A G E N D A
ISLE OF WIGHT COUNTY PLANNING COMMISSION
February 27, 2024

1. CALL TO ORDER

INVOCATION

PLEDGE OF ALLEGIANCE

2. ROLL CALL/DETERMINATION OF A QUORUM

BOBBY BOWSER, CHAIRMAN
THOMAS J. DISTEFANO, VICE-CHAIRMAN
BRIAN CARROLL
CYNTHIA TAYLOR
JAMES FORD
JENNIFER S. BOYKIN
GEORGE RAWLS
RICK SIENKIEWICZ
RAYNARD GIBBS
MATTHEW SMITH

3. ACTION ON REQUESTS TO WITHDRAW OR TABLE PENDING AGENDA ITEMS

4. APPROVAL OF AGENDA

5. CONSENT AGENDA

A. January 16, 2024 Board of Supervisors Work Session Action List

B. January 23, 2024 Planning Commission Regular Meeting Minutes

C. February 15, 2024 Board of Supervisors Work Session Action List

6. CITIZENS' COMMENTS

7. PUBLIC HEARINGS

A. LUP-01-23 Tidewater Logisitics Comprehensive Plan Amendment

Application (LUP-1-23) of the Industrial Development Authority of Isle of Wight and Hollowell Holdings LLC, property owners, and Meridian Property Purchaser, LLC, applicant, for a Comprehensive Plan Amendment on 154.3 acres located on properties with tax map numbers 54-01-086J and 55-01-013 to amend the Comprehensive Plan Future Recommended Land Use Map designation from Mixed Use to Planned Industrial

B. ZA-4-23 Tidewater Logistics Conditional Rezoning

Application (ZA-4-23) of the Industrial Development Authority of Isle of Wight and Hollowell Holdings LLC, property owners, and Meridian Property Purchaser, LLC, applicant, for a change in the zoning district from Rural Agricultural Conservation to

Conditional Limited Industrial for approximately 154.3 acres on tax map numbers 54-01-086B, 54-01-086J, and 55-01-013 to allow the following uses: Custom manufacturing, Industry Type 1, Warehousing and Distribution, Industry Type II, and Reconstructed Wetland

8. OLD BUSINESS

9. NEW BUSINESS

A. 2023 Planning Commission Annual Report

Acceptance of the 2023 Planning Commission Annual Report

B. COUNTY ATTORNEY'S REPORT

C. PLANNING DIRECTOR'S REPORT

1. Recreational Vehicles Ordinance Discussion

Recreational Vehicle (RV) Ordinance Discussion

10. CLOSED MEETING

11. ADJOURNMENT

PLANNING REPORT

ATTACHMENTS:

Description	Type	Upload Date
January 16, 2024 Board of Supervisors Work Session Action List	Cover Memo	2/21/2024

ACTION LIST
Board of Supervisors
January 16, 2024

1. *Approval of Agenda*

Supervisor McCarty moved that the agenda be approved as presented. The motion passed unanimously (5-0) with Supervisors Acree, Rosie, McCarty, Jefferson and Rountree voting in favor of the motion and no Supervisor voting against the motion.

2. *Closed Meeting*

There was no action following the closed meeting.

3. *Citizens' Comments*

A. Herb DeGroft thanked the Board for its past financial support of Senior Services of Southeastern Virginia and asked that continued funding be provided to that organization in the upcoming budget. He recommended when Westside Elementary School is no longer used as a school that it be renovated into a senior living complex. He invited the Board to attend a ribbon cutting on February 14, 2024 for the Senior Services of Southeastern Virginia at the Windsor Town Center.

B. Charles Short of Carrollton encouraged the Board to have the $50 currently being charged by the Clerk of Circuit Court's office for a concealed weapons permit and renewal fee reduced to $15 as currently being charged in six other surrounding localities. In response to damage done to his yard by GFL Environmental, he recommended that there be a County staff person to receive complaints noting that GFL Environmental staff do not answer/return phone calls.

County Administrator Keaton notified the Board that staff is currently investigating Mr. Short's complaint and he would report back to the Board when staff completes their investigation.

Assignment: Keaton

Regarding the $50 fee charged for permits/renewals for concealed weapons, Supervisor McCarty asked that the fee be brought up for discussion during the upcoming budget process.

Chairman Acree remarked that the County has been and will continue to be obligated to its seniors through services and affordable housing.

4. *Consent Agenda*

Following an overview of the Consent Agenda by County Administrator Keaton, Supervisor McCarty moved to adopt the following Consent Agenda as presented which passed unanimously (5-0) with Supervisors Acree, Rosie, McCarty, Jefferson and Rountree voting in favor of the motion and no Supervisor voting against the motion:

A. Resolution to Amend the FY2023-24 Operating Budget and Appropriate Economic Development Access Grant Program Funds ($850,000)

Assignment: Wells

B. Resolution to Amend the FY2023-24 County and School Budgets and Appropriate Funds for School Employees' Compensation ($475,000)

Assignment Wells

C. Resolution to Amend the FY2023-24 Operating Budget and Appropriate Grant Funds to the Schools' FY2023-24 Operating Budget ($1,817,444)

Assignment: Wells

D. Resolution for Purchase/Repairs to Sheriff's Office Vehicles

Assignment: Wells

E. Memorandums of Agreement with Constitutional Offices

. Resolution/Isle of Wight County Treasurer

Assignment: Clark

F. Acquisition of a Cargo Van for the Public Utilities Department

Assignment: Wells/Wilson

G. Minutes of November 16, 2023 Regular Meeting and December 14, 2023 Work Session

5. *Regional and Inter-Governmental Reports*

No reports were offered.

6. *Appointments*

Planning Commission: Supervisor Rountree moved that Matthew Smith be reappointed to serve on the Planning Commission representing District 1. The motion passed unanimously (5-0) with Supervisors Acree, Rosie, McCarty, Jefferson and Rountree voting in favor of the motion and no Supervisors voting against the motion.

Assignment: Storm

7. *Special Presentations / Appearances*

A. The Board received a presentation from Paula Miller, Dominion Energy, regarding the largest off-shore-wind utility project currently under development on the East Coast.

B. Following an annual financial report from Stephanie Wells, Director of Budget and Finance, Aaron Hawkins, Robinson, Farmer, Cox Associates, notified the Board via telephonically of an additional Federal finding found related to the Child Nutrition Program. He advised that his preliminary draft report provided to the Board at its organizational meeting of January 4, 2024, remains the same with the exception of this new Federal finding.

Ms. Wells advised that the School Board, at its most recent meeting, had discussed having an action plan and would be meeting with the Board to discuss same.

County Administrator Keaton was requested to invite the Treasurer to the Board's March 7, 2024 work session to discuss the inter-workings of that office and her plan going forward as the newly elected Treasurer.

Assignment: Keaton

C. Garry Windley, Chief of Emergency Services, addressed the Board regarding rebranding efforts underway by Isle of Wight County Emergency Services to Isle of Wight Fire & Rescue.

D. Paint-the-Plow Program: Awards/certificates were presented to Smithfield High School for winners of "Best Plow" in the Windsor and Smithfield Christmas parades and a "People's Choice Award in on-line voting. Certificates for participation were presented to the Art Teachers at Smithfield and Windsor High schools; Smithfield Middle School; and, Georgie D. Tyler Middle School. Certificates for participation were presented to the Smithfield and Windsor area headquarters.

8. *County Attorney's Report*

No report was offered.

9. *County Administrator's Report*

A. The Boad received an update relative to capital projects for development of Bradby Park and the renovation of the Tyler's Beach marina from Mike Frickanisce, Director of Parks and Recreation, followed by an update regarding the expansion of the Rushmere Volunteer Fire Department building by Tony Wilson.

Supervisor Jefferson requested Mr. Frickanisce to develop a timeline on items not yet accomplished for presentation at the next Town Hall meeting in Rushmere.

Assignment: Frickanisce

B. Relative to legislative issues, Assistant County Robertson advised the Board of a proposed Bill which would strip the County of its authority to regulate solar, wind and other types of small-scale utilities. He reminded the Board that February 1, 2024 is VACo Legislative Day.

Chairman Acree requested staff to review House Bill 1049 to see if it would be beneficial to the County's volunteer fire and EMS personnel.

Assignment: Robertson

C. County Administrator Keaton reviewed matters for the Board's information as follows: 1.) Delinquent Tax Collection – November 2023; 2.) Cash Position – November 2023; 3.) Statement of the Treasurer's Accountability – November 2023; 4.) Incidents

by Zone Map – Summary 2023; 5.) Incidents by Zone Data – Summary 2023; 6.) Incidents by Zone Map – December 2023; 7.) Incidents by Zone Data – December 2023; 8.) Station Activity Report – Summary 2023; and, 9.) Museum Report – December 2023.

10. *Unfinished / Old Business*

A. CIP Recommendations/Emergency Apparatus: Supervisor McCarty moved to adopt the recommendations for the replacement protocol for fire rescue apparatus and add the Rushmere and Carrollton trucks back into the CIP. The motion passed unanimously (5-0) with Supervisors Acree, Rosie, McCarty, Jefferson and Rountree voting in favor of the motion and no Supervisors voting against the motion.

Chairman Acree recommended the Board discuss community paramedicine, its potential cost; and, what services would be offered.

Assignment: Windley

11. *New Business*

A. Joint Resolution Supporting Virginia Legislation to Hold a Referendum Regarding a One-Percent Sales Tax to Finance School Construction and Renovations: Supervisor McCarty moved that the Resolution be adopted. The motion passed unanimously (5-0) with Supervisors Acree, Rosie, McCarty, Jefferson and Rountree voting in favor of the motion and no Supervisors voting against the motion.

Assignment: Robertson

B. Review of the County's Comprehensive Plan and Development of a Growth Management Task Force:

Supervisor Rountree shared her recommended components of a proposed plan for growth development related to membership, its mission, modeling skills, etc. and noted that she would be requesting the matter be put on an upcoming agenda of the Planning Commission to further discuss the creation of a Growth Management Task Force.

C. Pet Fees: Supervisor Rountree provided an overview of the various fees associated with animals housed at the Animal Control shelter.

D. Chairman Acree recommended advertising of upcoming County events/holiday closures, etc. during Board of Supervisors' meeting while the Board is on breaks or in closed meeting.

12. *Closed Meeting*

There was no action taken following the closed meeting.

PLANNING REPORT

ATTACHMENTS:

Description	Type	Upload Date
January 23, 2024 Planning Commission Regular Meeting Minutes	Minutes	2/21/2024

MINUTES OF THE MEETING OF THE ISLE OF WIGHT COUNTY PLANNING COMMISSION HELD ON THE TWENTY-THIRD DAY OF JANUARY IN THE YEAR TWO THOUSAND AND TWENTY-FOUR

CALL TO ORDER

Brian Carroll, Chairman, called the Isle of Wight County Planning Commission meeting to order at 6:00 PM on January 23, 2024, in the Board of Supervisors Room at the Isle of Wight County Courthouse, Isle of Wight, Virginia.

INVOCATION

Don Robertson delivered the invocation.

PLEDGE OF ALLEGIANCE

Chairman Carroll invited everyone present to join in the Pledge of Allegiance.

ROLL CALL/DETERMINATION OF A QUORUM

PRESENT
Brian Carroll, Chairman
Bobby Bowser, Vice-Chairman
Cynthia Taylor
James Ford
Jennifer Boykin
Thomas Distefano
George Rawls
Rick Sienkiewicz
Raynard Gibbs
Matthew Smith

ABSENT

A quorum was determined.

ALSO IN ATTENDANCE
Supervisor Renee Rountree, Smithfield
Bobby Jones, County Attorney
Randy Keaton, County Administrator
Don Robertson, Assistant County Administrator
Amy Ring, Community Development Director
Sandy Robinson, Planner II
Trenton Blowe, Planner II
Amanda Landrus, Secretary

ELECTIONS OF CHAIRMAN FOR 2024

Chairman Carroll opened the floor for nominations for the Chairman of the Planning Commission for 2024.

Commissioner Distefano moved to recommend Commissioner Bowser Chairman of the Planning Commission for 2024. Commissioner Gibbs seconded the motion. Chairman Bowser asked for all in favor to signify by saying aye. The motion passed unanimously.

ELECTIONS OF VICE-CHAIRMAN FOR 2024

Chairman Bowser called for the nominations for Vice-Chairman of the Planning Commission for 2024.

Commissioner Boykin moved to recommend Commissioner Distefano Vice-Chairman of the Planning Commission for 2024. Commissioner Ford seconded the motion. Chairman Bowser asked for all in favor to signify by saying aye. The motion passed unanimously.

APPOINTMENT OF SECRETARY FOR 2024

Chairman Bowser called for appointment of the Secretary for the Planning Commission for 2024.

Commissioner Ford moved to appoint Amanda Landrus as Secretary for the Planning Commission for 2024. Commissioner Carroll seconded the motion. Chairman Bowser asked for all in favor to signify by saying aye. The motion passed unanimously.

ADOPTION OF THE 2024 MEETING/INVOCATION SCHEDULE

Chairman Bowser called for the adoption of the 2024 Planning Commission Meeting/Invocation Schedule as presented.

Commissioner Boykin moved to adopt the 2024 Planning Commission Meeting/Invocation Schedule as presented. Commissioner Ford seconded the motion. Chairman Bowser asked for all in favor to signify by saying aye. The motion passed unanimously.

2024 PLANNING COMMISSION MEETING AND INVOCATION SCHEDULE

Date	Time	Meeting	Invocation	District
January 9th	6:00pm	Work Session	Jennifer Boykin	District 5
January 23rd	6:00pm	Regular Meeting	Brian Carrol	District 5
February 13th	6:00pm	Work Session	George Rawls	District 4
February 27th	6:00pm	Regular Meeting	Bobby Bowser	District 3
March 12th	6:00pm	Work Session	Thomas Distefano	District 2
March 26th	6:00pm	Regular Meeting	Cynthia Taylor	District 2
April 9th	6:00pm	Work Session	Rick Sienkiewicz	District 4
April 23rd	6:00pm	Regular Meeting	James Ford	District 3
May 14th	6:00pm	Work Session	Raynard Gibbs	District 1
May 28th	6:00pm	Regular Meeting	Jennifer Boykin	District 5
June 11th	6:00pm	Work Session	Matthew Smith	District 1
June 25th	6:00pm	Regular Meeting	George Rawls	District 4
July 9th	6:00pm	Work Session	Brian Carroll	District 5
July 23rd	6:00pm	Regular Meeting	Thomas Distefano	District 2
August 13th	6:00pm	Work Session	Bobby Bowser	District 3
August 27th	6:00pm	Regular Meeting	Rick Sienkiewicz	District 4
September 10th	6:00pm	Work Session	Cynthia Taylor	District 2
September 24th	6:00pm	Regular Meeting	Raynard Gibbs	District 1
October 8th	6:00pm	Work Session	James Ford	District 3
October 22nd	6:00pm	Regular Meeting	Matthew Smith	District 1
November 12th	6:00pm	Regular Meeting	Brian Carroll	District 5
December 10th	6:00pm	Regular Meeting	Bobby Bowser	District 3
January 14th, 2025	6:00pm	Work Session	Thomas Distefano	District 2
January 28th, 2025	6:00pm	Regular Meeting	Cynthia Taylor	District 2

Work Sessions will be held on an as-needed basis

ACTION ON REQUESTS TO WITHDRAW OR TABLE PENDING AGENDA ITEMS

Chairman Carroll asked if there were any requests to table or withdrawal agenda items. Amy Ring, Community Development Director, stated there were no requests.

APPROVAL OF AGENDA

Chairman Bowser called for a vote to approve the agenda. Commissioner Carroll made the motion to move Smithfield Supervisor Renee Rountree's discussion to after citizens comments. Commissioner Ford seconded the motion. Chairman Bowser asked for all in favor to signify by saying aye. The motion passed unanimously.

APPROVAL OF CONSENT AGENDA

Chairman Bowser called for a vote to approve the consent agenda. Commissioner Taylor made a motion to approve the consent agenda, Commissioner Ford seconded the motion. Chairman Bowser asked for all in favor to signify by saying aye. The motion passed unanimously.

CITIZENS' COMMENTS

There being no comments, Chairman Bowser closed citizens' comments and invited Supervisor Rountree to speak.

Supervisor Rountree introduced herself to the Planning Commission and proposed an Isle of Wight Growth Management Task Force. She stated the other board members are in favor and asked her to bring her proposal to the Planning Commission and get their opinion and feedback. Supervisor Roundtree stated this Growth Task Force will be a great precursor for the Comprehensive Plan five-year review. She presented her proposal for the task force as follows.

IOW Growth Management Task Force Proposal (rev 1-22-24)

Composition: County board member, Windsor council person or planning commission member, Smithfield council person or planning commission member, IOW County Planning commission member, 5 citizens representing each district, two at large citizens (one from Carrollton DSD and one from Carrsville DSD), with modeling and statistical analysis skills.

- Smithfield and Windsor Town Managers are supportive, as is Mayor Bowman and Councilman Adams.

Supporting staff: Planning & Zoning

Mission: Identify & create a comprehensive listing of specifically costs, needs, benefits, & the impact of various growth rates within the county on projected growth. To begin to define the "output" of this task force, a complex model that allows "gaming" of inputs to see the impact of outputs, based upon a set of parameters is needed. This requires computer modeling skills, which abundantly exist in the area.

Task: The IOW Growth Task force should use county staff for expertise and the existing Comprehensive Plan as a guide. The TischlerBise modeling tool previously commissioned is exceptionally good, although outdated, and should be a good basis for moving forward on county land. The existing model was used to evaluate proffer scenarios only.

a. **Define growth, growth rate, and growth management** to assure the Board of Supervisors that everyone is speaking the same language with the same, as much as possible, meaning. Definitions should be pointed toward the intended purpose of this project; no unique definitions exist. Important for modelers to understand.

i. **Growth**: The concept of growth in the context of land use refers to the **changes in land utilization over time**. It encompasses the physical, economic, and social transformations that occur within a specific area, often involving the increase in population, housing, infrastructure, and built environment. It can have both positive and negative elements. In the case of this study, it would be measured in incremental expansion impacts of both

cost (capital) and amounts/volumes of services to baselines for all the variables cited in this study.

ii. **Growth management**: Land use growth management refers to a **purposeful strategic, planned approach aimed at guiding, regulating, and optimizing the growth and development of land within a specific jurisdiction**. This process involves the formulation and implementation of policies, regulations, and strategies to influence and control the spatial expansion, distribution, and intensity of various land uses. The primary goals of land use growth management are to achieve sustainable development; balance economic, environmental, and social considerations; and avoid unchecked sprawl. It would be the responsibility of county staff, planning commission, board of supervisors, and citizens inputs.

iii. **Growth rate**: Land management growth rate refers **to the pace or rate at which improvements, changes, or advancements are implemented in the management of land resources.** It can be both positive and negative. It is the input to the adoption of sustainable and efficient land use practices and regulations, the integration of technology for better resource management, and the implementation of policies aimed at conservation and environmental protection. Typically for this study, it would be input in terms of housing units.

b. **Define the variables to be considered in this study**. They should consist of what the previous study (2019) included, which are: Public schools, parks and rec, public safety sheriff, public safety fire and rescue, public safety animal protection, transportation/traffic, libraries, general government, courts, solid waste, water, and sewer. The following variables should be added to the model: natural gas, internet, capital project delay time (time from approved design to operational), age-group demographics (boomers, millennials, etc.), housing unit restrictions (55+), housing unit types (condo, single family, apartment ½ bedroom—as each type has different density factor) housing unit delay times (proposal to when occupied), IOW housing market trends over time (cost of materials, regulation changes, etc.), area demographics, developmental zones, and cost of housing (< 250K, 250-500K, >500K e.g.). Healthcare and religious facilities and industrial growth should be factored into the model. And any other variable that might be valuable in supporting leadership decision-making.

c. **Modify the model from capital basis to an operational basis**. Inputs to model should be developer proposed parameters (housing units, location, capital impacts, demographics, costs, etc.). Outputs of model should be incremental costs and impacts to model variables from stated baselines. Intent would be to feed model a proposed growth rate of housing units of specified types to be occupied over specified times. The model output would be variable impacts, county capital costs, first limitations, as phased over realistic timelines. The model should include IOW

unique aspects, like cost of housing units compared to Hampton and NNS, impact of northern Suffolk development on route 17 traffic, JRB traffic, routes 10 and 258 traffic.

d. **Develop from the model and other sources positive attributes to positive growth**. Previous model studies showed net revenue to county, attracting new services, and potential business and services growth, more youth organizations and so on. These should be identified and publicized as well as growth challenges.

e. **Community education on growth process**. Virginia and IOW county laws that pertain to growth proposals should be summarized and explained to the public. What is the process, how does the process flow, where can the public participate, what are property owner rights, how are zoning changes accomplished, etc. Learning the process when there is a contentious developer proposal is not helpful. Common knowledge should include the public role in zoning changes.

f. **Updating IOW Comprehensive Plan**. Page 139 of the IOW Comprehensive Plan (CompPlan) states that "The County shall proactively address the location, amount, and timing of growth in order to preserve its distinctive character, protect sensitive environmental and cultural resources, and control costs associated with growth" at five-year update intervals from JAN 2020. TischlerBise participated in the CompPlan development and many of the plan's attributes are visible in the growth model report. This is an excellent connection that should be maintained. The CompPlan is very professionally written document, backed-up and a guiding plan, that perhaps is shelved until that time again. It talks all about growth initiatives and how they should be managed. Does the planning commission follow it? Do builders and landowners follow it? There are too many questions being asked about growth to reflect a detailed and actionable knowledge of the work in the CompPlan to make one think it is actually being applied.

Recommendations:

1. Ask Planning and Zoning Director to update the TischlerBise growth study with the suggestions as appropriate from above. Support need for any

   funding needed to update the study.

2. Take appropriate action to request the study be updated at Annual

   intervals for the time being due to rate of changes and need for actions by governing bodies.

3. Act on the CompPlan implementation actions, hold accountability

   for what is stated to be done. Or replace it with an action plan to manage county growth centered on the updated TischlerBise growth study and discuss how to deal with the CompPlan later. Require

board updates on the CompPlan plan periodically.

4. **Determine where** the growth management plan is to be actionable and accountable: county staff, board of supervisors, planning commission(s), governing bodies, citizens group, others. Suggest best place is planning commission (s) as supported by staff and model, and governing bodies.
5. **Implement proposed growth task force.** Implement proposed task force to work with staff on model outputs, meaning, communications, CompPlan actions.
6. **Ask expert to perform** a high-level systems analysis on the existing growth management system, focus on system pathologies, reporting to Supervisor Rountree.

Timing: Provide a first report to a joint session of local governing bodies by September 2024.

Recommendations: This task force will not delay projects that have broken ground. Any project of more than three or more unit residential projects, requiring zoning amendment should consider outputs of the task force.

Respectfully submitted,

Renee K. Rountree

Commissioner Gibbs asked why members from the schools or first responders were not included in the composition of this task force.

Supervisor Rountree stated if one of the service sectors was included, they should all be included. She stated their feedback would be requested but was hopeful of keeping the task force small to better conduct business.

Chairman Bowser asked the anticipated timeline to get this started.

Supervisor Rountree stated it should start as soon as possible and was hopeful to have their report by September.

Commissioner Gibbs asked if the TischlerBise consultant is budgeted and what that cost may look like.

Supervisor Rountree said the original study was $79,000 in 2018, and was done in collaboration with Amy Ring. Ms. Ring told her she would make contact with TischlerBise asking if they could make do an operational impact study with provided data. Supervisor Rountree added that she is looking to find that money before the new budget year.

Commissioner Taylor stated that the Hampton Roads Planning District has the county's raw data that may be used and asked about proposed consultant.

Supervisor Roundtree stated she is hopeful the task force will include local experts in the areas of systems, analytics and modeling and is hopeful to not have the need to hire a consultant.

Commissioner Boykin asked if the original task force proposal included a moratorium.

Bobby Jones stated moratoriums are not allowed in land use applications. Mr. Jones included that the Planning Commission and Board of Supervisors are allowed to take as much time as statutorily allows to make a decision.

Commissioner Distefano stated that the proposed task force aligns with what the Planning Commission believes in and likes the engagement and education with the public and the increased communication with Windsor and Smithfield townships. Commissioner Distefano stated his concern is some of the duties and responsibilities mirror those of the Planning Commissions and suggests creating a subcommittee from the Planning Commission.

PUBLIC HEARINGS

Chaiman Bowser called for the following public hearing item:

> Application ZA-8-23 of Charles L. and Deborah C. Owens, Trustees, Owens Living Trust, property owner, for a change in zoning classification from Rural Agricultural Conservation (RAC) to Conditional-Rural Residential (C-RR) of approximately 18 acres. The application includes a proffer for no further subdivision of the parcel, a waiver request to Section 4-3004 for the lot to contain more than ten acres and a request to withdraw the acreage from the Courthouse Agricultural and Forestal District upon rezoning.

Sandy Robinson, Planner II, gave the following presentation.

Application of Owens Rezoning to Conditional Rural Residential

Local Roots, Global Reach

Planning Commission Regular Meeting
January 23, 2024

SITE DESCRIPTION

Tax Map ID#:	31-01-029
Location :	Carroll Bridge Road
Current Zoning :	RAC
Election District:	D3
Request:	To rezone for one single family residential lot, a waiver for the lot to contain more than ten acres and to withdraw the lot from the Courthouse Agricultural District upon rezoning.

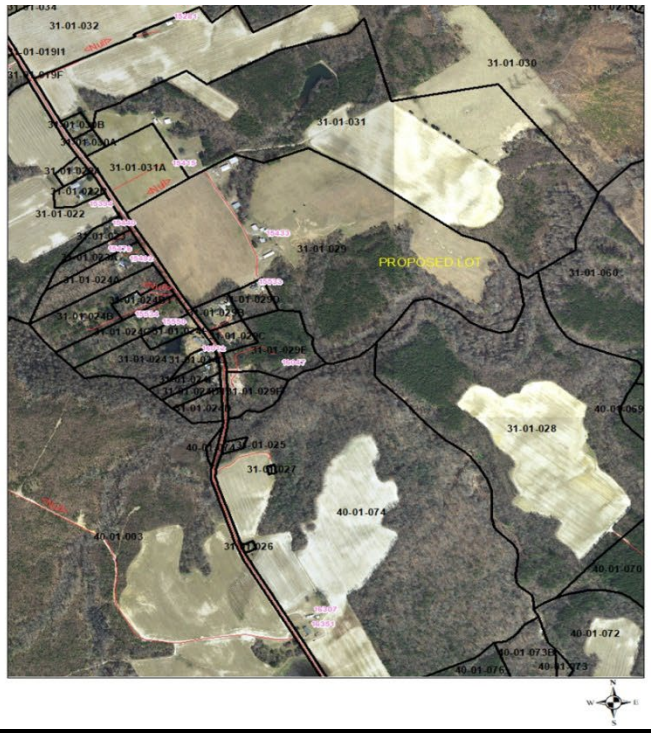
Local Roots, Global Reach

BACKGROUND

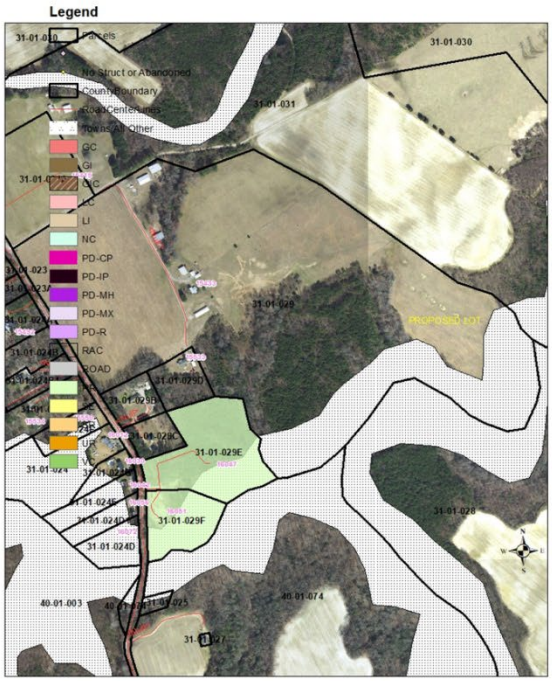
- The property currently consists of one home site, approximately 50 acres of woods, and the remainder of the land is farm and pasture-land.
- The proposed rezoning is to accommodate a single-family residential lot and conditioned on no further subdivision from the lot including family member transfer.
- A previous rezoning to create two single family residential lots was approved in January 2011. Under the sliding scale option in the Rural Residential Zoning Designation, a total of three single family residential lots are allowed. If this rezoning is approved, there will be no more rezoning options for this property.
- The Agricultural and Forestal District (AFD) Advisory Committee met on January 3, 2024, and recommended approval of the removal of the acreage from the Courthouse AFD upon rezoning.

Local Roots, Global Reach

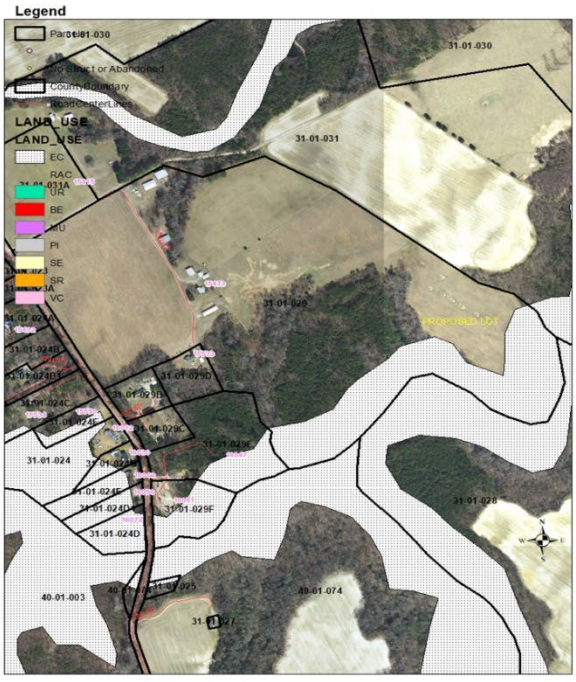
Location Map



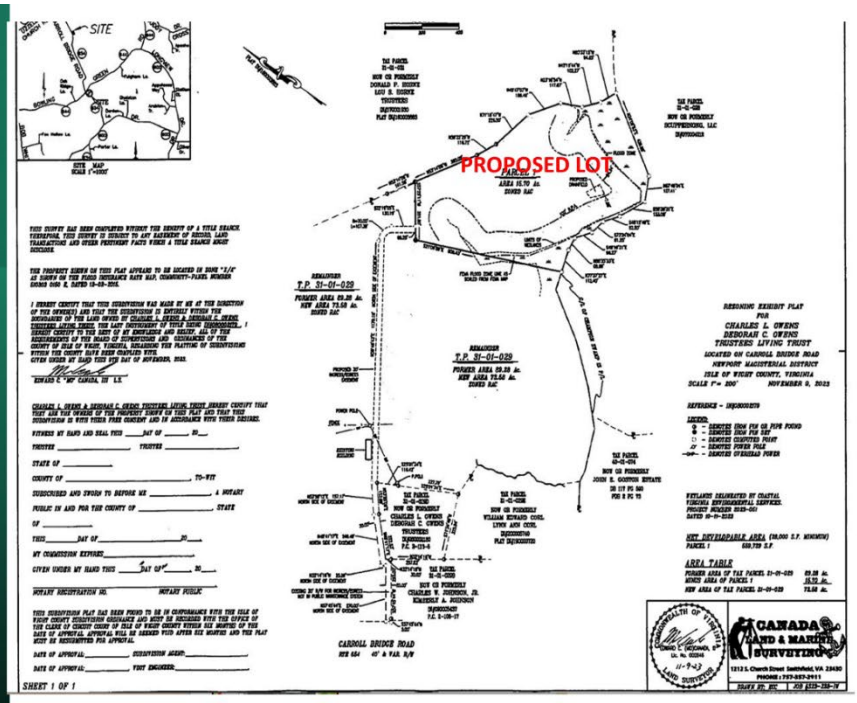
ZONING MAP



LAND USE MAP



REZONING EXHIBIT



TRAVELING NORTH TOWARD SCOTTS FACTORY ROAD

TRAVELING SOUTH TOWARDS BOWLING GREEN ROAD

TRAVELING SOUTH TOWARD BOWLING GREEN ROAD

STAFF CONCLUSIONS

- Strengths:
- The application is compatible with the existing land uses in the vicinity and within the guidelines of the future Recommended Land Use Plan Designation.

- Weaknesses:
- The sliding scale option limits a maximum lot area of ten acres without Board of Supervisors approval, and this application exceeds that area.

Local Roots, Global Reach

STAFF RECOMMENDATION

- Staff recommends approval of the rezoning application as proffered, along with the waiver and removal from the Courthouse AFD District upon rezoning.

Local Roots, Global Reach

Chairman Bowser opened the public hearing and invited the applicant to speak.

The applicant had no comment.

There being no comments, Chairman Bowser closed the public hearing and asked for discussion from the Commissioners.

Commissioner Taylor asked if there was an easement for the access road.

Ms. Robinson stated there is a thirty-foot ingress/egress easement existing halfway and with the rezoning, the ingress/egress will be extended to the proposed lot. She added that the school responded that they have adequate room for the additional student this rezoning would generate.

Commissioner Carroll made the motion to recommend approval to the Board of Supervisors. Commissioner Smith seconded the motion which was adopted with Commissioners, Bowser, Boykin, Distefano, Ford, Rawls, Taylor, Sienkiewicz, Gibbs, Smith and Carroll voting in favor of the motion and no commissioners voting against the motion (10-0)

This application will move forward to the Board of Supervisors with the recommendation of approval from the Planning Commission at the Boards February 15, 2024, meeting.

Chairman Bowser called for the next public hearing item.

> Application ZA-7-23 of 17466 Benns Church Blvd, LLC, property owner, for an amendment to conditional zoning to permit additional uses, such as a micro-brewery, distillery, or cidery, restaurant, retail sales, event center, farmers' markets, catering, business or trade school, cabinet, antique or craft shop, itinerant merchants, peddlers, and fine arts studio on approximately 3.15 acres located at 17466 Benns Church Blvd. on property with tax map numbers 42-01-007B, 42-01-007B1, and 42-01-007B2

Trenton Blowe, Planner II, gave the following presentation.

SITE DESCRIPTION

- Tax Map ID#: 42-01-007B, 42-01-007B1, and 42-01-007B2
- Current Zoning: Conditional General Commercial (C-GC)
- Election District: D4
- Request: Retain uses allowed in the(RAC) zone, allow a cabinet, antique and craft shop, Business or trade school, catering, farmer's markets, commercial indoor entertainment, event center, itinerant merchant, micro-brewery, distillery, cidery, peddler, restaurant, general, retail sales, and studio, fine arts.

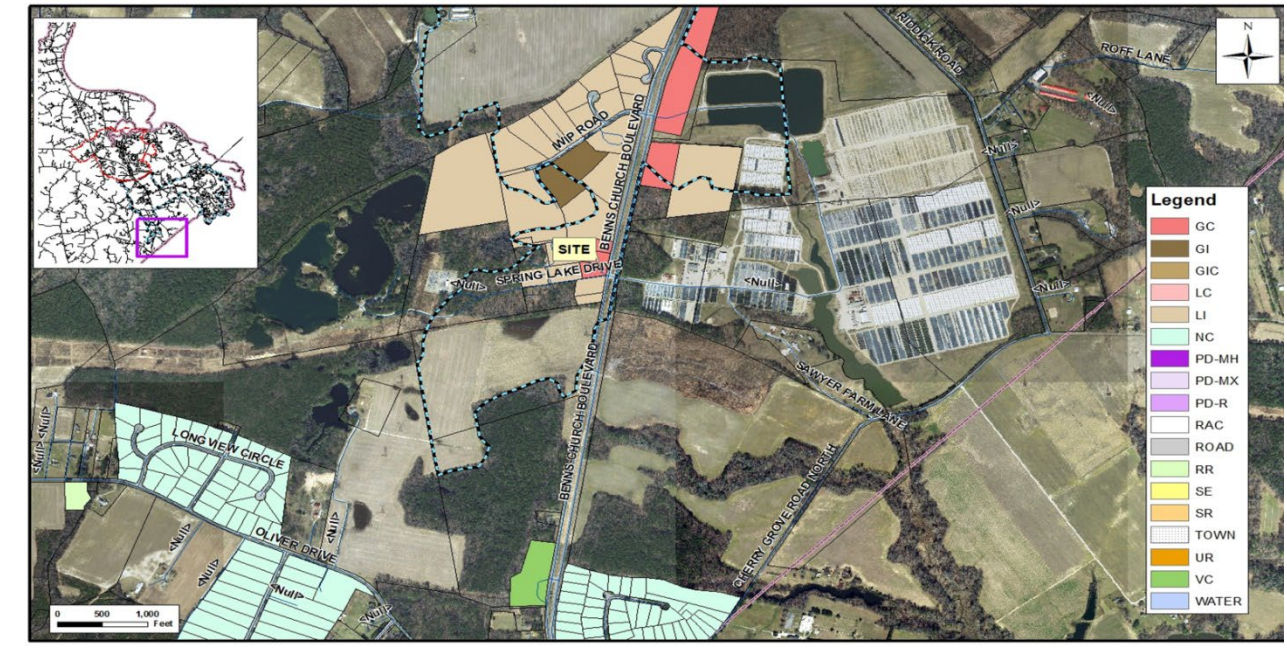
BACKGROUND

- The subject property was conditionally rezoned for commercial use in July 1984. As a part of the 1984 rezoning, the conditions specifically allow for the retaining of the A-1 (RAC) uses, a cabinet/craft antique shop, and a business sign.
- In August of 2023, the applicant applied to retain the prior approved use conditions as well as proposed new uses.

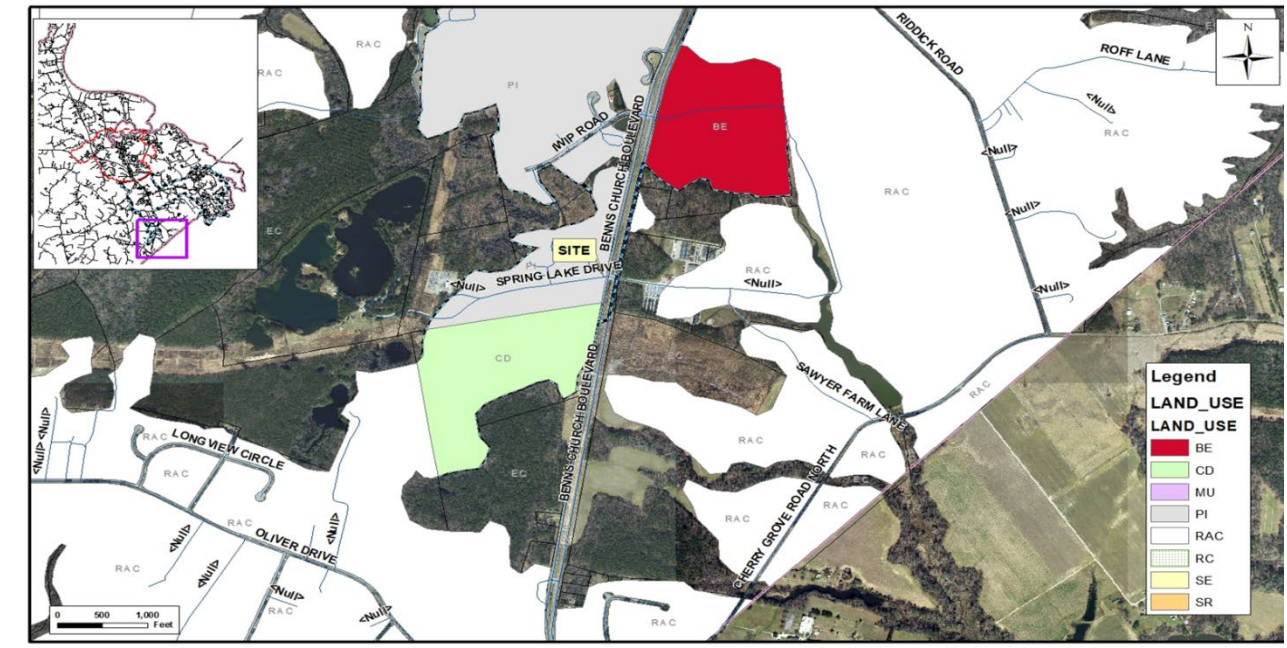
ZA-7-23 - Amendment to Conditional Zoning - Location Map

ZA-7-23 - Amendment to Conditional Zoning - Closeup Map

ZA-7-23 - Amendment to Conditional Zoning - Zoning Map



ZA-7-23 - Amendment to Conditional Zoning - Land Use Map



Looking West along Spring Lake Drive

Looking towards the site from the East side of Benns Church Blvd.

Existing buildings

Proposed Use

- The applicant has proposed to use the property for his distillery business. Blue Sky Distillery would use the back half of the existing shop building to house its distilling manufacturing operations where the distillery would produce its distilled spirits and related legally approved products.
- The front half of the building would be used as a tasting room, event and venue space, and a retail store area.
- The applicant has also proposed hosting events.

Agency Review

- IOW Economic Development – Economic Development, along with Smithfield & Isle of Wight Tourism, supports Blue Sky Distillery's expansion project.
- VDOT- We recommend that the existing commercial entrance off of Route 10, known as Spring Lake Dr., a private road, be paved with asphalt from its intersection with Route 10 extending past the turn-off to the proposed tasting room.

Agency Review CTD.

- Health Department - An onsite Sewage System Construction Permit was issued for a total daily usage of 760 GPD.
- County Attorney - If they are attempting to add the permitted uses allowed in the RAC district, this would be improper.
- Emergency and General Services - No concerns were expressed with this application

Staff Conclusions

- This zoning amendment will not impact public safety, schools, or services (public water and sewer or stormwater facilities) serving the existing property.
- Staff does not support the retaining of all the RAC uses which are not consistent with the existing zoning or the recommended future land use designation.

Strengths and Weaknesses

<u>Strengths:</u>

1. The additional uses are consistent with the permitted uses in the GC zoning district.
2. The application enables the reuse of an existing vacant commercial building and site with new commercial uses limited only to those listed in the conditions voluntarily proffered.

Strengths and Weaknesses CTD

Weaknesses:

1. The proposed uses are not consistent with the PI's future recommended land use.
2. The application proposes to retain all RAC uses which is not consistent with the GC zoning district or the future recommended land use of PI.
3. There is no to require the improvements to the road entrance as recommended by VDOT.

RECOMMENDATION

Given that the proffers include uses that are not appropriate for zoning district or land use and there is no way to require the improvements to a private road entrance, Staff recommends denial of the application.

Chairman Bowser opened the public hearing and invited the applicant to speak.

Mike Miller, Owner of Blue Sky, gave the following presentation.

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA

BLUE SKY
DISTILLERY

Application for Zoning Amendment

Outgrowing Our Story

Blue Sky Distillery was previously located at 20042 Iwip Rd, Smithfield since 2017. BSD flourished over the 6 years in that location, so much so that we outgrew the facility.

In 2022, BSD began searching for a new location and ultimately purchased the 17466 Benns Church Blvd property.

This new location gives us the ability to expand production and develop more polished and meaningful customer interactions; both of which will increase future customer and general tourism traffic into Smithfield and Isle of Wight County.

Supporting Local Businesses

Wheat (Charles City) | Honey (Smithfield) | Bottles (Richmond)

In addition to the current locally sourced products, we intend to expand our local supplier base with these sorts of vendors:

Local Artists	Local Craftsmen	Local Vendors
▪ Writers	▪ Candlemakers	▪ Food trucks
▪ Painters	▪ Wood crafts	▪ Specialty Sweets
▪ Musicians	▪ Metal works	
▪ Etc.	▪ Etc.	

Employees

Virginia Values Veterans (V3)

- Current Master Distiller
- We are pursuing another applicant through the program
- Also, pursuing military and veteran spouses

Future Workforce:

- By opening, we anticipate having 3 employees, + owners
- By the end of the year, we are aiming for 5 employees

David Berrien, 25 Gurwen Drive, Smithfield, Master Distiller, stated he is a thirty-year veteran, and Blue Sky works around his medical appointments and puts their employees' needs first. Mr. Berrien stated that he doesn't know if he would be able to find another job if this application did not get approved. David Berrien asked for the Planning Commission to recommend approval of this application.

Carrie Robertson, 2568 Pruden Blvd, Suffolk, owner of Peanut City Candle, stated that her business got its start because of Smithfield's Farmers Market and thirty percent of her sales tax goes to Isle of Wight County. Ms. Robertson stated that small businesses like Blue Sky bring the community together and generate an increased tax revenue for the County. Carrie Robertson stated that it would help keep money local and asked for the Planning Commission,s favor on this application.

Alice Holmes, 4439 Godwin Blvd, writer, stated that local best-selling authors don't have a venue locally to share their work. Ms. Holmes stated she supports the location and wants a local attraction.

There being no further comments Chairman Bowser closed the public hearing and called for discussion from the Commissioners.

Bobby Jones clarified that there are many overlaps between the RAC and commercial zoning districts. While he does not oppose to where they overlap, he does oppose the uses that are allowed in RAC but prohibited in commercial, like residential uses, detention centers, and livestock auctions to just name a few.

Commissioner Gibbs asked if the applicant is willing to work with staff on the weaknesses to improve the application.

Mr. Miller stated he is willing to withdraw the uses that are in conflict.

Amy Ring stated to the applicant that if he is willing to withdraw the uses, he can ask for a deferral to the next meeting to allow corrections to be made and amend the proffers.

Mr. Miller stated he did not have the time to push it back another thirty days and was willing to strike out the uses now and do whatever is needed to get this application approved.

Mr. Jones stated the proffers could be amended in writing before the Board of Supervisors meeting.

Commissioner Taylor asked what the applicant's thoughts were on VDOT's recommendation.

Mr. Miller stated that he would love to be able to pave the entrance way but financially it is not an option for him right now.

Commissioner Carroll stated they have been good community stewards. During the pandemic they began making hand sanitizer and provided it to public safety and other local entities at their own cost.

Mr. Miller stated they try to be great community citizens and give back to foundations important to them such as veterans, first responders, American Cancer Society, and animal shelters.

Commissioner Smith asked the approximate amount of people that would come to the venue.

Mr. Miller stated they are restricted to 44 people in the facility plus six employees.

Commissioner Smith asked if there was an agreement to maintain the private drive with the other businesses.

Mr. Miller stated there is not a formal agreement, but Christian and Pugh has the equipment, and they work together to maintain the entrance. Mr. Miller stated if a formal agreement was needed, he would be happy to obtain that.

Commissioner Distefano stated there has been a trend in industrial areas that have extended their growth to include breweries and distilleries and suggested this trend may be worth adopting in Isle of Wight.

Commissioner Boykin made the motion to recommend approval with applicant's amended proffers to remove the conflicting RAC use types and the addition of a road maintenance agreement to the Board of Supervisors. Commissioner Carroll seconded the motion, which was adopted with Commissioners, Bowser, Boykin, Distefano, Ford, Rawls, Taylor, Sienkiewicz, Gibbs, Smith and Carroll voting in favor of the motion and no commissioners voting against the motion (10-0).

This application will move forward to the Board of Supervisors with the recommendation of approval from the Planning Commission at the Board's February 15, 2024, meeting.

OLD BUSINESS

Amy Ring confirmed there were no old business items to discuss.

COUNTY ATTORNEY'S REPORT

Bobby Jones confirmed there were no items to discuss.

PLANNING DIRECTORS REPORT

Chairman Bowser called for the Proposed Ordinance Change Discussion.

Amy Ring stated the Board of Supervisors has directed staff to develop an assessment of a couple of existing ordinance sections to allow recreational vehicles to be used as short-term residences, which is currently prohibited, and a general review of the sign ordinance to recommend any changes that may be needed. Ms. Ring stated at the time there are no suggested changes at the staff level but invited suggestions to be made by the Planning Commission.

Commissioner Ford asked if there was a statement prompting the request for the change to the sign ordinance.

Ms. Ring stated it was general direction to staff to develop some recommendations, but some recent complaints have involved temporary signage on trailers that are parked in front of businesses.

Mr. Ford asked what direction the Board was leaning for the use of recreational vehicles.

Ms. Ring stated she believes they are looking for reasons why it would not be allowed and if there is any flexibility in this.

A discussion was had on previous complaints and stories about the use of recreational vehicles.

Ms. Ring stated she would bring information back before the Planning Commission.

Commissioner Carroll asked if Cavelier Solar was producing electricity?

Ms. Ring stated they are trying to get a permit to allow for partial operations and need to submit a one hundred percent surety bond for the landscaping.

Commissioner Carroll stated landscaping and road work is needed.

Commissioner Boykin asked for an update on Moonlight Solar.

Ms. Ring stated they have deferred consideration of the Board of Supervisors until March.

Chairman Bowser shared his concern on the road conditions of Old Stage Highway.

Commissioner Ford shared his concern with the traffic problems caused by Hardy Elementary.

Vice Chairman Distefano made a recommendation to staff to offer suggestions whether an amendment can be made to allow brewery use in industrial zoning districts. Mr. Distefano also recommended developing a method to engage with towns and schools on their strategic objectives and how they align with the county.

Commissioner Gibbs stated he believes schools and emergency services should be included in this discussion.

Commissioner Taylor stated defined goals and expectations need to be established so time is used wisely.

Commissioner Boykin stated she believes Economic Development needs to be included.

Chairman Bowser proposed holding a work session in March to start looking at goals.

Commissioner Carroll shared his concern with the Planning Commission not being initially included in the proposed growth task force.

Commissioner Distefano suggested ways to initiate the development sub-committee.

Chairman Bowser stated a work session in March would be an appropriate time to discuss this.

CLOSED MEETING

Chairman Bowser confirmed there were no items to discuss in closed meeting.

ADJOURNMENT

There being no further information to discuss, Chairman Bowser adjourned the meeting at 8 PM.

Adopted this _____day of _____, 2024.

_____

Bobby Bowser, Chairman, Isle of Wight County Planning Commission

Attest: _____

Amanda Landrus, Secretary

PLANNING REPORT

ATTACHMENTS:

Description	Type	Upload Date
February 15, 2024 Board of Supervisors Work Session Action List	Cover Memo	2/21/2024

ACTION LIST
BOARD OF SUPERVISORS
FEBRUARY 15, 2024

1. *Approval of Agenda*

Vice-Chairman Rosie moved to adopt the agenda with the addition of adding a discussion under New Business concerning traffic flow on the Cypress Creek Bridge. The motion was adopted unanimously (5-0) with Supervisors Acree, Rosie, McCarty, Jefferson and Rountree voting in favor of the motion and no Supervisor voting against the motion.

Supervisor Rountree notified the Board that she will be conducting a District 1 Town Hall meeting on March 26, 2024. The District 1 Smithfield Town Council member and School Board member will be invited to attend and the Sheriff's office will be notified about the meeting.

2. *Closed Meeting*

No action was taken following the closed meeting.

3. *Citizens' Comments*

A. Richard "Dick" Grice of Smithfield spoke on the School's identified deficit in its FY2023-24 operating budget.

B. Herb DeGroft of Mill Swamp Road spoke in favor of the creation of a task force on growth and development to supplement the Planning Commission. In regard to the possible annexation of property of Ms. Turner, he requested the Board to keep in mind the potential for Westside Elementary School to be developed into apartments for senior citizens.

C. Charles Short of Carrollton reminded the Board that the elevator is still in need of being repaired. He encouraged the Board to take action to have the concealed weapons permit renewal fee reduced to $15.

D. Volpe Boykin of the Carrsville District requested the County's ordinance be revised to allow persons to camp on their own property.

County Attorney Jones advised that the Planning Commission is currently discussing revisions to the County's ordinance to address how recreational vehicles

can be used and camping on one's property. He clarified that the County does not prohibit someone from camping in their back yard.

E. Julie Schwartz of Morgart's Beach Road asked the Board to keep in mind the feel for what makes the County amazing when approving new developments.

Under Board comments, Supervisor McCarty advised that the cost for concealed weapons permits will be discussed during the upcoming budget process. He further advised that developments now coming online in the Carrollton area have primarily been approved in the early 2000's through 2008. He stated that forty years ago, Development Service Districts were carved out equaling 15% of the County's land mass to target growth with the remaining 85% to remain rural in nature. He commented that as long as he has been on the Board, taxes have not been raised.

Supervisor Rosie commented that this Board has remained committed to retaining 85% of the land mass in rural character; has restricted solar development at 2%; and, reduced the property tax rate from $.85 to $.71.

Supervisor Jefferson remarked that he did not believe a $35 annual fee for a concealed weapons permit is a significant amount to charge.

4. *Consent Agenda*

Following an overview by County Administrator Keaton, the below Consent Agenda was adopted unanimously (5-0) as presented, on motion of Supervisor McCarty:

A. Resolution to Amend the FY2023-24 Operating Budget and Appropriate Funding for Carryover Activities from Prior Fiscal Year ($4,297) (Farmers Market & Vintage Market)

Assignment: Wells

B. Resolution to Amend the FY2023-24 Operating Budget and Appropriate Funding for Repair of County Property from Insurance Proceeds ($67,314)

Assignment: Wells

C. Resolution to Amend the FY2023-24 Operating Budget and Appropriate Funding for the 2024 Local Emergency Management Performance Grant ($7,500)

Assignment: Wells

D. Resolution to Amend the FY2023-24 E-911 Fund Budget and Appropriate Funding from the Virginia 911 Service Board PSAP Next Generation 911 ($45,000)

Assignment: Wells

E. Resolution to Amend the FY2023-24 County Budgeted Revenues for School Employees' Compensation ($475,000)

Assignment: Wells

F. Resolution to Amend the FY2023-24 Operating Budget and Appropriate Grant Funds to the Schools FY2023-24 Operating Budget ($270,546)

Assignment: Wells

G. Resolution to Amend the FY2023-24 Operating Budget and Appropriate Carryover Grant Funds to the Schools FY2023-24 Operating Budget ($1,942,332)

Assignment: Wells

H. Resolution to Amend the FY2023-24 Operating Budget and Appropriate Funding for Public Utilities Billing ($120,370)

Assignment: Wells

I. Resolution to Amend the FY2023-24 Budget and Appropriate Funding for Public Utilities Shortfall ($765,530)

Assignment: Wells

J. Resolution Declaring a Local Emergency to Exist in Isle of Wight County, Virginia

Assignment: Drewery

K. Resolution to Rescind a Declaration of Local Emergency in Isle of Wight County, Virginia

Assignment: Drewery

L. Resolution to Accept Donated Medical Rapid Access Transport Unit from Hampton Roads Planning District Commission

M. Acquisition of Vehicles for County Administration, Public Works, and the Sheriff's Office

G. Minutes

. December 14, 2023 Regular Meeting Minutes
. January 4, 2024 Organizational Meeting Minutes

Assignment: Storm

5. *Regional & Inter-Governmental Reports*

No reports were offered.

6. *Appointments*

A. Commission on Adults with Disabilities: On motion of Supervisor Jefferson, Julia Wilson was appointed to serve on the Commission on Adults with Disabilities representing District 3. The motion was adopted unanimously (5-0) with Supervisors Acree, Rosie, Jefferson, McCarty and Rountree voting in favor of the motion and no Supervisor voting against the motion.

Assignment: Storm

B. Planning Commission: On motion of Supervisor Jefferson, James Ford was reappointed to the Planning Commission representing District 3. The motion was adopted unanimously (5-0) with Supervisors Acree, Rosie, Jefferson, McCarty and Rountree voting in favor of the motion and no Supervisor voting against the motion.

Assignment: Storm

C. Planning Commission: On motion of Chairman Acree, Rick Sienkiewicz was reappointed to the Planning Commission representing District 4. The motion was adopted unanimously (5-0) with Supervisors Acree, Rosie, Jefferson, McCarty and Rountree voting in favor of the motion and no Supervisor voting against the motion.

Assignment: Storm

7. *Special Presentations*

A. School's Financial Shortfall: School Superintendent Cramer and School Board Chairman Maresh presented a proposed corrective action plan to address an identified deficit in the School's year-end FY2022-23 financial report.

B. County Mid-Year FY2023-24 Financial Report: An overview of the County's financial performance for mid-year FY2023-24 was provided by Stephanie Wells, the County's Chief Financial Officer.

8. *County Attorney's Report*

No report was offered.

9. *Public Hearings*

A. Application (ZA-8-23) of Charles L. and Deborah C. Owens, Trustees, Owens Living Trust, Property Owner, for a Change in Zoning Classification from Rural Agricultural Conservation (RAC) to Conditional Rural Residential (C-RR) of Approximately 18 Acres Located at 15433 Carroll Bridge Road to Create One Single-Family Residential Lot and to Withdraw from the Courthouse Agricultural District: On motion of Supervisor Jefferson, the rezoning was approved, as conditioned, along with the waiver and removal from the Courthouse Agricultural Forestal District upon rezoning. The motion was adopted unanimously (5-0) with Supervisors Acree, Rosie, McCarty, Jefferson and Rountree voting in favor of the motion and no Supervisor voting against the motion.

Assignment: Ring

B. Application ZA-7-23 of 17466 Benns Church Boulevard, LLC, Property Owner, for an Amendment to Conditional Zoning to Permit Additional Uses on Approximately 3.15 Acres Located at 17466 Benns Church Boulevard: On motion of Chairman

Acree, the application was approved with the conditions that the applicant remove the Rural Agricultural Conservation uses from the proffers and submit a road maintenance agreement for Spring Lake Drive. Further, the request was approved with the revised proffered conditions as recommended by the Planning Commission. The motion passed unanimously (5-0) with Supervisors Acree, Rosie, McCarty, Jefferson and Rountree voting in favor of the motion and no Supervisor voting against the motion.

Assignment: Ring

C. Chapter 12 – Offenses – Miscellaneous, Section 12 – 11.1 Discharging Firearms of the Isle of Wight Code of Ordinances: Supervisor McCarty moved that the Ordinance be adopted with an amendment to the language "using blanks." The motion passed unanimously (5-0) with Supervisors Acree, Rosie, McCarty, Jefferson and Rountree voting in favor of the motion and no Supervisor voting against the motion.

Assignment: Jones

D. An Ordinance to Impose Tangible Personal Property Tax Rates for IOWC, Virginia for Fiscal Year July 1, 2024 through June 30, 2025: Supervisor McCarty moved that the Ordinance be adopted amending the rate of car tax relief from 37% to 33%. The motion passed unanimously (5-0) with Supervisors Acree, Rosie, McCarty, Jefferson and Rountree voting in favor of the motion and no Supervisor voting against the motion.

Assignment: Gwaltney

E. Relocation of Boundary Line/Town of Smithfield:

Resolution of the Board of Supervisors of the County of Isle of Wight, Virginia, Approving an Agreement to Relocate the Boundary Line of the Town of Smithfield and Authorizing the Filing of a Joint Petition Pursuant to Section 15.2-3106 et seq of the Code of Virginia (1950), as Amended, to Approve the Agreement: On motion of Vice-Chairman Rosie, the Resolution was unanimously (5-0) adopted.

Assignment: Jones

10. *County Administrator's Report*

A. Isle of Wight Industrial Park Fire: Garry Windley, Chief of Fire Rescue, provided an update on the recent fire incident at the County's Industrial Park on January 18, 2024.

B. Legislative Update of the 2024 General Assembly Session: Assistant County Administrator Robertson provided an update on legislation involving SB14 and HB805; HB636 and SB567; SB697; SB544; HB1461; SB36; SB212; and, HB590;

C. County Administrator Keaton highlighted the following matters contained in the agenda for the Board's information:

1.) Statement of the Treasurer's Accountability – December 2024
2.) County Sales Tax Report – 5-Year History
3.) Incidents by Zone Map –January 2024
4.) Incidents by Zone Data – January 2024
5.) Station Activity Report – January 2024
6.) Museum Annual Report – 2023

Supervisor Rountree made the following comments and asked County Administrator Keaton to relay them to the Treasurer: A review of where the County's funds are being invested should be done (Bank of America does not operate in the County any longer); that Farmers Bank dissolved in June of 2023 and was purchased by Towne Bank; an explanation is requested regarding data being unavailable under the School's Food Service line item; how much training took place before the new Treasurer came onboard; and, relay the importance of the Board having tax billings and collection reports.

The Board was advised that the Treasurer and the Clerk of Circuit Court will be attending the Board's March 7, 2024 work session.

11. *Unfinished/Old Business*

Proposed Formation of a Growth Management Task Force: Supervisor Rountree moved that an Isle of Wight Growth Management Task Force be created under the County's Planning Commission with membership consisting of a Town of Windsor Planning Commission member, a Smithfield Planning Commission member, five citizens (one representing each district), two at-large members (one from Carrollton DSD and another from Carrsville DSD) to make a recommendation to the County's Planning Commission

and request their feedback. The motion passed (4-1) with Supervisors Acree, Rosie, McCarty and Rountree voting in favor of the motion and Supervisor Jefferson voting against the motion.

Assignment: Ring

12. *New Business*

A. Resolution to Amend the County's *Policy and Procedures Manual* to Add a Dress Code Policy: On motion of Supervisor McCarty, the Resolution was unanimously (5-0) adopted.

Supervisor Rountree requested County Administrator Keaton to discuss with the Director of Human Resources if language addressing fingernails, tattoos and piercings should be included in the policy.

Assignment: Keaton/Clark

B. Resolution to Revise the FY2023-24 Classification and Compensation Plan to Address Staffing Needs in the Utilities Department: On motion of Supervisor McCarty, the Resolution was unanimously (5-0) adopted.

Assignment: Clark

C. Town of Smithfield Request to Rezone County-owned Property: County Administrator Keaton is to advise the Town of Smithfield that the Board did not take any action on its request to rezone County-owned property within the Town from Downtown Neighborhood Residential to Community Conservation for preservation of the property as a public park and open space.

Assignment: Keaton/Jones

D. Strategic Plan Update: The Board's Strategic Plan needs to be updated from the 2016 retreat.

E. Cypress Creek – Traffic Flow (Added under Approval of the Agenda by Supervisor Jefferson): Supervisor Rountree advised that Jamie Oliver, the County's Transportation Manager and Smithfield Town Manager Stallings are currently discussing what can be done with the VDOT Project Manager.

PLANNING REPORT

APPLICATION:

Application (LUP-1-23) of the Industrial Development Authority of Isle of Wight and Hollowell Holdings LLC, property owners, and Meridian Property Purchaser, LLC, applicant, for a Comprehensive Plan Amendment on 154.3 acres located on properties with tax map numbers 54-01-086J and 55-01-013 to amend the Comprehensive Plan Future Recommended Land Use Map designation from Mixed Use to Planned Industrial

ELECTION DISTRICT:

District 4

LOCATION:

The subject property is located on the north side of Windsor Boulevard (Rte. 460). The proposed project consists of three separate parcels consisting of approximately 154.34 acres. The parcels are in the Rural Agricultural Conservation (RAC) zoning district. The property is also located in the Windsor Development Service Overlay District, the Highway Corridor Overlay District, and the Chesapeake Bay Preservation Area Overlay District. To the South across Windsor Blvd. is the World Market warehousing and distribution center which is part of the Shirley T Holland Industrial Park. A forested area containing Ennis Pond, a part of the City of Norfolk reservoir system, is located to the north of the project site as well as agricultural land. The Town of Windsor boundary line and residential development along Lovers Lane and Keaton Avenue is located to the west of the property. Additional agricultural land is located to the east of the project site.

BACKGROUND:

The subject properties contain approximately 154 acres located on the north side of US Route 460 and currently consist of agricultural fields and timberland. The property is currently zoned RAC. County GIS images indicates that both parcels 54-01-086J and 55-01-013 have historically been used for agriculture. Parcel 54-01-086J is currently owned by the Economic Development Authority which originally purchased the property in 2008 in order to expand the Shirley T. Holland Industrial Park.

The current future recommended land use designation for the property is Mixed Use as shown on the Future Recommended Land Use Map in the Comprehensive Plan adopted in January 2020.

Both parcels 54-01-086J and 55-01-013 were found to have historic cemeteries on them. The cemetery on parcel 54-01086J is located within the project area, the cemetery on 55-01-013 is located along the outer boundary of the parcel to the northeast. Parcel 55-01-013 is the currently location for the historic home known as the Henry Saunders House. The attached concept plan shows proposed buildings roughly 162 feet from the Henry Saunders House at its closest point.

DESCRIPTION:

In order to support the associated application for a change in zoning from RAC to Conditional-Limited Industrial, the applicant has submitted this comprehensive plan amendment application. The applicant is requesting these changes in response to significant and growing demand for warehousing and distribution centers in the Hampton Roads region. The applicant states in their narrative that, the County's quality of life, work force, and stable local economy, as well as its supply of suitable property along the 460 corridor make it a desirable location for warehousing and distribution centers.
In order to justify their comprehensive plan amendment request, the applicant asserts that establishing the future land use designation for the subject property to be consistent with the industrial designation south of 460 creates a much more consistent and compatible land use scenario and allows for a larger, well-planned industrial node.

COMPREHENSIVE LAND USE PLAN:

The comprehensive plan future recommended land use designation for the property is currently a combination of Mixed Use (MU) and Environmental Conservation (EC). The application seeks to change the designation from MU to Planned Industrial (PI) to support the associated application to change the zoning district of the properties to Conditional-Limited Industrial (C-LI) to accommodate warehousing and distribution, custom manufacturing, industry type I and industry type II uses.

The Comprehensive Plan describes MU as areas of housing mixed with office, commercial, and other uses. Types of housing in these areas may consist of one or

multiple detached or attached single family homes, multi-plex and apartment style housing options, along with office or commercial uses. The Plan recommends MU areas be located on major transportation routes and at major intersections. MU areas should consist of large tracts of land capable of being master planned for a diversity and integration of multiple uses. MU should also have access to public water and sewer infrastructure with capacity for more intense development. Examples of MU development in the County include Eagle Harbor and Benns Grant. The Plan does indicate, however, that select light industrial uses may also be appropriate when sited correctly.

The PI land use designation is given to areas where manufacturing, warehousing and distribution are envisioned to occur. Typical land uses in PI consist of light industrial as well as heavy industrial and manufacturing uses which may negatively impact surrounding development. Preservation of environmental features still occurs, and PI development is connected to residential uses with vehicular and pedestrian access. The Plan notes that PI should be buffered from adjacent uses. Examples of PI include the Shirley T. Holland Intermodal Park and International Paper.

Similar to MU areas, PI land use is best located in places with easy access to major highway corridors or rail transportation. PI should also have access to public water and sewer infrastructure with capacity to support industrial development. Large tracts of land which allow for master planning of PI uses is preferable.

The Plan recommends that PI areas be developed in a way to provide good access for materials and workers while buffering residential land uses. Expected development in PI might include light and heavy manufacturing, warehousing, distribution, rail dependent uses, and other uses which may impact surrounding development due to noise, smell, dust or similar features. Supporting office, commercial uses, and other land uses with similar siting considerations such as enhanced buffering may also be appropriate. Residential uses and community facilities should be considered elsewhere first, and separated or buffered adequately if in close proximity. Parks, trails, and open space may be appropriate in areas preserved due to natural features.

The properties are also located within the Windsor Development Service District (DSD). The Plan describes the DSDs as specific areas identified for development to occur. Outside of the DSD boundaries all land is intended to stay in rural and agricultural uses and environmental protection. Within the boundaries of the DSD, the County has installed or has plans for water and sewer infrastructure, road improvements and other public facilities necessary to support growth. Following

the DSD approach has allowed the County to protect roughly 85% of the County land area for rural and agricultural uses.

The EC land use designation is identified for the protection of a variety of sensitive environmental features, such as wetlands and streams, and serves to create natural connections for wildlife, protect commercial and recreational fisheries, and to provide buffers for adjacent developments. Specific locations of Environmental Conservation areas are determined with site specific delineations during the plan of development review process. Both MU and PI designations recommend the preservation of environmentally sensitive features within these areas.

ORDINANCE REVIEW:

Section 15.2-2229 of the Code of Virginia stipulates that any amendments to a community's Comprehensive Plan be recommended by resolution to the governing body by the local planning commission.

AGENCY REVIEW:

The Comprehensive Plan amendment application does not require outside agency policy review. Staff did distribute the associated rezoning application for outside department and agency review. Comments are included in the associated staff report.

STAFF CONCLUSIONS:

Staff reviewed the application for the change in the future recommended land use designation from MU to PI and found the proposed designation to be generally consistent with the Plan's recommended location criteria but noted a concern with the proximity of existing adjacent residential uses and potential impacts to environmentally sensitive features as shown on the concept plan. Staff's findings are summarized as follows:

Strengths:

- The proposed land use location recommendation is consistent with the location criteria as recommended in the County's Comprehensive Plan.
- The proposed PI designation is located within the Windsor DSD.
- The proposed PI designation would encourage job creation and additional nonresidential tax revenue for the County to support future public service needs.

Weaknesses:

- Expected development in PI might include light and heavy manufacturing, warehousing, distribution, and other uses which may impact surrounding development due to noise, smell, dust or similar features without adequate buffers.
- The concept shows impacts to Resource Protection Area buffers for parking lots that do not meet exception criteria included in the Chesapeake Bay Preservation Area Ordinance.

STAFF RECOMMENDATION:

Staff recommends approval of the application dependent on the implementation of adequate mitigation measures to protect adjacent residential uses from noise, smell, dust, intrusive lighting, or other detrimental impacts.

ATTACHMENTS:

Description	Type	Upload Date
Application	Backup Material	2/20/2024
Community Impact Statement	Backup Material	2/20/2024
Narrative	Backup Material	2/20/2024
Location Map	Backup Material	2/20/2024
Location Closeup Map	Backup Material	2/20/2024
Land Use Map	Backup Material	2/20/2024
Zoning Map	Backup Material	2/20/2024
Resolution	Resolution	2/20/2024

Local Roots, Global Reach

ISLE OF WIGHT
COUNTY, VIRGINIA

AMENDED

REZONING

WHAT IS REZONING?

Isle of Wight first adopted zoning laws in 1970 as part of the County's authority to promote and protect health, safety, and general welfare of the present, as well as future, residents and businesses of the County.

These laws, as outlined in the Zoning Ordinance, designate all land to one of the zoning districts. The permitted uses and rules pertaining to each district designate the use of a parcel of land in a desired fashion. A change, or rezoning, is made at the owner's request or at the direction of the Board of Supervisors and in accordance with the land use designations of the Comprehensive Land Use Plan.

WHAT MUST I FILE TO REZONE MY PROPERTY?

1. Prior to submitting an application, it is recommended to schedule a pre-application meeting with Economic Development to review the application and discuss any questions the applicant may have. Please call 757-365-6249 for meeting information. If the property is in the Land Use Assessment Program, the applicant should also contact the Commissioner of the Revenue's Office at (757) 365-6222.

2. Submit a completed application form, completed application checklist with all required documents (See Submittal Checklist for additional items that may be required), completed disclosure of real estate holdings, owners affidavit and the filing fee of $1,200.

WHEN IS A REZONING APPLICATION CONSIDERED BY THE PLANNING COMMISSION?

Once a completed application has been submitted to the County, the application is distributed for comment and review to all appropriate County and State Agencies/Departments. Once all comments are received and the application is deemed acceptable by all appropriate County and State Agencies/Departments, the application is scheduled for public hearing by the Planning Commission. The Planning Commission meetings are normally held at 6:00 p.m. on the fourth Tuesday of each month in the Robert C. Claude, Sr. Board Room, at the County Courthouse Complex. The advertising deadline for an upcoming Planning Commission public hearing is the first Thursday of the month. An application must be deemed acceptable by all appropriate County and State Agencies/Departments prior to this deadline in order to be placed on the next agenda.

WHAT IS THE PUBLIC HEARING PROCEDURE FOR REZONING?

1. Once the application is scheduled for a public hearing by the Planning Commission, the applicant is required to the required number of copies of the concept plan and all other supplementary documentation deemed necessary by the Planning and Zoning Department for distribution to the Planning Commission. All required items must be submitted to the Planning and Zoning Department no fewer than ten calendar days prior to the scheduled public hearing.

2. The applicant will be given at least one sign to post on the property at least fourteen days prior to the Planning Commission public hearing, indicating an application has been filed. Additional signs may be required based on linear road frontage. These signs are provided by the County and may be picked up at the Planning and Zoning Department front desk.

3. The application is advertised for public hearing in the local newspapers twice – no more than twenty-one (21) days and no less than six (6) days prior to the public hearing.

4. Notices are sent by the Planning and Zoning Department to all adjoining property owners

If you have any questions, please call the Central Permitting office at 757-365-6211 or email at planreview@iwus.net

at least fourteen days prior to the public hearing.

5. Staff will prepare a report on the application and the applicant will be sent a copy of the report and other comments made by County and State Agencies/Departments prior to the meeting date.

6. The applicant and/or a representative are/is required to attend the Planning Commission meeting to present the application and answer any questions from Commission members.

7. Following the Planning Commission's recommendation of approval or denial, the application will be placed on the Board of Supervisors' agenda for a public hearing. Board of Supervisors meetings are typically held on the third Thursday of each month and the meetings begin at 5:00 pm in the Robert C. Claude, Sr. Board Room, at the County Courthouse Complex. The same notification procedure as outlined above will be followed, and additional copies of the concept plan and all other supplementary documentation will be required to be submitted by the applicant for distribution to the Board of Supervisors. All required items must be submitted to the Planning and Zoning Department no fewer than ten calendar days prior to the scheduled public hearing.

8. The Board of Supervisors will hold the public hearing as scheduled, and make a determination to approve or deny the application. The applicant and/or a representative are/is required to attend the Board of Supervisors meeting to present the application and answer any questions from Board of Supervisors members.

9. The applicant will be notified in writing of the Board of Supervisors' discussion. If denied, a period of at least one (1) year must elapse in order to resubmit the application, unless significant changes are made. Also, the applicant may appeal the Board's decision to the Circuit Court

10. If approved, and the request does not include the rezoning of an entire parcel, a zoning boundary plat will need to be prepared by a licensed surveyor and submitted for approval within twelve months of the Boards approval of the rezoning application.

WHAT OTHER PERMITS OR APPROVALS MAY BE REQUIRED PRIOR TO CONSTRUCTION?

- Zoning Permit
- Stormwater
- Building Permit
- Health Department Permit
- Site Plan Approval
- Subdivision Plat Approval
- Landscaping Surety
- Erosion and Sediment Control Surety

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

AMENDED

APPLICATION FOR REZONING/CONDITIONAL ZONING AMENDMENT

This application should be used to petition for a change to the Official Zoning Map or for an amendment of zoning conditions. The following application requirements are consistent with the procedures set forth in Section 1-1015*, Amendments*, of the Isle of Wight County Zoning Ordinance*,* as amended*.*

A. APPLICATION FOR:

[ ] Rezoning

[X] Conditional Rezoning (Are voluntary proffered conditions attached?): X Yes _____ No

Request to change the subject property(s) from the RAC to the LI zoning district.

Proposed Use or Activity: Industry, Type 1, Custom Manufacturing, and Warehousing and Distribution

[ ] Amendment to Conditional Zoning

Request to change conditional zoning as follows (Attach current and proposed conditions): _____

B. PROJECT DESCRIPTION:

Project Name: Tidewater Logistics Center

Property Address (if any): _____

Election District: District 4

Comprehensive Plan Designation: Planned Industrial (Proposed)

The rezoning will apply to 154.34 acres out of 154.34 total acres

Tax Parcel Identification # 54-01-086J Number of Acres to be Rezoned: 90.885

Requesting Zoning District Change from: RAC to LI

Tax Parcel Identification # 55-01-013 Number of Acres to be Rezoned: 63.457

Requesting Zoning District Change from: RAC to LI

Tax Parcel Identification # 54-01-086B Number of Acres to be Rezoned: .0000

Requesting Zoning District Change from: RAC to LI

Proposed Utilities (check all that apply): Public Water X Private Well _____

Public Sewer X Private Septic _____

DocuSign Envelope ID: 50D434E4-7966-42E3-8280-C4943D17E7C4

C. APPLICATION INFORMATION:

Applicant(s) Name(s): Meridian Property Purchaser, L.L.C.

Address: 3 Bethesda Metro Center, Suite 1400

City, State, Zip Code: Bethesda, MD 20814

Phone No.: 240.507.1174 Email: tomboylan@tmgdc.com Fax No.:

Property Owner(s) Name(s): Industrial Development Authority of Isle of Wight and Hollowell Holdings, LLC

Address: IDA: 17146 Monument Circle, Suite A, Isle of Wight, VA 23397
Hollowell: 409 Patrick Street, Portsmouth, VA 23707

City, State, Zip Code:

Phone No.: Email: Fax No.:

DocuSigned by:
James Huckaby
A800E42E9DA046A...

September 25, 2023

Approved By: Tom Boylan

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: 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:

C. APPLICATION INFORMATION:

Applicant(s) Name(s): Meridian Property Purchaser, L.L.C.

Address: 3 Bethesda Metro Center, Suite 1400

City, State, Zip Code: Bethesda, MD 20814

Phone No.: 240.507.1174 Email: tomboylan@tmgdc.com Fax No.: _____

Property Owner(s) Name(s): Industrial Development Authority of Isle of Wight and Hollowell Holdings, LLC

Address: IDA: 17146 Monument Circle, Suite A, Isle of Wight, VA 23397
Hollowell: 409 Patrick Street, Portsmouth, VA 23707

City, State, Zip Code: _____

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

Applicant Signature **Date**

C. Morello 9/19/23

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: _____ 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: _____

C. **APPLICATION INFORMATION:**

Applicant(s) Name(s): Meridian Property Purchaser, L.L.C.

Address: 3 Bethesda Metro Center, Suite 1400

City, State, Zip Code: Bethesda, MD 20814

Phone No.: 240.507.1174 Email: tomboylan@tmgdc.com Fax No.: _____

Property Owner(s) Name(s): Industrial Development Authority of Isle of Wight and Hollowell Holdings, LLC

Address: IDA: 17146 Monument Circle, Suite A, Isle of Wight, VA 23397
Hollowell: 409 Patrick Street, Portsmouth, VA 23707

City, State, Zip Code: _____

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

_____

Applicant Signature **Date**

John W. Hollowell Jr. 9/18/2023

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: _____ 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: _____

AMENDED

REZONING/CONDITIONAL ZONING AMENDMENT APPLICATION CHECKLIST

****Both checklist and application required upon submission to central permitting or application will not be accepted****

In conjunction with Section 1-1015, *Amendments*, of the Isle of Wight County Zoning Ordinance, as amended, the following information shall be submitted for a Rezoning/Conditional Zoning Amendment Application. Please note that it is the applicant's responsibility to ensure that the application is in compliance with all Federal, State and County regulations.

No application for an exception shall be certified as complete unless the following information is provided. ***The required number of copies may be increased or reduced with permission of the Zoning Administrator, depending on the review needs.*** Applicant(s) must have their signature(s) notarized on the disclosure of real estate holdings.

- ☐ **Ten (10) copies of the following:**
  - ☐ original, executed application
  - ☐ a statement of the reasons for seeking a rezoning, and if applicable, a statement of proffered conditions with owner(s) original, notarized signature.
  - ☐ narrative description of current condition and use of the property, which shall include the tax parcel identification number
  - ☐ full size concept plan of the site to show all existing and proposed physical improvements and such other information as is necessary to clearly indicate to the reviewing body that adequate provisions have been made for compliance with all standards for that particular use, the extent of the property to be so used on a given parcel or parcels, and information defining the requested exceptions. The plan shall be prepared by the appropriate authorized design professional licensed to practice in Virginia. No person shall prepare or certify design elements of site plans which are outside the limits of their professional expertise and license. 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), 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)
  - ☐ any additional information required for the proposed use in accordance with Section 5-5000, *Supplementary Use Regulations,* of the Zoning Ordinance.
  - ☐ Community Impact Statement. Required for residential subdivisions of five (5) or more lots, planned development, commercial, industrial, or miscellaneous rezoning/conditional zoning amendment applications. Please refer to Section 1-1015.F for detailed requirements of the Community Impact Statement.
  - ☐ Water Quality Impact Assessment. For any rezoning in the Chesapeake Bay

DocuSign Envelope ID: 50D434E4-7966-42E3-8280-C4943D17E7C4

Preservation Area prepared in accordance with Appendix B-1 of the County Code for applications containing any of the following:

- will disturb any portion of the 100-foot buffer area of a Resource Protection Area
- (RPA), or any component identified in Section 3000.B.1 of the Chesapeake Bay Preservation Area Ordinance;
- contains ten (10) acres or more for any use, other than a development of single family detached residential lots;
- contains twenty-five (25) acres or more for the development of single family detached residential lots; or,
- any other development that may warrant such assessment due to the unique
- characteristics of the site or intensity of the proposed use or development, as may be required by the Zoning Administrator.

☐ Planned Development supplemental information shall be submitted in accordance with Section 4-14005, *Submission Requirements,* of the Zoning Ordinance

☐ **One (1) original executed application**

☐ **One (1) digital copy of ALL application documents**

☐ **One (1) reduced 11"x17" copy of concept plan**

☐ **Voluntary Proffer Statement if applicable**

☐ **Waiver and Release of Claims if cash proffer is proposed**

☐ **Application fee submitted with the application. Checks should be made payable to treasurer, Isle of Wight, County**

☐ **Other information may be necessary to demonstrate compliance with all other applicable federal, state and County standards and regulations.**

☐ **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.

James Huckaby

Name

DocuSigned by:
James Huckaby
A808E42E89A848A...

Signature

September 25, 2023

Date

DocuSign Envelope ID: 50D434E4-7966-42E3-8280-C4943D17E7C4

COUNTY OF ISLE OF WIGHT
DISCLOSURE OF REAL ESTATE HOLDINGS

Applicant: Meridian Property Purchaser, L.L.C

Address: 3 Bethesda Metro Center, Suite 1400, MD 20814

REAL ESTATE HOLDINGS TO BE AFFECTED

Location or Address	Description
None	

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
None	

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: James Huckaby (Printed or Typed Name) Applicant: James Huckaby (Signature) Date: September 25, 2023

Commonwealth of Maryland
County of Montgomery

Subscribed and sworn to before me Katt Bogue,
A Notary Public in and for the County of Montgomery Commonwealth of Maryland, this 25th day of September, 2023.

Notary Public

My Commission Expires 6/24/25

KATHERINE GRACE BOGUE NOTARY PUBLIC MONTGOMERY COUNTY, MD MY COMMISSION EXPIRES JUNE 24, 2025

Community Impact Statement

For

Tidewater Logistics Center

Isle of Wight, VA

Prepared For:

The Meridian Group

3 Bethesda Metro Center, Suite 1400

Bethesda, MD 20814

Prepared By:

Kimley-Horn

4525 Main Street, Suite 1000

Virginia Beach, VA 23462

1st Submittal: July 17th, 2023

2nd Submittal: September 22, 2023

3rd Submittal: November 21, 2023

Kimley-Horn Project Number: 117158002

Table of Contents

Section I – Regulatory Requirements 3

Section II – Project Description 3

Section III – Adequacy of Existing Public Facilities and Services 4

A. Public Water facilities 4

B. Public Sewer Facilities 4

C. Environmental Considerations 4

D. Drainage Facilities 5

E. Public Schools 5

F. Emergency Service Facilities 5

G. Transportation Facilities 6

Section IV – Fiscal Impacts 6

Section V – Conclusion 6

Section I – Regulatory Requirements

This analysis is submitted pursuant to the requirements of the *Isle of Wight County Code of Ordinances Section 1-1015.F.* It is submitted in support of the Rezoning Application for the subject property.

Section II – Project Description

The parcels in question are located in Isle of Wight County on the north side of U.S. Route 460 (Windsor Boulevard) in between Lovers Lane and Old Mill Road, identified by its Tax Parcel Numbers (TPN's) 54-01-086J, 54-01-086B and 55-01-013. For the purposes of this report, unless otherwise noted, this land is considered to be assembled and collectively is referred to as the "Site" and the project as the "Tidewater Logistics Center". The gross area of the site is approximately 154.34 acres and consists of an existing residential home and agricultural fields. The site lies to the east of the Town of Windsor but is located within the Windsor Development Service District (DSD), per the Isle of Wight Comprehensive Plan. The areas within the DSD are primarily designated planned industrial, environmental conservation, and suburban estate; however, the surrounding parcels of the project site are identified by the comprehensive plan as planned industrial, business & employment, environmental conservation, and suburban residential.

The project is proposing the rezoning of the indicated parcels from the Rural Agricultural Conversion District (RAC) to the Conditional Limited Industrial District (C-LI). In addition to the rezoning of the site, the project proposes a comprehensive plan amendment to change the land use designation from mixed use to planned industrial.

Five industrial warehouse buildings are proposed on the site. The total proposed warehouse space is approximately 1.23 million square feet. Just outside of the Tidewater Logistics Center site is the site of the 1 million square foot Cost Plus World Market warehouse along Route 460. An industrial park development is located south of the Cost Plus warehouse, referred to as the Shirley T. Holland Industrial Park.

An industrial access road is to be constructed throughout the site, servicing the parcels. Gravity sanitary sewers on each parcel will be installed, supported by two sewer pump stations – one private pump to serve the southeastern parcel and one public pump for the western parcel and the existing residential development on Lovers Lane. Water mains will be constructed within the access roads connecting to an existing water main located on U.S. Route 460.

The portions of the parcel containing the Saunders House, as well as the existing cemeteries onsite will remain undisturbed.

Section III – Adequacy of Existing Public Facilities and Services

A. PUBLIC WATER FACILITIES

The proposed development will be connected to public water facilities via the Route 460 right-of-way 16" water main. The water system around the Tidewater Logistics Center contains a 600,000-gallon elevated storage tank that provides storage to the system and mains that provide water service to the existing warehouses south of the site. An analysis and exhibits showing the proposed water system are contained within the Water and Sanitary Sewer Master Plan submitted in support of the Rezoning Application. The analysis demonstrates that the existing public water infrastructure can supply adequate pressures and flows for the worst-case fire demands at each of the proposed warehouse buildings, based on the capacity curves the County provided in June 2023.

B. PUBLIC SEWER FACILITIES

The existing sanitary sewer infrastructure around the Tidewater Logistics Center project consists of the 20" Hampton Roads Sanitation District (HRSD) force main along the Route 460 right-of-way that ultimately conveys the wastewater to the treatment plant. Two sewersheds have been proposed for the Tidewater Logistics Center, dividing the site into eastern and western portions whose systems will connect to the existing 20" force main.

Sewer Service Area 1 contains 3 industrial buildings on the western parcel of the proposed development as well as the existing residential development on Lovers Lane and part of Shiloh Drive, as requested by the County during the pre-application meeting. This sewershed will be serviced by a gravity system carrying flows from the existing and proposed buildings to the proposed Isle of Wight Regional Pump Station (PS-1). This pump station will connect the existing residential development to the HRSD force main. Sewer Service Area 2 contains 2 industrial buildings on the eastern parcel of the proposed development. This sewershed is serviced by a gravity system carrying flows from the proposed buildings to the proposed private pump station (PS-2).

Combined, both the residential and proposed industrial flows total to an average daily flow of 46,283 gpd or a peak flow of 140.1 gpm. An analysis and exhibits showing the proposed sanitary sewer system are contained within the Water and Sanitary Sewer Master Plan submitted in support of the Rezoning Application.

C. ENVIRONMENTAL CONSIDERATIONS

Multiple critical areas where impacts to CBPA buffers, wetland areas, and watercourses are proposed as part of the industrial development, which will require additional permitting with Virginia Department of Environmental Quality and the Army Corp of Engineers. These include encroachment of the CBPA buffer for parking and loading facilities, the access road and utility installation crossing Ennis Pond, and BMP outfalls for each of the proposed ponds to the existing wetlands. The project is being specifically

designed to limit the impacts to the environmental features to the greatest possible extent and mitigate impacts through standard engineering practices. Refer to the Major Water Quality Impact Assessment for a depiction of environmental constraints, critical areas, and wetland impacts.

D. DRAINAGE FACILITIES

The project site generally drains from south to north, to the wetlands associated with Lake Prince, or towards Ennis Pond at the center of the site. Preliminary engineering calculations propose multiple stormwater ponds which will be designed to provide water quality and quantity mitigation for the proposed buildings and parking/loading areas in accordance with Isle of Wight County stormwater requirements as well as the requirements of the Chesapeake Bay Preservation Area Act. Compliance with channel protection and flood protection requirements will be met through the proposed stormwater Best Management Practices (BMP's).

Localized redirection of storm water from impervious and other developed areas will cause minor disruptions to water supplies to adjacent wetlands and streams. To comply with City and State regulations, BMP's must intercept developed runoff and treat it prior to release. To the extent practical, storm water will be generally directed to release at historic points of discharge, with attention to provide adequate supply of water to wetland areas. Stormwater flow from the public right-of-way, which currently flows through the site via ditches and streams to the wetlands to the north, will maintain its original drainage patterns by the installation of culvert crossings under the proposed driveway entrances.

Refer to the Stormwater Master Plan and Major Water Quality Impact Assessment (MWQIA) for a more detailed analysis of surface water impacts.

E. PUBLIC SCHOOLS

There will be no impacts to public schools in the area, as the proposed use is industrial and does not include any residential units.

F. EMERGENCY SERVICE FACILITIES

Emergency Services in Isle of Wight County are provided through a combination volunteer-career system. The Windsor Volunteer Rescue Squad is responsible for providing EMS service to the area and is located on Windsor Boulevard (Route 460), approximately 1.5 miles from the nearest proposed Tidewater Logistics Center site entrance. The Windsor Volunteer Fire Department is responsible for providing fire protection services for the area and is located approximately 1 mile on Route 460 from the nearest proposed site entrance. The Isle of Wight County Sheriff's Department has the primary responsibility to prove law enforcement in the area surrounding the proposed development and is located approximately 7.5 miles north of the site. Law enforcement protection is also provided by the Virginia State Police.

G. TRANSPORTATION FACILITIES

Access to/from the proposed development will be via Windsor Boulevard and Dominion Way (a full access movement that forms the north leg of the existing signalized intersection) as well as an additional intersection further east on Windsor Boulevard (new proposed right-in/right-out unsignalized intersection).

A Traffic Impact Analysis (TIA) was performed for the proposed development and is included with the Rezoning application. The proposed Tidewater Logistics Center development has the potential to generate a total of 2,349 daily weekday trips. Out of the total weekday daily trips, 223 driveway trips occur during the AM peak hour and 246 driveway trips occur during the PM peak hour. 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. Based on the results of the traffic analysis, including the off-site transportation infrastructure improvements listed within the TIA, the impacts associated with the development are anticipated to result in operations similar to No Build conditions.

Refer to the TIA for a full analysis of existing and future traffic conditions within the project study area as well as identification of traffic impacts and transportation recommendations based on the new traffic generated by the development.

Section IV – Fiscal Impacts

A fiscal impact study is underway and will be provided to Isle of Wight staff upon completion. Completion is estimated by the end of August 2023.

Section V – Conclusion

The existing County infrastructure has adequate capacity to support the proposed Tidewater Logistics Center development. As the demand for warehousing and distribution centers in the Hampton Roads region grows, Isle of Wight County is well positioned, generally, to be a beneficiary of this economic activity given its proximity to the Port, US Route 460, and the Norfolk Southern Rail Line. The character of the area for the proposed land use has been established by the existing World Market, Safco, and Green Mountain facilities. Establishing the future land use designation for the subject property to be consistent with the planned industrial designation south of Route 460 acknowledges this and allows for a larger, well-planned industrial node and protects against potentially incompatible land uses.

COMPREHENSIVE PLAN AMENDMENT
STATEMENT OF REASONS & NARRATIVE DESCRIPTION

Tax Parcel ID# 54-01-086J: Windsor Blvd., Windsor
Tax Parcel ID# 55-01-013: 13009 Windsor Blvd., Windsor
Tax Parcel ID# 54-01-086B: 13009 Windsor Blvd., Windsor

November 21, 2023

Applicant/Project Background

https://tmgdc.com/about

The Applicant, Meridian Property Purchaser, L.L.C., is an affiliate of The Meridian Group. The Meridian Group was founded in 1993, and is based in Bethesda, Maryland. Over the past 30 years, TMG has evolved into a full service real estate firm with a present focus on the development and management of light industrial centers. TMG is passionate about place making and envisions a dynamic and modern warehousing and distribution center for the subject property. TMG is excited about the opportunity to work with the County in developing this vision and in expanding an emerging economic center within the County.

Narrative Description

The property upon which the project is envisioned is located at 13009 Windsor Boulevard (Tax Parcels ID # 54-01-086J, # 54-01-086B, and # 55-01-013) in the Windsor Development Service District, just outside the limits of the Town of Windsor. The site contains approximately 154 acres located on US Route 460 and consists of agricultural fields and timberland. The property is currently zoned RAC – Rural Agricultural Conservation and designated Mixed Use on the County's Comprehensive Plan Future Land Use Map.

Parcel ID # 54-01-086J is owned by the Industrial Development Authority of Isle of Wight, and Parcels ID # 55-01-013 and # 54-01-086B are owned by Hollowell Holdings, LLC. The legal descriptions and surveys for the property are attached hereto as Exhibit A. Meridian Property Purchaser, L.L.C. is the contract purchaser of the property.

Statement of Reasons

The applicant seeks to change the Comprehensive Plan Future Land Use Designation for the property from Mixed Use and Environmental Conservation to Planned Industrial.

The Port of Virginia is a major driver of warehousing and distribution activity in the region. The capacity and logistics of the Port's operations and its investment in its future operations, make it a leading center of global commerce and a vital import and export location for many US and foreign businesses. Accordingly, there is significant and growing demand for warehousing and distribution centers in the Hampton Roads region.

The County is well positioned, generally, to be a beneficiary of this economic activity given its proximity to the Port, US Route 460, and the Norfolk Southern Rail Line. The County's quality of

life, work force, and stable local economy, as well as its supply of suitable property along the 460 corridor make it a desirable location for warehousing and distribution centers. The subject property is of particular interest because of the availability of the relatively large area of contiguous, relatively flat land with direct access to US Route 460, as well as its location within the Virginia Enterprise Zone and the Foreign Trade Zone.

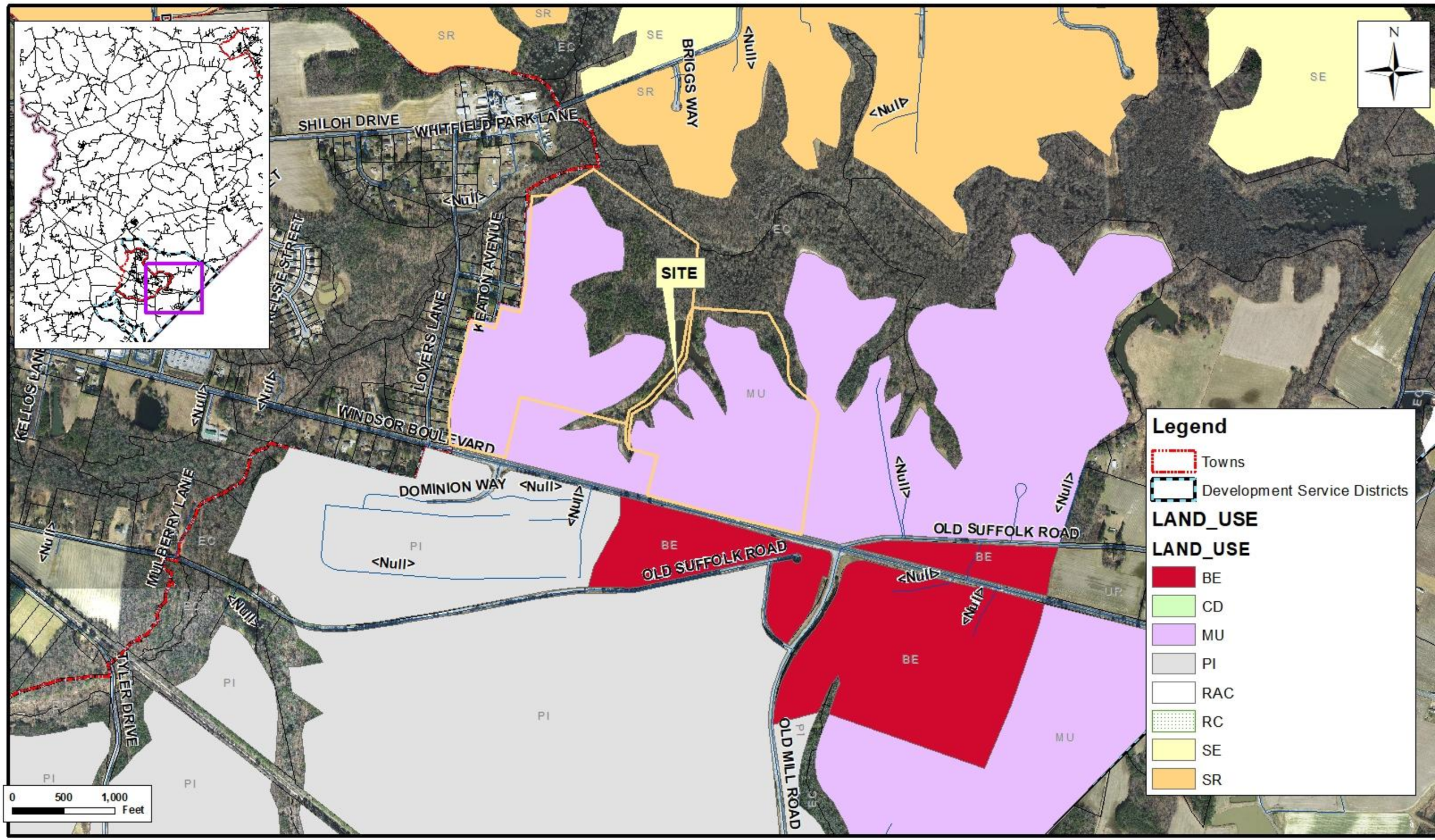
The current Mixed Use designation is inconsistent with the character of the area established by the Shirley T. Holland Intermodal Park and the existing World Market, Safco, and Green Mountain facilities. Mixed Use development of the property as envisioned by the current Comprehensive Plan land use designation containing retail and commercial uses would detract from and potentially displace the historic commercial corridor within the Town of Windsor. Additionally, such mixed use development would generate school impacts and much more extensive traffic during peak commuting hours. Mixed use development would be better suited within the Town of Windsor as a growth and/or redevelopment strategy in order to create more compatible land use patterns and minimize impacts.

Establishing the future land use designation for the subject property to be consistent with the industrial designation south of 460 creates a much more consistent and compatible land use scenario, and allows for a larger, well-planned industrial node. According to County officials, the original purpose of purchasing the property was to develop industrial/commercial, which was seen as the highest and best use at that time. Shortly after that, the County began contemplating workforce housing opportunities for the expected influx of workers associated with the intermodal park. For some years, a mixed-use development with some commercial retail was the idea which the comprehensive plan reflected and still reflects currently. We believe that such a Mixed Use concept has merit, but not in the current location. As stated above, such a concept is better suited to the established development patterns within the Town of Windsor. Accordingly, the Applicant seeks to revert the property's land use designation back to the previously-intended industrial use and to maintain land use consistency with the adjacent Shirly T. Holland Intermodal Park.

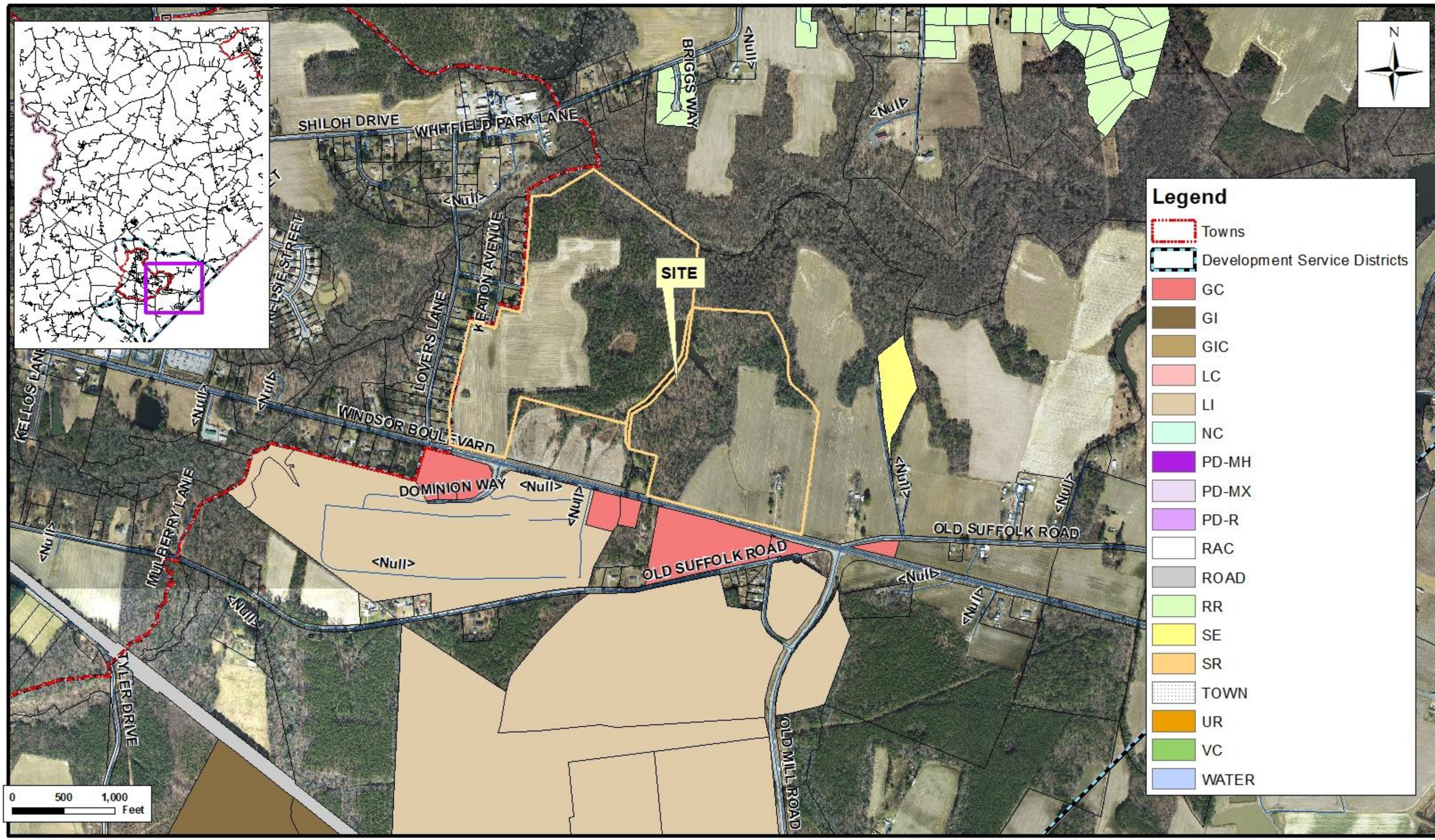
LUP-1-23 - Comp Plan Amendment - Location Map

LUP-1-23 - Comp Plan Amendment - Closeup Map

LUP-1-23 - Comp Plan Amendment - Land Use Map



LUP-1-23 - Comp Plan Amendment - Zoning Map



RESOLUTION NO. PC-24-003

ISLE OF WIGHT COUNTY PLANNING COMMISSION
A RESOLUTION TO PRESENT A REPORT AND RECOMMENDATION TO THE BOARD OF SUPERVISORS RELATING TO COMPREHENSIVE PLAN AMENDMENT REQUEST LUP-01-23 TO CHANGE THE LAND USE DESIGNATION FROM MU, MIXED USE, TO PI, PLANNED INDUSTRIAL, OF APPROXIMATELY 154 ACRES OF LAND IDENTIFIED AS TAX MAP PARCELS 54-01-086J, AND 55-01-013

WHEREAS, Meridian Property Purchaser, LLC, applicants and Industrial Development Authority and Hollowell Holdings, LLC, owners, have requested a change in comprehensive plan land use designation from MU, Mixed Use, to PI, Planned Industrial; and

WHEREAS, the procedural requirements for the consideration of this request by the Planning Commission have been met in accordance with Section 15.2-2229 of the Code of Virginia (1950, as amended).

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 Comprehensive Plan amendment is reasonable, and warranted due to a change in circumstances affecting the property, and has considered the following factors and finds that the proposed Comprehensive Plan amendment does not conflict with:

1. the existing use and character of property within the County;

2. the Comprehensive Plan;

3. the suitability of the property for various uses;

4. the trends of growth or change;

5. the current or future requirements of the community as to land for various purposes as determined by population and economic studies and other studies;

6. the transportation requirements of the community;

7. the requirements for airports, housing, schools, parks, playgrounds, recreation areas and other public services;

8. the conservation of natural resources;

9. the preservation of flood plains;

10. the preservation of agricultural and forestal land;

11. the conservation of properties and their values;

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

Section 2. Recommendation to Board of Supervisors.

The Planning Commission recommends to the Board of Supervisors that the request, LUP-01-19, be approved as presented.

READ AND PASSED: _____

TESTE: _____

Approved as to Form:

_____
Robert W. Jones, Jr., County Attorney

PLANNING REPORT

APPLICATION:

Application (ZA-4-23) of the Industrial Development Authority of Isle of Wight and Hollowell Holdings LLC, property owners, and Meridian Property Purchaser, LLC, applicant, for a change in the zoning district from Rural Agricultural Conservation to Conditional Limited Industrial for approximately 154.3 acres on tax map numbers 54-01-086B, 54-01-086J, and 55-01-013 to allow the following uses: Custom manufacturing, Industry Type 1, Warehousing and Distribution, Industry Type II, and Reconstructed Wetland

ELECTION DISTRICT:

District 4

LOCATION:

The subject property is located on the north side of Windsor Boulevard (Rte. 460). The proposed project consists of three separate parcels consisting of approximately 154.34 acres. The parcels are in the Rural Agricultural Conservation (RAC) zoning district. The property is also located in the Windsor Development Service Overlay District, the Highway Corridor Overlay District, and the Chesapeake Bay Preservation Area Overlay District. To the South across Windsor Blvd. is the World Market warehousing and distribution center which is part of the Shirley T Holland Industrial Park. A forested area containing Ennis Pond, a part of the City of Norfolk reservoir system, is located to the north of the project site as well as agricultural land. The Town of Windsor boundary line and residential development along Lovers Lane and Keaton Avenue is located to the west of the property. Additional agricultural land is located to the east of the project site.

BACKGROUND:

The subject properties contain approximately 154 acres located on the north side of US Route 460 and currently consist of agricultural fields and timberland. The property is currently zoned RAC. County GIS images indicates that both parcels 54-01-086J and 55-01-013 have historically been used for agriculture. Parcel 54-01-086J is currently owned by the Economic Development Authority which originally purchased the property in 2008 in order to expand the Shirley T. Holland

Industrial Park.

The current future recommended land use designation for the properties is Mixed Use as shown on the Future Recommended Land Use Map in the Comprehensive Plan adopted in January 2020.

Both parcels 54-01-086J and 55-01-013 were found to have historic cemeteries on them. The cemetery on parcel 54-01086J is located within the project area, while the cemetery on 55-01-013 is located along the outer boundary of the parcel to the northeast. Parcel 55-01-013 is the currently location for the historic home known as the Henry Saunders House which is listed on the National Register of Historic Places. The attached concept plan shows proposed buildings roughly 162 feet from the Henry Saunders House at its closest point.

The concept plan shows the closest building to existing residences along Lovers Lane, Hazelwood Drive, and Keaton Avenue to be approximately 240 feet while the closest parking area is approximately 194 feet according to page one of the attached Buffer Section Detail document. The stormwater management ponds will be located closer to the residences behind the proposed screening berm with landscaping.

DESCRIPTION:

The applicant requests a conditional zoning for the subject parcels. The proffered conditions will limit the permitted uses on the properties to the following: Custom manufacturing, Industry Type 1, Warehousing and distribution, Industry Type 2, and Reconstructed wetland. It should be noted that Warehousing and Distribution, Custom Manufacturing, and Industry Type 1 uses are permitted in the current RAC zoning district with a conditional use permit.

In addition, the applicant has proffered to specifically prohibit the following uses: Fertilizer Storage Assembly and Repair of Storage Equipment, Forestry, Silvicultural, Agricultural Farming Operation, Timbering, Sawmill, Adult Care Center, Adult Entertainment Establishment, Laundry, Lawn and Garden Services, Mini Warehouse, Motor Vehicle Repair Service/Major, Construction Yard, Convenience Center, Meat Packing, Recycling Center, Abattoir or Livestock Processing, Asphalt Plant, Industry Type III, Industrial Landfill, Rubble Landfill, Transfer Station, Resource Extraction, Scrap and Salvage Service, Petroleum Storage for resale purposes, Manufacture of production of aluminum, Sand, gravel, or brick operations, and General Aviation Facility.

The applicant has not proposed an end user at this time. Warehousing and distribution is included in the proffered uses and the narrative for the project. Warehousing and distribution is defined as uses including storage, warehousing and dispatching of goods within enclosed structures, or outdoors. Typical uses include storage warehouses, truck terminals and moving/storage firms. The findings of the traffic impact analysis is based on the warehousing and manufacturing use types.

The Zoning Ordinance defines the Custom Manufacturing use type as establishments primarily engaged in the on-site production of goods by hand manufacturing, within enclosed structures, involving the use of hand tools, and the use of mechanical equipment commonly associated with residential or commercial uses or a single kiln. Typical uses would include pottery, cabinet or woodwork shops.

Industry Type I uses could include enterprises engaged in the processing, manufacturing, compounding, assembly, packaging, treatment or fabrication of materials and products, from processed or previously manufactured materials. Included would be assembly of electrical appliances, bottling and printing plants, and the manufacturing of paint, oils, pharmaceuticals, cosmetics, solvents and other chemicals, production of items made of stone, metal or concrete.

Industry Type II uses could include businesses in which goods are generally mass produced from raw materials on a large scale through use of an assembly line or similar process, usually for sale to wholesalers or other industrial or manufacturing uses. Included in this use type are industries involved in processing and/or refining raw material such as chemicals, rubber, wood or wood pulp, forging, casting, melting, refining, extruding, rolling, drawing, and/or alloying ferrous metals, and the production of large durable goods such as automobiles, manufactured homes, or other motor vehicles.

The concept plan includes five industrial warehouse buildings ranging in size from 121,530 to 542,800 square feet across two parcels, for a total of 1,229,130 square feet. There are parking areas dedicated to employee and visitor parking, trailer parking, and loading docks for the buildings. There is a concern from staff and adjacent property owners with the distance from the buildings and parking areas shown on the western part of the site and the homes that exist along Lovers Lane and Keaton Avenue. Staff has remaining concerns with the lack of screening provided between the Saunders House and the proposed buildings and parking areas.

To help mitigate the concerns from staff and residents, the applicant has proposed

a berm with additional landscaping to help shield the buildings and parking from the adjacent residential development along the western property line. The applicant also included a sound study in their proffered conditions and committed to implementing the study's recommendations in order to achieve code compliance with no commitment to a maximum level. The applicant did include an additional screening buffer between the proposed facility and the Saunders House on the attached concept plan, but staff is awaiting additional details on the width and materials to be included.

An analysis of the project's potential impacts to public services and facilities is included below.

Public Services and Facilities:

The proposed development will be connected to public water facilities via the 16 inch water main in the Route 460 right-of-way. The water system around the Tidewater Logistics Center contains a 600,000-gallon elevated storage tank and mains that currently provide water service to the existing warehouses south of the site. The existing sanitary sewer infrastructure around the project consists of the 20 inch Hampton Roads Sanitation District (HRSD) force main along the Route 460. Two sewer sheds have been proposed for the site, dividing it into eastern and western portions whose systems will connect to the existing 20 inch force main.

Traffic Impacts:

Access to and from the proposed development will be via Windsor Boulevard and Dominion Way to include a full access movement that forms the north leg of the existing signalized intersection with World Market as well as an additional access further east on Windsor Boulevard which will be a new proposed right-in/right-out unsignalized intersection with Route 460. The proposed Tidewater Logistics Center development has the potential to generate a total of 2,349 daily weekday trips. Out of the total weekday daily trips, 223 driveway trips occur during the AM peak hour and 246 driveway trips occur during the PM peak hour.

A copy of the traffic impact analysis is attached to this staff report.

Financial Impact:

Site improvements include five industrial warehouses including offices, employee and truck parking, and storm drainage system. The projected total number of jobs is 5,198 direct and indirect jobs. The jobs have been categorized as 1,200 direct

jobs and 3,958 indirect and temporary construction jobs.

Environmental Features:

The concept plan shows potential impacts to several environmentally sensitive areas throughout the project site. Parking and loading areas are shown to impact buffers on all parcels included in the application. Parcel 54-01-086B is shown to be completely wetlands. Because of the need for state permits and local exceptions for any proposed environmental impacts, the design of the site could shift in order to achieve final site plan approval. The purpose of the conceptual plan is illustrative only and any final site plan will be required to meet Ordinance and proffered conditions.

Historical Resources:

Both a Phase I and II were performed for the parcels included in the project area. The Henry Saunders House is located within the project area and is included on the National Register for Historic Places (NRHP). The Isle of Wight County Museum commented that additional landscape buffers would further enhance shielding for the historic resource from the proposed development. The Virginia Department of Historic Resources (VDHR) sent review comments that expressed concerns about potential additional archeological resources that were not identified in the report based on a site visit and analysis by VDHR staff. The applicant proposes to include proffered conditions to address these concerns which are not received as of today's date. Staff will update the staff report when the new proffered conditions are received.

In addition to the Henry Saunders House, a family cemetery was identified along the forested area to the east of parcel 55-01-013. A cemetery known as the Butler-Jones cemetery is located along the western edge of parcel 54-01-086J. Permanent fence has been proposed for both cemeteries, so that they remain undisturbed.

The final Phase II report as well as review comments from VDHR and Isle of Wight County Museum are attached to this report.

Visual Impact:

The project site lies mostly in a vacant farm field with frontage along Route 460. There is cluster of residential development along the west and northwest of the project area. In addition, the Henry Saunders House which is listed on the NRHP is located on the southeastern side of the proposed project area. A six-foot tall, 42

foot wide landscaped berm has been proposed along the western portion of the site with existing landscaping being proposed to remain along the northwest to minimize the impact to the viewshed of the residential development. An illustrative perspective rendering is attached for your reference. The applicant has proposed additional screening in addition to what is required in the Ordinance adjacent to the Henry Saunders House. Staff will update the staff report when the revised proffer conditions are received.

The property also lies in the Highway Corridor Overlay (HCO) District, and future development will have to meet nonresidential design criteria. The attached concept plan is for illustrative purposes only, and any final site plan will need to meet current ordinance requirements. Conceptual elevations for the proposed buildings are attached to this staff report.

COMPREHENSIVE LAND USE PLAN:

The current recommended future land use designation for all properties is Mixed Use (MU) and Environmental Conservation (EC). This application is associated with an accompanying application for a comprehensive plan amendment from MU to Planned Industrial (PI).

The Comprehensive Plan describes MU as areas of housing mixed with office, commercial, and other uses. Types of housing in these areas may consist of one or multiple detached or attached single family homes, multi-plex and apartment style housing options, along with office or commercial uses. The Plan recommends MU areas be located on major transportation routes and at major intersections. MU areas should consist of large tracts of land capable of being master planned for a diversity and integration of multiple uses. MU should also have access to public water and sewer infrastructure with capacity for more intense development. Examples of MU development in the County include Eagle Harbor and Benns Grant. The Plan does indicate, however, that select light industrial uses may also be appropriate when sited correctly.

The PI land use designation is given to areas where manufacturing, warehousing and distribution are envisioned to occur. Typical land uses in PI consist of light industrial as well as heavy industrial and manufacturing uses which may negatively impact surrounding development. Preservation of environmental features still occurs, and PI development is connected to residential uses with vehicular and pedestrian access. The Plan notes that PI should be buffered from adjacent uses.

Examples of PI include the Shirley T. Holland Intermodal Park and International Paper.

While PI land use is present across Rt.460, the change to PI in this location could be incompatible with the surrounding residential uses and historical resources without substantial buffering for visual, noise and lighting impacts.

The properties are also located within the Windsor Development Service District (DSD). The Plan describes the DSDs as specific areas identified for development to occur. Outside of the DSD boundaries all land is intended to stay in rural and agricultural uses and environmental protection. Within the boundaries of the DSD, the County has installed or has plans for water and sewer infrastructure, road improvements and other public facilities necessary to support growth. Following the DSD approach has allowed the County to protect roughly 85% of the County land area for rural and agricultural uses.

The EC land use designation is identified for the protection of a variety of sensitive environmental features, such as wetlands and streams, and serves to create natural connections for wildlife, protect commercial and recreational fisheries, and to provide buffers for adjacent developments. Specific locations of Environmental Conservation areas are determined with site specific delineations during the plan of development review process. Both MU and PI designations recommend the preservation of environmentally sensitive features within these areas.

ORDINANCE REVIEW:

The proposed zoning district designation is C-LI subject to the attached proffered conditions. The applicant has proffered that only the uses included in the proffer statement will be permitted on this site. The uses proposed are consistent with the Limited Industrial zoning district.

If the Board of Supervisors approves the change in zoning, the project will need to undergo site plan and building permit review. The project will be required to demonstrate any necessary state and federal permits as well.

The parcel is also located in the HCO District. The parcel is located in the HCO District. Article VI, Section 6-3001 of the Zoning Ordinance states that the

purpose of the HCO district is to protect the aesthetic and visual character of lands in Isle of Wight County adjacent to major existing and proposed highway corridors, as defined in the Zoning Ordinance, and to provide for and promote their orderly development. To meet the intent of the HCO District, the proposed building design, building materials, and outdoor storage area must comply with the district's design standards during site plan review, at which time all other applicable regulations of the Zoning Ordinance including parking, landscaping, lighting, etc. will be addressed.

This property falls within the Chesapeake Bay Preservation Area (CBPA) Overlay District which includes a mandatory 100 foot wide resource protection area (RPA) buffer surrounding stream features and wetlands. The concept plan shows proposed impacts to the 100 foot buffer for loading spaces which is not permitted under the Ordinance. The applicant would need an exception from the Board of Supervisors to develop the site as shown on the concept plan.

AGENCY REVIEW:

This application was forwarded to the following departments for their review:

Economic Development: The EDA and the Economic Development Department support these applications and view this property as an extension of Shirley T. Holland Intermodal Park. Amending the Comprehensive Plan from Mixed-use to Planned Industrial and Rezoning from RAC to C-LI makes the land use and zoning consistent with the existing park. This project will have a major economic impact on both Isle of Wight County and the Town of Windsor, creating a significant number of jobs and benefitting local businesses.
Environmental Planner: Concerns with potential environmental impacts shown on concept plan. Additional comments to be provided during site plan review.
Virginia Department of Transportation: Comments addressed.
County Attorney: Comments addressed.
Emergency Services: Fire Rescue has no comments, concerns, or questions at this time. Additional comments to be provided during site plan review.
General Services: No concerns were expressed with this application. Additional comments to be provided during site plan review.
Town of Windsor: Please see attached.
Virginia Department of Historic Resources: Please see attached.
Isle of Wight County Museum: Please see attached.

STAFF CONCLUSIONS:

Based on the assessment above, staff finds the following strengths and weaknesses for this request:

Strengths:

1. The proposed uses are consistent with the proposed C-LI zoning district.
2. The proposed project would create additional jobs and generate additional nonresidential revenue to help cover the costs of future public services and facilities.

Weaknesses:

1. Buildings on the western portion of the project area are in close vicinity to the residential development along Lovers Lane and Keaton Avenue, however, the applicant has proposed several mitigation measures to include a six foot tall, 42 foot wide landscaped berm and a sound study.
2. The historic resource known as the Saunders House is less than 200 feet from the proposed buildings and parking areas and the applicant has proposed additional screening measures, the details of which are not available at this time.
3. The applicant has proposed proffered conditions to address concerns listed in the February 12, 2024, VDHR letter. Staff will update the staff report once they are received.

STAFF RECOMMENDATION:

Due to several outstanding concerns that have not been addressed, staff does not recommend approval of the application at this time.

ATTACHMENTS:

Description	Type	Upload Date
Application	Backup Material	2/21/2024
Statement of Reason	Backup Material	2/21/2024
Community Impact Statement	Backup Material	2/21/2024
Concept Plan	Backup Material	2/21/2024
Conceptual Building	Backup Material	2/21/2024
Landscaping Elevations	Backup Material	2/21/2024
Town of Windsor Comments	Backup Material	2/21/2024
Isle of Wight County Musuem	Backup Material	2/21/2024

VDHR Comments	Backup Material	2/21/2024
Location Map	Backup Material	2/21/2024
Location Closeup Map	Backup Material	2/21/2024
Land Use Map	Backup Material	2/21/2024
Zoning Map	Backup Material	2/21/2024
Traffic Impact Analysis	Backup Material	2/21/2024
Phase II Archeological Report	Backup Material	2/21/2024
Fiscal Impact Analysis	Backup Material	2/21/2024

Local Roots, Global Reach

ISLE OF WIGHT
COUNTY, VIRGINIA

AMENDED

REZONING

WHAT IS REZONING?

Isle of Wight first adopted zoning laws in 1970 as part of the County's authority to promote and protect health, safety, and general welfare of the present, as well as future, residents and businesses of the County.

These laws, as outlined in the Zoning Ordinance, designate all land to one of the zoning districts. The permitted uses and rules pertaining to each district designate the use of a parcel of land in a desired fashion. A change, or rezoning, is made at the owner's request or at the direction of the Board of Supervisors and in accordance with the land use designations of the Comprehensive Land Use Plan.

WHAT MUST I FILE TO REZONE MY PROPERTY?

1. Prior to submitting an application, it is recommended to schedule a pre-application meeting with Economic Development to review the application and discuss any questions the applicant may have. Please call 757-365-6249 for meeting information. If the property is in the Land Use Assessment Program, the applicant should also contact the Commissioner of the Revenue's Office at (757) 365-6222.

2. Submit a completed application form, completed application checklist with all required documents (See Submittal Checklist for additional items that may be required), completed disclosure of real estate holdings, owners affidavit and the filing fee of $1,200.

WHEN IS A REZONING APPLICATION CONSIDERED BY THE PLANNING COMMISSION?

Once a completed application has been submitted to the County, the application is distributed for comment and review to all appropriate County and State Agencies/Departments. Once all comments are received and the application is deemed acceptable by all appropriate County and State Agencies/Departments, the application is scheduled for public hearing by the Planning Commission. The Planning Commission meetings are normally held at 6:00 p.m. on the fourth Tuesday of each month in the Robert C. Claude, Sr. Board Room, at the County Courthouse Complex. The advertising deadline for an upcoming Planning Commission public hearing is the first Thursday of the month. An application must be deemed acceptable by all appropriate County and State Agencies/Departments prior to this deadline in order to be placed on the next agenda.

WHAT IS THE PUBLIC HEARING PROCEDURE FOR REZONING?

1. Once the application is scheduled for a public hearing by the Planning Commission, the applicant is required to the required number of copies of the concept plan and all other supplementary documentation deemed necessary by the Planning and Zoning Department for distribution to the Planning Commission. All required items must be submitted to the Planning and Zoning Department no fewer than ten calendar days prior to the scheduled public hearing.

2. The applicant will be given at least one sign to post on the property at least fourteen days prior to the Planning Commission public hearing, indicating an application has been filed. Additional signs may be required based on linear road frontage. These signs are provided by the County and may be picked up at the Planning and Zoning Department front desk.

3. The application is advertised for public hearing in the local newspapers twice – no more than twenty-one (21) days and no less than six (6) days prior to the public hearing.

4. Notices are sent by the Planning and Zoning Department to all adjoining property owners

If you have any questions, please call the Central Permitting office at 757-365-6211 or email at planreview@iwus.net

at least fourteen days prior to the public hearing.

5. Staff will prepare a report on the application and the applicant will be sent a copy of the report and other comments made by County and State Agencies/Departments prior to the meeting date.

6. The applicant and/or a representative are/is required to attend the Planning Commission meeting to present the application and answer any questions from Commission members.

7. Following the Planning Commission's recommendation of approval or denial, the application will be placed on the Board of Supervisors' agenda for a public hearing. Board of Supervisors meetings are typically held on the third Thursday of each month and the meetings begin at 5:00 pm in the Robert C. Claude, Sr. Board Room, at the County Courthouse Complex. The same notification procedure as outlined above will be followed, and additional copies of the concept plan and all other supplementary documentation will be required to be submitted by the applicant for distribution to the Board of Supervisors. All required items must be submitted to the Planning and Zoning Department no fewer than ten calendar days prior to the scheduled public hearing.

8. The Board of Supervisors will hold the public hearing as scheduled, and make a determination to approve or deny the application. The applicant and/or a representative are/is required to attend the Board of Supervisors meeting to present the application and answer any questions from Board of Supervisors members.

9. The applicant will be notified in writing of the Board of Supervisors' discussion. If denied, a period of at least one (1) year must elapse in order to resubmit the application, unless significant changes are made. Also, the applicant may appeal the Board's decision to the Circuit Court

10. If approved, and the request does not include the rezoning of an entire parcel, a zoning boundary plat will need to be prepared by a licensed surveyor and submitted for approval within twelve months of the Boards approval of the rezoning application.

WHAT OTHER PERMITS OR APPROVALS MAY BE REQUIRED PRIOR TO CONSTRUCTION?

- Zoning Permit
- Stormwater
- Building Permit
- Health Department Permit
- Site Plan Approval
- Subdivision Plat Approval
- Landscaping Surety
- Erosion and Sediment Control Surety

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

AMENDED

APPLICATION FOR REZONING/CONDITIONAL ZONING AMENDMENT

This application should be used to petition for a change to the Official Zoning Map or for an amendment of zoning conditions. The following application requirements are consistent with the procedures set forth in Section 1-1015*, Amendments*, of the Isle of Wight County Zoning Ordinance*,* as amended*.*

A. APPLICATION FOR:

[ ] Rezoning

[X] Conditional Rezoning (Are voluntary proffered conditions attached?): X Yes _____ No

Request to change the subject property(s) from the RAC to the LI zoning district.

Proposed Use or Activity: Industry, Type 1, Custom Manufacturing, and Warehousing and Distribution

[ ] Amendment to Conditional Zoning

Request to change conditional zoning as follows (Attach current and proposed conditions): _____

B. PROJECT DESCRIPTION:

Project Name: Tidewater Logistics Center

Property Address (if any): _____

Election District: District 4

Comprehensive Plan Designation: Planned Industrial (Proposed)

The rezoning will apply to 154.34 acres out of 154.34 total acres

Tax Parcel Identification # 54-01-086J Number of Acres to be Rezoned: 90.885

Requesting Zoning District Change from: RAC to LI

Tax Parcel Identification # 55-01-013 Number of Acres to be Rezoned: 63.457

Requesting Zoning District Change from: RAC to LI

Tax Parcel Identification # 54-01-086B Number of Acres to be Rezoned: .0000

Requesting Zoning District Change from: RAC to LI

Proposed Utilities (check all that apply): Public Water X Private Well _____

Public Sewer X Private Septic _____

DocuSign Envelope ID: 50D434E4-7966-42E3-8280-C4943D17E7C4

C. APPLICATION INFORMATION:

Applicant(s) Name(s): Meridian Property Purchaser, L.L.C.

Address: 3 Bethesda Metro Center, Suite 1400

City, State, Zip Code: Bethesda, MD 20814

Phone No.: 240.507.1174 Email: tomboylan@tmgdc.com Fax No.:

Property Owner(s) Name(s): Industrial Development Authority of Isle of Wight and Hollowell Holdings, LLC

Address: IDA: 17146 Monument Circle, Suite A, Isle of Wight, VA 23397
Hollowell: 409 Patrick Street, Portsmouth, VA 23707

City, State, Zip Code:

Phone No.: Email: Fax No.:

DocuSigned by:
James Huckaby
A800E42E9DA046A...

September 25, 2023

Approved By: Tom Boylan

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: 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:

C. APPLICATION INFORMATION:

Applicant(s) Name(s): Meridian Property Purchaser, L.L.C.

Address: 3 Bethesda Metro Center, Suite 1400

City, State, Zip Code: Bethesda, MD 20814

Phone No.: 240.507.1174 Email: tomboylan@tmgdc.com Fax No.: _____

Property Owner(s) Name(s): Industrial Development Authority of Isle of Wight and Hollowell Holdings, LLC

Address: IDA: 17146 Monument Circle, Suite A, Isle of Wight, VA 23397
Hollowell: 409 Patrick Street, Portsmouth, VA 23707

City, State, Zip Code: _____

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

Applicant Signature **Date**

C. Morello 9/19/23

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: _____ 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: _____

C. **APPLICATION INFORMATION:**

Applicant(s) Name(s): Meridian Property Purchaser, L.L.C.

Address: 3 Bethesda Metro Center, Suite 1400

City, State, Zip Code: Bethesda, MD 20814

Phone No.: 240.507.1174 Email: tomboylan@tmgdc.com Fax No.: _____

Property Owner(s) Name(s): Industrial Development Authority of Isle of Wight and Hollowell Holdings, LLC

Address: IDA: 17146 Monument Circle, Suite A, Isle of Wight, VA 23397
Hollowell: 409 Patrick Street, Portsmouth, VA 23707

City, State, Zip Code: _____

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

_____

Applicant Signature **Date**

John W. Hollowell Jr. 9/18/2023

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: _____ 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: _____

AMENDED

REZONING/CONDITIONAL ZONING AMENDMENT APPLICATION CHECKLIST

****Both checklist and application required upon submission to central permitting or application will not be accepted****

In conjunction with Section 1-1015, *Amendments*, of the Isle of Wight County Zoning Ordinance, as amended, the following information shall be submitted for a Rezoning/Conditional Zoning Amendment Application. Please note that it is the applicant's responsibility to ensure that the application is in compliance with all Federal, State and County regulations.

No application for an exception shall be certified as complete unless the following information is provided. ***The required number of copies may be increased or reduced with permission of the Zoning Administrator, depending on the review needs.*** Applicant(s) must have their signature(s) notarized on the disclosure of real estate holdings.

- ☐ **Ten (10) copies of the following:**
  - ☐ original, executed application
  - ☐ a statement of the reasons for seeking a rezoning, and if applicable, a statement of proffered conditions with owner(s) original, notarized signature.
  - ☐ narrative description of current condition and use of the property, which shall include the tax parcel identification number
  - ☐ full size concept plan of the site to show all existing and proposed physical improvements and such other information as is necessary to clearly indicate to the reviewing body that adequate provisions have been made for compliance with all standards for that particular use, the extent of the property to be so used on a given parcel or parcels, and information defining the requested exceptions. The plan shall be prepared by the appropriate authorized design professional licensed to practice in Virginia. No person shall prepare or certify design elements of site plans which are outside the limits of their professional expertise and license. 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), 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)
  - ☐ any additional information required for the proposed use in accordance with Section 5-5000, *Supplementary Use Regulations,* of the Zoning Ordinance.
  - ☐ Community Impact Statement. Required for residential subdivisions of five (5) or more lots, planned development, commercial, industrial, or miscellaneous rezoning/conditional zoning amendment applications. Please refer to Section 1-1015.F for detailed requirements of the Community Impact Statement.
  - ☐ Water Quality Impact Assessment. For any rezoning in the Chesapeake Bay

DocuSign Envelope ID: 50D434E4-7966-42E3-8280-C4943D17E7C4

Preservation Area prepared in accordance with Appendix B-1 of the County Code for applications containing any of the following:

- will disturb any portion of the 100-foot buffer area of a Resource Protection Area
- (RPA), or any component identified in Section 3000.B.1 of the Chesapeake Bay Preservation Area Ordinance;
- contains ten (10) acres or more for any use, other than a development of single family detached residential lots;
- contains twenty-five (25) acres or more for the development of single family detached residential lots; or,
- any other development that may warrant such assessment due to the unique
- characteristics of the site or intensity of the proposed use or development, as may be required by the Zoning Administrator.

☐ Planned Development supplemental information shall be submitted in accordance with Section 4-14005, *Submission Requirements,* of the Zoning Ordinance

☐ **One (1) original executed application**

☐ **One (1) digital copy of ALL application documents**

☐ **One (1) reduced 11"x17" copy of concept plan**

☐ **Voluntary Proffer Statement if applicable**

☐ **Waiver and Release of Claims if cash proffer is proposed**

☐ **Application fee submitted with the application. Checks should be made payable to treasurer, Isle of Wight, County**

☐ **Other information may be necessary to demonstrate compliance with all other applicable federal, state and County standards and regulations.**

☐ **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.

James Huckaby

Name

DocuSigned by:
James Huckaby
A808E42E89A848A...

Signature

September 25, 2023

Date

DocuSign Envelope ID: 50D434E4-7966-42E3-8280-C4943D17E7C4

COUNTY OF ISLE OF WIGHT
DISCLOSURE OF REAL ESTATE HOLDINGS

Applicant: Meridian Property Purchaser, L.L.C

Address: 3 Bethesda Metro Center, Suite 1400, MD 20814

REAL ESTATE HOLDINGS TO BE AFFECTED

Location or Address	Description
None	

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
None	

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: James Huckaby (Printed or Typed Name) Applicant: James Huckaby (Signature) Date: September 25, 2023

Commonwealth of Maryland
County of Montgomery

Subscribed and sworn to before me Katt Bogue,
A Notary Public in and for the County of Montgomery Commonwealth of Maryland, this 25th day of September, 2023.

Notary Public

My Commission Expires 6/24/25

KATHERINE GRACE BOGUE NOTARY PUBLIC MONTGOMERY COUNTY, MD MY COMMISSION EXPIRES JUNE 24, 2025

REZONING
STATEMENT OF REASONS & NARRATIVE DESCRIPTION

Tax Parcel ID# 54-01-086J: Windsor Blvd., Windsor
Tax Parcel ID# 55-01-013: 13009 Windsor Blvd., Windsor
Tax Parcel ID# 54-01-086B: 13009 Windsor Blvd., Windsor

November 21, 2023

Applicant/Project Background

https://tmgdc.com/about

The Applicant, Meridian Property Purchaser, L.L.C., is an affiliate of The Meridian Group. The Meridian Group was founded in 1993, and is based in Bethesda, Maryland. Over the past 30 years, TMG has evolved into a full service real estate firm with a present focus on the development and management of light industrial centers. TMG is passionate about place making and envisions a dynamic and modern warehousing and distribution center for the subject property. TMG is excited about the opportunity to work with the County in developing this vision and in expanding an emerging economic center within the County.

Narrative Description

The property upon which the project is envisioned is located at 13009 Windsor Boulevard (Tax Parcels ID # 54-01-086J, # 54-01-086B, and # 55-01-013) in the Windsor Development Service District, just outside the limits of the Town of Windsor. The site contains approximately 154 acres located on US Route 460 and consists of agricultural fields and timberland. The property is currently zoned RAC – Rural Agricultural Conservation and designated Mixed Use on the County's Comprehensive Plan Future Land Use Map.

Parcel ID # 54-01-086J is owned by the Industrial Development Authority of Isle of Wight, and Parcels ID # 55-01-013 and # 54-01-086B are owned by Hollowell Holdings, LLC. The legal descriptions and surveys for the property are attached hereto as Exhibit A. Meridian Property Purchaser, L.L.C. is the contract purchaser of the property.

Statement of Reasons

The applicant seeks to change the zoning of the property from Rural Agricultural Conservation to Conditional Limited Industrial for the development of a warehousing and fulfillment center to be known as the Tidewater Logistics Center.

The Port of Virginia is a major driver of warehousing and distribution activity in the region. The capacity and logistics of the Port's operations and its investment in its future operations, make it a leading center of global commerce and a vital import and export location for many US and foreign businesses. Accordingly, there is significant and growing demand for warehousing and distribution centers in the Hampton Roads region.

The County is well positioned, generally, to be a beneficiary of this economic activity given its proximity to the Port, US Route 460, and the Norfolk Southern Rail Line. The County's quality of life, work force, and stable local economy, as well as its supply of suitable property along the 460 corridor make it a desirable location for warehousing and distribution centers. The subject property is of particular interest because of the availability of the relatively large area of contiguous, relatively flat land with direct access to US Route 460, as well as its location within the Virginia Enterprise Zone and the Foreign Trade Zone.

The character of the area for the proposed zoniong has been established by the existing World Market, Safco, and Green Mountain facilities. A rezoning to Conditional Limited Industrial is consistent with the planned industrial designation south of 460 and allows for a larger, well-planned industrial node and protects against potentially incompatible land uses that could be associated with the RAC designation. The project will generate substantial revenue for the County and many new jobs. The proffers, master plan, and elevations which are a part of the proposal mitigate the impacts of the project and ensure a high-quality project that contributes to the character and prosperity of the area.

It is understood that there is certain overlap in permitted and conditional uses between RAC and Conditional Limited Industrial zoning designations; however, the Applicant's goal for the Tidewater Logistics Center project, as described in the pre-application meeting and application materials, is rezone the project from the RAC to C-LI district. The application seeks to maintain land use consistency with the adjacent Shirly T. Holland Intermodal Park (Limited Industrial zoning designation). Additionally, it is important that there be a clear alignment of the project's land use with the purpose and intent of property's underlying zoning designation in order to ensure the project's success over the long term. A Conditional Limited Industrial zoning designation will allow the Virginia Enterprise Zone Program objectives to be accomplished without limitations or marketing ambiguity. Furthermore, the project's consideration as part of the Virginia Business Ready Sites Program (VBRSP) would be hindered without a tier ranking as part of the site characterization report that supports a road map to zoning alignment.

Community Impact Statement

For

Tidewater Logistics Center

Isle of Wight, VA

Prepared For:

The Meridian Group

3 Bethesda Metro Center, Suite 1400

Bethesda, MD 20814

Prepared By:

Kimley-Horn

4525 Main Street, Suite 1000

Virginia Beach, VA 23462

1st Submittal: July 17th, 2023

2nd Submittal: September 22, 2023

3rd Submittal: November 21, 2023

Kimley-Horn Project Number: 117158002

Table of Contents

Section I – Regulatory Requirements 3

Section II – Project Description 3

Section III – Adequacy of Existing Public Facilities and Services 4

A. Public Water facilities 4

B. Public Sewer Facilities 4

C. Environmental Considerations 4

D. Drainage Facilities 5

E. Public Schools 5

F. Emergency Service Facilities 5

G. Transportation Facilities 6

Section IV – Fiscal Impacts 6

Section V – Conclusion 6

Section I – Regulatory Requirements

This analysis is submitted pursuant to the requirements of the *Isle of Wight County Code of Ordinances Section 1-1015.F.* It is submitted in support of the Rezoning Application for the subject property.

Section II – Project Description

The parcels in question are located in Isle of Wight County on the north side of U.S. Route 460 (Windsor Boulevard) in between Lovers Lane and Old Mill Road, identified by its Tax Parcel Numbers (TPN's) 54-01-086J, 54-01-086B and 55-01-013. For the purposes of this report, unless otherwise noted, this land is considered to be assembled and collectively is referred to as the "Site" and the project as the "Tidewater Logistics Center". The gross area of the site is approximately 154.34 acres and consists of an existing residential home and agricultural fields. The site lies to the east of the Town of Windsor but is located within the Windsor Development Service District (DSD), per the Isle of Wight Comprehensive Plan. The areas within the DSD are primarily designated planned industrial, environmental conservation, and suburban estate; however, the surrounding parcels of the project site are identified by the comprehensive plan as planned industrial, business & employment, environmental conservation, and suburban residential.

The project is proposing the rezoning of the indicated parcels from the Rural Agricultural Conversion District (RAC) to the Conditional Limited Industrial District (C-LI). In addition to the rezoning of the site, the project proposes a comprehensive plan amendment to change the land use designation from mixed use to planned industrial.

Five industrial warehouse buildings are proposed on the site. The total proposed warehouse space is approximately 1.23 million square feet. Just outside of the Tidewater Logistics Center site is the site of the 1 million square foot Cost Plus World Market warehouse along Route 460. An industrial park development is located south of the Cost Plus warehouse, referred to as the Shirley T. Holland Industrial Park.

An industrial access road is to be constructed throughout the site, servicing the parcels. Gravity sanitary sewers on each parcel will be installed, supported by two sewer pump stations – one private pump to serve the southeastern parcel and one public pump for the western parcel and the existing residential development on Lovers Lane. Water mains will be constructed within the access roads connecting to an existing water main located on U.S. Route 460.

The portions of the parcel containing the Saunders House, as well as the existing cemeteries onsite will remain undisturbed.

Section III – Adequacy of Existing Public Facilities and Services

A. PUBLIC WATER FACILITIES

The proposed development will be connected to public water facilities via the Route 460 right-of-way 16" water main. The water system around the Tidewater Logistics Center contains a 600,000-gallon elevated storage tank that provides storage to the system and mains that provide water service to the existing warehouses south of the site. An analysis and exhibits showing the proposed water system are contained within the Water and Sanitary Sewer Master Plan submitted in support of the Rezoning Application. The analysis demonstrates that the existing public water infrastructure can supply adequate pressures and flows for the worst-case fire demands at each of the proposed warehouse buildings, based on the capacity curves the County provided in June 2023.

B. PUBLIC SEWER FACILITIES

The existing sanitary sewer infrastructure around the Tidewater Logistics Center project consists of the 20" Hampton Roads Sanitation District (HRSD) force main along the Route 460 right-of-way that ultimately conveys the wastewater to the treatment plant. Two sewersheds have been proposed for the Tidewater Logistics Center, dividing the site into eastern and western portions whose systems will connect to the existing 20" force main.

Sewer Service Area 1 contains 3 industrial buildings on the western parcel of the proposed development as well as the existing residential development on Lovers Lane and part of Shiloh Drive, as requested by the County during the pre-application meeting. This sewershed will be serviced by a gravity system carrying flows from the existing and proposed buildings to the proposed Isle of Wight Regional Pump Station (PS-1). This pump station will connect the existing residential development to the HRSD force main. Sewer Service Area 2 contains 2 industrial buildings on the eastern parcel of the proposed development. This sewershed is serviced by a gravity system carrying flows from the proposed buildings to the proposed private pump station (PS-2).

Combined, both the residential and proposed industrial flows total to an average daily flow of 46,283 gpd or a peak flow of 140.1 gpm. An analysis and exhibits showing the proposed sanitary sewer system are contained within the Water and Sanitary Sewer Master Plan submitted in support of the Rezoning Application.

C. ENVIRONMENTAL CONSIDERATIONS

Multiple critical areas where impacts to CBPA buffers, wetland areas, and watercourses are proposed as part of the industrial development, which will require additional permitting with Virginia Department of Environmental Quality and the Army Corp of Engineers. These include encroachment of the CBPA buffer for parking and loading facilities, the access road and utility installation crossing Ennis Pond, and BMP outfalls for each of the proposed ponds to the existing wetlands. The project is being specifically

designed to limit the impacts to the environmental features to the greatest possible extent and mitigate impacts through standard engineering practices. Refer to the Major Water Quality Impact Assessment for a depiction of environmental constraints, critical areas, and wetland impacts.

D. DRAINAGE FACILITIES

The project site generally drains from south to north, to the wetlands associated with Lake Prince, or towards Ennis Pond at the center of the site. Preliminary engineering calculations propose multiple stormwater ponds which will be designed to provide water quality and quantity mitigation for the proposed buildings and parking/loading areas in accordance with Isle of Wight County stormwater requirements as well as the requirements of the Chesapeake Bay Preservation Area Act. Compliance with channel protection and flood protection requirements will be met through the proposed stormwater Best Management Practices (BMP's).

Localized redirection of storm water from impervious and other developed areas will cause minor disruptions to water supplies to adjacent wetlands and streams. To comply with City and State regulations, BMP's must intercept developed runoff and treat it prior to release. To the extent practical, storm water will be generally directed to release at historic points of discharge, with attention to provide adequate supply of water to wetland areas. Stormwater flow from the public right-of-way, which currently flows through the site via ditches and streams to the wetlands to the north, will maintain its original drainage patterns by the installation of culvert crossings under the proposed driveway entrances.

Refer to the Stormwater Master Plan and Major Water Quality Impact Assessment (MWQIA) for a more detailed analysis of surface water impacts.

E. PUBLIC SCHOOLS

There will be no impacts to public schools in the area, as the proposed use is industrial and does not include any residential units.

F. EMERGENCY SERVICE FACILITIES

Emergency Services in Isle of Wight County are provided through a combination volunteer-career system. The Windsor Volunteer Rescue Squad is responsible for providing EMS service to the area and is located on Windsor Boulevard (Route 460), approximately 1.5 miles from the nearest proposed Tidewater Logistics Center site entrance. The Windsor Volunteer Fire Department is responsible for providing fire protection services for the area and is located approximately 1 mile on Route 460 from the nearest proposed site entrance. The Isle of Wight County Sheriff's Department has the primary responsibility to prove law enforcement in the area surrounding the proposed development and is located approximately 7.5 miles north of the site. Law enforcement protection is also provided by the Virginia State Police.

G. TRANSPORTATION FACILITIES

Access to/from the proposed development will be via Windsor Boulevard and Dominion Way (a full access movement that forms the north leg of the existing signalized intersection) as well as an additional intersection further east on Windsor Boulevard (new proposed right-in/right-out unsignalized intersection).

A Traffic Impact Analysis (TIA) was performed for the proposed development and is included with the Rezoning application. The proposed Tidewater Logistics Center development has the potential to generate a total of 2,349 daily weekday trips. Out of the total weekday daily trips, 223 driveway trips occur during the AM peak hour and 246 driveway trips occur during the PM peak hour. 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. Based on the results of the traffic analysis, including the off-site transportation infrastructure improvements listed within the TIA, the impacts associated with the development are anticipated to result in operations similar to No Build conditions.

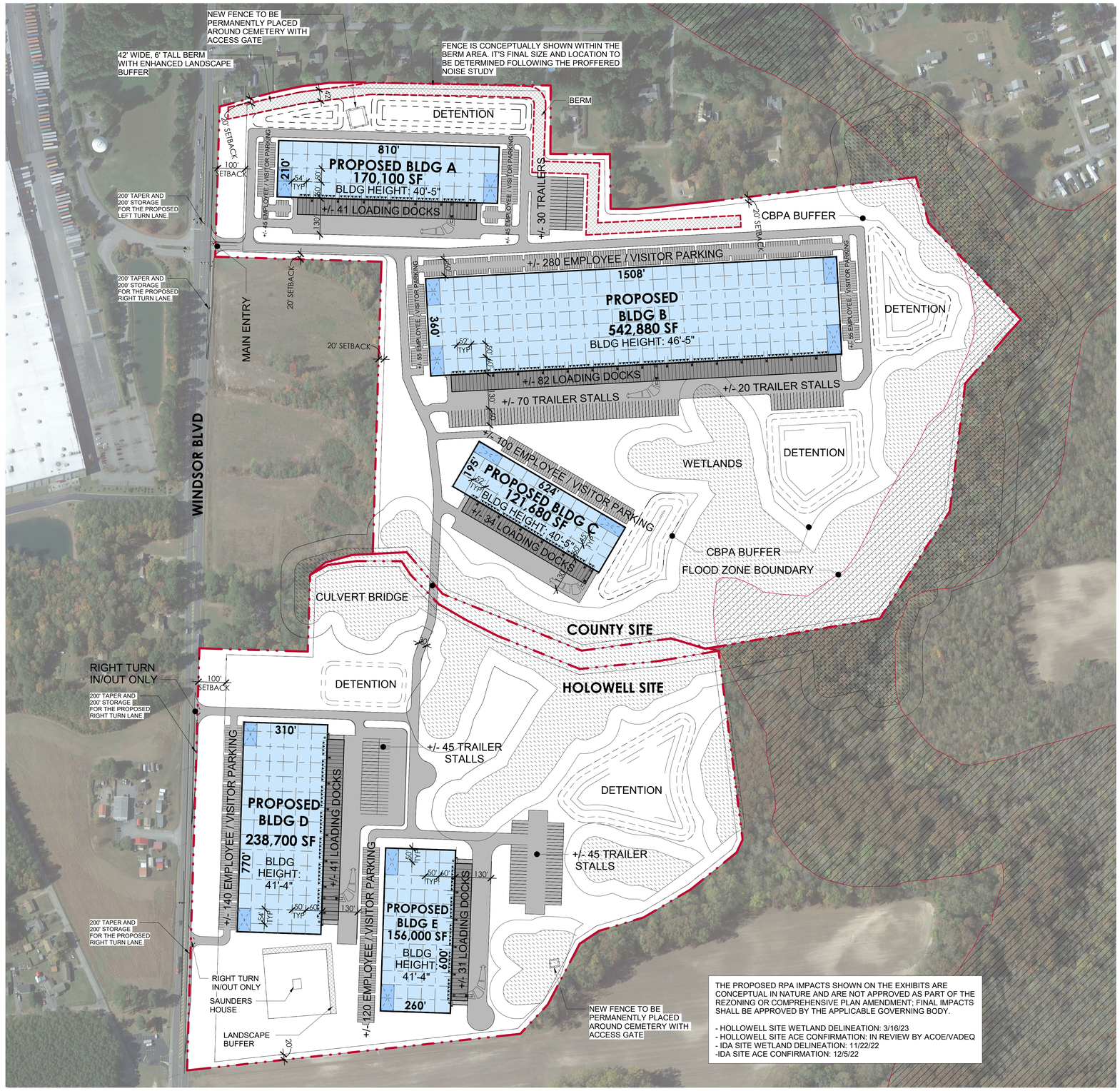
Refer to the TIA for a full analysis of existing and future traffic conditions within the project study area as well as identification of traffic impacts and transportation recommendations based on the new traffic generated by the development.

Section IV – Fiscal Impacts

A fiscal impact study is underway and will be provided to Isle of Wight staff upon completion. Completion is estimated by the end of August 2023.

Section V – Conclusion

The existing County infrastructure has adequate capacity to support the proposed Tidewater Logistics Center development. As the demand for warehousing and distribution centers in the Hampton Roads region grows, Isle of Wight County is well positioned, generally, to be a beneficiary of this economic activity given its proximity to the Port, US Route 460, and the Norfolk Southern Rail Line. The character of the area for the proposed land use has been established by the existing World Market, Safco, and Green Mountain facilities. Establishing the future land use designation for the subject property to be consistent with the planned industrial designation south of Route 460 acknowledges this and allows for a larger, well-planned industrial node and protects against potentially incompatible land uses.



This conceptual design and dimensional information is based upon a preliminary review of entitlement requirements and on unverified and possibly incomplete site and/or building information. It is intended merely to assist in exploring how the project might be developed.

SCALE 1" = 160'

0 80 160 320 800

N

ADB | DESIGN SERVICES

TIDEWATER LOGISTICS CENTER

ISLE OF WIGHT COUNTY, VA

02/06/2023

ARCO DESIGN/BUILD

This conceptual design is based upon a preliminary review of entitlement requirements and on unverified and possibly incomplete site and/or building information, and is intended merely to assist in exploring how the project might be developed.

ONE FOUR TWO DESIGN GROUP

CONCEPTUAL RENDERING - BUILDING D

TIDEWATER LOGISTICS CENTER
ISLE OF WIGHT COUNTY, VA

ARCO DESIGN/BUILD

02/05/2024

This conceptual design is based upon a preliminary review of entitlement requirements and on unverified and possibly incomplete site and/or building information, and is intended merely to assist in exploring how the project might be developed.

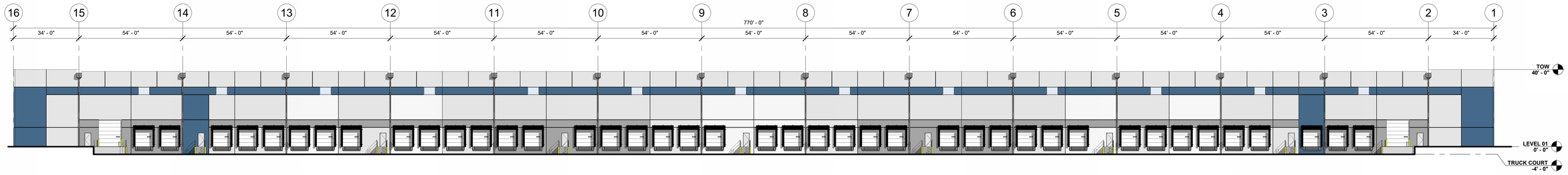
ONE FOUR TWO DESIGN GROUP

CONCEPTUAL RENDERING

TIDEWATER LOGISTICS CENTER
ISLE OF WIGHT COUNTY, VA

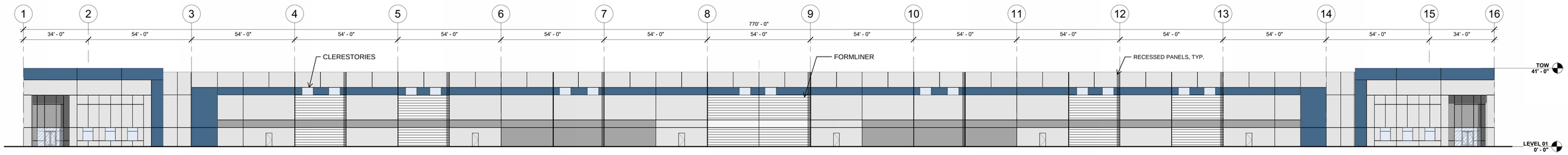
02/05/2024

ARCO DESIGN/BUILD



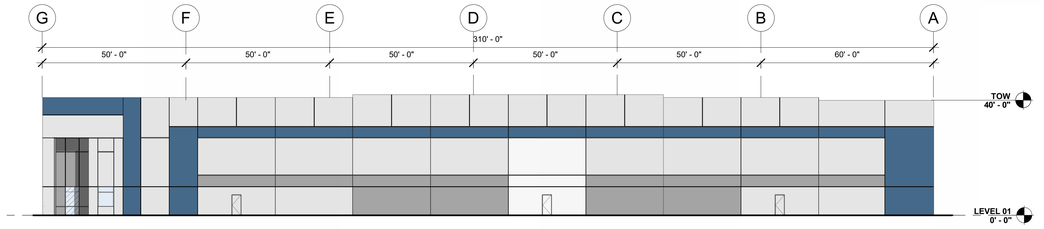
NORTH ELEVATION

SCALE: 3/64" = 1'-0" 1



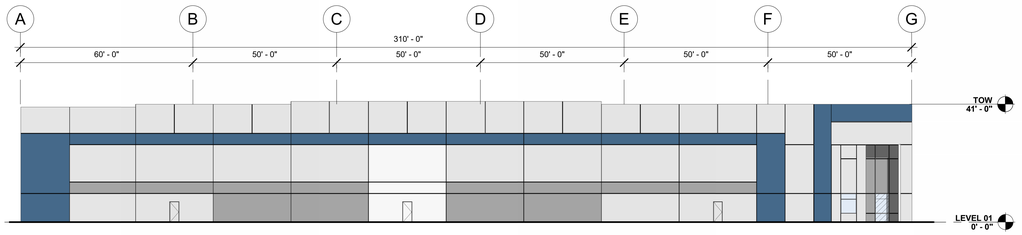
SOUTH ELEVATION

SCALE: 3/64" = 1'-0" 2



EAST ELEVATION

SCALE: 3/64" = 1'-0" 4



WEST ELEVATION

SCALE: 3/64" = 1'-0" 3

This conceptual design is based upon a preliminary review of entitlement requirements and on unverified and possibly incomplete site and/or building information, and is intended merely to assist in exploring how the project might be developed.

SCALE 3/64" = 1'-0"

0 16 32 48 96

ADB | DESIGN SERVICES

PRELIMINARY ELEVATIONS - BUILDING D

MERIDIAN TIDEWATER
ISLE OF WIGHT COUNTY, VA

02/05/2024

ARCO DESIGN/BUILD

This conceptual design and dimensional information is based upon a preliminary review of entitlement requirements and on unverified and possibly incomplete site and/or building information. It is intended merely to assist in exploring how the project might be developed.

ADB | DESIGN SERVICES

TMG

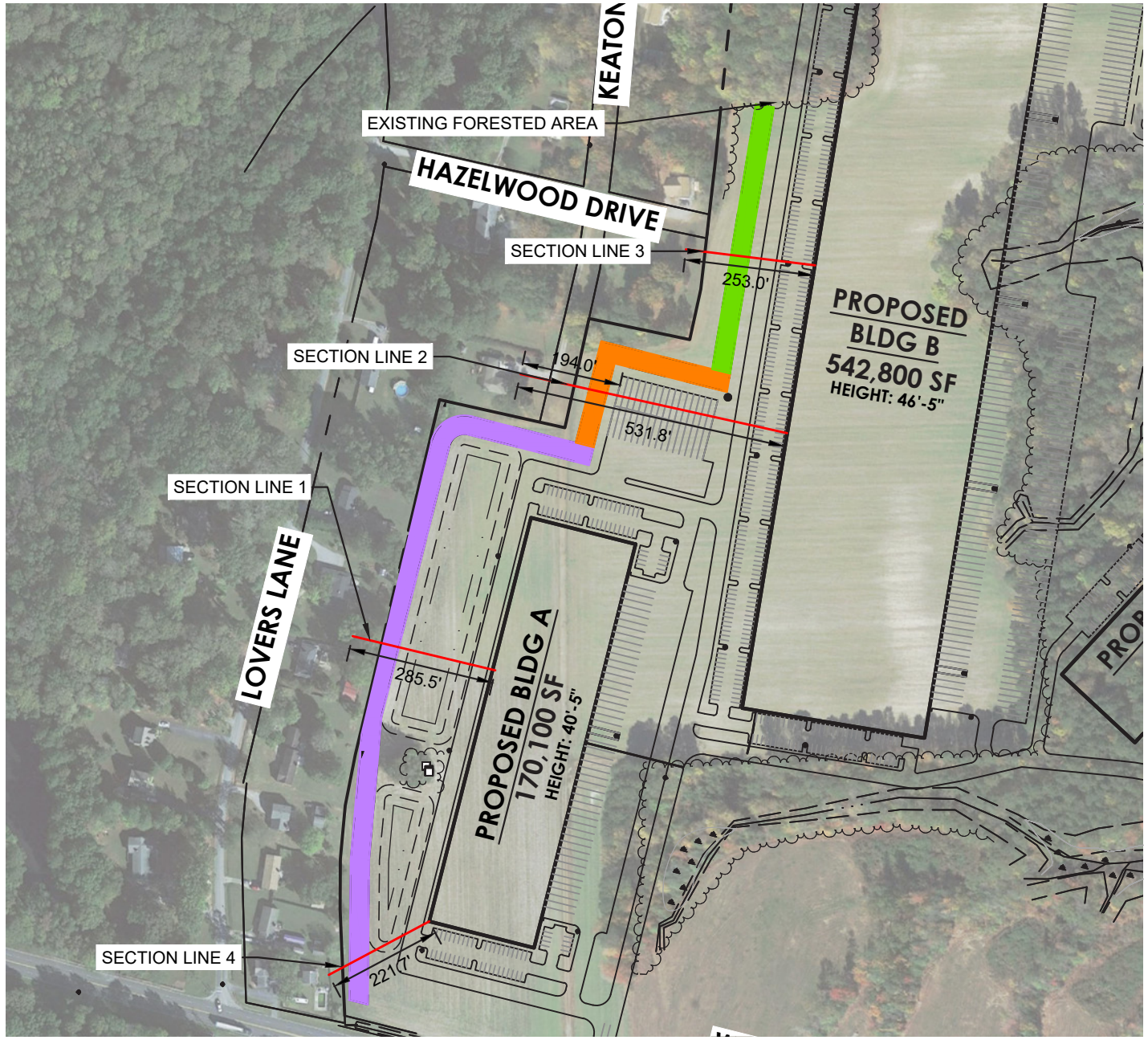
PRELIMINARY BUILDING DESIGN

TIDEWATER LOGISTICS CENTER

ISLE OF WIGHT COUNTY, VA

06/16/2023

ARCO DESIGN/BUILD



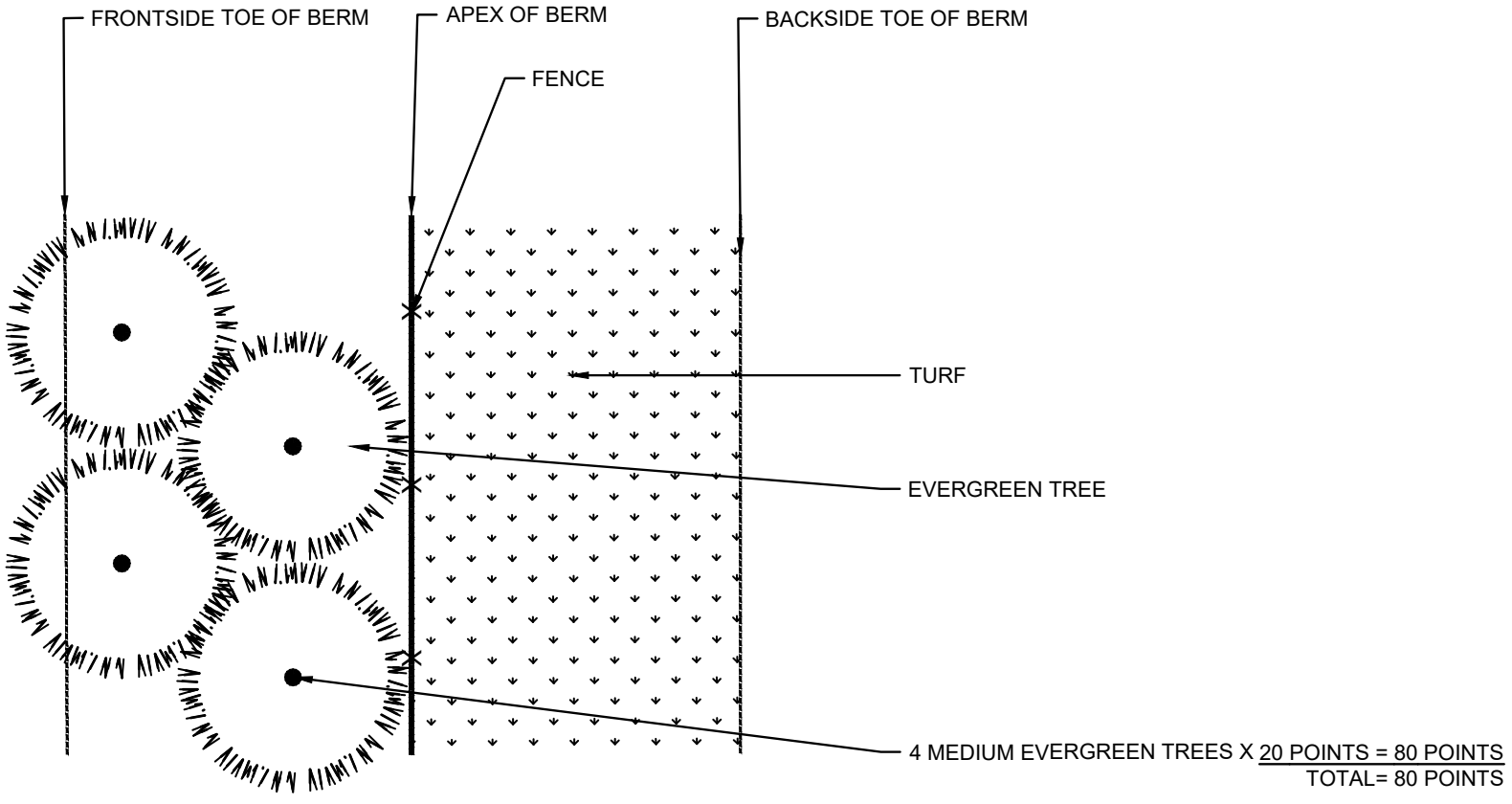
Landscape Industrial Adjacent to Residential Buffer Zone

Tidewater Logistics Center Rezoning | Isle of Wight | Virginia

Plan View

February 2024

Kimley»Horn



EVERGREENS ARE 10' HEIGHT AT INSTALLATION
AND 30-70' HEIGHT AT MATURITY

PROPOSED BUFFER IS NOT IN COMPLIANCE
WITH CODE PROFFER REQUIRED

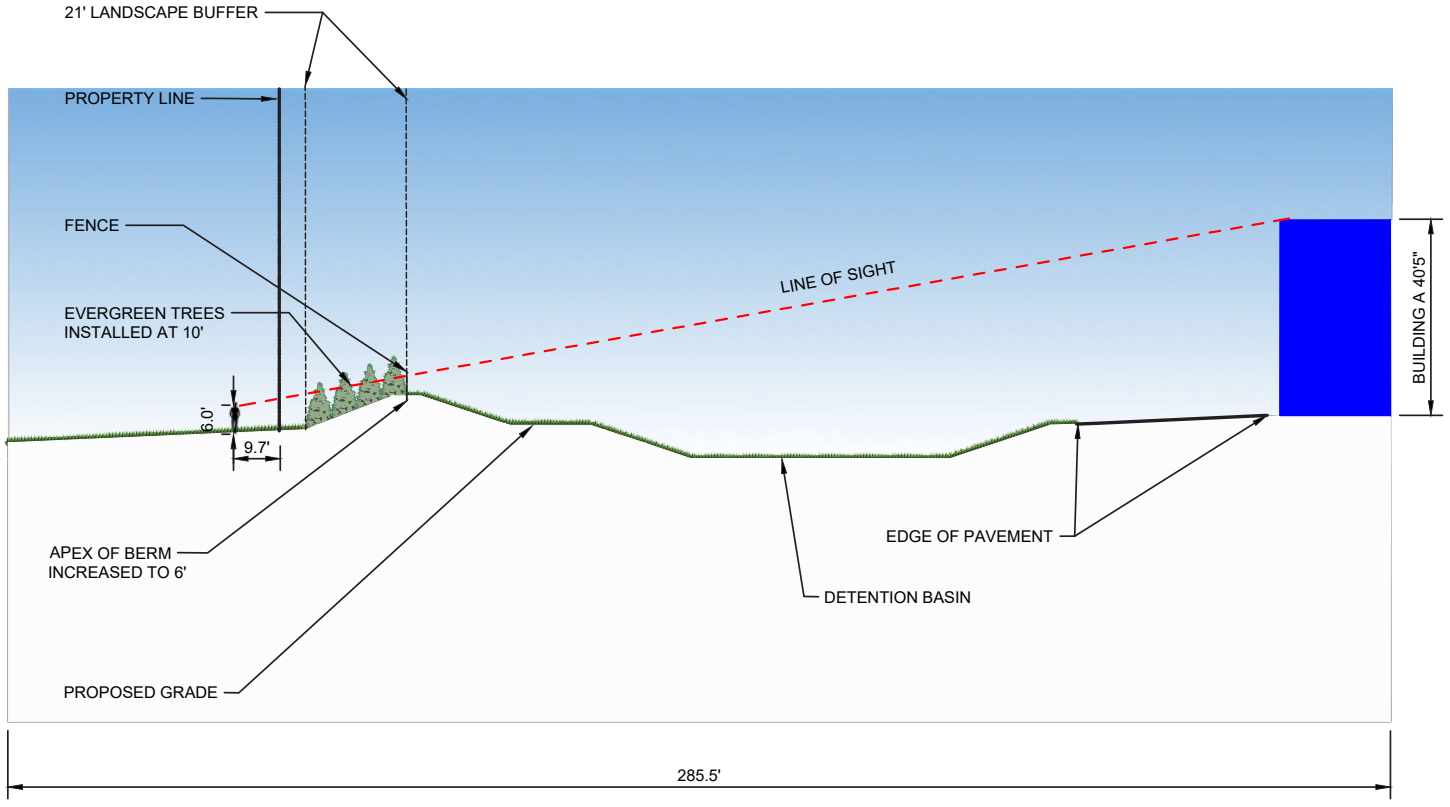
LANDSCAPE INDUSTRIAL ADJACENT TO RESIDENTIAL BUFFER ZONE: EVERGREEN TREE BUFFER

Tidewater Logistics Center Rezoning | Isle of Wight | Virginia

BUFFER EXHIBIT

February 2024

Kimley»Horn



GIS TOPO DATA USED FOR OFF SITE TOPOGRAPHY

APEX OF BERM INCREASED TO 6'

FINAL FENCE TYPE PM LOCATION WILL BE DETERMINED PENDING THE RESULTS OF THE PROJECT'S NOISE STUDY

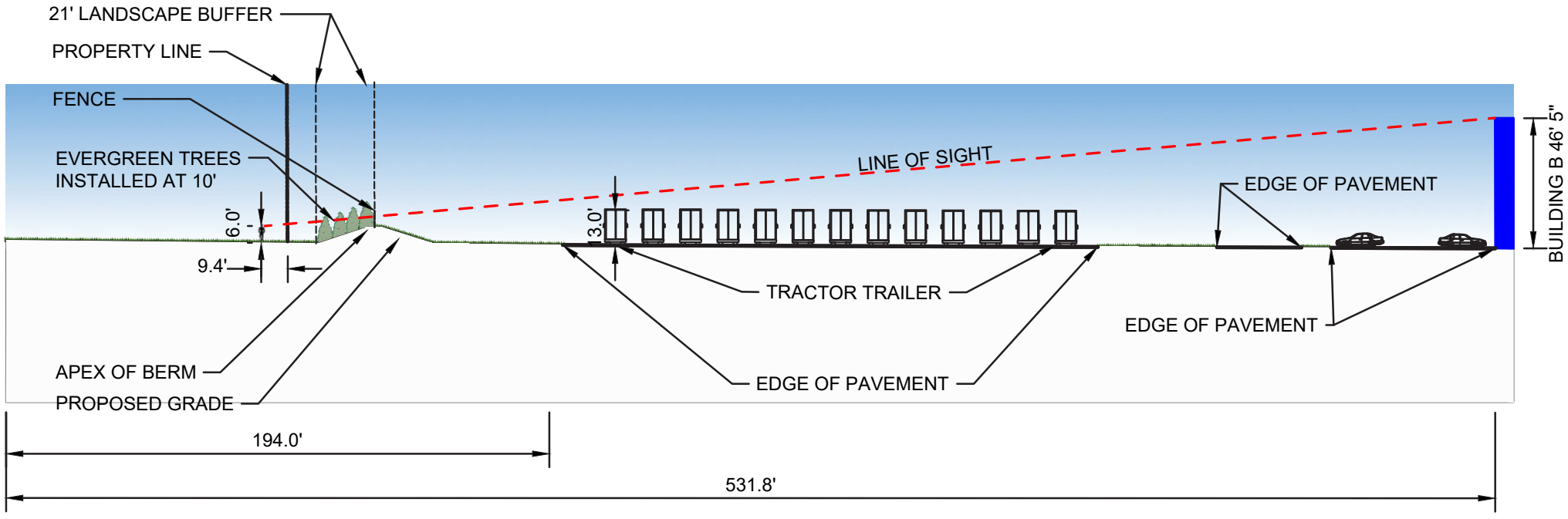
Landscape Industrial Adjacent to Residential Buffer Zone: evergreen tree buffer

Section Elevation 1

February 2024

Tidewater Logistics Center Rezoning | Isle of Wight | Virginia

Kimley»Horn



GIS TOPO DATA USED FOR OFF SITE TOPOGRAPHY

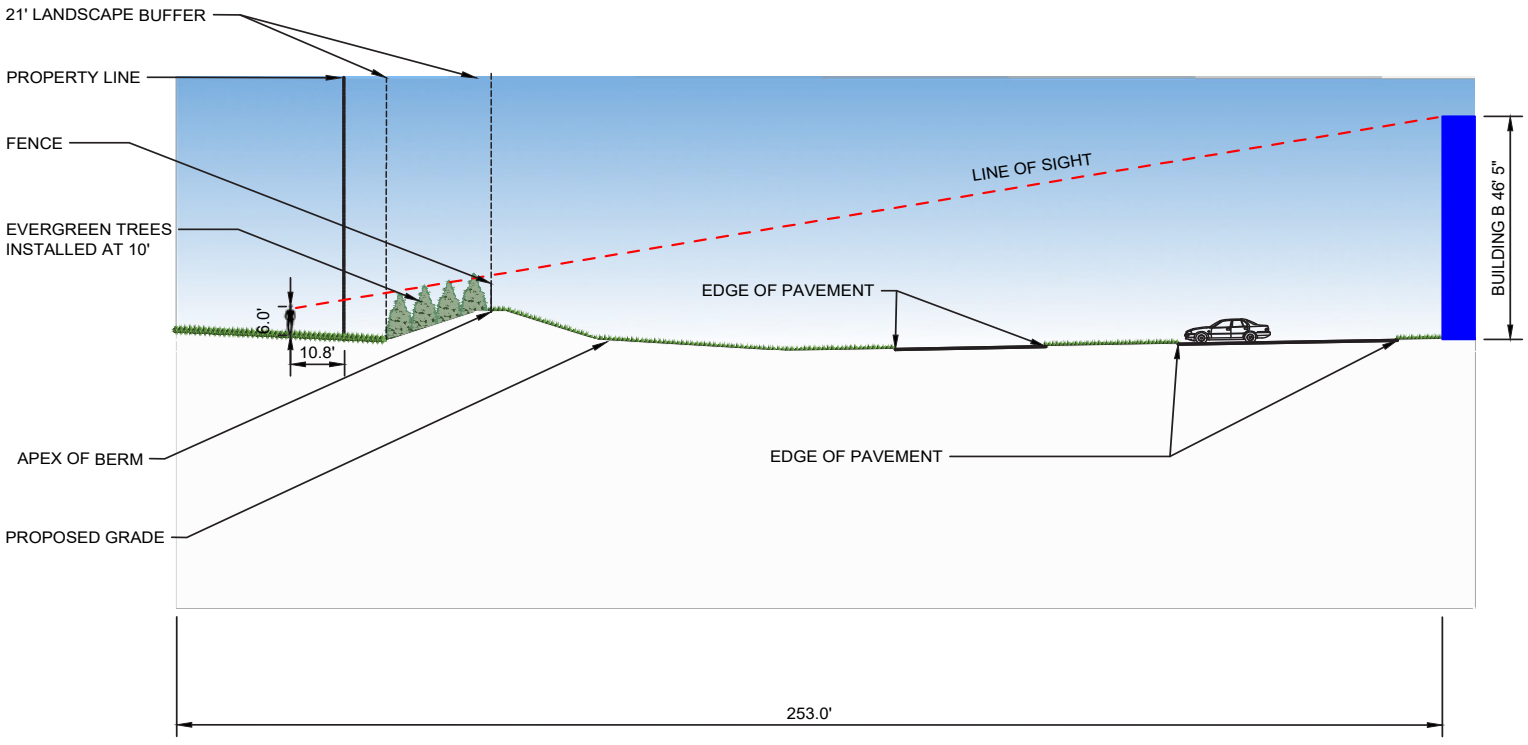
APEX OF BERM INCREASED TO 6'

FINAL FENCE TYPE PM LOCATION WILL BE DETERMINED PENDING THE RESULTS OF THE PROJECT'S NOISE STUDY

Landscape Industrial Adjacent to Residential Buffer Zone: evergreen tree buffer

Section Elevation 2

February 2024



GIS TOPO DATA USED FOR OFF SITE TOPOGRAPHY

APEX OF BERM INCREASED TO 6'

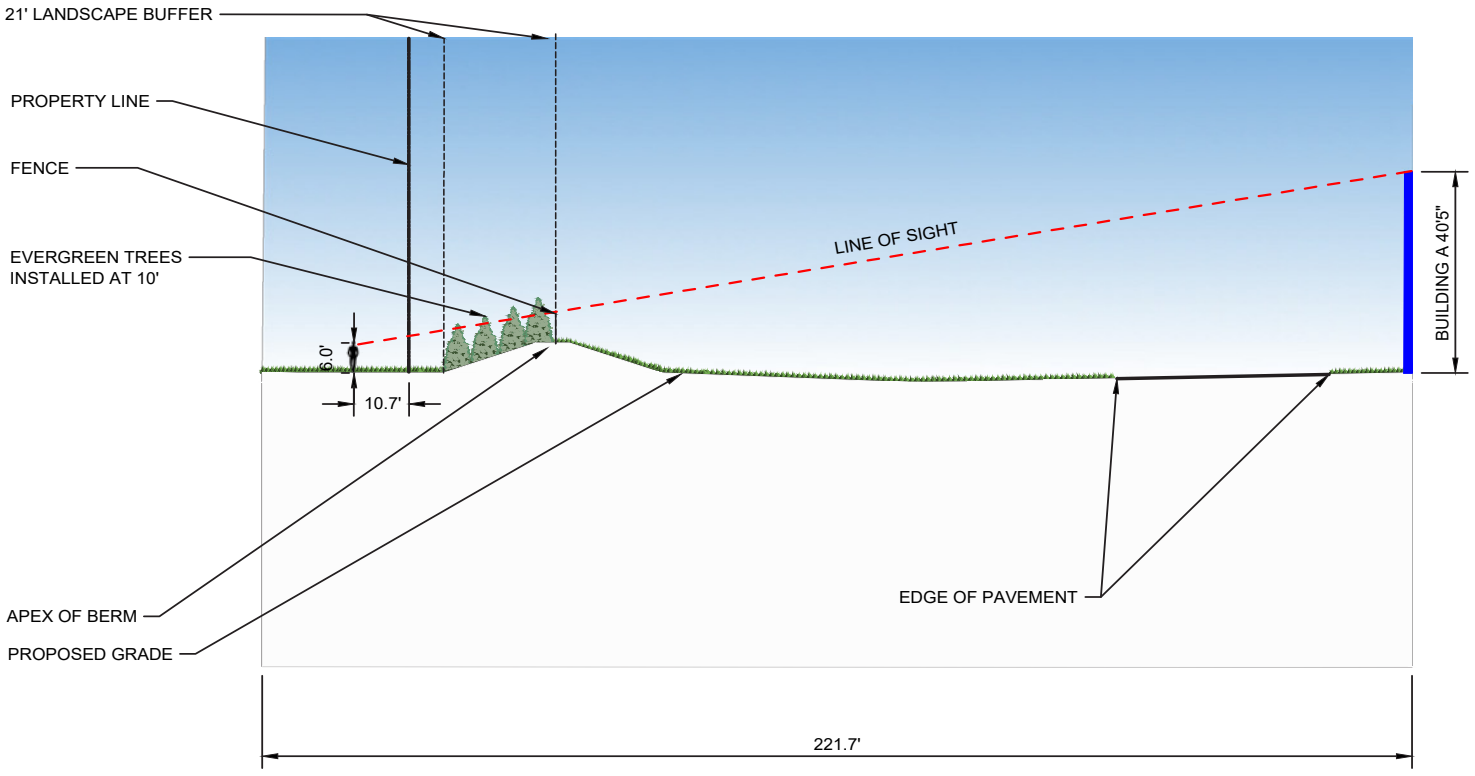
Landscape Industrial Adjacent to Residential Buffer Zone: evergreen tree buffer

Section Elevation 3

February 2024

Tidewater Logistics Center Rezoning | Isle of Wight | Virginia

Kimley»Horn



GIS TOPO DATA USED FOR OFF SITE TOPOGRAPHY

APEX OF BERM INCREASED TO 6'

FINAL FENCE TYPE PM LOCATION WILL BE DETERMINED PENDING THE RESULTS OF THE PROJECT'S NOISE STUDY

Landscape Industrial Adjacent to Residential Buffer Zone: evergreen tree buffer

Section Elevation 4

February 2024

Tidewater Logistics Center Rezoning | Isle of Wight | Virginia

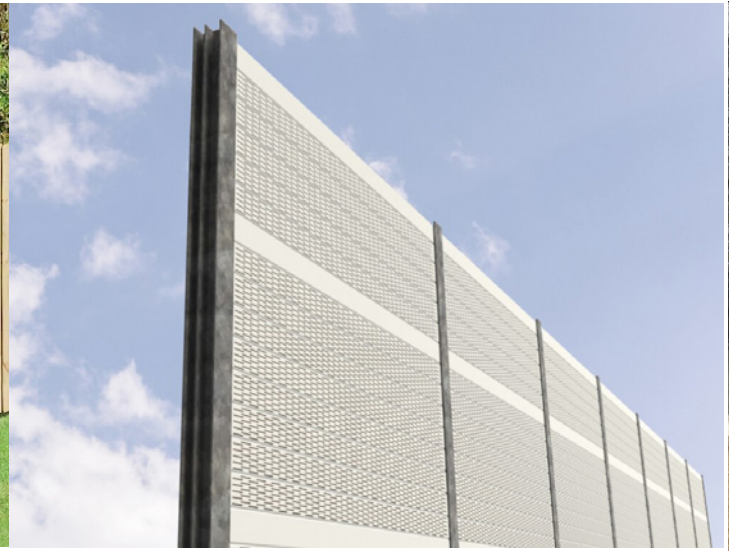
Kimley»Horn

Evergreen Buffer Example

Evergreen Buffer Example

Evergreen Buffer Example

Wood Fence



Aluminum sound wall, source: Durisol walls

PVC sound wall, source: Durisol walls

Landscape Industrial Adjacent to Residential Buffer Zone

TOWN OF WINDSOR

P.O. Box 307
8 E. Windsor Blvd.
Windsor, VA 23487

Department of
Planning & Zoning
757-242-4288

Established 1902

August 31, 2023

Isle of Wight County Planning Commission
17140 Monument Circle
Isle of Wight, Virginia 23397

RE: Application for an amendment to the Comprehensive Plan
Application for a change in zoning classification
Meridian Property Purchaser LLC, Tidewater Logistics Center
Parcels 54-01-086J, 54-02-086B, 55-01-013

Dear Isle of Wight County Planning Commission:

The Isle of Wight County Planning Department recently referred the above referenced applications to our attention for review and comment. As these applications border the corporate limits of the Town of Windsor and will have substantial impacts upon the Town, we are appreciative of the opportunity to review these proposals.

The Windsor Planning Commission reviewed these applications at their meeting on August 23rd and asked that I summarize their discussions and forward these comments to your attention. We understand our comments are advisory in nature, however, we ask that the County Planning Commission give due consideration to the highlights that emerged from our review.

Comprehensive Plan Amendment Application

The Isle of Wight County Comprehensive Plan was adopted in January 2020. This plan identifies the above referenced parcels as Mixed Use. According to the plan, Mixed Use designations will provide for housing, mixed with office, commercial and other uses. The Mixed Use (MU) land use consists of one or multiple detached or attached single family homes, multi-plex and apartment style housing options, along with office or commercial uses. As such, this designation is more compatible with the established neighborhoods along Lover's Lane, Hazelwood Drive and Keaton Avenue, all located in the Town of Windsor.

We understand that the Comprehensive Plan is not an ordinance, but rather a guide for future land use decisions. This plan is enacted through changes to zoning classifications and applying specific regulations. However, to request an amendment to the County Comprehensive Plan to Planned Industrial seems to negate the considerable efforts that went into developing the plan.

Records indicate that Parcel 54-01-086J is currently owned by the Industrial Authority of Isle of Wight County (IDA). The question arises as to why the IDA did not advocate for a future land use designation of Planned Industrial during this Comprehensive Plan development, as the IDA has owned the property since 2008. To amend the Comprehensive Plan to a Planned Industrial designation appears to negate sound planning principles especially as they relate to nearby existing residential uses. Planned Industrial areas should be as they state, "planned". In this particular application, it appears that this concept is not being followed. The Mixed Use (MU) designation is more appropriate for this specific location.

Zoning Amendment Applications

This zoning application raises a multitude of effects for the Town of Windsor and Isle of Wight County. Please keep in mind, residents of the Town are also residents of the County. Some of the impacts associated with this application may provide benefits to the Town and County and also produce negative effects. As with any application of this size and scope, careful review and/or modifications should be considered. As this proposal will be located in close proximity to established neighborhoods, specific considerations should be addressed. This application provides many more questions than answers.

Proximity to Residential Uses:

Is there adequate buffering with earthen berms and landscaping?

The site exhibit does not show any proposed lighting. Any lighting near the residences should be limited or prohibited to avoid unnecessary impacts.

The location of stormwater retention basins should away from residential uses and adequate aeration provided to prevent stagnation and mosquitoes.

Increased buffering should be considered to reduce adverse noise impacts given the potential for 24/7 operations of such warehousing facilities, including diesel trucks idling, loading and unloading activities, and backup chimes on vehicles.

Infrastructure Improvements:

This application intends to utilize a sewer pumping station. However, this station is located too close to the existing residential uses. No amount of buffering will prevent the undesirable odors from infiltrating these neighborhoods. The pumping station should be relocated away from the residences. While we appreciate the County studying the nearby areas for the potential future expansion of sewer services, the proposed location of this pump station should be revisited.

Transportation:

After reviewing the Traffic Impact Analysis (TIA) for this application, it was noted there is a glaring omission. Most of the intersections along Windsor Boulevard were studied for possible impacts, however, the intersection of Windsor Boulevard and Lovers Lane was not included. This is the intersection closest to the traffic signal at Dominion Way/Windsor Blvd., the primary entrance and exit for the site. Additionally, the application includes adding a 200' turn lane with a 200' taper eastbound on Windsor Blvd. This turn lane and taper will be very close to the intersection of Windsor Blvd. and Lovers Lane. Undoubtedly, this will be a friction point and lead to increased accidents, injuries and possible fatalities. A study of this intersection should be provided and in coordination with VDOT, possible mitigation strategies suggested and enacted.

The application will provide substantial impacts to Windsor Blvd., especially through the corporate limits of the Town of Windsor. Improvements to the existing intersections throughout the Town should be studied with positive enhancements suggested to improve the flow of traffic, including synchronizing the existing signals.

Public Safety:
The Isle of Wight Sheriff's Office maintains law enforcement responsibility throughout the County and performs a commendable job with the limited resources they have. Through a mutual aid agreement, the Windsor Police Department also responds to multiple 911 dispatches that fall within the County yet are in close proximity, including the Shirley T. Holland Intermodal Park. This site would also fall within the mutual aid area. With the proposed number of employees, truck freight and other uses intended for this site, this will only add to the number of calls that the Windsor Police Department will respond to. Consideration should be given to establishing revenue sharing protocols to reimburse the Town for services provided.

The Windsor Volunteer Fire Department serves the central area of Isle of Wight County. The department relies on volunteers to ensure adequate response to incidents both near and far. The Town of Windsor is very proud of the dedicated service of these volunteers. While we understand that the Windsor Fire Department falls under the purview of Isle of Wight County Emergency Services, we are fortunate to have the station within the Town limits.

With a proposal of this size and scope, their will be additional calls for service from the Windsor Fire Department. In reviewing the Isle of Wight County Capital Improvement Plan (CIP), there appears to be limited capital investment in the fire department for the next 5 years. Phased investments primarily consist of replacing station equipment. With the existing industrial development in the Shirley T. Holland Intermodal Park and with this proposed application, due consideration should be given to begin the process of updating the CIP to include providing the Windsor Fire Department with a ladder truck. Additionally, preliminary design work should be included for the replacement of the Windsor Fire Station. Isle of Wight County owns the corner parcel at Hidden Acres Circle/Windsor Boulevard (next to the existing fire station). This would be an ideal site for a new fire station.

The Windsor Rescue Squad serves the central area of Isle of Wight County and provides excellent service. They also fall under the purview of Emergency Services. Consideration should be given to amending the CIP to provide the resources and space they will need to provide the level of service expected, now and in the future. Long term planning will allow the Rescue squad to relocate to the existing fire station, once a new fire station is constructed.

Proffers:
We have reviewed the proffer statement submitted by the applicant. A brief synopsis provides that the applicant will only proffer the improvements that they will be required to do, including the transportation improvements. If industrial development really pays for the services they require including law enforcement, fire protection, and rescue squad calls, why is there such limited funding in the CIP for investments in these vital agencies? This application and its proffers should involve a more robust effort to address the public safety funding inadequacies.

Environmental:
The application proposes impacts to the 100' wetland Resource Protection Area (RPA) buffers in several locations. In reviewing the proposed site layout associated with this application, it appears that revising the layout would alleviate or remove these encroachments. Additionally, County ordinances and regulations limit maximum site coverage to a specific percentage. Questions arose during our review as to what areas this would be applicable to; will all the undevelopable wetlands be considered in deriving this maximum lot coverage percentage? It appears that the site layout may be in conflict with County ordinances.

In conclusion, the Town of Windsor Planning Commission thanks you for the opportunity to review these applications. Careful consideration should be given to any Comprehensive Plan amendment in order to maintain the integrity and usefulness of the plan. This site adjoins an established neighborhood; therefore the proposed site layout can and should be modified to limit any and all impacts to these residences. An adequate transportation study should be performed to reduce potential friction points and to provide for safe traveling for all who pass through the Town and County. The proffers suggested should be revisited to ensure that all development, including industrial, provides its fair share to the public safety services they require.

As always, we look forward to assisting the Isle of Wight County Planning Commission make sound recommendations that reflect our commitments to serving the public. Should you have any questions or need additional information, please feel free to contact me.

Sincerely,

James A. Randolph
Planning & Zoning Administrator

Cc: Town of Windsor Planning Commission

ISLE of WIGHT COUNTY MUSEUM

MEMORANDUM

TO: Trenton S. Blowe
Planner II, Isle of Wight County Department of Planning & Zoning

FROM: Jennifer England
Director, Isle of Wight County Museum
Historic Resources Manager, Isle of Wight County

RE: Tidewater Logistics Center
Updated Phase II
Tax Map Nos. 54-01-086J and 55-01-013
MUNIS No. 28397

DATE: February 6, 2024

After yesterday's meeting regarding the Tidewater Logistics Center project in Windsor with the Meridian Group of Bethesda, Maryland, the Isle of Wight County Museum/Isle of Wight County Department of Historic Resources would like to document several items as this project moves forward.

While the c. 1796 Henry Saunders House maintains a significant portion of its original fabric, its true significance lies in its representation of an entire class of 18th century Virginians. The Smithsonian Institution acquired several original portions of the interior including a staircase which was studied, interpreted and displayed at the National Museum of American History as an ideal example of the household of an economically stable middle class planter in 18th-century Virginia. Exhibited in this national museum in The Virginia Parlor, the artifacts' interpretation focused on Henry Saunders and his house as representations of this class of Virginians.

Here in Isle of Wight County, his house still stands as a symbol of 18th-century Virginia planters with a significant portion of its original exterior and interior fabric intact with accurate replicas replacing all but one of the portions removed by the Smithsonian. Furthermore, several houses with comparable interior details in Isle of Wight County are now scarce. For example, the two-level built-in buffet that is now owned by the Smithsonian had comparable pieces in the James Johnson House and Carr House, both

103 Main Street
Smithfield, VA 23430
(757) 356-1014
(757) 357-0114 FAX

demolished in 1974. In summary, Henry Saunders and the house he built both represent 18th century Virginia planters for a national - if not worldwide - audience.

Because of the significance of this house and its associated outbuildings, the developer should be encouraged – assuming the homeowner is agreeable – to provide funding for a highway marker through the Virginia Department of Historic Resources. This department would be pleased to handle the logistics of such a project with the said funding.

The viewshed of the Saunders House will not be impacted greatly by the project's construction because of the trees already in existence on the property. However, the addition of enhanced landscape – with appropriate vegetative choices to match the trees currently behind the house – to further protect the viewshed is encouraged.

It has been noted that the two cemeteries – the first north of the Saunders House and the second west of Proposed Building A – will be marked off and monitored during site preparation and construction. Additionally, the cemeteries should be permanently protected and delineated with wrought iron fencing appropriate for these cemetery landscapes.

As the applicant moves forward with this project, the potential discovery of archaeological artifacts and resources at these sites is probable. If the landowners are willing, the Isle of Wight County Museum should be considered a repository for discovered artifacts on this land and future finds on this site as they could further the interpretation or discovery of Isle of Wight County history.

103 Main Street
Smithfield, VA 23430
(757) 356-1014
(757) 357-0114 FAX

COMMONWEALTH of VIRGINIA

Department of Historic Resources

2801 Kensington Avenue, Richmond, Virginia 23221

Travis A. Voyles
Secretary of Natural and Historic Resources

Julie V. Langan
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
www.dhr.virginia.gov

February 12, 2024

Mr. Trenton Blowe
Planner II
Isle of Wight, Virginia 23397

Re: Tidewater Logistics Center - Windsor Commerce Tract
Isle of Wight County, Virginia
DHR File No. 2023-4713

Dear Mr. Blowe:

The Department of Historic Resources (DHR) has received for our review and comment revised versions of the report titled *Phase I Cultural Resources Survey of the Windsor Commerce Center Tract, Isle of Wight County, Virginia*, and the report entitled *Phase II Archaeological Evaluation of Site 44IW0395 and GPR Survey of Site 046-5629, The Windsor Commerce Center Tract*. Both reports were prepared and submitted by Circa~ Cultural Resource Management (Circa). Our comments are provided to Isle of Wight County as technical assistance in the assessment of potential impacts on historic resources and consistency of the report with DHR's *Guidelines for Conducting Historical Resources Survey in Virginia* (2017).

The revised Phase I report meets *Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines* (48 FR 44716-42) and DHR's *Guidelines* (2017). We concur with the consultant's recommendation that sites 44IW0160 and 44IW0396 are not likely to yield significant historical information and are likely not eligible for listing in the National Register of Historic Places (NRHP). The isolated finds do not constitute archaeological sites and are therefore not eligible for listing in the NRHP.

I conducted a brief reconnaissance of the project area on November 15, 2023, and identified a historic archaeological site that was not discussed in the previous version of the Phase I report. The site is a dense concentration of redeposited historic architectural, agricultural, and domestic materials exposed on and within an eroding ditch (see Attachment A). According to the revised Phase I report, "a neighboring farmer indicated he had retrieved old, demolished building material from Norfolk to fill in the wet areas on his farm for roads and along wetlands." Norfolk is approximately 40 miles from the project area. I did not observe any similar deposits elsewhere on the property and none were reported by Circa. This archaeological site should be documented in the Virginia Cultural Resource Information System (VCRIS).

The revised Phase II report also meets *Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines* (48 FR 44716-42) and DHR's *Guidelines* (2017). However, DHR does not concur with Circa's recommendations regarding the integrity and potential significance of Site 44IW0395. Their statements are based on contradictory conclusions. Circa states that, "All artifacts were recovered from an undifferentiated/mixed-plowed stratigraphic context." However, distinct, artifact-bearing strata are

described, drawn, and photographed in the report. The report states that, "No subsurface features beyond plowscars were identified." However, Plates 8 and 10 depict buried archaeological features in Test Units 7 and 8, respectively, that contrast sharply in their shapes and dimensions from the distinct plowscars also visible at the base of excavation in Test Unit 7. It is also notable that sterile subsoil had not yet been exposed across the base of Test Unit 8 when the photograph in Plate 10 was captured. This is especially evident by comparing the profile in Plate 10 to the photograph of Test Unit 7 in Plate 8 (see Attachment B). Both units were excavated at the center of the site. Likewise, the plan drawings of Test Units 2 and 3, also excavated at the center of the site, depict features that do not resemble plowscars.

The report describes Site 44IW0395 as lacking "spatial and temporal integrity." However, nearly all the diagnostic artifacts recovered during the Phase I and Phase II investigations were produced during the late eighteenth and early nineteenth centuries. The results of the Phase II evaluation support the location of the site centroid as defined during the Phase I survey. Circa~ wisely focused their test unit excavations in this area based on a subtle difference in topography and the greater density and diversity of materials recovered from this area during the Phase I survey. As discussed above, intact archaeological features were uncovered in these tests. Additional controlled excavation will likely reveal additional buried archaeological features. DHR recommends 44IW0395 *potentially eligible* for listing in the NRHP.

DHR concurs that the Butler/Jones/Lovers Lane Cemetery (DHR ID No. 046-5629) is likely not eligible for listing in the NHRP. It is our understanding that no buffer will be established between where ground disturbing operations are anticipated and the tree line of the copse of trees containing the cemetery's extant headstones. The report states that, "GPR [ground penetrating radar] survey did not record any additional burial features within the buffer." It is unfortunate that the GPR survey was not scheduled for a time after the crops were harvested from the field, when the rest of the archaeological investigation were conducted. The level terrain and sandy soils that characterize this part of the APE would have allowed for comprehensive coverage using the instrument. It is also unfortunate that no visual data, either radargram profiles or horizontal time slices were provided by the technician. The report states that a [Geonics] EM-31 [Ground Conductivity Meter] survey was also conducted, however no data on the results of that investigation are presented. It is unclear why the eastern edge of the copse of trees was excluded from the geophysical survey. Circa~ recommends "installing orange safety fencing around the cemetery edge [presumably at the tree line] to ensure that any unmarked graves [presumably within the tree line] are not impacted during construction." Care should be taken to recognize possible grave shafts that may have been missed during the limited GPR survey. A qualified archaeologist should monitor ground disturbance around the cemetery especially if no buffer is intended between the known limits of the cemetery and ground disturbing operations.
Please contact me at tim.roberts@dhr.virginia.gov if you have any questions.

Sincerely,

Timothy Roberts, Archaeologist
Review and Compliance Division

Eastern Region Office
2801 Kensington Avenue
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Western Region Office
962 Kime Lane
Salem, VA 24153
Tel: (540) 387-5443
Fax: (540) 387-5446

Northern Region Office
5357 Main Street
PO Box 519
Stephens City, VA 22655
Tel: (540) 868-7029
Fax: (540) 868-7033

Attachment A

Previously unrecorded historic archaeological site at approximately 36.804432°, -76.712184°. Before (above) and after (below) raking leaves.

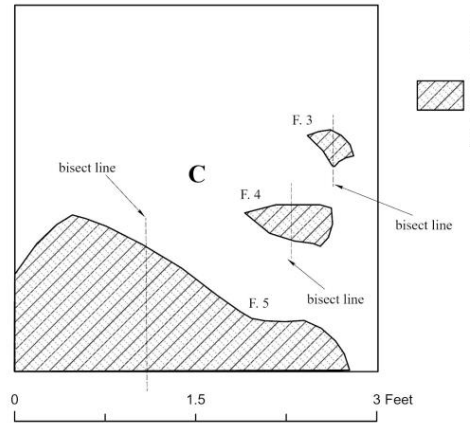
Previously unrecorded historic archaeological site at approximately 36.804432°, -76.712184°. Large fragments of brick foundation (above). Large roots growing around a mortared brick (below).

Previously unrecorded historic archaeological site at approximately 36.804432°, -76.712184°. A refit ceramic vessel (above). Handmade brick with "…ALVERT" stamped in the frog (below). The Calvert brand was established by Cushwa Brickworks in Williamsport, Maryland, in 1872.

Previously unrecorded historic archaeological site at approximately 36.804432°, -76.712184°. Artifact sample: cut and drawn iron nails, lance-tooth crosscut saw blade fragment, c. 1950s Pepsi-Cola glass bottle fragment, hammered glass vessel base.

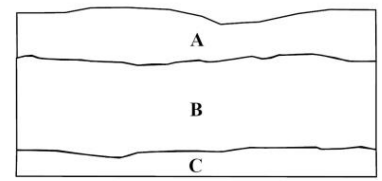
Attachment B

Site 44IW0395
Test Unit 7
Features 3, 4, and 5
Plan View and North
Wall Profile



C-Subsoil: Brownish-yellow (10YR 6/6) sandy clay

Plowscar: Mottled brown (10YR 5/3), pale-brown (10YR 6/3), and brownish-yellow (10YR 6/6) sandy silty clay



A-Plowzone: Brown (10YR 5/3) sandy silt

B-Plowzone: Pale-brown (10YR 6/3) sandy silt

C-Subsoil: Brownish-yellow (10YR 6/6) sandy clay

Plowscar: Mottled brown (10YR 5/3), pale-brown (10YR 6/3), and brownish-yellow (10YR 6/6) sandy silty clay

Feature 3:
West Wall profile

Feature 4:
West Wall profile

Feature 5:
West Wall profile

99% | Reset

Crop | Adjustment | Filter | Markup | Retouch | Background

Save options | Cancel

Light

Brightness 0

Exposure 0

Contrast 0

Highlights 0

Shadows 0

Vignette 0

Color

Saturation 0

Warmth 0

Tint 0

99% | Reset

Crop | Adjustment | Filter | Markup | Retouch | Background

Save options | Cancel

Light

Brightness 39

Exposure 0

Contrast 32

Highlights 0

Shadows -100

Vignette 0

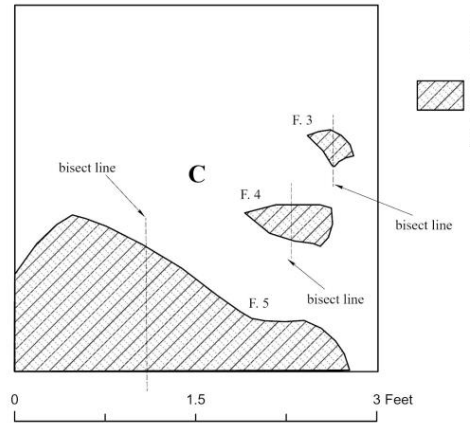
Color

Saturation 0

Warmth 0

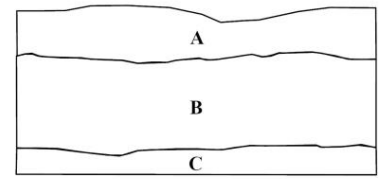
Tint 0

Site 44IW0395
Test Unit 7
Features 3, 4, and 5
Plan View and North
Wall Profile



C-Subsoil: Brownish-yellow (10YR 6/6) sandy clay

Plowscar: Mottled brown (10YR 5/3), pale-brown (10YR 6/3), and brownish-yellow (10YR 6/6) sandy silty clay



A-Plowzone: Brown (10YR 5/3) sandy silt

B-Plowzone: Pale-brown (10YR 6/3) sandy silt

C-Subsoil: Brownish-yellow (10YR 6/6) sandy clay

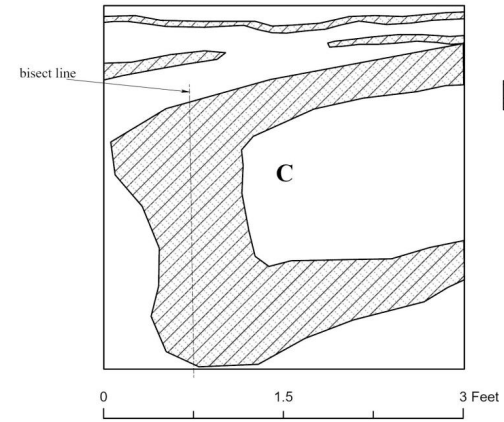
Plowscar: Mottled brown (10YR 5/3), pale-brown (10YR 6/3), and brownish-yellow (10YR 6/6) sandy silty clay

Feature 3:
West Wall profile

Feature 4:
West Wall profile

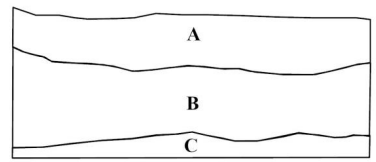
Feature 5:
West Wall profile

Site 44IW0395
Test Unit 8
Feature 6
Plan View and North Wall Profile



C-Subsoil: Brownish-yellow (10YR 6/6) sandy clay

Plowscar: Mottled brown (10YR 5/3), pale-brown (10YR 6/3), and brownish-yellow (10YR 6/6) sandy silty clay

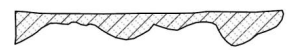


A-Plowzone: Brown (10YR 5/3) sandy silt

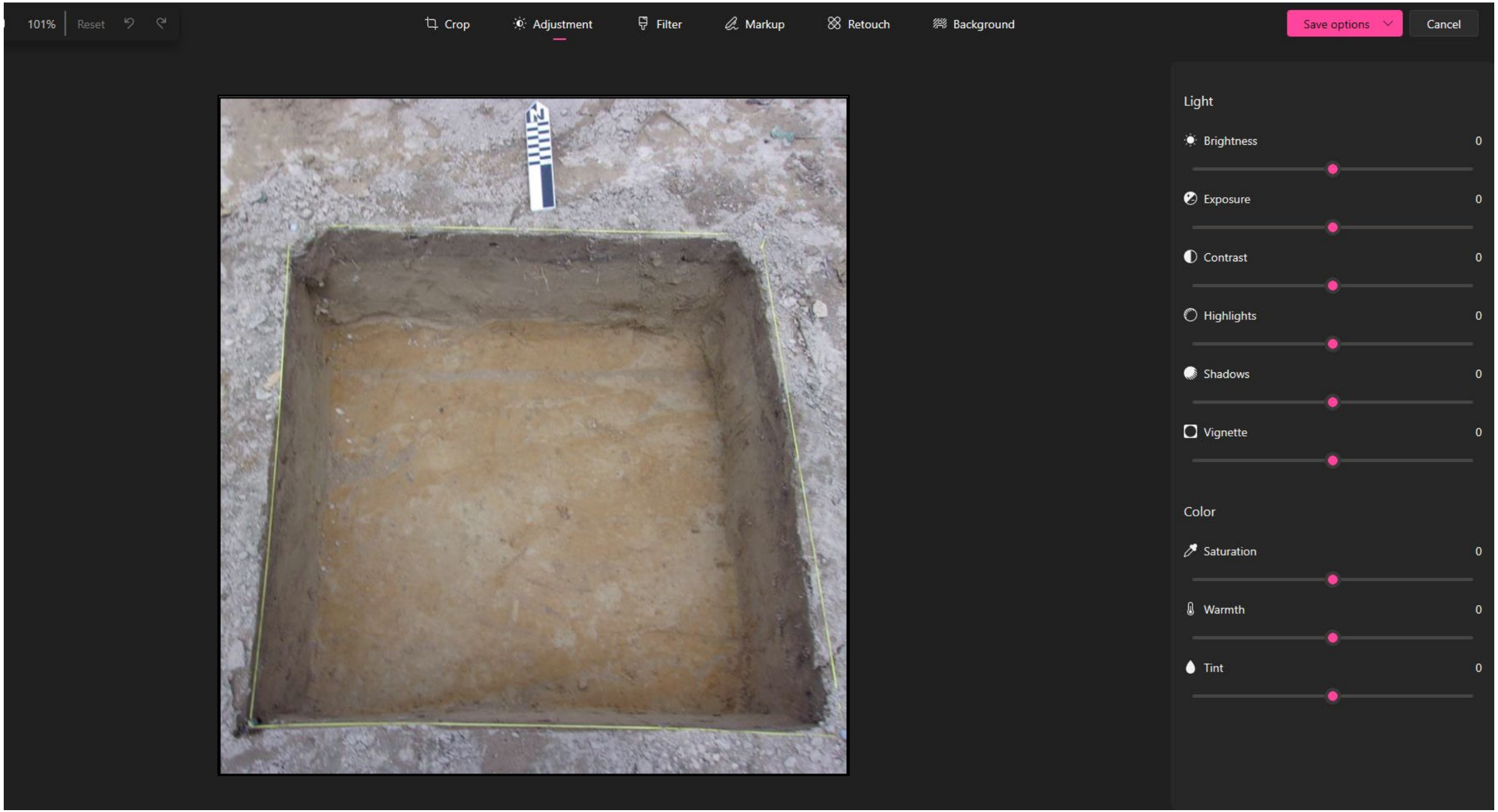
B-Plowzone: Pale-brown (10YR 6/3) sandy silt

C-Subsoil: Brownish-yellow (10YR 6/6) sandy clay

Feature 6:
West Wall profile



Plowscar: Mottled brown (10YR 5/3), pale-brown (10YR 6/3), and brownish-yellow (10YR 6/6) sandy silty clay


101%
Reset
Crop
Adjustment
Filter
Markup
Retouch
Background
Save options
Cancel
Light
Brightness 0
Exposure 0
Contrast 0
Highlights 0
Shadows 0
Vignette 0
Color
Saturation 0
Warmth 0
Tint 0

95% | Reset

Crop | Adjustment | Filter | Markup | Retouch | Background

Save options | Cancel

Light

Brightness 42

Exposure 0

Contrast -40

Highlights 7

Shadows -100

Vignette 0

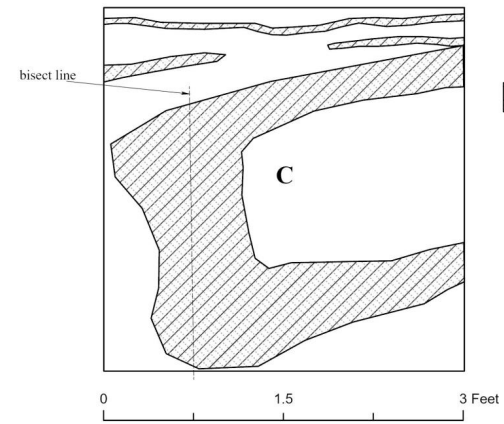
Color

Saturation 53

Warmth -11

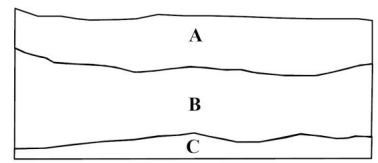
Tint 0

Site 44IW0395
Test Unit 8
Feature 6
Plan View and North Wall Profile



C-Subsoil: Brownish-yellow (10YR 6/6) sandy clay

Plowscar: Mottled brown (10YR 5/3), pale-brown (10YR 6/3), and brownish-yellow (10YR 6/6) sandy silty clay

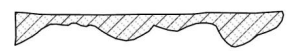


A-Plowzone: Brown (10YR 5/3) sandy silt

B-Plowzone: Pale-brown (10YR 6/3) sandy silt

C-Subsoil: Brownish-yellow (10YR 6/6) sandy clay

Feature 6:
West Wall profile

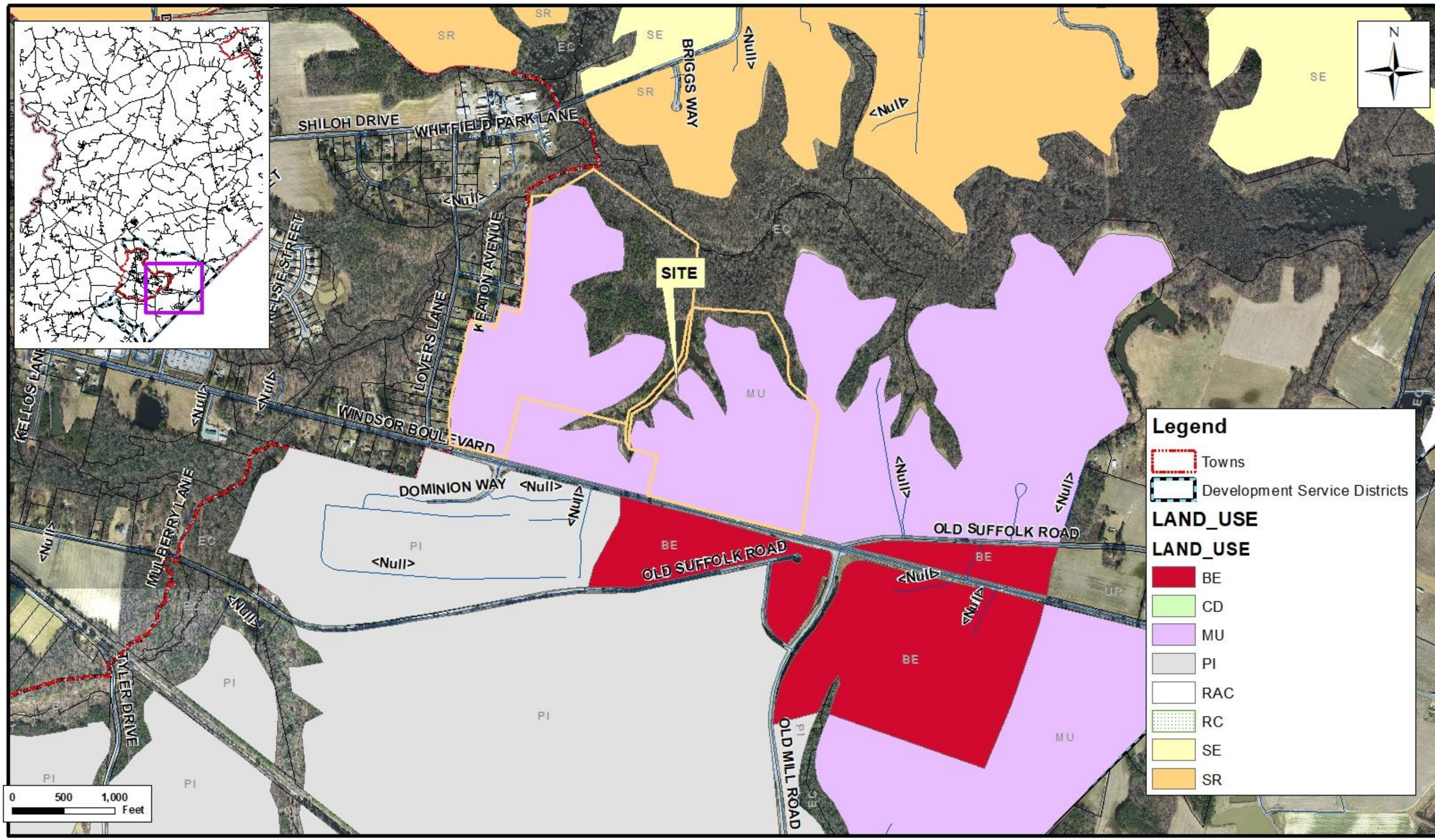


Plowscar: Mottled brown (10YR 5/3), pale-brown (10YR 6/3), and brownish-yellow (10YR 6/6) sandy silty clay

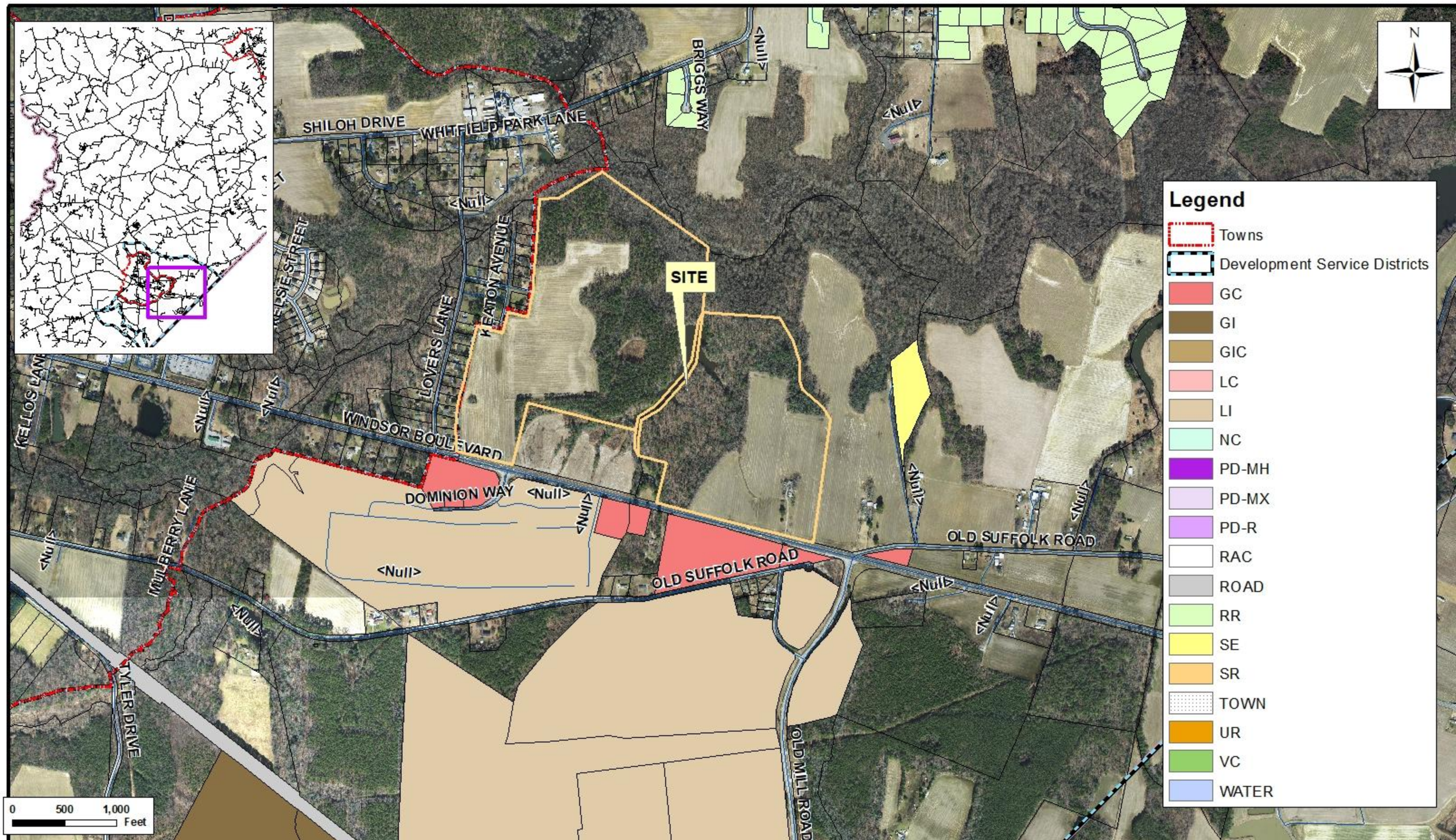
LUP-1-23 - Comp Plan Amendment - Location Map

ZA-4-23 - Condtional Rezoning - CloseUp Map

ZA-4-23 - Condtional Rezoning - Land Use Map



ZA-4-23 - Condtional Rezoning - Zoning Map



Traffic Impact Analysis
for
Tidewater Logistics Center Industrial Development

Isle of Wight County, Virginia

Prepared for:
Meridian Group

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: 117158002
July 2023

Table of Contents

1.0 Executive Summary 3
2.0 Introduction 6
2.1 Project Overview 6
2.2 Study Area 6
3.0 EXISTING CONDITIONS 8
3.1 Study Area Roadways 8
3.2 Existing Traffic Volumes 9
4.0 FUTURE TRAFFIC 12
4.1 Analysis Scenarios 12
4.2 Traffic Growth Rate 12
4.3 Un-Built Approved Development Traffic 13
4.4 Un-Built Transportation Improvements 13
4.5 Trip Generation 14
4.6 Trip Distribution and Assignment 15
4.7 Total Future Traffic 15
5.0 Traffic Analysis 22
5.1 Intersection Operational Analysis 22
5.2 Intersection Operational Analysis Results and Findings 22
5.3 Intersection Queuing Analysis Results and Findings 31
6.0 Conclusions and Recommendations 35

Appendices

Appendix A: Proposed Conceptual Site Plan
Appendix B: Traffic Count Data
Appendix C: Approved But Unbuilt Developments and Infrastructure Improvement Projects
Appendix D: Synchro Tabular Outputs

List of Tables

Table 1: Study Area Roadways Historic AAWDT 12
Table 2: VDOT Statewide Planning System (SPS) Traffic Volume Projections 13
Table 3: Proposed Trip Generation 14
Table 4: LOS Control Delay Thresholds 22
Table 5: Windsor Boulevard and Prince Boulevard AM and PM LOS results 25
Table 6: Windsor Boulevard and Court Street/Bank Street AM and PM LOS Results 26
Table 7: Windsor Boulevard and Burroughs Lane AM and PM LOS results 27
Table 8: Windsor Boulevard and Dominion Way AM and PM LOS results 28
Table 9: Windsor Boulevard and Old Mill Road AM and PM LOS results 29
Table 10: Windsor Boulevard and RIRO 1 AM and PM LOS results 30
Table 11: Windsor Boulevard and RIRO 2 AM and PM LOS results 30
Table 12: Windsor Boulevard and Prince Boulevard AM and PM Queue results 32
Table 13: Windsor Boulevard and Court Street/Bank Street AM and PM Queue Results 32
Table 14: Windsor Boulevard and Burroughs Lane AM and PM Queue results 33
Table 15: Windsor Boulevard and Dominion Way AM and PM Queue results 33
Table 16: Windsor Boulevard and Old Mill Road AM and PM Queue results 34
Table 17: Windsor Boulevard and RIRO 1 AM and PM Queue results 34
Table 18: Windsor Boulevard and RIRO 2 AM and PM Queue results 34

List of Figures

Figure ES-1: Future Roadway Conditions 6
Figure 1: Project Study Area 7
Figure 2: Existing Roadway Geometry 10
Figure 3: Existing AM and PM Peak Hour Traffic Volumes 11
Figure 4: Site Traffic Distributions 16
Figure 5: Site Traffic Assignment 17
Figure 6: 2025 No Build AM and PM Peak Hour Traffic Volumes 18
Figure 7: 2031 No Build AM and PM Peak Hour Traffic Volumes 19
Figure 8: 2025 Build AM and PM Peak Hour Traffic Volumes 20
Figure 9: 2031 Build AM and PM Peak Hour Traffic Volumes 21
Figure 10: Future Roadway Improvements 37

1.0 EXECUTIVE SUMMARY

Kimley-Horn was retained to perform a traffic impact analysis (TIA) for Tidewater Logistics Center, a proposed industrial development consisting of warehouses and a manufacturing facility in Isle of Wight County, Virginia. The proposed development includes up to approximately 1,229,130 square feet (SF) of warehousing, trans-load, and manufacturing facilities. A trans-load facility is a distribution center that specializes in transferring goods from one mode of transportation to another. The development is estimated to generate approximately 2,349 daily vehicle trips with 223 and 246 occurring during the AM and PM peak hours, respectively.

The existing site consists of approximately 168 acres of land zoned as Rural Agricultural Conservation (RAC). This TIA has been prepared to support a Conditional Rezoning Application to an Industrial District that allows for the proposed land uses. This TIA summarizes existing and future traffic conditions within the agreed upon project study area and identifies traffic impacts with transportation recommendations based on the new traffic generated by the development. 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 in the 2025 and 2031 development scenarios.

RECOMMENDATIONS

One full movement access and two right-in/right-out driveways are proposed for the development. The full movement access will be at the existing signalized T-intersection of Windsor Boulevard and Dominion Way. The development will construct the north leg of the intersection. Windsor Boulevard at RIRO 1 is a new right-in/right-out stop-controlled access located approximately 1,800-feet east of Dominion Way, and Windsor Boulevard at RIRO 2 is a new right-in/right-out stop controlled access located approximately 750-feet east of RIRO 1.

Figure ES-1 illustrates existing lane configurations and traffic control, improvements within the study area that will be constructed by others, and improvements based on the proposed development as described below.

Windsor Boulevard/Dominion Way

- Reconstruct the existing traffic signal to accommodate the north leg of the intersection and to current VDOT standards
- Modify existing protected-permissive left-turn phasing to flashing yellow arrow
- Modify coordinated traffic signal timings at this intersection based on new signal phasing and volumes

Eastbound Windsor Boulevard

- Construct an exclusive left-turn lane with 200-feet of storage and a 200-foot taper
    - Note: Existing striped median does not meet VDOT minimum turn lane requirements

Westbound Windsor Boulevard

- Construct an exclusive right-turn lane with 200-feet of storage and a 200-foot taper

Northbound Dominion Way

This TIA modeled protected-only left-turn movements for the northbound and southbound approaches. Once design advances and intersection geometry is established, the left-turn movements should be evaluated for protected-permissive operations with a flashing yellow arrow.

- Restripe the existing right-turn lane to a through/right-turn

Southbound Access Driveway

- Construct one exclusive left-turn lane
- Construct one shared through/right turn-lane
    - If outbound lanes are not continuous into the site, the through/right-turn lane should be constructed with 200-feet of storage and a 200-foot taper

Windsor Boulevard/RIRO 1

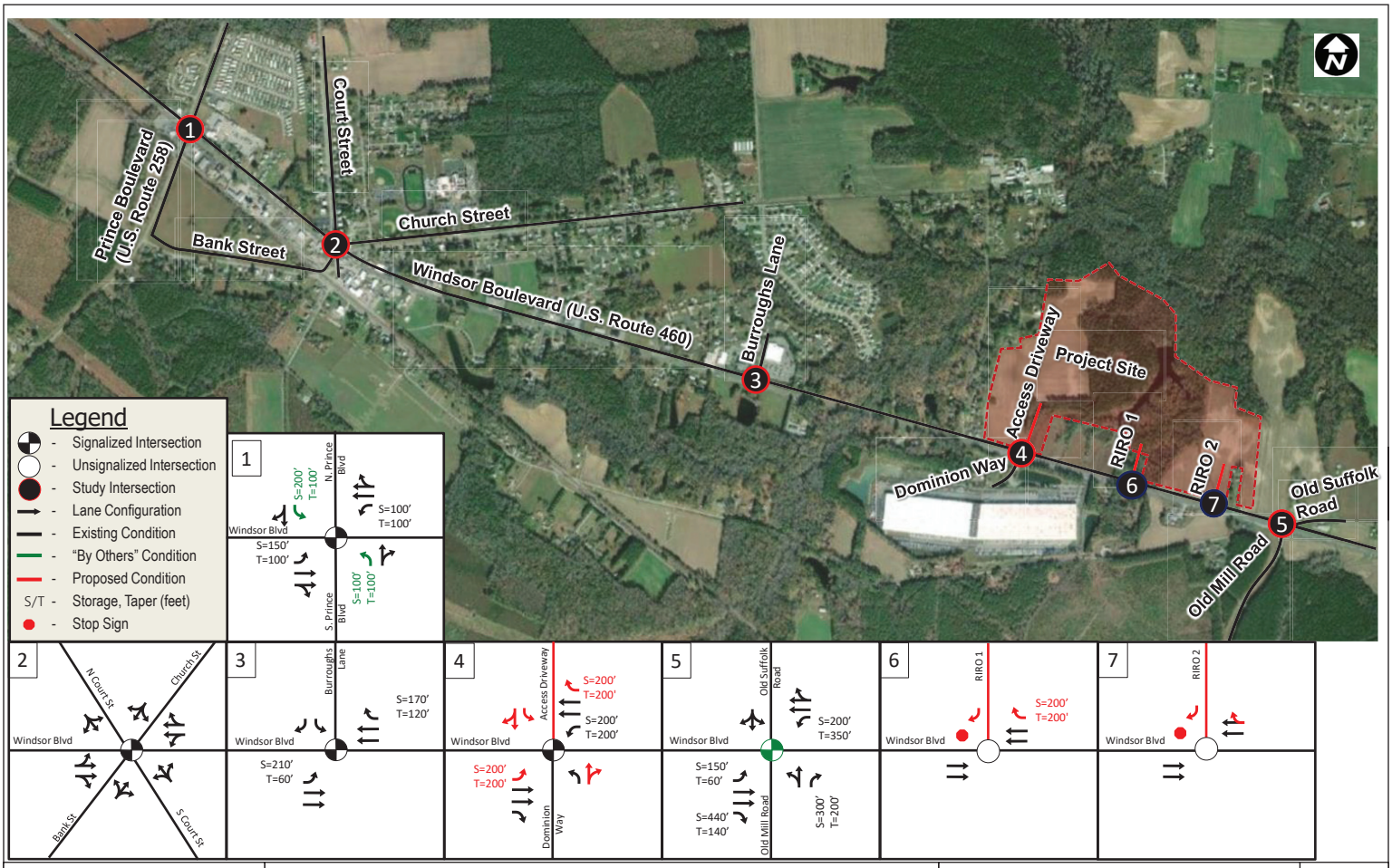
- Unsignalized intersection with stop-control along the southbound approach

Westbound Windsor Boulevard

- Construct an exclusive right-turn lane with 200-feet of storage and a 200-foot taper

Windsor Boulevard/RIRO 2

- Unsignalized intersection with stop-control along the southbound approach



Kimley»Horn	Tidewater Logistics Center TIA Windsor, VA	Future Roadway Geometry	Figure ES-1

2.0 INTRODUCTION

2.1 Project Overview

Kimley-Horn was retained to perform a traffic impact analysis (TIA) for Tidewater Logistics Center, a proposed industrial development consisting of various warehouses and a manufacturing facility in Isle of Wight County, Virginia. The proposed development) will consist of approximately 1,229,130 square feet (SF) of warehousing, trans-load, and manufacturing facilities. Access to/from the proposed development will be at Windsor Boulevard and Dominion Way (a full access movement that forms the north leg of the existing signalized intersection), Windsor Boulevard at RIRO 1 (new proposed right-in/right-out access unsignalized intersection), and Windsor Boulevard at RIRO 2 (new proposed right-in/right-out access unsignalized intersection). The study area with proposed access points is found in Error! Reference source not found..

The proposed development site consists of approximately 168 acres of land currently zoned as Rural Agricultural Conservation (RAC). To support the proposed development (specifically the warehousing and trans-load facility land uses) the properties zoned RAC will require rezoning to an Industrial District. A conceptual site plan of the proposed development is included in **Appendix A**.

This TIA summarizes existing and future traffic conditions within the agreed upon project study area, identifies traffic impacts resulting from the proposed development on the surrounding local road network, and recommends initial/interim and ultimate transportation infrastructure improvements that will support the full development.

2.2 Study Area

The study area for this analysis includes five existing intersections located along Windsor Boulevard (U.S. Route 460). There are two, new access points proposed along Windsor Boulevard to support traffic operations and accessibility to/from the proposed development site. A third, full movement access will form a new approach at the Dominion Way intersection. Study area intersections are shown in Error! Reference source not found. and consist of the following:

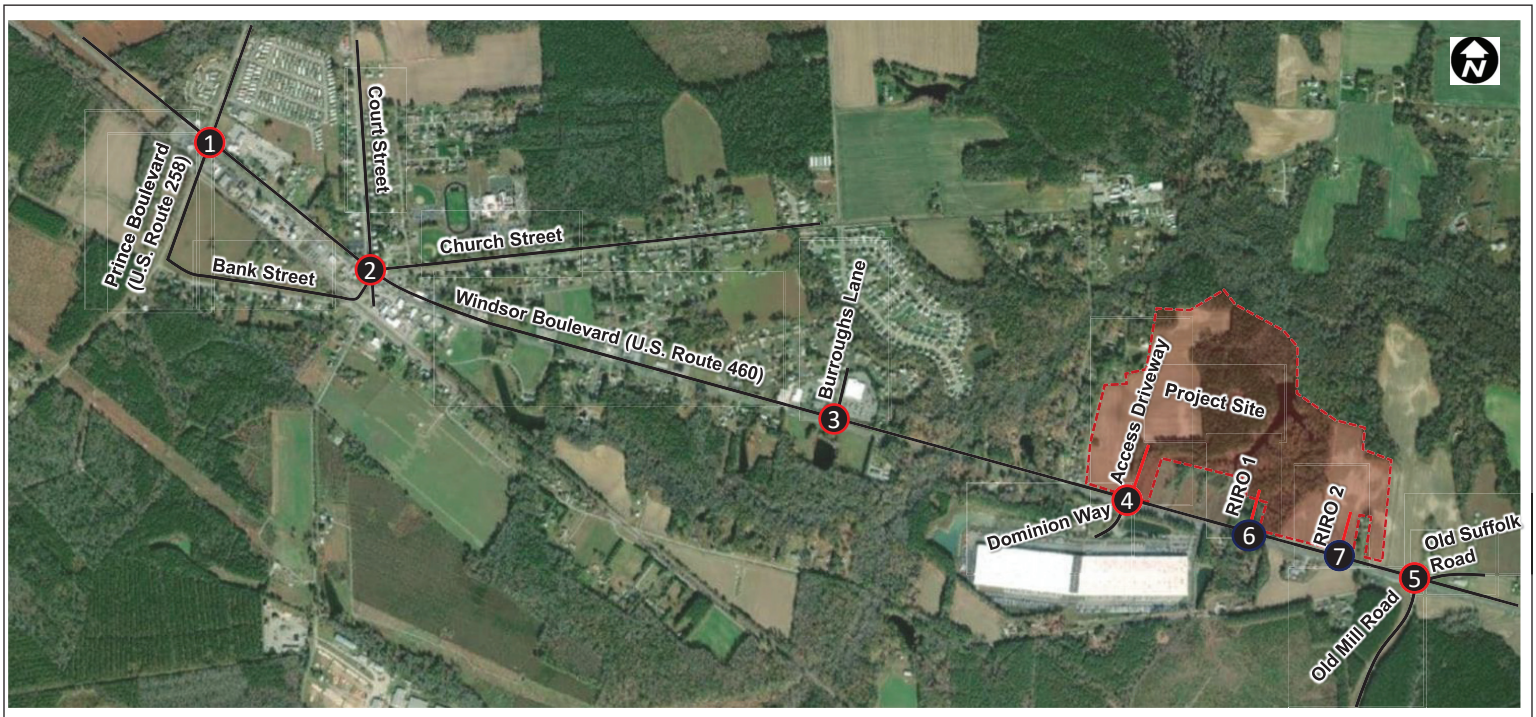
Existing Intersections:

- Windsor Boulevard (U.S. Route 460) at U.S. Route 258 (Prince Boulevard) – Signalized
- Windsor Boulevard (U.S. Route 460) at Church Street/Court Street/Bank Street – Signalized
- Windsor Boulevard (U.S. Route 460) at Burroughs Lane – Signalized
- Windsor Boulevard (U.S. Route 460) at Dominion Way/Proposed Access – Signalized
- Windsor Boulevard (U.S. Route 460) at Old Mill Road (State Route 607) – Unsignalized

Proposed Intersections:

- Windsor Boulevard (U.S. Route 460) at Proposed RI/RO 1 – Unsignalized
- Windsor Boulevard (U.S. Route 460) at Proposed RI/RO 2 – Unsignalized

All study area roadways and intersections were identified and agreed to with Isle of Wight County. It is noted that for the purposes of this study, Windsor Boulevard (U.S. Route 460) is referenced as being oriented in east/west cardinal directions. Side streets along Windsor Boulevard are described as being oriented in north/south cardinal directions.



Legend

- Signalized Study Intersection
- Unsignalized Study Intersection
- Existing Roadway
- Proposed Access

Kimley»Horn	Tidewater Logistics Center TIA Windsor, VA	Project Study Area	Figure 1

3.0 EXISTING CONDITIONS

3.1 Study Area Roadways

Figure 2 depicts existing lane designations, storage lengths for exclusive turn lanes, and posted speed limits throughout the study area at each study area intersection. The following provides a short description of existing roadway characteristics for roadways adjacent to the proposed site:

- **Windsor Boulevard (U.S. Route 460)** – is an undivided four-lane principal arterial within the limits of the study area. Windsor Boulevard is oriented in an approximate northwest/southeast direction with a posted speed limit ranging from 35 to 55 miles per hour (MPH) within the study area. Windsor Boulevard (U.S. Route 460) is designated as a Corridor of Statewide Significance (CoSS), making up the Heartland Corridor. Based on VDOT traffic data reported for 2021, this section of Windsor Boulevard carried approximately 35,000 vehicles per day (vpd).
- **Prince Boulevard (State Route 258)** – is an undivided two-lane minor arterial within the limits of the study area. Prince Boulevard runs in an approximate north/south direction with a posted speed limit of 45 MPH. Based on VDOT traffic data reported for 2021, this section of Prince Boulevard carried approximately 5,500 vehicles per day (vpd).
- **Court Street (State Route 610)** – is an undivided two-lane minor collector within the limits of the study area. Court Street is oriented in an approximate north/south direction with a posted speed limit of 25 MPH within the study area. Based on VDOT traffic data reported for 2021, this section of Court Street carried approximately 2,960 vehicles per day (vpd).
- **Church Street/Bank Street (State Route 603)** – is an undivided two-lane major collector within the limits of the study area. Church Street/Bank Street is oriented in an approximate east/west direction with a posted speed limit of 25 MPH. Based on VDOT traffic data reported for 2021, this section of Church Street/Bank Street carried approximately 5,400 vehicles per day (vpd).
- **Old Mill Road (State Route 607) –** is an undivided two-lane local road within the limits of the study area. Old Mill Road is oriented in an approximate north/south direction. Based on VDOT traffic data reported for 2021, this section of Church Street/Bank Street carried approximately 1,200 vehicles per day (vpd).

Existing traffic signal timing data for each signalized study area intersection was provided by VDOT and was used in the operational analyses.

3.2 Existing Traffic Volumes

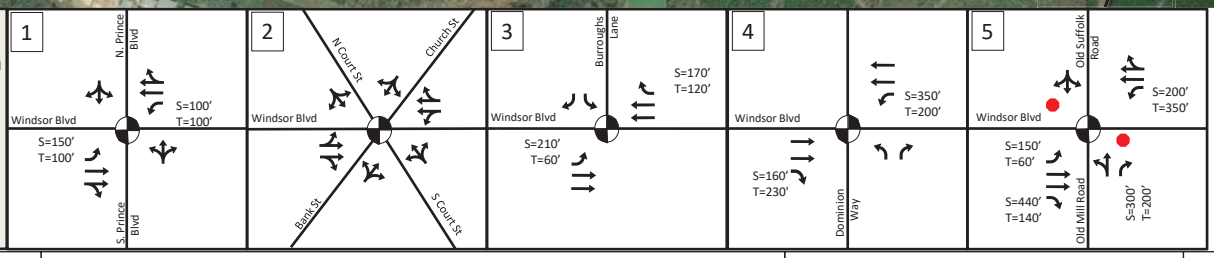
Kimley-Horn collected existing weekday turning movement count (TMC) data on May 11, 2023 (Thursday) and May 23, 2023 (Friday) from 6:00 AM to 9:00 AM and 3:30 PM to 6:30 PM at the following intersections:

- Windsor Boulevard (U.S. Route 460) at U.S. Route 258 (Prince Boulevard) – Signalized
- Windsor Boulevard (U.S. Route 460) at Church Street/Court Street/Bank Street – Signalized
- Windsor Boulevard (U.S. Route 460) at Burroughs Lane – Signalized
- Windsor Boulevard (U.S. Route 460) at Dominion Way – Signalized
- Windsor Boulevard (U.S. Route 460) at Old Mill Road (State Route 607) – Unsignalized

Based on the TMC data, the uniform AM peak hour occurs from 7:15 AM to 8:15 AM, while the uniform PM peak hour occurs from 4:00 PM to 5:00 PM. Existing AM and PM peak hour traffic volumes are illustrated in **Figure 3**, while raw traffic count data are provided for reference in **Appendix B**. Heavy vehicle percentages were calculated for each intersection movement, while overall intersection peak hour factors (PHF) were calculated and then applied to each intersection movement.

Legend

- Signalized Intersection
- Unsignalized Intersection
- Study Intersection
- Existing Laneage
- S/T - Storage, Taper (feet)
- Stop Sign



Kimley»Horn	Tidewater Logistics Center TIA Windsor, VA	Existing Roadway Geometry	Figure 2

Kimley»Horn	Tidewater Logistics Center TIA Windsor, VA	Existing Volumes	Figure 3

4.0 FUTURE TRAFFIC

4.1 Analysis Scenarios

The proposed development is anticipated to be completed in 2025. As such, 2025 will reflect an Opening Year scenario, while 2031 will reflect an Opening Year scenario + 6 Years. This study includes the analysis of 2025 and 2031 No Build and Build conditions in addition to 2023 Existing Conditions. A summary of all scenarios included in this study are provided below:

- **Scenario 1 –** Existing (2023) traffic conditions
- **Scenario 2 –** Opening Year (2025) No-Build conditions – Build-out year traffic conditions with a growth rate applied to existing traffic volumes and approved but unbuilt site trips without traffic volumes generated by the proposed development
- **Scenario 3 –** Opening Year (2025) Build conditions – Build-out year traffic conditions with a growth rate applied to existing traffic volumes and approved but unbuilt site trips with traffic volumes generated by the proposed development
- **Scenario 4 –** Opening Year +6 Years (2031) No-Build conditions – Build-out year +6 with a growth rate applied to existing traffic volumes and approved but unbuilt site trips without traffic volumes generated by the proposed development
- **Scenario 5 –** Opening Year +6 Years (2031) Build conditions – with a growth rate applied to existing traffic volumes and approved but unbuilt site trips with traffic volumes generated by the proposed development

4.2 Traffic Growth Rate

Background traffic growth for this study was assumed to be consistent with previous studies performed for adjacent developments and confirmed based on historical traffic volume trends of adjacent roadways within the study area from 2016 to 2021 as shown in **Table 1**. Note that 2020 traffic volumes were excluded from traffic forecasting consideration due to impacts from COVID.

Table 1: Study Area Roadways Historic AAWDT

Roadway	Location	2016	2017	2018	2019	2021	Overall Average Growth Rate
U.S. 460	WCL Windsor to U.S. 258	12,000	11,000	11,000	11,000	11,000	**-0.4%**
U.S. 460	U.S. 258 to Court Street	18,000	17,000	17,000	17,000	17,000	**-0.3%**
U.S. 460	Court Street to ECL Windsor	18,000	18,000	17,000	17,000	18,000	**1.2%**
U.S. 258	WCL Windsor to U.S. 460	4,900	5,500	5,000	5,200	5,500	**2.1%**
U.S. 258	U.S. 460 to NCL Windsor	5,700	5,900	5,400	5,600	5,900	**1.6%**

**Source: VDOT Daily Traffic Volume Estimates*

In addition to the annualized growth rate, **Table 2** summarizes the future traffic volume projections from VDOT Statewide Planning System (SPS) data.

Table 2: VDOT Statewide Planning System (SPS) Traffic Volume Projections

Roadway	Location	2019	2045	Overall Average Growth Rate
U.S. 460	WCL Windsor to U.S. 258	11,212	15,136	**1.2%**
U.S. 460	U.S. 258 to Court Street	17,424	24,333	**1.3%**
U.S. 460	Court Street to ECL Windsor	17,424	22,093	**0.9%**
U.S. 258	WCL Windsor to U.S. 460	5,585	6,532	**0.6%**
U.S. 258	U.S. 460 to NCL Windsor	5,205	6,035	**0.6%**

**Source: VDOT SPS Data*

An overall growth rate of 1.0% (compounded annually) was applied to existing traffic counts for all turning movements along Windsor Boulevard and Prince Boulevard to develop background traffic for each future analysis scenario. This growth rate accounts for non-specific traffic growth within the study area.

4.3 Un-Built Approved Development Traffic

In addition to the 1.0% annualized growth rate, Isle of Wight County provided approved, but unbuilt, developments adjacent to the proposed development and within the study area as follows:

- Shirley T. Holland Intermodal Park Traffic Analysis Report (2023)
- Walter's Highway Site Traffic Impact Study (2023)

Peak hour trip assignments for these developments were included in the 2025 and 2031 traffic volume forecasts developed for this study and are documented in **Appendix C**. No Build traffic volumes for 2025 and 2031 were developed by adding the unbuilt development site trips to the existing traffic volumes with the applied compounded growth rate.

4.4 Un-Built Transportation Improvements

A funded but unbuilt SmartScale project is planned at the intersection of Windsor Boulevard at Prince Boulevard (U.S. Route 258). The project includes constructing a northbound and southbound left-turn lane along U.S. Route 258 at the existing signalized intersection. A conceptual design from the SmartScale application is included in **Appendix C.** The Walter's Highway Site Traffic Impact Study (2023) included recommendations to construct a traffic signal at the intersection of Old Mill Road/Old Suffolk Road at Windsor Boulevard.

These improvements were included in all future analysis scenarios.

4.5 Trip Generation

Traffic generation potential for the proposed development was calculated using *ITE Trip Generation 11th Edition* (2017) and is summarized in **Table 3**.

Table 3: Proposed Trip Generation

Building Number	ITE Code	ITE Descriptions	Density	Unit	Vehicle Type	Daily	AM Peak Hour			PM Peak Hour		
							Total	Enter	Exit	Total	Enter	Exit
Building A	150	Warehousing	171	KSF	***Total***	***308***	***29***	***22***	***7***	***31***	***9***	***22***
					Passenger	205	26	20	6	26	6	20
					Trucks	103	3	2	1	5	3	2
Building B	154	High-Cube Trans-load and Short-Term Storage Warehouse	543	KSF	***Total***	***760***	***43***	***33***	***10***	***54***	***15***	***39***
					Passenger	641	32	28	4	49	13	36
					Trucks	119	11	5	6	5	2	3
Building C	140	Manufacturing	122	KSF	***Total***	***580***	***83***	***63***	***20***	***90***	***28***	***62***
					Passenger	525	79	61	18	86	26	60
					Trucks	55	4	2	2	4	2	2
Building D	150	Warehousing	239	KSF	***Total***	***416***	***41***	***32***	***9***	***43***	***12***	***31***
					Passenger	273	36	29	7	36	8	28
					Trucks	143	5	3	2	7	4	3
Building E	150	Warehousing	156	KSF	***Total***	***285***	***27***	***21***	***6***	***28***	***8***	***20***
					Passenger	191	24	19	5	23	5	18
					Trucks	94	3	2	1	5	3	2
Total Site Trips						***2,349***	***223***	***171***	***52***	***246***	***72***	***174***

The proposed Tidewater Logistics Center development has the potential to generate approximately 2,349 daily weekday trips. Out of the total weekday daily trips, 223 driveway trips are anticipated to occur during the AM peak hour and 246 driveway trips are expected to occur during the PM peak hour.

4.6 Trip Distribution and Assignment

Site trip distributions were 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 most proposed traffic will be traveling to/from U.S. Route 460 east of the project site. Site traffic distributions are shown in **Figure 4** and summarized as follows:

- To/from the west on U.S. Route 460 (Windsor Boulevard) – **30%**
- To/from the east on U.S. Route 460 (Windsor Boulevard) – **70%**

Three access points are proposed along Windsor Boulevard:

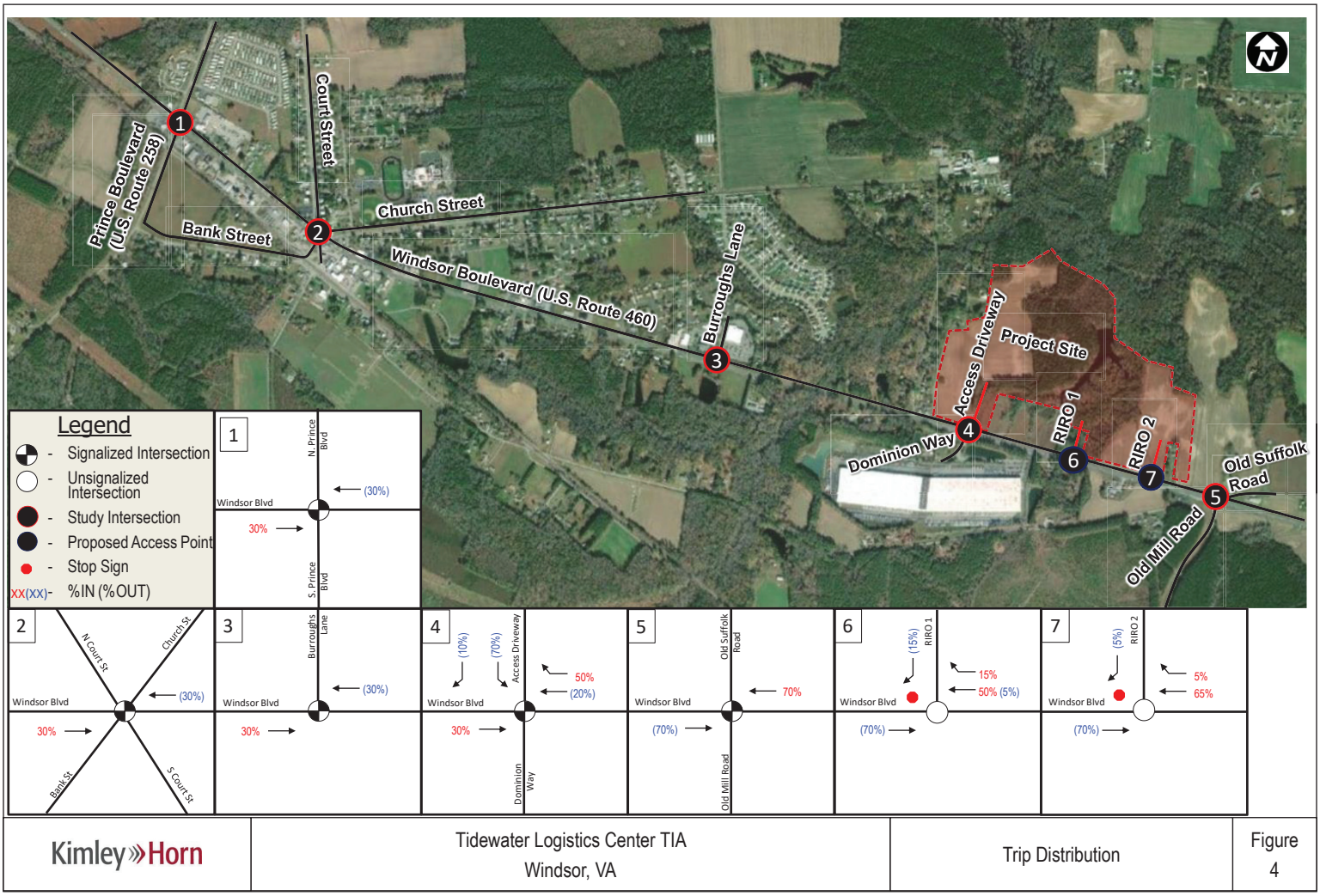
- Windsor Boulevard (U.S. Route 460) at Dominion Way – Signalized
- Windsor Boulevard (U.S. Route 460) at Proposed RI/RO 1 – Unsignalized
- Windsor Boulevard (U.S. Route 460) at Proposed RI/RO 2 – Unsignalized

Individual site driveway traffic assignments were based on locations of each building with respect to the closest driveway. All eastbound traffic was assigned through the existing traffic signal at Dominion Way. Site traffic assignment volumes are shown in **Figure 5**.

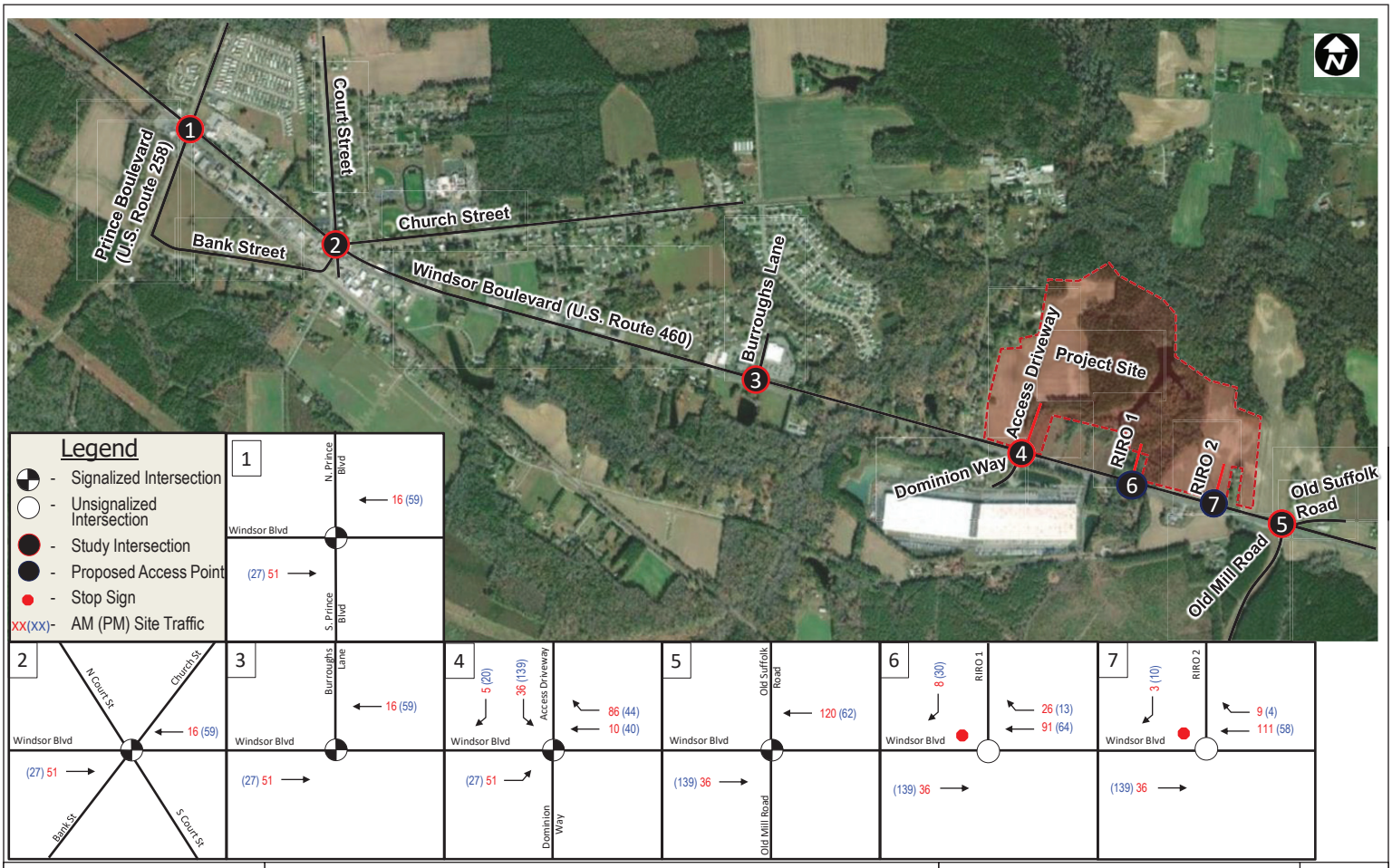
4.7 Total Future Traffic

Total future traffic volumes for the peak hours were calculated by multiplying the trip generation by the trip distributions and added to the No Build traffic volumes to develop both 2025 and 2031 Build peak hour traffic volumes. Future No Build and Build traffic volumes and laneage are provided in the following figures:

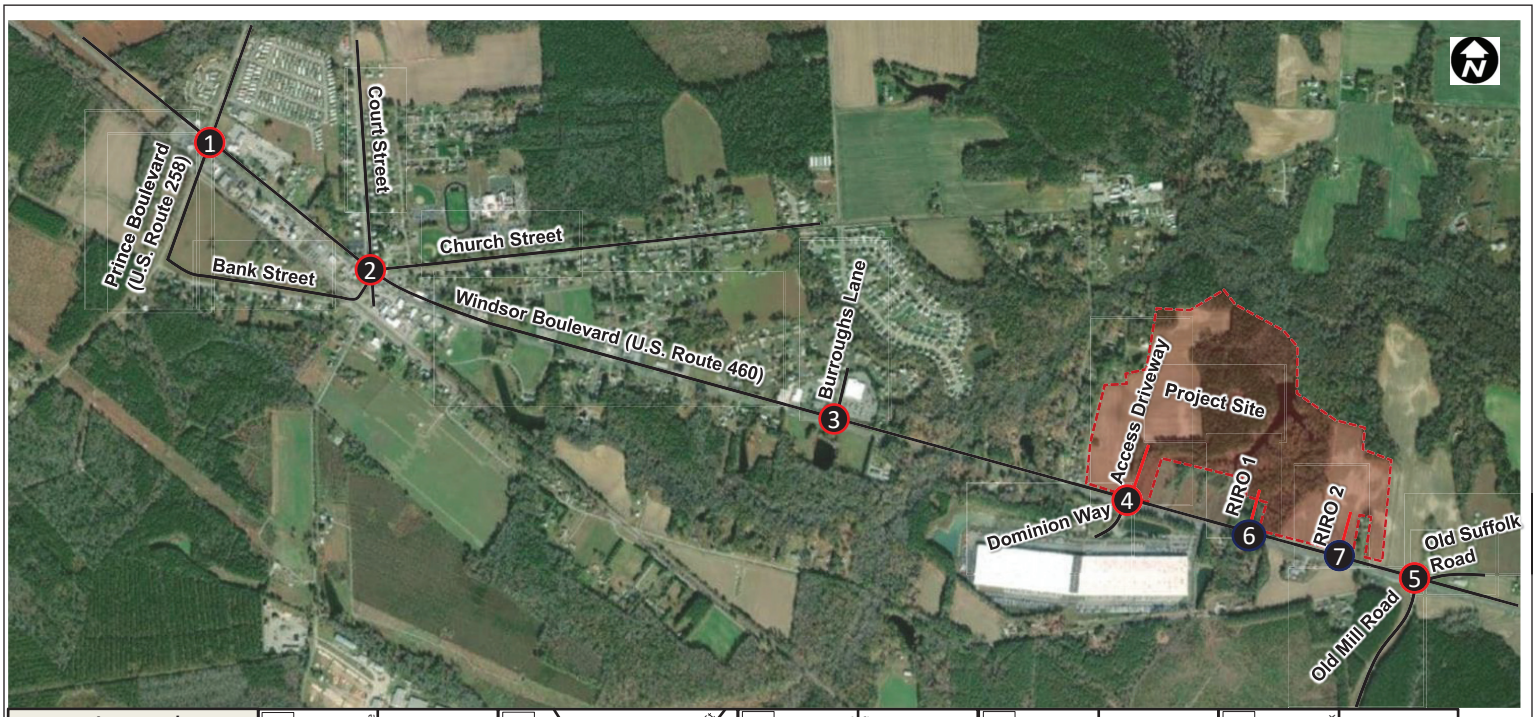
- 2025 No Build AM and PM Peak Hour Traffic Volumes – **Figure 6**
- 2031 No Build AM and PM Peak Hour Traffic Volumes – **Figure 7**
- 2025 Build AM and PM Peak Hour Traffic Volumes – **Figure 8**
- 2031 Build AM and PM Peak Hour Traffic Volumes – **Figure 9**



Kimley»Horn	Tidewater Logistics Center TIA Windsor, VA	Trip Distribution	Figure 4

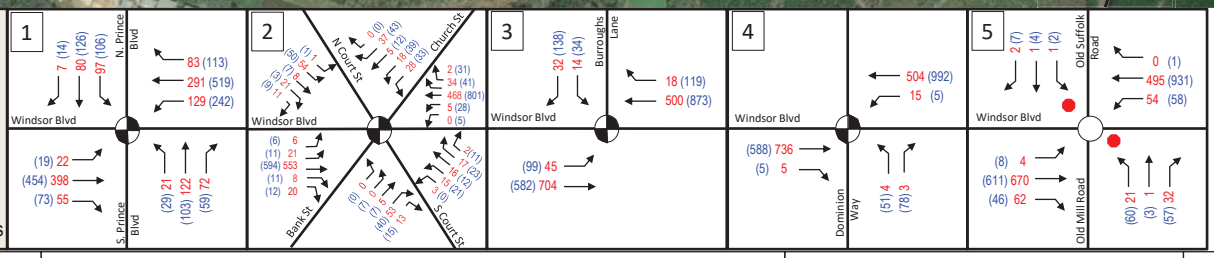


Kimley»Horn	Tidewater Logistics Center TIA Windsor, VA	Trip Assignment	Figure 5

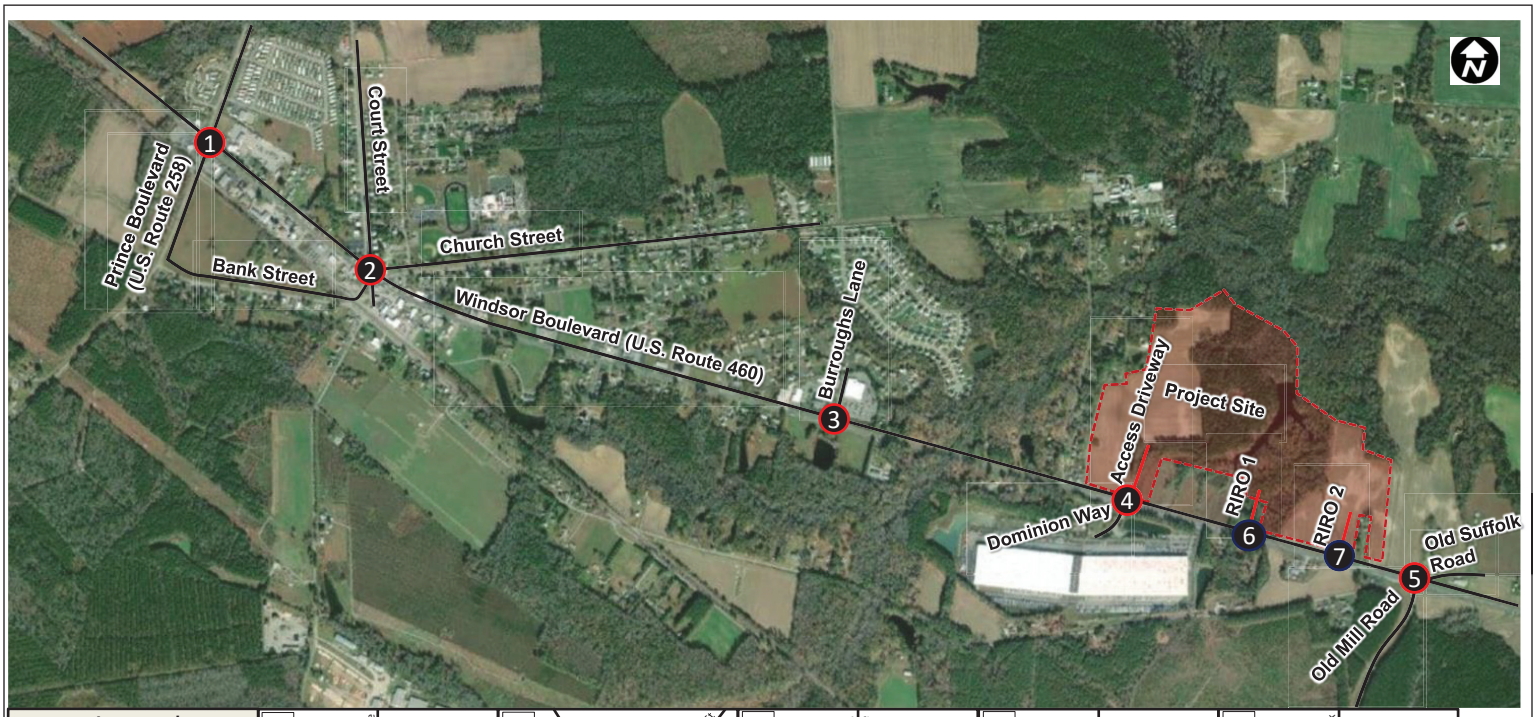


Legend

- Signalized Intersection
- Unsignalized Intersection
- Study Intersection
- Proposed Access Point
- Stop Sign
- XX(XX) - AM (PM) Traffic Volumes



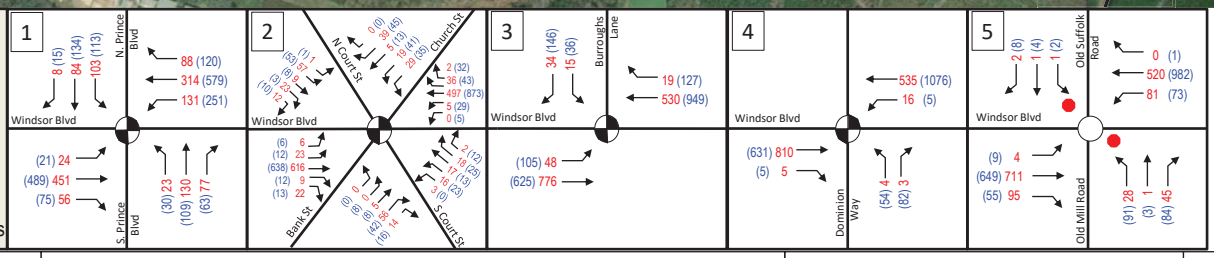
Kimley»Horn	Tidewater Logistics Center TIA Windsor, VA	No Build 2025 Volumes	Figure 6



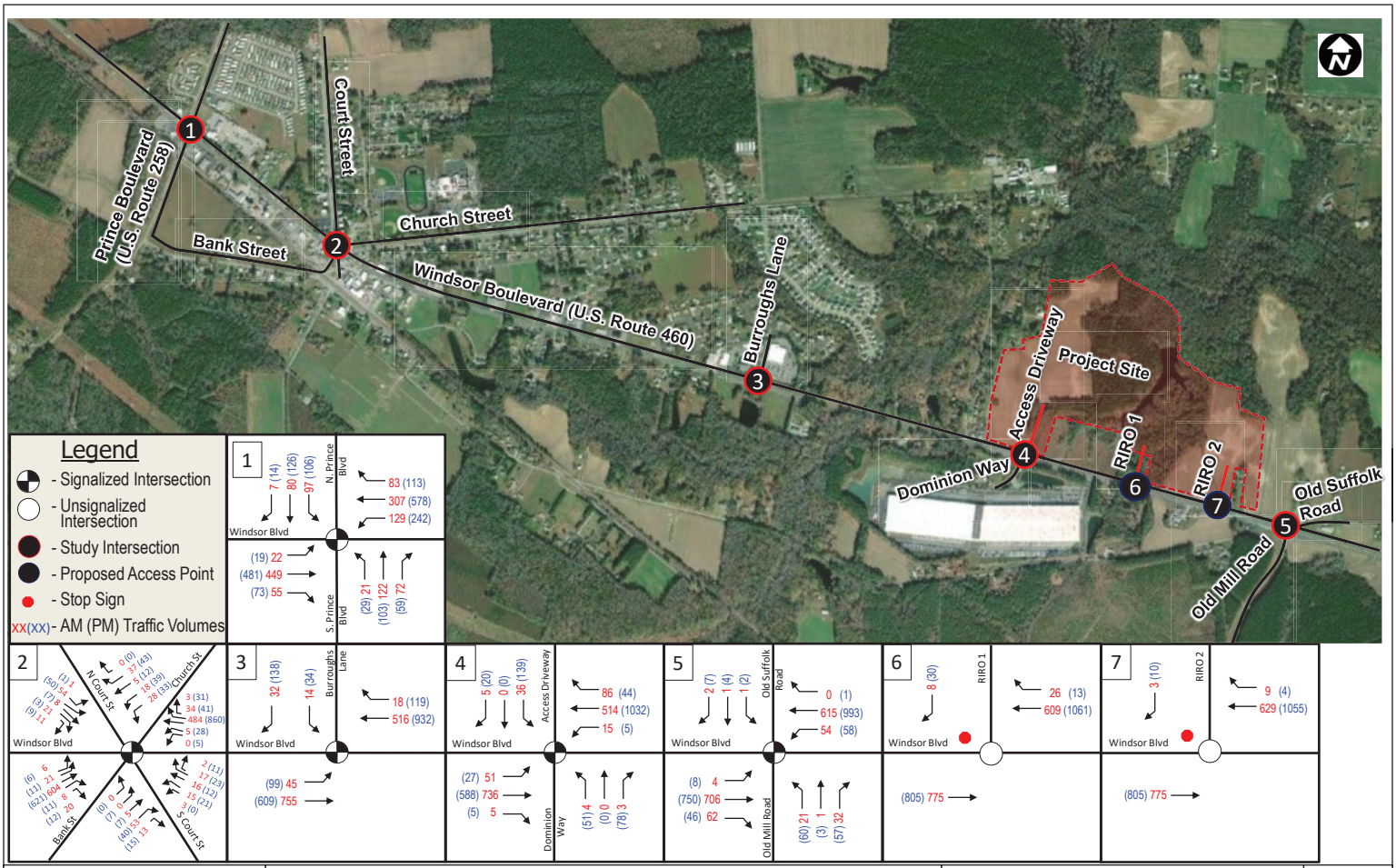
Legend

- Signalized Intersection
- Unsignalized Intersection
- Study Intersection
- Proposed Access Point
- Stop Sign

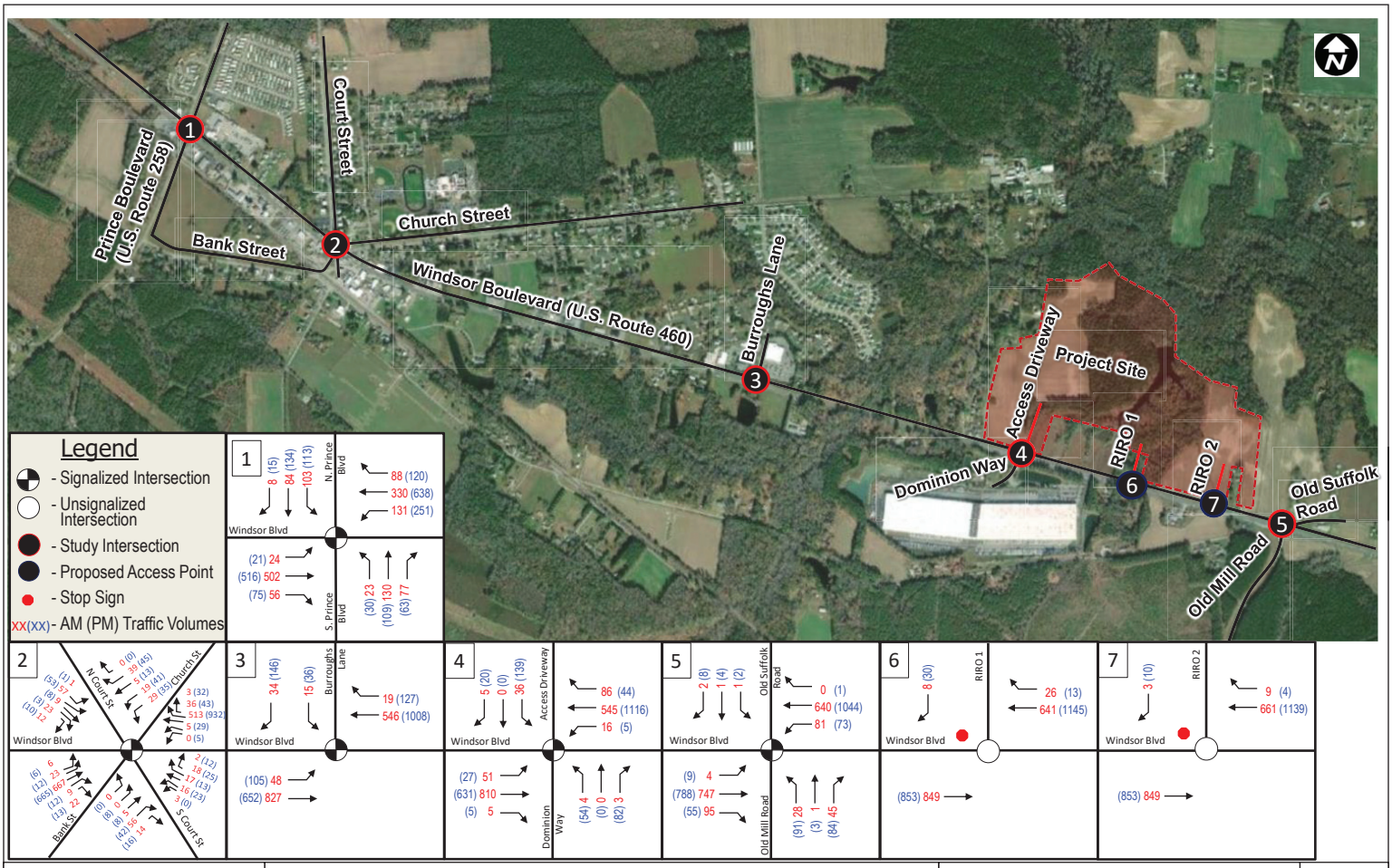
XX(XX) - AM (PM) Traffic Volumes



Kimley»Horn	Tidewater Logistics Center TIA Windsor, VA	No Build 2031 Volumes	Figure 7



Kimley»Horn	Tidewater Logistics Center TIA Windsor, VA	Build 2025 Volumes	Figure 8



Kimley»Horn	Tidewater Logistics Center TIA Windsor, VA	Build 2031 Volumes	Figure 9

5.0 TRAFFIC ANALYSIS

5.1 Intersection Operational Analysis

Intersection capacity analyses for all study intersections were performed under weekday AM and PM peak hour conditions for the analysis scenarios described in **Section 4.1**. All signalized and unsignalized intersection capacity analyses were completed using *Synchro Professional (Version 11)*. For future condition analyses, traffic signal timings were optimized to account for increases in future traffic volumes due to background traffic growth and/or additional development related traffic.

Two 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 5 feet). Average vehicle delays and 95th percentile queues were obtained using *2000 Highway Capacity Manual (HCM)* methodologies contained within *Synchro*. 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 4** summarizes LOS thresholds for both signalized and unsignalized intersection operations.

Table 4: LOS Control Delay Thresholds

LOS	Signalized Intersections Control Delay Per Vehicle [sec/veh]	Unsignalized Intersections Average Control Delay [sec/veh]	Relative Delay
A	≤ 10	≤ 10	Short Delays
	Free-flow traffic operations at average travel speeds. Vehicles completely unimpeded in ability to maneuver. Minimal delay at signalized intersections.		
B	> 10 – 20	> 10 – 15	
	Reasonably unimpeded traffic operations at average travel speeds. Vehicle maneuverability slightly restricted. Low traffic delays.		
C	> 20 – 35	> 15 – 25	
	Stable traffic operations. Lane changes becoming more restricted. Travel speeds reduced to half of average free flow travel speeds. Longer intersection delays.		
D	> 35 – 55	> 25 – 35	Moderate Delays
	Small increases in traffic flow can cause increased delays. Delays likely attributable to increase traffic, reduced signal progression and adverse timing.		
E	> 55 – 80	> 35 – 50	
	Significant delays. Travel speeds reduced to one third of average free flow travel speed.		
F	> 80	> 50	Long Delays
	Extremely low speeds. Intersection congestion. Long delays. Extensive traffic queues at intersections.		

Source: Highway Capacity Manual, Transportation Research Board, Washington, D.C., 2022

5.2 Intersection Operational Analysis Results and Findings

Operational analysis LOS results are summarized in the following tables:

- **Table 5** – Intersection of Windsor Boulevard and Prince Boulevard AM and PM LOS results
- **Table 6** – Intersection of Windsor Boulevard and Court Street/Bank Street AM and PM LOS results
- **Table 7**– Intersection of Windsor Boulevard and Burroughs Lane AM and PM LOS results
- **Table 8** – Intersection of Windsor Boulevard and Dominion Way AM and PM LOS results

- **Table 9** – Intersection of Windsor Boulevard and Old Mill Road AM and PM LOS results
- **Table 10** – Intersection of Windsor Boulevard and Proposed RIRO 1 AM and PM LOS results
- **Table 11** – Intersection of Windsor Boulevard and Proposed RIRO 2 AM and PM LOS results

Under existing conditions, all intersections operate at a LOS D or better during both the AM and PM peak hours. It is noted that thirteen (13) individual/exclusive turning movements along the corridor and at the side street approaches experience poor LOS (i.e., LOS E or worse). These are shown in the tables in red text.

At the signalized intersections, the operational conditions are primarily caused by the predominant allocation of green time to support/improve through movement traffic progression along the Windsor Boulevard corridor. Signal coordination with cycle lengths greater than 120 seconds inherently increase delay for movements other than the mainline through and right-turn traffic. The duration of cycle time between consecutive phases for left turn and side street movements is typically longer than 55 seconds, which is the threshold for LOS E and can be more than 80 seconds, which is the threshold for LOS F. These results do not necessarily indicate an operational deficiency.

The unsignalized operational condition at the Old Mill Road intersection is due to the low frequency of appropriate gaps for left-turning vehicles to navigate across Windsor Boulevard.

For each 2025 and 2031 future year analysis, the following approved but unbuilt improvements were implemented:

- Adjusted traffic signal timing splits and phase sequences (all No Build and Build scenarios)
- Changed the traffic control of the Windsor Boulevard and Old Mill Road intersection from unsignalized to signalized and added a flashing yellow arrow (FYA) protected permissive left-turn control for the westbound left-turn.
- Added exclusive left-turn storage lanes at the northbound and southbound approaches of the intersection of Windsor Boulevard and Prince Boulevard. Signal operations were modified from split-phase to eight-phase.

Under 2025 No Build conditions, overall intersection operations are expected to be comparable to existing conditions, with delays increasing by less than 15 seconds per vehicle due to background traffic growth. Synchro is reporting a delay of 126.5 seconds (LOS F) for the eastbound right-turn movement at Old Mill Road during the AM peak hour. This is due to a high reported progression factor and associated platoon arrival. However, the adjacent through movement and left-turn movement both function at LOS B and the right-turn movement is expected to operate comparably despite the reported condition.

Under 2025 Build conditions, all study area intersections are anticipated to operate at overall LOS C or better during the AM and PM peak hours. Individual/exclusive turning movements are expected to experience both minor improvements and minor deteriorations in vehicle delays. The majority of individual turning movements within the study area are anticipated to experience a LOS D or better during both peak hours. However, it is noted that select individual turning movements (primarily those associated with the side street approaches to Windsor Boulevard) could experience LOS E during the peak travel periods.

Under 2031 No Build conditions, overall intersection operations are anticipated to function at LOS C or better during both the AM and PM peak hours respectively. Individual turning movements are expected to experience both minor improvements and minor deteriorations in LOS or vehicle delay. However, operational conditions similar to those experienced currently along the corridor are generally expected to be maintained under 2031 No Build conditions for side street approaches and select Windsor Boulevard turning movements. Synchro is reporting a delay of 84.3 seconds (LOS F) for the eastbound right-turn

movement at Old Mill Road during the PM peak hour. This is a similar condition as described above and is expected to operate comparably despite the reported condition.

Under 2031 Build conditions, overall intersection operations are anticipated to continue functioning at LOS C or better during the AM and PM peak hours. The majority of individual turning movements within the study area are anticipated to experience a LOS D or better during both peak hours; however, it is noted that select individual turning movements could experience poor LOS (i.e., a LOS of E or worse). These conditions are maintained from both 2031 No Build and 2025 Build conditions.

Table 5: Windsor Boulevard and Prince Boulevard Vehicle Delay Results

Scenario	Traffic Control	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)											
			Eastbound Windsor Blvd			Westbound Windsor Blvd			Northbound Prince Blvd			Southbound Prince Blvd		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour														
2023 Existing	Signalized	D (35.7)	C (23.7)	C (28.9)		B (18.8)	C (24.0)		D (52.7)			E (57.8)		
			C (28.6)			C (23.5)								
2025 No Build	Signalized	C (25.8)	B (19.3)	C (28.3)		B (12.9)	B (12.0)		C (30.6)	D (47.3)		C (32.7)	D (36.6)	
			C (27.8)			B (12.2)			D (45.7)			C (34.6)		
2025 Build	Signalized	C (26.4)	B (19.4)	C (29.2)		B (13.4)	B (13.1)		C (30.6)	D (47.3)		C (32.7)	D (36.6)	
			C (28.7)			B (13.2)			D (45.7)			C (34.6)		
2031 No Build	Signalized	C (26.5)	C (20.5)	C (29.8)		B (13.3)	B (12.5)		C (29.7)	D (47.1)		C (32.0)	D (35.6)	
			C (29.4)			B (12.7)			D (45.3)			C (33.7)		
2031 Build	Signalized	C (27.0)	C (20.5)	C (30.2)		B (14.2)	B (13.1)		C (30.1)	D (48.0)		C (32.5)	D (36.1)	
			C (29.8)			B (13.4)			D (46.2)			C (34.2)		
PM Peak Hour														
2023 Existing	Signalized	D (42.0)	C (27.5)	E (56.9)		C (21.7)	C (22.6)		E (60.3)			E (60.6)		
			E (55.7)			C (22.4)								
2025 No Build	Signalized	D (35.3)	C (21.6)	E (63.6)		B (15.8)	B (12.6)		D (36.1)	D (53.0)		D (38.2)	D (44.3)	
			E (62.1)			B (13.5)			D (50.5)			D (41.7)		
2025 Build	Signalized	C (34.4)	C (22.7)	E (61.8)		B (18.7)	B (11.2)		C (32.6)	D (53.1)		D (38.3)	D (44.4)	
			E (60.5)			B (13.1)			D (50.6)			D (41.8)		
2031 No Build	Signalized	C (34.6)	C (23.4)	E (61.6)		C (21.1)	B (11.2)		D (35.2)	D (53.0)		D (37.5)	D (43.6)	
			E (60.2)			B (13.8)			D (50.4)			D (41.0)		
2031 Build	Signalized	C (34.6)	C (25.1)	E (60.5)		C (24.6)	B (11.5)		D (35.1)	D (52.9)		D (37.4)	D (43.5)	
			E (59.3)			B (14.8)			D (50.3)			D (40.9)		

Table 6: Windsor Boulevard and Court Street/Bank Street Vehicle Delay Results

Scenario	Traffic Control	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)					
			Eastbound Windsor Blvd	Westbound Windsor Blvd	Northbound Court St	Southbound Court St	Northeastbound Bank St	Southwestbound Church St
AM Peak Hour								
2023 Existing	Signalized	C (27.9)	B (17.6)	C (21.9)	D (50.1)	E (56.9)	E (59.4)	E (55.5)
2025 No Build	Signalized	C (27.4)	B (19.5)	C (20.4)	D (50.1)	E (56.5)	E (59.1)	E (55.7)
2025 Build	Signalized	C (28.7)	B (19.9)	C (23.0)	D (50.6)	E (60.9)	E (59.1)	E (55.7)
2031 No Build	Signalized	C (29.9)	C (21.6)	C (23.4)	D (50.5)	E (62.4)	E (59.6)	E (56.2)
2031 Build	Signalized	C (30.3)	C (21.8)	C (24.9)	D (50.5)	E (62.4)	E (59.6)	E (58.5)
PM Peak Hour								
2023 Existing	Signalized	C (24.6)	A (8.8)	C (21.1)	E (61.3)	E (67.5)	E (63.7)	E (58.7)
2025 No Build	Signalized	C (26.2)	B (10.7)	C (22.2)	E (65.4)	E (77.6)	E (64.0)	E (62.2)
2025 Build	Signalized	C (23.6)	B (12.3)	B (16.1)	E (65.3)	E (77.0)	E (65.0)	E (65.1)
2031 No Build	Signalized	C (28.9)	B (13.5)	C (27.1)	E (59.5)	E (64.6)	E (66.3)	E (63.4)
2031 Build	Signalized	C (26.6)	B (16.5)	B (19.8)	E (61.1)	E (68.5)	E (69.9)	E (67.2)

Table 7: Windsor Boulevard and Burroughs Lane Vehicle Delay Results

Scenario	Traffic Control	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)											
			Eastbound Windsor Blvd			Westbound Windsor Blvd			Northbound			Southbound Burroughs Ln		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour														
2023 Existing	Signalized	A (5.8)	A (4.8)	A (4.1)	-	-	A (3.2)	A (2.7)	-	-	-	E (55.3)	-	D (54.5)
			A (4.2)			A (3.2)			-			D (54.8)		
2025 No Build	Signalized	A (5.5)	A (5.2)	A (4.3)	-	-	A (2.8)	A (2.2)	-	-	-	E (55.3)	-	D (54.5)
			A (4.4)			A (2.8)			-			D (54.8)		
2025 Build	Signalized	A (5.3)	A (5.7)	A (5.4)	-	-	A (0.9)	A (0.1)	-	-	-	E (55.3)	-	D (54.5)
			A (5.4)			A (0.9)			-			D (54.8)		
2031 No Build	Signalized	A (6.4)	A (5.9)	A (5.9)	-	-	A (2.9)	A (2.3)	-	-	-	E (55.3)	-	D (54.5)
			A (5.9)			A (2.9)			-			D (54.7)		
2031 Build	Signalized	A (6.0)	A (5.9)	A (6.5)	-	-	A (1.0)	A (0.1)	-	-	-	E (55.3)	-	D (54.5)
			A (6.4)			A (1.0)			-			D (54.7)		
PM Peak Hour														
2023 Existing	Signalized	A (8.2)	A (4.4)	A (3.1)	-	-	A (2.3)	A (0.9)	-	-	-	E (59.7)	-	E (58.3)
			A (3.3)			A (2.1)			-			E (58.6)		
2025 No Build	Signalized	A (8.9)	A (5.6)	A (3.7)	-	-	A (3.8)	A (2.4)	-	-	-	E (59.7)	-	E (58.2)
			A (4.0)			A (3.6)			-			E (58.5)		
2025 Build	Signalized	B (10.8)	A (5.8)	A (4.0)	-	-	A (6.6)	B (14.0)	-	-	-	E (59.7)	-	E (58.2)
			A (4.2)			A (7.5)			-			E (58.5)		
2031 No Build	Signalized	A (8.9)	A (6.2)	A (3.9)	-	-	A (4.0)	A (1.5)	-	-	-	E (59.7)	-	E (58.1)
			A (4.3)			A (3.7)			-			E (58.4)		
2031 Build	Signalized	B (11.0)	A (6.3)	A (3.9)	-	-	A (7.1)	B (14.0)	-	-	-	E (59.7)	-	E (58.1)
			A (4.2)			A (7.8)			-			E (58.4)		

Table 8: Windsor Boulevard and Dominion Way Vehicle Delay Results

Scenario	Traffic Control	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)											
			Eastbound Windsor Blvd			Westbound Windsor Blvd			Northbound Dominion Way			Southbound Dominion Way		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour														
2023 Existing	Signalized	A (9.9)	-	B (14.3)	B (12.6)	A (2.9)	A (1.5)	-	E (69.7)	-	E (58.6)	-	-	-
			B (14.3)			A (1.5)			E (64.9)			-		
2025 No Build	Signalized	A (9.0)	-	B (14.5)	B (12.6)	A (2.4)	A (0.4)	-	E (69.7)	-	E (58.6)	-	-	-
			B (14.5)			A (0.5)			E (64.9)			-		
2025 Build	Signalized	B (11.1)	A (7.8)	B (10.7)	A (6.6)	A (6.3)	A (8.1)	A (8.2)	D (54.9)	E (59.0)		E (62.2)	E (58.9)	
			B (10.5)			A (8.0)			E (56.6)			E (61.8)		
2031 No Build	Signalized	A (9.8)	-	B (15.8)	B (12.0)	A (2.3)	A (0.5)	-	E (69.7)	-	E (58.6)	-	-	-
			B (15.7)			A (0.5)			E (64.9)			-		
2031 Build	Signalized	B (10.8)	A (7.2)	B (10.2)	A (6.6)	A (6.8)	A (8.1)	A (8.2)	D (54.9)	E (59.0)		E (62.2)	E (58.9)	
			A (10.0)			A (8.1)			E (56.6)			E (61.8)		
PM Peak Hour														
2023 Existing	Signalized	B (10.5)	-	A (9.7)	B (13.2)	A (4.8)	A (4.2)	-	E (59.6)	-	E (55.5)	-	-	-
			A (9.7)			A (4.2)			E (57.1)			-		
2025 No Build	Signalized	A (10.0)	-	A (8.1)	A (9.7)	A (6.8)	A (4.9)	-	E (59.7)	-	E (55.9)	-	-	-
			A (8.1)			A (4.9)			E (57.4)			-		
2025 Build	Signalized	B (19.6)	A (3.9)	A (4.2)	B (11.1)	B (10.7)	B (17.5)	B (12.6)	E (57.4)	E (60.1)		E (65.2)	D (55.0)	
			A (4.3)			B (17.2)			E (59.0)			E (63.9)		
2031 No Build	Signalized	B (11.8)	-	A (8.8)	B (10.1)	A (9.6)	A (7.9)	-	E (59.6)	-	E (55.7)	-	-	-
			A (8.8)			A (7.9)			E (57.2)			-		
2031 Build	Signalized	C (21.1)	A (4.0)	A (4.3)	B (11.3)	B (14.4)	C (21.2)	B (12.9)	D (49.7)	E (60.1)		E (63.1)	E (61.6)	
			A (4.3)			C (20.8)			E (55.9)			E (63.0)		

Table 9: Windsor Boulevard and Old Mill Road Vehicle Delay Results

Scenario	Traffic Control	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)											
			Eastbound Windsor Blvd			Westbound Windsor Blvd			Northbound Old Mill Rd			Southbound Old Suffolk Rd		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour														
2023 Existing	Unsignalized	A (0.7)	A (8.7)	A (0.0)	A (0.0)	A (0.0)	A (9.4)		C (19.1)			C (16.1)		
			A (0.0)			A (0.4)								
2025 No Build	Signalized	B (15.0)	B (11.6)	B (11.1)	F (126.5)	A (4.7)	A (3.0)		E (57.3)		D (52.4)	D (52.4)		
			C (20.7)			A (3.1)			D (54.4)					
2025 Build	Signalized	A (7.8)	A (6.4)	A (5.5)	D (39.3)	A (4.7)	A (3.2)		E (57.3)		D (52.4)	D (52.4)		
			A (8.2)			A (3.3)			D (54.4)					
2031 No Build	Signalized	B (13.0)	B (14.1)	B (13.3)	D (37.9)	A (5.0)	A (3.2)		E (57.4)		D (51.8)	D (51.6)		
			B (16.2)			A (3.5)			D (54.0)					
2031 Build	Signalized	A (8.0)	A (7.8)	A (6.6)	B (14.6)	A (5.1)	A (3.5)		E (57.4)		D (51.8)	D (51.6)		
			A (7.5)			A (3.6)			D (54.0)					
PM Peak Hour														
2023 Existing	Unsignalized	A (2.5)	B (10.7)	A (0.0)	A (0.0)	A (0.0)	A (9.5)		E (48.4)			E (41.2)		
			A (0.1)			A (0.4)								
2025 No Build	Signalized	A (9.5)	A (5.4)	A (6.2)	A (7.6)	A (6.1)	A (5.3)		E (61.3)		D (51.9)	D (51.9)		
			A (6.3)			A (5.4)			E (56.8)					
2025 Build	Signalized	B (10.5)	A (8.5)	A (9.0)	A (7.6)	A (6.2)	A (5.9)		E (61.3)		D (51.9)	D (51.9)		
			A (8.9)			A (5.9)			E (56.8)					
2031 No Build	Signalized	B (14.5)	A (8.3)	A (8.7)	F (84.3)	A (7.5)	A (7.0)		E (62.8)		D (48.7)	D (48.4)		
			B (14.6)			A (7.0)			E (56.1)					
2031 Build	Signalized	B (12.8)	A (8.3)	A (9.2)	B (17.8)	A (7.7)	A (7.8)		E (62.8)		D (48.7)	D (48.4)		
			A (9.7)			A (7.8)			E (56.1)					

Table 10: Windsor Boulevard and RIRO 1 Vehicle Delay Results

Scenario	Traffic Control	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)											
			Eastbound Windsor Blvd			Westbound Windsor Blvd			Northbound			Southbound RIRO 1		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak Hour														
2025 Build	Unsignalized	A (0.0)	-	-	-	-	-	-	-	-	-	-	-	B (11.0)
			-			-			-			B (11.0)		
2031 Build	Unsignalized	A (0.1)	-	-	-	-	-	-	-	-	-	-	-	B (11.2)
			-			-			-			B (11.2)		
PM Peak Hour														
2025 Build	Unsignalized	A (0.2)	-	-	-	-	-	-	-	-	-	-	-	B (13.4)
			-			-			-			B (13.4)		
2031 Build	Unsignalized	A (0.2)	-	-	-	-	-	-	-	-	-	-	-	B (14.0)
			-			-			-			B (14.0)		

Table 11: Windsor Boulevard and RIRO 2 Vehicle Delay Results

Scenario	Traffic Control	Overall LOS	Level of Service per Movement by Approach (Delay in sec/veh)										
			Eastbound Windsor Blvd			Westbound Windsor Blvd		Northbound			Southbound RIRO 2		
			LT	TH	RT	LT	TH/RT	LT	TH	RT	LT	TH	RT
AM Peak Hour													
2025 Build	Unsignalized	A (0.0)	-	-	-	-	-	-	-	-	-	B (10.4)	
			-			-		-			B (10.4)		
2031 Build	Unsignalized	A (0.0)	-	-	-	-	-	-	-	-	-	B (10.5)	
			-			-		-			B (10.5)		
PM Peak Hour													
2025 Build	Unsignalized	A (0.1)	-	-	-	-	-	-	-	-	-	B (10.5)	
			-			-		-			B (10.5)		
2031 Build	Unsignalized	A (0.1)	-	-	-	-	-	-	-	-	-	B (10.4)	
			-			-		-			B (10.4)		

5.3 Intersection Queuing Analysis Results and Findings

Operational analysis 95th percentile queueing results are summarized in the following figures:

- **Table 12** – Intersection of Windsor Boulevard and Prince Boulevard AM and PM Queue results
- **Table 13** – Intersection of Windsor Boulevard and Court Street/Bank Street AM and PM Queue results
- **Table 14 –** Intersection of Windsor Boulevard and Burroughs Lane AM and PM Queue results
-
- – Intersection of Windsor Boulevard and Dominion Way AM and PM Queue results
-

- **Table** 16 – Intersection of Windsor Boulevard and Old Mill Road AM and PM Queue results
- **Table 17** – Intersection of Windsor Boulevard and Proposed RIRO 1 AM and PM Queue results
- **Table 18** – Intersection of Windsor Boulevard and Proposed RIRO 2 AM and PM Queue results

Under all modeled 2023 existing peak hour conditions, all eastbound, westbound mainline Windsor Boulevard and side street turn lanes are expected to adequately accommodate peak hour turning movement demands. None of the 95th percentile queue lengths adversely impacted adjacent travel lanes.

All future 2025 No Build, 2025 Build, 2031 No Build, and 2031 Build peak hour conditions are expected to experience similar conditions within the study area where all 95th percentile queue lengths are anticipated to be contained within available storage lengths with the same exception of the westbound left-turn at the U.S. Route 258 intersection with Windsor Boulevard.

This space intentionally left blank.

Table 12: Windsor Boulevard and Prince Boulevard Queue Results

Scenario	Maximum Queue Length by Movement (Feet)											
	Eastbound Windsor Blvd			Westbound Windsor Blvd			Northbound Prince Blvd			Southbound Prince Blvd		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Effective Storage Length (Existing)	150	-	Cont.	100	-	Cont.		Cont.			Cont.	
Effective Storage Length No Build / [Build]	-			-			100	Cont.		200	Cont.	
AM Peak Hour												
2023 Existing	30	195		m60	220		235			230		
2025 No Build	25	225		60	95		30	210		90	105	
2025 Build	25	255		m95	170		30	210		90	105	
2031 No Build	30	255		m110	205		30	225		95	105	
2031 Build	30	270		m110	235		30	230		100	110	
PM Peak Hour												
2023 Existing	30	250		145	345		220			280		
2025 No Build	25	270		95	80		40	190		105	170	
2025 Build	25	280		115	75		40	190		105	170	
2031 No Build	25	285		150	90		40	200		110	175	
2031 Build	30	295		#185	135		40	200		110	175	

m - Volume for 95th percentile queue is metered by upstream signal
 # - 95th percentile volume exceeds capacity, queue may be longer

Table 13: Windsor Boulevard and Court Street/Bank Street Queue Results

Scenario	Maximum Queue Length by Movement (Feet)																	
	Eastbound Windsor Blvd			Westbound Windsor Blvd			Northbound Court St			Southbound Court St			Northeastbound Bank St			Southeastbound Church St		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Effective Storage Length (Existing)	Cont.			Cont.			Cont.			Cont.			Cont.			Cont.		
AM Peak Hour																		
2023 Existing	295			220			85			120			100			125		
2025 No Build	310			275			80			125			100			125		
2025 Build	335			295			85			#165			100			125		
2031 No Build	340			290			90			#190			105			130		
2031 Build	365			295			90			#190			105			135		
PM Peak Hour																		
2023 Existing	300			400			100			105			100			170		
2025 No Build	325			400			105			#120			100			#200		
2025 Build	335			345			105			#120			105			#235		
2031 No Build	345			490			115			#135			110			#250		
2031 Build	360			200			115			#135			110			#250		

m - Volume for 95th percentile queue is metered by upstream signal
 # - 95th percentile volume exceeds capacity, queue may be longer

Table 14: Windsor Boulevard and Burroughs Lane Queue Results

Scenario	Maximum Queue Length by Movement (Feet)											
	Eastbound Windsor Blvd			Westbound Windsor Blvd			Northbound			Southbound Burroughs Ln		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Effective Storage Length (Existing)	210	-	Cont.	Cont.	-	170		-		Cont.	-	Cont.
AM Peak Hour												
2023 Existing	m20	230	-	-	45	5		-		35	-	35
2025 No Build	m25	300	-	-	50	5		-		35	-	35
2025 Build	m25	330	-	-	5	0		-		35	-	35
2031 No Build	m25	335	-	-	55	5		-		40	-	35
2031 Build	m25	360	-	-	5	0		-		40	-	35
PM Peak Hour												
2023 Existing	80	195	-	-	70	5		-		65	-	65
2025 No Build	m60	145	-	-	220	5		-		70	-	70
2025 Build	m50	130	-	-	225	45		-		70	-	70
2031 No Build	m55	130	-	-	245	5		-		70	-	70
2031 Build	m50	120	-	-	170	25		-		70	-	70

m - Volume for 95th percentile queue is metered by upstream signal
 # - 95th percentile volume exceeds capacity, queue may be longer

Table 15: Windsor Boulevard and Dominion Way Queue Results

Scenario	Maximum Queue Length by Movement (Feet)											
	Eastbound Windsor Blvd			Westbound Windsor Blvd			Northbound Dominion Way			Southbound Dominion Way		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Effective Storage Length (Existing)	-	-	160	350	-	-		-		Cont.	-	Cont.
Effective Storage Length No Build / [Build]	XXX	-		-		XXX	XXX	Cont.		200	Cont.	
AM Peak Hour												
2023 Existing	-	280	m10	10	45	-	15	-	15	-		
2025 No Build	-	320	m10	5	15	-	15	-	15	-		
2025 Build	35	375	m0	10	170	0	15	0		65	0	
2031 No Build	-	330	m10	5	15	-	15	-	15	-		
2031 Build	40	410	m0	10	185	0	15	0		65	0	
PM Peak Hour												
2023 Existing	-	215	10	5	140	-	85	-	40	-		
2025 No Build	-	180	10	m5	210	-	90	-	55	-		
2025 Build	10	65	m0	m5	320	0	90	0		195	0	
2031 No Build	-	170	m10	m0	365	-	95	-	55	-		
2031 Build	10	65	m0	m5	470	m0	85	0		190	0	

m - Volume for 95th percentile queue is metered by upstream signal
 # - 95th percentile volume exceeds capacity, queue may be longer

Table 16: Windsor Boulevard and Old Mill Road Queue Results

Scenario	Maximum Queue Length by Movement (Feet)											
	Eastbound Windsor Blvd			Westbound Windsor Blvd			Northbound Old Mill Rd			Southbound Old Suffolk Rd		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Effective Storage Length	150	-	440	200	-	Cont.		-		Cont.	-	Cont.
AM Peak Hour												
2023 Existing	0	0	0	5	0	-	10		0	5		
2025 No Build	m10	340	60	20	70	-	45		0	15		
2025 Build	m5	145	15	20	90	-	45		0	15		
2031 No Build	m10	355	90	30	80	-	55		0	15		
2031 Build	m5	175	35	30	100	-	55		0	15		
PM Peak Hour												
2023 Existing	5	0	0	5	0	-	55		0	15		
2025 No Build	m15	205	25	30	195	-	105		0	25		
2025 Build	m10	190	m5	30	225	-	105		0	25		
2031 No Build	m15	205	25	40	250	-	140		20	25		
2031 Build	m10	160	5	40	290	-	140		20	25		

m - Volume for 95th percentile queue is metered by upstream signal
 # - 95th percentile volume exceeds capacity, queue may be longer

Table 17: Windsor Boulevard and RIRO 1 Queue Results

Scenario	Maximum Queue Length by Movement (Feet)											
	Eastbound			Westbound			Northbound			Southbound		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Effective Storage Length Build		-			-	Cont.	XXX				-	-	Cont.
AM Peak Hour												
2025 Build	0	0	-	-	0	0		-		-		5
2031 Build	0	0	-	-	0	0		-		-		5
PM Peak Hour												
2025 Build	0	0	-	-	0	0		-		-		10
2031 Build	0	0	-	-	0	0		-		-		10

m - Volume for 95th percentile queue is metered by upstream signal
 # - 95th percentile volume exceeds capacity, queue may be longer

Table 18: Windsor Boulevard and RIRO 2 AM and PM Queue results

Scenario	Maximum Queue Length by Movement (Feet)									
	Eastbound			Westbound		Northbound			Southbound		
	LT	TH	RT	LT	TH/RT	LT	TH	RT	LT	TH	RT
Effective Storage Length Build		-		-	Cont.				-	-	Cont.
AM Peak Hour											
2025 Build	0	0	-	-	0		-		-		0
2031 Build	0	0	-	-	0		-		-		0
PM Peak Hour											
2025 Build	0	0	-	-	0		-		-		5
2031 Build	0	0	-	-	0		-		-		5

m - Volume for 95th percentile queue is metered by upstream signal
 # - 95th percentile volume exceeds capacity, queue may be longer

6.0 CONCLUSIONS AND RECOMMENDATIONS

The proposed Tidewater Logistics Center development is anticipated to be constructed by 2025 and will consist of approximately 1,230,000 square feet (SF) of warehousing, trans-load, and manufacturing facilities. The development has the potential to generate a total of 2,349 daily weekday trips. Out of the total weekday daily trips, 223 driveway trips occur during the AM peak hour and 246 driveway trips occur during the PM peak hour. Access to/from the proposed development will be via Windsor Boulevard and Dominion Way (a full access movement that forms the north leg of the existing signalized intersection), Windsor Boulevard at RIRO 1 (new proposed right-in/right-out unsignalized intersection), and Windsor Boulevard at RIRO 2 (new proposed right-in/right-out unsignalized intersection).

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. Based on the results of the traffic analysis including the off-site transportation infrastructure improvements listed below, the impacts associated with the development are anticipated to result in operations similar to No Build conditions. **Figure 10** illustrates the improvements.

RECOMMENDATIONS

One full movement access and two right-in/right-out driveways are proposed for the development. The full movement access will be at the existing signalized T-intersection of Windsor Boulevard and Dominion Way. The development will construct the north leg of the intersection. Windsor Boulevard at RIRO 1 is a new right-in/right-out stop-controlled access located approximately 1,800-feet east of Dominion Way, and Windsor Boulevard at RIRO 2 is a new right-in/right-out stop-controlled access located approximately 750-feet east of RIRO 1.

Windsor Boulevard/Dominion Way

- Reconstruct the existing traffic signal to accommodate the north leg of the intersection and to current VDOT standards
- Modify existing protected-permissive left-turn phasing to flashing yellow arrow
- Modify coordinated traffic signal timings at this intersection based on new signal phasing and volumes

<u>Eastbound Windsor Boulevard</u>

- Construct an exclusive left-turn lane with 200-feet of storage and a 200-foot taper
    - Note: Existing striped median does not meet VDOT minimum turn lane requirements

<u>Westbound Windsor Boulevard</u>

- Construct an exclusive right-turn lane with 200-feet of storage and a 200-foot taper

<u>Northbound Dominion Way</u>

This TIA modeled protected-only left-turn movements for the northbound and southbound approaches. Once design advances and intersection geometry is established, the left-turn movements should be evaluated for protected-permissive operations with a flashing yellow arrow.

- Restripe the existing right-turn lane to a through/right-turn

<u>Southbound Access Driveway</u>

- Construct one exclusive left-turn lane
- Construct one shared through/right turn-lane

- If outbound lanes are not continuous into the site, the through/right-turn lane should be constructed with 200-feet of storage and a 200-foot taper

Windsor Boulevard/RIRO 1

- Unsignalized intersection with stop-control along the southbound approach

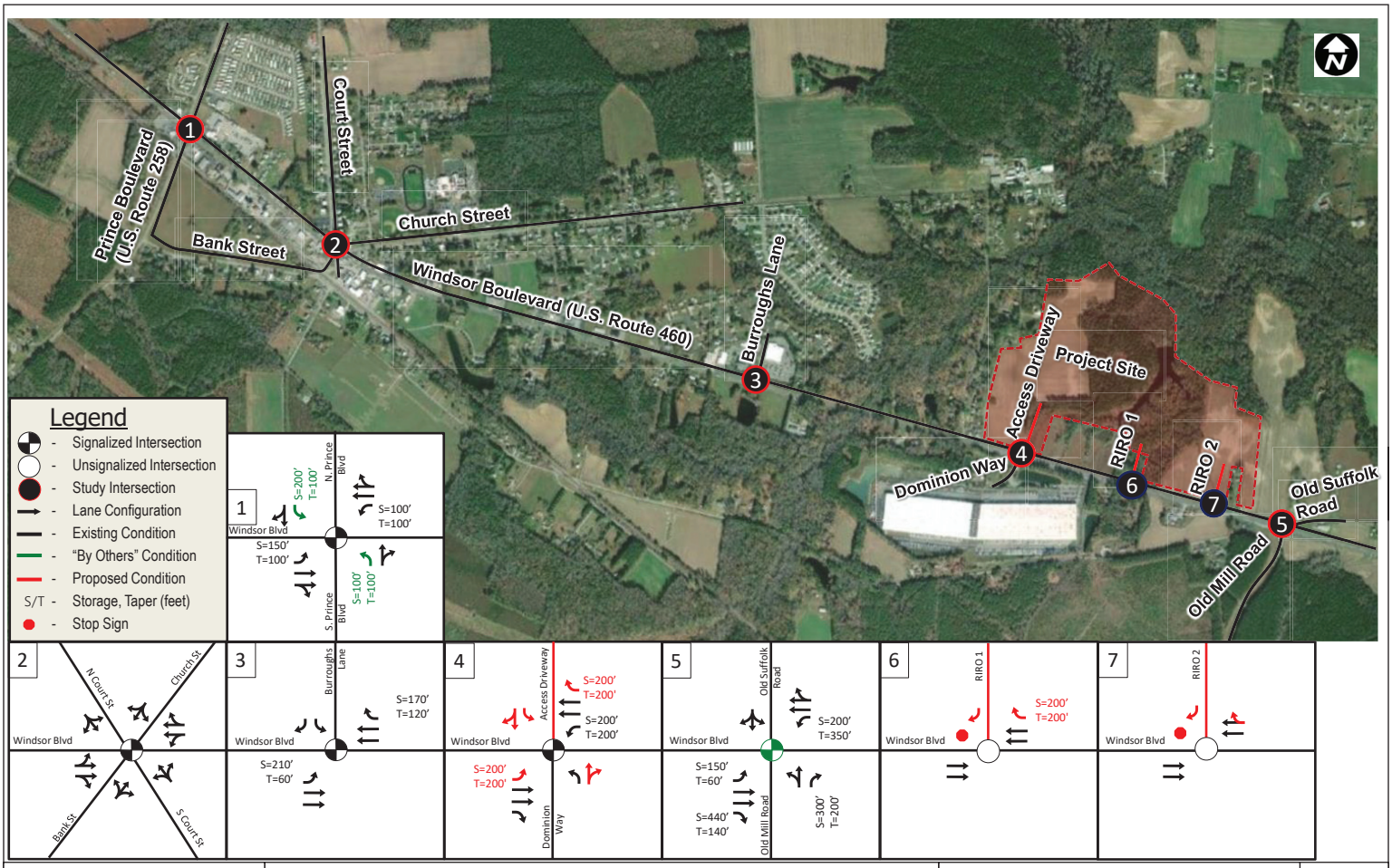
Westbound Windsor Boulevard

- Construct an exclusive right-turn lane with 200-feet of storage and a 200-foot taper

Windsor Boulevard/RIRO 2

- Unsignalized intersection with stop-control along the southbound approach

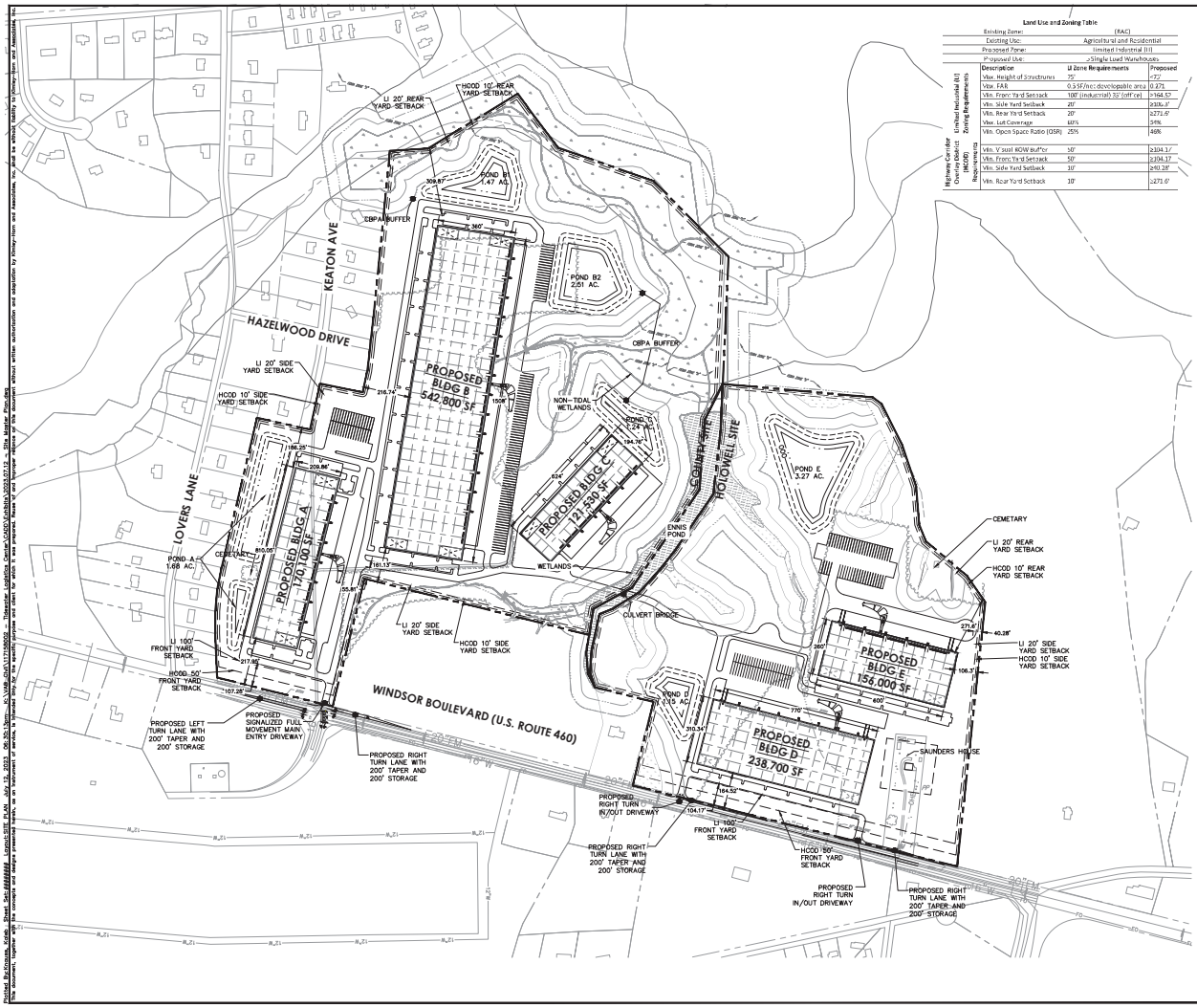
This space intentionally left blank.



Kimley»Horn	Tidewater Logistics Center TIA Windsor, VA	Future Roadway Improvements	Figure 10

Appendix A

Proposed Conceptual Site Plan



No.	REVISIONS	DATE	BY

Kimley»Horn
© 2023 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 117158002
DATE 07/07/2023
SCALE AS SHOWN
DESIGNED BY VGB
DRAWN BY VGB
CHECKED BY KBB

SITE MAP

TIDEWATER LOGISTICS CENTER
PREPARED FOR:
THE MERIDIAN GROUP
ISLE OF WIGHT VIRGINIA

SHEET NUMBER
1 OF 1

Plotted By:Vincent, Kirsti Sheet Set:######## Layout:SITE PLAN July 12, 2023 08:30:13pm K:\VAB_ISOA\117158002 - Tidewater Logistics Center\VCAD\Exhibits\V2023.07.12 - Site Master Plan.dwg
The document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Appendix B

Traffic Count Data

National Data & Surveying Services Intersection Turning Movement Count

Location: N/S Prince Blvd & Windsor Blvd
City: Windsor
Control: Signalized

Project ID: 23-250015-001
Date: 5/11/2023

Data - Total

NS/EW Streets:	N/S Prince Blvd				N/S Prince Blvd				Windsor Blvd				Windsor Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	1	14	15	0	13	5	0	0	1	66	2	0	4	49	8	0	178
6:15 AM	2	15	21	0	19	11	2	0	0	89	2	0	7	50	13	0	231
6:30 AM	5	25	24	0	17	5	1	0	1	73	3	0	5	58	5	0	222
6:45 AM	6	21	15	0	17	14	2	0	3	74	12	0	6	56	9	0	235
7:00 AM	8	27	17	0	27	23	3	0	5	78	4	0	5	45	9	0	251
7:15 AM	7	32	19	0	27	17	2	0	7	83	4	0	5	53	23	0	279
7:30 AM	3	37	12	0	33	30	3	0	5	100	2	0	12	77	12	0	326
7:45 AM	6	19	18	0	18	13	0	0	5	87	2	0	10	75	16	0	269
8:00 AM	5	32	22	0	17	18	2	0	5	81	8	0	10	70	30	0	300
8:15 AM	6	30	15	0	20	20	1	0	0	84	5	0	8	68	28	0	285
8:30 AM	4	12	18	0	33	24	2	0	3	90	5	0	13	71	11	0	286
8:45 AM	8	18	16	0	35	19	2	0	3	90	5	0	11	81	9	0	297
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	61	282	212	0	276	199	20	0	38	995	54	0	96	753	173	0	3159
APPROACH %'s :	10.99%	50.81%	38.20%	0.00%	55.76%	40.20%	4.04%	0.00%	3.50%	91.54%	4.97%	0.00%	9.39%	73.68%	16.93%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	20	118	67	0	88	81	6	0	15	352	17	0	40	290	86	0	1180
PEAK HR FACTOR :	0.833	0.797	0.761	0.000	0.667	0.675	0.500	0.000	0.750	0.880	0.531	0.000	0.833	0.942	0.717	0.000	0.905
	0.869				0.663				0.897				0.945				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:30 PM	5	19	18	0	30	29	2	0	2	92	6	0	35	101	21	0	360
3:45 PM	13	23	13	0	30	25	2	0	9	107	5	0	19	107	23	0	376
4:00 PM	6	20	11	0	19	17	6	0	3	122	10	0	36	115	26	0	391
4:15 PM	7	29	16	0	33	38	1	0	9	89	16	0	31	128	29	0	426
4:30 PM	10	18	13	0	22	37	5	0	1	103	3	0	44	123	24	0	403
4:45 PM	5	34	18	0	30	32	2	0	6	115	4	0	37	113	32	0	428
5:00 PM	9	23	15	0	24	33	3	0	5	108	9	0	30	117	36	0	412
5:15 PM	2	24	11	0	27	21	6	0	5	106	8	0	29	98	36	0	373
5:30 PM	9	23	15	0	29	34	4	0	6	95	6	0	31	95	35	0	382
5:45 PM	11	27	14	0	33	21	5	0	7	81	4	0	29	107	27	0	366
6:00 PM	9	20	21	0	18	26	2	0	2	108	4	0	42	136	32	0	420
6:15 PM	5	12	13	0	15	14	4	0	0	90	4	0	26	90	28	0	301
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	91	272	178	0	310	327	42	0	55	1216	79	0	389	1330	349	0	4638
APPROACH %'s :	16.82%	50.28%	32.90%	0.00%	45.66%	48.16%	6.19%	0.00%	4.07%	90.07%	5.85%	0.00%	18.81%	64.31%	16.88%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	31	104	62	0	109	140	11	0	21	415	32	0	142	481	121	0	1669
PEAK HR FACTOR :	0.775	0.765	0.861	0.000	0.826	0.921	0.550	0.000	0.583	0.902	0.500	0.000	0.807	0.939	0.840	0.000	0.975
	0.864				0.903				0.936				0.974				

National Data & Surveying Services Intersection Turning Movement Count

Location: N/S Prince Blvd & Windsor Blvd
City: Windsor
Control: Signalized

Project ID: 23-250015-001
Date: 5/11/2023

Data - Cars

NS/EW Streets: N/S Prince Blvd | N/S Prince Blvd | Windsor Blvd | Windsor Blvd

AM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	1	14	15	0	12	5	0	0	1	53	1	0	4	34	7	0	147
6:15 AM	1	14	20	0	19	11	2	0	0	73	2	0	7	39	12	0	200
6:30 AM	5	20	24	0	17	4	1	0	0	57	0	0	3	51	5	0	187
6:45 AM	5	18	13	0	15	13	2	0	2	61	9	0	4	41	8	0	191
7:00 AM	6	26	15	0	25	20	3	0	5	59	3	0	5	35	6	0	208
7:15 AM	5	31	18	0	27	13	2	0	6	65	3	0	5	34	22	0	231
7:30 AM	2	35	11	0	30	27	2	0	5	72	2	0	10	56	11	0	263
7:45 AM	3	16	18	0	16	11	0	0	5	71	1	0	9	50	14	0	214
8:00 AM	5	31	21	0	15	15	2	0	5	64	4	0	9	57	28	0	256
8:15 AM	5	25	14	0	19	17	1	0	0	62	4	0	7	50	27	0	231
8:30 AM	2	10	17	0	30	24	2	0	3	69	4	0	12	48	11	0	232
8:45 AM	7	16	15	0	35	19	2	0	2	65	3	0	10	64	9	0	247
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	47	256	201	0	260	179	19	0	34	771	36	0	85	559	160	0	2607
APPROACH %'s :	9.33%	50.79%	39.88%	0.00%	56.77%	39.08%	4.15%	0.00%	4.04%	91.68%	4.28%	0.00%	10.57%	69.53%	19.90%	0.00%	
PEAK HR :	**07:30 AM - 08:30 AM**																TOTAL
PEAK HR VOL :	15	107	64	0	80	70	5	0	15	269	11	0	35	213	80	0	964
PEAK HR FACTOR :	0.750	0.764	0.762	0.000	0.667	0.648	0.625	0.000	0.750	0.934	0.688	0.000	0.875	0.934	0.714	0.000	0.916
		0.816				0.657				0.934				0.872			

PM

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:30 PM	5	19	16	0	28	26	2	0	2	72	5	0	32	91	20	0	318
3:45 PM	9	21	10	0	30	24	2	0	9	95	3	0	18	89	21	0	331
4:00 PM	6	18	10	0	19	17	4	0	3	106	9	0	31	99	26	0	348
4:15 PM	6	27	14	0	32	36	1	0	9	81	8	0	28	112	29	0	383
4:30 PM	9	18	13	0	22	34	3	0	1	93	2	0	44	112	24	0	375
4:45 PM	4	34	17	0	30	29	2	0	6	98	4	0	37	105	32	0	398
5:00 PM	9	22	15	0	23	33	2	0	5	98	9	0	28	102	33	0	379
5:15 PM	1	20	11	0	27	21	6	0	4	97	8	0	29	90	36	0	350
5:30 PM	8	23	14	0	29	33	4	0	6	85	6	0	30	90	34	0	362
5:45 PM	9	27	14	0	33	21	5	0	5	71	4	0	28	91	25	0	333
6:00 PM	9	19	21	0	18	25	2	0	2	96	4	0	40	124	32	0	392
6:15 PM	3	12	13	0	15	13	4	0	0	83	3	0	25	82	28	0	281
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	78	260	168	0	306	312	37	0	52	1075	65	0	370	1187	340	0	4250
APPROACH %'s :	15.42%	51.38%	33.20%	0.00%	46.72%	47.63%	5.65%	0.00%	4.36%	90.18%	5.45%	0.00%	19.50%	62.57%	17.92%	0.00%	
PEAK HR :	**04:15 PM - 05:15 PM**																TOTAL
PEAK HR VOL :	28	101	59	0	107	132	8	0	21	370	23	0	137	431	118	0	1535
PEAK HR FACTOR :	0.778	0.743	0.868	0.000	0.836	0.917	0.667	0.000	0.583	0.944	0.639	0.000	0.778	0.962	0.894	0.000	0.964
		0.855				0.895				0.924				0.953			

National Data & Surveying Services Intersection Turning Movement Count

Location: N/S Prince Blvd & Windsor Blvd
City: Windsor
Control: Signalized

Project ID: 23-250015-001
Date: 5/11/2023

Data - HT

NS/EW Streets:	N/S Prince Blvd				N/S Prince Blvd				Windsor Blvd				Windsor Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	0	0	0	1	0	0	0	0	13	1	0	0	15	1	0	31
6:15 AM	1	1	1	0	0	0	0	0	0	16	0	0	0	11	1	0	31
6:30 AM	0	5	0	0	0	1	0	0	1	16	3	0	2	7	0	0	35
6:45 AM	1	3	2	0	2	1	0	0	1	13	3	0	2	15	1	0	44
7:00 AM	2	1	2	0	2	3	0	0	0	19	1	0	0	10	3	0	43
7:15 AM	2	1	1	0	0	4	0	0	1	18	1	0	0	19	1	0	48
7:30 AM	1	2	1	0	3	3	1	0	0	28	0	0	2	21	1	0	63
7:45 AM	3	3	0	0	2	2	0	0	0	16	1	0	1	25	2	0	55
8:00 AM	0	1	1	0	2	3	0	0	0	17	4	0	1	13	2	0	44
8:15 AM	1	5	1	0	1	3	0	0	0	22	1	0	1	18	1	0	54
8:30 AM	2	2	1	0	3	0	0	0	0	21	1	0	1	23	0	0	54
8:45 AM	1	2	1	0	0	0	0	0	1	25	2	0	1	17	0	0	50
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	14	26	11	0	16	20	1	0	4	224	18	0	11	194	13	0	552
APPROACH %'s :	27.45%	50.98%	21.57%	0.00%	43.24%	54.05%	2.70%	0.00%	1.63%	91.06%	7.32%	0.00%	5.05%	88.99%	5.96%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	5	11	3	0	8	11	1	0	0	83	6	0	5	77	6	0	216
PEAK HR FACTOR :	0.417	0.550	0.750	0.000	0.667	0.917	0.250	0.000	0.000	0.741	0.375	0.000	0.625	0.770	0.750	0.000	0.857
	0.679				0.714				0.795				0.786				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:30 PM	0	0	2	0	2	3	0	0	0	20	1	0	3	10	1	0	42
3:45 PM	4	2	3	0	0	1	0	0	0	12	2	0	1	18	2	0	45
4:00 PM	0	2	1	0	0	0	2	0	0	16	1	0	5	16	0	0	43
4:15 PM	1	2	2	0	1	2	0	0	0	8	8	0	3	16	0	0	43
4:30 PM	1	0	0	0	0	3	2	0	0	10	1	0	0	11	0	0	28
4:45 PM	1	0	1	0	0	3	0	0	0	17	0	0	0	8	0	0	30
5:00 PM	0	1	0	0	1	0	1	0	0	10	0	0	2	15	3	0	33
5:15 PM	1	4	0	0	0	0	0	0	1	9	0	0	0	8	0	0	23
5:30 PM	1	0	1	0	0	1	0	0	0	10	0	0	1	5	1	0	20
5:45 PM	2	0	0	0	0	0	0	0	2	10	0	0	1	16	2	0	33
6:00 PM	0	1	0	0	0	1	0	0	0	12	0	0	2	12	0	0	28
6:15 PM	2	0	0	0	0	1	0	0	0	7	1	0	1	8	0	0	20
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	13	12	10	0	4	15	5	0	3	141	14	0	19	143	9	0	388
APPROACH %'s :	37.14%	34.29%	28.57%	0.00%	16.67%	62.50%	20.83%	0.00%	1.90%	89.24%	8.86%	0.00%	11.11%	83.63%	5.26%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	3	3	3	0	2	8	3	0	0	45	9	0	5	50	3	0	134
PEAK HR FACTOR :	0.750	0.375	0.375	0.000	0.500	0.667	0.375	0.000	0.000	0.662	0.281	0.000	0.417	0.781	0.250	0.000	0.779
	0.450				0.650				0.794				0.725				

National Data & Surveying Services Intersection Turning Movement Count

Location: N/S Prince Blvd & Windsor Blvd
City: Windsor
Control: Signalized

Project ID: 23-250015-001
Date: 5/11/2023

Data - Bikes

NS/EW Streets:	N/S Prince Blvd				N/S Prince Blvd				Windsor Blvd				Windsor Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
APPROACH %'s :									0.00%	100.00%	0.00%	0.00%					
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

National Data & Surveying Services Intersection Turning Movement Count

Location: N/S Prince Blvd & Windsor Blvd
City: Windsor
Project ID: 23-250015-001
Date: 5/11/2023

Data - Pedestrians (Crosswalks)

NS/EW Streets:	N/S Prince Blvd		N/S Prince Blvd		Windsor Blvd		Windsor Blvd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	07:30 AM - 08:30 AM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	1	0	1
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	1	0	0	0	0	0	1
6:00 PM	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	1	0	0	0	1	0	2
APPROACH %'s :			100.00%	0.00%			100.00%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	1
PEAK HR FACTOR :							0.250		0.250
							0.250		

Prepared by National Data & Surveying Services

N/S Prince Blvd & Windsor Blvd

Peak Hour Turning Movement Count

ID: 23-250015-001
City: Windsor

Day: Thursday
Date: 5/11/2023

PEAK HOURS

AM: 07:30 AM - 08:30 AM
NOON: NONE
PM: 04:15 PM - 05:15 PM

COUNT PERIODS

AM: 6:00 AM - 09:00 AM
NOON: NONE
PM: 3:30 PM - 06:30 PM

SOUTHBOUND (N/S Prince Blvd)

AM	6	81	88	0	219	AM
NOON	0	0	0	0	0	NOON
PM	11	140	109	0	246	PM
	0	1	0	0		

EASTBOUND (Windsor Blvd)

AM	NOON	PM		
316	0	523		
0	0	0	0	
15	0	21	1	
352	0	415	2	
17	0	32	0	
AM	NOON	PM		

WESTBOUND (Windsor Blvd)

	PM	NOON	AM
0	121	0	86
2	481	0	290
1	142	0	40
0	0	0	0
	586	0	507
	PM	NOON	AM

NORTHBOUND (N/S Prince Blvd)

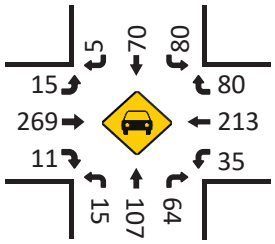
PM	314	0	31	104	62	PM
NOON	0	0	0	0	0	NOON
AM	138	0	20	118	67	AM
		0	0	1	0	

CONTROL

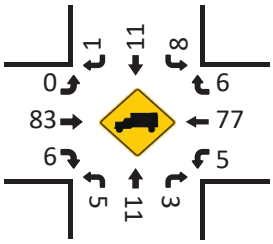
Signalized

TEV	1180 AM	0 NOON	1669 PM
PHF	0.90		0.97

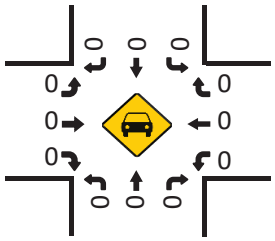
Cars (AM)



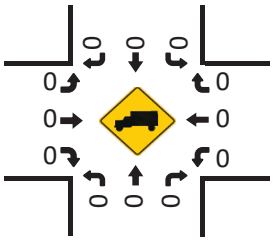
HT (AM)



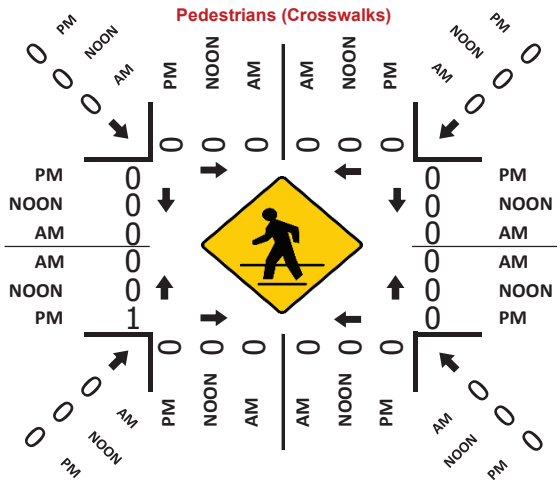
Cars (NOON)



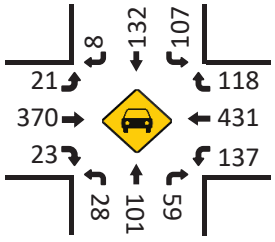
HT (NOON)



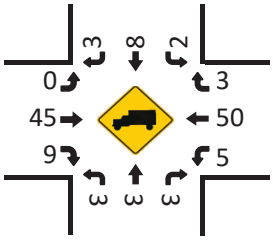
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Project ID: 23-250015-001
Location: N/S Prince Blvd & Windsor Blvd
City: Windsor

Day: Thursday
Date: 5/11/2023

Groups Printed - Cars, PU, Vans - Heavy Trucks

	N/S Prince Blvd Northbound						N/S Prince Blvd Southbound						Windsor Blvd Eastbound						Windsor Blvd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
6:00 AM	1	14	15	0	0	30	13	5	0	0	0	18	1	66	2	0	0	69	4	49	8	0	0	61	178
6:15 AM	2	15	21	0	0	38	19	11	2	0	0	32	0	89	2	0	0	91	7	50	13	0	0	70	231
6:30 AM	5	25	24	0	0	54	17	5	1	0	0	23	1	73	3	0	0	77	5	58	5	0	0	68	222
6:45 AM	6	21	15	0	0	42	17	14	2	0	0	33	3	74	12	0	0	89	6	56	9	0	0	71	235
Total	14	75	75	0	0	164	66	35	5	0	0	106	5	302	19	0	0	326	22	213	35	0	0	270	866
7:00 AM	8	27	17	0	0	52	27	23	3	0	0	53	5	78	4	0	0	87	5	45	9	0	0	59	251
7:15 AM	7	32	19	0	0	58	27	17	2	0	0	46	7	83	4	0	0	94	5	53	23	0	0	81	279
7:30 AM	3	37	12	0	0	52	33	30	3	0	0	66	5	100	2	0	0	107	12	77	12	0	0	101	326
7:45 AM	6	19	18	0	0	43	18	13	0	0	0	31	5	87	2	0	0	94	10	75	16	0	0	101	269
Total	24	115	66	0	0	205	105	83	8	0	0	196	22	348	12	0	0	382	32	250	60	0	0	342	1125
8:00 AM	5	32	22	0	0	59	17	18	2	0	0	37	5	81	8	0	0	94	10	70	30	0	0	110	300
8:15 AM	6	30	15	0	0	51	20	20	1	0	0	41	0	84	5	0	0	89	8	68	28	0	0	104	285
8:30 AM	4	12	18	0	0	34	33	24	2	0	0	59	3	90	5	0	0	98	13	71	11	0	0	95	286
8:45 AM	8	18	16	0	0	42	35	19	2	0	0	56	3	90	5	0	0	98	11	81	9	0	0	101	297
Total	23	92	71	0	0	186	105	81	7	0	0	193	11	345	23	0	0	379	42	290	78	0	0	410	1168
BREAK																									
3:30 PM	5	19	18	0	0	42	30	29	2	0	0	61	2	92	6	0	0	100	35	101	21	0	0	157	360
3:45 PM	13	23	13	0	0	49	30	25	2	0	0	57	9	107	5	0	0	121	19	107	23	0	0	149	376
Total	18	42	31	0	0	91	60	54	4	0	0	118	11	199	11	0	0	221	54	208	44	0	0	306	736
4:00 PM	6	20	11	0	0	37	19	17	6	0	0	42	3	122	10	0	0	135	36	115	26	0	0	177	391
4:15 PM	7	29	16	0	0	52	33	38	1	0	0	72	9	89	16	0	0	114	31	128	29	0	0	188	426
4:30 PM	10	18	13	0	0	41	22	37	5	0	0	64	1	103	3	0	0	107	44	123	24	0	0	191	403
4:45 PM	5	34	18	0	0	57	30	32	2	0	0	64	6	115	4	0	0	125	37	113	32	0	0	182	428
Total	28	101	58	0	0	187	104	124	14	0	0	242	19	429	33	0	0	481	148	479	111	0	0	738	1648
5:00 PM	9	23	15	0	0	47	24	33	3	0	0	60	5	108	9	0	1	122	30	117	36	0	0	183	412
5:15 PM	2	24	11	0	0	37	27	21	6	0	0	54	5	106	8	0	0	119	29	98	36	0	0	163	373
5:30 PM	9	23	15	0	0	47	29	34	4	0	0	67	6	95	6	0	0	107	31	95	35	0	0	161	382
5:45 PM	11	27	14	0	1	52	33	21	5	0	0	59	7	81	4	0	0	92	29	107	27	0	0	163	366
Total	31	97	55	0	1	183	113	109	18	0	0	240	23	390	27	0	1	440	119	417	134	0	0	670	1533
6:00 PM	9	20	21	0	0	50	18	26	2	0	0	46	2	108	4	0	0	114	42	136	32	0	0	210	420
6:15 PM	5	12	13	0	0	30	15	14	4	0	0	33	0	90	4	0	0	94	26	90	28	0	0	144	301
Total	14	32	34	0	0	80	33	40	6	0	0	79	2	198	8	0	0	208	68	226	60	0	0	354	721
Grand Total	152	554	390	0	1	1096	586	526	62	0	0	1174	93	2211	133	0	1	2437	485	2083	522	0	0	3090	7797
Apprch %	13.9	50.5	35.6	0.0	0.1		49.9	44.8	5.3	0.0	0.0		3.8	90.7	5.5	0.0	0.0		15.7	67.4	16.9	0.0	0.0		
Total %	1.9	7.1	5.0	0.0	0.0	14.1	7.5	6.7	0.8	0.0	0.0	15.1	1.2	28.4	1.7	0.0	0.0	31.3	6.2	26.7	6.7	0.0	0.0	39.6	
Cars, PU, Vans	125	516	369	0		1010	566	491	56	0		1113	86	1846	101	0		2033	455	1746	500	0		2701	6857
% Cars, PU, Vans	82.2	93.1	94.6	0.0		92.2	96.6	93.3	90.3	0.0		94.8	92.5	83.5	75.9	0.0		83.4	93.8	83.8	95.8	0.0		87.4	87.9
Heavy trucks	27	38	21	0		86	20	35	6	0		61	7	365	32	0		404	30	337	22	0		389	940
%Heavy trucks	17.8	6.9	5.4	0.0		7.8	3.4	6.7	9.7	0.0		5.2	7.5	16.5	24.1	0.0		16.6	6.2	16.2	4.2	0.0		12.6	12.1

Project ID: 23-250015-001
Location: N/S Prince Blvd & Windsor Blvd
City: Windsor

PEAK HOURS

Day: Thursday
Date: 5/11/2023

AM

	N/S Prince Blvd Northbound					N/S Prince Blvd Southbound					Windsor Blvd Eastbound					Windsor Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 06:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	3	37	12	0	52	33	30	3	0	66	5	100	2	0	107	12	77	12	0	101	326
7:45 AM	6	19	18	0	43	18	13	0	0	31	5	87	2	0	94	10	75	16	0	101	269
8:00 AM	5	32	22	0	59	17	18	2	0	37	5	81	8	0	94	10	70	30	0	110	300
8:15 AM	6	30	15	0	51	20	20	1	0	41	0	84	5	0	89	8	68	28	0	104	285
Total Volume	20	118	67	0	205	88	81	6	0	175	15	352	17	0	384	40	290	86	0	416	1180
% App. Total	9.8	57.6	32.7	0.0	100	50.3	46.3	3.4	0.0	100	3.9	91.7	4.4	0.0	100	9.6	69.7	20.7	0.0	100	
PHF					0.869					0.663					0.897					0.945	0.905
Cars, PU, Vans	15	107	64	0	186	80	70	5	0	155	15	269	11	0	295	35	213	80	0	328	964
% Cars, PU, Vans	75.0	90.7	95.5	0.0	90.7	90.9	86.4	83.3	0.0	88.6	100.0	76.4	64.7	0.0	76.8	87.5	73.4	93.0	0.0	78.8	81.7
Heavy trucks	5	11	3	0	19	8	11	1	0	20	0	83	6	0	89	5	77	6	0	88	216
%Heavy trucks	25.0	9.3	4.5	0.0	9.3	9.1	13.6	16.7	0.0	11.4	0.0	23.6	35.3	0.0	23.2	12.5	26.6	7.0	0.0	21.2	18.3

PM

	N/S Prince Blvd Northbound					N/S Prince Blvd Southbound					Windsor Blvd Eastbound					Windsor Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 03:30 PM - 06:30 PM																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
4:15 PM	7	29	16	0	52	33	38	1	0	72	9	89	16	0	114	31	128	29	0	188	426
4:30 PM	10	18	13	0	41	22	37	5	0	64	1	103	3	0	107	44	123	24	0	191	403
4:45 PM	5	34	18	0	57	30	32	2	0	64	6	115	4	0	125	37	113	32	0	182	428
5:00 PM	9	23	15	0	47	24	33	3	0	60	5	108	9	0	122	30	117	36	0	183	412
Total Volume	31	104	62	0	197	109	140	11	0	260	21	415	32	0	468	142	481	121	0	744	1669
% App. Total	15.7	52.8	31.5	0.0	100	41.9	53.8	4.2	0.0	100	4.5	88.7	6.8	0.0	100	19.1	64.7	16.3	0.0	100	
PHF					0.864					0.903					0.936					0.974	0.975
Cars, PU, Vans	28	101	59	0	188	107	132	8	0	247	21	370	23	0	414	137	431	118	0	686	1535
% Cars, PU, Vans	90.3	97.1	95.2	0.0	95.4	98.2	94.3	72.7	0.0	95.0	100.0	89.2	71.9	0.0	88.5	96.5	89.6	97.5	0.0	92.2	92.0
Heavy trucks	3	3	3	0	9	2	8	3	0	13	0	45	9	0	54	5	50	3	0	58	134
%Heavy trucks	9.7	2.9	4.8	0.0	4.6	1.8	5.7	27.3	0.0	5.0	0.0	10.8	28.1	0.0	11.5	3.5	10.4	2.5	0.0	7.8	8.0

Location: Bank St/N Coast Rd/Church St & Windsor Blvd
City: Windsor
Control: Signalized

Project ID: 21-00015-002
Date: 5/11/2023

Data - Total

| HELENA Streets | Bank St/N Coast Rd/Church St | | | | | | Bank St/N Coast Rd/Church St | | | | | | Windsor Blvd | | | | | | Windsor Blvd | | | | | |

National Data & Surveying Services

Intersection Turning Movement Count

Location: Bank St/N Court St/Church St & Windsor Blvd
City: Windsor
Control: Signalized

Project ID: 23-250015-002
Date: 5/11/2023

Data - Cars

NS/EW Streets: Bank St/N Court St/Church St | Bank St/N Court St/Church St | Windsor Blvd | Windsor Blvd | | | |

AM

	NORTHBOUND						SOUTHBOUND						EASTBOUND						WESTBOUND						NORTHBOUND2						SOUTHBOUND2						WESTBOUND2						
	0	1	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NT2	NU2	SL	ST	SR	SU	SL2	ST2	SU2	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2	NZT	NZR	NZL2	NZT2	NZR2	SZL	SZT	SZL2	SZT2	SZR2	SZU2	WZR	WZT2	WZU2	TOTAL
6:00 AM	2	0	0	0	0	0	9	0	0	0	0	1	0	0	100	2	0	1	0	1	0	59	2	0	0	0	0	3	0	0	0	0	4	0	4	1	0	2	0	0	0	12	216
6:15 AM	1	0	1	0	2	0	7	0	0	0	0	1	0	0	89	2	0	1	0	1	0	62	1	0	0	0	0	0	0	0	0	0	4	0	4	1	1	5	0	0	0	11	215
6:30 AM	1	1	0	0	2	0	8	0	0	0	1	1	0	0	83	1	0	3	0	0	0	51	5	0	0	1	2	3	0	0	0	1	5	1	2	1	2	2	0	0	1	1	188
6:45 AM	2	1	0	0	2	0	8	0	0	0	1	1	0	0	85	1	0	3	0	0	0	51	5	0	0	1	2	3	0	0	0	1	5	1	2	1	2	2	0	0	1	1	188
7:00 AM	1	2	0	0	0	0	12	0	0	0	2	0	0	1	89	3	0	12	6	0	0	41	2	0	0	4	2	18	0	0	1	4	0	4	3	2	3	0	1	1	8	210
7:15 AM	3	3	1	0	12	0	15	2	0	0	2	0	0	1	112	0	0	17	6	0	0	58	13	0	0	1	1	39	0	0	1	4	2	9	11	1	15	0	0	12	9	338
7:30 AM	4	3	0	0	0	1	26	2	7	0	6	6	0	1	108	2	0	2	6	0	0	49	5	0	1	0	0	5	0	0	3	1	0	5	3	2	13	0	0	1	15	277
7:45 AM	3	8	0	0	3	1	6	0	2	0	1	1	0	3	99	2	0	3	3	0	0	65	5	0	0	0	2	4	0	0	0	1	1	2	4	0	3	0	0	0	7	274
8:00 AM	4	2	1	0	0	0	9	1	2	0	0	1	1	0	96	3	0	4	2	0	0	99	7	0	0	1	1	4	0	0	1	5	2	2	2	1	2	0	0	0	3	252
8:15 AM	1	3	1	0	1	0	8	0	0	0	2	0	0	1	97	1	0	3	2	1	0	84	5	0	0	0	1	2	0	0	1	2	2	2	1	1	2	0	0	0	7	252
8:30 AM	2	3	1	0	1	0	17	0	2	0	0	0	0	0	96	2	0	3	3	0	0	58	3	0	2	0	1	1	0	0	0	0	7	0	2	4	2	7	0	0	0	2	219
8:45 AM	1	1	0	0	3	0	8	3	0	0	2	0	0	0	116	2	0	6	2	1	0	76	3	0	1	3	2	6	0	0	0	1	2	0	5	4	3	2	0	0	0	7	258
	NL	NT	NR	NU	NT2	NU2	SL	ST	SR	SU	SL2	ST2	SU2	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2	NZT	NZR	NZL2	NZT2	NZR2	SZL	SZT	SZL2	SZT2	SZR2	SZU2	WZR	WZT2	WZU2	TOTAL
TOTAL VOLUMES :	25	27	6	0	33	2	130	12	14	0	18	12	1	7	1154	21	0	60	53	4	0	725	51	0	4	16	13	88	0	0	8	39	12	41	39	16	59	0	1	3	94	1752
APPROACH %'s :	26.88%	29.03%	6.45%	0.00%	35.48%	2.15%	69.52%	6.42%	7.49%	0.00%	9.63%	6.42%	0.53%	0.54%	88.84%	1.62%	0.00%	4.62%	4.08%	0.31%	0.00%	90.41%	6.27%	0.00%	0.49%	1.23%	1.60%	65.19%	0.00%	0.00%	5.93%	28.89%	7.19%	24.55%	23.35%	9.58%	35.33%	0.00%	1.02%	3.06%	95.92%	
PEAK HR :	07:15 AM - 08:15 AM																																									TOTAL
PEAK HR VOL :	14	10	2	0	15	2	52	5	11	0	7	10	1	5	415	7	0	26	20	0	0	271	30	0	1	2	6	52	0	0	5	11	5	18	20	4	33	0	0	1	34	1099
PEAK HR FACTOR :	0.875	0.500	0.500	0.000	0.313	0.500	0.765	0.625	0.688	0.000	0.875	0.417	0.250	0.417	0.908	0.583	0.000	0.650	0.833	0.000	0.000	0.684	0.577	0.000	0.250	0.500	0.500	0.813	0.000	0.000	0.625	0.688	0.625	0.500	0.455	0.500	0.550	0.000	0.000	0.250	0.567	0.813
			0.645						0.457								0.869						0.713										0.526							

PM

	NORTHBOUND						SOUTHBOUND						EASTBOUND						WESTBOUND						NORTHBOUND2						SOUTHBOUND2						WESTBOUND2						
	0	1	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NT2	NU2	SL	ST	SR	SU	SL2	ST2	SU2	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2	NZT	NZR	NZL2	NZT2	NZR2	SZL	SZT	SZL2	SZT2	SZR2	SZU2	WZR	WZT2	WZU2	TOTAL
3:30 PM	6	4	2	0	2	0	7	0	2	0	0	3	0	0	138	5	0	10	2	3	1	121	10	0	4	4	2	7	2	0	0	0	0	15	5	1	7	1	0	0	6	350
3:45 PM	4	3	1	0	7	0	8	2	0	0	0	1	0	0	127	1	0	11	4	0	0	137	12	0	2	1	5	16	1	2	2	3	1	13	6	2	8	0	0	0	4	382
4:00 PM	6	4	4	0	8	0	11	2	2	0	0	0	0	1	118	2	0	9	2	1	2	142	13	0	2	1	5	10	0	2	3	6	1	9	3	2	12	1	0	0	2	388
4:15 PM	7	2	2	0	5	0	16	1	4	0	1	1	0	0	134	4	0	9	2	0	0	153	12	0	2	1	4	14	0	0	1	4	4	13	6	2	10	0	0	0	9	431
4:30 PM	6	2	1	0	4	0	14	0	0	0	0	0	0	4	135	1	0	5	5	0	0	159	7	0	7	4	3	5	0	1	2	3	1	9	7	1	10	0	0	0	0	396
4:45 PM	7	6	1	0	3	1	9	0	2	0	2	0	0	3	122	3	0	3	0	1	0	142	14	0	4	3	0	6	0	1	1	4	2	12	6	1	11	0	0	0	0	389
5:00 PM	3	5	1	0	3	0	11	0	0	0	2	2	0	1	137	2	0	3	2	0	0	139	9	0	7	0	0	4	0	2	2	9	4	10	9	1	5	1	0	0	2	382
5:30 PM	6	2	2	0	0	0	5	1	0	0	0	0	1	2	135	3	0	6	2	0	2	143	11	0	2	6	2	5	0	1	0	5	3	5	6	0	4	0	0	0	1	361
5:45 PM	6	1	1	0	1	0	7	0	1	0	0	1	0	1	101	4	0	3	5	0	1	138	6	0	10	3	1	2	0	0	0	7	0	5	2	0	10	0	0	0	1	318
6:00 PM	2	2	0	0	1	0	6	1	1	0	0	1	0	1	116	1	0	4	4	3	0	162	6	0	5	5	3	5	0	0	0	3	0	4	5	3	11	0	0	0	0	375
6:15 PM	1	3	0	0	1	0	1	0	1	0	0	0	0	4	105	8	0	4	1	1	0	139	10	0	2	4	5	2	0	0	0	5	2	3	11	2	10	0	0	0	1	326
	NL	NT	NR	NU	NT2	NU2	SL	ST	SR	SU	SL2	ST2	SU2	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2	NZT	NZR	NZL2	NZT2	NZR2	SZL	SZT	SZL2	SZT2	SZR2	SZU2	WZR	WZT2	WZU2	TOTAL
TOTAL VOLUMES :	56	38	18	0	41	1	101	9	16	0	5	10	1	18	1472	33	0	86	34	7	6	1780	110	0	51	38	30	83	3	13	12	51	18	105	75	20	106	3	0	0	11	4476
APPROACH %'s :	36.36%	24.68%	11.69%	0.00%	26.62%	0.65%	70.63%	6.29%	11.19%	0.00%	3.50%	6.99%	1.40%	1.09%	89.54%	2.25%	0.00%	5.42%	1.95%	0.55%	0.45%	86.85%	5.61%	0.00%	2.13%	2.88%	1.49%	51.13%	1.85%	8.02%	7.41%	31.48%	5.59%	32.11%	22.94%	6.12%	32.42%	0.92%	0.00%	0.00%	100.00%	
PEAK HR :	04:00 PM - 05:00 PM																																									TOTAL
PEAK HR VOL :	21	12	6	0	23	0	49	5	9	0	1	2	1	6	511	10	0	28	11	1	5	609	39	0	15	30	12	36	0	7	7	15	6	38	25	10	42	1	0	0	16	1613
PEAK HR FACTOR :	0.750	0.750	0.625	0.000	0.719	0.000	0.766	0.625	0.563	0.000	0.250	0.500	0.250	0.375	0.939	0.625	0.000	0.939	0.779	0.550	0.250	0.958	0.750	0.000	0.536	0.682	0.600	0.643	0.000	0.583	0.583	0.625	0.375	0.731	0.694	0.625	0.875	0.250	0.000	0.000	0.444	0.936
			0.752						0.728								0.939						0.975										0.824							

National Data & Surveying Services

Intersection Turning Movement Count

Location: Bank St/N Court St/Church St & Windsor Blvd
City: Windsor
Control: Signalized

Project ID: 23-250015-002
Date: 5/11/2023

Data - HT

NS/EW Streets: Bank St/N Court St/Church St | Bank St/N Court St/Church St | Windsor Blvd | Windsor Blvd | | | |

AM

	NORTHBOUND						SOUTHBOUND						EASTBOUND						WESTBOUND						NORTHBOUND2						SOUTHBOUND2						WESTBOUND2			
	0 NL	1 NT	0 NR	0 NU	0 NT2	0 NU2	0 SL	1 ST	0 SR	0 SU	0 SL2	0 ST2	0 SU2	0 EL	2 ET	0 ER	0 EU	0 EL2	0 ET2	0 ER2	0 WL	2 WT	0 WR	0 WU	0 WL2	0 WR2	0 WU2	0 N2T	0 N2R	0 N3L2	0 N2T2	0 N2R2	0 S2L	0 S2T	0 S3L2	0 S2T2	0 S2R2	0 S2U2	0 W2R	0 WZT2	0 WZU2	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
6:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	2	0	0	0	17	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	41
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	19	0	0	0	0	1	0	14	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	39
7:15 AM	0	0	0	0	0	0	0	2	0	0	0	1	0	0	21	1	0	0	0	0	0	21	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	48
7:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	30	0	0	0	1	0	0	23	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	58
7:45 AM	1	0	0	0	2	0	1	0	0	0	0	2	0	0	18	0	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	49
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	19	0	0	0	0	0	0	22	2	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	48
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	26	0	0	0	0	0	0	19	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	48
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	25	1	0	0	0	0	0	20	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	0	0	0	22	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	47
	NL	NT	NR	NU	NT2	NU2	SL	ST	SR	SU	SL2	ST2	SU2	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2	N2T	N2R	N3L2	N2T2	N2R2	S2L	S2T	S3L2	S2T2	S2R2	S2U2	W2R	WZT2	WZU2	TOTAL
TOTAL VOLUMES :	2	0	0	0	4	1	1	3	0	0	0	4	0	2	248	2	0	3	0	1	0	214	4	0	1	0	1	5	0	0	1	2	0	3	4	2	8	1	0	0	0	516
APPROACH %'s :	28.57%	0.00%	0.00%	0.00%	57.14%	14.29%	12.50%	37.50%	0.00%	0.00%	0.00%	50.00%	0.00%	0.78%	96.88%	0.78%	0.00%	1.17%	0.00%	0.39%	0.00%	97.27%	1.82%	0.00%	0.45%	0.00%	0.45%	62.50%	0.00%	0.00%	12.50%	25.00%	0.00%	17.65%	23.53%	5.88%	47.06%	5.88%				
PEAK HR :	07:15 AM - 08:15 AM																																								TOTAL
PEAK HR VOL :	1	0	0	0	2	1	1	3	0	0	0	4	0	1	88	1	0	0	0	0	0	89	3	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	203
PEAK HR FACTOR :	0.250	0.000	0.000	0.000	0.250	0.250	0.250	0.375	0.000	0.000	0.000	0.500	0.000	0.250	0.733	0.250	0.000	0.000	0.000	0.000	0.000	0.667	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.250	0.250	0.750	0.000	0.000	0.000	0.000	0.875
	0.333						0.667							0.734							0.958							0.500						0.500								

PM

	NORTHBOUND						SOUTHBOUND						EASTBOUND						WESTBOUND						NORTHBOUND2						SOUTHBOUND2						WESTBOUND2			
	0 NL	1 NT	0 NR	0 NU	0 NT2	0 NU2	0 SL	1 ST	0 SR	0 SU	0 SL2	0 ST2	0 SU2	0 EL	2 ET	0 ER	0 EU	0 EL2	0 ET2	0 ER2	0 WL	2 WT	0 WR	0 WU	0 WL2	0 WR2	0 WU2	0 N2T	0 N2R	0 N3L2	0 N2T2	0 N2R2	0 S2L	0 S2T	0 S3L2	0 S2T2	0 S2R2	0 S2U2	0 W2R	0 WZT2	0 WZU2	TOTAL
3:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	39
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	2	0	0	0	23	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	40
4:00 PM	0	0	1	0	0	0	2	0	1	0	0	0	0	0	19	1	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	43
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	1	0	0	0	0	0	10	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	34
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	12	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	29
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	15	0	0	1	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	39
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	18
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	14	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	27
6:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	15
	NL	NT	NR	NU	NT2	NU2	SL	ST	SR	SU	SL2	ST2	SU2	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2	N2T	N2R	N3L2	N2T2	N2R2	S2L	S2T	S3L2	S2T2	S2R2	S2U2	W2R	WZT2	WZU2	TOTAL
TOTAL VOLUMES :	1	0	1	0	1	0	2	0	1	0	0	0	0	0	167	2	0	2	0	0	2	161	2	0	1	1	0	3	0	0	0	1	0	0	2	1	6	2	0	0	0	341
APPROACH %'s :	33.33%	0.00%	33.33%	0.00%	33.33%	0.00%	66.67%	0.00%	33.33%	0.00%	0.00%	0.00%	0.00%	0.00%	98.00%	0.67%	0.00%	1.33%	0.00%	0.00%	1.18%	96.47%	1.18%	0.00%	0.59%	0.59%	0.00%	75.00%	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	18.18%	9.09%	54.55%	27.27%	0.00%			
PEAK HR :	04:00 PM - 05:00 PM																																								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	2	0	1	0	0	0	0	0	56	1	0	0	0	0	0	58	1	0	0	0	0	3	0	0	0	0	0	0	1	2	0	0	0	0	0	126
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.737	0.250	0.000	0.000	0.000	0.000	0.000	0.806	0.250	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.733
	0.250						0.250							0.750							0.819							0.375						0.375								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Bank St/N Court St/Church St & Windsor Blvd
City: Windsor
Control: Signalized

Project ID: 23-250015-002
Date: 5/11/2023

Data - Bikes

NS/EW Streets: Bank St/N Court St/Church St | Bank St/N Court St/Church St | Windsor Blvd | Windsor Blvd | | | |

AM

	NORTHBOUND						SOUTHBOUND						EASTBOUND						WESTBOUND						NORTHBOUND2					SOUTHBOUND2					WESTBOUND2			
	0	1	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	NT2	NU2	SL	ST	SR	SU	SL2	ST2	SU2	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2	N2T	N2R	N2L2	N2T2	N2R2	S2L	S2T	S2L2	S2T2	S2R2	S2U2	W2R	W2T2	W2U2	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
8:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
APPROACH %'s :							0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%																				
PEAK HR :	07:15 AM - 08:15 AM																																							TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.500

PM

	NORTHBOUND						SOUTHBOUND						EASTBOUND						WESTBOUND						NORTHBOUND2					SOUTHBOUND2					WESTBOUND2			
	0	1	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	NT2	NU2	SL	ST	SR	SU	SL2	ST2	SU2	EL	ET	ER	EU	EL2	ET2	ER2	WL	WT	WR	WU	WL2	WR2	WU2	N2T	N2R	N2L2	N2T2	N2R2	S2L	S2T	S2L2	S2T2	S2R2	S2U2	W2R	W2T2	W2U2	TOTAL
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
APPROACH %'s :														0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%													100.00%	0.00%	0.00%	0.00%	0.00%	0.00%				
PEAK HR :	04:00 PM - 05:00 PM																																							TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

National Data & Surveying Services Intersection Turning Movement Count

Location: Bank St/N Court St/Church St & Windsor Blvd
City: Windsor

Project ID: 23-250015-002
Date: 5/11/2023

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Bank St/N Court St/Church St		Bank St/N Court St/Church St		Windsor Blvd		Windsor Blvd								
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		NORTH LEG 2		SOUTH LEG 2		EAST LEG 2		
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	EB	WB	NB	SB	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	EB	WB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
APPROACH %'s :									0.00%	100.00%					
PEAK HR :	07:15 AM - 08:15 AM														TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :															

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		NORTH LEG 2		SOUTH LEG 2		EAST LEG 2		
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	EB	WB	NB	SB	TOTAL
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	2	0	0	0	0	0	1	0	0	0	0	0	0	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	EB	WB	NB	SB	TOTAL
TOTAL VOLUMES :	0	3	0	0	0	0	0	1	0	0	0	0	0	0	4
APPROACH %'s :	0.00%	100.00%					0.00%	100.00%							
PEAK HR :	04:00 PM - 05:00 PM														TOTAL
PEAK HR VOL :	0	3	0	0	0	0	0	1	0	0	0	0	0	0	4
PEAK HR FACTOR :	0.375	0.375					0.250	0.250							0.333

Prepared by National Data & Surveying Services

Bank St/N Court St/Church St & Windsor Blvd

Peak Hour Turning Movement Count

ID: 23-250015-002
City: Windsor

Day: Thursday
Date: 5/11/2023

PEAK HOURS

AM: 07:15 AM - 08:15 AM
NOON: NONE
PM: 04:00 PM - 05:00 PM

COUNT PERIODS

AM: 6:00 AM - 09:00 AM
NOON: NONE
PM: 3:30 PM - 06:30 PM

SOUTHBOUND — Bank St/N Court St/Church St

AM	11	8	53	0	55	AM
NOON	0	0	0	0	0	NOON
PM	10	5	51	0	58	PM

EASTBOUND — Windsor Blvd

AM	NOON	PM		
386	0	698		
0	0	0	0	
6	0	6	0	
503	0	567	2	
8	0	11	0	
AM	NOON	PM		

WESTBOUND — Windsor Blvd

PM	NOON	AM		
			0	
40	0	33	0	
667	0	360	2	
5	0	0	0	
0	0	0	0	
PM	NOON	AM		
629	0	558		

NORTHBOUND — Bank St/N Court St/Church St

PM	21	0	21	12	11	PM
NOON	0	0	0	0	0	NOON
AM	16	0	15	16	2	AM

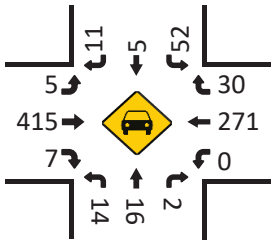
	0	0	1	0

CONTROL

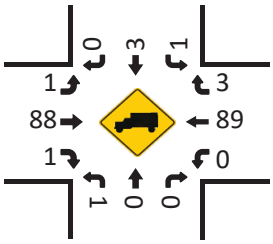
Signalized

TEV	1015 AM	0 NOON	1406 PM
PHF	0.84		0.95

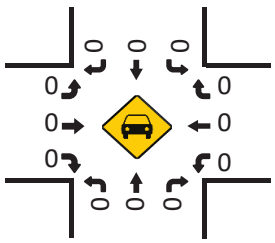
Cars (AM)



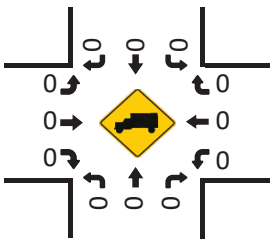
HT (AM)



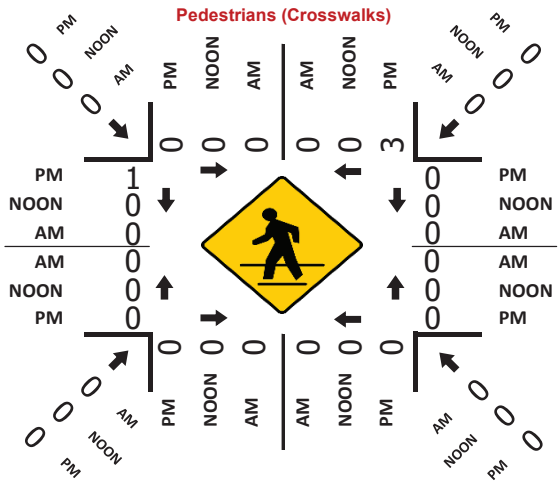
Cars (NOON)



HT (NOON)



Pedestrians (Crosswalks)


PM
NOON
AM
0
1
0
0
0
0
0
0
3
0
0
0
0
0
0
0
0
0
0
0

Project ID: 23-250015-002
Location: Bank St/N Court St/Church St & Windsor Blvd
City: Windsor

Day: Thursday
Date: 5/11/2023

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Bank St/N Court St/Church St Northbound						Bank St/N Court St/Church St Southbound						Windsor Blvd Eastbound						Windsor Blvd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
6:00 AM	2	0	0	0	0	2	9	2	1	0	0	12	0	89	1	0	0	90	0	52	0	0	0	52	156
6:15 AM	1	0	1	0	0	2	9	0	0	0	0	9	0	121	2	0	0	123	0	63	2	0	0	65	199
6:30 AM	1	1	1	0	0	3	7	2	0	0	0	9	0	116	2	0	0	118	0	72	1	0	0	73	203
6:45 AM	3	1	0	0	0	4	8	0	0	0	0	8	0	102	1	0	0	103	0	68	5	0	0	73	188
Total	7	2	2	0	0	11	33	4	1	0	0	38	0	428	6	0	0	434	0	255	8	0	0	263	746
7:00 AM	1	2	0	0	0	3	12	0	0	0	0	12	1	88	3	0	0	92	0	55	2	0	0	57	164
7:15 AM	3	3	1	0	0	7	15	4	0	0	0	19	1	133	1	0	0	135	0	79	14	0	0	93	254
7:30 AM	4	3	0	0	0	7	26	3	7	0	0	36	1	138	2	0	0	141	0	72	5	0	0	77	261
7:45 AM	4	8	0	0	0	12	7	0	2	0	0	9	3	117	2	0	0	122	0	88	5	0	0	93	236
Total	12	16	1	0	0	29	60	7	9	0	0	76	6	476	8	0	0	490	0	294	26	0	0	320	915
8:00 AM	4	2	1	0	0	7	5	1	2	0	0	8	1	115	3	0	0	119	0	121	9	0	0	130	264
8:15 AM	1	3	1	0	0	5	8	0	0	0	0	8	1	123	1	0	0	125	0	103	6	0	0	109	247
8:30 AM	2	3	1	0	0	6	17	0	2	0	0	19	1	121	3	0	0	125	0	78	3	0	0	81	231
8:45 AM	1	1	0	0	0	2	8	3	0	0	0	11	0	139	2	0	0	141	0	98	3	0	0	101	255
Total	8	9	3	0	0	20	38	4	4	0	0	46	3	498	9	0	0	510	0	400	21	0	0	421	997
BREAK																									
3:30 PM	6	4	2	0	0	12	7	0	2	0	0	9	0	139	5	0	0	144	1	136	10	0	0	147	312
3:45 PM	4	3	1	0	0	8	6	2	0	0	0	8	0	140	1	0	0	141	0	160	12	0	0	172	329
Total	10	7	3	0	0	20	13	2	2	0	0	17	0	279	6	0	0	285	1	296	22	0	0	319	641
4:00 PM	6	4	5	0	0	15	13	2	3	0	1	18	1	137	2	0	0	140	2	160	13	0	0	175	348
4:15 PM	2	4	2	0	0	8	16	1	4	0	0	21	0	144	4	0	0	148	3	171	12	0	0	186	363
4:30 PM	7	2	3	0	0	12	8	2	3	0	0	13	1	135	4	0	0	140	0	165	8	0	0	173	338
4:45 PM	6	2	1	0	0	9	14	0	0	0	2	14	4	151	1	0	1	156	0	171	7	0	0	178	357
Total	21	12	11	0	0	44	51	5	10	0	3	66	6	567	11	0	1	584	5	667	40	0	0	712	1406
5:00 PM	7	6	1	0	0	14	9	0	2	0	0	11	3	132	3	0	0	138	0	157	14	0	0	171	334
5:15 PM	3	5	1	0	0	9	11	0	0	0	0	11	1	146	2	0	0	149	0	147	9	0	0	156	325
5:30 PM	6	2	2	0	0	10	5	1	0	0	0	6	2	144	3	0	0	149	3	152	11	0	0	166	331
5:45 PM	6	1	1	0	0	8	7	0	1	0	0	8	1	112	4	0	0	117	1	154	6	0	0	161	294
Total	22	14	5	0	0	41	32	1	3	0	0	36	7	534	12	0	0	553	4	610	40	0	0	654	1284
6:00 PM	2	2	0	0	0	4	6	1	1	0	0	8	1	127	1	0	0	129	0	196	7	0	0	203	344
6:15 PM	2	3	0	0	0	5	1	0	1	0	0	2	4	112	8	0	0	124	1	145	10	0	0	156	287
Total	4	5	0	0	0	9	7	1	2	0	0	10	5	239	9	0	0	253	1	341	17	0	0	359	631
Grand Total	84	65	25	0	0	174	234	24	31	0	3	289	27	3021	61	0	1	3109	11	2863	174	0	0	3048	6620
Apprch %	48.3	37.4	14.4	0.0	0.0		81.0	8.3	10.7	0.0	1.0		0.9	97.2	2.0	0.0	0.0		0.4	93.9	5.7	0.0	0.0		
Total %	1.3	1.0	0.4	0.0	0.0	2.6	3.5	0.4	0.5	0.0	0.0	4.4	0.4	45.6	0.9	0.0	0.0	47.0	0.2	43.2	2.6	0.0	0.0	46.0	
Cars, PU, Vans	81	65	24	0		170	231	21	30	0		282	25	2626	58	0		2709	9	2485	168	0		2662	5823
% Cars, PU, Vans	96.4	100.0	96.0	0.0		97.7	98.7	87.5	96.8	0.0		97.6	92.6	86.9	95.1	0.0		87.1	81.8	86.8	96.6	0.0		87.3	88.0
Heavy trucks	3	0	1	0		4	3	3	1	0		7	2	395	3	0		400	2	378	6	0		386	797
%Heavy trucks	3.6	0.0	4.0	0.0		2.3	1.3	12.5	3.2	0.0		2.4	7.4	13.1	4.9	0.0		12.9	18.2	13.2	3.4	0.0		12.7	12.0

Project ID: 23-250015-002
Location: Bank St/N Court St/Church St & Windsor Blvd
City: Windsor

PEAK HOURS

Day: Thursday
Date: 5/11/2023

AM

	Bank St/N Court St/Church St Northbound					Bank St/N Court St/Church St Southbound					Windsor Blvd Eastbound					Windsor Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 06:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	3	3	1	0	7	15	4	0	0	19	1	133	1	0	135	0	79	14	0	93	254
7:30 AM	4	3	0	0	7	26	3	7	0	36	1	138	2	0	141	0	72	5	0	77	261
7:45 AM	4	8	0	0	12	7	0	2	0	9	3	117	2	0	122	0	88	5	0	93	236
8:00 AM	4	2	1	0	7	5	1	2	0	8	1	115	3	0	119	0	121	9	0	130	264
Total Volume	15	16	2	0	33	53	8	11	0	72	6	503	8	0	517	0	360	33	0	393	1015
% App. Total	45.5	48.5	6.1	0.0	100	73.6	11.1	15.3	0.0	100	1.2	97.3	1.5	0.0	100	0.0	91.6	8.4	0.0	100	
PHF					0.697					0.490					0.892					0.758	0.843
Cars, PU, Vans	14	16	2	0	32	52	5	11	0	68	5	415	7	0	427	0	271	30	0	301	828
% Cars, PU, Vans	93.3	100.0	100.0	0.0	97.0	98.1	62.5	100.0	0.0	94.4	83.3	82.5	87.5	0.0	82.6	0.0	75.3	90.9	0.0	76.6	81.6
Heavy trucks	1	0	0	0	1	1	3	0	0	4	1	88	1	0	90	0	89	3	0	92	187
%Heavy trucks	6.7	0.0	0.0	0.0	3.0	1.9	37.5	0.0	0.0	5.6	16.7	17.5	12.5	0.0	17.4	0.0	24.7	9.1	0.0	23.4	18.4

PM

	Bank St/N Court St/Church St Northbound					Bank St/N Court St/Church St Southbound					Windsor Blvd Eastbound					Windsor Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 03:30 PM - 06:30 PM																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
4:00 PM	6	4	5	0	15	13	2	3	0	18	1	137	2	0	140	2	160	13	0	175	348
4:15 PM	2	4	2	0	8	16	1	4	0	21	0	144	4	0	148	3	171	12	0	186	363
4:30 PM	7	2	3	0	12	8	2	3	0	13	1	135	4	0	140	0	165	8	0	173	338
4:45 PM	6	2	1	0	9	14	0	0	0	14	4	151	1	0	156	0	171	7	0	178	357
Total Volume	21	12	11	0	44	51	5	10	0	66	6	567	11	0	584	5	667	40	0	712	1406
% App. Total	47.7	27.3	25.0	0.0	100	77.3	7.6	15.2	0.0	100	1.0	97.1	1.9	0.0	100	0.7	93.7	5.6	0.0	100	
PHF					0.728					0.761					0.940					0.971	0.947
Cars, PU, Vans	21	12	10	0	43	49	5	9	0	63	6	511	10	0	527	5	609	39	0	653	1286
% Cars, PU, Vans	100.0	100.0	90.9	0.0	97.7	96.1	100.0	90.0	0.0	95.5	100.0	90.1	90.9	0.0	90.2	100.0	91.3	97.5	0.0	91.7	91.5
Heavy trucks	0	0	1	0	1	2	0	1	0	3	0	56	1	0	57	0	58	1	0	59	120
%Heavy trucks	0.0	0.0	9.1	0.0	2.3	3.9	0.0	10.0	0.0	4.5	0.0	9.9	9.1	0.0	9.8	0.0	8.7	2.5	0.0	8.3	8.5

National Data & Surveying Services Intersection Turning Movement Count

Location: Burroughs Ln & Windsor Blvd
City: Windsor
Control: Signalized

Project ID: 23-250015-005
Date: 5/11/2023

Data - Total

NS/EW Streets:	Burroughs Ln				Burroughs Ln				Windsor Blvd				Windsor Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	0	1	0	1	2	0	0	0	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	1	135	0	0	0	55	1	0	192
6:15 AM	0	0	0	0	0	0	1	0	4	174	0	0	0	69	2	0	250
6:30 AM	0	0	0	0	1	0	1	0	4	160	0	0	0	69	1	0	236
6:45 AM	0	0	0	0	0	0	1	0	7	123	0	0	0	68	1	0	200
7:00 AM	0	0	0	0	3	0	5	0	8	142	0	0	0	77	3	0	238
7:15 AM	0	0	0	0	3	0	2	0	10	178	0	0	0	107	1	0	301
7:30 AM	0	0	0	0	4	0	6	0	15	200	0	0	0	73	5	0	303
7:45 AM	0	0	0	0	2	0	14	0	7	153	0	0	0	96	4	0	276
8:00 AM	0	0	0	0	5	0	9	0	12	120	0	0	0	115	8	0	269
8:15 AM	0	0	0	0	3	0	7	0	6	152	0	0	0	113	6	0	287
8:30 AM	0	0	0	0	1	0	5	0	12	135	0	0	0	78	2	0	233
8:45 AM	0	0	0	0	1	0	7	0	18	144	0	0	0	109	4	0	283
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	23	0	58	0	104	1816	0	0	0	1029	38	0	3068
APPROACH %'s :					28.40%	0.00%	71.60%	0.00%	5.42%	94.58%	0.00%	0.00%	0.00%	96.44%	3.56%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	14	0	31	0	44	651	0	0	0	391	18	0	1149
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.700	0.000	0.554	0.000	0.733	0.814	0.000	0.000	0.000	0.850	0.563	0.000	0.948
					0.703				0.808				0.831				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	0	1	0	1	2	0	0	0	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:30 PM	rrr	0	0	0	10	0	27	0	20	126	0	0	0	155	27	0	365
3:45 PM	0	0	0	0	6	0	38	0	18	144	0	0	0	181	30	0	417
4:00 PM	0	0	0	0	8	0	29	0	14	131	0	0	0	174	28	0	384
4:15 PM	0	0	0	0	6	0	33	0	24	131	0	0	0	187	26	0	407
4:30 PM	0	0	0	0	7	0	31	0	25	148	0	0	0	195	29	0	435
4:45 PM	0	0	0	0	12	0	42	0	34	145	0	0	0	181	34	0	448
5:00 PM	0	0	0	0	12	0	34	0	30	135	0	0	0	151	26	0	388
5:15 PM	0	0	0	0	4	0	26	0	32	164	0	1	0	190	34	0	451
5:30 PM	0	0	0	0	11	0	46	0	32	144	0	0	0	123	31	0	387
5:45 PM	0	0	0	0	9	0	31	0	22	109	0	0	0	178	28	0	377
6:00 PM	0	0	0	0	4	0	38	0	20	122	0	0	0	173	26	0	383
6:15 PM	0	0	0	0	7	0	40	0	18	115	0	0	0	133	16	0	329
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	96	0	415	0	289	1614	0	1	0	2021	335	0	4771
APPROACH %'s :					18.79%	0.00%	81.21%	0.00%	15.18%	84.77%	0.00%	0.05%	0.00%	85.78%	14.22%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	35	0	133	0	121	592	0	1	0	717	123	0	1722
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.729	0.000	0.792	0.000	0.890	0.902	0.000	0.250	0.000	0.919	0.904	0.000	0.955
					0.778				0.906				0.938				

National Data & Surveying Services Intersection Turning Movement Count

Location: Burroughs Ln & Windsor Blvd
City: Windsor
Control: Signalized

Project ID: 23-250015-005
Date: 5/11/2023

Data - Cars

NS/EW Streets:	Burroughs Ln				Burroughs Ln				Windsor Blvd				Windsor Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	0	1	0	1	2	0	0	0	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0	118	0	0	0	39	1	0	158
6:15 AM	0	0	0	0	0	0	1	0	3	156	0	0	0	58	2	0	220
6:30 AM	0	0	0	0	1	0	1	0	3	143	0	0	0	61	1	0	210
6:45 AM	0	0	0	0	0	0	0	0	6	113	0	0	0	51	1	0	171
7:00 AM	0	0	0	0	3	0	4	0	7	122	0	0	0	61	3	0	200
7:15 AM	0	0	0	0	3	0	2	0	10	156	0	0	0	80	1	0	252
7:30 AM	0	0	0	0	4	0	5	0	15	168	0	0	0	56	3	0	251
7:45 AM	0	0	0	0	1	0	14	0	7	132	0	0	0	77	4	0	235
8:00 AM	0	0	0	0	5	0	8	0	12	104	0	0	0	92	8	0	229
8:15 AM	0	0	0	0	2	0	6	0	6	120	0	0	0	92	5	0	231
8:30 AM	0	0	0	0	1	0	5	0	12	112	0	0	0	59	2	0	191
8:45 AM	0	0	0	0	1	0	7	0	18	120	0	0	0	87	4	0	237
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	21	0	53	0	99	1564	0	0	0	813	35	0	2585
APPROACH %'s :					28.38%	0.00%	71.62%	0.00%	5.95%	94.05%	0.00%	0.00%	0.00%	95.87%	4.13%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	13	0	29	0	44	560	0	0	0	305	16	0	967
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.650	0.000	0.518	0.000	0.733	0.833	0.000	0.000	0.000	0.829	0.500	0.000	0.959
							0.700				0.825				0.803		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	0	1	0	1	2	0	0	0	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:30 PM	0	0	0	0	10	0	27	0	19	102	0	0	0	141	26	0	325
3:45 PM	0	0	0	0	6	0	35	0	18	132	0	0	0	155	30	0	376
4:00 PM	0	0	0	0	8	0	29	0	13	113	0	0	0	156	27	0	346
4:15 PM	0	0	0	0	6	0	33	0	23	120	0	0	0	170	26	0	378
4:30 PM	0	0	0	0	7	0	29	0	25	136	0	0	0	181	27	0	405
4:45 PM	0	0	0	0	12	0	41	0	34	131	0	0	0	167	31	0	416
5:00 PM	0	0	0	0	12	0	33	0	30	123	0	0	0	136	26	0	360
5:15 PM	0	0	0	0	4	0	26	0	32	152	0	1	0	187	34	0	436
5:30 PM	0	0	0	0	11	0	46	0	32	135	0	0	0	112	31	0	367
5:45 PM	0	0	0	0	9	0	31	0	22	100	0	0	0	157	28	0	347
6:00 PM	0	0	0	0	4	0	38	0	20	111	0	0	0	164	26	0	363
6:15 PM	0	0	0	0	7	0	40	0	18	106	0	0	0	128	16	0	315
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	96	0	408	0	286	1461	0	1	0	1854	328	0	4434
APPROACH %'s :					19.05%	0.00%	80.95%	0.00%	16.36%	83.58%	0.00%	0.06%	0.00%	84.97%	15.03%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	35	0	129	0	121	542	0	1	0	671	118	0	1617
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.729	0.000	0.787	0.000	0.890	0.891	0.000	0.250	0.000	0.897	0.868	0.000	0.927
							0.774				0.897				0.893		

National Data & Surveying Services Intersection Turning Movement Count

Location: Burroughs Ln & Windsor Blvd
City: Windsor
Control: Signalized

Project ID: 23-250015-005
Date: 5/11/2023

Data - HT

NS/EW Streets:	Burroughs Ln				Burroughs Ln				Windsor Blvd				Windsor Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	0	1	0	1	2	0	0	0	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	1	17	0	0	0	16	0	0	34
6:15 AM	0	0	0	0	0	0	0	0	1	18	0	0	0	11	0	0	30
6:30 AM	0	0	0	0	0	0	0	0	1	17	0	0	0	8	0	0	26
6:45 AM	0	0	0	0	0	0	1	0	1	10	0	0	0	17	0	0	29
7:00 AM	0	0	0	0	0	0	1	0	1	20	0	0	0	16	0	0	38
7:15 AM	0	0	0	0	0	0	0	0	0	22	0	0	0	27	0	0	49
7:30 AM	0	0	0	0	0	0	1	0	0	32	0	0	0	17	2	0	52
7:45 AM	0	0	0	0	1	0	0	0	0	21	0	0	0	19	0	0	41
8:00 AM	0	0	0	0	0	0	1	0	0	16	0	0	0	23	0	0	40
8:15 AM	0	0	0	0	1	0	1	0	0	32	0	0	0	21	1	0	56
8:30 AM	0	0	0	0	0	0	0	0	0	23	0	0	0	19	0	0	42
8:45 AM	0	0	0	0	0	0	0	0	0	24	0	0	0	22	0	0	46
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	2	0	5	0	5	252	0	0	0	216	3	0	483
APPROACH %'s :					28.57%	0.00%	71.43%	0.00%	1.95%	98.05%	0.00%	0.00%	0.00%	98.63%	1.37%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	1	0	2	0	0	91	0	0	0	86	2	0	182
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.250	0.000	0.500	0.000	0.000	0.711	0.000	0.000	0.000	0.796	0.250	0.000	0.875
							0.750				0.711				0.815		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	0	1	0	1	2	0	0	0	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:30 PM	0	0	0	0	0	0	0	0	1	24	0	0	0	14	1	0	40
3:45 PM	0	0	0	0	0	0	3	0	0	12	0	0	0	26	0	0	41
4:00 PM	0	0	0	0	0	0	0	0	1	18	0	0	0	18	1	0	38
4:15 PM	0	0	0	0	0	0	0	0	1	11	0	0	0	17	0	0	29
4:30 PM	0	0	0	0	0	0	2	0	0	12	0	0	0	14	2	0	30
4:45 PM	0	0	0	0	0	0	1	0	0	14	0	0	0	14	3	0	32
5:00 PM	0	0	0	0	0	0	1	0	0	12	0	0	0	15	0	0	28
5:15 PM	0	0	0	0	0	0	0	0	0	12	0	0	0	3	0	0	15
5:30 PM	0	0	0	0	0	0	0	0	0	9	0	0	0	11	0	0	20
5:45 PM	0	0	0	0	0	0	0	0	0	9	0	0	0	21	0	0	30
6:00 PM	0	0	0	0	0	0	0	0	0	11	0	0	0	9	0	0	20
6:15 PM	0	0	0	0	0	0	0	0	0	9	0	0	0	5	0	0	14
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	7	0	3	153	0	0	0	167	7	0	337
APPROACH %'s :					0.00%	0.00%	100.00%	0.00%	1.92%	98.08%	0.00%	0.00%	0.00%	95.98%	4.02%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	4	0	0	50	0	0	0	46	5	0	105
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.893	0.000	0.000	0.000	0.767	0.417	0.000	0.820
							0.500				0.893				0.750		

National Data & Surveying Services Intersection Turning Movement Count

Location: Burroughs Ln & Windsor Blvd
City: Windsor
Control: Signalized

Project ID: 23-250015-005
Date: 5/11/2023

Data - Bikes

NS/EW Streets:	Burroughs Ln				Burroughs Ln				Windsor Blvd				Windsor Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	0	1	0	1	2	0	0	0	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	0	1	0	1	2	0	0	0	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
APPROACH %'s :									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.500
										0.250				0.250			

National Data & Surveying Services Intersection Turning Movement Count

Location: Burroughs Ln & Windsor Blvd
City: Windsor
Project ID: 23-250015-005
Date: 5/11/2023

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Burroughs Ln		Burroughs Ln		Windsor Blvd		Windsor Blvd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	**07:15 AM - 08:15 AM**								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	**04:30 PM - 05:30 PM**								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

Prepared by National Data & Surveying Services

Burroughs Ln & Windsor Blvd

Peak Hour Turning Movement Count

ID: 23-250015-005
City: Windsor

Day: Thursday
Date: 5/11/2023

PEAK HOURS

AM	07:15 AM - 08:15 AM
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	6:00 AM - 09:00 AM
NOON	NONE
PM	3:30 PM - 06:30 PM

SOUTHBOUND (Burroughs Ln)

AM	31	0	14	0	62	AM
NOON	0	0	0	0	0	NOON
PM	133	0	35	0	244	PM
	1	0	1	0		

EASTBOUND (Windsor Blvd)

AM	NOON	PM	
422	0	851	
0	0	1	0
44	0	121	1
651	0	592	2
0	0	0	0

WESTBOUND (Windsor Blvd)

	PM	NOON	AM
1	123	0	18
2	717	0	391
0	0	0	0
0	0	0	0
	627	0	665

NORTHBOUND (Burroughs Ln)

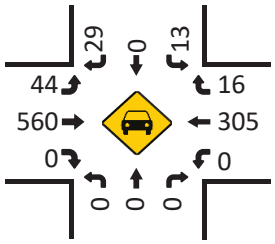
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM
	0	0	0	0		

CONTROL

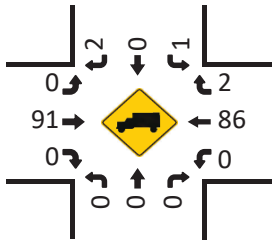
Signalized

TEV	1149 AM	0 NOON	1722 PM
PHF	0.95		0.95

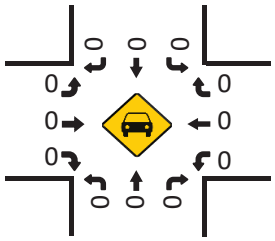
Cars (AM)



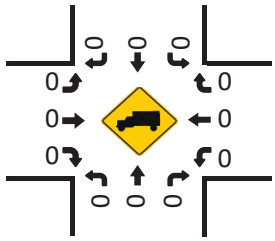
HT (AM)



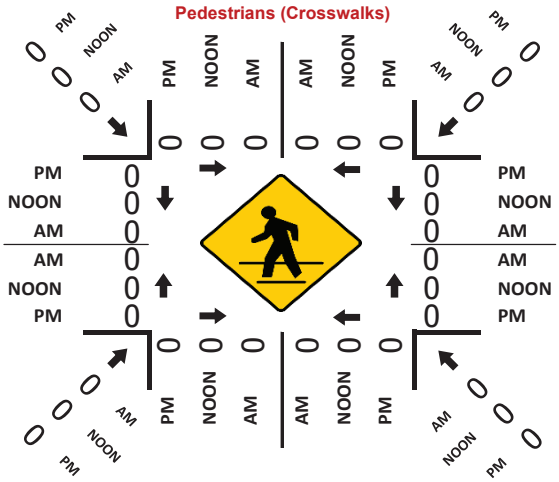
Cars (NOON)



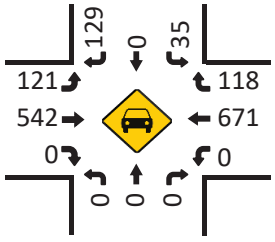
HT (NOON)



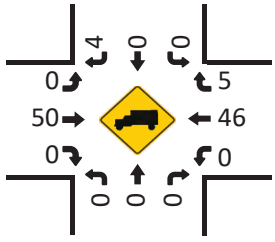
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Project ID: 23-250015-005
Location: Burroughs Ln & Windsor Blvd
City: Windsor

Day: Thursday
Date: 5/11/2023

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Burroughs Ln Northbound						Burroughs Ln Southbound						Windsor Blvd Eastbound						Windsor Blvd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	135	0	0	0	136	0	55	1	0	0	56	192
6:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	4	174	0	0	0	178	0	69	2	0	0	71	250
6:30 AM	0	0	0	0	0	0	1	0	1	0	0	2	4	160	0	0	0	164	0	69	1	0	0	70	236
6:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	7	123	0	0	0	130	0	68	1	0	0	69	200
Total	0	0	0	0	0	0	1	0	3	0	0	4	16	592	0	0	0	608	0	261	5	0	0	266	878
7:00 AM	0	0	0	0	0	0	3	0	5	0	0	8	8	142	0	0	0	150	0	77	3	0	0	80	238
7:15 AM	0	0	0	0	0	0	3	0	2	0	0	5	10	178	0	0	0	188	0	107	1	0	0	108	301
7:30 AM	0	0	0	0	0	0	4	0	6	0	0	10	15	200	0	0	0	215	0	73	5	0	0	78	303
7:45 AM	0	0	0	0	0	0	2	0	14	0	0	16	7	153	0	0	0	160	0	96	4	0	0	100	276
Total	0	0	0	0	0	0	12	0	27	0	0	39	40	673	0	0	0	713	0	353	13	0	0	366	1118
8:00 AM	0	0	0	0	0	0	5	0	9	0	0	14	12	120	0	0	0	132	0	115	8	0	0	123	269
8:15 AM	0	0	0	0	0	0	3	0	7	0	0	10	6	152	0	0	0	158	0	113	6	0	0	119	287
8:30 AM	0	0	0	0	0	0	1	0	5	0	0	6	12	135	0	0	0	147	0	78	2	0	0	80	233
8:45 AM	0	0	0	0	0	0	1	0	7	0	0	8	18	144	0	0	0	162	0	109	4	0	0	113	283
Total	0	0	0	0	0	0	10	0	28	0	0	38	48	551	0	0	0	599	0	415	20	0	0	435	1072
BREAK																									
3:30 PM	0	0	0	0	0	0	10	0	27	0	0	37	20	126	0	0	0	146	0	155	27	0	0	182	365
3:45 PM	0	0	0	0	0	0	6	0	38	0	0	44	18	144	0	0	0	162	0	181	30	0	0	211	417
Total	0	0	0	0	0	0	16	0	65	0	0	81	38	270	0	0	0	308	0	336	57	0	0	393	782
4:00 PM	0	0	0	0	0	0	8	0	29	0	0	37	14	131	0	0	0	145	0	174	28	0	0	202	384
4:15 PM	0	0	0	0	0	0	6	0	33	0	0	39	24	131	0	0	0	155	0	187	26	0	0	213	407
4:30 PM	0	0	0	0	0	0	7	0	31	0	0	38	25	148	0	0	0	173	0	195	29	0	0	224	435
4:45 PM	0	0	0	0	0	0	12	0	42	0	0	54	34	145	0	0	0	179	0	181	34	0	0	215	448
Total	0	0	0	0	0	0	33	0	135	0	0	168	97	555	0	0	0	652	0	737	117	0	0	854	1674
5:00 PM	0	0	0	0	0	0	12	0	34	0	0	46	30	135	0	0	0	165	0	151	26	0	0	177	388
5:15 PM	0	0	0	0	0	0	4	0	26	0	0	30	32	164	0	1	0	197	0	190	34	0	0	224	451
5:30 PM	0	0	0	0	0	0	11	0	46	0	0	57	32	144	0	0	0	176	0	123	31	0	0	154	387
5:45 PM	0	0	0	0	0	0	9	0	31	0	0	40	22	109	0	0	0	131	0	178	28	0	0	206	377
Total	0	0	0	0	0	0	36	0	137	0	0	173	116	552	0	1	0	669	0	642	119	0	0	761	1603
6:00 PM	0	0	0	0	0	0	4	0	38	0	0	42	20	122	0	0	0	142	0	173	26	0	0	199	383
6:15 PM	0	0	0	0	0	0	7	0	40	0	0	47	18	115	0	0	0	133	0	133	16	0	0	149	329
Total	0	0	0	0	0	0	11	0	78	0	0	89	38	237	0	0	0	275	0	306	42	0	0	348	712
Grand Total	0	0	0	0	0	0	119	0	473	0	0	592	393	3430	0	1	0	3824	0	3050	373	0	0	3423	7839
Apprch %	0.0	0.0	0.0	0.0	0.0		20.1	0.0	79.9	0.0	0.0		10.3	89.7	0.0	0.0	0.0		0.0	89.1	10.9	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	6.0	0.0	0.0	7.6	5.0	43.8	0.0	0.0	0.0	48.8	0.0	38.9	4.8	0.0	0.0	43.7	
Cars, PU, Vans	0	0	0	0		0	117	0	461	0		578	385	3025	0	1		3411	0	2667	363	0		3030	7019
% Cars, PU, Vans	0.0	0.0	0.0	0.0		0.0	98.3	0.0	97.5	0.0		97.6	98.0	88.2	0.0	100.0		89.2	0.0	87.4	97.3	0.0		88.5	89.5
Heavy trucks	0	0	0	0		0	2	0	12	0		14	8	405	0	0		413	0	383	10	0		393	820
%Heavy trucks	0.0	0.0	0.0	0.0		0.0	1.7	0.0	2.5	0.0		2.4	2.0	11.8	0.0	0.0		10.8	0.0	12.6	2.7	0.0		11.5	10.5

Project ID: 23-250015-005
Location: Burroughs Ln & Windsor Blvd
City: Windsor

PEAK HOURS

Day: Thursday
Date: 5/11/2023

AM

	Burroughs Ln Northbound					Burroughs Ln Southbound					Windsor Blvd Eastbound					Windsor Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 06:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
7:15 AM	0	0	0	0	0	3	0	2	0	5	10	178	0	0	188	0	107	1	0	108	301
7:30 AM	0	0	0	0	0	4	0	6	0	10	15	200	0	0	215	0	73	5	0	78	303
7:45 AM	0	0	0	0	0	2	0	14	0	16	7	153	0	0	160	0	96	4	0	100	276
8:00 AM	0	0	0	0	0	5	0	9	0	14	12	120	0	0	132	0	115	8	0	123	269
Total Volume	0	0	0	0	0	14	0	31	0	45	44	651	0	0	695	0	391	18	0	409	1149
% App. Total	0.0	0.0	0.0	0.0	0	31.1	0.0	68.9	0.0	100	6.3	93.7	0.0	0.0	100	0.0	95.6	4.4	0.0	100	
PHF										0.703					0.808					0.831	0.948
Cars, PU, Vans	0	0	0	0	0	13	0	29	0	42	44	560	0	0	604	0	305	16	0	321	967
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	92.9	0.0	93.5	0.0	93.3	100.0	86.0	0.0	0.0	86.9	0.0	78.0	88.9	0.0	78.5	84.2
Heavy trucks	0	0	0	0	0	1	0	2	0	3	0	91	0	0	91	0	86	2	0	88	182
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	7.1	0.0	6.5	0.0	6.7	0.0	14.0	0.0	0.0	13.1	0.0	22.0	11.1	0.0	21.5	15.8

PM

	Burroughs Ln Northbound					Burroughs Ln Southbound					Windsor Blvd Eastbound					Windsor Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 03:30 PM - 06:30 PM																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
4:30 PM	0	0	0	0	0	7	0	31	0	38	25	148	0	0	173	0	195	29	0	224	435
4:45 PM	0	0	0	0	0	12	0	42	0	54	34	145	0	0	179	0	181	34	0	215	448
5:00 PM	0	0	0	0	0	12	0	34	0	46	30	135	0	0	165	0	151	26	0	177	388
5:15 PM	0	0	0	0	0	4	0	26	0	30	32	164	0	1	197	0	190	34	0	224	451
Total Volume	0	0	0	0	0	35	0	133	0	168	121	592	0	1	714	0	717	123	0	840	1722
% App. Total	0.0	0.0	0.0	0.0	0	20.8	0.0	79.2	0.0	100	16.9	82.9	0.0	0.1	100	0.0	85.4	14.6	0.0	100	
PHF										0.778					0.906					0.938	0.955
Cars, PU, Vans	0	0	0	0	0	35	0	129	0	164	121	542	0	1	664	0	671	118	0	789	1617
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	0.0	97.0	0.0	97.6	100.0	91.6	0.0	100.0	93.0	0.0	93.6	95.9	0.0	93.9	93.9
Heavy trucks	0	0	0	0	0	0	0	4	0	4	0	50	0	0	50	0	46	5	0	51	105
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	2.4	0.0	8.4	0.0	0.0	7.0	0.0	6.4	4.1	0.0	6.1	6.1

National Data & Surveying Services Intersection Turning Movement Count

Location: Dominion Way & Windsor Blvd
City: Windsor
Control: Signalized

Project ID: 23-250015-003
Date: 5/23/2023

Data - Total

NS/EW Streets:	Dominion Way				Dominion Way				Windsor Blvd				Windsor Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	0	0	0	0	2	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	2	0	2	0	0	0	0	0	0	135	1	0	6	58	0	0	204
6:15 AM	0	0	0	0	0	0	0	0	0	187	0	0	5	72	0	0	264
6:30 AM	0	0	0	0	0	0	0	0	0	166	3	0	5	64	0	0	238
6:45 AM	0	0	0	0	0	0	0	0	0	138	2	0	11	92	0	0	243
7:00 AM	1	0	1	0	0	0	0	0	0	205	0	0	6	105	0	0	318
7:15 AM	1	0	2	0	0	0	0	0	0	176	1	0	1	122	0	0	303
7:30 AM	0	0	0	0	0	0	0	0	0	200	1	0	6	90	0	0	297
7:45 AM	2	0	0	0	0	0	0	0	0	148	2	0	7	94	0	0	253
8:00 AM	1	0	1	0	0	0	0	0	0	158	1	0	1	89	0	0	251
8:15 AM	0	0	2	0	0	0	0	0	0	140	0	0	2	105	0	0	249
8:30 AM	1	0	1	0	0	0	0	0	0	146	1	0	4	87	0	0	240
8:45 AM	1	0	0	0	0	0	0	0	0	148	0	0	5	104	0	0	258
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	9	0	9	0	0	0	0	0	0	1947	12	0	59	1082	0	0	3118
APPROACH %'s :	50.00%	0.00%	50.00%	0.00%					0.00%	99.39%	0.61%	0.00%	5.17%	94.83%	0.00%	0.00%	
PEAK HR :	**07:00 AM - 08:00 AM**																TOTAL
PEAK HR VOL :	4	0	3	0	0	0	0	0	0	729	4	0	20	411	0	0	1171
PEAK HR FACTOR :	0.500	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.889	0.500	0.000	0.714	0.842	0.000	0.000	0.921
	0.583								0.894				0.876				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	0	0	0	0	2	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:30 PM	3	0	5	0	0	0	0	0	0	145	9	0	9	189	0	0	360
3:45 PM	2	0	0	0	0	0	0	0	0	127	7	0	20	201	0	0	357
4:00 PM	6	0	11	0	0	0	0	0	0	141	1	0	4	192	0	0	355
4:15 PM	38	0	57	0	0	0	0	0	0	140	1	0	1	239	0	0	476
4:30 PM	4	0	5	0	0	0	0	0	0	155	1	0	0	213	0	0	378
4:45 PM	2	0	3	0	0	0	0	0	0	125	2	0	0	210	0	0	342
5:00 PM	2	0	1	0	0	0	0	0	0	152	1	0	0	193	0	0	349
5:15 PM	3	0	3	0	0	0	0	0	0	129	0	0	1	265	0	0	401
5:30 PM	1	0	1	0	0	0	0	0	0	113	1	0	0	219	0	0	335
5:45 PM	1	0	4	0	0	0	0	0	0	122	2	0	0	190	0	0	319
6:00 PM	0	0	1	0	0	0	0	0	0	120	0	0	0	146	0	0	267
6:15 PM	0	0	1	0	0	0	0	0	0	90	0	0	0	148	0	0	239
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	62	0	92	0	0	0	0	0	0	1559	25	0	35	2405	0	0	4178
APPROACH %'s :	40.26%	0.00%	59.74%	0.00%					0.00%	98.42%	1.58%	0.00%	1.43%	98.57%	0.00%	0.00%	
PEAK HR :	**03:45 PM - 04:45 PM**																TOTAL
PEAK HR VOL :	50	0	73	0	0	0	0	0	0	563	10	0	25	845	0	0	1566
PEAK HR FACTOR :	0.329	0.000	0.320	0.000	0.000	0.000	0.000	0.000	0.000	0.908	0.357	0.000	0.313	0.884	0.000	0.000	0.822
	0.324								0.918				0.906				

National Data & Surveying Services Intersection Turning Movement Count

Location: Dominion Way & Windsor Blvd
City: Windsor
Control: Signalized

Project ID: 23-250015-003
Date: 5/23/2023

Data - Cars

NS/EW Streets:	Dominion Way				Dominion Way				Windsor Blvd				Windsor Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	0	0	0	0	2	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	2	0	2	0	0	0	0	0	0	119	1	0	6	44	0	0	174
6:15 AM	0	0	0	0	0	0	0	0	0	169	0	0	5	58	0	0	232
6:30 AM	0	0	0	0	0	0	0	0	0	143	2	0	4	44	0	0	193
6:45 AM	0	0	0	0	0	0	0	0	0	127	2	0	10	72	0	0	211
7:00 AM	0	0	1	0	0	0	0	0	0	181	0	0	4	81	0	0	267
7:15 AM	0	0	1	0	0	0	0	0	0	157	1	0	1	104	0	0	264
7:30 AM	0	0	0	0	0	0	0	0	0	182	1	0	6	68	0	0	257
7:45 AM	2	0	0	0	0	0	0	0	0	135	1	0	7	77	0	0	222
8:00 AM	0	0	1	0	0	0	0	0	0	122	1	0	1	80	0	0	205
8:15 AM	0	0	1	0	0	0	0	0	0	119	0	0	1	87	0	0	208
8:30 AM	0	0	1	0	0	0	0	0	0	121	0	0	1	67	0	0	190
8:45 AM	0	0	0	0	0	0	0	0	0	127	0	0	2	81	0	0	210
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	0	7	0	0	0	0	0	0	1702	9	0	48	863	0	0	2633
APPROACH %'s :	36.36%	0.00%	63.64%	0.00%					0.00%	99.47%	0.53%	0.00%	5.27%	94.73%	0.00%	0.00%	
PEAK HR :	**07:00 AM - 08:00 AM**																TOTAL
PEAK HR VOL :	2	0	2	0	0	0	0	0	0	655	3	0	18	330	0	0	1010
PEAK HR FACTOR :	0.250	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.900	0.750	0.000	0.643	0.793	0.000	0.000	0.946
			0.500								0.899				0.829		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	0	0	0	0	2	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:30 PM	2	0	4	0	0	0	0	0	0	117	9	0	7	159	0	0	298
3:45 PM	1	0	0	0	0	0	0	0	0	112	7	0	20	176	0	0	316
4:00 PM	5	0	10	0	0	0	0	0	0	121	1	0	4	175	0	0	316
4:15 PM	38	0	57	0	0	0	0	0	0	121	1	0	1	210	0	0	428
4:30 PM	4	0	5	0	0	0	0	0	0	137	1	0	0	191	0	0	338
4:45 PM	2	0	3	0	0	0	0	0	0	114	2	0	0	191	0	0	312
5:00 PM	2	0	1	0	0	0	0	0	0	143	1	0	0	179	0	0	326
5:15 PM	3	0	3	0	0	0	0	0	0	113	0	0	0	246	0	0	365
5:30 PM	1	0	1	0	0	0	0	0	0	108	1	0	0	204	0	0	315
5:45 PM	1	0	3	0	0	0	0	0	0	108	2	0	0	180	0	0	294
6:00 PM	0	0	1	0	0	0	0	0	0	108	0	0	0	133	0	0	242
6:15 PM	0	0	1	0	0	0	0	0	0	81	0	0	0	136	0	0	218
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	59	0	89	0	0	0	0	0	0	1383	25	0	32	2180	0	0	3768
APPROACH %'s :	39.86%	0.00%	60.14%	0.00%					0.00%	98.22%	1.78%	0.00%	1.45%	98.55%	0.00%	0.00%	
PEAK HR :	**03:45 PM - 04:45 PM**																TOTAL
PEAK HR VOL :	48	0	72	0	0	0	0	0	0	491	10	0	25	752	0	0	1398
PEAK HR FACTOR :	0.316	0.000	0.316	0.000	0.000	0.000	0.000	0.000	0.000	0.896	0.357	0.000	0.313	0.895	0.000	0.000	0.817
			0.316								0.908				0.921		

National Data & Surveying Services Intersection Turning Movement Count

Location: Dominion Way & Windsor Blvd
City: Windsor
Control: Signalized

Project ID: 23-250015-003
Date: 5/23/2023

Data - HT

NS/EW Streets:	Dominion Way				Dominion Way				Windsor Blvd				Windsor Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	0	0	0	0	2	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0	16	0	0	0	14	0	0	30
6:15 AM	0	0	0	0	0	0	0	0	0	18	0	0	0	14	0	0	32
6:30 AM	0	0	0	0	0	0	0	0	0	23	1	0	1	20	0	0	45
6:45 AM	0	0	0	0	0	0	0	0	0	11	0	0	1	20	0	0	32
7:00 AM	1	0	0	0	0	0	0	0	0	24	0	0	2	24	0	0	51
7:15 AM	1	0	1	0	0	0	0	0	0	19	0	0	0	18	0	0	39
7:30 AM	0	0	0	0	0	0	0	0	0	18	0	0	0	22	0	0	40
7:45 AM	0	0	0	0	0	0	0	0	0	13	1	0	0	17	0	0	31
8:00 AM	1	0	0	0	0	0	0	0	0	36	0	0	0	9	0	0	46
8:15 AM	0	0	1	0	0	0	0	0	0	21	0	0	1	18	0	0	41
8:30 AM	1	0	0	0	0	0	0	0	0	25	1	0	3	20	0	0	50
8:45 AM	1	0	0	0	0	0	0	0	0	21	0	0	3	23	0	0	48
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	0	2	0	0	0	0	0	0	245	3	0	11	219	0	0	485
APPROACH %'s :	71.43%	0.00%	28.57%	0.00%					0.00%	98.79%	1.21%	0.00%	4.78%	95.22%	0.00%	0.00%	
PEAK HR :	**07:00 AM - 08:00 AM**																TOTAL
PEAK HR VOL :	2	0	1	0	0	0	0	0	0	74	1	0	2	81	0	0	161
PEAK HR FACTOR :	0.500	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.771	0.250	0.000	0.250	0.844	0.000	0.000	0.789
	0.375								0.781				0.798				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	0	0	0	0	2	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:30 PM	1	0	1	0	0	0	0	0	0	28	0	0	2	30	0	0	62
3:45 PM	1	0	0	0	0	0	0	0	0	15	0	0	0	25	0	0	41
4:00 PM	1	0	1	0	0	0	0	0	0	20	0	0	0	17	0	0	39
4:15 PM	0	0	0	0	0	0	0	0	0	19	0	0	0	29	0	0	48
4:30 PM	0	0	0	0	0	0	0	0	0	18	0	0	0	22	0	0	40
4:45 PM	0	0	0	0	0	0	0	0	0	11	0	0	0	19	0	0	30
5:00 PM	0	0	0	0	0	0	0	0	0	9	0	0	0	14	0	0	23
5:15 PM	0	0	0	0	0	0	0	0	0	16	0	0	1	19	0	0	36
5:30 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	15	0	0	20
5:45 PM	0	0	1	0	0	0	0	0	0	14	0	0	0	10	0	0	25
6:00 PM	0	0	0	0	0	0	0	0	0	12	0	0	0	13	0	0	25
6:15 PM	0	0	0	0	0	0	0	0	0	9	0	0	0	12	0	0	21
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	0	3	0	0	0	0	0	0	176	0	0	3	225	0	0	410
APPROACH %'s :	50.00%	0.00%	50.00%	0.00%					0.00%	100.00%	0.00%	0.00%	1.32%	98.68%	0.00%	0.00%	
PEAK HR :	**03:45 PM - 04:45 PM**																TOTAL
PEAK HR VOL :	2	0	1	0	0	0	0	0	0	72	0	0	0	93	0	0	168
PEAK HR FACTOR :	0.500	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.900	0.000	0.000	0.000	0.802	0.000	0.000	0.875
	0.375								0.900				0.802				

National Data & Surveying Services Intersection Turning Movement Count

Location: Dominion Way & Windsor Blvd
City: Windsor
Control: Signalized

Project ID: 23-250015-003
Date: 5/23/2023

Data - Bikes

NS/EW Streets:	Dominion Way				Dominion Way				Windsor Blvd				Windsor Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	0	0	0	0	2	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	0	0	0	0	2	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	03:45 PM - 04:45 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

National Data & Surveying Services Intersection Turning Movement Count

Location: Dominion Way & Windsor Blvd
City: Windsor
Project ID: 23-250015-003
Date: 5/23/2023

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Dominion Way		Dominion Way		Windsor Blvd		Windsor Blvd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	**07:00 AM - 08:00 AM**								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	**03:45 PM - 04:45 PM**								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

Prepared by National Data & Surveying Services

Dominion Way & Windsor Blvd

Peak Hour Turning Movement Count

ID: 23-250015-003
City: Windsor

Day: Tuesday
Date: 5/23/2023

PEAK HOURS

AM: 07:00 AM - 08:00 AM
NOON: NONE
PM: 03:45 PM - 04:45 PM

COUNT PERIODS

AM: 6:00 AM - 09:00 AM
NOON: NONE
PM: 3:30 PM - 06:30 PM

SOUTHBOUND (Dominion Way)

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Windsor Blvd)

AM	NOON	PM		
415	0	895	⇦	
0	0	0	↩	0
0	0	0	↱	0
729	0	563	→	2
4	0	10	↳	1
AM	NOON	PM		

WESTBOUND (Windsor Blvd)

PM	NOON	AM		
0	0	0	↩	0
845	0	411	←	2
25	0	20	↰	1
0	0	0	↰	0
636	0	732	⇨	
PM	NOON	AM		

NORTHBOUND (Dominion Way)

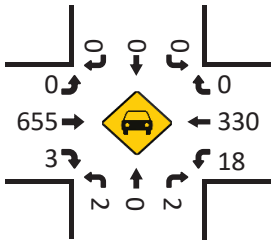
PM	35	0	50	0	73	PM
NOON	0	0	0	0	0	NOON
AM	24	0	4	0	3	AM

CONTROL

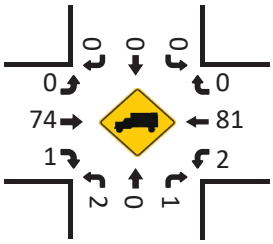
Signalized

TEV	1171 AM	0 NOON	1566 PM
PHF	0.92		0.82

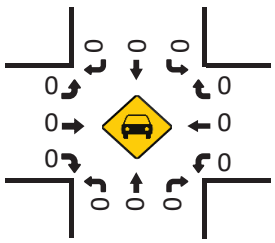
Cars (AM)



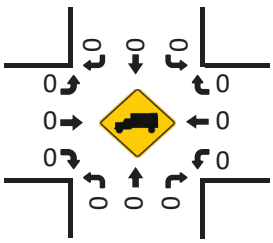
HT (AM)



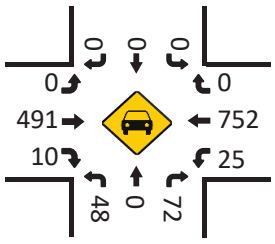
Cars (NOON)



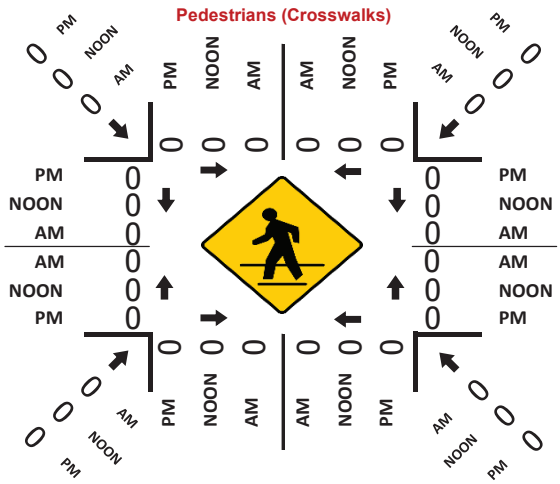
HT (NOON)



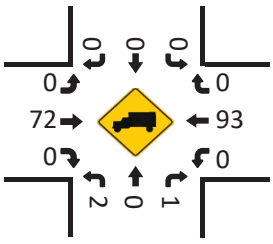
Cars (PM)



Pedestrians (Crosswalks)



HT (PM)



Project ID: 23-250015-003
Location: Dominion Way & Windsor Blvd
City: Windsor

Day: Tuesday
Date: 5/23/2023

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Dominion Way Northbound						Dominion Way Southbound						Windsor Blvd Eastbound						Windsor Blvd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
6:00 AM	2	0	2	0	0	4	0	0	0	0	0	0	0	135	1	0	0	136	6	58	0	0	0	64	204
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	187	0	0	0	187	5	72	0	0	0	77	264
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	166	3	0	0	169	5	64	0	0	0	69	238
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	138	2	0	0	140	11	92	0	0	0	103	243
Total	2	0	2	0	0	4	0	0	0	0	0	0	0	626	6	0	0	632	27	286	0	0	0	313	949
7:00 AM	1	0	1	0	0	2	0	0	0	0	0	0	0	205	0	0	0	205	6	105	0	0	0	111	318
7:15 AM	1	0	2	0	0	3	0	0	0	0	0	0	0	176	1	0	0	177	1	122	0	0	0	123	303
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	200	1	0	0	201	6	90	0	0	0	96	297
7:45 AM	2	0	0	0	0	2	0	0	0	0	0	0	0	148	2	0	0	150	7	94	0	0	0	101	253
Total	4	0	3	0	0	7	0	0	0	0	0	0	0	729	4	0	0	733	20	411	0	0	0	431	1171
8:00 AM	1	0	1	0	0	2	0	0	0	0	0	0	0	158	1	0	0	159	1	89	0	0	0	90	251
8:15 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	140	0	0	0	140	2	105	0	0	0	107	249
8:30 AM	1	0	1	0	0	2	0	0	0	0	0	0	0	146	1	0	0	147	4	87	0	0	0	91	240
8:45 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	148	0	0	0	148	5	104	0	0	0	109	258
Total	3	0	4	0	0	7	0	0	0	0	0	0	0	592	2	0	0	594	12	385	0	0	0	397	998
BREAK																									
3:30 PM	3	0	5	0	0	8	0	0	0	0	0	0	0	145	9	0	0	154	9	189	0	0	0	198	360
3:45 PM	2	0	0	0	0	2	0	0	0	0	0	0	0	127	7	0	0	134	20	201	0	0	0	221	357
Total	5	0	5	0	0	10	0	0	0	0	0	0	0	272	16	0	0	288	29	390	0	0	0	419	717
4:00 PM	6	0	11	0	0	17	0	0	0	0	0	0	0	141	1	0	0	142	4	192	0	0	0	196	355
4:15 PM	38	0	57	0	0	95	0	0	0	0	0	0	0	140	1	0	0	141	1	239	0	0	0	240	476
4:30 PM	4	0	5	0	0	9	0	0	0	0	0	0	0	155	1	0	0	156	0	213	0	0	0	213	378
4:45 PM	2	0	3	0	0	5	0	0	0	0	0	0	0	125	2	0	0	127	0	210	0	0	0	210	342
Total	50	0	76	0	0	126	0	0	0	0	0	0	0	561	5	0	0	566	5	854	0	0	0	859	1551
5:00 PM	2	0	1	0	0	3	0	0	0	0	0	0	0	152	1	0	0	153	0	193	0	0	0	193	349
5:15 PM	3	0	3	0	0	6	0	0	0	0	0	0	0	129	0	0	0	129	1	265	0	0	0	266	401
5:30 PM	1	0	1	0	0	2	0	0	0	0	0	0	0	113	1	0	0	114	0	219	0	0	0	219	335
5:45 PM	1	0	4	0	0	5	0	0	0	0	0	0	0	122	2	0	0	124	0	190	0	0	0	190	319
Total	7	0	9	0	0	16	0	0	0	0	0	0	0	516	4	0	0	520	1	867	0	0	0	868	1404
6:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	120	0	0	0	120	0	146	0	0	0	146	267
6:15 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	90	0	0	0	90	0	148	0	0	0	148	239
Total	0	0	2	0	0	2	0	0	0	0	0	0	0	210	0	0	0	210	0	294	0	0	0	294	506
Grand Total	71	0	101	0	0	172	0	0	0	0	0	0	0	3506	37	0	0	3543	94	3487	0	0	0	3581	7296
Apprch %	41.3	0.0	58.7	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	99.0	1.0	0.0	0.0		2.6	97.4	0.0	0.0	0.0		
Total %	1.0	0.0	1.4	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.1	0.5	0.0	0.0	48.6	1.3	47.8	0.0	0.0	0.0	49.1	
Cars, PU, Vans	63	0	96	0		159	0	0	0	0		0	0	3085	34	0		3119	80	3043	0	0		3123	6401
% Cars, PU, Vans	88.7	0.0	95.0	0.0		92.4	0.0	0.0	0.0	0.0		0.0	0.0	88.0	91.9	0.0		88.0	85.1	87.3	0.0	0.0		87.2	87.7
Heavy trucks	8	0	5	0		13	0	0	0	0		0	0	421	3	0		424	14	444	0	0		458	895
%Heavy trucks	11.3	0.0	5.0	0.0		7.6	0.0	0.0	0.0	0.0		0.0	0.0	12.0	8.1	0.0		12.0	14.9	12.7	0.0	0.0		12.8	12.3

Project ID: 23-250015-003
Location: Dominion Way & Windsor Blvd
City: Windsor

PEAK HOURS

Day: Tuesday
Date: 5/23/2023

AM

	Dominion Way Northbound					Dominion Way Southbound					Windsor Blvd Eastbound					Windsor Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 06:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
7:00 AM	1	0	1	0	2	0	0	0	0	0	0	205	0	0	205	6	105	0	0	111	318
7:15 AM	1	0	2	0	3	0	0	0	0	0	0	176	1	0	177	1	122	0	0	123	303
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	200	1	0	201	6	90	0	0	96	297
7:45 AM	2	0	0	0	2	0	0	0	0	0	0	148	2	0	150	7	94	0	0	101	253
Total Volume	4	0	3	0	7	0	0	0	0	0	0	729	4	0	733	20	411	0	0	431	1171
% App. Total	57.1	0.0	42.9	0.0	100	0.0	0.0	0.0	0.0	0	0.0	99.5	0.5	0.0	100	4.6	95.4	0.0	0.0	100	
PHF					0.583										0.894					0.876	0.921
Cars, PU, Vans	2	0	2	0	4	0	0	0	0	0	0	655	3	0	658	18	330	0	0	348	1010
% Cars, PU, Vans	50.0	0.0	66.7	0.0	57.1	0.0	0.0	0.0	0.0	0.0	0.0	89.8	75.0	0.0	89.8	90.0	80.3	0.0	0.0	80.7	86.3
Heavy trucks	2	0	1	0	3	0	0	0	0	0	0	74	1	0	75	2	81	0	0	83	161
%Heavy trucks	50.0	0.0	33.3	0.0	42.9	0.0	0.0	0.0	0.0	0.0	0.0	10.2	25.0	0.0	10.2	10.0	19.7	0.0	0.0	19.3	13.7

PM

	Dominion Way Northbound					Dominion Way Southbound					Windsor Blvd Eastbound					Windsor Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 03:30 PM - 06:30 PM																					
Peak Hour for Entire Intersection Begins at 03:45 PM																					
3:45 PM	2	0	0	0	2	0	0	0	0	0	0	127	7	0	134	20	201	0	0	221	357
4:00 PM	6	0	11	0	17	0	0	0	0	0	0	141	1	0	142	4	192	0	0	196	355
4:15 PM	38	0	57	0	95	0	0	0	0	0	0	140	1	0	141	1	239	0	0	240	476
4:30 PM	4	0	5	0	9	0	0	0	0	0	0	155	1	0	156	0	213	0	0	213	378
Total Volume	50	0	73	0	123	0	0	0	0	0	0	563	10	0	573	25	845	0	0	870	1566
% App. Total	40.7	0.0	59.3	0.0	100	0.0	0.0	0.0	0.0	0	0.0	98.3	1.7	0.0	100	2.9	97.1	0.0	0.0	100	
PHF					0.324										0.918					0.906	0.822
Cars, PU, Vans	48	0	72	0	120	0	0	0	0	0	0	491	10	0	501	25	752	0	0	777	1398
% Cars, PU, Vans	96.0	0.0	98.6	0.0	97.6	0.0	0.0	0.0	0.0	0.0	0.0	87.2	100.0	0.0	87.4	100.0	89.0	0.0	0.0	89.3	89.3
Heavy trucks	2	0	1	0	3	0	0	0	0	0	0	72	0	0	72	0	93	0	0	93	168
%Heavy trucks	4.0	0.0	1.4	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	12.8	0.0	0.0	12.6	0.0	11.0	0.0	0.0	10.7	10.7

National Data & Surveying Services Intersection Turning Movement Count

Location: Old Mill Rd/Old Suffolk Rd & Windsor Blvd
City: Windsor
Control: 1-Way Stop(NB)

Project ID: 23-250015-004
Date: 5/23/2023

Data - Total

NS/EW Streets:	Old Mill Rd/Old Suffolk Rd				Old Mill Rd/Old Suffolk Rd				Windsor Blvd				Windsor Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	2	0	4	0	0	0	2	0	2	126	3	0	4	58	0	0	201
6:15 AM	12	1	27	0	0	0	0	0	0	181	9	0	0	64	0	0	294
6:30 AM	2	2	9	0	0	0	0	0	1	159	8	0	4	72	0	0	257
6:45 AM	3	0	6	0	0	0	0	0	1	132	2	0	3	97	0	0	244
7:00 AM	4	0	4	0	0	0	1	0	0	193	9	0	3	100	0	0	314
7:15 AM	4	0	1	0	0	0	2	0	0	167	6	0	10	117	0	0	307
7:30 AM	2	0	6	0	0	0	0	0	2	187	10	0	1	98	0	0	306
7:45 AM	3	1	2	0	0	1	0	0	0	149	4	0	5	98	0	0	263
8:00 AM	2	0	4	0	1	0	0	0	2	154	2	0	2	83	0	0	250
8:15 AM	7	0	3	0	0	0	1	0	0	138	0	0	5	101	0	0	255
8:30 AM	3	0	3	0	1	0	0	0	0	135	2	0	5	86	0	0	235
8:45 AM	4	0	1	0	0	1	0	0	2	150	4	0	6	106	0	0	274
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	48	4	70	0	2	2	6	0	10	1871	59	0	48	1080	0	0	3200
APPROACH %'s :	39.34%	3.28%	57.38%	0.00%	20.00%	20.00%	60.00%	0.00%	0.52%	96.44%	3.04%	0.00%	4.26%	95.74%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	13	1	13	0	0	1	3	0	2	696	29	0	19	413	0	0	1190
PEAK HR FACTOR :	0.813	0.250	0.542	0.000	0.000	0.250	0.375	0.000	0.250	0.902	0.725	0.000	0.475	0.882	0.000	0.000	0.947
	0.844				0.500				0.900				0.850				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:30 PM	2	0	3	0	0	0	1	0	1	145	2	0	5	200	0	0	359
3:45 PM	9	0	6	0	1	1	2	0	0	120	4	0	7	201	0	0	351
4:00 PM	12	1	8	0	0	1	1	0	1	131	6	0	8	191	0	0	360
4:15 PM	6	2	8	0	0	1	1	0	6	189	10	0	11	231	0	0	465
4:30 PM	5	0	9	0	2	1	2	0	1	153	7	0	6	199	1	0	386
4:45 PM	6	0	3	0	0	1	3	0	0	126	6	0	11	202	0	2	360
5:00 PM	11	3	12	0	0	0	1	0	2	143	7	0	8	185	0	0	372
5:15 PM	7	0	6	0	0	0	2	0	2	130	3	0	9	262	0	0	421
5:30 PM	5	0	8	0	0	0	0	0	2	96	11	0	13	200	0	0	335
5:45 PM	14	1	7	0	0	0	1	0	2	124	6	0	12	170	0	0	337
6:00 PM	4	0	5	0	0	0	2	0	0	115	4	0	1	153	0	0	284
6:15 PM	26	2	25	0	0	0	1	0	0	91	3	0	7	109	0	0	264
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	107	9	100	0	3	5	17	0	17	1563	69	0	98	2303	1	2	4294
APPROACH %'s :	49.54%	4.17%	46.30%	0.00%	12.00%	20.00%	68.00%	0.00%	1.03%	94.78%	4.18%	0.00%	4.08%	95.80%	0.04%	0.08%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	28	5	32	0	2	3	7	0	9	611	30	0	36	817	1	2	1583
PEAK HR FACTOR :	0.636	0.417	0.667	0.000	0.250	0.750	0.583	0.000	0.375	0.808	0.750	0.000	0.818	0.884	0.250	0.250	0.851
	0.625				0.600				0.793				0.884				

National Data & Surveying Services Intersection Turning Movement Count

Location: Old Mill Rd/Old Suffolk Rd & Windsor Blvd
City: Windsor
Control: 1-Way Stop(NB)

Project ID: 23-250015-004
Date: 5/23/2023

Data - Cars

NS/EW Streets:	Old Mill Rd/Old Suffolk Rd				Old Mill Rd/Old Suffolk Rd				Windsor Blvd				Windsor Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	2	0	4	0	0	0	2	0	2	106	3	0	4	46	0	0	169
6:15 AM	12	1	27	0	0	0	0	0	0	164	9	0	0	49	0	0	262
6:30 AM	2	2	8	0	0	0	0	0	0	137	7	0	2	51	0	0	209
6:45 AM	3	0	6	0	0	0	0	0	1	118	2	0	2	71	0	0	203
7:00 AM	3	0	4	0	0	0	1	0	0	167	8	0	3	77	0	0	263
7:15 AM	2	0	1	0	0	0	2	0	0	146	5	0	9	98	0	0	263
7:30 AM	2	0	5	0	0	0	0	0	2	172	9	0	1	74	0	0	265
7:45 AM	3	0	2	0	0	1	0	0	0	133	4	0	5	79	0	0	227
8:00 AM	2	0	4	0	1	0	0	0	1	113	1	0	2	73	0	0	197
8:15 AM	4	0	3	0	0	0	1	0	0	114	0	0	5	85	0	0	212
8:30 AM	3	0	3	0	1	0	0	0	0	111	1	0	5	62	0	0	186
8:45 AM	3	0	1	0	0	1	0	0	2	123	4	0	6	81	0	0	221
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	41	3	68	0	2	2	6	0	8	1604	53	0	44	846	0	0	2677
APPROACH %'s :	36.61%	2.68%	60.71%	0.00%	20.00%	20.00%	60.00%	0.00%	0.48%	96.34%	3.18%	0.00%	4.94%	95.06%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	10	0	12	0	0	1	3	0	2	618	26	0	18	328	0	0	1018
PEAK HR FACTOR :	0.833	0.000	0.600	0.000	0.000	0.250	0.375	0.000	0.250	0.898	0.722	0.000	0.500	0.837	0.000	0.000	0.960
	0.786				0.500				0.883				0.808				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:30 PM	2	0	3	0	0	0	1	0	1	117	2	0	5	170	0	0	301
3:45 PM	7	0	5	0	1	1	2	0	0	104	3	0	6	180	0	0	309
4:00 PM	9	1	8	0	0	1	1	0	0	111	6	0	8	174	0	0	319
4:15 PM	6	2	8	0	0	1	1	0	6	170	9	0	10	203	0	0	416
4:30 PM	4	0	7	0	2	1	2	0	1	133	7	0	6	178	1	0	342
4:45 PM	4	0	3	0	0	0	3	0	0	114	6	0	10	184	0	2	326
5:00 PM	8	3	12	0	0	0	1	0	2	133	7	0	7	174	0	0	347
5:15 PM	7	0	5	0	0	0	2	0	2	112	3	0	9	240	0	0	380
5:30 PM	5	0	8	0	0	0	0	0	2	92	11	0	13	186	0	0	317
5:45 PM	14	1	7	0	0	0	1	0	2	108	6	0	12	159	0	0	310
6:00 PM	4	0	5	0	0	0	2	0	0	103	4	0	1	137	0	0	256
6:15 PM	25	2	25	0	0	0	1	0	0	82	3	0	7	100	0	0	245
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	95	9	96	0	3	4	17	0	16	1379	67	0	94	2085	1	2	3868
APPROACH %'s :	47.50%	4.50%	48.00%	0.00%	12.50%	16.67%	70.83%	0.00%	1.09%	94.32%	4.58%	0.00%	4.31%	95.55%	0.05%	0.09%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	22	5	30	0	2	2	7	0	9	550	29	0	33	739	1	2	1431
PEAK HR FACTOR :	0.688	0.417	0.625	0.000	0.250	0.500	0.583	0.000	0.375	0.809	0.806	0.000	0.825	0.910	0.250	0.250	0.860
	0.620				0.550				0.795				0.910				

National Data & Surveying Services Intersection Turning Movement Count

Location: Old Mill Rd/Old Suffolk Rd & Windsor Blvd
City: Windsor
Control: 1-Way Stop(NB)

Project ID: 23-250015-004
Date: 5/23/2023

Data - HT

NS/EW Streets:	Old Mill Rd/Old Suffolk Rd				Old Mill Rd/Old Suffolk Rd				Windsor Blvd				Windsor Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0	20	0	0	0	12	0	0	32
6:15 AM	0	0	0	0	0	0	0	0	0	17	0	0	0	15	0	0	32
6:30 AM	0	0	1	0	0	0	0	0	1	22	1	0	2	21	0	0	48
6:45 AM	0	0	0	0	0	0	0	0	0	14	0	0	1	26	0	0	41
7:00 AM	1	0	0	0	0	0	0	0	0	26	1	0	0	23	0	0	51
7:15 AM	2	0	0	0	0	0	0	0	0	21	1	0	1	19	0	0	44
7:30 AM	0	0	1	0	0	0	0	0	0	15	1	0	0	24	0	0	41
7:45 AM	0	1	0	0	0	0	0	0	0	16	0	0	0	19	0	0	36
8:00 AM	0	0	0	0	0	0	0	0	1	41	1	0	0	10	0	0	53
8:15 AM	3	0	0	0	0	0	0	0	0	24	0	0	0	16	0	0	43
8:30 AM	0	0	0	0	0	0	0	0	0	24	1	0	0	24	0	0	49
8:45 AM	1	0	0	0	0	0	0	0	0	27	0	0	0	25	0	0	53
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	7	1	2	0	0	0	0	0	2	267	6	0	4	234	0	0	523
APPROACH %'s :	70.00%	10.00%	20.00%	0.00%					0.73%	97.09%	2.18%	0.00%	1.68%	98.32%	0.00%	0.00%	
PEAK HR :	**07:00 AM - 08:00 AM**																TOTAL
PEAK HR VOL :	3	1	1	0	0	0	0	0	0	78	3	0	1	85	0	0	172
PEAK HR FACTOR :	0.375	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.750	0.000	0.250	0.885	0.000	0.000	0.843
		0.625								0.750				0.896			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:30 PM	0	0	0	0	0	0	0	0	0	28	0	0	0	30	0	0	58
3:45 PM	2	0	1	0	0	0	0	0	0	16	1	0	1	21	0	0	42
4:00 PM	3	0	0	0	0	0	0	0	1	20	0	0	0	17	0	0	41
4:15 PM	0	0	0	0	0	0	0	0	0	19	1	0	1	28	0	0	49
4:30 PM	1	0	2	0	0	0	0	0	0	20	0	0	0	21	0	0	44
4:45 PM	2	0	0	0	0	1	0	0	0	12	0	0	1	18	0	0	34
5:00 PM	3	0	0	0	0	0	0	0	0	10	0	0	1	11	0	0	25
5:15 PM	0	0	1	0	0	0	0	0	0	18	0	0	0	22	0	0	41
5:30 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	14	0	0	18
5:45 PM	0	0	0	0	0	0	0	0	0	16	0	0	0	11	0	0	27
6:00 PM	0	0	0	0	0	0	0	0	0	12	0	0	0	16	0	0	28
6:15 PM	1	0	0	0	0	0	0	0	0	9	0	0	0	9	0	0	19
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	12	0	4	0	0	1	0	0	1	184	2	0	4	218	0	0	426
APPROACH %'s :	75.00%	0.00%	25.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.53%	98.40%	1.07%	0.00%	1.80%	98.20%	0.00%	0.00%	
PEAK HR :	**04:15 PM - 05:15 PM**																TOTAL
PEAK HR VOL :	6	0	2	0	0	1	0	0	0	61	1	0	3	78	0	0	152
PEAK HR FACTOR :	0.500	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.763	0.250	0.000	0.750	0.696	0.000	0.000	0.776
		0.667				0.250				0.775				0.698			

National Data & Surveying Services Intersection Turning Movement Count

Location: Old Mill Rd/Old Suffolk Rd & Windsor Blvd
City: Windsor
Control: 1-Way Stop(NB)

Project ID: 23-250015-004
Date: 5/23/2023

Data - Bikes

NS/EW Streets:	Old Mill Rd/Old Suffolk Rd				Old Mill Rd/Old Suffolk Rd				Windsor Blvd				Windsor Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

National Data & Surveying Services Intersection Turning Movement Count

Location: Old Mill Rd/Old Suffolk Rd & Windsor Blvd
City: Windsor
Project ID: 23-250015-004
Date: 5/23/2023

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Old Mill Rd/Old Suffolk Rd		Old Mill Rd/Old Suffolk Rd		Windsor Blvd		Windsor Blvd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
6:00 AM	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	**07:00 AM - 08:00 AM**								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	**04:15 PM - 05:15 PM**								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

Prepared by National Data & Surveying Services

Old Mill Rd/Old Suffolk Rd & Windsor Blvd

Peak Hour Turning Movement Count

ID: 23-250015-004
City: Windsor

Day: Tuesday
Date: 5/23/2023

PEAK HOURS	COUNT PERIODS
07:00 AM - 08:00 AM	6:00 AM - 09:00 AM
NONE	NONE
04:15 PM - 05:15 PM	3:30 PM - 06:30 PM

SOUTHBOUND (Old Mill Rd/Old Suffolk Rd)

AM	3	1	0	0	3	AM
NOON	0	0	0	0	0	NOON
PM	7	3	2	0	15	PM
	0	1	0	0		

EASTBOUND (Windsor Blvd)

AM	NOON	PM	
429	0	852	
0	0	0	0
2	0	9	1
696	0	611	2
29	0	30	0
AM	NOON	PM	

WESTBOUND (Windsor Blvd)

PM	NOON	AM	
1	0	0	0
817	0	413	2
36	0	19	1
2	0	0	0
647	0	709	
PM	NOON	AM	

CONTROL

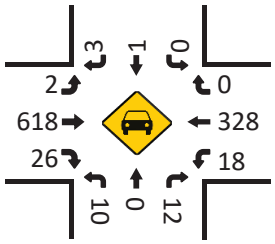
1-Way Stop(NB)

	AM	NOON	PM
TEV	1190	0	1583
PHF	0.95		0.85

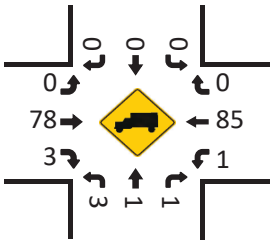
NORTHBOUND (Old Mill Rd/Old Suffolk Rd)

PM	69	0	28	5	32	PM
NOON	0	0	0	0	0	NOON
AM	49	0	13	1	13	AM
		0	0.5	0.5	1	

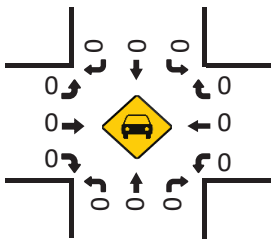
Cars (AM)



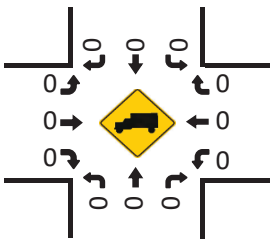
HT (AM)



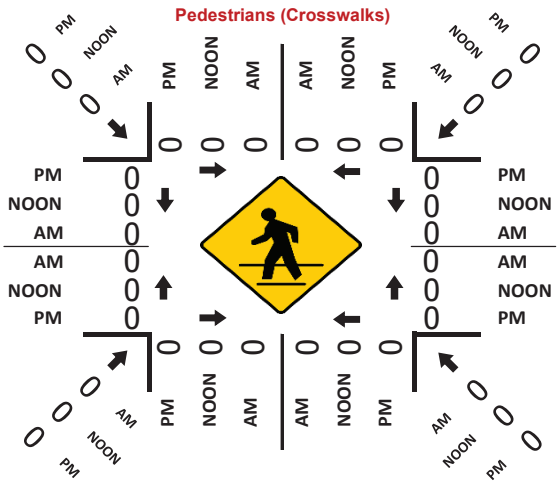
Cars (NOON)



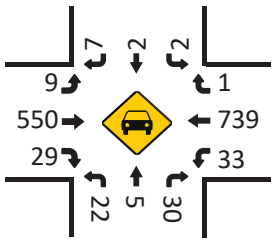
HT (NOON)



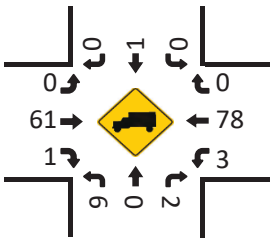
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Project ID: 23-250015-004
Location: Old Mill Rd/Old Suffolk Rd & Windsor Blvd
City: Windsor

Day: Tuesday
Date: 5/23/2023

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Old Mill Rd/Old Suffolk Rd Northbound						Old Mill Rd/Old Suffolk Rd Southbound						Windsor Blvd Eastbound						Windsor Blvd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
6:00 AM	2	0	4	0	0	6	0	0	2	0	0	2	2	126	3	0	0	131	4	58	0	0	0	62	201
6:15 AM	12	1	27	0	0	40	0	0	0	0	0	0	0	181	9	0	0	190	0	64	0	0	0	64	294
6:30 AM	2	2	9	0	0	13	0	0	0	0	0	0	1	159	8	0	0	168	4	72	0	0	0	76	257
6:45 AM	3	0	6	0	0	9	0	0	0	0	0	0	1	132	2	0	0	135	3	97	0	0	0	100	244
Total	19	3	46	0	0	68	0	0	2	0	0	2	4	598	22	0	0	624	11	291	0	0	0	302	996
7:00 AM	4	0	4	0	0	8	0	0	1	0	0	1	0	193	9	0	0	202	3	100	0	0	0	103	314
7:15 AM	4	0	1	0	0	5	0	0	2	0	0	2	0	167	6	0	0	173	10	117	0	0	0	127	307
7:30 AM	2	0	6	0	0	8	0	0	0	0	0	0	2	187	10	0	0	199	1	98	0	0	0	99	306
7:45 AM	3	1	2	0	0	6	0	1	0	0	0	1	0	149	4	0	0	153	5	98	0	0	0	103	263
Total	13	1	13	0	0	27	0	1	3	0	0	4	2	696	29	0	0	727	19	413	0	0	0	432	1190
8:00 AM	2	0	4	0	0	6	1	0	0	0	0	1	2	154	2	0	0	158	2	83	0	0	0	85	250
8:15 AM	7	0	3	0	0	10	0	0	1	0	0	1	0	138	0	0	0	138	5	101	0	0	0	106	255
8:30 AM	3	0	3	0	0	6	1	0	0	0	0	1	0	135	2	0	0	137	5	86	0	0	0	91	235
8:45 AM	4	0	1	0	0	5	0	1	0	0	0	1	2	150	4	0	0	156	6	106	0	0	0	112	274
Total	16	0	11	0	0	27	2	1	1	0	0	4	4	577	8	0	0	589	18	376	0	0	0	394	1014
BREAK																									
3:30 PM	2	0	3	0	0	5	0	0	1	0	0	1	1	145	2	0	0	148	5	200	0	0	0	205	359
3:45 PM	9	0	6	0	0	15	1	1	2	0	0	4	0	120	4	0	0	124	7	201	0	0	0	208	351
Total	11	0	9	0	0	20	1	1	3	0	0	5	1	265	6	0	0	272	12	401	0	0	0	413	710
4:00 PM	12	1	8	0	0	21	0	1	1	0	0	2	1	131	6	0	0	138	8	191	0	0	0	199	360
4:15 PM	6	2	8	0	0	16	0	1	1	0	0	2	6	189	10	0	0	205	11	231	0	0	0	242	465
4:30 PM	5	0	9	0	0	14	2	1	2	0	0	5	1	153	7	0	0	161	6	199	1	0	0	206	386
4:45 PM	6	0	3	0	0	9	0	1	3	0	0	4	0	126	6	0	0	132	11	202	0	2	0	215	360
Total	29	3	28	0	0	60	2	4	7	0	0	13	8	599	29	0	0	636	36	823	1	2	0	862	1571
5:00 PM	11	3	12	0	0	26	0	0	1	0	0	1	2	143	7	0	0	152	8	185	0	0	0	193	372
5:15 PM	7	0	6	0	0	13	0	0	2	0	0	2	2	130	3	0	0	135	9	262	0	0	0	271	421
5:30 PM	5	0	8	0	0	13	0	0	0	0	0	0	2	96	11	0	0	109	13	200	0	0	0	213	335
5:45 PM	14	1	7	0	0	22	0	0	1	0	0	1	2	124	6	0	0	132	12	170	0	0	0	182	337
Total	37	4	33	0	0	74	0	0	4	0	0	4	8	493	27	0	0	528	42	817	0	0	0	859	1465
6:00 PM	4	0	5	0	0	9	0	0	2	0	0	2	0	115	4	0	0	119	1	153	0	0	0	154	284
6:15 PM	26	2	25	0	0	53	0	0	1	0	0	1	0	91	3	0	0	94	7	109	0	0	0	116	264
Total	30	2	30	0	0	62	0	0	3	0	0	3	0	206	7	0	0	213	8	262	0	0	0	270	548
Grand Total	155	13	170	0	0	338	5	7	23	0	0	35	27	3434	128	0	0	3589	146	3383	1	2	0	3532	7494
Apprch %	45.9	3.8	50.3	0.0	0.0		14.3	20.0	65.7	0.0	0.0		0.8	95.7	3.6	0.0	0.0		4.1	95.8	0.0	0.1	0.0		
Total %	2.1	0.2	2.3	0.0	0.0	4.5	0.1	0.1	0.3	0.0	0.0	0.5	0.4	45.8	1.7	0.0	0.0	47.9	1.9	45.1	0.0	0.0	0.0	47.1	
Cars, PU, Vans	136	12	164	0		312	5	6	23	0		34	24	2983	120	0		3127	138	2931	1	2		3072	6545
% Cars, PU, Vans	87.7	92.3	96.5	0.0		92.3	100.0	85.7	100.0	0.0		97.1	88.9	86.9	93.8	0.0		87.1	94.5	86.6	100.0	100.0		87.0	87.3
Heavy trucks	19	1	6	0		26	0	1	0	0		1	3	451	8	0		462	8	452	0	0		460	949
%Heavy trucks	12.3	7.7	3.5	0.0		7.7	0.0	14.3	0.0	0.0		2.9	11.1	13.1	6.3	0.0		12.9	5.5	13.4	0.0	0.0		13.0	12.7

Project ID: 23-250015-004
Location: Old Mill Rd/Old Suffolk Rd & Windsor Blvd
City: Windsor

PEAK HOURS

Day: Tuesday
Date: 5/23/2023

AM

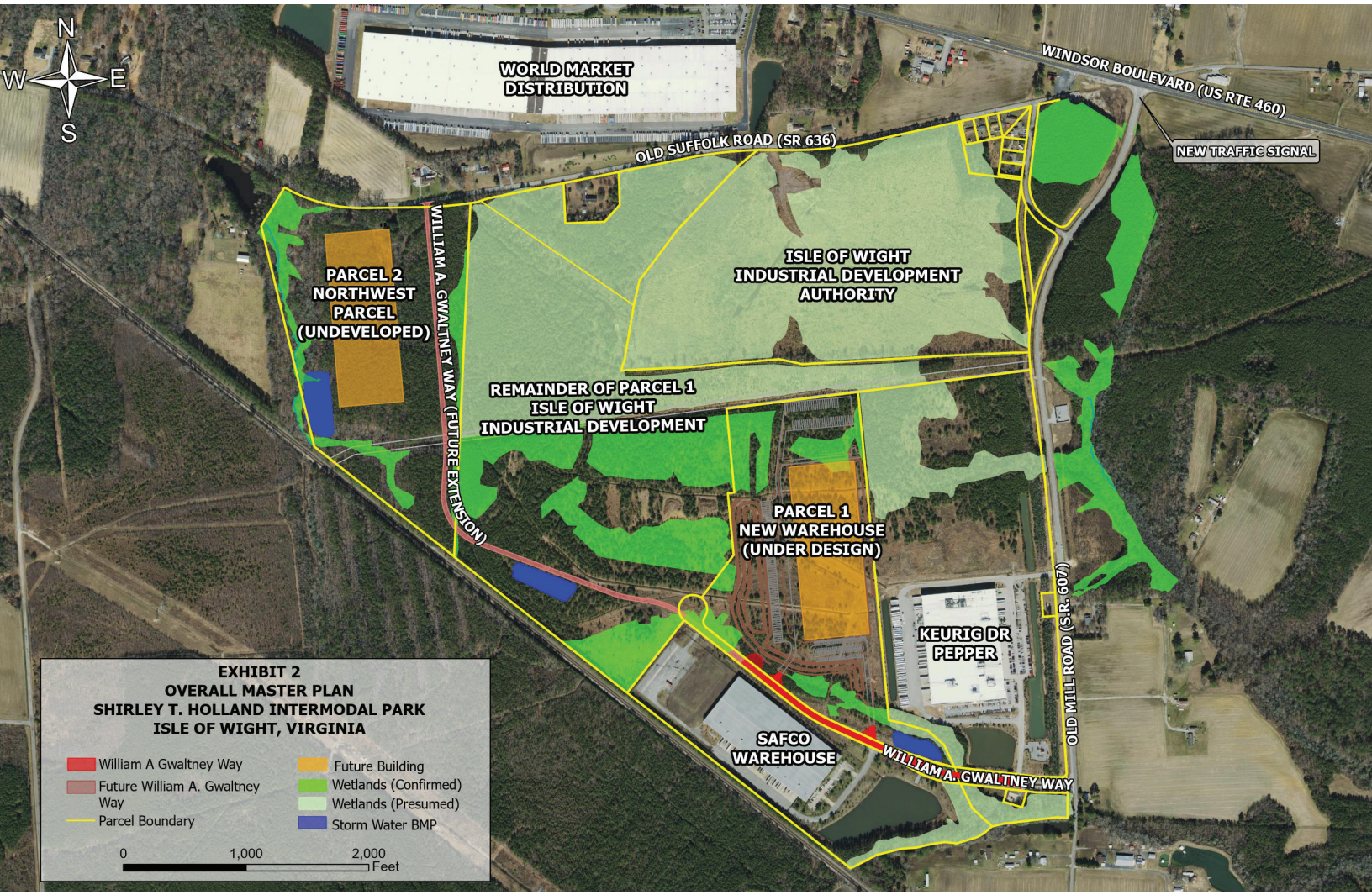
	Old Mill Rd/Old Suffolk Rd Northbound					Old Mill Rd/Old Suffolk Rd Southbound					Windsor Blvd Eastbound					Windsor Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 06:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
7:00 AM	4	0	4	0	8	0	0	1	0	1	0	193	9	0	202	3	100	0	0	103	314
7:15 AM	4	0	1	0	5	0	0	2	0	2	0	167	6	0	173	10	117	0	0	127	307
7:30 AM	2	0	6	0	8	0	0	0	0	0	2	187	10	0	199	1	98	0	0	99	306
7:45 AM	3	1	2	0	6	0	1	0	0	1	0	149	4	0	153	5	98	0	0	103	263
Total Volume	13	1	13	0	27	0	1	3	0	4	2	696	29	0	727	19	413	0	0	432	1190
% App. Total	48.1	3.7	48.1	0.0	100	0.0	25.0	75.0	0.0	100	0.3	95.7	4.0	0.0	100	4.4	95.6	0.0	0.0	100	
PHF					0.844					0.500					0.900					0.850	0.947
Cars, PU, Vans	10	0	12	0	22	0	1	3	0	4	2	618	26	0	646	18	328	0	0	346	1018
% Cars, PU, Vans	76.9	0.0	92.3	0.0	81.5	0.0	100.0	100.0	0.0	100.0	100.0	88.8	89.7	0.0	88.9	94.7	79.4	0.0	0.0	80.1	85.5
Heavy trucks	3	1	1	0	5	0	0	0	0	0	0	78	3	0	81	1	85	0	0	86	172
%Heavy trucks	23.1	100.0	7.7	0.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0	11.2	10.3	0.0	11.1	5.3	20.6	0.0	0.0	19.9	14.5

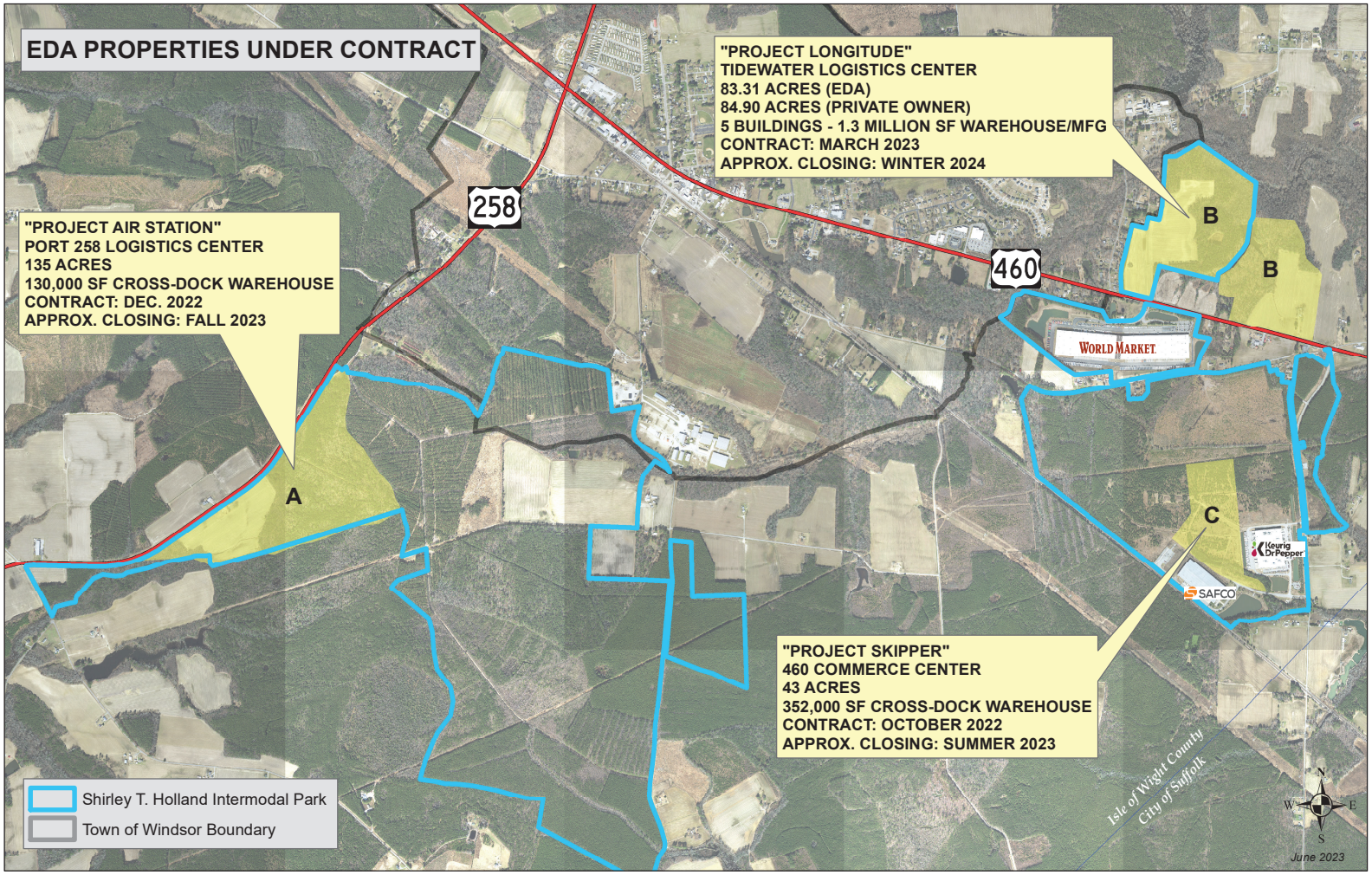
PM

	Old Mill Rd/Old Suffolk Rd Northbound					Old Mill Rd/Old Suffolk Rd Southbound					Windsor Blvd Eastbound					Windsor Blvd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 03:30 PM - 06:30 PM																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
4:15 PM	6	2	8	0	16	0	1	1	0	2	6	189	10	0	205	11	231	0	0	242	465
4:30 PM	5	0	9	0	14	2	1	2	0	5	1	153	7	0	161	6	199	1	0	206	386
4:45 PM	6	0	3	0	9	0	1	3	0	4	0	126	6	0	132	11	202	0	2	215	360
5:00 PM	11	3	12	0	26	0	0	1	0	1	2	143	7	0	152	8	185	0	0	193	372
Total Volume	28	5	32	0	65	2	3	7	0	12	9	611	30	0	650	36	817	1	2	856	1583
% App. Total	43.1	7.7	49.2	0.0	100	16.7	25.0	58.3	0.0	100	1.4	94.0	4.6	0.0	100	4.2	95.4	0.1	0.2	100	
PHF					0.625					0.600					0.793					0.884	0.851
Cars, PU, Vans	22	5	30	0	57	2	2	7	0	11	9	550	29	0	588	33	739	1	2	775	1431
% Cars, PU, Vans	78.6	100.0	93.8	0.0	87.7	100.0	66.7	100.0	0.0	91.7	100.0	90.0	96.7	0.0	90.5	91.7	90.5	100.0	100.0	90.5	90.4
Heavy trucks	6	0	2	0	8	0	1	0	0	1	0	61	1	0	62	3	78	0	0	81	152
%Heavy trucks	21.4	0.0	6.3	0.0	12.3	0.0	33.3	0.0	0.0	8.3	0.0	10.0	3.3	0.0	9.5	8.3	9.5	0.0	0.0	9.5	9.6

Appendix C

Approved But Unbuilt Developments and Infrastructure Improvement Projects


N
W
E
S
WORLD MARKET DISTRIBUTION
WINDSOR BOULEVARD (US RTE 460)
NEW TRAFFIC SIGNAL
OLD SUFFOLK ROAD (SR 636)
PARCEL 2 NORTHWEST PARCEL (UNDEVELOPED)
WILLIAM A. GWALTNEY WAY (FUTURE EXTENSION)
ISLE OF WIGHT INDUSTRIAL DEVELOPMENT AUTHORITY
REMAINDER OF PARCEL 1 ISLE OF WIGHT INDUSTRIAL DEVELOPMENT
PARCEL 1 NEW WAREHOUSE (UNDER DESIGN)
KEURIG DR PEPPER
OLD MILL ROAD (S.R. 607)
SAFCO WAREHOUSE
WILLIAM A. GWALTNEY WAY
EXHIBIT 2
OVERALL MASTER PLAN
SHIRLEY T. HOLLAND INTERMODAL PARK
ISLE OF WIGHT, VIRGINIA
William A Gwaltney Way
Future William A. Gwaltney Way
Parcel Boundary
Future Building
Wetlands (Confirmed)
Wetlands (Presumed)
Storm Water BMP
0
1,000
2,000
Feet


EDA PROPERTIES UNDER CONTRACT
"PROJECT LONGITUDE"
TIDEWATER LOGISTICS CENTER
83.31 ACRES (EDA)
84.90 ACRES (PRIVATE OWNER)
5 BUILDINGS - 1.3 MILLION SF WAREHOUSE/MFG
CONTRACT: MARCH 2023
APPROX. CLOSING: WINTER 2024
"PROJECT AIR STATION"
PORT 258 LOGISTICS CENTER
135 ACRES
130,000 SF CROSS-DOCK WAREHOUSE
CONTRACT: DEC. 2022
APPROX. CLOSING: FALL 2023
258
460
A
B
B
C
WORLD MARKET
Keurig Dr Pepper
SAFCO
"PROJECT SKIPPER"
460 COMMERCE CENTER
43 ACRES
352,000 SF CROSS-DOCK WAREHOUSE
CONTRACT: OCTOBER 2022
APPROX. CLOSING: SUMMER 2023
Shirley T. Holland Intermodal Park
Town of Windsor Boundary
Isle of Wight County
City of Suffolk
N
W
E
S
June 2023

Roadway Infrastructure

Existing Conditions

The existing Shirley T Holland Intermodal Park (Park) consists of undeveloped Parcels 1 and 2 and developed parcels including the Green Mountain Coffee Roasters and LDI Virginia, LLC containing the SafCo warehouse. Parcel 1, also referred to as the Northwest Parcel Site, is approximately 47.5 acres and located in the northwest corner of the Park. Parcel 2 is located in the middle of the Park and is currently being subdivided into two smaller parcels; "Parcel 2A" and the "Remainder of Parcel 2". Parcel 2A is located directly west of the Green Mountain Coffee Roasters parcel, is 42.9 acres, and is currently under development. The Remainder of Parcel 2 consists of 105.6 acres and encompasses the area west of Parcel 2A and east of Parcel 1. The Green Mountain Coffee Roasters and the LDI Virginia parcels are located on the east and southern side of the Park. See Existing Conditions Plan in Appendix A.

The existing William A. Gwaltney Way (Gwaltney Way) is a 2 lane roadway located off of Old Mill Road (SR 607). From the intersection with Old Mill Rd traveling west to the Green Mountain Coffee Roasters' entrance, Gwaltney Way is a divided curb and gutter roadway with a raised grass median. Existing lane widths are approximately 13.5' (edge of pavement to edge of pavement). Gwaltney Way tapers to an uncurbed, two-lane undivided roadway with approximately 13' wide paved lane width. This two-lane undivided roadway continues to just past the SafCo Warehouse entrance. Beyond this entrance, the roadway turns into a series of dirt trails that run throughout the business park.

Existing wetlands have been identified throughout the Park and are shown on the plan exhibits for reference. Wetland locations shown are based on the "Shirley T. Holland Figure 4: Wetlands and Waters Delineation Map," prepared by the Timmons Group and dated 02/04/2021.

Proposed Improvements

The proposed Gwaltney Way extension will connect Old Mill Road on the east to Old Suffolk Road (SR 636) to the northwest and allow for future development of the business park. Connecting to the existing Gwaltney Way roadway, the proposed section is utilizing 13' lanes with a 4' graded shoulder. This graded shoulder will include a 1' pavement edge extension. The intersection with the Green Mountain Coffee Roasters entrance will be brought up to meet Virginia Department of Transportation (VDOT) minimum standards. The required minimum taper lengths for a 25mph design speed are included at the transition from the new roadway section to the existing raised median section.

Following VDOT geometric design standards for Urban Collector Street System (GS-7), the minimum lane width in industrial areas is 12' unless available or attainable right-of-way imposes severe limitations, then 11' lanes can be used. VDOT also recommends an additional foot in lane width be considered in areas if heavy truck traffic (>10%) or bus traffic is anticipated. A 13' lane width is used in this conceptual layout to meet these requirements and to continue the existing lane widths along the current section of Gwaltney Way.

The undivided two-lane roadway will continue to the west, include two new entrances for the Parcel 2A development, continue through the Remainder of Parcel 2 and along the northeast edge of Parcel 1, connecting at a new stop-controlled intersection with Old Suffolk Road. The layout of the roadway extension through Parcel 2 avoids the existing identified wetlands as much as possible. The layout of the roadway through Parcel 1 allows for maximum future development of the parcel.

Since Old Suffolk Road does not connect to 460, and to avoid sending additional truck traffic through downtown Windsor, the County's intention is not for trucks to exit the Park via the new intersection of Gwaltney Way and Old Suffolk Road. In addition to signage identifying the truck route, the Gwaltney Way typical section will be reduced from 13' wide lanes to 11' lanes (24' edge to edge pavement width) after the southern entrance to the potential Northwest Parcel Site (Parcel 1) entrance point. See Roadway Layout Plan in Appendix A.

Entrances shown are designed to meet Hampton Roads Planning District Committee (HRPDC) minimum standards and allow for WB-67 truck turning requirements. A minimum of 50' turning radius was used.

To allow phasing of the roadway extension, a temporary cul-de-sac is shown west of the second entrance to Parcel 2. This will allow the roadway extension to be constructed and allow connection to the Parcel 2 development currently under design/construction to be built. The temporary cul-de-sac can be removed, and the roadway extended the full length to Old Suffolk Road as a second phase.

The entire length of the Gwaltney Way roadway extension can fit in a proposed 50' right of way as shown on the exhibits. The initial phase of Gwaltney Way includes a proposed bus stop with a pullout area and room for a bus shelter and amenities. Sidewalks will be provided from the Parcel 2 entrances back to the Green Mountain Coffee Roasters entrance for pedestrian access to the bus stop. The sidewalks will be located behind the ditch line on the north side of the roadway and the section along the Parcel 2A property will be outside the 50' right of way and may require public access easements on the adjacent parcels.

Traffic Assessment

A Traffic Analysis Report was prepared by ATCS in January 2023. Following is a summary of the analysis:

New developments were proposed for Shirley T Holland Intermodal Park (the "Park") that will attract more vehicles to the surrounding roadways. Due to the size and nature of these developments, the impact on traffic conditions in the area could be large. An analysis was conducted to identify and quantify potential impacts that may occur and identify road or intersection improvements needed to support further development of the Park while ensuring adequate access into and out of the Park will be maintained. Note that the goal of this effort was not to gain approval from the Virginia Department of Transportation for any improvements, but to identify transportation-related needs associated with continued development of the Park.

Existing Conditions

Shirley T Holland Intermodal Park (the "Park") is located in southeastern Virginia approximately two miles east of the City of Windsor in an area that is lightly developed, consisting primarily of farmland with forests and wetland. The Park is located on the southern side of US 460 along the western side of Old Mill Road. The study area road network consists of two primary intersections on Old Mill Road, with two minor roads and two driveways in between which were not analyzed. Characteristics of roads within the study area that form the two primary study intersections are described below:

1. US 460 (Windsor Blvd) is a four-lane undivided principle arterial roadway providing eastbound and westbound travel along the north edge of the Park. This road has posted speeds of 55 MPH, dedicated left turn lanes for Old Mill Road and Old Suffolk Road, a dedicated eastbound right turn lane for Old Mill Road, and no traffic control.
2. Old Mill Road (Route 607) is a two-lane undivided local road providing northbound and southbound travel along the east edge of the Park. This road has no posted speed limit. At US 460, it has stop-control on the approach with one shared left-through lane and one dedicated right turn lane. At William A Gwaltney Way, it has no traffic control with one southbound right turn lane, one southbound through lane, and one northbound left-through lane. Old Mill Road is located on the south side of US 460 across from Old Suffolk Road.
3. Old Suffolk Road (Route 636) is a two-lane undivided local road providing access to farmland, single-family homes, and one business north of US 460. This road has no posted speed limit. It connects to US 460 at a sharp angle with stop-control on the approach and one lane from which all turning movements are made. Old Suffolk Road is located on the north side of US 460 across from Old Mill Road.
4. William A Gwaltney Way is a two-lane undivided local road providing access to the Park and existing Safco and Keurig buildings. It has no posted speed limit. It connects to Old Mill Road forming a T-intersection with stop-control on the eastbound approach and one lane from which left and right turns are made.

Proposed Improvements

As development of Shirley T Holland Intermodal Park (the "Park) continues, traffic traveling on the surrounding road network and into and out of the Park will increase. Analysis has shown that for 2022 existing conditions, the intersections of Old Mill Road at US 460 and Old Mill Road at William A Gwaltney Way perform well overall, primarily operating with Level of Service (LOS) A and LOS B for most lanes in each peak hour. As traffic volumes increase, traffic operations change minimally at the Old Mill Road and William A Gwaltney Way intersection, which maintains LOS A for all lanes and peak hours regardless of the scenario being analyzed. However, traffic operations degrade more significantly at the Old Mill Road and US 460 intersection which has higher traffic demand.

While natural growth in background traffic causes modest increases in delay on northbound and southbound stop-controlled approaches for the Old Mill Road and US 460 intersection, it does not create a significant negative impact, even after ten years of traffic growth.

To mitigate poor future traffic operations, installing a traffic signal is recommended for the intersection of Old Mill Road and US 460. A traffic signal can provide LOS B or better for all intersection lanes while eliminating LOS D, E, and F that occurs after ten years of traffic growth and new vehicle trips from both developments use the intersection. The traffic signal should utilize a four-phase signal head with flashing yellow arrow for the westbound left turn lane, which should operate with permitted-protected phasing, while standard three-phase signal heads and permitted left turns for other approaches are adequate. Lane configuration does not need to be modified at the intersection, reducing construction cost, complexity, and duration. The traffic signal should be semi-actuated with vehicle detectors on the Old Mill Road and Old Suffolk Road approaches. A semi-actuated signal creates less interruption to traffic traveling on US 460, except when needed to allow side-street traffic to enter the highway. However, a pretimed signal produces similarly good traffic operations according to Synchro analysis and may be considered due to its lower installation and ongoing maintenance costs. For high-level planning purposes, budgeting $500,000 to construct a new traffic signal is recommended, however this dollar amount excludes contingency and communications equipment.

No improvements are recommended for the intersection of Old Mill Road and William A Gwaltney Way, because it operates with LOS A for all lanes in every peak hour and analysis scenario. Within the Park, side-street stop control with stop signs installed on existing or future driveways connecting to William A Gwaltney Way is recommended for safety reasons, and should adequately accommodate traffic while allowing for efficient and orderly flow of vehicles.

Following is the estimated ADT for William A. Gwaltney Way for the current condition, as well as the projected development years:

- Year 2022, ADT = 370 (Current condition)
- Year 2025, ADT = 1,238 (Proposed Parcel 2A development open)
- Year 2032, ADT = 1,995 (Proposed Parcel 1 Northwest development open)

The detailed Traffic Analysis Report prepared by ATCS is included in Appendix B.

Stormwater Management

Existing Conditions

The overall site has been divided into three project areas for analysis: Gwaltney Way Extension-Initial, Gwaltney Way Extension-Secondary, and the Northwest Parcel development site. The Gwaltney Way Extension-Initial project area totals 4.24 acres and includes an existing asphalt roadway and site entrances. The Gwaltney Way Extension Secondary project area consists entirely of forested land and totals 12.18 acres. The Northwest Parcel development site also consists entirely of forested land and totals 39.37 acres. Wetlands exist within and adjacent to

Appendix B – Traffic Analysis Report

Contents

1.0 Introduction 1
2.0 Existing Conditions 1
2.1 Study Area 1
2.2 Crash Data 3
2.3 2022 Traffic Volume 5
2.4 2022 Traffic Operations Analysis 7
2.4.1 Analysis Methodology 7
2.4.2 2022 Analysis Results 7
2.5 Traffic Generated by Developments 8
2.5.1 Trip Generation 8
2.5.2 Trip Distribution 9
3.0 Future Background Traffic Conditions 13
3.1 Background Traffic Forecasts 13
3.2 Future Background Traffic Operations Analysis 15
3.2.1 2025 Background Traffic Analysis Results 16
3.2.2 2032 Background Traffic Analysis Results 17
4.0 Future Build Conditions 18
4.1 Build Traffic Forecasts 18
4.2 Unmitigated Future Traffic Operations Analysis 21
4.2.1 2025 Unmitigated Build Analysis Results 21
4.2.2 2032 Unmitigated Build Analysis Results 22
4.3 Mitigated Future Traffic Operations Analysis 23
4.3.1 Recommended Improvements 23
4.3.2 2025 Mitigated Build Analysis Results 24
4.3.3 2032 Mitigated Build Analysis Results 25
5. Summary of Findings 26
6. References 27
Appendix A: Traffic Counts
Appendix B: Synchro and HCS Reports for Existing Conditions
Appendix C: Graphs Showing Historical Trends in AADT
Appendix D: Synchro and HCS Reports for Future Background Traffic Conditions
Appendix E: Synchro and HCS Reports for Future Unmitigated Build Conditions
Appendix F: Synchro Reports for Future Mitigated Build Conditions

Tables

Table 1-1: Crashes in Study Area 3
Table 1-2: Crashes at Old Mill Rd at US 460 4
Table 2-1: 2022 MOE's for Old Mill Rd at US 460 7
Table 2-2: 2022 MOE's for Old Mill Rd at William A Gwaltney Wy 8
Table 3: Trip Generation Volume 9
Table 4: Selected Growth Rates 13
Table 5-1: 2025 Background MOE's for Old Mill Rd at US 460 16
Table 5-2: 2025 Background MOE's for Old Mill Rd at William A Gwaltney Wy 16
Table 6-1: 2032 Background MOE's for Old Mill Rd at US 460 17
Table 6-2: 2032 Background MOE's for Old Mill Rd at William A Gwaltney Wy 18
Table 7-1: 2025 Unmitigated Build MOE's for Old Mill Rd at US 460 21
Table 7-2: 2025 Unmitigated Build MOE's for Old Mill Rd at William A Gwaltney Wy 22
Table 8-1: 2032 Unmitigated Build MOE's for Old Mill Rd at US 460 23
Table 8-2: 2032 Unmitigated Build MOE's for Old Mill Rd at William A Gwaltney Wy 23
Table 9-1: 2025 Mitigated Build MOE's for Old Mill Rd at US 460 24
Table 9-2: 2025 Mitigated Build MOE's for Old Mill Rd at William A Gwaltney Wy 25
Table 10-1: 2032 Mitigated Build MOE's for Old Mill Rd at US 460 26
Table 10-2: 2032 Mitigated Build MOE's for Old Mill Rd at William A Gwaltney Wy 26

Figures

Figure 1: Existing Lane Geometry, Traffic Control, and Posted Speed in Study Area 2
Figure 2: Crash Location Map 4
Figure 3: 2022 Peak Hour Traffic Counts and Estimated Average Daily Traffic 6
Figure 4: Distribution of New Peak Hour and Daily Trips 10
Figure 5: New Peak Hour and Daily Trips for Development 1 11
Figure 6: New Peak Hour and Daily Trips for Development 2 12
Figure 7: 2025 Peak Hour Background Traffic Volume and Average Daily Traffic 14
Figure 8: 2032 Peak Hour Background Traffic Volume and Average Daily Traffic 15
Figure 8: 2025 Peak Hour Build Traffic Volume and Average Daily Traffic 19
Figure 9: 2032 Peak Hour Build Traffic Volume and Average Daily Traffic 20

1.0 Introduction

New developments were proposed for Shirley T Holland Intermodal Park (the "Park") that will attract more vehicles to the surrounding roadways. Due to the size and nature of these developments, the impact on traffic conditions in the area could be large. An analysis was conducted to identify and quantify potential impacts that may occur and identify road or intersection improvements needed to support further development of the Park while ensuring adequate access into and out of the Park will be maintained. Note that the goal of this effort was not to gain approval from the Virginia Department of Transportation for any improvements, but to identify transportation-related needs associated with continued development of the Park.

2.0 Existing Conditions

2.1 Study Area

Shirley T Holland Intermodal Park (the "Park") is located in southeastern Virginia approximately two miles east of the City of Windsor in an area that is lightly developed, consisting primarily of farmland with forests and wetland. The Park is located on the southern side of US 460 along the western side of Old Mill Road. The study area road network consists of two primary intersections on Old Mill Road, with two minor roads and two driveways in between which were not analyzed. Existing intersection lane configuration and traffic control are pictured on **Figure 1**. Characteristics of roads within the study area that form the two primary study intersections are described below:

1. **US 460 (Windsor Blvd)** is a four-lane undivided principle arterial roadway providing eastbound and westbound travel along the north edge of the Park. This road has posted speeds of 55 MPH, dedicated left turn lanes for Old Mill Road and Old Suffolk Road, a dedicated eastbound right turn lane for Old Mill Road, and no traffic control.

2. **Old Mill Road (Route 607)** is a two-lane undivided local road providing northbound and southbound travel along the east edge of the Park. This road has no posted speed limit. At US 460, it has stop-control on the approach with one shared left-through lane and one dedicated right turn lane. At William A Gwaltney Way, it has no traffic control with one southbound right turn lane, one southbound through lane, and one northbound left-through lane. Old Mill Road is located on the south side of US 460 across from Old Suffolk Road.

3. **Old Suffolk Road (Route 636)** is a two-lane undivided local road providing access to farmland, single-family homes, and one business north of US 460. This road has no posted speed limit. It connects to US 460 at a sharp angle with stop-control on the approach and one lane from which all turning movements are made. Old Suffolk Road is located on the north side of US 460 across from Old Mill Road.

4. **William A Gwaltney Way** is a two-lane undivided local road providing access to the Park and existing Safco and Keurig buildings. It has no posted speed limit. It connects to Old Mill Road forming a T-intersection with stop-control on the eastbound approach and one lane from which left and right turns are made.

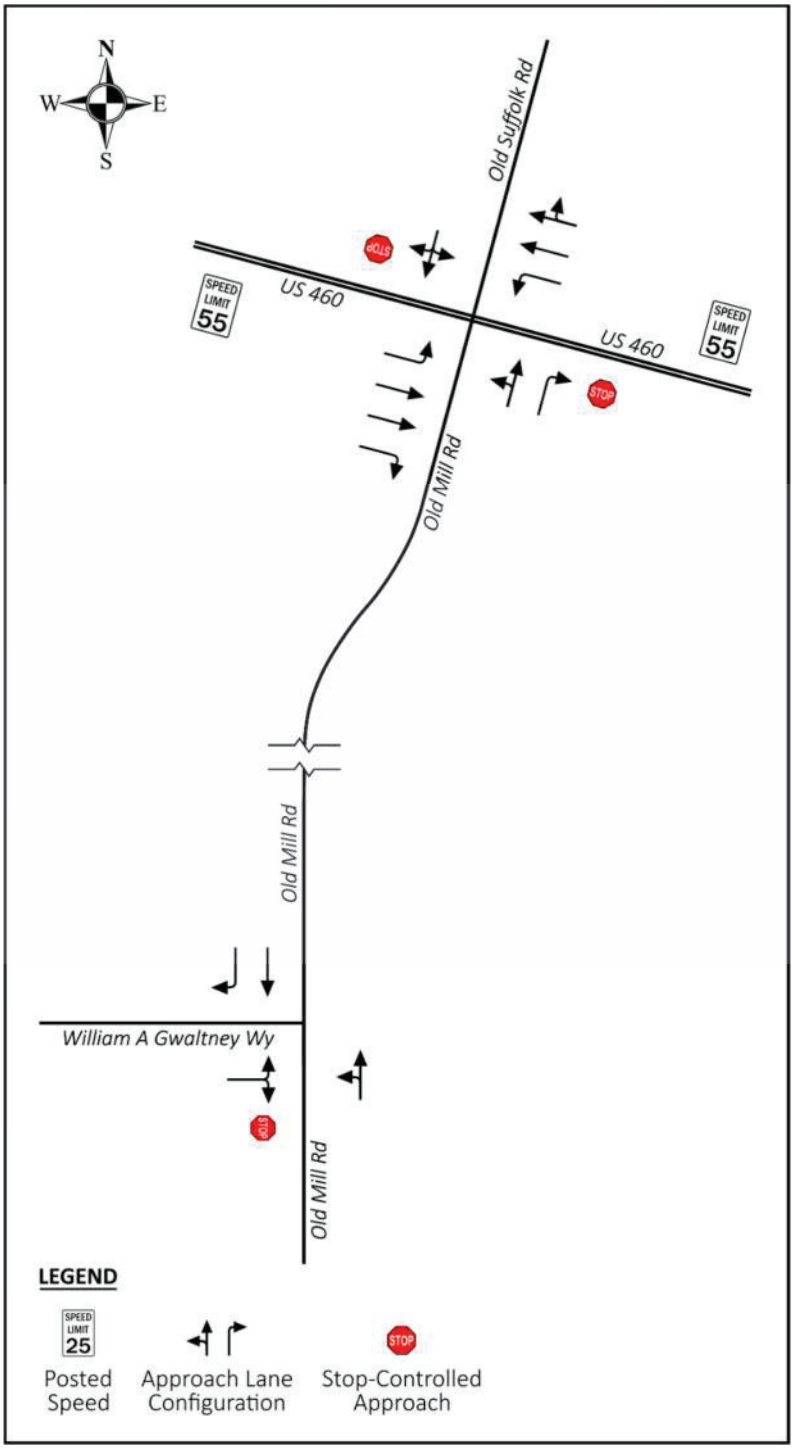


Figure 1: Existing Lane Geometry, Traffic Control, and Posted Speed in Study Area

2.2 Crash Data

Crash data was obtained for years 2015 through 2021 from the Virginia Department of Transportation (VDOT) online crash analysis tool accessed via the *VirginiaRoads.org* website. Data is summarized in **Table 1-1** and **Table 1-2**, and crash locations are pictured on **Figure 2**.

From 2015 through 2021, there were 14 crashes reported in the vicinity of the study area. Most crashes involved property-damage-only, with no fatalities and two non-severe injuries reported. Angle crashes were the most common type of crash followed by deer collisions, same-direction sideswipes, and non-collision events where vehicles ran off the road. The number of crashes occuring each year fluctuated from year to year, averaging two crashes per year. There is no clear upward or downward trend in crash frequency over the seven-year period.

Out of 14 reported crashes, 11 crashes occurred on US 460 and the remainder occurred on Old Mill Road. Five crashes occurred at the Old Mill Road and US 460 intersection, and no crashes occurred at the Old Mill Road and William A Gwaltney Way intersection.

Note that the *Manual on Uniform Traffic Control Devices* does consider crash severity and frequency for signal warrants. However, the crash experience at an intersection cannot be used to justify a traffic signal unless five or more crashes susceptible to correction by a traffic signal are reported in a one-year period. While five crashes occurred at the Old Mill Road and US 460 intersection, no more than two crashes occurred in any given year, and only four crashes occurred that may be remedied with a traffic signal. For these reasons, crash data alone is insufficient to justify installing a traffic signal at either study intersection.

Table 1-1: Crashes in Study Area

Metric	Year 2015	Year 2016	Year 2017	Year 2018	Year 2019	Year 2020	Year 2021	Total
By Year								
Number of Crashes	3	0	2	3	1	0	5	14
By Severity								
Property Damage (O)	3	0	2	2	1	0	4	12
Non-Visible Injury (C)	0	0	0	1	0	0	1	2
Minor Injury (B)	0	0	0	0	0	0	0	0
Severe Injury (A)	0	0	0	0	0	0	0	0
Fatal (K)	0	0	0	0	0	0	0	0
By Type								
Angle	1	0	0	3	0	0	1	5
Deer	0	0	2	0	0	0	0	2
Non-Collision (Ran Off Road)	1	0	0	0	0	0	1	2
Other (Ditch)	0	0	0	0	0	0	1	1
Other (Ran Off Road)	0	0	0	0	0	0	1	1
Rear End	0	0	0	0	1	0	0	1
Sideswipe - Same Direction	1	0	0	0	0	0	1	2

Table 1-2: Crashes at Old Mill Rd at US 460

Metric	Year 2015	Year 2016	Year 2017	Year 2018	Year 2019	Year 2020	Year 2021	Total
By Year								
Number of Crashes	1	0	0	2	0	0	2	5
By Severity								
Property Damage (O)	1	0	0	2	0	0	2	5
By Type								
Angle	1	0	0	2	0	0	1	4
Sideswipe - Same Direction	0	0	0	0	0	0	1	1

Note: metrics with no associated crashes are not included in Table 1-2

Figure 2: Crash Location Map

2.3 2022 Traffic Volume

Intersection turning movement counts were collected for twelve hours from 7:00 AM to 7:00 PM in 15-minute intervals at the intersection of Old Mill Road and US 460 on Tuesday August 2, 2022, and at the intersection of Old Mill Road and William A Gwaltney Way on Thursday June 23, 2022. Traffic count sheets are included in **Appendix A**.

Peak hours were determined by identifying the largest one-hour sum of 15-minute traffic count volumes entering each intersection. For the intersection of Old Mill Road and US 460, the morning peak hour was identified as 7:00 to 8:00 AM and the evening peak hour was identified as 4:00 to 5:00 PM. These peak hours were also used for the intersection Old Mill Road and William A Gwaltney Way.

Existing conditions traffic volume for the 2022 AM and PM peak hours are pictured on **Figure 3** along with estimated average daily traffic (ADT) volume using each intersection approach. Traffic volumes were not balanced on Old Mill Road between the two study intersections because several intermediate vehicular ingress and egress points exist that account for the imbalance, including Old Mill Road West, Melton Lane, and several driveways, one of which belongs the existing Keurig manufacturing facility. Because of this imbalance, two ADT values are shown on volume figures for Old Mill Road. One ADT value represents traffic on Old Mill Road near US 460 and the other ADT value represents traffic on Old Mill Road near William A Gwaltney Way.

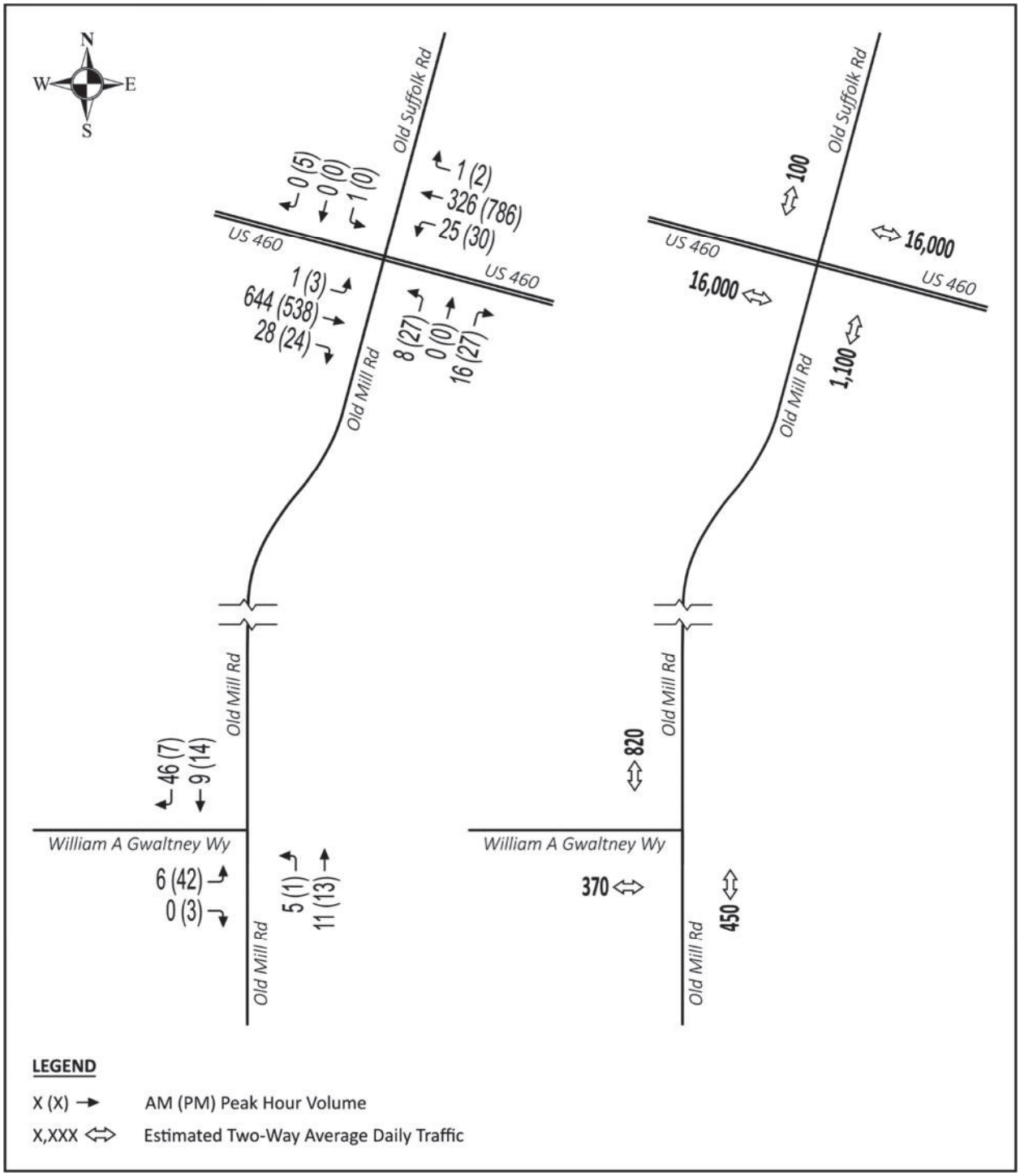


Figure 3: 2022 Peak Hour Traffic Counts and Estimated Average Daily Traffic

2.4 2022 Traffic Operations Analysis

2.4.1 Analysis Methodology

Traffic operations for existing and future conditions were analyzed using Synchro 10 according to methodology presented in *Highway Capacity Manual 6th Edition*. Peak hour factors (PHF) were calculated by approach and heavy vehicle percentages (HV%) were calculated by lane, following guidance in the VDOT *Traffic Impact Analysis Regulations 2VAC30-155-10*. Future traffic volumes and trip generation volumes were estimated by hour and for 15-minute periods within each hour, allowing PHF and HV% to be calculated for traffic forecast volumes and trip generation volumes the same way they were calculated for existing conditions using 15-minute traffic counts. Highway Capacity Software 7.8 was used to check if signal warrants were satisfied for each analysis scenario, based on criteria in the current edition of the *Manual on Uniform Traffic Control Devices* (MUTCD).

2.4.2 2022 Analysis Results

Analysis of 2022 existing conditions involved analyzing 2022 AM and PM peak hour traffic volumes with existing lane geometry and traffic control. Level of service (LOS), vehicle delay, and 95th percentile queue length is shown in **Table 2-1** and **Table 2-2** for this scenario. Synchro analysis reports and Highway Capacity Software signal warrant reports for 2022 existing conditions are included in **Appendix B**.

For 2022 existing conditions, traffic operations for all intersections are generally good with LOS A and LOS B for most lane groups in each peak hour. The stop-controlled northbound and southbound approaches at the Old Mill Road and US 460 intersection are the only locations without excellent traffic operations for existing conditions. During the AM peak hour, LOS D occurs with moderate delay on the southbound approach. This likely happened because the only vehicle using the southbound approach was a heavy vehicle according to traffic counts, and this one heavy vehicle likely struggled to find sufficiently large gaps in free-flowing traffic on US 460 to enter the highway. During the PM peak hour, LOS D also occurs on the northbound left-through lane, likely due to higher northbound left turn volume relative to the AM peak hour. Signal warrants are not satisfied for existing conditions at any intersection.

Table 2-1: 2022 MOE's for Old Mill Rd at US 460

	US 460			US 460		Old Mill Rd		Old Suffolk Rd
	EB L	EB T	EB R	WB L	WB TR	NB LT	NB R	SB LTR
AM Peak Hour								
LOS	A	A	A	A	A	C	B	D
Delay (s/veh)	8.0	0.0	0.0	9.6	0.0	24.7	11.1	31.3
95th % Queue (veh)	0.1	0.0	0.0	0.1	0.0	0.2	0.1	0.0
PM Peak Hour								
LOS	A	A	A	A	A	D	B	B
Delay (s/veh)	9.6	0	0	8.8	0	31.9	10.3	11.3
95th % Queue (ft)	0.0	0	0	0.1	0	0.7	0.1	0.0

L = Left | T = Thru | R = Right | LT, TR, LTR, LR = Shared Turn/Thru Lanes

Table 2-2: 2022 MOE's for Old Mill Rd at William A Gwaltney Wy

	William A Gwaltney Way	Old Mill Rd	Old Mill Rd	
	EB LR	NB LT	SB T	SB R
AM Peak Hour				
LOS	A	A	A	A
Delay (s/veh)	8.7	7.3	0.0	0.0
95th % Queue (veh)	0.0	0.0	0.0	0.0
PM Peak Hour				
LOS	A	A	A	A
Delay (s/veh)	8.9	7.2	0.0	0.0
95th % Queue (veh)	0.2	0.0	0.0	0.0

L = Left | T = Thru | R = Right | LT, TR, LTR, LR = Shared Turn/Thru Lanes

2.5 Traffic Generated by Developments

2.5.1 Trip Generation

New vehicle trips generated by proposed developments were estimated using the *Trip Generation Manual 10th Edition*, published by the Institute of Transportation Engineers (ITE). For planning purposes, Development 1 is assumed to be a manufacturing facility with distribution capabilities that has 300 employees, occupies 450,000 square feet of gross floor area, and will be built in the very near future. Development 2 is assumed to be a warehouse that also has 300 employees, occupies 450,000 square feet of gross floor area, and will be built father in the future after the completion of Development 1. Dates for opening year or full build-out of each development were unknown at the time of writing. So, it was assumed Development 1 would open and be operating at full capacity in 2025, while Development 2 would be open and operating at full capacity in 2032. These years represent three and ten years beyond the existing conditions year used for analysis.

When estimating new vehicle trips, Development 1 trips were estimated based on the expected number of employees whereas Development 2 trips were estimated based on gross floor area, because "trips versus employees" data for warehouses in the *Trip Generation Manual* was limited to warehouse facilities with less than 200 employees. The number of people employed by Development 2 exceeds the range of available ITE data, so gross floor area was used instead. (ITE data includes warehouse facilities with up to millions of square feet of gross floor area.) The number of new peak hour and daily vehicle trips are shown in **Table 3**.

Table 3: Trip Generation Volume

Development			ITE Land	AM Trips		PM Trips		Daily
Number	Use	Size	Use Code	Entering	Exiting	Entering	Exiting	Trips
1	Manufacturing (near-term build)	300 employees 450,000 Sq Ft	140	82	29	38	60	868
2	Warehouse (long-term build)	300 employees 450,000 Sq Ft	150	61	18	22	60	757
Total	–	–	–	**143**	**47**	**60**	**120**	**1625**

2.5.2 Trip Distribution

New vehicle trips associated with each development were assigned to the study area road network assuming they follow existing travel patterns and experience the same hourly and 15-minute volume fluctuations shown by traffic count data. Trip distribution percentages are pictured on **Figure 4**, and trip volumes assigned to each intersection turning movement are pictured on **Figure 5** and **Figure 6** for each development.

To determine the distribution of new trips, the portion of total new daily trips occuring from 7:00 AM to 7:00 PM was estimated. This 12-hour trip volume was distributed to each hour and 15-minute period by calculating the portion of total 12-hour traffic count volume contained in each hour and each 15-minute period between 7:00 AM and 7:00 PM, allowing new trips to be distributed temporally within study area. Next, hourly and 15-minute trip volumes were distributed spatially within the study area to intersection movements that convey traffic to or from William A Gwaltney Way, where the developments are located. This was done by calculating the portion of total traffic count volume in movements entering or exiting the study area road network, but only for movements conveying traffic to or from William A Gwaltney Way. For example, westbound and eastbound through movements on US 460 at Old Mill Road were not used in these calculations and no trips were assigned to these movements because they do not convey traffic to or from William A Gwaltney Way. Finally, it was assumed all new trips access developments only from the intersection of Old Mill Road and William A Gwaltney Way.

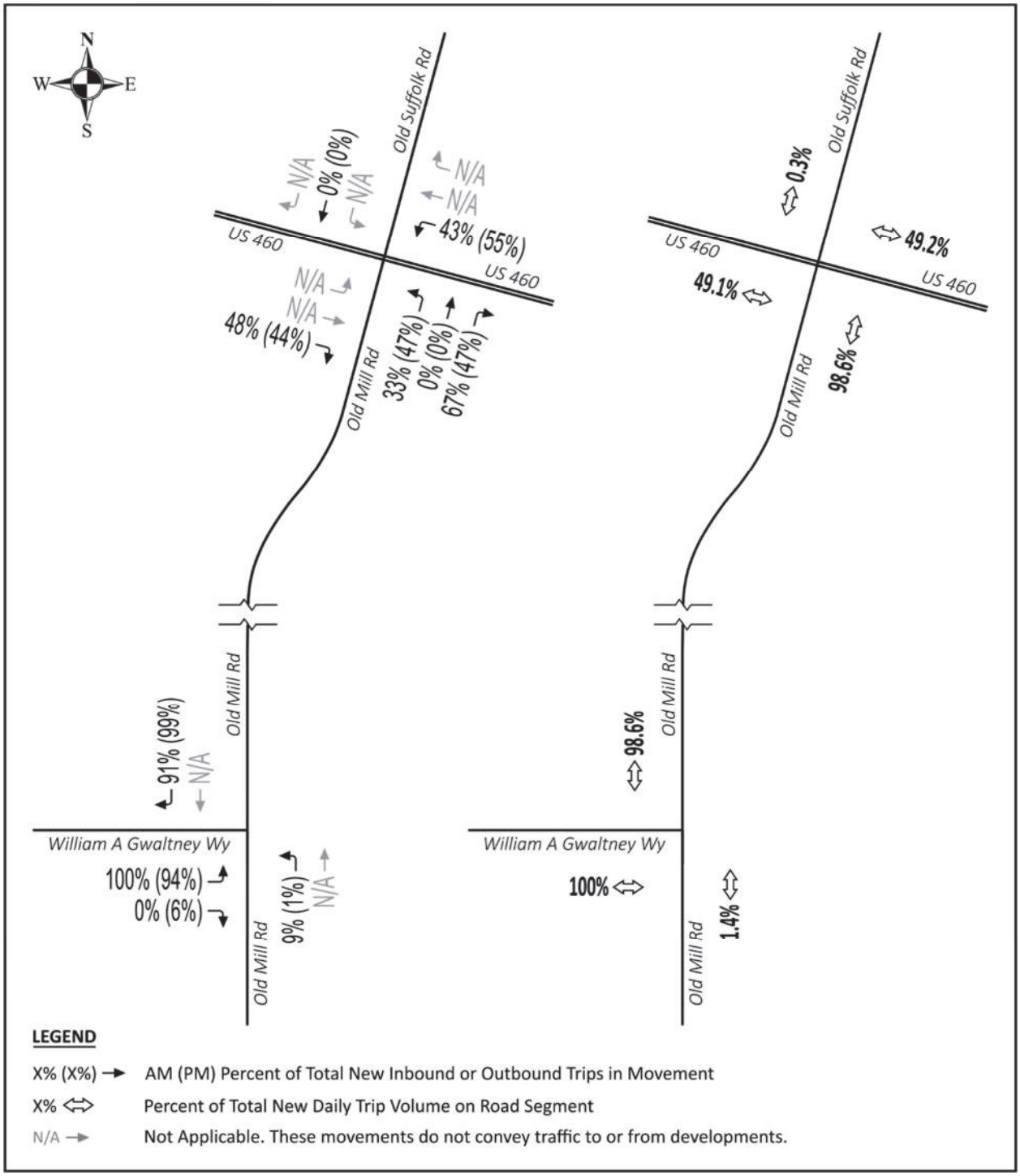


Figure 4: Distribution of New Peak Hour and Daily Trips

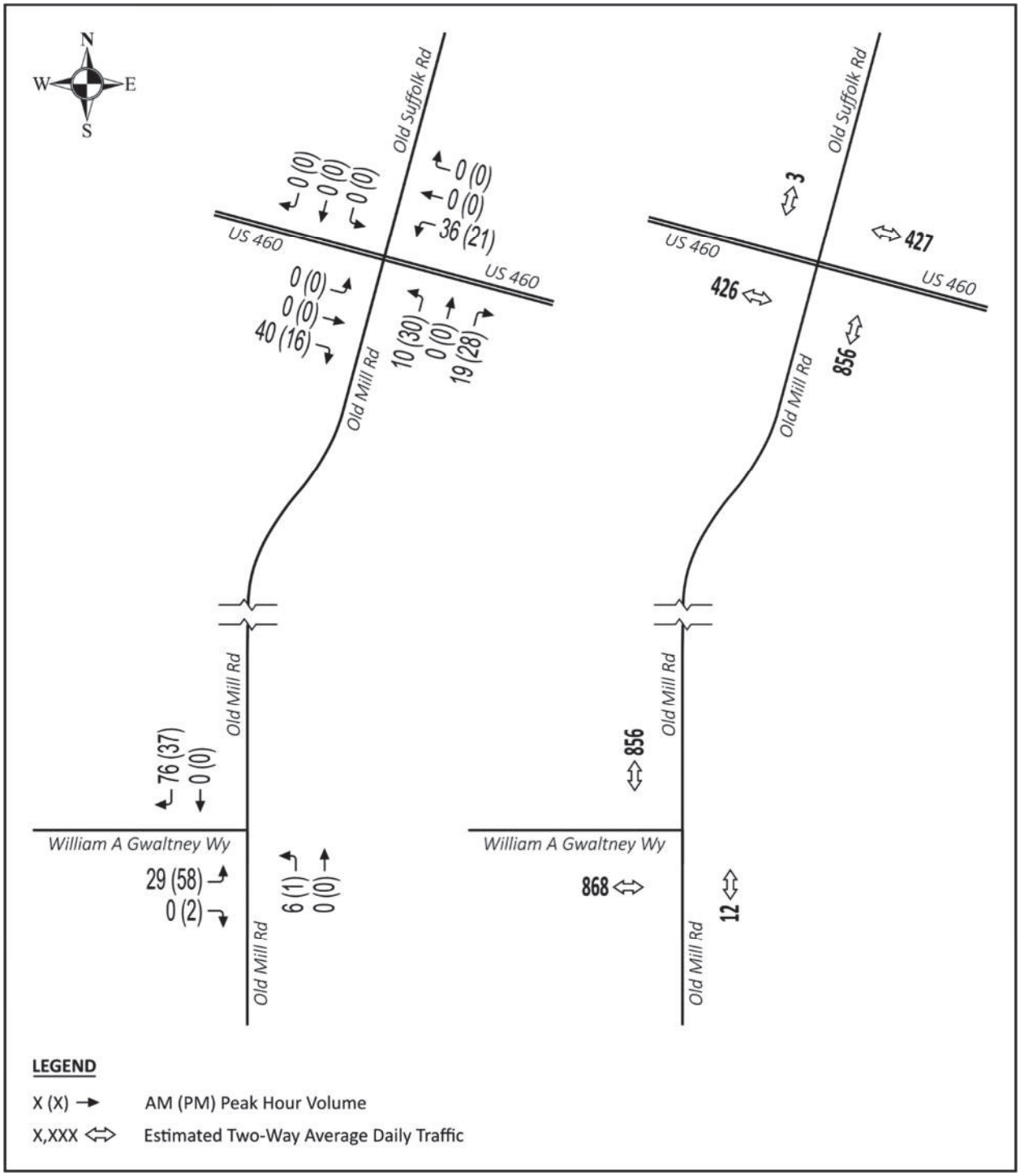


Figure 5: New Peak Hour and Daily Trips for Development 1

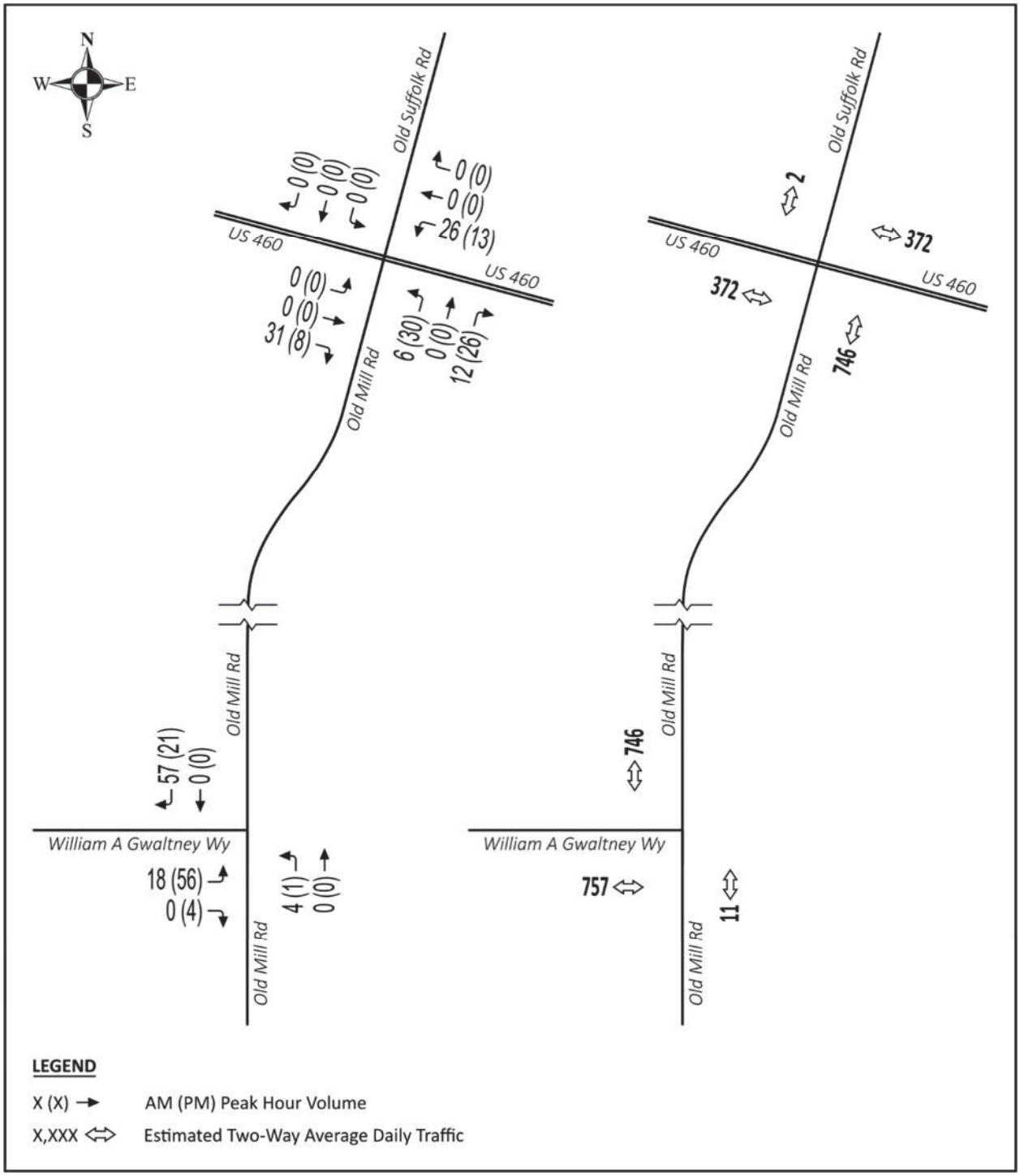


Figure 6: New Peak Hour and Daily Trips for Development 2

3.0 Future Background Traffic Conditions

3.1 Background Traffic Forecasts

Annual linear growth rates were used to estimate the natural growth in background traffic. These rates were selected by analyzing historical trends in annual average daily traffic (AADT) for study area roadways. AADT data was obtained from traffic volume reports published online by VDOT. Graphs showing historical AADT data and growth trends for US 460 and Old Mill Road are included in **Appendix C**. Growth rates chosen for analysis are summarized in **Table 4** with additional discussion about the selection process after the table.

Table 4: Selected Growth Rates

Roadway	Growth Rate	Source
US 460	0.2%	Historical AADT Trends
Old Mill Rd	1.3%	Historical AADT Trends
Old Suffolk Rd	1.3%	Historical AADT Trends
William A Gwaltney Way	0.0%	Historical AADT Trends

On US 460, AADT trends indicate traffic growth started positive and decreased as time progressed. Annual growth started at +1.9% for the longest time period (2001 through 2019) and became -0.6% in the most recent five-year period (2015 through 2019). Given this decreasing trend, it is unreasonable to assume large positive growth would occur in the future. Additionally, five years of data showing negative growth is insufficient to conclusively suggest negative growth should be expected to continue. Therefore, an annual linear growth rate of 0.2% was selected for US 460. This rate was calculated using data from 2011 through 2019, representing the most recent decade excluding 2010 which had unusually low AADT that may have been caused by the economic recession occurring at that time.

On Old Mill Road, AADT trends indicate positive traffic growth over time. However, depending on the time period, that growth is either small or very large. From 2005 through 2017, an annual growth rate of 27% occurred. From 2005 through 2011, an annual growth rate of 1.3% occurred. When viewing the data, there is a dramatic increase in AADT in 2017 versus earlier years. The cause is unknown but including data for 2017 in growth rate calculations produces an unreasonably large growth rate, so the 1.3% annual linear growth rate was selected for Old Mill Road instead. This rate was also applied to Old Suffolk Road because AADT data was not available for Old Mill Road and Old Suffolk Road separately, but rather both roads combined.

No traffic growth was assumed to occur on William A Gwaltney Way. This road is currently a dead-end street and vehicles traveling on William A Gwaltney Way in the future are assumed to use this road to access developments within the Park, not as a cut-through route to access other destinations if new connections are made to William A Gwaltney Way.

The dates for opening year or full build-out for proposed developments were unknown at the time of writing, although it is believed that one development could be built within the next few years while the other development is a longer-term proposal. Due to this uncertainty, future background traffic volume was calculated for 2025 and 2032, three years and ten years into the future from the existing conditions year used for analysis.

The chosen growth rates were applied directly to 2022 AM and PM peak hour turning movement counts to estimate future background traffic volume. Peak hour and estimated ADT for 2025 and 2032 are pictured on **Figure 7** and **Figure 8**.

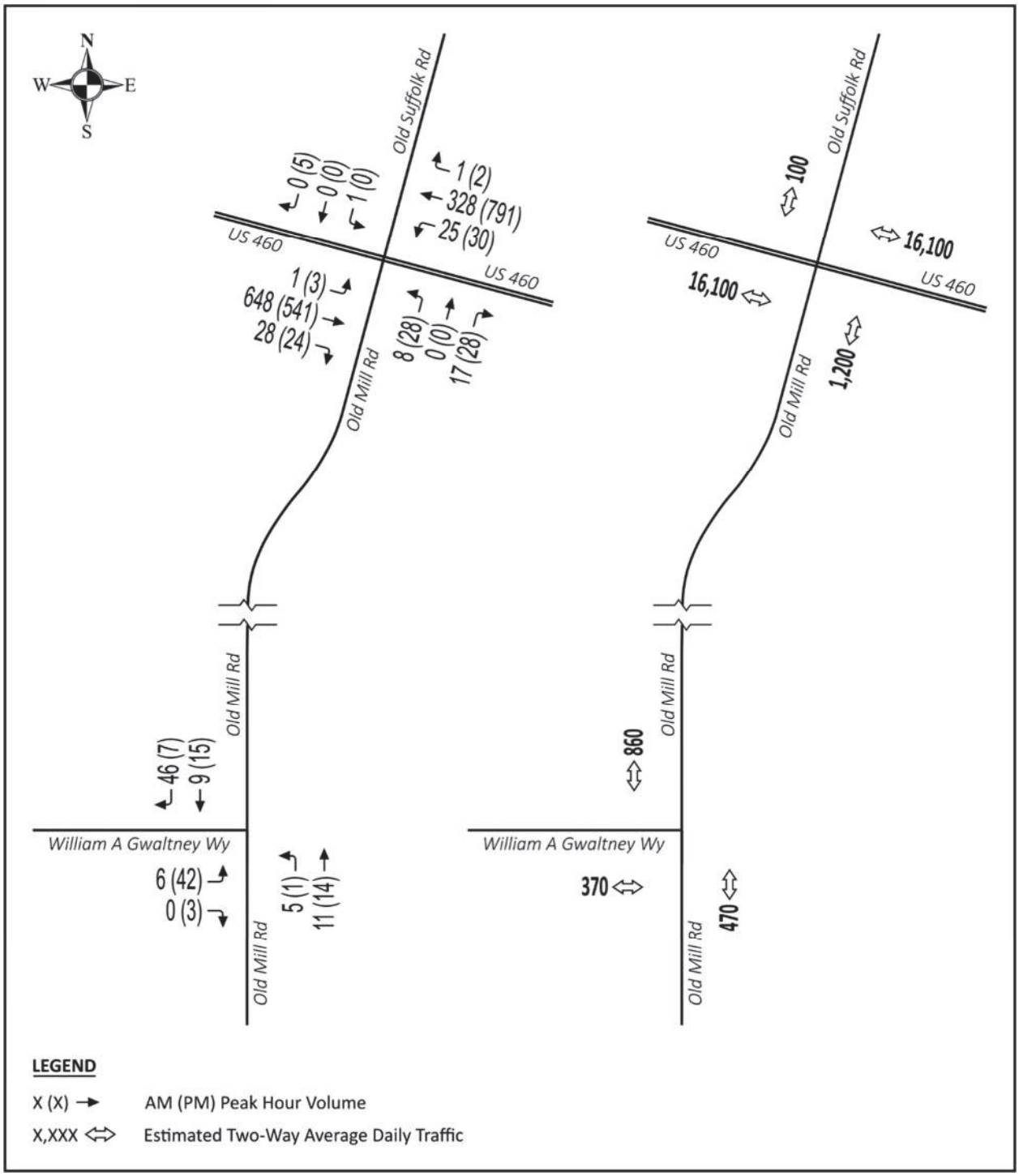


Figure 7: 2025 Peak Hour Background Traffic Volume and Average Daily Traffic

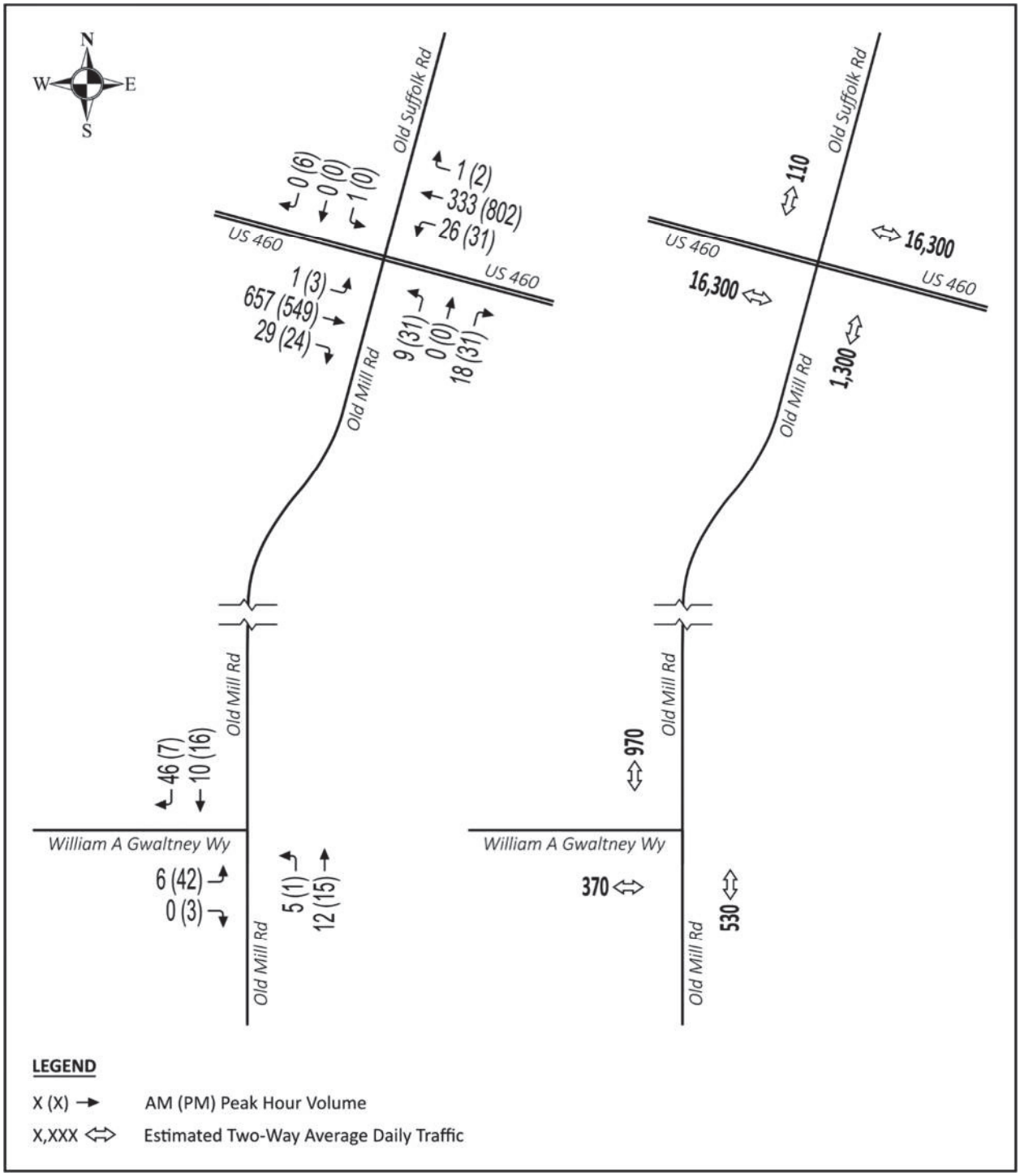


Figure 8: 2032 Peak Hour Background Traffic Volume and Average Daily Traffic

3.2 Future Background Traffic Operations Analysis

Analysis of future background traffic was performed using existing intersection lane geometry and traffic control with 2025 and 2032 background traffic forecasts. This background

traffic scenario represents the impact on traffic operations resulting solely from natural growth in background traffic, without the influence of new development trips or changes to the study area road network.

3.2.1 2025 Background Traffic Analysis Results

For 2025 background traffic conditions, traffic operations for all intersections and peak hours are generally good overall and are nearly identical to existing conditions, with minimal or no degradation of LOS, delay, and queuing caused by three years of traffic growth. Signal warrants are not satisfied for 2025 background traffic conditions. Results for this analysis scenario are shown in **Table 5-1** and **Table 5-2** below. Synchro analysis reports and Highway Capacity Software signal warrant reports for background traffic conditions are included in **Appendix D**.

Table 5-1: 2025 Background MOE's for Old Mill Rd at US 460

	US 460			US 460		Old Mill Rd		Old Suffolk Rd
	EB L	EB T	EB R	WB L	WB TR	NB LT	NB R	SB LTR
AM Peak Hour								
LOS	A	A	A	A	A	C	B	D
Delay (s/veh)	8.0	0.0	0.0	9.6	0.0	24.8	11.1	31.5
95th % Queue (veh)	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.0
PM Peak Hour								
LOS	A	A	A	A	A	D	B	B
Delay (s/veh)	9.6	0.0	0.0	8.8	0.0	32.4	10.3	11.3
95th % Queue (ft)	0.0	0.0	0.0	0.1	0.0	0.7	0.1	0.0

L = Left | T = Thru | R = Right | LT, TR, LTR, LR = Shared Turn/Thru Lanes

Table 5-2: 2025 Background MOE's for Old Mill Rd at William A Gwaltney Wy

	William A Gwaltney Way	Old Mill Rd	Old Mill Rd	
	EB LR	NB LT	SB T	SB R
AM Peak Hour				
LOS	A	A	A	A
Delay (s/veh)	8.7	7.3	0.0	0.0
95th % Queue (veh)	0.0	0.0	0.0	0.0
PM Peak Hour				
LOS	A	A	A	A
Delay (s/veh)	9.0	7.2	0.0	0.0
95th % Queue (veh)	0.2	0.0	0.0	0.0

L = Left | T = Thru | R = Right | LT, TR, LTR, LR = Shared Turn/Thru Lanes

3.2.2 2032 Background Traffic Analysis Results

For 2032 background traffic conditions, traffic operations for all intersections and peak hours are generally adequate to good overall and are similar to existing conditions, with slight or no degradation of LOS, delay, and queuing caused by ten years of traffic growth. The most noteworthy change versus 2025 background traffic and 2022 existing conditions is the northbound left-through lane on Old Mill Road at US 460. During the AM peak hour, LOS changed from C to D for this lane with delay increasing roughly one second. During the PM peak hour, LOS changed from D to E for with delay increasing roughly four seconds. These increases in delay are relatively small, indicating this particular lane was already operating near the threshold between LOS C and D in the AM peak hour and threshold between LOS D and E in the PM peak hour before 2032. Signal warrants are not satisfied for 2032 background traffic conditions. Results for this analysis scenario are shown in **Table 6-1** and **Table 6-2** below. Synchro analysis reports and Highway Capacity Software signal warrant reports for background traffic conditions are included in **Appendix D**.

Table 6-1: 2032 Background MOE's for Old Mill Rd at US 460

	US 460			US 460		Old Mill Rd		Old Suffolk Rd
	EB L	EB T	EB R	WB L	WB TR	NB LT	NB R	SB LTR
AM Peak Hour								
LOS	A	A	A	A	A	D	B	D
Delay (s/veh)	8.1	0.0	0.0	9.7	0.0	25.9	11.2	32.7
95th % Queue (veh)	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.0
PM Peak Hour								
LOS	A	A	A	A	A	E	B	B
Delay (s/veh)	9.9	0.0	0.0	8.8	0.0	36.8	10.4	11.7
95th % Queue (ft)	0.0	0.0	0.0	0.1	0.0	0.9	0.2	0.0

L = Left | T = Thru | R = Right | LT, TR, LTR, LR = Shared Turn/Thru Lanes

Table 6-2: 2032 Background MOE's for Old Mill Rd at William A Gwaltney Wy

	William A Gwaltney Way	Old Mill Rd	Old Mill Rd	
	EB LR	NB LT	SB T	SB R
AM Peak Hour				
LOS	A	A	A	A
Delay (s/veh)	8.9	7.3	0.0	0.0
95th % Queue (veh)	0.0	0.0	0.0	0.0
PM Peak Hour				
LOS	A	A	A	A
Delay (s/veh)	9.0	7.3	0.0	0.0
95th % Queue (veh)	0.2	0.0	0.0	0.0

L = Left | T = Thru | R = Right | LT, TR, LTR, LR = Shared Turn/Thru Lanes

4.0 Future Build Conditions

4.1 Build Traffic Forecasts

"Build conditions" refer to future years when each development reaches full build-out. Development 1 is assumed to achieve full build-out by 2025 and Development 2 is assumed to achieve full build-out by 2032. For build conditions, the total traffic volume using study area roadways is the sum of background traffic and new vehicle trips generated by the developments. Total peak hour traffic volume and estimated ADT for build conditions in years 2025 and 2032 are pictured on **Figure 9** and **Figure 10**.

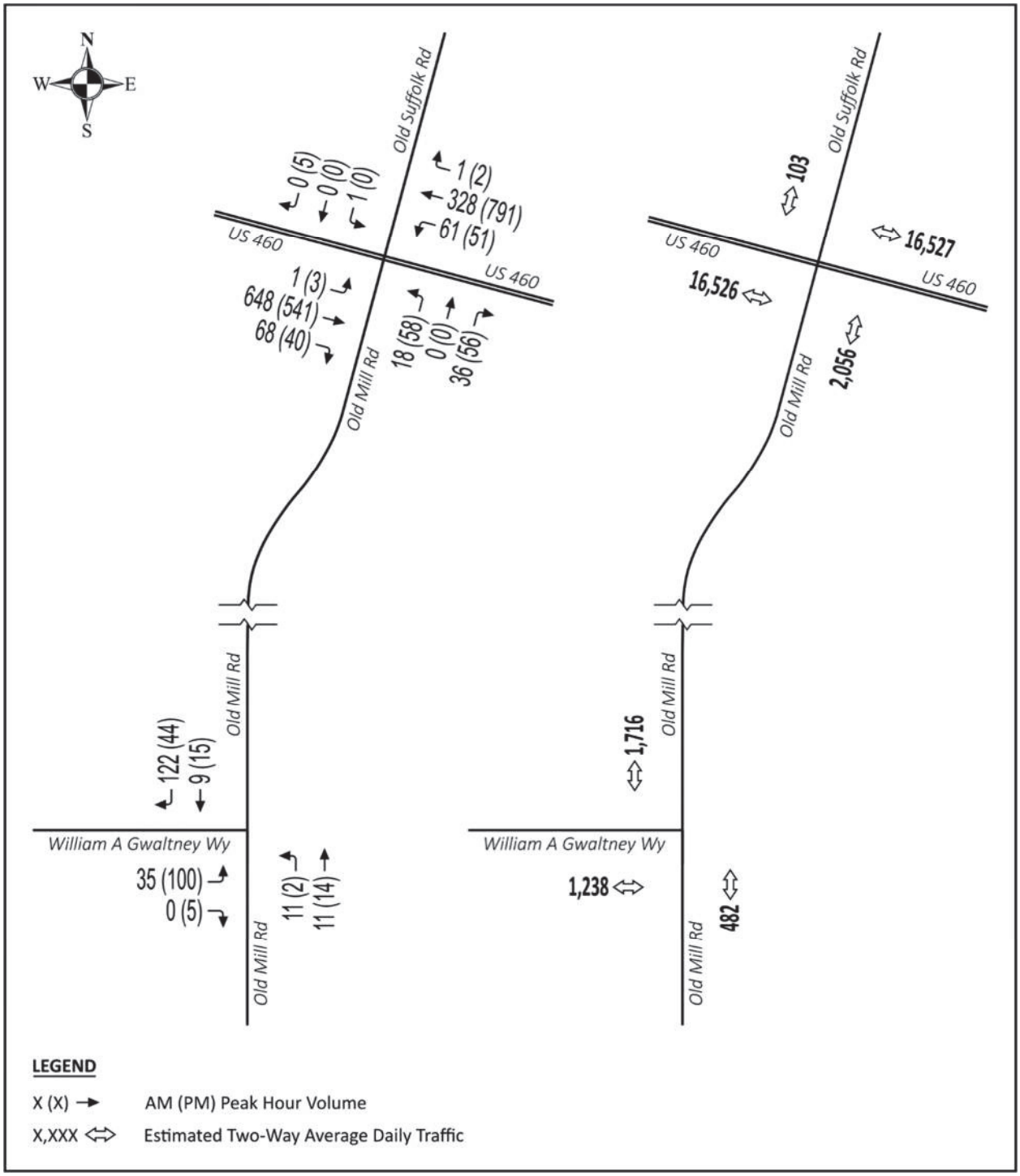


Figure 9: 2025 Peak Hour Build Traffic Volume and Average Daily Traffic

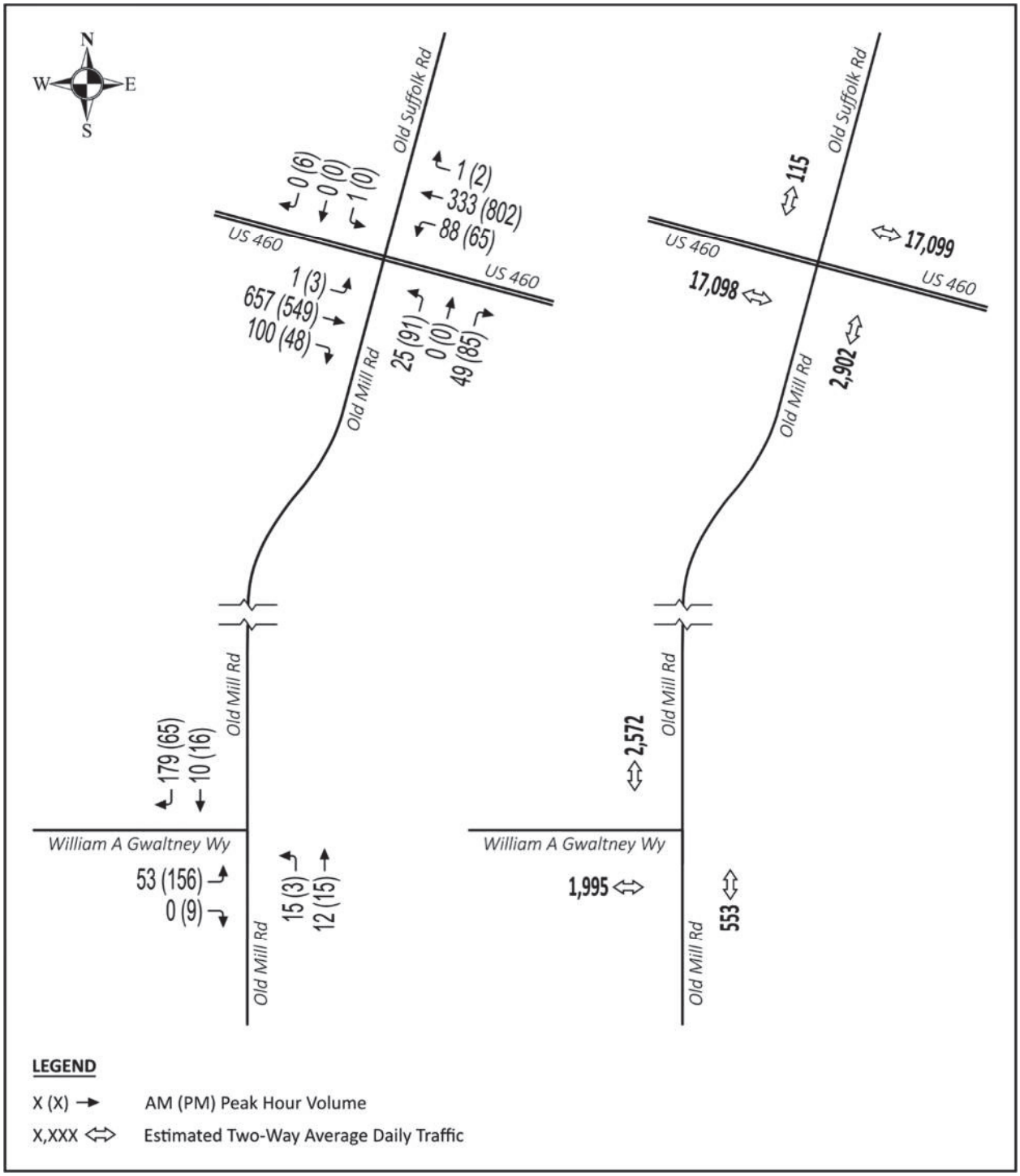


Figure 10: 2032 Peak Hour Build Traffic Volume and Average Daily Traffic

4.2 Unmitigated Future Traffic Operations Analysis

Analyzing the impact on traffic conditions caused by the developments was done in two steps. First by assuming developments are built without any roadway improvements, and second by assuming developments are built in conjunction with roadway improvements that mitigate negative traffic impacts. The first scenario, termed "unmitigated build conditions," represents the combined impact of background traffic growth plus new development trips on the existing road network. This acts as a baseline to compare improvement results against. The second scenario, termed "mitigated build conditions," represents the impact of background traffic growth plus new development trips after improvements are implemented to reduce negative impacts on traffic operations.

4.2.1 2025 Unmitigated Build Analysis Results

For 2025 unmitigated build conditions, trips for Development 1 were added to 2025 background traffic forecasts and analyzed using current intersection lane geometry and traffic control. Development 1 is assumed to be open and operating at full capacity in 2025. Analysis results for this scenario are shown in **Table 7-1** and **Table 7-2** below. Synchro analysis reports and Highway Capacity Software signal warrant reports for unmitigated build conditions are included in **Appendix E**.

Compared to 2025 background traffic conditions, adding trips for Development 1 to three years of traffic growth results in distinct degradation of traffic operations on the northbound approach at the intersection of Old Mill Road and US 460. The northbound left-through lane degrades from LOS D to LOS F during the PM peak hour with about 55% more delay and 210% longer queue lengths. This may be attributed to the northbound left turn volume being roughly two times higher than 2025 background traffic conditions during the PM peak hour. Other lanes at this intersection show less degradation of traffic operations versus 2025 background conditions. The intersection of Old Mill Road and William A Gwaltney Way continues operating at LOS A for all lanes as it did for 2025 background traffic conditions.

Additionally, when adding trips from Development 1 to 2025 background traffic, MUTCD Signal Warrant 3B (the "peak hour" warrant) is satisfied at the intersection of Old Mill Road and US 460. This suggests that a traffic signal should be considered at this location and could be justified. No signal warrants are met for the Old Mill Road and William A Gwaltney Way intersection for 2025 unmitigated build conditions.

Table 7-1: 2025 Unmitigated Build MOE's for Old Mill Rd at US 460

	US 460			US 460		Old Mill Rd		Old Suffolk Rd
	EB L	EB T	EB R	WB L	WB TR	NB LT	NB R	SB LTR
AM Peak Hour								
LOS	A	A	A	B	A	D	B	E
Delay (s/veh)	8.0	0.0	0.0	10.3	0.0	31.9	11.5	37.8
95th % Queue (veh)	0.0	0.0	0.0	0.3	0.0	0.5	0.2	0.0
PM Peak Hour								
LOS	A	A	A	A	A	F	B	B
Delay (s/veh)	9.6	0.0	0.0	9.1	0.0	50.2	10.7	11.3

95th % Queue (ft)	0.0	0.0	0.0	0.2	0.0	2.2	0.3	0.0

L = Left | T = Thru | R = Right | LT, TR, LTR, LR = Shared Turn/Thru Lanes

Table 7-2: 2025 Unmitigated Build MOE's for Old Mill Rd at William A Gwaltney Wy

	William A Gwaltney Way EB LR	Old Mill Rd NB LT	Old Mill Rd SB T	Old Mill Rd SB R
AM Peak Hour				
LOS	A	A	A	A
Delay (s/veh)	9.1	7.5	0.0	0.0
95th % Queue (veh)	0.1	0.0	0.0	0.0
PM Peak Hour				
LOS	A	A	A	A
Delay (s/veh)	9.3	7.3	0.0	0.0
95th % Queue (veh)	0.4	0.0	0.0	0.0

L = Left | T = Thru | R = Right | LT, TR, LTR, LR = Shared Turn/Thru Lanes

4.2.2 2032 Unmitigated Build Analysis Results

For 2032 unmitigated build conditions, trips for Development 1 and Development 2 were added to 2032 background traffic forecasts and analyzed using current intersection lane geometry and traffic control. Development 2 is assumed to be open and operating at full capacity in 2032, while Development was assumed to be operating at full capacity in 2025. Analysis results for this scenario are shown in **Table 8-1** and **Table 8-2** below. Synchro analysis reports and Highway Capacity Software signal warrant reports for unmitigated build conditions are included in **Appendix E**.

Compared to 2032 background traffic conditions, adding trips for Development 1 and Development 2 to ten years of traffic growth results in significant degradation of traffic operations on the northbound approach at the intersection of Old Mill Road and US 460. The northbound left-through lane degrades from LOS E to LOS F during the PM peak hour, which is accompanied by roughly 160% higher delay and 440% longer queue lengths. This lane also degrades form LOS D to LOS E in the AM peak hour. The significant PM peak hour degradation may be attributed to the northbound left turn volume being roughly three times higher than 2032 background traffic conditions after new trips are added. Other lanes at this intersection show less severe degradation of traffic operations versus 2032 background traffic conditions, while the Old Mill Road and William A Gwaltney Way intersection continues operating with LOS A for all lanes as it did for 2032 background traffic conditions.

When adding trips from both developments to 2032 background traffic, MUTCD Signal Warrant 2 (the "four hour" warrant) and MUTCD Signal Warrant 3 (the "peak hour" warrant) are satisfied at the intersection of Old Mill Road and US 460. This suggests that a traffic signal should be considered at this location and could be justified. No signal warrants are met for the Old Mill Road and William A Gwaltney Way intersection for 2032 unmitigated build conditions.

Table 8-1: 2032 Unmitigated Build MOE's for Old Mill Rd at US 460

	US 460			US 460		Old Mill Rd		Old Suffolk Rd
	EB L	EB T	EB R	WB L	WB TR	NB LT	NB R	SB LTR
AM Peak Hour								
LOS	A	A	A	B	A	E	B	E
Delay (s/veh)	8.0	0.0	0.0	10.9	0.0	41.3	11.7	46.5
95th % Queue (veh)	0.0	0.0	0.0	0.5	0.0	0.8	0.3	0.0
PM Peak Hour								
LOS	A	A	A	A	A	F	B	B
Delay (s/veh)	9.6	0.0	0.0	9.3	0.0	96.5	11.1	11.4
95th % Queue (veh)	0.0	0.0	0.0	0.2	0.0	4.9	0.5	0.0

L = Left | T = Thru | R = Right | LT, TR, LTR, LR = Shared Turn/Thru Lanes

Table 8-2: 2032 Unmitigated Build MOE's for Old Mill Rd at William A Gwaltney Wy

	William A Gwaltney Way	Old Mill Rd	Old Mill Rd	
	EB LR	NB LT	SB T	SB R
AM Peak Hour				
LOS	A	A	A	A
Delay (s/veh)	9.3	7.7	0.0	0.0
95th % Queue (veh)	0.2	0.0	0.0	0.0
PM Peak Hour				
LOS	A	A	A	A
Delay (s/veh)	9.9	7.4	0.0	0.0
95th % Queue (veh)	0.8	0.0	0.0	0.0

L = Left | T = Thru | R = Right | LT, TR, LTR, LR = Shared Turn/Thru Lanes

4.3 Mitigated Future Traffic Operations Analysis

4.3.1 Recommended Improvements

Analysis of future background traffic conditions discovered that natural growth of background traffic causes relatively limited harm to traffic operations. However, when new development trips are included, traffic operations degrade significantly and poor level of service ranging from LOS D to LOS F is expected for the northbound left-through lane and other lanes at the Old Mill Road and US 460 intersection. Signal warrants are also satisfied when the new development trips are included.

Due to these findings, signalizing the intersection of Old Mill Road and US 460 should be considered as a means of mitigating poor traffic operations. A traffic signal with four-phase flashing yellow arrow signal head allowing permitted-protected westbound left turns, and three-phase signal heads allowing permitted lefts elsewhere, is recommended. Ideally, the traffic signal

should be semi-actuated with detectors on Old Mill Road and Old Suffolk Road. This would create less interruption to vehicles traveling on US 460, except when necessary to allow side-street traffic to access the highway. However, installation and maintenance costs are higher for actuated signals compared to pretimed signals, and a pretimed signal can provide similarly good traffic operations according to Synchro analysis.

For a new traffic signal built to VDOT specifications, budgeting $500,000 is recommended. However, this dollar amount excludes contingency funds, and excludes additional costs related to communications equipment because the availability and location of existing VDOT fiber optics near Old Mill Road and US 460 is not known.

4.3.2 2025 Mitigated Build Analysis Results

For 2025 mitigated build conditions, trips for Development 1 were added to 2025 background traffic and analyzed using a traffic signal with existing lane geometry at the intersection of Old Mill Road and US 460. Synchro was allowed to optimize signal parameters. No changes were made to the Old Mill Road and William A Gwaltney Way intersection which already has excellent traffic operations. Analysis results for this scenario are shown in **Table 9-1** and **Table 9-2** below. Synchro analysis reports and Highway Capacity Software signal warrant reports for mitigated build conditions are included in **Appendix F**.

Compared to 2025 unmitigated build traffic operations, adding a traffic signal to the intersection of Old Mill Road and US 460 eliminates poor LOS and delay that occurred on northbound and southbound approaches without mitigation. The northbound left-through lane which was previously LOS D in the AM peak hour and LOS F in the PM peak hour is now LOS B in both peak hours, with about 70% less delay and 70% shorter queue lengths during the PM peak hour. The southbound approach, which was LOS E during the AM peak hour due to a heavy vehicle struggling to leave the approach, improves to LOS B. Traffic operations degrade slightly from LOS A to LOS B on eastbound and westbound approaches with moderate increases to delay and queuing. However, this is expected because vehicles on these approaches must stop and wait for a Green signal indication. Previously they were free-flowing and could traverse the intersection unimpeded.

Table 9-1: 2025 Mitigated Build MOE's for Old Mill Rd at US 460

	US 460			US 460		Old Mill Rd		Old Suffolk Rd
	EB L	EB T	EB R	WB L	WB TR	NB LT	NB R	SB LTR
AM Peak Hour								
LOS	B	B	B	B	A	B	B	B
Delay (s/veh)	12.7	19.2	14.0	13.0	9.9	15.0	15.5	15.1
95th % Queue (veh)	0.0	6.9	1.2	0.9	2.1	0.4	0.7	0.0
PM Peak Hour								
LOS	B	B	B	B	B	B	B	B
Delay (s/veh)	13.9	17.6	14.0	10.9	12.6	15.6	15.6	14.5
95th % Queue (veh)	0.0	4.8	0.6	0.7	5.6	1.2	1.1	0.1

L = Left | T = Thru | R = Right | LT, TR, LTR, LR = Shared Turn/Thru Lanes

Table 9-2: 2025 Mitigated Build MOE's for Old Mill Rd at William A Gwaltney Wy

	William A Gwaltney Way	Old Mill Rd	Old Mill Rd	
	EB LR	NB LT	SB T	SB R
AM Peak Hour				
LOS	A	A	A	A
Delay (s/veh)	9.1	7.5	0.0	0.0
95th % Queue (veh)	0.1	0.0	0.0	0.0
PM Peak Hour				
LOS	A	A	A	A
Delay (s/veh)	9.4	7.3	0.0	0.0
95th % Queue (veh)	0.4	0.0	0.0	0.0

L = Left | T = Thru | R = Right | LT, TR, LTR, LR = Shared Turn/Thru Lanes

4.3.3 2032 Mitigated Build Analysis Results

For 2032 mitigated build conditions, trips for both developments were added to 2032 background traffic and analyzed using a traffic signal with existing lane geometry at the intersection of Old Mill Road and US 460. Synchro was allowed to optimize signal parameters. No changes were made to the Old Mill Road and William A Gwaltney Way intersection which already has excellent traffic operations. Analysis results for this scenario are shown in **Table 10-1** and **Table 10-2** below. Synchro analysis reports and Highway Capacity Software signal warrant reports for mitigated build conditions are included in **Appendix F**.

Compared to 2032 unmitigated build traffic operations, adding a traffic signal to the intersection of Old Mill Road and US 460 eliminates poor LOS and delay that occurred on northbound and southbound approaches without mitigation. The northbound left-through lane which was previously LOS D in the AM peak hour and LOS F in the PM peak hour is now LOS B in both peak hours, with about 85% less delay and 80% shorter queue lengths during the PM peak hour. The southbound approach, which was LOS E during the AM peak hour due to a heavy vehicle struggling to leave the approach, improves to LOS B. Traffic operations degrade slightly from LOS A to LOS B on eastbound and westbound approaches with moderate increases to delay and queuing. However, this is expected because vehicles on these approaches must stop and wait for a Green signal indication. Previously they were free-flowing and could traverse the intersection unimpeded.

Table 10-1: 2032 Mitigated Build MOE's for Old Mill Rd at US 460

	US 460			US 460		Old Mill Rd		Old Suffolk Rd
	EB L	EB T	EB R	WB L	WB TR	NB LT	NB R	SB LTR
AM Peak Hour								
LOS	B	B	B	B	A	B	B	B
Delay (s/veh)	12.4	18.5	13.6	13.0	9.9	15.0	15.5	15.1
95th % Queue (veh)	0.0	6.7	1.2	0.9	2.1	0.4	0.7	0.0
PM Peak Hour								
LOS	B	B	B	B	B	B	B	B
Delay (s/veh)	15.9	18.2	14.6	12.8	14.6	15.6	15.6	13.8
95th % Queue (veh)	0.1	5.0	0.8	1.0	6.5	1.9	1.6	0.1

L = Left | T = Thru | R = Right | LT, TR, LTR, LR = Shared Turn/Thru Lanes

Table 10-2: 2032 Mitigated Build MOE's for Old Mill Rd at William A Gwaltney Wy

	William A Gwaltney Way	Old Mill Rd	Old Mill Rd	
	EB LR	NB LT	SB T	SB R
AM Peak Hour				
LOS	A	7.5	A	A
Delay (s/veh)	9.1	A	0.0	0.0
95th % Queue (veh)	0.1	0.0	0.0	0.0
PM Peak Hour				
LOS	A	A	A	A
Delay (s/veh)	9.9	7.4	0.0	0.0
95th % Queue (veh)	0.8	0.0	0.0	0.0

L = Left | T = Thru | R = Right | LT, TR, LTR, LR = Shared Turn/Thru Lanes

5. Summary of Findings

As development of Shirley T Holland Intermodal Park (the "Park) continues, traffic traveling on the surrounding road network and into and out of the Park will increase. Analysis has shown that for 2022 existing conditions, the intersections of Old Mill Road at US 460 and Old Mill Road at William A Gwaltney Way perform well overall, primarily operating with LOS A and LOS B for most lanes in each peak hour. As traffic volumes increase, traffic operations change minimally at the Old Mill Road and William A Gwaltney Way intersection, which maintains LOS A for all lanes and peak hours regardless of the scenario being analyzed. However, traffic operations degrade more significantly at the Old Mill Road and US 460 intersection which has higher traffic demand.

While natural growth in background traffic causes modest increases in delay on northbound and southbound stop-controlled approaches for the Old Mill Road and US 460 intersection, it does not create a significant negative impact, even after ten years of traffic growth.

Only when new development-related vehicle trips are added to background traffic growth will traffic operations degrade significantly. Adding trips from one proposed development to three years of background traffic growth results in LOS E on the northbound approach in 2025 and one signal warrant is satisfied. Adding trips from both proposed developments to ten years of background traffic growth results in LOS F on the same approach in 2032 and two signal warrants are satisfied. Some form of intersection improvement is therefore necessary at the Old Mill Road and US 460 intersection to mitigate poor traffic operations caused by building new manufacturing and warehouse facilities within the Park.

To mitigate poor future traffic operations, installing a traffic signal is recommended for the intersection of Old Mill Road and US 460. A traffic signal can provide LOS B or better for all intersection lanes while eliminating LOS D, E, and F that occurs after ten years of traffic growth and new vehicle trips from both developments use the intersection. The traffic signal should utilize a four-phase signal head with flashing yellow arrow for the westbound left turn lane, which should operate with permitted-protected phasing, while standard three-phase signal heads and permitted left turns for other approaches are adequate. Lane configuration does not need to be modified at the intersection, reducing construction cost, complexity, and duration. The traffic signal should be semi-actuated with vehicle detectors on the Old Mill Road and Old Suffolk Road approaches. A semi-actuated signal creates less interruption to traffic traveling on US 460, except when needed to allow side-street traffic to enter the highway. However, a pretimed signal produces similarly good traffic operations according to Synchro analysis and may be considered due to its lower installation and ongoing maintenance costs. For high-level planning purposes, budgeting $500,000 to construct a new traffic signal is recommended, however this dollar amount excludes contingency and communications equipment.

No improvements are recommended for the intersection of Old Mill Road and William A Gwaltney Way, because it operates with LOS A for all lanes in every peak hour and analysis scenario. Within the Park, side-street stop control with stop signs installed on existing or future driveways connecting to William A Gwaltney Way is recommended for safety reasons, and should adequately accommodate traffic while allowing for efficient and orderly flow of vehicles.

6. References

Virginia Department of Transportation. *Traffic Forecasting Guidebook*, version 1. May 2020.

Virginia Department of Transportation. *Traffic Operations and Safety Analysis Manual*, Version 2. Feb 2020.

Virginia Department of Transportation. *Updated Administrative Guidelines for the Traffic Impact Analysis Regulations 24VAC30-155*. Dec 2018.

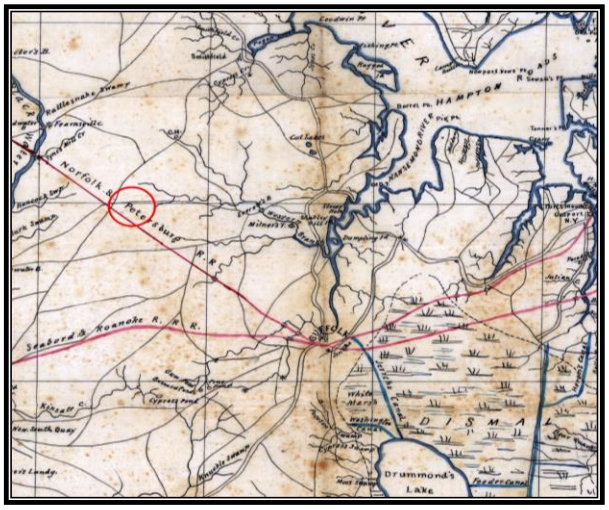
United States Department of Transportation, Federal Highway Administration. *Manual on Uniform Traffic Control Devices,* Revision 3. July 2022.

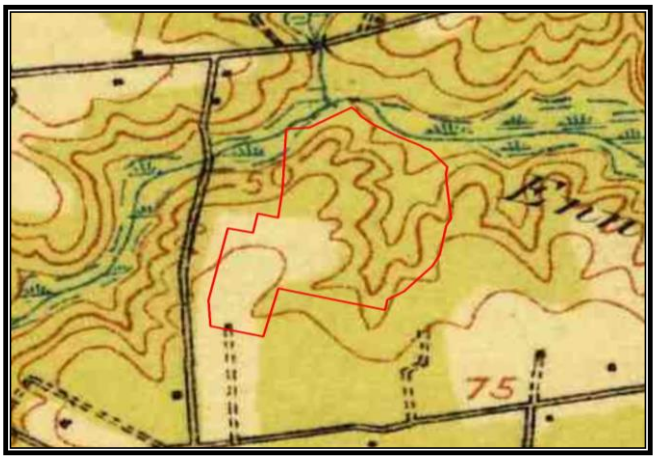
Appendix A: Traffic Counts

PHASE II ARCHAEOLOGICAL EVALUATION OF SITE 44IW0395 AND GPR SURVEY OF SITE 046-5629 THE WINDSOR COMMERCE CENTER TRACT

ISLE OF WIGHT COUNTY, VIRGINIA

VDHR #2023-4713





Circa~ Cultural Resource Management

JULY 2023

UPDATED JANUARY 2024

PHASE II ARCHAEOLOGICAL EVALUATION OF SITE 44IW0395 AND GPR SURVEY OF SITE 046-5629 THE WINDSOR COMMERCE CENTER TRACT ISLE OF WIGHT, VIRGINIA VDHR # 2023-4713

Prepared For:
The Meridian Group
3 Bethesda Metro Center, Suite 1400
Bethesda, Maryland 20814
(301) 718-0800

Prepared By:
Carol D. Tyrer, RPA, Principal Investigator, Dawn M. Muir, RPA, and Skye Hughes, RPA

Circa~ Cultural Resource Management, LLC
453 McLaws Circle, Suite 3
Williamsburg, Virginia 23185
(757) 220-5023

July 2023
Updated January 2024

ABSTRACT

In the summer of 2023, The Meridian Group contracted Circa~ Cultural Resource Management, LLC (Circa~) to conduct a Phase II archaeological evaluation of Site 44IW0395 and a ground-penetrating radar (GPR) survey of the buffer of 046-5629, the cemetery at the Windsor Commerce Center Tract, in Isle of Wight County, Virginia.

The artifacts recovered from Site 44IW0395 during the Phase I survey suggested occupation from the late 18th century, with the use of the parcel continuing into the early- to mid-19th century. At the conclusion of the Phase I survey completed in 2023, Circa~ noted the site may have good research potential and recommended it as potentially eligible for the National Register of Historic Places under Criterion D, with Criteria A, B, and C not applicable. If the development cannot avoid the site, then Circa~ recommended a Phase II evaluation be completed on the site before ground-disturbing activities.

At the conclusion of the Phase II survey, it appears that the individuals working and living at the site were probably small landowners or possibly slaves who may have diversified their agricultural efforts to include grain or, perhaps, livestock production. The shovel testing indicates the site was plowed with a more recent plowzone from the shift of no-till practices overlying an older, deeper plowzone from when the field was consistently mechanically plowed. The absence of cultural features and the presence of plowscars in the base of test units, coupled with the minute size of artifacts, suggests the repeated plowing of the site has erased any features associated with the site.

All artifacts were recovered from an undifferentiated/mixed-plowed stratigraphic context. No subsurface features beyond plowscars were identified. The lack of spatial and temporal integrity caused by repeated plowing episodes and the absence of subsurface features limit the research potential of the site to contain significant archaeological resources that could answer important research questions pertaining to this period in the region. Circa~ recommends that the site is not eligible for listing on the National Register of Historic Places under Criterion D. Criteria A, B, and C are also not warranted for the site. No further work is recommended.

Circa~ recommended that Site 046-5629 was not potentially eligible for listing on the National Register of Historic Places under Criteria A, B, C, or D. The cemetery will be avoided by development. Circa ~ recommends installing orange-safety fencing around the cemetery edge to ensure unmarked graves are not impacted during construction. This report includes the GPR survey of an area where development would encroach into the 25-foot buffer.

TABLE OF CONTENTS

ABSTRACT i
TABLE OF CONTENTS ii
LIST OF FIGURES iii
LIST OF PLATES iv
LIST OF TABLES v
INTRODUCTION 1
ENVIRONMENTAL BACKGROUND 5
Soils 5
Soils Identified Within Site 44IW0395 7
RESEARCH STRATEGY AND METHODOLOGY 7
Evaluation Of Significance 7
Methods 8
Archival Research 8
Field Methods 9
Laboratory Methods 9
CULTURAL BACKGROUND 9
Historic Context 10
Summary of Late 18th to mid-19th Century Domestic Sites 42
RESULTS 48
Site 44IW0395 48
Background 48
Phase II Excavations 50
Architectural Resources 75
Site 046-5629 75
CONCLUSIONS AND RECOMMENDATIONS 85
Site 44IW0395 85
Site 046-5629 87
REFERENCES CITED 88

Appendix A – VDHR V-CRIS Forms
Appendix B - Artifact Inventory
Appendix C – Project Map
Appendix D – GPR report
Appendix E – Staff Resumes

LIST OF FIGURES

Figure 1. Approximate location of the project area outlined in red and Site 44IW0395 outlined in blue, USGS Franklin quad. 2
Figure 2. Current (2023) aerial view of the project area outlined in red and Site 44IW0395 outlined in blue from Google Earth. 3
Figure 3. Development plans. 4
Figure 4. Site 44IW0395 soil map from NRCS website. 6
Figure 5. Detail of *Virginia discovered and discribed* by Captayn John Smith, 1624. 11
Figure 6. Detail of *Virginia and Maryland as it is planted and inhabited this present year 1670* surveyed and exactly drawne by the only labour & endeavour of Augustin Herrman bohemiensis. 17
Figure 7. Detail of *A map of the most inhabited part of Virginia containing the whole province of Maryland with part of Pensilvania, New Jersey and North Carolina*. Drawn by Joshua Fry & Peter Jefferson in 1751. 21
Figure 8. Detail of *A map of the country between Albemarle South, and Lake Erie, comprehending the whole of Virginia, Maryland, Delaware, and Pennsylvania, with parts of several other of the United States of America*. 1787. 23
Figure 9. Detail of *A map of the state of Virginia, constructed in conformity to law from the late surveys authorized by the legislature and other original and authentic documents* by Herman Böÿe, 1825. 24
Figure 10. Detail of *S. E. portion of Virginia and N. E. portion of N'th Carolina*. 1861. 28
Figure 11. Detail of *Southeastern part of Virginia, from York River and west to Black Water River,* B. Hove, 1862. 29
Figure 12. Detail of *Military map of Suffolk & vicinity for Majr. Genl. J. A. Dix*, 1863. 30
Figure 13. Detail of *J.H. Colton's topographical map of seat of war in Virginia, Maryland*, J.H. Colton's Geographical Establishment, New York. 1855. 31
Figure 14. Detail of *Map of eastern Virginia,* A. D. Bache, 1863. 32
Figure 15. Detail of 1919 Smithfield quad. 35
Figure 16. Detail of 1938 Smithfield quad. 36
Figure 17. Detail of 1944 Windsor quad. 37
Figure 18. Detail of 1961 Windsor quad. 38
Figure 19. Detail of 1973 Windsor quad. 39
Figure 20. Detail of 1985 Windsor quad. 40
Figure 21. VDHR V-CRIS map showing previously identified late 18th to mid-19th century domestic resources within one mile of the project area (yellow-shaded area). ... 43
Figure 22. Phase II representative shovel test profiles. 50
Figure 23. Test Unit 1 plan view and north wall profile. 53
Figure 24. Test Unit 2 plan view and north wall profile. 56
Figure 25. Test Unit 3 plan view and north wall profile. 58
Figure 26. Test Unit 4 plan view and north wall profile. 60
Figure 27. Test Unit 5 plan view and north wall profile. 62
Figure 28. Test Unit 5, Feature 1, plan view and west wall profile. 63
Figure 29. Test Unit 6 plan view and north wall profile. 65
Figure 30. Test Unit 7 plan view and north wall profile. 67
Figure 31. Test Unit 8 plan view and north wall profile. 70

Figure 32. Test Unit 9 plan view and north wall profile. 72
Figure 33. GPR survey area within the buffer area. 82

LIST OF PLATES

Plate 1. View of the site environs, looking, west. 48
Plate 2. View of artifacts recovered from Test Unit 1. Left to right: Yellowware sherd, hand-painted pearlware sherd, cut nail fragment, aqua window glass fragment, and quartzite secondary flake. 54
Plate 3. Plan view of Test Unit 2 with the plow scars excavated, looking north. 57
Plate 4. View of representative artifacts recovered from Test Unit 2. Left to right: aqua fire-damaged glass and hand-painted blue pearlware. 57
Plate 5. Representative artifacts recovered from Test Unit 3. Top row: clear bottle glass base, quartzite worked flake, hand-painted blue pearlware, hand-painted green and brown pearlware, hand-painted green and molded pearlware, and aqua fire-damaged glass. 59
Plate 6. Representative artifacts recovered from Test Unit 4. Left to right: green shell-edge pearlware, hand-painted blue and brown pearlware, aqua fire-damaged glass fragment, and aqua window glass fragment. 61
Plate 7. Representative artifacts recovered from Test Unit 6. Left to right: Quartzite secondary flake, aqua fire-damaged glass, fire-damaged refined earthenware, aqua window glass. 66
Plate 8. Plan view of Test Unit 7, after plowscar excavations, looking north. 68
Plate 9. Representative artifacts recovered from Test Unit 7. Left to right: Aqua window glass fragment and pearlware sherd. 68
Plate 10. Plan view of Test Unit 8, looking north. 71
Plate 11. Representative artifacts recovered from Test Unit 8. Left to right: Aqua window glass fragment and hand-painted black pearlware. 71
Plate 12. View of representative artifacts recovered from Test Unit 9. Left to right: Pearlware sherd and clear bottle glass fragment 73
Plate 13. View of the cleaned stone, by the GSSTF, June 2, 2005. 76
Plate 14. View of Site 046-5629 in September 2022, looking west. 77
Plate 15. View of Site 046-5629 in September 2022, looking west. 78
Plate 16. View of Site 046-5629 in April 2023, looking southeast. 79
Plate 17. View of headstone in September 2022, looking west. 79
Plate 18. View of broken stone in September 2022, looking north. 80
Plate 19. View of broken stones and daffodils in the cemetery, looking west. 81
Plate 20. View of fencing and daffodils within Site 046-5629, looking northwest. 81
Plate 21. View of the northern side of the buffer around the cemetery, looking east. 82
Plate 22. View of the eastern side of the buffer around the cemetery, looking south. 83
Plate 23. View of the southern side of the buffer around the cemetery, looking west. 83
Plate 24. View of the GPR on northeastern side of the buffer around the cemetery, looking east. 84
Plate 25. View of the GPR survey on the eastern side of the buffer around the cemetery, looking north. 84

LIST OF TABLES

Table 1. Soils Identified Within Site 44IW0395. 5
Table 2. Deed Research for the Project Area. 42
Table 3. Previously-Identified Late 18th to Mid-19th Domestic Sites Within One Mile of The Project Area. 44
Table 4. Native American Artifact Summary of Site 44IW0395 Phase I and Phase II Surface Collection and Shovel Testing 74
Table 5. Historic Artifact Summary of Site 44IW0395 Phase I and Phase II Surface Collection and Shovel Testing 74

INTRODUCTION

In the summer of 2023, Circa~ Cultural Resource Management, LLC (Circa~) conducted a Phase II evaluation of Site 44IW0395 located within the overall 83-acre Windsor Commerce Center Tract in Isle of Wight County, Virginia (Figures 1 and 2). In addition, a Ground Penetrating Radar (GPR) survey of the buffer area surrounding the cemetery at Site 046-5629 was completed. The owner plans to construct a warehouse and associated infrastructure (Figure 3). The overall project area is bordered by Ennis Pond to the north, an unnamed dammed tributary of Ennis Pond to the east, residential properties to the west, and Windsor Boulevard (Route 460) to the south.

Circa~ conducted a Phase I cultural resources survey of the project area earlier in 2023 and identified 66 isolated finds, one previously identified archaeological resource, two new archaeological resources, one previously identified architectural resource, and no new architectural resources. One of the archaeological resources, Site 44IW0395, was recommended as potentially eligible for listing on the National Register of Historic Places.

The artifacts recovered from Site 44IW0395 suggest occupation from the late 18th century, with the use of the parcel continuing into the early- to mid-19th century. The site had good research potential, and Circa~ recommended that this site was potentially eligible for listing on the National Register of Historic Places under Criterion D. Further work was recommended if development cannot avoid the site. The Virginia Department of Historic Resources (VDHR) concurred with the recommendation.

In consultation with project engineers, it was determined that avoiding this archaeological site was impractical and that the site should be evaluated at the Phase II level. This survey was carried out in compliance with an Isle of Wight County rezoning request and conducted following the Secretary of the Interior's *Standards and Guidelines for Architectural Documentation* and the Commonwealth of Virginia guidelines, including the *Guidelines for Conducting Cultural Resources Survey in Virginia* (VDHR 2017). The Phase II testing was designed to more accurately determine the horizontal and vertical limits of the resources, identify potential cultural layers and features, retrieve representative artifact samples, and evaluate the sites' eligibility for inclusion in the National Register of Historic Places. The documentary research, archaeological field testing, and laboratory analysis were conducted in compliance with the *Secretary of the Interior's Standards* (Department of the Interior 1983, 48 FR 44720-44723) and Isle of Wight County and VDHR guidelines for Phase II archaeological studies (VDHR 2017).

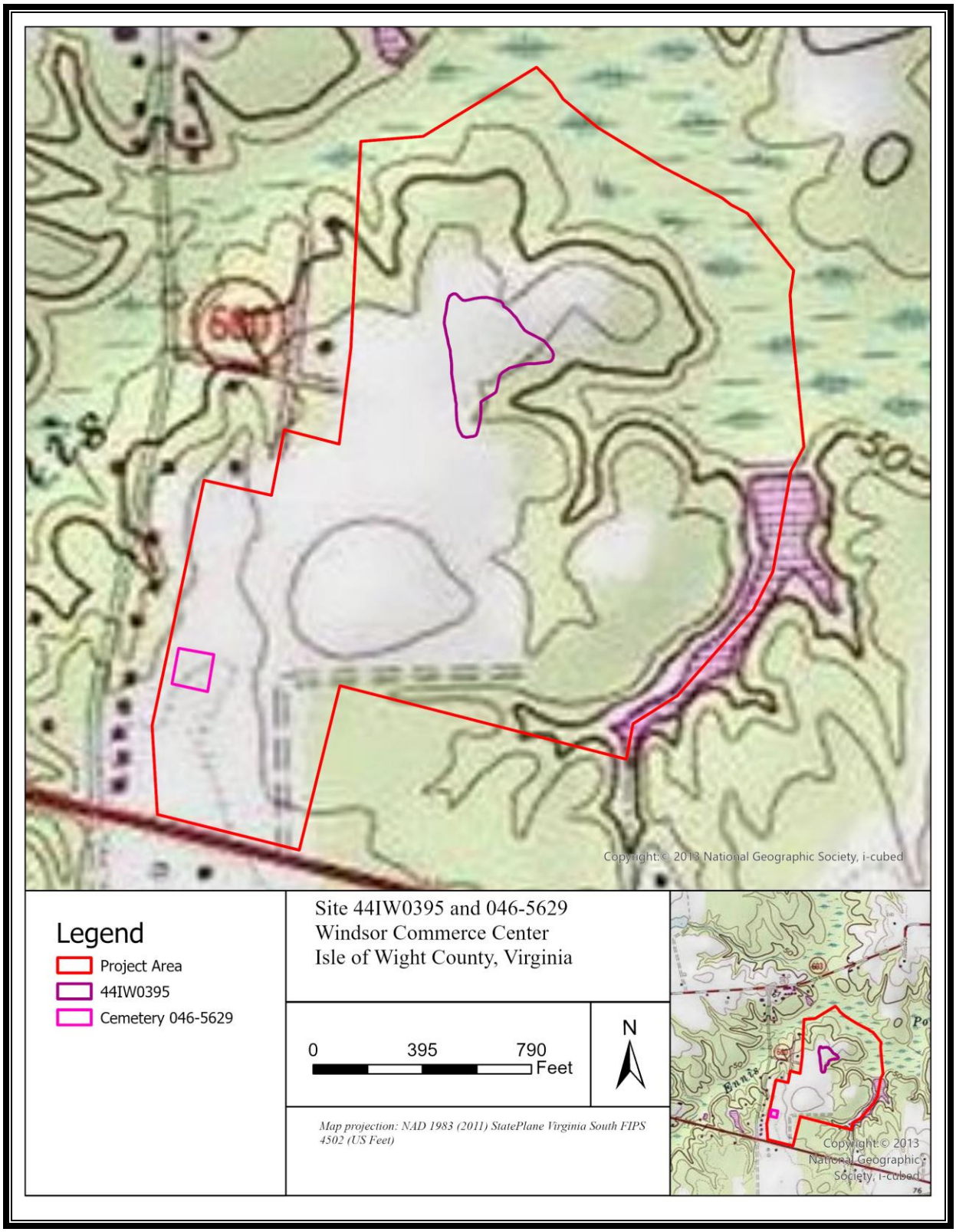


Figure 1. Approximate location of the project area and Sites 44IW0395 and 046-5629, USGS Franklin quad.

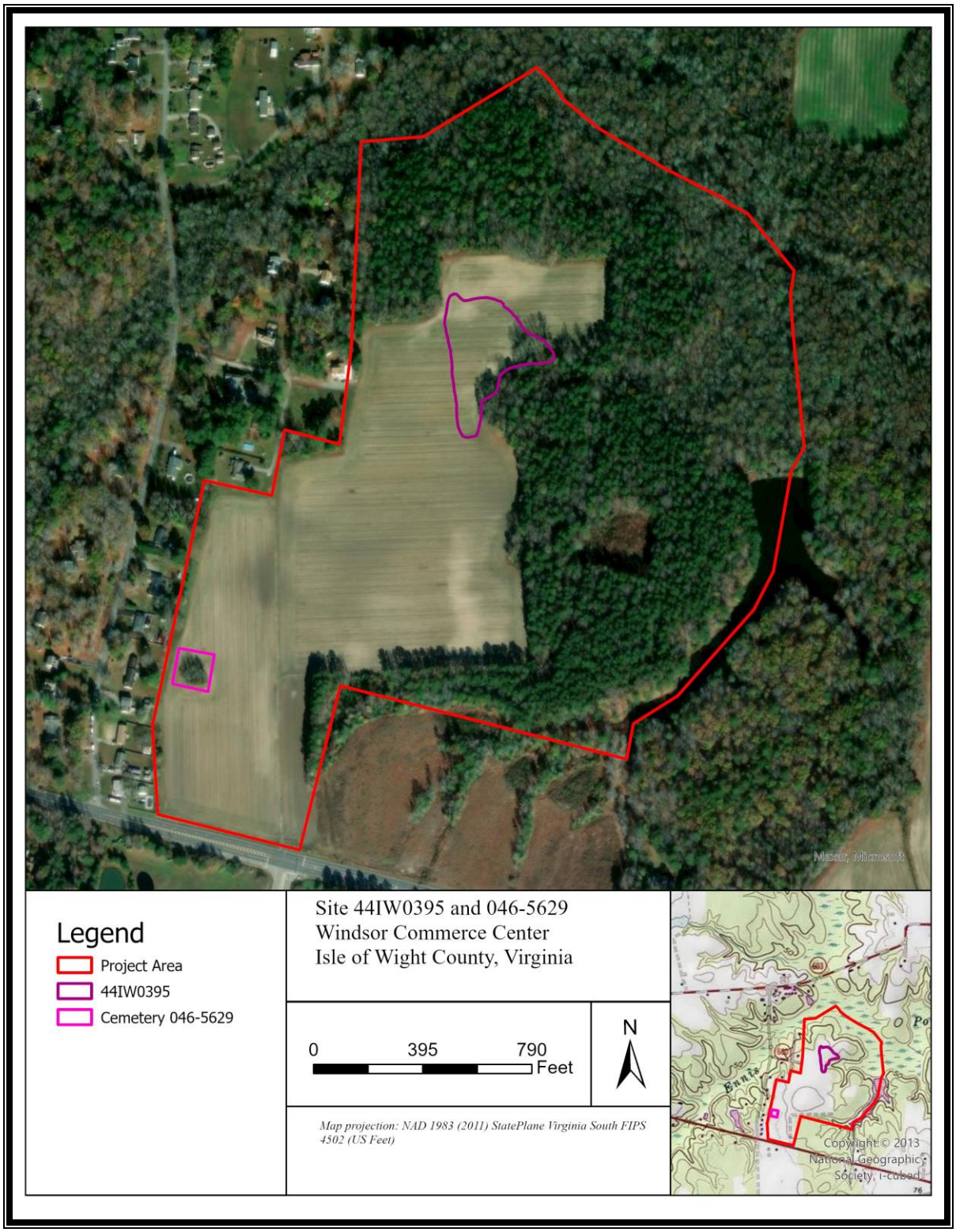


Figure 2. Current (2023) aerial view of the project area and Sites 44IW0395 and 046-5629 from Google Earth.

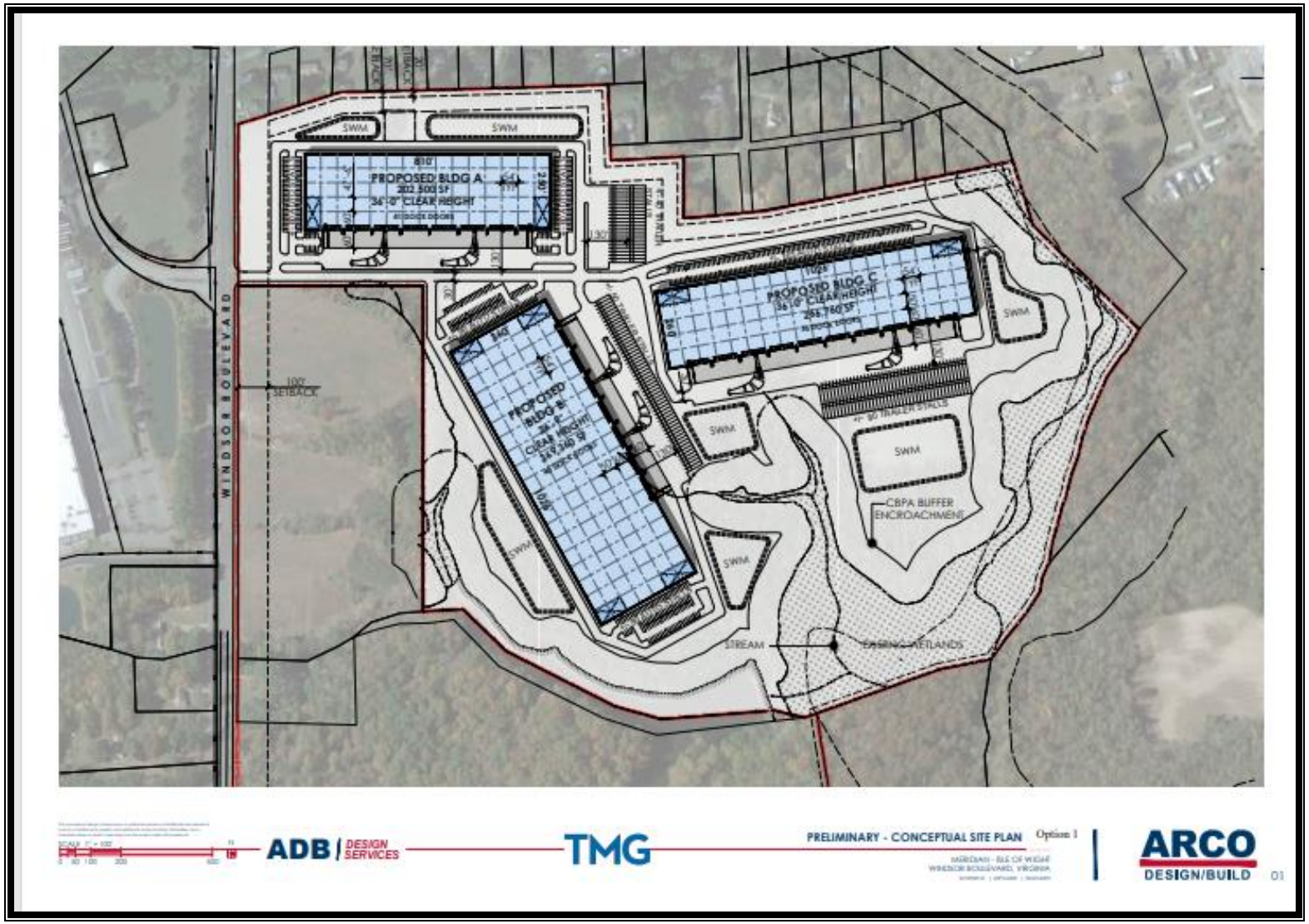


Figure 3. Development plans.

At Circa~, Carol D. Tyrer, Register of Professional Archaeologists (RPA), served as Project Manager and Principal Investigator for the project and oversaw the course of the project. Dawn M. Muir, RPA, served as the Historian for the project and completed the historic research. Skye Hughes, RPA, completed the graphics. Carol D. Tyrer, Skye Hughes, and Dawn M. Muir prepared the report. The successful completion of the Phase II survey for the proposed development was made possible by the contribution of many individuals. In particular, the current developer, Tom Boylan, ensured that project information and maps were always available for the study. The developer contracted with GPRS to complete a GPR survey near the cemetery to ensure no graves extended into the field.

ENVIRONMENTAL BACKGROUND

Site 44IW0395 is on a slightly higher knoll in the agricultural field and within the fringe of trees to the southeast. The elevation is 61 feet above mean sea level (AMSL), and the landform drains to the north and east.

Soils

Two different soil types and soil type variants exist within Site 44IW0395 (Natural Resources Conservation Service [NRCS] 2023). These soil and soil types include Slagle fine sandy loam, 2% to 6% slopes, and Kinston loam (Figure 4 and Table 1). Water makes up the remaining portion of the tract. These types and variants are described below, including references to drainage, and horticultural and agricultural productivity potential.

Table 1. Soils Identified Within Site 44IW0395.

Soil Symbol	Soil Name	Acres Within the Project Area	Location Within Project Area	Percentage Within the Project Area
18B	Slagle fine sandy loam, 2% to 6% slopes	1.90	Northern, central, western, southern	78.40
7	Kinston Loam	0.50	Southern, eastern	21.60%

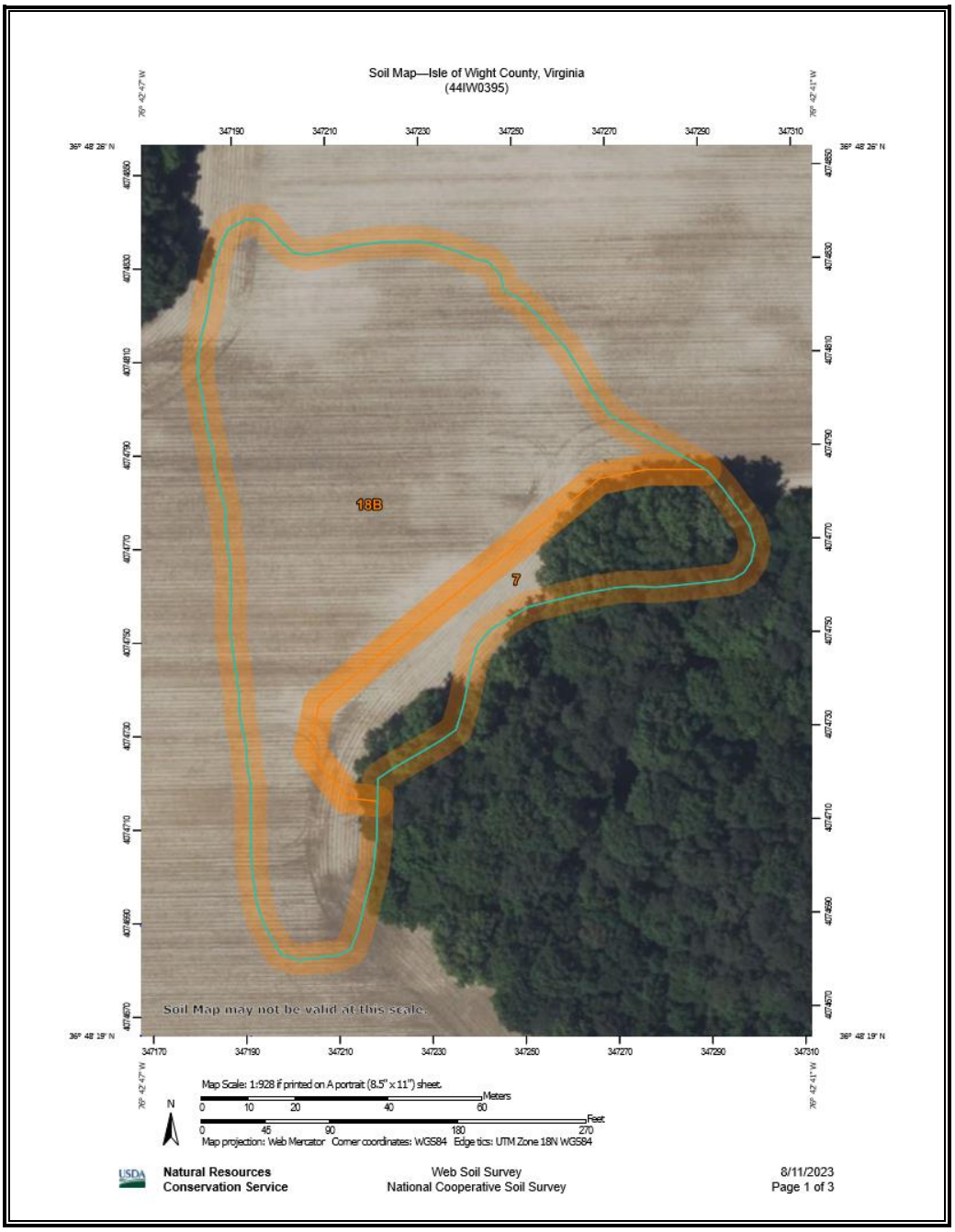


Figure 4. Site 44IW0395 soil map from NRCS website.

Soil maps and associated data analyze soil types within a geographic area. Researchers often miss microenvironments due to their small footprints despite soil surveyors' comprehensive and detailed coverage of most places. Unfortunately, resource-rich microenvironments were often common sites of cultural activity. This analysis of archaeological potential is a "best guess" using the best available data.

Well-drained, agriculturally- and horticulturally productive soils proximal to transportation corridors were the best choices for historic period occupation. Secondary areas, such as those containing wet and acid soils, may have also been suitable for historic occupation after improvements such as drainage and liming. No navigable waterways exist within the project area; thus, water travel is not a factor in the site probability analysis of this tract.

Areas of wet soils may have been attractive to Native American cultures. Edible herbaceous plant species may have been gathered in these areas, and faunal species browsing these areas may have been hunted successfully. Well-drained soils proximal to these resource-rich areas may have made adequate hunting and gathering campsites where the hunted and gathered resources were processed. These sites would have left an observable archaeological footprint. Little archaeological evidence would be located within the wet areas, the immediate locale of resource procurement.

Areas containing gravelly soils may have been especially attractive to stone tool-manufacturing Native American cultures, but the level of attraction may have depended on the type and quality of the gravels available in these locations. Well-drained soils proximal to quarry-able, gravel-rich areas would have made adequate lithic material procurement campsites.

Soils Identified Within Site 44IW0395

Slagle Soil (18B)
Slagle soil is a very deep, moderately well-drained, moderately slowly to slowly permeable soil found on marine terraces and uplands of the Atlantic Coastal Plain (NRCS 2023). Bedrock is located over 75 inches below the ground surface in this extremely to strongly acidic soil. This soil is mainly used for crops and forestry. This soil can support corn, soybeans, peanuts, and tobacco where cultivated. Where wooded, the soil can support loblolly pine, Virginia pine, sweet gum, red maple, southern red oak, water oak, yellow poplar, and hickory.

Kinston Soil (7)
Kinston soil is a very-deep, poorly drained, moderately permeable soil formed in marine sediments found on floodplains of the Atlantic Coastal Plain (NRCS 2023). Solum thickness ranges from 40 to 72 inches, and depth to bedrock is over 72 inches in this strongly acid to very strongly acid soil. The content of rock fragments is 0% to 3% throughout the solum. This soil features negligible surface runoff. Most of this soil is forested with limited pasture and crop growth. This soil can support pasture, corn, soybeans, and general farm crops where cleared. Where wooded, this soil can support water-tolerant hardwoods such as sweet gum, black gum, water oak, poplar, hickory, beech, elm, and ironwood. Loblolly pines are also found in some drained areas.

RESEARCH STRATEGY AND METHODOLOGY

Evaluation Of Significance

The Phase II archaeological investigations were designed to more accurately determine the horizontal and vertical limits of the resources, identify potential cultural layers and features, retrieve representative artifact samples, and evaluate the site's eligibility for inclusion in the

National Register of Historic Places. A cultural resource is gauged to be significant if it meets at least one of four National Register criteria:

A. Associated with significant events in the broad patterns of national history;
B. Associated with the lives of persons significant in our past;
C. Representative of a type, period, or method of construction, or the work of a master; and
D. Capable of yielding important information about the past.

Typically, Criterion D applies to archaeological sites, although all four criteria may apply. To be capable of yielding important information about the past, generally, a site must possess artifacts, soil strata, structural remains, or other cultural features that make it possible to test historical hypotheses, corroborate and amplify currently available information, or reconstruct the sequence of the local archaeological record.

Methods

Archival Research

Phase II level archival research was undertaken to support archaeological tests conducted at the site. Historical maps, plats, surveys, and land ownership records were reviewed. Extensive efforts were made to determine who owned or occupied the site.

The property's history was traced using land patents, deeds, wills, demographic records, and other locally generated court documents such as tax rolls. Real estate tax lists, filed with the State Auditor's Office commencing in 1782, specify the quantity of land and number of parcels owned by each taxpayer and often contain notations about property boundaries and when and how acreage was transferred from one person to another by sale or bequest. Commencing in 1820, tax commissioners began recording the collective value of any buildings present on the parcels they assessed. Also, they usually noted the estimated worth of any new buildings constructed since their last visit. Assessors omitted their estimates of uninhabitable man-made features such as fences, roads, and wells. Conversely, they reduced a landowner's assessment of existing buildings that had been razed or destroyed.

The study of land tax lists evaluated the presence or absence of structural features within the site, and specific gaps in antebellum court records were bridged. The analysis of these documents also provided a considerable amount of insight into the phases of development that occurred within the site and yielded data on local land use patterns. On the other hand, personal property tax rolls provide information on the quantities of enslaved people, livestock, and other taxable personal property that taxpayers own, which are extremely useful in gauging the socio-economic status and individual wealth.

Land and personal property tax rolls usually indicate whether individual property owners were residents of the county where they were being taxed, making it possible to identify absentee landowners. Agricultural census records were used as a land use and productivity data source. In contrast, census records and slave schedules can be expected to yield information on the household, family composition, and ethnicity. A diligent search was done for public records and personal papers pertaining to those who owned and/or occupied the site and the study area. The

research was conducted at the Isle of Wight County Courthouse, the Colonial Williamsburg Foundation's Rockefeller Library, the Swem Library, the Library of Congress, and the Virginia Historical Society. Use was made of online sources whenever it proved practical.

Field Methods

The Phase II archaeological evaluation of Site 44IW0395 included the excavation of screened shovel tests and the hand excavation of three-foot-square test units in areas where positive shovel tests were located.

Shovel Tests

The project area was surveyed by hand excavating shovel tests in transects at 25-foot intervals across the site. All shovel tests were excavated by natural levels to the sterile subsoil, and all soils were screened through a ¼-inch wire mesh. Profiles were recorded for all shovel tests, and soil color was recorded per the Munsell classification system. All shovel tests were recorded on standard field forms, and all cultural material was retained. The location of all excavated shovel tests was marked on a base map of the site.

Test Units

Test units measuring three feet square were excavated by hand in those areas that had demonstrated the densest concentration of artifacts or to sample the landform. The locations of all excavated test units were marked on a base map of the site. All excavated soils were screened through a ¼-inch wire mesh. Test unit base plans and sidewall profiles were recorded and photographed, and soils were described with the Munsell classification system.

Laboratory Methods

Once removed from the field, all archaeological data and specimens were transported to Circa~'s laboratory for processing and analysis. Before washing, artifacts from a given provenience were first emptied into a screened basket and sorted. Items determined to be unstable were either dry brushed or, in some cases, not washed and re-bagged with the appropriate provenience information. These items may include unstable organic objects, such as Wood or other plant material, leather, bone, fabric, metal requiring immediate conservation, overglaze painted delftware, and other soft-bodied ceramics such as some local wares. Stable objects were washed with a soft brush, and the edges of ceramics and glass were thoroughly cleaned to identify body type and mending. Items will then be placed by provenience on a drying rack.

Artifacts were sorted first by material and checked for mends in a given provenience. Stylistic attributes were described with current terminology and recorded by count into a database for analysis. Non-diagnostic artifacts with like attributes will be grouped - i.e., clear, amber, etc., bottle body glass fragments, unrecognizable nail fragments, corroded metal fragments, and aqua window glass. Diagnostic artifacts were sorted and grouped based on type, ware, vessel, or function.

CULTURAL BACKGROUND

The following section provides the historical background information necessary to assess the archaeological potential of the proposed project area. Previous investigations in the general

vicinity of the project area are outlined, while specific documents and resources employed in this survey are discussed.

Historic Context

Settlement to Society (1607-1750)

The first European exploration of the area, now known as Hampton Roads, Virginia, occurred in 1584 when Sir Walter Raleigh received a patent from the British Crown and explored the New World. He would obtain two other patents in 1585 and 1587 for the same area. The first two voyages were largely exploratory, but the third included women and children to populate a permanent English colony on Roanoke Island, now part of North Carolina. A year later, Captain Vincente Gonzales and Juan Menendez-Marques visited the area (McCartney 1997). These men, Spaniards under the direction of the Florida government, set out to find Sir Walter Raleigh's colonists. They sailed up the west shore of the Chesapeake Bay and then traced the west coast of the Eastern Shore of Virginia. Although the men did not find the Roanoke colony, they did open the area for other colonists to follow.

In December 1606, under the direction of Captain Christopher Newport, 105 men, all employees of the proprietary London Company section of the Virginia Company, set sail from the English coast bound for North America. Their three ships, the Susan Constant, the Godspeed, and the Discovery, made their first landfall in the New World on April 23, 1607, where the Atlantic Ocean met the southern mouth of the Chesapeake Bay in the northeastern part of what would become Virginia Beach. The colonists named the area Cape Henry after Henry Frederick Prince of Wales, the eldest son of King James the First of England (Mansfield 1989). Over four days, the settlers investigated the future Princess Anne County, walking and rowing to the Lynnhaven River. On the fourth day, the colonists set up a cross on the sands of the newly named Cape Henry shore to thank God and affirm England's claim to the land. The English colonists of the Virginia Company left the area shortly after that as they were ordered from England to seek an inland site, which would be more sheltered from ships of competing European countries (Turner 1985). They would go on to create their first permanent settlement at Jamestown.

In the summer of 1608, Captain John Smith and his men left Jamestown and explored the Nansemond River, encountering Indians he described as "a proud warlike Nation." Sailing inland toward the head of the river, Smith commented on the beauty and fertility of the countryside and the area's larger native population (Tyler 1907, Smith 1910 [Figure 5]). Although the colonist's initial encounter with the Nansemond Indians was friendly, later in the year, the relationship changed when the natives declined to sell the settlers corn and took it by force (Tyler 1907). During the winter of 1609, when the settlers at Jamestown experienced what is traditionally known as the Starving Time, Captain John Smith sent a group of men back to the Nansemond River, where they could exist on the area's abundant oyster supply. However, after a hostile confrontation with the Indians, the hunger-weakened colonists returned to the relative safety of Jamestown.

Figure 5. Detail of *Virginia discovered and discribed* by Captayn John Smith, 1624.

In 1618, the Virginia Company ratified its so-called Great Charter, paving the way for changes in the Colony, including a system like local English law and the establishment of representative government (McCartney 1997). In particular, the Great Charter created a land policy known as the headright system, under which Virginia colonists could acquire real estate and work for personal gain. Before this system, investors in the Virginia Company and settlers who arrived in Virginia before 1616 were eligible for 100 acres as their first dividend. Under the headright system, however, anyone who came to the Colony at their own expense and lived in Virginia for at least three years was entitled to 50 acres of land. Anyone who paid for someone's passage to the Colony was entitled to 50 acres for every person they paid for (McCartney 1997). The bulk of Virginia land was distributed under the headright system.

The Great Charter also established a representative government in which Virginia Company officials chose Virginia's governor and council. In 1619, the Virginia Company chose Sir George Yeardley as the new Governor of Virginia. Yeardley arrived in Virginia on April 17, 1619, and quickly subdivided the Colony into four corporations or shires: James City, Charles City, Henrico City, and Kecoughton or Elizabeth City. The area now known as Hampton Roads and what would become Isle of Wight County fell within the Kecoughton or Elizabeth City division (Mansfield 1989).

By the late 1620s, European settlement had spread to the lower side of the James River. By this time, tobacco dominated Virginia's economy, and throughout the lower Tidewater landscape, landowners, tenants, and servants worked tobacco plantations. Development was concentrated along navigable waterways, which served as transportation corridors. However, throughout the first quarter of the 17th century, the native presence in the Nansemond River basin remained strong (Tyler 1907).

The first English settlers in what is now Isle of Wight County included Captain Christopher Lawne, Sir Richard Worsley, Nathaniel Basse, and John Hobson, who helped establish a settlement on the south shore of the James River at Lawne's Creek, near the current boundary between Isle of Wight and Surry counties. Lawne's plantation was known as Warrosquoyacke, after the local Native American group. Edward Bennett followed Lawne's settlement when he was granted a patent along the Pagan River in 1621. A London merchant and elder of the ancient church, the London Company, gave Bennett a patent to establish a plantation. Bennett immediately prepared to send 100 people to Virginia. On March 22, 1622, Indians attacked Bennett's plantation, killing 53 men, women, and children, including the settlement's commander, Thomas Brewood. Captain Ralph Hamor evacuated the surviving settlers to Jamestown, a position of safety. By October 1622, Edward Bennett received permission for his people to return to Bennett's Welcome, but several months passed before they returned. In the spring of 1623, construction of a fort began at the site, which provided a commanding view of shipping lanes along the James River. Then, in July, Sir George Yeardley led an expedition against the Warresqueak Indians, burning their villages. The inhabitants of Bennett's Welcome began returning to their homes, but the Indians harassed them constantly, and sickness took a severe toll. In February 1624, only 33 people remained at Bennett's Welcome, with the population dwindling to only 19 by 1625. By May 1625, inhabitants had patented an estimated 1,750 acres in Warresqueak. In 1632, tensions with the Indians began to ease, and within a year, colonists began patenting modest-sized tracts in Warresqueak (McCartney 1997). Soon

afterward, Edward Bennett returned to England; however, his brother Robert remained and helped establish other plantations in the area.

The Indians continued to make isolated forays upon outlying settlements, such as Warresqueak, and in the upper reaches of the James River. In April 1627, the Colony's governing officials reiterated their order that all houses be paled in. However, surviving archival records reveal that many colonists ignored the law. By January 1629, they were said to have "grown secure and utterly neglected eyther to stand upon their guard or to keep their Arms fitt," and officials bemoaned the fact that "the Condition of our people being soe wretchedly negligent in this kinde that neither proclamations or other strict orders have remedied the same." As a result, the Governor and Council of State resolved to nullify a treaty made with the Indians in August 1628, not because of the Natives' treachery but because of the settlers' negligence in maintaining their defense. However, a great drought in the summer of 1632 forced governing officials to initiate a trade with the Indians. Although a peace agreement was made with the Chickahominies and Pamunkeys in October, trade and other interaction with them was restricted to official occasions, for the natives were deemed "irreconcilable enemies" (McIlwaine 1924).

In 1634, Virginia was subdivided into eight shires or counties. Warresqueak, which included the project area, maintained a population of 532 people. The County's original boundaries included Lawne's Creek to the north, the James River to the east, along with an inland line from the point from Richard Hayes plantation to the head of Colonel Pitt's Creek and a line that ran west for an undefined distance (Commonwealth Heritage Group [CHG] 2019). In 1637, the county's original name was changed to Isle of Wight. Despite losing its Indian name, the County had a substantial Native population. During the mid-1630s, patents were issued for land near the mouth of the Nansemond River, along the banks of the James River, and further inland. Early settlers relied heavily upon waterborne transportation, lured by the opportunity to reap substantial profits from tobacco cultivation. As the century wore on, patentees moved inland in increasing numbers. By 1640, the county had been divided into six districts, each with "tobacco viewers" or inspectors (Nugent 1969-1979, King 1993).

The lands near the mouth of Chuckatuck Creek and the Nansemond River were first patented in the 1630s and 1640s. Between 1639 and 1645, Tristram Norsworthy (Nosworthy) patented nearly 1,000 acres of land around and including Ragged Island (Nugent 1992). A native of Devon, England, Norsworthy was a prominent local figure in Isle of Wight's early years, serving as burgess for Nansemond County in 1641. His eldest son, Colonel George Norsworthy, was the local militia captain and sheriff. Among the first English arrivals to this area, the Norsworthys remained a prominent Isle of Wight family into the 20th century (Boddie 1973).

Warrosquoyacke was divided in 1647 between Isle of Wight to the west and Upper and Lower Norfolk counties to the east, with Pagan Creek as the dividing line (CHG 2019, King 1993). Residents of Ragged Island and Terrascoe Neck, which included those lands between Chuckatuck Creek and the James River, won their petition to be included in Isle of Wight County in 1656 and 1674, the House of Burgesses formally established the boundary (King 1993).

On April 18, 1644, when the Indians made a second attempt to drive the colonists from their soil, those who lived on the south side of the James River were especially hard hit. Again, settlers withdrew to positions of greater safety, gradually returning as their fears began to subside. In June 1644, the Grand Assembly resolved to "forever abandon all formes of peace and familiarity with the whole [Indian] nation and to the uttermost of our Power pursue and root out those which have in any way had their hand in the shedding of our blood and massacring of our People." A series of retaliatory marches were undertaken against all Native groups implicated in the attack. The inhabitants of relatively remote areas were ordered to withdraw to positions of greater safety. However, October 1644 brought the enactment of legislation that authorized all but those who lived "in places of danger" to go back to their homes. Those whose return would place them at risk were allowed to reoccupy their patents if there were at least ten able men in the group equipped with arms and ammunition, and they obtained prior approval of the local military commander. Some colonists were reluctant to return to their plantations. In February 1645, the Governor and Grand Assembly declared that those who failed to reoccupy their patents would be presumed to have forsaken them and that all abandoned land would be reassigned to others. Moreover, those deserting their patents were prohibited from burning their buildings to recover the nails used in construction. This policy impelled some colonists to return to their homesteads despite the potential danger of being attacked by Indians (McIlwaine 1924, Hening 1809-1823, King 1993).

During this time, the Colony's officials decided to erect three small forts or fortified buildings at strategic locations on the Colony's frontier: at the falls of the James River, near Manquin Creek in the Pamunkey Indians' heartland, and on the Chickahominy River at Moysenac, amid the Chickahominy Indians' territory. All three forts, built by private citizens who received land in exchange for their services, were to provide surveillance over the Colony's frontier and offer protection to outlying settlers. Retaliatory marches against the Indians were undertaken regularly, and Opechancanough, credited with leading the 1622 and 1644 attacks, was captured and slain. In March 1646, the Burgesses decided to build a fourth fort on the Colony's frontier, situated at the falls of the Appomattox River. Meanwhile, the inhabitants of Upper and Lower Norfolk counties and Isle of Wight's Lower Parish were ordered to wage war against the Nansemond Indians. If they desired, they were authorized to build a fort.

In October 1646, Necotowance, Opechancanough's immediate successor, concluded a formal peace agreement with the Virginia government. The Indians agreed to withdraw from the James-York peninsula, inland to the fall line, and abandon their territory along the lower side of the James River, down to the Blackwater River. The colonists agreed to vacate their plantations on the north side of the York River, west of Poropotank Creek, a considerable distance above the river's mouth. Natives entering the ceded territory on official business could be legally slain unless they were garbed in "a coate of striped stuff," a badge of safe conduct they could procure from the fortified outposts on the Pamunkey River and at the falls of the Appomattox (Hening 1809-1823).

The Indians also agreed to allow Virginia's governor to appoint or confirm their leaders. This critically important concession put in place a mechanism for change that hastened the Powhatan chiefdom's disintegration. Governor Berkeley and his council "thought the safest way [was] setting all the lesser nations at liberty from obedience to the house of Pamunkey." The Secretary

of the Colony added, “they like to warr with each other and destroy themselves more in a year than we can do it.” This ‘divide and conquer’ approach quickly evolved into establishing tribal preserves, further dispersing the natives into small clusters. That led to further Native land loss, for it restricted the natives to certain areas and allowed European settlement to spread almost unchecked (Hening 1809-1823).

Despite the treaty, the Middle Peninsula and Northern Neck were open to settlement on September 1, 1649, and colonists quickly moved into the territory reserved for the natives' use in the 1646 treaty. This policy change occurred per the official abandonment of the military outposts established on the frontier in the mid-1640s. Seating requirements were extremely lax, and a would-be patentee had only to place one acre under cultivation and build a tiny house to substantiate his land claim (Hening 1809-1823, Nugent 1969-1979, Blanton and King 2004).

In 1650, when Governor William Berkeley and a small group of men set out on an expedition into the territory beyond the head of the Appomattox River, two Indian guides led them, an Appomattock and a Nottoway. At one point in the journey, the two warriors performed a ritual at a site they deemed significant, and the Nottoway referred to Opechancanough as his people’s “late Great Emperour.” Thus, the influence of the Powhatan Indians’ paramount chief apparently extended as far south as the Meherrin River, a tributary of the Chowan, and included more Native groups than ethnohistorians generally assume. These tribes may have joined the Nansemond in attacking the settlers who intruded into their territory. By 1648, colonists densely populated the Nansemond Indians’ old homeland and subdivided the land into three parishes. In 1653, the Reverend Roger Green and other “inhabitants of Nansemond River” sought and received permission from the Grand Assembly to seat 10,000 acres of land near the Roanoke or Moratoc River and along the south side of the Chowan if they agreed to settle in sufficient numbers and arm themselves well. The Government authorized Green to patent 1,000 acres of land close to where the others intended to seat. This authorization suggests that the Indians’ departure from the Nansemond River basin whetted the planters’ appetite for territorial expansion and encouraged them to move further inland (Hening 1809-1823).

In 1652, the Grand Assembly enacted legislation stipulating that all native groups were to retain the acreage they occupied. Four years later, they passed a new law requiring all Indians entering the colonized area to bear a pass or ticket of authorization. However, the Burgesses admitted that the natives often failed to cooperate due to “our extreme pressures on them.” By 1658, the General Assembly assigned each Colony’s tributary Indian groups a specific tract of land. However, if the Indians abandoned or sold any of their legally designated homelands, colonists could claim and patent the land (Blanton and King 2004).

In 1662, the boundary lines were reaffirmed, defining the territory the Indians ceded by virtue of the 1646 treaty. Parties of horsemen were ordered to process the bounds annually. The southern boundary established by the 1646 treaty, which surveyors later demarcated, followed the Blackwater River toward its head, extending to the Appomattox and Monacan Indian towns. A trading path, perhaps dating to the 1646 establishment of Fort Henry as a trading center, traversed part of the land east and southeast of the Appomattox River and defined the boundary line in that area.

In March 1662, native leaders were forbidden to sell their land, and colonists were ordered not to purchase it. Special commissioners were supposed to visit each Indian town to "settle the bounds between us" (Blanton and King 2004). A multitude of old property transactions, both legal and illegal, clouded the boundary definition. Although the Colony's officials acknowledged that land was the crux of most disputes with the Indians, they also realized that the native population was dwindling and that their territory would eventually open to settlement. The legality of the patents issued to frontier settlers often hinged upon the Indians' deserting their land. In some instances, the Indians eagerly divested their land. In 1661, the Chickahominy Indians asked for acreage on the south side of the Mattaponi River. As soon as the Government granted their request, they sold nearly 750 acres to a local clergyman. The unscrupulous often drove natives from their homes (Blanton and King 2004).

Pressure to open native lands to settlement intensified as planters resented allocating large, desirable tracts to a population with diminishing ranks. A 1669 census of Virginia's natives identified 18 recognized groups with 725 warriors distributed throughout eight Tidewater counties (Blanton and King 2004). In 1670, when Augustine Herrmann made a relatively detailed map of Virginia and Maryland, he indicated that settlements dotted the shorelines of the major rivers and their tributaries. He identified the Blackwater Swamp and nearby put the word "Plant[ati]ons," thereby suggesting that European settlement was present (Figure 6).

By the early 1670s, natives to the north and west of the colonized area began to prey on Virginia's tributary Indians and frontier settlers, especially those who lived near the fall line. Thus, the tributaries found themselves trapped between the colonists, whose plantations were engulfing their habitat at an alarming rate, and hostile tribes. The population grew, and the pressure to extend settlement into native territory increased considerably. Planters, who frankly coveted the large tracts allocated to the Indians whose population was visibly dwindling, attempted to acquire their acreage through both legal and illegal means. Competition for land and disagreements over boundaries, livestock, trade, and hunting and fishing habitats were a steady source of conflict that all too often culminated in violence (Blanton and King 2004).

Because the Government was obliged to protect the colonists and tributary natives, in 1676, the Government constructed nine forts at strategic locations. These forts were expensive to build and maintain and useless against a highly mobile enemy whose strategy was an ambush. The Government constructed one fort at the head of the Nansemond River, at New Dursley (Dursly) or Currawaugh, close to the northern limits of Dismal Swamp, and pressed men from Isle of Wight, Nansemond, and Lower Norfolk Counties into service at the fort. Young Nathaniel Bacon, whose upper James River plantation was attacked by Indians, agreed to lead an unauthorized march against the native population. Thus began the uprising known as Bacon's Rebellion, which spread throughout Tidewater, Virginia, and deeply affected the native population. When Bacon and his followers marched on Jamestown, they forced the Burgesses to enact a group of laws, including one making it legal to patent Indian land as soon as the natives abandoned it. This provision provided land-hungry planters a new incentive to drive Indians from their tribal preserves.

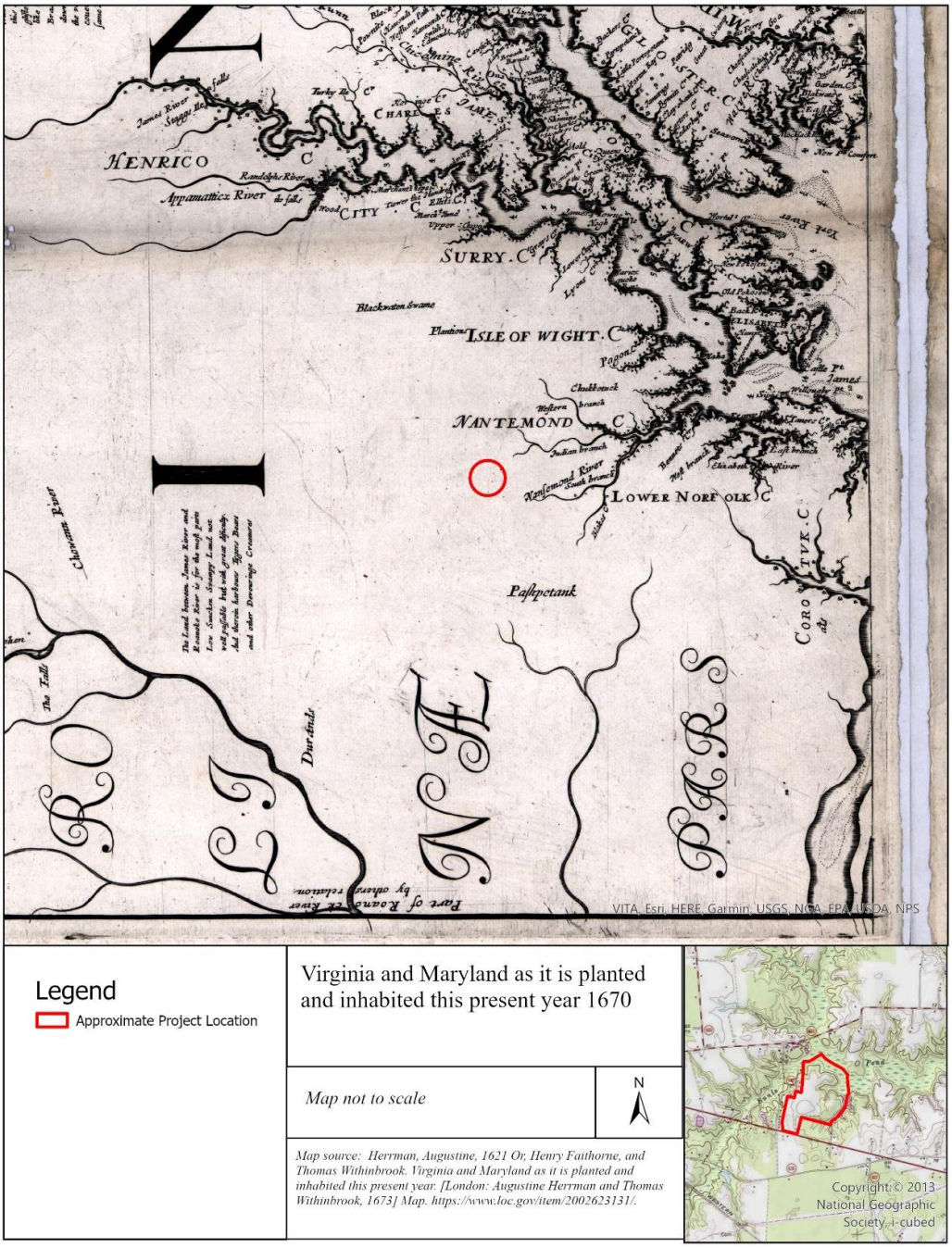


Figure 6. Detail of *Virginia and Maryland as it is planted and inhabited this present year 1670* surveyed and exactly drawne by the only labour & endeavour of Augustin Herrman bohemiensis.

In May 1677, after Bacon's Rebellion ended, the colonial government and the tributary Indians made a formal peace agreement at Middle Plantation. The Queens of the Pamunkey and the Weyanoke and the Kings of the Nottoway and the Nansemond acknowledged their allegiance to the Crown and conceded their entitlement to land derived from the British monarch by endorsing the Treaty of Middle Plantation. A critical provision of the 1677 treaty was that "Noe English shall seate or plant nearer than three Miles of any Indian towne and whomever hath made an encroachment upon their Land shall be removed" (Blanton and King 2004). Further, signatory tribes were entitled to the protection of the colonial government. All tributary Indian leaders were to have equal power except Cockacoeske, the Queen of Pamunkey, under whose rule were placed "severall scattered nations," notably the Chickahominy, Rappahannock, and probably the Mattaponi and Totachus (Blanton and King 2004). In 1680, the Treaty of Middle Plantation expanded to include leaders of the Saponi, the Manakin, the Meherrin, the Nanzattico, the Portobago, and another Nansemond group, along with the original signers. The Rappahannock, Chickahominy, Mattaponi, and Totachus were conspicuously absent, probably because the Pamunkey Queen represented them (Blanton and King 2004).

On December 30, 1682, the General Assembly voted to abolish the latest forts along the frontier, as maintaining them was prohibitive. The Burgesses noted that the need for fortifications was lessened somewhat by a recent peace agreement with the Indians beyond Virginia's borders. In 1691, as settlement became denser on the south side of the James River, formal survey lines were run from the head of the southern branches of the Blackwater River to the upper limits of the old Appomattox Indian town. Thus, the boundaries established through the 1646 treaty remained fixed. Although conflict over trade occasionally erupted, as the 17th century ended, relations between the colonists in the coastal plain and their Indian neighbors were relatively peaceful (Blanton and King 2004, Hening 1809-1823).

Early on, the territory on the lower side of the James River became known for its agricultural productivity. By the third quarter of the 17th century, the plantation system had become established, and Virginia's more successful planters had begun accumulating wealth. As European colonists displaced the Indians, they made an indelible imprint upon the landscape (Hening 1809-1823).

In May 1688, Virginia officials asked the King for permission to issue patents for vacant Indian land in Pamunkey Neck and on the south side of the James River at Blackwater Swamp. The Councilors noted that in former times, large quantities of land had been laid out for the benefit of the "very considerable nations of Indians . . . now wasted and dwindled away, [who] however doe [still] hold and possess [it]" (Blanton and King 2004). They claimed that the tributary Indians had asked them to allow settlers to seat their land to prevent foreign Indians from invading, adding that the Indians had found "such large Tracts of Land are of noe benifitt nor use unto them" (Blanton and King 2004). Throughout the 1690s, the Governor and Council repeatedly asked the King to allow patents on vacant Indian lands. These requests came after native groups had repeatedly asked for patents and requested that their land be clearly defined (Blanton and King 2004).

In 1693, when the College of William and Mary received its royal charter, it became entitled to 10,000 acres in King William County's Pamunkey Neck and a similar amount of land on the

south side of the Blackwater Swamp. This expansion would have placed additional pressure upon any natives living there. In 1697, the Governor's council suspended the Isle of Wight County surveyor, from which Southampton was formed, for "taking entries" along the Blackwater River. Two years later, in 1699, the Nansemond Indians sold off their 300 acres of land between the Meherrin and Blackwater rivers and went to join the Nottoway. The English, interested in moving into the area, claimed that the Indians had deserted it several years earlier. By 1711, the Nansemond lived one-and-a-half miles up the Chowan River, near the Nottoway River's mouth. Although they reportedly had 30 warriors in 1705, by the 1780s, their population was reported to consist of only five people.

Additional legislation enacted in October 1705 cost tributary tribes much of their land. The General Assembly decided that "where an Indian town is seated, on or near a navigable river, and the English have already seated and planted within three miles of the said town, on the opposite side of the river, the said clause [of the 1677 treaty] shall not be construed . . . to give the Indian town any privilege on the said opposite side. The burgesses minimized the new law's significance by calling it an "explanation of a clause in the articles of peace" (Blanton and King 2004). However, its implications were much more severe, for most Indian towns or preserves were on the waterfront. Thus, it quickened the pace of native land loss.

Most of the Nottoway Indians who remained in Virginia after defeating the Tuscarora in a war along the Carolina border moved to the south and west of the Nottoway River. Other Nottoway joined the Tuscarora and moved to New York to become the sixth Iroquois nation. Ultimately, Virginia's Nottoway Indians were given a reservation just west of the Southampton County seat, Jerusalem (now Courtland [Rountree 1989]).

In 1728, Colonel William Byrd went to the Nottoway Indian town. Henry Howe, a historian, transcribed and published Byrd's account of the visit in 1845. Byrd said that shortly before his group arrived at Nottoway Town, they sent a messenger to announce their intention to visit. He noted that the Nottoway occupied a fort covering a square piece of ground. Substantial puncheons or palisades surrounded the fort. The Nottoway's had constructed bark-covered cabins fabricated from saplings arched over at the top within their fort. Byrd described the cabins' interiors and noted how the Indians dressed, fashioned their hair, and adorned themselves with jewelry and body paint. He also spoke of the Natives' hospitality and the entertainment they provided. Byrd estimated that in 1728, approximately 200 men, women, and children were associated with Nottoway Town. In 1845, Howe noted that the Nottoway Indians inhabited a good reservation about 15 miles square, on the Nottoway River, near Jerusalem, the County seat (Howe 1969).

Claiming vacant land and obtaining a legally binding title was relatively easy. Many Virginians constructed simple, inexpensive, earth-fast dwellings that did not require skilled labor. Thus, impermanent architecture was typical throughout the Chesapeake region (Carson *et al.* 1981). In October 1705, when patenting land criteria were refined beyond the nebulous standards that had been set in 1666, "the building of one house of wood, after the usuall manner of building in this colony, being at least in length 12 foot and in breadth 12 foot, and clearing, planting and tending to at least one acre of ground, shall be . . . declared to be a good and sufficient seating" of a 50-acre tract (Hening 1809-1823). In 1713, prospective patentees were given three years in which to

build “one good dwelling house after the manner of Virginia building, to contain at least 20 ft. in length and 16 ft. in breadth” or 320 square feet (Hening 1809-1823). By 1749, the southern part of Isle of Wight County had become so populous that Southampton County was formed (Virginia State Library 1965).

Colony to Nation (1750-1789)

During the 18th century, additional small towns began to develop in Isle of Wight County. Smithfield was incorporated in 1752, just one year after Joshua Fry and Peter Jefferson created their map of Virginia (Figure 7). Fry and Jefferson noted development occurring, but no development was in the project area. Laid out on a portion of Arthur Smith’s farm that bordered Pagan Creek, the area already boasted a tobacco storehouse, a public landing, and access to the ferry landing. This development quickly allowed Smithfield to become the County's principal port (CHG 2019). Crops such as peas, hoop poles, bacon, staves, and peanuts were traded with England and the West Indies (AECOM 2019). When Joshua Fry and Peter Jefferson prepared their map of Virginia, they failed to indicate the extent to which Nansemond County's interior had developed. However, they showed that major roads approached the Town of Suffolk from the northwest and south (Virginia State Library 1965). During the 1760s, a group of investors decided to construct canals and causeways in the Dismal Swamp.

Isle of Wight’s economy in the second half of the 18th century centered around tobacco cultivation, even though the Southside’s sandy soils were never particularly conducive to growing the crop. However, by the latter years of the 18th century, Isle of Wight’s farmers began diversifying their crops and exploring alternative products. Part of the success of diversified crops was the easy access to the James River and the establishment of ferries at Pagan Creek and Cypress Creek (AECOM 2019, Morrison 1907). Touring the Smithfield area in 1783, German visitor Johann David Schoeff commented that:

> *...the coast is nearer here, one has passed the tobacco country proper, the plant not thriving on the poorer sandy soil of the region, but tobacco is brought hither from more distant parts; on the other hand, the extensive pine forests supply a different sort of produce, namely tar, pitch and turpentine, which with salted hog meat are the most important articles for export of this place* (King 1993).

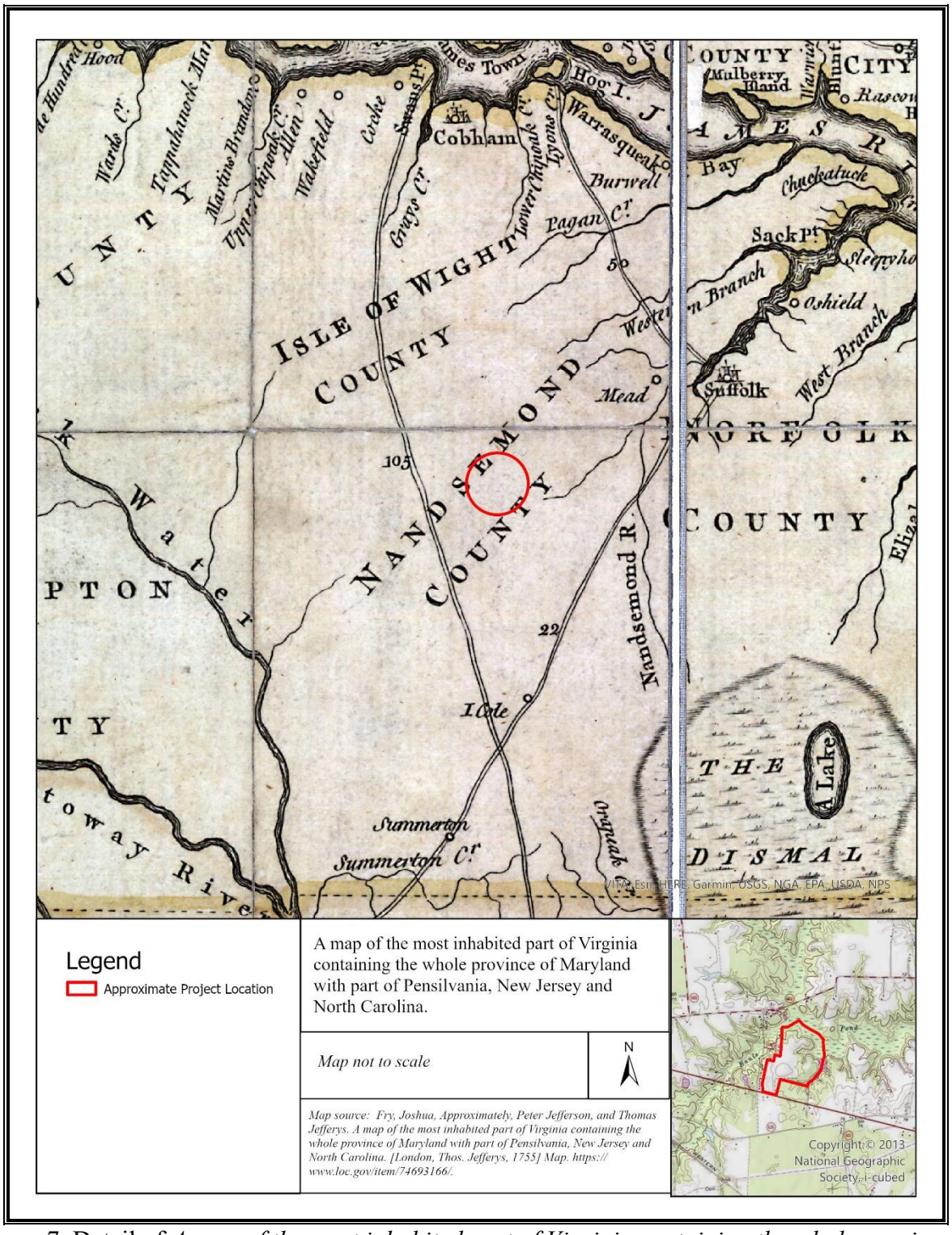


Figure 7. Detail of *A map of the most inhabited part of Virginia containing the whole province of Maryland with part of Pensilvania, New Jersey and North Carolina*. Drawn by Joshua Fry & Peter Jefferson in 1751.

As with most other parts of Virginia, the citizens of Isle of Wight were divided in their loyalties as the revolution grew imminently in the 1770s. Many English and Scottish immigrants resided in Isle of Wight. When they left the County, their property reverted to the Government, which typically sold the land to their more "patriotic" neighbors. Several local men joined the Princess Anne District Battalion in 1775 and fought at Kempsville and Portsmouth.

At the onset of the Revolutionary War, Hampton Roads' strategic importance led to a succession of military cartographers mapping the area. According to one local historian, foreign trade entered the Southside during wartime through a depot at South Quay on the Nottoway River, having come there by the Albemarle Sound. Military supplies and other stores that came by this route were transferred to wagons and hauled to the nearby city of Suffolk. These goods most likely were transported to Suffolk via Route 58's forerunner. South Quay, one of the few ports free of British naval control, provided a shipbuilding facility and access to Albemarle Sound during the war. In 1781, a British cavalry force under Banastre Tarleton rode out from Portsmouth and burned South Quay (Virginia State Library 1965).

Later in the war, Isle of Wight men served in the 7th, 8th, and 9th companies of the 4th Virginia Regiment of Foot. No major battles were fought in Isle of Wight during the Revolutionary War. However, British Lt. Col. Banastre Tarleton led a raid against the Isle of Wight courthouse in Smithfield in 1781. Tarleton damaged the building, though the court records had recently been removed and hidden (King 1993).

During the last quarter of the 18th century, Crublier D'Opterre prepared a map showing some of the Hampton Roads area's public highways, including the old thoroughfare that connected Portsmouth and Suffolk (Route 337/Airline Boulevard) and the road that ran from Suffolk to the Dismal Swamp. He also indicated that a road headed southwest along the Nansemond River's southern branch intersected with the road to Smithfield. Thomas Jefferson labeled the Town of Suffolk on his map of Virginia and identified the site of Sleepy Hole; however, he omitted any development present in Nansemond County's interior (Figure 8 [Jefferson 1787; Norfleet 1974]). Jefferson did not note any development within the project area. Cartographer Samuel Lewis focused on what he considered the Colony's main thoroughfares, emphasizing the roads that connected Suffolk with Portsmouth and Smithfield but omitting any that may have passed close to the project area (Lewis 1794).

Early National Period (1789-1830) and Antebellum Period (1830-1860)

During the end of the 18th century and the beginning of the 19th century, Isle of Wight transitioned from a predominantly tobacco economy to one characterized by diversified farming and the exploitation of the County's timber resources. By the 1830s, Isle of Wight farmers grew enough cotton to support two local factories (King 1993). The most important local products include wheat, corn, oats, Irish potatoes, sweet potatoes, peas, beans, hogs, and forest products. Development in Isle of Wight County is evident on an 1825 map of Virginia created by Herman Boye (Figure 9). His map shows the beginning of a road network, although no development is shown within the project area.

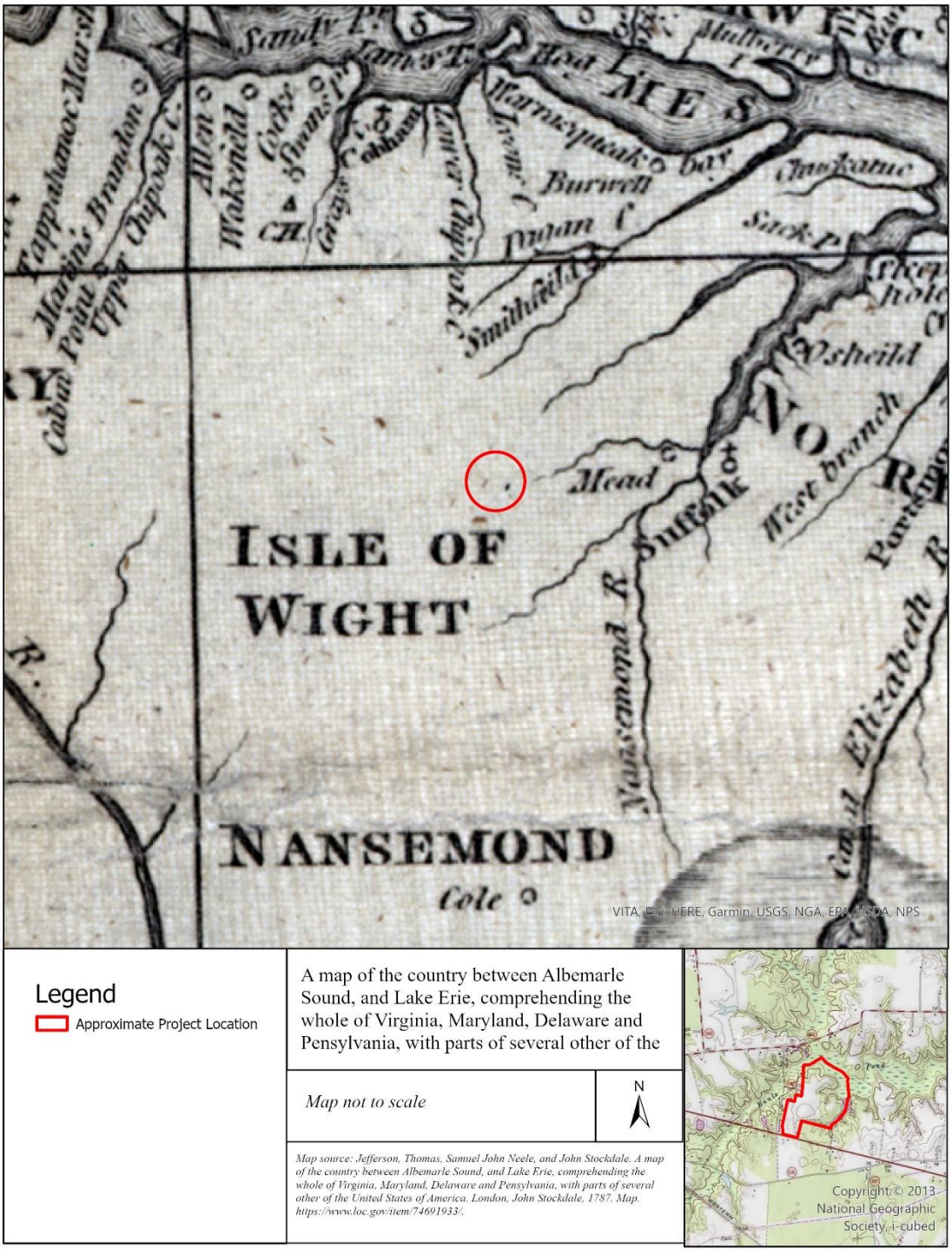


Figure 8. Detail of *A map of the country between Albemarle South, and Lake Erie, comprehending the whole of Virginia, Maryland, Delaware, and Pennsylvania, with parts of several other of the United States of America*. 1787.

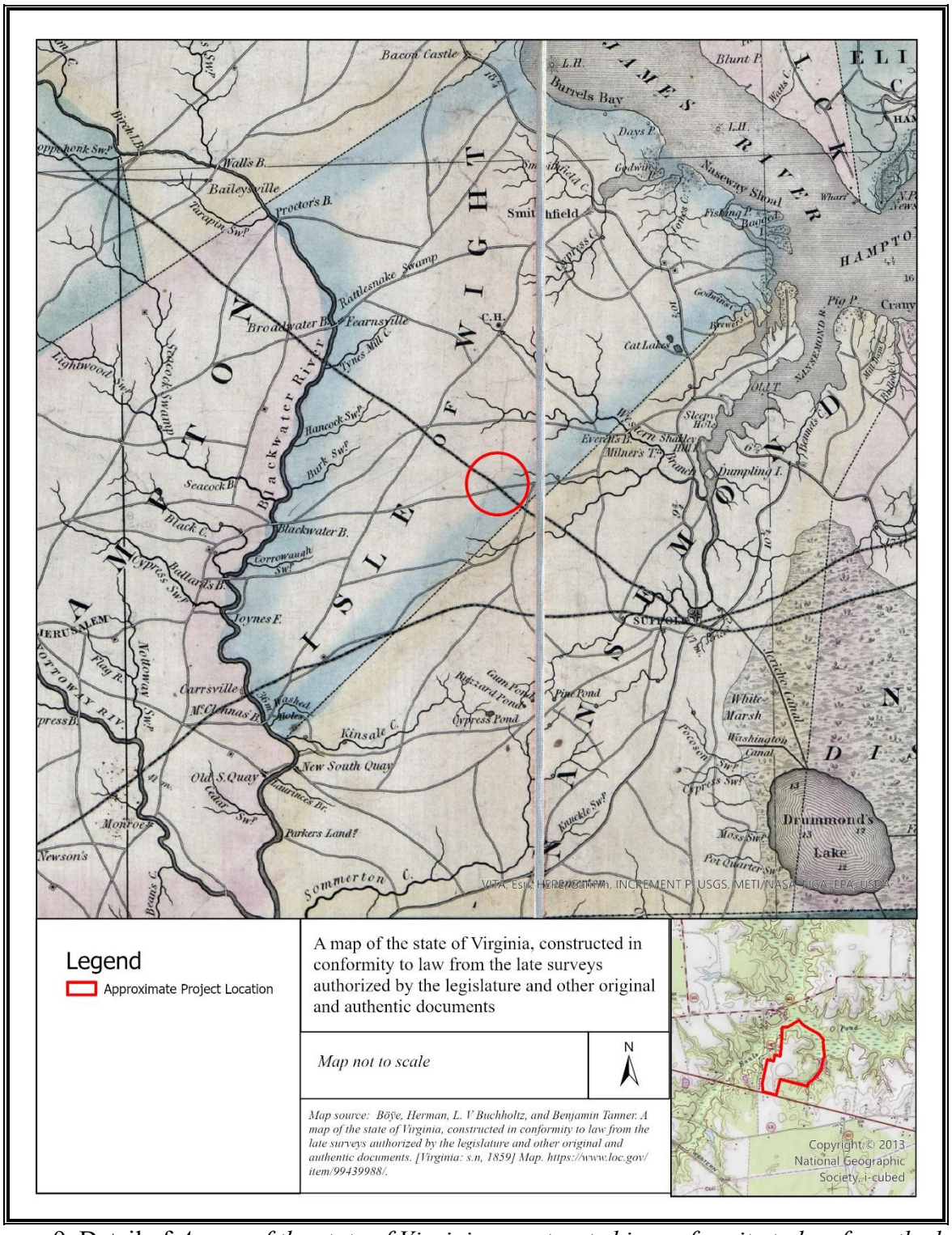


Figure 9. Detail of *A map of the state of Virginia, constructed in conformity to law from the late surveys authorized by the legislature and other original and authentic documents* by Herman Boye, 1825.

Previous research into Nansemond and Norfolk counties' land use patterns revealed that during the 18th and early to mid-19th centuries, middling landowners often possessed two or more outlying parcels where they erected improvements, leasing both land and buildings to tenants or sharecroppers. This pattern may have evolved from both counties' proximity to seaports, where a steady flow of landless new immigrants emerged. Some landowners used a subsidiary tract as a plantation quarter where they placed a farm manager or overseer and a gang of slaves (Nansemond County Land Tax Lists 1820-1850).

From 1830 to 1860, the population of Isle of Wight County remained virtually constant at around 5,000 inhabitants. Slavery was not as crucial to the county's social and economic makeup as it was in other Tidewater counties in the antebellum period. Isle of Wight County was home to numerous free slaves before Emancipation. By 1860, there were 1,370 free blacks residing in the County; together, they held 2,965 acres of land, a modest average of 44.25 acres per adult male (King 1993).

As time went on, the region's transportation network became increasingly sophisticated. In 1832, a group of Portsmouth citizens organized the Portsmouth and Roanoke Railroad Company, one of the nation's earliest railways. The Company's first train steamed into Suffolk in 1834, and by 1837, its tracks extended to the Roanoke River. In 1846, the fledgling rail line was reorganized, and its name was changed to the Seaboard and Roanoke Railroad.

Isle of Wight County's economy had never been heavily oriented toward slave labor, and many of its citizens questioned the wisdom of fighting a sectional conflict to protect what they perceived to be the interests of large slave owners. However, when war was finally declared, many Isle of Wight men willingly took up arms to defend the Confederacy, some joining the Surry Light Artillery Company and others joining the Isle of Wight Grays, which became Company D of the 16th Virginia Infantry Regiment (King 1993).

Civil War (1861-1865)

In 1861, when the Civil War began, Fort Monroe, a strongly fortified and well-staffed Union military complex located across the James River from Norfolk and Portsmouth, threatened the south side of Hampton Roads. When Union forces abandoned the navy yard at Gosport early in the war, Confederate troops poured into the area, erecting defensive batteries at the Navy Yard, Navy Hospital Point, Pinners Point, Craney Island, Pig Point, Fort Norfolk, Boush Bluff, and Seawell's Point. By November 1861, the lower side of Hampton Roads housed more than 20,000 Confederate troops (Butts 1961).

When Federal Major General Benjamin Butler seized Newport News in May 1861, Confederate General Robert E. Lee quickly realized the threat posed to Suffolk, a critical junction of the Southside railroad lines connecting the port of Norfolk with Petersburg and Richmond. Immediately, Lee ordered local commander Brigadier General Benjamin Huger to strengthen the region's defenses and erect or expand the number of fortifications along the Nansemond River and the south side of the James River in Isle of Wight County. On May 14, 1862, several Federal gunboats came up the James and fired on Fort Boykin, an important Southside fortification located on Burwell's Bay, several miles west of Smithfield. Overwhelmed by the longer range of the Union guns, the Confederate defenders of Fort Boykin abandoned the defenses, destroying

their guns and the fort's buildings. After this engagement, Huger withdrew his forces from the Southside forts, and the battery near Ragged Island was likely abandoned by late May 1862 (King 1993).

According to a local historian, the nearby Franklin area felt the effects of the Civil War shortly after the Union Army seized Norfolk in 1862. In a preemptive move, the Confederates burned the railroad bridge across the Blackwater River at Franklin and the Nottoway River Bridge. The Confederates withdrew from Franklin in anticipation of a Union Army advance in October 1862, when the Union Army assaulted Franklin to disrupt Confederate communications. Confederate infantry, positioned upon Crumplers Bluff, less than a mile downstream from Franklin, ambushed a Union gunboat with a barrage of heavy musket fire. Simultaneously, pickets on the east side of the river foiled the Union Army's efforts to seize the rail depot at Franklin and the floating bridge across the Blackwater River. The Confederates also held off a Union infantry force (Parramore 1978).

Between the fall of 1862 and the spring of 1863, Union General John J. Peck was ordered to Suffolk with approximately 9,000 men to repel the advance of a Confederate force that was 15,000 strong. Peck viewed Suffolk as "the key to all the approaches to the mouth of the James River on the north of the Dismal Swamp" for it was "at the head of the Nansemond River, with the railway to Petersburg and Weldon." Convinced that access to the James River via Suffolk was vital to the support of the Confederate Army, on September 25, 1862, Peck and his men set about constructing an elaborate ring of fortifications about the city, sealing it from the outside. Meanwhile, on February 26, 1863, Confederate General James Longstreet was detached from Lee's army and placed in the Department of Virginia and North Carolina command. He had between 12,000 and 15,000 troops on the Blackwater River and a similar number between Petersburg and the James River, making around 35,000 men. In early April, General Peck learned that there was a Confederate troop build-up near the Blackwater River and braced for an attack. On April 11th, the Confederates advanced, found Suffolk strongly defended, and withdrew, taking up a strong position outside the city. A few days later, General Longstreet informed his superiors that although he was convinced that "we could reduce [Suffolk] in two or three days," he doubted that "we can afford to expend the powder and ball." He stated that his men had been collecting supplies from the eastern coasts of Virginia and North Carolina. Longstreet received orders to move his men to Fredericksburg relatively quickly. However, he was obliged to delay his departure until he could withdraw his supply trains to safety across the Blackwater River (Johnson and Buel 1956, Hobbs and Paquette 1987). Thus, the Confederates departed from the area without having pressed their offensive.

Later in the war, the fall of coastal North Carolina's defenses left the Confederate cities of Norfolk and Portsmouth open to attack from the south. This vulnerability, when viewed considering the massive Union presence at Fort Monroe, led Confederate officials to declare martial law in the cities and make plans to evacuate women and children. In the spring of 1862, Union General George B. McClellan marched out of Fort Monroe and began advancing up the James-York peninsula toward Richmond. General John E. Wool, in support of McClellan's offensive, dispatched troops to Norfolk and Portsmouth, which quickly surrendered. Although Suffolk remained for a time in the hands of local citizens, Confederate forces ultimately

withdrew across the Blackwater River, where they were under the command of General Roger A. Pryor (Butts 1961, Hobbs and Paquette 1987, Johnson and Buel 1956).

Isle of Wight County saw few direct military engagements during the war, the most significant being the Battle of Smithfield of January 31 - February 1, 1864, in which Confederate defenders repulsed a minor Union assault against the town. Living in a sort of no-man's-land, Isle of Wight's citizens were harried by Federal cavalry raids, frequently resulting in the appropriation of supplies and the destruction of property. An 1864 resolution of the County's justices succinctly outlined the hardships faced by Isle of Wight citizens during the war years:

> *Whereas on account of the exposed condition of the County, being beyond the lines of the Confederate Army and subject to frequent and destructive raids of the enemy and the difficult and embarrassed communication with other sections of the state, our people, in a great measure, are dependent upon their own resources for an adequate supply of the necessities of life. And whereas, on account of the loss of almost our entire slave population, and the loss of a number of our free labor, and the conscription of white men between the ages of eighteen and forty-five to recruit the ranks of our armies, there is a great scarcity of productive labor, and whereas any further extension of conscription within the limits of this County will but result in the paralyzing of production and great suffering and hardships upon those who will be left at home . . . all other business is suspended in the County and, our people with scarcely an exception, are engaged in the cultivation of the soil* (King 1993).

Maps of the area drawn during this time show development around the project area with no development directly within the project area (Figure 10 – 14). Union Army topographic engineer A. D. Bache, whose "Map of the coast of Virginia and North Carolina" and "Map of Eastern Virginia" cover a broad expanse of territory, showed the region's major roads and canals and a few scattered residences (Bache 1862, 1862-1863). Union and Confederate troops clashed in sporadic raids along the Blackwater River throughout the war.

Reconstruction and Growth (1865-1917)

Four years of civil war had a devastating effect on the land and people of Virginia, and Isle of Wight County was no exception, though it suffered less than other parts of the Commonwealth. The wake of the conflict left the County poorer as the lack of draft animals and the poor condition of long-neglected fields hampered agricultural life. It was difficult for most former slave owners to face Emancipation emotionally and financially.

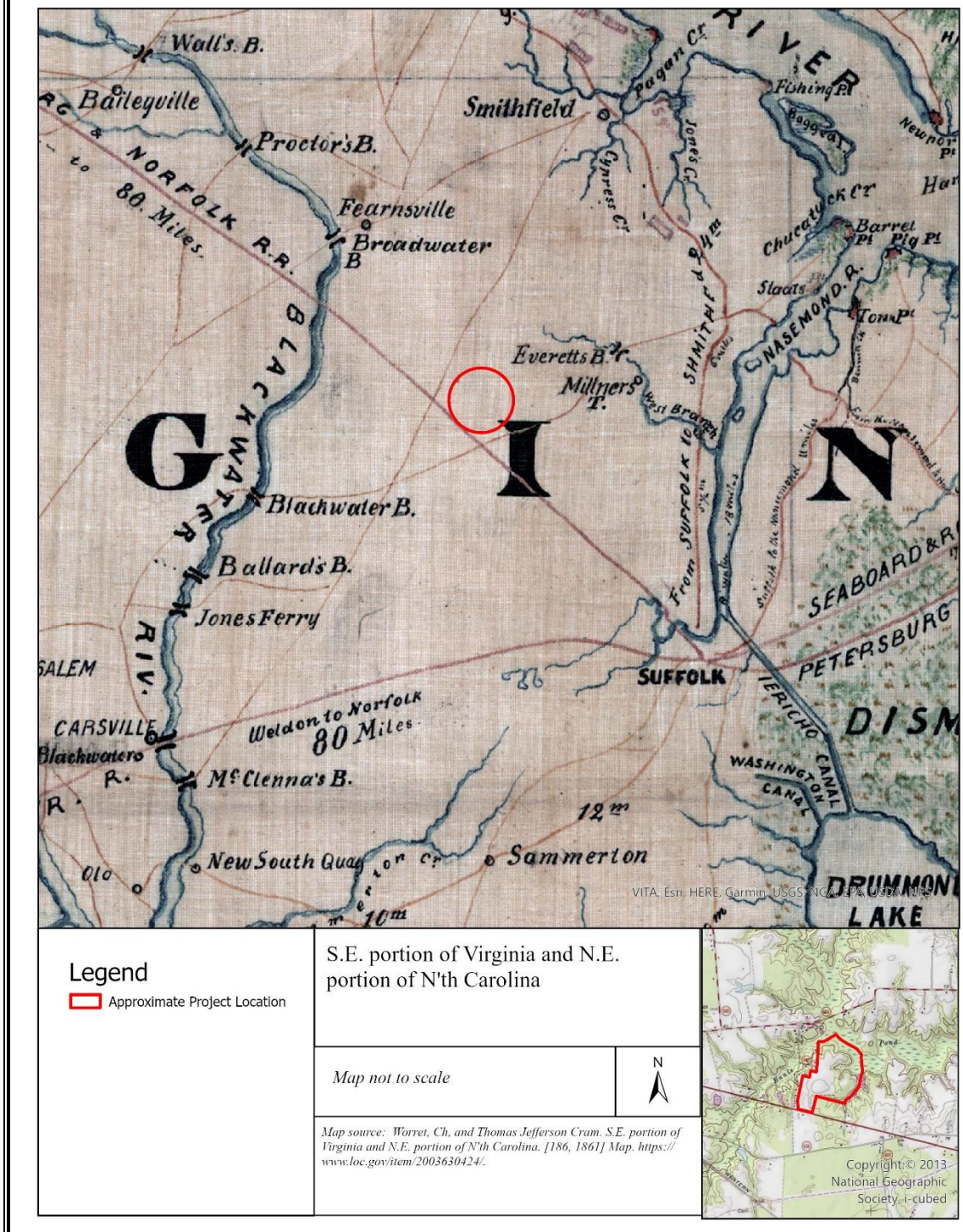


Figure 10. Detail of *S. E. portion of Virginia and N. E. portion of N'th Carolina*. 1861.

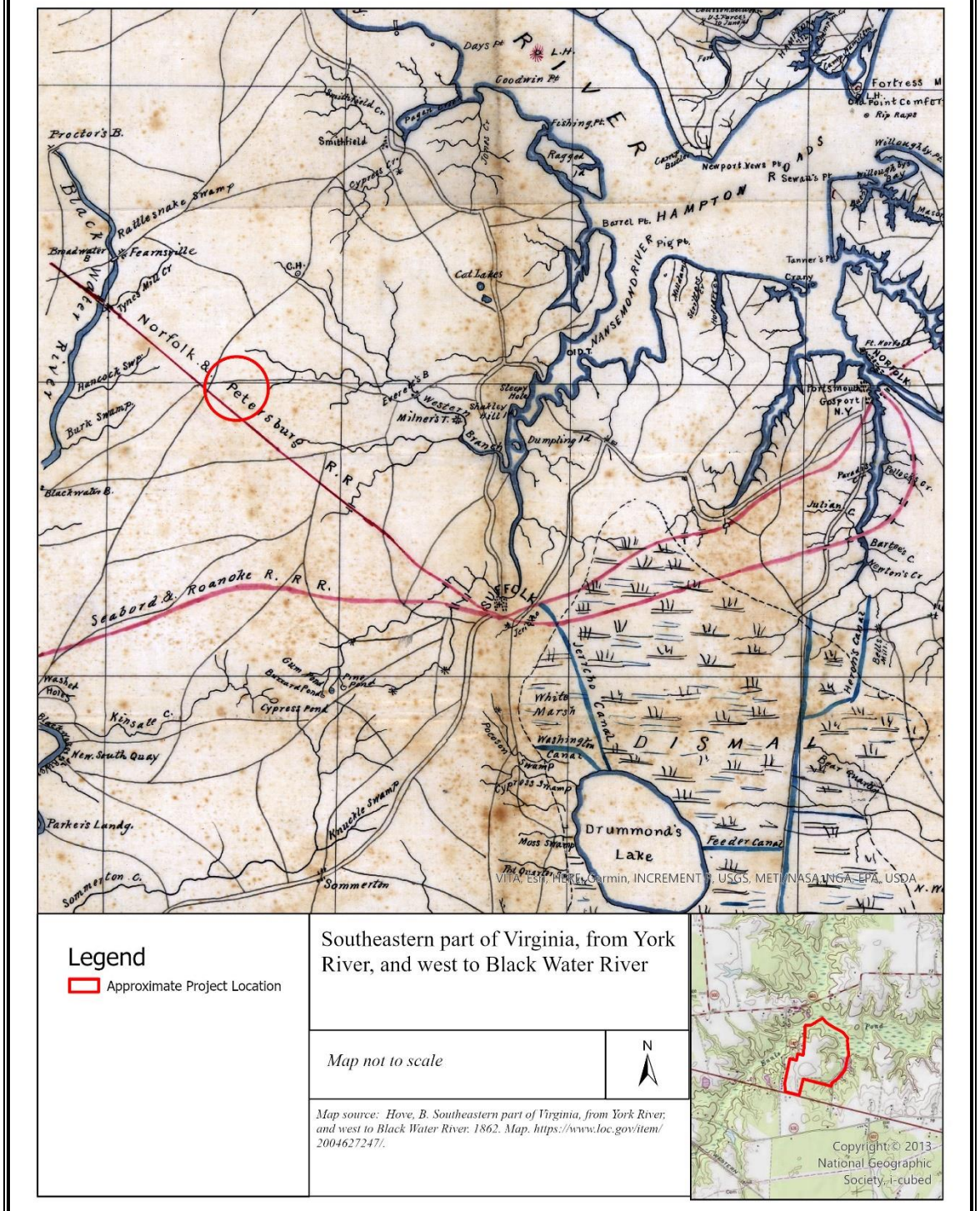


Figure 11. Detail of *Southeastern part of Virginia, from York River and west to Black Water River,* B. Hove, 1862.

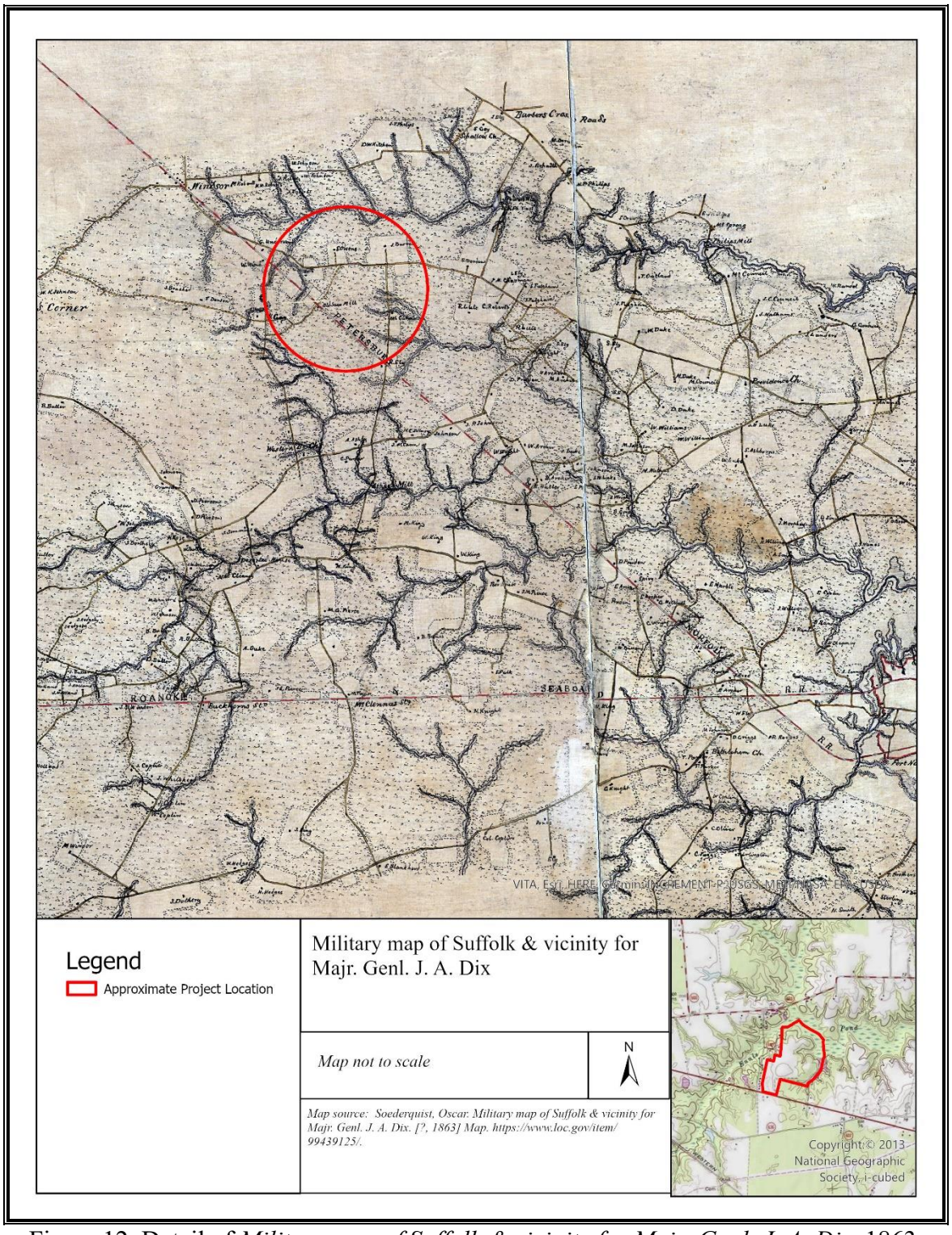


Figure 12. Detail of *Military map of Suffolk & vicinity for Majr. Genl. J. A. Dix*, 1863.

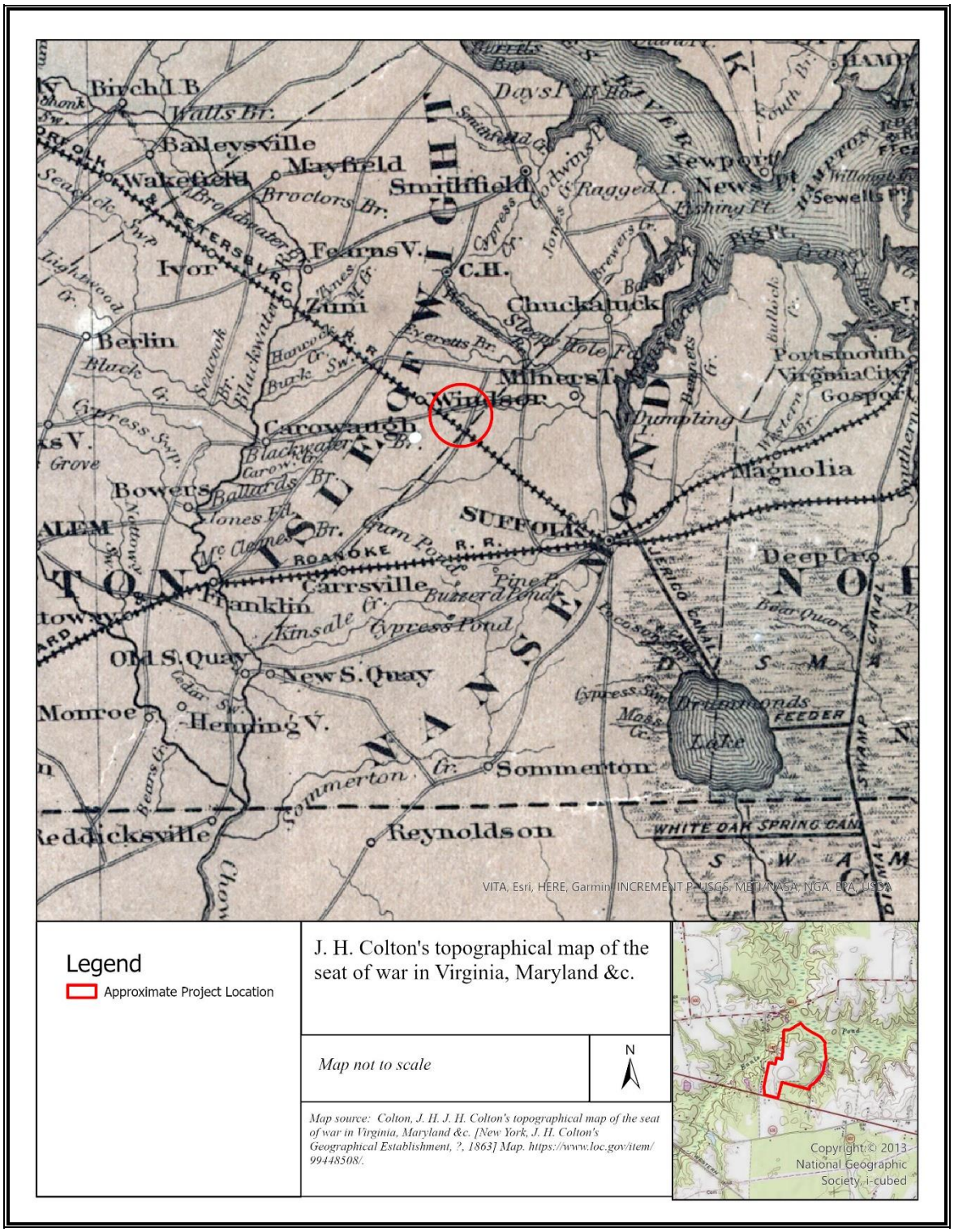


Figure 13. Detail of *J.H. Colton's topographical map of seat of war in Virginia, Maryland*, J.H. Colton's Geographical Establishment, New York. 1855.

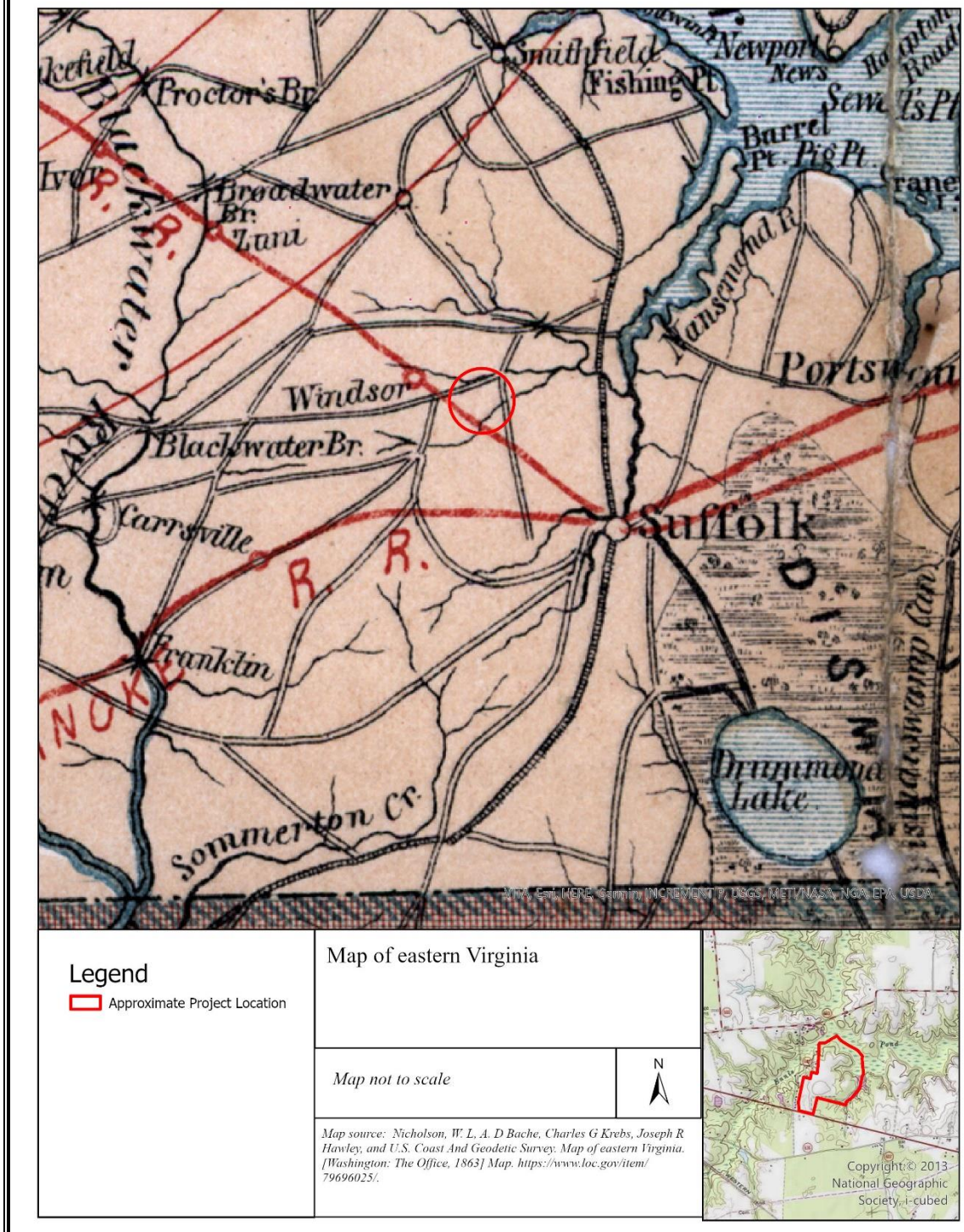


Figure 14. Detail of *Map of eastern Virginia,* A. D. Bache, 1863.

The County's population also dropped considerably in the immediate postwar years. In 1860, Isle of Wight's residents numbered nearly 10,000; by 1870, the population had fallen by almost 20% to 8,320. After the war, many black and white residents left the Isle of Wight in large numbers, seeking work in nearby cities. Physically, economically, socially, and politically, the landscape of the County had been irrevocably altered in a brief period (King 1993).

One major problem that confronted the Union Army leadership during the war years was how to provide food, shelter, and employment to the numerous former slaves who sought refuge behind their lines, many of whom arrived with only the clothing they wore and a few belongings. After the fighting ceased, the Government assigned the dilemma of providing for these men, women, and children to the Bureau of Refugees. Bureau officials supported ex-slaves by resetting them upon private property that white families had abandoned when fleeing from Union-occupied territory. They also made use of rural acreage confiscated for back taxes. The Bureau of Refugees subdivided some of these abandoned or confiscated farms and leased small plots to black refugees who paid their rent in crop shares (Bureau of Refugees 1862 - 1866). Although some of the farms occupied by black refugees were located at the head of the Nansemond River's southern branch, none were near the project area.

Several local black citizens were elected to public office during the Reconstruction Era. In time, this election of black citizens led to a white backlash that resulted in the election of a Conservative (Democratic) legislature and, ultimately, the disenfranchisement of blacks. In 1870, the adoption of a new state constitution established a public school system with mandatory attendance for blacks and whites. In 1872, Suffolk received a new town charter, and seven years later, the town limits were expanded. Gradually, as the scars of war healed, the region began making slow but steady economic progress. Suffolk's commercial power grew because it was the terminus for six railroad lines (the Norfolk and Western, the Southern, the Atlantic Coast Line, the Seaboard Air Line, the Virginian, and the Suffolk and Carolina). Ready access to rail transportation fostered the development of manufacturing facilities.

Agricultural changes in Isle of Wight County, including the remarkable growth of peanut and soybean production, spurred population growth toward the end of the 19th century. By 1890, the County's population exceeded its pre-war levels. Truck farming and manufacturing facilities also brought new income to the area. Peanut factories, lumber mills, foundries, woodworking establishments, knitting mills, a shirt factory, machine shops, and ice factories were built in Suffolk. Outside the Town limits were brickyards, cotton gins, grist and flour mills, and other manufacturing facilities. Farming, lumbering, and peanut processing were the predominant occupations in rural areas. In 1907, Joseph B. Dunn reported that the lower part of the County was primarily devoted to truck farming, whereas the upper part was ideal for peanuts. During the late 19th and early 20th centuries, small communities grew around train stations, crossroads, and industrial facilities (Hobbs and Paquette 1987).

World War I to World War II (1917-1945)

The beginning of the 20th century saw frequent and rapid change in the Isle of Wight County. For example, electricity became available to most rural residents after 1939, when the Community Electric Cooperative began raising power lines. However, perhaps the most significant local development witnessed during this period was the construction of the James River Bridge,

officially opened by President Calvin Coolidge on November 17, 1928. Virtually overnight, the bridge ended Isle of Wight's relative isolation from Hampton Roads' growing urban centers. County businessman and booster Albert Sidney Johnson was instrumental in getting the main north-south U. S. highway, Route 17, routed through Isle of Wight via the James River Bridge and across the new Crittenden and Nansemond River bridges to Portsmouth and Norfolk. Initially, the bridge tolls were high enough to discourage daily commuting to the Peninsula. However, ready access to the region's cities still proved a significant stimulus to the local economy despite the onset of the Depression (King 1993). Maps of the area drawn during this period show this growth, with one house situated within the project area, presumably the Saunders house (Figure 15).

The New Dominion (1945 to present)

Isle of Wight grew at an unprecedented rate after World War II, and today, the County has over 28,500 residents, more than double the population at the turn of the 20th century. In 1975, Virginia took over the James River Bridge and removed the tolls; as a result, Isle of Wight County quickly developed into a bedroom community of Newport News, with residential developments springing up along the Route 17 corridor. Despite this increasing residential growth, the majority of Isle of Wight County remains predominantly rural (King 1993). Maps of the area drawn during this period show this continued rural nature, with the project area now shown as an agricultural field with the Saunders House within the project area (Figures 16 - 20).

The military veterans who returned to Suffolk after World War II found what had become a growing commercial and industrial center. Although peanut farming and other agricultural enterprises continued employing numerous workers, several manufacturers had entered the area. The city also had four lumber companies and some meat-packing plants. The Lipton Tea Company and General Electric also established manufacturing facilities in Suffolk. The city also continued to be a vital railroad terminus served by five rail lines. After World War II, the Government transferred to Suffolk, an airport formerly operated by the Navy (Hobbs and Paquette 1987).

Brief History of the Project Area

The Windsor Commerce Center property can be traced through Isle of Wight County real estate records from the present to 1866 (Table 2). However, anecdotal evidence can trace the property back to the 18th century. Before the 1770s, the Saunders family owned the project area. Mr. Saunders passed away sometime before 1771, and his wife, Martha, decided to remarry. She petitioned the Isle of Wight County courts for one-third of her late husband's estate, and in February 1771, the court granted her the land and two slaves, Tom and Joan. Martha married planter John Carstephan and lived with him on his farm (Smith 1985).

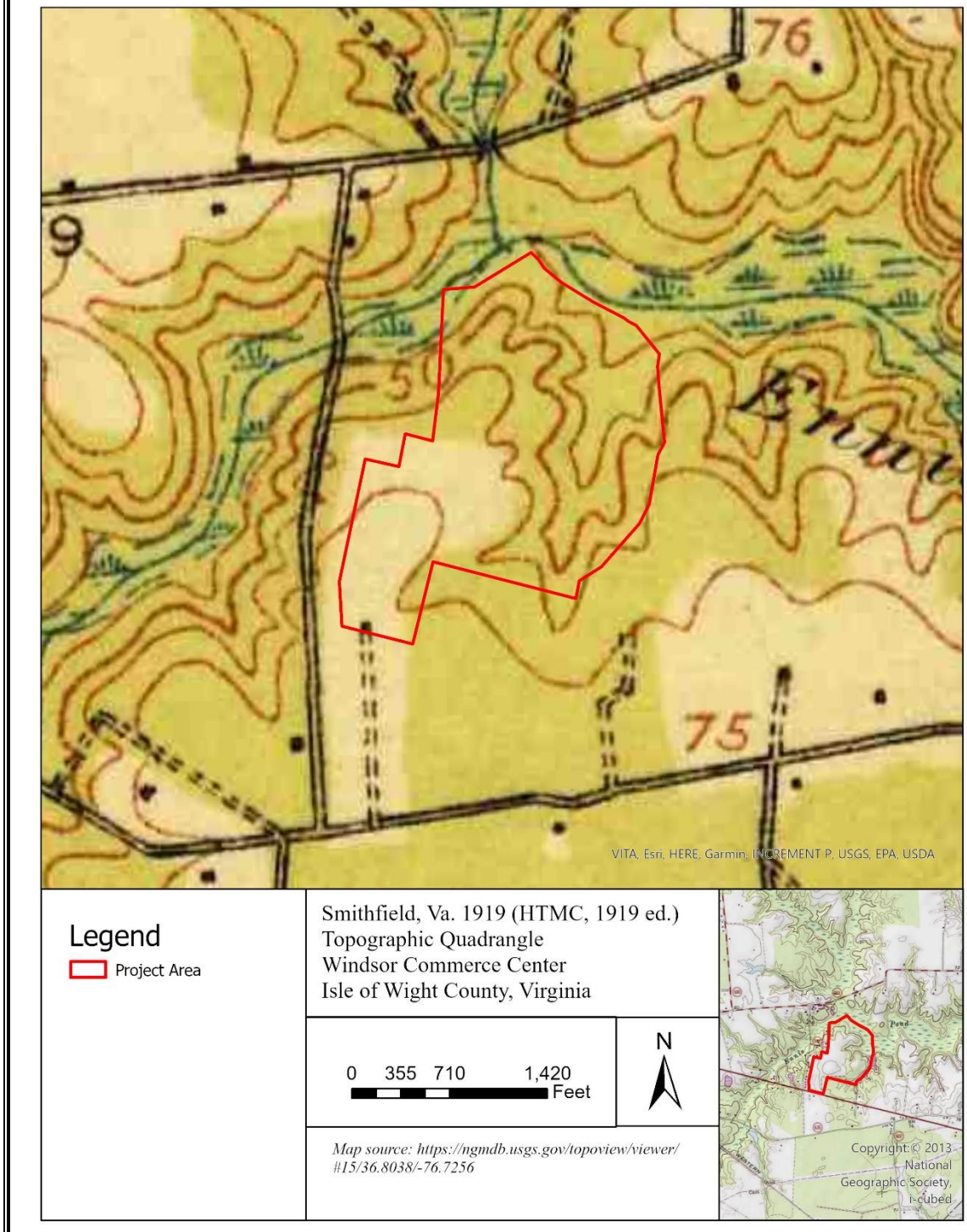


Figure 15. Detail of 1919 Smithfield quad.

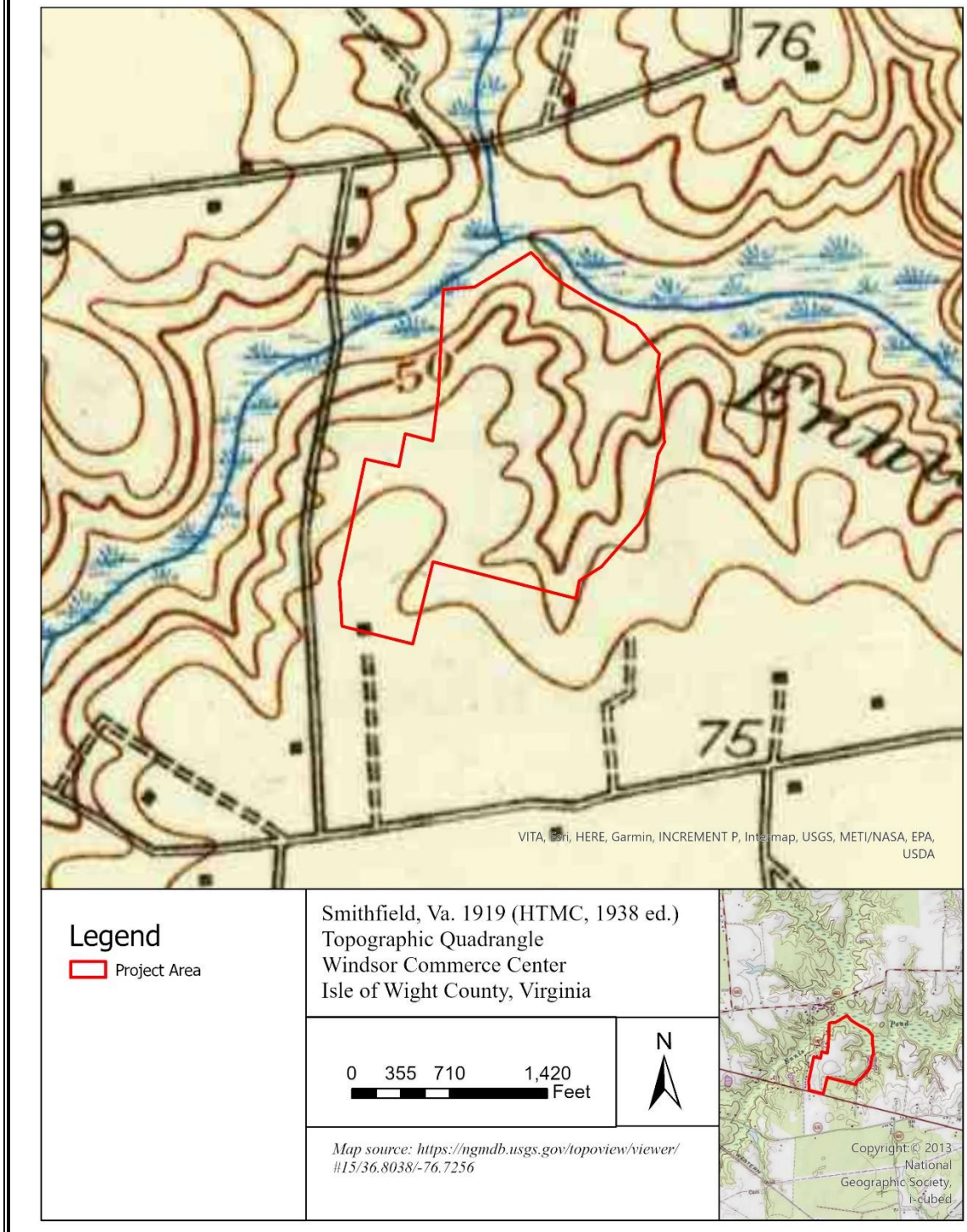


Figure 16. Detail of 1938 Smithfield quad.

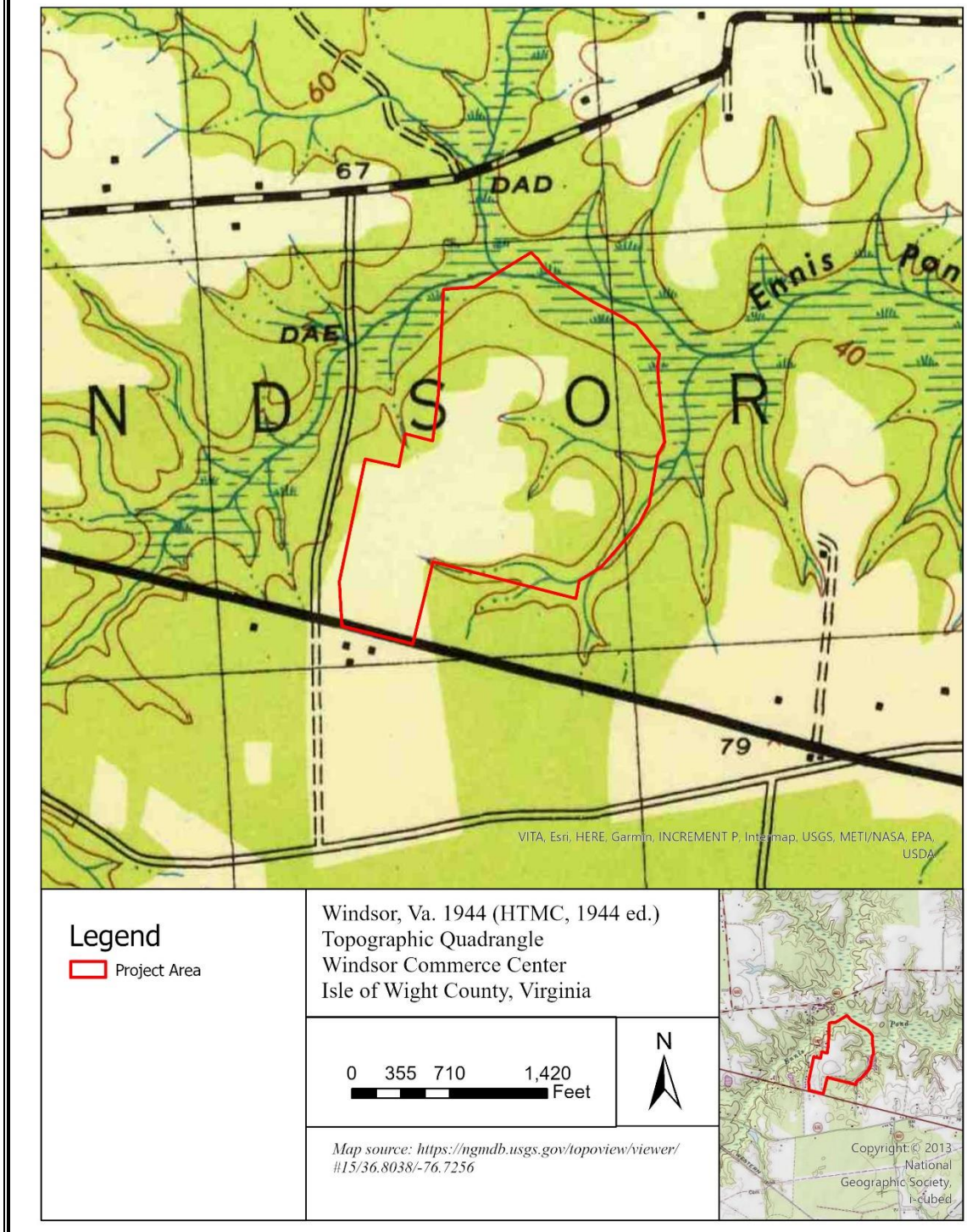


Figure 17. Detail of 1944 Windsor quad.

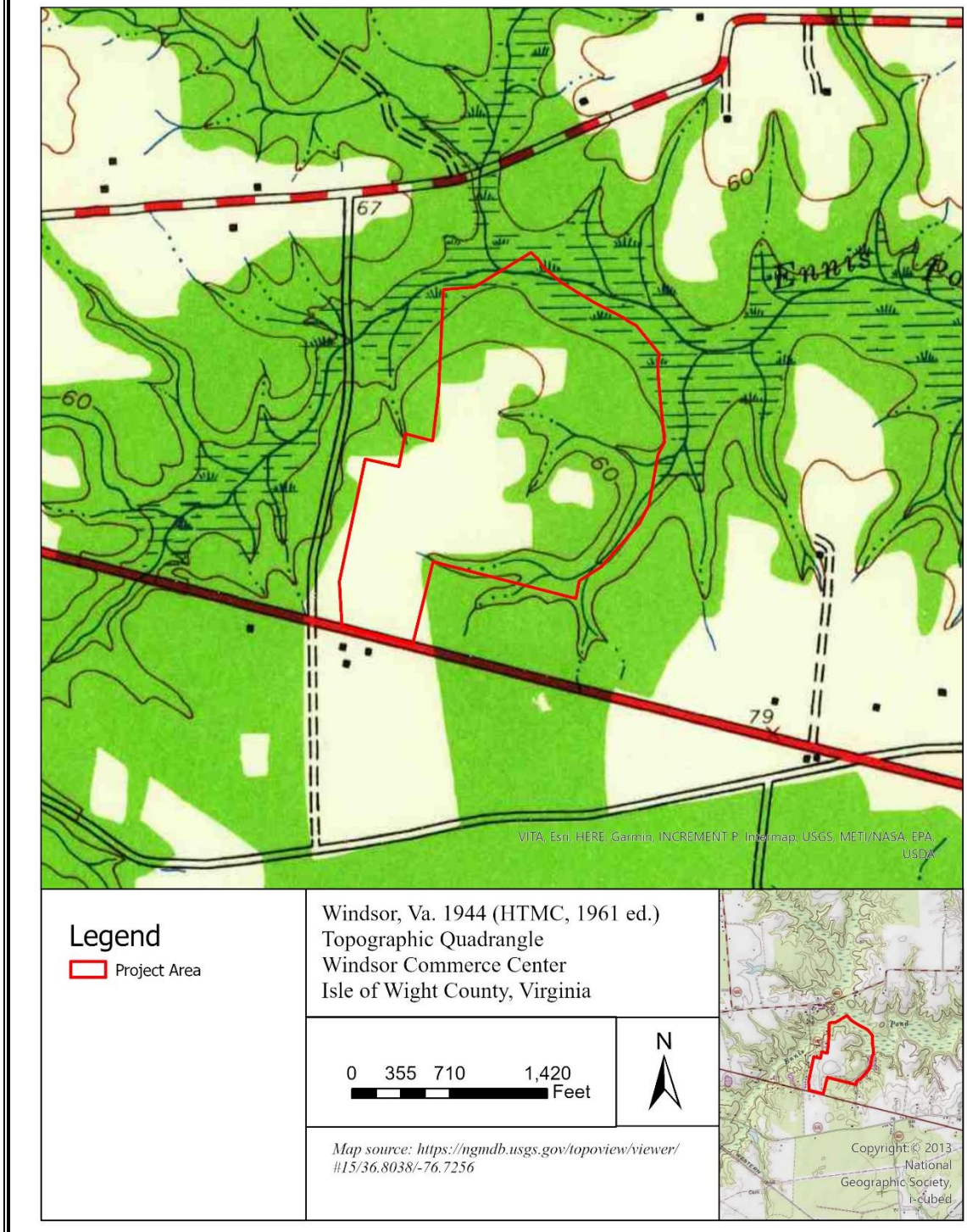


Figure 18. Detail of 1961 Windsor quad.

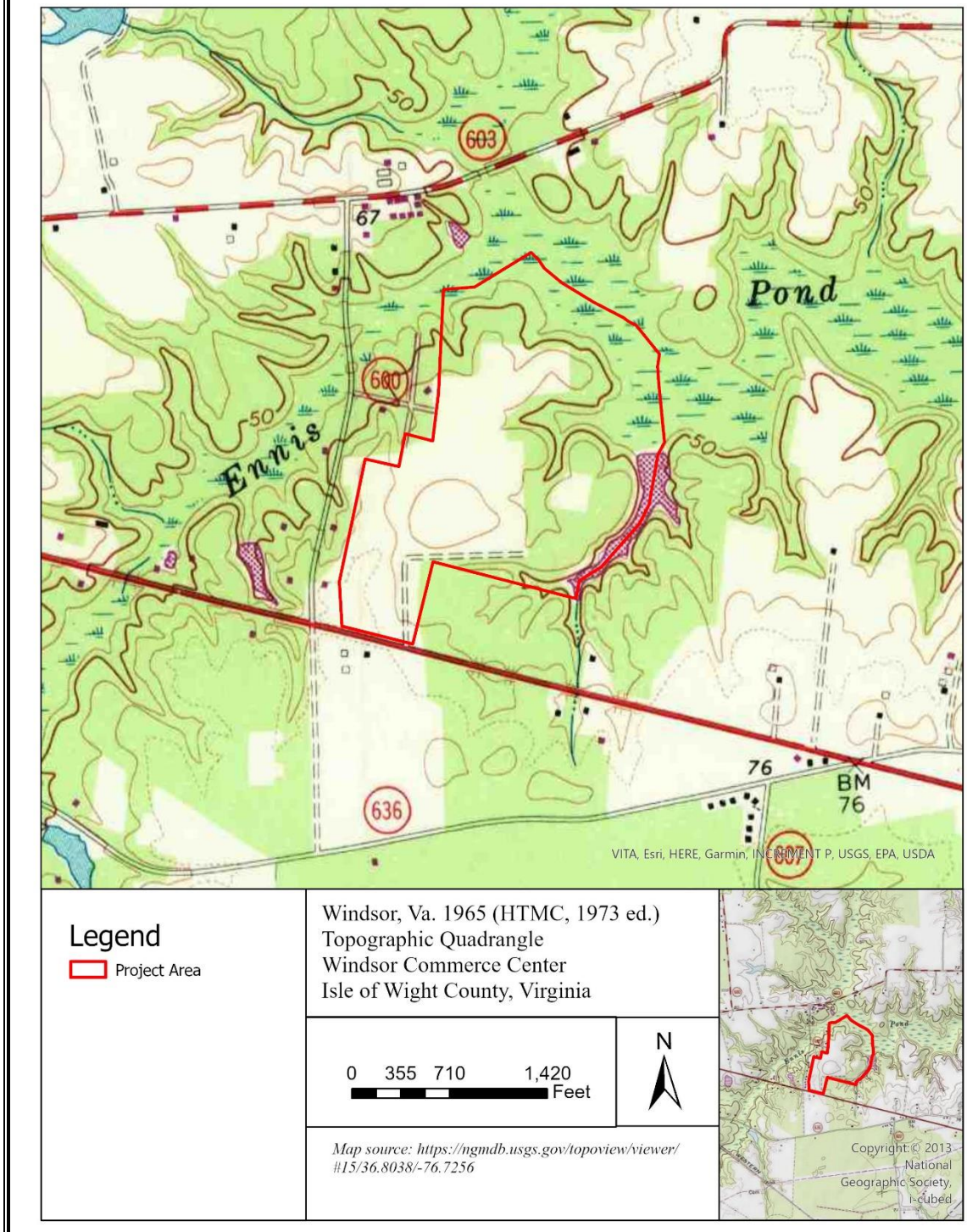


Figure 19. Detail of 1973 Windsor quad.

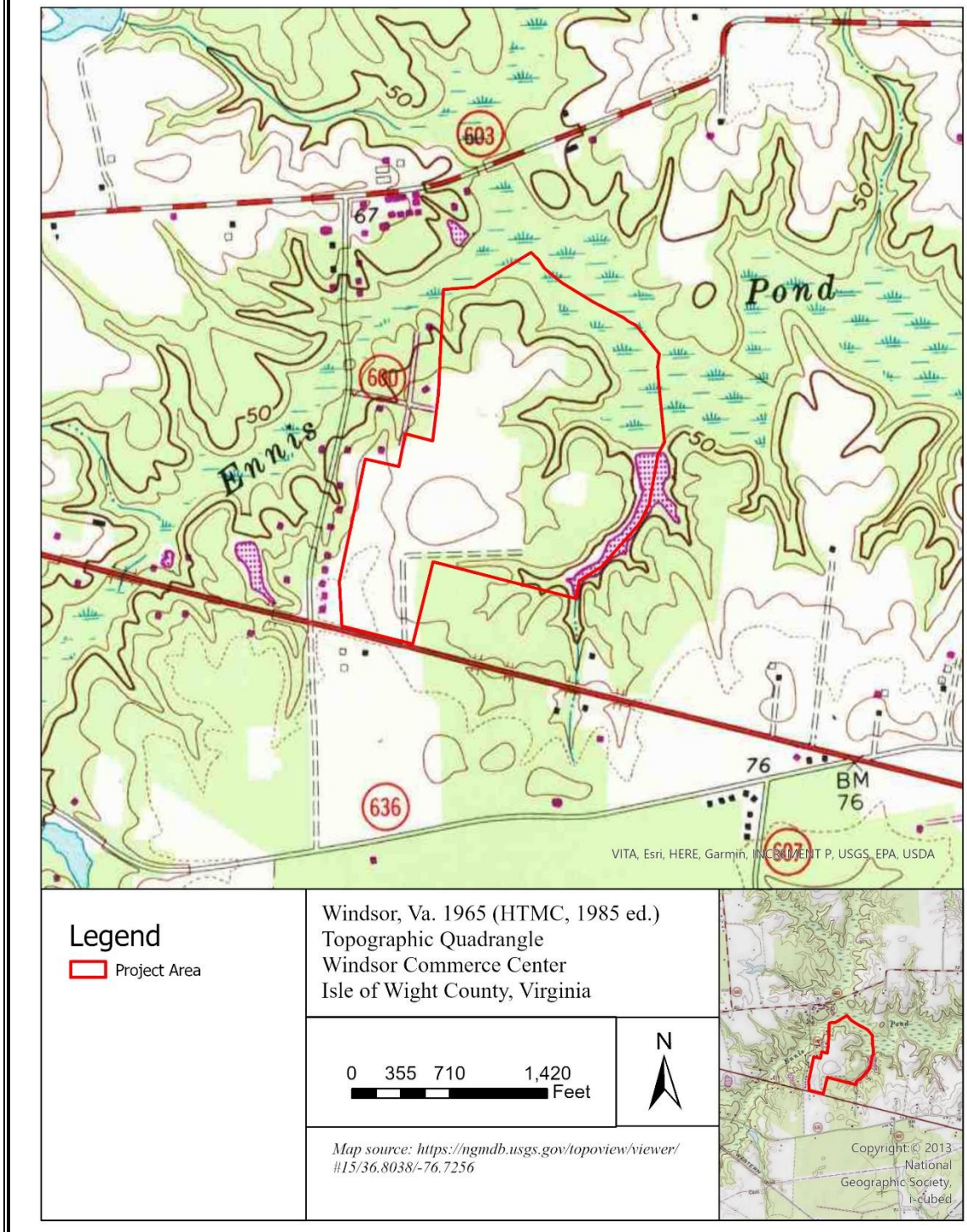


Figure 20. Detail of 1985 Windsor quad.

Martha's son, Henry Saunders, inherited the family property when he came of age in the mid-1770s. When he inherited the land, it contained approximately 250 acres and came with four to five slaves. Shortly after inheriting the property, Saunders enlisted in the military and served as a Lieutenant during the Revolutionary War (Smith 1985). After the war, in 1779, Henry married Anne Tallough, and together they had two children: a daughter named Betsy and records indicated another unnamed child (Smith 1985). Saunders added to his land holdings through the remainder of the 18th century, buying property and then selling property to purchase slaves before acquiring more property. In 1780, he bought 620 acres on the Blackwater River from his wife's family, including the project area. Three years later, he obtained a 57-acre grant. In 1787, he bought 687 acres from another planter, which gave him ownership of approximately 1,041 acres in Isle of Wight County, including the project area acreage (Smith 1985).

Saunders' property was next to William Eley, a wealthy landowner whose large house set a precedent for residences in the area. Keeping up with Eley was costly, and Sanders sold some property to build his home. However, that sale did not provide enough funding for his construction, and in 1797, Saunders mortgaged the remainder of his land and built what came to be known as the Henry Saunders House. In addition to the house, Saunders built several outbuildings, including a kitchen and cellar (Smith 1985). It is reasonable to assume that he built some slave quarters, as he still owned slaves.

In 1808, Henry Saunders's wife Anne was murdered, and the Isle of Wight County courts charged him with the crime. Saunders was found guilty and sentenced to 18 years in prison. It is presumed that he died in a Richmond prison. A year after the trial, the property was foreclosed on and sold at a public auction. A widow named Anne Scott purchased a portion of the property, including the house, which still stands on the adjacent parcel to the east (Smith 1985).

By the 1860s, according to deed records, Stephen S. Barrett owned the property. In November 1866, Barrett sold approximately 306 acres to Robert Eley. Robert Eley remained the owner of the property until his death. The land was seized and sold at a public auction when he died. George R. Atkinson was appointed Special Commissioner of the case and, in January 1887, sold 100 acres to W. J. Nelms. At the time, Nelms owned the adjacent property to the east, and the house on the property to the east was known as the Saunders, aka Nelms house. Nelms retained this portion of the property for less than a month and, in February 1887, sold the 100 acres to Joseph D. Jones.

Joseph D. Jones owned the property until his death. This ownership is consistent with the cemetery on the property, which has a gravestone for Joseph Jones. When Jones passed away, the land was once again seized. B. F. Holland was appointed Special Commissioner for the case, and in September 1897, he sold approximately 374 acres at a public auction to K. E. Johnson. The deed for this transaction noted that Johnson lived in North Carolina, and there is no indication that he ever lived on the property. The property remained in the Johnson family until the mid-20th century.

In 1961, the property became part of a chancery case between Harry T. Johnson and Otis H. Johnson. A. E. S. Stephens and Rodham T. Delk were appointed Special Commissioners and ordered to sell the property at public auction. On November 24, 1961, they sold approximately

279.58 acres to Fred T. Mathews, the highest bidder. Mathews retained ownership of the property until his death. When Fred T. Mathews died, his family, including his widow Hazel K. Mathews and sons Fred T. Mathews, Jr., John Thomas Mathews, and Robert S. Mathews, sold the property HRFT, Inc. The deed for this transaction noted that the property contained 279.58 acres on both sides of Route 460. HRFT, Inc. retained the property until 2008 when they sold it to the Board of Supervisors for Isle of Wight County. They retained the property for two weeks and, in October 2008, sold it to the Industrial Development Authority of Isle of Wight County, listed in the Isle of Wight County real estate records as the current owners.

Table 2. Deed Research for the Project Area.

Grantor	Grantee	Instrument #	Book/Page	Date
Isle of Wight County	Industrial Development Authority of Isle of Wight County	080005646		10/28/2008
HRFT, Inc.	Isle of Wight County	080005325		10/6/2008
Fred T. Mathews, Jr. and John Thomas Mathews, executors of the estate of Fred Tunstall Mathews, Sr., Hazel K. Mathews, widow of Fred Tunstall Mathews, and Robert S. and Barbara S. Mathews	HRFT, Inc.		211/271	1/14/1972
A.E.S. Stephens and Rodham T. Delk, Special Commissioners	Fred T. Mathews		164/537	11/24/1961
B. F. Holland, Special Commissioner	K. E. Johnson		62/32	9/3/1897
W. J. Nelms	Joseph D. Jones		51/133	2/8/1887
George R. Atkinson, Special Commissioner	W. J. Nelms		51/131	1/3/1887
Stephen S. Barrett	Robert Eley		41/15	11/24/1866

Summary of Late 18th to mid-19th Century Domestic Sites

Fourteen previously recorded historic archaeological sites and 30 previously identified architectural sites are located within one mile of Site 44IW0395, which is identified as a late 18th to mid-19th century domestic site. Of these sites, 13 resources date from the late 18th to the mid-19th century and contain a domestic component (Table 3 and Figure 21). Of these sites, one dates to the Archaic period and the 18th, 19th, and 20th century; one dates to the Native American period and the 18th and 19th century; two date to the 18th century; one dates to the 18th and 19th century; one dates to the 19th century; six dates to the 19th and 20th century; and one has no associated date but has a historical component.

Many of these resources provided substantial building details. Most appear to be typically one or one-and-a-half-story, gable roof, often with dormers, Georgian style, hall and parlor or central passage design, wood-frame houses clad in wood weatherboard and resting on raised brick foundations with two interior or exterior end chimneys. The windows are typically sash, double-hung sash, or wood-framed. There is often a front porch and an ell extension. Many of these dwellings were situated on small parcels with a few outbuildings. The outbuildings typically included a combination of barns, smokehouses, corncribs, sheds, granaries, wells, slave or servant quarters, and sometimes a family cemetery.

Two of these sites also included a Native American component. These typically consisted of quartzite flakes, projectile points, and quartz or quartzite debitage. These findings indicate that

the components are small temporary campsites used by probably only one group at a time with no long-term, day-to-day activities.

Given this review of dwellings near Site 44IW0395, most of these domestic sites appeared to have at least one single dwelling, and several had a few scattered outbuildings with family cemeteries.

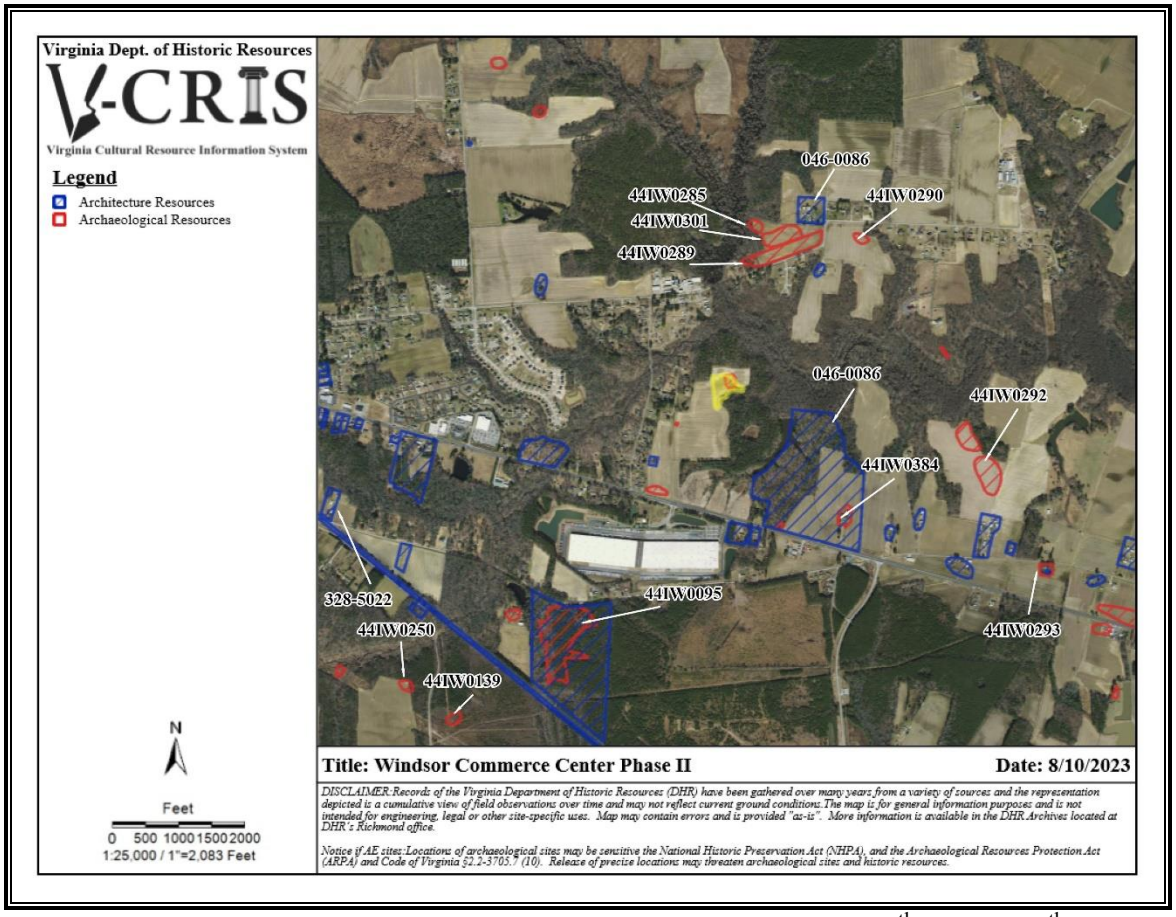


Figure 21. VDHR V-CRIS map showing previously identified late 18th to mid-19th century domestic resources within one mile of the project area (yellow-shaded area).

Table 3. Previously Identified Late 18th to Mid-19th Domestic Sites Within One Mile of The Project Area.

Site Number	Site Chronology	Site Type	Native American Artifacts	Historic Ceramic Artifacts	Other Historic Artifacts	Site Size	Soil Type	Additional Site Information
44IW0095 See also 046-5347	Archaic 18th century 19th century 20th century	Camp, cemetery, and single dwelling	Palmer points, Morrow Mountain points, Savannah River points, one chert secondary flake, three quartz biface fragments, one quartz primary flake retouched, two quartz secondary flakes, two quartz tertiary flakes, eight quartz shatter, one trimmed cobble, one quartzite scraper tool, ten quartzite biface fragments, four quartzite fire-cracked rock, one ground quartzite tool fragment, nine quartzite primary flakes, 15 quartzite secondary flakes, 12 quartzite tertiary flakes, five trimmed quartzite cobbles, one secondary rhyolite flake, one rose quartz primary flake, one rose quartz tertiary flake	None listed	None listed	21.29 acres	None listed	The site is located in the James River drainage
44IW0139	Native American 18th century 19th century	Camp, artifact scatter	Four quartz debitage, two quartzite debitage	Whiteware sherds	Bottle glass fragments, table glass fragments	None listed	None listed	None listed

Site Number	Site Chronology	Site Type	Native American Artifacts	Historic Ceramic Artifacts	Other Historic Artifacts	Site Size	Soil Type	Additional Site Information
44IW0250	19th century 20th century	Farmstead	None listed	Ceramic sherds	Glass fragments	None listed	None listed	The site is located 12 feet AMSL in the Dismal Swamp drainage basin
44IW0285	18th century 19th century	Artifact scatter	None listed	Creamware sherds, pearlware sherds, Rhenish stoneware sherds, white salt-glazed stoneware sherds	Melted solarized manganese glass fragments	0.73 acres	Sandy loam with a clay subsoil	The site is located 12 feet AMSL in the James River drainage basin
44IW0289	19th century 20th century	Artifact scatter	None listed	One stoneware sherd, one pearlware sherd, five whiteware sherds, two earthenware sherds, two slipped stoneware sherds, one porcelain sherd	Cobalt glass fragments, amethyst glass fragments, colorless glass fragments, brick fragments	5.50 acres	None listed	The site is located 54 feet AMSL in the James River drainage basin
44IW0290	19th century 20th century	Artifact scatter	None listed	One creamware sherd, one white salt-glazed stoneware sherd	Two olive green bottle glass fragments, one solarized manganese bottle glass fragment, one opaque white glass fragment	0.59 acres	None listed	The site is located 71 feet AMSL in the James River basin
44IW0292	19th century 20th century	Artifact scatter	None listed	One whiteware sherd, one ironstone sherd, two china sherds, two earthenware sherds	One solarized manganese bottle glass fragment, one milk glass fragment, four bottle glass fragments, one copper alloy Blue Bell brand button	4.11 acres	None listed	The site is located 63 feet AMSL in the James River drainage basin

Site Number	Site Chronology	Site Type	Native American Artifacts	Historic Ceramic Artifacts	Other Historic Artifacts	Site Size	Soil Type	Additional Site Information
44IW0293	19th century 20th century	Single dwelling	None listed	Porcelain sherds, whiteware sherds, one earthenware sherd	Bottle glass fragments, one canning jar lid, manganese bottle glass fragments, milk glass fragments, chimney lamp fragments, four window glass fragments, three nail fragments, two iron fragments, five brick fragments, two charcoal fragments	0.85 acres	None listed	The site is located 75 feet AMSL on a flat area in the James River drainage basin
44IW0301	19th century 20th century	Artifact scatter	None listed	Two Bristol-slipped stoneware sherds, one Albany-slipped stoneware sherd, whiteware sherds, porcelain sherds	One solarized manganese glass fragment; olive green bottle glass fragments, colorless bottle glass fragments, one white glass collar button, one copper alloy faucet valve; brick fragments	3.13 acres	None listed	The site is located 66 feet AMSL in the James River drainage basin
44IW0384	Historic	Farmstead	None listed	Ten whiteware sherds, two porcelain bisque sherds, one earthenware sherd	Four aqua bottle glass fragments, one clear bottle glass fragment, one cobalt blue bottle glass fragment, one green bottle glass fragment, one opaque white glass fragment, 24 reddish-brown handmade brick fragments, five oyster	1.250 acres	None listed	The site is located 75 feet AMSL in the James River Drainage Basin

Site Number	Site Chronology	Site Type	Native American Artifacts	Historic Ceramic Artifacts	Other Historic Artifacts	Site Size	Soil Type	Additional Site Information
					shell fragments, two coal fragments, four terracotta tile fragments, one amber bottle glass fragment, one wire nail fragment, three 5-inch long wire nails, one iron rivet, two iron fragments, one brick bat, one slate fragment, one plastic fragment, one charred wood fragment, one iron chain fragment			
046-0006	ca. 1795	Nelms, aka Henry Saunders House, aka Eley House	None listed	None listed	None listed	67.0 acres	None listed	The site includes one house, one corncrib, one shed, and one granary
046-0086	ca. 1780	Ennis Pond House, aka William Scott Farmstead, aka Roberts House	None listed	None listed	None listed	None listed	None listed	The site includes one house, one barn, one smokehouse, one kitchen, one corncrib, and one slave quarters
328-5022	ca. 1850	House, 11223 Windsor Boulevard	None listed	None listed	None listed	None listed	None listed	The site includes one house and one barn

RESULTS

The field survey provides specific information concerning the location, nature, and distribution of artifacts across the site area. Appendix A contains the VDHR V-CRIS form. Appendix B contains the inventory of artifacts recovered.

Site 44IW0395

Background

Circa~ identified Site 44IW0395 by a moderate surface scatter of artifacts in the field and Phase I shovel testing on a 50-foot grid in the forested area to the southeast (Plate 1). In addition, Circa~ completed judgmental shovel testing in the field to determine the depth of the plowzone. The surface collection and Phase I shovel tests indicated artifacts concentrated within an area measuring approximately 325 feet north-to-south by 400 feet east-to-west. Circa~ excavated 23 shovel tests in this area on the 50-foot grid and 11 shovel tests on 25-foot intervals. Of these, 17 shovel tests were negative, and 17 were positive. The site borders were defined by the surface scatter and shovel testing to the south and east.

Plate 1. View of the site environs, looking, west.

In the forested area, Stratum A, lying under an inch or two of root mat and organic matter, ranging from a very dark-brown (10YR 2/2) to a very dark grayish-brown (10YR 3/2) sand from 0.45 to 0.65 feet thick. Stratum B ranged from brown (10YR 4/3) to yellowish-brown (10YR 5/4) sandy clay 0.35 feet to 0.60 feet thick. Stratum C, subsoil or C-horizon, consisted of light yellowish-brown (10YR 6/4) sandy clay excavated 0.30 feet.

Two soil strata were noted over subsoil in the cultivated field. Stratum A ranged from 0.60 to 0.75 feet thick and consisted of a grayish-brown (10YR 6/4 to 6/6) sandy plowzone. Stratum B ranged from brown (10YR 4/3) to yellowish-brown (10YR 5/4) sandy clay 0.30 feet to 0.45 feet thick. Stratum C, excavated 0.20 feet wide, consists of a sterile yellowish-brown (2.5Y 5/6) sandy clay subsoil or C-horizon.

Two hundred eighty-four artifacts were recovered from the survey, 21 from the surface collection, and 263 from shovel testing. On average, 15.47 artifacts were recovered from the 17 positive tests. Of the 284 artifacts recovered, two, or 1%, date to Native American land use, and 282, or 99%, are historic. Historic material included 21 artifacts recovered from the surface, 55 from Stratum A, and 206 from Stratum B.

Circa~ only collected a representative sampling of artifacts from the field to help date the site. Material recovered from the surface of the plowed field included two creamware, nine pearlware, and one stoneware sherd; six reddish-brown handmade brick fragments; and three oyster shell fragments.

Material recovered from Stratum A consisted of one dark green bottle glass fragment, one aqua window glass fragment, one wrought nail fragment, one burned 1 ½-inch long wrought nail, 51 reddish-brown handmade brick fragments, and one oyster shell fragment.

Material recovered from Stratum B included two quartzite secondary flakes, one coarse earthenware sherd, four pearlware sherds, one aqua bottle glass fragment, eight aqua window glass fragments, one cut nail fragment, and 186 reddish-brown handmade brick fragments.

The creamware sherds were potted in England circa 1775-1820 and were too small to identify the vessel's shape. The pearlware sherds were potted in England and date circa post-1779. The sherds represented two plates and one platter. One pearlware sherd exhibited a light and medium blue transfer print design typical of ware potted in England circa post-1795. This sherd was identified as a holloware vessel. The stoneware sherd exhibited a hand-decorated cobalt blue design typical of ware potted in America circa post-1750. The sherd was too small to identify the vessel shape. The combination of locally produced American and imported European ceramics indicates consumer activity reflective of household necessity. Utilitarian wares such as stoneware and other earthenware would have been purchased for daily food preparatory use and consumption without regard to the item’s aesthetic nature.

Phase II Excavations

Shovel Tests

Circa re-established the Phase I grid at the site and filled it in at 25-foot intervals with an additional 272 shovel tests (see map in Appendix C). Phase I surface survey and shovel tests indicated artifacts concentrated within an area measuring approximately 325 feet north-to-south by 400 feet east-to-west. However, the Phase II borders were expanded north and south to approximately 500 feet north-to-south by 400 feet east-to-west. The site's core is on the top of a knoll in the field, with gentle slopes to the east, north, and south. Of these shovel tests, 190 were negative, and 82 were positive. The site borders were defined by double-negative shovel tests to the west, north, and east and by the wetlands and double-negative shovel tests to the south.

In the agricultural field, Stratum A ranged from 0.40 to 0.65 feet thick and consisted of brown (10YR 5/3) silty sand plowzone (Figure 22). Stratum B ranged from 0.30 to 0.60 feet thick and consisted of a pale-brown (10YR 6/3) sandy silt plowzone. Stratum C consisted of a sterile brownish-yellow (10YR 6/6) sandy clay subsoil excavated 0.20 feet deep.

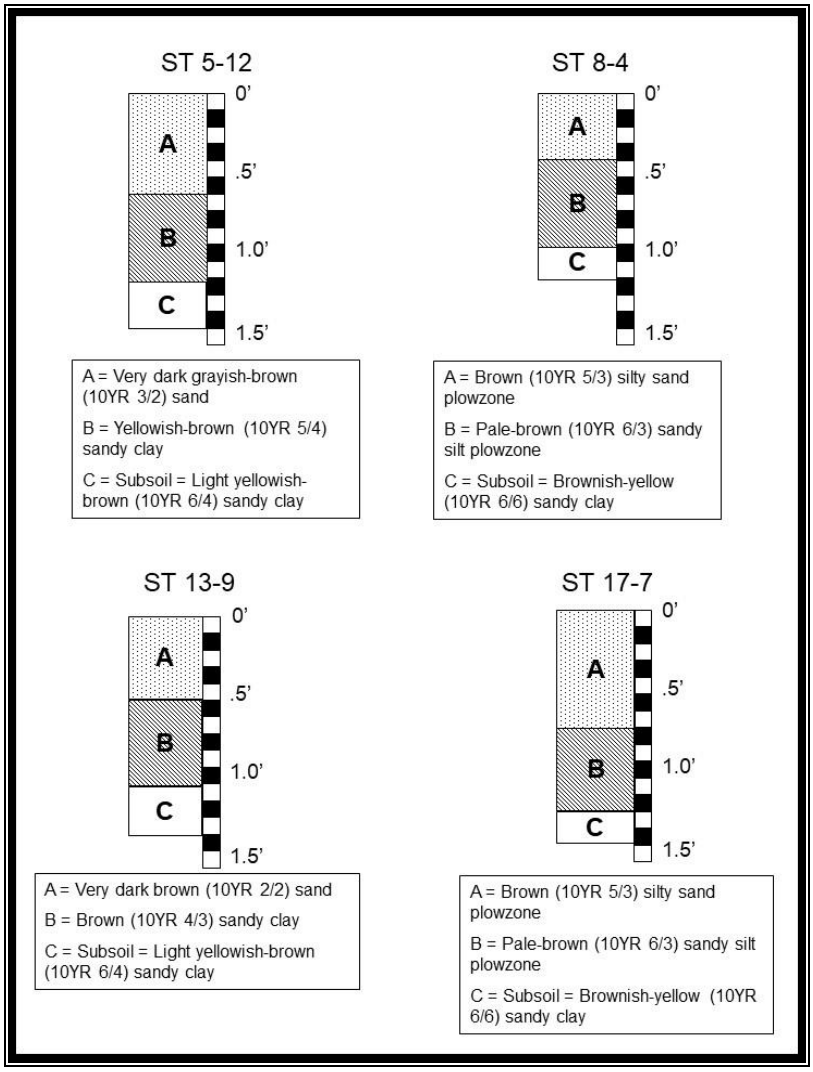


Figure 22. Phase II representative shovel test profiles.

In the forested area, Stratum A, lying under an inch or two of root mat and organic matter, ranging from a very dark-brown (10YR 2/2) to a very dark grayish-brown (10YR 3/2) sand from 0.45 to 0.65 feet thick (see Figure 23). Stratum B ranged from brown (10YR 4/3) to yellowish-brown (10YR 5/4) sandy clay 0.35 feet to 0.60 feet thick. Stratum C, subsoil or C-horizon, consisted of light yellowish-brown (10YR 6/4) sandy clay excavated 0.30 feet.

One thousand nine hundred and forty-one artifacts were recovered from 82 positive Phase II shovel tests. On average, 23.67 artifacts were recovered from the 82 positive tests. Of the 1,941 artifacts recovered, seven, or 1%, date to Native American land use, and 1,934, or 99%, are historic. Artifacts included 1,497 artifacts recovered from Stratum A, 69 from Stratum B, and 16 from Strata A and B. Five Native American artifacts recovered from Stratum A included one quartzite fire-cracked rock, one quartzite primary flake, one rhyolite secondary flake, one siliceous slate tertiary flake, and one quartzite reduced cobble fragment. Historical material recovered from Stratum A included one delftware, two creamware, and 15 pearlware sherds, two aqua, and three clear bottle glass fragments, two fire-damaged aqua bottle glass fragments, six aqua 2/32-inch-thick and one 3/32-inch-thick window glass fragments, two indeterminate nail fragments, 13 cut nail fragments, one 2-inch long cut nail, three iron oval lid fragments, 1,428 reddish-brown handmade brick fragments, 41 sand-tempered mortar, 58 sand-and-shell tempered mortar fragments, two oyster shell fragments, and one aluminum can fragment. The delftware sherd was too small to identify the vessel's shape and country of origin. One creamware sherd was undecorated and typical of ware potted in England circa 1775-1820. The sherd was too small to identify the vessel shape. One of the creamware sherds exhibited a hand-painted green glaze over a molded dot design on the exterior typical of ware potted in England circa 1775 to 1820. Eleven pearlware chips are typical of ware potted in England circa post-1779 and were too small to identify the vessel shape. One pearlware sherd exhibited a blue and black hand-painted design on the interior and was typical of ware potted in England circa post-1795. The sherd was too small to identify the vessel shape. One pearlware sherd exhibited a blue hand-painted shell-edge design on the interior and was typical of ware potted in England circa post-1795. The sherd was too small to identify the vessel shape. One pearlware sherd exhibited a black hand-painted band on the rim interior above a green foliage design typical of ware potted in England circa post-1795. The sherd was too small to identify the vessel shape.

The two Native American artifacts recovered from Stratum B included one quartzite secondary flake and one siliceous slate tertiary flake. Historical material recovered from Stratum B included one creamware and three pearlware sherds, one amber, three aqua, one clear, one dark green, one olive green bottle glass fragments, one aqua 3/32-inch-thick window glass fragment, two indeterminate iron lid fragments, 273 reddish-brown handmade brick fragments, seven sand-and-shell-tempered mortar fragments, two charred wood fragments, two oyster shell fragments. The creamware sherd was potted in England circa 1775 to 1820 and was too small to identify the vessel shape. The pearlware sherds included two undecorated glaze chips and one undecorated sherd typical of ware potted in England circa post-1779. The sherds were too small to identify vessel shapes.

Historical material recovered from Strata A and B included one aqua 2/32-inch-thick aqua window glass fragment, one fire-damaged refined earthenware, one coarse earthenware, four creamware, one stoneware, 53 reddish-brown handmade brick fragments, and eight sand-and-

shell-tempered mortar fragments. The fire-damaged refined earthenware, coarse earthenware core, and stoneware sherds were too small to identify the country of origin or date. The four creamware sherds were potted in England circa 1775 to 1820 and were too small to locate the vessel shape.

Test Units
Circa~ excavated nine three-foot-by-three-foot test units within the site borders in areas of high artifact concentrations.

Test Unit 1
Test Unit 1, a three-foot-by-three-foot unit, was placed near ST J1-1. Two soil strata were excavated before reaching subsoil 0.90 feet below the ground surface (Figure 23). Stratum A, 0.40 feet thick, consisted of brown (10YR 5/3) silty sand plowzone. The artifacts were recovered throughout the stratum. One hundred and twenty-eight artifacts were recovered from Stratum A fill (Plate 2). Of this number, one, or 1% of the artifacts, are associated with the Native American occupation at the site, and 127, or 99%, of the artifacts are associated with historical land use. The Native American artifact included one quartzite secondary flake.

The historical material included four ceramic sherds, one aqua and one clear bottle glass fragments, two cut nail fragments, and 119 reddish-brown handmade brick fragments. The ceramic sherds included one creamware, two pearlware, and one yellowware sherd. The creamware sherd was potted in Europe circa 1775 to 1820. The sherd was a glaze chip too small to identify the vessel's shape. One pearlware sherd exhibited a blue hand-painted design on the interior and was typical of ware potted in England circa post-1795. The sherd was too small to identify the vessel shape. One pearlware sherd exhibited a blue transfer-printed design on the interior and was typical of ware potted in England circa post-1795. The sherd was too small to identify the vessel shape. The yellowware sherd dates circa post-1830 and was too small to identify the country of origin or the vessel shape. The aqua bottle glass is too small to date accurately. The clear bottle glass dates circa post-1900.

Stratum B, 0.50 feet thick, consisted of a pale-brown (10YR 6/3) sandy silt plowzone. Sixty-seven artifacts were recovered from Stratum B fill. Of this number, one or 1% of the artifacts are associated with the Native American occupation at the site and 66 or 99% of the artifacts are associated with historical land use. The Native American artifact included one quartzite secondary flake. The historical material included one ceramic sherd, three 2/32-inch-thick aqua window glass fragments, and 62 reddish-brown handmade brick fragments. The one pearlware sherd exhibited a light and medium blue transfer print design on the interior, typical of ware potted in England circa post-1795. The sherd was too small to identify the vessel shape.

Stratum C consisted of a sterile brownish-yellow (10YR 6/6) sandy clay subsoil excavated 0.20 feet deep. No artifacts were recovered from Stratum C. Plowscars were noted in the base of the test unit. Plowscars consisted of a mottled brown (10YR 5/3), pale-brown (10YR 6/3), and brownish-yellow (10YR 6/6) sandy silty clay. No other cultural features were noted within the unit.

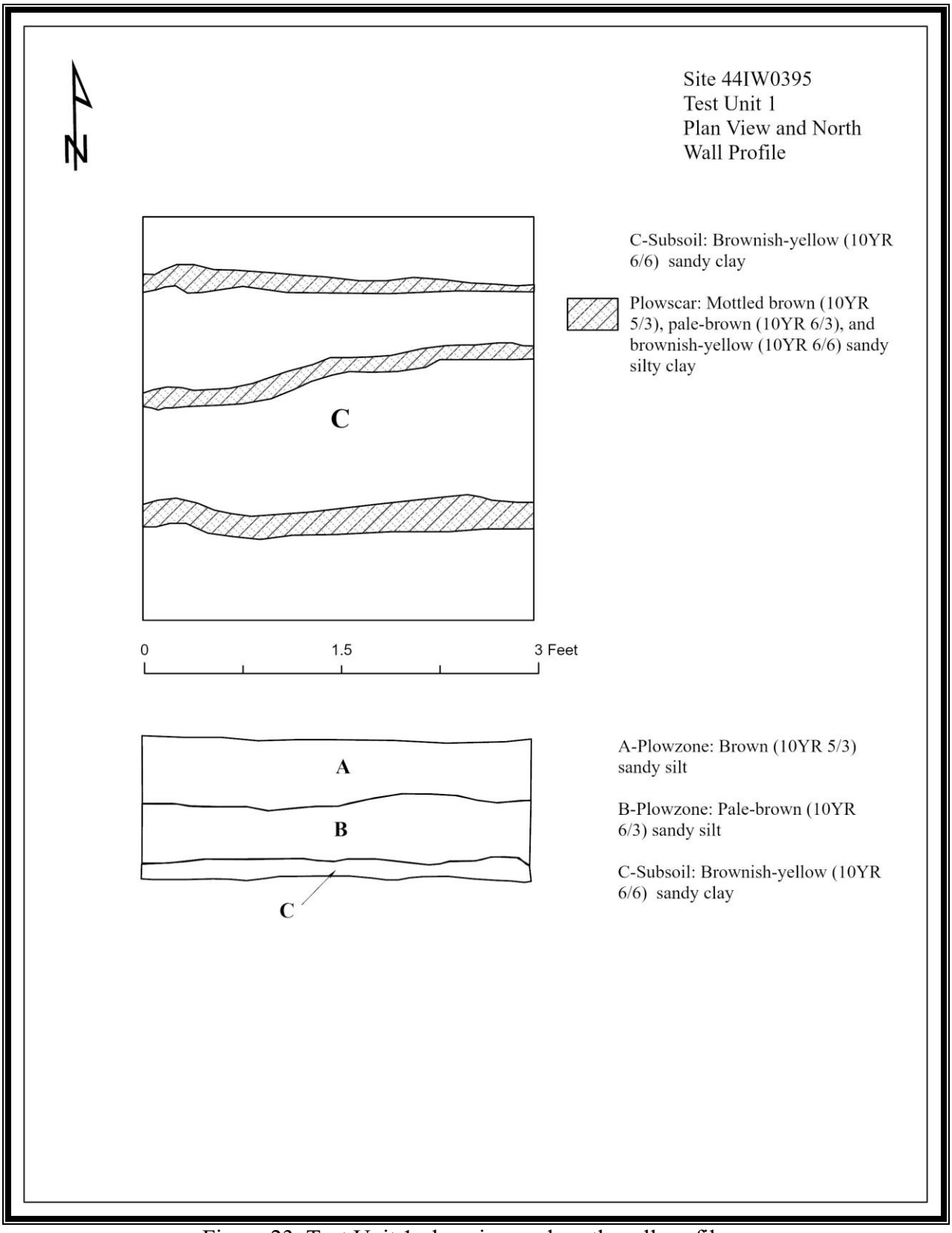


Figure 23. Test Unit 1 plan view and north wall profile.

Plate 2. View of artifacts recovered from Test Unit 1. Left to right: Yellowware sherd, hand-painted pearlware sherd, cut nail fragment, aqua window glass fragment, and quartzite secondary flake.

Test Unit 2

Test Unit 2, a three-foot-by-three-foot unit, was placed near ST J1-4 and a cluster of shovel tests that contained numerous brick fragments. Two soil strata were excavated before reaching subsoil 0.90 feet below the ground surface (Figure 24). Stratum A, 0.40 feet thick, consisted of brown (10YR 5/3) silty sand plowzone. Two hundred and ninety-six artifacts were recovered from Stratum A (Plate 3). Of this number, one, or 1% of the artifacts, are associated with the Native American occupation at the site, and 296, or 99%, of the artifacts are associated with historical land use (Plate 4). The artifacts were recovered throughout the stratum. The Native American artifact included one chert tertiary flake.

The historical material included six ceramic sherds, two aqua bottle glass fragments, four fire-damaged glass fragments, eight 3/32-inch-thick aqua window glass fragments, three cut nail fragments, 270 reddish-brown handmade brick fragments, and two sand- and shell-tempered mortar fragments. The ceramic sherds included five pearlware and one yellowware sherd. The four undecorated pearlware sherds were too small to identify the vessel shapes. One pearlware sherd exhibited a blue hand-painted design on the exterior and was typical of ware potted in England circa post-1795. The sherd was too small to identify the vessel shape. The yellowware sherd dates circa post-1830 and was too small to identify the country of origin or the vessel shape. The aqua bottle glass fragments are too small to date accurately.

Stratum B, 0.50 feet thick, consisted of a pale-brown (10YR 6/3) sandy silt plowzone. Three hundred and sixteen artifacts were recovered from Stratum B. Of this number, none or 0% of the artifacts are associated with the Native American occupation at the site, and 316 or 100% of the artifacts are associated with historical land use. The historical material included one fire-damaged coarse earthenware glaze chip and 315 reddish-brown handmade brick fragments. The sherd was a glaze chip and was too small to identify the country of origin and vessel shape.

Stratum C consisted of a sterile brownish-yellow (10YR 6/6) sandy clay subsoil excavated 0.20 feet deep. No artifacts were recovered from Stratum C. Plowscars were noted in the base of the test unit. Plowscars consisted of a mottled brown (10YR 5/3), pale-brown (10YR 6/3), and brownish-yellow (10YR 6/6) sandy silty clay. Feature 2 was bisected north to south, and the east half, then the west half was excavated. The profile varied from 0.10 to 0.21 feet in depth. No artifacts were recovered from the feature fill; however, a few brick specks were noted. No other cultural features were noted within the unit, although a root was noted in the northeast corner of the test unit.

Test Unit 3

Test Unit 3, a three-foot-by-three-foot unit, was placed 5 feet east of Test Unit 2 in an area where numerous brick fragments were recovered. Two soil strata were excavated before reaching subsoil 1.40 feet below the ground surface (Figure 25). Stratum A, 0.80 feet thick, consisted of brown (10YR 5/3) silty sand plowzone. The artifacts were recovered throughout the stratum. One thousand five hundred and seventy-five artifacts were recovered from Stratum A fill (Plate 5). Of this number, none, or 0% of the artifacts, are associated with the Native American occupation at the site, and 1,575, or 100% of the artifacts are associated with historical land use. The historical material included ten ceramic sherds, 48 glass fragments, 14 cut nail fragments, 1,435 reddish-brown handmade brick fragments, and 68 sand-and-shell-tempered mortar fragments. The ceramic sherds included ten pearlware. The six undecorated pearlware sherds potted in England circa post-1779 were too small to identify the vessel shapes. One pearlware sherd exhibited a blue hand-painted design on the exterior and was typical of ware potted in England circa post-1795. The sherd was too small to identify the vessel shape. One pearlware sherd exhibited a black and green hand-painted design on the exterior and was typical of ware potted in England circa post-1795. The sherd was too small to identify the vessel shape. One pearlware sherd exhibited a blue transfer-print design on the exterior and was typical of ware potted in England circa post-1795. The sherd was too small to identify the vessel shape. The aqua bottle glass fragment is too small to date accurately. The clear bottle glass dates post-1900.

Stratum B, 0.60 feet thick, consisted of a pale-brown (10YR 6/3) sandy silt plowzone. Seven hundred and fifty-three artifacts were recovered from Stratum B fill. Of this number, none, or 0% of the artifacts, are associated with the Native American occupation at the site, and 753, or 100% of the artifacts, are associated with historical land use. The historical material included 23 glass fragments, eight cut nail fragments, one 3-inch-long cut nail, 589 reddish-brown handmade brick fragments, and 132 sand-and-shell tempered mortar fragments. The aqua bottle glass fragment is too small to date accurately. The clear bottle glass fragments date circa post-1900.

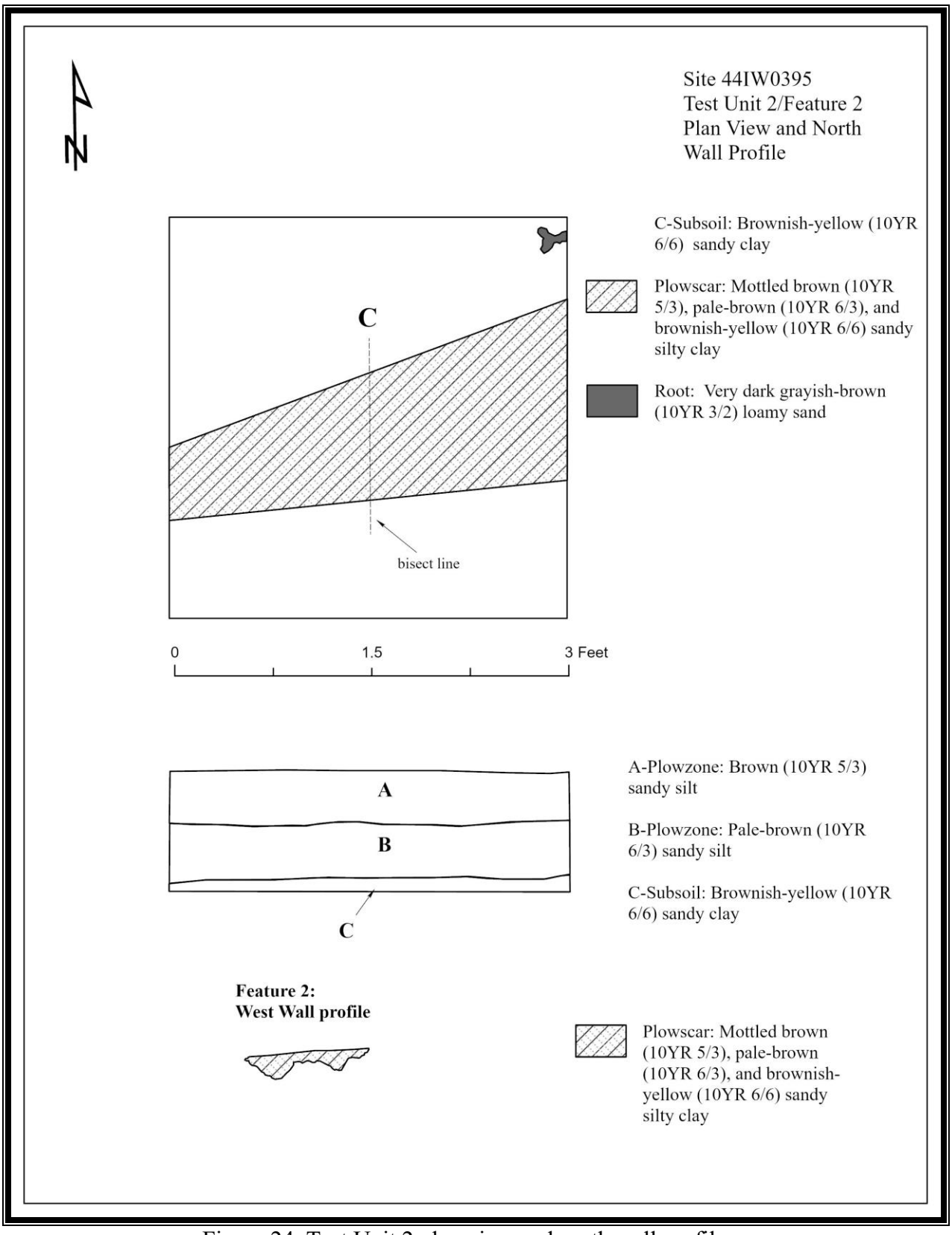


Figure 24. Test Unit 2 plan view and north wall profile.

Plate 3. Plan view of Test Unit 2 with the plow scars excavated, looking north.

Plate 4. View of representative artifacts recovered from Test Unit 2. Left to right: aqua fire-damaged glass and hand-painted blue pearlware.

Stratum C consisted of a sterile brownish-yellow (10YR 6/6) sandy clay subsoil excavated 0.20 feet deep. No artifacts were recovered from Stratum C. Plowscars were noted in the base of the test unit. Plowscars consisted of a mottled brown (10YR 5/3), pale-brown (10YR 6/3), and brownish-yellow (10YR 6/6) sandy silty clay. No other cultural features were noted within the unit.

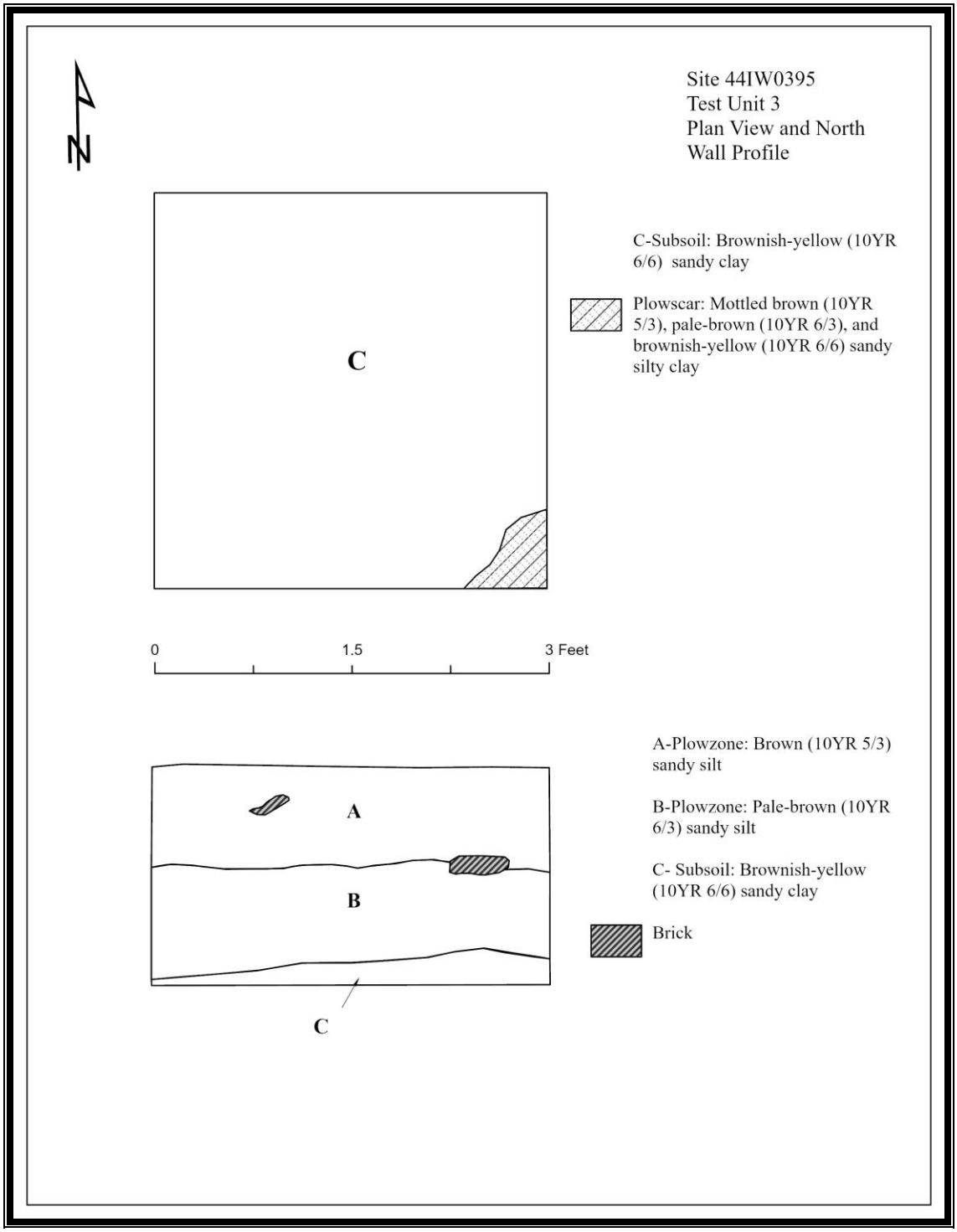


Figure 25. Test Unit 3 plan view and north wall profile.

Plate 5. Representative artifacts recovered from Test Unit 3. Top row: clear bottle glass base, quartzite worked flake, hand-painted blue pearlware, hand-painted green and brown pearlware, hand-painted green and molded pearlware, and aqua fire-damaged glass.

Test Unit 4

Test Unit 4, a three-foot-by-three-foot unit, was placed near ST J1-6 and in an area with a high concentration of brick fragments. Two soil strata were excavated before reaching subsoil 1.00 feet below the ground surface (Figure 26). Stratum A, 0.40 feet thick, consisted of brown (10YR 5/3) silty sand plowzone. The artifacts were recovered throughout the stratum. Twenty-six artifacts were recovered from Stratum A fill (Plate 6). Of this number, none or 0% of the artifacts are associated with the Native American occupation at the site and 26 or 100% of the artifacts are associated with historical land use. The historical material included one pearlware glaze chip and 25 reddish-brown handmade brick fragments. The pearlware glaze chip exhibited a hand-painted green and incised shell edge on the exterior and was typical of ware potted in England circa post-1795. The sherd was too small to identify the vessel shape.

Stratum B, 0.60 feet thick, consisted of a pale-brown (10YR 6/3) sandy silt plowzone. Thirty-nine artifacts were recovered from Stratum B fill. Of this number, none or 0% of the artifacts are associated with the Native American occupation at the site and 39 or 100% of the artifacts are associated with historical land use. The historical material included three ceramic sherds, one fire-damaged aqua glass fragment, 25 reddish-brown handmade brick fragments, one oyster shell fragment, and three charred wood fragments. The ceramic sherds included three pearlware sherds. One undecorated sherd was typical of ware potted in England c. post-1779. One pearlware sherd exhibited a blue hand-painted design on the exterior and was typical of ware

potted in England circa post-1795. The sherd was too small to identify the vessel shape. One pearlware sherd exhibited a blue and brown hand-painted design on the interior, typical of pottery potted in England circa post-1795. The sherd was too small to identify the vessel shape.

Stratum C consisted of a sterile brownish-yellow (10YR 6/6) sandy clay subsoil excavated 0.20 feet deep. No artifacts were recovered from Stratum C. Plowscars were noted in the base of the test unit. Plowscars consisted of a mottled brown (10YR 5/3), pale-brown (10YR 6/3), and brownish-yellow (10YR 6/6) sandy silty clay. No other cultural features were noted within the unit.

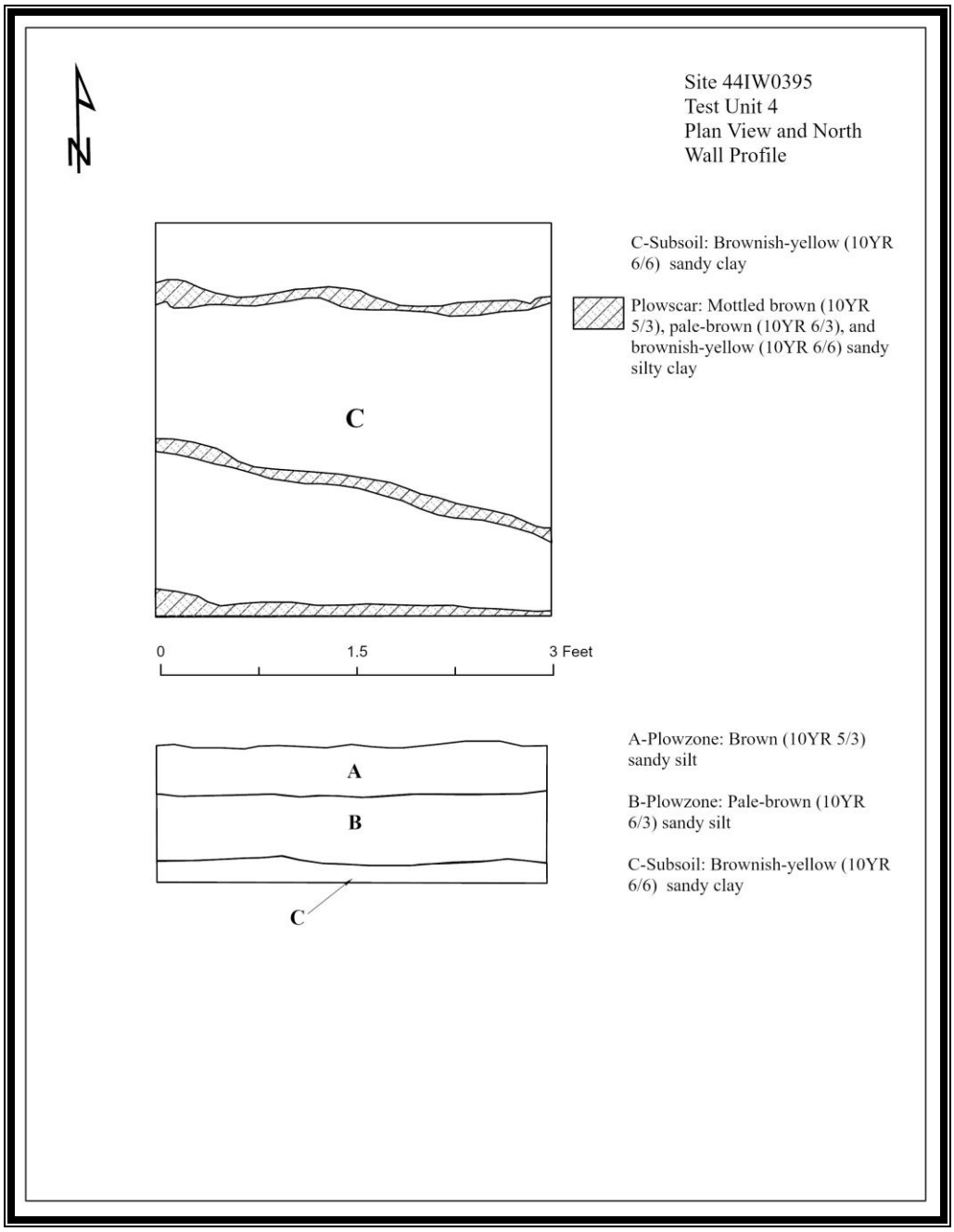


Figure 26. Test Unit 4 plan view and north wall profile.

Plate 6. Representative artifacts recovered from Test Unit 4. Left to right: green shell-edge pearlware, hand-painted blue and brown pearlware, aqua fire-damaged glass fragment, and aqua window glass fragment.

Test Unit 5

Test Unit 5, a three-foot-by-three-foot unit, was placed near ST 4-5. Two soil strata were excavated before reaching subsoil 1.30 feet below the ground surface (Figure 27). Stratum A, 1.10 feet thick, consisted of brown (10YR 5/3) silty sand plowzone. The artifacts were recovered throughout the stratum. Sixteen artifacts were recovered from Stratum A fill. Of this number, none or 0% of the artifacts are associated with the Native American occupation at the site and 16 or 100% of the artifacts are associated with historical land use. The historical material included 16 reddish-brown handmade brick fragments.

Stratum B, 0.20 feet thick, consisted of a pale-brown (10YR 6/3) sandy silt plowzone. Two artifacts were recovered from Stratum B fill. Of this number, none or 0% of the artifacts are associated with the Native American occupation at the site, and two or 100% of the artifacts are associated with historical land use. The historical material included two reddish-brown handmade brick fragments.

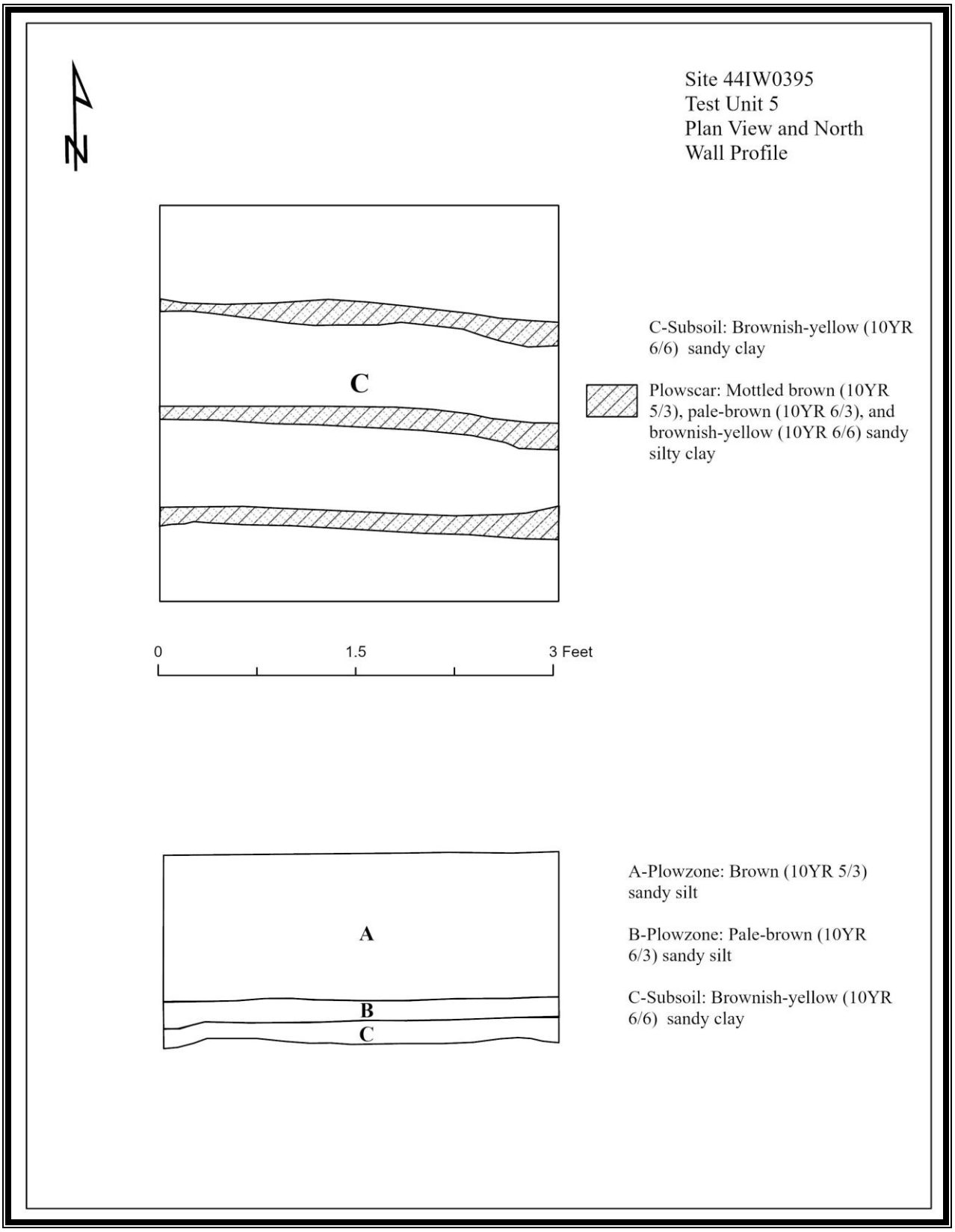


Figure 27. Test Unit 5 plan view and north wall profile.

Stratum C consisted of a sterile brownish-yellow (10YR 6/6) sandy clay subsoil excavated 0.20 feet deep. No artifacts were recovered from Stratum C. Plowscars were noted in the base of the test unit. Plowscars consisted of a mottled brown (10YR 5/3), pale-brown (10YR 6/3), and brownish-yellow (10YR 6/6) sandy silty clay. Feature 1 was noted in the northwestern corner of the test unit at the base of Stratum A and intruding into Stratum B.

Feature 1 consists of a 0.55-foot north-to-south by 0.65-foot east-to-west square stain (Figure 28). The feature was bisected from north to south, and the east half was excavated first, then the west half. Stratum A consisted of a brown (10YR 5/3) sandy silt plowzone 0.20 feet thick. No artifacts were recovered from the feature. The function of the feature is unknown, but it does not appear to be cultural.

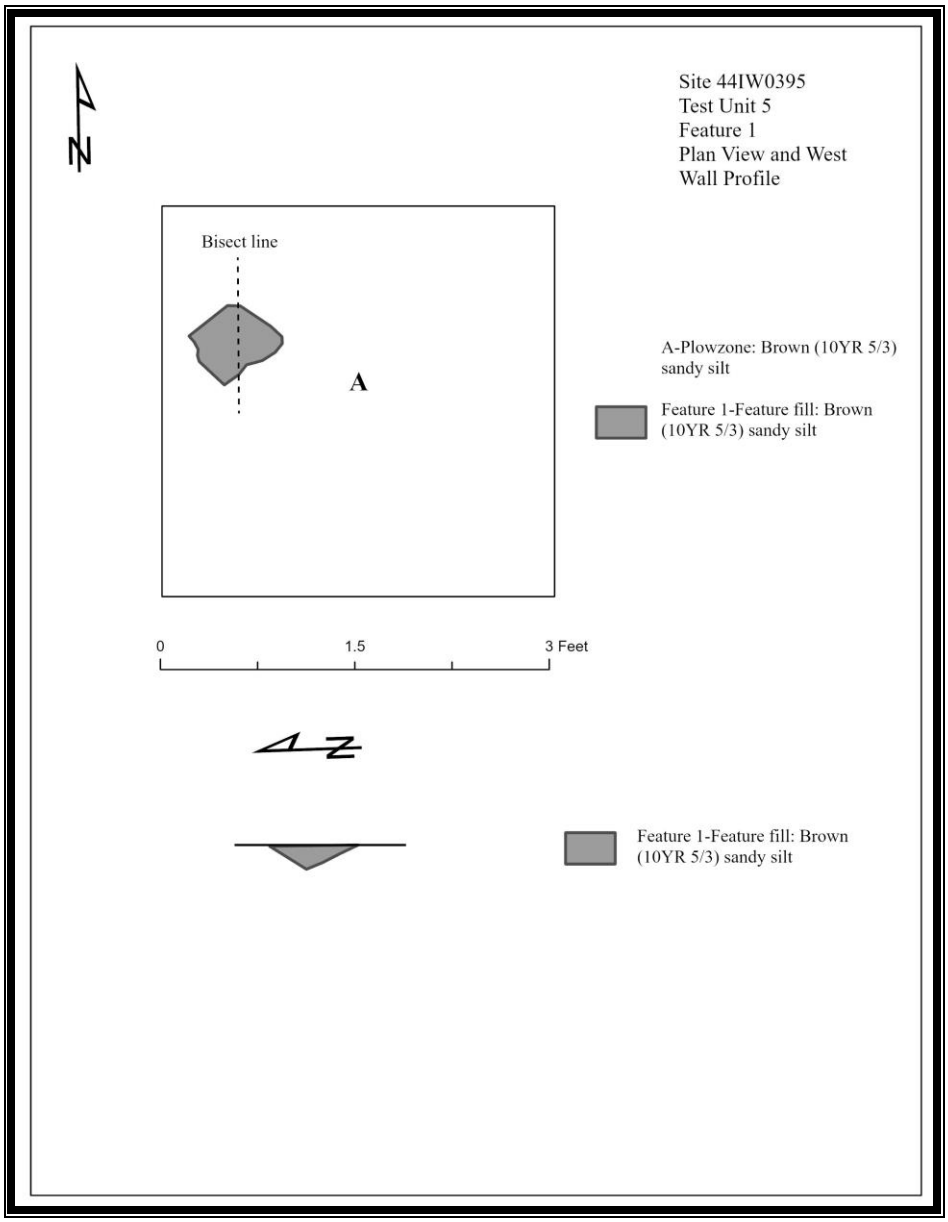


Figure 28. Test Unit 5, Feature 1, plan view and west wall profile.

Test Unit 6

Test Unit 6, a three-foot-by-three-foot unit, was placed near ST 8-9 in a high concentration of high brick fragments. Two soil strata were excavated before reaching subsoil 1.40 feet below the ground surface (Figure 29). Stratum A, 0.70 feet thick, consisted of brown (10YR 5/3) silty sand plowzone. The artifacts were recovered throughout the stratum. One thousand four hundred and fifty-two artifacts were recovered from Stratum A fill (Plate 7). Of this number, one, or 1% of the artifacts, are associated with the Native American occupation at the site, and 1,451, or 99%, of the artifacts are associated with historical land use. The Native American material included one quartzite secondary flake. The historical material included one fire-damaged refined earthenware glaze chip, two pearlware sherds, one fire-damaged aqua glass fragment, 12 aqua 3/32-inch-thick window glass fragments, and 1,435 reddish-brown handmade brick fragments. The undecorated pearlware glaze chip is typical of ware potted in England circa post-1779. The two glaze chips were too small to identify the vessel shapes. One pearlware sherd exhibited a blue hand-painted design on the exterior and was typical of ware potted in England circa post-1795. The sherd was too small to identify the vessel shape.

Stratum B, 0.70 feet thick, consisted of a pale-brown (10YR 6/3) sandy silt plowzone. Three hundred and two artifacts were recovered from Stratum B fill. Of this number, one or 1% of the artifacts are associated with the Native American occupation at the site and 301 or 99% of the artifacts are associated with historical land use. The Native American material included one quartz tertiary flake. The historical material included three pearlware sherds, one cut nail fragment, and 297 reddish-brown handmade brick fragments. The undecorated pearlware sherds are typical of ware potted in England circa post-1779. The sherds were too small to identify the vessel shapes.

Stratum C consisted of a sterile brownish-yellow (10YR 6/6) sandy clay subsoil excavated 0.20 feet deep. No artifacts were recovered from Stratum C. Plowscars were noted in the base of the test unit. Plowscars consisted of a mottled brown (10YR 5/3), pale-brown (10YR 6/3), and brownish-yellow (10YR 6/6) sandy silty clay. No other cultural features were noted within the unit.

Test Unit 7

Test Unit 7, a three-foot-by-three-foot unit, was placed north of Test Units 2 and 3 in a high concertation of brick fragments. Two soil strata were excavated before reaching subsoil 1.10 feet below the ground surface (Figure 30 and Plate 8). Stratum A, 0.40 feet thick, consisted of brown (10YR 5/3) silty sand plowzone. The artifacts were recovered throughout the stratum. Four hundred and six artifacts were recovered from Stratum A fill (Plate 9). Of this number, one, or 1% of the artifacts, are associated with the Native American occupation at the site, and 405, or 99% of the artifacts are associated with historical land use. The Native American artifact included one quartzite biface base fragment.

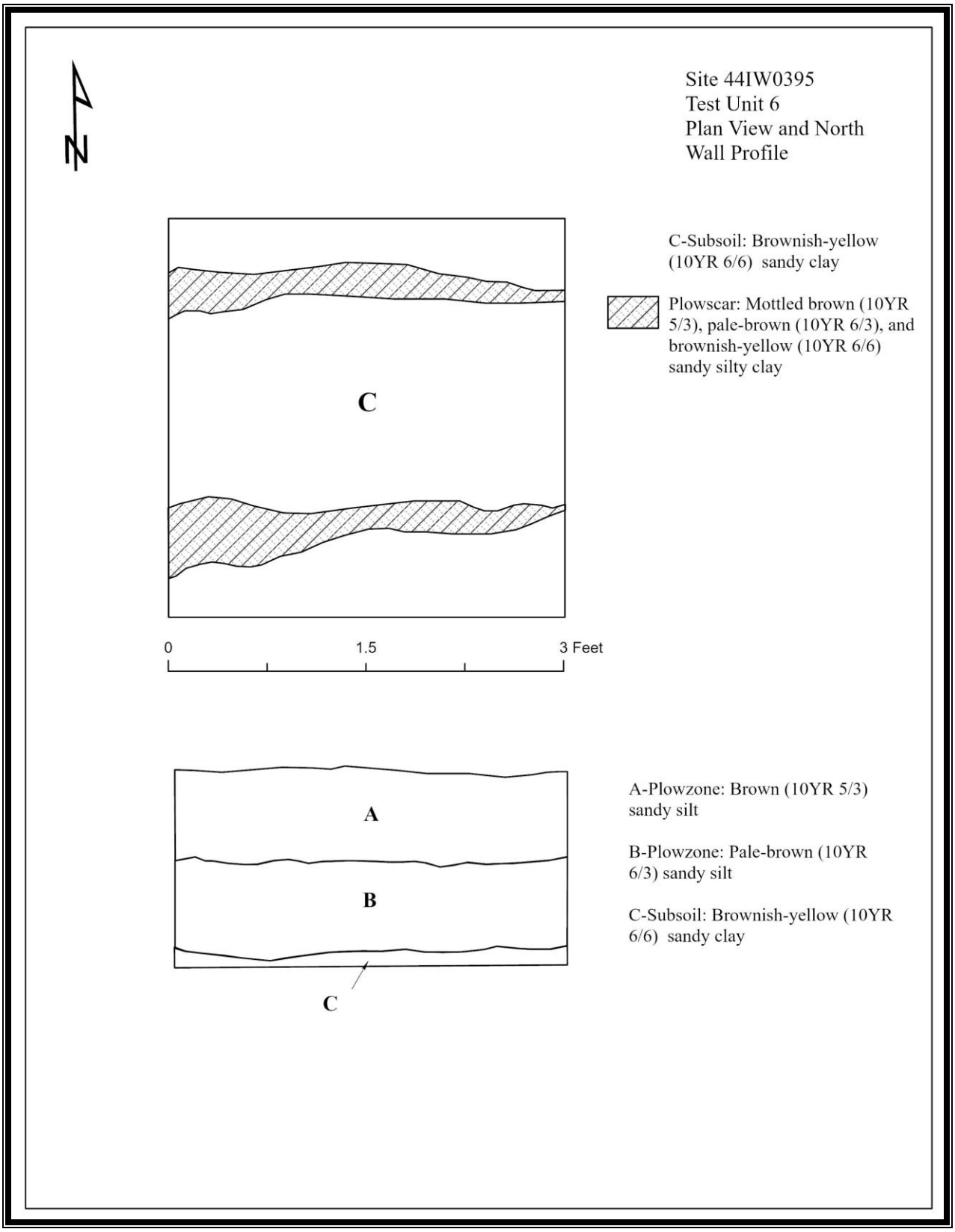


Figure 29. Test Unit 6 plan view and north wall profile.

Plate 7. Representative artifacts recovered from Test Unit 6. Left to right: Quartzite secondary flake, aqua fire-damaged glass, fire-damaged refined earthenware, aqua window glass.

The historical material included eight pearlware sherds, 15 glass fragments, one cut nail fragment, one tapered iron strap fragment, 350 reddish-brown handmade brick fragments, 14 sand- and shell-tempered mortar fragments, and 16 fire-damaged sand- and shell-tempered mortar fragments. Five pearlware sherds were undecorated and typical of ware potted in England circa post-1779. One pearlware sherd exhibited a blue hand-painted design on the exterior and was typical of ware potted in England circa post-1795. The sherd was too small to identify the vessel shape. One fire-damaged pearlware sherd exhibited an indeterminate hand-painted design on the exterior, which is typical of ware potted in England circa post-1795. The sherd was too small to identify the vessel shape. One pearlware sherd exhibited a hand-painted blue band on the rim edge and was typical of ware potted in England circa post-1795. The sherd was too small to identify the vessel shape. The 15 glass fragments included one aqua and six clear bottle glass fragments, two fire-damaged aqua glass fragments, one clear hurricane lamp chimney globe fragment, and five aqua 3/32-inch-thick window glass fragments. The aqua glass fragment is too small to date. The clear bottle glass fragments date circa post-1900.

Stratum B, 0.70 feet thick, consisted of a pale-brown (10YR 6/3) sandy silt plowzone. Two hundred and eighty-one artifacts were recovered from Stratum B fill. Of this number, none, or 0% of the artifacts, are associated with the Native American occupation at the site, and 281, or 100% of the artifacts are associated with historical land use. The historical material included five

pearlware sherds, one aqua 3/32-inch-thick window glass fragment, one aqua bottle glass fragment, three reddish-brown handmade brick fragments, eight oyster shell fragments, one oyster shell, and one charred wood fragment. The aqua bottle glass was too small to date accurately.

Stratum C consisted of a sterile brownish-yellow (10YR 6/6) sandy clay subsoil excavated 0.20 feet deep. No artifacts were recovered from Stratum C. Plowscars were noted in the base of the test unit. Plowscars consisted of a mottled brown (10YR 5/3), pale-brown (10YR 6/3), and brownish-yellow (10YR 6/6) sandy silty clay. The plowscars were excavated and ranged in depth from 0.08 to 0.18 feet thick. Features 3, 4, and 5 were bisected north to south, and the east half, then the west half was excavated. No artifacts were recovered from the feature fill; however, a several brick smears were noted. No other cultural features were noted within the unit.

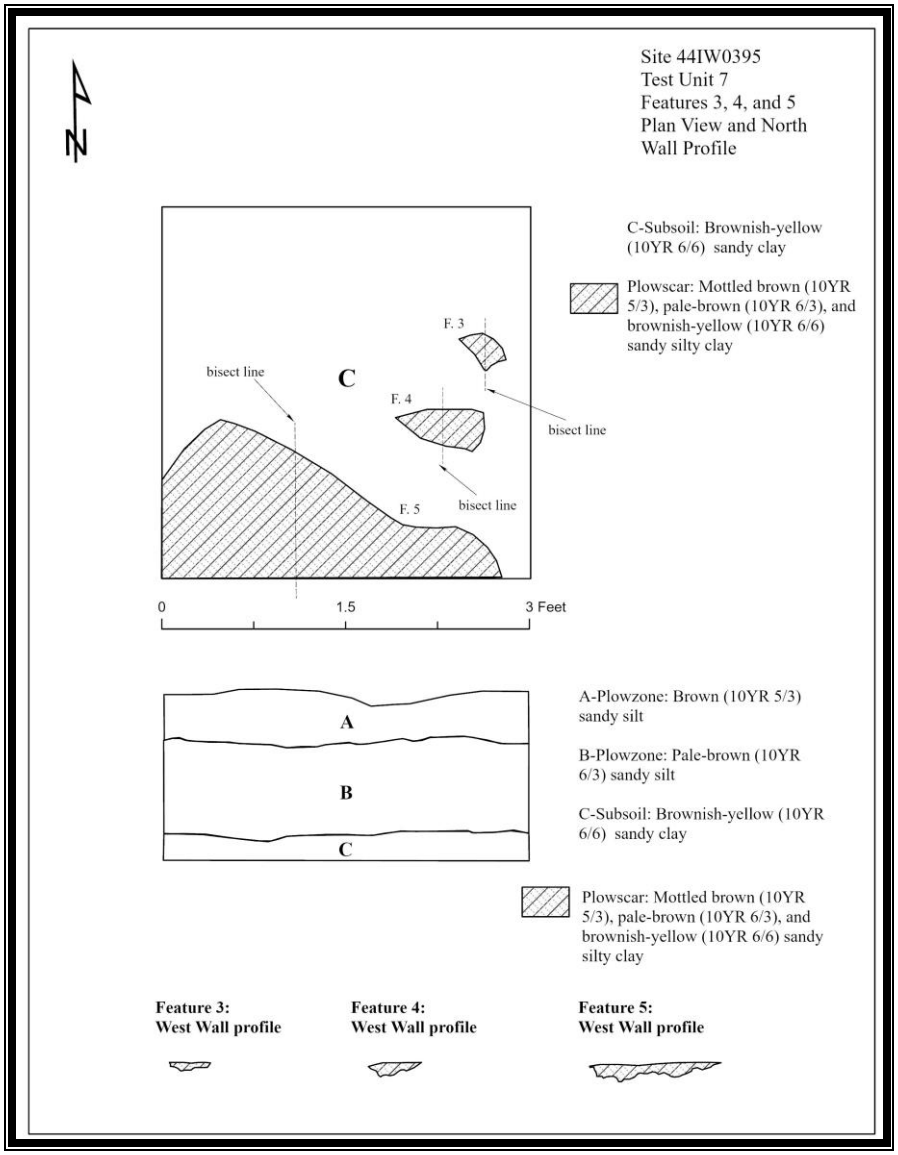


Figure 30. Test Unit 7 plan view and north wall profile.

Plate 8. Plan view of Test Unit 7, after plowscar excavations, looking north.

Plate 9. Representative artifacts recovered from Test Unit 7. Left to right: Aqua window glass fragment and pearlware sherd.

Test Unit 8

Test Unit 8, a three-foot-by-three-foot unit, was placed south of Test Units 2 and 3 in a high concertation of brick fragments. Two soil strata were excavated before reaching subsoil 1.00 feet below the ground surface (Figure 31 and Plate 10). Stratum A, 0.40 feet thick, consisted of brown (10YR 5/3) silty sand plowzone. The artifacts were recovered throughout the stratum. Ninety-five artifacts were recovered from Stratum A fill (Plate 11). Of this number, none or 0% of the artifacts are associated with the Native American occupation at the site and 95 or 100% of the artifacts are associated with historical land use. The historical material included one pearlware glaze chip, two aqua bottle glass fragments, one aqua 3/32-inch-thick window glass fragment, 90 reddish-brown handmade brick fragments, and one aluminum can fragment. The pearlware glaze chip is typical of ware potted in England circa post-1779. The two aqua bottle glass fragments are too small to date.

Stratum B, 0.60 feet thick, consisted of a pale-brown (10YR 6/3) sandy silt plowzone. One hundred and twenty-six artifacts were recovered from Stratum B fill. Of this number, none or 0% of the artifacts are associated with the Native American occupation at the site and 126 or 100% of the artifacts are associated with historical land use. The historical material included three pearlware glaze chips, two aqua 3/32-inch-thick window glass fragments, and 121 reddish-brown handmade brick fragments. Two pearlware glaze chips are typical of ware potted in England circa post-1779. One pearlware glaze chip exhibited a hand-painted black band typical of ware potted in England circa post-1795. The glaze chips were too small to identify the vessel's shape.

Stratum C consisted of a sterile brownish-yellow (10YR 6/6) sandy clay subsoil excavated 0.20 feet deep. No artifacts were recovered from Stratum C. Plowscars were noted in the base of the test unit. Plowscars consisted of a mottled brown (10YR 5/3), pale-brown (10YR 6/3), and brownish-yellow (10YR 6/6) sandy silty clay. Feature 6 was bisected north to south, and the east half, then the west half was excavated. The profile varied from 0.10 to 0.26 feet in depth. No artifacts were recovered from the feature fill; however, several brick and charred wood smears were noted. No other cultural features were noted within the unit.

Test Unit 9

Test Unit 9, a three-foot-by-three-foot unit, was placed west of the wetlands in a high concentration of brick fragments. Two soil strata were excavated before reaching subsoil 1.40 feet below the ground surface (Figure 32). Stratum A, 0.70 feet thick, consisted of dark yellowish-brown (10YR 4/4) silty sand. The artifacts were recovered throughout the stratum. One hundred and fifty-two artifacts were recovered from Stratum A fill (Plate 12). Of this number, none or 0% of the artifacts are associated with the Native American occupation at the site and 152 or 100% of the artifacts are associated with historical land use. The historical material included one pearlware glaze chip, one clear bottle glass fragment, 147 reddish-brown handmade brick fragments, one oyster shell fragment, and one drain tile fragment. The pearlware glaze chip was potted in England circa post-1779 and was too small to identify the vessel shape. The clear bottle glass dates circa post-1900.

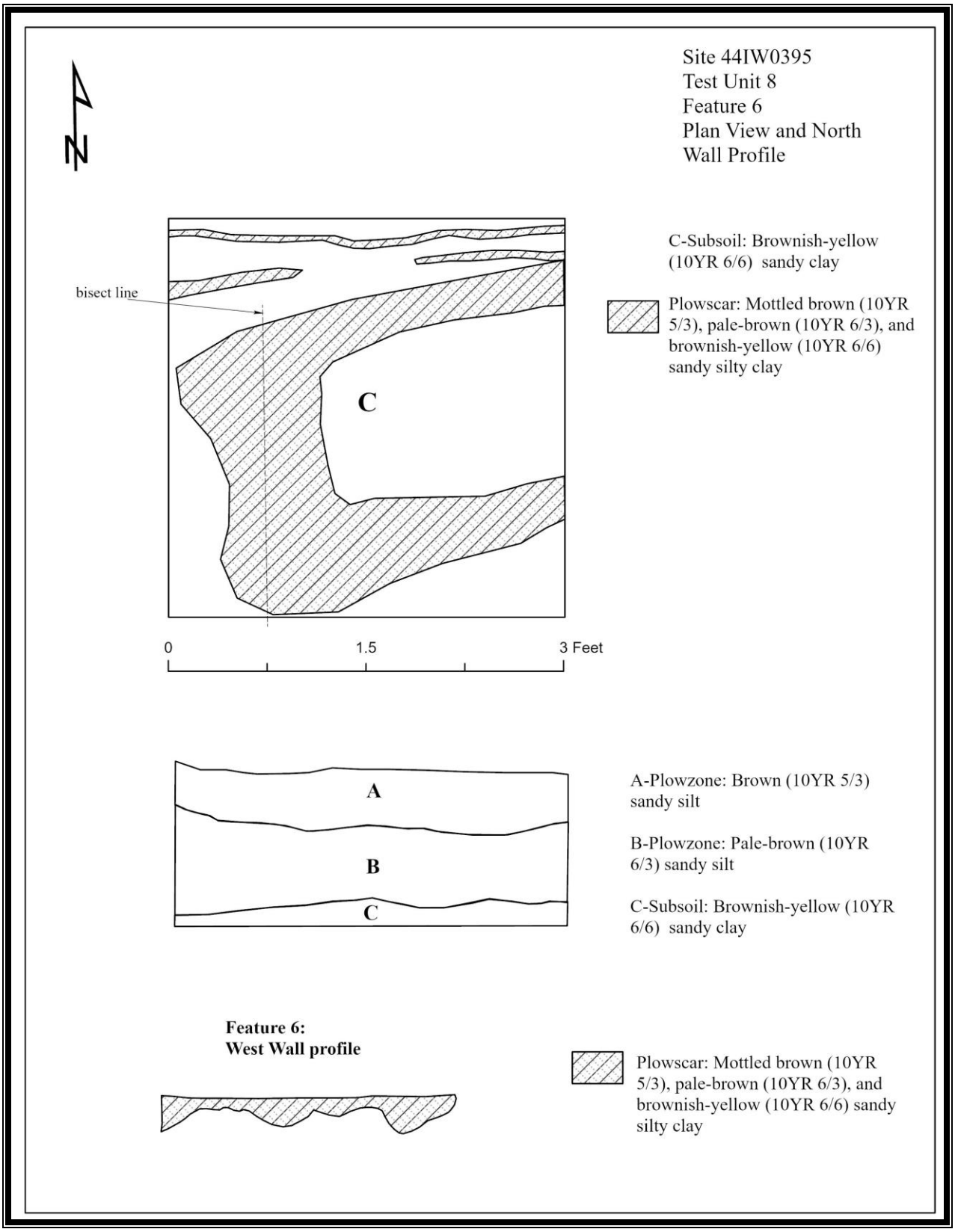


Figure 31. Test Unit 8 plan view and north wall profile.

Plate 10. Plan view of Test Unit 8, looking north.

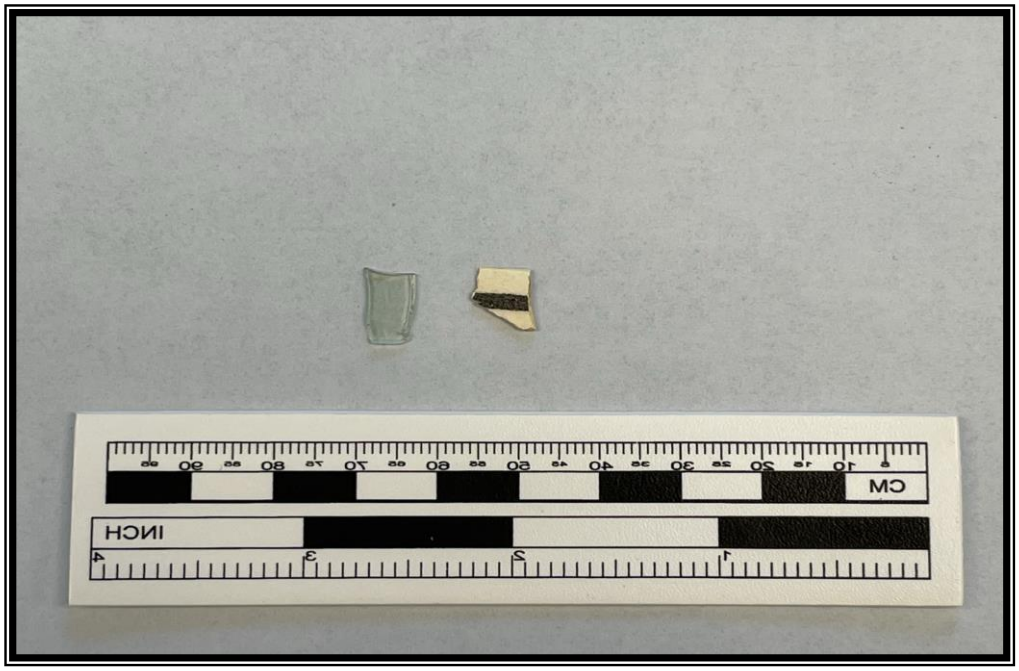


Plate 11. Representative artifacts recovered from Test Unit 8. Left to right: Aqua window glass fragment and hand-painted black pearlware.

Stratum B, 0.70 feet thick, consisted of a pale brown (10YR 6/3) sandy silt plowzone. No artifacts were recovered from Stratum B. Stratum C consisted of a sterile brownish-yellow (10YR 6/6) sandy clay subsoil excavated 0.20 feet deep. No artifacts were recovered from Stratum C. No cultural features were noted within the unit.

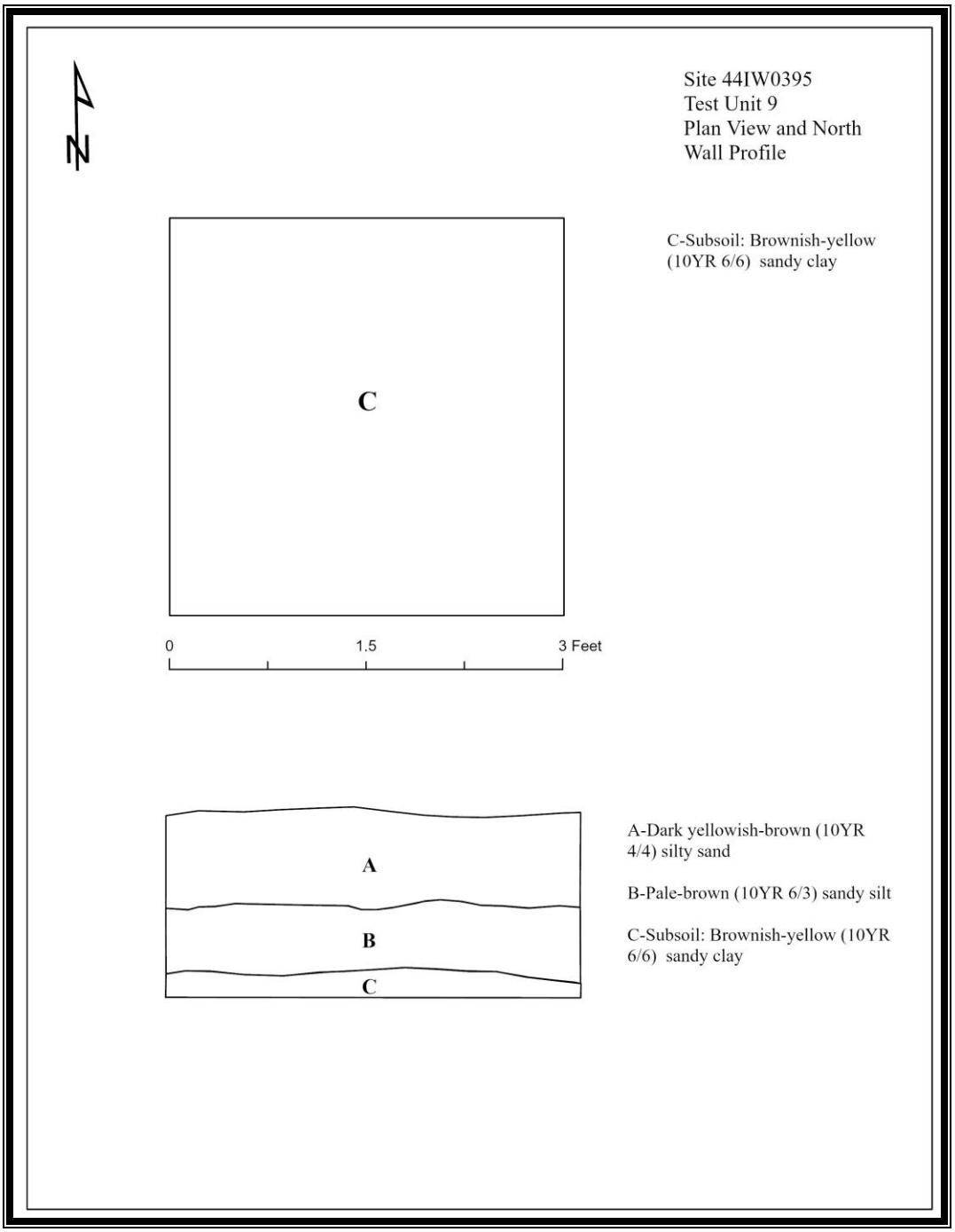


Figure 32. Test Unit 9 plan view and north wall profile.

Plate 12. View of representative artifacts recovered from Test Unit 9. Left to right: Pearlware sherd and clear bottle glass fragment.

Summary of Site 44IW0395 Phase I and Phase II Artifacts

Combining the Phase I shovel testing and Phase II shovel testing and test unit excavations at Site 44IW0395, 8,284 artifacts were recovered. Of these, 15, or 0.18%, were associated with the Native American occupation of the site, and 8,269, or 99.81%, were associated with the historic period.

The Phase I surface collection and shovel testing recovered 283 artifacts. Of these, two, or 0.70%, were associated with Native American occupation of the site, and 281, or 99.29%, dated to the historic period. Both Native American artifacts, or 100%, were lithics, and none, or 0%, were pottery. The Native American artifacts included two quartzite secondary flakes. Historic material included 19 (67.61%) domestic artifacts, 258 (91.81%) architectural artifacts, none (0%) metal artifacts, and four (14.23%) faunal artifacts.

In contrast, the Phase II shovel testing and unit excavation recovered 8,003 artifacts. This material included 1,978 (24.71%) from the shovel testing and 6,023 (75.25%) from the test unit excavation. Of these, 13, or 0.16%, were associated with Native American occupation of the site, and 7,988, or 99.81%, dated to the historic period. Thirteen, or 100%, of the Native American artifacts were lithics, and none, or 0%, were pottery. Historic material included 149 (1.86%) domestic artifacts, 7,819 (97.70%) architectural artifacts, eight (0.09%) metal artifacts, and 12

(0.14%) faunal artifacts. Specific information on the artifacts recovered at the site is summarized in Tables 4 and 5.

Table 4. Native American Artifact Summary of Site 44IW0395 Phase I and Phase II Surface Collection and Shovel Testing

Artifact Classification	Artifacts Type	Artifact Subtype	Phase I Shovel Tests	Phase II Shovel Tests	Phase II Unit Excavations
Native American	Lithic	Flake, primary, quartzite		2	
		Flake, quartzite, secondary	2		3
		Flake, rhyolite, secondary		1	
		Flake, quartz tertiary			1
		Flake, chert, tertiary			1
		Flake, silicious slate, tertiary		2	
		Biface, quartzite, fragment			1
		Fire-cracked rock, quartzite		1	
		Cobble, fragment, quartzite		1	
		Total artifact count	**2**	**7**	**6**

Table 5. Historic Artifact Summary of Site 44IW0395 Phase I and Phase II Surface Collection and Shovel Testing

Artifact Classification	Artifacts Type	Artifact Subtype	Phase I Surface Collection and Shovel Tests	Phase II Shovel Tests	Phase II Unit Excavations
Domestic	Ceramic	Creamware, sherd	2	3	1
		Pearlware, sherd	13	18	45
		Stoneware, sherd	1	1	
		Coarse earthenware, sherd	1	1	1
		Yellowware, sherd			2
		Refined earthenware, sherd		1	1
		Delftware, sherd		1	
	Glass	Bottle glass, dark green, fragment	1	1	
		Bottle glass, aqua, fragment	1	6	8
		Bottle glass, clear, fragment		4	24
		Bottle glass, amber, fragment		1	
		Bottle glass, olive green, fragment		1	
		Aqua, fragment			28
		Hurricane lamp chimney globe, clear, fragment			1
Architectural	Brick	Handmade, reddish-brown fragment	243	1,753	5,552
		Handmade, buff, fragment	3		
		Handmade, reddish-brown, brick bat		1	
	Nail	Wrought, 1 ½-inch long	1		
		Wrought, fragment	1		
		Cut, 2-inch long		1	
		Cut, 3-inch long			1
		Cut, fragment	1	13	29
		Fragment		2	

Artifact Classification	Artifacts Type	Artifact Subtype	Phase I Surface Collection and Shovel Tests	Phase II Shovel Tests	Phase II Unit Excavations
	Window glass	Aqua, fragment	9	9	62
	Mortar	Sand- and shell-tempered, fragment		100	254
		Sand-tempered, fragment		41	
	Drain tile	Reddish-orange, fragment			1
Metal	Iron	Strap, fragment			1
		Lid, fragment		3	
		Fragment		2	
	Aluminum	Can, fragment		1	1
Faunal	Shell	Oyster, fragment	4	5	2
	Wood	Charred, fragment		2	3
		Total artifact count	**281**	**1,971**	**6,017**

Architectural Resources
During the Phase II survey, Circa~ re-surveyed one previously identified architectural resource.

Site 046-5629

Background
Site 046-5629 is identified as the Butler-Jones Cemetery. On October 5, 2005, the Isle of Wight County Historical Society (IWCHS) Grave Site Survey Task Force (GSSTF) visited the Butler-Jones Cemetery. The GSSTF cleaned the stones with shaving foam, water, or talcum powder to improve the legibility of the inscriptions on the older tombstones. Afterward, a clean water spray was used to remove any residue. GSSTF members were careful not to damage monuments or artifacts during the transcription process (Plate 13). The stone is inscribed:

To My Father
JOSEPH JONES
Born
April 8, 1813
Died
Feb. 12, 1890

His toils are past, his work is
done,
He fought the fight – the victory
won.
Erected by his son Frank

Plate 13. View of the cleaned stone, by the GSSTF, June 2, 2005.

The cemetery is within a copse of trees on the Project Area's western side. The stones are difficult to read, with some broken and lying on the ground. A few strands of fencing were noted on the eastern side of the cemetery. There could be additional unmarked graves (Plates 14 - 20).

Fieldwork-geophysical survey

The investigation will include electromagnetic (EM) and ground-penetrating radar (GPR) surveys to locate suspected human graves (Figure 33 and Plates 21 - 25). The EM survey was conducted using an EM-31 induction meter. The EM measures the apparent conductivity of the subsurface using the principles of electromagnetic induction. The EM consists of two horizontal coplanar loops, one acting as a transmitter and the other as a receiver. The transmitter induces eddy currents in the earth, producing a secondary field. The receiver intercepts the secondary field in which the EM measures the terrain conductivity by comparing the strength of the secondary field to that of the primary. The EM can be used to locate nonmetal debris, trenches, pits, grave shafts, or any interface that can create a contrast in the dielectric properties.

Plate 14. View of Site 046-5629 in September 2022, looking west.

Plate 15. View of Site 046-5629 in September 2022, looking west.

Plate 16. View of Site 046-5629 in April 2023, looking southeast.

Plate 17. View of headstone in September 2022, looking west.

Plate 18. View of broken stone in September 2022, looking north.

Plate 19. View of broken stones and daffodils in the cemetery, looking west.

Plate 20. View of fencing and daffodils within Site 046-5629, looking northwest.

Figure 33. GPR survey area within the buffer area.

Plate 21. View of the northern side of the buffer around the cemetery, looking east.

Plate 22. View of the eastern side of the buffer around the cemetery, looking south.

Plate 23. View of the southern side of the buffer around the cemetery, looking west.

Plate 24. View of the GPR on the northeastern side of the buffer around the cemetery, looking east.

Plate 25. View of the GPR survey on the eastern side of the buffer around the cemetery, looking north.

The GPR profiles were conducted using a Sensors & Software GPR system with a 250 MHZ shielded antenna. GPR are impulse systems that transmit short-duration EM pulses into the ground from an antenna near the surface. These EM pulses are reflected from interfaces with contrasting electrical properties back to the receiver section of the antenna connected to the control unit for processing and display. Contrasts in electrical properties of materials in the earth cause radar signal reflections. These reflections occur at different soil strata, soil/rock interfaces, rock/air interfaces (voids), fractures, manmade objects (drums, USTs, trenches, graves, pits), or any interface that can create a contrast in the dielectric properties.

EM and GPR surveys were conducted from the woodline into the field 30 feet on the site's north, south, and eastern edges to locate unmarked graves outside the forested portion (see attached map). The proposed development will not impact the western side. EM data was collected along linear one- to two-foot traverses with stations at ten readings per second using an Archer data logger connected to a GPS within sub-meter accuracy. GPR measurements were collected with lines at two-foot centers with stations at 0.10 feet for the GPR survey. The GPR was connected to a sub-meter GPS instrument.

GPR was limited to a maximum depth of approximately five feet in some areas; however, this maximum depth was inconsistent over the entire scan area. The operator scanned in a grid pattern to determine if there were any anomalies with characteristics of an unmarked grave. There were no anomalies within the scan area that portrayed characteristics of an unmarked grave or graves being present. The row crops were limitations encountered throughout the scans; however, the field was level and clear for the sled to run between the rows.

CONCLUSIONS AND RECOMMENDATIONS

Site 44IW0395

This site appears to have been the home of a small-scale farmer of modest economic status or may have been associated with slaves. The occupation may have begun sometime after circa 1775 and ended by about 1830 to 1840. The Phase I surface survey and shovel tests indicated artifacts concentrated within an area measuring approximately 325 feet north-to-south by 400 feet east-to-west. However, the Phase II borders were expanded north and south to approximately 500 feet north-to-south by 400 feet east-to-west. The site's core is on the top of a knoll in the field, with gentle slopes to the east, north, and south. The outlying shovel tests were sparse, with one or two small brick fragments artifacts recovered from the excavations. The excavations in the field indicated two plowzone strata. Although no plowscars were evident within the shovel tests, plowscars were evident intruding into the subsoil in the test unit excavations.

Fourteen previously recorded historic archaeological sites and 30 previously identified architectural sites are located within one mile of Site 44IW0395, which is identified as a late 18th to mid-19th century domestic site. Many of these resources provided substantial building details. Most appear to be typically one or one-and-a-half-story, gable roof, often with dormers, Georgian style, hall and parlor or central passage design, wood-frame houses clad in wood weatherboard and resting on raised brick foundations with two interior or exterior end chimneys. The windows are typically sash, double-hung sash, wood-frame. There is often a front porch and

an ell extension. Many of these dwellings were situated on small parcels with a few outbuildings. The outbuildings typically included a combination of barns, smokehouses, corncribs, sheds, granaries, wells, slave or servant quarters, and sometimes a family cemetery.

Two of these sites also included a Native American component. These typically consisted of quartzite flakes, projectile points, and quartz or quartzite debitage. These findings indicate that the components are small, single-use temporary campsites used by one group at a time with no long-term, day-to-day activities. A pattern similar to the results of the excavations at this site was observed, although chert, silicious slate, and rhyolite material were also recorded at the site. Given this review of dwellings near Site 44IW0395, most of these domestic sites appeared to have at least one single dwelling, and several had a few scattered outbuildings with family cemeteries.

Ceramic artifacts include limited sherds of utilitarian ware such as yellowware and stoneware types with a few refined, finer ceramics such as creamware and pearlware. The sherds were primarily small and undecorated. Decorated wares included hand-painted and transfer print designs. The sherds were too small to identify vessel shapes and sometimes countries of origin. The creamware and pearlware were potted in England from 1775 to 1830. Most of the ceramics were pearlware, which is circa post-1779 to 1830 date. The absence of whiteware, circa post-1830, but the presence of yellowware potted circa post-1830 suggests occupation at the site past 1830.

None of the patterns or the shapes of the undecorated or decorated wares matched, indicating the items may have been purchased one at a time. The presence of blue in most of the patterns could reflect a desire to match colors but could be more reflective of the pieces available and price. The presence of the combination of locally produced American ceramics and a few imported European ceramics indicates consumer activity reflective of household necessity. Utilitarian wares such as stoneware and other earthenware would have been purchased for daily food preparatory use and consumption without regard to the item's aesthetic nature.

Glass artifacts included bottles, lightning, and window glass fragments. No white ball clay pipe stems were recovered. Other historic period artifacts of note include wrought and cut nails and handmade brick fragments. These nails indicate a relatively mid- to late 18th-century period of house construction within the site confines. The presence of 7,552 brick fragments could indicate the structure had a brick chimney or brick piers. The presence of fire-damaged artifacts and charred wood suggests the house burned. The lack of domestic artifacts could reflect the house was abandoned, and only the broken or discarded artifacts were left behind. In general, the artifacts were very small, indicating impacts from plowing.

The individuals working and living at the site were probably small landowners who may have diversified their agricultural efforts to include grain or, perhaps, livestock production. The shovel testing indicates the site was plowed with a more recent plowzone from the shift of no-till practices overlying an older, deeper plowzone from when the field was consistently mechanically plowed. The absence of cultural features and the presence of plowscars in the base of test units, coupled with the minute size of artifacts, suggests the repeated plowing of the site has erased any features associated with the site.

All artifacts were recovered from an undifferentiated/mixed-plowed stratigraphic context. No subsurface features beyond plowscars were identified. The lack of spatial and temporal integrity caused by repeated plowing episodes and the absence of subsurface features limit the research potential of the site to contain significant archaeological resources that could answer important research questions pertaining to this period in the region. Circa~ recommends that the site is not eligible for listing on the National Register of Historic Places under Criterion D. Criteria A, B, and C are also not warranted for the site. No further work is recommended.

Site 046-5629

At the conclusion of the Phase I survey, Circa~ recommended that Site 046-5629 was not potentially eligible for listing on the National Register of Historic Places under Criteria A, B, C, or D. The cemetery will be avoided by development; however, development is planned within the buffer. The GPR survey did not record any additional burial features within the buffer. Circa~ does recommend installing orange safety fencing around the cemetery edge to ensure that any unmarked graves are not impacted during construction.

REFERENCES CITED

Advisory Council on Historic Preservation
1986 "36 CFR Part 800 – Protection of Historic Properties (incorporating amendments effective August 5, 2004)" *Regulations of the Advisory Council on Historic Preservation Governing the Section 106 Review Process*. Available online at http://www.achp.gov

AECOM
2019 *Phase I Archaeological Survey Cypress Creek Crossing, Isle of Wight County, Virginia*. Available at the Virginia Department of Historic Resources archives, Richmond, Virginia.

Anonymous
1863 *Military map of Suffolk & vicinity for Majr. Genl. J. A. Dix*. Available online at http://www.loc.gov/maps/collections

Bache, A. D.
1862 *Map of the state of Virginia*. Available online at http://www.loc.gov/maps/collections

1862-1863 *Coast of North Carolina and Virginia*. Available online at http://www.loc.gov/maps/collections

1864 *Map of eastern Virginia*. Available online at http://www.loc.gov/maps/collections

Blanton, Dennis B., and Julia A. King, eds.
2004 *Indian and European Contact in Context: The Mid-Atlantic Region*. University Press of Florida, Gainesville, Florida.

Boddie, John Bennett
1973 *Seventeenth Century Isle of Wight County, Virginia*. Genealogical Publishing Company, Baltimore, Maryland.

Boye, Herman
1825 *A map of the state of Virginia, constructed in conformity to law from the late surveys authorized by the legislature and other original and authentic documents*. Available online at http://www.loc.gov/maps/collections

Bureau of Refugees
1862-1866 *List of Confiscated Lands*. National Archives, Washington, D. C.

Butts, Marshall W.
1961 *Portsmouth Under Four Flags, 1752-1961*. Portsmouth Historical Association, Portsmouth, Virginia.

Carson, Cary, Norman F. Barka, William M. Kelso, Garry Wheeler Stone, and Dell Upton
1981 "Impermanent Architecture in the Southern American Colonies," *Winterthur Portfolio* 16: 136-196.

Circa~ Cultural Resources Management, LLC
2023 *Phase I Cultural Resources Survey of the 13009 Windsor Boulevard Tract, Isle of Wight County, Virginia.* Available at the Virginia Department of Historic Resources archives, Richmond, Virginia.

2023 *Phase I Cultural Resources Survey of Windsor Commerce Center, Isle of Wight County, Virginia*. Available at the Virginia Department of Historic Resources archives, Richmond, Virginia.

Commonwealth Heritage Group
2019 *Cultural Resources Survey Proposed Solidago Solar Farm, Isle of Wight County, Virginia*. Available at the Virginia Department of Historic Resources archives, Richmond, Virginia.

Cram, T. J.
1861 *S.E. portion of Virginia and N.E. portion of N'th Carolina.* Available online at http://www.loc.gov/maps/collections

Department of the Interior, National Park Service
1983 Archaeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines. *Federal Register* 48:44716-44762. Available online at http://www.nps.gov

Fry, Joshua, and Peter Jefferson
1751 *A map of the most inhabited part of Virginia containing the whole province of Maryland with part of Pensilvania, New Jersey and North Carolina.* Available online at http://www.loc.gov/maps/collections

GPRS
2023 *Job Summary Report.*

Hening, William W., ed.
1809-1823 *The Statutes At Large: Being a Collection of All the Laws of Virginia.* 13 vols. University Press of Virginia, Charlottesville, Virginia.

Herrmann, Augustine
1670 *Virginia and Maryland in 1670*. Available online at http://www.loc.gov/maps/collections

Hobbs, Kermit and William A. Paquette
1987 *Suffolk: A Pictorial History*. Donning Company, Norfolk, Virginia.

Hove, B. Jr.
1862 *Southeastern part of Virginia, from York River, and west to Black Water River*. Available online at http://www.loc.gov/maps/collections

Howe, Henry
1969 *Historical Collections of Virginia*. Genealogical Publishing, Baltimore, Maryland.

Isle of Wight County
No date Various deed records. Available at the Isle of Wight County Courthouse.

J. H. Colton Establishment
1855 *J.H. Colton's topographical map of seat of war in Virginia, Maryland*. Available online at http://www.loc.gov/maps/collections

Jefferson, Thomas
1787 *A Map of the Country between Albemarle Sound and Lake Erie.* Available online at http://www.loc.gov/maps/collections

Johnson, R. U. and C. C. Buel
1956 *North to Antietam, Battles and Leaders of the Civil War.* 4 vol. T. Yoseloff, New York, New York.

King, Helen H.
1993 *Historical Notes on Isle of Wight County*. Isle of Wight County Board of Supervisors, Isle of Wight County, Virginia.

Lewis, Samuel
1794 *The State of Virginia from the Best Authorities*. Matthew Carey Publishers, Philadelphia, Pennsylvania.

Mansfield, Stephen S.
1989 *Princess Anne County and Virginia Beach A Pictorial History*. Donning Company Publishers, Norfolk, Virginia.

McCartney, Martha.
1997 *James City County Keystone of the Commonwealth.* Donning Company Publishers, Virginia Beach, Virginia.

McIlwaine, H. R., ed.
1924 *Minutes of Council and General Court of Colonial Virginia*. The Library Board, Richmond, Virginia. Reprinted 1934, 1979.

Morrison, Colonel E. M.
1907 *A History of Isle of Wight County, Virginia*. Available online at http://www.iwchs.com/IWCHistory.html

Nansemond County
1820 – 1850 Land Tax Records.

National Park Service
1990 *National Register of Historic Places Bulletin 15: How to Apply the National Register of Historic Places Criteria for Evaluation.* Available online at http://www.nps.gov

Natural Resources Conservation Service
2023 Online soil data. Available online at http://soils.usda.gov/.

Norfleet, Fillmore
1974 *Suffolk In Virginia, c. 1795-1840*. Whittet and Shepperson, Richmond, Virginia.

Nugent, Nell Marion (ed.)
1969-1979 *Cavaliers and Pioneers: Abstracts of Virginia Land Patents and Grants*. Three vols. Genealogical Publishing Company, Baltimore, Maryland.

1992 *Cavaliers and Pioneers: Abstracts of Virginia Land Patents and Grants, Vol. 1: 1623-1666*. Genealogical Publishing Company, Baltimore, Maryland.

Parramore, Thomas C.
1978 *Southampton County*. Printed for the Southampton County Historical Society, University Press of Virginia, Charlottesville, Virginia.

Rountree, Helen C.
1989 *The Powhatan Indians of Virginia*. The University of Oklahoma Press, Normandy and London.

Smith, Barbara Clark
1985 *After the Revolution*. Random House, New York, New York.

Smith, John
1606 *Virginia discovered and described.* Available online at http://www.loc.gov/maps/collections

1910 *Travels and Works of Captain John Smith, President of Virginia and Admiral of New England, 1580-1631*, ed. by Edward Arber. 2 Vols. Kessinger Publishers, Whitefish, Montana.

Turner, Florence Kimberly.
1985 *Gateway to the New World: A History of Princess Anne County 1607-1824.* Southern Historical Press, Easley, South Carolina.

Tyler, Lyon G.
1907 "Williamsburg-The Old Colonial Capital." *William and Mary Quarterly*, Vol. XVI (series 1). Colonial Williamsburg Foundation, Williamsburg, Virginia.

United States Geological Survey
1919 Smithfield Quad map. Available online at http://historicalmaps.arcgis.com/usgs/

1938 Smithfield Quad map. Available online at http://historicalmaps.arcgis.com/usgs/

1944 Windsor Quad map. Available online at http://historicalmaps.arcgis.com/usgs/

1961 Windsor Quad map. Available online at http://historicalmaps.arcgis.com/usgs/

1973 Windsor Quad map. Available online at http://historicalmaps.arcgis.com/usgs/

1985 Windsor Quad map. Available online at http://historicalmaps.arcgis.com/usgs/

Virginia Department of Historic Resources
2017 *Guidelines for Conducting Historic Resources Survey in Virginia*. Available at the Virginia Department of Historic Resources, Richmond, Virginia.

Virginia State Library
1965 *A Hornbook of Virginia History*. Virginia State Library, Richmond, Virginia.

APPENDIX A
VDHR V-CRIS FORMS

Snapshot

Date Generated: August 23, 2023

Site Name: Site 1
Site Classification: Terrestrial, open air
Year(s): 1751 - 1789, 1790 - 1829, 1830 - 1860
Site Type(s): Dwelling, single
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Locational Information

USGS Quad: WINDSOR
County/Independent City: Isle Of Wight (County)
Physiographic Province: Coastal Plain
Elevation: 61 feet
Aspect: Flat
Drainage: James
Slope: 0-2%
Acreage: 0.680
Landform: Knoll
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Domestic
Site Type: Dwelling, single
Cultural Affiliation: Euro-American
Cultural Affiliation Detail: No Data
DHR Time Period: Colony to Nation (1751 - 1789), Early National Period (1790 - 1829), Antebellum Period (1830 - 1860)
Start Year: 1775
End Year: 1840
Comments: June 2023: The site was recorded by an extensive surface scatter of artifacts in the field and Phase I shovel testing on a 50-foot grid in the forested area to the southeast. In addition, Circa~ completed judgmental shovel testing in the field to determine the depth of the plowzone. The surface collection and Phase I shovel tests indicated artifacts concentrated within an area measuring approximately 325 feet north-to-south by 400 feet east-to-west. Circa~ excavated 23 shovel tests in this area on the 50-foot grid and 11 shovel tests on 25-foot intervals. Of these, 17 shovel tests were negative, and 17 were positive. The site borders were defined by the surface scatter and shovel testing to the south and east. The artifacts recovered from the site suggest occupation from the late 18th century, with the use of the parcel continuing into the early- to mid-19th century.

In the forested area, Stratum A, lying under an inch or two of root mat and organic matter, ranging from a very dark-brown (10YR 2/2) to a very dark grayish-brown (10YR 3/2) sand from 0.45 to 0.65 feet thick. Stratum B ranged from brown (10YR 4/3) to yellowish-brown (10YR 5/4) sandy clay 0.35 feet to 0.60 feet thick. Stratum C, subsoil or C-horizon, consisted of light yellowish-brown (10YR 6/4) sandy clay excavated 0.30 feet.

Two soil strata were noted over subsoil in the cultivated field. Stratum A ranged from 0.60 to 0.75 feet thick and consisted of a grayish-brown (10YR 6/4 to 6/6) sandy plowzone. Stratum B ranged from brown (10YR 4/3) to yellowish-brown (10YR 5/4) sandy clay 0.30 feet to 0.45 feet thick. Stratum C, excavated 0.20 feet wide, consists of a sterile yellowish-brown (2.5Y 5/6) sandy clay subsoil or C-horizon.

March 2023

August 2023: Circa re-established the Phase I grid at the site and filled it in at 25-foot intervals with an additional 272 shovel tests. Phase I surface survey and shovel tests indicated artifacts concentrated within an area measuring approximately 325 feet north-to-south by 400 feet east-to-west. However, the Phase II borders were expanded north and south to approximately 500 feet north-to-south by 400 feet east-to-west. The site's core is on the top of a knoll in the field, with gentle slopes to the east, north, and south. Of these,

190 shovel tests were negative, and 82 were positive. The site borders were defined by double-negative shovel tests to the west, north, and east and by the wetlands and double-negative shovel tests to the south.

In the agricultural field, Stratum A ranged from 0.40 to 0.65 feet thick and consisted of brown (10YR 5/3) silty sand plowzone. Stratum B ranged from 0.30 to 0.60 feet thick and consisted of a pale-brown (10YR 6/3) sandy silt plowzone. Stratum C consisted of a sterile brownish-yellow (10YR 6/6) sandy clay subsoil excavated 0.20 feet deep.

In the forested area, Stratum A, lying under an inch or two of root mat and organic matter, ranging from a very dark-brown (10YR 2/2) to a very dark grayish-brown (10YR 3/2) sand from 0.45 to 0.65 feet thick. Stratum B ranged from brown (10YR 4/3) to yellowish-brown (10YR 5/4) sandy clay 0.35 feet to 0.60 feet thick. Stratum C, subsoil or C-horizon, consisted of light yellowish-brown (10YR 6/4) sandy clay excavated 0.30 feet.

This site appears to have been the home of a small-scale farmer of modest economic status or associated with slaves. The occupation seems to have begun sometime after circa 1775 and ended by about 1830 to 1840. The outlying shovel tests were sparse, with one or two small brick fragments artifacts recovered from the excavations. The excavations in the field indicated two plowzone strata. Although no plowscars were evident within the shovel tests, plowscars were evident intruding into the subsoil in the test unit excavations. The individuals working and living at the site were probably small landowners who may have diversified their agricultural efforts to include grain or perhaps livestock production. The shovel testing indicates that the site was plowed with a more recent plowzone overlying a relic plowzone. The absence of features and the presence of plowscars in the base of test units coupled with the minute size of artifacts suggests the repeated plowing of the site has erased any features associated with the site.

Bibliographic Information

Bibliography:

No Data

Informant Data:

No Data

CRM Events

Event Type: Survey:Phase II

Project Staff/Notes:

August 2023: In the summer of 2023, Circa~ Cultural Resource Management, LLC (Circa~) conducted a Phase II evaluation of Site 44IW0395 located within the overall 83-acre Windsor Commerce Center Tract in Isle of Wight County, Virginia. The owner plans to construct a warehouse and associated infrastructure on the property. The overall project area is bordered by Ennis Pond to the north, an unnamed dammed tributary of Ennis Pond to the east, residential properties to the west, and Windsor Boulevard (Route 460) to the south.

Circa~ conducted a Phase I cultural resources survey of the project area earlier in 2023 and identified 66 isolated finds, one previously identified archaeological resource, two new archaeological resources, one previously identified architectural resource, and no new architectural resources. One of the archaeological resources, Site 44IW0395, was recommended as potentially eligible for listing on the National Register of Historic Places.

At Circa~, Carol D. Tyrer, Register of Professional Archaeologists (RPA), served as Project Manager and Principal Investigator for the project and oversaw the course of the project. Dawn M. Muir, RPA, served as the Historian for the project and completed the historic research for the project. Skye Hughes, RPA, completed the graphics. Carol D. Tyrer, Skye Hughes, and Dawn M. Muir prepared the report. The successful completion of the Phase II survey for the proposed development was made possible by the contribution of many individuals. In particular, the current landowner, John Hollowell, ensured that project information and maps were always available for the study.

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Circa~ Cultural Resource Management, LLC

Investigator: Carol D. Tyrer

Survey Date: 7/17/2023

Survey Description:

August 2023: Phase II level archival research was undertaken to support archaeological tests conducted at the site. Historical maps, plats, surveys were reviewed, and land ownership records were reviewed. Extensive efforts were made to determine who owned or occupied the site. The property's history was traced using land patents, deeds, wills, demographic records, and other locally generated court documents such as tax rolls. Real estate tax lists, filed with the State Auditor's Office commencing in 1782, specify the quantity of land and number of parcels owned by each taxpayer and often contain notations about property boundaries and when and how acreage was transferred from one person to another by sale or bequest. Commencing in 1820, tax commissioners began recording the collective value of any buildings present on the parcels they assessed. Also, they usually noted the estimated worth of any new buildings constructed since their last visit. Assessors omitted their estimates' uninhabitable man-made features such as fences, roads, and wells. Conversely, they reduced a landowner's assessment if previously existing buildings had been razed or destroyed.

The study of land tax lists evaluated the presence or absence of structural features within the site, and specific gaps in antebellum court records were bridged. The analysis of these documents also provided a considerable amount of insight into the phases of development that occurred within the site and yielded data on local land use patterns. On the other hand, personal property tax rolls provide a wealth of information on the quantities of enslaved people, livestock, and other taxable personal property that taxpayers own, which are extremely useful in gauging the socio-economic status and individual wealth.

Land and personal property tax rolls usually indicate whether individual property owners were residents of the county in which they were being taxed, making it possible to identify absentee landowners. Agricultural census records were used as a source of data on land use and productivity. In contrast, census records and slave schedules can be expected to yield information on the household, family composition, and ethnicity. A diligent search was done for public records and personal papers pertaining to those who owned and/or occupied the site and the study area. The research was conducted at the Isle of Wight County Courthouse, the Colonial Williamsburg Foundation's Rockefeller Library, the Swem Library, the Library of Congress, and the Virginia Historical Society. Use was made of online sources whenever it proved practical.

The Phase II archaeological evaluation of Site 44IW0395 included the excavation of screened shovel tests and the hand excavation of three-foot-square test units in areas where positive shovel tests were located.
The project area was surveyed by the hand excavation of shovel tests in transects at 25-foot intervals across the site. All shovel tests were excavated by natural levels to the sterile subsoil, and all soils were screened through a ¼-inch wire mesh. Profiles were recorded for all shovel tests and soil color recorded per the Munsell classification system. All shovel tests were recorded on standard field forms, and all cultural material was retained. The location of all excavated shovel tests was marked on a base map of the site.

Test units measuring three feet square were excavated by hand in those areas that had demonstrated the densest concentration of artifacts or to sample the landform. The locations of all excavated test units were marked on a base map of the site. All excavated soils were screened through a ¼-inch wire mesh. Test unit base plans and sidewall profiles were recorded and photographed, and soils were described with the Munsell classification system.

Once removed from the field, all archaeological data and specimens were transported to Circa~ 's laboratory for processing and analysis. Before washing, artifacts from a given provenience were first emptied into a screened basket and sorted. Items determined to be unstable were either dry brushed or, in some cases, not washed and re-bagged with the appropriate provenience information. These items may include unstable organic objects, such as Wood or other plant material, leather, bone, fabric, metal requiring immediate conservation, overglaze painted delftware, and other soft-bodied ceramics such as some local wares. Stable objects were washed with a soft brush, and edges of ceramics and glass were thoroughly cleaned to identify body type and mending. Items will then be placed by provenience on a drying rack.

Artifacts were sorted first by material and checked for mends in a given provenience. Stylistic attributes were described with current terminology and recorded by count into a database for analysis. Non-diagnostic artifacts with like attributes will be grouped - i.e., clear, amber, etc., bottle body glass fragments, unrecognizable nail fragments, corroded metal fragments, and aqua window glass. Diagnostic artifacts were sorted and grouped based on type or ware and vessel or function.

Current Land Use	Date of Use	Comments
Agricultural field	7/17/2023	August 2023: The site's core is on the top of a knoll in the field, with gentle slopes to the east, north, and south.

Threats to Resource: Development

Site Conditions: Surface Deposits Present But With No Subsurface Integrity

Survey Strategies: Informant, Observation, Subsurface Testing, Surface Testing, Historic Map Projection

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

August 2023: The Phase II shovel testing and unit excavation recovered 8,003 artifacts. This material included 1,978 (24.71%) from the shovel testing and 6,023 (75.25%) from the test unit excavation. Of these, 13, or 0.16%, were associated with Native American occupation of the site, and 7,988, or 99.81%, dated to the historic period. Thirteen, or 100%, of the Native American artifacts, were lithics, and none, or 0%, were pottery. Historic material included 38 (0.47%) domestic artifacts, 1,920 (23.99%) architectural artifacts, six (0.07%) metal artifacts, and seven (0.08%) faunal artifacts.

Summary of Specimens Observed, Not Collected:

No Data

Current Curation Repository: Circa~

Permanent Curation Repository: Land owner

Field Notes: Yes

Field Notes Repository: Circa~

Photographic Media: Digital

Survey Reports: Yes

Survey Report Information:

Circa~
2023 Phase II Archaeological Evaluation of Site 44IW0395 The Windsor Commerce Center Tract, Isle of Wight County, Virginia

Survey Report Repository: VDHR

DHR Library Reference Number: No Data

Significance Statement:

June 2023: The artifacts recovered from the site suggest occupation from the late 18th century, with the use of the parcel continuing into the early- to mid-19th century. The shovel testing indicates a moderate density of artifacts. The majority of the artifacts were recovered from Stratum B. The site appeared to have vertical and horizontal integrity and cultural stratigraphy underneath the plowzone. The site has good research potential and is recommended as potentially eligible for the National Register of Historic Places under Criterion D, with Criteria A, B, and C not applicable. If the development cannot avoid the site, then Circa~ recommends a Phase II evaluation be completed on the site before ground-disturbing activities. Circa~ recommended that if the site is avoided, it be protected during construction activities by placing orange-safety fencing around its perimeter.

August 2023: The individuals working and living at the site were probably small landowners who may have diversified their agricultural efforts to include grain or perhaps livestock production. The shovel testing indicates that the site was plowed with a more recent plowzone overlying a relic plowzone. The absence of features and the presence of plowscars in the base of test units coupled with the minute size of artifacts suggests the repeated plowing of the site has erased any features associated with the site. The research potential at the site is considered poor, and Circa~ recommends that the site is not eligible for listing on the National Register of Historic Places under Criterion D. Criteria A, B. and C is also not warranted for the site. No further work is recommended.

Surveyor's Eligibility Recommendations: Recommended Not Eligible

Surveyor's NR Criteria Recommendations: No Data

Surveyor's NR Criteria Considerations: No Data

Event Type: Survey:Phase I

Project Staff/Notes:

June 2023: In March and April 2023, Circa~ Cultural Resource Management, LLC (Circa~) conducted a Phase I cultural resources survey of the Windsor Commerce Center Tract in Isle of Wight County, Virginia. The project area, which encompasses approximately 83 acres, is bordered by Ennis Pond to the north, an unnamed dammed tributary of Ennis Pond to the east, residential properties to the west, and Windsor Boulevard (Route 460) to the south. The Area of Potential Effect (APE) for archaeological and architectural resources is the 83-acre project area. The owner plans to construct a warehouse and associated infrastructure on the property.

At Circa~, Carol D. Tyrer, Registered Professional Archaeologist (RPA), served as Project Manager and Principal Investigator for the project. Dawn M. Muir, RPA, served as the Architectural Historian for the project. Skye Hughes, RPA, created the graphics for the report. Carol D. Tyrer, Dawn M. Muir, and Skye Hughes prepared the report. The successful completion of the Phase I survey for the proposed development was made possible by the contribution of many individuals. In particular, the current landowner, John Hollowell, ensured that project information and maps were always available for the study.

Project Review File Number: No Data

Sponsoring Organization: No Data

Organization/Company: Circa~ Cultural Resource Management, LLC

Investigator: Carol D. Tyrer

Survey Date: 3/13/2023

Survey Description:

June 2023: Archival research commenced with examining cartographic and historical works on file online with the Library of Congress, the Colonial Williamsburg Rockefeller Library, VDHR, the Library of Virginia, and Isle of Wight County. Efforts were made to determine whether historic road rights-of-way passed close to the project area and whether subsurface cultural deposits were likely present. Data accumulated during previous archival research on historical sites throughout the region were also examined.

Prior to subsurface testing, the entire project area was visually inspected via pedestrian survey, and all aboveground evidence of cultural activity was noted and recorded. The project area was located within an agricultural field, and the survey was completed right after the application of Roundup after the crop was harvested. As a result, surface visibility was 80% or better, and a pedestrian survey of the cultivated areas was completed at 35-foot intervals. In addition, limited shovel testing was completed in areas where artifacts were recorded on the ground surface to sample the soil stratigraphy or the presence of subsurface cultural layers.

Judgmental shovel tests were excavated on a 50-foot grid in areas where surface artifacts were located to determine the depth of the plowzone, any intact soil stratum under the plowzone, artifact densities within the soil profiles, and site boundaries. In addition, shovel tests were excavated at 50-foot intervals in the forested areas. Shovel tests, approximately 1.50 feet in diameter, were excavated at 50-foot intervals. Shovel tests were excavated at a 25-foot radius around selected positive shovel tests to aid in the determination of isolated finds. Waterlogged areas, or portions of the project area with slopes in excess of 15%, were carefully examined for cultural material but were not subjected to subsurface testing. All shovel tests were excavated according to natural levels to the sterile subsoil, and all soils were screened through a ¼-inch wire mesh. Profiles were recorded for representative shovel tests, and soil color was recorded per the Munsell classification system. All shovel tests were recorded on standard field forms, and all cultural material was retained.

Once removed from the field, all archaeological data and specimens were transported to Circa~ 's laboratory for processing and analysis. Before washing, artifacts from a given provenience were first emptied into a screened basket and sorted. Items determined to be unstable will be either dry brushed or, in some cases, not washed and re-bagged with the appropriate provenience information. These items may include unstable organic objects, such as wood or other plant material, leather, bone, fabric, metal requiring immediate conservation, overglaze painted delftware, and other soft-bodied ceramics such as some local wares. Stable objects will be washed with a soft brush. The edges of ceramics and glass will be thoroughly cleaned to identify body type and mending. Items will then be placed by provenience on a drying rack.

Artifacts were sorted first by material and checked for mends in a given provenience. Stylistic attributes were described with current terminology and recorded by count into a database for analysis. Non-diagnostic artifacts with like attributes will be grouped - i.e., clear, amber, etc., bottle body glass fragments, unrecognizable nail fragments, corroded metal fragments, and aqua window glass. Diagnostic artifacts were sorted and grouped based on type, ware, vessel, or function.

Current Land Use	Date of Use	Comments
Agricultural field	6/1/2023	June 2023: The site is on a level, slightly higher knoll in the agricultural field and within the fringe of trees to the southeast. The elevation is 61 feet AMSL, and the landform drains to the north and east.

Threats to Resource: Development

Site Conditions: Surface Deposits Present And With Subsurface Integrity

Survey Strategies: Subsurface Testing, Surface Testing

Specimens Collected: Yes

Specimens Observed, Not Collected: No

Artifacts Summary and Diagnostics:

June 2023: Two hundred and eight-four artifacts were recovered from the survey, 21 from the surface collection, and 263 from shovel testing. On average, 15.47 artifacts were recovered from the 17 positive tests. Of the 284 artifacts recovered, two, or 1%, date to Native American land use, and 282, or 99%, are historic. Historic material included 21 artifacts recovered from the surface, 55 from Stratum A, and 206 from Stratum B.

Circa~ only collected a representative sampling of artifacts from the field to help date the site. Material recovered from the surface of the plowed field included two creamware, nine pearlware, and one stoneware sherd; six reddish-brown handmade brick fragments; and three oyster shell fragments.

Material recovered from Stratum A consisted of one dark green bottle glass fragment, one aqua window glass fragment, one wrought nail fragment, one burned 1 ½-inch long wrought nail, 51 reddish-brown handmade brick fragments, and one oyster shell fragment.

Material recovered from Stratum B included two quartzite secondary flakes, one coarse earthenware sherd, four pearlware sherds, one aqua bottle glass fragment, eight aqua window glass fragments, one cut nail fragment, and 186 reddish-brown handmade brick fragments.

The creamware sherds were potted in England circa 1775-1820 and were too small to identify the vessel shape. The pearlware sherds were potted in England and date circa post-1779. The sherds represented two plates and one platter. One pearlware sherd exhibited a light and medium blue transfer print design typical of ware potted in England circa post-1795. This sherd was identified as a holloware vessel. The stoneware sherd exhibited a hand decorated cobalt blue design typical of ware potted in America circa post-1750. The sherd was too small to identify the vessel shape. The presence of the combination of locally produced American ceramics and imported European ceramics indicates consumer activity reflective of household necessity. The utilitarian wares such as the stoneware and other earthenware would have been purchased for daily food preparatory use and consumption without regard to the item’s aesthetic nature.

Summary of Specimens Observed, Not Collected:

No Data

Current Curation Repository: Circa~CRM

Permanent Curation Repository: Landowner

Field Notes: Yes

Field Notes Repository:	Circa~CRM
Photographic Media:	Digital
Survey Reports:	Yes
Survey Report Information:	

Circa~
2023 Phase I Cultural Resources Survey of the Windsor Commerce Center Tract, Isle of Wight, Virginia

Survey Report Repository:	VDHR
DHR Library Reference Number:	No Data
Significance Statement:	June 2023: The artifacts recovered from the site suggest occupation from the late 18th century, with the use of the parcel continuing into the early- to mid-19th century. The shovel testing indicates a moderate density of artifacts. The majority of the artifacts were recovered from Stratum B. The site appeared to have vertical and horizontal integrity and cultural stratigraphy underneath the plowzone. The site has good research potential and is recommended as potentially eligible for the National Register of Historic Places under Criterion D, with Criteria A, B, and C not applicable. If the development cannot avoid the site, then Circa~ recommends a Phase II evaluation be completed on the site before ground-disturbing activities. Circa~ recommended that if the site is avoided, it be protected during construction activities by placing orange-safety fencing around its perimeter.
Surveyor's Eligibility Recommendations:	Recommended Eligible
Surveyor's NR Criteria Recommendations:	D
Surveyor's NR Criteria Considerations:	No Data

Property Information

Property Names

Name Explanation	Name
Current Name	Butler/Jones Cemetery
Function/Location	Cemetery, Lovers Lane

Property Evaluation Status

Property Addresses

Current - Lovers Lane

County/Independent City(s): Isle Of Wight (County)
Incorporated Town(s): *No Data*
Zip Code(s): 23487
Magisterial District(s): *No Data*
Tax Parcel(s): *No Data*
USGS Quad(s): WINDSOR

Additional Property Information

Architecture Setting: Rural
Acreage: *No Data*
Site Description:

DHR Staff 2020: This cemetery is located just northeast of the intersection of Lovers Lane and Windsor Boulevard.

June 2023: The cemetery is within a cope of trees located in the western side of the current Project Area.

August 2023: No changes have been made to the site since the previous survey.

Surveyor Assessment:

DHR Staff 2020: Further survey recommended.

June 2023: Circa~ recommends the site is not potentially eligible for listing on the National Register of Historic Places under Criteria A, B, C, or D. The cemetery will be avoided by development, and Circa~ recommends installing orange-safety fencing 25 feet from the edge of the woods to ensure unmarked graves are not impacted during construction. If the buffer cannot be set aside, Circa~ recommends monitoring of construction for the cemetery environs.

August 2023: At the conclusion of the Phase I survey, Circa~ recommended that the cemetery was not potentially eligible for listing on the National Register of Historic Places. Circa~ noted that the cemetery will be avoided and that orange safety fencing should be installed to ensure that any unmarked graves are not impacted during construction. The results of the GPR survey did not provide any information that would change that recommendation. The cemetery will still be avoided by the project construction. However, Circa ~ does continue to recommend installing orange-safety fencing around the cemetery edge to ensure any unmarked graves are not impacted during construction.

Surveyor Recommendation: Recommended Not Eligible

Ownership

Ownership Category	Ownership Entity
Private	*No Data*

Primary Resource Information

Resource Category: Funerary
Resource Type: Cemetery
NR Resource Type: Site
Date of Construction: ca 1890
Date Source: Site Visit
Historic Time Period: Reconstruction and Growth (1866 - 1916)
Historic Context(s): Funerary
Other ID Number: *No Data*
Architectural Style: No discernible style
Form: *No Data*

Number of Stories: *No Data*
Condition: Poor
Threats to Resource: Erosion, Neglect
Cultural Affiliations: Indeterminate
Cultural Affiliation Details: *No Data*
Architectural Description:

IWCHS GSSTF, 2015: A selection of shaving foam, water, or talcum powder was used to improve the legibility of the inscriptions on the older tombstones. Afterwards, a clean water spray was used to remove any residue. GSSTF members were careful not to damage tombstones or artifacts during the transcription process. Throughout the transcribing process, an attempt was made to preserve the, 'look and feel' of the original inscriptions as regards word spacing, arrangement, and possible misspellings.

The cemetery was visited on October 5, 2005. Transcriptions were made for Joseph Jones. See survey form for more details (including epitaphs, birth dates, and death dates). Photographs included. There is an additional unknown headstone with no markings visible.

DHR Staff, 2020: Circa date of construction based upon oldest recorded burial date. Some additional information on those buried here included on survey form (namely epitaphs, birth, and death dates).

June 2023: Site 046-5629 is identified as the Butler- Jones Cemetery. On October 5, 2005, the Isle of Wight County Historical Society (IWCHS) Grave Site Survey Task Force (GSSTF) visited the Butler-Jones Cemetery. The GSSTF cleaned the stones with a selection of shaving foam, water, and/or talcum powder to improve the legibility of the inscriptions on the older tombstones. Afterwards, a clean water spray was used to remove any residue. GSSTF members were careful not to damage tombstones or artifacts during the transcription process. The stone is inscribed:

To My Father
JOSEPH JONES
Born
April 8, 1813
Died
Feb. 12, 1890

His toils are past, his work is
done,
He fought the fight – the victory
won.
Erected by his son Frank

The cemetery is within a cope of trees located in the western side of the Project Area. The stones are difficult to read, with some broken and lying on the ground. A few strands of fencing were noted on the eastern side of the cemetery. There could be additional unmarked graves.

August 2023: A ground-penetrating radar (GPR) or electromagnetic (EM) survey was conducted on this site as part of a Phase II archaeological survey for the current project. This survey was intended to locate suspected human graves. The survey was conducted using an EM-31 induction meter. The EM measures the apparent conductivity of the subsurface using the principles of electromagnetic induction. The EM consists of two horizontal coplanar loops, one acting as a transmitter and the other as a receiver. The transmitter induces eddy currents in the earth, producing a secondary field. The receiver intercepts the secondary field in which the EM measures the terrain conductivity by comparing the strength of the secondary field to that of the primary. The EM can be used to locate nonmetal debris, trenches, pits, grave shafts, or any interface that can create a contrast in the dielectric properties.

The GPR profiles were conducted using a Sensors & Software GPR system with a 250 MHZ shielded antenna. GPR are impulse systems that transmit short-duration EM pulses into the ground from an antenna near the surface. These EM pulses are reflected from interfaces with contrasting electrical properties back to the receiver section of the antenna connected to the control unit for processing and display. Contrasts in electrical properties of materials in the earth cause radar signal reflections. These reflections occur at different soil strata, soil/rock interfaces, rock/air interfaces (voids), fractures, manmade objects (drums, USTs, trenches, graves, pits), or any interface that can create a contrast in the dielectric properties.

EM and GPR surveys were conducted from the wood line into the field 30 feet on the site's north, south, and eastern edges to locate unmarked graves outside the forested portion. The proposed development will not impact the western side. EM data was collected along linear one to two-foot traverses having stations at 10 readings per second using an Archer data logger connected to a GPS within sub-meter accuracy. GPR measurements were collected with lines at two-foot centers with stations at 0.10 feet for the GPR survey. The GPR was connected to a sub-meter GPS instrument.

GPR was limited to a max depth of approximately five feet in areas; however, this max depth was not consistent over the entire scan area. The operator scanned in a grid pattern to determine if there were any anomalies with characteristics of an unmarked grave. There were no anomalies within the scan area that portrayed characteristics of an unmarked grave being present. Surface obstructions, overgrown vegetation, and rough terrain were limitations encountered throughout the scans.

Cemetery Information

Current Use: Family
Historic Religious Affilitation: Unknown
Ethnic Affiliation: *No Data*
Has Marked Graves: Yes
Has Unmarked Graves: Yes
Enclosure Type: None
Number Of Gravestones: 0 - 5

Earliest Marked Death Year: 1890
Latest Marked Death Year: *No Data*

Secondary Resource Information

Historic District Information

Historic District Name: *No Data*
Local Historic District Name: *No Data*
Historic District Significance: *No Data*

CRM Events

Event Type: Other

Project Review File Number: *No Data*
Investigator: Dawn Muir
Organization/Company: Circa~ Cultural Resource Management, LLC
Photographic Media: Digital
Survey Date: 8/1/2023
Dhr Library Report Number: *No Data*
Project Staff/Notes:

August 2023: In the summer of 2023, Circa~ Cultural Resource Management, LLC (Circa~) conducted a Phase II evaluation of Site 44IW0395 located within the overall 83-acre Windsor Commerce Center Tract in Isle of Wight County, Virginia. The owner plans to construct a warehouse and associated infrastructure on the property. The overall project area is bordered by Ennis Pond to the north, an unnamed dammed tributary of Ennis Pond to the east, residential properties to the west, and Windsor Boulevard (Route 460) to the south.

Circa~ conducted a Phase I cultural resources survey of the project area earlier in 2023 and identified 66 isolated finds, one previously identified archaeological resource, two new archaeological resources, one previously identified architectural resource, and no new architectural resources. One of the archaeological resources, Site 44IW0395, was recommended as potentially eligible for listing on the National Register of Historic Places. In addition to the Phase II survey of Site 44IW0395, Circa~ also completed a GPR survey of Site 046-5629 as it fell within the Phase II project area.

At Circa~, Carol D. Tyrer, Register of Professional Archaeologists (RPA), served as Project Manager and Principal Investigator for the project and oversaw the course of the project. Dawn M. Muir, RPA, served as the Historian for the project and completed the historic research for the project. Skye Hughes, RPA, completed the graphics. Carol D. Tyrer, Skye Hughes, and Dawn M. Muir prepared the report. The successful completion of the Phase II survey for the proposed development was made possible by the contribution of many individuals. In particular, the current landowner, John Hollowell, ensured that project information and maps were always available for the study.

Project Bibliographic Information:

Circa~
2023 Phase II Archaeological Evaluation of Site 44IW0395 The Windsor Commerce Center Tract, Isle of Wight County, Virginia.

GPRS
2023 Job Summary for Windsor Project.

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: *No Data*
Investigator: Dawn Muir
Organization/Company: Circa~ Cultural Resource Management, LLC
Photographic Media: Digital
Survey Date: 3/13/2023
Dhr Library Report Number: *No Data*
Project Staff/Notes:

June 2023: In March and April 2023, Circa~ Cultural Resource Management, LLC (Circa~) conducted a Phase I cultural resources survey of the Windsor Commerce Center Tract in Isle of Wight County, Virginia. The project area, which encompasses approximately 83 acres, is bordered by Ennis Pond to the north, an unnamed dammed tributary of Ennis Pond to the east, residential properties to the west, and Windsor Boulevard

(Route 460) to the south. The Area of Potential Effect (APE) for archaeological and architectural resources is the 83-acre project area. The owner plans to construct a warehouse and associated infrastructure on the property.

At Circa~, Carol D. Tyrer, Registered Professional Archaeologist (RPA), served as Project Manager and Principal Investigator for the project. She photographed the resources. Dawn M. Muir, RPA, served as the Architectural Historian for the project and completed the architectural survey and V-CRIS data entry. Skye Hughes, RPA, created the graphics for the report. and assisted with V-CRIS data entry. Carol D. Tyrer, Dawn M. Muir, and Skye Hughes prepared the report. The successful completion of the Phase I survey for the proposed development was made possible by the contribution of many individuals. In particular, the current landowner, John Hollowell, ensured that project information and maps were always available for the study.

Project Bibliographic Information:

Circa~
2023 Phase II Archaeological Evaluation of Site 44IW0395 The Windsor Commerce Center Tract, Isle of Wight County, Virginia.

GPRS
2023 Job Summary for Windsor Project.

Event Type: Survey:Phase I/Reconnaissance

Project Review File Number: *No Data*
Investigator: Isle of Wight County Historical Society Grave Site Survey Task Force
Organization/Company: DHR
Photographic Media: Digital
Survey Date: 6/2/2015
Dhr Library Report Number: *No Data*

Project Staff/Notes:

Data entry for cemeteries recorded by the Isle of Wight County Historical Society (IWCHS) Grave Site Survey Task Force (GSSTF). Documentation obtained from their website (iwchs.com/Cemetery-Reports.html). Survey dates range from the fall of 2003 to the spring of 2015. Their last update is noted as June 2, 2015. Data entry completed by DHR archives assistants Amber Cox and Jonathan Valalik.

Project Bibliographic Information:

Circa~
2023 Phase II Archaeological Evaluation of Site 44IW0395 The Windsor Commerce Center Tract, Isle of Wight County, Virginia.

GPRS
2023 Job Summary for Windsor Project.

Bibliographic Information

Bibliography:

No Data

Property Notes:

No Data

APPENDIX B
ARTIFACT INVENTORY

ARTIFACT INVENTORY

Site: 44IW0395 **Phase I**

Recorder: C. Tyrer **April 27, 2023**

Provenience	Quantity	Description
Surface collection		
Surface collection	2	Creamware body sherds, c. 1775-1820
	6	Pearlware body sherds, c. post 1779
	1	Pearlware body sherd, medium and light blue transfer print design on exterior, c. post 1795
	2	Pearlware base sherds, c. post 1779
	1	Stoneware body sherd, gray body, gray salt glaze on interior and exterior, cobalt blue design on exterior, American, c. post 1750
	6	Brick fragments, reddish brown, handmade, discarded
	3	Shell fragments, oyster
Shovel Tests		
ST 14-13 Stratum B	2	Brick fragments, reddish brown, handmade, discarded
ST 14-14 Stratum B	4	Brick fragments, reddish brown, handmade, discarded
ST 16-10 Stratum A	1	Brick fragment, reddish brown, handmade, discarded
Judgmental Shovel Test in Field		
J1-1	3	Brick fragments, buff, handmade, discarded
Stratum A	4	Brick fragments, reddish brown, handmade, discarded
J2-2	1	Bottle glass body fragment, dark green
Stratum A	1	Window glass fragment, aqua, 3/32” thick
	11	Brick fragments, reddish brown, handmade, discarded
ST J1-2 Stratum A	16	Brick fragments, reddish brown, handmade, discarded
ST J1-4	1	Pearlware body sherd, c. post 1779
Stratum B	7	Window glass fragments, aqua, 2/32” thick
	1	Nail fragment, wrought
	1	Nail, wrought, 1 ½” L, burned
	101	Brick fragments, reddish brown, handmade (19.6723 grams), discarded

ST J1-5 Stratum A	8	Brick fragments, reddish brown, handmade, discarded
ST J1-5 Stratum B	1 4	Pearlware body sherd, c. post 1795 Brick fragments, reddish brown, handmade, discarded
J1-6 Stratum A	1 5 1	Nail fragment, cut Brick fragments, reddish brown, handmade, discarded Shell fragment, oyster
ST J2-2 Stratum A	3	Brick fragments, reddish brown, handmade, discarded
ST J2-2 Stratum B	2	Brick fragments, reddish brown, handmade, discarded
ST J2-3 Stratum B	1 1 23	Pearlware base sherd, c. post 1775 Window glass fragment, aqua, 2/32” thick Brick fragments, reddish brown, handmade, discarded
ST J2-5 Stratum B	1 1 18	Pearlware body sherd, c. post 1779 Bottle glass body fragment, aqua Brick fragments, reddish brown, handmade, discarded
ST J2-6 Stratum B	10	Brick fragments, reddish brown, handmade, discarded
ST J2-7 Stratum B	2 1 25	Flakes, quartzite, secondary Coarse earthenware body sherd, reddish orange body with a thick black lead glaze on interior and exterior, English, c. 1700 to 1810 Brick fragments, reddish brown, handmade (02.8891 grams), discarded

ARTIFACT INVENTORY

Site: 44IW0395 **Phase II**

Recorder: C. Tyrer **July 7, 2023**

Provenience	Quantity	Description
Shovel Tests		
ST -1-3	1	Window glass fragment, aqua, 2/32" thick
Stratum A	1	Brick fragment, reddish brown, handmade, discarded
ST 1-3	1	Creamware glaze chip, c. 1775-1820
Stratum B	1	Brick fragment, reddish brown, handmade, discarded
ST 1-4	2	Brick fragments, reddish brown, handmade, discarded
Stratum A		
ST 1-9	1	Flake, silicious slate, tertiary
Stratum A	1	Pearlware glaze chip, c. post 1779
	2	Brick fragments, reddish brown, handmade, discarded
ST 2-6	1	Brick fragment, reddish brown, handmade, discarded
Stratum A		
ST 3-4	4	Brick fragments, reddish brown, handmade, discarded
Stratum A		
ST 3-5	1	Brick fragment, reddish brown, handmade, discarded
Stratum B		
ST 3-6	1	Brick fragment, reddish brown, handmade, discarded
Stratum A		
ST 3-11	4	Brick fragments, reddish brown, handmade, discarded
Stratum A		
ST 3-11	6	Brick fragments, reddish brown, handmade, discarded
Stratum B		
ST 4-5	2	Brick fragments, reddish brown, handmade, discarded
Stratum A		

ST 4-5	1	Bottle glass body fragment, dark green
Stratum B	10	Brick fragments, reddish brown, handmade, discarded
	1	Shell fragment, oyster, discarded
ST 4-6	18	Brick fragments, reddish brown, handmade, discarded
Stratum A	1	Aluminum can fragment
ST 4-7	1	Nail fragment, cut
Stratum A	3	Brick fragments, reddish brown, handmade, discarded
ST 4-9	5	Brick fragments, reddish brown, handmade, discarded
Stratum A		
ST 4-11	8	Brick fragments, reddish brown, handmade (40.1571
Stratum A		grams), discarded
ST 4-12	3	Brick fragments, reddish brown, handmade, discarded
Stratum B		
ST 5-3	4	Brick fragments, reddish brown, handmade, discarded
Stratum A		
ST 5-4	1	Brick fragment, reddish brown, handmade, discarded
Stratum B		
ST 5-5	1	Brick fragment, reddish brown, handmade, discarded
Stratum B		
ST 5-6	3	Brick fragments, reddish brown, handmade, discarded
Stratum A		
ST 5-8	1	Window glass fragment, aqua, 2/32” thick
Strata A/B	53	Brick fragments, reddish brown, handmade, discarded
ST 5-9	5	Brick fragment, reddish brown, handmade, discarded
Stratum A		
ST 5-9	1	Nail fragment, indeterminate
Stratum A	16	Brick fragments, reddish brown, handmade, discarded
ST 5-11	1	Fire-cracked rock, quartzite
Stratum A	11	Brick fragments, reddish brown, handmade, discarded
ST 5-11	8	Brick fragments, reddish brown, handmade (08.9615
Stratum B		grams), discarded

ST 5-12 Stratum A	12	Brick fragments, reddish brown, handmade (04.9502 grams), discarded
	1	Shell fragment, oyster, discarded
ST 5-13 Stratum B	11	Brick fragments, reddish brown, handmade (45.3592 grams), discarded
ST 6-4 Stratum A	9	Brick fragments, reddish brown, handmade, discarded
ST 6-7 Stratum A	1	Nail fragment, cut
	10	Brick fragments, reddish brown, handmade, discarded
	1	Mortar fragment, sand temper, discarded
ST 6-8 Stratum A	1	Creamware body sherd, green glaze, molded dot design on exterior, c. 1775-1820
	2	Window glass fragments, aqua, 2/32" thick
	3	Nail fragments, cut
	142	Brick fragments, reddish brown, handmade (1241.82 grams), discarded
	8	Mortar fragments, sand and shell temper, discarded
ST 6-9 Stratum A	2	Bottle glass body fragment, aqua
	5	Nail fragments, cut
	1	Nail, cut, 2" L
	244	Brick fragments, reddish brown, handmade (1133.98 grams), discarded
	40	Mortar fragments, fine sand temper, discarded
	1	Shell fragment, discarded
ST 6-11 Stratum A	1	Nail fragment, cut
	19	Brick fragments, reddish brown, handmade (45.3592 grams), discarded
	6	Mortar fragments, sand and shell temper (12.5619 grams) discarded
ST 6-11 Stratum B	1	Brick batt, reddish brown, handmade (42.4751 grams), discarded
ST 6-12 Stratum A	1	Pearlware body sherd, c. post 1779
	1	Bottle glass body fragment, clear
	78	Brick fragments, reddish brown, handmade (46.9371 grams), discarded
	22	Mortar fragments, sand and shell temper, discarded

ST 6-12 Stratum B	9	Brick fragments, reddish brown, handmade, discarded
ST 6-13	1	Creamware glaze chip, c. 1775-1820
Stratum B	34	Brick fragments, reddish brown, handmade (05.1638 grams), discarded
ST 7-6 Stratum A	4	Brick fragments, reddish brown, handmade, discarded
ST 7-8	1	Delftware glaze chip, buff body with a blue-tinted tin glaze
Stratum A		c. 1600-1800
	1	Pearlware glaze chip, c. post 1779
	1	Pearlware body sherd, hand painted black and blue design on interior, c. post 1795
	1	Bottle glass body fragment, aqua, fire damaged
	102	Brick fragments, reddish brown, handmade (453.592 grams), discarded
	34	Mortar fragments, sand and shell temper (90.7815 grams) discarded
ST 7-9	1	Flake, quartzite, primary
Stratum A	1	Pearlware rim sherd, blue molded shell edge on interior, c. post 1795
	1	Pearlware rim sherd, hand painted black band on rim interior, c. post 1795
	1	Pearlware rim sherd, hand painted black band on rim interior and green foliage design on interior, c. post 1795
	1	Bottle glass body fragment, clear
	1	Window glass fragment, aqua, 3/32” thick
	50	Brick fragments, reddish brown, handmade (1133.98 grams), discarded
ST 7-13	1	Window glass fragments, aqua, 3/32” thick
Stratum B	28	Brick fragments, reddish brown, handmade (45.3592 grams), discarded
	2	Charred wood fragments, discarded
ST 7-15 Stratum A	4	Brick fragments, reddish brown, handmade, discarded
ST 8-5	1	Pearlware glaze sherd, c. post 1775
Stratum B	2	Brick fragments, reddish brown, handmade, discarded
ST 8-6 Stratum A	11	Brick fragments, reddish brown, handmade, discarded

ST 8-6 Stratum B	4	Brick fragments, reddish brown, handmade (08.8701 grams), discarded
ST 8-8 Stratum A	47	Brick fragments reddish brown, handmade (26.8791 grams), discarded
ST 8-9	1	Window glass fragment, aqua, 2/32” thick
Stratum A	48	Brick fragments, reddish brown, handmade, discarded
ST 8-11	1	Pearlware glaze chip, c. post 1779
Stratum A	1	Bottle glass body fragment, clear
	1	Nail fragment, cut
	13	Brick fragments, reddish brown, handmade (41.5981 grams), discarded
	1	Shell fragment, oyster
ST 8-11 Stratum B	19	Brick fragments, reddish brown, handmade (45.3597 grams), discarded
ST 8-12	1	Cobble fragment, quartzite, reduced
Stratum A	1	Nail fragment, indeterminate
	1	Brick fragment, reddish brown, handmade, discarded
ST 8-13 Stratum B	21	Brick fragments, reddish brown, handmade, discarded
ST 9-5 Stratum B	1	Brick fragment, reddish brown, handmade, discarded
ST 9-6	1	Flake, rhyolite, secondary
Stratum A	1	Window glass fragment, aqua, 2/32” thick
	75	Brick fragments, reddish brown, handmade (45.7691 grams), discarded
	4	Mortar fragments, sand and shell temper, discarded
ST 9-9	1	Window glass fragment, aqua, 2/32” thick
Stratum A	34	Brick fragments, reddish brown, handmade, discarded
ST 9-16	3	Iron lid fragments, oval-shaped
Stratum A	10	Brick fragments, reddish brown, handmade (33.5612 grams), discarded

ST 10-4	1	Bottle glass body fragment, amber
Stratum B	8	Brick fragments, reddish brown, handmade, discarded
ST 10-9	1	Pearlware glaze chip, c. post 1779
Stratum A	29	Brick fragments, reddish brown, handmade, discarded
ST 10-10	10	Brick fragments, reddish brown, handmade, discarded
Stratum B		
ST 10-11	3	Brick fragments, reddish brown, handmade, discarded
Stratum A		
ST 10-12	1	Flake, quartzite, primary
Stratum B	1	Bottle glass body fragment, olive green
	23	Brick fragments, reddish brown, handmade (06.7811 grams), discarded
ST 11-4	3	Brick fragments, reddish brown, handmade, discarded
Stratum B		
ST 11-6	3	Brick fragments, reddish brown, handmade, discarded
Stratum A		
ST 11-10	5	Brick fragments, reddish brown, handmade, discarded
Stratum A		
ST 12-4	5	Brick fragments, reddish brown, handmade, discarded
Stratum A		
ST 12-5	1	Flake, silicious slate, tertiary
Stratum B	10	Brick fragments, reddish brown, handmade, discarded
ST 12-6	5	Brick fragments, reddish brown, handmade, discarded
Stratum A		
ST 13-3	1	Pearlware body sherd, c. post 1779
Stratum B	1	Bottle glass body fragment, aqua
	3	Brick fragments, reddish brown, handmade, discarded
ST 13-4	4	Brick fragments, reddish brown, handmade, discarded
Stratum B		
ST 13-6	2	Brick fragments, reddish brown, handmade, discarded
Stratum A		

ST 14-5 Stratum B	1	Brick fragment, reddish brown, handmade, discarded
ST 14-6 Stratum A	40	Brick fragments, reddish brown, handmade (45.3592 grams), discarded
	11	Mortar fragments, sand and shell temper (41.5612 grams) discarded
ST 14-6	2	Bottle glass body fragments, aqua
Stratum B	10	Brick fragments, reddish brown, handmade, discarded
ST 14-8 Strata A/B	1	Coarse earthenware core sherd, reddish buff body, redware
	1	Refined earthenware base sherd, fire-damaged
	1	Stoneware body sherd, red body, unglazed
	255	Brick fragments, reddish brown, handmade (45.3592 grams), discarded
	8	Mortar fragments, shell and sand temper, discarded
ST 14-8 Stratum B	43	Brick fragments, reddish brown, handmade (367.891 grams), discarded
	7	Mortar fragments, shell and sand temper (11.0157 grams) discarded
	1	Shell fragment, oyster, discarded
ST 14-9	1	Bottle glass body fragment, clear, 20th century
Stratum B	1	Brick fragment, reddish brown, handmade, discarded
ST 15-4	1	Pearlware glaze chip, c. post 1779
Stratum B	2	Brick fragments, reddish brown, handmade, discarded
ST 15-7	1	Pearlware glaze chip, c. post 1779
Stratum A	1	Brick fragment, reddish brown, handmade, discarded
ST 16-4 Stratum A	2	Brick fragments, reddish brown, handmade, discarded
ST 16-5 Stratum A	3	Brick fragments, reddish brown, handmade, discarded
ST 16-6 Stratum A	3	Brick fragments, reddish brown, handmade, discarded
ST 17- 4 Stratum A	1	Nail fragment, cut

ST 17-5 Stratum B	2	Iron fragments, indeterminate, discarded
ST 17-6 Stratum A	8	Brick fragments, reddish brown, handmade, discarded
ST 17-6 Stratum B	3	Brick fragments, reddish brown, handmade, discarded
ST 18-5 Stratum A	2 2	Pearlware glaze chips, c. post 1779 Brick fragments, reddish brown, handmade, discarded
ST 18-5 Stratum B	1 3	Pearlware glaze chip, c. post 1779 Brick fragments, reddish brown, handmade, discarded
ST 18-6 Stratum B	3	Brick fragments, reddish brown, handmade, discarded
ST 19-5 Stratum B	4	Brick fragments, reddish brown, handmade, discarded
ST 19-6 Stratum A	20	Brick fragments, reddish brown, handmade (09.1794 grams), discarded
ST 19-6 Stratum B	2	Brick fragments, reddish brown, handmade, discarded
ST 20-5 Stratum A	2 4	Pearlware glaze chips, traces of a blue transfer print design, c. post 1795 Brick fragments, reddish brown, handmade, discarded
ST 20-6 Stratum B	14	Brick fragments, reddish brown, handmade, discarded

Test Units

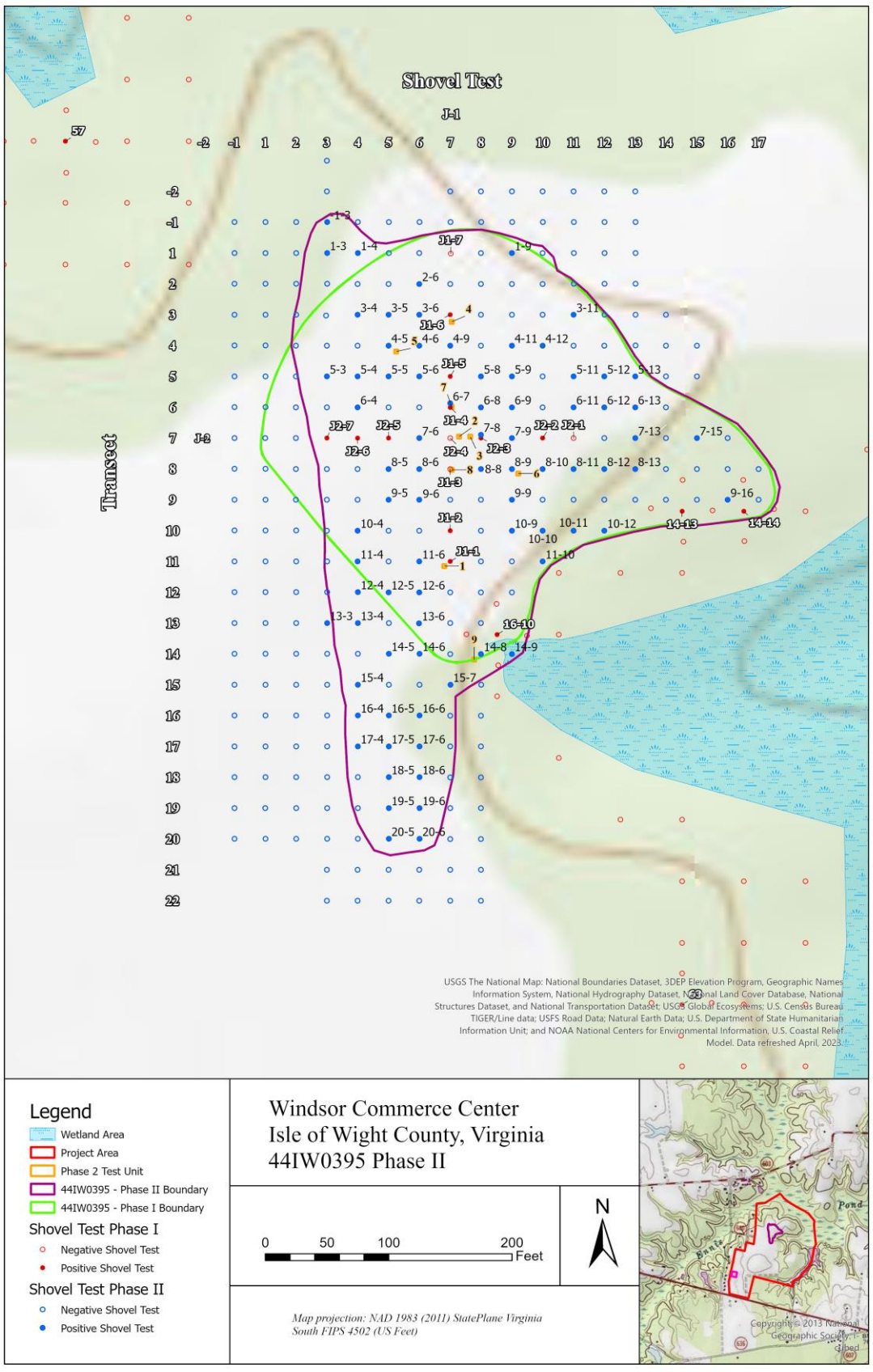
Test Unit 1	1	Flake, quartzite, secondary
Stratum A	1	Creamware glaze chip, c. 1775-1820
	1	Pearlware body sherd, underglaze blue hand painted design on the interior, c. post 1795
	1	Pearlware rim sherd, blue transfer print design on interior, c. post 1795
	1	Yellowware body sherd, c. post 1830
	1	Bottle glass body fragment, aqua
	1	Bottle glass body fragment, clear
	2	Nail fragments, cut
	119	Brick fragments, reddish brown, handmade (453.592 grams), discarded
Test Unit 1	1	Flake, quartzite, secondary
Stratum B	1	Pearlware body sherd, medium and light blue transfer print design on interior, c. post 1795
	3	Window glass fragments, aqua, 2/32" thick
	62	Brick fragments, reddish brown, handmade (226.796 grams), discarded
Test Unit 2	1	Flake, chert, tertiary
Stratum A	1	Pearlware glaze chip, c. post 1779
	3	Pearlware body sherds, c. post 1779
	1	Pearlware body sherd, hand painted blue design on the exterior, c. post 1795
	1	Yellowware body sherd, c. post 1830
	2	Bottle glass body fragment, aqua
	4	Glass fragments, aqua, fire-damaged
	8	Window glass fragments, aqua, 3/32" thick
	3	Nail fragments, cut
	270	Brick fragments, reddish brown, handmade (680.389 grams), discarded
	2	Mortar fragments, sand and shell temper, discarded
Test Unit 2	1	Coarse earthenware rim glaze chip, fire-damaged
Stratum B	315	Brick fragments, reddish brown, handmade (1139.84 grams), discarded
Test Unit 3	5	Pearlware body sherds, c. post 1779
Stratum A	1	Pearlware glaze chip, blue and green design on exterior, c. post 1779
	1	Pearlware rim sherd, c. post 1779
	1	Pearlware body sherd, hand painted blue design on the

		exterior, c. post 1795
	1	Pearlware body sherd, hand painted black and green design on the exterior, c. post 1795
	1	Pearlware body sherd, blue transfer print design on the exterior, c. post 1795
	1	Bottle glass body fragment, aqua
	12	Glass fragments, aqua, fire damaged
	11	Bottle glass body fragments, clear
	1	Bottle glass base fragment, clear, "…101132 …OHIBITED …"
	2	Bottle glass rim fragments, clear, molded screw threads
	21	Window glass fragments, aqua, 3/32" thick
	14	Nail fragments, cut
	1,435	Brick fragments, reddish brown, handmade (7247.48 grams), discarded
	68	Mortar fragments, sand and shell temper, discarded
Test Unit 3	1	Bottle glass body fragment, aqua
Stratum B	5	Bottle glass body fragments, clear
	1	Bottle glass base fragment, clear
	8	Glass fragments, aqua, fire damaged
	8	Window glass fragments, aqua, 3/32" thick
	8	Nail fragments, cut
	1	Nail, cut, 3" L
	589	Brick fragments, reddish brown, handmade, (2721.55 grams), discarded
	132	Mortar fragments, sand and shell temper, discarded
Test Unit 4	1	Pearlware glaze chip, traces of a green hand painted
Stratum A		and incised shell edge, c. post 1795
	25	Brick fragments, reddish brown, handmade, discarded
Test Unit 4	1	Pearlware body sherd, c. post 1779
Stratum B	1	Pearlware body sherd, hand-painted blue design on exterior, c. post 1795
	1	Pearlware rim sherd, hand painted blue and brown design on interior, c. post 1795
	1	Glass fragment, aqua, fire damaged
	1	Window glass fragment, aqua, 2/32" thick
	25	Brick fragments, reddish brown, handmade, discarded
	1	Shell fragment, oyster, discarded
	3	Charred wood fragments, discarded
Test Unit 5	16	Brick fragments, reddish brown, handmade, discarded
Stratum A		

Test Unit 5 Stratum B	2	Brick fragments, reddish brown, handmade, discarded
Test Unit 6 Stratum A	1	Flake, quartzite, secondary
	1	Refined earthenware glaze chip, fire-damaged
	1	Pearlware glaze chip, c. post 1779
	1	Pearlware body sherd, hand-painted blue design on interior, c. post 1795
	1	Glass fragment, aqua, fire-damaged
	12	Window glass fragments, aqua, 3/32” thick
	1435	Brick fragments, reddish brown, handmade (1600 grams), discarded
Test Unit 6 Stratum B	1	Flake, quartz, tertiary
	2	Pearlware body sherds, c. post 1779
	1	Pearlware rim sherd, c. post 1779
	1	Nail fragment, cut
	297	Brick fragments, reddish brown, handmade (226.796 grams), discarded
Test Unit 7 Stratum A	1	Biface base fragment, quartzite
	5	Pearlware body fragments, c. post 1779
	1	Pearlware body fragment, hand painted blue design on exterior, c. post 1795
	1	Pearlware body sherd, hand painted design on exterior, fire damaged
	1	Pearlware rim sherd, blue band on rim edge, c. post 1795
	1	Bottle glass body fragment, aqua
	3	Bottle glass body fragments, clear
	3	Bottle glass rim fragments, clear, molded screw threads
	2	Glass fragments, aqua, fire damaged
	1	Hurricane lamp chimney globe fragment, clear
	5	Window glass fragments, aqua, 3/32” thick
	1	Nail fragment, cut
	1	Iron strap fragment, tapered end
	350	Brick fragments, reddish brown, handmade (221.651 grams), discarded
	14	Mortar fragments, sand and shell temper, discarded
	16	Mortar fragments, sand and shell temper, fire-damaged, discarded
Test Unit 7 Stratum B	5	Pearlware body sherds, c. post 1779
	1	Window glass fragment, aqua, 3/32” thick
	254	Brick fragments, reddish brown, handmade (226.796 grams), discarded
	20	Mortar fragments, sand and shell temper

	1	Mortar fragment, sand and shell temper, fire damaged
Test Unit 8	1	Pearlware glaze chip, c. post 1779
Stratum A	2	Bottle glass body fragments, aqua
	1	Window glass fragment, aqua, 3/32” thick
	90	Brick fragments, reddish brown, handmade (39.8901 grams), discarded
	1	Aluminum can fragment
Test Unit 8	2	Pearlware glaze chips, c. post 1779
Stratum B	1	Pearlware rim glaze chip, hand painted black band c. post 1795
	2	Window glass fragments, aqua, 3/32” thick
	121	Brick fragments, reddish brown, handmade (45.3592 grams), discarded
Test Unit 9	1	Pearlware glaze chip, c. post 1779
Stratum A	1	Bottle glass body fragment, clear, 20th century
	147	Brick fragments, reddish brown, handmade (07.8702 grams), discarded
	1	Mortar fragment, sand and shell temper. discarded
	1	Shell fragment, oyster, discarded
	1	Drain file fragment, reddish orange, discarded

APPENDIX C
PROJECT MAP


Shovel Test
Transect
J-1
J-2
Legend
Wetland Area
Project Area
Phase 2 Test Unit
44IW0395 - Phase II Boundary
44IW0395 - Phase I Boundary
Shovel Test Phase I
Negative Shovel Test
Positive Shovel Test
Shovel Test Phase II
Negative Shovel Test
Positive Shovel Test
Windsor Commerce Center
Isle of Wight County, Virginia
44IW0395 Phase II
0 50 100 200 Feet
N
Map projection: NAD 1983 (2011) StatePlane Virginia South FIPS 4502 (US Feet)
USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed April, 2023.
Pond
Copyright © 2013 National Geographic Society, i-cubed

APPENDIX D
GPR REPORT

JOB SUMMARY

Service Completed Date: 07/26/2023

Customer: KIMLEY HORN **Phone Number:**

Billing Address	City	State	Zip
11700 KATY FWY	HOUSTON	TX	77079

Job Details

Jobsite Location	City	State	Zip
11483 Windsor Boulevard	Windsor	Virginia	

Work Order Number 573052-77979 **Customer Service Phone Num**

Job Num **PO Num**

Project Manager: Timothy Woods **Email:** Logan.Woods@gprsinc.com

Thank you for using GPRS on your project. We appreciate the opportunity to work with you. If you have questions regarding the results of this scanning, please contact the lead GPRS technician on this project.

EQUIPMENT USED

The following equipment was used on this project:

- **Underground GPR Antenna:** This GPR Antenna uses frequencies ranging from 250 MHz to 450 MHz and is mounted in a stroller frame that rolls over the surface. Data is displayed on a screen and marked in the field in real-time. The surface needs to be reasonably smooth and unobstructed to obtain readable scans. Obstructions such as curbs, landscaping, and vegetation will limit the efficacy of GPR. The total effective scan depth can be as much as 8' or more with this antenna but can vary widely depending on the soil conditions and composition. Some soil types, such as clay, may limit maximum depths to 3' or less. As depth increases, targets must be larger to be detected, and non-metallic targets can be challenging to locate. The depths provided should always be treated as estimates as their accuracy can be affected by multiple factors. For more information, please visit: Link
- **GPS:** This handheld unit offers accuracy down to 4 inches; however, the accuracy achieved will depend on the satellite environment at the time of collection and is not considered survey-grade. Features can be collected as points, lines, or areas and then exported as a KML/KMZ or overlaid on a CAD drawing. For more information, please visit: Link

JOB SUMMARY

WORK PERFORMED

GPRS performed the following work on this project:

CEMETERY

- The effective depth of GPR will vary throughout a site depending on a variety of factors such as surface type, surface conditions, soil type, and moisture content. At this site, the maximum effective GPR depth was approximately 5 feet.

RESULTS AND NOTES

Client's Scope of Work	Scan for possible unmarked graves within the scan area.		
Additional Notes	GPR was used for locating possible unmarked graves. GPR was limited to a max depth of approximately 5ft in areas but this max depth was not consistent over the entire scan area. I scanned in a grid pattern to determine if there were any anomalies with characteristics to what an unmarked grave would be. There were no anomalies within the scan area that portrayed characteristics of an unmarked grave being present. Surface obstructions, overgrown vegetation and rough terrain were limitations encountered throughout the scans. -Understand we cannot scan within 2' of all obstructions. We advise to stay 2' from all markings. -Note some lines/utilities are not traceable without direct access points. -Note, GPRS does not replace 811 mandates. -GPR technology dictates, In order to be seen with GPR, pipes must be larger as the depth increases -Understand our max depth does not indicate that we could see this deep throughout the entire work area. - GPRS strongly advises potholing or daylighting the location/depth of any marked out utilities for verification prior to any excavations within 2' of markings.		
Limitations Encountered:	Surface Obstructions, Overgrown Vegetation	Findings Walkthrough done with client:	Yes

JOB SUMMARY

Image 1

Image 2

Image 3

Image 4

JOB SUMMARY

CONTACT / SIGNATURE INFORMATION

TERMS & CONDITIONS

http://www.gprsinc.com/termsandconditions.html

SIGNATURE

CONTACT NAME

Victoria Holmes 757-350-6669

GPRS

3D LASER SCANNING

BUILD AT THE SPEED OF INSIGHT

GPRS DELIVERS SINGULAR SOLUTIONS IN 3D TECHNOLOGY

GPRS Intelligently Visualizes The Built World™ above and below ground as the leading provider of accurate and creative 3D laser scanning solutions for the construction, architecture, and engineering industries.

3D laser scan technology is a cost-effective solution to your facility visualization needs. It can reduce and even eliminate costly errors to speed up your design, engineering, and construction process.

ABOVE AND BELOW GROUND DATA CAPTURE

The combination of laser scanning and ground penetrating radar allows you to visualize your facility effectively and accurately.

Our fully integrated service gives you accurate data to expedite design planning, extract 3D coordinates and measure distances, along with the ability to mark-up and share this with project teams. Receiving critical site information will lower project risks and increase project efficiency.

What can GPRS help you visualize?

SUBSURFACE INVESTIGATION METHODOLOGY SIM

- TRAINING
- EQUIPMENT
- METHODOLOGY

The use of proper training, multiple technologies and a field-tested methodology are the key to a successful utility locate. GPRS is a master of all three components through the utilization of the SIM Specification.

SIMSPEC.ORG

SERVICES

- UTILITY LOCATING
- VIDEO PIPE INSPECTION
- LEAK DETECTION
- MAPPING & MODELING
- CONCRETE IMAGING

1.866.914.4718

GPRSINC.COM

APPENDIX E
STAFF RESUMES

CAROL D. TYRER, RPA
PRESIDENT/PROJECT MANAGER/PRINCIPAL INVESTIGATOR/LABORATORY DIRECTOR
CIRCA~ CULTURAL RESOURCE MANAGEMENT, LLC
Williamsburg, Virginia Office

Education:

University of Tennessee, Chattanooga, 1984, BA, Sociology and Anthropology: Anthropology
University of Tennessee, Chattanooga, 1984, BA English and American Language and Literature: Technical Writing
University of Tennessee, Chattanooga, 1987, English: Technical Writing Graduate classes
University of Denver, 2012, MLS. Global Affairs: World History and Culture
Liberty University: Ph.D., American History, (ongoing) est. 2023

October 2019 to present: Register of Professional Archaeologists (RPA) #18078

Professional Experience:

2012-present: President/Project Manager/Principal Investigator/Laboratory Director, Circa~ Cultural Resource Management, Inc., Williamsburg, Virginia.
2005-2012: President/Project Manager/Laboratory Director, Circa~ Cultural Resource Management, Inc., Williamsburg, Virginia.
2002-2005: Partner/Chief Financial Officer/Operations Manager/Project Manager/Marketing Director/Laboratory Director, James River Institute for Archaeology, Inc. (JRIA), Williamsburg, Virginia.
1995-2002: Operations Manager/Project Manager/ Marketing Director/Archaeological Laboratory Director, Cultural Resources, Inc. (CRI), Williamsburg, Virginia.
1991-1995: Project Manager/Marketing Director/ Archaeological Laboratory Director, Espey, Huston & Associates, Inc. (EH&A), Williamsburg, Virginia.
1990-1991: Consultant, Colonial Williamsburg Foundation.
1988-1991: Project Manager/Archaeological Laboratory Director, Mid-Atlantic Archaeological Research & Associates (MAAR), Williamsburg, Virginia.
1990 Field Crew, College of William and Mary Archaeological Project Center, Williamsburg, Virginia.
1985-1986: Assistant Curator, Riley County Historical Museum, Manhattan, Kansas.
1985: Assistant Field Supervisor, Environmental Systems, Inc., Kansas City, Kansas.
1985: Field Supervisor/Field Crew, Fort Riley, Kansas, University of Wichita, Kansas.
1983-1984: Field Crew, St. Simon's Island, Georgia, University of Tennessee
1982-1984: Lab Technician, University of Tennessee
1977-1982: Field and Lab Technician (summers), TVA, Chattanooga, Tennessee

Non-Profit Experience:

1996 to present: Co-president, Friends of the National Park Service Historic Green Spring Park, Williamsburg, Virginia
2010 to present: Vice-president Watermen's Museum, Yorktown, Virginia

Fields of Experience:

Ms. Tyrer has over 42 years of professional experience in the field of archaeology and the management of archaeological and museum collections. Her current responsibilities at Circa~ include managerial and technical tasks associated with archaeological assessments and Phase I, II, and III excavations, consultation with and representation of clients before state and national review agencies, writing and editing technical reports, preparing and managing project budgets, and developing and implementing archaeological research designs, site predictability models, and sensitivity areas. She has been the principal author of over 400 technical reports and historical studies (all accepted by the regulatory agencies), and worked closely with the Virginia Department of Historic Resources (VDHR) and other official agencies to fulfill the requirements of local, state, and federal regulations related to both archaeological and architectural resources.

As Laboratory Director, Ms. Tyrer has identified, catalogued, and analyzed artifacts from sites in Tennessee, North Carolina, South Carolina, Kentucky, West Virginia, Maryland, Florida, Pennsylvania, Georgia, Kansas, and Virginia. She has performed these analyses on Native American sites of all periods and on 17th, 18th, 19th, and 20th century historic sites. She is familiar with the state and federal artifact curation standards and uses these guidelines daily. She has prepared field soil samples for flotation of faunal remains and for carbon-14 dating and has experience in metal conservation. She also identifies and analyzes artifacts recovered from excavations and prepares distribution maps, vessel counts, and detailed discussions on artifact types for reports.

Ms. Tyrer's specialty is the identification and analysis of ceramics. She completed specialized computer cataloguing of the extensive ceramic study collection at The Colonial Williamsburg Foundation in Williamsburg, Virginia. Ms. Tyrer has also worked in a county historical museum identifying, labeling, curating, and appraising artifacts and museum specimens, and preparing exhibits. In addition, Ms. Tyrer has re-cataloged and analyzed the approximately 100,000-artifact collection from George Washington's Boyhood Home using the Automated National Catalog System (ANCS) developed by the National Park Service.

Ms. Tyrer has considerable experience in historic and prehistoric archaeological resources. She has personally designed and completed investigations for dozens of projects ranging from a large-scale study archaeological and historical resources to detailed investigations of numerous individual historic and prehistoric sites throughout the east coast. Ms. Tyrer's technical capabilities include detailed archival and literary research at the local, state, and national levels; site documentation and analysis; evaluation of properties for National Register and State Landmark significance; and technical report writing. As with other

senior staff, she will also be responsible for the formulation of research designs, preparation of project budgets, selection and guidance of field crews, and the preparation of technical reports.

Ms. Tyrer also has extensive experience with assessment, survey, evaluation, and mitigation of historic and prehistoric resources. She has developed sampling designs for site locations models and settlement patterns for prehistoric and historic sites for tracts of land ranging from a few acres to thousands of acres. These sampling designs are based on previous and present land use, environmental characteristics, and topographic features. Other responsibilities include the dissemination of archaeological information to the public through various media and exhibits, educational site brochures, and site visits.

DAWN M. MUIR, R.P.A.
HISTORIAN
ARCHITECTURAL HISTORIAN
PRINCIPAL INVESTIGATOR
CIRCA~ CULTURAL RESOURCE MANAGEMENT, LLC

Education:

Radford University, 1996, B.A. Interior Merchandising

Middle Tennessee State University, M.A., 2000, Public History: Historic Preservation tract

2010-present: Registered Professional Archaeologist (RPA) #203780

Professional Experience:

2007-present: Architectural Historian, Historian, Principal Investigator, Circa~ Cultural Resource Management, LLC, Williamsburg, Virginia.

2004-2007: Cultural Resources Manager, Preservation Planner, Vanasse Hangen Brustlin, Inc. (VHB), Williamsburg, Virginia.

2000-2004: Cultural Resource Specialist, Architectural Historian, General Scientific Corporation under contract to Naval Air Station Patuxent River, Patuxent River, Maryland.

1998-2000: Assistant, Main Street Murfreesboro, Murfreesboro, Tennessee.

Fields of Experience:

Ms. Muir has over 20 years of professional experience in the fields of archaeology, architectural history, and cultural resources. Her current responsibilities at Circa~ include managerial and technical tasks associated with cultural resources assessments including both archaeology and architectural resources and Phase I, II, and III surveys and excavations, consultation with state and national review agencies, developing and implementing archaeological and architectural research designs, and writing and editing technical reports. She has authored or co-authored over 200 technical reports and historical studies (all accepted by the regulatory agencies), and worked closely with the Virginia Department of Historic Resources (VDHR), the Maryland Historical Trust (MHT), the National Park Service (NPS), the U.S. Army Corps of Engineers, and other official agencies to fulfill the requirements of local, state, and federal regulations related to archaeological and architectural resources.

As a principal investigator and architectural historian, Ms. Muir has identified archaeological and architectural resources in Tennessee, Maryland, Pennsylvania, New York, North Carolina, Massachusetts, Maine, and Virginia. She has performed surveys and analyses on all periods including Paleoindian to Woodland Native American sites and 17th, 18th, 19th, and 20th century historic sites and burials. She has completed investigations for numerous projects that range from large-scale studies of archaeological and historic resources to detailed investigations of individual Native American and historic sites. Ms. Muir is familiar with the management and preparation of environmental documents that comply with the National Historic Preservation Act of 1966, as amended and the National Environmental Policy Act of 1969. She has a solid understanding of federal and state environmental and cultural resources including the *Secretary of the Interior Standards and Guidelines for Archaeology and Historic Preservation*. She is familiar with both the Maryland and Virginia standards, and she uses these guidelines when drafting reports.

Ms. Muir's technical capabilities include detailed archival and literary research at the local, state, and national levels; site documentation and analysis; evaluation of properties for National Register of Historic Places and State Landmark significance; preparation of project budgets; selection and guidance of field crew; and technical report writing. Ms. Muir also has extensive experience with assessment, survey, evaluation, and mitigation of both Native American and historic resources. In addition, Ms. Muir has a thorough understanding of the Section 106 process and has written over 100 Section 106 compliance packages. As part of the Section 106 process, Ms. Muir has drafted over 30 Memorandums of Agreement (MOA) as mitigation for various projects and has developed a draft Programmatic Agreement (PA) for Disaster Preparedness related to cultural resources.

In addition, Ms. Muir has also attended various training sessions including How to Manage the National Environmental Policy Act and Write Effective National Environmental Policy Act documents, How to Write Creative Mitigation, an Introductory and Advanced Section 106 Seminar, and How to Write Programmatic Agreements. Ms. Muir was also instrumental in arranging a Historic Preservation Workshop for Naval Air Station (NAS) Patuxent River.

Prior to joining Circa~, Ms. Muir worked as a cultural resource specialist contractor for NAS Patuxent River in Patuxent River, Maryland, where she oversaw the historic preservation requirements of the NAS. Ms. Muir also maintained the historic building database for the NAS, which contained over 50 historic structures at both the NAS and two outlying properties. In addition, Ms. Muir assisted in a station-wide survey of buildings over 50 years of age. This effort resulted in a comprehensive report of the station's history and significance, the identification of and preparation of nominations for four National Register of Historic Places eligible districts, and the eventual completion of an Integrated Cultural Resources Management Plan (ICRMP) for the NAS. Ms. Muir also assisted in archaeological

requirements for NAS Patuxent River including monitoring for underground utilities at an 18th century house site, assisting in survey of a Jesuit Mission site on an outlying base of NAS Patuxent River, and finalizing the artifact collection for the Officers Club archaeological survey.

Ms. Muir has also worked on several other notable projects. While at NAS Patuxent River, Ms. Muir conducted an architectural and landscape survey and National Register nomination of the Mattapany-Sewell Historic District, which included a 18th century house and outbuildings; drafted a Preservation Plan and National Register nomination for the Point Lookout Light Station Complex, owned and operated at the time by NAS Patuxent River; and drafted a Preservation Plan and repair scope of work for the St. Nicholas Chapel on the NAS in response to water and roof damage sustained during several hurricanes. In addition, Ms. Muir assisted in a project to relocate the St. Nicholas Chapel cemetery and restore the existing gravestones that had been buried by the U. S. Navy in the 1940s. More recently, Ms. Muir assisted in a Phase I Architectural Reconnaissance Survey of the East and West Area of NASA Langley Air Field, in Hampton, Virginia.

SKYE W. HUGHES, R.P.A.
HISTORIAN/PRINCIPAL INVESTIGATOR/GIS ANALYIST
CIRCA~ CULTURAL RESOURCE MANAGEMENT, LLC

Education:

New Mexico State University, 1996, B.A. Anthropology and French

Florida Atlantic University, M.A., 2003, Anthropology

Register of Professional Archaeologists (RPA) #12804

Professional Experience:

2017-present: Historian, GIS Analyst, Principal Investigator, Circa~ Cultural Resource Management, LLC, Williamsburg, Virginia.

2003-2008: Principal Investigator, Panamerican Consultants, Inc. (PCI), Tampa, Florida.

2002-2003: Archaeologist, Southeastern Archaeological Company, Inc. (SEARCH), Riverview, Florida.

1999-2002: Archaeologist, Technical Writer, Illustrator, Janus Research, St. Petersburg, Florida

1998-2000: Museum attendant, Morikami Museum and Japanese Gardens, Delray Beach, Florida

1997-1998: Assistant instructor Introduction to Anthropology, Florida Atlantic University, Boca Raton, Florida

1997: Laboratory Director, Florida Atlantic University, Boca Raton, Florida

1997-1998: Consulting archaeologist, Historic Preservation Services, Plantation, Florida

1996-1998: Archaeologist, Archaeological and Historical Conservancy, Inc., Miami, Florida

Fields of Experience:

Ms. Hughes has over 25 years of professional experience in the fields of archaeology, architectural history, and cultural resources. From 2003 to 2008, Ms. Hughes worked as a Principal Investigator for Panamerican Consultants, supervising for five years archaeological and architectural fieldwork and studies. Her current responsibilities at Circa~ include technical tasks associated with cultural resources assessments including both archaeology and architectural resources and Phase I, II, and III surveys and excavations, consultation with state and national review agencies, developing and implementing archaeological and architectural research designs, and writing and editing technical reports. She has authored or co-authored over 200 technical reports and historical studies (all accepted by the regulatory agencies) and worked closely with the U. S. Fish and Wildlife Service (USFWS), the U. S. Army Corps of Engineers (USACE), and other official agencies to fulfill the requirements of local, state, and federal regulations related to archaeological and architectural resources.

As an archaeologist and principal investigator, Ms. Hughes has identified archaeological and architectural resources in Florida, Louisiana, Texas, Alabama, and Virginia. She has performed surveys and analyses on all periods including Paleoindian to Woodland Native American sites and 17th, 18th, 19th, and 20th century historic sites and burials. She has completed investigations for numerous projects that range from large-scale studies of archaeological and historic resources to detailed investigations of individual Native American and historic sites. Ms. Hughes is familiar with the management and preparation of environmental documents that comply with the National Historic Preservation Act of 1966, as amended and the National Environmental Policy Act (NEPA) of 1969. She has a solid understanding of federal and state environmental and cultural resources including the *Secretary of the Interior Standards and Guidelines for Archaeology and Historic Preservation*. She is familiar with Virginia standards, and she uses these guidelines when drafting reports.

Ms. Hughes's technical capabilities include detailed archival and literary research at the local, state, and national levels; site documentation and analysis; evaluation of properties for National Register of Historic Places and State Landmark significance; preparation of project budgets; selection and guidance of field crew; and technical report writing. Ms. Hughes also has extensive experience with assessment, survey, evaluation, and mitigation of both Native American and historic resources. In addition, Ms. Hughes has a thorough understanding of the Section 106 process.

In addition, Ms. Hughes gained teaching experience while working towards her graduate degree in Anthropology working as an assistant instructor and teaching assistant while at Florida Atlantic University. She has also given guest lectures on zooarchaeology and presented professional papers at various conferences.

Prior to joining Circa~, Ms. Hughes worked as a staff archaeologist for PCI in Tampa Florida, where she served as a Principal Investigator for archaeological projects under contract to many different firms. Ms. Hughes has also worked on several notable projects. These include a 3,000+-acre survey for the Southwest Florida Water Management District and Sarasota County, a Phase I survey at Naval Station Mayport, and Phase I and II excavations at Naval Air Station (NAS) Jacksonville.

Economic Impact Analysis

October 2023

Tidewater Logistics Center

Prospective Investment + Operations

Commonwealth of Virginia / Isle of Wight County

UPDATED VERSION

Document may contain proprietary information

Prepared By:

HICKEY

A NEW ERA IN SITE SELECTION

TABLE OF CONTENTS

Executive Summary	Page 3
Data Assumptions	Page 5
Potential Economic Impact	Page 6
Jobs Impact	Page 7
Tax Revenue Impact	Page 8
Money Impact	Page 9
Conclusion	Page 10
Supplemental Information Request	Page 11

EXECUTIVE SUMMARY

Purpose and Scope of Work

Hickey & Associates, LLC, (Hickey) has been retained to develop an Economic Impact Analysis (EIA) on behalf of The Meridian Group. The robust EIA is focused on prospective new capital investment and economic activities for the Tidewater Logistics Center in the Commonwealth of Virginia.

The objective of this EIA is to clearly demonstrate the significance and scale of the potential economic impact of new capital investment and economic activities tied to the development of the Tidewater Logistics Center by calculating the monetary impact from operations, the magnitude of employment/jobs, and the generated tax revenues for the commonwealth and local communities. The financial impact directly related to anticipated capital investment and job creation has been calculated, including infrastructure improvements, equipment acquisition, goods and services, and wages for direct employees and indirect jobs.

The inputs and assumptions are uniquely tailored to accommodate the potential operational blend for the site in the Commonwealth of Virginia.

Methodology and Inputs

In the 1970's, the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) developed a method for estimating regional I-O (Input-Output) multipliers known as the Regional Industrial Multiplier System or RIMS.

In the 1980's, the BEA completed an enhancement of RIMS, known as RIMS II (Regional Input-Output Modeling System). Since then, the RIMS II Model has undergone further refinement and updates, over the years.

RIMS II is based on an accounting framework called an I-O table. For each industry, an I-O table shows the industrial distribution of inputs purchased and outputs sold. A typical I-O table in RIMS II is derived from two data sources: BEA's national I-O table, which shows the input and output structure of nearly 500 U.S. industries and BEA's regional economic accounts, which are used to adjust the national I-O table to show a region's industrial structure and trading patterns.

RIMS II multipliers can be estimated for any region composed of one or more counties and for any industry, or group of industries, in the national I-O table. The accessibility of the main data sources for RIMS II keeps the cost of estimating regional multipliers relatively low. Empirical tests show that estimates based on relatively expensive surveys and RIMS II based estimates are similar in magnitude. For this study, 2012/2021 multipliers for the Virginia Beach-Norfolk, VA-NC Combined Statistical Area were utilized.

Methodology and Inputs, continued

RIMS II measures and evaluates an industry for three elements of potential economic impact:

- Direct impacts include earnings (income) and employment (jobs) generated by an employer, as well as, direct expenditures
- Induced impacts are a result of what employees spend in the regional economy
- Indirect impacts are a result of the goods and services purchased by the employer throughout the regional economy

RIMS II is widely used in both the public and private sectors. In the public sector, the U.S. Department of Defense uses it to estimate the regional impacts of military base closings, and state transportation departments use it to estimate regional impacts of airport construction and expansion. In the private sector, consultants and analysts use it to estimate regional impacts of a variety of projects, such as, general business expansions, development of shopping malls, sports stadiums, industrial parks, etc.

The EIA aims to capture the potential impact of existing and potential future operations in the Commonwealth of Virginia. These include the following:

- **Total Money Impact** – The potential total money impact of operations is a measure of the total capital circulation created by existing operations and the associated investment.
- **Total Jobs Impact** – The potential job impact is a measure of the total number of jobs created as a result of the prospective. Job creation reflects the direct employees hired to perform work at the facility, as well as, the indirect and induced jobs that result from the wages and benefits paid to the direct employees, the annual purchases of goods and services, the investment in personal property and the investment in the facilities.
- **Total Tax Revenue Impact** – Tax revenue impact is determined by the annual revenue contribution to income tax, sales tax and property tax for all of the direct, indirect/induced and construction employees, as well as, the taxes paid by the facility in previous years. The calculations utilize local and state tax rates and employee average annual income.

DATA ASSUMPTIONS

Data inputs were developed based on an estimated blend of building / industry use across the development site of the Tidewater Logistics Center with a blend of 10% Light Manufacturing / 20% Manufacturing / 70% Warehousing.

Wages, planned infrastructure, equipment and goods and services expenses were estimated specific to the site and leveraged insights from similar projects in the commonwealth and throughout the United States for 2024 - 2033.

Annual wages are estimated to increase by approximately 3% each year.

The following are the data assumptions utilized for the EIA:

Employment Data

New Employment Schedule

Type	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	PEAK
Manufacturing Total	400	400	400	400	400	400	400	400	400	400	400
Warehousing Total	800	800	800	800	800	800	800	800	800	800	800
All Total	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200

Wage Schedule

Job Types	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Manufacturing	$48,940	$50,408	$51,920	$53,478	$55,082	$56,735	$58,437	$60,190	$61,996	$63,856
Warehousing	$42,570	$43,847	$45,163	$46,517	$47,913	$49,350	$50,831	$52,356	$53,926	$55,544
Blended Wage	$44,481	$45,815	$46,274	$46,736	$47,204	$47,676	$48,152	$48,634	$49,120	$49,612

Capital Investment Data

Site Investment

Investment Type	2024
Construction	$106,000,000
MM&E	$40,000,000
Investment Total	$146,000,000

POTENTIAL ECONOMIC IMPACT

2024 - 2033

TOTAL JOB IMPACT
5,158 Jobs

TOTAL ECONOMIC IMPACT
$2.9 Billion

TOTAL TAX REVENUE IMPACT
$269.3 Million

JOBS IMPACT

The potential job impact is a measure of the total number of jobs as a result of operations. Job creation reflects the direct employees hired to perform work for the project, as well as, the indirect jobs that result from the wages and benefits paid to the direct employees, the annual purchases of goods and services, the investment in personal property, and the investment in facilities.

The most current available RIMS II multipliers were obtained by the U.S. Department of Commerce, Regional Product Division of the Bureau of Economic Analysis.

Jobs are not added together over the years. Instead, the impact of jobs must be examined annually. Utilizing the RIMS II model, the anticipated Total Job Impact for the potential future operations would be 5,198 jobs over the study period.

5,198 JOBS

DIRECT = 1,200 JOBS

INDIRECT / INDUCED + CONSTRUCTION = 3,958 JOBS

ECONOMIC IMPACT

The potential total earnings impact of the project is a measure of the direct and indirect impact of wages, the capital investment, and annual goods & services purchases.

In total, the money impact attributed to existing and potential future operations for the reviewed period is $2.9 billion.

$2.9 Billion

DIRECT = $146 Million
INDIRECT & INDUCED = $2.754 Billion

TAX REVENUE IMPACT

Tax revenue impact is determined by the annual revenue contribution to the government due to the creation of direct and indirect jobs, as well as, purchases and investment in the operations.

The total tax revenue impact attributed to the existing and potential future operations would be $269.3 Million over the reviewed period. Further breakdown of the tax revenues is below.

$269.3 Million

SALES TAX = $42.1 Million
PROPERTY TAX = $99.7 Million
INCOME TAX = $111.5 Million

CONCLUSION

The objective of this EIA is to clearly demonstrate the significance and scale of the potential economic impact of new contracts and existing operations in the Commonwealth of Virginia by calculating the monetary impact from operations, the magnitude of employment/jobs, and the generated tax revenues for the state and for local communities.

The EIA indicates the significant positive impact of projected investment in the local economy.

The direct economic benefit over the reviewed period is estimated at $2.9 billion, with a total tax revenue impact of approximately $269.3 million, and a projection of 5,198 jobs.

SUPPLEMENTAL INFORMATION REQUEST

Per a request from the County of Isle of Wight Office of the Commissioner of the Revenue, Hickey has developed the following response to questions regarding the EIA.

Geographic Economic Impact

As the report was developed, the primary estimated figures are for the Isle of Wight County with a regional impact. With the workforce to be derived from within and outside of the county, the economic impact analysis does assume a wider regional impact. Certain tax revenues, such as sales taxes, are considered to be collected at the local level, with the most significant impact being in the initial years of construction.

Employment Assumptions + Outputs

For the assumptions of the EIA, with the blended investment project of industrial and distribution uses, the following are the direct, indirect/induced, and the construction jobs (temporary) to be created by the project:

Job Type	Estimated Creation
Direct (Full-Time / Part-Time)	1,200
Indirect / Induced	2,599
Construction	1,359
Total Employment	5,198

Tax Revenue Estimates

The EIA developed for the Tidewater Logistics Center assumes a total tax revenue impact based on the annual revenue contribution to income tax, sales tax and property tax for all of the direct, indirect/induced and construction employees, as well as, taxes estimated to incur by the investment in the facility. The calculations utilizes the following local and state tax rates and employee average annual income and capital investment schedule.

Inputs	Jurisdiction	Rate / Value	Source
Real Estate Property Tax Rate	County	0.710%	Isle of Wight County Website
State Sales Tax Rate	State	5.0%	Isle of Wight County Website
County Sales Tax Rate	County	1.0%	Isle of Wight County Website
Virginia Income Tax Blended Rate	State	3.875%	Virginia Dept of Taxation Website
Average Home Price / Value	County	$299,223	Zillow
Home Ownership Rate	County	77.9%	U.S. Census Bureau

Tax Type	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
Sales Tax	$5,325,341	$3,689,589	$3,782,170	$3,877,533	$3,975,774	$4,076,992	$4,181,288	$4,288,769	$4,399,546	$4,513,733	**$42,110,735**
Property Tax	$14,124,657	$9,476,649	$9,485,116	$9,493,838	$9,502,821	$9,512,073	$9,521,603	$9,531,419	$9,541,529	$9,551,943	**$99,741,648**
Income Tax	$15,465,007	$10,494,712	$10,536,356	$10,578,616	$10,621,506	$10,665,037	$10,709,223	$10,754,076	$10,799,611	$10,845,840	**$111,469,983**

SUPPLEMENTAL INFORMATION REQUEST, CONTINUED

Economic Impact Multipliers

For additional reference, the following are the primary RIMS II 2012/2021 economic impact multipliers for the Virginia Beach-Norfolk, VA-NC Combined Statistical Area utilized in the study:

Category	Economic Impact Multipliers		
	Output	Employment	Earnings
Direct	1.6014	9.2559	0.4696
Construction	1.8251	12.8208	0.6709
Machinery + Equipment	1.7351	7.419	0.4837
Goods + Services	1.6907	10.0062	0.5521

PLANNING REPORT

APPLICATION:

Acceptance of the 2023 Planning Commission Annual Report

BACKGROUND:

The Planning Commission develops an annual report in conformance with Section 15.1-2221 of the Code of Virginia. This Section states that local planning commissions shall make recommendations and an annual report to the governing body concerning the operation of the commission and the status of planning within its jurisdiction.

DESCRIPTION:

Planning and Zoning staff developed the attached 2023 Planning Commission Annual Report for review and approval by the Planning Commission. The Report includes a description of the types of applications considered by the Planning Commission this past calendar year as well as a general description of its long range planning activities, the meeting attendance statistics of its members, and the overall development activity in the County.

STAFF RECOMMENDATION:

Staff recommends approval of the 2023 Planning Commission Annual Report

ATTACHMENTS:

Description	Type	Upload Date
2023 Planning Commission Annual Report	Backup Material	2/20/2024

Local Roots, Global Reach

ISLE OF WIGHT COUNTY PLANNING COMMISSION
2023 ANNUAL REPORT

ADOPTED BY THE
ISLE OF WIGHT COUNTY PLANNING COMMISSION
FEBRUARY 27, 2024

Local Roots, Global Reach
ISLE OF WIGHT
COUNTY, VIRGINIA

CHAIRMAN'S MESSAGE

To Members of the Board of Supervisors and Citizens of the County of Isle of Wight, Virginia:

We are pleased to submit the Planning Commission 2023 Annual Report. This report is intended to provide informative and relevant data for the residents of the County, Board of Supervisors, and any other interested readers.

In 2023, the County's Board of Supervisors, Planning Commission and the Community Development team continued its strategy to proactively resolve issues related to growth and new technology to further the goals of the County's Comprehensive Plan, *Envisioning the Isle*. We continued our development of the Rushmere Village Master Plan based on the feedback we received from the public input survey and community meetings. We also began implementation of the Opengov integrated permitting software to increase the efficiency of development review processes and to improve the community's ability to perform more permitting functions online at any time. We continued to refine county ordinances to allow flexibility for new use types and to better address siting concerns associated with solar energy generation facilities and short term rentals. These new tools will help citizens do business faster, save money, and protect property values, thereby increasing the overall wealth levels of the County.

Although persistently high interest rates and inflation across the nation continued to dampen permitting activity in 2023, new commercial construction permitting activity more than tripled. This past year saw the start of new retail, medical, financial, and industrial space in both Carrollton and Windsor. The County's overall population continues to climb as well. The July 2022 American Community Survey estimated the County's population to be 40,141, or a 4% increase over the 2020 decennial census count of 38,606, doubling the original projected growth rate.

As we look ahead to 2024, we will begin the background research to support the forthcoming five year Comprehensive Plan Review with an eye towards supporting the increasing operational and capital facility needs as a result of continued growth. We will also begin to examine changes brought about by emerging energy technology and consider ways to increase safe, affordable housing options for people of all ages and abilities.

The new year brings about changes for the Planning Commission as well. Beginning January 2024, I will pass the reigns to a new chairman, Bobby Bowser of District 3. I look forward to continuing to serve on the County's Planning Commission and will lend Chairman Bowser and his new vice-chairman, Thomas Distefano of District 2, my full support. Together, we can continue to make a positive difference.

J. Brian Carroll
Chairman

2023 Isle of Wight Planning Commission

Brian Carroll, Chair	District 5
Bobby Bowser, Vice-Chair	District 3
Cynthia Taylor, AICP	District 2
Raynard Gibbs	District 1
Jennifer Boykin	District 5
James Ford	District 3
Thomas Distefano	District 2
Matt Smith	District 1
Rick Sienkiewz	District 4
George Rawls	District 4

Robert W. Jones, Jr., County Attorney
Amanda Landrus, Secretary

Isle of Wight County Planning and Zoning Staff

Amy M. Ring, AICP	Community Development Director
Shaunee A. Beussink	Environmental Planner
Sandy Robinson	Planner II
Trenton Blowe	Planner II
Caleb Kitchen	Planner I
Rachel Bass	Zoning Coordinator
Katie Marshall	Code Enforcement Officer
Amanda Landrus	Planning Services Coordinator

OVERVIEW

The role of the Planning Commission outlined in Section 15.2-2200 of the Code of Virginia (1950, as amended) is to improve the public health, safety, convenience and welfare of the County's citizens through the development and implementation of long-range plans to ensure for adequate transportation, utility, health, housing, educational, economic development, and recreational facilities and to ensure future growth be consonant with the efficient and economical use of public funds. The Planning Commission utilizes the County's Comprehensive Plan as a guide to review current and long-range planning applications to ensure future development proceeds in an orderly and efficient manner.

In furtherance of this effort, the Planning Commission conducted a total of twelve regular meetings, one worksession and one special called annual retreat meeting during the 2023 calendar year. The Commission took action on a total of 37 items to include:

- 4 Rezoning requests;
- 8 Conditional use permit requests;
- 14 Waiver and Exception Requests;
- 3 Zoning Ordinance amendments;
- 1 Subdivision Ordinance amendment;
- 1 Chesapeake Bay Preservation Area Ordinance amendment;
- 5 Agricultural and Forestal District Withdrawal Request; and
- The 2022 Planning Commission Annual Report.

The total number of items considered by Planning Commission in 2023 is a 42% increase from the 26 items considered in 2022. The highest number of applications by type in 2023 consisted of waiver and exception requests to zoning and subdivision ordinance requirements for building height, sign size, lots on a private road, and architectural design criteria in the overlay districts. The next highest number of applications included eight conditional use permit requests for a variety of commercial uses, such as contractor's offices, commercial kennels, a private school, and three separate solar farms.

The Planning Commission recommended approval for 30 out of the 36 applications for an 83% approval rating. Of the items considered by the Board of Supervisors as of December 31, 2023, the Board voted consistently with the Planning Commission recommendations 100% of the time.

A series of summary tables are included with this report, including a list of the Commission members' districts, appointment date, and attendance record as well as a record of the Commission's decisions by application type and a comparison table of the number of applications by year.

MEMBERSHIP UPDATE

The Commission continues to reflect a balanced representation of the citizenry of Isle of Wight County with specific interests in rural, agricultural, and historic preservation; environmental protection; community values, quality of life; economic development; and overall land use planning standards that promote balanced growth, community character and enhanced design. The Planning Commission membership is made up of two members appointed by the Board of Supervisors from each of the County's five election districts.

The longest serving members on the Commission are James Ford (District 3), appointed in October 2009, Cynthia Taylor (District 2), appointed in March 2014, and Brian Carroll (District 5), appointed in March 2014. Mr. Carroll served as Chairman in 2023, while Bobby Bowser of District 3 served as Vice-Chairman.

BY-LAW AMENDMENTS AND PROCEDURAL CHANGES

The Planning Commission did not amend its by-laws during 2023.

LONG RANGE PLANNING PROJECTS

Progress was made this past year on the development of the Rushmere Village Master Plan. Staff conducted a community feedback survey and is using the results in the development of the future Plan. The draft Plan is expected to be available for public review and comment in late Spring 2024.

DEVELOPMENT ACTIVITY

Notable development activity in 2023 include some of the following projects:

- Construction continued for 162 townhome-style apartment units in the master planned Brewer's Station community.
- Construction continued for 210 condominium units at the Crossings.
- The new Hardy Elementary School opened for classes in Fall 2023.
- Construction of the Publix Grocery store began.
- Langley Federal Credit Union began construction of its local branch.
- Go Carwash Club began construction in the Crossings.
- South Harbor age-restricted community continued its build out of 340 units.
- Construction began for the 240-unit Benns Grant Apartments.
- Riverside Hospital began construction.
- Royal Farms began construction.

GOALS FOR 2024

It is the goal of the Planning Commission in 2024 to begin the five year review process for the County's Comprehensive Plan, *Envisioning the Isle*. We will examine how the County's current growth rate will impact future operational and capital facility needs as well as consider ways to increase safe, affordable housing options throughout the County. The Commission plans to hold an educational retreat in the fall of 2024 for its members to review its mission, future goals, new planning techniques, and community outreach activities. The Commission also renews its commitment in 2024 to provide comprehensive, objective and thorough reviews on plans, ordinances, and applications prior to making a recommendation to the Board of Supervisors.

Adopted this _____ day of _____ 2024.

_____
Chairman, Isle of Wight County
Planning Commission

Attest:_____
Amanda Landrus, Secretary

2023 Planning Commission Actions Summary Tables

ZONING DISTRICTS LEGEND

RAC-Rural Agricultural Conservation
RR-Rural Residential
VC-Village Center
NC-Neighborhood Conservation
SE-Suburban Estate
SR-Suburban Residential
UR-Urban Residential
LC-Limited Commercial
GC-General Commercial
LI-Limited Industrial
GI-General Industrial
GIC-General Industrial Conservation
PD-R-Planned Development Residential
PD-MH-Planned Development Manufactured Home Park
PD-CP-Planned Development Commercial Park
PD-MX-Planned Development Mixed-Use
PD-IP-Planned Development Industrial Park
HCO-Highway Corridor Overlay
NDSO-Newport Development Service Overlay
HO-Historic Overlay
FPMO-Flood Plain Management Overlay

REZONINGS (4)

Tax PIN Application Number	Election District/ Location	Owner/Applicant	Acreage	Application Description	Recommendation/Action/Vote/Date	
					PC	BOS
11-01-022	D5	Dana Louise Edwards, George W. Edwards, and Jeanette J. Edwards	1	Change in zoning classification of one acre from Rural Agricultural Conservation (RAC) to Rural Residential (RR).	Approval (10-0) January 24, 2023	Approved (5-0) February 23, 2023
55-01-010	D4	3B's LLC Steven & Kristen Lander	1.98	Change in zoning classification of 1.98 acres from Rural Agricultural Conservation (RAC) to Conditional-Suburban Residential (C-SR)	Approval (9-0) May 23, 2023	Approved (5-0) June 15, 2023
69-01-093	D5	Corey D. Depaula		Application to amend conditional zoning to limit the uses to only a construction yard located at 32424 Green Oaks Lane with tax parcel number 69-01-093 in the Conditional-General Commercial zoning district	Approval (8-0) June 27, 2023	Approved (5-0) July 13, 2023
32-01-009	D1	NVR, Inc	250	Conditional rezoning of approximately 250 acres from the Rural Agricultural Conservation zoning district to the Conditional - Planned Development - Mixed Use zoning district. The purpose of the application is to allow for up to 390 age-restricted single family detached residential units, 225 residential townhomes, and approximately five acres of commercial uses to include up to 18,000 square feet of retail and commercial uses and up to 55,000 square feet of office uses	Tabled (9-0) September 26, 2023 Tabled (10-0) October 24, 2023 Tabled (5-4) November 28, 2023 Recommend Denial (6-2) December 12, 2023	

CONDITIONAL USE PERMITS (8)

Tax PIN Application Number	Election District/ Location	Owner/Applicant	Acreage	Application Description	Recommendation/Action/Vote/Date	
					PC	BOS
32-01-064	D1	Built by Babb		Conditional use permit to establish a contractor office and storage facility	Approval (10-0) January 24, 2023	Approved (5-0) February 23, 2023
32-01-080 33-01-034 41-01-053 42-01-005 41-01-074 41-01-046 41-01-056 41-01-057	D3	Bay Sands	125	Conditional use permit to allow resource extraction at multiple existing and new borrow pits	Approval (8-2) January 24, 2023	Approved (5-0) February 23, 2023
41-01-018 50-01-009 41-01-019 41-01-017 50-01-007 50-01-006	D4	Prairie Solar	152	Conditional use permit to establish a major utility service, specifically a 20 MWac utility-scale so1ar facility on 152 acres, located on private property located off of Longview Drive (Route 602) at 19604 Longview Drive	Tabled (10-0) February 28, 2023 Tabled (8-2) March 28, 2023 Approval (9-1) April 25, 2023	Tabled (5-0) May 18, 2023 Approved (5-0) June 15, 2023
32-01-093	D1	Benns Saint Luke, LLC		Primary and secondary educational facility in two (2) existing buildings (CUP-1-23) and extinguish active Conditional Use Permit CUP-4-21 for Kids Come First Daycare and Conditional Use Permit CUP-9-21 for Smithfield Sports Complex	Approval (8-1) May 23, 2023	Approved (5-0) June 15, 2023
34-07-000B	D4	Debra Hall		Conditional use permit to establish a commercial kennel on property located at 15042 (Suites K and L)	Approval (9-0) July 25, 2023	Approved (5-0) August 17, 2023
34-01-070		Waverton Associates		Conditional use permit for a mini-warehouse storage facility	Approval (8-0) August 22, 2023	Approved (5-0) September 21, 2023
39-01-017	D3	Courthouse Hwy Solar	18.23	Conditional use permit for a major utility service, specifically a 3 MW utility-scale solar energy generation facility	Approval (6-4) October 24, 2023	Approved (5-0) November 16, 2023

11-01-017 11-01-018 11-01-023 11-01-023A	D5	Moonlight Solar, LLC	523	Conditional use permit for a major utility service, specifically a 44 MW utility-scale solar energy facility and substation	Recommend Denial (9-0) November 28, 2023	

EXEMPTIONS, WAIVERS, EXCEPTIONS, MODIFICATIONS AND APPEALS REQUESTS (14)

Tax PIN Application Number	Election District/Location	Owner/Applicant	Application Description	Recommendation/Action/Vote/Date	
				PC	BOS
11-01-022	D5	Dana Louise Edwards, George W. Edwards, and Jeanette J. Edwards	Waiver request to Section 5.11.1 of the Subdivision Ordinance regarding lot design and configuration	Approval (10-0) January 24, 2023	Approved (5-0) February 23, 2023
06-01-053	D3	LaJeune Stone	Waiver request to Section 3.2.4.A.4 and Section 5.9.1.C of the Subdivision Ordinance to allow a family member subdivision from tax map parcel 06-01-053 on a private right-of-way not built to public standards which serves more than two lots	Approval (10-0) January 24, 2023	Approved (5-0) February 23, 2023
34-01-070D2	D2	Langley Federal Credit Union	Exception request to section 6-2009.L.1 of the Newport Development Service Overlay (NDSO) regulations. The purpose of the application is to allow for an exception to the NDSO requirement that sidewalks, no less than eight (8) feet in width, shall be provided along the full length of the building along any facade featuring a customer entrance, and along any facade abutting public parking areas	Approval (8-1-1) January 24, 2023	Approved (5-0) February 23, 2023
34-01-126	D2	Troy Marine LLC	NDSO design standards except request for building materials to allow the use of metal exterior walls	Approval (8-2) March 28, 2023	Approved (5-0) April 20, 2023
32-01-102	D3	Riverside	Height exception request for a proposed hospital building located at 19339 Benns Church Boulevard on property with tax map numbers 32-01-102 to allow the building to exceed the maximum height limit of 50 feet	Approval (10-0) March 28, 2023	Approved (5-0) April 20, 2023

			pennitted in the General Commercial (GC) zoning district. The requested building height is 67 feet.		
32-01-102	D3	Riverside	Sign size exception request for a proposed hospital building located at 19339 Benns Church Boulevard on property with tax map numbers 32-01-102 to allow a free-standing sign to exceed the maximum sign face area size of fifty feet square feet and the maximum height of eight feet. The requested sign area size is 97.5 square feet with a height often feet, nine inches.	Approval (10-0) March 28, 2023	Approved (5-0) April 20, 2023
20-01-082	D3	Krohn	Waiver request to Section 3.2.4.A.4 and Section 5.9.1.C of the Subdivision Ordinance to allow a family member subdivision from tax map parcel 20-01-082 on a private thirty-foot ingress/egress easement not built to public standards which serves more than two lots	Approval (10-0) April 25, 2023	Approved (5-0) May 18, 2023
14-12-001	D3	Gayle	After-the-fact request for a platform to store small boats and equipment with a seating area	Denial (9-0) May 23, 2023	Tabled (5-0) June 15, 2023 Denied (4-1) August 17, 2023
33-03-005	D2	Vance	Waiver request to Section 3.2.4.A.4 and Section 5.9.1.C of the Subdivision Ordinance to allow a family member subdivision from tax map parcel 33-03-005 on a private twenty foot ingress/egress easement not built to public standards, which serves more than two lots	Approval (7-2) May 23, 2023	Approved (5-0) June 15, 2023
21-01-003	D5	Gibson	Height exception request to Section 5-2000.D.2. of the Zoning Ordinance for a proposed accessory structure (two-story garage), to be located at 16055 Mill Swamp Road on property with tax map number 21-01-003 which will exceed the maximum height permitted of 125% of the single-story principal structure by three (3) feet	Approval (9-0) May 23, 2023	Approved (5-0) June 15, 2023

53-01-080A 53-01-081	D4	Air Station General	Exception request to Sections 6-1010.A and 6-1010.B. of the Zoning Ordinance pertaining to the Highway Corridor Overlay District architectural and design guidelines for non-residential uses	Approval (7-0-1) June 27, 2023	Approved (5-0) July 13, 2023
42-06-006	D4	Bur Investment LLC	Exception request to Section 6-2010.A.1, 2 and 3 of the Newport Development Service Overlay (NDSO) District Regulations in the Zoning for the NDSO Design Standards for Building Fayades, Exterior Walls, Windows and Building Materials	Approval (9-0) July 25, 2023	Approved (5-0) August 17, 2023
13-01-048C	D1	Elizabeth K. Russell	Height exception request to Section 4-2006.A of the Zoning Ordinance for a proposed single-family dwelling, to be located at 9615 Old Stage Highway on property with tax map number 13-01-048C which will exceed the maximum height of 35 feet by eight feet, eight inches for a total height of 43 feet, 8 inches.	Recommend Denial (5-4) November 28, 2023	Withdrawn prior to BOS
34-01-108	D2	Carrollton Ventures, LLC	Exception request to Section 6-2010.A.1.b, Section 6-2010.A.1.c, and Section 6-2010.A.3 of the Zoning Ordinance, Newport Development Service Overlay (NDSO) District regulations, for the property located on Carrollton Boulevard with Tax Map Number 34-01-108. The purpose of the application is to allow for an exception to the NDSO design standards for building facades, building materials, and building entryway design elements.	Recommend Denial (7-2) November 28, 2023	Withdrawn prior to BOS

ZONING ORDINANCE AMENDMENTS (3)

Application Description	Recommendation/Action/Vote/Date	
	PC	BOS
Proposed So1ar Energy Facility Ordinance Change	Approval (9-1) February 28, 2023	Tabled (5-0) April 20, 2023 Approved (4-1) May 18, 2023

Short-Term Rental Ordinance Revisions	Approval (10-0) October 24, 2023	Tabled (5-0) November 16, 2023 Approved (4-1) December 14, 2023
Revisions to the Enforcement Provisions of the Zoning and Chesapeake Bay Preservation Area Ordinance	Approval (10-0) October 24, 2023	Approved (5-0) November 16, 2023

SUBDIVISION ORDINANCE AMENDMENTS (1)

Application Description	Recommendation/Action/Vote/Date	
	PC	BOS
Proposed Revisions to Article 5, "Development Standards," of the Isle of Wight County Subdivision Ordinance	Approval (9-0) May 23, 2023	Approved (5-0) June 15, 2023

COMPREHENSIVE PLAN AMENDMENTS (0)

Application Description	Recommendation/Action/Vote/Date	
	PC	BOS

AGRICULTURAL/FORESTAL DISTRICTS AMENDMENTS (5)

Application Description	Recommendation/Action/Vote/Date	
	PC	BOS
Dana Louise Edwards request to withdraw the one acre of property from the Moonlight Agricultural/Forestal District.	Approval (10-0) January 24, 2023	Approved (5-0) February 23, 2023
Bay Sands requests to withdraw portions of the properties for a total of 129.8 acres from the Longview Agricultural/Forestal District.	Approval (8-2) January 24, 2023	Approved (5-0) February 23, 2023
Prairie Solar requests for withdrawal of approximately 103 acres of land owned by Everets Properties, Inc., from the Longview Agricultural/Forestal District	Tabled (10-0) February 28, 2023 Tabled (8-2) March 28, 2023 Approval (9-1) April 25, 2023	Tabled (5-0) May 18, 2023 Approved (5-0) June 15, 2023
Courthouse Hwy Solar requests to withdraw eighteen acres from the Courthouse Agricultural/Forestal District.	Approval (6-4) October 24, 2023	Approved November 16, 2023
Moonlight Solar requests to withdraw approximately five hundred and twenty-three acres of land from the Moonlight Agricultural and Forestal District	Recommend Denial (9-0) November 28, 2023	

PLANNING COMMISSION ANNUAL REPORT

Application Description	Recommendation/Action/Vote/Date	
	PC	BOS
2022 Planning Commission Annual Report	Approved (10-0) February 24, 2023	Informational / No Action Required

2023 ISLE OF WIGHT COUNTY PLANNING COMMISSIONERS

NAME	DISTRICT	APPOINTED	TERM EXPIRES
Brian Carroll, Chair	District 5	March 20, 2014	February 2026
Bobby Bowser, Vice-Chair	District 3	April 20, 2017	February 2025
Cynthia Taylor	District 2	March 20, 2014	February 2025
Jennifer Boykin	District 5	February 15, 2018	February 2027
James Ford	District 3	October 15, 2009	February 2024
Thomas Distefano	District 2	February 21, 2019	February 2027
George Rawls	District 4	August 16, 2018	February 2027
Rick Sienkiewz	District 4	August 18, 2022	February 2025
Raynard Gibbs	District 1	September 1, 2022	February 2027
Matthew Smith	District 1	September 1, 2022	February 2028

2023 MEETING STATISTICS

Regular Meetings	Members Absent	Attendance Percentage	
January 24, 2023	None	Brian Carroll	92%
February 28, 2023	None	Bobby Bowser	100%
March 28, 2023	None	Cynthia Taylor	92%
April 25, 2023	None	Jennifer Boykin	85%
May 23, 2023	Jennifer Boykin	James Ford	92%
June 27, 2023	Gibbs & Smith	Thomas Distefano	92%
July 25, 2023	Gibbs	George Rawls	92%
August 22, 2023	Carroll, Boykin, Rawls	Rick Sienkiewz	92%
September 26, 2023	Taylor	Raynard Gibbs	77%
October 24, 2023	None	Matthew Smith	92%
November 28, 2023	Thomas Distefano		
December 12, 2023	Ford & Gibbs		
WORK SESSIONS/SPECIAL MEETINGS			
November 3, 2023	Rick Sienkiewicz		

PLANNING COMMISSION REVIEW
FIVE YEAR DEVELOPMENT APPLICATION COMPARISON CHART

APPLICATIONS/PROJECTS	2023	2022	2021	2020	2019
Rezonings	4	6	5	5	6
Conditional Use Permits	8	9	4	5	4
Special Use Permits	0	0	0	0	0
Site Plans	0	0	0	0	0
Subdivision Plats	0	0	0	0	0
Comp Plan Update/Master Plans	0	0	0	0	1
Comp Plan Amendments/Land Use	0	1	0	0	2
Zoning Ordinance Amendments	3	2	2	2	2
Subdivision Ordinance Amendments	1	1	1	1	1
CBPA Ordinance Amendments	1	0	1	0	0
Agricultural/Forestal Districts	5	1	1	0	0
Waivers, Exceptions, Appeals	14	5	3	4	2
Miscellaneous	0	0	0	1	0
CBPA Ordinance Exceptions/WQIA	0	0	0	1	1
Annual Report	1	1	1	1	1
Historic Overlay Districts	0	0	0	0	0
TOTAL NUMBER OF APPLICATIONS/PROJECTS	**37**	**26**	**18**	**20**	**20**

PLANNING REPORT

APPLICATION:

Recreational Vehicle (RV) Ordinance Discussion

ELECTION DISTRICT:

All

LOCATION:

County-wide

BACKGROUND:

During their April 25, 2023, regular meeting, the Planning Commission requested that a discussion on the County's existing ordinance requirements for RVs be included on the agenda for their next regular meeting.

The Board of Supervisors also began discussions of the potential use of RVs for short term stays at their June 1, 2023, worksession. At their December 2023 regular meeting, the Board requested that the Planning Commission review the existing Ordinance for potential flexibility to allow the use of RVs for temporary residential use.

DESCRIPTION:

Staff developed draft Ordinance changes for Planning Commission review and discussion. A copy of the draft revisions is attached to this staff report.

ORDINANCE REVIEW:

The Zoning Ordinance defines RVs in Article II as a "vehicle designed to be self-propelled or permanently towable; and not designed for use as a permanent dwelling but as temporary living quarters for recreational camping, travel, or seasonal use. This term shall also include watercraft and trailers."

The current Ordinance specifically prohibits the use of RVs as a temporary or permanent residence in Section 5-1001 unless otherwise permitted. Instances where RVs are permitted as temporary living quarters include in permitted campgrounds, for farm stays where a water supply is provided as defined in

Section 4-2A003.B and as temporary emergency housing which is defined in Article III as a "manufactured home, Class B or recreational vehicle used temporarily for a period of reconstruction or replacement of an uninhabitable dwelling lost or destroyed by fire, acts of nature or used temporarily as housing relief to victims of declared disaster."

Section 5-2000.L states that RVs must be stored in the side or rear yards only on residential property at least five feet from any property line.

AGENCY REVIEW:

According to the Virginia Department of Health, permanent occupancy in an RV on private property would require a pump-out facility. This does not mean a person could simply modify their home's septic system or public sewer connection and connect an RV. With that said, a Professional Engineer can propose systems outside of the regulations and variances can be requested to any part of the regulations.

A camping event with three or more campsites requires a temporary campground permit from the state that allows up to fourteen days of camping in any one 60-day period. There must be pump-out facilities available if there are RVs present. A "camping unit" is defined as tents, tent trailers, travel trailers, camping trailers, pick-up campers, motor homes, yurts, cabins, or any other device or vehicular-type structure as may be developed marketed and used by the camping trade for use as temporary living quarters or shelter during periods of recreation, vacation, leisure time, or travel.

Because RVs do not meet the definition of a structure under the Uniform Statewide Building Code or as defined by the U.S. Department of Housing and Urban Development (HUD), they are not regulated under the building code and are not subject to the same standards for construction, utilities, fire safety, or occupancy as structures. RVs are classified as personal property covered by motor vehicle regulations and taxed accordingly.

In order to distinguish RVs from manufactured housing and definitively exempt RVs from its regulation, HUD released a final rule on November 16, 2018, that defines RVs as:

1. Vehicles or vehicular structures not certified as manufactured homes;
2. Designed only for recreational use and not as a primary residence or for permanent occupancy; and either:
    a. Built and certified in accordance with NFPA 1192-15 or ANSI

A119.5-15; or
b. Any vehicle that is self-propelled.

The revised HUD rule also required labeling that notifies consumers that Park Model RVs are designed only for recreational use and not for use as a primary residence. The rules governing where RVs may be parked and how they may be used are set at the state and local level.

STAFF CONCLUSIONS:

A comparison table is attached to this staff report for your information.

STAFF RECOMMENDATION:

The information provided in this staff report is for informational purposes only. No action is required.

ATTACHMENTS:

Description	Type	Upload Date
Comparison Table	Backup Material	6/20/2023
Draft Ordinance Revisions	Cover Memo	2/20/2024

As of June 20, 2023

Locality	Habitation in RVs
Chesapeake	No
Isle of Wight	Permitted in campgrounds, as temporary emergency shelter, and as farm stay, no more than (1), with sewer and water facilities
James City County	Not addressed
Newport News	Not addressed
Norfolk	No
Portsmouth	Defined as temporary living quarters for recreational camping, travel, or seasonal use.
Southampton County	Defined as temporary living quarters for recreational, camping or travel use.
Suffolk	No
Surry County	No
Virginia Beach	No
York County	No

Proposed Zoning Ordinance Revisions
Revised February 27, 2024

The draft revisions are listed by section below. New, proposed language is in red underlined text. Language proposed to be deleted is shown in red text with ~~strikethrough~~ markings.

Article V, Supplementary Use Regulations

Sec. 5-1001. - Prohibited uses.
The following uses are specifically excluded from all districts:

Replace current language:

~~A. Unless otherwise expressly permitted, the use of a recreational vehicle as a temporary or permanent residence.~~

With the Following *(see Section 86-111 of Louisa County Ordinance):*

Recreational vehicles, tents, and the like shall not be used for permanent or full-time dwellings in any district, unless otherwise permitted by the Ordinance and in accordance with the Virginia Department of Health, whether or not connected to utilities, wells or septic systems. For the purposes of this section, permanent means available for occupancy for 30 consecutive days or more per year regardless of actual use.

Sec. 5-2000. - Supplementary density and dimensional regulations.

L. Recreational vehicles and watercraft. In all districts it shall be permissible to store out-of-doors recreational vehicles and watercraft as an accessory use only in accordance with the following:

1. Such vehicles or watercraft shall be placed in the rear or side yards only, and shall be located at least five (5) feet from all property lines. This provision shall not apply to recreational vehicles or watercraft stored within completely enclosed structures.
2. Recreational vehicles shall not be used as permanent or full-time living quarters and may only be otherwise occupied in accordance with zoning district regulations and the Virginia Department of Health. For the purposes of this section, permanent means available for occupancy for 30 consecutive days or more per year regardless of actual use.