0	0	88
14:45	0	0	0	0	0	0	0	6	13	33	27	3	2	0	84
15:00	0	0	0	0	0	0	0	0	13	42	27	9	1	0	92
Hour Total	0	0	0	0	0	1	0	10	58	157	95	23	4	0	348
15:15	0	0	0	0	0	0	0	3	7	36	25	10	5	0	86
15:30	0	0	0	0	0	0	0	2	10	31	36	8	1	0	88
15:45	0	0	0	0	0	0	0	3	12	34	41	10	0	0	100
16:00	0	0	0	0	0	0	0	1	22	43	24	10	0	0	100
Hour Total	0	0	0	0	0	0	0	9	51	144	126	38	6	0	374
16:15	0	0	0	0	0	0	1	8	11	50	43	12	2	0	127
16:30	0	0	0	0	0	0	0	3	24	52	31	17	2	1	130
16:45	0	0	0	0	0	0	0	0	14	42	31	16	1	0	104
17:00	0	0	0	0	0	0	0	2	19	61	45	15	3	0	145
Hour Total	0	0	0	0	0	0	1	13	68	205	150	60	8	1	506

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2014-SBO,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	0	0	3	12	42	52	13	3	1	126
17:30	0	0	0	0	0	0	1	2	19	46	44	11	0	0	123
17:45	0	0	0	0	0	0	2	11	21	48	20	0	0	0	102
18:00	0	0	0	0	0	0	0	2	32	39	25	9	0	0	107
Hour Total	0	0	0	0	0	0	3	18	84	175	141	33	3	1	458
18:15	0	0	0	0	0	0	0	1	11	40	37	5	0	0	94
18:30	0	0	0	0	0	0	0	7	19	21	16	7	2	0	72
18:45	0	0	0	0	0	0	0	1	15	37	10	2	0	0	65
19:00	0	0	0	0	0	1	0	4	13	31	9	2	1	0	61
Hour Total	0	0	0	0	0	1	0	13	58	129	72	16	3	0	292
19:15	0	0	0	0	0	0	1	3	16	28	13	2	0	0	63
19:30	0	0	0	0	0	0	0	8	20	27	11	4	0	0	70
19:45	1	0	0	0	0	0	0	4	16	19	9	2	0	0	51
20:00	0	0	0	0	0	0	0	3	11	30	8	3	1	0	56
Hour Total	1	0	0	0	0	0	1	18	63	104	41	11	1	0	240
20:15	0	0	0	0	0	0	0	1	6	22	12	6	1	0	48
20:30	0	0	0	0	0	0	0	2	7	17	12	2	0	0	40
20:45	0	0	0	0	0	0	0	3	12	14	13	5	0	0	47
21:00	0	0	0	0	0	0	0	6	6	9	6	4	1	0	32
Hour Total	0	0	0	0	0	0	0	12	31	62	43	17	2	0	167
21:15	0	0	0	0	0	0	0	1	4	8	11	4	0	0	28
21:30	0	0	0	0	0	0	0	2	7	11	9	0	1	0	30
21:45	0	0	0	0	0	0	1	2	6	15	5	2	0	0	31
22:00	0	0	0	0	0	0	0	1	7	8	4	3	0	0	23
Hour Total	0	0	0	0	0	0	1	6	24	42	29	9	1	0	112
22:15	0	0	0	0	0	0	0	1	2	4	7	2	0	0	16
22:30	0	0	0	0	0	0	0	0	8	6	5	2	0	0	21
22:45	0	0	0	0	0	0	0	0	2	9	2	1	1	0	15
23:00	0	0	0	0	0	0	0	1	1	5	2	3	0	0	12
Hour Total	0	0	0	0	0	0	0	2	13	24	16	8	1	0	64
23:15	0	0	0	0	0	0	0	0	1	6	6	1	0	1	15
23:30	0	0	0	0	0	0	0	1	1	0	1	0	0	0	3
23:45	0	0	0	0	0	0	1	0	1	3	2	2	1	0	10
24:00	0	0	0	0	0	0	0	0	0	2	2	1	0	0	5
Hour Total	0	0	0	0	0	0	1	1	3	11	11	4	1	1	33
DAY TOTAL	2	0	0	0	1	4	15	174	911	2247	1698	566	53	4	5675
PERCENTS	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.3%	3.1%	16.1%	39.5%	29.9%	9.9%	0.9%	0.0%	100%

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2014-SBO,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
48.6 mph

85th Percentile Speed
59.3 mph

Median Speed
53.9 mph

Average Speed
54.0 mph

10 MPH Pace Speed
50 mph to 60 mph
3945 vehicles in pace
Representing 69.5% of the total vehicles

Vehicles > 55 MPH
2321
40.9%

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2014-SBO,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	0	4	5	1	0	1	0	11
00:30	0	0	0	0	0	0	0	0	3	3	3	1	0	1	11
00:45	0	0	0	0	0	0	0	0	2	3	1	1	0	0	7
01:00	0	0	0	0	0	0	0	1	1	3	2	0	0	0	7
Hour Total	0	0	0	0	0	0	0	1	10	14	7	2	1	1	36
01:15	0	0	0	0	0	0	0	1	2	4	0	1	0	0	8
01:30	0	0	0	0	0	0	0	0	2	1	3	1	1	0	8
01:45	0	0	0	0	0	0	0	1	1	1	0	1	0	0	4
02:00	0	0	0	0	0	0	0	0	3	3	3	0	0	0	9
Hour Total	0	0	0	0	0	0	0	2	8	9	6	3	1	0	29
02:15	0	0	0	0	0	0	0	1	0	1	2	0	0	0	4
02:30	0	0	0	0	0	0	0	0	2	1	0	1	0	0	4
02:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
03:00	0	0	0	0	0	0	0	1	1	1	1	0	0	0	4
Hour Total	0	0	0	0	0	0	0	2	3	3	4	1	0	0	13
03:15	0	0	0	0	0	0	0	2	1	3	2	0	0	0	8
03:30	0	0	0	0	0	0	0	1	0	0	4	0	0	0	5
03:45	0	0	0	0	0	0	0	0	2	3	0	1	1	0	7
04:00	0	0	0	0	0	0	0	0	0	3	0	3	0	0	6
Hour Total	0	0	0	0	0	0	0	3	3	9	6	4	1	0	26
04:15	0	0	0	0	0	0	0	0	0	3	4	3	0	0	10
04:30	0	0	0	0	0	0	0	0	1	4	7	1	1	0	14
04:45	0	0	0	0	0	0	1	0	0	4	9	4	2	0	20
05:00	0	0	0	0	0	0	0	0	2	9	4	5	0	0	20
Hour Total	0	0	0	0	0	0	1	0	3	20	24	13	3	0	64
05:15	0	0	0	0	0	0	0	1	1	5	14	13	3	1	38
05:30	0	0	0	0	0	0	0	1	3	10	13	20	2	0	49
05:45	0	0	0	0	0	0	0	2	0	16	17	13	1	0	49
06:00	0	0	0	0	0	0	0	1	4	12	20	19	5	1	62
Hour Total	0	0	0	0	0	0	0	5	8	43	64	65	11	2	198
06:15	0	0	0	0	0	0	0	0	8	10	29	14	2	0	63
06:30	1	0	0	0	0	0	0	2	9	25	37	9	0	0	83
06:45	0	0	0	0	0	0	1	1	6	37	42	15	2	0	104
07:00	0	0	0	0	0	0	0	0	12	34	39	14	1	0	100
Hour Total	1	0	0	0	0	0	1	3	35	106	147	52	5	0	350
07:15	0	0	0	0	0	0	0	2	4	21	41	15	3	2	88
07:30	0	0	0	0	0	0	0	1	3	33	48	20	2	0	107
07:45	0	0	0	0	0	0	0	1	11	22	30	21	2	1	88
08:00	0	0	0	0	0	0	0	0	14	26	35	22	2	0	99
Hour Total	0	0	0	0	0	0	0	4	32	102	154	78	9	3	382
08:15	0	0	0	0	0	0	0	5	10	25	31	17	3	0	91
08:30	0	0	0	0	0	0	0	0	9	28	43	19	2	1	102
08:45	0	0	0	0	0	0	0	6	9	26	33	10	1	0	85
09:00	0	0	0	0	0	0	0	2	11	39	28	13	1	0	94

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2014-SBO,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	0	0	0	13	39	118	135	59	7	1	372
09:15	0	0	0	0	0	0	0	4	7	34	27	10	0	0	82
09:30	0	0	0	0	0	0	0	2	20	30	23	7	0	0	82
09:45	0	0	0	0	0	1	1	3	21	21	16	2	0	0	65
10:00	0	0	0	0	0	0	0	3	17	48	17	6	1	0	92
Hour Total	0	0	0	0	0	1	1	12	65	133	83	25	1	0	321
10:15	0	0	0	0	0	0	1	2	19	16	20	6	0	0	64
10:30	0	0	0	0	0	0	1	1	14	25	20	8	0	0	69
10:45	0	0	0	0	0	0	0	2	13	28	25	11	0	0	79
11:00	0	0	0	0	0	0	0	4	19	24	25	8	0	0	80
Hour Total	0	0	0	0	0	0	2	9	65	93	90	33	0	0	292
11:15	0	0	0	0	0	0	0	4	11	35	12	7	0	0	69
11:30	0	0	0	0	0	0	0	4	14	36	18	10	2	0	84
11:45	1	0	0	0	0	0	0	3	6	39	20	9	0	0	78
12:00	0	0	0	0	0	0	0	0	19	31	21	9	0	0	80
Hour Total	1	0	0	0	0	0	0	11	50	141	71	35	2	0	311
12:15	0	0	0	0	0	0	0	4	19	46	26	5	0	0	100
12:30	0	0	0	0	0	0	0	2	18	28	22	7	0	0	77
12:45	0	0	0	0	0	0	0	3	13	35	23	8	1	0	83
13:00	0	0	0	0	0	0	3	2	11	30	23	8	1	0	78
Hour Total	0	0	0	0	0	0	3	11	61	139	94	28	2	0	338
13:15	0	0	0	0	0	0	0	1	16	39	17	2	1	0	76
13:30	0	0	0	0	0	0	1	2	17	47	18	1	0	0	86
13:45	0	0	0	0	0	0	0	4	17	44	17	4	0	0	86
14:00	0	0	0	0	0	0	0	1	11	39	20	3	0	0	74
Hour Total	0	0	0	0	0	0	1	8	61	169	72	10	1	0	322
14:15	0	0	0	0	0	0	0	3	12	32	24	6	0	0	77
14:30	0	0	0	0	0	0	1	0	8	28	20	9	1	0	67
14:45	0	0	0	0	0	0	0	4	5	29	29	12	2	0	81
15:00	0	0	0	0	0	0	0	3	8	26	30	5	1	1	74
Hour Total	0	0	0	0	0	0	1	10	33	115	103	32	4	1	299
15:15	0	0	0	0	0	1	0	3	18	43	27	8	3	0	103
15:30	0	0	0	0	0	0	0	2	13	34	35	6	1	0	91
15:45	0	0	0	0	0	0	1	1	15	55	22	15	1	0	110
16:00	0	0	0	0	0	0	0	4	15	35	27	12	1	0	94
Hour Total	0	0	0	0	0	1	1	10	61	167	111	41	6	0	398
16:15	0	0	0	0	0	0	0	2	6	37	47	11	3	1	107
16:30	0	0	0	0	0	0	0	6	8	37	39	12	2	0	104
16:45	1	0	0	0	0	0	1	6	20	43	46	13	0	0	130
17:00	0	0	0	0	0	0	0	3	13	34	43	25	4	0	122
Hour Total	1	0	0	0	0	0	1	17	47	151	175	61	9	1	463

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2014-SBO,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	1	0	0	16	44	45	17	1	0	124
17:30	0	0	0	0	0	0	1	0	22	42	51	13	2	0	131
17:45	0	0	0	0	0	0	0	3	26	39	37	12	1	0	118
18:00	0	0	0	0	0	0	0	5	27	46	35	6	1	0	120
Hour Total	0	0	0	0	0	1	1	8	91	171	168	48	5	0	493
18:15	0	0	0	0	0	0	0	1	15	39	36	9	1	0	101
18:30	0	0	0	0	0	0	1	20	31	32	11	7	0	0	102
18:45	0	0	0	0	1	5	14	38	26	7	0	0	0	0	91
19:00	0	0	0	1	1	9	13	31	22	8	2	0	0	0	87
Hour Total	0	0	0	1	2	14	28	90	94	86	49	16	1	0	381
19:15	1	0	0	0	0	0	0	6	23	19	3	2	0	0	54
19:30	0	0	0	0	0	0	0	10	9	27	15	4	0	0	65
19:45	0	0	0	0	0	0	0	8	11	21	9	1	0	0	50
20:00	0	0	0	0	0	0	0	7	14	16	14	4	1	0	56
Hour Total	1	0	0	0	0	0	0	31	57	83	41	11	1	0	225
20:15	0	0	0	0	0	0	0	4	10	13	15	5	0	1	48
20:30	0	0	0	0	0	1	1	2	9	10	12	2	0	0	37
20:45	0	0	0	0	0	0	0	1	6	16	7	4	0	0	34
21:00	0	0	0	0	0	0	0	2	6	12	6	2	0	0	28
Hour Total	0	0	0	0	0	1	1	9	31	51	40	13	0	1	147
21:15	0	0	0	0	0	0	0	0	7	17	12	2	0	0	38
21:30	0	0	0	0	0	0	0	1	6	5	11	3	0	0	26
21:45	0	0	0	0	0	0	0	1	1	5	9	2	0	0	18
22:00	0	0	0	0	0	0	0	5	1	8	8	3	1	0	26
Hour Total	0	0	0	0	0	0	0	7	15	35	40	10	1	0	108
22:15	0	0	0	0	0	0	0	0	4	5	8	2	0	0	19
22:30	0	0	0	0	0	0	0	0	1	8	4	5	0	0	18
22:45	0	0	0	0	0	0	0	0	2	7	10	4	0	0	23
23:00	0	0	0	0	0	0	0	0	3	6	5	1	0	0	15
Hour Total	0	0	0	0	0	0	0	0	10	26	27	12	0	0	75
23:15	0	0	0	0	0	0	0	0	1	1	1	1	2	0	6
23:30	0	0	0	0	0	0	0	0	2	2	4	1	0	0	9
23:45	0	0	0	0	0	0	0	0	3	5	0	0	0	0	8
24:00	0	0	0	0	0	0	0	1	2	5	3	0	0	0	11
Hour Total	0	0	0	0	0	0	0	1	8	13	8	2	2	0	34
DAY TOTAL	4	0	0	1	2	18	42	267	890	1997	1719	654	73	10	5677
PERCENTS	0.1%	0.0%	0.0%	0.1%	0.1%	0.4%	0.8%	4.8%	15.6%	35.1%	30.2%	11.5%	1.2%	0.1%	100%

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2014-SBO,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total

Statistical Information...

15th Percentile Speed
47.9 mph

85th Percentile Speed
59.7 mph

Median Speed
54.1 mph

Average Speed
53.9 mph

10 MPH Pace Speed
50 mph to 60 mph
3716 vehicles in pace
Representing 65.4% of the total vehicles

Vehicles > 55 MPH
2456
43.3%

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2014-SBO,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
00:15	0	0	0	0	0	0	0	1	3	2	1	0	0	1	8
00:30	0	0	0	0	0	0	0	0	2	6	2	0	1	0	11
00:45	0	0	0	0	0	0	0	0	1	5	7	1	0	0	14
01:00	0	0	0	0	0	0	0	0	1	1	1	1	0	0	4
Hour Total	0	0	0	0	0	0	0	1	7	14	11	2	1	1	37
01:15	0	0	0	0	0	0	0	1	3	0	1	2	0	2	9
01:30	0	0	0	0	0	0	0	0	0	1	1	2	1	0	5
01:45	0	0	0	0	0	0	0	0	0	4	4	1	1	0	10
02:00	0	0	0	0	0	0	0	1	3	4	4	1	0	0	13
Hour Total	0	0	0	0	0	0	0	2	6	9	10	6	2	2	37
02:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
02:30	0	0	0	0	0	0	0	0	0	4	0	0	1	0	5
02:45	0	0	0	0	0	0	0	1	0	3	0	0	0	0	4
03:00	0	0	0	0	0	0	0	0	2	0	0	2	0	0	4
Hour Total	0	0	0	0	0	0	0	1	3	7	0	2	1	0	14
03:15	0	0	0	0	0	0	0	0	1	3	1	0	0	0	5
03:30	0	0	0	0	0	0	0	1	1	2	3	1	0	0	8
03:45	0	0	0	0	0	0	0	0	0	5	3	2	1	0	11
04:00	0	0	0	0	0	0	0	0	0	0	1	5	0	0	6
Hour Total	0	0	0	0	0	0	0	1	2	10	8	8	1	0	30
04:15	0	0	0	0	0	0	0	2	2	0	5	3	0	0	12
04:30	0	0	0	0	0	0	0	0	2	1	7	1	1	0	12
04:45	0	0	0	0	0	0	1	0	2	3	7	4	0	0	17
05:00	0	0	0	0	0	0	0	0	2	4	7	8	1	0	22
Hour Total	0	0	0	0	0	0	1	2	8	8	26	16	2	0	63
05:15	0	0	0	0	0	0	0	0	1	8	13	11	1	0	34
05:30	0	0	0	0	0	0	0	2	5	14	13	22	2	1	59
05:45	0	0	0	0	0	0	0	1	1	10	25	16	1	2	56
06:00	0	0	0	0	0	0	0	2	4	13	24	8	2	0	53
Hour Total	0	0	0	0	0	0	0	5	11	45	75	57	6	3	202
06:15	0	0	0	0	0	0	0	0	6	20	24	22	3	0	75
06:30	0	0	0	0	0	0	0	2	12	38	28	12	0	0	92
06:45	0	0	0	0	0	0	1	4	14	26	32	11	3	0	91
07:00	0	0	0	0	0	0	1	2	13	38	38	14	1	0	107
Hour Total	0	0	0	0	0	0	2	8	45	122	122	59	7	0	365
07:15	0	0	0	0	0	0	1	2	10	24	31	21	4	0	93
07:30	0	0	0	0	0	0	0	0	13	37	25	28	2	0	105
07:45	0	0	0	0	0	0	0	0	15	18	35	23	3	1	95
08:00	0	0	0	0	0	0	0	1	8	16	33	22	2	1	83
Hour Total	0	0	0	0	0	0	1	3	46	95	124	94	11	2	376
08:15	0	0	0	0	0	0	0	2	18	32	27	21	3	0	103
08:30	0	0	0	0	0	0	0	0	8	25	25	24	4	0	86
08:45	0	0	0	0	0	0	0	4	13	23	30	15	2	1	88
09:00	0	0	0	0	0	0	1	2	10	32	27	22	1	0	95

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2014-SBO,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
Hour Total	0	0	0	0	0	0	1	8	49	112	109	82	10	1	372
09:15	0	0	0	0	0	0	0	4	12	42	29	6	2	0	95
09:30	0	0	0	0	0	0	0	1	8	38	19	6	0	0	72
09:45	0	0	0	0	0	0	0	1	21	33	19	7	1	0	82
10:00	0	0	0	0	0	0	0	3	17	22	20	9	1	0	72
Hour Total	0	0	0	0	0	0	0	9	58	135	87	28	4	0	321
10:15	0	0	0	0	0	0	1	7	15	25	20	9	1	0	78
10:30	0	0	0	0	0	0	0	2	14	37	20	5	1	0	79
10:45	0	0	0	0	0	0	1	7	9	36	32	5	2	0	92
11:00	0	0	0	0	0	0	0	0	16	34	23	2	2	0	77
Hour Total	0	0	0	0	0	0	2	16	54	132	95	21	6	0	326
11:15	0	0	0	0	0	0	0	4	14	25	14	6	0	0	63
11:30	0	0	0	0	0	0	1	2	15	31	25	7	0	0	81
11:45	0	0	0	0	0	0	0	1	13	28	21	4	1	0	68
12:00	0	0	0	0	0	0	0	1	13	18	28	8	2	0	70
Hour Total	0	0	0	0	0	0	1	8	55	102	88	25	3	0	282
12:15	0	0	0	0	0	0	0	2	11	34	37	11	2	0	97
12:30	0	0	0	0	0	0	1	1	17	31	16	6	2	0	74
12:45	0	0	0	0	0	0	0	2	14	20	26	6	1	0	69
13:00	0	0	0	0	0	0	0	3	13	31	17	3	2	0	69
Hour Total	0	0	0	0	0	0	1	8	55	116	96	26	7	0	309
13:15	0	0	0	0	0	0	1	2	14	33	21	9	1	0	81
13:30	0	0	0	0	0	0	1	0	7	42	17	9	2	0	78
13:45	0	0	0	0	0	0	0	1	10	28	40	13	0	0	92
14:00	0	0	0	0	0	0	0	2	14	42	25	6	0	0	89
Hour Total	0	0	0	0	0	0	2	5	45	145	103	37	3	0	340
14:15	0	0	0	0	0	0	1	3	18	38	24	5	1	0	90
14:30	0	0	0	0	0	0	0	1	10	25	24	6	0	0	66
14:45	0	0	0	0	0	0	0	1	25	24	32	10	2	0	94
15:00	0	0	0	0	0	0	0	3	25	40	22	3	1	0	94
Hour Total	0	0	0	0	0	0	1	8	78	127	102	24	4	0	344
15:15	0	0	0	0	0	0	1	9	17	36	20	10	2	0	95
15:30	0	0	0	0	0	0	0	2	15	45	29	13	1	0	105
15:45	0	0	0	0	0	0	1	1	22	42	22	8	1	0	97
16:00	0	0	0	0	0	0	0	1	6	51	46	9	3	1	117
Hour Total	0	0	0	0	0	0	2	13	60	174	117	40	7	1	414
16:15	0	0	0	0	0	0	0	2	15	54	27	16	3	0	117
16:30	0	0	0	0	0	0	0	3	18	44	31	18	1	0	115
16:45	0	0	0	0	0	0	0	8	18	42	36	14	0	1	119
17:00	0	0	0	0	0	0	0	1	10	54	53	18	4	0	140
Hour Total	0	0	0	0	0	0	0	14	61	194	147	66	8	1	491

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2014-SBO,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
17:15	0	0	0	0	0	0	0	0	22	40	35	22	0	1	120
17:30	0	0	0	0	0	0	0	6	20	43	36	11	2	0	118
17:45	0	0	0	0	0	0	0	1	17	58	35	7	1	0	119
18:00	0	0	0	0	0	0	0	0	7	37	39	9	0	0	92
Hour Total	0	0	0	0	0	0	0	7	66	178	145	49	3	1	449
18:15	0	0	0	0	0	0	0	1	6	44	31	14	0	0	96
18:30	0	0	0	0	0	0	1	2	16	22	24	16	1	0	82
18:45	0	0	0	0	0	0	0	1	19	37	28	5	0	1	91
19:00	0	0	0	0	0	0	0	3	8	25	35	5	0	0	76
Hour Total	0	0	0	0	0	0	1	7	49	128	118	40	1	1	345
19:15	1	0	0	0	0	0	0	2	9	24	25	6	0	0	67
19:30	0	0	0	0	0	0	0	1	13	24	10	7	1	1	57
19:45	0	0	0	0	0	0	1	4	5	24	17	3	1	0	55
20:00	0	0	0	0	0	0	1	2	7	27	13	3	0	0	53
Hour Total	1	0	0	0	0	0	2	9	34	99	65	19	2	1	232
20:15	0	0	0	0	0	0	0	1	13	15	18	4	1	0	52
20:30	0	0	0	0	0	0	2	5	3	19	7	2	0	0	38
20:45	0	0	0	0	0	0	0	1	4	16	8	1	0	0	30
21:00	0	0	0	0	0	0	0	2	8	11	10	4	0	0	35
Hour Total	0	0	0	0	0	0	2	9	28	61	43	11	1	0	155
21:15	0	0	0	0	0	0	0	2	6	13	8	1	0	0	30
21:30	0	0	0	0	0	0	0	3	7	7	4	7	0	0	28
21:45	0	0	0	0	0	0	0	0	8	11	4	3	0	0	26
22:00	0	0	0	0	0	0	0	1	6	6	7	3	0	0	23
Hour Total	0	0	0	0	0	0	0	6	27	37	23	14	0	0	107
22:15	0	0	0	0	0	0	0	0	1	5	8	0	0	0	14
22:30	0	0	0	0	0	0	0	0	4	1	8	5	0	0	18
22:45	0	0	0	0	0	0	0	0	2	8	10	2	0	0	22
23:00	0	0	0	0	0	0	0	1	3	7	4	1	0	0	16
Hour Total	0	0	0	0	0	0	0	1	10	21	30	8	0	0	70
23:15	0	0	0	0	0	0	0	0	2	4	7	2	0	0	15
23:30	0	0	0	0	0	0	0	0	1	4	4	2	1	0	12
23:45	0	0	0	0	0	0	0	1	0	3	1	1	0	0	6
24:00	0	0	0	0	0	0	0	0	2	4	4	0	0	0	10
Hour Total	0	0	0	0	0	0	0	1	5	15	16	5	1	0	43
DAY TOTAL	1	0	0	0	0	0	19	152	862	2086	1760	739	91	14	5724
PERCENTS	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	2.7%	15.1%	36.4%	30.7%	12.9%	1.5%	0.2%	100%

Station #: Site C-SBO
Site ID: 000000009347
Location: Carrollton, btw Channel Way & Omera
Direction: SOUTH
Lane: 1

File: 2014-SBO,S-FINAL.prn
City: 17-311 RS Max
County: 36.93666, -76.53293

TIME	10	15	20	25	30	35	40	45	50	55	60	65	70	71+	Total
GRAND TOTAL	7	0	3	76	2663	5177	217	0	1	22	593	6330	1959	28	17076
PERCENTS	0.1%	0.0%	0.0%	0.1%	0.1%	0.2%	0.5%	3.5%	15.5%	37.0%	30.3%	11.4%	1.2%	0.1%	100%

Statistical Information...

15th Percentile Speed
49.0 mph

85th Percentile Speed
60.0 mph

Median Speed
54.4 mph

Average Speed
54.5 mph

10 MPH Pace Speed
50 mph to 60 mph
3846 vehicles in pace
Representing 67.1% of the total vehicles

Vehicles > 55 MPH
2604
45.5%

Appendix C
Volume Worksheets

VOLUME DEVELOPMENT SHEET

Carrollton Boulevard at Whippingham Parkway/Harbor Point Lane
AM Peak Hour
(7:00 AM to 8:00 AM)

	Description	Harbor Point Lane Eastbound			Whippingham Parkway Westbound			Carrollton Boulevard Northbound			Carrollton Boulevard Southbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Conditions	**2017 Counts**												
	Cars	49	0	25	18	0	29	10	1967	7	4	607	11
	Trucks	0	0	0	0	0	1	2	33	0	1	25	1
	Total Existing 2017 Traffic	49	0	25	18	0	30	12	2000	7	5	642	12
	Truck %	0%	-	0%	0%	-	3%	17%	2%	0%	20%	4%	8%
	PHF	0.89											
	Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Background Traffic	**Background Traffic**												
	2026 No Build	59	0	30	22	0	36	14	2,390	8	6	767	14
	2032 No Build	66	0	34	24	0	40	16	2,692	9	7	864	16
	2026 Nike Park Diversion Diverted Trips												
	2026 Total No Build	59	0	30	22	0	36	14	2,390	8	6	767	14
	2032 Nike Park Diversion Diverted Trips												
	2032 Total No Build	66	0	34	24	0	40	16	2,692	9	7	864	16
Site Traffic	**The Pitt & Lipp**												
	Residental N Uses												
	Proposed Trips												
	Entering Distribution											*50%*	
	Exiting Distribution								50%				
	Entering Assignment											*7*	
	Exiting Assignment								13				
	Residental S Uses												
	Proposed Trips												
	Entering Distribution											*50%*	
	Exiting Distribution								50%				
	Entering Assignment											*16*	
	Exiting Assignment								32				
	Office Uses												
	Proposed Trips												
	Entering Distribution											*50%*	
	Exiting Distribution								50%				
	Entering Assignment											*34*	
	Exiting Assignment								7				
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution											*50%*	
	Exiting Distribution								50%				
	Entering Assignment											*5*	
	Exiting Assignment								14				
	Site Traffic								**52**			**57**	
Total	**2026 South Harbor Build**	59	0	30	22	0	36	14	2,442	8	6	824	14
	2026 Total Traffic	59	0	30	22	0	36	14	2,456	8	6	829	14
	2032 South Harbor Build	66	0	34	24	0	40	16	2,744	9	7	921	16
	2032 Total Traffic	66	0	34	24	0	40	16	2,758	9	7	926	16

VOLUME DEVELOPMENT SHEET

Carrollton Boulevard at Whippingham Parkway/Harbor Point Lane
PM Peak Hour
(4:45 PM to 5:45 PM)

	Description	Harbor Point Lane Eastbound			Whippingham Parkway Westbound			Carrollton Boulevard Northbound			Carrollton Boulevard Southbound		
		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Conditions	**2017 Counts**												
	Cars	11	0	15	23	0	8	31	948	30	19	1950	45
	Trucks	0	0	0	0	0	1	0	15	1	0	22	0
	Total Existing 2017 Traffic	11	0	15	23	0	9	31	962	31	19	1959	45
	Truck %	0%	-	0%	0%	-	11%	0%	2%	3%	0%	1%	0%
	PHF	0.96											
	Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Background Traffic	**Background Traffic**												
	2026 No Build	13	0	18	27	0	11	37	1,150	37	23	2,341	54
	2032 No Build	15	0	20	31	0	12	42	1,295	42	26	2,637	61
	2026 Nike Park Diversion Diverted Trips												
	2026 Total No Build	13	0	18	27	0	11	37	1,150	37	23	2,341	54
	2032 Nike Park Diversion Diverted Trips												
	2032 Total No Build	15	0	20	31	0	12	42	1,295	42	26	2,637	61
Site Traffic	**The Pitt & Lipp**												
	Residental N Uses												
	Proposed Trips												
	Entering Distribution											*50%*	
	Exiting Distribution								50%				
	Entering Assignment											*14*	
	Exiting Assignment								11				
	Residental S Uses												
	Proposed Trips												
	Entering Distribution											*50%*	
	Exiting Distribution								50%				
	Entering Assignment											*36*	
	Exiting Assignment								25				
	Office Uses												
	Proposed Trips												
	Entering Distribution											*50%*	
	Exiting Distribution								50%				
	Entering Assignment											*9*	
	Exiting Assignment								28				
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution											*50%*	
	Exiting Distribution								50%				
	Entering Assignment											*16*	
	Exiting Assignment								10				
	Site Traffic								**64**			**59**	
Total	**2026 South Harbor Build**	13	0	18	27	0	11	37	1,214	37	23	2,400	54
	2026 Total Traffic	13	0	18	27	0	11	37	1,224	37	23	2,416	54
	2032 South Harbor Build	15	0	20	31	0	12	42	1,359	42	26	2,696	61
	2032 Total Traffic	15	0	20	31	0	12	42	1,369	42	26	2,712	61

VOLUME DEVELOPMENT SHEET

Carrollton Boulevard at Eagle Harbor Parkway/Kings Cross
AM Peak Hour
(7:00 AM to 8:00 AM)

	Description	Eagle Harbor Parkway Eastbound			Kings Cross Westbound			Carrollton Boulevard Northbound			Carrollton Boulevard Southbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Conditions	**2017 Counts**												
	Cars	129	1	56	12	2	18	36	1843	1	2	635	23
	Trucks	1	0	0	0	0	2	2	31	2	0	24	1
	Total Existing 2017 Traffic	130	1	56	12	2	20	38	1874	3	2	659	24
	Truck %	1%	0%	0%	0%	0%	10%	5%	2%	67%	0%	4%	4%
	PHF	0.89											
	Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Background Traffic	**Background Traffic**												
	2026 No Build	155	1	67	14	2	24	45	2,240	4	2	788	29
	2032 No Build	175	1	75	16	3	27	51	2,522	4	3	887	32
	2026 Nike Park Diversion Diverted Trips												
	2026 Total No Build	155	1	67	14	2	24	45	2,240	4	2	788	29
	2032 Nike Park Diversion Diverted Trips												
	2032 Total No Build	175	1	75	16	3	27	51	2,522	4	3	887	32
Site Traffic	**The Pitt & Lipp**												
	Residental N Uses												
	Proposed Trips												
	Entering Distribution											*50%*	
	Exiting Distribution								50%				
	Entering Assignment											*7*	
	Exiting Assignment								13				
	Residental S Uses												
	Proposed Trips												
	Entering Distribution											*50%*	
	Exiting Distribution								50%				
	Entering Assignment											*16*	
	Exiting Assignment								32				
	Office Uses												
	Proposed Trips												
	Entering Distribution											*50%*	
	Exiting Distribution								50%				
	Entering Assignment											*34*	
	Exiting Assignment								7				
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution											*50%*	
	Exiting Distribution								50%				
	Entering Assignment											*5*	
	Exiting Assignment								14				
	Site Traffic								**52**			**57**	
Total	**2026 South Harbor Build**	155	1	67	14	2	24	45	2,292	4	2	845	29
	2026 Total Traffic	155	1	67	14	2	24	45	2,306	4	2	850	29
	2032 South Harbor Build	175	1	75	16	3	27	51	2,574	4	3	944	32
	2032 Total Traffic	175	1	75	16	3	27	51	2,588	4	3	949	32

VOLUME DEVELOPMENT SHEET

Carrollton Boulevard at Eagle Harbor Parkway/Kings Cross
PM Peak Hour
(4:45 PM to 5:45 PM)

	Description	Eagle Harbor Parkway Eastbound			Kings Cross Westbound			Carrollton Boulevard Northbound			Carrollton Boulevard Southbound		
		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Conditions	**2017 Counts**												
	Cars	61	4	47	12	5	11	78	937	14	20	1803	151
	Trucks	0	0	0	0	0	1	0	14	1	0	23	0
	Total Existing 2017 Traffic	61	4	47	12	5	12	78	951	15	20	1826	151
	Truck %	0%	0%	0%	0%	0%	8%	0%	1%	7%	0%	1%	0%
	PHF	0.94											
	Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Background Traffic	**Background Traffic**												
	2026 No Build	73	5	56	14	6	14	93	1,137	18	24	2,182	180
	2032 No Build	82	5	63	16	7	16	105	1,280	20	27	2,458	203
	2026 Nike Park Diversion Diverted Trips												
	2026 Total No Build	73	5	56	14	6	14	93	1,137	18	24	2,182	180
	2032 Nike Park Diversion Diverted Trips												
	2032 Total No Build	82	5	63	16	7	16	105	1,280	20	27	2,458	203
Site Traffic	**The Pitt & Lipp**												
	Residental N Uses												
	Proposed Trips												
	Entering Distribution											*50%*	
	Exiting Distribution								50%				
	Entering Assignment											*14*	
	Exiting Assignment								11				
	Residental S Uses												
	Proposed Trips												
	Entering Distribution											*50%*	
	Exiting Distribution								50%				
	Entering Assignment											*36*	
	Exiting Assignment								25				
	Office Uses												
	Proposed Trips												
	Entering Distribution											*50%*	
	Exiting Distribution								50%				
	Entering Assignment											*9*	
	Exiting Assignment								28				
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution											*50%*	
	Exiting Distribution								50%				
	Entering Assignment											*16*	
	Exiting Assignment								10				
	Site Traffic								**64**			**59**	
Total	**2026 South Harbor Build**	73	5	56	14	6	14	93	1,201	18	24	2,241	180
	2026 Total Traffic	73	5	56	14	6	14	93	1,211	18	24	2,257	180
	2032 South Harbor Build	82	5	63	16	7	16	105	1,344	20	27	2,517	203
	2032 Total Traffic	82	5	63	16	7	16	105	1,354	20	27	2,533	203

VOLUME DEVELOPMENT SHEET

Carrollton Boulevard at Smith's Neck Road
AM Peak Hour
(7:00 AM to 8:00 AM)

	Description	Smiths Neck Road Eastbound			Smiths Neck Road Westbound			Carrollton Boulevard Northbound			Carrollton Boulevard Southbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Conditions	**2017 Counts**												
	Cars	607	49	126	41	8	27	46	1118	70	28	512	171
	Trucks	5	1	0	2	0	1	6	27	3	1	24	0
	Total Existing 2017 Traffic	612	50	126	43	8	28	52	1145	73	29	536	171
	Truck %	1%	2%	0%	5%	0%	4%	12%	2%	4%	3%	4%	0%
	PHF	0.89											
	Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Background Traffic	**Background Traffic**												
	2026 No Build	731	60	151	51	10	33	62	1,368	87	35	641	204
	2032 No Build	824	67	170	58	11	38	70	1,541	98	39	721	230
	2026 Nike Park Diversion Diverted Trips	-292		-60				-25	267			82	-82
	2026 Total No Build	439	60	91	51	10	33	37	1,635	87	35	723	122
	2032 Nike Park Diversion Diverted Trips	-330		-68				-28	302			92	-92
	2032 Total No Build	494	67	102	58	11	38	42	1,843	98	39	813	138
Site Traffic	**The Pitt & Lipp**												
	Residental N Uses												
	Proposed Trips												
	Entering Distribution		*5%*								*30%*	*20%*	
	Exiting Distribution				45%	5%	35%		15%				
	Entering Assignment		*1*								*4*	*3*	
	Exiting Assignment				12	1	9		4				
	Residental S Uses												
	Proposed Trips												
	Entering Distribution			*5%*								*50%*	
	Exiting Distribution							5%	50%				
	Entering Assignment			*2*								*16*	
	Exiting Assignment							3	32				
	Office Uses												
	Proposed Trips												
	Entering Distribution		*5%*								*30%*	*20%*	
	Exiting Distribution				45%	5%			50%				
	Entering Assignment		*3*								*21*	*14*	
	Exiting Assignment				7	1			7				
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution			*5%*								*50%*	
	Exiting Distribution							5%	50%				
	Entering Assignment			*1*								*5*	
	Exiting Assignment							1	14				
	Site Traffic		**4**	**2**	**19**	**2**	**9**	**3**	**43**		**25**	**33**	
Total	**2026 South Harbor Build**	439	64	93	70	12	42	40	1,678	87	60	756	122
	2026 Total Traffic	439	64	94	70	12	42	41	1,692	87	60	761	122
	2032 South Harbor Build	494	71	104	77	13	47	45	1,886	98	64	846	138
	2032 Total Traffic	494	71	105	77	13	47	46	1,900	98	64	851	138

VOLUME DEVELOPMENT SHEET

Carrollton Boulevard at Smith's Neck Road
PM Peak Hour
(4:45 PM to 5:45 PM)

	Description	Smiths Neck Road Eastbound			Smiths Neck Road Westbound			Carrollton Boulevard Northbound			Carrollton Boulevard Southbound		
		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Conditions	**2017 Counts**												
	Cars	315	37	91	72	76	23	240	663	75	65	1321	504
	Trucks	0	0	1	0	0	0	1	15	0	1	18	4
	Total Existing 2017 Traffic	315	37	92	72	76	23	241	678	75	66	1339	508
	Truck %	0%	0%	1%	0%	0%	0%	0%	2%	0%	2%	1%	1%
	PHF	0.92											
	Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Background Traffic	**Background Traffic**												
	2026 No Build	376	44	110	86	91	27	288	810	90	79	1,600	607
	2032 No Build	424	50	124	97	102	31	324	912	101	89	1,802	684
	2026 Nike Park Diversion Diverted Trips	-150		-44				-115	35			243	-243
	2026 Total No Build	226	44	66	86	91	27	173	845	90	79	1,843	364
	2032 Nike Park Diversion Diverted Trips	-170		-50				-130	40			274	-274
	2032 Total No Build	254	50	74	97	102	31	194	952	101	89	2,076	410
Site Traffic	**The Pitt & Lipp**												
	Residental N Uses												
	Proposed Trips												
	Entering Distribution		*5%*								*30%*	*20%*	
	Exiting Distribution				45%	5%	35%		15%				
	Entering Assignment		*1*								*8*	*6*	
	Exiting Assignment				10	1	8		3				
	Residental S Uses												
	Proposed Trips												
	Entering Distribution			*5%*								*50%*	
	Exiting Distribution							5%	50%				
	Entering Assignment			*4*								*36*	
	Exiting Assignment							2	25				
	Office Uses												
	Proposed Trips												
	Entering Distribution		*5%*								*30%*	*20%*	
	Exiting Distribution				45%	5%			50%				
	Entering Assignment		*1*								*5*	*4*	
	Exiting Assignment				25	3			28				
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution			*5%*								*50%*	
	Exiting Distribution							5%	50%				
	Entering Assignment			*2*								*16*	
	Exiting Assignment							1	10				
	Site Traffic		**2**	**4**	**35**	**4**	**8**	**2**	**56**		**13**	**46**	
Total	**2026 South Harbor Build**	226	46	70	121	95	35	175	901	90	92	1,889	364
	2026 Total Traffic	226	46	72	121	95	35	176	911	90	92	1,905	364
	2032 South Harbor Build	254	52	78	132	106	39	196	1,008	101	102	2,122	410
	2032 Total Traffic	254	52	80	132	106	39	197	1,018	101	102	2,138	410

VOLUME DEVELOPMENT SHEET

Bojangles/7-Eleven Driveway at Smith's Neck Road
AM Peak Hour
(7:00 AM to 8:00 AM)

	Description	Smiths Neck Road Eastbound			Smiths Neck Road Westbound			Bojangles Driveway Northbound			7-Eleven Driveway Southbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Conditions	**2017 Counts**												
	Cars												
	Trucks												
	Total Existing 2017 Traffic	92		60				47	5			5	32
	Truck %	0%	-	0%	-	-	-	0%	0%	-	-	0%	0%
	PHF												
	Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Background Traffic	**Background Traffic**												
	2026 No Build	110	0	72	0	0	0	56	6	0	0	6	38
	2032 No Build	124	0	81	0	0	0	63	7	0	0	7	43
	2026 Nike Park Diversion Diverted Trips												
	2026 Total No Build	110	0	72	0	0	0	56	6	0	0	6	38
	2032 Nike Park Diversion Diverted Trips												
	2032 Total No Build	124	0	81	0	0	0	63	7	0	0	7	43
Site Traffic	**The Pitt & Lipp**												
	Residental Uses												
	Proposed Trips												
	Entering Distribution		*5%*										
	Exiting Distribution					5%							
	Entering Assignment		*2*										
	Exiting Assignment					4							
	Residental S Uses												
	Proposed Trips												
	Entering Distribution		*5%*										
	Exiting Distribution					5%							
	Entering Assignment		*2*										
	Exiting Assignment					3							
	Office Uses												
	Proposed Trips												
	Entering Distribution		*5%*										
	Exiting Distribution					5%							
	Entering Assignment		*3*										
	Exiting Assignment					1							
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution		*5%*										
	Exiting Distribution					5%							
	Entering Assignment		*1*										
	Exiting Assignment					1							
	Site Traffic		**7**			**8**							
Total	**2026 South Harbor Build**	110	7	72	0	8	0	56	6	0	0	6	38
	2026 Total Traffic	110	8	72	0	9	0	56	6	0	0	6	38
	2032 South Harbor Build	124	7	81	0	8	0	63	7	0	0	7	43
	2032 Total Traffic	124	8	81	0	9	0	63	7	0	0	7	43

VOLUME DEVELOPMENT SHEET

Bojangles/7-Eleven Driveway at Smith's Neck Road
PM Peak Hour
(4:45 PM to 5:45 PM)

	Description	Smiths Neck Road Eastbound			Smiths Neck Road Westbound			Bojangles Driveway Northbound			7-Eleven Driveway Southbound		
		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Conditions	**2017 Counts**												
	Cars												
	Trucks												
	Total Existing 2017 Traffic	130	0	48	0	0	0	66	5	0		5	105
	Truck %	0%	-	0%	-	-	-	0%	0%	-	-	0%	0%
	PHF	0.92											
	Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Background Traffic	**Background Traffic**												
	2026 No Build	155	0	57	0	0	0	79	6	0	0	6	125
	2032 No Build	175	0	65	0	0	0	89	7	0	0	7	141
	2026 Nike Park Diversion Diverted Trips												
	2026 Total No Build	155	0	57	0	0	0	79	6	0	0	6	125
	2032 Nike Park Diversion Diverted Trips												
	2032 Total No Build	175	0	65	0	0	0	89	7	0	0	7	141
Site Traffic	**The Pitt & Lipp**												
	Residental Uses												
	Proposed Trips												
	Entering Distribution		*5%*										
	Exiting Distribution					5%							
	Entering Assignment		*1*										
	Exiting Assignment					1							
	Residental S Uses												
	Proposed Trips												
	Entering Distribution		*5%*										
	Exiting Distribution					5%							
	Entering Assignment		*4*										
	Exiting Assignment					2							
	Office Uses												
	Proposed Trips												
	Entering Distribution		*5%*										
	Exiting Distribution					5%							
	Entering Assignment		*1*										
	Exiting Assignment					3							
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution		*5%*										
	Exiting Distribution					5%							
	Entering Assignment		*2*										
	Exiting Assignment					1							
	Site Traffic		**2**			**4**							
Total	**2026 South Harbor Build**	155	6	57	0	6	0	79	6	0	0	6	125
	2026 Total Traffic	155	8	57	0	7	0	79	6	0	0	6	125
	2032 South Harbor Build	175	6	65	0	6	0	89	7	0	0	7	141
	2032 Total Traffic	175	8	65	0	7	0	89	7	0	0	7	141

VOLUME DEVELOPMENT SHEET

Carrollton Boulevard at Northgate Lane
AM Peak Hour
(7:00 AM to 8:00 AM)

	Description	Northgate Lane Eastbound			Northgate Lane Westbound			Carrollton Boulevard Northbound			Carrollton Boulevard Southbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Conditions	**2017 Counts**												
	Cars	43	0	30	0	0	0	17	1235	0	0	688	8
	Trucks	0	0	2	0	0	0	0	37	0	0	28	0
	Total Existing 2017 Traffic	43	0	32	0	0	0	17	1272	0	0	716	8
	Truck %	0%	-	6%	-	-	-	0%	3%	-	-	4%	0%
	PHF	0.92											
	Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Background Traffic	**Background Traffic**												
	2026 No Build	51	0	38	0	0	0	20	1,520	0	0	856	10
	2032 No Build	58	0	43	0	0	0	23	1,712	0	0	964	11
	2026 Nike Park Diversion Diverted Trips								267			22	
	2026 Total No Build	51	0	38	0	0	0	20	1,787	0	0	878	10
	2032 Nike Park Diversion Diverted Trips								302			24	
	2032 Total No Build	58	0	43	0	0	0	23	2,014	0	0	988	11
Site Traffic	**The Pitt & Lipp**												
	Residental N Uses												
	Proposed Trips												
	Entering Distribution									*45%*	*20%*		
	Exiting Distribution						15%					45%	
	Entering Assignment									*6*	*3*		
	Exiting Assignment						4					12	
	Residental S Uses												
	Proposed Trips												
	Entering Distribution											*55%*	
	Exiting Distribution								55%				
	Entering Assignment											*18*	
	Exiting Assignment								35				
	Office Uses												
	Proposed Trips												
	Entering Distribution									*45%*	*20%*		
	Exiting Distribution						50%					45%	
	Entering Assignment									*31*	*14*		
	Exiting Assignment						7					7	
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution											*55%*	
	Exiting Distribution								55%				
	Entering Assignment											*6*	
	Exiting Assignment								15				
	Site Traffic						**11**		**35**	**37**	**17**	**37**	
Total	**2026 South Harbor Build**	51	0	38	0	0	11	20	1,822	37	17	915	10
	2026 Total Traffic	51	0	38	0	0	11	20	1,837	37	17	921	10
	2032 South Harbor Build	58	0	43	0	0	11	23	2,049	37	17	1,025	11
	2032 Total Traffic	58	0	43	0	0	11	23	2,064	37	17	1,031	11

VOLUME DEVELOPMENT SHEET

Carrollton Boulevard at Northgate Lane
PM Peak Hour
(4:45 PM to 5:45 PM)

	Description	Northgate Lane Eastbound			Northgate Lane Westbound			Carrollton Boulevard Northbound			Carrollton Boulevard Southbound		
		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Conditions	**2017 Counts**												
	Cars	9	0	15	0	1	1	73	1025	1	3	1448	28
	Trucks	0	0	0	0	0	0	1	13	0	0	19	0
	Total Existing 2017 Traffic	9	0	15	0	1	1	74	1038	1	3	1467	28
	Truck %	0%	-	0%	-	0%	0%	1%	1%	0%	0%	1%	0%
	PHF	0.94											
	Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Background Traffic	**Background Traffic**												
	2026 No Build	11	0	18	0	1	1	88	1,241	1	4	1,753	33
	2032 No Build	12	0	20	0	1	1	100	1,397	1	4	1,974	38
	2026 Nike Park Diversion Diverted Trips								35			199	
	2026 Total No Build	11	0	18	0	1	1	88	1,276	1	4	1,952	33
	2032 Nike Park Diversion Diverted Trips								40			224	
	2032 Total No Build	12	0	20	0	1	1	100	1,437	1	4	2,198	38
Site Traffic	**The Pitt & Lipp**												
	Residental N Uses												
	Proposed Trips												
	Entering Distribution									*45%*	*20%*		
	Exiting Distribution						15%					45%	
	Entering Assignment									*13*	*6*		
	Exiting Assignment						3					10	
	Residental S Uses												
	Proposed Trips												
	Entering Distribution											*55%*	
	Exiting Distribution								55%				
	Entering Assignment											*10*	
	Exiting Assignment								31				
	Office Uses												
	Proposed Trips												
	Entering Distribution									*45%*	*20%*		
	Exiting Distribution						50%					45%	
	Entering Assignment									*8*	*4*		
	Exiting Assignment						28					25	
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution											*55%*	
	Exiting Distribution								55%				
	Entering Assignment											*18*	
	Exiting Assignment								10				
	Site Traffic						**31**		**31**	**21**	**10**	**45**	
Total	**2026 South Harbor Build**	11	0	18	0	1	32	88	1,307	22	14	1,997	33
	2026 Total Traffic	11	0	18	0	1	32	88	1,317	22	14	2,015	33
	2032 South Harbor Build	12	0	20	0	1	32	100	1,468	22	14	2,243	38
	2032 Total Traffic	12	0	20	0	1	32	100	1,478	22	14	2,261	38

Carrollton Boulevard at Nike Park
AM Peak Hour
(7:00 AM to 8:00 AM)

	Description	Nike Park Eastbound			Westbound			Carrollton Boulevard Northbound			Carrollton Boulevard Southbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2026 and 2032 Background Traffic	**2026 No Build**	0	0	0				0	1,507	0	0	894	0
	Nike Park Diversion Diverted Trips	292	0	60				25	-25	0	0	-60	82
	2026 Total No Build	292	0	60	0	0	0	25	1,482	0	0	834	82
	2032 No Build	0	0	0				0	1,697	0	0	1,007	0
	Nike Park Diversion Diverted Trips	330	0	68				28	-28	0	0	-68	92
	2032 Total No Build	330	0	68	0	0	0	28	1,669	0	0	939	92
Site Traffic	**The Pitt & Lipp**												
	Residental N Uses												
	Proposed Trips												
	Entering Distribution								*45%*				
	Exiting Distribution											45%	
	Entering Assignment								*6*				
	Exiting Assignment											12	
	Residental S Uses												
	Proposed Trips												
	Entering Distribution											*55%*	
	Exiting Distribution								55%				
	Entering Assignment											*18*	
	Exiting Assignment								35				
	Office Uses												
	Proposed Trips												
	Entering Distribution								*45%*				
	Exiting Distribution											45%	
	Entering Assignment								*31*				
	Exiting Assignment											7	
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution											*55%*	
	Exiting Distribution								55%				
	Entering Assignment											*6*	
	Exiting Assignment								15				
	Site Traffic								**72**			**37**	
Total	**2026 South Harbor Build**	292	0	60	0	0	0	25	1,554	0	0	871	82
	2026 Total Traffic	292	0	60	0	0	0	25	1,569	0	0	877	82
	South Harbor Build	330	0	68	0	0	0	28	1,741	0	0	976	92
	Total Traffic	330	0	68	0	0	0	28	1,756	0	0	982	92

Carrollton Boulevard at Nike Park
AM Peak Hour
(7:00 AM to 8:00 AM)

PM Peak Hour
(4:45 PM to 5:45 PM)

	Description	Nike Park Eastbound			Westbound			Carrollton Boulevard Northbound			Carrollton Boulevard Southbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2026 and 2032 Background Traffic	**2026 No Build**	0	0	0				0	1,313	0	0	1,771	0
	Nike Park Diversion Diverted Trips	150	0	44				115	-115	0	0	-44	243
	2026 Total No Build	150	0	44	0	0	0	115	1,198	0	0	1,727	243
	2032 No Build	0	0	0				0	1,480	0	0	1,994	0
	Nike Park Diversion Diverted Trips	170	0	50				130	-130	0	0	-50	274
	2032 Total No Build	170	0	50	0	0	0	130	1,350	0	0	1,944	274
Site Traffic	**The Pitt & Lipp**												
	Residental N Uses												
	Proposed Trips												
	Entering Distribution								*45%*				
	Exiting Distribution											45%	
	Entering Assignment								*13*				
	Exiting Assignment											10	
	Residental S Uses												
	Proposed Trips												
	Entering Distribution											*55%*	
	Exiting Distribution								55%				
	Entering Assignment											*39*	
	Exiting Assignment								27				
	Office Uses												
	Proposed Trips												
	Entering Distribution								*45%*				
	Exiting Distribution											45%	
	Entering Assignment								*8*				
	Exiting Assignment											25	
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution											*55%*	
	Exiting Distribution								55%				
	Entering Assignment											*18*	
	Exiting Assignment								10				
	Site Traffic								**48**			**74**	
Total	**2026 South Harbor Build**	150	0	44	0	0	0	115	1,246	0	0	1,801	243
	2026 Total Traffic	150	0	44	0	0	0	115	1,256	0	0	1,819	243
	South Harbor Build	170	0	50	0	0	0	130	1,398	0	0	2,018	274
	Total Traffic	170	0	50	0	0	0	130	1,408	0	0	2,036	274

VOLUME DEVELOPMENT SHEET

Carrollton Boulevard at Brewers Neck Boulevard
AM Peak Hour
(7:00 AM to 8:00 AM)

	Description	Brewers Neck Boulevard Eastbound			- Westbound			Carrollton Boulevard Northbound			Carrollton Boulevard Southbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Conditions	**2017 Counts**												
	Cars	781	-	438	-	-	-	339	441	-	-	301	456
	Trucks	31	-	26	-	-	-	29	8	-	-	10	17
	Total Existing 2017 Traffic	812	0	464	0	0	0	368	449	0	0	311	473
	Truck %	4%	2%	6%	2%	2%	2%	8%	2%	2%	2%	3%	4%
	PHF	0.93											
	Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Background Traffic	**Background Traffic**												
	2026 No Build	970	0	555	0	0	0	440	537	0	0	372	565
	2032 No Build	1,093	0	624	0	0	0	495	604	0	0	419	637
	2026 Nike Park Diversion Diverted Trips												
	2026 Total No Build	970	81	555	36	58	45	440	537	20	44	372	565
	2032 Nike Park Diversion Diverted Trips												
	2032 Total No Build	1,093	81	624	36	58	45	495	604	20	44	419	637
Site Traffic	**The Pitt & Lipp**												
	Residental N Uses												
	Proposed Trips												
	Entering Distribution	*10%*							*35%*				
	Exiting Distribution											35%	10%
	Entering Assignment	*1*							*5*				
	Exiting Assignment											9	3
	Residental S Uses												
	Proposed Trips												
	Entering Distribution		*10%*								*40%*	*15%*	
	Exiting Distribution				25%	10%	30%		25%				
	Entering Assignment		*3*								*13*	*5*	
	Exiting Assignment				16	6	19		16				
	Office Uses												
	Proposed Trips												
	Entering Distribution	*10%*							*35%*				
	Exiting Distribution											35%	10%
	Entering Assignment	*7*							*24*				
	Exiting Assignment											5	1
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution		*10%*								*40%*	*15%*	
	Exiting Distribution				25%	10%	30%		25%				
	Entering Assignment		*1*								*4*	*2*	
	Exiting Assignment				7	3	8		7				
	Site Traffic	**8**	**3**		**16**	**6**	**19**		**45**		**13**	**19**	**4**
Total	**2026 South Harbor Build**	978	84	555	52	64	64	440	582	20	57	391	569
	2026 Total Traffic	978	85	555	59	67	72	440	589	20	61	393	569
	2032 South Harbor Build	1,101	84	624	52	64	64	495	649	20	57	438	641
	2032 Total Traffic	1,101	85	624	59	67	72	495	656	20	61	440	641

VOLUME DEVELOPMENT SHEET

Carrollton Boulevard at Brewers Neck Boulevard
PM Peak Hour
(4:45 PM to 5:45 PM)

	Description	Brewers Neck Boulevard Eastbound Left	Through	Right	- Westbound Left	Through	Right	Carrollton Boulevard Northbound Left	Through	Right	Carrollton Boulevard Southbound Left	Through	Right
Existing Conditions	**2017 Counts**												
	Cars	621	-	520	-	-	-	452	461	-	1	519	992
	Trucks	11	-	16	-	-	-	8	6	-	0	6	14
	Total Existing 2017 Traffic	632	0	536	0	0	0	460	467	0	1	525	1006
	Truck %	2%	-	3%	-	-	-	2%	1%	-	0%	1%	1%
	PHF	0.95											
	Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Background Traffic	**Background Traffic**												
	2026 No Build	755	0	641	0	0	0	550	558	0	1	627	1,202
	2032 No Build	851	0	721	0	0	0	619	629	0	1	707	1,354
	2026 Nike Park Diversion Diverted Trips												
	2026 Total No Build	755	189	641	158	294	50	550	558	61	305	627	1,202
	2032 Nike Park Diversion Diverted Trips												
	2032 Total No Build	851	189	721	158	294	50	619	629	61	305	707	1,354
Site Traffic	**The Pitt & Lipp**												
	Residental N Uses												
	Proposed Trips												
	Entering Distribution	*10%*							*35%*				
	Exiting Distribution											35%	10%
	Entering Assignment	*3*							*10*				
	Exiting Assignment											8	2
	Residental S Uses												
	Proposed Trips												
	Entering Distribution		*10%*								*40%*	*15%*	
	Exiting Distribution				25%	10%	30%		25%				
	Entering Assignment		*7*								*29*	*11*	
	Exiting Assignment				12	5	15		12				
	Office Uses												
	Proposed Trips												
	Entering Distribution	*10%*							*35%*				
	Exiting Distribution											35%	10%
	Entering Assignment	*2*							*6*				
	Exiting Assignment											20	6
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution		*10%*								*40%*	*15%*	
	Exiting Distribution				25%	10%	30%		25%				
	Entering Assignment		*3*								*13*	*5*	
	Exiting Assignment				5	2	6		5				
	Site Traffic	**5**	**7**		**12**	**5**	**15**		**28**		**29**	**39**	**8**
Total	**2026 South Harbor Build**	760	196	641	170	299	65	550	586	61	334	666	1,210
	2026 Total Traffic	760	199	641	175	301	71	550	591	61	347	671	1,210
	2032 South Harbor Build	856	196	721	170	299	65	619	657	61	334	746	1,362
	2032 Total Traffic	856	199	721	175	301	71	619	662	61	347	751	1,362

VOLUME DEVELOPMENT SHEET

Carrollton Boulevard at Channell Way/Deep Bottom Drive
AM Peak Hour
(7:00 AM to 8:00 AM)

	Description	Deep Bottom Drive Eastbound			Channell Way Westbound			Carrollton Boulevard Northbound			Carrollton Boulevard Southbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Conditions	**2017 Counts**												
	Cars	0	0	2	19	1	42	5	759	6	13	722	1
	Trucks	0	0	2	0	0	2	0	38	2	0	37	0
	Total Existing 2017 Traffic	0	0	4	19	1	44	5	773	8	13	759	1
	Truck %	-	-	50%	0%	0%	5%	0%	5%	25%	0%	5%	0%
	PHF	0.92											
	Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Background Traffic	**Background Traffic**												
	2026 No Build	0	0	5	23	1	53	6	924	10	16	907	1
	2032 No Build	0	0	5	26	1	59	7	1,040	11	17	1,022	1
	2026 Nike Park Diversion Diverted Trips												
	2026 Total No Build	0	0	5	23	1	53	6	924	10	16	907	1
	2032 Nike Park Diversion Diverted Trips												
	2032 Total No Build	0	0	5	26	1	59	7	1,040	11	17	1,022	1
Site Traffic	**The Pitt & Lipp**												
	Residental N Uses												
	Proposed Trips												
	Entering Distribution								*35%*				
	Exiting Distribution											35%	
	Entering Assignment								*5*				
	Exiting Assignment											9	
	Residental S Uses												
	Proposed Trips												
	Entering Distribution									*35%*	*15%*		
	Exiting Distribution				10%		25%					25%	
	Entering Assignment									*11*	*5*		
	Exiting Assignment				6		16					16	
	Office Uses												
	Proposed Trips												
	Entering Distribution								*35%*				
	Exiting Distribution											35%	
	Entering Assignment								*24*				
	Exiting Assignment											5	
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution									*35%*	*15%*		
	Exiting Distribution				10%		25%					25%	
	Entering Assignment									*4*	*2*		
	Exiting Assignment				3		7					7	
	Site Traffic				**6**		**16**		**29**	**11**	**5**	**30**	
Total	**2026 South Harbor Build**	0	0	5	29	1	69	6	953	21	21	937	1
	2026 Total Traffic	0	0	5	32	1	76	6	953	25	23	944	1
	2032 South Harbor Build	0	0	5	32	1	75	7	1,069	22	22	1,052	1
	2032 Total Traffic	0	0	5	35	1	82	7	1,069	26	24	1,059	1

VOLUME DEVELOPMENT SHEET

Carrollton Boulevard at Channell Way/Deep Bottom Drive
PM Peak Hour
(4:45 PM to 5:45 PM)

	Description	Deep Bottom Drive Eastbound			Channell Way Westbound			Carrollton Boulevard Northbound			Carrollton Boulevard Southbound		
		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Conditions	**2017 Counts**												
	Cars	3	0	7	16	0	26	11	890	23	49	984	5
	Trucks	0	0	0	1	0	1	0	13	1	0	22	0
	Total Existing 2017 Traffic	3	0	7	17	0	27	11	897	24	49	1006	5
	Truck %	0%	-	0%	6%	-	4%	0%	1%	4%	0%	2%	0%
	PHF	0.94											
	Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Background Traffic	**Background Traffic**												
	2026 No Build	4	0	8	20	0	32	13	1,072	29	59	1,202	6
	2032 No Build	4	0	9	23	0	36	15	1,207	32	66	1,354	7
	2026 Nike Park Diversion Diverted Trips												
	2026 Total No Build	4	0	8	20	0	32	13	1,072	29	59	1,202	6
	2032 Nike Park Diversion Diverted Trips												
	2032 Total No Build	4	0	9	23	0	36	15	1,207	32	66	1,354	7
Site Traffic	**The Pitt & Lipp**												
	Residental N Uses												
	Proposed Trips												
	Entering Distribution								*35%*				
	Exiting Distribution											35%	
	Entering Assignment								*10*				
	Exiting Assignment											8	
	Residental S Uses												
	Proposed Trips												
	Entering Distribution									*35%*	*15%*		
	Exiting Distribution				10%		25%					25%	
	Entering Assignment									*25*	*11*		
	Exiting Assignment				5		12					12	
	Office Uses												
	Proposed Trips												
	Entering Distribution								*35%*				
	Exiting Distribution											35%	
	Entering Assignment								*6*				
	Exiting Assignment											20	
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution									*35%*	*15%*		
	Exiting Distribution				10%		25%					25%	
	Entering Assignment									*11*	*5*		
	Exiting Assignment				2		5					5	
	Site Traffic				**5**		**12**		**16**	**25**	**11**	**40**	
Total	**2026 South Harbor Build**	4	0	8	25	0	44	13	1,088	54	70	1,242	6
	2026 Total Traffic	4	0	8	27	0	49	13	1,088	65	75	1,247	6
	2032 South Harbor Build	4	0	9	28	0	48	15	1,223	57	77	1,394	7
	2032 Total Traffic	4	0	9	30	0	53	15	1,223	68	82	1,399	7

VOLUME DEVELOPMENT SHEET

Carrollton Boulevard at Ashby Way/Omera Drive
AM Peak Hour
(7:00 AM to 8:00 AM)

	Description	Ashby Way Eastbound			Omera Drive Westbound			Carrollton Boulevard Northbound			Carrollton Boulevard Southbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Conditions	**2017 Counts**												
	Cars	51	1	21	32	1	60	10	630	8	45	689	6
	Trucks	1	0	1	1	0	4	0	36	1	3	30	1
	Total Existing 2017 Traffic	52	1	22	33	1	64	10	666	9	48	719	7
	Truck %	2%	0%	5%	3%	0%	6%	0%	5%	11%	6%	4%	14%
	PHF	0.90											
	Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Background Traffic	**Background Traffic**												
	2026 No Build	62	1	26	39	1	76	12	796	11	57	859	8
	2032 No Build	70	1	30	44	1	86	13	896	12	65	968	9
	2026 Nike Park Diversion Diverted Trips												
	2026 Total No Build	62	1	26	39	1	76	12	796	11	57	859	8
	2032 Nike Park Diversion Diverted Trips												
	2032 Total No Build	70	1	30	44	1	86	13	896	12	65	968	9
Site Traffic	**The Pitt & Lipp**												
	Residental N Uses												
	Proposed Trips												
	Entering Distribution								*35%*				
	Exiting Distribution											35%	
	Entering Assignment								*5*				
	Exiting Assignment											9	
	Residental S Uses												
	Proposed Trips												
	Entering Distribution								*35%*				
	Exiting Distribution											35%	
	Entering Assignment								*11*				
	Exiting Assignment											22	
	Office Uses												
	Proposed Trips												
	Entering Distribution								*35%*				
	Exiting Distribution											35%	
	Entering Assignment								*24*				
	Exiting Assignment											5	
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution								*35%*				
	Exiting Distribution											35%	
	Entering Assignment								*4*				
	Exiting Assignment											10	
	Site Traffic								**40**			**36**	
Total	**2026 South Harbor Build**	62	1	26	39	1	76	12	836	11	57	895	8
	2026 Total Traffic	62	1	26	39	1	76	12	840	11	57	905	8
	2032 South Harbor Build	70	1	30	44	1	86	13	936	12	65	1,004	9
	2032 Total Traffic	70	1	30	44	1	86	13	940	12	65	1,014	9

VOLUME DEVELOPMENT SHEET

Carrollton Boulevard at Ashby Way/Omera Drive
PM Peak Hour
(4:45 PM to 5:45 PM)

	Description	Ashby Way Eastbound			Omera Drive Westbound			Carrollton Boulevard Northbound			Carrollton Boulevard Southbound		
		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Conditions	**2017 Counts**												
	Cars	29	6	13	40	6	76	24	788	21	83	958	39
	Trucks	0	0	0	1	0	2	0	15	0	2	11	0
	Total Existing 2017 Traffic	29	6	13	41	6	78	24	803	21	85	969	39
	Truck %	0%	0%	0%	2%	0%	3%	0%	2%	0%	2%	1%	0%
	PHF	0.99											
	Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Background Traffic	**Background Traffic**												
	2026 No Build	35	7	16	49	7	93	29	960	25	102	1,158	47
	2032 No Build	39	8	17	55	8	105	32	1,081	28	114	1,304	52
	2026 Nike Park Diversion Diverted Trips												
	2026 Total No Build	35	7	16	49	7	93	29	960	25	102	1,158	47
	2032 Nike Park Diversion Diverted Trips												
	2032 Total No Build	39	8	17	55	8	105	32	1,081	28	114	1,304	52
Site Traffic	**The Pitt & Lipp**												
	Residental N Uses												
	Proposed Trips												
	Entering Distribution								*35%*				
	Exiting Distribution											35%	
	Entering Assignment								*10*				
	Exiting Assignment											8	
	Residental S Uses												
	Proposed Trips												
	Entering Distribution								*35%*				
	Exiting Distribution											35%	
	Entering Assignment								*25*				
	Exiting Assignment											17	
	Office Uses												
	Proposed Trips												
	Entering Distribution								*35%*				
	Exiting Distribution											35%	
	Entering Assignment								*6*				
	Exiting Assignment											20	
	The Crossing Tower Parcel												
	Proposed Trips												
	Entering Distribution								*35%*				
	Exiting Distribution											35%	
	Entering Assignment								*11*				
	Exiting Assignment											7	
	Site Traffic								**41**			**45**	
Total	**2026 South Harbor Build**	35	7	16	49	7	93	29	1,001	25	102	1,203	47
	2026 Total Traffic	35	7	16	49	7	93	29	1,012	25	102	1,210	47
	2032 South Harbor Build	39	8	17	55	8	105	32	1,122	28	114	1,349	52
	2032 Total Traffic	39	8	17	55	8	105	32	1,133	28	114	1,356	52

Appendix D
Model Calibration

Existing SimTraffic Speed Calibration Results

Site A-Between Eagle Harbor and Whipingham

AM Peak Hour

Segment				Measured Speeds	Simulated Speeds	Speed Difference	Percent Difference	Speed Fails?	Justification
				AM Peak Hour					
Carrollton Boulevard									
NB	Eagle Harbor Parkway	to	Whippingham Parkway	45.37	30	15.37295167	-34%	TRUE	Vehicles are unable to accelerate with the limited spacing
SB	Whippingham Parkway	to	Eagle Harbor Parkway	48.94	42	6.937208333	-14%	TRUE	Vehicles are unable to accelerate with the limited spacing

PM Peak Hour

Segment				Measured Speeds	Simulated Speeds	Speed Difference	Percent Difference	Speed Fails?	Justification
				PM Peak Hour					
Carrollton Boulevard									
NB	Eagle Harbor Parkway	to	Whippingham Parkway	48.58	36	12.58050667	-26%	TRUE	Vehicles are unable to accelerate with the limited spacing
SB	Whippingham Parkway	to	Eagle Harbor Parkway	38.01	15	23.00510333	-61%	TRUE	Vehicles are unable to accelerate with the limited spacing

Site B-Between Brewers Neck and Northgate

AM Peak Hour

Segment				Measured Speeds	Simulated Speeds	Speed Difference	Percent Difference	Speed Fails?	Justification
				AM Peak Hour					
Carrollton Boulevard									
NB	Brewers Neck	to	Northgate	58.63	53	5.633333333	-10%	TRUE	Only off by 1 MPH
SB	Brewers Neck	to	Northgate	58.33	54	4.333333333	-7%	FALSE	

PM Peak Hour

Segment				Measured Speeds	Simulated Speeds	Speed Difference	Percent Difference	Speed Fails?	Justification
				PM Peak Hour					
Carrollton Boulevard									
NB	Brewers Neck	to	Northgate	58.45	54	4.45	-8%	FALSE	
SB	Brewers Neck	to	Northgate	54.20	44	10.2	-19%	TRUE	Congestion along southbound Carrollton Boulevard

Site C-Between Channel Way & Omera

AM Peak Hour

Segment				Measured Speeds	Simulated Speeds	Speed Difference	Percent Difference	Speed Fails?	Justification
				AM Peak Hour					
Carrollton Boulevard									
NB	Channel Way	to	Omera	60.73	57	3.733333333	-6%	FALSE	
SB	Channel Way	to	Omera	58.97	57	1.966666667	-3%	FALSE	

PM Peak Hour

Segment				Measured Speeds	Simulated Speeds	Speed Difference	Percent Difference	Speed Fails?	Justification
				PM Peak Hour					
Carrollton Boulevard									
NB	Channel Way	to	Omera	58.48	55	3.483333333	-6%	FALSE	
SB	Channel Way	to	Omera	57.12	55	2.116666667	-4%	FALSE	

Existing SimTraffic Volume Calibration Results

Intersection	Movement	Actual Volumes	Volume Percentile	Simulated Volumes	Volume Difference	Percent Difference	Volume Fails?	Justification	Actual Volumes	Volume Percentile	Simulated Volumes	Volume Difference	Percent Difference	Volume Fails?	Justification
		AM Peak Hour							PM Peak Hour						
1. Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway	EBL	49	64%	48	-1	-2.0%	FALSE		11	25%	10	-1	-9.1%	FALSE	
	EBT	0	0%		0	-	-		0	0%		0	-	-	
	EBR	25	49%	24	-1	-4.0%	FALSE		15	31%	16	1	6.7%	FALSE	
	WBL	18	43%	17	-1	-5.6%	FALSE		23	40%	22	-1	-4.3%	FALSE	
	WBT	0	0%		0	-	-		0	0%		0	-	-	
	WBR	30	53%	32	2	6.7%	FALSE		9	22%	10	1	11.1%	FALSE	
	NBL	12	36%	10	-2	-16.7%	FALSE		31	49%	30	-1	-3.2%	FALSE	
	NBT	2000	100%	2025	25	1.3%	FALSE		962	90%	986	24	2.5%	FALSE	
	NBR	7	27%	8	1	14.3%	FALSE		31	49%	31	0	0.0%	FALSE	
	SBL	5	25%	5	0	0.0%	FALSE		19	36%	15	-4	-21.1%	TRUE	Low volume movements/Only off by 1 vehicle
	SBT	642	86%	642	0	0.0%	FALSE		1959	100%	1962	3	0.2%	FALSE	
	SBR	12	36%	13	1	8.3%	FALSE		45	56%	43	-2	-4.4%	FALSE	
2. Carrollton Boulevard & Eagle Harbor Parkway/King's Cross	EBL	130	74%	129	-1	-0.8%	FALSE		61	61%	58	-3	-4.9%	FALSE	
	EBT	1	13%	1	0	0.0%	FALSE		4	14%	5	1	25.0%	FALSE	
	EBR	56	69%	57	1	1.8%	FALSE		47	57%	48	1	2.1%	FALSE	
	WBL	12	36%	10	-2	-16.7%	FALSE		12	27%	14	2	16.7%	FALSE	
	WBT	2	19%	2	0	0.0%	FALSE		5	16%	5	0	0.0%	FALSE	
	WBR	20	45%	22	2	10.0%	FALSE		12	27%	14	2	16.7%	FALSE	
	NBL	38	57%	42	4	10.5%	FALSE		78	69%	78	0	0.0%	FALSE	
	NBT	1874	99%	1876	2	0.1%	FALSE		951	88%	965	14	1.5%	FALSE	
	NBR	3	22%	3	0	0.0%	FALSE		15	31%	12	-3	-20.0%	FALSE	
	SBL	2	19%	1	-1	-50.0%	TRUE	Low volume movements/Only off by 1 vehicle	20	38%	21	1	5.0%	FALSE	
	SBT	659	87%	671	12	1.8%	FALSE		1826	99%	1836	10	0.5%	FALSE	
	SBR	24	48%	27	3	12.5%	FALSE		151	73%	147	-4	-2.6%	FALSE	
3. Carrollton Boulevard & Smiths Neck Road	EBL	612	84%	615	3	0.5%	FALSE		315	75%	318	3	1.0%	FALSE	
	EBT	50	65%	50	0	0.0%	FALSE		37	52%	37	0	0.0%	FALSE	
	EBR	126	73%	123	-3	-2.4%	FALSE		92	71%	94	2	2.2%	FALSE	
	WBL	43	58%	42	-1	-2.3%	FALSE		72	64%	73	1	1.4%	FALSE	
	WBT	8	30%	8	0	0.0%	FALSE		76	68%	73	-3	-3.9%	FALSE	
	WBR	28	51%	28	0	0.0%	FALSE		23	40%	21	-2	-8.7%	FALSE	
	NBL	52	66%	53	1	1.9%	FALSE		241	74%	248	7	2.9%	FALSE	
	NBT	1145	96%	1186	41	3.6%	FALSE		678	84%	734	56	8.3%	FALSE	
	NBR	73	71%	75	2	2.7%	FALSE		75	66%	73	-2	-2.7%	FALSE	
	SBL	29	52%	30	1	3.4%	FALSE		66	62%	64	-2	-3.0%	FALSE	
	SBT	536	83%	542	6	1.1%	FALSE		1339	96%	1321	-18	-1.3%	FALSE	
	SBR	171	75%	161	-10	-5.8%	FALSE		508	79%	503	-5	-1.0%	FALSE	
4. Carrollton Boulevard & Northgate Lane	EBL	43	58%	42	-1	-2.3%	FALSE		9	22%	8	-1	-11.1%	FALSE	
	EBT	0	0%		0	-	-		0	0%		0	-	-	
	EBR	32	55%	30	-2	-6.3%	FALSE		15	31%	12	-3	-20.0%	FALSE	
	WBL	0	0%		0	-	-		0	0%		0	-	-	
	WBT	0	0%		0	-	-		1	8%	0	-1	-100.0%	FALSE	
	WBR	0	0%		0	-	-		1	8%	2	1	100.0%	FALSE	
	NBL	17	42%	16	-1	-5.9%	FALSE		74	65%	70	-4	-5.4%	FALSE	
	NBT	1272	97%	1270	-2	-0.2%	FALSE		1038	95%	1053	15	1.4%	FALSE	
	NBR	0	0%		0	-	-		1	8%	2	1	100.0%	FALSE	
	SBL	0	0%		0	-	-		3	12%	2	-1	-33.3%	FALSE	
	SBT	716	90%	717	1	0.1%	FALSE		1467	97%	1453	-14	-1.0%	FALSE	
	SBR	8	30%	10	2	25.0%	TRUE	Low volume movements/Only off by 1 vehicle	28	47%	28	0	0.0%	FALSE	

Existing SimTraffic Volume Calibration Results

Intersection	Movement	Actual Volumes	Volume Percentile	Simulated Volumes	Volume Difference	Percent Difference	Volume Fails?	Justification	Actual Volumes	Volume Percentile	Simulated Volumes	Volume Difference	Percent Difference	Volume Fails?	Justification
		AM Peak Hour							PM Peak Hour						
5. Carrollton Boulevard & Brewers Neck Boulevard	EBL	812	95%	808	-4	-0.5%	FALSE		632	83%	636	4	0.6%	FALSE	
	EBT		0%		0	-	-			0%		0	-	-	
	EBR	464	81%	472	8	1.7%	FALSE		536	82%	528	-8	-1.5%	FALSE	
	WBL		0%		0	-	-			0%		0	-	-	
	WBT		0%		0	-	-			0%		0	-	-	
	WBR		0%		0	-	-			0%		0	-	-	
	NBL	368	78%	361	-7	-1.9%	FALSE		460	77%	447	-13	-2.8%	FALSE	
	NBT	449	79%	452	3	0.7%	FALSE		467	78%	468	1	0.2%	FALSE	
	NBR		0%		0	-	-			0%		0	-	-	
	SBL		0%		0	-	-			0%		0	-	-	
	SBT	311	77%	305	-6	-1.9%	FALSE		525	81%	540	15	2.9%	FALSE	
	SBR	473	82%	474	1	0.2%	FALSE		1006	92%	982	-24	-2.4%	FALSE	
6. Carrollton Boulevard & Deep Bottom Drive/Channell Way	EBL	0	0%		0	-	-		3	12%	2	-1	-33.3%	FALSE	
	EBT	0	0%		0	-	-		0	0%		0	-	-	
	EBR	4	23%	3	-1	-25.0%	TRUE	Low volume movements/Only off by 1 vehicle	7	21%	6	-1	-14.3%	FALSE	
	WBL	19	44%	17	-2	-10.5%	FALSE		17	35%	16	-1	-5.9%	FALSE	
	WBT	1	13%	1	0	0.0%	FALSE		0	0%		0	-	-	
	WBR	44	61%	44	0	0.0%	FALSE		27	45%	28	1	3.7%	FALSE	
	NBL	5	25%	5	0	0.0%	FALSE		11	25%	12	1	9.1%	FALSE	
	NBT	773	94%	786	13	1.7%	FALSE		897	87%	889	-8	-0.9%	FALSE	
	NBR	8	30%	6	-2	-25.0%	TRUE	Low volume movements/Only off by 1 vehicle	24	43%	24	0	0.0%	FALSE	
	SBL	13	40%	13	0	0.0%	FALSE		49	58%	48	-1	-2.0%	FALSE	
	SBT	759	92%	766	7	0.9%	FALSE		1006	92%	1002	-4	-0.4%	FALSE	
	SBR	1	13%	1	0	0.0%	FALSE		5	16%	5	0	0.0%	FALSE	
7. Carrollton Boulevard & Ashby Way/Omera Drive	EBL	52	66%	50	-2	-3.8%	FALSE		29	48%	29	0	0.0%	FALSE	
	EBT	1	13%	1	0	0.0%	FALSE		6	18%	5	-1	-16.7%	FALSE	
	EBR	22	47%	22	0	0.0%	FALSE		13	30%	13	0	0.0%	FALSE	
	WBL	33	56%	34	1	3.0%	FALSE		41	55%	36	-5	-12.2%	FALSE	
	WBT	1	13%	2	1	100.0%	FALSE		6	18%	6	0	0.0%	FALSE	
	WBR	64	70%	69	5	7.8%	FALSE		78	69%	78	0	0.0%	FALSE	
	NBL	10	35%	9	-1	-10.0%	FALSE		24	43%	27	3	12.5%	FALSE	
	NBT	666	88%	659	-7	-1.1%	FALSE		803	86%	794	-9	-1.1%	FALSE	
	NBR	9	34%	10	1	11.1%	FALSE		21	39%	21	0	0.0%	FALSE	
	SBL	48	62%	46	-2	-4.2%	FALSE		52	60%	50	-2	-3.8%	FALSE	
	SBT	719	91%	750	31	4.3%	FALSE		969	91%	986	17	1.8%	FALSE	
	SBR	7	27%	8	1	14.3%	FALSE		39	53%	37	-2	-5.1%	FALSE	

Legend

FALSE	Meets Calibration Threshold
TRUE	Does Not Meets Calibration Threshold

Within ± 20% for <100 vph
Within ± 15% for ≥100 vph to <300 vph
Within ± 10% for ≥300 vph to <1,000 vph
Within ± 5% for ≥1,000 vph

VISSIM Sample Size Determination
2017 Existing AM Peak Hour
NB Carrollton Boulevard (B)

VDOT Virginia Department of Transportation

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) (X_1 + X_2 + X_3 … + X_N)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	57
2	58
3	56
4	57
5	56
6	57
7	57
8	57
9	57
10	57
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	56.9
S_s	=	0.6
E	=	5.7
Z	=	1.96

Sampling Error	=	0.35		
95% Confidence Interval	=	56.5	to	57.3
Percentage of Mean	=	0.62%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

VISSIM Sample Size Determination
2017 Existing AM Peak Hour
SB Carrollton Boulevard (C)

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) ($X_1 + X_2 + X_3 \ldots + X_N$)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	57
2	57
3	57
4	57
5	57
6	57
7	57
8	57
9	57
10	57
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	57.0
S_s	=	0.0
E	=	5.7
Z	=	1.96

Sampling Error	=	0.00		
95% Confidence Interval	=	57.0	to	57.0
Percentage of Mean	=	0.00%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

Sample Size Determination
2017 Existing PM Peak Hour
NB Carrollton Boulevard (B)

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) (X_1 + X_2 + X_3 … + X_N)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	56
2	56
3	56
4	56
5	57
6	56
7	55
8	56
9	55
10	56
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	55.9
S_s	=	0.6
E	=	5.6
Z	=	1.96

Sampling Error	=	0.35		
95% Confidence Interval	=	55.5	to	56.3
Percentage of Mean	=	0.63%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

Sample Size Determination
2017 Existing PM Peak Hour
SB Carrollton Boulevard (C)

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) (X_1 + X_2 + X_3 … + X_N)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	55
2	55
3	56
4	55
5	55
6	55
7	55
8	55
9	56
10	55
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	55.2
S_s	=	0.4
E	=	5.5
Z	=	1.96

Sampling Error	=	0.26		
95% Confidence Interval	=	54.9	to	55.5
Percentage of Mean	=	0.47%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

VISSIM Sample Size Determination
2026 No Build AM Peak Hour
NB Carrollton Boulevard (B)

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) (X_1 + X_2 + X_3 … + X_N)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	29
2	26
3	27
4	26
5	27
6	28
7	28
8	25
9	26
10	27
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	26.9
S_s	=	1.2
E	=	2.7
Z	=	1.96

Sampling Error	=	0.74		
95% Confidence Interval	=	26.2	to	27.6
Percentage of Mean	=	2.76%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

VISSIM Sample Size Determination
2026 No Build AM Peak Hour
SB Carrollton Boulevard (C)

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) (X_1 + X_2 + X_3 … + X_N)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = Z ($S_s/\sqrt{N}$)
Confidence Level = $X_s \pm Z$ ($S_s/\sqrt{N}$)
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	43
2	44
3	42
4	41
5	41
6	42
7	40
8	43
9	44
10	42
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	42.2
S_s	=	1.3
E	=	4.2
Z	=	1.96

Sampling Error	=	0.82		
95% Confidence Interval	=	41.4	to	43.0
Percentage of Mean	=	1.93%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

VISSIM Sample Size Determination
2026 No Build PM Peak Hour
NB Carrollton Boulevard (B)

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) (X_1 + X_2 + X_3 … + X_N)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	41
2	41
3	40
4	42
5	42
6	40
7	41
8	41
9	41
10	41
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	41.0
S_s	=	0.7
E	=	4.1
Z	=	1.96

Sampling Error	=	0.41		
95% Confidence Interval	=	40.6	to	41.4
Percentage of Mean	=	1.01%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

VISSIM Sample Size Determination
2026 No Build PM Peak Hour
SB Carrollton Boulevard (C)

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) (X_1 + X_2 + X_3 … + X_N)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	54
2	54
3	55
4	55
5	55
6	55
7	54
8	55
9	55
10	55
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	54.7
S_s	=	0.5
E	=	5.5
Z	=	1.96

Sampling Error	=	0.30		
95% Confidence Interval	=	54.4	to	55.0
Percentage of Mean	=	0.55%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

VISSIM Sample Size Determination
2032 No Build AM Peak Hour
NB Carrollton Boulevard (B)

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) (X_1 + X_2 + X_3 … + X_N)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	20
2	20
3	20
4	19
5	22
6	22
7	21
8	21
9	22
10	21
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	20.8
S_s	=	1.0
E	=	2.1
Z	=	1.96

Sampling Error	=	0.64		
95% Confidence Interval	=	20.2	to	21.4
Percentage of Mean	=	3.08%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

VISSIM Sample Size Determination
2032 No Build AM Peak Hour
SB Carrollton Boulevard (C)

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) (X_1 + X_2 + X_3 … + X_N)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	42
2	42
3	42
4	40
5	42
6	41
7	42
8	41
9	42
10	42
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	41.6
S_s	=	0.7
E	=	4.2
Z	=	1.96

Sampling Error	=	0.43		
95% Confidence Interval	=	41.2	to	42.0
Percentage of Mean	=	1.04%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

VISSIM Sample Size Determination
2032 No Build PM Peak Hour
NB Carrollton Boulevard (B)

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) (X_1 + X_2 + X_3 … + X_N)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	41
2	40
3	40
4	42
5	40
6	40
7	40
8	41
9	40
10	40
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	40.4
S_s	=	0.7
E	=	4.0
Z	=	1.96

Sampling Error	=	0.43		
95% Confidence Interval	=	40.0	to	40.8
Percentage of Mean	=	1.07%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

VISSIM Sample Size Determination
2032 No Build PM Peak Hour
SB Carrollton Boulevard (C)

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) (X_1 + X_2 + X_3 … + X_N)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	55
2	55
3	55
4	55
5	54
6	55
7	55
8	55
9	55
10	55
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	54.9
S_s	=	0.3
E	=	5.5
Z	=	1.96

Sampling Error	=	0.20		
95% Confidence Interval	=	54.7	to	55.1
Percentage of Mean	=	0.36%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

VISSIM Sample Size Determination
2016 Existing AM Peak Hour
NB Carrollton Boulevard

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) (X_1 + X_2 + X_3 … + X_N)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	56
2	56
3	56
4	56
5	56
6	56
7	56
8	55
9	56
10	56
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	55.9
S_s	=	0.3
E	=	5.6
Z	=	1.96

Sampling Error	=	0.20		
95% Confidence Interval	=	55.7	to	56.1
Percentage of Mean	=	0.35%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

VISSIM Sample Size Determination
2016 Existing AM Peak Hour
SB Carrollton Boulevard

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) ($X_1 + X_2 + X_3 \ldots + X_N$)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	56
2	56
3	56
4	56
5	57
6	57
7	56
8	57
9	56
10	56
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	56.3
S_s	=	0.5
E	=	5.6
Z	=	1.96

Sampling Error	=	0.30		
95% Confidence Interval	=	56.0	to	56.6
Percentage of Mean	=	0.53%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

VISSIM Sample Size Determination
2016 Existing AM Peak Hour
NB Carrollton Boulevard

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) (X_1 + X_2 + X_3 … + X_N)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	41
2	40
3	39
4	39
5	39
6	38
7	39
8	40
9	38
10	39
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	39.2
S_s	=	0.9
E	=	3.9
Z	=	1.96

Sampling Error	=	0.57		
95% Confidence Interval	=	38.6	to	39.8
Percentage of Mean	=	1.45%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

VISSIM Sample Size Determination
2016 Existing AM Peak Hour
SB Carrollton Boulevard

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) ($X_1 + X_2 + X_3 \ldots + X_N$)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	55
2	55
3	56
4	56
5	55
6	55
7	55
8	56
9	56
10	55
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	55.4
S_s	=	0.5
E	=	5.5
Z	=	1.96

Sampling Error	=	0.32		
95% Confidence Interval	=	55.1	to	55.7
Percentage of Mean	=	0.58%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

VISSIM Sample Size Determination
2016 Existing AM Peak Hour
NB Carrollton Boulevard

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) (X_1 + X_2 + X_3 … + X_N)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	55
2	55
3	55
4	56
5	56
6	54
7	56
8	55
9	55
10	54
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	55.1
S_s	=	0.7
E	=	5.5
Z	=	1.96

Sampling Error	=	0.46		
95% Confidence Interval	=	54.6	to	55.6
Percentage of Mean	=	0.83%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

VISSIM Sample Size Determination
2016 Existing AM Peak Hour
SB Carrollton Boulevard

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) (X_1 + X_2 + X_3 … + X_N)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	58
2	58
3	58
4	58
5	59
6	58
7	58
8	58
9	58
10	58
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	58.1
S_s	=	0.3
E	=	5.8
Z	=	1.96

Sampling Error	=	0.20		
95% Confidence Interval	=	57.9	to	58.3
Percentage of Mean	=	0.34%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

VISSIM Sample Size Determination
2016 Existing AM Peak Hour
NB Carrollton Boulevard

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) (X_1 + X_2 + X_3 … + X_N)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	38
2	39
3	39
4	38
5	39
6	39
7	38
8	38
9	39
10	39
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	38.6
S_s	=	0.5
E	=	3.9
Z	=	1.96

Sampling Error	=	0.32		
95% Confidence Interval	=	38.3	to	38.9
Percentage of Mean	=	0.83%		**Good**
Sample Size Needed	=	**10**		

Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

VISSIM Sample Size Determination
2016 Existing AM Peak Hour
SB Carrollton Boulevard

Sample Size Determination Tool, Version 2.0

User Inputs
Constants
Outputs

Sample Size (N) = Number of Model Runs
Sample Mean (X_s) = (1/N) ($X_1 + X_2 + X_3 \ldots + X_N$)
Sample Standard Deviation (S_s) = $\sqrt{[(\Sigma(X-X_s)^2)/(N-1)]}$
Sampling Error = $Z\ (S_s/\sqrt{N})$
Confidence Level = $X_s \pm Z\ (S_s/\sqrt{N})$
% of Sample Mean (E) = % Tolerance * X_s
Sample Size Needed = $[(Z)^2 * (S_s)^2] / (E)^2$

Model Iterations

Measure of Effectiveness (MOE):	Speed
Confidence Interval:	95%
Tolerance Error:	10%
Number of Model Runs:	10

Run Number	*Speed*
1	55
2	55
3	55
4	55
5	55
6	56
7	55
8	54
9	54
10	56
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Sample Size Outputs

N	=	10.0
X_s	=	55.0
S_s	=	0.7
E	=	5.5
Z	=	1.96

Sampling Error	=	0.41		
95% Confidence Interval	=	54.6	to	55.4
Percentage of Mean	=	0.75%		**Good**
Sample Size Needed	=	**10**		

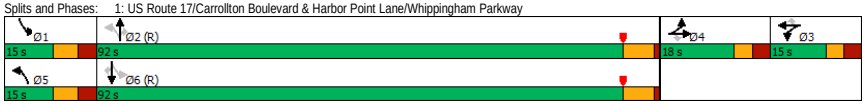
Z is the number of standard deviations away from the mean corresponding to the required confidence level in a normal distribution.

Appendix E
Synchro and SimTraffic Reports

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	0	30	22	0	36	14	2390	8	6	767	14
Future Volume (vph)	59	0	30	22	0	36	14	2390	8	6	767	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1805	1615	0	1805	1568	1543	3539	1615	1504	3471	1495
Flt Permitted		0.950			0.950		0.308			0.041		
Satd. Flow (perm)	0	1805	1615	0	1805	1568	500	3539	1615	65	3471	1495
Satd. Flow (RTOR)			125			125			125			125
Adj. Flow (vph)	64	0	33	24	0	39	15	2598	9	7	834	15
Lane Group Flow (vph)	0	64	33	0	24	39	15	2598	9	7	834	15
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	18.0	18.0	18.0	15.0	15.0	15.0	15.0	92.0	92.0	15.0	92.0	92.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)		10.0	10.0		7.7	7.7	107.2	108.2	108.2	105.6	105.6	105.6
Actuated g/C Ratio		0.07	0.07		0.06	0.06	0.77	0.77	0.77	0.75	0.75	0.75
v/c Ratio		0.50	0.14		0.24	0.19	0.04	0.95	0.01	0.07	0.32	0.01
Control Delay		75.5	1.3		69.0	2.1	1.2	9.0	0.0	7.2	8.5	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		75.5	1.3		69.0	2.1	1.2	9.0	0.0	7.2	8.5	0.0
LOS		E	A		E	A	A	A	A	A	A	A
Approach Delay		50.3			27.6			8.9			8.4	
Approach LOS		D			C			A			A	

Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 68 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 10.2		Intersection LOS: B	
Intersection Capacity Utilization 92.7%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway



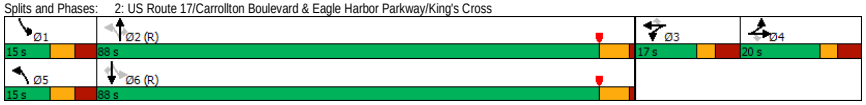
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	0	30	22	0	36	14	2390	8	6	767	14
Future Volume (vph)	59	0	30	22	0	36	14	2390	8	6	767	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1805	1615		1805	1568	1543	3539	1615	1504	3471	1495
Flt Permitted		0.95	1.00		0.95	1.00	0.31	1.00	1.00	0.04	1.00	1.00
Satd. Flow (perm)		1805	1615		1805	1568	500	3539	1615	65	3471	1495
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	64	0	33	24	0	39	15	2598	9	7	834	15
RTOR Reduction (vph)	0	0	31	0	0	37	0	0	3	0	0	5
Lane Group Flow (vph)	0	64	2	0	24	2	15	2598	6	7	834	10
Heavy Vehicles (%)	0%	0%	0%	0%	0%	3%	17%	2%	0%	20%	4%	8%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		8.6	8.6		6.3	6.3	101.3	99.0	99.0	98.9	97.8	97.8
Effective Green, g (s)		8.6	8.6		6.3	6.3	101.3	99.0	99.0	98.9	97.8	97.8
Actuated g/C Ratio		0.06	0.06		0.04	0.04	0.72	0.71	0.71	0.71	0.70	0.70
Clearance Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		110	99		81	70	378	2502	1142	57	2424	1044
v/s Ratio Prot		c0.04			c0.01		0.00	c0.73		c0.00	0.24	
v/s Ratio Perm			0.00			0.00	0.03		0.00	0.09		0.01
v/c Ratio		0.58	0.02		0.30	0.03	0.04	1.04	0.01	0.12	0.34	0.01
Uniform Delay, d1		63.9	61.7		64.7	63.9	5.7	20.5	6.0	37.6	8.4	6.4
Progression Factor		1.00	1.00		1.00	1.00	0.20	0.11	1.00	1.00	1.00	1.00
Incremental Delay, d2		7.6	0.1		2.0	0.1	0.0	22.0	0.0	0.7	0.4	0.0
Delay (s)		71.6	61.8		66.7	64.1	1.2	24.3	6.0	38.3	8.8	6.4
Level of Service		E	E		E	E	A	C	A	D	A	A
Approach Delay (s)		68.3			65.1			24.2			9.0	
Approach LOS		E			E			C			A	

Intersection Summary					
HCM 2000 Control Delay		22.5	HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio		0.95			
Actuated Cycle Length (s)		140.0	Sum of lost time (s)		25.0
Intersection Capacity Utilization		92.7%	ICU Level of Service		F
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	1	67	14	2	24	45	2240	4	2	788	29
Future Volume (vph)	155	1	67	14	2	24	45	2240	4	2	788	29
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.958		0.950			0.950		
Satd. Flow (prot)	0	1793	1615	0	1820	1468	1719	3539	967	1805	3471	1553
Flt Permitted		0.953			0.958		0.270			0.047		
Satd. Flow (perm)	0	1793	1615	0	1820	1468	489	3539	967	89	3471	1553
Satd. Flow (RTOR)			136			136			144			144
Adj. Flow (vph)	168	1	73	15	2	26	49	2435	4	2	857	32
Lane Group Flow (vph)	0	169	73	0	17	26	49	2435	4	2	857	32
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	20.0	20.0	20.0	17.0	17.0	17.0	15.0	88.0	88.0	15.0	88.0	88.0
Total Lost Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Act Effct Green (s)		17.1	17.1		7.5	7.5	98.4	98.4	98.4	92.3	89.7	89.7
Actuated g/C Ratio		0.12	0.12		0.05	0.05	0.70	0.70	0.70	0.66	0.64	0.64
v/c Ratio		0.77	0.23		0.18	0.13	0.12	0.98	0.01	0.02	0.39	0.03
Control Delay		82.7	1.7		67.2	1.2	6.6	21.3	0.0	7.5	10.3	0.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		82.7	1.7		67.2	1.2	6.6	21.3	0.0	7.5	10.3	0.1
LOS		F	A		E	A	A	C	A	A	B	A
Approach Delay		58.2			27.3			21.0			9.9	
Approach LOS		E			C			C			A	

Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 50 (36%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 20.8		Intersection LOS: C	
Intersection Capacity Utilization 93.1%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross



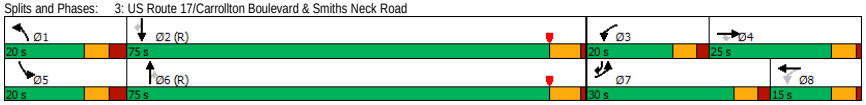
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	1	67	14	2	24	45	2240	4	2	788	29
Future Volume (vph)	155	1	67	14	2	24	45	2240	4	2	788	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1792	1615		1820	1468	1719	3539	967	1805	3471	1553
Flt Permitted		0.95	1.00		0.96	1.00	0.27	1.00	1.00	0.05	1.00	1.00
Satd. Flow (perm)		1792	1615		1820	1468	488	3539	967	89	3471	1553
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	168	1	73	15	2	26	49	2435	4	2	857	32
RTOR Reduction (vph)	0	0	64	0	0	25	0	0	1	0	0	12
Lane Group Flow (vph)	0	169	9	0	17	1	49	2435	3	2	857	20
Heavy Vehicles (%)	1%	0%	0%	0%	0%	10%	5%	2%	67%	0%	4%	4%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		17.1	17.1		4.7	4.7	94.9	89.7	89.7	86.5	85.5	85.5
Effective Green, g (s)		17.1	17.1		4.7	4.7	94.9	89.7	89.7	86.5	85.5	85.5
Actuated g/C Ratio		0.12	0.12		0.03	0.03	0.68	0.64	0.64	0.62	0.61	0.61
Clearance Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		218	197		61	49	376	2267	619	67	2119	948
v/s Ratio Prot		c0.09			c0.01		c0.00	c0.69		0.00	0.25	
v/s Ratio Perm			0.01			0.00	0.08		0.00	0.02		0.01
v/c Ratio		0.78	0.05		0.28	0.02	0.13	1.07	0.00	0.03	0.40	0.02
Uniform Delay, d1		59.6	54.2		66.0	65.4	8.5	25.1	9.1	34.0	14.1	10.7
Progression Factor		1.00	1.00		1.00	1.00	0.89	0.48	1.00	0.98	0.73	1.00
Incremental Delay, d2		15.7	0.1		2.5	0.1	0.1	38.8	0.0	0.1	0.6	0.0
Delay (s)		75.3	54.3		68.5	65.6	7.6	51.0	9.1	33.5	10.9	10.8
Level of Service		E	D		E	E	A	D	A	C	B	B
Approach Delay (s)		69.0			66.7			50.0			11.0	
Approach LOS		E			E			D			B	

Intersection Summary					
HCM 2000 Control Delay		42.0	HCM 2000 Level of Service		D
HCM 2000 Volume to Capacity ratio		0.99			
Actuated Cycle Length (s)		140.0	Sum of lost time (s)		27.5
Intersection Capacity Utilization		93.1%	ICU Level of Service		F
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	439	60	91	51	10	33	37	1635	87	35	723	122
Future Volume (vph)	439	60	91	51	10	33	37	1635	87	35	723	122
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.885				0.850			0.850
Flt Protected	0.950	0.963		0.950			0.950			0.950		
Satd. Flow (prot)	1698	1717	1615	1719	1632	0	1612	3539	1553	1752	3471	1615
Flt Permitted	0.950	0.431		0.583			0.950			0.950		
Satd. Flow (perm)	1698	768	1615	1055	1632	0	1612	3539	1553	1752	3471	1615
Satd. Flow (RTOR)			125		36				164			133
Adj. Flow (vph)	477	65	99	55	11	36	40	1777	95	38	786	133
Lane Group Flow (vph)	267	275	99	55	47	0	40	1777	95	38	786	133
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		1	6		5	2	7
Permitted Phases			4	8					6			2
Total Split (s)	30.0	25.0	25.0	20.0	15.0		20.0	75.0	75.0	20.0	75.0	30.0
Total Lost Time (s)	6.0	5.0	5.0	6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)	27.0	28.0	27.5	16.3	9.4		8.4	76.4	76.4	8.0	76.0	110.2
Actuated g/C Ratio	0.19	0.20	0.20	0.12	0.07		0.06	0.55	0.55	0.06	0.54	0.79
v/c Ratio	0.82	0.80	0.24	0.33	0.33		0.42	0.92	0.10	0.38	0.42	0.10
Control Delay	75.0	72.5	5.4	45.6	31.4		79.7	25.3	0.9	80.5	13.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	11.4	0.0	0.0	0.0	0.0
Total Delay	75.0	72.5	5.4	45.6	31.4		79.7	36.6	0.9	80.5	13.4	0.2
LOS	E	E	A	D	C		E	D	A	F	B	A
Approach Delay		63.2			39.1			35.8			14.2	
Approach LOS		E			D			D			B	

Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 35 (25%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 35.0		Intersection LOS: D	
Intersection Capacity Utilization 74.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	439	60	91	51	10	33	37	1635	87	35	723	122
Future Volume (vph)	439	60	91	51	10	33	37	1635	87	35	723	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.0	5.0	6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.89		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1698	1717	1615	1719	1632		1612	3539	1553	1752	3471	1615
Flt Permitted	0.95	0.43	1.00	0.58	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1698	768	1615	1054	1632		1612	3539	1553	1752	3471	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	477	65	99	55	11	36	40	1777	95	38	786	133
RTOR Reduction (vph)	0	0	80	0	34	0	0	0	45	0	0	38
Lane Group Flow (vph)	267	275	19	55	13	0	40	1777	50	38	786	95
Heavy Vehicles (%)	1%	2%	0%	5%	0%	4%	12%	2%	4%	3%	4%	0%
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		1	6		5	2	7
Permitted Phases			4	8					6			2
Actuated Green, G (s)	27.0	41.2	27.5	15.9	8.2		7.4	73.8	73.8	7.0	73.4	100.4
Effective Green, g (s)	27.0	41.2	27.5	15.9	8.2		7.4	73.8	73.8	7.0	73.4	100.4
Actuated g/C Ratio	0.19	0.29	0.20	0.11	0.06		0.05	0.53	0.53	0.05	0.52	0.72
Clearance Time (s)	6.0	5.0	5.0	6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		2.5	5.0	5.0	2.5	5.0	3.0
Lane Grp Cap (vph)	327	409	317	156	95		85	1865	818	87	1819	1227
v/s Ratio Prot	c0.16	0.13		0.02	0.01		c0.02	c0.50		0.02	0.23	0.01
v/s Ratio Perm		c0.07	0.01	0.02					0.03			0.04
v/c Ratio	0.82	0.67	0.06	0.35	0.14		0.47	0.95	0.06	0.44	0.43	0.08
Uniform Delay, d1	54.1	43.5	45.8	56.8	62.5		64.4	31.4	16.2	64.6	20.5	5.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.10	0.56	1.00	1.12	0.64	0.01
Incremental Delay, d2	14.5	4.3	0.1	1.4	0.7		2.5	10.9	0.1	2.4	0.7	0.0
Delay (s)	68.6	47.8	45.8	58.2	63.2		73.3	28.4	16.3	74.5	13.8	0.1
Level of Service	E	D	D	E	E		E	C	B	E	B	A
Approach Delay (s)		56.2			60.5			28.8			14.3	
Approach LOS		E			E			C			B	

Intersection Summary					
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.89				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		24.0	
Intersection Capacity Utilization	74.8%	ICU Level of Service		D	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	0	38	0	0	0	20	1787	0	0	878	10
Future Volume (vph)	51	0	38	0	0	0	20	1787	0	0	878	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850									0.850
Flt Protected		0.950					0.950					
Satd. Flow (prot)	0	1805	1524	0	1900	0	1805	3505	1900	1900	3471	1615
Flt Permitted		0.950					0.950					
Satd. Flow (perm)	0	1805	1524	0	1900	0	1805	3505	1900	1900	3471	1615
Adj. Flow (vph)	55	0	41	0	0	0	22	1942	0	0	954	11
Lane Group Flow (vph)	0	55	41	0	0	0	22	1942	0	0	954	11
Sign Control		Stop			Stop			Free			Free	

Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 59.4%				ICU Level of Service B								
Analysis Period (min) 15												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	0	38	0	0	0	20	1787	0	0	878	10
Future Volume (Veh/h)	51	0	38	0	0	0	20	1787	0	0	878	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	55	0	41	0	0	0	22	1942	0	0	954	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			6									
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1315	
pX, platoon unblocked	0.86	0.86	0.86	0.86	0.86		0.86					
vC, conflicting volume	1969	2940	477	2463	2951	971	965			1942		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1808	2931	83	2379	2943	971	647			1942		
tC, single (s)	7.5	6.5	7.0	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.4	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	95	100	100	100	97			100		
cM capacity (veh/h)	43	13	820	15	13	256	820			306		

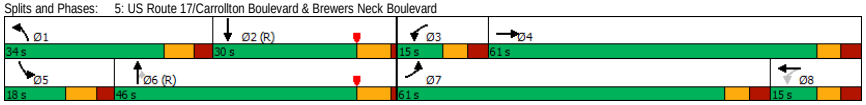
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	96	0	22	971	971	0	0	477	477	11
Volume Left	55	0	22	0	0	0	0	0	0	0
Volume Right	41	0	0	0	0	0	0	0	0	11
cSH	74	1700	820	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	1.29	0.00	0.03	0.57	0.57	0.00	0.00	0.28	0.28	0.01
Queue Length 95th (ft)	188	0	2	0	0	0	0	0	0	0
Control Delay (s)	299.1	0.0	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	A	A							
Approach Delay (s)	299.1	0.0	0.1				0.0			
Approach LOS	F	A								

Intersection Summary												
Average Delay			9.6									
Intersection Capacity Utilization			59.4%		ICU Level of Service				B			
Analysis Period (min)			15									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	970	81	555	36	58	45	440	537	20	44	372	565
Future Volume (vph)	970	81	555	36	58	45	440	537	20	44	372	565
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.935				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3367	1863	1524	1770	3309	0	3242	3539	1583	1770	3505	1553
Flt Permitted	0.950			0.701			0.950			0.950		
Satd. Flow (perm)	3367	1863	1524	1306	3309	0	3242	3539	1583	1770	3505	1553
Satd. Flow (RTOR)			597		48				214			608
Adj. Flow (vph)	1043	87	597	39	62	48	473	577	22	47	400	608
Lane Group Flow (vph)	1043	87	597	39	110	0	473	577	22	47	400	608
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Total Split (s)	61.0	61.0		15.0	15.0		34.0	46.0	46.0	18.0	30.0	
Total Lost Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Act Effct Green (s)	49.3	52.2	140.0	14.0	7.2		23.9	48.3	48.3	8.5	30.2	140.0
Actuated g/C Ratio	0.35	0.37	1.00	0.10	0.05		0.17	0.34	0.34	0.06	0.22	1.00
v/c Ratio	0.88	0.13	0.39	0.25	0.51		0.86	0.47	0.03	0.44	0.53	0.39
Control Delay	52.0	29.5	0.8	33.8	45.6		60.1	36.6	0.1	83.1	39.8	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.0	29.5	0.8	33.8	45.6		60.1	36.6	0.1	83.1	39.8	2.0
LOS	D	C	A	C	D		E	D	A	F	D	A
Approach Delay		33.1			42.5			46.2			20.0	
Approach LOS		C			D			D			B	

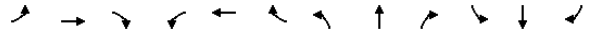
Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 65 (46%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 33.5		Intersection LOS: C	
Intersection Capacity Utilization 75.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard



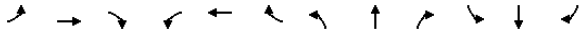
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	970	81	555	36	58	45	440	537	20	44	372	565
Future Volume (vph)	970	81	555	36	58	45	440	537	20	44	372	565
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	4.0	7.5	7.5		8.0	6.5	6.5	8.0	6.5	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	1863	1524	1770	3308		3242	3539	1583	1770	3505	1553
Flt Permitted	0.95	1.00	1.00	0.70	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	1863	1524	1305	3308		3242	3539	1583	1770	3505	1553
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	1043	87	597	39	62	48	473	577	22	47	400	608
RTOR Reduction (vph)	0	0	0	0	45	0	0	0	15	0	0	0
Lane Group Flow (vph)	1043	87	597	39	65	0	473	577	7	47	400	608
Heavy Vehicles (%)	4%	2%	6%	2%	2%	2%	8%	2%	2%	2%	3%	4%
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Actuated Green, G (s)	49.3	52.2	140.0	14.3	8.6		23.9	45.2	45.2	7.4	28.7	140.0
Effective Green, g (s)	49.3	52.2	140.0	14.3	8.6		23.9	45.2	45.2	7.4	28.7	140.0
Actuated g/C Ratio	0.35	0.37	1.00	0.10	0.06		0.17	0.32	0.32	0.05	0.20	1.00
Clearance Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Vehicle Extension (s)	3.5	3.5		3.0	3.0		2.5	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	1185	694	1524	152	203		553	1142	511	93	718	1553
v/s Ratio Prot	c0.31	0.05		0.01	0.02		c0.15	0.16		0.03	c0.11	
v/s Ratio Perm			c0.39	0.02					0.00			0.39
v/c Ratio	0.88	0.13	0.39	0.26	0.32		0.86	0.51	0.01	0.51	0.56	0.39
Uniform Delay, d1	42.6	28.9	0.0	57.7	62.9		56.4	38.4	32.2	64.5	49.9	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.80	0.92	1.00	1.12	0.74	1.00
Incremental Delay, d2	8.0	0.1	0.8	0.9	0.9		11.5	1.5	0.0	4.1	3.0	0.7
Delay (s)	50.6	29.0	0.8	58.6	63.8		56.7	36.9	32.3	76.5	39.7	0.7
Level of Service	D	C	A	E	E		E	D	C	E	D	A
Approach Delay (s)		32.3			62.4			45.5			18.9	
Approach LOS		C			E			D			B	

Intersection Summary					
HCM 2000 Control Delay		33.4	HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio		0.78			
Actuated Cycle Length (s)		140.0	Sum of lost time (s)		29.5
Intersection Capacity Utilization		75.5%	ICU Level of Service		D
Analysis Period (min)		15			
c Critical Lane Group					



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	23	1	53	6	924	10	16	907	1
Future Volume (vph)	0	0	5	23	1	53	6	924	10	16	907	1
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.865			0.907				0.850			
Flt Protected					0.985		0.950			0.950		
Satd. Flow (prot)	0	1096	0	0	1641	0	1805	3438	1292	1805	3438	0
Flt Permitted					0.985		0.950			0.950		
Satd. Flow (perm)	0	1096	0	0	1641	0	1805	3438	1292	1805	3438	0
Adj. Flow (vph)	0	0	5	25	1	58	7	1004	11	17	986	1
Lane Group Flow (vph)	0	5	0	0	84	0	7	1004	11	17	987	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 43.5%					ICU Level of Service A							
Analysis Period (min) 15												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	5	23	1	53	6	924	10	16	907	1
Future Volume (Veh/h)	0	0	5	23	1	53	6	924	10	16	907	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	5	25	1	58	7	1004	11	17	986	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1135	
pX, platoon unblocked	0.91	0.91	0.91	0.91	0.91		0.91					
vC, conflicting volume	1595	2050	494	1550	2039	502	987			1015		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1452	1953	239	1403	1941	502	783			1015		
tC, single (s)	7.5	6.5	7.9	7.5	6.5	7.0	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.8	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	72	98	89	99			98		
cM capacity (veh/h)	72	57	576	89	58	507	767			691		

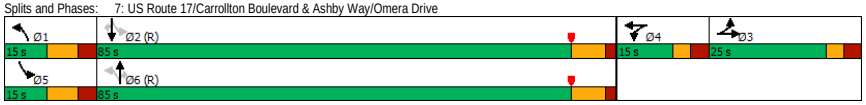
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	5	84	7	502	502	11	17	657	330
Volume Left	0	25	7	0	0	0	17	0	0
Volume Right	5	58	0	0	0	11	0	0	1
cSH	576	203	767	1700	1700	1700	691	1700	1700
Volume to Capacity	0.01	0.41	0.01	0.30	0.30	0.01	0.02	0.39	0.19
Queue Length 95th (ft)	1	47	1	0	0	0	2	0	0
Control Delay (s)	11.3	34.6	9.7	0.0	0.0	0.0	10.3	0.0	0.0
Lane LOS	B	D	A				B		
Approach Delay (s)	11.3	34.6	0.1				0.2		
Approach LOS	B	D							

Intersection Summary									
Average Delay			1.5						
Intersection Capacity Utilization			43.5%		ICU Level of Service			A	
Analysis Period (min)			15						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	1	26	39	1	76	12	796	11	57	859	8
Future Volume (vph)	62	1	26	39	1	76	12	796	11	57	859	8
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.855			0.911				0.850			0.850
Flt Protected	0.950				0.984		0.950			0.950		
Satd. Flow (prot)	1770	1550	0	0	1623	0	1805	3438	1455	1703	3471	1417
Flt Permitted	0.950				0.984		0.273			0.272		
Satd. Flow (perm)	1770	1550	0	0	1623	0	519	3438	1455	488	3471	1417
Satd. Flow (RTOR)		28			53				132			132
Adj. Flow (vph)	67	1	28	42	1	83	13	865	12	62	934	9
Lane Group Flow (vph)	67	29	0	0	126	0	13	865	12	62	934	9
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Total Split (s)	25.0	25.0		15.0	15.0		15.0	85.0	85.0	15.0	85.0	85.0
Total Lost Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Act Effct Green (s)	11.0	11.0			13.1		91.7	86.6	86.6	96.2	93.2	93.2
Actuated g/C Ratio	0.08	0.08			0.09		0.66	0.62	0.62	0.69	0.67	0.67
v/c Ratio	0.49	0.20			0.63		0.03	0.41	0.01	0.15	0.40	0.01
Control Delay	72.9	22.9			48.7		9.3	17.0	0.0	5.9	8.7	0.0
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.9	22.9			48.7		9.3	17.0	0.0	5.9	8.7	0.0
LOS	E	C			D		A	B	A	A	A	A
Approach Delay		57.8			48.7			16.7			8.4	
Approach LOS		E			D			B			A	

Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 50 (36%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 16.5		Intersection LOS: B	
Intersection Capacity Utilization 61.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive



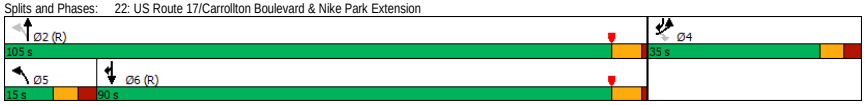
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	1	26	39	1	76	12	796	11	57	859	8
Future Volume (vph)	62	1	26	39	1	76	12	796	11	57	859	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.86			0.91		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1550			1622		1805	3438	1455	1703	3471	1417
Flt Permitted	0.95	1.00			0.98		0.27	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)	1770	1550			1622		519	3438	1455	487	3471	1417
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	1	28	42	1	83	13	865	12	62	934	9
RTOR Reduction (vph)	0	26	0	0	48	0	0	0	5	0	0	3
Lane Group Flow (vph)	67	3	0	0	78	0	13	865	7	62	934	6
Heavy Vehicles (%)	2%	0%	5%	3%	0%	6%	0%	5%	11%	6%	4%	14%
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Actuated Green, G (s)	9.4	9.4			13.1		86.6	83.8	83.8	93.4	87.2	87.2
Effective Green, g (s)	9.4	9.4			13.1		86.6	83.8	83.8	93.4	87.2	87.2
Actuated g/C Ratio	0.07	0.07			0.09		0.62	0.60	0.60	0.67	0.62	0.62
Clearance Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	118	104			151		346	2057	870	378	2161	882
v/s Ratio Prot	c0.04	0.00			c0.05		0.00	0.25		c0.01	c0.27	
v/s Ratio Perm							0.02		0.00	0.10		0.00
v/c Ratio	0.57	0.03			0.52		0.04	0.42	0.01	0.16	0.43	0.01
Uniform Delay, d1	63.3	61.0			60.4		10.5	15.1	11.3	8.9	13.6	10.0
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	0.61	0.60	1.00
Incremental Delay, d2	6.1	0.1			3.0		0.0	0.6	0.0	0.2	0.6	0.0
Delay (s)	69.5	61.1			63.4		10.6	15.7	11.4	5.6	8.8	10.0
Level of Service	E	E			E		B	B	B	A	A	B
Approach Delay (s)		67.0			63.4			15.6			8.6	
Approach LOS		E			E			B			A	

Intersection Summary				
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.45			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	27.5	
Intersection Capacity Utilization	61.0%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	292	60	25	1482	834	82
Future Volume (vph)	292	60	25	1482	834	82
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.266			
Satd. Flow (perm)	3433	1583	495	3539	3539	1583
Satd. Flow (RTOR)		65				89
Adj. Flow (vph)	317	65	27	1611	907	89
Lane Group Flow (vph)	317	65	27	1611	907	89
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Total Split (s)	35.0	35.0	15.0	105.0	90.0	
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	
Act Effct Green (s)	18.2	18.2	107.8	108.8	100.8	128.4
Actuated g/C Ratio	0.13	0.13	0.77	0.78	0.72	0.92
v/c Ratio	0.71	0.25	0.06	0.59	0.36	0.06
Control Delay	67.3	13.8	4.3	8.0	11.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.3	13.8	4.3	8.0	11.5	0.1
LOS	E	B	A	A	B	A
Approach Delay	58.2			7.9	10.5	
Approach LOS	E			A	B	

Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 56 (40%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 15.2		Intersection LOS: B	
Intersection Capacity Utilization 60.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 22: US Route 17/Carrollton Boulevard & Nike Park Extension



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	292	60	25	1482	834	82
Future Volume (vph)	292	60	25	1482	834	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.27	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	495	3539	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	317	65	27	1611	907	89
RTOR Reduction (vph)	0	57	0	0	0	11
Lane Group Flow (vph)	317	8	27	1611	907	78
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Actuated Green, G (s)	18.2	18.2	108.8	108.8	98.0	122.2
Effective Green, g (s)	18.2	18.2	108.8	108.8	98.0	122.2
Actuated g/C Ratio	0.13	0.13	0.78	0.78	0.70	0.87
Clearance Time (s)	7.0	7.0	7.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	446	205	419	2750	2477	1381
v/s Ratio Prot	c0.09		0.00	c0.46	0.26	0.05
v/s Ratio Perm		0.01	0.05			
v/c Ratio	0.71	0.04	0.06	0.59	0.37	0.06
Uniform Delay, d1	58.4	53.3	4.5	6.4	8.5	1.2
Progression Factor	1.00	1.00	0.94	1.08	1.31	0.20
Incremental Delay, d2	5.3	0.1	0.0	0.7	0.4	0.0
Delay (s)	63.7	53.4	4.3	7.5	11.5	0.3
Level of Service	E	D	A	A	B	A
Approach Delay (s)	61.9			7.5	10.5	
Approach LOS	E			A	B	

Intersection Summary				
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.64			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	60.1%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

Intersection: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	120	54	62	77	44	324	344	57	33	113	124	15
Average Queue (ft)	56	18	17	23	9	114	125	3	4	28	38	1
95th Queue (ft)	109	47	46	60	33	264	276	34	20	76	100	7
Link Distance (ft)	1023		1185			490	490			4237	4237	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		170		550	280			215	220			230
Storage Blk Time (%)	0	0				1	2	0				
Queuing Penalty (veh)	0	0				0	0	0				

Intersection: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	260	167	83	64	264	635	654	105	22	175	215	51
Average Queue (ft)	136	35	18	23	46	327	335	6	2	75	103	6
95th Queue (ft)	233	115	55	60	173	591	596	63	13	149	189	36
Link Distance (ft)	1043		1035			976	976			549	549	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		220		65	265			240	310			240
Storage Blk Time (%)	2	0	1	2	0	11	15	0			0	0
Queuing Penalty (veh)	2	0	0	0	1	5	1	0			0	0

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	TR	L	T	T	R	L	T	T
Maximum Queue (ft)	328	382	64	109	98	204	597	604	245	96	205	227
Average Queue (ft)	202	242	25	39	30	43	298	310	60	31	86	108
95th Queue (ft)	308	348	51	83	72	127	521	533	219	74	165	188
Link Distance (ft)		1224	1224		1092		1221	1221			976	976
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	465			140		280			245	310		
Storage Blk Time (%)				0	0	0	11	15	0		0	0
Queuing Penalty (veh)				0	0	0	4	13	2		0	0

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	SB
Directions Served	R
Maximum Queue (ft)	41
Average Queue (ft)	10
95th Queue (ft)	33
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	340
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: US Route 17/Carrollton Boulevard & Northgate Lane

Movement	EB	EB	NB	NB
Directions Served	LT	R	L	T
Maximum Queue (ft)	151	106	45	6
Average Queue (ft)	50	29	9	0
95th Queue (ft)	127	82	30	6
Link Distance (ft)	1221			1237
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		160	245	
Storage Blk Time (%)	3	0		
Queuing Penalty (veh)	1	0		

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB
Directions Served	L	L	T	R	L	T	TR	L	L	T	T	R
Maximum Queue (ft)	429	446	102	172	80	115	94	286	298	283	287	58
Average Queue (ft)	278	302	34	9	22	40	29	145	179	154	164	11
95th Queue (ft)	394	410	80	75	57	85	69	244	274	240	253	46
Link Distance (ft)		668	668			1281	1281			1046	1046	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	585			575	150			560	560			300
Storage Blk Time (%)						0					0	
Queuing Penalty (veh)						0					0	

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	SB	SB	SB
Directions Served	L	T	T
Maximum Queue (ft)	112	227	207
Average Queue (ft)	42	134	98
95th Queue (ft)	90	206	175
Link Distance (ft)		1181	1181
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	300		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: US Route 17/Carrollton Boulevard & Deep Bottom Drive/Channell Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	55	104	18	33
Average Queue (ft)	6	38	2	8
95th Queue (ft)	31	76	11	26
Link Distance (ft)	712	416		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			140	140
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	R	L	T	T	R
Maximum Queue (ft)	111	64	182	32	241	211	21	64	163	170	32
Average Queue (ft)	47	17	62	6	106	64	1	23	54	69	2
95th Queue (ft)	93	46	131	23	199	160	10	53	125	136	15
Link Distance (ft)		644	713		1440	1440			1077	1077	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	135			275			350	300			630
Storage Blk Time (%)	0				0						
Queuing Penalty (veh)	0				0						

Intersection: 10: Bend

Movement	WB	WB
Directions Served	T	T
Maximum Queue (ft)	110	110
Average Queue (ft)	4	4
95th Queue (ft)	81	80
Link Distance (ft)	668	668
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 16: US Route 17/Carrollton Boulevard & Site A

Movement	NB	NB
Directions Served	T	TR
Maximum Queue (ft)	5	10
Average Queue (ft)	0	0
95th Queue (ft)	5	8
Link Distance (ft)	549	549
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: US Route 17/Carrollton Boulevard & Site B

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 19: US Route 17/Carrollton Boulevard & Site C

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: US Route 17/Carrollton Boulevard & Nike Park Extension

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	L	T	T	T	T	R
Maximum Queue (ft)	183	216	64	58	202	216	126	252	139
Average Queue (ft)	106	133	15	12	78	74	41	104	9
95th Queue (ft)	176	197	41	39	172	170	95	202	71
Link Distance (ft)		1339			1181	1181	632	632	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	650		430	75					200
Storage Blk Time (%)				0	7			1	0
Queuing Penalty (veh)				0	2			1	0

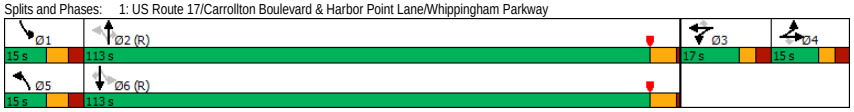
Network Summary

Network wide Queuing Penalty: 32

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	0	18	27	0	11	37	1150	37	23	2341	54
Future Volume (vph)	13	0	18	27	0	11	37	1150	37	23	2341	54
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1805	1615	0	1805	1455	1805	3539	1568	1805	3574	1615
Flt Permitted		0.950			0.950		0.033			0.207		
Satd. Flow (perm)	0	1805	1615	0	1805	1455	63	3539	1568	393	3574	1615
Satd. Flow (RTOR)			109			109			109			109
Adj. Flow (vph)	14	0	19	28	0	11	39	1198	39	24	2439	56
Lane Group Flow (vph)	0	14	19	0	28	11	39	1198	39	24	2439	56
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	15.0	15.0	15.0	17.0	17.0	17.0	15.0	113.0	113.0	15.0	113.0	113.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)		7.4	7.4		8.0	8.0	129.3	127.6	127.6	127.0	124.8	124.8
Actuated g/C Ratio		0.05	0.05		0.05	0.05	0.81	0.80	0.80	0.79	0.78	0.78
v/c Ratio		0.17	0.11		0.31	0.06	0.34	0.42	0.03	0.07	0.88	0.04
Control Delay		77.6	1.2		81.6	0.7	34.8	2.9	0.1	4.6	21.8	0.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Total Delay		77.6	1.2		81.6	0.7	34.8	2.9	0.1	4.6	22.8	0.1
LOS		E	A		F	A	C	A	A	A	C	A
Approach Delay		33.6			58.8			3.8			22.2	
Approach LOS		C			E			A			C	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 10 (6%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 16.6		Intersection LOS: B	
Intersection Capacity Utilization 89.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway



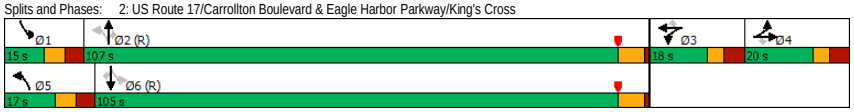
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	0	18	27	0	11	37	1150	37	23	2341	54
Future Volume (vph)	13	0	18	27	0	11	37	1150	37	23	2341	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1805	1615		1805	1455	1805	3539	1568	1805	3574	1615
Flt Permitted		0.95	1.00		0.95	1.00	0.03	1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)		1805	1615		1805	1455	63	3539	1568	394	3574	1615
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	14	0	19	28	0	11	39	1198	39	24	2439	56
RTOR Reduction (vph)	0	0	18	0	0	11	0	0	10	0	0	14
Lane Group Flow (vph)	0	14	1	0	28	0	39	1198	29	24	2439	42
Heavy Vehicles (%)	0%	0%	0%	0%	0%	11%	0%	2%	3%	0%	1%	0%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		4.6	4.6		6.9	6.9	125.0	120.1	120.1	122.0	118.6	118.6
Effective Green, g (s)		4.6	4.6		6.9	6.9	125.0	120.1	120.1	122.0	118.6	118.6
Actuated g/C Ratio		0.03	0.03		0.04	0.04	0.78	0.75	0.75	0.76	0.74	0.74
Clearance Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		51	46		77	62	102	2656	1176	330	2649	1197
v/s Ratio Prot		c0.01			c0.02		c0.01	0.34		0.00	c0.68	
v/s Ratio Perm			0.00			0.00	0.28		0.02	0.05		0.03
v/c Ratio		0.27	0.01		0.36	0.01	0.38	0.45	0.02	0.07	0.92	0.03
Uniform Delay, d1		76.1	75.5		74.4	73.3	38.0	7.5	5.1	5.2	16.9	5.5
Progression Factor		1.00	1.00		1.00	1.00	2.51	0.32	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.9	0.1		2.9	0.0	1.6	0.5	0.0	0.1	6.7	0.1
Delay (s)		79.0	75.6		77.3	73.3	97.0	2.9	5.1	5.3	23.5	5.6
Level of Service		E	E		E	E	F	A	A	A	C	A
Approach Delay (s)		77.0			76.2			5.9			22.9	
Approach LOS		E			E			A			C	

Intersection Summary					
HCM 2000 Control Delay		18.3	HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.85			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		25.0
Intersection Capacity Utilization		89.7%	ICU Level of Service		E
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	5	56	14	6	14	93	1137	18	24	2182	180
Future Volume (vph)	73	5	56	14	6	14	93	1137	18	24	2182	180
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.966		0.950			0.950		
Satd. Flow (prot)	0	1814	1615	0	1835	1495	1805	3574	1509	1805	3574	1615
Flt Permitted		0.955			0.966		0.036			0.198		
Satd. Flow (perm)	0	1814	1615	0	1835	1495	68	3574	1509	376	3574	1615
Satd. Flow (RTOR)			119			119			126			126
Adj. Flow (vph)	78	5	60	15	6	15	99	1210	19	26	2321	191
Lane Group Flow (vph)	0	83	60	0	21	15	99	1210	19	26	2321	191
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	20.0	20.0	20.0	18.0	18.0	18.0	17.0	107.0	107.0	15.0	105.0	105.0
Total Lost Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Act Effct Green (s)		12.0	12.0		7.8	7.8	122.1	117.7	117.7	114.1	110.0	110.0
Actuated g/C Ratio		0.08	0.08		0.05	0.05	0.76	0.74	0.74	0.71	0.69	0.69
v/c Ratio		0.61	0.26		0.24	0.08	0.70	0.46	0.02	0.08	0.94	0.17
Control Delay		90.2	2.7		79.2	0.9	50.8	17.2	0.0	5.6	18.5	1.6
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0
Total Delay		90.2	2.8		79.2	0.9	50.8	17.2	0.0	5.6	25.4	1.6
LOS		F	A		E	A	D	B	A	A	C	A
Approach Delay		53.5			46.6			19.5			23.4	
Approach LOS		D			D			B			C	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 12 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 23.4		Intersection LOS: C	
Intersection Capacity Utilization 93.5%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross



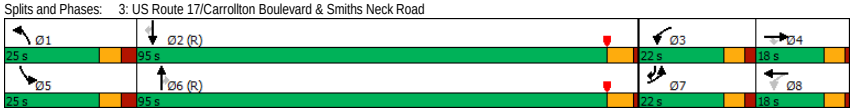
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	5	56	14	6	14	93	1137	18	24	2182	180
Future Volume (vph)	73	5	56	14	6	14	93	1137	18	24	2182	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96	1.00		0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1815	1615		1834	1495	1805	3574	1509	1805	3574	1615
Flt Permitted		0.96	1.00		0.97	1.00	0.04	1.00	1.00	0.20	1.00	1.00
Satd. Flow (perm)		1815	1615		1834	1495	68	3574	1509	377	3574	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	78	5	60	15	6	15	99	1210	19	26	2321	191
RTOR Reduction (vph)	0	0	56	0	0	15	0	0	6	0	0	42
Lane Group Flow (vph)	0	83	5	0	21	0	99	1210	13	26	2321	149
Heavy Vehicles (%)	0%	0%	0%	0%	0%	8%	0%	1%	7%	0%	1%	0%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		12.0	12.0		5.0	5.0	120.2	111.9	111.9	110.8	107.2	107.2
Effective Green, g (s)		12.0	12.0		5.0	5.0	120.2	111.9	111.9	110.8	107.2	107.2
Actuated g/C Ratio		0.08	0.08		0.03	0.03	0.75	0.70	0.70	0.69	0.67	0.67
Clearance Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		136	121		57	46	141	2499	1055	293	2394	1082
v/s Ratio Prot		c0.05			c0.01		c0.04	0.34		0.00	c0.65	
v/s Ratio Perm			0.00			0.00	c0.49		0.01	0.06		0.09
v/c Ratio		0.61	0.04		0.37	0.01	0.70	0.48	0.01	0.09	0.97	0.14
Uniform Delay, d1		71.7	68.6		76.0	75.1	52.9	10.9	7.3	8.5	24.9	9.6
Progression Factor		1.00	1.00		1.00	1.00	0.87	1.54	1.00	0.84	0.47	0.35
Incremental Delay, d2		7.9	0.1		4.0	0.1	12.3	0.6	0.0	0.1	8.1	0.1
Delay (s)		79.6	68.8		79.9	75.2	58.2	17.5	7.3	7.2	19.6	3.5
Level of Service		E	E		E	E	E	B	A	A	B	A
Approach Delay (s)		75.0			78.0			20.4			18.3	
Approach LOS		E			E			C			B	

Intersection Summary					
HCM 2000 Control Delay		21.5	HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio		0.91			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		27.5
Intersection Capacity Utilization		93.5%	ICU Level of Service		F
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	44	66	86	91	27	173	845	90	79	1843	364
Future Volume (vph)	226	44	66	86	91	27	173	845	90	79	1843	364
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.966				0.850			0.850
Flt Protected	0.950	0.967		0.950			0.950			0.950		
Satd. Flow (prot)	1715	1745	1599	1805	1835	0	1805	3539	1615	1770	3574	1599
Flt Permitted	0.950	0.312		0.658			0.950			0.950		
Satd. Flow (perm)	1715	563	1599	1250	1835	0	1805	3539	1615	1770	3574	1599
Satd. Flow (RTOR)			109		7				102			163
Adj. Flow (vph)	246	48	72	93	99	29	188	918	98	86	2003	396
Lane Group Flow (vph)	145	149	72	93	128	0	188	918	98	86	2003	396
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		1	6		5	2	7
Permitted Phases			4	8					6			2
Total Split (s)	22.0	18.0	18.0	22.0	18.0		25.0	95.0	95.0	25.0	95.0	22.0
Total Lost Time (s)	6.0	5.0	5.0	6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)	15.5	16.5	16.8	24.7	13.5		17.9	94.4	94.4	12.6	89.1	110.7
Actuated g/C Ratio	0.10	0.10	0.10	0.15	0.08		0.11	0.59	0.59	0.08	0.56	0.69
v/c Ratio	0.87	0.83	0.27	0.40	0.80		0.94	0.44	0.10	0.62	1.01	0.34
Control Delay	113.2	103.5	5.3	58.1	100.1		133.4	6.6	1.3	103.4	30.0	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	5.6	0.0
Total Delay	113.2	103.5	5.3	58.1	100.1		133.4	6.6	1.3	103.4	35.6	2.6
LOS	F	F	A	E	F		F	A	A	F	D	A
Approach Delay		88.0			82.4			26.0			32.7	
Approach LOS		F			F			C			C	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 28 (18%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 38.1		Intersection LOS: D	
Intersection Capacity Utilization 89.6%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	44	66	86	91	27	173	845	90	79	1843	364
Future Volume (vph)	226	44	66	86	91	27	173	845	90	79	1843	364
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.0	5.0	6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.97	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1715	1746	1599	1805	1835		1805	3539	1615	1770	3574	1599
Flt Permitted	0.95	0.31	1.00	0.66	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1715	563	1599	1249	1835		1805	3539	1615	1770	3574	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	246	48	72	93	99	29	188	918	98	86	2003	396
RTOR Reduction (vph)	0	0	64	0	6	0	0	0	40	0	0	56
Lane Group Flow (vph)	145	149	8	93	122	0	188	918	58	86	2003	340
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	2%	1%	1%
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		1	6		5	2	7
Permitted Phases			4	8					6			2
Actuated Green, G (s)	15.5	32.3	16.8	25.7	13.5		17.9	94.4	94.4	12.6	89.1	104.6
Effective Green, g (s)	15.5	32.3	16.8	25.7	13.5		17.9	94.4	94.4	12.6	89.1	104.6
Actuated g/C Ratio	0.10	0.20	0.11	0.16	0.08		0.11	0.59	0.59	0.08	0.56	0.65
Clearance Time (s)	6.0	5.0	5.0	6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		2.5	5.0	5.0	2.5	5.0	3.0
Lane Grp Cap (vph)	166	228	167	243	154		201	2088	952	139	1990	1105
v/s Ratio Prot	c0.08	0.06		0.03	c0.07		c0.10	c0.26		0.05	c0.56	0.03
v/s Ratio Perm		c0.07	0.00	0.03					0.04			0.18
v/c Ratio	0.87	0.65	0.05	0.38	0.79		0.94	0.44	0.06	0.62	1.01	0.31
Uniform Delay, d1	71.3	58.7	64.4	59.4	71.9		70.5	18.2	13.9	71.4	35.5	12.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.29	0.32	0.46	1.34	0.39	0.41
Incremental Delay, d2	36.2	6.6	0.1	1.0	23.0		43.0	0.6	0.1	3.0	14.9	0.1
Delay (s)	107.5	65.3	64.5	60.4	94.9		133.9	6.4	6.6	98.9	28.8	5.0
Level of Service	F	E	E	E	F		F	A	A	F	C	A
Approach Delay (s)		81.9			80.4			26.4			27.4	
Approach LOS		F			F			C			C	

Intersection Summary					
HCM 2000 Control Delay	34.5	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.97				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0		
Intersection Capacity Utilization	89.6%	ICU Level of Service	E		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	0	18	0	1	1	88	1276	1	4	1952	33
Future Volume (vph)	11	0	18	0	1	1	88	1276	1	4	1952	33
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.932				0.850			0.850
Flt Protected		0.950					0.950			0.950		
Satd. Flow (prot)	0	1805	1615	0	1771	0	1787	3574	1615	1805	3574	1615
Flt Permitted		0.950					0.950			0.950		
Satd. Flow (perm)	0	1805	1615	0	1771	0	1787	3574	1615	1805	3574	1615
Adj. Flow (vph)	12	0	19	0	1	1	94	1357	1	4	2077	35
Lane Group Flow (vph)	0	12	19	0	2	0	94	1357	1	4	2077	35
Sign Control		Stop			Stop			Free			Free	

Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 76.1%					ICU Level of Service D							
Analysis Period (min) 15												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	0	18	0	1	1	88	1276	1	4	1952	33
Future Volume (Veh/h)	11	0	18	0	1	1	88	1276	1	4	1952	33
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	12	0	19	0	1	1	94	1357	1	4	2077	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			6									
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1315	
pX, platoon unblocked	0.45	0.45	0.45	0.45	0.45		0.45					
vC, conflicting volume	2953	3631	1038	2592	3665	678	2112			1358		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2896	4394	0	2098	4469	678	1038			1358		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	96	100	0	100	69			99		
cM capacity (veh/h)	0	0	494	10	0	399	304			513		

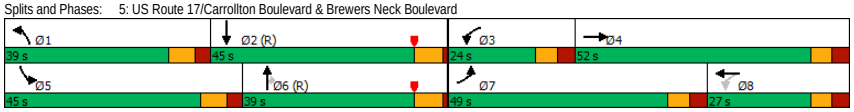
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4		
Volume Total	31	2	94	678	678	1	4	1038	1038	35		
Volume Left	12	0	94	0	0	0	4	0	0	0		
Volume Right	19	1	0	0	0	1	0	0	0	35		
cSH	0	1	304	1700	1700	1700	513	1700	1700	1700		
Volume to Capacity	Err	2.29	0.31	0.40	0.40	0.00	0.01	0.61	0.61	0.02		
Queue Length 95th (ft)	Err	23	32	0	0	0	1	0	0	0		
Control Delay (s)	Err	6500.3	22.1	0.0	0.0	0.0	12.1	0.0	0.0	0.0		
Lane LOS	F	F	C				B					
Approach Delay (s)	Err	6500.3	1.4				0.0					
Approach LOS	F	F										

Intersection Summary												
Average Delay			Err									
Intersection Capacity Utilization			76.1%		ICU Level of Service				D			
Analysis Period (min)			15									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	755	189	641	158	294	50	550	558	61	305	627	1202
Future Volume (vph)	755	189	641	158	294	50	550	558	61	305	627	1202
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.978				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1863	1568	1770	3461	0	3433	3574	1583	1805	3574	1599
Flt Permitted	0.950			0.633			0.950			0.950		
Satd. Flow (perm)	3433	1863	1568	1179	3461	0	3433	3574	1583	1805	3574	1599
Satd. Flow (RTOR)			592		10				188			631
Adj. Flow (vph)	795	199	675	166	309	53	579	587	64	321	660	1265
Lane Group Flow (vph)	795	199	675	166	362	0	579	587	64	321	660	1265
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Total Split (s)	49.0	52.0		24.0	27.0		39.0	39.0	39.0	45.0	45.0	
Total Lost Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Act Effct Green (s)	40.2	44.9	160.0	33.4	19.0		29.6	38.9	38.9	32.4	41.7	160.0
Actuated g/C Ratio	0.25	0.28	1.00	0.21	0.12		0.18	0.24	0.24	0.20	0.26	1.00
v/c Ratio	0.92	0.38	0.43	0.56	0.86		0.91	0.68	0.12	0.88	0.71	0.79
Control Delay	75.0	48.9	0.9	41.2	87.0		71.3	57.3	2.6	87.9	38.9	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.0	48.9	0.9	41.2	87.0		71.3	57.3	2.6	87.9	38.9	14.6
LOS	E	D	A	D	F		E	E	A	F	D	B
Approach Delay		41.9			72.6			61.1			32.2	
Approach LOS		D			E			E			C	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 74 (46%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 45.1		Intersection LOS: D	
Intersection Capacity Utilization 87.6%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	755	189	641	158	294	50	550	558	61	305	627	1202
Future Volume (vph)	755	189	641	158	294	50	550	558	61	305	627	1202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	4.0	7.5	7.5		8.0	6.5	6.5	8.0	6.5	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1568	1770	3461		3433	3574	1583	1805	3574	1599
Flt Permitted	0.95	1.00	1.00	0.63	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1863	1568	1179	3461		3433	3574	1583	1805	3574	1599
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	795	199	675	166	309	53	579	587	64	321	660	1265
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	48	0	0	0
Lane Group Flow (vph)	795	199	675	166	353	0	579	587	16	321	660	1265
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	1%	2%	0%	1%	1%
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Actuated Green, G (s)	40.2	44.9	160.0	33.3	19.0		29.6	38.9	38.9	32.4	41.7	160.0
Effective Green, g (s)	40.2	44.9	160.0	33.3	19.0		29.6	38.9	38.9	32.4	41.7	160.0
Actuated g/C Ratio	0.25	0.28	1.00	0.21	0.12		0.19	0.24	0.24	0.20	0.26	1.00
Clearance Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Vehicle Extension (s)	3.5	3.5		3.0	3.0		2.5	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	862	522	1568	298	410		635	868	384	365	931	1599
v/s Ratio Prot	c0.23	0.11		0.05	0.10		0.17	0.16		0.18	0.18	
v/s Ratio Perm			0.43	0.07					0.01			c0.79
v/c Ratio	0.92	0.38	0.43	0.56	0.86		0.91	0.68	0.04	0.88	0.71	0.79
Uniform Delay, d1	58.4	46.4	0.0	55.4	69.2		63.9	54.8	46.3	61.9	53.6	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.82	0.94	1.00	1.10	0.64	1.00
Incremental Delay, d2	15.3	0.6	0.9	2.3	16.7		16.7	4.0	0.2	17.0	3.6	3.2
Delay (s)	73.7	46.9	0.9	57.6	85.9		69.3	55.6	46.5	85.3	38.1	3.2
Level of Service	E	D	A	E	F		E	E	D	F	D	A
Approach Delay (s)		41.0			77.0			61.6			25.2	
Approach LOS		D			E			E			C	

Intersection Summary					
HCM 2000 Control Delay		42.6	HCM 2000 Level of Service		D
HCM 2000 Volume to Capacity ratio		0.97			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		29.5
Intersection Capacity Utilization		87.6%	ICU Level of Service		E
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	8	20	0	32	13	1072	29	59	1202	6
Future Volume (vph)	4	0	8	20	0	32	13	1072	29	59	1202	6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.907			0.917				0.850		0.999	
Flt Protected		0.985			0.981		0.950			0.950		
Satd. Flow (prot)	0	1697	0	0	1631	0	1805	3574	1553	1805	3536	0
Flt Permitted		0.985			0.981		0.950			0.950		
Satd. Flow (perm)	0	1697	0	0	1631	0	1805	3574	1553	1805	3536	0
Adj. Flow (vph)	4	0	9	21	0	34	14	1140	31	63	1279	6
Lane Group Flow (vph)	0	13	0	0	55	0	14	1140	31	63	1285	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 51.0%					ICU Level of Service A							
Analysis Period (min) 15												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	0	8	20	0	32	13	1072	29	59	1202	6
Future Volume (Veh/h)	4	0	8	20	0	32	13	1072	29	59	1202	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	4	0	9	21	0	34	14	1140	31	63	1279	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1132	
pX, platoon unblocked	0.85	0.85	0.85	0.85	0.85		0.85					
vC, conflicting volume	2040	2607	642	1942	2579	570	1285			1171		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1865	2535	212	1749	2502	570	972			1171		
tC, single (s)	7.5	6.5	6.9	7.6	6.5	7.0	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	88	100	99	47	100	93	98			90		
cM capacity (veh/h)	32	21	676	40	22	460	607			604		

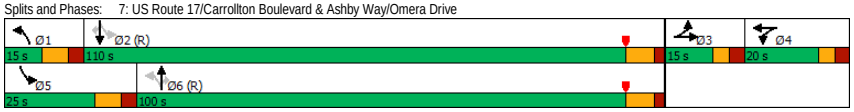
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3			
Volume Total	13	55	14	570	570	31	63	853	432			
Volume Left	4	21	14	0	0	0	63	0	0			
Volume Right	9	34	0	0	0	31	0	0	6			
cSH	95	91	607	1700	1700	1700	604	1700	1700			
Volume to Capacity	0.14	0.61	0.02	0.34	0.34	0.02	0.10	0.50	0.25			
Queue Length 95th (ft)	11	71	2	0	0	0	9	0	0			
Control Delay (s)	48.8	92.4	11.1	0.0	0.0	0.0	11.7	0.0	0.0			
Lane LOS	E	F	B				B					
Approach Delay (s)	48.8	92.4	0.1				0.5					
Approach LOS	E	F										

Intersection Summary												
Average Delay			2.5									
Intersection Capacity Utilization			51.0%		ICU Level of Service				A			
Analysis Period (min)			15									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	7	16	49	7	93	29	960	25	102	1158	47
Future Volume (vph)	35	7	16	49	7	93	29	960	25	102	1158	47
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.896			0.915				0.850			0.850
Flt Protected	0.950				0.984		0.950			0.950		
Satd. Flow (prot)	1805	1702	0	0	1668	0	1805	3539	1615	1770	3574	1615
Flt Permitted	0.950				0.984		0.199			0.236		
Satd. Flow (perm)	1805	1702	0	0	1668	0	378	3539	1615	440	3574	1615
Satd. Flow (RTOR)		16			41				170			116
Adj. Flow (vph)	35	7	16	49	7	94	29	970	25	103	1170	47
Lane Group Flow (vph)	35	23	0	0	150	0	29	970	25	103	1170	47
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Total Split (s)	15.0	15.0		20.0	20.0		15.0	100.0	100.0	25.0	110.0	110.0
Total Lost Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Act Effct Green (s)	9.2	9.2			16.9		107.2	100.6	100.6	113.4	108.2	108.2
Actuated g/C Ratio	0.06	0.06			0.11		0.67	0.63	0.63	0.71	0.68	0.68
v/c Ratio	0.34	0.21			0.71		0.09	0.44	0.02	0.27	0.48	0.04
Control Delay	81.1	40.3			67.2		9.1	17.5	0.0	6.5	11.7	0.3
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.1	40.3			67.2		9.1	17.5	0.0	6.5	11.7	0.3
LOS	F	D			E		A	B	A	A	B	A
Approach Delay		64.9			67.2			16.9			10.8	
Approach LOS		E			E			B			B	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 74 (46%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 17.8		Intersection LOS: B	
Intersection Capacity Utilization 71.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive



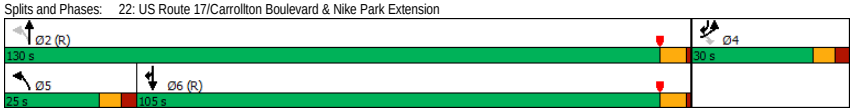
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	7	16	49	7	93	29	960	25	102	1158	47
Future Volume (vph)	35	7	16	49	7	93	29	960	25	102	1158	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.90			0.92		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	1702			1669		1805	3539	1615	1770	3574	1615
Flt Permitted	0.95	1.00			0.98		0.20	1.00	1.00	0.24	1.00	1.00
Satd. Flow (perm)	1805	1702			1669		379	3539	1615	440	3574	1615
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	35	7	16	49	7	94	29	970	25	103	1170	47
RTOR Reduction (vph)	0	15	0	0	37	0	0	0	9	0	0	17
Lane Group Flow (vph)	35	8	0	0	113	0	29	970	16	103	1170	30
Heavy Vehicles (%)	0%	0%	0%	2%	0%	3%	0%	2%	0%	2%	1%	0%
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Actuated Green, G (s)	7.6	7.6			16.9		103.7	99.4	99.4	112.3	103.7	103.7
Effective Green, g (s)	7.6	7.6			16.9		103.7	99.4	99.4	112.3	103.7	103.7
Actuated g/C Ratio	0.05	0.05			0.11		0.65	0.62	0.62	0.70	0.65	0.65
Clearance Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	85	80			176		283	2198	1003	380	2316	1046
v/s Ratio Prot	c0.02	0.00			c0.07		0.00	0.27		c0.01	c0.33	
v/s Ratio Perm							0.06		0.01	0.18		0.02
v/c Ratio	0.41	0.10			0.64		0.10	0.44	0.02	0.27	0.51	0.03
Uniform Delay, d1	74.0	72.9			68.7		11.1	15.8	11.6	9.2	14.7	10.1
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	0.63	0.73	1.00
Incremental Delay, d2	3.2	0.5			7.8		0.2	0.6	0.0	0.3	0.7	0.0
Delay (s)	77.3	73.4			76.5		11.2	16.5	11.6	6.1	11.4	10.1
Level of Service	E	E			E		B	B	B	A	B	B
Approach Delay (s)		75.7			76.5			16.2			10.9	
Approach LOS		E			E			B			B	

Intersection Summary					
HCM 2000 Control Delay		18.4	HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.52			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		27.5
Intersection Capacity Utilization		71.2%	ICU Level of Service		C
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	150	44	115	1198	1727	243
Future Volume (vph)	150	44	115	1198	1727	243
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.064			
Satd. Flow (perm)	3433	1583	119	3539	3539	1583
Satd. Flow (RTOR)		48				264
Adj. Flow (vph)	163	48	125	1302	1877	264
Lane Group Flow (vph)	163	48	125	1302	1877	264
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Total Split (s)	30.0	30.0	25.0	130.0	105.0	
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	
Act Effct Green (s)	12.9	12.9	133.1	134.1	115.1	135.1
Actuated g/C Ratio	0.08	0.08	0.83	0.84	0.72	0.84
v/c Ratio	0.59	0.28	0.56	0.44	0.74	0.19
Control Delay	79.5	20.3	20.6	8.1	2.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.5	20.3	20.6	8.1	2.4	0.1
LOS	E	C	C	A	A	A
Approach Delay	66.0			9.2	2.1	
Approach LOS	E			A	A	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 78 (49%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 8.3		Intersection LOS: A	
Intersection Capacity Utilization 76.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 22: US Route 17/Carrollton Boulevard & Nike Park Extension



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	150	44	115	1198	1727	243
Future Volume (vph)	150	44	115	1198	1727	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.06	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	120	3539	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	48	125	1302	1877	264
RTOR Reduction (vph)	0	44	0	0	0	43
Lane Group Flow (vph)	163	4	125	1302	1877	221
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Actuated Green, G (s)	12.9	12.9	134.1	134.1	115.2	134.1
Effective Green, g (s)	12.9	12.9	134.1	134.1	115.2	134.1
Actuated g/C Ratio	0.08	0.08	0.84	0.84	0.72	0.84
Clearance Time (s)	7.0	7.0	7.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	276	127	223	2966	2548	1326
v/s Ratio Prot	c0.05		0.04	c0.37	c0.53	0.14
v/s Ratio Perm		0.00	0.43			
v/c Ratio	0.59	0.03	0.56	0.44	0.74	0.17
Uniform Delay, d1	71.0	67.8	25.4	3.3	13.4	2.4
Progression Factor	1.00	1.00	1.01	2.23	0.11	0.00
Incremental Delay, d2	3.4	0.1	1.8	0.3	0.7	0.0
Delay (s)	74.4	67.9	27.5	7.7	2.2	0.0
Level of Service	E	E	C	A	A	A
Approach Delay (s)	72.9			9.4	1.9	
Approach LOS	E			A	A	

Intersection Summary					
HCM 2000 Control Delay		8.7	HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio		0.71			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		20.0
Intersection Capacity Utilization		76.6%	ICU Level of Service		D
Analysis Period (min)		15			

c Critical Lane Group

Intersection: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	58	61	80	33	91	113	116	33	199	2476	2474	230
Average Queue (ft)	15	17	22	5	33	31	43	3	32	887	923	55
95th Queue (ft)	45	47	59	21	74	87	102	18	140	2440	2465	214
Link Distance (ft)	1155		1696			490	490			4237	4237	
Upstream Blk Time (%)										0	0	
Queuing Penalty (veh)										0	0	
Storage Bay Dist (ft)		170		550	280			215	220			230
Storage Blk Time (%)									0	19	25	0
Queuing Penalty (veh)									0	4	13	3

Intersection: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	180	120	68	60	181	241	266	48	282	585	583	240
Average Queue (ft)	76	41	18	13	70	101	106	3	30	473	498	119
95th Queue (ft)	143	93	51	45	140	198	204	28	147	693	681	301
Link Distance (ft)	1388		1498			976	976			550	550	
Upstream Blk Time (%)										8	12	
Queuing Penalty (veh)										101	140	
Storage Bay Dist (ft)		220		65	265			240	310			240
Storage Blk Time (%)	0	0	1	0	0	0	0		0	21	27	1
Queuing Penalty (veh)	0	0	0	0	0	0	0		0	5	49	6

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	TR	L	T	T	R	L	T	T
Maximum Queue (ft)	352	441	105	140	281	270	325	302	182	310	959	971
Average Queue (ft)	213	244	39	81	107	171	134	136	21	105	506	573
95th Queue (ft)	370	415	86	147	219	264	282	266	100	256	914	986
Link Distance (ft)		1812	1812		1622		1217	1217			976	976
Upstream Blk Time (%)											0	0
Queuing Penalty (veh)											1	2
Storage Bay Dist (ft)	465			140		280			245	310		
Storage Blk Time (%)	0	1		2	6	3	1	1	0	0	14	16
Queuing Penalty (veh)	0	1		3	6	11	1	1	0	1	11	57

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	SB
Directions Served	R
Maximum Queue (ft)	340
Average Queue (ft)	204
95th Queue (ft)	451
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	340
Storage Blk Time (%)	1
Queuing Penalty (veh)	8

Intersection: 4: US Route 17/Carrollton Boulevard & Northgate Lane

Movement	EB	EB	WB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	L	T	T
Maximum Queue (ft)	51	46	19	149	12	19	112	114
Average Queue (ft)	10	11	2	69	0	2	4	4
95th Queue (ft)	34	31	11	132	7	11	115	114
Link Distance (ft)	1606		1590		1229		1217	1217
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		160		245		80		
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	EB	EB	EB	EB	B10	B10	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	R	T	T	L	T	TR	L	L	T
Maximum Queue (ft)	475	518	279	285	18	6	150	343	318	365	373	335
Average Queue (ft)	304	325	119	42	1	0	122	185	166	218	229	209
95th Queue (ft)	446	473	220	191	19	6	183	302	271	335	345	300
Link Distance (ft)		640	640		1310	1310		1284	1284			1055
Upstream Blk Time (%)		0	0									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	585			575			150			560	560	
Storage Blk Time (%)	0	0					5	15				
Queuing Penalty (veh)	0	1					7	24				

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R
Maximum Queue (ft)	347	208	300	490	532	266
Average Queue (ft)	220	38	250	276	220	14
95th Queue (ft)	308	119	340	439	423	116
Link Distance (ft)	1055			1181	1181	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		300	300			300
Storage Blk Time (%)	1	0	7	3	0	0
Queuing Penalty (veh)	1	0	21	10	2	0

Intersection: 6: US Route 17/Carrollton Boulevard & Deep Bottom Drive/Channell Way

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	R	L
Maximum Queue (ft)	41	106	29	6	81
Average Queue (ft)	11	39	5	0	27
95th Queue (ft)	35	84	20	3	64
Link Distance (ft)	711	416			
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			140	60	140
Storage Blk Time (%)					0
Queuing Penalty (veh)					0

Intersection: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	R	L	T	T	R
Maximum Queue (ft)	74	57	197	73	280	251	18	119	216	233	29
Average Queue (ft)	28	17	90	17	143	103	4	39	65	81	5
95th Queue (ft)	60	46	171	53	256	224	15	84	156	174	22
Link Distance (ft)		644	713		1440	1440			1077	1077	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	135			275			350	300			630
Storage Blk Time (%)					0	0			0		
Queuing Penalty (veh)					0	0			0		

Intersection: 10: Bend

Movement	WB	WB	WB
Directions Served	T	T	
Maximum Queue (ft)	579	566	568
Average Queue (ft)	97	99	41
95th Queue (ft)	439	436	304
Link Distance (ft)	640	640	640
Upstream Blk Time (%)			0
Queuing Penalty (veh)			3
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 16: US Route 17/Carrollton Boulevard & Site A

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	512	516
Average Queue (ft)	262	287
95th Queue (ft)	613	632
Link Distance (ft)	490	490
Upstream Blk Time (%)	2	2
Queuing Penalty (veh)	21	30
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: US Route 17/Carrollton Boulevard & Site B

Movement	SB
Directions Served	T
Maximum Queue (ft)	13
Average Queue (ft)	0
95th Queue (ft)	9
Link Distance (ft)	1229
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 19: US Route 17/Carrollton Boulevard & Site C

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: US Route 17/Carrollton Boulevard & Nike Park Extension

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	L	T	T	T	T	R
Maximum Queue (ft)	127	145	72	74	382	356	311	557	200
Average Queue (ft)	51	77	19	62	160	135	129	314	91
95th Queue (ft)	103	129	52	87	333	298	255	517	243
Link Distance (ft)		1339			1181	1181	632	632	
Upstream Blk Time (%)								0	
Queuing Penalty (veh)								0	
Storage Bay Dist (ft)	650		430	75					200
Storage Blk Time (%)				30	10			16	1
Queuing Penalty (veh)				183	12			39	5

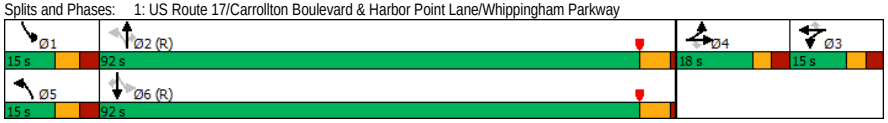
Network Summary

Network wide Queuing Penalty: 786

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	0	30	22	0	36	14	2442	8	6	824	14
Future Volume (vph)	59	0	30	22	0	36	14	2442	8	6	824	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1805	1615	0	1805	1568	1543	3539	1615	1504	3471	1495
Flt Permitted		0.950			0.950		0.285			0.041		
Satd. Flow (perm)	0	1805	1615	0	1805	1568	463	3539	1615	65	3471	1495
Satd. Flow (RTOR)			125			125			125			125
Adj. Flow (vph)	64	0	33	24	0	39	15	2654	9	7	896	15
Lane Group Flow (vph)	0	64	33	0	24	39	15	2654	9	7	896	15
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	18.0	18.0	18.0	15.0	15.0	15.0	15.0	92.0	92.0	15.0	92.0	92.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)		10.0	10.0		7.7	7.7	107.2	108.2	108.2	105.6	105.6	105.6
Actuated g/C Ratio		0.07	0.07		0.06	0.06	0.77	0.77	0.77	0.75	0.75	0.75
v/c Ratio		0.50	0.14		0.24	0.19	0.04	0.97	0.01	0.07	0.34	0.01
Control Delay		75.5	1.3		69.0	2.1	1.1	10.7	0.0	7.2	8.8	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		75.5	1.3		69.0	2.1	1.1	10.7	0.0	7.2	8.8	0.0
LOS		E	A		E	A	A	B	A	A	A	A
Approach Delay		50.3			27.6			10.6			8.6	
Approach LOS		D			C			B			A	

Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 78 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 11.4		Intersection LOS: B	
Intersection Capacity Utilization 94.2%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway



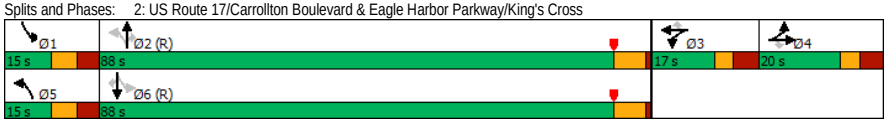
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	0	30	22	0	36	14	2442	8	6	824	14
Future Volume (vph)	59	0	30	22	0	36	14	2442	8	6	824	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1805	1615		1805	1568	1543	3539	1615	1504	3471	1495
Flt Permitted		0.95	1.00		0.95	1.00	0.29	1.00	1.00	0.04	1.00	1.00
Satd. Flow (perm)		1805	1615		1805	1568	463	3539	1615	65	3471	1495
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	64	0	33	24	0	39	15	2654	9	7	896	15
RTOR Reduction (vph)	0	0	31	0	0	37	0	0	3	0	0	5
Lane Group Flow (vph)	0	64	2	0	24	2	15	2654	6	7	896	10
Heavy Vehicles (%)	0%	0%	0%	0%	0%	3%	17%	2%	0%	20%	4%	8%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		8.6	8.6		6.3	6.3	101.3	99.0	99.0	98.9	97.8	97.8
Effective Green, g (s)		8.6	8.6		6.3	6.3	101.3	99.0	99.0	98.9	97.8	97.8
Actuated g/C Ratio		0.06	0.06		0.04	0.04	0.72	0.71	0.71	0.71	0.70	0.70
Clearance Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		110	99		81	70	352	2502	1142	57	2424	1044
v/s Ratio Prot		c0.04			c0.01		0.00	c0.75		c0.00	0.26	
v/s Ratio Perm			0.00			0.00	0.03		0.00	0.09		0.01
v/c Ratio		0.58	0.02		0.30	0.03	0.04	1.06	0.01	0.12	0.37	0.01
Uniform Delay, d1		63.9	61.7		64.7	63.9	5.8	20.5	6.0	37.6	8.6	6.4
Progression Factor		1.00	1.00		1.00	1.00	0.20	0.13	1.00	1.00	1.00	1.00
Incremental Delay, d2		7.6	0.1		2.0	0.1	0.0	30.4	0.0	0.7	0.4	0.0
Delay (s)		71.6	61.8		66.7	64.1	1.2	33.0	6.0	38.3	9.0	6.4
Level of Service		E	E		E	E	A	C	A	D	A	A
Approach Delay (s)		68.3			65.1			32.7			9.2	
Approach LOS		E			E			C			A	

Intersection Summary					
HCM 2000 Control Delay		28.4	HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio		0.97			
Actuated Cycle Length (s)		140.0	Sum of lost time (s)		25.0
Intersection Capacity Utilization		94.2%	ICU Level of Service		F
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	1	67	14	2	24	45	2292	4	2	845	29
Future Volume (vph)	155	1	67	14	2	24	45	2292	4	2	845	29
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.958		0.950			0.950		
Satd. Flow (prot)	0	1793	1615	0	1820	1468	1719	3539	967	1805	3471	1553
Flt Permitted		0.953			0.958		0.248			0.047		
Satd. Flow (perm)	0	1793	1615	0	1820	1468	449	3539	967	89	3471	1553
Satd. Flow (RTOR)			136			136			144			144
Adj. Flow (vph)	168	1	73	15	2	26	49	2491	4	2	918	32
Lane Group Flow (vph)	0	169	73	0	17	26	49	2491	4	2	918	32
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	20.0	20.0	20.0	17.0	17.0	17.0	15.0	88.0	88.0	15.0	88.0	88.0
Total Lost Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Act Effct Green (s)		17.1	17.1		7.5	7.5	98.4	98.4	98.4	92.3	89.7	89.7
Actuated g/C Ratio		0.12	0.12		0.05	0.05	0.70	0.70	0.70	0.66	0.64	0.64
v/c Ratio		0.77	0.23		0.18	0.13	0.13	1.00	0.01	0.02	0.41	0.03
Control Delay		82.7	1.7		67.2	1.2	7.1	27.9	0.0	8.0	10.4	0.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		82.7	1.7		67.2	1.2	7.1	27.9	0.0	8.0	10.4	0.1
LOS		F	A		E	A	A	C	A	A	B	A
Approach Delay		58.2			27.3			27.4			10.1	
Approach LOS		E			C			C			B	

Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 60 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 25.0		Intersection LOS: C	
Intersection Capacity Utilization 94.5%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross



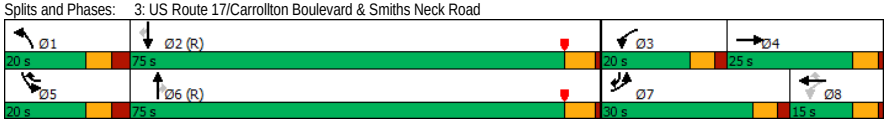
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	1	67	14	2	24	45	2292	4	2	845	29
Future Volume (vph)	155	1	67	14	2	24	45	2292	4	2	845	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1792	1615		1820	1468	1719	3539	967	1805	3471	1553
Flt Permitted		0.95	1.00		0.96	1.00	0.25	1.00	1.00	0.05	1.00	1.00
Satd. Flow (perm)		1792	1615		1820	1468	448	3539	967	89	3471	1553
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	168	1	73	15	2	26	49	2491	4	2	918	32
RTOR Reduction (vph)	0	0	64	0	0	25	0	0	1	0	0	12
Lane Group Flow (vph)	0	169	9	0	17	1	49	2491	3	2	918	20
Heavy Vehicles (%)	1%	0%	0%	0%	0%	10%	5%	2%	67%	0%	4%	4%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		17.1	17.1		4.7	4.7	94.9	89.7	89.7	86.5	85.5	85.5
Effective Green, g (s)		17.1	17.1		4.7	4.7	94.9	89.7	89.7	86.5	85.5	85.5
Actuated g/C Ratio		0.12	0.12		0.03	0.03	0.68	0.64	0.64	0.62	0.61	0.61
Clearance Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		218	197		61	49	350	2267	619	67	2119	948
v/s Ratio Prot		c0.09			c0.01		c0.01	c0.70		0.00	0.26	
v/s Ratio Perm			0.01			0.00	0.09		0.00	0.02		0.01
v/c Ratio		0.78	0.05		0.28	0.02	0.14	1.10	0.00	0.03	0.43	0.02
Uniform Delay, d1		59.6	54.2		66.0	65.4	8.8	25.1	9.1	34.0	14.4	10.7
Progression Factor		1.00	1.00		1.00	1.00	0.94	0.53	1.00	1.04	0.72	1.00
Incremental Delay, d2		15.7	0.1		2.5	0.1	0.1	49.4	0.0	0.1	0.6	0.0
Delay (s)		75.3	54.3		68.5	65.6	8.3	62.7	9.1	35.6	11.1	10.8
Level of Service		E	D		E	E	A	E	A	D	B	B
Approach Delay (s)		69.0			66.7			61.5			11.1	
Approach LOS		E			E			E			B	

Intersection Summary					
HCM 2000 Control Delay		49.4	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio		1.01			
Actuated Cycle Length (s)		140.0	Sum of lost time (s)	27.5	
Intersection Capacity Utilization		94.5%	ICU Level of Service	F	
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	439	64	93	70	12	42	40	1678	87	60	756	122
Future Volume (vph)	439	64	93	70	12	42	40	1678	87	60	756	122
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.911				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	1717	0	1719	1900	1553	1612	3539	1553	1752	3471	1615
Flt Permitted	0.950						0.950			0.950		
Satd. Flow (perm)	3467	1717	0	1810	1900	1553	1612	3539	1553	1752	3471	1615
Satd. Flow (RTOR)		43				117			164			133
Adj. Flow (vph)	477	70	101	76	13	46	43	1824	95	65	822	133
Lane Group Flow (vph)	477	171	0	76	13	46	43	1824	95	65	822	133
Turn Type	Prot	NA		pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8	5	1	6		5	2	7
Permitted Phases				8		8			6			2
Total Split (s)	30.0	25.0		20.0	15.0	20.0	20.0	75.0	75.0	20.0	75.0	30.0
Total Lost Time (s)	6.0	5.0		6.0	5.0	7.0	7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)	25.8	15.4		13.8	7.6	15.3	8.6	82.5	82.5	9.8	83.5	116.5
Actuated g/C Ratio	0.18	0.11		0.10	0.05	0.11	0.06	0.59	0.59	0.07	0.60	0.83
v/c Ratio	0.75	0.75		0.44	0.13	0.17	0.43	0.87	0.10	0.53	0.40	0.10
Control Delay	62.0	64.7		57.5	65.2	1.3	77.8	21.0	0.6	84.9	10.8	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0
Total Delay	62.0	64.7		57.5	65.2	1.4	77.8	26.5	0.6	84.9	10.8	0.1
LOS	E	E		E	E	A	E	C	A	F	B	A
Approach Delay		62.7			39.1			26.4			14.1	
Approach LOS		E			D			C			B	

Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 48 (34%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 29.8		Intersection LOS: C	
Intersection Capacity Utilization 81.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	439	64	93	70	12	42	40	1678	87	60	756	122
Future Volume (vph)	439	64	93	70	12	42	40	1678	87	60	756	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.0		6.0	5.0	7.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	1718		1719	1900	1553	1612	3539	1553	1752	3471	1615
Flt Permitted	0.95	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	1718		1810	1900	1553	1612	3539	1553	1752	3471	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	477	70	101	76	13	46	43	1824	95	65	822	133
RTOR Reduction (vph)	0	37	0	0	0	42	0	0	42	0	0	33
Lane Group Flow (vph)	477	134	0	76	13	4	43	1824	53	65	822	100
Heavy Vehicles (%)	1%	2%	0%	5%	0%	4%	12%	2%	4%	3%	4%	0%
Turn Type	Prot	NA		pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8	5	1	6		5	2	7
Permitted Phases				8		8			6			2
Actuated Green, G (s)	25.8	18.4		14.2	3.4	12.0	7.6	78.2	78.2	8.6	79.2	105.0
Effective Green, g (s)	25.8	18.4		14.2	3.4	12.0	7.6	78.2	78.2	8.6	79.2	105.0
Actuated g/C Ratio	0.18	0.13		0.10	0.02	0.09	0.05	0.56	0.56	0.06	0.57	0.75
Clearance Time (s)	6.0	5.0		6.0	5.0	7.0	7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	2.5	2.5	5.0	5.0	2.5	5.0	3.0
Lane Grp Cap (vph)	638	225		176	46	133	87	1976	867	107	1963	1280
v/s Ratio Prot	c0.14	c0.08		0.03	0.01	0.00	0.03	c0.52		c0.04	0.24	0.01
v/s Ratio Perm				0.01		0.00			0.03			0.05
v/c Ratio	0.75	0.59		0.43	0.28	0.03	0.49	0.92	0.06	0.61	0.42	0.08
Uniform Delay, d1	54.0	57.3		59.1	67.1	58.7	64.3	28.2	14.1	64.1	17.3	4.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.07	0.55	1.00	1.13	0.60	0.01
Incremental Delay, d2	4.8	4.2		1.7	3.4	0.1	2.6	7.4	0.1	7.5	0.6	0.0
Delay (s)	58.8	61.4		60.8	70.5	58.7	71.4	23.0	14.2	80.0	11.0	0.0
Level of Service	E	E		E	E	E	E	C	B	E	B	A
Approach Delay (s)		59.5			61.0			23.7			13.9	
Approach LOS		E			E			C			B	

Intersection Summary				
HCM 2000 Control Delay	28.5	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	24.0	
Intersection Capacity Utilization	81.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	38	0	0	11	20	1822	37	17	915	10
Future Volume (vph)	0	0	38	0	0	11	20	1822	37	17	915	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.865			0.865			0.850			0.850
Flt Protected							0.950			0.950		
Satd. Flow (prot)	0	0	1550	0	0	1644	1805	3505	1615	1805	3471	1615
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	0	0	1550	0	0	1644	1805	3505	1615	1805	3471	1615
Adj. Flow (vph)	0	0	41	0	0	12	22	1980	40	18	995	11
Lane Group Flow (vph)	0	0	41	0	0	12	22	1980	40	18	995	11
Sign Control		Stop			Stop			Free			Free	

Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 60.4%					ICU Level of Service B							
Analysis Period (min) 15												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	38	0	0	11	20	1822	37	17	915	10
Future Volume (Veh/h)	0	0	38	0	0	11	20	1822	37	17	915	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	41	0	0	12	22	1980	40	18	995	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1315	
pX, platoon unblocked	0.87	0.87	0.87	0.87	0.87		0.87					
vC, conflicting volume	2077	3095	498	2598	3066	990	1006			2020		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1940	3109	126	2539	3076	990	710			2020		
tC, single (s)	7.5	6.5	7.0	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.4	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	95	100	100	95	97			94		
cM capacity (veh/h)	31	9	774	11	10	249	782			285		

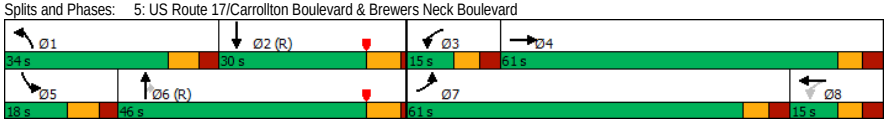
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	41	12	22	990	990	40	18	498	498	11
Volume Left	0	0	22	0	0	0	18	0	0	0
Volume Right	41	12	0	0	0	40	0	0	0	11
cSH	774	249	782	1700	1700	1700	285	1700	1700	1700
Volume to Capacity	0.05	0.05	0.03	0.58	0.58	0.02	0.06	0.29	0.29	0.01
Queue Length 95th (ft)	4	4	2	0	0	0	5	0	0	0
Control Delay (s)	9.9	20.2	9.7	0.0	0.0	0.0	18.5	0.0	0.0	0.0
Lane LOS	A	C	A				C			
Approach Delay (s)	9.9	20.2	0.1				0.3			
Approach LOS	A	C								

Intersection Summary												
Average Delay			0.4									
Intersection Capacity Utilization			60.4%		ICU Level of Service					B		
Analysis Period (min)			15									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	978	84	555	52	64	64	440	582	20	57	391	569
Future Volume (vph)	978	84	555	52	64	64	440	582	20	57	391	569
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.925				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3367	1863	1524	1770	3274	0	3242	3539	1583	1770	3505	1553
Flt Permitted	0.950			0.699			0.950			0.950		
Satd. Flow (perm)	3367	1863	1524	1302	3274	0	3242	3539	1583	1770	3505	1553
Satd. Flow (RTOR)			597		69				214			612
Adj. Flow (vph)	1052	90	597	56	69	69	473	626	22	61	420	612
Lane Group Flow (vph)	1052	90	597	56	138	0	473	626	22	61	420	612
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Total Split (s)	61.0	61.0		15.0	15.0		34.0	46.0	46.0	18.0	30.0	
Total Lost Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Act Effct Green (s)	49.6	52.4	140.0	14.3	7.2		23.9	47.5	47.5	9.0	29.8	140.0
Actuated g/C Ratio	0.35	0.37	1.00	0.10	0.05		0.17	0.34	0.34	0.06	0.21	1.00
v/c Ratio	0.88	0.13	0.39	0.36	0.59		0.86	0.52	0.03	0.54	0.56	0.39
Control Delay	51.8	29.4	0.8	36.5	43.6		59.7	37.3	0.1	78.4	43.7	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	29.4	0.8	36.5	43.6		59.7	37.3	0.1	78.4	43.7	2.1
LOS	D	C	A	D	D		E	D	A	E	D	A
Approach Delay		33.1			41.5			46.0			22.3	
Approach LOS		C			D			D			C	

Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 68 (49%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 34.2		Intersection LOS: C	
Intersection Capacity Utilization 79.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	978	84	555	52	64	64	440	582	20	57	391	569
Future Volume (vph)	978	84	555	52	64	64	440	582	20	57	391	569
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	4.0	7.5	7.5		8.0	6.5	6.5	8.0	6.5	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	1863	1524	1770	3274		3242	3539	1583	1770	3505	1553
Flt Permitted	0.95	1.00	1.00	0.70	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	1863	1524	1301	3274		3242	3539	1583	1770	3505	1553
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	1052	90	597	56	69	69	473	626	22	61	420	612
RTOR Reduction (vph)	0	0	0	0	65	0	0	0	15	0	0	0
Lane Group Flow (vph)	1052	90	597	56	73	0	473	626	7	61	420	612
Heavy Vehicles (%)	4%	2%	6%	2%	2%	2%	8%	2%	2%	2%	3%	4%
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Actuated Green, G (s)	49.6	52.4	140.0	14.6	8.7		23.9	44.5	44.5	7.7	28.3	140.0
Effective Green, g (s)	49.6	52.4	140.0	14.6	8.7		23.9	44.5	44.5	7.7	28.3	140.0
Actuated g/C Ratio	0.35	0.37	1.00	0.10	0.06		0.17	0.32	0.32	0.06	0.20	1.00
Clearance Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Vehicle Extension (s)	3.5	3.5		3.0	3.0		2.5	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	1192	697	1524	155	203		553	1124	503	97	708	1553
v/s Ratio Prot	c0.31	0.05		0.02	0.02		c0.15	c0.18		0.03	0.12	
v/s Ratio Perm			0.39	0.02					0.00			c0.39
v/c Ratio	0.88	0.13	0.39	0.36	0.36		0.86	0.56	0.01	0.63	0.59	0.39
Uniform Delay, d1	42.5	28.8	0.0	58.0	63.0		56.4	39.6	32.7	64.8	50.6	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.80	0.90	1.00	0.97	0.79	1.00
Incremental Delay, d2	8.1	0.1	0.8	1.4	1.1		11.5	1.9	0.0	11.6	3.5	0.7
Delay (s)	50.6	28.9	0.8	59.4	64.1		56.3	37.6	32.8	74.6	43.6	0.7
Level of Service	D	C	A	E	E		E	D	C	E	D	A
Approach Delay (s)		32.4			62.7			45.4			21.3	
Approach LOS		C			E			D			C	

Intersection Summary					
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.79				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	29.5		
Intersection Capacity Utilization	79.7%	ICU Level of Service	D		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	29	1	69	6	953	21	21	937	1
Future Volume (vph)	0	0	5	29	1	69	6	953	21	21	937	1
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.865				0.850			0.850			
Flt Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	1096	0	0	1813	1538	1805	3438	1292	1805	3438	0
Flt Permitted					0.954		0.950			0.950		
Satd. Flow (perm)	0	1096	0	0	1813	1538	1805	3438	1292	1805	3438	0
Adj. Flow (vph)	0	0	5	32	1	75	7	1036	23	23	1018	1
Lane Group Flow (vph)	0	5	0	0	33	75	7	1036	23	23	1019	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 43.9%					ICU Level of Service A							
Analysis Period (min) 15												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	5	29	1	69	6	953	21	21	937	1
Future Volume (Veh/h)	0	0	5	29	1	69	6	953	21	21	937	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	5	32	1	75	7	1036	23	23	1018	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						9						
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1135	
pX, platoon unblocked	0.90	0.90	0.90	0.90	0.90		0.90					
vC, conflicting volume	1597	2138	510	1610	2115	518	1019			1059		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1444	2043	237	1458	2018	518	803			1059		
tC, single (s)	7.5	6.5	7.9	7.5	6.5	7.0	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.8	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	60	98	85	99			97		
cM capacity (veh/h)	69	49	573	80	51	495	748			665		

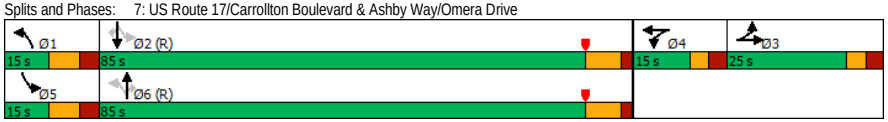
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	5	108	7	518	518	23	23	679	340
Volume Left	0	32	7	0	0	0	23	0	0
Volume Right	5	75	0	0	0	23	0	0	1
cSH	573	258	748	1700	1700	1700	665	1700	1700
Volume to Capacity	0.01	0.42	0.01	0.30	0.30	0.01	0.03	0.40	0.20
Queue Length 95th (ft)	1	49	1	0	0	0	3	0	0
Control Delay (s)	11.3	33.9	9.9	0.0	0.0	0.0	10.6	0.0	0.0
Lane LOS	B	D	A				B		
Approach Delay (s)	11.3	33.9	0.1				0.2		
Approach LOS	B	D							

Intersection Summary									
Average Delay			1.8						
Intersection Capacity Utilization			43.9%		ICU Level of Service			A	
Analysis Period (min)			15						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	1	26	39	1	76	12	836	11	57	895	8
Future Volume (vph)	62	1	26	39	1	76	12	836	11	57	895	8
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.855			0.911				0.850			0.850
Flt Protected	0.950				0.984		0.950			0.950		
Satd. Flow (prot)	1770	1550	0	0	1623	0	1805	3438	1455	1703	3471	1417
Flt Permitted	0.950				0.984		0.259			0.255		
Satd. Flow (perm)	1770	1550	0	0	1623	0	492	3438	1455	457	3471	1417
Satd. Flow (RTOR)		28			53				132			132
Adj. Flow (vph)	67	1	28	42	1	83	13	909	12	62	973	9
Lane Group Flow (vph)	67	29	0	0	126	0	13	909	12	62	973	9
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Total Split (s)	25.0	25.0		15.0	15.0		15.0	85.0	85.0	15.0	85.0	85.0
Total Lost Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Act Effct Green (s)	11.0	11.0			13.1		91.7	86.6	86.6	96.2	93.2	93.2
Actuated g/C Ratio	0.08	0.08			0.09		0.66	0.62	0.62	0.69	0.67	0.67
v/c Ratio	0.49	0.20			0.63		0.03	0.43	0.01	0.16	0.42	0.01
Control Delay	72.9	22.9			48.7		9.3	17.3	0.0	6.0	8.9	0.0
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.9	22.9			48.7		9.3	17.3	0.0	6.0	8.9	0.0
LOS	E	C			D		A	B	A	A	A	A
Approach Delay		57.8			48.7			17.0			8.7	
Approach LOS		E			D			B			A	

Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 53 (38%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 16.6		Intersection LOS: B	
Intersection Capacity Utilization 62.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive



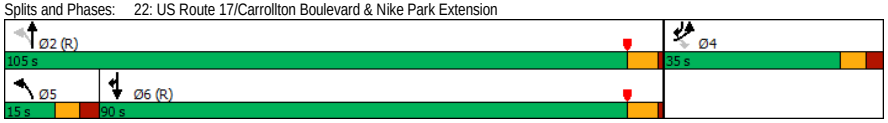
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	1	26	39	1	76	12	836	11	57	895	8
Future Volume (vph)	62	1	26	39	1	76	12	836	11	57	895	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.86			0.91		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1550			1622		1805	3438	1455	1703	3471	1417
Flt Permitted	0.95	1.00			0.98		0.26	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)	1770	1550			1622		492	3438	1455	458	3471	1417
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	1	28	42	1	83	13	909	12	62	973	9
RTOR Reduction (vph)	0	26	0	0	48	0	0	0	5	0	0	3
Lane Group Flow (vph)	67	3	0	0	78	0	13	909	7	62	973	6
Heavy Vehicles (%)	2%	0%	5%	3%	0%	6%	0%	5%	11%	6%	4%	14%
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Actuated Green, G (s)	9.4	9.4			13.1		86.6	83.8	83.8	93.4	87.2	87.2
Effective Green, g (s)	9.4	9.4			13.1		86.6	83.8	83.8	93.4	87.2	87.2
Actuated g/C Ratio	0.07	0.07			0.09		0.62	0.60	0.60	0.67	0.62	0.62
Clearance Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	118	104			151		330	2057	870	360	2161	882
v/s Ratio Prot	c0.04	0.00			c0.05		0.00	0.26		c0.01	c0.28	
v/s Ratio Perm							0.02		0.00	0.11		0.00
v/c Ratio	0.57	0.03			0.52		0.04	0.44	0.01	0.17	0.45	0.01
Uniform Delay, d1	63.3	61.0			60.4		10.6	15.3	11.3	9.1	13.8	10.0
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	0.60	0.61	1.00
Incremental Delay, d2	6.1	0.1			3.0		0.0	0.7	0.0	0.2	0.6	0.0
Delay (s)	69.5	61.1			63.4		10.7	16.0	11.4	5.7	9.0	10.0
Level of Service	E	E			E		B	B	B	A	A	B
Approach Delay (s)		67.0			63.4			15.9			8.9	
Approach LOS		E			E			B			A	

Intersection Summary					
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B		
HCM 2000 Volume to Capacity ratio	0.47				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	27.5		
Intersection Capacity Utilization	62.0%	ICU Level of Service	B		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	292	60	25	1554	871	82
Future Volume (vph)	292	60	25	1554	871	82
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.253			
Satd. Flow (perm)	3433	1583	471	3539	3539	1583
Satd. Flow (RTOR)		65				89
Adj. Flow (vph)	317	65	27	1689	947	89
Lane Group Flow (vph)	317	65	27	1689	947	89
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Total Split (s)	35.0	35.0	15.0	105.0	90.0	
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	
Act Effct Green (s)	18.2	18.2	107.8	108.8	100.8	128.4
Actuated g/C Ratio	0.13	0.13	0.77	0.78	0.72	0.92
v/c Ratio	0.71	0.25	0.06	0.61	0.37	0.06
Control Delay	67.3	13.8	4.0	9.6	12.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.3	13.8	4.0	9.6	12.0	0.2
LOS	E	B	A	A	B	A
Approach Delay	58.2			9.5	11.0	
Approach LOS	E			A	B	

Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 64 (46%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 15.9		Intersection LOS: B	
Intersection Capacity Utilization 62.1%		ICU Level of Service B	
Analysis Period (min) 15			

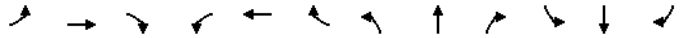
Splits and Phases: 22: US Route 17/Carrollton Boulevard & Nike Park Extension



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	292	60	25	1554	871	82
Future Volume (vph)	292	60	25	1554	871	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.25	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	471	3539	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	317	65	27	1689	947	89
RTOR Reduction (vph)	0	57	0	0	0	11
Lane Group Flow (vph)	317	8	27	1689	947	78
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Actuated Green, G (s)	18.2	18.2	108.8	108.8	98.0	122.2
Effective Green, g (s)	18.2	18.2	108.8	108.8	98.0	122.2
Actuated g/C Ratio	0.13	0.13	0.78	0.78	0.70	0.87
Clearance Time (s)	7.0	7.0	7.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	446	205	401	2750	2477	1381
v/s Ratio Prot	c0.09		0.00	c0.48	0.27	0.05
v/s Ratio Perm		0.01	0.05			
v/c Ratio	0.71	0.04	0.07	0.61	0.38	0.06
Uniform Delay, d1	58.4	53.3	4.6	6.7	8.6	1.2
Progression Factor	1.00	1.00	0.87	1.24	1.35	0.51
Incremental Delay, d2	5.3	0.1	0.0	0.7	0.4	0.0
Delay (s)	63.7	53.4	4.1	9.0	12.0	0.6
Level of Service	E	D	A	A	B	A
Approach Delay (s)	61.9			8.9	11.0	
Approach LOS	E			A	B	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	7	72	0	8	0	56	6	0	0	6	38
Future Volume (vph)	110	7	72	0	8	0	56	6	0	0	6	38
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.864									0.885	
Flt Protected	0.950							0.957				
Satd. Flow (prot)	1770	1609	0	0	1863	0	0	1783	0	0	1649	0
Flt Permitted	0.950							0.957				
Satd. Flow (perm)	1770	1609	0	0	1863	0	0	1783	0	0	1649	0
Adj. Flow (vph)	120	8	78	0	9	0	61	7	0	0	7	41
Lane Group Flow (vph)	120	86	0	0	9	0	0	68	0	0	48	0
Sign Control		Free			Stop			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 29.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Intersection: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	134	53	70	88	79	345	359	6	30	134	142	9
Average Queue (ft)	56	17	16	27	12	137	152	0	3	34	46	1
95th Queue (ft)	110	44	47	66	51	302	320	6	17	92	111	4
Link Distance (ft)	892		1111			490	490			4237	4237	
Upstream Blk Time (%)						0	0					
Queuing Penalty (veh)						0	0					
Storage Bay Dist (ft)		170		550	280			215	220			230
Storage Blk Time (%)	0					1	3					
Queuing Penalty (veh)	0					0	0					

Intersection: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	288	158	76	66	264	641	660	175	18	177	197	38
Average Queue (ft)	145	35	16	22	45	382	386	8	1	85	106	5
95th Queue (ft)	259	109	50	58	161	635	639	77	11	160	185	23
Link Distance (ft)	1075		1206			970	970			549	549	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		220		65	265			240	310			240
Storage Blk Time (%)	4	0	1	2	0	16	18	0			0	
Queuing Penalty (veh)	3	0	0	0	0	7	1	0			0	

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	L	TR	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	282	320	229	126	62	91	348	664	673	245	146	200
Average Queue (ft)	159	189	102	58	12	25	57	358	370	76	61	81
95th Queue (ft)	248	275	186	111	42	62	183	607	622	239	122	154
Link Distance (ft)			1127		178			1228	1228			970
Upstream Blk Time (%)						0						
Queuing Penalty (veh)						0						
Storage Bay Dist (ft)	465	465		150		175	450			245	450	
Storage Blk Time (%)				0		0	0	5	20	0		
Queuing Penalty (veh)				0		0	0	2	18	2		

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	248	32
Average Queue (ft)	104	5
95th Queue (ft)	188	22
Link Distance (ft)	970	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		820
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: US Route 17/Carrollton Boulevard & Northgate Lane

Movement	EB	WB	NB	SB
Directions Served	R	R	L	L
Maximum Queue (ft)	56	38	33	49
Average Queue (ft)	19	10	8	12
95th Queue (ft)	43	31	25	37
Link Distance (ft)	1152	872		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			245	300
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	EB	EB	EB	EB	B10	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	L	T	R	T	L	T	TR	L	L	T	T
Maximum Queue (ft)	479	505	171	145	11	86	110	116	275	299	290	304
Average Queue (ft)	307	334	42	6	1	32	43	48	152	177	168	178
95th Queue (ft)	441	470	119	78	12	67	84	92	242	269	260	277
Link Distance (ft)		610	610		1332		1286	1286			1050	1050
Upstream Blk Time (%)		0	0									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	585			575		150			650	650		
Storage Blk Time (%)	0	0	0	0			0					3
Queuing Penalty (veh)	0	0	0	0			0					1

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	NB	SB	SB	SB
Directions Served	R	L	T	T
Maximum Queue (ft)	167	123	246	212
Average Queue (ft)	19	52	144	115
95th Queue (ft)	90	105	221	190
Link Distance (ft)			1181	1181
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	225	500		
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Intersection: 6: US Route 17/Carrollton Boulevard & Deep Bottom Drive/Channell Way

Movement	EB	WB	WB	NB	SB	SB
Directions Served	LTR	LT	R	L	L	TR
Maximum Queue (ft)	54	67	78	20	37	2
Average Queue (ft)	6	23	31	2	9	0
95th Queue (ft)	33	54	60	13	29	1
Link Distance (ft)	712	416				1050
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			225	140	275	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	R	L	T	T	R
Maximum Queue (ft)	104	53	186	34	263	229	20	76	142	157	31
Average Queue (ft)	48	16	66	6	107	70	1	25	58	73	2
95th Queue (ft)	91	42	139	23	206	170	10	56	122	138	15
Link Distance (ft)		644	713		1440	1440			1077	1077	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	135			275			350	300			630
Storage Blk Time (%)	0				0						
Queuing Penalty (veh)	0				0						

Intersection: 10: Bend

Movement	WB	WB	WB
Directions Served	T	T	
Maximum Queue (ft)	291	143	57
Average Queue (ft)	12	11	2
95th Queue (ft)	133	129	59
Link Distance (ft)	610	610	610
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 16: US Route 17/Carrollton Boulevard & Site A

Movement	NB	NB
Directions Served	T	TR
Maximum Queue (ft)	62	71
Average Queue (ft)	3	3
95th Queue (ft)	60	62
Link Distance (ft)	549	549
Upstream Blk Time (%)	0	0
Queuing Penalty (veh)	0	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: US Route 17/Carrollton Boulevard & Site B

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 19: US Route 17/Carrollton Boulevard & Site C

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: US Route 17/Carrollton Boulevard & Nike Park Extension

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	L	T	T	T	T	R
Maximum Queue (ft)	200	226	53	47	225	233	151	269	170
Average Queue (ft)	107	135	16	15	92	89	50	122	12
95th Queue (ft)	181	201	39	42	193	190	114	228	88
Link Distance (ft)		1339			1181	1181	632	632	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	650		430	75					200
Storage Blk Time (%)				0	8			1	0
Queuing Penalty (veh)				1	2			1	0

Intersection: 33: Bojangles Driveway/7-Eleven Driveway & Smiths Neck Road

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	3	29	48	48
Average Queue (ft)	0	7	23	23
95th Queue (ft)	3	27	42	45
Link Distance (ft)		650	468	414
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	175			
Storage Blk Time (%)				
Queuing Penalty (veh)				

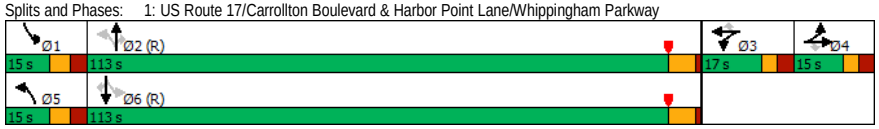
Network Summary

Network wide Queuing Penalty: 40

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	0	18	27	0	11	37	1214	37	23	2400	54
Future Volume (vph)	13	0	18	27	0	11	37	1214	37	23	2400	54
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1805	1615	0	1805	1455	1805	3539	1568	1805	3574	1615
Flt Permitted		0.950			0.950		0.033			0.190		
Satd. Flow (perm)	0	1805	1615	0	1805	1455	63	3539	1568	361	3574	1615
Satd. Flow (RTOR)			109			109			109			109
Adj. Flow (vph)	14	0	19	28	0	11	39	1265	39	24	2500	56
Lane Group Flow (vph)	0	14	19	0	28	11	39	1265	39	24	2500	56
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	15.0	15.0	15.0	17.0	17.0	17.0	15.0	113.0	113.0	15.0	113.0	113.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)		7.4	7.4		8.0	8.0	129.3	127.6	127.6	127.0	124.8	124.8
Actuated g/C Ratio		0.05	0.05		0.05	0.05	0.81	0.80	0.80	0.79	0.78	0.78
v/c Ratio		0.17	0.11		0.31	0.06	0.34	0.45	0.03	0.07	0.90	0.04
Control Delay		77.6	1.2		81.6	0.7	31.3	4.2	0.0	4.6	23.3	0.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0
Total Delay		77.6	1.2		81.6	0.7	31.3	4.2	0.0	4.6	26.6	0.1
LOS		E	A		F	A	C	A	A	A	C	A
Approach Delay		33.6			58.8			4.9			25.8	
Approach LOS		C			E			A			C	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 15 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 19.1		Intersection LOS: B	
Intersection Capacity Utilization 91.3%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway



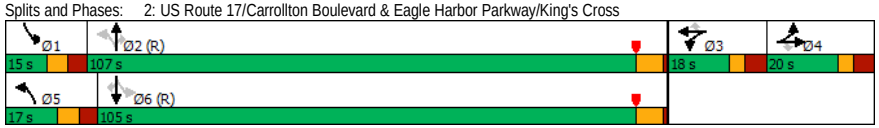
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	0	18	27	0	11	37	1214	37	23	2400	54
Future Volume (vph)	13	0	18	27	0	11	37	1214	37	23	2400	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1805	1615		1805	1455	1805	3539	1568	1805	3574	1615
Flt Permitted		0.95	1.00		0.95	1.00	0.03	1.00	1.00	0.19	1.00	1.00
Satd. Flow (perm)		1805	1615		1805	1455	63	3539	1568	362	3574	1615
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	14	0	19	28	0	11	39	1265	39	24	2500	56
RTOR Reduction (vph)	0	0	18	0	0	11	0	0	10	0	0	14
Lane Group Flow (vph)	0	14	1	0	28	0	39	1265	29	24	2500	42
Heavy Vehicles (%)	0%	0%	0%	0%	0%	11%	0%	2%	3%	0%	1%	0%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		4.6	4.6		6.9	6.9	125.0	120.1	120.1	122.0	118.6	118.6
Effective Green, g (s)		4.6	4.6		6.9	6.9	125.0	120.1	120.1	122.0	118.6	118.6
Actuated g/C Ratio		0.03	0.03		0.04	0.04	0.78	0.75	0.75	0.76	0.74	0.74
Clearance Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		51	46		77	62	102	2656	1176	306	2649	1197
v/s Ratio Prot		c0.01			c0.02		c0.01	0.36		0.00	c0.70	
v/s Ratio Perm			0.00			0.00	0.28		0.02	0.06		0.03
v/c Ratio		0.27	0.01		0.36	0.01	0.38	0.48	0.02	0.08	0.94	0.03
Uniform Delay, d1		76.1	75.5		74.4	73.3	42.8	7.7	5.1	5.4	17.8	5.5
Progression Factor		1.00	1.00		1.00	1.00	2.20	0.47	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.9	0.1		2.9	0.0	1.6	0.6	0.0	0.1	8.5	0.1
Delay (s)		79.0	75.6		77.3	73.3	95.5	4.2	5.1	5.5	26.4	5.6
Level of Service		E	E		E	E	F	A	A	A	C	A
Approach Delay (s)		77.0			76.2			6.9			25.7	
Approach LOS		E			E			A			C	

Intersection Summary					
HCM 2000 Control Delay		20.3	HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio		0.87			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		25.0
Intersection Capacity Utilization		91.3%	ICU Level of Service		F
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	5	56	14	6	14	93	1201	18	24	2241	180
Future Volume (vph)	73	5	56	14	6	14	93	1201	18	24	2241	180
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.966		0.950			0.950		
Satd. Flow (prot)	0	1814	1615	0	1835	1495	1805	3574	1509	1805	3574	1615
Flt Permitted		0.955			0.966		0.036			0.181		
Satd. Flow (perm)	0	1814	1615	0	1835	1495	68	3574	1509	344	3574	1615
Satd. Flow (RTOR)			119			119			126			126
Adj. Flow (vph)	78	5	60	15	6	15	99	1278	19	26	2384	191
Lane Group Flow (vph)	0	83	60	0	21	15	99	1278	19	26	2384	191
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	20.0	20.0	20.0	18.0	18.0	18.0	17.0	107.0	107.0	15.0	105.0	105.0
Total Lost Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Act Effct Green (s)		12.0	12.0		7.8	7.8	122.1	117.7	117.7	114.1	110.0	110.0
Actuated g/C Ratio		0.08	0.08		0.05	0.05	0.76	0.74	0.74	0.71	0.69	0.69
v/c Ratio		0.61	0.26		0.24	0.08	0.70	0.49	0.02	0.09	0.97	0.17
Control Delay		90.2	2.7		79.2	0.9	54.4	15.8	0.0	4.1	20.2	0.7
Queue Delay		0.0	0.1		0.0	0.0	0.0	0.0	0.0	0.0	33.7	0.0
Total Delay		90.2	2.8		79.2	0.9	54.4	15.8	0.0	4.1	54.0	0.7
LOS		F	A		E	A	D	B	A	A	D	A
Approach Delay		53.5			46.6			18.3			49.6	
Approach LOS		D			D			B			D	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 24 (15%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 39.2		Intersection LOS: D	
Intersection Capacity Utilization 95.2%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross



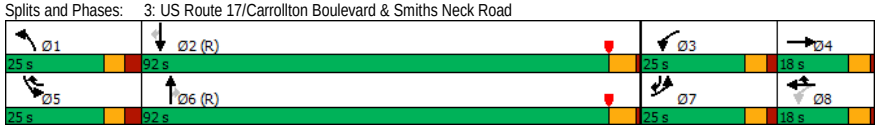
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	5	56	14	6	14	93	1201	18	24	2241	180
Future Volume (vph)	73	5	56	14	6	14	93	1201	18	24	2241	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96	1.00		0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1815	1615		1834	1495	1805	3574	1509	1805	3574	1615
Flt Permitted		0.96	1.00		0.97	1.00	0.04	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)		1815	1615		1834	1495	68	3574	1509	343	3574	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	78	5	60	15	6	15	99	1278	19	26	2384	191
RTOR Reduction (vph)	0	0	56	0	0	15	0	0	6	0	0	42
Lane Group Flow (vph)	0	83	5	0	21	0	99	1278	13	26	2384	149
Heavy Vehicles (%)	0%	0%	0%	0%	0%	8%	0%	1%	7%	0%	1%	0%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		12.0	12.0		5.0	5.0	120.2	111.9	111.9	110.8	107.2	107.2
Effective Green, g (s)		12.0	12.0		5.0	5.0	120.2	111.9	111.9	110.8	107.2	107.2
Actuated g/C Ratio		0.08	0.08		0.03	0.03	0.75	0.70	0.70	0.69	0.67	0.67
Clearance Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		136	121		57	46	141	2499	1055	270	2394	1082
v/s Ratio Prot		c0.05			c0.01		c0.04	0.36		0.00	c0.67	
v/s Ratio Perm			0.00			0.00	c0.49		0.01	0.06		0.09
v/c Ratio		0.61	0.04		0.37	0.01	0.70	0.51	0.01	0.10	1.00	0.14
Uniform Delay, d1		71.7	68.6		76.0	75.1	52.9	11.3	7.3	8.8	26.2	9.6
Progression Factor		1.00	1.00		1.00	1.00	0.96	1.36	1.00	0.61	0.41	0.12
Incremental Delay, d2		7.9	0.1		4.0	0.1	12.6	0.7	0.0	0.1	12.1	0.1
Delay (s)		79.6	68.8		79.9	75.2	63.6	16.0	7.3	5.4	22.7	1.3
Level of Service		E	E		E	E	E	B	A	A	C	A
Approach Delay (s)		75.0			78.0			19.2			21.0	
Approach LOS		E			E			B			C	

Intersection Summary					
HCM 2000 Control Delay		22.8	HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio		0.93			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		27.5
Intersection Capacity Utilization		95.2%	ICU Level of Service		F
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	46	70	121	95	35	175	901	90	92	1889	364
Future Volume (vph)	226	46	70	121	95	35	175	901	90	92	1889	364
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.910				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3502	1719	0	1805	1900	1615	1805	3539	1615	1770	3574	1599
Flt Permitted	0.950			0.408			0.950			0.950		
Satd. Flow (perm)	3502	1719	0	775	1900	1615	1805	3539	1615	1770	3574	1599
Satd. Flow (RTOR)		37				61			102			155
Adj. Flow (vph)	246	50	76	132	103	38	190	979	98	100	2053	396
Lane Group Flow (vph)	246	126	0	132	103	38	190	979	98	100	2053	396
Turn Type	Prot	NA		pm+pt	NA	pt+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8	8 5	1	6		5	2	7
Permitted Phases				8					6			2
Total Split (s)	25.0	18.0		25.0	18.0		25.0	92.0	92.0	25.0	92.0	25.0
Total Lost Time (s)	6.0	5.0		6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)	16.1	13.5		26.5	12.4	33.0	19.0	93.8	93.8	13.6	88.4	110.6
Actuated g/C Ratio	0.10	0.08		0.17	0.08	0.21	0.12	0.59	0.59	0.08	0.55	0.69
v/c Ratio	0.70	0.71		0.59	0.70	0.10	0.89	0.47	0.10	0.67	1.04	0.34
Control Delay	80.2	70.8		64.3	95.8	4.0	123.9	4.5	0.6	102.5	41.3	2.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0
Total Delay	80.2	70.8		64.3	95.8	4.0	123.9	4.5	0.6	102.5	46.4	2.7
LOS	F	E		E	F	A	F	A	A	F	D	A
Approach Delay		77.1			67.8			22.1			41.8	
Approach LOS		E			E			C			D	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 40 (25%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 40.8		Intersection LOS: D	
Intersection Capacity Utilization 90.3%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	46	70	121	95	35	175	901	90	92	1889	364
Future Volume (vph)	226	46	70	121	95	35	175	901	90	92	1889	364
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.0		6.0	5.0	5.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3502	1718		1805	1900	1615	1805	3539	1615	1770	3574	1599
Flt Permitted	0.95	1.00		0.41	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3502	1718		774	1900	1615	1805	3539	1615	1770	3574	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	246	50	76	132	103	38	190	979	98	100	2053	396
RTOR Reduction (vph)	0	34	0	0	0	31	0	0	40	0	0	54
Lane Group Flow (vph)	246	92	0	132	103	7	190	979	58	100	2053	342
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	2%	1%	1%
Turn Type	Prot	NA		pm+pt	NA	pt+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8	8 5	1	6		5	2	7
Permitted Phases				8					6			2
Actuated Green, G (s)	16.1	13.5		27.4	12.4	31.0	19.0	93.9	93.9	13.6	88.5	104.6
Effective Green, g (s)	16.1	13.5		27.4	12.4	31.0	19.0	93.9	93.9	13.6	88.5	104.6
Actuated g/C Ratio	0.10	0.08		0.17	0.08	0.19	0.12	0.59	0.59	0.08	0.55	0.65
Clearance Time (s)	6.0	5.0		6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.5	5.0	5.0	2.5	5.0	3.0
Lane Grp Cap (vph)	352	144		229	147	312	214	2076	947	150	1976	1105
v/s Ratio Prot	c0.07	0.05		0.05	c0.05	0.00	c0.11	c0.28		0.06	c0.57	0.03
v/s Ratio Perm				0.04					0.04			0.18
v/c Ratio	0.70	0.64		0.58	0.70	0.02	0.89	0.47	0.06	0.67	1.04	0.31
Uniform Delay, d1	69.6	70.9		59.4	72.0	52.2	69.5	18.9	14.2	71.0	35.8	12.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.32	0.19	0.16	1.33	0.40	0.40
Incremental Delay, d2	6.0	9.0		3.5	14.0	0.0	30.6	0.7	0.1	3.9	24.4	0.1
Delay (s)	75.6	79.9		62.9	86.0	52.3	122.2	4.3	2.3	98.4	38.8	4.9
Level of Service	E	E		E	F	D	F	A	A	F	D	A
Approach Delay (s)		77.0			70.1			21.8			35.9	
Approach LOS		E			E			C			D	

Intersection Summary				
HCM 2000 Control Delay	37.4	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.95			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0	
Intersection Capacity Utilization	90.3%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	18	0	0	32	88	1307	22	14	1997	33
Future Volume (vph)	0	0	18	0	0	32	88	1307	22	14	1997	33
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.865			0.865			0.850			0.850
Flt Protected							0.950			0.950		
Satd. Flow (prot)	0	0	1644	0	0	1644	1787	3574	1615	1805	3574	1615
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	0	0	1644	0	0	1644	1787	3574	1615	1805	3574	1615
Adj. Flow (vph)	0	0	19	0	0	34	94	1390	23	15	2124	35
Lane Group Flow (vph)	0	0	19	0	0	34	94	1390	23	15	2124	35
Sign Control		Stop			Stop			Free			Free	

Intersection Summary					
Control Type: Unsignalized					
Intersection Capacity Utilization 66.7%			ICU Level of Service C		
Analysis Period (min) 15					

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	18	0	0	32	88	1307	22	14	1997	33
Future Volume (Veh/h)	0	0	18	0	0	32	88	1307	22	14	1997	33
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	19	0	0	34	94	1390	23	15	2124	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1315	
pX, platoon unblocked	0.46	0.46	0.46	0.46	0.46		0.46					
vC, conflicting volume	3071	3755	1062	2689	3767	695	2159			1413		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	3156	4657	0	2317	4683	695	1154			1413		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	96	100	100	91	66			97		
cM capacity (veh/h)	1	0	497	7	0	389	276			489		

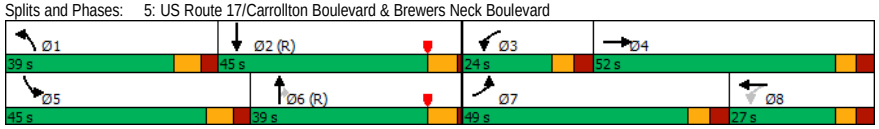
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	19	34	94	695	695	23	15	1062	1062	35
Volume Left	0	0	94	0	0	0	15	0	0	0
Volume Right	19	34	0	0	0	23	0	0	0	35
cSH	497	389	276	1700	1700	1700	489	1700	1700	1700
Volume to Capacity	0.04	0.09	0.34	0.41	0.41	0.01	0.03	0.62	0.62	0.02
Queue Length 95th (ft)	3	7	36	0	0	0	2	0	0	0
Control Delay (s)	12.5	15.1	24.6	0.0	0.0	0.0	12.6	0.0	0.0	0.0
Lane LOS	B	C	C				B			
Approach Delay (s)	12.5	15.1	1.5				0.1			
Approach LOS	B	C								

Intersection Summary					
Average Delay			0.9		
Intersection Capacity Utilization			66.7%	ICU Level of Service	C
Analysis Period (min)			15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	760	196	641	170	299	65	550	586	61	334	666	1210
Future Volume (vph)	760	196	641	170	299	65	550	586	61	334	666	1210
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.973				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1863	1568	1770	3444	0	3433	3574	1583	1805	3574	1599
Flt Permitted	0.950			0.629			0.950			0.950		
Satd. Flow (perm)	3433	1863	1568	1172	3444	0	3433	3574	1583	1805	3574	1599
Satd. Flow (RTOR)			581		13				188			630
Adj. Flow (vph)	800	206	675	179	315	68	579	617	64	352	701	1274
Lane Group Flow (vph)	800	206	675	179	383	0	579	617	64	352	701	1274
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Total Split (s)	49.0	52.0		24.0	27.0		39.0	39.0	39.0	45.0	45.0	
Total Lost Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Act Effct Green (s)	40.3	44.9	160.0	34.1	19.3		29.6	36.6	36.6	34.3	41.3	160.0
Actuated g/C Ratio	0.25	0.28	1.00	0.21	0.12		0.18	0.23	0.23	0.21	0.26	1.00
v/c Ratio	0.93	0.39	0.43	0.59	0.90		0.91	0.76	0.13	0.91	0.76	0.80
Control Delay	75.3	49.3	0.9	42.1	90.6		71.1	63.1	2.7	93.7	47.8	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.3	49.3	0.9	42.1	90.6		71.1	63.1	2.7	93.7	47.8	12.9
LOS	E	D	A	D	F		E	E	A	F	D	B
Approach Delay		42.2			75.2			63.7			35.7	
Approach LOS		D			E			E			D	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 74 (46%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 47.4		Intersection LOS: D	
Intersection Capacity Utilization 90.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	760	196	641	170	299	65	550	586	61	334	666	1210
Future Volume (vph)	760	196	641	170	299	65	550	586	61	334	666	1210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	4.0	7.5	7.5		8.0	6.5	6.5	8.0	6.5	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1568	1770	3445		3433	3574	1583	1805	3574	1599
Flt Permitted	0.95	1.00	1.00	0.63	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1863	1568	1171	3445		3433	3574	1583	1805	3574	1599
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	800	206	675	179	315	68	579	617	64	352	701	1274
RTOR Reduction (vph)	0	0	0	0	11	0	0	0	49	0	0	0
Lane Group Flow (vph)	800	206	675	179	372	0	579	617	15	352	701	1274
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	1%	2%	0%	1%	1%
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Actuated Green, G (s)	40.3	44.9	160.0	34.0	19.3		29.6	36.6	36.6	34.3	41.3	160.0
Effective Green, g (s)	40.3	44.9	160.0	34.0	19.3		29.6	36.6	36.6	34.3	41.3	160.0
Actuated g/C Ratio	0.25	0.28	1.00	0.21	0.12		0.19	0.23	0.23	0.21	0.26	1.00
Clearance Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Vehicle Extension (s)	3.5	3.5		3.0	3.0		2.5	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	864	522	1568	303	415		635	817	362	386	922	1599
v/s Ratio Prot	c0.23	0.11		0.05	0.11		0.17	0.17		c0.20	0.20	
v/s Ratio Perm			0.43	0.07					0.01			c0.80
v/c Ratio	0.93	0.39	0.43	0.59	0.90		0.91	0.76	0.04	0.91	0.76	0.80
Uniform Delay, d1	58.4	46.6	0.0	55.2	69.4		63.9	57.5	48.0	61.4	54.8	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.82	0.97	1.00	1.17	0.77	1.00
Incremental Delay, d2	15.7	0.6	0.9	3.1	21.1		16.6	6.0	0.2	20.5	4.5	3.2
Delay (s)	74.1	47.1	0.9	58.3	90.5		69.1	61.9	48.2	92.6	46.9	3.2
Level of Service	E	D	A	E	F		E	E	D	F	D	A
Approach Delay (s)		41.4			80.2			64.5			29.9	
Approach LOS		D			F			E			C	

Intersection Summary					
HCM 2000 Control Delay	45.5	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.99				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.5		
Intersection Capacity Utilization	90.1%	ICU Level of Service	E		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	8	25	0	44	13	1088	54	70	1242	6
Future Volume (vph)	4	0	8	25	0	44	13	1088	54	70	1242	6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.907				0.850			0.850		0.999	
Flt Protected		0.985			0.950		0.950			0.950		
Satd. Flow (prot)	0	1697	0	0	1703	1553	1805	3574	1553	1805	3536	0
Flt Permitted		0.985			0.950		0.950			0.950		
Satd. Flow (perm)	0	1697	0	0	1703	1553	1805	3574	1553	1805	3536	0
Adj. Flow (vph)	4	0	9	27	0	47	14	1157	57	74	1321	6
Lane Group Flow (vph)	0	13	0	0	27	47	14	1157	57	74	1327	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 52.3%					ICU Level of Service A							
Analysis Period (min) 15												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	0	8	25	0	44	13	1088	54	70	1242	6
Future Volume (Veh/h)	4	0	8	25	0	44	13	1088	54	70	1242	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	4	0	9	27	0	47	14	1157	57	74	1321	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						9						
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1135	
pX, platoon unblocked	0.83	0.83	0.83	0.83	0.83		0.83					
vC, conflicting volume	2078	2714	664	2002	2660	578	1327			1214		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1893	2656	192	1801	2591	578	989			1214		
tC, single (s)	7.5	6.5	6.9	7.6	6.5	7.0	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	86	100	99	22	100	90	98			87		
cM capacity (veh/h)	29	16	685	35	18	454	588			582		

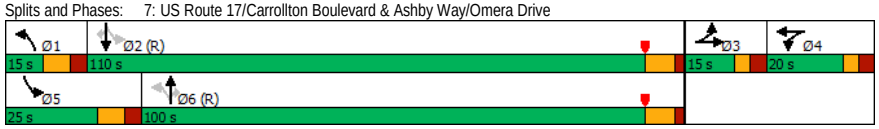
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	13	74	14	578	578	57	74	881	446
Volume Left	4	27	14	0	0	0	74	0	0
Volume Right	9	47	0	0	0	57	0	0	6
cSH	86	95	588	1700	1700	1700	582	1700	1700
Volume to Capacity	0.15	0.78	0.02	0.34	0.34	0.03	0.13	0.52	0.26
Queue Length 95th (ft)	13	102	2	0	0	0	11	0	0
Control Delay (s)	54.4	101.6	11.3	0.0	0.0	0.0	12.1	0.0	0.0
Lane LOS	F	F	B				B		
Approach Delay (s)	54.4	101.6	0.1				0.6		
Approach LOS	F	F							

Intersection Summary									
Average Delay			3.4						
Intersection Capacity Utilization			52.3%		ICU Level of Service				A
Analysis Period (min)			15						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	7	16	49	7	93	29	1001	25	102	1203	47
Future Volume (vph)	35	7	16	49	7	93	29	1001	25	102	1203	47
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.896			0.915				0.850			0.850
Flt Protected	0.950				0.984		0.950			0.950		
Satd. Flow (prot)	1805	1702	0	0	1668	0	1805	3539	1615	1770	3574	1615
Flt Permitted	0.950				0.984		0.186			0.223		
Satd. Flow (perm)	1805	1702	0	0	1668	0	353	3539	1615	415	3574	1615
Satd. Flow (RTOR)		16			41				170			116
Adj. Flow (vph)	35	7	16	49	7	94	29	1011	25	103	1215	47
Lane Group Flow (vph)	35	23	0	0	150	0	29	1011	25	103	1215	47
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Total Split (s)	15.0	15.0		20.0	20.0		15.0	100.0	100.0	25.0	110.0	110.0
Total Lost Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Act Effct Green (s)	9.2	9.2			16.9		107.2	100.6	100.6	113.4	108.2	108.2
Actuated g/C Ratio	0.06	0.06			0.11		0.67	0.63	0.63	0.71	0.68	0.68
v/c Ratio	0.34	0.21			0.71		0.10	0.45	0.02	0.28	0.50	0.04
Control Delay	81.1	40.3			67.2		9.2	17.8	0.0	6.4	11.0	0.2
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.1	40.3			67.2		9.2	17.8	0.0	6.4	11.0	0.2
LOS	F	D			E		A	B	A	A	B	A
Approach Delay		64.9			67.2			17.2			10.3	
Approach LOS		E			E			B			B	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 69 (43%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 17.5		Intersection LOS: B	
Intersection Capacity Utilization 72.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive



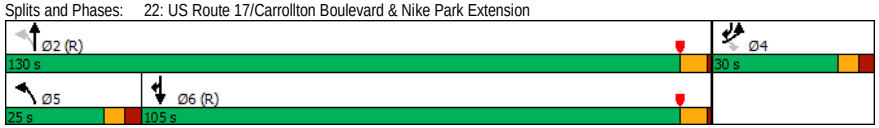
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	7	16	49	7	93	29	1001	25	102	1203	47
Future Volume (vph)	35	7	16	49	7	93	29	1001	25	102	1203	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.90			0.92		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	1702			1669		1805	3539	1615	1770	3574	1615
Flt Permitted	0.95	1.00			0.98		0.19	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)	1805	1702			1669		354	3539	1615	415	3574	1615
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	35	7	16	49	7	94	29	1011	25	103	1215	47
RTOR Reduction (vph)	0	15	0	0	37	0	0	0	9	0	0	17
Lane Group Flow (vph)	35	8	0	0	113	0	29	1011	16	103	1215	30
Heavy Vehicles (%)	0%	0%	0%	2%	0%	3%	0%	2%	0%	2%	1%	0%
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Actuated Green, G (s)	7.6	7.6			16.9		103.7	99.4	99.4	112.3	103.7	103.7
Effective Green, g (s)	7.6	7.6			16.9		103.7	99.4	99.4	112.3	103.7	103.7
Actuated g/C Ratio	0.05	0.05			0.11		0.65	0.62	0.62	0.70	0.65	0.65
Clearance Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	85	80			176		268	2198	1003	364	2316	1046
v/s Ratio Prot	c0.02	0.00			c0.07		0.00	0.29		c0.02	c0.34	
v/s Ratio Perm							0.07		0.01	0.18		0.02
v/c Ratio	0.41	0.10			0.64		0.11	0.46	0.02	0.28	0.52	0.03
Uniform Delay, d1	74.0	72.9			68.7		11.3	16.1	11.6	9.5	15.0	10.1
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	0.61	0.67	1.00
Incremental Delay, d2	3.2	0.5			7.8		0.2	0.7	0.0	0.4	0.7	0.0
Delay (s)	77.3	73.4			76.5		11.5	16.8	11.6	6.1	10.7	10.1
Level of Service	E	E			E		B	B	B	A	B	B
Approach Delay (s)		75.7			76.5			16.5			10.4	
Approach LOS		E			E			B			B	

Intersection Summary				
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.53			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	27.5	
Intersection Capacity Utilization	72.5%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	150	44	115	1246	1801	243
Future Volume (vph)	150	44	115	1246	1801	243
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.054			
Satd. Flow (perm)	3433	1583	101	3539	3539	1583
Satd. Flow (RTOR)		48				264
Adj. Flow (vph)	163	48	125	1354	1958	264
Lane Group Flow (vph)	163	48	125	1354	1958	264
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Total Split (s)	30.0	30.0	25.0	130.0	105.0	
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	
Act Effct Green (s)	12.9	12.9	133.1	134.1	115.1	135.1
Actuated g/C Ratio	0.08	0.08	0.83	0.84	0.72	0.84
v/c Ratio	0.59	0.28	0.60	0.46	0.77	0.19
Control Delay	79.5	20.3	22.8	8.9	4.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.5	20.3	22.8	8.9	4.4	0.1
LOS	E	C	C	A	A	A
Approach Delay	66.0			10.0	3.9	
Approach LOS	E			B	A	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 84 (53%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 9.6		Intersection LOS: A	
Intersection Capacity Utilization 78.7%		ICU Level of Service D	
Analysis Period (min) 15			

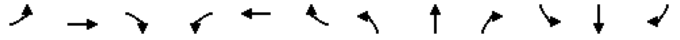
Splits and Phases: 22: US Route 17/Carrollton Boulevard & Nike Park Extension



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	150	44	115	1246	1801	243
Future Volume (vph)	150	44	115	1246	1801	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.05	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	101	3539	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	48	125	1354	1958	264
RTOR Reduction (vph)	0	44	0	0	0	43
Lane Group Flow (vph)	163	4	125	1354	1958	221
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Actuated Green, G (s)	12.9	12.9	134.1	134.1	115.2	134.1
Effective Green, g (s)	12.9	12.9	134.1	134.1	115.2	134.1
Actuated g/C Ratio	0.08	0.08	0.84	0.84	0.72	0.84
Clearance Time (s)	7.0	7.0	7.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	276	127	208	2966	2548	1326
v/s Ratio Prot	c0.05		0.04	c0.38	c0.55	0.14
v/s Ratio Perm		0.00	0.46			
v/c Ratio	0.59	0.03	0.60	0.46	0.77	0.17
Uniform Delay, d1	71.0	67.8	34.2	3.4	14.0	2.4
Progression Factor	1.00	1.00	0.80	2.39	0.24	0.00
Incremental Delay, d2	3.4	0.1	2.5	0.3	0.7	0.0
Delay (s)	74.4	67.9	29.8	8.4	4.0	0.0
Level of Service	E	E	C	A	A	A
Approach Delay (s)	72.9			10.2	3.6	
Approach LOS	E			B	A	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	6	57	0	6	0	79	6	0	0	6	125
Future Volume (vph)	155	6	57	0	6	0	79	6	0	0	6	125
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865									0.872	
Flt Protected	0.950							0.956				
Satd. Flow (prot)	1770	1611	0	0	1863	0	0	1781	0	0	1624	0
Flt Permitted	0.950							0.956				
Satd. Flow (perm)	1770	1611	0	0	1863	0	0	1781	0	0	1624	0
Adj. Flow (vph)	168	7	62	0	7	0	86	7	0	0	7	136
Lane Group Flow (vph)	168	69	0	0	7	0	0	93	0	0	143	0
Sign Control		Free			Stop			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 38.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Intersection: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	63	68	69	34	98	169	185	50	201	2903	2917	230
Average Queue (ft)	17	20	22	6	33	45	55	5	29	1045	1095	59
95th Queue (ft)	49	54	54	23	75	125	141	31	133	2721	2767	223
Link Distance (ft)	892		1111			490	490			4237	4237	
Upstream Blk Time (%)										1	1	
Queuing Penalty (veh)										0	0	
Storage Bay Dist (ft)		170		550	280			215	220			230
Storage Blk Time (%)							0	0	0	21	27	0
Queuing Penalty (veh)							0	0	0	5	15	3

Intersection: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	163	123	81	66	195	266	278	85	309	584	587	240
Average Queue (ft)	69	41	22	15	67	112	123	4	33	484	506	118
95th Queue (ft)	134	92	58	50	139	233	244	46	148	689	687	299
Link Distance (ft)	1075		1206			970	970			549	549	
Upstream Blk Time (%)										8	11	
Queuing Penalty (veh)										95	135	
Storage Bay Dist (ft)		220		65	265			240	310			240
Storage Blk Time (%)	0	0	1	0	0	0	1	0	0	23	29	1
Queuing Penalty (veh)	0	0	0	0	0	0	0	0	0	6	52	6

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	L	TR	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	189	216	201	148	179	98	331	290	311	183	449	946
Average Queue (ft)	91	131	89	88	85	27	191	129	133	21	146	558
95th Queue (ft)	177	198	162	148	157	68	318	238	245	78	371	960
Link Distance (ft)			1127		178			1228	1228			970
Upstream Blk Time (%)					2	0						0
Queuing Penalty (veh)					3	0						2
Storage Bay Dist (ft)	465	465		150		175	450			245	450	
Storage Blk Time (%)				1	2	0			1	0	0	12
Queuing Penalty (veh)				2	3	0			1	0	1	11

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	967	820
Average Queue (ft)	598	204
95th Queue (ft)	993	745
Link Distance (ft)	970	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	4	
Storage Bay Dist (ft)		820
Storage Blk Time (%)	4	1
Queuing Penalty (veh)	13	5

Intersection: 4: US Route 17/Carrollton Boulevard & Northgate Lane

Movement	EB	WB	NB	NB	NB	SB	SB
Directions Served	R	R	L	T	R	L	R
Maximum Queue (ft)	45	57	156	34	2	43	2
Average Queue (ft)	12	20	70	1	0	6	0
95th Queue (ft)	34	46	134	26	0	25	2
Link Distance (ft)	1152	872		1215			
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			245		300	300	200
Storage Blk Time (%)				0			
Queuing Penalty (veh)				0			

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB
Directions Served	L	L	T	R	L	T	TR	L	L	T	T	R
Maximum Queue (ft)	518	541	236	260	150	354	317	394	406	380	384	225
Average Queue (ft)	336	359	108	24	124	201	180	232	244	235	240	73
95th Queue (ft)	484	510	197	141	186	333	303	354	364	340	345	216
Link Distance (ft)		610	610			1286	1286			1050	1050	
Upstream Blk Time (%)		0										
Queuing Penalty (veh)		0										
Storage Bay Dist (ft)	585			575	150			650	650			225
Storage Blk Time (%)	0	0			5	18					13	0
Queuing Penalty (veh)	0	1			8	31					8	1

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	437	432	537	299
Average Queue (ft)	277	254	231	53
95th Queue (ft)	424	382	413	240
Link Distance (ft)		1181	1181	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	500			300
Storage Blk Time (%)	0	0	1	0
Queuing Penalty (veh)	2	1	10	1

Intersection: 6: US Route 17/Carrollton Boulevard & Deep Bottom Drive/Channell Way

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	L	R	L	TR
Maximum Queue (ft)	54	87	78	29	2	93	3
Average Queue (ft)	12	28	26	7	0	31	0
95th Queue (ft)	38	68	55	23	2	73	2
Link Distance (ft)	712	416					1050
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			225	140	60	275	
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	R	L	T	T	R
Maximum Queue (ft)	82	47	237	73	290	265	19	100	232	232	28
Average Queue (ft)	29	15	96	19	140	105	4	38	78	92	6
95th Queue (ft)	68	42	191	55	247	221	15	80	178	185	23
Link Distance (ft)		644	713		1440	1440			1077	1077	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	135			275			350	300			630
Storage Blk Time (%)					0				0		
Queuing Penalty (veh)					0				0		

Intersection: 10: Bend

Movement	WB	WB	WB
Directions Served	T	T	
Maximum Queue (ft)	532	527	258
Average Queue (ft)	86	83	12
95th Queue (ft)	394	386	142
Link Distance (ft)	610	610	610
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 16: US Route 17/Carrollton Boulevard & Site A

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	514	513
Average Queue (ft)	273	302
95th Queue (ft)	612	627
Link Distance (ft)	490	490
Upstream Blk Time (%)	2	2
Queuing Penalty (veh)	22	31
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: US Route 17/Carrollton Boulevard & Site B

Movement	SB
Directions Served	T
Maximum Queue (ft)	5
Average Queue (ft)	0
95th Queue (ft)	5
Link Distance (ft)	1215
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 19: US Route 17/Carrollton Boulevard & Site C

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: US Route 17/Carrollton Boulevard & Nike Park Extension

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	L	T	T	T	T	R
Maximum Queue (ft)	130	148	73	74	467	451	354	582	200
Average Queue (ft)	54	77	19	60	154	131	169	369	84
95th Queue (ft)	108	131	54	86	351	320	302	577	236
Link Distance (ft)		1339			1181	1181	632	632	
Upstream Blk Time (%)								0	
Queuing Penalty (veh)								1	
Storage Bay Dist (ft)	650		430	75					200
Storage Blk Time (%)				26	10			15	0
Queuing Penalty (veh)				164	12			38	4

Intersection: 33: Bojangles Driveway/7-Eleven Driveway & Smiths Neck Road

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	30	57	73
Average Queue (ft)	4	26	37
95th Queue (ft)	21	46	62
Link Distance (ft)	650	468	414
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

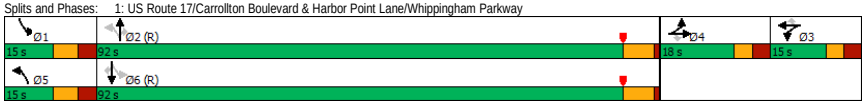
Network Summary

Network wide Queuing Penalty: 698

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	0	30	22	0	36	14	2456	8	6	829	14
Future Volume (vph)	59	0	30	22	0	36	14	2456	8	6	829	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1805	1615	0	1805	1568	1543	3539	1615	1504	3471	1495
Flt Permitted		0.950			0.950		0.283			0.041		
Satd. Flow (perm)	0	1805	1615	0	1805	1568	460	3539	1615	65	3471	1495
Satd. Flow (RTOR)			125			125			125			125
Adj. Flow (vph)	64	0	33	24	0	39	15	2670	9	7	901	15
Lane Group Flow (vph)	0	64	33	0	24	39	15	2670	9	7	901	15
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	18.0	18.0	18.0	15.0	15.0	15.0	15.0	92.0	92.0	15.0	92.0	92.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)		10.0	10.0		7.7	7.7	107.2	108.2	108.2	105.6	105.6	105.6
Actuated g/C Ratio		0.07	0.07		0.06	0.06	0.77	0.77	0.77	0.75	0.75	0.75
v/c Ratio		0.50	0.14		0.24	0.19	0.04	0.98	0.01	0.07	0.34	0.01
Control Delay		75.5	1.3		69.0	2.1	1.1	11.2	0.0	7.2	8.8	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		75.5	1.3		69.0	2.1	1.1	11.2	0.0	7.2	8.8	0.0
LOS		E	A		E	A	A	B	A	A	A	A
Approach Delay		50.3			27.6			11.1			8.6	
Approach LOS		D			C			B			A	

Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 80 (57%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 11.8		Intersection LOS: B	
Intersection Capacity Utilization 94.6%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway



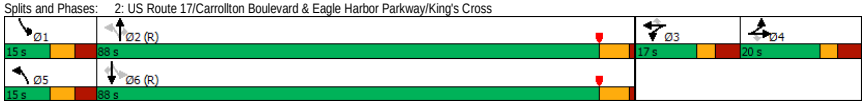
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	0	30	22	0	36	14	2456	8	6	829	14
Future Volume (vph)	59	0	30	22	0	36	14	2456	8	6	829	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1805	1615		1805	1568	1543	3539	1615	1504	3471	1495
Flt Permitted		0.95	1.00		0.95	1.00	0.28	1.00	1.00	0.04	1.00	1.00
Satd. Flow (perm)		1805	1615		1805	1568	460	3539	1615	65	3471	1495
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	64	0	33	24	0	39	15	2670	9	7	901	15
RTOR Reduction (vph)	0	0	31	0	0	37	0	0	3	0	0	5
Lane Group Flow (vph)	0	64	2	0	24	2	15	2670	6	7	901	10
Heavy Vehicles (%)	0%	0%	0%	0%	0%	3%	17%	2%	0%	20%	4%	8%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		8.6	8.6		6.3	6.3	101.3	99.0	99.0	98.9	97.8	97.8
Effective Green, g (s)		8.6	8.6		6.3	6.3	101.3	99.0	99.0	98.9	97.8	97.8
Actuated g/C Ratio		0.06	0.06		0.04	0.04	0.72	0.71	0.71	0.71	0.70	0.70
Clearance Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		110	99		81	70	350	2502	1142	57	2424	1044
v/s Ratio Prot		c0.04			c0.01		0.00	c0.75		c0.00	0.26	
v/s Ratio Perm			0.00			0.00	0.03		0.00	0.09		0.01
v/c Ratio		0.58	0.02		0.30	0.03	0.04	1.07	0.01	0.12	0.37	0.01
Uniform Delay, d1		63.9	61.7		64.7	63.9	5.8	20.5	6.0	37.6	8.6	6.4
Progression Factor		1.00	1.00		1.00	1.00	0.20	0.12	1.00	1.00	1.00	1.00
Incremental Delay, d2		7.6	0.1		2.0	0.1	0.0	32.9	0.0	0.7	0.4	0.0
Delay (s)		71.6	61.8		66.7	64.1	1.1	35.3	6.0	38.3	9.0	6.4
Level of Service		E	E		E	E	A	D	A	D	A	A
Approach Delay (s)		68.3			65.1			35.1			9.2	
Approach LOS		E			E			D			A	

Intersection Summary					
HCM 2000 Control Delay		30.1	HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio		0.98			
Actuated Cycle Length (s)		140.0	Sum of lost time (s)		25.0
Intersection Capacity Utilization		94.6%	ICU Level of Service		F
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	1	67	14	2	24	45	2306	4	2	850	29
Future Volume (vph)	155	1	67	14	2	24	45	2306	4	2	850	29
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.958		0.950			0.950		
Satd. Flow (prot)	0	1793	1615	0	1820	1468	1719	3539	967	1805	3471	1553
Flt Permitted		0.953			0.958		0.246			0.047		
Satd. Flow (perm)	0	1793	1615	0	1820	1468	445	3539	967	89	3471	1553
Satd. Flow (RTOR)			136			136			144			144
Adj. Flow (vph)	168	1	73	15	2	26	49	2507	4	2	924	32
Lane Group Flow (vph)	0	169	73	0	17	26	49	2507	4	2	924	32
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	20.0	20.0	20.0	17.0	17.0	17.0	15.0	88.0	88.0	15.0	88.0	88.0
Total Lost Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Act Effct Green (s)		17.1	17.1		7.5	7.5	98.4	98.4	98.4	92.3	89.7	89.7
Actuated g/C Ratio		0.12	0.12		0.05	0.05	0.70	0.70	0.70	0.66	0.64	0.64
v/c Ratio		0.77	0.23		0.18	0.13	0.13	1.01	0.01	0.02	0.42	0.03
Control Delay		82.7	1.7		67.2	1.2	7.2	29.8	0.0	8.0	10.4	0.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		82.7	1.7		67.2	1.2	7.2	29.8	0.0	8.0	10.4	0.1
LOS		F	A		E	A	A	C	A	A	B	A
Approach Delay		58.2			27.3			29.4			10.1	
Approach LOS		E			C			C			B	

Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 62 (44%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 26.3		Intersection LOS: C	
Intersection Capacity Utilization 94.9%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross



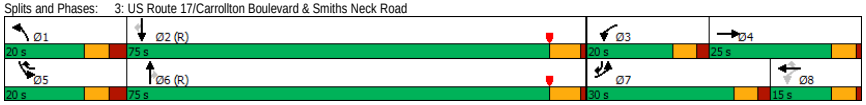
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	1	67	14	2	24	45	2306	4	2	850	29
Future Volume (vph)	155	1	67	14	2	24	45	2306	4	2	850	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1792	1615		1820	1468	1719	3539	967	1805	3471	1553
Flt Permitted		0.95	1.00		0.96	1.00	0.25	1.00	1.00	0.05	1.00	1.00
Satd. Flow (perm)		1792	1615		1820	1468	445	3539	967	89	3471	1553
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	168	1	73	15	2	26	49	2507	4	2	924	32
RTOR Reduction (vph)	0	0	64	0	0	25	0	0	1	0	0	12
Lane Group Flow (vph)	0	169	9	0	17	1	49	2507	3	2	924	20
Heavy Vehicles (%)	1%	0%	0%	0%	0%	10%	5%	2%	67%	0%	4%	4%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		17.1	17.1		4.7	4.7	94.9	89.7	89.7	86.5	85.5	85.5
Effective Green, g (s)		17.1	17.1		4.7	4.7	94.9	89.7	89.7	86.5	85.5	85.5
Actuated g/C Ratio		0.12	0.12		0.03	0.03	0.68	0.64	0.64	0.62	0.61	0.61
Clearance Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		218	197		61	49	348	2267	619	67	2119	948
v/s Ratio Prot		c0.09			c0.01		c0.01	c0.71		0.00	0.27	
v/s Ratio Perm			0.01			0.00	0.09		0.00	0.02		0.01
v/c Ratio		0.78	0.05		0.28	0.02	0.14	1.11	0.00	0.03	0.44	0.02
Uniform Delay, d1		59.6	54.2		66.0	65.4	8.8	25.1	9.1	34.0	14.5	10.7
Progression Factor		1.00	1.00		1.00	1.00	0.96	0.55	1.00	1.04	0.72	1.00
Incremental Delay, d2		15.7	0.1		2.5	0.1	0.1	52.3	0.0	0.1	0.6	0.0
Delay (s)		75.3	54.3		68.5	65.6	8.5	66.1	9.1	35.6	11.1	10.8
Level of Service		E	D		E	E	A	E	A	D	B	B
Approach Delay (s)		69.0			66.7			64.9			11.1	
Approach LOS		E			E			E			B	

Intersection Summary					
HCM 2000 Control Delay		51.6	HCM 2000 Level of Service		D
HCM 2000 Volume to Capacity ratio		1.02			
Actuated Cycle Length (s)		140.0	Sum of lost time (s)		27.5
Intersection Capacity Utilization		94.9%	ICU Level of Service		F
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	439	64	94	70	12	42	41	1692	87	60	761	122
Future Volume (vph)	439	64	94	70	12	42	41	1692	87	60	761	122
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.911				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	1717	0	1719	1900	1553	1612	3539	1553	1752	3471	1615
Flt Permitted	0.950						0.950			0.950		
Satd. Flow (perm)	3467	1717	0	1810	1900	1553	1612	3539	1553	1752	3471	1615
Satd. Flow (RTOR)		44				117			164			133
Adj. Flow (vph)	477	70	102	76	13	46	45	1839	95	65	827	133
Lane Group Flow (vph)	477	172	0	76	13	46	45	1839	95	65	827	133
Turn Type	Prot	NA		pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8	5	1	6		5	2	7
Permitted Phases				8		8			6			2
Total Split (s)	30.0	25.0		20.0	15.0	20.0	20.0	75.0	75.0	20.0	75.0	30.0
Total Lost Time (s)	6.0	5.0		6.0	5.0	7.0	7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)	25.8	15.4		13.8	7.6	15.3	8.8	82.5	82.5	9.8	83.4	116.4
Actuated g/C Ratio	0.18	0.11		0.10	0.05	0.11	0.06	0.59	0.59	0.07	0.60	0.83
v/c Ratio	0.75	0.75		0.44	0.13	0.17	0.45	0.88	0.10	0.53	0.40	0.10
Control Delay	62.0	64.5		57.5	65.2	1.3	76.4	21.9	0.7	86.7	10.3	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0
Total Delay	62.0	64.5		57.5	65.2	1.3	76.4	25.7	0.7	86.7	10.3	0.1
LOS	E	E		E	E	A	E	C	A	F	B	A
Approach Delay		62.7			39.1			25.6			13.8	
Approach LOS		E			D			C			B	

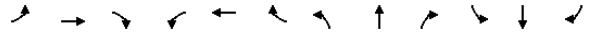
Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 52 (37%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 29.3		Intersection LOS: C	
Intersection Capacity Utilization 81.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road



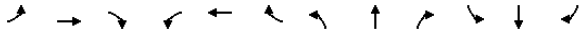
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	439	64	94	70	12	42	41	1692	87	60	761	122
Future Volume (vph)	439	64	94	70	12	42	41	1692	87	60	761	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.0		6.0	5.0	7.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	1717		1719	1900	1553	1612	3539	1553	1752	3471	1615
Flt Permitted	0.95	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	1717		1810	1900	1553	1612	3539	1553	1752	3471	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	477	70	102	76	13	46	45	1839	95	65	827	133
RTOR Reduction (vph)	0	38	0	0	0	42	0	0	42	0	0	33
Lane Group Flow (vph)	477	134	0	76	13	4	45	1839	53	65	827	100
Heavy Vehicles (%)	1%	2%	0%	5%	0%	4%	12%	2%	4%	3%	4%	0%
Turn Type	Prot	NA		pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8	5	1	6		5	2	7
Permitted Phases				8		8			6			2
Actuated Green, G (s)	25.8	18.4		14.2	3.4	12.0	7.8	78.2	78.2	8.6	79.0	104.8
Effective Green, g (s)	25.8	18.4		14.2	3.4	12.0	7.8	78.2	78.2	8.6	79.0	104.8
Actuated g/C Ratio	0.18	0.13		0.10	0.02	0.09	0.06	0.56	0.56	0.06	0.56	0.75
Clearance Time (s)	6.0	5.0		6.0	5.0	7.0	7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	2.5	2.5	5.0	5.0	2.5	5.0	3.0
Lane Grp Cap (vph)	638	225		176	46	133	89	1976	867	107	1958	1278
v/s Ratio Prot	c0.14	c0.08		0.03	0.01	0.00	0.03	c0.52		c0.04	0.24	0.01
v/s Ratio Perm				0.01		0.00			0.03			0.05
v/c Ratio	0.75	0.59		0.43	0.28	0.03	0.51	0.93	0.06	0.61	0.42	0.08
Uniform Delay, d1	54.0	57.3		59.1	67.1	58.7	64.2	28.4	14.1	64.1	17.4	4.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.04	0.57	1.00	1.16	0.57	0.00
Incremental Delay, d2	4.8	4.2		1.7	3.4	0.1	2.7	8.0	0.1	7.5	0.6	0.0
Delay (s)	58.8	61.5		60.8	70.5	58.7	69.7	24.3	14.2	81.9	10.5	0.0
Level of Service	E	E		E	E	E	E	C	B	F	B	A
Approach Delay (s)		59.5			61.0			24.8			13.7	
Approach LOS		E			E			C			B	

Intersection Summary					
HCM 2000 Control Delay	29.1	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.87				
Actuated Cycle Length (s)	140.0	Sum of lost time (s)		24.0	
Intersection Capacity Utilization	81.6%	ICU Level of Service		D	
Analysis Period (min)	15				
c Critical Lane Group					



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	38	0	0	11	20	1837	37	17	921	10
Future Volume (vph)	0	0	38	0	0	11	20	1837	37	17	921	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.865			0.865			0.850			0.850
Flt Protected							0.950			0.950		
Satd. Flow (prot)	0	0	1550	0	0	1644	1805	3505	1615	1805	3471	1615
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	0	0	1550	0	0	1644	1805	3505	1615	1805	3471	1615
Adj. Flow (vph)	0	0	41	0	0	12	22	1997	40	18	1001	11
Lane Group Flow (vph)	0	0	41	0	0	12	22	1997	40	18	1001	11
Sign Control		Stop			Stop			Free			Free	

Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 60.8%				ICU Level of Service B								
Analysis Period (min) 15												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	38	0	0	11	20	1837	37	17	921	10
Future Volume (Veh/h)	0	0	38	0	0	11	20	1837	37	17	921	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	41	0	0	12	22	1997	40	18	1001	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1315	
pX, platoon unblocked	0.87	0.87	0.87	0.87	0.87		0.87					
vC, conflicting volume	2092	3118	500	2618	3089	998	1012			2037		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1955	3136	124	2561	3102	998	712			2037		
tC, single (s)	7.5	6.5	7.0	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.4	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	95	100	100	95	97			94		
cM capacity (veh/h)	30	9	775	10	9	246	779			281		

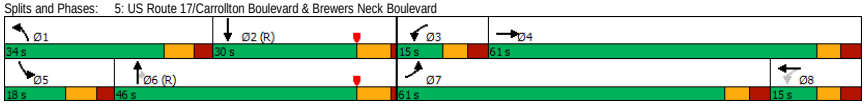
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	41	12	22	998	998	40	18	500	500	11
Volume Left	0	0	22	0	0	0	18	0	0	0
Volume Right	41	12	0	0	0	40	0	0	0	11
cSH	775	246	779	1700	1700	1700	281	1700	1700	1700
Volume to Capacity	0.05	0.05	0.03	0.59	0.59	0.02	0.06	0.29	0.29	0.01
Queue Length 95th (ft)	4	4	2	0	0	0	5	0	0	0
Control Delay (s)	9.9	20.4	9.8	0.0	0.0	0.0	18.7	0.0	0.0	0.0
Lane LOS	A	C	A				C			
Approach Delay (s)	9.9	20.4	0.1				0.3			
Approach LOS	A	C								

Intersection Summary												
Average Delay			0.4									
Intersection Capacity Utilization			60.8%		ICU Level of Service				B			
Analysis Period (min)			15									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	978	85	555	59	67	72	440	589	20	61	393	569
Future Volume (vph)	978	85	555	59	67	72	440	589	20	61	393	569
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.922				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3367	1863	1524	1770	3263	0	3242	3539	1583	1770	3505	1553
Flt Permitted	0.950			0.698			0.950			0.950		
Satd. Flow (perm)	3367	1863	1524	1300	3263	0	3242	3539	1583	1770	3505	1553
Satd. Flow (RTOR)			597		77				214			612
Adj. Flow (vph)	1052	91	597	63	72	77	473	633	22	66	423	612
Lane Group Flow (vph)	1052	91	597	63	149	0	473	633	22	66	423	612
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Total Split (s)	61.0	61.0		15.0	15.0		34.0	46.0	46.0	18.0	30.0	
Total Lost Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Act Effct Green (s)	49.6	52.4	140.0	14.4	7.2		23.9	47.3	47.3	9.2	29.8	140.0
Actuated g/C Ratio	0.35	0.37	1.00	0.10	0.05		0.17	0.34	0.34	0.07	0.21	1.00
v/c Ratio	0.88	0.13	0.39	0.40	0.62		0.86	0.53	0.03	0.57	0.57	0.39
Control Delay	51.8	29.5	0.8	37.7	43.2		59.7	37.5	0.1	76.9	44.0	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	29.5	0.8	37.7	43.2		59.7	37.5	0.1	76.9	44.0	2.1
LOS	D	C	A	D	D		E	D	A	E	D	A
Approach Delay		33.1			41.6			46.1			22.7	
Approach LOS		C			D			D			C	

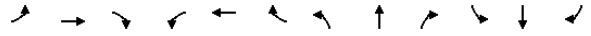
Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 68 (49%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 34.3		Intersection LOS: C	
Intersection Capacity Utilization 80.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard



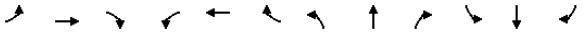
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	978	85	555	59	67	72	440	589	20	61	393	569
Future Volume (vph)	978	85	555	59	67	72	440	589	20	61	393	569
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	4.0	7.5	7.5		8.0	6.5	6.5	8.0	6.5	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	1863	1524	1770	3265		3242	3539	1583	1770	3505	1553
Flt Permitted	0.95	1.00	1.00	0.70	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	1863	1524	1300	3265		3242	3539	1583	1770	3505	1553
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	1052	91	597	63	72	77	473	633	22	66	423	612
RTOR Reduction (vph)	0	0	0	0	72	0	0	0	15	0	0	0
Lane Group Flow (vph)	1052	91	597	63	77	0	473	633	7	66	423	612
Heavy Vehicles (%)	4%	2%	6%	2%	2%	2%	8%	2%	2%	2%	3%	4%
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Actuated Green, G (s)	49.6	52.4	140.0	14.8	8.8		23.9	44.2	44.2	7.9	28.2	140.0
Effective Green, g (s)	49.6	52.4	140.0	14.8	8.8		23.9	44.2	44.2	7.9	28.2	140.0
Actuated g/C Ratio	0.35	0.37	1.00	0.11	0.06		0.17	0.32	0.32	0.06	0.20	1.00
Clearance Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Vehicle Extension (s)	3.5	3.5		3.0	3.0		2.5	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	1192	697	1524	157	205		553	1117	499	99	706	1553
v/s Ratio Prot	c0.31	0.05		0.02	0.02		c0.15	c0.18		0.04	0.12	
v/s Ratio Perm			0.39	0.03					0.00			c0.39
v/c Ratio	0.88	0.13	0.39	0.40	0.37		0.86	0.57	0.01	0.67	0.60	0.39
Uniform Delay, d1	42.5	28.8	0.0	58.0	63.0		56.4	39.9	32.9	64.8	50.8	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.79	0.90	1.00	0.93	0.80	1.00
Incremental Delay, d2	8.1	0.1	0.8	1.7	1.2		11.5	2.0	0.0	15.1	3.6	0.7
Delay (s)	50.6	28.9	0.8	59.7	64.1		56.3	38.0	33.0	75.1	44.0	0.7
Level of Service	D	C	A	E	E		E	D	C	E	D	A
Approach Delay (s)		32.4			62.8			45.6			21.8	
Approach LOS		C			E			D			C	

Intersection Summary					
HCM 2000 Control Delay		34.7	HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio		0.80			
Actuated Cycle Length (s)		140.0	Sum of lost time (s)		29.5
Intersection Capacity Utilization		80.1%	ICU Level of Service		D
Analysis Period (min)		15			
c Critical Lane Group					



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	32	1	76	6	953	25	23	944	1
Future Volume (vph)	0	0	5	32	1	76	6	953	25	23	944	1
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.865				0.850			0.850			
Flt Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	1096	0	0	1813	1538	1805	3438	1292	1805	3438	0
Flt Permitted					0.954		0.950			0.950		
Satd. Flow (perm)	0	1096	0	0	1813	1538	1805	3438	1292	1805	3438	0
Adj. Flow (vph)	0	0	5	35	1	83	7	1036	27	25	1026	1
Lane Group Flow (vph)	0	5	0	0	36	83	7	1036	27	25	1027	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 44.4%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	5	32	1	76	6	953	25	23	944	1
Future Volume (Veh/h)	0	0	5	32	1	76	6	953	25	23	944	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	5	35	1	83	7	1036	27	25	1026	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						9						
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1135	
pX, platoon unblocked	0.90	0.90	0.90	0.90	0.90		0.90					
vC, conflicting volume	1609	2154	514	1618	2127	518	1027			1063		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1455	2060	239	1465	2031	518	809			1063		
tC, single (s)	7.5	6.5	7.9	7.5	6.5	7.0	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.8	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	55	98	83	99			96		
cM capacity (veh/h)	66	48	571	78	50	495	743			663		

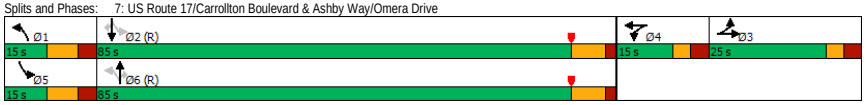
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	5	119	7	518	518	27	25	684	343
Volume Left	0	35	7	0	0	0	25	0	0
Volume Right	5	83	0	0	0	27	0	0	1
cSH	571	257	743	1700	1700	1700	663	1700	1700
Volume to Capacity	0.01	0.46	0.01	0.30	0.30	0.02	0.04	0.40	0.20
Queue Length 95th (ft)	1	57	1	0	0	0	3	0	0
Control Delay (s)	11.4	35.7	9.9	0.0	0.0	0.0	10.6	0.0	0.0
Lane LOS	B	E	A				B		
Approach Delay (s)	11.4	35.7	0.1				0.3		
Approach LOS	B	E							

Intersection Summary					
Average Delay		2.1			
Intersection Capacity Utilization		44.4%	ICU Level of Service		A
Analysis Period (min)		15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	1	26	39	1	76	12	840	11	57	905	8
Future Volume (vph)	62	1	26	39	1	76	12	840	11	57	905	8
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.855			0.911				0.850			0.850
Flt Protected	0.950				0.984		0.950			0.950		
Satd. Flow (prot)	1770	1550	0	0	1623	0	1805	3438	1455	1703	3471	1417
Flt Permitted	0.950				0.984		0.255			0.254		
Satd. Flow (perm)	1770	1550	0	0	1623	0	484	3438	1455	455	3471	1417
Satd. Flow (RTOR)		28			53				132			132
Adj. Flow (vph)	67	1	28	42	1	83	13	913	12	62	984	9
Lane Group Flow (vph)	67	29	0	0	126	0	13	913	12	62	984	9
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Total Split (s)	25.0	25.0		15.0	15.0		15.0	85.0	85.0	15.0	85.0	85.0
Total Lost Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Act Effct Green (s)	11.0	11.0			13.1		91.7	86.6	86.6	96.2	93.2	93.2
Actuated g/C Ratio	0.08	0.08			0.09		0.66	0.62	0.62	0.69	0.67	0.67
v/c Ratio	0.49	0.20			0.63		0.03	0.43	0.01	0.16	0.43	0.01
Control Delay	72.9	22.9			48.7		9.3	17.4	0.0	6.0	9.0	0.0
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.9	22.9			48.7		9.3	17.4	0.0	6.0	9.0	0.0
LOS	E	C			D		A	B	A	A	A	A
Approach Delay		57.8			48.7			17.0			8.8	
Approach LOS		E			D			B			A	

Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 53 (38%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 16.7		Intersection LOS: B	
Intersection Capacity Utilization 62.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive



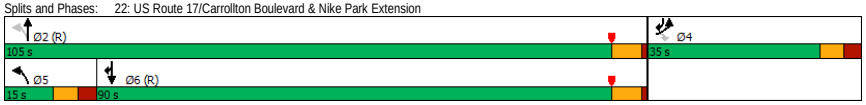
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	1	26	39	1	76	12	840	11	57	905	8
Future Volume (vph)	62	1	26	39	1	76	12	840	11	57	905	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.86			0.91		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1550			1622		1805	3438	1455	1703	3471	1417
Flt Permitted	0.95	1.00			0.98		0.25	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)	1770	1550			1622		484	3438	1455	455	3471	1417
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	1	28	42	1	83	13	913	12	62	984	9
RTOR Reduction (vph)	0	26	0	0	48	0	0	0	5	0	0	3
Lane Group Flow (vph)	67	3	0	0	78	0	13	913	7	62	984	6
Heavy Vehicles (%)	2%	0%	5%	3%	0%	6%	0%	5%	11%	6%	4%	14%
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Actuated Green, G (s)	9.4	9.4			13.1		86.6	83.8	83.8	93.4	87.2	87.2
Effective Green, g (s)	9.4	9.4			13.1		86.6	83.8	83.8	93.4	87.2	87.2
Actuated g/C Ratio	0.07	0.07			0.09		0.62	0.60	0.60	0.67	0.62	0.62
Clearance Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	118	104			151		325	2057	870	358	2161	882
v/s Ratio Prot	c0.04	0.00			c0.05		0.00	0.27		c0.01	c0.28	
v/s Ratio Perm							0.02		0.00	0.11		0.00
v/c Ratio	0.57	0.03			0.52		0.04	0.44	0.01	0.17	0.46	0.01
Uniform Delay, d1	63.3	61.0			60.4		10.7	15.4	11.3	9.1	13.9	10.0
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	0.61	0.61	1.00
Incremental Delay, d2	6.1	0.1			3.0		0.1	0.7	0.0	0.2	0.6	0.0
Delay (s)	69.5	61.1			63.4		10.7	16.1	11.4	5.7	9.2	10.0
Level of Service	E	E			E		B	B	B	A	A	B
Approach Delay (s)		67.0			63.4			15.9			9.0	
Approach LOS		E			E			B			A	

Intersection Summary				
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.47			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	27.5	
Intersection Capacity Utilization	62.3%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	292	60	25	1569	877	82
Future Volume (vph)	292	60	25	1569	877	82
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.251			
Satd. Flow (perm)	3433	1583	468	3539	3539	1583
Satd. Flow (RTOR)		65				89
Adj. Flow (vph)	317	65	27	1705	953	89
Lane Group Flow (vph)	317	65	27	1705	953	89
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Total Split (s)	35.0	35.0	15.0	105.0	90.0	
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	
Act Effct Green (s)	18.2	18.2	107.8	108.8	100.8	128.4
Actuated g/C Ratio	0.13	0.13	0.77	0.78	0.72	0.92
v/c Ratio	0.71	0.25	0.06	0.62	0.37	0.06
Control Delay	67.3	13.8	3.4	9.8	12.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.3	13.8	3.4	9.8	12.0	0.2
LOS	E	B	A	A	B	A
Approach Delay	58.2			9.7	11.0	
Approach LOS	E			A	B	

Intersection Summary			
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 68 (49%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 16.0		Intersection LOS: B	
Intersection Capacity Utilization 62.5%		ICU Level of Service B	
Analysis Period (min) 15			

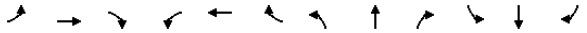
Splits and Phases: 22: US Route 17/Carrollton Boulevard & Nike Park Extension



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	292	60	25	1569	877	82
Future Volume (vph)	292	60	25	1569	877	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.25	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	468	3539	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	317	65	27	1705	953	89
RTOR Reduction (vph)	0	57	0	0	0	11
Lane Group Flow (vph)	317	8	27	1705	953	78
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Actuated Green, G (s)	18.2	18.2	108.8	108.8	98.0	122.2
Effective Green, g (s)	18.2	18.2	108.8	108.8	98.0	122.2
Actuated g/C Ratio	0.13	0.13	0.78	0.78	0.70	0.87
Clearance Time (s)	7.0	7.0	7.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	446	205	399	2750	2477	1381
v/s Ratio Prot	c0.09		0.00	c0.48	0.27	0.05
v/s Ratio Perm		0.01	0.05			
v/c Ratio	0.71	0.04	0.07	0.62	0.38	0.06
Uniform Delay, d1	58.4	53.3	4.6	6.7	8.6	1.2
Progression Factor	1.00	1.00	0.72	1.26	1.34	0.50
Incremental Delay, d2	5.3	0.1	0.1	0.7	0.4	0.0
Delay (s)	63.7	53.4	3.4	9.2	12.0	0.6
Level of Service	E	D	A	A	B	A
Approach Delay (s)	61.9			9.1	11.0	
Approach LOS	E			A	B	

Intersection Summary				
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	62.5%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	8	72	0	9	0	56	6	0	0	6	38
Future Volume (vph)	110	8	72	0	9	0	56	6	0	0	6	38
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.866									0.885	
Flt Protected	0.950							0.957				
Satd. Flow (prot)	1770	1613	0	0	1863	0	0	1783	0	0	1649	0
Flt Permitted	0.950							0.957				
Satd. Flow (perm)	1770	1613	0	0	1863	0	0	1783	0	0	1649	0
Adj. Flow (vph)	120	9	78	0	10	0	61	7	0	0	7	41
Lane Group Flow (vph)	120	87	0	0	10	0	0	68	0	0	48	0
Sign Control		Free			Stop			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 29.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Intersection: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	114	49	56	87	54	335	359	43	30	123	145	14
Average Queue (ft)	50	19	15	26	10	140	153	2	4	34	47	1
95th Queue (ft)	98	44	42	63	37	288	308	25	19	94	115	7
Link Distance (ft)	892		1111			490	490			4237	4237	
Upstream Blk Time (%)						0	0					
Queuing Penalty (veh)						0	1					
Storage Bay Dist (ft)		170		550	280			215	220			230
Storage Blk Time (%)	0					1	3					
Queuing Penalty (veh)	0					0	0					

Intersection: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	316	204	76	65	245	742	770	87	26	183	213	39
Average Queue (ft)	143	42	19	22	37	397	406	4	2	81	105	5
95th Queue (ft)	262	136	57	58	143	682	693	52	13	154	185	25
Link Distance (ft)	1075		1206			970	970			549	549	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		220		65	265			240	310			240
Storage Blk Time (%)	4	0	1	2	0	16	19	0			0	
Queuing Penalty (veh)	3	0	0	0	0	7	1	0			0	

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	L	TR	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	270	305	230	131	86	90	351	820	833	245	137	205
Average Queue (ft)	164	193	101	59	13	26	67	382	392	73	57	82
95th Queue (ft)	251	275	190	116	54	65	221	776	786	232	113	161
Link Distance (ft)			1127		178			1228	1228			970
Upstream Blk Time (%)					0	0		0	0			
Queuing Penalty (veh)					0	0		0	0			
Storage Bay Dist (ft)	465	465		150		175	450			245	450	
Storage Blk Time (%)				1	0	0	0	8	20	0		
Queuing Penalty (veh)				0	0	0	0	3	17	2		

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	234	35
Average Queue (ft)	102	6
95th Queue (ft)	189	24
Link Distance (ft)	970	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		820
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: US Route 17/Carrollton Boulevard & Northgate Lane

Movement	EB	WB	NB	NB	SB
Directions Served	R	R	L	T	L
Maximum Queue (ft)	56	36	40	5	54
Average Queue (ft)	17	10	8	0	12
95th Queue (ft)	41	32	27	5	37
Link Distance (ft)	1152	872		1215	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			245		300
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB
Directions Served	L	L	T	R	L	T	TR	L	L	T	T	R
Maximum Queue (ft)	488	509	188	66	92	101	138	301	326	298	304	205
Average Queue (ft)	314	340	47	4	39	43	54	160	182	177	190	19
95th Queue (ft)	447	474	108	51	79	86	105	265	285	269	285	96
Link Distance (ft)		610	610			1286	1286			1050	1050	
Upstream Blk Time (%)		0										
Queuing Penalty (veh)		0										
Storage Bay Dist (ft)	585			575	150			650	650			225
Storage Blk Time (%)	0	0									5	0
Queuing Penalty (veh)	0	0									1	0

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	128	239	226	30
Average Queue (ft)	53	141	114	1
95th Queue (ft)	109	218	192	31
Link Distance (ft)		1181	1181	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	500			300
Storage Blk Time (%)			0	0
Queuing Penalty (veh)			0	0

Intersection: 6: US Route 17/Carrollton Boulevard & Deep Bottom Drive/Channell Way

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	LT	R	L	L
Maximum Queue (ft)	57	80	94	25	41
Average Queue (ft)	8	25	33	3	11
95th Queue (ft)	38	63	72	16	32
Link Distance (ft)	712	416			
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			225	140	275
Storage Blk Time (%)		0	0		
Queuing Penalty (veh)		0	0		

Intersection: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	R	L	T	T	R
Maximum Queue (ft)	122	66	173	39	252	226	22	58	181	195	42
Average Queue (ft)	48	18	67	7	113	74	2	21	59	72	2
95th Queue (ft)	99	48	134	26	214	178	12	48	138	149	18
Link Distance (ft)		644	713		1440	1440			1077	1077	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	135			275			350	300			630
Storage Blk Time (%)	1	0			0						
Queuing Penalty (veh)	0	0			0						

Intersection: 10: Bend

Movement	WB	WB
Directions Served	T	T
Maximum Queue (ft)	400	317
Average Queue (ft)	16	14
95th Queue (ft)	159	155
Link Distance (ft)	610	610
Upstream Blk Time (%)	0	0
Queuing Penalty (veh)	0	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 16: US Route 17/Carrollton Boulevard & Site A

Movement	NB	NB
Directions Served	T	TR
Maximum Queue (ft)	40	40
Average Queue (ft)	2	2
95th Queue (ft)	30	29
Link Distance (ft)	549	549
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: US Route 17/Carrollton Boulevard & Site B

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 19: US Route 17/Carrollton Boulevard & Site C

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: US Route 17/Carrollton Boulevard & Nike Park Extension

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	L	T	T	T	T	R
Maximum Queue (ft)	202	224	54	62	229	222	146	280	162
Average Queue (ft)	103	132	17	15	83	83	52	120	11
95th Queue (ft)	178	193	41	46	181	178	115	224	82
Link Distance (ft)		1339			1181	1181	632	632	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	650		430	75					200
Storage Blk Time (%)				0	6			1	0
Queuing Penalty (veh)				0	2			1	0

Intersection: 33: Bojangles Driveway/7-Eleven Driveway & Smiths Neck Road

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	2	32	54	53
Average Queue (ft)	0	8	23	22
95th Queue (ft)	2	29	42	45
Link Distance (ft)		650	468	414
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	175			
Storage Blk Time (%)				
Queuing Penalty (veh)				

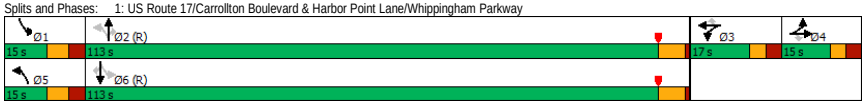
Network Summary

Network wide Queuing Penalty: 41

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	0	18	27	0	11	37	1224	37	23	2416	54
Future Volume (vph)	13	0	18	27	0	11	37	1224	37	23	2416	54
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1805	1615	0	1805	1455	1805	3539	1568	1805	3574	1615
Flt Permitted		0.950			0.950		0.033			0.188		
Satd. Flow (perm)	0	1805	1615	0	1805	1455	63	3539	1568	357	3574	1615
Satd. Flow (RTOR)			109			109			109			109
Adj. Flow (vph)	14	0	19	28	0	11	39	1275	39	24	2517	56
Lane Group Flow (vph)	0	14	19	0	28	11	39	1275	39	24	2517	56
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	15.0	15.0	15.0	17.0	17.0	17.0	15.0	113.0	113.0	15.0	113.0	113.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)		7.4	7.4		8.0	8.0	129.3	127.6	127.6	127.0	124.8	124.8
Actuated g/C Ratio		0.05	0.05		0.05	0.05	0.81	0.80	0.80	0.79	0.78	0.78
v/c Ratio		0.17	0.11		0.31	0.06	0.34	0.45	0.03	0.07	0.90	0.04
Control Delay		77.6	1.2		81.6	0.7	29.9	5.6	0.1	4.6	23.8	0.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0
Total Delay		77.6	1.2		81.6	0.7	29.9	5.6	0.1	4.6	28.5	0.1
LOS		E	A		F	A	C	A	A	A	C	A
Approach Delay		33.6			58.8			6.2			27.6	
Approach LOS		C			E			A			C	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 142 (89%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 20.8		Intersection LOS: C	
Intersection Capacity Utilization 91.8%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway



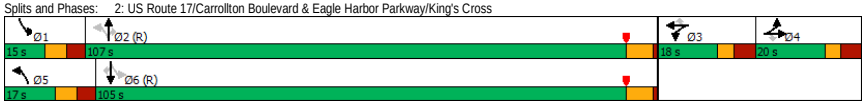
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	0	18	27	0	11	37	1224	37	23	2416	54
Future Volume (vph)	13	0	18	27	0	11	37	1224	37	23	2416	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1805	1615		1805	1455	1805	3539	1568	1805	3574	1615
Flt Permitted		0.95	1.00		0.95	1.00	0.03	1.00	1.00	0.19	1.00	1.00
Satd. Flow (perm)		1805	1615		1805	1455	63	3539	1568	357	3574	1615
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	14	0	19	28	0	11	39	1275	39	24	2517	56
RTOR Reduction (vph)	0	0	18	0	0	11	0	0	10	0	0	14
Lane Group Flow (vph)	0	14	1	0	28	0	39	1275	29	24	2517	42
Heavy Vehicles (%)	0%	0%	0%	0%	0%	11%	0%	2%	3%	0%	1%	0%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		4.6	4.6		6.9	6.9	125.0	120.1	120.1	122.0	118.6	118.6
Effective Green, g (s)		4.6	4.6		6.9	6.9	125.0	120.1	120.1	122.0	118.6	118.6
Actuated g/C Ratio		0.03	0.03		0.04	0.04	0.78	0.75	0.75	0.76	0.74	0.74
Clearance Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		51	46		77	62	102	2656	1176	302	2649	1197
v/s Ratio Prot		c0.01			c0.02		c0.01	0.36		0.00	c0.70	
v/s Ratio Perm			0.00			0.00	0.28		0.02	0.06		0.03
v/c Ratio		0.27	0.01		0.36	0.01	0.38	0.48	0.02	0.08	0.95	0.03
Uniform Delay, d1		76.1	75.5		74.4	73.3	44.2	7.8	5.1	5.4	18.1	5.5
Progression Factor		1.00	1.00		1.00	1.00	2.07	0.65	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.9	0.1		2.9	0.0	1.6	0.6	0.0	0.1	9.2	0.1
Delay (s)		79.0	75.6		77.3	73.3	93.3	5.6	5.1	5.5	27.3	5.6
Level of Service		E	E		E	E	F	A	A	A	C	A
Approach Delay (s)		77.0			76.2			8.1			26.6	
Approach LOS		E			E			A			C	

Intersection Summary					
HCM 2000 Control Delay		21.3	HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio		0.88			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		25.0
Intersection Capacity Utilization		91.8%	ICU Level of Service		F
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	5	56	14	6	14	93	1211	18	24	2257	180
Future Volume (vph)	73	5	56	14	6	14	93	1211	18	24	2257	180
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.966		0.950			0.950		
Satd. Flow (prot)	0	1814	1615	0	1835	1495	1805	3574	1509	1805	3574	1615
Flt Permitted		0.955			0.966		0.036			0.178		
Satd. Flow (perm)	0	1814	1615	0	1835	1495	68	3574	1509	338	3574	1615
Satd. Flow (RTOR)			119			119			126			126
Adj. Flow (vph)	78	5	60	15	6	15	99	1288	19	26	2401	191
Lane Group Flow (vph)	0	83	60	0	21	15	99	1288	19	26	2401	191
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	20.0	20.0	20.0	18.0	18.0	18.0	17.0	107.0	107.0	15.0	105.0	105.0
Total Lost Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Act Effct Green (s)		12.0	12.0		7.8	7.8	122.1	117.7	117.7	114.1	110.0	110.0
Actuated g/C Ratio		0.08	0.08		0.05	0.05	0.76	0.74	0.74	0.71	0.69	0.69
v/c Ratio		0.61	0.26		0.24	0.08	0.70	0.49	0.02	0.09	0.98	0.17
Control Delay		90.2	2.7		79.2	0.9	53.7	14.6	0.0	3.5	20.7	0.4
Queue Delay		0.0	0.1		0.0	0.0	0.0	0.0	0.0	0.0	39.4	0.0
Total Delay		90.2	2.8		79.2	0.9	53.7	14.6	0.0	3.5	60.1	0.4
LOS		F	A		E	A	D	B	A	A	E	A
Approach Delay		53.5			46.6			17.2			55.2	
Approach LOS		D			D			B			E	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 154 (96%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 42.4		Intersection LOS: D	
Intersection Capacity Utilization 95.6%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross



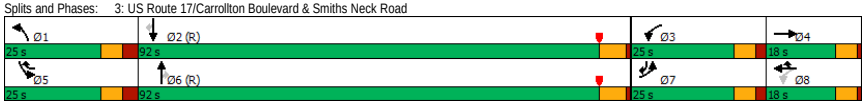
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	5	56	14	6	14	93	1211	18	24	2257	180
Future Volume (vph)	73	5	56	14	6	14	93	1211	18	24	2257	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96	1.00		0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1815	1615		1834	1495	1805	3574	1509	1805	3574	1615
Flt Permitted		0.96	1.00		0.97	1.00	0.04	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)		1815	1615		1834	1495	68	3574	1509	338	3574	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	78	5	60	15	6	15	99	1288	19	26	2401	191
RTOR Reduction (vph)	0	0	56	0	0	15	0	0	6	0	0	42
Lane Group Flow (vph)	0	83	5	0	21	0	99	1288	13	26	2401	149
Heavy Vehicles (%)	0%	0%	0%	0%	0%	8%	0%	1%	7%	0%	1%	0%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		12.0	12.0		5.0	5.0	120.2	111.9	111.9	110.8	107.2	107.2
Effective Green, g (s)		12.0	12.0		5.0	5.0	120.2	111.9	111.9	110.8	107.2	107.2
Actuated g/C Ratio		0.08	0.08		0.03	0.03	0.75	0.70	0.70	0.69	0.67	0.67
Clearance Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		136	121		57	46	141	2499	1055	267	2394	1082
v/s Ratio Prot		c0.05			c0.01		c0.04	0.36		0.00	c0.67	
v/s Ratio Perm			0.00			0.00	c0.49		0.01	0.07		0.09
v/c Ratio		0.61	0.04		0.37	0.01	0.70	0.52	0.01	0.10	1.00	0.14
Uniform Delay, d1		71.7	68.6		76.0	75.1	52.9	11.3	7.3	8.8	26.4	9.6
Progression Factor		1.00	1.00		1.00	1.00	0.94	1.25	1.00	0.50	0.38	0.07
Incremental Delay, d2		7.9	0.1		4.0	0.1	12.6	0.7	0.0	0.1	13.6	0.1
Delay (s)		79.6	68.8		79.9	75.2	62.5	14.8	7.3	4.5	23.6	0.8
Level of Service		E	E		E	E	E	B	A	A	C	A
Approach Delay (s)		75.0			78.0			18.1			21.8	
Approach LOS		E			E			B			C	

Intersection Summary					
HCM 2000 Control Delay		22.8	HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio		0.94			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		27.5
Intersection Capacity Utilization		95.6%	ICU Level of Service		F
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	46	72	121	95	35	176	911	90	92	1905	364
Future Volume (vph)	226	46	72	121	95	35	176	911	90	92	1905	364
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.909				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3502	1717	0	1805	1900	1615	1805	3539	1615	1770	3574	1599
Flt Permitted	0.950			0.397			0.950			0.950		
Satd. Flow (perm)	3502	1717	0	754	1900	1615	1805	3539	1615	1770	3574	1599
Satd. Flow (RTOR)		38				61			102			154
Adj. Flow (vph)	246	50	78	132	103	38	191	990	98	100	2071	396
Lane Group Flow (vph)	246	128	0	132	103	38	191	990	98	100	2071	396
Turn Type	Prot	NA		pm+pt	NA	pt+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8	8 5	1	6		5	2	7
Permitted Phases				8					6			2
Total Split (s)	25.0	18.0		25.0	18.0		25.0	92.0	92.0	25.0	92.0	25.0
Total Lost Time (s)	6.0	5.0		6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)	16.1	13.5		26.5	12.4	33.0	19.1	93.8	93.8	13.6	88.4	110.5
Actuated g/C Ratio	0.10	0.08		0.17	0.08	0.21	0.12	0.59	0.59	0.08	0.55	0.69
v/c Ratio	0.70	0.72		0.59	0.70	0.10	0.89	0.48	0.10	0.67	1.05	0.34
Control Delay	80.2	71.0		64.5	95.8	4.0	120.6	11.7	2.8	102.2	45.0	2.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0
Total Delay	80.2	71.0		64.5	95.8	4.0	120.6	11.7	2.8	102.2	50.4	2.7
LOS	F	E		E	F	A	F	B	A	F	D	A
Approach Delay		77.1			67.9			27.3			45.0	
Approach LOS		E			E			C			D	

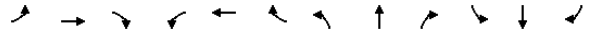
Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 10 (6%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.05			
Intersection Signal Delay: 44.0		Intersection LOS: D	
Intersection Capacity Utilization 90.8%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road



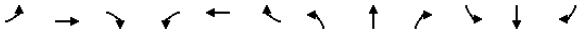
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	46	72	121	95	35	176	911	90	92	1905	364
Future Volume (vph)	226	46	72	121	95	35	176	911	90	92	1905	364
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.0		6.0	5.0	5.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3502	1716		1805	1900	1615	1805	3539	1615	1770	3574	1599
Flt Permitted	0.95	1.00		0.40	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3502	1716		753	1900	1615	1805	3539	1615	1770	3574	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	246	50	78	132	103	38	191	990	98	100	2071	396
RTOR Reduction (vph)	0	35	0	0	0	31	0	0	40	0	0	53
Lane Group Flow (vph)	246	93	0	132	103	7	191	990	58	100	2071	343
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	2%	1%	1%
Turn Type	Prot	NA		pm+pt	NA	pt+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8	8 5	1	6		5	2	7
Permitted Phases				8					6			2
Actuated Green, G (s)	16.1	13.5		27.4	12.4	31.0	19.1	93.9	93.9	13.6	88.4	104.5
Effective Green, g (s)	16.1	13.5		27.4	12.4	31.0	19.1	93.9	93.9	13.6	88.4	104.5
Actuated g/C Ratio	0.10	0.08		0.17	0.08	0.19	0.12	0.59	0.59	0.08	0.55	0.65
Clearance Time (s)	6.0	5.0		6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.5	5.0	5.0	2.5	5.0	3.0
Lane Grp Cap (vph)	352	144		227	147	312	215	2076	947	150	1974	1104
v/s Ratio Prot	c0.07	c0.05		0.05	0.05	0.00	c0.11	c0.28		0.06	c0.58	0.03
v/s Ratio Perm				0.04					0.04			0.18
v/c Ratio	0.70	0.65		0.58	0.70	0.02	0.89	0.48	0.06	0.67	1.05	0.31
Uniform Delay, d1	69.6	70.9		59.4	72.0	52.2	69.4	19.0	14.2	71.0	35.8	12.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.27	0.54	0.97	1.33	0.40	0.40
Incremental Delay, d2	6.0	9.6		3.8	14.0	0.0	30.5	0.7	0.1	3.8	28.0	0.1
Delay (s)	75.6	80.5		63.1	86.0	52.3	118.4	11.0	13.9	98.3	42.4	4.9
Level of Service	E	F		E	F	D	F	B	B	F	D	A
Approach Delay (s)		77.3			70.3			27.3			38.8	
Approach LOS		E			E			C			D	

Intersection Summary					
HCM 2000 Control Delay	40.6	HCM 2000 Level of Service		D	
HCM 2000 Volume to Capacity ratio	0.96				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)		24.0	
Intersection Capacity Utilization	90.8%	ICU Level of Service		E	
Analysis Period (min)	15				
c Critical Lane Group					



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	18	0	0	32	88	1317	22	14	2015	33
Future Volume (vph)	0	0	18	0	0	32	88	1317	22	14	2015	33
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.865			0.865			0.850			0.850
Flt Protected							0.950			0.950		
Satd. Flow (prot)	0	0	1644	0	0	1644	1787	3574	1615	1805	3574	1615
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	0	0	1644	0	0	1644	1787	3574	1615	1805	3574	1615
Adj. Flow (vph)	0	0	19	0	0	34	94	1401	23	15	2144	35
Lane Group Flow (vph)	0	0	19	0	0	34	94	1401	23	15	2144	35
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 67.2%		ICU Level of Service C	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	18	0	0	32	88	1317	22	14	2015	33
Future Volume (Veh/h)	0	0	18	0	0	32	88	1317	22	14	2015	33
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	19	0	0	34	94	1401	23	15	2144	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1315	
pX, platoon unblocked	0.46	0.46	0.46	0.46	0.46		0.46					
vC, conflicting volume	3096	3786	1072	2710	3798	700	2179			1424		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	3212	4726	0	2363	4752	700	1198			1424		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	96	100	100	91	65			97		
cM capacity (veh/h)	1	0	497	6	0	386	266			484		

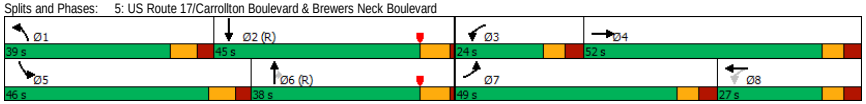
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	19	34	94	700	700	23	15	1072	1072	35
Volume Left	0	0	94	0	0	0	15	0	0	0
Volume Right	19	34	0	0	0	23	0	0	0	35
cSH	497	386	266	1700	1700	1700	484	1700	1700	1700
Volume to Capacity	0.04	0.09	0.35	0.41	0.41	0.01	0.03	0.63	0.63	0.02
Queue Length 95th (ft)	3	7	38	0	0	0	2	0	0	0
Control Delay (s)	12.5	15.2	25.7	0.0	0.0	0.0	12.7	0.0	0.0	0.0
Lane LOS	B	C	D				B			
Approach Delay (s)	12.5	15.2	1.6				0.1			
Approach LOS	B	C								

Intersection Summary					
Average Delay		0.9			
Intersection Capacity Utilization		67.2%	ICU Level of Service	C	
Analysis Period (min)		15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	760	199	641	175	301	71	550	591	61	347	671	1210
Future Volume (vph)	760	199	641	175	301	71	550	591	61	347	671	1210
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.971				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1863	1568	1770	3437	0	3433	3574	1583	1805	3574	1599
Flt Permitted	0.950			0.627			0.950			0.950		
Satd. Flow (perm)	3433	1863	1568	1168	3437	0	3433	3574	1583	1805	3574	1599
Satd. Flow (RTOR)			582		15				188			626
Adj. Flow (vph)	800	209	675	184	317	75	579	622	64	365	706	1274
Lane Group Flow (vph)	800	209	675	184	392	0	579	622	64	365	706	1274
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Total Split (s)	49.0	52.0		24.0	27.0		39.0	38.0	38.0	46.0	45.0	
Total Lost Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Act Effct Green (s)	40.3	44.8	160.0	34.3	19.4		29.6	35.4	35.4	35.4	41.2	160.0
Actuated g/C Ratio	0.25	0.28	1.00	0.21	0.12		0.18	0.22	0.22	0.22	0.26	1.00
v/c Ratio	0.93	0.40	0.43	0.60	0.91		0.91	0.79	0.13	0.91	0.77	0.80
Control Delay	75.3	49.5	0.9	42.6	92.2		71.0	65.7	2.7	86.5	43.2	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.3	49.5	0.9	42.6	92.2		71.0	65.7	2.7	86.5	43.2	14.4
LOS	E	D	A	D	F		E	E	A	F	D	B
Approach Delay		42.3			76.3			64.9			34.3	
Approach LOS		D			E			E			C	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 60 (38%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 47.3		Intersection LOS: D	
Intersection Capacity Utilization 91.2%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	760	199	641	175	301	71	550	591	61	347	671	1210
Future Volume (vph)	760	199	641	175	301	71	550	591	61	347	671	1210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	4.0	7.5	7.5		8.0	6.5	6.5	8.0	6.5	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1568	1770	3438		3433	3574	1583	1805	3574	1599
Flt Permitted	0.95	1.00	1.00	0.63	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1863	1568	1168	3438		3433	3574	1583	1805	3574	1599
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	800	209	675	184	317	75	579	622	64	365	706	1274
RTOR Reduction (vph)	0	0	0	0	13	0	0	0	50	0	0	0
Lane Group Flow (vph)	800	209	675	184	379	0	579	622	14	365	706	1274
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	1%	2%	0%	1%	1%
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Actuated Green, G (s)	40.3	44.8	160.0	34.3	19.4		29.6	35.4	35.4	35.4	41.2	160.0
Effective Green, g (s)	40.3	44.8	160.0	34.3	19.4		29.6	35.4	35.4	35.4	41.2	160.0
Actuated g/C Ratio	0.25	0.28	1.00	0.21	0.12		0.19	0.22	0.22	0.22	0.26	1.00
Clearance Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Vehicle Extension (s)	3.5	3.5		3.0	3.0		2.5	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	864	521	1568	306	416		635	790	350	399	920	1599
v/s Ratio Prot	c0.23	0.11		0.06	0.11		0.17	0.17		c0.20	0.20	
v/s Ratio Perm			0.43	0.07					0.01			c0.80
v/c Ratio	0.93	0.40	0.43	0.60	0.91		0.91	0.79	0.04	0.91	0.77	0.80
Uniform Delay, d1	58.4	46.7	0.0	55.1	69.4		63.9	58.8	49.0	60.8	55.0	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.82	0.98	1.00	1.06	0.69	1.00
Incremental Delay, d2	15.7	0.6	0.9	3.3	23.7		16.5	7.3	0.2	20.3	4.6	3.2
Delay (s)	74.1	47.3	0.9	58.4	93.2		69.0	64.7	49.2	84.6	42.4	3.2
Level of Service	E	D	A	E	F		E	E	D	F	D	A
Approach Delay (s)		41.4			82.1			65.9			27.7	
Approach LOS		D			F			E			C	

Intersection Summary					
HCM 2000 Control Delay	45.2	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	1.00				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.5		
Intersection Capacity Utilization	91.2%	ICU Level of Service	F		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	8	27	0	49	13	1088	65	75	1247	6
Future Volume (vph)	4	0	8	27	0	49	13	1088	65	75	1247	6
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.907				0.850			0.850		0.999	
Flt Protected		0.985			0.950		0.950			0.950		
Satd. Flow (prot)	0	1697	0	0	1703	1553	1805	3574	1553	1805	3536	0
Flt Permitted		0.985			0.950		0.950			0.950		
Satd. Flow (perm)	0	1697	0	0	1703	1553	1805	3574	1553	1805	3536	0
Adj. Flow (vph)	4	0	9	29	0	52	14	1157	69	80	1327	6
Lane Group Flow (vph)	0	13	0	0	29	52	14	1157	69	80	1333	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary				
Control Type: Unsignalized				
Intersection Capacity Utilization 52.4%		ICU Level of Service A		
Analysis Period (min) 15				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	0	8	27	0	49	13	1088	65	75	1247	6
Future Volume (Veh/h)	4	0	8	27	0	49	13	1088	65	75	1247	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	4	0	9	29	0	52	14	1157	69	80	1327	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						9						
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1135	
pX, platoon unblocked	0.83	0.83	0.83	0.83	0.83		0.83					
vC, conflicting volume	2096	2744	666	2018	2678	578	1333			1226		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1912	2692	190	1817	2612	578	993			1226		
tC, single (s)	7.5	6.5	6.9	7.6	6.5	7.0	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	85	100	99	13	100	89	98			86		
cM capacity (veh/h)	27	15	686	33	17	454	585			576		

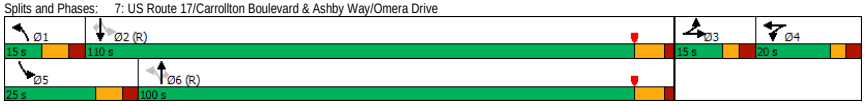
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	13	81	14	578	578	69	80	885	448
Volume Left	4	29	14	0	0	0	80	0	0
Volume Right	9	52	0	0	0	69	0	0	6
cSH	81	93	585	1700	1700	1700	576	1700	1700
Volume to Capacity	0.16	0.87	0.02	0.34	0.34	0.04	0.14	0.52	0.26
Queue Length 95th (ft)	13	120	2	0	0	0	12	0	0
Control Delay (s)	57.6	112.6	11.3	0.0	0.0	0.0	12.3	0.0	0.0
Lane LOS	F	F	B				B		
Approach Delay (s)	57.6	112.6	0.1				0.7		
Approach LOS	F	F							

Intersection Summary					
Average Delay		4.0			
Intersection Capacity Utilization		52.4%	ICU Level of Service		A
Analysis Period (min)		15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	7	16	49	7	93	29	1012	25	102	1210	47
Future Volume (vph)	35	7	16	49	7	93	29	1012	25	102	1210	47
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.896			0.915				0.850			0.850
Flt Protected	0.950				0.984		0.950			0.950		
Satd. Flow (prot)	1805	1702	0	0	1668	0	1805	3539	1615	1770	3574	1615
Flt Permitted	0.950				0.984		0.185			0.219		
Satd. Flow (perm)	1805	1702	0	0	1668	0	352	3539	1615	408	3574	1615
Satd. Flow (RTOR)		16			41				170			116
Adj. Flow (vph)	35	7	16	49	7	94	29	1022	25	103	1222	47
Lane Group Flow (vph)	35	23	0	0	150	0	29	1022	25	103	1222	47
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Total Split (s)	15.0	15.0		20.0	20.0		15.0	100.0	100.0	25.0	110.0	110.0
Total Lost Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Act Effct Green (s)	9.2	9.2			16.9		107.2	100.6	100.6	113.4	108.2	108.2
Actuated g/C Ratio	0.06	0.06			0.11		0.67	0.63	0.63	0.71	0.68	0.68
v/c Ratio	0.34	0.21			0.71		0.10	0.46	0.02	0.28	0.51	0.04
Control Delay	81.1	40.3			67.2		9.2	17.9	0.0	6.5	10.9	0.2
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.1	40.3			67.2		9.2	17.9	0.0	6.5	10.9	0.2
LOS	F	D			E		A	B	A	A	B	A
Approach Delay		64.9			67.2			17.3			10.2	
Approach LOS		E			E			B			B	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 54 (34%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 17.5		Intersection LOS: B	
Intersection Capacity Utilization 72.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive



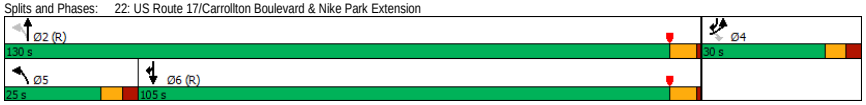
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	7	16	49	7	93	29	1012	25	102	1210	47
Future Volume (vph)	35	7	16	49	7	93	29	1012	25	102	1210	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.90			0.92		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	1702			1669		1805	3539	1615	1770	3574	1615
Flt Permitted	0.95	1.00			0.98		0.18	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)	1805	1702			1669		351	3539	1615	408	3574	1615
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	35	7	16	49	7	94	29	1022	25	103	1222	47
RTOR Reduction (vph)	0	15	0	0	37	0	0	0	9	0	0	17
Lane Group Flow (vph)	35	8	0	0	113	0	29	1022	16	103	1222	30
Heavy Vehicles (%)	0%	0%	0%	2%	0%	3%	0%	2%	0%	2%	1%	0%
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Actuated Green, G (s)	7.6	7.6			16.9		103.7	99.4	99.4	112.3	103.7	103.7
Effective Green, g (s)	7.6	7.6			16.9		103.7	99.4	99.4	112.3	103.7	103.7
Actuated g/C Ratio	0.05	0.05			0.11		0.65	0.62	0.62	0.70	0.65	0.65
Clearance Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	85	80			176		266	2198	1003	359	2316	1046
v/s Ratio Prot	c0.02	0.00			c0.07		0.00	0.29		c0.02	c0.34	
v/s Ratio Perm							0.07		0.01	0.19		0.02
v/c Ratio	0.41	0.10			0.64		0.11	0.46	0.02	0.29	0.53	0.03
Uniform Delay, d1	74.0	72.9			68.7		11.3	16.1	11.6	9.5	15.1	10.1
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	0.62	0.66	1.00
Incremental Delay, d2	3.2	0.5			7.8		0.2	0.7	0.0	0.4	0.7	0.0
Delay (s)	77.3	73.4			76.5		11.5	16.8	11.6	6.2	10.7	10.1
Level of Service	E	E			E		B	B	B	A	B	B
Approach Delay (s)		75.7			76.5			16.6			10.3	
Approach LOS		E			E			B			B	

Intersection Summary					
HCM 2000 Control Delay		18.0	HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.54			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		27.5
Intersection Capacity Utilization		72.7%	ICU Level of Service		C
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	150	44	115	1256	1819	243
Future Volume (vph)	150	44	115	1256	1819	243
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.052			
Satd. Flow (perm)	3433	1583	97	3539	3539	1583
Satd. Flow (RTOR)		48				264
Adj. Flow (vph)	163	48	125	1365	1977	264
Lane Group Flow (vph)	163	48	125	1365	1977	264
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Total Split (s)	30.0	30.0	25.0	130.0	105.0	
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	
Act Effct Green (s)	12.9	12.9	133.1	134.1	115.1	135.1
Actuated g/C Ratio	0.08	0.08	0.83	0.84	0.72	0.84
v/c Ratio	0.59	0.28	0.61	0.46	0.78	0.19
Control Delay	79.5	20.3	23.4	9.2	4.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.5	20.3	23.4	9.2	4.1	0.1
LOS	E	C	C	A	A	A
Approach Delay	66.0			10.4	3.6	
Approach LOS	E			B	A	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 72 (45%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 9.5		Intersection LOS: A	
Intersection Capacity Utilization 79.2%		ICU Level of Service D	
Analysis Period (min) 15			

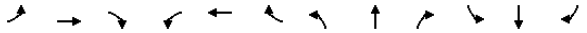
Splits and Phases: 22: US Route 17/Carrollton Boulevard & Nike Park Extension



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	150	44	115	1256	1819	243
Future Volume (vph)	150	44	115	1256	1819	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.05	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	97	3539	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	48	125	1365	1977	264
RTOR Reduction (vph)	0	44	0	0	0	43
Lane Group Flow (vph)	163	4	125	1365	1977	221
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Actuated Green, G (s)	12.9	12.9	134.1	134.1	115.2	134.1
Effective Green, g (s)	12.9	12.9	134.1	134.1	115.2	134.1
Actuated g/C Ratio	0.08	0.08	0.84	0.84	0.72	0.84
Clearance Time (s)	7.0	7.0	7.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	276	127	205	2966	2548	1326
v/s Ratio Prot	c0.05		0.05	c0.39	c0.56	0.14
v/s Ratio Perm		0.00	0.46			
v/c Ratio	0.59	0.03	0.61	0.46	0.78	0.17
Uniform Delay, d1	71.0	67.8	36.2	3.4	14.2	2.4
Progression Factor	1.00	1.00	0.77	2.49	0.21	0.01
Incremental Delay, d2	3.4	0.1	2.5	0.3	0.7	0.0
Delay (s)	74.4	67.9	30.5	8.7	3.7	0.0
Level of Service	E	E	C	A	A	A
Approach Delay (s)	72.9			10.6	3.3	
Approach LOS	E			B	A	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	8	57	0	7	0	79	6	0	0	6	125
Future Volume (vph)	155	8	57	0	7	0	79	6	0	0	6	125
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.869									0.872	
Flt Protected	0.950							0.956				
Satd. Flow (prot)	1770	1619	0	0	1863	0	0	1781	0	0	1624	0
Flt Permitted	0.950							0.956				
Satd. Flow (perm)	1770	1619	0	0	1863	0	0	1781	0	0	1624	0
Adj. Flow (vph)	168	9	62	0	8	0	86	7	0	0	7	136
Lane Group Flow (vph)	168	71	0	0	8	0	0	93	0	0	143	0
Sign Control		Free			Stop			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 38.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Intersection: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	64	66	86	30	86	198	222	57	219	3041	3080	230
Average Queue (ft)	16	22	23	6	30	69	82	6	27	1059	1098	50
95th Queue (ft)	47	55	61	21	69	163	180	35	128	2770	2814	204
Link Distance (ft)	892		1111			490	490			4237	4237	
Upstream Blk Time (%)										1	1	
Queuing Penalty (veh)										0	0	
Storage Bay Dist (ft)		170		550	280			215	220			230
Storage Blk Time (%)							0	0	0	20	26	0
Queuing Penalty (veh)							0	0	0	5	14	3

Intersection: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	160	112	89	65	164	243	239	17	210	584	588	240
Average Queue (ft)	68	41	24	15	70	82	91	2	22	480	507	117
95th Queue (ft)	132	88	64	51	133	180	186	10	113	688	671	301
Link Distance (ft)	1075		1206			970	970			549	549	
Upstream Blk Time (%)										7	10	
Queuing Penalty (veh)										89	128	
Storage Bay Dist (ft)		220		65	265			240	310			240
Storage Blk Time (%)		0	2	0		0	0		0	23	29	1
Queuing Penalty (veh)		0	0	0		0	0		0	5	51	6

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	L	TR	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	176	210	198	148	181	112	322	335	351	244	450	940
Average Queue (ft)	92	131	84	92	95	26	182	203	211	55	155	545
95th Queue (ft)	173	195	162	151	171	72	299	307	327	182	390	937
Link Distance (ft)			1127		178			1228	1228			970
Upstream Blk Time (%)					2	0						0
Queuing Penalty (veh)					5	0						1
Storage Bay Dist (ft)	465	465		150		175	450			245	450	
Storage Blk Time (%)				2	3	0			5	0	0	11
Queuing Penalty (veh)				3	5	0			5	1	1	10

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	961	820
Average Queue (ft)	588	190
95th Queue (ft)	975	718
Link Distance (ft)	970	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	3	
Storage Bay Dist (ft)		820
Storage Blk Time (%)	3	0
Queuing Penalty (veh)	11	3

Intersection: 4: US Route 17/Carrollton Boulevard & Northgate Lane

Movement	EB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	R	R	L	T	R	L	T	T	R
Maximum Queue (ft)	41	54	169	27	2	30	123	6	2
Average Queue (ft)	11	19	74	1	0	5	4	0	0
95th Queue (ft)	31	45	142	21	2	20	126	6	0
Link Distance (ft)	1152	872		1215			1228	1228	
Upstream Blk Time (%)							0		
Queuing Penalty (veh)							0		
Storage Bay Dist (ft)			245		300	300			200
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	EB	EB	EB	EB	B10	B10	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	R	T	T	L	T	TR	L	L	T
Maximum Queue (ft)	516	554	314	305	56	8	150	407	376	387	399	386
Average Queue (ft)	342	369	140	32	7	0	130	221	202	229	245	246
95th Queue (ft)	515	562	269	173	62	8	183	383	341	344	361	355
Link Distance (ft)		610	610		1332	1332		1286	1286			1050
Upstream Blk Time (%)		2	0									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	585			575			150			650	650	
Storage Blk Time (%)	0	2	0	0			9	24				
Queuing Penalty (veh)	1	7	0	0			13	41				

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R
Maximum Queue (ft)	383	225	466	519	542	299
Average Queue (ft)	251	80	294	263	231	41
95th Queue (ft)	360	225	449	436	445	211
Link Distance (ft)	1050			1181	1181	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		225	500			300
Storage Blk Time (%)	15	0	1	1	1	0
Queuing Penalty (veh)	9	1	5	3	10	1

Intersection: 6: US Route 17/Carrollton Boulevard & Deep Bottom Drive/Channell Way

Movement	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	LTR	LT	R	L	T	R	L	TR
Maximum Queue (ft)	55	129	96	30	2	11	84	2
Average Queue (ft)	12	43	31	5	0	0	29	0
95th Queue (ft)	41	115	76	22	2	6	65	2
Link Distance (ft)	712	416			569			1050
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			225	140		60	275	
Storage Blk Time (%)		1	0					
Queuing Penalty (veh)		0	0					

Intersection: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	R	L	T	T	R
Maximum Queue (ft)	85	55	235	119	292	275	21	136	218	230	30
Average Queue (ft)	33	17	95	19	144	106	4	45	81	97	6
95th Queue (ft)	73	43	196	69	258	223	16	95	183	196	24
Link Distance (ft)		644	713		1440	1440			1077	1077	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	135			275			350	300			630
Storage Blk Time (%)				0	0	0			0		
Queuing Penalty (veh)				0	0	0			0		

Intersection: 10: Bend

Movement	WB	WB	WB
Directions Served	T	T	
Maximum Queue (ft)	538	532	451
Average Queue (ft)	84	81	25
95th Queue (ft)	392	379	217
Link Distance (ft)	610	610	610
Upstream Blk Time (%)		0	0
Queuing Penalty (veh)		0	1
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 16: US Route 17/Carrollton Boulevard & Site A

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	510	509
Average Queue (ft)	260	288
95th Queue (ft)	604	621
Link Distance (ft)	490	490
Upstream Blk Time (%)	2	2
Queuing Penalty (veh)	19	29
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: US Route 17/Carrollton Boulevard & Site B

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	23	37
Average Queue (ft)	2	4
95th Queue (ft)	33	60
Link Distance (ft)	1215	1215
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: US Route 17/Carrollton Boulevard & Site C

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: US Route 17/Carrollton Boulevard & Nike Park Extension

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	L	T	T	T	T	R
Maximum Queue (ft)	135	146	90	74	510	492	302	466	200
Average Queue (ft)	55	75	20	63	183	162	111	266	84
95th Queue (ft)	112	130	62	88	412	383	235	453	236
Link Distance (ft)		1339			1181	1181	632	632	
Upstream Blk Time (%)							0	0	
Queuing Penalty (veh)							0	2	
Storage Bay Dist (ft)	650		430	75					200
Storage Blk Time (%)				32	12			14	0
Queuing Penalty (veh)				200	14			34	4

Intersection: 33: Bojangles Driveway/7-Eleven Driveway & Smiths Neck Road

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	2	29	70	74
Average Queue (ft)	0	6	28	37
95th Queue (ft)	2	26	52	61
Link Distance (ft)		650	468	414
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	175			
Storage Blk Time (%)				
Queuing Penalty (veh)				

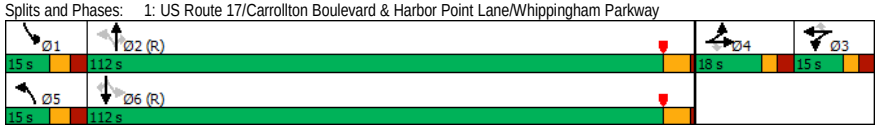
Network Summary

Network wide Queuing Penalty: 744

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	0	34	24	0	40	16	2692	9	7	864	16
Future Volume (vph)	66	0	34	24	0	40	16	2692	9	7	864	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1805	1615	0	1805	1568	1543	3539	1615	1504	3471	1495
Flt Permitted		0.950			0.950		0.269			0.035		
Satd. Flow (perm)	0	1805	1615	0	1805	1568	437	3539	1615	55	3471	1495
Satd. Flow (RTOR)			109			109			109			109
Adj. Flow (vph)	72	0	37	26	0	43	17	2926	10	8	939	17
Lane Group Flow (vph)	0	72	37	0	26	43	17	2926	10	8	939	17
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	18.0	18.0	18.0	15.0	15.0	15.0	15.0	112.0	112.0	15.0	112.0	112.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)		10.6	10.6		7.9	7.9	123.8	123.6	123.6	120.7	118.5	118.5
Actuated g/C Ratio		0.07	0.07		0.05	0.05	0.77	0.77	0.77	0.75	0.74	0.74
v/c Ratio		0.61	0.18		0.30	0.24	0.05	1.07	0.01	0.09	0.37	0.01
Control Delay		93.6	1.9		81.7	3.1	1.0	39.7	0.0	7.3	9.2	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
Total Delay		93.6	1.9		81.7	3.1	1.0	40.2	0.0	7.3	9.2	0.0
LOS		F	A		F	A	A	D	A	A	A	A
Approach Delay		62.5			32.7			39.8			9.0	
Approach LOS		E			C			D			A	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 18 (11%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 33.0		Intersection LOS: C	
Intersection Capacity Utilization 101.1%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway



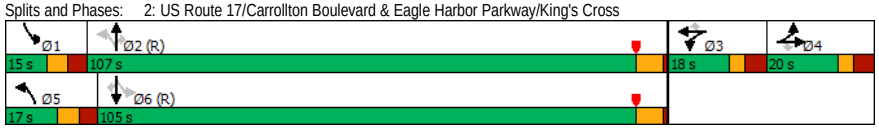
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	0	34	24	0	40	16	2692	9	7	864	16
Future Volume (vph)	66	0	34	24	0	40	16	2692	9	7	864	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1805	1615		1805	1568	1543	3539	1615	1504	3471	1495
Flt Permitted		0.95	1.00		0.95	1.00	0.27	1.00	1.00	0.03	1.00	1.00
Satd. Flow (perm)		1805	1615		1805	1568	437	3539	1615	55	3471	1495
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	0	37	26	0	43	17	2926	10	8	939	17
RTOR Reduction (vph)	0	0	35	0	0	41	0	0	3	0	0	5
Lane Group Flow (vph)	0	72	2	0	26	2	17	2926	7	8	939	12
Heavy Vehicles (%)	0%	0%	0%	0%	0%	3%	17%	2%	0%	20%	4%	8%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		10.6	10.6		6.5	6.5	120.2	116.8	116.8	115.6	114.5	114.5
Effective Green, g (s)		10.6	10.6		6.5	6.5	120.2	116.8	116.8	115.6	114.5	114.5
Actuated g/C Ratio		0.07	0.07		0.04	0.04	0.75	0.73	0.73	0.72	0.72	0.72
Clearance Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		119	106		73	63	351	2583	1178	49	2483	1069
v/s Ratio Prot		c0.04			c0.01		0.00	c0.83		c0.00	0.27	
v/s Ratio Perm			0.00			0.00	0.04		0.00	0.11		0.01
v/c Ratio		0.61	0.02		0.36	0.03	0.05	1.13	0.01	0.16	0.38	0.01
Uniform Delay, d1		72.7	69.9		74.7	73.7	5.6	21.6	5.9	44.5	8.9	6.5
Progression Factor		1.00	1.00		1.00	1.00	0.20	0.10	1.00	1.00	1.00	1.00
Incremental Delay, d2		8.4	0.1		3.0	0.2	0.0	60.3	0.0	1.1	0.4	0.0
Delay (s)		81.1	69.9		77.7	73.9	1.1	62.5	5.9	45.7	9.3	6.5
Level of Service		F	E		E	E	A	E	A	D	A	A
Approach Delay (s)		77.3			75.3			62.0			9.6	
Approach LOS		E			E			E			A	

Intersection Summary				
HCM 2000 Control Delay	50.3	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	1.05			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	25.0	
Intersection Capacity Utilization	101.1%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	1	75	16	3	27	51	2522	4	3	887	32
Future Volume (vph)	175	1	75	16	3	27	51	2522	4	3	887	32
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.959		0.950			0.950		
Satd. Flow (prot)	0	1793	1615	0	1822	1468	1719	3539	967	1805	3471	1553
Flt Permitted		0.953			0.959		0.237			0.039		
Satd. Flow (perm)	0	1793	1615	0	1822	1468	429	3539	967	74	3471	1553
Satd. Flow (RTOR)			119			119			126			126
Adj. Flow (vph)	190	1	82	17	3	29	55	2741	4	3	964	35
Lane Group Flow (vph)	0	191	82	0	20	29	55	2741	4	3	964	35
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	20.0	20.0	20.0	18.0	18.0	18.0	17.0	107.0	107.0	15.0	105.0	105.0
Total Lost Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Act Effct Green (s)		19.0	19.0		7.8	7.8	113.5	113.4	113.4	107.1	104.5	104.5
Actuated g/C Ratio		0.12	0.12		0.05	0.05	0.71	0.71	0.71	0.67	0.65	0.65
v/c Ratio		0.90	0.28		0.23	0.16	0.15	1.09	0.01	0.03	0.43	0.03
Control Delay		107.4	5.2		79.1	1.8	6.3	59.9	0.0	7.3	10.4	0.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0
Total Delay		107.4	5.2		79.1	1.8	6.3	63.2	0.0	7.3	10.4	0.1
LOS		F	A		E	A	A	E	A	A	B	A
Approach Delay		76.7			33.3			62.0			10.0	
Approach LOS		E			C			E			A	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.09			
Intersection Signal Delay: 50.0		Intersection LOS: D	
Intersection Capacity Utilization 102.0%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross



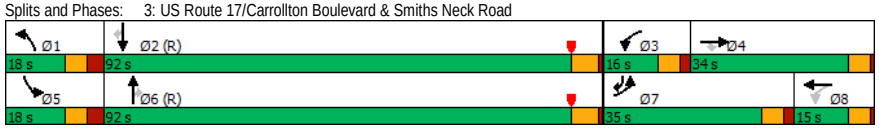
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	1	75	16	3	27	51	2522	4	3	887	32
Future Volume (vph)	175	1	75	16	3	27	51	2522	4	3	887	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1792	1615		1823	1468	1719	3539	967	1805	3471	1553
Flt Permitted		0.95	1.00		0.96	1.00	0.24	1.00	1.00	0.04	1.00	1.00
Satd. Flow (perm)		1792	1615		1823	1468	429	3539	967	75	3471	1553
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	190	1	82	17	3	29	55	2741	4	3	964	35
RTOR Reduction (vph)	0	0	72	0	0	28	0	0	1	0	0	13
Lane Group Flow (vph)	0	191	10	0	20	1	55	2741	3	3	964	22
Heavy Vehicles (%)	1%	0%	0%	0%	0%	10%	5%	2%	67%	0%	4%	4%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		19.0	19.0		6.4	6.4	111.5	106.0	106.0	102.7	101.6	101.6
Effective Green, g (s)		19.0	19.0		6.4	6.4	111.5	106.0	106.0	102.7	101.6	101.6
Actuated g/C Ratio		0.12	0.12		0.04	0.04	0.70	0.66	0.66	0.64	0.63	0.63
Clearance Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		212	191		72	58	343	2344	640	60	2204	986
v/s Ratio Prot		c0.11			c0.01		c0.01	c0.77		0.00	0.28	
v/s Ratio Perm			0.01			0.00	0.11		0.00	0.03		0.01
v/c Ratio		0.90	0.05		0.28	0.02	0.16	1.17	0.00	0.05	0.44	0.02
Uniform Delay, d1		69.6	62.5		74.6	73.8	9.2	27.0	9.1	40.1	14.8	10.8
Progression Factor		1.00	1.00		1.00	1.00	0.86	0.51	1.00	1.00	0.70	1.00
Incremental Delay, d2		35.9	0.1		2.1	0.1	0.1	78.5	0.0	0.2	0.6	0.0
Delay (s)		105.5	62.6		76.7	73.9	8.0	92.1	9.1	40.5	11.0	10.9
Level of Service		F	E		E	E	A	F	A	D	B	B
Approach Delay (s)		92.6			75.0			90.4			11.1	
Approach LOS		F			E			F			B	

Intersection Summary				
HCM 2000 Control Delay	71.1	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.08			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	27.5	
Intersection Capacity Utilization	102.0%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	494	67	102	58	11	38	42	1843	98	39	813	138
Future Volume (vph)	494	67	102	58	11	38	42	1843	98	39	813	138
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.884				0.850			0.850
Flt Protected	0.950	0.963		0.950			0.950			0.950		
Satd. Flow (prot)	1698	1717	1615	1719	1629	0	1612	3539	1553	1752	3471	1615
Flt Permitted	0.950	0.428		0.564			0.950			0.950		
Satd. Flow (perm)	1698	763	1615	1021	1629	0	1612	3539	1553	1752	3471	1615
Satd. Flow (RTOR)			109		41				143			150
Adj. Flow (vph)	537	73	111	63	12	41	46	2003	107	42	884	150
Lane Group Flow (vph)	301	309	111	63	53	0	46	2003	107	42	884	150
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		1	6		5	2	7
Permitted Phases			4	8					6			2
Total Split (s)	35.0	34.0	34.0	16.0	15.0		18.0	92.0	92.0	18.0	92.0	35.0
Total Lost Time (s)	6.0	5.0	5.0	6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)	32.0	33.0	32.5	16.3	9.4		8.9	91.0	91.0	8.5	90.6	129.8
Actuated g/C Ratio	0.20	0.21	0.20	0.10	0.06		0.06	0.57	0.57	0.05	0.57	0.81
v/c Ratio	0.89	0.88	0.27	0.44	0.40		0.52	1.00	0.11	0.46	0.45	0.11
Control Delay	89.6	86.4	11.2	57.3	35.2		92.9	39.0	1.4	99.4	13.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.1		0.0	38.1	0.0	0.0	0.0	0.0
Total Delay	89.6	86.4	11.2	57.3	35.3		92.9	77.2	1.4	99.4	13.2	0.2
LOS	F	F	B	E	D		F	E	A	F	B	A
Approach Delay		76.1			47.2			73.8			14.8	
Approach LOS		E			D			E			B	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 144 (90%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 57.8		Intersection LOS: E	
Intersection Capacity Utilization 82.2%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	494	67	102	58	11	38	42	1843	98	39	813	138
Future Volume (vph)	494	67	102	58	11	38	42	1843	98	39	813	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.0	5.0	6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1698	1717	1615	1719	1629		1612	3539	1553	1752	3471	1615
Flt Permitted	0.95	0.43	1.00	0.56	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1698	764	1615	1020	1629		1612	3539	1553	1752	3471	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	537	73	111	63	12	41	46	2003	107	42	884	150
RTOR Reduction (vph)	0	0	87	0	39	0	0	0	48	0	0	38
Lane Group Flow (vph)	301	309	24	63	14	0	46	2003	59	42	884	113
Heavy Vehicles (%)	1%	2%	0%	5%	0%	4%	12%	2%	4%	3%	4%	0%
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		1	6		5	2	7
Permitted Phases			4	8					6			2
Actuated Green, G (s)	32.0	46.2	32.5	15.9	8.2		7.8	88.4	88.4	7.4	88.0	120.0
Effective Green, g (s)	32.0	46.2	32.5	15.9	8.2		7.8	88.4	88.4	7.4	88.0	120.0
Actuated g/C Ratio	0.20	0.29	0.20	0.10	0.05		0.05	0.55	0.55	0.05	0.55	0.75
Clearance Time (s)	6.0	5.0	5.0	6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		2.5	5.0	5.0	2.5	5.0	3.0
Lane Grp Cap (vph)	339	411	328	135	83		78	1955	858	81	1909	1271
v/s Ratio Prot	c0.18	0.15		0.02	0.01		c0.03	c0.57		0.02	0.25	0.02
v/s Ratio Perm		c0.07	0.01	0.02					0.04			0.05
v/c Ratio	0.89	0.75	0.07	0.47	0.17		0.59	1.02	0.07	0.52	0.46	0.09
Uniform Delay, d1	62.3	51.7	51.6	67.4	72.6		74.5	35.8	16.7	74.6	21.7	5.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.05	0.60	1.40	1.17	0.59	0.01
Incremental Delay, d2	23.3	7.6	0.1	2.5	1.0		7.3	24.8	0.1	3.9	0.8	0.0
Delay (s)	85.5	59.3	51.7	69.9	73.6		85.8	46.3	23.4	90.7	13.6	0.1
Level of Service	F	E	D	E	E		F	D	C	F	B	A
Approach Delay (s)		69.1			71.6			46.0			14.8	
Approach LOS		E			E			D			B	

Intersection Summary					
HCM 2000 Control Delay	42.5	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.97				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0		
Intersection Capacity Utilization	82.2%	ICU Level of Service	E		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	0	43	0	0	0	23	2014	0	0	988	11
Future Volume (vph)	58	0	43	0	0	0	23	2014	0	0	988	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850									0.850
Flt Protected		0.950					0.950					
Satd. Flow (prot)	0	1805	1524	0	1900	0	1805	3505	1900	1900	3471	1615
Flt Permitted		0.950					0.950					
Satd. Flow (perm)	0	1805	1524	0	1900	0	1805	3505	1900	1900	3471	1615
Adj. Flow (vph)	63	0	47	0	0	0	25	2189	0	0	1074	12
Lane Group Flow (vph)	0	63	47	0	0	0	25	2189	0	0	1074	12
Sign Control		Stop			Stop			Free			Free	

Intersection Summary					
Control Type: Unsignalized					
Intersection Capacity Utilization 65.7%			ICU Level of Service C		
Analysis Period (min) 15					

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	0	43	0	0	0	23	2014	0	0	988	11
Future Volume (Veh/h)	58	0	43	0	0	0	23	2014	0	0	988	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	63	0	47	0	0	0	25	2189	0	0	1074	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			6									
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1315	
pX, platoon unblocked	0.85	0.85	0.85	0.85	0.85		0.85					
vC, conflicting volume	2218	3313	537	2776	3325	1094	1086			2189		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2078	3369	96	2736	3383	1094	743			2189		
tC, single (s)	7.5	6.5	7.0	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.4	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	94	100	100	100	97			100		
cM capacity (veh/h)	26	6	788	8	6	212	741			245		

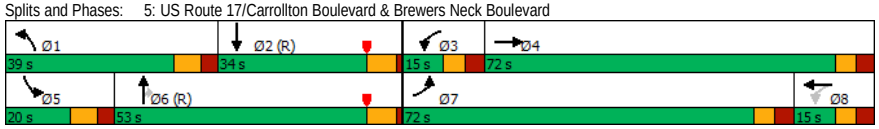
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	110	0	25	1094	1094	0	0	537	537	12
Volume Left	63	0	25	0	0	0	0	0	0	0
Volume Right	47	0	0	0	0	0	0	0	0	12
cSH	45	1700	741	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	2.46	0.00	0.03	0.64	0.64	0.00	0.00	0.32	0.32	0.01
Queue Length 95th (ft)	292	0	3	0	0	0	0	0	0	0
Control Delay (s)	856.1	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	A	B							
Approach Delay (s)	856.1	0.0	0.1				0.0			
Approach LOS	F	A								

Intersection Summary					
Average Delay		27.7			
Intersection Capacity Utilization		65.7%	ICU Level of Service		C
Analysis Period (min)		15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1093	81	624	36	58	45	495	604	20	44	419	637
Future Volume (vph)	1093	81	624	36	58	45	495	604	20	44	419	637
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.935				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3367	1863	1524	1770	3309	0	3242	3539	1583	1770	3505	1553
Flt Permitted	0.950			0.701			0.950			0.950		
Satd. Flow (perm)	3367	1863	1524	1306	3309	0	3242	3539	1583	1770	3505	1553
Satd. Flow (RTOR)			671		48				188			685
Adj. Flow (vph)	1175	87	671	39	62	48	532	649	22	47	451	685
Lane Group Flow (vph)	1175	87	671	39	110	0	532	649	22	47	451	685
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Total Split (s)	72.0	72.0		15.0	15.0		39.0	53.0	53.0	20.0	34.0	
Total Lost Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Act Effct Green (s)	61.3	64.3	160.0	14.1	7.2		29.3	55.4	55.4	9.3	32.6	160.0
Actuated g/C Ratio	0.38	0.40	1.00	0.09	0.04		0.18	0.35	0.35	0.06	0.20	1.00
v/c Ratio	0.91	0.12	0.44	0.29	0.56		0.90	0.53	0.03	0.46	0.63	0.44
Control Delay	57.8	30.8	0.9	39.9	53.7		69.0	41.8	0.1	99.0	47.7	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.8	30.8	0.9	39.9	53.7		69.0	41.8	0.1	99.0	47.7	1.8
LOS	E	C	A	D	D		E	D	A	F	D	A
Approach Delay		36.9			50.1			53.1			23.1	
Approach LOS		D			D			D			C	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 16 (10%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 38.0		Intersection LOS: D	
Intersection Capacity Utilization 81.9%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1093	81	624	36	58	45	495	604	20	44	419	637
Future Volume (vph)	1093	81	624	36	58	45	495	604	20	44	419	637
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	4.0	7.5	7.5		8.0	6.5	6.5	8.0	6.5	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	1863	1524	1770	3308		3242	3539	1583	1770	3505	1553
Flt Permitted	0.95	1.00	1.00	0.70	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	1863	1524	1305	3308		3242	3539	1583	1770	3505	1553
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	1175	87	671	39	62	48	532	649	22	47	451	685
RTOR Reduction (vph)	0	0	0	0	45	0	0	0	15	0	0	0
Lane Group Flow (vph)	1175	87	671	39	65	0	532	649	7	47	451	685
Heavy Vehicles (%)	4%	2%	6%	2%	2%	2%	8%	2%	2%	2%	3%	4%
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Actuated Green, G (s)	61.3	64.3	160.0	14.6	8.8		29.3	52.2	52.2	8.2	31.1	160.0
Effective Green, g (s)	61.3	64.3	160.0	14.6	8.8		29.3	52.2	52.2	8.2	31.1	160.0
Actuated g/C Ratio	0.38	0.40	1.00	0.09	0.06		0.18	0.33	0.33	0.05	0.19	1.00
Clearance Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Vehicle Extension (s)	3.5	3.5		3.0	3.0		2.5	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	1289	748	1524	135	181		593	1154	516	90	681	1553
v/s Ratio Prot	c0.35	0.05		0.01	0.02		c0.16	0.18		0.03	c0.13	
v/s Ratio Perm			0.44	0.02					0.00			c0.44
v/c Ratio	0.91	0.12	0.44	0.29	0.36		0.90	0.56	0.01	0.52	0.66	0.44
Uniform Delay, d1	46.8	30.0	0.0	67.6	72.9		63.9	44.5	36.5	74.0	59.6	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.81	0.91	1.00	1.19	0.73	1.00
Incremental Delay, d2	10.0	0.1	0.9	1.2	1.2		15.0	1.8	0.0	5.1	4.8	0.9
Delay (s)	56.8	30.1	0.9	68.7	74.1		66.8	42.3	36.5	92.8	48.2	0.9
Level of Service	E	C	A	E	E		E	D	D	F	D	A
Approach Delay (s)		36.2			72.7			53.0			22.6	
Approach LOS		D			E			D			C	

Intersection Summary					
HCM 2000 Control Delay	38.3	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.84				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.5		
Intersection Capacity Utilization	81.9%	ICU Level of Service	D		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	26	1	59	7	1040	11	17	1022	1
Future Volume (vph)	0	0	5	26	1	59	7	1040	11	17	1022	1
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.865			0.907				0.850			
Flt Protected					0.985		0.950			0.950		
Satd. Flow (prot)	0	1096	0	0	1641	0	1805	3438	1292	1805	3438	0
Flt Permitted					0.985		0.950			0.950		
Satd. Flow (perm)	0	1096	0	0	1641	0	1805	3438	1292	1805	3438	0
Adj. Flow (vph)	0	0	5	28	1	64	8	1130	12	18	1111	1
Lane Group Flow (vph)	0	5	0	0	93	0	8	1130	12	18	1112	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 47.2%				ICU Level of Service A								
Analysis Period (min) 15												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	5	26	1	59	7	1040	11	17	1022	1
Future Volume (Veh/h)	0	0	5	26	1	59	7	1040	11	17	1022	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	5	28	1	64	8	1130	12	18	1111	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1135	
pX, platoon unblocked	0.89	0.89	0.89	0.89	0.89		0.89					
vC, conflicting volume	1793	2306	556	1742	2294	565	1112			1142		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1642	2218	250	1585	2206	565	875			1142		
tC, single (s)	7.5	6.5	7.9	7.5	6.5	7.0	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.8	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	56	97	86	99			97		
cM capacity (veh/h)	49	38	554	63	38	461	693			619		

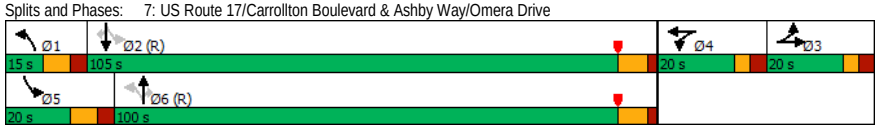
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	5	93	8	565	565	12	18	741	371
Volume Left	0	28	8	0	0	0	18	0	0
Volume Right	5	64	0	0	0	12	0	0	1
cSH	554	153	693	1700	1700	1700	619	1700	1700
Volume to Capacity	0.01	0.61	0.01	0.33	0.33	0.01	0.03	0.44	0.22
Queue Length 95th (ft)	1	81	1	0	0	0	2	0	0
Control Delay (s)	11.6	59.4	10.3	0.0	0.0	0.0	11.0	0.0	0.0
Lane LOS	B	F	B				B		
Approach Delay (s)	11.6	59.4	0.1				0.2		
Approach LOS	B	F							

Intersection Summary									
Average Delay			2.5						
Intersection Capacity Utilization			47.2%		ICU Level of Service				A
Analysis Period (min)			15						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	1	30	44	1	86	13	896	12	65	968	9
Future Volume (vph)	70	1	30	44	1	86	13	896	12	65	968	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.854			0.912				0.850			0.850
Flt Protected	0.950				0.983		0.950			0.950		
Satd. Flow (prot)	1770	1548	0	0	1623	0	1805	3438	1455	1703	3471	1417
Flt Permitted	0.950				0.983		0.235			0.228		
Satd. Flow (perm)	1770	1548	0	0	1623	0	446	3438	1455	409	3471	1417
Satd. Flow (RTOR)		33			47				116			116
Adj. Flow (vph)	76	1	33	48	1	93	14	974	13	71	1052	10
Lane Group Flow (vph)	76	34	0	0	142	0	14	974	13	71	1052	10
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Total Split (s)	20.0	20.0		20.0	20.0		15.0	100.0	100.0	20.0	105.0	105.0
Total Lost Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Act Effct Green (s)	12.3	12.3			15.5		103.2	96.7	96.7	109.9	106.7	106.7
Actuated g/C Ratio	0.08	0.08			0.10		0.64	0.60	0.60	0.69	0.67	0.67
v/c Ratio	0.56	0.23			0.71		0.04	0.47	0.01	0.21	0.45	0.01
Control Delay	86.4	24.0			65.2		9.9	19.6	0.0	6.9	11.2	0.0
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.4	24.0			65.2		9.9	19.6	0.0	6.9	11.2	0.0
LOS	F	C			E		A	B	A	A	B	A
Approach Delay		67.2			65.2			19.3			10.8	
Approach LOS		E			E			B			B	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 10 (6%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 20.2		Intersection LOS: C	
Intersection Capacity Utilization 65.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive



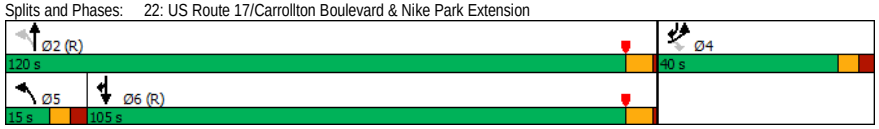
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	1	30	44	1	86	13	896	12	65	968	9
Future Volume (vph)	70	1	30	44	1	86	13	896	12	65	968	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.85			0.91		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1548			1623		1805	3438	1455	1703	3471	1417
Flt Permitted	0.95	1.00			0.98		0.24	1.00	1.00	0.23	1.00	1.00
Satd. Flow (perm)	1770	1548			1623		447	3438	1455	409	3471	1417
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	1	33	48	1	93	14	974	13	71	1052	10
RTOR Reduction (vph)	0	30	0	0	42	0	0	0	5	0	0	4
Lane Group Flow (vph)	76	4	0	0	100	0	14	974	8	71	1052	6
Heavy Vehicles (%)	2%	0%	5%	3%	0%	6%	0%	5%	11%	6%	4%	14%
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Actuated Green, G (s)	12.3	12.3			15.5		99.5	96.7	96.7	109.9	101.9	101.9
Effective Green, g (s)	12.3	12.3			15.5		99.5	96.7	96.7	109.9	101.9	101.9
Actuated g/C Ratio	0.08	0.08			0.10		0.62	0.60	0.60	0.69	0.64	0.64
Clearance Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	136	119			157		301	2077	879	345	2210	902
v/s Ratio Prot	c0.04	0.00			c0.06		0.00	0.28		c0.01	c0.30	
v/s Ratio Perm							0.03		0.01	0.13		0.00
v/c Ratio	0.56	0.03			0.63		0.05	0.47	0.01	0.21	0.48	0.01
Uniform Delay, d1	71.2	68.3			69.5		12.1	17.5	12.6	10.1	15.1	10.6
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	0.64	0.70	1.00
Incremental Delay, d2	4.9	0.1			8.1		0.1	0.8	0.0	0.3	0.7	0.0
Delay (s)	76.1	68.4			77.6		12.1	18.2	12.6	6.7	11.3	10.6
Level of Service	E	E			E		B	B	B	A	B	B
Approach Delay (s)		73.8			77.6			18.1			11.0	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	27.5
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	330	68	28	1669	939	92
Future Volume (vph)	330	68	28	1669	939	92
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.233			
Satd. Flow (perm)	3433	1583	434	3539	3539	1583
Satd. Flow (RTOR)		74				100
Adj. Flow (vph)	359	74	30	1814	1021	100
Lane Group Flow (vph)	359	74	30	1814	1021	100
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Total Split (s)	40.0	40.0	15.0	120.0	105.0	
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	
Act Effct Green (s)	22.2	22.2	123.8	124.8	116.7	148.3
Actuated g/C Ratio	0.14	0.14	0.77	0.78	0.73	0.93
v/c Ratio	0.76	0.26	0.08	0.66	0.40	0.07
Control Delay	76.5	13.5	3.7	10.5	6.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.5	13.5	3.7	10.5	6.0	0.1
LOS	E	B	A	B	A	A
Approach Delay	65.7			10.4	5.5	
Approach LOS	E			B	A	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 10 (6%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 15.8		Intersection LOS: B	
Intersection Capacity Utilization 66.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 22: US Route 17/Carrollton Boulevard & Nike Park Extension



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	330	68	28	1669	939	92
Future Volume (vph)	330	68	28	1669	939	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.23	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	434	3539	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	359	74	30	1814	1021	100
RTOR Reduction (vph)	0	64	0	0	0	11
Lane Group Flow (vph)	359	10	30	1814	1021	89
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Actuated Green, G (s)	22.2	22.2	124.8	124.8	113.9	142.1
Effective Green, g (s)	22.2	22.2	124.8	124.8	113.9	142.1
Actuated g/C Ratio	0.14	0.14	0.78	0.78	0.71	0.89
Clearance Time (s)	7.0	7.0	7.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	476	219	371	2760	2519	1405
v/s Ratio Prot	c0.10		0.00	c0.51	0.29	0.06
v/s Ratio Perm		0.01	0.06			
v/c Ratio	0.75	0.05	0.08	0.66	0.41	0.06
Uniform Delay, d1	66.3	59.7	5.3	7.9	9.3	1.1
Progression Factor	1.00	1.00	0.71	1.14	0.59	0.12
Incremental Delay, d2	6.7	0.1	0.1	0.8	0.5	0.0
Delay (s)	73.0	59.8	3.9	9.8	6.0	0.1
Level of Service	E	E	A	A	A	A
Approach Delay (s)	70.7			9.7	5.5	
Approach LOS	E			A	A	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	163	63	71	76	86	370	359	61	30	123	135	17
Average Queue (ft)	67	23	20	28	14	168	183	3	3	30	48	1
95th Queue (ft)	131	56	55	63	55	329	340	41	18	84	114	8
Link Distance (ft)	1023		1185			490	490			4237	4237	
Upstream Blk Time (%)						0	0					
Queuing Penalty (veh)						0	0					
Storage Bay Dist (ft)		170		550	280			215	220			230
Storage Blk Time (%)	0	0				1	5	0				
Queuing Penalty (veh)	0	0				0	0	0				

Intersection: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	440	202	101	66	264	865	899	59	24	192	222	61
Average Queue (ft)	219	73	23	25	47	546	559	3	3	79	107	7
95th Queue (ft)	436	213	70	64	164	819	834	45	15	154	190	38
Link Distance (ft)	1043		1035			976	976			549	549	
Upstream Blk Time (%)						0	0					
Queuing Penalty (veh)						0	0					
Storage Bay Dist (ft)		220		65	265			240	310			240
Storage Blk Time (%)	17	0	3	2	0	22	24	0			0	0
Queuing Penalty (veh)	13	1	1	0	1	11	1	0			0	0

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	TR	L	T	T	R	L	T	T
Maximum Queue (ft)	422	493	81	123	130	279	1088	1098	245	99	176	213
Average Queue (ft)	255	301	30	49	35	70	590	600	77	36	84	104
95th Queue (ft)	378	435	62	101	86	208	1116	1121	252	81	154	177
Link Distance (ft)		1224	1224		1092		1221	1221			976	976
Upstream Blk Time (%)							1	1				
Queuing Penalty (veh)							9	13				
Storage Bay Dist (ft)	465			140		280			245	310		
Storage Blk Time (%)	0	1		1	0	0	26	29	0			
Queuing Penalty (veh)	0	2		0	0	0	11	29	2			

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	SB
Directions Served	R
Maximum Queue (ft)	35
Average Queue (ft)	8
95th Queue (ft)	29
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	340
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: US Route 17/Carrollton Boulevard & Northgate Lane

Movement	EB	EB	NB	NB	NB	SB
Directions Served	LT	R	L	T	T	R
Maximum Queue (ft)	504	149	91	164	188	2
Average Queue (ft)	156	38	12	14	17	0
95th Queue (ft)	408	119	53	116	137	2
Link Distance (ft)	1221			1237	1237	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		160	245			200
Storage Blk Time (%)	29	0		1	1	
Queuing Penalty (veh)	12	0		0	0	

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB
Directions Served	L	L	T	R	L	T	TR	L	L	T	T	R
Maximum Queue (ft)	519	530	140	269	82	103	113	375	395	331	339	119
Average Queue (ft)	347	376	37	24	26	46	36	201	234	205	214	15
95th Queue (ft)	481	506	96	139	63	92	83	323	358	304	314	69
Link Distance (ft)		668	668			1281	1281			1046	1046	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	585			575	150			560	560			300
Storage Blk Time (%)		0									1	0
Queuing Penalty (veh)		0									0	0

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	139	293	264	30
Average Queue (ft)	44	169	126	2
95th Queue (ft)	101	261	225	44
Link Distance (ft)		1181	1181	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	300			300
Storage Blk Time (%)		0	0	0
Queuing Penalty (veh)		0	1	0

Intersection: 6: US Route 17/Carrollton Boulevard & Deep Bottom Drive/Channell Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	58	141	19	31
Average Queue (ft)	6	52	2	8
95th Queue (ft)	34	106	10	27
Link Distance (ft)	712	416		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			140	140
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	R	L	T	T	R
Maximum Queue (ft)	126	96	210	36	266	232	22	110	165	186	23
Average Queue (ft)	58	20	79	8	131	94	2	31	65	78	2
95th Queue (ft)	109	60	159	26	239	208	12	71	147	156	13
Link Distance (ft)		644	713		1440	1440			1077	1077	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	135			275			350	300			630
Storage Blk Time (%)	1	0			0						
Queuing Penalty (veh)	0	0			0						

Intersection: 10: Bend

Movement	WB	WB	WB
Directions Served	T	T	
Maximum Queue (ft)	222	284	70
Average Queue (ft)	8	12	2
95th Queue (ft)	117	146	71
Link Distance (ft)	668	668	668
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 16: US Route 17/Carrollton Boulevard & Site A

Movement	NB	NB
Directions Served	T	TR
Maximum Queue (ft)	68	21
Average Queue (ft)	3	1
95th Queue (ft)	59	15
Link Distance (ft)	549	549
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: US Route 17/Carrollton Boulevard & Site B

Movement	NB
Directions Served	TR
Maximum Queue (ft)	2
Average Queue (ft)	0
95th Queue (ft)	2
Link Distance (ft)	632
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 19: US Route 17/Carrollton Boulevard & Site C

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 22: US Route 17/Carrollton Boulevard & Nike Park Extension

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	L	T	T	T	T	R
Maximum Queue (ft)	243	258	55	58	260	289	142	255	164
Average Queue (ft)	133	157	18	15	86	83	42	104	7
95th Queue (ft)	212	229	44	44	205	206	102	199	63
Link Distance (ft)		1339			1181	1181	632	632	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	650		430	75					200
Storage Blk Time (%)				0	7			1	0
Queuing Penalty (veh)				1	2			1	0

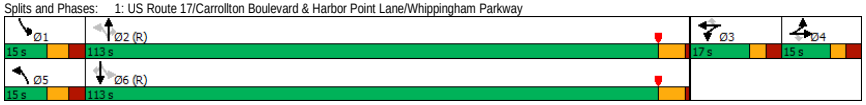
Network Summary

Network wide Queuing Penalty: 116

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	0	20	31	0	12	42	1295	42	26	2637	61
Future Volume (vph)	15	0	20	31	0	12	42	1295	42	26	2637	61
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1805	1615	0	1805	1455	1805	3539	1568	1805	3574	1615
Flt Permitted		0.950			0.950		0.034			0.168		
Satd. Flow (perm)	0	1805	1615	0	1805	1455	65	3539	1568	319	3574	1615
Satd. Flow (RTOR)			109			109			109			109
Adj. Flow (vph)	16	0	21	32	0	13	44	1349	44	27	2747	64
Lane Group Flow (vph)	0	16	21	0	32	13	44	1349	44	27	2747	64
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	15.0	15.0	15.0	17.0	17.0	17.0	15.0	113.0	113.0	15.0	113.0	113.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)		7.5	7.5		8.2	8.2	126.4	124.6	124.6	124.0	121.6	121.6
Actuated g/C Ratio		0.05	0.05		0.05	0.05	0.79	0.78	0.78	0.78	0.76	0.76
v/c Ratio		0.19	0.12		0.34	0.07	0.37	0.49	0.04	0.09	1.01	0.05
Control Delay		78.3	1.4		82.5	0.8	33.1	5.6	0.0	5.2	43.0	0.2
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	35.0	0.0
Total Delay		78.3	1.4		82.5	0.8	33.1	5.6	0.0	5.2	78.0	0.2
LOS		E	A		F	A	C	A	A	A	E	A
Approach Delay		34.6			58.9			6.3			75.5	
Approach LOS		C			E			A			E	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 138 (86%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 52.2		Intersection LOS: D	
Intersection Capacity Utilization 97.9%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway



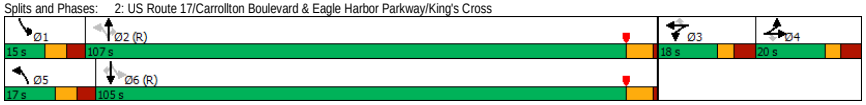
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	0	20	31	0	12	42	1295	42	26	2637	61
Future Volume (vph)	15	0	20	31	0	12	42	1295	42	26	2637	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1805	1615		1805	1455	1805	3539	1568	1805	3574	1615
Flt Permitted		0.95	1.00		0.95	1.00	0.03	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)		1805	1615		1805	1455	64	3539	1568	320	3574	1615
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	16	0	21	32	0	12	44	1349	44	27	2747	64
RTOR Reduction (vph)	0	0	20	0	0	12	0	0	11	0	0	17
Lane Group Flow (vph)	0	16	1	0	32	1	44	1349	33	27	2747	47
Heavy Vehicles (%)	0%	0%	0%	0%	0%	11%	0%	2%	3%	0%	1%	0%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		6.1	6.1		7.1	7.1	123.4	118.3	118.3	120.2	116.7	116.7
Effective Green, g (s)		6.1	6.1		7.1	7.1	123.4	118.3	118.3	120.2	116.7	116.7
Actuated g/C Ratio		0.04	0.04		0.04	0.04	0.77	0.74	0.74	0.75	0.73	0.73
Clearance Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		68	61		80	64	104	2616	1159	272	2606	1177
v/s Ratio Prot		c0.01			c0.02		c0.01	0.38		0.00	c0.77	
v/s Ratio Perm			0.00			0.00	0.31		0.02	0.07		0.03
v/c Ratio		0.24	0.01		0.40	0.01	0.42	0.52	0.03	0.10	1.05	0.04
Uniform Delay, d1		74.7	74.1		74.4	73.1	46.1	8.8	5.5	6.3	21.6	6.0
Progression Factor		1.00	1.00		1.00	1.00	2.05	0.56	1.00	1.00	1.00	1.00
Incremental Delay, d2		1.8	0.1		3.3	0.1	1.7	0.6	0.0	0.1	34.0	0.1
Delay (s)		76.5	74.1		77.6	73.1	96.2	5.5	5.6	6.4	55.6	6.1
Level of Service		E	E		E	E	F	A	A	A	E	A
Approach Delay (s)		75.1			76.3			8.3			54.1	
Approach LOS		E			E			A			D	

Intersection Summary				
HCM 2000 Control Delay	39.4	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.96			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	25.0	
Intersection Capacity Utilization	97.9%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	5	63	16	7	16	105	1280	20	27	2458	203
Future Volume (vph)	82	5	63	16	7	16	105	1280	20	27	2458	203
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.966		0.950			0.950		
Satd. Flow (prot)	0	1814	1615	0	1835	1495	1805	3574	1509	1805	3574	1615
Flt Permitted		0.955			0.966		0.036			0.157		
Satd. Flow (perm)	0	1814	1615	0	1835	1495	68	3574	1509	298	3574	1615
Satd. Flow (RTOR)			119			119			126			126
Adj. Flow (vph)	87	5	67	17	7	17	112	1362	21	29	2615	216
Lane Group Flow (vph)	0	92	67	0	24	17	112	1362	21	29	2615	216
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	20.0	20.0	20.0	18.0	18.0	18.0	17.0	107.0	107.0	15.0	105.0	105.0
Total Lost Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Act Effct Green (s)		12.6	12.6		8.0	8.0	118.5	114.1	114.1	110.1	105.9	105.9
Actuated g/C Ratio		0.08	0.08		0.05	0.05	0.74	0.71	0.71	0.69	0.66	0.66
v/c Ratio		0.65	0.28		0.26	0.09	0.77	0.53	0.02	0.11	1.11	0.19
Control Delay		92.0	3.0		79.8	0.9	59.6	18.0	0.1	2.1	63.6	0.4
Queue Delay		0.0	0.1		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Total Delay		92.0	3.1		79.8	0.9	59.6	18.0	0.1	2.1	64.0	0.4
LOS		F	A		E	A	E	B	A	A	E	A
Approach Delay		54.5			47.1			20.9			58.5	
Approach LOS		D			D			C			E	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 156 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay: 45.9		Intersection LOS: D	
Intersection Capacity Utilization 102.3%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross



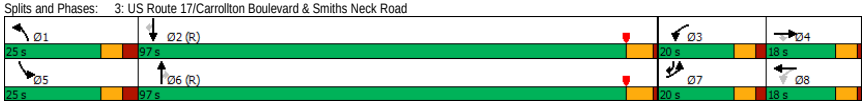
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	5	63	16	7	16	105	1280	20	27	2458	203
Future Volume (vph)	82	5	63	16	7	16	105	1280	20	27	2458	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1814	1615		1835	1495	1805	3574	1509	1805	3574	1615
Flt Permitted		0.95	1.00		0.97	1.00	0.04	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)		1814	1615		1835	1495	69	3574	1509	299	3574	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	87	5	67	17	7	17	112	1362	21	29	2615	216
RTOR Reduction (vph)	0	0	62	0	0	16	0	0	7	0	0	44
Lane Group Flow (vph)	0	92	5	0	24	1	112	1362	14	29	2615	172
Heavy Vehicles (%)	0%	0%	0%	0%	0%	8%	0%	1%	7%	0%	1%	0%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		12.6	12.6		6.6	6.6	118.5	109.7	109.7	108.1	104.5	104.5
Effective Green, g (s)		12.6	12.6		6.6	6.6	118.5	109.7	109.7	108.1	104.5	104.5
Actuated g/C Ratio		0.08	0.08		0.04	0.04	0.74	0.69	0.69	0.68	0.65	0.65
Clearance Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		142	127		75	61	146	2450	1034	235	2334	1054
v/s Ratio Prot		c0.05			c0.01		c0.04	c0.38			0.00	c0.73	
v/s Ratio Perm			0.00			0.00	0.52		0.01	0.08		0.11
v/c Ratio		0.65	0.04		0.32	0.01	0.77	0.56	0.01	0.12	1.12	0.16
Uniform Delay, d1		71.5	68.1		74.5	73.6	54.4	12.8	8.0	10.2	27.8	10.8
Progression Factor		1.00	1.00		1.00	1.00	0.89	1.36	1.00	0.27	0.33	0.06
Incremental Delay, d2		9.8	0.1		2.5	0.1	17.4	0.8	0.0	0.1	56.4	0.1
Delay (s)		81.3	68.3		77.0	73.6	65.6	18.1	8.0	2.8	65.4	0.8
Level of Service		F	E		E	E	E	B	A	A	E	A
Approach Delay (s)		75.8			75.6			21.5			59.9	
Approach LOS		E			E			C			E	

Intersection Summary				
HCM 2000 Control Delay	48.0	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	1.02			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	27.5	
Intersection Capacity Utilization	102.3%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	254	50	74	97	102	31	194	952	101	89	2076	410
Future Volume (vph)	254	50	74	97	102	31	194	952	101	89	2076	410
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.965				0.850			0.850
Flt Protected	0.950	0.967		0.950			0.950			0.950		
Satd. Flow (prot)	1715	1745	1599	1805	1834	0	1805	3539	1615	1770	3574	1599
Flt Permitted	0.950	0.247		0.646			0.950			0.950		
Satd. Flow (perm)	1715	446	1599	1227	1834	0	1805	3539	1615	1770	3574	1599
Satd. Flow (RTOR)			109		8				110			129
Adj. Flow (vph)	276	54	80	105	111	34	211	1035	110	97	2257	446
Lane Group Flow (vph)	163	167	80	105	145	0	211	1035	110	97	2257	446
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		1	6		5	2	7
Permitted Phases			4	8					6			2
Total Split (s)	20.0	18.0	18.0	20.0	18.0		25.0	97.0	97.0	25.0	97.0	20.0
Total Lost Time (s)	6.0	5.0	5.0	6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)	14.0	15.0	14.7	24.3	13.0		18.0	95.6	95.6	13.4	91.0	111.0
Actuated g/C Ratio	0.09	0.09	0.09	0.15	0.08		0.11	0.60	0.60	0.08	0.57	0.69
v/c Ratio	1.09	1.02	0.33	0.46	0.93		1.04	0.49	0.11	0.66	1.11	0.39
Control Delay	163.1	145.5	7.8	61.5	122.6		154.3	5.9	1.0	98.9	64.5	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	163.1	145.5	7.8	61.5	122.6		154.3	5.9	1.0	98.9	64.6	1.4
LOS	F	F	A	E	F		F	A	A	F	E	A
Approach Delay		125.6			97.0			28.6			55.7	
Approach LOS		F			F			C			E	

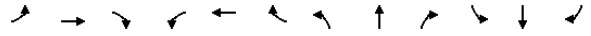
Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 12 (8%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay: 56.2		Intersection LOS: E	
Intersection Capacity Utilization 102.9%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road



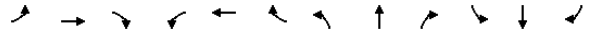
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	254	50	74	97	102	31	194	952	101	89	2076	410
Future Volume (vph)	254	50	74	97	102	31	194	952	101	89	2076	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.0	5.0	6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.97	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1715	1746	1599	1805	1833		1805	3539	1615	1770	3574	1599
Flt Permitted	0.95	0.25	1.00	0.65	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1715	446	1599	1228	1833		1805	3539	1615	1770	3574	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	276	54	80	105	111	34	211	1035	110	97	2257	446
RTOR Reduction (vph)	0	0	73	0	7	0	0	0	44	0	0	44
Lane Group Flow (vph)	163	167	7	105	138	0	211	1035	66	97	2257	402
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	2%	1%	1%
Turn Type	Prot	NA	Perm	pm+pt	NA		Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8		1	6		5	2	7
Permitted Phases			4	8					6			2
Actuated Green, G (s)	14.0	28.7	14.7	25.3	13.0		18.0	95.6	95.6	13.4	91.0	105.0
Effective Green, g (s)	14.0	28.7	14.7	25.3	13.0		18.0	95.6	95.6	13.4	91.0	105.0
Actuated g/C Ratio	0.09	0.18	0.09	0.16	0.08		0.11	0.60	0.60	0.08	0.57	0.66
Clearance Time (s)	6.0	5.0	5.0	6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		2.5	5.0	5.0	2.5	5.0	3.0
Lane Grp Cap (vph)	150	193	146	238	148		203	2114	964	148	2032	1109
v/s Ratio Prot	c0.10	0.08		0.03	0.08		c0.12	c0.29		0.05	c0.63	0.03
v/s Ratio Perm		c0.08	0.00	0.04					0.04			0.22
v/c Ratio	1.09	0.87	0.05	0.44	0.93		1.04	0.49	0.07	0.66	1.11	0.36
Uniform Delay, d1	73.0	63.8	66.3	60.2	73.0		71.0	18.3	13.5	71.1	34.5	12.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.31	0.27	0.31	1.38	0.30	0.19
Incremental Delay, d2	98.5	30.8	0.1	1.3	53.3		70.3	0.7	0.1	0.8	50.6	0.0
Delay (s)	171.5	94.6	66.4	61.5	126.4		163.0	5.8	4.3	98.6	60.9	2.3
Level of Service	F	F	E	E	F		F	A	A	F	E	A
Approach Delay (s)		119.7			99.1			30.1			52.9	
Approach LOS		F			F			C			D	

Intersection Summary					
HCM 2000 Control Delay	54.6	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	1.09				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0		
Intersection Capacity Utilization	102.9%	ICU Level of Service	G		
Analysis Period (min)	15				
c Critical Lane Group					



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	0	20	0	1	1	100	1437	1	4	2198	38
Future Volume (vph)	12	0	20	0	1	1	100	1437	1	4	2198	38
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.932				0.850			0.850
Flt Protected		0.950					0.950			0.950		
Satd. Flow (prot)	0	1805	1615	0	1771	0	1787	3574	1615	1805	3574	1615
Flt Permitted		0.950					0.950			0.950		
Satd. Flow (perm)	0	1805	1615	0	1771	0	1787	3574	1615	1805	3574	1615
Adj. Flow (vph)	13	0	21	0	1	1	106	1529	1	4	2338	40
Lane Group Flow (vph)	0	13	21	0	2	0	106	1529	1	4	2338	40
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 83.6%		ICU Level of Service E	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	0	20	0	1	1	100	1437	1	4	2198	38
Future Volume (Veh/h)	12	0	20	0	1	1	100	1437	1	4	2198	38
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	13	0	21	0	1	1	106	1529	1	4	2338	40
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			6									
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1315	
pX, platoon unblocked	0.44	0.44	0.44	0.44	0.44		0.44					
vC, conflicting volume	3324	4088	1169	2918	4127	764	2378			1530		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	3739	5482	0	2813	5571	764	1581			1530		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	96	100	0	100	42			99		
cM capacity (veh/h)	0	0	478	2	0	351	183			441		

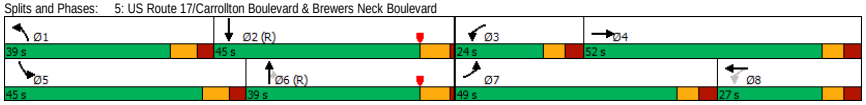
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	34	2	106	764	764	1	4	1169	1169	40
Volume Left	13	0	106	0	0	0	4	0	0	0
Volume Right	21	1	0	0	0	1	0	0	0	40
cSH	0	0	183	1700	1700	1700	441	1700	1700	1700
Volume to Capacity	Err	22.96	0.58	0.45	0.45	0.00	0.01	0.69	0.69	0.02
Queue Length 95th (ft)	Err	Err	78	0	0	0	1	0	0	0
Control Delay (s)	Err	Err	48.8	0.0	0.0	0.0	13.2	0.0	0.0	0.0
Lane LOS	F	F	E				B			
Approach Delay (s)	Err	Err	3.2				0.0			
Approach LOS	F	F								

Intersection Summary				
Average Delay		Err		
Intersection Capacity Utilization		83.6%	ICU Level of Service	
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	851	189	721	158	294	50	619	629	61	305	707	1354
Future Volume (vph)	851	189	721	158	294	50	619	629	61	305	707	1354
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.978				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1863	1568	1770	3461	0	3433	3574	1583	1805	3574	1599
Flt Permitted	0.950			0.633			0.950			0.950		
Satd. Flow (perm)	3433	1863	1568	1179	3461	0	3433	3574	1583	1805	3574	1599
Satd. Flow (RTOR)			589		10				188			629
Adj. Flow (vph)	896	199	759	166	309	53	652	662	64	321	744	1425
Lane Group Flow (vph)	896	199	759	166	362	0	652	662	64	321	744	1425
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Total Split (s)	49.0	52.0		24.0	27.0		39.0	39.0	39.0	45.0	45.0	
Total Lost Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Act Effct Green (s)	41.5	46.2	160.0	33.2	19.0		31.3	37.6	37.6	32.4	38.7	160.0
Actuated g/C Ratio	0.26	0.29	1.00	0.21	0.12		0.20	0.24	0.24	0.20	0.24	1.00
v/c Ratio	1.01	0.37	0.48	0.56	0.87		0.97	0.79	0.12	0.88	0.86	0.89
Control Delay	89.8	48.1	1.1	41.1	87.6		79.1	68.3	2.7	89.2	52.6	22.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.8	48.1	1.1	41.1	87.6		79.1	68.3	2.7	89.2	52.6	22.1
LOS	F	D	A	D	F		E	E	A	F	D	C
Approach Delay		49.0			73.0			70.3			39.8	
Approach LOS		D			E			E			D	

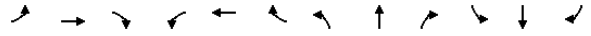
Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 48 (30%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 52.1		Intersection LOS: D	
Intersection Capacity Utilization 94.5%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard



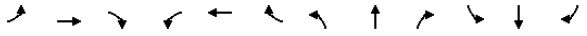
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	851	189	721	158	294	50	619	629	61	305	707	1354
Future Volume (vph)	851	189	721	158	294	50	619	629	61	305	707	1354
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	4.0	7.5	7.5		8.0	6.5	6.5	8.0	6.5	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1568	1770	3461		3433	3574	1583	1805	3574	1599
Flt Permitted	0.95	1.00	1.00	0.63	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1863	1568	1179	3461		3433	3574	1583	1805	3574	1599
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	896	199	759	166	309	53	652	662	64	321	744	1425
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	49	0	0	0
Lane Group Flow (vph)	896	199	759	166	353	0	652	662	15	321	744	1425
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	1%	2%	0%	1%	1%
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Actuated Green, G (s)	41.5	46.3	160.0	33.2	19.0		31.3	37.6	37.6	32.4	38.7	160.0
Effective Green, g (s)	41.5	46.3	160.0	33.2	19.0		31.3	37.6	37.6	32.4	38.7	160.0
Actuated g/C Ratio	0.26	0.29	1.00	0.21	0.12		0.20	0.24	0.24	0.20	0.24	1.00
Clearance Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Vehicle Extension (s)	3.5	3.5		3.0	3.0		2.5	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	890	539	1568	297	410		671	839	372	365	864	1599
v/s Ratio Prot	0.26	0.11		0.05	0.10		0.19	0.19		0.18	0.21	
v/s Ratio Perm			0.48	0.07					0.01			c0.89
v/c Ratio	1.01	0.37	0.48	0.56	0.86		0.97	0.79	0.04	0.88	0.86	0.89
Uniform Delay, d1	59.2	45.2	0.0	55.4	69.2		63.9	57.5	47.3	61.9	58.1	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.82	1.06	1.00	1.16	0.77	1.00
Incremental Delay, d2	31.8	0.5	1.1	2.3	16.7		26.2	6.8	0.2	15.0	7.7	5.6
Delay (s)	91.1	45.7	1.1	57.7	85.9		78.5	67.5	47.5	86.9	52.3	5.6
Level of Service	F	D	A	E	F		E	E	D	F	D	A
Approach Delay (s)		49.4			77.0			71.7			30.0	
Approach LOS		D			E			E			C	

Intersection Summary					
HCM 2000 Control Delay	48.9	HCM 2000 Level of Service		D	
HCM 2000 Volume to Capacity ratio	1.09				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)		29.5	
Intersection Capacity Utilization	94.5%	ICU Level of Service		F	
Analysis Period (min)	15				
c Critical Lane Group					



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	9	23	0	36	15	1207	32	66	1354	7
Future Volume (vph)	4	0	9	23	0	36	15	1207	32	66	1354	7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.904			0.917				0.850		0.999	
Flt Protected		0.986			0.981		0.950			0.950		
Satd. Flow (prot)	0	1694	0	0	1631	0	1805	3574	1553	1805	3536	0
Flt Permitted		0.986			0.981		0.950			0.950		
Satd. Flow (perm)	0	1694	0	0	1631	0	1805	3574	1553	1805	3536	0
Adj. Flow (vph)	4	0	10	24	0	38	16	1284	34	70	1440	7
Lane Group Flow (vph)	0	14	0	0	62	0	16	1284	34	70	1447	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 56.1%				ICU Level of Service B								
Analysis Period (min) 15												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	0	9	23	0	36	15	1207	32	66	1354	7
Future Volume (Veh/h)	4	0	9	23	0	36	15	1207	32	66	1354	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	4	0	10	24	0	38	16	1284	34	70	1440	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1132	
pX, platoon unblocked	0.81	0.81	0.81	0.81	0.81		0.81					
vC, conflicting volume	2296	2934	724	2186	2903	642	1447			1318		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2132	2918	197	1998	2881	642	1088			1318		
tC, single (s)	7.5	6.5	6.9	7.6	6.5	7.0	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	78	100	98	0	100	91	97			87		
cM capacity (veh/h)	19	11	664	24	11	412	527			531		

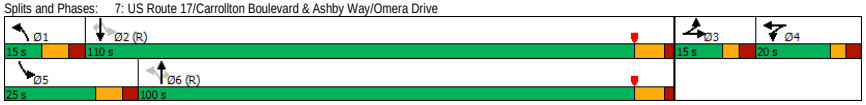
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	14	62	16	642	642	34	70	960	487
Volume Left	4	24	16	0	0	0	70	0	0
Volume Right	10	38	0	0	0	34	0	0	7
cSH	61	56	527	1700	1700	1700	531	1700	1700
Volume to Capacity	0.23	1.10	0.03	0.38	0.38	0.02	0.13	0.56	0.29
Queue Length 95th (ft)	20	130	2	0	0	0	11	0	0
Control Delay (s)	81.1	271.7	12.0	0.0	0.0	0.0	12.8	0.0	0.0
Lane LOS	F	F	B				B		
Approach Delay (s)	81.1	271.7	0.1				0.6		
Approach LOS	F	F							

Intersection Summary												
Average Delay			6.5									
Intersection Capacity Utilization			56.1%		ICU Level of Service				B			
Analysis Period (min)			15									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	8	17	55	8	105	32	1081	28	114	1304	52
Future Volume (vph)	39	8	17	55	8	105	32	1081	28	114	1304	52
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.898			0.916				0.850			0.850
Flt Protected	0.950				0.984		0.950			0.950		
Satd. Flow (prot)	1805	1706	0	0	1670	0	1805	3539	1615	1770	3574	1615
Flt Permitted	0.950				0.984		0.149			0.192		
Satd. Flow (perm)	1805	1706	0	0	1670	0	283	3539	1615	358	3574	1615
Satd. Flow (RTOR)		17			41				170			116
Adj. Flow (vph)	39	8	17	56	8	106	32	1092	28	115	1317	53
Lane Group Flow (vph)	39	25	0	0	170	0	32	1092	28	115	1317	53
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Total Split (s)	15.0	15.0		20.0	20.0		15.0	100.0	100.0	25.0	110.0	110.0
Total Lost Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Act Effct Green (s)	9.4	9.4			20.1		103.3	96.6	96.6	108.9	101.7	101.7
Actuated g/C Ratio	0.06	0.06			0.13		0.65	0.60	0.60	0.68	0.64	0.64
v/c Ratio	0.37	0.22			0.69		0.13	0.51	0.03	0.35	0.58	0.05
Control Delay	81.7	40.0			65.0		10.7	20.9	0.0	7.8	11.5	0.1
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.7	40.0			65.0		10.7	20.9	0.0	7.8	11.5	0.1
LOS	F	D			E		B	C	A	A	B	A
Approach Delay		65.4			65.0			20.1			10.8	
Approach LOS		E			E			C			B	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 17 (11%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 19.0		Intersection LOS: B	
Intersection Capacity Utilization 76.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive



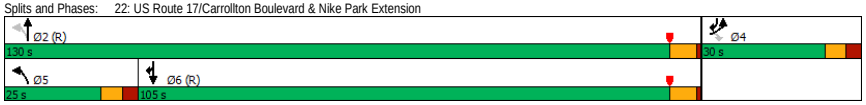
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	8	17	55	8	105	32	1081	28	114	1304	52
Future Volume (vph)	39	8	17	55	8	105	32	1081	28	114	1304	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.90			0.92		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	1706			1670		1805	3539	1615	1770	3574	1615
Flt Permitted	0.95	1.00			0.98		0.15	1.00	1.00	0.19	1.00	1.00
Satd. Flow (perm)	1805	1706			1670		283	3539	1615	358	3574	1615
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	39	8	17	56	8	106	32	1092	28	115	1317	53
RTOR Reduction (vph)	0	16	0	0	36	0	0	0	11	0	0	20
Lane Group Flow (vph)	39	9	0	0	134	0	32	1092	17	115	1317	33
Heavy Vehicles (%)	0%	0%	0%	2%	0%	3%	0%	2%	0%	2%	1%	0%
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Actuated Green, G (s)	7.8	7.8			20.1		101.2	95.5	95.5	108.0	98.9	98.9
Effective Green, g (s)	7.8	7.8			20.1		101.2	95.5	95.5	108.0	98.9	98.9
Actuated g/C Ratio	0.05	0.05			0.13		0.63	0.60	0.60	0.68	0.62	0.62
Clearance Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	87	83			209		233	2112	963	321	2209	998
v/s Ratio Prot	c0.02	0.01			c0.08		0.00	0.31		c0.02	c0.37	
v/s Ratio Perm							0.08		0.01	0.22		0.02
v/c Ratio	0.45	0.11			0.64		0.14	0.52	0.02	0.36	0.60	0.03
Uniform Delay, d1	74.0	72.8			66.5		13.5	18.8	13.1	11.8	18.5	11.9
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	0.61	0.55	1.00
Incremental Delay, d2	3.6	0.6			6.6		0.3	0.9	0.0	0.5	0.9	0.0
Delay (s)	77.7	73.3			73.1		13.8	19.7	13.2	7.8	11.0	12.0
Level of Service	E	E			E		B	B	B	A	B	B
Approach Delay (s)		76.0			73.1			19.4			10.8	
Approach LOS		E			E			B			B	

Intersection Summary				
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.59			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	27.5	
Intersection Capacity Utilization	76.4%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	170	50	130	1350	1944	274
Future Volume (vph)	170	50	130	1350	1944	274
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.033			
Satd. Flow (perm)	3433	1583	61	3539	3539	1583
Satd. Flow (RTOR)		54				280
Adj. Flow (vph)	185	54	141	1467	2113	298
Lane Group Flow (vph)	185	54	141	1467	2113	298
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Total Split (s)	30.0	30.0	25.0	130.0	105.0	
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	
Act Effct Green (s)	14.1	14.1	131.9	132.9	112.6	133.8
Actuated g/C Ratio	0.09	0.09	0.82	0.83	0.70	0.84
v/c Ratio	0.61	0.29	0.74	0.50	0.85	0.22
Control Delay	78.7	18.9	32.5	11.1	4.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.7	18.9	32.5	11.1	4.1	0.0
LOS	E	B	C	B	A	A
Approach Delay	65.2			13.0	3.6	
Approach LOS	E			B	A	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 56 (35%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 10.6		Intersection LOS: B	
Intersection Capacity Utilization 83.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 22: US Route 17/Carrollton Boulevard & Nike Park Extension



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	170	50	130	1350	1944	274
Future Volume (vph)	170	50	130	1350	1944	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.03	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	62	3539	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	54	141	1467	2113	298
RTOR Reduction (vph)	0	49	0	0	0	48
Lane Group Flow (vph)	185	5	141	1467	2113	250
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Actuated Green, G (s)	14.1	14.1	132.9	132.9	112.7	132.8
Effective Green, g (s)	14.1	14.1	132.9	132.9	112.7	132.8
Actuated g/C Ratio	0.09	0.09	0.83	0.83	0.70	0.83
Clearance Time (s)	7.0	7.0	7.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	302	139	192	2939	2492	1313
v/s Ratio Prot	c0.05		c0.06	0.41	c0.60	0.16
v/s Ratio Perm		0.00	0.55			
v/c Ratio	0.61	0.03	0.73	0.50	0.85	0.19
Uniform Delay, d1	70.3	66.7	53.8	3.9	17.4	2.7
Progression Factor	1.00	1.00	0.56	2.59	0.16	0.00
Incremental Delay, d2	3.7	0.1	5.7	0.2	0.4	0.0
Delay (s)	74.0	66.8	35.7	10.4	3.1	0.0
Level of Service	E	E	D	B	A	A
Approach Delay (s)	72.4			12.6	2.7	
Approach LOS	E			B	A	

Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	67	63	79	48	89	177	191	38	219	4282	4288	230
Average Queue (ft)	19	20	25	8	34	51	62	3	37	3131	3161	82
95th Queue (ft)	54	51	62	30	72	136	153	20	157	5335	5319	262
Link Distance (ft)	1155		1696			490	490			4237	4237	
Upstream Blk Time (%)										33	36	
Queuing Penalty (veh)										0	0	
Storage Bay Dist (ft)		170		550	280			215	220			230
Storage Blk Time (%)							0		0	31	40	0
Queuing Penalty (veh)							0		1	8	25	5

Intersection: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	179	121	79	61	185	253	283	48	228	590	596	240
Average Queue (ft)	81	42	21	14	78	119	127	3	33	522	542	126
95th Queue (ft)	153	92	58	46	146	230	239	30	158	653	636	309
Link Distance (ft)	1388		1498			976	976			550	550	
Upstream Blk Time (%)										9	14	
Queuing Penalty (veh)										128	187	
Storage Bay Dist (ft)		220		65	265			240	310			240
Storage Blk Time (%)	0	0	2	0	0	0	1	0	0	26	31	1
Queuing Penalty (veh)	0	0	0	0	0	0	0	0	0	7	63	7

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	TR	L	T	T	R	L	T	T
Maximum Queue (ft)	457	995	245	140	401	279	437	387	226	294	932	962
Average Queue (ft)	371	578	52	97	174	206	178	155	26	103	436	498
95th Queue (ft)	531	1155	175	167	364	311	384	300	120	245	825	896
Link Distance (ft)		1812	1812		1622		1217	1217			976	976
Upstream Blk Time (%)											0	0
Queuing Penalty (veh)											0	1
Storage Bay Dist (ft)	465			140		280			245	310		
Storage Blk Time (%)	2	32		5	21	9	2	1	0	0	11	12
Queuing Penalty (veh)	4	41		7	21	43	3	1	0	1	9	49

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	SB
Directions Served	R
Maximum Queue (ft)	340
Average Queue (ft)	192
95th Queue (ft)	442
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	340
Storage Blk Time (%)	1
Queuing Penalty (veh)	8

Intersection: 4: US Route 17/Carrollton Boulevard & Northgate Lane

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	LT	R	LTR	L	T	L	T
Maximum Queue (ft)	58	49	15	193	57	19	108
Average Queue (ft)	12	13	1	86	2	2	4
95th Queue (ft)	40	36	8	159	33	11	106
Link Distance (ft)	1606		1590		1229		1217
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		160		245		80	
Storage Blk Time (%)				0	0		
Queuing Penalty (veh)				0	0		

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	EB	EB	EB	EB	B10	B10	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	R	T	T	L	T	TR	L	L	T
Maximum Queue (ft)	544	630	462	432	165	191	150	319	286	531	540	756
Average Queue (ft)	428	474	144	107	45	25	123	187	165	351	365	348
95th Queue (ft)	634	737	376	356	233	193	184	292	255	573	585	730
Link Distance (ft)		640	640		1310	1310		1284	1284			1055
Upstream Blk Time (%)		8	1									0
Queuing Penalty (veh)		0	0									2
Storage Bay Dist (ft)	585			575			150			560	560	
Storage Blk Time (%)	2	9	1	0			4	16		0	5	3
Queuing Penalty (veh)	7	37	5	0			6	26		1	16	20

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R
Maximum Queue (ft)	582	278	300	535	610	270
Average Queue (ft)	281	61	250	304	248	38
95th Queue (ft)	503	211	348	471	473	203
Link Distance (ft)	1055			1181	1181	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		300	300			300
Storage Blk Time (%)	5	0	5	6	1	0
Queuing Penalty (veh)	3	0	17	19	10	1

Intersection: 6: US Route 17/Carrollton Boulevard & Deep Bottom Drive/Channell Way

Movement	EB	WB	NB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	T	R	L	TR
Maximum Queue (ft)	52	159	35	40	5	91	4
Average Queue (ft)	12	58	8	4	0	33	0
95th Queue (ft)	39	140	25	46	3	74	2
Link Distance (ft)	711	416		569			1055
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			140		60	140	
Storage Blk Time (%)				0			
Queuing Penalty (veh)				0			

Intersection: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	R	L	T	T	R
Maximum Queue (ft)	104	65	297	169	381	333	20	161	281	285	33
Average Queue (ft)	37	20	123	26	191	151	3	50	112	126	9
95th Queue (ft)	84	50	235	97	332	297	15	111	233	241	29
Link Distance (ft)		644	713		1440	1440			1077	1077	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	135			275			350	300			630
Storage Blk Time (%)	0			0	2	0		0	0		
Queuing Penalty (veh)	0			0	1	0		0	0		

Intersection: 10: Bend

Movement	WB	WB	WB
Directions Served	T	T	
Maximum Queue (ft)	584	575	521
Average Queue (ft)	90	110	36
95th Queue (ft)	420	461	280
Link Distance (ft)	640	640	640
Upstream Blk Time (%)	0	0	0
Queuing Penalty (veh)	0	0	2
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 16: US Route 17/Carrollton Boulevard & Site A

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	523	519
Average Queue (ft)	367	392
95th Queue (ft)	660	661
Link Distance (ft)	490	490
Upstream Blk Time (%)	3	4
Queuing Penalty (veh)	36	55
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: US Route 17/Carrollton Boulevard & Site B

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	50	116
Average Queue (ft)	2	11
95th Queue (ft)	42	107
Link Distance (ft)	1229	1229
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: US Route 17/Carrollton Boulevard & Site C

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: US Route 17/Carrollton Boulevard & Nike Park Extension

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	L	T	T	T	T	R
Maximum Queue (ft)	144	160	75	74	592	573	428	608	200
Average Queue (ft)	63	85	23	65	260	228	185	404	96
95th Queue (ft)	118	143	59	90	550	524	339	609	247
Link Distance (ft)		1339			1181	1181	632	632	
Upstream Blk Time (%)							0	1	
Queuing Penalty (veh)							1	8	
Storage Bay Dist (ft)	650		430	75					200
Storage Blk Time (%)				39	16			20	1
Queuing Penalty (veh)				267	20			55	5

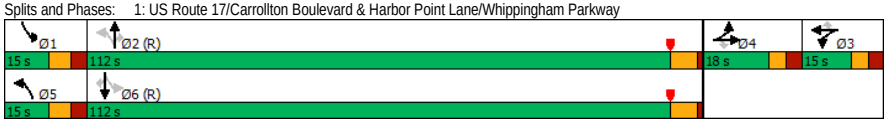
Network Summary

Network wide Queuing Penalty: 1238

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	0	34	24	0	40	16	2744	9	7	921	16
Future Volume (vph)	66	0	34	24	0	40	16	2744	9	7	921	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1805	1615	0	1805	1568	1543	3539	1615	1504	3471	1495
Flt Permitted		0.950			0.950		0.249			0.035		
Satd. Flow (perm)	0	1805	1615	0	1805	1568	404	3539	1615	55	3471	1495
Satd. Flow (RTOR)			109			109			109			109
Adj. Flow (vph)	72	0	37	26	0	43	17	2983	10	8	1001	17
Lane Group Flow (vph)	0	72	37	0	26	43	17	2983	10	8	1001	17
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	18.0	18.0	18.0	15.0	15.0	15.0	15.0	112.0	112.0	15.0	112.0	112.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)		10.6	10.6		7.9	7.9	123.8	123.6	123.6	120.7	118.5	118.5
Actuated g/C Ratio		0.07	0.07		0.05	0.05	0.77	0.77	0.77	0.75	0.74	0.74
v/c Ratio		0.61	0.18		0.30	0.24	0.05	1.09	0.01	0.09	0.39	0.01
Control Delay		93.6	1.9		81.7	3.1	1.0	49.4	0.0	7.3	9.5	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
Total Delay		93.6	1.9		81.7	3.1	1.0	50.0	0.0	7.3	9.5	0.0
LOS		F	A		F	A	A	D	A	A	A	A
Approach Delay		62.5			32.7			49.5			9.3	
Approach LOS		E			C			D			A	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 26 (16%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.09			
Intersection Signal Delay: 39.8		Intersection LOS: D	
Intersection Capacity Utilization 102.5%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway



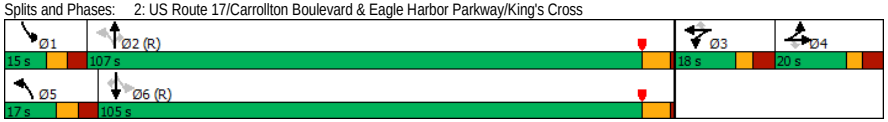
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	0	34	24	0	40	16	2744	9	7	921	16
Future Volume (vph)	66	0	34	24	0	40	16	2744	9	7	921	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1805	1615		1805	1568	1543	3539	1615	1504	3471	1495
Flt Permitted		0.95	1.00		0.95	1.00	0.25	1.00	1.00	0.03	1.00	1.00
Satd. Flow (perm)		1805	1615		1805	1568	405	3539	1615	55	3471	1495
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	0	37	26	0	43	17	2983	10	8	1001	17
RTOR Reduction (vph)	0	0	35	0	0	41	0	0	3	0	0	5
Lane Group Flow (vph)	0	72	2	0	26	2	17	2983	7	8	1001	12
Heavy Vehicles (%)	0%	0%	0%	0%	0%	3%	17%	2%	0%	20%	4%	8%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		10.6	10.6		6.5	6.5	120.2	116.8	116.8	115.6	114.5	114.5
Effective Green, g (s)		10.6	10.6		6.5	6.5	120.2	116.8	116.8	115.6	114.5	114.5
Actuated g/C Ratio		0.07	0.07		0.04	0.04	0.75	0.73	0.73	0.72	0.72	0.72
Clearance Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		119	106		73	63	328	2583	1178	49	2483	1069
v/s Ratio Prot		c0.04			c0.01		0.00	c0.84		c0.00	0.29	
v/s Ratio Perm			0.00			0.00	0.04		0.00	0.11		0.01
v/c Ratio		0.61	0.02		0.36	0.03	0.05	1.15	0.01	0.16	0.40	0.01
Uniform Delay, d1		72.7	69.9		74.7	73.7	5.7	21.6	5.9	44.5	9.1	6.5
Progression Factor		1.00	1.00		1.00	1.00	0.20	0.10	1.00	1.00	1.00	1.00
Incremental Delay, d2		8.4	0.1		3.0	0.2	0.0	70.2	0.0	1.1	0.5	0.0
Delay (s)		81.1	69.9		77.7	73.9	1.1	72.3	5.9	45.7	9.6	6.5
Level of Service		F	E		E	E	A	E	A	D	A	A
Approach Delay (s)		77.3			75.3			71.7			9.8	
Approach LOS		E			E			E			A	

Intersection Summary					
HCM 2000 Control Delay	56.9	HCM 2000 Level of Service	E		
HCM 2000 Volume to Capacity ratio	1.06				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	25.0		
Intersection Capacity Utilization	102.5%	ICU Level of Service	G		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	1	75	16	3	27	51	2574	4	3	944	32
Future Volume (vph)	175	1	75	16	3	27	51	2574	4	3	944	32
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.959		0.950			0.950		
Satd. Flow (prot)	0	1793	1615	0	1822	1468	1719	3539	967	1805	3471	1553
Flt Permitted		0.953			0.959		0.218			0.039		
Satd. Flow (perm)	0	1793	1615	0	1822	1468	394	3539	967	74	3471	1553
Satd. Flow (RTOR)			119			119			126			126
Adj. Flow (vph)	190	1	82	17	3	29	55	2798	4	3	1026	35
Lane Group Flow (vph)	0	191	82	0	20	29	55	2798	4	3	1026	35
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	20.0	20.0	20.0	18.0	18.0	18.0	17.0	107.0	107.0	15.0	105.0	105.0
Total Lost Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Act Effct Green (s)		19.0	19.0		7.8	7.8	113.5	113.4	113.4	107.1	104.5	104.5
Actuated g/C Ratio		0.12	0.12		0.05	0.05	0.71	0.71	0.71	0.67	0.65	0.65
v/c Ratio		0.90	0.28		0.23	0.16	0.17	1.12	0.01	0.03	0.45	0.03
Control Delay		107.4	5.2		79.1	1.8	6.8	72.0	0.0	7.0	10.5	0.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay		107.4	5.2		79.1	1.8	6.8	72.3	0.0	7.0	10.5	0.1
LOS		F	A		E	A	A	E	A	A	B	A
Approach Delay		76.7			33.3			71.0			10.1	
Approach LOS		E			C			E			B	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 8 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.12			
Intersection Signal Delay: 55.6		Intersection LOS: E	
Intersection Capacity Utilization 103.4%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross



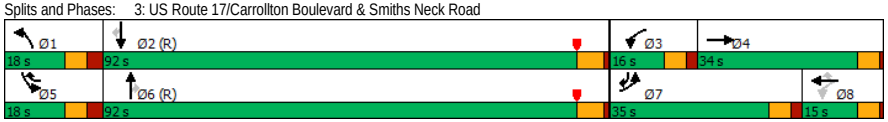
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	1	75	16	3	27	51	2574	4	3	944	32
Future Volume (vph)	175	1	75	16	3	27	51	2574	4	3	944	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1792	1615		1823	1468	1719	3539	967	1805	3471	1553
Flt Permitted		0.95	1.00		0.96	1.00	0.22	1.00	1.00	0.04	1.00	1.00
Satd. Flow (perm)		1792	1615		1823	1468	394	3539	967	75	3471	1553
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	190	1	82	17	3	29	55	2798	4	3	1026	35
RTOR Reduction (vph)	0	0	72	0	0	28	0	0	1	0	0	13
Lane Group Flow (vph)	0	191	10	0	20	1	55	2798	3	3	1026	22
Heavy Vehicles (%)	1%	0%	0%	0%	0%	10%	5%	2%	67%	0%	4%	4%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		19.0	19.0		6.4	6.4	111.5	106.0	106.0	102.7	101.6	101.6
Effective Green, g (s)		19.0	19.0		6.4	6.4	111.5	106.0	106.0	102.7	101.6	101.6
Actuated g/C Ratio		0.12	0.12		0.04	0.04	0.70	0.66	0.66	0.64	0.63	0.63
Clearance Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		212	191		72	58	320	2344	640	60	2204	986
v/s Ratio Prot		c0.11			c0.01		c0.01	c0.79		0.00	0.30	
v/s Ratio Perm			0.01			0.00	0.11		0.00	0.03		0.01
v/c Ratio		0.90	0.05		0.28	0.02	0.17	1.19	0.00	0.05	0.47	0.02
Uniform Delay, d1		69.6	62.5		74.6	73.8	9.5	27.0	9.1	40.1	15.1	10.8
Progression Factor		1.00	1.00		1.00	1.00	0.93	0.60	1.00	0.96	0.69	1.00
Incremental Delay, d2		35.9	0.1		2.1	0.1	0.1	89.4	0.0	0.2	0.7	0.0
Delay (s)		105.5	62.6		76.7	73.9	8.9	105.6	9.1	38.7	11.1	10.9
Level of Service		F	E		E	E	A	F	A	D	B	B
Approach Delay (s)		92.6			75.0			103.6			11.2	
Approach LOS		F			E			F			B	

Intersection Summary					
HCM 2000 Control Delay		79.4	HCM 2000 Level of Service		E
HCM 2000 Volume to Capacity ratio		1.10			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		27.5
Intersection Capacity Utilization		103.4%	ICU Level of Service		G
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	494	71	104	77	13	47	45	1886	98	64	846	138
Future Volume (vph)	494	71	104	77	13	47	45	1886	98	64	846	138
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.911				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	1717	0	1719	1900	1553	1612	3539	1553	1752	3471	1615
Flt Permitted	0.950						0.950			0.950		
Satd. Flow (perm)	3467	1717	0	1810	1900	1553	1612	3539	1553	1752	3471	1615
Satd. Flow (RTOR)		40				102			143			150
Adj. Flow (vph)	537	77	113	84	14	51	49	2050	107	70	920	150
Lane Group Flow (vph)	537	190	0	84	14	51	49	2050	107	70	920	150
Turn Type	Prot	NA		pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8	5	1	6		5	2	7
Permitted Phases				8		8			6			2
Total Split (s)	35.0	34.0		16.0	15.0	18.0	18.0	92.0	92.0	18.0	92.0	35.0
Total Lost Time (s)	6.0	5.0		6.0	5.0	7.0	7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)	29.7	20.3		12.4	7.4	15.8	9.4	95.5	95.5	10.6	99.1	136.1
Actuated g/C Ratio	0.19	0.13		0.08	0.05	0.10	0.06	0.60	0.60	0.07	0.62	0.85
v/c Ratio	0.83	0.75		0.63	0.16	0.21	0.52	0.97	0.11	0.61	0.43	0.11
Control Delay	74.7	70.5		79.5	77.3	1.9	87.7	32.4	1.4	104.1	10.5	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	42.2	0.0	0.0	0.0	0.0
Total Delay	74.7	70.5		79.5	77.3	2.0	87.7	74.6	1.4	104.1	10.5	0.1
LOS	E	E		E	E	A	F	E	A	F	B	A
Approach Delay		73.6			52.8			71.4			14.9	
Approach LOS		E			D			E			B	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 156 (98%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 55.9		Intersection LOS: E	
Intersection Capacity Utilization 86.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	494	71	104	77	13	47	45	1886	98	64	846	138
Future Volume (vph)	494	71	104	77	13	47	45	1886	98	64	846	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.0		6.0	5.0	7.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	1717		1719	1900	1553	1612	3539	1553	1752	3471	1615
Flt Permitted	0.95	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	1717		1810	1900	1553	1612	3539	1553	1752	3471	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	537	77	113	84	14	51	49	2050	107	70	920	150
RTOR Reduction (vph)	0	34	0	0	0	47	0	0	45	0	0	33
Lane Group Flow (vph)	537	156	0	84	14	4	49	2050	62	70	920	117
Heavy Vehicles (%)	1%	2%	0%	5%	0%	4%	12%	2%	4%	3%	4%	0%
Turn Type	Prot	NA		pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8	5	1	6		5	2	7
Permitted Phases				8		8			6			2
Actuated Green, G (s)	29.7	23.3		12.8	3.2	13.8	8.3	92.5	92.5	10.6	94.8	124.5
Effective Green, g (s)	29.7	23.3		12.8	3.2	13.8	8.3	92.5	92.5	10.6	94.8	124.5
Actuated g/C Ratio	0.19	0.15		0.08	0.02	0.09	0.05	0.58	0.58	0.07	0.59	0.78
Clearance Time (s)	6.0	5.0		6.0	5.0	7.0	7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	2.5	2.5	5.0	5.0	2.5	5.0	3.0
Lane Grp Cap (vph)	643	250		139	38	133	83	2045	897	116	2056	1317
v/s Ratio Prot	c0.15	c0.09		0.04	0.01	0.00	0.03	c0.58		c0.04	0.27	0.02
v/s Ratio Perm				0.01		0.00			0.04			0.06
v/c Ratio	0.84	0.62		0.60	0.37	0.03	0.59	1.00	0.07	0.60	0.45	0.09
Uniform Delay, d1	62.8	64.2		71.2	77.4	67.0	74.2	33.8	14.8	72.7	18.1	4.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.01	0.62	1.35	1.16	0.56	0.00
Incremental Delay, d2	9.2	4.8		7.2	6.0	0.1	7.0	18.0	0.1	6.7	0.7	0.0
Delay (s)	72.0	69.0		78.4	83.4	67.1	81.7	38.8	20.2	91.3	10.8	0.0
Level of Service	E	E		E	F	E	F	D	C	F	B	A
Approach Delay (s)		71.2			75.0			38.9			14.3	
Approach LOS		E			E			D			B	

Intersection Summary					
HCM 2000 Control Delay	39.1	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.94				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0		
Intersection Capacity Utilization	86.4%	ICU Level of Service	E		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	43	0	0	11	23	2049	37	17	1025	11
Future Volume (vph)	0	0	43	0	0	11	23	2049	37	17	1025	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.865			0.865			0.850			0.850
Flt Protected							0.950			0.950		
Satd. Flow (prot)	0	0	1550	0	0	1644	1805	3505	1615	1805	3471	1615
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	0	0	1550	0	0	1644	1805	3505	1615	1805	3471	1615
Adj. Flow (vph)	0	0	47	0	0	12	25	2227	40	18	1114	12
Lane Group Flow (vph)	0	0	47	0	0	12	25	2227	40	18	1114	12
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 66.6%	ICU Level of Service C
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	43	0	0	11	23	2049	37	17	1025	11
Future Volume (Veh/h)	0	0	43	0	0	11	23	2049	37	17	1025	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	47	0	0	12	25	2227	40	18	1114	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1315	
pX, platoon unblocked	0.86	0.86	0.86	0.86	0.86		0.86					
vC, conflicting volume	2326	3467	557	2917	3439	1114	1126			2267		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2212	3546	145	2903	3513	1114	810			2267		
tC, single (s)	7.5	6.5	7.0	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.4	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	94	100	100	94	96			92		
cM capacity (veh/h)	18	5	738	5	5	206	706			229		

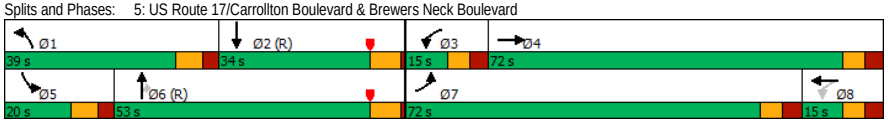
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	47	12	25	1114	1114	40	18	557	557	12
Volume Left	0	0	25	0	0	0	18	0	0	0
Volume Right	47	12	0	0	0	40	0	0	0	12
cSH	738	206	706	1700	1700	1700	229	1700	1700	1700
Volume to Capacity	0.06	0.06	0.04	0.66	0.66	0.02	0.08	0.33	0.33	0.01
Queue Length 95th (ft)	5	5	3	0	0	0	6	0	0	0
Control Delay (s)	10.2	23.6	10.3	0.0	0.0	0.0	22.1	0.0	0.0	0.0
Lane LOS	B	C	B				C			
Approach Delay (s)	10.2	23.6	0.1				0.3			
Approach LOS	B	C								

Intersection Summary					
Average Delay	0.4				
Intersection Capacity Utilization	66.6%	ICU Level of Service		C	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1101	84	624	52	64	64	495	649	20	57	438	641
Future Volume (vph)	1101	84	624	52	64	64	495	649	20	57	438	641
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.925				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3367	1863	1524	1770	3274	0	3242	3539	1583	1770	3505	1553
Flt Permitted	0.950			0.699			0.950			0.950		
Satd. Flow (perm)	3367	1863	1524	1302	3274	0	3242	3539	1583	1770	3505	1553
Satd. Flow (RTOR)			671		69				188			689
Adj. Flow (vph)	1184	90	671	56	69	69	532	698	22	61	471	689
Lane Group Flow (vph)	1184	90	671	56	138	0	532	698	22	61	471	689
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Total Split (s)	72.0	72.0		15.0	15.0		39.0	53.0	53.0	20.0	34.0	
Total Lost Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Act Effct Green (s)	61.6	64.3	160.0	14.4	7.2		29.3	54.5	54.5	10.2	32.4	160.0
Actuated g/C Ratio	0.38	0.40	1.00	0.09	0.04		0.18	0.34	0.34	0.06	0.20	1.00
v/c Ratio	0.91	0.12	0.44	0.41	0.64		0.90	0.58	0.03	0.54	0.66	0.44
Control Delay	58.1	30.8	0.9	43.7	51.8		68.9	43.8	0.1	100.3	55.2	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.1	30.8	0.9	43.7	51.8		68.9	43.8	0.1	100.3	55.2	1.7
LOS	E	C	A	D	D		E	D	A	F	E	A
Approach Delay		37.1			49.4			53.7			27.3	
Approach LOS		D			D			D			C	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 19 (12%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 39.5		Intersection LOS: D	
Intersection Capacity Utilization 86.0%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1101	84	624	52	64	64	495	649	20	57	438	641
Future Volume (vph)	1101	84	624	52	64	64	495	649	20	57	438	641
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	4.0	7.5	7.5		8.0	6.5	6.5	8.0	6.5	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	1863	1524	1770	3274		3242	3539	1583	1770	3505	1553
Flt Permitted	0.95	1.00	1.00	0.70	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	1863	1524	1301	3274		3242	3539	1583	1770	3505	1553
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	1184	90	671	56	69	69	532	698	22	61	471	689
RTOR Reduction (vph)	0	0	0	0	65	0	0	0	15	0	0	0
Lane Group Flow (vph)	1184	90	671	56	73	0	532	698	7	61	471	689
Heavy Vehicles (%)	4%	2%	6%	2%	2%	2%	8%	2%	2%	2%	3%	4%
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Actuated Green, G (s)	61.6	64.3	160.0	14.7	8.7		29.3	51.4	51.4	8.8	30.9	160.0
Effective Green, g (s)	61.6	64.3	160.0	14.7	8.7		29.3	51.4	51.4	8.8	30.9	160.0
Actuated g/C Ratio	0.39	0.40	1.00	0.09	0.05		0.18	0.32	0.32	0.06	0.19	1.00
Clearance Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Vehicle Extension (s)	3.5	3.5		3.0	3.0		2.5	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	1296	748	1524	137	178		593	1136	508	97	676	1553
v/s Ratio Prot	c0.35	0.05		0.02	0.02		c0.16	0.20		0.03	c0.13	
v/s Ratio Perm			0.44	0.02					0.00			c0.44
v/c Ratio	0.91	0.12	0.44	0.41	0.41		0.90	0.61	0.01	0.63	0.70	0.44
Uniform Delay, d1	46.7	30.1	0.0	68.1	73.2		63.9	45.9	37.0	74.0	60.2	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.81	0.92	1.00	1.15	0.84	1.00
Incremental Delay, d2	10.2	0.1	0.9	2.0	1.5		14.9	2.3	0.0	11.5	5.6	0.9
Delay (s)	56.8	30.2	0.9	70.1	74.7		66.4	44.4	37.1	96.7	56.0	0.9
Level of Service	E	C	A	E	E		E	D	D	F	E	A
Approach Delay (s)		36.3			73.4			53.6			26.9	
Approach LOS		D			E			D			C	

Intersection Summary					
HCM 2000 Control Delay	40.1	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.85				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.5		
Intersection Capacity Utilization	86.0%	ICU Level of Service	E		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	32	1	75	7	1069	22	22	1052	1
Future Volume (vph)	0	0	5	32	1	75	7	1069	22	22	1052	1
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.865				0.850			0.850			
Flt Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	1096	0	0	1813	1538	1805	3438	1292	1805	3438	0
Flt Permitted					0.954		0.950			0.950		
Satd. Flow (perm)	0	1096	0	0	1813	1538	1805	3438	1292	1805	3438	0
Adj. Flow (vph)	0	0	5	35	1	82	8	1162	24	24	1143	1
Lane Group Flow (vph)	0	5	0	0	36	82	8	1162	24	24	1144	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 47.5%					ICU Level of Service A							
Analysis Period (min) 15												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	5	32	1	75	7	1069	22	22	1052	1
Future Volume (Veh/h)	0	0	5	32	1	75	7	1069	22	22	1052	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	5	35	1	82	8	1162	24	24	1143	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						9						
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1135	
pX, platoon unblocked	0.88	0.88	0.88	0.88	0.88		0.88					
vC, conflicting volume	1789	2394	572	1802	2370	581	1144			1186		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1627	2313	248	1643	2286	581	896			1186		
tC, single (s)	7.5	6.5	7.9	7.5	6.5	7.0	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.8	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	38	97	82	99			96		
cM capacity (veh/h)	47	32	551	56	33	450	676			596		

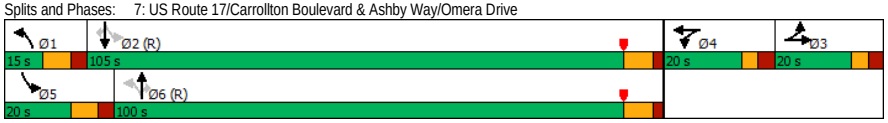
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	5	118	8	581	581	24	24	762	382
Volume Left	0	35	8	0	0	0	24	0	0
Volume Right	5	82	0	0	0	24	0	0	1
cSH	551	183	676	1700	1700	1700	596	1700	1700
Volume to Capacity	0.01	0.65	0.01	0.34	0.34	0.01	0.04	0.45	0.22
Queue Length 95th (ft)	1	93	1	0	0	0	3	0	0
Control Delay (s)	11.6	55.4	10.4	0.0	0.0	0.0	11.3	0.0	0.0
Lane LOS	B	F	B				B		
Approach Delay (s)	11.6	55.4	0.1				0.2		
Approach LOS	B	F							

Intersection Summary									
Average Delay			2.8						
Intersection Capacity Utilization			47.5%		ICU Level of Service			A	
Analysis Period (min)			15						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	1	30	44	1	86	13	936	12	65	1004	9
Future Volume (vph)	70	1	30	44	1	86	13	936	12	65	1004	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.854			0.912				0.850			0.850
Flt Protected	0.950				0.983		0.950			0.950		
Satd. Flow (prot)	1770	1548	0	0	1623	0	1805	3438	1455	1703	3471	1417
Flt Permitted	0.950				0.983		0.222			0.214		
Satd. Flow (perm)	1770	1548	0	0	1623	0	422	3438	1455	384	3471	1417
Satd. Flow (RTOR)		33			47				116			116
Adj. Flow (vph)	76	1	33	48	1	93	14	1017	13	71	1091	10
Lane Group Flow (vph)	76	34	0	0	142	0	14	1017	13	71	1091	10
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Total Split (s)	20.0	20.0		20.0	20.0		15.0	100.0	100.0	20.0	105.0	105.0
Total Lost Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Act Effct Green (s)	12.3	12.3			15.5		103.2	96.7	96.7	109.9	106.7	106.7
Actuated g/C Ratio	0.08	0.08			0.10		0.64	0.60	0.60	0.69	0.67	0.67
v/c Ratio	0.56	0.23			0.71		0.04	0.49	0.01	0.22	0.47	0.01
Control Delay	86.4	24.0			65.2		9.9	20.0	0.0	7.1	11.5	0.0
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.4	24.0			65.2		9.9	20.0	0.0	7.1	11.5	0.0
LOS	F	C			E		A	C	A	A	B	A
Approach Delay		67.2			65.2			19.7			11.1	
Approach LOS		E			E			B			B	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 11 (7%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 20.3		Intersection LOS: C	
Intersection Capacity Utilization 65.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive



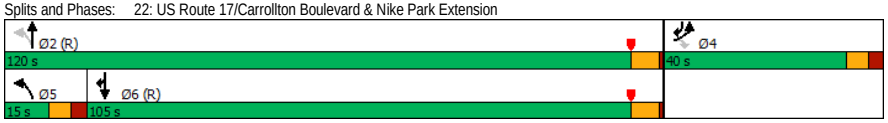
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	1	30	44	1	86	13	936	12	65	1004	9
Future Volume (vph)	70	1	30	44	1	86	13	936	12	65	1004	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.85			0.91		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1548			1623		1805	3438	1455	1703	3471	1417
Flt Permitted	0.95	1.00			0.98		0.22	1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)	1770	1548			1623		423	3438	1455	384	3471	1417
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	1	33	48	1	93	14	1017	13	71	1091	10
RTOR Reduction (vph)	0	30	0	0	42	0	0	0	5	0	0	4
Lane Group Flow (vph)	76	4	0	0	100	0	14	1017	8	71	1091	6
Heavy Vehicles (%)	2%	0%	5%	3%	0%	6%	0%	5%	11%	6%	4%	14%
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Actuated Green, G (s)	12.3	12.3			15.5		99.5	96.7	96.7	109.9	101.9	101.9
Effective Green, g (s)	12.3	12.3			15.5		99.5	96.7	96.7	109.9	101.9	101.9
Actuated g/C Ratio	0.08	0.08			0.10		0.62	0.60	0.60	0.69	0.64	0.64
Clearance Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	136	119			157		287	2077	879	329	2210	902
v/s Ratio Prot	c0.04	0.00			c0.06		0.00	0.30		c0.01	c0.31	
v/s Ratio Perm							0.03		0.01	0.14		0.00
v/c Ratio	0.56	0.03			0.63		0.05	0.49	0.01	0.22	0.49	0.01
Uniform Delay, d1	71.2	68.3			69.5		12.2	17.8	12.6	10.4	15.4	10.6
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	0.64	0.71	1.00
Incremental Delay, d2	4.9	0.1			8.1		0.1	0.8	0.0	0.3	0.7	0.0
Delay (s)	76.1	68.4			77.6		12.3	18.6	12.6	6.9	11.6	10.6
Level of Service	E	E			E		B	B	B	A	B	B
Approach Delay (s)		73.8			77.6			18.5			11.3	
Approach LOS		E			E			B			B	

Intersection Summary					
HCM 2000 Control Delay		20.9	HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio		0.52			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		27.5
Intersection Capacity Utilization		65.9%	ICU Level of Service		C
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	330	68	28	1741	976	92
Future Volume (vph)	330	68	28	1741	976	92
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.221			
Satd. Flow (perm)	3433	1583	412	3539	3539	1583
Satd. Flow (RTOR)		74				100
Adj. Flow (vph)	359	74	30	1892	1061	100
Lane Group Flow (vph)	359	74	30	1892	1061	100
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Total Split (s)	40.0	40.0	15.0	120.0	105.0	
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	
Act Effct Green (s)	22.2	22.2	123.8	124.8	116.7	148.3
Actuated g/C Ratio	0.14	0.14	0.77	0.78	0.73	0.93
v/c Ratio	0.76	0.26	0.08	0.69	0.41	0.07
Control Delay	76.5	13.5	3.8	12.2	6.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.5	13.5	3.8	12.2	6.9	0.1
LOS	E	B	A	B	A	A
Approach Delay	65.7			12.0	6.3	
Approach LOS	E			B	A	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 18 (11%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 16.8		Intersection LOS: B	
Intersection Capacity Utilization 68.4%		ICU Level of Service C	
Analysis Period (min) 15			

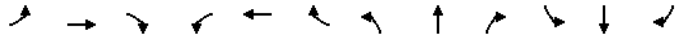
Splits and Phases: 22: US Route 17/Carrollton Boulevard & Nike Park Extension



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	330	68	28	1741	976	92
Future Volume (vph)	330	68	28	1741	976	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.22	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	412	3539	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	359	74	30	1892	1061	100
RTOR Reduction (vph)	0	64	0	0	0	11
Lane Group Flow (vph)	359	10	30	1892	1061	89
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Actuated Green, G (s)	22.2	22.2	124.8	124.8	113.9	142.1
Effective Green, g (s)	22.2	22.2	124.8	124.8	113.9	142.1
Actuated g/C Ratio	0.14	0.14	0.78	0.78	0.71	0.89
Clearance Time (s)	7.0	7.0	7.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	476	219	354	2760	2519	1405
v/s Ratio Prot	c0.10		0.00	c0.53	0.30	0.06
v/s Ratio Perm		0.01	0.06			
v/c Ratio	0.75	0.05	0.08	0.69	0.42	0.06
Uniform Delay, d1	66.3	59.7	5.5	8.3	9.5	1.1
Progression Factor	1.00	1.00	0.72	1.25	0.67	0.08
Incremental Delay, d2	6.7	0.1	0.1	0.9	0.5	0.0
Delay (s)	73.0	59.8	4.0	11.3	6.9	0.1
Level of Service	E	E	A	B	A	A
Approach Delay (s)	70.7			11.2	6.3	
Approach LOS	E			B	A	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	7	81	0	8	0	63	7	0	0	7	43
Future Volume (vph)	124	7	81	0	8	0	63	7	0	0	7	43
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.862									0.885	
Flt Protected	0.950							0.957				
Satd. Flow (prot)	1770	1606	0	0	1863	0	0	1783	0	0	1649	0
Flt Permitted	0.950							0.957				
Satd. Flow (perm)	1770	1606	0	0	1863	0	0	1783	0	0	1649	0
Adj. Flow (vph)	135	8	88	0	9	0	68	8	0	0	8	47
Lane Group Flow (vph)	135	96	0	0	9	0	0	76	0	0	55	0
Sign Control		Free			Stop			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 30.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Intersection: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	144	72	62	86	136	413	440	85	38	148	182	7
Average Queue (ft)	61	21	19	28	17	204	218	4	5	45	62	1
95th Queue (ft)	118	53	51	67	68	373	392	47	22	114	145	4
Link Distance (ft)	892		1111			490	490			4237	4237	
Upstream Blk Time (%)						0	0					
Queuing Penalty (veh)						0	1					
Storage Bay Dist (ft)		170		550	280			215	220			230
Storage Blk Time (%)	0	0			0	3	9	0		0	0	
Queuing Penalty (veh)	0	0			0	1	1	0		0	0	

Intersection: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	404	204	101	66	264	872	884	133	27	202	242	50
Average Queue (ft)	196	67	20	25	54	601	615	5	3	89	118	6
95th Queue (ft)	384	198	63	62	186	815	832	58	15	170	207	34
Link Distance (ft)	1075		1206			970	970			549	549	
Upstream Blk Time (%)						0	0					
Queuing Penalty (veh)						0	0					
Storage Bay Dist (ft)		220		65	265			240	310			240
Storage Blk Time (%)	12	0	2	1	0	24	27	0			0	0
Queuing Penalty (veh)	9	0	0	0	1	12	1	0			0	0

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	L	TR	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	320	363	321	134	63	93	449	1236	1244	245	166	172
Average Queue (ft)	207	237	132	68	13	33	86	740	751	78	68	85
95th Queue (ft)	312	344	250	126	43	75	289	1343	1354	247	129	155
Link Distance (ft)			1127		178			1228	1228			970
Upstream Blk Time (%)					0			4	5			
Queuing Penalty (veh)					0			39	49			
Storage Bay Dist (ft)	465	465		150		175	450			245	450	
Storage Blk Time (%)	0	0	0	1	0		0	25	34	0		
Queuing Penalty (veh)	0	0	0	1	0		0	11	34	3		

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	211	26
Average Queue (ft)	106	5
95th Queue (ft)	176	20
Link Distance (ft)	970	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		820
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: US Route 17/Carrollton Boulevard & Northgate Lane

Movement	EB	WB	NB	NB	NB	NB	SB
Directions Served	R	R	L	T	T	R	L
Maximum Queue (ft)	78	46	133	458	496	124	74
Average Queue (ft)	22	9	19	80	87	5	13
95th Queue (ft)	51	34	86	421	445	71	47
Link Distance (ft)	1152	872		1215	1215		
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			245			300	300
Storage Blk Time (%)			0	4	4	0	
Queuing Penalty (veh)			0	1	2	0	

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	EB	EB	EB	EB	B10	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	L	T	R	T	L	T	TR	L	L	T	T
Maximum Queue (ft)	534	573	161	174	24	94	107	136	379	401	375	372
Average Queue (ft)	367	393	45	8	2	36	48	52	210	242	229	239
95th Queue (ft)	515	540	112	76	26	76	94	107	333	367	339	344
Link Distance (ft)		610	610		1332		1286	1286			1050	1050
Upstream Blk Time (%)		0										
Queuing Penalty (veh)		0										
Storage Bay Dist (ft)	585			575		150			650	650		
Storage Blk Time (%)	0	0										13
Queuing Penalty (veh)	1	2										3

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	NB	SB	SB	SB	SB
Directions Served	R	L	T	T	R
Maximum Queue (ft)	224	149	325	328	148
Average Queue (ft)	28	58	181	152	6
95th Queue (ft)	133	121	272	255	77
Link Distance (ft)			1181	1181	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	225	500			300
Storage Blk Time (%)	0			0	0
Queuing Penalty (veh)	0			1	0

Intersection: 6: US Route 17/Carrollton Boulevard & Deep Bottom Drive/Channell Way

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	LT	R	L	L
Maximum Queue (ft)	60	82	87	26	45
Average Queue (ft)	8	29	35	4	11
95th Queue (ft)	36	65	65	17	35
Link Distance (ft)	712	416			
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			225	140	275
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	R	L	T	T	R
Maximum Queue (ft)	128	124	210	32	284	267	26	96	173	184	26
Average Queue (ft)	58	24	83	8	137	96	2	30	63	80	2
95th Queue (ft)	109	70	168	27	245	215	13	69	137	153	14
Link Distance (ft)		644	713		1440	1440			1077	1077	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	135			275			350	300			630
Storage Blk Time (%)	1	0			0						
Queuing Penalty (veh)	0	0			0						

Intersection: 10: Bend

Movement	WB	WB
Directions Served	T	T
Maximum Queue (ft)	393	315
Average Queue (ft)	18	13
95th Queue (ft)	169	148
Link Distance (ft)	610	610
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 16: US Route 17/Carrollton Boulevard & Site A

Movement	NB	NB
Directions Served	T	TR
Maximum Queue (ft)	92	92
Average Queue (ft)	4	6
95th Queue (ft)	60	86
Link Distance (ft)	549	549
Upstream Blk Time (%)		0
Queuing Penalty (veh)		0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: US Route 17/Carrollton Boulevard & Site B

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 19: US Route 17/Carrollton Boulevard & Site C

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: US Route 17/Carrollton Boulevard & Nike Park Extension

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	L	T	T	T	T	R
Maximum Queue (ft)	220	248	60	55	282	306	145	265	165
Average Queue (ft)	135	160	19	16	95	100	47	105	10
95th Queue (ft)	210	231	46	44	218	227	110	218	80
Link Distance (ft)		1339			1181	1181	632	632	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	650		430	75					200
Storage Blk Time (%)				0	9			1	0
Queuing Penalty (veh)				0	2			1	0

Intersection: 33: Bojangles Driveway/7-Eleven Driveway & Smiths Neck Road

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	30	51	59
Average Queue (ft)	6	22	24
95th Queue (ft)	24	39	47
Link Distance (ft)	650	468	414
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

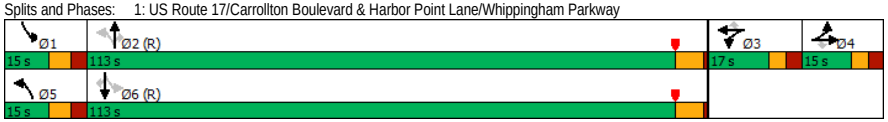
Network Summary

Network wide Queuing Penalty: 179

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	0	20	31	0	12	42	1359	42	26	2696	61
Future Volume (vph)	15	0	20	31	0	12	42	1359	42	26	2696	61
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1805	1615	0	1805	1455	1805	3539	1568	1805	3574	1615
Flt Permitted		0.950			0.950		0.034			0.153		
Satd. Flow (perm)	0	1805	1615	0	1805	1455	65	3539	1568	291	3574	1615
Satd. Flow (RTOR)			109			109			109			109
Adj. Flow (vph)	16	0	21	32	0	13	44	1416	44	27	2808	64
Lane Group Flow (vph)	0	16	21	0	32	13	44	1416	44	27	2808	64
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	15.0	15.0	15.0	17.0	17.0	17.0	15.0	113.0	113.0	15.0	113.0	113.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)		7.5	7.5		8.2	8.2	126.4	124.6	124.6	124.0	121.6	121.6
Actuated g/C Ratio		0.05	0.05		0.05	0.05	0.79	0.78	0.78	0.78	0.76	0.76
v/c Ratio		0.19	0.12		0.34	0.07	0.37	0.51	0.04	0.10	1.03	0.05
Control Delay		78.3	1.4		82.5	0.8	31.4	6.5	0.1	5.2	49.6	0.2
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	27.6	0.0
Total Delay		78.3	1.4		82.5	0.8	31.4	6.5	0.1	5.2	77.2	0.2
LOS		E	A		F	A	C	A	A	A	E	A
Approach Delay		34.6			58.9			7.0			74.9	
Approach LOS		C			E			A			E	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 130 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.03			
Intersection Signal Delay: 51.6		Intersection LOS: D	
Intersection Capacity Utilization 99.5%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway



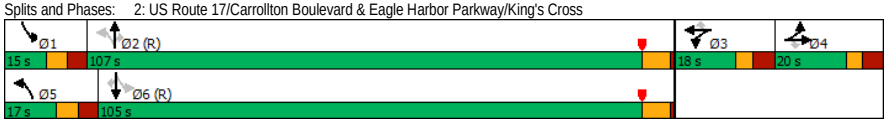
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	0	20	31	0	12	42	1359	42	26	2696	61
Future Volume (vph)	15	0	20	31	0	12	42	1359	42	26	2696	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1805	1615		1805	1455	1805	3539	1568	1805	3574	1615
Flt Permitted		0.95	1.00		0.95	1.00	0.03	1.00	1.00	0.15	1.00	1.00
Satd. Flow (perm)		1805	1615		1805	1455	64	3539	1568	292	3574	1615
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	16	0	21	32	0	12	44	1416	44	27	2808	64
RTOR Reduction (vph)	0	0	20	0	0	12	0	0	11	0	0	17
Lane Group Flow (vph)	0	16	1	0	32	1	44	1416	33	27	2808	47
Heavy Vehicles (%)	0%	0%	0%	0%	0%	11%	0%	2%	3%	0%	1%	0%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		6.1	6.1		7.1	7.1	123.4	118.3	118.3	120.2	116.7	116.7
Effective Green, g (s)		6.1	6.1		7.1	7.1	123.4	118.3	118.3	120.2	116.7	116.7
Actuated g/C Ratio		0.04	0.04		0.04	0.04	0.77	0.74	0.74	0.75	0.73	0.73
Clearance Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		68	61		80	64	104	2616	1159	252	2606	1177
v/s Ratio Prot		c0.01			c0.02		c0.01	0.40		0.00	c0.79	
v/s Ratio Perm			0.00			0.00	0.31		0.02	0.08		0.03
v/c Ratio		0.24	0.01		0.40	0.01	0.42	0.54	0.03	0.11	1.08	0.04
Uniform Delay, d1		74.7	74.1		74.4	73.1	46.1	9.1	5.5	6.6	21.6	6.0
Progression Factor		1.00	1.00		1.00	1.00	1.93	0.63	1.00	1.00	1.00	1.00
Incremental Delay, d2		1.8	0.1		3.3	0.1	1.7	0.7	0.0	0.1	42.7	0.1
Delay (s)		76.5	74.1		77.6	73.1	90.5	6.4	5.6	6.8	64.4	6.1
Level of Service		E	E		E	E	F	A	A	A	E	A
Approach Delay (s)		75.1			76.3			8.8			62.5	
Approach LOS		E			E			A			E	

Intersection Summary					
HCM 2000 Control Delay		44.8	HCM 2000 Level of Service		D
HCM 2000 Volume to Capacity ratio		0.98			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		25.0
Intersection Capacity Utilization		99.5%	ICU Level of Service		F
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	5	63	16	7	16	105	1344	20	27	2517	203
Future Volume (vph)	82	5	63	16	7	16	105	1344	20	27	2517	203
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.966		0.950			0.950		
Satd. Flow (prot)	0	1814	1615	0	1835	1495	1805	3574	1509	1805	3574	1615
Flt Permitted		0.955			0.966		0.036			0.142		
Satd. Flow (perm)	0	1814	1615	0	1835	1495	68	3574	1509	270	3574	1615
Satd. Flow (RTOR)			119			119			126			126
Adj. Flow (vph)	87	5	67	17	7	17	112	1430	21	29	2678	216
Lane Group Flow (vph)	0	92	67	0	24	17	112	1430	21	29	2678	216
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	20.0	20.0	20.0	18.0	18.0	18.0	17.0	107.0	107.0	15.0	105.0	105.0
Total Lost Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Act Effct Green (s)		12.6	12.6		8.0	8.0	118.5	114.1	114.1	110.1	105.9	105.9
Actuated g/C Ratio		0.08	0.08		0.05	0.05	0.74	0.71	0.71	0.69	0.66	0.66
v/c Ratio		0.65	0.28		0.26	0.09	0.77	0.56	0.02	0.12	1.13	0.19
Control Delay		92.0	3.0		79.8	0.9	62.5	16.9	0.1	2.1	75.4	0.4
Queue Delay		0.0	0.1		0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Total Delay		92.0	3.1		79.8	0.9	62.5	16.9	0.1	2.1	75.8	0.4
LOS		F	A		E	A	E	B	A	A	E	A
Approach Delay		54.6			47.1			19.9			69.5	
Approach LOS		D			D			B			E	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 148 (93%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay: 52.3		Intersection LOS: D	
Intersection Capacity Utilization 103.9%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross



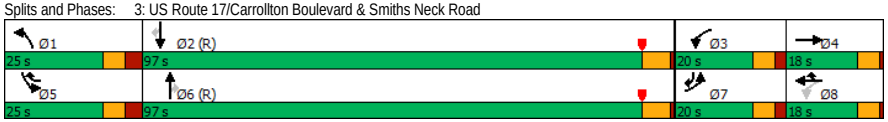
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	5	63	16	7	16	105	1344	20	27	2517	203
Future Volume (vph)	82	5	63	16	7	16	105	1344	20	27	2517	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1814	1615		1835	1495	1805	3574	1509	1805	3574	1615
Flt Permitted		0.95	1.00		0.97	1.00	0.04	1.00	1.00	0.14	1.00	1.00
Satd. Flow (perm)		1814	1615		1835	1495	69	3574	1509	269	3574	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	87	5	67	17	7	17	112	1430	21	29	2678	216
RTOR Reduction (vph)	0	0	62	0	0	16	0	0	7	0	0	44
Lane Group Flow (vph)	0	92	5	0	24	1	112	1430	14	29	2678	172
Heavy Vehicles (%)	0%	0%	0%	0%	0%	8%	0%	1%	7%	0%	1%	0%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		12.6	12.6		6.6	6.6	118.5	109.7	109.7	108.1	104.5	104.5
Effective Green, g (s)		12.6	12.6		6.6	6.6	118.5	109.7	109.7	108.1	104.5	104.5
Actuated g/C Ratio		0.08	0.08		0.04	0.04	0.74	0.69	0.69	0.68	0.65	0.65
Clearance Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		142	127		75	61	146	2450	1034	216	2334	1054
v/s Ratio Prot		c0.05			c0.01		c0.04	c0.40		0.00	c0.75	
v/s Ratio Perm			0.00			0.00	0.52		0.01	0.09		0.11
v/c Ratio		0.65	0.04		0.32	0.01	0.77	0.58	0.01	0.13	1.15	0.16
Uniform Delay, d1		71.5	68.1		74.5	73.6	54.4	13.2	8.0	10.7	27.8	10.8
Progression Factor		1.00	1.00		1.00	1.00	0.96	1.22	1.00	0.27	0.33	0.06
Incremental Delay, d2		9.8	0.1		2.5	0.1	17.8	0.9	0.0	0.1	67.9	0.1
Delay (s)		81.3	68.3		77.0	73.6	69.8	17.0	8.0	3.0	77.1	0.8
Level of Service		F	E		E	E	E	B	A	A	E	A
Approach Delay (s)		75.8			75.6			20.6			70.7	
Approach LOS		E			E			C			E	

Intersection Summary				
HCM 2000 Control Delay	54.2	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	1.04			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	27.5	
Intersection Capacity Utilization	103.9%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	254	52	78	132	106	39	196	1008	101	102	2122	410
Future Volume (vph)	254	52	78	132	106	39	196	1008	101	102	2122	410
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.910				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3502	1719	0	1805	1900	1615	1805	3539	1615	1770	3574	1599
Flt Permitted	0.950			0.323			0.950			0.950		
Satd. Flow (perm)	3502	1719	0	614	1900	1615	1805	3539	1615	1770	3574	1599
Satd. Flow (RTOR)		37				61			107			122
Adj. Flow (vph)	276	57	85	143	115	42	213	1096	110	111	2307	446
Lane Group Flow (vph)	276	142	0	143	115	42	213	1096	110	111	2307	446
Turn Type	Prot	NA		pm+pt	NA	pt+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8	8 5	1	6		5	2	7
Permitted Phases				8					6			2
Total Split (s)	20.0	18.0		20.0	18.0		25.0	97.0	97.0	25.0	97.0	20.0
Total Lost Time (s)	6.0	5.0		6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)	14.0	13.0		24.8	12.4	33.7	18.6	95.3	95.3	14.3	91.0	111.0
Actuated g/C Ratio	0.09	0.08		0.16	0.08	0.21	0.12	0.60	0.60	0.09	0.57	0.69
v/c Ratio	0.90	0.82		0.74	0.78	0.11	1.02	0.52	0.11	0.70	1.14	0.39
Control Delay	103.0	86.4		78.7	104.8	5.1	143.6	5.3	0.9	99.3	76.0	1.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	103.0	86.4		78.7	104.8	5.1	143.6	5.3	0.9	99.3	76.0	1.4
LOS	F	F		E	F	A	F	A	A	F	E	A
Approach Delay		97.4			78.4			25.7			65.3	
Approach LOS		F			E			C			E	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 4 (3%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.14			
Intersection Signal Delay: 57.5		Intersection LOS: E	
Intersection Capacity Utilization 103.5%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	254	52	78	132	106	39	196	1008	101	102	2122	410
Future Volume (vph)	254	52	78	132	106	39	196	1008	101	102	2122	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.0		6.0	5.0	5.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3502	1719		1805	1900	1615	1805	3539	1615	1770	3574	1599
Flt Permitted	0.95	1.00		0.32	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3502	1719		613	1900	1615	1805	3539	1615	1770	3574	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	276	57	85	143	115	42	213	1096	110	111	2307	446
RTOR Reduction (vph)	0	34	0	0	0	34	0	0	43	0	0	42
Lane Group Flow (vph)	276	108	0	143	115	8	213	1096	67	111	2307	404
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	2%	1%	1%
Turn Type	Prot	NA		pm+pt	NA	pt+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8	8 5	1	6		5	2	7
Permitted Phases				8					6			2
Actuated Green, G (s)	14.0	13.0		25.8	12.4	31.7	18.6	95.3	95.3	14.3	91.0	105.0
Effective Green, g (s)	14.0	13.0		25.8	12.4	31.7	18.6	95.3	95.3	14.3	91.0	105.0
Actuated g/C Ratio	0.09	0.08		0.16	0.08	0.20	0.12	0.60	0.60	0.09	0.57	0.66
Clearance Time (s)	6.0	5.0		6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.5	5.0	5.0	2.5	5.0	3.0
Lane Grp Cap (vph)	306	139		198	147	319	209	2107	961	158	2032	1109
v/s Ratio Prot	c0.08	c0.06		0.06	0.06	0.01	c0.12	c0.31		0.06	c0.65	0.03
v/s Ratio Perm				0.06					0.04			0.22
v/c Ratio	0.90	0.78		0.72	0.78	0.03	1.02	0.52	0.07	0.70	1.14	0.36
Uniform Delay, d1	72.3	72.1		61.3	72.5	51.7	70.7	19.0	13.6	70.8	34.5	12.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.23	0.23	0.26	1.38	0.30	0.18
Incremental Delay, d2	27.9	23.4		12.2	23.2	0.0	63.6	0.8	0.1	1.2	61.6	0.0
Delay (s)	100.2	95.4		73.5	95.7	51.7	150.2	5.1	3.7	98.8	71.9	2.3
Level of Service	F	F		E	F	D	F	A	A	F	E	A
Approach Delay (s)		98.6			79.0			26.8			62.1	
Approach LOS		F			E			C			E	

Intersection Summary				
HCM 2000 Control Delay	56.2	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.07			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0	
Intersection Capacity Utilization	103.5%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	20	0	0	32	100	1468	22	14	2243	38
Future Volume (vph)	0	0	20	0	0	32	100	1468	22	14	2243	38
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.865			0.865			0.850			0.850
Flt Protected							0.950			0.950		
Satd. Flow (prot)	0	0	1644	0	0	1644	1787	3574	1615	1805	3574	1615
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	0	0	1644	0	0	1644	1787	3574	1615	1805	3574	1615
Adj. Flow (vph)	0	0	21	0	0	34	106	1562	23	15	2386	40
Lane Group Flow (vph)	0	0	21	0	0	34	106	1562	23	15	2386	40
Sign Control		Stop			Stop			Free			Free	

Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 74.2%					ICU Level of Service D							
Analysis Period (min) 15												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	20	0	0	32	100	1468	22	14	2243	38
Future Volume (Veh/h)	0	0	20	0	0	32	100	1468	22	14	2243	38
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	21	0	0	34	106	1562	23	15	2386	40
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1315	
pX, platoon unblocked	0.44	0.44	0.44	0.44	0.44		0.44					
vC, conflicting volume	3443	4213	1193	3018	4230	781	2426			1585		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	4011	5768	0	3041	5806	781	1690			1585		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	96	100	100	90	36			96		
cM capacity (veh/h)	0	0	478	1	0	342	166			420		

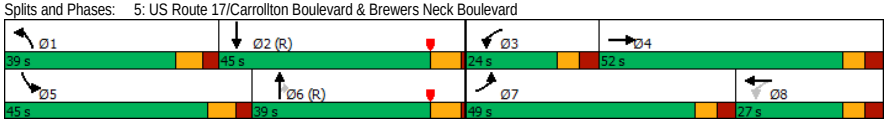
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	21	34	106	781	781	23	15	1193	1193	40
Volume Left	0	0	106	0	0	0	15	0	0	0
Volume Right	21	34	0	0	0	23	0	0	0	40
cSH	478	342	166	1700	1700	1700	420	1700	1700	1700
Volume to Capacity	0.04	0.10	0.64	0.46	0.46	0.01	0.04	0.70	0.70	0.02
Queue Length 95th (ft)	3	8	90	0	0	0	3	0	0	0
Control Delay (s)	12.9	16.7	58.9	0.0	0.0	0.0	13.9	0.0	0.0	0.0
Lane LOS	B	C	F				B			
Approach Delay (s)	12.9	16.7	3.7				0.1			
Approach LOS	B	C								

Intersection Summary												
Average Delay			1.7									
Intersection Capacity Utilization			74.2%		ICU Level of Service				D			
Analysis Period (min)			15									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	856	196	721	170	299	65	619	657	61	334	746	1362
Future Volume (vph)	856	196	721	170	299	65	619	657	61	334	746	1362
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.973				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1863	1568	1770	3444	0	3433	3574	1583	1805	3574	1599
Flt Permitted	0.950			0.629			0.950			0.950		
Satd. Flow (perm)	3433	1863	1568	1172	3444	0	3433	3574	1583	1805	3574	1599
Satd. Flow (RTOR)			578		13				188			628
Adj. Flow (vph)	901	206	759	179	315	68	652	692	64	352	785	1434
Lane Group Flow (vph)	901	206	759	179	383	0	652	692	64	352	785	1434
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Total Split (s)	49.0	52.0		24.0	27.0		39.0	39.0	39.0	45.0	45.0	
Total Lost Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Act Effct Green (s)	41.5	46.1	160.0	33.9	19.2		31.3	35.4	35.4	34.3	38.5	160.0
Actuated g/C Ratio	0.26	0.29	1.00	0.21	0.12		0.20	0.22	0.22	0.21	0.24	1.00
v/c Ratio	1.01	0.38	0.48	0.59	0.90		0.97	0.87	0.13	0.91	0.91	0.90
Control Delay	91.0	48.6	1.1	42.0	91.4		79.1	74.8	2.5	92.1	61.1	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.0	48.6	1.1	42.0	91.4		79.1	74.8	2.5	92.1	61.1	20.8
LOS	F	D	A	D	F		E	E	A	F	E	C
Approach Delay		49.7			75.7			73.5			42.9	
Approach LOS		D			E			E			D	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 30 (19%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 54.5		Intersection LOS: D	
Intersection Capacity Utilization 96.9%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	856	196	721	170	299	65	619	657	61	334	746	1362
Future Volume (vph)	856	196	721	170	299	65	619	657	61	334	746	1362
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	4.0	7.5	7.5		8.0	6.5	6.5	8.0	6.5	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1568	1770	3445		3433	3574	1583	1805	3574	1599
Flt Permitted	0.95	1.00	1.00	0.63	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1863	1568	1171	3445		3433	3574	1583	1805	3574	1599
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	901	206	759	179	315	68	652	692	64	352	785	1434
RTOR Reduction (vph)	0	0	0	0	11	0	0	0	50	0	0	0
Lane Group Flow (vph)	901	206	759	179	372	0	652	692	14	352	785	1434
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	1%	2%	0%	1%	1%
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Actuated Green, G (s)	41.5	46.1	160.0	34.0	19.3		31.3	35.4	35.4	34.3	38.4	160.0
Effective Green, g (s)	41.5	46.1	160.0	34.0	19.3		31.3	35.4	35.4	34.3	38.4	160.0
Actuated g/C Ratio	0.26	0.29	1.00	0.21	0.12		0.20	0.22	0.22	0.21	0.24	1.00
Clearance Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Vehicle Extension (s)	3.5	3.5		3.0	3.0		2.5	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	890	536	1568	303	415		671	790	350	386	857	1599
v/s Ratio Prot	c0.26	0.11		0.05	0.11		0.19	0.19		0.20	0.22	
v/s Ratio Perm			0.48	0.07					0.01			c0.90
v/c Ratio	1.01	0.38	0.48	0.59	0.90		0.97	0.88	0.04	0.91	0.92	0.90
Uniform Delay, d1	59.2	45.6	0.0	55.2	69.4		63.9	60.2	49.0	61.4	59.2	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.82	1.05	1.00	1.19	0.85	1.00
Incremental Delay, d2	33.3	0.5	1.1	3.1	21.1		26.1	12.0	0.2	18.0	11.2	5.5
Delay (s)	92.5	46.1	1.1	58.3	90.5		78.4	74.9	49.2	91.2	61.3	5.5
Level of Service	F	D	A	E	F		E	E	D	F	E	A
Approach Delay (s)		50.2			80.2			75.3			34.3	
Approach LOS		D			F			E			C	

Intersection Summary					
HCM 2000 Control Delay	52.0	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	1.10				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	29.5		
Intersection Capacity Utilization	96.9%	ICU Level of Service	F		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	9	28	0	48	15	1223	57	77	1394	7
Future Volume (vph)	4	0	9	28	0	48	15	1223	57	77	1394	7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.904				0.850			0.850		0.999	
Flt Protected		0.986			0.950		0.950			0.950		
Satd. Flow (prot)	0	1694	0	0	1703	1553	1805	3574	1553	1805	3536	0
Flt Permitted		0.986			0.950		0.950			0.950		
Satd. Flow (perm)	0	1694	0	0	1703	1553	1805	3574	1553	1805	3536	0
Adj. Flow (vph)	4	0	10	30	0	51	16	1301	61	82	1483	7
Lane Group Flow (vph)	0	14	0	0	30	51	16	1301	61	82	1490	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 56.6%	ICU Level of Service B
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	0	9	28	0	48	15	1223	57	77	1394	7
Future Volume (Veh/h)	4	0	9	28	0	48	15	1223	57	77	1394	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	4	0	10	30	0	51	16	1301	61	82	1483	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						9						
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1135	
pX, platoon unblocked	0.80	0.80	0.80	0.80	0.80		0.80					
vC, conflicting volume	2333	3044	745	2248	2987	650	1490			1362		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2164	3056	172	2058	2984	650	1106			1362		
tC, single (s)	7.5	6.5	6.9	7.6	6.5	7.0	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	75	100	99	0	100	87	97			84		
cM capacity (veh/h)	16	8	676	20	9	407	509			511		

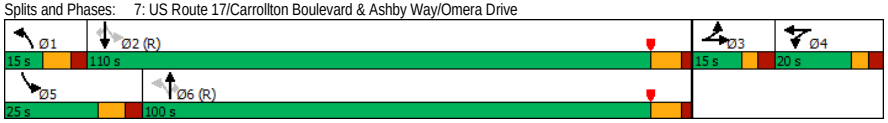
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	14	81	16	650	650	61	82	989	501
Volume Left	4	30	16	0	0	0	82	0	0
Volume Right	10	51	0	0	0	61	0	0	7
cSH	54	55	509	1700	1700	1700	511	1700	1700
Volume to Capacity	0.26	1.47	0.03	0.38	0.38	0.04	0.16	0.58	0.29
Queue Length 95th (ft)	22	184	2	0	0	0	14	0	0
Control Delay (s)	94.4	247.7	12.3	0.0	0.0	0.0	13.4	0.0	0.0
Lane LOS	F	F	B				B		
Approach Delay (s)	94.4	247.7	0.1				0.7		
Approach LOS	F	F							

Intersection Summary			
Average Delay	7.4		
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	8	17	55	8	105	32	1122	28	114	1349	52
Future Volume (vph)	39	8	17	55	8	105	32	1122	28	114	1349	52
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.898			0.916				0.850			0.850
Flt Protected	0.950				0.984		0.950			0.950		
Satd. Flow (prot)	1805	1706	0	0	1670	0	1805	3539	1615	1770	3574	1615
Flt Permitted	0.950				0.984		0.137			0.180		
Satd. Flow (perm)	1805	1706	0	0	1670	0	260	3539	1615	335	3574	1615
Satd. Flow (RTOR)		17			41				170			116
Adj. Flow (vph)	39	8	17	56	8	106	32	1133	28	115	1363	53
Lane Group Flow (vph)	39	25	0	0	170	0	32	1133	28	115	1363	53
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Total Split (s)	15.0	15.0		20.0	20.0		15.0	100.0	100.0	25.0	110.0	110.0
Total Lost Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Act Effct Green (s)	9.4	9.4			20.1		103.3	96.6	96.6	108.9	101.7	101.7
Actuated g/C Ratio	0.06	0.06			0.13		0.65	0.60	0.60	0.68	0.64	0.64
v/c Ratio	0.37	0.22			0.69		0.14	0.53	0.03	0.37	0.60	0.05
Control Delay	81.7	40.0			65.0		10.8	21.3	0.0	8.6	12.0	0.1
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.7	40.0			65.0		10.8	21.3	0.0	8.6	12.0	0.1
LOS	F	D			E		B	C	A	A	B	A
Approach Delay		65.4			65.0			20.5			11.3	
Approach LOS		E			E			C			B	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 156 (98%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 19.3		Intersection LOS: B	
Intersection Capacity Utilization 77.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive



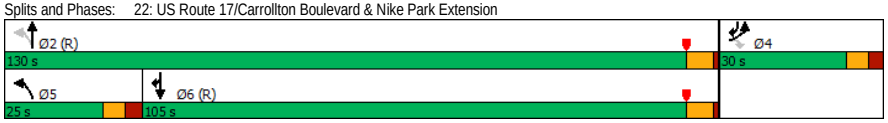
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	8	17	55	8	105	32	1122	28	114	1349	52
Future Volume (vph)	39	8	17	55	8	105	32	1122	28	114	1349	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.90			0.92		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	1706			1670		1805	3539	1615	1770	3574	1615
Flt Permitted	0.95	1.00			0.98		0.14	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	1805	1706			1670		261	3539	1615	336	3574	1615
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	39	8	17	56	8	106	32	1133	28	115	1363	53
RTOR Reduction (vph)	0	16	0	0	36	0	0	0	11	0	0	20
Lane Group Flow (vph)	39	9	0	0	134	0	32	1133	17	115	1363	33
Heavy Vehicles (%)	0%	0%	0%	2%	0%	3%	0%	2%	0%	2%	1%	0%
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Actuated Green, G (s)	7.8	7.8			20.1		101.2	95.5	95.5	108.0	98.9	98.9
Effective Green, g (s)	7.8	7.8			20.1		101.2	95.5	95.5	108.0	98.9	98.9
Actuated g/C Ratio	0.05	0.05			0.13		0.63	0.60	0.60	0.68	0.62	0.62
Clearance Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	87	83			209		220	2112	963	308	2209	998
v/s Ratio Prot	c0.02	0.01			c0.08		0.01	0.32		c0.02	c0.38	
v/s Ratio Perm							0.09		0.01	0.23		0.02
v/c Ratio	0.45	0.11			0.64		0.15	0.54	0.02	0.37	0.62	0.03
Uniform Delay, d1	74.0	72.8			66.5		14.0	19.1	13.1	12.3	18.9	11.9
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	0.68	0.56	1.00
Incremental Delay, d2	3.6	0.6			6.6		0.3	1.0	0.0	0.6	1.0	0.0
Delay (s)	77.7	73.3			73.1		14.3	20.1	13.2	8.9	11.5	12.0
Level of Service	E	E			E		B	C	B	A	B	B
Approach Delay (s)		76.0			73.1			19.8			11.3	
Approach LOS		E			E			B			B	

Intersection Summary					
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B		
HCM 2000 Volume to Capacity ratio	0.61				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	27.5		
Intersection Capacity Utilization	77.6%	ICU Level of Service	D		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	170	50	130	1398	2018	274
Future Volume (vph)	170	50	130	1398	2018	274
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.033			
Satd. Flow (perm)	3433	1583	61	3539	3539	1583
Satd. Flow (RTOR)		54				270
Adj. Flow (vph)	185	54	141	1520	2193	298
Lane Group Flow (vph)	185	54	141	1520	2193	298
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Total Split (s)	30.0	30.0	25.0	130.0	105.0	
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	
Act Effct Green (s)	14.1	14.1	131.9	132.9	112.6	133.8
Actuated g/C Ratio	0.09	0.09	0.82	0.83	0.70	0.84
v/c Ratio	0.61	0.29	0.74	0.52	0.88	0.22
Control Delay	78.7	18.9	30.9	11.4	5.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.7	18.9	30.9	11.4	5.9	0.0
LOS	E	B	C	B	A	A
Approach Delay	65.2			13.0	5.2	
Approach LOS	E			B	A	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 44 (28%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 11.4		Intersection LOS: B	
Intersection Capacity Utilization 85.5%		ICU Level of Service E	
Analysis Period (min) 15			

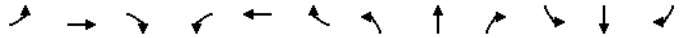
Splits and Phases: 22: US Route 17/Carrollton Boulevard & Nike Park Extension



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	170	50	130	1398	2018	274
Future Volume (vph)	170	50	130	1398	2018	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.03	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	62	3539	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	54	141	1520	2193	298
RTOR Reduction (vph)	0	49	0	0	0	46
Lane Group Flow (vph)	185	5	141	1520	2193	252
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Actuated Green, G (s)	14.1	14.1	132.9	132.9	112.7	132.8
Effective Green, g (s)	14.1	14.1	132.9	132.9	112.7	132.8
Actuated g/C Ratio	0.09	0.09	0.83	0.83	0.70	0.83
Clearance Time (s)	7.0	7.0	7.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	302	139	192	2939	2492	1313
v/s Ratio Prot	c0.05		c0.06	0.43	c0.62	0.16
v/s Ratio Perm		0.00	0.55			
v/c Ratio	0.61	0.03	0.73	0.52	0.88	0.19
Uniform Delay, d1	70.3	66.7	55.1	4.0	18.4	2.8
Progression Factor	1.00	1.00	0.56	2.60	0.22	0.00
Incremental Delay, d2	3.7	0.1	4.7	0.2	0.5	0.0
Delay (s)	74.0	66.8	35.5	10.7	4.5	0.0
Level of Service	E	E	D	B	A	A
Approach Delay (s)	72.4			12.8	4.0	
Approach LOS	E			B	A	

Intersection Summary				
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	85.5%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	6	65	0	6	0	89	7	0	0	7	141
Future Volume (vph)	175	6	65	0	6	0	89	7	0	0	7	141
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.863									0.872	
Flt Protected	0.950							0.956				
Satd. Flow (prot)	1770	1608	0	0	1863	0	0	1781	0	0	1624	0
Flt Permitted	0.950							0.956				
Satd. Flow (perm)	1770	1608	0	0	1863	0	0	1781	0	0	1624	0
Adj. Flow (vph)	190	7	71	0	7	0	97	8	0	0	8	153
Lane Group Flow (vph)	190	78	0	0	7	0	0	105	0	0	161	0
Sign Control		Free			Stop			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 40.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Intersection: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	58	67	81	37	110	257	254	108	219	4277	4282	230
Average Queue (ft)	16	21	26	7	35	70	83	9	36	3228	3257	73
95th Queue (ft)	45	55	63	24	79	188	198	53	157	5408	5406	249
Link Distance (ft)	892		1111			490	490			4237	4237	
Upstream Blk Time (%)										31	34	
Queuing Penalty (veh)										0	0	
Storage Bay Dist (ft)		170		550	280			215	220			230
Storage Blk Time (%)						0	1	0	0	28	36	0
Queuing Penalty (veh)						0	0	0	1	7	22	5

Intersection: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	154	119	69	63	190	303	312	91	229	590	590	240
Average Queue (ft)	80	42	21	16	73	126	132	4	24	509	529	118
95th Queue (ft)	140	91	55	52	146	248	251	39	118	656	651	299
Link Distance (ft)	1075		1206			970	970			549	549	
Upstream Blk Time (%)										8	11	
Queuing Penalty (veh)										105	155	
Storage Bay Dist (ft)		220		65	265			240	310			240
Storage Blk Time (%)		0	1	0	0	0	1	0	0	24	29	0
Queuing Penalty (veh)		0	0	0	0	0	0	0	0	7	60	6

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	L	TR	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	234	270	270	149	190	131	390	355	350	206	438	805
Average Queue (ft)	130	163	121	105	102	33	263	151	154	37	114	375
95th Queue (ft)	225	243	237	167	188	93	423	290	291	138	275	708
Link Distance (ft)			1127		178			1228	1228			970
Upstream Blk Time (%)					5	0						0
Queuing Penalty (veh)					12	0						0
Storage Bay Dist (ft)	465	465		150		175	450			245	450	
Storage Blk Time (%)				6	5	0	0	0	2	0	0	4
Queuing Penalty (veh)				8	8	0	1	0	2	0	0	4

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	848	441
Average Queue (ft)	411	56
95th Queue (ft)	750	324
Link Distance (ft)	970	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	1	
Storage Bay Dist (ft)		820
Storage Blk Time (%)	1	0
Queuing Penalty (veh)	3	1

Intersection: 4: US Route 17/Carrollton Boulevard & Northgate Lane

Movement	EB	WB	NB	NB	SB	SB	SB
Directions Served	R	R	L	T	L	T	R
Maximum Queue (ft)	52	59	195	73	41	128	2
Average Queue (ft)	13	21	87	3	6	5	0
95th Queue (ft)	37	47	163	37	24	130	0
Link Distance (ft)	1152	872		1215		1228	
Upstream Blk Time (%)						0	
Queuing Penalty (veh)						0	
Storage Bay Dist (ft)			245		300		200
Storage Blk Time (%)			0	0			
Queuing Penalty (veh)			1	0			

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	EB	EB	EB	EB	B10	B10	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	R	T	T	L	T	TR	L	L	T
Maximum Queue (ft)	585	709	610	508	1128	1049	150	371	333	604	612	685
Average Queue (ft)	522	597	198	113	445	403	123	200	179	410	419	342
95th Queue (ft)	688	815	502	398	1293	1293	182	335	303	627	635	651
Link Distance (ft)		610	610		1332	1332		1286	1286			1050
Upstream Blk Time (%)		31	2		5	7						0
Queuing Penalty (veh)		0	0		0	0						1
Storage Bay Dist (ft)	585			575			150			650	650	
Storage Blk Time (%)	5	30	1	0			5	19		0	2	2
Queuing Penalty (veh)	21	128	10	0			8	32		1	6	10

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R
Maximum Queue (ft)	615	225	442	496	724	300
Average Queue (ft)	312	87	263	278	275	65
95th Queue (ft)	531	240	397	419	534	267
Link Distance (ft)	1050			1181	1181	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		225	500			300
Storage Blk Time (%)	25	0	0	0	2	1
Queuing Penalty (veh)	15	1	0	1	22	2

Intersection: 6: US Route 17/Carrollton Boulevard & Deep Bottom Drive/Channell Way

Movement	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	LTR	LT	R	L	T	R	L	T
Maximum Queue (ft)	75	93	76	40	8	5	117	95
Average Queue (ft)	18	32	28	8	0	0	36	3
95th Queue (ft)	56	78	58	28	8	4	84	97
Link Distance (ft)	712	416			569			1050
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			225	140		60	275	
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	R	L	T	T	R
Maximum Queue (ft)	101	75	283	144	381	341	22	186	318	324	38
Average Queue (ft)	37	21	122	25	181	149	4	51	131	146	9
95th Queue (ft)	81	55	234	96	329	296	17	115	276	291	30
Link Distance (ft)		644	713		1440	1440			1077	1077	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	135			275			350	300			630
Storage Blk Time (%)	0	0		0	2	0		0	0		
Queuing Penalty (veh)	0	0		0	1	0		0	0		

Intersection: 10: Bend

Movement	WB	WB	WB
Directions Served	T	T	
Maximum Queue (ft)	534	528	324
Average Queue (ft)	99	113	21
95th Queue (ft)	425	449	196
Link Distance (ft)	610	610	610
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 16: US Route 17/Carrollton Boulevard & Site A

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	517	517
Average Queue (ft)	330	354
95th Queue (ft)	649	653
Link Distance (ft)	490	490
Upstream Blk Time (%)	2	3
Queuing Penalty (veh)	27	37
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: US Route 17/Carrollton Boulevard & Site B

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	86	207
Average Queue (ft)	5	31
95th Queue (ft)	64	156
Link Distance (ft)	1215	1215
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: US Route 17/Carrollton Boulevard & Site C

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: US Route 17/Carrollton Boulevard & Nike Park Extension

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	L	T	T	T	T	R
Maximum Queue (ft)	143	163	92	75	746	747	573	644	200
Average Queue (ft)	65	86	25	67	302	277	238	479	91
95th Queue (ft)	126	145	65	86	601	585	452	711	247
Link Distance (ft)		1339			1181	1181	632	632	
Upstream Blk Time (%)							0	2	
Queuing Penalty (veh)							3	27	
Storage Bay Dist (ft)	650		430	75					200
Storage Blk Time (%)				43	14			21	1
Queuing Penalty (veh)				301	18			59	5

Intersection: 33: Bojangles Driveway/7-Eleven Driveway & Smiths Neck Road

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	LTR	LTR
Maximum Queue (ft)	6	2	26	82	124
Average Queue (ft)	0	0	5	32	46
95th Queue (ft)	4	2	22	66	116
Link Distance (ft)		178	650	468	414
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	175				
Storage Blk Time (%)					
Queuing Penalty (veh)					

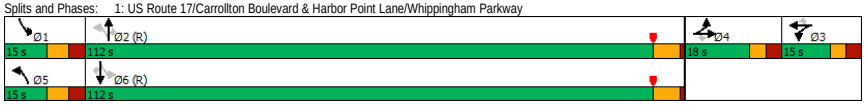
Network Summary

Network wide Queuing Penalty: 1146

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	0	34	24	0	40	16	2758	9	7	926	16
Future Volume (vph)	66	0	34	24	0	40	16	2758	9	7	926	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1805	1615	0	1805	1568	1543	3539	1615	1504	3471	1495
Flt Permitted		0.950			0.950		0.247			0.035		
Satd. Flow (perm)	0	1805	1615	0	1805	1568	401	3539	1615	55	3471	1495
Satd. Flow (RTOR)			109			109			109			109
Adj. Flow (vph)	72	0	37	26	0	43	17	2998	10	8	1007	17
Lane Group Flow (vph)	0	72	37	0	26	43	17	2998	10	8	1007	17
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	18.0	18.0	18.0	15.0	15.0	15.0	15.0	112.0	112.0	15.0	112.0	112.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)		10.6	10.6		7.9	7.9	123.8	123.6	123.6	120.7	118.5	118.5
Actuated g/C Ratio		0.07	0.07		0.05	0.05	0.77	0.77	0.77	0.75	0.74	0.74
v/c Ratio		0.61	0.18		0.30	0.24	0.05	1.10	0.01	0.09	0.39	0.01
Control Delay		93.6	1.9		81.7	3.1	1.0	52.0	0.0	7.3	9.5	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
Total Delay		93.6	1.9		81.7	3.1	1.0	52.5	0.0	7.3	9.5	0.0
LOS		F	A		F	A	A	D	A	A	A	A
Approach Delay		62.5			32.7			52.1			9.3	
Approach LOS		E			C			D			A	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 28 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.10			
Intersection Signal Delay: 41.6		Intersection LOS: D	
Intersection Capacity Utilization 102.9%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway



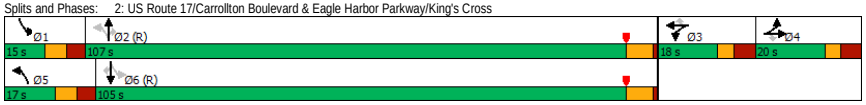
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	0	34	24	0	40	16	2758	9	7	926	16
Future Volume (vph)	66	0	34	24	0	40	16	2758	9	7	926	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1805	1615		1805	1568	1543	3539	1615	1504	3471	1495
Flt Permitted		0.95	1.00		0.95	1.00	0.25	1.00	1.00	0.03	1.00	1.00
Satd. Flow (perm)		1805	1615		1805	1568	402	3539	1615	55	3471	1495
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	0	37	26	0	43	17	2998	10	8	1007	17
RTOR Reduction (vph)	0	0	35	0	0	41	0	0	3	0	0	5
Lane Group Flow (vph)	0	72	2	0	26	2	17	2998	7	8	1007	12
Heavy Vehicles (%)	0%	0%	0%	0%	0%	3%	17%	2%	0%	20%	4%	8%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		10.6	10.6		6.5	6.5	120.2	116.8	116.8	115.6	114.5	114.5
Effective Green, g (s)		10.6	10.6		6.5	6.5	120.2	116.8	116.8	115.6	114.5	114.5
Actuated g/C Ratio		0.07	0.07		0.04	0.04	0.75	0.73	0.73	0.72	0.72	0.72
Clearance Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		119	106		73	63	326	2583	1178	49	2483	1069
v/s Ratio Prot		c0.04			c0.01		c0.00	c0.85		0.00	0.29	
v/s Ratio Perm			0.00			0.00	0.04		0.00	0.11		0.01
v/c Ratio		0.61	0.02		0.36	0.03	0.05	1.16	0.01	0.16	0.41	0.01
Uniform Delay, d1		72.7	69.9		74.7	73.7	5.8	21.6	5.9	44.5	9.1	6.5
Progression Factor		1.00	1.00		1.00	1.00	0.20	0.10	1.00	1.00	1.00	1.00
Incremental Delay, d2		8.4	0.1		3.0	0.2	0.0	72.7	0.0	1.1	0.5	0.0
Delay (s)		81.1	69.9		77.7	73.9	1.1	74.9	5.9	45.7	9.6	6.5
Level of Service		F	E		E	E	A	E	A	D	A	A
Approach Delay (s)		77.3			75.3			74.3			9.8	
Approach LOS		E			E			E			A	

Intersection Summary					
HCM 2000 Control Delay		58.7	HCM 2000 Level of Service		E
HCM 2000 Volume to Capacity ratio		1.07			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		25.0
Intersection Capacity Utilization		102.9%	ICU Level of Service		G
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	1	75	16	3	27	51	2588	4	3	949	32
Future Volume (vph)	175	1	75	16	3	27	51	2588	4	3	949	32
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.953			0.959		0.950			0.950		
Satd. Flow (prot)	0	1793	1615	0	1822	1468	1719	3539	967	1805	3471	1553
Flt Permitted		0.953			0.959		0.216			0.039		
Satd. Flow (perm)	0	1793	1615	0	1822	1468	391	3539	967	74	3471	1553
Satd. Flow (RTOR)			119			119			126			126
Adj. Flow (vph)	190	1	82	17	3	29	55	2813	4	3	1032	35
Lane Group Flow (vph)	0	191	82	0	20	29	55	2813	4	3	1032	35
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	20.0	20.0	20.0	18.0	18.0	18.0	17.0	107.0	107.0	15.0	105.0	105.0
Total Lost Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Act Effct Green (s)		19.0	19.0		7.8	7.8	113.5	113.4	113.4	107.1	104.5	104.5
Actuated g/C Ratio		0.12	0.12		0.05	0.05	0.71	0.71	0.71	0.67	0.65	0.65
v/c Ratio		0.90	0.28		0.23	0.16	0.17	1.12	0.01	0.03	0.46	0.03
Control Delay		107.4	5.2		79.1	1.8	6.6	74.6	0.0	7.0	10.5	0.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay		107.4	5.2		79.1	1.8	6.6	74.9	0.0	7.0	10.5	0.1
LOS		F	A		E	A	A	E	A	A	B	A
Approach Delay		76.7			33.3			73.5			10.1	
Approach LOS		E			C			E			B	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 10 (6%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.12			
Intersection Signal Delay: 57.3		Intersection LOS: E	
Intersection Capacity Utilization 103.8%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross



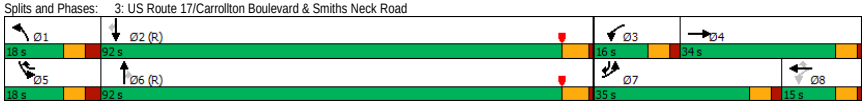
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	1	75	16	3	27	51	2588	4	3	949	32
Future Volume (vph)	175	1	75	16	3	27	51	2588	4	3	949	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1792	1615		1823	1468	1719	3539	967	1805	3471	1553
Flt Permitted		0.95	1.00		0.96	1.00	0.22	1.00	1.00	0.04	1.00	1.00
Satd. Flow (perm)		1792	1615		1823	1468	390	3539	967	75	3471	1553
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	190	1	82	17	3	29	55	2813	4	3	1032	35
RTOR Reduction (vph)	0	0	72	0	0	28	0	0	1	0	0	13
Lane Group Flow (vph)	0	191	10	0	20	1	55	2813	3	3	1032	22
Heavy Vehicles (%)	1%	0%	0%	0%	0%	10%	5%	2%	67%	0%	4%	4%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		19.0	19.0		6.4	6.4	111.5	106.0	106.0	102.7	101.6	101.6
Effective Green, g (s)		19.0	19.0		6.4	6.4	111.5	106.0	106.0	102.7	101.6	101.6
Actuated g/C Ratio		0.12	0.12		0.04	0.04	0.70	0.66	0.66	0.64	0.63	0.63
Clearance Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		212	191		72	58	317	2344	640	60	2204	986
v/s Ratio Prot		c0.11			c0.01		c0.01	c0.79		0.00	0.30	
v/s Ratio Perm			0.01			0.00	0.11		0.00	0.03		0.01
v/c Ratio		0.90	0.05		0.28	0.02	0.17	1.20	0.00	0.05	0.47	0.02
Uniform Delay, d1		69.6	62.5		74.6	73.8	9.6	27.0	9.1	40.1	15.2	10.8
Progression Factor		1.00	1.00		1.00	1.00	0.90	0.60	1.00	0.96	0.69	1.00
Incremental Delay, d2		35.9	0.1		2.1	0.1	0.1	92.2	0.0	0.2	0.7	0.0
Delay (s)		105.5	62.6		76.7	73.9	8.7	108.4	9.1	38.7	11.1	10.9
Level of Service		F	E		E	E	A	F	A	D	B	B
Approach Delay (s)		92.6			75.0			106.3			11.2	
Approach LOS		F			E			F			B	

Intersection Summary					
HCM 2000 Control Delay		81.2	HCM 2000 Level of Service		F
HCM 2000 Volume to Capacity ratio		1.11			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		27.5
Intersection Capacity Utilization		103.8%	ICU Level of Service		G
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	494	71	105	77	13	47	46	1900	98	64	851	138
Future Volume (vph)	494	71	105	77	13	47	46	1900	98	64	851	138
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.910				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	1715	0	1719	1900	1553	1612	3539	1553	1752	3471	1615
Flt Permitted	0.950						0.950			0.950		
Satd. Flow (perm)	3467	1715	0	1810	1900	1553	1612	3539	1553	1752	3471	1615
Satd. Flow (RTOR)		41				102			143			150
Adj. Flow (vph)	537	77	114	84	14	51	50	2065	107	70	925	150
Lane Group Flow (vph)	537	191	0	84	14	51	50	2065	107	70	925	150
Turn Type	Prot	NA		pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8	5	1	6		5	2	7
Permitted Phases				8		8			6			2
Total Split (s)	35.0	34.0		16.0	15.0	18.0	18.0	92.0	92.0	18.0	92.0	35.0
Total Lost Time (s)	6.0	5.0		6.0	5.0	7.0	7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)	29.7	20.3		12.4	7.4	15.8	9.5	95.5	95.5	10.6	99.1	136.0
Actuated g/C Ratio	0.19	0.13		0.08	0.05	0.10	0.06	0.60	0.60	0.07	0.62	0.85
v/c Ratio	0.83	0.75		0.63	0.16	0.21	0.53	0.98	0.11	0.61	0.43	0.11
Control Delay	74.7	70.3		79.5	77.3	1.9	88.7	33.3	1.3	102.3	11.0	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	41.4	0.0	0.0	0.0	0.0
Total Delay	74.7	70.3		79.5	77.3	2.0	88.7	74.6	1.3	102.3	11.0	0.1
LOS	E	E		E	E	A	F	E	A	F	B	A
Approach Delay		73.5			52.8			71.4			15.2	
Approach LOS		E			D			E			B	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 156 (98%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 55.9		Intersection LOS: E	
Intersection Capacity Utilization 86.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	494	71	105	77	13	47	46	1900	98	64	851	138
Future Volume (vph)	494	71	105	77	13	47	46	1900	98	64	851	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.0		6.0	5.0	7.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	1716		1719	1900	1553	1612	3539	1553	1752	3471	1615
Flt Permitted	0.95	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	1716		1810	1900	1553	1612	3539	1553	1752	3471	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	537	77	114	84	14	51	50	2065	107	70	925	150
RTOR Reduction (vph)	0	35	0	0	0	47	0	0	45	0	0	33
Lane Group Flow (vph)	537	156	0	84	14	4	50	2065	62	70	925	117
Heavy Vehicles (%)	1%	2%	0%	5%	0%	4%	12%	2%	4%	3%	4%	0%
Turn Type	Prot	NA		pm+pt	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8	5	1	6		5	2	7
Permitted Phases				8		8			6			2
Actuated Green, G (s)	29.7	23.3		12.8	3.2	13.8	8.4	92.5	92.5	10.6	94.7	124.4
Effective Green, g (s)	29.7	23.3		12.8	3.2	13.8	8.4	92.5	92.5	10.6	94.7	124.4
Actuated g/C Ratio	0.19	0.15		0.08	0.02	0.09	0.05	0.58	0.58	0.07	0.59	0.78
Clearance Time (s)	6.0	5.0		6.0	5.0	7.0	7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	2.5	2.5	5.0	5.0	2.5	5.0	3.0
Lane Grp Cap (vph)	643	249		139	38	133	84	2045	897	116	2054	1316
v/s Ratio Prot	c0.15	c0.09		0.04	0.01	0.00	0.03	c0.58		c0.04	0.27	0.02
v/s Ratio Perm				0.01		0.00			0.04			0.06
v/c Ratio	0.84	0.63		0.60	0.37	0.03	0.60	1.01	0.07	0.60	0.45	0.09
Uniform Delay, d1	62.8	64.3		71.2	77.4	67.0	74.1	33.8	14.8	72.7	18.2	4.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.02	0.60	1.31	1.14	0.58	0.00
Incremental Delay, d2	9.2	4.9		7.2	6.0	0.1	7.0	19.8	0.1	6.7	0.7	0.0
Delay (s)	72.0	69.1		78.4	83.4	67.1	82.5	40.1	19.5	89.5	11.3	0.0
Level of Service	E	E		E	F	E	F	D	B	F	B	A
Approach Delay (s)		71.2			75.0			40.1			14.6	
Approach LOS		E			E			D			B	

Intersection Summary					
HCM 2000 Control Delay	39.8	HCM 2000 Level of Service		D	
HCM 2000 Volume to Capacity ratio	0.94				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)		24.0	
Intersection Capacity Utilization	86.4%	ICU Level of Service		E	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	43	0	0	11	23	2064	37	17	1031	11
Future Volume (vph)	0	0	43	0	0	11	23	2064	37	17	1031	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.865			0.865			0.850			0.850
Flt Protected							0.950			0.950		
Satd. Flow (prot)	0	0	1550	0	0	1644	1805	3505	1615	1805	3471	1615
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	0	0	1550	0	0	1644	1805	3505	1615	1805	3471	1615
Adj. Flow (vph)	0	0	47	0	0	12	25	2243	40	18	1121	12
Lane Group Flow (vph)	0	0	47	0	0	12	25	2243	40	18	1121	12
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 67.1%	ICU Level of Service C
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	43	0	0	11	23	2064	37	17	1031	11
Future Volume (Veh/h)	0	0	43	0	0	11	23	2064	37	17	1031	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	47	0	0	12	25	2243	40	18	1121	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1315	
pX, platoon unblocked	0.85	0.85	0.85	0.85	0.85		0.85					
vC, conflicting volume	2340	3490	560	2936	3462	1122	1133			2283		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2228	3574	145	2926	3541	1122	815			2283		
tC, single (s)	7.5	6.5	7.0	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.4	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	94	100	100	94	96			92		
cM capacity (veh/h)	18	4	738	5	5	203	702			225		

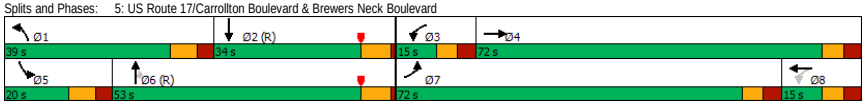
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	47	12	25	1122	1122	40	18	560	560	12
Volume Left	0	0	25	0	0	0	18	0	0	0
Volume Right	47	12	0	0	0	40	0	0	0	12
cSH	738	203	702	1700	1700	1700	225	1700	1700	1700
Volume to Capacity	0.06	0.06	0.04	0.66	0.66	0.02	0.08	0.33	0.33	0.01
Queue Length 95th (ft)	5	5	3	0	0	0	6	0	0	0
Control Delay (s)	10.2	23.8	10.3	0.0	0.0	0.0	22.4	0.0	0.0	0.0
Lane LOS	B	C	B				C			
Approach Delay (s)	10.2	23.8	0.1				0.3			
Approach LOS	B	C								

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	67.1%	ICU Level of Service	C	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1101	85	624	59	67	72	495	656	20	61	440	641
Future Volume (vph)	1101	85	624	59	67	72	495	656	20	61	440	641
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.922				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3367	1863	1524	1770	3263	0	3242	3539	1583	1770	3505	1553
Flt Permitted	0.950			0.698			0.950			0.950		
Satd. Flow (perm)	3367	1863	1524	1300	3263	0	3242	3539	1583	1770	3505	1553
Satd. Flow (RTOR)			671		77				188			689
Adj. Flow (vph)	1184	91	671	63	72	77	532	705	22	66	473	689
Lane Group Flow (vph)	1184	91	671	63	149	0	532	705	22	66	473	689
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Total Split (s)	72.0	72.0		15.0	15.0		39.0	53.0	53.0	20.0	34.0	
Total Lost Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Act Effct Green (s)	61.6	64.3	160.0	14.5	7.3		29.3	51.3	51.3	10.4	32.4	160.0
Actuated g/C Ratio	0.38	0.40	1.00	0.09	0.05		0.18	0.32	0.32	0.06	0.20	1.00
v/c Ratio	0.91	0.12	0.44	0.45	0.67		0.90	0.62	0.03	0.58	0.67	0.44
Control Delay	58.1	30.9	0.9	45.5	51.7		69.0	46.6	0.1	100.2	55.0	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.1	30.9	0.9	45.5	51.7		69.0	46.6	0.1	100.2	55.0	1.7
LOS	E	C	A	D	D		E	D	A	F	E	A
Approach Delay		37.1			49.8			55.3			27.5	
Approach LOS		D			D			E			C	

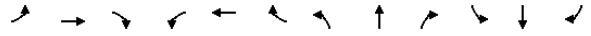
Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 21 (13%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 40.1		Intersection LOS: D	
Intersection Capacity Utilization 86.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard



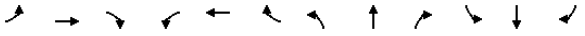
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1101	85	624	59	67	72	495	656	20	61	440	641
Future Volume (vph)	1101	85	624	59	67	72	495	656	20	61	440	641
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	4.0	7.5	7.5		8.0	6.5	6.5	8.0	6.5	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3367	1863	1524	1770	3265		3242	3539	1583	1770	3505	1553
Flt Permitted	0.95	1.00	1.00	0.70	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3367	1863	1524	1300	3265		3242	3539	1583	1770	3505	1553
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	1184	91	671	63	72	77	532	705	22	66	473	689
RTOR Reduction (vph)	0	0	0	0	73	0	0	0	15	0	0	0
Lane Group Flow (vph)	1184	91	671	63	76	0	532	705	7	66	473	689
Heavy Vehicles (%)	4%	2%	6%	2%	2%	2%	8%	2%	2%	2%	3%	4%
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Actuated Green, G (s)	61.6	64.3	160.0	14.7	8.7		29.3	49.8	49.8	10.4	30.9	160.0
Effective Green, g (s)	61.6	64.3	160.0	14.7	8.7		29.3	49.8	49.8	10.4	30.9	160.0
Actuated g/C Ratio	0.39	0.40	1.00	0.09	0.05		0.18	0.31	0.31	0.07	0.19	1.00
Clearance Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Vehicle Extension (s)	3.5	3.5		3.0	3.0		2.5	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	1296	748	1524	137	177		593	1101	492	115	676	1553
v/s Ratio Prot	c0.35	0.05		0.02	0.02		c0.16	0.20		0.04	c0.13	
v/s Ratio Perm			0.44	0.02					0.00			c0.44
v/c Ratio	0.91	0.12	0.44	0.46	0.43		0.90	0.64	0.01	0.57	0.70	0.44
Uniform Delay, d1	46.7	30.1	0.0	68.4	73.3		63.9	47.4	38.1	72.6	60.2	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.81	0.93	1.00	1.12	0.83	1.00
Incremental Delay, d2	10.2	0.1	0.9	2.4	1.7		14.9	2.6	0.0	6.4	5.6	0.9
Delay (s)	56.8	30.2	0.9	70.8	74.9		66.5	46.8	38.2	88.1	55.8	0.9
Level of Service	E	C	A	E	E		E	D	D	F	E	A
Approach Delay (s)		36.3			73.7			55.0			26.7	
Approach LOS		D			E			D			C	

Intersection Summary					
HCM 2000 Control Delay		40.5	HCM 2000 Level of Service		D
HCM 2000 Volume to Capacity ratio		0.85			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		29.5
Intersection Capacity Utilization		86.4%	ICU Level of Service		E
Analysis Period (min)		15			
c Critical Lane Group					



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	35	1	82	7	1069	26	24	1059	1
Future Volume (vph)	0	0	5	35	1	82	7	1069	26	24	1059	1
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.865				0.850			0.850			
Flt Protected					0.954		0.950			0.950		
Satd. Flow (prot)	0	1096	0	0	1813	1538	1805	3438	1292	1805	3438	0
Flt Permitted					0.954		0.950			0.950		
Satd. Flow (perm)	0	1096	0	0	1813	1538	1805	3438	1292	1805	3438	0
Adj. Flow (vph)	0	0	5	38	1	89	8	1162	28	26	1151	1
Lane Group Flow (vph)	0	5	0	0	39	89	8	1162	28	26	1152	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 48.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	5	35	1	82	7	1069	26	24	1059	1
Future Volume (Veh/h)	0	0	5	35	1	82	7	1069	26	24	1059	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	5	38	1	89	8	1162	28	26	1151	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						9						
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1135	
pX, platoon unblocked	0.88	0.88	0.88	0.88	0.88		0.88					
vC, conflicting volume	1801	2410	576	1810	2382	581	1152			1190		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1640	2330	251	1651	2299	581	904			1190		
tC, single (s)	7.5	6.5	7.9	7.5	6.5	7.0	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.8	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	31	97	80	99			96		
cM capacity (veh/h)	45	31	548	55	33	450	671			594		

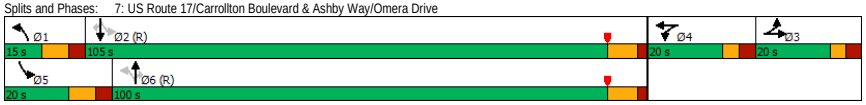
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	5	128	8	581	581	28	26	767	385
Volume Left	0	38	8	0	0	0	26	0	0
Volume Right	5	89	0	0	0	28	0	0	1
cSH	548	180	671	1700	1700	1700	594	1700	1700
Volume to Capacity	0.01	0.71	0.01	0.34	0.34	0.02	0.04	0.45	0.23
Queue Length 95th (ft)	1	110	1	0	0	0	3	0	0
Control Delay (s)	11.6	60.5	10.4	0.0	0.0	0.0	11.3	0.0	0.0
Lane LOS	B	F	B				B		
Approach Delay (s)	11.6	60.5	0.1				0.3		
Approach LOS	B	F							

Intersection Summary					
Average Delay		3.3			
Intersection Capacity Utilization		48.0%	ICU Level of Service		A
Analysis Period (min)		15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	1	30	44	1	86	13	940	12	65	1014	9
Future Volume (vph)	70	1	30	44	1	86	13	940	12	65	1014	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.854			0.912				0.850			0.850
Flt Protected	0.950				0.983		0.950			0.950		
Satd. Flow (prot)	1770	1548	0	0	1623	0	1805	3438	1455	1703	3471	1417
Flt Permitted	0.950				0.983		0.219			0.212		
Satd. Flow (perm)	1770	1548	0	0	1623	0	416	3438	1455	380	3471	1417
Satd. Flow (RTOR)		33			47				116			116
Adj. Flow (vph)	76	1	33	48	1	93	14	1022	13	71	1102	10
Lane Group Flow (vph)	76	34	0	0	142	0	14	1022	13	71	1102	10
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Total Split (s)	20.0	20.0		20.0	20.0		15.0	100.0	100.0	20.0	105.0	105.0
Total Lost Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Act Effct Green (s)	12.3	12.3			15.5		103.2	96.7	96.7	109.9	106.7	106.7
Actuated g/C Ratio	0.08	0.08			0.10		0.64	0.60	0.60	0.69	0.67	0.67
v/c Ratio	0.56	0.23			0.71		0.04	0.49	0.01	0.22	0.48	0.01
Control Delay	86.4	24.0			65.2		10.0	20.1	0.0	7.1	11.5	0.0
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.4	24.0			65.2		10.0	20.1	0.0	7.1	11.5	0.0
LOS	F	C			E		A	C	A	A	B	A
Approach Delay		67.2			65.2			19.7			11.1	
Approach LOS		E			E			B			B	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 12 (8%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 20.3		Intersection LOS: C	
Intersection Capacity Utilization 66.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive



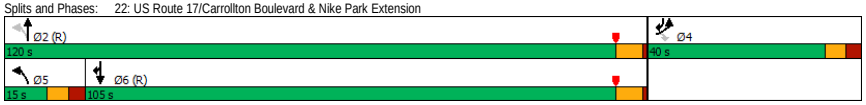
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	1	30	44	1	86	13	940	12	65	1014	9
Future Volume (vph)	70	1	30	44	1	86	13	940	12	65	1014	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.85			0.91		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1548			1623		1805	3438	1455	1703	3471	1417
Flt Permitted	0.95	1.00			0.98		0.22	1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)	1770	1548			1623		416	3438	1455	381	3471	1417
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	1	33	48	1	93	14	1022	13	71	1102	10
RTOR Reduction (vph)	0	30	0	0	42	0	0	0	5	0	0	4
Lane Group Flow (vph)	76	4	0	0	100	0	14	1022	8	71	1102	6
Heavy Vehicles (%)	2%	0%	5%	3%	0%	6%	0%	5%	11%	6%	4%	14%
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Actuated Green, G (s)	12.3	12.3			15.5		99.5	96.7	96.7	109.9	101.9	101.9
Effective Green, g (s)	12.3	12.3			15.5		99.5	96.7	96.7	109.9	101.9	101.9
Actuated g/C Ratio	0.08	0.08			0.10		0.62	0.60	0.60	0.69	0.64	0.64
Clearance Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	136	119			157		283	2077	879	327	2210	902
v/s Ratio Prot	c0.04	0.00			c0.06		0.00	0.30		c0.01	c0.32	
v/s Ratio Perm							0.03		0.01	0.14		0.00
v/c Ratio	0.56	0.03			0.63		0.05	0.49	0.01	0.22	0.50	0.01
Uniform Delay, d1	71.2	68.3			69.5		12.2	17.8	12.6	10.4	15.5	10.6
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	0.63	0.70	1.00
Incremental Delay, d2	4.9	0.1			8.1		0.1	0.8	0.0	0.3	0.7	0.0
Delay (s)	76.1	68.4			77.6		12.3	18.7	12.6	6.9	11.6	10.6
Level of Service	E	E			E		B	B	B	A	B	B
Approach Delay (s)		73.8			77.6			18.5			11.3	
Approach LOS		E			E			B			B	

Intersection Summary					
HCM 2000 Control Delay	20.9	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.52				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	27.5		
Intersection Capacity Utilization	66.2%	ICU Level of Service	C		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	330	68	28	1756	982	92
Future Volume (vph)	330	68	28	1756	982	92
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.220			
Satd. Flow (perm)	3433	1583	410	3539	3539	1583
Satd. Flow (RTOR)		74				100
Adj. Flow (vph)	359	74	30	1909	1067	100
Lane Group Flow (vph)	359	74	30	1909	1067	100
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Total Split (s)	40.0	40.0	15.0	120.0	105.0	
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	
Act Effct Green (s)	22.2	22.2	123.8	124.8	116.7	148.3
Actuated g/C Ratio	0.14	0.14	0.77	0.78	0.73	0.93
v/c Ratio	0.76	0.26	0.08	0.69	0.41	0.07
Control Delay	76.5	13.5	4.2	12.3	7.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.5	13.5	4.2	12.4	7.2	0.1
LOS	E	B	A	B	A	A
Approach Delay	65.7			12.2	6.6	
Approach LOS	E			B	A	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 18 (11%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 68.8%		ICU Level of Service C	
Analysis Period (min) 15			

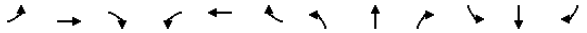
Splits and Phases: 22: US Route 17/Carrollton Boulevard & Nike Park Extension



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	330	68	28	1756	982	92
Future Volume (vph)	330	68	28	1756	982	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.22	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	409	3539	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	359	74	30	1909	1067	100
RTOR Reduction (vph)	0	64	0	0	0	11
Lane Group Flow (vph)	359	10	30	1909	1067	89
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Actuated Green, G (s)	22.2	22.2	124.8	124.8	113.9	142.1
Effective Green, g (s)	22.2	22.2	124.8	124.8	113.9	142.1
Actuated g/C Ratio	0.14	0.14	0.78	0.78	0.71	0.89
Clearance Time (s)	7.0	7.0	7.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	476	219	352	2760	2519	1405
v/s Ratio Prot	c0.10		0.00	c0.54	0.30	0.06
v/s Ratio Perm		0.01	0.06			
v/c Ratio	0.75	0.05	0.09	0.69	0.42	0.06
Uniform Delay, d1	66.3	59.7	5.5	8.4	9.5	1.1
Progression Factor	1.00	1.00	0.80	1.26	0.70	0.08
Incremental Delay, d2	6.7	0.1	0.1	0.9	0.5	0.0
Delay (s)	73.0	59.8	4.5	11.5	7.2	0.1
Level of Service	E	E	A	B	A	A
Approach Delay (s)	70.7			11.4	6.6	
Approach LOS	E			B	A	

Intersection Summary				
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	20.0	
Intersection Capacity Utilization	68.8%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	8	81	0	9	0	63	7	0	0	7	43
Future Volume (vph)	124	8	81	0	9	0	63	7	0	0	7	43
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.864									0.885	
Flt Protected	0.950							0.957				
Satd. Flow (prot)	1770	1609	0	0	1863	0	0	1783	0	0	1649	0
Flt Permitted	0.950							0.957				
Satd. Flow (perm)	1770	1609	0	0	1863	0	0	1783	0	0	1649	0
Adj. Flow (vph)	135	9	88	0	10	0	68	8	0	0	8	47
Lane Group Flow (vph)	135	97	0	0	10	0	0	76	0	0	55	0
Sign Control		Free			Stop			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 30.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Intersection: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	67	72	90	35	95	214	229	111	219	4281	4280	230
Average Queue (ft)	15	22	26	6	34	64	77	8	38	3330	3349	72
95th Queue (ft)	46	57	65	23	76	162	181	53	159	5353	5341	246
Link Distance (ft)	892		1111			490	490			4237	4237	
Upstream Blk Time (%)										33	36	
Queuing Penalty (veh)										0	0	
Storage Bay Dist (ft)		170		550	280			215	220			230
Storage Blk Time (%)						0	0	0	0	29	37	0
Queuing Penalty (veh)						0	0	0	1	8	22	5

Intersection: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	160	119	95	65	174	291	304	46	230	587	589	240
Average Queue (ft)	75	44	27	17	76	127	134	3	25	520	536	116
95th Queue (ft)	142	93	69	53	147	252	259	29	119	648	638	296
Link Distance (ft)	1075		1206			970	970			549	549	
Upstream Blk Time (%)										8	11	
Queuing Penalty (veh)										112	157	
Storage Bay Dist (ft)		220		65	265			240	310			240
Storage Blk Time (%)			2	0		0	1	0	0	25	29	1
Queuing Penalty (veh)			0	0		0	0	0	0	7	59	6

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	L	TR	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	234	284	255	150	188	142	367	365	363	228	425	798
Average Queue (ft)	129	167	115	106	99	32	230	163	163	35	112	375
95th Queue (ft)	228	264	241	166	181	89	380	319	306	132	284	701
Link Distance (ft)			1127		178			1228	1228			970
Upstream Blk Time (%)					3	0						0
Queuing Penalty (veh)					7	0						0
Storage Bay Dist (ft)	465	465		150		175	450			245	450	
Storage Blk Time (%)			0	4	4	0	1	0	3	0	0	4
Queuing Penalty (veh)			0	6	6	0	4	0	3	0	0	4

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	835	521
Average Queue (ft)	422	61
95th Queue (ft)	751	341
Link Distance (ft)	970	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	1	
Storage Bay Dist (ft)		820
Storage Blk Time (%)	1	0
Queuing Penalty (veh)	3	1

Intersection: 4: US Route 17/Carrollton Boulevard & Northgate Lane

Movement	EB	WB	NB	NB	SB	SB	SB
Directions Served	R	R	L	T	L	T	R
Maximum Queue (ft)	58	61	185	69	34	124	2
Average Queue (ft)	13	21	83	1	7	4	0
95th Queue (ft)	39	51	156	21	24	127	0
Link Distance (ft)	1152	872		1215		1228	
Upstream Blk Time (%)						0	
Queuing Penalty (veh)						0	
Storage Bay Dist (ft)			245		300		200
Storage Blk Time (%)			0	0			
Queuing Penalty (veh)			1	0			

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	EB	EB	EB	EB	B10	B10	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	R	T	T	L	T	TR	L	L	T
Maximum Queue (ft)	585	705	604	519	734	757	150	399	359	532	530	633
Average Queue (ft)	510	575	202	97	266	236	129	222	203	382	391	360
95th Queue (ft)	673	786	493	375	942	943	184	357	323	623	629	675
Link Distance (ft)		610	610		1332	1332		1286	1286			1050
Upstream Blk Time (%)		23	2		3	4						0
Queuing Penalty (veh)		0	0		0	0						0
Storage Bay Dist (ft)	585			575			150			650	650	
Storage Blk Time (%)	3	23	2	0			10	24		0	2	1
Queuing Penalty (veh)	14	97	11	0			14	43		1	6	7

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R
Maximum Queue (ft)	561	225	456	569	698	300
Average Queue (ft)	327	90	286	297	293	92
95th Queue (ft)	544	244	437	471	567	319
Link Distance (ft)	1050			1181	1181	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		225	500			300
Storage Blk Time (%)	26	0	1	1	2	1
Queuing Penalty (veh)	16	1	4	2	32	3

Intersection: 6: US Route 17/Carrollton Boulevard & Deep Bottom Drive/Channell Way

Movement	EB	WB	WB	NB	NB	NB	SB
Directions Served	LTR	LT	R	L	T	R	L
Maximum Queue (ft)	62	131	110	38	7	2	104
Average Queue (ft)	16	46	32	8	0	0	39
95th Queue (ft)	53	118	79	26	5	1	83
Link Distance (ft)	712	416			569		
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			225	140		60	275
Storage Blk Time (%)			0				
Queuing Penalty (veh)			0				

Intersection: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	R	L	T	T	R
Maximum Queue (ft)	92	68	280	159	356	330	56	185	342	337	38
Average Queue (ft)	35	19	119	23	184	148	6	53	129	147	9
95th Queue (ft)	78	50	226	87	327	297	42	120	277	294	31
Link Distance (ft)		644	713		1440	1440			1077	1077	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	135			275			350	300			630
Storage Blk Time (%)	0			0	2	0		0	1		
Queuing Penalty (veh)	0			0	1	0		0	1		

Intersection: 10: Bend

Movement	WB	WB	WB
Directions Served	T	T	
Maximum Queue (ft)	537	540	293
Average Queue (ft)	102	105	15
95th Queue (ft)	431	437	155
Link Distance (ft)	610	610	610
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 16: US Route 17/Carrollton Boulevard & Site A

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	521	519
Average Queue (ft)	348	378
95th Queue (ft)	648	652
Link Distance (ft)	490	490
Upstream Blk Time (%)	2	3
Queuing Penalty (veh)	28	40
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: US Route 17/Carrollton Boulevard & Site B

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	42	127
Average Queue (ft)	2	13
95th Queue (ft)	32	84
Link Distance (ft)	1215	1215
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: US Route 17/Carrollton Boulevard & Site C

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: US Route 17/Carrollton Boulevard & Nike Park Extension

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	L	T	T	T	T	R
Maximum Queue (ft)	138	158	93	74	723	704	486	636	200
Average Queue (ft)	63	85	27	68	305	279	227	468	101
95th Queue (ft)	123	142	68	84	611	591	406	658	258
Link Distance (ft)		1339			1181	1181	632	632	
Upstream Blk Time (%)							0	1	
Queuing Penalty (veh)							1	12	
Storage Bay Dist (ft)	650		430	75					200
Storage Blk Time (%)				45	14			21	1
Queuing Penalty (veh)				315	19			57	6

Intersection: 33: Bojangles Driveway/7-Eleven Driveway & Smiths Neck Road

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	3	31	72	89
Average Queue (ft)	0	6	31	41
95th Queue (ft)	3	26	58	69
Link Distance (ft)		650	468	414
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	175			
Storage Blk Time (%)				
Queuing Penalty (veh)				

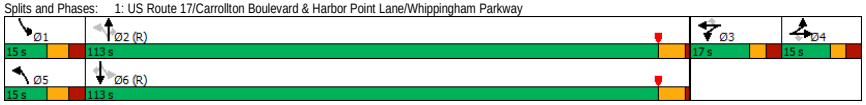
Network Summary

Network wide Queuing Penalty: 1146

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	0	20	31	0	12	42	1369	42	26	2712	61
Future Volume (vph)	15	0	20	31	0	12	42	1369	42	26	2712	61
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.950			0.950		0.950			0.950		
Satd. Flow (prot)	0	1805	1615	0	1805	1455	1805	3539	1568	1805	3574	1615
Flt Permitted		0.950			0.950		0.034			0.151		
Satd. Flow (perm)	0	1805	1615	0	1805	1455	65	3539	1568	287	3574	1615
Satd. Flow (RTOR)			109			109			109			109
Adj. Flow (vph)	16	0	21	32	0	13	44	1426	44	27	2825	64
Lane Group Flow (vph)	0	16	21	0	32	13	44	1426	44	27	2825	64
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	15.0	15.0	15.0	17.0	17.0	17.0	15.0	113.0	113.0	15.0	113.0	113.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)		7.5	7.5		8.2	8.2	126.4	124.6	124.6	124.0	121.6	121.6
Actuated g/C Ratio		0.05	0.05		0.05	0.05	0.79	0.78	0.78	0.78	0.76	0.76
v/c Ratio		0.19	0.12		0.34	0.07	0.37	0.52	0.04	0.10	1.04	0.05
Control Delay		78.3	1.4		82.5	0.8	31.5	6.6	0.1	5.3	51.7	0.2
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	25.3	0.0
Total Delay		78.3	1.4		82.5	0.8	31.5	6.6	0.1	5.3	77.0	0.2
LOS		E	A		F	A	C	A	A	A	E	A
Approach Delay		34.6			58.9			7.2			74.6	
Approach LOS		C			E			A			E	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 130 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 51.5		Intersection LOS: D	
Intersection Capacity Utilization 100.0%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway



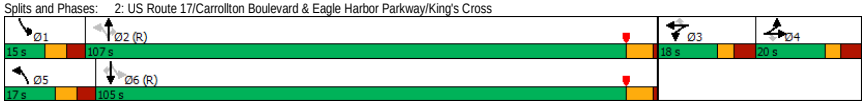
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	0	20	31	0	12	42	1369	42	26	2712	61
Future Volume (vph)	15	0	20	31	0	12	42	1369	42	26	2712	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1805	1615		1805	1455	1805	3539	1568	1805	3574	1615
Flt Permitted		0.95	1.00		0.95	1.00	0.03	1.00	1.00	0.15	1.00	1.00
Satd. Flow (perm)		1805	1615		1805	1455	64	3539	1568	287	3574	1615
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	16	0	21	32	0	12	44	1426	44	27	2825	64
RTOR Reduction (vph)	0	0	20	0	0	12	0	0	11	0	0	17
Lane Group Flow (vph)	0	16	1	0	32	1	44	1426	33	27	2825	47
Heavy Vehicles (%)	0%	0%	0%	0%	0%	11%	0%	2%	3%	0%	1%	0%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		6.1	6.1		7.1	7.1	123.4	118.3	118.3	120.2	116.7	116.7
Effective Green, g (s)		6.1	6.1		7.1	7.1	123.4	118.3	118.3	120.2	116.7	116.7
Actuated g/C Ratio		0.04	0.04		0.04	0.04	0.77	0.74	0.74	0.75	0.73	0.73
Clearance Time (s)		6.0	6.0		6.0	6.0	7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		68	61		80	64	104	2616	1159	248	2606	1177
v/s Ratio Prot		c0.01			c0.02		c0.01	0.40		0.00	c0.79	
v/s Ratio Perm			0.00			0.00	0.31		0.02	0.08		0.03
v/c Ratio		0.24	0.01		0.40	0.01	0.42	0.55	0.03	0.11	1.08	0.04
Uniform Delay, d1		74.7	74.1		74.4	73.1	46.1	9.1	5.5	6.7	21.6	6.0
Progression Factor		1.00	1.00		1.00	1.00	1.93	0.64	1.00	1.00	1.00	1.00
Incremental Delay, d2		1.8	0.1		3.3	0.1	1.7	0.7	0.0	0.1	45.3	0.1
Delay (s)		76.5	74.1		77.6	73.1	90.8	6.5	5.6	6.8	66.9	6.1
Level of Service		E	E		E	E	F	A	A	A	E	A
Approach Delay (s)		75.1			76.3			9.0			65.0	
Approach LOS		E			E			A			E	

Intersection Summary					
HCM 2000 Control Delay		46.4	HCM 2000 Level of Service		D
HCM 2000 Volume to Capacity ratio		0.98			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		25.0
Intersection Capacity Utilization		100.0%	ICU Level of Service		F
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	5	63	16	7	16	105	1354	20	27	2533	203
Future Volume (vph)	82	5	63	16	7	16	105	1354	20	27	2533	203
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.955			0.966		0.950			0.950		
Satd. Flow (prot)	0	1814	1615	0	1835	1495	1805	3574	1509	1805	3574	1615
Flt Permitted		0.955			0.966		0.036			0.140		
Satd. Flow (perm)	0	1814	1615	0	1835	1495	68	3574	1509	266	3574	1615
Satd. Flow (RTOR)			119			119			126			126
Adj. Flow (vph)	87	5	67	17	7	17	112	1440	21	29	2695	216
Lane Group Flow (vph)	0	92	67	0	24	17	112	1440	21	29	2695	216
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Total Split (s)	20.0	20.0	20.0	18.0	18.0	18.0	17.0	107.0	107.0	15.0	105.0	105.0
Total Lost Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Act Effct Green (s)		12.6	12.6		8.0	8.0	118.5	114.1	114.1	110.1	105.9	105.9
Actuated g/C Ratio		0.08	0.08		0.05	0.05	0.74	0.71	0.71	0.69	0.66	0.66
v/c Ratio		0.65	0.28		0.26	0.09	0.77	0.57	0.02	0.12	1.14	0.19
Control Delay		92.0	3.0		79.8	0.9	62.5	17.1	0.1	2.1	78.6	0.4
Queue Delay		0.0	0.1		0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Total Delay		92.0	3.1		79.8	0.9	62.5	17.1	0.1	2.1	79.0	0.4
LOS		F	A		E	A	E	B	A	A	E	A
Approach Delay		54.6			47.1			20.1			72.5	
Approach LOS		D			D			C			E	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 148 (93%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.14			
Intersection Signal Delay: 54.2		Intersection LOS: D	
Intersection Capacity Utilization 104.4%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross



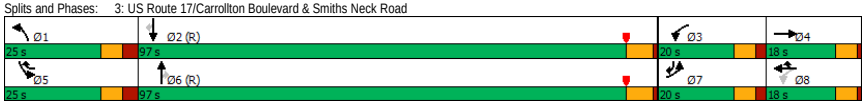
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	5	63	16	7	16	105	1354	20	27	2533	203
Future Volume (vph)	82	5	63	16	7	16	105	1354	20	27	2533	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00		0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1814	1615		1835	1495	1805	3574	1509	1805	3574	1615
Flt Permitted		0.95	1.00		0.97	1.00	0.04	1.00	1.00	0.14	1.00	1.00
Satd. Flow (perm)		1814	1615		1835	1495	69	3574	1509	265	3574	1615
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	87	5	67	17	7	17	112	1440	21	29	2695	216
RTOR Reduction (vph)	0	0	62	0	0	16	0	0	7	0	0	44
Lane Group Flow (vph)	0	92	5	0	24	1	112	1440	14	29	2695	172
Heavy Vehicles (%)	0%	0%	0%	0%	0%	8%	0%	1%	7%	0%	1%	0%
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4			3	2		2	6		6
Actuated Green, G (s)		12.6	12.6		6.6	6.6	118.5	109.7	109.7	108.1	104.5	104.5
Effective Green, g (s)		12.6	12.6		6.6	6.6	118.5	109.7	109.7	108.1	104.5	104.5
Actuated g/C Ratio		0.08	0.08		0.04	0.04	0.74	0.69	0.69	0.68	0.65	0.65
Clearance Time (s)		7.0	7.0		7.0	7.0	7.5	6.0	6.0	7.5	6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	2.5	5.0	5.0	2.5	5.0	5.0
Lane Grp Cap (vph)		142	127		75	61	146	2450	1034	213	2334	1054
v/s Ratio Prot		c0.05			c0.01		c0.04	c0.40		0.00	c0.75	
v/s Ratio Perm			0.00			0.00	0.52		0.01	0.09		0.11
v/c Ratio		0.65	0.04		0.32	0.01	0.77	0.59	0.01	0.14	1.15	0.16
Uniform Delay, d1		71.5	68.1		74.5	73.6	54.4	13.2	8.0	10.8	27.8	10.8
Progression Factor		1.00	1.00		1.00	1.00	0.96	1.23	1.00	0.27	0.33	0.06
Incremental Delay, d2		9.8	0.1		2.5	0.1	17.8	0.9	0.0	0.1	71.1	0.1
Delay (s)		81.3	68.3		77.0	73.6	69.9	17.1	8.0	3.0	80.2	0.8
Level of Service		F	E		E	E	E	B	A	A	F	A
Approach Delay (s)		75.8			75.6			20.8			73.6	
Approach LOS		E			E			C			E	

Intersection Summary					
HCM 2000 Control Delay		56.1	HCM 2000 Level of Service		E
HCM 2000 Volume to Capacity ratio		1.05			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)		27.5
Intersection Capacity Utilization		104.4%	ICU Level of Service		G
Analysis Period (min)		15			
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	254	52	80	132	106	39	197	1018	101	102	2138	410
Future Volume (vph)	254	52	80	132	106	39	197	1018	101	102	2138	410
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.909				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3502	1717	0	1805	1900	1615	1805	3539	1615	1770	3574	1599
Flt Permitted	0.950			0.323			0.950			0.950		
Satd. Flow (perm)	3502	1717	0	614	1900	1615	1805	3539	1615	1770	3574	1599
Satd. Flow (RTOR)		37				61			106			122
Adj. Flow (vph)	276	57	87	143	115	42	214	1107	110	111	2324	446
Lane Group Flow (vph)	276	144	0	143	115	42	214	1107	110	111	2324	446
Turn Type	Prot	NA		pm+pt	NA	pt+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8	8 5	1	6		5	2	7
Permitted Phases				8					6			2
Total Split (s)	20.0	18.0		20.0	18.0		25.0	97.0	97.0	25.0	97.0	20.0
Total Lost Time (s)	6.0	5.0		6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Act Effct Green (s)	14.0	13.0		24.8	12.4	33.7	18.6	95.3	95.3	14.3	91.0	111.0
Actuated g/C Ratio	0.09	0.08		0.16	0.08	0.21	0.12	0.60	0.60	0.09	0.57	0.69
v/c Ratio	0.90	0.83		0.74	0.78	0.11	1.02	0.53	0.11	0.70	1.14	0.39
Control Delay	103.0	88.2		78.7	104.8	5.1	145.3	5.3	0.9	99.4	79.8	1.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	103.0	88.2		78.7	104.8	5.1	145.3	5.3	0.9	99.4	79.9	1.4
LOS	F	F		E	F	A	F	A	A	F	E	A
Approach Delay		97.9			78.4			25.9			68.5	
Approach LOS		F			E			C			E	

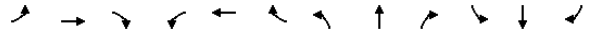
Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 4 (3%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.14			
Intersection Signal Delay: 59.4		Intersection LOS: E	
Intersection Capacity Utilization 104.1%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road



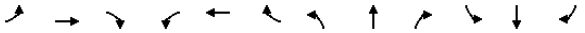
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	254	52	80	132	106	39	197	1018	101	102	2138	410
Future Volume (vph)	254	52	80	132	106	39	197	1018	101	102	2138	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	5.0		6.0	5.0	5.0	7.0	6.0	6.0	7.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3502	1717		1805	1900	1615	1805	3539	1615	1770	3574	1599
Flt Permitted	0.95	1.00		0.32	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3502	1717		613	1900	1615	1805	3539	1615	1770	3574	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	276	57	87	143	115	42	214	1107	110	111	2324	446
RTOR Reduction (vph)	0	34	0	0	0	34	0	0	43	0	0	42
Lane Group Flow (vph)	276	110	0	143	115	8	214	1107	67	111	2324	404
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	2%	0%	2%	1%	1%
Turn Type	Prot	NA		pm+pt	NA	pt+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4		3	8	8 5	1	6		5	2	7
Permitted Phases				8					6			2
Actuated Green, G (s)	14.0	13.0		25.8	12.4	31.7	18.6	95.3	95.3	14.3	91.0	105.0
Effective Green, g (s)	14.0	13.0		25.8	12.4	31.7	18.6	95.3	95.3	14.3	91.0	105.0
Actuated g/C Ratio	0.09	0.08		0.16	0.08	0.20	0.12	0.60	0.60	0.09	0.57	0.66
Clearance Time (s)	6.0	5.0		6.0	5.0		7.0	6.0	6.0	7.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.5	5.0	5.0	2.5	5.0	3.0
Lane Grp Cap (vph)	306	139		198	147	319	209	2107	961	158	2032	1109
v/s Ratio Prot	c0.08	c0.06		0.06	0.06	0.01	c0.12	c0.31		0.06	c0.65	0.03
v/s Ratio Perm				0.06					0.04			0.22
v/c Ratio	0.90	0.79		0.72	0.78	0.03	1.02	0.53	0.07	0.70	1.14	0.36
Uniform Delay, d1	72.3	72.2		61.3	72.5	51.7	70.7	19.0	13.6	70.8	34.5	12.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.24	0.22	0.25	1.38	0.30	0.18
Incremental Delay, d2	27.9	25.7		12.2	23.2	0.0	64.8	0.8	0.1	1.2	65.3	0.0
Delay (s)	100.2	97.9		73.5	95.7	51.7	152.5	5.1	3.6	98.9	75.7	2.2
Level of Service	F	F		E	F	D	F	A	A	F	E	A
Approach Delay (s)		99.4			79.0			27.0			65.2	
Approach LOS		F			E			C			E	

Intersection Summary					
HCM 2000 Control Delay	58.0	HCM 2000 Level of Service		E	
HCM 2000 Volume to Capacity ratio	1.08				
Actuated Cycle Length (s)	160.0	Sum of lost time (s)		24.0	
Intersection Capacity Utilization	104.1%	ICU Level of Service		G	
Analysis Period (min)	15				
c Critical Lane Group					



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	20	0	0	32	100	1478	22	14	2261	38
Future Volume (vph)	0	0	20	0	0	32	100	1478	22	14	2261	38
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.865			0.865			0.850			0.850
Flt Protected							0.950			0.950		
Satd. Flow (prot)	0	0	1644	0	0	1644	1787	3574	1615	1805	3574	1615
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	0	0	1644	0	0	1644	1787	3574	1615	1805	3574	1615
Adj. Flow (vph)	0	0	21	0	0	34	106	1572	23	15	2405	40
Lane Group Flow (vph)	0	0	21	0	0	34	106	1572	23	15	2405	40
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 74.7%		ICU Level of Service D	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	20	0	0	32	100	1478	22	14	2261	38
Future Volume (Veh/h)	0	0	20	0	0	32	100	1478	22	14	2261	38
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	21	0	0	34	106	1572	23	15	2405	40
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1315	
pX, platoon unblocked	0.44	0.44	0.44	0.44	0.44		0.44					
vC, conflicting volume	3467	4242	1202	3038	4259	786	2445			1595		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	4065	5834	0	3086	5872	786	1734			1595		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	96	100	100	90	34			96		
cM capacity (veh/h)	0	0	478	1	0	339	160			416		

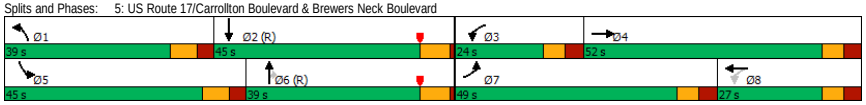
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	21	34	106	786	786	23	15	1202	1202	40
Volume Left	0	0	106	0	0	0	15	0	0	0
Volume Right	21	34	0	0	0	23	0	0	0	40
cSH	478	339	160	1700	1700	1700	416	1700	1700	1700
Volume to Capacity	0.04	0.10	0.66	0.46	0.46	0.01	0.04	0.71	0.71	0.02
Queue Length 95th (ft)	3	8	95	0	0	0	3	0	0	0
Control Delay (s)	12.9	16.8	63.7	0.0	0.0	0.0	14.0	0.0	0.0	0.0
Lane LOS	B	C	F				B			
Approach Delay (s)	12.9	16.8	4.0				0.1			
Approach LOS	B	C								

Intersection Summary					
Average Delay		1.8			
Intersection Capacity Utilization		74.7%	ICU Level of Service		D
Analysis Period (min)		15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	856	199	721	175	301	71	619	662	61	347	751	1362
Future Volume (vph)	856	199	721	175	301	71	619	662	61	347	751	1362
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.971				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1863	1568	1770	3437	0	3433	3574	1583	1805	3574	1599
Flt Permitted	0.950			0.627			0.950			0.950		
Satd. Flow (perm)	3433	1863	1568	1168	3437	0	3433	3574	1583	1805	3574	1599
Satd. Flow (RTOR)			575		15				188			628
Adj. Flow (vph)	901	209	759	184	317	75	652	697	64	365	791	1434
Lane Group Flow (vph)	901	209	759	184	392	0	652	697	64	365	791	1434
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Total Split (s)	49.0	52.0		24.0	27.0		39.0	39.0	39.0	45.0	45.0	
Total Lost Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Act Effct Green (s)	41.5	46.0	160.0	34.1	19.3		31.2	34.7	34.7	35.0	38.5	160.0
Actuated g/C Ratio	0.26	0.29	1.00	0.21	0.12		0.20	0.22	0.22	0.22	0.24	1.00
v/c Ratio	1.01	0.39	0.48	0.61	0.92		0.97	0.90	0.13	0.93	0.92	0.90
Control Delay	91.0	48.8	1.1	42.5	93.0		79.9	77.9	2.4	93.4	62.1	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.0	48.8	1.1	42.5	93.0		79.9	77.9	2.4	93.4	62.1	20.8
LOS	F	D	A	D	F		E	E	A	F	E	C
Approach Delay		49.7			76.9			75.4			43.7	
Approach LOS		D			E			E			D	

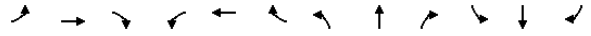
Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 30 (19%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 55.4		Intersection LOS: E	
Intersection Capacity Utilization 97.4%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard



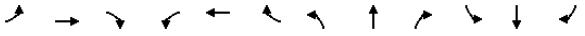
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	856	199	721	175	301	71	619	662	61	347	751	1362
Future Volume (vph)	856	199	721	175	301	71	619	662	61	347	751	1362
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5	4.0	7.5	7.5		8.0	6.5	6.5	8.0	6.5	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	0.95		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1568	1770	3438		3433	3574	1583	1805	3574	1599
Flt Permitted	0.95	1.00	1.00	0.63	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1863	1568	1168	3438		3433	3574	1583	1805	3574	1599
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	901	209	759	184	317	75	652	697	64	365	791	1434
RTOR Reduction (vph)	0	0	0	0	13	0	0	0	50	0	0	0
Lane Group Flow (vph)	901	209	759	184	379	0	652	697	14	365	791	1434
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	2%	1%	2%	0%	1%	1%
Turn Type	Prot	NA	Free	pm+pt	NA		Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			Free	8					6			Free
Actuated Green, G (s)	41.5	46.0	160.0	34.1	19.3		31.2	34.7	34.7	35.0	38.5	160.0
Effective Green, g (s)	41.5	46.0	160.0	34.1	19.3		31.2	34.7	34.7	35.0	38.5	160.0
Actuated g/C Ratio	0.26	0.29	1.00	0.21	0.12		0.19	0.22	0.22	0.22	0.24	1.00
Clearance Time (s)	7.5	7.5		7.5	7.5		8.0	6.5	6.5	8.0	6.5	
Vehicle Extension (s)	3.5	3.5		3.0	3.0		2.5	5.0	5.0	3.0	5.0	
Lane Grp Cap (vph)	890	535	1568	304	414		669	775	343	394	859	1599
v/s Ratio Prot	c0.26	0.11		0.06	0.11		0.19	0.20		0.20	0.22	
v/s Ratio Perm			0.48	0.07					0.01			c0.90
v/c Ratio	1.01	0.39	0.48	0.61	0.91		0.97	0.90	0.04	0.93	0.92	0.90
Uniform Delay, d1	59.2	45.8	0.0	55.3	69.5		64.0	61.0	49.5	61.2	59.3	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.82	1.04	1.00	1.19	0.85	1.00
Incremental Delay, d2	33.3	0.6	1.1	3.4	24.4		26.7	14.3	0.2	19.6	11.5	5.5
Delay (s)	92.5	46.3	1.1	58.7	94.0		79.1	78.0	49.7	92.7	62.0	5.5
Level of Service	F	D	A	E	F		E	E	D	F	E	A
Approach Delay (s)		50.2			82.7			77.2			35.0	
Approach LOS		D			F			E			D	

Intersection Summary					
HCM 2000 Control Delay		52.9	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio		1.10			
Actuated Cycle Length (s)		160.0	Sum of lost time (s)	29.5	
Intersection Capacity Utilization		97.4%	ICU Level of Service	F	
Analysis Period (min)		15			
c Critical Lane Group					



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	9	30	0	53	15	1223	68	82	1399	7
Future Volume (vph)	4	0	9	30	0	53	15	1223	68	82	1399	7
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.904				0.850			0.850		0.999	
Flt Protected		0.986			0.950		0.950			0.950		
Satd. Flow (prot)	0	1694	0	0	1703	1553	1805	3574	1553	1805	3536	0
Flt Permitted		0.986			0.950		0.950			0.950		
Satd. Flow (perm)	0	1694	0	0	1703	1553	1805	3574	1553	1805	3536	0
Adj. Flow (vph)	4	0	10	32	0	56	16	1301	72	87	1488	7
Lane Group Flow (vph)	0	14	0	0	32	56	16	1301	72	87	1495	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 56.7%					ICU Level of Service B							
Analysis Period (min) 15												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	0	9	30	0	53	15	1223	68	82	1399	7
Future Volume (Veh/h)	4	0	9	30	0	53	15	1223	68	82	1399	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	4	0	10	32	0	56	16	1301	72	87	1488	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						9						
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											1135	
pX, platoon unblocked	0.80	0.80	0.80	0.80	0.80		0.80					
vC, conflicting volume	2348	3070	748	2261	3002	650	1495			1373		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2181	3089	169	2071	3003	650	1109			1373		
tC, single (s)	7.5	6.5	6.9	7.6	6.5	7.0	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.0	3.3	2.2			2.2		
p0 queue free %	74	100	99	0	100	86	97			83		
cM capacity (veh/h)	15	8	677	20	9	407	507			506		

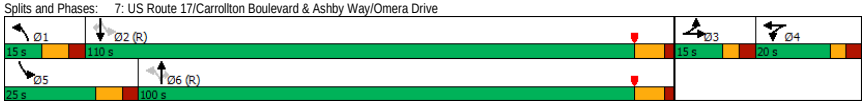
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	14	88	16	650	650	72	87	992	503
Volume Left	4	32	16	0	0	0	87	0	0
Volume Right	10	56	0	0	0	72	0	0	7
cSH	51	54	507	1700	1700	1700	506	1700	1700
Volume to Capacity	0.28	1.62	0.03	0.38	0.38	0.04	0.17	0.58	0.30
Queue Length 95th (ft)	24	206	2	0	0	0	15	0	0
Control Delay (s)	100.9	271.3	12.3	0.0	0.0	0.0	13.6	0.0	0.0
Lane LOS	F	F	B				B		
Approach Delay (s)	100.9	271.3	0.1				0.7		
Approach LOS	F	F							

Intersection Summary									
Average Delay			8.7						
Intersection Capacity Utilization			56.7%		ICU Level of Service			B	
Analysis Period (min)			15						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	8	17	55	8	105	32	1133	28	114	1356	52
Future Volume (vph)	39	8	17	55	8	105	32	1133	28	114	1356	52
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.898			0.916				0.850			0.850
Flt Protected	0.950				0.984		0.950			0.950		
Satd. Flow (prot)	1805	1706	0	0	1670	0	1805	3539	1615	1770	3574	1615
Flt Permitted	0.950				0.984		0.136			0.177		
Satd. Flow (perm)	1805	1706	0	0	1670	0	258	3539	1615	330	3574	1615
Satd. Flow (RTOR)		17			41				170			116
Adj. Flow (vph)	39	8	17	56	8	106	32	1144	28	115	1370	53
Lane Group Flow (vph)	39	25	0	0	170	0	32	1144	28	115	1370	53
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Total Split (s)	15.0	15.0		20.0	20.0		15.0	100.0	100.0	25.0	110.0	110.0
Total Lost Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Act Effct Green (s)	9.4	9.4			20.1		103.3	96.6	96.6	108.9	101.7	101.7
Actuated g/C Ratio	0.06	0.06			0.13		0.65	0.60	0.60	0.68	0.64	0.64
v/c Ratio	0.37	0.22			0.69		0.14	0.54	0.03	0.38	0.60	0.05
Control Delay	81.7	40.0			65.0		10.8	21.4	0.0	8.7	12.0	0.1
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.7	40.0			65.0		10.8	21.4	0.0	8.7	12.0	0.1
LOS	F	D			E		B	C	A	A	B	A
Approach Delay		65.4			65.0			20.7			11.3	
Approach LOS		E			E			C			B	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 155 (97%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 19.3		Intersection LOS: B	
Intersection Capacity Utilization 77.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive



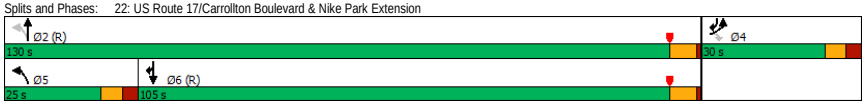
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	8	17	55	8	105	32	1133	28	114	1356	52
Future Volume (vph)	39	8	17	55	8	105	32	1133	28	114	1356	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.90			0.92		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	1706			1670		1805	3539	1615	1770	3574	1615
Flt Permitted	0.95	1.00			0.98		0.14	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	1805	1706			1670		258	3539	1615	330	3574	1615
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	39	8	17	56	8	106	32	1144	28	115	1370	53
RTOR Reduction (vph)	0	16	0	0	36	0	0	0	11	0	0	20
Lane Group Flow (vph)	39	9	0	0	134	0	32	1144	17	115	1370	33
Heavy Vehicles (%)	0%	0%	0%	2%	0%	3%	0%	2%	0%	2%	1%	0%
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases							6		6	2		2
Actuated Green, G (s)	7.8	7.8			20.1		101.2	95.5	95.5	108.0	98.9	98.9
Effective Green, g (s)	7.8	7.8			20.1		101.2	95.5	95.5	108.0	98.9	98.9
Actuated g/C Ratio	0.05	0.05			0.13		0.63	0.60	0.60	0.68	0.62	0.62
Clearance Time (s)	6.0	6.0			6.0		8.0	7.5	7.5	8.0	7.5	7.5
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	87	83			209		218	2112	963	304	2209	998
v/s Ratio Prot	c0.02	0.01			c0.08		0.01	0.32		c0.02	c0.38	
v/s Ratio Perm							0.09		0.01	0.23		0.02
v/c Ratio	0.45	0.11			0.64		0.15	0.54	0.02	0.38	0.62	0.03
Uniform Delay, d1	74.0	72.8			66.5		14.1	19.2	13.1	12.4	18.9	11.9
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	0.67	0.55	1.00
Incremental Delay, d2	3.6	0.6			6.6		0.3	1.0	0.0	0.6	1.0	0.0
Delay (s)	77.7	73.3			73.1		14.4	20.2	13.2	8.9	11.5	12.0
Level of Service	E	E			E		B	C	B	A	B	B
Approach Delay (s)		76.0			73.1			19.9			11.3	
Approach LOS		E			E			B			B	

Intersection Summary				
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	27.5	
Intersection Capacity Utilization	77.8%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	170	50	130	1408	2036	274
Future Volume (vph)	170	50	130	1408	2036	274
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.033			
Satd. Flow (perm)	3433	1583	61	3539	3539	1583
Satd. Flow (RTOR)		54				267
Adj. Flow (vph)	185	54	141	1530	2213	298
Lane Group Flow (vph)	185	54	141	1530	2213	298
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Total Split (s)	30.0	30.0	25.0	130.0	105.0	
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	
Act Effct Green (s)	14.1	14.1	131.9	132.9	112.6	133.8
Actuated g/C Ratio	0.09	0.09	0.82	0.83	0.70	0.84
v/c Ratio	0.61	0.29	0.74	0.52	0.89	0.22
Control Delay	78.7	18.9	30.6	11.4	5.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.7	18.9	30.6	11.4	5.8	0.0
LOS	E	B	C	B	A	A
Approach Delay	65.2			13.0	5.1	
Approach LOS	E			B	A	

Intersection Summary			
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 45 (28%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 11.3		Intersection LOS: B	
Intersection Capacity Utilization 86.0%		ICU Level of Service E	
Analysis Period (min) 15			

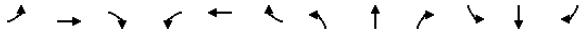
Splits and Phases: 22: US Route 17/Carrollton Boulevard & Nike Park Extension



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	170	50	130	1408	2036	274
Future Volume (vph)	170	50	130	1408	2036	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.03	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	62	3539	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	54	141	1530	2213	298
RTOR Reduction (vph)	0	49	0	0	0	45
Lane Group Flow (vph)	185	5	141	1530	2213	253
Turn Type	Prot	Perm	pm+pt	NA	NA	pt+ov
Protected Phases	4		5	2	6	6 4
Permitted Phases		4	2			
Actuated Green, G (s)	14.1	14.1	132.9	132.9	112.7	132.8
Effective Green, g (s)	14.1	14.1	132.9	132.9	112.7	132.8
Actuated g/C Ratio	0.09	0.09	0.83	0.83	0.70	0.83
Clearance Time (s)	7.0	7.0	7.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	302	139	192	2939	2492	1313
v/s Ratio Prot	c0.05		c0.06	0.43	c0.63	0.16
v/s Ratio Perm		0.00	0.55			
v/c Ratio	0.61	0.03	0.73	0.52	0.89	0.19
Uniform Delay, d1	70.3	66.7	55.5	4.0	18.7	2.8
Progression Factor	1.00	1.00	0.56	2.58	0.20	0.00
Incremental Delay, d2	3.7	0.1	4.4	0.2	0.5	0.0
Delay (s)	74.0	66.8	35.7	10.6	4.3	0.0
Level of Service	E	E	D	B	A	A
Approach Delay (s)	72.4			12.8	3.8	
Approach LOS	E			B	A	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	8	65	0	7	0	89	7	0	0	7	141
Future Volume (vph)	175	8	65	0	7	0	89	7	0	0	7	141
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.867									0.872	
Flt Protected	0.950							0.956				
Satd. Flow (prot)	1770	1615	0	0	1863	0	0	1781	0	0	1624	0
Flt Permitted	0.950							0.956				
Satd. Flow (perm)	1770	1615	0	0	1863	0	0	1781	0	0	1624	0
Adj. Flow (vph)	190	9	71	0	8	0	97	8	0	0	8	153
Lane Group Flow (vph)	190	80	0	0	8	0	0	105	0	0	161	0
Sign Control		Free			Stop			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 40.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Intersection: 1: US Route 17/Carrollton Boulevard & Harbor Point Lane/Whippingham Parkway

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	154	93	73	79	99	368	375	115	40	149	171	13
Average Queue (ft)	67	23	20	28	13	191	209	5	5	41	58	1
95th Queue (ft)	127	61	53	65	60	355	373	52	21	110	139	7
Link Distance (ft)	892		1111			490	490			4237	4237	
Upstream Blk Time (%)						0	0					
Queuing Penalty (veh)						0	0					
Storage Bay Dist (ft)		170		550	280			215	220			230
Storage Blk Time (%)	0	0			0	2	8	0			0	
Queuing Penalty (veh)	0	0			0	0	1	0			0	

Intersection: 2: US Route 17/Carrollton Boulevard & Eagle Harbor Parkway/King's Cross

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	450	207	103	65	264	865	895	105	24	200	221	56
Average Queue (ft)	213	64	21	26	46	607	624	5	2	88	112	8
95th Queue (ft)	412	193	68	65	166	777	821	57	14	171	202	46
Link Distance (ft)	1075		1206			970	970			549	549	
Upstream Blk Time (%)						0	0					
Queuing Penalty (veh)						0	0					
Storage Bay Dist (ft)		220		65	265			240	310			240
Storage Blk Time (%)	16	0	2	3	0	25	27	0			0	0
Queuing Penalty (veh)	12	0	0	1	1	13	1	0			0	0

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	L	TR	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	334	359	296	137	89	121	449	1181	1188	245	148	169
Average Queue (ft)	209	237	125	72	16	35	102	698	708	82	66	82
95th Queue (ft)	310	340	237	133	62	84	331	1270	1276	258	125	149
Link Distance (ft)			1127		178			1228	1228			970
Upstream Blk Time (%)					0	0		4	5			
Queuing Penalty (veh)					0	0		41	49			
Storage Bay Dist (ft)	465	465		150		175	450			245	450	
Storage Blk Time (%)		0	0	2	0	0	0	23	34	0		
Queuing Penalty (veh)		0	0	1	0	0	1	11	34	3		

Intersection: 3: US Route 17/Carrollton Boulevard & Smiths Neck Road

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	202	30
Average Queue (ft)	102	5
95th Queue (ft)	168	21
Link Distance (ft)	970	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		820
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: US Route 17/Carrollton Boulevard & Northgate Lane

Movement	EB	WB	NB	NB	NB	NB	SB
Directions Served	R	R	L	T	T	R	L
Maximum Queue (ft)	68	62	121	520	527	150	57
Average Queue (ft)	20	15	14	105	112	13	13
95th Queue (ft)	49	60	73	551	574	113	42
Link Distance (ft)	1152	872		1215	1215		
Upstream Blk Time (%)				0	0		
Queuing Penalty (veh)				1	1		
Storage Bay Dist (ft)			245			300	300
Storage Blk Time (%)			0	6	6	0	
Queuing Penalty (veh)			0	1	2	1	

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	EB	EB	EB	EB	B10	B10	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	R	T	T	L	T	TR	L	L	T
Maximum Queue (ft)	526	553	150	182	15	134	102	122	134	355	396	354
Average Queue (ft)	346	372	44	13	0	5	40	51	58	207	230	223
95th Queue (ft)	488	508	109	100	8	136	83	101	113	318	346	327
Link Distance (ft)		610	610		1332	1332		1286	1286			1050
Upstream Blk Time (%)		0				0						
Queuing Penalty (veh)		0				0						
Storage Bay Dist (ft)	585			575			150			650	650	
Storage Blk Time (%)	0	0					0	0				
Queuing Penalty (veh)	0	0					0	0				

Intersection: 5: US Route 17/Carrollton Boulevard & Brewers Neck Boulevard

Movement	NB	NB	SB	SB	SB	SB
Directions Served	T	R	L	T	T	R
Maximum Queue (ft)	376	185	141	290	268	89
Average Queue (ft)	237	26	56	177	151	2
95th Queue (ft)	340	123	112	265	238	44
Link Distance (ft)	1050			1181	1181	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		225	500			300
Storage Blk Time (%)	11	0			0	0
Queuing Penalty (veh)	2	0			0	0

Intersection: 6: US Route 17/Carrollton Boulevard & Deep Bottom Drive/Channell Way

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	LT	R	L	R	L
Maximum Queue (ft)	58	96	93	26	3	48
Average Queue (ft)	6	33	36	3	0	10
95th Queue (ft)	32	76	70	16	3	33
Link Distance (ft)	712	416				
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			225	140	60	275
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 7: US Route 17/Carrollton Boulevard & Ashby Way/Omera Drive

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	R	L	T	T	R
Maximum Queue (ft)	118	79	218	36	280	266	26	99	209	201	30
Average Queue (ft)	55	21	79	7	131	95	3	31	68	79	2
95th Queue (ft)	103	61	166	25	243	212	15	75	157	162	14
Link Distance (ft)		644	713		1440	1440			1077	1077	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	135			275			350	300			630
Storage Blk Time (%)	1	0			0	0					
Queuing Penalty (veh)	0	0			0	0					

Intersection: 10: Bend

Movement	WB	WB	WB
Directions Served	T	T	
Maximum Queue (ft)	200	208	52
Average Queue (ft)	12	11	4
95th Queue (ft)	138	130	72
Link Distance (ft)	610	610	610
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 16: US Route 17/Carrollton Boulevard & Site A

Movement	NB	NB
Directions Served	T	TR
Maximum Queue (ft)	65	80
Average Queue (ft)	2	4
95th Queue (ft)	49	55
Link Distance (ft)	549	549
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: US Route 17/Carrollton Boulevard & Site B

Movement	NB	NB
Directions Served	T	TR
Maximum Queue (ft)	19	20
Average Queue (ft)	2	2
95th Queue (ft)	34	34
Link Distance (ft)	632	632
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: US Route 17/Carrollton Boulevard & Site C

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: US Route 17/Carrollton Boulevard & Nike Park Extension

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	L	T	T	T	T	R
Maximum Queue (ft)	249	272	59	53	316	316	148	257	166
Average Queue (ft)	139	164	17	16	114	111	47	111	8
95th Queue (ft)	222	240	42	44	243	245	111	218	69
Link Distance (ft)		1339			1181	1181	632	632	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	650		430	75					200
Storage Blk Time (%)				0	10			1	0
Queuing Penalty (veh)				1	3			1	0

Intersection: 33: Bojangles Driveway/7-Eleven Driveway & Smiths Neck Road

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	30	57	53
Average Queue (ft)	8	24	25
95th Queue (ft)	29	44	47
Link Distance (ft)	650	468	414
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 186

MSA, P.C.
5032 Rouse Drive, Suite 200
Virginia Beach, VA 23462-3764
757-490-9264 | www.msaonline.com

Environmental Sciences • Surveying • Civil & Environmental Engineering

August 25, 2021

U.S. Army Corps of Engineers, Norfolk District
Regulatory Office
803 Front Street
Norfolk, VA 23510-1096

RE: The Crossings – Tower Property; MSA Project Number 18075E

Greetings Regulatory Staff,

On behalf of Franciscus Homes, Inc., MSA, P.C. is pleased to submit this wetland delineation for the approximately 12.2-acre property located at 23067 Channell Way, Carrollton, Isle of Wight, Virginia. Franciscus Homes, Inc. is proposing a residential development on the subject property. Approximately 0.342 acres of wetlands exist on the site, associated with two low areas on the property. Please see the enclosed Wetland Delineation Exhibit of the subject property for the locations of the wetlands. Datasheets were generated documenting wetland and upland conditions, attached for your review.

Please have a representative from your office contact me regarding a field confirmation of the delineation as soon as possible. Thank you for your assistance with this project.

Sincerely;

Nikolai Karlov
Environmental Technician

Nikolai Karlov

NORFOLK DISTRICT REGULATORY OFFICE PRE-APPLICATION AND/OR JURISDICTIONAL WATERS DETERMINATION REQUEST FORM

This form is used when you want to determine if areas on your property fall under regulatory requirements of the U.S. Army Corps of Engineers (USACE). Please supply the following information and supporting documents described below. This form can be filled out online and/or printed and then mailed, faxed, or e-mailed to the Norfolk District. Submitting this request authorizes the US Army Corps of Engineers to field inspect the property site, if necessary, to help in the determination process. **THIS FORM MUST BE SIGNED BY THE PROPERTY OWNER TO BE CONSIDERED A FORMAL REQUEST.**

The printed form and supporting documents should be mailed to:

U.S. Army Corps of Engineers, Norfolk District
Regulatory Branch
803 Front Street
Norfolk, Virginia 23510-1096

Or faxed to (757) 201-7678

Or sent via e-mail to: CENAO.REG_ROD@usace.army.mil

Additional information on the Regulatory Program is available on our website at:
http://www.nao.usace.army.mil/
Please contact us at 757-201-7652 if you need any assistance with filling out this form.

Location and Information about Property to be subject to a Jurisdictional Determination:

1. Date of Request: 8/14/2021
2. Project Name: The Crossings – Tower Property
3. City or County where property located: Carrollton, Isle of Wight, VA
4. Address of property and directions (attach a map of the property location and a copy of the property plat): 23067 Channell Way
5. Coordinates of property (if known): 36.9427 -76.532
6. Size of property in acres: 12.2
7. Tax Parcel Number / GPIN (if available): 34-01-070B
8. Name of Nearest Waterway: Ragged Island Creek

9. Brief Description of Proposed Activity, Reason for Preapplication Request, and/or Reason for Jurisdictional Waters Determination Request: Proposed expansion of residential development

10. Has a wetland delineation/determination been completed by a consultant or the Corps on the property previously? UNKNOWN

    If yes, please provide the name of the consultant and/or Corps staff and Corps permit number, if available: None known.

Property Owner Contact Information:

Property Owner Name: Booth-Cobb Media, LLC
Mailing Address: 700 Monticello Ave Ste 311
City: State: Zip: NORFOLK, VA 23510
Daytime Telephone:
E-mail Address:

If the person requesting the Jurisdictional Determination is **NOT** the Property Owner, please also supply the Requestor's contact information here:

Requestor Name: Jerry Bowman & Franciscus Homes, Inc
Mailing Address: 616 Village Drive STE G
City: State: Zip: Virginia Beach, VA 23454
Daytime Telephone: (757) 517-3010
E-mail Address: jbowman@evalaw.net

Additionally, if you have any of the following information, please include it with your request: wetland delineation map, other relevant maps, drain tile survey, topographic survey, and/or site photographs.

CERTIFICATION: I am hereby requesting a preapplication consultation or jurisdictional waters and/or wetlands determination from the U.S. Army Corps of Engineers, for the property(ies) I have described herein. I agree to allow the duly authorized representatives of the Norfolk District Corps of Engineers and other regulatory or advisory agencies to enter upon the premises of the project site at reasonable times to evaluate inspect and photograph site conditions. This consent to enter the property is superior to, takes precedence over, and waives any communication to the contrary. For example, if the property is posted as "no trespassing" this consent specifically supercedes and waives that prohibition and grants permission to enter the property despite such posting. I hereby certify that the information contained in the Request for a Jurisdictional Determination is accurate and complete:

Property Owner's Signature

18 Aug 21
Date

Wetland Delineation Report Site Information Summary
The Crossings – Tower Property,
23067 Channell Way
Tax Parcel 34-01-070B (12.2 Acres),
Carrollton, Isle of Wight, Virginia

Date
August 14, 2021

Applicant/Property Owner
Jerry Bowman
Franciscus Homes, Inc. (Applicant)
616 Village Drive, Suite G
Virginia Beach, VA
Phone: (757) 517-3010 / Email: jbowman@evalaw.net

Consulting Agent
Nikolai Karlov of MSA, P.C.
5032 Rouse Drive, Suite 200
Virginia Beach, VA. 23462
757 490-9264 / nikolai.karlov@msaonline.com

Latitude/ Longitude in Decimal Degrees using coordinate plane (NAD 1983)
36.9427 -76.532

Directions to project site: Interstate 264 west to 664 exit Route 17 west, right turn on Channel Way.

Has a previous delineation or JD been performed? If so please provide USACE Project Number: None known

Hydrologic Unit Code (HUC): 8-Digit HUC -02080206

USGS Topographic Sheet: Benns Church, VA Quadrangle

Nearest Waterbody: Ragged Island Creek (Tidal system) lies approximately 1,000 feet north of the subject parcel.

Delineation Methods
U.S. Army Corps of Engineers 1987 Wetland Delineation Manual in conjunction with the Atlantic and Gulf Coast Regional Supplement version 2.0, November 2010
Atlantic and Gulf Coast Plain 2012 Final Regional Wetland Plant List

On-Site Investigation Date

Wetland boundary delineation and site data collection conducted on June 9, 2021.

Wetland Delineation Plan
The proposed wetland boundaries and Data Sampling Point locations are depicted on the plan entitled "Wetland Delineation Exhibit" prepared by MSA, P.C. on June 17, 2021.

Wetland Investigation Results"
Wetlands: A total of approximately 0.342 acres of non-tidal wetlands were identified within the 12.2 acre parcel during this investigation. Of the total proposed wetland area, all acres are palustrine emergent (PEM) wetlands. These wetlands, described by Data Sampling Points 1 and 2, appear to be remnants of historic agricultural ditches.

Stream Channels: No stream channels were observed on the subject parcel.

Other Waters: N/A.

Water bodies onsite identified as Section 10: N/A

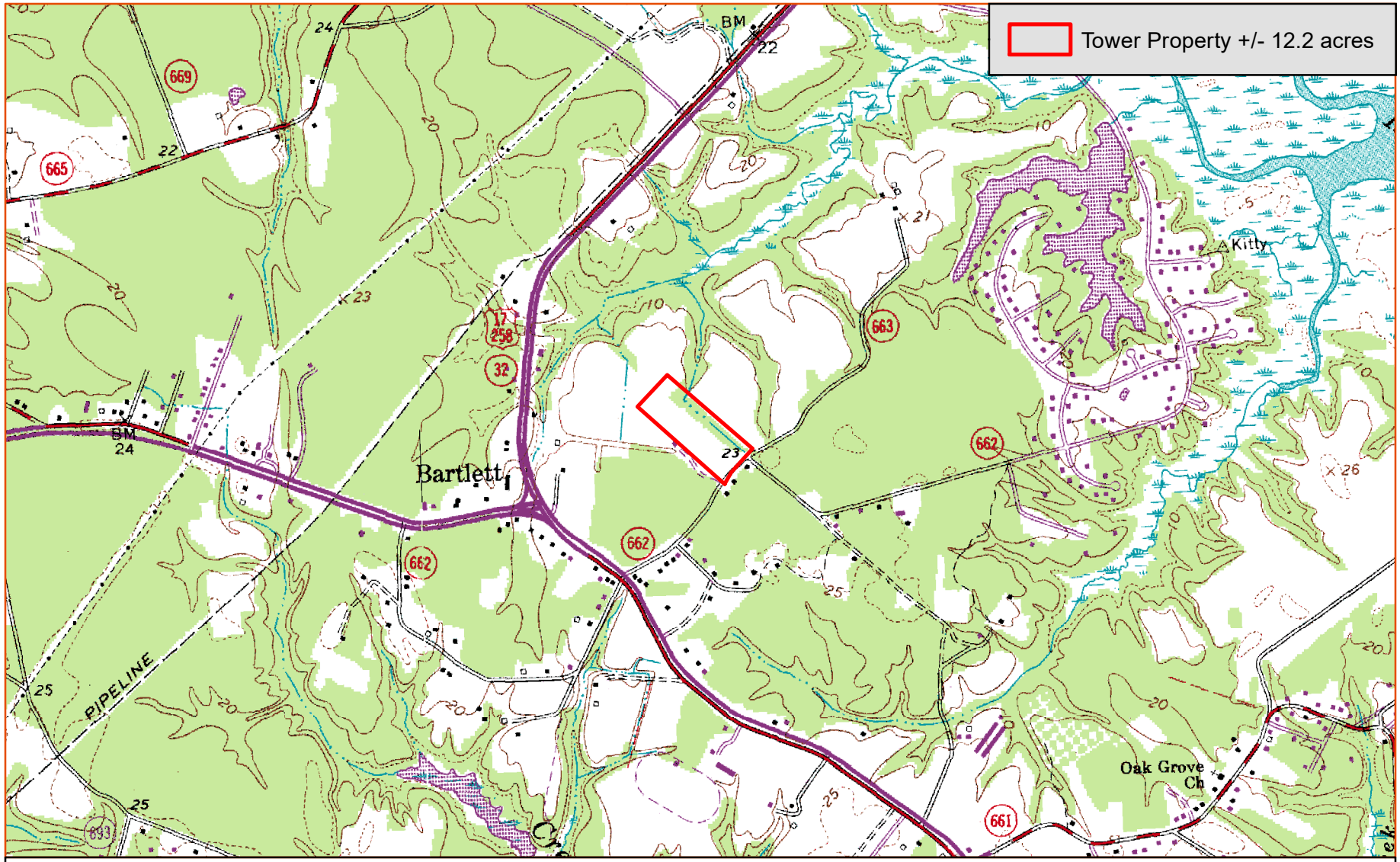
Uplands: Approximately 11.858 acres of the subject parcel were classified as uplands, as described by Data Sampling Point 3.

100-Year Floodplains: As depicted on the Federal Emergency Management Agency's (FEMA) on-line Flood Insurance Rate Map # 51093C0158E and 51093C0159E, effective date 12/02/2015 the subject property does not lie within the 100-year or 500-year floodplain (Zone X).

National Wetlands Inventory: National Wetland Inventory (GIS, last updated 2015) identifies no wetlands within the subject property.

USDA Soil Survey: USDA Natural Resource Conservation Service Soil Survey (GIS data last updated around 2005) identifies poorly drained Myatt fine sandy loam (NmA) across the entire subject property. The Myatt series is found on the Virginia Hydric Soils List.

Notes:
Normal circumstances, portions of the adjacent property west and northwest of the subject property has been cleared and is undergoing earthworks which have may have impacted onsite drainage. Datapoint locations, like most of the property, are periodically mowed.



Benns Church, VA USGS Quadrangle Topographic Map

0 500 1,000 2,000 3,000 4,000 5,000 Feet

USGS TOPOGRAPHIC VICINITY EXHIBIT

JURISDICTIONAL DETERMINATION REQUEST

THE CROSSINGS - TOWER PROPERTY

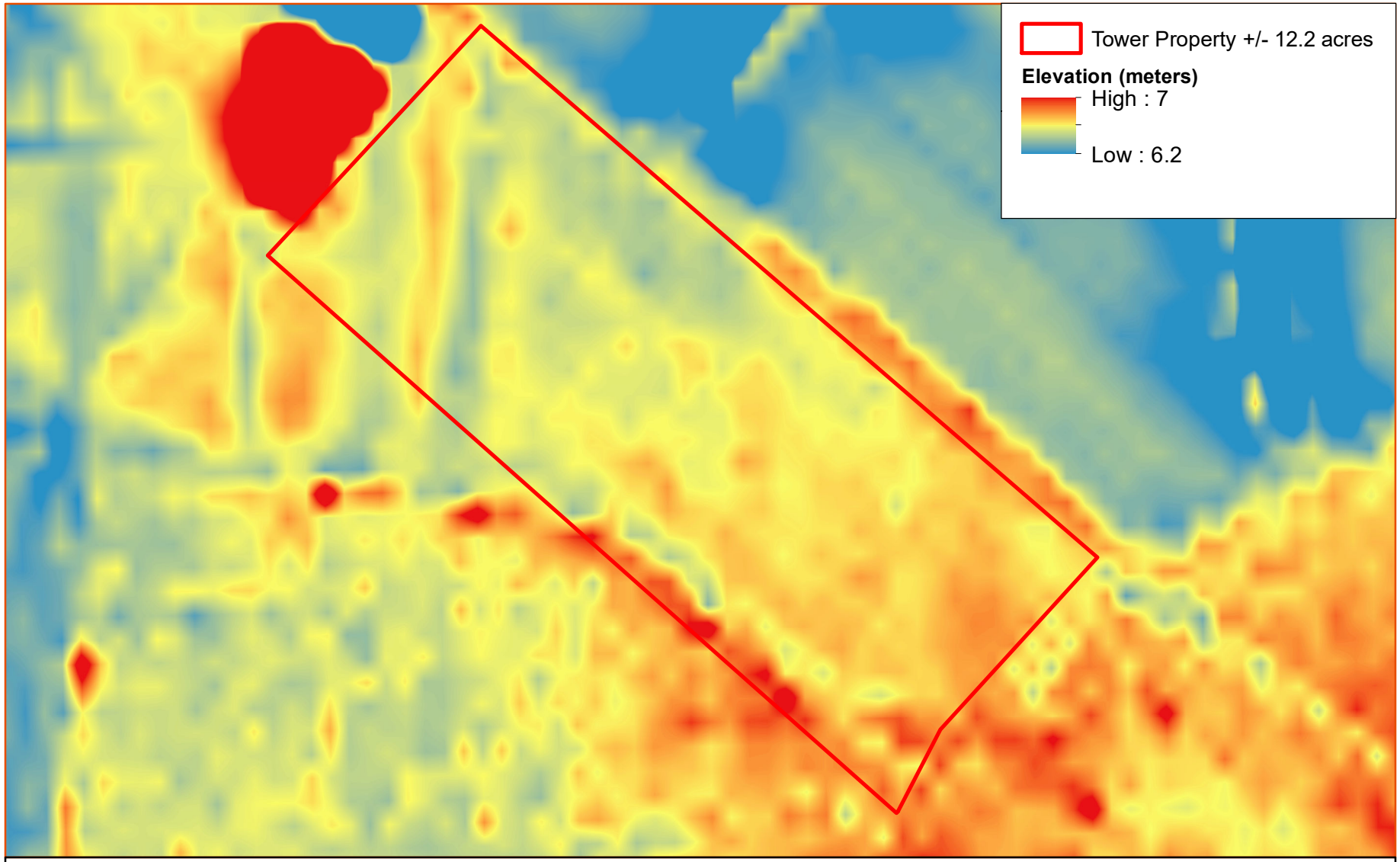
23067 CHANNELL WAY, CARROLLTON, VA

MSA, P.C.

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5032 Rouse Drive, Suite 100
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www.msaonline.com

MSA JOB #	DATE:	MAPPED BY:	SCALE
18075E	JUNE 17, 2021	NMK	AS SHOWN



Benns Church, VA USGS Quadrangle Topographic Map

0 100 200 400 600 800 1,000 Feet

LIDAR EXHIBIT

WETLAND DELINEATION

THE CROSSINGS - TOWER PROPERTY

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MSA JOB #	DATE:	MAPPED BY:	SCALE
18075E	JULY 30, 2021	NMK	AS SHOWN



Benns Church, VA USGS Quadrangle Topographic Map

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WETLAND DELINEATION EXHIBIT

WETLAND DELINEATION

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Benns Church, VA USGS Quadrangle Topographic Map

0 100 200 400 600 800 1,000 Feet

NWI WETLAND EXHIBIT

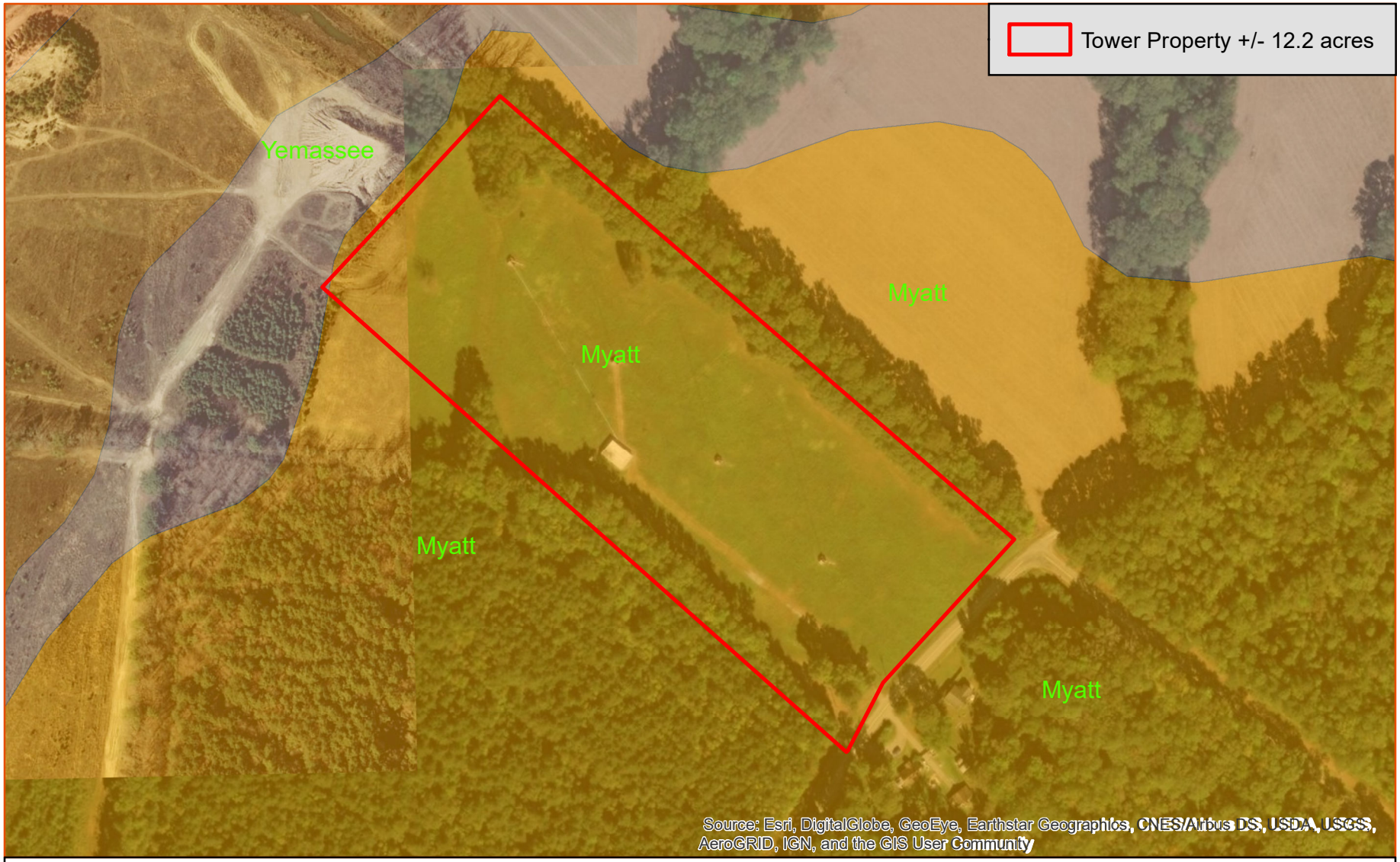
JURISDICTIONAL DETERMINATION REQUEST

THE CROSSINGS - TOWER PROPERTY

23067 CHANNELL WAY, CARROLLTON, VA

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MSA JOB #	DATE:	MAPPED BY:	SCALE
18075E	JUNE 17, 2021	NMK	AS SHOWN



Benns Church, VA USGS Quadrangle Topographic Map

0 100 200 400 600 800 1,000 Feet

USGS SOIL SURVEY EXHIBIT

JURISDICTIONAL DETERMINATION REQUEST

THE CROSSINGS - TOWER PROPERTY

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MSA JOB #	DATE:	MAPPED BY:	SCALE
18075E	JUNE 17, 2021	NMK	AS SHOWN

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: The Crossings – Tower Property City/County: Isle of Wight Sampling Date: 7/20/2021

Applicant/Owner: Franciscus Homes, Inc. State: VA Sampling Point: 1

Investigator: Brian Owen of MSA. P.C. Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Relatively Flat Local relief (concave, convex, none): _____ Slope (%): 0-2%

Subregion (LRR or MLRA): LRR-T Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI Classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present Yes X No ___

Are vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area Within a Wetland?** **Yes X No _____**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	

Remarks: Site periodically mowed. Land clearing and construction has begun on adjacent properties west/northwest of the subject property. The northwest corner of the subject property has been disturbed by land clearing.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) (**LRR U**)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- X Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) (LRR T, U)

Field Observations

Surface Water Present? Yes _____ No X Depth (Inches): _____

Water Table Present? Yes _____ No X Depth (Inches): _____

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (Inches): 10

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (Stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: 1

Tree Stratum (Plot Size: 30' Radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus phellos	30	Y	FACW
2. Diospyros virginiana	5	N	FAC
3. Quercus falcata	10	N	FACU
4. Quercus nigra	3	N	FAC
5. Acer rubrum	10	N	FAC
6.			
7.			
8.			
	58	= Total Cover	
50% of total cover: 29	20% of total cover: 11.6		
Sapling/Shrub Stratum (Plot Size: 30' Radius)			
1. Liquidambar syraciflua	5	Y	FAC
2. Quercus phellos	5	Y	FACW
3. Diospyros virginiana	5	Y	FAC
4.			
5.			
6.			
7.			
8.			
	15	= Total Cover	
50% of total cover: 7.5	20% of total cover: 3		
Herb Stratum (Plot Size: 30' Radius)			
1. Juncus effuses	55	Y	OBL
2. Apocynum cannabinum	10	N	FACU
3. Diodia virginiana	20	Y	FACW
4. Rumex crispus	5	N	FAC
5. Campsis radicans	3	N	FAC
6. Sorghum halepense	2	N	FACU
7. Arundinaria tecta	1	N	FACW
8. Diospros virginiana	2	N	FAC
9. Acer rubrum	1	N	FAC
10. Liquidambar styraciflua	1	N	FAC
11.			
12.			
	100	= Total Cover	
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot Size: 30' Radius)			
1. Smilax rotundifolia	5	Y	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
50% of total cover: 2.5	20% of total cover: 1		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

____ Prevalence Index is ≤ 3.0[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of Hydric soil and wetland hydrology must be present unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height

Sapling/Shrub - Woody plants, excluding woody vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants regardless of size. and woody plants less that 3.28 ft (1 m) in height.

Woody Vine - All woody vines greater than 3.25 ft in height.

Hydrophytic Vegetation Present? **Yes X** **No ____**

Remarks: (If Observed, list morphological adaptations below).

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 3/2						Top soil	
2-10	2.5Y 4/1	85	10YR 5/6	15			Clay Loam	
10-30	2.5Y 5/1	90	10YR 5/6	10			Clay Sandy Loam	

[1]Type: C=Concretion, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soils Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A22)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Magnanese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 153A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of Hydrophytic Vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: The Crossings – Tower Property City/County: Isle of Wight Sampling Date: 7/20/2021

Applicant/Owner: Franciscus Homes, Inc. State: VA Sampling Point: 2

Investigator: Brian Owen of MSA. P.C. Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Relatively Flat Local relief (concave, convex, none): _____ Slope (%): 0-2%

Subregion (LRR or MLRA): LRR-T Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI Classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present Yes X No ___

Are vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area Within a Wetland?** **Yes X No _____**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	

Remarks: Site is periodically mowed

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- _X_ Saturation (A3)
- ___ Water Marks (B1)
- _X_ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) (**LRR U**)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- _X_ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) (LRR T, U)

Field Observations

Surface Water Present? Yes _____ No X Depth (Inches): _____

Water Table Present? Yes _____ No X Depth (Inches): 25

Saturation Present? Yes X No ___ Depth (Inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (Stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: 2

Tree Stratum (Plot Size: 30' Radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Sapling/Shrub Stratum (Plot Size: 30' Radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Herb Stratum (Plot Size: 30' Radius)			
1. Juncus effusus	20	Y	OBL
2. Eleocharis obtusa	20	Y	OBL
3. Rumex crispus	12	N	FAC
4. Diodia virginiana	5	N	FACW
5. Apocynum cannabinum	3	N	FACU
6. Liquidambar styracilua	1	N	FAC
7. Ludwigia palustris	25	Y	OBL
8. Chamaecrista fasciculata	1	N	FACU
9. Trifolium sp.	3	N	FAC
10. Lespedeza cuneata	5	N	FACU
11.			
12.			
	95 = Total Cover		

50% of total cover: 47.5 20% of total cover: 19

Woody Vine Stratum (Plot Size: 30' Radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

50% of total cover: _____ 20% of total cover: _____

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

	Total % Cover of:	Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column Totals:	(A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

____ Prevalence Index is ≤ 3.0[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of Hydric soil and wetland hydrology must be present unless disturbed or problematic.

Definitions of Vegetation Strata:

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Sapling/Shrub - Woody plants, excluding woody vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants regardless of size. and woody plants less that 3.28 ft (1 m) in height.

Woody Vine - All woody vines greater than 3.25 ft in height.

Hydrophytic Vegetation Present? **Yes X** **No** ____

Remarks: (If Observed, list morphological adaptations below).

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/3	100					Organic	
2-10	10YR 4/2	95	10YR 5/6	5			Clay Loam	
10-20	2.5Y 6/3	100					Loam	
20-28	2.5Y 5/4	97	10YR 5/8	3			Sandy Clay Loam	
28-32	2.5Y 7/2	95	10YR 5/6	5			Sandy Loam	

[1]Type: C=Concretion, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soils Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A22)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Magnanese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 153A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of Hydrophytic Vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: The Crossings – Tower Property City/County: Isle of Wight Sampling Date: 7/20/2021

Applicant/Owner: Franciscus Homes, Inc. State: VA Sampling Point: 3

Investigator: Brian Owen of MSA. P.C. Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Relatively Flat Local relief (concave, convex, none): _____ Slope (%): 0-2%

Subregion (LRR or MLRA): LRR-T Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI Classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present Yes X No ___

Are vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area Within a Wetland?** **Yes _____ No X**
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks: Site is periodically mowed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) (**LRR U**)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) (LRR T, U)

Field Observations

Surface Water Present? Yes _____ No X Depth (Inches): _____

Water Table Present? Yes _____ No X Depth (Inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (Inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (Stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: 3

Tree Stratum (Plot Size: 30' Radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Nyssa sylvatica	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Sapling/Shrub Stratum (Plot Size: 30' Radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot Size: 30' Radius)			
1. Juncus effusus	3	N	OBL
2. Apocynum cannabinum	25	Y	FACU
3. Solanum carolinense	8	N	FACU
4. Microstegium vimineum	15	Y	FAC
5.Parthenocissus quinquefolia	10	Y	FACU
6. Toxicodendron radicans	5	N	FACU
7. Chamaecrista fasciculata	5	N	FACW
8. Diospyros virginiana	3	N	FAC
9. Ranunculus sp.	2	N	FAC
10. Hordiem pusillum	10	Y	FACU
11.			
12.			
	81 = Total Cover		
50% of total cover: 40.5	20% of total cover: 16.2		
Woody Vine Stratum (Plot Size: 30' Radius)			
1. Vitis rotundifolia	5	Y	FAC
2.			
3.			
4.			
5.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

____ Dominance Test is >50%

____ Prevalence Index is ≤ 3.0[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of Hydric soil and wetland hydrology must be present unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree - Woody plants, excluding woody vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height

Sapling/Shrub - Woody plants, excluding woody vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants regardless of size. and woody plants less that 3.28 ft (1 m) in height.

Woody Vine - All woody vines greater than 3.25 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** X

Remarks: (If Observed, list morphological adaptations below).

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 4/3	100					Loam	
14-20	10YR 4/2	100					Clay Loam	
20-24	10YR 7/2	94	10YR 5/6	6			Clay Loam	

[1]Type: C=Concretion, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soils Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A22)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Magnanese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 153A, B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of Hydrophytic Vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive layer (if observed):

Type: _____

Depth (inches): _____

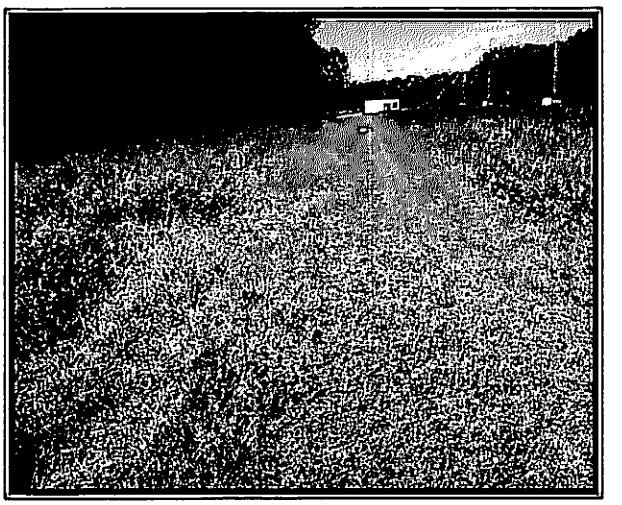
Hydric Soil Present? Yes X No _____

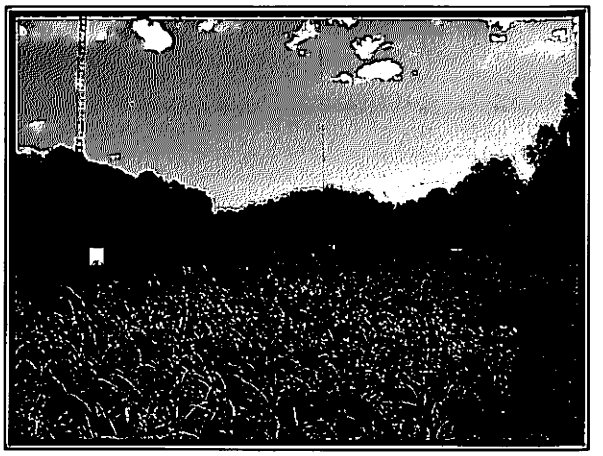
Remarks:

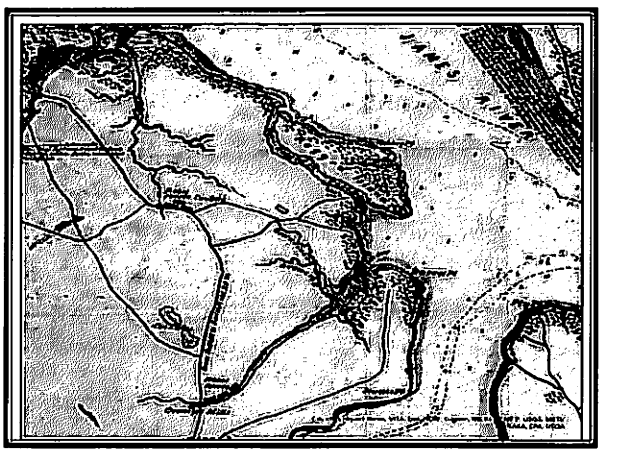
PHASE I CULTURAL RESOURCES SURVEY OF THE 12.20-ACRE JAMES RIVER CROSSING TRACT

ISLE OF WIGHT COUNTY, VIRGINIA







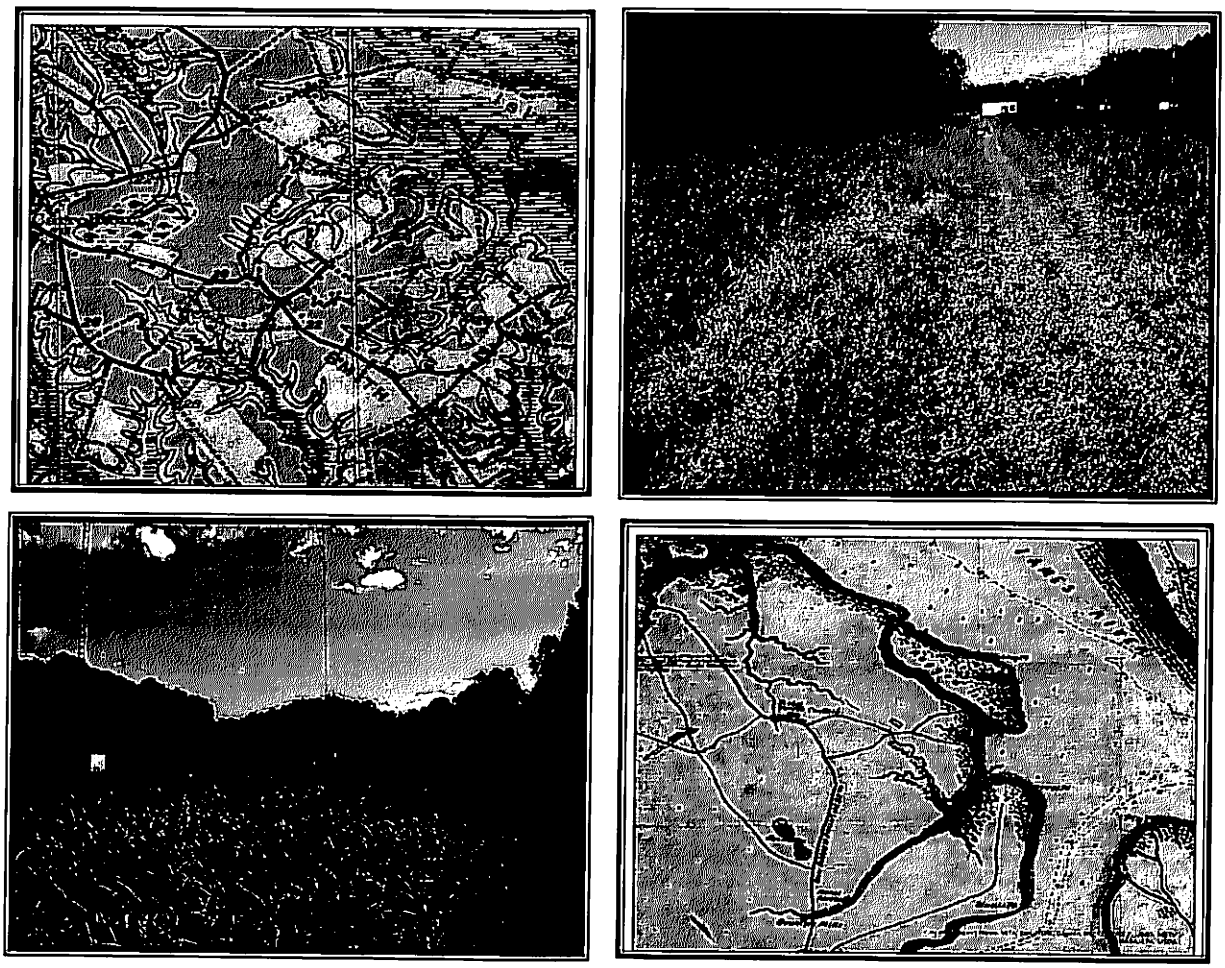


Circa~ Cultural Resource Management

DECEMBER 2021

PHASE I CULTURAL RESOURCES SURVEY OF THE 12.20-ACRE JAMES RIVER CROSSING TRACT

ISLE OF WIGHT COUNTY, VIRGINIA



Circa~ Cultural Resource Management

DECEMBER 2021

PHASE I CULTURAL RESOURCES SURVEY OF THE 12.20-ACRE JAMES RIVER CROSSING TRACT ISLE OF WIGHT, VIRGINIA

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December 2021

ABSTRACT

In the fall of 2021, Eastern Virginia Law Group PLLC contracted Circa~ Cultural Resource Management, LLC (Circa~) to conduct a Phase I cultural resources survey of the James River Crossing tract (the project) in Isle of Wight County, Virginia. This Phase I cultural resources survey aimed to identify and record all historic resources within the project area before the project's development. This survey identified one isolated find, no previously-identified archaeological resources, no new archaeological resources, no previously-identified architectural resources, and no new architectural resources.

The Phase I shovel testing recorded one historic isolated find and one circa late 20th-century radio station with associated infrastructure within the project area. No further work is recommended for the one isolated find, as it is not eligible for listing on the National Register of Historic Places. Because the radio station was constructed circa late 20th century, most likely in the late 1970s to early 1980s, it was not formally surveyed at this time, and no Virginia Department of Historic Resources (VDHR) site number was requested.

Circa~ recommends that the proposed project will not affect any archaeological or architectural sites listed on or potentially eligible for listing on the National Register of Historic Places. Therefore, no further work is recommended.

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INTRODUCTION

In the fall of 2021, Circa~ Cultural Resource Management, LLC (Circa~) conducted a Phase I cultural resources survey of the James River Crossing tract (the project) in Isle of Wight County, Virginia (Figure 1). The project area, which encompasses approximately 12.20 acres, is bordered by new, current development to the west, rural residential lands to the south and north, and Channell Way to the east. The developer plans to construct a housing development. The Area of Potential Effect (APE) for archaeological and architectural resources is the 12.20-acre project area.

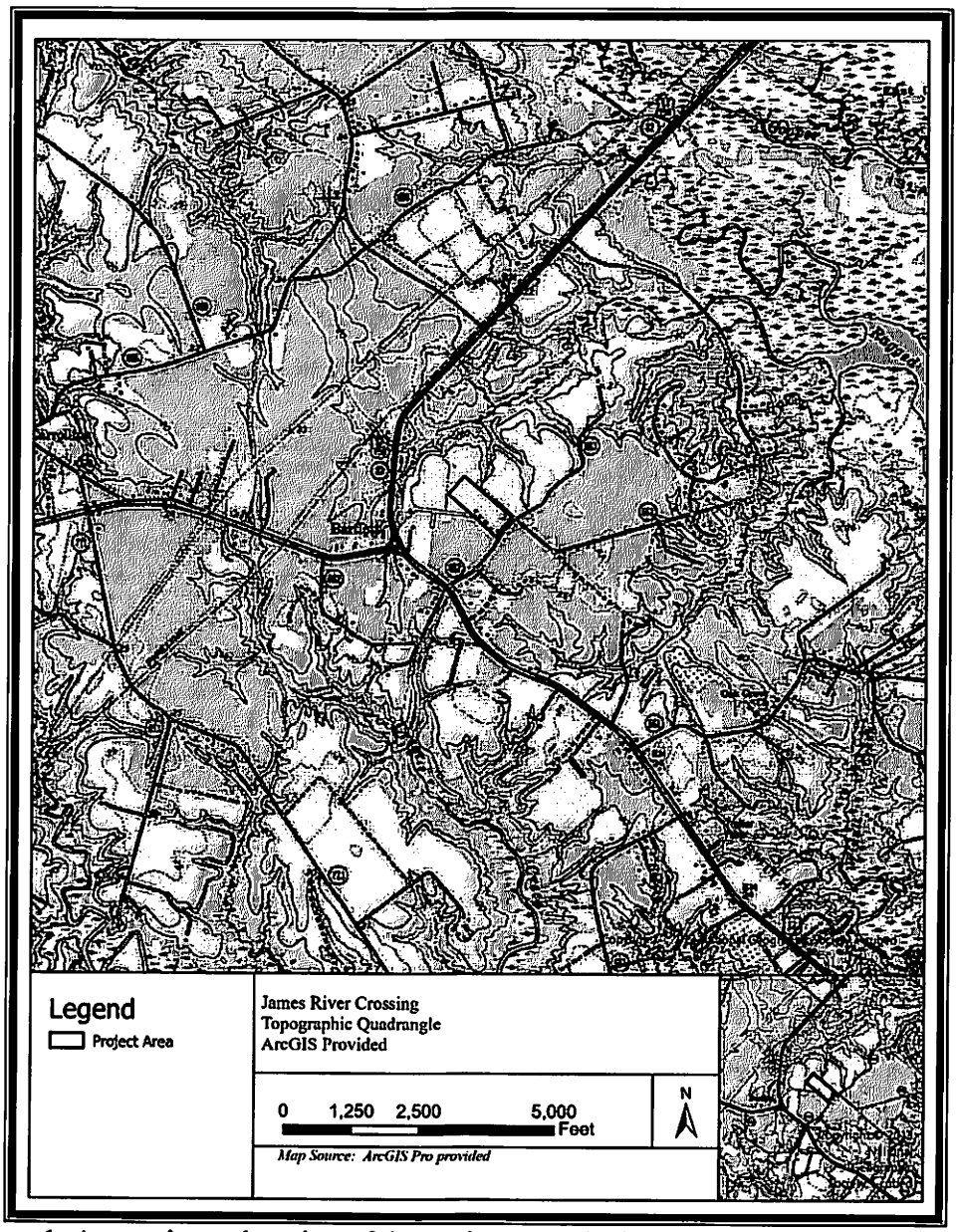


Figure 1. Approximate location of the project area depicted in red upon USGS Benns Church quad.

The investigation was completed on behalf of Isle of Wight County as part of the rezoning request and conducted per the Secretary of the Interior's *Standards and Guidelines for Archaeological Documentation* and the *Guidelines for Preparing Archaeological Resource Management Reports* of the Virginia Department of Historic Resources (VDHR). The report describes fieldwork results and makes recommendations for further work.

This report describes the project area's physical and environmental setting, an outline of meaningful historical contexts for the APE, a general research design that summarizes field methods, previous research in the area, and expected results. Finally, the survey results are described, the findings reviewed, and recommendations explained. Field notes, artifacts, and other project records are curated in Circa ~'s office in Williamsburg, Virginia. It is anticipated that all these materials will eventually be transferred either to the landowner or VDHR in Richmond, Virginia, following the project's conclusion.

At Circa~, Carol D. Tyrer, Registered Professional Archaeologist (RPA), served as Project Manager for the project. Skye Hughes, RPA, served as the Principal Investigator for the project. Dawn M. Muir, RPA, served as the Architectural Historian for the project and completed the architectural survey and historical context. Skye Hughes, Carol D. Tyrer, and Dawn M. Muir prepared the report. The successful completion of the Phase I survey for the proposed development was made possible by the contribution of many individuals. In particular, Jerry Bowman with Eastern Virginia Law Group PLLC ensured that project information and maps were always available for the study.

ENVIRONMENTAL BACKGROUND

The primary reasons for incorporating environmental studies into archaeological projects are: to learn of possible environmental constraints or lack of constraints; to determine the presence or absence of critical resources that might have influenced site distribution, etc.; and to discover environmental factors -- erosion, deposition, subsidence, and historical land-use patterns -- that might influence the integrity of archaeological sites once they have formed. A brief environmental summary of the project area is provided below.

The tract is situated in the Coastal Plain physiographic province within a partially open grassy field with a fringe of hardwood and softwood trees along the tract's western, southeastern, and northern edges. The tract is relatively level and ranges in elevation from approximately 21 feet above mean sea level (AMSL) in the southeastern section to 25 feet AMSL in the western section of the tract. Water ponds to the south of the gravel drive within the power line easement and along the western and northwestern edge of the tract. Miss Utility mapped underground utilities along the eastern edge of the project area by Channell Way. An overhead electrical line parallels the gravel road leading to a structure. There are four radio towers with guidewires embedded surrounding the towers. Underground utilities interconnect these towers and the station. The landform consists of a flat upland at the head of an unnamed non-perennial tributary to Ragged Island Creek. Drainage ditches were noted along the western edge of the tract and within the adjacent parcels to the west and south. The site can be accessed via a dirt road off Channell Way.

A review of aerial photos from 1994 through 2018 shows the radio towers and station on the property over the last 24 years. In addition, the forest to the south has matured during this period (Figures 2 - 7).

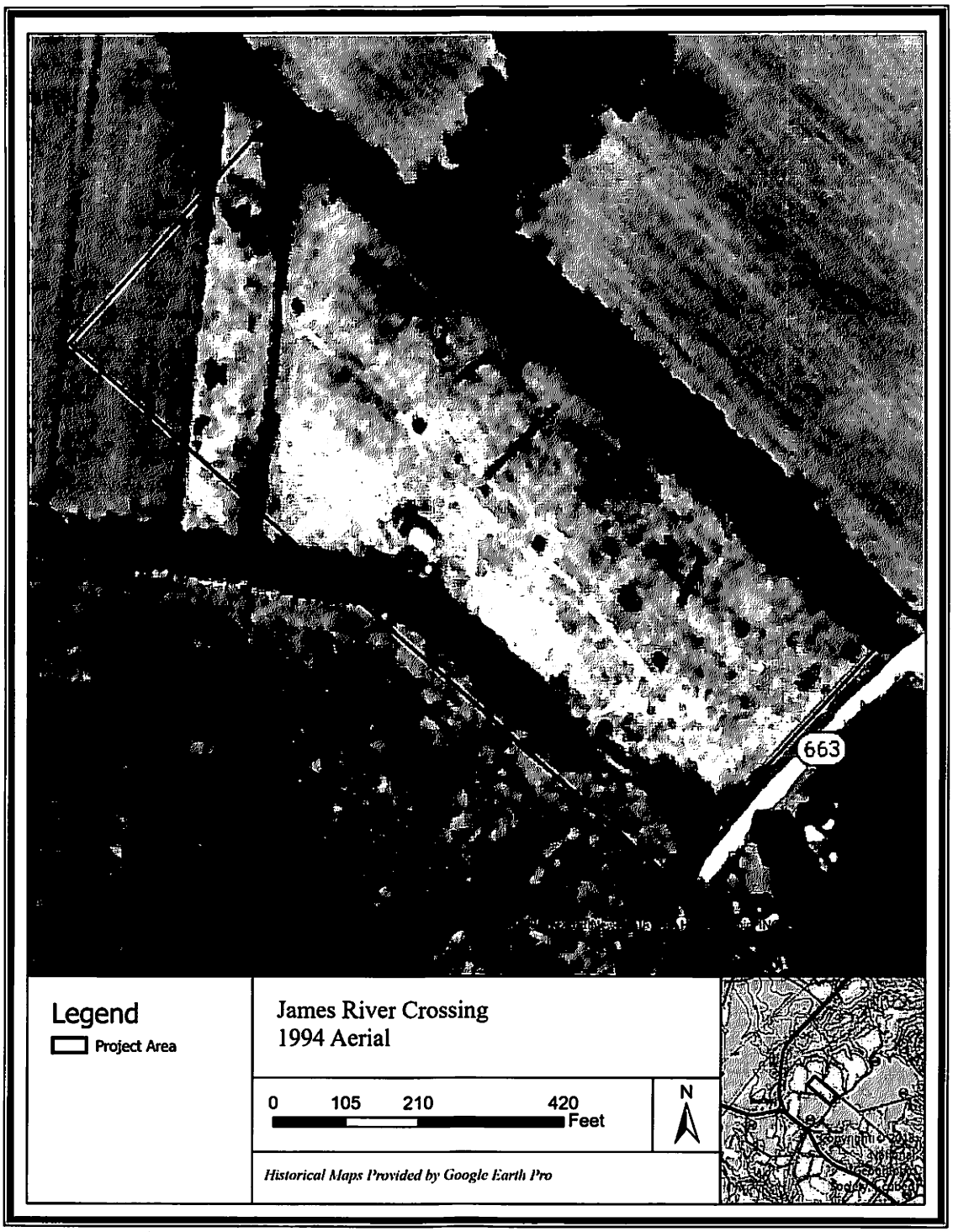


Figure 2. 1994 aerial view of the project area from Google Earth.

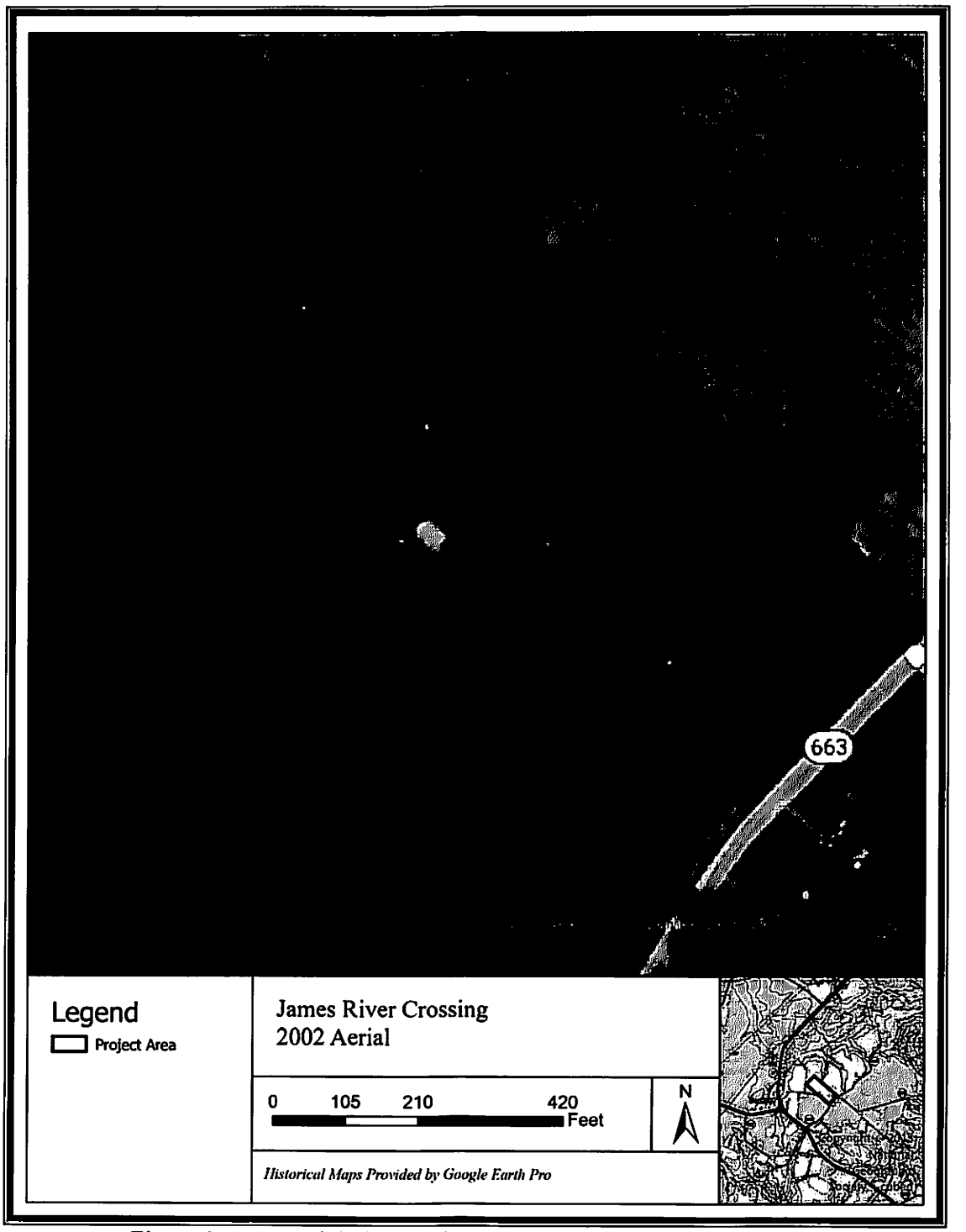


Figure 3. 2002 aerial view of the project area from Google Earth.

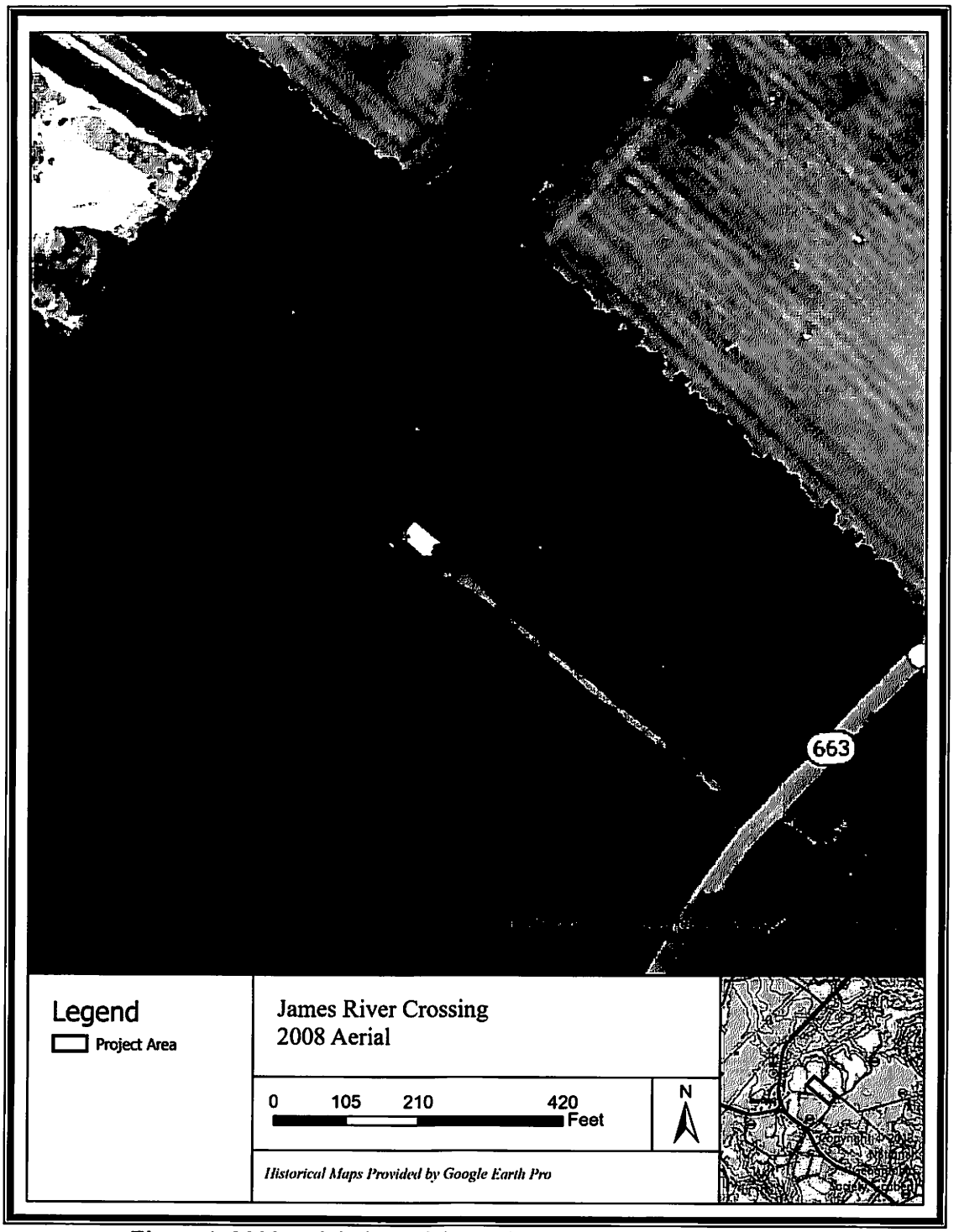


Figure 4. 2008 aerial view of the project area from Google Earth.

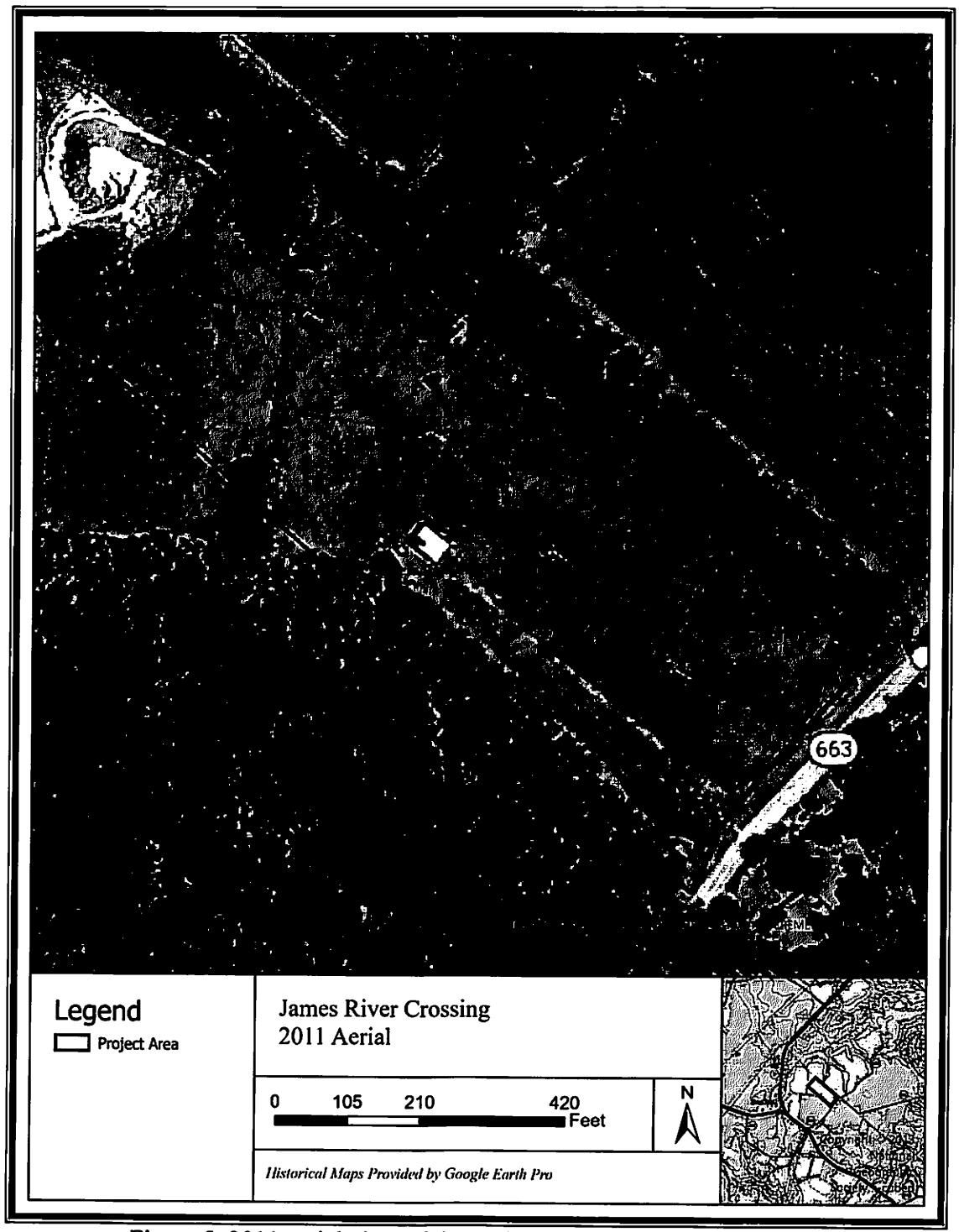


Figure 5. 2011 aerial view of the project area, from Google Earth.

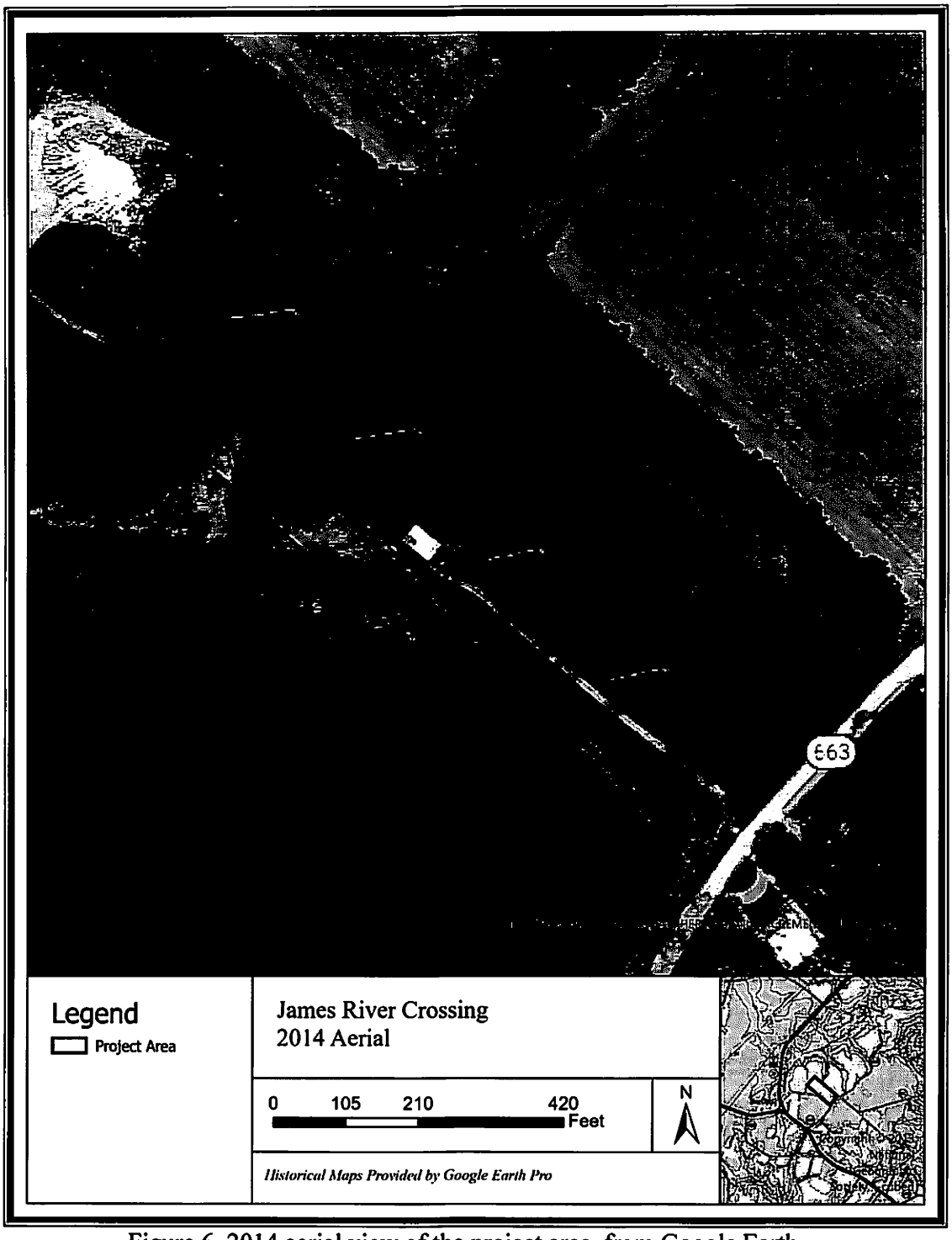


Figure 6. 2014 aerial view of the project area, from Google Earth.

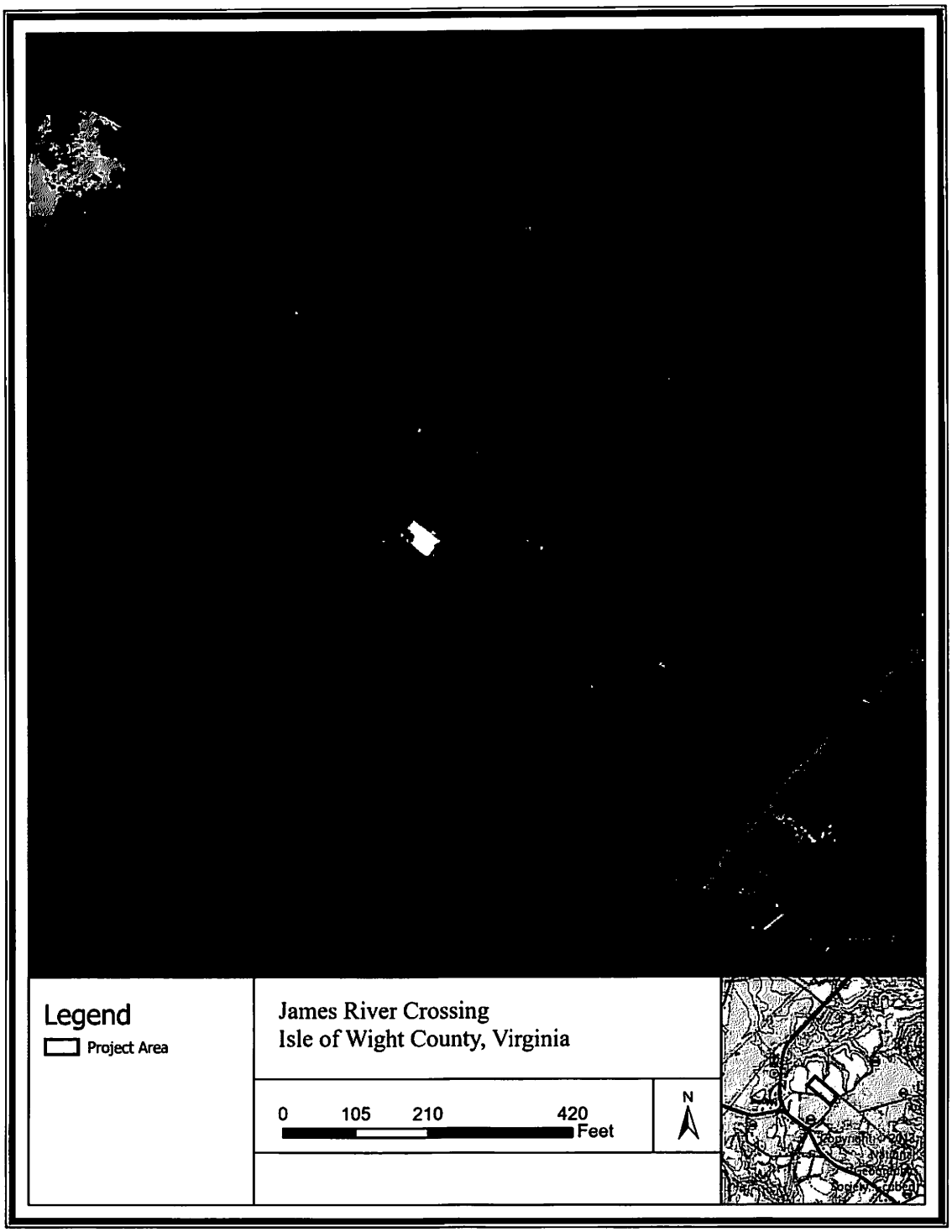


Figure 7. Current (2021) aerial view of the project area, from Google Earth.

Soils

At least two different soil types and type variants exist within the project area (Natural Resources Conservation Service [NRCS] 2021). These soil and soil types include Myatt fine sandy loam and Yemassee fine sandy loam (Figure 8 and Table 1). These types and variants are described below, including references to drainage, hunting, and gathering potential, and horticultural and agricultural productivity potential. Further, conclusions regarding the suitability of each for historical and Native American occupation and archaeological site probability are also explained.

Soils maps and associated data analyze soil types within a geographic area. Despite comprehensive and detailed coverage of most areas by soils surveyors, researchers often miss microenvironments due to their small footprints. Unfortunately, resource-rich microenvironments were often common sites of cultural activity. As such, this analysis of archaeological potential is a "best-guess" using the best available data.

Well-drained, agriculturally- and horticulturally-productive soils proximal to transportation corridors were the best choices for historic period occupation. Secondary areas, such as those containing wet soils and acid soils, after improvement such as drainage and liming, may have also been suitable choices for historic occupation. No navigable waterways exist within the project area; thus, water travel is not a factor in the site probability analysis of this tract.

Areas of wet soils may have been attractive to Native American cultures. In these areas, edible herbaceous plant species may have been gathered, and faunal species browsing these areas may have been hunted with success. Well-drained soils proximal to these resource-rich areas may have made adequate hunting and gathering campsites where the hunted and gathered resources were processed. These sites would have left a visible archaeological footprint. Little archaeological evidence would be located within the wet areas, the immediate locale of resource procurement.

Areas containing gravelly soils may have been especially attractive to stone tool-manufacturing Native American cultures, but the level of attraction may have depended on the type and quality of the gravels available in these locations. Well-drained soils proximal to quarry-able, gravel-rich areas would have made adequate lithic material procurement campsites. Still, in this case, archaeological materials may be located at both the campsites and the quarry sites.

Table 1. Soils Identified Within the Project Area Boundaries.

9	Myatt fine sandy loam	12.0	Northern, southern, western, eastern, central	99.90%
23	Yemassee fine sandy loam	0.01	Northwestern	0.10%

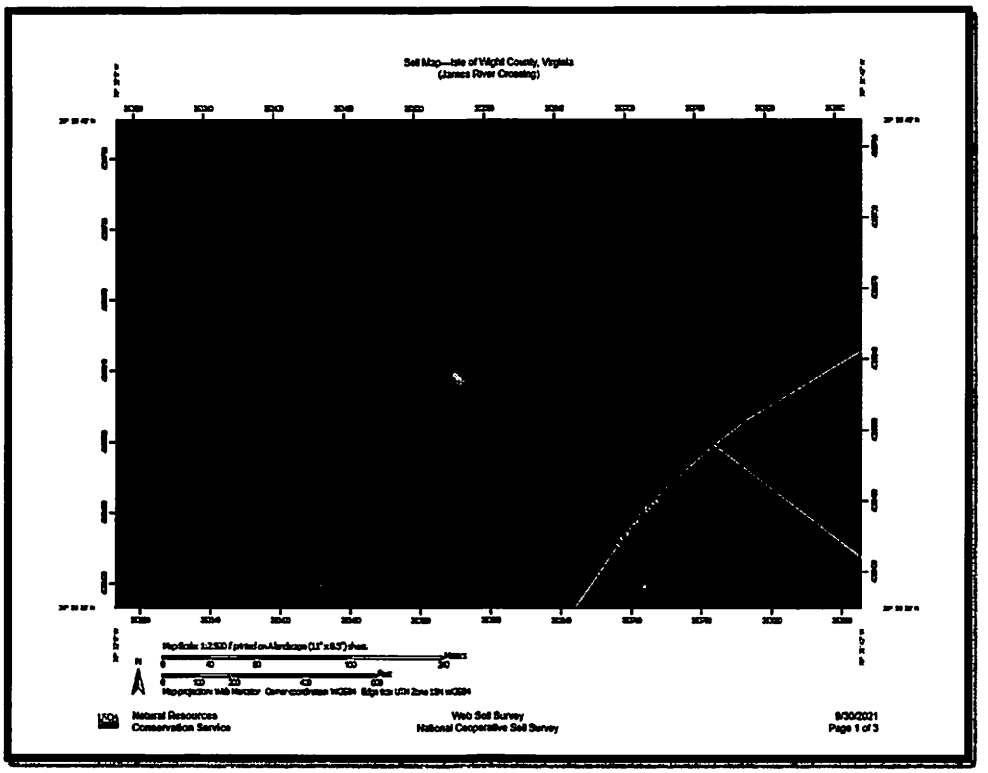


Figure 8. Project area soil map, from NRCS website.

Soils Identified Within the Project Area

Myatt Soil (9)

Myatt soil is a very-deep, poorly-drained, moderately-slowly-permeable soil formed in the regolith of medium- to moderately-fine-textured marine or fluviatile sediments found in stream terraces and upland flats of the Southern Coastal Plain (NRCS 2021). Solum thickness ranges from 40 inches to 60 inches in this very strongly acid to moderately acid soil. This soil features a very slow to slow surface runoff. Most areas of Myatt soil are in woodland or pasture. This soil can support corn, cotton, oats, and hay crops where cultivated. Where forested, this soil can support water oak, maple, sweetgum, ash, cypress, bay, and some pine.

Yemassee Soil (23)

Yemassee soil is a very-deep, somewhat poorly-drained, moderately-permeable soil formed in marine sediments and located on terraces and broad flats of the lower Coastal Plain (NRCS 2021). Solum thickness ranges from 40 inches to 70 inches in this extremely acid to slightly acid soil. The water table is about 1.00 feet to 1.50 feet below the surface for up to four months of the year. Where forested, this soil can support loblolly pine, slash pine, longleaf pine, sweetgum, black gum, water oak, dogwood, and hickory. Where cultivated, this soil can support corn, soybeans, small grains, truck crops, and pasture grasses.

RESEARCH STRATEGY AND METHODOLOGY

Research Strategy

The survey was designed to identify all cultural resources present in the project area and obtain sufficient information to make recommendations about the further research potential of each resource based on potential eligibility to the National Register of Historic Places. Both documentary research and archaeological field were performed at a level in compliance with the Secretary of the Interior's Standards (Department of the Interior 1983, 48 FR 44720-44723) and VDHR guidelines for Phase I archaeological surveys. Moreover, the field survey was conducted in compliance with statutes regarding the impact of undertakings on historic properties as summarized by the Advisory Council on Historic Preservation (36 CFR 800 [1986 and amended]). To meet Advisory Council on Historic Preservation standards, a Phase I archaeological survey must be conducted in "a reasonable and good faith effort to identify historic properties that may be affected by the undertaking" (36 CFR 800.4). The Phase I survey was performed and documented at a level that meets or exceeds these standards.

A cultural resource is gauged to be significant if at least one of four National Register of Historic Places criteria can be applied to it:

A. Associated with significant events in the broad patterns of national history;
B. Associated with the lives of persons significant in our past;
C. Representative of a type, period, or method of construction, or the work of a master; and
D. Capable of yielding important information about the past.

Typically, Criterion D applies to archaeological sites, although all four criteria may apply. To be capable of yielding important information about the past, generally, a site must possess artifacts, soil strata, structural remains, or other cultural features that make it possible to test historical hypotheses, corroborate and amplify currently available information, or reconstruct the sequence of the local archaeological record.

Methods

Archival Research

Archival research commenced examining cartographic and historical works online with the Library of Congress, the Colonial Williamsburg Rockefeller Library, VDHR, the Library of Virginia, and the Isle of Wight County. Efforts were made to determine whether historic road rights-of-way passed close to the project area and whether subsurface cultural deposits were likely to be present. Data accumulated during previous archival research on historical sites throughout the region also were examined.

Architectural Field Methods

A field survey of all historic structures was conducted according to VDHR's survey procedures. A VDHR site form was completed for each structure or complex 45 years of age or older, and at least one photograph was taken, usually more.

Archaeological Field Methods
Before subsurface testing, the entire project area was visually inspected via pedestrian survey, and all aboveground evidence of cultural activity was noted and recorded. Shovel tests, approximately 1.50-foot in diameter, were excavated at 50- and 25-foot intervals. Waterlogged areas, or portions of the project area with slopes in excess of 15%, were carefully examined for cultural material but were not subjected to subsurface testing. All shovel tests were excavated according to natural levels to the sterile subsoil, and all soils were screened through a ¼-inch wire mesh. Profiles were recorded for representative shovel tests, and the Munsell classification system recorded soil color. All shovel tests were recorded on standard field forms, and all cultural material was retained.

Laboratory Methods
Once removed from the field, all archaeological data and specimens were transported to Circa~ 's laboratory for processing and analysis. Before washing, artifacts from a given provenience were first emptied into a screened basket and sorted. Items determined to be unstable will be either dry brushed or, in some cases, not washed and re-bagged with the appropriate provenience information. These items may include unstable organic objects, such as wood or other plant material, leather, bone, fabric, metal requiring immediate conservation, and overglaze painted delftware, and other soft-bodied ceramics such as some local wares. Stable objects will be washed with a soft brush. The edges of ceramics and glass will be thoroughly cleaned to identify body type and mending. Items will then be placed by provenience on a drying rack.

Artifacts were sorted first by material and checked for mends in a given provenience. Stylistic attributes were described with current terminology and recorded by count into a database for analysis. Non-diagnostic artifacts with like attributes will be grouped - i.e., clear, amber, etc., bottle body glass fragments, unrecognizable nail fragments, corroded metal fragments, and aqua window glass. Diagnostic artifacts were sorted and grouped based on type, ware, vessel, or function.

CULTURAL BACKGROUND

The following section provides the Native American and historical background information necessary to assess the archaeological potential of the proposed project area. Previous investigations in the general vicinity of the project area are outlined, while specific documents and resources employed in this survey are discussed.

Historic Context

Native American Context
Virginia's Native American cultural chronology, like that of the rest of the Middle Atlantic region, is divided into three major periods, Paleoindian, Archaic, and Woodland, with the differences defined mainly on changes in subsistence practices, settlement patterns, and types of material remains found. The three main periods reflect significant changes, while "Early," "Middle," and "Late" subperiods reflect less dramatic, though still significant, changes.

Paleoindian Period (Prior to 10,000 B.C.)
Paleoindian occupation in Virginia, the first human occupation of the region, began sometime before 10,000 B.C. The earliest diagnostic artifacts where there is any consensus are Clovis projectile points, typically fashioned of high-quality cryptocrystalline materials such as chert, chalcedony, and jasper. Later Paleoindian points include smaller Clovis-like and Cumberland variants and small "Mid-Paleo" points. Dalton, Hardaway-Dalton, and Hardaway side-notched points make up the later end of the Paleoindian period in the southeastern part of Virginia. Also, though to a lesser extent, diagnostic are certain types of well-made endscrapers, sidescrapers, and other formalized tools. Most current views now hold that eastern Paleoindians were generalized foragers emphasizing hunting. The social organization apparently consisted of relatively small bands that exploited a broad but defined territory.

Isolated projectile point finds and what appear to be small temporary camps represent the majority of Paleoindian remains in Virginia. Although some larger and very notable base camps are present in Virginia, they are relatively rare and usually associated with sources of preferred high-quality lithic materials. Two of the most important Paleoindian sites in Virginia and the eastern United States are the Thunderbird Site in the Shenandoah Valley (Gardner 1974, 1977) and the Williamson Site in south-central Virginia (McCary 1951, 1975). Both are large base camps associated with nearby sources of high-grade cryptocrystalline lithic materials. Researchers have formulated a site typology at the Thunderbird site area and its surrounding environs, including lithic quarries, quarry-related base camps, quarry reduction stations, base camp maintenance stations, remote hunting sites, and isolated point sites (Gardner 1981, 1989).

One of the earliest dating sites in North America, Cactus Hill, lies in the Coastal Plain along the Nottoway River in nearby Sussex County, Virginia (McAvoy and McAvoy 1997). Although still controversial, Cactus Hill appears to potentially become one of the most well-accepted pre-Clovis sites in the western hemisphere.

There are concentrations of Paleoindian materials in Virginia, and, conversely, there are areas where sites and isolated finds of this early period are all but absent. The largest concentrations are in Dinwiddie and Mecklenburg counties, with a second one around the Dismal Swamp. In the Virginia Coastal Plain, counties lying south of the James River account for the largest number of Paleoindian finds (McCary 1983, Turner 1989), and Isle of Wight County is one of those counties with a relatively high concentration of such finds. This situation likely represents the northern edge of the greater cluster that extends down to the Dismal Swamp.

Despite this location, Paleoindian finds are rare, and Paleoindian sites are far less common than all other periods of Native American history. However, a fluted point crafted from petrified wood was recovered to the east of the project tract. Given this find, the possibility of finding remains from this early period either in or near the project area is considered higher than average. In addition, any well-drained location along the James River, particularly where tributaries converge, is a high potential location for Native American camps and settlements in general. Therefore, considering that several

Paleoindian finds have been discovered near the project tract. In Isle of Wight County, the presence of these sites or isolated finds in the vicinity are unlikely but cannot be ruled out.

Archaic Period (8,000 B.C. - 1200 B.C.)
The beginning of the Archaic period generally coincides with the end of the Pleistocene epoch, marked in this region by a climatic shift from a moist, cool period to a warmer, dryer climate. Vegetation also changed at this time from a largely boreal forest setting to a mixed conifer-deciduous forest. In eastern Virginia, a temperate climate was established, and the formation of the Chesapeake estuary began (Dent 1995). Researchers believe that increasing differences in the seasonal availability of resources brought on by post-Pleistocene changes coincide with increasing emphasis on strategies of seasonally geared mobility.

A band-level social organization involving seasonal movements corresponding to the seasonal availability of resources and, in some instances, shorter-interval movements is thought to characterize Archaic populations primarily. Settlement during the Archaic period probably involved the occupation of relatively large regions by single band-sized groups, living in base camps during part of the year and dispersing as necessary on an as-needed or seasonal basis, creating smaller microband camps, possibly consisting of no more than single families.

The development of more specialized resource procurement activities and the technology to accomplish these activities also characterizes the Archaic period. These differences in the material culture are believed to reflect larger, more localized populations and changes in food procurement and processing methods.

Corner and side notching became a common characteristic of projectile points at the beginning of the Archaic period (Early Archaic subperiod), indicating changes in hafting technology and possibly the invention of the spear-thrower (atlatl). Notched forms include Palmer and Kirk corner-notched and, in localized areas, various side-notched forms. A series of bifurcate base forms marked the later end of the Early Archaic subperiod and the beginning of the Middle Archaic subperiod. The Middle Archaic subperiod, circa 6,500 B.C. - 3,000 B.C., sees the rise of various stemmed projectile point forms. In this area of eastern Virginia, the most common Middle Archaic forms would be Stanly, Morrow Mountain, and Guilford types, followed by the side-notched Halifax type at the end of the subperiod and the transition into the Late Archaic subperiod between circa 3,500 B.C. and 3,000 B.C. Stemmed and notched forms, including various large, broad-bladed stemmed knives and projectile points (e.g., Savannah River and variants), dominated the Late Archaic subperiod. These forms generally diminish in size by the succeeding Early Woodland subperiod. Also found, though more rarely along the margins of the Dismal Swamp, are stemmed and notched-stem forms like those generally associated more prominently with areas of Pennsylvania and adjoining parts of the northeast (Perkiomen).

The Archaic period also marks the beginning of ground-stone technology, with the occurrence of ground atlatl weights and celts. New tool categories developed during the Archaic period include chipped- and ground-stone celts, ground stone net sinkers, pestles, pecked stones, mullers, and axes. Vessels carved from steatite have been found on sites dating to the end of the Late Archaic subperiod.

Marked increases in population density and decreased mobility characterize the Late Archaic subperiod in eastern North America (4,000 B.C. - 1,200 B.C.). Because population growth necessitated a larger and more predictable food supply, agriculture probably has its origins in the Middle Atlantic region during this subperiod. Yarnell (1976), for example, writes that sunflower, sump weed, and possibly goosefoot may have been cultivated as early as 2,000 B.C. In the lower Little Tennessee River Valley remains of squash have been found in Late Archaic Savannah River contexts (circa 2,400 B.C.), with both squash and gourd in slightly later period contexts (Chapman and Shea 1988).

The settlement model presented by Gardner (1982) for the nearby Portsmouth locality is most relevant to the project area environs. In this model, the Late Archaic pattern shows continuity with the earlier Middle Archaic subperiod in that the settlement system involves a fusion-fission cycle of alternating group dispersal and aggregation in a series of seasonal shifts (Gardner 1982). Locally, these shifts would occur between the fringe of the Great Dismal Swamp to the south and the estuarine zone and its associated streams. Briefly stated, foray camps would be located directly on the estuaries and up the freshwater tributaries, with seasonally occupied small group base camps in the tributary headwaters. By contrast, the Dismal Swamp is the suggested location of seasonally occupied large group aggregations with associated satellite camps around them.

The most common types of Archaic sites that would most likely be found in and around the project area would be those dating to the Middle and Late Archaic subperiods. Middle and Late Archaic campsites are common in the James River-drained Coastal Plain. The project area was viewed as having a low to moderate potential for the location of Middle to Late Archaic components representing small group, transient campsites. In most cases, such sites would not likely have National Register of Historic Places significance unless preserved features or unplowed subsurface deposits were present.

Woodland Period (1,200 B.C. - circa A.D. 1600)
Ceramic technology, a gradually developing dependence on horticulture, and increased sedentism characterized the Woodland period. Researchers have designated three subperiods (Early, Middle, and Late Woodland) based primarily on stylistic and technological changes in ceramic and projectile point types and settlement patterns.

Not all researchers agree on the temporal brackets for Virginia's Early and Middle Woodland subperiods. Some use the southeastern chronology where the Early Woodland subperiod begins circa 1,000 B.C. and lasts to circa A.D. 200/300. This chronology may apply to southwestern Virginia, though not to the Piedmont, Coastal Plain, or Potomac-drained Ridge and Valley. Gardner (1982) initially formulated the most widely used temporal scheme in the Middle Atlantic, Early Woodland, circa 1,200 B.C. - 500 B.C.;

VDHR Survey Number	Date of resource	Description of resource	Survey information	Recommendation
44IW0222	17th century 18th century 19th century	Dwelling	Phase I survey 3/99	None made
44IW0223	Native American Historic	Camp	Phase I survey 3/99	None made
44IW0224	Native American	Camp	Phase I survey 3/99	None made
44IW0225	18th century 19th century	Trash scatter	Phase I survey 3/99	None made
44IW0226	Middle Woodland	Camp	Phase I survey 3/99	None made
44IW0227	18th century 19th century	Dwelling	Phase I survey 3/99	None made
44IW0228	17th century 18th century	Trash scatter	Phase I survey 3/99	None made
44IW0229	Middle Woodland Late Woodland	Camp	Phase I survey 3/99	None made
44IW0230	20th century	Trash scatter	Phase I survey 3/99	None made
44IW0255	19th century 20th century	Trash scatter	Phase I survey 7/07	None made
44IW0309	20th century	Artifact scatter	Phase I survey 4/19	VDHR determined not eligible 6/19
44IW0310	20th century	Artifact scatter	Phase I survey 4/19	VDHR determined not eligible 6/19
Architectural Resources				
046-5051	ca. 1900	House/Barn, Route 17/258	Phase I survey 7/03	VDHR determined not eligible 8/03
046-5180	ca. 1900	Farmhouse, 23381 Channel Way, site includes one house, one workshop, one barn, one well house, and one cemetery	Phase I survey 3/05	None made
046-5279	ca. 1910	Brown House, Deep Bottom Drive, site includes one ruinous house and one well house	Phase I survey 4/07	None made
046-5539	ca. 1950	House, 23109 Baltimore Lane, the site includes two houses, one shed, and one ruin	Phase I survey 3/19	None made

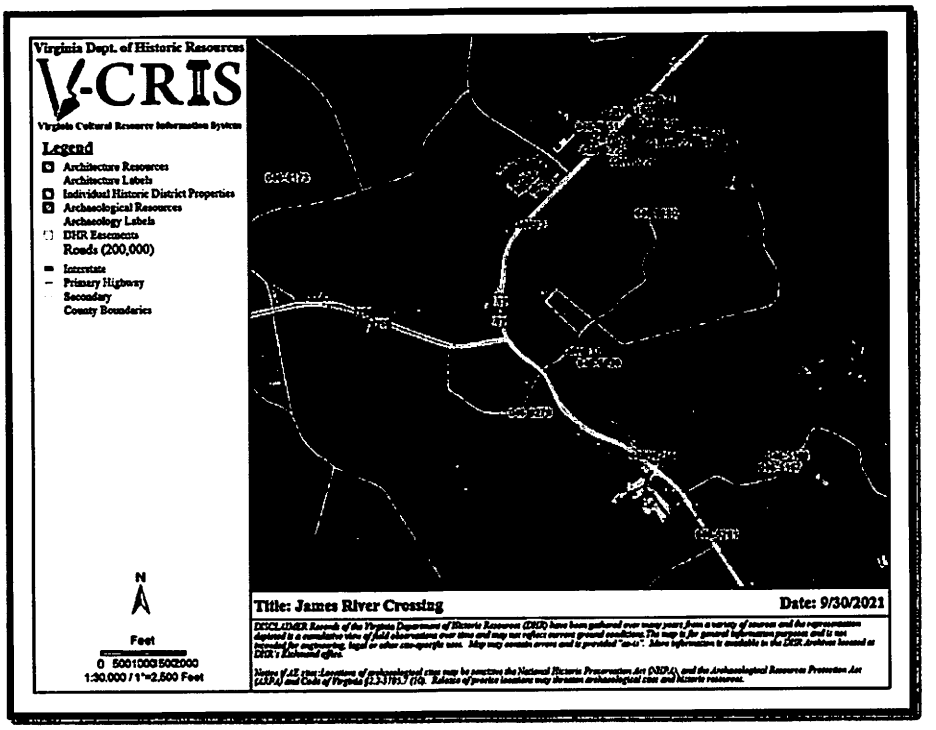


Figure 22. V-CRIS map showing previously-identified resources within a one-mile radius of project area boundaries.

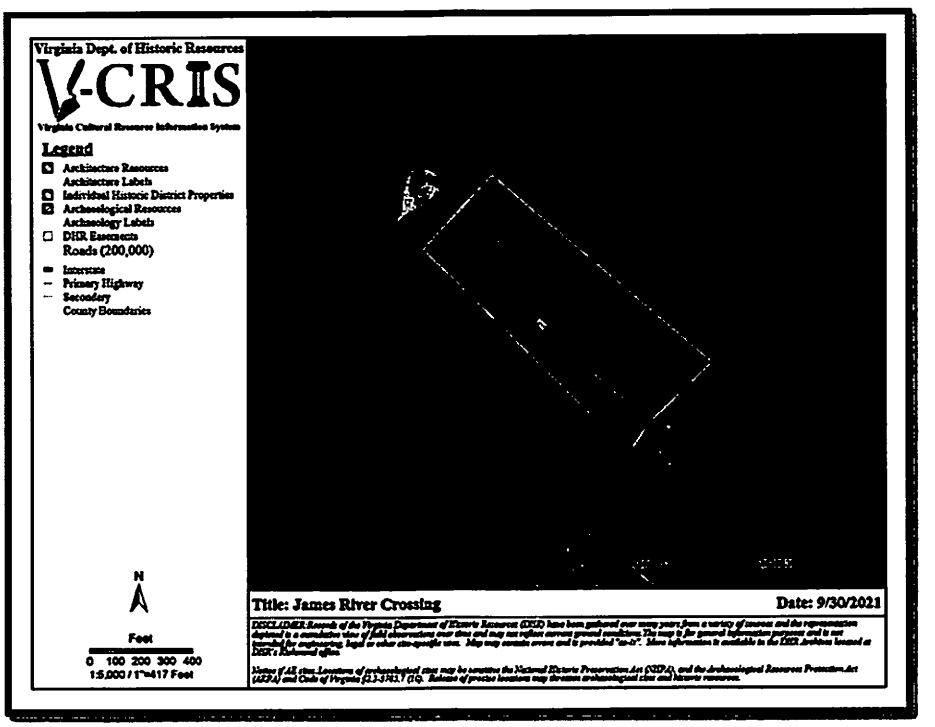


Figure 23. Detailed V-CRIS map showing previously-identified resources within proximity to the project area boundaries.

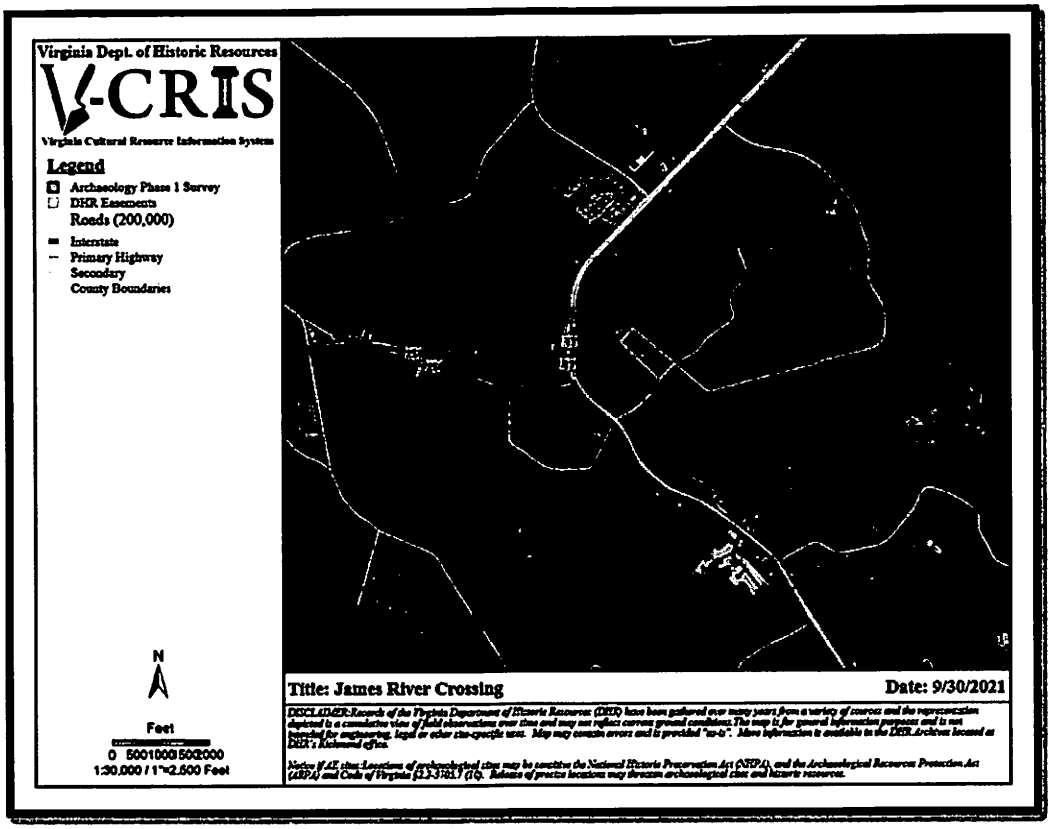


Figure 24. VDHR V-CRIS map showing project area in yellow and previous-survey areas outlined in green.

ARCHAEOLOGICAL SITE POTENTIAL

Native American Site Potential

Eight previously-identified Native American archaeological sites are located within one mile of the project area (Table 3 and Figure 25). Twelve previously-identified Native American archaeological sites are located within two miles of the project area. Of these resources, one site dates to the Woodland period; one site dates to the Middle Woodland subperiod; one site dates to the Middle and Late Woodland subperiods; one site dates to the Woodland period and the 19th century; three sites date to the Native American period; one site dates to the Native American period and the 17th century; two sites date to the Native American period and the 19th and 20th century; and two sites date to the Native American period and the historic period.

Table 3. Previously-Identified Native American Sites Within Two Miles of The Project Area.

Site Number	Site Chronology	Site Type	Native American Lithic Artifacts	Native American Ceramic Artifacts	Site Size	Soil Type	Additional Site Information
44IW0096	Woodland 19th century	Trash scatter	None listed	Fabric-impressed, sand-tempered sherds	None listed	None listed	The site is located along Route 662, approximately 1/10 of a mile from Ragged Island Creek.
44IW0193	Native American Historic	Trash scatter	One secondary quartz flake	None listed	0.120 acres	None listed	The site is located on a ridge approximately 20 feel AMSL.
44IW0216	Native American	Camp	Eight secondary quartzite flakes, five tertiary flakes, one secondary quartzite flake, one secondary quartz flake, one tertiary quartz flake, one secondary siliceous slate flake, one quartzite fire-cracked rock	None listed	None listed	None listed	The site is located on a knoll approximately 17 feel AMSL.
44IW0217	Native American 19th century 20th century	Camp	Three secondary quartzite flakes, five tertiary quartzite flakes, two quartzite fire-cracked rock	None listed	0.90 acres	None listed	The site is located on a knoll approximately 15 feet AMSL.

Site Number	Site Chronology	Site Type	Native American Lithic Artifacts	Native American Ceramic Artifacts	Site Size	Soil Type	Additional Site Information
44IW0218	Native American 19th century 20th century	Camp	One secondary quartzite flake, one tertiary quartzite flake, one quartzite fire-cracked rock	None listed	0.210 acres	None listed	The site is located on a knoll approximately 14 feet AMSL.
44IW0219	Native American 17th century	Camp	Two secondary quartzite flakes	Two fine sand- and grit-tempered sherds	1.0 acres	None listed	The site is located on a knoll approximately 11 feet AMSL.
44IW0220	Native American Historic	Camp	Six secondary quartzite flakes, one tertiary quartzite flake, one quartzite fire-cracked rock	None listed	0.250 acres	None listed	The site is located on a knoll approximately 13 feet AMSL.
44IW0221	Woodland	Camp	None listed	Two shell-tempered sherds, one sand-tempered shed	0.130 acres	None listed	The site is located on a knoll approximately 10 feel AMSL.
44IW0223	Native American	Camp	Two secondary quartzite flakes, one quartzite primary flake	None listed	0.080 acres	None listed	The site is located on a knoll approximately 13 feet AMSL.
44IW0224	Native American	Camp	Four quartzite fire-cracked rocks	None listed	0.069 acres	None listed	This site is located on a knoll approximately eight feet AMSL.
44IW0226	Middle Woodland	Camp	Four secondary quartzite flakes	Nine shell-tempered sherds, one cord-marked sand-, grit-, and shell-tempered sherd, one sand-tempered sherd	1.840 acres	None listed	The site is located on a knoll approximately 17 feet AMSL.
44IW0229	Middle Woodland Late Woodland	Camp	Three quartzite fire-cracked rock	One shell-tempered sherd, one crushed-quartz-tempered sherd	0.060 acres	None listed	The site is located on a knoll approximately 16 feet AMSL.

Given the project area's proximity to the James River and tributaries such as Ragged Island Creek to the north of the project area and Brewers Creek and Creer Creek to the south of the project area, the possibility of finding Native American resources on the site would be moderate to high; however, when coupled with the poorly-drained soil type mapping for the project area, the possibility of locating Native American resources is considered low. Most of the Native American sites were identified to the northeast of the project area, located along Ragged Island Creek on well-drained soil. Given this information, it is possible that a Native American site, most likely a temporary camp, could be found within the project area boundaries. Given the previously-identified sites, this site would most likely date to the Woodland and/or general Native American period and would range in size from under one acre to less than three acres. Judging from the previously-identified sites, it would probably contain a very light mix of lithic artifacts and Native American pottery if a site was found within the project area.

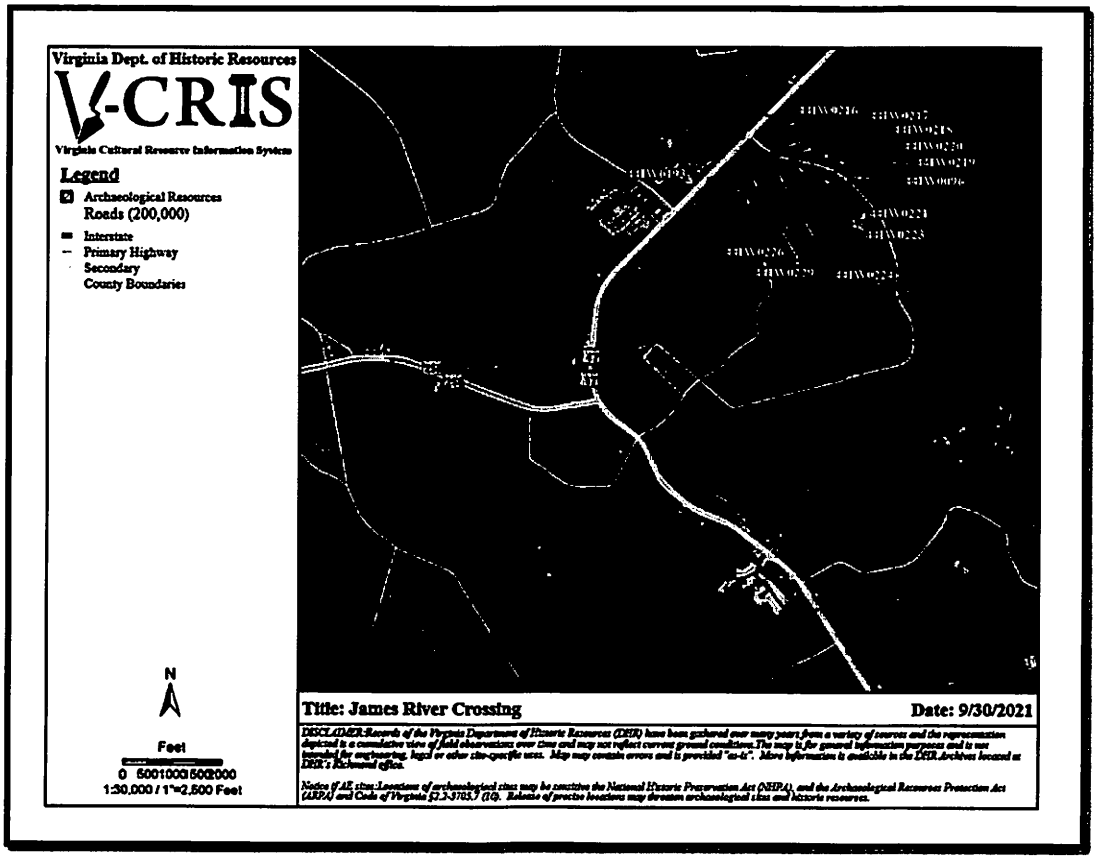


Figure 25. VDHR V-CRIS map showing previously-identified Native American archaeological resources within two miles of the project area (yellow-shaded area).

Historic Site Potential

Sixteen previously-identified historic archaeological sites are located within one mile of the project area (Table 4 and Figure 26). No additional previously-identified historic archaeological sites are located within two miles of the project area. Of these resources, one site dates to the Native American period and the 17th century; two sites date to the Native American period and the 19th and 20th century; two sites date to the Native American period and the historical period; one site dates to the 17th and 18th century; one site dates to the 17th, 18th, and 19th century; one site dates to the 18th century; three sites date to the 18th and 19th century; two sites date to the 19th and 20th century; and three sites date to the 20th century.

Given the project area's proximity to the James River and its tributaries such as Ragged Island Creek to the north of the project area and Brewers Creek and Creer Creek to the south of the project area, and the presence of historic structures near the project area on the historical USGS maps would indicate a moderate to high probability/ However, the presence of poorly-drained soils suggest the possibility of finding historic archaeological resources is considered low to moderate. Most of the previously-identified sites are clustered to the northeast of the project area, near Ragged Island Creek, with several located along Brewers Creek and Creer Creek to the south. Given this information, it is possible that a historical site, most likely a domestic, could be found within the project area boundaries. Given the previously-identified sites, this site would most likely date to the 18th, 19th, and/or 20th centuries and would range in size from under one acre to less than three acres. Judging from the previously-identified sites, if a site were found within the project area, it would probably contain a light mix of ceramic artifacts and domestic artifacts, including glass fragments and building materials such as brick and nails.

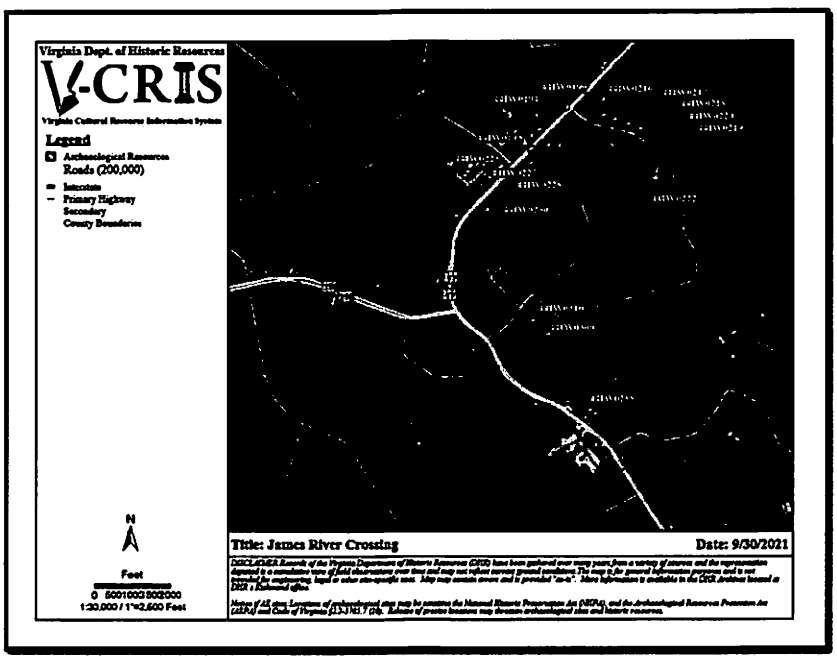


Figure 26. VDHR V-CRIS map showing previously-identified historic archaeological resources within two miles of the project area (yellow-shaded area).

Table 4. Previously-Identified Historical Archaeological Sites Within Two Miles of The Project Area.

Site Number	Site Chronology	Site Type	Historic Ceramic Artifacts	Other Historic Artifacts	Site Size	Soil Type	Additional Site Information
44IW0190	18th century	Grave/burial	None listed	None listed	None listed	None listed	The site is located on a floodplain approximately 22 feet AMSL
44IW0193	19th century 20th century	Trash scatter	Pearlware sherds, whiteware sherds, ironstone sherds	Clam shell fragments, oyster shell fragments, mortar fragments, window glass fragments, bottle glass fragments, plastic fragments	0.120 acres	None listed	The site is located on a ridge approximately 20 feet AMSL.
44IW0194	18th century 19th century	Dwelling	Pearlware sherds, creamware sherds, whiteware sherds, American stoneware sherds	Oyster shell fragments, dark green bottle glass fragments, aqua bottle glass fragments, one iron finial	2.00 acres	None listed	The site is located on a ridge overlooking an unnamed tributary to Ragged Island Creek, approximately 18 feet AMSL.
44IW0216	Native American Historic	Camp	One pearlware sherd	One coal fragment	None listed	None listed	The site is located on a knoll approximately 17 feet AMSL.
44IW0217	Native American 19th century 20th century	Camp	One pearlware sherd, one creamware sherd, one whiteware sherd	One window glass fragment, two cut nail fragments	0.90 acres	None listed	The site is located on a knoll approximately 15 feet AMSL.
44IW0218	Native American 19th century 20th century	Camp	One whiteware sherd	One solarized bottle glass fragment	0.210 acres	None listed	The site is located on a knoll approximately 14 feet AMSL.
44IW0219	Native American 17th century	Camp	Two redware sherds	One dark green bottle glass fragment, two white ball clay pipe bowl fragments, one	1.00 acres	None listed	The site is located on a knoll approximately 11 feet AMSL.

Site Number	Site Chronology	Site Type	Historic Ceramic Artifacts	Other Historic Artifacts	Site Size	Soil Type	Additional Site Information
				white ball clay pipe stem fragment, one pipe bowl fragment			
44IW0220	Native American Historic	Camp	None listed	Two handmade brick fragments	0.250 acres	None listed	The site is located on a knoll approximately 13 feet AMSL.
44IW0222	17th century 18th century 19th century	Dwelling	Two fire-damaged earthenware sherds, one fire-damaged stoneware sherd, one pearlware sherd	One white ball clay pipe stem, one white ball clay bowl fragment, one clear bottle glass fragment, two handmade brick fragments, oyster shell fragments, one cut nail fragment, one coal fragment	0.250 acres	None listed	The site is located on a knoll approximately 13 feet AMSL.
44IW0225	18th century 19th century	Trash scatter	Three creamware sherds	One handmade brick fragment	0.140 acres	None listed	The site is located on a knoll approximately 20 feet AMSL.
44IW0227	18th century 19th century	Dwelling	One creamware sherd, one pearlware sherd	Seven handmade brick fragments, oyster shell fragments, two window glass fragments	0.180 acres	None listed	This site is located on a knoll approximately 19 feet AMSL.
44IW0228	17th century 18th century	Trash scatter	One Chinese porcelain sherd, one Rhenish stoneware sherd	One green bottle glass fragment, one brass nut	0.060 acres	None listed	The site is located on a knoll approximately 18 feet AMSL.
44IW0230	20th century	Trash scatter	Seven whiteware sherds	Seven machine-made brick fragments, aqua bottle glass fragments,	0.110 acres	None listed	The site is located on a knoll approximately 19 feet AMSL.

Site Number	Site Chronology	Site Type	Historic Ceramic Artifacts	Other Historic Artifacts	Site Size	Soil Type	Additional Site Information
				amber bottle glass fragments, clear bottle glass fragments, cobalt blue bottle glass fragments, two clam shell fragments, wire nail fragments, one bone fragment, one lead plug, one iron button			
44IW0255	19th century 20th century	Trash scatter	Two whiteware body sherds	One tableware glass fragment, one coal fragment, one bottle glass fragment, one dark green bottle glass fragment	0.125 acres	None listed	The site is located on a knoll approximately 20 feet AMSL.
44IW0309	20th century	Artifact scatter	One whiteware sherd,	One amber bottle glass fragment, four clear bottle glass fragments, two aqua bottle glass fragments, two aqua window glass fragments, seven 1-inch-long roofing nails, four concrete fragments, three white tile fragments	0.200 acres	None listed	The site is located in a flat area approximately 22 AMSL.

Site Number	Site Chronology	Site Type	Historic Ceramic Artifacts	Other Historic Artifacts	Site Size	Soil Type	Additional Site Information
44IW0310	20th Century	Artifact scatter	Two whiteware sherds	Six clear bottle glass fragments, two aqua window glass fragments	0.030 acres	None listed	The site is located in a flat area approximately 21 feet AMSL.

RESULTS

The field survey provides specific information concerning the location, nature, and distribution of archaeological resources within the project area. Based on VDHR guidelines, Circa~ uses two designations to group archaeological resources: isolated finds and sites. An isolated find is defined as when a limited number of artifacts are recovered from the ground surface or shovel testing. This event may be either a casual or a single-episode discard such as a projectile point or a bottle break or a small collection of artifacts related to various periods, such as a projectile point from the Woodland period and a 20th-century bottle fragment. An archaeological site is defined as a grouping of artifacts that date to specific periods and reveal the location of human activity and land use. Appendix A contains the inventory of artifacts recovered.

Architectural Resources

During the Phase I survey, Circa~ identified no new architectural resources within the project area. However, one late 20th-century radio station was identified within the project area.

Late 20th Century Radio Station

One late 20th-century radio station was identified within the project area boundaries (Plates 1 - 7). This complex includes one prefabricated building, various concrete-block structures, and four radio towers situated in the center of the project area. As noted above, no structures were identified on the historical USGS maps in this area. The building style is consistent with a late 20th-century construction date, most likely in the late 1970s to early 1980s. The building appears to be a prefabricated building clad in vinyl siding and resting on a poured-concrete slab-on-grade foundation. Because this complex was constructed in the late 20th century, it was not formally surveyed, and no VDHR site number was requested.

Archaeological Resources

Circa~ laid out a grid of 100 shovel tests during the Phase I survey (Figure 27). The shovel test grid was offset along Channell Way, the power line easement, and the buried lines between the towers and radio station to avoid impacts to underground utilities and the gravel road. Of the 100 shovel tests within the grid, 18 were skipped for ponded areas and stockpiled concrete pipes (Plates 8 - 14). The project area consists of very flat terrain with mapped Myatt soil. This soil is a very-deep, poorly-drained, moderately-slowly-permeable soil with a very slow to slow surface runoff. The historic 1919 USGS map illustrates the eastern portion of the project area is forested, with the western portion cleared. By 1952, the USGS map shows the tree cover removed to create fields for cultivation.

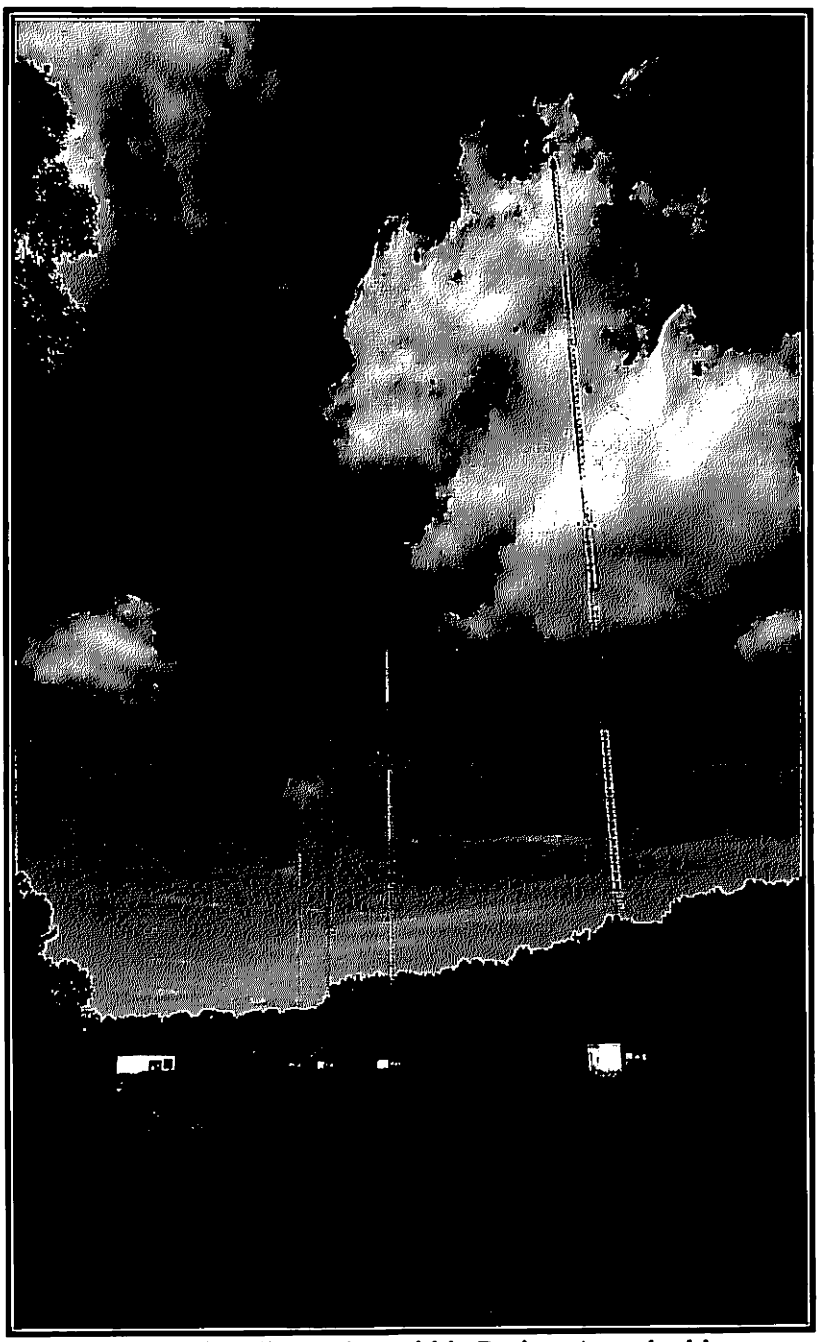


Plate 1. View of Radio Station within Project Area, looking west.

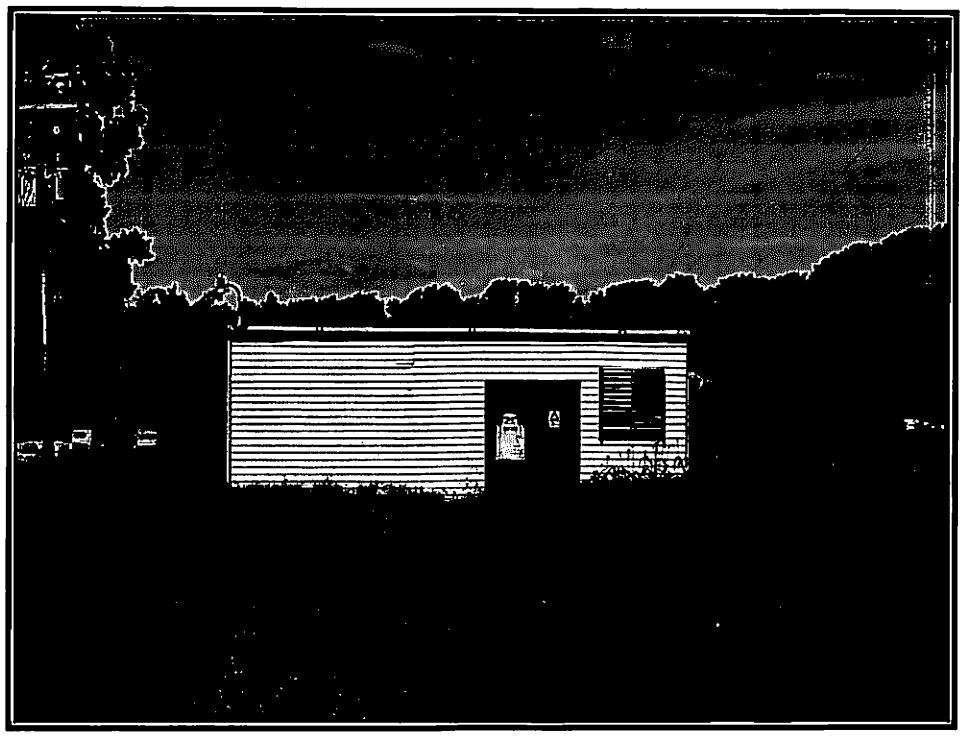


Plate 2. View of Radio Station building within Project Area, looking west.

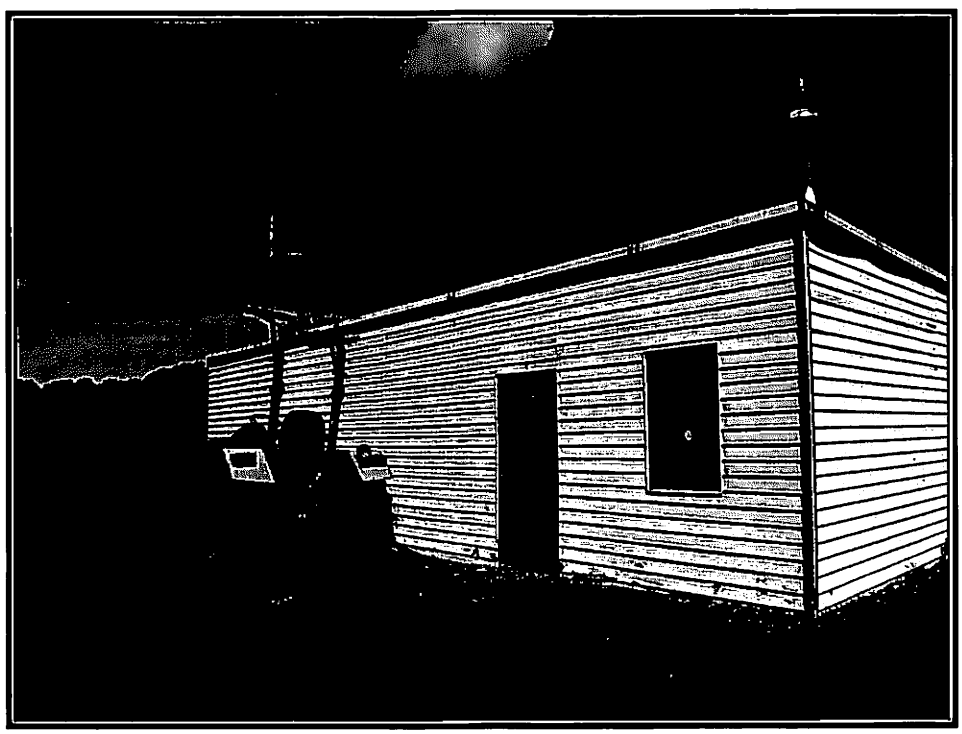


Plate 3. View of Radio Station building within Project Area, looking northeast.

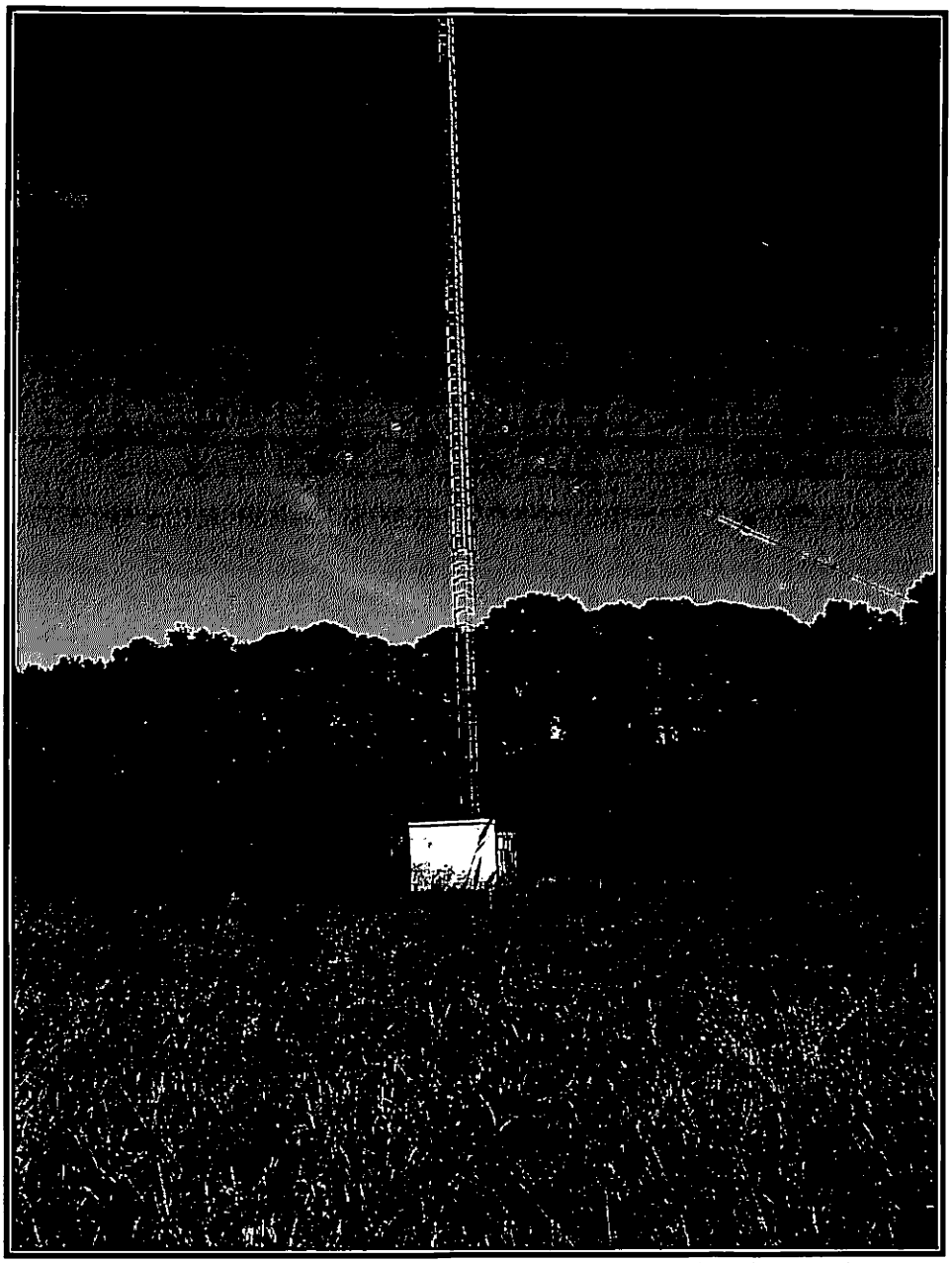


Plate 4. View of Radio tower within Project Area, looking north.

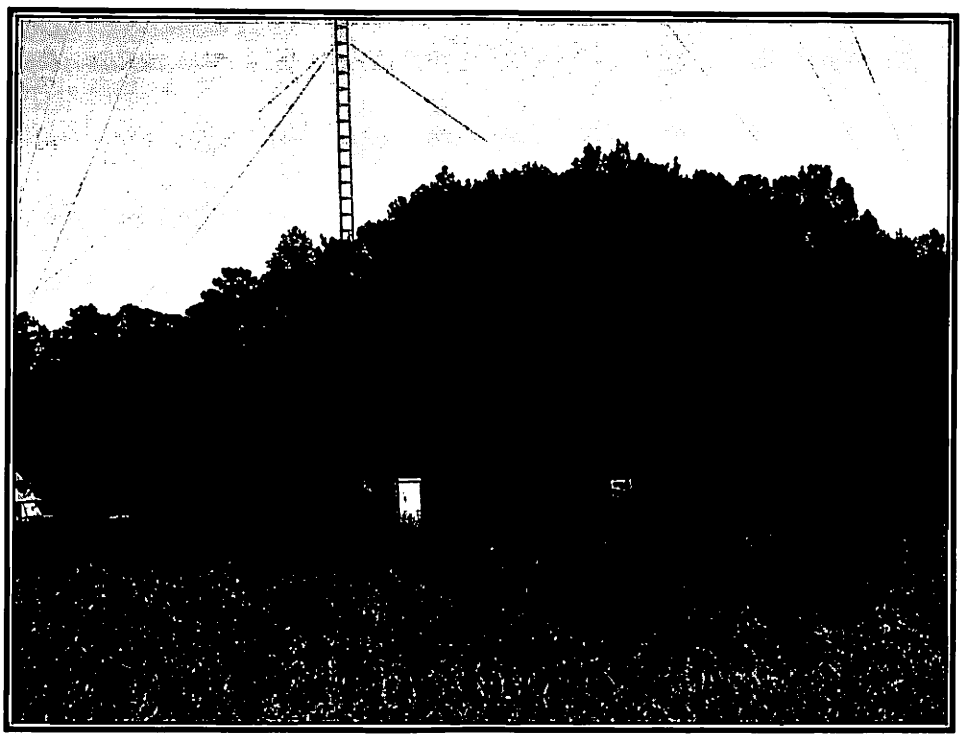


Plate 5. View of Radio tower within Project Area, looking east.

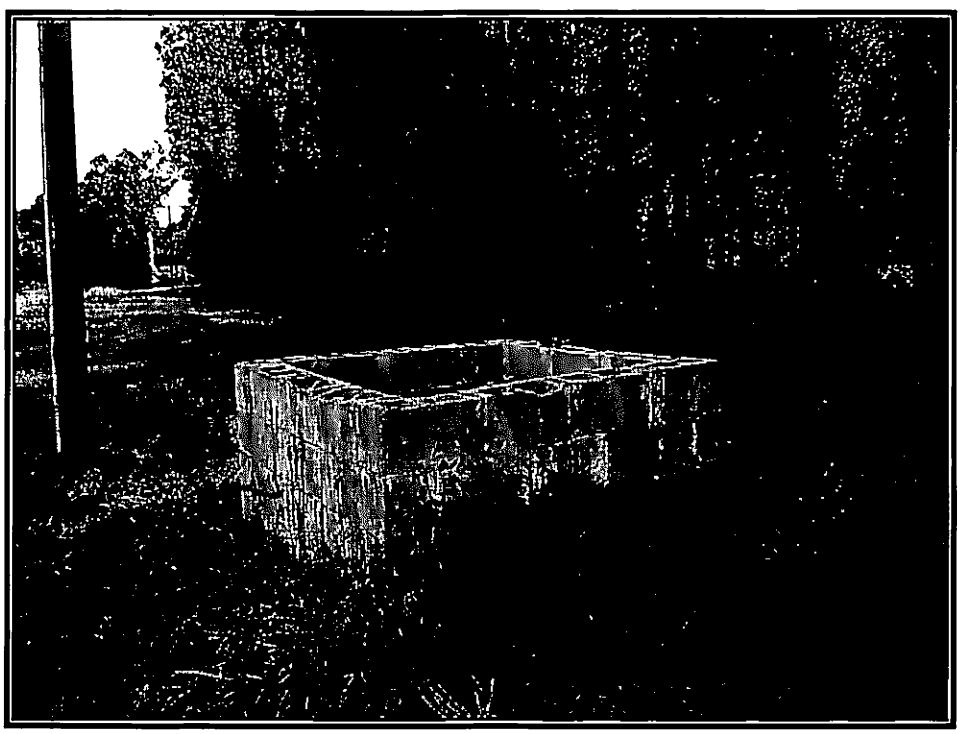


Plate 6. View of concrete-block structure within Project Area, looking northwest.

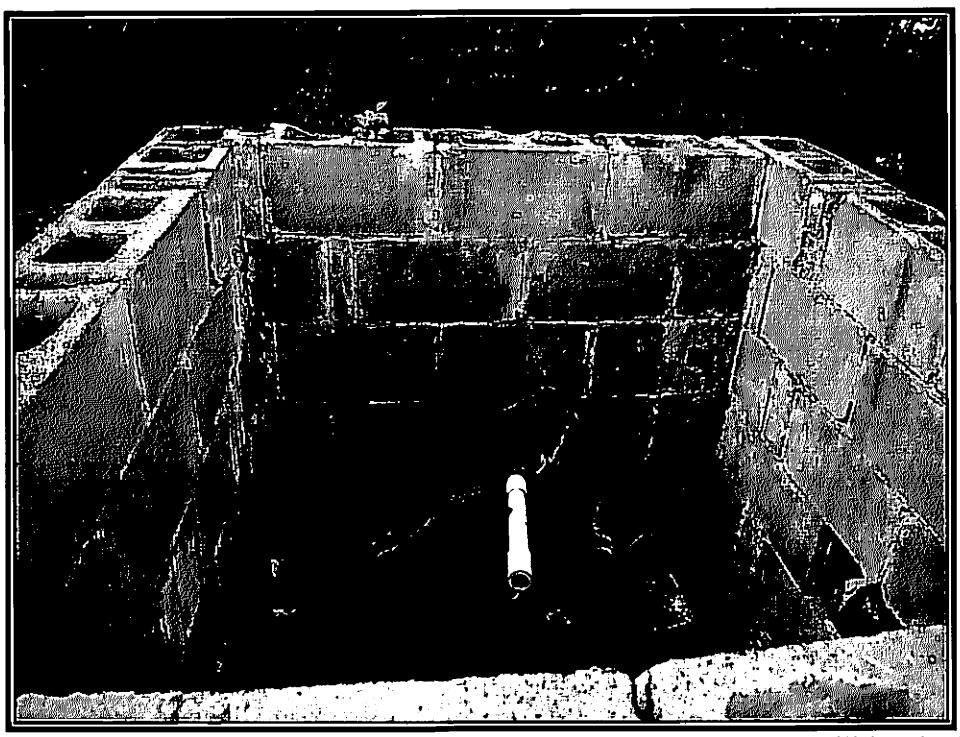


Plate 7. View of the interior of the concrete structure showing capped utilities, looking south.

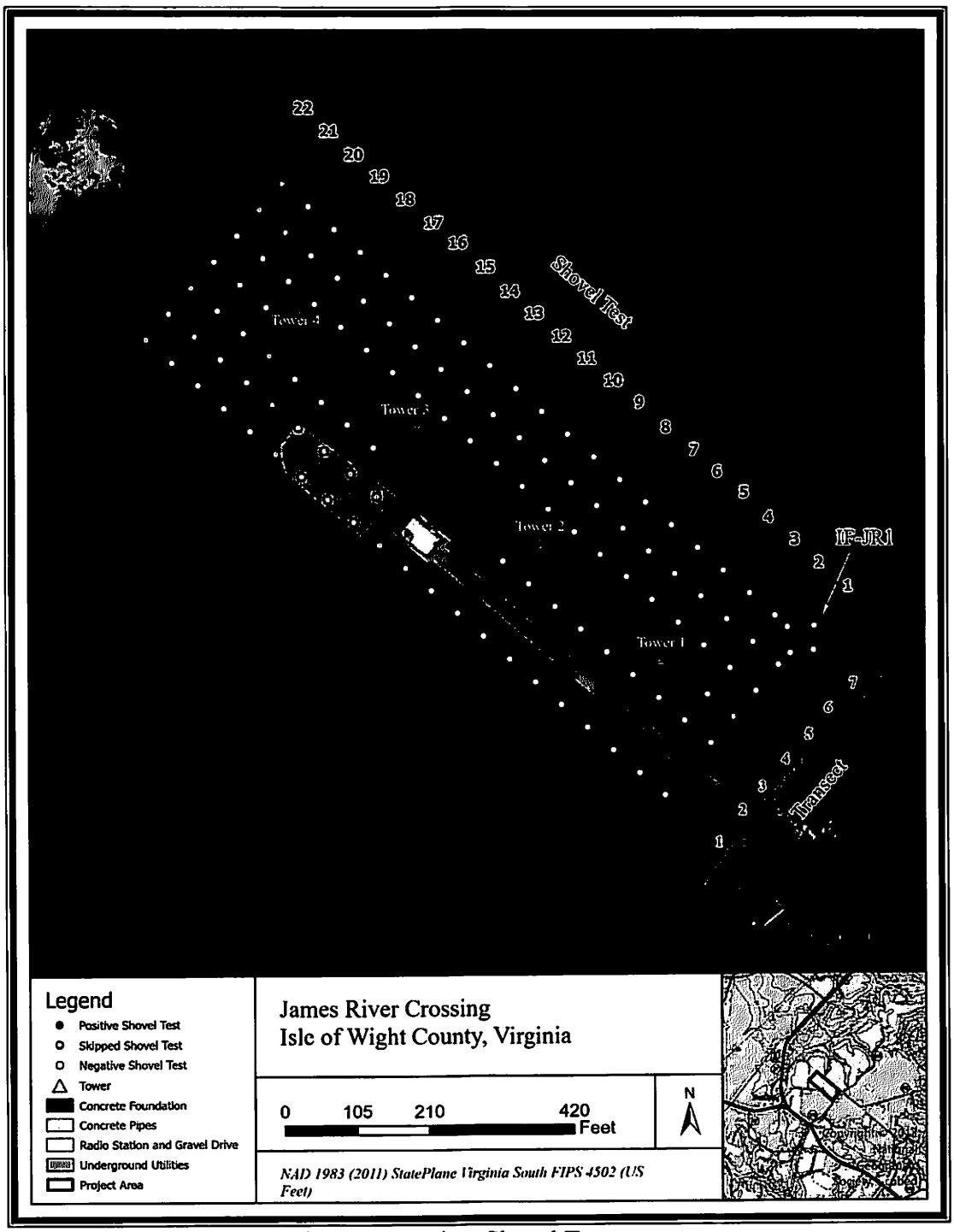


Figure 27. Project Shovel Test map.

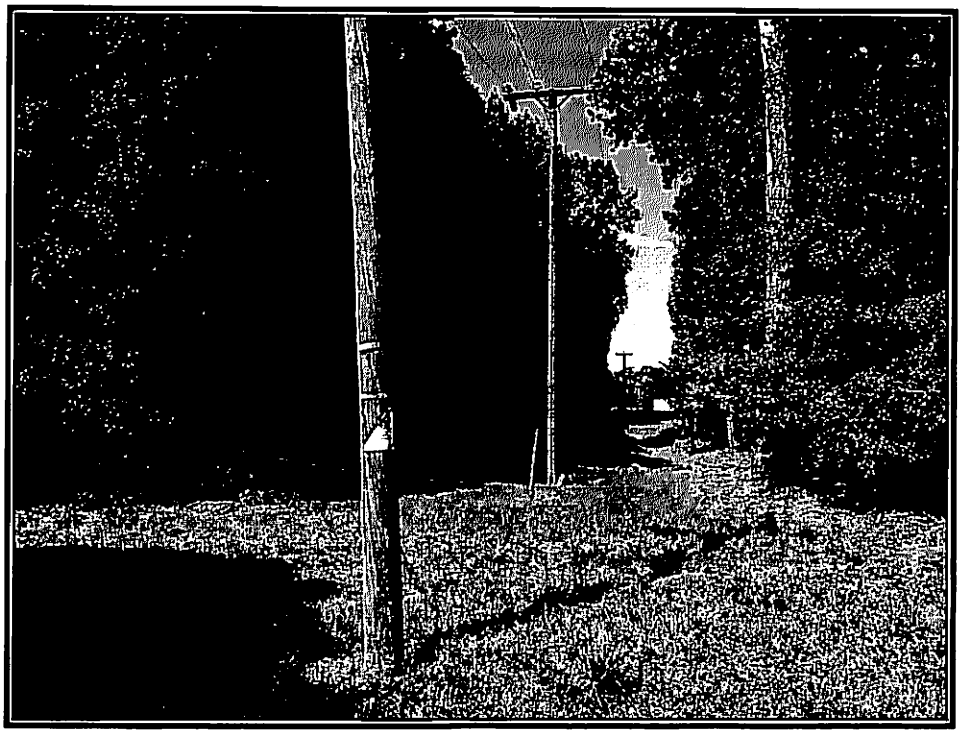


Plate 8. View of the utility corridor along the southern side of the Project Area 15 feet south of Shovel Test 1-1, looking west.

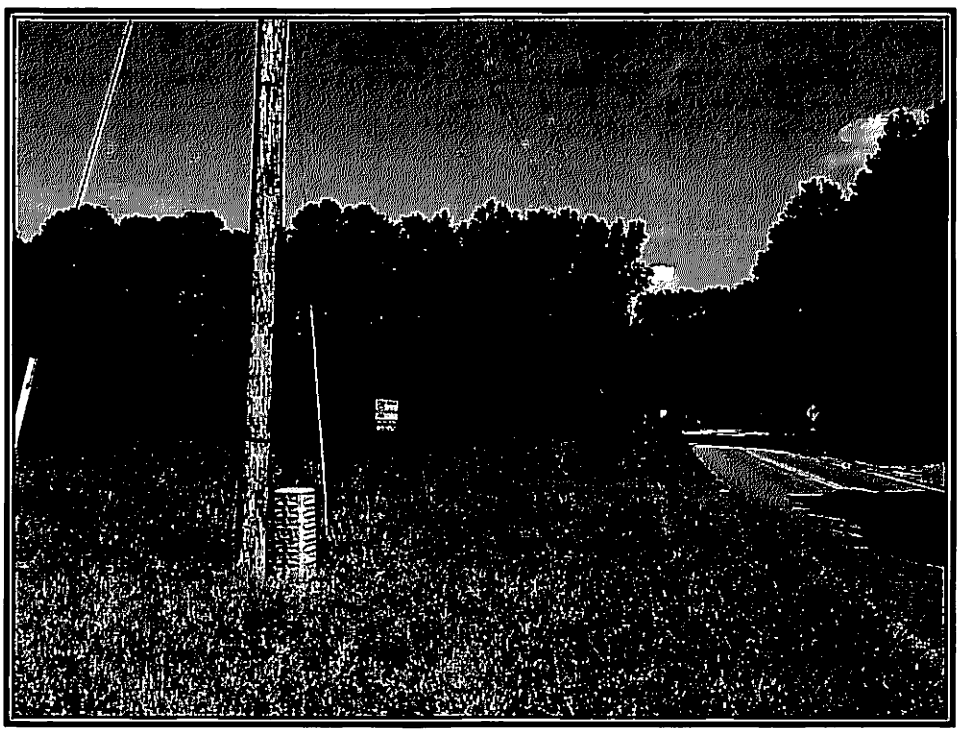


Plate 9. View of utilities along the eastern edge of the Project Area 20 feet east of Shovel Test 1-2, looking north.

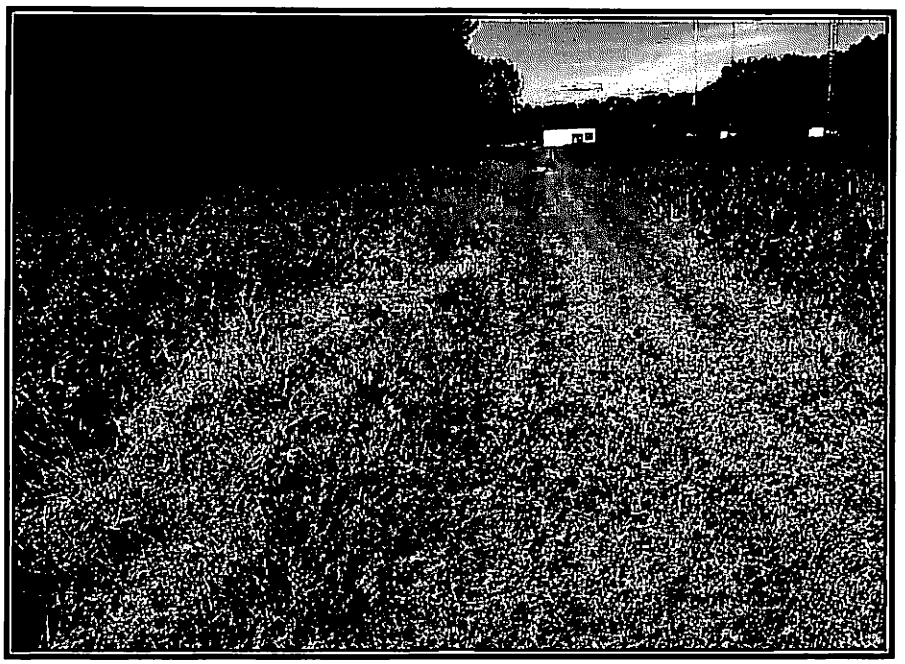


Plate 10. View of the gravel drive within the Project Area 15 feet south of Shovel Test 1-3, looking west.

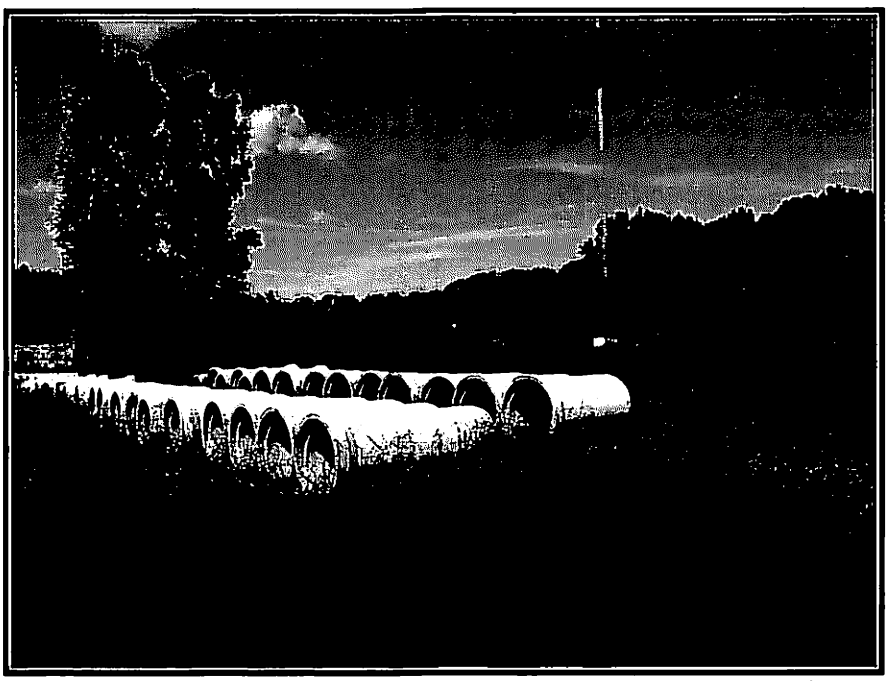


Plate 11. View of the concrete pipe storage area at Shovel Test 1-12, looking northwest.

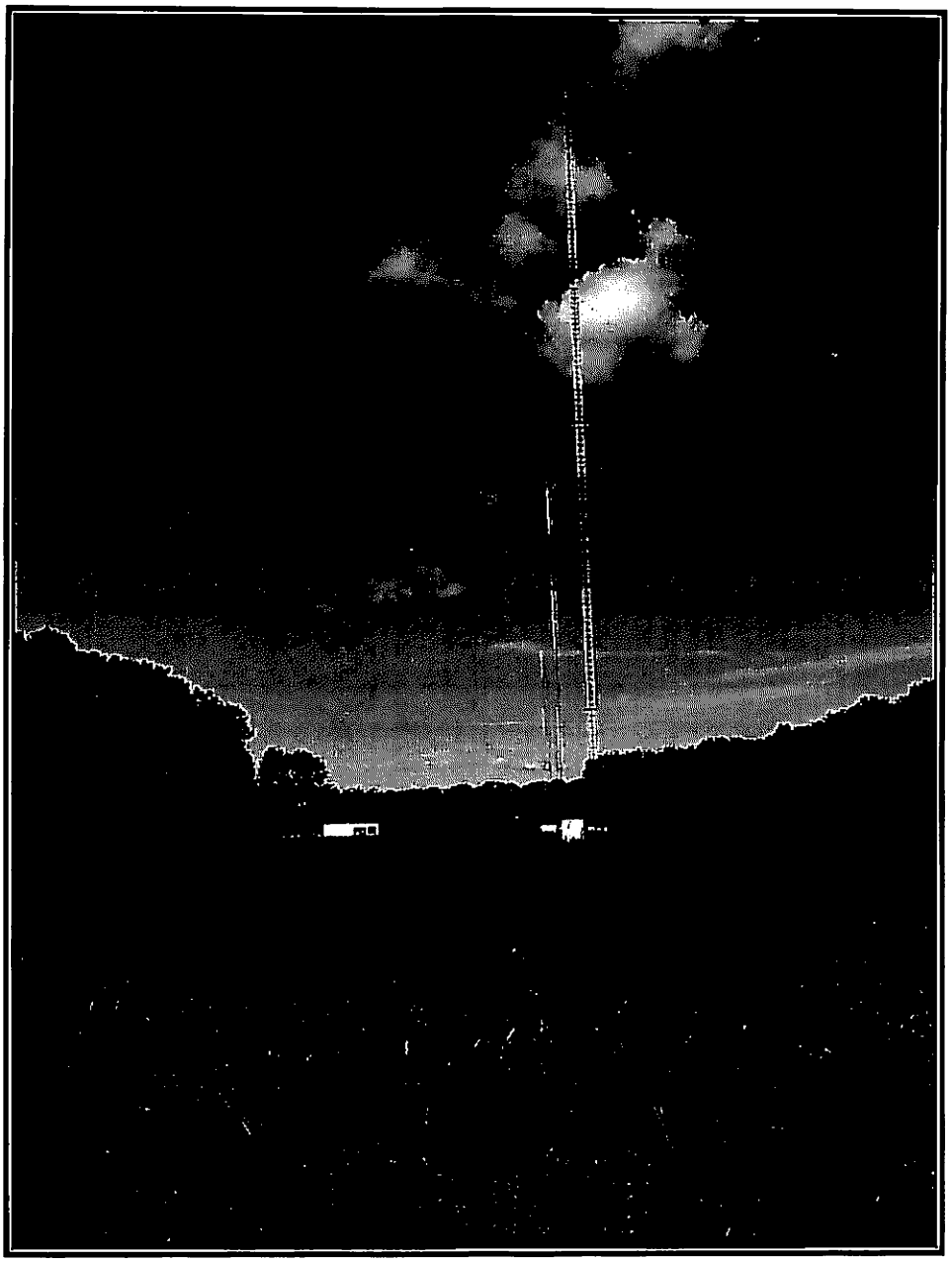


Plate 12. View of the Project Area at Shovel Test 5-1, looking west.

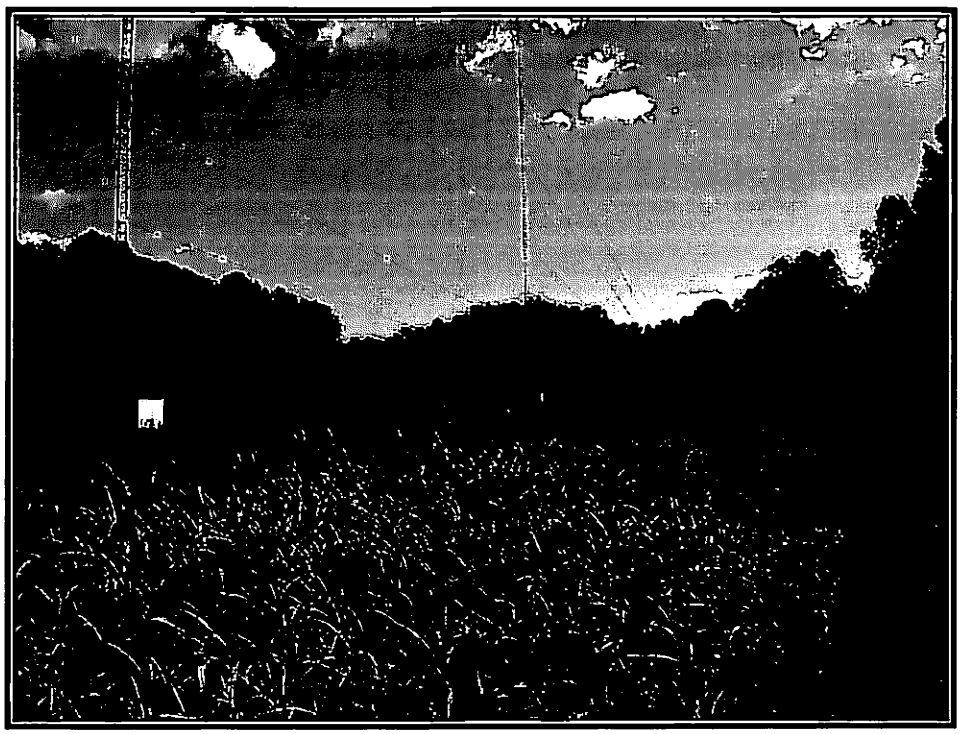


Plate 13. View of the Project Area at Shovel Test 3-14, looking east.

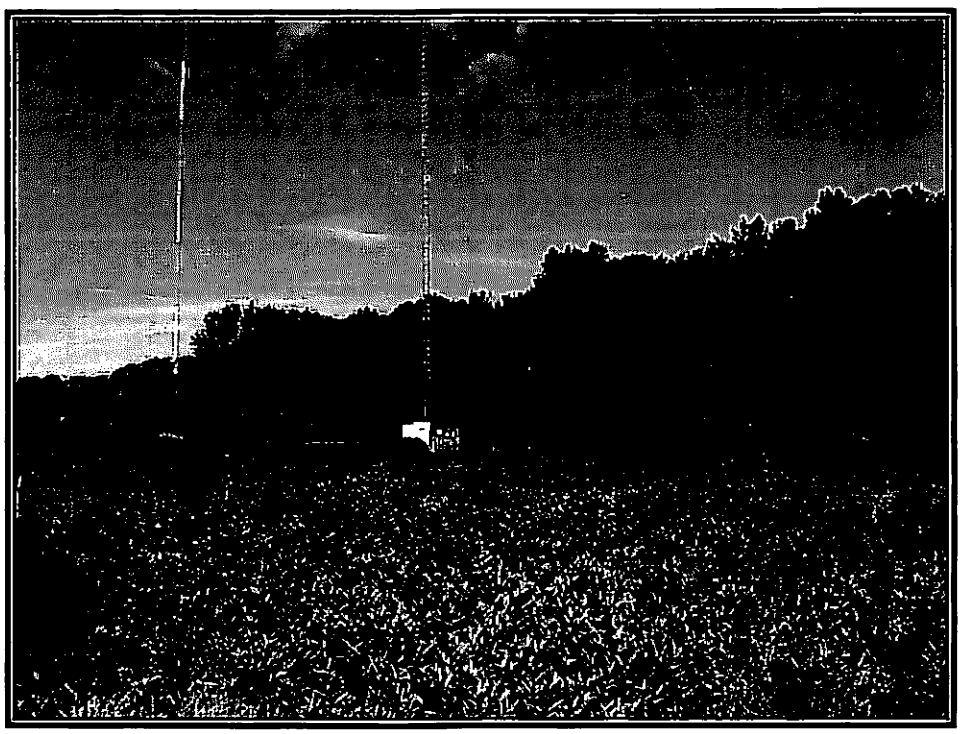


Plate 14. View of the Project Area at Shovel Test 3-2, looking northwest.

Shovel tests excavated revealed one soil stratum above a sterile subsoil (Figure 28). Stratum A, 0.74 to 0.93 feet thick, consisted of a grayish-brown (2.5Y 3/2) loamy, sandy clay under a thick root mat. This stratum may be a relic plowzone. Stratum B consisted of a sterile brownish-red (10YR 2/4) silty clay subsoil. Shovel tests excavated around the structures, towers, gravel drive, and the utility easements reveal a deflated Stratum A, probably from the leveling of the landform during construction. The disturbed stratum consisted of a deflated stratum over a sterile subsoil. Stratum A, 0.22 to 0.31 feet thick, consisted of a grayish-brown (2.5Y 3/2) silty clay. Stratum B consisted of a brownish-red (10YR 2/4) silty clay subsoil. The shovel testing recorded one isolated find in the northeastern corner of the project area near Chanell Way.

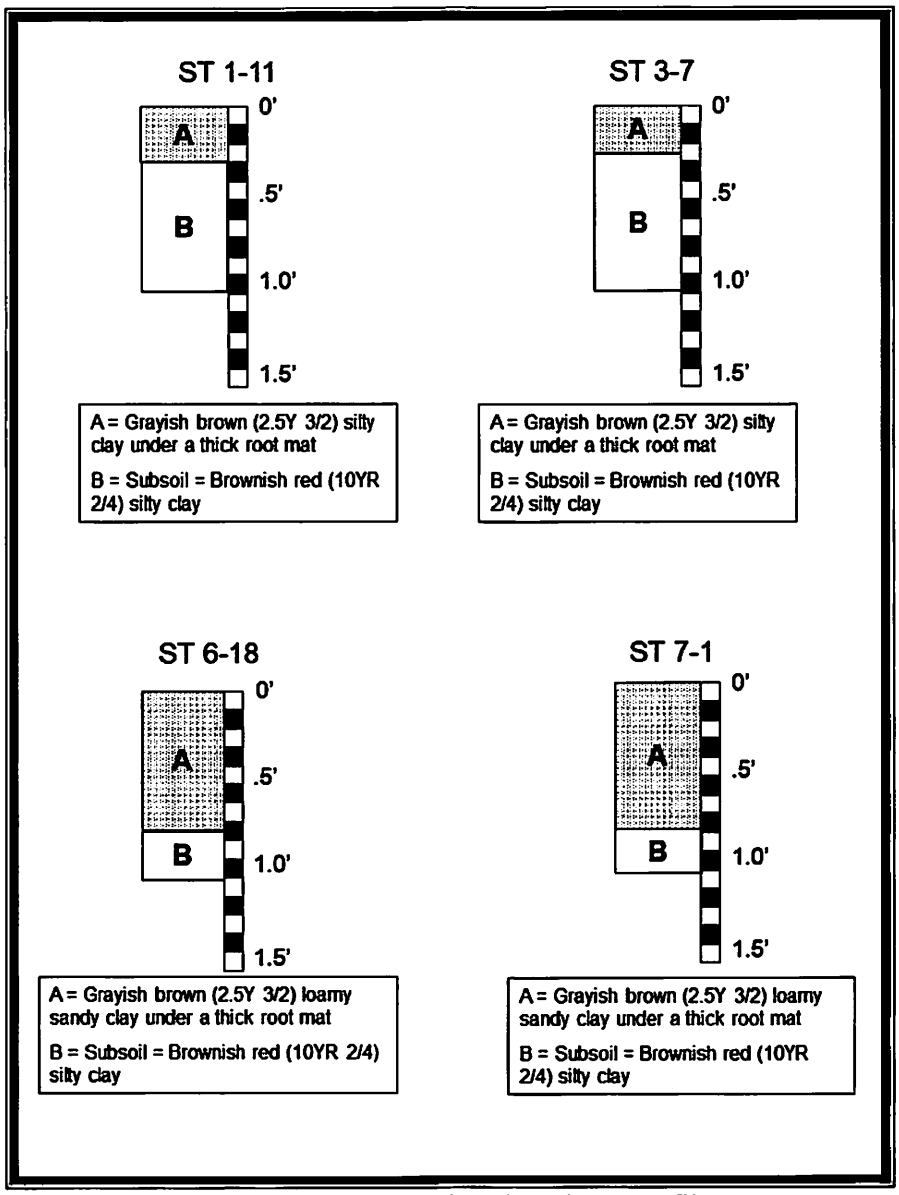


Figure 28. Representative shovel test profiles.

IF-JR1

One isolated find was recovered from Shovel Test 7-1 near the northeastern section of the project area, roughly 35 feet west of Channell Way (Plate 15). The find consisted of one amber beer bottle glass fragment. The fragment is from a container that dates circa post-1950. Four shovel tests were excavated at 25-foot radials to the east, west, north, and south of the find; all were negative. One soil stratum was excavated before reaching sterile subsoil (see Figure 28). Stratum A ranged from 0.70 to 0.85 feet thick and consisted of a grayish-brown (2.5Y 3/2) loamy, sandy clay under a thick root mat. This stratum may be a relic plowzone. Stratum B consisted of a sterile brownish-red (10YR 2/4) silty clay subsoil. No further work is recommended for this isolated find.



Plate 15. View of IF-JR1 within the Project Area at Shovel Test 7-1, looking west.

CONCLUSIONS AND RECOMMENDATIONS

The Phase I shovel testing recorded one historic isolated find and one circa late 20th-century radio station with associated infrastructure within the project area. No further work is recommended for the one isolated find, as it is not eligible for listing on the National Register of Historic Places. Because the radio station was constructed circa late 20th century, most likely in the late 1970s to early 1980s, it was not formally surveyed at this time, and no VDHR site number was requested.

Circa~ recommends that the proposed project will not affect any archaeological or architectural sites listed on or potentially eligible for listing on the National Register of Historic Places. Therefore, no further work is recommended.

Table 5. Summary of identified resources and recommendations

Site	Type	National Register Eligibility	Recommendation	Effect
IF-JR1	Historic, mid to late 20th century	No	No further work	None

REFERENCES CITED

Advisory Council on Historic Preservation
1986 "36 CFR Part 800 – Protection of Historic Properties (incorporating amendments effective August 5, 2004)" *Regulations of the Advisory Council on Historic Preservation Governing the Section 106 Review Process.* Available online at http://www.achp.gov

Boddie, John Bennett
1973 *Seventeenth Century Isle of Wight County, Virginia.* Genealogical Publishing Company, Baltimore, Maryland.

Boye, Herman
1825 *A map of the state of Virginia, constructed in conformity to law from the late surveys authorized by the legislature and other original and authentic documents.* Available online at http://www.loc.gov/maps/collections

Chapman, Jefferson, and Andrea Brewer Shea
1988 "The Archaeobotanical Record: Early Archaic Period to Contact in the Lower Little Tennessee River Valley." *Tennessee Anthropologist* VI (1).

Circa~ Cultural Resource Management, LLC
2019 *Phase I Cultural Resources Survey of Archers Meade Tract, Isle of Wight County, Virginia.* Available at the Virginia Department of Historic Resources archives, Richmond, Virginia.

Cram, T. J.
1862 *Copy of a map military reconnaissance Dep't Va.: [Hampton Roads and Norfolk regions, Va.].* Available online at http://www.loc.gov/maps/collections

1860s *S.E. portion of Virginia and N.E. portion of N'th Carolina.* Available online at http://www.loc.gov/maps/collections

Cultural Resources Inc.
2004 *A Phase I Archaeological Survey of Eagle Harbor Tract 4A, Isle of Wight County, Virginia.* Available at the Virginia Department of Historic Resources archives, Richmond, Virginia.

2009 *A Phase I Cultural Resources Survey of Approximately 10.12 Acres for the Proposed Eagle Harbor Development Area, Isle of Wight County, Virginia.* Available at the Virginia Department of Historic Resources archives, Richmond, Virginia.

Dent, Richard J., Jr
1995 *Chesapeake Prehistory: Old Traditions, New Directions.* Plenum Press, New York, New York.

Department of the Interior, National Park Service
1983 Archaeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines. *Federal Register* 48:44716-44762. Available online at http://www.nps.gov

Fry, Joshua and Peter Jefferson
1751 *A map of the most inhabited part of Virginia containing the whole province of Maryland with part of Pensilvania, New Jersey and North Carolina.* Available online at http://www.loc.gov/maps/collections

Gardner, William M.
1974 "The Flint Run Paleoindian Complex: A Preliminary Report 1971-1973 Seasons." *Occasional Publication* No. 1, Archeology Laboratory.

1977 "Flint Run Paleoindian Complex, its Implication for Eastern North American Prehistory." In "Amerinds and Their Paleoenvironment in Northeastern North America." edited by W. S. Mewman and B. Salwen, *Annals of the New York Academy of Sciences.*

1981 "Paleoindian Settlement Pattern and Site Distribution in the Middle Atlantic." *Anthropological Careers*, edited by R. H. Landmine, L. A. Bennett, A. Brooks, and P. P. Chock.

1982 "Early and Middle Woodland in the Middle Atlantic: An Overview." In *Practicing Environmental Archaeology: Methods and Interpretations*, edited by Roger W. Moeller, American Indian Archaeological Institute Occasional Paper No. 3.

1989 "An Examination of Cultural Change in the Late Pleistocene and Early Holocene (circa 9200 to 6800 B. C.)." In "Paleoindian Research in Virginia: A Synthesis." edited by J. Mark Wittkofski and Theodore R. Reinhart, *Special Publication No. 19 of the Archeological Society of Virginia.*

Heald, D. A.
1862 *The battle fields and military positions in the Virginian peninsula: from surveys supplied by officers of the army.* Available online at http://www.loc.gov/maps/collections

Herrmann, Augustine
1670 *Virginia and Maryland in 1670.* Available online at http://www.loc.gov/maps/collections

Hodges, Mary Ellen N., and Charles T. Hodges, editors
1994 *Paspahegh Archaeology: Data Recovery Investigations of Site 44JC308 at The Governor's Land at Two Rivers, James City County, Virginia.* Available at the Virginia Department of Historic Resources archives.

J. H. Colton Establishment
1855 *J.H. Colton's topographical map of seat of war in Virginia, Maryland.* Available online at http://www.loc.gov/maps/collections

Johnson and Ward
1862 *Johnson's map of the vicinity of Richmond and Peninsular Campaign in Virginia: showing also the interesting localities along the James, Chickahominy, and York Rivers.* Available online at http://www.loc.gov/maps/collections

King, Helen H.
1993 *Historical Notes on Isle of Wight County.* Isle of Wight County Board of Supervisors, Isle of Wight County, Virginia.

McAvoy, Joseph M., and Lynn D. McAvoy
1997 "Archaeological Investigations of Site 44SX202, Cactus Hill, Sussex County, Virginia." *Research Report Series* No. 8, Virginia Department of Historic Resources.

McCary, Ben C.
1951 "A Workshop of Early Man in Dinwiddie County, Virginia." *American Antiquity* 17(1).

1975 "The Williamson Paleoindian Site, Dinwiddie County, Virginia." *The Chesopiean* 13(3-4).

1983 "The Paleoindian in Virginia." *Archeological Society of Virginia Quarterly Bulletin* 38(1).

Mid-Atlantic Archaeological Research Associates, Inc.
1993 *Phase I Cultural Resources Survey for the Proposed Smithfield Interceptor in Isle of Wight County, Virginia.* Available at the Virginia Department of Historic Resources archives, Richmond, Virginia.

National Park Service
1990 *National Register of Historic Places Bulletin 15: How to Apply the National Register of Historic Places Criteria for Evaluation.* Available online at http://www.nps.gov

Natural Resources Conservation Service
2021 Online soils data. Available online at http://soils.usda.gov/.

Nugent, Nell Marion (ed.)
1992 *Cavaliers and Pioneers: Abstracts of Virginia Land Patents and Grants, Vol. 1: 1623-1666.* Genealogical Publishing Company, Baltimore, Maryland.

Rountree, Helen C.
1989 *The Powhatan Indians of Virginia.* The University of Oklahoma Press, Normandy and London.

Smith, John
1610 *Virginia discovered and described.* Available online at http://www.loc.gov/maps/collections

Turner, E. Randolph, III
1989 "Paleoindian Settlement Patterns and Population Distribution in Virginia. In Paleoindian Research in Virginia: A Synthesis." edited by J. Mark Wittkofski and Theodore R. Reinhart, *Special Publication No. 19 of the Archeological Society of Virginia.*

United States Geological Survey
1919 Smithfield Quad map. Available online at http://historicalmaps.arcgis.com/usgs/

1952 Benns Church Quad map. Available online at http://historicalmaps.arcgis.com/usgs/

1965 Benns Church Quad map. Available online at http://historicalmaps.arcgis.com/usgs/

1972 Benns Church Quad map. Available online at http://historicalmaps.arcgis.com/usgs/

Virginia Department of Historic Resources
2017 *Guidelines for Conducting Historic Resources Survey in Virginia.* Available at the Virginia Department of Historic Resources, Richmond, Virginia.

William and Mary Center for Archaeological Research
2018 *Final Management Summary Archaeological Survey Nike Park Road (Route 669) Extension, Isle of Wight County, Virginia.* Available at the Virginia Department of Historic Resources archives, Richmond, Virginia.

Yarnell, Richard A.
1976 "Early Plant Husbandry in Eastern North America." In *Cultural Change and Continuity: Essays in Honor of James Bennett Griffin*, edited by Charles E. Cleland.

APPENDIX A
ARTIFACT INVENTORY

ARTIFACT INVENTORY

Site: Isolated Finds **Phase I**

Recorder: C. Tyrer **October 18, 2021**

Provenience	Quantity	Description
ST 7-1 IF-JR1	1	Bottle glass body fragment, amber

APPENDIX B
STAFF RESUMES

CAROL D. TYRER, RPA
PRESIDENT/PROJECT MANAGER/PRINCIPAL INVESTIGATOR/LABORATORY DIRECTOR
CIRCA~ CULTURAL RESOURCE MANAGEMENT, LLC
Williamsburg, Virginia Office

Education:

University of Tennessee, Chattanooga, 1984, BA, Sociology and Anthropology: Anthropology
University of Tennessee, Chattanooga, 1984, BA English and American Language and Literature: Technical Writing
University of Tennessee, Chattanooga, 1987, English: Technical Writing Graduate classes
University of Denver, 2012, MLS. Global Affairs: World History and Culture
Liberty University: Ph.D., American History, (ongoing) est. 2023

October 2019 to present: Register of Professional Archaeologists (RPA) #18078

Professional Experience:

2012-present: President/Project Manager/Principal Investigator/Laboratory Director, Circa~ Cultural Resource Management, Inc., Williamsburg, Virginia.
2005-2012: President/Project Manager/Laboratory Director, Circa~ Cultural Resource Management, Inc., Williamsburg, Virginia.
2002-2005: Partner/Chief Financial Officer/Operations Manager/Project Manager/Marketing Director/Laboratory Director, James River Institute for Archaeology, Inc. (JRIA), Williamsburg, Virginia.
1995-2002: Operations Manager/Project Manager/ Marketing Director/Archaeological Laboratory Director, Cultural Resources, Inc. (CRI), Williamsburg, Virginia.
1991-1995: Project Manager/Marketing Director/ Archaeological Laboratory Director, Espey, Huston & Associates, Inc. (EH&A), Williamsburg, Virginia.
1990-1991: Consultant, Colonial Williamsburg Foundation.
1988-1991: Project Manager/Archaeological Laboratory Director, Mid-Atlantic Archaeological Research & Associates (MAAR), Williamsburg, Virginia.
1990 Field Crew, College of William and Mary Archaeological Project Center, Williamsburg, Virginia.
1985-1986: Assistant Curator, Riley County Historical Museum, Manhattan, Kansas.
1985: Assistant Field Supervisor, Environmental Systems, Inc., Kansas City, Kansas.
1985: Field Supervisor/Field Crew, Fort Riley, Kansas, University of Wichita, Kansas.
1983-1984: Field Crew, St. Simon's Island, Georgia, University of Tennessee
1982-1984: Lab Technician, University of Tennessee
1977-1982: Field and Lab Technician (summers), TVA, Chattanooga, Tennessee

Non-Profit Experience:

1996 to present: Co-president, Friends of the National Park Service Historic Green Spring Park, Williamsburg, Virginia
2010 to present: Vice-president Watermen's Museum, Yorktown, Virginia

Fields of Experience:

Ms. Tyrer has over 42 years of professional experience in the field of archaeology and the management of archaeological and museum collections. Her current responsibilities at Circa~ include managerial and technical tasks associated with archaeological assessments and Phase I, II, and III excavations, consultation with and representation of clients before state and national review agencies, writing and editing technical reports, preparing and managing project budgets, and developing and implementing archaeological research designs, site predictability models, and sensitivity areas. She has been the principal author of over 400 technical reports and historical studies (all accepted by the regulatory agencies), and worked closely with the Virginia Department of Historic Resources (VDHR) and other official agencies to fulfill the requirements of local, state, and federal regulations related to both archaeological and architectural resources.

As Laboratory Director, Ms. Tyrer has identified, catalogued, and analyzed artifacts from sites in Tennessee, North Carolina, South Carolina, Kentucky, West Virginia, Maryland, Florida, Pennsylvania, Georgia, Kansas, and Virginia. She has performed these analyses on prehistoric sites of all periods (Paleoindian to Late Woodland) and on 17th, 18th, 19th, and 20th century historic sites. She is familiar with the state and federal artifact curation standards and she uses these guidelines when processing artifacts for curation. She has prepared field soil samples for flotation of faunal remains and for carbon-14 dating and has experience in the conservation of metals. She also identifies and analyzes artifacts recovered from excavations and prepares distribution maps, vessel counts, and detailed discussions on artifact types for reports.

Ms. Tyrer's specialty is the identification and analysis of ceramics. She completed specialized computer cataloguing of the extensive ceramic study collection at The Colonial Williamsburg Foundation in Williamsburg, Virginia. Ms. Tyrer has also worked in a county historical museum identifying, labeling, curating, and appraising artifacts and museum specimens, and preparing exhibits. In addition, Ms. Tyrer has re-cataloged and analyzed the approximately 100,000-artifact collection from George Washington's Boyhood Home using the Automated National Catalog System (ANCS) developed by the National Park Service.

Ms. Tyrer has considerable experience in historic and prehistoric archaeological resources. She has personally designed and completed investigations for dozens of projects ranging from a large-scale study archaeological and historical resources to detailed investigations of numerous individual historic and prehistoric sites throughout the east

coast. Ms. Tyrer's technical capabilities include detailed archival and literary research at the local, state, and national levels; site documentation and analysis; evaluation of properties for National Register and State Landmark significance; and technical report writing. As with other senior staff, she will also be responsible for the formulation of research designs, preparation of project budgets, selection and guidance of field crews, and the preparation of technical reports.

Ms. Tyrer also has extensive experience with assessment, survey, evaluation, and mitigation of historic and prehistoric resources. She has developed sampling designs for site locations models and settlement patterns for prehistoric and historic sites for tracts of land ranging from a few acres to thousands of acres. These sampling designs are based on previous and present land use, environmental characteristics, and topographic features. Other responsibilities include the dissemination of archaeological information to the public through various media and exhibits, educational site brochures, and site visits.

Selected Publications/Technical Reports:

Archaeological Data Recovery Investigation at Sulley Plantation - Dairy Annex, Chantilly, Virginia (with Harding Polk).

Phase II Archaeological Investigations of Nine Previously Identified Sites (44FX13, 4FX672, 44FX683, 44FX1095, 44FX1327, 44FX1328, 44FX1329, 44FX1621, and 44FX1622) Ft. Belvoir, Virginia (with Jerry Traver and Harding Polk).

Archaeological Data Recovery at 44IW88 A Multicomponent Historic Late Seventeenth Century House Site and Prehistoric Campsite of the Archaic and Woodland Periods, Isle of Wight County, Virginia (with Jerry Traver).

Phase IA Cultural Resource Survey Pittsylvania Commonwealth Plant Pittsylvania County, Virginia (with Jerry Traver).

Phase I Cultural Resource Survey Portsmouth Naval Hospital Portsmouth, Virginia (with Jerry Traver).

Phase IA Cultural Resource Survey for the Proposed King and Queen County Landfill at Piedmont, King and Queen County, Virginia (with Jerry Traver).

Phase I Investigation of Various Development Sites and Training Areas, Vol. II, Ft. Belvoir, Virginia (with Harding Polk and Jerry Traver).

A Plan for Preservation and Interpretation of the Fairfax Ruins and Grave Site at Fort Belvoir, Virginia (with Harding Polk).

Phase IA Cultural Resource Overview for the Proposed U.S. Route 58 Corridor Study Bristol and Salem Districts (Study Areas 1, 2, & 3) Virginia (with Jerry Traver).

Phase I Cultural Resource Survey of the Proposed John Rolfe Parkway, Richmond, Virginia (with Jerry Traver).

Phase I Cultural Resource Survey Nottoway Waterline Southampton County, Virginia (with Jerry Traver).

1991 *A Study of The Architecture, The History, and The Archaeology of George Washington's Ferry Farm Stafford County, Virginia.* EH&A Document No. 9110340 (with Alain C. Outlaw, Martha W. McCartney, and Carl R. Lounsbury).

1991 *Archaeological Investigations of Mechanicsville to Kingsmill Virginia Natural Gas Lateral Pipeline.* EH&A Document No. 9110352 (with Alain C. Outlaw and Martha W. McCartney).

1992 Terrestrial and Underwater Cultural Resources Investigations for the Wastewater Treatment Upgrade at Camp Lejeune, North Carolina. EH&A Document No. 9310157 (with Alain C. Outlaw and Robert L Gearhart II).

1992 A Cultural Resource Survey of the St. Julian's Creek Annex Norfolk Naval Shipyard Portsmouth, Virginia. EH&A Document No. 9110565 (with Alain C. Outlaw, Eugene Foster, and Martha W. McCartney).

1992 Phase I Archaeological Investigations of Spratt Recycling, Inc., Property, (Schwab Tract), Swans Corner, Carolina County, Virginia. EH&A Document No. 9210040 (with Alain C. Outlaw and Martha W. McCartney).

1992 *Archaeological Investigations at Green Spring, James City County, Virginia.* EH&A Document No. 9110494 (with Alain C. Outlaw and Martha W. McCartney).

Cataloging of Archaeological Collections at George Washington Birthplace National Monument, Westmoreland County, Virginia. Bimonthly reports on file with National Park Service, George Washington Birthplace, Virginia, 1993 - 1994.

1993 *Cultural Resources Investigations for the Sanitary Landfill at Camp Lejeune, North Carolina.* Department of the Navy Atlantic Division, Norfolk, Virginia. EH&A Project No. 14093 (with Alain C. Outlaw).

1993 *Phase II Archaeological Investigations at 44JC669 and 44JC684, Green Spring, James City County, Virginia.* EH&A Document No. T9310318 (with Alain C. Outlaw and Martha W. McCartney).

1994 *Phase I Cultural Resources Investigations Near Owl Trap, Gloucester County, Virginia.* EH&A Document No. T9310342 (with Martha W. McCartney and Alain C. Outlaw).

1994 *Archaeological Investigations at Williamsburg Landing, Inc., James City County, Virginia.* EH&A Document No. CR94025.

1994 *Phase I Cultural Resources Survey for the Proposed Alternate Route 58 Project, Lee County, Virginia.* EH&A Document No. CR94020.

1994 *Phase I Cultural Resources Investigations for the Route 58 Widening, Grayson County, Virginia.* EH&A Document No. CR94018.

1995 A Phase IA Archival Study of the Warhill Tract, James City County, Virginia.

1995 *Phase I Cultural Resources Investigations at Five Permit Areas at Druid Hills, James City County, Virginia.*

1995 *Phase I Survey of the Proposed Runway Expansion for the Richmond International Airport, Henrico County, Virginia.*

1995 *Phase IA Archival Background at the Proposed James City County District Park, James City County, Virginia.*

1995 *Phase II Archaeological Excavations at 44CF373, 44CF379, 44CF382, and 44CF513 at River's Bend, Chesterfield County, Virginia* (with Martha W. McCartney).

1996 *Phase I Cultural Resources Investigations at the 10.5-Acre Williamsburg Landing Tract, James City County, Virginia.*

1996 *Phase IA Cultural Resources Study of the 200-Acre Portion of the Warhill Tract, James City County, Virginia.*

1996 *Archaeological Investigations of the Potomac Creek Site (44ST2), Stafford County, Virginia.*

1996 *Phase I Archaeological Investigations at Sixty-Nine Permit Areas and One Mitigation Area at the South Riding Development, Loudoun County, Virginia* (with Martha W. McCartney).

1996 *Phase IA Archaeological Assessment at the 19 Proposed BMP Locations*, Stafford County, Virginia.

1996 *Phase I and Phase II Archaeological Investigations for Five Permit Areas at the White Oak Semi-Conductor Tract*, Henrico County, Virginia (with Martha W. McCartney).

1996 *Cultural Resources Assessment at the 477-Acre Walnut Farms Tract*, Stafford County, Virginia (with Martha W. McCartney).

1996 Phase I Cultural Resources Investigations for 75-Acre Permit Area at the Cypress Creek Tract, Isle of Wight County, Virginia (with Alain C. Outlaw and Martha W. McCartney) Cultural Resources, Inc. Submitted to Langley and McDonald, P. C., Williamsburg, Virginia.

1996 *Phase I Archaeological Investigations for a Proposed Landfill at the Shoosmith Brothers Tract, Chesterfield County, Virginia* (with Martha W. McCartney).

1997 *Phase I Archaeological Investigations for the Proposed Virginia Power Utility Corridor, Henrico County, Virginia* (with Martha W. McCartney).

1997 *Phase I and Phase II Archaeological Investigations for Five Permit Areas at the White Oak Semiconductor Tract, Henrico County, Virginia* (co-author, Alain C. Outlaw and Martha McCartney) Cultural Resources, Inc. Submitted to Williamsburg Environmental Group, Inc., Williamsburg, Virginia.

1997 *Phase I and Phase II Archaeological Investigations for the Proposed Memorial Drive Extension, Henrico County, Virginia* (co-author, Alain C. Outlaw and Martha McCartney) Cultural Resources, Inc. Submitted to J. K. Timmons, Richmond, Virginia.

1997 *Phase II Evaluations at Site 44LD535 at the South Riding Development, Loudoun County, Virginia* (with Martha W. McCartney).

1997 *A Cultural Resources Management Plan for Fort A.P. Hill, Caroline County, Virginia* (with Alain C. Outlaw, Martha W. McCartney, and Baird Smith).

1997 *Phase I Cultural Resources Investigation of Approximately 240 Acres and a 32-Acre Permit Area at the Proposed James City County District Park, James City County, Virginia.*

1997 *Phase I Cultural Resources Investigation of the Proposed Woodbury Tract, James City County, Virginia.*

1997 *Phase I Cultural Resources Investigations of Four Permit Areas at the Proposed Warhill Development Tract, James City County, Virginia* Cultural Resources, Inc. Submitted to Williamsburg Environmental Group, Inc., Williamsburg, Virginia.

1997 *Phase I Cultural Resources Investigations of Three Permit Areas at the Proposed Terry Peterson Development Tract, James City County, Virginia* Cultural Resources, Inc. Submitted to Williamsburg Environmental Group, Inc., Williamsburg, Virginia.

1997 *Phase I Cultural Resources Investigations of the Proposed Lake Powell Forest Tract, James City County, Virginia.*

1997 *Phase II Archaeological Evaluations at Sites 44CF538 and 44CF543 on the Shoosmith Brothers Tract, Chesterfield County, Virginia.*

1997 *Phase II and Phase III Archaeological Investigations at Site 44JC93 Green Spring Plantation, James City County, Virginia* (with Martha W. McCartney).

1997 *Archaeological Assessment of the Fort Fisher Tract, Dinwiddie County, Virginia* (with Martha W. McCartney).

1997 *Phase I Survey of Indian River Road from: Lynnhaven Parkway to: Elbow Road (U000-134-146, PE-101) and Elbow Road From: Indian River Road to: 0.80 KM (0.5 MI) West of Princess Anne Road (U000-134-147, PE-101), City of Virginia Beach, Virginia, DRAFT* (with Martha W. McCartney).

1997 *Phase II Excavations at Site 44DW103, the Fort Fisher Tract, Dinwiddie County, Virginia* (with Martha W. McCartney).

1997 *Plan for the Archaeological Excavation of Historic Burials at Site 33JC966, Lake Powell Forest Tract, James City County, Virginia.*

1997 *Phase II Evaluation at Site 44GO290, Goochland County, Virginia* (co-authored with Martha McCartney) Cultural Resources, Inc. Submitted to Richard Sharp, Richmond, Virginia.

1997 *Archaeological Assessment of the Goodrich River Tract, Chesterfield County, Virginia* (co-authored with Martha McCartney) Cultural Resources, Inc. Submitted to The Goodrich River Trust Tract, Chester, Virginia.

1997 *Archaeological Assessment of the Approximately 595 Acre Meadowville Technology Park Tract, Chesterfield County, Virginia* (co-authored with Martha McCartney) Cultural Resources, Inc. Submitted to Timmons Consulting Engineers, Richmond, Virginia.

1997 Plan *for The Archaeological Excavation of Historic Burials at Site 44JC966 Lake Powell Forest Tract, James City County, Virginia.* Cultural Resources Inc. Submitted to Horton and Dodd, P.C., Chesapeake, Virginia.

1997 *Phase I and Phase II Archaeological Investigations at the Approximately 798-Acre Phase IV, V, and VI Tracts at the South Riding Development, Loudoun County, Virginia, DRAFT* (with James G. Harrison III and Martha W. McCartney).

1998 *Phase I Cultural Resources Investigations of Approximately 93 Acres at the Proposed Fenwick Hills Tract, James City County, Virginia* Cultural Resources, Inc. Submitted to BGA Richneck, L. L. C., Newport News, Virginia.

1998 *Phase II Excavations at Sites 44DW103, 44DW286, and 44DW287 at the Proposed Chaparral Steel Tract, Dinwiddie County, Virginia* (with Martha W. McCartney).

1998 *Archaeological Assessment of Judicial Boulevard and West Neck Parkway City of Virginia Beach, Virginia* (co-author, with Martha McCartney). Cultural Resources, Inc. Submitted to Langley and McDonald, P.C., Virginia Beach, Virginia.

1998 *Phase I Cultural Resources Investigations 6.57 +/- Acre Capitol Landing Road Tract, City of Williamsburg, Virginia* Cultural Resources, Inc. Submitted to Consolidated Realty Management Corporation, Williamsburg, Virginia.

1998 *An Archaeological Assessment of Two Tracts Proposed for the Ford's Colony Development in James City County, Virginia* (contributing author, with Douglas C. McLearen, and Matthew R. Laird, Ph.D.) Cultural Resources, Inc. Submitted to Realtec, Inc., Williamsburg, Virginia.

1998 *Phase I Archaeological Survey of the Goodrich River Tract, Chesterfield County, Virginia* (with Douglas C. McLearen and Martha W. McCartney).

1998 *Cultural Resources Survey for the Industrial Access Road, Dinwiddie County, Virginia* (with Martha W. McCartney).

1998 *Phase II Significance Evaluation of Site 44HE696, in the Elko Tract, Henrico County, Virginia* (contributing author with Douglas C. McLearen, and Matthew R. Laird, Ph.D.) Cultural Resources Inc. Submitted to County of Henrico, Department of Public Works, Richmond, Virginia.

1998 *Archaeological Assessment of the Filtrona Tract, Chesterfield County, Virginia* (with Matthew R. Laird, Ph.D.)

1998 *Phase I Archaeological Survey of the 196-Acre Green Spring Plantation Site, James City County, Virginia* (with the James River Institute for Archaeology).

1999 *Phase II Boundary Determination at Site 44JC679 Green Springs Plantation Development, James City County, Virginia* (with Martha W. McCartney).

1999 *Phase I Archaeological Survey on One Permit Area at the Proposed Powhatan Development Tract, James City County, Virginia* (with Matthew R. Laird, PhD.) Cultural Resources, Inc. Submitted to Langley and McDonald, P.C., Williamsburg, Virginia.

1999 *Phase I Archaeological Survey of Two Permit Areas at the Proposed Powhatan Development Tract, James City County, Virginia* (with Matthew R. Laird, Ph.D., and Douglas C. McLearen) Cultural Resources, Inc. Submitted to Langley and McDonald. P. C., Williamsburg, Virginia.

1999 *Phase I Archaeological Survey of Approximately 200 Acres at the Greenmount Property, James City County, Virginia* (with Matthew R. Laird, PhD., Douglas C. McLearen, and R. Taft Kiser).

1999 *Phase I Survey of Two Tracts Proposed for the Ford's Colony Development in James City County, Virginia* (with Matthew R. Laird, Ph.D., and Douglas C. McLearen) Cultural Resources, Inc. Submitted to Realtec, Inc., Williamsburg, Virginia.

1998 Phase *I Archaeological Survey of the 196-Acre Green Spring Plantation Site, James City County, Virginia.* Cultural Resources, Inc. Submitted to the National Park Service, Yorktown, Virginia.

1998 Progress *Report Osteological Analysis of Human Remains at Site 44GL394 Gloucester County, Virginia.* Cultural Resources, Inc. Submitted to Waste Management, Gloucester, Virginia.

1999 *Phase I Survey at Two Permit Areas at Williamsburg Crossing, James City County, Virginia* Cultural Resources, Inc. Submitted to Langley and McDonald, P.C., Williamsburg, Virginia.

1999 *Phase I Archaeological Survey of Site 44IW96, Eagle Harbor Tract, Isle of Wight County, Virginia* (contributing author, with Douglas C. McLearen, and Matthew R. Laird, Ph.D.) Cultural Resources, Inc. Submitted to Williamsburg Environmental Group, Inc., Williamsburg, Virginia.

1999 Revised *Data Recovery Plan for Mitigation of Adverse Effects to Interrelated Sites 44GL394, 44GL395, and 44GL399 At the Middle Peninsula Landfill and Recycling Facility Gloucester County, Virginia.* Cultural Resources, Inc. Prepared for Waste Management, Gloucester, Virginia.

1999 *Phase I Archaeological Survey of the Greenmount Property, James City County, Virginia* (contributing author, with Douglas McLearen, and Matthew R. Laird, Ph.D.) Cultural Resources, Inc. Submitted to Brookstone Ventures, LLC, Williamsburg, Virginia.

1999 *Phase I and II Archaeological Investigations of the Liguria Tract, 44JC1018, James City County, Virginia* (with Matthew R. Laird, PhD., and Douglas C. McLearen) Cultural Resources, Inc. Submitted to AES Consulting Engineers, Williamsburg, Virginia.

1999 *Phase I Archaeological Survey of Approximately 200 Acres at the Greenmount Property, James City County, Virginia* (with Taft Kiser, Matthew R. Laird, Ph.D., and Douglas McLearen) Cultural Resources, Inc. Submitted to C. A. Barrs, Contractor, Inc., Yorktown, Virginia.

1999 *Phase II Excavations at Sites 44DW103, 44DW286, 44DW287, and 44DW292 at the Chaparral Steel Tract, Dinwiddie County, Virginia* (with Martha W. McCartney).

1999 *Phase II Boundary Determination at Site 44JC679 Green Spring Plantation Development, James City County, Virginia* (co-author, with Martha McCartney) Cultural Resources, Inc. Submitted to Lewis Waltrip, Williamsburg, Virginia.

1999 *Archaeological Testing of Sites 44IW184, 44IW185, and 44IW20, Isle of Wight County, Virginia* (with Douglas C. McLearen) Cultural Resources, Inc. Submitted to Coastal Design & Construction, Inc., Gloucester, Virginia.

1999 *Phase I Archaeological Survey of the Enon Pump Station Site, Chesterfield County, Virginia* (with Martha W. McCartney and contributions by Anthony W. Smith and David M. Givens).

1999 *An Archaeological Assessment of the Brooks Tract, Hanover County, Virginia* (with Douglas C. McLearen, David H. Dutton, and Matthew R. Laird, PhD.).

1999 *Phase I Archaeological Survey of Selected Areas of the Eagle Harbor Tract South of Route 17, Isle of Wight County, Virginia* (contributing author, with Douglas C. McLearen, and Matthew R. Laird, Ph.D.) Cultural Resources, Inc. Submitted to Williamsburg Environmental Group, Williamsburg, Virginia.

1999 *Phase II Boundary Determinations for Sites 44JC719, 44JC1009, 44JC1011, 44JC1012, and 44JC1014, James City County, Virginia* (with Douglas C. McLearen, and R. Taft Kiser) Cultural Resources, Inc. Submitted to Carl A. Barrs, Yorktown, Virginia.

1999 *Data Recovery Plan for Site 44JC1006 on the Greenmount Property, James City County, Virginia* Cultural Resources, Inc. Submitted to Malcolm Pirnie, Inc., Newport News, Virginia.

1999 *Phase I Archaeological Survey of the 196-Acre Green Spring Plantation Site, James City County, Virginia* (with Matthew R. Laird, Ph.D.).

1999 *Phase II Archaeological Significance Evaluation of 44NK189, 44NK199, and 44NK201 Associated with Potential Wetlands Mitigation Areas on Capital Region Airport Commission Property in New Kent County, Virginia* (with Douglas C. McLearen).

1999 *Phase I Survey at Two Areas at the Prime Retail Outlet, James City County, Virginia.*

1999 *Phase I Archaeological Survey of Wetlands Mitigation and Permit Areas Along Tomahawk Creek and Little Tomahawk Creek in Chesterfield County, Virginia* (co-authored with Douglas C. McLearen and Matthew R., Ph.D.). Cultural Resources, Inc. Submitted to Watermill Properties, LLC, Williamsburg, Virginia.

2000 *Phase II Testing at Archaeological Sites 44JC686 and 44JC687 at the Proposed Patriot's Colony Tract, James City County, Virginia* (with Douglas C. McLearen).

2000 *Phase I Archaeological Survey of a 52-Acre Tract Slated for Industrial Development at the Bear Island Property in Prince George County, Virginia* (with Douglas

C. McLearen, Anthony W. Smith, David M. Givens, and Matthew R. Laird, PhD.).

2000 *Data Recovery Plan, Archaeological Site 44JC1004 Ford's Colony, James City County, Virginia* Cultural Resources, Inc. Submitted to Realtec, Inc., Williamsburg, Virginia.

2000 *Intensive Testing at Archaeological Sites 44JC686 and 44JC687 at the Proposed Patriots Colony Tract, James City County, Virginia* (co-authored with Douglas C. McLearen) Cultural Resources, Inc. Submitted to The Williamsburg Environmental Group, Inc., Williamsburg, Virginia.

2000 *Phase I Archaeological Survey of the Proposed Meadowville Parkway, Chesterfield County, Virginia* (with Douglas C. McLearen, Martha W. McCartney, and David M. Givens).

2000 *Phase I Archaeological Identification Survey of Beaverdam Creek Pumping Station Force Main Improvements in Henrico County, Virginia* (with Douglas C. McLearen, Matthew R. Laird, PhD., and R. Taft Kiser).

2000 *Phase II Significance Evaluation of Site 44HE706 in the Elko Tract, Henrico County, Virginia* (senior author, with Matthew R. Laird, PhD., Donald G. Jones, PhD., R. Taft Kiser, and David M. Givens).

2000 *Phase I Archaeological Survey: Proposed BMP Pond, Wetland Mitigation Site, Construction Staging Area, and 1300 foot Section of Road Alignment Associated with the Proposed Meadowville Parkway, Chesterfield County, Virginia,* (contributing author, with Douglas C. McLearen (senior author), Martha W. McCartney, and David M. Givens).

2000 *Phase I Archaeological Survey of Permit Areas Along a Portion of the Proposed Watermill Parkway in Chesterfield County, Virginia* (contributing author, with Douglas C. McLearen (senior author), Matthew R. Laird, Ph.D., and R. Taft Kiser).

2000 *Phase I Archaeological Identification Survey of Beaverdam Creek Pumping Station Force Main Improvements in Henrico County, Virginia* (contributing author, with Douglas C. McLearen (senior author), R. Taft Kiser, and Matthew R. Laird, Ph.D.) Cultural Resources, Inc. Submitted to Michael Baker, Jr., Inc., Richmond, Virginia.

2000 *Phase I Archaeological Survey of the Malvern Hill Wetland Mitigation Area, Henrico County, Virginia* (contributing author, with Douglas C. McLearen, Matthew R. Laird, Ph.D., and David M. Givens) Cultural Resources, Inc. Submitted by H. H. Hunt, Glen Allen, Virginia.

2001 *Phase II Evaluation at Site 44JC371 Ford's Colony Development in James City County, Virginia* (co-authored with Matthew R. Laird). Cultural Resources, Inc. Submitted to Realtec, Inc., Williamsburg, Virginia.

2001 *Phase I Cultural Resources Survey Zion Crossroads Tract, Louisa County, Virginia* (co-authored with Matthew R. Laird, and David M. Givens) Cultural Resources, Inc. Submitted to Carter Burgess, Fort Worth, Texas.

2001 *Phase II Evaluation at Site 44JC371 Ford's Colony Development in James City County, Virginia* (co-authored with Matthew R. Laird, Ph.D.) Cultural Resources, Inc. Submitted to Realtec, Inc., Williamsburg, Virginia.

2001 *Phase I Archaeological Survey of the Proposed 600 Foot Bike Trail Extension, James City County, Virginia* Cultural Resources, Inc. Submitted to James City County Development Management Office, Williamsburg, Virginia.

2001 *Phase I Archaeological Survey, Court Square, Albemarle County, Virginia* (contributing author, with Matthew R. Laird, Ph.D., and Clifton A. Huston). Cultural Resources, Inc. Submitted to PMA Planners and Architects, Newport News, Virginia.

2001 *Phase I Cultural Resources Survey, John Rolfe Parkway, Henrico County, Virginia* (contributing author with David H. Dutton, and David M. Givens) Cultural Resources Inc. Submitted to The Williamsburg Environmental Group, Inc., Williamsburg, Virginia.

2001 *Phase I Cultural Resources Survey, Garcia Tract, Loudoun County, Virginia* Cultural Resources Inc. Submitted to Barclay Ridge, L.L.C., Vienna, Virginia.

2002 *Phase I Archaeological Survey of the Proposed 8-Acre Williamsburg Apartments Property, James City County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Dr. David G. Walker, Williamsburg, Virginia.

2002 *Phase II Archaeological Investigation of Sites 44JC1085, 44JC1087, 44JC1088, and 44JC1089 at the Stonehouse Development, James City County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Stonehouse Development Company, Inc., Williamsburg, Virginia.

2002 *Phase I Archaeological Survey of Four Selected Portions of the Proposed Belleharbour Development, City of Suffolk, Virginia (*co-authored with Garrett R. Fesler and Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Kimley-Horn & Associates, Inc., Virginia Beach, Virginia.

2002 *Phase I and II Archaeological Survey and Evaluation and Phase I and II Architectural Survey and Evaluation of the Aston (Eley) House and Lot Located in the City of Suffolk, Virginia* (co-authored with Garrett R. Fesler). James River Institute for Archaeology, Inc. Submitted to Tri-City Developers, LLC, Suffolk, Virginia.

2002 *Phase I Cultural Resources Survey of a Proposed 68-Acre Mining Area, Sussex County, Virginia* (co-authored

with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Iluka Resources, Inc., Stony Creek, Virginia.

2002 *Phase I Archaeological Survey of 250 Acres at Fort Pickett, Nottoway County, Virginia.* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Malcolm Pirnie, Inc., Newport News, Virginia.

2002 *Phase III Data Recovery at Site 44YO1015, Located at Armed Forces Experimental Training Activity, Camp Peary in York County, Virginia.* James River Institute for Archaeology, Inc. (co-authored with Garrett R. Fesler and Matthew R. Laird). Submitted to AFETA Camp Peary, Williamsburg, Virginia.

2002 *Phase I Survey of Approximately 1.5 Acres, Centex Development*, James City County, Virginia. James River Institute for Archaeology, Inc. (co-authored with Matthew R. Laird). Submitted to Kerr Environmental Corporation, Virginia Beach, Virginia.

2002 *Phase I Archaeological Survey of the Proposed Richmond Waterline Replacement Project, Richmond, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Greely & Hanson, Inc., Richmond, Virginia.

2002 *Phase I Archaeological Survey of Site 44YO264, York County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Landmark Design Group, Inc., Williamsburg, Virginia.

2002 *Phase II Evaluation of Site 44JC674, James City County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Jamestown Management, LLC, Williamsburg, Virginia.

2002 *Phase I Archaeological Survey of 26 Acres at Fort Pickett, Nottoway County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Malcolm Pirnie, Inc., Newport News, Virginia.

2003 *Phase I Archaeological Survey of the Interior and Immediate Exterior of the Reproduction James Fort Located at Jamestown Settlement, James City County, Virginia* (co-authored with Garrett R. Fesler and Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to The Jamestown-Yorktown Foundation, Williamsburg, Virginia.

2003 *Phase I Archaeological Survey of a Proposed 620' Interpretive Pathway Located at Jamestown Settlement, James City County, Virginia* (co-authored with Garrett R. Fesler and Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Jamestown-Yorktown Foundation, Williamsburg, Virginia.

2003 *Phase I Archaeological Survey of a Proposed 3,700-Foot Desalinization Pipeline Corridor, James City County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to James City County, James City County, Virginia.

2003 *Phase I Archaeological Survey of Approximately 250 Acres at the Greenmount Property, James City County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Greenmount Associates, LLC, Newport News, Virginia.

2003 *Phase I Archaeological Survey of Approximately 14 Acres at the Hankins Tract, James City County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to RMC Allied Readymix, Inc., Atlanta, Georgia.

2003 *Phase I Cultural Resources Survey of the Proposed Virginia State University Student Housing Project Area, Chesterfield County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to VHB, Inc., Williamsburg, Virginia.

2003 *Phase I Archaeological Survey of Permit Areas at the Proposed Watermill Development in Chesterfield County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Centex Homes, Richmond, Virginia.

2003 *Phase I Cultural Resources Survey of a 22.5-Acre Tract (Tax Map 49, Parcel 15), Stafford County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Caly Builders, Inc., Stafford, Virginia.

2003 *Phase I Archaeological Survey of Seven Testing Areas Associated with the Goochland/Henrico Regional Force Main Project, Goochland and Henrico Counties, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Timmons Group, Richmond, Virginia.

2003 *Archaeological Testing at Red Hill, Charlotte County, Virginia* (co-authored with Nicholas M. Luccketti). James River Institute for Archaeology, Inc. Submitted to Patrick Henry National Memorial, Brookneal, Virginia.

2003 *Phase IA Historical and Archaeological Assessment of Approximately 50 Acres Located in the City of Chesapeake, Virginia* (co-authored with Garrett R. Fesler). James River Institute for Archaeology, Inc. Submitted to HDR Engineering, Inc., Richmond, Virginia.

2003 *Phase II Evaluations of Sites 054-0988, 44LD767, and 44LD757, Loudoun County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to John Laing Homes, LLC, Vienna, Virginia.

2003 *Phase I Archaeological Survey of Approximately 16 Acres at the Proposed Rippon Boulevard Elementary School Project, Prince William County, Virginia.* James

River Institute for Archaeology, Inc. Submitted to HGS, Manassas, Virginia.

2003 *Phase I Cultural Resources Survey of Approximately 10 Acres of the Project "Value" Property, Rockingham County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to H and M Architects/Engineers, Inc., Jackson, Tennessee.

2003 *Phase I Archaeological Survey of 450 Acres at Fort Pickett, Nottoway County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Malcolm Pirnie, Inc., Newport News, Virginia.

2003 *Archaeological Excavations at Site 44ST269, Stafford County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Leeland Station, LLC, Rockville, Maryland.

2003 *Data Recovery Plan for Site 44JC1012 on the Greenmount Property, James City County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Greenmount Associates, LLC, Newport News, Virginia.

2003 *Data Recovery Plan for Site 44JC1009 on the Greenmount Property, James City County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Greenmount Associates, LLC, Newport News, Virginia.

2003 *Phase I Archaeological Survey of Approximately 22 Acres, Henrico County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Michael Baker, LLC, Richmond, Virginia.

2003 *Phase I Archaeological Survey of the Proposed Meadowville Technology Park Industrial Access Road Realignment, Chesterfield County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Timmons Group, Richmond, Virginia.

2003 *Phase II Evaluations of Sites 44JC276, 44JC278, 44JC279, and 44JC425, James City County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Stonehouse Development Company, Inc., Williamsburg, Virginia.

2003 *Phase I Archaeological Survey of Approximately 6,430 Linear Feet of the Proposed Riverstone Gravity Sewer Interceptor Corridor, Halifax County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Industrial Development Authority of Halifax County, Virginia, South Boston, Virginia.

2003 *Phase I Archaeological Survey of Approximately 180 Acres, Prince William County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to D.R. Horton, Inc., Fairfax, Virginia.

2004 *Phase I Archaeological Survey of Approximately Two Acres, Yorktown, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to C. A. Barrs, Yorktown, Virginia.

2004 *Phase I Archaeological Survey of Approximately Two Acres, Yorktown, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to York County, Yorktown, Virginia.

2004 *Phase I Archaeological Survey of 8.2 Acres for the Proposed Birmingham Green Assisted Living Facility, Manassas, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to DSC Advisory Services, LLC, Chesapeake, Virginia.

2004 *Phase I Cultural Resources Survey of Four Permit Areas at the Edgewater, Section 3, Development, Chesterfield County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Timmons Group, Richmond, Virginia.

2004 *Phase II Archaeological Evaluation of Sites 44SX259, 44SX270, and 44SX328, Sussex County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Iluka Resources, Inc., Stony Creek, Virginia.

2004 *Phase I Cultural Resources Survey of Permit Areas, Kingsland Glen, Chesterfield County, Virginia* (co-authored with Matthew R. Laird). James River Institute for Archaeology, Inc. Submitted to Barthol Design Associates, Richmond, Virginia.

2004 *Phase I Survey of Rippon Lodge.* James River Institute for Archaeology, Inc. Submitted to D.R. Horton, Fairfax, Virginia.

2005 *Phase II Evaluations of 22 Sites at the GreenMount Tract.* James River Institute for Archaeology, Inc.

2005 *Phase III Excavations at two sites at the GreenMount Tract.* James River Institute for Archaeology, Inc.

2005 *Phase II Evaluations of three sites at Rippon Lodge.* James River Institute for Archaeology, Inc. Submitted to D.R. Horton, Fairfax, Virginia.

2005 *Phase I Survey of the Sherman Property.* James River Institute for Archaeology, Inc. Submitted to Michael Brown, Williamsburg, Virginia.

2006 Phase I Archaeological Survey at Quality Way, Southpoint Industrial Park, Prince George County, Virginia (co-authored with Nancy Phaup and Martha McCartney. Circa~. Submitted to Southpoint Industrial Park, Prince George County, Virginia.

2006 Phase I Archaeological Survey at Warburton Tract, James City County, Virginia (co-authored with Nancy Phaup and Martha McCartney. Circa~. Submitted to Ford's Colony, Williamsburg, Virginia.

2006 Phase I Excavations for the James City County Trail, Warhill Sports Complex, James City County, Virginia (co-authored with Nancy Phaup and Martha McCartney. Circa~. Submitted to James City County, Virginia.

2006 Phase I Survey of the Approximately 10-acre BI Chemical Plant, Prince George County, Virginia (co-authored with Nancy Phaup and Martha McCartney. Circa~. Submitted to Malcolm-Pirnie, Newport News, Virginia.

2006 Phase I Survey of the Former Hood Property, Henrico County, Virginia (co-authored with Nancy Phaup and Martha McCartney). Circa~. Submitted to Timmons Group, Inc., Chesterfield, Virginia.

2006 Phase I Survey of the Henrico County East Middle School Access Road, Henrico County, Virginia. (co-authored with Nancy Phaup and Martha McCartney. Circa~. Submitted to Timmons Group, Inc., Chesterfield, Virginia.

2006 Phase I Survey of the Access Road for Matoaca Park, Chesterfield County, Virginia (co-authored with Nancy Phaup and Martha McCartney). Circa~. Submitted to Timmons Group, Inc., Chesterfield, Virginia.

2006 Phase I Survey of the Realignment of Water Country Way, York County, Virginia (co-authored with Nancy Phaup and Martha McCartney). Circa~. Submitted to Busch Properties, Inc., Williamsburg, Virginia.

2007 Cemetery Boundary Delineation of Site 089-5193 and 089-5202 Wilbourn property Stafford County Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~). Submitted to the Anderson Company, LLC. Manassas, Virginia.

2007 Current Condition Assessment Brewers Neck Boulevard Isle of Wight County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2007 Current Condition Assessment Caeli Farm Loudon County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2007 Current Condition Assessment Greensville Megasite Greensville County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~). Submitted to Timmons Group, Inc., Chesterfield, Virginia.

2007 Current Condition Assessment Gresham Property City of Richmond, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~). Submitted to Timmons Group, Inc., Chesterfield, Virginia.

2007 Current Condition Assessment McCale Property York County, Virginia ((co-authored with Aaron Levinthal and Dawn Frost, Circa~). Submitted to Vanasse Hangen Brustlin, Williamsburg, Virginia.

2007 Current Condition Assessment O'Connor Tract Loudon County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2007 Current Condition Assessment Chester Site Chesterfield County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~). Submitted to Vanasse Hangen Brustlin, Williamsburg, Virginia.

2007 Hancock Village Management Summary, Chesterfield County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2007 Phase I Archaeological Survey of 120 Acres at Jolly Pond Road James City County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~). Submitted to James City County, Virginia.

2007 Phase I Archaeological Survey for Approximately 6 Acres Stonehouse Development James City County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2007 Phase I Archaeological Survey for Approximately 140 Acres at the Proposed Rose Hill Tract, York County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~). Submitted to York County, Virginia.

2007 Phase I Archaeological Survey of Albemarle River Subdivision Lots 16-21, Chesapeake, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2007 Phase I Archaeological Survey of Approximately 415 Acres of the Turner Tract, Southampton County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2007 Phase I Archaeological Survey of Approximately One Acre at the Grove Christian Center Property James City County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~). Submitted to Grove Christian Center, James City County, Virginia.

2007 Phase I Archaeological Survey of DSCR Road Alignment Chesterfield County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2007 Phase I Archaeological Survey of the Proposed Lakeridge Parkway Extension Section 2 Hanover County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2007 Phase I Archaeological Survey of the Park Valley Church Property Prince William County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2007 Phase I Archaeological Survey of Three Trails Meadowood Special Recreation Management Area, Fairfax

County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2007 Phase I Archaeological Survey of the Wilbourn Property Stafford County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~). Submitted to the Anderson Company, LLC, Manassas Virginia.

2007 Phase I Architectural Reconnaissance Survey of a 350-Acre Tract Associated with the Proposed Three Flags Development, Culpeper, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~). Submitted to Angler Environmental.

2007 Phase I Cultural Resources Survey of Golf Course Areas Holes 13-18 and Development Areas F and G at Magnolia Green, Chesterfield County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~). Submitted to Timmons Group, Inc., Chesterfield, Virginia.

2007 Phase I Cultural Resources Survey for Mill Creek Drive, Southampton County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~). Submitted to Timmons Group, Inc., Chesterfield, Virginia.

2007 Phase I Cultural Resources Survey of Road Right-of-Way Magnolia Green Chesterfield County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~). Submitted to Timmons Group, Inc., Chesterfield, Virginia.

2007 Phase I Cultural Resources Survey of the Georgia-Pacific Site Property Town of South Boston, Vicinity, Halifax County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2007 Phase I Cultural Resources Survey of the Lower Opossum Creek Wastewater Improvements, Hanover County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2007 Phase I Location Survey of Features Associated with Site 020-5350 Midlothian District of the Richmond Coal Basin: The Henry Jones Tract Chesterfield County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~). Submitted to Timmons Group, Inc., Chesterfield, Virginia.

2007 Phase II Archaeological Survey of Sites 44JC1173 and 44JC1174 James City County School Site at Jolly Pond, James City County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~). Submitted to AES, Inc.., Williamsburg, Virginia.

2007 Phase II Archaeological Survey of Site 44CF0596 Chesterfield County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~). Submitted to Timmons Group, Inc., Chesterfield, Virginia.

2007 Villages of Gloucester Management Summary, Gloucester, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2007 *Management Summary Totopotomoy Creek Wastewater Improvements, Hanover County, Virginia* (co-authored with Dawn Frost, Circa~).

2007 *Phase I Architectural Survey of the Tenaska Tract (Buschman Farm) Buckingham County, Virginia* (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2007 *Phase II Evaluation of Site 44BK0331 Buckingham County, Virginia* (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2007 *Phase I Cultural Resources Survey of the 14-Acre Walnut Tree Farm Prince William County, Virginia* (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2007 *Phase I Architectural Survey of Littlefields, Westmoreland County, Virginia* (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Current Conditions Assessment Dinwiddie Commerce Park, Dinwiddie County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Current Conditions Assessment at Magnolia Green, Chesterfield County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase II Architectural Survey of Timberneck and Catlett Island, Gloucester County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase II Evaluation of Site 44JC845, Moss Creek Development, James City County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Archaeological Excavations of 44JC77, The Stonehouse Site, James City County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase II Archaeological Evaluation for Site 44JC427, Stonehouse Tract, James City County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase II Evaluation of Site 44JC837/047-0046, Stonehouse Tract, James City County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Current Conditions Assessment, Thibault Tract, Chesterfield County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase I Archaeological Survey of a Proposed Utility Line for the School Sites at Jolly Pond Road, James City County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Current Conditions Assessment, Allegheny Master Plan, Allegheny County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Current Conditions Assessment, Crosspointe Centre, Prince George County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Historical Assessment for Indian Creek Dredging Project, City of Hampton, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase IA Cultural Resources Survey, St. Olaf's Church, James City County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Current Conditions Assessment, Proposed Industrial Access Road Corridor, Crosspointe Centre, Prince George County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase I Archaeological Survey of 42 Acres at Magnolia Green, Chesterfield County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase I Cultural Resources Survey of the Smith River Sports Complex Access Road, Henry County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Current Conditions Assessment Roma and Sharpe Tracts, Henry County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase II Archaeological Evaluation for Site 44JC412 Stonehouse Tract, James City County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Proposed Partial Data Recovery Plan for Site 44JC845 at Moss Creek Development, James City County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase I Architectural Survey of the Greensville Megasite, Greensville County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Proposed Partial Data Recovery Plan for Site 44CF684 at Magnolia Green, Chesterfield County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase I Archaeological Survey of Timberneck at Catlett Island, Gloucester County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Additional Phase III Archaeological Evaluations at Site 44JC1113 The Colonies, James City County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Management Summary Beaufont Spring, Chesterfield County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase I Cultural Resources Survey of Permit Areas Within the Bottoms Bridge Tract, New Kent County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase I Cultural Resources Survey of the Stoup Property, Isle of Wight County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase I Cultural Resources Survey of Christ United Methodist Church Property, Fairfax County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase II Archaeological Evaluation of Sites 44CF0697, 44CF0700, and 44CF0701 at Magnolia Green, Chesterfield County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase I Archaeological Survey of Littlefields, Westmoreland County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase II Evaluation of Site 44BK0329, Buckingham County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase I Cultural Resources Survey of Middle Peninsula Environmental Bank, Gloucester County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase I Cultural Resources Survey of Fluvanna High School Site, Fluvanna County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase I Cultural Resources Survey of proposed Science and Technology Building Tract on the Richard Bland College Campus, Dinwiddie County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase IA Cultural Resources Survey of Wildwood Estates Property, Loudon County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase II Archaeological Survey of Five Sites and a Cemetery Delineation, Turner Tract, Southampton County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2008 Phase I Archaeological Survey of the Chicken Coop Trail, Meadowood Special Recreation Management Area, Fairfax County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2009 Phase I Cultural Resources Survey of Terrascape Design and Build Company Inc., at 16127 John Marshall Highway, Prince William County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2009 Current Condition Assessment, Towers Tract, Goochland County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2009 Current Condition Assessment, Wilderness North Tract, Orange County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2009 Phase II Archaeological Evaluation of 44GL0450 at Middle Peninsula Environmental Bank, Gloucester County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2009 Phase I Cultural Resources Survey of Faith Church Property, Henrico County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2009 Current Condition Assessment of the 8.8-Acre Bull Property Tract, Isle of Wight County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2009 Phase I Architectural Survey of the Roma Tract, Henry County, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2009 Phase I Architectural Survey of Seven Housing Areas, Norfolk Redevelopment and Housing Authority, City of Norfolk, Virginia (co-authored with Aaron Levinthal and Dawn Frost, Circa~).

2009 Current Condition Assessment Deep Creek and Jones and Gilligan Creeks Craney Island Expansion Project Mitigation Sites, City of Chesapeake, Virginia (with Aaron Levinthal and Dawn Frost, Circa~).

2009 Archaeological Excavations at the Roma Tract Payne Cemetery Site 044-5184 Henry County, Virginia (with Aaron Levinthal and Dawn Frost, Circa~).

2009 Cemetery Delineation at Catlett Island Gloucester, County, Virginia (with Aaron Levinthal and Dawn Frost, Circa~).

2009 *Phase II Archaeological Evaluation of Site 44NN60, Newport News, Virginia* (with Aaron Levinthal and Dawn Frost, Circa~).

2009 Phase I Cultural Resources Survey of the College Triangle Retail Property, City of Williamsburg, Virginia (with Aaron Levinthal and Dawn Frost, Circa~).

2009 Phase I Archaeological Survey of Airport Gateway Land Bay A, Prince William County, Virginia (with Aaron Levinthal and Dawn Frost, Circa~).

2009 Phase I Archaeological Survey of Proposed Utility Replacement Corridor on the Richard Bland College Campus, Dinwiddie and Prince George Counties, Virginia (with Aaron Levinthal and Dawn Frost, Circa~).

2009 Phase I Archaeological Survey of Coleman Crossing, Gloucester Counties, Virginia (with Aaron Levinthal and Dawn Frost, Circa~).

2009 Current Conditions Assessment Rotterdam Property Craney Island Expansion Project Mitigation Sites, City of Chesapeake, Virginia (with Aaron Levinthal and Dawn Frost, Circa~).

2009 Phase II Architectural Survey of Master Craftsmen Jewelry Building College Triangle Retail Property, City of Williamsburg, Virginia (with Dawn Frost, Circa~).

2009 Cultural Resources Survey of 755 Scotland Street City of Williamsburg, Virginia (with Aaron Levinthal. Amy Humphries, and Dawn Frost, Circa~).

2009 Phase I Archaeological Survey of Approximately 30 Acres Liberty Landing Property, New Kent County, Virginia (with Aaron Levinthal and Dawn Frost, Circa~).

2009 Phase I Archaeological Survey of the Cape Henry Inn Tract Fort Story, City of Virginia Beach, Virginia (with Aaron Levinthal and Dawn Frost, Circa~).

2009 Management Summary, 3410 Goodwin Neck Road, York County, Virginia (with Dawn Frost, Circa~).

2009 Phase I Cultural Resources Survey of Quaker Steak and Lube Property, Prince William County, Virginia (with Dawn Frost, Circa~).

2009 Phase II Archaeological Survey of Sites 44YO1074 and 44YO1075 Hampton Roads Sanitation District York River Treatment Plant Expansion, York County, Virginia (with Aaron Levinthal and Dawn Frost, Circa~).

2009 Archaeological Excavations at the Greenhow Cemetery Site 089-5202, Stafford County, Virginia (with Aaron Levinthal, Amy Humphries, and Dawn Frost, Circa~).

2009 Phase I Cultural Resources Survey of the Sharpe Tract, Henry County, Virginia (with Amy Humphries and Dawn Frost, Circa~).

2009 Phase I Cultural resources Survey of Colonial Heights Baptist Church Property, Chesterfield County, Virginia (with Amy Humphries and Dawn Frost, Circa~).

2009 Phase I Archaeological Survey of Approximately One Acre at the Grove Christian Center Property, James City County, Virginia (with Amy Humphries and Dawn Frost, Circa~).

2009 Phase II Architectural Survey of the Watkins House, Henry County, Virginia (with Dawn Frost, Circa~).

2009 Phase I Cultural Resources Survey of the South Norfolk Jordan Bridge Project, Chesapeake and Portsmouth, Virginia (with Aaron Levinthal and Dawn Frost, Circa~).

2009 Phase II Architectural Survey Atlantic Wood Industries, Inc. Property, VDHR Site #124-5132, City of Portsmouth, Virginia (with Dawn Frost, Circa~).

2010 Current Conditions Assessment Windsor Road Property, Orange County, Virginia (with Dawn Frost, Circa~).

2010 Henricus State Park Riverbank Stabilization Project Management Summary, Chesterfield County, Virginia (with Dawn Frost, Circa~).

2010 Phase I Archaeological Survey of the 10-Acre Williamsburg James City County Schools Operations Center Expansion, James City County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Phase I Archaeological Survey of 10 Trails Meadowood Special Recreation Management Area, Fairfax County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Phase I Cultural Resources Survey of Deep Creek Ball Park Property, City of Chesapeake, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Current Conditions Assessment of the Approximately 350-Acre Dupont-Fabros Development Tract, Loudoun County, Virginia (with Dawn Frost, Circa~).

2010 Phase I Cultural Resources Survey of BiCounty Way Property, New Kent County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Phase I Cultural Resources Survey of Mount Zion Baptist Church, Price William County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Phase I Cultural Resources Survey of Stafford Commerce Center, Stafford County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Phase I Cultural Resources Survey of Meherrin River Regional Jail Site, Brunswick County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Phase I Cultural Resources Survey of Commonwealth Crossing Business Centre Water and Sewer Lines, Henry County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Wynwood Property Management Summary, Chesterfield County, Virginia (with Dawn Frost, Circa~).

2010 Winterfield Commercial Park Viewshed Analysis, Powhatan County, Virginia (with Dawn Frost, Circa~).

2010 College Triangle Retail Project – The College of William and Mary Management Summary, City of Williamsburg, Virginia (with Dawn Frost, Circa~).

2010 Darby Road Parcels Management Summary, York County, Virginia (with Dawn Frost, Circa~).

2010 Phase I Cultural Resources Survey of Bryan's Landing Subdivision, City of Chesapeake, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Phase I Cultural Resources Survey of Greenhaven at Murray Drive Drainage Easement Acquisition from U.S. Navy, City of Chesapeake, Virginia (with Dawn Frost Circa~).

2010 Phase I Cultural Resources Survey of Pole Green Road and Rural Point Road Intersection Improvements, Hanover County, Virginia (with Dawn Frost Circa~).

2010 Phase I Cultural Resources Survey of Pole Green Road and Walnut Grove Road Intersection Improvements, Hanover County, Virginia (with Dawn Frost Circa~).

2010 Lee Hall Reservoir Management Summary, City of Newport News, Virginia (with Dawn Frost, Circa~).

2010 Phase I Cultural Resources Survey of the Approximately 350-Acre Dupont-Fabros Development Tract, Loudoun County, Virginia (with Amy Humphries and Dawn Frost Circa~).

2010 Phase IA Cultural Resources Assessment, Forest Heights and Neighbors Drive, James City County, Virginia (with Dawn Frost Circa~).

2011 Phase I Cultural Resources Survey of Nansemond River Estates property, City of Suffolk, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Disturbance Assessment West Creek Medical Center, Goochland County, Virginia (with Dawn Frost Circa~).

2011 Phase I Cultural Resources Survey of Lowes Tract and Extension of Russell Branch Parkway, Loudoun County, Virginia (with Dawn Frost Circa~).

2011 Phase I Cultural Resources Survey of Foxfield Tract, Chesterfield County, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Phase I Cultural Resources Survey of Brasfield Commons Tract, City of Petersburg, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Phase I Cultural Resources Survey of Courthouse at Marketplace Property, Chesterfield County, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Phase I Cultural Resources Survey of Sports Quest Tract Phase I, Chesterfield County, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Phase I Cultural Resources Survey of West Creek Medical Center Shared Entrance Road Right-of-Way and Utility Right-of-Ways, Goochland County, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Current Conditions Assessment of Stonebridge Property, Chesterfield County, Virginia (with Dawn Frost Circa~).

2011 Treatment Plan for Site 44GO0370 West Creek Emergency Center Tract, Goochland County, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Management Summary 3190 Riverside Drive, Henry County, Virginia (with Dawn Frost Circa~).

2011 Current Conditions Assessment of Haymarket Tract, Prince William County, Virginia (with Dawn Frost Circa~).

2011 Current Conditions Assessment of J. Sergeant Reynolds Community College Tract, Henrico County, Virginia (with Dawn Frost Circa~).

2011 Phase I Cultural Resources Survey of George Mason University Life Sciences Building Parking Lot, Prince William County, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Phase I Cultural Resources Survey of George Mason University Housing and Retail Building, Prince William County, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Addendum to Phase I Cultural Resources Survey of Pole Green Road and Rural Point Road Intersection Improvements, Hanover County, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Current Conditions Assessment of the Stafford County High School Property, Stafford County, Virginia (with Dawn Frost, Circa~).

2011 Current Conditions Assessment of the Mecklenburg Jail Site, Mecklenburg County, Virginia (with Dawn Frost, Circa~).

2011 Phase I Cultural Resources Survey of the Marine Animal Care Facility Tract, City of Virginia Beach, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2011 Management Summary Dominion Virginia Power, Remington Site, Fauquier County, Virginia (with Dawn Frost, Circa~).

2011 Management Summary Dominion Virginia Power, Brunswick Site, County, Brunswick Virginia (with Dawn Frost, Circa~).

2011 Management Summary Dominion Virginia Power, Chesterfield Site, Chesterfield County, Virginia (with Dawn Frost, Circa~).

2011 Partial Phase III Archaeological Data Recovery of Site 44CF0684 at Magnolia Green, Chesterfield County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2011 Phase II Archaeological Evaluations and Boundary Determination of Site 44GO0370 at West Creek Emergency Center Tract, Goochland County, Virginia (with Dawn Frost, Circa~).

2011 Phase I Cultural Resources Survey of Varina Stream Mitigation Bank, Henrico County, Virginia (with Dawn Frost, Circa~).

2011 Addendum to Current Conditions Assessment, Dinwiddie Commerce Park, Dinwiddie County, Virginia (with Dawn Frost, Circa~).

2011 Proposed Data Recovery Plan for Site 44CF0594 at the DeSear Farmstead Site, Chesterfield County, Virginia (with Dawn Frost, Circa~).

2011 Phase I Cultural Resources Survey of Dominion Virginia Power Brunswick Site, Brunswick County, Virginia (with Dawn Frost, Circa~).

2011 Current Conditions Assessment of the Stafford County Elementary School Property, Stafford County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2011 Phase I Cultural Resources Survey of Washington Ridge, York County, Virginia (with Dawn Frost, Circa~).

2011 Phase I Architectural Survey of Mainline Norfolk-Southern Railroad Project Area, City of Petersburg, Virginia (with Dawn Frost, Circa~).

2011 Phase I Architectural Survey of Mainline Norfolk and Western Railroad Project Area, City of Chesapeake, Virginia (with Dawn Frost, Circa~).

2012 Addendum to Phase I Archaeological Survey of the Proposed Meadowville Parkway, Chesterfield County, Virginia (with Dawn Frost, Circa~).

2012 Addendum to Phase I Cultural Resources Survey of Pole Green Road and Walnut Grove Road Intersection Improvements, Hanover County, Virginia (with Dawn Frost, Circa~).

2012 Management Summary, Dominion Virginia Power Chesterfield Tract Utility Corridor, Chesterfield County, Virginia (with Dawn Frost, Circa~).

2012 Management Summary, Village of Holland Water Supply, City of Suffolk, Virginia (with Dawn Frost, Circa~).

2012 Phase I Architectural Survey of Mainline Norfolk-Southern Railroad Project Area, City of Chesapeake, Virginia (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of Atlee Road Extended, Hanover County, Virginia (with Dawn Frost, Circa~).

Middle Woodland, circa 500 B.C. - A.D. 900, and the one that is probably most applicable to the project area environs. Others elaborated on the scheme based on both artifact styles and, of perhaps more significance, perceived settlement shifts.

The appearance of ceramics in the archaeological record generally defined the Early Woodland subperiod, bracketed herein at circa 1,200 B.C. - 500 B.C. The earliest Woodland ceramic wares, Marcey Creek plain, and variants are rectangular or oval and resemble the preceding Late Archaic soapstone vessels. In the Tidewater James River area, these ceramics are rare and appear to be, in part, contemporaneous with similar flat-bottom vessels tempered with grog, sand, and, in some cases, shell. Variously tempered beaker-shaped vessels and those with more conventional sub-conical shapes follow these forms.

The complexity of and emphasis on ceremonial aspects, especially those concerned with the burial of the dead, are also characteristic of the Early Woodland subperiod across a broad region of the east. This emphasis is not seen in Virginia until about 500 B.C. when stone and earth burial cairns and cairn clusters occur in the western part of Virginia. However, despite the mention of such mounds in both oral tradition and older publications, most researchers generally accept that this phenomenon did not extend into the Coastal Plain.

Gardner's model indicates that, in the overall project area vicinity, large and intensively occupied sites interpreted as sedentary (as opposed to seasonal) large group base camps are located in the estuarine zone/shoreline with smaller, short-term support camps located in the estuarine zone and throughout the freshwater tributary network. During this time, shell middens appeared, indicating shellfish were an important part of the subsistence focus (Gardner 1982). The succeeding Middle Woodland subperiod sees the most intensive use of these resources, and middens are generally larger and more abundant.

The appearance of net-marked and corded pottery that is sand-tempered, sand- and crushed-rock-tempered, and gravel-tempered marked the Middle Woodland subperiod in this area, defined herein between circa 500 B.C. and A.D. 900. These types generally span the subperiod circa 500 B.C. to A.D. 300 and are slightly overlapped in time by, and replaced with, the shell-tempered Mockley ware from slightly before circa A.D. 200 to about A.D. 900 throughout outer Tidewater Virginia.

By the Late Woodland subperiod (circa A.D. 900 - 1600), agriculture had assumed a role of major importance in the Native American subsistence system. The adoption of agriculture represents a major change in the Native American subsistence economy and settlement patterns. Expanses of arable land became a dominant settlement factor, and sites were located on fertile floodplain soils or, in many cases, on higher terraces or ridges adjacent to them. During this subperiod, shell middens were still used, but the large habitation sites are not necessarily correlated with them. Early to Middle Woodland shell middens are often re-used but mainly as short-term foray sites (Gardner 1982).

By the time of initial European exploration, most Native American groups in the Coastal Plain, from the James drainage to the Northern Neck, shared a common culture. They were subsumed within an emerging paramount chiefdom under the domain of one paramount chief, Powhatan. Some groups were direct components of the chiefdom, while others, usually those most distant, were allied in some manner with the paramount group (Rountree 1989).

Diagnostic artifacts of the Late Woodland subperiod include several triangular projectile point styles that originated during the latter part of the Middle Woodland subperiod. These styles decreased in size through time and eventually culminated in the small, often serrated triangles typically found on the most recent Late Woodland and early contact period villages. Late Woodland subperiod ceramics in the Isle of Wight County area include shell-tempered Townsend and Roanoke Simple Stamped types, along with plain-surfaced, shell-tempered variants. By European contact, the most common pottery type in the vicinity appears to have been Roanoke Simple Stamped and plain variants.

Settlements dating to this time consist of both villages and small hamlets. Some villages were highly nucleated, while others were internally dispersed over a wide area. Some were entirely fortified by circular or oval palisades, while others contained a fortified core area and outlying houses, indicating a rise in intergroup conflict. The more dispersed villages and hamlets were scattered over a wide area, indicating internally fluid settlement within a loosely defined town or village territory.

Drawings and journals of early European explorers describing Indian villages indicate that houses were constructed of an oval, rectangular, or circular framework of flexible green sapling poles set in the ground, lashed together, and covered with thatch or bark mats. Burial sites of the period were situated in individual pits or ossuaries. Such historical accounts are consistent with data obtained from archaeological excavations of Late Woodland to early historic village sites (Hodges and Hodges 1994).

With the development of a more sedentary settlement-subsistence system culminating in the Late Woodland subperiod, permanent habitation sites gradually replaced base camp habitation sites more characteristic of those of the previous foragers and hunter-gatherers. Various supporting camps and activity areas were established in the day-to-day procurement of food and other resources (i.e., short-term hunting and foraging camps, quarries, butchering locations, and re-tooling locations). Locations used partially or largely for ceremonial purposes were also present, usually associated with habitation sites.

The large base camps, hamlets, and villages are typically located on bluffs, terraces, or high floodplains adjacent to rivers or major tributaries. Small seasonal camps and non-seasonally based satellite camps supporting nearby sedentary villages and hamlets are located along smaller streams in the interior. Limited concentrations and sparse scatters of lithics and ceramics typically characterize these campsites. As indicated earlier, shellfish-gathering sites and shell middens suggest ephemeral re-use of the earlier middens.

Historic Context

Settlement to Society (1607-1750)

In 1619, 100 English colonists settled near the mouth of a creek on the south side of the James River. This settlement was the beginning of Isle of Wight County. However, Captain John Smith visited the present-day Isle of Wight County as early as 1608. Smith, who was hoping to find food for the staving settlers at Jamestown, had contact with the Worrosquoyacke Indians who occupied a village in the present-day Isle of Wight County. Smith revisited the tribe in 1611, and he noted the presence of the Indians on his 1610 map of Virginia (Figure 9).

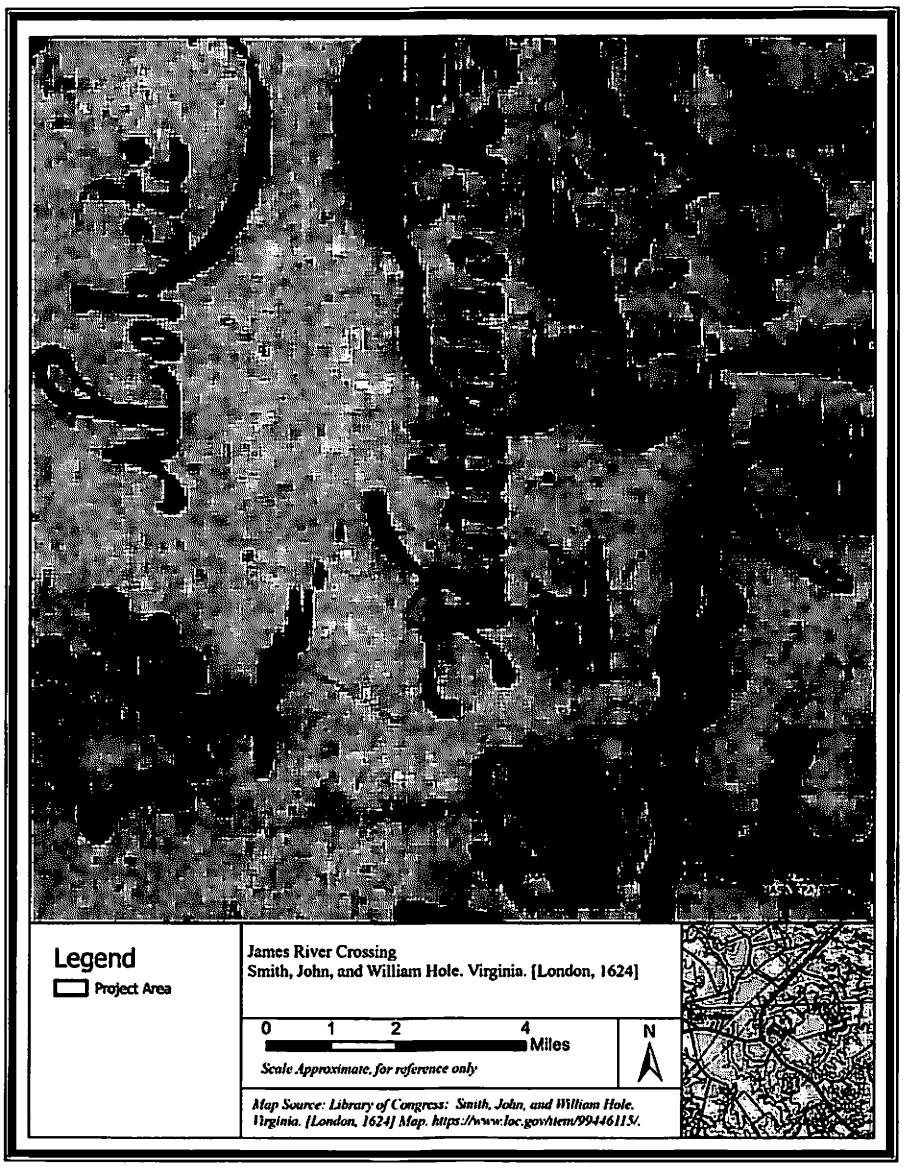


Figure 9. Detail of *Virginia discovered and discribed* by Captayn John Smith, 1610.

The first English settlers in what is now Isle of Wight County included Captain Christopher Lawne, Sir Richard Worsley, Nathaniel Basse, and John Hobson, who helped establish a settlement on the south shore of the James River at Lawne's Creek, near the current boundary between Isle of Wight and Surry counties. Lawne's plantation was known as Warrosquoyacke, after the local Indian group. Edward Bennett followed Lawne's settlement when he acquired a patent along the Pagan River in 1621. Nathaniel Basse also followed, settling at "Basse's Choice." The following year, in 1622, the Powhatan uprising destroyed these Southside settlements resulting in the loss of 53 colonists. Later in the year, Sir George Yeardley led a punitive expedition against the Warrosquoyackes and Nansemonds, which helped open the James River's southern shore to increasing settlement.

The lands near the mouth of Chuckatuck Creek and the Nansemond River were first patented in the 1630s and 1640s. Between 1639 and 1645, Tristram Norsworthy (Nosworthy) patented nearly 1,000 acres of land around and including Ragged Island (Nugent 1992). A native of Devon, England, Norsworthy was a prominent local figure in Isle of Wight's early years, serving as burgess for Nansemond County in 1641. His eldest son, Colonel George Norsworthy, served as the local captain of militia and sheriff. Among the first English arrivals to this area, the Norsworthys remained a prominent Isle of Wight family into the 20th century (Boddie 1973).

When Virginia's first counties were created in 1634, the current project area was encompassed by Warrosquoyacke County. Warrosquoyacke was divided in 1647 between Isle of Wight to the west and Upper and Lower Norfolk counties to the east. The project area was considered part of Upper Norfolk County by this time. Residents of Ragged Island and Terrascoe Neck, which included those lands between Chuckatuck Creek and the James River, won their petition to be included in Isle of Wight County in 1656 and 1674, the House of Burgesses formally established the boundary (King 1993).

A 1673 map of Virginia drafted by Augustine Herrmann clearly shows the extent of English expansion by that date. The map shows settlements clustered along many of the County's interior creeks and streams, including the lands along Chuckatuck Creek and around Ragged Island (Figure 10).

Colony to Nation (1750-1789)

During the 18th century, small towns developed within Isle of Wight County. The town of Smithfield was incorporated in 1752, just one year after Joshua Fry and Peter Jefferson created their map of Virginia (Figure 11). Fry and Jefferson noted development occurring but no development within the project area.

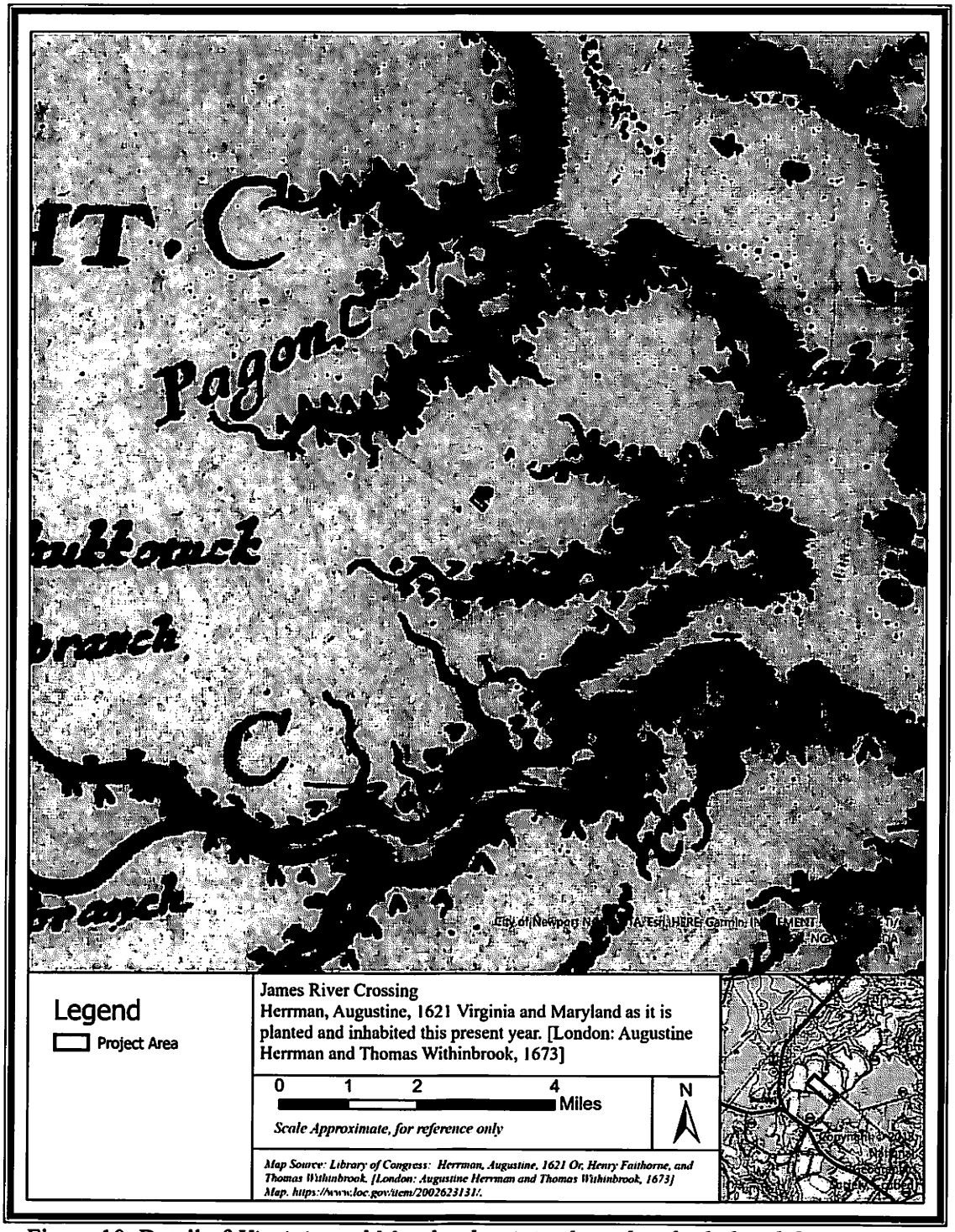


Figure 10. Detail of *Virginia and Maryland as it is planted and inhabited this present year 1670* surveyed and exactly drawne by the only labour & endeavour of Augustin Herrman bohemiensis.

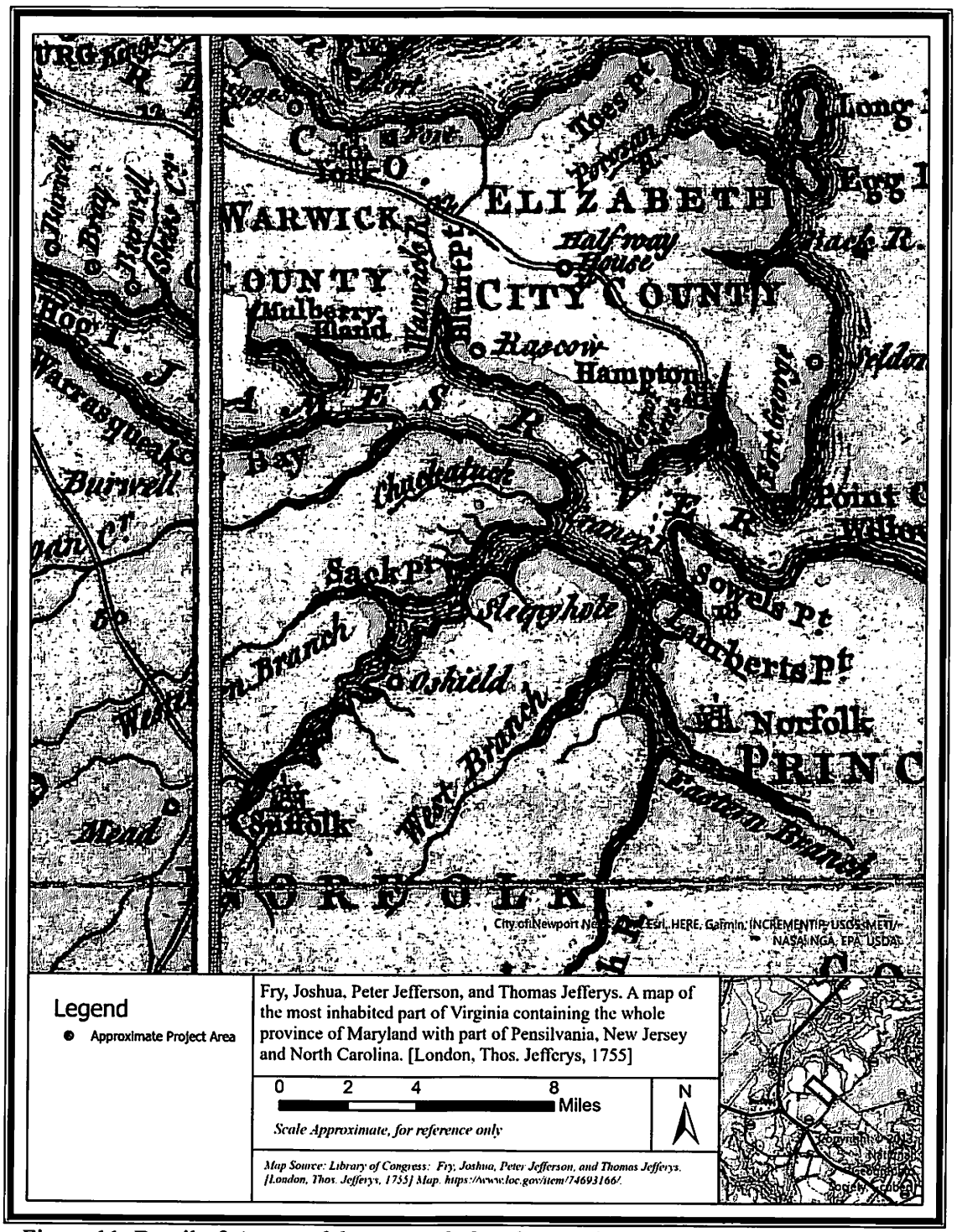


Figure 11. Detail of *A map of the most inhabited part of Virginia containing the whole province of Maryland with part of Pensilvania, New Jersey and North Carolina.* Drawn by Joshua Fry & Peter Jefferson in 1751.

Isle of Wight's economy in the second half of the 18th century centered around tobacco cultivation, even though the Southside's sandy soils were never particularly conducive to growing the crop. However, by the latter years of the 18th century, Isle of Wight's farmers were beginning to diversify their crops and explore alternative products. Touring the Smithfield area in 1783, German visitor Johann David Schoeff commented that:

> *...the coast is nearer here, one has passed the tobacco country proper, the plant not thriving on the poorer sandy soil of the region, but tobacco is brought hither from more distant parts; on the other hand, the extensive pine forests supply a different sort of produce, namely tar, pitch and turpentine, which with salted hog meat are the most important articles for export of this place* (King 1993).

As with most other parts of Virginia, Isle of Wight's citizens were divided in their loyalties as the revolution grew imminent in the 1770s. Many English and Scots immigrants resided in Isle of Wight, and when they left the County, their property reverted to the Government, who typically sold the land to their more "patriotic" neighbors. Several local men joined the Princess Anne District Battalion in 1775 and fought at Kempsville and Portsmouth. Later in the war, Isle of Wight men served in the 7th, 8th, and 9th companies of the 4th Virginia Regiment of Foot. No major battles were fought in Isle of Wight during the Revolutionary War. However, British Lieutenant Colonel Banastre Tarleton led a raid against the Isle of Wight courthouse in Smithfield in 1781. Tarleton succeeded in damaging the building, though the court records had recently been removed and hidden (King 1993).

Early National Period (1789-1830) and Antebellum Period (1830-1860)

During the end of the 18th century and the beginning of the 19th century, Isle of Wight transitioned from a predominantly tobacco economy to one characterized by diversified farming and the exploitation of the County's timber resources. Now, the most important local products included wheat, corn, oats, Irish potatoes, sweet potatoes, peas, beans, hogs, and forest products. By the 1830s, Isle of Wight farmers grew enough cotton to support two local factories (King 1993). Development in Isle of Wight County is evident on an 1825 map of Virginia created by Herman Boye (Figure 12). His map shows the beginning of a road network, although no development is shown within the project area.

From 1830 to 1860, the population of Isle of Wight County remained virtually constant at around 5,000 inhabitants. Slavery was not as important to the County's social and economic makeup as in other Tidewater counties in the antebellum period, and Isle of Wight County was home to a significant number of free slaves before emancipation. By 1860, 1,370 free blacks were residing in the County; together, they held 2,965 acres of land, a modest average of 44.25 acres per adult male (King 1993). A map of the area created in 1855 shows that the County was developing around a complex road network and railroad lines, although no development is evident in the project area (Figure 13).

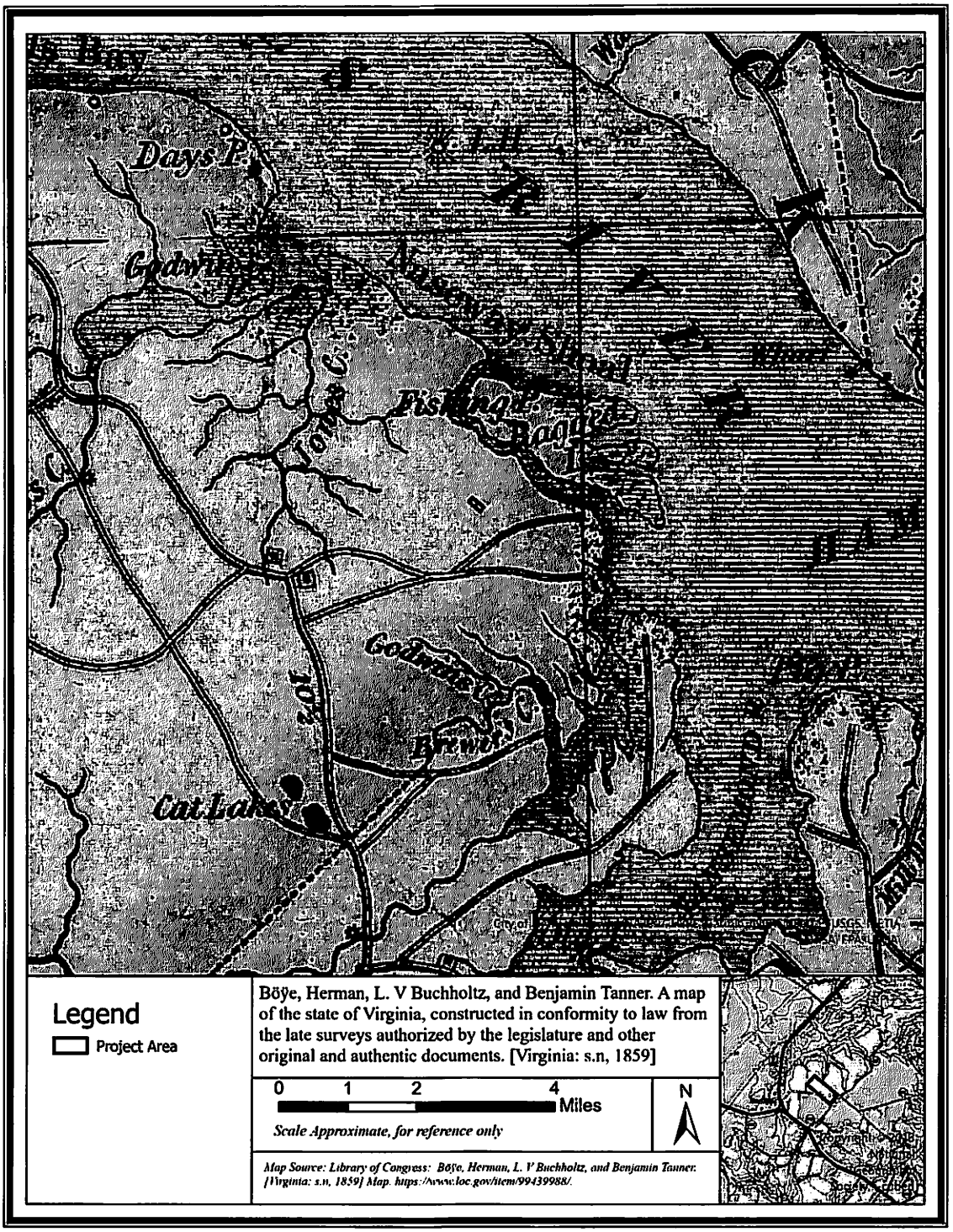


Figure 12. Detail of *A map of the state of Virginia, constructed in conformity to law from the late surveys authorized by the legislature and other original and authentic documents* by Herman Boye, 1825.

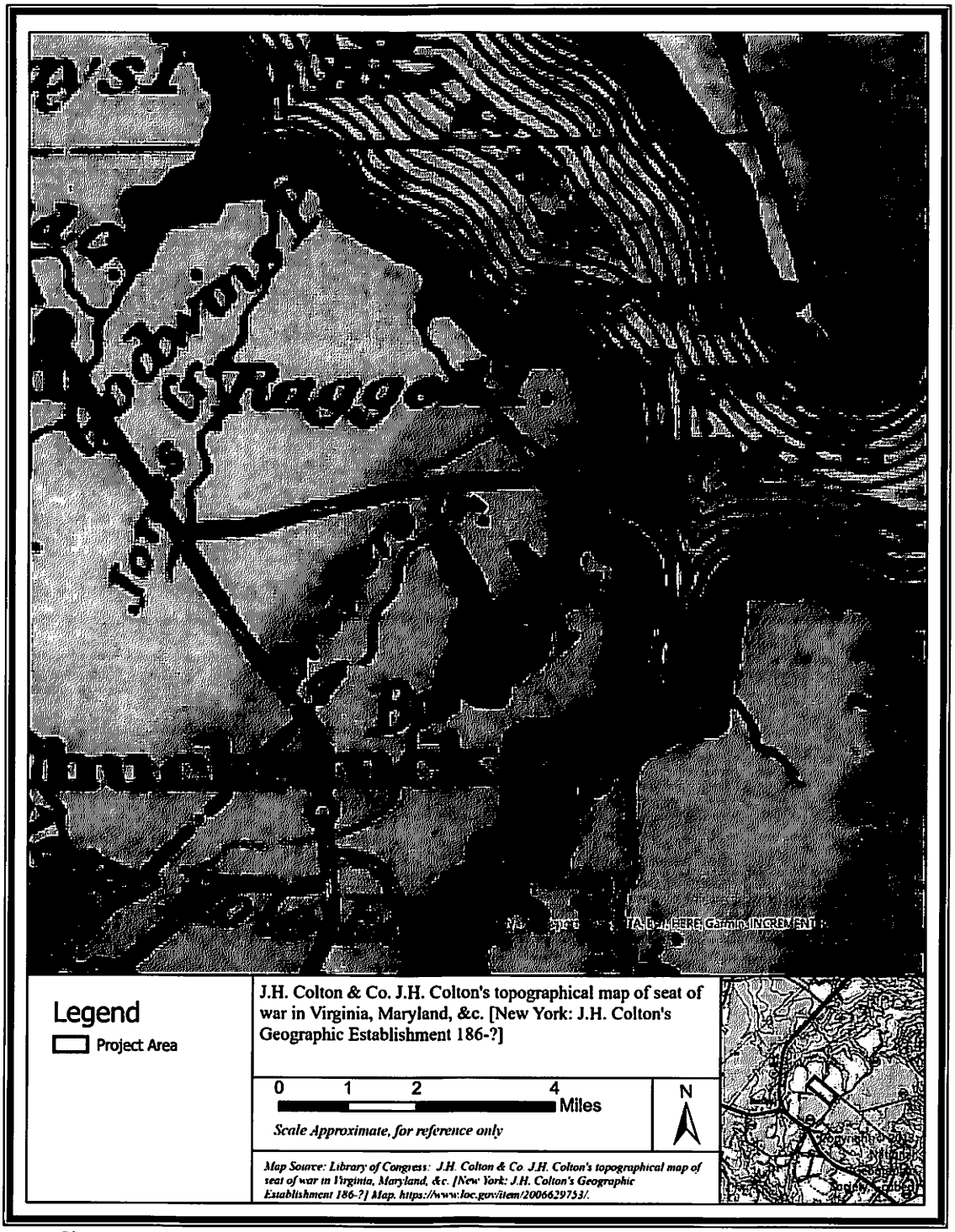


Figure 13. Detail of *J.H. Colton's topographical map of seat of war in Virginia, Maryland*, J.H. Colton's Geographical Establishment, New York. 1855.

Isle of Wight County's economy had never been heavily oriented toward slave labor, and many of its citizens questioned the wisdom of fighting a sectional conflict to protect what they perceived to be the interests of large slave owners. However, when war was finally declared, many Isle of Wight men willingly took up arms to defend the Confederacy. Some men joined the Surry Light Artillery Company, and others the Isle of Wight Grays, which became Company D of the 16th Virginia Infantry Regiment (King 1993).

Civil War (1861-1865)

When Federal Major General Benjamin Butler seized Newport News in May 1861, Confederate General Robert E. Lee quickly realized the threat posed to Suffolk, an important junction of the Southside railroad lines connecting the port of Norfolk with Petersburg and Richmond. Immediately, Lee ordered local commander Brigadier General Benjamin Huger to strengthen the region's defenses and erect or expand several fortifications along the Nansemond River and the south side of the James River in Isle of Wight County. On May 14, 1862, several Federal gunboats came up the James River and fired on Fort Boykin, an important Southside fortification located on Burwell's Bay, several miles west of Smithfield. Overwhelmed by the longer range of the Union guns, the Confederate defenders of Fort Boykin abandoned the defenses, destroying their guns and the fort's buildings in the process. After this engagement, Huger withdrew his forces from the Southside forts, and the battery near Ragged Island was likely abandoned by late May 1862 (King 1993). Maps of the area drawn during this time show development around the project area with no development directly within the project area (Figure 14 – 17).

During the war, Isle of Wight County saw few direct military engagements, the most significant Battle of Smithfield of January 31 - February 1, 1864, where Confederate defenders repulsed a minor Union assault against the town. Federal cavalry raids harried Isle of Wight's citizens who lived in a sort of no-man's-land, which frequently resulted in the appropriation of supplies and the destruction of property. An 1864 resolution of the County's justices succinctly outlined the hardships faced by Isle of Wight citizens during the war years:

> *Whereas on account of the exposed condition of the county, being beyond the lines of the Confederate Army and subject to frequent and destructive raids of the enemy and the difficult and embarrassed communication with other sections of the state, our people, in a great measure, are dependent upon their own resources for an adequate supply of the necessities of life. And whereas, on account of the loss of almost our entire slave population, and the loss of a number of our free labor, and the conscription of white men between the ages of eighteen and forty-five to recruit the ranks of our armies, there is a great scarcity of productive labor, and whereas any further extension of conscription within the limits of this county will but result in the paralyzing of production and great suffering and hardships upon those who will be left at home . . . all other business is suspended in the county and, our people with scarcely an exception, are engaged in the cultivation of the soil* (King 1993).

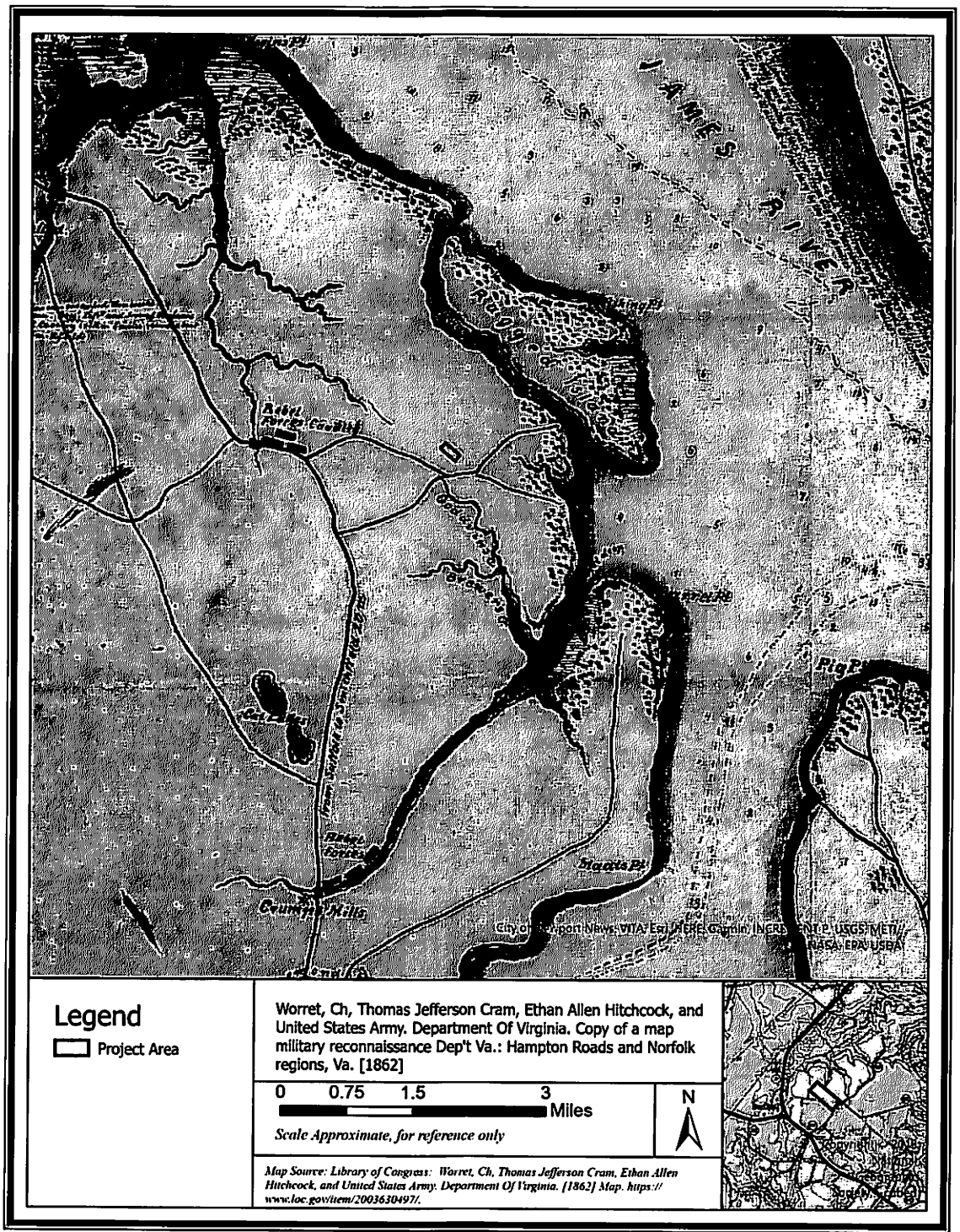


Figure 14. Detail of *Copy of a map military reconnaissance Dep't Va.: [Hampton Roads and Norfolk regions, Va.]* drawn and compiled under the direction of Col. T.J. Cram, Chief Top'l Enge'r Dep. Va.; by Sergt. Ch. Worret. 1862.

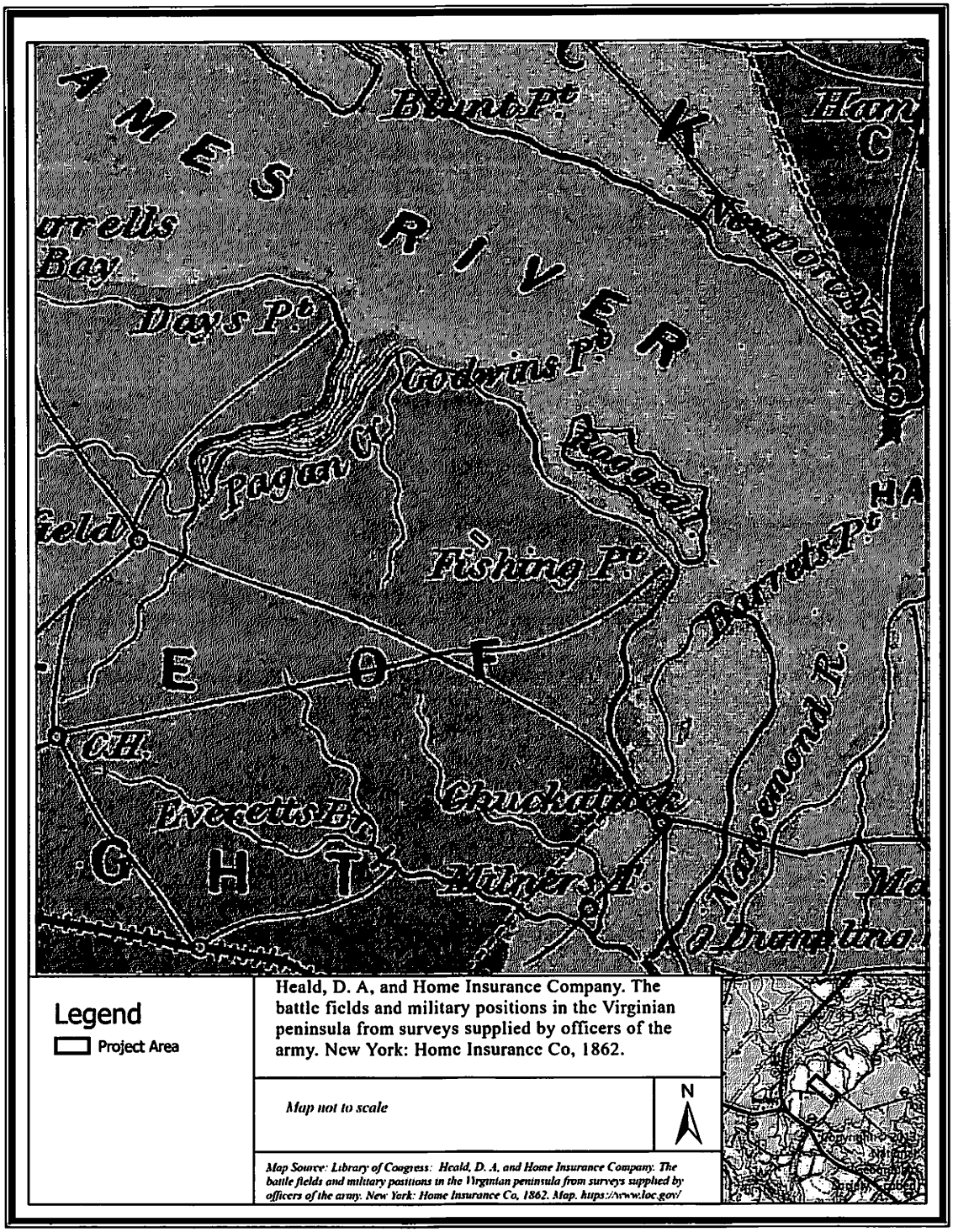


Figure 15. Detail of *The battle fields and military positions in the Virginian peninsula: from surveys supplied by officers of the army.* 1862.

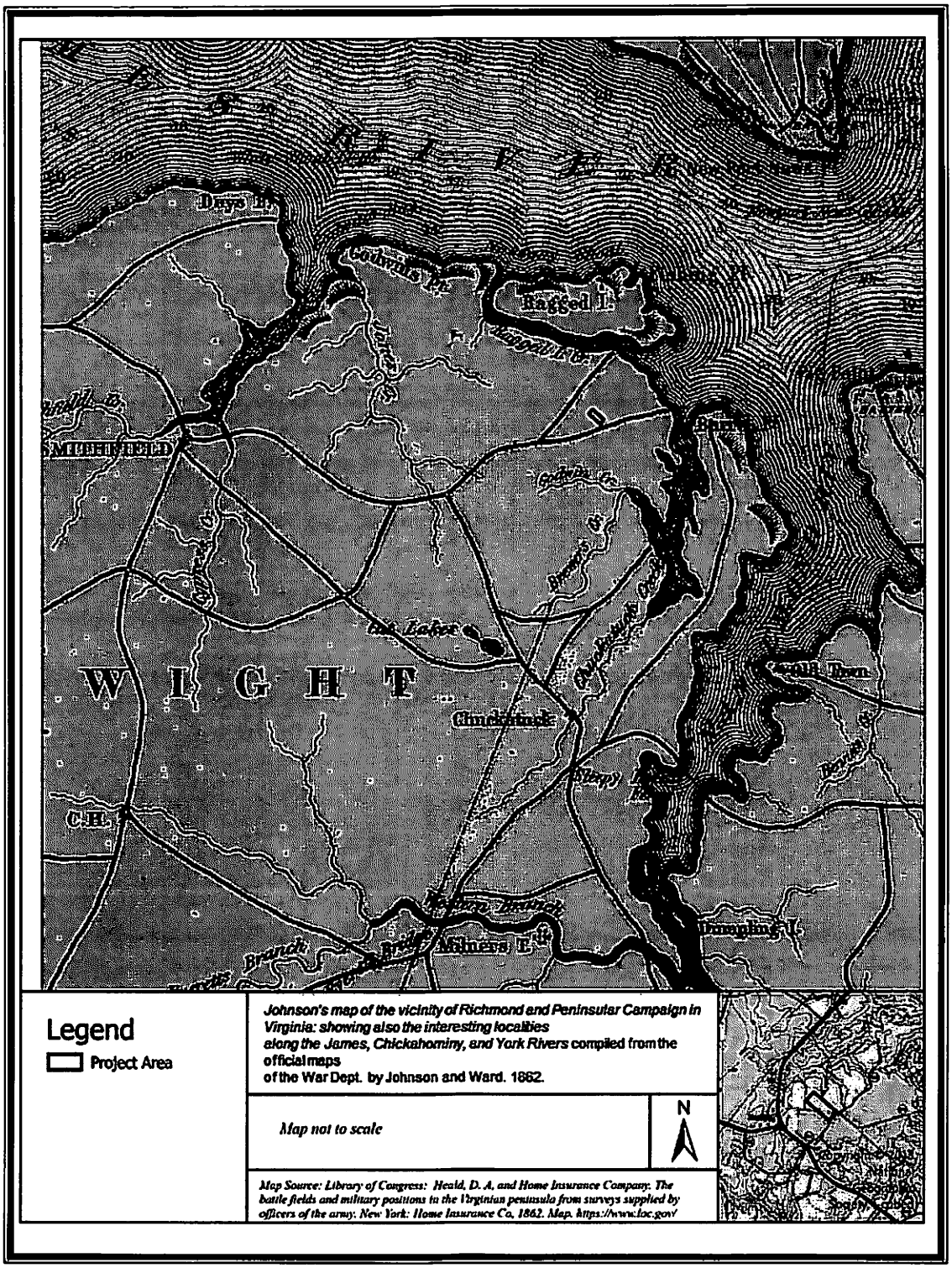


Figure 16. Detail of *Johnson's map of the vicinity of Richmond and Peninsular Campaign in Virginia: showing also the interesting localities along the James, Chickahominy, and York Rivers* compiled from the official maps of the War Dept. by Johnson and Ward. 1862.

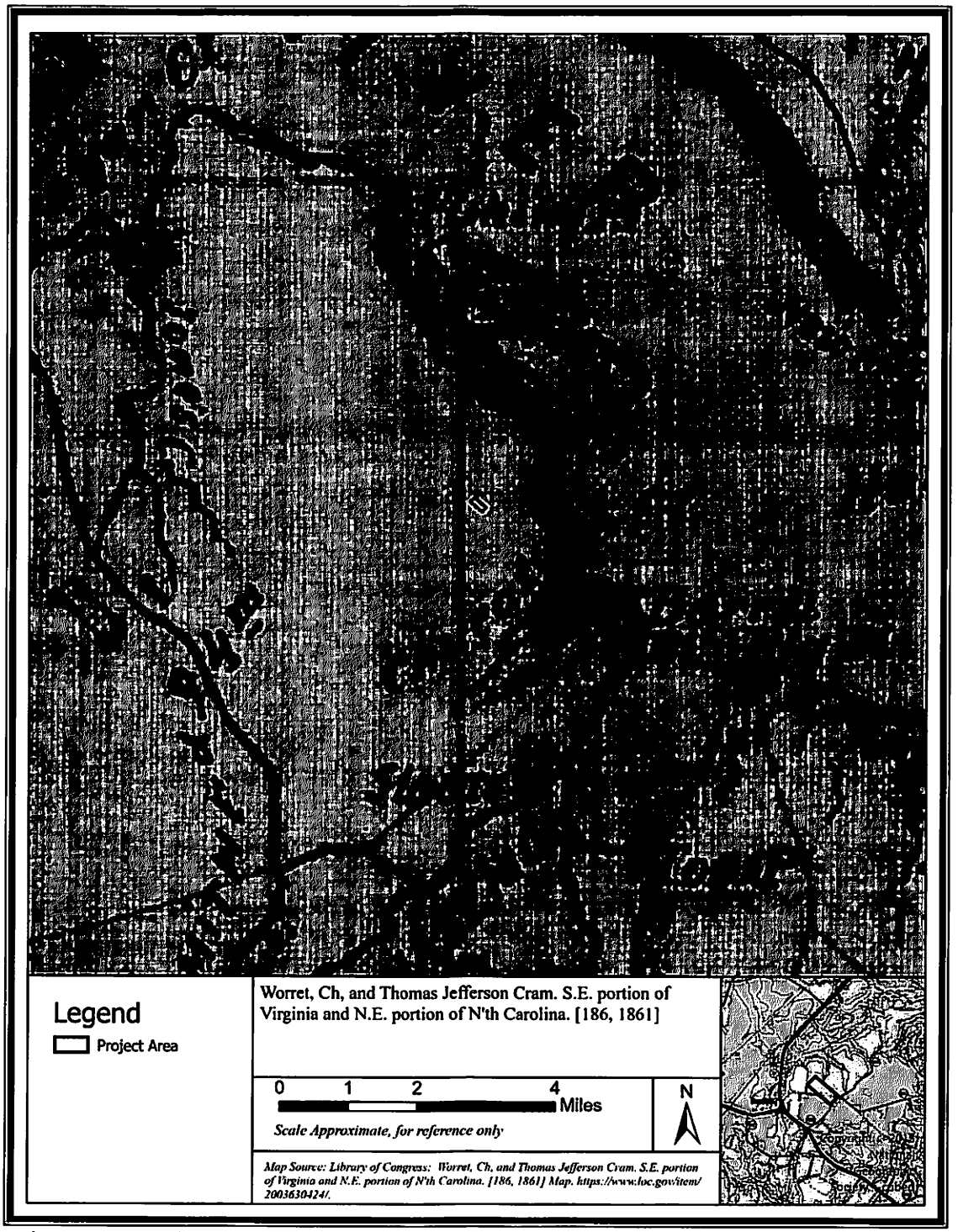


Figure 17. Detail of *S.E. portion of Virginia and N.E. portion of N'th Carolina* drawn b. Serg't Ch. Worret; & compiled under the direction of Col. T.J. Cram, Chief Top'l Eng'r Dep't Va 1860s.

Reconstruction and Growth (1865-1917)
Four years of civil war had a devastating effect on the land and people of Virginia, and Isle of Wight County was no exception, though it certainly suffered less than other parts of the Commonwealth. The wake of the conflict left the County poorer with a lack of draft animals, and the poor condition of long-neglected fields hampered agricultural life. Most former slave owners also found it challenging to come to terms with emancipation, both emotionally and financially. The County's population also dropped considerably in the immediate postwar years. In 1860, Isle of Wight's residents numbered nearly 10,000; by 1870, the population had dropped by almost 20%, to 8,320. After the war, both black and white residents left Isle of Wight in large numbers, many seeking work in nearby cities. Physically, economically, socially, and politically, the landscape of the County had been irrevocably altered in a short period (King 1993).

Agricultural changes in Isle of Wight County, including the remarkable growth of peanut and soybean production, spurred population growth toward the end of the 19th century. By 1890, the County's population had well exceeded its pre-war levels. In the early 20th century, Isle of Wight farmers profited from an expanding truck-farming market, supplying the growing cities of Newport News and Norfolk with a variety of fresh fruits and vegetables. The meat packing industry also grew considerably during this period, introducing the famed "Smithfield ham" to a national market.

World War I to World War II (1917-1945)
The beginning of the 20th century saw frequent and rapid change in Isle of Wight County. For example, electricity became available to most rural residents after 1939, when the Community Electric Cooperative installed power lines. However, perhaps the most significant local development witnessed during this period was the construction of the James River Bridge, officially opened by President Calvin Coolidge on November 17, 1928. Virtually overnight, the bridge ended Isle of Wight's relative isolation from Hampton Roads' growing urban centers. County businessman and booster Albert Sidney Johnson were instrumental in getting the main north-south U. S. highway, Route 17, routed through Isle of Wight via the James River Bridge and across the new Crittenden and Nansemond River bridges to Portsmouth and Norfolk. Initially, the bridge tolls were high enough to discourage daily commuting to the Peninsula. However, ready access to the region's cities still proved a significant stimulus to the local economy, despite the onset of the Depression (King 1993). Maps of the area drawn during the first half of the 20th century show these local developments, including some development within the project area (Figure 18 and 19).

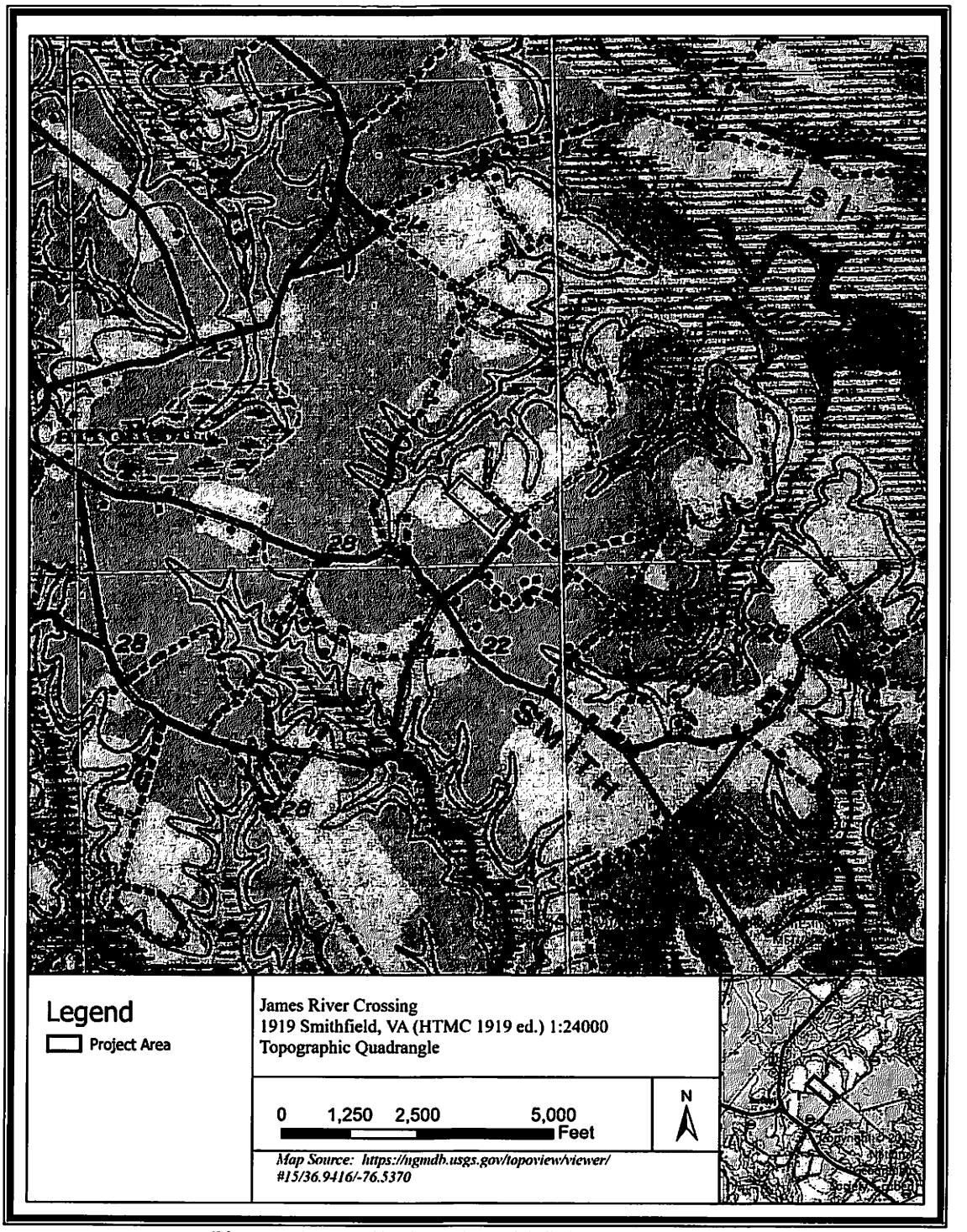


Figure 18. Detail of 1919 Smithfield USGS quad.

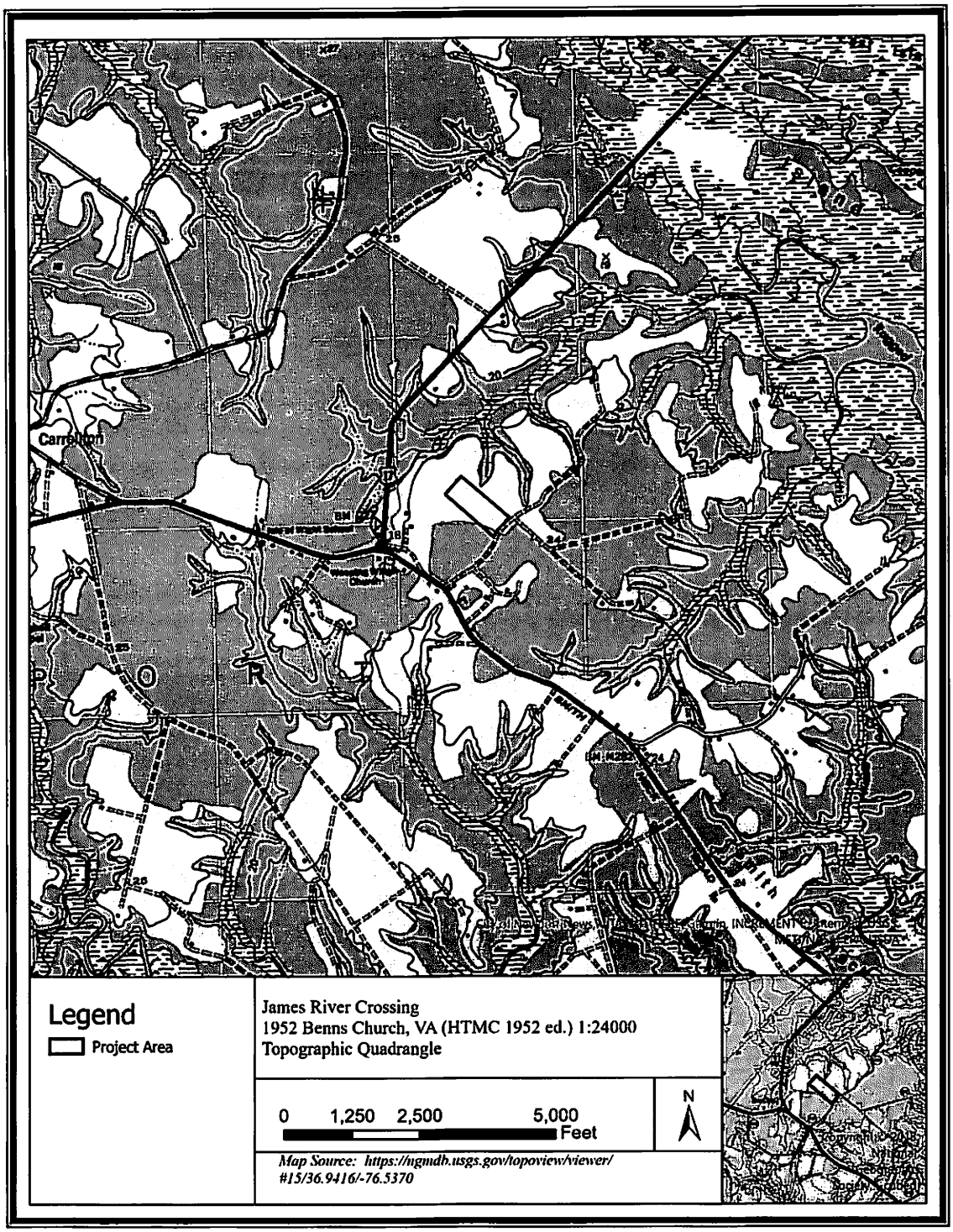


Figure 19. Detail of 1952 Benns Church USGS quad.

The New Dominion (1945 to present)

Isle of Wight grew at an unprecedented rate after World War II, and today the County has over 28,500 residents, more than double the population at the turn of the 20th century. In 1975, Virginia took over the James River Bridge and removed the tolls; as a result, Isle of Wight County quickly developed into a bedroom community of Newport News, with residential developments springing up along the Route 17 corridor. Despite this increasing residential growth, most Isle of Wight County remains predominantly rural in character (King 1993). Maps of the area drawn during this period show development continuing within the project area throughout the 20th century (Figures 20 and 21).

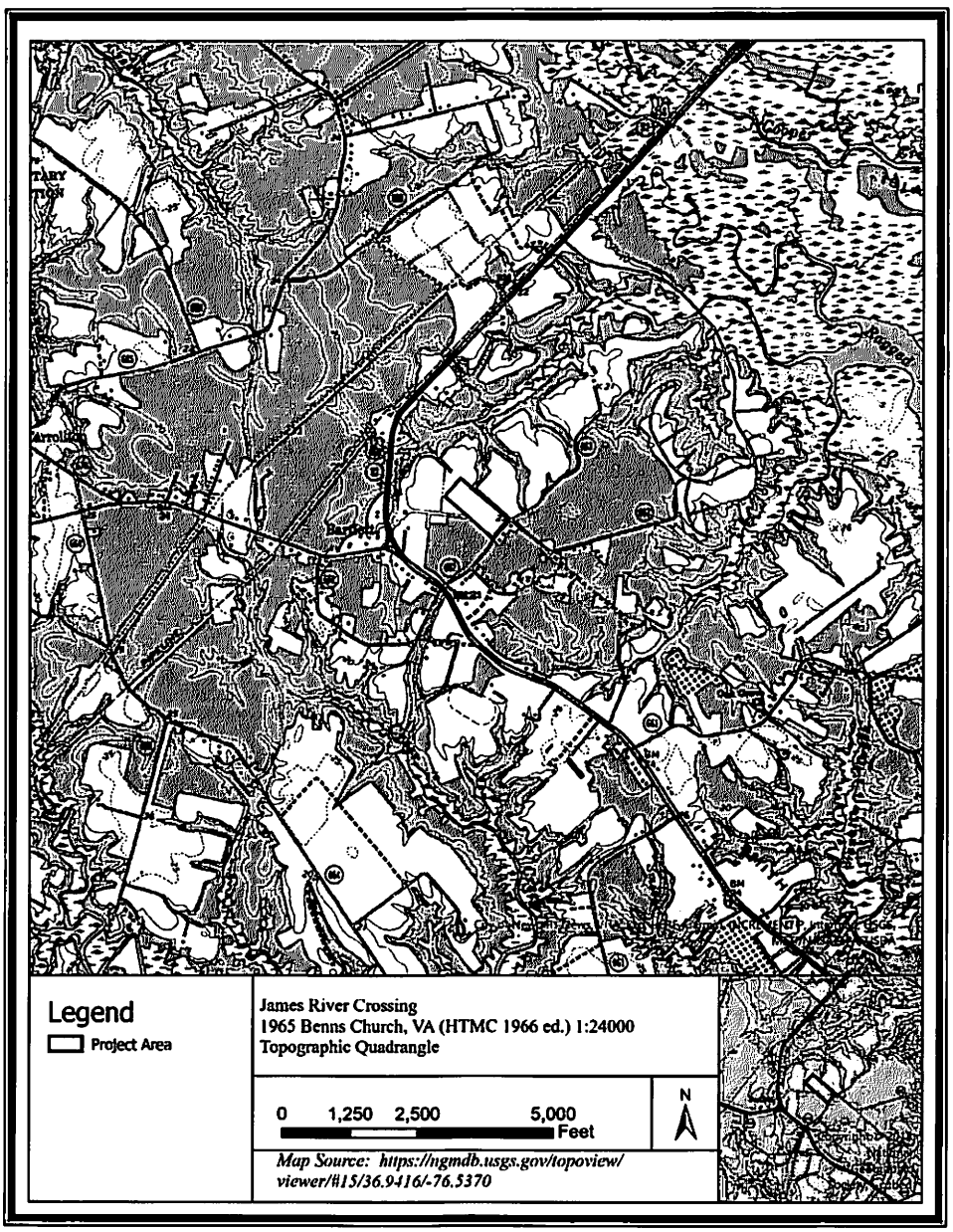


Figure 20. Detail of 1965 Benns Church USGS quad.

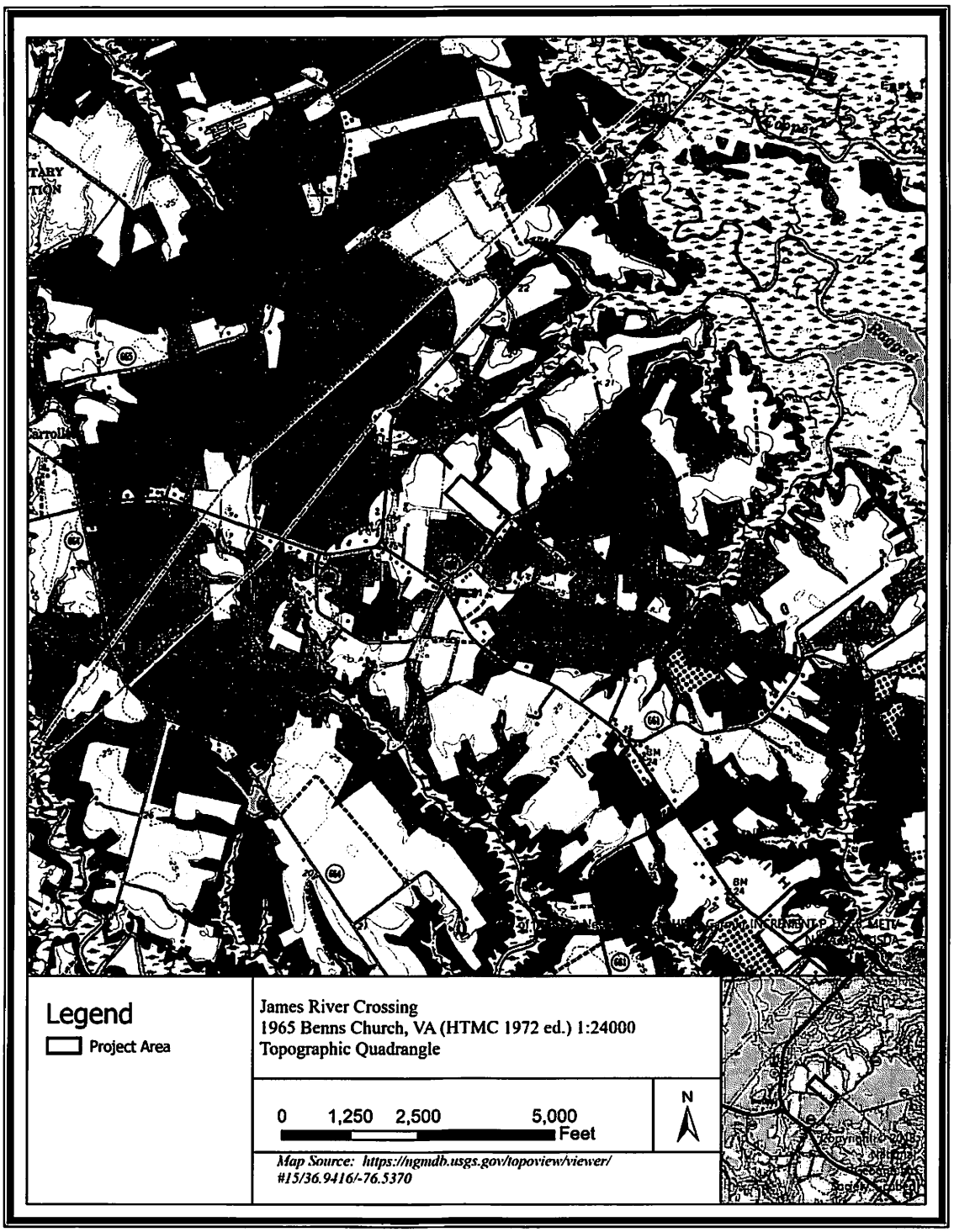


Figure 21. Detail of 1972 Benns Church USGS quad.

PREVIOUSLY-RECORDED CULTURAL RESOURCES

Circa~ performed an archival search for the James River Crossing project area using the VDHR online V-CRIS system on September 30, 2021. This research was completed to determine if historic resources exist within the project area boundaries. The search identified 22 archaeological resources and four architectural resources within a one-mile radius of the project area boundaries. Table 2 lists all the resources within one mile of the project area boundaries. Figures 22 and 23 show the approximate project area boundaries (yellow-shaded area) and resources within proximity. Of the resources identified, no archaeological resources and no architectural resources were identified within the project area.

According to the VDHR V-CRIS search, at least six Phase I surveys have been completed within one mile of the project area (Figure 24). To the northeast of the project area, Cultural Resources, Inc. (CRI) conducted two Phase I surveys: *A Phase I Archaeological Survey of Eagle Harbor Tract 4A, Isle of Wight County, Virginia,* in 2004 and *A Phase I Cultural Resources Survey of Approximately 10.12 acres for the Proposed Eagle Harbor Development Area, Isle of Wight County, Virginia* in 2009. To the northwest of the project area, the College of William and Mary Center for Archaeological Research (WMCAR) conducted a *Final Management Summary Archaeological Survey, Nike Park Road (Route 669) Extension, Isle of Wight County, Virginia,* in 2018. To the south of the project area, Circa~ conducted a *Phase I Cultural Resources Survey of Archers Mead Tract, Isle of Wight County, Virginia,* in 2019. Mid-Atlantic Archaeological Research (MAAR) Associates, Inc, conducted a *Phase I Cultural Resource Survey for the Proposed Smithfield Interceptor in Isle of Wight County, Virginia.* Finally, to the west of the project area, the Virginia State Library conducted an *Archaeological Reconnaissance of Routes 258/32 and 10/32, Isle of Wight County* in 1976. In addition, VDHR holds no easement within one mile of the project area.

Table 2. Resources Within a One-Mile Radius of Project Area Boundaries.

VDHR Survey Number	Date of Resource	Description of Resource	Survey Information	Recommendation
Archaeological Sites				
44IW0096	Woodland	Trash scatter	Phase I survey 9/83	None made
44IW0190	18th century	Grave/burial	Phase III survey 10/01	None made
44IW0193	19th century 20th century	Trash scatter	Phase I survey 5/03	VDHR determined not eligible 8/04
44IW0194	18th century 19th century	Dwelling	Phase I survey 12/02	VDHR determined not eligible 8/04
44IW0216	Native American	Camp	Phase I survey 3/99	None made
44IW0217	19th century 20th century	Camp	Phase I survey 3/99	None made
44IW0218	19th century 20th century	Camp	Phase I survey 3/99	None made
44IW0219	17th century	Camp	Phase I survey 3/99	None made
44IW0220	Native American Historic	Camp	Phase I survey 3/99	None made
44IW0221	Woodland	Camp	Phase I survey 3/99	None made

2010 Current Conditions Assessment Windsor Road Property, Orange County, Virginia (with Dawn Frost, Circa~).

2010 Henricus State Park Riverbank Stabilization Project Management Summary, Chesterfield County, Virginia (with Dawn Frost, Circa~).

2010 Phase I Archaeological Survey of the 10-Acre Williamsburg James City County Schools Operations Center Expansion, James City County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Phase I Archaeological Survey of 10 Trails Meadowood Special Recreation Management Area, Fairfax County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Phase I Cultural Resources Survey of Deep Creek Ball Park Property, City of Chesapeake, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Current Conditions Assessment of the Approximately 350-Acre Dupont-Fabros Development Tract, Loudoun County, Virginia (with Dawn Frost, Circa~).

2010 Phase I Cultural Resources Survey of BiCounty Way Property, New Kent County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Phase I Cultural Resources Survey of Mount Zion Baptist Church, Price William County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Phase I Cultural Resources Survey of Stafford Commerce Center, Stafford County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Phase I Cultural Resources Survey of Meherrin River Regional Jail Site, Brunswick County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Phase I Cultural Resources Survey of Commonwealth Crossing Business Centre Water and Sewer Lines, Henry County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Wynwood Property Management Summary, Chesterfield County, Virginia (with Dawn Frost, Circa~).

2010 Winterfield Commercial Park Viewshed Analysis, Powhatan County, Virginia (with Dawn Frost, Circa~).

2010 College Triangle Retail Project – The College of William and Mary Management Summary, City of Williamsburg, Virginia (with Dawn Frost, Circa~).

2010 Darby Road Parcels Management Summary, York County, Virginia (with Dawn Frost, Circa~).

2010 Phase I Cultural Resources Survey of Bryan's Landing Subdivision, City of Chesapeake, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2010 Phase I Cultural Resources Survey of Greenhaven at Murray Drive Drainage Easement Acquisition from U.S. Navy, City of Chesapeake, Virginia (with Dawn Frost Circa~).

2010 Phase I Cultural Resources Survey of Pole Green Road and Rural Point Road Intersection Improvements, Hanover County, Virginia (with Dawn Frost Circa~).

2010 Phase I Cultural Resources Survey of Pole Green Road and Walnut Grove Road Intersection Improvements, Hanover County, Virginia (with Dawn Frost Circa~).

2010 Lee Hall Reservoir Management Summary, City of Newport News, Virginia (with Dawn Frost, Circa~).

2010 Phase I Cultural Resources Survey of the Approximately 350-Acre Dupont-Fabros Development Tract, Loudoun County, Virginia (with Amy Humphries and Dawn Frost Circa~).

2010 Phase IA Cultural Resources Assessment, Forest Heights and Neighbors Drive, James City County, Virginia (with Dawn Frost Circa~).

2011 Phase I Cultural Resources Survey of Nansemond River Estates property, City of Suffolk, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Disturbance Assessment West Creek Medical Center, Goochland County, Virginia (with Dawn Frost Circa~).

2011 Phase I Cultural Resources Survey of Lowes Tract and Extension of Russell Branch Parkway, Loudoun County, Virginia (with Dawn Frost Circa~).

2011 Phase I Cultural Resources Survey of Foxfield Tract, Chesterfield County, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Phase I Cultural Resources Survey of Brasfield Commons Tract, City of Petersburg, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Phase I Cultural Resources Survey of Courthouse at Marketplace Property, Chesterfield County, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Phase I Cultural Resources Survey of Sports Quest Tract Phase I, Chesterfield County, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Phase I Cultural Resources Survey of West Creek Medical Center Shared Entrance Road Right-of-Way and Utility Right-of-Ways, Goochland County, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Current Conditions Assessment of Stonebridge Property, Chesterfield County, Virginia (with Dawn Frost Circa~).

2011 Treatment Plan for Site 44GO0370 West Creek Emergency Center Tract, Goochland County, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Management Summary 3190 Riverside Drive, Henry County, Virginia (with Dawn Frost Circa~).

2011 Current Conditions Assessment of Haymarket Tract, Prince William County, Virginia (with Dawn Frost Circa~).

2011 Current Conditions Assessment of J. Sergeant Reynolds Community College Tract, Henrico County, Virginia (with Dawn Frost Circa~).

2011 Phase I Cultural Resources Survey of George Mason University Life Sciences Building Parking Lot, Prince William County, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Phase I Cultural Resources Survey of George Mason University Housing and Retail Building, Prince William County, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Addendum to Phase I Cultural Resources Survey of Pole Green Road and Rural Point Road Intersection Improvements, Hanover County, Virginia (with Dawn Frost and Amy Humphries Circa~).

2011 Current Conditions Assessment of the Stafford County High School Property, Stafford County, Virginia (with Dawn Frost, Circa~).

2011 Current Conditions Assessment of the Mecklenburg Jail Site, Mecklenburg County, Virginia (with Dawn Frost, Circa~).

2011 Phase I Cultural Resources Survey of the Marine Animal Care Facility Tract, City of Virginia Beach, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2011 Management Summary Dominion Virginia Power, Remington Site, Fauquier County, Virginia (with Dawn Frost, Circa~).

2011 Management Summary Dominion Virginia Power, Brunswick Site, County, Brunswick Virginia (with Dawn Frost, Circa~).

2011 Management Summary Dominion Virginia Power, Chesterfield Site, Chesterfield County, Virginia (with Dawn Frost, Circa~).

2011 Partial Phase III Archaeological Data Recovery of Site 44CF0684 at Magnolia Green, Chesterfield County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2011 Phase II Archaeological Evaluations and Boundary Determination of Site 44GO0370 at West Creek Emergency Center Tract, Goochland County, Virginia (with Dawn Frost, Circa~).

2011 Phase I Cultural Resources Survey of Varina Stream Mitigation Bank, Henrico County, Virginia (with Dawn Frost, Circa~).

2011 Addendum to Current Conditions Assessment, Dinwiddie Commerce Park, Dinwiddie County, Virginia (with Dawn Frost, Circa~).

2011 Proposed Data Recovery Plan for Site 44CF0594 at the DeSear Farmstead Site, Chesterfield County, Virginia (with Dawn Frost, Circa~).

2011 Phase I Cultural Resources Survey of Dominion Virginia Power Brunswick Site, Brunswick County, Virginia (with Dawn Frost, Circa~).

2011 Current Conditions Assessment of the Stafford County Elementary School Property, Stafford County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2011 Phase I Cultural Resources Survey of Washington Ridge, York County, Virginia (with Dawn Frost, Circa~).

2011 Phase I Architectural Survey of Mainline Norfolk-Southern Railroad Project Area, City of Petersburg, Virginia (with Dawn Frost, Circa~).

2011 Phase I Architectural Survey of Mainline Norfolk and Western Railroad Project Area, City of Chesapeake, Virginia (with Dawn Frost, Circa~).

2012 Addendum to Phase I Archaeological Survey of the Proposed Meadowville Parkway, Chesterfield County, Virginia (with Dawn Frost, Circa~).

2012 Addendum to Phase I Cultural Resources Survey of Pole Green Road and Walnut Grove Road Intersection Improvements, Hanover County, Virginia (with Dawn Frost, Circa~).

2012 Management Summary, Dominion Virginia Power Chesterfield Tract Utility Corridor, Chesterfield County, Virginia (with Dawn Frost, Circa~).

2012 Management Summary, Village of Holland Water Supply, City of Suffolk, Virginia (with Dawn Frost, Circa~).

2012 Phase I Architectural Survey of Mainline Norfolk-Southern Railroad Project Area, City of Chesapeake, Virginia (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of Atlee Road Extended, Hanover County, Virginia (with Dawn Frost, Circa~).

2012 Phase III Archaeological Excavations at Site 44JC1018, the Liguria Tract, James City County, Virginia (with Dawn Frost and Amy Humphries, Circa~).

2012 Management Summary, The Midlothian Mines within the Midlothian District of the Richmond Coal Basin, Chesterfield County, Virginia (with Dawn Frost, Circa~).

2012 Management Summary, For Site 44GO0370 West Creek Emergency Center Tract, Goochland County, Virginia (with Dawn Frost, Circa~).

2012 Management Summary, Roanoke Cement Company, Botetourt County, Virginia (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of the Stafford County Chinchester Park Property, Stafford County, Virginia (with Dawn Frost, Circa~).

2012 Current Conditions Assessment Virginia State University Gateway II Residence Hall Student Housing Project, City of Petersburg, Virginia (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of Swift Island Property, Buckingham County, Virginia (with Dawn Frost, Circa~).

2012 Orchard Bridge Commercial Tract Management Summary, Prince William County, Virginia (with Dawn Frost, Circa~).

2012 Phase II Archaeological Excavations at Sites 44CF0592 and 44CF0593, Chesterfield County, Virginia (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of East Point Estates Tract, Currituck County, North Carolina (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of the Upper Susquehanna River Mitigation Bank, Potter County, Pennsylvania (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of Roanoke Cement Company Quarry Expansion and Stream Compensation Sites, Botetourt County, Virginia (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of Willis Farm Tract, City of Suffolk, Virginia (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of Orchard Bridge Tract, Prince William County, Virginia (with Dawn Frost, Circa~).

2012 Current Conditions Assessment of Dual Rail Tract, Dinwiddie County, Virginia (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of the Deer Run Golf Course, City of Newport News, Virginia (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of Capital One Meadowville Data Center Property, Chesterfield County, Virginia (with Dawn Frost, Circa~).

2012 Current Conditions Assessment of the Brambleton-Layng Property, Loudoun County, Virginia (with Dawn Frost, Circa~).

2012 Current Conditions Assessment of the Peebles Tract, Sussex County, Virginia (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of the Capital Bike Trail Realignment, Turkey Creek, Dominion Line, and Kimages Creek Project Areas, Charles City County, Virginia (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of Greensville Megasite, Greensville County, Virginia (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of Brambleton, Cornelius I Property, Loudoun County, Virginia (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of Brambleton, Cornelius II Property, Loudoun County, Virginia (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of Brambleton, Guth Property, Loudoun County, Virginia (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of Brambleton, Mack Smith Property, Loudoun County, Virginia (with Dawn Frost, Circa~).

2012 Phase I Cultural Resources Survey of Compton Berry Tract, Fairfax County, Virginia (with Dawn Frost, Circa~).

2012 Current Conditions Assessment of the Brambleton-Hallinan Property, Loudoun County, Virginia (with Dawn Frost, Circa~).

2012 Current Conditions Assessment, Philip Morris Site, City of Richmond, Virginia (with Dawn Muir-Frost, Circa~).

2012 Management Summary, Brunswick County Site, Brunswick County, Virginia (with Dawn Muir-Frost, Circa~).

2013 Management Summary, Busch Property Tract, York County, Virginia (with Dawn Muir-Frost, Circa~).

2013 *Management Summary Specht Mitigation Site, Potter and Tioga Counties, Pennsylvania (with Dawn Muir-Frost, Circa~).*

2013 Addendum to Phase I Cultural Resources Survey of the Capital Bike Trail Realignments Curles Neck Road, Shirley Carter Property, and Shirley Plantation Entrance Realignments, Charles City and Henrico Counties, Virginia (with Dawn Muir-Frost, Circa~).

2013 Phase I Cultural Resources Survey of Burbage Drive Extended, City of Suffolk, Virginia (with Dawn Muir-Frost, Circa~).

2013 Management Summary, Virginia Natural Gas Pipeline Corridor, Hanover County to City of Newport News, Virginia (with Dawn Muir-Frost, Circa~).

2013 Phase I Cultural Resources Survey of 7250 Idylwood Road, Fairfax County, Virginia (with Dawn Muir-Frost, Circa~).

2013 Phase I Cultural Resources Survey of Lee Hall Dam Improvement Project, City of Newport News, Virginia (with Dawn Muir-Frost, Circa~).

2013 Phase I Cultural Resources Survey of Colonial Heritage Deer Lake Tract, James City County, Virginia (with Dawn Muir-Frost, Circa~).

2013 Management Summary, Oakenwold Tract, Stafford County, Virginia (with Dawn Muir-Frost, Circa~).

2013 Phase III Archaeological Evaluations at Site 44GO0370, West Creek Emergency Center Tract, Goochland County, Virginia (with Dawn Muir-Frost, Circa~).

2013 Management Summary, Cussawego Creek Mitigation Bank, Crawford County, Pennsylvania (with Dawn Muir-Frost, Circa~).

2013 Management Summary, Longpoint Tract, Prince William County, Virginia (with Dawn Muir-Frost, Circa~).

2013 Management Summary, PRM Project, Marshall County, West Virginia (with Dawn Muir-Frost, Circa~).

2013 Management Summary, 330 Charles Street, City of Newport News, Virginia (with Dawn Muir-Frost, Circa~).

2013 Management Summary, Conneauttee Creek Mitigation Bank, Crawford County, Pennsylvania (with Dawn Muir-Frost, Circa~).

2013 Management Summary, Pigeon Creek Mitigation Bank, Washington County, Pennsylvania (with Dawn Muir-Frost, Circa~).

2013 Management Summary, North Branch Pigeon Creek Mitigation Bank, Washington County, Pennsylvania (with Dawn Muir-Frost, Circa~).

2013 Management Summary, Tenmile Creek Mitigation Bank, Washington County, Pennsylvania (with Dawn Muir-Frost, Circa~)

2013 Management Summary, Pike Run Mitigation Bank, Washington County, Pennsylvania (with Dawn Muir-Frost, Circa~)

2013 Management Summary, Wilson Property, James City County, Virginia (with Dawn Muir-Frost, Circa~)

2013 Management Summary, Laurel Hill Creek Mitigation Bank, Somerset County, Pennsylvania (with Dawn Muir-Frost, Circa~).

2013 Management Summary, Cross Creek Mitigation Bank, Washington County, Pennsylvania (with Dawn Muir-Frost, Circa~).

2013 Addendum to Phase I Cultural Resources Survey of the Varina Phase of the Virginia Capital Bike Trail Henrico and Charles City Counties, Virginia, A Cultural Resources Survey of the Northern Alignment of the Varina Phase of the Virginia Capital Bike Trail, Henrico and Charles City Counties, Virginia, and A Cultural Resources Survey of the New Market Heights Phase of the Virginia Capital Bike Trail, Henrico and Charles City Counties, Virginia (with Dawn Muir-Frost, Circa~).

2013 Current Conditions Assessment, House 1414 Ohio Street, City of Chesapeake, Virginia (with Dawn Muir-Frost, Circa~).

2013 Phase I Cultural Resources Survey of 5636 Guinea Road, Fairfax County, Virginia (with Dawn Muir-Frost, Circa~).

2013 Phase I Cultural Resources Survey of Longpoint Tract, Prince William County, Virginia (with Dawn Muir-Frost, Circa~).

2013 Management Summary, Simpson Road Tract, Dinwiddie County, Virginia (with Dawn Muir-Frost, Circa~).

2013 Management Summary, White Marsh Property, Surry County, Virginia (with Dawn Muir-Frost, Circa~)

2013 A Supplemental Cultural Resources Survey of the New Market Heights Phase of the Virginia Capital Trail, Henrico and Charles City Counties, Virginia (with Dawn Muir-Frost, Circa~).

2013 Phase I Architectural Survey of CSXT Bridge over Appomattox River, City of Hopewell, Virginia (with Dawn Muir-Frost, Circa~).

2013 Phase II Archaeological Excavations of Site 44JC1319 at Colonial Heritage Deer Lake Tract, James City County, Virginia (with Dawn Muir-Frost, Circa~).

2013 Addendum to Phase I Archaeological Survey of the Proposed Meadowville Parkway Wetland Bridge Crossing, Chesterfield County, Virginia (with Dawn Muir-Frost, Circa~).

2013 Phase I Cultural Resources Survey of Oakenwold Tract, Stafford County, Virginia (with Dawn Muir-Frost, Circa~).

2013 Phase I Cultural Resources Survey of Burgesses Quarter, York County, Virginia (with Dawn Muir-Frost, Circa~).

2013 Archaeological Excavations at the Moore Family Cemetery, Site 134-0057, City of Virginia Beach, Virginia (with Dawn Muir-Frost, Circa~).

2013 Phase I Cultural Resources Survey of North Branch Pigeon Creek Mitigation Bank, Washington County, Pennsylvania (with Dawn Muir-Frost, Circa~).

2013 Phase I Cultural Resources Survey of Conneauttee Creek Mitigation Bank, Crawford County, Pennsylvania (with Dawn Muir-Frost, Circa~).

2013 Management Summary, Rappahannock Cliffs, Essex County, Virginia (with Dawn Muir-Frost, Circa~).

2013 Phase I Cultural Resources Survey of Seely Creek Mitigation Bank, Bradford County, Pennsylvania (with Dawn Muir-Frost, Circa~).

2013 Proposed Data Recovery Plan for Site 44LD0679 at the Brambleton Tract, Loudoun County, Virginia (with Dawn Muir-Frost, Circa~).

2013 Proposed Data Recovery Plan for Site 44LD0680 at the Brambleton Tract, Loudoun County, Virginia (with Dawn Muir-Frost, Circa~).

2013 Phase I Cultural Resources Survey of the Buck Property, Loudoun County, Virginia (with Dawn Muir-Frost, Circa~).

2013 Phase III Archaeological Evaluations at Site 44CF0594 and Phase II Evaluation of Site 44CF0595, The DeSear Farmstead Site, Chesterfield County, Virginia (with Dawn Muir-Frost, Circa~).

2013 A Supplemental Cultural Resources Survey of the Varina Phase of the Virginia Capital Trail, Henrico and Charles City Counties, Virginia (with Dawn Muir-Frost, Circa~).

2013 Management Summary, 4153 Dam Neck Road, City of Virginia Beach, Virginia (with Dawn Muir-Frost, Circa~).

2013 Archaeological Excavations at the Stonebridge Site Cemetery, Site 44CF0769/020-5574, Chesterfield County Virginia (with Dawn Muir-Frost, Circa~).

2013 Phase I Cultural Resources Survey of the Appomattox River Greenway Trail, City of Colonial Heights, Virginia (with Dawn Muir-Frost, Circa~).

2014 Partial Phase III Archaeological Evaluation at Site 44JC0845, Moss Creek Development, James City County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Management Summary, Pleasure House Point Property, City of Virginia Beach, Virginia (with Dawn Muir-Frost, Circa~).

2014 Phase I Cultural Resources Survey of Fisher Cove, City of Chesapeake, Virginia (with Dawn Muir-Frost, Circa~).

2014 Virginia Natural Gas Zinc-Ribbon Installation Project Management Summary, Cities of Newport News, Hampton, Portsmouth, and Norfolk, Virginia (with Dawn Muir-Frost, Circa~).

2014 Management Summary, Hartle Tract, Prince William County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Phase I Archaeological Survey of Site 44YO0337, Battlefield Bluffs Property, York County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Management Summary, New Holland Water Transmission Main, City of Suffolk, Virginia (with Dawn Muir-Frost, Circa~).

2014 Current Conditions Assessment, Project Twister – Keck Site, Chesterfield County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Archaeological Excavations of Site 44HE0673, Redskins Training Facility, City of Richmond, Virginia (with Dawn Muir-Frost, Circa~).

2014 Phase III Archaeological Excavations at Site 44PW1832, Prince William County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Phase I Cultural Resources Survey of the Compton Road Tract, Prince William County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Standing Structures Architectural Summary, Battlefield Bluffs tract, York County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Archaeological Investigations at Point of Rocks Park, Chesterfield County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Phase I Cultural Resources Survey of Project Twister-Keck Site, Chesterfield County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Current Condition Assessment, Sussex Megasite, Sussex County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Management Summary, Holloway Tract, Henrico County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Phase I Cultural Resources Survey of Speakes Subdivision, Prince William County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Phase I Architectural Survey of City Garage, City of Petersburg, Virginia (with Dawn Muir-Frost, Circa~).

2014 Addendum to Phase I Cultural Resources Survey of Brambleton Cornelius I Property, Loudoun County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Current Conditions Assessment, Building 17, the Canteen, Hampton Veterans Affairs Medical Center, City of Hampton, Virginia (with Dawn Muir-Frost, Circa~).

2014 Mitigation Summary, South Norfolk Historic District, City of Chesapeake, Virginia (with Dawn Muir-Frost, Circa~).

2014 Management Summary, Hazelwood Tract, James City County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Addendum to Cayden Ridge Phase I Archaeological Investigations, Prince William County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Addendum to A Cultural Resources Survey of the Varina Park Phase of the Virginia Capital Bike Trail, Henrico County, Virginia (with Dawn Muir-Frost, Circa~)

2014 Phase I Cultural Resources Survey of Baptist Run Mitigation Site, York County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Phase I Cultural Resources Survey of Busch Property, York County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Phase I Cultural Resources Survey of Cross Creek Mitigation Site, Washington County, Pennsylvania (with Dawn Muir-Frost, Circa~).

2014 Phase I Cultural Resources Survey of Princess Anne Road, City of Virginia Beach, Virginia (with Dawn Muir-Frost, Circa~).

2014 Additional Site and Survey Information Conneauttee Creek Mitigation Site, Crawford County, Pennsylvania (with Dawn Muir-Frost, Circa~).

2014 Phase I Cultural Resources Survey of Furnace Estates Subdivision, Stafford County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Phase I Cultural Resources Survey of Elbow Road Property, City of Chesapeake, Virginia (with Dawn Muir-Frost, Circa~).

2014 Phase I Cultural Resources Survey of Kingsland Green Subdivision, Henrico County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Supplemental Archaeological Testing of Proposed Drainage Pipe Installation Within Site 44HE1163, Varina Park Phase, Virginia Capital Trail, Henrico County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Phase I Cultural Resources Survey of Pleasure House Point Property, City of Virginia Beach, Virginia (with Dawn Muir-Frost, Circa~).

2014 Management Summary, Kirby Tract Within the Greenmount Industrial Park, James City County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Phase I Cultural Resources Survey of New River Valley Commerce Park, Pulaski County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Phase I Cultural Resources Survey of Lynchburg Expressway, City of Lynchburg, Virginia (with Dawn Muir-Frost, Circa~).

2014 Phase I Cultural Resources Survey of Patrick Henry Connector Drive, City of Newport News, Virginia (with Dawn Muir-Frost, Circa~).

2014 Phase I Cultural Resources Survey of Widewater State Park Property, Stafford County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Addendum to Phase I Cultural Resources Survey of Kingsland Green Subdivision, Henrico County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Management Summary, Project Cavalier, Chesterfield County, Virginia (with Dawn Muir-Frost, Circa~).

2014 Data Recovery Plan for Site 44CF0701 at Magnolia Green, Chesterfield County, Virginia (with Dawn Muir-Frost, Circa~).

2015 Treatment Plan for Mosley Cemetery Site 44NC0920/058-5128, Mecklenburg County, Virginia (with Dawn Muir-Frost, Circa~).

2015 Phase I Architectural Survey of Mason Street Parking Deck, City of Harrisonburg, Virginia (with Dawn Muir-Frost, Circa~).

2015 Phase I Cultural Resources Survey of Line VM-131 Pipe Replacement, City of Chesapeake, Virginia (with Dawn Muir-Frost, Circa~).

2015 Phase I Cultural Resources Survey of Line VM-129 Pipe Relocation Southampton County, Virginia (with Dawn Muir-Frost, Circa~).

2015 Phase II Architectural Survey of the Sandbridge Texaco Station, City of Virginia Beach, Virginia (with Dawn Muir-Frost, Circa~).

2015 Supplemental Cultural Resources Survey, Access Road Alignment of the Varina Park Phase, Virginia Capital Trail (with Dawn Muir-Frost, Circa~).

2015 Phase I Cultural Resources Survey of the Smith Island Martin National Wildlife Refuge, Hurricane Sandy Resiliency Project #31, Fog Point Living Shoreline Restoration, Somerset County, Maryland (with Dawn Muir-Frost, Circa~).

2015 Phase II Survey of Midlothian Mines Within the Midlothian District of the Richmond Coal Basin, Chesterfield County, Virginia (with Dawn Muir-Frost, Circa~).

2015 Phase I Cultural Resources Survey of Jessup Road, Chesterfield County, Virginia (with Dawn Muir-Frost, Circa~).

2015 Current Conditions Assessment Dominion Virginia Power Remington Site, Fauquier County, Virginia (with Dawn Muir-Frost, Circa~).

2015 Phase I Cultural Resources Survey of Virginia Truck Tract, Chesterfield County, Virginia (with Dawn Muir-Frost, Circa~).

2015 Current Conditions Assessment, Meadowville Technology Park Project Niagra, Chesterfield County, Virginia (with Dawn Muir-Frost, Circa~).

2015 Current Conditions Assessment, Granville Estates, Stafford County, Virginia (with Dawn Muir-Frost, Circa~).

2015 Management Summary, Hibred Easement, Lancaster County, Pennsylvania (with Dawn Muir-Frost, Circa~).

2015 Management Summary, Campbell-Briar Creek Mitigation Site, Columbia County, Pennsylvania (with Dawn Muir-Frost, Circa~).

2015 Management Summary, Chippewa and Saddle Easement, Bradford County, Pennsylvania (with Dawn Muir-Frost, Circa~).

2015 Management Summary, Brewster Lake Potential Mitigation Site, Susquehanna County, Pennsylvania (with Dawn Muir-Frost, Circa~).

2015 Phase I Cultural Resources Survey of the Sliding Hill Road Widening Project, Hanover County, Virginia (with Dawn Muir-Frost, Circa~).

2015 Phase I Cultural Resources Survey of 55 Acres at Meadowville, Project Niagra Site, Chesterfield County, Virginia (with Dawn Muir-Frost, Circa~).

2015 Management Summary, Monterey Cemetery, Highland County, Virginia (with Dawn Muir-Frost, Circa~).

*2015 Phase I Cultural Resources Survey of the Promenade at John Tyler Property, James City County, Virginia (*with dawn Muir-Frost, Circa~).

2015 Phase II Architectural Survey of Buildings 6, 107, and 124, Hampton Veterans Affairs Medical Center, City of Hampton, Virginia (with Dawn Muir-Frost, Circa~).

2015 Phase III Archaeological Excavations at the Turner Tract Cemetery, Site 44SN0286, Southampton County, Virginia (with Dawn Muir-Frost, Circa~).

2015 *Phase I Cultural Resources Survey of Courthouse Manor Property, Stafford County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2015 *Management Summary, Dinwiddie Airport, Dinwiddie County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2015 *Phase I Archaeological Survey of LeGordon Drive Sidewalk Improvements, Chesterfield County, Virginia* (with dawn M. Muir-Frost, Circa~).

2015 *Phase I Cultural Resources Survey of Matoaca and Hickory Road Intersection Improvement Project, Chesterfield County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2015 *Management Summary Robinson Fork 2 Mitigation Site, Washington County, Pennsylvania* (with Dawn M. Muir-Frost, Circa~).

2015 *Management Summary Chesapeake Holdings Property, Stafford County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2015 *Management Summary Back Bay National Wildlife Refuge Visitors Center and Horn Point Shoreline Restoration Areas, City of Virginia Beach, Virginia* (with Dawn M. Muir-Frost, Circa~).

2015 *Phase I Cultural Resources Survey of Lines VM-114, VM-115, and VM-116 Columbia Gas Pipeline, Chesterfield County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2015 *Phase II Architectural Survey of 5636 Guinea Road, Fairfax County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2015 Phase I Cultural Resources Survey of Tucker's Cove Tract, Currituck County, North Carolina (with Dawn M. Muir-Frost, Circa~).

2015 Phase I Cultural Resources Survey of Riverview at the Preserve, City of Chesapeake, Virginia (with Dawn M. Muir-Frost, Circa~).

2015 Management Summary, Henry County School Site, Henry County, Virginia (with Dawn M. Muir-Frost, Circa~).

2015 Phase I Cultural Resources Survey of Robinson Fork Mitigation Site, Washington County, Pennsylvania (with Dawn M. Muir-Frost, Circa~).

2015 Management Summary, Norwood Site, Greensville County, Virginia (with Dawn M. Muir-Frost, Circa~).

2015 Phase I Cultural Resources Survey of Buck Run Restoration Site Project, Washington County, Pennsylvania (with Dawn M. Muir-Frost, Circa~).

2015 Phase I Cultural Resources Survey of Virginia Dominion Power, Remington Site, Fauquier County, Virginia (with Dawn M. Muir-Frost, Circa~).

2015 Phase II Evaluation of Site 44ST1205 at Courthouse Manor Property, Stafford County, Virginia (with Dawn M. Muir-Frost, Circa~).

205 Phase I Cultural Resources Survey of Fieldstone Property, City of Chesapeake, Virginia (with Dawn M. Muir-Frost, Circa~).

2015 Phase I Cultural Resources Survey of Sandbridge Road Phase VIIA Improvements, City of Virginia Beach, Virginia (with Dawn M. Muir-Frost, Circa~).

2015 Phase I Cultural Resources Survey of Starrucca Creek Mitigation Site Project, Susquehanna and Wayne Counties, Pennsylvania (with Dawn M. Muir-Frost, Circa~).

2015 Phase I Cultural Resources Survey Back Bay National Wildlife Refuge Alternative Transportation Study Sigma Trail Corridor, City of Virginia Beach, Virginia (with Dawn M. Muir-Frost, Circa~).

2015 *Phase I Cultural Resources Survey of the 33-Acre EAH Tract, York County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2015 Archaeological Excavations at the Mosley Cemetery Site 44MC0920/058-5128, Mecklenburg County, Virginia (with Dawn M. Muir-Frost, Circa~).

2015 Phase I Cultural Resources Survey of the 52-Acre Bush Hill Property, Loudoun County, Virginia (with Dawn M. Muir-Frost, Circa~).

2015 Phase I Cultural Resources Survey of Beaverdam Creek Dam Rehabilitation Project, Loudoun County, Virginia (with Dawn M. Muir-Frost, Circa~).

2016 Phase II Archaeological Excavations of Site 44PW1941 at Cayden Ridge, Prince William County, Virginia (with Dawn M. Muir-Frost, Circa~).

2016 *Management Summary Route 460 Utility Corridor, City of Suffolk, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Management Summary Firestone Property, Buckingham County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Cultural Resources Survey of the Rhodes Point Erosion Control Project, Somerset County, Maryland* (with Dawn M. Muir-Frost, Circa~).

2016 *Proposed Data Recovery Plan of Site 44PW1941 at Cayden Ridge, Prince William County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Cultural Resources Survey of the Bethlehem Road Property, Prince William County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Archaeological Survey of the Bamboo Removal Site at Colonial National Historical Park, York County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Archaeological Survey of Shore Drive Property, City of Virginia Beach, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Cultural Resources Survey of Eastview Farm Bank Site, Buckingham County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Cultural Resources Survey of the Williamsburg Indoor Sports Complex Indoor Pool Facility, James City County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Cultural Resources Survey of the Norwood Site, City of Emporia, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Cultural Resources Survey of Independence Boulevard Project, York County and the City of Newport News, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Cultural Resources Survey of Lackawaxen Creek Restoration project, Wayne County, Pennsylvania* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Architectural Survey of Firestone Property, Buckingham County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Management Summary, Firestone Property, Buckingham County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Cultural Resources Survey of the Legacy of Poquoson Tract, City of Poquoson, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Management Summary Gilman and Walker Properties, New Kent County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Addendum to Phase I Cultural Resources Survey of Buck Run Restoration Site Property, Washington County, Pennsylvania* (with Dawn M. Muir-Frost, Circa~)

2016 *Phase I Architectural Survey of 389 Mountain View Road, Stafford County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2016 *Management Summary Sempeles Tract, Frederick County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2016 *Addendum to Phase I Cultural Resources Survey of Oakenwold Tract, Stafford County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2016 *Management Summary Swaterra Creek, Schuylkill County, Pennsylvania* (with Dawn M. Muir-Frost, Circa~)

2016 *Management Summary Graystone Property, Frederick County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2016 *Phase I Architectural Survey of Providence Subdivision – Section 4, Hanover County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2016 *Phase I Cultural Resources Survey of Wet Wood Property, New Kent County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2016 *Phase I Architectural Survey of the Sappony Property, Sussex County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2016 *Addendum to Phase I Archaeological Survey of Approximately 113 Acres of the Former Hood Property, Henrico County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Cultural Resources Survey of Minecraft Property, Dinwiddie County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Cultural Resources Survey of Two Road Crossings, Moore Point Property, City of Suffolk, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Archaeological Survey of Sappony Property, Sussex County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Architectural Survey of Gilman and Walker Property, New Kent County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Archaeological Survey of Gilman and Walker Property, New Kent County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Management Summary, Franklin Property, Southampton County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2016 *Management Summery, Ashwood Property, Prince William County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2016 *Phase I Cultural Resources Survey of Tritach Tract, Spotsylvania County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2016 *Addendum to Phase I Cultural Resources Survey of Virginia Dominion Power Remington Site, Fauquier County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2016 *Management Summary, The Briel Property, Henrico County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2016 *Phase I Cultural Resources Survey of Scott II Property, Powhatan County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2016 *Phase II Archaeological Excavations of Sites 44HE1041, 44HE1042, and 44HE1043 at the Former Hood Property, Henrico County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2016 *Phase I Cultural Resources Survey of Granville Property, Stafford County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2016 *Phase I Cultural Resources Survey of Mussetter Road, Frederick County, Maryland* (with Dawn M. Muir-Frost, Circa~)

2016 *Phase I Cultural Resources Survey of the Calumet Property, Frederick County, Maryland* (with Dawn M. Muir-Frost, Circa~)

2016 *Phase I Archaeological Survey of Meadow Lawn Farm, Rockbridge County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2016 *Phase I Cultural Resources Survey of 23108 Evergreen Mills Road Property, Loudoun County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Management Summary, Belcher Tract, Louisa County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Management Summary, Harrowgate Road Sidewalk Construction Project, Chesterfield County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Addendum to Phase I Cultural Resources Survey of Virginia Dominion Power Remington Site, Fauquier County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Cultural Resources Survey of Robious Road Sanitary Sewer Relocation, Chesterfield County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Cultural Resources Survey of Michael Drive Roadway Extension, City of Chesapeake, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Management Summary, Twain Property, Surry County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Management Summary, Lancaster Solar Farm, Lancaster County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Management Summary, Dinwiddie Solar Farm, Dinwiddie County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase II Archaeological Excavations of Site 44NK0292 at the Walker Tract, New Kent County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Cultural Resources Survey of Bryans Cove Property, City of Chesapeake, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Cultural Resources Survey of South Creek Restoration Site, Bradford County, Pennsylvania* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Cultural Resources Survey of the Mid County Park and Estate Homes Property, Prince William County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Cultural Resources Survey of Swatara Creek Restoration Site, Schuylkill County, Pennsylvania* (with Dawn M. Muir-Frost, Circa~).

2016 *Phase I Archaeological Survey of Eyre Hall Property, Northampton County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2017 *Phase I Cultural Resources Survey of Nansemond River Golf Course Property, City of Suffolk, Virginia* (with Dawn M. Muir-Frost, Circa~)

2017 *Phase I Cultural Resources Survey of Sampson Creek Property, City of Chesapeake County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary, Crystal Hill Property, Halifax County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary, Deb Allen Property, Halifax County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Cultural Resources Survey of Proposed Mezzo Apartment Homes Property, City of Virginia Beach, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Cultural Resources Survey of the Bailey Tract, Chesterfield County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary, Occoquan Project, Prince William County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary, Brandy Station Property, Culpeper County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 Addendum to Phase I Cultural Resources Survey of Robinson Fork Mitigation Site, Washington County, Pennsylvania (with Carol D. Tyrer, Circa~).

2017 *Addendum to Phase I Cultural Resources Survey of South Creek Restoration Site, Bradford County, Pennsylvania* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Archaeological Survey of Hollyfield North Tract, King William County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary, Stevensburg Property, Culpeper, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary, Gardy Mill Property, Westmoreland County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Cultural Resources Survey Scot Center Relocation, City of Newport News, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary, Spring Grove Tract, Surry County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2017 *Phase I Architectural Survey of the Belcher Tract, Louisa County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary and Archaeological Probability Analysis, Mount Jackson Property, Shenandoah County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary, Newtown Road, Hampton Roads Sanitation Department Utility Right-of-Way, City of Virginia Beach, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary, Western Section of Newtown Road, Hampton Roads Sanitation Department Utility Right-of-Way, City of Virginia Beach, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Cultural Resources Survey of Buck Run Restoration Site II, Washington County, Pennsylvania* (with Dawn M. Muir-Frost, Circa~).

2017 *Addendum to Phase I Cultural Resources Survey of Pleasure House Point Property, City of Virginia Beach, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Cultural Resources Survey of American Legion Property, Gloucester County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Cultural Resources Survey of Fiddlers Green Property, Gloucester County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Ashland Trolley Management Summary, Hanover County, Virginia* (with Dawn M. Muir-Frost, Circa~)

2017 *Phase I Cultural Resources Survey of Hogan Kent and Greene Tract, Loudoun County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Cultural Resources Survey of Pump Station No. 5 and Royal Glen Pump Station Sewer Corridor, Hanover County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Archaeological Survey of the Mechanicsville Solar Farm Tract, Hanover County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Architectural Survey of the Mechanicsville Solar Farm Tract, Hanover County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Architectural Survey of the Franklin County Property, Franklin County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Archaeological Survey of the Franklin County Property, Franklin County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary and Archaeological Probability Analyses, Colonial Trail West Property, Surry County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Architectural Survey of Turkey Run Farm, Chesterfield County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Cultural Resources Survey of Ashton Creek Pump Station New Force Main Property, Chesterfield County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Turner Solar Farm Management Summary, Henrico County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Architectural Survey of the Nokesville Solar Site, Prince William County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Archaeological Survey of the Nokesville Solar Site, Prince William County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary, Reservoir Tract, Louisa County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary and Archaeological Probability Analyses, Pamplin Solar Property, Appomattox County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary and Archaeological Probability Analyses, Carson Solar Property, Appomattox County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary, Chickahominy Power, Charles City County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Addendum to Phase I Cultural Resources Survey of Buck Run Restoration Site II, Washington County, Pennsylvania* (with Dawn M. Muir-Frost, Circa~).

2017 Management Summary, Pottery Tract West and East, James City County and York County, Virginia (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary, Chesapeake Solar Farm, City of Chesapeake, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Cultural Resources Survey of Johnson Creek Force Main Gravity Sewer and Water Line, Chesterfield County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary, Hickory Solar Farm, City of Chesapeake, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary, 1090 German School Road, City of Richmond, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary, Sycamore Solar Farm, Pittsylvania County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Management Summary, Maplewood Solar Farm, Pittsylvania County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Cultural Resources Survey of Dorey Park Pedestrian Trail, Henrico County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Archaeological Survey of Colonial Trail West Solar Farm Site, Surry County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Architectural Survey of Colonial Trail West Solar Farm Site, Surry County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Greenwood Solar Farm Current Conditions Assessment, Culpeper County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Cultural Resources Survey of Osborne Landing, Henrico County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Cultural Resources Survey of Monticello Avenue Trail, City of Williamsburg, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Architectural Survey of Mount Jackson Property, Shenandoah County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Cultural Resources Survey of Oakland Property, James City County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Cultural Resources Survey of Randolph I Mitigation Bank, Randolph County, West Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Archaeological Survey of Mount Jackson Property, Shenandoah County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Dragon Fly Solar Farm Current Conditions Assessment, Campbell County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Archaeological Survey of Buckingham Solar Site, Buckingham County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Architectural Survey of Buckingham Solar Site, Buckingham County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Cultural Resources Survey of Forest Glen, James City County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Architectural Survey of Gardy's Mill Site, Westmoreland County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *S B Solar Farm Current Conditions Assessment, Halifax County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Archaeological Survey of Gardy's Mill Site, Westmoreland County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Architectural Survey of Church View Property, Middlesex County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2017 *Phase I Archaeological Survey of Church View Property, Middlesex County, Virginia* (with Dawn M. Muir-Frost, Circa~).

2018 *Phase I Archaeological Survey of Rives Road, Prince George County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Architectural Survey of Rives Road, Prince George County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Cultural Resources Survey of Gala Pipeline, Alleghany County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Architectural Survey of Spring Grove Property, Surry County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Grasshopper Solar Farm Current Conditions Assessment, Mecklenburg County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Addendum to Phase I Archaeological Survey of Church View Property, Middlesex County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Cultural Resources Survey of Hai Tran Poultry Farm Property, Accomack County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Archaeological Survey of Pamplin Solar Farm Site, Appomattox County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Architectural Survey of Walnut Solar Farm, King and Queen County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase II Archaeological Evaluations of the Bailey Tract, Chesterfield County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Architectural Survey of Pamplin Solar Site, Appomattox County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Cape Solar Farm Current Conditions Assessment, Page County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Cavalier Solar Farm Current Conditions Assessment, Greene County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Dewey Solar Farm Current Conditions Assessment, Orange County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Dogwood Solar Farm Current Conditions Assessment, Page County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Cultural Resources Survey of Shugart Solar Farm, Charles County, Maryland Virginia* (with Dawn M. Muir, Circa~).

2018 *Culpeper Management Summary, Culpeper County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Leatherwood Solar Site Management Summary, Henry County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Cultural Resources Survey of Haymarket Bypass, Prince William County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Archaeological Survey of Chesapeake Solar Site, City of Chesapeake, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Architectural Survey of Chesapeake Solar Site, City of Chesapeake, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Cultural Resources Survey of Seven Pines Mitigation Bank, Marion County, West Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Architectural Survey of Route 17 – Shoulders Hill Road, City of Suffolk, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Cultural Resources Survey of the Michael Drive Tract, City of Chesapeake, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Archaeological Survey of the East West Roadway, Chesterfield County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Architectural Survey of the East West Roadway, Chesterfield County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Management Summary, Bunting Road, York County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase II Archaeological Evaluation of Site 44PG0584, Rives Road Solar Farm, Prince George County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Cultural Resources Survey of the 2.50-Acre Wellingford Industrial Park Lot 6A, Prince William County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Archaeological Survey of Cherrywood Solar Farm, Caroline County, Maryland* (with Dawn M. Muir, Circa~).

2018 *Phase I Archaeological Survey of Greenwood Solar Farm, Culpeper County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Architectural Survey of Greenwood Solar Farm, Culpeper County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Architectural Survey of Crystal Hill Solar Site, Halifax County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Cultural Resources Survey of Paradise Creek Bridge Project, City of Portsmouth, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Cultural Resources Survey of False Cape, City of Virginia Beach, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I and II Cultural Resources Survey and Excavation Report for the James River Water Authority Intake, Pump Station, and Pipeline Project, Fluvanna County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Architectural Survey of Turner Solar, LLC, Henrico County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Addendum to Phase I Archaeological Survey of the Circa 145-Acre Haymarket Crossing Property, Prince William County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Cultural Resources Survey of the Accokeek Creek Sewer Alignment, Stafford County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Cultural Resources Survey of Widewater State Park Property, Stafford County, Virginia and Charles County, Maryland* (with Dawn M. Muir, Circa~).

2018 *Assessment and Probability Analysis Foxglove Solar LLC, Frederick County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Management Summary, Maplewood Solar Farm, Pittsylvania County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Management Summary Petersburg Gas Works Retort Building, City of Petersburg, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Cultural Resources Survey, Ohio Creek Alternatives, City of Norfolk, Virginia* (with Dawn M. Muir, Circa~).

2018 *Management Summary Camden Plantation, Camden County, North Carolina* (with Dawn M. Muir, Circa~).

2018 *Phase I Cultural Resources Survey of Columbia Gas Transmission, LLC VM System, Drip Removal Project, Greene County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Cultural Resources Survey of Lower Smith River Sewer Conveyance, Henry County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Archaeological Survey of Grasshopper Solar I, Mecklenburg County, Virginia* (with Dawn M. Muir, Circa~).

2018 *Phase I Archaeological Survey of the Cherrywood Solar I LLC Property, Caroline County, Maryland* (with Dawn M. Muir, Circa~).

2018 *Addendum to Phase I Cultural Resources Survey of Lynchburg Expressway, City of Lynchburg, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of the Columbia Gas LLC-VNG Suffolk No. 3 Meter Station Expansion Project, City of Suffolk, Virginia* (with Dawn M. Muir, Circa~).

2019 *Assessment and Probability Analysis, Colonial Solar Farm, Surry County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Architectural Survey of Dragonfly Solar, Campbell County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of Toano Self Storage Tract, James City County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of Casalight Nokesville Tract, Prince William County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase II Architectural Survey of the Wilroy House, City of Suffolk, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey Highland Springs School Tract, Henrico County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of Union Bridge Solar Farm, Carroll County, Maryland* (with Dawn M. Muir, Circa~).

2019 *Phase I Architectural Survey of the Walnut Solar Site, King and Queen County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Archaeological Survey of the Walnut Solar Site, King and Queen County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of the Bethlehem Road Property, Prince William County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of the Piedmont Line 24 Replacement Project, Pitt County, North Carolina* (with Dawn M. Muir, Circa~).

2019 *Assessment and Probability Analysis, Banbury Cross, Loudoun County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of the Richmond Road Property, James City County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of the Tranquility Tract, York County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Management Summary, Christ Community Church Multipurpose Building, James City County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of the Lifepointe Church Tract, James City County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Archaeological Survey of Harrowgate-Cougar Trail Sidewalk Improvements, Chesterfield County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Archaeological Survey of Marina to Merriewood Sidewalk Improvements, Chesterfield County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of the Hopkins Road Sidewalk Improvements, Chesterfield County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of the Lorton Community Center Tract, Fairfax County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Assessment and Probability Analysis, Westmoreland Solar Farm Site, Westmoreland County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Archaeological Survey of Winterpock Road Widening Project, Chesterfield County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase II Archaeological Evaluation of Site 44CS0348, The Chesapeake Solar Site, City of Chesapeake, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase II Archaeological Evaluation of Site 44FV0269, James River Water Supply Pump Station and Pipeline Alignment, Fluvanna County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Architectural Survey of Mount Nebo Solar Farm, Surry County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of Archers Mead Tract, Isle of Wight County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of 136 Tewning Road, City of Williamsburg, Virginia* (with Dawn M. Muir, Circa~).

2019 *Management Summary and Archaeological Probability Analysis for Spring Grove II Solar Site, Surry County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Partial Phase III Archaeological Excavations of Site 44PW1941 at Cayden Ridge, Prince William County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey, Misenheimer Solar Farm, Stanly County, North Carolina* (with Dawn M. Muir, Circa~).

2019 *Addendum to Phase I Cultural Resources Survey of Nansemond Bridge Alternatives, City of Suffolk, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey Nansemond Road Improvements, City of Suffolk, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Architectural Survey of Maplewood Solar I LLC Tract, Pittsylvania County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Archaeological Survey of Maplewood Solar I LLC Tract, Pittsylvania, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey the Kendall Hills Tract, Stafford, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of the Potomac Landing Permit Areas, King George, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of Petersburg Locks Water Main Pipeline Corridor, City of Petersburg, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase III Archaeological Evaluation at Site 44CF0701, Magnolia Green Property, Chesterfield County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Assessment and Probability Analysis, Hopewell Tract, City of Hopewell, Virginia* (with Dawn M. Muir, Circa~).

2019 *Assessment of Probability Analysis, Monarch Solar Farm Greensville County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Management Summary, Sycamore Solar I Project, Pittsylvania County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Assessment and Probability Analysis, Sebera Winstead Solar Farm, Prince George County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Assessment and Probability Analysis, Amelia Solar Site, Amelia County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of Mabee Swamp Trail, York County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of ABC Warehouse Property, Hanover County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Architectural Survey of the Spring Grove II Solar Site, Surry County, Virginia* (with Dawn M. Muir, Circa~).

2019 *Assessment and Probability Analysis, Moody Creek, Charlotte and Mecklenburg Counties, Virginia* (with Dawn M. Muir, Circa~).

2019 *Phase I Cultural Resources Survey of the Scannell Warehouse Tract, Chesterfield County, Virginia* (with Dawn M. Muir, Circa~).

2020 *Phase II Archaeological Evaluation of Site 18WC200 and 18WC201, Porter Mill Road Solar Project, Wicomico County, Maryland* (with Dawn M. Muir, Circa~).

2020 *Phase I Cultural Resources Survey of Sandy Creek Mitigation Bank, Tyler and Doddridge Counties, West Virginia* (with Dawn M. Muir, Circa~).

2020 *Phase I Cultural Resources Survey of Shands Energy Century, Sussex County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2020 *Phase I Cultural Resources Survey of Dry Bridge Energy Century, Chesterfield County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2020 *Phase I Cultural Resources Survey of Cedar Energy Century, City of Chesapeake, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2020 *Additional Landscape and Architectural Information for the Porter Mill Road Solar Project, Wicomico County, Maryland* (with Dawn M. Muir, Circa~).

2020 *Phase I Archaeological Survey of Sebera Solar Farm, Prince George County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2020 *Phase I Cultural Resources Survey of Camden Haven, City of Chesapeake, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2020 *Phase I Architectural Survey of Sebera Solar Farm, Prince George County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2020 *Phase II Archaeological Evaluation of Site 44LD1345, The Glenmore Farm Site, Loudoun County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2020 *Management Summary Porter Mill Solar Property GPR Survey, Wicomico County, Maryland* (with Dawn M. Muir, Circa~).

2020 *Phase I Cultural Resources Survey of Yadkins Energy Center, City of Chesapeake, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2020 *Management Summary, Lawnes Point on the James, Lot 16, Isle of Wight County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2020 *Management Summary, Boulware Cemetery, Caroline County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Phase I Cultural Resources Survey 101 Tewning Road, James City County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Phase I Cultural Resources Survey 815 Walker Road, Fairfax County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Desktop Survey Report for Reconnect Fiber Optic Cable, King and Queen Phase I, King and Queen County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Desktop Survey Report for Reconnect Fiber Optic Cable, Pittsylvania County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Phase I Cultural Resources Survey of the Proposed Freeman Avenue Overpass/Norfolk and Portsmouth Belt Line Railroad Overpass, City of Chesapeake, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Phase III Archaeological Evaluations at Site 44YO1042, Powell Plantation Property, York County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Costen Road Solar Farm updates, Pocomoke City, Maryland* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Phase I Cultural Resources Survey of Smithfield IAAI Property, Isle of Wight County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Desktop Survey Report for Reconnect Fiber Optic Cable, King and Queen Phase II, King and Queen County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Phase I Cultural Resources Survey of Veterans Park Restoration Site, Dauphin County, Pennsylvania* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Phase I Cultural Resources Survey of the Group Dam Removal Project, Beaver County, Pennsylvania* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Phase IA Cultural Resources Assessment, 523 George Street, City of Fredericksburg, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Middle Creek Negative Form, Montgomery County, Pennsylvania* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Desktop Survey Report for Pembroke Telephone Cable, Giles County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Phase I Cultural Resources Survey of 8189 and 8193 Richmond Road, James City County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Phase I Cultural Resources Survey of Fenton Mills Tract, York County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Phase II Architectural Survey of the Oakenwold Tract, Stafford County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Phase I Cultural Resources Survey of Corelot Tract, City of Fredericksburg, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Current Conditions Assessment, Kings Creek Solar Farm, York County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Phase I Architectural Survey of Kings Creek Solar Farm, York County, Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

2021 *Phase I Cultural Resources Survey of Horseshoe Hills Mitigation Bank, Marion County, West Virginia* (with Dawn M. Muir and Skye Hughes, Circa~).

DAWN M. MUIR, R.P.A.
HISTORIAN
ARCHITECTURAL HISTORIAN
PRINCIPAL INVESTIGATOR
CIRCA~ CULTURAL RESOURCE MANAGEMENT, LLC

Education:

Radford University, 1996, B.A. Interior Merchandising

Middle Tennessee State University, M.A., 2000, Public History: Historic Preservation tract

2010-present: Registered Professional Archaeologist (RPA) #203780

Professional Experience:

2007-present: Architectural Historian, Historian, Principal Investigator, Circa~ Cultural Resource Management, LLC, Williamsburg, Virginia.

2004-2007: Cultural Resources Manager, Preservation Planner, Vanasse Hangen Brustlin, Inc. (VHB), Williamsburg, Virginia.

2000-2004: Cultural Resource Specialist, Architectural Historian, General Scientific Corporation under contract to Naval Air Station Patuxent River, Patuxent River, Maryland.

1998-2000: Assistant, Main Street Murfreesboro, Murfreesboro, Tennessee.

Fields of Experience:

Ms. Muir has over 20 years of professional experience in the fields of archaeology, architectural history, and cultural resources. Her current responsibilities at Circa~ include managerial and technical tasks associated with cultural resources assessments including both archaeology and architectural resources and Phase I, II, and III surveys and excavations, consultation with state and national review agencies, developing and implementing archaeological and architectural research designs, and writing and editing technical reports. She has authored or co-authored over 200 technical reports and historical studies (all accepted by the regulatory agencies), and worked closely with the Virginia Department of Historic Resources (VDHR), the Maryland Historical Trust (MHT), the National Park Service (NPS), the U.S. Army Corps of Engineers, and other official agencies to fulfill the requirements of local, state, and federal regulations related to archaeological and architectural resources.

As a principal investigator and architectural historian, Ms. Muir has identified archaeological and architectural resources in Tennessee, Maryland, Pennsylvania, New York, North Carolina, Massachusetts, Maine, and Virginia. She has performed surveys and analyses on all periods including Paleoindian to Woodland Native American sites and 17th, 18th, 19th, and 20th century historic sites and burials. She has completed investigations for numerous projects that range from large-scale studies of archaeological and historic resources to detailed investigations of individual Native American and historic sites. Ms. Muir is familiar with the management and preparation of environmental documents that comply with the National Historic Preservation Act of 1966, as amended and the National Environmental Policy Act of 1969. She has a solid understanding of federal and state environmental and cultural resources including the *Secretary of the Interior Standards and Guidelines for Archaeology and Historic Preservation*. She is familiar with both the Maryland and Virginia standards and she uses these guidelines when drafting reports.

Ms. Muir's technical capabilities include detailed archival and literary research at the local, state, and national levels; site documentation and analysis; evaluation of properties for National Register of Historic Places and State Landmark significance; preparation of project budgets; selection and guidance of field crew; and technical report writing. Ms. Muir also has extensive experience with assessment, survey, evaluation, and mitigation of both Native American and historic resources. In addition, Ms. Muir has a thorough understanding of the Section 106 process and has written over 100 Section 106 compliance packages. As part of the Section 106 process, Ms. Muir has drafted over 30 Memorandums of Agreement (MOA) as mitigation for various projects and has developed a draft Programmatic Agreement (PA) for Disaster Preparedness related to cultural resources.

In addition, Ms. Muir has also attended various training sessions including How to Manage the National Environmental Policy Act and Write Effective National Environmental Policy Act documents, How to Write Creative Mitigation, an Introductory and Advanced Section 106 Seminar, and How to Write Programmatic Agreements. Ms. Muir was also instrumental in arranging a Historic Preservation Workshop for Naval Air Station (NAS) Patuxent River.

Prior to joining Circa~, Ms. Muir worked as a cultural resource specialist contractor for NAS Patuxent River in Patuxent River, Maryland, where she oversaw the historic preservation requirements of the NAS. Ms. Muir also maintained the historic building database for the NAS, which contained over 50 historic structures at both the NAS and two outlying properties. In addition, Ms. Muir assisted in a station-wide survey of buildings over 50 years of age. This effort resulted in a comprehensive report of the station's history and significance, the identification of and preparation of nominations for four National Register of Historic Places eligible districts, and the eventual completion of an Integrated Cultural Resources Management Plan (ICRMP) for the NAS. Ms. Muir also assisted in archaeological

requirements for NAS Patuxent River including monitoring for underground utilities at an 18th century house site, assisting in survey of a Jesuit Mission site on an outlying base of NAS Patuxent River, and finalizing the artifact collection for the Officers Club archaeological survey.

Ms. Muir has also worked on several other notable projects. While at NAS Patuxent River, Ms. Muir conducted an architectural and landscape survey and National Register nomination of the Mattapany-Sewell Historic District, which included a 18th century house and outbuildings; drafted a Preservation Plan and National Register nomination for the Point Lookout Light Station Complex, owned and operated at the time by NAS Patuxent River; and drafted a Preservation Plan and repair scope of work for the St. Nicholas Chapel on the NAS in response to water and roof damage sustained during several hurricanes. In addition, Ms. Muir assisted in a project to relocate the St. Nicholas Chapel cemetery and restore the existing gravestones that had been buried by the U. S. Navy in the 1940s. More recently, Ms. Muir assisted in a Phase I Architectural Reconnaissance Survey of the East and West Area of NASA Langley Air Field, in Hampton, Virginia.

Selected Publications/Technical Reports:

1999 Town of Lebanon Virginia Historic District, National Register nomination (as part of a Graduate class at Middle Tennessee State University).

2000 Recycling the Can: Adaptive Reuse of Industrial Buildings in Baltimore, Maryland (Master's Thesis).

2001 Mattapany-Sewell Historic District National Register nomination (with Doug Lister, NAS Patuxent River Maryland).

2002 A Guide Book to Preservation of Archaeological and Architectural Resources at NAS Patuxent River (NAS Patuxent River Maryland).

2002 Point Lookout Light Station Complex Preservation Plan (NAS Patuxent River Maryland)

2002 Point Lookout Light Station multi-component National Register nomination including both Architecture and Archaeology Sites (NAS Patuxent River Maryland).

2003 St. Nicholas Chapel Preservation Plan. (NAS Patuxent River Maryland).

2004 Boston Church Survey, Boston Massachusetts (with Elaine Stiles and Rita Walsh, VHB, Inc.).

2004 Deshler Morris-Bringhurst House Upgrade Utilities and Interpretive Facilities Environmental Assessment for Independence National Historical Park, Philadelphia, Pennsylvania (with Tricia Wingard and Elaine Stiles, VHB, Inc.).

2004 Development Concept Plan/Environmental Impact Statement for Fort McHenry National Monument and Historic Shrine, Baltimore Maryland (with Tricia Wingard and Scott Smizik, VHB, Inc.).

2004 Interpretive Facilities at Green Spring for Colonial National Historical Park, Williamsburg, Virginia (with Tricia Wingard and Scott Smizik, VHB, Inc.).

2004 The Washington Rochambeau Revolutionary Route Feasibility Study, Newport, Rhode Island to Yorktown, Virginia (with VHB, Inc.).

2005 Architectural Design Guidelines, U.S. Route 17/ Great Dismal Swamp, City of Chesapeake, Virginia (with VHB, Inc.).

2005 City Point Stabilization Environmental Assessment/Assessment of Effect for Petersburg National Battlefield, Petersburg, Virginia (with Scott Smizik, VHB, Inc.).

2005 Culvert Replacement Brooklyn, Maine (with Elaine Stiles, VHB, Inc.).

2005 Highway Improvements, Blue Hill, Maine (with Elaine Stiles, VHB, Inc.).

2005 Highway Improvements Orland, Bucksport, Holden, Maine (with Elaine Stiles, VHB, Inc.).

2005 Intersection Improvement without a Signal, Penobscot, Maine (with Elaine Stiles, VHB, Inc.).

2005 Public Access and Visitor Facilities for Five Forks Environmental Assessment/Assessment of Effect for Petersburg National Battlefield, Petersburg, Virginia (with Tricia Wingard and Scott Smizik, VHB Inc.).

2006 Belle Haven Marina Project Environmental Assessment for George Washington Memorial Parkway, McLean, Virginia (with VHB, Inc.).

2006 General Management Plan/Environmental Impact Statement for Valley Forge National Historical Park, Valley Forge, Pennsylvania (with Tricia Wingard, VHB, Inc.).

2006 Historic Jamestown Interpretive Facilities Environmental Assessment, Colonial National Historical Park, Williamsburg, Virginia (with Tricia Wingard, VHB, Inc.).

2006 Improvements to Island Facilities and Infrastructure for Assateague Island National Seashore, Berlin, Maryland (with Tricia Wingard and Scott Smizik, VHB, Inc.).

2006 Jamaica Bay Transportation Studies Development Concept Plan Environmental Assessment Assessment of Effect for Gateway National Recreation Area, New York, New York (with Scott Smizik, VHB, Inc.).

2006 Phase I Architectural Survey, the Woodlands, Chesterfield County, Virginia (with VHB, Inc.).

2006 Phase I Architectural Reconnaissance Survey of East Area, NASA Langley Air Field, Hampton, Virginia (with Carol Tyrer, Circa~ CRM and VHB, Inc.).

2006 Phase I Architectural Reconnaissance Survey of West Area, NASA Langley Air Field, Hampton, Virginia (with Carol Tyrer, Circa~ CRM and VHB, Inc.).

*2006 Phase I Environmental Site Assessment, Appomattox Wal-mart, Appomattox County, Virginia (*with Mark Romulus, VHB, Inc.).

2006 Phase I Environmental Site Assessment, Louisa County Wal-mart, Louisa County, Virginia (with Mark Romulus, VHB, Inc.).

2006 Phase I Environmental Site Assessment, Mechanicsville Wal-mart, Mechanicsville, Virginia (with Mark Romulus, VHB, Inc.).

2006 Phase I Environmental Site Assessment, Nike Missile Site, Fairfax County, Virginia (with Mark Romulus, VHB, Inc.).

2006 Phase II Architectural Survey for a 38-acre tract Associated with the Proposed Colonial Heights Baptist Church Project, Chesterfield County, Virginia (with VHB, Inc.).

2006 Rehabilitation of Park Routes and Parking Areas Environmental Assessment/Assessment of Effect for Valley Forge National Historical Park, Valley Forge, Pennsylvania (with Tricia Wingard and Scott Smizik, VHB, Inc.).

*2006 Rehabilitate Support Facilities at Washington's Headquarters Environmental Assessment/Assessment of Effect for Valley Forge National Historical Park, Valley Forge, Pennsylvania (*with Tricia Wingard, VHB, Inc.).

2007 Architectural Cost Share Survey, Fredericksburg Historic District, Fredericksburg, Virginia (with William and Mary Center for Archaeological Research)

2007 Cemetery Boundary Delineation of Site 089-5193 and 089-5202 Wilbourn Property Stafford County Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Current Condition Assessment Brewers Neck Boulevard Isle of Wight County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Current Condition Assessment Caeli Farm Loudon County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Current Condition Assessment Greensville Megasite Greensville County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Current Condition Assessment Gresham Property City of Richmond, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Current Condition Assessment McCale Property York County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Current Condition Assessment O'Connor Tract Loudon County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Current Condition Assessment Chester Site Chesterfield County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Hancock Village Management Summary, Chesterfield County, Virginia (with Carol Tyrer, Circa~).

2007 Management Summary Totopotomoy Creek Wastewater Improvements, Hanover County, Virginia (with Carol Tyrer, Circa~).

2007 Phase I Archaeological Survey of 120 Acres at Jolly Pond Road James City County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Archaeological Survey for Approximately 6 Acres Stonehouse Development James City County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Archaeological Survey for Approximately 140 Acres at the Proposed Rose Hill Tract, York County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Archaeological Survey of Albemarle River Subdivision Lots 16-21, Chesapeake, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Archaeological Survey of Approximately 415 Acres of the Turner Tract, Southampton County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Archaeological Survey of Approximately One Acre at the Grove Christian Center Property James City County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Archaeological Survey of DSCR Road Alignment Chesterfield County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Archaeological Survey of the Proposed Lakeridge Parkway Extension Section 2 Hanover County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Archaeological Survey of the Park Valley Church Property Prince William County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Archaeological Survey of Three Trails Meadowood Special Recreation Management Area Fairfax

County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Archaeological Survey of the Wilbourn Property Stafford County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Architectural Reconnaissance Survey of a 350-Acre Tract Associated with the Proposed Three Flags Development, Culpeper, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 *Phase I Architectural Survey of Littlefields, Westmoreland County, Virginia* (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Architectural Survey of the Tenaska Tract (Buschman Farm), Buckingham County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Cultural Resources Survey of the 14-Acre Walnut Tree Farm, Prince William County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Cultural Resources Survey of Golf Course Areas Holes 13-18 and Development Areas F and G at Magnolia Green, Chesterfield County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Cultural Resources Survey for Mill Creek Drive, Southampton County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Cultural Resources Survey of Road Right-of-Way Magnolia Green Chesterfield County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Cultural Resources Survey of the Georgia-Pacific Site Property Town of South Boston, Vicinity, Halifax County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Cultural Resources Survey of the Lower Opossum Creek Wastewater Improvements, Hanover County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase I Location Survey of Features Associated with Site 020-5350 Midlothian District of the Richmond Coal Basin The Henry Jones Tract Chesterfield County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase II Archaeological Survey of Site 44CF0596 Chesterfield County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase II Archaeological Survey of Sites 44JC1173 and 44JC1174 James City County School Site at Jolly Pond Road, James City County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Phase II Evaluation of Site 44BK0331, Buckingham County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2007 Villages of Gloucester Management Summary, Gloucester, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Additional Phase III Archaeological Evaluations at Site 44JC1113 The Colonies, James City County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Archaeological Excavations of 44JC77 The Stonehouse Site, James City County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Current Conditions Assessment, Allegheny Master Plan, Allegheny County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Current Conditions Assessment at Magnolia Green, Chesterfield County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Current Conditions Assessment, Crosspointe Centre, Prince George County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Current Conditions Assessment Dinwiddie Commerce Park, Dinwiddie County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Current Conditions Assessment Proposed Industrial Access Road Corridor Crosspointe Centre, Prince George County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Current Conditions Assessment Roma and Sharpe Tracts, Henry County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Current Conditions Assessment, Thibault Tract, Chesterfield County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Historical Assessment for Indian Creek Dredging Project, City of Hampton, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Management Summary Beaufont Spring, Chesterfield County Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase I Archaeological Survey of 42 Acres at Magnolia Green, Chesterfield County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase I Archaeological Survey of the Chicken Coop Trail, Meadowood Special Recreation Management Area, Fairfax County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase I Archaeological Survey of Littlefields, Westmoreland County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase I Archaeological Survey of a Proposed utility Line for the School Sites at Jolly Pond Road, James City County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase I Archaeological Survey of Timberneck at Catlett Island, Gloucester County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase I Architectural Survey of the Greensville Megasite, Greensville County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase I Cultural Resources Survey of Christ United Methodist Church Property, Fairfax County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase I Cultural Resources Survey of Fluvanna High School Site, Fluvanna County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase I Cultural Resources Survey of Middle Peninsula Environmental Bank, Gloucester County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase I Cultural Resources Survey of Permit Areas Within the Bottoms Bridge Tract, New Kent County Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase I Cultural Resources Survey of Proposed Science and Technology Building Tract on the Richard Bland College Campus, Dinwiddie County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase I Cultural Resources Survey of the Smith River Sports Complex Access Road, Henry County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase I Cultural Resources Survey of the Stoup Property, Isle of Wight County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase IA Cultural Resources Survey, Wildwood Estates, Loudon County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase IA Cultural Resources Survey, St. Olaf's Church, James City County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase II Archaeological Evaluation of Site 44JC412, Stonehouse Tract, James City County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase II Archaeological Evaluation for Site 44JC427, Stonehouse Tract, James City County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase II Archaeological Evaluation of Sites 44CF0697, 44CF0700, and 44CF0701 at Magnolia Green, Chesterfield County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase II Archaeological Survey of Five Sites and a Cemetery Delineation, Turner Tract, Southampton County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase II Architectural Survey of Timberneck and Catlett Island, Gloucester County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase II Evaluation of Site 44BK0329, Buckingham County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase II Evaluation of Site 44JC837/047-0046, Stonehouse Tract, James City County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Phase II Evaluation of Site 44JC845, Moss Creek Development, James City County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Proposed Partial Data Recovery Plan for Site 44CF684 at Magnolia Green, Chesterfield County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2008 Proposed Partial Data Recovery Plan for Site 44JC845 at Moss Creek Development, James City County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Archaeological Excavations at the Greenhow Cemetery Site 089-5202 Stafford County, Virginia (with Aaron Levinthal, Amy Humphries and Carol Tyrer, Circa~).

2009 Archaeological Excavations at the Roma Tract Payne Cemetery Site 044-5184 Henry County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Cemetery Delineation at Catlett Island Gloucester, County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Current Condition Assessment Deep Creek and Jones and Gilligan Creeks Craney Island Expansion Project Mitigation Sites, City of Chesapeake, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Current Condition Assessment of the 8.8-Acre Bull Property Tract, Isle of Wight County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Current Condition Assessment, Rotterdam Property Craney Island Expansion Project Mitigation Sites, City of Chesapeake, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Current Condition Assessment, Towers Tract, Goochland County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Current Condition Assessment, Wilderness North Tract, Orange County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Management Summary House, 3410 Goodwin Neck Road, York County, Virginia (with Carol Tyrer, Circa~).

2009 Phase I Architectural Survey of Seven Housing Areas, Norfolk Redevelopment and Housing Authority, City of Norfolk, Virginia 6 vols. (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Phase I Architectural Survey of the Roma Tract, Henry County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Phase I Cultural Resources Survey of Faith Church Property, Henrico County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Phase I Cultural Resources Survey of Colonial Heights Baptist Church Property, Chesterfield County, Virginia (with Amy Humphries and Carol Tyrer, Circa~).

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2009 Phase I Cultural Resources Survey of Terrascape Design and Build Company, Inc. at 16127 John Marshall Highway, Prince William County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

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2009 Phase I Cultural Resources Survey of the Sharpe Tract, Henry County, Virginia (with Amy Humphries and Carol Tyrer, Circa~).

2009 Phase I Cultural Resources Survey of 755 Scotland Street, City of Williamsburg, Virginia (with Aaron Levinthal. Amy Humphries, and Carol Tyrer, Circa~).

2009 *Phase II Archaeological Evaluation of Site 44NN60, Newport News, Virginia* (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Phase I Archaeological Survey of Airport Gateway Land Bay A, Prince William County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Phase I Archaeological Survey of Approximately One Acre at the Grove Christian Center Property, James City County, Virginia (with Amy Humphries and Carol Tyrer, Circa~).

2009 Phase I Archaeological Survey of Approximately 30 Acres Liberty Landing Property, New Kent County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Phase I Archaeological Survey of Coleman Crossing, Gloucester County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Phase I Archaeological Survey of Proposed Utility Replacement Corridor on the Richard Bland College Campus, Dinwiddie and Prince George Counties, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Phase I Archaeological Survey of the Armed Forces Recreation Center, Cape Henry Inn and Beach Club, Fort Story, City of Virginia Beach, Virginia (with Amy Humphries and Carol Tyrer, Circa~).

2009 Phase II Archaeological Evaluation of 44GL0450 at Middle Peninsula Environmental Bank, Gloucester County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Phase I Cultural Resources Survey of the South Norfolk Jordan Bridge Projects, Chesapeake and Portsmouth, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Phase II Archaeological Survey of Sites 44YO1074 and 44YO1075 Hampton Roads Sanitation District York River Treatment Plant Expansion, York County, Virginia (with Aaron Levinthal and Carol Tyrer, Circa~).

2009 Phase II Architectural Survey of Master Craftsmen Jewelry Building College Triangle Retail Project, City of Williamsburg, Virginia (with Carol Tyrer, Circa~).

2009 Phase II Architectural Survey of the Watkins House, Henry County, Virginia (with Carol Tyrer, Circa~).

2009 Phase II Architectural Survey of Atlantic Wood Industries, Inc. Property VDHR Site #124-5132, City of Portsmouth, Virginia (with Carol Tyrer, Circa~).

2010 College Triangle Retail Project – The College of William and Mary Management Summary, City of Williamsburg, Virginia (with Carol Tyrer, Circa~).

2010 Current Conditions Assessment of the Approximately 350-Acre Dupont-Fabros Development Tract, Loudoun County, Virginia (with Carol Tyrer, Circa~).

2010 Current Conditions Assessment Windsor Road Property, Orange County, Virginia (with Carol Tyrer, Circa~).

2010 Darby Road Parcels Management Summary, York County, Virginia (with Carol Tyrer, Circa~).

2010 Henricus State Park Riverbank Stabilization Project Management Summary, Chesterfield County, Virginia (with Carol Tyrer, Circa~).

2010 Lee Hall Reservoir Management Summary, Cit of Newport News, Virginia (with Carol Tyrer, Circa~).

2010 Phase I Archaeological Survey of the 10-Acre Williamsburg James City County Schools Operations Center Expansion, James City County, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

2010 Phase I Archaeological Survey of 10 Trails Meadowood Special Recreation Management Area, Fairfax County, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

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2010 Phase I Cultural Resources Survey of BiCounty Way Property, New Kent County, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

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2010 Phase I Cultural Resources Survey of Deep Creek Ball Park Property, City of Chesapeake, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

2010 Phase I Cultural Resources Survey of Greenhaven at Murray Drive Drainage Easement Acquisition from U.S. Navy, City of Chesapeake, Virginia (with Carol Tyrer Circa~).

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2010 Phase I Cultural Resources Survey of Mount Zion Baptist Church, Prince William County, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

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2010 Phase I Cultural Resources Survey of Pole Green Road and Walnut Grove Road Intersection Improvements, Hanover County, Virginia (with Carol Tyrer Circa~).

2010 Phase I Cultural Resources Survey of Stafford Commerce Center, Stafford County, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

2010 Phase IA Cultural Resources Assessment of Forest Heights and Neighbors Drive, James City County, Virginia (with Carol Tyrer, Circa~).

2010 Winterfield Commercial Park Viewshed Analysis, Powhatan County, Virginia (with Carol Tyrer, Circa~).

2010 Wynwood Property Management Summary, Chesterfield County, Virginia (with Carol Tyrer, Circa~).

2011 Addendum to Phase I Cultural Resources Survey of Pole Green Road and Rural Point Road Intersection Improvements, Hanover County, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

2011 Current Conditions Assessment of Haymarket Tract, Prince William County, Virginia (with Carol Tyrer, Circa~).

2011 Current Conditions Assessment of J. Sergeant Reynolds Community College Tract, Henrico County, Virginia (with Carol Tyrer, Circa~).

2011 Current Conditions Assessment of the Mecklenburg Jail Site, Mecklenburg County, Virginia (with Carol Tyrer, Circa~).

2011 Current Conditions Assessment of the Stafford County High School Property, Stafford County, Virginia (with Carol Tyrer, Circa~).

2011 Current Conditions Assessment of Stonebridge Property, Chesterfield County, Virginia (with Carol Tyrer, Circa~).

2011 Disturbance Assessment of West Creek Medical Center, Goochland County, Virginia (with Carol Tyrer, Circa~).

2011 Management Summary, Dominion Virginia Power, Brunswick Site, Brunswick County, Virginia (with Carol Tyrer, Circa~).

2011 Management Summary, Virginia Dominion Power Chesterfield Site, Chesterfield County, Virginia (with Carol Tyrer, Circa~).

2011 Management Summary, Dominion Virginia Power Remington Site, Fauquier County, Virginia (with Carol Tyrer, Circa~).

2011 Management Summary, 3190 Riverside Drive, Henry County, Virginia (with Carol Tyrer, Circa~).

2011 Partial Phase III Archaeological Data Recovery of Site 44CF0684 at Magnolia Green, Chesterfield County, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

2011 Phase I Cultural Resources Survey of Brasfield Commons Tract, City of Petersburg, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

2011 Phase I Cultural Resources Survey of Courthouse at Marketplace Property, Chesterfield County, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

2011 Phase I Cultural Resources Survey of Foxfield Tract, Chesterfield County, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

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2011 Phase I Cultural Resources Survey of George Mason University Life Sciences Building Parking Lot, Prince William County, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

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2011 Phase I Cultural Resources Survey of the Marine Animal Care Facility Tract, City of Virginia Beach, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

2011 Phase I Cultural Resources Survey of Nansemond River Estates Property, City of Suffolk, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

2011 Phase I Cultural Resources Survey of Sports Quest Tract Phase I, Chesterfield County, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

2011 Phase I Cultural Resources Survey of West Creek Medical Center Shared Entrance Road Right-of-Way and Utility Right-of-Ways, Goochland County, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

2011 Treatment Plan for Site 44GO0370 West Creek Emergency Center Tract, Goochland County, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

2011 Phase II Archaeological Evaluations and Boundary Determination of Site 44GO0370 at West Creek Emergency Center Tract, Goochland County, Virginia (with Carol Tyrer, Circa~).

2011 Phase I Cultural Resources Survey of Varina Stream Mitigation Bank, Henrico County, Virginia (with Carol Tyrer, Circa~).

2011 Addendum to Current Conditions Assessment, Dinwiddie Commerce Park, Dinwiddie County, Virginia (with Carol Tyrer, Circa~).

2011 Proposed Data Recovery Plan for Site 44CF0594 at the DeSear Farmstead Site, Chesterfield County, Virginia (with Carol Tyrer, Circa~).

2011 Phase I Cultural Resources Survey of Dominion Virginia Power Brunswick Site, Brunswick County, Virginia (with Carol Tyrer, Circa~).

2011 Current Conditions Assessment of the Stafford County Elementary School Property, Stafford County, Virginia (with Carol Tyrer, Circa~).

2011 Phase I Cultural Resources Survey of Washington Ridge, York County, Virginia (with Carol Tyrer, Circa~).

2011 Phase I Architectural Survey of Mainline Norfolk-Southern Railroad Project Area, City of Petersburg, Virginia (with Carol Tyrer, Circa~).

2011 Phase I Architectural Survey of Mainline Norfolk and Western Railroad Project Area, City of Chesapeake, Virginia (with Carol Tyrer, Circa~).

2011 Management Summary Dominion Virginia Power Chesterfield Site, Chesterfield County, Virginia (with Carol Tyrer, Circa~).

2011 Management Summary Dominion Virginia Power Remington Site, Fauquier County, Virginia (with Carol Tyrer, Circa~).

2011 Management Summary Dominion Virginia Power Brunswick Site, Brunswick County, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

2012 Addendum to Phase I Archaeological Survey of the Proposed Meadowville Parkway, Chesterfield County, Virginia (with Carol Tyrer, Circa~).

2012 Addendum to Phase I Cultural Resources Survey of Pole Green Road and Walnut Grove Road Intersection Improvements, Hanover County, Virginia (with Carol Tyrer Circa~).

2012 Current Conditions Assessment of Brambleton-Hallinan Property, Loudoun County, Virginia (with Carol Tyrer, Circa~).

2012 Current Conditions Assessment of Brambleton-Layng Property, Loudoun County, Virginia (with Carol Tyrer, Circa~).

2012 Current Conditions Assessment of Dual Rail Tract, Dinwiddie County, Virginia (with Carol Tyrer, Circa~).

2012 Current Conditions Assessment of Peebles tract, Sussex County, Virginia (with Carol Tyrer, Circa~).

2012 Current Conditions Assessment Philip Morris Site, City of Richmond, Virginia (with Carol Tyrer, Circa~).

2012 Current Conditions Assessment Virginia State University Gateway II Residence Hall Student Housing Project, City of Petersburg, Virginia (with Carol Tyrer, Circa~).

2012 Management Summary, Brunswick County IDA Site, Brunswick County, Virginia (with Carol Tyrer, Circa~).

2012 Management Summary, Dominion Virginia Power Chesterfield Tract Utility Corridor, Chesterfield County, Virginia (with Carol Tyrer, Circa~).

2012 Management Summary, For Site 44GO0370 West Creek Emergency Center Tract, Goochland County, Virginia (with Carol Tyrer, Circa~).

2012 Management Summary, The Midlothian Mines Within the Midlothian District of the Richmond Coal Basin, Chesterfield County, Virginia (with Carol Tyrer, Circa~).

2012 Management Summary, Roanoke Cement Company, Botetourt County, Virginia (with Carol Tyrer, Circa~).

2012 Management Summary, Village of Holland Water Supply, City of Suffolk, Virginia (with Carol Tyrer, Circa~).

2012 Orchard Bridge Commercial Tract Management Summary, Prince William County, Virginia (with Carol Tyrer, Circa~).

2012 Phase I Architectural Survey of Mainline Norfolk-Southern Railroad Project Area, City of Chesapeake, Virginia (with Carol Tyrer, Circa~).

2012 Phase I Cultural Resources Survey of Atlee Road Extended, Hanover County, Virginia (with Carol Tyrer, Circa~).

2012 Phase I Cultural Resources Survey of Brambleton, Cornelius I Property, Loudoun County, Virginia (with Carol Tyrer, Circa~).

2012 Phase I Cultural Resources Survey of Brambleton, Cornelius II Property, Loudoun County, Virginia (with Carol Tyrer, Circa~).

2012 Phase I Cultural Resources Survey of Brambleton, Guth Property, Loudoun County, Virginia (with Carol Tyrer, Circa~).

2012 Phase I Cultural Resources Survey of Brambleton, Mack Smith Property, Loudoun County, Virginia (with Carol Tyrer, Circa~).

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2012 Phase I Cultural Resources Survey of Capital One Meadowville Data Center Property, Chesterfield County, Virginia (with Carol Tyrer, Circa~).

2012 Phase I Cultural Resources Survey of the Compton-Berry Tract, Fairfax County, Virginia (with Carol Tyrer, Circa~).

2012 Phase I Cultural Resources Survey of Deer Run Golf Course, City of Newport News, Virginia (with Carol Tyrer, Circa~).

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2012 Phase I Cultural Resources Survey of Orchard Bridge Tract, Prince William County, Virginia (with Carol Tyrer, Circa~).

2012 Phase I Cultural Resources Survey of Roanoke Cement Company Quarry Expansion and Stream Compensation Sites, Botetourt County, Virginia (with Carol Tyrer, Circa~).

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2012 Phase I Cultural Resources Survey of Swift Island Property, Buckingham County, Virginia (with Carol Tyrer, Circa~).

2012 Phase I Cultural Resources Survey of the Upper Susquehanna River Mitigation Bank, Potter County, Pennsylvania (with Carol Tyrer, Circa~).

2012 Phase I Cultural Resources Survey of Willis Farm Tract, City of Suffolk, Virginia (with Carol Tyrer, Circa~).

2012 Phase II Archaeological Excavations at Sites 44CF0592 and 44CF0593, Chesterfield County, Virginia (with Carol Tyrer, Circa~).

2012 Phase III Archaeological Excavations at Site 44JC1018, the Liguria Tract, James City County, Virginia (with Carol Tyrer and Amy Humphries, Circa~).

2013 Addendum to Phase I Archaeological Survey of the Proposed Meadowville Parkway Wetland Bridge Crossing, Chesterfield County, Virginia (with Carol Tyrer, Circa~).

2013 Addendum to Phase I Cultural Resources Survey of the Capital Bike Trail Realignments Curles Neck Road, Shirley Carter Property, and Shirley Plantation Entrance Realignments, Charles City and Henrico Counties Virginia (with Carol Tyrer, Circa~).

2013 Addendum to Phase I Cultural Resources Survey of the Varina Phase of the Virginia Capital Bike Trail, Henrico and Charles City Counties Virginia, A Cultural Resources Survey of the Northern Alignment of the Varina Phase of the Virginia Capital Bike Trail, Henrico and Charles City Counties, Virginia, and A Cultural Resources Survey of the New Market Heights Phase of the Virginia Capital Bike Trail, Henrico and Charles City Counties, Virginia (with Carol Tyrer, Circa~).

2013 Archaeological Excavations at the Moore Family Cemetery, Site 134-0057, City of Virginia Beach, Virginia (with Carol Tyrer, Circa~)

2013 Archaeological Excavations at the Stonebridge Site Cemetery, Site 44CF0769/020-5574, Chesterfield County, Virginia (with Carol Tyrer, Circa~)

2013 A Supplemental Cultural Resources Survey of the New Market Heights Phase of the Virginia Capital Trail, Henrico and Charles City Counties, Virginia (with Carol Tyrer, Circa~).

2013 A Supplemental Cultural Resources Survey of the Varina Phase of the Virginia Capital Trail, Henrico and Charles City Counties, Virginia (with Carol Tyrer, Circa~).

2013 Current Conditions Assessment, House 1414 Ohio Street, City of Chesapeake, Virginia (with Carol Tyrer, Circa~).

2013 Longpoint Tract Management Summary, Prince William County, Virginia (with Carol Tyrer, Circa~).

2013 Management Summary, 330 Charles Street, City of Newport News, Virginia (with Carol Tyrer, Circa~).

2013 Management Summary, 4153 Dam Neck Road, City of Virginia Beach, Virginia (with Carol Tyrer, Circa~).

2013 Management Summary, Busch Property Tract, York County, Virginia (with Carol Tyrer, Circa~).

2013 Management Summary, Conneauttee Creek Mitigation Bank, Crawford County, Pennsylvania (with Carol Tyrer, Circa~).

2013 Management Summary, Cross Creek Mitigation Bank, Washington County, Pennsylvania (with Carol Tyrer, Circa~).

2013 Management Summary, Cussawego Creek Mitigation Bank, Crawford County, Pennsylvania (with Carol Tyrer, Circa~).

2013 Management Summary, Rappahannock Cliff, Essex County, Virginia (with Carol Tyrer, Circa~).

2013 Management Summary, Laurel Hill Creek Mitigation Bank, Somerset County, Pennsylvania (with Carol Tyrer, Circa~).

2013 Management Summary, North Branch Pigeon Creek Mitigation Bank, Washington County, Pennsylvania (with Carol Tyrer, Circa~).

2013 Management Summary, Oakenwold Tract, Stafford County, Virginia (with Carol Tyrer, Circa~).

2013 Management Summary, Pigeon Creek Mitigation Bank, Washington County, Pennsylvania (with Carol Tyrer, Circa~).

2013 Management Summary, Pike Run Mitigation Bank, Washington County, Pennsylvania (with Carol Tyrer, Circa~).

2013 Management Summary, PRM Project, Marshall County, West Virginia (with Carol Tyrer, Circa~).

2013 Management Summary, Specht Mitigation Site, Potter and Tioga Counties, Pennsylvania (with Carol Tyrer, Circa~).

2013 Management Summary, Simpson Road Property, Dinwiddie County, Virginia (with Carol Tyrer, Circa~).

2013 Management Summary, Tenmile Creek Mitigation Bank, Washington County, Pennsylvania (with Carol Tyrer, Circa~).

2013 Management Summary, Virginia Natural Gas Pipeline Corridor, Hanover County to City of Newport News, Virginia (with Carol Tyrer, Circa~).

2013 Management Summary, White Marsh Property, Surry County, Virginia (with Carol Tyrer, Circa~).

2013 Management Summary, Wilson Property, James City County, Virginia (with Carol Tyrer, Circa~).

2013 Phase I Architectural Survey of CSXT Bridge over Appomattox River, City of Hopewell, Virginia (with Carol Tyrer, Circa~).

2013 Phase I Cultural Resources Survey of 5636 Guinea Road, Fairfax County, Virginia (with Carol Tyrer, Circa~).

2013 Phase I Cultural Resources Survey of 7250 Idylwood Road, Fairfax County, Virginia (with Carol Tyrer, Circa~).

2013 Phase I Cultural Resources Survey of the Appomattox River Greenway Trail, City of Colonial Heights, Virginia (with Carol Tyrer, Circa~)

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2013 Phase I Cultural Resources Survey of Colonial Heritage Deer Lake Tract, James City County, Virginia (with Carol Tyrer, Circa~).

2013 Phase I Cultural Resources Survey of Conneauttee Creek Mitigation Bank, Crawford County, Pennsylvania (with Carol Tyrer, Circa~).

2013 Phase I Cultural Resources Survey of Lee Hall Dam Improvement Project, City of Newport News, Virginia (with Carol Tyrer, Circa~).

2013 Phase I Cultural Resources Survey of Longpoint Tract, Prince William County, Virginia (with Carol Tyrer, Circa~).

2013 Phase I Cultural Resources Survey of the North Branch Pigeon Creek Mitigation Bank, Washington County, Pennsylvania (with Carol Tyrer, Circa~).

2013 Phase I Cultural Resources Survey of Oakenwold Tract, Stafford County, Virginia (with Carol Tyrer, Circa~).

2013 Phase I Cultural Resources Survey of Seely Creek Mitigation Bank, Bradford County, Pennsylvania (with Carol Tyrer, Circa~).

2013 Phase II Archaeological Excavations of Site 44JC1319 at Colonial Heritage Deer Lake Tract, James City County, Virginia (with Carol Tyrer, Circa~).

2013 Phase III Archaeological Evaluations at Site 44CF0594 and Phase II Evaluation of Site 44CF0595, The DeSear Farmstead Site, Chesterfield County, Virginia (with Carol Tyrer, Circa~).

2013 Phase III Archaeological Evaluations at Site 44GO0370, West Creek Emergency Center Tract, Goochland County, Virginia (with Carol Tyrer, Circa~).

2013 Proposed Data Recovery Plan for Site 44LD0679 at the Brambleton Tract, Loudoun County, Virginia (with Carol Tyrer, Circa~).

2013 Proposed Data Recovery Plan for Site 44LD0680 at the Brambleton Tract, Loudoun County, Virginia (with Carol Tyrer, Circa~).

2014 Addendum to a Cultural Resources Survey of the Varina Park Phase of the Virginia Capital Bike Trail, Henrico County, Virginia (with Carol Tyrer, Circa~).

2014 Addendum to Cayden Ridge Phase I Archaeological Investigations, Prince William County, Virginia (with Carol Tyrer, Circa~).

2014 Addendum to Phase I Cultural Resources Survey of Brambleton Cornelius I Property, Loudoun County, Virginia (with Carol Tyrer, Circa~)

2014 Addendum to Phase I Cultural Resources Survey of the Kingsland Green Subdivision, Henrico County, Virginia (with Carol Tyrer, Circa~)

2014 Additional Site and Survey Information, Conneauttee Creek Mitigation Bank, Crawford County, Pennsylvania (with Carol Tyrer, Circa~)

2014 Archaeological Excavations of Site 44HE0673, Redskins Training Facility, City of Richmond, Virginia (with Carol Tyrer, Circa~).

2014 Archaeological Investigations at Point of Rocks Park, Chesterfield County, Virginia (with Carol Tyrer, Circa~)

2014 Current Conditions Assessment, Building 17 the Canteen, Hampton Veterans Affairs Medical Center, City of Hampton, Virginia (with Carol Tyrer, Circa~)

2014 Current Conditions Assessment, Project Twister – Keck Site, Chesterfield County, Virginia (with Carol Tyrer, Circa~).

2014 Current Condition Assessment Sussex Megasite, Sussex County, Virginia (with Carol Tyrer, Circa~)

2014 Data Recovery Plan for Site 44CF0701 at Magnolia Green, Chesterfield County, Virginia (with Carol Tyrer, Circa~)

2014 Management Summary, Hartle Tract, Prince William County, Virginia (with Carol Tyrer, Circa~).

2014 Management Summary, Hazelwood Tract, James City County, Virginia (with Carol Tyrer, Circa~).

2014 Management Summary Holloway Tract, Henrico County, Virginia (with Carol Tyrer, Circa~)

2014 Management Summary, Kirby Tract Within the Greenmount Industrial Park, James City County, Virginia (with Carol Tyrer, Circa~).

2014 Management Summary, New Holland Water Transmission Main City of Suffolk, Virginia (with Carol Tyrer, Circa~).

2014 Management Summary, Pleasure House Point Property, City of Virginia Beach, Virginia (with Carol Tyrer, Circa~).

2014 Management Summary, Project Cavalier Chesterfield County, Virginia (with Carol Tyrer, Circa~)

2014 Mitigation Summary, South Norfolk Historic District, City of Chesapeake, Virginia (with Carol Tyrer, Circa~).

2014 Partial Phase III Archaeological Evaluation at Site 44JC0845, Moss Creek Development, James City County, Virginia (with Carol Tyrer, Circa~)

2014 Phase I Archaeological Survey of Site 44YO0337, Battlefield Bluffs Property, York County, Virginia (with Carol Tyrer, Circa~).

2014 Phase I Architectural Survey of City Garage, City of Petersburg, Virginia (with Carol Tyrer, Circa~)

2014 Phase I Cultural Resources Survey of Baptist Run Mitigation Site, York County, Virginia (with Carol Tyrer, Circa~).

2014 Phase I Cultural Resources Survey of Busch Property, York County, Virginia (with Carol Tyrer, Circa~)

2014 Phase I Cultural Resources Survey of Cross Creek Mitigation Site, Washington County, Pennsylvania , Virginia (with Carol Tyrer, Circa~)

2014 Phase I Cultural Resources Survey of Elbow Road Property, City of Chesapeake, Virginia (with Carol Tyrer, Circa~).

2014 Phase I Cultural Resources Survey of Fisher Cove, City of Chesapeake, Virginia (with Carol Tyrer, Circa~).

2014 Phase I Cultural Resources Survey of Furnace Estates Subdivision, Stafford County, Virginia (with Carol Tyrer, Circa~)

2014 Phase I Cultural Resources Survey of Kingsland Green Subdivision, Henrico County, Virginia (with Carol Tyrer, Circa~).

2014 A Supplemental Cultural Resources Survey of the Varina Phase of the Virginia Capital Trail, Henrico and Charles City Counties, Virginia (with Carol Tyrer, Circa~).

2014 Phase I Cultural Resources Survey of New River Valley Commerce Park, Pulaski County, Virginia (with Carol Tyrer, Circa~)

2014 Phase I Cultural Resources Survey of Patrick Henry Drive Connector, City of Newport News, Virginia (with Carol Tyrer, Circa~)

2014 Phase I Cultural Resources Survey of Pleasure House Point Property City of Virginia Beach, Virginia (with Carol Tyrer, Circa~).

2014 Phase I Cultural Resources Survey of Princess Anne Road, City of Virginia Beach, Virginia (with Carol Tyrer, Circa~)

2014 Phase I Cultural Resources Survey of Project Twister – Keck Site, Chesterfield Virginia (with Carol Tyrer, Circa~)

2014 Phase I Cultural Resources Survey of Speakes Subdivision, Prince William County, Virginia (with Carol Tyrer, Circa~)

2014 Phase I Cultural Resources Survey of the Compton Road Tract, Prince William County, Virginia (with Carol Tyrer, Circa~)

2014 A Supplemental Cultural Resources Survey of the Varina Phase of the Virginia Capital Trail, Henrico and Charles City Counties, Virginia (with Carol Tyrer, Circa~).

2014 Phase III Archaeological Excavations at Site 44PW1832, Prince William County, Virginia (with Carol Tyrer, Circa~)

2014 Standing Structures Architectural Summary, Battlefield Bluffs Tract, York County, Virginia (with Carol Tyrer, Circa~)

2014 Supplemental Archaeological Testing of Proposed Drainage Pipe Installation Within Site 44HE1163, Varina Park Phase, Virginia Capital Trail, Henrico County, Virginia (with Carol Tyrer, Circa~).

2014 Virginia Natural Gas Zinc-Ribbon Installation Project Management Summary, Cities of Newport News, Hampton, Portsmouth, and Norfolk, Virginia (with Carol Tyrer, Circa~).

2015 Archaeological Excavations at the Mosley Cemetery Site 44MC0920/058-5128, Mecklenburg County, Virginia (with Carol Tyrer, Circa~)

2015 Current Conditions Assessment, Dominion Virginia Power Remington Site, Fauquier County, Virginia (with Carol Tyrer, Circa~)

2015 Current Conditions Assessment, Granville Estates, Stafford County, Virginia (with Carol Tyrer, Circa~)

2015 Current Conditions Assessment, Meadowville Technology Park Project Niagra, Chesterfield County, Virginia (with Carol Tyrer, Circa~)

2015 Management Summary Back Bay National Wildlife Refuge Visitors Center and Horn Point Shoreline Restoration Areas, City of Virginia Beach, Virginia (with Carol D. Tyrer, Circa~)

2015 Management Summary Brewster Lake Potential Mitigation Site, Susquehanna County, Pennsylvania (with Carol Tyrer, Circa~)

2015 Management Summary, Campbell-Briar Creek Mitigation Site, Columbia County, Pennsylvania (with Carol Tyrer, Circa~)

2015 Management Summary Chesapeake Holdings Property, Stafford County, Virginia (with Carol D. Tyrer, Circa~)

2015 Management Summary, Chippewa and Saddle Easement, Bradford County, Pennsylvania (with Carol Tyrer, Circa~)

2015 Management Summary, Dinwiddie Airport, Dinwiddie County, Virginia (with Carol Tyrer, Circa~)

2015 Management Summary, Henry County School Site, Henry County, Virginia (with Carol D. Tyrer, Circa~)

2015 Management Summary, Hibred Easement, Lancaster County Pennsylvania (with Carol Tyrer, Circa~)

2015 Management Summary, Monterey Cemetery, Highland County, Virginia (with Carol Tyrer, circa~)

2015 Management Summary Norwood Site, Greensville County, Virginia (with Carol D. Tyrer, Circa~

2015 Management Summary Robinson Fork 2 Mitigation Site, Washington County, Pennsylvania (with Carol D. Tyrer, Circa~)

2015 Phase I Archaeological Survey of LeGordon Drive Sidewalk Improvements, Chesterfield County, Virginia (with Carol Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of Courthouse Manor Property, Stafford County, Virginia (with Carol Tyrer, Circa~)

2015 Phase I Architectural Survey of Mason Street Parking Deck, City of Harrisonburg, Virginia (with Carol Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of the 33-Acre EAH Tract, York County, Virginia (with Carol Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of the 52-Acre Bush Hill Property, Loudoun County, Virginia (with Carol Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of 55 Acres at Meadowville, Project Niagra Site, Chesterfield County, Virginia (with Carol Tyrer, Circa~)

2015 Phase I Cultural Resources Survey Back Bay National Wildlife Refuge Alternative Transportation Study, Sigma Corridor, City of Virginia Beach, Virginia (with Carol Tyrer, Circa)

2015 *Phase I Cultural Resources Survey of Beaverdam Creek Dam Rehabilitation Project, Loudoun County, Virginia* (with Carol Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of Buck Run Restoration Site Project, Washington County, Pennsylvania (with Carol D. Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of Fieldstone Property, City of Chesapeake, Virginia (with Carol Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of Jessup Road, Chesterfield County, Virginia (with Carol Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of Line VM-114, VM-115, and VM-116 Columbia Gas Pipeline, Chesterfield County, Virginia (with Carol D. Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of Line VM-129 Pipe Relocation, Southampton County, Virginia (with Carol Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of Line VM-131 Pipe Replacement, City of Chesapeake, Virginia (with Carol Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of Matoaca and Hickory Road Intersection Improvement Project, Chesterfield County, Virginia (with Carol Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of the Promenade at John Tyler Property, James City County, Virginia (with Carol Tyrer, Circa~)

2015 Phase I Cultural Resource Survey of Riverview at the Preserve, City of Chesapeake, Virginia (with Carol D. Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of Robinson Fork Mitigation Site, Washington County, Pennsylvania (with Carol D. Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of Sandbridge Road Phase VIIA Improvements, City of Virginia Beach, Virginia (with Carol Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of the Sliding Hill Road Widening Project, Hanover County, Virginia (with Carol Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of the Smith Island Martin National Wildlife Refuge Hurricane Sandy Resiliency Project #31, Fog Point Living Shoreline Restoration, Somerset County, Maryland (with Carol Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of Starrucca Creek Mitigation Site Protect, Susquehanna and Wayne Counties, Pennsylvania (with Carol Tyrer, Circa~)

2015 *Phase I Cultural Resources Survey of Tucker's Cove Tract, Currituck County, North Carolina* (with Carol D. Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of Virginia Dominion Power Remington Site, Fauquier County, Virginia (with Carol D. Tyrer, Circa~)

2015 Phase I Cultural Resources Survey of Virginia Truck Tract, Chesterfield County, Virginia (with Carol Tyrer, Circa~)

2015 Phase II Architectural Survey of Buildings 6, 107, and 124, Hampton Veterans Affairs Medical Center, City of Hampton, Virginia (with Carol Tyrer, Circa~)

2015 Phase II Architectural Survey of 5636 Guinea Road, Fairfax County, Virginia (with Carol D. Tyrer, Circa~)

2015 Phase II Architectural Survey of the Sandbridge Texaco Station, City of Virginia Beach, Virginia (with Carol Tyrer, Circa~)

2015 Phase II Evaluation of Site 44ST1205 at Courthouse Manor Property, Stafford County, Virginia (with Carol D. Tyrer, Circa~)

2015 Phase II Survey, the Midlothian Mines Within the Midlothian District of the Richmond Coal Basin, Chesterfield County, Virginia (with Carol Tyrer, Circa~)

2015 Phase III Archaeological Excavations at the Turner Tract Cemetery, Site 44SN0286, Southampton County, Virginia (with Carol Tyrer, Circa~)

2015 Supplemental Cultural Resources Survey, Access Road Alignment of the Varina Park Phase, Virginia Capital Trail (with Carol Tyrer, Circa~)

2015 Treatment Plan for Mosley Cemetery Site 44NC0920/058-5128, Mecklenburg County, Virginia (with Carol Tyrer, Circa~)

2016 *Addendum to Phase I Archaeological Survey of Approximately 113 Acres of the Former Hood Property, Henrico County, Virginia* (with Carol Tyrer, Circa~)

2016 *Addendum to Phase I Cultural Resources Survey of Buck Run Restoration Site Project, Washington County, Pennsylvania* (with Carol D. Tyrer, Circa~)

2016 *Addendum to Phase I Cultural Resources Survey of Virginia Dominion Power Remington Site, Fauquier County, Virginia* (with Carol Tyrer, Circa~)

2016 *Addendum to Phase I Cultural Resources Survey of Oakenwold Tract, Stafford County, Virginia* (with Carol Tyrer, Circa~)

2016 *Addendum to Phase I Cultural Resources Survey of Virginia Dominion Power Remington Site, Fauquier County, Virginia* (with Carol Tyrer, Circa~)

2016 *Management Summary, Ashwood Property, Prince William County, Virginia* (with Carol Tyrer, Circa~)

2016 *Management Summary, Belcher Tract, Louisa County, Virginia* (with Carol Tyrer, Circa~)

2016 *Management Summary, Briel Property, Henrico County, Virginia* (with Carol Tyrer, Circa~)

2016 *Management Summary, Dinwiddie Solar Farm, Dinwiddie County, Virginia* (with Carol Tyrer, Circa~)

2016 *Management Summary Firestone Property, Buckingham County, Virginia* (with Carol Tyrer, Circa~)

2016 *Management Summary, Franklin Property, Southampton County, Virginia* (with Carol Tyrer, Circa~)

2016 *Management Summary Gilman and Walker Properties, New Kent County, Virginia* (with Carol Tyrer, Circa~)

2016 *Management Summary, Graystone Property, Frederick County, Virginia* (with Carol Tyrer, Circa~)

2016 *Management Summary, Lancaster Solar Farms, Lancaster County, Virginia* (with Carol Tyrer, Circa~)

2016 *Management Summary, Harrowgate Road Sidewalk Construction Project, Chesterfield County, Virginia* (with Carol Tyrer, Circa~)

2016 *Management Summary Route 460 Utility Corridor, City of Suffolk, Virginia* (with Carol Tyrer, Circa~)

2016 *Management Summary, Sempeles Tract, Frederick County, Virginia* (with Carol Tyrer, Circa~)

2016 *Management Summary, Swatara Creek, Schuylkill County, Pennsylvania* (with Carol Tyrer, Circa~)

2016 *Management Summary, Twain Property, Surry County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Archaeological Survey of the Bamboo Removal Site at Colonial National Historical Park, York County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Archaeological Survey of Eyre Hall Property, Northampton County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Archaeological Survey of Gilman and Walker Property, New Kent County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Archaeological Survey of Meadow Lawn Farm, Rockbridge County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Archaeological Survey of Sappony Property, Sussex County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Archaeological Survey of Shore Drive Property, City of Virginia Beach, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Architectural Survey of the Firestone Property, Buckingham County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Architectural Survey of Gilman and Walker Property, New Kent County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Architectural Survey of Providence Subdivision – Section 4, Hanover County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Architectural Survey of the Sappony Property, Sussex County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Architectural Survey of 389 Mountain View Road, Stafford County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of the Bethlehem Road Property, Prince William County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of the Bryans Cove Property, City of Chesapeake, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of the Calumet Property, Frederick County, Maryland* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of Eastview Farm Bank Site, Buckingham County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of Granville Property, Stafford County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of the Independence Boulevard Project, York County and the City of Newport News, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of the Lackawaxen Creek Restoration Project, Wayne County, Pennsylvania* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of the Legacy of Poquoson Tract, City of Poquoson, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of Michael Drive Roadway Extension, City of Chesapeake, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of the Mid County Park and Estate Homes Property, Prince William County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of Minecraft Property, Dinwiddie County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of Mussetter Road, Frederick County, Maryland* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of the Norwood Property, City of Emporia, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of the Rhodes Point Erosion Control Project, Somerset County, Maryland* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of Robious Road Sanitary Sewer Relocation, Chesterfield County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of Scott II Property, Powhatan County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of South Creek Restoration Site, Bradford County, Pennsylvania* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of Swatara Creek Restoration Site, Schuylkill County, Pennsylvania* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of the Tritach Tract, Spotsylvania County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of Two Road Crossings, Moore Point Property, City of Suffolk, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of the Wet Wood Property, New Kent County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of the Williamsburg Indoor Sports Complex Indoor Pool Facility, James City County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase I Cultural Resources Survey of 23108 Evergreen Mills Road Property, Loudoun County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase II Archaeological Excavations of Site 44PW1941 at Cayden Ridge, Prince William County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase II Archaeological Excavations of Sites 44HE1041, 44HE1042, and 44HE1043 at the Former Hood Property, Henrico County, Virginia* (with Carol Tyrer, Circa~)

2016 *Phase II Archaeological Excavations of Site 44NK0292 at the Walker Tract, New Kent County, Virginia* (with Carol Tyrer, Circa~)

2016 *Proposed Data Recovery Plan of Site 44PW1941 at Cayden Ridge, Prince William County, Virginia* (with Carol Tyrer, Circa~)

2017 *Addendum to Phase I Cultural Resources Survey of Buck Run Restoration Site II, Washington County, Pennsylvania* (with Carol D. Tyrer, Circa~)

2017 *Addendum to Phase I Cultural Resources Survey of Pleasure House Point, City of Virginia Beach, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Addendum to Phase I Cultural Resources Survey of Robinson Fork Mitigation Site, Washington County, Pennsylvania* (with Carol D. Tyrer, Circa~)

2017 *Addendum to Phase I Cultural Resources Survey of South Creek Restoration Site, Bradford County, Pennsylvania* (with Carol D. Tyrer, Circa~)

2017 *Ashland Trolley Management Summary, Hanover County, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Management Summary, 1090 German School Road, City of Richmond, Virginia* (with Carol Tyrer, Circa~)

2017 *Management Summary, Brandy Station Property, Culpeper County, Virginia* (with Carol Tyrer, Circa~)

2017 *Management Summary Chesapeake Solar Farm, City of Chesapeake, Virginia* (with Carol Tyrer, Circa~)

2017 *Management Summary, Chickahominy Power Site, Charles City County, Virginia* (with Carol Tyrer, Circa~)

2017 *Management Summary, Crystal Hill Property, Halifax County, Virginia* (with Carol Tyrer, Circa~)

2017 *Management Summary, Deb Allen Property, Halifax County, Virginia* (with Carol Tyrer, Circa~)

2017 *Management Summary, Gardy Mill Property, Westmoreland County, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Management Summary, Greenwood Solar Farm, Culpeper County, Virginia* (with Carol Tyrer, Circa~)

2017 *Management Summary, Hickory Solar Farm, City of Chesapeake, Virginia* (with Carol Tyrer, Circa~)

2017 *Management Summary, Maplewood Solar Farm, Pittsylvania County, Virginia* (with Carol Tyrer, Circa~)

2017 *Management Summary, Newtown Road Hampton Roads Sanitation Department Utility Right-of-Way, City of Virginia Beach, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Management Summary, Newtown Road West Hampton Roads Sanitation Department Utility Right-of-Way, City of Virginia Beach, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Management Summary, Occoquan Project, Prince William County, Virginia* (with Carol Tyrer, Circa~)

2017 *Management Summary Pottery Tract West and East, James City County and York County, Virginia* (with Carol Tyrer, Circa~)

2017 *Management Summary, Reservoir Tract, Louisa County, Virginia* (with Carol Tyrer, Circa~)

2017 *Management Summary, Spring Grove Tract, Surry County, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Management Summary, Stevensburg Property, Culpeper, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Management Summary, Sycamore Solar Farm, Pittsylvania County, Virginia* (with Carol Tyrer, Circa~)

2017 *Management Summary Turner Solar Farm, Henrico County, Virginia* (with Carol Tyrer, Circa~)

2017 *Management Summary and Archaeological Probability Analysis, Carson Solar Property, Appomattox County, Virginia* (with Carol Tyrer, Circa~)

2017 *Management Summary and Archaeological Probability Analysis, Colonial Trail West Property, Surry County, Virginia* (with Carol Tyrer, Circa~)

2017 *Management Summary and Archaeological Probability Analysis, Dragon Fly Property, Campbell County, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Management Summary and Archaeological Probability Analysis, Mount Jackson Property, Shenandoah County, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Management Summary and Archaeological Probability Analysis, Pamplin Solar Property, Appomattox County, Virginia* (with Carol Tyrer, Circa~)

2017 *Management Summary and Archaeological Probability Analysis, S B Solar Site, Halifax County, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Phase I Archaeological Survey of the Buckingham Solar Site, Buckingham County, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Archaeological Survey of Church View Property, Middlesex County, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Archaeological Survey of Colonial Trail West Solar Farm Site, Surry County, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Archaeological Survey of Gardy's Mill Property, Westmoreland County, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Archaeological Survey of Hollyfield North Tract, King William County, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Phase I Archaeological Survey of the Franklin County Property, Franklin County, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Phase I Archaeological Survey of the Mechanicsville Solar Farm Tract, Hanover County, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Phase I Archaeological Survey of the Mount Jackson Solar Site, Shenandoah County, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Architectural Survey of the Buckingham Solar Site, Buckingham William County, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Architectural Survey of Church View Property, Middlesex County, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Architectural Survey of Colonial Trail West Solar Farm Site, Surry County, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Architectural Survey of Hollyfield North Tract, King William County, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Phase I Architectural Survey of the Belcher Tract, Louisa County, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Phase I Architectural Survey of the Franklin County Property, Franklin County, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Phase I Architectural Survey of Gardy's Mill Property, Westmoreland County, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Architectural Survey of the Mechanicsville Solar Farm Tract, Hanover County, Virginia (*with Carol D. Tyrer, Circa~)

2017 *Phase I Architectural Survey of the Mount Jackson Solar Site, Shenandoah County, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Architectural Survey of the Nokesville Solar Site, Prince William County, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Architectural Survey of Turkey Run Farm, Chesterfield County, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of American Legion Property, Gloucester County, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of Ashton Creek Pump Station New Force Main Property, Chesterfield County, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of Buck Run Restoration Site II, Washington County, Pennsylvania* (with Carol D. Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of Dorey Park Pedestrian Trail, Henrico County, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of Fiddlers Green Property, Gloucester County, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of Forest Glen Property, James City County, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of Hogan Kent and Greene Tract, Loudoun County, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of Johnson Creek Force Main Gravity Sewer and Water Line, Chesterfield County Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of Monticello Avenue Trail, City of Williamsburg, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of Nansemond River Golf Course Property, City of Suffolk, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of the Oakland Property, James City County, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of Osborne Landing, Henrico County, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of Proposed Mezzo Apartment Homes Property, City of Virginia Beach, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of Pump Station No. 5 and Royal Glen Pump Station Sewer Corridor, Hanover County, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of Randolph I Mitigation Bank, Randolph County, West Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of Sampson Creek Property, City of Chesapeake, Virginia* (with Carol Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of Scott Center Relocation, City of Newport News, Virginia* (with Carol D. Tyrer, Circa~)

2017 *Phase I Cultural Resources Survey of the Bailey Tract, Chesterfield County, Virginia* (with Carol Tyrer, Circa~)

2018 *Addendum to Phase I Archaeological Survey of the Circa 145-Acre Haymarket Crossing Property, Prince William County, Virginia* (with Carol Tyrer, Circa~)

2018 *Addendum to Phase I Archaeological Survey of Church View Property, Middlesex County, Virginia* (with Carol D. Tyrer, Circa~).

2018 *Addendum to Phase I Cultural Resources Survey of Lynchburg Expressway, City of Lynchburg, Virginia* (with Carol Tyrer, Circa~)

2018 *Assessment and Probability Analysis Foxglove Solar LLC, Frederick County, Virginia* (with Carol Tyrer, Circa~)

2018 *Leatherwood Solar Site Management Summary, Henry County, Virginia* (with Carol Tyrer, Circa~)

2018 *Petersburg Gas Works Retort Building Management Summary, City of Petersburg, Virginia* (with Carol Tyrer, Circa~)

2018 *Management Summary and Archaeological Probability Analysis, Cape Solar Site, Page County, Virginia* (with Carol D. Tyrer, Circa~)

2018 *Management Summary and Archaeological Probability Analysis, Cavalier Solar Site, Greene County, Virginia* (with Carol D. Tyrer, Circa~)

2018 *Management Summary and Archaeological Probability Analysis, Maplewood Solar Farm, Pittsylvania County, Virginia* (with Carol Tyrer, Circa~)

2018 *Management Summary and Archaeological Probability Analysis, Dewey Solar Site, Orange County, Virginia* (with Carol D. Tyrer, Circa~)

2018 *Management Summary and Archaeological Probability Analysis, Dogwood Solar Site, Page County, Virginia* (with Carol D. Tyrer, Circa~)

2018 *Management Summary and Archaeological Probability Analysis, Grasshopper Solar Site, Mecklenburg County, Virginia* (with Carol D. Tyrer, Circa~)

2018 *Management Summary, Bunting Road, York County, Virginia* (with Carol Tyrer, Circa~)

2018 *Management Summary, Camden Plantation, Camden County, North Carolina* (with Carol Tyrer, Circa~)

2018 *Management Summary, Culpeper Property, Culpeper County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Archaeological Survey of Cherrywood Solar Farm, Caroline County, Maryland* (with Carol Tyrer, Circa~)

2018 *Phase I Archaeological Survey of the Chesapeake Solar Project Site, City of Chesapeake, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Archaeological Survey of East West Roadway, Chesterfield County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Archaeological Survey of Greenwood Solar Farm, Culpeper County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Archaeological Survey of Pamplin Solar Sire, Appomattox County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Archaeological Survey of Rives Road, Prince George County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Archaeological Survey of Spring Grove Solar Site, Surry County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Architectural Survey of the Chesapeake Solar Project Site, City of Chesapeake, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Architectural Survey of Crystal Hill Solar Site, Halifax County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Architectural Survey of East West Roadway, Chesterfield County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Architectural Survey of Greenwood Solar Farm, Culpeper County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Architectural Survey of Pamplin Solar Site, Appomattox County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Architectural Survey of Rives Road, Prince George County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Architectural Survey of Route 17 – Shoulders Hill Road, City of Suffolk, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Architectural Survey of the Grasshopper Solar Site, Mecklenburg County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Architectural Survey of Turner Solar LLC, Henrico County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Architectural Survey of Walnut Solar Site, King and Queen County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Cultural Resources Survey of the 2.50-Acre Wellingford Industrial Park Lot 6A, Prince William County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Cultural Resources Survey of the Accokeek Creek Sewer Alignment, Stafford County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Cultural Resources Survey of the Columbia Gas Transmission LLCs VM System, Drip Removal Project, Greene County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Cultural Resources Survey, False Cape, City of Virginia Beach, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Cultural Resources Survey of the Gala Pipeline, Alleghany County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Cultural Resources Survey of the Hai Tran Poultry Farm Property, Accomack County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Cultural Resources Survey of the Haymarket Bypass, Prince William County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Cultural Resources Survey of the Lower Smith River Sewer Conveyance, Henry County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Cultural Resources Survey of the Michael Drive Tract, City of Chesapeake, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Cultural Resources Survey of the Ohio Creek Alternatives, City of Norfolk, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Cultural Resources Survey of Paradise Creek Bridge Project, City of Portsmouth, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Cultural Resources Survey, Seven Pines Mitigation Bank, Marion County, West Virginia* (with Carol Tyrer, Circa~)

2018 *Phase I Cultural Resources Survey of Shugart Property, Charles County, Maryland* (with Carol Tyrer, Circa~)

2018 *Phase I Cultural Resources Survey Widewater State Park Property, Stafford County, Virginia and Charles County, Maryland* (with Carol Tyrer, Circa~)

2018 *Phase I and II Cultural Resources Survey and Excavation Report for the James River Water Authority Intake, Pump Station, and Pipeline Project, Fluvanna County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase II Archaeological Evaluations of the Bailey's Tract, Chesterfield County, Virginia* (with Carol Tyrer, Circa~)

2018 *Phase II Archaeological Evaluations of Site 44PG0584, Rives Road, Solar Farm, Prince George County, Virginia* (with Carol Tyrer, Circa~)

2019 *Addendum to Phase I Cultural Resources Survey of Nansemond Bridge Alternatives, City of Suffolk, Virginia* (with Carol Tyrer, Circa~)

2019 *Assessment and Probability Analysis, Amelia Solar Site, Amelia County, Virginia* (with Carol Tyrer, Circa~)

2019 *Assessment and Probability Analysis, Banbury Cross, Loudoun County, Virginia* (with Carol Tyrer, Circa~)

2019 *Assessment and Probability Analysis, Colonial Solar Farm, Surry County, Virginia* (with Carol Tyrer, Circa~)

2019 *Assessment and Probability Analysis, Hopewell Tract, City of Hopewell, Virginia* (with Carol Tyrer, Circa~)

2019 *Assessment and Probability Analysis, Moody Creek, Charlotte and Mecklenburg Counties, Virginia* (with Carol Tyrer, Circa~)

2019 *Assessment and Probability Analysis, Monarch Solar Farm, Greensville County, Virginia* (with Carol Tyrer, Circa~)

2019 *Assessment and Probability Analysis, Sebera Winstead Solar Farm, Prince George County, Virginia* (with Carol Tyrer, Circa~)

2019 *Assessment and Probability Analysis, Westmoreland Solar Farm, Westmoreland County, Virginia* (with Carol Tyrer, Circa~)

2019 *Management Summary, Christ Community Church Multi-purpose Building, James City County, Virginia* (with Carol Tyrer, Circa~)

2019 *Management Summary, Sycamore Solar I Project, Pittsylvania County, Virginia* (with Carol Tyrer, Circa~)

2019 *Management Summary and Archaeological Probability Analysis of Spring Grove II Solar Site, Surry County, Virginia* (with Carol Tyrer, Circa~)

2019 *Partial Phase III Archaeological Excavations of Site 44PW1941 at Cayden Ridge, Prince William County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Architectural Survey of the Dragonfly Solar Site, Campbell County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Architectural Survey of Maplewood Solar I LLC, Pittsylvania County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Architectural Survey of Mount Nebo Solar Farm Site, Surry County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Architectural Survey of Spring Grove II Solar Site, Surry County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Architectural Survey of the Walnut Solar Farm Site, King and Queen County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Archaeological Survey of Harrowgate-Cougar Trail Sidewalk Improvements, Chesterfield County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Archaeological Survey of Maplewood Solar I LLC, Pittsylvania County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Archaeological Survey of Marina to Merriewood Sidewalk Improvements, Chesterfield County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Archaeological Survey of the Walnut Solar Site, King and Queen County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Archaeological Survey of Winterpock Road Widening Project, Chesterfield County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of 136 Tewning Road, City of Williamsburg, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of the ABC Warehouse Property, Hanover County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of Archers Mead Tract, Isle of Wight County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of the Bethlehem Road Project, Prince William County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of the Casalight Nokesville School Tract, Prince William County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of the Columbia Gas LLC-VNG Suffolk No. 3 Meter Station Expansion Project, City of Suffolk, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of the Highland Springs School Site, Henrico County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of the Hopkins Road Sidewalk Improvements, Chesterfield County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of the Kendall Hills Tract, Stafford County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of the Lifepointe Church Tract, James City County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of the Lorton Community Center Tract, Fairfax County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of the Mabee Swamp Trail, York County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of The Maine at Williamsburg Tract, James City County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of Misenheimer Solar Farm, Stanly County, North Carolina* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of Nansemond Road Improvements, City of Suffolk, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of the Petersburg Lockes Water Main Pipeline Corridor, City of Petersburg, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of the Piedmont Line 24 Replacement Project, Pitt County, North Carolina* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of The Potomac Landing Permit Areas, King George County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of the Richmond Road Project Area, James City County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of the Scannell Warehouse Tract, Chesterfield County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of the Toano Self Storage Tract, James City County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of Tranquility Tract, York County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase I Cultural Resources Survey of the Union Bridge Solar Farm, Carroll County, Maryland* (with Carol Tyrer, Circa~)

2019 *Phase II Archaeological Evaluation of Site 44CS0348, The Chesapeake Solar Site, City of Chesapeake, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase II Archaeological Evaluation of Site 44FV0269. James River Water Supply Pump Station and Pipeline Alignment, Fluvanna County, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase II Architectural Survey of the Wilroy House, City of Suffolk, Virginia* (with Carol Tyrer, Circa~)

2019 *Phase III Archaeological Evaluation at Site 44CF0701, Magnolia Green Property, Chesterfield County, Virginia* (with Carol Tyrer, Circa~)

2020 *Additional Landscape and Architectural Information for the Porter Mill Road Solar Project, Wicomico County, Maryland* (with Carol Tyrer, Circa~)

2020 *Management Summary, Boulware Cemetery, Caroline County, Virginia* (with Carol Tyrer and Skye Hughes, Circa~)

2020 *Management Summary, Lawnes Point on the James, Lot 16, Isle of Wight County, Virginia* (with Carol Tyrer and Skye Hughes, Circa~)

2020 *Management Summary Porter Mill Solar Property, GPR Survey, Wicomico County, Maryland* (with Carol Tyrer, Circa~)

2020 *Phase I Architectural Survey of Sebera Solar Farm, Prince George County, Virginia* (with Carol Tyrer and Skye Hughes, Circa~)

2020 *Phase I Archaeological Survey of Sebera Solar Farm, Prince George County, Virginia* (with Carol Tyrer and Skye Hughes, Circa~)

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2020 *Phase II Archaeological Evaluation of Site 44LD1345, The Glenmore Farm Site, Loudoun County, Virginia* (with Carol Tyrer and Skye Hughes, Circa~)

2020 *Phase II Archaeological Evaluation of Site 18WC200 and 18WC201, Porter Mill Road Property, Wicomico County, Maryland* (with Carol Tyrer, Circa~)

2021 *Costen Road Solar Farm DOE updates, Pocomoke City, Maryland* (with Carol Tyrer and Skye Hughes, Circa~)

2021 *Current Conditions Assessment, Kings Creek Solar Farm, York County, Virginia (*with Carol Tyrer and Skye Hughes, Circa~)

2021 *Desktop Survey Report for Pembroke Telephone Cable, Giles County, Virginia (*with Carol Tyrer and Skye Hughes, Circa~)

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2021 *Phase I Cultural Resources Survey 101 Tewning Road, James City County, Virginia (*with Carol Tyrer and Skye Hughes, Circa~)

2021 *Phase I Cultural Resources Survey 815 Walker Road, Fairfax County, Virginia (*with Carol Tyrer and Skye Hughes, Circa~)

2021 *Phase I Cultural Resources Survey of 8189 and 8193 Richmond Road, James City County, Virginia (*with Carol Tyrer and Skye Hughes, Circa~)

2021 *Phase I Cultural Resources Survey of Corelot Tract, City of Fredericksburg, Virginia (*with Carol Tyrer and Skye Hughes, Circa~)

2021 *Phase I Cultural Resources Survey of Fenton Mills Tract, York County, Virginia (*with Carol Tyrer and Skye Hughes, Circa~)

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2021 *Phase I Cultural Resources Survey of Veteran's Park Restoration Site, Dauphin County, Pennsylvania (*with Carol Tyrer and Skye Hughes, Circa~)

2021 *Phase I Cultural Resources Survey Smithfield IAAI Property, Isle of Wight County, Virginia (*with Carol Tyrer and Skye Hughes, Circa~)

2021 *Phase II Architectural Survey of the Oakenwold Tract, Stafford County, Virginia (*with Carol Tyrer and Skye Hughes, Circa~)

2021 *Phase III Archaeological Evaluations at Site 44YO1042 Powell Plantation Property, York County, Virginia (*with Carol Tyrer and Skye Hughes, Circa~)

SKYE W. HUGHES, R.P.A.
HISTORIAN/PRINCIPAL INVESTIGATOR/GIS ANALYIST
CIRCA~ CULTURAL RESOURCE MANAGEMENT, LLC

Education:

New Mexico State University, 1996, B.A. Anthropology and French

Florida Atlantic University, M.A., 2003, Anthropology

Register of Professional Archaeologists (RPA) #12804

Professional Experience:

2017-present: Historian, GIS Analyst, Principal Investigator, Circa~ Cultural Resource Management, LLC, Williamsburg, Virginia.

2003-2008: Principal Investigator, Panamerican Consultants, Inc. (PCI), Tampa, Florida.

2002-2003: Archaeologist, Southeastern Archaeological Company, Inc. (SEARCH), Riverview, Florida.

1999-2002: Archaeologist, Technical Writer, Illustrator, Janus Research, St. Petersburg, Florida

1998-2000: Museum attendant, Morikami Museum and Japanese Gardens, Delray Beach, Florida

1997-1998: Assistant instructor Introduction to Anthropology, Florida Atlantic University, Boca Raton, Florida

1997: Laboratory Director, Florida Atlantic University, Boca Raton, Florida

1997-1998: Consulting archaeologist, Historic Preservation Services, Plantation, Florida

1996-1998: Archaeologist, Archaeological and Historical Conservancy, Inc., Miami, Florida

Fields of Experience:

Ms. Hughes has over 25 years of professional experience in the fields of archaeology, architectural history, and cultural resources. From 2003 to 2008, Ms. Hughes worked as a Principal Investigator for Panamerican Consultants, supervising for five years archaeological and architectural fieldwork and studies. Her current responsibilities at Circa~ include technical tasks associated with cultural resources assessments including both archaeology and architectural resources and Phase I, II, and III surveys and excavations, consultation with state and national review agencies, developing and implementing archaeological and architectural research designs, and writing and editing technical reports. She has authored or co-authored over 200 technical reports and historical studies (all accepted by the regulatory agencies), and worked closely with the U. S. Fish and Wildlife Service (USFWS), the U. S. Army Corps of Engineers (USACE), and other official agencies to fulfill the requirements of local, state, and federal regulations related to archaeological and architectural resources.

As an archaeologist and principal investigator, Ms. Hughes has identified archaeological and architectural resources in Florida, Louisiana, Texas, Alabama, and Virginia. She has performed surveys and analyses on all periods including Paleoindian to Woodland Native American sites and 17th, 18th, 19th, and 20th century historic sites and burials. She has completed investigations for numerous projects that range from large-scale studies of archaeological and historic resources to detailed investigations of individual Native American and historic sites. Ms. Hughes is familiar with the management and preparation of environmental documents that comply with the National Historic Preservation Act of 1966, as amended and the National Environmental Policy Act (NEPA) of 1969. She has a solid understanding of federal and state environmental and cultural resources including the *Secretary of the Interior Standards and Guidelines for Archaeology and Historic Preservation*. She is familiar with Virginia standards, and she uses these guidelines when drafting reports.

Ms. Hughes's technical capabilities include detailed archival and literary research at the local, state, and national levels; site documentation and analysis; evaluation of properties for National Register of Historic Places and State Landmark significance; preparation of project budgets; selection and guidance of field crew; and technical report writing. Ms. Hughes also has extensive experience with assessment, survey, evaluation, and mitigation of both Native American and historic resources. In addition, Ms. Hughes has a thorough understanding of the Section 106 process.

In addition, Ms. Hughes gained teaching experience while working towards her graduate degree in Anthropology working as an assistant instructor and teaching assistant while at Florida Atlantic University. She has also given guest lectures on zooarchaeology and presented professional papers at various conferences.

Prior to joining Circa~, Ms. Hughes worked as a staff archaeologist for PCI in Tampa Florida, where she served as a Principal Investigator for archaeological projects under contract to many different firms. Ms. Hughes has also worked on several notable projects. These include a 3,000+-acre survey for the Southwest Florida Water Management District and Sarasota County, a Phase I survey at Naval Station Mayport, and Phase I and II excavations at Naval Air Station (NAS) Jacksonville.

Selected Publications/Technical Reports:

1997 Phase II Report, Archaeological Investigations of the Scheurich Middne Site (8PB9261) Jupiter, Palm Beach County, Floridan (with Historic Preservation Services).

2003 A Cultural Affiliation Assessment of Archaeological Sites within the Loxahatchee Scarp Area Using Discriminant Analysis Techniques (Master's Thesis).

2004 Historic Assessment, Terrestrial and Submerged Resources Survey of Hollomans Branch of the Hillsborough River, Hillsborough County (under subcontract to Gulf South Research Corporation).

2004 Phase I Archaeological Survey of Navy Family Housing Areas at Naval Station Mayport in Duval County (for HHM).

2004 Cultural Resource Assessment Survey of the Bay Preserve at Osprey in Sarasota County, Florida (for Sarasota Conservation Foundation).

2004 Cultural Resources Assessment Survey of the Sarasota Rails to Trails Project in Sarasota County, Florida (for Sarasota County).

2005 Cultural Resource Assessment Survey of the Scapo Project Area in Pasco County. (for Greystar GP, LLC).

2005 Cultural Resource Assessment Survey of the Fort Myers Property in Lee County, Florida (for Cobalt Development Group, Inc.).

2005 Cultural Resource Assessment of the Links of Hidden Creek Project Area in Pasco County, Florida (for Kimley-Horn and Associates, Inc).

2005 Cultural Resource Assessment Survey of the Columns at Cypress Point in Pasco County (for ECI Capital, Inc.).

*2005 Cultural Resource Assessment Survey of the Linebaugh Avenue Town Homes Project Area in Hillsborough County, Florida (*for Pulte Homes).

2006 Cultural Resource Assessment Survey of the Altamonte G&M/Beeler Project Area in Pasco County, Florida (for Altamonte G&M).

2006 Cultural Resource Assessment Survey of the Orange Blossom Ranch Project Area in Collier County, Florida (for Pulte Homes).

2006 Cultural Resource Assessment Survey of the Magnolia Lakes Project Area in Manatee County, Florida (for Cedarwood Development.).

2006 Cultural Resource Assessment Survey of the Four Corners Town Center Project Area in Pole County, Florida (for DWSKB Group, LLC).

2006 Cultural Resource Assessment Survey of the Campanelli Property in Indian River County (for Kimley Horn and Associates).

2006 Cultural Resource Assessment Survey of 900 Biscayne Boulevard in Miami-Dade County (for Peruyera and Associates, Inc.).

2006 Phase II Cultural Resource Assessment Survey of Site 8HI10216-Telecom Lot 7B (for A. G. Armstrong).

2006 Cultural Resource Assessment Survey of the Fowler Crossing Project Ara in Hillsborough County, Florida (for Fowler Crossing Business Park, LLC).

2006 Cultural Resource Assessment Survey of the 605 West Flagler Project Area in Miami, Florida (for Santos Raimundez Architects).

2006 Cultural Resource Assessment Survey of the Christmas Creek Headwaters Preserve in Orange County (for Orange County Environmental Protection Division).

2006 Cultural Resource Assessment Survey of the Roseland East Stormwater Improvements Property in Indian River County, Florida (for PCI).

2018 *Assessment and Probability Analysis Foxglove Solar LLC, Frederick County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Leatherwood Solar Site Management Summary, Henry County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Management Summary and Archaeological Probability Analysis, Cape Solar Site, Page County, Virginia* (with Dawn M. Muir and Carol D. Tyrer, Circa~).

2018 *Management Summary and Archaeological Probability Analysis, Cavalier Solar Site, Greene County, Virginia* (with Dawn M. Muir and Carol D. Tyrer, Circa~).

2018 *Management Summary and Archaeological Probability Analysis, Maplewood Solar Farm, Pittsylvania County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Management Summary and Archaeological Probability Analysis, Dewey Solar Site, Orange County, Virginia* (with Dawn M. Muir and Carol D. Tyrer, Circa~).

2018 *Management Summary and Archaeological Probability Analysis, Dogwood Solar Site, Page County, Virginia* (with Dawn M. Muir and Carol D. Tyrer, Circa~).

2018 *Management Summary and Archaeological Probability Analysis, Grasshopper Solar Site, Mecklenburg County, Virginia* (with Dawn M. Muir and Carol D. Tyrer, Circa~).

2018 *Management Summary, Camden Plantation, Camden County, North Carolina* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Management Summary, Culpeper Property, Culpeper County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Archaeological Survey of the Chesapeake Solar Project Site, City of Chesapeake, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Archaeological Survey of East West Roadway, Chesterfield County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Archaeological Survey of Greenwood Solar Farm, Culpeper County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Archaeological Survey of Pamplin Solar Sire, Appomattox County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Archaeological Survey of Rives Road, Prince George County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Archaeological Survey of Spring Grove Solar Site, Surry County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Architectural Survey of the Chesapeake Solar Project Site, City of Chesapeake, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Architectural Survey of Crystal Hill Solar Site, Halifax County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Architectural Survey of East West Roadway, Chesterfield County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Architectural Survey of Greenwood Solar Farm, Culpeper County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Architectural Survey of Pamplin Solar Site, Appomattox County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Architectural Survey of Rives Road, Prince George County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Architectural Survey of Route 17 – Shoulders Hill Road, City of Suffolk, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Architectural Survey of the Grasshopper Solar Site, Mecklenburg County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Architectural Survey of Turner Solar LLC, Henrico County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Architectural Survey of Walnut Solar Site, King and Queen County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Cultural Resources Survey of the 2.50-Acre Wellingford Industrial Park Lot 6A, Prince William County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Cultural Resources Survey of the Accokeek Creek Sewer Alignment, Stafford County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Cultural Resources Survey of the Columbia Gas Transmission LLCs VM System, Drip Removal Project, Greene County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Cultural Resources Survey, False Cape, City of Virginia Beach, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Cultural Resources Survey of the Gala Pipeline, Alleghany County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Cultural Resources Survey of the Hai Tran Poultry Farm Property, Accomack County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Cultural Resources Survey of the Haymarket Bypass, Prince William County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Cultural Resources Survey of the Lower Smith River Sewer Conveyance, Henry County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Cultural Resources Survey of the Michael Drive Tract, City of Chesapeake, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Cultural Resources Survey of the Ohio Creek Alternatives, City of Norfolk, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Cultural Resources Survey of Paradise Creek Bridge Project, City of Portsmouth, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Cultural Resources Survey, Seven Pines Mitigation Bank, Marion County, West Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Cultural Resources Survey of Shugart Property, Charles County, Maryland* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase I Cultural Resources Survey Widewater State Park Property, Stafford County, Virginia and Charles County, Maryland* (with Dawn M. Muir and Carol Tyrer, Circa~).

2018 *Phase II Archaeological Evaluations of the Bailey's Tract, Chesterfield County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Addendum to Phase I Cultural Resources Survey of Nansemond Bridge Alternatives, City of Suffolk, Virginia* (with Carol Tyrer, Circa~).

2019 *Assessment of Probability Analysis, Banbury Cross, Loudoun County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Assessment of Probability Analysis, Colonial Solar Farm, Surry County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Assessment and Probability Analysis, Westmoreland Solar Farm, Westmoreland County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Management Summary, Christ Community Church Multi-Purpose Building, James City County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Management Summary and Archaeological Probability Analysis of Spring Grove II Solar Site, Surry County, Virginia* (with Carol Tyrer, Circa~).

2019 *Partial Phase III Archaeological Excavations of Site 44PW1941 at Cayden Ridge, Prince William County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Phase I Architectural Survey of the Dragonfly Solar Site, Campbell County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Phase I Architectural Survey of Mount Nebo Solar Farm Site, Surry County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Phase I Architectural Survey of the Walnut Solar Farm Site, King and Queen County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Phase I Archaeological Survey of Harrowgate-Cougar Trail Sidewalk Improvements, Chesterfield County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Phase I Archaeological Survey of Marina to Merriewood Sidewalk Improvements, Chesterfield County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Phase I Archaeological Survey of the Walnut Solar Site, King and Queen County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Phase I Archaeological Survey of Winterpock Road Widening Project, Chesterfield County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Phase I Cultural Resources Survey of 136 Tewning Road, City of Williamsburg, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Phase I Cultural Resources Survey of Archers Mead Tract, Isle of Wight County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Phase I Cultural Resources Survey of the Bethlehem Road Project, Prince William County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Phase I Cultural Resources Survey of the Casalight Nokesville School Tract, Prince William County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Phase I Cultural Resources Survey of the Columbia Gas LLC-VNG Suffolk No. 3 Meter Station Expansion Project, City of Suffolk, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Phase I Cultural Resources Survey of the Highland Springs School Site, Henrico County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

2019 *Phase I Cultural Resources Survey of the Hopkins Road Sidewalk Improvements, Chesterfield County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~).

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2021 *Phase III Archaeological Evaluations at Site 44YO1042, Powell Plantation Property, York County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~)

2021 *Desktop Survey Report for Reconnect Fiber Optic Cable, King and Queen Phase II, King and Queen County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~)

2021 *Phase I Cultural Resources Survey of Veteran's Park Restoration Site, Dauphin County, Pennsylvania* (with Dawn M. Muir and Carol Tyrer, Circa~)

2021 *Phase I Cultural Resources Survey of Horseshoe Hills Mitigation Bank, Marion County, West Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~)

2021 *Phase I Cultural Resources Survey of Group Dam Removal Project, Beaver County, Pennsylvania* (with Dawn M. Muir and Carol Tyrer, Circa~)

2021 *Phase IA Cultural Resources Assessment, 523 George Street, City of Fredericksburg, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~)

2021 *Middle Creek Negative Form, Montgomery County, Pennsylvania* (with Dawn M. Muir and Carol Tyrer, Circa~)

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2021 *Phase I Cultural Resources Survey of 8189 and 8193 Richmond Road, James City County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~)

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2021 *Phase II Architectural Survey of the Oakenwold Tract, Stafford County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~)

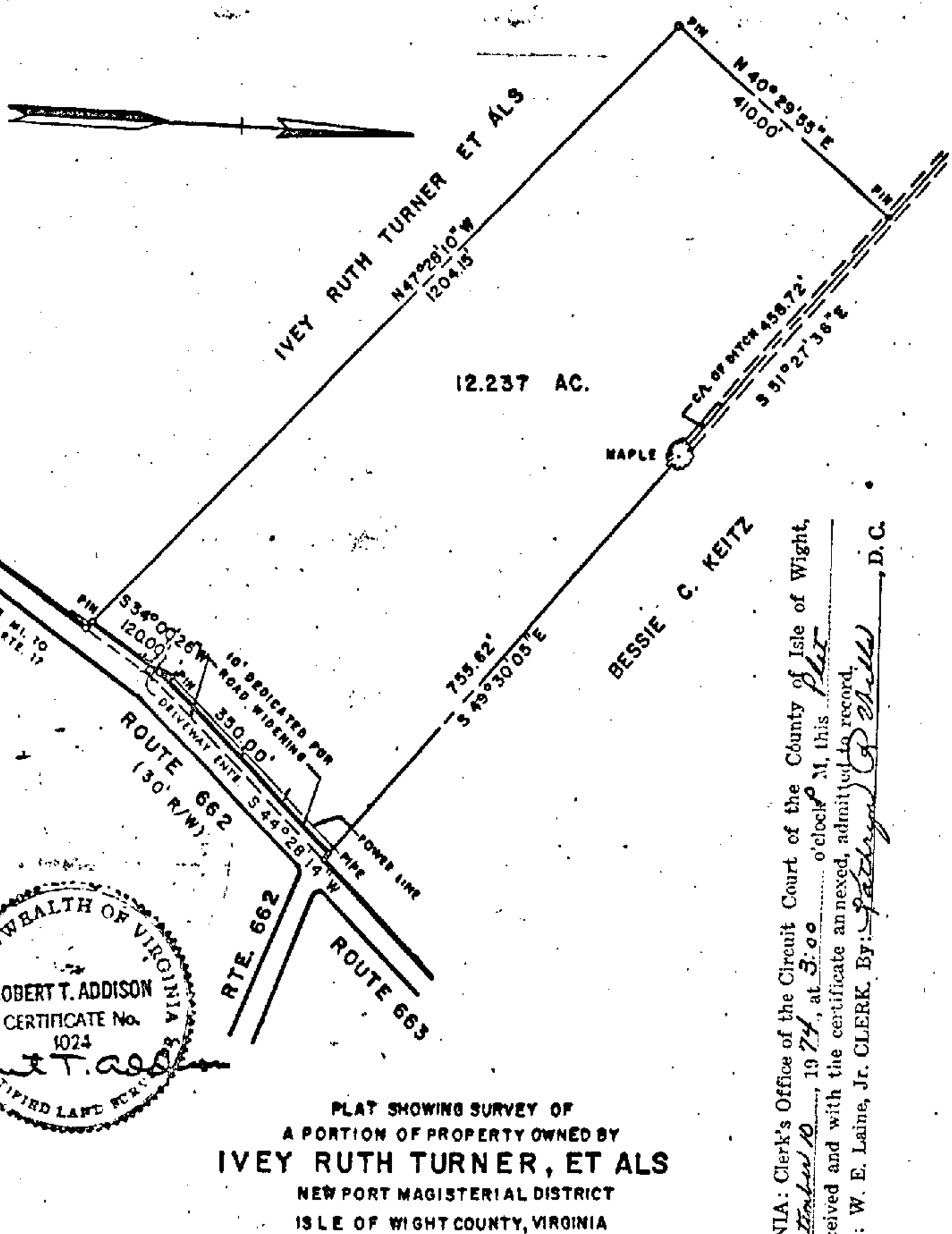
2021 *Phase I Cultural Resources Survey of Corelot Tract, City of Fredericksburg, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~)

2021 *Current Conditions Assessment, Kings Creek Solar Farm, York County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~)

2021 *Phase I Architectural Survey of the Kings Creek Solar Farm, York County, Virginia* (with Dawn M. Muir and Carol Tyrer, Circa~)

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C-1609



COMMONWEALTH OF VIRGINIA
ROBERT T. ADDISON
CERTIFICATE No.
1024
CERTIFIED LAND SURVEYOR

PLAT SHOWING SURVEY OF
A PORTION OF PROPERTY OWNED BY
IVEY RUTH TURNER, ET ALS
NEW PORT MAGISTERIAL DISTRICT
ISLE OF WIGHT COUNTY, VIRGINIA

SCALE : 1" = 200' JULY 23, 1974

* BALDWIN AND GREGG, LTD.
ENGINEERS · SURVEYORS · PLANNERS
PORTSMOUTH, VIRGINIA

F.B. P-154 PG.18

REVISED 8/28/74
REVISED 9/1/74

WTC

VIRGINIA: Clerk's Office of the Circuit Court of the County of Isle of Wight, the 10 day of Sept., 1974, at 3:00 o'clock P M, this plat was received and with the certificate annexed, admitted to record.
TESTE: W. E. Laine, Jr. CLERK By: Patsy Gwaltney D.C.

18-M-3905

ORDINANCE NUMBER:

AN ORDINANCE TO CONDITIONALLY REZONE APPROXIMATELY 12.24 ACRES IDENTIFIED AS TAX MAP PARCEL NUMBER 34-01-070B FROM RURAL AGRICULTURAL CONSERVATION (RAC) TO CONDITIONAL PLANNED DEVELOMENT – MIXED USE (C-PD-MX) TO PERMIT DEVELOPMENT OF 52 SINGLE-FAMILY DETACHED DWELLINGS

WHEREAS, Saunders and Ojeda, P.C., applicant, on behalf of James River Crossings, Inc., owner, has requested to conditionally rezone 12.24 acres from Rural Agricultural Conservation (RAC) to Conditional Planned Development – Mixed Use (C-PD-MX), located at 23067 Channell Way that is further identified as tax parcel identification number 34-01-070B, which land is depicted on Exhibit "B"; to allow the land to be developed for 52 single-family detached dwellings; and,

WHEREAS, the proposed rezoning to C-PD-MX zoning has been advertised and reviewed by the Planning Commission in compliance with the requirements of state law; and,

WHEREAS, the Planning Commission has made a recommendation as stated in Exhibit "A" to approve the requested rezoning with the proffered conditions attached hereto as Exhibit "C"; and,

WHEREAS, a public hearing before the Isle of Wight County Board of Supervisors was duly advertised as required by law and held on May 19, 2022, at which public hearing the public was presented with the opportunity to comment on the proposed rezoning.

NOW, THEREFORE, BE IT ORDAINED by the Isle of Wight County Board of Supervisors of Isle of Wight County, Virginia, that:

Section 1. Exhibits.

Exhibit "A", "Planning Commission Recommendation", Exhibit "B", "Property Map", and Exhibit "C", "Proffered Conditions", as attached hereto, are hereby incorporated as part of this ordinance.

Section 2. Findings.

The Board of Supervisors finds that the requested conditional rezoning application, ZA-08-21, as submitted with proffered conditions herein, is for the expressed purpose of developing the subject property in harmony with the standards of the Isle of Wight County Zoning Ordinance; and it will have no more adverse effects on the health, safety or comfort of persons living or working in or driving through the neighborhood; and will be no more injurious to property or improvements in the neighborhood than would any other use generally permitted in the same district, taking into consideration the location, type and height of buildings or structures, the type and extent of landscaping and screening on site; and whether the use is consistent with any theme, action, policy or map of the Comprehensive Plan with the conditions set forth below.

These findings are based upon the consideration for the existing use and character of the property, the Comprehensive Plan, the suitability of the property for various uses, the trends of growth or change, the current and future requirements of the community as to land for various purposes as determined by population and economic studies and other studies, the transportation requirements of the community, the requirements of airports, housing, schools, parks, playgrounds, recreation areas and other public services, the conservation of natural resources, the preservation

floodplains, the preservation of agricultural and forestal land, the conservation of properties and their values, and the encouragement of the most appropriate use of land throughout the County.

Section 3. Rezoning.

A. The property as shown on the attached Exhibit "B" is hereby rezoned with proffered conditions described in Exhibit "C" and the Official Zoning Map be, and is hereby, amended to allow the proposed development.

B. The foregoing rezoning and amendment to the official zoning map shall remain in effect until a subsequent amendment changes the zoning of the property.

Section 4. Severability.

It is the intention of the Board of Supervisors that the provisions, sections, paragraphs, sentences, clauses, and phrases of this ordinance are severable; and, if any phrase, clause, sentence, paragraph, section, and provision of this ordinance hereby adopted shall be declared unconstitutional or otherwise invalid by the valid judgement or decree of a court of competent jurisdiction, such unconstitutionality or invalidity shall not affect any of the remaining phrase, clauses, sentences, paragraphs, sections, and provisions of this ordinance, to the extent that they can be enforced notwithstanding such determination

Section 5. Effective Date

This ordinance shall be effective upon passage and shall not be published or codified.

DATE: _____

READ AND PASSED: _____
Chairman, Board of Supervisors

TESTE: _____
Clerk, Board of Supervisors

Approved as to Form:

_____
Robert W. Jones Jr., County Attorney

EXHIBIT A: PLANNING COMMISSION RECOMMENDATION

RESOLUTION NUMBER PC-22-2

ISLE OF WIGHT COUNTY PLANNING COMMISSION
A RESOLUTION TO PRESENT A REPORT AND RECOMMENDATION TO THE BOARD OF SUPERVISORS REGARDING CASE NO. ZA-08-21, A REQUEST TO CONDITIONALLY REZONE TAX PARCEL 34-01-070B FROM RURAL AGRICULTURAL CONSERVATION (RAC) TO PLANNED DEVELOPMENT – MIXED USE (PD-MX) TO CONSTRUCT 52 SINGLE-FAMILY DETACHED DWELLING UNITS

WHEREAS, James River Crossings, Inc., owner, has requested to rezone property having Tax Map Number 34-01-070B from Rural Agricultural Conservation (RAC) to Conditional Planned Development – Mixed Use (PD-MX) in order to allow for the construction of 52 single-family detached dwelling units having a condominium system of property ownership; and

WHEREAS the procedural requirements for the consideration of this request by the Planning Commission have been met.

NOW, THEREFORE, BE IT RESOLVED by the Planning Commission of Isle of Wight County, that:

Section 1. Findings.

✓ A. The Isle of Wight County Planning Commission finds that the proposed amendment to conditional zoning is reasonable and warranted due to a change in circumstances affecting the property and has considered the following factors and finds that the proposed rezoning does not conflict with:

1. the existing use and character of property within the County;
2. the Comprehensive Plan;
3. the suitability of the property for various uses;
4. the trends of growth or change;
5. the current or future requirements of the community as to land for various purposes as determined by population and economic studies and other studies;
6. the transportation requirements of the community;
7. the requirements for airports, housing, schools, parks, playgrounds, recreation areas and other public services;
8. the conservation of natural resources;
9. the preservation of floodplains;
10. the preservation of agricultural and forestal land;

11. the conservation of properties and their values; and

12. the encouragement of the most appropriate use of land throughout the County.

____ B. The Isle of Wight County Planning Commission does not find that the proposed zoning map amendment is reasonable based on the consideration of the factors listed herein.

Section 2. Recommendation to Board of Supervisors.

The Planning Commission recommends to the Board of Supervisors that the request, ZA-08-21, be:

Y a. Granted as submitted, and that the Board of Supervisors adopt the proposed Ordinance without modification.

___b. Denied, and that Board of Supervisors not adopt the proposed Ordinance.

___c. Granted with the modifications set forth on the attached listing of specific recommendations, and that the Board of Supervisors adopt the proposed Ordinance with such modifications.

DATE: 4-26-22

READ AND PASSED: Bobby Bowser
Chairman, Isle of Wight County Planning Commission

TESTE: Dandrea
Secretary, Isle of Wight County Planning Commission

Approved as to Form:

Robert W. Jones, Jr., County Attorney

Exhibit B: Property Map

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA

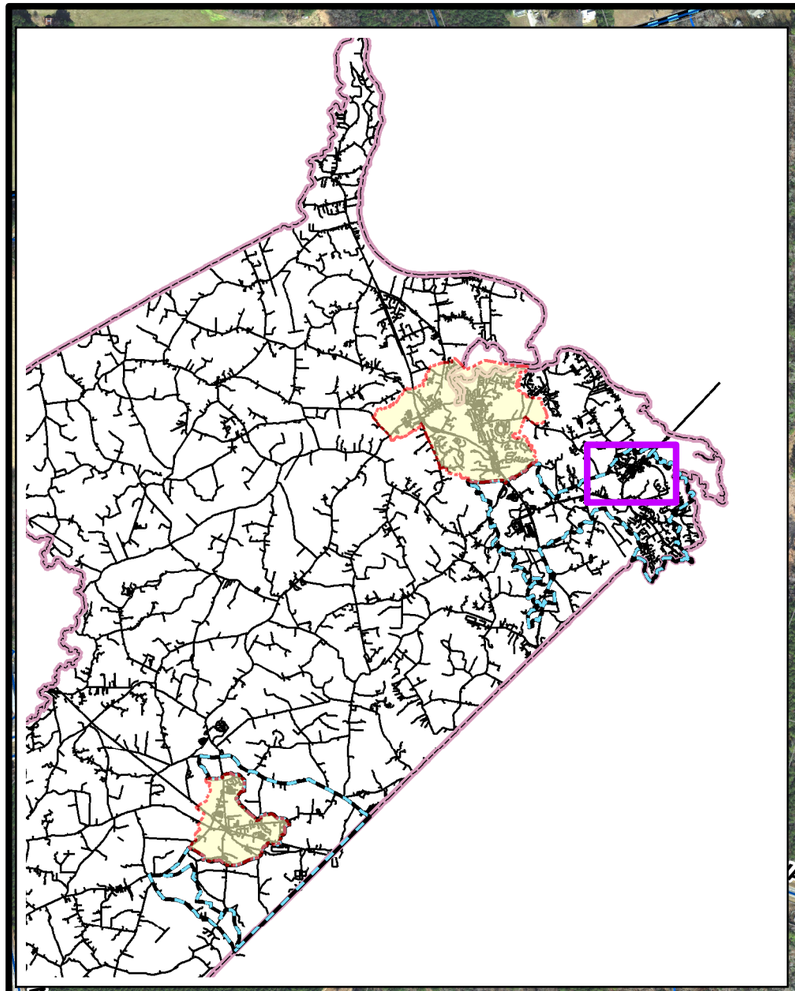




EXHIBIT C: PROFFERED CONDITIONS

RESTATED PROFFER STATEMENT

Applicant's name(s): Saunders & Ojeda, P.C., Counsel on behalf of James River Crossings, Inc.

Owner's name(s): James River Crossings Inc.

Project name: Tower Site

Date: April 4, 2022

Parcel-Tax Map Numbers and deed book reference: 34-01-070B and Instrument #140002331

These proffers are made as of the 4th day of April , 2022 by **James River Crossings Inc.** ("Owner"), of Tax Map Number 34-01-070B, containing approximately 12.24 acres of land which is referred to herein as the "Property". Booth-Cobb Media LLC filed a rezoning application with the Isle of Wight County Planning and Zoning Department requesting a change in the zoning of the Property from Rural Agricultural Conservation (RAC) to Conditional Planned Development - Mixed Use (PD-MX) on behalf of James River Crossings, the contract purchaser. James River Crossings has since acquired the Property. Owner voluntarily proffers that the development of the Property proposed for rezoning under this application shall be in strict accordance with the conditions set forth below.

These proffered conditions ("Proffers") are the only conditions offered on this rezoning, and any prior proffered conditions on the Property are hereby superseded by these proffers and any and all previous proffers on the Property are hereby void and of no further force and effect.

All improvements, land, easements, dedications, gifts, proffers and other conveyances to the County shall be in fee simple, without cloud of title or encumbrance of any kind.

1. The maximum number of residential units shall not exceed fifty-two (52) single family detached condominium residential units.

2. The minimum unit area shall be no less than five thousand five hundred (5,500) square feet.

3. The maximum building height shall not exceed thirty-five (35) feet.

4. The maximum unit width shall not exceed fifty-five (55) feet.

5. The minimum setbacks shall be no less than:
   Front: twenty (20) feet
   Side: five (5) feet
   Rear: fifteen (15) feet

6. The Property will be developed as the second phase of the Crossings development, as a condominium project with single family detached homes. It will be subject to the Declaration covering all of the Crossings properties, will be a member of the James River Crossings Master Association, Inc. ("Master Association") which will have responsibility for all of the common facilities and common areas and will, through its payments to the Master Association, share in the common expenses of the Crossings development.

SIGATURE PAGE

Applicant: J. Witt Harper, Esq.

Applicant: _____ Date: _____
Signature

Commonwealth of Virginia,
City of Suffolk

Subscribed and sworn to before me, Cheryl K. Watters, a Notary Public in and for the City of Suffolk, Commonwealth of Virginia, this __ date of _____, 202__.

_____
My Commission Expires December 31, 2025
My Registration Number: 7924387

Owner: James River Crossings Inc.

Owner: _____ Date: 4/6/2022

Jerry L. Bowman, President

Commonwealth of Virginia,
City of Norfolk

Subscribed and sworn to before me, Kathryn M Estep, a Notary Public in and for the City of Norfolk, Commonwealth of Virginia, this 6th date of April, 2022

Kathryn M Estep

My Commission Expires 2/28/2026
My Registration Number: 264416

KATHRYN M ESTEP
NOTARY PUBLIC
REG # 264416
MY COMMISSION EXPIRES
02/28/20__
COMMONWEALTH OF VIRGINIA

ISSUE:

Staff Report - 2021 Economic Development Annual Report

BACKGROUND:

Staff will provide a brief presentation relative to the Annual Report for Economic Development for 2021.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

For the Board's information.

ISSUE:

Draft of "Share the Isle: Isle of Wight County's Plan for an Age and Mixed Ability Inclusive Community"

BACKGROUND:

Isle of Wight County began its plan to develop services for persons age 55 and over in February 2021. This new part of the Comprehensive Plan will serve as a decision-making guide to help the County remain livable for all ages and abilities.

The draft Plan will be made available to the public in June for their review and comment prior to consideration by the Planning Commission and Board as a Comprehensive Plan amendment.

BUDGETARY IMPACT:

None

RECOMMENDATION:

For the Board's information.

ATTACHMENTS:

Description	Type	Upload Date
Share the Isle Draft Plan	Backup Material	4/20/2022

SHARE *the* ISLE











ISLE OF WIGHT COUNTY'S PLAN FOR AN AGING & MIXED ABILITY INCLUSIVE COMMUNITY

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EXECUTIVE SUMMARY

Introduction



On January 16, 2020, the Isle of Wight County Board of Supervisors directed staff to conduct a study on the future impacts of aging on the County's quality of life and levels of service as part of the new County's new Comprehensive Plan. The initial step of the Plan included a community survey of residents on their top concerns with aging in the County as well as their future lifestyle priorities. The next step of the Plan engaged a small working group recruited from the County's Commission on Aging and supported by County staff as well as staff from the Southeastern Senior Services of Virginia (SSEVA) to develop policy recommendations to better direct County actions and decisions as well as guide capital investments to maximize the accessibility in the County to persons of all ages, ability levels and socioeconomic groups.

Through the development of the Plan, the initial stakeholder workgroup identified several common issues that were critical to the successful implementation of each of the Plan's focus areas. Specifically, transportation access and a housing supply which can accommodate different ability and socioeconomic needs were found to be critical to successful aging in the community. These two components permit older people and those with special needs to partake in all the recreational, educational, employment and social opportunities the County may have to offer that creates a high quality of life. The third common issue the workgroup identified was the need for a central clearinghouse of information on all these opportunities and services within the County. Information on transportation services, housing assistance, health care, educational, employment and social opportunities is often dispersed among different groups, websites and agencies which can make locating information difficult, especially among those without access to the internet. The group agreed that a critical element in the Plan's successful implementation is the creation of a coordinator position that could not only serve as a central contact for aging-related services and information specific to the County, but also assist residents in obtaining these services. Below is an outline of the policies and implementation steps for the Share the Isle Plan. The full Plan documents includes additional background information and analysis used to develop the Plan.

FOCUS AREA 1: HEALTHY AND ACTIVE LIFESTYLE

OBJECTIVE: The County should provide access to healthy food options, opportunities for walking, biking and exercise, and education on nutrition and wellness.

IMPLEMENTATION STEPS

1. The County should continue to expand its public system of bike and pedestrian trails, especially to destinations including parks, libraries, or community facilities.
2. The County should expand its transit service to provide connections between residential areas and shopping centers which offer groceries in all development service districts within the County.
3. The County should expand its Parks and Recreation programs and facilities to include exercise programs for all ability levels and include educational programs on such topics as nutrition and treatment of chronic conditions, such as diabetes and obesity which are linked to poor nutrition.

FOCUS AREA 2: QUALITY HEALTH CARE AND COMMUNITY SUPPORT SERVICES

OBJECTIVE: The County should provide connections to health facilities and related services and support, including home- and community-based supportive features and programs.

IMPLEMENTATION STEPS

1. Improve the accessibility of health services.
2. Establish a full-time livable community coordinator position to increase availability of information, educational programs, and coordinate volunteer efforts.
3. Establish a regular working group of community service providers, health care professional representatives, community stakeholders and staff to identify specific gaps in the County's available senior and special need health care services.
4. Centralize and expand programs and services to citizens to enable them to remain in their homes.

FOCUS AREA 3: TRANSPORTATION ACCESS

OBJECTIVE: The County should expand its range of safe, dependable, and affordable transportation options that are alternatives to driving, which promote independence, facilitate employment and educational opportunities, and foster social engagement.

IMPLEMENTATION STEPS

1. Increase local funding to expand the existing I-Ride service to provide additional routes to serve areas with the highest senior population and nearby activity centers to better meet daily needs;
2. Identify and expand existing volunteer networks that provide free transportation to seniors for medical and senior center visits utilizing surplus County-owned vehicles for immediate needs;

3. Incorporate smart mobility concepts into future road improvements to capitalize on technological improvements such as driverless vehicles, on demand services, and to accommodate future public transit needs, such as including broadband capabilities in public right of ways as improvements are made; and
4. Continue to support the expansion of the County's multipurpose trail system that connects residential areas to activity centers with shopping, medical, employment, educational, and recreational opportunities.

FOCUS AREA 4: HOUSING CHOICE

OBJECTIVE: The County should provide a range of safe housing options that promotes independence and aging in place through market rate units, subsidies, and appropriate design features such as universal design, visitability, energy efficiency, and use of innovative home features.

IMPLEMENTATION STEPS

1. Create more lifelong livable housing options.
2. Allow for multigenerational housing and increase affordable housing supply by allowing accessory dwelling units in more residential zoning districts.
3. Increase the ability for people to stay in the homes and neighborhoods by creating a grant fund dedicated to retrofitting and rehabilitating existing housing.
4. Zoning regulations should be written to allow homes to be built in close proximity to the services that enable people to remain independent as they age.
5. Implement an affordable dwelling unit ordinance.

FOCUS AREA 5: EDUCATION, EMPLOYMENT AND ENGAGEMENT

OBJECTIVE: The County should ensure employment opportunities for all ages, promote a life-long learning environment, and provide multiple opportunities for economic, social and civic engagement.

IMPLEMENTATION STEPS

1. Encourage the intergenerational use of public facilities for community education programs of rotating educational topics such as health, personal finance, job search, keyboarding, interviewing, coding, or home maintenance. These programs should be held at public facilities around the County at different times that are also accessible by public transit.
2. Continue the County's broadband network expansion program to underserved areas of the County.
3. Consider multiple outreach methods to increase community engagement in public policy decision making.

INTRODUCTION & BACKGROUND

Overview

In a February 2020 report, the US Census Bureau marks the year 2030 as a demographic turning point for the United States. Beginning that year, all baby boomers in the US will be older than 65 years of age. This will expand the size of the older population, so that one in every five Americans is projected to be of retirement age. Later that decade by 2034, older adults will outnumber children for the first time in U.S. history.

For Isle of Wight County, this turning point is projected to happen much sooner. The US Census Bureau projects 19.8% of the County's population was 65 years or older in 2019. The Weldon Cooper projects 21.6% of the population will be within this age bracket by 2020, which increases again to 26.9% of the County's population by 2030. By the end of the planning horizon of Envisioning the Isle, in 2040, the 65 year and older population group reduces in size slightly to 26.1% of the total population.

It is now Isle of Wight's turn to grapple with the implications of this demographic shift in the character of our community. How should we adapt neighborhood design, transportation options, recreational opportunities and even employment to ensure that people can successfully age here? Although there are significant challenges associated with creating a successful age friendly community, the good news is that most Americans want to remain healthy, active, and engaged in their communities as they age. In addition, technological innovation continues to follow the market opportunities presented by the increasing longevity market.

Successful age friendly communities can address some of the following concerns:

- **Financial Security —** provide a reasonable cost of living through such items as safe and affordable housing and employment opportunities for seniors;
- **Health —** offer access to a wide range of healthcare options and recreational opportunities;
- **Housing —** provide a diverse set of housing options to meet multiple needs, whether it's single family homeownership, a rental apartment or assisted living facility;
- **Transportation —** provide mobility and access to convenient transportation systems for seniors for travel, running errands, or making a medical visit;
- **Social Integration —** provide ready connections to family and friends as well as cultural and educational opportunities.

The Plan will identify steps the County can take to ensure its residents can age successfully in the community. The initial step of the Plan included a community survey of residents on their top concerns with aging in the County as well as their future lifestyle priorities. The next step of the Plan engaged a small working group recruited from the County's Commission on Aging and supported by County and SSEVA staff to develop policy recommendations to better direct County actions and decisions as well as guide capital investments to maximize the accessibility in the County to persons of all ages, ability levels and socioeconomic groups. Once the draft Plan was developed, the Plan was

presented to the Commission Aging, Planning Commission, the Board of Supervisors, and the community at large for their review and comment.

BACKGROUND

On January 16, 2020, the Isle of Wight County Board of Supervisors directed staff to conduct a study on the future impacts of aging on the County's quality of life and levels of service as part of the new County's new Comprehensive Plan.

This special Plan serves an implementation tool for several policies of the County's Comprehensive Plan, *Envisioning the Isle*, including:

- Studying the locations and demands of the elderly and low income populations of the County to inform transit decisions.
- Examining the impact of changing demographics and recreational needs on parks, facilities and programming;
- Continuing to improve access to parks, trails, and other facilities in order to serve all citizens, regardless of ability;
- Supporting life-long learning through schools, libraries, continuing and higher education programs, community-based education programs, and recreation programs for all age groups;
- Identifying regulatory changes that provide opportunities for housing for persons with special needs in proximity to supporting community services and activities;
- Reviewing and revising regulations to support housing types that allow the elderly to remain in their community as their needs change;
- Increasing opportunities within the development service districts (DSDs) for residences to be in close proximity to retail, employment, and public facilities; and
- Identifying possible incentives to encourage the development of a range of housing choices near major activity centers such as employment, commercial areas, schools, and recreation areas.

This Plan will further support and implement these policies.

PLAN ON AGING COMMUNITY SURVEY RESULTS

The initial step of the Plan included a survey of residents on their top concerns with aging in the County as well as their future lifestyle priorities. The Isle of Wight County Plan on Aging public input survey was conducted from Monday, February 1 through Monday, March 1, 2021. The public input survey was not designed as a scientific poll using a random sample of pre-selected households, but rather as a broad public engagement effort. The survey was widely publicized, and all residents, business owners, and property owners were welcome to respond. All responses were provided on a strictly voluntary basis and may or may not represent the perspectives of the average Isle of Wight County citizen.

The survey was available both online using the Survey Monkey web-based platform and in hard copy format located at six key locations across the County. Paper copies of the survey were available at the Carrollton, Smithfield and Windsor Libraries as well as the Windsor and Smithfield Town Halls. Copies were also available at the Isle of Wight County Community Development Department.

Staff mailed out notices to 45 different community stakeholder groups requesting participation in the survey. The notices included the website address of the survey as well as a QR code that provided a direct link to the survey instrument. The community groups

included churches, veterans groups, services organizations, the Commission on Aging, and other agencies that serve the elderly population, including Senior Services of Southeastern Virginia (SSSEV).

SSSEV and Isle of Wight County Social Services also provided valuable additional outreach to the County's senior population by distributing surveys through the administration of their programs, such as Meals on Wheels. Assistance with public outreach was also generously provided by County Departments such as Tourism, Parks and Recreation, Isle Cares, and Economic Development which posted notices about the survey on their social media sites.

A notice with the survey website and QR code was advertised in the Smithfield Times and Tidewater News for four consecutive weeks in March 2021. In addition, the survey could be accessed from links posted on the homepage of the County's website.

A total of 195 individuals participated in the survey. They came from all over Isle of Wight County and used a variety of methods to participate. The majority of participants, or 176 people, chose the online survey tool to complete the survey. This was expected, given that this method allowed participants to take the survey at their convenience. However, about 11%, or 19 people, chose to participate by completing paper surveys.

The survey included several questions for basic demographic information, such as age, gender, household income and which race with which they identify. Below is a summary of the profile of the average survey participant:

- Average age of participant was 63 years.
- About 77% non-military, 23% active or retired military.
- About 48% retired, 49% working part or full-time.
- Majority of respondents were female (63%).
- About 80% white, 12% African American, 4% Multiracial, 2.5% Other, 1% Asian, 0.5% Native American.
- About 61% had household incomes of greater than $50,000.

Most survey respondents were either somewhat or very concerned about their ability to live independently and remain financially secure as they aged. Most expected their quality of life to remain the same, and most participants planned to stay in the County for the next five years or longer. Most participants owned their own home and felt their neighborhoods were either good or excellent.

When thinking about housing in their senior years, most survey participants chose being able to live independently as their top priority. Being close to family and friends and the ability to stay in their current neighborhood ranked second and third in order of priority.

When it came to ranking priorities for future transportation access, most respondents felt that expanding services for people who need assistance should be the top priority. The second highest priority chosen is repairing existing roads and bridges. Adding sidewalks and expanding mass transit services tied as the third priority.

When asked to identify the things necessary to maintain their quality of life in the future, they ranked the following items as the five most important:

1. Having financial means;
2. Staying physically active;
3. Having access to quality healthcare;
4. Staying connected to friends and family;
5. Having quality health care coverage.

The goal of the survey was to ask the community to share its priorities for Isle of Wight County to better serve its growing senior population. The top five priorities for future investment to better serve seniors as indicated by the survey feedback are as follows:

1. Affordable health care services;
2. Senior Centers/Better Transportation Options (tied for second priority);
3. Internet access;
4. Affordable housing; and
5. Home delivered meals such as Meals on Wheels.

Most people participating in the survey felt that the County was not doing a good job supporting the needs of seniors in the community. When asked about different services provided in the County, public safety and volunteer opportunities received the highest marks while job opportunities and community support services were rated poorly.

The survey results provide critical information on which to begin to explore policy recommendations on how to better serve the County's growing senior population in the future. The feedback helps to narrow the focus of future investment in order to make the biggest impact to serve the most pressing needs in the community as well as to improve existing services. A full report on the results of the survey is included as an appendix to this plan.

"SHARE THE ISLE" PLAN

Based on the feedback received from the community survey and the Commission on Aging, the Plan seeks to improve the overall quality of life for all citizens, including the community's growing senior and special needs populations by achieving progress in the following five areas of focus:

1. Healthy and Active Lifestyle;
2. Quality Healthcare and Community Support Services;
3. Transportation Access;
4. Housing Choices; and
5. Education, Employment and Engagement.

Within each area, there is a background section and a findings section that collectively sets the stage for the recommendations. Whenever possible, they include County-specific data and information. The Plan outlines actions that will support achievement of the overall vision in each focus area. Each set of actions was developed based on community input, research, and data. The overall indicators within each focus area will assist in ensuring the community can evaluate progress towards the vision.

The following executive summary of the Plan on Aging includes a list of goals that are the Plan's focus areas, objectives and recommended implementation steps to achieve the County's vision of evolving as an inclusive, accessible community for all ages, abilities, and socioeconomic groups.

FOCUS AREA 1

Healthy And Active Lifestyle



The County's own community survey demonstrated that many people place the ability to live independently and remain both physically and mentally active as important to their quality of life as they age.

OBJECTIVE: The County should provide access to healthy food options, opportunities for walking, biking and exercise, and education on nutrition and wellness.

According to AARP, one aspect of age-friendly communities is that they allow older adults to stay active, stay connected, and stay engaged with their community as they age. The County's own community survey demonstrated that many people place the ability to live independently and remain both physically and mentally active as important to their quality of life as they age. In July 2017, the Milken Institute of Public Health released a ranking of 381 US metropolitan areas on how they performed in promoting and enabling successful aging. Among other criteria such as financial security, transportation, health care, and education, the study also ranked metro areas for overall "wellness" based on how they did on criteria such as their obesity rate, smoking rate, diabetes rate, longevity, prevalence of recreational opportunities, grocery stores and fast food restaurants in the area, among others. The Virginia Beach-Norfolk-Newport News Metropolitan Statistical Area (MSA), of which Isle of Wight County is a part, ranked 69th out of 100 large metropolitan areas overall based on its ability to meet the nine critical elements of successful aging, including wellness.

BACKGROUND

Although Isle of Wight County is too small to qualify for an individual assessment in the Milkin Institute Study, the criteria used in the report are publicly available. The *US News and World Report*, for example, provides an online tool that ranks individual localities on a scale of 1 to 100 and compares them to municipalities of similar size as well as to state and national averages.

The website gives Isle of Wight County an overall score of 63 out of 100 in its healthy community categories. To arrive at its overall ranking, the magazine used factors identified by the National Committee on Vital and Health Statistics — a policy advisory board to the head of the U.S. Department of Health and Human Services — as part of its Measurement Framework for Community Health and Well-Being. The online assessment tool may be found at https://www.usnews.com/news/healthiest-communities/virginia/isle-of-wight-county#population-health.

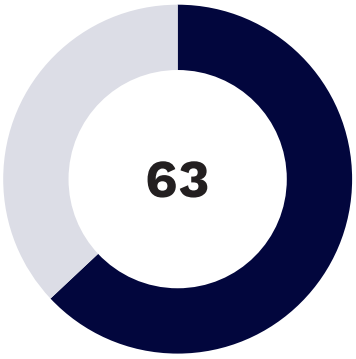
Although the County's score is the equivalent to a letter grade of "D," the County fared better than the state's average score of 53 and better still than the national average score of 48. The County performed higher than average scores in areas such as overall population health, public safety, education, community vitality and the economy. The County received failing grades (less than 60) for equity, housing, food and nutrition, the environment, and infrastructure.

TABLE FROM

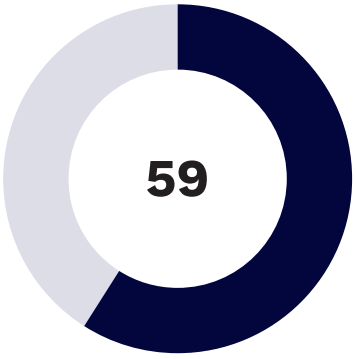
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NOVEMBER 29, 2021

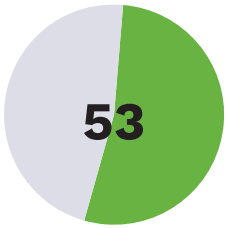
63/100 **OVERALL SCORE**



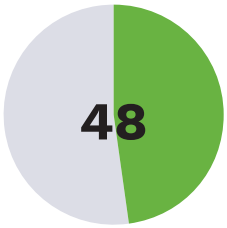
OVERALL SCORE



PEER GROUP AVERAGE
Urban, High-Performing



STATE AVERAGE



U.S. AVERAGE

Read our methodology to see how the scores and rankings were calculated.

CATEGORY	SCORE
Population Health	66
Equity	59
Education	68
Economy	66
Housing	48
Food & Nutrition	45
Environment	50
Public Safety	79
Community Vitality	62
Infrastructure	58

See the top communities overall.

Opportunities for improvement in the overall health and wellness of the community are noted below:

- **Access to care —** lower than average rates of hospital beds per 1,000 population (0 in Isle of Wight) and primary care doctor availability.
- **Mental Health —** higher than average number of adults with frequent mental distress.
- **Equity —** higher than average racial disparity in educational attainment and poverty rates.
- **Food and Nutrition —** less than average availability of healthy food and higher than average percentage of population without access to a large grocery store. Higher than average prevalence of diabetes and obesity.
- **Environment —** higher than average population served by unsafe drinking water. Only 2% of the County's population lives within a half mile of a public park compared to the national median of 18%.
- **Infrastructure —** only 3% of the County's population lives within walking distance of a library, museum or playground compared to 12.4% of the US population on average. The County receives a walkability score of 5.7 as compared to the US average of 6.1 and the state average of 8.4.

Overall, the County's general quality of life as indicated by its public safety record, higher than average life expectancy, economic well-being and educational standards. However, there is room for improvement to make it even healthier by providing increased walkability, increased nutrition availability, and expanding health care options across all socioeconomic groups and age levels.

IMPLEMENTATION STEPS

1. The County should continue to expand its public system of bike and pedestrian trails, especially to destinations including parks, libraries, or community facilities.
2. The County should expand its transit service to provide connections between residential areas and shopping centers which offer groceries in all development service districts within the County.
3. The County should expand its Parks and Recreation programs and facilities to include exercise programs for all ability levels and include educational programs on such topics as nutrition and treatment of chronic conditions, such as diabetes and obesity which are linked to poor nutrition.

FOCUS AREA 2

Quality Health Care and Community Support Services



Participants in the community survey on aging chose having access to quality healthcare and having quality health care coverage as the third and fifth most important criteria in ensuring their future quality of life in Isle of Wight.

OBJECTIVE: The County should provide connections to health facilities and related services and support, including home- and community-based supportive features and programs.

In 2013, the AARP Policy Institute published a report, *Is this a Good Place to Live? Measuring Quality of Life for All Ages*, which includes benchmarks to measure a community's livability for all ages improving the health of all its members by providing access to access to healthy food options, exercise opportunities for all abilities, and connections to health care facilities and related services, such as a strong network of community support services.

Increasing access to health care and community support services to those areas of the County with the highest senior and special needs populations can help implement several policies of the County's Comprehensive Plan, Envisioning the Isle, including:

- Identifying regulatory changes that provide opportunities for housing for persons with special needs in proximity to supporting community services and activities; and
- Increasing opportunities within the development service districts (DSDs) for residences to be in close proximity to retail, employment, and public facilities.

Participants in the community survey on aging chose having access to quality healthcare and having quality health care coverage as the third and fifth most important criteria in ensuring their future quality of life in Isle of Wight. Survey respondents also chose affordable health care as the County's first future investment priority and providing home delivered meals, such as Meals on Wheels, as the fifth most important priority for the County to better serve its aging population.

Most people participating in the survey felt that the County was not doing a good job supporting the needs of seniors in the community. When asked about the quality of different services provided in the County, community support services were rated poorly.

BACKGROUND

Using the most recently available census demographic information, the location of existing health care providers was combined with the location of the census tracts in the County with the highest senior and special needs populations. Consistent with other activity center data, most of the County's health care providers and services are found in the Carrollton and Smithfield areas followed by Windsor, and then the Camptown area. Although the Camptown area within the County limits may have little to no services, it does share a border with the City of Franklin which has additional services to offer, including the Southampton Memorial Hospital.

HEALTH CARE FACILITIES AND SERVICES IN ISLE OF WIGHT, NC

PRIMARY CARE FACILITY	LOCATION
Family Medical Care of Smithfield	Smithfield
Nansemond Family Practice	Smithfield
Isle of Wight Family Practice	Smithfield
Infinity Pediatric and Adolescent Medicine	Smithfield
Eagle Harbor Medical Associates	Carrollton
Riverside Eagle Harbor Primary Care	Carrollton
Sentara Family Medicine Physicians	Carrollton
Nakorn Primary Care	Windsor
URGENT CARE/EMERGENCY ROOM	
Velocity Health Care	Carrollton
PHYSICAL THERAPY	
Hull Physical Therapy	Smithfield
Phoenix Physical Therapy	Smithfield
Tidewater Physical Therapy	Smithfield
Pivot Physical Therapy	Smithfield
Sentara Therapy Center	Carrollton
Toland Chiropractic	Carrollton
Bayview Physical Therapy	Carrollton
Rise Physical Therapy	Carrollton
Southside Physical Therapy	Windsor
HOME HEALTH CARE SERVICES	
Growth Home Health Care	Carrollton
Cuadro Home Health Care	Carrollton
Americare Plus	Carrollton
Grace N Home Care 4 You	Carrollton
Home Sweet Home	Smithfield
Seniors 1st Home Health Care	Smithfield
HCC Personal Care Inc.	Windsor
MENTAL HEALTH SERVICES	
Western Tidewater Mental Health	Smithfield
Smithfield Christian Counseling	Smithfield
Focused Psychiatric and Mental Health Care	Smithfield
Alliance Family Services, LLC	Carrollton
Wholehearted Counseling	Carrollton
Behavorial Health Group	Carrollton

The US Health Resources and Services Administration has designated Isle of Wight County as a Medically Underserved Area (MUA). MUAs identify geographic areas and populations having too few primary care providers, high infant mortality, high poverty or a high elderly population. These designations can help establish health maintenance organizations or community health centers.

A quick internet search reveals the majority of health care providers are in the Carrollton and Smithfield areas of the County. Only one urgent care facility is located in the County in Carrollton. In order to access a hospital for most of the population of the County located in Smithfield and Carrollton, one must drive to Sentara Obici in Suffolk or Riverside Hospital in Newport News. Both of these hospitals are over a twenty minute drive away.

There are several community-wide service providers in the County, including the following programs:

- The Adult Services Program based in the Isle of Wight County Social Services Department provides assistance programs to adults age 60 years of age or older. Services are designed to assist the adult in remaining in the least restrictive setting and functioning as independently as possible, to establish or strengthen appropriate family and social support systems, and to support the adult in self-determination, provision of assistance through approved providers for disabled or elderly when they are unable to care for themselves. Services to seniors can include:
  - SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) — is a program designed to address food needs by permitting low-income households to obtain a more nutritious diet through the utilization of a plastic debit card to purchase food items.
  - MEDICARE — is a program designed to provide a payment resource, either totally or in part, for the medical needs of low-income individuals who are elderly, blind, or disabled, as well as families or pregnant women.
  - AUXILIARY GRANTS PROGRAMS — a monetary payment program designed to assist aged, blind, or disabled persons residing in homes for adults who have insufficient funds to meet their needs as established-by the state board of social services.
  - GENERAL RELIEF — is a program designed to provide monetary assistance, either ongoing or short term, for items that cannot be provided through other means.
  - ENERGY ASSISTANCE — programs designed to assist low-income households offset the cost of energy as well as purchase or repair heating equipment that poses a threat to the households.
- Senior Services of Southeastern Virginia (SSEVA) is a nonprofit organization that provides services targeted to older residents in Chesapeake, Franklin, Norfolk, Portsmouth, Suffolk, Virginia Beach, and Isle of Wight and Southampton counties. Senior Services receives funding from federal, state, municipal, and private sources. SSEVA provides the following services within Isle of Wight County:
  - I-Ride transit services; and
  - Meals on Wheels.
- Christian Outreach in Smithfield, Virginia is a nonprofit community food pantry.

INCREASING THE RANGE OF HEALTH CARE SERVICES

Being able to provide a wide range of health services for older people is an important component of an age friendly community. Specific forms of health care for older people could include geriatric clinic services, adult day centers, memory care services, mental health services, respite care and training for caregivers, rehabilitation and palliative care. Other health services could include disease prevention and health promotion, home care, and assisted living facilities.

In the list of important services to support aging successfully in the community are preventive screening, physical activity, education on injury prevention, nutritional guidance, mental health counseling. self-help groups or organizations offering sports activities for fitness and rehabilitation, and regular health checks at home.

STRENGTHENING THE COMMUNITY SERVICES NETWORK

One very consistent theme expressed by both community members, service providers, and the Commission on Aging is the need for a wide range of home support and care services to fulfill a variety of needs from helping with shopping and/or providing meals to home visits from doctors and other service providers. Barriers experienced in getting home care services include a general lack of such services, lack of funding, poor organization of services, restrictive eligibility criteria, and high turnover in home care staff.

A service gap also often cited is the need for increased services to protect and care for older people with low incomes. In addition to enhancing basic income support, there is a need to establish or strengthen shelter options for homeless and destitute older people and people who have been abused; meals services and programs; discounts on utilities for people with low incomes; registers of older people living alone; assistance in obtaining benefits and with health care costs.

Another theme expressed in the survey was a suggestion to use volunteers to help fill gaps in providing community services. More volunteers could assist older people to deliver social services and home care, to provide transportation for shopping and appointments, or simply to walk the pets of older people who are no longer able to do so themselves. Suggested sources of voluntary help are the “50+” associations of young retirees, students in social and health services, and school age children. Strong voluntary networks are easier to mobilize in established communities where people feel socially connected.



IMPLEMENTATION STEPS

The following is list of policy recommendations and implementation actions to begin to improve the health care and community service needs for all ages and ability levels.

1. Improve the accessibility of health services.

If services are not known about, they are not used. Better advertising of local health services, educating older people on available services, coordination of information, and health service telephone hotlines and website information are suggested as possible solutions.

Services that are far away or difficult to reach can be barriers to obtaining health care. Following the recommended actions in the transportation focus area of this Plan would increase mobility options in the County and access to healthcare services.

2. Establish a full-time livable community coordinator position to increase availability of information, educational programs, and coordinate volunteer efforts.

This position could serve as a central point of contact for information on available senior health care and community support services as well as provide assistance to those in need of locating these services. In addition, the coordinator could assist in developing educational programs on preventative health care topics, home maintenance, and coordinate the efforts of volunteer groups. An important task for this position would be the distribution of information easily accessible through a variety of formats, such as a regular newspaper column, website, or hard copy brochures.

3. Establish a regular working group of community service providers, health care professional representatives, community stakeholders and staff to identify specific gaps in the County's available senior and special need health care services.

An ongoing working group of people who regularly serve or use senior health care and community services in the County can share information and help identify ongoing service gaps and potential funding sources to improve these services, especially for low or moderate income individuals. Their findings could inform the budget discussions of organizations who provide grants or regular funding in support of these services.

4. Centralize and expand programs and services to citizens to enable them to remain in their homes.

The County should explore the appropriate agency to coordinate an expanded community outreach program, such as the existing companion provider program managed by the County's Department of Social Services. This program helps senior and special needs persons perform daily activities such as remembering to take medications, cooking, doing laundry and performing other household chores associated with independent living. Expansion of this program would entail providing additional funding and adequate staffing. Other services could include an adult daycare program.

FOCUS AREA 3

Transportation Access



When thinking about their senior years, most of the 2021 Study on Aging survey participants chose being able to live independently as their top priority. Being close to family and friends and the ability to stay in their current neighborhood ranked second and third in order of priority.

OBJECTIVE: The County should expand its range of safe, dependable, and affordable transportation options that are alternatives to driving, which promote independence, facilitate employment and educational opportunities, and foster social engagement.

This component of the Plan on Aging serves as an implementation tool for the following policies of the County's Comprehensive Plan, *Envisioning the Isle*:

- Identifies the locations and demands of the elderly and low income populations of the County to inform transit decisions.
- Encourages the development of a range of housing choices near major activity centers that provide employment, shopping, medical offices, schools, and recreation areas creating increased accessibility in meeting daily needs.
- Supports life-long learning by increased access to schools, libraries, continuing and higher education programs, community-based education programs, and recreation programs for all age groups.

When thinking about their senior years, most of the 2021 Study on Aging survey participants chose being able to live independently as their top priority. Being close to family and friends and the ability to stay in their current neighborhood ranked second and third in order of priority. Access to different mobility options is a key component to the ability to stay in someone's current home and community as they age, and driving no longer remains an option to meet daily needs.

As noted earlier, the US Census projects that nearly 20% of the County's population in 2019 would be 65 years old or older. This represents 7,348 people out of the County's total 2019 projected population of 37,109 people (US Census Bureau). When looking at a map of the County's 2010 census tracts, the majority of the County's senior population resides in the Carrollton and Smithfield areas, followed by the Windsor and Camptown areas. Due to the County's historic rural development pattern, many members of the County's senior population live in remote areas that require vehicular transportation to meet daily needs, such as shopping for groceries or going to a medical appointment. If a senior or disabled person is no longer able to drive, this person must rely on a caregiver, public transit, or a private service to meet their transportation needs.

The following alternative transportation options are currently available in Isle of Wight County for people who cannot drive:

1. Senior Services of Southeastern Virginia I-Ride fixed route public transit;
2. SSSEVA on demand service for medical visits available with advanced reservation;



Toronto's Self-Driving Shuttle Bus

3. Virginia Department of Medical Assistance Services for medicaid members available with advanced reservation; and
4. Private Medical Transport Services.

The map below ranks the County's census tracts by number of people aged 65 years or older as well as illustrates the location of existing public transit routes and public sidewalk and trail connections not internal to residential neighborhoods. The map also identifies activity centers in the County to include medical offices, shopping centers, government offices, schools and libraries. As the map illustrates, existing public transit routes and pedestrian connections do not serve areas with the highest number of seniors or provide connections to all activity centers that provide services needed by seniors.

When it came to ranking priorities for future transportation access, most survey respondents felt that expanding services for people who need assistance should be the top priority. The second highest priority chosen is repairing existing roads and bridges. Adding sidewalks and expanding mass transit services tied as the third priority.

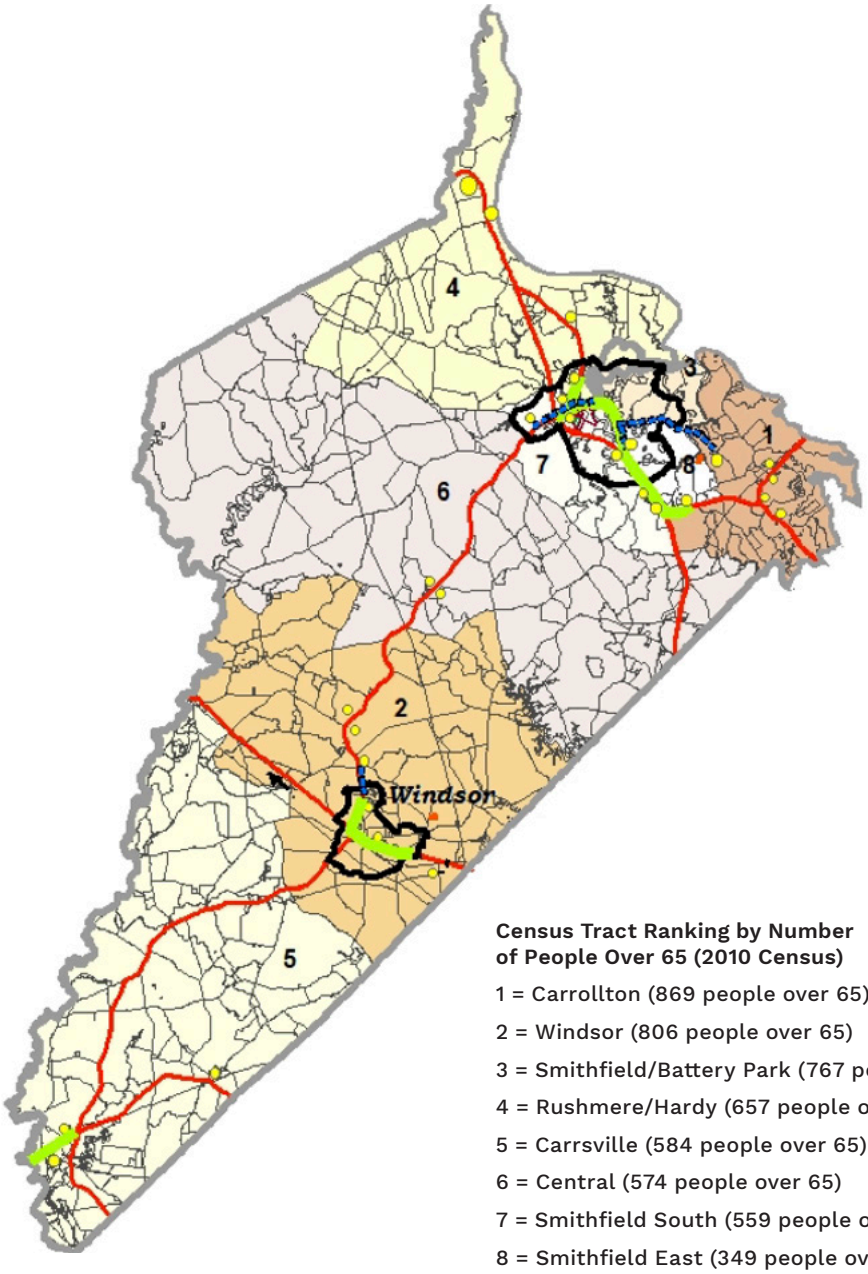
CREATING GOOD MOBILITY

Good mobility can be defined as one's ability to move at will. To ensure good mobility and access to all of the opportunities that the County has to offer, a person needs to be able to get to them. Seniors, as well as others who may have some form of mobility impairment, sometimes find it difficult to access to County services, recreational opportunities and social engagements due to the inability to drive, bicycle or walk, or due to the lack of public transit options.

Developing a good system of mobility options is an essential component for ensuring a high quality of life for seniors and others with mobility challenges. Increasing fixed routes for existing transit, enabling smart mobility options, and expanding the County's fledgling multipurpose trail system are all ways to implement this system, but all face both financial and resource challenges for both County administration and the community itself.

IRIDE: EXPAND THE COUNTY'S EXISTING TRANSIT SYSTEM

IRide recently began a fixed route service in the Town of Windsor and includes a portion of the Camptown area in its Franklin fixed route . The County should include funding for an expanded route to serve more of the Carrollton area where the majority of both the County's general and senior population reside. In order to continue to expand IRide's fixed route system, the Isle of Wight community must establish the provision of public transit as a priority in both its long range and capital improvement plans with a dedicated funding source.



Census Tract Ranking by Number of People Over 65 (2010 Census)

1 = Carrollton (869 people over 65)

2 = Windsor (806 people over 65)

3 = Smithfield/Battery Park (767 people over 65)

4 = Rushmere/Hardy (657 people over 65)

5 = Carrsville (584 people over 65)

6 = Central (574 people over 65)

7 = Smithfield South (559 people over 65)

8 = Smithfield East (349 people over 65)

Activity Center (includes medical, shopping, school, employment center, recreation, or government offices)

I Ride Fixed Route

Sidewalk/Trail Connection



An Image of an autonomous vehicle.

RIDE SHARE: VOLUNTEER BASED

This innovative program is currently found in larger municipalities which can serve as models in creating one in Isle of Wight County. Although the initial costs of establishing such a program would be minimal for donated vehicles, the larger challenge includes the ongoing maintenance of such a program to ensure its success and continued reliability, including volunteer recruitment, background checks, training, fuel, vehicle maintenance, insurance costs, and establishing an easily accessible scheduling platform.

SMART MOBILITY

The advent of widespread smart phone usage has opened the door to new possibilities of accessing on demand mobility services. The lower usage rate of smart phone technology and its expense continues to be a barrier to access for both seniors and lower income socioeconomic groups. In order to take advantage of smart mobility options, broadband networks must be readily available and included in the County's future infrastructure plans.

MULTIPURPOSE TRAIL

The County recently inaugurated its first four mile multipurpose trail that links downtown Smithfield with Nike Park, a regional community park in Carrollton. This trail provides a link for both bike and pedestrian users to existing neighborhoods via existing sidewalks to the recreational opportunities located at the park. It is the County's hope to expand this trail along the new, future Nike Park Extended Parkway that will link Nike Park to Route 17.

The construction of this trail continues the implementation of the County's Master Bicycle and Pedestrian Master Plan first adopted in 2008. Now that this segment is complete, the County should establish a priority list for the construction of the remaining segment of the trail system. Challenges for future implementation include financing, permitting, and continued maintenance of the trail system. Each new segment of the trail brings with it new maintenance responsibility and associated new operational costs for the County's

Parks and Recreation department. The County should include estimates for operational costs to be included in the department's operating budget when new segments of the trail are constructed.

IMPLEMENTATION STEPS

The following recommended actions would increase mobility options in the County:

1. Increase local funding to expand the existing I-Ride service to provide additional routes to serve areas with the highest senior population and nearby activity centers to better meet daily needs;
2. Identify and expand existing volunteer networks that provide free transportation to seniors for medical and senior center visits utilizing surplus County-owned vehicles for immediate needs;
3. Incorporate smart mobility concepts into future road improvements to capitalize on technological improvements such as driverless vehicles, on demand services, and to accommodate future public transit needs, such as including broadband capabilities in public right of ways as improvements are made; and
4. Continue to support the expansion of the County's multipurpose trail system that connects residential areas to activity centers with shopping, medical, employment, educational, and recreational opportunities.



FOCUS AREA 4

Housing Choice



Most participants in the March 2021 community survey expected their quality of life to remain the same as they aged, and most participants planned to stay in the County for the next five years or longer.

OBJECTIVE: The County should provide a range of safe housing options that promotes independence and aging in place through market rate units, subsidies, and appropriate design features such as universal design, visitability, energy efficiency, and use of innovative home features.

By including recommendations to improve housing affordability and choice, this study can help to implement several policies of the County's Comprehensive Plan, Envisioning the Isle, including:

- Identifying regulatory changes that provide opportunities for housing for persons with special needs in proximity to supporting community services and activities;
- Reviewing and revising regulations to support housing types that allow the elderly to remain in their community as their needs change;
- Increasing opportunities within the development service districts (DSDs) for residences to be in close proximity to retail, employment, and public facilities; and
- Identifying possible incentives to encourage the development of a range of housing choices near major activity centers such as employment, commercial areas, schools, and recreation areas.

The County's overall population is a stable one, and many choose to live here long-term for its superior quality of life. Most participants in the March 2021 community survey expected their quality of life to remain the same as they aged, and most participants planned to stay in the County for the next five years or longer. Those who chose to participate in the survey owned their own home and feel their neighborhoods are either good or excellent. At the same time, most survey participants were either somewhat or very concerned about their ability to live independently and remain financially secure as they aged. What these survey results reveal is the importance for the community to provide secure housing, including for the senior and disabled homeless population.

When thinking about housing in their senior years, most survey participants chose being able to live independently as their top priority. Being close to family and friends and the ability to stay in their current neighborhood ranked second and third in order of priority. Affordable housing ranked fourth in the top five priorities that respondents chose for Isle of Wight County to better serve its growing senior population.

BACKGROUND

Homeownership in the County remains high relatively to the rest of the nation since the 2010 Census. According to the 2019 American Community Survey, the majority, or approximately 75.8%, of all household units in the County were owner-occupied. This

represents a decline from 81.1% of units reported as owner-occupied in the 2010 decennial census. This number reflects the downturn in homeownership as a result of the 2008 financial crises as well as the growing number of rental units as a proportion of total housing units in the County. Although the recession negatively impacted employment and the ability of many people to afford home ownership, the overall percentage of the County's population living below poverty has matched the US average of 10.5% in 2019. Approximately 5.3% of the County's 6,813 people who are 65 years and older fall below this Census- defined poverty threshold as of the 2019 ACS survey.

Faced with high housing costs, less affluent seniors often struggle to pay for expenses such as food and health care. As a person ages and their income stream decreases, single family home ownership can become a burden due to the costs and physical requirements of home maintenance responsibilities. In addition, many existing homes in the County lack one or more universal design features that enable people to remain in their home, if they experience a physical disability. A "universal design feature" can be defined as an adaptation, such as a ramp or wider doorway, that enables adults to live safely and independently at home. For new homes, universal design features can include zero step entries, single story layouts, wheelchair accessible shelves, counters, and cabinets, and lever door handles, to name a few examples.

Increasing housing options available to older adults in the County at a variety of price points requires action from local officials as well as the housing industry. Relying on private market forces alone cannot adequately address the County's need for more affordable and livable housing.

HOUSING AFFORDABILITY

The average median value of a home in the County is $266,800 for both new and existing homes. The average sales price of a new single family home in the County in 2019, however, is $328,484. In order to afford a mortgage for the average new single family home in the County, the minimum household income should be approximately $59,486 based on today's mortgage rate of 3.02%. Popular websites such as bankrate.com advise that no more than 28% of gross income should be devoted to housing costs, and no more than 36% of gross income should be devoted to total debt service, including housing. The 2019 average rental rate in the County was $1,045 which would be deemed affordable for a household with a minimum annual income of $44,786. For newer rental units in the County, the rent for an average three bedroom apartment can be as high as $1,350 per month.

Although the 2019 ACS estimates that the average household income in Isle of Wight was $73,991, the data also shows that 32% of total households in the County received retirement income with an average value of $34,131. Approximately 37% of the total number of households received social security income in 2019 with an average value of $20,950. For households that are fortunate enough to receive both retirement and social security income, the average income for a retired household is $55,081. Using the common rule of thumb that affordable housing costs should not consume more than 28% of a household's gross annual income, the average monthly household housing allowance should equal no more than $1,285 per month. The average senior household income could almost qualify as "low income" according to standards set by the US Department of Housing and Urban Development Department (HUD).

HUD has oversight over federal housing assistance programs and defines low, very low and extremely low income limits for different areas across the country based on the median family income for the metropolitan statistical area (MSA). Isle of Wight County

FY 2019 INCOME LIMIT AREA	MODERN FAMILY INCOME EXPLANATION	FY 2019 INCOME LIMIT CATEGORY	PERSONS IN FAMILY 1	2	3	4	5	6	7	8
VIRGINIA BEACH, NORFOLK, NEWPORT NEWS, VA-NC HUD METRO FMR AREA	$79,300	Very Low (50%) Income Limits ($) Explanation	27,800	31,750	35,700	**39,650**	42,850	46,000	49,200	52,350
		Extremely Low Income Limits ($)* Explanation	16,700	19,050	21,450	**25,750**	30,170	34,590	39,010	43,430
		Low (80%) Income Limits ($) Explanation	44,450	50,800	57,150	**63,450**	68,550	73,650	78,700	83,800

is in the Virginia Beach-Norfolk-Newport News MSA. The table below shows the 2019 income limits used by HUD to determine eligibility for housing assistance programs.

Although the average senior household may not be considered low income, it is sometimes ideal for these households to downsize and live closer to services, such as grocery stores and medical facilities, which may mean more expensive housing depending on the area. Sometimes existing homes need to be retrofitted to make them safer and enable their inhabitants to continue to live independently for as long as possible. These home repairs and basic maintenance can be cost prohibitive to households with limited income. Assistance with housing costs, whether for rent, a mortgage, or to make modifications to existing homes, can be obtained through local, state, and federal housing programs to make them more affordable.

The County currently offers housing assistance through the Suffolk and Franklin Redevelopment and Housing Authorities which administer these programs on behalf of the County. Although there are Community Development Block Grants available for emergency housing repair and accessibility grants, the County does not currently manage or have access to these funds.

The County also receives housing rehabilitation and first-time homebuyers down payment assistance through HUD's HOME Investment Partnerships Program (HOME). The HOME program provides grants to states and localities that communities use to fund a wide range of activities including building, buying, and/or rehabilitating affordable housing for rent or homeownership. The County participates in the Tidewater Home Consortium coordinated by the City of Suffolk. Each year, the state distributes HOME funds to the Consortium that allocates the funds evenly between its member localities. Although HOME funds may be used for home repairs, this program does require that the entire dwelling meet building code requirements at the time of application, frequently resulting in total home replacement which can exhaust funding reserves, thereby limiting the number of people that benefit from this program.

Isle of Wight also operates an exemption program that provides relief for real estate property taxes. Senior citizens and permanently and totally disabled persons who meet the eligibility criteria are granted relief from all or part of their real estate taxes.

HOUSING LIVABILITY

Housing affordability is only one aspect of providing age friendly communities. Incorporating design features in housing units and throughout the community will help residents remain lifelong community members as they age. Another way to describe an age friendly house refers to a term known as “visibility.” The website visibility.org uses the term to describe a single-family or owner-occupied home designed in such a way that it can be lived in or visited by people who have trouble with steps or who use wheelchairs or walkers.

A house is visitable when it meets three basic requirements:

- one zero-step entrance;
- doors with 32 inches of clear passage space; and
- one bathroom on the main floor you can get into in a wheelchair.

The County’s current zoning ordinance does not include requirements for a minimum number of universal design or visibility features for new housing developments, including age-restricted communities. County policies also do not presently include incentives for including affordable units or universal design features in new housing developments.

HOUSING DIVERSITY

The County currently allows a mix of residential use types in several designated mixed use and planned residential zoning districts as a matter of right. These existing ordinances, however, should be examined for their effectiveness over the years in providing a mix of housing types at various price points. The County should consider other tools such as form-based codes that incorporate a mix of housing and building types to support people of all ages and incomes.

In 2007, the County completed a “Workforce Housing Report,” which included recommendations for a workforce housing unit ordinance which included incentives for residential developers to include a certain number of workforce units in exchange for a density bonus to protect and enhance the developers profit margin. Other possible incentives include waiving review fees and expedited review times. Although the County did undertake several recommendations of the study such as permitting accessory apartments and the renting of up to two rooms in an owner-occupied home, the County ultimately did not adopt a workforce housing unit ordinance.

Accessory dwelling units can also increase the supply of affordable homes, since they are generally located on the same property as a larger principal dwelling and are typically used as rental units. They can also provide a helpful supply of senior housing for people who wish to place their elderly family members in a location that is close to them and affordable. The County already permits accessory apartments by right in some residential districts, but this program could be expanded to all residential zoning districts.



IMPLEMENTATION STEPS:

The following is list of policy recommendations and implementation actions to begin to meet the population's housing needs for all ages and ability levels.

1. **Create more lifelong livable housing options.**

Encourage developers to incorporate universal design elements, energy efficient features, and range of unit sizes in future residential development by including requirements in the County's Zoning Ordinance. These features will help to enable people to live in their homes longer as they age as well as make them more affordable by reducing utility costs.

2. **Allow for multigenerational housing and increase affordable housing supply by allowing accessory dwelling units in more residential zoning districts.**

Revise the zoning ordinance to permit accessory dwelling units in all residential zoning districts.

3. **Increase the ability for people to stay in their homes and neighborhoods through retrofitting and rehabilitating existing housing.**

The County does have limited funds for the HOME housing rehabilitation for situations that meet narrow program qualification criteria. The County should create its own separate program that is dedicated to home repair or modification to allow seniors to live in their existing homes longer, by pursuing CDBG grant funds that can be used for emergency home repair and accessibility modifications.

4. **Zoning regulations should be written to allow homes to be built in close proximity to the services that enable people to remain independent as they age.**

The County's existing zoning ordinance currently permits mixed use development in certain districts at higher densities. An analysis should be performed to refine these regulations to further encourage mixed use development in the County's designated mixed use activity centers as shown on the County's future recommended land use map in the Comprehensive Plan, such as through a form based code or requiring a maximum separation between affordable or senior targeted housing units and nearby services.

5. **Implement an affordable dwelling unit ordinance.**

Adopting a workforce dwelling unit ordinance could help to increase the supply of more affordable housing for persons of all ages by offering incentives to private developers to provide these types of units. Such an ordinance could help define workforce unit criteria, income qualifications, and possible incentives.

FOCUS AREA 5

Education, Employment and Engagement



This plan has explored how a supply of safe, affordable housing types, transportation options, access to health care services, and recreational opportunities can improve the quality of life for all County residents.

OBJECTIVE: The County should ensure employment opportunities for all ages, promote a life-long learning environment, and provide multiple opportunities for economic, social and civic engagement.

This plan has explored how a supply of safe, affordable housing types, transportation options, access to health care services, and recreational opportunities can improve the quality of life for all County residents. These same community features can help residents better find and maintain employment, take advantage of educational opportunities and attend social and civic events. The whole community in turn benefits from increased levels of local wealth, more spending in the local economy, and a better-informed citizenry.

Increasing employment, education and social engagement opportunities for people of all ages and abilities in the County implements the following County Comprehensive Plan policies:

- Continue to facilitate nonresidential development to grow and diversify our economy.
- Improve public access to high-speed internet networks.
- Support early childhood education and life-long learning through schools, libraries, continuing and higher education programs, community-based education programs, and recreation programs for people of all ages.
- Enhance Isle of Wight's quality of life to retain and recruit a highly skilled workforce for the community.
- Improve public access to high-speed networks.

BACKGROUND



Photo credit: BLS.gov

According to a 2019 report issue by the BBC, "How Elders Can Reinvigorate the Workforce," more than one in ten workers will be older than 75 by 2026, and roughly three in ten workers will be between the ages of 65 and 74. A November 2020 Brookings Institute report, "Policies to Improve Workforce Services for Older Americans," attributes the rising numbers of older workers in the American economy to several factors, including increased longevity, better health, the desire to remain active, an increase in the eligibility age for claiming full Social Security benefits, and stagnant wages in recent decades for those at the bottom and middle of the earnings distribution, leaving a larger share of Americans without adequate retirement savings.

Despite the reasons for remaining in the job market, there are many advantages to tapping into this large, experienced segment of the local workforce. The same BBC article suggests that age diverse teams are more productive than those of similar ages, suggesting that both older and younger workers learn from each other – benefiting everyone. Older workers also tend to earn more, thus increasing spending levels and invigorating the economy and raising business activity, such as job creation, even further.



Barriers to increasing employment opportunities for older workers, according to the Brookings Institute study, is that these workers' skills may be outdated, making them less attractive to employers, as well as lack of current job search knowledge and skills. Workforce training and educational opportunities can help to overcome these challenges as well as raise the local overall quality of life. Once in place, these resources can enable people to continue to live independently and foster residents' engagement in the community's civic and social life.

IMPLEMENTATION STEPS

1. ENCOURAGE THE INTERGENERATIONAL USE OF PUBLIC FACILITIES FOR A COMMUNITY EDUCATION PROGRAM — The County should establish a program of rotating educational topics such as health, personal finance, job search, keyboarding, interviewing, coding, or home maintenance. These programs should be held at public facilities around the County at different times that are also accessible by public transit.
2. CONTINUE TO EXPAND THE COUNTY'S BROADBAND NETWORK — The County established the Broadband Task Force in 2020 to explore ways to expand its current network to underserved areas of the County. The County could establish a partnership with another service agency such as SSEVA or the Blackwater Public Libraries, to provide access to computers and the internet that is also accessible by public transit. Similarly, these services could be hosted by public facilities around the County that are also accessible by public transit. Investment in technology can translate into increased revenues for the locality, and higher productivity can result in higher wages for workers which are then spent in the local economy.
3. CONSIDER MULTIPLE OUTREACH METHODS TO INCREASE COMMUNITY ENGAGEMENT IN PUBLIC POLICY DECISION MAKING — Although modern communication and commerce are becoming increasingly digital, County leaders and staff should be aware that not all communication platforms are available to everyone in the community. Public surveys and opportunities for input should be provided in several different formats to ensure equitable access to all ages and abilities.



BACKGROUND:

The matters attached to this Board report are included as a means of providing information to the Board relative to matters of interest. These items do not require any action by the Board.

BUDGETARY IMPACT:

None

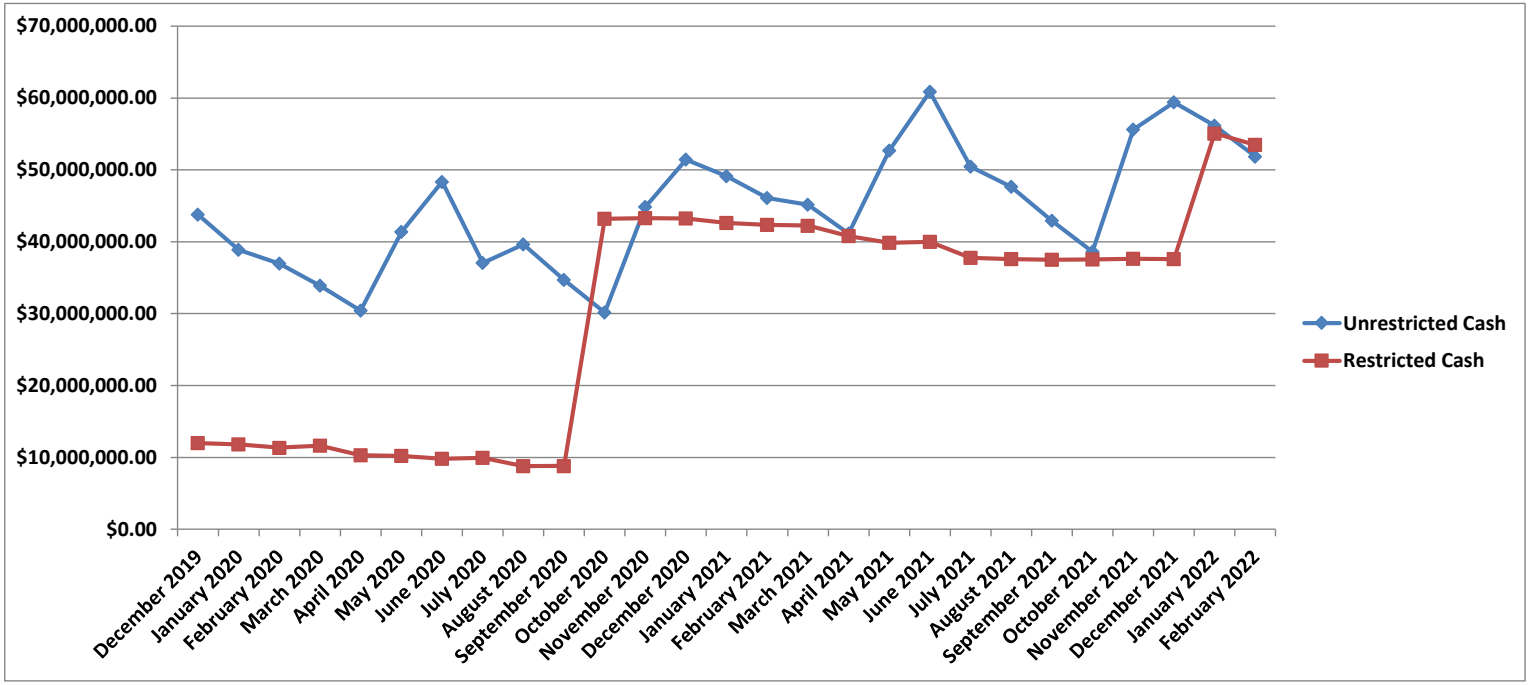
RECOMMENDATION:

For the Board's information.

ATTACHMENTS:

Description	Type	Upload Date
Cash Position - February 2022	Backup Material	5/12/2022
Statement of Treasurers Accountability - February 2022	Backup Material	5/12/2022
Incidents by Zone Map - April 2022	Backup Material	5/13/2022
Incidents by Zone Data - April 2022	Backup Material	5/13/2022
Station Activity Report - April 2022	Backup Material	5/13/2022
Website Statistics - April 2022	Backup Material	5/3/2022
Museum Report - April 2022	Backup Material	5/3/2022

CASH POSITION



COUNTY OF ISLE OF WIGHT



STATEMENT OF THE TREASURER'S ACCOUNTABILITY

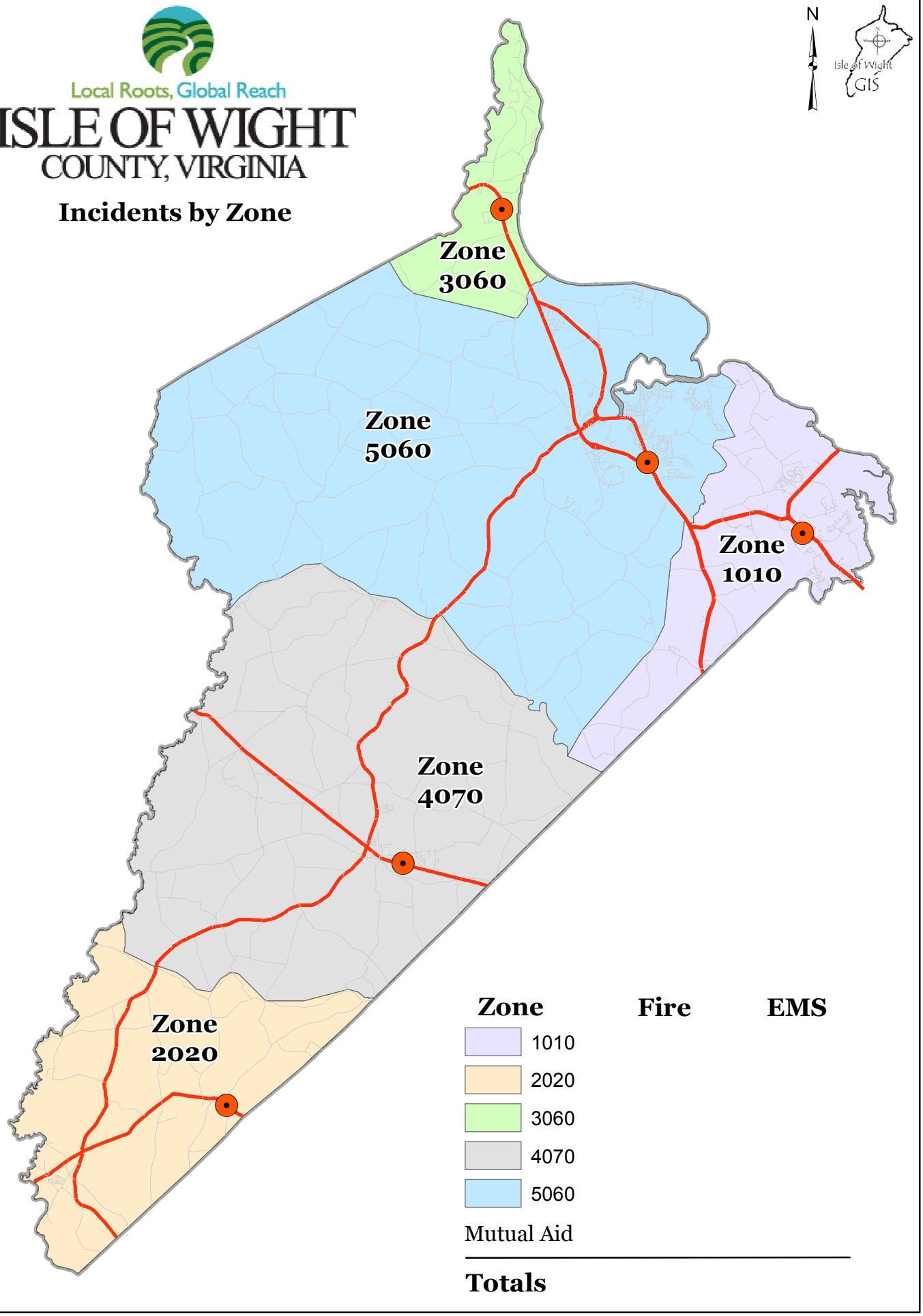
February 2022

Institution	Instrument	Rate	Earnings Credit	Balance	Previous Year Balance
	Cash				
	Petty Cash			$2,050.00	$2,050.00
SUB TOTAL					
	Checking Accounts				
Bank of America	General Fund Checking		0.20%	$5,716,543.88	$ 5,143,839.37
Bank of America	School General Fund Checking		0.20%	$4,888,608.31	$ 8,272,261.84
Bank of America	DSS General Fund Checking		0.20%	$2,594,848.54	$ 2,453,581.44
Bank of America	County Payroll Account		0.20%	$353,100.46	$ 80,000.54
Bank of America	School Payroll Account		0.20%	$810,518.53	$ 746,271.72
Bank of America	DSS Payroll Account		0.20%	$0.00	$ 233.34
SUB TOTAL				**$14,363,619.72**	**$16,696,188.25**
	Investments				
Bank of America	Emergency Fund Checking	0.18%		$2,601.67	$ 2,596.99
LGIP	General Fund Investment	0.24%		$24,163,204.15	$ 4,151,276.50
VIP	VIP Long Term	0.25%		$79,103.35	$ 81,476.78
VIP	VIP Short Term	0.25%		$13,253,757.89	$ 24,233,755.62
SUB TOTAL				**$37,498,667.06**	**$28,469,105.89**
	Restricted Funds				
Bank of America	School Escrow Fund	0.18%		$0.00	$0.00
Bank of America	General Recoupment Funds	0.00%		$22,878.50	$27,005.72
Bank of America	Special Welfare Funds	0.00%		$0.00	$0.00
Bank of America	Special Welfare Donated Funds	0.18%		$7,407.77	$12,188.63
Bank of America	Special Welfare Child Support	0.19%		$352.01	$201.97
Bank of America	School's Camp Foundation	0.18%		$24,907.19	$24,862.40
Farmers Bank	School Food Service Funds	0.20%		$740,336.30	$670,977.25
BNY Mellon	Pace Funds	0.00%		$2,732,007.51	$2,738,584.55
Bank of America	County Escrow Fund	0.18%		$6,281.50	$0.00
SUB TOTAL				**$3,534,170.78**	**$3,473,820.52**
	Bond Proceeds--Invested in SNAP				
	2010B Bond Interest	0.00%		$0.00	$ 32.81
	2010C Bond Interest	0.00%		$0.00	$ 35.79
	2011A Bond Interest	0.00%		$0.00	$ 41.88
	2011B Bond Interest	0.00%		$0.00	$ 20.77
	2012 Bond	0.00%		$0.00	$ 1,262,336.58
	2012 Bond Interest	0.00%		$0.00	$ 114,697.49
	2012 Public Utility Bond	0.31%		$1,873,229.55	$ 1,946,529.87
	2012 Public Utility Bond Interest	0.31%		$333,782.37	$ 331,618.60
	2016 Bond	0.31%		$355,264.97	$ 364,938.28
	2016 Bond Interest	0.31%		$200,392.36	$ 199,849.57
	2017 Bond	0.00%		$0.00	$ -
	2017 Bond Interest	0.00%		$0.00	$ 28.35
	2020A Bond	0.31%		$28,641,303.18	$ 34,532,327.41
	2020A Bond Interest	0.31%		$51,739.40	$ 21,441.84
	2022 GO Bond	0.31%		$18,509,158.87	$ -
	2022 GO Bond Interest	0.31%		$5,134.71	$ -
SUB TOTAL				**$49,970,005.41**	**$38,773,899.24**
TOTAL OF ALL FUNDS				**$105,368,512.97**	**$87,415,063.90**

Local Roots, Global Reach

ISLE OF WIGHT COUNTY, VIRGINIA

Incidents by Zone



ISLE OF WIGHT

Incident by Zone

Agency: IWFR, Event date/Time range: 04/01/2022 00:00:00 - 04/30/2022 23:59:59

Station/Beat Code	Nature Code	Self Init	CFS	Total	% Total	Avg Disp Time	Avg Resp Time	Avg Scene Time	Total Call Time	Avg Call Time
1010	ACCIDENT UNKNOWN INJURIES	0	11	11	10%	0:01:39	0:04:04	0:36:22	7:43:01	0:42:06
	ACCIDENT WITH ENTRAPMENT	0	1	1	1%	0:00:34	0:04:07	1:00:22	1:05:03	1:05:03
	ACCIDENT WITH INJURIES	0	3	3	3%	0:01:16	0:03:47	0:33:05	1:54:25	0:38:08
	ALARM - MEDICAL	0	1	1	1%	0:02:13	0:14:36	0:05:28	0:22:17	0:22:17
	ALLERGIC REACTIONS	0	1	1	1%	0:01:32	0:04:58	0:49:51	0:56:21	0:56:21
	ATTEMPT SUICIDE	0	1	1	1%	0:01:30	0:11:53	0:51:13	1:04:36	1:04:36
	BITE	0	1	1	1%	0:01:05	0:07:15	0:57:42	1:06:02	1:06:02
	BLEEDING/HEMORRHAGING	0	5	5	5%	0:01:20	0:04:43	0:39:17	3:46:44	0:45:21
	CARDIAC ARREST	0	1	1	1%	0:02:58	0:02:26	0:38:07	0:43:31	0:43:31
	DIABETIC PROBLEMS	0	1	1	1%	0:01:41	0:06:29	1:31:44	1:39:54	1:39:54
	DIFFICULTY BREATHING	0	9	9	8%	0:01:39	0:06:15	0:44:27	7:51:16	0:52:22
	FALLS AND RELATED INJURIES	0	5	5	5%	0:01:14	0:07:40	1:02:23	5:56:30	1:11:18
	HEAD INJURY	0	3	3	3%	0:01:26	0:03:42	0:12:34	0:53:07	0:17:42
	HEART PROBLEMS	0	2	2	2%	0:01:06	0:08:52	0:49:51	1:59:38	0:59:49
	LIFT ASSIST	0	6	6	6%	0:01:54	0:10:40	0:15:53	2:50:46	0:28:28
	OBSTETRICS	0	1	1	1%	0:00:46	0:00:00	0:00:00	0:08:44	0:08:44
	OVERDOSE	0	3	3	3%	0:01:23	0:07:47	0:55:41	3:14:35	1:04:52
	PAIN	0	4	4	4%	0:01:36	0:08:59	1:12:57	5:34:08	1:23:32
	PSYCHIATRIC PROBLEMS	0	3	3	3%	0:00:31	0:08:42	0:45:11	2:05:45	0:41:55
	SICK / ILL OR RESCUE	0	17	17	16%	0:01:30	0:07:33	0:52:09	16:25:19	0:57:58
	STROKE	0	3	3	3%	0:01:09	0:08:00	1:08:54	3:54:11	1:18:04
	UNCONSCIOUS OR FAINTING	0	6	6	6%	0:01:29	0:06:36	0:26:40	2:58:20	0:29:43
	Subtotals for EMS	**0**	**88**	**88**	**81%**	**0:01:26**	**0:07:06**	**0:46:11**	**74:14:13**	**0:51:43**
	ARCING WIRES DOWN POWER LINES	0	1	1	1%	0:01:04	0:09:30	1:24:59	1:35:33	1:35:33

Station/Beat Code	Nature Code	Self Init	CFS	Total	% Total	Avg Disp Time	Avg Resp Time	Avg Scene Time	Total Call Time	Avg Call Time
	ASSIST BOATER	0	1	1	1%	0:01:09	0:10:34	1:16:55	1:28:38	1:28:38
	BRUSH FIRE	0	3	3	3%	0:01:21	0:06:05	0:15:05	1:07:35	0:22:32
	CAR FIRE	0	2	2	2%	0:00:42	0:03:17	1:22:44	2:53:25	1:26:43
	CARBON MONOXIDE ALARM	0	1	1	1%	0:01:19	0:05:39	0:02:43	0:09:41	0:09:41
	FIRE ALARM	0	1	1	1%	0:01:37	0:04:58	1:04:19	1:10:54	1:10:54
	FIRE DEPT COMMUNITY RELATIONS	2	0	2	2%	0:00:01	0:00:00	1:36:35	3:13:12	1:36:36
	FIRE OTHER NOT LISTED	0	4	4	4%	0:01:21	0:05:46	0:36:05	2:52:50	0:43:13
	RUPTURE GAS LINE	0	1	1	1%	0:01:08	0:06:33	0:42:39	0:50:20	0:50:20
	SMELL OF GAS INSIDE/OUTSIDE	0	1	1	1%	0:01:22	0:03:34	0:06:52	0:11:48	0:11:48
	SMELL OR ODOR OF SMOKE	0	1	1	1%	0:00:29	0:03:29	0:01:47	0:05:45	0:05:45
	STRUCTURE FIRE	0	3	3	3%	0:01:17	0:03:25	0:26:30	1:08:54	0:22:58
	Subtotals for FIRE	**2**	**19**	**21**	**19%**	**0:01:04**	**0:05:43**	**0:44:46**	**16:48:35**	**0:50:23**
	Totals for 1010	**2**	**107**	**109**	**100%**	**0:01:18**	**0:06:37**	**0:45:40**	**91:02:48**	**0:51:15**
2020	ABDOMINAL PAIN	0	1	1	4%	0:01:08	0:10:26	1:27:43	1:39:17	1:39:17
	ACCIDENT UNKNOWN INJURIES	0	1	1	4%	0:02:29	0:05:30	0:16:43	0:24:42	0:24:42
	ACCIDENT WITH INJURIES	0	1	1	4%	0:01:38	0:02:42	1:10:31	1:14:51	1:14:51
	ATTEMPT SUICIDE	0	1	1	4%	0:02:28	0:07:21	0:08:14	0:18:03	0:18:03
	BLEEDING/HEMORRHAGING	0	2	2	7%	0:00:42	0:07:24	0:26:38	1:09:29	0:34:45
	CHEST PAIN	0	1	1	4%	0:00:48	0:09:39	0:39:11	0:49:38	0:49:38
	CHOKING	0	1	1	4%	0:00:40	0:13:23	0:09:11	0:23:14	0:23:14
	DIFFICULTY BREATHING	0	2	2	7%	0:01:03	0:10:47	0:42:53	1:49:26	0:54:43
	FALLS AND RELATED INJURIES	0	2	2	7%	0:01:35	0:10:31	0:33:55	1:32:00	0:46:00
	PAIN	0	1	1	4%	0:01:17	0:10:52	0:33:30	0:45:39	0:45:39
	SICK / ILL OR RESCUE	0	4	4	14%	0:02:39	0:09:43	0:51:13	4:14:22	1:03:36

Station/Beat Code	Nature Code	Self Init	CFS	Total	% Total	Avg Disp Time	Avg Resp Time	Avg Scene Time	Total Call Time	Avg Call Time
	STROKE	0	2	2	7%	0:00:36	0:05:59	1:09:11	2:31:32	1:15:46
	WELFARE CHECK	0	1	1	4%	0:00:09	0:11:21	1:02:49	1:14:19	1:14:19
	Subtotals for EMS	**0**	**20**	**20**	**71%**	**0:01:19**	**0:08:54**	**0:42:26**	**18:06:32**	**0:52:39**
	BURNING COMPLAINT	0	1	1	4%	0:02:35	0:04:25	0:01:52	0:08:52	0:08:52
	FIRE ALARM	0	2	2	7%	0:01:06	0:02:24	0:05:29	0:14:19	0:07:10
	FIRE OTHER NOT LISTED	0	3	3	11%	0:01:10	0:13:13	0:11:27	1:17:30	0:25:50
	STRUCTURE FIRE	0	2	2	7%	0:01:10	0:11:08	0:08:10	0:40:55	0:20:28
	Subtotals for FIRE	**0**	**8**	**8**	**29%**	**0:01:30**	**0:07:48**	**0:06:44**	**2:21:36**	**0:15:35**
	Totals for 2020	**0**	**28**	**28**	**100%**	**0:01:22**	**0:08:38**	**0:34:02**	**20:28:08**	**0:43:56**
3060	ACCIDENT UNKNOWN INJURIES	0	2	2	12%	0:02:02	0:03:16	0:50:44	1:52:04	0:56:02
	ALARM - MEDICAL	0	1	1	6%	0:02:50	0:00:00	0:00:00	0:12:21	0:12:21
	BLEEDING/HEMORRHAGING	0	1	1	6%	0:01:56	0:15:20	1:16:53	1:34:09	1:34:09
	CHEST PAIN	0	4	4	24%	0:01:40	0:13:16	1:12:38	5:50:18	1:27:35
	DIFFICULTY BREATHING	0	1	1	6%	0:00:58	0:11:18	1:37:01	1:49:17	1:49:17
	FALLS AND RELATED INJURIES	0	1	1	6%	0:02:22	0:20:01	1:28:20	1:50:43	1:50:43
	FRACTURES OR BROKEN BONES	0	1	1	6%	0:01:22	0:14:15	0:12:33	0:28:10	0:28:10
	OVERDOSE	0	1	1	6%	0:00:30	0:09:49	1:18:37	1:28:56	1:28:56
	PAIN	0	1	1	6%	0:03:08	0:16:57	0:10:08	0:30:13	0:30:13
	PSYCHIATRIC PROBLEMS	0	1	1	6%	0:00:12	0:15:57	0:47:56	1:04:05	1:04:05
	SICK / ILL OR RESCUE	0	1	1	6%	0:01:21	0:11:38	1:16:48	1:29:47	1:29:47
	STROKE	0	1	1	6%	0:00:57	0:15:11	1:13:51	1:29:59	1:29:59
	Subtotals for EMS	**0**	**16**	**16**	**94%**	**0:01:36**	**0:13:22**	**1:02:19**	**19:40:02**	**1:11:46**

Station/Beat Code	Nature Code	Self Init	CFS	Total	% Total	Avg Disp Time	Avg Resp Time	Avg Scene Time	Total Call Time	Avg Call Time
	ARCING WIRES DOWN POWER LINES	0	1	1	6%	0:00:39	0:00:00	0:00:00	0:18:47	0:18:47
	Subtotals for FIRE	**0**	**1**	**1**	**6%**	**0:00:39**	**0:00:00**	**0:00:00**	**0:18:47**	**0:18:47**
	Totals for 3060	**0**	**17**	**17**	**100%**	**0:01:32**	**0:13:22**	**1:02:19**	**19:58:49**	**1:07:42**
4070	ABDOMINAL PAIN	0	4	4	3%	0:01:15	0:06:38	0:41:04	3:15:49	0:48:57
	ACCIDENT UNKNOWN INJURIES	0	9	9	7%	0:01:55	0:05:35	0:38:04	6:50:08	0:45:34
	ACCIDENT WITH ENTRAPMENT	0	3	3	2%	0:00:44	0:02:54	1:33:31	4:51:26	1:37:09
	ACCIDENT WITH INJURIES	0	2	2	2%	0:01:30	0:06:58	1:34:49	3:26:33	1:43:17
	ALARM - MEDICAL	0	2	2	2%	0:01:17	0:08:18	0:05:15	0:29:41	0:14:51
	BACK PAIN (NON TRAUMATIC)	0	1	1	1%	0:01:25	0:11:28	0:05:47	0:18:40	0:18:40
	BITE	0	1	1	1%	0:04:19	0:07:01	0:48:08	0:59:28	0:59:28
	BLEEDING/HEMORRHAGING	1	4	5	4%	0:00:42	0:11:18	0:51:15	5:04:57	1:00:59
	CARDIAC ARREST	0	2	2	2%	0:01:25	0:02:10	0:25:54	0:58:58	0:29:29
	CHEST PAIN	1	3	4	3%	0:00:37	0:05:34	1:21:34	5:44:52	1:26:13
	DIABETIC PROBLEMS	0	6	6	5%	0:01:30	0:07:08	0:47:22	5:36:00	0:56:00
	DIFFICULTY BREATHING	0	14	14	11%	0:01:31	0:12:33	0:43:15	13:22:33	0:57:20
	FALLS AND RELATED INJURIES	0	6	6	5%	0:01:22	0:08:21	0:50:02	5:58:34	0:59:46
	FRACTURES OR BROKEN BONES	1	1	2	2%	0:03:40	0:04:17	1:11:23	2:30:44	1:15:22
	HEAD INJURY	0	1	1	1%	0:00:59	0:14:19	2:09:05	2:24:23	2:24:23
	HEADACHE	0	3	3	2%	0:00:21	0:07:17	0:35:43	2:10:03	0:43:21
	HEART PROBLEMS	0	2	2	2%	0:01:04	0:06:51	0:43:03	1:41:56	0:50:58
	HEAT AND COLD EXPOSURE	2	0	2	2%	0:00:00	0:00:00	0:15:12	0:30:24	0:15:12
	LIFT ASSIST	0	2	2	2%	0:01:26	0:06:30	0:03:40	0:23:13	0:11:37
	MEDIC STANDBY	5	1	6	5%	0:00:11	0:52:13	6:44:27	43:03:33	7:10:36

Station/Beat Code	Nature Code	Self Init	CFS	Total	% Total	Avg Disp Time	Avg Resp Time	Avg Scene Time	Total Call Time	Avg Call Time
	OVERDOSE	0	3	3	2%	0:01:26	0:03:46	1:04:55	2:37:01	0:52:20
	PAIN	1	4	5	4%	0:01:38	0:12:53	0:29:20	3:24:44	0:40:57
	PSYCHIATRIC PROBLEMS	0	2	2	2%	0:00:30	0:40:54	0:29:05	2:20:59	1:10:30
	SICK / ILL OR RESCUE	0	16	16	13%	0:01:33	0:10:22	0:56:04	18:07:59	1:08:00
	STROKE	0	2	2	2%	0:01:26	0:04:44	1:05:52	2:24:03	1:12:02
	UNCONSCIOUS OR FAINTING	1	4	5	4%	0:01:51	0:04:20	0:41:26	3:58:09	0:47:38
	Subtotals for EMS	**12**	**98**	**110**	**89%**	**0:01:25**	**0:10:34**	**1:02:08**	**142:34:50**	**1:11:34**
	BRUSH FIRE	0	1	1	1%	0:02:48	0:11:31	0:07:13	0:21:32	0:21:32
	CAR FIRE	0	1	1	1%	0:00:49	0:06:39	0:02:19	0:09:47	0:09:47
	FIRE ALARM	0	3	3	2%	0:01:21	0:05:47	0:15:26	1:07:42	0:22:34
	FIRE DEPT COMMUNITY RELATIONS	1	0	1	1%	0:00:01	0:00:00	0:58:56	0:58:57	0:58:57
	FIRE OTHER NOT LISTED	0	2	2	2%	0:01:13	0:31:42	0:23:09	0:58:45	0:29:23
	SMELL OF GAS INSIDE/OUTSIDE	0	1	1	1%	0:00:32	0:11:54	0:16:30	0:28:56	0:28:56
	STRUCTURE FIRE	0	4	4	3%	0:03:26	0:03:23	0:27:38	2:17:45	0:34:26
	Subtotals for FIRE	**1**	**12**	**13**	**11%**	**0:01:27**	**0:11:49**	**0:21:36**	**6:23:24**	**0:29:22**
	Totals for 4070	**13**	**110**	**123**	**100%**	**0:01:26**	**0:10:49**	**0:53:32**	**148:58:14**	**1:02:37**
5060	ABDOMINAL PAIN	0	6	6	3%	0:01:43	0:12:42	0:54:27	6:53:08	1:08:51
	ABRASIONS BRUISES ETC	0	4	4	2%	0:00:52	0:05:15	0:22:52	1:55:59	0:29:00
	ACCIDENT UNKNOWN INJURIES	0	6	6	3%	0:01:44	0:04:26	0:43:25	3:58:10	0:39:42
	ACCIDENT WITH INJURIES	0	3	3	1%	0:01:19	0:04:55	0:31:10	1:52:13	0:37:24
	ALARM - MEDICAL	0	4	4	2%	0:01:25	0:08:22	0:04:43	0:55:50	0:13:58
	ALLERGIC REACTIONS	0	1	1	0%	0:00:46	0:00:54	1:02:47	1:04:27	1:04:27
	BACK PAIN (NON TRAUMATIC)	0	2	2	1%	0:01:01	0:11:37	0:54:33	2:14:23	1:07:12
	BITE	0	1	1	0%	0:01:18	0:12:28	0:07:28	0:21:14	0:21:14
	BLEEDING/HEMORRHAGING	0	5	5	2%	0:01:51	0:11:58	1:01:19	6:15:47	1:15:09
	CARDIAC ARREST	0	1	1	0%	0:01:14	0:12:22	0:33:07	0:46:43	0:46:43

Station/Beat Code	Nature Code	Self Init	CFS	Total	% Total	Avg Disp Time	Avg Resp Time	Avg Scene Time	Total Call Time	Avg Call Time
	CHEST PAIN	0	15	15	7%	0:01:27	0:08:58	0:58:19	17:11:13	1:08:45
	CHOKING	0	1	1	0%	0:00:28	0:10:11	0:17:26	0:28:05	0:28:05
	DIABETIC PROBLEMS	0	4	4	2%	0:01:53	0:11:23	1:07:12	5:21:53	1:20:28
	DIFFICULTY BREATHING	0	19	19	9%	0:01:07	0:09:34	0:57:50	21:32:23	1:08:01
	EYE INJURIES	0	1	1	0%	0:01:18	0:11:40	0:42:33	0:55:31	0:55:31
	FALLS AND RELATED INJURIES	0	15	15	7%	0:01:14	0:12:01	0:48:17	15:23:04	1:01:32
	HEADACHE	0	3	3	1%	0:00:16	0:10:09	1:08:01	3:55:20	1:18:27
	HEART PROBLEMS	0	3	3	1%	0:03:20	0:13:15	0:56:05	3:38:03	1:12:41
	LIFT ASSIST	0	10	10	5%	0:01:46	0:12:41	0:18:13	5:26:47	0:32:41
	MEDIC STANDBY	1	1	2	1%	0:00:46	0:00:00	4:19:27	8:39:40	4:19:50
	OVERDOSE	0	4	4	2%	0:02:07	0:08:26	0:57:40	4:32:53	1:08:13
	PAIN	0	8	8	4%	0:01:15	0:09:29	1:01:11	9:35:19	1:11:55
	POSSIBLE DOA	0	2	2	1%	0:01:08	0:08:17	2:36:08	5:31:05	2:45:33
	PSYCHIATRIC PROBLEMS	0	2	2	1%	0:01:21	0:10:59	0:03:37	2:10:33	1:05:17
	SEIZURE	0	7	7	3%	0:01:24	0:11:51	0:42:07	6:27:40	0:55:23
	SICK / ILL OR RESCUE	0	43	43	20%	0:01:45	0:10:57	0:49:10	44:21:02	1:01:53
	STROKE	0	6	6	3%	0:01:27	0:08:22	0:56:41	6:38:57	1:06:30
	SUICIDE	0	1	1	0%	0:02:32	0:16:42	0:11:31	0:30:45	0:30:45
	UNCONSCIOUS OR FAINTING	0	10	10	5%	0:01:32	0:06:18	0:53:13	9:19:05	0:55:55
	Subtotals for EMS	**1**	**188**	**189**	**89%**	**0:01:25**	**0:09:52**	**0:53:49**	**197:57:12**	**1:05:54**
	ARCING WIRES DOWN POWER LINES	0	1	1	0%	0:01:40	0:09:15	0:13:02	0:23:57	0:23:57
	BRUSH FIRE	0	5	5	2%	0:01:10	0:08:02	0:57:23	5:32:56	1:06:35
	FIRE ALARM	0	7	7	3%	0:01:00	0:04:36	0:11:29	1:07:39	0:09:40
	FIRE DEPT COMMUNITY RELATIONS	1	0	1	0%	0:00:00	0:00:00	1:04:22	1:04:22	1:04:22
	FIRE OTHER NOT LISTED	0	6	6	3%	0:00:45	0:03:48	0:57:03	5:16:47	0:52:48
	HAZARDOUS MATERIALS INCIDENT	0	1	1	0%	0:02:06	0:04:31	0:03:25	0:10:02	0:10:02
	SMELL OF GAS INSIDE/OUTSIDE	0	1	1	0%	0:00:48	0:11:56	0:18:32	0:31:16	0:31:16

Station/Beat Code	Nature Code	Self Init	CFS	Total	% Total	Avg Disp Time	Avg Resp Time	Avg Scene Time	Total Call Time	Avg Call Time
	STRUCTURE FIRE	0	1	1	0%	0:03:02	0:00:00	0:00:00	0:08:36	0:08:36
	Subtotals for FIRE	**1**	**22**	**23**	**11%**	**0:01:30**	**0:07:01**	**0:32:11**	**14:15:35**	**0:33:24**
	Totals for 5060	**2**	**210**	**212**	**100%**	**0:01:26**	**0:09:22**	**0:49:36**	**212:12:47**	**0:58:52**
FRA	FIRE MUTUAL AID	0	1	1	50%	0:01:24	0:14:40	1:58:09	2:14:13	2:14:13
	RESCUE MUTUAL AID	0	1	1	50%	0:03:59	0:12:23	1:33:03	1:49:25	1:49:25
	Subtotals for MUTA	**0**	**2**	**2**	**100%**	**0:02:42**	**0:13:32**	**1:45:36**	**4:03:38**	**2:01:49**
	Totals for FRA	**0**	**2**	**2**	**100%**	**0:02:42**	**0:13:32**	**1:45:36**	**4:03:38**	**2:01:49**
SRY	FIRE MUTUAL AID	0	1	1	33%	0:01:16	0:31:19	0:16:33	0:49:08	0:49:08
	RESCUE MUTUAL AID	0	2	2	67%	0:01:38	0:20:03	0:25:38	1:34:37	0:47:19
	Subtotals for MUTA	**0**	**3**	**3**	**100%**	**0:01:27**	**0:25:41**	**0:21:06**	**2:23:45**	**0:48:14**
	Totals for SRY	**0**	**3**	**3**	**100%**	**0:01:27**	**0:25:41**	**0:21:06**	**2:23:45**	**0:48:14**
SUF	MEDIC STANDBY	1	0	1	14%	0:00:00	0:00:00	0:00:00	3:28:29	3:28:29
	Subtotals for EMS	**1**	**0**	**1**	**14%**	**0:00:00**	**0:00:00**	**0:00:00**	**3:28:29**	**3:28:29**
	BACKFILL STATION	1	1	2	29%	0:02:13	1:05:42	0:47:29	5:25:51	2:42:56
	Subtotals for FIRE	**1**	**1**	**2**	**29%**	**0:02:13**	**1:05:42**	**0:47:29**	**5:25:51**	**2:42:56**
	FIRE MUTUAL AID	0	2	2	29%	0:01:17	0:00:00	0:00:00	3:05:46	1:32:53
	RESCUE MUTUAL AID	0	2	2	29%	0:02:03	0:07:48	2:12:42	4:45:06	2:22:33
	Subtotals for MUTA	**0**	**4**	**4**	**57%**	**0:01:40**	**0:07:48**	**2:12:42**	**7:50:52**	**1:57:43**
	Totals for SUF	**2**	**5**	**7**	**100%**	**0:01:51**	**0:36:45**	**1:30:06**	**16:45:12**	**2:31:43**

ISLE OF WIGHT COUNTY

FIRE-EMS ACTIVITY REPORT 2022

STATION RESPONSES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	YTD
CARROLLTON	144	117	127	121									509
CARRSVILLE	43	45	38	43									169
RUSHMERE	4	2	7	6									19
WINDSOR FIRE	30	32	39	40									141
SMITHFIELD FIRE	89	50	71	69									279
IOW RESCUE	287	213	234	247									981
WINDSOR RESCUE	123	83	115	116									437
TOTAL STATION RESPONSES													**2535**

VOL. ACTIVITY HOURS	1ST QUARTER	2ND QUARTER	3RD QUARTER	4TH QUARTER	YTD
CARROLLTON					0
CARRSVILLE					
RUSHMERE					0
WINDSOR FIRE					0
SMITHFIELD FIRE					
IOW RESCUE					
WINDSOR RESCUE					0
TOTAL VOL. HOURS REPORTED					**0**

Note: *1. Station Responses- Data pulled from E911 Computer Aided Dispatch (CAD) system* *n/r not reported*

2. VOL. Activity Hours- Information as reported by Volunteer Agencies

Isle of Wight Website Stats (1 - 30 April 2022)

Page	Rank	Pageviews	Unique Pageviews	Avg. Time on Page	Entrances	Bounce Rate	% Exit
/county_home_page	1	10,505	8,460	0:01:44	7,903	41.38%	42.61%
/departments/information_technology/mapping_and_gis.php	2	2,236	1,646	0:02:12	1,207	57.66%	56.44%
/government/commissioner_of_the_revenue/real_estate_assessmer	3	2,140	1,692	0:02:53	1,177	68.22%	64.72%
/i_want_to_/pay_for/index.php	4	1,901	1,108	0:00:30	81	39.51%	10.99%
/government/treasurer/making_a_payment.php	5	1,755	1,292	0:03:02	245	60.00%	56.18%
/our_community/farmers_market/index.php	6	1,697	1,419	0:02:25	1,375	76.15%	72.72%
/our_services/animal_services/index.php	7	1,665	1,260	0:01:09	985	54.82%	47.09%
/our_services/permits/index.php	8	1,172	885	0:00:57	202	40.59%	24.66%
/departments/parks_and_recreation/index.php	9	1,129	833	0:01:26	452	41.37%	38.97%
/government/commissioner_of_the_revenue/index.php	10	1,037	797	0:00:50	112	40.18%	18.23%
/departments/index.php	11	938	726	0:00:29	217	27.19%	15.46%
/departments/public_utilities/making_payments.php	12	850	691	0:02:25	219	62.56%	62.12%
/government/commissioner_of_the_revenue/real_estate.php	13	702	552	0:00:14	84	13.10%	5.13%
/index.php	14	647	534	0:01:08	50	42.00%	27.36%
/departments/human_resources/index.php	15	592	533	0:03:23	242	76.03%	74.66%
/i_want_to_/index.php	16	570	428	0:00:39	19	63.16%	15.96%
/government/treasurer/personal_property_tax_information.php	17	559	464	0:01:49	362	48.62%	43.83%
/government/clerk_of_the_circuit_court/index.php	18	545	427	0:01:10	266	51.13%	42.94%
/departments/solid_waste/refuse_and_recycling_centers.php	19	511	476	0:03:03	457	86.43%	85.71%
/government/treasurer/real_estate_tax.php	20	477	386	0:01:26	255	31.76%	28.09%
/our_services/index.php	21	477	388	0:00:45	39	58.97%	24.32%
/government/county_board_of_supervisors/board_of_supervisors_a	22	470	395	0:03:10	206	68.45%	61.91%
/government/commissioner_of_the_revenue/personal_property_tax	23	442	342	0:01:46	74	62.16%	32.13%
/departments/information_technology/map_gallery.php	24	396	352	0:04:44	114	71.93%	67.93%
/departments/public_utilities/index.php	25	391	318	0:01:38	216	53.24%	43.99%
/departments/planning_and_zoning/index.php	26	385	302	0:00:49	111	36.04%	26.49%
/government/county_board_of_supervisors/meeting_live_stream.ph	27	368	251	0:02:21	71	60.56%	39.95%
/departments/building_inspections/online_inspection_requests_and	28	362	323	0:04:24	115	83.48%	73.76%
/government/county_board_of_supervisors/index.php	29	361	310	0:01:44	143	46.85%	39.61%

Isle of Wight County Museum &
Isle of Wight County Historic Resources



April 2022 Report

J.L. England, Museum Director & Isle of Wight County Historic Resources Manager

Notable



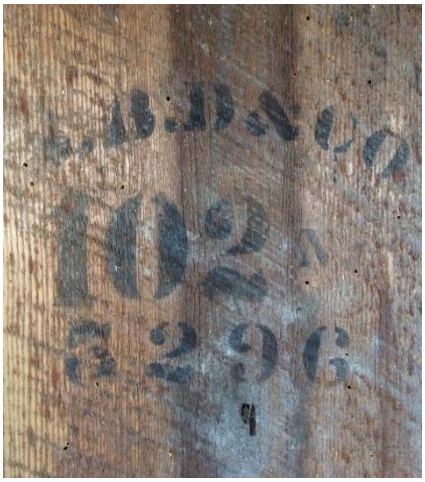
- COVID-19 Pandemic. The museum was closed from March to July 2020. Now open for visitors, these protocols remain in place:
    - Masks are now optional for staff and visitors.
    - A hand sanitizer station was installed at the museum's entrance. A service company refills it each month.
    - Several times daily, staff cleans and documents the sanitizing of high-touch surfaces.
- Volunteer Hours: 149
- The museum was closed for Easter on Sunday, April 17.

Isle of Wight County Museum 103 Main Street Smithfield

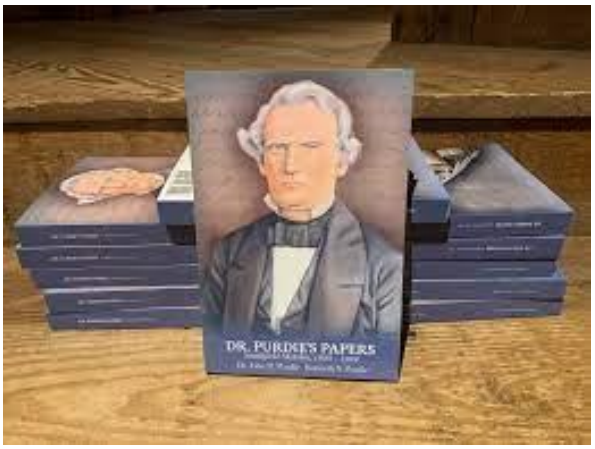
- Visitation: 637
- Special Events
    - **April 9. Battle of Smithfield Walking Tour.** 2 p.m. Meet your guide at the museum for a brief overview of this Civil War battle. Afterwards, program participants will walk to several sites along Main Street and Church Street to note the locations of significant events from January 30 to February 2, 1864. 12 guests.
    - **April 14. Tell Me A Story.** 10:30 a.m. This program, geared for children ages 3 to 5, introduces youngsters to the symbols of Isle of Wight and features books, songs and games. Children must be accompanied by an adult. Theme: Museums. 2 guests.
    - **April 16. Cannonball Intoxication.** 2 p.m. Albert Burckard, intrepid and life-long cannonball collector, relates the fascinating story of smooth-bore artillery projectiles and their resounding and reverberating impact on our peaceful county. Earplugs not required for this presentation. 15 guests.



- Livestreaming Events. We continue to connect to visitors, supporters, fans and the community via social media. Our livestreaming tours and programs on Facebook are driving traffic and enhancing interaction on our sites. Events this month, still viewable in the videos section of our Facebook page, include:
    - **April 5. LIVE at 12:05: Artifacts from the Smithfield Woman's Club**. Curator Rachel Popp highlights the Woman's Club of Smithfield with a few artifacts in our collection dating back to 1931.
    - **April 7. LIVE at 12:05: Sweet Potatoes at Windsor Castle**. Director Jennifer England visits the farm manager's office exhibit at Windsor Castle Park and discusses sweet potatoes. In the first half of the 20th century, Windsor Castle had its own brand of these nutritious and popular root vegetable.



- **April 12. LIVE at 12:05: Photographs of Windsor Castle**. Curator Rachel Popp shares photos of the Windsor Castle house as it changed through the years. The photos are from a scrapbook in the museum collection donated by Anne Betts Allen.



- **April 14. LIVE at 12:05: Dr. Purdie's Papers: Smithfield Sketches, 1843-1884.** (Teaser...There was once a vinegar factory in Smithfield!) Director Jennifer England discusses this book which collects the contemporaneous writings of John Robinson Purdie, a physician who served as mayor of Smithfield from 1863 to 1866 and who was an observant chronicler of local history. The grandson of a Scottish immigrant who became Smithfield's first postmaster, Purdie was an eyewitness to the development of Smithfield and Isle of Wight County. His journals, notebooks and correspondence paint a detailed and fascinating picture of the town and the county in the middle of the 19th century.



- **April 19. LIVE at 12:05: Springtime Activities in Isle of Wight County.** With Isle of Wight County Parks and Recreation's SpringFest scheduled at the Joel C Bradshaw Fairgrounds this weekend, it's the perfect time to highlight a few other historic outdoor activities and events in Isle of Wight County such as croquet, tournaments and baseball. For more information about SpringFest, see https://www.thefairiscoming.com/spring-fest.



- **April 21. LIVE at 12:05: Jack Dashiell: Veteran, Artist, Smithfield Native.** Curator Rachel Popp highlights the life and work of veteran and artist Jack Dashiell. A few pieces of his artwork have recently been accessioned into the collection.
- **April 26. LIVE at 12:05: The Return of the British Telephone Box.** Curator Rachel Popp announces the return of the telephone box on Main Street and shares a photo of its original delivery to the U.S. in March 1986 in celebration.



- **April 28. LIVE at 12:05: Corn and Corn History.** Director Jennifer England discusses corn, corn history and a corn sheller while showing off some seeds (thanks to Oliver Farms Produce - Smithfield, VA!) recently donated to us for an upcoming crop exhibit.

- Behind These Walls
    - People, objects and places all tell stories, and it is the history of a community that shows its unique character. This video series allows some of the county's most interesting structures to share their stories. This project launched in 2020. Highlighted this month was **Pulaski Baptist Church** on April 29. View all episodes in this series on the museum's YouTube Channel, Facebook page or website.
- Groups/Tours/Programs
    - April 21. Bus Tour hosted by Smithfield and Isle of Wight County Tourism Department, Richmond. 22 guests.
    - April 26. Cypress Creek, Smithfield. 20 people.
    - April 29. 4th grade students from both the Norfolk and Virginia Beach campuses of Norfolk Christian Schools. 51 students and parents.



- Gift Shop
    - Restocked peanut coffee.
- Exhibit/Project Update
    - **Sprigg Wing, Phase II: Crops, Trade & Merchants.** Panels and didactics for enhancements to the Sprigg Wing have been designed. These will depict the three crops that are curious to most visitors. We await installation.



    - **Civil War Trails.** Three new signs for Main Street, Fort Boykin and Fort Huger have been submitted. The sign for Main Street has been finalized. The Smithfield Board of Historic Architecture and Review approved the application while permits from the Town and County have been received. We await installation and subsequent inspection.
    - **Local Treasures**. Currently on display is 19th and 20th Century Woodworking Tools by Roger Healey. This exhibit concept displays the private collections of Isle of Wight County residents and/or those with a connection to the area. For more information and applications: www.historicisleofwight.com/local-treasures.html.



    - **Sign Project:** Wharf Hill. In conjunction with Historic Smithfield, the sign at the base of Wharf Hill will be rewritten and redesigned to be more reflective of the history in that location and to be more structurally sound. The Town of Smithfield has hired a mason who will repair and repoint the pedestal in June. Once that is complete, new signage will be created and installed.



- **English Telephone Box**. The phone box in front of the Bank of Southside Virginia is part of the Isle of Wight County Museum's collection. Dishman Fabrications LLC of Yorktown repaired and media blasted the box, and it was returned to its permanent location on April 21. Once the door and glass installation are complete, a reception and/or ribbon-cutting will be organized.
- **Steamboats & Life on the Water; Colonial Isle of Wight; Unusual Objects.** Under development.
- **Online Exhibits Under Development**: Vietnam War Veterans in Isle of Wight County, Unsung Heroes of Isle of Wight County.
- **Christmas in Isle of Wight County.** New book project under development.

- Artifacts Added to the Collection
  - Items added to the collection include early 20th century Christmas ornaments, 1940s leaflets from *American Poultry Journal*, photographs and Helen Haverty King's 1931 diploma from the University of Richmond.







- Staff Training and Requirements
  - **Webinar: Disinfecting Books and Other Collections**. Hosted by the Northeast Document Conservation Center.
  - **Webinar: Long Term Preservation for Early Record Books**. Hosted by the Northeast Document Conservation Center.

Financials

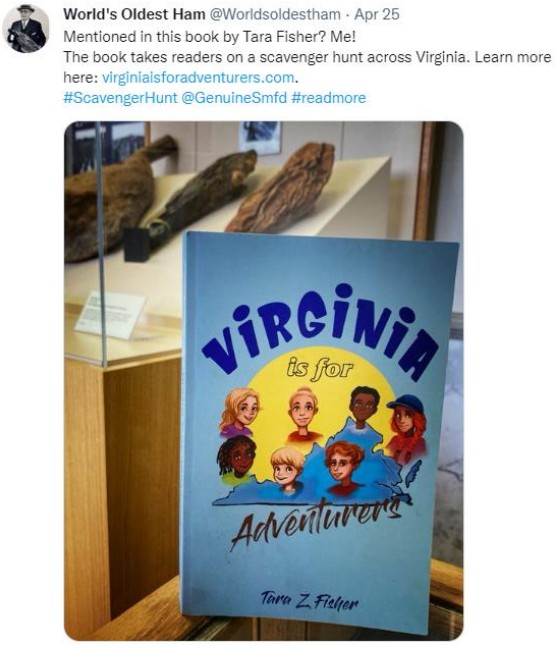
• Gift Shop Sales (including tax):	$ 1,609.22
• Donations:	$ 0.00
• Admission:	$ 816.00
• Program/Lecture Fees:	$
Total Monthly Deposit:	**$ 2,425.22**

Social Media/Online Presence

- Visit our website at www.historicisleofwight or www.hamcamva.com.
- **LIVE at 12:05.** Each Tuesday and Thursday, we host pop-up broadcasts on the museum's Facebook page. These programs were seen on the Ham Cam, but since COVID-19, programs and livestreaming from Facebook make these programs more mobile. Our segments – shot in the museum or at any of our historic sites - highlight events at the museum, announcements or artifacts from our collection. Tune in each Tuesday and Thursday at 12:05 p.m. on the museum's Facebook page to learn a bit about local history.
- **Facebook:** Isle of Wight County Museum: 3,222 likes and 3,553 followers. Daily posts.
- **Facebook:** World's Oldest Ham: 199 likes and 206 followers. Semi-weekly posts.
- **Facebook:** Town of Smithfield. Periodic posts, responses and maintenance.
- **Twitter.** @WorldsOldestHam. The world's oldest ham has his own account. 1,288 followers.
- **Instagram.** @Isleofwightcountymuseum. 896 followers.
- **YouTube.** Isle of Wight County Museum. This channel was created in January 2022 so that we can upload our videos in another location for easier viewing and use by the public, other Town and County departments and media. 8 subscribers.
- **Google Reviews.** 4.8/5 overall rating.
- **TripAdvisor.** 4.5/5 star overall rating.
- **Yelp.** 4.5/5 star overall rating.
- **Foursquare/Swarm.** 7.3/10 rating.

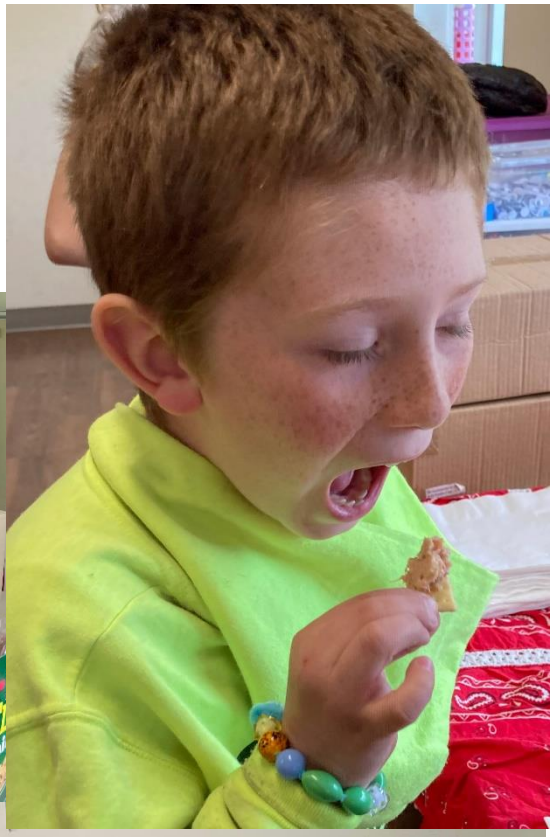
Media Coverage/Promotion/Advertising/Lobbying

- Various pieces in area publications to include calendars and events.
- **Week of April 18**: *Smithfield Times, Windsor Weekly, Tidewater News* and *Suffolk News-Herald*. Cutline: A hog-wild time; Cutline: Fun with pigs.
- **April**: Virginia is for Adventurers by Tara Z. Fisher. Book mentions the World's Oldest Ham and Isle of Wight County Museum.
- **April 25**: Roadside America. Website. The World's Oldest Ham was the Site of the Week and was promoted with a new feature article: https://www.roadsideamerica.com/story/14498



Outreach Lectures & Events

- **April 12. Isle of Wight County Parks and Recreation Spring Break Camp at Windsor Town Center**. Theme: Meat preservation, ham, salt pork and Smithfield's history with hogs. 13 students.
- **April 13. Isle of Wight County Parks and Recreation Spring Break Camp at Nike-Carrollton Park**. Theme: Meat preservation, ham, salt pork and Smithfield's history with hogs. 28 students.









- **April 19. Main Street Baptist Preschool, Smithfield.** Theme: Museums. 11 students.
- **April 20. Hampton Roads Classical, Smithfield**. Theme: Colonial America. 10 students.
- **April 25. Sons of Confederate Veterans, Camp 484, Virginia Beach**. Theme: Benjamin Huger. 23 guests.

- **April 27. Cypress Creek. Smithfield.** Theme: Colonial history; Behind These Walls video series. 140 people.

Windsor Castle 705 Cedar Street, Smithfield

- April 3. Walking Tour. From the site's pre-colonial existence to the present day, Windsor Castle tells the fascinating history of the development of Smithfield. Join us for this free walking tour through history as we tour the house and several of the outbuildings. Meet on the front steps of Windsor Castle, 301 Jericho Road, Smithfield. 20 guests.
- April 7. Site and historical orientation for new site manager.

Fort Boykin 7410 Fort Boykin Trail, Isle of Wight County

- No updates.

Fort Huger 15080 Talcott Terrace, Isle of Wight County

- **April 9. Walking Tour.** Visit this Civil War fort and learn the significance of this gateway to the Confederate capital. Tour meets at Fort Huger, 15080 Talcott Terrace, Smithfield. 10 guests.



Nike-Carrollton Park 13036 Nike Park Road, Carrollton

- **Nike-Ajax Missile Restoration**. Site plan, restoration specs and lead paint analysis in progress with Isle of Wight County Engineering.

Boykin's Tavern, 1820 Clerk's Office & Isle of Wight County Court House Complex 17146 Monument Circle, isle of Wight County

- Boykin's Tavern Visitors: 0

Meetings

- **April 6.** Peninsula Museums Forum.
- **April 23.** Isle of Wight County Fair Committee.
- **April 18.** James River Institute for Archaeology.
- **April 19.** Genuine Merchants of Downtown Smithfield.
- **April 27.** Town of Smithfield staff meeting.

Other Events & Notable Information

- Isle of Wight County Public Works assisted with several repairs this month including a leaky toilet, the patching and repainting of the museum's front door and the flattening of bubbling carpet in a highly trafficked area.
- April 22-24. Staff assisted with Isle of Wight County Parks and Recreation's SpringFest at Heritage Park & the Joel C. Bradshaw Fairgrounds.
- Provided promotion for April 9 Ivy Hill Cemetery walking tour.
- Provided commentary for Isle of Wight County Department of Planning/Community Development on the following projects:
    - Emmanual Baptist Church, proposed cemetery expansion.
    - Amendment to conditional use permit application (CUP-08-18) for Ho-Fel Solar Facility.
    - Griffin Rezoning Request, Parcel III, Vellines Lane, Newport District, Parcel #24-01-036DD.



Safety

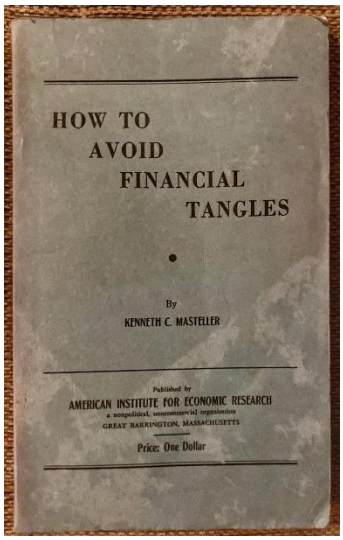
- No updates.

Selections from Our Website and Social Media



April 15

Forrest, 4, visited the museum yesterday for our monthly Tell Me A Story program for preschoolers. Time beforehand in the sandbox was a bonus.



April 18

This 1957 booklet in our collection - published by the American Institute for Economic Research - is appropriate on Tax Day. This is the 25th edition.



World's Oldest Ham @Worldsoldestham · Apr 6

I'm celebrating #NationalTartanDay.
Plaid patterns for all!
#DUND





World's Oldest Ham @Worldsoldestham · 10h

Disco balls are making a comeback.
I'm all about the dance party after closing time.
#disco #DiscoDuck #discoball



ISSUE:

Resolution to Amend the Budget and Appropriate Carryover Funding ($197,444)

BACKGROUND:

The Isle of Wight County Schools had unexpended FY2020-21 Capital Maintenance funds in the amount of $197,444.

During the current fiscal years, County Schools have encountered major HVAC issues at Carrollton Elementary School and Georgie Tyler Middle School. In this regard, the School Board has requested that carryover funds from the FY2020-21 unexpended funds be appropriated to the Operations and Maintenance category in the Schools' Budget for temporary HVAC units at the aforementioned schools until repairs can be finalized.

BUDGETARY IMPACT:

Appropriation of the carryover funds will increase the Schools Operating Fund and decrease the Unassigned Fund Balance by the amount of the appropriation.

RECOMMENDATION:

Adopt a resolution to amend the budget and appropriate carryover funding.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution	5/6/2022
Correspondence from Schools	Backup Material	5/5/2022

RESOLUTION TO AMEND THE FY 2021-2022 OPERATING BUDGET AND APPROPRIATE FUNDING FOR SCHOOL-RELATED PROJECTS WITH UNEXPENDED FY 2020-2021 SCHOOLS' FUNDS

WHEREAS, on June 30, 2021, the Isle of Wight County Schools had unexpended Capital Maintenance funds in the amount of $197,444; and,

WHEREAS, the Schools have encountered major HVAC issues at Carrollton Elementary School and Georgie Tyler Middle School; and,

WHEREAS, the School Board has requested the carryover funds in the amount of one hundred ninety-seven thousand four hundred forty-four dollars ($197,444) from the FY2020-21 unexpended funds be appropriated to the Operations and Maintenance category in the Schools' Budget for temporary HVAC units at the aforementioned schools until repairs can be finalized.

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED by the Board of Supervisors of the County of Isle of Wight, Virginia that carryover funds in the amount of one hundred ninety-seven thousand four hundred forty-four dollars ($197,444) from the FY2020-21 unexpended funds be appropriated to the Operations and Maintenance category in the FY2021-22 Schools' Budget for:

Temporary AC Classroom Units at Carrollton Elementary - $134,639
Temporary AC Cooling Tower at Georgie D. Tyler Middle - $62,805

BE IT FURTHER RESOLVED that the County Administrator of the County of Isle of Wight, Virginia is authorized to make the appropriate accounting adjustment in the budget and to do all things necessary to give this resolution effect.

Adopted this 19th day of May 2022.

_____
Rudolph Jefferson, Chairman

_____
Carey Mills-Storm, Clerk

Approved as to form:

_____
Robert W. Jones, Jr., County Attorney

Isle of Wight County Schools
PREPARING STUDENTS FOR COLLEGE, CAREER AND LIFE

April 22, 2022

Mr. Randy Keaton
County Administrator
Isle of Wight County
Isle of Wight, Virginia

Dear Mr. Keaton:

The School Board approved at their April 21, 2022 board meeting a request to carry over the unspent Capital Maintenance funds from the 2020-2021 school year. The amount of unspent funds is $197,444.22. We fully expended our 2021-2022 allocation of $250,000 this year. However, we have run into some major HVAC issues at Carrolton Elementary and Georgie Tyler Middle School that will be resolved during the summer months. In the meantime, we have an emergent need for temporary units at both schools to get us through the rest of the year, until all repairs can be finalized. We are requesting a carry-over of the 2020-2021 remaining funds that were unspent.

Below is an outline of how the funds were spent during the 2020-2021 school year. As a reminder, the County Board of Supervisors approved an additional $250,000 for that year, totaling $500,000.

2020-2021 Capital Maintenance Expenses

Purpose	Location	Cost
Chiller repair	Smithfield Middle School	142,750.00
Replacement of Hot Water heater	Carrsville Elementary school	25,294.50
Roof Repairs	Windsor High School	11,500.00
Sprinkler System Repairs	Windsor Elementary/Smithfield High School	31,511.28
	TOTAL EXPENDED	**211,055.78**

Isle of Wight County Schools
PREPARING STUDENTS FOR COLLEGE, CAREER AND LIFE

Below are the projects with their estimated costs for which the carry over funds would be applied.

2020-2021 Capital Maintenance Carry Over Request

Purpose	Location	Est. Cost
A.C. Classroom Temporary Units	Carrollton Elementary School	134,638.84
A.C. School Temporary Cooling Tower	Georgie D. Tyler Middle School	62,805.38
	TOTAL CARRY OVER REQUEST	**197,444.22**

You may notice that the above amounts (Expended plus Carry Over Request) do not total to the full $500,000 that was originally appropriated. This is due to the fact that the cost for the Carrollton Elementary School chiller repairs ended up being reimbursed by insurance, in the amount of $91,500.00. Please let me know if you need any additional information in order to bring this carry over request to the Board of Supervisors for their approval.

Sincerely,

Steven Kepnes
Executive Director of Budget & Finance

Cc: Dr. James Thornton, Superintendent
Dr. Chris Coleman, Assistant Superintendent

ISSUE:

Resolution to Amend the Budget and Appropriate Federal Funding for Before and After School Programs ($573,168)

BACKGROUND:

The Schools are receiving American Rescue Plan Act - Elementary and Secondary School Emergency Relief (ESSER III) funding. The funding will be used to address unfinished learning and provide before and after school programs.

BUDGETARY IMPACT:

Appropriation of the ESSER III funds will increase the Instructional category in the Schools budget by the amount of funding ($573,168) received.

RECOMMENDATION:

Adopt a resolution to amend the budget and appropriate federal funding for Before and After School Programs.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution	5/6/2022
Correspondence from Schools	Backup Material	5/5/2022

RESOLUTION TO AMEND THE FY 2020-21 BUDGET AND APPROPRIATE ESSER III FUNDS TO THE SCHOOLS BUDGET

WHEREAS, the Isle of Wight County School Board will receive federal funding via the Elementary and Secondary School Emergency Relief (ESSER III) fund; and,

WHEREAS, the School Board has requested that the Board of Supervisors appropriate ESSER III funds to the Instructional category in the School Division's FY 2021-22 budget for the following projects:

- $423,650 – Address Unfinished Learning
- $149,518 - Before and After School Programs

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia, that the FY 2021-22 budget is hereby amended and funds in the amount of $573,168 or as much as shall be received from the American Rescue Plan Act – ESSER III fund be appropriated to the Instructional category in the School Division's FY 2021-22 budget for the projects listed above.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, Virginia is authorized to make the appropriate accounting adjustments and to do all things necessary to give this resolution effect.

Adopted this 19th of May, 2022.

_____
Rudolph Jefferson, Chairman

_____
Carey Mills Storm, Clerk

Approved as to Form:

_____
Robert W. Jones Jr., County Attorney

Isle of Wight County Schools
PREPARING STUDENTS FOR COLLEGE, CAREER AND LIFE

April 22, 2022

Mr. Randy Keaton
County Administrator
Isle of Wight County
Isle of Wight, Virginia

Dear Mr. Keaton:

At last evening's School Board meeting, the School Board approved a request of the Board of Supervisors for two additional appropriations through the American Rescue Plan Act-Elementary & Secondary School Emergency Relief Fund (ESSER III). The purpose of the funding is to address learning loss through summer learning or summer enrichment, extended day, comprehensive after school programs, or extended school year programs. The federal funding is being provided as a pass-through allocation by the Virginia Department of Education as follows:

Addressing Unfinished Learning:	$423,650.67
Before & After School Programs:	$149,518.69

Please let me know if you need any additional information in order to bring this budget appropriations request to the Board of Supervisors for their approval.

Sincerely,

Steven Kepnes
Executive Director of Budget & Finance

Cc: Dr. James Thornton, Superintendent
Dr. Christopher Coleman, Assistant Superintendent

ISSUE:

Revised Memorandum of Understanding for the Emergency Communications Center

BACKGROUND:

In 2002, the County established a centralized Emergency Communications Center jointly with the Towns of Smithfield and Windsor. In 2019, the radio system for emergency communications was significantly upgraded.

Additionally, the 2020 Census impacted the apportionment of costs.

In this regard, the Memorandum of Understanding for the Emergency Communications Center and Radio System needs to be amended to reflect updated information.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

Authorize execution of the revised Memorandum of Understanding for the Emergency Communications Center.

ATTACHMENTS:

Description	Type	Upload Date
Memorandum of Understanding	Backup Material	5/5/2022

MEMORANDUM OF UNDERSTANDING

BY AND BETWEEN

ISLE OF WIGHT COUNTY

AND

The ISLE OF WIGHT COUNTY SHERIFF'S OFFICE, the TOWN OF SMITHFIELD, and TOWN OF WINDSOR

THIS AGREEMENT revised this 12th of April, 2022, by and between the COUNTY OF ISLE OF WIGHT ("County"), the ISLE OF WIGHT COUNTY SHERIFF'S OFFICE, the TOWN OF SMITHFIELD, and the TOWN OF WINDSOR.

WITNESSETH:

1. BACKGROUND:

The County and the Towns of Smithfield, and Windsor established a centralized emergency communications center to serve area law enforcement, fire, rescue, and emergency services under a consolidated Emergency Communications Department in 2002. The County and Towns wish to update the terms of the previous agreements to include operations of a newly constructed radio system to provide service to The County and Towns. In consideration of the mutual benefits and obligations contained herein, the aforementioned parties therefore do agree to the following terms:

2. EMERGENCY COMMUNICATIONS CENTER ESTABLISHED:

The County, the Town of Smithfield, and the Town of Windsor established an Emergency Communications Center in the dispatch center of the Sheriff's Office located at the Isle of Wight County Courthouse Complex. The Center became effective on July 1, 2002, and became

operational later in the calendar year, to perform dispatching functions for County and Town law enforcement, and fire and rescue personnel.

The County established an updated Radio System which became operational in 2019 to provide communication services to County and Town law enforcement and fire and rescue personnel.

The Emergency Communications Center and Radio System (the terms "center" or "communications center" shall be construed to include the Communications Center and Radio System anywhere it is used in this document) shall be governed by a Board of Directors composed of the following members: the County Administrator, the Smithfield Town Manager, the Windsor Town Manager, the Sheriff, the Smithfield Police Chief, the Windsor Police Chief, the Chief of Emergency Services, and an appointed member of the Volunteer Fire and Rescue Association. The members of the Board of Directors shall incur no individual or personal liability for actions taken in good faith by them as members of the Board. The Board of Directors shall elect from among its members a Chairman and a Vice-Chairman who shall serve for one-year terms with eligibility for re-election.

The Board of Directors shall operate the Center and Radio System in accordance with the Bylaws adopted by the County and the Towns and shall establish operating procedures and policies for the Center and Radio System. The Board shall adopt and submit annually to the County and the Towns an operating budget and report of activities. The operating budget shall be submitted to the Towns no later than March 31st of each year. The Board shall annually review the cost allocation schedule for the Center and Radio System and make pertinent recommendations for changes to the governing bodies.

The Board of Directors shall select a Communications Director who shall be responsible for overall Management of the Emergency Communications Center and Radio System.

Qualified employees of any of the parties hereto shall be given preferred consideration for employment in categories with rate of pay and benefits equivalent to their present categories rate of pay and benefits. The

determination of employment of such employees shall be made by the Communications Director. Wages for employees accepting employment shall be determined by the Communications Director in consultation with the Human Resources Director and the fringe benefits for such employees shall be the same as those enjoyed by new employees of the Communications Center. Persons employed by the Center and Radio System shall be considered County employees; however, the County hereby delegates to the Board of Directors the power to hire, discipline and remove the Communications Director (within the limits of the County's established personnel policies), to establish his/her duties, and to receive all rights and benefits of County employees.

By this MOU, the Sheriff hereby delegates authority to the County to provide dispatching services for the Sheriff's Office. The Sheriff also agrees to assign five Sheriff's Office employees classified by the Compensation Board as COMOPS/COMOP SUPV to the Emergency Communications Center. The Sheriff authorizes the Communications Director to manage the day-to-day activities of those persons (within the limits of the County's established personnel policies) classified by the Compensation Board; however, the Sheriff shall retain the authority to hire, evaluate, and terminate said appointees and these appointees shall remain employees of the Sheriff. The Sheriff agrees that he will process the appropriate paperwork for the Compensation Board, as necessary to receive funding for the positions reimbursed by them.

If funding of the five (5) State Compensation Board positions is eliminated, the Board of Supervisors may continue those positions as recommended by the Board of Directors of the Emergency Communications Center with funding from the 911 tax revenues.

3. ALLOCATION OF COSTS:

The local 911 surcharge was eliminated by House Bill 568 effective January 1, 2007 and replaced with a uniform statewide tax of $.75 per line, collected by the Commonwealth and allocated to the localities in aggregate with the proceeds of the Communications Tax, also created in

HB 568, commonly referred to as the Virginia Tax Reform Act of 2006. Beginning January 1, 2019, A portion of the Communications Tax distributed to the County and localities equivalent to the E-911Wireline surcharge multiplied by a factor of four (4) shall also be applied toward the operations, capital, and maintenance costs of the ECC to replace the loss of revenue from the elimination of the local E-911 surcharge tax. This is in keeping with the General Assembly's statements at the time of creation of the Communications Tax that no locality should go without funding due to the loss of the local surcharges but should be made whole by the imposition of the Statewide Communications Tax. The County and Town allocations of the E911 fee shall continue to be applied toward the operational, capital and maintenance costs of the system. In addition, the $.75 per line Wireless E-911 fee and the $.50 prepaid wireless surcharge established by House Bill 754 and Senate Bill 441, effective January 1, 2011, distributed to the County and the Towns, shall be applied to offset the operational, capital and maintenance costs of the Emergency Communications Center.

Any capital and operational costs incurred over and above the revenues collected via the telephone surcharges and communications taxes listed above will be apportioned between the County and the Towns.

The apportionment of costs will be based on the following factors:

Population: the ratio of each jurisdiction's population to the total population of the three (3) jurisdictions, using the most recently published population data from the University of Virginia's Weldon Cooper Center or the U.S. Census Bureau, whichever is most current.

Calls Received: the number of all calls for service received at the Center originating in each jurisdiction compared as a ratio to the total calls received at the Center, based on actual logs of calls to be provided by the Communications Director.

The Board of Directors shall review the allocation criteria on a fiscal year annual basis. The Board shall make recommendations to the County and the Towns for any changes to the initial allocation percentages.

Notwithstanding anything to the contrary in this MOU, the County and the Towns shall be obligated for any operational cost or the cost of an outside attorney provided for this MOU only to the extent such funds are budgeted and appropriated by the respective governing body of each jurisdiction.

4. FISCAL AND ADMINISTRATIVE AGENT:

The County of Isle of Wight is hereby designated as fiscal agent for the Emergency Communications Center and Radio System. The County shall be responsible for furnishing accounting, purchasing, personnel, and payroll functions for the Center, as well as legal counsel. If, in the opinion of the County Attorney, outside counsel is necessary for the provision of legal services to the Center, the cost will be apportioned between the County and the Towns.

5. LIABILITY

The County and the Towns acknowledge that the Board of Directors will act as agents for them in carrying out the dispatching functions of the law enforcement, and fire and rescue activities. The Board of Directors shall obtain liability insurance adequate to protect the interests of the County and the Towns and itself for claims arising out of its performance of these functions. The purchase of such insurance shall in no way constitute a waiver of any defenses, including but not limited to the defense of sovereign immunity that may be available to the Board of Directors, The County, or the Towns, with respect to any claim against any or all of them.

6. EXECUTION: DURATION, JOINT EXERCISE OF POWERS

The County, Towns, and the Sheriff intend this agreement as a joint exercise of their respective powers, as authorized by Section 15.1-21 of the Code of Virginia. The Board of Supervisors, Town Councils, and the Sheriff have therefore caused the MOU to be executed for them by the County Board Chairman and the Mayors, respectively, as of the respective dates indicated below. The MOU will take effect on the date signed by the last necessary party and will continue in effect as adopted through

June 30, 2028, and thereafter until modified or dissolved by mutual agreement; provided that any may discontinue its participation at the end of any fiscal year subsequent to the ending on June 30, 2028, by providing one (1) year's written notice to the other parties hereto.

7. SEVERABILITY OF PARTS OF AGREEMENT

It is hereby declared to be the intention that the sections, paragraphs, sentences, and clauses of this MOU are severable. If any section, paragraph, sentence, or clause shall be found to be invalid for any reason, such invalidity shall not affect any of the remaining portions of the MOU.

8. SIGNATURES OF AUTHORIZED AGENTS

Town of Smithfield:

_____ _____

Clerk, Town Council Mayor, Town Council

Approved as to Form:

_____

Town Attorney

Town of Windsor:

_____ _____

Clerk, Town Council Mayor, Town Council

Approved as to Form:

_____

Town Attorney

Sheriff, Isle of Wight County:

_____

Isle of Wight County:

_____ _____

Clerk, Board of Supervisors Chairman, Board of Supervisors

Approved as to Form:

_____

County Attorney