

Agenda
Board of Supervisors
Isle of Wight County
September 15, 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 – Supervisor Richard L. Grice
6. Citizens' Comments
7. Consent Agenda
 - A. Budget Amendment – Insurance Proceeds
Resolution to Budget and Appropriate Insurance Proceeds from VaCorp Insurance for Repairs of County Vehicles and Property (\$22,859)
 - B. Vehicle Lease Purchase Agreement
Resolution to Execute a Master Lease Purchase Agreement for the Purchase of New Vehicles
 - C. Minutes
 - . July 21, 2022 Regular Meeting Minutes
 - . August 4, 2022 Work Session Minutes
 - . August 18, 2022 Regular Meeting Minutes
8. Regional and Inter-Governmental Reports
 - A. Regional Reports

9. Appointments

A. Appointments List

10. County Attorney's Report

11. Public Hearings

A. Aston Manor Estates Park Vacation

Application of Ronald L. Aston and Alaina A. Sims, Property Owners, to Vacate the "Dedicated Park" of the Aston Manor Subdivision to Allow Single Family Residential Use of the Parcel

B. Moonlight Agricultural and Forestal District Renewal

Ordinance to Amend and Reenact the Isle of Wight County Code by Amending and Reenacting Appendix D, Agricultural Districts, Section D-1, District Establishment

12. County Administrator's Report

A. Enterprise Zone Expansion

Discussion of Expansion of the County's Enterprise Zone

B. Fee Schedule for Heritage Park

Discussion of Fee Schedule for Heritage Park

C. Zencity Monthly Report

Staff Report - Zencity Monthly Report

D. Matters for the Board's Information

13. Unfinished / Old Business

A. WaWa Convenience Store and Gasoline Station Conditional Use Permit Request

Application of Remus Brustur of Frontier Development, Applicant, and the William G. Yeoman, III, Trust, Property Owner, for a Conditional Use Permit (CUP-8-21) for a Wawa

Convenience Store and Gas Station on 5.69 Acres Located on the Southwest Corner of Turner Drive (Rte. 644) and Benns Church Boulevard (Rte. 10)

B. 2023 Legislative Priorities

Consideration of Items for 2023 Legislative Priorities

C. Joint Meeting - Planning Commission re: Solar

Resolution to Set a Joint Work Session with the Planning Commission re: Solar

D. Joint Meeting - School Board

Resolution to Set a Joint Meeting with the School Board

14. New Business

A. CERT Program Update

Resolution to Establish a Community Emergency Response Team (CERT) Program

15. Adjournment

ISSUE:

Resolution to Budget and Appropriate Insurance Proceeds from VaCorp Insurance for Repairs of County Vehicles and Property (\$22,859)

BACKGROUND:

The County has received insurance proceeds for repairs of County vehicles in the amounts of \$22,859 from VaCorp Insurance. The insurance proceeds need to be budgeted and appropriated to the Public Utility Fund and to the General Fund budgets for FY 2022-23.

The department has requested that these insurance proceeds received be budgeted to the line item that will allow the repair of County vehicles and property. Any additional budget amount required would be done through the Departments' existing available budgets.

Fleet Repairs - Sheriff's Office	\$ 15,384	Vacorp
Repair & Maint. - Public Utilities Water	\$ 7,475	Vacorp
	\$ 22,859	

BUDGETARY IMPACT:

Adoption of the resolution will increase the FY 2022-23 Public Utility Fund budget (\$7,475) budget and the FY 2022-23 General Fund (\$15,384) budget.

RECOMMENDATION:

Adopt the resolution to budget and appropriate insurance proceeds and authorize the departments' budget line items to be increase by the insurance proceeds amount to repair County vehicles and property.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution	9/6/2022

**RESOLUTION TO AMEND THE FY 2022-23 OPERATING BUDGET
AND APPROPRIATE FUNDING FOR REPAIR OF COUNTY
PROPERTY FROM INSURANCE PROCEEDS**

WHEREAS, the County of Isle of Wight, Virginia has received insurance proceeds from VaCorp Insurance for damaged County vehicles and property; and,

WHEREAS, the Board of Supervisors desires to amend the FY 2022-2023 Public Utility Fund budget in the amount of \$7,475 for repair of damaged County property and to the FY 2022-23 General Fund budget in the amount of \$15,384 for repair of damaged County vehicles; and,

WHEREAS, the Board of Supervisors needs to appropriate insurance proceeds in the amount of \$7475 to the Public Utility Fund for repair of damaged County property and insurance proceeds in the amount of \$15,384 to the General Fund for repair of damaged County vehicles.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of the County of Isle of Wight, Virginia, that the FY 2022-23 budget is hereby amended and funds appropriated in the amount of \$22,859.

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 15th day of September, 2022.

Rudolph Jefferson, Chairman

Carey Mills Storm, Clerk

Approved as to form:

Robert W. Jones, Jr., County Attorney

ISSUE:

Resolution to Execute a Master Lease Purchase Agreement for the Purchase of New Vehicles

BACKGROUND:

The Adopted FY 2022-23 Operating Budget included new vehicles to be purchased via a Master Lease Purchase Program. VML/VACo Finance solicited proposals related to the County's Vehicles Financing.

The amount financed shall not exceed \$533,000, the annual interest rate (in the absence of default or change in tax status) shall not exceed 3.30%, and the financing term shall not exceed five years from closing.

BUDGETARY IMPACT:

The FY2022-23 Budget already includes the necessary budget and appropriation to purchase the vehicles upon securing the necessary financing.

RECOMMENDATION:

Adopt a resolution to execute the Lease Purchasing Agreement.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution	9/7/2022

**CERTIFICATE OF THE CLERK
OF THE BOARD OF SUPERVISORS
COUNTY OF ISLE OF WIGHT, VIRGINIA**

The undersigned Clerk to the Board of Supervisors of the County of Isle of Wight, Virginia (the "Board"), hereby certifies that:

1. A meeting of the Board was duly called and held on September 15, 2022 (the "Meeting").

2 Attached hereto is a true, correct and complete copy of a resolution (the "Resolution") of the Board entitled "Resolution of the Board of Supervisors of the County of Isle of Wight, Virginia, Approving the Financing of Equipment and the Execution and Delivery of Certain Documents Prepared in Connection Therewith," as recorded in full in the minutes of the Meeting and duly adopted by a majority of the members of the Board present and voting during the Meeting.

3. A summary of the members of the Board present or absent at the Meeting, and the recorded vote with respect to the Resolution, is set forth below:

Member Name	Voting				
	Present	Absent	Yes	No	Abstaining
(Chairman)	_____	_____	_____	_____	_____
(Vice-Chairman)	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____

4. The Resolution has not been repealed, revoked, rescinded or amended, and is in full force and effect on the date hereof.

WITNESS my signature and the seal of the County of Isle of Wight, Virginia, dated _____, 2022.

Clerk to the Board of Supervisors
County of Isle of Wight, Virginia

(SEAL)

**RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY
OF ISLE OF WIGHT, VIRGINIA, APPROVING THE FINANCING OF
EQUIPMENT AND THE EXECUTION AND DELIVERY OF CERTAIN
DOCUMENTS PREPARED IN CONNECTION THEREWITH**

The Board of Supervisors of the County of Isle of Wight, Virginia (the "Board") has determined it is in the best interest of the County of Isle of Wight, a body politic of the Commonwealth of Virginia (the "County") to undertake the financing of various vehicles (the "Project"), and the Finance Director has now presented a proposal for the financing of such Project.

Truist Financial Corporation has indicated its willingness to provide financing for the Project in accordance with its proposal dated August 24, 2022. The amount financed shall not exceed \$533,000.00, the annual interest rate (in the absence of default or change in tax status) shall not exceed 3.30%, and the financing term shall not exceed five years from closing.

THEREFORE, BE IT RESOLVED BY THE BOARD OF SUPERVISORS OF THE
COUNTY OF ISLE OF WIGHT, VIRGINIA:

1. The recitals above are found and determined to be a part of this resolution.
2. All financing contracts and all related documents for the closing of the financing (the "Financing Documents") shall be consistent with the foregoing terms. The County Administrator and/or Finance Director of the County are hereby authorized and directed to execute and deliver any Financing Documents, and to take all such further action as they may consider necessary or desirable, to carry out the financing of the Project as contemplated by the proposal and this resolution.
3. The County Administrator is hereby authorized and directed to hold executed copies of the Financing Documents until the conditions for the delivery of the Financing Documents have been completed to such officer's satisfaction. The County Administrator is authorized to approve changes to any Financing Documents previously signed by County officers or employees, provided that such changes shall not substantially alter the intent of such documents or certificates from the intent expressed in the forms executed by such officers. The Financing Documents shall be in such final forms as the County Administrator shall approve, with the County Administrator's release of any Financing Document for delivery constituting conclusive evidence of such officer's final approval of the Document's final form.
4. The County shall not take or omit to take any action the taking or omission of which shall cause its interest payments on this financing to be includable in the gross income for federal income tax purposes of the registered owners of the interest payment obligations.
5. To the extent necessary, the County intends that the adoption of this resolution will be a declaration of the County's official intent under Treas. Reg. §1.150-2 (the "Reimbursement Regulations") promulgated under the Internal Revenue Code of 1986, as amended, to reimburse

expenditures for the Project. The County intends that funds that have been advanced, or that may be advanced, from the County's general fund, or any other County fund related to the Project, for Project costs may be reimbursed from the financing proceeds.

6. All prior actions of County officers in furtherance of the purposes of this resolution are hereby ratified, approved and confirmed. All other resolutions (or parts thereof) in conflict with this resolution are hereby repealed, to the extent of the conflict.

7. This resolution shall take effect immediately.

Adopted: _____, 2022

Chairman
County of Isle of Wight, Virginia

ATTEST:

Clerk to the Board of Supervisors
County of Isle of Wight, Virginia

ISSUE:

- . July 21, 2022 Regular Meeting Minutes
- . August 4, 2022 Work Session Minutes
- . August 18. 2022 Regular Meeting 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:

ATTACHMENTS:

Description	Type	Upload Date
August 4, 2022 Work Session Minutes	Cover Memo	9/15/2022
August 18, 2022 Regular Meeting Minutes	Cover Memo	9/15/2022
July 21, 2022 Regular Meeting Minutes	Cover Memo	9/15/2022

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 FOURTH DAY OF AUGUST IN THE YEAR TWO THOUSAND AND TWENTY-TWO

BOARD MEMBERS 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

STAFF MEMBERS PRESENT:

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

CALL TO ORDER

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

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Supervisor Acree moved that Vice-Chairman McCarty be allowed to join the meeting electronically from 8018 Angel Lane in Roanoke, Virginia due to his inability to arrive in time to attend the meeting. The motion was adopted (4-0) with Supervisors Acree, Rosie, Grice and Jefferson voting in favor of the motion and no Supervisors voting against the motion.

Vice-Chairman McCarty joined the meeting.

INVOCATION

Assistant County Administrator Don Robertson delivered the invocation and led the Pledge of Allegiance to the flag.

APPROVAL OF AGENDA

Supervisor Acree moved that the agenda be approved. 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.

COUNTY ADMINISTRATOR'S REPORT

The Board received a proposal for a bike park at Nike Park from Andrew Gibber and Kyle Martindale who agreed to return with a business plan and details regarding parking.

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Chris Morello, Director of Economic Development, Judy Winslow, Director of Tourism and Jessica Healey, President, Chamber of Commerce, provided a presentation on the roles of Tourism, Economic Development and the Chamber of Commerce.

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Jamie Oliver, Transportation Manager, reviewed options for Channell Way/Deep Bottom Road median breaks and was requested to return with additional information on crash data, visibility issues and timeline for installation.

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The results of the 2022 bond issuance were revealed by County Administrator Keaton.

CLOSED MEETING

Pursuant to Section 2.2-3711(A) of the *Code of Virginia*, Supervisor Acree moved to enter the closed meeting for the limited purpose of:

- (1) A discussion regarding the performance of specific employees of the Department of Planning and Zoning, pursuant to subsection 1.
- (2) Consultation with legal counsel employed by the Board regarding specific legal matters, namely the Board's authority over County personnel and

policy and statutory requirements regarding boundary line adjustments between localities, requiring the provision of legal advice by such counsel, pursuant to subsection 8.

- (3) 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 County at the Shirley T. Holland Industrial Park, the Rt. 460 83-acre site, and the former DJJ site, pursuant to subsection 5.

The motion was unanimously adopted (5-0).

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 9:30 p.m., Chairman Jefferson declared the work session adjourned.

Rudolph Jefferson, Chairman

Carey Mills Storm, Clerk

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 EIGHTEENTH DAY OF AUGUST IN THE YEAR TWO
THOUSAND AND TWENTY-TWO AT FIVE O'CLOCK P.M.

BOARD MEMBERS PRESENT:

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

STAFF MEMBERS PRESENT:

Randy R. Keaton, County Administrator
Donald T. Robertson, Assistant County Administrator
Mandy Rogers, Substitute County Attorney
Amber Johnson, Deputy Clerk

CALL TO ORDER

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

APPROVAL OF AGENDA

Supervisor Grice motioned to approve the agenda with the following amendment. The motion was unanimously adopted (5-0).

- New Business – A discussion regarding disposal of salvaged batteries from battery powered vehicles.

CLOSED MEETING

Pursuant to Section 2.2-3711(A) of the Code of Virginia, Supervisor Acree motioned to move to closed session for the limited purpose of:

- (1) A discussion regarding the appointment of specific appointees to County boards, committee or authorities as set forth in the agenda, pursuant to subsection 1;

The motion was unanimously adopted (5-0).

Supervisor Acree motioned to return to open session. The motion was unanimously adopted (5-0).

Supervisor Acree motioned to adopt the following resolution certifying the Closed Meeting, the motion was unanimously adopted (5-0).

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 2.23712(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 here by certifies that, 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 with 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: Grice, Rosie, Acree, McCarty, Jefferson

NAYS: 0

ABSENT: 0

INVOCATION

Mr. David Thomas, the Discipleship and Communications Pastor at of Healing Waters Worship Center gave the invocation and lead the Pledge of Allegiance.

CITIZENS' COMMENTS

- Colby Owens of Carrsville expressed the need for a four way stop sign at the intersection of Joyner's Bridge Road and Holly Run Drive. Mr. Owens' brother was recently killed in a car accident at the intersection. A four way stop sign would prevent future tragedies.
- Herb DeGroft again expressed concerns about the School Board and their spending.

CONSENT AGENDA

Supervisor McCarty motioned to approve the Consent Agenda as presented. The motion was unanimously adopted (5-0).

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RESOLUTION TO ACCEPT AND APPROPRIATE FUNDS FROM THE INTERNET CRIMES AGAINST CHILDREN TASK FORCE

WHEREAS, the Board of Supervisors has received \$9,638 during FY2021-2022 for reimbursement from (ICAC) Internet Crimes Against Children Task Force for the purchase of forensic training and a forensic laptop; and,

WHEREAS, the Sheriff's Office requests that the reimbursed funding in the amount of \$9,638 be reappropriated to the FY2022-2023 General Operating Budget for the purchase of active shooter training aids; and,

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED by the Board of Supervisors of County of Isle of Wight, Virginia, that the FY2022-2023 Budget is hereby amended, and funds appropriated in the amount of \$9,638 to the Sheriff's Office small equipment line for the costs associated with the purchase of active shooter training aids.

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

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**RESOLUTION TO AMEND THE FY 2022-2023 OPERATING BUDGET AND
APPROPRIATE FUNDING FOR LOCAL EMERGENCY MANAGEMENT
PERFORMANCE GRANT**

WHEREAS, Isle of Wight County Department of Emergency Services annually receives funding from the Virginia Department of Emergency Management (VDEM) under the Federal Emergency Management Agency (FEMA) 2022 Local Emergency Management Performance Grant (LEMPG) program for emergency management related functions; and,

WHEREAS, the Board of Supervisors desires to amend to the FY 2022-2023 Grant Fund Budget in the amount of \$7,500 from the Virginia Department of Emergency Management: and,

WHEREAS, the Board of Supervisors needs to appropriate \$7,500 to the FY 2022-2023 Grant Fund Budget for emergency management related functions of Isle of Wight County, Virginia.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia, that the FY 2022-2023 Grant Fund Budget is hereby amended, and funds appropriated in the amount of \$7,500 for emergency management related functions.

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

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**RESOLUTION TO AMEND THE POSITION CLASSIFICATION AND
COMPENSATION PLAN FOR FISCAL YEAR 2022-2023**

WHEREAS, the Board of Supervisors has previously adopted the FY 2022-2023 Position Classification and Compensation Plan; and,

WHEREAS, it is necessary to periodically make amendments/revisions to the County's Position Classification and Compensation Plan; and,

WHEREAS, in accordance with County Policy (Chapter 1: Personnel, Article II, Position Classification Plan and Article III, Compensation Plan), the Position Classification and Compensation Plan containing the Salary Schedule and Schematic List of Classes assigned to Salary Grades has been amended/revised as referenced in the attached exhibit.

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED that the amended/revised FY 2022-2023 Position Classification and Compensation Plan is adopted and shall remain in effect until amended by the Board.

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**RESOLUTION TO AMEND CHAPTER 1: PERSONNEL,
ARTICLE III - COMPENSATION PLAN, SECTION 3.3 – SALARY INCREASES OF
THE COUNTY POLICY MANUAL**

WHEREAS, the Board of Supervisors desires to amend the County Policy Manual, Chapter 1: Personnel, Article III – Compensation Plan, Sections 3.3 and 3.6 which currently establishes provisions regarding salary increases and maintenance of the compensation plan; and,

WHEREAS, amendments of the County Policy Manual are necessary in order to ensure appropriate maintenance and administration of the County's Classification and Compensation system in accordance with the FY 2022-23 Position Classification and Compensation Plan as previously amended on June 16, 2022.

NOW, THEREFORE, BE IT RESOLVED that Chapter 1: Personnel, Article III – Compensation Plan, Sections 3.3 – Salary Increases of the County Policy Manual is hereby amended effective August 18, 2022, and shall remain in effect until amended by the Board.

ARTICLE III - Compensation Plan

(Revised October 7, 1999, April 7, 2005, December 15, 2005, April 18, 2006, June 1, 2006, April 16, 2015, October 1, 2015, July 1, 2016, July 1, 2017, July 1, 2018, July 1, 2021)

Section 3.3 - Salary Increases

(Revised June 1, 2006, October 1, 2015, June 16, 2022, August 18, 2022)

The performance of regular full-time and regular part-time employees shall be reviewed annually. If funding is available, an employee may be entitled to a salary increase for successful job performance. Performance increases shall be awarded to employees in accordance with the County's performance evaluation system. Probationary employees are not eligible for merit-based salary increases during the probation period.

An employee's salary may not exceed the maximum of his/her pay range. Full-time employees at the maximum of their range, who would otherwise be eligible for a merit ~~and/or cost of living increase~~, will receive a payment for that portion of his/her ~~merit~~ increase which exceeds the maximum of the pay range. The payment will be awarded as a lump sum bonus not added to the base salary. The bonus will be ~~paid semi-annually~~. The payment will not be included in the calculation of VRS contributions.

Employee salary adjustments may be necessary on occasion to address internal salary compression, external pressure in high demand areas, and/or retention issues. Such equity adjustments to salaries require the approval of the County Administrator.

The County Administrator shall recommend changes to the compensation plan to the Board of Supervisors. The Board of Supervisors shall make changes to the compensation plan as appropriate.

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Minutes

- June 16, 2022 – Regular Meeting
- July 21, 2022 – Work Session

APPOINTMENTS

Supervisor McCarty motioned to reappoint Robert W. Jones, Jr. to the Western Tidewater Water Authority. The motion was unanimously adopted (5-0).

Supervisor McCarty motioned to appoint Mr. Joe Puglisi (Newport/District 2) to the Department of Social Services Board. The motion was unanimously adopted (5-0).

Supervisor Acree motioned to appoint Rick Sienkiewicz (Windsor/District 4) to the Planning Commission. The motion was unanimously adopted (5-0).

SPECIAL PRESENTATIONS/APPEARANCES

Supervisor McCarty motioned to adopt a resolution in recognition of William "Billy" Bell, Jr. for his service and contributions to the community and the Board of Elections. The motion was unanimously adopted (5-0). Mr. Bell was in attendance for official presentation by the Board.

RESOLUTION TO RECOGNIZE WILLIAM "BILLY" BELL, JR.

WHEREAS, William "Billy" Bell Jr. was first appointed to the Isle of Wight County Electoral Board on March 30, 1998, and served until his retirement on December 31, 2021; and,

WHEREAS, Billy played a crucial role in conducting numerous general, primary, and special elections along with oversight of two decennial redistricting periods in 2000 and 2010; and,

WHEREAS, Billy was an active member of the Virginia Electoral Board Association, holding several leadership roles in both the Tidewater District and on the statewide Small Population Localities Committee; and,

WHEREAS, the citizens of Isle of Wight County and the Commonwealth of Virginia have benefited greatly from Billy's commitment to free, fair, honest, and transparent elections; and,

WHEREAS, the Board of Supervisors wishes to recognize and thank Billy for his many years of non-partisan servant-leadership that has set an ideal example for all election officials in our community to emulate.

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED by the Board of Supervisors of the County of Isle of Wight, Virginia that William "Billy" Bell, Jr. is recognized and congratulated for his selfless contributions to Isle of Wight County and the integrity of our elections.

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PUBLIC HEARINGS

Application of Royal Farms and James River Crossings, Inc., property owner, for a Conditional Use Permit (CUP-11-21) for a Royal Farms convenience store and gas station on 5.11 acres located on the east side of Carrollton Boulevard (Route 17).

Amy Ring, Director of Planning and Zoning explained the application in detail and gave the Planning Commission and staff recommendations.

Mr. Tom Fenderson of Carrollton was the only citizen to speak in favor of the application. He also expressed concerns regarding enough charging stations for electric vehicles.

The public hearing was then closed.

Randy Royal, representing Kimley-Horn addressed the charging station concern. He explained that studies show that generic stations are not utilized enough to be installed at construction. However, there is room to do so in the future if the need arises. Supervisor McCarty motioned to approve an ordinance issuing a Conditional Use Permit allowing a convenience store and gasoline station at tax map # 31-01-070E in the Conditional-General Commercial Zoning District. The motion was unanimously adopted (5-0). A complete copy of the non-codified land use ordinance is on file in the office of Community Development.

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A public hearing to consider granting vacation of a county-owned utility easement to William John Horning, III and Donna C. Horning. The Board is required to hold a public hearing prior to conveying any interest in the property.

The County currently owns a 10' utility easement which runs from an abandoned County owned well located on Tax Map Parcel 04B-01-C014B to S. Shore Drive and crosses lots identified as Tax Map Parcels 04B-02-C001 and 04B-02-C002 owned by William J Horning III and Donna C. Horning. The vacation of the easement would not adversely affect the County's utilities.

There was no one present to speak for the public hearing.

Following the public hearing, Supervisor McCarty motioned to authorize execution of the quitclaim deed to William J. Horning, III and Donna C. Horning. The motion was unanimously adopted (5-0).

COUNTY ADMINISTRATOR'S REPORT

The County recently issued a Request for Bids for construction of an 1800 square foot expansion of the Windsor Library. The anticipated cost of the project was approximately \$428,000. Bids were recently received and the apparent low bid for the project is \$627,000.

Following presentation of bids received and discussion, Supervisor McCarty motioned to reject all bids at this time. The motion was unanimously adopted (5-0).

UNFINISHED/OLD BUSINESS

At the request of the applicant, Mr. McCarty moved to table the WaWa Convenience Store and gasoline station Conditional Use Permit request until the next regular meeting in September. The motion was unanimously adopted (5-0).

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Supervisor McCarty moved to table the School Board Budget Amendment request

(\$613,345) until the first public meeting of the Board of Supervisors after its joint meeting with the School Board. The motion was unanimously adopted (5-0).

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Supervisor McCarty moved to adopt the following resolutions covering unusual costs for apparatus repairs for the Smithfield Volunteer Fire Department. The motion was unanimously adopted (5-0). Supervisor Acree requested a delivery date of the apparatus or when the County's funds would be refunded.

RESOLUTION TO COMMIT FY2021-22 UNASSIGNED FUND BALANCE TO COVER UNUSUAL COSTS FOR APPARATUS REPAIRS FOR SMITHFIELD VOLUNTEER FIRE DEPARTMENT

WHEREAS, the Smithfield Volunteer Fire Department has incurred unusual costs for repairs to its apparatus and said costs have created a deficit in the Department's FY2021-22 operating budget in the amount of \$13,250; and,

WHEREAS, Isle of Wight County Board of Supervisors wishes to commit FY2021-22 unassigned fund balance in the amount of \$13,250 to Smithfield Volunteer Fire Department for unusual costs for vehicle maintenance and repairs.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia, that FY2021-22 unassigned fund balance in the amount of \$13,250 is hereby committed to Smithfield Volunteer Fire Department.

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.

RESOLUTION TO AMEND THE FY 2022-2023 OPERATING BUDGET AND APPROPRIATE COMMITTED FUND BALANCE FOR SMITHFIELD VOLUNTEER FIRE DEPARTMENT

WHEREAS, the Smithfield Volunteer Fire Department incurred unusual costs for repairs to its apparatus and said costs created a deficit in the Department's FY2021-22 operating budget in the amount of \$13,250; and,

WHEREAS, Isle of Wight County Board of Supervisors committed FY2021-22 fund balance in the amount of \$13,250 to Smithfield Volunteer Fire Department for unusual costs for vehicle maintenance and repairs; and,

WHEREAS, the Board of Supervisors needs to budget and appropriate \$13,250 from committed fund balance to Smithfield Volunteer Fire Department.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of the County of Isle of Wight, Virginia that the FY2022-23 budget is hereby amended and funds appropriated in the amount of \$13,250 to Smithfield Volunteer Fire Department for unusual costs for vehicle maintenance and repairs.

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.

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Jamie Oliver gave information regarding the number of accidents reported at the intersection of Channell Way and Deep Bottom Road. The Board agreed no action as needed at this time.

//

Mr. Robertson gave the updated list of 2023 Legislative priorities for the Board to review and comment.

NEW BUSINESS

Sandy Robinson, Zoning Coordinator presented the application of Sheila Auvil, owner, for a waiver to Section 3.2.4.A.4 and Section 5.9.1.C of the Subdivision Ordinance. The application is to seek a waiver allowing a family member transfer from tax map parcel 03-03-001 on a private driveway not built to public standards that serves more than two lots.

The Planning Commission voted to recommend approval of the request as recommended by staff contingent on 1) VDOT recommendations are met prior to subdivision plat approval; and 2) The deed for the new lot specifies adherence to the existing road maintenance agreement as part of the subdivision approval.

Chairman Jefferson motioned to approve the recommendation from the Planning Commission for approval with the specified conditions. The motion was unanimously adopted (5-0).

//

Sandy Robinson, Zoning Coordinator presented the application of Bill and Sandra Kessler, owners, for a waiver to Section 3.2.4.A.4 and Section 5.9.1.C of the Subdivision Ordinance. The application seeks a waiver allowing a family member to transfer from tax map parcel 59-01-071C on a private easement that serves two existing lots.

The Planning Commission voted to recommend approval of the request as recommended by staff contingent on 1) VDOT recommendations are met prior to subdivision plat approval; and 2) Creation of a road maintenance agreement to include the new lot to be recorded with the plat.

Supervisor Rosie motioned to approve the recommendation from the Planning Commission for approval with the specified conditions. The motion was unanimously adopted (5-0).

//

Organizers of the bike park continued discussion with the Board on their proposal to work with Parks and Recreation to develop a bike park to include a BMX track, pump track and refurbishment of the existing mountain bike trails at Nike Park. The group was given permission by the Board to move forward with Parks and Recreation in the development of a Memorandum of Understanding and other legalities of the partnership.

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The Board was given dates to consider for a joint meeting with the Planning Commission Regarding solar and will return to the administrator after reviewing their calendars.

//

The Board was given dates to consider for a joint meeting with the School Board. Members will return to the administrator after reviewing their calendars.

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At the request of Supervisor Acree, there was a discussion of salvaged batteries from battery powered vehicles. The topic will be continued for further discussion at a work session.

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The Chairman adjourned the meeting at 9:04 p.m.

Rudolph Jefferson, Chairman

Amber Johnson, Deputy Clerk

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 TWENTY-FIRST DAY OF JULY IN THE YEAR TWO THOUSAND AND TWENTY-TWO

BOARD MEMBERS 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

STAFF MEMBERS PRESENT:

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

CALL TO ORDER

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

APPROVAL OF THE AGENDA

Supervisor McCarty moved that the agenda be adopted as amended with Items (C) and (D) under the Consent Agenda and the Fair Committee report under the County Administrator's report being moved following the County Attorney's report. The motion was adopted unanimously (5-0) with Supervisors Jefferson, McCarty, Grice, Rosie and Acree voting in favor of the motion and no Supervisor voting against the motion.

CLOSED MEETING

Pursuant to Section 2.2-3711(A) of the *Code of Virginia*, Supervisor McCarty moved to enter the closed meeting for the limited purpose of:

- (1) A discussion regarding the appointment of specific appointees to County boards, committee or authorities as set forth in the agenda, pursuant to subsection 1.
- (2) Consultation with legal counsel regarding actual or probable litigation regarding Chesapeake Bay Preservation Area, the park-to-park trail, Drainage Outfalls, Elections and Recalls, and M&T tax where such consultation would adversely affect the negotiating or litigation posture of this public body pursuant to subsection 7.
- (3) Consultation with legal counsel employed by the Board regarding specific legal matters, namely the Board's authority over County personnel and policy, requiring the provision of legal advice by such counsel, pursuant to subsection 8.

The motion was unanimously adopted (5-0).

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

INVOCATION

Robert Switzwalter of Regent University delivered the invocation and led the Pledge of Allegiance to the American Flag.

CITIZENS' COMMENTS

Herb DeGroft of Mill Swamp Road (Carrsville District) expressed concerns with the School Board's transition appropriation to the former School Superintendent.

CONSENT AGENDA

Supervisor McCarty moved that the following Consent Agenda be adopted as amended under the Approval of the Agenda with Items (C) and (D) under the

Consent Agenda and the Fair Committee report under the County Administrator's report being moved following the County Attorney's report:

**RESOLUTION TO AMEND THE FY 2022-23 GRANT FUND
BUDGET AND APPROPRIATE FUNDING RECEIVED AS AN ANIMAL CONTROL
DONATION**

WHEREAS, Isle of Wight County Animal Control is the beneficiary of a recent donation in the amount of \$17,756; and,

WHEREAS, the Board of Supervisors desires to amend to the FY 2022-23 Grant Fund Budget in the amount of \$17,756 for the Isle of Wight County Animal Control; and,

WHEREAS, the Board of Supervisors needs to appropriate \$17,756 to the FY2022-23 Grant Fund Budget of Isle of Wight County, Virginia.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia, that the FY 2022-23 budget is hereby amended and funds appropriated in the amount of \$17,756.

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.

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**RESOLUTION TO AMEND THE FY 2022-23 OPERATING
BUDGET & APPROPRIATE FUNDING FOR REPAIR OF COUNTY PROPERTY FROM
INSURANCE PROCEEDS**

WHEREAS, the County has received insurance proceeds from The Hartford Insurance for damaged County vehicles; and,

WHEREAS, the Board of Supervisors desires to amend the FY 2022-2023 Public Utility Fund budget in the amount of \$1,769 for repair of damaged County vehicles; and,

WHEREAS, the Board of Supervisors needs to appropriate insurance proceeds in the amount of \$1,769 to the Public Utility Fund for repair of damaged County vehicles.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of Isle of Wight County, Virginia, that the FY 2022-23 budget is hereby amended and the funds appropriated in the amount of \$1,769.

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.

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**RESOLUTION TO AMEND THE FY 2022-2023 OPERATING BUDGET AND
APPROPRIATE FUNDS FOR IMPROVEMENTS TO WRENN'S MILL REFUSE AND
RECYCLING CENTER**

WHEREAS, the Board of Supervisors has approved improvements to the Wrenn's Mill Refuse and Recycling Center to be funded from Stormwater Management Funds; and,

WHEREAS, the Board of Supervisors needs to budget and appropriate \$862,701 from Stormwater Management Funds to the Wrenn's Mill Refuse and Recycling Center project to fund the improvements.

NOW, THEREFORE, BE IT RESOLVED by the Board of Supervisors of the County of Isle of Wight, Virginia that the cross-fund transfer from Stormwater Management Funds to the Capital Project Fund in the amount of \$862,701 for the Wrenn's Mill Refuse and Recycling Center project is hereby approved; and,

BE IT FURTHER RESOLVED by the Board of Supervisors of Isle of Wight County that funds in the amount of \$862,701 are hereby budgeted and appropriated for the Wrenn's Mill Refuse and Recycling Center project; and,

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.

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An Amendment to an Agriculture and Forestry Industries Development Fund Performance Agreement with M&M Milling which involves a provision for a 15-month extension in order to avoid a full clawback of incentive funds by the Virginia Department of Agriculture. M&M Milling has requested a 15-month extension. The company plans to establish a second production line, which will create new jobs and increase its purchase of Virginia-grown corn.

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Heritage Park ATV Training Park and Trails – Project Agreement for an All-Terrain Vehicle (ATV) trail at Heritage Park. The purpose of the ATV Trail is to provide a safe environment for the youth of the County and surrounding areas to ride four-wheel recreational vehicles. During the master planning for Heritage Park several citizens attended-public meetings and requested a facility for youth to ride ATV's. According to the 2007 Virginia Outdoor Plan some existing networks fail to provide many functional loops or less challenging trails for beginner level riders. The ATV Trail project is envisioned to be an innovative facility that will serve as a model for other communities.

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RESOLUTION OF SUPPORT FOR PROJECTS TO BE SUBMITTED FOR SMART SCALE EVALUATION AND FUNDING THROUGH THE VIRGINIA DEPARTMENT OF TRANSPORTATION

WHEREAS, the SMART SCALE program directs the Commonwealth Transportation Board (CTB) to develop and implement a statewide process to identify, score and select projects for **Round 5** funding by July 1, 2023; and,

WHEREAS, the SMART SCALE prioritization process requires that all project submissions by local governments must be consistent with the regionally adopted fiscally constrained Long-Range Transportation Plan (LRTP); and,

WHEREAS, the SMART SCALE prioritization process requires that all project submissions must be consistent with the needs identified in the Statewide transportation plan, VTRANS 2040, and VTRANS 2021 Midterm Needs; and,

WHEREAS, the SMART SCALE prioritization process requires that all project submissions must be consistent with the goals and priorities of the local community as identified in local long-range community plans, local ordinances and/or by local public input processes.

NOW THEREFORE BE IT RESOLVED that the Board of Supervisors of the County of Isle of Wight, Virginia hereby supports the application, evaluation, and funding of the following projects under the SMART SCALE Prioritization Process:

- US Route 17 (Carrollton Blvd) Right Turn Lane Extension at State Route 669 (Smiths Neck Road)
- US Route 17 (Carrollton Blvd) and State Route 661 (Sugar Hill Road) Intersection Improvements
- US Route 460 Windsor Blvd (EASTERN) Safety Improvements Ennis Mill Road to Lovers Lane
- US Route 460 Windsor Blvd (WESTERN) Safety Improvements Cut Thru Road to Stave Mill Road

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, and/or his designee, is authorized to execute all required project applications, agreements, and/or addendums, and make all accounting adjustments, revisions, and amendments necessary to give this resolution effect.

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RESOLUTION OF SUPPORT FOR PROJECTS TO BE SUBMITTED FOR SMART SCALE EVALUATION AND FUNDING THROUGH THE VIRGINIA DEPARTMENT OF TRANSPORTATION

WHEREAS, the SMART SCALE program directs the Commonwealth Transportation Board (CTB) to develop and implement a statewide process to identify, score and select projects for **Round 5** funding by July 1, 2023; and,

WHEREAS, the SMART SCALE prioritization process requires that all project submissions must be consistent with the needs identified in the Statewide transportation plan, VTRANS 2040, and VTRANS 2021 Midterm Needs; and,

WHEREAS, the SMART SCALE prioritization process requires that all project submissions must be consistent with the goals and priorities of the local community as identified in local long-range community plans, local ordinances and/or by local public input processes; and,

WHEREAS, SMART SCALE encourages collaboration between adjacent communities for the purpose of efficient and effective use of public funds.

NOW THEREFORE BE IT RESOLVED that the Board of Supervisors of the County of Isle of Wight, Virginia hereby supports the City of Suffolk's application for the following project under the SMART SCALE Prioritization Process:

- Windsor to Suffolk Commuter Bus Service, providing a new Suffolk Transit commuter route through the Shirley T. Holland Intermodal Park and the Town of Windsor.

BE IT FURTHER RESOLVED that the County Administrator of Isle of Wight County, and/or his designee, is authorized to execute all required project applications, agreements, and/or addendums, and make all accounting adjustments, revisions, and amendments necessary to provide partnership with the City of Suffolk in this application process and give this resolution effect.

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Minutes

- . May 19, 2022 Regular Meeting Minutes
- . June 2, 2022 Work Session Minutes

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

REGIONAL AND INTER-GOVERNMENTAL REPORTS

No reports were offered.

APPOINTMENTS

Supervisor McCarty moved that Donald Robertson be reappointed as the ex-officio member on the Chamber of Commerce. The motion was adopted unanimously (5-0) with Supervisors Jefferson, McCarty, Grice, Rosie and Acree voting in favor of the motion and no Supervisor voting against the motion.

Supervisor McCarty moved that Richard Grice be reappointed to serve on the Western Tidewater Water Authority. The motion was adopted unanimously (5-0) with Supervisors Jefferson, McCarty, Grice, Rosie and Acree voting in favor of the motion and no Supervisor voting against the motion.

Supervisor McCarty moved that Joel Acree be reappointed to serve on the Western Tidewater Water Authority. The motion was adopted unanimously (5-0) with Supervisors Jefferson, McCarty, Grice, Rosie and Acree voting in favor of the motion and no Supervisor voting against the motion.

COUNTY ATTORNEY'S REPORT

No report was offered.

NEW BUSINESS

Dr. Coleman was requested to explain why the Board was not notified by the School Division of the \$478,313 in additional revenue received by the schools from the liquidation of the Pruden partnership. Dr. Coleman responded that the check for the additional revenue was received by the Schools in March, however, he could not explain why the Board of Supervisors was not notified. The consensus of the Board was to delay action on the Resolution to Amend the Budget and Appropriate Funding from the Unexpended FY2021-22 Schools' Funds in the amount of \$613,345 until clarification could be provided by Dr. Coleman.

Supervisor McCarty moved that action on the Resolution to Amend the Budget and Appropriate Funding from the Unexpended FY2021-22 Schools' Funds in the amount of \$613,345 be tabled to the Board's August 18, 2022 meeting. The motion was adopted unanimously (5-0) with Supervisors Jefferson, McCarty, Grice, Rosie and Acree voting in favor of the motion and no Supervisor voting against the motion.

Supervisor McCarty stated that he would like additional information regarding the repair of a vehicle and if it would be sold and moved to table the following resolutions pending receipt of additional information:

- . Resolution to Commit FY2021-22 Unassigned Fund Balance to Cover Unusual Costs for Apparatus Repairs for Smithfield Volunteer Fire Department (\$13,250)
- . Resolution to Amend the FY2022-23 Operating Budget and Appropriate Committed Fund Balance for Smithfield Volunteer Fire Department (\$13,250)

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

Michelle Billups, Vice-Chairman of the County Fair, provided an update on the County Fair.

PUBLIC HEARINGS

- A. Application of Anthony Landes and Derek Joyner, applicants, and Vincent Carollo, property owner, for a Conditional Use Permit to Establish a Sports Club on Property located at 14353 Benns Church Boulevard.

Trenton Blowe, Planner, provided an overview of the proposed application and gave staff's and the Planning Commission's recommendations.

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

Nick Hess, Anthony Landes and Derek Joyner, applicants, appeared and offered to answer any questions.

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

Supervisor McCarty moved that the Conditional Use Permit be approved with the amendment changing “people” to “participants”. The motion was adopted unanimously (5-0) with Supervisors Jefferson, McCarty, Grice, Rosie and Acree voting in favor of the motion and no Supervisor voting against the motion.

B. Application of Curtis Contracting, Inc., Applicant and Whitley-Hawkins Holdings, LLC, property owner, for approval of a Conditional Use Permit to Expand an Existing Sand Borrow Pit on eleven acres Located at 32083 Airport Drive.

Jeryl Phillips, Department of Community Development, provided an overview of the application and gave the Planning Commission’s and staff’s recommendations.

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

William Riddick, Attorney representing the applicant, stated this material is needed for projects in the County to include the expansion of the Highway 58 project. He advised that the applicant would like the option to remove the existing oil tanks that were identified as a weakness.

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

Supervisor McCarty moved that the application be approved with the conditions proposed by the Planning Commission and regarding Conditions #2 and #3 that the applicant shall comply with all inspections and register the storage tanks or remove the storage tanks prior to the issuance of the Zoning permit. The motion was adopted unanimously (5-0) with Supervisors Jefferson, McCarty, Grice, Rosie and Acree voting in favor of the motion and no Supervisor voting against the motion.

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The Board took a break and upon returning to open session, Chairman Jefferson called for a public hearing on the following:

- C. Application of Gerald W. Peade, Property Owner, for an Amendment to Conditional Zoning to Add Motor Vehicle Repair Service (Major) and Garden Center Uses to Conditional Zoning Uses on a 1.25-acre parcel located at 12728 Courthouse Highway

Jeryl Phillips, Department of Community Development, provided an overview of the application and gave the Planning Commission's and staff's recommendations.

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

No one appeared and spoke.

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

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

- D. Application of Carrollton Ventures, LLC, property owner, for a change in Conditional Zoning to allow 120,000 square feet of self-storage units and outdoor motor vehicle storage on 8.08 acres located at 15411 Carrollton Boulevard.

Amy Ring, Director of Community Development, provided an overview of the application and gave the Planning Commission's and staff's recommendations.

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

Beverly Walkup, representing the applicant, advised that Mr. Sawyer is ready to develop and has had a plumbing business in the County since 1978. He has been a great resident and business owner in the County and he is requesting approval of his application.

Sam Cratch of New Towne Haven Lane recommended that the Board approve Mr. Sawyer's application.

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

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

- E. Application of Remus Brustur of Frontier Development, applicant and the William G. Yeoman, III, trust, property owner, for a Conditional Use Permit for a Wawa Convenience Store and gas station pm 5.69 acres located on the southwest corner of Turner Drive and Benns Church Boulevard.

Ms. Ring provided an overview of the application and gave the Planning Commission's and staff's recommendations.

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

Tim Trant, Kaufman & Canoles, stated changes to the proposed conditions were submitted by the applicant following the Planning Commission meeting and he is requesting an opportunity to work through those with staff before the Board considers the application and come back to the Board at its next meeting.

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

Supervisor McCarty moved that the application be tabled until the Board's regular August 18, 2022 meeting based on the applicant's recommendation. The motion was adopted unanimously (5-0) with Supervisors Jefferson, McCarty, Grice, Rosie

and Acree voting in favor of the motion and no Supervisor voting against the motion.

- F. Resolution to Request Establishment of No Through Trucks on Old Mill Road West from the intersection of Old Mill Road West and Old Mill Road for 0.18 miles to the intersection of Old Mill Road West and Old Suffolk Road

Jamie Oliver, Transportation Manager, presented a resolution for consideration by the Board to Request Establishment of No Through Trucks on Old Mill Road West from the intersection of Old Mill Road West and Old Mill Road for 0.18 miles to the intersection of Old Mill Road West and Old Suffolk Road.

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

No one appeared and spoke.

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

Supervisor McCarty moved that the following Resolution be adopted:

**RESOLUTION REQUESTING ESTABLISHMENT OF NO
THROUGH TRUCKS ON OLD MILL ROAD WEST (RT. 733)**

WHEREAS, Isle of Wight County has been requested by citizens to evaluate the possibility of restricting through trucks on Old Mill Road West (Rt. 733) from the intersection of Old Mill Road West (Rt. 733) and Old Mill (Rt. 607) Road for 0.18 miles to the intersection of Old Mill Road West (Rt. 733) and Old Suffolk Road (Rt. 636); and,

WHEREAS, industrial park traffic is currently being routed by GPS through this road segment and is causing conflict between industrial traffic and residents; and,

WHEREAS, the Board of Supervisors deems it appropriate to prohibit through truck traffic on this 0.18 mile segment to promote the health, safety and welfare of the citizens of the Commonwealth.

NOW THEREFORE, BE IT RESOLVED, that the Board of Supervisors of Isle of Wight County requests that the segment of Old Mill Road West (Rt. 733) be designated as No Through Trucks by the Commissioner of the Virginia Department of Transportation.

BE IT FURTHER RESOLVED that the Board of Supervisors believes that an alternative route with the same termini is available for truck traffic utilizing East Windsor Boulevard (Rt. 460), South Court Street, East Griffin Street, Old Suffolk Road (Rt. 636), and Old Mill Road West (Rt. 733), if deemed necessary.

BE IT FURTHER RESOLVED that the Board of Supervisors agrees to use its good offices for enforcement of the proposed restriction by the appropriate local law enforcement agency.

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

COUNTY ADMINISTRATOR'S REPORT

The FY2022-23 budget book was presented by the Chief Financial Officer Stephanie Humphries.

Assistant County Administrator Robertson provided an overview of the 2023 legislative priorities. Supervisor Grice requested that the salaries for SRO and Comp Board positions be adjusted.

UNFINISHED/OLD BUSINESS

There was no old business offered for discussion.

NEW BUSINESS

Assistant County Administrator Robertson presented a Resolution in Support of the Virginia American Revolution 250 Commission which was created by the State to recognize the 250th year of the country. The State would like for the County to develop a local commission and develop local celebrations with a local person such as the Director of Tourism being appointed as the local designee for the 250th Committee assignment.

Supervisor McCarty moved that the following Resolution be adopted:

A RESOLUTION TO SUPPORT THE EFFORTS OF THE VIRGINIA AMERICAN REVOLUTION 250 COMMISSION

WHEREAS, the Isle of Wight County Board of Supervisors is dedicated to the furtherance of economic development and tourism throughout our community; and,

WHEREAS, the Virginia American Revolution 250 Commission (VA250) was created in the 2020 by the General Assembly for the purpose of preparing for and commemorating the 250th anniversary of Virginia's participation in American independence; and,

WHEREAS, the Board of Supervisors desires to form a committee to plan and coordinate local programs and communicate regularly with VA250; and,

WHEREAS, the Board of Supervisors wishes to undertake this endeavor with VA250 to promote and commemorate this important historic milestone.

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors of the County of Isle of Wight, Virginia supports the Virginia American Revolution 250 Commission and their efforts to commemorate the 250th anniversary of Virginia's participation in American independence.

BE IT FURTHER RESOLVED that the Board of Supervisors will form a committee to aid in the planning for the commemoration period.

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

Supervisor Rosie moved that Judy Winslow be appointed as the local designee for the 250th Committee assignment. The motion was adopted unanimously (5-0) with Supervisors Jefferson, McCarty, Grice, Rosie and Acree voting in favor of the motion and no Supervisor voting against the motion.

Staff will return with in the future with a resolution and a recommended list of persons to be appointed to a local committee.

ADJOURNMENT

At 9:00 p.m., Chairman Jefferson declared the regular meeting 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
2022 Regional Reports	Backup Material	7/19/2022

2022 BOARD MEMBER REGIONAL REPRESENTATIVE

(Appointed by Board Vote)

Organization	Member	Term Expires
Eastern Virginia Regional Industrial Facility Authority	Grice	No Set Term
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
Hampton Roads Workforce Council	Grice	No Set Term
Southeastern Public Service Authority	Keaton	December 2025
	Etheridge/Alternate	December 2025
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

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	9/9/2022

BOARDS/COMMISSIONS/COMMITTEES

Boards/Commissions/Committee	Appointees	Contact	District	Expiration	
Board of Building Appeals	Gary Terwillinger	357-9955	Smithfield/District 1	November	2022
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
Commission on Aging	Replacement for Brenda Reynolds who no longer resides in District 2		Newport/District 2		
Commission on Aging	Jane March - Resigned	242-3807	Carrsville/District 5	November	2021
Commission on Aging	Glenie Jones - Resigned		Carrsville/District 5	March	2023

ISSUE:

Application of Ronald L. Aston and Alaina A. Sims, Property Owners, to Vacate the "Dedicated Park" of the Aston Manor Subdivision to Allow Single Family Residential Use of the Parcel

BACKGROUND:

The subdivision plat of Aston Manor was approved in September 1975 establishing eighteen residential lots on the north and south sides Old Myrtle Road (Rte. 632) west of the City of Suffolk line. The approved plat also established a "Dedicated Park" containing 2.26 acres of land, and is identified as tax map parcel 61A-01-021A, that was a requirement at that time. The lot is in the Rural Agricultural Zoning District (RAC).

On December 17, 1981, the Board of Supervisors adopted an "Ordinance to Amend the Subdivision Ordinance to Delete Provisions for Parks, Playgrounds and Recreation Areas." This ordinance amendment deleted Section 4-4-13 so that subdivisions approved after that date were not required to dedicate that amenity.

BUDGETARY IMPACT:

None

RECOMMENDATION:

The lot meets the minimum requirements for a residential lot in the RAC zoning district. There are no proffered conditions to limit the lot for recreational use.

Staff recommends that the application be approved contingent on approval of a well and wastewater system.

ATTACHMENTS:

Description	Type	Upload Date
Ordinance	Ordinance	9/7/2022
Application	Exhibit	9/6/2022
Subdivision Plat	Exhibit	9/6/2022
Location Map	Exhibit	9/6/2022

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ORDINANCE TO VACATE THE DEDICATED PARK AREA OF THE ASTON
MANOR ESTATES SUBDIVISION

WHEREAS, there is now located in Isle of Wight County, Virginia a platted subdivision known as Aston Manor Estates, which was approved in September 1975, establishing eighteen residential lots in the County, said plat being of record in the Circuit Court Clerk's office of the Isle of Wight County, in Plat Book 7, page 20; and

WHEREAS, the subdivision plat also established a "Dedicated Park" containing 2.226 acres of land, and is identified as Tax Map Parcel 61A-01-021A; and

WHEREAS, the said "Dedicated Park" area is not now nor has it ever been used or utilized as a park; and

WHEREAS, the General Assembly of Virginia has authorized governing bodies of counties to vacate any recorded final plat of portion of a recorded plat as provided in Section 15.2-2272 of the Code of Virginia, 1950, as amended and the County has adopted Appendix A. – Subdivisions, Section 3.2.9 of the Isle of Wight County Code to address the procedure to vacate such plats; and

WHEREAS, the owners of said lot desire to vacate the "Dedicated Park" designation on said lot and make such use of said lot as may be allowed by law.

NOW, THEREFORE, BE IT ORDAINED that the Isle of Wight County Board of Supervisors hereby vacates the designation as a "Dedicated Park" on the parcel of land identified as Tax Map Parcel 61A-01-021A, as shown on the plat entitled "SUBDIVISION OF ASTON MANOR ESTATES, WINDSOR MAGISTERIAL DISTRICT, ISLE OF WIGHT COUNTY, VIRGINIA", RECORDED IN THE Circuit Court Clerk's Office of Isle of Wight County in Plat Book 7, page 20, in accordance with Section 15.2-2272 of the Code of Virginia, 1950, as amended and Appendix A. – Subdivisions, Section 3.2.9 of the Isle of Wight County Code,

Adopted this 15th day of September, 2022.

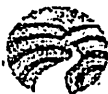
Rudolph Jefferson, Chairman
Board of Supervisors

Attest:

Carey Mills Storm, Clerk

Approved as to form:

Robert W. Jones, Jr.
County Attorney



Local Roots, Global Reach
ISLE OF WIGHT
 COUNTY, VIRGINIA
 DEPARTMENT OF COMMUNITY DEVELOPMENT

APPLICATION FOR SUBDIVISION APPROVAL

This application shall be used to request review and approval of all subdivision activity. The following application requirements are consistent with the procedures set forth in Sections 3 and 4 of the Isle of Wight County Subdivision Ordinance, as amended. Please note that both preliminary and final plats are required for any subdivision of fifty lots or more.

APPLICATION FOR (CHECK ALL THAT APPLY):

- ☐ Preliminary Plat
- ☐ Final Plat
- ☐ Construction/Development Plans
- ☒ Plat Vacation

Submittal #: First ☒ Second ☐ Third ☐ Other (please specify) _____

****Resubmittals only required to submit application and submittal checklist****

Application Number (resubmittals only): _____

PROJECT DESCRIPTION:

Project Name: Old Myrtle Rd

Number of lots proposed: 1

Election District: 50 (D5)

Zoning District: RAC

Tax Parcel Identification # 61A-01-021A

Proposed Utilities (check all that apply):
 Public Water _____ Private Well ☒
 Public Sewer _____ Private Septic ☒

APPLICATION INFORMATION:

Applicant(s) Name(s): Ronald L. Aston and Alaina A. Sims

Address: 112 E. Harris St #403 / 19 Tall Marigolds Court

City, State, Zip Code: Savannah, GA 31401 / Homosassa, FL 34446

Phone No.: 757-636-8088 Email: laston1024@gmail.com
757-282-8349 Email: alainajsims@gmail.com Fax No.: _____

Property Owner(s) Name(s): same

Address: _____

City, State, Zip Code: _____

Phone No.: _____ Email: _____ Fax No.: _____



Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA
DEPARTMENT OF PLANNING AND ZONING

SUBMITTAL CHECKLIST FOR SUBDIVISION PLAT APPLICATIONS

In accordance with the Isle of Wight County Subdivision Ordinance, the following information shall be submitted for subdivision applications. Please note that it is the applicant's responsibility to ensure that the application complies with all Federal, State and County regulations.

No application for approval of a subdivision plat shall be certified as complete unless the following information is provided. If the required number of copies has been reduced by the Subdivision Agent, the permitted number of copies must be documented in writing and provided with the application. A pre-application conference is encouraged for all subdivision applications and may be required (see section 3.2.1.B).

- ☒ One (1) copy and one (1) original executed application.
- ☒ ^{one} Ten (10) paper copies of a preliminary or final plat drawn to scale. Final plats, when deemed complete by the subdivision agent, must be signed in accordance with section 3.2.8. of the Subdivision Ordinance. Number of paper copies may be reduced by the Subdivision Agent per instructions above.
- ☒ One (1) digital copy of the plat and application materials
- ☒ Appropriate fees must be submitted with the application pending on number of lots. Checks should be made payable to: Treasurer, Isle of Wight County.
- ☒ All real estate taxes must be paid and current at the time of submittal. 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.



Signature

7-7-22

Date

Applicant Signature

Date

Owner Signature if different

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: 08/18/22

Fees Paid: ☒

Tax Query: ☒ Current ☐ Delinquent

Distribution Date: _____

Posted/Date to Post: ☒ 09/09/22

AGENCY REFERRALS:

☐ Inspections
☐ Economic Development
☐ Emergency Services
☐ Utility Services (SWM/Utilities)
☐ Environmental Planner
☐ Health Department
☐ Transportation Manager
☐ Commissioner of Revenue
☐ Isle of Wight County Museum (Historic Resources)
☐ Department of Historic Resources

☐ Department of Environmental Quality
☐ Sheriff's Office
☐ Town of Smithfield
☐ Town of Windsor
☐ VDOT
☐ Schools
☐ Budget & Finance
☐ County Attorney

Verified By: 

Date: 08/18/22

THIS SUBDIVISION OF LOT 25, 4500 W. 40TH ST. IS APPROVED BY THE
CITY ENGINEER IN ACCORDANCE WITH EXISTING SUBDIVISION REGULATIONS
AND MAY BE COMMITTED TO RECORD.

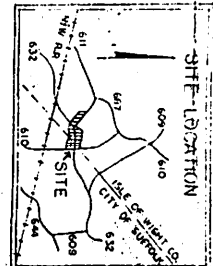
9-4-75
DATE
8/19/75
DATE
9-4-75
DATE

H. G. Gault
HIGHWAY ENGINEER
R. J. Johnson
PLANNING OFFICER
B. G. H. Gault
AGENT OF INSURING BODY

APPROVAL IS WITH THE UNDERSTANDING THAT WHERE SEPTIC TANKS ARE TO BE INSTALLED THESE MUST BE APPROVED ON AN INDIVIDUAL LOT BASIS BY THE HEALTH DEPARTMENT AT THAT THE APPLICATION IS MADE FOR A SEPTIC TANK PERMIT.

* This appeal for more late
written sets of Church's memory.

AGE - 66 TABLE			
LOT NO	2 - 65	LOT NO	AGE 65
1	5.34	16	3.04
2	5.34	17	3.04
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14	5.34	29	3.04
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16	5.34	31	3.04
17	5.34	32	3.04
18	5.34	33	3.04
19	5.34	34	3.04
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21	5.34	36	3.04
22	5.34	37	3.04
23	5.34	38	3.04
24	5.34	39	3.04
25	5.34	40	3.04
26	5.34	41	3.04
27	5.34	42	3.04
28	5.34	43	3.04
29	5.34	44	3.04
30	5.34	45	3.04
31	5.34	46	3.04
32	5.34	47	3.04
33	5.34	48	3.04
34	5.34	49	3.04
35	5.34	50	3.04
36	5.34	51	3.04
37	5.34	52	3.04
38	5.34	53	3.04
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319	5.34	334	3.04
320	5.34	335	3.04
321	5.34	336	3.04
322	5.34	337	3.04
323	5.34	338	3.04
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326	5.34	341	3.04
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329	5.34	344	3.04
330	5.34</		



NOTE: BEARINGS BASED ON VAL.
DEPT. OF HWYS. PROJ. 1347-07
ROUTE 411.

- DENOTES IRON PIN
- DENOTES LINE TAPE

TOTAL AREA = 19.0525 ACRES

THE LAST INSTRUMENT OF TITLE BEING IN MY KNOWLEDGE AND BELIEF, ALL OF THE REQUIREMENTS OF THE BUREAU OF SUPERVISORS AND COMMISSIONERS OF THE COUNTY OF SAN JOSE, CALIFORNIA, IN GRANTING THE PLATTING OF SUBDIVISIONS WITHIN THE COUNTY HAVE BEEN CONSIDERED WITHIN.

WITNESS MY HAND AND SEAL OF OFFICE, JANUARY 1, 1935.

NOTE: ROUTE 32 WAS EXISTING ALIGHT-OF-WAY (7.50); ROUTE 610 WAS 2.12 AND ROUTE 611 WAS 40'. 1,3710 L&S ARE DESIGNATED TO INCREASE RIGHT-OF-WAY. ROUTE 632 INCREASES TO 50' P/W; ROUTE 611 INCREASED TO 45' P/W; ROUTE 6 INCREASED TO 40' P/W.

Chief Clerk
CENTRAL LAND SURVEYOR
NO. 00087

STATE OF MICHIGAN
CITY OF ANN ARBOR, MI 48106

Paul D. Ayer
James A. Ayer

SUBJACENT AND SWORN TO BEFORE ME, Isidoro B. Melendez, A NOTARY PUBLIC IN AND FOR THE CITY OF SAN JUAN, P.R., ON 17th DAY OF August, 1975.
MY COM. NO. 1376 EXPIRES March 13, 1976
GIVEN UNDER MY HAND AND SEAL OF OFFICE, AT SAN JUAN, P.R., ON 17th DAY OF August, 1975.

NO.	RADIUS	DELTA	TANGENT	ARC
1	2884.79	1578.00	34.61	678.67
2	2819.78	1578.00	34.64	686.20
3	2764.51	1578.00	34.66	694.05
4	2708.55	1578.00	34.68	701.65
5	10.00	9075.00	10.01	180.67
6	10.00	3646.00	10.01	15.75
7	200.65	455.50	99.99	15.66
8	200.65	455.50	11.59	24.65
9	3488.47	559.00	34.63	678.67

SUBDIVISION OF
ASTON MANOR
ESTATES
WINDSOR MAGISTRAL DISTRICT
ISLE OF WIGHT COUNTY, VIRGINIA

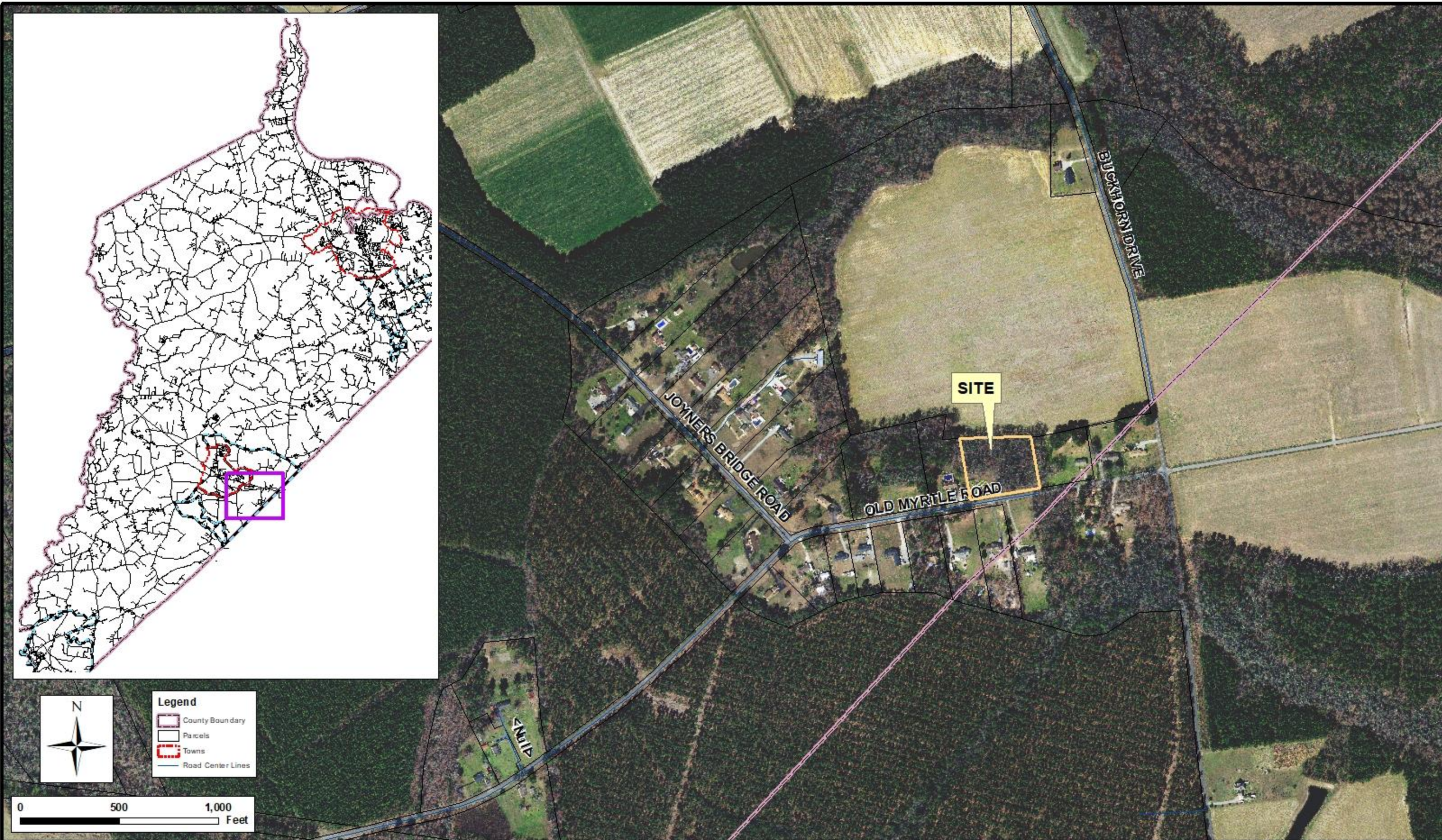
ERNEST C. MANNING JR.
CERTIFIED LAND SURVEYOR
PORTSMOUTH, VIRGINIA



100' 200' 400' 600'

GRAPHIC SCALE

ASTON MANOR ESTATES - LOCATION MAP



ISSUE:

Ordinance to Amend and Reenact the Isle of Wight County Code by Amending and Reenacting Appendix D, Agricultural Districts, Section D-1, District Establishment

BACKGROUND:

In accordance with the legal authority granted by Section 15.2-4300 *et seq.* of the Code of Virginia (1950, as amended), Isle of Wight County has established four (4) agricultural and forestal districts. The purpose of these districts is to conserve, protect and encourage the development and improvement of agriculture and forestal lands within Isle of Wight County.

As required by Section 15.2-4311 of the Code of Virginia (1950, as amended), the County is required to review each district no less than four years, but no more than ten years, after the date of each district's creation. The Moonlight District is set to expire on September 20, 2022. Staff has reviewed the district boundaries and has determined that there are no modifications to the boundaries to be made.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

Adopt an ordinance to renew the Moonlight Agricultural and Forestal District.

ATTACHMENTS:

Description	Type	Upload Date
Ordinance	Ordinance	9/2/2022

**AN ORDINANCE TO AMEND AND REENACT
THE ISLE OF WIGHT COUNTY CODE
BY AMENDING AND REENACTING
APPENDIX D. AGRICULTURAL DISTRICTS.
SECTION D-1. DISTRICT ESTABLISHMENT.**

WHEREAS, the Board of Supervisors of Isle of Wight County, Virginia, has deemed it to be in the best interest of Isle of Wight County to continue its support for the conservation and protection of its agricultural and forestal lands; and

WHEREAS, Section 15.2-4300 *et seq.* of the Code of Virginia (1950, as amended) provides localities with the legal authority to establish and maintain agricultural and forestal districts under which Isle of Wight County has enacted Appendix D of the Isle of Wight County Code; and

WHEREAS, Section 15.2-4311 of the Code of Virginia (1950, as amended) requires that a review of said district(s) be made every four to ten years; and

WHEREAS, the Moonlight agricultural/forestal district is set to expire September 20, 2022.

WHEREAS, a review of the Moonlight agricultural/forestal district has determined that no changes need to be made to said district at this time.

NOW, THEREFORE, BE IT ORDAINED by the Isle of Wight County Board of Supervisors that Appendix D, Agricultural Districts, Section D-1 of the Isle of Wight County Code be amended and reenacted as follows:

APPENDIX D.

AGRICULTURAL DISTRICTS.

Sec. D-1. District establishment.

The County of Isle of Wight, Virginia, finds that the conservation and protection of its agricultural and forestal lands for the production of food and agricultural and forestal products is vital to the public interest and upon the advice of the agricultural and forestal districts advisory committee and the planning commission, and after the conduct of a public hearing, and with the concurrence of the landowners, the board of supervisors of Isle of Wight County does hereby promulgate the existence of the Longview agricultural district, the Knoxville agricultural district and the Courthouse agricultural district initially created and established by separate ordinances in accordance with the provisions of the Code of Virginia (1950, as amended), as follows:

- A. Longview agricultural district established on June 21, 1979 for a period of eight (8) years, and subsequently renewed, effective June 21, 1987 for a period of eight (8) years, renewed effective June 21, 1995 for a period of ten (10) years, renewed effective June 21, 2005 for a period of ten (10) years, and renewed June 21, 2015 for a ten (10) year period to expire on June 21, 2025; and
- B. Knoxville agricultural district established on April 21, 1983 for a period of eight (8) years, and subsequently renewed, effective April 21, 1991 for a period of ten (10) years, renewed effective April 21, 2001 for a period of ten (10) years, and renewed effective April 21, 2011 for a period of ten (10) years, and renewed September 16, 2021 (effective April 21, 2021) to expire on April 21, 2031; and
- C. Courthouse agricultural district established on September 15, 1988 for a period of eight (8) years, and subsequently renewed, effective October 17, 1996 for a period of ten (10) years, renewed effective October 17, 2006 for a period of ten (10) years, and renewed September 15, 2016 for a period of ten (10) years to expire on September 15, 2026.
- D. Moonlight agricultural/forestal district established on September 20, 2012 for a period of ten (10) years to expire on September 20, 2022, and renewed September 15, 2022 for a ten (10) year period to expire on September 15, 2032. (Ord. No. 2011-17-C, 9-1-11; Ord. No. 2012-9-C, 9-20-12; 6-18-15; 9-15-16; 9-16-21; 9-15-22.)

Adopted this 15th day of September, 2022.

Rudolph Jefferson, Chairman
Board of Supervisors

Attest:

Carey Mills-Storm, Clerk

Approved as to Form:

Robert W. Jones, Jr., County Attorney

ISSUE:

Discussion of Expansion of the County's Enterprise Zone

BACKGROUND:

The County has an opportunity to apply for expansion of its current Enterprise Zones through the Virginia Department of Housing and Community Development. Expansion of the Enterprise Zones would be a beneficial to the County's economic development efforts.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

For the Board's information.

ISSUE:

Discussion of Fee Schedule for Heritage Park

BACKGROUND:

The County has recently added three large open shelters at Heritage Park, making it a potentially desirable site for events such as class/family reunions, wedding receptions, picnics, etc. In this regard, staff has develop a proposed fee schedule for rental of Heritage Park and its facilities.

The Board may wish to consider adopting a fee schedule for Heritage Park.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

Per the Board's discussion and direction.

ATTACHMENTS:

Description	Type	Upload Date
Proposed Fee Schedule for Heritage Park	Backup Material	9/6/2022

Joel C. Bradshaw Fairgrounds at Heritage Park

21311 Courthouse Highway, Windsor, VA 23487

Proposed Facilities & Services Fees

DRAFT Rev. 6-20-2022

AVAILABILITY

Available for rental throughout the calendar year excluding August 15-September 30 (County Fair) and other blackout dates. Contact Isle of Wight County Parks & Recreation for all inquiries.

Hours:

Weekday – Monday-Thursday: 7:00 am – 9:00 pm

Weekend – Friday-Sunday: 6:00 am – 10:00 pm

PAVILIONS

Rental includes trash, water, power, and on-site personnel. See additional services for other rental costs.

Pavilion Dimensions: 80'W x 120'L x 16'H (Poultry Pavilion or Agricultural Pavilion) OR 80'W x 120'L x 18'H (4-H Pavilion). Max Capacity: 288 per pavilion.

Daily Rates:

\$1,500.00 choice of 1 pavilion.

\$500.00 each additional pavilion.

\$500 deposit – refundable up until 2 weeks (14 days) from rental. Forfeited after any cancelations less than 2 weeks from rental date.

Full payment due 2 weeks (14 days) before rental date.

10% off base for rentals Monday – Thursday (7:00 am – 9:00 pm) ONLY.

FAIRGROUNDS

Rental includes trash, water, power, and on-site personnel. See additional services for other rental costs.

\$3,500.00-\$6,000.00 for entire fairgrounds including parking lot, pavilions, rodeo arena, and motorsports track. Does not include grain bin, office, or barn.

\$500 deposit – refundable up until 2 weeks (14 days) from rental. Forfeited after any cancelations less than 2 weeks from rental date.

Full payment due 2 weeks (14 days) before rental date.

10% off base for rentals Monday – Thursday (7:00 am – 9:00 pm) ONLY.

ADDITIONAL SERVICES & FEES

Required: minimum 2 portable toilets (1 regular, 1 handicap). Additional 1 portable toilet per 50 people. Rate TBD through Parks & Rec. OR personal arrangements can be made with rental company with approval from Parks & Recreation. Liability insurance must be on file and delivery must be coordinated at least 2 weeks prior to rental.

Early set-up available the day prior for additional \$500.00 after 2:00 pm contingent upon availability.

Custom Message (with approval) on Park Digital Sign at Park Entrance: \$25.00 per day

Wifi Access: \$100.00

Folding Chairs: \$1.50 per chair

8' Folding Table with OR without Tablecloth Clips (tablecloths not included): \$8.50 per table

Picnic Table: \$10 per picnic table

Benches: \$3.50 per bench

Bleachers: \$150.00 per bleacher

Light Towers: Price TBD

Vendor Fees:

Non-profit Food Vendor Fee (per day): \$50.00

For Profit/Food Truck Vendors (per day): \$150.00

**All food vendors must be approved by the Isle of Wight County Health Department and reported to the office of the Isle of Wight County Commissioner of the Revenue. Liability insurance naming Isle of Wight County as additionally insured for \$1,000,000.00 must be on file.*

\$500.00 fee for any damages to the property.

ISSUE:

Staff Report - Zencity Monthly Report

BACKGROUND:

Zencity is an international company that gathers information from social media, surveys, and other online sources to inform government leaders relative to interests and opinions of citizens.

Staff will present information relative to its use of data from Zencity.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

For the Board's information.

ATTACHMENTS:

Description	Type	Upload Date
Zencity Report	Activity Report	9/7/2022
Survey Summary - Seniors	Backup Material	9/7/2022

Isle of Wight County, VA

To: Board of Supervisors

From: Donald Robertson

Subject: Community input report from Zencity

Date: September 07, 2022

What is Zencity?

Zencity is the community input and insights platform used by hundreds of local governments to hear from more resident voices and obtain the most meaningful and actionable takeaways from their feedback.

Where is the data collected from?

This report analyzes the interest and sentiment expressed by residents across social media posts and local news outlets. Only opinions expressed in fully public forums, or forums in which admins give explicit consent, are included.

What's being measured?

- **Volume of interactions:** A measure of the size of the conversation, representing the total count of all online engagements (posts, tweets, likes, comments, shares, retweets, reactions, etc.).
- **Discourse sentiment:** A way to understand the tone or emotions present in the conversation, Zencity's AI algorithm is able to classify the content of each interaction as positive, negative, or neutral, based on expressions of satisfaction or dissatisfaction towards the topic being discussed.

Aug 31st - Sep 6th, 2022 | Isle of Wight County, VA

3,847

2%

1%

147%

365%

277%



The most negative interactions were found on **WAVY TV 10**, totaling 26 interactions and making up 16% of the conversation on that source.

Where is the conversation happening?

On the left is a breakdown of the percentage of the conversation happening on channels managed by local government entities, versus on channels managed by residents, local governments, or other non-governmental institutions. On the right is a list of the three sources with the highest numbers of interactions.

Official channels

15% · ↓ 51.5%



Unofficial channels

85% · ↑ 12.3%



Visit Smithfield VA (31%)

1,195 interactions

↑ 294%



Isle of Wight County Sheriff's Office (10%)

403 interactions

↓ 64%



Smithfield Farmers Market (8%)

325 interactions

↑ 173%

Top stories

Reading on your computer? Click any story to open in source.



Visit Smithfield VA

Sep 1, 2022, 9:45 AM

We're going to be FUELED BY BACON this Saturday! In celebration of International Bacon Day, Smithfield Foods will join us this Saturday, Sept. 3 at the Smithfield Farmers Market. Enjoy the Bacon Truck, Jenga, Corn Hole, and



653



112



24

Interactions: 807

96%

1%



Isle of Wight County Sheriff's Office

Aug 31, 2022, 1:20 PM

Please join Sheriff Clarke Jr. in Congratulating Deputy Hopko on his retirement after 20 years of dedicated service to law enforcement. He served Southampton County Sheriff's Office in the jail before joining Isle of Wight County Sheriff's Office in 2004. He served as a Range



292



13



70

Interactions: 377

99%

0%



Visit Smithfield VA

Aug 29, 2022, 9:40 AM

Looking for a relaxing weekend getaway? Check out the Smithfield Travel Guide by lifestyle blogger Amber Miller (Pretty as Peaches) who spent the day with us in July!
<https://www.prettyaspeaches.com/post/a-day-in-smithfield-virginia-travel-guide>



191



23



4

Interactions: 310

75%

0%



Smithfield Volunteer Fire Department

Sep 6, 2022, 6:09 PM

1327 hrs Tuesday September 6, Station 10, 50, and 60 responded for an accident with extrication. An 18 wheeler carrying cinder blocks ran off the road way on Benns Church Blvd and landed on its side. Cinder blocks were across both lanes



172



42



27

Interactions: 280

13%

0%



Isle of Wight County Schools

Aug 30, 2022, 5:46 PM

Photos from Isle of Wight County Schools's post



134



8



3

Interactions: 275

35%

0%



WAVY TV 10

Sep 6, 2022, 5:13 PM

A tractor-trailer carrying cinder blocks overturned and closed roadways in Isle of Wight earlier this afternoon. <https://bit.ly/3RFcRGe> ----- Tractor-trailer carrying cinder blocks overturns on US-258 in Isle of Wight



128



17



13

Interactions: 178

0%

17%



Isle of Wight Volunteer Rescue Squad

Sep 3, 2022, 11:45 AM

It is with profound sadness that I pass along the passing of John "JT" Joseph Treier. JT was born in Hampton, VA. He served three years in the US Army before returning to Smithfield, VA. JT retired from NASA as a wind tunnel technician. In



John Treier



79



16



19

Interactions: 148

14%

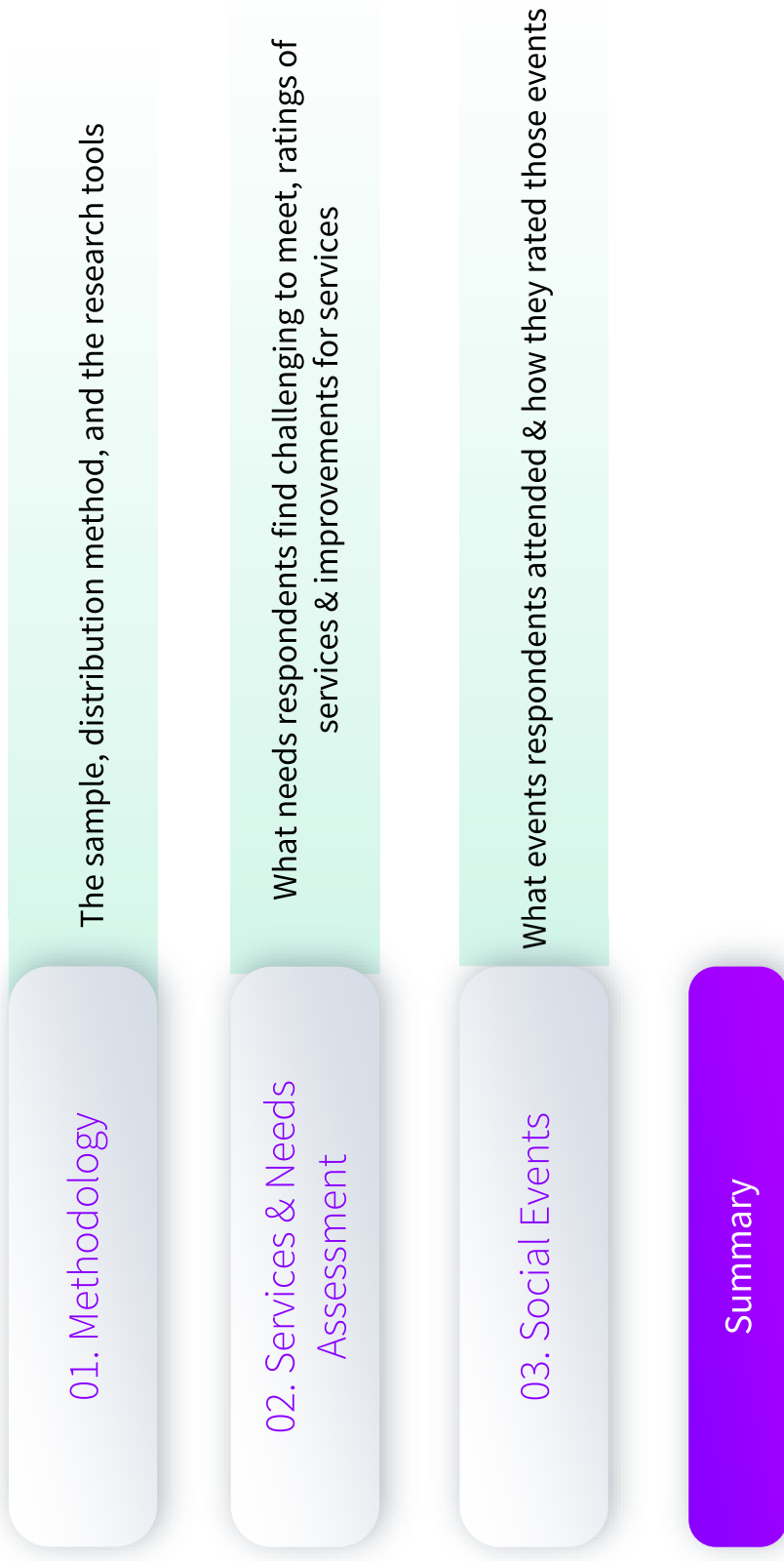
16%



Senior Services – Isle of Wight, VA

May - July 2022

The structure of the report



01

Methodology



Methodology



409 sample survey
of Isle of Wight
adults, 18+



Respondents were
recruited
online



Fielded May 9th –
June 23rd, 2022



Survey was
conducted in
English



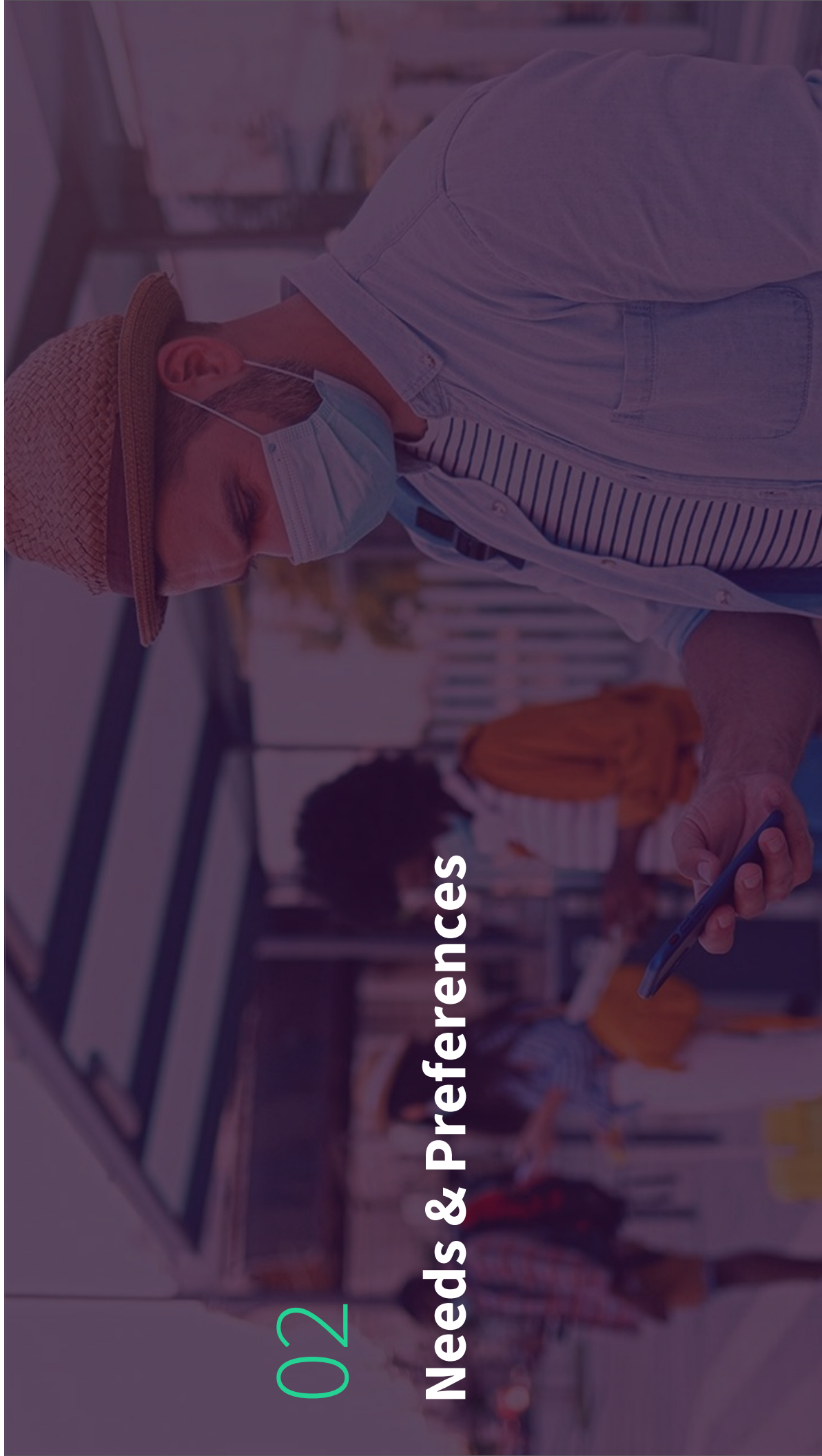
Data was weighted
to represent the
population in the
Isle of Wight

Methodology – how we ensure the sample is statistically valid

- 409 respondents were recruited online between May 9th to June 23rd, 2022, using targeted ads on various platforms (e.g., social media, apps for Android and IOS) as well as online survey panels. An additional 45 responses were collected through county channels, which were analyzed separately and presented alongside the Zencity-recruited responses.
- Using data from the Census Bureau, this survey employed quotas to match the distribution of race, ethnicity, and gender in the Isle of Wight, ensuring that the sample represents the entire county. For setting targets and weights, age distribution was left as it was in the sample because it was a specific criterion used in targeting.
- To make sure our sample is representative, a technique called rake-weighting was used to balance out any remaining differences between the makeup of the survey respondents and the community. This process serves as a statistical safeguard against any demographic group being overrepresented or underrepresented in the final score calculations by giving overrepresented groups a lower weight and underrepresented groups a higher weight in the analysis.

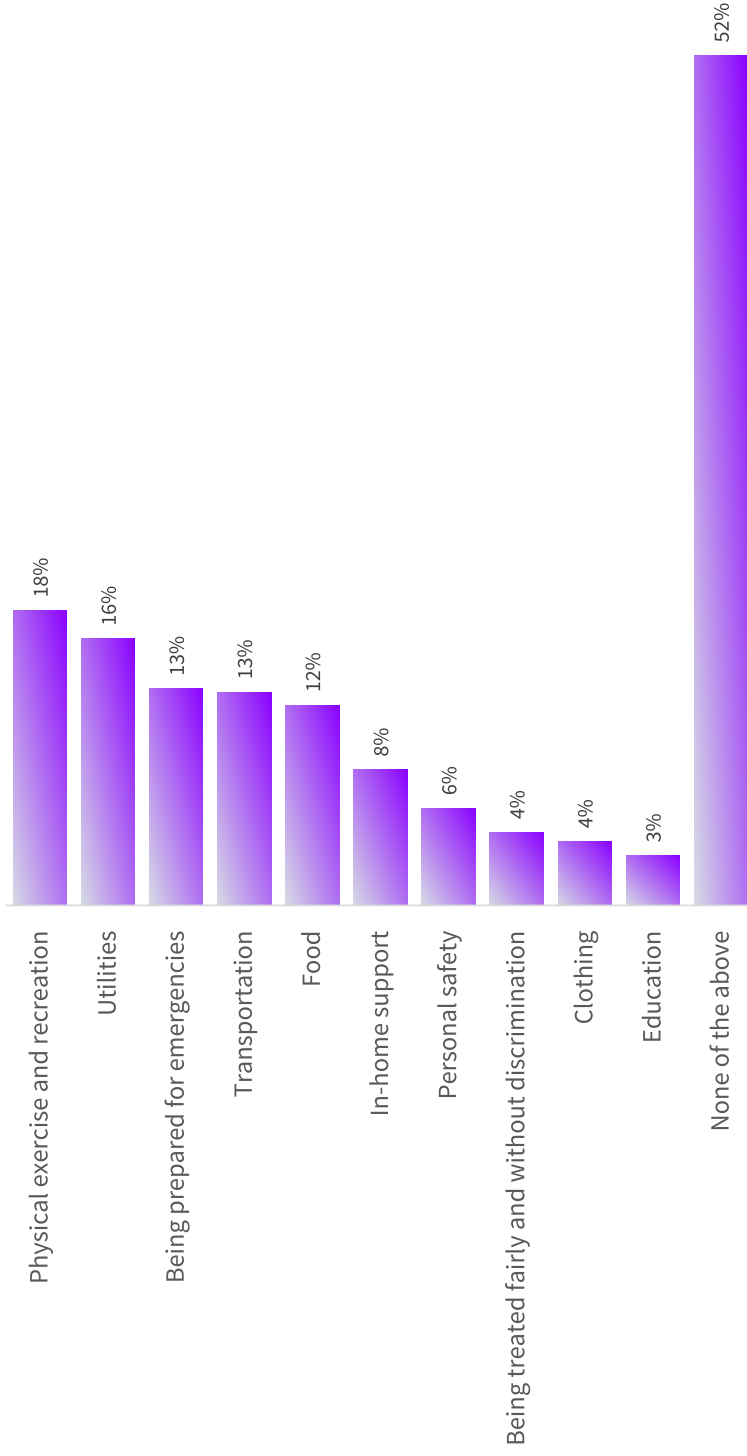
02

Needs & Preferences



Needs: Physical exercise and recreation, as well as utilities, were the two needs that respondents most commonly reported having challenges meeting in the past 12 months. However, over half of the respondents reported that they did not have challenges meeting any of the needs listed.

Question: In the past 12 months, have you or a senior resident of the county that you personally know had challenges meeting their needs in any of the following areas?



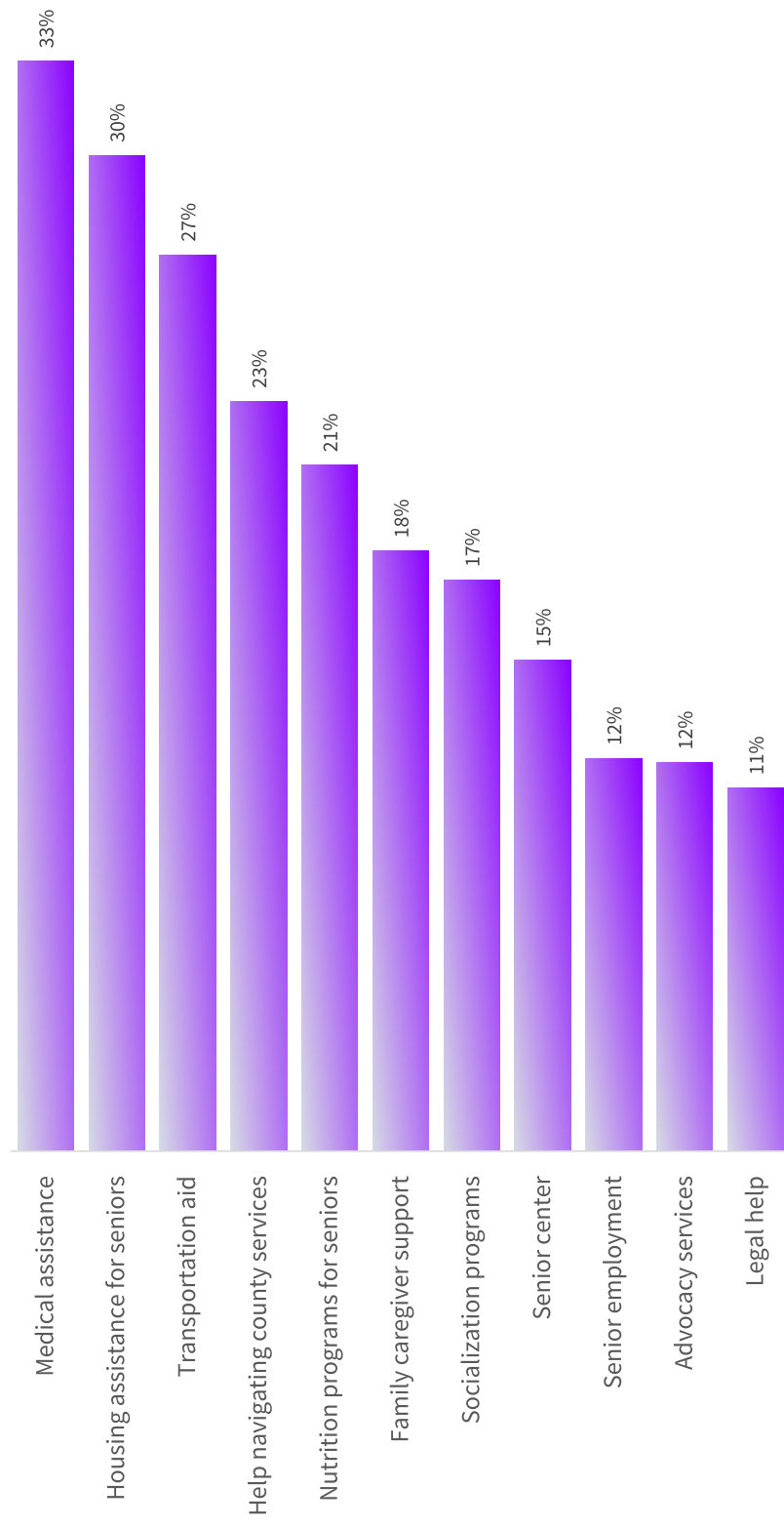
Needs: Physical exercise and recreation, and utilities were one of the three needs that respondents across all demographic groups found most challenging to meet (this was not found across the self-distribution respondents). Being prepared for emergencies was also a need that respondents, across all demographic groups (except for Black and male respondents), found challenging to meet.

Question: In the past 12 months, have you or a senior resident of the county that you personally know had challenges meeting their needs in any of the following areas?

All Respondents		White Respondents	Black Respondents	Women	Men	Senior Citizens Only	Self-Distribution
Physical exercise & recreation (18%)	Physical exercise & recreation (12%)	Utilities (35%)	Physical exercise & recreation (20%)	Utilities (20%)	Physical exercise & recreation (15%)	In-home support (18%)	
Utilities (16%)	Utilities (11%)	Being prepared for emergencies (34%)	Utilities (12%)	Physical exercise & recreation (16%)	Utilities (12%)	Transportation (18%)	
Being prepared for emergencies (13%)	Food (10%)	Physical exercise & recreation (30%)	Being prepared for emergencies (12%)	Transportation (15%)	Being prepared for emergencies (9%)	Being prepared for emergencies (16%)	

Service Prioritization: Medical assistance, housing assistance for seniors, and transportation aid were the services that respondents reported as most important. Respondents reported legal help, advocacy services, and senior employment services as the least important services.

Question: In your opinion, which of the following are the most important services for the county to provide for senior citizens?



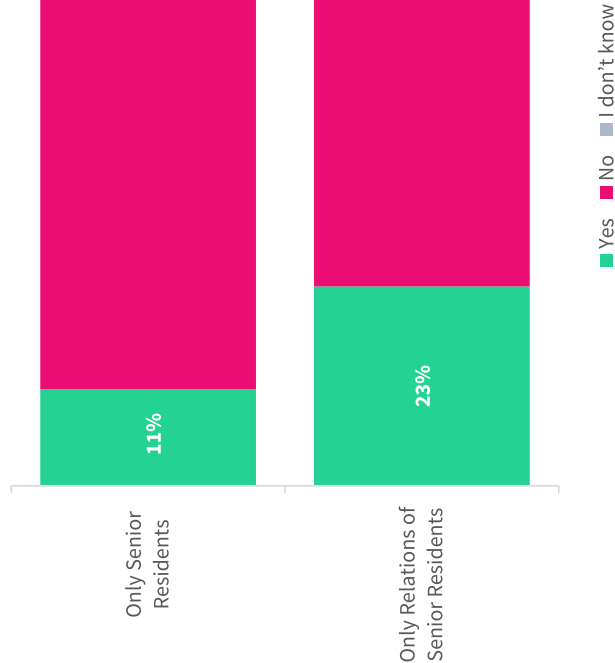
Service Prioritization: Medical assistance and housing assistance for seniors were services that all the analyzed groups (except for respondents sampled through self-distribution) rated as one of their top three most important services. Over half of Black respondents reported housing assistance for seniors as the most important service for the county to provide for senior citizens.

Question: In your opinion, which of the following are the most important services for the county to provide for senior citizens?

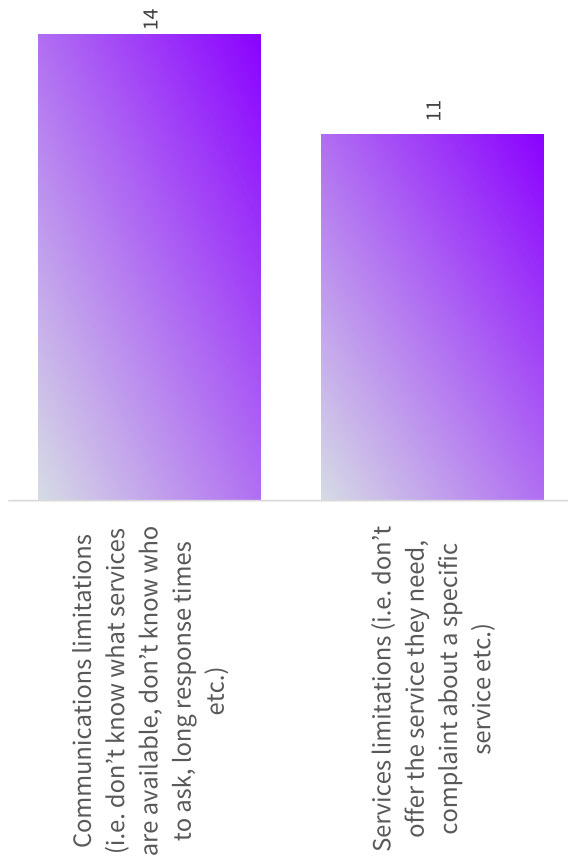
All Respondents		White Respondents	Black Respondents	Women	Men	Senior Citizens Only	Self-Distribution
Medical assistance (33%)	Medical assistance (32%)	Housing assistance for seniors (53%)	Housing assistance for seniors (37%)	Medical assistance (32%)	Medical assistance (28%)	Transportation aid (40%)	
Housing assistance for seniors (30%)	Housing assistance for seniors (28%)	Medical assistance (45%)	Medical assistance (35%)	Transportation aid (26%)	Housing assistance for seniors (26%)	Advocacy services (27%)	
Transportation aid (27%)	Transportation aid (27%)	Transportation aid (31%)	Transportation aid (28%)	Housing assistance for seniors (24%)	Help navigating county services (24%)	Housing assistance for seniors (27%)	

Accessing Services: The large majority of respondents reported that they did not have trouble accessing services. However, those who did, reported that they struggled mainly with communication with the county i.e., they didn't receive timely responses for their queries, and they didn't know who to contact about services or where to get information.

Question: In the past 12 months, have you had trouble accessing county services?

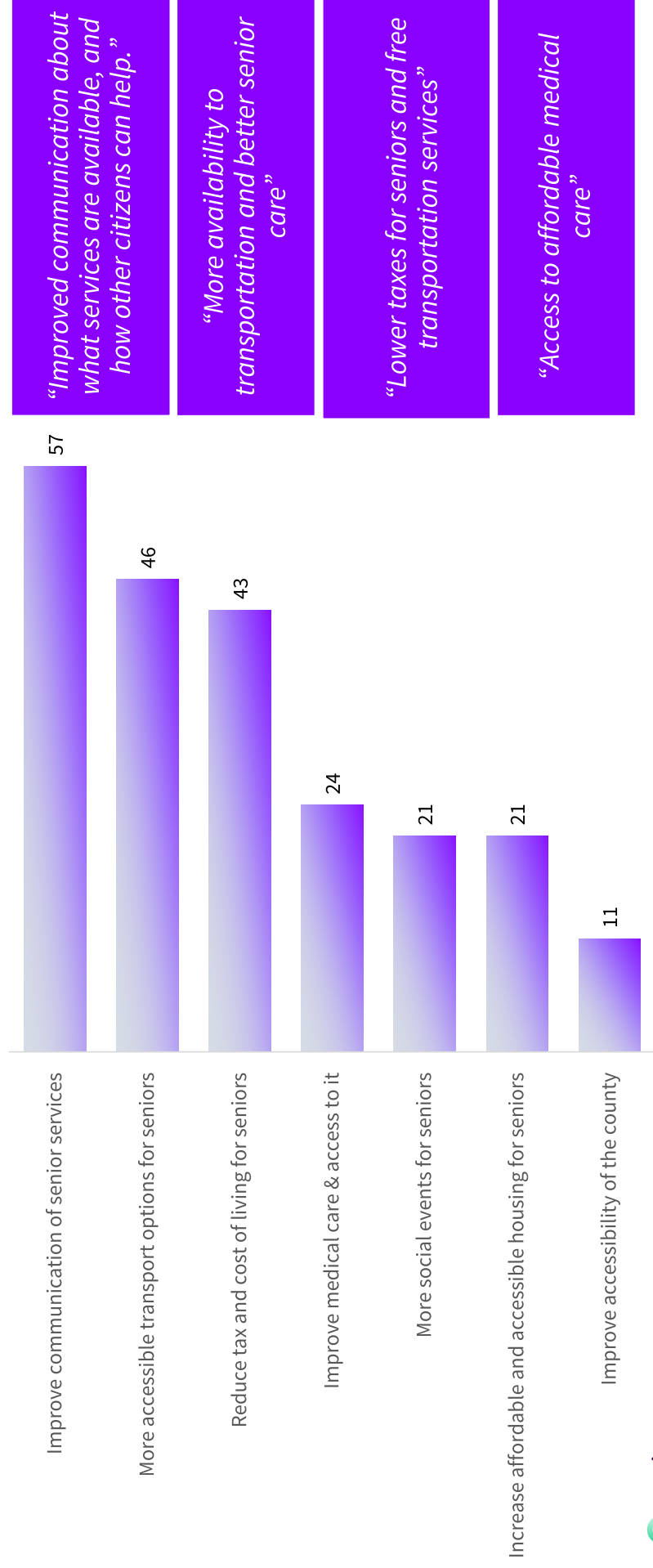


Question: What was the issue? (open-ended)



Open-ended responses: Respondents most often reported improved communication of the senior services available as a key point to improve. Accessible transportation options and reducing tax/cost of living for seniors were also mentioned by numerous respondents.

Question: What is the one thing you would improve about county services for senior citizens? (N = 248)



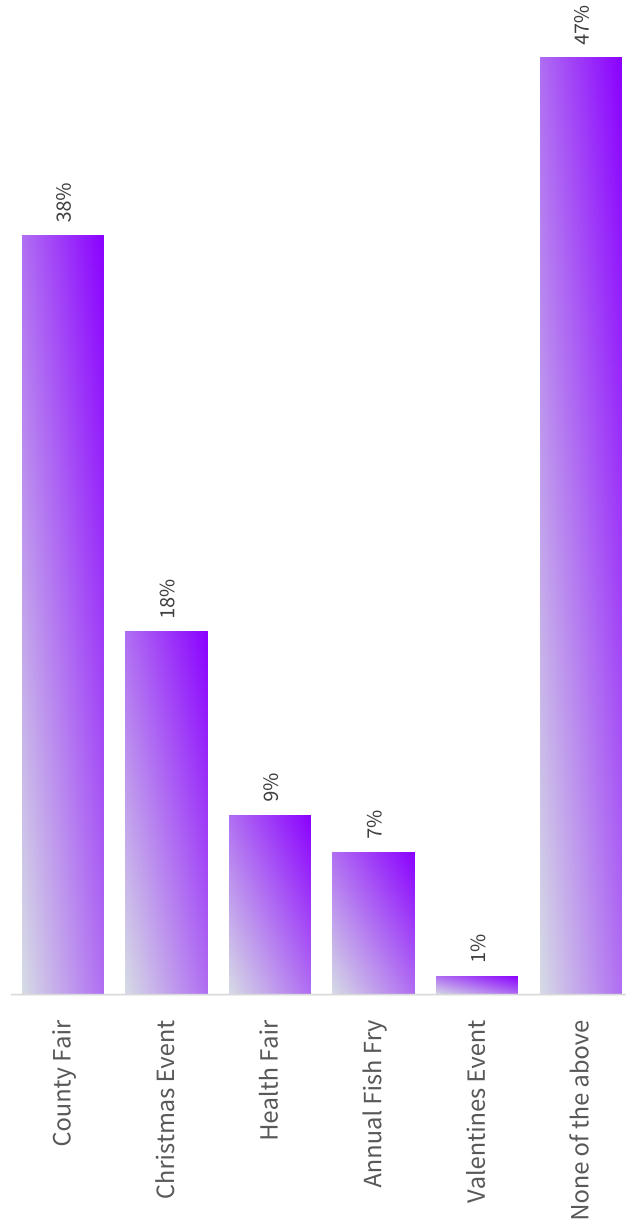
03

Social Events



Social Events Participation: Over one-third of respondents reported that they, or the senior resident they know, had participated in the county fair. 18% of respondents also reported that they had participated in the Christmas event. However, nearly half of the respondents reported that they had not participated in any of the social events listed.

Question: Have you or a senior resident of the county you personally know ever participated in any of the following social events the county organizes for senior citizens?



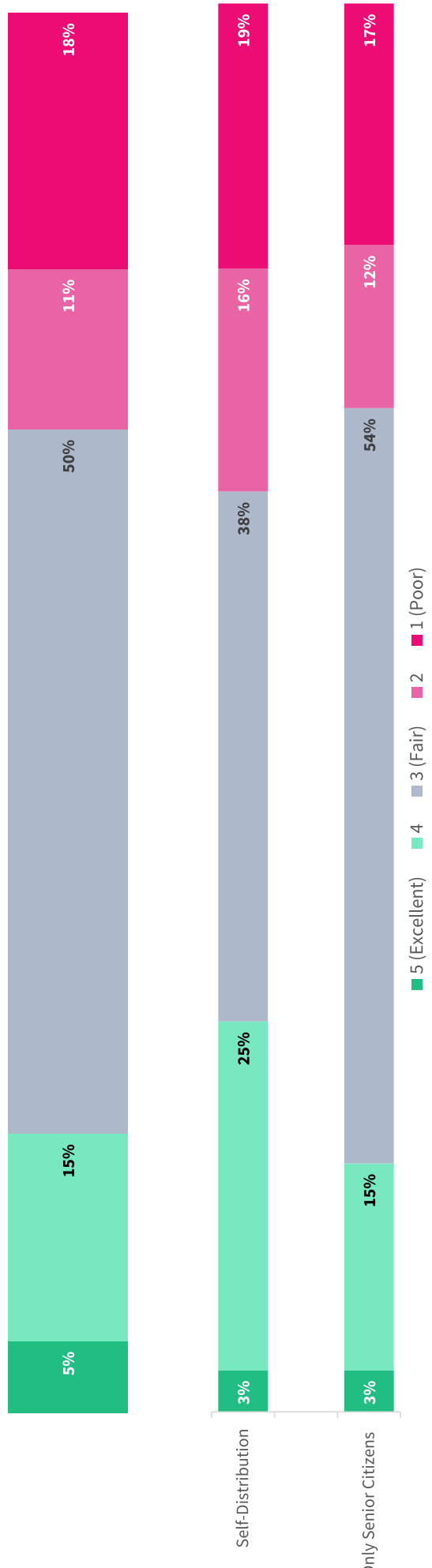
Social Events Rating: Of the respondents who had attended a social event, or personally knew a senior who had attended, over 50% rated the social events positively. Ratings from those who attended the Christmas event, and the county fair were similar to the overall ratings. When analyzing responses given only by senior citizens themselves, positive sentiment stayed largely the same, whilst negative sentiment reduced slightly.

Question: Overall, how would you rate the social events you attended?



Social Events Variety: Respondents reported being more dissatisfied than satisfied with the variety of social events that the county organizes. However, the majority of respondents were neutral towards the variety of social events. Respondents that were sampled through self-distribution reported both more positive and more negative sentiments towards the variety of social events offered.

Question: How would you rate the variety of social events the county organizes for senior citizens?



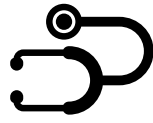
A photograph of a group of people's hands stacked on top of each other in a huddle, symbolizing teamwork and unity. The image is overlaid with a dark purple gradient. The number '04' is written in a light green font on the left side, and the word 'Summary' is written in a white font on the right side.

04

Summary

Summary

Most important services



Medical assistance
(33%)



Housing assistance
(30%)



Transportation aid
(27%)

Points to improve



Improved communication
of available services



Accessible
transportation options



Reduce tax and cost of
living for seniors

Most attended event



County fair

Attended events rating



53%



8%

Variety of events ratings



20%

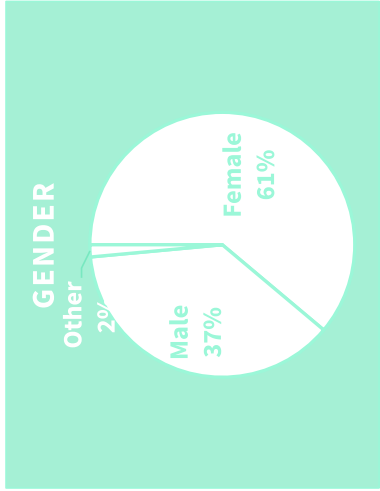


29%

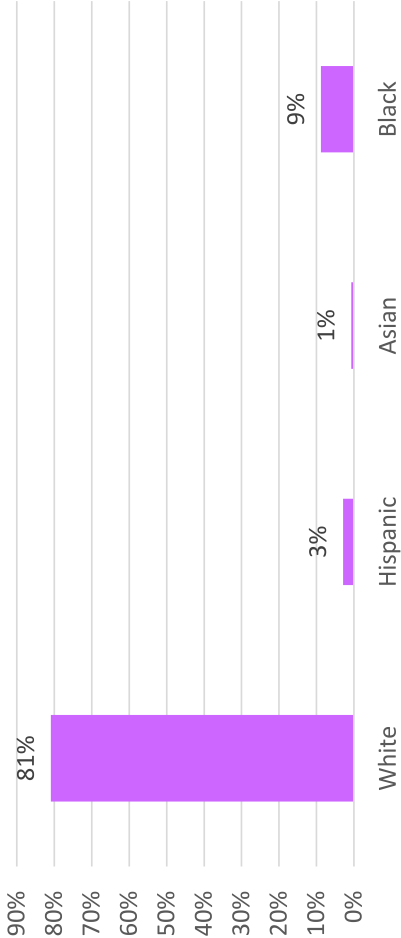
Thank You!

Survey respondents demographics – gender, ethnicity

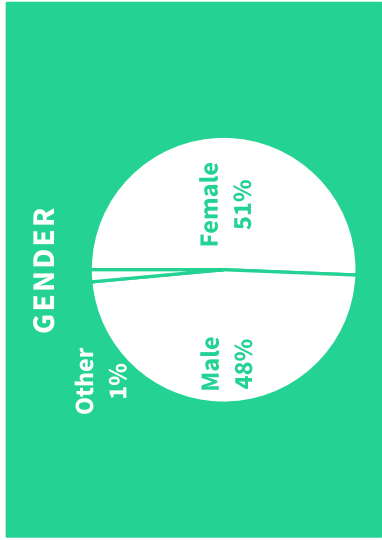
Unweighted demographics – the original sample



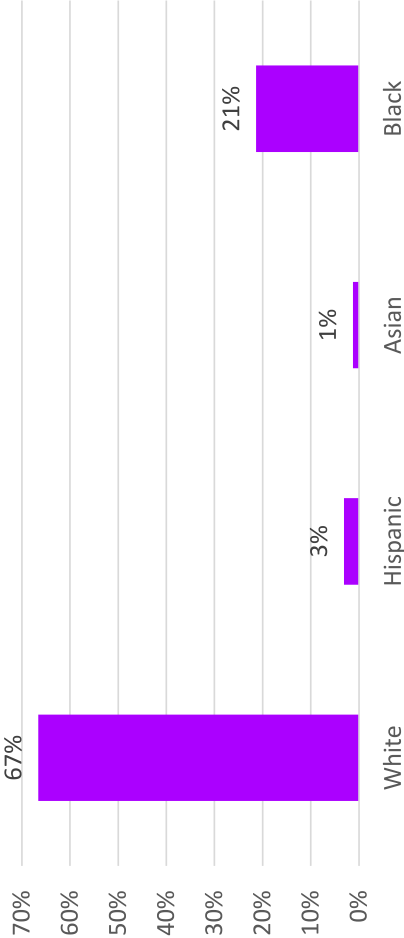
Ethnicity



Weighted demographics – representative of the population



Ethnicity



[Link to survey](#)

[Link to open-ended responses](#)

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:

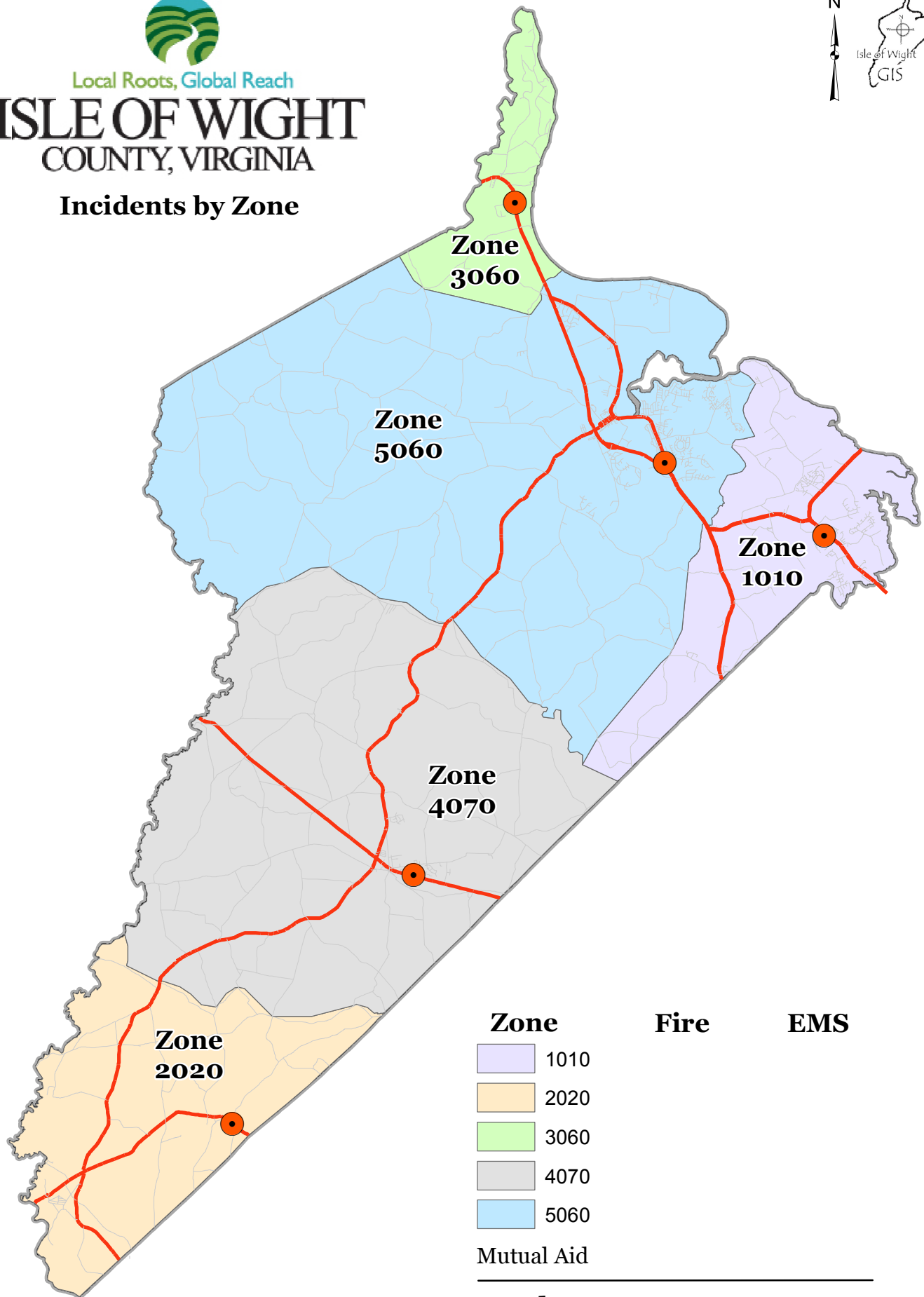
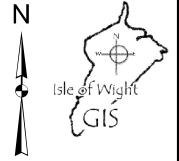
Description	Type	Upload Date
Incidents by Zone Map - August 2022	Backup Material	9/2/2022
Incidents by Zone Data - August 2022	Backup Material	9/2/2022
Station Activity Report - August 2022	Backup Material	9/2/2022
Museum Report - August 2022	Backup Material	9/2/2022



Local Roots, Global Reach

ISLE OF WIGHT COUNTY, VIRGINIA

Incidents by Zone



ISLE OF WIGHT

Incidents by Zone

Agency: IWFR, Event date/Time range: 08/01/2022 00:00:00 - 08/31/2022 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
	ACCIDENT (FATALITY)	0	1	1	13%	0:00:37	0:06:35	2:03:22	2:10:34	2:10:34
	ACCIDENT UNKNOWN INJURIES	0	2	2	25%	0:01:17	0:00:00	0:00:00	0:17:41	0:08:51
	ACCIDENT WITH INJURIES	0	1	1	13%	0:01:17	0:00:00	0:00:00	0:22:44	0:22:44
	SICK / ILL OR RESCUE	0	1	1	13%	0:01:40	0:10:07	0:03:26	0:15:13	0:15:13
	Subtotals for EMS	0	5	5	63%	0:01:13	0:08:21	1:03:24	3:06:12	0:44:20
	ASSIST BOATER	0	2	2	25%	0:01:30	0:06:50	0:09:17	0:35:14	0:17:37
	Subtotals for FIRE	0	2	2	25%	0:01:30	0:06:50	0:09:17	0:35:14	0:17:37
	RESCUE MUTUAL AID	0	1	1	13%	0:01:25	0:17:03	1:24:39	1:43:07	1:43:07
	Subtotals for MUTA	0	1	1	13%	0:01:25	0:17:03	1:24:39	1:43:07	1:43:07
	Totals for	0	8	8	100%	0:01:18	0:10:09	0:55:11	5:24:33	0:49:41
1010	ABDOMINAL PAIN	0	4	4	3%	0:01:40	0:07:20	1:09:09	5:12:36	1:18:09
	ABRASIONS BRUISES ETC	0	2	2	2%	0:01:30	0:05:41	0:19:23	0:53:07	0:26:34
	ACCIDENT UNKNOWN INJURIES	0	10	10	8%	0:01:06	0:05:19	0:24:26	5:08:34	0:30:51
	ACCIDENT WITH INJURIES	0	4	4	3%	0:01:19	0:04:02	1:01:52	4:28:54	1:07:14
	ALARM - MEDICAL	0	5	5	4%	0:01:45	0:07:52	0:24:49	1:55:51	0:23:10
	ALLERGIC REACTIONS	0	2	2	2%	0:01:24	0:03:50	0:20:41	0:51:50	0:25:55
	ASSAULT WITH INJURIES	0	1	1	1%	0:00:40	0:09:27	0:10:48	0:20:55	0:20:55
	BACK PAIN (NON TRAUMATIC)	0	5	5	4%	0:01:15	0:04:38	0:57:08	5:15:07	1:03:01
	BITE	0	2	2	2%	0:01:06	0:05:47	0:31:15	1:16:15	0:38:08
	BLEEDING/HEMORRHAGING	0	3	3	2%	0:02:07	0:13:12	0:41:43	2:51:07	0:57:02
	CHEST PAIN	0	5	5	4%	0:01:15	0:06:05	1:04:54	6:01:14	1:12:15
	CHILD OR ANIMAL LOCKED IN CAR	1	2	3	2%	0:00:06	0:07:35	0:06:29	0:25:36	0:08:32

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
	DIABETIC PROBLEMS	0	1	1	1%	0:02:47	0:06:14	1:03:24	1:12:25	1:12:25
	DIFFICULTY BREATHING	0	12	12	9%	0:01:35	0:06:38	0:51:23	10:59:08	0:54:56
	FALLS AND RELATED INJURIES	0	11	11	9%	0:01:58	0:07:52	0:52:49	11:29:12	1:02:39
	FRACTURES OR BROKEN BONES	0	2	2	2%	0:00:48	0:06:42	0:54:28	2:03:56	1:01:58
	HEAD INJURY	0	1	1	1%	0:01:39	0:03:53	0:21:10	0:26:42	0:26:42
	HEADACHE	0	2	2	2%	0:00:12	0:22:46	0:37:23	2:00:41	1:00:21
	HEART PROBLEMS	0	3	3	2%	0:01:34	0:07:09	1:41:23	5:30:21	1:50:07
	HEAT AND COLD EXPOSURE	0	1	1	1%	0:02:41	0:02:46	0:18:27	0:23:54	0:23:54
	INGEST POISONS OR TOXINS	0	1	1	1%	0:01:02	0:06:49	0:43:27	0:51:18	0:51:18
	LIFT ASSIST	0	2	2	2%	0:01:32	0:09:36	0:16:36	0:55:27	0:27:44
	OVERDOSE	0	2	2	2%	0:02:08	0:07:52	0:20:46	1:01:32	0:30:46
	PAIN	0	1	1	1%	0:02:36	0:07:33	1:34:52	1:45:01	1:45:01
	PSYCHIATRIC PROBLEMS	0	5	5	4%	0:00:38	0:07:20	1:03:21	5:56:34	1:11:19
	SEIZURE	0	3	3	2%	0:00:48	0:04:41	1:17:47	4:09:50	1:23:17
	SICK / ILL OR RESCUE	0	16	16	13%	0:01:45	0:08:04	0:53:13	16:48:27	1:03:02
	STABBING	0	1	1	1%	0:03:21	0:05:45	0:50:24	0:59:30	0:59:30
	STROKE	0	2	2	2%	0:01:26	0:06:47	1:10:58	2:38:23	1:19:12
	UNCONSCIOUS OR FAINTING	0	5	5	4%	0:00:48	0:07:47	1:27:55	8:02:36	1:36:31
	Subtotals for EMS	1	116	117	91%	0:01:29	0:07:14	0:47:05	111:56:03	0:55:05
	ARCING WIRES DOWN POWER LINES	0	1	1	1%	0:00:50	0:07:13	0:43:04	0:51:07	0:51:07
	BRUSH FIRE	0	1	1	1%	0:00:53	0:08:04	0:05:39	0:14:36	0:14:36
	FIRE ALARM	0	2	2	2%	0:01:46	0:06:44	0:06:19	0:29:36	0:14:48
	FIRE DEPT COMMUNITY RELATIONS	0	2	2	2%	0:02:33	0:12:17	0:10:31	0:38:25	0:19:13
	FIRE OTHER NOT LISTED	0	1	1	1%	0:00:56	0:08:25	0:06:58	0:16:19	0:16:19
	SMELL OF GAS INSIDE/OUTSIDE	0	1	1	1%	0:01:47	0:08:40	0:14:43	0:25:10	0:25:10
	SMELL OR ODOR OF SMOKE	0	1	1	1%	0:00:59	0:09:42	0:14:22	0:25:03	0:25:03
	STANDBY	0	1	1	1%	0:00:23	0:00:00	0:25:38	0:26:01	0:26:01

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	1%	0:01:17	0:04:10	0:20:19	0:25:46	0:25:46
	Subtotals for FIRE	0	11	11	9%	0:01:16	0:08:09	0:16:24	4:12:03	0:24:14
	Totals for 1010	1	127	128	100%	0:01:26	0:07:26	0:40:00	116:08:06	0:47:58
2020	ABRASIONS BRUISES ETC	0	2	2	7%	0:00:07	0:14:03	0:12:25	0:53:09	0:26:35
	ACCIDENT UNKNOWN INJURIES	0	2	2	7%	0:01:36	0:05:53	1:39:24	3:33:45	1:46:53
	ACCIDENT WITH ENTRAPMENT	0	1	1	4%	0:01:37	0:08:09	3:17:15	3:27:01	3:27:01
	CHEST PAIN	0	1	1	4%	0:01:06	0:04:18	0:24:59	0:30:23	0:30:23
	CHILD OR ANIMAL LOCKED IN CAR	0	1	1	4%	0:00:22	0:13:53	0:08:29	0:22:44	0:22:44
	DIABETIC PROBLEMS	0	2	2	7%	0:01:04	0:08:30	0:39:24	1:37:56	0:48:58
	DIFFICULTY BREATHING	0	1	1	4%	0:01:40	0:07:25	0:30:27	0:39:32	0:39:32
	FALLS AND RELATED INJURIES	0	2	2	7%	0:01:21	0:08:09	1:00:35	2:20:10	1:10:05
	HEART PROBLEMS	0	1	1	4%	0:02:58	0:11:39	0:46:03	1:00:40	1:00:40
	LIFT ASSIST	0	2	2	7%	0:01:14	0:11:11	0:05:11	0:35:10	0:17:35
	PAIN	0	1	1	4%	0:01:04	0:07:19	2:27:19	2:35:42	2:35:42
	SICK / ILL OR RESCUE	1	4	5	19%	0:01:27	0:10:03	0:41:30	4:23:35	0:52:43
	STROKE	0	1	1	4%	0:02:48	0:09:17	0:39:59	0:52:04	0:52:04
	Subtotals for EMS	1	21	22	81%	0:01:25	0:09:13	0:57:55	22:51:51	1:08:32
	ARCING WIRES DOWN POWER LINES	0	1	1	4%	0:00:14	0:01:47	1:13:35	1:15:36	1:15:36
	FIRE ALARM	0	2	2	7%	0:01:03	0:11:26	1:33:51	1:53:49	0:56:55
	FIRE OTHER NOT LISTED	0	2	2	7%	0:00:18	0:09:32	0:31:19	1:22:18	0:41:09
	Subtotals for FIRE	0	5	5	19%	0:00:32	0:07:35	1:06:15	4:31:43	0:57:53
	Totals for 2020	1	26	27	100%	0:01:15	0:08:55	0:59:29	27:23:34	1:06:32

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
3060	BURN INJURIES	0	1	1	5%	0:01:12	0:13:04	1:45:35	1:59:51	1:59:51
	DIABETIC PROBLEMS	0	1	1	5%	0:00:37	0:13:14	1:09:30	1:23:21	1:23:21
	DIFFICULTY BREATHING	0	3	3	16%	0:00:55	0:07:47	1:46:47	5:46:26	1:55:29
	FALLS AND RELATED INJURIES	0	3	3	16%	0:02:08	0:15:39	0:44:15	3:06:07	1:02:02
	POSSIBLE DOA	0	1	1	5%	0:02:08	0:15:26	0:26:22	0:43:56	0:43:56
	SICK / ILL OR RESCUE	0	5	5	26%	0:01:49	0:15:01	0:51:21	5:40:54	1:08:11
	UNCONSCIOUS OR FAINTING	0	1	1	5%	0:00:50	0:10:14	0:02:12	0:13:16	0:13:16
	Subtotals for EMS	0	15	15	79%	0:01:23	0:12:55	0:58:00	18:53:51	1:12:18
	ASSIST BOATER	0	1	1	5%	0:03:04	0:00:00	0:00:00	0:07:12	0:07:12
	BRUSH FIRE	0	1	1	5%	0:01:32	0:10:57	0:07:43	0:20:12	0:20:12
	FIRE ALARM	0	1	1	5%	0:01:21	0:00:00	0:00:00	0:12:24	0:12:24
	STRUCTURE FIRE	0	1	1	5%	0:01:46	0:08:23	1:54:52	2:05:01	2:05:01
	Subtotals for FIRE	0	4	4	21%	0:01:56	0:09:40	1:01:18	2:44:49	0:41:12
	Totals for 3060	0	19	19	100%	0:01:35	0:12:12	0:58:44	21:38:40	1:01:00
4070	ABDOMINAL PAIN	0	2	2	2%	0:01:24	0:07:45	1:48:51	3:56:00	1:58:00
	ABRASIONS BRUISES ETC	1	2	3	3%	0:01:01	0:04:15	0:41:09	1:32:05	0:30:42
	ACCIDENT UNKNOWN INJURIES	1	4	5	4%	0:01:06	0:10:21	1:20:11	6:29:13	1:17:51
	ACCIDENT WITH ENTRAPMENT	0	2	2	2%	0:01:10	0:04:29	1:17:56	2:47:09	1:23:35
	ACCIDENT WITH INJURIES	0	2	2	2%	0:00:16	0:04:27	0:36:40	1:22:46	0:41:23
	ALARM - MEDICAL	0	4	4	3%	0:01:27	0:08:51	0:03:24	0:54:48	0:13:42
	BACK PAIN (NON TRAUMATIC)	0	1	1	1%	0:01:49	0:11:21	1:51:03	2:04:13	2:04:13
	BLEEDING/HEMORRHAGING	0	1	1	1%	0:02:32	0:08:00	0:54:25	1:04:57	1:04:57
	CARDIAC ARREST	0	1	1	1%	0:01:36	0:08:49	2:08:59	2:19:24	2:19:24
	CHEST PAIN	0	13	13	11%	0:01:35	0:08:11	0:56:02	14:15:36	1:05:49
	CHILD OR ANIMAL LOCKED IN CAR	0	1	1	1%	0:00:08	0:05:49	0:02:29	0:08:26	0:08:26

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
	DIABETIC PROBLEMS	0	4	4	3%	0:01:39	0:09:51	0:59:02	4:42:11	1:10:33
	DIFFICULTY BREATHING	0	5	5	4%	0:02:05	0:08:15	0:33:53	3:41:08	0:44:14
	FALLS AND RELATED INJURIES	0	15	15	13%	0:01:28	0:08:20	0:52:45	15:38:16	1:02:33
	HEADACHE	0	1	1	1%	0:00:15	0:05:44	0:44:11	0:50:10	0:50:10
	HEART PROBLEMS	0	3	3	3%	0:02:03	0:09:40	0:40:50	2:37:41	0:52:34
	LIFT ASSIST	0	4	4	3%	0:01:57	0:12:33	0:22:50	2:29:25	0:37:21
	MEDIC STANDBY	1	0	1	1%	0:00:00	0:03:09	2:58:42	3:01:51	3:01:51
	OBSTETRICS	0	1	1	1%	0:00:58	0:06:00	0:24:20	0:31:18	0:31:18
	OVERDOSE	1	2	3	3%	0:00:58	0:06:20	0:40:13	2:22:34	0:47:31
	PAIN	0	4	4	3%	0:01:56	0:13:52	0:53:02	4:35:16	1:08:49
	POSSIBLE DOA	1	0	1	1%	0:00:15	0:07:52	0:04:07	0:12:14	0:12:14
	PSYCHIATRIC PROBLEMS	0	3	3	3%	0:00:10	0:09:59	0:37:22	2:22:33	0:47:31
	RESPIRATORY ARREST	0	1	1	1%	0:00:33	0:05:52	0:42:24	0:48:49	0:48:49
	SEIZURE	0	3	3	3%	0:01:23	0:11:37	0:25:54	1:56:42	0:38:54
	SICK / ILL OR RESCUE	1	10	11	9%	0:01:18	0:11:30	1:37:24	20:00:35	1:49:09
	STROKE	0	4	4	3%	0:01:21	0:09:05	1:16:35	5:48:03	1:27:01
	UNCONSCIOUS OR FAINTING	0	3	3	3%	0:01:07	0:04:25	0:50:00	2:46:37	0:55:32
	Subtotals for EMS	6	96	102	87%	0:01:14	0:08:05	0:56:36	111:20:00	1:04:47
	ARCING WIRES DOWN POWER LINES	0	1	1	1%	0:01:45	0:09:18	0:26:04	0:37:07	0:37:07
	BURNING COMPLAINT	0	1	1	1%	0:01:45	0:10:49	0:04:59	0:17:33	0:17:33
	CAR FIRE	0	1	1	1%	0:01:00	0:07:47	0:42:14	0:51:01	0:51:01
	FIRE ALARM	0	7	7	6%	0:00:59	0:07:46	0:10:05	1:25:47	0:12:15
	FIRE DEPT COMMUNITY RELATIONS	2	1	3	3%	0:02:03	0:00:00	2:21:58	7:07:59	2:22:40
	FIRE OTHER NOT LISTED	0	2	2	2%	0:00:44	0:12:59	0:08:51	0:28:18	0:14:09
	Subtotals for FIRE	2	13	15	13%	0:01:23	0:09:44	0:39:02	10:47:45	0:45:48
	Totals for 4070	8	109	117	100%	0:01:16	0:08:20	0:53:30	122:07:45	1:01:26

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
5060	ABDOMINAL PAIN	0	7	7	3%	0:01:42	0:10:41	0:43:32	6:31:30	0:55:56
	ABRASIONS BRUISES ETC	0	5	5	2%	0:00:53	0:05:54	0:21:08	2:13:47	0:26:45
	ACCIDENT UNKNOWN INJURIES	0	8	8	3%	0:05:16	0:05:00	0:41:23	6:53:17	0:51:40
	ACCIDENT WITH INJURIES	0	6	6	2%	0:01:01	0:04:58	0:48:25	5:26:29	0:54:25
	ALARM - MEDICAL	0	5	5	2%	0:02:00	0:12:06	0:05:27	1:10:21	0:14:04
	ALLERGIC REACTIONS	0	3	3	1%	0:01:23	0:08:46	0:58:59	3:27:27	1:09:09
	BACK PAIN (NON TRAUMATIC)	0	3	3	1%	0:00:59	0:09:50	1:03:20	3:42:27	1:14:09
	BLEEDING/HEMORRHAGING	0	10	10	4%	0:01:48	0:07:14	0:43:45	8:47:50	0:52:47
	CARDIAC ARREST	0	2	2	1%	0:01:25	0:14:09	1:04:32	2:40:11	1:20:06
	CHEST PAIN	0	16	16	7%	0:01:23	0:11:19	0:59:57	18:16:13	1:08:31
	CHILD OR ANIMAL LOCKED IN CAR	0	3	3	1%	0:00:22	0:06:47	0:05:30	0:37:57	0:12:39
	CHOKING	0	1	1	0%	0:01:12	0:08:55	0:13:33	0:23:40	0:23:40
	DIABETIC PROBLEMS	0	2	2	1%	0:01:19	0:12:04	1:20:42	3:08:11	1:34:06
	DIFFICULTY BREATHING	0	17	17	7%	0:01:34	0:09:33	1:00:02	20:09:38	1:11:09
	ELECTROCUTION--SHOCKED	0	1	1	0%	0:00:43	0:06:16	0:21:52	0:28:51	0:28:51
	FALLS AND RELATED INJURIES	0	14	14	6%	0:02:05	0:10:28	0:47:25	13:59:34	0:59:58
	FRACTURES OR BROKEN BONES	0	3	3	1%	0:01:07	0:04:44	1:22:21	4:24:37	1:28:12
	HEAD INJURY	0	1	1	0%	0:01:55	0:14:08	0:14:08	0:30:11	0:30:11
	HEADACHE	0	2	2	1%	0:01:08	0:08:17	0:47:08	1:53:05	0:56:33
	HEART PROBLEMS	0	3	3	1%	0:01:04	0:08:44	1:00:07	3:29:46	1:09:55
	HEAT AND COLD EXPOSURE	0	2	2	1%	0:02:37	0:18:20	0:21:27	1:24:48	0:42:24
	INGEST POISONS OR TOXINS	0	1	1	0%	0:02:10	0:23:25	0:46:34	1:12:09	1:12:09
	LIFT ASSIST	0	15	15	6%	0:02:16	0:11:17	0:10:08	5:55:26	0:23:42
	OVERDOSE	0	2	2	1%	0:02:18	0:12:23	1:02:00	2:33:21	1:16:41
	PAIN	0	17	17	7%	0:01:40	0:13:28	0:56:54	19:16:11	1:08:01
	PSYCHIATRIC PROBLEMS	0	4	4	2%	0:00:38	0:10:22	0:37:48	3:15:10	0:48:48
	SEIZURE	0	2	2	1%	0:01:16	0:07:16	0:54:50	2:06:44	1:03:22
	SICK / ILL OR RESCUE	1	43	44	18%	0:01:32	0:11:13	0:43:22	40:57:06	0:55:51

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	5	5	2%	0:01:09	0:07:08	0:59:11	5:37:21	1:07:28
	SUICIDE	0	1	1	0%	0:00:50	0:06:40	0:09:22	0:16:52	0:16:52
	UNCONSCIOUS OR FAINTING	0	7	7	3%	0:01:02	0:05:40	1:20:34	10:10:55	1:27:16
	Subtotals for EMS	1	211	212	87%	0:01:32	0:09:54	0:44:03	201:01:05	0:55:01
	ARCING WIRES DOWN POWER LINES	0	1	1	0%	0:02:07	0:03:35	0:16:55	0:22:37	0:22:37
	BACKFILL STATION	0	1	1	0%	0:01:08	0:00:00	0:00:00	1:04:36	1:04:36
	BRUSH FIRE	0	3	3	1%	0:01:17	0:04:01	0:40:33	2:17:35	0:45:52
	BURNING COMPLAINT	0	1	1	0%	0:01:39	0:09:15	0:05:10	0:16:04	0:16:04
	CARBON MONOXIDE ALARM	0	1	1	0%	0:01:21	0:08:00	0:16:04	0:25:25	0:25:25
	FIRE ALARM	0	13	13	5%	0:01:41	0:06:41	0:12:18	3:44:25	0:17:16
	FIRE DEPT COMMUNITY RELATIONS	1	0	1	0%	0:00:01	0:00:00	0:16:38	0:16:39	0:16:39
	FIRE OTHER NOT LISTED	0	1	1	0%	0:00:10	0:07:30	0:14:43	0:22:23	0:22:23
	HAZARDOUS MATERIALS INCIDENT	0	2	2	1%	0:02:45	0:09:36	0:14:05	0:52:50	0:26:25
	RUPTURE GAS LINE	0	2	2	1%	0:03:03	0:05:09	0:41:12	1:38:47	0:49:24
	SMELL OF GAS INSIDE/OUTSIDE	0	3	3	1%	0:02:03	0:05:10	0:44:12	2:34:17	0:51:26
	STRUCTURE FIRE	1	1	2	1%	0:01:23	0:07:32	0:46:04	1:41:03	0:50:32
	Subtotals for FIRE	2	29	31	13%	0:01:33	0:06:39	0:24:21	15:36:41	0:34:03
	Totals for 5060	3	240	243	100%	0:01:33	0:09:07	0:38:53	216:37:46	0:49:10
FRA	FIRE MUTUAL AID	0	1	1	100%	0:02:30	0:00:00	0:00:00	0:04:28	0:04:28
	Subtotals for MUTA	0	1	1	100%	0:02:30	0:00:00	0:00:00	0:04:28	0:04:28
	Totals for FRA	0	1	1	100%	0:02:30	0:00:00	0:00:00	0:04:28	0:04:28

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
SOU	RESCUE MUTUAL AID	0	5	5	100%	0:01:25	0:15:50	1:21:28	6:43:30	1:20:42
	Subtotals for MUTA	0	5	5	100%	0:01:25	0:15:50	1:21:28	6:43:30	1:20:42
	Totals for SOU	0	5	5	100%	0:01:25	0:15:50	1:21:28	6:43:30	1:20:42
SRY	RESCUE MUTUAL AID	0	4	4	100%	0:01:16	0:31:37	1:01:55	6:19:15	1:34:49
	Subtotals for MUTA	0	4	4	100%	0:01:16	0:31:37	1:01:55	6:19:15	1:34:49
	Totals for SRY	0	4	4	100%	0:01:16	0:31:37	1:01:55	6:19:15	1:34:49

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	131	120	156	149					1065
CARRSVILLE	43	45	38	43	47	43	41	32					332
RUSHMERE	4	2	7	6	3	10	9	6					47
WINDSOR FIRE	30	32	39	40	31	50	43	30					295
SMITHFIELD FIRE	89	50	71	69	71	77	68	76					571
IOW RESCUE	287	213	234	247	265	259	268	269					2042
WINDSOR RESCUE	123	83	115	116	103	142	117	112					911
TOTAL STATION RESPONSES													5263

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	760	756			1516
TOTAL VOL. HOURS REPORTED					1,516

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 County Museum & Isle of Wight County Historic Resources



August 2022 Report

J.L. England, Museum Director & Isle of Wight County Historic Resources Manager

Isle of Wight County Museum 103 Main Street, Smithfield

- Visitation: 728
- Special Events

- **Aug. 2. Coloring Book Day.** Today is National Coloring Book Day. Whether you are coloring for fun or to escape and relax your mind, embrace this joyful and creative day. Today at the museum, our crayons await your visit. 27 guests.

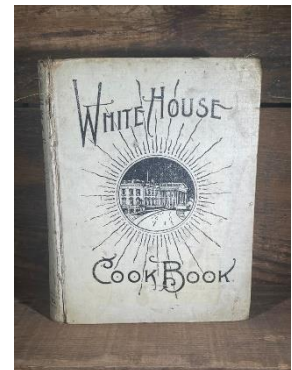


- **Second Week of August. StoryWalk.** Participation in this event hosted by the Blackwater Regional Library. The museum is stop 9 on the library's StoryWalk which features "Swimmy" by Leo Lionni. The event runs through August 14. Pick up your storywalk passport at the Visitor Center, and follow the StoryWalk trail. This is the perfect outdoor family adventure! Many readers.
- **Aug. 17. LUNCH & LEARN: The Great Smithfield Fire.** 101 years ago today marks the anniversary of the Great Smithfield Fire. This monumental event in Smithfield history drove the town's focus from peanuts to ham. 14 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:

- **Aug. 2. LIVE at 12:05: National Coloring Book Day.** The museum has coloring books in its collection and coloring sheets for all our visitors today. Join us and share your creativity. Share your creative coloring talents with us below!
- **Aug. 4. LIVE at 12:05: The Original White House Cook Book.** Initially published in 1887, The original *White House Cook Book* is a cooking compendium penned by F. L. Gillette and Hugo Ziemann. In it are 500+ recipes, cooking techniques, etiquette instruction, household care, and cleanliness tips used in the White House. Like other cookbooks, it provides a window into a different cultural time as well as recipes that may no longer be considered fashionable or tasty.
- **Aug. 9. LIVE at 12:05: Happy National Book Lovers Day!** Curator Rachel Popp celebrates National Book Lovers Day by sharing a book she loved when she



was younger entitled, "The True Story of the 3 Little Pigs!" by Jon Scieszka. Told from the wolf's perspective, the story is a hilarious retelling of the classic tale.

- **Aug. 11. LIVE at 12:05: Smithfield's Tastee Freez.** Beginning in the 1950s, Virginia B. Ward owned and operated the Tastee Freez that once stood on South Church Street. Part of the greater Tastee Freez franchise at the time of establishment, the business thrived as a popular Smithfield restaurant. In 1998, Virginia Ward sold the business and the new owners left the Tastee Freez franchise. While similar businesses with similar menus continued to operate in this location for several years, the building began rapidly changing hands and fell into disrepair. In 2021, it was declared a blight under town ordinance, condemned, and later demolished.
- **Aug. 16. LIVE at 12:05: Pan Ham Photo Contest.** Director Jennifer England discusses the museum's annual Pan Ham photo contest. Send in your entries by Sep. 6. Visit our website to learn more: www.historicisleofwight.com/pan-ham-photo-contest-2022.html.
- **Aug. 18. LIVE at 12:05: Ruffles.** Curator Rachel Popp discusses the return of ruffles in fashion and interior design while highlighting some ruffles in the museum's collection.
- **Aug. 23. LIVE at 12:05: Happy National Sponge Cake Day!** The sponge cake is thought to be one of the earliest non-yeasted cakes. Though some version of the sponge cake is believed to have been created during the Renaissance, the first English record of the recipe can be found in Gervase Markham's 1615

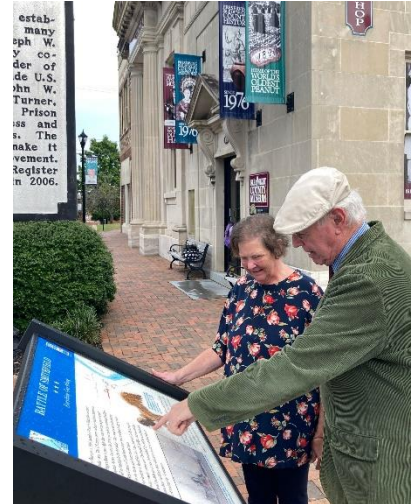


World's Oldest Ham @Worldsoldestham · Aug 17
Ruffles are making a comeback.
So sayeth the [@nytimes: nyti.ms/3du112F](https://www.nytimes.com/2022/08/17/fashion/ruffles-comeback.html).
[#DUND](#) [#Fashionista](#)



writing, "The English Huswife." Join Curator Rachel Popp in this brief exploration of sponge cake history.

- **Aug. 25. LIVE at 12:05: Civil War Trails Sign.** Director Jennifer England showcases the new Civil War Trails, Inc. sign in front of the museum which highlights the 1864 Battle of Smithfield. Visit us soon to see it for yourself, and make plans to join us for our next lecture and tour about the battle at 2 p.m. Saturday, Oct. 22.
- **Aug. 30. LIVE at 12:05: Frankenstein Day.** Director Jennifer England takes us from Mary Shelley's novel "Frankenstein" to the James Adams Floating Theatre which cruised the mid-Atlantic coast in the early 20th century. It made 12 stops in Smithfield. Shoutout to writer and author Bill Camp for the research!
- **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, launched in 2020, allows some of the county's most interesting structures to share their stories. Highlighted this month was Smithfield's **Mill Swamp Baptist Church** on Aug. 26. View all episodes in this series on the museum's YouTube Channel, Facebook page or website. YouTube link: <https://www.youtube.com/watch?v=RKfQqNu8tVY>.
- **Groups/Tours/Programs**
 - Aug. 11. Hambassador Tour Group with Smithfield & Isle of Wight County Tourism. The program offers the opportunity to those who work in, contribute to or support the tourism industry in Smithfield & Isle of Wight County to learn more about local attractions, accommodations, restaurants and shops. 2 guests.
 - Aug. 13. Hambassador Tour Group. 6 guests.
 - Aug. 24. St. Luke's Historic Church and Museum. 2 guests.
 - Aug. 24. Smithfield & Isle of Wight County Tourism Fam Tour. 3 guests.
 - Aug. 25. Smithfield & Isle of Wight County Tourism Fam Tour. 4 guests.
- **Gift Shop**
 - Numerous items were restocked including t-shirts and peanut coffee.
 - 1,030 copies (2,700 pounds) of Segar Cofer Dashiell's "**Smithfield: A Pictorial History**" were reprinted by Walsworth/The Donning Company. They arrived at the museum on Aug. 17 and are now available in the gift shop for purchase for \$39.95 each. The Dashiell Family owns the copyright and agreed to the reprinting. This is the fourth printing. The original book was printed in 1977 with reprints in 1978 and 1996.



- Exhibit/Project Update

- **Sprigg Wing, Phase II: Crops, Trade & Merchants.** A new timeline as well as exhibits about colonial businesses, the tobacco industry and mills are in production.
- **First Residents.** A new acquisition for the wall of the Sprigg Wing is in progress. In the next few months, the wall will be prepped, several new panels regarding fishing and fabrication for supports will progress. Details soon.
- **Civil War Trails.** Three new signs for Main Street, Fort Boykin and Fort Huger have been submitted. The sign for Main Street was installed on Aug. 24.
- **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 was rewritten and redesigned to be more reflective of the history in that location and to be more structurally sound. The pedestal was repaired and repointed by the Town of Smithfield, and Historic Smithfield approved the new signage. Production and installation will take place in September or October.
- **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**
 - On Aug. 31, two dresses belonging to Everard Moore Todd were brought to us by Nichol Gabor, The Nathalie L. Klaus Curator of Costume & Textiles at The Valentine in Richmond. Everard Moore Todd, 1855-1859, was the great-grandson of Mallory Todd, founder of the first ham curing and packing business in Smithfield as early as 1779. These dresses will be accessioned into the museum's collection.
- **Staff Training and Requirements**
 - None.



Financials

● Gift Shop Sales (including tax):	\$ 1,919.26
● Donations:	\$
● Admission:	\$ 1,100.00
● Program/Lecture Fees:	\$
Total Monthly Deposit:	\$ 3,019.26

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: 3,232 likes and 3,709 followers. Daily posts.



- **Facebook:** World's Oldest Ham: 211 likes. Semi-weekly posts.
- **Facebook:** Town of Smithfield. Periodic posts, responses and maintenance.
- **Twitter.** @WorldsOldestHam. The world's oldest ham has his own account. 1,350 followers.
- **Instagram.** @Isleofwightcountymuseum. 1,051 followers.
- **YouTube.** Isle of Wight County Museum. 25 subscribers.
- **Google Reviews.** 4.7/5 overall rating.
 - **August 1. Katie McDaniel:** *This museum is AMAZING! I loved learning some history about Smithfield but more importantly I bonded in particular with Hammy, the ham. Everyone should come here.*
- **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.
- Aug. 2. **Vacation Channel.** Video production: <https://bit.ly/3efQeK7>.
- Aug. 10. **Smithfield Times.** Article: Panel favors moving farmers market.
- Aug. 9: **Cultivate Magazine, Virginia Farm Bureau.** Article: The Southern Salty Route or Bust - https://issuu.com/virginiafarmbureau/docs/cultivate_summer_2022_final.
- Aug. 17. **Smithfield Times.** Outline: Spinning demonstration.
- Aug. 22. **Virginian Pilot/Daily Press.** Article: Comic book preserves WWII veteran's harrowing story - <https://bit.ly/3wQzTC1>.

Outreach Lectures & Events

- **Aug. 9. Isle of Wight County Parks and Recreation Summer Blast Camp.** Carrollton Elementary School. Theme: Vacations. 55 students.
- **Aug. 10. Isle of Wight County Parks and Recreation Summer Blast Camp.** Windsor Town Center. Theme: Vacations. 28 students.



Windsor Castle 705 Cedar Street, Smithfield

- **Aug. 15. 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. 15 guests.

Fort Boykin 7410 Fort Boykin Trail, Isle of Wight County

- No updates.

Fort Huger 15080 Talcott Terrace, Isle of Wight County

- Aug. 24. Civil War Trails updated the sign at the fort.

Nike-Carrollton Park 13036 Nike Park Road, Carrollton

- **Nike-Ajax Missile Restoration.** Awaiting lead paint abatement quotes.

Boykin's Tavern, 1820 Clerk's Office & Isle of Wight County Court House Complex 17146 Monument Circle, Isle of Wight County

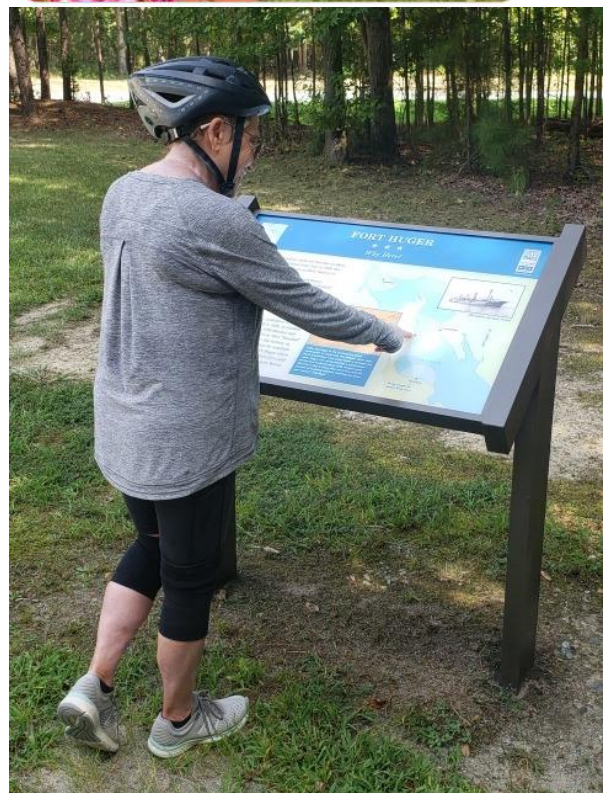
- Boykin's Tavern Visitors: 11
- Aug. 4. Tour hosted by Isle of Wight County Engineering of the 1820 Clerk's Office to share progress on the restoration and upgrades.



World's Oldest Ham @Worldsoldestham · Aug 8

Let's start the week off with a pretty scene from @WindsorCastleVA featuring a bumbly, barns and a blooming crepe myrtle. Ah, nature.

@GenuineSmfd #bee



Meetings

- August. 3. Peninsula Museums Forum.
- Aug. 29. Isle of Wight County Fair Committee.

Other Events & Notable Information

- **Volunteer Hours:** 122
 - Charlotte Harris has worked with us on a number of projects this summer. Sadly, she is headed back to school after Labor Day. We await her return over the holiday break.
- **Staffing.** Docent Shannon Reyna's last day was Aug. 28. Human Resources has posted the job and is accepting applications for a new employee.
- Provided promotion for Aug. 13 and 14 Ivy Hill Cemetery walking tours.
- The museum's front door was decorated for **Paint the Town Purple**, Western Tidewater's awareness campaign for their Walk to End Alzheimer's on Oct. 1 in Suffolk.
- At the Aug. 24 **Tourism Celebration** event hosted by Smithfield and Isle of Wight County Tourism, Director **Jennifer England** was named a community ambassador and Docent **Cindy Lucas** was named Hospitality Hero of the Year. The annual reception celebrated and recognized Hambassadors, Hospitality Heroes and Community Ambassadors.



Safety

- Aug. 10. Town of Smithfield Safety Committee meeting.

Selections from Our Website and Social Media



World's Oldest Ham @Worldsoldestham · Aug 12

...

My friend Richard wrote me a birthday poem. It arrived a few weeks after the fact, but it's still fab that my birthday celebration continues!

[#birthday](#) [#poetry](#) [#hammybirthday](#)

SALTY
ODE TO A^A (OLDE) HAM V2.0

OH THE SUN SETS RED
AND THE SEA BREAKS BLUE

MOLD IS GREEN
AND SO ARE YOU

NOW TIMES BEEN ~~XXXX~~ LEAN
OUR BISCUITS ARE FEW

AND LUCK IT TIS
YOU'RE STILL IN VIEW



World's Oldest Ham @Worldsoldestham · Aug 14

...

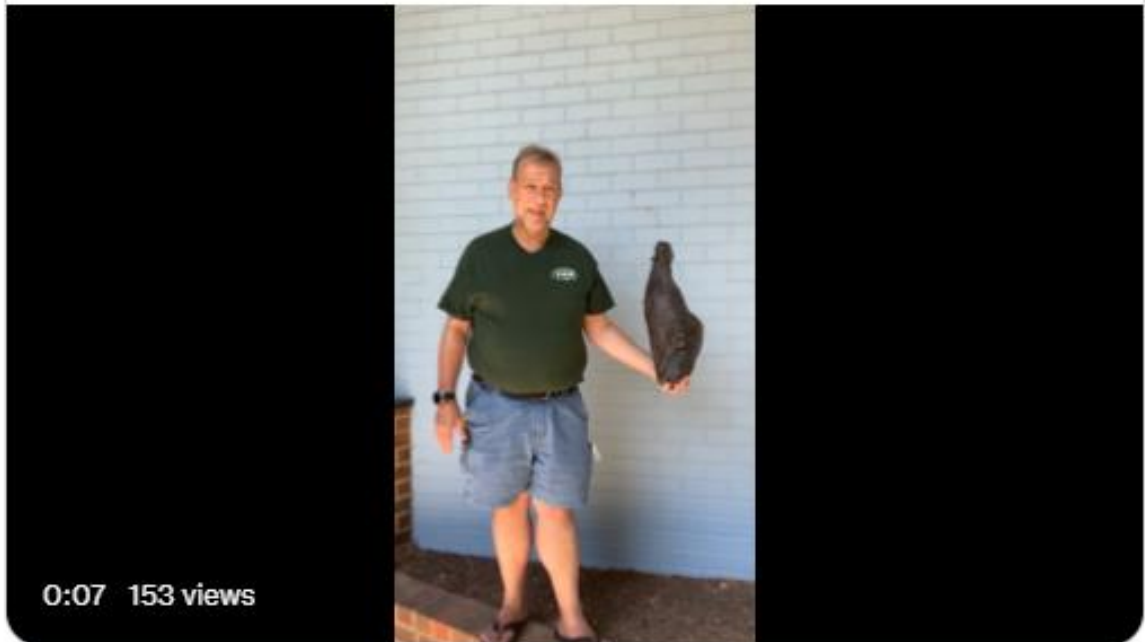
I've been 3D-scanned by the best. Find my likeness on [@Sketchfab](#).
[#research](#) [#3D](#) [#ConsiderThePossibilities](#)



VCL @VCLatVCU · Aug 14

One of our @VCUResearch partners is @isleofwightcountymuseum and home of the World's Oldest Ham [#vcunstopableinnovation](#)

[Show this thread](#)



ISSUE:

Application of Remus Brustur of Frontier Development, Applicant, and the William G. Yeoman, III, Trust, Property Owner, for a Conditional Use Permit (CUP-8-21) for a Wawa Convenience Store and Gas Station on 5.69 Acres Located on the Southwest Corner of Turner Drive (Rte. 644) and Bennis Church Boulevard (Rte. 10)

BACKGROUND:

Remus Brustur of Frontier Development, applicant, and the William G. Yeoman, III, Trust, property owner, submitted an application for a conditional use permit (CUP-8-21) for a Wawa convenience store and gas station on 5.69 acres located on the southwest corner of Turner Drive (Rte. 644) and Bennis Church Boulevard (Rte. 10) on property with tax map number 32-01-007.

The project site is located on the southwest corner of the intersection between Bennis Church Boulevard (Rte. 10) and Turner Drive (Rte. 644) on a property with tax map number 32-01-007. The property is bounded by Bennis Church Boulevard to the northeast, by Turner Drive to the northwest, by Smithfield High School to the southwest, and by a residence and cropland to the southeast.

The project site's past and current use is agricultural use. There are no existing structures or environmentally sensitive features on the site.

The applicant proposes to use the site for a Wawa convenience store and gasoline station. The convenience store will be 6,049 square feet and the gasoline station will have sixteen fuel pumps with an approximately fifteen foot canopy. Elevations of the proposed building are attached for your information.

The conceptual plan shows a right in/right out only entrance on Bennis Church Boulevard as well as a full access site entrance on Turner Drive. Please note that the concept plan submitted as part of the application is for general illustrative purposes only, and a full site plan will be required for a full, formal review for compliance with County ordinances prior to construction.

The facility is a commercial use and will not have significant impacts on public services with the exception of adjacent local roadways. The project's traffic impact assessment (TIA) shows that the facility is projected to generate 4,378 average daily weekday trips. During peak times in the morning and afternoons, the

majority of traffic generated (63% and more) will be by people stopping at the business on their way to or from somewhere else.

The TIA find that the impacts of the development's additional traffic on local roadways will absorb most of the existing lane capacity and contribute to a declining level of service at the primary intersection of Turner Drive and Route 10, by causing additional delay for key turning movements. The existing Level of Service (LOS) at the intersection in the No Build scenario is a LOS D. With the increase in Wawa traffic, plus the mitigating traffic improvements the application has proposed in the submitted TIA, the future LOS continues as a D. Accounting for the proposed improvements, the Wawa is still expected to cause a minor increase in wait times for drivers taking northbound lefts and southbound rights exiting Turner Drive onto Route 10 during peak hours. There also continue to be particular concerns about driver safety and queuing issues for drivers trying to exit left at the Wawa's Turner Drive site entrance, heading towards Smithfield High School—particularly during morning peak hours which will overlap with school arrival hours, the student driver population, and heavy bus traffic.

The TIA recommends the following to address the safety, capacity, and delay issues:

1. Lengthen the westbound left-turn lane on Bennis Church Boulevard to consist of 350 feet of storage and a 200-foot taper.
2. Reconfigure and shorten the existing shared through/left-turn lane on Turner Drive to an exclusive left-turn lane consisting of 200 feet of storage and a 100-foot taper.
3. Extend, modify, and reconfigure the existing exclusive right-turn lane to serve as a shared through/right-turn lane.
4. Construct one exclusive right-turn lane into the site from eastbound Bennis Church Boulevard consisting of 200 feet of storage and a 100-foot taper.
5. Install pavement markings to for a "DO NOT BLOCK INTERSECTION" box and identification signage to include signage reflecting a potential fine for those observed/caught impeding intersection operations.
6. Widen Turner Drive to the south of the proposed Wawa Site Driveway for a distance of approximately 300 feet to provide the roadway transition necessary to support the introduction of the proposed southbound exclusive left-turn lane from Turner Drive into the Wawa development site. Widening will extend from the Wawa Site Driveway to a tie-in point with the existing three-lane section/transition portion of Turner Drive associated with the southbound left-turn lane serving the Smithfield High School site access driveway.

An analysis of the traffic impacts and consistency with County plan and ordinances is discussed further in the attached Planning Commission staff report.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

The Planning Commission recommended approval of the conditional use permit with the following conditions:

1. In lieu of the "DO NOT BLOCK THE BOX" improvements, submit an alternative intersection design for the Turner Drive site entrance with enhanced safety and greater functionality to reduce delays and drain on law enforcement resources, such as a single-lane roundabout, to the County and VDOT for review and approval at site plan submittal.
2. The property shall provide a shared entrance with the adjacent property onto Benn's Church Boulevard.
3. Provide a cross-access easement along the rear property line that meets VDOT standards for a future public cross parcel access road.
4. The proposed connection across the rear of the property from the Turner Drive entrance shall be designed to have sufficient throat distance from the intersection of Entrance 2 with Turner Drive to be submitted at site plan review.
5. The proposed multipurpose trail along the frontage with Benn's Church Boulevard shall meet the County's minimum trail specifications at the time of site plan submittal.
6. The proposed public sidewalk along Turner Drive shall meet VDOT minimum specifications at the time of site plan submittal.
7. With the exception of the signal timing optimization and coordination, the applicant shall be responsible for the design and construction of the all other recommended improvements not listed here provided in the project TIA received in Community Development on June 16, 2022. In addition to the signal changes proposed, the applicant shall install an ADA accessible curb ramp as part of the sidewalk and trail improvements and a pedestrian push button signal for their side of the intersection to provide pedestrian safety.

In order to in order to help mitigate safety concerns and the further degradation of traffic conditions at the intersection of Benns Church Boulevard and Turner

Drive, staff also recommends approval of the application with the conditions listed above.

ATTACHMENTS:

Description	Type	Upload Date
CUP-8-21 Wawa CUP PC staff report June 26, 2022	Backup Material	7/5/2022
Wawa Application	Backup Material	6/21/2022
Statement of Reason and Narrative Description	Backup Material	6/21/2022
Wawa Elevations and Concept Plan	Backup Material	6/21/2022
Wawa Traffic Impact Analysis June 16, 2022	Backup Material	6/21/2022
Wawa Site Property Location Map	Backup Material	6/21/2022
Wawa Site Zoning Map	Backup Material	6/21/2022
Wawa Site Future Recommended Land Use Map	Backup Material	6/21/2022
VDOT Comments June 15, 2022	Backup Material	6/21/2022
County Transportation Manager Comments	Backup Material	6/21/2022
Town of Smithfield Comments	Backup Material	6/21/2022
Town of Smithfield Comments	Backup Material	6/21/2022
Applicant Transportation Comment Response 061622	Backup Material	6/21/2022
CUP-8-21 Wawa BOS Ordinance	Ordinance	7/8/2022

PLANNING REPORT

APPLICATION:

Application of Remus Brustur of Frontier Development, applicant, and the William G. Yeoman, III, Trust, property owner, for a conditional use permit (CUP-8-21) for a Wawa convenience store and gas station on 5.69 acres located on the southwest corner of Turner Drive (Rte. 644) and Benns Church Boulevard (Rte. 10) on property with tax map number 32-01-007

ELECTION DISTRICT:

D3

LOCATION:

The project site is located on the southwest corner of the intersection between Benns Church Boulevard (Rte. 10) and Turner Drive (Rte. 644) on a property with tax map number 32-01-007. The property is bounded by Benns Church Boulevard to the northeast, by Turner Drive to the northwest, by Smithfield High School to the southwest, and by a residence and cropland to the southeast.

BACKGROUND:

The project site's past and current use is agricultural use. There are no existing structures or environmentally sensitive features on the site.

DESCRIPTION:

The applicant proposes to use the site for a Wawa convenience store and gasoline station. The convenience store will be 6,049 square feet and the gasoline station will have sixteen fuel pumps with an approximately fifteen foot canopy. Elevations of the proposed building are attached for your information.

The conceptual plan shows a right in/right out only entrance on Benns Church Boulevard as well as a full access site entrance on Turner Drive. Please note that the concept plan submitted as part of the application is for general illustrative purposes only, and a full site plan will be required for a full, formal review for compliance with County ordinances prior to construction.

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The TIA find that the impacts of the development's additional traffic on local roadways will absorb most of the existing lane capacity and contribute to a declining level of service at the primary intersection of Turner Drive and Route 10, by causing additional delay for key turning movements. The existing Level of Service (LOS) at the intersection in the No Build scenario is a LOS D. With the increase in Wawa traffic, plus the mitigating traffic improvements the application has proposed in the submitted TIA, the future LOS continues as a D. Accounting for the proposed improvements, the Wawa is still expected to cause a minor increase in wait times for drivers taking northbound lefts and southbound rights exiting Turner Drive onto Route 10 during peak hours. There also continue to be particular concerns about driver safety and queuing issues for drivers trying to exit left at the Wawa's Turner Drive site entrance, heading towards Smithfield High School—particularly during morning peak hours which will overlap with school arrival hours, the student driver population, and heavy bus traffic.

The TIA recommends the following to address the safety, capacity, and delay issues:

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6. Widen Turner Drive to the south of the proposed Wawa Site Driveway for a distance of approximately 300 feet to provide the roadway transition necessary to support the introduction of the proposed southbound exclusive left-turn lane from Turner Drive into the Wawa development site. Widening will extend from the Wawa Site Driveway to a tie-in point with the existing three-lane section/transition portion of Turner Drive associated with the southbound left-turn lane serving the Smithfield High School site access driveway.

An analysis of the traffic impacts are discussed further in the "Staff Conclusions" section of the staff report.

COMPREHENSIVE LAND USE PLAN:

The recommended future land use designation for this property is business and employment (BE) on the County's Future Recommended Land Use Map in the 2020 Comprehensive Plan. The primary role of BE is defined locations for employment creation and expansion. These areas should be developed with a mix of office, commercial, and light industrial uses. Expected development in BE might include medical offices, an office park in a campus like setting, supporting retail services, community shopping centers, light manufacturing, research and development, and other low intensity industrial uses which are compatible with surrounding development. Nonresidential uses may include parks and trails, or existing community facilities, but siting for new community facilities should be considered elsewhere first. BE should be connected to residential uses with vehicular and pedestrian access.

The BE land use is best located on major transportation routes and at major intersections. BE should be master planned for coordination with surrounding uses and quality of design internally. BE should also have access to public water and sewer infrastructure with capacity for more intense development.

The proposed uses of convenience store and gasoline station are defined as a commercial uses type in the Zoning Ordinance and can be considered generally consistent with the recommended future land use designation.

ORDINANCE REVIEW:

Both proposed the convenience store and gasoline station require approval of a conditional use permit in the Rural Agricultural Conservation (RAC) zoning district. The Zoning Ordinance also includes supplemental use regulations for both proposed uses in Article V.

The property lies both in the Chesapeake Bay Preservation Area Overlay district as well as the Newport Development Service Overlay (NDSO) district. The property does not contain any wetlands or stream features. Due to the project's size and no existing resource protection area features on site, a water quality impact analysis is not required.

The project will be required to meet all nonresidential design criteria in the NDSO district regulations and supplemental use regulations for convenience stores and gas stations at site plan review.

The proposed site is currently in agricultural use and has no environmentally sensitive features or identified archeological or architectural resources. The site is shown as having high potential for archeological resources according to the County's 2005 archeological study. A review of the project site by historic resources staff yielded no concerns with the project. A Phase I Cultural Resources Analysis will be required at the time of site plan review.

Section 1-1017 of the Zoning Ordinance provides the following criteria for review of a conditional use permit

Section 17.017 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.

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

AGENCY REVIEW:

Upon receipt of the application, staff distributed it to the following departments and outside agencies for their review and comment.

Departments and agencies with no outstanding concerns for the project:

- Utility Services
- Emergency Services
- Isle of Wight County Museum

- Economic Development

Departments and Agencies with Outstanding Concerns:

- VDOT - Concern with additional delays and continued service level deterioration of the intersection, especially the deterioration of the right-turn movement from Turner Drive from a service level B to a service level D. Also has continued safety concerns with the "DO NOT BLOCK THE BOX" area and reliance on public safety resources for successful implementation. Final comment letter attached
- Transportation Manager - Concern with additional delays and continued service level deterioration of the intersection, especially with traffic generated by a potential new school adjacent to the high school. Also has continued safety concerns with the "DO NOT BLOCK THE BOX" area and reliance on public safety resources for successful implementation. Final comment letter attached.
- Town of Smithfield - concern with potential cut-through traffic from Turner Drive entrance to avoid the signal and exit Route 10. Recommends reconfiguring driveway, so it functions more like a roadway at the rear of the property to avoid parking areas.

STAFF CONCLUSIONS:

Based on an analysis of the project, staff identified the following strengths and weaknesses for the proposed uses:

Strengths:

1. The proposed uses are generally consistent with the County's future recommended land use plan;
2. The proposed uses will generate additional employment opportunities and tax revenues necessary to fund future public services and facilities; and
3. The proposed business will provide additional local retail and services to community members.

Weaknesses:

1. The proposed use will continue to contribute to the degradation of service of the intersection with Benns Church Boulevard and Turner Drive, to include increased wait times and safety concerns for left hand turns from the site onto Turner Drive.

Staff's analysis of the project finds that most of the criteria for granting the conditional use permit are met, however, additional measures need to be taken to provide adequate ingress and egress to minimize traffic congestion on public streets and to protect public safety. There remains a safety concern with the proposed full access site entrance on Turner Drive as drivers exit the site to turn left on Turner Drive due to limited visibility for cars exiting the site. The applicant proposes installing pavement markings delineating an area not to block, also known as a "DO NOT BLOCK THE BOX" area, to make it easier for people to exit the site while traffic is waiting at the light. This remedy is dependent on continued County law enforcement resources for successful implementation, whether by providing a police presence at the site or with having to maintain and monitor a traffic camera.

In order to in order to help mitigate safety concerns and the further degradation of traffic conditions at the intersection of Benns Church Boulevard and Turner Drive, staff recommends the following conditions:

1. In lieu of the "DO NOT BLOCK THE BOX" improvements, submit an alternative intersection design for the Turner Drive site entrance with enhanced safety and greater functionality to reduce delays and drain on law enforcement resources, such as a single-lane roundabout, to the County and VDOT for review and approval at site plan submittal.
2. The property shall provide a shared entrance with the adjacent property onto Benn's Church Boulevard.
3. Provide a cross-access easement along the rear property line that meets VDOT standards for a future public cross parcel access road.
4. The proposed connection across the rear of the property from the Turner Drive entrance shall be designed to have sufficient throat distance from the intersection of Entrance 2 with Turner Drive to be submitted at site plan review.
5. The proposed multi-lane trail along the frontage with Benn's Church Boulevard shall meet the County's

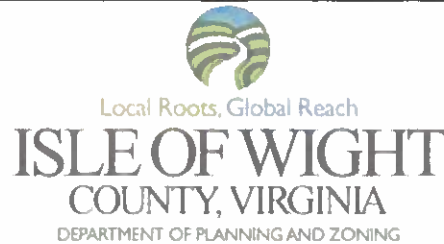
5. The proposed multipurpose trail along the frontage with Benne's Church Boulevard shall meet the County's minimum trail specifications at the time of site plan submittal.
6. The proposed public sidewalk along Turner Drive shall meet VDOT minimum specifications at the time of site plan submittal.
7. With the exception of the signal timing optimization and coordination, the applicant shall be responsible for the design and construction of the all other recommended improvements not listed here provided in the project TIA received in Community Development on June 16, 2022. In addition to the signal changes proposed, the applicant shall install an ADA accessible curb ramp as part of the sidewalk and trail improvements and a pedestrian push button signal for their side of the intersection to provide pedestrian safety.

STAFF RECOMMENDATION:

Based on the strengths of the application, staff recommends approval with the conditions listed above in order to help mitigate safety concerns and delays at the intersection of Benne's Church Boulevard and Turner Drive.

ATTACHMENTS:

Description	Type	Upload Date
Wawa Application	Backup Material	6/21/2022
Statement of Reason and Narrative Description	Backup Material	6/21/2022
Wawa Elevations and Concept Plan	Backup Material	6/21/2022
Wawa Traffic Impact Analysis June 16, 2022	Backup Material	6/21/2022
Wawa Site Property Location Map	Backup Material	6/21/2022
Wawa Site Zoning Map	Backup Material	6/21/2022
Wawa Site Future Recommended Land Use Map	Backup Material	6/21/2022
VDOT Comments June 15, 2022	Backup Material	6/21/2022
County Transportation Manager Comments	Backup Material	6/21/2022
Town of Smithfield Comments	Backup Material	6/21/2022
Town of Smithfield Comments	Backup Material	6/21/2022
Applicant Transportation Comment Response 061622	Backup Material	6/21/2022
CUP-8-21 Wawa CUP PC Resolution	Backup Material	6/21/2022



CUP- 8-21
MUNIS# 25060

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):

☒ Conditional Use Permit (Are applicant proposed conditions attached?): ☒ Yes ☐ No

The proposed use or activity is listed as a conditional use in the RAC zoning district as per Section 4-2003 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: To allow convenience store and gas station

B. PROJECT DESCRIPTION:

Project Name: Wawa convenience store with gas station

Property Address (if any): Southwest corner of Turner Drive and Benns Church Blvd

Election District: Windsor

Comprehensive Plan Designation: Business & Employment

The use permit will apply to 3.8892 acres out of 3.8892 total acres

Tax Parcel Identification # 32-01-007 Number of acres to be effected: 3.8892

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 _____

LEGAL
ACREAGE
5.69 ACRES

C. **APPLICATION INFORMATION:**

Applicant(s) Name(s): Frontier Companies Frontier Development
Address: 4001 SW 3rd Avenue, Suite 500 2950 SW 27th Avenue, Suite 300
City, State, Zip Code: Miami, Florida 33129 Miami, Florida 33133
Phone No.: 305-692-9992 Email: jleach@fdllc.com Fax No.: _____
Property Owner(s) Name(s): Yeoman William G III Trustee William G Y
Address: 40 Henry E Layden PO Box 231
City, State, Zip Code: Smithfield VA 23431
Phone No.: 757-438-3160 Email: henry.layden1@gmail.com Fax No.: NA

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

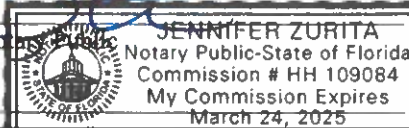
This application must be signed by the owner(s) of the subject property or must have attached written evidence of the owner's consent, which may be in the form of a binding contract of sale with the owner's signature or a letter signed by the owner(s), containing written authorization to act with full 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: Remus Brustur
Printed or Typed Name

Applicant: [Signature] Date: 10/12/2021
Signature

MIAMI - OADE
County of Isle of Wight, Commonwealth of Virginia
STATE OF FLORIDA

Subscribed and sworn to before me Jennifer Zurita
A Notary Public in and for the County of Isle of Wight, MIAMI - OADE
Commonwealth of Virginia, this 12 day of Oct., 2021

[Signature]
My Commission Expires _____


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

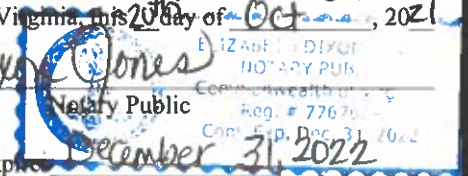
My Commission Expires _____

Owner: HENRY LAYDEN
Printed or Typed Name

Owner: [Signature] Date: 10/20/21
Signature

County of Isle of Wight, Commonwealth of Virginia

Subscribed and sworn to before me Elizabeth Dixon Jones
A Notary Public in and for the County of Isle of Wight,
Commonwealth of Virginia, this 20 day of Oct., 2021

[Signature]
My Commission Expires December 31, 2022


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 _____

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: 10-26-2021 Fees Paid: \$1,200
Tax Query: ☒ Current ☐ Delinquent Distribution Date: 10-29-2021
Posted/Date to Post: _____

AGENCIES REFERRALS:

☒ Department of Conservation & Recreation
☒ Economic Development
☒ Emergency Services
☒ General Services (2)
____ Environmental Planner
____ Health Department
☒ Transportation Manager
____ Commission of Revenue
☒ Other IOW MUSEUM

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

Verified By: Amym. Big Date: 10/29/21

COUNTY OF ISLE OF WIGHT DISCLOSURE OF REAL ESTATE HOLDINGS

Applicant Remus Brustur

Address 2950 SW 27th Avenue, Suite 300

Street

Miami Florida 33133

City State Zip

REAL ESTATE HOLDINGS TO BE AFFECTED

Location or Address	Description
<u>32-01-007</u>	<u>SOUTHWEST CORNER OF TURNER DR. & RTE. 10</u>

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

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: Remus Brustur Applicant: [Signature] Date: 10/12/2021

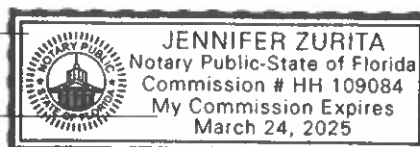
Printed or Typed Name

Signature

STATE OF FLORIDA
Commonwealth of Virginia
County of Isle of Wight MIAMI DADE

Subscribed and sworn to before me Jennifer Zurita
A Notary Public in and for the County of Isle of Wight, Commonwealth of Virginia, this 12 day of Oct., 2021.

[Signature]
Notary Public
My Commission Expires _____





SUBMITTAL CHECKLIST FOR CONDITIONAL / SPECIAL USE PERMIT APPLICATIONS

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.

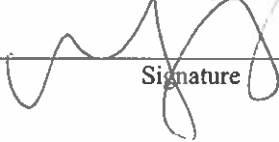
- ☒ 1. Fifteen (15) copies of the original, executed application and one (1) original executed application. Both the applicant(s) and the property owner(s) must have their signature(s) notarized on page No. 2 of the application.
- ☒ 2. The appropriate fees have been submitted with the application. Checks should be made payable to: Treasurer, Isle of Wight County.
- ☒ 3. Fifteen (15) copies of a statement of the reasons for seeking such permit, and if applicable, a statement of conditions.
- ☒ 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(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.

- ☒ 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. 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.

Jeremy Yee

Printed or Typed Name



Signature

10/25/2021

Date

This deed is exempt from recordation taxes pursuant to § 58.1-811(A)(12) of the Code of Virginia, 1950, as amended.

PG 69 FEB172000

CONSIDERATION:

\$ -0-

GRANTEES' ADDRESS:

14096 Benn's Church Boulevard
Smithfield, Virginia 23430

THIS INSTRUMENT PREPARED BY:

WILLIAM H. RIDDICK, III
BARLOW & RIDDICK, P.C.
353 MAIN STREET
P.O. BOX 190
SMITHFIELD, VIRGINIA 23431

THIS DEED OF GIFT, made and entered into this 17TH day of February, 2000, by and between WILLIAM GROVER YEOMAN, III, unmarried, Grantor, and WILLIAM G. YEOMAN, III, Trustee of the WILLIAM GROVER YEOMAN, III TRUST pursuant to a trust agreement dated February 22, 1991, Grantee.

WITNESSETH:

That for estate planning purposes and for no monetary consideration, the Grantor does give, grant and convey with General Warranty and English Covenants of Title, unto the Grantee, and his successor in trust, the following real estate, together with improvements thereon and appurtenances thereunto pertaining, to-wit:

PARCEL ONE:

All that certain tract, piece or parcel of land containing two hundred seventy-nine and eighty-four hundredths (279.84) acres by survey, but conveyed in gross and not by the acre, this being a conveyance of hazard as to acreage, situate, lying and being near Benns Church, in Newport Magisterial District, Isle of Wight County, Virginia; lying partly on both the East and West side of State Highway No. 10, and bounded by said Highway, the lands now or formerly of Daisy M. Bunkley, Philip F. Edwards, Jones' Creek, the lands now or formerly owned by George Yeoman, Christie Jordan, C. E. Johnson, J. F. Minton and others, and being the same land of which E. K. Batten and Maggie E. Batten, his wife, died seized and possessed.

PARCEL TWO:

All of that certain triangular tract, piece or parcel of land, situate, lying and being on the West side of State Highway No. 10 leading from Smithfield to Suffolk, said piece or parcel of land having its base on the East (on said Highway) and its apex on the West, containing six (6) acres, more or less, sale and conveyance in gross and not by the acre, and is bounded on the North by the secondary road leading from said State Highway No. 10 to Longview via Old Jordan's Mill, on the East by the aforesaid State Highway No. 10 leading from Smithfield to Suffolk, on the South by other lands now or formerly of W. Grover Yeoman, Jr., and on the West by the lands now or formerly of Jones Turner. The property hereby conveyed being a portion of the farm generally known and referred to as the Daisy Minton Bunkley Farm and a portion of the land conveyed to Junius M. Batten by deed from Rodham T. Delk, Special Commissioner, dated the 8th day of

March 1952 and recorded in the Clerk's Office of Isle of Wight County, Virginia.

LESS, SAVE AND EXCEPT those parcels of land conveyed to the Commonwealth of Virginia for the widening and improvement of Route 10.

The above-described real property was conveyed to Grantor by two separate deeds, both dated February 17, 2000, the first being from William Grover Yeoman, III as Trustee of the William Grover Yeoman, Jr. Family Trust and the second being from William Grover Yeoman, III as Trustee of the William Grover Yeoman, Jr. Marital Trust, both of which deeds are recorded prior to this deed in the Clerk's Office of the Circuit Court of Isle of Wight County, Virginia.

TO HAVE AND TO HOLD said property as Trustee under the William Grover Yeoman, III Trust, dated the 22nd day of February, 1991, as the same may be amended from time to time..

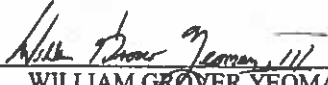
TO FURTHER HAVE AND TO HOLD the property with full power, right and authority hereby granted unto Grantee, and his successor in trust, to sell, lease, exchange, encumber and/or convey the said property, either in whole or in part, upon such terms and conditions and for such consideration, or no consideration, as Grantee may in the discretion of Grantee deem advantageous, with the further right to subdivide and re-subdivide said property and to dedicate such portions thereof for public use as Grantee shall deem desirable, together with the right to grant licenses and easements for utilities or other purposes across, over and under said property, and Grantee is hereby empowered to execute, acknowledge and deliver such deed, deeds of trust, leases and other instruments necessary to carry out the foregoing powers, and there shall be no obligation or liability upon any purchaser or purchasers, lessee or lessees of said property, or any part thereof, or upon any party or parties making any loans secured by deed or deeds of trust upon said property, or any part thereof, to see to the proper application of the proceeds of such sale, lease or loan.

Every deed, deed of trust, lease or other instrument executed by the Grantee, or his successor in trust, on behalf of either trust identified herein and in relation to the property described herein shall be conclusive evidence in favor of every person claiming any right, title or interest thereunder that: (1) at the time of the delivery of such instrument the trust was in full force and effect; (2) that such instrument was executed in accordance with the terms and conditions of the trust agreement establishing said trust, as the same may be amended from time to time, and is binding upon all beneficiaries under said trust; and (3) if such instrument is executed by successor(s) in trust to the Grantee, that such successor(s) in trust have been properly appointed and are fully vested with all the title, estate, rights, powers, duties and obligations of Grantees provided such successor(s) in trust certify in said instrument that such successor(s) in trust have been properly appointed.

PG 70 FEB172000

This conveyance is made expressly subject to the conditions, restrictions, rights of way, and easements and other instruments of record, if any, legally affecting the aforementioned property.

WITNESS the following signature and seal:


WILLIAM GROVER YEOMAN, III (SEAL)

STATE OF VIRGINIA
COUNTY OF ISLE OF WIGHT, to wit:

The foregoing instrument was acknowledged this 17th day of February, 2000 by
WILLIAM GROVER YEOMAN, III.


NOTARY PUBLIC

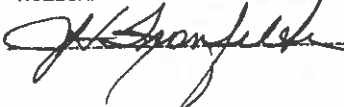
My commission: 3-31-2001

THIS DEED IS PREPARED WITHOUT BENEFIT OF TITLE EXAMINATION.

verified and mailed to
Barton & Riddick

this ____ day of _____,

INSTRUMENT #000000662
RECORDED IN THE CLERK'S OFFICE OF
ISLE OF WIGHT COUNTY ON
FEBRUARY 17, 2000 AT 04:33PM
WILLIAM E. LAINE JR., CLERK

BY:  (DC)



Statement of Reason – Conditional Use Permit

The property lies within the Rural Agricultural Conservation (RAC) District. The purpose of the Conditional Use Permit is to allow the proposed Wawa convenience store and gasoline station. The project will comply with the standards as listed in section 5-5000 supplementary use regulations, specifically for item K. Convenience Store and item P. Gasoline Station, except for the following modifications:

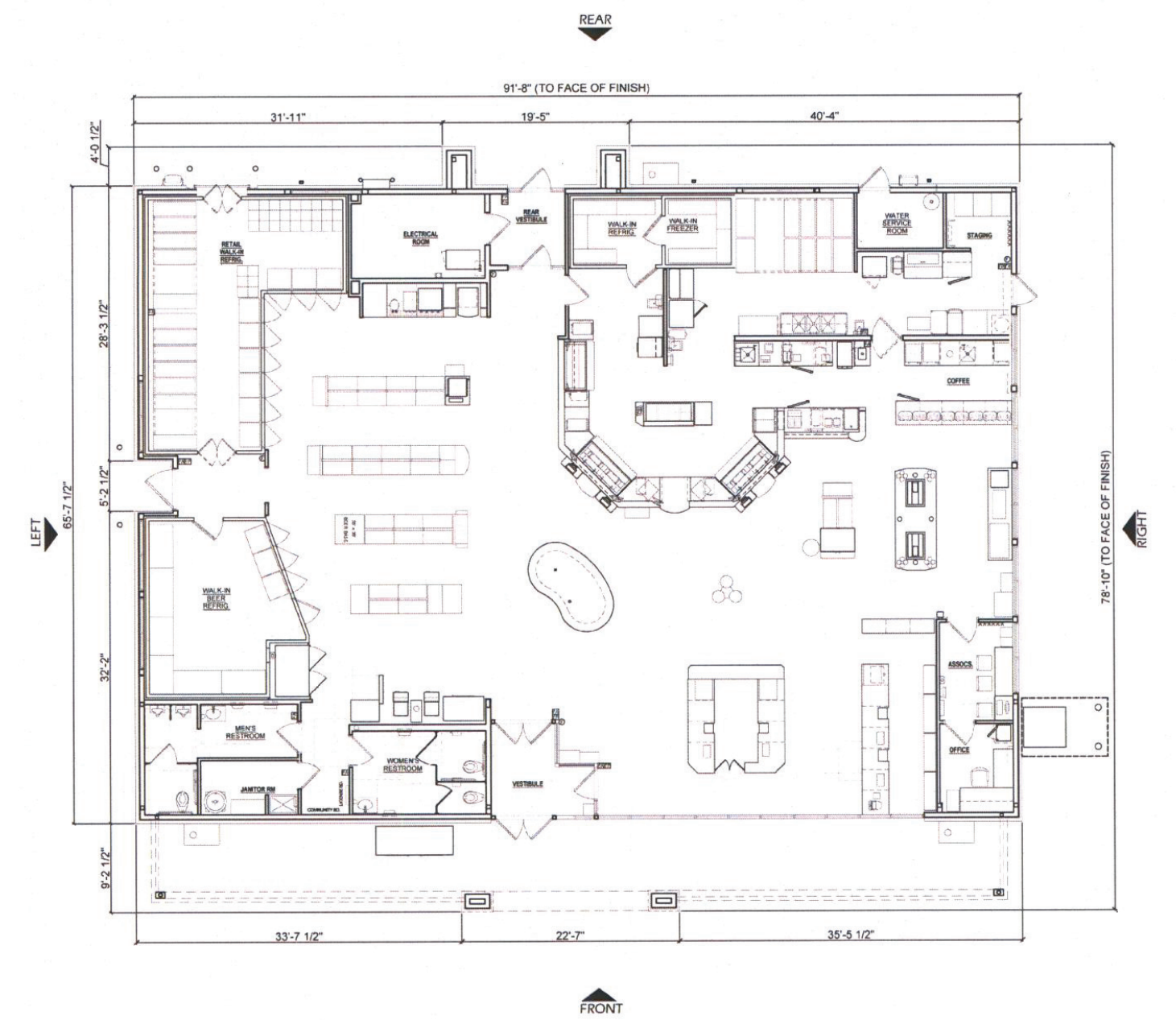
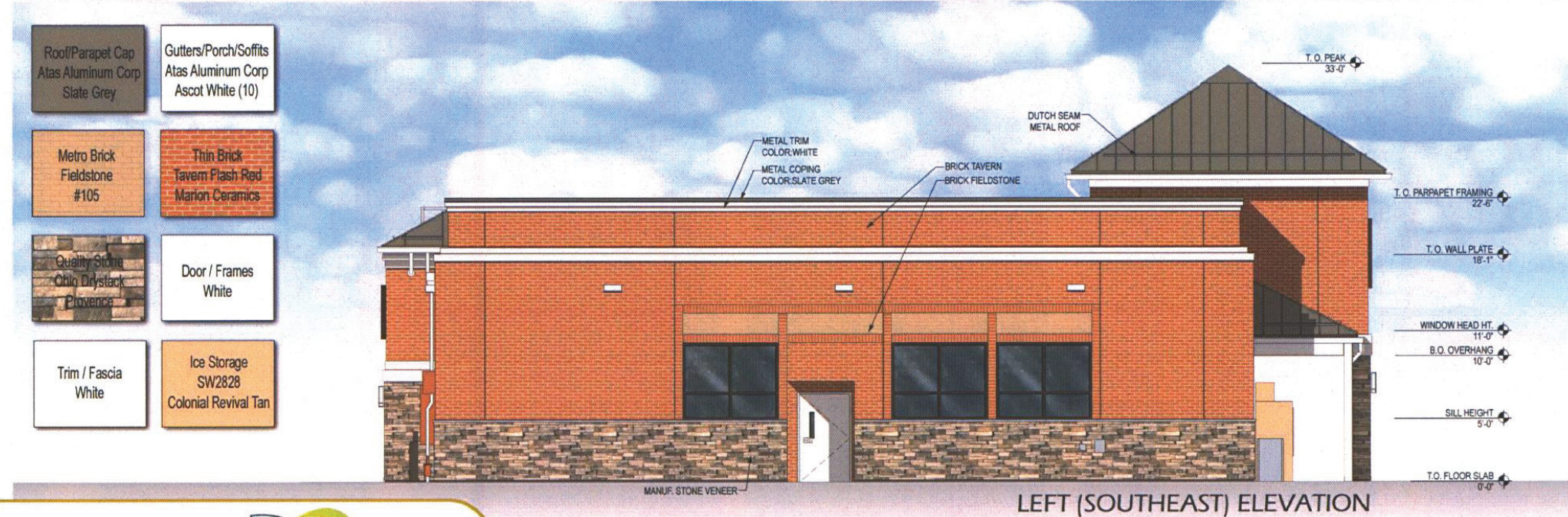
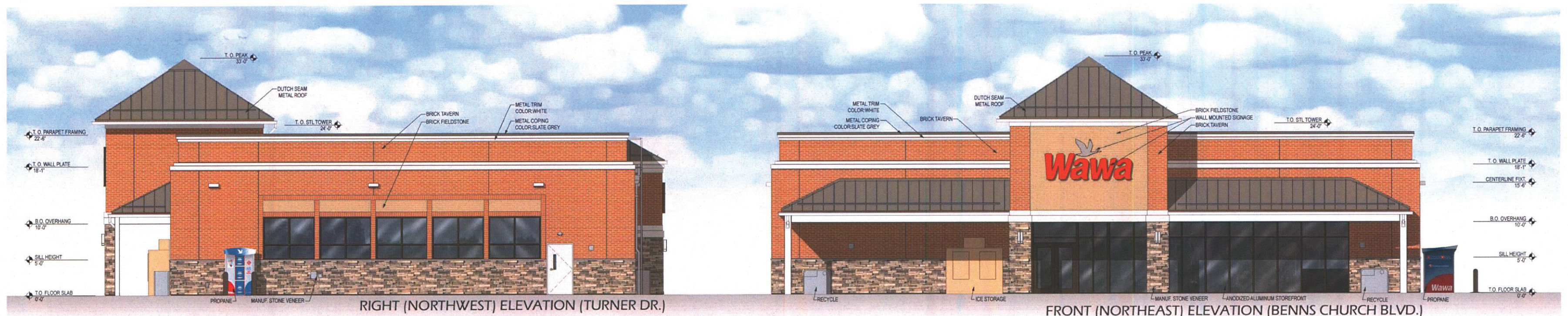
Item K. Convenience Store, 1.b. – The outdoor display of goods for sale shall prohibited except for the ice machine and propane gas as shown on site plan prepared by Kimley-Horn, dated 10-22-2021.

Item P. Gasoline Station, 1.j. – The gasoline station canopy measurements shall be consistent with the canopy elevations prepared by Cuhaci and Peterson, dated 10-20-2021.



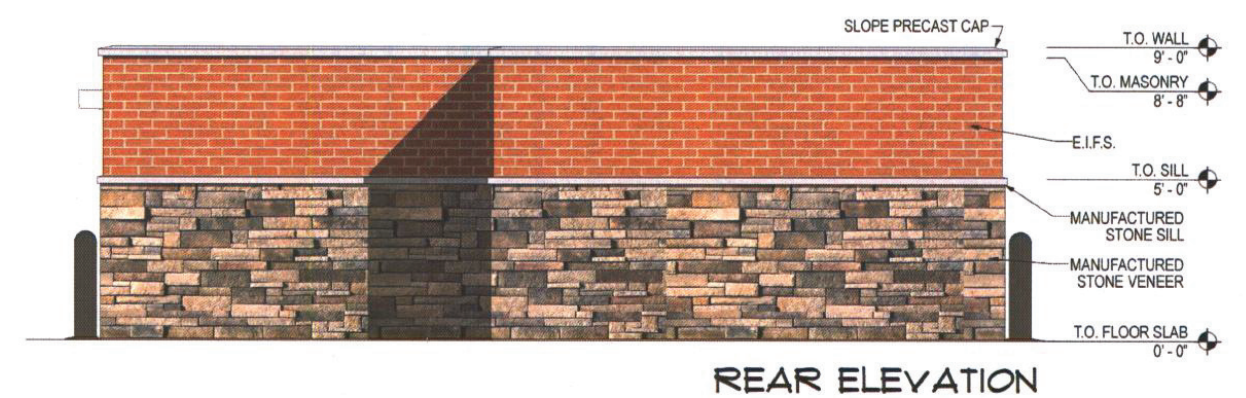
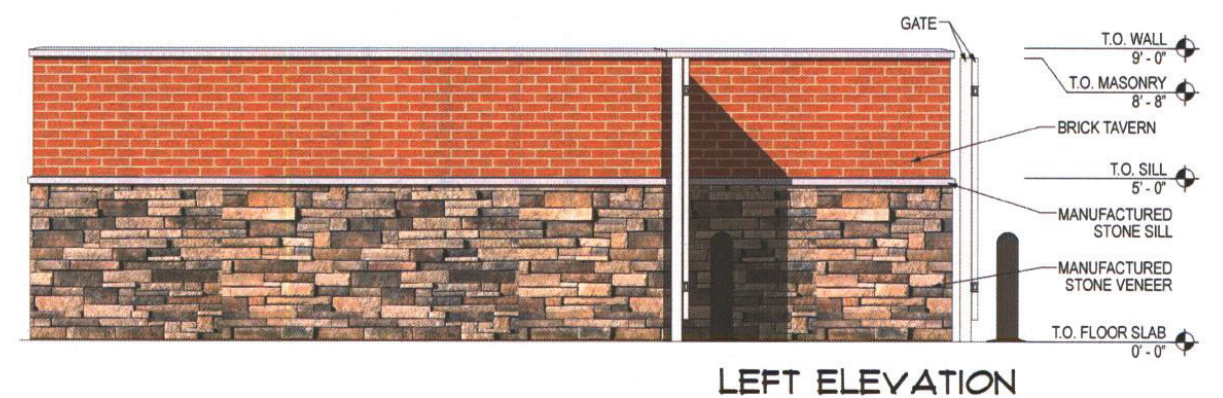
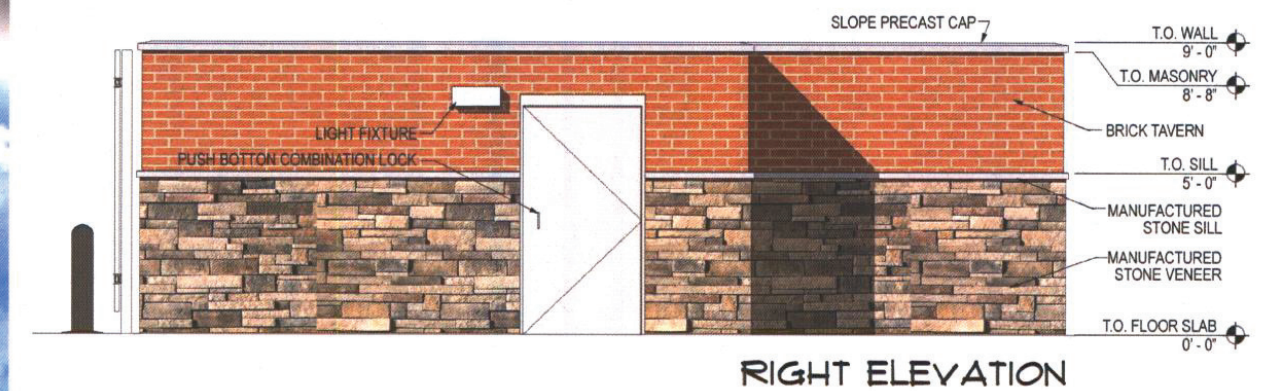
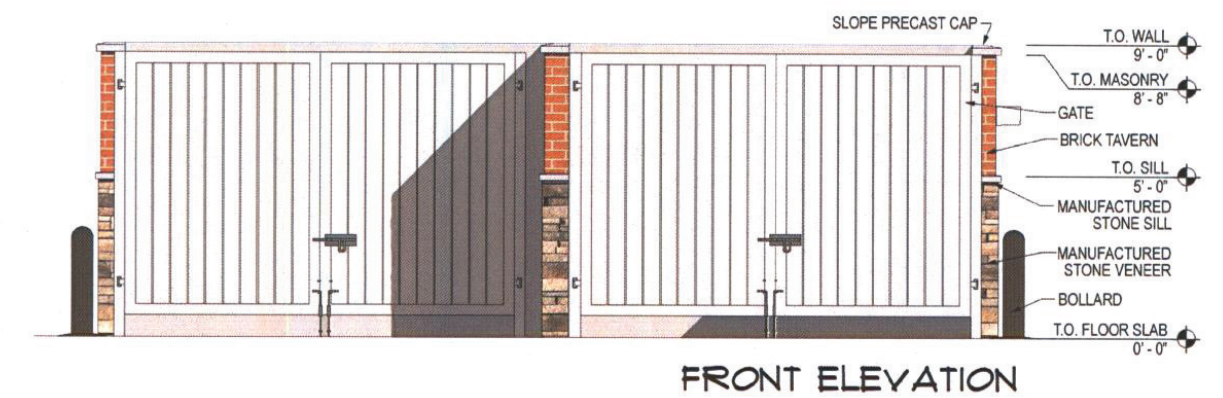
Narrative Description of The Property – Conditional Use Permit

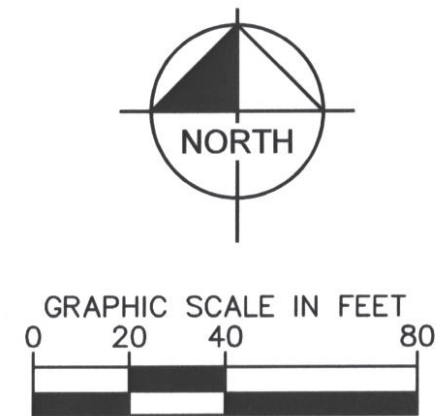
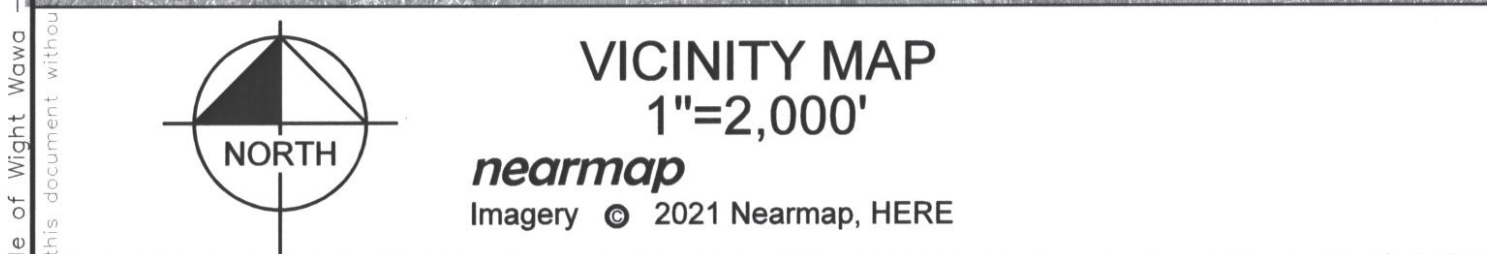
The property, Parcel A, is the lands of William G. Yeoman, III, Trust as recorded in instrument number 00662 having a parcel identification of 32-01-007. The total site area is 169,412 square feet or 3.8892 acres. The property is zoned Rural Agricultural Conservation (RAC).



NOTE:
SIGNAGE IS SHOWN FOR REFERENCE ONLY
SEPARATE PERMIT REQUIRED

FLOOR PLAN

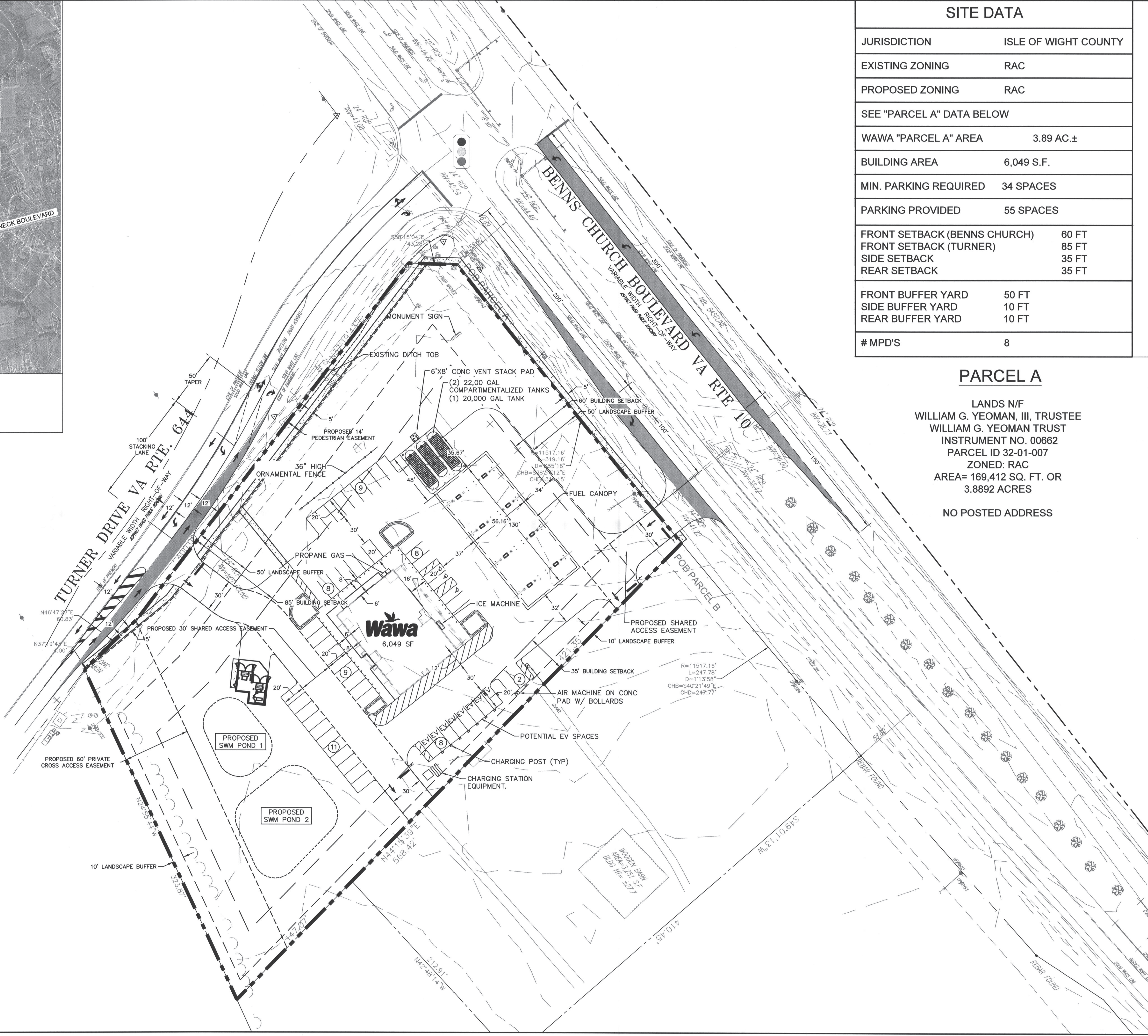




Kimley»»Horn
© 2021 KIMLEY-HORN AND ASSOCIATES, INC.
4525 MAIN STREET, SUITE 1000, VIRGINIA BEACH, VA 23462
PHONE: 757-213-8600 FAX: 757-213-8601
WWW.KIMLEY-HORN.COM

CUP LANDSCAPE PLAN
BENNS CHURCH BOULEVARD & TURNER
DRIVE

SHEET NUMBER
2



SITE DATA	
JURISDICTION	ISLE OF WIGHT COUNTY
EXISTING ZONING	RAC
PROPOSED ZONING	RAC
SEE "PARCEL A" DATA BELOW	
WAWA "PARCEL A" AREA	3.89 AC.±
BUILDING AREA	6,049 S.F.
MIN. PARKING REQUIRED	34 SPACES
PARKING PROVIDED	55 SPACES
FRONT SETBACK (BENNS CHURCH)	60 FT
FRONT SETBACK (TURNER)	85 FT
SIDE SETBACK	35 FT
REAR SETBACK	35 FT
FRONT BUFFER YARD	50 FT
SIDE BUFFER YARD	10 FT
REAR BUFFER YARD	10 FT
# MPD'S	8

PARCEL A
LANDS N/F
WILLIAM G. YEOMAN, III, TRUSTEE
WILLIAM G. YEOMAN TRUST
INSTRUMENT NO. 00662
PARCEL ID 32-01-007
ZONED: RAC
AREA= 169,412 SQ. FT. OR
3.8892 ACRES
NO POSTED ADDRESS

**Traffic Impact Analysis
for
Wawa Convenience Market Development – Benns Church Boulevard at Turner
Drive
Isle of Wight County, Virginia**

**Prepared for:
Frontier Development**

Prepared by:



Kimley-Horn and Associates, Inc.
4525 Main Street, Suite 1000
Virginia Beach, VA 23462
P: 757.213.8600 F: 757.213.8601

**Kimley-Horn Project Number: 116947000
June 2022**

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1.0 EXECUTIVE SUMMARY

Kimley-Horn and Associates, Inc. (Kimley-Horn) was retained to perform a traffic impact analysis (TIA) for a proposed Wawa Convenience Market and Fuel Sales located in Isle of Wight County, Virginia. The proposed Wawa will consist of a 6,049 square foot (sf) convenience market with 16 fueling positions. The proposed development site is bounded by Benns Church Boulevard (State Route 10) to the north, Turner Drive to the west, Smithfield High School and Smithfield Middle School to the south, and residential/agricultural properties to the east/southeast as illustrated in **Figure 1**. A conceptual site plan is also illustrated in **Figure 2**.

This project is a part of a Conditional Use Permit (CUP) application. Based on conversations with the Virginia Department of Transportation (VDOT) and Isle of Wight County, it was determined that a VDOT 527 TIA would not be required; however, this TIA has been prepared to meet VDOT and Isle of Wight County TIA requirements for the CUP application. The purpose of this TIA is to examine existing and future traffic conditions within the agreed upon project study area, identify traffic impacts resulting from the proposed development on the surrounding local road network, as well as recommend transportation improvements that support the development and help maintain acceptable traffic operations.

The proposed development has the potential to generate 4,378 daily weekday trips. Out of the total weekday daily trips, 508 driveway trips are anticipated to occur during the AM peak hour and 393 driveway trips are expected to occur during the PM peak hour. Pass-by assumptions for the proposed development were determined to be 63% and 66% of the trips generated during the AM and PM peak hours respectively. As a result, the proposed development is estimated to generate a total of 188 new trips occurring during the AM peak hour and 134 new trips during the PM peak hour.

Based on the results of the traffic analysis, the future impacts associated with the proposed development are anticipated to be minimal overall, with some deterioration in operations expected at the signalized intersection of Benns Church Boulevard at Turner Drive.

Under all future year development scenarios, it is anticipated that overall intersection operations will be maintained at LOS D or better during the AM and PM peak hours for all study area intersections.

It is also acknowledged that there are select movements under current and future conditions that do and/or will periodically have the potential to experience greater periods of operational delay. To address these operational constraints, this TIA has identified several potential improvements focused on reducing vehicle delay and facilitating traffic progression along the corridor.

As documented in the TIA, Scenario 4 was included to focus specifically on the potential impacts associated with just the proposed Wawa development as a part of the CUP application. It was initially identified that a proposed site access driveway along Turner Drive would likely be within the functional area of the Benns Church Boulevard/Turner Drive signalized intersection. In an effort to mitigate this concern and in collaboration with VDOT and the County, the proposed Site Access Driveway # 2 has been located approximately 450 feet south of the Benns Church signalized intersection (i.e., approximately 115 feet more than the minimum spacing requirement of 335 feet). The location of Site Driveway # 2 is also complemented with the installation of a proposed exclusive left-turn lane to serve southbound traffic attempting to accessing the site and to ensure through traffic flow is not impeded. Therefore, it is anticipated that queue lengths will not extend as far south as the proposed Site Access Driveway #2 on any type of regularly basis throughout the day and with the proposed southbound left-turn lane it is expected that this full access intersection along Turner Driver will function safely and efficiently under peak and off-peak traffic conditions.

The recommended off-site roadway/intersection improvements are summarized below:

Bennis Church Boulevard

- o VDOT should continue to monitor and optimize traffic signal phasing and timing plans to accommodate peak hour/off-peak traffic volumes along Bennis Church Boulevard
 - Coordinated signal timing optimization for the Turner Drive and Cypress Run intersections should occur following construction and approximately 90-days of operation and occupancy of the Wawa Convenience Market to account for the changes in traffic volumes/travel patterns
 - Signal coordination improvements should facilitate the progression of traffic along Bennis Church Boulevard from Cypress Run Drive to Turner Drive

Bennis Church Boulevard at Turner Drive

Bennis Church Boulevard Westbound Approach

- o Lengthen the westbound left-turn lane on Bennis Church Boulevard to consist of 350 feet of storage and a 200-foot taper

Turner Drive Northbound Approach

- o Reconfigure the existing shared through/left-turn lane to an exclusive left-turn lane consisting of 200 feet of storage and a 100-foot taper
- o Extend, modify, and reconfigure the existing exclusive right-turn lane serve as a shared through/right-turn lane
- o Construct/install the necessary traffic signal infrastructure (e.g., signal heads, signage, wiring, etc.) improvements to serve the new lane use designations/movements associated with the northbound Turner Drive approach to the intersection

Bennis Church Boulevard at Cypress Run Drive

- o VDOT should optimize existing signal timing plans (both AM and PM) and implement cycle lengths that are consistent with cycle lengths at the Turner Drive intersection to enhance traffic operations at the Cypress Run Drive intersection as well as better facilitate traffic progression along Bennis Church Boulevard

Bennis Church Boulevard at Proposed Wawa Site Driveway # 1

- o Site access will function as Right-In/Right-Out (RIRO) Only
- o Construct one exclusive right-turn lane, along eastbound Bennis Church Boulevard consisting of 200 feet of storage and a 100-foot taper.
- o The proposed Wawa site driveway will consist of one inbound lane and one outbound lane
- o Install/provide STOP control for outbound movements (i.e., approach to Bennis Church Boulevard)

Turner Drive at Proposed Wawa Site Driveway # 2

- o Site access will function as Full Access/Full Movement
- o Install supplemental signage and pavement markings to consist of the following:
 - o “DO NOT BLOCK INTERSECTION” signage
 - o Intersection pavement markings delineating the area not to block (i.e., the box)
 - o Supplement with signage reflecting a potential fine for those observed/caught impeding intersection operations

- o Widen Turner Drive to the south of the proposed Wawa Site Driveway # 2 for a distance of approximately 300 feet to provide the roadway transition necessary to support the introduction of the proposed southbound exclusive left-turn lane serving the Wawa development site.
 - o Widening will extend from the Wawa Site Driveway # 2 intersection to a tie-in point with the existing three-lane section/transition portion of Turner Drive associated with the southbound left-turn lane serving the Smithfield High School site access driveway.

****It is noted that the existing right-of-way (ROW) along this segment of Turner Drive is approximately 40-feet in width. Therefore, the proposed widening of Turner Drive is intended to be implemented within the existing ROW and match the existing cross section.***

Proposed Wawa Site Driveway # 2 Westbound Approach

- o Site driveway will consist of one inbound lane and one outbound lane
- o Install/provide STOP control for outbound (driveway) approach

Turner Drive Southbound Approach

- o Construct/delineate one exclusive left-turn lane consisting of 150 feet of storage and a 100-foot taper

Turner Drive Northbound Approach

- o Construct a new travel lane along the east side of Turner Drive to account for/accommodate the proposed southbound left-turn lane

Beyond the above-mentioned improvements, no other off-site geometric or traffic control improvements are recommended as part of the proposed Wawa Convenience Market development.

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2.0 INTRODUCTION

Kimley-Horn and Associates, Inc. (Kimley-Horn) was retained to perform a traffic impact analysis (TIA) for a proposed Wawa Convenience Market and Fuel Sales located in Isle of Wight County, Virginia. The proposed Wawa will consist of a 6,049 square foot (sf) convenience market with 16 fueling positions. The proposed development site is bounded by Benns Church Boulevard (State Route 10) to the north, Turner Drive (State Route 644) to the west, Smithfield High School to the south, and residential/agricultural properties to the east/southeast as illustrated in **Figure 1**. A conceptual site plan is also illustrated in **Figure 2**.

This project is a part of a Conditional Use Permit (CUP) application. Based on conversations with the Virginia Department of Transportation (VDOT) and Isle of Wight County, it was determined that a VDOT 527 TIA would not be required; however, this TIA has been prepared to meet VDOT and Isle of Wight County TIA requirements for the CUP application. Additionally, a TIA Assumptions document was prepared and approved by VDOT and Isle of Wight County and included in **Appendix A** of this report.

It is noted that an additional analysis scenario has been included in this TIA (i.e., Build conditions without a proposed new Elementary School). This scenario consists of applying a growth rate to existing volumes to establish background traffic and includes only additional/new traffic associated with the proposed Wawa development under consideration. It excludes a proposed new 600 pupil elementary school from the background traffic. This scenario was added to provide a more clear and/or realistic picture of the trip generation impacts, and the anticipated operational conditions associated with the proposed development in 2023/2024. Concern was raised that the proposed but not approved new Elementary School was overstating near-term traffic volume estimates and/or the reduction in operational conditions along Turner Drive. The analysis scenario that includes the new elementary school should be used by Isle of Wight County in collaboration with Isle of Wight County Schools and/or VDOT for future planning purposes and not as a factor in the consideration of the CUP application.

The purpose of this TIA is to examine existing and future traffic conditions within the agreed upon project study area, identify traffic impacts resulting from the proposed development on the surrounding local road network, as well as recommend transportation improvements that support the development and help maintain acceptable traffic operations.

Throughout this TIA, the “proposed development” refers to the proposed Wawa.

3.0 PROJECT BACKGROUND

3.1 STUDY AREA

The study area for this analysis includes three (3) existing roadways, two (2) existing intersections, and two (2) future intersections/access points planned to support the proposed development. The study area roadways and intersections are as follows:

Roadways

- Bennis Church Boulevard (State Route 10)
- Turner Drive (State Route 644)
- Cypress Run Drive

Intersections

Existing:

- Bennis Church Boulevard at Turner Drive (signalized)
- Bennis Church Boulevard at Cypress Run Drive (signalized)

Proposed:

- Bennis Church Boulevard at Site Access Driveway #1: Unsignalized, Right-In/Right-Out (RI/RO) only
- Turner Drive at Site Access Driveway # 2: Unsignalized, Full-Movement

All study area roadways and intersections were identified and agreed to with VDOT and Isle of Wight County as referenced in the TIA Assumptions document provided in **Appendix A**.



Kimley»Horn

Wawa Development
Bennis Church Boulevard TIA

Project Study Area

FIGURE
1

3.2 EXISTING CONDITIONS

Figure 3 depicts existing lane designations throughout the study area along with existing full width storage and taper lengths for exclusive turn lanes. The following provides a short description of the existing roadway characteristics for each facility:

- **Benns Church Boulevard (State Route 10)** – is a four-lane, divided minor arterial within the limits of the study area. Benns Church Boulevard is oriented in an approximate east/west direction with a posted speed limit of 45 miles per hour (mph). Based on VDOT historic counts reported for 2019, this section of Benns Church Boulevard carries approximately 27,000 vehicles per day (vpd).
- **Turner Drive (State Route 644)** – is primarily a two-lane, undivided major collector within the limits of the study area. Turner Drive runs in an approximate north/south direction. Based on VDOT historic counts reported in 2019, this section of Turner Drive carries approximately 3,200 vehicles per day (vpd). The posted speed limit is 40 mph.
- **Cypress Run Drive** – is primarily a two-lane, undivided local road within the limits of the study area. Cypress Run Drive is oriented in an approximate east/west direction. This roadway connects Benns Church Boulevard to a shopping center and a handful of residential homes. The posted speed limit is 15 mph.

Existing traffic signal timing data for the signalized intersection at Benns Church Boulevard at Turner Drive and Benns Church Boulevard at Cypress Run Drive was provided by VDOT.

3.3 EXISTING TRAFFIC VOLUMES

Kimley-Horn collected existing turning movement count (TMC) data on August 11, 2021 (Wednesday) at each study area intersection. The existing weekday TMC data was collected from 6:30 AM to 8:30 AM and from 3:30 PM to 6:30 PM.

Historical AAWDTs for Benns Church Boulevard are presented in **Table 1**. All raw traffic count data are provided in **Appendix B**. Uniform morning (AM) and evening (PM) peak hours were established from the TMC data. Based on the TMC data, the AM peak hour occurs from 7:15 AM to 8:15 AM and the PM peak hour occurs from 4:15 PM to 5:15 PM.

The existing (i.e., 2021) AM and PM peak hour traffic volumes have been adjusted to ensure school traffic was adequately accounted for in the operational analysis and are illustrated in **Figure 4**. The existing volumes were adjusted using the 2021 TMC data combined with historic TMC data (which accounts for influence of school related traffic/turning movements) to develop the adjusted 2021 traffic volumes. Heavy vehicle percentages were calculated for each individual intersection movement, while overall intersection peak hour factors were calculated and then applied to each intersection movement.

The existing traffic volumes have also been adjusted to account for COVID-19 related impacts. This was done by comparing the TMC data collected in August of 2021 to TMC data that was collected in August of 2017. A COVID factor was created for each individual movement by dividing the December 2016 TMC movement volume by the 2021 TMC movement volume. The 2021 data that was adjusted to account for school traffic was then multiplied by this factor to get the final adjusted 2021 volume data.” It is noted that due to the timing of the data collection for 2017 and 2021 (i.e., August), Kimley-Horn intentionally selected volumes for specific movements that needed to be and/or were more directly representative of “school in session” volumes (i.e., December 2016 TMC data captures turning movements at the Benns Church Boulevard/Turner Drive signalized intersection with school fully in session).

Table 1: Study Area Roadway Historical AAWDTs

VDOT Historical Daily Traffic Volumes AAWDT						
Location	2015	2016	2017	2018	2019	Average Annual Growth
Southern Corporate Limits of the Town of Smithfield to Brewers Neck Boulevard	27,000	28,000	26,000	26,000	27,000	0.102%
Average Annual Growth Rate						0.10%
Proposed Annual Growth Rate						1.0%

Source: VDOT (i.e., 2015 to 2019 ADT)

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Signalized Intersection

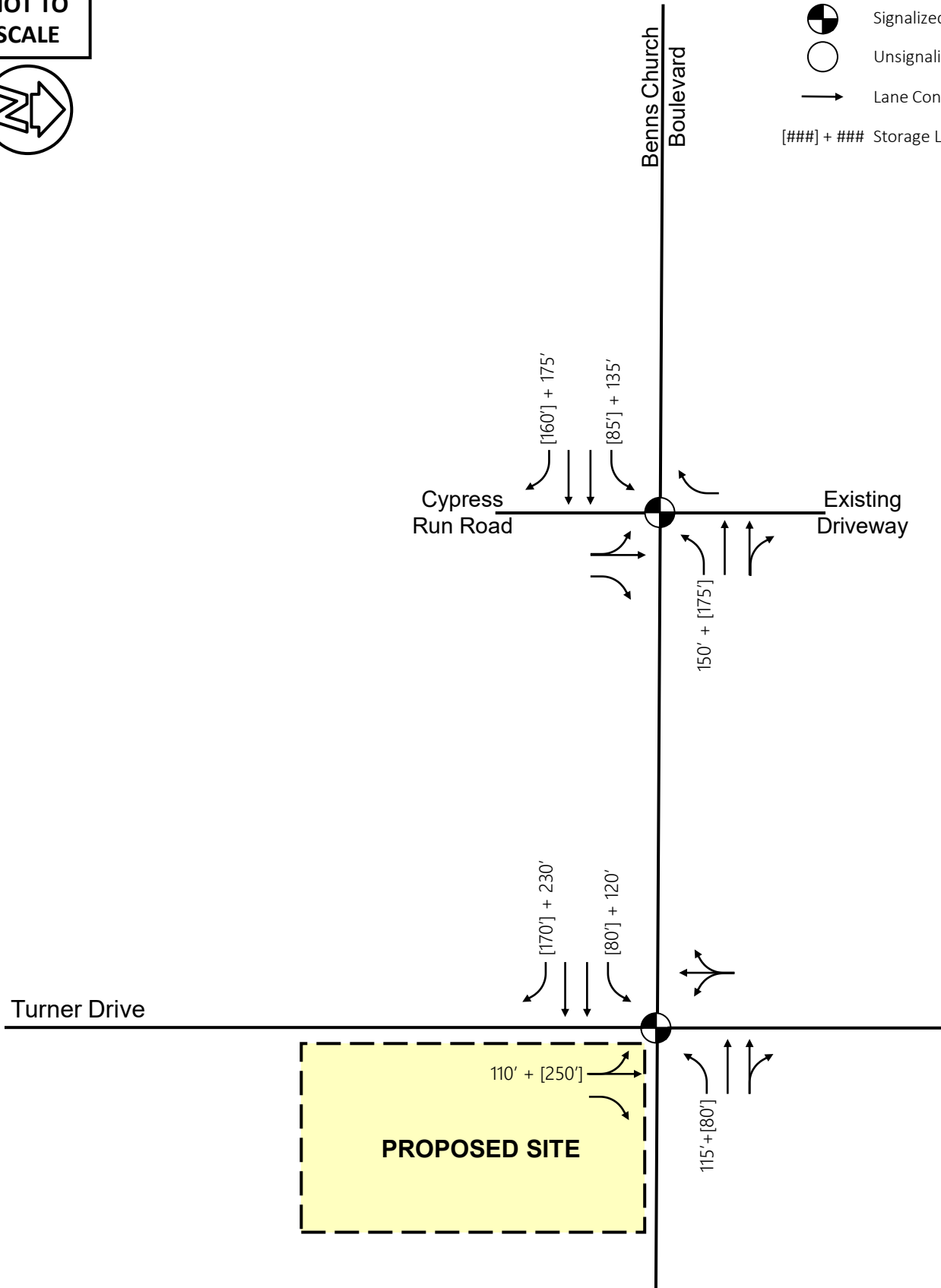


Unsignalized Intersection



Lane Configuration

[###] + ### Storage Length + Taper Length



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Signalized Intersection



Unsignalized Intersection



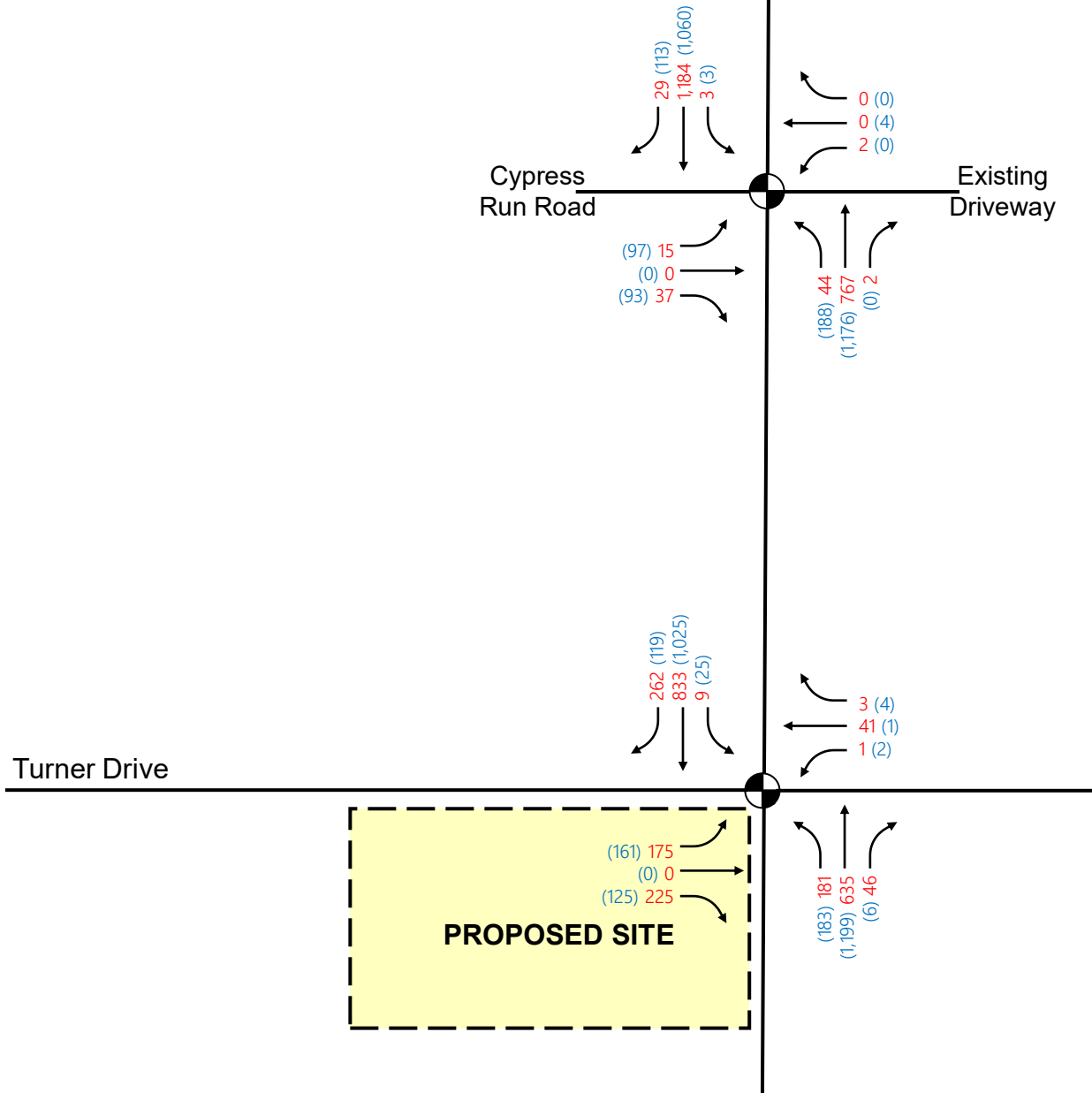
Turning Movement

###

AM Traffic Volume

(###)

PM Traffic Volume



4.0 PROJECTED TRAFFIC VOLUMES

In addition to 2021 Existing Conditions, this study includes the analysis of three (3) Future Year (i.e., one (1) No Build and two (2) Build) scenarios. The proposed development is anticipated to open in 2023. The following analysis scenarios for the AM and PM peak hours were studied as part of this TIA. The peak hours for this intersection were determined by looking at the school hours of both Smithfield Middle and Smithfield High School combined with the historic traffic volume data from 2016 and 2017 collected by VDOT. A summary of general traffic conditions associated with each scenario is included below:

- **Scenario 1** – Existing (2021) traffic conditions
- **Scenario 2** – Future Year (2023) No-Build Conditions – Opening year traffic conditions with a future growth rate applied to approved base year traffic volumes plus background development trips (i.e., approved historical growth rate plus approved adjacent development traffic if applicable) but without traffic volumes generated by the proposed Wawa Convenience Market with Fuel development.
 - o Background traffic for this TIA was assumed to include a New 600 Pupil Elementary School located along Turner Drive adjacent to Smithfield Middle School and Smithfield High School
- **Scenario 3** – Future Year (2023) Build-out conditions – Opening year traffic conditions with a future growth rate applied to approved base year traffic volumes plus background development trips (i.e., approved historical growth rate plus approved adjacent development traffic if applicable), with traffic volumes generated by the proposed Wawa Convenience Market with Fuel development
 - o Background traffic for this TIA was assumed to include a New 600 Pupil Elementary School located along Turner Drive adjacent to Smithfield Middle School and Smithfield High School
- **Scenario 4*** – Future Year (2023) Build-out No Elementary School conditions – Opening year traffic conditions with a future growth rate applied to approved base year traffic volumes plus background development trips (i.e., approved historical growth rate), with traffic volumes generated by the proposed Wawa Convenience Market with Fuel development
 - o Same as Scenario 3, however it does not include traffic volumes for a proposed New 600 Pupil Elementary School to the south of Smithfield High School along Turner Drive
 - o Unlike Scenario 3 and 5, the northbound approach of Turner Drive at Benns Church Boulevard will consist of an exclusive left-turn lane and a shared through/right-turn lane
- **Scenario 5** – Future Year (2023) Build-out conditions – Opening year traffic conditions with a future growth rate applied to approved base year traffic volumes plus background development trips (i.e., approved historical growth rate plus approved adjacent development traffic if applicable), with traffic volumes generated by the proposed Wawa Convenience Market with Fuel development
 - o Same as Scenario 3 and also includes a dedicated pedestrian phase as a part of signal operations at the signalized intersection of Benns Church Boulevard and Turner Drive

***Note:** Scenario 4 was added to provide a clearer and/or realistic picture of the trip generation impacts, and the anticipated operational conditions associated with the proposed development in 2023/2024. Concern was raised that the proposed but not approved new Elementary School was overstating near-term traffic volume estimates and/or the reduction in operational conditions along Turner Drive. The analysis scenario that includes the new elementary school should be used by Isle of Wight County in collaboration with Isle of Wight County Schools and/or VDOT for future planning purposes and not as a factor in the consideration of the CUP application.

4.1 BACKGROUND TRAFFIC GROWTH

A conservative 1% growth rate per year was used to account for general growth and other developments that may occur near or within the study area. This growth rate is consistent with overall County average growth rate used in other similar traffic studies.

The 2023 background peak hour traffic volumes were developed by applying a compounding 1.0% growth rate over a 2-year period to existing/base year (2021) volumes plus traffic associated with the approved/planned adjacent development as well as a proposed new 600 pupil elementary school). However, as noted previously, background traffic for Scenario 4 did not include the consideration of traffic associated with the proposed elementary school.

Trip generation associated with the proposed new elementary school is expected to result in an additional 1,134 daily weekday trips, as well as 402 trips during the AM peak hour (i.e., 217 entering and 185 exiting) and 102 trips during the PM peak hour (i.e., 49 entering and 53 exiting) as shown in **Table 2**.

Table 2: Trip Generation for a Proposed New 600 Pupil Elementary School

ITE Code	ITE Description	Density	Unit	Daily	AM Peak Hour			PM Peak Hour		
					Total	In	Out	Total	In	Out
520	Elementary School	600	Students	1,134	402	217	185	102	49	53
New Site Trips				1,134	402	217	185	102	49	53

4.2 SITE ACCESS SPACING

Based on the conceptual site plan, access to the site is proposed at the following two locations:

- **Site Access #1** on Benns Church Boulevard, approximately 300 feet east of Turner Drive – This intersection will operate as an unsignalized, right-in/right-out (RIRO) driveway
- **Site Access #2** on Turner Drive, approximately 450 feet south of the Benns Church Boulevard – This intersection will operate as an unsignalized, full-movement (i.e., full access) intersection

Based on these proposed access locations and permitted movements, spacing requirements per VDOT's *Roadway Design Manual Appendix F Access Management Design Standards for Entrances and Intersections* were reviewed. The required intersection spacing was compared to the proposed intersection spacing for the site entrances and is summarized in **Table 3**.

Table 3: Summary of Site Access Spacing

Site Access	Roadway	To	From	Minimum Spacing Requirement (feet)	Proposed Access Spacing (feet)	Meets Spacing Requirements?
Site Access #1 (Partial Access)	Benns Church Boulevard	Turner Drive	Site Access #1	250'	300'	Yes (+50')
Site Access #2 (Full Access)	Turner Drive	Benns Church Boulevard	Site Access #2	335'	450'	Yes (+115')

4.3 PROPOSED TRIP GENERATION, DISTRIBUTION, AND ASSIGNMENT

Traffic generation potential for the proposed development was obtained using *ITE Trip Generation 10th Edition* (2017). Trip generation estimates for the proposed site land uses are shown in **Table 4**. In addition, pass-by reductions were applied, consistent with the methods contained within the *ITE Trip Generation Handbook 10th Edition*. Trip generation estimates were developed and compared based on the number of fueling stations, convenience market square footage, and calculating the average using the volumes associated with fueling stations and square footage. Therefore, the proposed pass-by reduction was determined to be 63% and 66% of the trips generated for the AM and PM peak hours, respectively.

Table 4: Trip Generation for Proposed Development

ITE Code	ITE Description	Density	Unit	Daily	AM Peak Hour			PM Peak Hour		
					Total	In	Out	Total	In	Out
Trip Generation Based on Fueling Stations										
960	Super Convenience Market/Gas Station	16	Fueling Positions	3,688	449	225	224	367	184	183
Pass-By (63% AM, 66% PM)					(283)	(142)	(141)	(242)	(121)	(121)
New Site Trips				3,688	166	83	83	125	63	62
960	Super Convenience Market/Gas Station	6,049	Square Ft	5,067	566	283	283	419	210	209
Pass-By (63% AM, 66% PM)					(357)	(178)	(178)	(277)	(139)	(138)
New Site Trips				5,067	209	105	105	142	71	71
960	Super Convenience Market/Gas Station	Average		4,378	508	254	254	393	197	196
Pass-By (63% AM, 66% PM)					(320)	(160)	(160)	(259)	(130)	(129)
New Site Trips				4,378	188	94	94	134	67	67

The proposed Wawa development has the potential to generate a total of 4,378 daily weekday trips. Out of the total weekday trips, 508 driveway trips will occur during the AM peak hour and 393 driveway trips will occur during the PM peak hour. Pass-by assumptions for the proposed development were determined to be 63% and 66% of the trips generated during the AM and PM peak hours respectively.

As a result, the proposed development is estimated to generate a total of 188 new trips occurring during the AM peak hour and 134 new trips during the PM peak hour.

Site traffic distributions were preliminary determined from available traffic data, anticipated routes for vehicles entering and exiting the site, and a general familiarity of the study area. At the regional level it is anticipated that the majority of traffic will be traveling to/from Bennis Church Boulevard located northeast of the project site.

Proposed distributions determined for the proposed Wawa Convenience Market with Fuel development are listed below:

- To/from the south on Turner Drive – 20%
- To/from the west on Benns Church Boulevard – 40%
- To/from the east on Benns Church Boulevard – 40%

Two (2) unsignalized access driveways are proposed with the development. The first access driveway will be located along eastbound Benns Church Boulevard, approximately 325 feet south of Turner Drive, and will operate with right-in-right-out (RI/RO) only operations. Site access driveway #2 will be located along Turner Drive, approximately 450 feet south of Benns Church Boulevard and will accommodate full movement operations.

Detailed trip distribution and assignment is shown in **Figure 5**.

AM and PM future traffic volumes for Scenarios 3 and 5 are illustrated in **Figure 6** and **Figure 7**.

AM and PM future traffic volumes for Scenario 4 are illustrated in **Figure 8** and **Figure 9**.

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Signalized Intersection



Unsignalized Intersection



Turning Movements



Site Distributions

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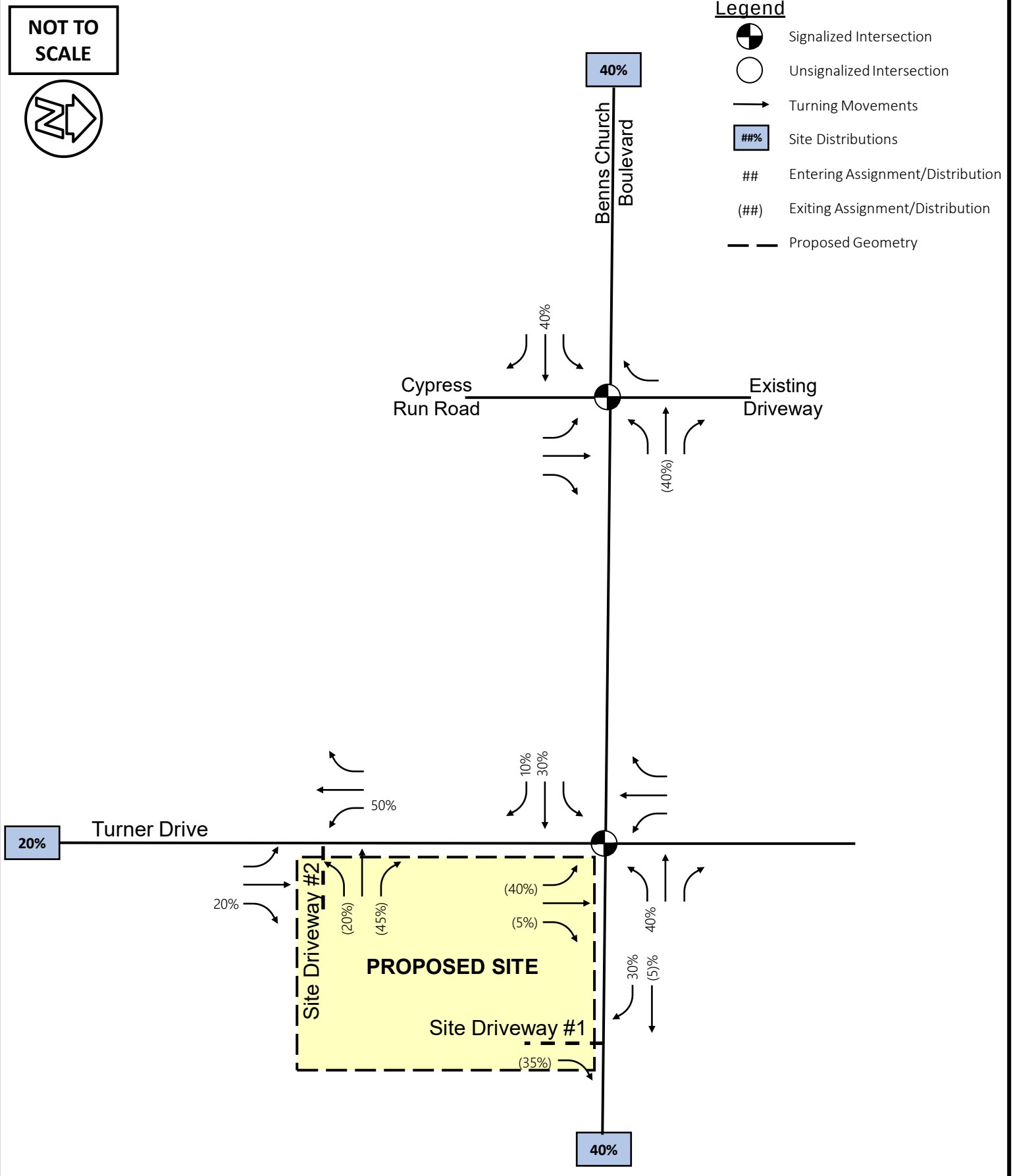
Entering Assignment/Distribution

(##)

Exiting Assignment/Distribution



Proposed Geometry



Kimley»Horn

Wawa Development
Bennis Church Boulevard TIA

Proposed
Trip Distributions

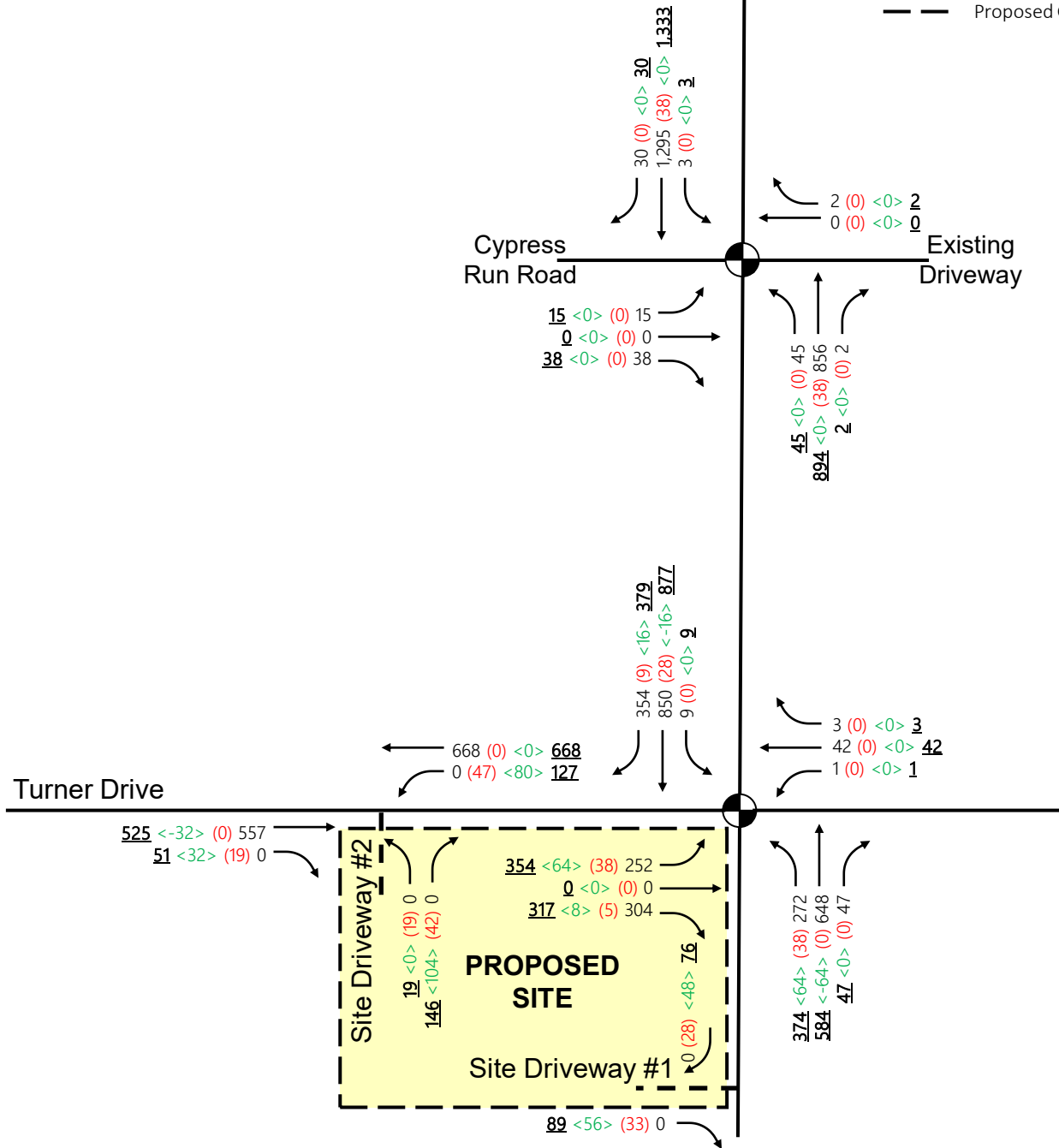
FIGURE
5

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- Signalized Intersection
- Unsignalized Intersection
- Turning Movement
- ###** Background Traffic Volume
- (###)** Site Trips
- <###>** Pass-By Trips
- ###** Total Trips
- Proposed Geometry



Kimley»Horn

Wawa Development
Bennis Church Boulevard TIA

2023 AM
Peak Hour Volumes for
Scenarios 3 and 5

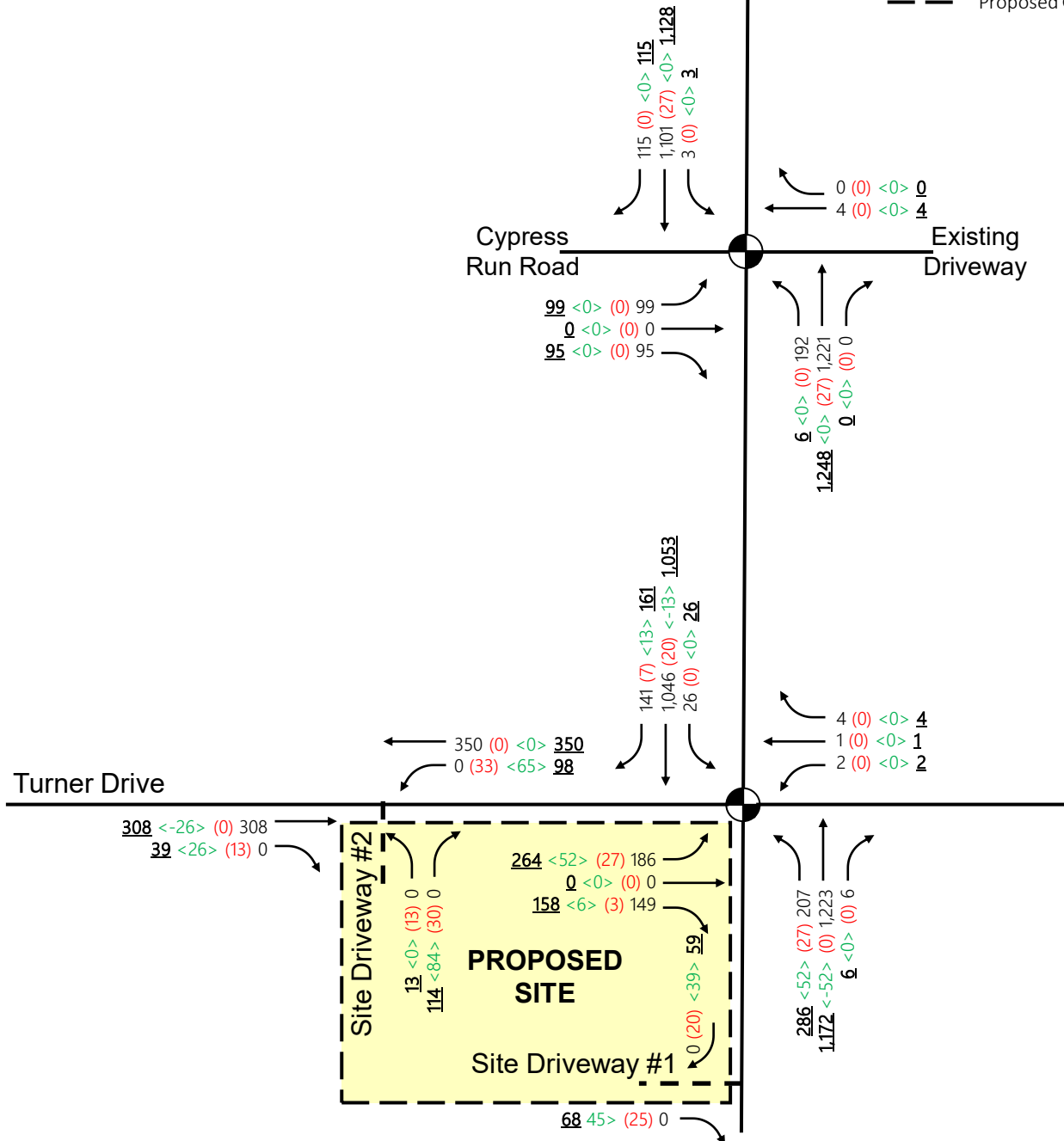
FIGURE
6

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- Signalized Intersection
- Unsignalized Intersection
- Turning Movement
- Background Traffic Volume
- Site Trips
- Pass-By Trips
- Total Trips
- Proposed Geometry



Kimley»Horn

Wawa Development
Bennis Church Boulevard TIA

2023 PM
Peak Hour Volumes for
Scenarios 3 and 5

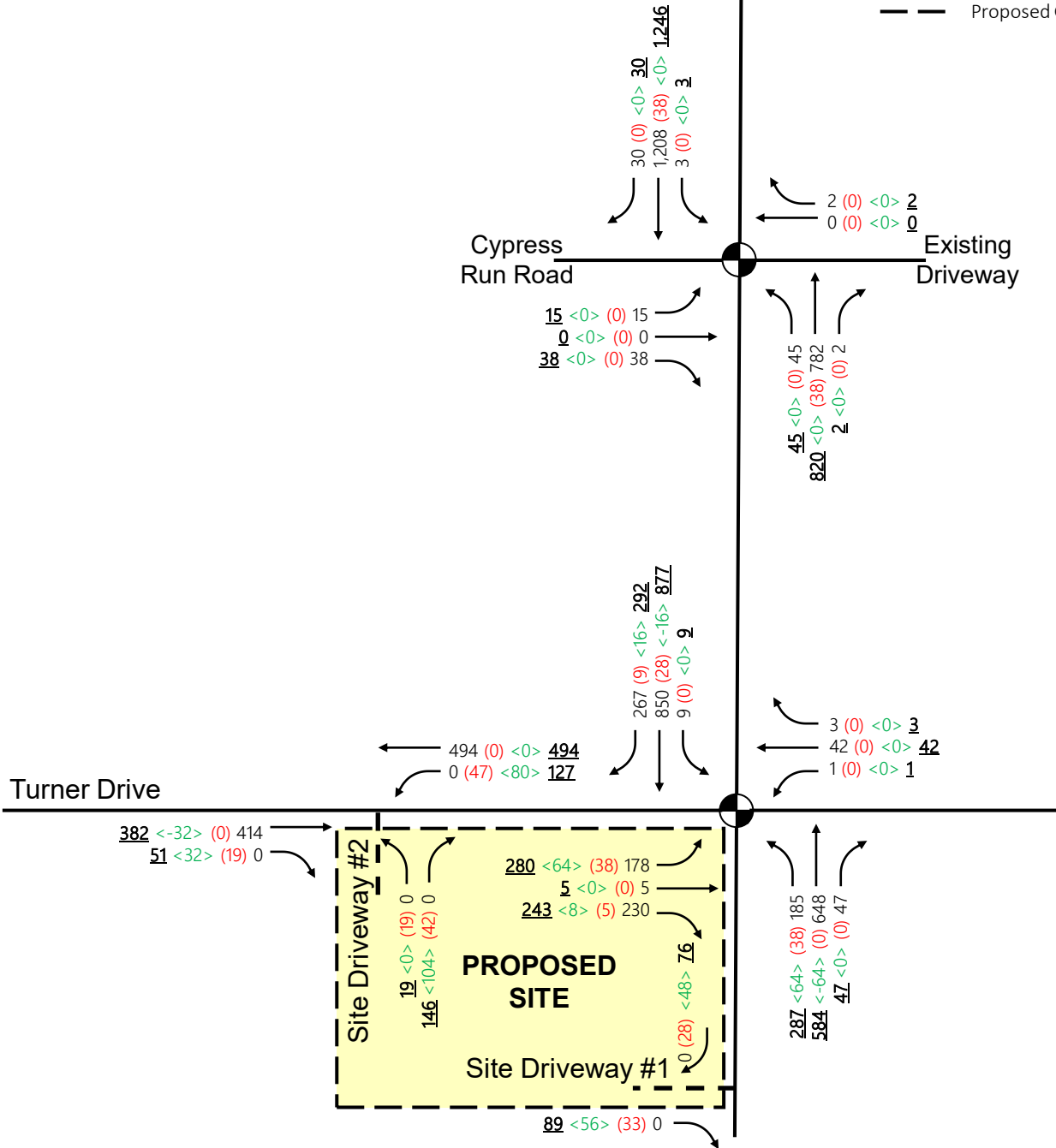
FIGURE
7

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- Signalized Intersection
- Unsignalized Intersection
- Turning Movement
- ###** Background Traffic Volume
- (###)** Site Trips
- <###>** Pass-By Trips
- ###** Total Trips
- - -** Proposed Geometry



Kimley»Horn

Wawa Development
Bennis Church Boulevard TIA

2023 AM
Peak Hour Volumes for
Scenario 4

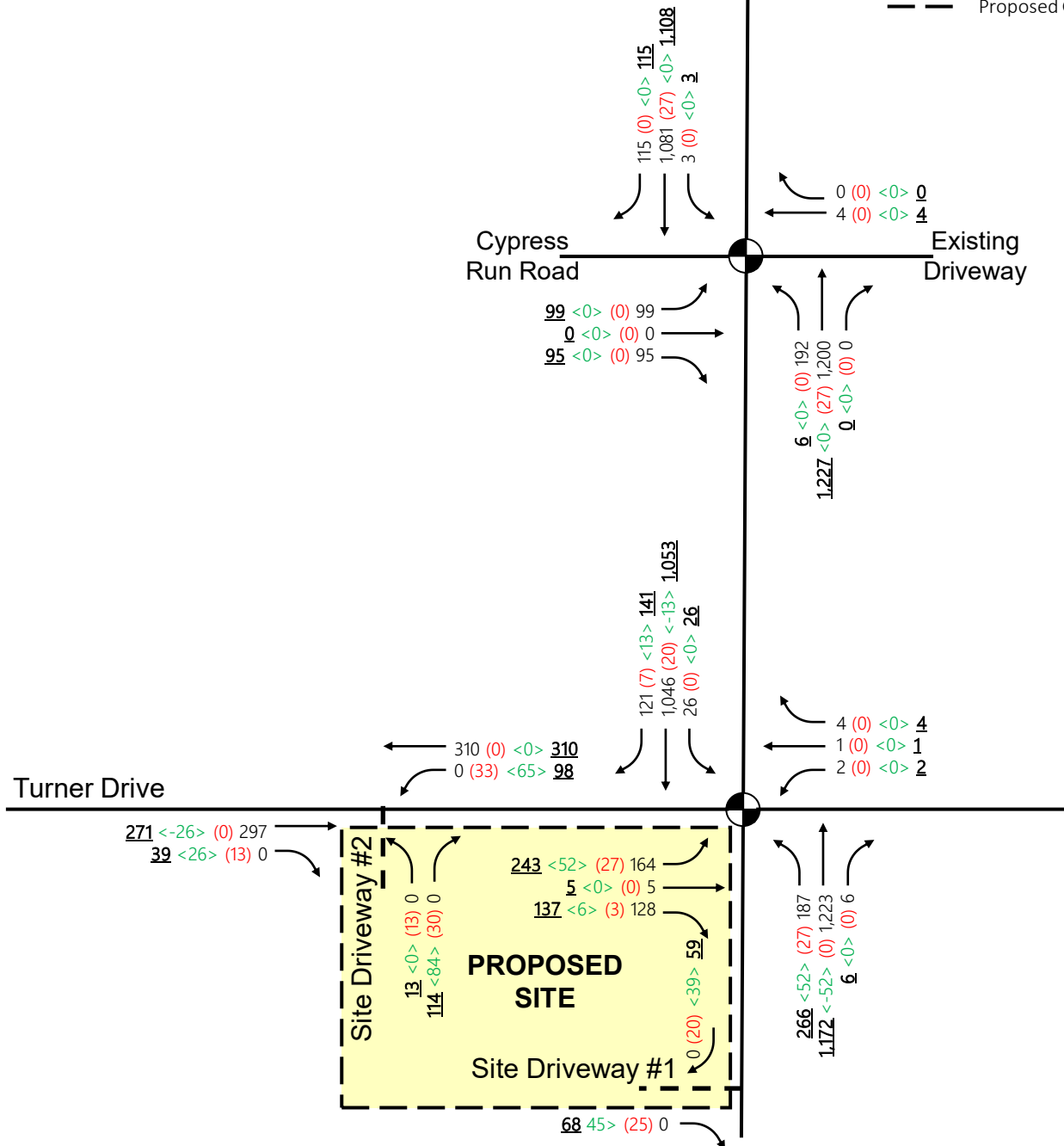
FIGURE
8

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SCALE



Legend

- Signalized Intersection
- Unsignalized Intersection
- Turning Movement
- Background Traffic Volume
- Site Trips
- Pass-By Trips
- Total Trips
- Proposed Geometry



Kimley»Horn

Wawa Development
Bennis Church Boulevard TIA

2023 PM
Peak Hour Volumes for
Scenario 4

FIGURE
9

5.0 TRAFFIC ANALYSIS

5.1 TURN LANE WARRANT

A right-turn lane warrant analysis was performed for the eastbound approach of Bennis Church Boulevard at the proposed RI/RO Site Access Driveway # 1 and for the eastbound approach of Bennis Church Boulevard at Turner Drive. A left-turn lane warrant analysis was performed for the southbound approach of Turner Drive at the proposed Site Access Driveway # 2 and for the northbound approach of Turner Drive at Bennis Church Boulevard. These were conducted to assess the need for any additional right-turn and/or left-turn treatments (i.e., new exclusive turn-lane or improvement of an existing turn-lane), due to the increase in traffic generated by the proposed development and anticipated to access the development site at these locations. This was conducted in accordance with VDOT turn-lane warrant analysis guidelines per *Appendix F Access Management Design Standards for Entrances and Intersections*. Detailed data sheets for the turn-lane warrants are provided in **Appendix C**.

A right-turn lane warrant analysis for the eastbound approach of Bennis Church Boulevard at Turner Drive was completed No Build and Build Conditions. The existing right-turn lane consists of approximately 170 feet of full width storage and a 230-foot taper. Based on AM volumes for both scenarios, a capacity analysis was warranted to determine the appropriate storage lane length and a 200-foot taper is required. The SimTraffic Queue Reports were used to complete the capacity analysis. For the AM and PM scenarios, both the No-Build and Build-out scenarios are projected to have an approximate 280-foot max queue. While 280 feet is the current approximate storage in the right-turn lane, the SimTraffic software is only projecting the max queue to fill the storage lane because the through lanes are projected to continuously block the right-turn lane traffic in all scenarios. The only scenario where the right-turn lane is modeled to actually back up past the 280 feet of storage is in the AM Build with Pedestrian Phasing where the queue is projected to extend the full length of the storage bay for approximately 1% of the peak hour. Based on these findings, the Build-out volumes are not projected to add significantly to the future queueing when compared to future No-Build peak hour queueing conditions.

A left-turn lane warrant analysis for the northbound approach of Turner Drive at Bennis Church Boulevard was completed for Scenario 4. Scenario 4 proposes the reconfiguration of the northbound approach to consist of an exclusive left-turn lane and a shared through/right-turn lane. The proposed left-turn lane will consist of approximately 200 feet of full width storage and a 100-foot taper. Per the requirements stated in the *Appendix F* guidelines, a minimum of 100 feet of storage is required for this movement.

For the eastbound approach of Bennis Church Boulevard at the proposed RI/RO Site Access Driveway # 1 it was determined that a full-width right-turn lane and taper would be required to accommodate the future development traffic under all future Build conditions. Per the requirements stated in the *Appendix F* guidelines and through conversations with VDOT while preparing this study, the proposed right-turn lane should consist of 200 feet of full width storage and a 100-foot taper.

It was determined that an exclusive left-turn lane along southbound Turner Drive would be required to accommodate the future development traffic entering the site via Site Access Driveway # 2 under all future Build scenarios. Per the requirements stated in the *Appendix F* guidelines and through conversations with VDOT while preparing this study, the proposed left-turn lane should consist of 200 feet of full width storage and a 200-foot taper.

However, based on the operational analysis findings (e.g., vehicle arrival during peak hour conditions, queuing results for the left-turn movement, etc.), efforts to avoid significant geometric modifications (e.g., horizontal curvature) to the existing shared through/left-turn lane, and concerns over the significant construction costs associated with reconstructing approximately 800 feet to 1,000 feet of Turner Drive to accommodate the proposed southbound left-turn lane, it is recommended that the left-turn lane be configured to consist of 150 feet of storage and a 100-foot taper to serve this movement. With the adjustments to the intersection and left-turn lane spacing, the queues are expected to be contained fully within the storage lane and the overall intersection is anticipated to operate at a LOS A, with no impacts to the upstream signalized intersection of Bennis Church Boulevard and Turner Drive.

5.2 INTERSECTION OPERATIONAL ANALYSIS

Capacity analyses for all study intersections were performed under weekday AM and weekday PM peak hour conditions for the following scenarios:

- 2021 Existing Conditions (Scenario 1)
- 2023 Future Year No Build (Scenario 2)
- 2023 Future Year Build (Scenario 3)
- 2023 Future Year Build with No School (Scenario 4)
- 2023 Future Year Build with pedestrian phasing (Scenario 5)

All signalized and unsignalized intersection capacity analyses were completed using *Synchro Professional (Version 11)* and *SimTraffic*, which is the microsimulation companion tool of *Synchro*. For future conditions analyses, traffic signal timings were optimized to account for increases in future traffic volumes (i.e., either due to background traffic growth or additional development related traffic) and/or changes in travel/turning movement patterns. Two (2) measures of effectiveness (MOE) were analyzed in the intersection capacity analyses – average vehicle delay (in seconds per vehicle) and maximum queue lengths (in feet, rounded up to the nearest five (5) feet). Average vehicle delays were obtained using *2000 Highway Capacity Manual (HCM)* methodologies contained within *Synchro*, while maximum queue lengths were obtained by averaging results from 10 individual *SimTraffic* simulation runs.

Accompanying HCM vehicle delays are HCM level of service (LOS) designations. LOS ranges from A to F—“A” indicating a condition of little or no congestion and “F” a condition with severe congestion, unstable traffic flow, and stop-and-go conditions. **Table 5** summarizes LOS thresholds by vehicle delay for signalized and unsignalized intersections.

Throughout this chapter, average vehicle delay, LOS, and queue length results are presented in tabular format, while software output results are included in **Appendix D**. In each queuing result table, “Effective Storage Length” distances are also included. For exclusive turn lanes, the effective storage length distances reflect actual storage lengths (i.e., full-width storage length) plus half of the taper. For continuous lanes, the effective storage lengths reflect the distance to the next upstream intersection. These distances, when compared to maximum queue length results, help in identifying potential queueing concerns at study area intersections. In each queueing summary table, queue length values were **bolded** if they are anticipated to be equal to or greater than effective storage lengths.

AM and PM Queue Lengths are shown graphically in **Figure 10** and **Figure 11** for each build condition scenario.

Lastly, queue lengths that are expected to be less than 25 feet in length (approximately 1 vehicle) have been reported as “< 25” in the queue length tables.

Table 5: 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	
F	> 80	> 50	Long Delays
	Extremely low speeds. Intersection congestion. Long delays. Extensive traffic queues at intersections.		

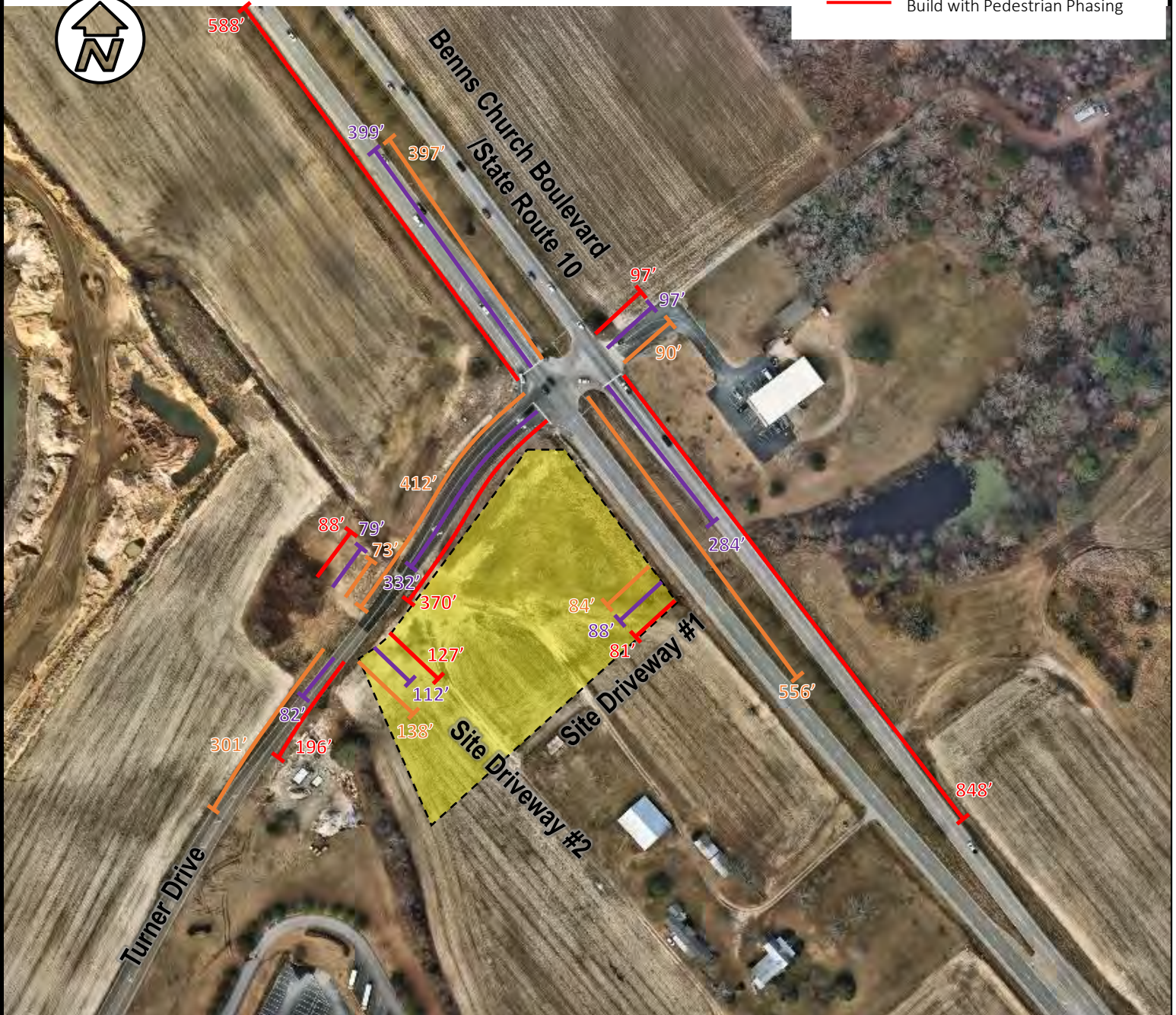
Source: *Highway Capacity Manual*, Transportation Research Board, Washington, D.C., 2010

NOT TO
SCALE



Legend

- Build
- Build with No School
- Build with Pedestrian Phasing



Kimley»Horn

Wawa Development
Bennis Church Boulevard TIA

AM Build
Queue Lengths

FIGURE
10

NOT TO
SCALE



Legend

- Build
- Build with No School
- Build with Pedestrian Phasing



5.3 BENNS CHURCH BOULEVARD AT TURNER DRIVE

Under existing conditions, this intersection currently operates with overall LOS B during the AM peak hour and LOS C during the PM peak hour. Individual movements under all existing scenarios are shown to operate at LOS D or better. Based on the model simulation, the eastbound, westbound, and northbound through queues are shown to periodically block the adjacent turn lanes during the AM and PM peak hours.

Under future 2023 No-Build conditions, this intersection is anticipated to operate at an overall LOS C in the AM and PM peak hours. Through movement queues are also projected to lengthen, resulting in more instances of access to the turn lanes being impeded during these peak periods.

With the addition of the proposed site traffic and proposed background school traffic in 2023, this intersection is anticipated to operate with overall LOS D in the AM peak hour and LOS C in the PM peak hour. Compared to No Build conditions, the potential for queues blocking adjacent turn lanes is expected to increase by approximately 10% and 12% for eastbound and northbound through movements, respectively. While compared to No Build conditions, the AM queues are projected to decrease by approximately 13% and 1% for the westbound left and westbound through/right movements, respectively.

In Scenario 4 (i.e., Build with No Elementary School traffic), with the background plus proposed Wawa development traffic only, this intersection is anticipated to operate with an overall LOS C during both the AM and PM peak hours. Compared to Scenario 2 (i.e., No Build) all LOS movements are anticipated to remain consistent with No Build, except for the southbound left/through/right movement. Compared to Scenario 3 (i.e., Build with the proposed Elementary School), the westbound through and northbound left/through queueing in the AM Peak Hour is anticipated to decrease by approximately 300 ft and 150 feet, respectively. All other movement queues associated with Scenario 4 are anticipated to remain consistent with future No Build conditions.

One of the primary concerns initially expressed by VDOT is the location of proposed Site Access Driveway #2 being within the functional area of the intersection. Queuing associated with the northbound approach of Turner Drive at Benns Church Boulevard can periodically extend as far as 250 feet (i.e., the shared through/left-turn lane) to 305 feet (i.e., the exclusive right-turn lane) to the south of the intersection. With Scenario 4, queue lengths could increase to essentially a combined length of 308 feet (i.e., due to reducing the length of the exclusive right-turn lane to introduce the southbound exclusive left-turn lane) south of the Benns Church Boulevard intersection during the AM peak hour and have the potential for one to two vehicles to queue south of Site Driveway #2.

However, queuing south of the Site Access Driveway #2 under Scenario 4 is expected to be more of a product of northbound traffic stopping to provide gaps for traffic either attempting to exit the site or southbound traffic entering the site from the proposed exclusive left-turn lane. It is noted again that the proposed location of Site Access Driveway # 2 is approximately 450 feet south of the Benns Church signalized intersection (i.e., approximately 115 feet more than the minimum spacing requirement of 335 feet for a full access intersection). Therefore, it is anticipated that queue lengths will not extend as far south as the proposed Site Access Driveway #2 on any type of regularly basis throughout the day and with the proposed southbound left-turn lane it is expected that this full access intersection along Turner Driver will function safely and efficiently under peak and off-peak traffic conditions.

In Scenario 5, with added pedestrian phasing crossing Benns Church Boulevard on the west leg and Turner Drive on the south leg, overall LOS is anticipated to decrease to a LOS D in the AM and PM peak hour. Eastbound through queues are shown to block the adjacent turn lanes approximately 13% more in the AM peak hour and 6% more in the PM peak hour than Scenario 3 with no pedestrian phasing.

Currently, this signalized intersection operates with a cycle length of 130 seconds in the PM peak hour, while the intersection of Benns Church Boulevard and Cypress Run Drive operates with a cycle length of 120 seconds in the PM peak hour. For all future scenarios (i.e., No Build and Build) the cycle length time at the intersection of Benns Church Boulevard and Cypress Run Drive was updated to 130 seconds to optimize signal timing and traffic progression between the two intersections.

Results from the capacity and queuing analyses at this signalized intersection are shown in **Table 6** and **Table 7**, respectively.

Table 6: Benns Church Boulevard at Turner Drive Intersection LOS Summary

Scenario	Traffic Control	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
Weekday AM Peak Hour										
2021 Existing	Signal	(B) 16.7	(A) 7.3	(B) 12.7	(A) 3.4	(B) 11.2	(B) 11.7	(D) 49.1	(D) 38.2	(D) 38.0
			(B) 10.4			(B) 11.6		(D) 43.0		(D) 38.0
2023 No Build	Signal	(C) 24.4	(B) 12.8	(C) 24.7	(B) 19.1	(B) 19.8	(B) 15.6	(D) 47.9	(C) 33.5	(C) 32.5
			(C) 23.0			(B) 16.8		(D) 40.0		(C) 32.5
2023 Build	Signal	(D) 37.0	(B) 19.9	(D) 35.6	(C) 28.9	(E) 55.2	(B) 17.5	(E) 71.1	(C) 31.1	(C) 29.8
			(C) 33.5			(C) 31.6		(D) 52.2		(C) 29.8
2023 Build with Pedestrian Phasing	Signal	(D) 38.6	(B) 12.1	(D) 41.8	(D) 45.7	(D) 49.7	(B) 19.1	(E) 56.6	(C) 29.4	(C) 28.1
			(D) 42.7			(C) 30.5		(D) 43.8		(C) 28.1
Weekday PM Peak Hour										
2021 Existing	Signal	(C) 20.8	(B) 10.4	(C) 21.2	(B) 14.7	(B) 12.6	(B) 15.7	(D) 53.7	(D) 43.7	(D) 43.0
			(C) 20.3			(B) 15.3		(D) 49.3		(D) 43.0
2023 No Build	Signal	(C) 20.8	(A) 9.9	(B) 15.2	(C) 26.7	(B) 17.3	(B) 18.8	(D) 50.2	(D) 40.6	(D) 39.7
			(B) 16.4			(B) 18.6		(D) 45.9		(D) 39.7
2023 Build	Signal	(C) 31.6	(B) 11.5	(C) 32.3	(C) 28.6	(D) 44.6	(C) 22.7	(D) 54.8	(D) 36.6	(D) 55.0
			(C) 31.4			(C) 27.0		(D) 48.0		(D) 55.0
2023 Build with Pedestrian Phasing	Signal	(D) 37.1	(B) 15.5	(D) 42.0	(D) 36.9	(D) 53.2	(C) 28.4	(D) 43.9	(C) 32.0	(D) 48.9
			(D) 40.8			(C) 33.2		(D) 39.4		(D) 48.9
Weekday AM Peak Hour										
2023 Build with No School	Signal	(C) 25.2	(B) 15.2	(C) 27.3	(B) 14.1	(C) 23.7	(B) 16.4	(D) 41.4	(C) 32.0	(D) 54.2
			(C) 24.0			(B) 18.6		(D) 37.0		(D) 54.2
Weekday PM Peak Hour										
2023 Build with No School	Signal	(C) 26.3	(B) 19.2	(C) 21.0	(A) 5.3	(D) 40.0	(C) 24.9	(D) 48.3	(D) 35.7	(D) 54.5
			(B) 19.2			(C) 27.7		(D) 43.8		(D) 54.5

Table 7: Bennis Church Boulevard at Turner Drive Intersection Maximum Queue Summary

Scenario	Traffic Control	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/No Build)		140	Cont.	280	130	Cont.	Cont.	305	185
Effective Storage Length (Build and Build with Ped Phasing)		140	Cont.	280	450	Cont.	Cont.	250	185
Weekday AM Peak Hour									
2021 Existing	Signal	47	239 **(8%)	73	134 *(2%)	168 **(1%)	213	109	74
2023 No Build	Signal	117	363 **(17%)	280	151 *(13%)	324 **(7%)	314	254	91
2023 Build	Signal	109	397 **(27%)	280	376	556 **(6%) ^(6%)	412 **(22%) ^(12%)	323 *(2%)	90
2023 Build with Pedestrian Phasing	Signal	103	588 **(39%)	335 *(1%)	415	848 **(25%) ^(25%)	370 **(9%) ^(3%)	250 *(1%)	97
Weekday PM Peak Hour									
2021 Existing	Signal	122	345 **(9%)	194	143 *(2%)	294 **(5%)	233	108	36
2023 No Build	Signal	100	256 **(6%)	105	153 *(9%)	418 **(9%)	256	166	29
2023 Build	Signal	139	414 **(17%)	280	335	440 **(1%) ^(1%)	320 **(2%)	237	31
2023 Build with Pedestrian Phasing	Signal	122	498 **(23%)	309	364	628 **(4%) ^(4%)	310 **(2%)	224	38
		LT	TH	RT	LT	TH/RT	LT	TH/RT	LT/TH/RT
Effective Storage Length (Build No School)		140	Cont.	280	450	Cont.	250	Cont.	185
Weekday AM Peak Hour									
2023 Build with No School	Signal	85	399 **(19%)	280	284	222	261 *(3%)	332 **(1%) ^(1%)	97
Weekday PM Peak Hour									
2023 Build with No School	Signal	104	361 **(15%)	216	310	370	238 *(1%)	217	35

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

5.4 BENNS CHURCH BOULEVARD AT CYPRESS RUN DRIVE

Under existing conditions, this intersection is operating at an overall LOS B in the AM and PM peak hours. The major through movements along Benns Church Boulevard operate at a LOS B or better during AM and PM peak hours, while the Cypress Run Drive side street movements operate at a LOS E or better. Model simulation shows queue lengths blocking the adjacent turn lane in the eastbound movement approximately 10% of the time in the PM peak hour.

Under all future peak hour scenarios, this intersection is anticipated to operate at an overall LOS B for the AM peak hour. In the PM peak hour, this intersection is anticipated to operate at an overall LOS C for the No Build scenario and LOS B for all Build scenarios. Under all scenarios, traffic along Benns Church Boulevard is anticipated to operate with movements as LOS C or better and traffic along Cypress Run Drive and the existing residential driveway are anticipated to operate at LOS E or better. With the addition of the proposed future site traffic, vehicle delays are expected to experience only minor increases (i.e., approximately 20 seconds) in the PM peak hour for all movements except the westbound through/right movement in comparison to No Build conditions. The westbound through/right movement is anticipated to decrease approximately 80 seconds or more in all PM Build scenarios and approximately 10 seconds or more in all AM Build scenarios in comparison to No Build conditions.

Based on model simulation of all future scenarios, eastbound through queues along Benns Church Boulevard are projected to block the adjacent turn lanes less than 10% of the time during the PM peak hours and less than 1% of the time during AM peak hours. Therefore, the addition of the proposed Wawa traffic is anticipated to have minimal impacts to this intersection with no additional improvements required.

Results from the capacity and queuing analyses at this signalized intersection are shown in **Table 8** and **Table 9**, respectively.

Table 8: Bennis Church Boulevard at Cypress Run Road Intersection LOS Summary

Scenario	Traffic Control	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
Weekday AM Peak Hour										
2021 Existing	Signal	(B) 11.2	(A) 5.1	(B) 10.9	(A) 6.6	(A) 9.2	(A) 9.1	(D) 53.4	(D) 51.8	(E) 58.6
			(B) 10.8			(A) 9.1		(D) 52.2		(E) 58.6
2023 No Build	Signal	(B) 11.3	(A) 5.2	(B) 11.6	(A) 6.6	(A) 9.3	(A) 8.3	(D) 53.4	(D) 51.8	(E) 58.6
			(B) 11.5			(A) 8.4		(D) 52.2		(E) 58.6
2023 Build	Signal	(B) 10.8	(A) 7.2	(B) 14.3	(A) 7.9	(A) 5.6	(A) 3.3	(D) 53.4	(D) 51.8	(E) 60.2
			(B) 14.2			(A) 3.4		(D) 52.2		(E) 60.2
2023 Build with Pedestrian Phasing	Signal	(B) 11.9	(A) 5.1	(B) 16.2	(A) 8.9	(A) 7.9	(A) 3.2	(D) 53.4	(D) 51.8	(E) 60.2
			(B) 16.0			(A) 3.5		(D) 52.2		(E) 60.2
Weekday PM Peak Hour										
2021 Existing	Signal	(B) 16.5	(A) 8.0	(B) 16.6	(B) 11.0	(B) 12.2	(B) 11.8	(E) 55.3	(D) 48.8	(E) 62.7
			(B) 16.0			(B) 11.9		(D) 52.1		(E) 62.7
2023 No Build	Signal	(C) 20.1	(A) 7.4	(B) 16.1	(B) 10.9	(C) 23.4	(B) 18.0	(E) 61.0	(D) 53.5	(E) 68.6
			(B) 15.6			(C) 18.7		(E) 57.3		(E) 68.6
2023 Build	Signal	(B) 14.4	(B) 13.2	(B) 15.9	(B) 10.6	(B) 11.2	(A) 7.2	(E) 61.0	(D) 53.5	(E) 68.6
			(B) 15.4			(A) 7.7		(E) 57.3		(E) 68.6
2023 Build with Pedestrian Phasing	Signal	(B) 13.7	(B) 13.2	(B) 15.9	(B) 10.6	(B) 15.3	(A) 4.9	(E) 61.0	(D) 53.5	(E) 68.6
			(B) 15.4			(A) 6.3		(E) 57.3		(E) 68.6
			LT	TH	RT	LT	TH/RT	LT	TH/RT	LT/TH/RT
Weekday AM Peak Hour										
2023 Build with No School	Signal	(B) 10.6	(A) 6.7	(B) 13.5	(A) 7.9	(A) 5.6	(A) 3.6	(D) 53.4	(D) 51.8	(E) 60.2
			(B) 13.4			(A) 3.7		(D) 52.2		(E) 60.2
Weekday PM Peak Hour										
2023 Build with No School	Signal	(B) 17.0	(A) 7.4	(C) 24.8	(B) 16.3	(B) 14.2	(A) 4.0	(E) 61.0	(D) 53.5	(E) 68.6
			(C) 23.9			(A) 5.4		(E) 57.3		(E) 68.6

Table 9: Bennis Church Boulevard at Cypress Run Road Intersection Maximum Queue Summary

Scenario	Traffic Control	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/No Build)		150	Cont.	245	255	Cont.	Cont.	180	Cont.
Effective Storage Length (Build)		150	Cont.	245	255	Cont.	Cont.	180	Cont.
Weekday AM Peak Hour									
2021 Existing	Signal	13	105	17	63	75	43	39	27
2023 No Build	Signal	20	201	41	91	113	82	68	48
2023 Build	Signal	22	190	36	86	85	58	73	31
2023 Build with Pedestrian Phasing	Signal	19	225 **(1%)	29	88	102	86	72	49
Weekday PM Peak Hour									
2021 Existing	Signal	32	317 **(6%)	82	184	243	160	114	27
2023 No Build	Signal	48	301 **(8%)	128	201	276	192	132	39
2023 Build	Signal	35	294 **(6%)	114	203	206	171	144	30
2023 Build with Pedestrian Phasing	Signal	48	321 **(7%)	134	219	188	173	128	32
Weekday AM Peak Hour									
2023 Build with No School	Signal	22	147	30	99	80	79	64	38
Weekday PM Peak Hour									
2023 Build with No School	Signal	26	318 **(10%)	154	210	195	149	116	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

5.5 BENNS CHURCH BOULEVARD AT PROPOSED SITE DRIVEWAY # 1

Under all peak hour scenarios, this intersection is anticipated to operate at an overall LOS A. Based on the model simulation, the northbound right-turn movement out of the proposed development is expected to experience queues of approximately 75 ft – 85 ft in both the AM and PM peak hours. Therefore, the addition of the proposed Wawa development traffic is anticipated to have minimal impacts to this intersection with no additional improvements required.

Results from the capacity and queuing analyses at this unsignalized intersection are shown in **Table 10** and **Table 11** respectively.

Table 10: Benns Church Boulevard at Proposed Site Driveway #1 Intersection LOS Summary

Scenario	Traffic Control	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)			
			Eastbound		Westbound	Northbound
			TH	RT	TH	RT
Weekday AM Peak Hour						
2021 Existing	Unsignalized					
2023 No Build	Unsignalized					
2023 Build	Unsignalized	(A) 0.4	(A) 0.0	(A) 0.0	(A) 0.0	(A) 9.9
			(A) 0.0		(A) 0.0	(A) 9.9
2023 Build with No School	Unsignalized	(A) 0.4	(A) 0.0	(A) 0.0	(A) 0.0	(A) 9.8
			(A) 0.0		(A) 0.0	(A) 9.8
2023 Build with Pedestrian Phasing	Unsignalized	(A) 0.4	(A) 0.0	(A) 0.0	(A) 0.0	(B) 10.0
			(A) 0.0		(A) 0.0	(B) 10.0
Weekday PM Peak Hour						
2021 Existing	Unsignalized					
2023 No Build	Unsignalized					
2023 Build	Unsignalized	(A) 0.3	(A) 0.0	(A) 0.0	(A) 0.0	(B) 10.2
			(A) 0.0		(A) 0.0	(B) 10.2
2023 Build with No School	Unsignalized	(A) 0.3	(A) 0.0	(A) 0.0	(A) 0.0	(A) 10.0
			(A) 0.0		(A) 0.0	(A) 10.0
2023 Build with Pedestrian Phasing	Unsignalized	(A) 0.3	(A) 0.0	(A) 0.0	(A) 0.0	(B) 10.3
			(A) 0.0		(A) 0.0	(B) 10.3

Table 11: Benns Church Boulevard at Proposed Site Driveway #1 Intersection Maximum Queue Summary

Scenario	Traffic Control	Maximum Queue Length by Movement (feet)			
		Eastbound		Westbound	Northbound
		TH	RT	TH	RT
Effective Storage Length (Existing/No Build)		Cont.	N/A	Cont.	150
Effective Storage Length (Build)		Cont.	250	Cont.	150
Weekday AM Peak Hour					
2021 Existing	Unsignalized				
2023 No Build	Unsignalized				
2023 Build	Unsignalized	0	0	0	84
2023 Build with No School	Unsignalized	0	0	0	88
2023 Build with Pedestrian Phasing	Unsignalized	0	0	0	81
Weekday PM Peak Hour					
2021 Existing	Unsignalized				
2023 No Build	Unsignalized				
2023 Build	Unsignalized	0	0	0	83
2023 Build with No School	Unsignalized	0	0	27	68
2023 Build with Pedestrian Phasing	Unsignalized	0	0	0	84

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

5.6 TURNER DRIVE AT PROPOSED SITE DRIVEWAY # 2

Under all peak hour scenarios, this intersection is anticipated to operate at an overall LOS A. The westbound movement out of the proposed development is expected to experience a LOS D or better in the AM peak hour and LOS B in the PM peak hour. Based on the Build model simulation, the northbound through/left-turn right movement on Turner Drive is expected to experience queues of approximately 300 ft in AM peak hour and 40 ft in the PM peak hour. When compared to the Build scenario with No Elementary School volumes, the anticipated queues drop down to approximately 30 ft in the AM and 15 ft in the PM. Therefore, the addition of the proposed Wawa traffic is anticipated to have minimal impacts to this intersection with no additional improvements required beyond those proposed/recommended.

Results from the capacity and queuing analyses at this unsignalized intersection are shown in **Table 12** and **Table 13**, respectively.

Table 12: Turner Drive at Proposed Site Driveway #2 Intersection LOS Summary

Scenario	Traffic Control	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)			
			Westbound	Northbound	Southbound	
			LT/RT	TH/RT	LT	TH
Weekday AM Peak Hour						
2021 Existing	Unsignalized					
2023 No Build	Unsignalized					
2023 Build	Unsignalized	(A) 3.7	(D) 27.3	(A) 0.0	(A) 9.3	(A) 0.0
			(D) 27.3	(A) 0.0	(A) 1.5	
2023 Build with No School	Unsignalized	(A) 3.2	(C) 16.8	(A) 0.0	(A) 8.7	(A) 0.0
			(C) 16.8	(A) 0.0	(A) 1.8	
2023 Build with Pedestrian Phasing	Unsignalized	(A) 3.7	(D) 27.5	(A) 0.0	(A) 9.3	(A) 0.0
			(D) 27.5	(A) 0.0	(A) 1.5	
Weekday PM Peak Hour						
2021 Existing	Unsignalized					
2023 No Build	Unsignalized					
2023 Build	Unsignalized	(A) 2.6	(B) 12.7	(A) 0.0	(A) 8.3	(A) 0.0
			(B) 12.7	(A) 0.0	(A) 1.8	
2023 Build with No School	Unsignalized	(A) 2.8	(B) 12.0	(A) 0.0	(A) 8.1	(A) 0.0
			(B) 12.0	(A) 0.0	(A) 2.0	
2023 Build with Pedestrian Phasing	Unsignalized	(A) 2.6	(B) 12.7	(A) 0.0	(A) 8.3	(A) 0.0
			(B) 12.7	(A) 0.0	(A) 1.8	

Table 13: Turner Drive at Proposed Site Driveway #2 Intersection Maximum Queue Summary

Scenario	Traffic Control	Maximum Queue Length by Movement (feet)			
		Westbound	Northbound	Southbound	
		LT/RT	TH/RT	LT	TH
Effective Storage Length (Existing/No Build)		N/A	Cont.	Cont.	
Effective Storage Length (Build)		150	Cont.	200	Cont.
Weekday AM Peak Hour					
2021 Existing	Unsignalized				
2023 No Build	Unsignalized				
2023 Build	Unsignalized	138	301	73	0
2023 Build with No School	Unsignalized	112	82	79	0
2023 Build with Pedestrian Phasing	Unsignalized	127	196	88	0
Weekday PM Peak Hour					
2021 Existing	Unsignalized				
2023 No Build	Unsignalized				
2023 Build	Unsignalized	94	38	69	0
2023 Build with No School	Unsignalized	87	14	60	0
2023 Build with Pedestrian Phasing	Unsignalized	93	24	85	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

6.0 CONCLUSIONS AND RECOMMENDATIONS

This traffic impact analysis examined the potential impacts associated with the proposed Wawa Convenience Market and Fuel Sales in Isle of Wight County, Virginia. The proposed Wawa will consist of a 6,049-square foot (sf) convenience market with 16 fueling positions. The proposed development site is bounded by Benns Church Boulevard (State Route 10) to the north, Turner Drive (State Route 644) to the west, Smithfield High School and Smithfield Middle School to the south, and residential/agricultural properties to the east/southeast.

Based on the results of the traffic analysis, the future impacts associated with the proposed development are anticipated to be minimal overall, with some deterioration in operations anticipated at the signalized intersection of Benns Church Boulevard at Turner Drive. This study reviewed potential improvements for this signalized intersection by modifying the existing timings, phasing, and splits as well as by modifying the existing laneage along Turner Drive and at the intersection of Benns Church Boulevard and Turner Drive to better accommodate the additional traffic generated by the proposed development.

Based on the findings of this analysis and input provided by VDOT, it is recommended that the westbound left-turn lane along Benns Church Boulevard at the intersection of Benns Church Boulevard and Turner Drive be improved to consist of 350 feet of storage and a 200-foot taper. It is also recommended that a left-turn lane be added along southbound Turner Drive to serve traffic accessing the proposed Wawa Development via Site Access Driveway # 2 and to mitigate potential left-turn queuing from impacting through movement traffic operations.

Traffic signal timing plans (i.e., cycle lengths, splits, offsets, and coordination for the AM and PM peak periods) should also be updated to account for this change in traffic volume demand and general intersection operations. Traffic signal coordination along Benns Church Boulevard should consist of both the Turner Drive and Cypress Run Drive intersections to facility traffic progression.

To accommodate the projected traffic volumes accessing the development directly from eastbound Benns Church Boulevard, an exclusive right-turn lane will be constructed at the proposed right-in/right-out (RIRO) Only Site Access Driveway (i.e., Site Access Driveway # 1). Based on the requirements of the VDOT Road Design Manual: *Appendix F – Access Management Design Standards for Entrances and Intersections* and through conversation with VDOT, it is recommended that the right-turn lane should consist of a minimum 200 feet of full width storage and a 100-foot taper.

As documented in the TIA, Scenario 4 was included to focus specifically on the potential impacts associated with just the proposed Wawa development as a part of the CUP application. It was initially identified that a proposed site access driveway along Turner Drive would like within the functional area of the Benns Church Boulevard/Turner Drive signalized intersection. In an effort to mitigate this concern and in collaboration with VDOT and the County, the proposed Site Access Driveway # 2 has been located approximately 450 feet south of the Benns Church signalized intersection (i.e., approximately 115 feet more than the minimum spacing requirement of 335 feet for a full access intersection). The location of Site Driveway # 2 is also complemented with the installation of a proposed exclusive left-turn lane to serve southbound traffic attempting to accessing the site and to ensure through traffic flow is not impeded. Therefore, it is anticipated that queue lengths will not extend as far south as the proposed Site Access Driveway #2 on any type of regularly basis throughout the day and with the proposed southbound left-turn lane it is expected that this full access intersection along Turner Driver will function safely and efficiently under peak and off-peak traffic conditions.

The recommended off-site roadway/intersection improvements are summarized below:

Bennis Church Boulevard

- o VDOT should continue to monitor and optimize traffic signal phasing and timing plans to accommodate peak hour/off-peak traffic volumes along Bennis Church Boulevard
 - Coordinated signal timing optimization for the Turner Drive and Cypress Run intersections should occur following construction and approximately 90-days of operation and occupancy of the Wawa Convenience Market to account for the changes in traffic volumes/travel patterns
 - Signal coordination improvements should facilitate the progression of traffic along Bennis Church Boulevard from Cypress Run Drive to Turner Drive

Bennis Church Boulevard at Turner Drive

Bennis Church Boulevard Westbound Approach

- o Lengthen the westbound left-turn lane on Bennis Church Boulevard to consist of 350 feet of storage and a 200-foot taper

Turner Drive Northbound Approach

- o Reconfigure the existing shared through/left-turn lane to an exclusive left-turn lane consisting of 200 feet of storage and a 100-foot taper
- o Extend, modify, and reconfigure the existing exclusive right-turn lane serve as a shared through/right-turn lane
- o Construct/install the necessary traffic signal infrastructure (e.g., signal heads, signage, wiring, etc.) improvements to serve the new lane use designations/movements associated with the northbound Turner Drive approach to the intersection

Bennis Church Boulevard at Cypress Run Drive

- o VDOT should optimize existing signal timing plans (both AM and PM) and implement cycle lengths that are consistent with cycle lengths at the Turner Drive intersection to enhance traffic operations at the Cypress Run Drive intersection as well as better facilitate traffic progression along Bennis Church Boulevard

Bennis Church Boulevard at Proposed Wawa Site Driveway # 1

- o Site access will function as Right-In/Right-Out (RIRO) Only
- o Construct one exclusive right-turn lane, along eastbound Bennis Church Boulevard consisting of 200 feet of storage and a 100-foot taper.
- o The proposed Wawa site driveway will consist of one inbound lane and one outbound lane
- o Install/provide STOP control for outbound movements (i.e., approach to Bennis Church Boulevard)

Turner Drive at Proposed Wawa Site Driveway # 2

- o Site access will function as Full Access/Full Movement
- o Install supplemental signage and pavement markings to consist of the following:
 - o “DO NOT BLOCK INTERSECTION” signage
 - o Intersection pavement markings delineating the area not to block (i.e., the box)
 - o Supplement with signage reflecting a potential fine for those observed/caught impeding intersection operations

- o Widen Turner Drive to the south of the proposed Wawa Site Driveway # 2 for a distance of approximately 300 feet to provide the roadway transition necessary to support the introduction of the proposed southbound exclusive left-turn lane serving the Wawa development site.
 - o Widening will extend from the Wawa Site Driveway # 2 intersection to a tie-in point with the existing three-lane section/transition portion of Turner Drive associated with the southbound left-turn lane serving the Smithfield High School site access driveway.

****It is noted that the existing right-of-way (ROW) along this segment of Turner Drive is approximately 40-feet in width. Therefore, the proposed widening of Turner Drive is intended to be implemented within the existing ROW and match the existing cross section.***

Proposed Wawa Site Driveway # 2 Westbound Approach

- o Site driveway will consist of one inbound lane and one outbound lane
- o Install/provide STOP control for outbound (driveway) approach

Turner Drive Southbound Approach

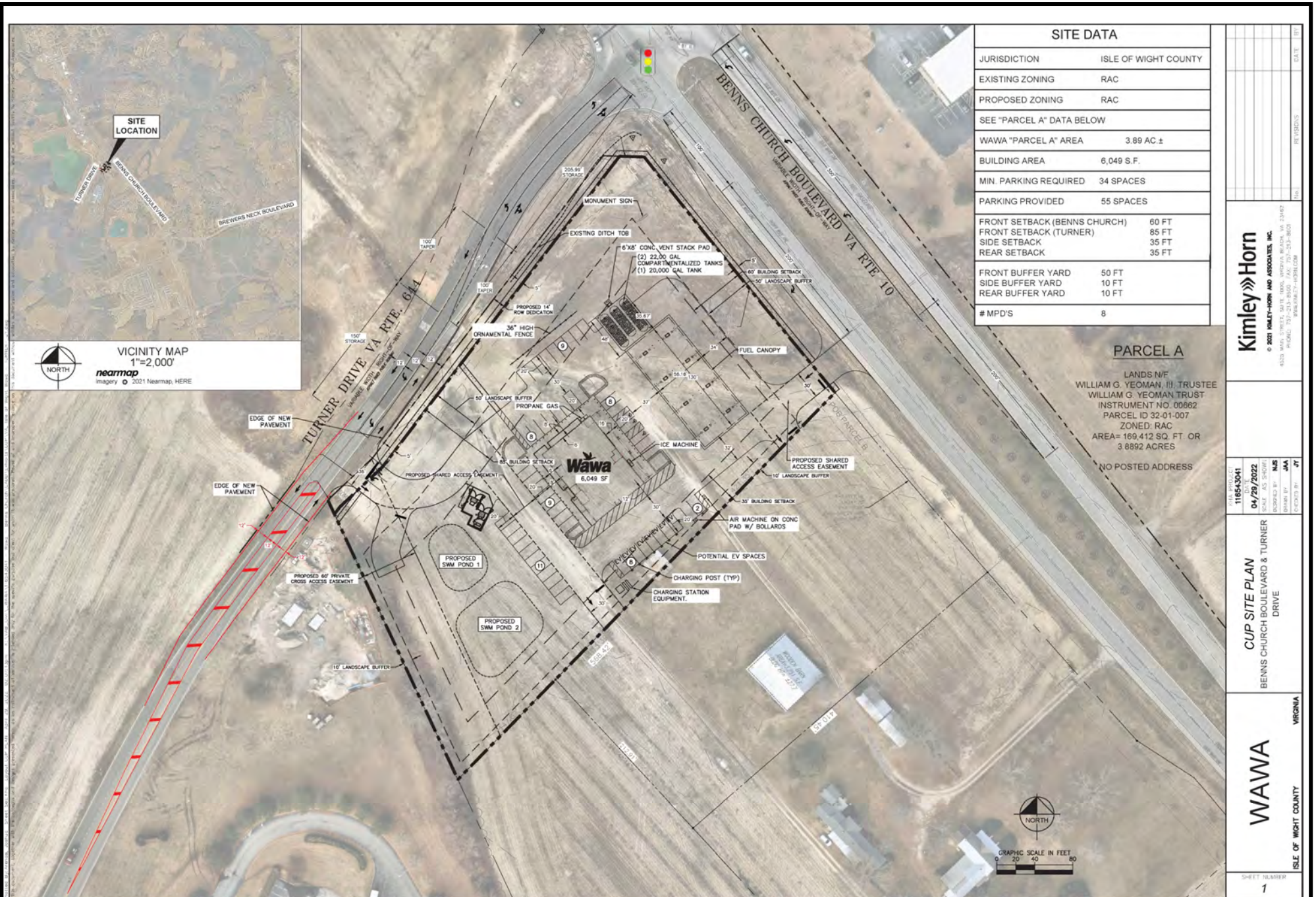
- o Construct/delineate one exclusive left-turn lane consisting of 150 feet of storage and a 100-foot taper

Turner Drive Northbound Approach

- o Construct a new travel lane along the east side of Turner Drive to account for/accommodate the proposed southbound left-turn lane

Figure 12 reflects the physical location and geometric configuration of the proposed off-site improvements.

Beyond the above-mentioned improvements, no other off-site geometric or traffic control improvements are recommended as part of the proposed Wawa Convenience Market development.



Appendix A

TIA Assumptions Document

The following documentation outlines the traffic impact analysis (TIA) assumptions for the proposed Wawa Convenience Market with Fuel development located in Isle of Wight County, Virginia. The development consists of a 6,049 square foot (SF) convenience market with 16 fueling positions. (See **Attachment A**). The proposed Wawa Convenience Market with Fuel site is located in the southwest quadrant of the Benns Church Boulevard (U.S. Route 258/State Route 10) at Turner Drive (State Route 644) intersection.

Study Area

The study area for the TIA and the associated proposed development site consists of the following existing intersections:

- Benns Church Boulevard (U.S. Route 258/State Route 10) at Turner Drive (State Route 644) (*Signalized*)
- Benns Church Boulevard at Cypress Run Drive (*Signalized*)

The following proposed site driveways are also included in the study area as shown in **Attachment B**.

- Benns Church Boulevard at Site Driveway # 1:
 - *Right-In/Right-Out (RI/RO) only*
- Turner Drive at Site Driveway # 2 (*Full Movement*)

Data Collection

Kimley-Horn requests that Isle of Wight County and/or VDOT provide any recent intersection or roadway traffic count data from studies previously completed within the study area. Turning movement count (TMC) data will also be collected during the AM peak hour (6:30 AM – 8:30 AM) and the PM peak hour (3:30 PM – 6:30 PM). Kimley-Horn's subconsultant, The Data Collection Group, will collect existing TMC data during weekday (Tuesday, Wednesday, or Thursday) operations at the following two (2) intersections:

- Benns Church Boulevard at Turner Drive (*Signalized*)
- Benns Church Boulevard at Cypress Run Dr (*Signalized*)

Current traffic signal timing and phasing data will be provided by VDOT for all signalized intersections in the study area.

The peak hours for this intersection were determined by looking at the school hours of both Smithfield Middle and Smithfield High School combined with the historic traffic volume data from 2016 and 2017 collected by VDOT and/or Kimley-Horn. With this information the AM peak hour was determined to occur from 7:00 AM to 8:00 AM and the PM peak hour occurs from 4:45 PM to 5:45 PM.

Analysis Years

The proposed development is anticipated to be completed in 2023. Therefore, the following analysis scenarios for the AM and PM peak hours will be studied as part of this TIA.

- **Scenario 1** – Existing (2021) traffic conditions
- **Scenario 2** – Future Year (2023) No-Build conditions – Opening year traffic conditions with a future growth rate applied to approved base year traffic volumes plus background development trips (i.e., approved historical growth rate plus approved adjacent development traffic if applicable) but without traffic volumes generated by the proposed Wawa Convenience Market with Fuel development
 - Background traffic will also assume a New 600 Pupil Elementary School located along Turner Drive adjacent to Smithfield Middle School and Smithfield High School

- **Scenario 3** – Future Year (2023) Build-out conditions – Opening year traffic conditions with a future growth rate applied to approved base year traffic volumes plus background development trips (i.e., approved historical growth rate plus approved adjacent development traffic if applicable), with traffic volumes generated by the proposed Wawa Convenience Market with Fuel development.
 - o Background traffic will include the proposed new 600 pupil Elementary School located along Turner Drive adjacent to Smithfield Middle School and Smithfield High School
- **Scenario 4** – Future Year (2023) Build-out No Elementary School conditions – Opening year traffic conditions with a future growth rate applied to approved base year traffic volumes plus background development trips (i.e., approved historical growth rate plus approved adjacent development traffic if applicable), with traffic volumes generated by the proposed Wawa Convenience Market with Fuel development.
 - o Same as Scenario 3, however it does not include traffic volume estimates for a proposed New 600 Pupil Elementary School to the south of Smithfield High School along Turner Drive
 - o Unlike Scenario 3 and 5, the northbound approach of Turner Drive at Bennis Church Boulevard will consist of an exclusive left-turn lane and a shared through/right-turn lane
- **Scenario 5** – Future Year (2023) Build-out conditions – Opening year traffic conditions with a future growth rate applied to approved base year traffic volumes plus background development trips (i.e., approved historical growth rate plus approved adjacent development traffic if applicable), with traffic volumes generated by the proposed Wawa Convenience Market with Fuel development.
 - o Same as Scenario 3 and will include a dedicated pedestrian phase at the signalized intersection of Bennis Church Boulevard and Turner Drive

Volume Development

It is proposed that a growth rate of 1.0% per year (applied exponentially) be used for adjusting the projected background traffic volumes, to opening year 2023 for all turning movements. This growth rate was determined by reviewing the County average growth rate from VDOT as well as input from Isle of Wight County. In addition, other known developments approved for construction (i.e., if applicable) will be included as part of the future background traffic volumes. Kimley-Horn will coordinate with Isle of Wight County staff to identify any approved developments and/or obtain the associated traffic studies with relevant data that should be included in the development of future background volumes.

The known planned development for background traffic volumes is a new 600 Pupil Elementary School located along Turner Drive.

Table 1 reflects historical traffic volume trends of adjacent roadways within the study area over five (5) years (i.e., 2015 to 2019) The overall growth of traffic from 2015 to 2019 on Bennis Church Boulevard within the study area (i.e., from southern corporate limits of the Town of Smithfield to Brewers Neck Boulevard) is around 0.1%.

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Table 1: Study Area Roadway Historic AAWDT

VDOT Historical Daily Traffic Volumes AAWDT						
Location	2015	2016	2017	2018	2019	Average Annual Growth
Southern Corporate Limits of the Town of Smithfield to Brewers Neck Boulevard	27,000	28,000	26,000	26,000	27,000	0.102%
<i>Average Annual Growth Rate</i>						0.10%
<i>Proposed Annual Growth Rate</i>						1.0%

Proposed Land Use

A conceptual site layout of the Wawa Convenience Market with Fuel development is included with these assumptions in **Attachment A**. Kimley-Horn will use *ITE Trip Generation 10th Edition* (2017) Trip Generation Rates and Land Uses for the proposed Wawa Convenience Market with Fuel development. Trip generation estimates were developed and compared based on the number of fueling stations, convenience market square footage, and calculating the average using the volumes associated with fueling stations and square footage.

It is proposed that the average of the trip generation rates based on the two independent variables (i.e., square footage and fueling positions) be used to evaluate the potential impacts to traffic operations as a result of the proposed development. Trip generation calculations for the proposed Wawa Convenience Market with Fuel development are shown in **Table 2**.

This space intentionally left blank.

Table 2: Proposed Trip Generation for the Proposed Development

ITE Code	ITE Description	Density	Unit	Daily	AM Peak Hour			PM Peak Hour		
					Total	In	Out	Total	In	Out
Trip Generation Based on Fueling Stations										
960	Super Convenience Market/Gas Station	16	Fueling Stations	3,688	449	225	224	367	184	183
*Convenience Market w/ Gasoline Pumps Pass-By (63% AM, 66% PM)				0	-283	-142	-141	-242	-121	-121
New Site Trips				3,688	166	83	83	125	63	63
Trip Generation Based on Square Footage										
960	Super Convenience Market/Gas Station	6,049	Square Feet	5,067	566	283	283	419	210	209
*Convenience Market w/ Gasoline Pumps Pass-By (63% AM, 66% PM)				0	-357	-178	-178	-277	-139	-138
New Site Trips				5,067	209	105	105	142	71	71
Average Convenience with Fuel Trip Generation										
960	Super Convenience Market/Gas Station	Average		4,378	508	254	254	393	197	196
*Convenience Market w/ Gasoline Pumps Pass-By (63% AM, 66% PM)				0	-320	-160	-160	-259	-130	-129
Net New Site Trips				4,378	188	94	94	134	67	67
Proposed Development Driveway Trips				4,378	508	254	254	393	197	249
Planned Elementary School Trip Generation										
520	Elementary School	600	Students	1,134	402	217	185	102	49	53
Net New Site Trips				1,134	402	217	185	102	49	53
TOTAL New Trips				5,512	590	311	279	236	116	120

Source: ITE Trip Generation Manual, 10th Edition, (2017)*Pass-by percentages using Code 853 in ITE Trip Generation Handbook, 3rd Edition (2017)

Site Access and Turn-Lane Warrant Analyses

As shown in the attached conceptual site layout (**Attachment A**), access to/from the proposed Wawa Convenience Market with Fuel development will occur at the following locations:

- Bennis Church Boulevard at Site Driveway # 1:
 - Right-In/Right-Out (RI/RO) only
- Turner Drive at Site Driveway # 2 (Full Movement)

A left-turn lane warrant analysis will be conducted at the proposed Wawa site entrance intersection along Turner Drive as well as a right-turn lane warrant analysis at the proposed Wawa site entrance intersection along Bennis Church Boulevard as required by VDOT. Turn-lane warrant analyses will be conducted using methodologies consistent with *Appendix F of the VDOT Road Design Manual*.

An Access Management Exception (AM-E) will be completed and recorded as an Appendix in the report.

Site Trip Distributions

Site trip distributions were preliminarily determined from available traffic data, anticipated routes for vehicles entering and exiting the proposed development site, and a general familiarity of the study area. At the regional level it is anticipated that the majority of traffic will be traveling to/from Bennis Church Boulevard

located northeast of the project site. Proposed regional trip distributions determined for the Wawa Convenience Market with Fuel development are listed below.

- To/from the west on Turner Drive – **20%**
- To/from the north on Benns Church Boulevard – **40%**
- To/from the south on Benns Church Boulevard – **40%**

Detailed site driveway trip distributions are provided in **Attachment C**.

Traffic Operations Analysis

Operational analyses for the study area intersections will be conducted using traffic analysis tools (e.g., *Synchro 10.1 Professional*, SimTraffic 10.1) and Highway Capacity Manual (HCM) methodologies. The future conditions analyses will confirm the need and define the geometric configurations necessary for the proposed roadway and intersection operational or capacity improvements (e.g., signal timing adjustments, exclusive turn-lane storage and taper, etc.).

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.

Reporting

A TIA report with an accompanying technical appendix (including all analysis files) will be prepared that summarizes the analysis methodology and results. There will be two (2) electronic submittals of the technical report – DRAFT and FINAL (including supporting analytical files). One round of comprehensive comments will be addressed with each report submittal through conference call. This study assumes that all deliverables will be electronic submittals (PDF report and all supporting analytical files).

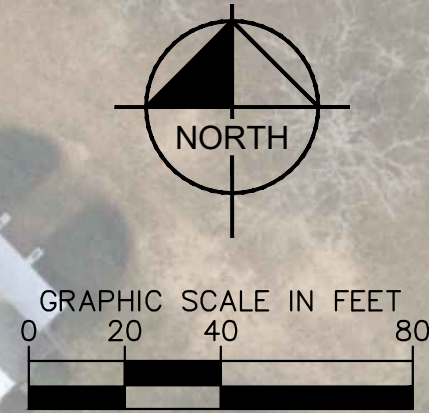
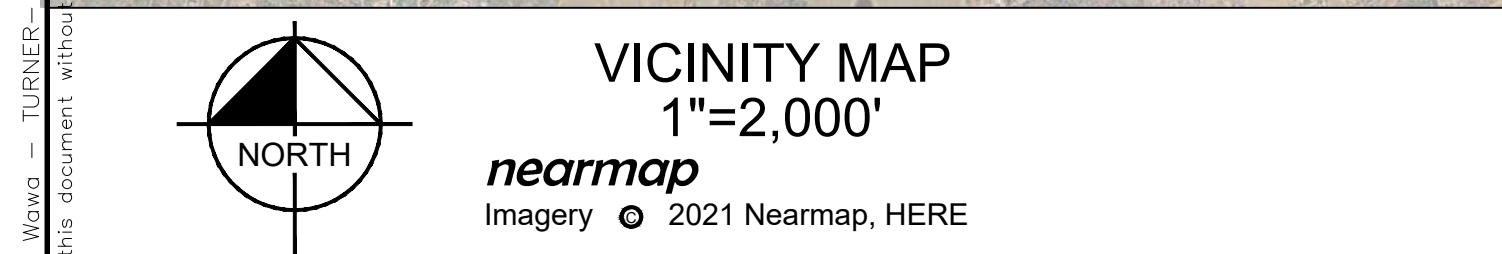
Attachments

Attachment A – Conceptual Site Layout

Attachment B – Study Area

Attachment C – Proposed Regional and Site Driveway Trip Distribution Percentages

Attachment A – Conceptual Site Layout



SITE DATA		
JURISDICTION	ISLE OF WIGHT COUNTY	
EXISTING ZONING	RAC	
PROPOSED ZONING	RAC	
SEE "PARCEL A" DATA BELOW		
WAWA "PARCEL A" AREA	3.89 AC.±	
BUILDING AREA	6,049 S.F.	
MIN. PARKING REQUIRED	34 SPACES	
PARKING PROVIDED	55 SPACES	
FRONT SETBACK (BENNS CHURCH)	60 FT	
FRONT SETBACK (TURNER)	85 FT	
SIDE SETBACK	35 FT	
REAR SETBACK	35 FT	
FRONT BUFFER YARD	50 FT	
SIDE BUFFER YARD	10 FT	
REAR BUFFER YARD	10 FT	
# MPD'S	8	

PARCEL A

LANDS N/F
WILLIAM G. YEOMAN, III, TRUSTEE
WILLIAM G. YEOMAN TRUST
INSTRUMENT NO. 00662
PARCEL ID 32-01-007
ZONED: RAC
AREA= 169,412 SQ. FT. OR
3.8892 ACRES

NO POSTED ADDRESS

[illegible]

Kimley»»Horn

© 2021 KIMLEY-HORN AND ASSOCIATES, INC.
4525 MAIN STREET, SUITE 1000, VIRGINIA BEACH, VA 23462
PHONE: 757-213-8600 FAX: 757-213-8601
WWW.KIMLEY-HORN.COM

KHA PROJECT	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
116543041	04/29/2022	NJS	JAA	JY
	SCALE AS SHOWN			

CUP SITE PLAN
BENNS CHURCH BOULEVARD & TURNER DRIVE

WAWA

ISLE OF WIGHT COUNTY

SHEET NUMBER

1

Attachment B – Project Study Area



Kimley»Horn

Wawa Development
Bennis Church Boulevard TIA

Project Study Area

ATTACHMENT
B

Attachment C – Proposed Regional and Site Driveway Trip Distribution Percentages

NOT TO
SCALE



Legend



Signalized Intersection



Unsignalized Intersection



Turning Movements



Site Distributions

##

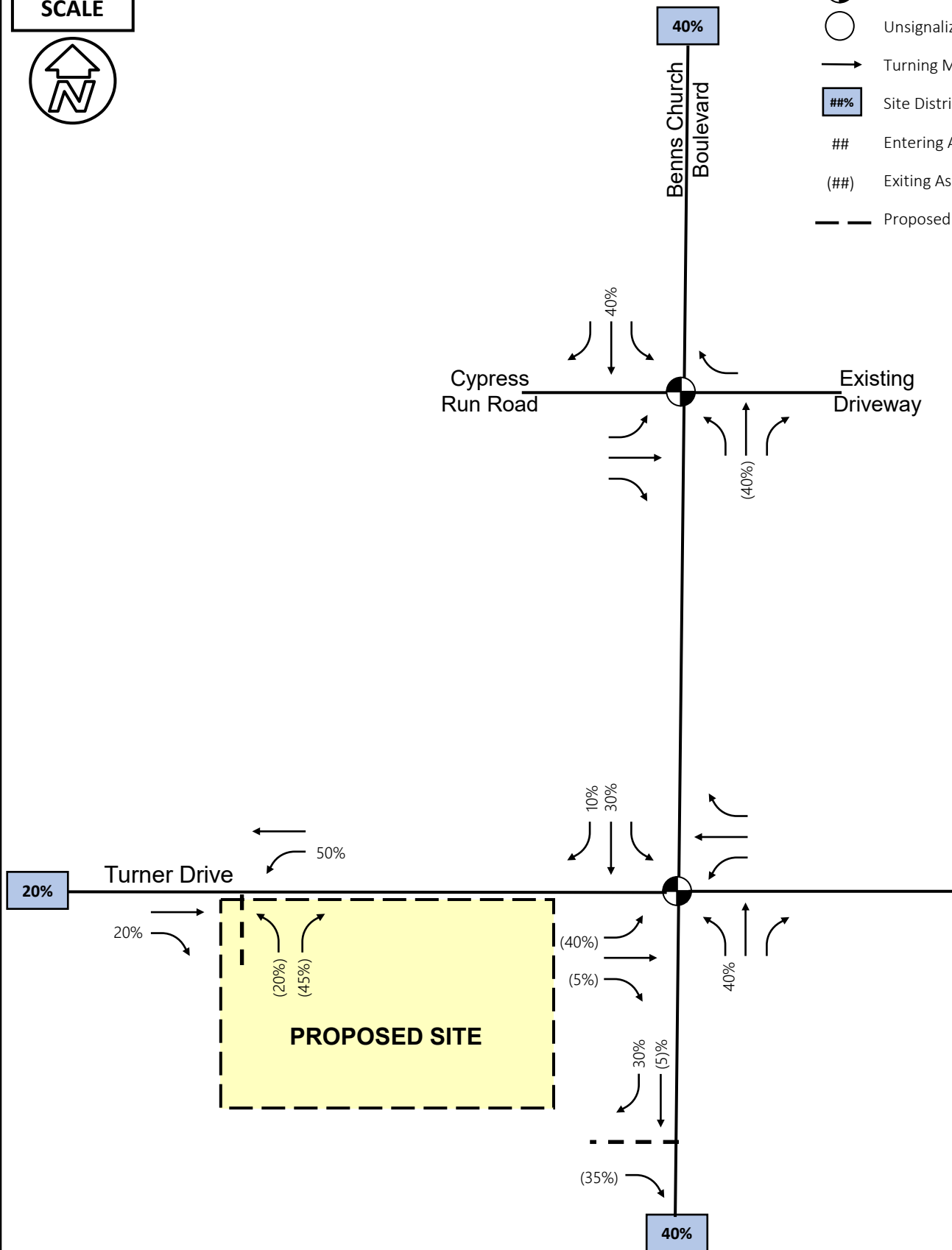
Entering Assignment/Distribution

(##)

Exiting Assignment/Distribution



Proposed Geometry



Kimley»Horn

Wawa Development
Bennis Church Boulevard TIA

Proposed
Trip Distributions

ATTACHMENT
C

Appendix B

Data Collection

Data Collection Group

757.478.6761

LSmith@DataCollectionGroup.net

File Name : Benns Church and Turner

Site Code :

Start Date : 8/11/2021

Page No : 1

Groups Printed- Passenger Veh - Trucks

	Benns Church From North				Driveway From East				Benns Church From South				Turner From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
06:30 AM	5	197	2	204	0	0	0	0	1	147	4	152	17	0	5	22	378
06:45 AM	10	185	1	196	0	0	0	0	1	141	9	151	23	0	7	30	377
Total	15	382	3	400	0	0	0	0	2	288	13	303	40	0	12	52	755
07:00 AM	5	159	0	164	0	0	1	1	0	101	10	111	31	0	16	47	323
07:15 AM	1	194	3	198	0	0	0	0	0	150	4	154	29	0	3	32	384
07:30 AM	9	197	1	207	0	0	1	1	0	143	12	155	24	0	9	33	396
07:45 AM	12	158	2	172	2	0	0	2	1	173	25	199	17	0	12	29	402
Total	27	708	6	741	2	0	2	4	1	567	51	619	101	0	40	141	1505
08:00 AM	12	154	3	169	0	0	0	0	0	137	20	157	16	0	10	26	352
08:15 AM	12	151	2	165	1	0	0	1	1	156	21	178	19	0	11	30	374
Total	24	305	5	334	1	0	0	1	1	293	41	335	35	0	21	56	726
03:30 PM	20	167	10	197	1	0	0	1	0	246	20	266	13	0	7	20	484
03:45 PM	21	209	3	233	0	0	1	1	1	258	36	295	20	0	16	36	565
Total	41	376	13	430	1	0	1	2	1	504	56	561	33	0	23	56	1049
04:00 PM	11	178	3	192	1	0	1	2	1	275	47	323	25	0	16	41	558
04:15 PM	22	238	9	269	1	0	1	2	0	264	53	317	23	0	18	41	629
04:30 PM	32	224	8	264	1	0	1	2	2	218	45	265	24	0	22	46	577
04:45 PM	37	225	4	266	1	0	0	1	1	280	50	331	30	0	28	58	656
Total	102	865	24	991	4	0	3	7	4	1037	195	1236	102	0	84	186	2420
05:00 PM	23	243	3	269	1	1	0	2	3	253	28	284	43	0	22	65	620
05:15 PM	24	205	5	234	1	0	1	2	1	268	38	307	22	0	14	36	579
05:30 PM	25	192	10	227	1	0	1	2	0	273	44	317	20	0	14	34	580
05:45 PM	21	180	6	207	0	0	0	0	0	254	29	283	16	0	14	30	520
Total	93	820	24	937	3	1	2	6	4	1048	139	1191	101	0	64	165	2299
06:00 PM	33	168	6	207	0	0	0	0	0	142	14	156	9	0	14	23	386
06:15 PM	23	120	2	145	0	0	0	0	0	231	25	256	20	0	12	32	433
Grand Total	358	3744	83	4185	11	1	8	20	13	4110	534	4657	441	0	270	711	9573
Apprch %	8.6	89.5	2		55	5	40		0.3	88.3	11.5		62	0	38		
Total %	3.7	39.1	0.9	43.7	0.1	0	0.1	0.2	0.1	42.9	5.6	48.6	4.6	0	2.8	7.4	
Passenger Veh	356	3620	83	4059	11	1	8	20	13	3983	527	4523	435	0	265	700	9302
% Passenger Veh	99.4	96.7	100	97	100	100	100	100	100	96.9	98.7	97.1	98.6	0	98.1	98.5	97.2
Trucks	2	124	0	126	0	0	0	0	0	127	7	134	6	0	5	11	271
% Trucks	0.6	3.3	0	3	0	0	0	0	0	3.1	1.3	2.9	1.4	0	1.9	1.5	2.8

Data Collection Group

757.478.6761

LSmith@DataCollectionGroup.net

File Name : Benns Church and Turner

Site Code :

Start Date : 8/11/2021

Page No : 3

	Benns Church From North				Driveway From East				Benns Church From South				Turner From West				
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 12:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	1	194	3	198	0	0	0	0	0	150	4	154	29	0	3	32	384
07:30 AM	9	197	1	207	0	0	1	1	0	143	12	155	24	0	9	33	396
07:45 AM	12	158	2	172	2	0	0	2	1	173	25	199	17	0	12	29	402
08:00 AM	12	154	3	169	0	0	0	0	0	137	20	157	16	0	10	26	352
Total Volume	34	703	9	746	2	0	1	3	1	603	61	665	86	0	34	120	1534
% App. Total	4.6	94.2	1.2		66.7	0	33.3		0.2	90.7	9.2		71.7	0	28.3		
PHF	.708	.892	.750	.901	.250	.000	.250	.375	.250	.871	.610	.835	.741	.000	.708	.909	.954
Passenger Veh	34	662	9	705	2	0	1	3	1	574	57	632	86	0	33	119	1459
% Passenger Veh	100	94.2	100	94.5	100	0	100	100	100	95.2	93.4	95.0	100	0	97.1	99.2	95.1
Trucks	0	41	0	41	0	0	0	0	0	29	4	33	0	0	1	1	75
% Trucks	0	5.8	0	5.5	0	0	0	0	0	4.8	6.6	5.0	0	0	2.9	0.8	4.9

Data Collection Group

757.478.6761

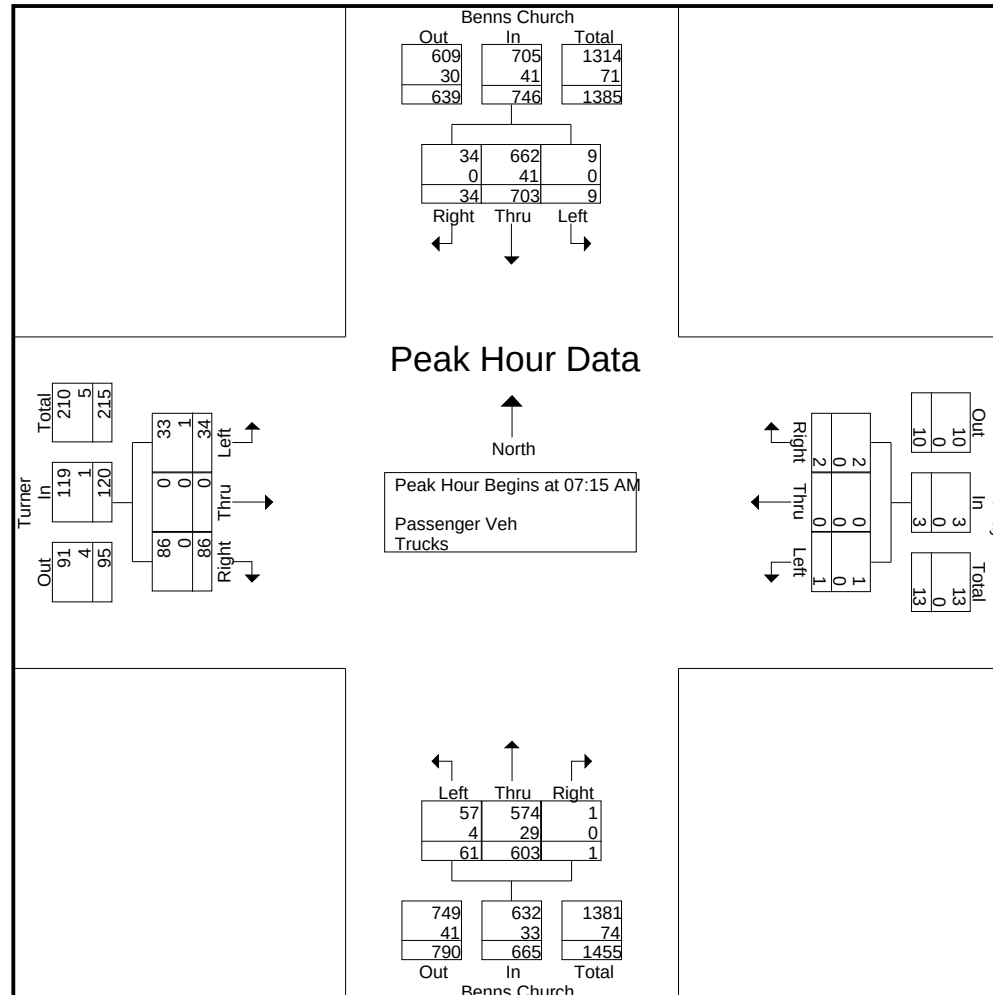
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File Name : Benns Church and Turner

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File Name : Benns Church and Turner

Site Code :

Start Date : 8/11/2021

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	Benns Church From North				Driveway From East				Benns Church From South				Turner From West				
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 12:45 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	22	238	9	269	1	0	1	2	0	264	53	317	23	0	18	41	629
04:30 PM	32	224	8	264	1	0	1	2	2	218	45	265	24	0	22	46	577
04:45 PM	37	225	4	266	1	0	0	1	1	280	50	331	30	0	28	58	656
05:00 PM	23	243	3	269	1	1	0	2	3	253	28	284	43	0	22	65	620
Total Volume	114	930	24	1068	4	1	2	7	6	1015	176	1197	120	0	90	210	2482
% App. Total	10.7	87.1	2.2		57.1	14.3	28.6		0.5	84.8	14.7		57.1	0	42.9		
PHF	.770	.957	.667	.993	1.000	.250	.500	.875	.500	.906	.830	.904	.698	.000	.804	.808	.946
Passenger Veh	114	907	24	1045	4	1	2	7	6	993	175	1174	116	0	89	205	2431
% Passenger Veh	100	97.5	100	97.8	100	100	100	100	100	97.8	99.4	98.1	96.7	0	98.9	97.6	97.9
Trucks	0	23	0	23	0	0	0	0	0	22	1	23	4	0	1	5	51
% Trucks	0	2.5	0	2.2	0	0	0	0	0	2.2	0.6	1.9	3.3	0	1.1	2.4	2.1

Data Collection Group

757.478.6761

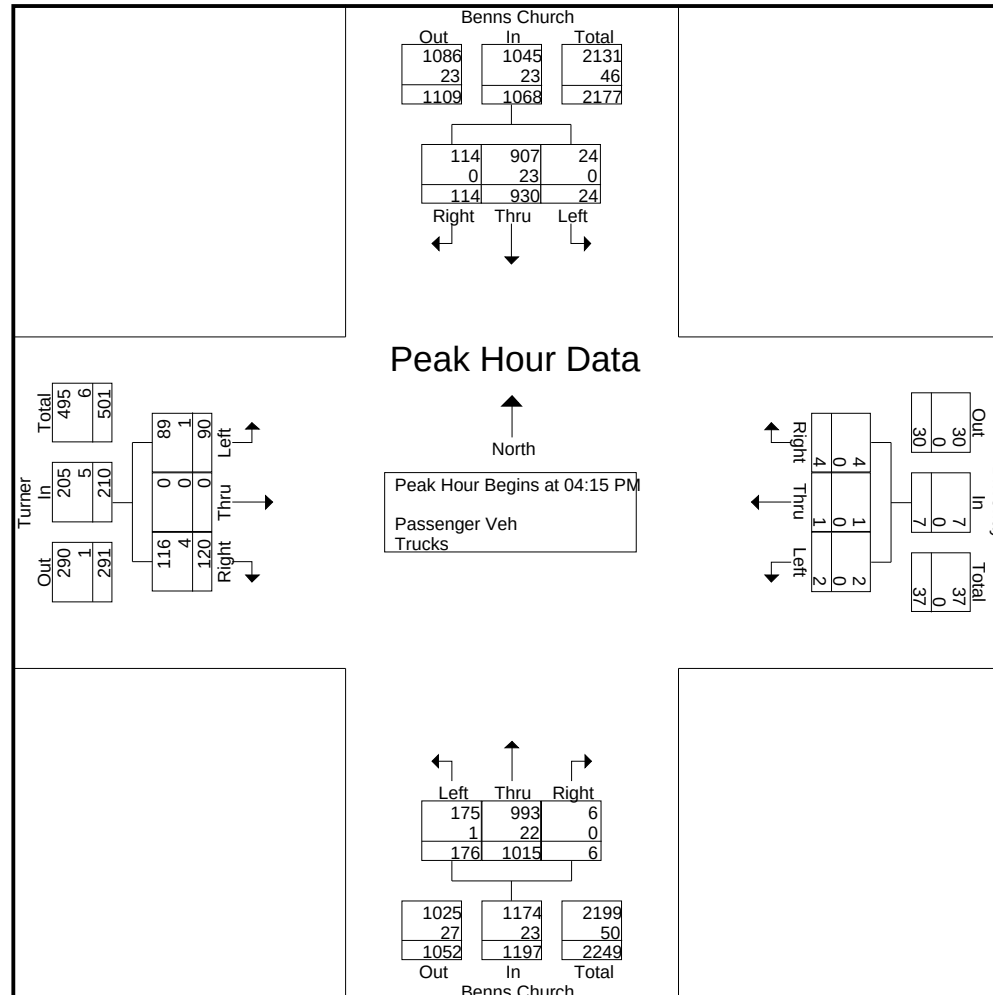
LSmith@DataCollectionGroup.net

File Name : Bennis Church and Turner

Site Code :

Start Date : 8/11/2021

Page No : 6



Data Collection Group

757.478.6761

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File Name : Benns Church and Cypress Run

Site Code :

Start Date : 8/11/2021

Page No : 1

Groups Printed- Passenger Veh - Trucks

	Benns Church From North				Driveway From East				Benns Church From South				Cypress Run From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
06:30 AM	4	208	0	212	0	0	0	0	0	148	4	152	1	0	1	2	366
06:45 AM	2	197	0	199	0	0	0	0	0	135	7	142	1	0	1	2	343
Total	6	405	0	411	0	0	0	0	0	283	11	294	2	0	2	4	709
07:00 AM	6	159	0	165	0	0	0	0	0	102	10	112	2	0	1	3	280
07:15 AM	4	186	0	190	0	0	0	0	0	155	11	166	4	0	4	8	364
07:30 AM	7	216	2	225	0	0	1	1	0	138	7	145	1	0	5	6	377
07:45 AM	5	165	1	171	0	0	0	0	0	188	10	198	4	0	2	6	375
Total	22	726	3	751	0	0	1	1	0	583	38	621	11	0	12	23	1396
08:00 AM	10	169	0	179	0	0	1	1	2	135	7	144	3	0	3	6	330
08:15 AM	4	171	0	175	2	0	0	2	0	161	14	175	4	0	3	7	359
Total	14	340	0	354	2	0	1	3	2	296	21	319	7	0	6	13	689
03:30 PM	22	178	0	200	1	0	0	1	0	218	33	251	20	1	20	41	493
03:45 PM	27	216	0	243	0	0	1	1	0	232	55	287	14	0	14	28	559
Total	49	394	0	443	1	0	1	2	0	450	88	538	34	1	34	69	1052
04:00 PM	24	176	1	201	0	0	0	0	0	244	34	278	13	0	29	42	521
04:15 PM	31	238	0	269	0	1	0	1	0	254	33	287	19	0	23	42	599
04:30 PM	12	248	0	260	0	0	0	0	0	228	34	262	17	0	15	32	554
04:45 PM	32	241	1	274	0	1	0	1	0	250	42	292	14	0	21	35	602
Total	99	903	2	1004	0	2	0	2	0	976	143	1119	63	0	88	151	2276
05:00 PM	31	249	1	281	0	0	0	0	0	260	29	289	18	0	15	33	603
05:15 PM	25	210	3	238	0	0	0	0	0	246	30	276	22	0	22	44	558
05:30 PM	32	203	0	235	0	0	0	0	0	249	27	276	16	0	15	31	542
05:45 PM	25	180	0	205	0	0	0	0	0	268	32	300	21	0	24	45	550
Total	113	842	4	959	0	0	0	0	0	1023	118	1141	77	0	76	153	2253
06:00 PM	20	169	2	191	0	0	0	0	0	157	17	174	19	0	23	42	407
06:15 PM	24	137	0	161	0	0	0	0	0	196	27	223	10	0	25	35	419
Grand Total	347	3916	11	4274	3	2	3	8	2	3964	463	4429	223	1	266	490	9201
Apprch %	8.1	91.6	0.3		37.5	25	37.5		0	89.5	10.5		45.5	0.2	54.3		
Total %	3.8	42.6	0.1	46.5	0	0	0	0.1	0	43.1	5	48.1	2.4	0	2.9	5.3	
Passenger Veh	339	3826	11	4176	3	2	2	7	2	3863	448	4313	223	1	260	484	8980
% Passenger Veh	97.7	97.7	100	97.7	100	100	66.7	87.5	100	97.5	96.8	97.4	100	100	97.7	98.8	97.6
Trucks	8	90	0	98	0	0	1	1	0	101	15	116	0	0	6	6	221
% Trucks	2.3	2.3	0	2.3	0	0	33.3	12.5	0	2.5	3.2	2.6	0	0	2.3	1.2	2.4

Data Collection Group

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File Name : Bennis Church and Cypress Run

Site Code :

Start Date : 8/11/2021

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	Bennis Church From North				Driveway From East				Bennis Church From South				Cypress Run From West				
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 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	4	186	0	190	0	0	0	0	0	155	11	166	4	0	4	8	364
07:30 AM	7	216	2	225	0	0	1	1	0	138	7	145	1	0	5	6	377
07:45 AM	5	165	1	171	0	0	0	0	0	188	10	198	4	0	2	6	375
08:00 AM	10	169	0	179	0	0	1	1	2	135	7	144	3	0	3	6	330
Total Volume	26	736	3	765	0	0	2	2	2	616	35	653	12	0	14	26	1446
% App. Total	3.4	96.2	0.4		0	0	100		0.3	94.3	5.4		46.2	0	53.8		
PHF	.650	.852	.375	.850	.000	.000	.500	.500	.250	.819	.795	.824	.750	.000	.700	.813	.959
Passenger Veh	24	709	3	736	0	0	1	1	2	588	33	623	12	0	11	23	1383
% Passenger Veh	92.3	96.3	100	96.2	0	0	50.0	50.0	100	95.5	94.3	95.4	100	0	78.6	88.5	95.6
Trucks	2	27	0	29	0	0	1	1	0	28	2	30	0	0	3	3	63
% Trucks	7.7	3.7	0	3.8	0	0	50.0	50.0	0	4.5	5.7	4.6	0	0	21.4	11.5	4.4

Data Collection Group

757.478.6761

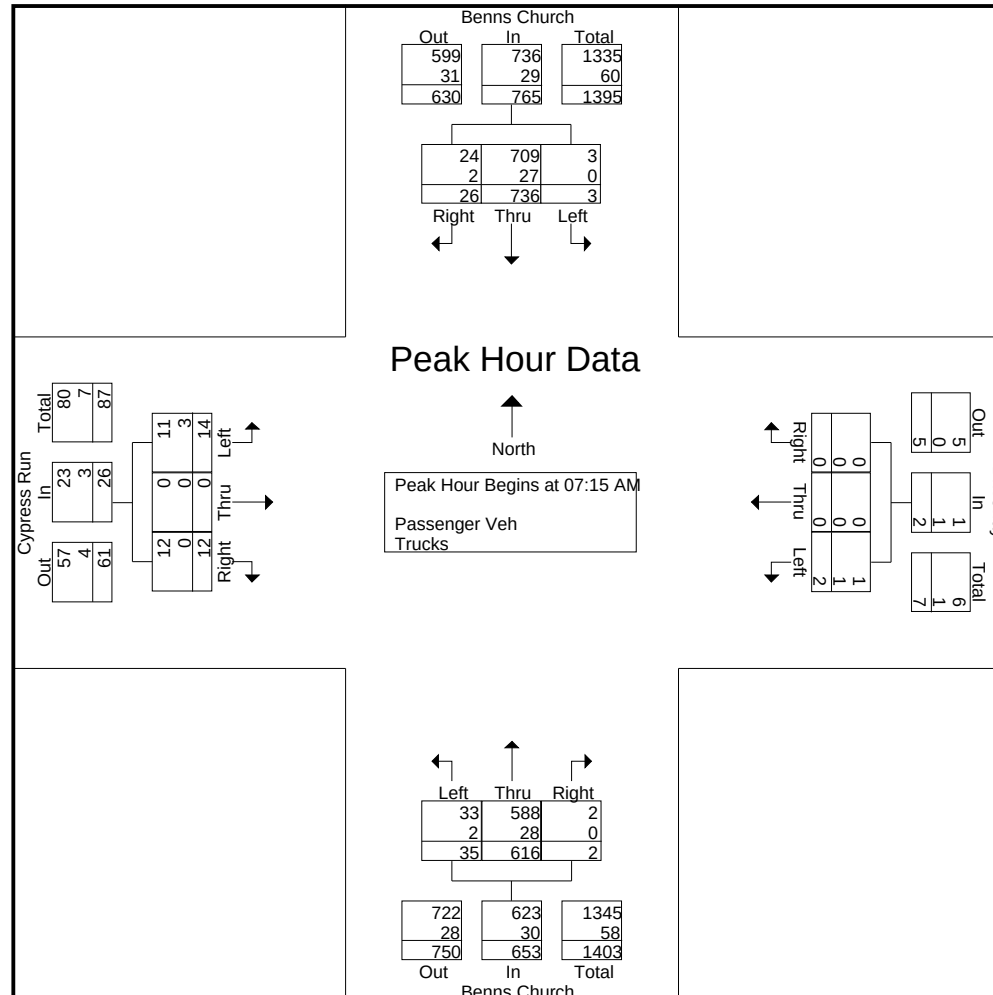
LSmith@DataCollectionGroup.net

File Name : Benns Church and Cypress Run

Site Code :

Start Date : 8/11/2021

Page No : 4



Data Collection Group

757.478.6761

LSmith@DataCollectionGroup.net

File Name : Benns Church and Cypress Run

Site Code :

Start Date : 8/11/2021

Page No : 5

	Benns Church From North				Driveway From East				Benns Church From South				Cypress Run From West				
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 12:00 PM to 06:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	31	238	0	269	0	1	0	1	0	254	33	287	19	0	23	42	599
04:30 PM	12	248	0	260	0	0	0	0	0	228	34	262	17	0	15	32	554
04:45 PM	32	241	1	274	0	1	0	1	0	250	42	292	14	0	21	35	602
05:00 PM	31	249	1	281	0	0	0	0	0	260	29	289	18	0	15	33	603
Total Volume	106	976	2	1084	0	2	0	2	0	992	138	1130	68	0	74	142	2358
% App. Total	9.8	90	0.2		0	100	0		0	87.8	12.2		47.9	0	52.1		
PHF	.828	.980	.500	.964	.000	.500	.000	.500	.000	.954	.821	.967	.895	.000	.804	.845	.978
Passenger Veh	105	956	2	1063	0	2	0	2	0	969	138	1107	68	0	74	142	2314
% Passenger Veh	99.1	98.0	100	98.1	0	100	0	100	0	97.7	100	98.0	100	0	100	100	98.1
Trucks	1	20	0	21	0	0	0	0	0	23	0	23	0	0	0	0	44
% Trucks	0.9	2.0	0	1.9	0	0	0	0	0	2.3	0	2.0	0	0	0	0	1.9

Data Collection Group

757.478.6761

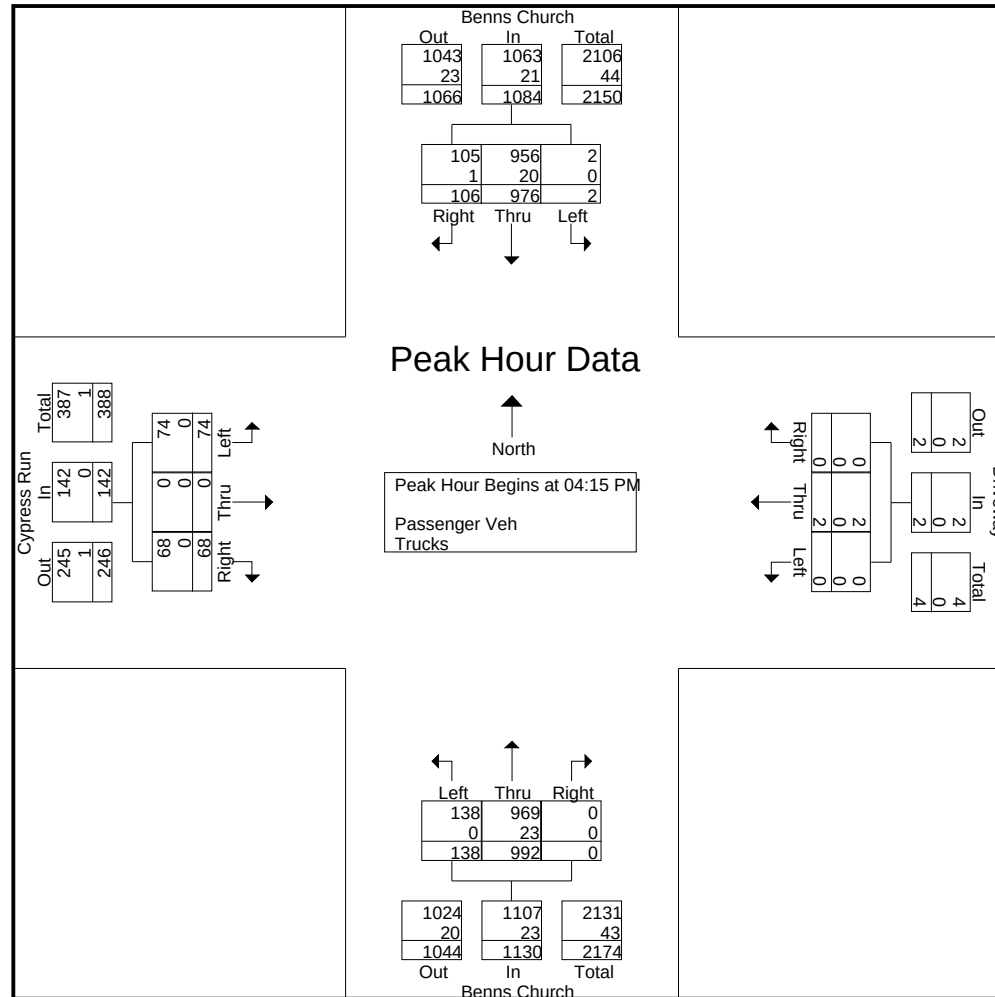
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File Name : Bennis Church and Cypress Run

Site Code :

Start Date : 8/11/2021

Page No : 6



Appendix C

Wawa Development Trip Generation

Based on Fueling Stations

ITE Code	ITE Descriptions	Density	Unit	Daily	AM Peak Hour			PM Peak Hour		
					Total	Enter	Exit	Total	Enter	Exit
960	Super Convenience Market/Gas Station	16	Fueling Positions	3,688	449	225	224	367	184	183
Pass-By				0	(283)	(142)	(141)	(242)	(121)	(121)
New Site Trips				3,688	166	83	83	125	63	62
Pass-by %				0%	63%	63%	63%	66%	66%	66%

Based on Square Footage

ITE Code	ITE Descriptions	Density	Unit	Daily	AM Peak Hour			PM Peak Hour		
					Total	Enter	Exit	Total	Enter	Exit
960	Super Convenience Market/Gas Station	6049	Sq Ft	5,067	566	283	283	419	210	209
Pass-By				0	(357)	(178)	(178)	(277)	(139)	(138)
New Site Trips				5,067	209	105	105	142	71	71
Pass-by %				0%	63%	63%	63%	66%	66%	66%

Average/Blended

				AM Peak Hour				PM Peak Hour		
ITE Code		ITE Descriptions		Daily	Total	Enter	Exit	Total	Enter	Exit
960	Super Convenience Market/Gas Station	Average		4,378	508	254	254	393	197	196
520	Elementary School	600	Students	1,134	402	217	185	102	49	53
Gas Station Pass-By				0	(320)	(160)	(160)	(259)	(130)	(129)
New Site Trips				5,512	590	311	279	236	116	120
Pass-by %				0%	63%	63%	63%	66%	66%	66%

Appendix D

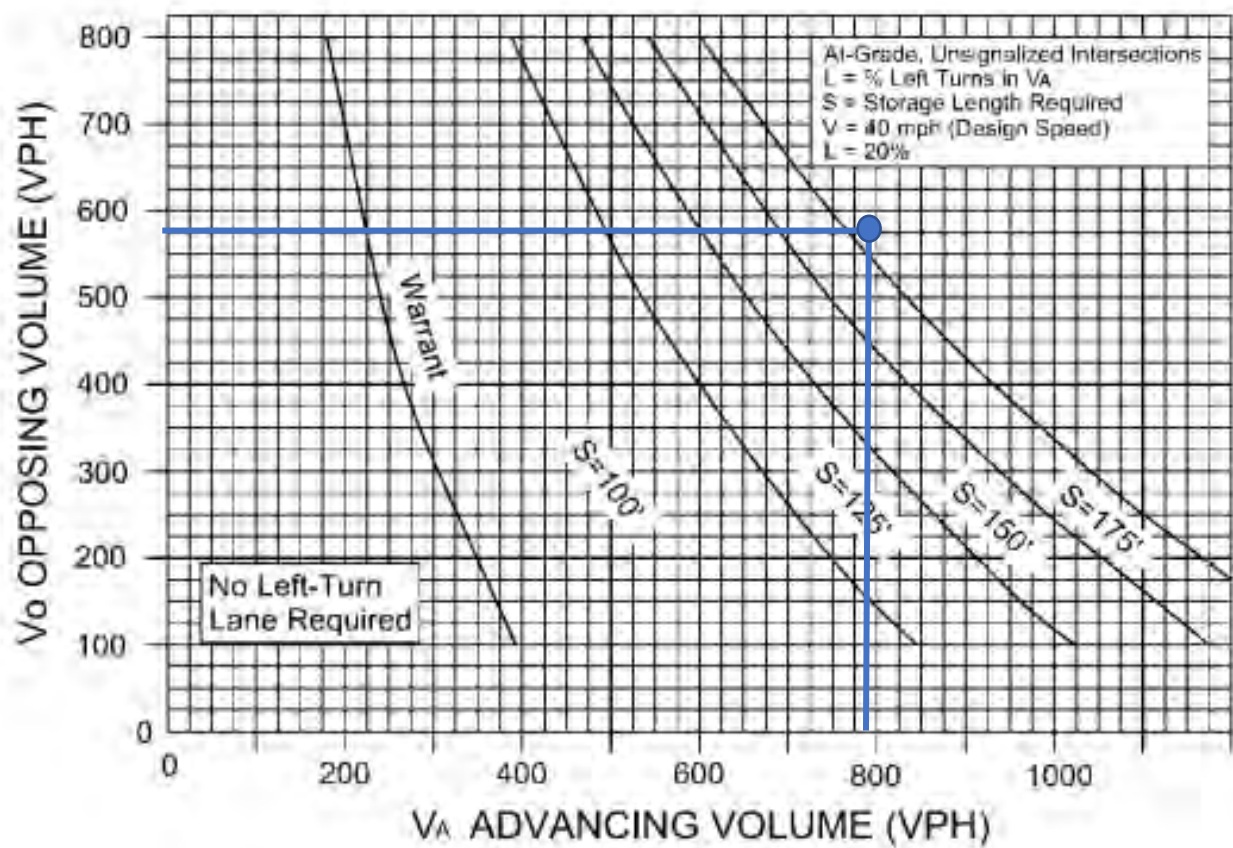
Turn-Lane Warrant Data Sheets

Left-Turn Lane Warrant Analysis for Site Driveway Access off Turner Drive for Build Scenarios 3 and 5

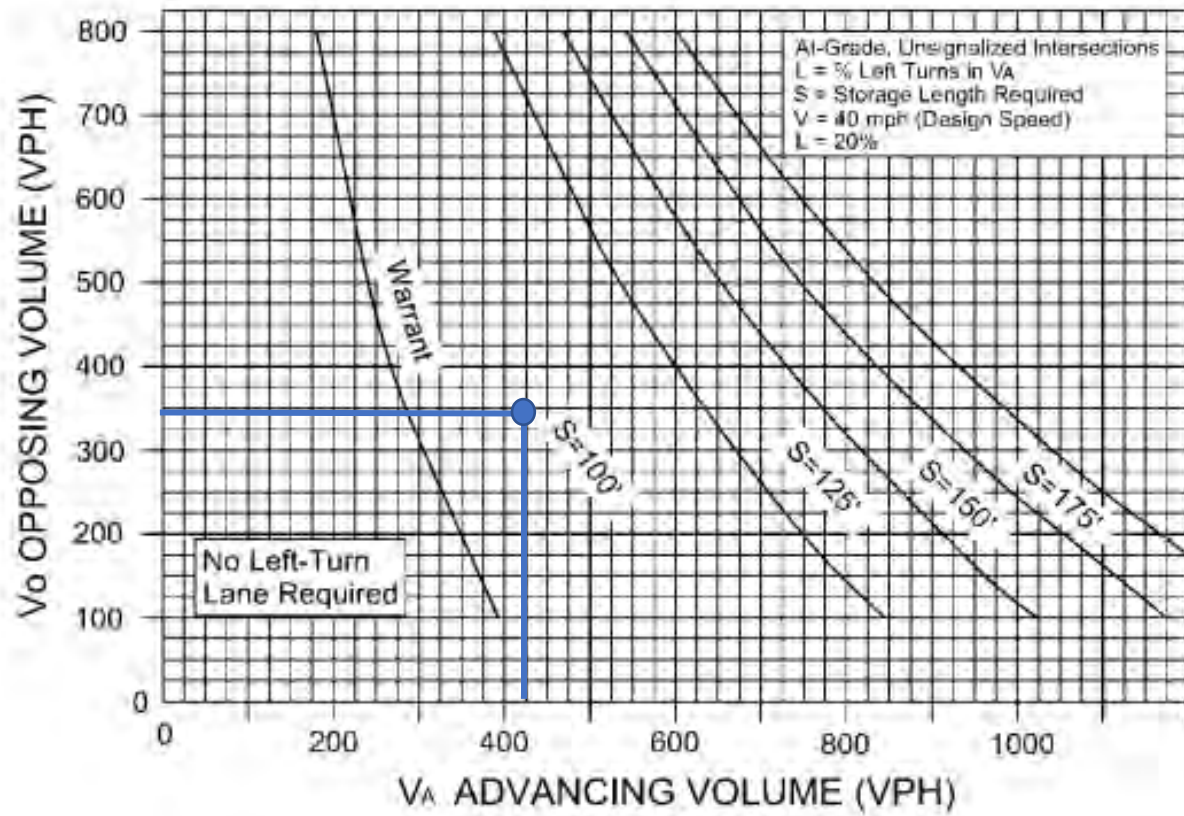
L = % Left Turns in Advancing Volume = 127 veh/795 veh (16%) in the AM and 98 veh/448 veh (22%) in the PM

V = 40 MPH

AM Peak Hour



PM Peak Hour

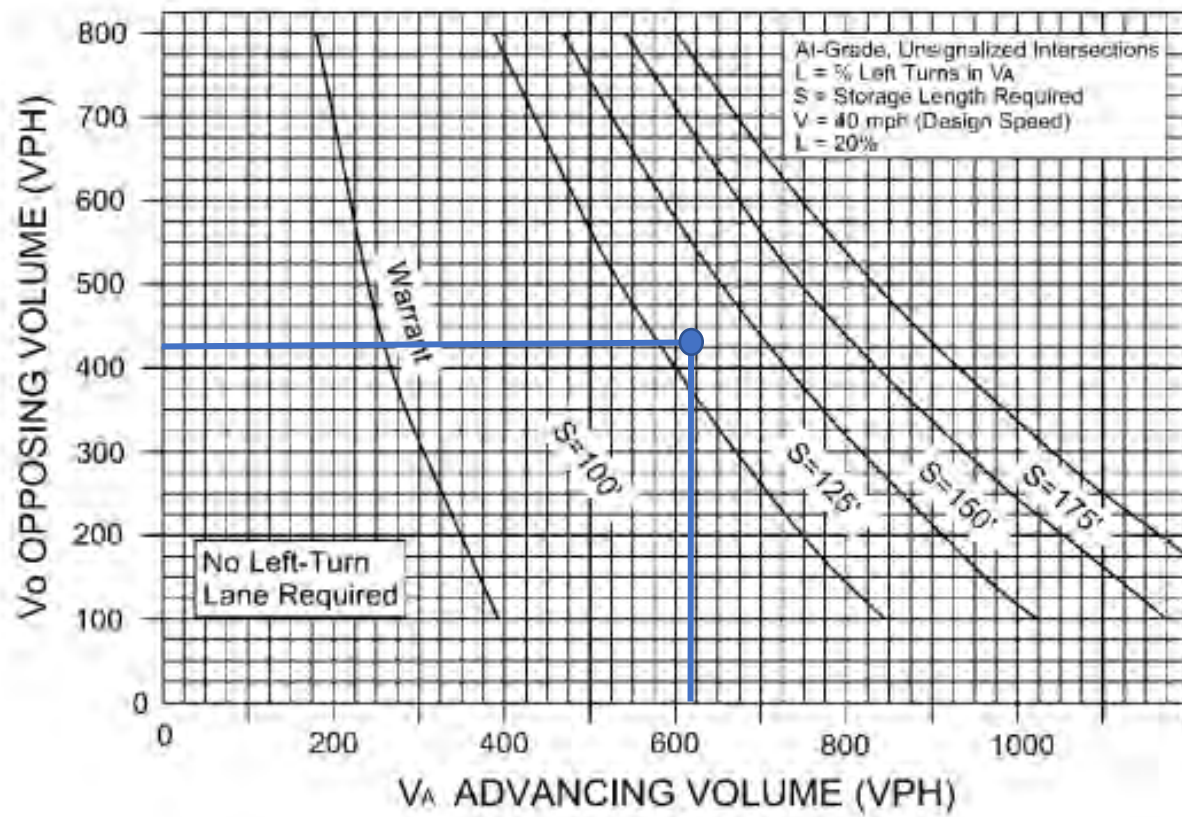


Left-Turn Lane Warrant Analysis for Site Driveway Access off Turner Drive for Build Scenario 4

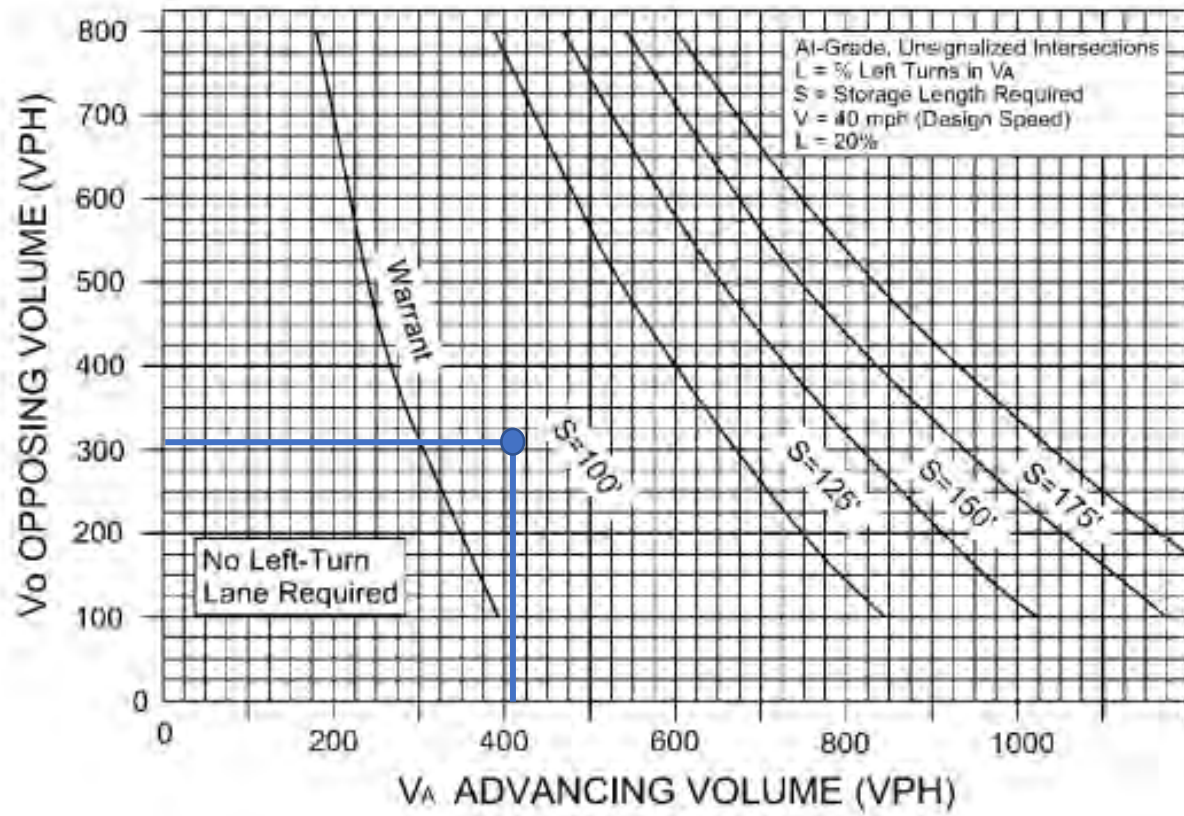
L = % Left Turns in Advancing Volume = 127 veh/621 veh (20%) in the AM and 98 veh/407 veh (24%) in the PM

V = 40 MPH

AM Peak Hour



PM Peak Hour

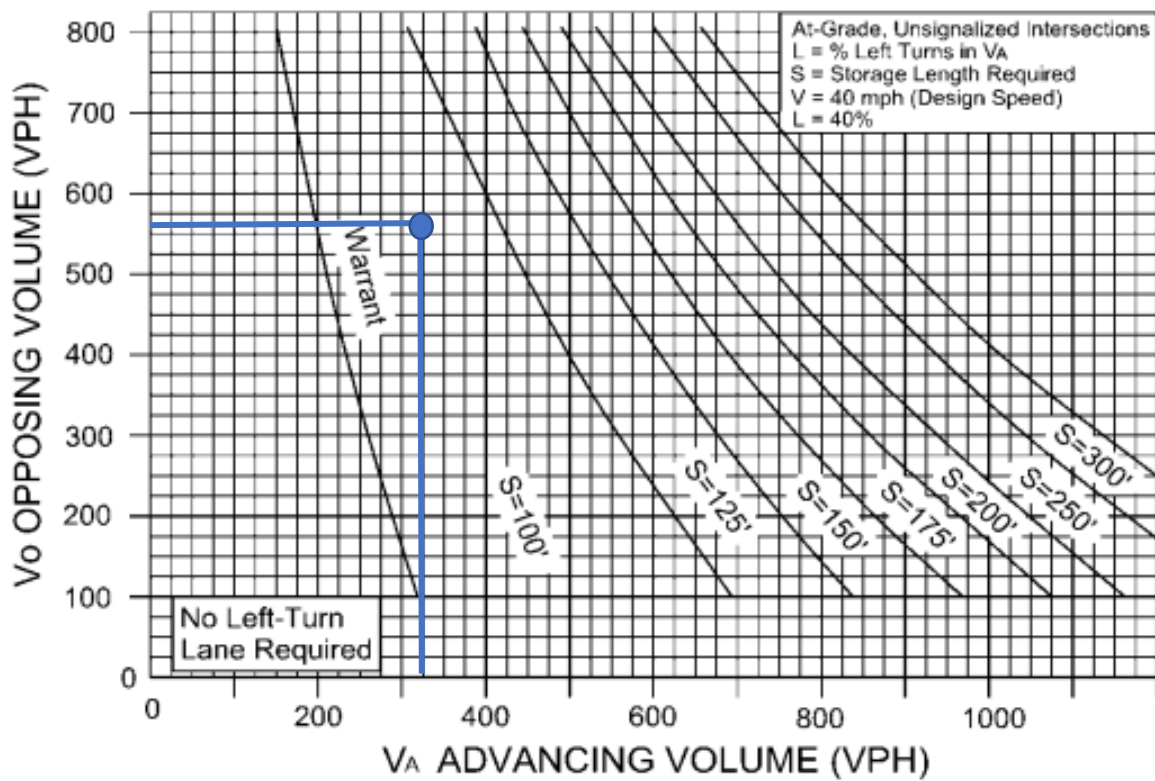


Left-Turn Lane Warrant Analysis for Northbound Bennis Church Boulevard at Turner Drive for Scenario 4

L = % Left Turns in Advancing Volume = 324 veh/567 veh (57%) in the AM and 243 veh/380 veh (64%) in the PM

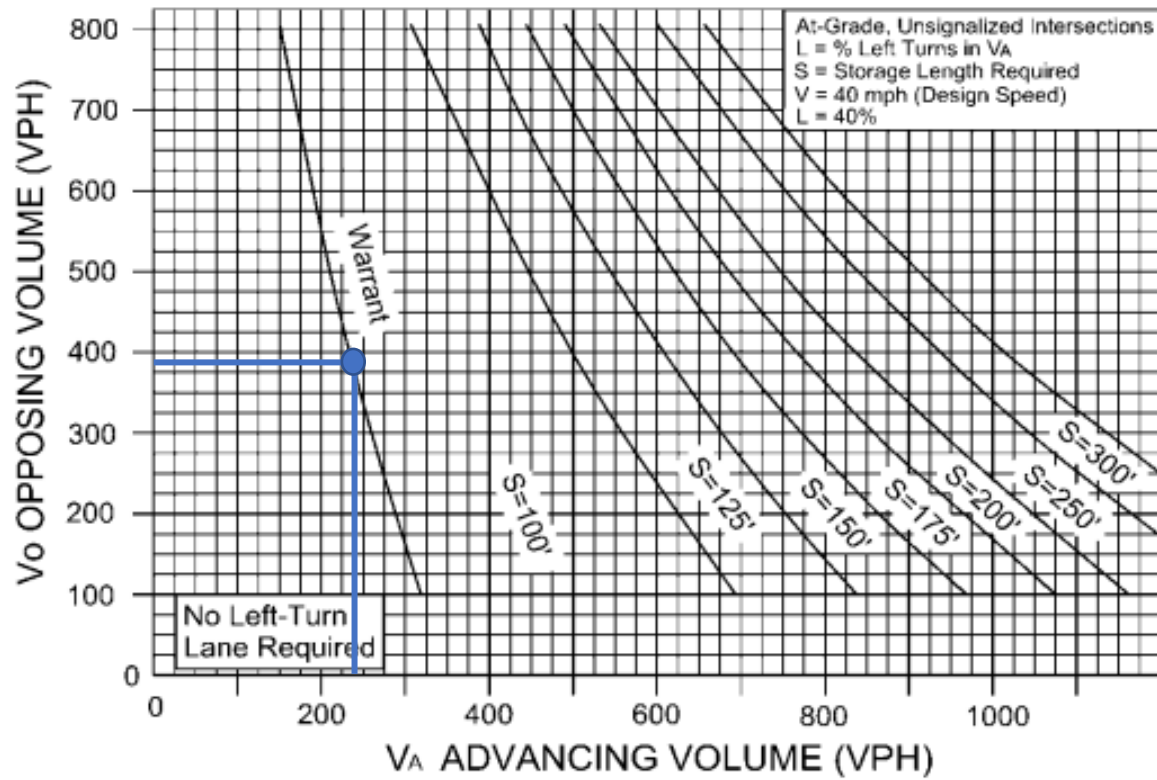
V = 40 MPH

AM Peak Hour



Left-Turn Lane Warrant Analysis for Eastbound Benns Church Boulevard at Turner Drive for Scenario 4

PM Peak Hour



Right Turn Lane Warrant Analysis for Site Driveway Access off of Benns Church Boulevard

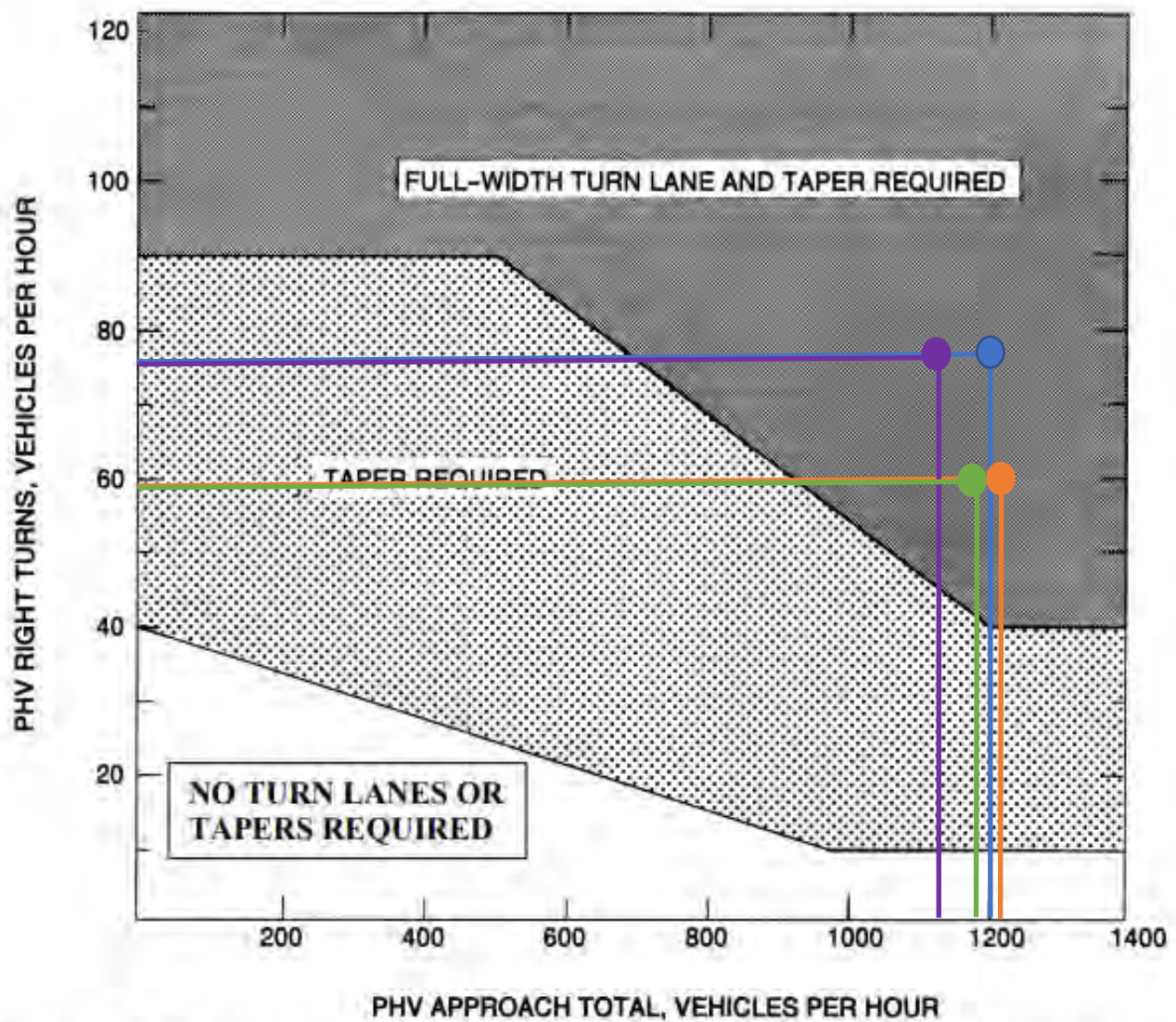


FIGURE 3-27 WARRANTS FOR RIGHT TURN TREATMENT (4-LANE HIGHWAY)

- AM Peak Hour – Scenario 3 & 5
- AM Peak Hour – Scenario 4
- PM Peak Hour – Scenario 3 & 5
- PM Peak Hour – Scenario 4

**Right Turn Lane Warrant Analysis for No Build and Build Traffic Volumes on Eastbound
Benns Church Boulevard at Turner Drive Intersection**

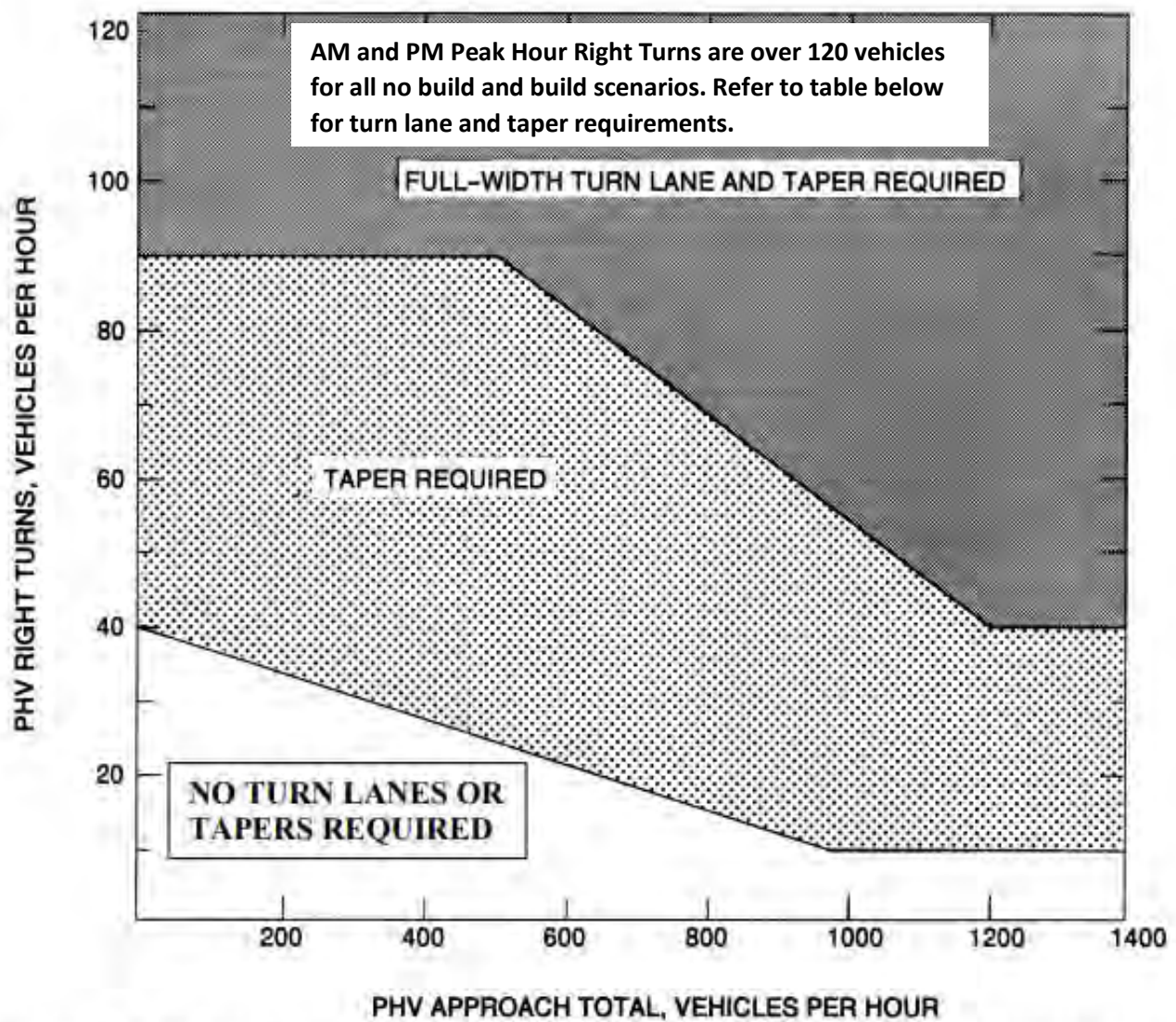


FIGURE 3-27 WARRANTS FOR RIGHT TURN TREATMENT (4-LANE HIGHWAY)

<u>LENGTH OF STORAGE (*)</u>		<u>TAPER - Rural (*)</u>	
Rural - For Design Speeds 50 MPH or Higher	*L - 200' min. (For 240 or fewer vehicles during peak hour, <u>making turn</u>)	- For Design Speeds 35 MPH or Higher	**T - 200' Min.
Rural - For Design Speeds 45 MPH or Less	*L - 100' min. (For 60 or fewer vehicles during peak hour, <u>making turn</u>)	- For Design Speeds 30 MPH or Less	**T - 100' Min. (single) **T - 200' Min. (dual)
*Distance L to be adjusted upward as determined by capacity analysis for Left and Right Turn Storage.		**Tapers are to be straight-line unless local policy requires reverse curves. In congested areas the taper length may be reduced to increase storage length. However, a design waiver shall be required.	
<u>LENGTH OF STORAGE</u>		<u>TAPER - Urban</u>	
Urban - Length determined by capacity analysis for Left and Right Turn Storage (100' Minimum)		- For Design Speeds 50 MPH or Higher	**T - 200' Min.
		- For Design Speeds 45 MPH or Less	**T - 100' Min. (single) **T - 150' Min. (dual)

FIGURE 3-1 RIGHT AND LEFT TURN LANE CRITERIA FOR SINGLE AND DUAL LANES

Appendix E

Synchro/SimTraffic Reports

Lanes, Volumes, Timings

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

Existing Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↰	↰	↰	↰↰			↰	↰		↰↰	
Traffic Volume (vph)	9	833	262	181	635	46	175	0	225	1	41	3
Future Volume (vph)	9	833	262	181	635	46	175	0	225	1	41	3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.990				0.850		0.991	
Flt Protected	0.950			0.950				0.950			0.999	
Satd. Flow (prot)	1770	3406	1615	1805	3415	0	0	1787	1599	0	1842	0
Flt Permitted	0.347			0.247				0.726			0.994	
Satd. Flow (perm)	646	3406	1615	469	3415	0	0	1366	1599	0	1833	0
Satd. Flow (RTOR)			276		8			237			2	
Adj. Flow (vph)	9	877	276	191	668	48	184	0	237	1	43	3
Lane Group Flow (vph)	9	877	276	191	716	0	0	184	237	0	47	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4		4	8		
Total Split (s)	19.0	38.0	38.0	32.0	51.0		30.0	45.0	45.0	15.0	15.0	
Total Lost Time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Act Effct Green (s)	75.6	57.7	57.7	69.6	75.9			22.9	22.9		22.9	
Actuated g/C Ratio	0.66	0.50	0.50	0.61	0.66			0.20	0.20		0.20	
v/c Ratio	0.02	0.51	0.29	0.44	0.32			0.68	0.47		0.13	
Control Delay	7.6	14.2	1.2	11.8	10.6			54.2	7.4		34.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay	7.6	14.2	1.2	11.8	10.6			54.2	7.4		34.2	
LOS	A	B	A	B	B			D	A		C	
Approach Delay		11.1			10.9			27.9			34.2	
Approach LOS		B			B			C			C	

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 15 (13%), Referenced to phase 2:EBWB and 6:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 14.2

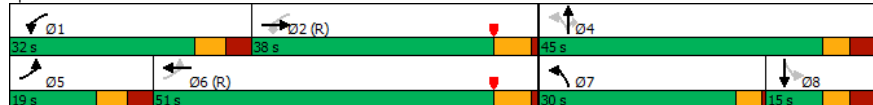
Intersection LOS: B

Intersection Capacity Utilization 66.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Turner Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

Existing Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↰	↰	↰	↰↰			↰	↰		↰↰	
Traffic Volume (vph)	9	833	262	181	635	46	175	0	225	1	41	3
Future Volume (vph)	9	833	262	181	635	46	175	0	225	1	41	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99			1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1770	3406	1615	1805	3414			1787	1599		1843	
Flt Permitted	0.35	1.00	1.00	0.25	1.00			0.73	1.00		0.99	
Satd. Flow (perm)	646	3406	1615	468	3414			1366	1599		1834	
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)	9	877	276	191	668	48	184	0	237	1	43	3
RTOR Reduction (vph)	0	0	138	0	3	0	0	0	190	0	2	0
Lane Group Flow (vph)	9	877	138	191	713	0	0	184	47	0	45	0
Heavy Vehicles (%)	2%	6%	0%	0%	5%	0%	1%	0%	1%	0%	0%	33%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4		4	8		
Actuated Green, G (s)	71.1	57.7	57.7	71.1	69.8			22.9	22.9		22.9	
Effective Green, g (s)	71.1	57.7	57.7	71.1	69.8			22.9	22.9		22.9	
Actuated g/C Ratio	0.62	0.50	0.50	0.62	0.61			0.20	0.20		0.20	
Clearance Time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	412	1708	810	445	2072			272	318		365	
v/s Ratio Prot	0.00	c0.26		c0.05	c0.21							
v/s Ratio Perm	0.01		0.09	0.22				c0.13	0.03		0.02	
v/c Ratio	0.02	0.51	0.17	0.43	0.34			0.68	0.15		0.12	
Uniform Delay, d1	8.6	19.2	15.6	10.6	11.2			42.6	38.0		37.8	
Progression Factor	0.85	0.61	0.19	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.0	0.4	0.7	0.5			6.5	0.2		0.2	
Delay (s)	7.3	12.7	3.4	11.2	11.7			49.1	38.2		38.0	
Level of Service	A	B	A	B	B			D	D		D	
Approach Delay (s)		10.4			11.6			43.0			38.0	
Approach LOS		B			B			D			D	

Intersection Summary

HCM 2000 Control Delay 16.7

HCM 2000 Level of Service B

HCM 2000 Volume to Capacity ratio 0.57

Actuated Cycle Length (s) 115.0

Sum of lost time (s) 25.0

Intersection Capacity Utilization 66.9%

ICU Level of Service C

Analysis Period (min) 15

Critical Lane Group

Lanes, Volumes, Timings

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

Existing Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	3	1184	29	44	767	2	15	0	37	2	0	0
Future Volume (vph)	3	1184	29	44	767	2	15	0	37	2	0	0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected	0.950			0.950				0.950			0.950	
Satd. Flow (prot)	1805	3471	1509	1641	3374	0	0	1492	1495	0	1203	0
Flt Permitted	0.328			0.180				0.950				
Satd. Flow (perm)	623	3471	1509	311	3374	0	0	1492	1495	0	1267	0
Satd. Flow (RTOR)			157					152				
Adj. Flow (vph)	3	1233	30	46	799	2	16	0	39	2	0	0
Lane Group Flow (vph)	3	1233	30	46	801	0	0	16	39	0	2	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		4	4			3	
Permitted Phases	6		2	2				4		3		
Total Split (s)	21.0	56.0	56.0	16.0	51.0		26.0	26.0	17.0	17.0		
Total Lost Time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Act Effct Green (s)	91.8	85.3	85.3	88.2	93.4			7.5	7.5		7.3	
Actuated g/C Ratio	0.80	0.74	0.74	0.77	0.81			0.07	0.07		0.06	
v/c Ratio	0.01	0.48	0.03	0.15	0.29			0.17	0.16		0.03	
Control Delay	4.7	9.7	0.0	6.7	6.6			54.5	1.5		51.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay	4.7	9.7	0.0	6.7	6.6			54.5	1.5		51.0	
LOS	A	A	A	A	A			D	A		D	
Approach Delay		9.4			6.6			16.9			51.0	
Approach LOS		A			A			B			D	

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 6 (5%), Referenced to phase 2:EBWB and 6:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.48

Intersection Signal Delay: 8.5

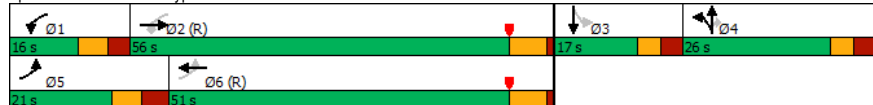
Intersection LOS: A

Intersection Capacity Utilization 59.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 2: Cypress Run Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

Existing Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	3	1184	29	44	767	2	15	0	37	2	0	0
Future Volume (vph)	3	1184	29	44	767	2	15	0	37	2	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	
Satd. Flow (prot)	1805	3471	1509	1641	3373			1492	1495		1203	
Flt Permitted	0.33	1.00	1.00	0.18	1.00			0.95	1.00		1.00	
Satd. Flow (perm)	624	3471	1509	312	3373			1492	1495		1267	
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)	3	1233	30	46	799	2	16	0	39	2	0	0
RTOR Reduction (vph)	0	0	10	0	0	0	0	0	37	0	0	0
Lane Group Flow (vph)	3	1233	20	46	801	0	0	16	2	0	2	0
Heavy Vehicles (%)	0%	4%	7%	10%	7%	0%	21%	0%	8%	50%	0%	0%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		4	4			3	
Permitted Phases	6		2	2				4		3		
Actuated Green, G (s)	81.2	76.5	76.5	81.7	80.0			6.1	6.1		1.7	
Effective Green, g (s)	81.2	76.5	76.5	81.7	80.0			6.1	6.1		1.7	
Actuated g/C Ratio	0.71	0.67	0.67	0.71	0.70			0.05	0.05		0.01	
Clearance Time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	452	2308	1003	281	2346			79	79		18	
v/s Ratio Prot	0.00	c0.36		c0.01	c0.24			c0.01				
v/s Ratio Perm	0.00		0.01	0.11					0.00		c0.00	
v/c Ratio	0.01	0.53	0.02	0.16	0.34			0.20	0.03		0.11	
Uniform Delay, d1	5.1	10.0	6.5	6.2	7.0			52.1	51.6		55.9	
Progression Factor	1.00	1.00	1.00	1.44	1.25			1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.9	0.0	0.3	0.4			1.3	0.1		2.7	
Delay (s)	5.1	10.9	6.6	9.2	9.1			53.4	51.8		58.6	
Level of Service	A	B	A	A	A			D	D		E	
Approach Delay (s)		10.8			9.1			52.2			58.6	
Approach LOS		B			A			D			E	

Intersection Summary

HCM 2000 Control Delay 11.2

HCM 2000 Level of Service B

HCM 2000 Volume to Capacity ratio 0.49

Actuated Cycle Length (s) 115.0

Sum of lost time (s) 26.0

Intersection Capacity Utilization 59.8%

ICU Level of Service B

Analysis Period (min) 15

c Critical Lane Group

Intersection: 1: Turner Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	37	216	201	69	123	147	115	181	98	65
Average Queue (ft)	10	129	129	46	92	79	64	134	61	38
95th Queue (ft)	47	239	227	73	134	168	136	213	109	74
Link Distance (ft)		2175	2175			1928	1928	919		114
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	140			280	130				305	
Storage Blk Time (%)		8			2	1				
Queuing Penalty (veh)		1			7	3				

Intersection: 2: Cypress Run Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	7	91	86	13	50	62	63	36	33	19
Average Queue (ft)	2	42	40	3	25	20	25	11	19	5
95th Queue (ft)	13	105	107	17	63	75	84	43	39	27
Link Distance (ft)		885	885			2175	2175	657		94
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	150			245	255				180	
Storage Blk Time (%)		0								
Queuing Penalty (veh)		0								

Network Summary

Network wide Queuing Penalty: 10

Lanes, Volumes, Timings

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

Existing Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	25	1025	119	187	1199	6	161	0	125	2	1	4
Future Volume (vph)	25	1025	119	187	1199	6	161	0	125	2	1	4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999			0.850		0.923		
Flt Protected	0.950			0.950				0.950		0.986		
Satd. Flow (prot)	1787	3539	1615	1805	3536	0	0	1787	1568	0	1729	0
Flt Permitted	0.157			0.165				0.753		0.929		
Satd. Flow (perm)	295	3539	1615	314	3536	0	0	1417	1568	0	1629	0
Satd. Flow (RTOR)			227					151		4		
Adj. Flow (vph)	26	1079	125	197	1262	6	169	0	132	2	1	4
Lane Group Flow (vph)	26	1079	125	197	1268	0	0	169	132	0	7	0
Turn Type	D,P+P	NA	Perm	pm+pt	NA		D,P+P	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	6			8		4	8		
Total Split (s)	19.0	45.0	45.0	35.0	61.0		30.0	50.0	50.0	20.0	20.0	
Total Lost Time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Act Effct Green (s)	86.1	70.0	70.0	90.6	83.7			24.4	24.4		24.4	
Actuated g/C Ratio	0.66	0.54	0.54	0.70	0.64			0.19	0.19		0.19	
v/c Ratio	0.10	0.57	0.13	0.51	0.56			0.64	0.32		0.02	
Control Delay	8.9	23.7	0.3	12.6	16.5			58.6	6.1		28.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay	8.9	23.7	0.3	12.6	16.5			58.6	6.1		28.0	
LOS	A	C	A	B	B			E	A		C	
Approach Delay		21.0			16.0			35.5			28.0	
Approach LOS		C			B			D			C	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:EBT and 6:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 20.0

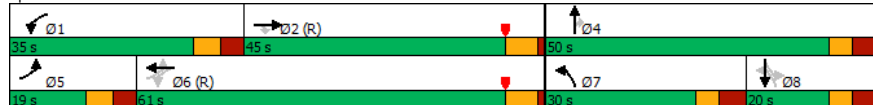
Intersection LOS: C

Intersection Capacity Utilization 71.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Turner Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

Existing Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	25	1025	119	187	1199	6	161	0	125	2	1	4
Future Volume (vph)	25	1025	119	187	1199	6	161	0	125	2	1	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)	1787	3539	1615	1805	3537			1787	1568		1729	
Flt Permitted	0.16	1.00	1.00	0.16	1.00			0.75	1.00		0.93	
Satd. Flow (perm)	295	3539	1615	313	3537			1417	1568		1628	
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)	26	1079	125	197	1262	6	169	0	132	2	1	4
RTOR Reduction (vph)	0	0	58	0	0	0	0	0	107	0	3	0
Lane Group Flow (vph)	26	1079	67	197	1268	0	0	169	25	0	4	0
Heavy Vehicles (%)	1%	2%	0%	0%	2%	0%	1%	0%	3%	0%	0%	0%
Turn Type	D,P+P	NA	Perm	pm+pt	NA		D,P+P	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	6			8		4	8		
Actuated Green, G (s)	84.6	69.9	69.9	92.1	80.7			24.4	24.4		24.4	
Effective Green, g (s)	84.6	69.9	69.9	92.1	80.7			24.4	24.4		24.4	
Actuated g/C Ratio	0.65	0.54	0.54	0.71	0.62			0.19	0.19		0.19	
Clearance Time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	236	1902	868	390	2195			265	294		305	
v/s Ratio Prot	0.00	0.30		c0.06	c0.36							
v/s Ratio Perm	0.07		0.04	0.30				c0.12	0.02		0.00	
v/c Ratio	0.11	0.57	0.08	0.51	0.58			0.64	0.08		0.01	
Uniform Delay, d1	10.2	20.0	14.5	11.6	14.6			48.7	43.6		43.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.2	1.2	0.2	1.0	1.1			5.0	0.1		0.0	
Delay (s)	10.4	21.2	14.7	12.6	15.7			53.7	43.7		43.0	
Level of Service	B	C	B	B	B			D	D		D	
Approach Delay (s)		20.3			15.3			49.3			43.0	
Approach LOS		C			B			D			D	

Intersection Summary

HCM 2000 Control Delay

HCM 2000 Level of Service

C

HCM 2000 Volume to Capacity ratio

0.66

Actuated Cycle Length (s)

130.0

Sum of lost time (s)

28.5

Intersection Capacity Utilization

71.8%

ICU Level of Service

C

Analysis Period (min)

15

Critical Lane Group

Lanes, Volumes, Timings

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

Existing Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	0	↩	↩	↩	0	↩	0
Traffic Volume (vph)	3	1060	113	188	1176	0	97	0	93	0	4	0
Future Volume (vph)	3	1060	113	188	1176	0	97	0	93	0	4	0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Flt		0.850						0.850				
Flt Protected	0.950			0.950				0.950				
Satd. Flow (prot)	1805	3471	1553	1805	3539	0	0	1805	1615	0	1900	0
Flt Permitted	0.167			0.179				0.950				
Satd. Flow (perm)	317	3471	1553	340	3539	0	0	1805	1615	0	1900	0
Satd. Flow (RTOR)			150					214				
Adj. Flow (vph)	3	1152	123	204	1278	0	105	0	101	0	4	0
Lane Group Flow (vph)	3	1152	123	204	1278	0	0	105	101	0	4	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm		NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	6		2	2				4				
Total Split (s)	24.0	66.0	66.0	14.0	56.0		25.0	25.0	15.0	15.0		
Total Lost Time (s)	7.5	6.0	6.0	7.0	6.0		6.5	6.5	6.0			
Act Effct Green (s)	89.6	75.1	75.1	84.6	90.0		12.3	12.3	7.0			
Actuated g/C Ratio	0.75	0.63	0.63	0.70	0.75		0.10	0.10	0.06			
v/c Ratio	0.01	0.53	0.12	0.55	0.48		0.57	0.28	0.04			
Control Delay	6.3	15.2	1.6	11.8	8.9		62.7	2.0	54.2			
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0			
Total Delay	6.3	15.2	1.6	11.8	8.9		62.7	2.0	54.2			
LOS	A	B	A	B	A		E	A	D			
Approach Delay		13.8			9.3		33.0		54.3			
Approach LOS		B			A		C		D			

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.57

Intersection Signal Delay: 13.0

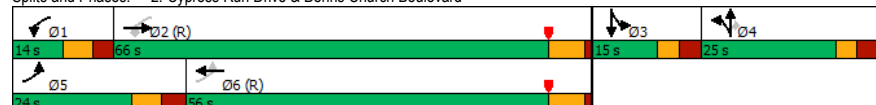
Intersection LOS: B

Intersection Capacity Utilization 68.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Cypress Run Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

Existing Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	0	↩	↩	↩	0	↩	0
Traffic Volume (vph)	3	1060	113	188	1176	0	97	0	93	0	4	0
Future Volume (vph)	3	1060	113	188	1176	0	97	0	93	0	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Flt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1805	3471	1553	1805	3539			1805	1615		1900	
Flt Permitted	0.17	1.00	1.00	0.18	1.00			0.95	1.00		1.00	
Satd. Flow (perm)	316	3471	1553	340	3539			1805	1615		1900	
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)	3	1152	123	204	1278	0	105	0	101	0	4	0
RTOR Reduction (vph)	0	0	51	0	0	0	0	0	91	0	0	0
Lane Group Flow (vph)	3	1152	72	204	1278	0	0	105	10	0	4	0
Heavy Vehicles (%)	0%	4%	4%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm		NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	6		2	2				4				
Actuated Green, G (s)	80.3	70.3	70.3	80.8	79.1			12.3	12.3		1.4	
Effective Green, g (s)	80.3	70.3	70.3	80.8	79.1			12.3	12.3		1.4	
Actuated g/C Ratio	0.67	0.59	0.59	0.67	0.66			0.10	0.10		0.01	
Clearance Time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	226	2033	909	357	2332			185	165		22	
v/s Ratio Prot	0.00	0.33		c0.05	c0.36			c0.06			c0.00	
v/s Ratio Perm	0.01		0.05	c0.33					0.01			
v/c Ratio	0.01	0.57	0.08	0.57	0.55			0.57	0.06		0.18	
Uniform Delay, d1	8.0	15.4	10.8	10.0	10.9			51.3	48.6		58.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.2	0.2	2.2	0.9			4.0	0.2		4.0	
Delay (s)	8.0	16.6	11.0	12.2	11.8			55.3	48.8		62.7	
Level of Service	A	B	B	B	B			E	D		E	
Approach Delay (s)		16.0			11.9			52.1			62.7	
Approach LOS		B			B			D			E	

Intersection Summary

HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection: 1: Turner Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	122	329	345	194	129	294	263	233	108	36
Average Queue (ft)	20	146	154	36	87	134	120	118	40	6
95th Queue (ft)	68	282	293	130	143	249	227	203	83	25
Link Distance (ft)		2172	2172			1930	1930	919		114
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	140			280	130				305	
Storage Blk Time (%)	0	9	1	0	2	5				
Queuing Penalty (veh)	0	2	1	0	12	10				

Intersection: 2: Cypress Run Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	32	317	269	82	184	243	243	160	114	27
Average Queue (ft)	2	142	110	23	88	78	96	70	32	4
95th Queue (ft)	19	270	229	61	155	183	199	129	69	18
Link Distance (ft)		885	885			2172	2172	657		94
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	150			245	255				180	
Storage Blk Time (%)		6	0	0		0		0	0	
Queuing Penalty (veh)		0	0	0		0		0	0	

Network Summary

Network wide Queuing Penalty: 27

Lanes, Volumes, Timings

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

No Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	9	850	354	272	648	47	252	0	304	1	42	3
Future Volume (vph)	9	850	354	272	648	47	252	0	304	1	42	3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.990				0.850		0.992	
Flt Protected	0.950			0.950				0.950			0.999	
Satd. Flow (prot)	1770	3406	1615	1805	3415	0	0	1787	1599	0	1845	0
Flt Permitted	0.325			0.187				0.726			0.994	
Satd. Flow (perm)	605	3406	1615	355	3415	0	0	1366	1599	0	1836	0
Satd. Flow (RTOR)			373		8			320			2	
Adj. Flow (vph)	9	895	373	286	682	49	265	0	320	1	44	3
Lane Group Flow (vph)	9	895	373	286	731	0	0	265	320	0	48	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4		4	8		
Total Split (s)	16.0	40.0	40.0	32.0	56.0		27.0	43.0	43.0	16.0	16.0	
Total Lost Time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Act Effct Green (s)	68.7	45.3	45.3	62.7	68.9			29.8	29.8		29.8	
Actuated g/C Ratio	0.60	0.39	0.39	0.55	0.60			0.26	0.26		0.26	
v/c Ratio	0.02	0.67	0.43	0.66	0.36			0.75	0.49		0.10	
Control Delay	12.3	27.1	4.0	23.8	13.9			52.1	6.0		29.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay	12.3	27.1	4.0	23.8	13.9			52.1	6.0		29.3	
LOS	B	C	A	C	B			D	A		C	
Approach Delay		20.2			16.7			26.9			29.3	
Approach LOS		C			B			C			C	

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 42 (37%), Referenced to phase 2:EBWB and 6:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 20.5

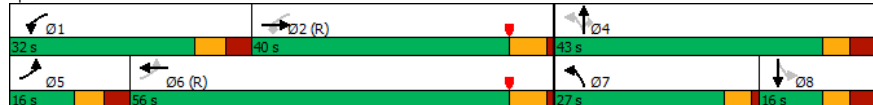
Intersection LOS: C

Intersection Capacity Utilization 76.7%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Turner Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

No Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	9	850	354	272	648	47	252	0	304	1	42	3
Future Volume (vph)	9	850	354	272	648	47	252	0	304	1	42	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99			1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1770	3406	1615	1805	3414			1787	1599		1844	
Flt Permitted	0.33	1.00	1.00	0.19	1.00			0.73	1.00		0.99	
Satd. Flow (perm)	606	3406	1615	355	3414			1365	1599		1835	
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)	9	895	373	286	682	49	265	0	320	1	44	3
RTOR Reduction (vph)	0	0	226	0	4	0	0	0	237	0	1	0
Lane Group Flow (vph)	9	895	147	286	727	0	0	265	83	0	47	0
Heavy Vehicles (%)	2%	6%	0%	0%	5%	0%	1%	0%	1%	0%	0%	33%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4		4	8		
Actuated Green, G (s)	64.2	45.3	45.3	64.2	62.9			29.8	29.8		29.8	
Effective Green, g (s)	64.2	45.3	45.3	64.2	62.9			29.8	29.8		29.8	
Actuated g/C Ratio	0.56	0.39	0.39	0.56	0.55			0.26	0.26		0.26	
Clearance Time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	351	1341	636	436	1867			353	414		475	
v/s Ratio Prot	0.00	0.26		0.11	0.21							
v/s Ratio Perm	0.01		0.09	0.26				0.19	0.05		0.03	
v/c Ratio	0.03	0.67	0.23	0.66	0.39			0.75	0.20		0.10	
Uniform Delay, d1	11.6	28.7	23.2	16.2	15.0			39.2	33.3		32.4	
Progression Factor	1.11	0.78	0.79	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	2.3	0.7	3.5	0.6			8.7	0.2		0.1	
Delay (s)	12.8	24.7	19.1	19.8	15.6			47.9	33.5		32.5	
Level of Service	B	C	B	B	B			D	C		C	
Approach Delay (s)		23.0			16.8			40.0			32.5	
Approach LOS		C			B			D			C	

Intersection Summary

HCM 2000 Control Delay

HCM 2000 Level of Service

C

HCM 2000 Volume to Capacity ratio

0.73

Actuated Cycle Length (s)

115.0

Sum of lost time (s)

25.5

Intersection Capacity Utilization

76.7%

ICU Level of Service

D

Analysis Period (min)

15

Critical Lane Group

Lanes, Volumes, Timings

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

No Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	3	1295	30	45	856	2	15	0	38	2	0	0
Future Volume (vph)	3	1295	30	45	856	2	15	0	38	2	0	0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected	0.950			0.950				0.950			0.950	
Satd. Flow (prot)	1805	3471	1509	1641	3374	0	0	1492	1495	0	1203	0
Flt Permitted	0.293			0.152				0.950				
Satd. Flow (perm)	557	3471	1509	263	3374	0	0	1492	1495	0	1267	0
Satd. Flow (RTOR)			157					152				
Adj. Flow (vph)	3	1349	31	47	892	2	16	0	40	2	0	0
Lane Group Flow (vph)	3	1349	31	47	894	0	0	16	40	0	2	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		4	4			3	
Permitted Phases	6		2	2				4		3		
Total Split (s)	21.0	56.0	56.0	16.0	51.0		26.0	26.0	17.0	17.0		
Total Lost Time (s)	7.5	6.0	6.0	7.0	6.0		6.5	6.5		6.0		
Act Effct Green (s)	91.8	85.2	85.2	88.2	93.4		7.5	7.5		7.3		
Actuated g/C Ratio	0.80	0.74	0.74	0.77	0.81		0.07	0.07		0.06		
v/c Ratio	0.01	0.52	0.03	0.17	0.33		0.17	0.17		0.03		
Control Delay	4.7	10.3	0.0	6.4	6.0		54.5	1.5		51.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0		
Total Delay	4.7	10.3	0.0	6.4	6.0		54.5	1.5		51.0		
LOS	A	B	A	A	A		D	A		D		
Approach Delay		10.1			6.0			16.7			51.0	
Approach LOS		B			A			B			D	

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 38 (33%), Referenced to phase 2:EBWB and 6:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.52

Intersection Signal Delay: 8.7

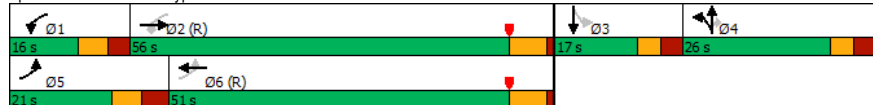
Intersection LOS: A

Intersection Capacity Utilization 62.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 2: Cypress Run Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

No Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	3	1295	30	45	856	2	15	0	38	2	0	0
Future Volume (vph)	3	1295	30	45	856	2	15	0	38	2	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	
Satd. Flow (prot)	1805	3471	1509	1641	3373			1492	1495		1203	
Flt Permitted	0.29	1.00	1.00	0.15	1.00			0.95	1.00		1.00	
Satd. Flow (perm)	557	3471	1509	262	3373			1492	1495		1267	
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)	3	1349	31	47	892	2	16	0	40	2	0	0
RTOR Reduction (vph)	0	0	10	0	0	0	0	0	38	0	0	0
Lane Group Flow (vph)	3	1349	21	47	894	0	0	16	2	0	2	0
Heavy Vehicles (%)	0%	4%	7%	10%	7%	0%	21%	0%	8%	50%	0%	0%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		4	4			3	
Permitted Phases	6		2	2				4		3		
Actuated Green, G (s)	81.2	76.5	76.5	81.7	80.0			6.1	6.1		1.7	
Effective Green, g (s)	81.2	76.5	76.5	81.7	80.0			6.1	6.1		1.7	
Actuated g/C Ratio	0.71	0.67	0.67	0.71	0.70			0.05	0.05		0.01	
Clearance Time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	406	2308	1003	248	2346			79	79		18	
v/s Ratio Prot	0.00	c0.39		c0.01	c0.27			c0.01				
v/s Ratio Perm	0.01		0.01	0.13					0.00		c0.00	
v/c Ratio	0.01	0.58	0.02	0.19	0.38			0.20	0.03		0.11	
Uniform Delay, d1	5.2	10.5	6.5	6.8	7.2			52.1	51.6		55.9	
Progression Factor	1.00	1.00	1.00	1.32	1.09			1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.1	0.0	0.3	0.4			1.3	0.1		2.7	
Delay (s)	5.2	11.6	6.6	9.3	8.3			53.4	51.8		58.6	
Level of Service	A	B	A	A	A			D	D		E	
Approach Delay (s)		11.5			8.4			52.2			58.6	
Approach LOS		B			A			D			E	

Intersection Summary

HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection: 1: Turner Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	117	330	363	280	129	324	288	314	254	91
Average Queue (ft)	11	182	181	98	114	156	123	158	92	32
95th Queue (ft)	60	297	303	223	151	288	236	268	197	75
Link Distance (ft)		2172	2172			1930	1930	919		114
Upstream Blk Time (%)										0
Queuing Penalty (veh)										0
Storage Bay Dist (ft)	140			280	130				305	
Storage Blk Time (%)	0	17	1	0	13	7		0	0	
Queuing Penalty (veh)	0	2	4	1	44	20		1	0	

Intersection: 2: Cypress Run Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	20	201	183	41	91	102	113	82	68	48
Average Queue (ft)	1	49	43	3	28	19	25	16	21	4
95th Queue (ft)	10	136	122	19	67	67	80	55	51	25
Link Distance (ft)		885	885			2172	2172	657		94
Upstream Blk Time (%)										0
Queuing Penalty (veh)										0
Storage Bay Dist (ft)	150			245	255				180	
Storage Blk Time (%)		0	0							
Queuing Penalty (veh)		0	0							

Network Summary

Network wide Queuing Penalty: 71

Lanes, Volumes, Timings

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

No Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	26	1046	141	207	1223	6	186	0	149	2	1	4
Future Volume (vph)	26	1046	141	207	1223	6	186	0	149	2	1	4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999				0.850		0.923	
Flt Protected	0.950			0.950				0.950			0.986	
Satd. Flow (prot)	1787	3539	1615	1805	3536	0	0	1787	1568	0	1729	0
Flt Permitted	0.140			0.155				0.753			0.932	
Satd. Flow (perm)	263	3539	1615	294	3536	0	0	1417	1568	0	1634	0
Satd. Flow (RTOR)			227					157		4		
Adj. Flow (vph)	27	1101	148	218	1287	6	196	0	157	2	1	4
Lane Group Flow (vph)	27	1101	148	218	1293	0	0	196	157	0	7	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4		4	8		
Total Split (s)	16.0	43.0	43.0	40.0	67.0		31.0	47.0	47.0	16.0	16.0	
Total Lost Time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Act Effct Green (s)	82.0	63.5	63.5	79.0	79.5			28.5	28.5		28.5	
Actuated g/C Ratio	0.63	0.49	0.49	0.61	0.61			0.22	0.22		0.22	
v/c Ratio	0.11	0.64	0.16	0.58	0.60			0.63	0.34		0.02	
Control Delay	8.5	17.3	0.5	19.4	19.8			54.0	7.2		25.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay	8.5	17.3	0.5	19.4	19.8			54.0	7.2		25.1	
LOS	A	B	A	B	B			D	A		C	
Approach Delay		15.1			19.7			33.2			25.1	
Approach LOS		B			B			C			C	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 49 (38%), Referenced to phase 2:EBWB and 6:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 19.4

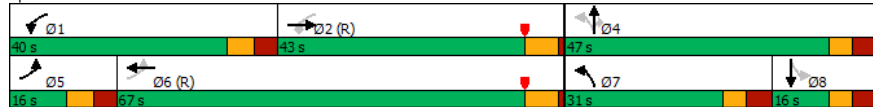
Intersection LOS: B

Intersection Capacity Utilization 74.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Turner Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

No Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	26	1046	141	207	1223	6	186	0	149	2	1	4
Future Volume (vph)	26	1046	141	207	1223	6	186	0	149	2	1	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)	1787	3539	1615	1805	3537			1787	1568		1729	
Flt Permitted	0.14	1.00	1.00	0.15	1.00			0.75	1.00		0.93	
Satd. Flow (perm)	263	3539	1615	294	3537			1417	1568		1633	
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)	27	1101	148	218	1287	6	196	0	157	2	1	4
RTOR Reduction (vph)	0	0	76	0	0	0	0	0	123	0	3	0
Lane Group Flow (vph)	27	1101	148	218	1293	0	0	196	157	0	7	0
Heavy Vehicles (%)	1%	2%	0%	0%	2%	0%	1%	0%	3%	0%	0%	0%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4		4	8		
Actuated Green, G (s)	80.5	63.5	63.5	80.5	76.5			28.5	28.5		28.5	
Effective Green, g (s)	80.5	63.5	63.5	80.5	76.5			28.5	28.5		28.5	
Actuated g/C Ratio	0.62	0.49	0.49	0.62	0.59			0.22	0.22		0.22	
Clearance Time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	209	1728	788	379	2081			310	343		358	
v/s Ratio Prot	0.00	0.31		c0.08	c0.37							
v/s Ratio Perm	0.08		0.04	0.28				c0.14	0.02		0.00	
v/c Ratio	0.13	0.64	0.09	0.58	0.62			0.63	0.10		0.01	
Uniform Delay, d1	12.5	24.7	17.8	15.2	17.4			46.0	40.5		39.7	
Progression Factor	0.78	0.55	1.49	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.3	1.6	0.2	2.1	1.4			4.2	0.1		0.0	
Delay (s)	9.9	15.2	26.7	17.3	18.8			50.2	40.6		39.7	
Level of Service	A	B	C	B	B			D	D		D	
Approach Delay (s)		16.4			18.6			45.9			39.7	
Approach LOS		B			B			D			D	

Intersection Summary

HCM 2000 Control Delay 20.8

HCM 2000 Level of Service C

HCM 2000 Volume to Capacity ratio 0.70

Actuated Cycle Length (s) 130.0

Sum of lost time (s) 28.5

Intersection Capacity Utilization 74.9%

ICU Level of Service D

Analysis Period (min) 15

Critical Lane Group

Lanes, Volumes, Timings

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

No Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	0	↩	↩	↩	0	↩	0
Traffic Volume (vph)	3	1101	115	192	1221	0	99	0	95	0	4	0
Future Volume (vph)	3	1101	115	192	1221	0	99	0	95	0	4	0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected	0.950			0.950				0.950				
Satd. Flow (prot)	1805	3471	1553	1805	3539	0	0	1805	1615	0	1900	0
Flt Permitted	0.180			0.191				0.950				
Satd. Flow (perm)	342	3471	1553	363	3539	0	0	1805	1615	0	1900	0
Satd. Flow (RTOR)			201					197				
Adj. Flow (vph)	3	1123	117	196	1246	0	101	0	97	0	4	0
Lane Group Flow (vph)	3	1123	117	196	1246	0	0	101	97	0	4	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm		NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	6		2	2				4				
Total Split (s)	17.0	64.0	64.0	25.0	72.0		24.0	24.0	17.0	17.0		
Total Lost Time (s)	7.5	6.0	6.0	7.0	6.0		6.5	6.5	6.0			
Act Effct Green (s)	99.3	83.3	83.3	94.3	99.7		12.6	12.6	7.0			
Actuated g/C Ratio	0.76	0.64	0.64	0.73	0.77		0.10	0.10	0.05			
v/c Ratio	0.01	0.51	0.11	0.49	0.46		0.58	0.29	0.04			
Control Delay	6.0	15.5	0.2	16.4	13.5		68.7	2.2	59.2			
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0			
Total Delay	6.0	15.5	0.2	16.4	13.5		68.7	2.2	59.2			
LOS	A	B	A	B	B		E	A	E			
Approach Delay		14.1			13.9			36.1			59.3	
Approach LOS		B			B			D			E	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 35 (27%), Referenced to phase 2:EBWB and 6:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 15.6

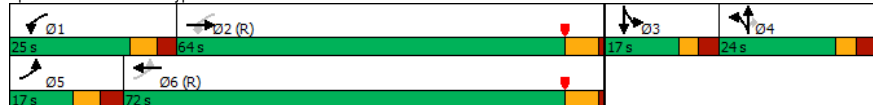
Intersection LOS: B

Intersection Capacity Utilization 69.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Cypress Run Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

No Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	0	↩	↩	↩	0	↩	0
Traffic Volume (vph)	3	1101	115	192	1221	0	99	0	95	0	4	0
Future Volume (vph)	3	1101	115	192	1221	0	99	0	95	0	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1805	3471	1553	1805	3539			1805	1615		1900	
Flt Permitted	0.18	1.00	1.00	0.19	1.00			0.95	1.00		1.00	
Satd. Flow (perm)	341	3471	1553	364	3539			1805	1615		1900	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	3	1123	117	196	1246	0	101	0	97	0	4	0
RTOR Reduction (vph)	0	0	46	0	0	0	0	0	88	0	0	0
Lane Group Flow (vph)	3	1123	71	196	1246	0	0	101	9	0	4	0
Heavy Vehicles (%)	0%	4%	4%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm		NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	6		2	2				4				
Actuated Green, G (s)	90.0	78.4	78.4	90.5	88.8			12.6	12.6		1.4	
Effective Green, g (s)	90.0	78.4	78.4	90.5	88.8			12.6	12.6		1.4	
Actuated g/C Ratio	0.69	0.60	0.60	0.70	0.68			0.10	0.10		0.01	
Clearance Time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	249	2093	936	387	2417			174	156		20	
v/s Ratio Prot	0.00	c0.32		c0.05	c0.35			c0.06			c0.00	
v/s Ratio Perm	0.01		0.05	0.31					0.01			
v/c Ratio	0.01	0.54	0.08	0.51	0.52			0.58	0.06		0.20	
Uniform Delay, d1	7.4	15.1	10.7	9.1	10.1			56.2	53.3		63.7	
Progression Factor	1.00	1.00	1.00	2.46	1.72			1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.0	0.2	0.9	0.6			4.9	0.2		4.9	
Delay (s)	7.4	16.1	10.9	23.4	18.0			61.0	53.5		68.6	
Level of Service	A	B	B	C	B			E	D		E	
Approach Delay (s)		15.6			18.7			57.3			68.6	
Approach LOS		B			B			E			E	

Intersection Summary

HCM 2000 Control Delay

HCM 2000 Level of Service

C

HCM 2000 Volume to Capacity ratio

0.55

Actuated Cycle Length (s)

130.0

Sum of lost time (s)

26.0

Intersection Capacity Utilization

69.5%

ICU Level of Service

C

Analysis Period (min)

15

c Critical Lane Group

Intersection: 1: Turner Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	100	240	256	105	129	418	385	256	166	29
Average Queue (ft)	19	119	121	27	104	179	160	126	53	6
95th Queue (ft)	59	203	207	72	153	332	307	213	117	25
Link Distance (ft)		2172	2172			1930	1930	919		114
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	140			280	130				305	
Storage Blk Time (%)	0	6	0	0	9	9		0	0	
Queuing Penalty (veh)	0	2	0	0	55	19		0	0	

Intersection: 2: Cypress Run Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	48	301	289	128	201	253	276	192	132	39
Average Queue (ft)	3	157	127	25	85	92	110	74	32	4
95th Queue (ft)	30	275	243	80	154	199	219	144	78	20
Link Distance (ft)		885	885			2172	2172	657		94
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	150			245	255				180	
Storage Blk Time (%)	0	8	0	0	0	0		1	0	
Queuing Penalty (veh)	0	0	0	0	0	0		1	0	

Network Summary

Network wide Queuing Penalty: 78

Lanes, Volumes, Timings

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	9	877	379	374	584	47	354	0	317	1	42	3
Future Volume (vph)	9	877	379	374	584	47	354	0	317	1	42	3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.989				0.850		0.992	
Flt Protected	0.950			0.950				0.950			0.999	
Satd. Flow (prot)	1770	3406	1615	1770	3412	0	0	1787	1599	0	1845	0
Flt Permitted	0.349			0.125				0.726			0.993	
Satd. Flow (perm)	650	3406	1615	233	3412	0	0	1366	1599	0	1834	0
Satd. Flow (RTOR)			399		9			334			2	
Adj. Flow (vph)	9	923	399	394	615	49	373	0	334	1	44	3
Lane Group Flow (vph)	9	923	399	394	664	0	0	373	334	0	48	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4		4	8		
Total Split (s)	16.0	42.0	42.0	30.0	56.0		18.0	43.0	43.0	25.0	25.0	
Total Lost Time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Act Effct Green (s)	65.2	37.8	37.8	59.2	65.0			33.3	33.3		33.3	
Actuated g/C Ratio	0.57	0.33	0.33	0.51	0.57			0.29	0.29		0.29	
v/c Ratio	0.02	0.83	0.50	0.92	0.34			0.94	0.48		0.09	
Control Delay	13.8	36.7	5.0	59.9	15.3			73.4	5.7		28.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay	13.8	36.7	5.0	59.9	15.3			73.4	5.7		28.1	
LOS	B	D	A	E	B			E	A		C	
Approach Delay		27.0			31.9			41.4			28.1	
Approach LOS		C			C			D			C	

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 2 (2%), Referenced to phase 2:EBWB and 6:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 31.9

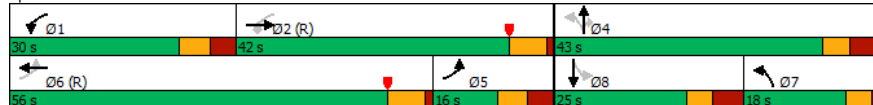
Intersection LOS: C

Intersection Capacity Utilization 87.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Turner Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	9	877	379	374	584	47	354	0	317	1	42	3
Future Volume (vph)	9	877	379	374	584	47	354	0	317	1	42	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99			1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1770	3406	1615	1770	3412			1787	1599		1844	
Flt Permitted	0.35	1.00	1.00	0.12	1.00			0.73	1.00		0.99	
Satd. Flow (perm)	649	3406	1615	233	3412			1365	1599		1834	
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)	9	923	399	394	615	49	373	0	334	1	44	3
RTOR Reduction (vph)	0	0	268	0	4	0	0	0	237	0	1	0
Lane Group Flow (vph)	9	923	131	394	660	0	0	373	97	0	47	0
Heavy Vehicles (%)	2%	6%	0%	2%	5%	0%	1%	0%	1%	0%	0%	33%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4		4	8		
Actuated Green, G (s)	60.7	37.8	37.8	60.7	59.0			33.3	33.3		33.3	
Effective Green, g (s)	60.7	37.8	37.8	60.7	59.0			33.3	33.3		33.3	
Actuated g/C Ratio	0.53	0.33	0.33	0.53	0.51			0.29	0.29		0.29	
Clearance Time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	359	1119	530	429	1750			395	463		531	
v/s Ratio Prot	0.00	0.27		c0.18	0.19							
v/s Ratio Perm	0.01		0.08	c0.30				c0.27	0.06		0.03	
v/c Ratio	0.03	0.82	0.25	0.92	0.38			0.94	0.21		0.09	
Uniform Delay, d1	16.8	35.6	28.2	30.9	16.9			39.9	30.9		29.8	
Progression Factor	1.18	0.83	0.99	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	6.1	1.0	24.3	0.6			31.1	0.2		0.1	
Delay (s)	19.9	35.6	28.9	55.2	17.5			71.1	31.1		29.8	
Level of Service	B	D	C	E	B			E	C		C	
Approach Delay (s)		33.5			31.6			52.2			29.8	
Approach LOS		C			C			D			C	

Intersection Summary

HCM 2000 Control Delay	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	3	1333	30	45	894	2	15	0	38	2	0	0
Future Volume (vph)	3	1333	30	45	894	2	15	0	38	2	0	0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected	0.950			0.950				0.950			0.950	
Satd. Flow (prot)	1805	3471	1509	1641	3374	0	0	1492	1495	0	1203	0
Flt Permitted	0.280			0.133				0.950				
Satd. Flow (perm)	532	3471	1509	230	3374	0	0	1492	1495	0	1267	0
Satd. Flow (RTOR)			161					157				
Adj. Flow (vph)	3	1389	31	47	931	2	16	0	40	2	0	0
Lane Group Flow (vph)	3	1389	31	47	933	0	0	16	40	0	2	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		4	4			3	
Permitted Phases	6		2	2				4		3		
Total Split (s)	16.0	67.0	67.0	16.0	67.0		16.0	16.0	16.0	16.0		
Total Lost Time (s)	7.5	6.0	6.0	7.0	6.0		6.5	6.5		6.0		
Act Effct Green (s)	92.3	86.1	86.1	88.5	93.7		7.5	7.5		7.0		
Actuated g/C Ratio	0.80	0.75	0.75	0.77	0.81		0.07	0.07		0.06		
v/c Ratio	0.01	0.53	0.03	0.19	0.34		0.17	0.16		0.03		
Control Delay	4.3	9.8	0.0	3.3	2.3		54.5	1.4		51.5		
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0		
Total Delay	4.3	9.8	0.0	3.3	2.3		54.5	1.4		51.5		
LOS	A	A	A	A	A		D	A		D		
Approach Delay		9.6			2.3			16.6			51.5	
Approach LOS		A			A			B			D	

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 19 (17%), Referenced to phase 2:EBWB and 6:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 6.9

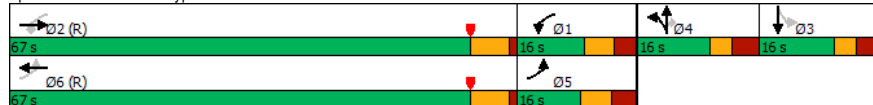
Intersection LOS: A

Intersection Capacity Utilization 63.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 2: Cypress Run Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	3	1333	30	45	894	2	15	0	38	2	0	0
Future Volume (vph)	3	1333	30	45	894	2	15	0	38	2	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	
Satd. Flow (prot)	1805	3471	1509	1641	3373			1492	1495		1203	
Flt Permitted	0.28	1.00	1.00	0.13	1.00			0.95	1.00		1.00	
Satd. Flow (perm)	531	3471	1509	230	3373			1492	1495		1267	
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)	3	1389	31	47	931	2	16	0	40	2	0	0
RTOR Reduction (vph)	0	0	11	0	0	0	0	0	38	0	0	0
Lane Group Flow (vph)	3	1389	20	47	933	0	0	16	2	0	2	0
Heavy Vehicles (%)	0%	4%	7%	10%	7%	0%	21%	0%	8%	50%	0%	0%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		4	4			3	
Permitted Phases	6		2	2					4	3		
Actuated Green, G (s)	81.5	72.8	72.8	82.0	80.4			6.1	6.1		1.4	
Effective Green, g (s)	81.5	72.8	72.8	82.0	80.4			6.1	6.1		1.4	
Actuated g/C Ratio	0.71	0.63	0.63	0.71	0.70			0.05	0.05		0.01	
Clearance Time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	388	2197	955	276	2358			79	79		15	
v/s Ratio Prot	0.00	c0.40		c0.01	c0.28			c0.01				
v/s Ratio Perm	0.01		0.01	0.11					0.00		c0.00	
v/c Ratio	0.01	0.63	0.02	0.17	0.40			0.20	0.03		0.13	
Uniform Delay, d1	7.2	12.9	7.8	15.8	7.2			52.1	51.6		56.2	
Progression Factor	1.00	1.00	1.00	0.34	0.40			1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.4	0.0	0.2	0.4			1.3	0.1		4.0	
Delay (s)	7.2	14.3	7.9	5.6	3.3			53.4	51.8		60.2	
Level of Service	A	B	A	A	A			D	D		E	
Approach Delay (s)		14.2			3.4			52.2			60.2	
Approach LOS		B			A			D			E	

Intersection Summary

HCM 2000 Control Delay

10.8

HCM 2000 Level of Service

B

HCM 2000 Volume to Capacity ratio

0.56

Actuated Cycle Length (s)

115.0

Sum of lost time (s)

26.0

Intersection Capacity Utilization

63.9%

ICU Level of Service

B

Analysis Period (min)

15

Critical Lane Group

Lanes, Volumes, Timings

3: Proposed Driveway & Turner Drive

Wawa Bennis Church TIA

Build Conditions

	↖	↗	↑	↘	↙	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖		↑		↘	↓
Traffic Volume (vph)	19	146	525	51	127	668
Future Volume (vph)	19	146	525	51	127	668
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.881		0.988			
Flt Protected	0.994				0.950	
Satd. Flow (prot)	1647	0	1840	0	1787	1881
Flt Permitted	0.994				0.950	
Satd. Flow (perm)	1647	0	1840	0	1787	1881
Adj. Flow (vph)	20	154	553	54	134	703
Lane Group Flow (vph)	174	0	607	0	134	703
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 57.8%						
Analysis Period (min) 15						
ICU Level of Service B						

HCM Unsignalized Intersection Capacity Analysis

3: Proposed Driveway & Turner Drive

Wawa Bennis Church TIA

Build Conditions

	↖	↗	↑	↘	↙	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖		↑		↘	↓
Traffic Volume (veh/h)	19	146	525	51	127	668
Future Volume (Veh/h)	19	146	525	51	127	668
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	20	154	553	54	134	703
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						450
pX, platoon unblocked	0.82					
vC, conflicting volume	1551	580			607	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1562	580			607	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	77	70			86	
cM capacity (veh/h)	88	516			976	
Direction, Lane #						
Volume Total	174	607	134	703		
Volume Left	20	0	134	0		
Volume Right	154	54	0	0		
cSH	331	1700	976	1700		
Volume to Capacity	0.53	0.36	0.14	0.41		
Queue Length 95th (ft)	72	0	12	0		
Control Delay (s)	27.3	0.0	9.3	0.0		
Lane LOS	D		A			
Approach Delay (s)	27.3	0.0	1.5			
Approach LOS	D					
Intersection Summary						
Average Delay			3.7			
Intersection Capacity Utilization			57.8%		ICU Level of Service	B
Analysis Period (min)			15			

Lanes, Volumes, Timings
4: Proposed Driveway & Benns Church Boulevard

Wawa Benns Church TIA
Build Conditions

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	 			 		
Traffic Volume (vph)	1119	76	0	1005	0	89
Future Volume (vph)	1119	76	0	1005	0	89
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	0.850				0.865	
Flt Protected						
Satd. Flow (prot)	3471	1615	0	3438	0	1611
Flt Permitted						
Satd. Flow (perm)	3471	1615	0	3438	0	1611
Adj. Flow (vph)	1178	80	0	1058	0	94
Lane Group Flow (vph)	1178	80	0	1058	0	94
Sign Control	Free		Free		Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 43.1%			ICU Level of Service A			
Analysis Period (min) 15						

HCM Unsignalized Intersection Capacity Analysis
4: Proposed Driveway & Benns Church Boulevard

Wawa Benns Church TIA
Build Conditions

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗		↑↑		↗
Traffic Volume (veh/h)	1119	76	0	1005	0	89
Future Volume (Veh/h)	1119	76	0	1005	0	89
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1178	80	0	1058	0	94
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	Raised		Raised			
Median storage (veh)	1		1			
Upstream signal (ft)	431					
pX, platoon unblocked			0.76		0.76	0.76
vC, conflicting volume			1258		1707	589
vC1, stage 1 conf vol					1178	
vC2, stage 2 conf vol					529	
vCu, unblocked vol			700		1293	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	89
cM capacity (veh/h)			686		260	821
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	589	589	80	529	529	94
Volume Left	0	0	0	0	0	0
Volume Right	0	0	80	0	0	94
cSH	1700	1700	1700	1700	1700	821
Volume to Capacity	0.35	0.35	0.05	0.31	0.31	0.11
Queue Length 95th (ft)	0	0	0	0	0	10
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.9
Lane LOS						A
Approach Delay (s)	0.0		0.0		9.9	
Approach LOS						A
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			43.1%		ICU Level of Service A	
Analysis Period (min)			15			

Intersection: 1: Turner Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	109	360	397	280	352	371	314	354	250	90
Average Queue (ft)	12	220	229	131	241	161	125	281	197	34
95th Queue (ft)	63	329	356	273	376	364	279	412	323	72
Link Distance (ft)		2164	2164			355	355	340		116
Upstream Blk Time (%)					5	6	0	12		0
Queuing Penalty (veh)					0	31	1	82		0
Storage Bay Dist (ft)	140			280	450				250	
Storage Blk Time (%)	0	27	2	0	5	6		22	2	
Queuing Penalty (veh)	0	2	9	1	15	23		69	5	

Intersection: 2: Cypress Run Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	22	167	190	36	86	67	85	58	73	31
Average Queue (ft)	2	43	42	3	28	11	17	14	22	2
95th Queue (ft)	13	121	126	18	67	43	56	46	54	17
Link Distance (ft)		890	890			2164	2164	641		181
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	150			245	255				180	
Storage Blk Time (%)		0	0							
Queuing Penalty (veh)		0	0							

Intersection: 3: Proposed Driveway & Turner Drive

Movement	WB	NB	SB
Directions Served	LR	TR	L
Maximum Queue (ft)	125	301	73
Average Queue (ft)	82	79	36
95th Queue (ft)	138	264	64
Link Distance (ft)	102	358	
Upstream Blk Time (%)	31	2	
Queuing Penalty (veh)	0	0	
Storage Bay Dist (ft)			200
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Proposed Driveway & Bennis Church Boulevard

Movement	WB	WB	NB
Directions Served	T	T	R
Maximum Queue (ft)	184	128	84
Average Queue (ft)	35	20	35
95th Queue (ft)	185	136	68
Link Distance (ft)	1102	1102	79
Upstream Blk Time (%)			1
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 239

Lanes, Volumes, Timings

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	26	1053	161	286	1172	6	264	0	158	2	1	4
Future Volume (vph)	26	1053	161	286	1172	6	264	0	158	2	1	4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999			0.850		0.923		
Flt Protected	0.950			0.950				0.950		0.986		
Satd. Flow (prot)	1805	3539	1615	1787	3536	0	0	1787	1568	0	1729	0
Flt Permitted	0.136			0.085				0.609		0.839		
Satd. Flow (perm)	258	3539	1615	160	3536	0	0	1146	1568	0	1471	0
Satd. Flow (RTOR)			164		1			166		4		
Adj. Flow (vph)	27	1108	169	301	1234	6	278	0	166	2	1	4
Lane Group Flow (vph)	27	1108	169	301	1240	0	0	278	166	0	7	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4		4	8		
Total Split (s)	16.0	56.0	56.0	32.0	72.0		23.5	42.0	42.0	18.5	18.5	
Total Lost Time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Act Effct Green (s)	76.0	50.0	50.0	73.0	73.5			34.5	34.5		11.0	
Actuated g/C Ratio	0.58	0.38	0.38	0.56	0.57			0.27	0.27		0.08	
v/c Ratio	0.12	0.81	0.23	0.76	0.62			0.73	0.31		0.05	
Control Delay	8.3	28.5	5.1	55.0	21.7			54.0	7.0		41.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay	8.3	28.5	5.1	55.0	21.7			54.0	7.0		41.6	
LOS	A	C	A	E	C			D	A		D	
Approach Delay		25.0			28.2			36.4			41.6	
Approach LOS		C			C			D			D	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 42 (32%), Referenced to phase 2:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 28.1

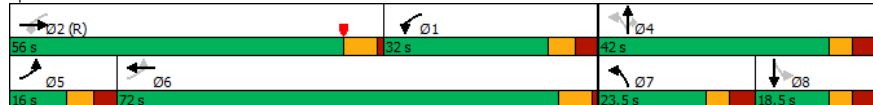
Intersection LOS: C

Intersection Capacity Utilization 83.7%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Turner Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	26	1053	161	286	1172	6	264	0	158	2	1	4
Future Volume (vph)	26	1053	161	286	1172	6	264	0	158	2	1	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)	1805	3539	1615	1787	3537			1787	1568		1729	
Flt Permitted	0.14	1.00	1.00	0.09	1.00			0.61	1.00		0.84	
Satd. Flow (perm)	259	3539	1615	160	3537			1146	1568		1471	
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)	27	1108	169	301	1234	6	278	0	166	2	1	4
RTOR Reduction (vph)	0	0	105	0	0	0	0	0	122	0	4	0
Lane Group Flow (vph)	27	1108	169	301	1240	0	0	278	166	0	7	0
Heavy Vehicles (%)	0%	2%	0%	1%	2%	0%	1%	0%	3%	0%	0%	0%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4		4	8		
Actuated Green, G (s)	74.5	47.0	47.0	74.5	70.5			34.5	34.5		11.0	
Effective Green, g (s)	74.5	47.0	47.0	74.5	70.5			34.5	34.5		11.0	
Actuated g/C Ratio	0.57	0.36	0.36	0.57	0.54			0.27	0.27		0.08	
Clearance Time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	195	1279	583	435	1918			383	416		124	
v/s Ratio Prot	0.00	c0.31		0.15	c0.35			c0.09				
v/s Ratio Perm	0.07		0.04	0.25				c0.10	0.03		0.00	
v/c Ratio	0.14	0.87	0.11	0.69	0.65			0.73	0.11		0.03	
Uniform Delay, d1	15.2	38.6	27.6	39.9	21.0			43.4	36.1		54.6	
Progression Factor	0.74	0.65	1.02	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.3	7.3	0.3	4.7	1.7			11.4	0.5		0.4	
Delay (s)	11.5	32.3	28.6	44.6	22.7			54.8	36.6		55.0	
Level of Service	B	C	C	D	C			D	D		D	
Approach Delay (s)		31.4			27.0			48.0			55.0	
Approach LOS		C			C			D			D	

Intersection Summary

HCM 2000 Control Delay

31.6

HCM 2000 Level of Service

C

HCM 2000 Volume to Capacity ratio

0.84

Actuated Cycle Length (s)

130.0

Sum of lost time (s)

28.5

Intersection Capacity Utilization

83.7%

ICU Level of Service

E

Analysis Period (min)

15

Critical Lane Group

Lanes, Volumes, Timings

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	0	↩	↩	↩	0	↩	0
Traffic Volume (vph)	3	1128	115	192	1248	0	99	0	95	0	4	0
Future Volume (vph)	3	1128	115	192	1248	0	99	0	95	0	4	0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850						0.850				
Flt Protected	0.950			0.950				0.950				
Satd. Flow (prot)	1805	3471	1553	1805	3539	0	0	1805	1615	0	1900	0
Flt Permitted	0.173			0.185				0.950				
Satd. Flow (perm)	329	3471	1553	352	3539	0	0	1805	1615	0	1900	0
Satd. Flow (RTOR)			138					197				
Adj. Flow (vph)	3	1151	117	196	1273	0	101	0	97	0	4	0
Lane Group Flow (vph)	3	1151	117	196	1273	0	0	101	97	0	4	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm		NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	6		2	2				4				
Total Split (s)	13.0	68.0	68.0	25.0	80.0		24.0	24.0	13.0	13.0		
Total Lost Time (s)	7.5	6.0	6.0	7.0	6.0		6.5	6.5		6.0		
Act Effct Green (s)	99.3	84.1	84.1	94.3	99.7		12.6	12.6		7.0		
Actuated g/C Ratio	0.76	0.65	0.65	0.73	0.77		0.10	0.10		0.05		
v/c Ratio	0.01	0.51	0.11	0.51	0.47		0.58	0.29		0.04		
Control Delay	6.0	15.2	1.9	9.5	5.4		68.7	2.2		59.2		
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0		
Total Delay	6.0	15.2	1.9	9.5	5.4		68.7	2.2		59.2		
LOS	A	B	A	A	A		E	A		E		
Approach Delay		14.0			5.9		36.1			59.3		
Approach LOS		B			A		D			E		

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 11.5

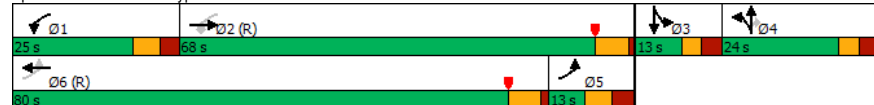
Intersection LOS: B

Intersection Capacity Utilization 70.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Cypress Run Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	0	↩	↩	↩	0	↩	0
Traffic Volume (vph)	3	1128	115	192	1248	0	99	0	95	0	4	0
Future Volume (vph)	3	1128	115	192	1248	0	99	0	95	0	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1805	3471	1553	1805	3539			1805	1615		1900	
Flt Permitted	0.17	1.00	1.00	0.18	1.00			0.95	1.00		1.00	
Satd. Flow (perm)	329	3471	1553	351	3539			1805	1615		1900	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	3	1151	117	196	1273	0	101	0	97	0	4	0
RTOR Reduction (vph)	0	0	46	0	0	0	0	0	88	0	0	0
Lane Group Flow (vph)	3	1151	71	196	1273	0	0	101	9	0	4	0
Heavy Vehicles (%)	0%	4%	4%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm		NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	6		2	2				4				
Actuated Green, G (s)	90.0	79.2	79.2	90.5	88.9			12.6	12.6		1.4	
Effective Green, g (s)	90.0	79.2	79.2	90.5	88.9			12.6	12.6		1.4	
Actuated g/C Ratio	0.69	0.61	0.61	0.70	0.68			0.10	0.10		0.01	
Clearance Time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	240	2114	946	370	2420			174	156		20	
v/s Ratio Prot	0.00	c0.33		0.05	c0.36			c0.06			c0.00	
v/s Ratio Perm	0.01		0.05	0.32					0.01			
v/c Ratio	0.01	0.54	0.08	0.53	0.53			0.58	0.06		0.20	
Uniform Delay, d1	13.2	14.9	10.4	9.3	10.1			56.2	53.3		63.7	
Progression Factor	1.00	1.00	1.00	1.09	0.64			1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.0	0.2	1.1	0.6			4.9	0.2		4.9	
Delay (s)	13.2	15.9	10.6	11.2	7.2			61.0	53.5		68.6	
Level of Service	B	B	B	B	A			E	D		E	
Approach Delay (s)		15.4			7.7			57.3			68.6	
Approach LOS		B			A			E			E	

Intersection Summary

HCM 2000 Control Delay

HCM 2000 Level of Service

B

HCM 2000 Volume to Capacity ratio

0.57

Actuated Cycle Length (s)

130.0

Sum of lost time (s)

26.0

Intersection Capacity Utilization

70.2%

ICU Level of Service

C

Analysis Period (min)

15

c Critical Lane Group

Lanes, Volumes, Timings

3: Proposed Driveway & Turner Drive

Wawa Bennis Church TIA

Build Conditions

	←	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖		↑		↘	↓
Traffic Volume (vph)	13	114	308	39	98	350
Future Volume (vph)	13	114	308	39	98	350
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.879		0.985			
Flt Protected	0.995				0.950	
Satd. Flow (prot)	1629	0	1867	0	1805	1900
Flt Permitted	0.995				0.950	
Satd. Flow (perm)	1629	0	1867	0	1805	1900
Adj. Flow (vph)	14	120	324	41	103	368
Lane Group Flow (vph)	134	0	365	0	103	368
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 41.8%						
Analysis Period (min) 15						
ICU Level of Service A						

HCM Unsignalized Intersection Capacity Analysis

3: Proposed Driveway & Turner Drive

Wawa Bennis Church TIA

Build Conditions

	←	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖		↑		↘	↓
Traffic Volume (veh/h)	13	114	308	39	98	350
Future Volume (Veh/h)	13	114	308	39	98	350
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	14	120	324	41	103	368
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						450
pX, platoon unblocked	0.89					
vC, conflicting volume	918	344			365	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	849	344			365	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	83			91	
cM capacity (veh/h)	271	698			1205	
Direction, Lane #						
Volume Total	134	365	103	368		
Volume Left	14	0	103	0		
Volume Right	120	41	0	0		
cSH	599	1700	1205	1700		
Volume to Capacity	0.22	0.21	0.09	0.22		
Queue Length 95th (ft)	21	0	7	0		
Control Delay (s)	12.7	0.0	8.3	0.0		
Lane LOS	B		A			
Approach Delay (s)	12.7	0.0	1.8			
Approach LOS	B					
Intersection Summary						
Average Delay			2.6			
Intersection Capacity Utilization			41.8%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
4: Proposed Driveway & Benns Church Boulevard

Wawa Benns Church TIA
Build Conditions

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑		↑↑		↑
Traffic Volume (vph)	1154	59	0	1464	0	68
Future Volume (vph)	1154	59	0	1464	0	68
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	0.850				0.865	
Flt Protected						
Satd. Flow (prot)	3539	1615	0	3539	0	1611
Flt Permitted						
Satd. Flow (perm)	3539	1615	0	3539	0	1611
Adj. Flow (vph)	1215	62	0	1541	0	72
Lane Group Flow (vph)	1215	62	0	1541	0	72
Sign Control	Free		Free		Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 43.8%			ICU Level of Service A			
Analysis Period (min) 15						

HCM Unsignalized Intersection Capacity Analysis
4: Proposed Driveway & Benns Church Boulevard

Wawa Benns Church TIA
Build Conditions

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗		↑↑		↗
Traffic Volume (veh/h)	1154	59	0	1464	0	68
Future Volume (Veh/h)	1154	59	0	1464	0	68
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1215	62	0	1541	0	72
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	Raised			Raised		
Median storage (veh)	1			1		
Upstream signal (ft)	434					
pX, platoon unblocked			0.71		0.71	0.71
vC, conflicting volume			1277		1986	608
vC1, stage 1 conf vol					1215	
vC2, stage 2 conf vol					770	
vCu, unblocked vol			570		1569	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	91
cM capacity (veh/h)			718		226	769
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	608	608	62	770	770	72
Volume Left	0	0	0	0	0	0
Volume Right	0	0	62	0	0	72
cSH	1700	1700	1700	1700	1700	769
Volume to Capacity	0.36	0.36	0.04	0.45	0.45	0.09
Queue Length 95th (ft)	0	0	0	0	0	8
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.2
Lane LOS						B
Approach Delay (s)	0.0		0.0		10.2	
Approach LOS						B
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			43.8%		ICU Level of Service	
Analysis Period (min)			15		A	

Intersection: 1: Turner Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	139	399	414	280	335	372	349	320	237	31
Average Queue (ft)	30	232	246	101	198	209	195	173	80	6
95th Queue (ft)	94	365	384	280	314	332	309	287	198	26
Link Distance (ft)		2169	2169			358	358	340		115
Upstream Blk Time (%)					0	1	0	0		
Queuing Penalty (veh)					0	5	1	2		
Storage Bay Dist (ft)	140			280	450				250	
Storage Blk Time (%)	0	17	4	0	0	1		2	0	
Queuing Penalty (veh)	0	4	6	2	1	2		3	0	

Intersection: 2: Cypress Run Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	35	294	269	114	203	196	206	171	144	30
Average Queue (ft)	2	145	120	25	95	47	63	73	34	4
95th Queue (ft)	20	262	240	83	171	131	153	135	80	20
Link Distance (ft)		885	885			2169	2169	657		94
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	150			245	255				180	
Storage Blk Time (%)		6	0	0	0			0	0	
Queuing Penalty (veh)		0	1	0	0			0	0	

Intersection: 3: Proposed Driveway & Turner Drive

Movement	WB	NB	SB
Directions Served	LR	TR	L
Maximum Queue (ft)	94	38	69
Average Queue (ft)	44	3	24
95th Queue (ft)	77	27	55
Link Distance (ft)	102	388	
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			200
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Proposed Driveway & Bennis Church Boulevard

Movement	WB	WB	NB
Directions Served	T	T	R
Maximum Queue (ft)	68	40	83
Average Queue (ft)	4	1	30
95th Queue (ft)	43	29	64
Link Distance (ft)	1102	1102	78
Upstream Blk Time (%)			1
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 28

Lanes, Volumes, Timings

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	9	877	292	287	584	47	280	5	243	1	42	3
Future Volume (vph)	9	877	292	287	584	47	280	5	243	1	42	3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.989			0.853			0.992	
Flt Protected	0.950			0.950			0.950				0.999	
Satd. Flow (prot)	1770	3406	1615	1805	3412	0	1787	1605	0	0	1845	0
Flt Permitted	0.353			0.158			0.620				0.983	
Satd. Flow (perm)	658	3406	1615	300	3412	0	1166	1605	0	0	1815	0
Satd. Flow (RTOR)			307		8		256				2	
Adj. Flow (vph)	9	923	307	302	615	49	295	5	256	1	44	3
Lane Group Flow (vph)	9	923	307	302	664	0	295	261	0	0	48	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4			8		
Total Split (s)	16.0	37.0	37.0	30.0	51.0		25.0	48.0		23.0	23.0	
Total Lost Time (s)	7.5	6.0	6.0	7.5	6.0		4.5	7.5			7.5	
Act Effct Green (s)	68.5	43.9	43.9	62.5	68.3		33.0	30.0			8.3	
Actuated g/C Ratio	0.60	0.38	0.38	0.54	0.59		0.29	0.26			0.07	
v/c Ratio	0.02	0.71	0.38	0.71	0.33		0.67	0.43			0.36	
Control Delay	11.3	29.1	3.2	29.5	14.3		41.9	6.2			55.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	11.3	29.1	3.2	29.5	14.3		41.9	6.2			55.9	
LOS	B	C	A	C	B		D	A			E	
Approach Delay		22.6			19.1			25.2			55.9	
Approach LOS		C			B			C			E	

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 112 (97%), Referenced to phase 2:EBWB and 6:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 22.5

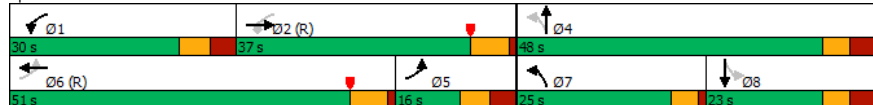
Intersection LOS: C

Intersection Capacity Utilization 79.8%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Turner Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	9	877	292	287	584	47	280	5	243	1	42	3
Future Volume (vph)	9	877	292	287	584	47	280	5	243	1	42	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.5	6.0		4.5	7.5			7.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.85			0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1770	3406	1615	1805	3412		1787	1605			1844	
Flt Permitted	0.35	1.00	1.00	0.16	1.00		0.62	1.00			0.98	
Satd. Flow (perm)	658	3406	1615	300	3412		1166	1605			1815	
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)	9	923	307	302	615	49	295	5	256	1	44	3
RTOR Reduction (vph)	0	0	194	0	4	0	0	186	0	0	2	0
Lane Group Flow (vph)	9	923	113	302	660	0	295	75	0	0	46	0
Heavy Vehicles (%)	2%	6%	0%	0%	5%	0%	1%	0%	1%	0%	0%	33%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4			8		
Actuated Green, G (s)	62.6	42.5	42.5	62.6	60.9		31.4	31.4			7.2	
Effective Green, g (s)	62.6	42.5	42.5	62.6	60.9		31.4	31.4			7.2	
Actuated g/C Ratio	0.54	0.37	0.37	0.54	0.53		0.27	0.27			0.06	
Clearance Time (s)	7.5	6.0	6.0	7.5	6.0		4.5	7.5			7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	374	1258	596	426	1806		424	438			113	
v/s Ratio Prot	0.00	c0.27		c0.12	0.19		c0.12	0.05				
v/s Ratio Perm	0.01		0.07	0.26			c0.07				0.03	
v/c Ratio	0.02	0.73	0.19	0.71	0.37		0.70	0.17			0.41	
Uniform Delay, d1	15.5	31.4	24.6	18.3	15.8		36.5	31.9			51.9	
Progression Factor	0.97	0.76	0.55	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.0	3.4	0.6	5.3	0.6		4.9	0.2			2.4	
Delay (s)	15.2	27.3	14.1	23.7	16.4		41.4	32.1			54.2	
Level of Service	B	C	B	C	B		D	C			D	
Approach Delay (s)		24.0			18.6			37.0			54.2	
Approach LOS		C			B			D			D	

Intersection Summary

HCM 2000 Control Delay

HCM 2000 Level of Service

C

HCM 2000 Volume to Capacity ratio

0.75

Actuated Cycle Length (s)

115.0

Sum of lost time (s)

25.5

Intersection Capacity Utilization

79.8%

ICU Level of Service

D

Analysis Period (min)

15

Critical Lane Group

Lanes, Volumes, Timings

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1246	30	45	820	2	15	0	38	2	0	0
Future Volume (vph)	3	1246	30	45	820	2	15	0	38	2	0	0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850						0.850				
Flt Protected	0.950			0.950				0.950			0.950	
Satd. Flow (prot)	1805	3471	1509	1641	3374	0	0	1492	1495	0	1203	0
Flt Permitted	0.308			0.155				0.950				
Satd. Flow (perm)	585	3471	1509	268	3374	0	0	1492	1495	0	1267	0
Satd. Flow (RTOR)			161					157				
Adj. Flow (vph)	3	1298	31	47	854	2	16	0	40	2	0	0
Lane Group Flow (vph)	3	1298	31	47	856	0	0	16	40	0	2	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		4	4			3	
Permitted Phases	6		2	2				4		3		
Total Split (s)	16.0	67.0	67.0	16.0	67.0		16.0	16.0	16.0	16.0		
Total Lost Time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Act Effct Green (s)	92.3	86.1	86.1	88.5	93.7			7.5	7.5		7.0	
Actuated g/C Ratio	0.80	0.75	0.75	0.77	0.81			0.07	0.07		0.06	
v/c Ratio	0.01	0.50	0.03	0.17	0.31			0.17	0.16		0.03	
Control Delay	4.3	9.3	0.0	3.2	2.5			54.5	1.4		51.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay	4.3	9.3	0.0	3.2	2.5			54.5	1.4		51.5	
LOS	A	A	A	A	A			D	A		D	
Approach Delay		9.1			2.6			16.6			51.5	
Approach LOS		A			A			B			D	

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 10 (9%), Referenced to phase 2:EBWB and 6:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 6.7

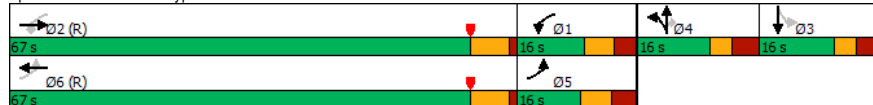
Intersection LOS: A

Intersection Capacity Utilization 61.5%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 2: Cypress Run Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations												
Traffic Volume (vph)	3	1246	30	45	820	2	15	0	38	2	0	0
Future Volume (vph)	3	1246	30	45	820	2	15	0	38	2	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	
Satd. Flow (prot)	1805	3471	1509	1641	3373			1492	1495		1203	
Flt Permitted	0.31	1.00	1.00	0.15	1.00			0.95	1.00		1.00	
Satd. Flow (perm)	585	3471	1509	267	3373			1492	1495		1267	
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)	3	1298	31	47	854	2	16	0	40	2	0	0
RTOR Reduction (vph)	0	0	11	0	0	0	0	0	38	0	0	0
Lane Group Flow (vph)	3	1298	20	47	856	0	0	16	2	0	2	0
Heavy Vehicles (%)	0%	4%	7%	10%	7%	0%	21%	0%	8%	50%	0%	0%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		4	4			3	
Permitted Phases	6		2	2					4		3	
Actuated Green, G (s)	81.5	72.8	72.8	82.0	80.4			6.1	6.1		1.4	
Effective Green, g (s)	81.5	72.8	72.8	82.0	80.4			6.1	6.1		1.4	
Actuated g/C Ratio	0.71	0.63	0.63	0.71	0.70			0.05	0.05		0.01	
Clearance Time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	426	2197	955	300	2358			79	79		15	
v/s Ratio Prot	0.00	c0.37		c0.01	c0.25			c0.01				
v/s Ratio Perm	0.00		0.01	0.10					0.00		c0.00	
v/c Ratio	0.01	0.59	0.02	0.16	0.36			0.20	0.03		0.13	
Uniform Delay, d1	6.7	12.4	7.8	13.9	7.0			52.1	51.6		56.2	
Progression Factor	1.00	1.00	1.00	0.39	0.46			1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.2	0.0	0.2	0.4			1.3	0.1		4.0	
Delay (s)	6.7	13.5	7.9	5.6	3.6			53.4	51.8		60.2	
Level of Service	A	B	A	A	A			D	D		E	
Approach Delay (s)		13.4			3.7			52.2			60.2	
Approach LOS		B			A			D			E	

Intersection Summary

HCM 2000 Control Delay 10.6

HCM 2000 Level of Service B

HCM 2000 Volume to Capacity ratio 0.52

Actuated Cycle Length (s) 115.0

Sum of lost time (s) 26.0

Intersection Capacity Utilization 61.5%

ICU Level of Service B

Analysis Period (min) 15

c Critical Lane Group

Lanes, Volumes, Timings

3: Proposed Driveway & Turner Drive

Wawa Bennis Church TIA

Build Conditions

	↖	↗	↑	↘	↙	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖		↑		↙	↓
Traffic Volume (vph)	19	146	382	51	127	494
Future Volume (vph)	19	146	382	51	127	494
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.881		0.984			
Flt Protected	0.994				0.950	
Satd. Flow (prot)	1647	0	1833	0	1787	1881
Flt Permitted	0.994				0.950	
Satd. Flow (perm)	1647	0	1833	0	1787	1881
Adj. Flow (vph)	20	154	402	54	134	520
Lane Group Flow (vph)	174	0	456	0	134	520
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 50.3%						
Analysis Period (min) 15						
ICU Level of Service A						

HCM Unsignalized Intersection Capacity Analysis

3: Proposed Driveway & Turner Drive

Wawa Bennis Church TIA

Build Conditions

	↖	↗	↑	↘	↙	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖		↑		↙	↓
Traffic Volume (veh/h)	19	146	382	51	127	494
Future Volume (Veh/h)	19	146	382	51	127	494
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	20	154	402	54	134	520
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						450
pX, platoon unblocked	0.90					
vC, conflicting volume	1217	429			456	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1184	429			456	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	88	75			88	
cM capacity (veh/h)	165	628			1110	
Direction, Lane #						
Volume Total	174	456	134	520		
Volume Left	20	0	134	0		
Volume Right	154	54	0	0		
cSH	475	1700	1110	1700		
Volume to Capacity	0.37	0.27	0.12	0.31		
Queue Length 95th (ft)	41	0	10	0		
Control Delay (s)	16.9	0.0	8.7	0.0		
Lane LOS	C		A			
Approach Delay (s)	16.9	0.0	1.8			
Approach LOS	C					
Intersection Summary						
Average Delay			3.2			
Intersection Capacity Utilization			50.3%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
4: Proposed Driveway & Benns Church Boulevard

Wawa Benns Church TIA
Build Conditions

	→	↗	↖	←	↙	↘
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗		↑↑		↗
Traffic Volume (vph)	1045	76	0	918	0	89
Future Volume (vph)	1045	76	0	918	0	89
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt		0.850				0.865
Flt Protected						
Satd. Flow (prot)	3471	1615	0	3438	0	1611
Flt Permitted						
Satd. Flow (perm)	3471	1615	0	3438	0	1611
Adj. Flow (vph)	1100	80	0	966	0	94
Lane Group Flow (vph)	1100	80	0	966	0	94
Sign Control	Free			Free	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 41.1%			ICU Level of Service A			
Analysis Period (min) 15						

HCM Unsignalized Intersection Capacity Analysis
4: Proposed Driveway & Benns Church Boulevard

Wawa Benns Church TIA
Build Conditions

	→	↗	↖	←	↙	↘
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗		↑↑		↗
Traffic Volume (veh/h)	1045	76	0	918	0	89
Future Volume (Veh/h)	1045	76	0	918	0	89
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1100	80	0	966	0	94
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	Raised		Raised			
Median storage (veh)	1		1			
Upstream signal (ft)	431					
pX, platoon unblocked			0.77		0.77	0.77
vC, conflicting volume			1180		1583	550
vC1, stage 1 conf vol					1100	
vC2, stage 2 conf vol					483	
vCu, unblocked vol			646		1167	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	89
cM capacity (veh/h)			734		288	838
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	550	550	80	483	483	94
Volume Left	0	0	0	0	0	0
Volume Right	0	0	80	0	0	94
cSH	1700	1700	1700	1700	1700	838
Volume to Capacity	0.32	0.32	0.05	0.28	0.28	0.11
Queue Length 95th (ft)	0	0	0	0	0	9
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.8
Lane LOS						A
Approach Delay (s)	0.0			0.0		9.8
Approach LOS						A
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			41.1%	ICU Level of Service		A
Analysis Period (min)	15					

Intersection: 1: Turner Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	L	TR	LTR
Maximum Queue (ft)	85	372	399	280	284	222	190	249	332	97
Average Queue (ft)	11	198	203	88	145	89	87	175	111	43
95th Queue (ft)	56	325	338	218	241	176	163	261	256	87
Link Distance (ft)		2164	2164			365	365		340	116
Upstream Blk Time (%)						0			1	0
Queuing Penalty (veh)						0			4	0
Storage Bay Dist (ft)	140			280	450			250		
Storage Blk Time (%)	0	19	2	0		0		3	1	
Queuing Penalty (veh)	0	2	6	1		0		7	2	

Intersection: 2: Cypress Run Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	20	173	159	29	71	97	86	76	59	42
Average Queue (ft)	1	45	40	3	23	13	18	18	21	3
95th Queue (ft)	11	122	116	16	54	52	60	53	47	20
Link Distance (ft)		890	890			2164	2164	641		181
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	150			245	255				180	
Storage Blk Time (%)		0	0							
Queuing Penalty (veh)		0	0							

Intersection: 3: Proposed Driveway & Turner Drive

Movement	WB	NB	SB
Directions Served	LR	TR	L
Maximum Queue (ft)	108	48	82
Average Queue (ft)	53	3	33
95th Queue (ft)	92	24	66
Link Distance (ft)	102	358	
Upstream Blk Time (%)	1		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			200
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Proposed Driveway & Bennis Church Boulevard

Movement	NB
Directions Served	R
Maximum Queue (ft)	88
Average Queue (ft)	34
95th Queue (ft)	70
Link Distance (ft)	79
Upstream Blk Time (%)	1
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 22

Lanes, Volumes, Timings

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	26	1053	141	266	1172	6	243	5	137	2	1	4
Future Volume (vph)	26	1053	141	266	1172	6	243	5	137	2	1	4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999			0.855			0.923	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1805	3539	1615	1787	3536	0	1787	1579	0	0	1729	0
Flt Permitted	0.128			0.111			0.613				0.881	
Satd. Flow (perm)	243	3539	1615	209	3536	0	1153	1579	0	0	1545	0
Satd. Flow (RTOR)			164		1		144				4	
Adj. Flow (vph)	27	1108	148	280	1234	6	256	5	144	2	1	4
Lane Group Flow (vph)	27	1108	148	280	1240	0	256	149	0	0	7	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4			8		
Total Split (s)	17.0	56.0	56.0	31.0	70.0		24.0	43.0		19.0	19.0	
Total Lost Time (s)	7.5	6.0	6.0	7.5	6.0		7.5	7.5			7.5	
Act Effct Green (s)	75.0	53.8	53.8	72.0	70.8		35.5	35.5			11.5	
Actuated g/C Ratio	0.58	0.41	0.41	0.55	0.54		0.27	0.27			0.09	
v/c Ratio	0.12	0.76	0.19	0.79	0.64		0.65	0.28			0.05	
Control Delay	8.6	21.6	1.1	43.9	24.1		49.0	7.6			41.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	8.6	21.6	1.1	43.9	24.1		49.0	7.6			41.0	
LOS	A	C	A	D	C		D	A			D	
Approach Delay		19.0			27.7			33.8			41.0	
Approach LOS		B			C			C			D	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 32 (25%), Referenced to phase 2:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 25.0

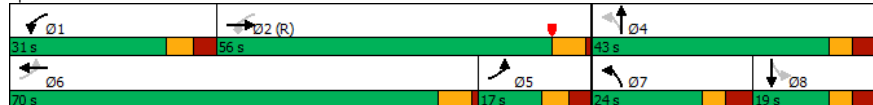
Intersection LOS: C

Intersection Capacity Utilization 81.5%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Turner Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	↩	↩	↩	↩	↩	↩	↩
Traffic Volume (vph)	26	1053	141	266	1172	6	243	5	137	2	1	4
Future Volume (vph)	26	1053	141	266	1172	6	243	5	137	2	1	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.5	6.0		7.5	7.5			7.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.86			0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1805	3539	1615	1787	3537		1787	1579			1729	
Flt Permitted	0.13	1.00	1.00	0.11	1.00		0.61	1.00			0.88	
Satd. Flow (perm)	243	3539	1615	210	3537		1153	1579			1544	
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)	27	1108	148	280	1234	6	256	5	144	2	1	4
RTOR Reduction (vph)	0	0	87	0	0	0	105	0	0	4	0	0
Lane Group Flow (vph)	27	1108	61	280	1240	0	256	44	0	0	3	0
Heavy Vehicles (%)	0%	2%	0%	1%	2%	0%	1%	0%	3%	0%	0%	0%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4			8		
Actuated Green, G (s)	73.5	53.8	53.8	73.5	67.8		35.5	35.5			11.5	
Effective Green, g (s)	73.5	53.8	53.8	73.5	67.8		35.5	35.5			11.5	
Actuated g/C Ratio	0.57	0.41	0.41	0.57	0.52		0.27	0.27			0.09	
Clearance Time (s)	7.5	6.0	6.0	7.5	6.0		7.5	7.5			7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	205	1464	668	357	1844		395	431			136	
v/s Ratio Prot	0.01	0.31		0.12	c0.35		c0.08	0.03				
v/s Ratio Perm	0.07		0.04	c0.32			c0.09				0.00	
v/c Ratio	0.13	0.76	0.09	0.78	0.67		0.65	0.10			0.02	
Uniform Delay, d1	30.3	32.5	23.2	29.2	22.9		40.3	35.3			54.1	
Progression Factor	0.62	0.55	0.22	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.3	3.3	0.2	10.8	2.0		8.0	0.5			0.3	
Delay (s)	19.2	21.0	5.3	40.0	24.9		48.3	35.8			54.5	
Level of Service	B	C	A	D	C		D	D			D	
Approach Delay (s)		19.2			27.7			43.7			54.5	
Approach LOS		B			C			D			D	

Intersection Summary

HCM 2000 Control Delay

HCM 2000 Level of Service

C

HCM 2000 Volume to Capacity ratio

0.79

Actuated Cycle Length (s)

130.0

Sum of lost time (s)

28.5

Intersection Capacity Utilization

81.5%

ICU Level of Service

D

Analysis Period (min)

15

Critical Lane Group

Lanes, Volumes, Timings

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	0	↩	↩	↩	0	↩↩	0
Traffic Volume (vph)	3	1108	115	192	1227	0	99	0	95	0	4	0
Future Volume (vph)	3	1108	115	192	1227	0	99	0	95	0	4	0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected	0.950			0.950				0.950				
Satd. Flow (prot)	1805	3471	1553	1805	3539	0	0	1805	1615	0	1900	0
Flt Permitted	0.178			0.156				0.950				
Satd. Flow (perm)	338	3471	1553	296	3539	0	0	1805	1615	0	1900	0
Satd. Flow (RTOR)			138					197				
Adj. Flow (vph)	3	1131	117	196	1252	0	101	0	97	0	4	0
Lane Group Flow (vph)	3	1131	117	196	1252	0	0	101	97	0	4	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm		NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	6		2	2				4				
Total Split (s)	13.0	68.0	68.0	25.0	80.0		24.0	24.0	13.0	13.0		
Total Lost Time (s)	7.5	6.0	6.0	7.0	6.0		6.5	6.5		6.0		
Act Effct Green (s)	99.3	77.3	77.3	94.3	99.7		12.6	12.6		7.0		
Actuated g/C Ratio	0.76	0.59	0.59	0.73	0.77		0.10	0.10		0.05		
v/c Ratio	0.01	0.55	0.12	0.46	0.46		0.58	0.29		0.04		
Control Delay	6.0	18.4	2.0	10.8	3.0		68.7	2.2		59.2		
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0		
Total Delay	6.0	18.4	2.0	10.8	3.0		68.7	2.2		59.2		
LOS	A	B	A	B	A		E	A		E		
Approach Delay		16.9			4.1			36.1			59.3	
Approach LOS		B			A			D			E	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 16 (12%), Referenced to phase 2:EBWB and 6:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 11.9

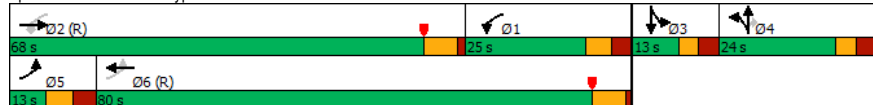
Intersection LOS: B

Intersection Capacity Utilization 69.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Cypress Run Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	0	↩	↩	↩	0	↩↩	0
Traffic Volume (vph)	3	1108	115	192	1227	0	99	0	95	0	4	0
Future Volume (vph)	3	1108	115	192	1227	0	99	0	95	0	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1805	3471	1553	1805	3539			1805	1615		1900	
Flt Permitted	0.18	1.00	1.00	0.16	1.00			0.95	1.00		1.00	
Satd. Flow (perm)	339	3471	1553	296	3539			1805	1615		1900	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	3	1131	117	196	1252	0	101	0	97	0	4	0
RTOR Reduction (vph)	0	0	57	0	0	0	0	0	88	0	0	0
Lane Group Flow (vph)	3	1131	60	196	1252	0	0	101	9	0	4	0
Heavy Vehicles (%)	0%	4%	4%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm		NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	6		2	2				4				
Actuated Green, G (s)	90.0	66.5	66.5	90.5	88.9			12.6	12.6		1.4	
Effective Green, g (s)	90.0	66.5	66.5	90.5	88.9			12.6	12.6		1.4	
Actuated g/C Ratio	0.69	0.51	0.51	0.70	0.68			0.10	0.10		0.01	
Clearance Time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	247	1775	794	484	2420			174	156		20	
v/s Ratio Prot	0.00	c0.33		0.07	c0.35			c0.06			c0.00	
v/s Ratio Perm	0.01		0.04	0.21					0.01			
v/c Ratio	0.01	0.64	0.08	0.40	0.52			0.58	0.06		0.20	
Uniform Delay, d1	7.4	23.0	16.1	26.6	10.1			56.2	53.3		63.7	
Progression Factor	1.00	1.00	1.00	0.52	0.34			1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.8	0.2	0.4	0.6			4.9	0.2		4.9	
Delay (s)	7.4	24.8	16.3	14.2	4.0			61.0	53.5		68.6	
Level of Service	A	C	B	B	A			E	D		E	
Approach Delay (s)		23.9			5.4			57.3			68.6	
Approach LOS		C			A			E			E	

Intersection Summary

HCM 2000 Control Delay

HCM 2000 Level of Service

B

HCM 2000 Volume to Capacity ratio

0.62

Actuated Cycle Length (s)

130.0

Sum of lost time (s)

26.0

Intersection Capacity Utilization

69.7%

ICU Level of Service

C

Analysis Period (min)

15

c Critical Lane Group

Lanes, Volumes, Timings

3: Proposed Driveway & Turner Drive

Wawa Bennis Church TIA

Build Conditions

	↖	↗	↑	↘	↙	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖		↑		↘	↓
Traffic Volume (vph)	13	114	271	39	98	310
Future Volume (vph)	13	114	271	39	98	310
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.879		0.983			
Flt Protected	0.995				0.950	
Satd. Flow (prot)	1629	0	1863	0	1805	1900
Flt Permitted	0.995				0.950	
Satd. Flow (perm)	1629	0	1863	0	1805	1900
Adj. Flow (vph)	14	120	285	41	103	326
Lane Group Flow (vph)	134	0	326	0	103	326
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 39.8%						
Analysis Period (min) 15						
ICU Level of Service A						

HCM Unsignalized Intersection Capacity Analysis

3: Proposed Driveway & Turner Drive

Wawa Bennis Church TIA

Build Conditions

	↖	↗	↑	↘	↙	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖		↑		↘	↓
Traffic Volume (veh/h)	13	114	271	39	98	310
Future Volume (Veh/h)	13	114	271	39	98	310
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	14	120	285	41	103	326
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						450
pX, platoon unblocked	0.92					
vC, conflicting volume	838	306			326	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	777	306			326	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	84			92	
cM capacity (veh/h)	307	734			1245	
Direction, Lane #						
Volume Total	134	326	103	326		
Volume Left	14	0	103	0		
Volume Right	120	41	0	0		
cSH	641	1700	1245	1700		
Volume to Capacity	0.21	0.19	0.08	0.19		
Queue Length 95th (ft)	20	0	7	0		
Control Delay (s)	12.1	0.0	8.2	0.0		
Lane LOS	B		A			
Approach Delay (s)	12.1	0.0	2.0			
Approach LOS	B					
Intersection Summary						
Average Delay			2.8			
Intersection Capacity Utilization			39.8%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
4: Proposed Driveway & Benns Church Boulevard

Wawa Benns Church TIA
Build Conditions

	→	↗	↖	←	↙	↘
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗		↑↑		↗
Traffic Volume (vph)	1133	59	0	1444	0	68
Future Volume (vph)	1133	59	0	1444	0	68
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	0.850				0.865	
Flt Protected						
Satd. Flow (prot)	3539	1615	0	3539	0	1611
Flt Permitted						
Satd. Flow (perm)	3539	1615	0	3539	0	1611
Adj. Flow (vph)	1193	62	0	1520	0	72
Lane Group Flow (vph)	1193	62	0	1520	0	72
Sign Control	Free				Free	Stop
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 43.2%			ICU Level of Service A			
Analysis Period (min) 15						

HCM Unsignalized Intersection Capacity Analysis
4: Proposed Driveway & Benns Church Boulevard

Wawa Benns Church TIA
Build Conditions

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗		↑↑		↗
Traffic Volume (veh/h)	1133	59	0	1444	0	68
Future Volume (Veh/h)	1133	59	0	1444	0	68
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1193	62	0	1520	0	72
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	Raised		Raised			
Median storage (veh)	1		1			
Upstream signal (ft)	434					
pX, platoon unblocked			0.73		0.73	0.73
vC, conflicting volume			1255		1953	596
vC1, stage 1 conf vol					1193	
vC2, stage 2 conf vol					760	
vCu, unblocked vol			620		1572	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	91
cM capacity (veh/h)			712		225	795
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	596	596	62	760	760	72
Volume Left	0	0	0	0	0	0
Volume Right	0	0	62	0	0	72
cSH	1700	1700	1700	1700	1700	795
Volume to Capacity	0.35	0.35	0.04	0.45	0.45	0.09
Queue Length 95th (ft)	0	0	0	0	0	7
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.0
Lane LOS						A
Approach Delay (s)	0.0		0.0		10.0	
Approach LOS					A	
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			43.2%		ICU Level of Service	
Analysis Period (min)			15		A	

Intersection: 1: Turner Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	L	TR	LTR
Maximum Queue (ft)	104	344	361	216	310	370	343	238	217	35
Average Queue (ft)	24	159	172	47	168	213	204	148	62	6
95th Queue (ft)	69	282	294	151	279	322	309	238	146	26
Link Distance (ft)		2169	2169			366	366		340	115
Upstream Blk Time (%)					0	0	0		0	
Queuing Penalty (veh)					0	2	1		1	
Storage Bay Dist (ft)	140			280	450			250		
Storage Blk Time (%)	0	15	1	0	0	0		1	0	
Queuing Penalty (veh)	0	4	2	0	0	1		1	0	

Intersection: 2: Cypress Run Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	48	327	298	208	172	191	194	168	131	38
Average Queue (ft)	4	176	145	35	87	69	86	75	33	4
95th Queue (ft)	35	303	274	114	149	155	166	136	77	22
Link Distance (ft)		885	885			2169	2169	657		94
Upstream Blk Time (%)										0
Queuing Penalty (veh)										0
Storage Bay Dist (ft)	150			245	255				180	
Storage Blk Time (%)	0	10	1	0		0		0	0	
Queuing Penalty (veh)	0	0	1	0		0		0	0	

Intersection: 3: Proposed Driveway & Turner Drive

Movement	WB	NB	SB
Directions Served	LR	TR	L
Maximum Queue (ft)	84	14	58
Average Queue (ft)	42	1	21
95th Queue (ft)	69	12	51
Link Distance (ft)	103	388	
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			200
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Proposed Driveway & Bennis Church Boulevard

Movement	WB	WB	NB
Directions Served	T	T	R
Maximum Queue (ft)	60	16	77
Average Queue (ft)	2	1	28
95th Queue (ft)	24	11	60
Link Distance (ft)	1102	1102	78
Upstream Blk Time (%)			1
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 13

Lanes, Volumes, Timings

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	9	877	379	374	584	47	354	0	317	1	42	3
Future Volume (vph)	9	877	379	374	584	47	354	0	317	1	42	3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.989				0.850		0.992	
Flt Protected	0.950			0.950				0.950			0.999	
Satd. Flow (prot)	1770	3406	1615	1805	3412	0	0	1787	1599	0	1845	0
Flt Permitted	0.342			0.118				0.726			0.994	
Satd. Flow (perm)	637	3406	1615	224	3412	0	0	1366	1599	0	1836	0
Satd. Flow (RTOR)			399		8			334			3	
Adj. Flow (vph)	9	923	399	394	615	49	373	0	334	1	44	3
Lane Group Flow (vph)	9	923	399	394	664	0	0	373	334	0	48	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4		4	8		
Total Split (s)	16.0	38.5	38.5	28.0	50.5		16.0	48.5	48.5	32.5	32.5	
Total Lost Time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Act Effct Green (s)	62.8	34.0	34.0	56.8	62.6			35.7	35.7		35.7	
Actuated g/C Ratio	0.55	0.30	0.30	0.49	0.54			0.31	0.31		0.31	
v/c Ratio	0.02	0.92	0.53	0.89	0.36			0.88	0.46		0.08	
Control Delay	9.3	43.2	7.0	55.1	17.3			59.5	5.0		24.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay	9.3	43.2	7.0	55.1	17.3			59.5	5.0		24.8	
LOS	A	D	A	E	B			E	A		C	
Approach Delay		32.1			31.4			33.8			24.8	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 55 (48%), Referenced to phase 2:EBWB and 6:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 32.1

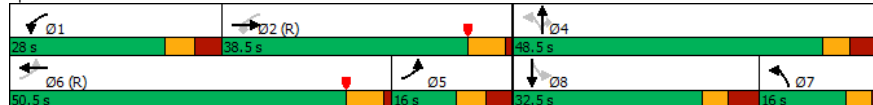
Intersection LOS: C

Intersection Capacity Utilization 87.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Turner Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

1: Turner Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	9	877	379	374	584	47	354	0	317	1	42	3
Future Volume (vph)	9	877	379	374	584	47	354	0	317	1	42	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	0.99			1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1770	3406	1615	1805	3412			1787	1599		1844	
Flt Permitted	0.34	1.00	1.00	0.12	1.00			0.73	1.00		0.99	
Satd. Flow (perm)	638	3406	1615	224	3412			1365	1599		1834	
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)	9	923	399	394	615	49	373	0	334	1	44	3
RTOR Reduction (vph)	0	0	281	0	4	0	0	0	230	0	2	0
Lane Group Flow (vph)	9	923	118	394	660	0	0	373	104	0	46	0
Heavy Vehicles (%)	2%	6%	0%	0%	5%	0%	1%	0%	1%	0%	0%	33%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4		4	8		
Actuated Green, G (s)	58.3	34.0	34.0	58.3	56.6			35.7	35.7		35.7	
Effective Green, g (s)	58.3	34.0	34.0	58.3	56.6			35.7	35.7		35.7	
Actuated g/C Ratio	0.51	0.30	0.30	0.51	0.49			0.31	0.31		0.31	
Clearance Time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	340	1006	477	447	1679			423	496		569	
v/s Ratio Prot	0.00	c0.27		c0.19	0.19							
v/s Ratio Perm	0.01		0.07	0.26				c0.27	0.06		0.03	
v/c Ratio	0.03	0.92	0.25	0.88	0.39			0.88	0.21		0.08	
Uniform Delay, d1	18.5	39.1	30.8	31.6	18.4			37.6	29.2		28.0	
Progression Factor	0.66	0.74	1.45	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	12.7	1.1	18.1	0.7			18.9	0.2		0.1	
Delay (s)	12.1	41.8	45.7	49.7	19.1			56.6	29.4		28.1	
Level of Service	B	D	D	D	B			E	C		C	
Approach Delay (s)		42.7			30.5			43.8			28.1	
Approach LOS		D			C			D			C	

Intersection Summary

HCM 2000 Control Delay	38.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	25.5
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1333	30	45	894	2	15	0	38	2	0	0
Future Volume (vph)	3	1333	30	45	894	2	15	0	38	2	0	0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected	0.950			0.950				0.950			0.950	
Satd. Flow (prot)	1805	3471	1509	1641	3374	0	0	1492	1495	0	1203	0
Flt Permitted	0.280			0.126				0.950				
Satd. Flow (perm)	532	3471	1509	218	3374	0	0	1492	1495	0	1267	0
Satd. Flow (RTOR)			157					223				
Adj. Flow (vph)	3	1389	31	47	931	2	16	0	40	2	0	0
Lane Group Flow (vph)	3	1389	31	47	933	0	0	16	40	0	2	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		4	4			3	
Permitted Phases	6		2	2				4		3		
Total Split (s)	16.0	67.0	67.0	16.0	67.0		16.0	16.0	16.0	16.0		
Total Lost Time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Act Effct Green (s)	92.1	83.5	83.5	89.9	93.7			7.5	7.5		7.0	
Actuated g/C Ratio	0.80	0.73	0.73	0.78	0.81			0.07	0.07		0.06	
v/c Ratio	0.01	0.55	0.03	0.17	0.34			0.17	0.13		0.03	
Control Delay	4.3	11.5	0.0	3.8	2.3			54.5	0.9		51.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay	4.3	11.5	0.0	3.8	2.3			54.5	0.9		51.5	
LOS	A	B	A	A	A			D	A		D	
Approach Delay		11.2			2.3			16.2			51.5	
Approach LOS		B			A			B			D	

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 56 (49%), Referenced to phase 2:EBWB and 6:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 7.8

Intersection LOS: A

Intersection Capacity Utilization 63.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 2: Cypress Run Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1333	30	45	894	2	15	0	38	2	0	0
Future Volume (vph)	3	1333	30	45	894	2	15	0	38	2	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.95	
Satd. Flow (prot)	1805	3471	1509	1641	3373			1492	1495		1203	
Flt Permitted	0.28	1.00	1.00	0.13	1.00			0.95	1.00		1.00	
Satd. Flow (perm)	531	3471	1509	217	3373			1492	1495		1267	
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)	3	1389	31	47	931	2	16	0	40	2	0	0
RTOR Reduction (vph)	0	0	12	0	0	0	0	0	38	0	0	0
Lane Group Flow (vph)	3	1389	19	47	933	0	0	16	2	0	2	0
Heavy Vehicles (%)	0%	4%	7%	10%	7%	0%	21%	0%	8%	50%	0%	0%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		4	4			3	
Permitted Phases	6		2	2					4		3	
Actuated Green, G (s)	81.5	70.1	70.1	82.0	80.3			6.1	6.1		1.4	
Effective Green, g (s)	81.5	70.1	70.1	82.0	80.3			6.1	6.1		1.4	
Actuated g/C Ratio	0.71	0.61	0.61	0.71	0.70			0.05	0.05		0.01	
Clearance Time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	389	2115	919	302	2355			79	79		15	
v/s Ratio Prot	0.00	c0.40		0.02	c0.28			c0.01				
v/s Ratio Perm	0.01		0.01	0.09					0.00		c0.00	
v/c Ratio	0.01	0.66	0.02	0.16	0.40			0.20	0.03		0.13	
Uniform Delay, d1	5.1	14.6	8.9	16.8	7.2			52.1	51.6		56.2	
Progression Factor	1.00	1.00	1.00	0.46	0.39			1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.6	0.0	0.2	0.4			1.3	0.1		4.0	
Delay (s)	5.1	16.2	8.9	7.9	3.2			53.4	51.8		60.2	
Level of Service	A	B	A	A	A			D	D		E	
Approach Delay (s)		16.0			3.5			52.2			60.2	
Approach LOS		B			A			D			E	

Intersection Summary

HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings

3: Proposed Driveway & Turner Drive

Wawa Bennis Church TIA

Build Conditions

	↖	↗	↑	↘	↙	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖		↑		↙	↓
Traffic Volume (vph)	19	146	525	51	127	668
Future Volume (vph)	19	146	525	51	127	668
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.881		0.988			
Flt Protected	0.994				0.950	
Satd. Flow (prot)	1647	0	1840	0	1787	1881
Flt Permitted	0.994				0.950	
Satd. Flow (perm)	1647	0	1840	0	1787	1881
Adj. Flow (vph)	20	154	553	54	134	703
Lane Group Flow (vph)	174	0	607	0	134	703
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 57.8%						
Analysis Period (min) 15						
ICU Level of Service B						

HCM Unsignalized Intersection Capacity Analysis

3: Proposed Driveway & Turner Drive

Wawa Bennis Church TIA

Build Conditions

	↖	↗	↑	↘	↙	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖		↑		↙	↓
Traffic Volume (veh/h)	19	146	525	51	127	668
Future Volume (Veh/h)	19	146	525	51	127	668
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	20	154	553	54	134	703
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						449
pX, platoon unblocked	0.82					
vC, conflicting volume	1551	580			607	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1562	580			607	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	77	70			86	
cM capacity (veh/h)	87	516			976	
Direction, Lane #						
Volume Total	174	607	134	703		
Volume Left	20	0	134	0		
Volume Right	154	54	0	0		
cSH	330	1700	976	1700		
Volume to Capacity	0.53	0.36	0.14	0.41		
Queue Length 95th (ft)	73	0	12	0		
Control Delay (s)	27.5	0.0	9.3	0.0		
Lane LOS	D		A			
Approach Delay (s)	27.5	0.0	1.5			
Approach LOS	D					
Intersection Summary						
Average Delay			3.7			
Intersection Capacity Utilization			57.8%		ICU Level of Service	B
Analysis Period (min)			15			

Lanes, Volumes, Timings
4: Proposed Driveway & Benns Church Boulevard

Wawa Benns Church TIA
Build Conditions

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	 			 		
Traffic Volume (vph)	1119	76	0	1005	0	89
Future Volume (vph)	1119	76	0	1005	0	89
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	0.850				0.865	
Flt Protected						
Satd. Flow (prot)	3471	1615	0	3438	0	1611
Flt Permitted						
Satd. Flow (perm)	3471	1615	0	3438	0	1611
Adj. Flow (vph)	1178	80	0	1058	0	94
Lane Group Flow (vph)	1178	80	0	1058	0	94
Sign Control	Free		Free		Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 43.1%			ICU Level of Service A			
Analysis Period (min) 15						

HCM Unsignalized Intersection Capacity Analysis
4: Proposed Driveway & Benns Church Boulevard

Wawa Benns Church TIA
Build Conditions

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗		↑↑		↗
Traffic Volume (veh/h)	1119	76	0	1005	0	89
Future Volume (Veh/h)	1119	76	0	1005	0	89
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1178	80	0	1058	0	94
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	Raised		Raised			
Median storage (veh)	1		1			
Upstream signal (ft)	433					
pX, platoon unblocked			0.75		0.75	0.75
vC, conflicting volume			1258		1707	589
vC1, stage 1 conf vol					1178	
vC2, stage 2 conf vol					529	
vCu, unblocked vol			663		1265	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	88
cM capacity (veh/h)			697		266	808
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	589	589	80	529	529	94
Volume Left	0	0	0	0	0	0
Volume Right	0	0	80	0	0	94
cSH	1700	1700	1700	1700	1700	808
Volume to Capacity	0.35	0.35	0.05	0.31	0.31	0.12
Queue Length 95th (ft)	0	0	0	0	0	10
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.0
Lane LOS						B
Approach Delay (s)	0.0		0.0		10.0	
Approach LOS					B	
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			43.1%		ICU Level of Service	
Analysis Period (min)			15		A	

Intersection: 1: Turner Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	103	546	588	280	356	417	356	352	250	97
Average Queue (ft)	12	281	292	185	295	268	187	237	160	34
95th Queue (ft)	59	464	496	335	415	498	383	370	300	76
Link Distance (ft)		2164	2164			356	356	339		115
Upstream Blk Time (%)					15	21	0	3		0
Queuing Penalty (veh)					0	105	2	22		0
Storage Bay Dist (ft)	140			280	450				250	
Storage Blk Time (%)	0	39	8	1	15	21		9	1	
Queuing Penalty (veh)	0	3	31	4	44	78		28	3	

Intersection: 2: Cypress Run Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	19	225	223	29	88	90	102	86	72	49
Average Queue (ft)	1	50	47	2	26	13	20	17	20	4
95th Queue (ft)	11	156	147	13	66	56	70	57	51	25
Link Distance (ft)		890	890			2164	2164	641		181
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	150			245	255				180	
Storage Blk Time (%)		1	0							
Queuing Penalty (veh)		0	0							

Intersection: 3: Proposed Driveway & Turner Drive

Movement	WB	NB	SB
Directions Served	LR	TR	L
Maximum Queue (ft)	127	196	88
Average Queue (ft)	71	22	40
95th Queue (ft)	123	112	74
Link Distance (ft)	102	358	
Upstream Blk Time (%)	9		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			200
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Proposed Driveway & Bennis Church Boulevard

Movement	WB	WB	NB
Directions Served	T	T	R
Maximum Queue (ft)	350	304	81
Average Queue (ft)	108	62	32
95th Queue (ft)	330	243	63
Link Distance (ft)	1102	1102	78
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 320

Lanes, Volumes, Timings

1: Turner Drive & Bennis Church Boulevard

Wawa Bennis Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	26	1053	161	286	1172	6	264	0	158	2	1	4
Future Volume (vph)	26	1053	161	286	1172	6	264	0	158	2	1	4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999				0.850		0.923	
Flt Protected	0.950			0.950				0.950			0.986	
Satd. Flow (prot)	1805	3539	1615	1787	3536	0	0	1787	1568	0	1729	0
Flt Permitted	0.114			0.092				0.647			0.888	
Satd. Flow (perm)	217	3539	1615	173	3536	0	0	1217	1568	0	1557	0
Satd. Flow (RTOR)			164					166			4	
Adj. Flow (vph)	27	1108	169	301	1234	6	278	0	166	2	1	4
Lane Group Flow (vph)	27	1108	169	301	1240	0	0	278	166	0	7	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4		4	8		
Total Split (s)	16.0	52.5	52.5	29.0	65.5		23.5	48.5	48.5	25.0	25.0	
Total Lost Time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Act Effct Green (s)	69.5	46.5	46.5	66.5	66.9			41.0	41.0		17.5	
Actuated g/C Ratio	0.53	0.36	0.36	0.51	0.51			0.32	0.32		0.13	
v/c Ratio	0.14	0.88	0.25	0.85	0.68			0.61	0.27		0.03	
Control Delay	11.3	34.9	6.5	66.7	27.2			43.0	5.9		36.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay	11.3	34.9	6.5	66.7	27.2			43.0	5.9		36.6	
LOS	B	C	A	E	C			D	A		D	
Approach Delay		30.7			34.9			29.1			36.6	
Approach LOS		C			C			C			D	

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 44 (34%), Referenced to phase 2:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 32.5

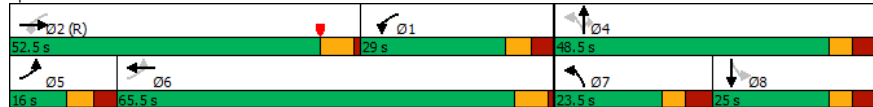
Intersection LOS: C

Intersection Capacity Utilization 83.7%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Turner Drive & Bennis Church Boulevard



HCM Signalized Intersection Capacity Analysis

1: Turner Drive & Bennis Church Boulevard

Wawa Bennis Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩			↩	↩		↩↩	
Traffic Volume (vph)	26	1053	161	286	1172	6	264	0	158	2	1	4
Future Volume (vph)	26	1053	161	286	1172	6	264	0	158	2	1	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)	1805	3539	1615	1787	3537			1787	1568		1729	
Flt Permitted	0.11	1.00	1.00	0.09	1.00			0.65	1.00		0.89	
Satd. Flow (perm)	217	3539	1615	173	3537			1217	1568		1556	
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)	27	1108	169	301	1234	6	278	0	166	2	1	4
RTOR Reduction (vph)	0	0	109	0	0	0	0	0	114	0	3	0
Lane Group Flow (vph)	27	1108	169	301	1240	0	0	278	166	0	7	0
Heavy Vehicles (%)	0%	2%	0%	1%	2%	0%	1%	0%	3%	0%	0%	0%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases	6		2	2			4		4	8		
Actuated Green, G (s)	68.0	43.5	43.5	68.0	63.9			41.0	41.0		17.5	
Effective Green, g (s)	68.0	43.5	43.5	68.0	63.9			41.0	41.0		17.5	
Actuated g/C Ratio	0.52	0.33	0.33	0.52	0.49			0.32	0.32		0.13	
Clearance Time (s)	7.5	6.0	6.0	7.5	6.0			7.5	7.5		7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	163	1184	540	394	1738			453	494		209	
v/s Ratio Prot	0.01	c0.31		0.14	c0.35			c0.08				
v/s Ratio Perm	0.08		0.04	0.26				c0.12	0.03		0.00	
v/c Ratio	0.17	0.94	0.11	0.76	0.71			0.61	0.11		0.02	
Uniform Delay, d1	19.1	41.9	29.9	44.6	25.9			37.8	31.5		48.8	
Progression Factor	0.79	0.68	1.22	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.4	13.5	0.4	8.5	2.5			6.1	0.4		0.1	
Delay (s)	15.5	42.0	36.9	53.2	28.4			43.9	32.0		48.9	
Level of Service	B	D	D	D	C			D	C		D	
Approach Delay (s)		40.8			33.2			39.4			48.9	
Approach LOS		D			C			D			D	

Intersection Summary

HCM 2000 Control Delay

37.1

HCM 2000 Level of Service

D

HCM 2000 Volume to Capacity ratio

0.84

Actuated Cycle Length (s)

130.0

Sum of lost time (s)

28.5

Intersection Capacity Utilization

83.7%

ICU Level of Service

E

Analysis Period (min)

15

Critical Lane Group

Lanes, Volumes, Timings

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	0	↩	↩	↩	0	↩	0
Traffic Volume (vph)	3	1128	115	192	1248	0	99	0	95	0	4	0
Future Volume (vph)	3	1128	115	192	1248	0	99	0	95	0	4	0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			
Flt Protected	0.950			0.950				0.950				
Satd. Flow (prot)	1805	3471	1553	1805	3539	0	0	1805	1615	0	1900	0
Flt Permitted	0.173			0.185				0.950				
Satd. Flow (perm)	329	3471	1553	352	3539	0	0	1805	1615	0	1900	0
Satd. Flow (RTOR)			138					197				
Adj. Flow (vph)	3	1151	117	196	1273	0	101	0	97	0	4	0
Lane Group Flow (vph)	3	1151	117	196	1273	0	0	101	97	0	4	0
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm		NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	6		2	2				4				
Total Split (s)	13.0	68.0	68.0	25.0	80.0		24.0	24.0	13.0	13.0		
Total Lost Time (s)	7.5	6.0	6.0	7.0	6.0		6.5	6.5		6.0		
Act Effct Green (s)	99.3	84.1	84.1	94.3	99.7		12.6	12.6		7.0		
Actuated g/C Ratio	0.76	0.65	0.65	0.73	0.77		0.10	0.10		0.05		
v/c Ratio	0.01	0.51	0.11	0.51	0.47		0.58	0.29		0.04		
Control Delay	6.0	15.2	1.9	11.6	3.7		68.7	2.2		59.2		
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0		
Total Delay	6.0	15.2	1.9	11.6	3.7		68.7	2.2		59.2		
LOS	A	B	A	B	A		E	A		E		
Approach Delay		14.0			4.7		36.1			59.3		
Approach LOS		B			A		D			E		

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 10.9

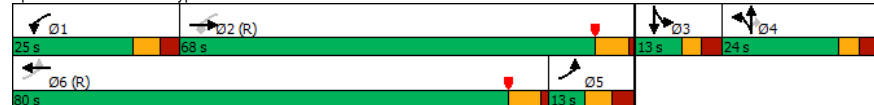
Intersection LOS: B

Intersection Capacity Utilization 70.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Cypress Run Drive & Benns Church Boulevard



HCM Signalized Intersection Capacity Analysis

2: Cypress Run Drive & Benns Church Boulevard

Wawa Benns Church TIA

Build Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↩	↩↩	↩	↩	↩↩	0	↩	↩	↩	0	↩	0
Traffic Volume (vph)	3	1128	115	192	1248	0	99	0	95	0	4	0
Future Volume (vph)	3	1128	115	192	1248	0	99	0	95	0	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	
Satd. Flow (prot)	1805	3471	1553	1805	3539			1805	1615		1900	
Flt Permitted	0.17	1.00	1.00	0.18	1.00			0.95	1.00		1.00	
Satd. Flow (perm)	329	3471	1553	351	3539			1805	1615		1900	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	3	1151	117	196	1273	0	101	0	97	0	4	0
RTOR Reduction (vph)	0	0	46	0	0	0	0	0	88	0	0	0
Lane Group Flow (vph)	3	1151	71	196	1273	0	0	101	9	0	4	0
Heavy Vehicles (%)	0%	4%	4%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Turn Type	D,P+P	NA	Perm	D,P+P	NA		Split	NA	Perm		NA	
Protected Phases	5	2		1	6		4	4		3	3	
Permitted Phases	6		2	2				4				
Actuated Green, G (s)	90.0	79.2	79.2	90.5	88.9			12.6	12.6		1.4	
Effective Green, g (s)	90.0	79.2	79.2	90.5	88.9			12.6	12.6		1.4	
Actuated g/C Ratio	0.69	0.61	0.61	0.70	0.68			0.10	0.10		0.01	
Clearance Time (s)	7.5	6.0	6.0	7.0	6.0			6.5	6.5		6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	240	2114	946	370	2420			174	156		20	
v/s Ratio Prot	0.00	c0.33		0.05	c0.36			c0.06			c0.00	
v/s Ratio Perm	0.01		0.05	0.32					0.01			
v/c Ratio	0.01	0.54	0.08	0.53	0.53			0.58	0.06		0.20	
Uniform Delay, d1	13.2	14.9	10.4	9.3	10.1			56.2	53.3		63.7	
Progression Factor	1.00	1.00	1.00	1.53	0.42			1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.0	0.2	1.0	0.6			4.9	0.2		4.9	
Delay (s)	13.2	15.9	10.6	15.3	4.9			61.0	53.5		68.6	
Level of Service	B	B	B	B	A			E	D		E	
Approach Delay (s)		15.4			6.3			57.3			68.6	
Approach LOS		B			A			E			E	

Intersection Summary

HCM 2000 Control Delay

HCM 2000 Level of Service

B

HCM 2000 Volume to Capacity ratio

0.57

Actuated Cycle Length (s)

130.0

Sum of lost time (s)

26.0

Intersection Capacity Utilization

70.2%

ICU Level of Service

C

Analysis Period (min)

15

c Critical Lane Group

Lanes, Volumes, Timings

3: Proposed Driveway & Turner Drive

Wawa Bennis Church TIA

Build Conditions

	↖	↗	↑	↘	↙	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖		↑		↘	↓
Traffic Volume (vph)	13	114	308	39	98	350
Future Volume (vph)	13	114	308	39	98	350
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.879		0.985			
Flt Protected	0.995				0.950	
Satd. Flow (prot)	1629	0	1867	0	1805	1900
Flt Permitted	0.995				0.950	
Satd. Flow (perm)	1629	0	1867	0	1805	1900
Adj. Flow (vph)	14	120	324	41	103	368
Lane Group Flow (vph)	134	0	365	0	103	368
Sign Control	Stop		Free			Free
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 41.8%						
Analysis Period (min) 15						
ICU Level of Service A						

HCM Unsignalized Intersection Capacity Analysis

3: Proposed Driveway & Turner Drive

Wawa Bennis Church TIA

Build Conditions

	↖	↗	↑	↘	↙	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖		↑		↘	↓
Traffic Volume (veh/h)	13	114	308	39	98	350
Future Volume (Veh/h)	13	114	308	39	98	350
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	14	120	324	41	103	368
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						451
pX, platoon unblocked	0.89					
vC, conflicting volume	918	344			365	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	845	344			365	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	83			91	
cM capacity (veh/h)	270	698			1205	
Direction, Lane #						
Volume Total	134	365	103	368		
Volume Left	14	0	103	0		
Volume Right	120	41	0	0		
cSH	599	1700	1205	1700		
Volume to Capacity	0.22	0.21	0.09	0.22		
Queue Length 95th (ft)	21	0	7	0		
Control Delay (s)	12.7	0.0	8.3	0.0		
Lane LOS	B		A			
Approach Delay (s)	12.7	0.0	1.8			
Approach LOS	B					
Intersection Summary						
Average Delay			2.6			
Intersection Capacity Utilization			41.8%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings
4: Proposed Driveway & Benns Church Boulevard

Wawa Benns Church TIA
Build Conditions

	→	↗	↖	←	↙	↘
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗		↑↑		↗
Traffic Volume (vph)	1154	59	0	1464	0	68
Future Volume (vph)	1154	59	0	1464	0	68
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	0.850				0.865	
Flt Protected						
Satd. Flow (prot)	3539	1615	0	3539	0	1611
Flt Permitted						
Satd. Flow (perm)	3539	1615	0	3539	0	1611
Adj. Flow (vph)	1215	62	0	1541	0	72
Lane Group Flow (vph)	1215	62	0	1541	0	72
Sign Control	Free		Free		Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 43.8%			ICU Level of Service A			
Analysis Period (min) 15						

HCM Unsignalized Intersection Capacity Analysis
4: Proposed Driveway & Benns Church Boulevard

Wawa Benns Church TIA
Build Conditions

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗		↑↑		↗
Traffic Volume (veh/h)	1154	59	0	1464	0	68
Future Volume (Veh/h)	1154	59	0	1464	0	68
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1215	62	0	1541	0	72
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	Raised		Raised			
Median storage (veh)	1		1			
Upstream signal (ft)	433					
pX, platoon unblocked			0.70		0.70	0.70
vC, conflicting volume			1277		1986	608
vC1, stage 1 conf vol					1215	
vC2, stage 2 conf vol					770	
vCu, unblocked vol			528		1544	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	90
cM capacity (veh/h)			732		230	756
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	608	608	62	770	770	72
Volume Left	0	0	0	0	0	0
Volume Right	0	0	62	0	0	72
cSH	1700	1700	1700	1700	1700	756
Volume to Capacity	0.36	0.36	0.04	0.45	0.45	0.10
Queue Length 95th (ft)	0	0	0	0	0	8
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.3
Lane LOS						B
Approach Delay (s)	0.0			0.0		10.3
Approach LOS						B
Intersection Summary						
Average Delay				0.3		
Intersection Capacity Utilization	43.8%			ICU Level of Service		A
Analysis Period (min)	15					

Intersection: 1: Turner Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	122	484	498	280	354	398	372	310	224	38
Average Queue (ft)	29	272	284	120	238	257	237	162	71	6
95th Queue (ft)	91	431	451	309	364	392	359	268	161	26
Link Distance (ft)		2169	2169			358	358	341		116
Upstream Blk Time (%)					2	4	1	0		
Queuing Penalty (veh)					0	29	4	1		
Storage Bay Dist (ft)	140			280	450				250	
Storage Blk Time (%)	0	23	7	0	2	4		2	0	
Queuing Penalty (veh)	0	6	12	2	9	11		3	0	

Intersection: 2: Cypress Run Drive & Bennis Church Boulevard

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	TR	LT	R	LTR
Maximum Queue (ft)	48	321	302	134	219	181	188	173	128	32
Average Queue (ft)	4	149	125	24	103	34	45	74	33	4
95th Queue (ft)	28	281	254	78	184	114	125	139	76	21
Link Distance (ft)		885	885			2169	2169	657		94
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	150			245	255				180	
Storage Blk Time (%)	0	7	1	0	0	0		0	0	
Queuing Penalty (veh)	0	0	1	0	1	0		0	0	

Intersection: 3: Proposed Driveway & Turner Drive

Movement	WB	NB	SB
Directions Served	LR	TR	L
Maximum Queue (ft)	93	24	85
Average Queue (ft)	45	1	26
95th Queue (ft)	76	17	61
Link Distance (ft)	102	388	
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			200
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Proposed Driveway & Bennis Church Boulevard

Movement	WB	WB	NB
Directions Served	T	T	R
Maximum Queue (ft)	230	156	84
Average Queue (ft)	32	18	31
95th Queue (ft)	175	126	66
Link Distance (ft)	1102	1102	78
Upstream Blk Time (%)			1
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 81

Appendix F

Access Management Exception (AM-E)

ACCESS MANAGEMENT EXCEPTION REQUEST: AM-E
ACCESS MANAGEMENT REGULATIONS 24 VAC 30-73
SECTION 120

Submitted by:		Date:	
Email Address:		Phone:	
Address:			
Project Name:	Rte #	Locality:	
Description of Project:			
VDOT District:		Area Land Use Engineer:	

NOTES:

- (1). Submit this form and any attachments to one of the District's Area Land Use Engineers.
- (2). See Section 120 of the Regulations for details on the requirements, exceptions, and exception request review process.
- (3). Attach additional information as necessary to justify the exception request(s).
- (4). If a traffic engineering study is required, the decision on the request will be based on VDOT engineering judgment.
- (5). Use the LD-440 Design Exception or the LD-448 Design Waiver forms for *design and engineering standards*, e.g. radius, grade, sight distance. See [IIM-LD-227](#) on VDOT web site for additional instructions.

Select the Exception(s) Being Requested

☐ **Exception to the shared commercial entrance requirement.** (Access M. Regulations Section 120 C.2)

Reason for exception:

☐ **A. An agreement to share the entrance could not be reached with adjoining property owner.**

☐ **Attached:** Written evidence that adjoining property owner will not share the entrance.

☐ **B. Physical constraints: topography, adjacent hazardous land use, stream, wetland, other.**

☐ **Specify constraint:**

☐ **Attached:** Documentation of constraint such as aerial photo or topographic map.

☐ **Exception to the vehicular connection to adjoining undeveloped property requirement.** (Section 120 C.4)

Reason for exception:

☐ **A. Physical constraints: topography, adjacent hazardous land use, stream, wetland, other.**

☐ **Specify constraint:**

☐ **Attached:** Documentation of constraint such as aerial photo or topographic map.

☐ **B. Other reason:**

☐ **Exception to the commercial entrance shall not be located within the functional area of an intersection requirement.** (See Regulation Section 120 C. 1; Appendix F, Rd Design Manual)

☐ **Attached:** A traffic engineering study documenting that the operation of the intersection and public safety will not be adversely impacted.

☐ **EXCEPTION TO THE SPACING STANDARDS FOR:**

- **Commercial entrances; intersections/median crossovers (Table 2-2);**
- **Commercial entrances/intersections near interchange ramps (Tables 2-3, 2-4); or**
- **Corner clearance (Figure 4-4).** Appendix F, Road Design Manual

Information on the Exception Request

☐ **ON A STATE HIGHWAY**

Functional classification: Principal Arterial: ☐ Minor Arterial: ☐ Collector: ☐ Local: ☐

Posted speed limit: _____ mph

☐ **NEAR AN INTERCHANGE RAMP** (Submittal of a traffic engineering study required)

☐ **CORNER CLEARANCE** (Submittal of a traffic engineering study required)

Type of intersection/entrance: Signalized ☐ Unsignalized ☐ Full Access ☐ Partial Access ☐

Required spacing distance _____ ft

Proposed spacing distance _____ ft

Requested exception: Reduction in required spacing _____ ft

REASON FOR EXCEPTION:

☐ **A. To be located on an older, established business corridor along a highway where existing spacing did not meet the standards prior to 7/1/08 or 10/14/09.** (Regulation Section 120 C.3.c)

☐ **Attached:** Dated aerial photo of corridor identifying proposed entrance/intersection location.

☐ **B. Not enough property frontage to meet spacing standard, but the applicant does not want a partial access right-in/right-out entrance.** (Section 120 C.3.f)

☐ **Attached:** A traffic engineering study documenting that left turn movements at the entrance will not have a negative impact on highway operation or safety.

☐ **C. To be located within a new urbanism mixed use type development.** (Section 120 C.3.d)

☐ **Attached:** The design of the development and compliance with intersection sight distance.

☐ **D. The proposed entrance meets the signal warrants but does not meet the signalized intersection spacing standard. The applicant requests an exception to the spacing standard.**

☐ **Attached:** A traffic engineering study that (i) evaluates the location's suitability for a roundabout and (ii) provides documentation that the proposed signal will not impact safety and traffic flow. (Section 120 C.5)

- ☐ E. The development's 2nd (or additional) entrance does not meet the spacing standards but is necessary for the streets to be accepted into the secondary system. (Section 120 C.3.e)

☐ Attached: Information on the development that identifies the location of entrances.

- ☐ F. To be located within the limits of a VDOT and locality approved access management corridor plan.

☐ Attached: Aerial photo of corridor identifying proposed entrance/intersection location. (Sect 120 C.3.b)

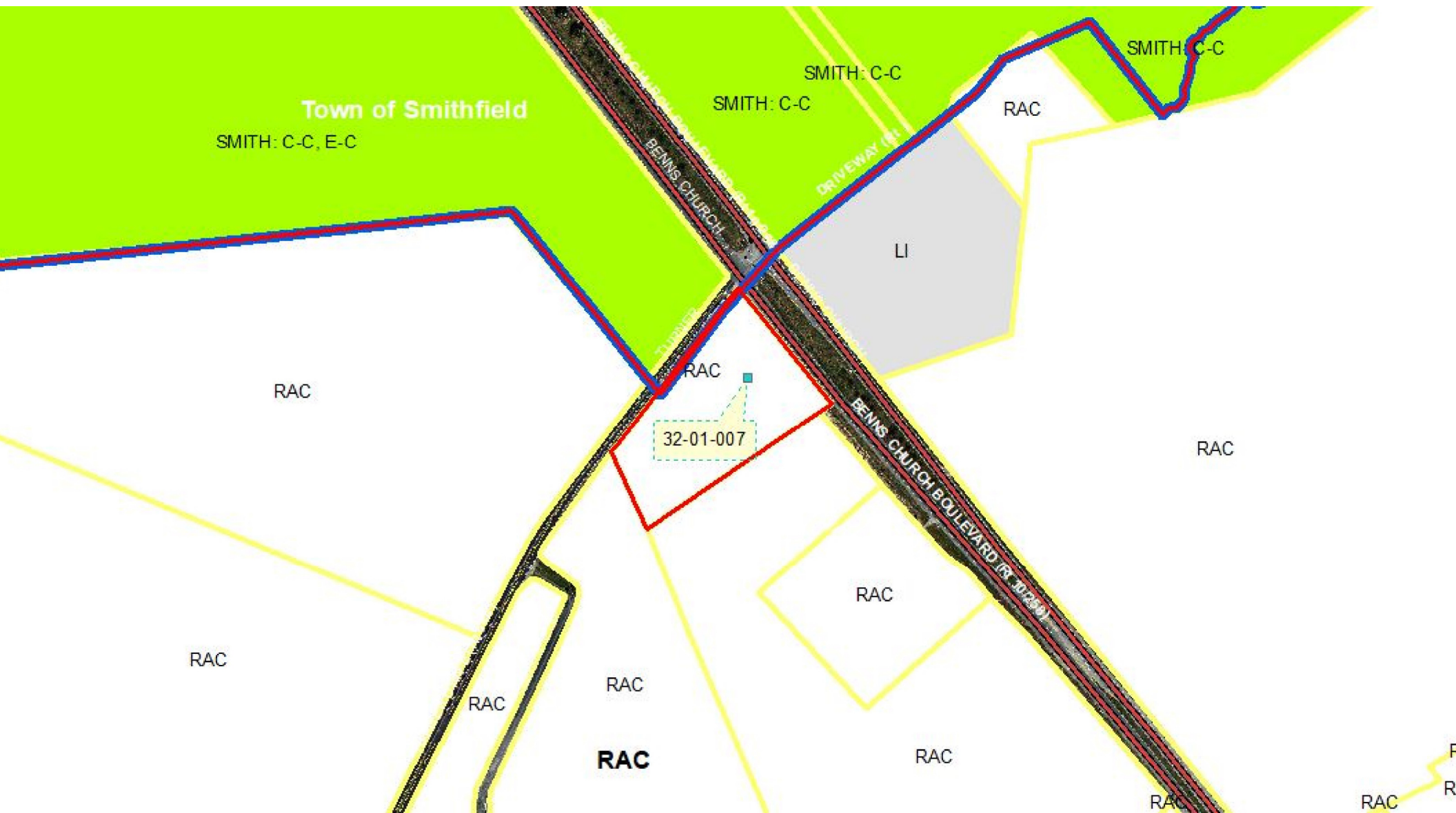
FOR VDOT USE ONLY

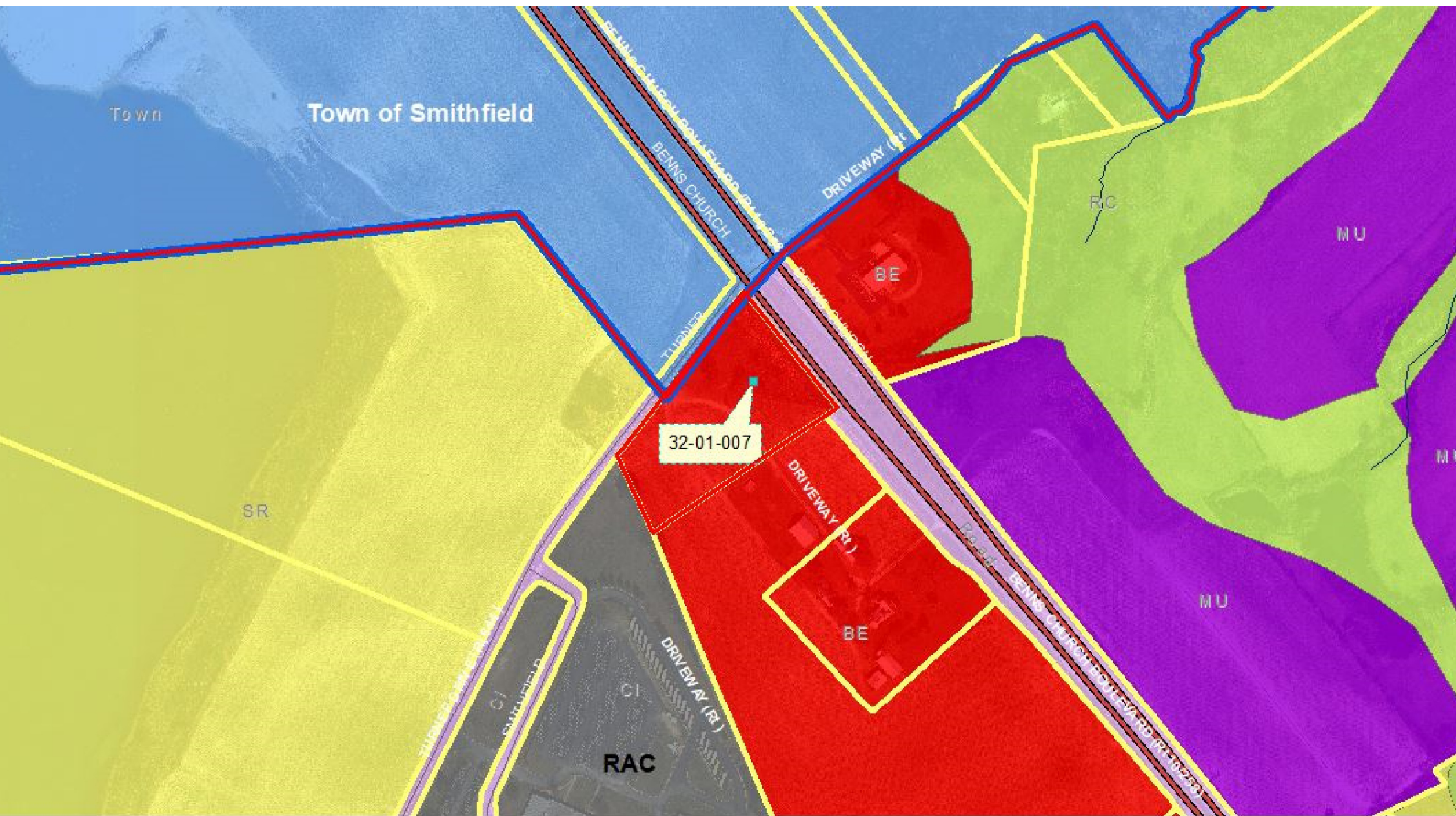
Recommendation on Exception Request: Approve ☐ Deny ☐		Date:
Area Land Use Engineer or:		Name
Remarks:		

Exception Request Action: Approved ☐ Denied ☐		Date:
District Administrator or Designee:		
Name (and position if Designee)		
Remarks:		

District Staff: Please email copy to Bradley.Shelton@VDOT.Virginia.gov









COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

23116 Meherrin Road
COURTLAND, VIRGINIA 23837

June 15, 2022

Amy Ring, Director
Planning and Zoning
Isle of Wight County
P. O. Box 80
Isle of Wight, VA 23397

**RE: CUP-08-21 WAWA
Route 10 (Benns Church Blvd)
TM #32-01-007**

The Residency has completed its review of the submitted Traffic Impact Analysis (TIA) associated with the Conditional Use Permit application dated April 2022 and received by the VDOT Land Development Office on May 6, 2022 for the new WAWA. We offer the following comments:

General Comments

- 1) During peak hours, the existing Northbound Movements (coming from the school) at the intersection of Benn's Church Blvd and Turner Drive experience delays categorized as Level of Service (LOS) "D". With the additional traffic of the WAWA development it is projected that this LOS "D" remains.
- 2) During peak hours, the existing Westbound Left Turn Movements at the intersection of Benn's Church Blvd and Turner Drive experience delays categorized as LOS "B". Even with the improvements proposed in the TIA, with the additional traffic of the WAWA development it is projected that this movement will be reduced to LOS "D", adding an additional 20 seconds of delay. Mitigating this delay will require additional lanes on Turner Drive.
- 3) The entrance from Turner Drive to the WAWA is proposed with a "Do Not Block the Intersection" configuration, which will depend on enforcement by local police in order to function as proposed. If the entrance becomes blocked, there is a potential for traffic to back onto Benn's Church Blvd. There is also a potential for sight distance to be obstructed for vehicles making a left from the entrance headed toward the school. An alternate intersection design may be a safer option at this entrance.
- 4) Review and comments are focused on Scenario 4, which provides a build condition for the WAWA and background growth to account for approved development, but does not include a future elementary school. Introduction of the proposed future elementary school, (Scenario 3), or elementary school with

pedestrian phasing (Scenario 5), lead to extensive queuing and severe degradation of the Benn's Church/Turner Drive intersection operations.

- 5) The proposed change at the Turner Drive/Benn's Church Blvd. intersection will alter the dedicated right turn lane recently installed as part of a County LAP project from a dedicated right turn lane with 255' of storage and 120' of taper to a shared through/right lane. The through/left lane will transition to being a dedicated left, with 206' of storage and 100' taper. This change effectively increases the right turn/through storage to unlimited, but effectively reduces the left turn lane storage by 49' in storage and a 20' reduction in taper.
- 6) At the Northbound approach to Benn's Church Blvd, (coming from the school) the proposed through/right lane queues beyond the provided storage for the left lane in some model runs, blocking vehicles from accessing the left turn lane in peak conditions.
- 7) The concept plan is not dimensioned for analysis of the acceptability of the proposed roadway geometric changes. Lane transitions, curve geometry, etc. must comply with the VDOT Road Design Manual and receive approval during the site plan review process.

Entrance 1/Benn's Grant Blvd. Intersection

- 8) The proposed "shared access" entrance as shown in Figure 2 should be shown located on the property line, with half on each property, and an easement across the entirety. If an agreement cannot be reached with the adjacent property owner, then documentation of the property owner's declining to share an entrance shall be provided, and an easement can be recorded to the adjacent property to provide cross-parcel access. Comment response is acknowledged as to the shown entrance being the preferred alignment, however cross-parcel access requirements require the documentation of declined shared entrance on the property line be provided. This requirement can be handled during the site plan process.

Entrance 2/Turner Drive Intersection

- 9) The analysis shows and acknowledges the potential for queuing from the Benn's Church Blvd./Turner Drive intersection past the proposed full access Turner Drive entrance for limited times in all scenarios. The analysis relies on "Do Not Block Intersection" signage to assist drivers in not blocking the intersection.
- 10) The proposed connection across the rear of the property from the Turner Drive entrance does not appear to have sufficient throat distance from the intersection of Entrance 2 with Turner Drive. The connection will also frequently be blocked based on the queuing report at the Turner Drive/Entrance 2 intersection.

If you have any questions, please contact me at 757-346-3084 or Jason.fowler@vdot.virginia.gov.

Sincerely,

Jason C. Fowler, PE

Jason C. Fowler, PE
Area Land Use Engineer
Virginia Department of Transportation

Amy Ring

From: Jamie Oliver
Sent: Tuesday, June 14, 2022 11:33 AM
To: Amy Ring
Cc: Jason.Fowler@VDOT.Virginia.gov; Norris, Joshua (VDOT); Julie Boswell; Tony Wilson
Subject: Transportation Division Wawa CUP-08-21 Comments
Attachments: 22-0603 Wawa Turner Drive Comments.pdf

Good morning Amy,

I'm sorry this is so late getting to you. I was out several days recently for my daughter's high school graduation. Please see comments from the Transportation Division below...

1. We concur with VDOT's comments regarding the finding in the submitted TIA.
2. The Transportation Division has recently completed a turn lane project at the Turner Dr/Rt 10 intersection (UPC 103021). This project has provided the County with a in-depth understanding of the extensive utility operations in the area, which limit the operational improvements which can be achieved without significant utility relocations. *Without extensive relocation efforts, the functional capacity of the intersection is limited.*
3. As highlighted in VDOT's comments, when Wawa's traffic is added, the intersection's Level of Service (LOS) drops to and/or remains at a "D" and, through several TIA iterations proposing different solutions, has not been improved significantly. This is not normally a preferred outcome. The continuing challenge is that mitigating the delay would likely required adding additional lanes, and additional lane width may be uneconomical for the applicant due to utility relocation costs.
4. If the Wawa is accepted as proposed, please note, there is little to no remaining functional capacity at the intersection for any future public or commercial development utilizing Turner Dr. This could include future school growth and/or development on the north side of Turner Drive.
5. As noted in VDOT's comments, possible future school growth at the existing Smithfield High School/Middle School campus—which is included in the County's CIP--was not adequately accounted for in the TIA. Adding future school traffic volumes would degrade the projected Turner Dr/Route 10 intersection function further. Adding a secondary public ingress/egress for school traffic to have additional access to Route 10 could help alleviate the traffic volumes and delay at the Turner Drive intersection *as currently proposed*, as well as allowing capacity for future growth needs in the corridor.
6. Entrance 2/Turner Drive full access Intersection continues to be problematic in the analysis, with the TIA showing excessive queuing for certain periods in all scenarios. Considering both the volume of traffic and the character of traffic in the area (buses, teen drivers, etc.) the Transportation Division has significant concerns about both safety and functionality at this entrance.
 - a. The "Do Not Block Intersection" Or Don't Block the Box scenarios are generally unenforceable unless the Sherriff's Office is actually on-site regularly to supervise traffic flow. This is an unrealistic option for the County.
 - b. In this location, if "the Box" is blocked, queuing/gridlock would mean you could not get to the location to provide enforcement until the infraction was resolved.
 - c. Currently, the most effective scenarios (outside of Virginia) seem to include the use of camera-ticket-enforcement.

- d. These challenges only become more pronounced if you give consideration to any future development on the north side of Turner Drive which may want to use the existing road network.
 - e. An alternative intersection design, such as a single lane roundabout, may function as a safer and more efficient solution in this location, while allowing more capacity for future growth. It would need to be analyzed within the TIA.
7. Based on the submission, I am not clear if the pedestrian accommodations provided meet the requirements and expectations of the County's Bike and Pedestrian plan, or provide for cost sharing of future pedestrian improvements at the key intersection locations as adjacent improvements come online. It would be helpful for the project team to explain how they see this parcel contributing to the future multi-modal needs developing between the school campus, their parcel, the shopping center, and the residential communities further down Rt 10.
- a. Are their facilities 5' sidewalks, or 10' multi-use trails?
 - b. Are their facilities providing functional connection to the adjacent school, or only extended to the property line?
 - c. Are they providing driveway crosswalks and functional pedestrian access from the perimeter infrastructure to the store at the center of the parcel for non-vehicular, non-fuel customers?
 - d. As a major intersection anchor, are they providing a plan or proposal for future "fair share" contributions to pedestrian accommodations at the Turner Dr/Route 10 intersection?

Thank you for giving our comments consideration, and please let me know if I can provide any revisions or clarifications for staff, since I am late providing them to you.

Jamie L. Oliver, Transportation Administrator

joliver@isleofwightus.net

(757) 365-1653.....office

(757) 846-8600.....cell

Isle of Wight County
Public Works—Transportation
PO BOX 80
Isle of Wight, VA 23397

From: Fowler, Jason <jason.fowler@vdot.virginia.gov>

Sent: Friday, June 3, 2022 3:32 PM

To: Amy Ring <aring@isleofwightus.net>

Cc: Jamie Oliver <joliver@isleofwightus.net>; Joshua Norris <joshua.norris@vdot.virginia.gov>

Subject: WAWA

See attached.



Jason Fowler

Franklin Residency / Hampton Roads District
23116 Meherrin Road
Courtland, VA 23837
757.346.3084 Office



TOWN OF SMITHFIELD

Friday, November 19th, 2021

Isle of Wight County Planning and Zoning
C/O Amy Ring, AICP
17140 Monument Circle #201
Isle of Wight, VA 23397

Re: Conditional Use Permit Application of Wawa Convenience Store and Gasoline Station –
Southwest Corner of Turner Drive and Benn's Church, Isle of Wight County
KHA #116543041

Mrs. Ring,

The Town of Smithfield Community Development and Planning Department is in receipt of the letters and conceptual plans from Kimely Horn, dated Monday, October 25th, 2021, concerning the Conditional Use Permit Application submitted to Isle of Wight County for the proposed Wawa Convenience and Gasoline Station located at the southwest corner of Turner Drive and Benn's Church Boulevard (TPIN: 32-01-007) in Isle of Wight County (see Enclosures 1).

At its Tuesday, November 9th, 2021 meeting, the Smithfield Planning Commission discussed the proposed entrance for the Wawa off of Turner Drive. Their discussion centered around reconfiguring the entrance from Turner Drive so that it functioned more as a defined roadway at the rear of the property, which would extend across the back of the property and provide access to the parking lot. They were concerned about cars cutting through the parking lot to access Benn's Church without traveling to the traffic light and making a right turn.

Please contact me at 1-(757)-365-4200 or tcclary@smithfieldva.gov with any questions.

Sincerely,

Tammie Clary
Community Development & Planning Director

Cc: File

Enclosures:

(1) Letter, Ring to Clary, 2021-10-25

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA
DEPARTMENT OF COMMUNITY DEVELOPMENT

MEMORANDUM

TO: Don Jennings, Utility Services
Joshua Norris, VDOT
Jamie Oliver, Transportation Manager
Steve Henson, Emergency Services
Jennifer England, Isle of Wight County Museum
Chris Morello, Economic Development
Tammie Clary, Town of Smithfield ✓

FROM: Amy Ring, Director

RE: Wawa Gasoline Station and Convenience Store Conditional Use Permit
Application (CUP-08-21) on Benns Church Boulevard (Rte. 10) with tax
parcel number 32-01-007

DATE: October 29, 2021

Please find attached a copy of the Conditional Use Permit (CUP) application for the proposed Wawa gasoline station and associated convenience store located at the intersection of Benns Church Boulevard and Turner Drive (munis project number 25060).

Please find copies of the following application documents attached:

1. CUP application received on October 25, 2021;
2. Statement of reasons for seeking the permit;
3. Narrative description of the properties;
4. Building and canopy elevations; and
5. Conceptual plans.

Please review the attached documents and send me any comments or concerns you may have by Friday, November 19, 2021.

As always, please feel free to give me a call at 365-6210, or by email at aring@iwus.net, if you have any questions.



October 25, 2021

Amy Ring, AICP
Director of Community Development
Isle of Wight County
17140 Monument Circle
Suite 101
Isle of Wight County, VA 23397

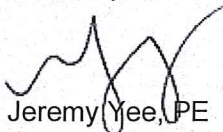
**RE: Conditional Use Permit Application of Wawa Convenience Store and Gasoline Station – Southwest Corner of Turner Drive and Benns Church, Isle of Wight County
KHA #: 116543041**

Dear Ms. Ring:

Enclose please find Conditional Use Permit Application that we file on behalf of Frontier Development with respect to the proposed Wawa Convenience Store and Gasoline Station located at southwest corner of Turner Drive and Benns Church Blvd., in Isle of Wight County, VA. Please accept these materials and place these items on the next available Planning Commission agenda.

Thank you for your assistance with this matter.

Sincerely,



Jeremy Yee, PE

Enclosures



Statement of Reason – Conditional Use Permit

The property lies within the Rural Agricultural Conservation (RAC) District. The purpose of the Conditional Use Permit is to allow the proposed Wawa convenience store and gasoline station. The project will comply with the standards as listed in section 5-5000 supplementary use regulations, specifically for item K. Convenience Store and item P. Gasoline Station, except for the following modifications:

Item K. Convenience Store, 1.b. – The outdoor display of goods for sale shall prohibited except for the ice machine and propane gas as shown on site plan prepared by Kimley-Horn, dated 10-22-2021.

Item P. Gasoline Station, 1.j. – The gasoline station canopy measurements shall be consistent with the canopy elevations prepared by Cuhaci and Peterson, dated 10-20-2021.



Narrative Description of The Property – Conditional Use Permit

The property, Parcel A, is the lands of William G. Yeoman, III, Trust as recorded in instrument number 00662 having a parcel identification of 32-01-007. The total site area is 169,412 square feet or 3.8892 acres. The property is zoned Rural Agricultural Conservation (RAC).



Local Roots. Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA
 DEPARTMENT OF PLANNING AND ZONING

SUBMITTAL CHECKLIST FOR CONDITIONAL / SPECIAL USE PERMIT APPLICATIONS

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.

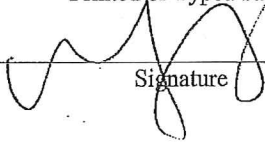
- ☒ 1. Fifteen (15) copies of the original, executed application and one (1) original executed application. Both the applicant(s) and the property owner(s) must have their signature(s) notarized on page No. 2 of the application.
- ☒ 2. The appropriate fees have been submitted with the application. Checks should be made payable to: Treasurer, Isle of Wight County.
- ☒ 3. Fifteen (15) copies of a statement of the reasons for seeking such permit, and if applicable, a statement of conditions.
- ☒ 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(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:
 - o A vicinity map at a scale of no less than one (1) inch equals two thousand (2,000) feet
 - o Title of drawing
 - o Date of drawing
 - o Existing wood line
 - o North arrow
 - o Scale bar
 - o Current zoning of parcel(s) to be rezoned, including tax map number(s) and owner(s)
 - o Current zoning of adjacent parcel(s), including tax map number(s) and owner(s)
 - o Street names including route number and width(s) of the right-of-way(s)
 - o Fifteen (15) full size copies, with one (1) reduced 11 inch X 17 inch copy shall be submitted
 - o 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. 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.

JEREMY YEE

Printed or Typed Name



Signature

10/25/2021

Date



Local Roots, Global Reach
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):

☒ Conditional Use Permit (Are applicant proposed conditions attached?): ☒ Yes ☐ No

The proposed use or activity is listed as a conditional use in the RAC zoning district as per Section 4-2003 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: To allow convenience store and gas station

B. PROJECT DESCRIPTION:

Project Name: Wawa convenience store with gas station

Property Address (if any): Southwest corner of Turner Drive and Benns Church Blvd

Election District: Windsor

Comprehensive Plan Designation: Business & Employment

The use permit will apply to 3.8892 acres out of 3.8892 total acres

Tax Parcel Identification # 32-01-007 Number of acres to be effected: 3.8892

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): Frontier Companies Frontier Development
Address: 4801 SW 3rd Avenue, Suite 500 2950 SW 27th Avenue, Suite 300
City, State, Zip Code: Miami, Florida 33129 Miami, Florida 33133
Phone No.: 305-692-9992 Email: jleach@fdllc.com Fax No.: _____
Property Owner(s) Name(s): Yeoman William G III Trustee William G Y
Address: 40 Henry E Layden PO Box 231
City, State, Zip Code: Smithfield VA 23431
Phone No.: 757-438-3160 Email: henry.layden1@gmail.com Fax No.: N/A

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

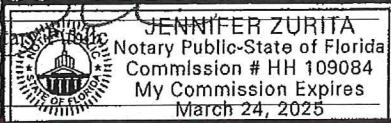
This application must be signed by the owner(s) of the subject property or must have attached written evidence of the owner's consent, which may be in the form of a binding contract of sale with the owner's signature or a letter signed by the owner(s), containing written authorization to act with full 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: Remus Brustur
Printed or Typed Name

Applicant: [Signature] Date: 10/12/2021
Signature

MIAMI - OADE
County of Isle of Wight, Commonwealth of Virginia
STATE OF FLORIDA

Subscribed and sworn to before me Jennifer Zurita
A Notary Public in and for the County of Isle of Wight, MIAMI - OADE
Commonwealth of Virginia, this 12 day of Oct., 2021
STATE OF FLORIDA

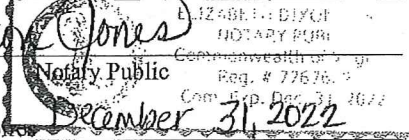
My Commission Expires _____

JENNIFER ZURITA
Notary Public-State of Florida
Commission # HH 109084
My Commission Expires
March 24, 2025

Owner: HENRY LAYDEN
Printed or Typed Name

Owner: [Signature] Date: 10/20/21
Signature

County of Isle of Wight, Commonwealth of Virginia

Subscribed and sworn to before me Elizabeth Dixon Jones
A Notary Public in and for the County of Isle of Wight,
Commonwealth of Virginia, this 20 day of Oct., 2021

My Commission Expires _____

ELIZABETH DIXON JONES
NOTARY PUBLIC
Reg. # 7767629
Com. Exp. Dec 31, 2022

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: _____
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 _____

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: _____ 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 Remus Brustur

Address 2950 SW 27th Avenue, Suite 300

Street

Miami Florida 33133

City State Zip

REAL ESTATE HOLDINGS TO BE AFFECTED

Location or Address	Description

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

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: Remus Brustur
Printed or Typed Name

Applicant: _____

Signature

Date: 10/12/2021

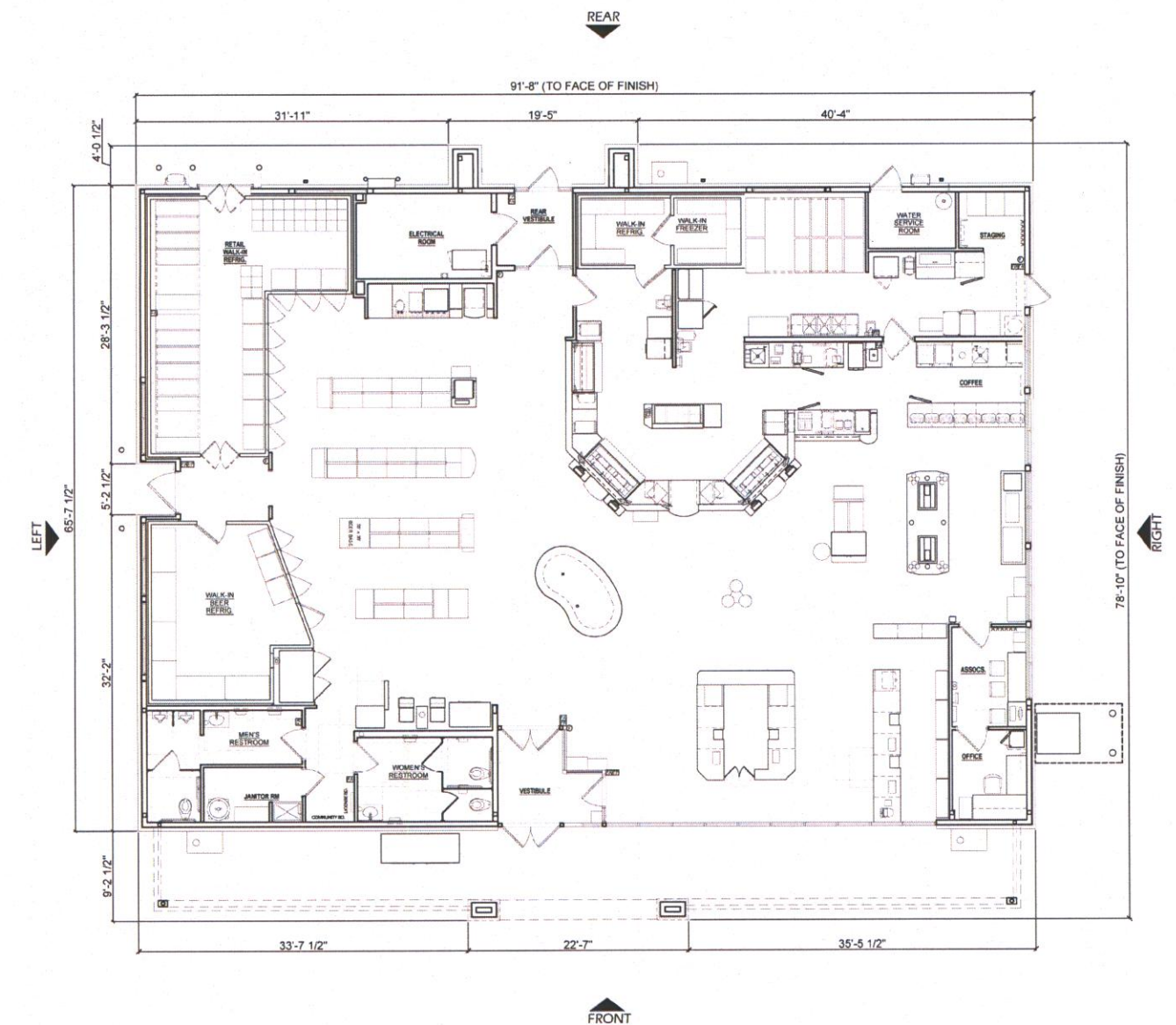
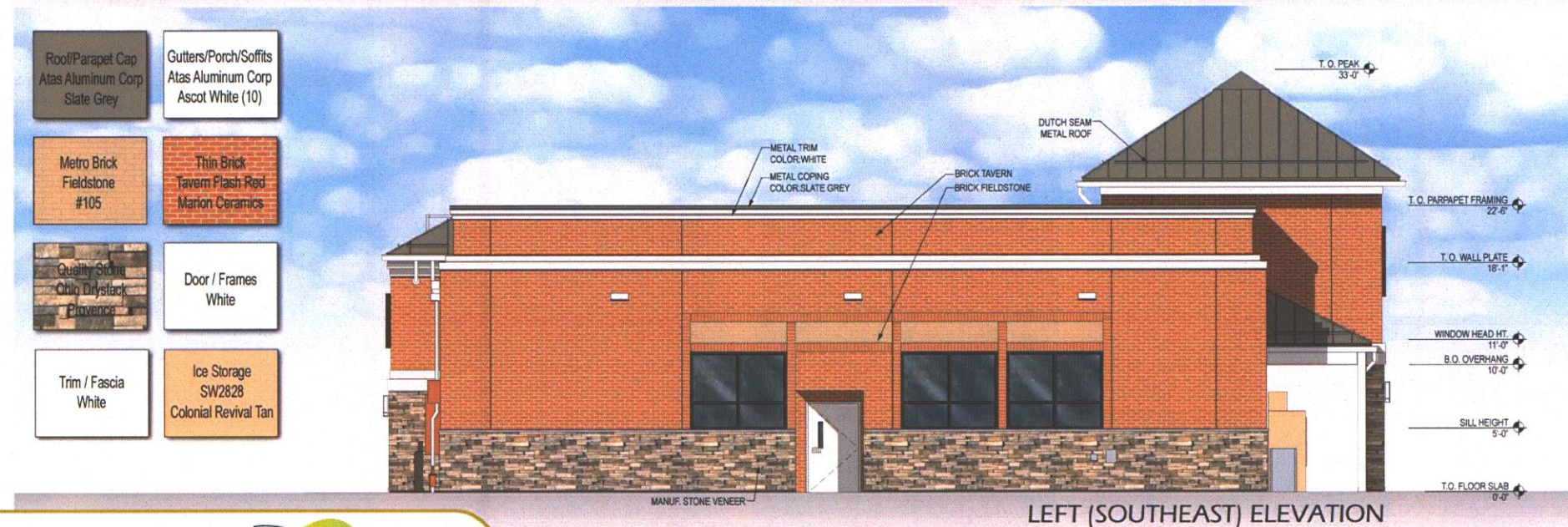
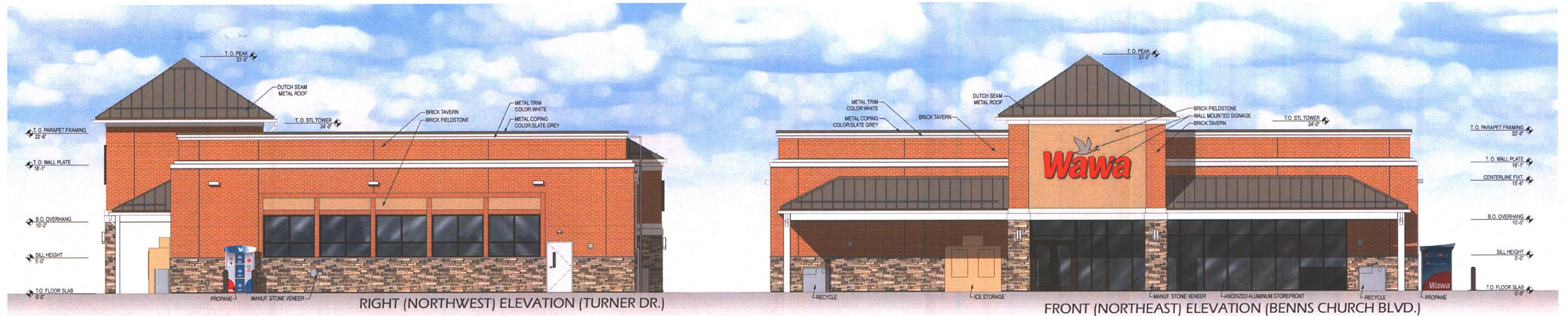
~~STATE OF FLORIDA~~
~~Commonwealth of Virginia~~
~~County of Isle of Wight~~ MIAMI DADE

Subscribed and sworn to before me Jennifer Zurita
A Notary Public in and for the County of ~~Isle of Wight, Commonwealth of Virginia~~ MIAMI DADE, STATE OF FLORIDA, this 12 day of Oct., 2021.

[Signature]
Notary Public

My Commission Expires _____

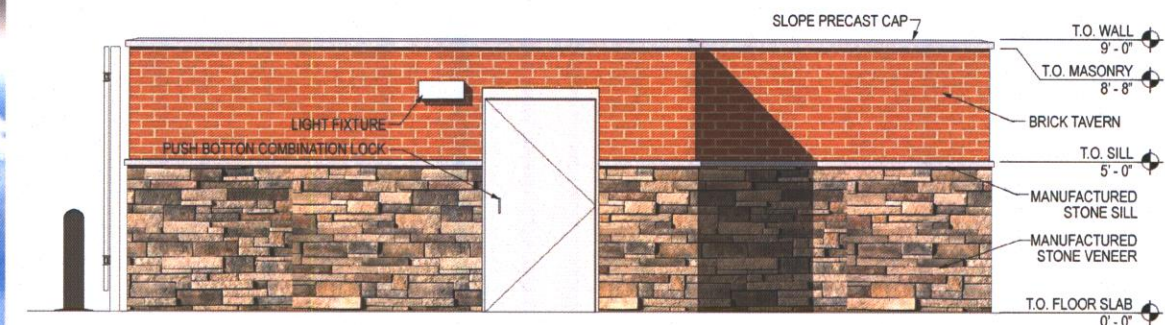




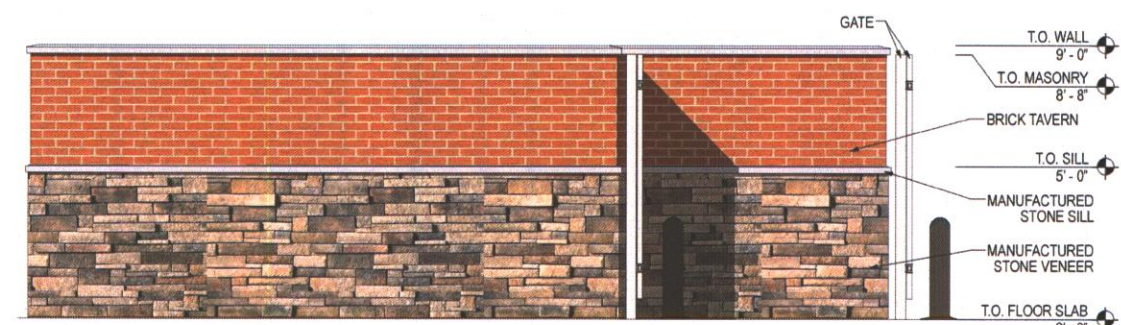
NOTE:
SIGNAGE IS SHOWN FOR REFERENCE ONLY
SEPARATE PERMIT REQUIRED



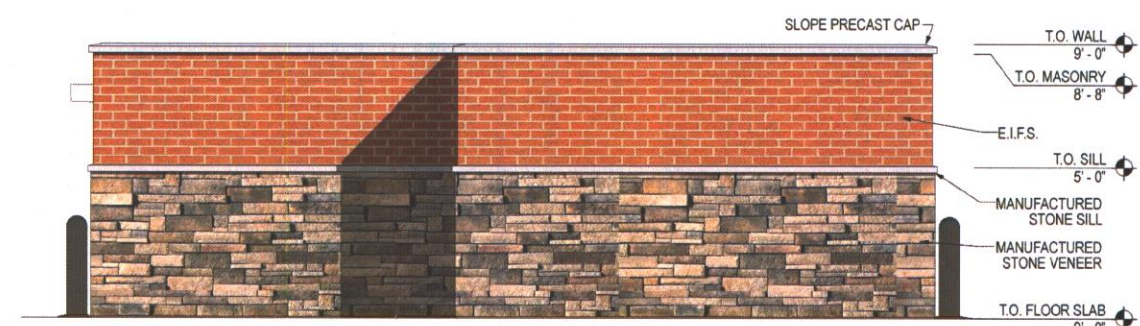
FRONT ELEVATION



RIGHT ELEVATION

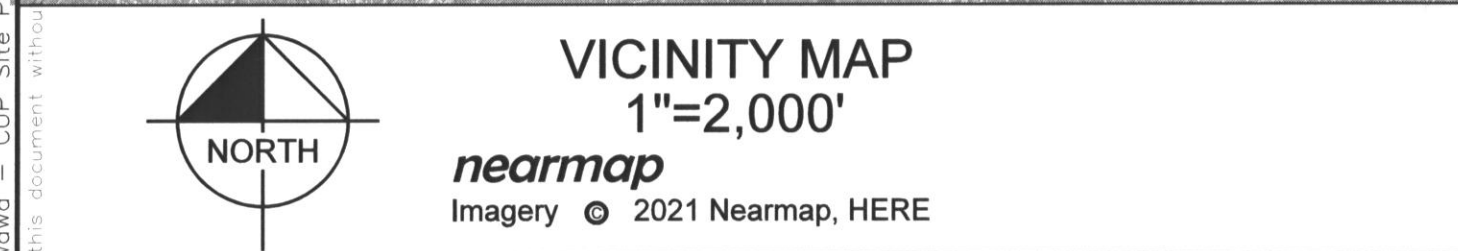


LEFT ELEVATION



REAR ELEVATION





PARCEL A

Country	Percentage of population aged 65 and over in 1990
Australia	14.5
Canada	13.5
France	12.5
Germany	12.5
Italy	12.5
Japan	11.5
Sweden	11.5
Switzerland	11.5
United States	10.5

Kimley»Horn
© 2021 KIMLEY-HORN AND ASSOCIATES, INC.
4525 MAIN STREET, SUITE 1000, VIRGINIA BEACH, VA 23462
PHONE: 757-213-8600 FAX: 757-213-8601

CUP SITE PLAN
BENNS CHURCH BOULEVARD & TURNER
DRIVE



TOWN OF SMITHFIELD

Friday, November 19th, 2021

Isle of Wight County Planning and Zoning
C/O Amy Ring, AICP
17140 Monument Circle #201
Isle of Wight, VA 23397

Re: Conditional Use Permit Application of Wawa Convenience Store and Gasoline Station –
Southwest Corner of Turner Drive and Benn's Church, Isle of Wight County
KHA #116543041

Mrs. Ring,

The Town of Smithfield Community Development and Planning Department is in receipt of the letters and conceptual plans from Kimely Horn, dated Monday, October 25th, 2021, concerning the Conditional Use Permit Application submitted to Isle of Wight County for the proposed Wawa Convenience and Gasoline Station located at the southwest corner of Turner Drive and Benn's Church Boulevard (TPIN: 32-01-007) in Isle of Wight County (see Enclosures 1).

At its Tuesday, November 9th, 2021 meeting, the Smithfield Planning Commission discussed the proposed entrance for the Wawa off of Turner Drive. Their discussion centered around reconfiguring the entrance from Turner Drive so that it functioned more as a defined roadway at the rear of the property, which would extend across the back of the property and provide access to the parking lot. They were concerned about cars cutting through the parking lot to access Benn's Church without traveling to the traffic light and making a right turn.

Please contact me at 1-(757)-365-4200 or tcclary@smithfieldva.gov with any questions.

Sincerely,

Tammie Clary
Community Development & Planning Director

Cc: File

Enclosures:

(1) Letter, Ring to Clary, 2021-10-25

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA
DEPARTMENT OF COMMUNITY DEVELOPMENT

MEMORANDUM

TO: Don Jennings, Utility Services
Joshua Norris, VDOT
Jamie Oliver, Transportation Manager
Steve Henson, Emergency Services
Jennifer England, Isle of Wight County Museum
Chris Morello, Economic Development
Tammie Clary, Town of Smithfield ✓

FROM: Amy Ring, Director

RE: Wawa Gasoline Station and Convenience Store Conditional Use Permit
Application (CUP-08-21) on Benns Church Boulevard (Rte. 10) with tax
parcel number 32-01-007

DATE: October 29, 2021

Please find attached a copy of the Conditional Use Permit (CUP) application for the proposed Wawa gasoline station and associated convenience store located at the intersection of Benns Church Boulevard and Turner Drive (munis project number 25060).

Please find copies of the following application documents attached:

1. CUP application received on October 25, 2021;
2. Statement of reasons for seeking the permit;
3. Narrative description of the properties;
4. Building and canopy elevations; and
5. Conceptual plans.

Please review the attached documents and send me any comments or concerns you may have by Friday, November 19, 2021.

As always, please feel free to give me a call at 365-6210, or by email at aring@iwus.net, if you have any questions.



October 25, 2021

Amy Ring, AICP
Director of Community Development
Isle of Wight County
17140 Monument Circle
Suite 101
Isle of Wight County, VA 23397

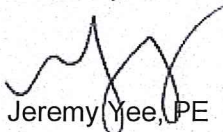
**RE: Conditional Use Permit Application of Wawa Convenience Store and Gasoline Station – Southwest Corner of Turner Drive and Benns Church, Isle of Wight County
KHA #: 116543041**

Dear Ms. Ring:

Enclose please find Conditional Use Permit Application that we file on behalf of Frontier Development with respect to the proposed Wawa Convenience Store and Gasoline Station located at southwest corner of Turner Drive and Benns Church Blvd., in Isle of Wight County, VA. Please accept these materials and place these items on the next available Planning Commission agenda.

Thank you for your assistance with this matter.

Sincerely,



Jeremy Yee, PE

Enclosures



Statement of Reason – Conditional Use Permit

The property lies within the Rural Agricultural Conservation (RAC) District. The purpose of the Conditional Use Permit is to allow the proposed Wawa convenience store and gasoline station. The project will comply with the standards as listed in section 5-5000 supplementary use regulations, specifically for item K. Convenience Store and item P. Gasoline Station, except for the following modifications:

Item K. Convenience Store, 1.b. – The outdoor display of goods for sale shall prohibited except for the ice machine and propane gas as shown on site plan prepared by Kimley-Horn, dated 10-22-2021.

Item P. Gasoline Station, 1.j. – The gasoline station canopy measurements shall be consistent with the canopy elevations prepared by Cuhaci and Peterson, dated 10-20-2021.



Narrative Description of The Property – Conditional Use Permit

The property, Parcel A, is the lands of William G. Yeoman, III, Trust as recorded in instrument number 00662 having a parcel identification of 32-01-007. The total site area is 169,412 square feet or 3.8892 acres. The property is zoned Rural Agricultural Conservation (RAC).



Local Roots. Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA
 DEPARTMENT OF PLANNING AND ZONING

SUBMITTAL CHECKLIST FOR CONDITIONAL / SPECIAL USE PERMIT APPLICATIONS

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.

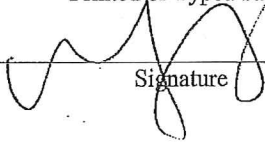
- ☒ 1. Fifteen (15) copies of the original, executed application and one (1) original executed application. Both the applicant(s) and the property owner(s) must have their signature(s) notarized on page No. 2 of the application.
- ☒ 2. The appropriate fees have been submitted with the application. Checks should be made payable to: Treasurer, Isle of Wight County.
- ☒ 3. Fifteen (15) copies of a statement of the reasons for seeking such permit, and if applicable, a statement of conditions.
- ☒ 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(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:
 - o A vicinity map at a scale of no less than one (1) inch equals two thousand (2,000) feet
 - o Title of drawing
 - o Date of drawing
 - o Existing wood line
 - o North arrow
 - o Scale bar
 - o Current zoning of parcel(s) to be rezoned, including tax map number(s) and owner(s)
 - o Current zoning of adjacent parcel(s), including tax map number(s) and owner(s)
 - o Street names including route number and width(s) of the right-of-way(s)
 - o Fifteen (15) full size copies, with one (1) reduced 11 inch X 17 inch copy shall be submitted
 - o 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. 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.

JEREMY YEE

Printed or Typed Name



Signature

10/25/2021

Date



Local Roots, Global Reach
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):

☒ Conditional Use Permit (Are applicant proposed conditions attached?): ☒ Yes ☐ No

The proposed use or activity is listed as a conditional use in the RAC zoning district as per Section 4-2003 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: To allow convenience store and gas station

B. PROJECT DESCRIPTION:

Project Name: Wawa convenience store with gas station

Property Address (if any): Southwest corner of Turner Drive and Benns Church Blvd

Election District: Windsor

Comprehensive Plan Designation: Business & Employment

The use permit will apply to 3.8892 acres out of 3.8892 total acres

Tax Parcel Identification # 32-01-007 Number of acres to be effected: 3.8892

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): Frontier Companies Frontier Development
Address: 4801 SW 3rd Avenue, Suite 500 2950 SW 27th Avenue, Suite 300
City, State, Zip Code: Miami, Florida 33129 Miami, Florida 33133
Phone No.: 305-692-9992 Email: jleach@fdllc.com Fax No.: _____
Property Owner(s) Name(s): Yeoman William G III Trustee William G Y
Address: 40 Henry E Layden PO Box 231
City, State, Zip Code: Smithfield VA 23431
Phone No.: 757-438-3160 Email: henry.layden1@gmail.com Fax No.: N/A

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

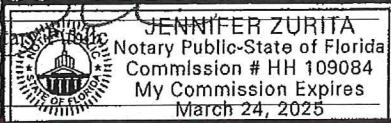
This application must be signed by the owner(s) of the subject property or must have attached written evidence of the owner's consent, which may be in the form of a binding contract of sale with the owner's signature or a letter signed by the owner(s), containing written authorization to act with full 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: Remus Brustur
Printed or Typed Name

Applicant: [Signature] Date: 10/12/2021
Signature

MIAMI - OADE
County of Isle of Wight, Commonwealth of Virginia
STATE OF FLORIDA

Subscribed and sworn to before me Jennifer Zurita
A Notary Public in and for the County of Isle of Wight, MIAMI - OADE
Commonwealth of Virginia, this 12 day of Oct., 2021
STATE OF FLORIDA

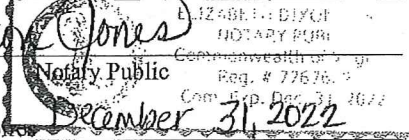
My Commission Expires _____

JENNIFER ZURITA
Notary Public-State of Florida
Commission # HH 109084
My Commission Expires
March 24, 2025

Owner: HENRY LAYDEN
Printed or Typed Name

Owner: [Signature] Date: 10/20/21
Signature

County of Isle of Wight, Commonwealth of Virginia

Subscribed and sworn to before me Elizabeth Dixon Jones
A Notary Public in and for the County of Isle of Wight,
Commonwealth of Virginia, this 20 day of Oct., 2021

My Commission Expires _____

ELIZABETH DIXON JONES
NOTARY PUBLIC
Reg. # 7767629
Com. Exp. Dec 31, 2022

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: _____
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 _____

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: _____ 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 Remus Brustur

Address 2950 SW 27th Avenue, Suite 300

Street

Miami Florida 33133

City State Zip

REAL ESTATE HOLDINGS TO BE AFFECTED

Location or Address	Description

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

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: Remus Brustur
Printed or Typed Name

Applicant: _____

Signature

Date: 10/12/2021

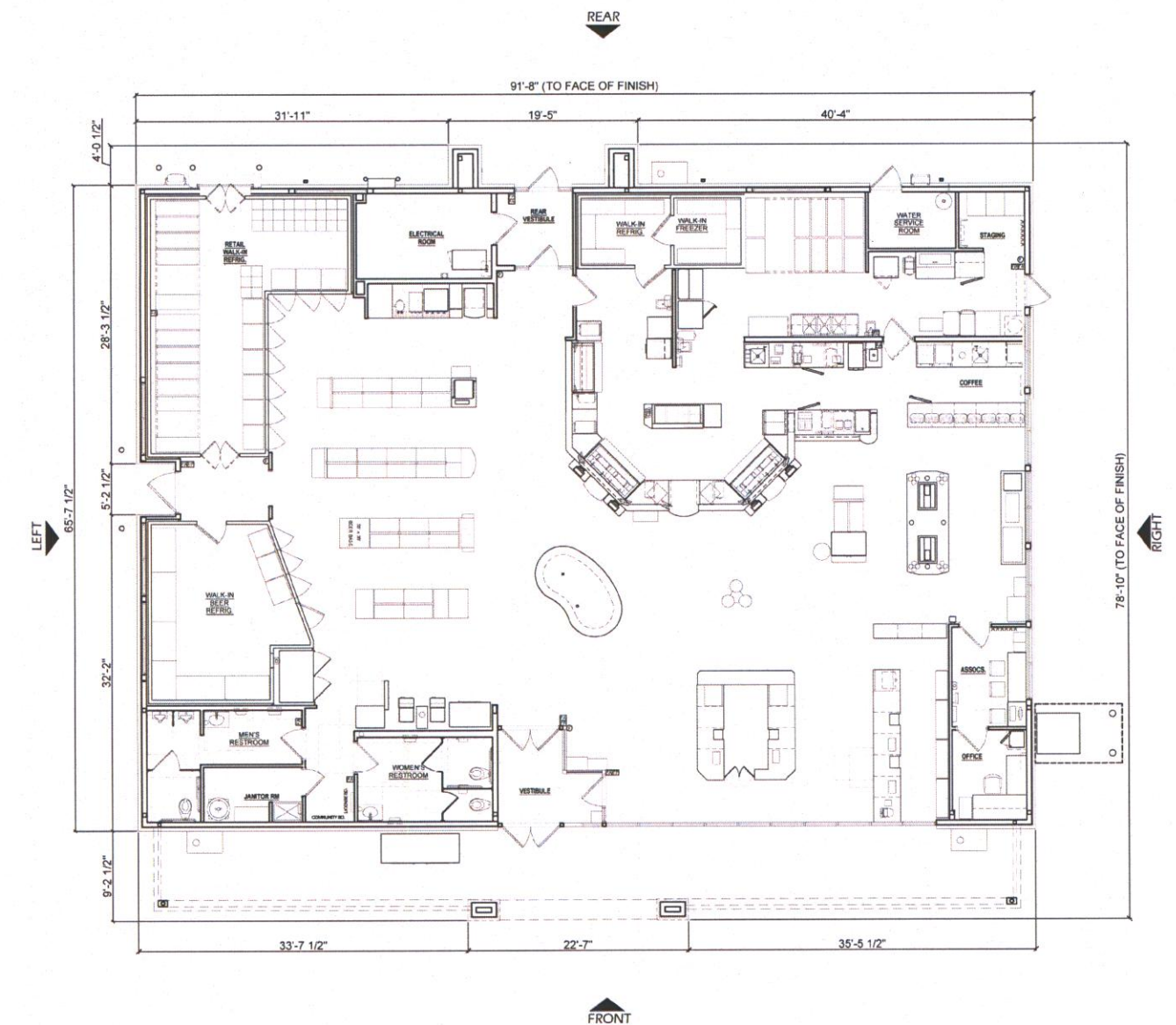
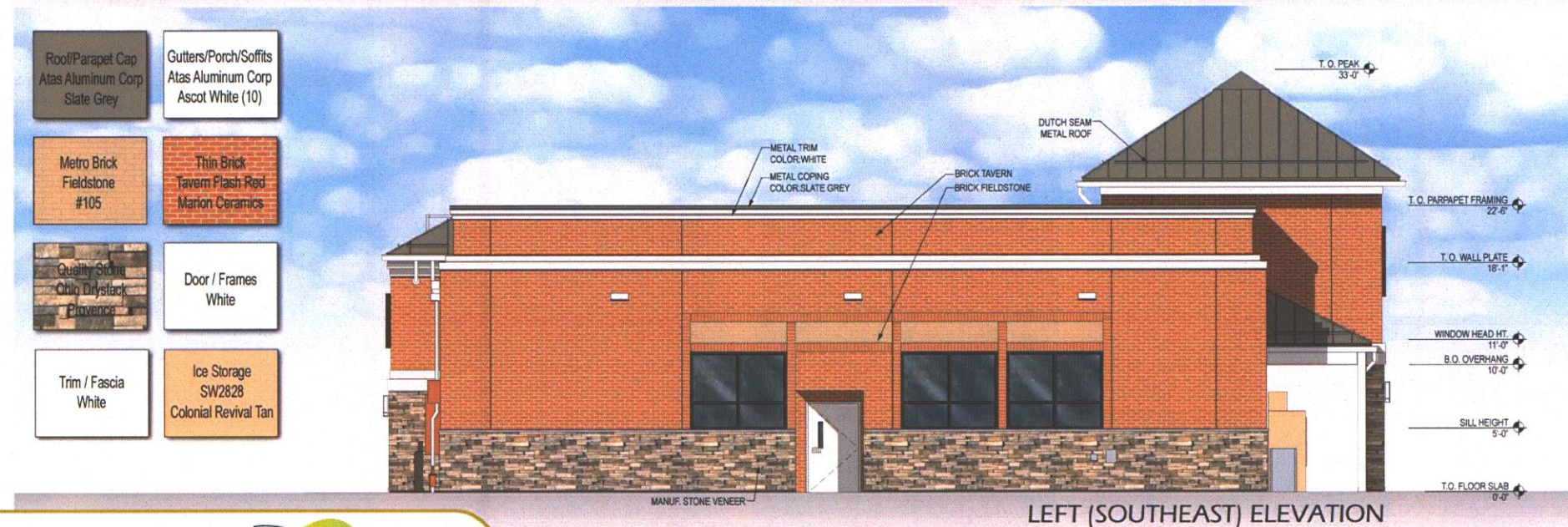
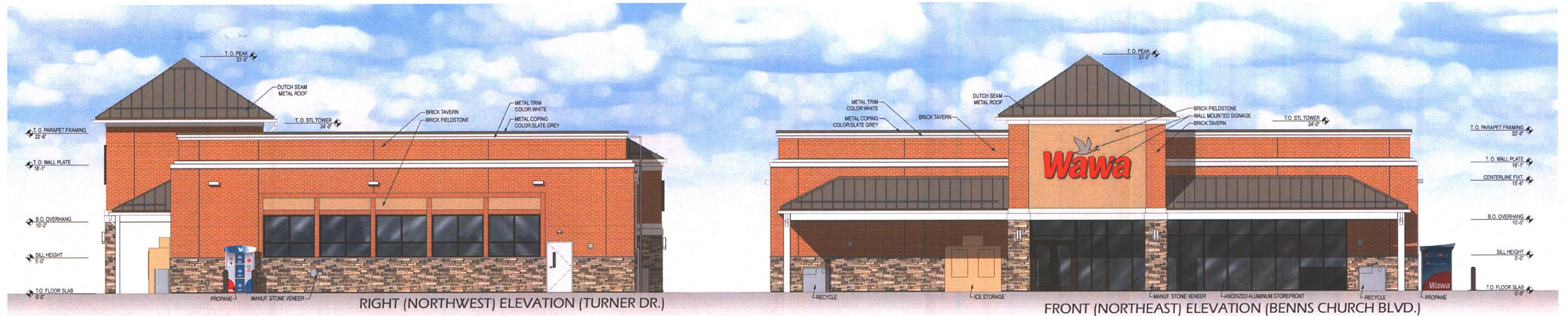
~~STATE OF FLORIDA~~
~~Commonwealth of Virginia~~
~~County of Isle of Wight~~ MIAMI DADE

Subscribed and sworn to before me Jennifer Zurita
A Notary Public in and for the County of ~~Isle of Wight, Commonwealth of Virginia~~ MIAMI DADE, STATE OF FLORIDA, this 12 day of Oct., 2021.

[Signature]
Notary Public

My Commission Expires _____



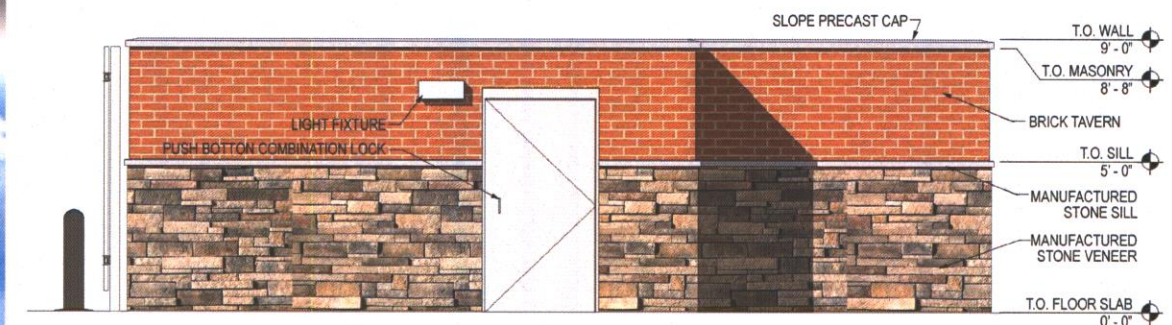


NOTE:
SIGNAGE IS SHOWN FOR REFERENCE ONLY
SEPARATE PERMIT REQUIRED

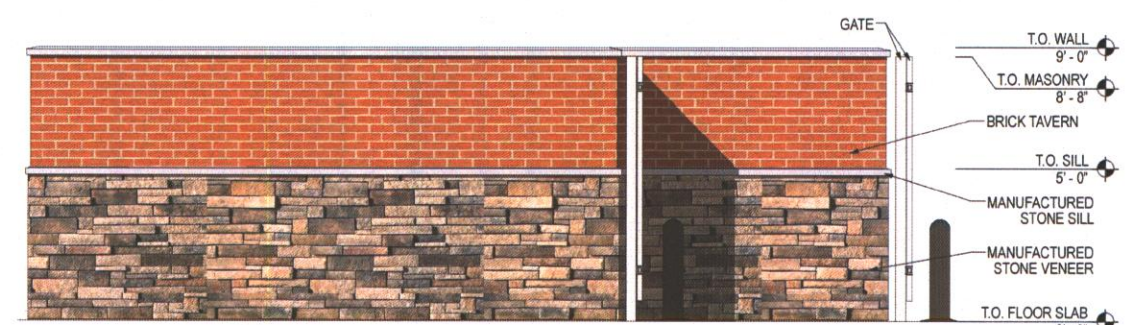
FLOOR PLAN



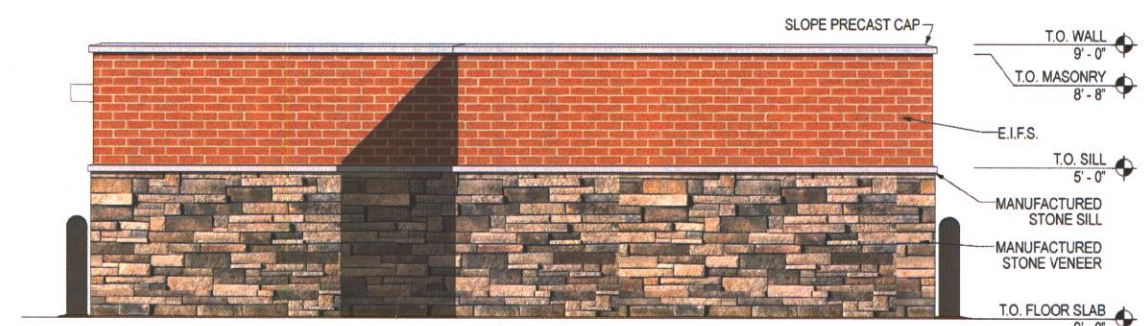
FRONT ELEVATION



RIGHT ELEVATION

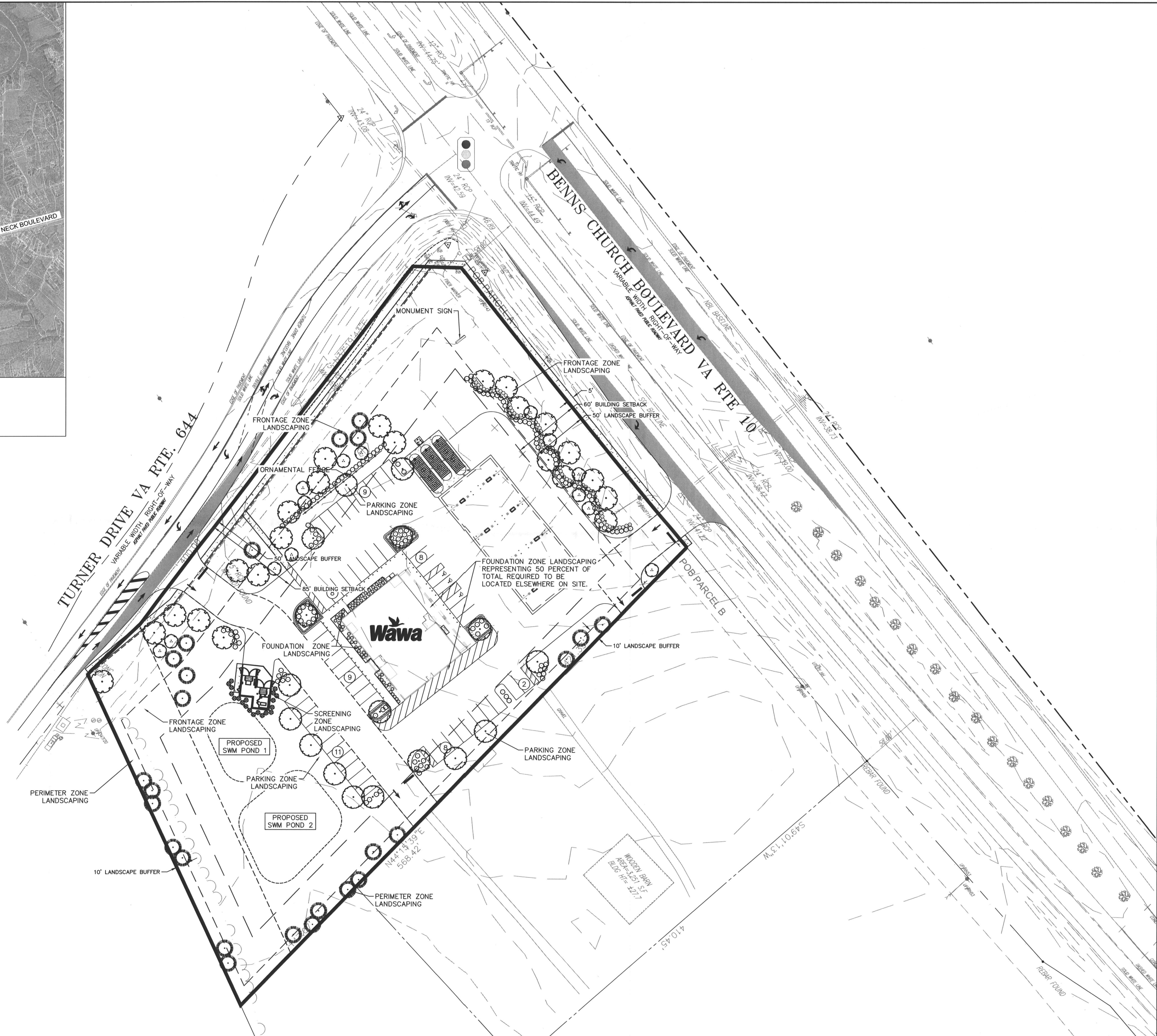
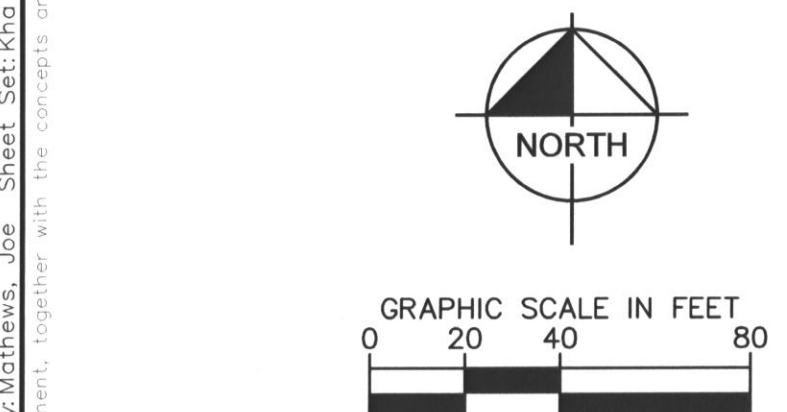
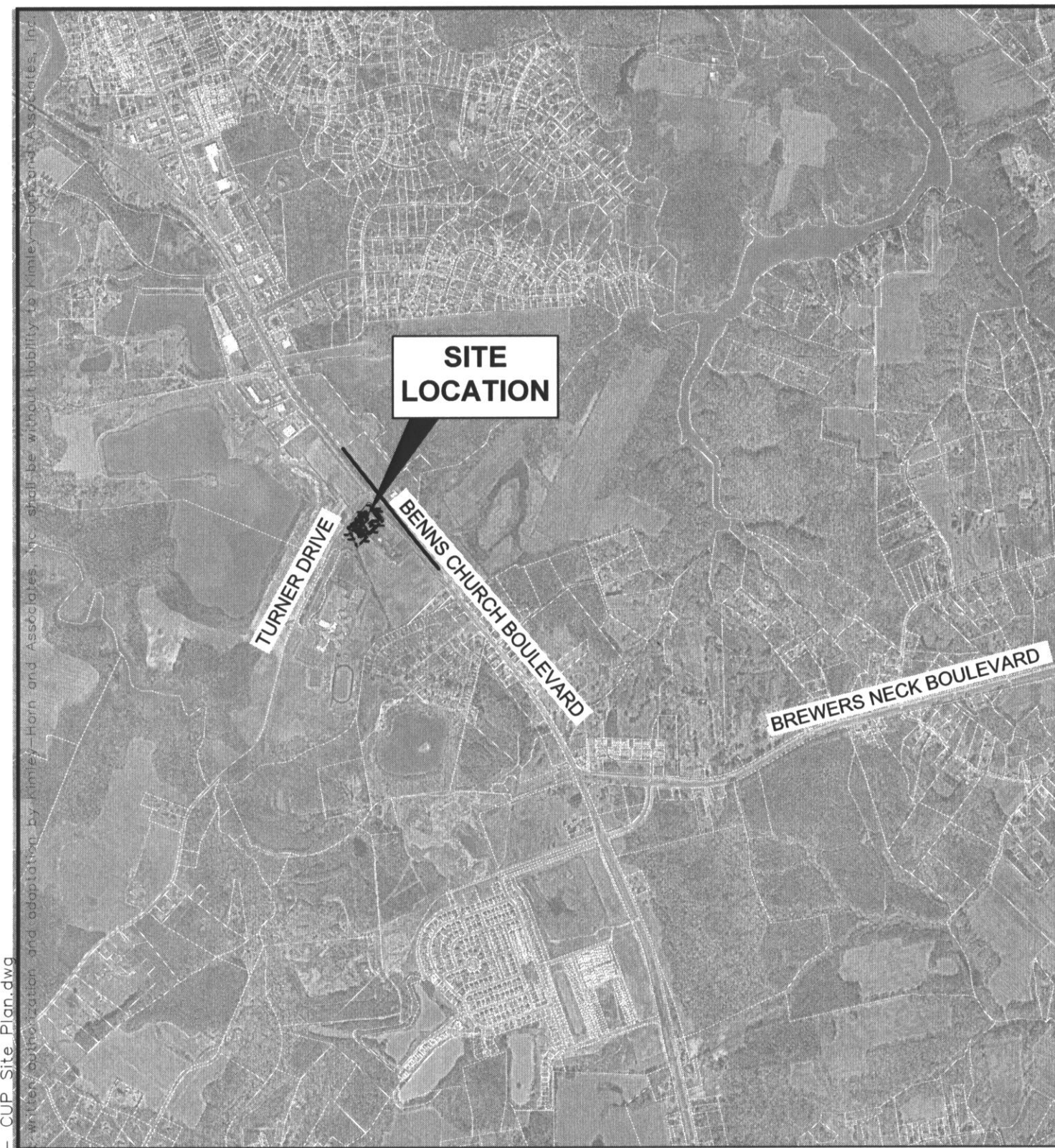


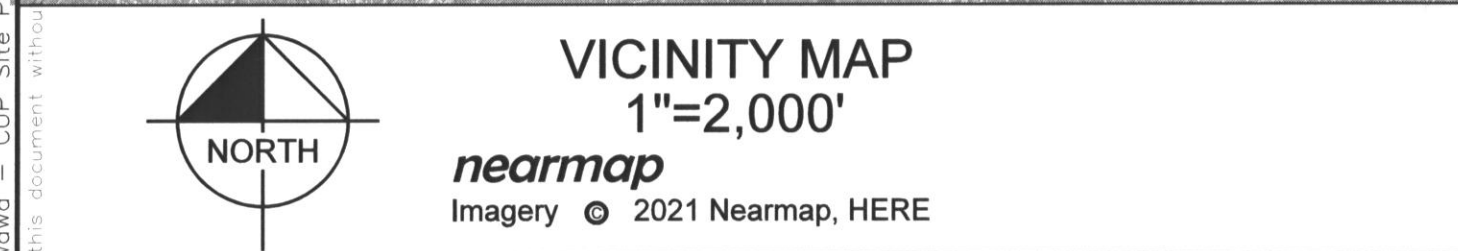
LEFT ELEVATION



REAR ELEVATION







PARCEL A

LANDS N/F
WILLIAM G. YEOMAN, III, TRUSTEE
WILLIAM G. YEOMAN TRUST
INSTRUMENT NO. 00662
PARCEL ID 32-01-007
ZONED: RAC
AREA= 169,412 SQ. FT. OR
3.8892 ACRES

NO POSTED ADDRESS

June 16, 2022

Amy Ring
Community Development Director
Isle of Wight County, Virginia
301 Jericho Road
Smithfield, VA 23430

**RE: CUP-08-21 WAWA
Route 10 (Benns Church Blvd)
Kimley-Horn #116947000
TM #32-01-007**

Dear Ms. Ring,

In response to the Residency's review comments on the above-referenced project received by Kimley-Horn from Isle of Wight County on June 15, 2022, we offer the following responses.

Comment Responses

1. We concur with VDOT's comments regarding the finding in the submitted TIA.
 - *Acknowledge. Understood.*
2. The Transportation Division has recently completed a turn lane project at the Turner Dr/Rt 10 intersection (UPC 103021). This project has provided the County with a in-depth understanding of the extensive utility operations in the area, which limit the operational improvements which can be achieved without significant utility relocations. *Without extensive relocation efforts, the functional capacity of the intersection is limited.*
 - *Acknowledge. Understood.*
3. As highlighted in VDOT's comments, when Wawa's traffic is added, the intersection's Level of Service (LOS) drops to and/or remains at a "D" and, through several TIA iterations proposing different solutions, has not been improved significantly. This is not normally a preferred outcome. The continuing challenge is that mitigating the delay would likely require adding additional lanes, and additional lane width may be uneconomical for the applicant due to utility relocation costs.
 - *Acknowledge. Understood and concur.*
4. If the Wawa is accepted as proposed, please note, there is little to no remaining functional capacity at the intersection for any future public or commercial development utilizing Turner Dr. This could include future school growth and/or development on the north side of Turner Drive.
 - *Comment acknowledged.*

5. As noted in VDOT's comments, possible future school growth at the existing Smithfield High School/Middle School campus—which is included in the County's CIP--was not adequately accounted for in the TIA. Adding future school traffic volumes would degrade the projected Turner Dr/Route 10 intersection function further. Adding a secondary public ingress/egress for school traffic to have additional access to Route 10 could help alleviate the traffic volumes and delay at the Turner Drive intersection as *currently proposed*, as well as allowing capacity for future growth needs in the corridor.
 - *At the initiation of the TIA the new school was proposed but it was our understanding that the school project at the time was not officially approved nor was it a funded project.*
 - *We acknowledge and understand that with the school related traffic it is the desire of the County and/or IOW Schools Public schools to pursue the implementation of secondary ingress/egress access point to the school site.*
6. Entrance 2/Turner Drive full access Intersection continues to be problematic in the analysis, with the TIA showing excessive queuing for certain periods in all scenarios. Considering both the volume of traffic and the character of traffic in the area (buses, teen drivers, etc.) the Transportation Division has significant concerns about both safety and functionality at this entrance.
 - a. The "Do Not Block Intersection" Or Don't Block the Box scenarios are generally unenforceable unless the Sheriff's Office is actually on-site regularly to supervise traffic flow. This is an unrealistic option for the County.
 - *Adherence to the signage and the associated guidance to "not block the box" is not intended to be monitored at all times by County law enforcement resources. It is anticipated/proposed that County Law enforcement resources periodically observe the intersection during peak times and throughout the day to enforce the restriction and address violations as/when needed.*
 - *Depending on driver behavior, etiquette, and/or courtesies there may always be the potential that queued vehicles could block the intersection and impede vehicles from making a left-turn movement from southbound Turner Drive into the site.*
 - b. In this location, if "the Box" is blocked, queuing/gridlock would mean you could not get to the location to provide enforcement until the infraction was resolved.
 - *This proposed striping of "Do Not Block the Box" will reduce the likelihood of drivers blocking the driveway to the proposed Wawa development. Alternative measures, including camera-ticket-enforcement, can be considered in conjunction with the proposed striping.*
 - c. Currently, the most effective scenarios (outside of Virginia) seem to include the use of camera-ticket-enforcement.
 - *"Do Not Block the Box" would be the recommended measure, however, if installing camera-ticket-enforcement is feasible, this could be a more effective solution to mitigate this issue. This would be considered with the*

understanding that once installed, it would be the responsibility of the County to maintain.

- d. These challenges only become more pronounced if you give consideration to any future development on the north side of Turner Drive which may want to use the existing road network.
 - *Acknowledge.*
 - e. An alternative intersection design, such as a single lane roundabout, may function as a safer and more efficient solution in this location, while allowing more capacity for future growth. It would need to be analyzed within the TIA.
 - *Consideration is being given to an alternative intersection/traffic control (e.g., a roundabout) concept at this intersection location to mitigate operational and/or safety concerns. The acquisition of right-of-way (ROW) from properties along both sides of the roadway (i.e., Turner Drive) will be critical to the ability to implement any alternative intersection concepts under consideration.*
7. Based on the submission, I am not clear if the pedestrian accommodations provided meet the requirements and expectations of the County's Bike and Pedestrian plan, or provide for cost sharing of future pedestrian improvements at the key intersection locations as adjacent improvements come online. It would be helpful for the project team to explain how they see this parcel contributing to the future multi-modal needs developing between the school campus, their parcel, the shopping center, and the residential communities further down Rt 10.
- a. Are their facilities 5' sidewalks, or 10' multi-use trails?
 - *The Wawa development is planning to design and install 5' paved sidewalk along both street frontages of the site on Benns Church Boulevard and Turner Drive. The development would consider the cost sharing option with the County to help implement the County's Bike and Pedestrian Plan and include 10' multi-use trails on both street frontages of the site.*
 - b. Are their facilities providing functional connection to the adjacent school, or only extended to the property line?
 - *Assuming this is referring to a pedestrian connection, it seems unnecessary for a private development to have a private pedestrian connection to a public school. The sidewalk or multi-use trail on Turner Drive should meet the intention of public pedestrian connection.*
 - c. Are they providing driveway crosswalks and functional pedestrian access from the perimeter infrastructure to the store at the center of the parcel for non-vehicular, non-fuel customers?
 - *Designated crosswalks will be provided to the pedestrian from public sidewalk to the store.*

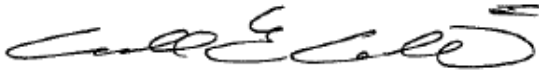
- d. As a major intersection anchor, are they providing a plan or proposal for future “fair share” contributions to pedestrian accommodations at the Turner Dr/Route 10 intersection?

- *The developer will need to understand the details of “fair share” contributions before being able to provide a response.*

Please contact me at (757) 213-8616 or carroll.collins@kimley-horn.com should you have any questions or need additional information.

Sincerely,

KIMLEY-HORN AND ASSOCIATES



Carroll E. Collins, AICP
Project Manager

Cc: James Leach, Frontier Companies
Jeremy Yee, P.E., Kimley-Horn and Associates

ORDINANCE NUMBER _____

AN ORDINANCE TO ISSUE A CONDITIONAL USE PERMIT, CUP-8-21, TO ALLOW A CONVENIENCE STORE AND GASOLINE STATION ON 5.69 ACRES ON PROPERTY WITH TAX MAP PARCEL 32-01-007 IN THE RURAL AGRICULTURAL CONSERVATION ZONING DISTRICT

WHEREAS, Remus Brustur of Frontier Development, applicant, and the William G. Yeoman, III, Trust, property owner, have requested issuance of a conditional use permit for a portion of a certain tract of land with tax parcel number 32-01-007 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 of approval with conditions 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-8-21), as submitted or modified with conditions herein, the expressed purpose of which is to permit a convenience store and gasoline station, 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 with the attached conditions and the general conditions set forth in Section 4 hereof. The conditional use permit specifically allows for a convenience store and gasonline station 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

EXHIBIT A

RESOLUTION NUMBER PC-22-10

**ISLE OF WIGHT COUNTY PLANNING COMMISSION
A RESOLUTION TO PRESENT A REPORT AND RECOMMENDATION
TO THE BOARD OF SUPERVISORS RELATING TO CONDITIONAL USE PERMIT
REQUEST CUP-8-21 TO ALLOW A CONVENIENCE STORE AND GASOLINE STATION ON
5.69 ACRES ON PROPERTY WITH TAX MAP PARCEL 32-01-007**

WHEREAS, Remus Brustur of Frontier Development, applicant, and the William G. Yeoman, III, Trust, property owner, have requested issuance of a conditional use permit for a portion of a certain tract of land with tax parcel number 32-01-007 situated in Isle of Wight County; and

WHEREAS, the specific request is to permit a convenience store and gasoline station in accordance with sections 1-1017 of the Zoning Ordinance; 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 conditional use permit is reasonable and warranted due to a change in circumstances affecting the property and has considered the following factors and finds that the proposed conditional use permit 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 conditional use permit 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, CUP-8-21, 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: 6-28-22

READ AND PASSED:

[Signature]
Chairman, Isle of Wight County Planning Commission

TESTE:

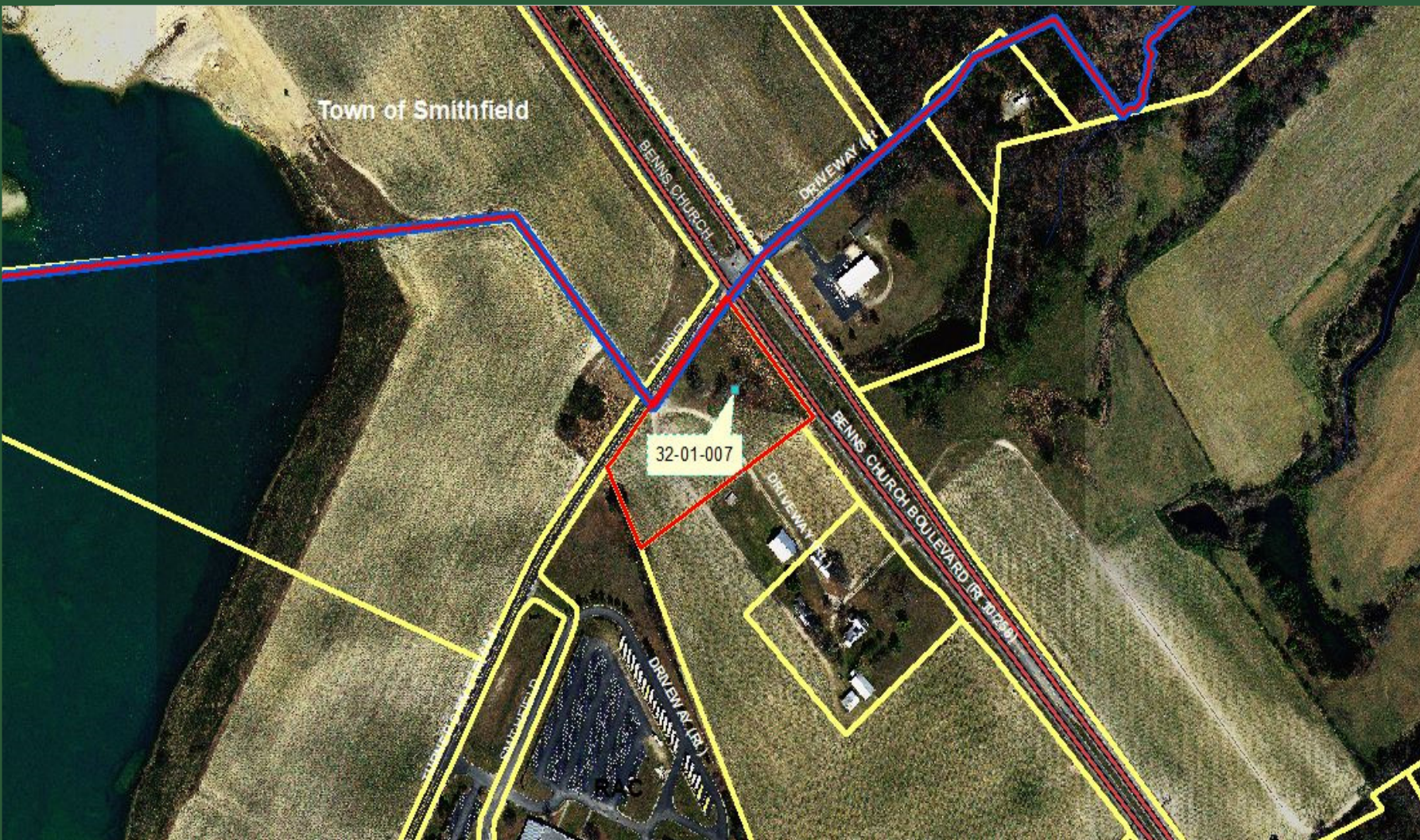
[Signature]
Secretary, Isle of Wight County Planning Commission

Approved as to Form:

[Signature]
Robert W. Jones, Jr., County Attorney

EXHIBIT B

PROPERTY
LOCATION



ISSUE:

Consideration of Items for 2023 Legislative Priorities

BACKGROUND:

Staff will briefly review and discuss the County's proposed legislative strategy and requests the Board provide any suggested items for inclusion in the 2023 Legislative Agenda.

Items previously included in the list of legislative priorities are:

- Additional Sales Tax for Educational Purposes
- Education Funding Support from the Commonwealth
- *Exemption of State Revenue Recovery for Western Tidewater Regional Jail (REMOVED)*
- Limited Residential Lodging Act
- Unfunded Mandates
- Transportation Funding
- Proffer/Impact Fee Legislation
- *Assistance to Broadband Internet (REMOVED)*
- *Support for HB1052 - Provision of Telecommunications Services (REMOVED)*
- Support for Second Amendment

BUDGETARY IMPACT:

None

RECOMMENDATION:

Per the Board's discussion and direction.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution	9/7/2022
Proposed 2023 Legislative Priorities	Backup Material	9/7/2022

**RESOLUTION ESTABLISHING ISLE OF WIGHT COUNTY'S
LEGISLATIVE PRIORITIES FOR THE
2023 SESSION OF THE GENERAL ASSEMBLY**

WHEREAS, the General Assembly considers numerous issues that affect local governments both directly and indirectly; and,

WHEREAS, the County of Isle of Wight, Virginia has specific interest in matters dealing generally with local governments, as well as matters directly impacting the County of Isle of Wight; and,

WHEREAS, such interest should be shared with Isle of Wight County's General Assembly Delegation so that it may know of the County's position on these important issues.

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED that the Board of Supervisors of the County of Isle of Wight, Virginia endorses the attached legislative proposals for the 2023 General Assembly Session and directs that both this resolution and the legislative priorities be forwarded to Isle of Wight County's General Assembly Delegation and that staff work with and assist the Delegation as appropriate.

Adopted this 15th day of September, 2022.

Rudolph Jefferson, Chairman

Carey Mills Storm, Clerk

Approved as to form:

Robert W. Jones, Jr., County Attorney

PROPOSED 2023 LEGISLATIVE PRIORITY LIST

LOCAL ISSUES

- Additional Sales Tax for Educational Purposes
- Education Funding Support from the Commonwealth
- Limited Residential Lodging Act
- Unfunded Mandates
- Transportation Funding
- Proffer/Impact Fee Legislation
- Support for Second Amendment

ADDITIONAL SALES TAX FOR EDUCATION PURPOSES

ISSUE:

The Code of Virginia authorizes “the qualifying locality” to impose an additional local sales and use tax at a rate not to exceed one percent, as determined by the governing body, if initiated by a resolution of the local governing body and approved by the voters at a referendum. The bill requires the governing body to specify in the enacting ordinance the time period, not to exceed 20 years, for which the tax would be imposed. Revenue from the tax shall be used solely for capital projects for new construction or major renovation of schools in the locality enacting the tax.

The bill removes the limit on the amount that “the qualifying locality” may appropriate to an incorporated town that has not complied with the provisions of its charter relating to the elections of local officials. Under current law, such amount is limited to the amount the town would have received from local sales and use tax for educational purposes if such election had been held.

In the Code of Virginia, § 58.1-602, “qualifying locality” currently means Charlotte County, Gloucester County, Halifax County, Henry County, Mecklenburg County, Northampton County, Patrick County, Pittsylvania County, or the City of Danville.

COUNTY POSITION:

Isle of Wight County urges the General Assembly to adopt legislation to amend the Code of Virginia (§ 58.1-602) to add “Isle of Wight County” as a qualifying locality for the purpose of imposing an additional local sales and use tax at a rate not to exceed one percent, as determined by the governing body to be used solely for capital projects for new construction or major renovation of schools.

EDUCATION FUNDING SUPPORT FROM THE COMMONWEALTH

ISSUE:

The Joint Legislative Audit and Review Commission (JLARC) has previously produced reports relative to state and local funding of the Standard of Quality (SOQ) for primary and secondary education in Virginia. In this regard, the Isle of Wight County remains concerned about the following issues:

- Localities pay 100 percent of the cost of teachers and other instructional expenses beyond the minimum requirements of the state Standards of Quality, which represents significant costs to localities.
- School divisions spend significantly less to operate and maintain facilities than in the past due to unfunded mandates from the State.

It is essential for the state to fully fund its constitutional responsibilities and all mandates associated with K-12 public education. Full state funding should be achieved without reduction to other parts of state public education budgets or to the other core services. Should state general funding diminish, local autonomy should be increased and state education mandates reduced.

COUNTY POSITION:

Isle of Wight County supports full State funding for public education, including the Standards of Quality (SOQ) as previously recommended by the Board of Education, where these recommendations coincide with prevailing local practice; targeted incentive programs; capital and maintenance support; and teacher salaries. Full State funding should be achieved without reduction to other parts of State public education budgets or to other core services. The State must recognize that local school divisions continue to spend billions of dollars above the required local effort.

The County opposes proposals to divert State or local education funds from local school divisions.

LIMITED RESIDENTIAL LODGING ACT

ISSUE:

The Limited Residential Lodging Act (the Act) allows persons to rent out their primary residences or portions thereof for charge for periods of less than 30 consecutive days or do so through a hosting platform. Localities are preempted from adopting ordinances or zoning restriction prohibiting such short-term rentals, but authorized to adopt ordinances requiring persons renting their primary residences to have a minimum of \$500,000 of liability insurance, prohibiting persons from renting their primary residences if they fail to pay applicable taxes, and requiring persons renting their primary residences to register with the locality. A hosting platform must register with the Department of Taxation to collect and remit all applicable taxes on behalf of the property owner using the hosting platform. The bill defines "limited residential lodging," "booking transaction," and "hosting platform" and provides for penalties for violations of the Act. The bill contains a reenactment clause and directs the Virginia Housing Commission to convene a work group to further study the issues presented in the bill and make recommendations for consideration by the 2017 Session of the General Assembly.

COUNTY POSITION:

The General Assembly should adopt legislation that provides localities the ability to ensure the safety, well-being and use of property by persons renting properties, as well as adjacent and neighboring property owners.

Isle of Wight County is **opposed** to any legislation that would exempt short-term rental rooms or entire residences through booking platforms such as AirBnB from local zoning regulations.

UNFUNDED MANDATES

ISSUE:

Unfunded mandates placed on localities by the State have detrimentally affected local tax rates and the ability of local governments to address local needs and priorities.

There are many programs required by the State to be implemented at the local level. Several of these programs are inadequately funded or not funded at all by the State. Unfunded mandates place a financial burden on localities to implement those programs. The problem is further exacerbated when existing funding from the State to provide programs is unexpectedly reduced or eliminated, but the requirement to provide the program still exists.

When funding for a mandated program is altered, the mandate should be suspended until full funding is restored. When legislation with a cost to localities is passed by the General Assembly, the cost should be borne by the Commonwealth, and the legislation should contain a sunset clause providing that the mandate is not binding on localities until funding by the Commonwealth is provided.

The General Assembly has previously adopted legislation mandating that local governments fund the Line of Duty Act (LODA) as a means of providing public safety personnel with death or disability benefits resulting from the performance of their duties.

Local governments had no input into the design of the LODA program, but are required to fund the program now that cost have exceeded what the State wants to pay for. **This is an unfunded mandate.**

Per the provisions of Section 3.2-6553 of the Code of Virginia, Isle of Wight County was required to compensate a citizen \$11,400 for livestock killed by dogs. No funding was provided for this requirement, nor is there a mechanism for reimbursement from the State.

COUNTY POSITION:

The County requests that the General Assembly adequately fund the State's share for required programs that must be implemented at the local level.

The County of Isle of Wight requests that the General Assembly adopt legislation to amend the Code of Virginia to make LODA coverage optional at the local level or provide local governments the option to only pay basic death benefits under LODA.

Additionally, LODA should be fully funded by the State and administration of the program should fall under the State Worker's Compensation Commission, not the State Comptroller's Office.

The County requests that the General Assembly adequately fund the State's share for required programs that must be implemented at the local level and/or eliminate the service requirement of the mandate.

TRANSPORTATION FUNDING

ISSUE:

Isle of Wight County appreciates the funding provided by the State as a significant step towards addressing the transportation needs of the Commonwealth; however, it did not fully address the needs of Virginia's highway system, where more funding is needed in the immediate future for our roadways, especially secondary roads.

COUNTY POSITION:

The General Assembly should take the appropriate actions necessary to restore funding for the Six-Year Secondary Road Plan to pre- recession levels, adjusted for inflation.

The General Assembly should closely monitor and evaluate the implementation of "Smart Scale" and all other processes employed in recent years for distributing transportation funds.

Isle of Wight County supports a fuel tax floor to ensure sufficient funding to address transportation construction and maintenance needs throughout the Commonwealth.

PROFFER/IMPACT FEES

ISSUE:

Many localities in the Commonwealth have used voluntary proffers as a means of ensuring that the impacts of new residential developments on public infrastructure and public services are not borne solely by existing residents of the impacted community.

In 2016, the General Assembly adopted legislation that provides that *no locality shall (i) request or accept any unreasonable proffer in connection with a rezoning or a proffer condition amendment as a condition of approval of a new residential development or new residential use or (ii) deny any rezoning application or proffer condition amendment for a new residential development or new residential use where such denial is based in whole or in part on an applicant's failure or refusal to submit an unreasonable proffer or proffer condition amendment.*

During the 2019, language was added to clarify that nothing should be interpreted to prohibit communications between an applicant or owner and the locality or to prohibit presentation, analysis, or discussion of the potential impacts of new residential development or other new residential use on the locality's public facilities.

COUNTY POSITION:

Isle of Wight County supports changes to the conditional zoning law to allow greater flexibility in the process for determining impacts (operational and capital) to be addressed when considering an application for development. Isle of Wight County also supports legislation that grants localities additional tools to adequately meet increasing needs for public services driven by new development without burdening current residents with the cost of new growth through increased real estate taxes. Such additional tools may include broad impact fee authority for all counties, and adequate public facilities provisions.

AFFIRMATION OF SECOND AMENDMENT RIGHTS

ISSUE:

The Second Amendment to the United States Constitution was ratified on December 15, 1791 and provides for the “Right to Bear Arms”. It establishes that “A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed”.

Article I, Section 13, of the Constitution of Virginia provides “That a well regulated militia, composed of the body of the people, trained to arms, is the proper, natural, and safe defense of a free state, therefore, the right of the people to keep and bear arms shall not be infringed; that standing armies, in time of peace, should be avoided as dangerous to liberty; and that in all cases the military should be under strict subordination to, and governed by, the civil power.”

The Isle of Wight County Board of Supervisors has previously adopted a resolution declaring Isle of Wight County as a “Constitutional County” which affirms its support of the rights ensured and protected by the Constitutions of the United States and Virginia. In this regard, it is the right of the people to keep and bear arms to defend life, liberty, and property as well as to derive benefit from safe forms of firearms recreation, hunting, and shooting using all types of firearms allowable by the United States Constitution.

COUNTY POSITION:

Isle of Wight County opposes the enactment of any legislation that would unconstitutionally infringe upon the right of law-abiding citizens to keep and bear arms. The County further urges the General Assembly to support that right.

ISSUE:

Resolution to Set a Joint Work Session with the Planning Commission re: Solar

BACKGROUND:

At its work session on September 1, 2022, the Board expressed its interest in holding a joint meeting with the Planning Commission for the purpose of discussing solar farms from 2:00 pm - 4:00 pm on October 14, 2022.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

Adopt a resolution to set a joint meeting with the Planning Commission.

ISSUE:

Resolution to Set a Joint Meeting with the School Board

BACKGROUND:

At its work session on September 1, 2022, the Board expressed its desire to hold a joint meeting with the School Board at 5:00 pm on September 21, 2022 for the purpose of discussing school security and budget related matters.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

Adopt a resolution to set a joint meeting with the School Board.

ISSUE:

Resolution to Establish a Community Emergency Response Team (CERT) Program

BACKGROUND:

Community Emergency Response Teams are made up of groups of citizen volunteers who assist with staffing critical but less emergent functions during times of crisis or other major disasters.

The Department of Emergency Services has conducted methodical research indicating the need for a Community Emergency Response Team in Isle of Wight County.

BUDGETARY IMPACT:

None.

RECOMMENDATION:

Adopt a resolution establishing a Community Emergency Response Team in Isle of Wight County.

ATTACHMENTS:

Description	Type	Upload Date
Resolution	Resolution	8/25/2022

RESOLUTION TO ESTABLISH A COMMUNITY EMERGENCY RESPONSE TEAM (CERT)

WHEREAS, the Board of Supervisors recognizes the need for enhanced emergency response resources in the wake of recent, unprecedented, natural disasters in the county and the likelihood that such events will increasingly occur; and,

WHEREAS, first responders to such natural disasters, and other emergencies, have to address often overwhelming circumstances in emergency situations; and,

WHEREAS, the Federal government has established the Community Emergency Response Team (CERT) program under its Citizen Corps, a subsidiary of the USA Freedom Corps created by Executive Order 13254 in 2002; and,

WHEREAS, the Board of Supervisors has the authority to establish a CERT that can be trained to help first responders and address various needs in the event of an emergency; and,

WHEREAS, the Federal government offers resources to assist in the establishment and maintenance of a CERT team, including Federal grants through the Department of Homeland Security which fund materials for training and certification of CERT team members; and,

WHEREAS, Isle of Wight County has an Emergency Management Coordinator designated to establish and oversee a CERT team.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors of Isle of Wight County, Virginia tasks the County's Emergency Management Coordinator to establish and oversee a Community Emergency Response Team.

Adopted this 15th day of September 2022.

Rudolph Jefferson, Chairman

Carey Mills Storm, Clerk

Approved as to form:

Robert W. Jones Jr., County Attorney