



Planning Commission MEETING AGENDA

Thursday, October 17, 2024 - 1:00 PM
Council Chambers, Easton Town Office
14 S Harrison Street

1. Call to Order

2. Approval of Minutes

- a. Approval of the Draft Decision Summary from the September 19, 2024 meeting.

3. Old Business

- a. **Application Number:** 2021 - 0473
Applicant: Armistead, Lee, Rust & Wright, P.A.
c/o Zachary A. Smith, Esq.
Location: 29659 Matthewstown Road - Gannon Range
Tax Map 0026, Grid 0020, Parcel 0045
Zoning District: PUD with a base zoning district of A-1
Request: Architectural approval for the addition of six (6) proposed house models pursuant to a previously approved Planned Unit Development (PUD) site plan for the development of the Gannon Range Community (*Ordinance No. 773*).

On February 21, 2022, the Town Council approved *Ordinance No. 773*, granting the application for a PUD under the provisions of the Easton Zoning Ordinance, effective March 13, 2022. Condition No. 7 in Section E of the Finding of Fact stipulates that the Applicant should provide a greater variation of architectural styles than what was provided in the PUD application to which shall be subject to the approval of the Easton Planning and Zoning Commission.

- b. **Application Number:** 2024 - 1261
Applicant: Rauch Inc.

Location:	410 Needwood Avenue (Silo Square) Tax Map 0105, Grid 00EA, Parcel 2226
Zoning District:	BC
Request:	Sketch Site Plan and conceptual approval for the construction of 28 single-family attached dwellings with associated stormwater management facilities and other site improvements including the demolition of the existing silos, storage buildings and a gravel road on the property. The Applicant is also seeking a waiver for bufferyard requirements.

4. New Business

5. Discussion Item

- a. Continued discussion of the Zoning and Subdivision Text Amendments.
- b. Continued discussion of the Comprehensive Plan Update.

6. Adjournment



**Town of Easton Planning Commission
Draft Decision Summary**

Thursday, September 19, 2024 at 1:00 p.m.

Town Hall Chamber 2

14 S. Harrison Street, Easton, Maryland

Archived video of the meeting is available at:

[Town of Easton Agendas and Minutes](https://www.eastonmd.gov/Agendas/Agendas%20and%20Minutes)
[\(eastonmd.gov\)](https://www.eastonmd.gov/)

Attendance:

Commission Members:

Philip Toussaint, Chairperson
Michael Ports, Vice Chairperson
Tom Klein

Absent:

Commission Members:

Victoria McAndrews
William Ryall

Staff:

Miguel Salinas, Planning and Zoning Director
Lynn B. Thomas, Town Planner
Joseph Mayer, Plan Reviewer
Nicholas Johnson, Planner
Sharon Van Emburgh, Esq. Town Attorney
Rick Van Emburgh, Town Engineer
Samantha Smith, Administrative Specialist

1. Call to Order — Chairperson Toussaint called the meeting to order at 1:00 pm.

2. Decision Summary Review —

a. Chairperson Toussaint moved to approve the July 18, 2024 Decision Summary. Commissioner Klein seconded the motion.

Vote 3 - 0 - 2

FOR: 3 - Toussaint, Ports, Klein
AGAINST: 0
ABSTAIN: 0
ABSENT: 2 - McAndrews, Ryall

b. Chairperson Toussaint moved to approve the August 15, 2024 Decision Summary. Commissioner Klein seconded the motion.

Vote 3 - 0 - 2

FOR: 3 - Toussaint, Ports, Klein

AGAINST: 0
ABSTAIN: 0
ABSENT: 2 - McAndrews, Ryall

3. Old Business — None

4. New Business — ~~Chairperson Toussaint addressed the Applicants, explaining that though a quorum of three out of five members are present, any motion to pass requires the Commission to vote in unanimous agreement as per the Planning Commission Bylaws. Chairperson Toussaint offered all Applicants the choice to proceed, or to continue their application to a future meeting with the presence of a full Board. All Applicants agreed to proceed with their applications.~~ **Chairperson Toussaint addressed the Applicants, explaining that although the presence of three out of five Members is sufficient to establish a quorum, any motion to pass requires a majority of the Commission to vote in unanimous agreement as per the Planning Commission Bylaws. In such instances, the Commission has historically offered all Applicants the choice to proceed, or to continue their application to a future meeting with the presence of a full Board. The decision to postpone must be made prior to the Commission deliberating or voting on the application. All Applicants agreed to proceed with their applications.**

a. File No.: 2024 - 1259

Applicant: Somerset Well Drilling Co., Inc.

Location: 28580 Mary's Court, Easton, MD 21601
Tax Map 0025, Parcel 0046, Lot 20

Current Zoning

District: A-1

Proposed Zoning

District: BC

Request: The Applicant is requesting a recommendation from the Planning Commission (Commission) to the Town Council for the zoning reclassification of 8.348 acres of property located on the south side of Goldsborough Neck Road, also known as 28580 Mary's Court, Easton, Maryland, Tax Map 0025, Parcel 0046, Lot 20 from Agricultural zoning district (A-1) to Business Commercial zoning district (BC). The Applicant is seeking to develop two (2) commercial buildings with associated facility improvements to the property. The proposed rezoning will allow the Applicant to develop the property pursuant to the Development Plans.

Background: On January 2, 2024 a growth allocation request was adopted by the Town Council (*Ordinance No. 807*); and on April 23, 2024, the Talbot County Council adopted *Bill No. 1551*, granting a supplemental growth allocation to the Town. On July 29, 2024 the Critical Area Commission received the Town's request to reclassify the 8.348 acres of land via growth allocation from Resource

Conservation Area (RCA) to Intensely Developed Area (IDA). The Critical Area Commission will make an amendment or refinement determination subsequent to the outcome of the Town's recommendation of the zoning reclassification.

Staff recommends the following condition:

1. The Planning Commission's recommendation to the Town Council for the support of the Zoning Amendment request is contingent on the Critical Area Commission's review and approval of the supplemental growth allocation request.
2. The conceptual site plan submitted with the zoning amendment application is conceptual in nature and was assessed by staff for conformance to § 28-401.8.E and § 28-401.8.F of the Town Code. Approval of the supplemental growth allocation shall not infer Town of Easton site plan approval. Prior to any lot consolidation or site plan approval of Lots 16 and 20, the proposed development will be evaluated by the applicable reviewing agencies for conformance to all applicable Zoning; Subdivision; Forest Conservation; Stormwater Management; Erosion and Sediment Control; and other applicable regulations. Such review may result in modifications to the conceptual site plan.

Staff Presentation:

Joseph Mayer, Plan Reviewer

Miguel Salinas, Director of Planning and Zoning

Sharon Van Emburgh, *Esq.* Town Attorney

Applicant Presentation:

Brendan Mullaney, *Esq.* McAllister, De Tar, Showalter & Walker, LLC.

Public Comment — None

Public Comment Written — None

Chairperson Toussaint moved to forward a positive recommendation to the Town Council for their approval of the zoning reclassification of 28580 Mary's Court Lot 20 to Business Commercial with the following determinations:

1. **The proposed reclassification is consistent with the purpose and intent of the Town of Easton Comprehensive Plan (2010).**
2. **The Commission has found that there have been "changes in the character of the neighborhood" that necessitate the rezoning of the property; including the allocation of a Stormwater Management Facility to the property, and the granting of growth allocation to reclassify the Critical Area from Resource Conservation Area (RCA) to Intensely Developed Area (IDA). The request is contingent on the Critical Area Commission's review and approval of the Supplemental Growth Allocation request.**

Vice Chairperson Ports seconded the motion.

Vote 3 - 0 - 2

FOR: 3 - Toussaint, Ports, Klein

AGAINST: 0

ABSTAIN: 0

ABSENT: 2 - McAndrews, Ryall

b. File No.: 2024 - 1199

Applicant: Rauch Inc

Location: 1180 S. Washington Street, Easton, MD 21601

Tax Map 0108, Grid 0000, Parcel 2677

Zoning: R-10A

Request: The request for Sketch Site Plan approval for the construction of a 6.119 square foot addition has been withdrawn from the September 19, 2024 Planning Commission agenda.

c. File No.: 2024 - 1261

Applicant: Rauch Inc.

Location: 410 Needwood Avenue, Easton, MD 21601

Tax Map 0105, Grid 00EA, Parcel 2226

Zoning: BC

Request: The Applicant is seeking Sketch Site Plan approval for the construction of sixteen (16) 3-story townhomes, and twelve (12) 2-story townhomes with associated parking, stormwater management and landscaping. Other site improvements include the demolition of the existing abandoned silos, storage buildings, and a gravel road on the property; and the installation of a split-rail fence in the bufferyard along the Town's "Rails-to-Trails" path system. The Applicant is also seeking a landscape and buffering waiver from Chapter 28-1017.E.5(c)1-3 of the Zoning Code.

Staff Presentation:

Joseph Mayer, Plan Reviewer

Lynn Thomas, Town Planner

Miguel Salinas, Director of Planning and Zoning

Rick Van Emburgh, Town Engineer

Applicant Presentation:

Zachary A. Smith, Esq. Armistead, Lee, Rust & Wright. P.A.

Virginia Richardson, Rauch Inc.

Ross Benincasa, Chesapeake Community Development

Public Comment:

Maury Schlesinger, 304 Winton Avenue

Peter Maloney, 301 S. Aurora Street
Steve Geraci, 312 Winton Avenue
Douglass Kerr, 211 Winton Avenue
Christine Dayton, Christine M. Dayton Architect, P.A.
Matthew Cartwood, 311 Needwood Avenue
Sean Nuthall, 310 S. Aurora Street

Public Comment Written:
Maury Schlesinger, 304 Winton Avenue
Megan Fillippo
Sarah Hilderbrand

Chairperson Toussaint moved to table the application pending the submission of a Traffic Impact Study, and the submission of a revised site plan exhibiting the removal of the proposed western facing fence. Vice Chairperson Ports seconded the motion.

Vote 3 - 0 - 2
FOR: 3 - Toussaint, Ports, Klein
AGAINST: 0
ABSTAIN: 0
ABSENT: 2 - McAndrews, Ryall

- d. File No.: 2024 - 1264**
Applicant: Lane Engineering, LLC
Location: 106 Talbot Lane, Easton, MD 21601
Tax Map 0105, Grid 00EA, Parcels 1948, 1949, 1950 & 1952
Zoning: R-7A
Request: The Applicant is seeking Sketch Site Plan approval for the renovation of the existing structure to be converted to an art museum annex with office space, art storage, and associated stormwater management facilities. The Applicant is also seeking a landscaping waiver (§1014.6.F), a bufferyard waiver (§1014.7.E) and a parking waiver (§1001.3.C) from the Zoning Code. This request also includes a revision to abandon the lot lines between Parcels 1948, 1949, 1950 & 1952 to create a revised Parcel 1948.

Background: On October 20, 2022, the Planning Commission unanimously approved *application 2022 - 0779* for a parking waiver of three (3) spaces on the subject property with the condition of adding an additional fourth bicycle rack. On November 15, 2022, the Board of Zoning Appeals unanimously approved Special Exception *application SE-836* for the use of a museum within the existing property with the condition that all screening requirements are met. On April 8, 2024, the Applicant received a Certificate of Appropriateness from the Historic District Commission (*application 2024 - 1172*) for the construction of the annex with the condition that minor revisions to the proposed site and structure that are

consistent with the Historic District Guidelines may be administratively approved by staff after consultation with the Chair of the Commission.

Staff Presentation:

Joseph Mayer, Plan Reviewer
Lynn Thomas, Town Planner
Miguel Salinas, Director of Planning and Zoning

Applicant Presentation:

Alec Chosta, Lane Engineering
John Hutchison, Hutchison Architecture
Jennifer Chrzanowski, Interim Director Academy Art Museum

Public Comment — None

Public Comment Written — None

**Commissioner Ports moved to approve the Sketch Site Plan as submitted.
Commissioner Klein seconded the motion.**

Vote 3 - 0 - 2

FOR: 3 - Toussaint, Ports, Klein
AGAINST: 0
ABSTAIN: 0
ABSENT: 2 - McAndrews, Ryall

e. File No.: 2024 - 1260

Applicant: Lane Engineering, LLC

Location: 350 N. Washington Street, Easton, MD 21601
Tax Map 0103, Grid 00EA, Parcels 0513 & 0514

Zoning: CB

Request: The Applicant is seeking Sketch Site Plan approval for the development of a two-story 16 unit Multi-Family residential building with associated parking, stormwater management and other site improvements. The Applicant is also seeking a property line adjustment to remove the property lines between Parel 0513 and 0514 to create a revised Parcel 0513.

Background: On September 17, 2024 the Board of Zoning Appeals unanimously approved Special Exception *application SE - 1267* for the use of a Multifamily Apartment Complex* in the CB - Commercial Business zoning district subject to the condition that the Applicant shall submit a photometric plan for staff approval during the building permit review process; and the condition that construction shall begin or shall be completed, or both within three (3) years after the date that the Special Exception is granted.

Staff Presentation:

Joseph Mayer, Plan Reviewer

Miguel Salinas, Director of Planning and Zoning
Rick Van Emburgh, Town Engineer

Applicant Presentation:

Brendan Mullaney, *Esq.* McAllister, De Tar, Showalter & Walker, LLC.
Brett Ewing, Lane Engineering
Alec Chosta, Lane Engineering,
Michael Leinhart, Lenhart Traffic Consulting
Lauren White, Fisher Architecture

Public Comment:

Kevan Full, 510 Diamond Street
Sheila Lawson, 418 N. Washington Street
Kathy Mothershead, 342 N. Washington Street

Public Comment Written:

Kathy Mothershead, 342 N. Washington Street
Sheila Lawson 418 N. Washington Street
Lyndy Galan, 10 Sycamore Avenue
Barb Jefferson
John Perkinson
Sam Plaskon
Sharen and James Apple, 503 Hazelwood Drive
Lia Plaskon
Lauren Rosales, 612 Hardin Street
Colby Ball
Ruth Jensen
George Fold, 347 N. Washington Street
Thomas and Tammy Hickey, 110 Sycamore Avenue
Peggy J. Ford
Maureen Curry
Nicholas Ewing
Carolyn A. Lane, Ashby Commons
Patty Crankshaw-Quimby, 203 Willis Avenue
Marcella Leach
Talbot Thrive

The Applicant presented a revised site plan (*Applicant Exhibit B*) with the following amendments: 1) the elimination one (1) parking space at the corner of North Washington street; and 2) the addition of a 12' x 45' vehicle loading area onto Aurora Park Alley.

Chairperson Toussaint moved to approve the amended Sketch Site Plan subject to the following condition:

- 329 **1. The Applicant shall explore adjustments to the gable roof line to be approved**
330 **by staff and Commission Members, if needed, to satisfy the appearance of the**
331 **east and west roof line elevations.**
332

333 **Vice Chairperson Ports seconded the motion.**
334

335 Vote 3 - 0 - 2

336 FOR: 3 - Toussaint, Ports, Klein

337 AGAINST: 0

338 ABSTAIN: 0

339 ABSENT: 2 - McAndrews, Ryall
340
341

342 **5. Discussion Items**
343

- 344 **a. Potential Revisions to the Zoning and Subdivision Text Amendments - Seafood**
345 **Processing —** The Town Council has asked the Commission to provide
346 recommendations pursuant to odor control measures in light industrial use areas
347 with a particular emphasis on seafood processing. During their August meeting,
348 the Commission struck the proposed enhanced operational setbacks in the BC -
349 Business Commercial Development Standards, and refined the language in the
350 odor control technology standards to include vehicles and storage uses. With
351 consideration to the Commission's ongoing discussion, Staff has presented a final
352 proposal of seafood processing Zoning Code amendments for recommendation to
353 the Council.
354

355 The Commission favored the amended definition of *Industry, light* as presented,
356 with clear indication that seafood processing does not qualify as this use. The
357 Commission also supported the new *Seafood Processing* use and definition as
358 presented, and supported the established Supplemental Standards for treatment,
359 storage, and odor control measures with minor revisions to its language. The
360 Commission supported the amendment to the Table of Permissible Uses as
361 presented which outright permits Seafood Processing in the Industrial (I) Zoning
362 District, and is permitted by Special Exception in the BC - Business Commercial
363 Zoning District subject to compliance with the added Supplemental Standards.
364 Additionally, the language regarding odor control technology was included into
365 the minimum Development Standards for the BC Zoning District.
366

367 **Staff Presentation:**

368 Lynn B. Thomas, Town Planner

369 Sharon Van Emburgh, *Esq.* Town Attorney
370

371 **Public Comment:**

372 Susan Russell 229 S. Aurora Street

373 Glenn Klakring, 225 S. Aurora Street

374 Peter Maloney, 301 S. Aurora Street

Douglas Kerr, 211 E. Earle Avenue
Nelsa Klakring, 225 S. Aurora Street

Vice Chairperson Ports moved to forward a positive recommendation of the seafood processing amendments to the Town Council for their approval. Commissioner Klein seconded the motion.

Vote 3 - 0 - 2

FOR: 3 - Toussaint, Ports, Klein
AGAINST: 0
ABSTAIN: 0
ABSENT: 2 - McAndrews, Ryall

- b. Potential Revisions to the Zoning and Subdivision Text Amendments - March 2024 Follow Up — the Commission continued their discussion pursuant to potential Amendments to the Zoning Code to a subsequent meeting.
- c. Update on the Draft Inclusionary Zoning Ordinance — Mr. Miguel Salinas provided an update on the ongoing efforts of the Attainable Housing Task Force to introduce an Inclusionary Zoning Ordinance. The task force is anticipated to prepare a final housing strategy at their October 10, 2024 meeting. This will inform and provide recommended strategies for the draft Ordinance for the Commission's consideration to the *Housing* Chapter of the Comprehensive Plan.
- d. Follow up Discussion on the August 22, 2024 Urban3 Presentation — Mr. Salinas provided feedback on the Urban3 Presentation held by economic development consultant Joseph Minicozzi. The Commission discussed the findings exhibited in the presentation, and how they could be strategically incorporated for better land use and planning.

6. Adjournment — Commissioner Klein moved to adjourn. Chairperson Toussaint seconded the motion. The meeting was adjourned at 4:53 p.m.



TOWN OF EASTON
PLANNING & ZONING
14 S Harrison Street, Easton MD 21601

Date of Meeting: October 17, 2024

3a

**PLANNING COMMISSION
SUPPLEMENTAL ITEM**

SUBJECT: Request Architectural approval for the addition of six (6) proposed house models pursuant to a previously approved Planned Unit Development (PUD) site plan for the development of the Gannon Range Community (Ordinance No. 773).

ELECTION WARD: Ward 2

CRITICAL ACTION DATE: At the pleasure of the Commission

STAFF CONTACTS: Joseph Mayer, Plan Reviewer
Miguel Salinas, Director of Planning and Zoning

DOCUMENT CREATED ON: October 7, 2024

PURPOSE: The PUD approval for the Gannon Range community per the Town of Easton Ordinance No. 773 requires the applicant, D.R. Horton, to provide a greater variety of home design and architectural styles subject to the approval of the Easton Planning and Zoning Commission. The applicant is seeking approval from the Planning Commission for six (6) proposed house products with various architectural elevations.

RECOMMENDATIONS:

Planning Commission: The Town Council, at their February 21, 2021 meeting, moved (3-2) to approve Ordinance 773, granting the application of D.R.Horton, Inc. for a Planned Unit Development under the provisions of the Easton Zoning Ordinance, effective March 13, 2022. The PUD approval requires D.R.Horton to propose additional architectural elevations for the community, to be reviewed by the Planning Commission under Ordinance 773, Condition No. 7 in Section E of the Finding of Fact; *"The Town Council believes that the Applicant should provide greater variety of home design and variation of architectural styles than what was provided with the PUD application. The specific elevations for the home designs shall be subject to the approval of the Easton Planning and Zoning Commission."*

Staff: Should the Planning Commission approve the six (6) proposed house products, staff has no conditions.

UPDATE:

On December 20, 2023, the Improvement Plans for Gannon Range were approved.

On February 5, 2024, the Town Council approved Ordinance 803, amending Chapter 28 of the Town Code (Zoning), revising the language governing the treatment of approved PUDs that do not start, or cease construction between phases in multi-phased projects. Under the new ordinance, a PUD approval will lapse at three (3) years (rather than the previous 2 years) if no action is taken by the owner or developer indicating that they plan to begin construction of the development.

On February 15, 2024, the Town of Easton Planning Commission reviewed an extension request for a previously approved a Planned Unit Development (PUD) application pursuant to Ordinance No. 773 for the development of a mixed-use subdivision. The Commission voted 5-0 to grant the PUD extension request through December 31, 2024.

On August 9, 2024, the Final Plat Phase 1 “Gannon Range” was recorded; KMD 92/96.

On September 5, 2024, the Forest Stand Delineation Plan was approved.

ISSUES: There are no outstanding issues.

GANNON RANGE ARCHITECTURAL EXAMPLE:



GANNON RANGE ARCHITECTURAL EXAMPLE:



GANNON RANGE ARCHITECTURAL EXAMPLE:



GANNON RANGE ARCHITECTURAL EXAMPLE:



D·R·HORTON
America's Builder

Wheaton

3 bed | 3.5 bath | 3 car | 1 story | 2,571 sq ft



RECOMMENDED CONDITION:

Staff has no recommended conditions.

DRAFT MOTIONS:

1. I move that the Planning Commission approve the six (6) additional architectural elevations for the Gannon Range community.

OR

2. I move that the Planning Commission continue the application to the November 21st Commission meeting for further discussion.

OR

3. I move an alternate motion.

ATTACHMENTS:

1. 2022.03.13 PUD Ordinance 773, paper copy & PDF
2. 2022.03.17 Planning Commission Minutes Final, paper copy & PDF
3. 2024.09.23 Additional Architecture & Exhibits, paper copy & PDF
4. 2024.09.23 Transmittal Letter, paper copy & PDF
5. 2024-10-02 Gannon Range - Subject Property Notice 2024.10.02, paper copy & PDF



ARMISTEAD, LEE, RUST & WRIGHT, P.A.
ATTORNEYS AT LAW

114 Bay STREET, BUILDING C
EASTON, MARYLAND 21601

TELEPHONE: (410) 819-8989
FACSIMILE: (410) 822-4787

EMAIL ADDRESS
ZACHSMITH@ALRWLAW.COM

September 23, 2024

VIA E-MAIL DELIVERY TO: jmayer@eastonmd.gov

Easton Planning Commission
c/o Joseph Mayer
14 S. Harrison Street
Easton Maryland 21601

Re: Additional Architecture for Gannon Range

Dear Joe:

As we recently discussed, the PUD approval for the Gannon Range community (TOE Ordinance No. 773) requires D.R. Horton to propose additional architectural elevations for the community, to be reviewed by the Planning Commission. This requirement is set forth as Condition No. 7 in Section E of the Finding of Fact. The condition states:

"The Town Council believes that the Applicant should provide greater variety of home design and variation of architectural styles than what was provided with the PUD application. The specific elevations for the home designs shall be subject to the approval of the Easton Planning and Zoning Commission."

To address this requirement, D.R. Horton is proposing the six (6) additional house products that are enclosed herewith as **Exhibit A**, which include the following models: Cali, Hayden, Galveston, Wheaton, Pine and Elm. As shown on the information sheets provided for each

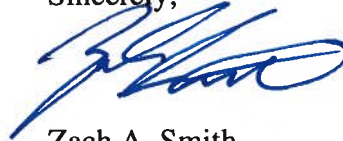
Easton Planning Commission
c/o Joe Mayer
September 23, 2024
Page 2

product, each model has multiple elevations, which should help to provide even greater architectural variation within the community.

Please note, the additional housing products being proposed hereunder are in addition to the six (6) housing products that were previously approved for this community, which include the following models: Hanover, Azalea, Galen, Bristol, Glendale and Freeport. As with the new products that are being proposed, the previously approved products also each have a variety of elevations. I am including the information sheets for the previously approved housing products as **Exhibit B**, for reference by your office and by the Planning Commission.

Please share this correspondence with the Planning Commission and include this item on the Planning Commission's October 17th agenda. If any further information and/or discussion may be needed at this time, please contact me at 410-819-8989 or zachsmith@alrwlaw.com. Thank you in advance for your assistance with this matter.

Sincerely,



Zach A. Smith

Enclosures

Cali

4 bed | 2 bath | 2 car | 1 story | 1,774 sq ft



Elevation A



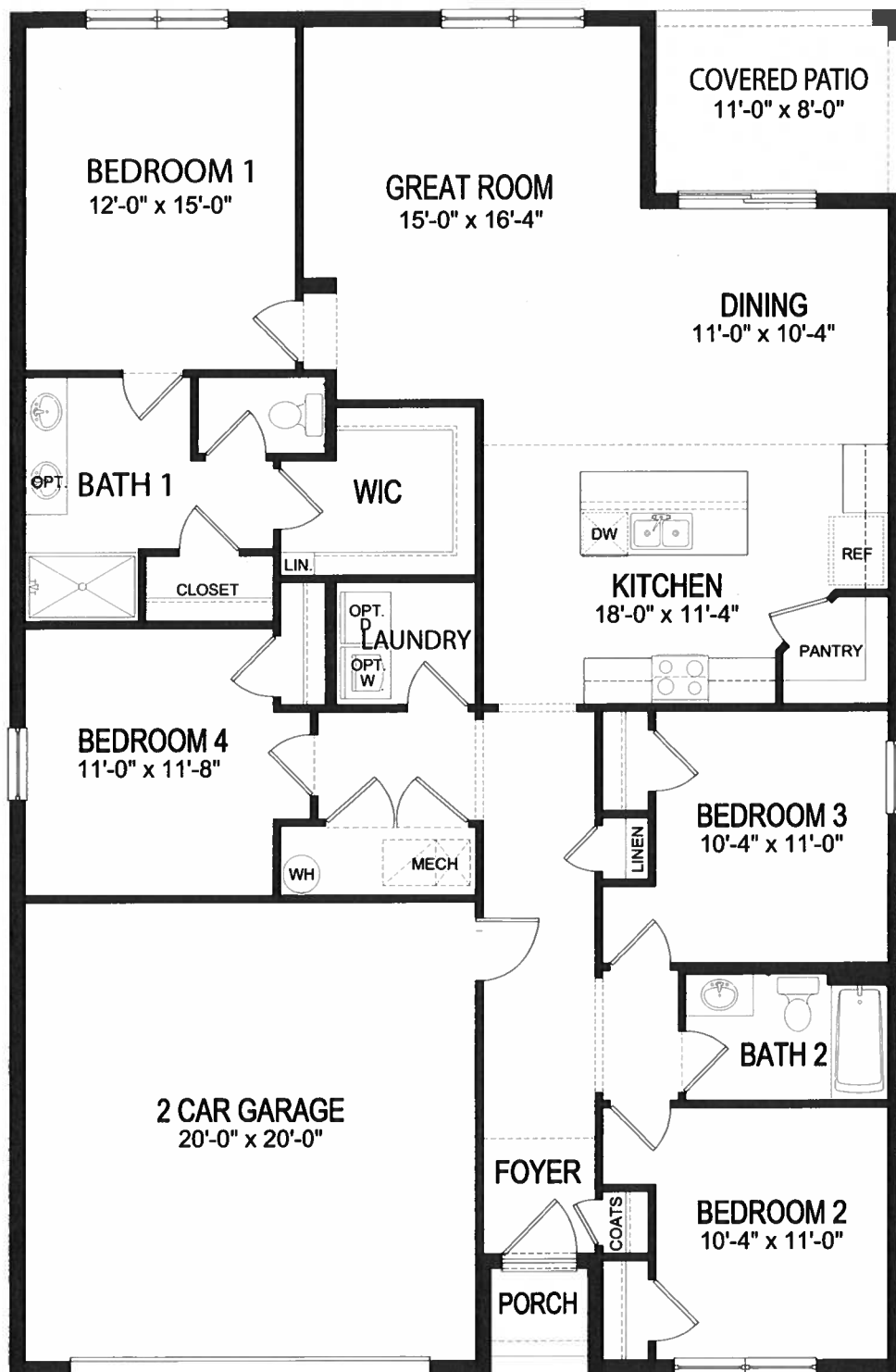
Elevation B



Elevation C

DRHORTON.COM

D.R. Horton is a Equal Housing Opportunity Builder. Home and community information, including pricing, included features, terms, availability and amenities, are subject to change and prior sale at any time without notice or obligation. Pictures, photographs, colors, features, and sizes are for illustration purposes only and will vary from the homes as built. Elevations and exterior materials may vary. Square footage dimensions are approximate.



DRHORTON.COM

Elm

5 bed | 3 bath | 2 car | 2 story | 2,415 sq ft



Elevation A

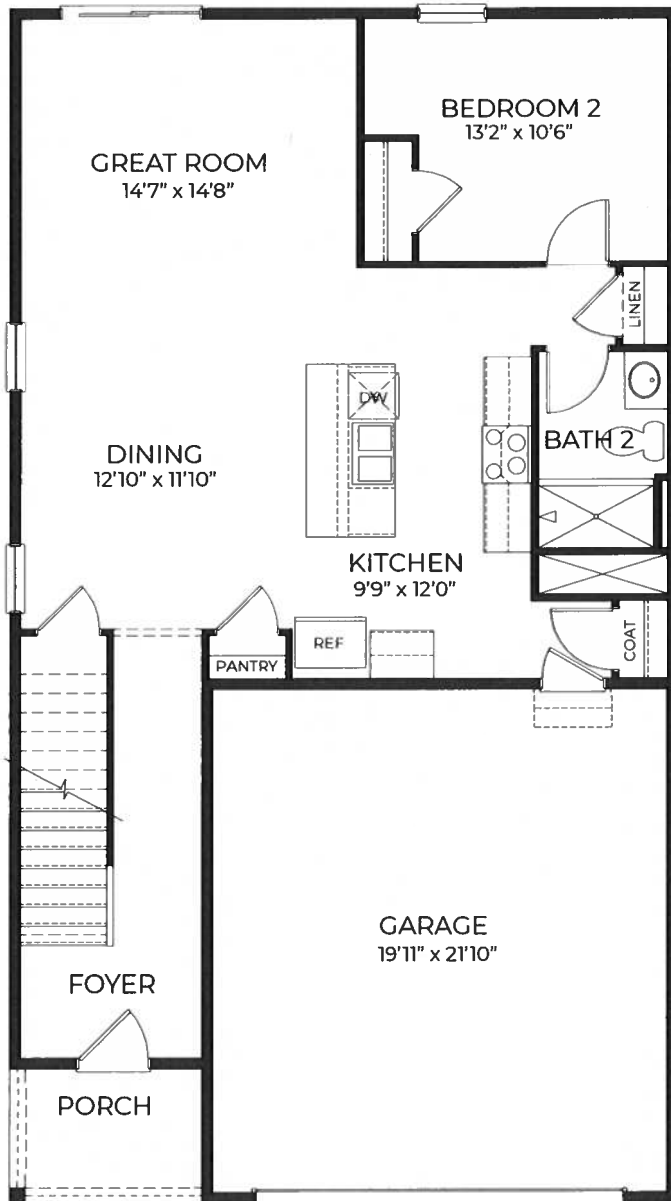


Elevation B

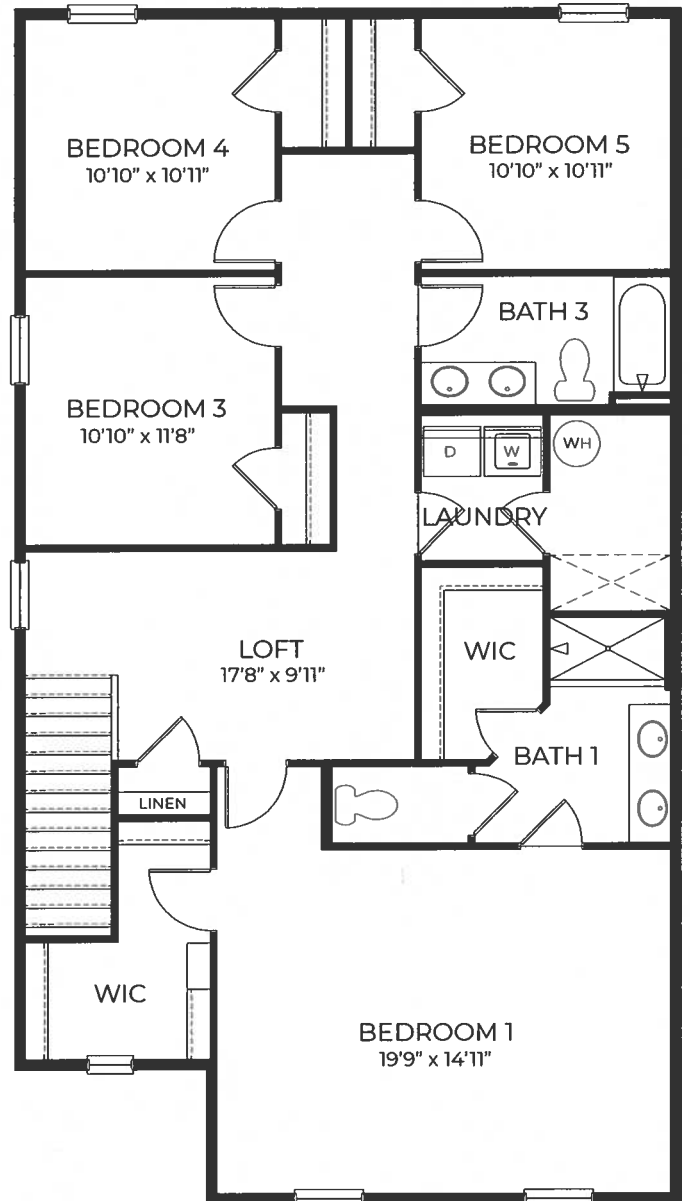


Elevation C

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FIRST FLOOR



SECOND FLOOR

Galveston

3 bed | 2 bath | 2 car | 1 story | 2,070 sq ft



Elevation A

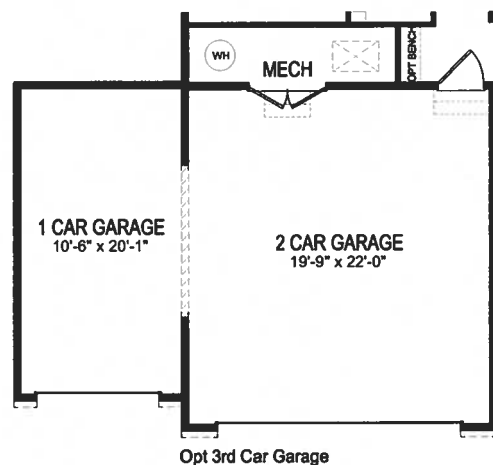
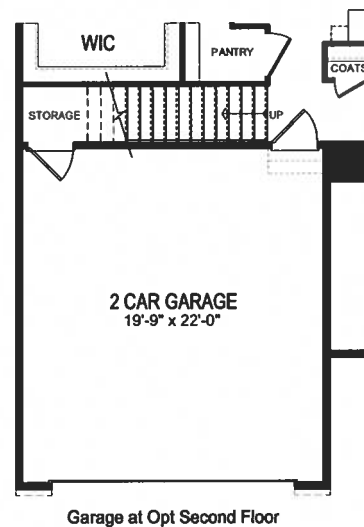
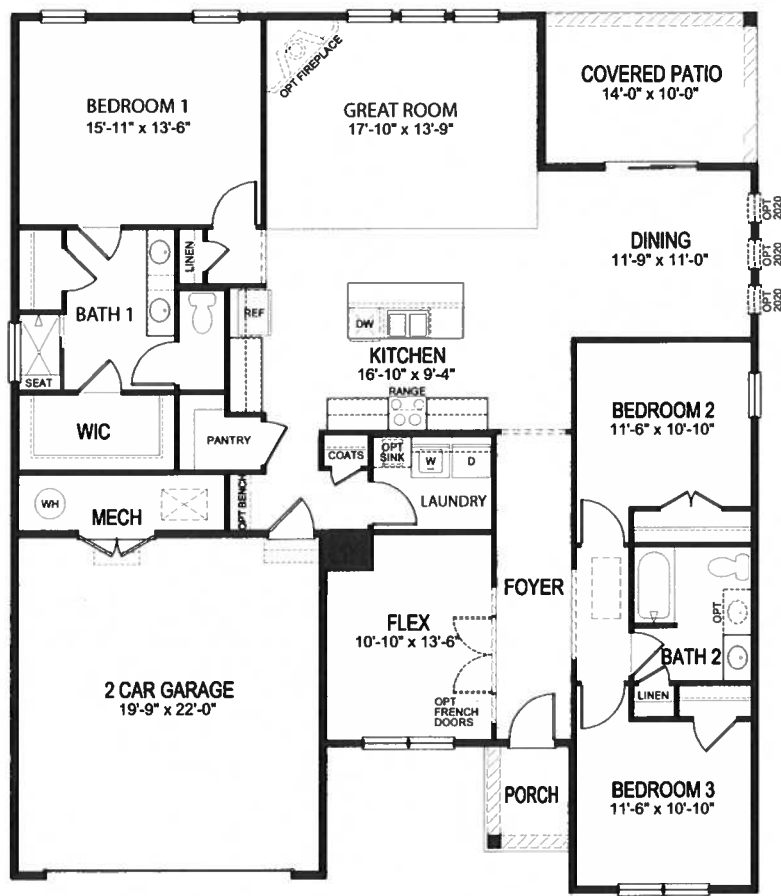
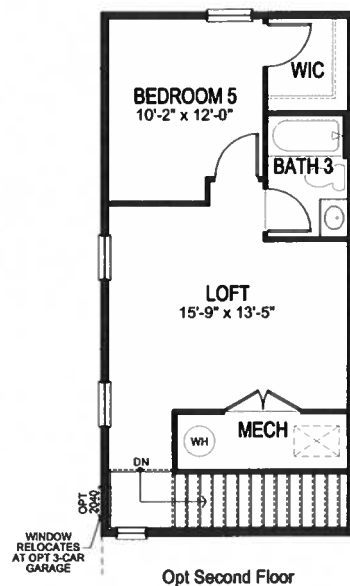
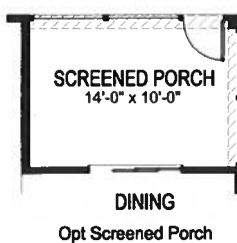
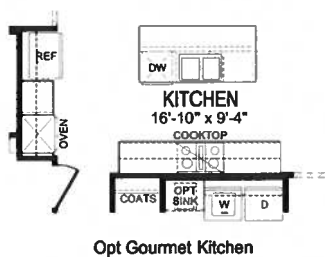
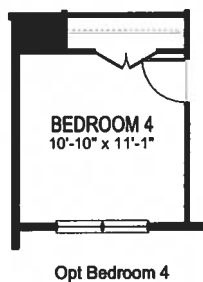


Elevation D



Elevation E

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Hayden

5 bed | 3 bath | 2 car | 2 story | 2,511 sq ft



Elevation B3



Elevation C3

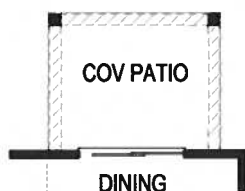


Elevation D

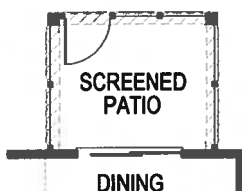


Elevation E

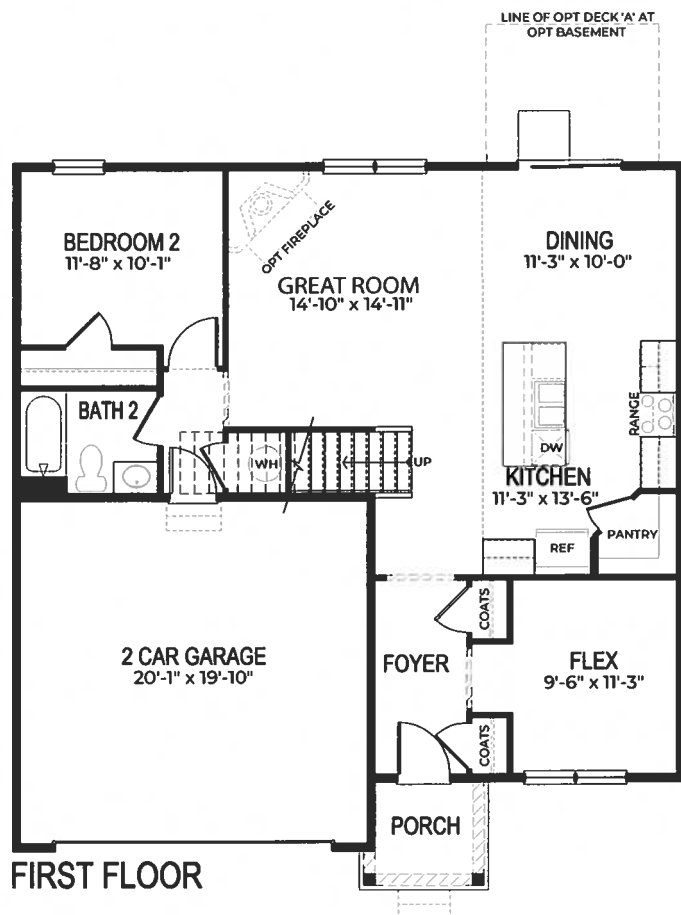
D.R. Horton is a Equal Housing Opportunity Builder. Home and community information, including pricing, included features, terms, availability and amenities, are subject to change and prior sale at any time without notice or obligation. Pictures, photographs, colors, features, and sizes are for illustration purposes only and will vary from the homes as built. Elevations and exterior materials may vary. Square footage dimensions are approximate.



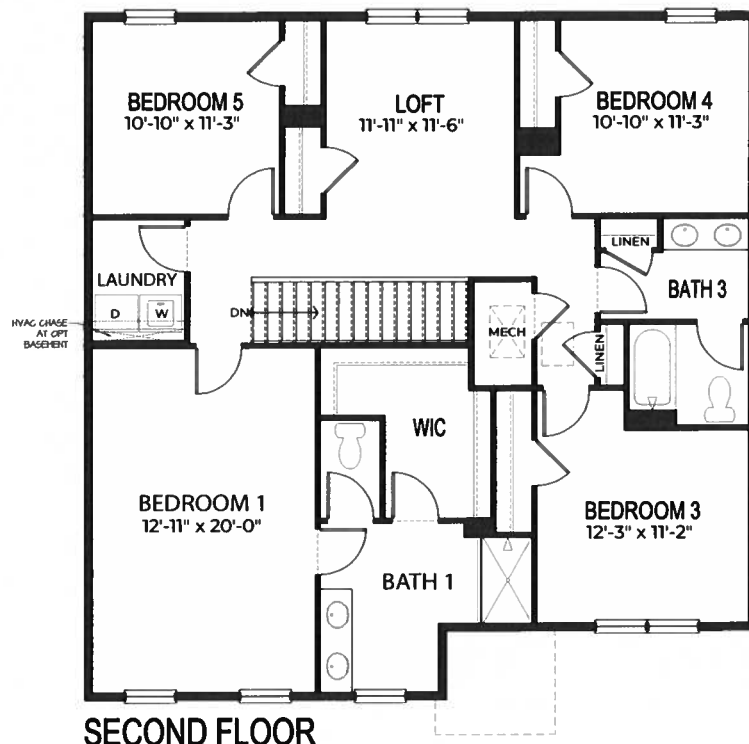
Opt Covered Patio



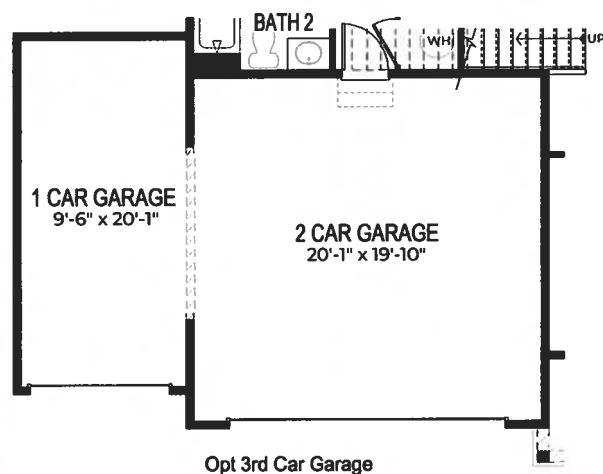
Opt Screened Patio/Porch



FIRST FLOOR



SECOND FLOOR



Opt 3rd Car Garage

Pine

4 bed | 2.5 bath | 2 car | 2 story | 1,953 sq ft



Elevation A

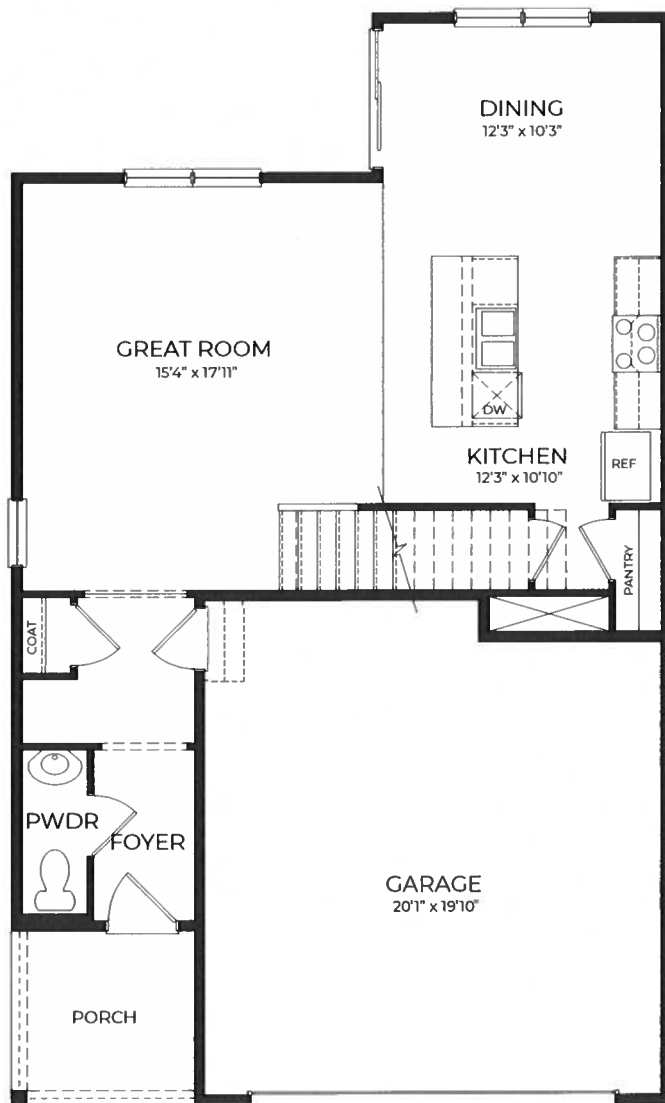


Elevation B

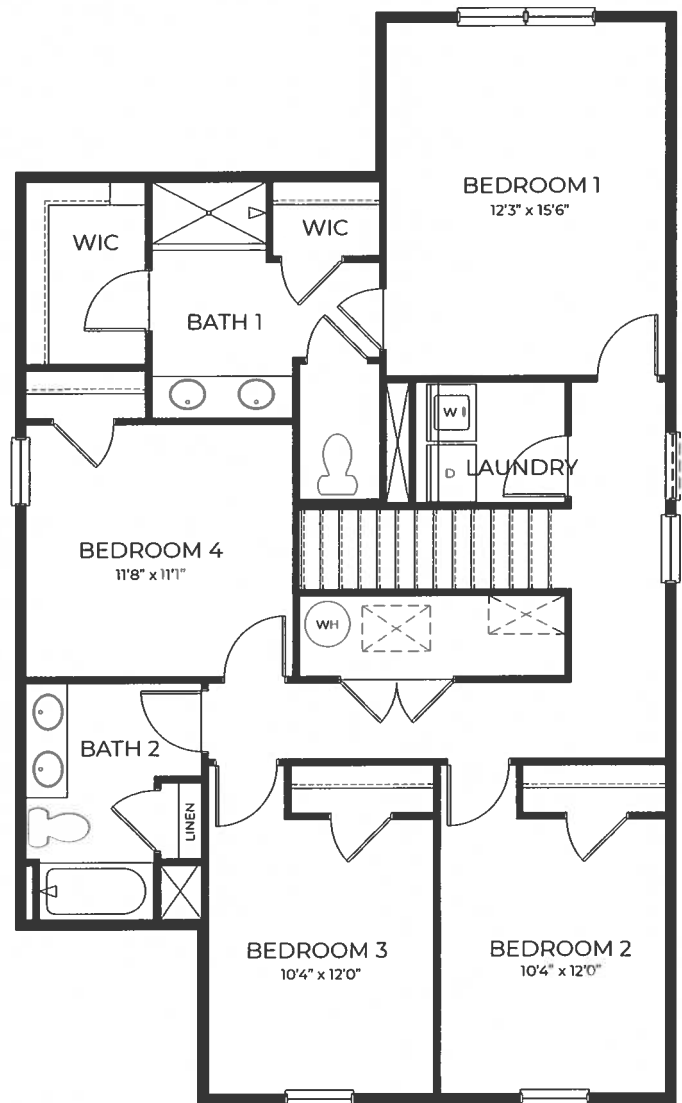


Elevation C

D.R. Horton is an Equal Housing Opportunity Builder. Home and community information, including pricing, included features, terms, availability and amenities, are subject to change and prior sale at any time without notice or obligation. Pictures, photographs, colors, features, and sizes are for illustration purposes only and will vary from the homes as built. Elevations and exterior materials may vary. Square footage dimensions are approximate.



FIRST FLOOR



SECOND FLOOR

Wheaton

3 bed | 3.5 bath | 3 car | 1 story | 2,571 sq ft



Elevation A3



Elevation B3



Elevation J3

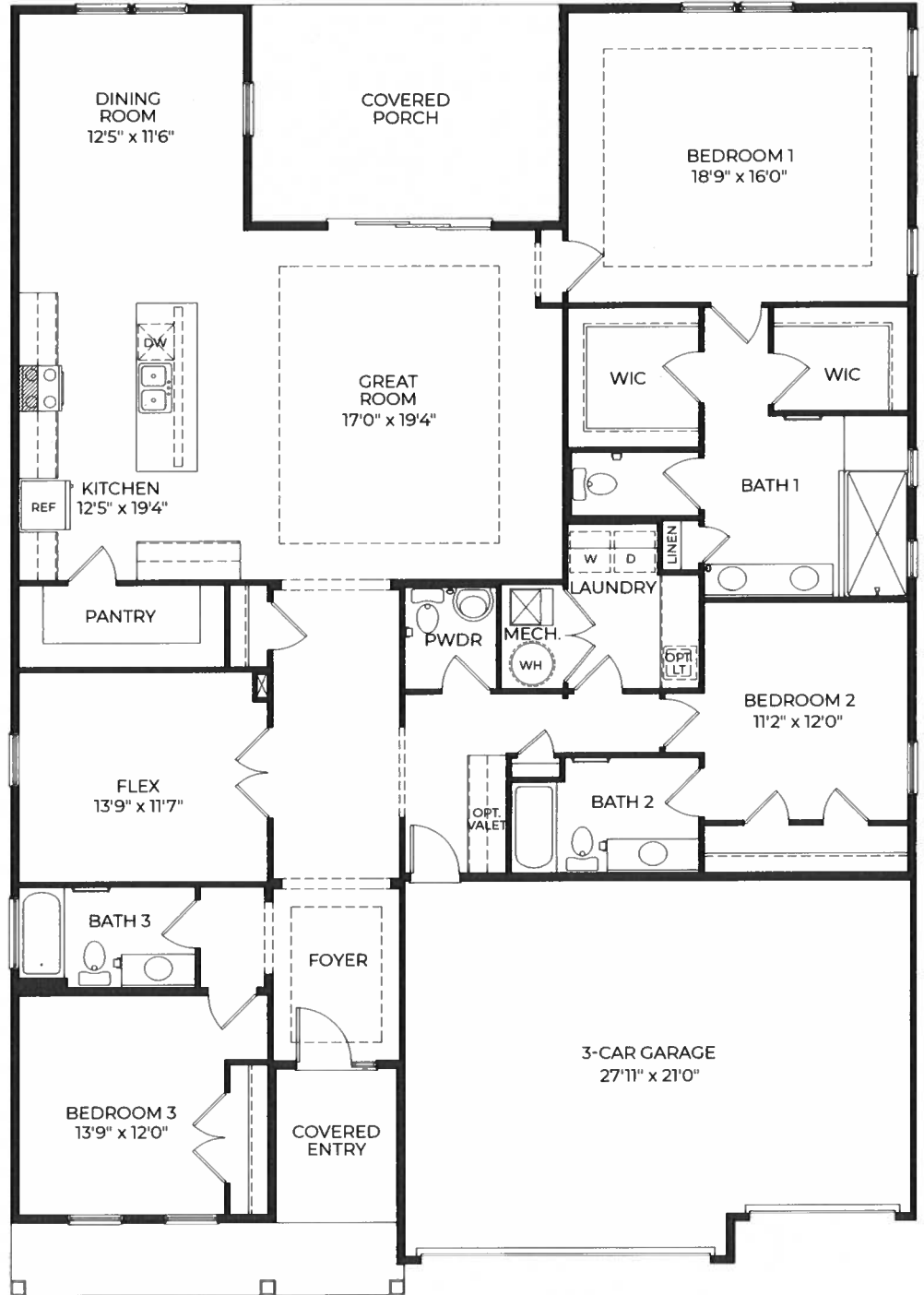


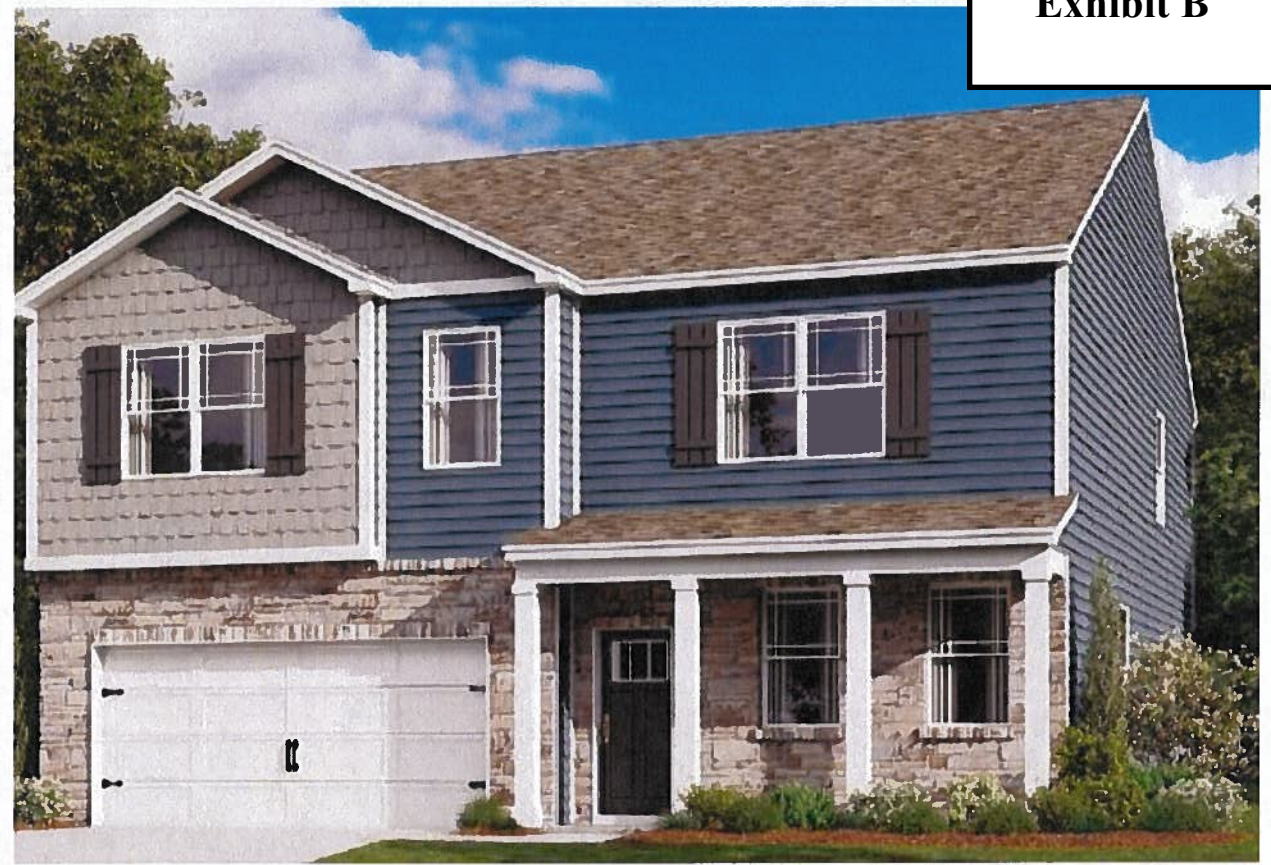
Elevation K3

D.R. Horton is an Equal Housing Opportunity Builder. Home and community information, including pricing, included features, terms, availability and amenities, are subject to change and prior sale at any time without notice or obligation. Pictures, photographs, colors, features, and sizes are for illustration purposes only and will vary from the homes as built. Elevations and exterior materials may vary. Square footage dimensions are approximate.



OPT. BEDROOM 4





THE ESTATES AT GANNON FARM

HANOVER HOUSE TYPE – 2804 SQFT

D·R·HORTON®
America's Builder



ELEVATION E1



ELEVATION F1

THE ESTATES AT GANNON FARM

AZALEA HOUSE TYPE – 1905 SQFT





THE ESTATES AT GANNON FARM

GALEN HOUSE TYPE – 2340 SQFT

D·R·HORTON®
America's Builder



THE ESTATES AT GANNON FARM

BRISTOL HOUSE TYPE – 1748 SQFT

D·R·HORTON®
America's Builder



THE ESTATES AT GANNON FARM

GLENDAL HOUSE TYPE – 1649 SQFT

D·R·HORTON®
America's Builder



THE ESTATES AT GANNON FARM

FREEPORT HOUSE TYPE – 1497 SQFT

D·R·HORTON®
America's Builder

ORDINANCE NO. 773

AN ORDINANCE OF THE TOWN OF EASTON GRANTING THE APPLICATION OF D.R. HORTON, INC. FOR A PLANNED UNIT DEVELOPMENT UNDER THE PROVISIONS OF THE EASTON ZONING ORDINANCE

INTRODUCED BY Mr. Silverstein

WHEREAS, the Town of Easton is authorized by the Land Use Article of the Maryland Annotated Code (the "Code") to enact and administer a zoning ordinance, which ordinance is Chapter 28 of the Easton Town Code; and

WHEREAS, the Town is authorized by Section 4-201 *et seq.* of the Land Use Article of the Code to divide land within the municipal boundaries into zoning districts in a manner it deems best suited to execute the purposes of the Land Use Article; and

WHEREAS, Section 28-701 of the Easton Zoning Ordinance authorizes the Easton Town Council to approve, deny and amend Planned Unit Development ("PUD") zoning districts in order to encourage the development of land in certain areas of the Town according to a total development concept incorporating a detailed development plan; and

WHEREAS, D.R. Horton, Inc. submitted an application for a PUD as described in the Town Council's findings of fact supporting this Ordinance and shown in detail on the plans referenced and attached hereto as Exhibit "A" (collectively, the "PUD Plan").

WHEREAS, the Easton Town Council held a duly noticed public hearing regarding the PUD application and this Ordinance on November 1, 2021, November 15, 2021, and December 6, 2021; and

WHEREAS, for the reasons expressed in the findings of fact of the Town Council, which are attached to this Ordinance as Exhibit "B", the Town Council concludes that the request for the PUD should be granted.

NOW, THEREFORE, the Town of Easton hereby ordains:

Section 1. The Findings of Fact attached hereto as Exhibit "B" are hereby incorporated into this Ordinance by reference.

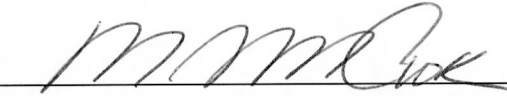
Section 2. The application of D.R. Horton, Inc. for a PUD as depicted by Exhibit "A" and described by Exhibit B is hereby approved subject to the conditions set forth in Exhibit "B".

Section 3. Severability. The Easton Town Council intends that, if a court of competent jurisdiction issues a final decision holding that any part of this ordinance is invalid, the remaining provisions hereof remain in full force and effect.

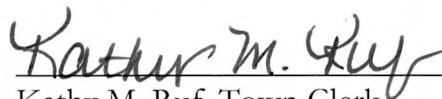
Section 4. In accordance with Article II, Section 9 of the Easton Town Charter, this ordinance shall become effective on the later of (a) twenty (20) calendar days after approval by the Mayor or passage of this ordinance by the Council over the Mayor's veto; or (b) the effective date of Ordinance 774 to amend the Subdivision Regulations to allow the waiver of the alley requirement for PUDs.

Silverstein	-	Yea
Abbatiello	-	Nay
Engle	-	Yea
Davis	-	Yea
Cook	-	Nay

I hereby certify that the above Ordinance was passed by a yea and nay vote of the Council this 21st day of February, 2022.

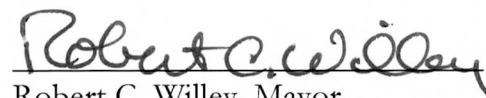

Megan J. M. Cook, Town Council President

Delivered to the Mayor by me this 21st day of February, 2022.


Kathy M. Ruf, Town Clerk

APPROVED: February 21, 2022

Date: February 21, 2022


Robert C. Willey, Mayor

EFFECTIVE DATE: March 13, 2022.

EXHIBIT "A"

The following materials are referred to as the "PUD Plan":

"PUD SKETCH PLAN FOR 'THE ESTATES AT GANNON FARM' IN THE TOWN OF EASTON TALBOT COUNTY, MD" (Sheets 1-5) prepared by Lane Engineering, LLC and dated August 24, 2001.

COPIES ARE ON FILE AT THE TOWN OFFICE



TALBOT COUNTY SOILS				
MAP SYMBOL	SOILS NAME	HYDRIC SOILS	K FACTOR	SOIL GROUP
CsA	CROSSADORE SILT LOAM	*	0.49	C/D
H9B	HAMBROOK-SASSAFRAS COMPLEX		0.37	B
M9A	MATAPEAKE SILT LOAM		0.49	C
M9B	MATAPEAKE SILT LOAM		0.49	C
M10A	MATTAPEX SILT LOAM	*	0.49	C
M10B	MATTAPEX SILT LOAM	*	0.49	C
N9B	NASSAWANING SILT LOAM	*	0.49	C
O1A	OTHELLO SILT LOAM	YES	0.43	C/D
W04a	WOODSTOWN LOAM	*	0.32	C

[illegible]

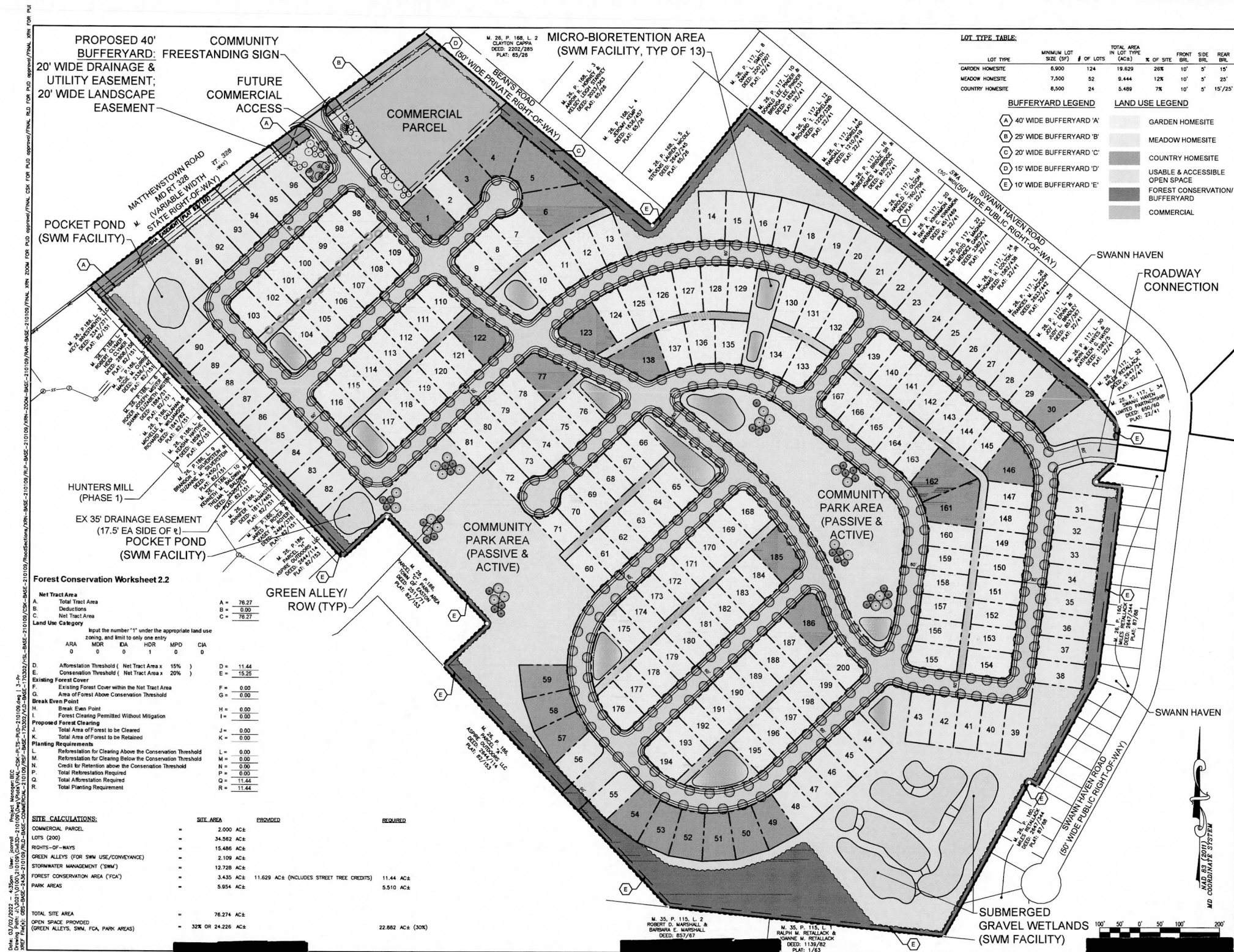
Lane Engineering, LLC
Established 1986
Civil Engineers • Land Planning • Land Surveyors



E-mail: general@lane.com
117 Bay St., Fenton, MD 21601 (410) 822-8053
15 Washington St., Cambridge, MA 02142 (617) 221-0818
354 Pennsylvania Ave., Cambridge, MA 02117 (410) 758-2095

SEAL	
	DATE

EXISTING CONDITIONS & SIMPLIFIED FSD "THE ESTATES AT GANNON FARM" ON THE LANDS OF GANNON FAMILY, LLC IN THE TOWNSHIP OF EASTON, MARYLAND TILLOT COUNTY, MARYLAND TAX MAP 26 GR1D 20 PARCEL 45	
ISSUED FOR: PUD SKETCH SITE PLAN TOWN COUNCIL PUD FINAL APPROVAL	DATE: BY: 05/05/21 BCE 05/14/21 BCE 03/03/22 BCE
SHEET 2 OF 4	DATE: JOB NO. 2110109
SCALE: AS NOTED	FILE NO. 1659



LOT TYPE TABLE:							
LOT TYPE	MINIMUM LOT SIZE (SF)	# OF LOTS	TOTAL AREA IN LOT TYPE (AC±)	% OF SITE	FRONT BRL	SIDE BRL	REAR BRL
GARDEN HOMESTE	6,900	124	19.629	26%	10'	5'	15'
MEADOW HOMESTE	7,500	52	9.444	12%	10'	5'	25'
COUNTRY HOMESTE	8,500	24	5.489	7%	10'	5'	15'/25'

BUFFERYARD LEGEND		LAND USE LEGEND	
	40' WIDE BUFFERYARD 'A'		GARDEN HOMESITE
	25' WIDE BUFFERYARD 'B'		MEADOW HOMESITE
	20' WIDE BUFFERYARD 'C'		COUNTRY HOMESITE
	15' WIDE BUFFERYARD 'D'		USABLE & ACCESSIBLE OPEN SPACE
	10' WIDE BUFFERYARD 'E'		FOREST CONSERVATION/ BUFFERYARD
			COMMERCIAL

[illegible]

Lane Engineering, LLC
Established 1986
Civil Engineers • Land Planning • Land Surveyors



E-mail: general@lane.com
117 Bay St. Foston, MD 21061 (410) 822-8003
15 Washington St. Carrollton, MD 21033 (410) 221-0918
354 Pennsylvania Ave. Centreville, MD 21617 (410) 756-2095

PUD CONCEPT & LAND USE PLAN "THE ESTATES AT GANNON FARM" ON THE LANDS OF GANNON FAMILY, LLC IN THE TOWN OF EASTON, MARYLAND TALBOT COUNTY, MARYLAND TAX MAP 26 GRID 20 PARCEL 45	
ISSUED FOR: PUD SKETCH SITE PLAN TOWN COUNCIL PUD FINAL APPROVAL	DATE: BY: 05/05/21 BCE 06/12/21 BCE 03/03/22 BCE
SHEET 3 OF 4	DATE:
SCALE: AS NOTED	FILE No. 210109 JOB No. 1659

EXHIBIT "B" TO ORDINANCE NO. 773

IN THE MATTER OF : BEFORE THE
THE APPLICATION OF : EASTON TOWN COUNCIL
D.R. HORTON, INC. :

FINDINGS OF FACT

During meetings of the Easton Town Council held on November 1, 2021, November 15, 2021, and December 6, 2021, a public hearing was held on the application of D.R. Horton, Inc. (the "Applicant" and/or "Developer") to establish a planned unit development ("PUD") in the Town of Easton for 200 single family residential homes and a two-acre commercial parcel. The PUD is located on Matthewstown Road and is Parcel 45 on Talbot County Tax Map 26 (the "Property"). The Applicant is the Contract Purchaser. The Property is owned by Gannon Family, LLC. The Property is more commonly known as 29659 Matthewstown Road, Easton, Maryland.

The Property and the proposed PUD are more particularly shown on plans entitled "PUD SKETCH PLAN FOR 'THE ESTATES AT GANNON FARM' IN THE TOWN OF EASTON TALBOT COUNTY, MD" (Sheets 1-5) prepared by Lane Engineering, LLC and dated August 24, 2001 (collectively, the "PUD Plan").

A. The PUD Application and the Public Hearing.

The Property is 76.274 acres more or less and is currently zoned A-1 under the Easton Zoning Ordinance. The Property is located on the Southeast side of Matthewstown Road. The Property is bounded on the north by a farm and farmhouse. To the Northeast is the Swann Haven Mobile Home Park. To the Southeast is a wooded parcel of land. To the South is a small residential subdivision. To the West is the Hunter's Mill residential subdivision and a wooded parcel, and further west is the Matthewstown Run residential subdivision. Across Matthewstown Road to the west is the Bretridge residential subdivision. The Applicant is requesting permission to build 200 single family residences on the Property and to carve out a two-acre commercial piece. No details were provided for proposed development of the commercial parcel, so any development on that portion of the Property will require a PUD Amendment. The Planning and Zoning Commission ("Planning Commission") reviewed the request and found the proposed PUD to be consistent with the Comprehensive Plan and recommended approval of the PUD to the Town Council conditioned on four items being addressed. The Planning Commission also reviewed and approved the sketch plan. However, the sketch plan was revised during the Town Council's process, and will need to go back to the Planning Commission for additional review and approval.

The Applicant was represented by Brett Ewing, AICP of Lane Engineering, LLC, Zach Smith, Esquire of Armistead, Lee, Rust, and Wright, and Jay Heilman, representative of D.R. Horton, Inc. who presented both testimonial and documentary evidence in support of the application. Following the close of the public hearing, during its regularly scheduled meeting on December 6, 2021, the Town Council developed a consensus concerning the application. The Council instructed the Town Attorney to prepare findings of fact reflecting these opinions and comments. In so doing, the Town Attorney has reviewed the evidence presented to the Council solely in the context of this application in order to set out the basis for the Council's decision.

B. Legal Background.

The Town of Easton Zoning Ordinance as recently updated (the "Ordinance") establishes the Planned Unit Development (PUD) Zoning District for "carefully planned residential, mixed use and certain commercial developments at appropriate locations" in Easton.

The standards and regulations for PUD districts are found in Article VII of the Ordinance. Section 28-701.A of the Ordinance explains that the PUD regulations are intended:

. . . to allow all aspects of a PUD District to be subject to public review and control by the Town with specific provisions to be made on a case-by-case basis for adequate open space, architectural appearance, the height, bulk and location of buildings, required public facilities, and a variety of housing types, densities, and/or compatible commercial or industrial uses as a part of a detailed development plan.

Section 28-701 sets out various development standards and procedures and, finally, establishes the standards by which PUD applications are reviewed by the Town Council. Section 28-701.C sets forth the uses that are permitted in a PUD District. Specifically, Section 28-701.C(1) provides that "Residential uses of all types" are permitted in a PUD District and 28-701.C(2) provides that Commercial uses in the A-1 District "shall be oriented to benefit the residents of the community and the Town." Section 28-701.G articulates eight specific development standards and a chart with varying standards for minimum size, maximum size, maximum residential density, and minimum open space requirement depending on the type of PUD being requested. In this case, the PUD-General is being proposed.

The PUD application procedure is described by Section 28-701.H. Upon receipt of a written recommendation by the Planning Commission, the Council shall conduct a public hearing on the application. The Council shall consider, but is not bound by, the recommendation of the Commission. The Ordinance establishes nine standards that must be met as precondition to granting an application. If the Council affirmatively finds that all

preconditions have been met, the Council is then authorized but not required to grant the application. In making its decision, the Council:

“may consider, in addition to the factors outlined above [i.e., the criteria set out in Section 28-701.H(3)A], other factors it deems appropriate including but not limited to the degree to which the proposed development:

1. helps accomplish the coordinated, adjusted, and harmonious development of the Town and its environs in accordance with present and future needs;
2. promotes health, safety, morals, order, convenience, prosperity, and general welfare; including among other things, adequate provisions for traffic, the promotion of public safety, adequate provisions for light and air, conservation of natural resources, the prevention of environmental pollution, the promotion of the healthful and convenient distribution of population;
3. exemplifies good civic design and arrangement and the stewardship of the Chesapeake Bay and the land as a universal ethic;
4. encourages the conservation of resources, including a reduction in resource consumption;
5. is located in a location suitable for it given existing and reasonably foreseeable development; and
6. encourages appropriate and sustainable economic growth.”

These six enumerated standards are paraphrases of the statement of intent of the Ordinance found in Section 28-103. In short, the Ordinance sets out a two-step decision-making process: first, the Council must determine whether or not an application satisfies certain minimum criteria and, if it does, then the Council considers whether to grant or deny the application based upon relevant factors including the degree to which the application satisfies the standards enunciated by the General Assembly as goals for land use planning in this State.

*C. Does the Proposed Development Meet the Minimum Criteria
Set Out in the Easton Zoning Ordinance for PUD Development?*

As required by Section 28-701.H(3)A of the Ordinance, the Town Council makes the following findings of fact with regard to the application¹:

¹ Given that no specific proposal was made for the commercial parcel proposed as part of the PUD, the findings articulated herein relate to the residential portion of the PUD only. Any future development in the commercial portion shall require a PUD Amendment and will have to satisfy all of the required findings for the commercial

1. The Town Council finds that the property was properly posted and that adequate legal notice of the public hearing was published in the Easton Star-Democrat.

2. The Town Council finds that the proposed development conforms to applicable standards set forth in this Zoning Ordinance for planned unit developments. In particular, the Town Council finds that the development standards set forth in Section 28-701.G of the Ordinance are satisfied as follows:

- (1) The land comprising the Property is in one ownership. Specifically, the Property is owned by Gannon Family, LLC. The contract purchaser is D.R. Horton, Inc., the Applicant.
- (2) The Property is of a configuration suitable for the development proposed. The size and configuration of the Property and the proposed site plan are suitable to accommodate the proposed 200 single family residential homes in a manner consistent with applicable Town design guidelines and requirements.
- (3) Public water and sewer systems are available to the Property for service of the PUD.
- (4) The Property is adjacent to adequate transportation facilities capable of serving existing traffic and that expected to be generated by the proposed development. The PUD site has frontage on Matthewstown Road. Matthewstown Road is a state road so the entrance and improvements required to Matthewstown Road are governed by the State Highway Administration ("SHA"). However, the Town Council requests that the Town Engineer communicate its preference to SHA. Specifically, the Town Council would like SHA to require the Applicant to construct acceleration and deceleration lanes to the entrance into the development and a dedicated left hand turn lane into the development when traveling southwest on Matthewstown Road. In addition, the Town Council believes that it is important for there to be multiple points of access to communities and interconnectivity between neighborhoods. Therefore, the Applicant shall construct an access to Swann Haven Road at the location designated as "Roadway Connection" on the PUD Concept & Land Use Plan. In addition, the Town Council is requiring the developer to designate and set aside land for a potential future connection to the property to the west of the Property. The Planning Commission shall approve the exact location of the access.

development proposed.

- (5) The owners or developers must begin construction of the development within two years after final approval. If there is no action on the part of the applicant at any point in the process for a period of two years, the zoning shall revert to its previous classification unless a time extension is requested and granted by the Planning Commission.
- (6) The setback, lot size, lot coverage, height, minimum frontage, minimum open space and yard requirements are as shown on the PUD Plan and reproduced here for convenience:

SETBACKS PROPOSED:

GARDEN HOMESITES: MINIMUM LOT SIZE - 6,900 SF

FRONT SETBACK - 10'
SIDE SETBACK - 5'
REAR SETBACK - 15'

MEADOW HOMESITES: MINIMUM LOT SIZE - 7,500 SF

FRONT SETBACK - 10'
SIDE SETBACK - 5'
REAR SETBACK - 25'

COUNTRY HOMESITES: MINIMUM LOT SIZE - 8,500 SF

FRONT SETBACK - 10'
SIDE SETBACK - 5'
REAR SETBACK - 25'

THE MINIMUM FRONTAGE, HEIGHT AND YARD REQUIREMENTS WILL REMAIN CONSISTENT WITH THE TOWN'S BASE RESIDENTIAL ZONING DISTRICT STANDARDS.

- (7) The off-street parking required for single family detached dwellings is a driveway at least 10 feet wide and 35 feet long. The Applicant is proposing driveways of 20 feet wide by 25 feet long which provide increased parking area.
- (8) The off-street parking requirements for major retail or shopping center use are not applicable.
- (9) The property is 76.274 acres in size which satisfies the 5-acre minimum size requirement.
- (10) Since the property is a PUD-General, there is no maximum size applicable.
- (11) The proposed density is 2.62 dwelling units per acre, which is significantly less than the 16 dwelling units per acre permissible.
- (12) The Applicant is proposing 22.882 acres for open space which is exactly the 30% open space required for PUD-General.

In summary, as is more specifically set forth above, the Town Council finds that the proposed PUD complies with applicable Development Standards in the Ordinance.

3. The proposed PUD is not necessarily superior to or more innovative than conventional development. In fact, it is very similar to a conventional development that could occur in R-10A Residential zoning. However, the Property is zoned Agricultural (A-1). In the A-1 zoning, the minimum lot size is one acre. By granting the PUD, the developer will be able to reach a density closer to Smart Growth standards without adding significant adverse impacts to public health, safety or the environment. The Town has not had a new residential subdivision of this size in quite a few years. With the shortage of available housing particularly in the price range for this project, this PUD provides a greater public benefit without the adverse impacts.

4. By letter dated August 23, 2021, the Easton Planning Commission made a favorable recommendation to the Town Council conditioned on the following four items:

a. The proposed PUD site plan shall be revised to comply with the alley requirement of the Town's Subdivision Regulations, as the flexibility afforded by the PUD does not extend to provisions of the Subdivision Regulations and we do not believe the application warrants the relief from this standard provided by these regulations (either there are too few lots proposed for alleys to be feasible or the standard poses a hardship for the Applicant);

b. A determination that two points of ingress/egress are sufficient in this instance to meet the objectives of connectivity called for in the Comprehensive Plan. Specifically, connections off of Matthewstown Road and to the Swann Haven Subdivision are deemed sufficient;

c. The Developer shall be responsible for the buildout of these remaining ingress/egress accesses subject to approval by the Town and Talbot County; and

d. The Developer shall provide some amount of greater variety in the home design including some models with rear garages/rear access and a variation of architectural styles.

The Town Council does not agree with the Planning Commission on condition a, b, and part of d, but does agree with c and part of d. Specifically, as to the alleys in condition a, the Town Council has simultaneously introduced legislation to amend the Subdivision Regulations to allow for the alley requirement to be waived for this PUD since this subdivision is not adjacent to other subdivisions that are served by alleys.

With respect to condition b, the Town Council believes that in addition to the ingress/egress to Matthewstown Road and to the Swann Haven Subdivision, the Applicant

shall preserve the ability to connect to the neighboring wooded property which is Parcel 186 on Talbot County Tax Map 26.

For condition d, since the Town Council is waiving the requirement for alleys, the Town Council does not believe that models with rear garages and rear access are required, but does agree that the Developer shall provide greater variety in the home design and variations of architectural styles, which is also included as a condition to these Findings of Fact.

5. Based upon the recommendation of the Planning Commission and information contained within the record, the Council finds that the proposed PUD conforms to the Town's Comprehensive Plan.

The Plan is intended to serve as the guide for land use decisions of the Town and articulates many broad policy issues and objectives intended to apply on a town-scale. The Plan has an entire chapter devoted to Housing. The Plan recognizes the problems in the housing market in Easton as housing cost, housing quality, and housing availability. (Plan p. 133).

Finally, at the end of the Housing Chapter in the Plan, the Town establishes Housing Goals and Objectives. Among them are to "Establish design standards and require physical distribution of different housing types that provide visual interest and a smooth blend of affordable housing in the community"; "Achieve a density that creates a sense of place, uses infrastructure efficiently, produces pedestrian-friendly neighborhoods and accommodates plans for transit." (Plan p. 140). The Council believes that the proposed PUD advances these goals and that the proposed PUD conforms with the Plan.

6. The proposed PUD, in conjunction with existing and reasonably anticipated development in the neighborhood surrounding the site for the proposed PUD, will not interfere with the adequate and orderly provision of public services to the area. Adequate water and sewer services to serve the proposed PUD exist and are within relatively close proximity to the Property. The Applicant will provide the utility extension that is necessary to connect the PUD to Town services. The Town's wastewater treatment plant has adequate capacity to serve the PUD. The Property currently has a "S2/W2" classification in the Talbot County Comprehensive Water and Sewer Plan. The Applicant will need to have the Property reclassified to "S1/W1".

7. The Town Council finds that the proposed PUD will not cause unacceptable traffic congestion or hazards either in or near the site for the proposed PUD development or elsewhere in the Town or Talbot County. The primary access to the Property will be from Matthewstown Road with a secondary access point connecting to the Swann Haven community and the potential for an additional secondary access point connecting to the west of the Property.

A Traffic Impact Analysis (“TIA”) was conducted by Mike Lenhart, P.E. PTOE and President of Lenhart Traffic Consulting, Inc. in July 2018 and updated in October 2020. The TIA analysis concludes that all intersections studied will operate at a Level of Service A after the PUD is completed. Matthewstown Road is a state road and the entrance and required improvements will be governed by the State Highway Administration (“SHA”). The Town Council requests that the Town Engineer communicate its preference to SHA. Specifically, the Town Council would like SHA to require the Applicant to construct acceleration and deceleration lanes to the entrance into the development and a dedicated left hand turn lane into the development when traveling southwest on Matthewstown Road. The Applicant will continue to work with SHA and the Town Engineer to determine the specific design of the entrance.

The Town Council does not make this finding regarding traffic lightly. A previous PUD approved for this same property was vetoed by the Mayor due, in large part, to the inadequacy of the transportation system at the time. Since then, a number of improvements have been made on Matthewstown Road between Black Dog Alley and Route 50. In addition, this PUD is proposing significantly less units than the previous PUD proposal.

8. The record contains no indication that there are any features of ecological, historical, or cultural significance on the Property, and the Council so finds. Ecologically, stormwater management techniques and practices that comply with State and local regulations and protect sensitive, downstream resources are proposed.

9. The Town Council finds that the proposed PUD is compatible with existing development in the surrounding neighborhood and with development reasonably anticipated to occur in the neighborhood in terms of size, scale, design, and appearance. The surrounding developments are residential. The site is identified as residential use on the Future Land Use Map in the Town’s Comprehensive Plan and will contain single family residential homes, consistent with the housing on all adjacent properties. Although consistent with adjacent housing types, a Town compliant landscaped bufferyard is proposed to help soften the impact on adjoining properties.

10. The proposed PUD will not adversely affect the value of property in the neighborhood surrounding the site. There is a significant demand for residential units in the Town of Easton. The values for Easton real estate have been escalating.

*D. Should the Town Council Exercise Its Legislative Discretion To
Grant The Application?*

The Council finds that the Applicant has met the minimum criteria for granting a PUD application. The Council has further concluded that it is appropriate for it to exercise its legislative discretion to grant the application.

The Council finds that the proposed PUD helps accomplish the coordinated, adjusted, and harmonious development of the Town and its environs in accordance with present and future needs and is located in a location suitable for its given existing and reasonably foreseeable development.

The Council further finds that the PUD is located in a location suitable for its given existing and reasonably foreseeable development and encourages appropriate and sustainable economic growth. The demand for housing in Easton outweighs the current supply. The PUD will enhance housing opportunities in the Town of Easton.

Based on the foregoing, the Town Council finds approval of the PUD to be in the public interest, subject to the conditions set forth below.

E. Conditions.

The following conditions are binding on the Applicant and any successor developer(s) of the land located within this PUD district:

1. To advance the Town's objectives related to making housing more affordable, the Developer shall establish a program for the community that offers closing assistance for individuals who are active military, law enforcement, firefighters, healthcare professionals, educators and/or social workers, whereby the developer pays the following closing costs associated with the purchase of a new home within the community, provided that the buyer(s) uses the developer's preferred lender: (i) cash contribution towards buyer's closing costs in an amount not less than 2% of the purchase price for the new home, and (ii) interest rate buy down of not less than one-quarter (0.25) of one (1) percentage point.

2. In furtherance of the Town's objective for affordable housing, the Applicant shall pay a fee to the Town's Affordable Housing Fund in the amount of Three Thousand Dollars (\$3,000.00) per lot payable at the time of application for a building permit for each lot.

3. Given that the Town Council has agreed to waive the requirement for alleys in accordance with the ordinance amending the Subdivision Regulations effective simultaneously with the PUD Ordinance, the Town Council believes that widening the proposed street sections to a 60-foot wide right of way with 36 feet wide street section (typical cross section for residential sub-collector street) is more appropriate to provide some on-street parking.

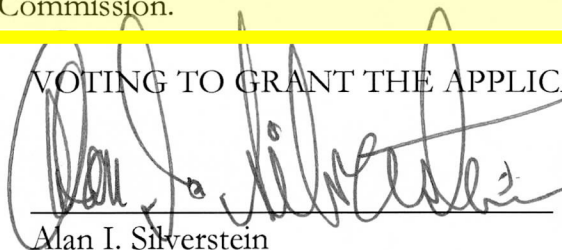
4. The Applicant shall construct a pedestrian pathway along the north side of the residential collector street that is shown on the site plan. The Applicant shall also establish and designate, to the Town, an easement along the entire frontage of the Property along Matthewstown Road for a future pedestrian pathway to be designed and constructed in accordance with the Maryland State Highway Administration. The easement shall be established prior to any building permit being issued for the Property.

5. Subject to approval by Talbot County, the Developer shall construct a vehicular connection, in accordance with applicable Town and County standards, between the community and Swann Haven Road in the location shown on the site plan. Provided that approval from Talbot County has been obtained, the vehicular connection shall be built concurrent with the construction of other roadways within the community. If the approval from Talbot County has not been obtained prior to the construction of the other roadways in the community, then the Applicant shall be required to continue to keep a bond in place to cover the cost of construction of the improvements until such time as the approval from Talbot County has been obtained and the road connection constructed to the Town's satisfaction.

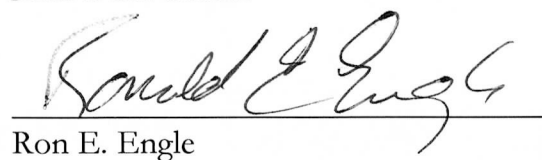
6. Developer shall plat a 60-foot right-of-way on the Property to provide for a future vehicular connection between the Property and the adjoining Parcel 186 on Talbot County Tax Map 26. The right-of-way shall be platted and dedicated to the Town simultaneously with the approval and recordation of the final plat for the Property, but the Applicant shall not be required to construct the road within the right-of-way.

7. The Town Council believes that the Applicant should provide a greater variety of home design and variation of architectural styles than what was provided with the PUD application. The specific elevations for the home designs shall be subject to the approval of the Easton Planning and Zoning Commission.

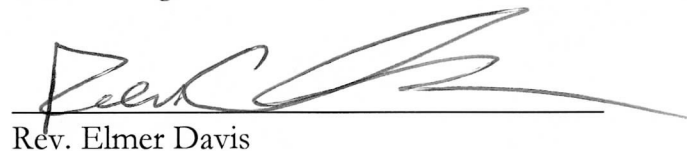
VOTING TO GRANT THE APPLICATION:



Alan I. Silverstein

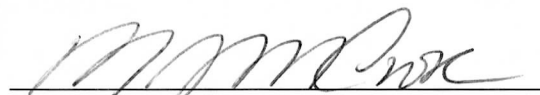


Ron E. Engle

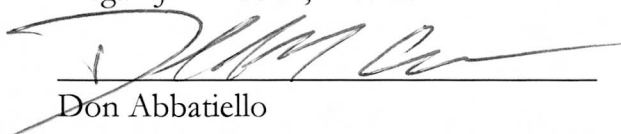


Rev. Elmer Davis

VOTING TO DENY THE APPLICATION:

A handwritten signature in cursive script, appearing to read 'Megan J. M. Cook', written over a horizontal line.

Megan J. M. Cook, President

A handwritten signature in cursive script, appearing to read 'Don Abbatiello', written over a horizontal line.

Don Abbatiello



Planning Commission MEETING MINUTES

Thursday, March 17, 2022 - 1:00 PM
Council Chambers, Easton Town Office
14 S Harrison Street

Call to Order

Members Present:

Mr. Paul Weber-Chairman, Ms. Jennifer Dindinger-Vice Chairperson, Mr. Talbot Bone, Mr. William Ryal, and Mr. Philip Toussaint

Member Present (via zoom)

Ms. Victoria McAndrews

Staff Present:

Mr. Lynn Thomas-Town Planner, Ms. Katie Reedy-Director of Site Development, Mr. Joseph Mayer-Plan Reviewer, Nicolas Johnson-Planner 1

Staff Not Present:

Mr. Rick VanEmburch-Town Engineer and Ms. Sharon VanEmburch-Town Attorney

Approval of Minutes.

Approval of Minutes from previous meeting: 2022-02-17 Meeting Minutes.

Upon motion by Mr. Bone and seconded by Mr. Ryall, the Commission voted 5-0 to approve the February 17, 2022 minutes with corrections.

New Business

Applicant:	Rauch, Inc. c/o Brian Fitzgerald
Owner:	BAAM Academic Center
Location:	31 Jowite Street
Nature of Request:	Applicant requests Site Plan and Architectural approval. In addition, approval of building setbacks is requested. The proposed site includes the demolition of the existing school, proposed infrastructure improvements and construction of a new school.

Mr. Paul Rogers, Mr. Brian Fitzgerald and Ms. Virginia Richardson from Rauch Inc., Mr. Derick Daly from Polaris Ministries & Polaris Academies, Ms. Dina Daly and Mr. William Ryan from BAAM LLC, Mr. Kendrick Daley, President of Naima Ventures, Mr. Chris Daley, Project Manager of Jack Construction, and Mr. Romont Fletcher, Construction Assistant from Naima Ventures were present to represent the request of Naima LLC. The request was for site plan review and approval. The Applicants also requested the establishment of unique setbacks under the provisions of the Planned Redevelopment Overlay District. The site is within the PR Overlay.

Mr. Rogers opened the discussion by reviewing the proposed site and its architectural design. The site includes the demolition of the existing school, proposed infrastructure improvements and construction of a new school. The Commission discussed architecture, parking requirements, building codes, after-school activities and outdoor recreation. Projections for the number of staff and students, trash pad location, utility connections, building height and proposed setbacks were also discussed.

Upon motion by Ms. Dindinger and seconded by Mr. Bone, the Commission voted 5-0 to approve the PR Site Plan, architectural design and setback request with the following conditions: the red, green and yellow stripes should only extend up to the height of the awning on the east side of the building, the front setback is approved at 15', the rear setback is approved at 5' and the side setbacks are approved at 8', the building height is to be set at 55' and verify that all proposed landscaping will be native plants.

Old Business

Applicant:	Rauch, Inc. c/o Brian Fitzgerald
Owner:	Naima Ventures, LLC
Location:	35 & 43 Clay Street

Nature of Request: Establish building setback lines for the redevelopment of both parcels.

Mr. Paul Rogers, Mr. Brian Fitzgerald and Ms. Virginia Richardson from Raugh Inc., Mr. Derick Daly from Polaris Ministries & Polaris Academies, Mr. Kendrick Daly, President of Naima Ventures, Mr. Chris Daly, Project Manager of Jack Construction, and Mr. Romont Fletcher, Construction Assistant from Naima Ventures was present to represent Naima LLC. This request was a follow-up from a previous meeting and sought approval of uniquely established setbacks under the flexibility offered via the Planned Redevelopment Overlay District development standards. The subject property is within the PR Overlay.

The Applicant and Commission discussed the need for reduced setbacks, fence location and notification of a 5' setback to adjacent owners.

Upon motion by Ms. Dindinger and seconded by Ms. McAndrews , the Commission voted 5-0 to approve the request for a 5' side yard setback.

Applicant: Lowe's Home Centers, Inc. c/o Laura Grissinger
Owner: Lowe's Home Centers, Inc.
Location: 501 Glebe Road
Nature of Request: Request a permanent location for outside storage.

The item was withdrawn from the Agenda.

Applicant: Armistead, Lee, Rust & Wright, P.A. c/o Zach Smith
Owner: Rise Up Dover Road, LLC
Location: 625 Dover Road
Nature of Request: Temporary Use Approval for Tent

Mr. Zach Smith from Armistead, Lee, Rust & Wright, P.A. was present to represent Rise Up Dover Road LLC.

The Applicant and the Commission discussed the extension of the temporary use approval for a tent. Mr. Smith reviewed the history of this application. He explained that the extension is necessary to accommodate unforeseen delays associated with the project, most notably from the Supply Chain issues that are plaguing the country.

Upon motion by Mr. Ryall and seconded by Mr. Bone, the Commission voted 5-0 approving the request as submitted, allowing the tent to remain until November 30, 2022.

Applicant: Armistead, Lee, Rust, & Wright, P.A. c/o Zach Smith
Owner: Gannon Family, LLC (D.R. Horton-Contract Purchaser)
Location: 29659 Matthewstown Road
Nature of Request: Request approval of the revised sketch plan, as approved by the Town Council.

Mr. Zach Smith from Armistead, Lee, Rust & Wright, P.A. was present to represent Gannon Family LLC.

The Applicant and the Commission discussed the request to approve the revised sketch subdivision plat to be consistent with the PUD site plan that was approved by the Town Council. The PUD process was discussed. It was noted that additional housing products will be submitted for architectural review at a future date.

The Chair opened the floor to the public for comment.

Mr. Derick Daley from Aspire discussed the dire need for housing.

Upon motion by Ms. Dindinger and seconded by Ms. McAndrews, the Commission voted 3-2, approving the revised sketch plat, to be consistent with the PUD site plan approved by the Town Council.

Adjournment.**Discussion Item**

Workshop discussion concerning Subdivision Regulations.

The Commission discussed the agenda for the upcoming Ward 3 Neighborhood Meeting and possibly wrapping up the Subdivision Regulations for Affordable Housing during the next scheduled Planning Commission Meeting.

Adjournment:

The meeting ended at 3:27 pm.



TOWN OF EASTON

14 South Harrison Street
Easton, Maryland 21601

October 2, 2024

Dear Resident,

The Easton Planning Commission (Commission) will hold a public meeting on **Thursday, October 17, 2024 at 1:00 p.m.** in the Easton Town Council Chambers located on the second floor of 14 South Harrison Street. The Town of Easton Zoning Ordinance requires that owners of property located within 400 feet of a parcel on which certain types of applications are pending be given notice of upcoming meetings or hearings. If you are a tenant in or an owner of a multi-unit building, please distribute or post this notice in a visible location for all other tenants or owners to view. If you are a tenant of a rental property, please notify the property owner that this notice letter has been distributed to their property. Notice has also been sent to the Star Democrat, a sign has been posted at the subject property and the hearing agenda has been posted on the Town of Easton website: <http://eastonmd.gov/>.

This letter is sent to inform you that Armistead, Lee, Rust & Wright, P.A. is anticipated to return before the Commission on behalf of D.R. Horton and pursuant to application 2021 - 0473 to propose additional architectural elevations for the development of a previously approved Planned Unit Development (PUD) site plan for the Gannon Range PUD subdivision. The subject property is located at 29659 Matthewstown Road, also known as Tax Map 0026, Grid 0020, Parcel 0045. On February 21, 2022, the Town Council approved *Ordinance No. 773*, granting the application for a PUD under the provisions of the Easton Zoning Ordinance, effective March 13, 2022. Condition No. 7 in Section E of the Council's Finding of Fact stipulates that the Applicant should provide a greater variation of architectural styles than what was provided in the PUD application to which shall be subject to the approval of the Easton Planning and Zoning Commission.

Copies of the proposed application are on file and available for public review in the Town's Planning Office at 14 South Harrison Street between the hours of 8:30 a.m. and 4:00 p.m., Monday through Friday. **In addition, digital copies will be available for review one week prior to the scheduled meeting via the Town's website at <https://www.eastonmd.gov/129/Agendas-Minutes>.** If you have any questions regarding this application, please contact the Planning Office at (410) 822-1943 or via email at ssmith@eastonMD.gov.

Samantha N. Smith

Samantha N. Smith, Administrative Specialist
Planning & Zoning Department
410-822-1943 ssmith@eastonMD.gov



***Subject property posting pursuant to Section
28-901.2.H.2 of the Town of Easton Zoning Code -
October 2, 2024.***



Gannon Range

CALI HOUSE TYPE – 1774 SQFT

Cali – Existing Community





Gannon Range

HAYDEN HOUSE TYPE – 2511 SQFT

Hayden – Existing Community





Gannon Range

GALVESTON HOUSE TYPE – 2070 SQFT

Galveston – Existing Community





Gannon Range

WHEATON HOUSE TYPE – 2571 SQFT

Wheaton – Existing Community





Gannon Range

PINE HOUSE TYPE – 1953 SQFT

Pine – Existing Community





Gannon Range

Elm HOUSE TYPE – 2415 SQFT

Elm – Existing Community



Approved Floorplans For Gannon Range



THE ESTATES AT GANNON FARM

HANOVER HOUSE TYPE – 2804 SQFT





ELEVATION E1



ELEVATION F1

THE ESTATES AT GANNON FARM

AZALEA HOUSE TYPE – 1905 SQFT





THE ESTATES AT GANNON FARM

GALEN HOUSE TYPE – 2340 SQFT

D·R·HORTON
America's Builder



THE ESTATES AT GANNON FARM

BRISTOL HOUSE TYPE – 1748 SQFT

D·R·HORTON
America's Builder



THE ESTATES AT GANNON FARM

GLENDAL HOUSE TYPE – 1649 SQFT

D·R·HORTON®
America's Builder



THE ESTATES AT GANNON FARM

FREEPORT HOUSE TYPE – 1497 SQFT

D·R·HORTON
America's Builder

Proposed Additional Floorplans For Gannon Range



Gannon Range

CALI HOUSE TYPE – 1774 SQFT

D·R·HORTON
America's Builder

Cali – Existing Community



D·R·HORTON
America's Builder



Gannon Range

HAYDEN HOUSE TYPE – 2511 SQFT

D·R·HORTON
America's Builder

Hayden – Existing Community



D·R·HORTON
America's Builder



Gannon Range

GALVESTON HOUSE TYPE – 2070 SQFT

D·R·HORTON
America's Builder

Galveston – Existing Community



D·R·HORTON
America's Builder



Gannon Range

WHEATON HOUSE TYPE – 2571 SQFT

D·R·HORTON
America's Builder

Wheaton – Existing Community



D·R·HORTON
America's Builder



Gannon Range

PINE HOUSE TYPE – 1953 SQFT

D·R·HORTON
America's Builder

Pine – Existing Community



D·R·HORTON
America's Builder



Gannon Range

Elm HOUSE TYPE – 2415 SQFT

D·R·HORTON
America's Builder

Elm – Existing Community



D·R·HORTON
America's Builder

Cali

4 bed | 2 bath | 2 car | 1 story | 1,774 sq ft



Elevation A

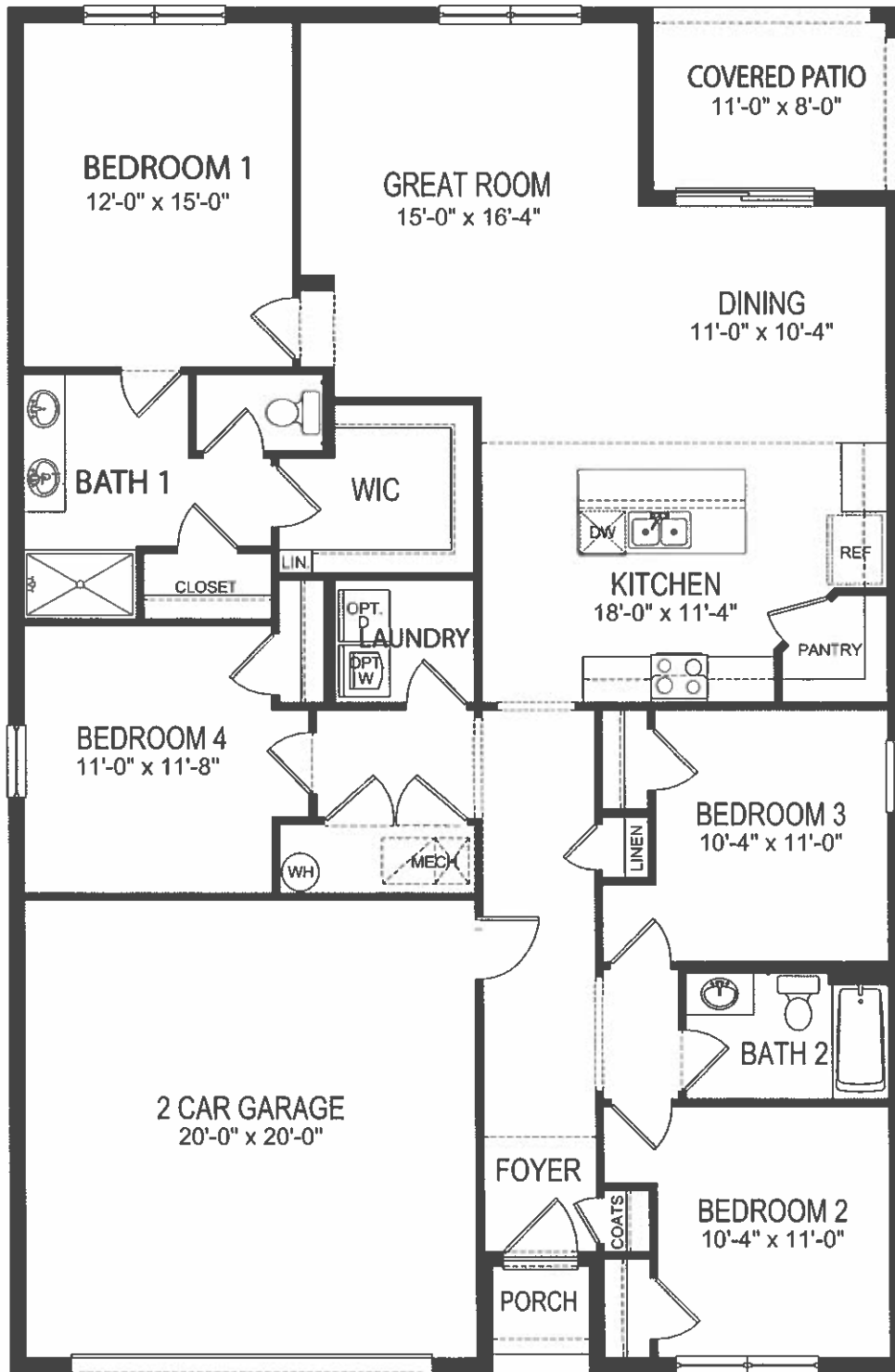


Elevation B



Elevation C

DRHORTON.COM



DRHORTON.COM

Hayden

5 bed | 3 bath | 2 car | 2 story | 2,511 sq ft



Elevation B3



Elevation C3

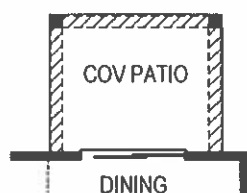


Elevation D

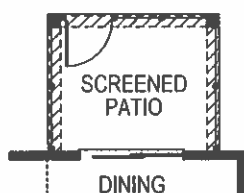


Elevation E

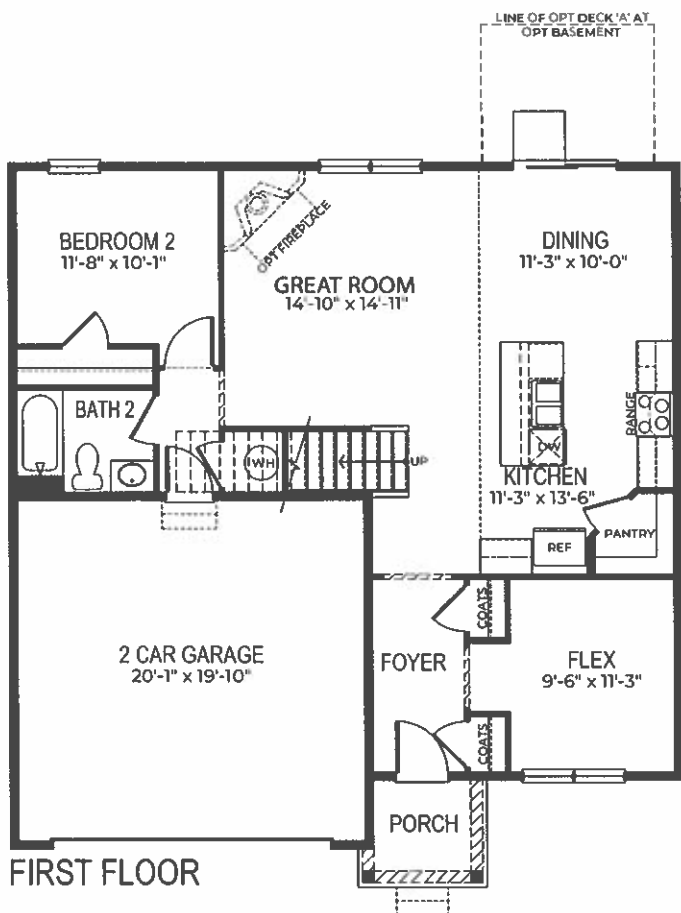
D.R. Horton is a Equal Housing Opportunity Builder. Home and community information, including pricing, included features, terms, availability and amenities, are subject to change and prior sale at any time without notice or obligation. Pictures, photographs, colors, features, and sizes are for illustration purposes only and will vary from the homes as built. Elevations and exterior materials may vary. Square footage dimensions are approximate.



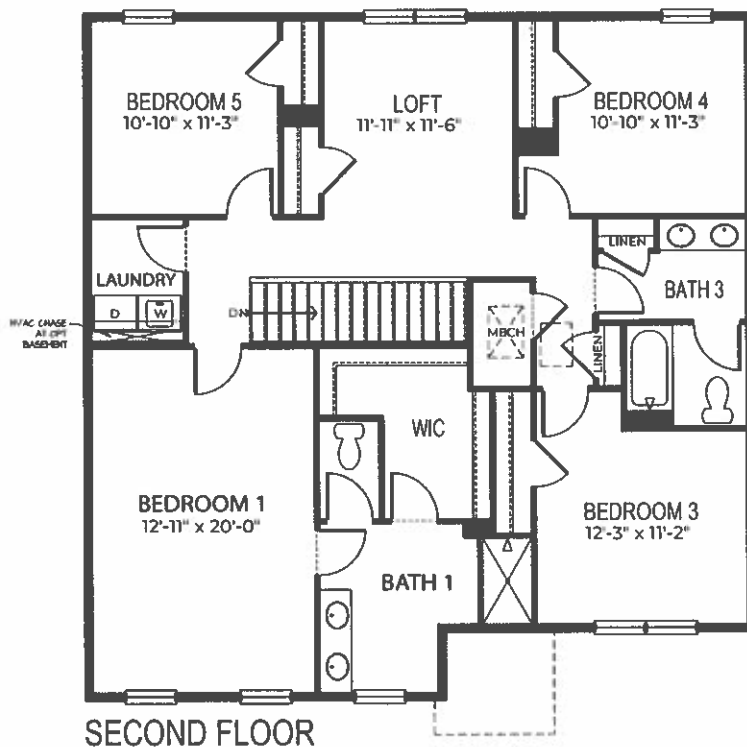
Opt Covered Patio



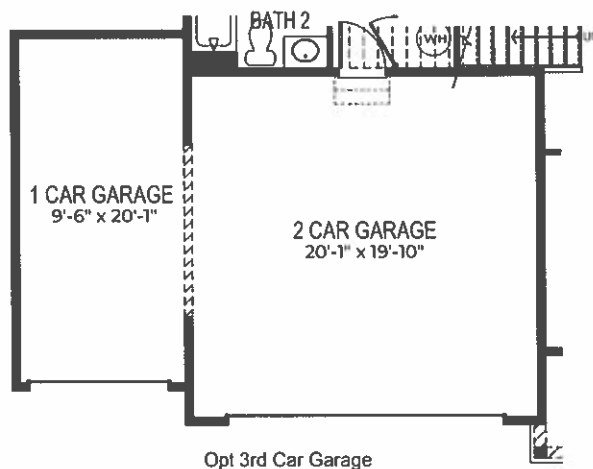
Opt Screened Patio/Porch



FIRST FLOOR



SECOND FLOOR



Opt 3rd Car Garage

Galveston

3 bed | 2 bath | 2 car | 1 story | 2,070 sq ft



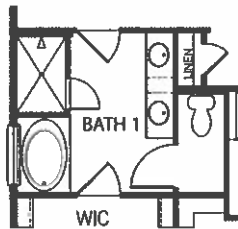
Elevation A



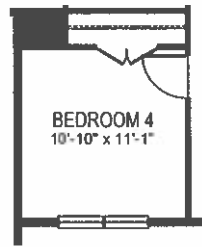
Elevation D



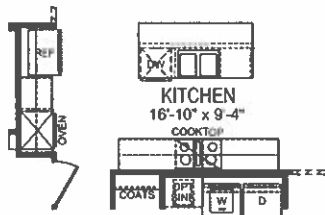
Elevation E



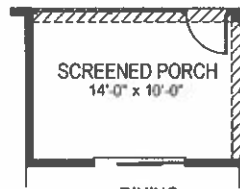
Opt All BATH 1



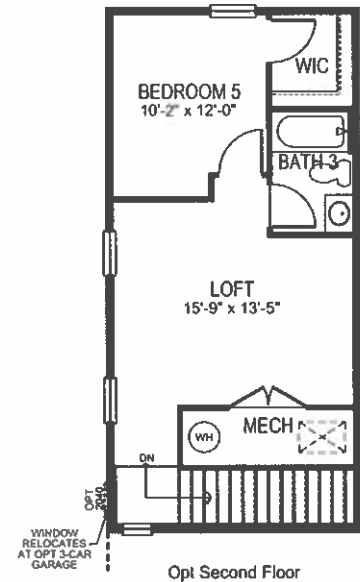
Opt Bedroom 4



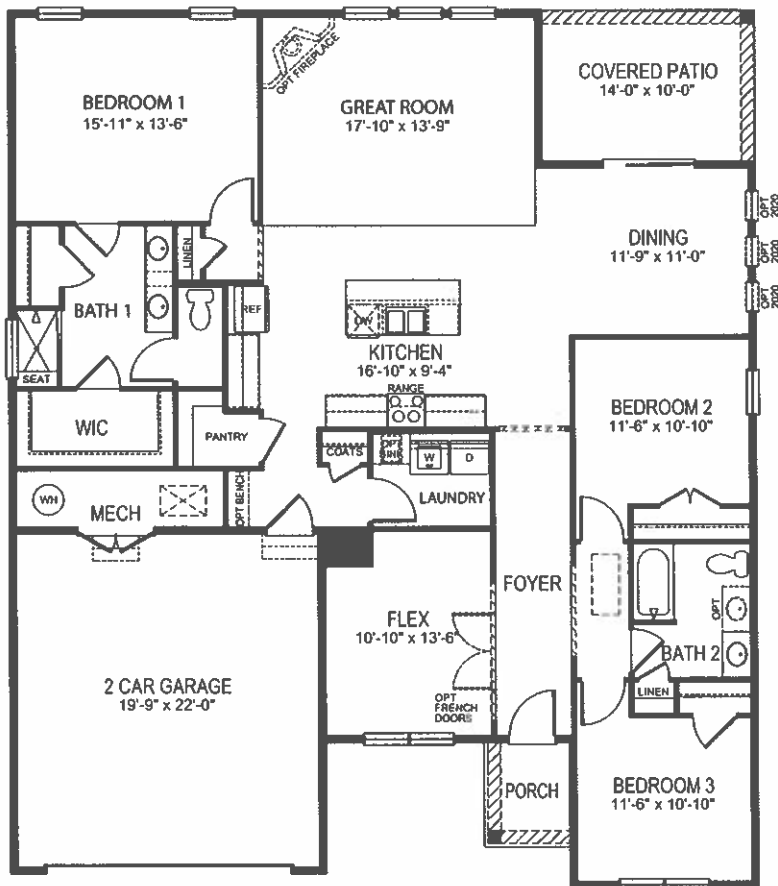
Opt Gourmet Kitchen



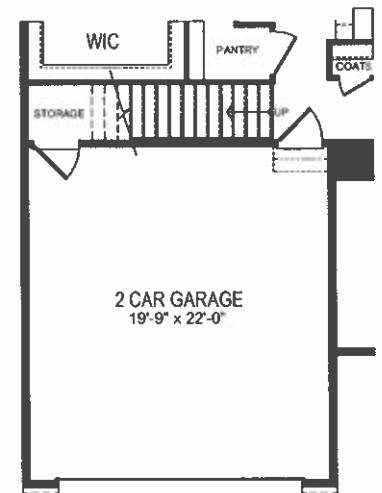
DINING
Opt Screened Porch



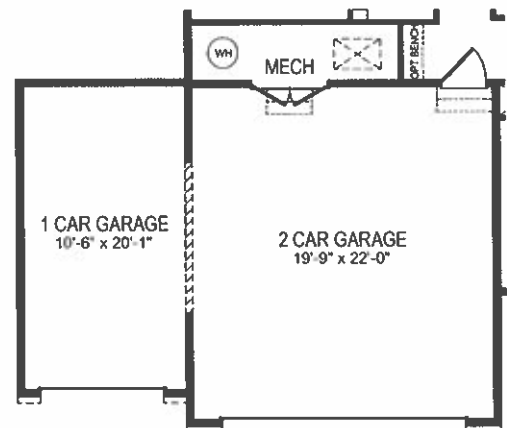
Opt Second Floor



FIRST FLOOR



Garage at Opt Second Floor



Opt 3rd Car Garage

Wheaton

3 bed | 3.5 bath | 3 car | 1 story | 2,571 sq ft



Elevation A3



Elevation B3

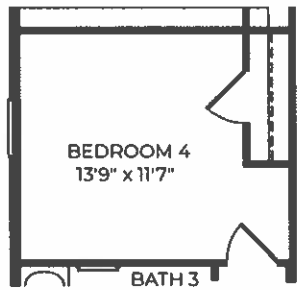


Elevation J3

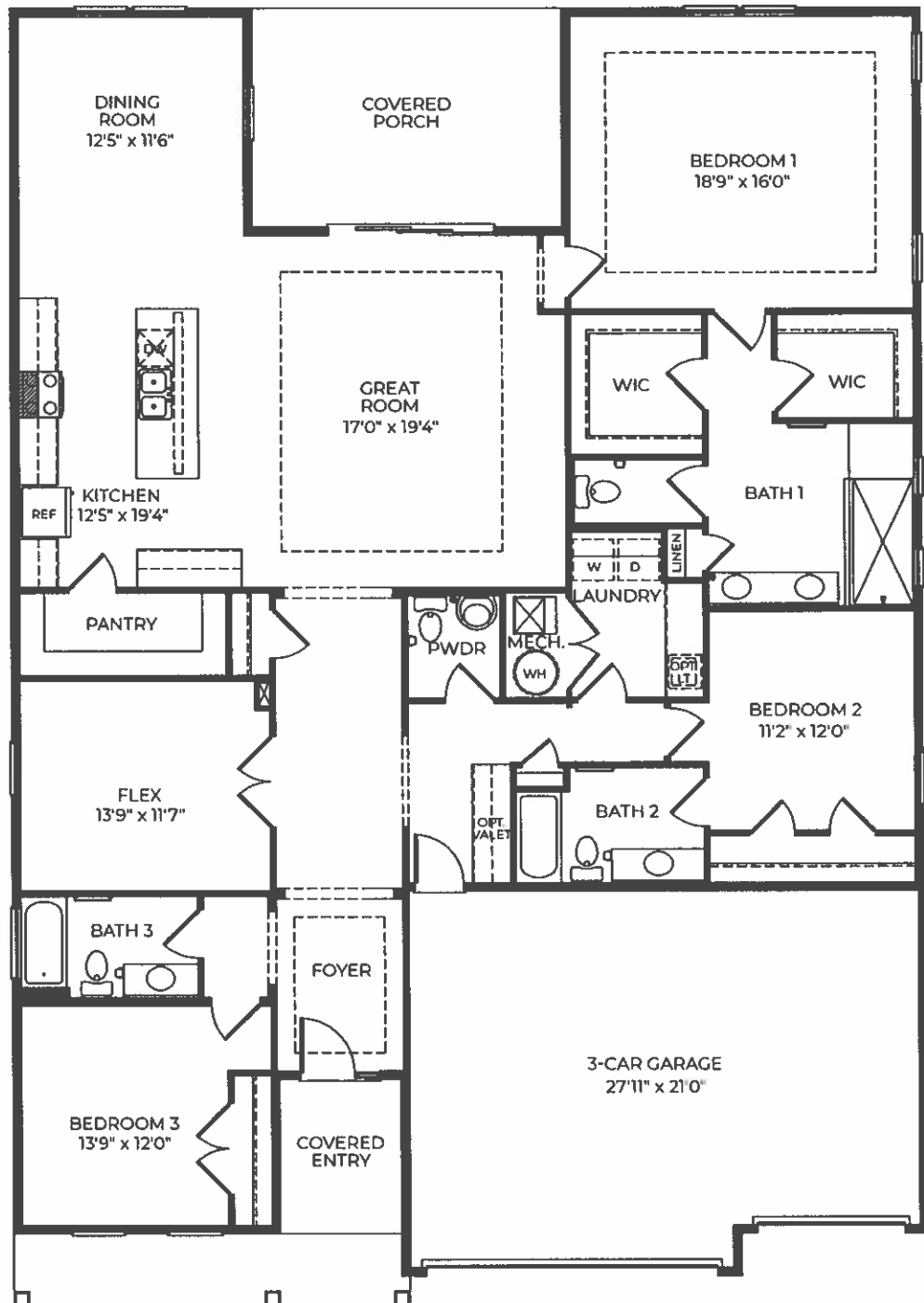


Elevation K3

D.R. Horton is an Equal Housing Opportunity Builder. Home and community information, including pricing, included features, terms, availability and amenities, are subject to change and prior sale at any time without notice or obligation. Pictures, photographs, colors, features, and sizes are for illustration purposes only and will vary from the homes as built. Elevations and exterior materials may vary. Square footage dimensions are approximate.



OPT. BEDROOM 4



Pine

4 bed | 2.5 bath | 2 car | 2 story | 1,953 sq ft



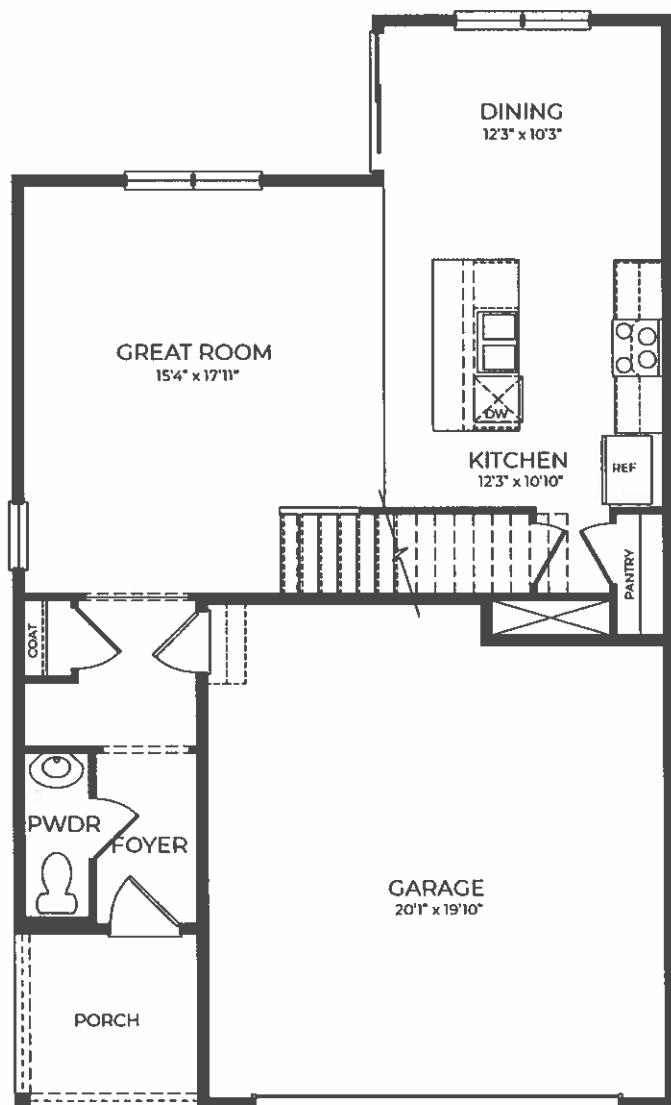
Elevation A



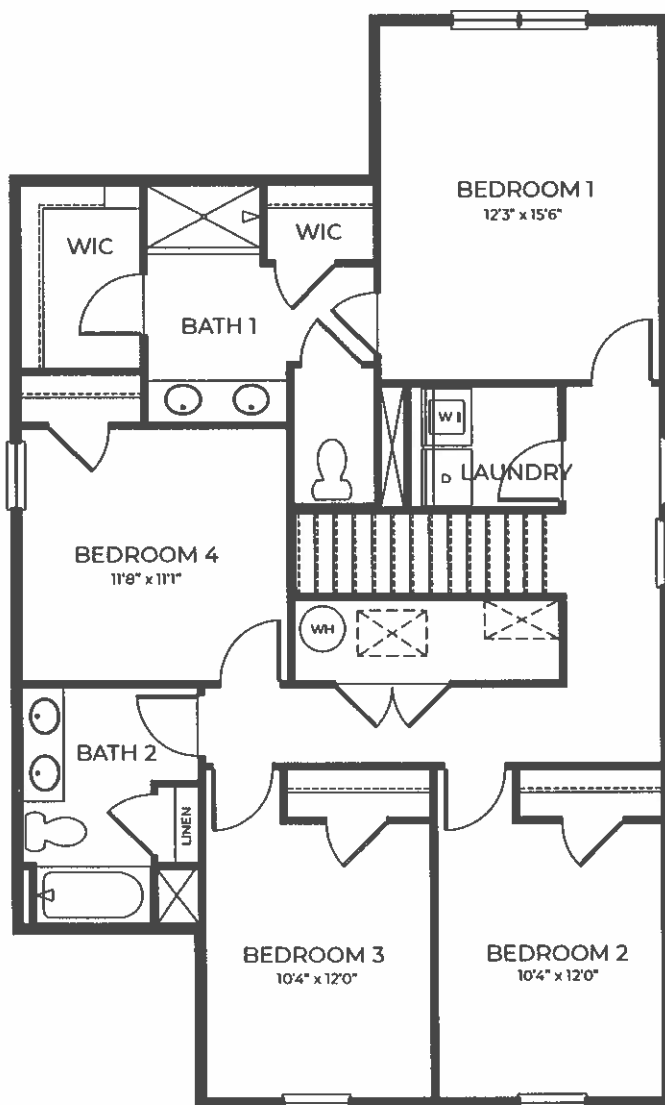
Elevation B



Elevation C



FIRST FLOOR



SECOND FLOOR

Elm

5 bed | 3 bath | 2 car | 2 story | 2,415 sq ft



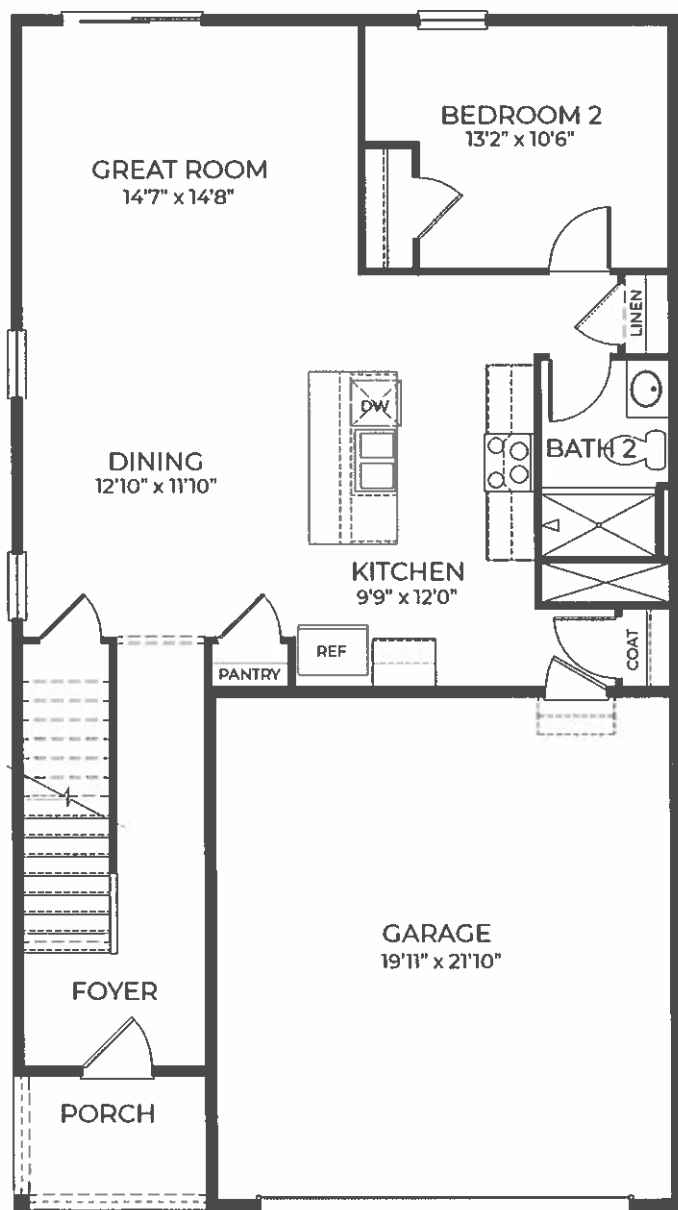
Elevation A



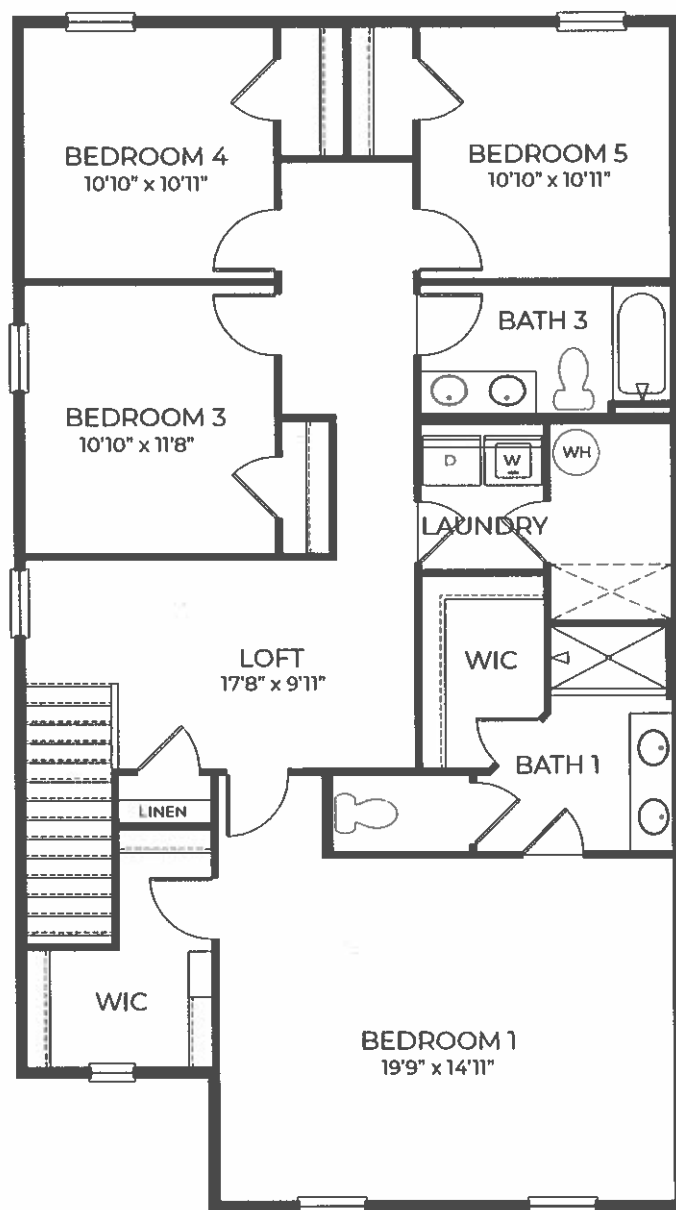
Elevation B



Elevation C



FIRST FLOOR



SECOND FLOOR



TOWN OF EASTON
PLANNING & ZONING
14 S Harrison Street, Easton MD 21601

Date of Meeting: October 17, 2024

3b

**PLANNING COMMISSION
SUPPLEMENTAL ITEM**

SUBJECT: **Sketch Site Plan Review for 410 Needwood Avenue**

ELECTION WARD: Ward 4

CRITICAL ACTION DATE: At the pleasure of the Commission

STAFF CONTACTS: Joseph Mayer, Plan Reviewer
Miguel Salinas, Director of Planning and Zoning

DOCUMENT CREATED ON: October 10, 2024

PURPOSE: Silo Square, LLC (Applicant), is seeking sketch site plan approval for the construction of sixteen (16) proposed 3-story townhomes and twelve (12) proposed 2-story townhomes with associated parking, stormwater management and landscaping. Associated site improvements include the demolition of existing abandoned silos, storage buildings and a gravel road on the property. In addition, the applicant is seeking a landscape and buffering waiver from Chapter 28-1014.7.E.5(c)1-3 of the Zoning Code. The application proposes the installation of a split-rail fence in the bufferyard abutting the Town's "Rails-to-Trails" path system. The solid fence along the western side of the property, though requested by the Planning Commission to be removed, was replaced with a split-rail fence. In addition, a public walking trail through the site was added connecting a path between South Higgins Street and the "Rails-to-Trails". The applicant indicated that the trail is open to the public in that Silo Square is not going to police people walking through the property on that trail. However, Silo Square may set their own hours and there is no desire from Silo Square to establish an easement for this connection. Additionally, the applicant intends to utilize the Bufferyard "E" option calling for a "wall/fence with three (3) evergreen shrubs", as noted in the code, by installing a split-rail fence and shrubs as an alternate design.

RECOMMENDATIONS:

Planning Commission: The Commission, at their September 19, 2024 meeting, moved (3-0) to table the application pending the submission of a Traffic Impact Study, and the submission of a revised site plan exhibiting the removal of the proposed western facing fence.

Staff: Should the Planning Commission approve the sketch site plan, staff recommends a proposed condition (see below).

UPDATE: On September 19, 2024, the Town of Easton Planning Commission (Commission) reviewed the above application to request Sketch Site Plan approval for the construction of sixteen (16) proposed 3-story townhomes and twelve (12) proposed 2-story townhomes, and a landscape and buffering waiver. The Commission voted (3-0) to table the application pending the submission of a Traffic Impact Study, and the submission of a revised site plan exhibiting the removal of the proposed western facing fence.

On September 30, 2024, Silo Square, LLC. submitted a revised Site Plan and Architectural Package. The applicant revised the western facing fence with a split-rail fence and added a walking trail through the site that connects South Higgins Street and the “Rails-to-Trails”. The revised Architectural Package includes a new rendering depicting the view from Melfield Avenue and a Silo Square Site Plan. Based upon the provided revisions, staff supports the replacement of the solid fence with a split-rail fence. The proposed fence is transparent and defines the landscape buffers, including the walking trail entrance at South Higgins Street.

Currently, the requested Traffic Impact Study was submitted to the Engineering Department on October 9, 2024. The Engineering Department has not yet reviewed the study.

ISSUES: Currently, the requested Traffic Impact Study was submitted to the Engineering Department on October 9, 2024. The Engineering Department has not yet reviewed the study.

RECOMMENDED CONDITION:

Should the Planning Commission approve the sketch site plan, staff recommends approval with the condition of the Traffic Impact Study (TIS) being approved by the Town Engineer with the study demonstrating that the project will operate at an adequate Level of Service.

DRAFT MOTIONS:

1. I move that the Planning Commission approve the sketch site plan subject to staff’s Condition of Approval.

OR

2. I move that the Planning Commission continue the application to the November 21st Commission meeting for further discussion.

OR

3. I move an alternate motion.

ATTACHMENTS:

1. 410 Needwood Avenue (Silo Square) - Subject Property Notice 2024.10.02, paper copy & PDF
2. 2024.08.06 ESDR Application, paper copy & PDF
3. 2024.08.28 ESDR Determination Letter 410 Needwood Avenue, paper copy & PDF
4. 2024.09.03 Bufferyard Waiver Request Signed, paper copy & PDF
5. 2024.09.03 Site Plan Application, paper copy & PDF
6. 2024.09.19 PC Outcome Letter - 410 Needwood Avenue, paper copy & PDF
7. 2024.09.19 Staff Report 410 Needwood Avenue, paper copy & PDF
8. 2024.09.30 Architectural Package, paper copy & PDF
9. 2024.09.30 ESDR Checklist-Sketch Plan,paper copy & PDF
10. 2024.09.30 ESDR Checklist-Sketch SWM Plan,paper copy & PDF
11. 2024.09.30 Infrastructure Improvement Plans - DRAFT, paper copy & PDF
12. 2024.09.30 Map of Area, paper copy & PDF
13. 2024.09.30 SWM Report(2024-07-24), PDF
14. 2024.09.30 View from Melfiel Submission, paper copy & PDF
15. 2024-10-09 Silo Square Project TIA, PDF
16. Silo Square - PC 400' Notice Letter 2024.10.02, paper copy & PDF



TOWN OF EASTON
PLANNING & ZONING
14 S Harrison Street, Easton MD 21601

Date of Hearing: September 19, 2024

4c

**PLANNING COMMISSION
PUBLIC HEARING
STAFF REPORT**

SUBJECT: **Sketch Site Plan Review for 410 Needwood Avenue**

ELECTION WARD: Ward 4

CRITICAL ACTION DATE: At the pleasure of the Commission

STAFF CONTACTS: Joseph Mayer, Plan Reviewer
Miguel Salinas, Director of Planning and Zoning

APPLICANT: Silo Square, LLC % Jonathon Rondeau

DOCUMENT CREATED ON: September 6, 2024

PURPOSE: Silo Square, LLC (Applicant), is seeking sketch site plan approval for the construction of sixteen (16) proposed 3-story townhomes and twelve (12) proposed 2-story townhomes with associated parking, stormwater management and landscaping. Associated site improvements include the demolition of existing abandoned silos, storage buildings and a gravel road on the property. In addition, the applicant is seeking a landscape and buffering waiver from Chapter 28-1014.7.E.5(c)1-3 of the Zoning Code. The application proposes the installation of a split-rail fence in the bufferyard abutting the Town's "Rails-to-Trails" path system. The applicant intends to utilize the Bufferyard "E" option calling for a "wall/fence with three (3) evergreen shrubs", as noted in the code, by installing a split-rail fence and shrubs as an alternate design.

RECOMMENDATION: Should the Planning Commission (Commission) approve the sketch site plan, staff recommends approval as submitted.

APPLICATION INFORMATION:	
APPLICANT: Silo Square, LLC % Jonathon Rondeau	REPRESENTATIVE: Rauch Inc.: Brian Fitzgerald, Casey Rauch, Chris Schoenster
PARCELS/ACREAGE:	
Parcel Information	Acreage
Map 105, Grid 0000E, Parcel 2226	2.36
ACCEPTANCE DATE: September 3, 2024	LOCATION: 410 Needwood Avenue
EXISTING ZONING BC PUD Infill Boundary PR Boundary	EXISTING LAND USE: Commercial
HISTORIC DISTRICT: Not Applicable	FUTURE LAND USE MAP: Redevelopment Area

CONTEXT:

Location/Site Access – The subject property is located at the corners of Higgins Street and Needwood Avenue, as well as Higgins Street and Maryland Avenue. The site's entrance will be accessed via Needwood Avenue and Maryland Avenue.

Existing Conditions – The subject property is vacant and can generally be described as approximately 2.36 acres consisting of abandoned silos and storage buildings.

Surrounding Properties

- 400 & 411 Needwood Avenue - BC
- 314 Needwood Avenue - R-7A
- Needwood Avenue - BC
- 700, 701 & 703 Summer Place - R-7A
- 200, 400, 402 & 404 Maryland Avenue - BC
- 516 Melfield Avenue - BC
- 514 Davis Avenue - BC

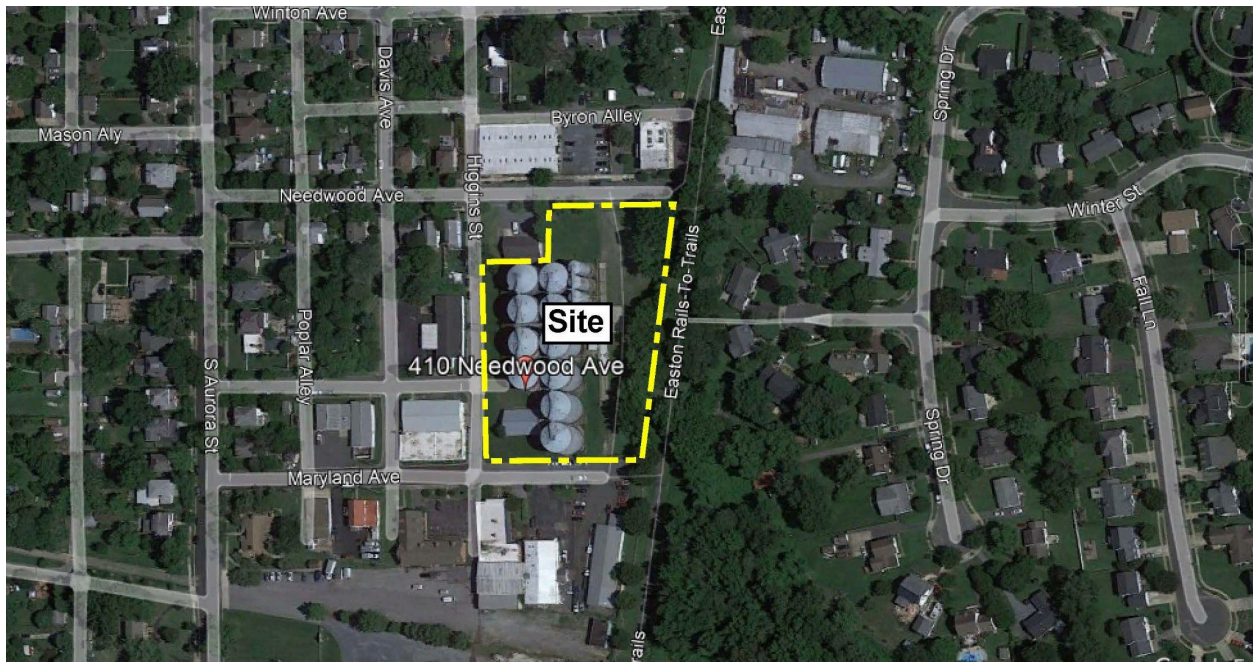


Figure 1: Vicinity Map

PROPOSAL: The applicant is proposing to construct sixteen (16) 3-story townhomes and twelve (12) 2-story townhomes with associated parking, stormwater management and landscaping. The three-story buildings will include sixteen (16) four-bedroom units and the two-story townhomes will include twelve (12) three-bedroom units. The current proposed density is 11.90 dwelling units per acre. The site is the former Purdue Agri-Business and is zoned Business Commercial (BC). The maximum density allowed on the property, based on the Planned Redevelopment Overlay District, is 40 dwelling units per acre which equals a maximum density of 94.4 dwelling units based on the property's size (2.36 acres). The total proposed density is 11.90 dwelling units per acre. The applicant is also seeking a landscape and buffering waiver from Chapter 28-1014.7.E.5(c)1-3 of the Zoning Code. The application proposes the installation of a split-rail fence in the bufferyard abutting the Town's "Rails-to-Trails" path system. The applicant intends to utilize Bufferyard "E" option calling for a "wall/fence with three (3) evergreen shrubs", as noted in the code, by installing a split-rail fence and shrubs as an alternate design.

BACKGROUND: The applicant submitted an application to the Easton Staff Development Review Committee (ESDR) on August 28, 2024 (please see attached ESDR Determination Letter).

OUTSTANDING ISSUES:

There are no outstanding issues.

ZONING ANALYSIS:

A. Purpose

Section 28-501.A (Town Code).

The purpose of the Planned Redevelopment Overlay District (PR) is to provide a mechanism for the redevelopment, rehabilitation, and general improvement of certain older areas within the Town of Easton that have fallen into a somewhat neglected or dilapidated state or have simply been used for a purpose that no longer serves the health, safety or general welfare of the neighborhood. PR applications may be submitted only if the project is located within the Planned Redevelopment Overlay District. However, this mechanism is optional and shall not be required of all projects located within this zone. Projects not being developed in accordance with PR District standards shall be developed in accordance with the development standards of the underlying base zoning district.

The nature, size, scale or intensity of a proposed use may cause a particular site not to be suitable for a specific PR proposal. Therefore, there is no general presumption that an application for such a use at a particular location is valid, inures to the general benefit of the Town, is compatible with surrounding uses, or is in compliance with the Town's Comprehensive Plan. Instead, each application will be evaluated according to its particular location and the degree to which the developer is willing or able to propose a development plan which ameliorates possible adverse impacts and furthers the goals and objectives of this Section and the Ordinance generally

Analysis - The current process of the Town of Easton Zoning Ordinance is for the Planning and Zoning Commission to review the material submitted as described in § 28-501.C of the Town Code and shall represent the initial step in the PR review process. Successful applications shall subsequently follow the appropriate steps for the type of project submitted and the applicant shall prepare and submit for a development and a final site plan in accordance with the site plan requirements specified in § 28 – 901.3.B and C of the Town Code and the requirements of the Town of Easton Subdivision Regulations, if applicable.

B. Off-Street Parking

28-1001.3 Parking Requirements

	Use/Activity	Minimum Vehicle Spaces	Maximum Vehicle Spaces	Minimum Bicycle Spaces	Notes
	Residential Buildings				
2	Single-Family Attached	2 per du	–	–	

Total Site Parking Required (when not proposed as a PR application):

Townhomes: 2 Spaces per dwelling unit required-Minimum
 28 units x 2 = 56 spaces required-Minimum
Total spaces provided: 58

Analysis- There are no minimum off-street parking spaces required within the PR Overlay Zoning District, although the adequacy of parking may be a consideration of site plan review. The Applicant is proposing 58 parking spaces. There are 34 proposed off-street parking spaces and 24 proposed garage/driveway parking spaces. The townhouse complex has a total of sixteen (16) proposed 3-story townhomes (57% of the complex) and twelve (12) proposed 2-story townhomes (43% of the complex) with associated parking, stormwater management and landscaping. The three-story buildings will include sixteen (16) four-bedroom units and the two-story townhomes will include twelve (12) three-bedroom units. The overall proposed parking spaces are 0.03% over the minimum required parking spaces for projects not developed under the PR Overlay Zoning District. The Applicant believes the proposed parking is adequate to support the daily operation of the townhomes. Silo Square, LLC has demonstrated that they can adequately provide parking spaces within the minimum requirements established in § 28-1001.3.A of the Town Code.

C. Business Commercial District Development Standards

Section 28-501.B.6, Development Standards under the Planned Redevelopment Overlay District, states that for new infill projects, the setback, lot size, lot coverage, height, and yard requirements shall be established for each individual project by the Planning Commission. In establishing these requirements, the Commission considers such factors as the intensity of the project and the existing character of the neighborhood. Table 1 below provides the applicant's proposed dimensional standards.

Table 1. Development Standards		
BC Zoning District	Standard	Proposed (Planned Redevelopment Overlay)
Setbacks	Front = 40 feet Side = 10 feet Rear – 30 feet	Front = 10 feet Side = 5 feet Rear – N/A
Lot Size (min.)	40,000 square feet	102,801 square feet
Lot Frontage (min.)	100 feet	200, 313 & 252 feet
Building Envelope (min.)	30 feet x 80 feet	280 x 357 feet
Lot Coverage (max.)	50% (Lot Area)	68%
Height (max.)	35 feet	32 feet +/-

§ 308.2 of the Zoning Ordinance states that development within the Business Commercial District shall also meet these additional requirements:

- There shall be no open storage on any lot or open areas, nor shall any products be displayed in open areas. All outside storage shall be adequately screened and landscaped in accordance with provisions of Section 28 – 1014 of this Ordinance.***

- *All on-site lighting unless approved otherwise by the Planning and Zoning Commission shall be low cut-off shielded luminaries at 18' height and light shall not shine off-site at levels greater than 1-foot candle.*
- *All off-street loading and unloading areas shall be screened from view by permanent decorative screens or natural planting, either of which shall be a minimum of eight (8) feet in height, in accordance with the provisions of Section 28 – 1014 of this Ordinance*
- *All areas not devoted to buildings or parking areas shall be landscaped and maintained in a suitable manner, in accordance with the provisions of Section 28 – 1014 of this Ordinance.*

Analysis - The site falls under the BC - Business Commercial District Area and meets the § 28-308.2 Development Standards.

D. DEVELOPMENT STANDARDS

Section 28-501.B.

Development within the Planned Redevelopment Overlay District shall meet the following requirements:

(1) The area proposed for a planned redevelopment shall be in one (1) ownership, or, if in several ownerships, the proposal shall be filed jointly by all the owners of the property included in the development plan.

Analysis - The Property is owned by a single entity.

(2) The site shall be of a configuration suitable for the development proposed.

Analysis - The Property abuts single-family homes to the northeast, commercial properties to the west and south and the Rails to Trails project to the east. The proposed layout and site design provides a functional residential community. The configuration focuses parking to the interior of the Property and provides for well-landscaped residential buildings.

(3) Public water and sewerage shall be available. :

Analysis - There's adequate existing water and sewer services to serve the proposed Project. The Applicant will provide the utility extensions that are necessary to connect the Project to Town services and will work with Easton Utilities to ensure that all permits and approvals are granted.

(4) The site shall be located adjacent to adequate transportation facilities capable of serving existing traffic and that are expected to be generated by the proposed development.

Analysis - Project will be accessed from Needwood Avenue and from Maryland Avenue.

(5) *The overall residential density of a Planned Redevelopment project shall not exceed forty (40) units per gross residential acre. For the purposes of this subsection, the gross residential area shall include all land within the area intended to be used for residences, residential parking space, and reservation for community recreation and education facilities. Any land mapped as floodway by the Federal Emergency Management Agency, and non-residential uses shall be excluded in computing the gross area. The Planning and Zoning Commission may require a lower density if review of the proposed development indicates that the maximum allowable density is excessive for the surrounding area.*

Analysis - The Applicant is proposing 28 total units, which is 66 units or 30% under the maximum density of 94 units permitted on the Property under the Planned Redevelopment Overlay District.

(6) *For new infill development projects, the setback, lot size, lot coverage, height, and yard requirements shall be established for each individual project by the Planning and Zoning Commission. In establishing these requirements, the Planning and Zoning Commission shall consider such factors as the proposed intensity of the project and the existing character of the neighborhood.*

Analysis - As stated above, the Planning Commission can apply, in its discretion, bulk standards such as setbacks and maximum height on a project-by-project basis.

(7) *Off-street parking is not required for projects proposed in the Planned Redevelopment Overlay District, although adequacy of parking may be a consideration of site plan review.*

Analysis - The Code does not require any parking for the Project; the Applicant is proposing a total of 58 parking spaces to serve the Project, which is two (2) spaces above the ordinarily-prescribed minimum parking spaces applicable to townhouse development. The Applicant has designed parking spaces on the Property.

(8) *Sidewalks shall be constructed along any public right-of-way (except for alleys) adjacent to the site along the entire frontage(s) of the property. To the extent practicable, walkways shall be constructed on the site to tie building entrances and/or pedestrian pathway systems into existing or proposed public sidewalk systems.*

Analysis - The Project design addresses this requirement by proposing sidewalks along the property frontage of Needwood Avenue, Higgins Street and Maryland Avenue. Sidewalks on the Property are proposed to ensure ease of access to roadways, townhomes, the gazebo building, and the Rails to Trails project.

E. Forest Conservation

Easton Forest Conservation Ordinance #718, Article III, § 31-3.2 Exemptions

O. An activity on a previously developed area covered by impervious surface and located in the priority funding area.

Analysis - The site is within the priority funding area and is an existing developed area covered by impervious surface; abandoned silos, storage buildings, gravel road and utilities. The overall site area is 2.36 acres with sixteen (16) proposed 3-story townhomes and twelve (12) proposed 2-story townhomes with associated parking, stormwater management and landscaping. Required Forest Conservation would be 0.354 acres or 15,420 square feet. The intent of the project is to maximize density within the infill area and provide adequate facilities to accommodate the site. The applicant has provided a landscape plan with forty-two (42) deciduous-shade/canopy trees, thirty-two (32) understory trees and thirty-two (32) evergreen trees that is fifty-three (53%) percent greater than the required forest conservation area. Based on the existing conditions and priority funding area, the staff supports the exemption under *Ordinance #718, Article III, § 31-3.2 Exemption, “O”, an activity on a previously developed area covered by impervious surface and located in the priority funding area.*

POLICY ANALYSIS:

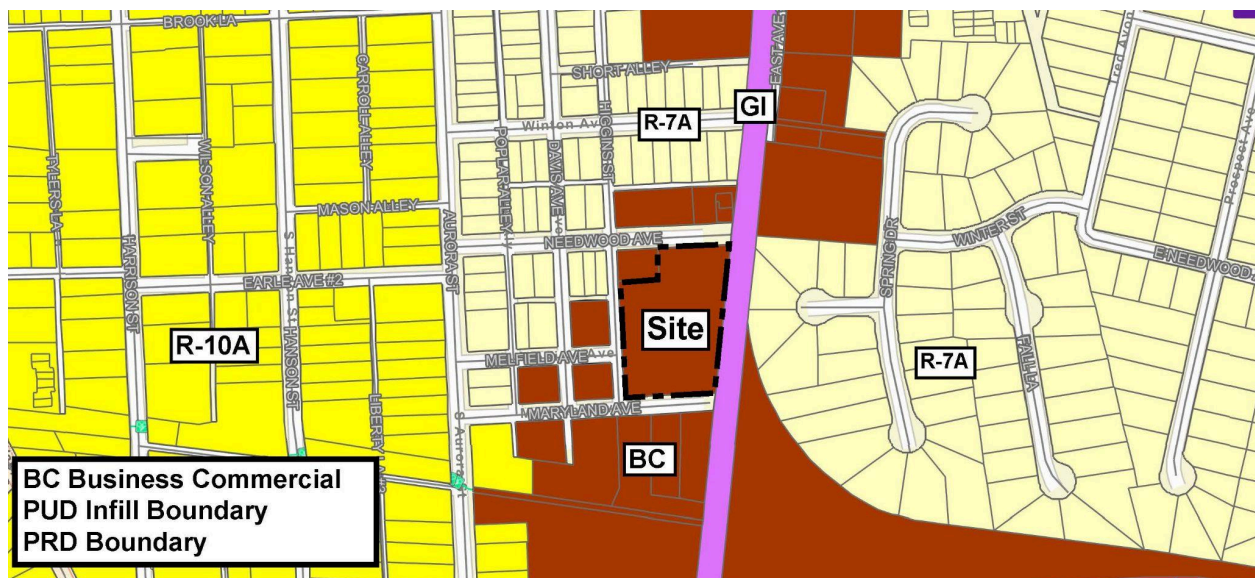


Figure 2: Zoning Map

Section 28-901.2.G of the Town Code states that the submission of a site plan for a proposed use or development activity shall not be approved unless it meets the factors below:

1. The site plan meets the design principles and standards and required improvements set forth in this Ordinance, the Town Comprehensive Plan, the Town of Easton Subdivision

Regulations, and other ordinances, regulations, and policies established by the Town of Easton.

Analysis -

Town of Easton 2010 Comprehensive Plan Design Principles (Principle #1) Integrated uses are desirable- Applicant's response: *The project consists of residential, open space, stormwater management, and parks. This project will have a total of 28 dwelling units addressing the need for housing as stated in the comprehensive plan to increase the number and types of housing available in the area.*

Staff notes that this is an appropriate location for a walkable residential complex. In addition, the proposed development is under the PR Overlay Zoning District, which includes properties adjacent to Rails-to-Trails to provide a mechanism for the redevelopment, rehabilitation, and general improvement of certain older areas within the Town of Easton, including properties that have fallen into a somewhat neglected or dilapidated state.

(Principle #2) Natural features should determine design – Applicant's response: *The site is developed to maintain existing natural contours and drainage paths. There are few natural features on the existing site as the original site was mostly impervious including grain tanks. More green/open space is incorporated into the proposed site plan.*

Staff notes that there are no compelling natural features on site.

(Principle #3) Automobiles should not determine design – Applicant's response: *Automobiles were not the priority focus for the design but sufficient parking is provided, which includes ample landscaping and green space.*

Staff notes that the applicant has provided adequate off-street parking interior to the site.

(Principle #4) Ample Open Space should be provided within & around neighborhoods – Applicant's response: *This project provides open park areas and green spaces throughout the parcel. The site also connects pedestrians to the rails to trails path.*

(Principle #5) Architecture should respect Easton's Historical Development – Applicant's response: *This project is not within the Historic District but the architecture is motivated by the original grain tanks from the existing site.*

(Principle #6) Signs should inform but not dominate – Applicant's response: *There will be minimal signage on this property. Each unit will have a street/house number that will indicate the unit and address for the public and fire/rescue services. Free standing signs at each entrance will not dominate the road frontage.*

Staff notes that any proposed monument sign will require a Signage Application to be submitted prior to installation. Signs should inform but not dominate the area.

(Principle #7) Neighborhoods should contain a diversity of housing types – *Applicant's response: This project has three different townhome styles which differ in the number of stories and built in garage. This offers a diversity of price ranges for the homes in the project. The townhouse design style is in addition to the clients overall residential portfolio in and around the Town of Easton. The client's portfolio has a diverse housing type within the Town of Easton.*

Staff notes that the townhome variations offer a diverse housing type. The plan supports a diversity of housing types to enable people from a broad spectrum of economic levels to live within the same neighborhood.

(Principle #8) Residential neighborhoods should be interesting places – *Applicant's response: The project embraces the existing agriculture business that originated the parcel. Incorporating the agriculture business within the motivation of the residential architecture, the ark gazebo, and the connection to the Rails to Trails Path make this a very interesting project and place.*

(Principle #9) Neighborhoods should connect – *Applicant's response: Pedestrians can traverse between Maryland Avenue as well as Needwood Avenue. Connection points for pedestrians to Rails to Trails are also provided.*

Staff notes that the Comprehensive Plan states that older historic areas of Easton are where you find a great variety of lot sizes, configurations, and housing types as opposed to the more recent homogenous subdivisions built over the last 30 years. In addition, the plan states that connected neighborhoods are a fundamental characteristic of the older parts of Easton that are essential to emulate in new development projects for four reasons: 1) to offer multiple travel options, 2) to promote community and increase the opportunities for social interactions and walking between adjacent developments, 3) connected neighborhoods are safer and urban gridded streets promote lower vehicular speeds, and 4) connected neighborhoods are more sustainable and can promote compact, vibrant, mixed-use neighborhoods where living in a mixed-use environment where residents are within walking distance of shops and services results in increased walking and biking.

The Comprehensive Plan's Community Character chapter, related to the role of infill development in Easton's growth strategy, states that infill development can accommodate growth without annexing land. Infill and redevelopment means:

- *decreased demand for new, undeveloped greenfields*
- *mobility for those who do not or cannot drive*
- *it's less expensive to provide services to infill sites versus greenfield sites*
- *An increased supply of smaller-sized housing units can offer more affordable and lower maintenance housing choices for smaller households*
- *new opportunities and improved quality of life for in-Town residents,*
- *savings on energy and the environment,*
- *development that is consistent with State Smart Growth Policies*

The plan does state that extra attention needs to be given to compatibility and neighborhood impact issues and the plan offers points for consideration with any infill or redevelopment project. These points include: ensure housing types that are compatible with existing types, employ appropriate traffic calming measures, and provide a continuous pedestrian network.

2. The site plan avoids or minimizes adverse impacts upon features (whether on-site or off-site) of historical, cultural or ecological significance.

Analysis - The site is not within the Historic District or Critical Area. This project would provide twenty-eight residential units with improved amenities; adequate parking, stormwater management facilities and landscaping.

3. The proposed use or development activity will not substantially increase traffic hazards due to traffic generated by the proposed use, the location of curb cuts or the layout of internal traffic circulation.

Analysis - The proposed use and activity will not increase traffic hazards in the surrounding area. Adequate off-street parking is provided.

4. The site plan and the proposed use or uses do not cause any adverse impact upon the health or safety of persons residing or working in the area surrounding the site or upon the character of the neighborhood surrounding the site; and

Analysis - There would be no adverse impacts. The existing property is located within a Business Commercial zoned district. The proposed development would provide a townhome community use with associated parking, stormwater management facilities and landscaping.

5. The site plan improves the water quality of the Chesapeake Bay or its tributaries.

Analysis - The proposed site would meet required design practices for stormwater management.

F. Supplemental Waiver Request: Landscaping & Buffering

28 – 1014.7.E.5(c)1-3 BUFFERYARD STANDARDS

Bufferyard 'E' (along non-street, exterior property lines adjoining more or less intense zoning or land use) The Planning and Zoning Commission may require additional buffering above the minimum standards listed below when the proposed or adjoining land uses are substantially incompatible.

a. 10' width

b. Plant unit: 1 shade/canopy and 3 evergreen trees

c. Option:

1. 2 shade/canopy trees and 8 large evergreen shrubs

2. 4 evergreen trees

3. wall/fence with 3 large evergreen shrubs

Analysis - The applicant for 410 Needwood Avenue has requested a landscape and buffering waiver from Chapter 28-1014.7.E.5(c)1-3 of the Zoning Code. The application proposes the installation of a split-rail fence in the bufferyard abutting the Town’s “Rails-to-Trails” path system. The applicant intends to utilize Bufferyard “E” option calling for a “wall/fence with three (3) evergreen shrubs”, as noted in the code by installing a split-rail fence and shrubs as an alternate design. The staff supports the waiver request of the modified Bufferyard “E” along the “Rails-to-Trails”. The proposed design captures the spirit and intent of the bufferyard by utilizing the split-rail fence and evergreen shrubs along the East side of the property . The applicant's modified design highlights the amenity of the “Rails-to-Trails” and promotes the connectivity of neighborhoods and subdivisions.

RECOMMENDED CONDITIONS:

Staff has no recommended conditions.

DRAFT MOTIONS:

1. I move that the Planning Commission approve the sketch site plan as submitted.

OR

2. I move that the Planning Commission forward the application to the October 17th Commission meeting for further discussion.

OR

3. I move an alternate motion.

ATTACHMENTS:

1. 2024.08.06 ESDR Application, paper copy & PDF
2. 2024.09.03 Architectural Package - Updated, paper copy & PDF
3. 2024.09.03 Bufferyard Waiver Request Signed, paper copy & PDF
4. 2024.09.03 Infrastructure Improvement Plans, paper copy & PDF
5. 2024.09.03 Site Plan Application, paper copy & PDF
6. 2024-08-28 ESDR Determination Letter 410 Needwood Ave, paper copy & PDF
7. July 2024 SWM Report, PDF



TOWN OF
EASTON
TOWN ENGINEER

DATE: October 16, 2024
TO: Brian Fitzgerald - Rauch
cc: Mike Lenhart - Lenhart Traffic Consultant, Inc.
Sierra Clem - Town of Easton
FROM: Rick Van Emburgh, P.E. – Town Engineer
SUBJECT: Silo Square
Sketch Plan - Traffic Impact Analysis Review

I reviewed the Traffic Impact Analysis (TIA) for the Subject project received on 10/9/2024.

Per the TIA, all study intersections operate at a Level of Service (LOS) B or better under existing, background, and total conditions and the proposed redevelopment generates fewer morning and evening weekday peak hour trips than the previous grain storage facility use.

The **Traffic Impact Analysis** is **Acceptable to the Engineering Department**.

Please contact me if you have any questions. Thank you.

END OF DOCUMENT

SITE DATA:

PROPERTY ADDRESS: 410 NEEDWOOD AVENUE
EASTON, MD 21601

LATITUDE: 38° 46' 03" N

LONGITUDE: -76° 04' 14" W

PRESENT ZONING CLASSIFICATION: BUSINESS COMMERCIAL DISTRICT
WITH PRD OVERLAY

PRESENT USE: BUSINESS COMMERCIAL
FUTURE USE: RESIDENTIAL

TAX MAPS: 0105
GRIDS: 00EA
PARCELS: 2226
DEED REFERENCE: 03105 / 00287

PROPERTY AREA: 2.36 ACRES
LIMITS OF DISTURBANCE: 2.52 ACRES
CUT: 2,300 SF
FILL: 1,424 SF
NET CUT/FILL: 876 SF (CUT)
EXISTING IMPERVIOUS: 53%
PROPOSED IMPERVIOUS: 58%

FEMA FLOOD MAP: PANEL 2404100188D
WATERSHED: LOWER CHOPTANK

NO PORTION OF THIS PROJECT SITE IS LOCATED WITHIN THE 100-YR FLOOD PLAIN

NO PORTION OF THIS PROJECT SITE IS LOCATED WITHIN THE CHESAPEAKE BAY CRITICAL AREA

DENSITY REQUIRED: LESS THAN 40 UNITS PER ACRE
DENSITY PROVIDED: 11.9 UNITS PER ACRE

PRO SETBACKS: FRONT: 10 FT FROM PROPERTY LINE
SIDE: 5 FT FROM PROPERTY LINE
REAR: NONE PRESENT

LOT SIZE: N/A - NO INTENT TO SUBDIVIDE

EXISTING LOT COVERAGE: 53%
REQUIRED LOT COVERAGE: NOT TO EXCEED 65%
ACTUAL PR. LOT COVERAGE: 66%

REQUIRED MAX BUILDING HEIGHT: 35'
MAX PROPOSED BUILDING HEIGHT: 32'

FOREST CONSERVATION: EXEMPT PER SECTION 31-3-2 FROM THE TOWN OF EASTON FOREST CONSERVATION ORDINANCE #718 "THE PROPOSED ACTIVITY IS ON A PREVIOUSLY DEVELOPED AREA COVERED BY IMPERVIOUS SURFACE AND IS LOCATED WITHIN THE PRIORITY FUNDING AREA"

OVERALL TREES REQUIRED: 3 PER RESIDENTIAL UNIT (84 TREES)
STREET TREES PROVIDED: 28 TREES
PARKING LOT TREES PROVIDED: 7 TREES
TOTAL TREES PROVIDED: 106

PARKING SPACES PROVIDED: 24 SPACES
GARAGE/DRIVEWAY PARKING: 34 PARKING SPACES
OFFSTREET PARKING: INCLUDES 3 EV CHARGING STATION
INCLUDES 2 ADA SPACES WITH AISLE
58 SPACES

TOTAL PARKING PROVIDED:

BUFFERYARD: REQUIRED: 20' PLANT WIDTH
BUFFERYARD "C": PLANT WITH: (1) SHADE/CANOPY TREE, 2 EVERGREEN TREES, 5 SHRUBS
OPTION: SUBSTITUTE 1 EVERGREEN TREE FOR 5 SHRUBS
NOTE: WHEN BUFFERYARD IS LOCATED BETWEEN A PARKING LOT AND STREET R/W, DELETE SHRUB REQUIREMENT

PROVIDED: BUFFERYARD "C": (1) SHADE/CANOPY TREE, 3 EVERGREEN TREES

REQUIRED: BUFFERYARD "E": 10' PLANT WIDTH
PLANT WITH: (1) SHADE/CANOPY TREE, 3 EVERGREEN TREES,
OPTION: (2) SHADE, CANOPY TREE AND 8 EVERGREEN SHRUBS
- OR - 4 EVERGREEN TREES
- OR - WALL/FENCE WITH 3 EVERGREEN SHRUBS

PROVIDED: BUFFERYARD "E": FENCE WITH 3 EVERGREEN SHRUBS

SURVEY DATUM: HORIZONTAL: NAD83
VERTICAL: NAVD88
DATE OF SURVEY: 6/18/2024

CONTACT INFORMATION

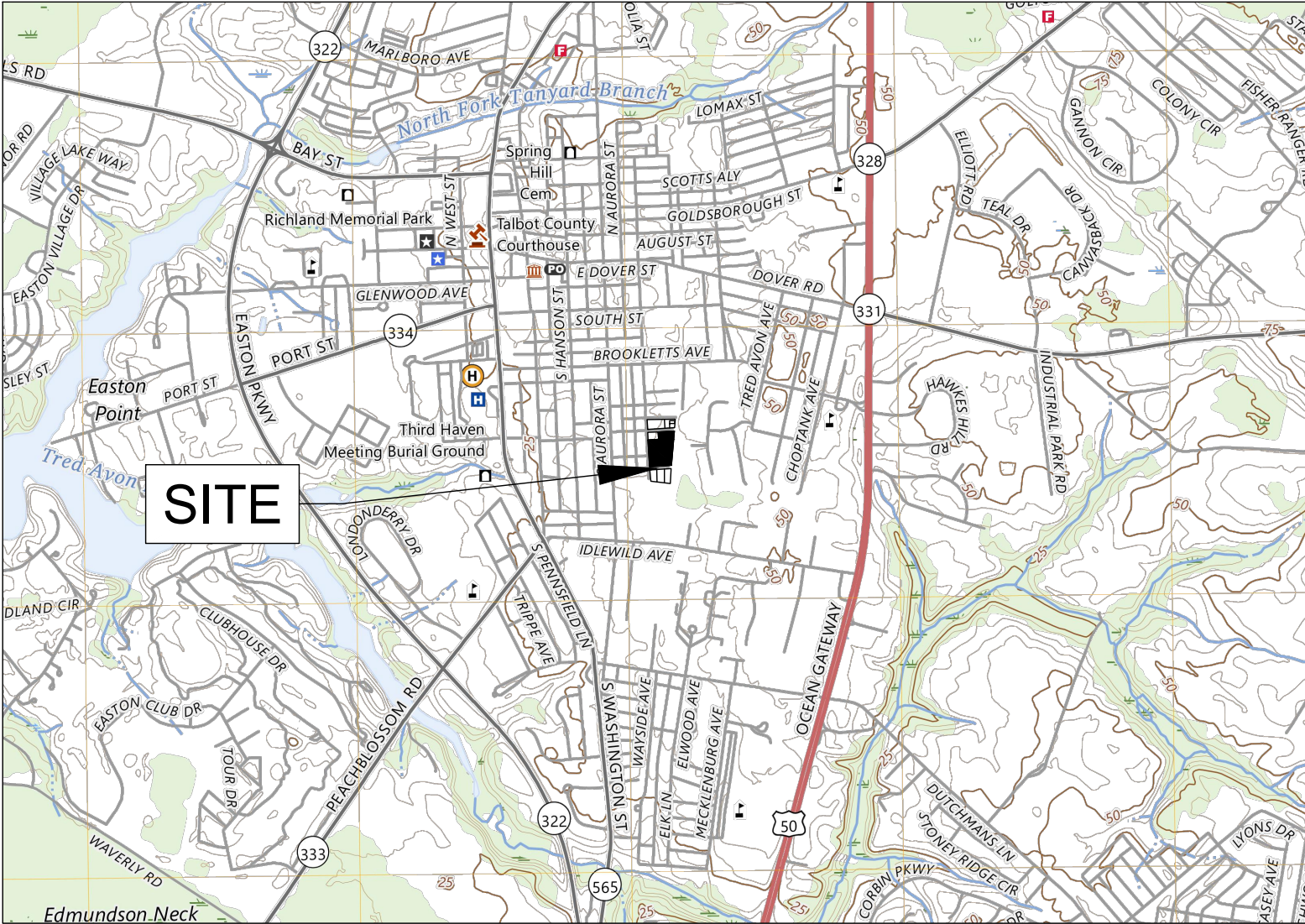
OWNER/DEVELOPER: SILO SQUARE, LLC
989 CORPORATE DRIVE,
LINTHICUM, MD 21090
(410) 384-4022

ENGINEER: RAUCH Inc.
106 N HARRISON ST
EASTON, MARYLAND 21601
(410) 770-9081

SILO SQUARE

INFRASTRUCTURE IMPROVEMENTS

FOR
SILO SQUARE, LLC
EASTON, TALBOT COUNTY, MARYLAND 21601



VICINITY MAP

SCALE: 1" = 2000'

ENVIRONMENTAL NOTES:

- THE PROJECT SITE IS NOT LOCATED WITHIN THE CRITICAL AREA BUFFER
- THE SITE IS NOT LOCATED WITHIN A 100 YEAR FLOODPLAIN
- STEEP SLOPES ARE NOT PRESENT ON SITE
- NON TIDAL WETLANDS ARE NOT PRESENT ON THIS PORTION OF THE PROJECT

HYDROLOGY NOTES:

- THE PROJECT WILL NOT ALTER HYDROLOGY TO OR FROM THE SITE
- NO OUTLETS WILL BE ALTERED BY THIS PROJECT

STANDARD STABILIZATION NOTE

- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-STABILIZATION, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETE WITHIN:
- THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND
 - SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISBURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING

DRAWING LIST	
DRAWING NUMBER	DRAWING TITLE
G-100	TITLE SHEET
V-101	EXISTING CONDITIONS PLAN
C-101	OVERALL SITE PLAN
C-201.01-.02	ESC & STORMWATER MANAGEMENT PLAN
C-203.01-.03	STORMWATER MANAGEMENT PROFILES
C-205.01-.02	EROSION & SEDIMENT CONTROL DETAILS
C-205.03	CLEAN OUT
C-301.01-.02	SITE AND GRADING PLAN
C-303	GRADING PROFILES
C-305	SITE AND GRADING DETAILS
C-401.01-.02	UTILITY PLAN
C-403.01-.03	UTILITY PROFILES
C-405	UTILITY DETAILS
C-501.01-02	LANDSCAPE PLAN AND DETAILS

DESIGN PRINCIPLES FOR EASTON

(COMPREHENSIVE PLAN, PG. 29-31)

- INTEGRATED USES ARE DESIRABLE** - THE PROJECT CONSISTS OF RESIDENTIAL, OPEN SPACE, STORMWATER MANAGEMENT, AND PARKS. THIS PROJECT WILL HAVE A TOTAL OF 28 DWELLING UNITS ADDRESSING THE NEED FOR HOUSING AS STATED IN THE COMPREHENSIVE PLAN TO INCREASE THE NUMBER AND TYPES OF HOUSING AVAILABLE IN THE AREA
- NATURAL FEATURES SHOULD DETERMINE DESIGN** - THE SITE IS DEVELOPED TO MAINTAIN EXISTING NATURAL CONTOURS AND DRAINAGE PATHS. THERE ARE FEW NATURAL FEATURES ON THE EXISTING SITE AS THE ORIGINAL SITE WAS MOSTLY IMPERVIOUS INCLUDING GRAIN TANKS. MORE GREEN/OPEN SPACE IS INCORPORATED INTO THE PROPOSED SITE PLAN.
- AUTOMOBILES SHOULD NOT DETERMINE DESIGN** - AUTOMOBILES WERE NOT THE PRIORITY FOCUS FOR THE DESIGN BUT SUFFICIENT PARKING IS PROVIDED, WHICH INCLUDES AMPLE LANDSCAPING AND GREEN SPACE.
- AMPLE OPEN SPACES SHOULD BE PROVIDED WITHIN AND AROUND NEIGHBORHOODS** - THIS PROJECT PROVIDES OPEN PARK AREAS AND GREEN SPACES THROUGHOUT THE PARCEL. THE SITE ALSO CONNECTS PEDESTRIANS TO THE RAILS TO TRAILS PATH.
- ARCHITECTURE SHOULD RESPECT EASTON'S HISTORIC DISTRICT** - THIS PROJECT IS NOT WITHIN THE HISTORIC DISTRICT BUT THE ARCHITECTURE IS MOTIVATED BY THE ORIGINAL GRAIN TANKS FROM THE EXISTING SITE.
- SIGNS SHOULD INFORM BUT NOT DOMINATE** - THERE WILL BE MINIMAL SIGNAGE ON THIS PROPERTY. EACH UNIT WILL HAVE A STREET/HOUSE NUMBER THAT WILL INDICATE THE UNIT AND ADDRESS FOR THE PUBLIC AND FIRE/RESCUE SERVICES. FREE STANDING SIGNS AT EACH ENTRANCE WILL NOT DOMINATE THE ROAD FRONTAGE.
- NEIGHBORHOODS SHOULD CONTAIN A DIVERSITY OF HOUSING TYPES** - THIS PROJECT HAS THREE DIFFERENT TOWNHOME STYLES WHICH DIFFER IN THE NUMBER OF STORIES AND BUILT IN GARAGE. THIS OFFERS A DIVERSITY OF PRICE RANGES FOR THE HOMES IN THE PROJECT. THE TOWNHOUSE DESIGN STYLE IS IN ADDITION TO THE CLIENTS OVERALL RESIDENTIAL PORTFOLIO IN AND AROUND THE TOWN OF EASTON. THE CLIENT'S PORTFOLIO HAS A DIVERSE HOUSING TYPE WITHIN THE TOWN OF EASTON.
- RESIDENTIAL DEVELOPMENTS SHOULD BE INTERESTING PLACES** - THE PROJECT EMBRACES THE EXISTING AGRICULTURE BUSINESS THAT ORIGINATED THE PARCEL. INCORPORATING THE AGRICULTURE BUSINESS WITHIN THE MOTIVATION OF THE RESIDENTIAL ARCHITECTURE, THE PARK GAZEBO, AND THE CONNECTION TO THE RAILS TO TRAILS. PATH MAKE THIS A VERY INTERESTING PROJECT AND PLACE.
- NEIGHBORHOODS SHOULD CONNECT** - PEDESTRIANS CAN TRAVERSE BETWEEN MARYLAND AVENUE AS WELL AS NEEDWOOD AVENUE. CONNECTION POINTS FOR PEDESTRIANS TO RAILS TO TRAILS ARE ALSO PROVIDED.

SEQUENCE OF CONSTRUCTION

- NOTIFY MDE AT TALBOT COUNTY SOIL CONSERVATION DISTRICT AT TOWN OF EASTON DPW AT (410) 901-4020 (410) 822-1583 (410) 822-0513
- PRE-CONSTRUCTION MEETING.
- INSTALL ALL SEDIMENT AND EROSION CONTROL MEASURES PER PLANS.
- CUT EXISTING SEWER PIPE, PLUG AND CAP WEST SECTION AND APPLY FLOWABLE FILL TO THE EAST PART OF THE SEWER PIPE TO BE ABANDONED.
- DEMO PER PLAN.
- INSTALL STORMWATER MANAGEMENT NETWORK.
- INSTALL UTILITIES.
- START SITE GRADING.
- START CONSTRUCTION.
- CONSTRUCT SUBMERGED GRAVEL WETLAND AREA. DO NOT FINALIZE CONSTRUCTION OF THIS UNTIL EARTH DISTURBANCE IS COMPLETE.
- CONSTRUCT CURBS AND SIDEWALKS AS INDICATED ON THE PLANS.
- INSTALL BASE PAVEMENT
- PERMANENTLY STABILIZE REMAINING AREAS.
- MAINTAIN ALL PERIMETER CONTROLS AND SEDIMENT CONTROL DEVICES UNTIL FINAL STABILIZATION HAS BEEN COMPLETELY ESTABLISHED.
- REMOVE PERIMETER CONTROLS UPON APPROVAL BY THE MDE SEDIMENT CONTROL INSPECTOR.

REVIEWED FOR THE TALBOT SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

APPROVED:

TALBOT SOIL CONSERVATION DISTRICT DATE

NOTE: THE TALBOT SOIL CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT THAT ADDITIONAL PROTECTION BECOMES NECESSARY.

DEVELOPER'S CERTIFICATION

I HEREBY CERTIFY THAT ALL OF THE DEVELOPMENT AND/OR CONSTRUCTION SHALL BE DONE IN ACCORDANCE TO THIS PLAN OF EROSION AND SEDIMENT CONTROL.

SIGNATURE DATE

- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR OR SUBCONTRACTOR TO NOTIFY THE ENGINEER OF ANY DEVIATION MADE IN THIS PLAN. ANY CHANGE MADE TO THIS PLAN WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER WILL PLACE RESPONSIBILITY FOR SAID CHANGE ON THE CONTRACTOR OR SUBCONTRACTOR.
- ANY RESPONSIBLE PERSONNEL INVOLVED IN THIS CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT.

GENERAL NOTES

PROJECT SHALL BE CONSTRUCTED TO COMPLY WITH THE TOWN OF EASTON DESIGN AND CONSTRUCTION STANDARDS.

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, LOCAL BUILDING CODES, BEST PRACTICES OF THE RESPECTIVE TRADES AND THE STANDARD SPECIFICATIONS AND DETAILS REFERRED TO HEREON.

THIS DRAWING SHOWS INFORMATION OBTAINED FROM AVAILABLE RECORDS REGARDING PIPES, CONDUITS, TELEPHONE LINES AND OTHER STRUCTURES AND CONDITIONS WHICH EXIST WITHIN LIMITS OF THE WORK AT AND BELOW THE SURFACE OF THE GROUND. THE CONTRACTOR IS RESPONSIBLE FOR SUPPORTING AND PROTECTING ALL PIPES, CONDUITS, TELEPHONE LINES, AND OTHER STRUCTURES.

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWO (2) WEEKS PRIOR TO START OF CONSTRUCTION AND SHALL COORDINATE ALL CONSTRUCTION PHASES WITH THEM:

MDE (Main Number)	410-537-3000
MDE (Eastern Shore Field Office)	410-901-4020
TOWN OF EASTON DPW	410-822-0513
TALBOT COUNTY SCD	410-822-1583
MISS UTILITY	800-257-7777 or 811

SHOULD ANY DAMAGE OCCUR TO ANY MARKED UTILITIES, THEY SHALL BE REPAIRED SOLELY AT THE CONTRACTORS EXPENSE.

ALL LANDSCAPING SHALL BE PERFORMED BY QUALIFIED PROFESSIONALS. ALL PLANT MATERIALS SHALL BE FROM CERTIFIED NURSERYMAN AND BE GUARANTEED FOR ONE (1) YEAR FROM THE DATE OF PLANTING.

ANY PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE REPLACED SOLELY AT THE CONTRACTORS EXPENSE.

LINETYPES

	PROPOSED	EXISTING
TOPOGRAPHY		
MAJOR CONTOURS	45	45
MINOR CONTOURS	44	44
TOP OF SLOPE BREAKLINE		
BOTTOM OF SLOPE BREAKLINE		
TOPOGRAPHY BREAKLINE		
CATCHMENT AREA		
Tc FLOW PATH		
PARCEL BOUNDARY		
PARCEL SETBACK/EASEMENT		
FENCELINE WOOD		
FENCELINE STEEL		
TREELINE/VEGETATION		
ROADWAY CENTERLINE		
HIGHWAY BARRIER		
UTILITIES		
OVERHEAD ELECTRIC	OE	OE
UNDERGROUND ELECTRIC	UE	UE
TELEPHONE LINE	T	T
GAS PIPE LINE	G	G
COMMUNICATIONS (FIBER, ETC)	C	C
WATER PIPE	W	W
STORMWATER PIPE		
UNDERDRAIN		
SANITARY SEWER	SS	SS
FORCE MAIN SEWER	FM	FM
ENVIRONMENTAL		
WETLAND LINE		
FLOOD PLANE 100/500 YR		
MEAN HIGH WATER		
MEAN LOW WATER		
CRITICAL AREA BOUNDARY		
BUFFER 25'/100'		
SOILS BOUNDARY		

EROSION AND SEDIMENT CONTROL	
SILT FENCE	SF
SUPER SILT FENCE	SSF
SILT FENCE ON PAVEMENT	SFOP
LIMITS OF DISTURBANCE	LOD
STANDARD INLET PROTECTION	SIP
AT-GRADE INLET PROTECTION	AGIP
CURB INLET PROTECTION	CIP
SWM EASEMENT 5'/10'	

SYMBOLS

	PROPOSED	EXISTING
FLARED END SECTION		
YARD INLET	YI	YI
CURB INLET	CI	CI
CUSTOM INLET	CU	CU
NYLOPLAST INLET	N	N
STORM DRAIN MANHOLE	S	S
SANITARY SEWER MANHOLE	SS	SS
CLEANOUT	C	C
GATE VALVE	GV	GV
STUB		
SIGN		
WATER METER	WM	WM
FIRE HYDRANT	FH	FH
WELL	W	W
BOLLARD		
ELECTRIC TRANSFORMER	ELEC	ELEC
TELEPHONE PEDESTAL		
UTILITY POLE		
GUY WIRE		
CONIFEROUS TREE		
DECIDUOUS TREE		
SPOT ELEVATION	X 39.01	X 39.00
LAND SLOPE	-0.41%	-0.41%
BENCHMARK		
BOREHOLE/MONITORING WELL		

HATCHES

ASPHALT	
GRAVEL	
CONCRETE	
RIPRAP/ROCK	
ESD BED BOTTOM	
BRICK PAVING	
EXISTING, TO BE DEMOLISHED	
STEEP SLOPES	
ROOFTOP/NON-ROOFTOP DISCONNECT	

ABBREVIATIONS

ADA	AMERICANS WITH DISABILITIES ACT
AGIP	AT GRADE INLET PROTECTION
@	NUMBER
BC	BACK OF CURB
BM	BENCHMARK
BRL	BUILDING RESTRICTION LINE
CES	CONCRETE END SECTION
C/O	CLEAN OUT
CHRD	CHORD
CI	CURB INLET
CIP	CURB INLET PROTECTION
CL	CENERLINE
CMP	CORRUGATED METAL PIPE
Cul	CUSTOM INLET
CY	CUBIC YARD
DI	DUCTILE IRON
E	EAST
E/ELEV	ELEVATION
EP	EDGE OF PAVE
ESC	EROSION AND SEDIMENT CONTROL
EX	EXISTING
FES	FLARED END SECTION
FFE	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
FL	FLOW LINE
FT	FOOT
GFA	GROSS FLOOR AREA
GPD	GALLONS PER DAY
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
I	INLET
INV	INVERT
KV	KILOVOLTS
L	ARC LENGTH
LF	LINEAR FEET
LOD	LIMITS OF DISTURBED AREA
LT	LEFT
MAX	MAXIMUM
MBR	MICRO-BIORETENTION
MD	MARYLAND
MEP	MECHANICAL, ELECTRICAL, AND PLUMBING
MH	MANHOLE
MHW	MEAN HIGH WATER
MIN	MINIMUM
MLW	MEAN LOW WATER
MSHA	MARYLAND STATE HIGHWAY ADMINISTRATION
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N	NORTH
N	NUMBER
PC	POINT OF CURVATURE
PE	POLYETHYLENE
PERF	PERFORATED
PR	PROPOSED
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
Q	DISCHARGE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RCN	RUNOFF CURVE NUMBER
ROW	RIGHT-OF-WAY
RT	RIGHT
S	SOUTH
SCE	STABILIZED CONSTRUCTION ENTRANCE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
Sf	FRICTION SLOPE
SF	SILT FENCE
SHA	STATE HIGHWAY ADMINISTRATION
SIP	STANDARD INLET PROTECTION
SQ	SQUARE
SS	SANITARY SEWER
SSF	SUPER SILT FENCE
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
SWM	STORM WATER MANAGEMENT
TAN	TANGENT
TB	THRUST BLOCK
TBR	TO BE REMOVED
TC	TOP OF CURB
Tc	TIME OF CONCENTRATION
TP	TAX PARCEL
TYP	TYPICAL
UE	UNDERGROUND ELECTRIC
UL	UNDERGROUND LIGHT CABLE
UT	UNDERGROUND TELEPHONE
V	VELOCITY
W	WEST
W/	WITH

TITLE SHEET

OF THE LANDS OF

SILO SQUARE, LLC

TAX MAP 0105, GRID 00EA, PARCEL 2226

EASTON, TALBOT COUNTY, MARYLAND

PREPARED FOR: SILO SQUARE, LLC

RAUCH
Engineering | Survey | Architecture | Environmental

Main Office: 106 N Harrison St - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410 770 9081 | Fax: 410 770 3487



Professional Certification.
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 11024
Expiration Date: July 24, 2026

REVISIONS

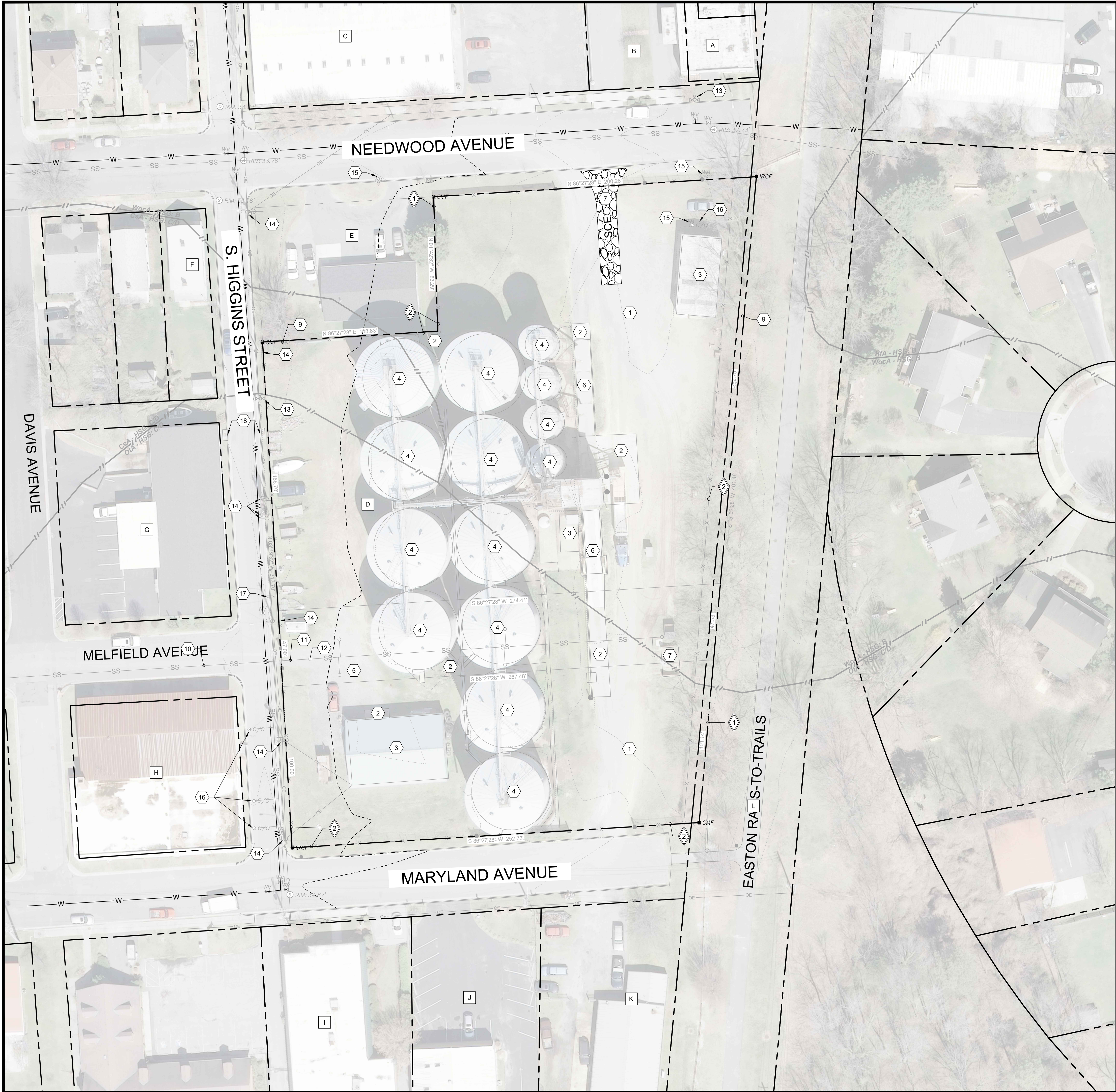
REV. #	DATE	DESCRIPTION



DATE: 9/3/2024
SCALE: AS SHOWN
DRAWN BY: AF
DESIGNED BY: BBF
APPROVED BY:

SHEET NO.: G-100

FOR REVIEW



EXISTING FEATURES

- 1 EXISTING PROPERTY LINE
- 2 EXISTING CHAIN LINK FENCE TO STAY

DEMOLITION FEATURES

- 1 EXISTING GRAVEL ROAD TO BE DEMOLISHED
- 2 EXISTING CONCRETE PAD TO BE DEMOLISHED
- 3 EXISTING BUILDING TO BE DEMOLISHED
- 4 SALVAGE EXISTING SILO ROOF FOR REUSE. GENERAL CONTRACTOR TO DETERMINE EXACT STRUCTURE. REMAINING EXISTING SILOS TO BE DEMOLISHED.
- 5 EXISTING GRAVEL PARKING LOT TO BE DEMOLISHED
- 6 EXISTING TRUCK WEIGHT SCALE TO BE DEMOLISHED
- 7 EXISTING STRUCTURE TO BE DEMOLISHED
- 8 STABILIZED CONSTRUCTION ENTRANCE. SEE DETAIL ON SHEET V-105. 01
- 9 SILT FENCE. SEE DETAIL ON SHEET V-105.01
- 10 EXISTING SEWER PIPE
- 11 EXISTING SEWER PIPE CUT/ABANDONMENT LOCATION
- 12 ABANDONED SEWER PIPE TO BE FILLED WITH FLOWABLE FILL
- 13 EXISTING FIRE HYDRANT
- 14 EXISTING ELECTRIC POLE
- 15 EXISTING WATER METER
- 16 EXISTING CLEAN-OUT
- 17 MAIL BOX
- 18 CURB INLET
- 19 PROPOSED CONTOUR (TYP.)

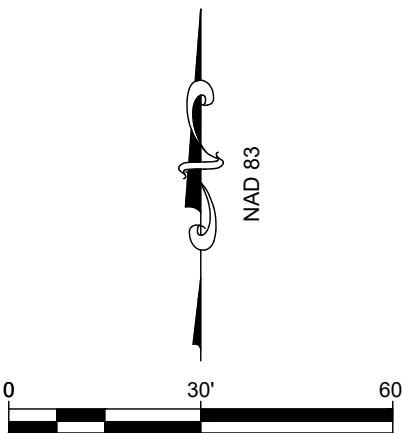
PROPERTY DATA

- A WARRINGTON DAN W. WARRINGTON REBECCA DIXON
M/G/P: 0105/0000/4533- B/P: 00961/00816
- B KNAUER IRVIN C JR KNAUER MARGARET E
M/G/P: -/- - B/P: 00693/00234
- C 411 NEEDWOOD LLC
M/G/P: 0105/0000/2214 - B/P: 01302/00939
- D SILO SQUARE LLC
M/G/P: 0105/00EA/2226 - B/P: 03105/00287
- E NEEDWOOD PARTNERSHIP
M/G/P: 0105/000EA/2225 - B/P: 00777/00391
- F EASTON VENTURES LLC
M/G/P: 0105/00EA/2224 - B/P: 02340/00451
- G KC RENTAL PROPERTIES, LLC
M/G/P: 0105/0000/2234 - B/P: 01279/00343
- H ASPRO INC
M/G/P: 0105/000EA/2233 - B/P: 00814/00892
- I WILLOW CONSTRUCTION INC
M/G/P: 0105/000EA/2229 - B/P: 02958/00252
- J WALBRIDGE REAL ESTATE INVESTMENTS LLC
M/G/P: 0105/000EA/2228 - B/P: 02589/00013
- K LORD STUART PROPERTIES LCC
M/G/P: 0105/000EA/2227 - B/P: 02532/00125
- L TOWN OF EASTON
M/G/P: 0105/000EA/2211 - B/P: 01595/00214

SOIL DATA

Map Unit Symbol	Name	Hydrologic Soil Group	K-Factor	Hydric?
WocA	Woodstown loam, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	C	0.37	No
OtA	Othello silt loams, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	C/D	0.43	Yes
CsA	Crosiadore silt loam, 0 to 2 percent slopes	C/D	0.49	Yes

*NOTE: ANY WATER TO BE USED CAN COME OFF HYDRANT ON SOUTH HIGGINS STREET AFTER APPLYING FOR TEMPORARY WATER METER FROM EUC.

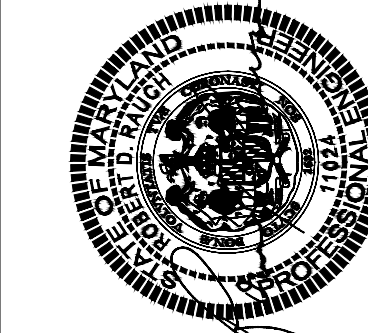


EXISTING CONDITIONS & DEMOLITION PLAN

OF THE LANDS OF
SILO SQUARE, LLC
TAX MAP 0105, GRID 08EA, PARCEL 2226
EASTON, TALBOT COUNTY, MARYLAND
PREPARED FOR: SILO SQUARE, LLC



Main Office: 106 N Harrison St - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410 770 8081 | Fax: 410 770 3887

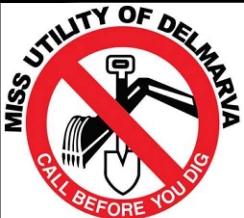


Professional Certification.
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 11024
Expiration Date: July 24, 2026

REVISIONS

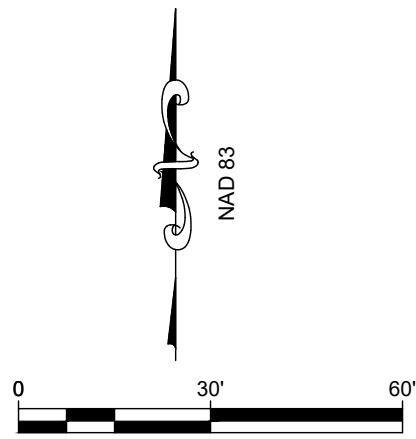
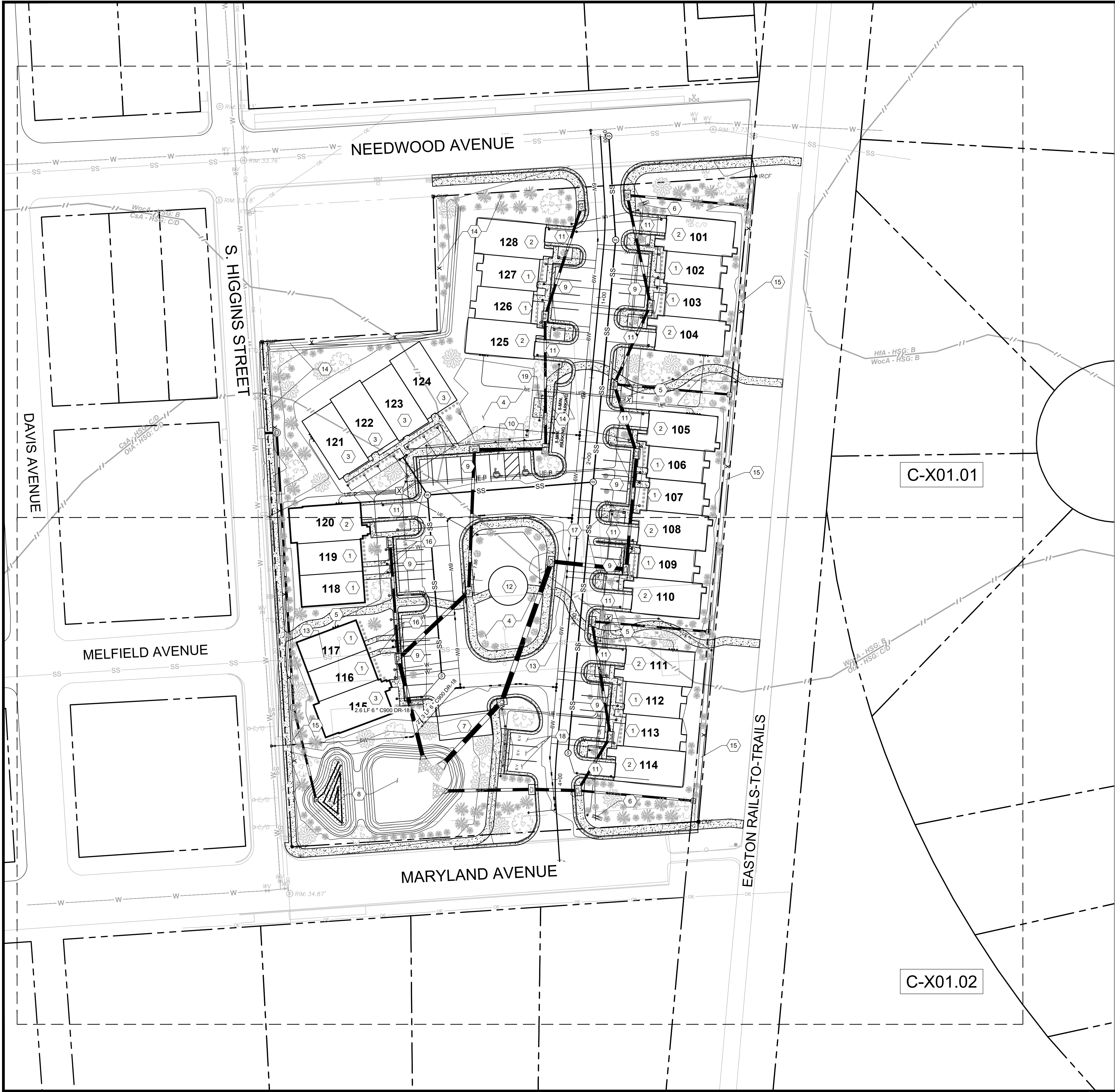
REV. #	DATE	DESCRIPTION



DATE: 9/3/2024
SCALE: 1" = 30'
DRAWN BY: AFB
DESIGNED BY: BBF
APPROVED BY:

SHEET NO.:
V-101

FOR
REVIEW



PROPOSED FEATURES

- 1 UNIT TYPE A
- 2 UNIT TYPE B
- 3 UNIT TYPE C
- 4 PARK
- 5 WALKING TRAIL
- 6 SIGN
- 7 TRASH AND RECYCLING CENTER
- 8 STORMWATER SUBMERGED GRAVEL WETLAND AND FOREBAY
- 9 PARKING AREA. TYPICAL SPACE: 9'Wx18'L
- 10 HANDICAP PARKING SPACE - 9'Wx18'L WITH 9'Wx18'L AISLE. TYPICAL OF TWO
- 11 DRIVEWAY FOR GARAGE ACCESS - 12'Wx25'L
- 12 GAZEBO
- 13 EXISTING SEWER LATERAL TO BE DEMOLISHED - SEE V-101 FOR FURTHER DETAILS
- 14 PROPOSED PARALLEL PARKING FOR MAILBOX ACCESS
- 15 PROPOSED TWO-RAIL FENCE TO MATCH EXISTING RAILS TO TRAILS FENCE
- 16 PROPOSED 3' SIDEWALK FOR RESIDENTIAL ACCESS - TYPICAL
- 17 PROPOSED 5' SIDEWALK FOR PUBLIC USE - TYPICAL
- 18 PROPOSED ELECTRIC VEHICLE CHARGING STATIONS
- 19 PROPOSED CLUSTER MAILBOX

FINISH FLOOR/GARAGE FLOOR ELEVATIONS:
UNITS 101-104: 37.25'
UNITS 105-110: 37.25'
UNITS 111-114: 37.00'
UNITS 115-120: 36.50'
UNITS 121-124: 36.50'
UNITS 125-128: 37.00'

LANDSCAPING LEGEND

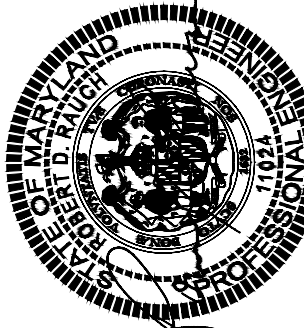
- PROPOSED SHADE TREE - TYPE TO BE DETERMINED
- PROPOSED SHRUB - TYPE TO BE DETERMINED

OVERALL SITE PLAN

OF THE LANDS OF
SILO SQUARE, LLC
TAX MAP 0105, GRID 08EA, PARCEL 2226
EASTON, TALBOT COUNTY, MARYLAND
PREPARED FOR: SILO SQUARE, LLC



Main Office: 106 N Harrison St - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
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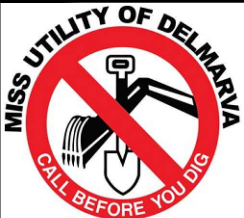


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REV. #	DATE	DESCRIPTION



DATE: 9/3/2024
SCALE: 1" = 30'
DRAWN BY: AF
DESIGNED BY: BBF
APPROVED BY:

SHEET NO.:
C-101

FOR REVIEW

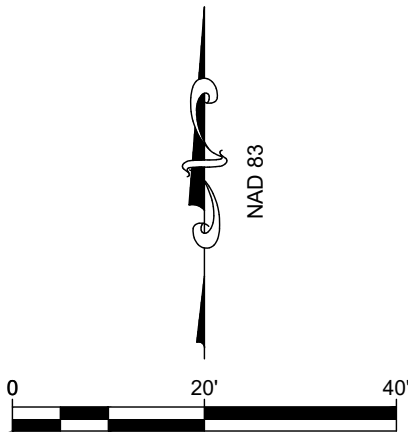
EROSION & SEDIMENT CONTROL FEATURES

- A CURB INLET PROTECTION PER DETAIL ON C-205.01
- B AT-GRADE INLET PROTECTION PER DETAIL ON C-205.01
- C SILT FENCE PER DETAIL ON C-205.01
- D STABILIZED CONSTRUCTION ENTRANCE PER DETAIL ON C-205.01

STORMWATER MANAGEMENT FEATURES

- 1 VEGETATED SWALE. SEE DETAIL ON C-205.03

SOIL DATA				
Map Unit Symbol	Name	Hydrologic Soil Group	K-Factor	Hydric?
WocA	Woodstown loam, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	C	0.37	No
OtA	Othello silt loams, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	C/D	0.43	Yes
CsA	Crosiadore silt loam, 0 to 2 percent slopes	C/D	0.49	Yes



CONTINUATION - SEE SHEET C-201.02

ESC AND SWM PLAN

OF THE LANDS OF

SILO SQUARE, LLC

TAX MAP 0105, GRID 08EA, PARCEL 2226

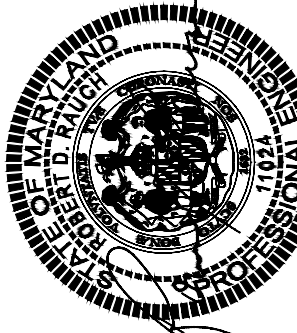
EASTON, TALBOT COUNTY, MARYLAND

PREPARED FOR: SILO SQUARE, LLC

RAUCH

Engineering | Survey | Architecture | Environmental

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REVISIONS

REV. #	DATE	DESCRIPTION



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DESIGNED BY: BBF
APPROVED BY:

SHEET NO.:
C-201.01

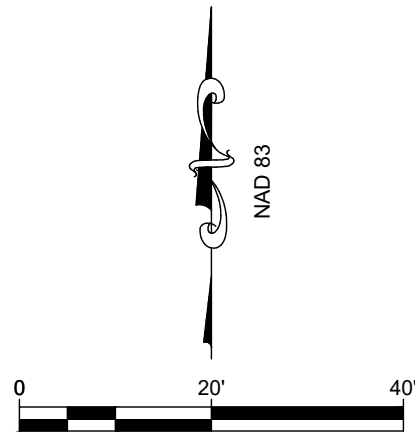
FOR
REVIEW

A	CURB INLET PROTECTION PER DETAIL ON C-205.01
B	AT-GRADE INLET PROTECTION PER DETAIL ON C-205.01
C	SILT FENCE PER DETAIL ON C-205.01

1 SUBMERGED GRAVEL WETLAND WITH FOREBAY.
SEE SECTIONS ON C-203.03 AND DETAIL ON C-205.03

2 VEGETATED SWALE. SEE DETAIL ON C-205.03

Map Unit Symbol	Name	Hydrologic Soil Group	K-Factor	Hydric?
WocA	Woodstown loam, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	C	0.37	No
OtA	Othello silt loams, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	C/D	0.43	Yes
CsA	Crosiadore silt loam, 0 to 2 percent slopes	C/D	0.49	Yes

[illegible]

ESC AND SWM PLAN

OF THE LANDS OF

SILLO SQUARE, LLC

TAX MAP 0105, GRID 00EA, PARCEL 2226
EASTON, TALBOT COUNTY, MARYLAND
PREPARED FOR: SILO SQUARE, LLC

RAUCH
inc.

Engineering | Survey | Architecture | Environmental

Main Office: 106 N Harrison St - Easton, MD 21601
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9/30/2024

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REVISIONS

DESCRIPTION

REV. #	DATE
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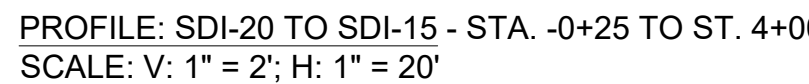
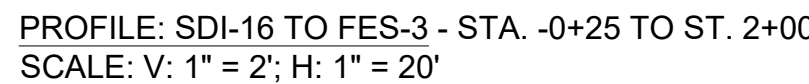
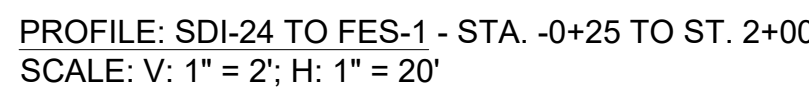
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SCALE:	1" = 20'
DRAWN BY:	AF
DESIGNED BY:	BBF
APPROVED BY:	

SHEET NO.:
C-201.02

**FOR
REVIEW**



STRUCTURE SCHEDULE
SILO SQUARE STORM

STRUCTURE NAME	LOCATION	STRUCTURE TYPE AND SIZE	CONNECTED PIPES	RIM ELEVATION
CCO-1	N402227.28, E1577646.71	6" PVC CLEANOUT	UD-1 INV IN = 26.670	27.96
CCO-2	N402207.81, E1577637.67	6" PVC CLEANOUT	UD-1 INV IN = 26.670 UD-2 INV OUT = 26.670	32.83
CCO-3	N402189.21, E1577649.09	6" PVC CLEANOUT	UD-4 INV IN = 26.670 UD-3 INV OUT = 26.670	32.83
CCO-4	N402220.83, E1577647.88	6" PVC CLEANOUT	UD-5 INV IN = 26.670 UD-4 INV OUT = 26.670	32.83
CCO-5	N402203.17, E1577641.24	6" PVC CLEANOUT	UD-5 INV IN = 26.670	32.83
DCO-1	N402224.93, E1577648.05	6" ADS NYLOPLAST STRUCTURE	UD-6 INV OUT = 26.670	32.83
DCO-2	N402202.29, E1577637.60	6" ADS NYLOPLAST STRUCTURE	UD-6 INV IN = 26.670 UD-7 INV OUT = 26.670	32.83
DCO-3	N402195.17, E1577646.36	6" ADS NYLOPLAST STRUCTURE	UD-7 INV IN = 26.670 UD-8 INV OUT = 26.670	32.83
DCO-4	N402211.60, E1577646.61	6" ADS NYLOPLAST STRUCTURE	UD-8 INV IN = 26.670 UD-9 INV OUT = 26.670	32.83
DCO-5	N402201.67, E1577643.96	6" ADS NYLOPLAST STRUCTURE	UD-9 INV IN = 26.670	32.83
EXCI-1	N402430.92, E1577598.98	CURB INLET PER SD-1.01	SD-26 INV IN = 30.000	33.78
FES-1	N402209.29, E1577713.76	18" N-12 FES	SD-2 INV IN = 31.994	33.63
FES-2	N402225.94, E1577711.71	30" N-12 FES	SD-6 INV IN = 31.553	34.26
FES-3	N402230.10, E1577699.15	24" N-12 FES	SD-15 INV IN = 32.175	34.33
SDI-1	N402203.91, E157632.89	18"x18" CUSTOM INLET	UD-2 INV IN = 26.670 UD-3 INV IN = 26.670 SD-1 INV OUT = 31.167	32.61
SDI-2	N402210.22, E1577766.76	CURB INLET PER SD-1.01	SD-3 INV IN = 33.231 SD-2 INV OUT = 33.231	36.24
SDI-3	N402209.52, E1577795.22	CURB INLET PER SD-1.01	SD-4 INV IN = 33.770 SD-24 INV IN = 34.006 SD-3 INV OUT = 33.512	36.52
SDI-4	N402243.09, E15777815.37	CURB INLET PER SD-1.01	SD-5 INV IN = 33.802 SD-4 INV OUT = 33.803	36.48
SDI-5	N402314.37, E1577803.94	CURB INLET PER SD-1.01	SD-23 INV IN = 34.182 SD-5 INV OUT = 33.947	36.69
SDI-6	N402264.74, E1577748.09	CURB INLET PER SD-1.01	SD-7 INV IN = 31.669 SD-6 INV OUT = 31.669	36.04
SDI-8	N402351.52, E1577778.83	CURB INLET PER SD-1.01	SD-9 INV IN = 32.346 SD-7 INV OUT = 31.853	35.85
SDI-9	N402346.59, E1577825.01	CURB INLET PER SD-1.01	SD-10 INV IN = 33.088 SD-9 INV OUT = 32.648	36.65
SDI-10	N402418.34, E1577831.66	CURB INLET PER SD-1.01	SD-11 INV IN = 33.232 SD-10 INV OUT = 33.232	36.55
SDI-11	N402461.31, E1577817.59	CURB INLET PER SD-1.01	SD-12 INV IN = 33.580 SD-22 INV IN = 33.816 SD-11 INV OUT = 33.322	36.55
SDI-12	N402510.39, E1577840.22	CURB INLET PER SD-1.01	SD-13 INV IN = 33.688 SD-12 INV OUT = 33.688	36.44
SDI-13	N402578.53, E1577825.77	CURB INLET PER SD-1.01	SD-21 INV IN = 34.296 SD-13 INV OUT = 34.060	36.81
SDI-14	N402332.73, E1577727.54	CURB INLET PER SD-1.01	SD-17 INV IN = 32.918 SD-14 INV OUT = 32.417	36.42
SDI-15	N402291.29, E1577683.99	CURB INLET PER SD-1.01	SD-16 INV IN = 33.056 SD-14 INV IN = 32.297 SD-15 INV OUT = 32.297	36.19
SDI-16	N402363.27, E1577678.82	CURB INLET PER SD-1.01	SD-16 INV OUT = 33.531	36.36
SDI-17	N402420.81, E1577731.07	CURB INLET PER SD-1.01	SD-18 INV IN = 33.095 SD-17 INV OUT = 33.094	36.08
SDI-18	N402421.30, E1577775.28	CURB INLET PER SD-1.01	SD-19 INV IN = 33.441 SD-18 INV OUT = 33.183	36.25
SDI-19	N402503.55, E1577774.88	CURB INLET PER SD-1.01	SD-20 INV IN = 33.606 SD-19 INV OUT = 33.607	36.52
SDI-20	N402572.00, E1577797.69	CURB INLET PER SD-1.01	SD-20 INV OUT = 33.751	36.50
SDI-21	N402571.99, E1577899.60	YARD INLET PER SD-3.01	SD-21 INV OUT = 35.178	36.79
SDI-22	N402454.96, E1577889.24	YARD INLET PER SD-3.01	SD-22 INV OUT = 34.534	36.55
SDI-23	N402307.97, E1577876.23	YARD INLET PER SD-3.01	SD-23 INV OUT = 34.682	36.69
SDI-24	N402203.14, E1577866.94	YARD INLET PER SD-3.01	SD-24 INV OUT = 34.524	36.54
SDMH-1	N402431.33, E1577606.49	PRECAST CONCRETE MANHOLE PER SD-4.00	SD-25 INV IN = 30.018 SD-26 INV OUT = 30.019	33.96
SDMH-2	N402261.01, E1577618.93	PRECAST CONCRETE MANHOLE PER SD-4.00	SD-1 INV IN = 30.913 SD-25 INV OUT = 30.913	34.85

STORMWATER MANAGEMENT PROFILES

OF THE LANDS OF

SILO SQUARE, LLC

TAX MAP 0105, GRID 00EA, PARCEL 2226

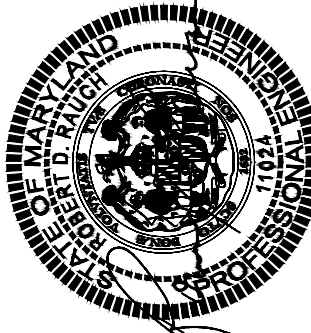
ASTON, TALBOT COUNTY, MARYLAND

PREPARED FOR: SILO SQUARE, LLC



Engineering | Survey | Architecture | Environmental

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9/30/2024

Professional Certification.

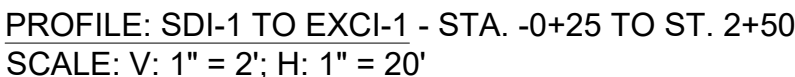
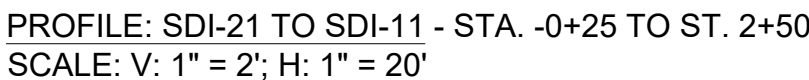
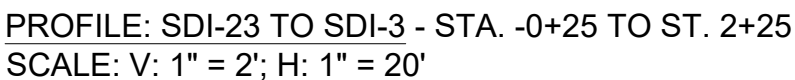
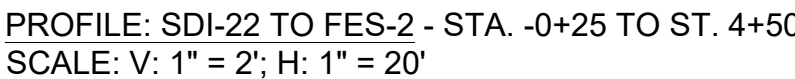
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

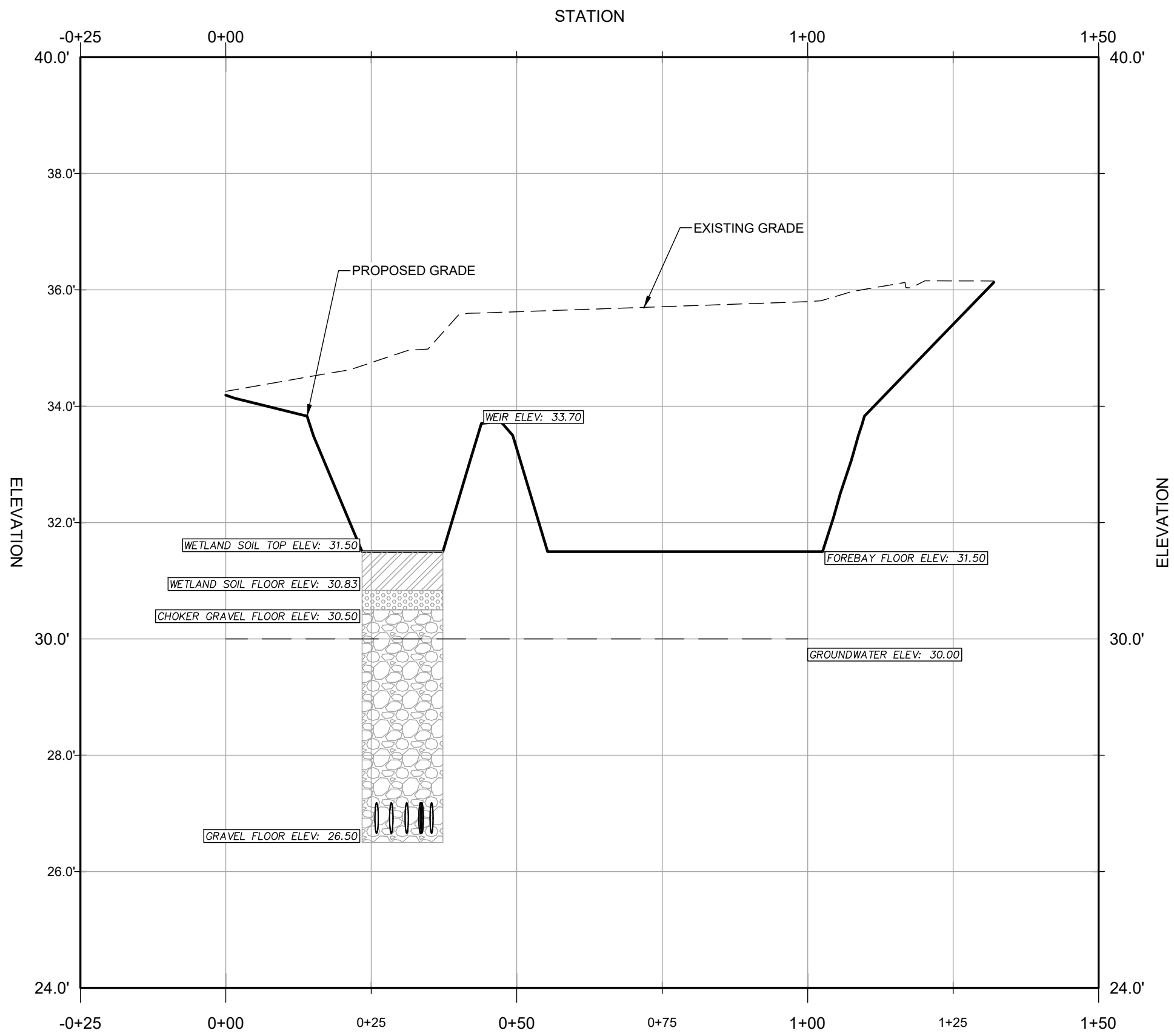
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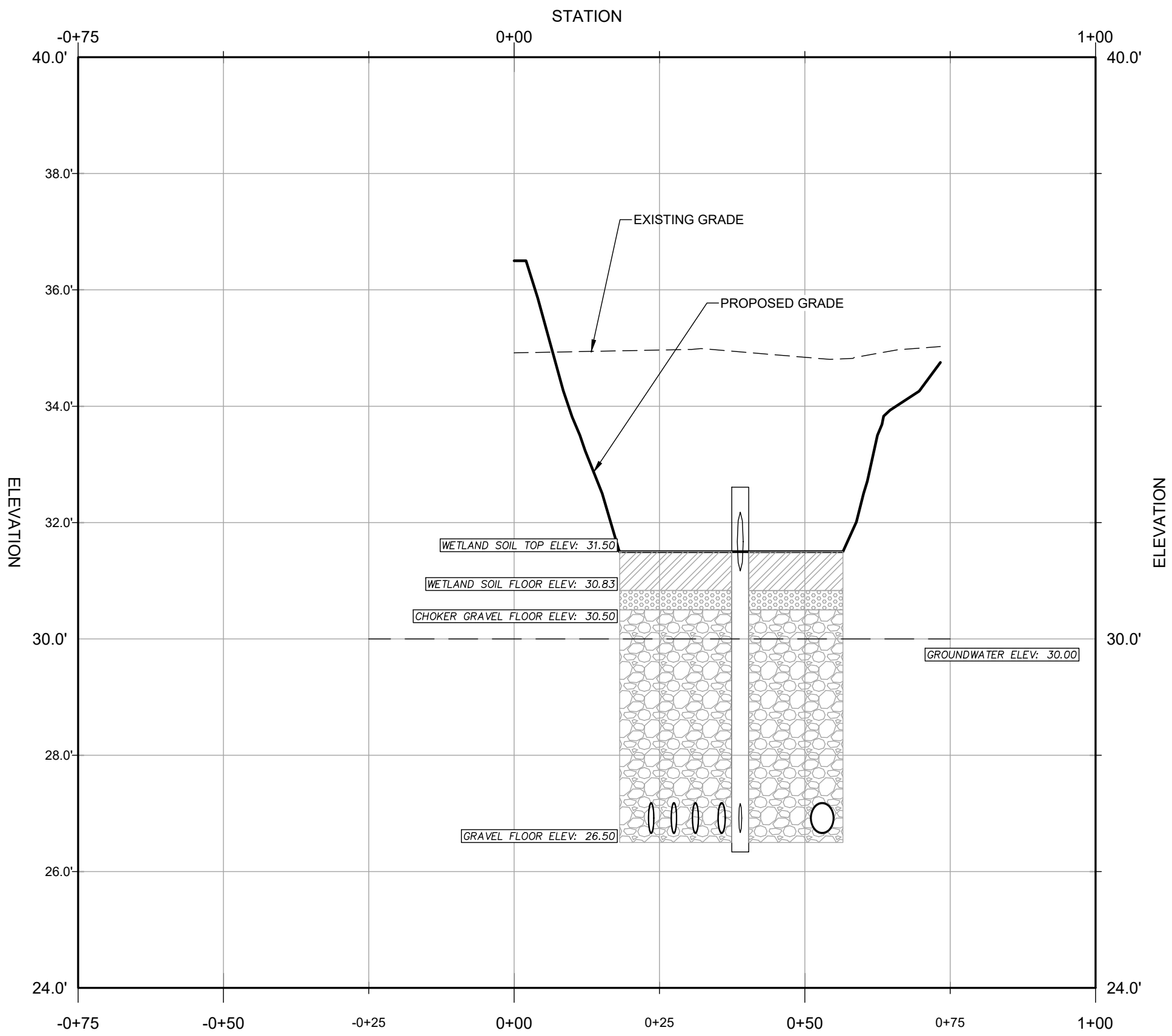
SHEET NO.: **C-203.01**

**FOR
REVIEW**





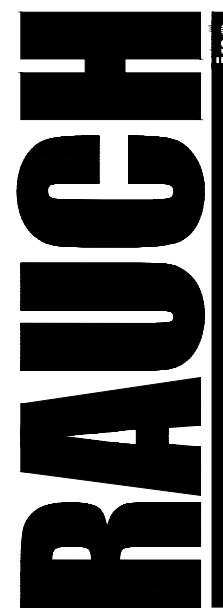
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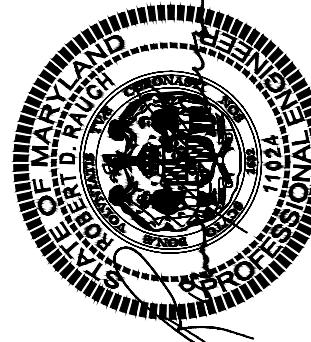
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SCALE: V: 1" = 2'; H: 1" = 20'

STORMWATER MANAGEMENT PROFILES

OF THE LANDS OF
SILO SQUARE, LLC
TAX MAP 0105, GRID 08EA, PARCEL 2226
EASTON, TALBOT COUNTY, MARYLAND
PREPARED FOR: SILO SQUARE, LLC



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Professional Certification.
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 11024
Expiration Date: July 24, 2026

REVISIONS

REV. #	DATE	DESCRIPTION



DATE: 9/3/2024
SCALE: AS SHOWN
DRAWN BY: AF
DESIGNED BY: BBF
APPROVED BY:

SHEET NO.:
C-203.03

FOR
REVIEW

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, LOCAL BUILDING CODES, BEST PRACTICES OF THE RESPECTIVE TRADES AND THE STANDARD SPECIFICATIONS AND DETAILS REFERRED TO HEREON.

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWO (2) WEEKS PRIOR TO START OF CONSTRUCTION AND SHALL COORDINATE ALL CONSTRUCTION PHASES WITH THEM:

SHOULD ANY DAMAGE OCCUR TO ANY MARKED UTILITIES, THEY SHALL BE REPAIRED SOLELY AT THE CONTRACTORS EXPENSE.

ANY PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE REPLACED SOLELY AT THE CONTRACTORS EXPENSE.

1. ALL TREES TO BE LOGGED AND STUMPS TO BE REMOVED.
2. ALL AREAS/HOLES WHERE A STUMP ONCE WAS IS TO BE FILLED IN TO MEET SURROUNDING GRADES.
3. CLEARING AND GRUBBING SHALL INCLUDE ALL TREES, BUSH, DEBRIS, ROAD MATERIAL AND ORGANIC MATERIALS TO BE REMOVED.

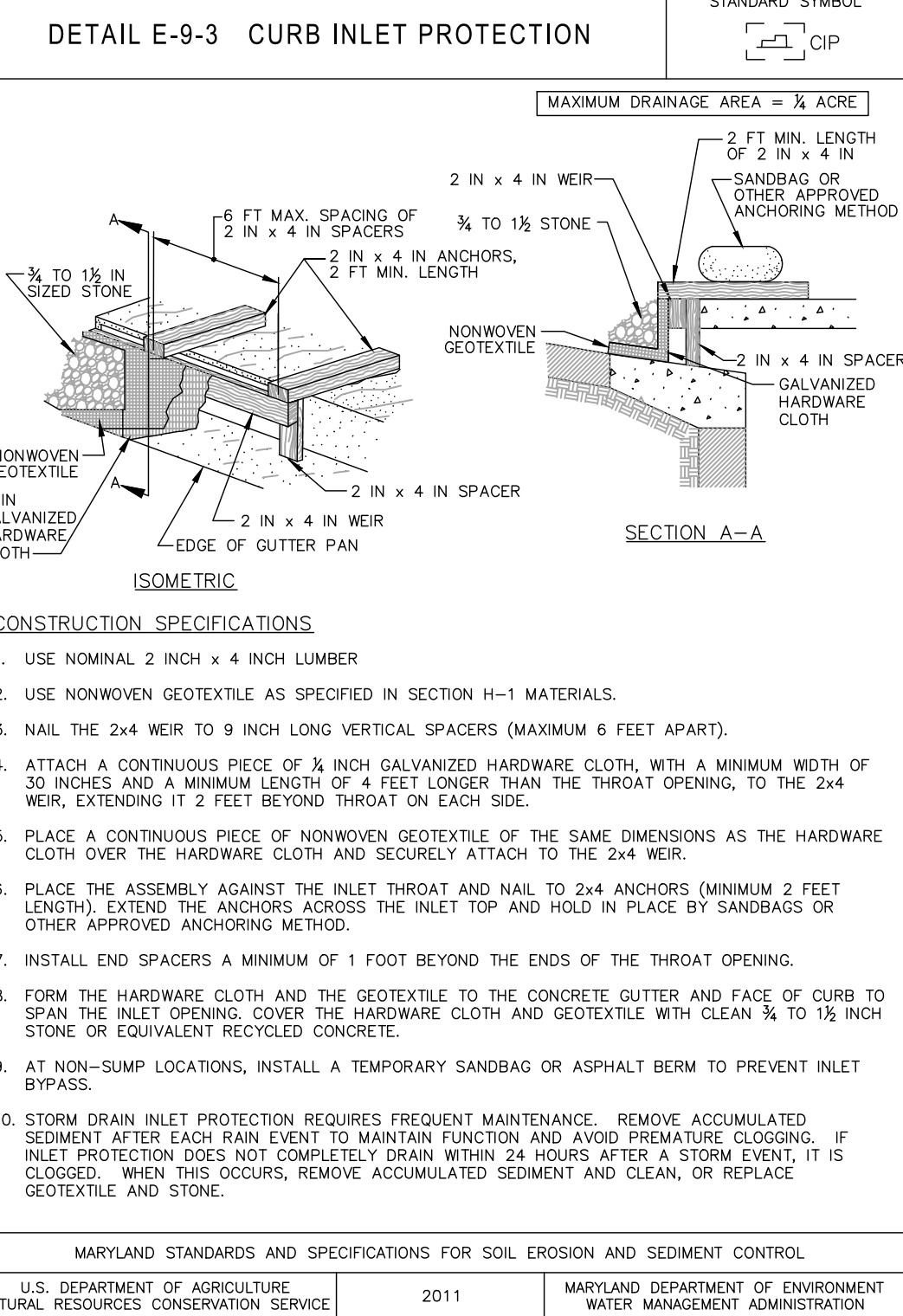
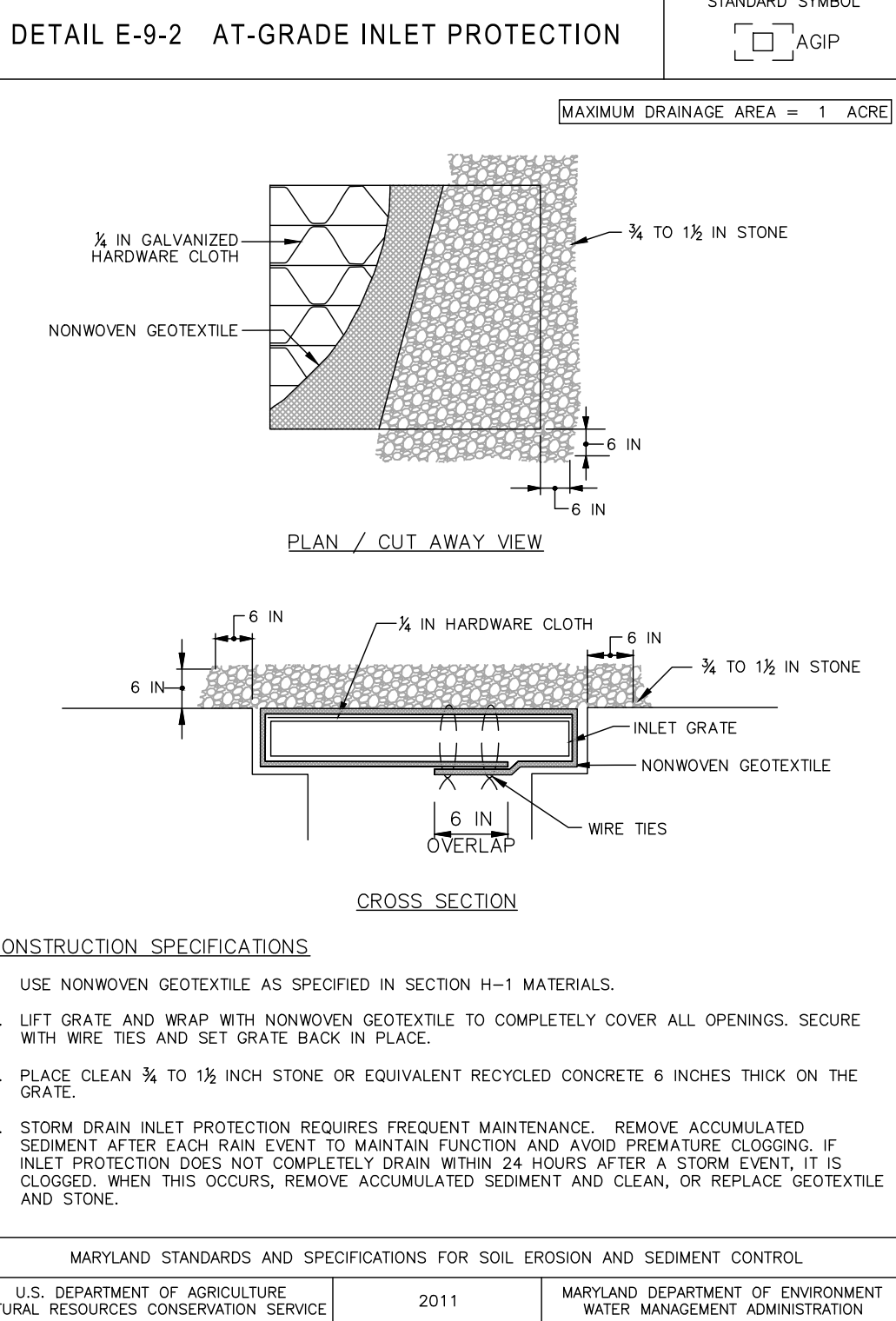
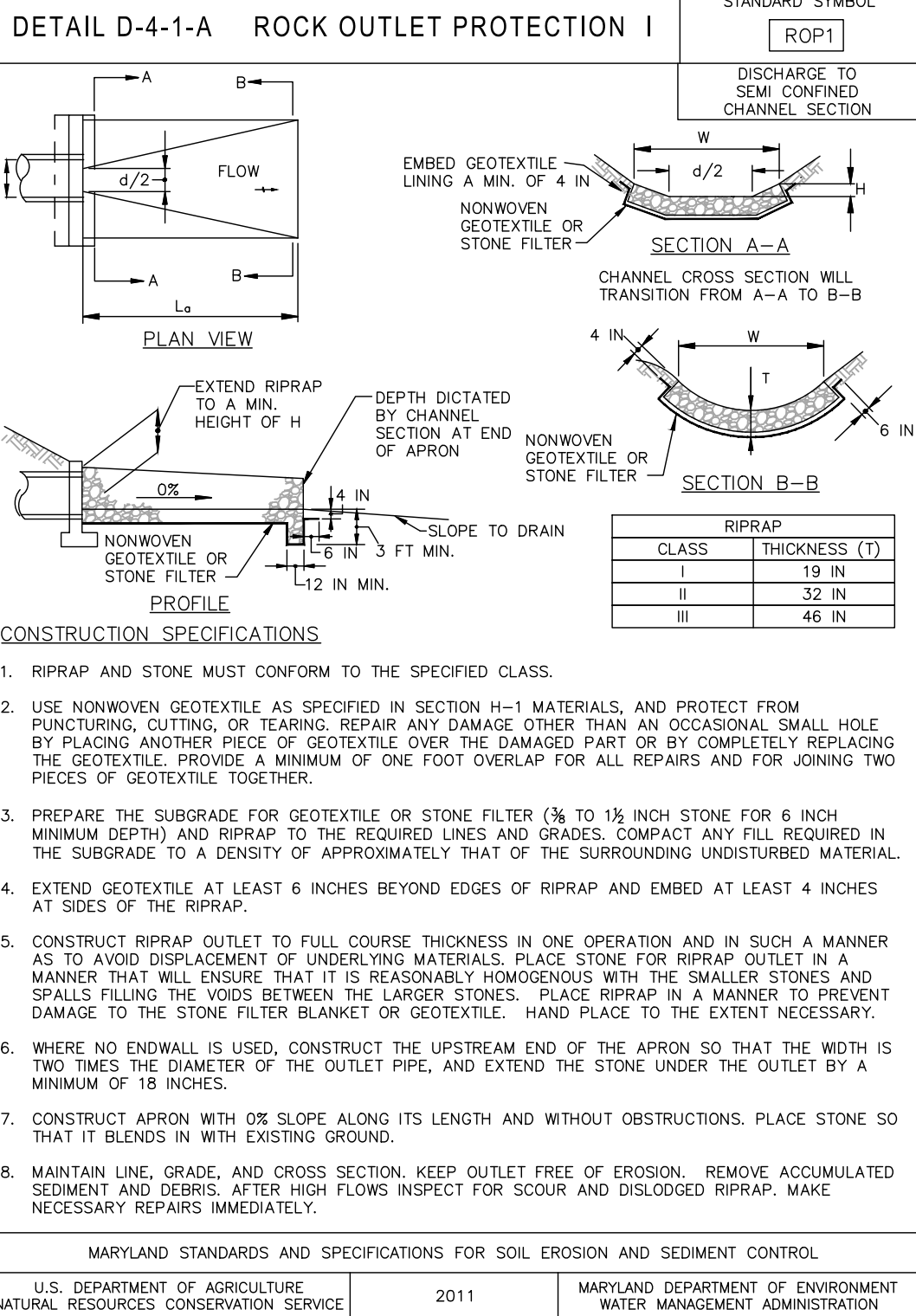


Plant Species	Seeding Rate ^{1/}		Seeding Depth ^{2/} (inches)	Recommended Seeding Dates by Plant Hardiness Zone ^{3/}		
	lb/ac	lb/1000 ft ²		5b and 6a	6b	7a and 7b
Cool-Season Grasses						
Annual Ryegrass (<i>Lolium perenne</i> sp. <i>multiflorum</i>)	40	1.0	0.5	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30
Barley (<i>Hordeum vulgare</i>)	96	2.2	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30
Oats (<i>Avena sativa</i>)	72	1.7	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30
Wheat (<i>Triticum aestivum</i>)	120	2.8	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30
Cereal Rye (<i>Secale cereale</i>)	112	2.8	1.0	Mar 15 to May 31; Aug 1 to Oct 31	Mar 1 to May 15; Aug 1 to Nov 15	Feb 15 to Apr 30; Aug 15 to Dec 15
Warm-Season Grasses						
Forxtail Millet (<i>Setaria italica</i>)	30	0.7	0.5	Jun 1 to Jul 31	May 16 to Jul 31	May 1 to Aug 14
Pearl Millet (<i>Pennisetum glaucum</i>)	20	0.5	0.5	Jun 1 to Jul 31	May 16 to Jul 31	May 1 to Aug 14

1/ Seeding rates for the warm-season grasses are in pounds of Pure Live Seed (PLS). Actual planting rates shall be adjusted to reflect percent seed germination and purity, as tested. Adjustments are usually not needed for the cool-season grasses.

Oats are the recommended nurse crop for warm-season grasses.

2/ For sandy soils, plant seeds at twice the depth listed above.



C-

B-4 STANDARDS AND SPECIFICATIONS
FOR
VEGETATIVE STABILIZATION

Definition

Using vegetation as cover to protect exposed soil from erosion.

Purpose

To promote the establishment of vegetation on exposed soil.

Conditions Where Practice Applies

On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent stabilization.

Effects on Water Quality and Quantity

Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas.

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation will help to reduce runoff, increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control practices must remain in place during grading, seedbed preparation, seeding, mulching, and vegetative establishment.

Adequate Vegetative Establishment

Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the planting season.

- Adequate vegetative stabilization requires 95 percent groundcover.
- If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seedbed preparation, and seeding.
- If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.
- Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

B-4-2 STANDARDS AND SPECIFICATIONS
FOR
SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

- Soil Preparation
 - Temporary Stabilization
 - Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or ripers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plans.
 - Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
 - Permanent Stabilization
 - A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
 - Soil pH between 6.0 and 7.0.
 - Soluble salts less than 500 parts per million (ppm).
 - Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
 - Soil contains 1.5 percent minimum organic matter by weight.
 - Soil contains sufficient pore space to permit adequate root penetration.
 - Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
 - Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
 - Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
 - Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seeding loosening may be unnecessary on newly disturbed areas.
- Topsoiling
 - Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
 - Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
 - Topsoiling is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
- Areas having slopes steeper than 2:1 require special consideration and design:
 - Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
 - Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.
 - Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
 - Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
 - Topsoil Application
 - Erosion and sediment control practices must be maintained when applying topsoil.
 - Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
 - Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the topsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

- Soil Amendments (Fertilizer and Lime Specifications)
 - Soil tests must be performed to determine the exact rates and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
 - Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
 - Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
 - Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
 - Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

B-4-3 STANDARDS AND SPECIFICATIONS
FOR
SEEDING AND MULCHING

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

- Seeding
 - Specifications
 - All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
 - Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
 - Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
 - Application
 - Dry Seeding: This includes use of conventional drop or broadcast spreaders.
 - Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
 - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
 - Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
 - Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seeded must be firm after planting.
 - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
 - Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
 - If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre of total soluble nitrogen; P2O5 (phosphorus), 200 pounds per acre; K2O (potassium), 200 pounds per acre.
 - Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
 - Mix seed and fertilizer on site and seed immediately and without interruption.
 - When hydroseeding seed do not incorporate seed into the soil.
 - Mulching
 - Mulch Materials (in order of preference)
 - Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
 - Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
 - WCFM, including dye, must contain no germination or growth inhibiting factors.
 - WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - WCFM material must not contain elements or compounds at concentration levels that will be phytotoxic.
 - WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.
- Application
 - Apply mulch to all seeded areas immediately after seeding.
 - When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
 - Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
- Anchoring
 - Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
 - A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
 - Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petrosel, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
 - Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls to 15 feet wide and 300 to 3,000 feet long.

B-4-4 STANDARDS AND SPECIFICATIONS
FOR
TEMPORARY STABILIZATION

Definition

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

- Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
- For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
- When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3 A.1.b and maintain until the next seeding season.

Temporary Seeding Summary

Hardness Zone (from Figure B.3): Seed Mixture (from Table B.1):					Fertilizer Rate (10-20-20)		Lime Rate
No.	Species	Appl. Rate (lbs./ac.)	Seeding Dates	Seeding Depths	N	P2O5	
	ANNUAL RYEGRASS	40	FEB 15 - APR 30 AUG 15 - NOV 30	0.50			
	BARLEY	40	FEB 15 - APR 30 AUG 15 - NOV 30	1	436 lb/ac 10 lb/ 1000 sf	90 lb/ 20 lb/ 1000 sf	2 tons/ac 90 lb/ 1000 sf

B-4-5 STANDARDS AND SPECIFICATIONS
FOR
PERMANENT STABILIZATION

Definition

To stabilize disturbed soils with permanent vegetation.

Purpose

To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for 6 months or more.

Criteria

- Seed Mixtures
 - General Use
 - Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
 - Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.
 - For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
 - For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 ½ pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.
 - Turfgrass Mixtures
 - Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
 - Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
 - Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
 - Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
 - Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: Certified Tall Fescue Cultivars 35 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 6 pounds per 1000 square feet. One or more cultivars may be blended.
 - Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass Lawns. For establishment in high quality, intensively managed turf area. Mixture includes: Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1½ to 3 pounds per 1000 square feet.
- Ideal Times of Seeding for Turf Grass Mixtures
 - Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)
 - Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b)
 - Southern MD: Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

Notes:
Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultural Recommendations for Maryland"

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)

Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b)

Southern MD: Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

- Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1½ inches in diameter.
- The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
- If soil moisture is deficient, supply new seedlings with adequate water for plant growth (½ to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedlings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Permanent Seeding Summary

Hardness Zone (from Figure B.3): Seed Mixture (from Table B.1):					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Appl. Rate (lbs./ac.)	Seeding Dates	Seeding Depths	N	P2O5	K2O	
	CREEPING RED FESCUE KENTUCKY BLUEGRASS	60# 15#	MAR 1 - MAY 15 AUG 15 - OCT 15	1/4" - 1/2"				
	TALL FESCUE	100#	MAR 1 - MAY 15 AUG 15 - OCT 15	1/4" - 1/2"	45 lb/ac 1 lb/ 1000 sf	90 lb/ac 2 lb/1000 sf	90 lb/ac 2 lb/1000 sf	2 tons/ac 90 lb/ 1000 sf

- Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

- General Specifications
 - Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
 - Sod must be machine cut to a uniform soil thickness of ¾ inch, plus or minus ¼ inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
 - Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
 - Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
 - Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.
- Sod Installation
 - During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
 - Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
 - Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
 - Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.
- Sod Maintenance
 - In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
 - After the first week, sod watering is required as necessary to maintain adequate moisture content. Do not mow until the sod is firmly rooted. No more than ½ of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

EROSION & SEDIMENT CONTROL DETAILS

OF THE LANDS OF

SILO SQUARE, LLC

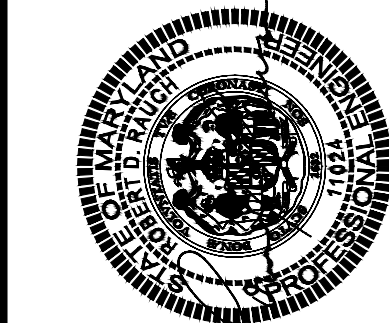
TAX MAP 0105, GRID 00EA, PARCEL 2226

EASTON, TALBOT COUNTY, MARYLAND

PREPARED FOR: SILO SQUARE, LLC

RAUCH
Engineering | Survey | Architecture | Environmental

Main Office: 106 N. Harrison St. - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410 770 9881 | Fax: 410 770 3887



Professional Certification.
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License No. 11024
Expiration Date: July 24, 2026

REVISIONS

DESCRIPTION

DATE

REV. #

DATE

SCALE:

DRAWN BY:

DESIGNED BY:

APPROVED BY:

SHEET NO.:

C-205.02

FOR REVIEW

DATE: 9/3/2024

SCALE: N/A

DRAWN BY: AF

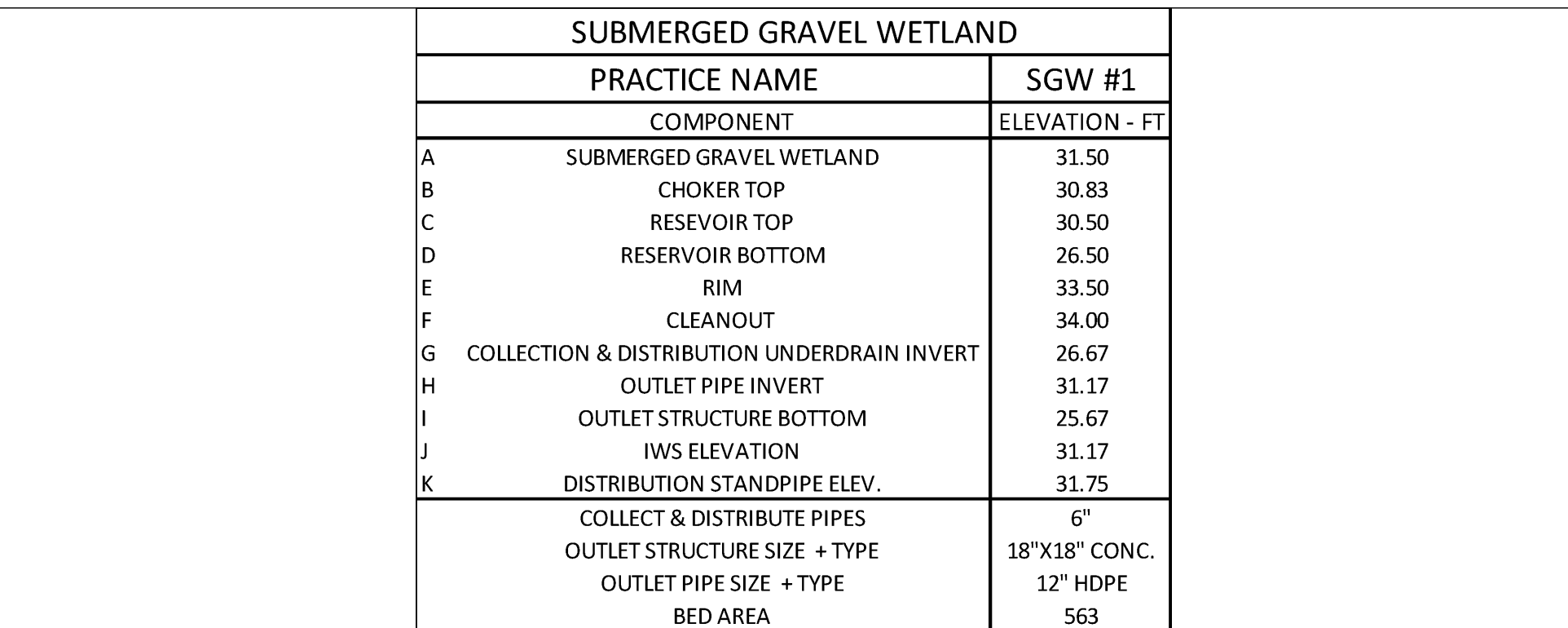
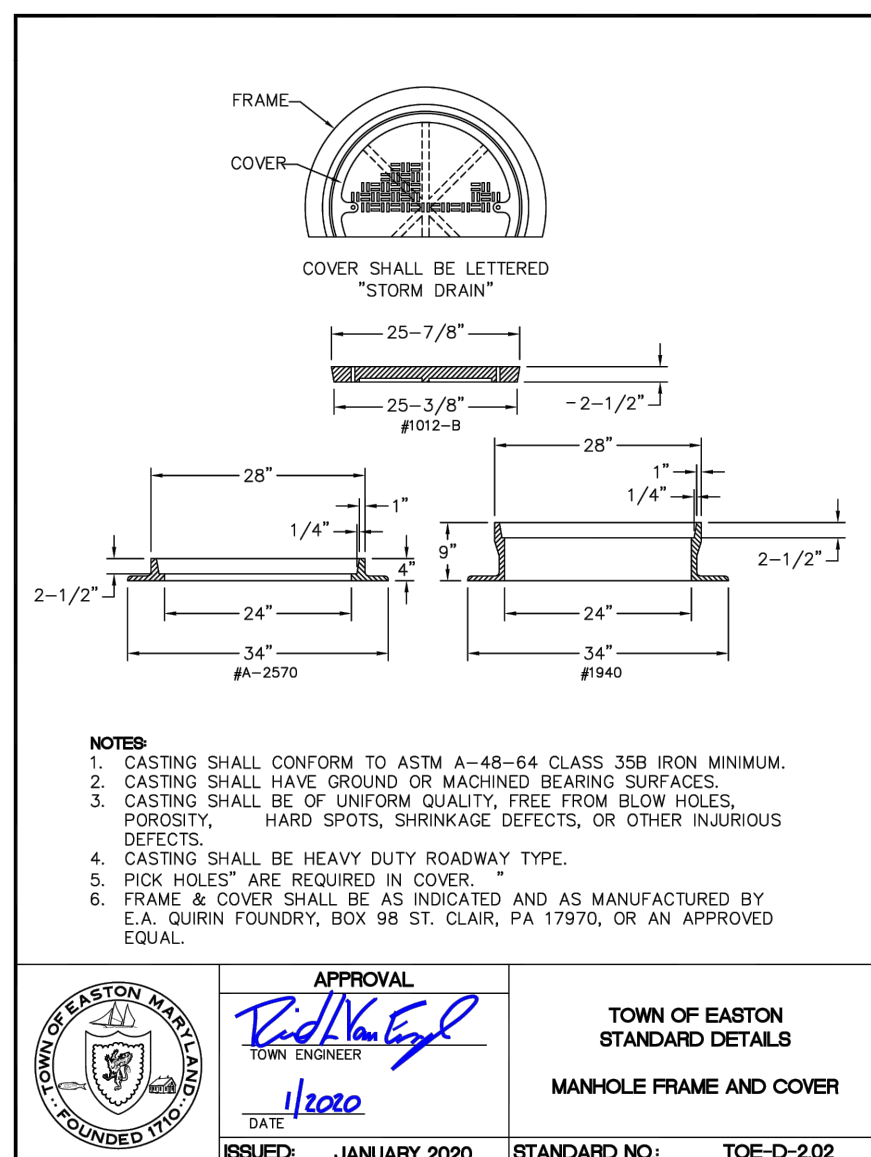
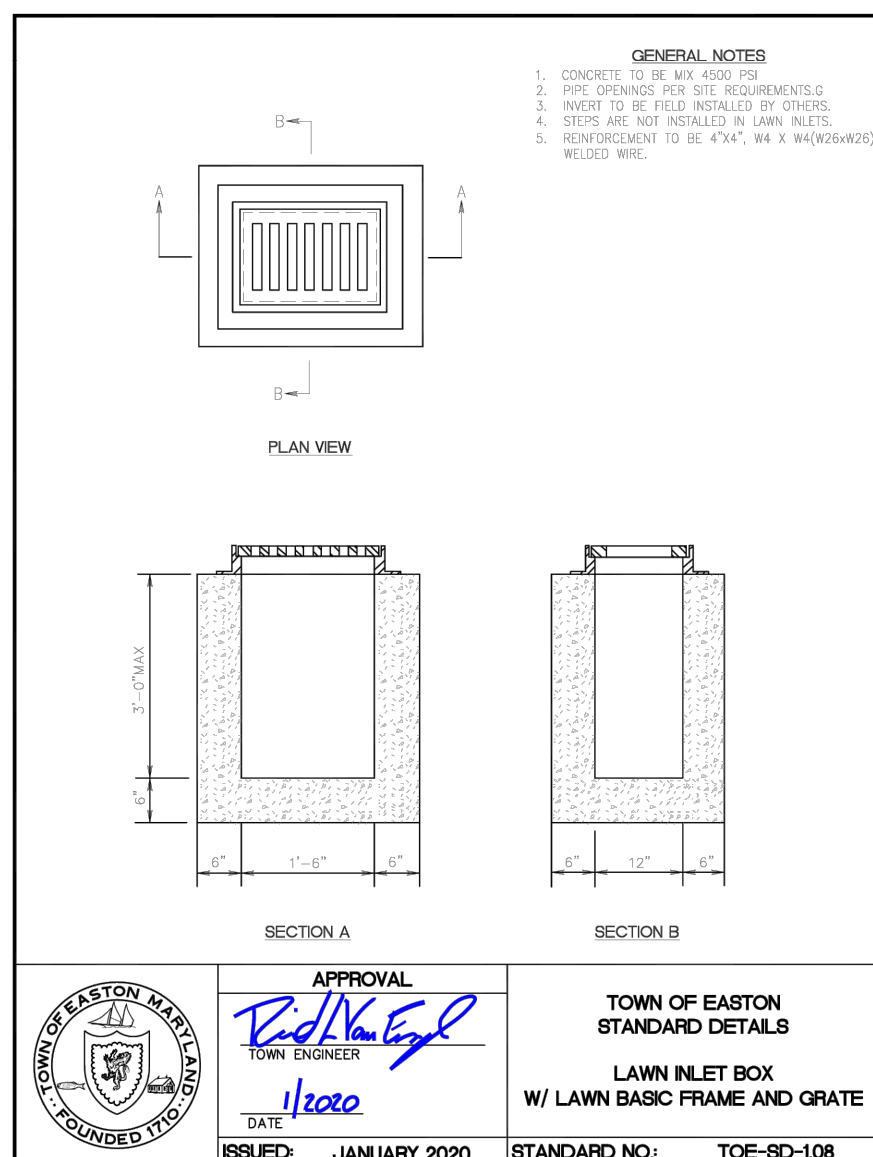
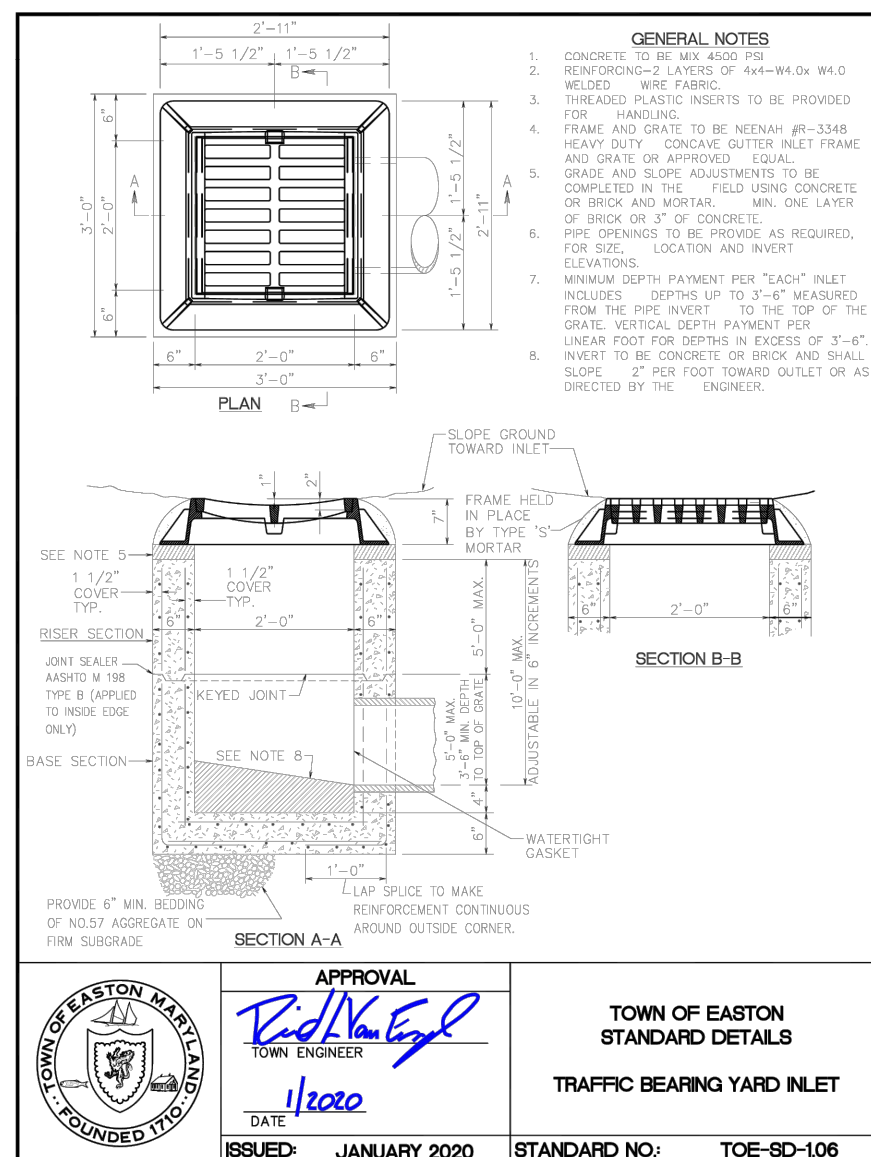
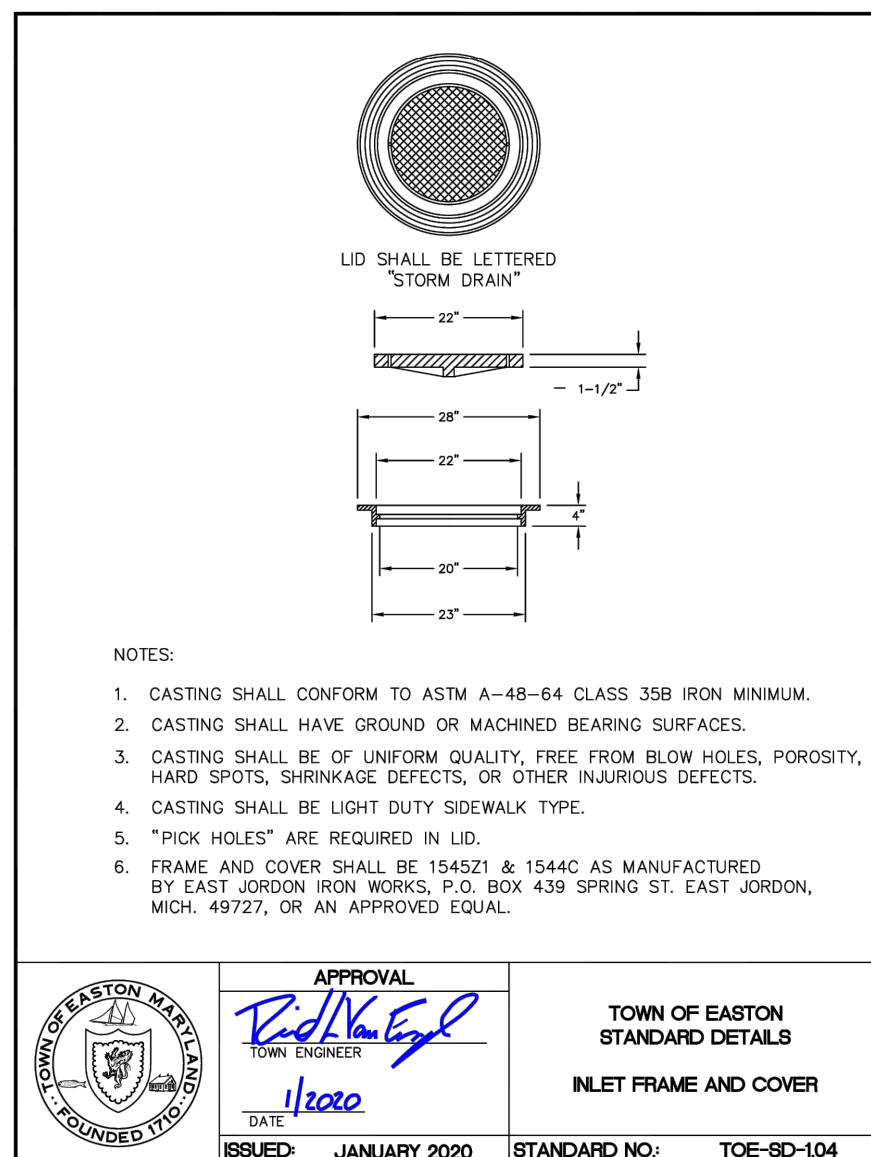
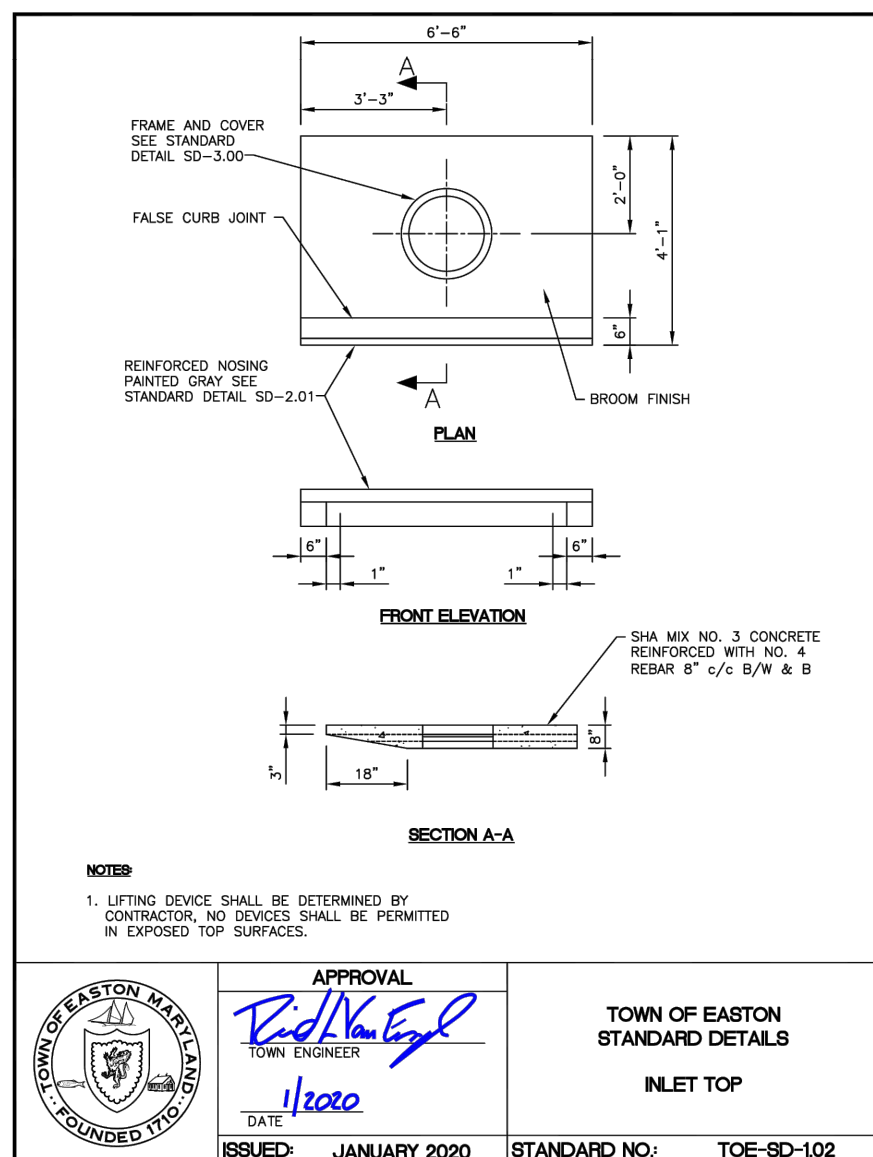
DESIGNED BY: BBF

APPROVED BY:

SHEET NO.:

C-205.02

FOR REVIEW



QUANTITY SUMMARY CHART				
STUDY POINT	STORM EVENT	2-YEAR {cfs}	10-YEAR {cfs}	100-YEAR {cfs}
STUDY POINT	EXISTING	8.60	15.15	23.03
	PROPOSED	2.71	4.89	20.04
CHANGE	CHANGE	5.89	10.26	2.99

SUBMERGED GRAVEL WETLAND		
PRACTICE NAME		SGW #1
COMPONENT		ELEVATION - FT
A	SUBMERGED GRAVEL WETLAND	31.50
B	CHOKER TOP	30.83
C	RESERVOIR TOP	30.50
D	RESERVOIR BOTTOM	26.50
E	RIM	33.50
F	CLEANOUT	34.00
G	COLLECTION & DISTRIBUTION UNDERDRAIN INVERT	26.67
H	OUTLET PIPE INVERT	31.17
I	OUTLET STRUCTURE BOTTOM	25.67
J	IWS ELEVATION	31.17
K	DISTRIBUTION STRANDPIPE ELEV.	31.75
COLLECT & DISTRIBUTE PIPES		6"
OUTLET STRUCTURE SIZE + TYPE		18"x18" CONC.
OUTLET PIPE SIZE + TYPE		12" HDPE
BED AREA		563

SITE AND GRADING FEATURES

- 1

3' SIDEWALK PER DETAIL ON C-305
- 2

5' SIDEWALK PER DETAIL ON C-305
- 3

CURB RAMP WITH DETECTABLE WARNING SURFACES PER DETAILS ON C-305
- 4

STANDARD CURB (TYPICAL) PER DETAIL ON C-305
- 5

ASPHALT PAVEMENT PER DETAIL ON C-305
- 6

PARKING STALL STRIPING (TYPICAL) PER DETAIL ON C-305
- 7

MONUMENT SIGN PER DETAIL ON C-305
- 8

(2) PARALLEL PARKING SPACES FOR MAILBOX ACCESS
- 9

STAMPED ASPHALT WALKING TRAIL **PER DETAIL ON C-305**
- 10

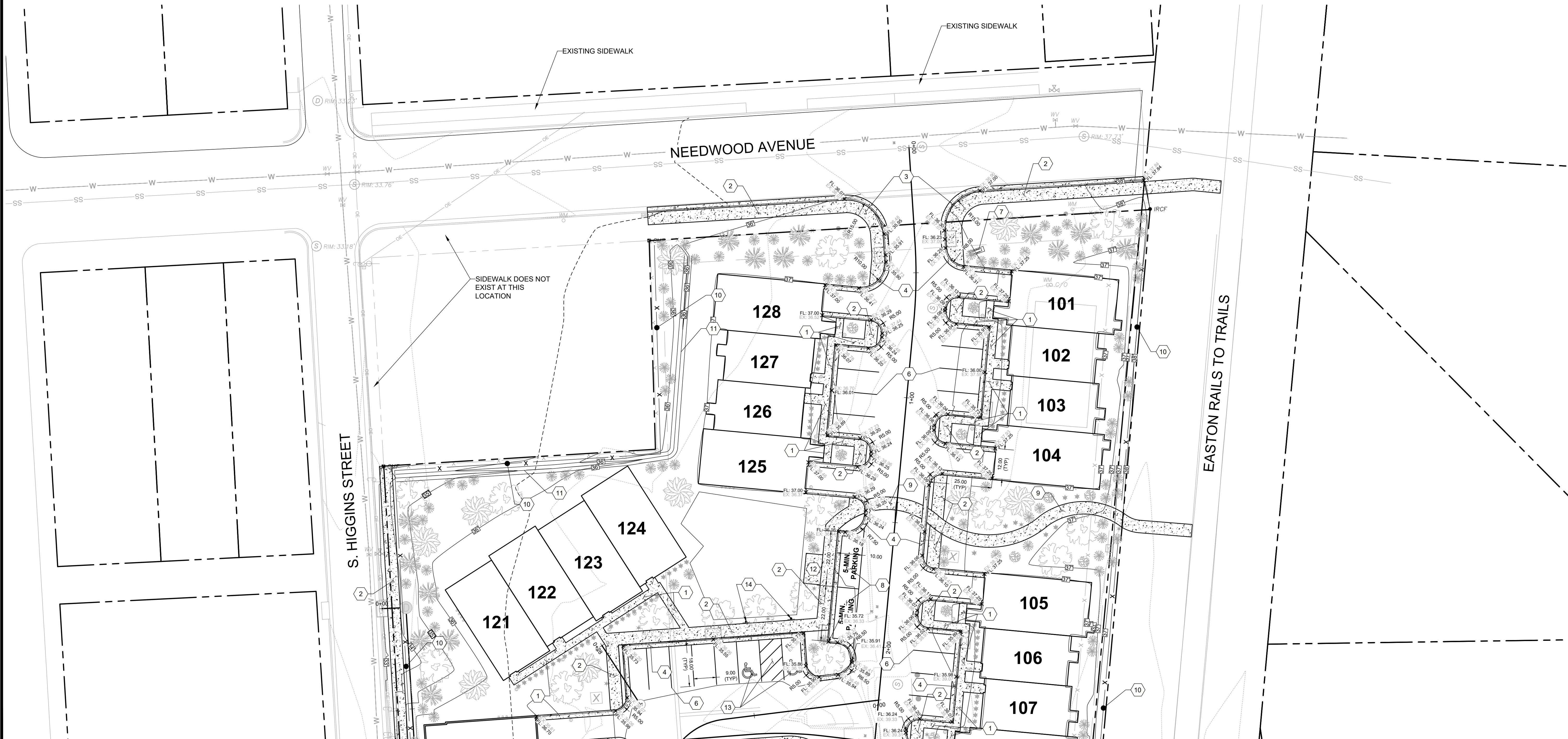
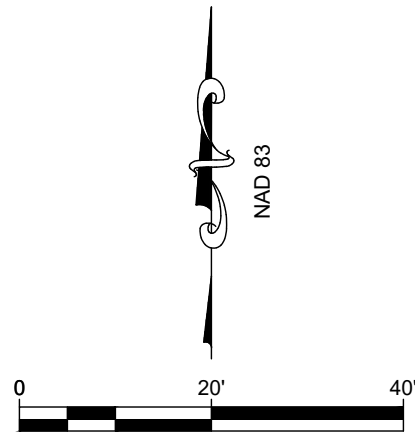
TWO RAIL FENCE TO MATCH EXISTING RAILS-TO-TRAILS FENCE. END FENCE 5' FROM EDGES OF TRAIL FOR RAILS-TO-TRAILS ACCESS. SEE ARCHITECTURAL PLANS FOR FURTHER DETAILS
- 11

VEGETATED V-BOTTOM SWALE.
- 12

CONCRETE PAD FOR CLUSTER MAILBOXES. SEE ARCHITECTURAL PLANS FOR FURTHER DETAILS
- 13

HANDICAP PARKING SYMBOL AND ACCESS AISLE. MARK PER PARKING STALL STRIPING DETAIL ON C-305
- 14

HANDICAP PARKING SIGN. SEE DETAIL ON C-305



CONTINUATION - SEE SHEET C-301.02

SITE AND GRADING PLAN

OF THE LANDS OF

SILO SQUARE, LLC

TAX MAP 0105, GRID 08EA, PARCEL 2226
EASTON, TALBOT COUNTY, MARYLAND
PREPARED FOR: SILO SQUARE, LLC

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Engineering | Survey | Architecture | Environmental

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License No. 11024
Expiration Date: July 24, 2026

REVISIONS

REV. #	DATE	DESCRIPTION



DATE: 9/3/2024
SCALE: 1" = 20'
DRAWN BY: AF
DESIGNED BY: BBF
APPROVED BY:

SHEET NO.:
C-301.01

FOR
REVIEW

SITE AND GRADING FEATURES

- 1

3' SIDEWALK PER DETAIL ON C-305
- 2

5' SIDEWALK PER DETAIL ON C-305
- 3

CURB RAMP WITH DETECTABLE WARNING SURFACES PER DETAILS ON C-305
- 4

STANDARD CURB (TYPICAL) PER DETAIL ON C-305
- 5

ASPHALT PAVEMENT PER DETAIL ON C-305
- 6

PARKING STALL STRIPING (TYPICAL) PER DETAIL ON C-305
- 7

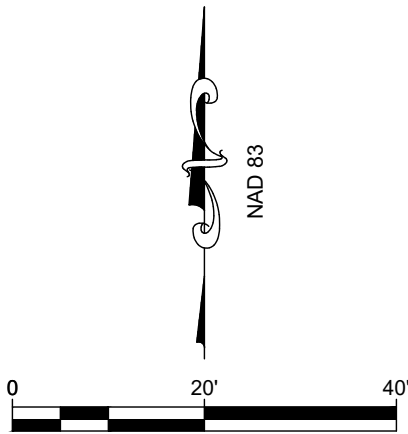
MONUMENT SIGN PER DETAIL ON C-305
- 8

6' TALL MASONRY SURROUND FOR TRASH AND RECYCLING RECEPTACLES PER DETAIL ON C-305
- 9

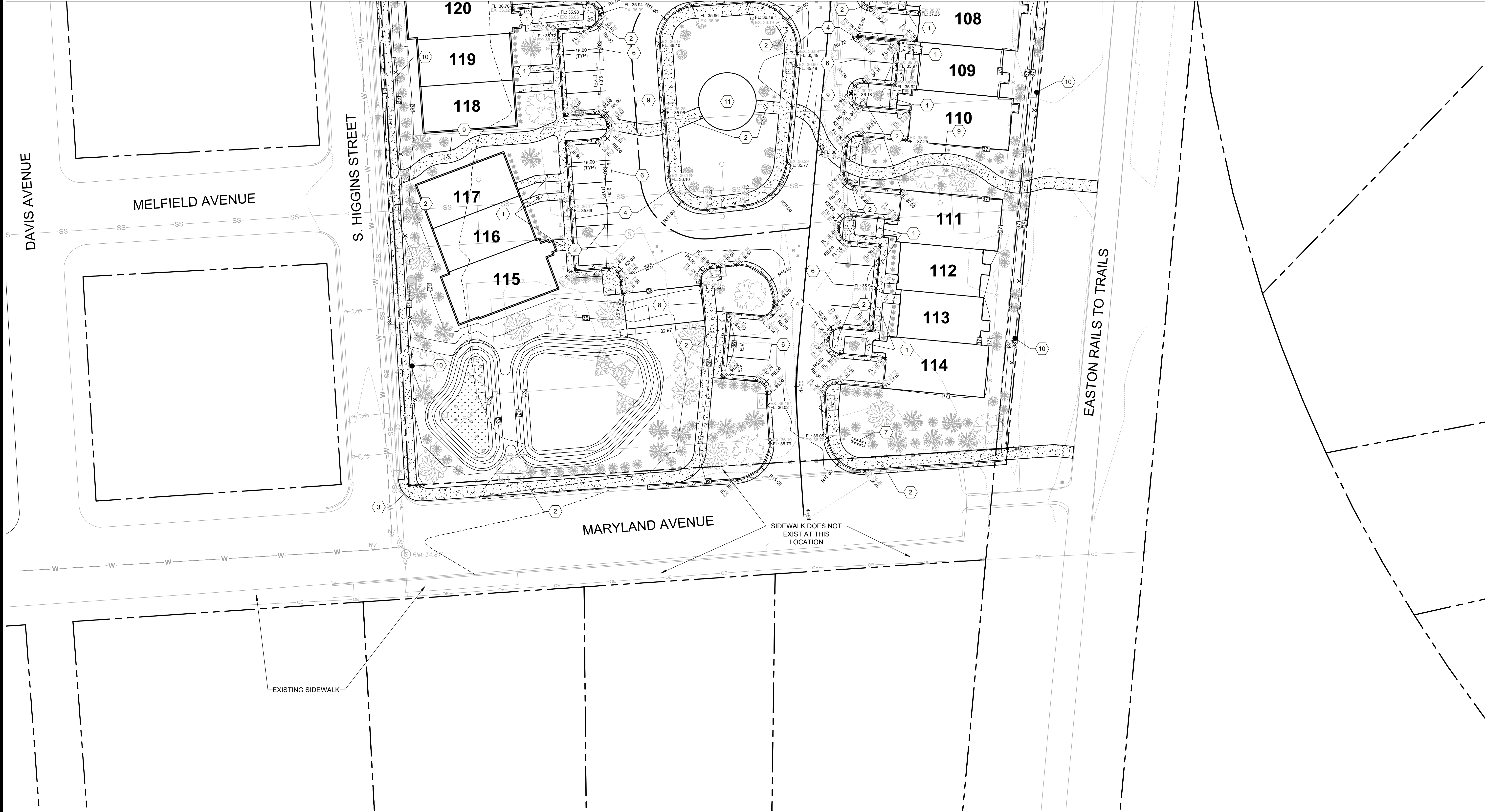
STAMPED ASPHALT WALKING TRAIL **PER DETAIL ON C-305**
- 10

TWO RAIL FENCE TO MATCH EXISTING RAILS-TO-TRAILS FENCE. END FENCE 5' FROM EDGES OF TRAIL FOR RAILS-TO-TRAILS ACCESS. SEE ARCHITECTURAL PLANS FOR FURTHER DETAILS
- 11

GAZEBO. SEE ARCHITECTURAL PLANS FOR FURTHER DETAILS



CONTINUATION - SEE SHEET C-301.01



SITE AND GRADING PLAN

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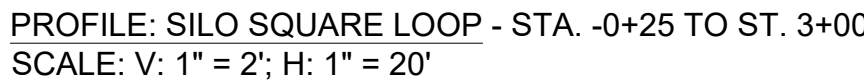
DATE



DATE: 9/3/2024
SCALE: 1" = 30'
DRAWN BY: AF
DESIGNED BY: BBF
APPROVED BY:

SHEET NO.:
C-301.02

FOR
REVIEW



[illegible]

RESTORATION IN UNPAVED AREAS

A. TOPSOIL, AND SEEDING

1. TOPSOIL SHALL BE PLACED IN AREAS WHERE GRASS HAS BEEN DISTURBED BY THE CONTRACTOR'S OPERATIONS. DURING TOPSOIL PLACEMENT, THE FOLLOWING MINIMUM TOPSOIL SALVAGED AND STOCKPILED DURING TRUCKING AND STOCKPILING RESTORATION MAY BE USED FOR THIS PURPOSE, WHEN TOP SOILING. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL MEET THE PROVISIONS OF THE MSA STANDARDS, SECTION 702, 703, 704, 705, 706, AND 920. IF SPECIFIED, THE CONTRACTOR SHALL HAVE THE TOPSOIL TESTED BY A STATE CERTIFIED LABORATORY AND SHALL SUBMIT CERTIFICATION THAT TOPSOIL MEETS THE SPECIFIED STANDARD. TOPSOIL SHALL BE CLEAN, FREE OF ROOTS, STONES AND OTHER DEBRIS.

2. THE TOPSOIL DURING FURNISHING AND PLACING SHALL BE SOIL SUPPLEMENTS ON TOP SOILED AREAS AND IN ANY OTHER LOCATION, AS DIRECTED BY THE ENGINEER. WHEN SEEDING, ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL MEET THE PROVISIONS OF MSA STANDARDS, SECTION 702 AND 920.

3. FERTILIZER SHALL BE A RECOGNIZED COMMERCIAL FERTILIZER CONFORMING TO MSA STANDARDS, SECTION 920.

4. MULCH SHALL BE APPLIED TO DISTURBED AREAS WITH SLOPES LESS THAN 3 TO 1. MULCH FOR THESE AREAS SHALL CONSIST OF STRAW MULCH.

5. MULCH SHALL BE APPLIED TO SLOPES OF 3 TO 1. MULCHING OF AREAS WHERE SLOPES EQUAL OR EXCEED 3 TO 1 SHALL UTILIZE CURBED OR DRAIN.

APPROVAL

[Signature]
TOM ENGINEER

DATE *1/16/20*

TOWN OF SEASIDE
STANDARD DETAILS

RESTORATION NOTES

ISSUED: JANUARY 2020

STANDARD NO: TCE-R-5.05

1. ALL CONCRETE USED FOR CURB AND GUTTER SHALL BE 3/4" MAX NO. 7.

2. CURB AND GUTTER SHALL HAVE CONTRACTION JOINTS EVERY 15'-0" AND EXPANSION JOINTS EVERY 45'-0". EXTRUDED CONCRETE AND GUTTER SHALL HAVE CONTRACTION JOINTS EVERY 10'-0". AND EXPANSION JOINTS EVERY 100'-0".

3. DEPRESSION CURB AND GUTTER SHALL BE UTILIZED AT HANDICAPPED RAMPS WHEN TRANSITIONING FROM STANDARD CURB AND GUTTER.

4. MAXIMUM GUTTER AND SLOPE ON CURB RETURNS SHALL BE 2% WHERE HANDICAPPED RAMPS ARE REQUIRED.

APPROVAL

Paul H. Engler
TOWN ENGINEER

DATE: 1/10/20

TOWN OF EASTON
STANDARD DETAILS
STANDARD CURB AND GUTTER

ISSUED: JANUARY 2020 STANDARD NO: TOE-R-6.01

25.1 (30)

1" R (1/8" RAT HANDCAP RAMPS)

1"

1/4" R

8"

1"

18"

6"

24"

3"

1"

NOTES:

1. ALL CONCRETE USED FOR CURB AND GUTTER SHALL BE SHA MIX NO. 7.
2. CURB AND GUTTER SHALL HAVE CONTRACTION JOINTS EVERY 10'-0", AND EXPANSION JOINTS EVERY 40'-0". EXTRUDED CONCRETE CURB AND GUTTER SHALL HAVE CONTRACTION JOINTS EVERY 10'-0", AND EXPANSION JOINTS EVERY 100'-0".
3. MAXIMUM GUTTER SLOPE ON CURB RETURNING SHALL BE .2% WHERE HANDICAPPED RAMPS ARE REQUIRED.

APPROVAL

TOWN ENGINEER

1200

DATE

ISSUED: JANUARY 2020

STANDARD NO:

TOWN OF EASTON
STANDARD DETAILS

STANDARD DEPRESSED
CURB AND GUTTER
FOR SIDEWALK RAMPS

TOE-R-6.03

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Page 137 of 445

UTILITY FEATURES

- 1

6" SEWER LATERAL AND CLEANOUT (TYPICAL) PER
DETAIL ON C-405
- 2

X" WATER LATERAL AND METER PIT (TYPICAL) PER
DETAIL ON C-405
- 3

QTY-X" CONDUITS FOR ELECTRICAL AND
COMMUNICATIONS PRIMARY UTILITIES. SEE UTILITY
TRENCH DETAIL ON C-405
- 4

QTY-X" CONDUIT FOR STREETLIGHT. SEE UTILITY
TRENCH DETAIL ON C-405
- 5

QTY-X" CONDUITS FOR ELECTRICAL AND
COMMUNICATIONS SECONDARY UTILITIES TO
RESIDENCE. SEE UTILITY TRENCH DETAIL ON C-405
- 6

CONNECT NEW WATER MAIN TO EXISTING MAIN IN
MARYLAND AVENUE
- 7

6"x6" HYDRANT TEE
- 8

6"x6" TEE
- 9

6" 11.25-DEG BEND
- 10

6" GATE VALVE
- 11

6"x4" REDUCER
- 12

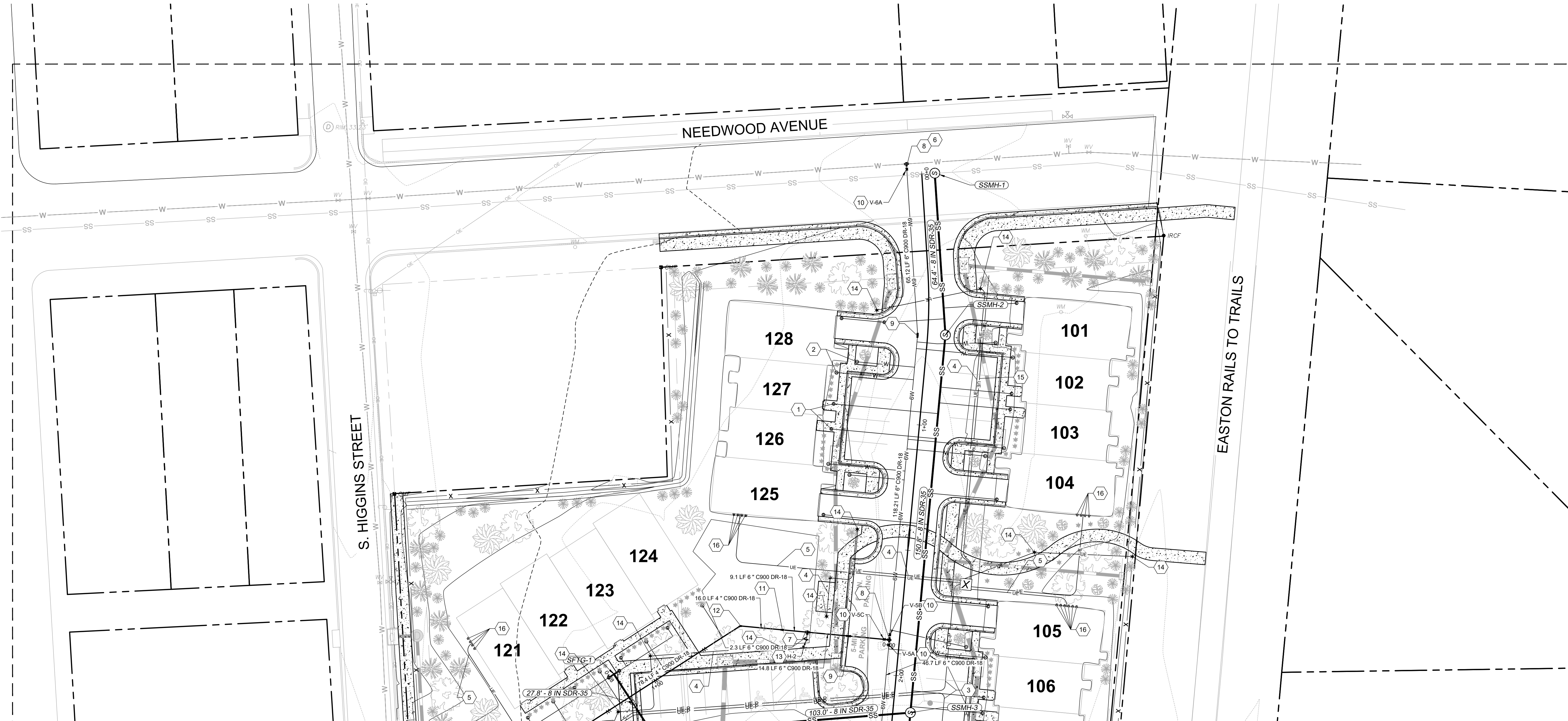
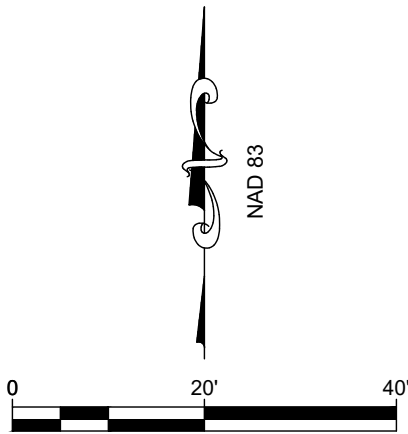
4" 45-DEG BEND
- 13

FIRE HYDRANT - SEE DETAIL SHEET C-405
- 14

STYLE POLE MOUNTED LAMP PER DETAIL ON C-405
- 15

QTY-X" CONDUIT FOR SIGN ILLUMINATION. SEE
UTILITY TRENCH DETAIL ON C-405
- 16

ELECTRICAL METER BOX CLUSTER - 4 OR 6 METERS
DEPENDING ON STRUCTURE REQUIREMENTS.



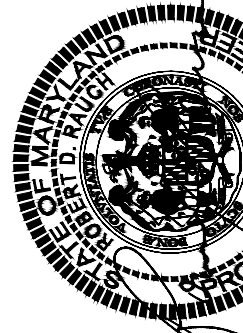
CONTINUATION - SEE SHEET C-401.02

UTILITY PLAN

OF THE LANDS OF
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TAX MAP 0105, GRID 08EA, PARCEL 2226
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DATE: 9/3/2024
SCALE: 1" = 20'
DRAWN BY: AF
DESIGNED BY: BBF
APPROVED BY:

SHEET NO.:
C-401.01

FOR
REVIEW

UTILITY FEATURES

- 1

6" SEWER LATERAL AND CLEANOUT (TYPICAL) PER
DETAIL ON C-405
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X" WATER LATERAL AND METER PIT (TYPICAL) PER
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QTY-X" CONDUITS FOR ELECTRICAL AND
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TRENCH DETAIL ON C-405
- 4

QTY-X" CONDUIT FOR STREETLIGHT. SEE UTILITY
TRENCH DETAIL ON C-405
- 5

QTY-X" CONDUIT FOR ELECTRIC VEHICLE CHARGING
STATION(S). SEE UTILITY TRENCH DETAIL ON C-405
- 6

QTY-X" CONDUITS FOR ELECTRICAL AND
COMMUNICATIONS SECONDARY UTILITIES TO
RESIDENCE. SEE UTILITY TRENCH DETAIL ON C-405
- 7

CONNECT NEW WATER MAIN TO EXISTING MAIN IN
SOUTH HIGGINS STREET
- 8

8"x6" TEE
- 9

6"x6" TEE
- 10

6" 11.25-DEG BEND
- 11

6" 22.5-DEG BEND
- 12

6" 45-DEG BEND
- 13

6" 90-DEG BEND
- 14

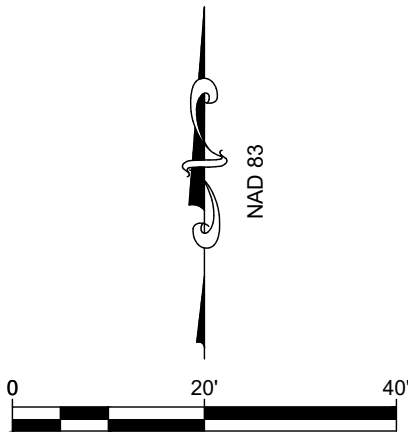
6" GATE VALVE
- 15

FIRE HYDRANT - SEE DETAIL SHEET C-405
- 16

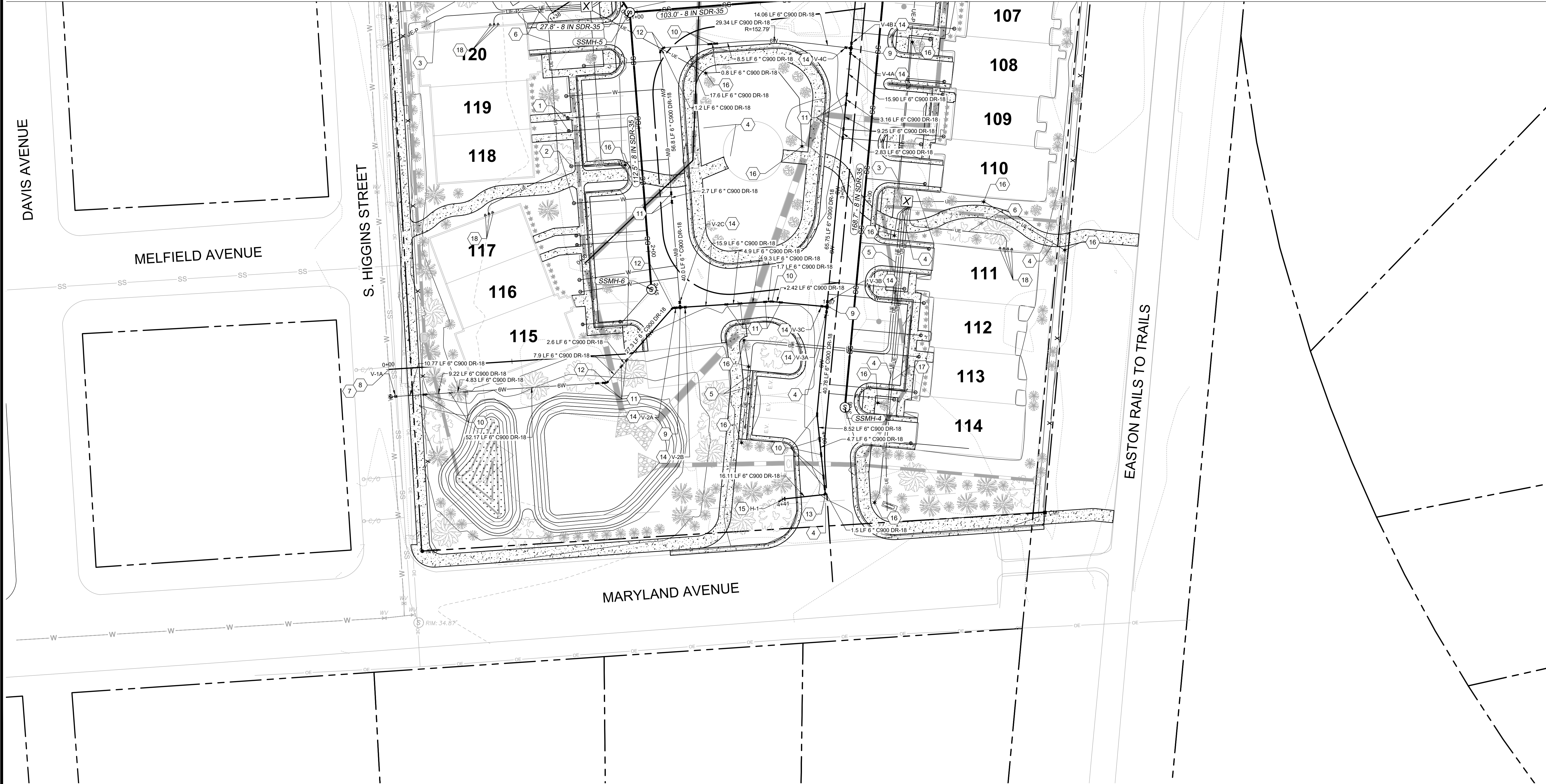
STYLE POLE MOUNTED LAMP PER DETAIL ON C-405
- 17

QTY-X" CONDUIT FOR SIGN ILLUMINATION. SEE
UTILITY TRENCH DETAIL ON C-405
- 18

ELECTRICAL METER BOX CLUSTER - 4 OR 6 METERS
DEPENDING ON STRUCTURE REQUIREMENTS.



CONTINUATION - SEE SHEET C-401.01



UTILITY PLAN

OF THE LANDS OF
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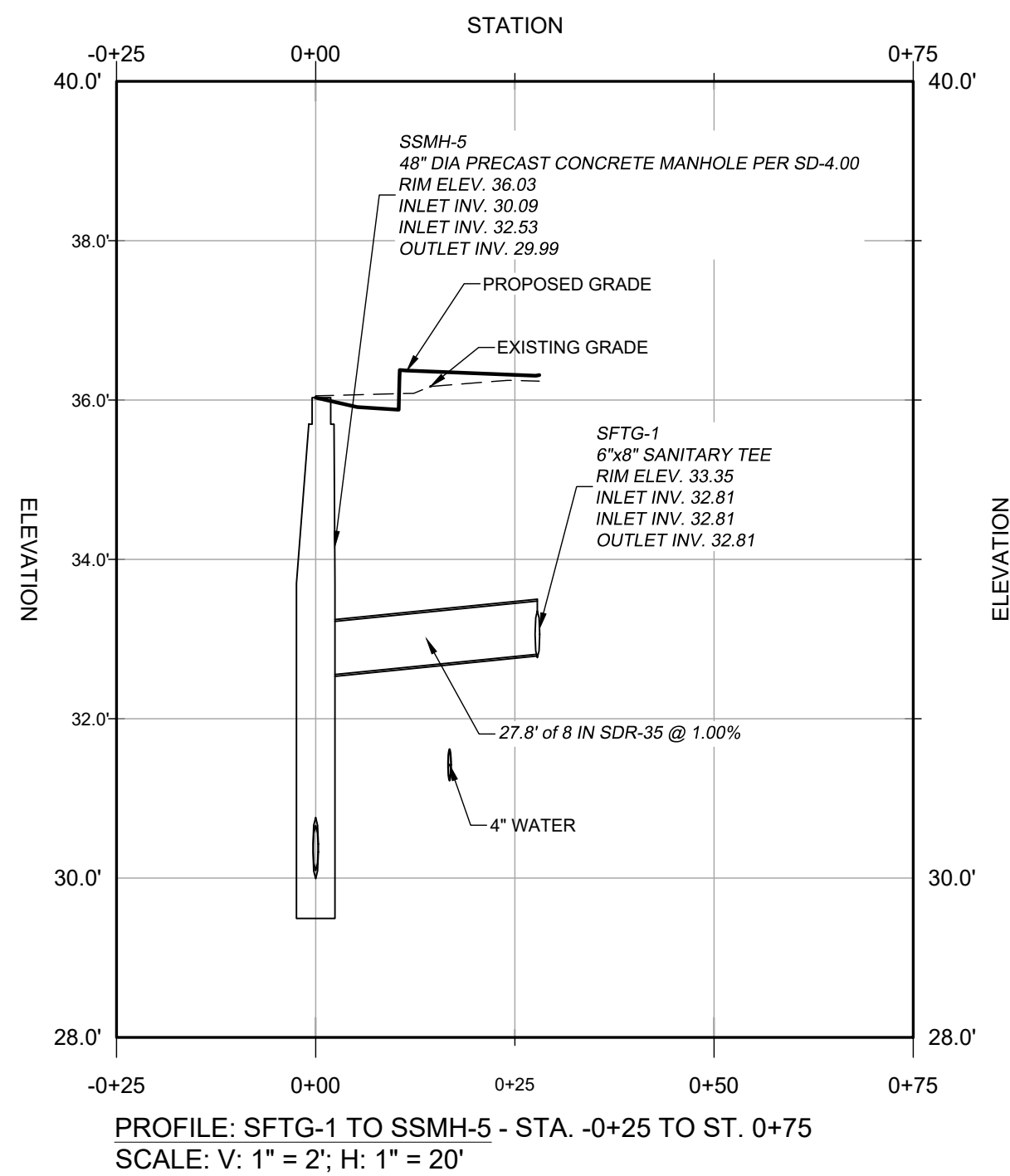
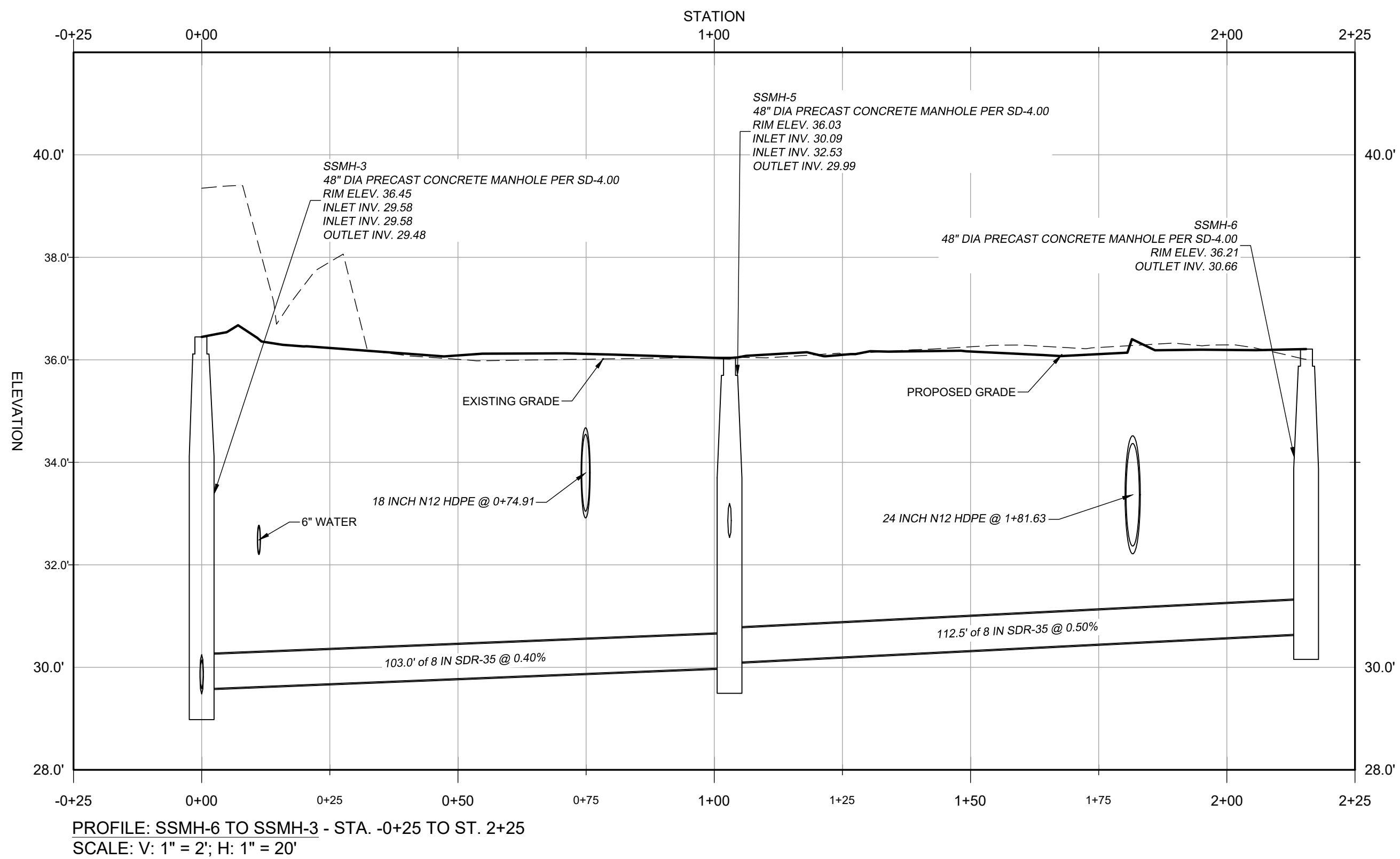
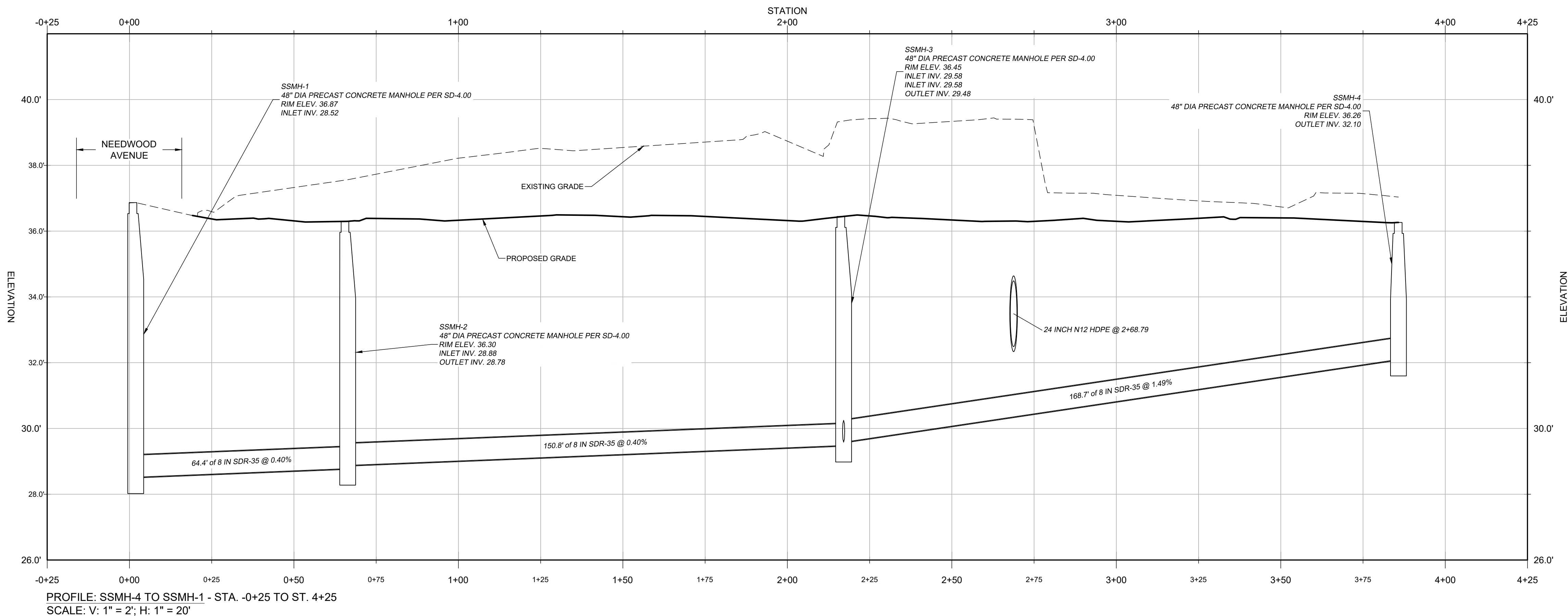
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REVIEW



PIPE SCHEDULE SILO SQUARE SANITARY SEWER					
PIPE NAME	SIZE AND MATERIAL	LENGTH	SLOPE	UPSTREAM STRUCTURE AND INVERT	DOWNSTREAM STRUCTURE AND INVERT
SS-3	8 IN SDR-35	168.67'	1.49%	SSMH-4 INV. 32.10'	SSMH-3 INV. 29.58'
SS-2	8 IN SDR-35	150.76'	0.40%	SSMH-3 INV. 29.48'	SSMH-2 INV. 28.88'
SS-1	8 IN SDR-35	64.44'	0.40%	SSMH-2 INV. 28.78'	SSMH-1 INV. 28.52'
SS-5	8 IN SDR-35	112.48'	0.50%	SSMH-6 INV. 30.66'	SSMH-5 INV. 30.09'
SS-4	8 IN SDR-35	102.99'	0.40%	SSMH-5 INV. 29.99'	SSMH-3 INV. 29.58'
SS-8	6 IN SDR-35	2.50'	1.00%	SCO-1 INV. 32.84'	SFTG-1 INV. 32.81'
SS-7	6 IN SDR-35	2.50'	1.00%	SCO-2 INV. 32.84'	SFTG-1 INV. 32.81'
SS-6	8 IN SDR-35	27.83'	1.00%	SFTG-1 INV. 32.81'	SSMH-5 INV. 32.53'

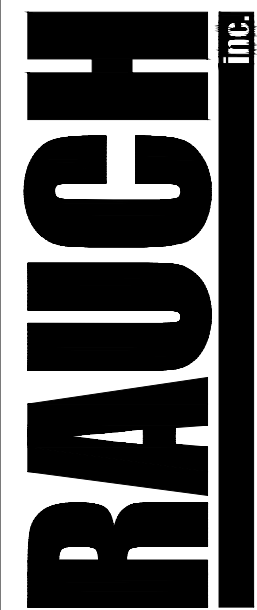
STRUCTURE SCHEDULE SILO SQUARE SANITARY SEWER				
STRUCTURE NAME	LOCATION	STRUCTURE TYPE AND SIZE	CONNECTED PIPES	RIM ELEVATION
SCO-1	N402414.64, E1577684.75	6" SANITARY SEWER CLEANOUT	SS-8 INV OUT = 32.835	36.34
SCO-2	N402417.34, E1577688.95	6" SANITARY SEWER CLEANOUT	SS-7 INV OUT = 32.835	36.31
SFTG-1	N402416.01, E1577686.84	6"x8" SANITARY TEE	SS-8 INV IN = 32.810 SS-7 INV IN = 32.810 SS-6 INV OUT = 32.810	33.35
SSMH-1	N402615.13, E1577814.40	48" DIA PRECAST CONCRETE MANHOLE PER SD-4.00	SS-1 INV IN = 28.520	36.87
SSMH-2	N402550.83, E1577818.64	48" DIA PRECAST CONCRETE MANHOLE PER SD-4.00	SS-2 INV IN = 28.878 SS-1 INV OUT = 28.778	36.30
SSMH-3	N402400.72, E1577804.71	48" DIA PRECAST CONCRETE MANHOLE PER SD-4.00	SS-3 INV IN = 29.581 SS-4 INV IN = 29.581 SS-2 INV OUT = 29.481	36.45
SSMH-4	N402232.78, E1577789.10	48" DIA PRECAST CONCRETE MANHOLE PER SD-4.00	SS-3 INV OUT = 32.097	36.26
SSMH-5	N402392.69, E1577702.03	48" DIA PRECAST CONCRETE MANHOLE PER SD-4.00	SS-5 INV IN = 30.093 SS-6 INV IN = 32.532 SS-4 INV OUT = 29.993	36.03
SSMH-6	N402280.56, E1577710.80	48" DIA PRECAST CONCRETE MANHOLE PER SD-4.00	SS-5 INV OUT = 30.655	36.21

UTILITY PROFILES

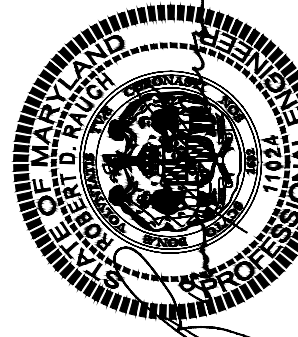
OF THE LANDS OF

SILO SQUARE, LLC

TAX MAP 0105, GRID 08EA, PARCEL 2226
EASTON, TALBOT COUNTY, MARYLAND
PREPARED FOR: SILO SQUARE, LLC



Main Office: 106 N Harrison St - Easton, MD 21601
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Phone: 410 770 8081 | Fax: 410 770 3887



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APPROVED BY:

SHEET NO.: C-403.01

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UTILITY PROFILES

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SILO SQUARE, LLC

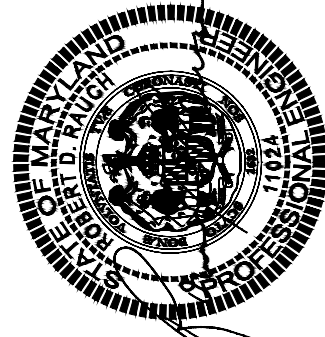
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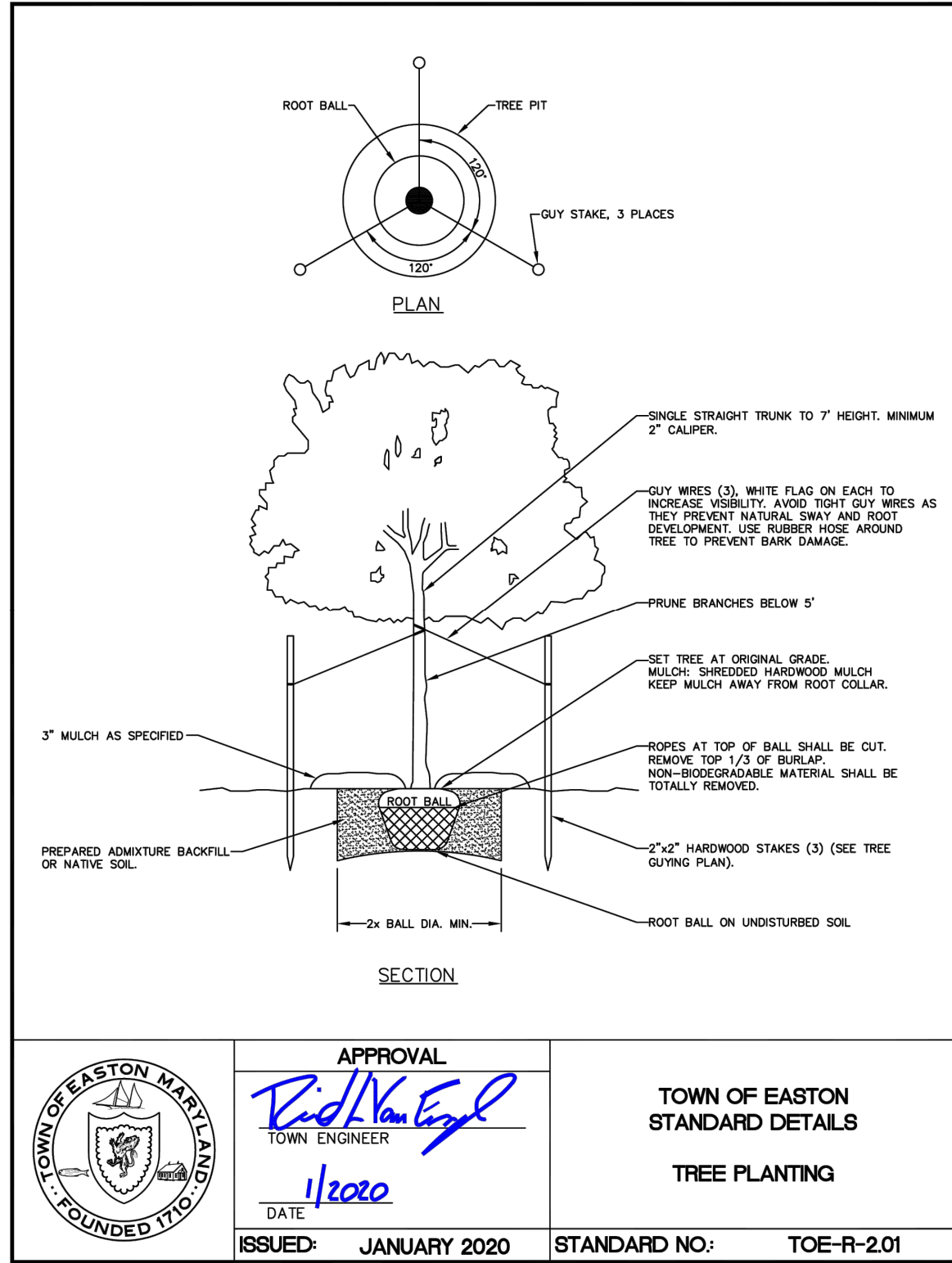
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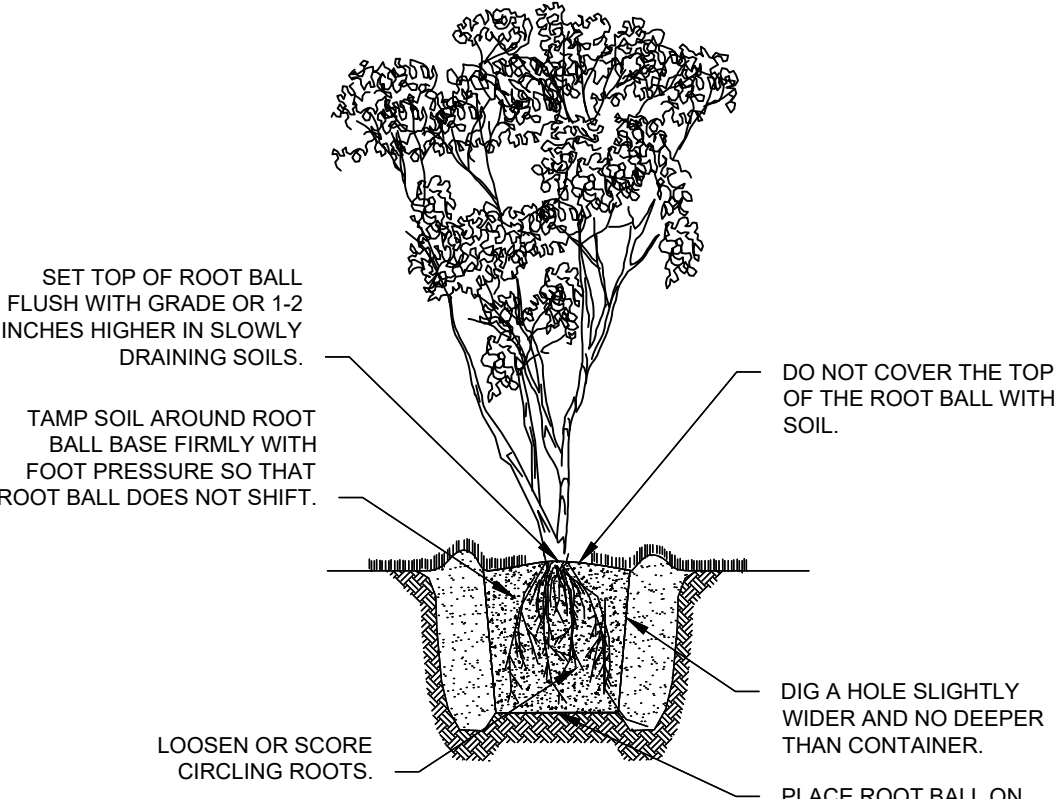
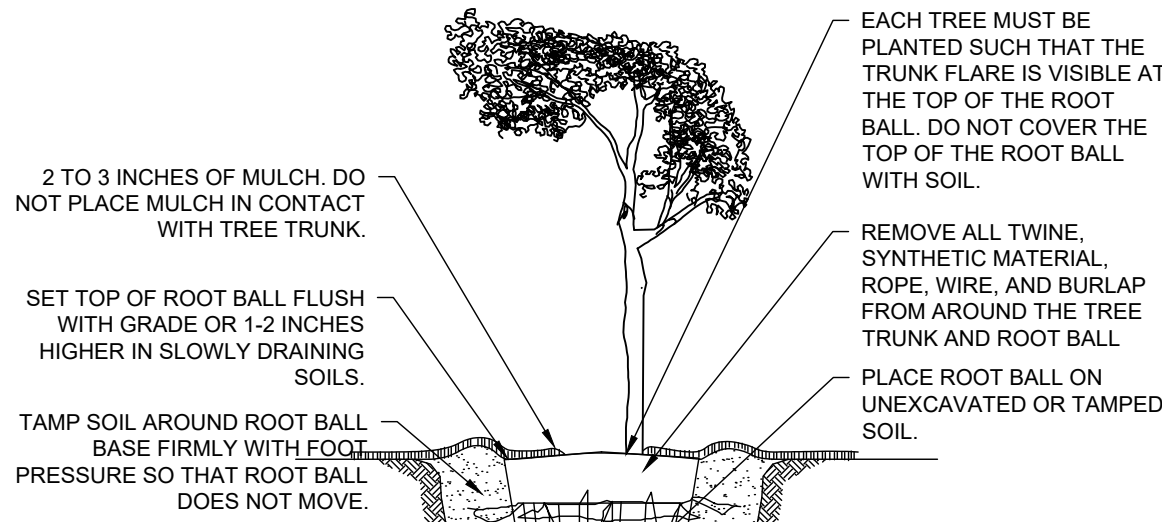
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**FOR
REVIEW**



STAKE TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT.

PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES ONLY UPON THE APPROVAL OF LANDSCAPE ARCHITECT.

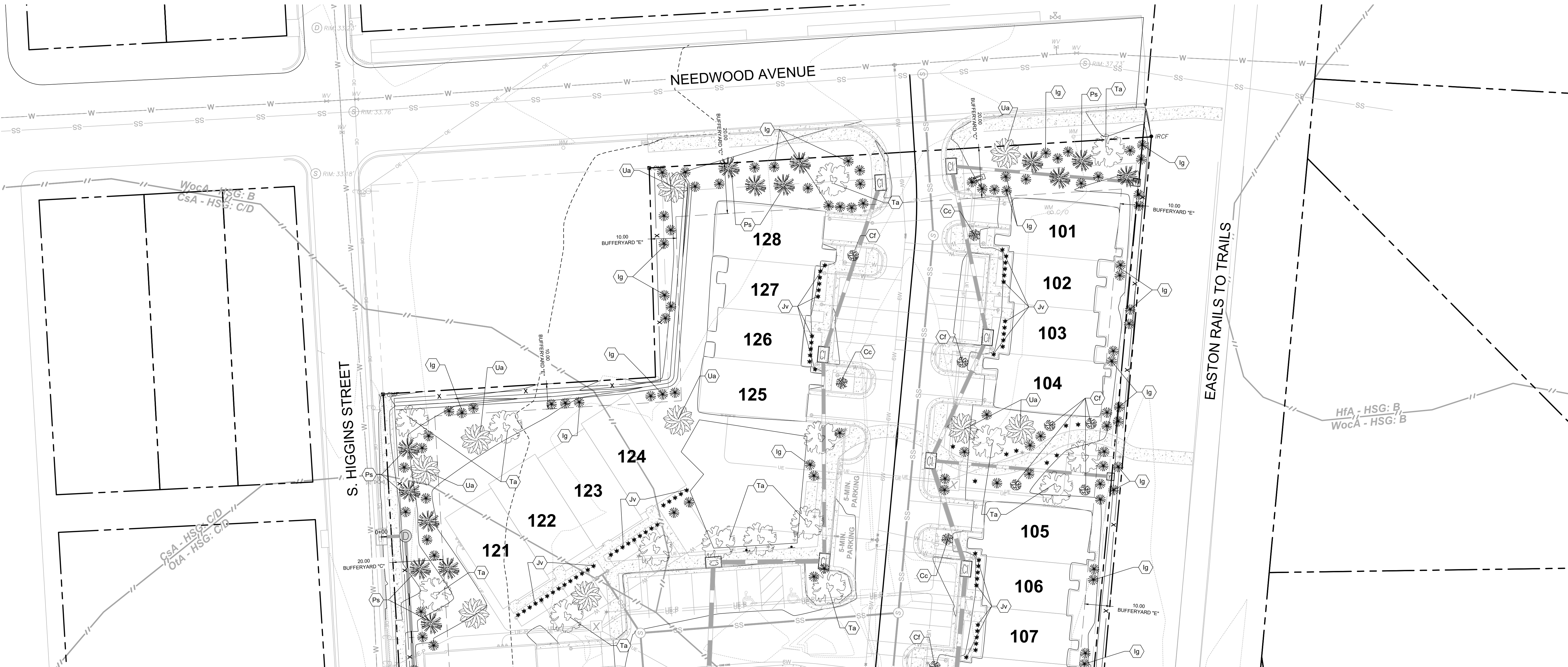
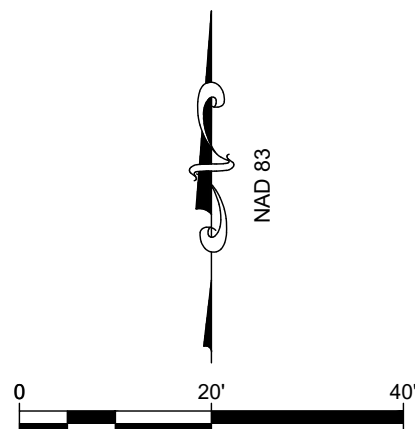


LANDSCAPE FEATURES

- Cf SMALL TREE - DOGWOOD, AMERICAN FLOWERING - CORNUS FLORIDA - QTY 15
- Cc SMALL TREE - REDBUD, EASTERN - CERCIS CANADENSIS - QTY 17
- Ta SHADE TREE - LINDEN, AMERICAN - TILIA AMERICANA - QTY 24
- Ua SHADE TREE - ELM, AMERICAN - ULMUS AMERICANA - QTY 18
- Ps EVERGREEN TREE - PINE, EASTERN WHITE - PINUS STROBUS - QTY 32
- Ig EVERGREEN SHRUB - INKBERY HOLLY - ILEX GLABRA - QTY 181
- Jv EVERGREEN SHRUB - JUNIPER 'GREY OWL' - JUNIPERUS VIRGINIANA - QTY 116

NOTES:

1. CONTRACTOR MAY PROVIDE ALTERNATE "MARYLAND NATIVE" SPECIES FOR PLANTING.



CONTINUATION - SEE SHEET C-501.02

LANDSCAPE PLAN AND DETAILS

OF THE LANDS OF

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TAX MAP 0105, GRID 08EA, PARCEL 2226

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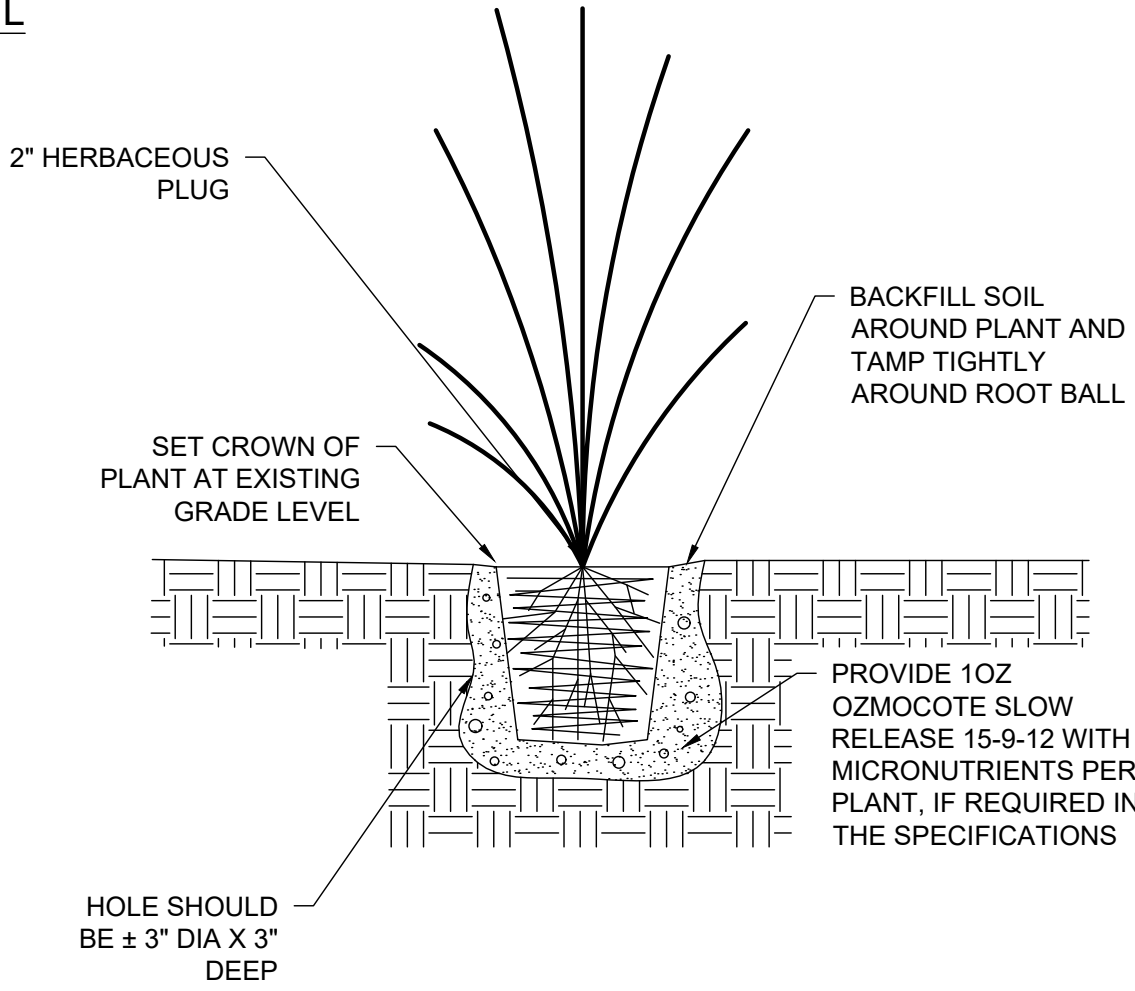
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FOR REVIEW

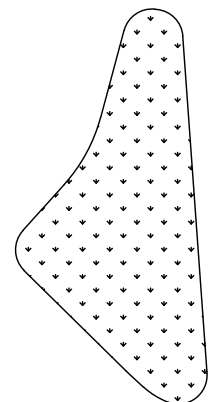
LANDSCAPE NOTES:

- LANDSCAPE INSTALLER SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK. INSTALLER SHALL ENSURE THAT FINAL GRADES HAVE BEEN ESTABLISHED AD THE SITE IS READY FOR LANDSCAPE INSTALLATION.
- LANDSCAPE INSTALLER SHALL MAINTAIN THE LANDSCAPE IMPROVEMENT AREAS IN A CLEAN CONDITION, REMOVING DEBRIS DAILY AND AT THE COMPLETION OF THE INSTALLATION.
- INSTALLER SHALL LAYOUT ALL BEDS AND POSITION PLANTS PER THE PLANS. ADJUST AS REQUIRED FOR FIELD CONDITIONS. REPORT SIGNIFICANT ADJUSTMENTS TO THE OWNER FOR APPROVAL PRIOR TO PLANT INSTALLATION. ALL BED AREAS SHALL BE SPRAYED WITH HERBICIDE AS NEEDED TO KILL AND/OR REMOVE ALL WEED OR GRASS VEGETATION.
- EXCEPT FOR TREE SPADE INSTALLATIONS, ALL TREE PITS SHALL BE EXCAVATED TO A DEPTH SO THAT THE ROOT BALL WILL REST ON SOLID SOIL AT THE PROPER HEIGHT. STREET TREES PLANTING PITS SHALL BE EXCAVATED AND WORED IN A RECTANGULAR FORM WITH THE SMALL DIMENSION TWICE THE DIAMETER OF THE ROOT BALL AND LARGE DIMENSION AT LEAST THREE (3) TIMES THE DIAMETER OF THE ROOT BALL. OPEN AREA TREE PITS SHALL BE EXCAVATED TO A MINIMUM DIMENSION TWICE THE ROOTBALL WIDTH. TREES PLANTED ON SLOPES OR SIDE SWALES SHALL BE INSTALLED AT A HEIGHT RELATING TO THE UPHILL SIDE OF THE PIT, AND MOUNDED WITH SOIL AROUND THE LOWER SIDE. ALL SIDES AND BOTTOM OF TREE PLANTING PITS SHALL BE SCARIFIED OR LOOSENED TO PERMIT ROOT GROWTH. EXCAVATED SOILS THAT HAVE BEEN PREVIOUSLY UNDISTURBED SHALL BE LOOSENED AND UTILIZED FOR BACKFILL. COMPACTED SOILS THAT CANNOT BE RESTORED TO A REASONABLE PLANTING SOIL SHALL BE REMOVED AND REPLACED WITH FRIABLE NATIVE SOILS FROM THE REGION.
- ALL SHRUB PLANTING PITS, LANDSCAPE BEDS AND PLANTING MASS AREAS SHALL BE WORKED TO A DEPTH OF TWELVE INCHES (12") (OR RAISED SLIGHTLY TO ACHIEVE A TWELVE INCH (12") FRIABLE SOIL DEPTH). SHRUB PLANTING AREAS SHALL BE WORKED TO TWELVE INCH (12") MINIMUM OUTSIDE THE ROOTBALL.
- ALL LANDSCAPE BEDS SHALL BE "V" EDGED AND MULCH WITH MINIMUM THREE INCH (3") DOUBLE SHREDDED HARDWOOD BARK MULCH, OR APPROVED EQUAL. MULCH TO FENCE LINES OR BACK OF CURBS WHERE APPROPRIATE TO ELIMINATE NARROW GRASS AREAS. AVOID MULCH PILED AGAINST TREE TRUNKS, ETC.
- ALL TREES TO BE STAKED AND GUYED WITH HARDWOOD STAKES, MINIMUM OF TWO (2) FIVE FEET (5') LONG, OR OTHER APPROVED GUYING SYSTEMS. STAKES SHALL BE DRIVEN INTO STABLE SOILS. PROVIDE WIRE GUYS WITH RUBBER PROTECTANT OR OTHER APPROVED INDUSTRY PRACTICE.
- LANDSCAPE INSTALLER SHALL MAINTAIN ALL PLANT MATERIALS THROUGH THE COMPLETION OF THE LANDSCAPE INSTALLATION, AND THEN AS REQUIRED BY THE OWNER.
- AT THE COMPLETION OF THE LANDSCAPE INSTALLATION (OR BY PHASED COMPLETION IF PROVIDED FOR ON THE PLAN), THE OWNER, OR HIS DESIGNATED REPRESENTATIVE SHALL REQUEST AN INSPECTION BY TOWN OF EASTON.

2" PLUG PLANTING
DETAIL



SWM MAINTENANCE & INSPECTION SCHEDULE	
TASKS	FREQUENCY
SPOT WEEDING, EROSION REPAIR, TRASH REMOVAL	TWICE DURING GROWING SEASON
ADD REINFORCEMENT PLANTING TO MAINTAIN DESIRED VEGETATION DENSITY	AS NEEDED
REMOVE INVASIVE PLANTS USING RECOMMENDED CONTROL METHODS	AS NEEDED
SPRING INSPECTION AND CLEANUP	ANNUALLY
REMOVE SEDIMENT IN INFLOW POINTS	ONCE EVERY 2-3 YEARS



PV QUANTITY: 2,533
IV QUANTITY: 2,534

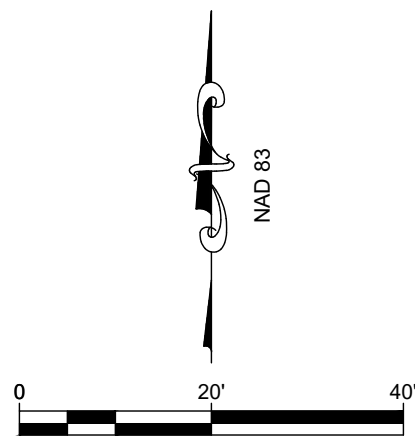
SUBMERGED GRAVEL WETLAND

PLANT SCHEDULE - SUBMERGED GRAVEL WETLAND					
KEY	BOTANICAL NAME	COMMON NAME	SIZE	O.C. SPACING	TOTAL QUANTITY
GRASSES					
PV	Panicum Vergatum	Shenandoah	QUART	1'-6"	2533
IV	Itea Virginica	Henry's Garnet	QUART	1'-6"	2534

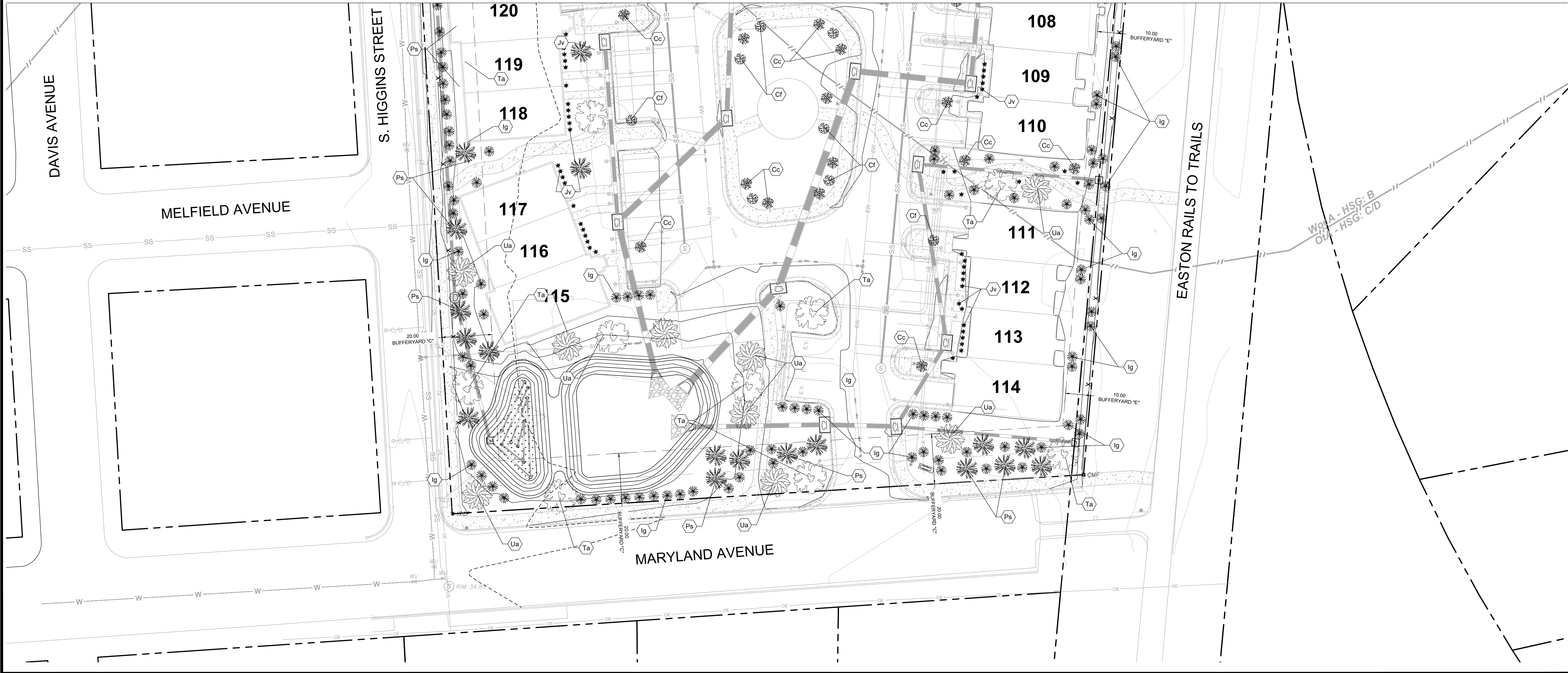
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CONTINUATION - SEE SHEET C-501.01



LANDSCAPE PLAN AND DETAILS

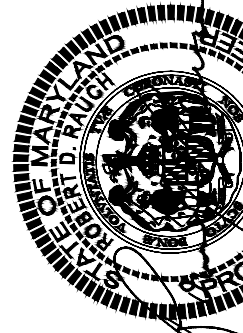
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TAX MAP 0105, GRID 08EA, PARCEL 2226
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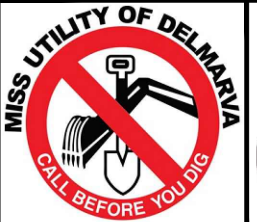
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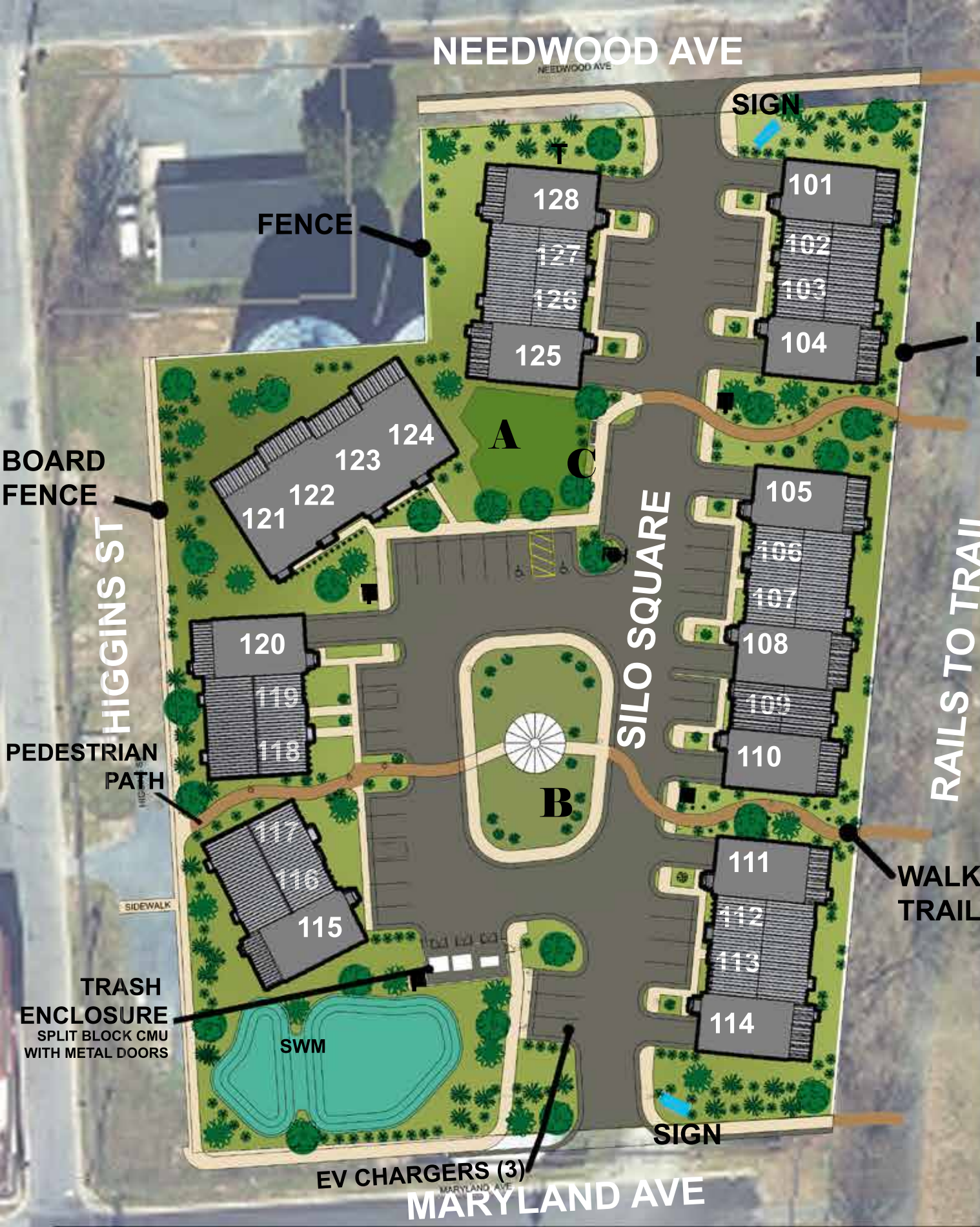
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DESIGNED BY: BBF
APPROVED BY:

SHEET NO.: C-501.02

FOR REVIEW



410 NEEDWOOD AVE, EASTON MD
PROPOSED 101-128 SILO SQUARE,
EASTON MD



SILO SQUARE SITE PLAN

28 TOWNHOMES
2 PARKING SPACES PER UNIT
UNLESS THERE IS A GARAGE

LEGEND

PRELIMINARY LOCATIONS

T TRANSFORMER

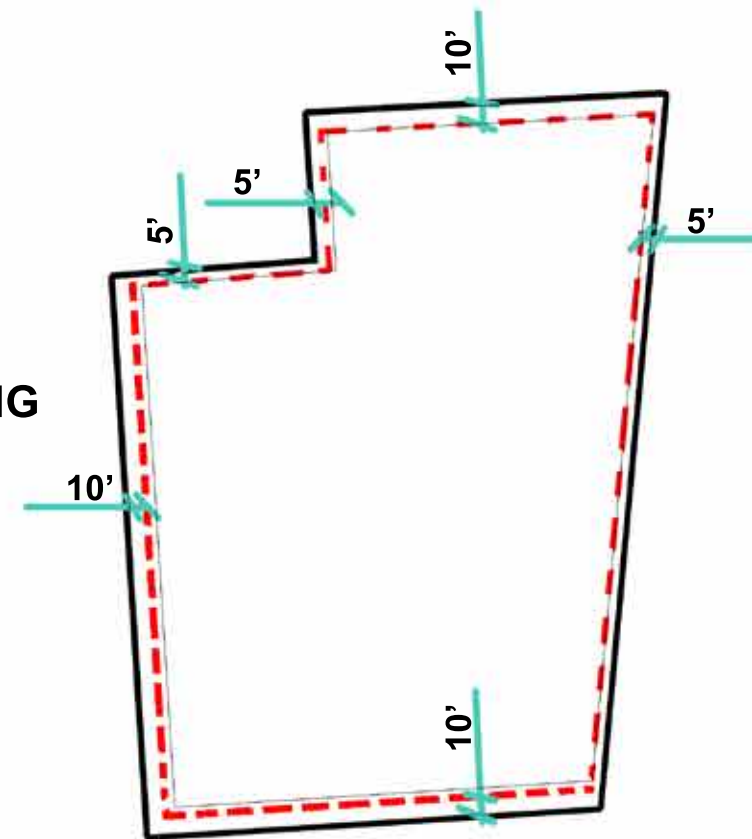
FH FIRE HYDRANT

□ SITE SIGNAGE

PARK **A** - 2,000 SQ FT

PARK **B** - 4,700 SQ FT

C - MAILBOXES



BOARD FENCE FROM RAILS TO TRAILS



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VIEW FROM SILO SQUARE





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VIEW FROM RAILS-TO-TRAILS





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STICK 1 FRONT



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STICK 1 REAR



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STICK 2 FRONT





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STICK 2 REAR





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STICK 3 FRONT



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SILO SQUARE PAVILION



VIEW FROM CORNER OF MELFIELD
AND DAVIS AVENUE



VIEW FROM MELFIELD

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SITE SIGNAGE



VIEW FROM MARYLAND AVE



SITE SIGN

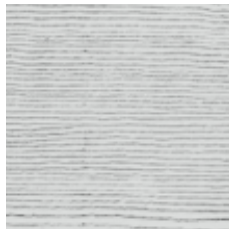


STICK 1 - FRONT ELEVATION



STICK 2 - FRONT ELEVATION

SILO SQUARE FINISHES



URBAN GRAY



TITANIUM



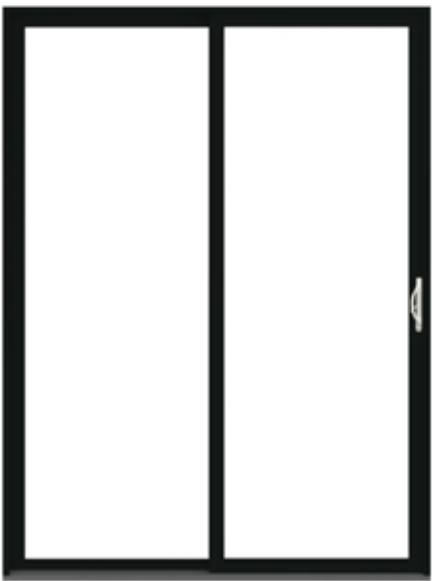
ARGENT GRAY



HUDSON BAY BLUE



ENTRY DOOR WITH FROSTED GLASS



SLIDING PATIO DOOR



GARAGE DOOR WITH FROSTED GLASS



STREET LIGHT



SLIDING WINDOW



REUSED METAL FROM THE SILO

FIBER CEMENT SIDING



BLACK GUTTER AND DOWNSPOUTS



METAL STANDING SEAM ROOF - SILVER



MAIL BOXES PARCEL BOX

SILO SQUARE FENCES

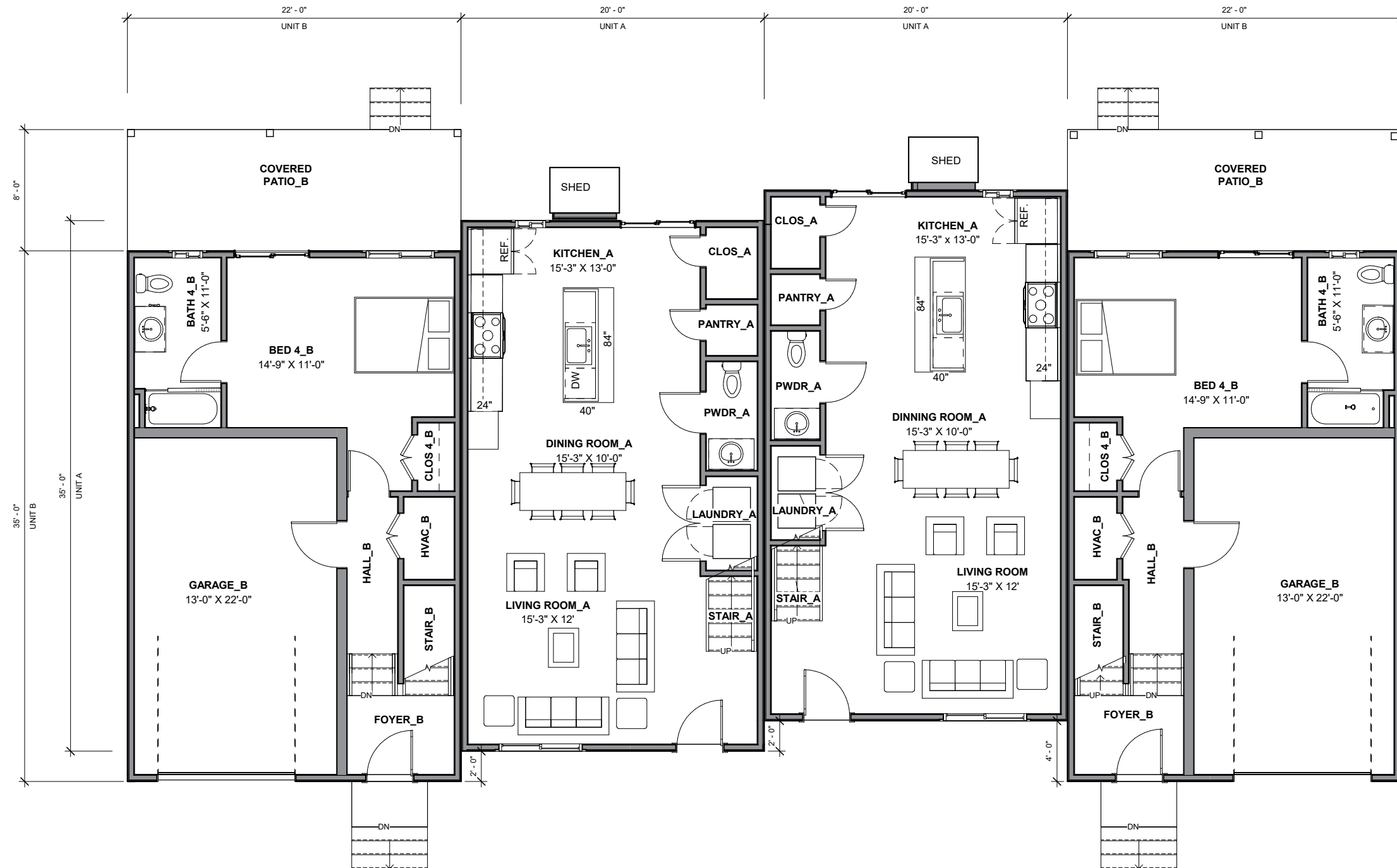


Rails to Trails
Two Rail Board Fence

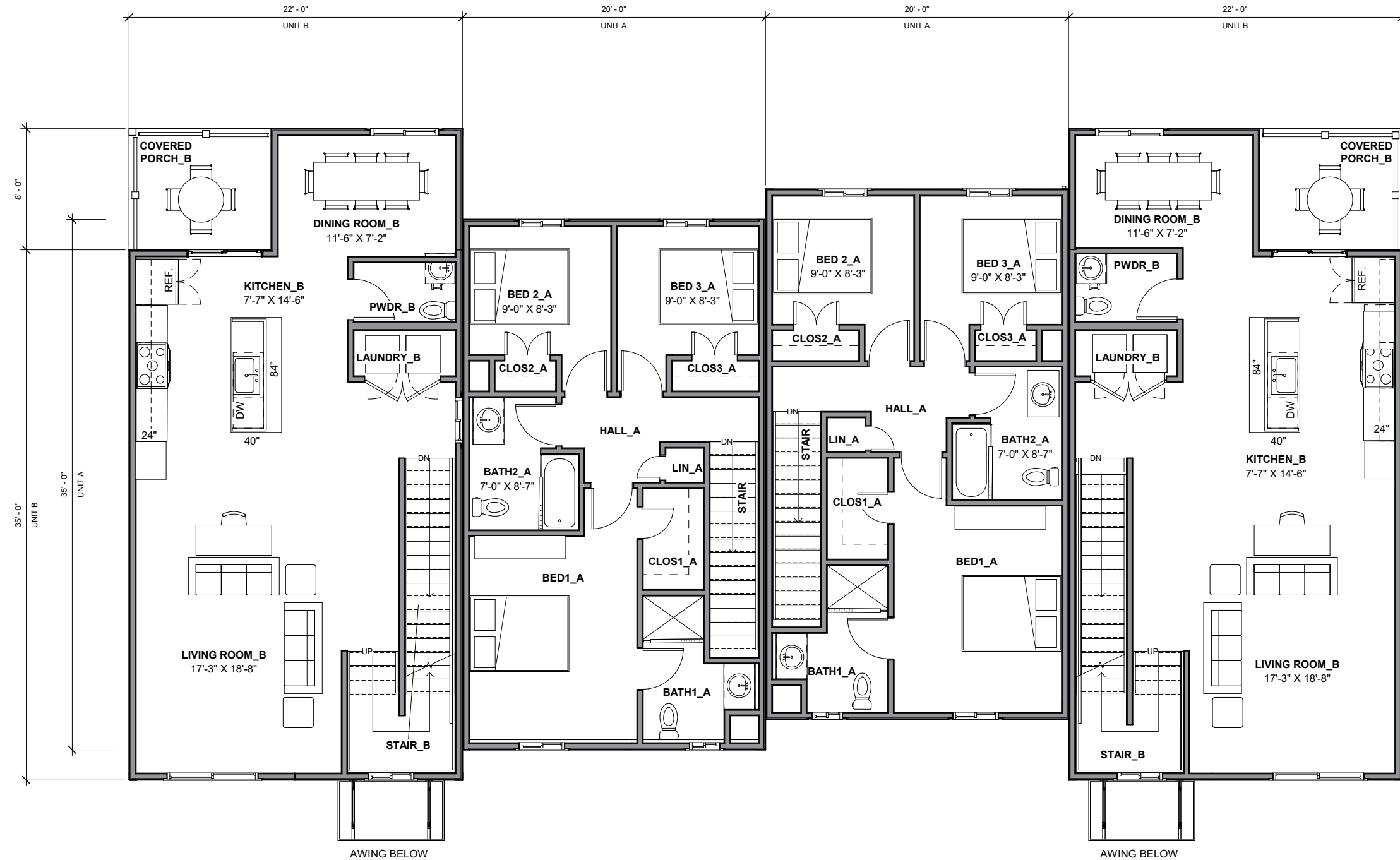


West side fence
Wood Board on Board

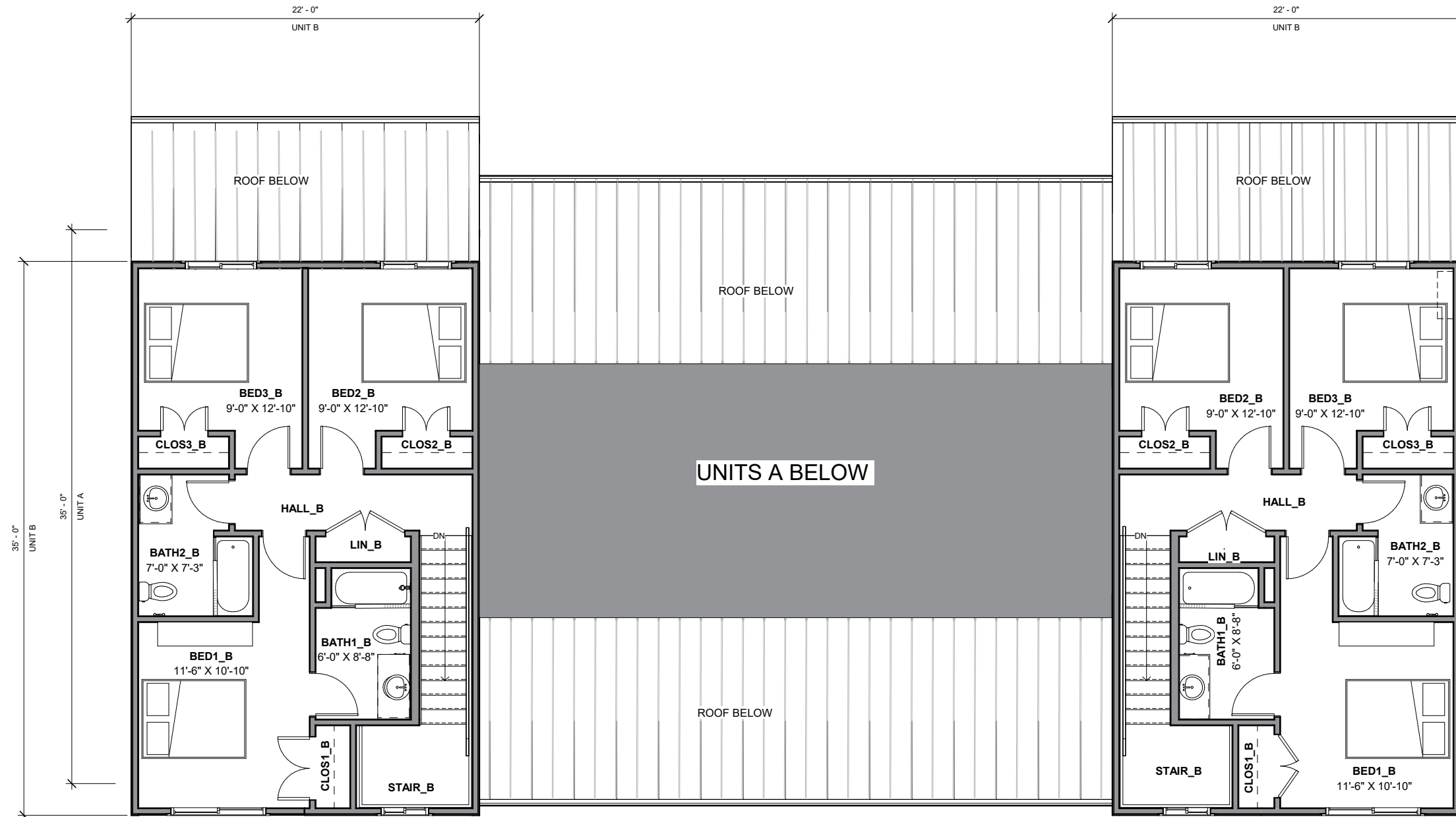
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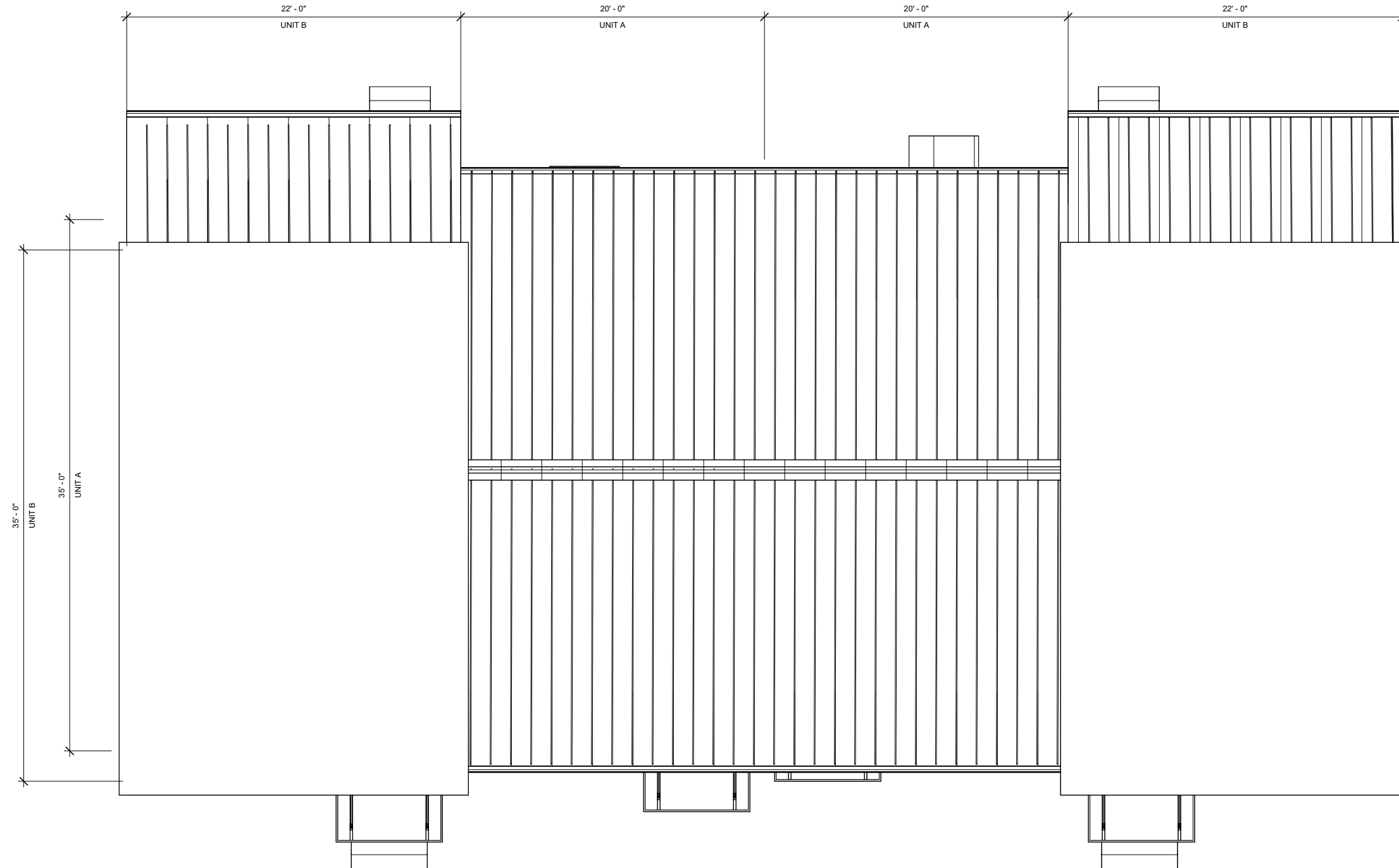
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 1/8" = 1'-0"



STICK 1 - SECOND FLOOR PLAN
 $1/8" = 1'-0"$

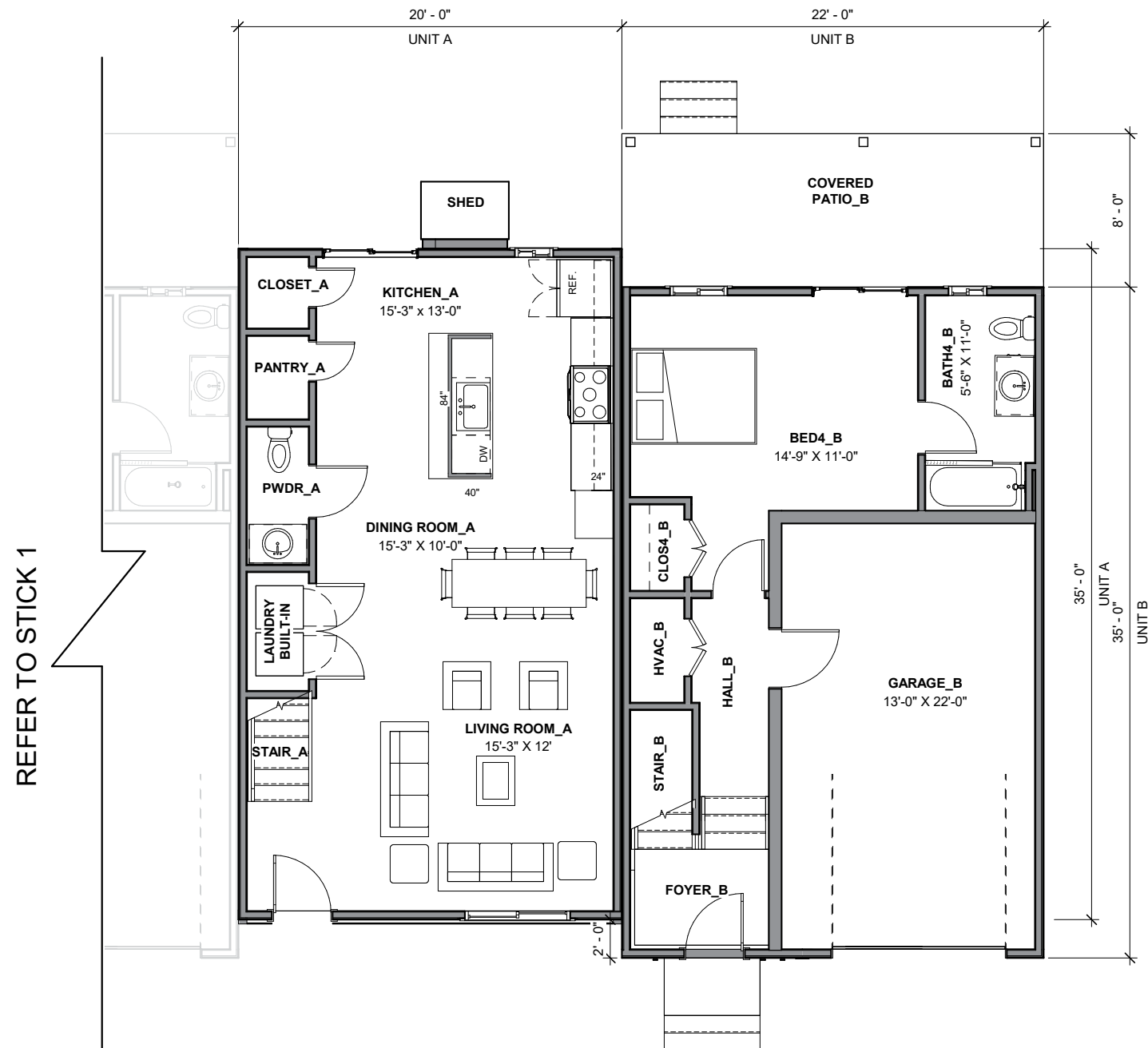


STICK 1 - THIRD FLOOR PLAN
 1/8" = 1'-0"

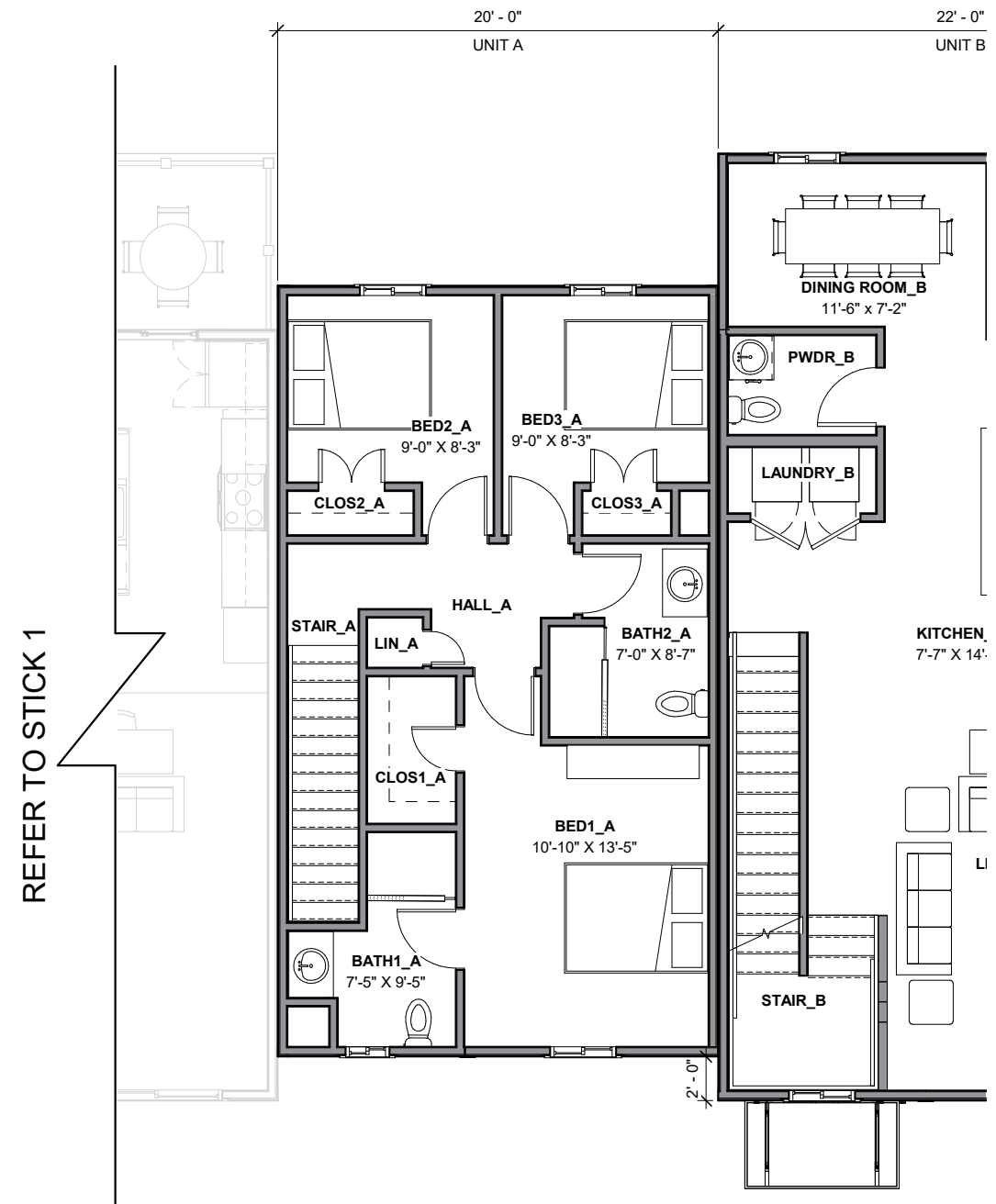


STICK 1 - ROOF PLAN

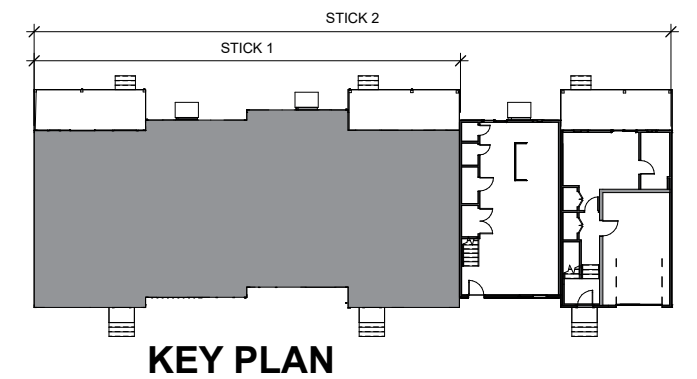
1/8" = 1'-0"



STICK 2 - FIRST FLOOR PLAN
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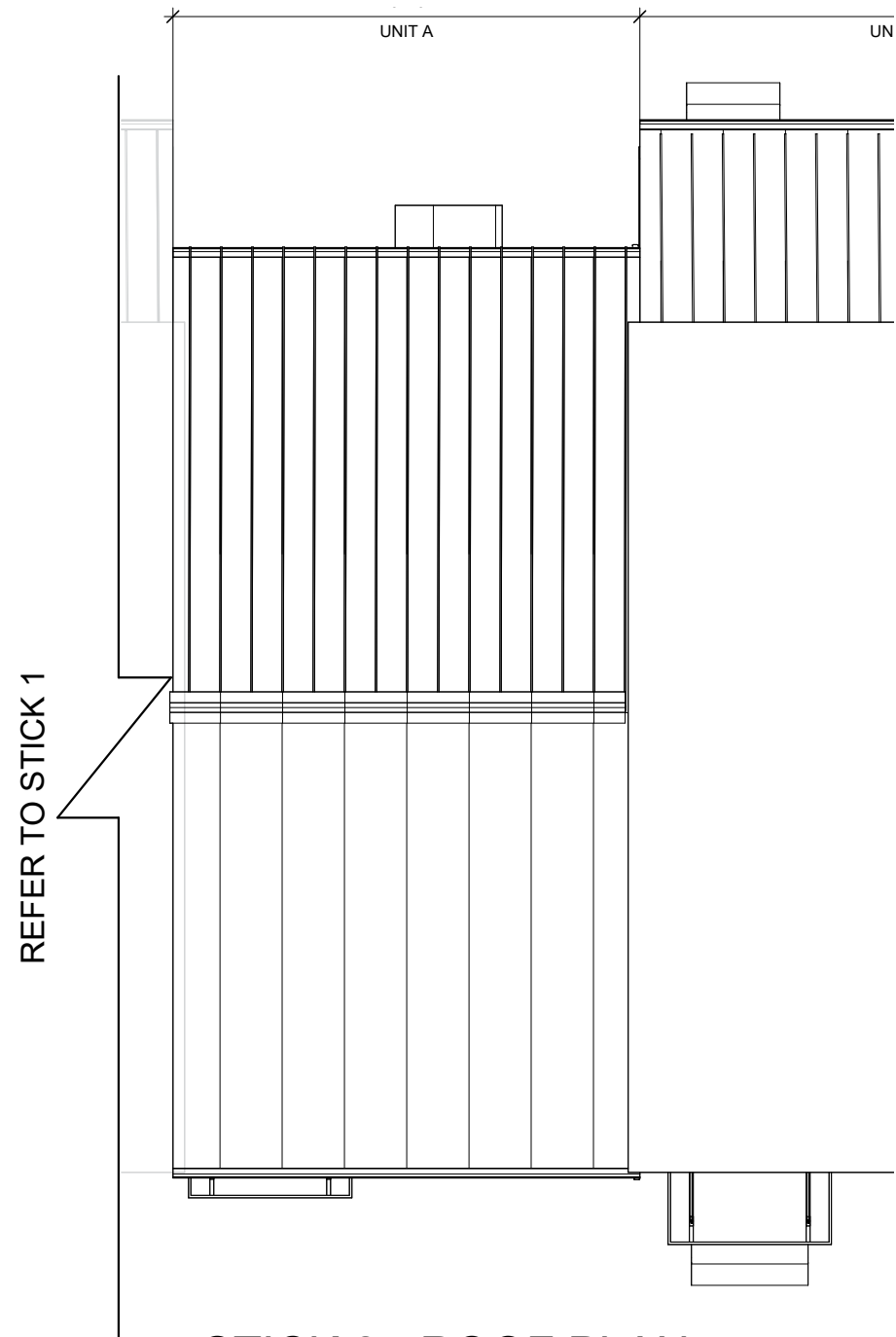


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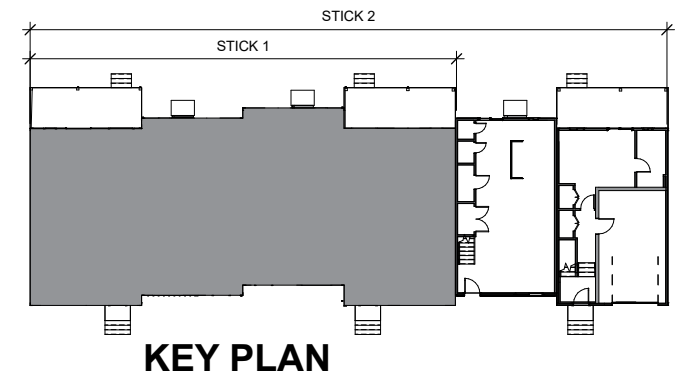




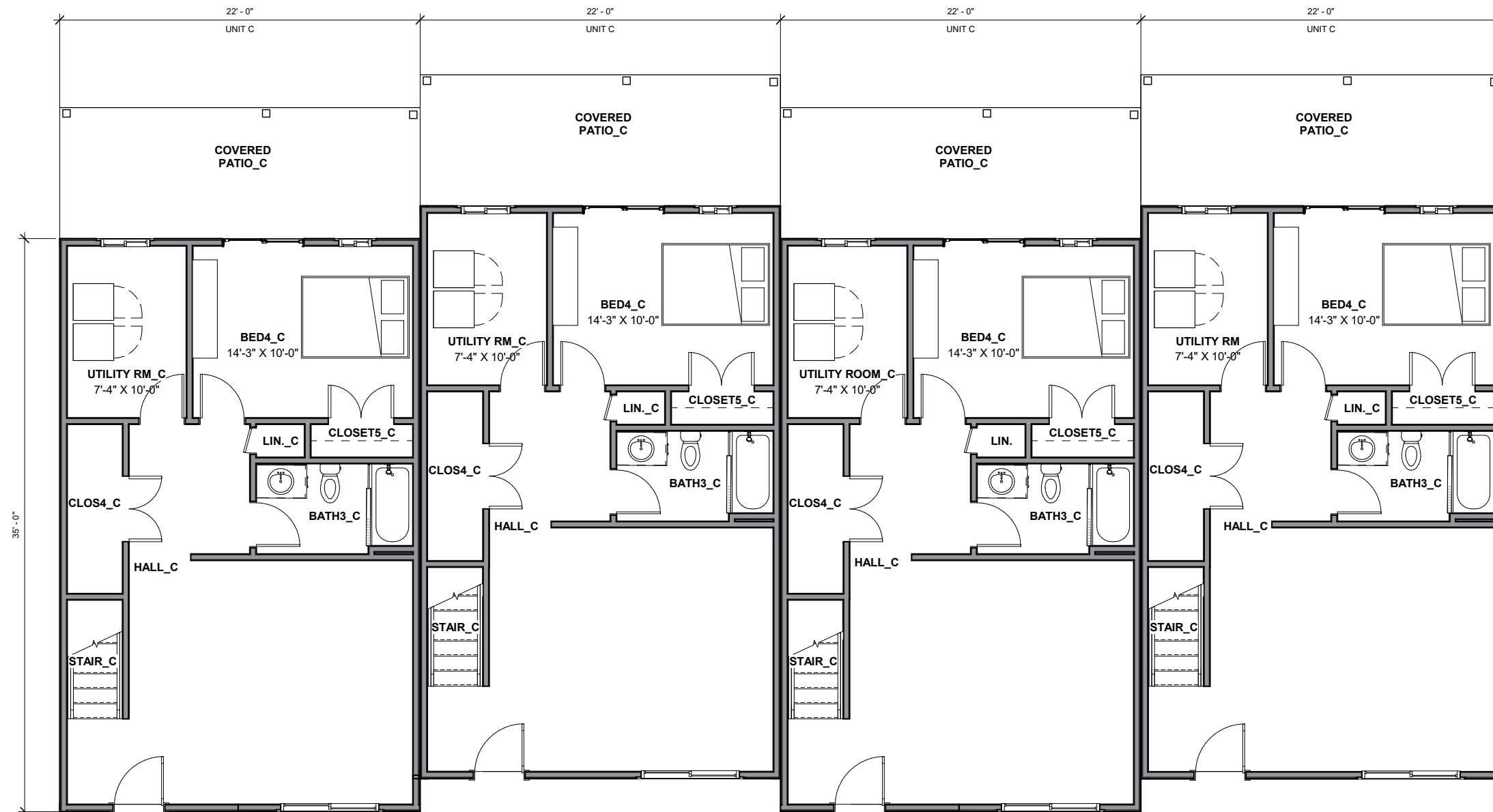
STICK 2 - THIRD FLOOR PLAN
 $1/8" = 1'-0"$



STICK 2 - ROOF PLAN
 $1/8" = 1'-0"$

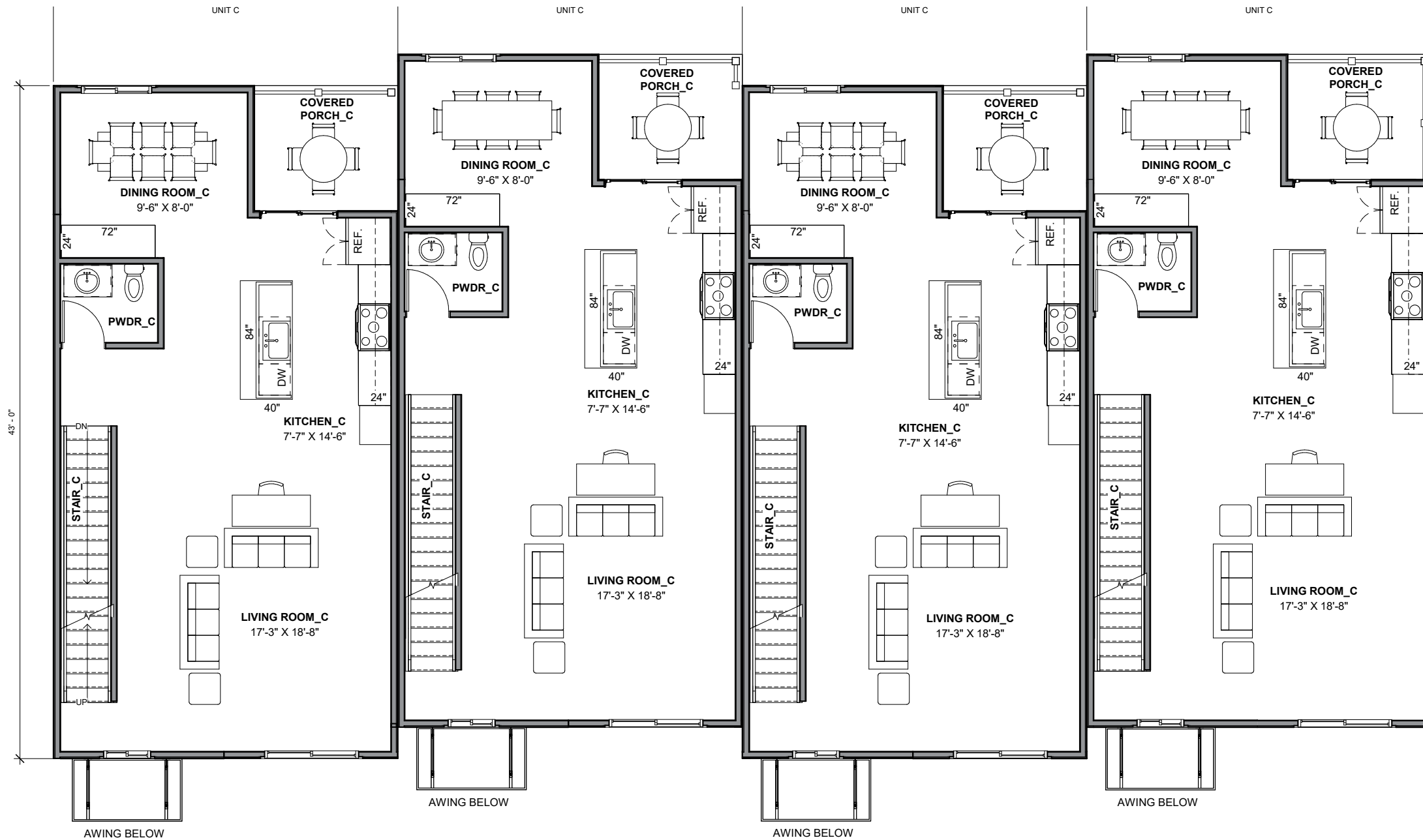


KEY PLAN

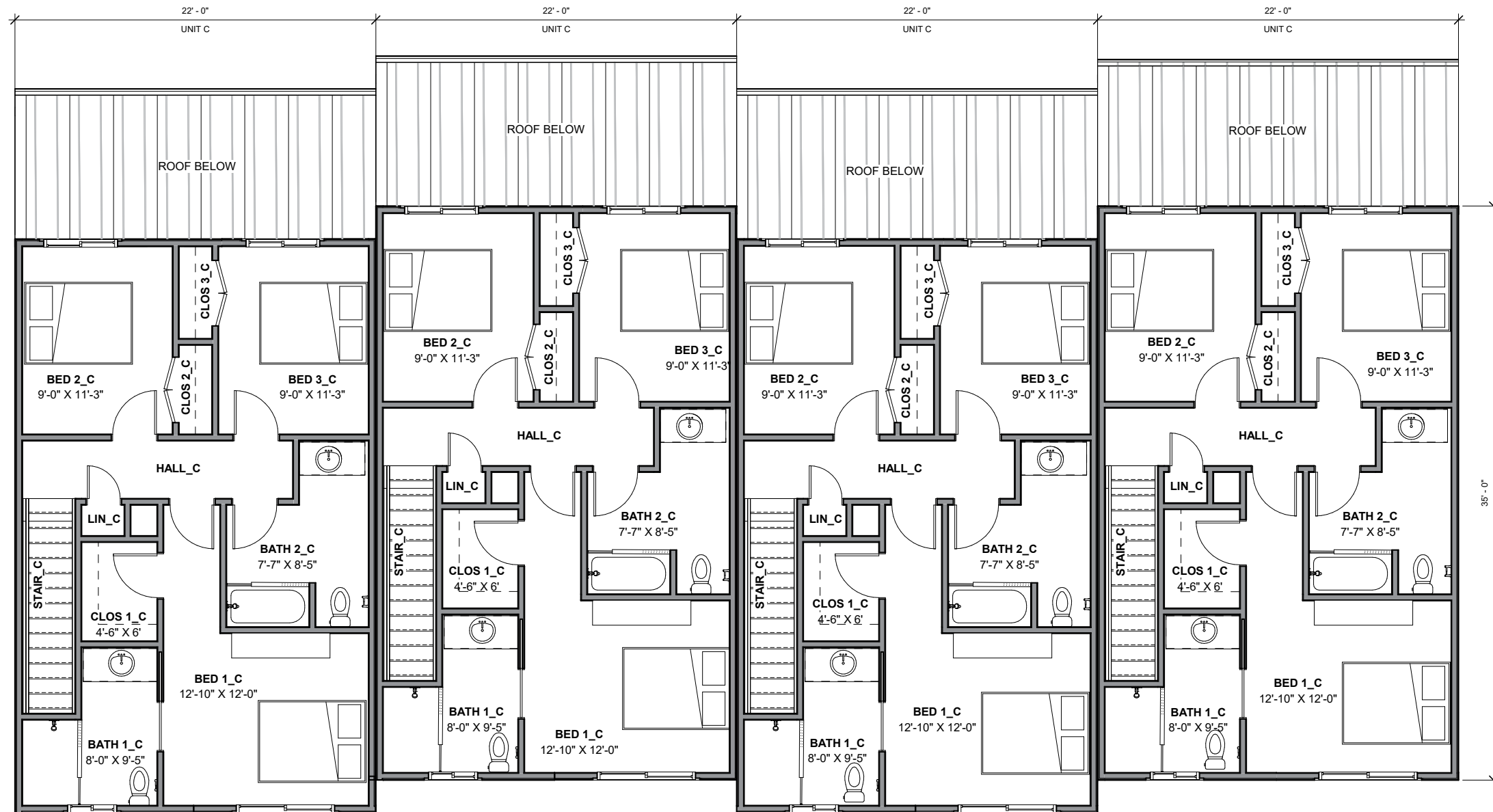


STICK 3 - FIRST FLOOR PLAN

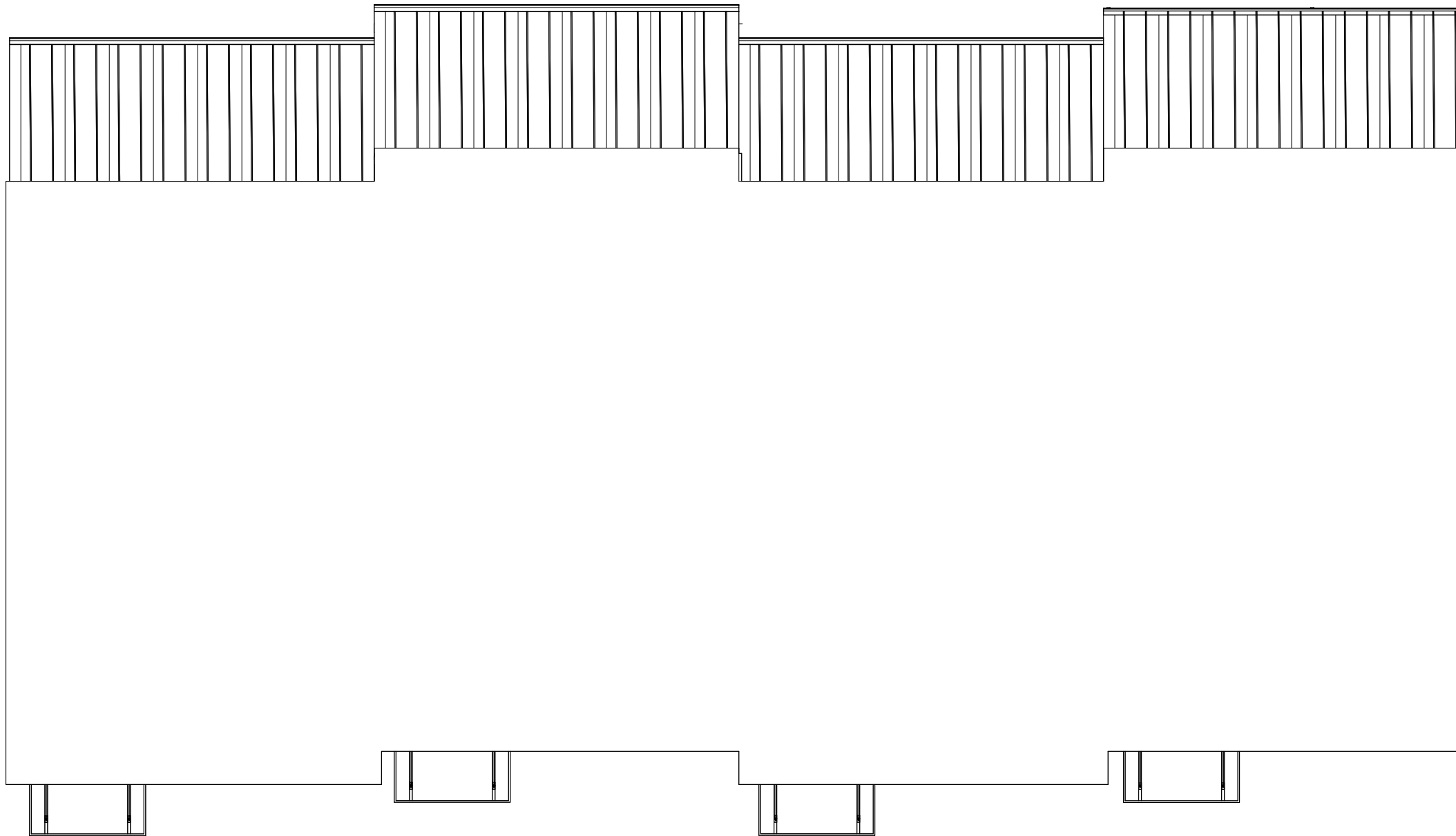
1/8" = 1'-0"



STICK 3 - SECOND FLOOR PLAN
 1/8" = 1'-0"



STICK 3 - THIRD FLOOR PLAN
 1/8" = 1'-0"



STICK 3 - ROOF PLAN

1/8" = 1'-0"



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Silo Square | View from Melfield
Easton, MD
October 15, 2024



Another Level Fitness

The Freckl

S Aurora St

Needwood Ave

Higgins St

Needwood Ave

Poplar Alley

Davis Ave



Kitchen Creations
Cabinet store



Perdue Farms

Melfield Ave

Higgins St

Maryland Ave

Maryland Ave



Talbot Clock Shop



Meintzer Petroleum

Easton Rails-To-Trails

Easton Rails-To-Trails

S Aurora St

S Aurora St

S Aurora St

TRAFFIC IMPACT ANALYSIS

FOR

SILO SQUARE PROJECT

Prepared by:

LENHART TRAFFIC CONSULTING, INC.
TRAFFIC ENGINEERING & TRANSPORTATION PLANNING

October 8, 2024



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- A Supplemental Info, Turning Movement Counts
- B Level of Service (LOS) Worksheets
- C Reference Material

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Exhibit 2	Lane Use & Traffic Control Devices	7
Exhibit 3	Existing Peak Hour Volumes	8
Exhibit 4	Background Peak Hour Volumes	10
Exhibit 5	Trip Generation for Site	14
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Section 1 Introduction

1.1 Project Description

This Traffic Impact Analysis (TIA) has been prepared for the proposed Silo Square Project. The subject site is located at 410 Needwood Avenue in Easton, Maryland, and is bounded by Needwood Avenue to the north, Higgins Street to the west, and Maryland Avenue to the south. The eastern side of the subject site is bounded by the Easton Rails-to-Trails. **Exhibit 1** shows the location of the site.

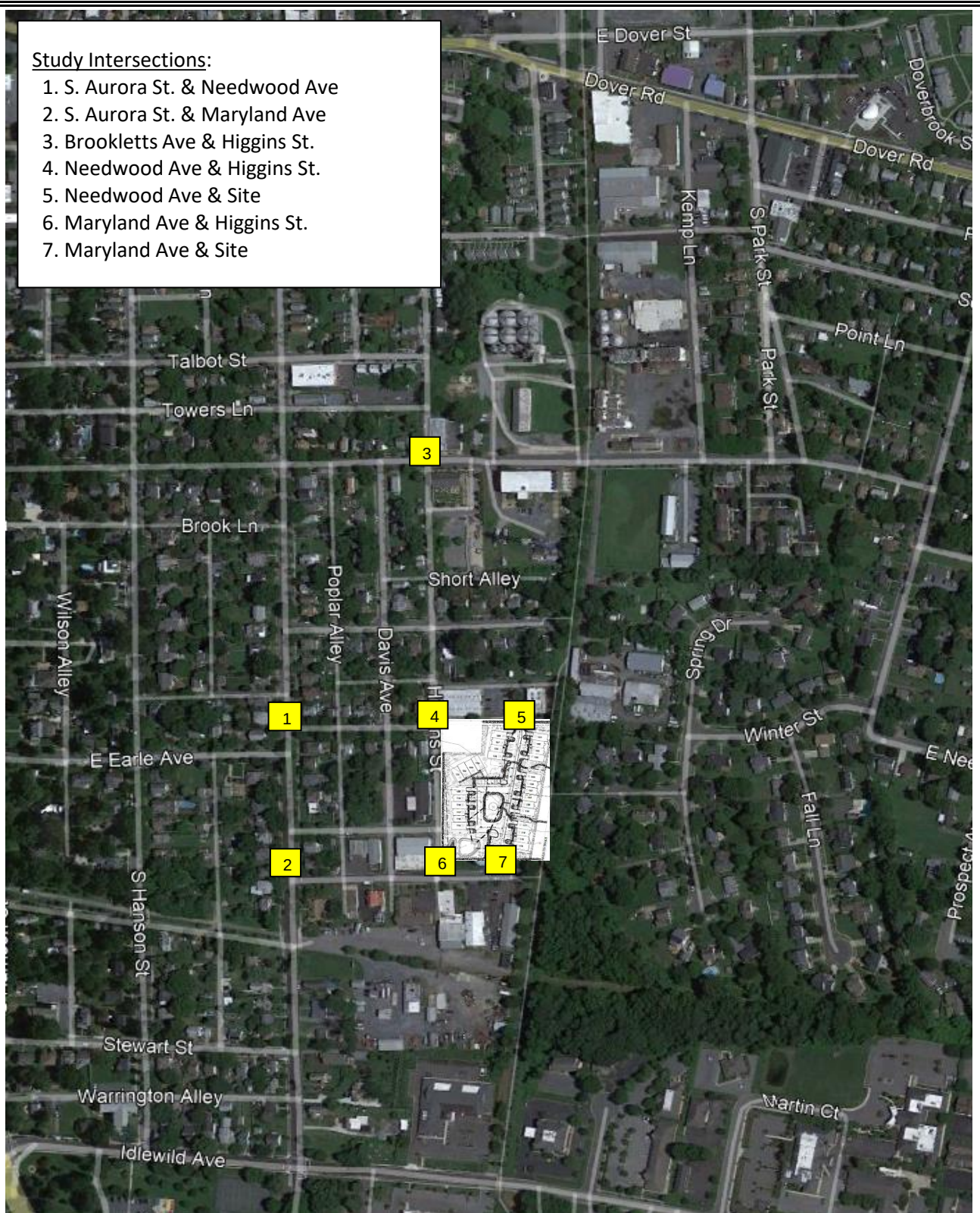
The property was previously used as a grain storage facility with 10 silos and a 2,380 square foot storage warehouse. The grain storage facility has not been operational since 2022. The property is proposed to be redeveloped with 28 townhouse units. Access to the site will be provided with two full movement access points: one along Needwood Avenue and one along Maryland Avenue. A concept site plan has been provided in Appendix A.

1.2 Scope of Study

This TIA has been prepared in accordance with a scoping agreement coordinated with the Town of Easton. The Highway Capacity Manual (HCM) and Critical Lane Volume (CLV) methodologies were utilized to evaluate the study intersections per Town of Easton requirements.

Study Intersections:

1. S. Aurora St. & Needwood Ave
2. S. Aurora St. & Maryland Ave
3. Brookletts Ave & Higgins St.
4. Needwood Ave & Higgins St.
5. Needwood Ave & Site
6. Maryland Ave & Higgins St.
7. Maryland Ave & Site



Traffic Impact Analysis

Site Location
Map

**Exhibit
1**



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Section 2 Existing Conditions

2.1 Description of Road Network

The key roads in the study area are:

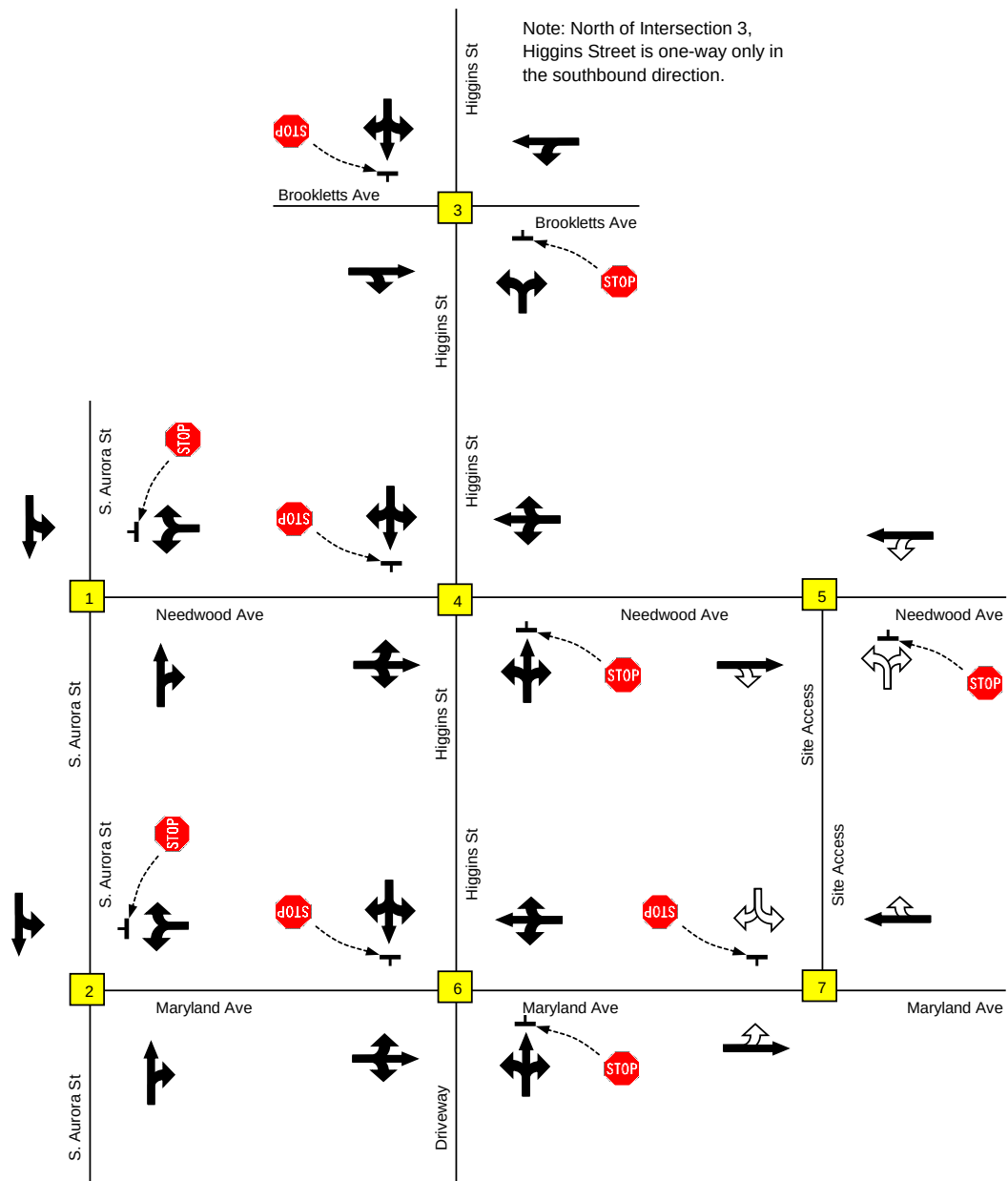
- Needwood Avenue – a two-lane roadway classified as a local road. The roadway has a posted speed limit of 25 MPH.
- Maryland Avenue – a two-lane roadway classified as a local road. The roadway has a posted speed limit of 25 MPH.
- Higgins Street – a two-lane roadway classified as a local road. The roadway has a posted speed limit of 25 MPH.
- S. Aurora Street – a two-lane roadway classified as a major collector. The roadway has a posted speed limit of 25 MPH.

2.2 Existing Lane Configurations

The Lane Use & Traffic Control Devices are shown on **Exhibit 2**.

2.3 Existing Traffic Counts

Peak hour turning movement counts were conducted and are shown on **Exhibit 3**.



Traffic Impact Analysis



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Lane Use &
 Traffic Control Devices

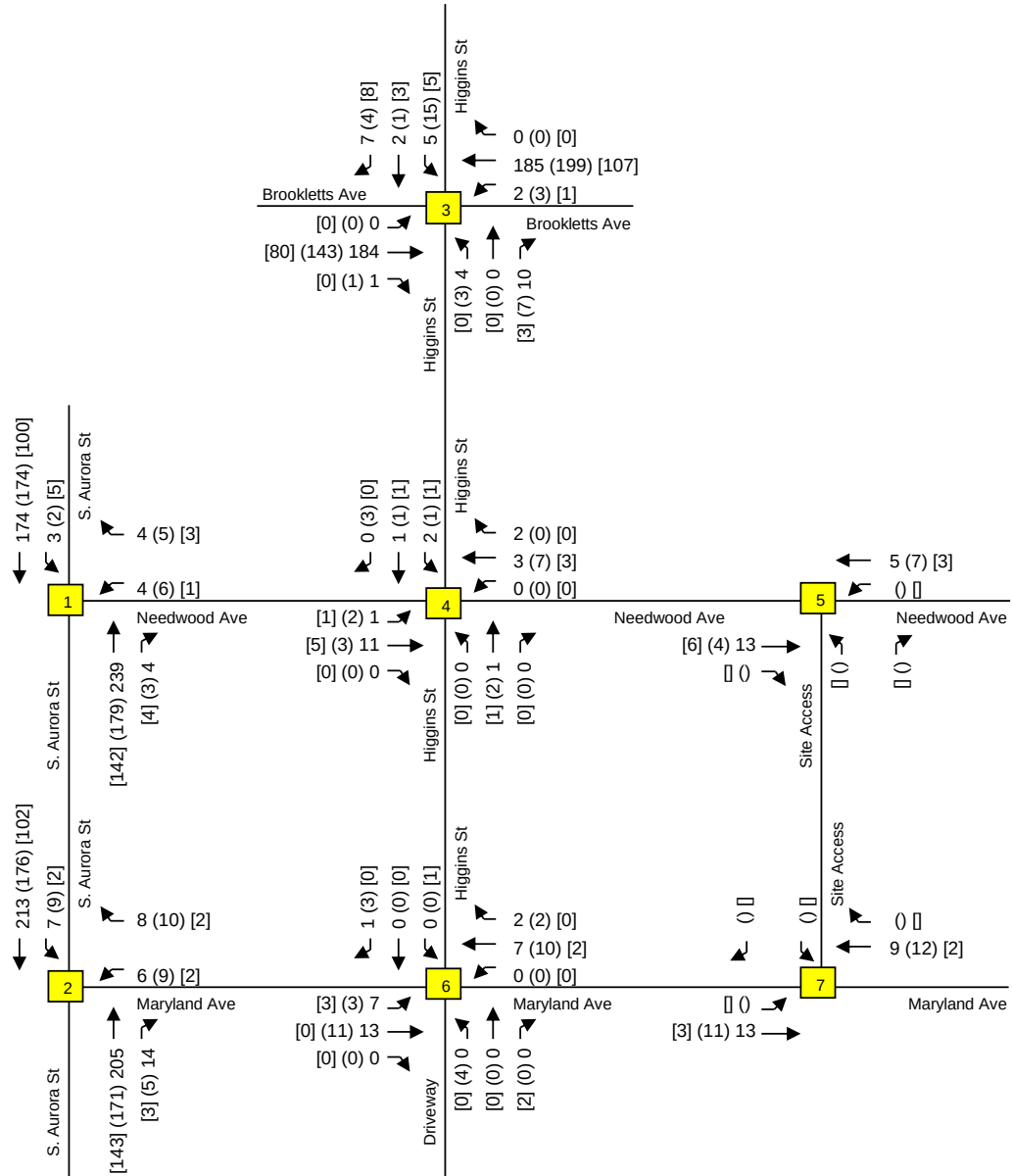


- Existing



- Proposed

**Exhibit
 2**



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Existing Peak Hour Volumes

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

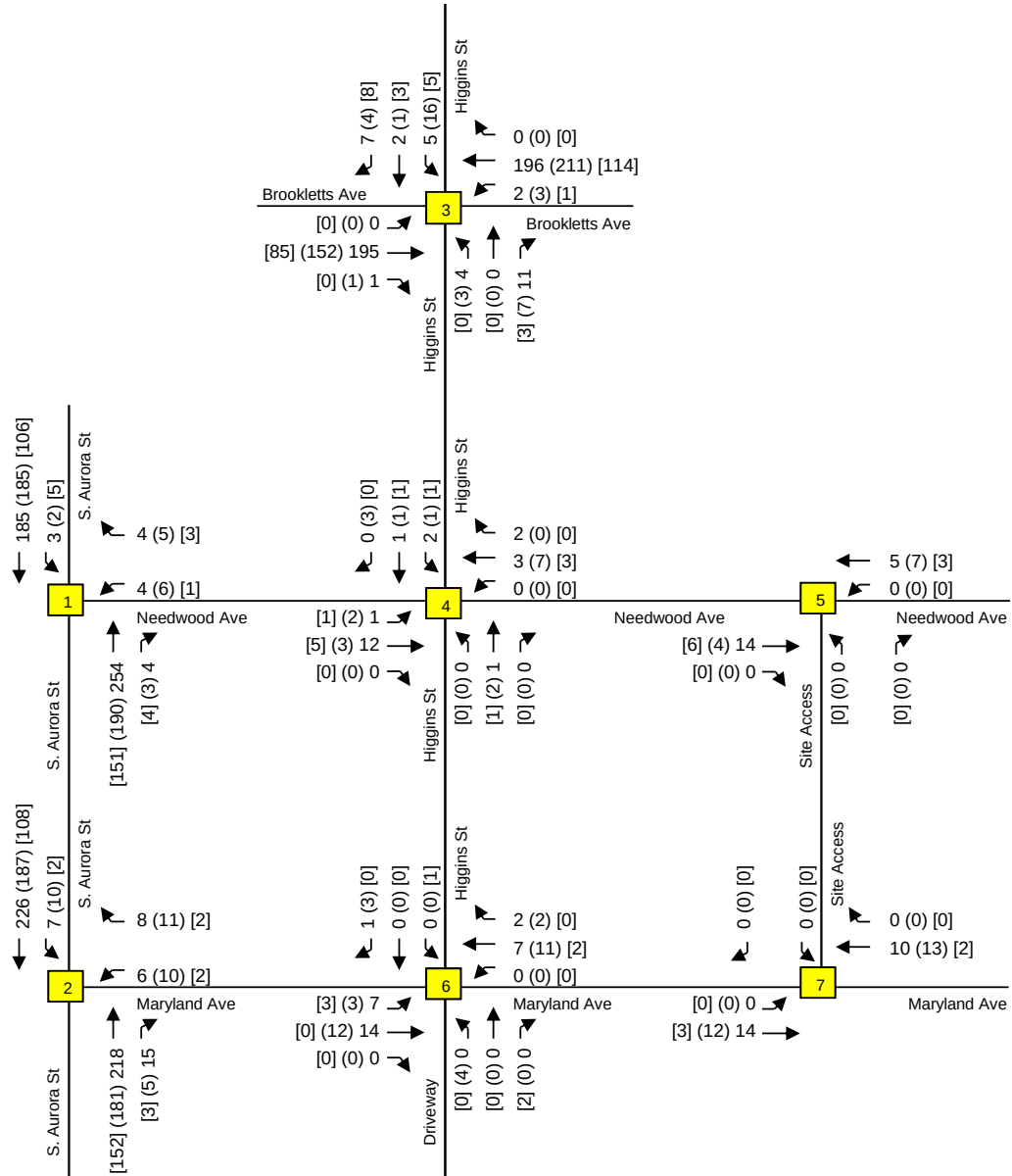
Exhibit 3

Section 3 Background Conditions

3.1 Background Traffic Volumes

A 1.5% growth rate was confirmed for use in the scoping coordination for this report. However, in order to account for any additional traffic at the study intersections due to approved but unbuilt developments, a more conservative 2% growth rate was applied to the study intersections for three years. The resulting background peak hour volumes are shown on **Exhibit 4**.

2%	Growth Rate
3	Years of Growth
1.061	Total Growth



Traffic Impact Analysis



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Background Peak Hour Volumes

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

Exhibit

4

Section 4 Projected Conditions with Site

4.1 Site Trip Generation

The site is proposed to be redeveloped with 28 townhouse units. The trip generation for the proposed development is detailed on **Exhibit 5**. Trip generation rates were obtained from the ITE Trip Generation Manual, 11th Edition.

Exhibit 5 also provides the trip generation for the previous grain storage facility. Site specific details regarding the trips to/from the grain facility are unknown, as the site has been abandoned since 2022. As such, ITE-150 (Warehousing) was used to determine the number of trips generated by the previous use. As shown on Exhibit 5, the proposed redevelopment will result in fewer weekday peak hour trips than the previous grain storage facility use. Additionally, it is expected that the grain storage facility generated significant heavy vehicle trips, while the proposed residential use will not generate heavy vehicle trips with any regularity.

4.2 Site Trip Distribution & Trip Assignment

The trip distribution and assignment is shown on **Exhibit 6**.

4.3 Total Traffic Volumes

The Total Peak Hour Volumes are shown on **Exhibit 7**.

4.4 Project Level of Service

The total peak hour traffic volumes shown on Exhibit 7 were evaluated using the CLV and HCM methodologies. The results of the CLV analyses are shown on **Exhibit 8** and indicate that all intersections operate at LOS A under total conditions. The results of the HCM analyses are shown on **Exhibit 9** and indicate that each study intersection operates with LOS A, and each stop-controlled approach operates with LOS B or better. The results of the CLV and HCM analyses show that the proposed redevelopment will have negligible impact on the operation of the study intersections.

The trip assignment on Exhibit 6 shows how much vehicular traffic the proposed redevelopment will add on each roadway and intersection in the study area. As shown, the Saturday peak hour is expected to have more vehicular traffic than the morning and evening peaks, and results in only 15 additional vehicles along Needwood Avenue between the site and Higgins Street, and only 11 additional

vehicles between Higgins Street and S. Aurora Street. Even less impact is expected along Maryland Avenue, with only 9 vehicles expected along Maryland Avenue between the site and S. Aurora Street. The morning and evening peak hours are expected to have even less vehicular traffic on these roadways.

The table below shows the total number of vehicles passing through each study intersection during the background (without the proposed development) and total (with the proposed development) conditions, along with the net increase in volume at each intersection due to the redevelopment.

Intersection		Peak Hour		
		AM	PM	Sat.
Int. 1	Total	459	399	285
	Background	454	391	270
	Net	5	8	15
Int. 2	Total	484	411	283
	Background	480	404	269
	Net	4	7	14
Int. 3	Total	425	400	223
	Background	423	398	219
	Net	2	2	4
Int. 4	Total	28	27	27
	Background	22	19	12
	Net	6	8	15
Int. 6	Total	34	40	17
	Background	31	35	8
	Net	3	5	9

As shown, the maximum increase in vehicular traffic at any of the study intersections is 15 vehicles, which occurs at Study Intersections 1 and 4 during the Saturday peak hour. For context, 15 additional vehicles per hour averages to only 1 additional vehicle every 4 minutes during the peak hour.

As discussed in Section 4.1, the previous use on the property is expected to have generated even more traffic than the proposed use, with many of the trips for the previous use heavy trucks making deliveries. According to a news article by Christina Aufderheide with The Star, written in June 2022 when the grain storage facility was closing, many heavy trucks had difficulty bringing grain to the site due to roads that were not designed to accommodate large trucks. Needwood Avenue is approximately 33-feet wide and Maryland Avenue is approximately 30-feet wide, with both roads frequently parked on either side of the road. These widths are appropriate to accommodate residential traffic, which consists primarily of passenger cars, SUVs, and a low volume of smaller trucks (e.g. local deliveries, garbage trucks, etc.), but were not sufficient to accommodate the high volume of

large trucks associated with the previous use. The traffic from the proposed residential development is consistent with the design of the local roads and the proposed use is not expected to generate heavy vehicle trips with any regularity or in greater frequency than the existing residential units in the neighborhood. The news article from The Star has been provided in Appendix C of this report for reference.

Based on the results of the level of service analyses, and the negligible increases in traffic volume expected with the redevelopment of the site, the proposed redevelopment will have minimal impact on the surrounding roadway and will not degrade the level of service at the study intersections.

Trip Generation Rates

Single-Family Attached Housing (ITE-215, Units)

Trip Distribution (In/Out)

Morning Trips = 0.52 x Units - 5.70 31/69
 Evening Trips = 0.60 x Units - 3.93 57/43
 Ln(Midday Sat. Trips) = 0.82 x Ln(Units) + 0.43 48/52

Warehousing (ksf, ITE-150)

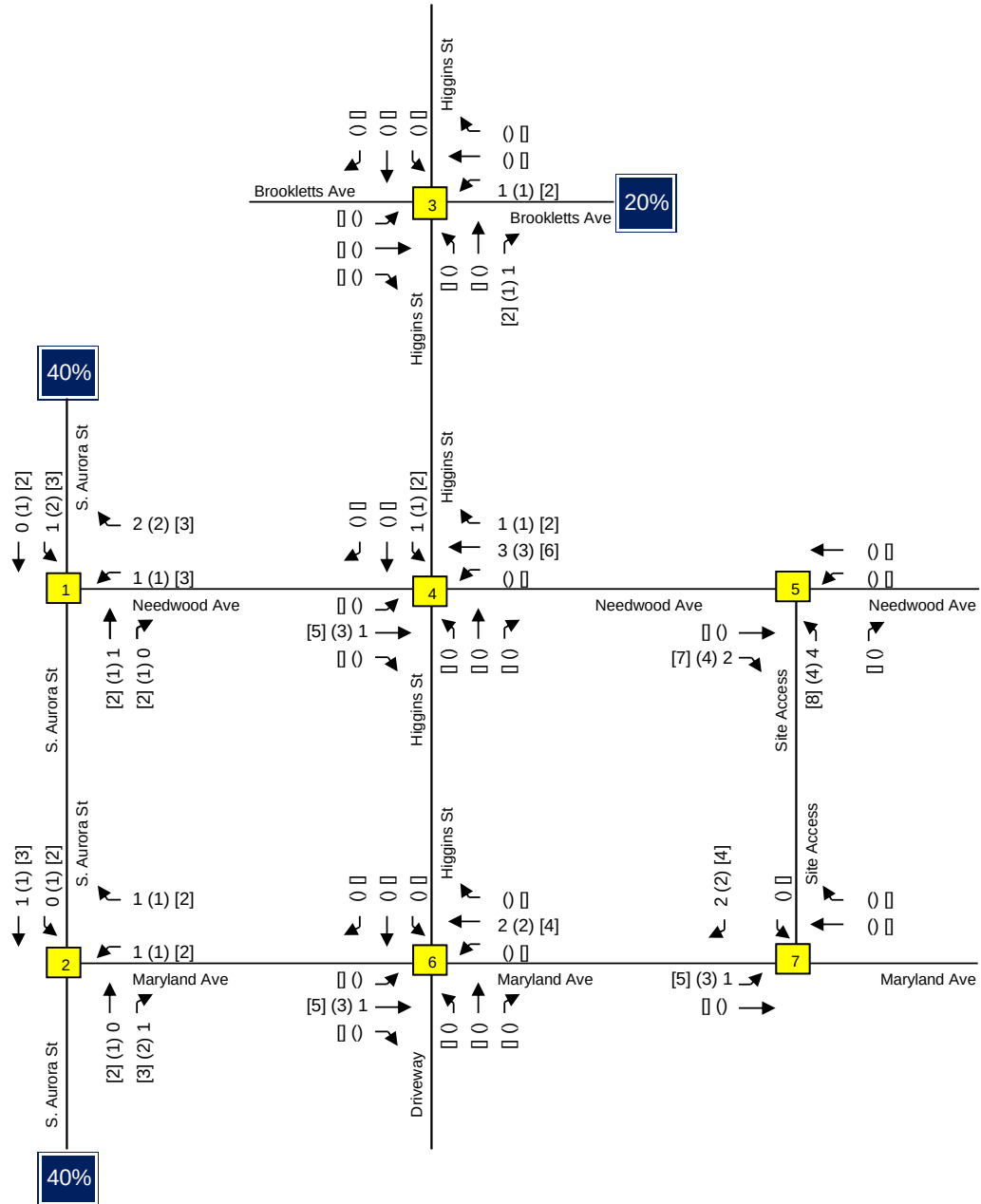
Morning Trips = 0.12 x ksf + 23.62 77/23
 Evening Trips = 0.12 x ksf + 26.48 28/72
 Midday Sat. Trips = 0.05 x ksf 64/36

Trip Generation Totals

			AM Peak			PM Peak			Sat. Mid-day Peak		
			In	Out	Total	In	Out	Total	In	Out	Total
Proposed	Single-Family Attached Housing (ITE-215, Units)	28 units	3	6	9	7	6	13	12	12	24
Pre-existing	Warehousing (ksf, ITE-150) [Grain Storage Facility]	2,380 sq.ft.	18	6	24	7	20	27	No Data		

NOTE: Trip Generation Rates obtained from the ITE Trip Generation Manual, 11th Edition

Traffic Impact Analysis	Trip Generation for Site	Exhibit 5
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Traffic Impact Analysis

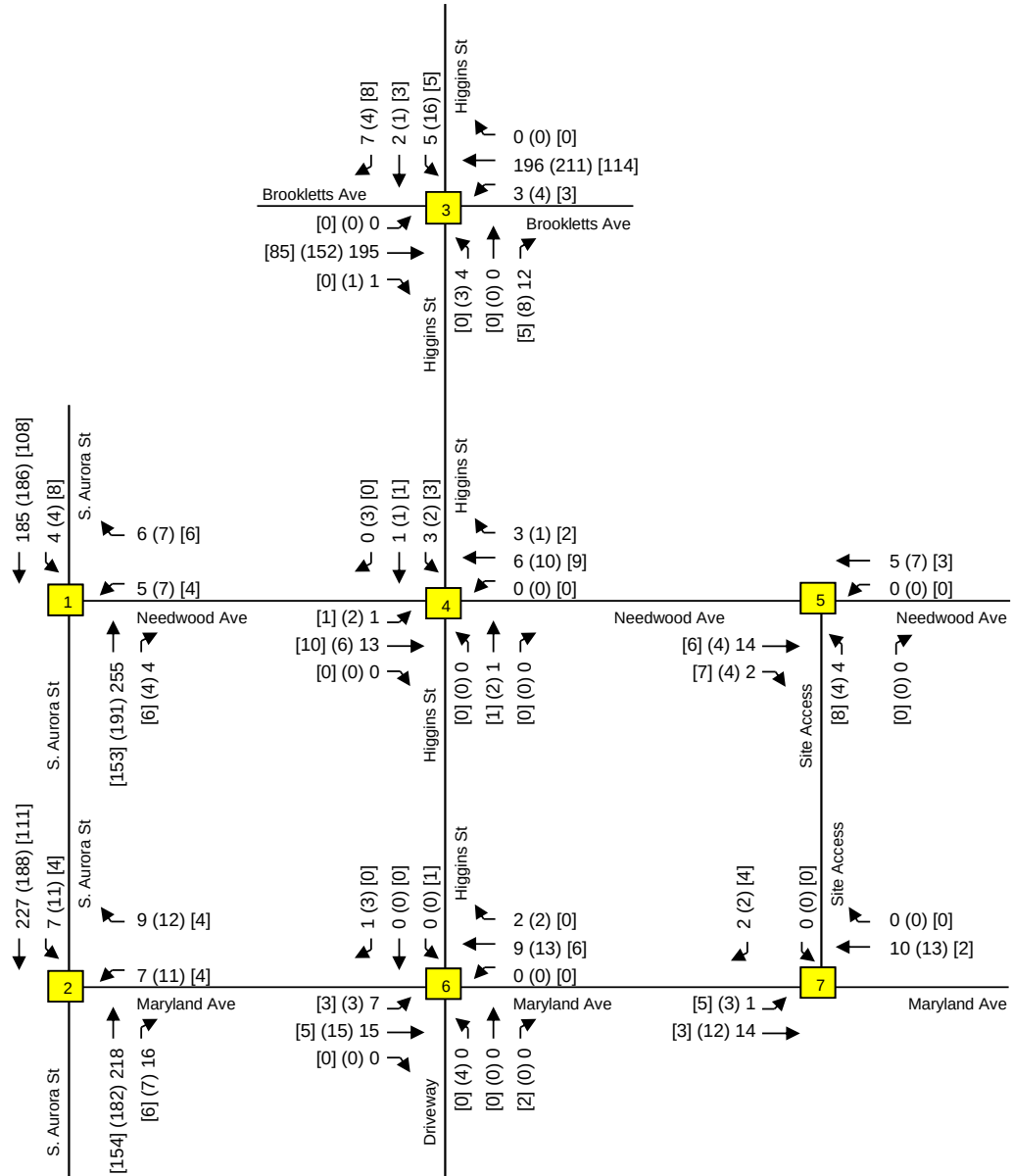


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Trip Assignment for Site

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

Exhibit 6



Traffic Impact Analysis



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Total Peak Hour Volumes

Key: xx = AM Peak Vol's (xx) = PM Peak Vol's

Exhibit

7

Critical Lane Volume (CLV) Level-of-Service Results

Morning Peak Hour	Existing CLV	Background CLV	Total CLV	LOS D or better?
1). S. Aurora Street & Needwood Avenue	A / 254	A / 269	A / 274	Y
2). S. Aurora Street & Maryland Avenue	A / 241	A / 254	A / 257	Y
3). Brookletts Avenue & Higgins Street	A / 206	A / 218	A / 220	Y
4). Needwood Avenue & Higgins Street	A / 15	A / 16	A / 18	Y
5). Needwood Avenue & Site Access	A / 13	A / 14	A / 20	Y
6). Maryland Avenue & Higgins Street	A / 22	A / 23	A / 24	Y
7). Maryland Avenue & Site Access	A / 13	A / 14	A / 17	Y
Evening Peak Hour	Existing CLV	Background CLV	Total CLV	LOS D or better?
1). S. Aurora Street & Needwood Avenue	A / 195	A / 206	A / 213	Y
2). S. Aurora Street & Maryland Avenue	A / 205	A / 219	A / 223	Y
3). Brookletts Avenue & Higgins Street	A / 227	A / 240	A / 242	Y
4). Needwood Avenue & Higgins Street	A / 14	A / 14	A / 19	Y
5). Needwood Avenue & Site Access	A / 7	A / 7	A / 12	Y
6). Maryland Avenue & Higgins Street	A / 22	A / 23	A / 25	Y
7). Maryland Avenue & Site Access	A / 12	A / 13	A / 18	Y
Midday Saturday Peak Hour	Existing CLV	Background CLV	Total CLV	LOS D or better?
1). S. Aurora Street & Needwood Avenue	A / 155	A / 164	A / 177	Y
2). S. Aurora Street & Maryland Avenue	A / 152	A / 161	A / 172	Y
3). Brookletts Avenue & Higgins Street	A / 125	A / 132	A / 134	Y
4). Needwood Avenue & Higgins Street	A / 8	A / 8	A / 16	Y
5). Needwood Avenue & Site Access	A / 6	A / 6	A / 21	Y
6). Maryland Avenue & Higgins Street	A / 8	A / 8	A / 12	Y
7). Maryland Avenue & Site Access	A / 3	A / 3	A / 13	Y

Traffic Impact Analysis

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Results of CLV
Level-of-Service Analyses

**Exhibit
8**

Highway Capacity Manual (HCM) Level-of-Service Results

Morning Peak Hour	Existing Delay	Background Delay	Total Delay	LOS D or better?
1). S. Aurora Street & Needwood Avenue Westbound Approach	A / 0.2 B / 10.6	A / 0.2 B / 10.8	A / 0.3 B / 10.7	Y
2). S. Aurora Street & Maryland Avenue Westbound Approach	A / 0.5 B / 10.5	A / 0.5 B / 10.7	A / 0.5 B / 10.8	Y
3). Brookletts Avenue & Higgins Street Northbound Approach	A / 0.8 B / 10.0	A / 0.7 B / 10.1	A / 0.8 B / 10.1	Y
3). Brookletts Avenue & Higgins Street Southbound Approach	B / 10.5	B / 10.7	B / 10.7	Y
4). Needwood Avenue & Higgins Street Northbound Approach	A / 1.9 A / 9.1	A / 1.9 A / 9.1	A / 1.7 A / 9.2	Y
4). Needwood Avenue & Higgins Street Southbound Approach	A / 8.8	A / 8.8	A / 8.8	Y
5). Needwood Avenue & Site Access Northbound Approach	N/A N/A	N/A N/A	A / 1.3 A / 8.6	Y
6). Maryland Avenue & Higgins Street Northbound Approach	A / 2.0 A / 0.0	A / 2.0 A / 0.0	A / 1.8 A / 0.0	Y
6). Maryland Avenue & Higgins Street Southbound Approach	A / 8.4	A / 8.4	A / 8.4	Y
7). Maryland Avenue & Site Access Southbound Approach	N/A N/A	N/A N/A	A / 0.8 A / 8.4	Y
Evening Peak Hour	Existing Delay	Background Delay	Total Delay	LOS D or better?
1). S. Aurora Street & Needwood Avenue Westbound Approach	A / 0.4 B / 10.3	A / 0.3 B / 10.4	A / 0.5 B / 10.4	Y
2). S. Aurora Street & Maryland Avenue Westbound Approach	A / 0.7 B / 10.2	A / 0.8 B / 10.4	A / 0.8 B / 10.4	Y
3). Brookletts Avenue & Higgins Street Northbound Approach	A / 0.9 A / 9.7	A / 0.9 A / 9.8	A / 0.9 A / 9.8	Y
3). Brookletts Avenue & Higgins Street Southbound Approach	B / 11.2	B / 11.4	B / 11.5	Y
4). Needwood Avenue & Higgins Street Northbound Approach	A / 3.8 A / 9.1	A / 3.8 A / 9.1	A / 2.9 A / 9.2	Y
4). Needwood Avenue & Higgins Street Southbound Approach	A / 8.6	A / 8.6	A / 8.6	Y
5). Needwood Avenue & Site Access Northbound Approach	N/A N/A	N/A N/A	A / 1.7 A / 8.6	Y
6). Maryland Avenue & Higgins Street Northbound Approach	A / 2.3 A / 8.7	A / 2.2 A / 8.7	A / 2.0 A / 8.8	Y
6). Maryland Avenue & Higgins Street Southbound Approach	A / 8.4	A / 8.4	A / 8.4	Y
7). Maryland Avenue & Site Access Southbound Approach	N/A N/A	N/A N/A	A / 1.2 A / 8.4	Y
Midday Saturday Peak Hour	Existing Delay	Background Delay	Total Delay	LOS D or better?
1). S. Aurora Street & Needwood Avenue Westbound Approach	A / 0.3 A / 9.3	A / 0.3 A / 9.4	A / 0.6 A / 9.6	Y
2). S. Aurora Street & Maryland Avenue Westbound Approach	A / 0.2 A / 9.6	A / 0.2 A / 9.6	A / 0.4 A / 9.7	Y
3). Brookletts Avenue & Higgins Street Northbound Approach	A / 0.9 A / 8.7	A / 0.8 A / 8.7	A / 1.0 A / 8.7	Y
3). Brookletts Avenue & Higgins Street Southbound Approach	A / 9.5	A / 9.5	A / 9.6	Y
4). Needwood Avenue & Higgins Street Northbound Approach	A / 2.8 A / 9.1	A / 2.8 A / 9.1	A / 1.8 A / 9.2	Y
4). Needwood Avenue & Higgins Street Southbound Approach	A / 8.8	A / 8.8	A / 8.8	Y
5). Needwood Avenue & Site Access Northbound Approach	N/A N/A	N/A N/A	A / 2.9 A / 8.6	Y
6). Maryland Avenue & Higgins Street Northbound Approach	A / 5.9 A / 8.3	A / 5.9 A / 8.3	A / 2.6 A / 8.3	Y
6). Maryland Avenue & Higgins Street Southbound Approach	A / 8.6	A / 8.6	A / 8.6	Y
7). Maryland Avenue & Site Access Southbound Approach	N/A N/A	N/A N/A	A / 5.0 A / 8.3	Y

Traffic Impact Analysis



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Results of HCM Level-of-Service Analyses

**Exhibit
9**

Section 5 Conclusions / Recommendations

5.1 Results of Analyses

This Traffic Impact Analysis (TIA) has been prepared for the proposed Silo Square Project. The subject site is located at 410 Needwood Avenue in Easton, Maryland, and is bounded by Needwood Avenue to the north, Higgins Street to the west, and Maryland Avenue to the south. The eastern side of the subject site is bounded by the Easton Rails-to-Trails.

The property was previously used as a grain storage facility with 10 silos and a 2,380 square foot storage warehouse. The grain storage facility has not been operational since 2022. The property is proposed to be redeveloped with 28 townhouse units. Access to the site will be provided with two full movement access points: one along Needwood Avenue and one along Maryland Avenue.

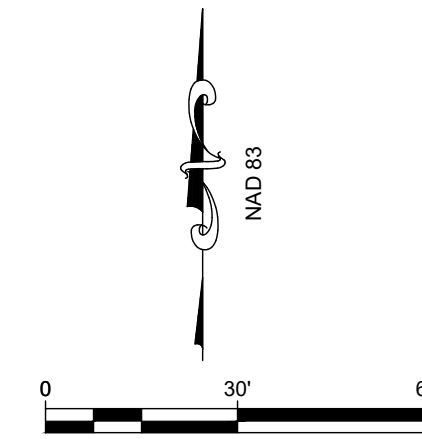
Based on the analyses contained in this report:

- All study intersections operate at LOS A under existing, background, and total conditions using the CLV methodology.
- All study intersections operate at LOS A and each stop-controlled approach operates with LOS B or better under existing, background, and total conditions.
- As demonstrated, the proposed redevelopment does not degrade the level of service at the study intersections, and therefore meets the Town of Easton requirements.
- The proposed redevelopment generates fewer morning and evening weekday peak hour trips than the previous grain storage facility use, which also generated heavy vehicle trips.
- The proposed redevelopment will not significantly increase traffic volume on any road segment or intersection within the study area.

In light of the findings contained in this report, the proposed redevelopment meets the adequacy requirements of the Town of Easton and has minimal impact on the surrounding road network. It is recommended that the proposed development is approved.

Appendix A

Supplemental Information
Turning Movement Counts



- 1 UNIT TYPE A
- 2 UNIT TYPE B
- 3 UNIT TYPE C
- 4 PARK
- 5 WALKING TRAIL
- 6 SIGN
- 7 TRASH AND RECYCLING CENTER
- 8 STORMWATER SUBMERGED GRAVEL WETLAND AND FOREBAY
- 9 PARKING AREA. TYPICAL SPACE: 9'Wx18'L
- 10 HANDICAP PARKING SPACE - 9'Wx18'L WITH 9'Wx18'L AISLE. TYPICAL OF TWO
- 11 DRIVEWAY FOR GARAGE ACCESS - 12'Wx25'L
- 12 GAZEBO
- 13 EXISTING SEWER LATERAL TO BE DEMOLISHED - SEE V-101 FOR FURTHER DETAILS
- 14 PROPOSED 6' TALL BOARD-ON-BOARD FENCE
- 15 PROPOSED TWO-RAIL FENCE TO MATCH EXISTING RAILS TO TRAILS FENCE
- 16 PROPOSED 3' SIDEWALK FOR RESIDENTIAL ACCESS - TYPICAL
- 17 PROPOSED 5' SIDEWALK FOR PUBLIC USE - TYPICAL
- 18 PROPOSED ELECTRIC VEHICLE CHARGING STATIONS
- 19 PROPOSED CLUSTER MAILBOX
- 20 PROPOSED PARALLEL PARKING FOR MAILBOX ACCESS

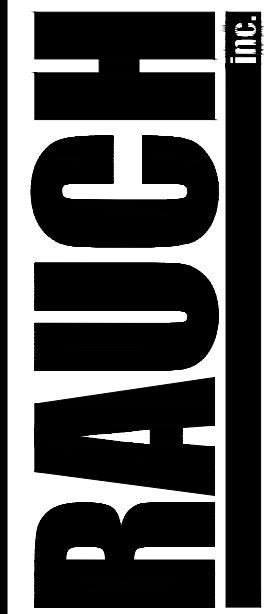
 PROPOSED SHADE TREE - TYPE TO BE DETERMINED

 PROPOSED SHRUB - TYPE TO BE DETERMINED

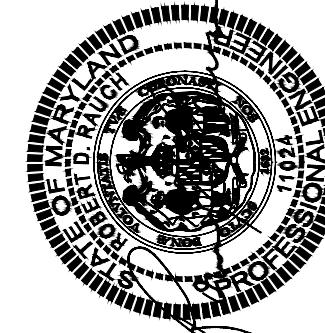
OF THE LANDS OF

SIL O SQUARE LLC

TAX MAP 0105, GRID 00EA, PARCEL 2226
EASTON, TALBOT COUNTY, MARYLAND
PREPARED FOR: SILO SQUARE, LLC



Main Office: 106 N Harrison St - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410 770 9081 | Fax: 410 770 3667



9/3/2024

Professional Certification.
I hereby certify that these documents were prepared on approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 11024
Expiration Date: July 24, 2026

[illegible]

From: [Nick Driban](#)
To: [Robert Engel](#)
Subject: FW: Silo Square Traffic Study
Date: Thursday, September 26, 2024 11:54:04 AM
Attachments: [image001.png](#)

From: Rick VanEmburch <rvanemburch@eastonmd.gov>
Sent: Wednesday, September 25, 2024 9:43 PM
To: mlenhart@LENHARTTRAFFIC.COM>
Cc: Nick Driban <ndriban@LENHARTTRAFFIC.COM>
Subject: Re: Silo Square Traffic Study

Mike -

Yes, per our phone conversation yesterday, please proceed with the scope below and the additional discussion you outlined.

Rick Van Emburch, P.E.
Town Engineer
Town of Easton
[Engineering Department](#)
410-820-8822

On Wed, Sep 25, 2024 at 9:11 AM [mlenhart <mlenhart@lenharttraffic.com>](mailto:mlenhart@lenharttraffic.com) wrote:

Hi Rick,

Following up on our conversation yesterday. We will proceed with the scope below and we will also include a discussion about the impacts associated with the residential connections to both Needwood and Maryland.

Thanks,
Mike

Mike Lenhart, P.E., PTOE
President

Office: [\(410\) 216-3333](tel:(410)216-3333) (Ext. 1)
Mobile: [\(410\) 980-2367](tel:(410)980-2367)



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From: mlenhart <mlenhart@LENHARTTRAFFIC.COM>
Sent: Monday, September 23, 2024 9:03 AM
To: Rick VanEmburch <rvanemburch@eastonmd.gov>
Cc: mlenhart <mlenhart@LENHARTTRAFFIC.COM>; Nick Driban <ndriban@LENHARTTRAFFIC.COM>
Subject: Silo Square Traffic Study

Hi Rick,

I've been retained by the applicant to prepare the traffic study for the next PC hearing on October 17th. What date do you need to have the study in order to prepare your staff report for the hearing?

1. I've attached a scoping package for your review/approval.

- a. Exhibit 1 shows the proposed study intersections.
- b. Exhibit 2 shows the trip generation.

- i. The 28 units will generate 9 AM, 13 PM, and 24 Saturday mid day peak hour trips.

- ii. As discussed at the hearing, we also included a trip generation estimate of the existing Purdue grain silos which have been abandoned since +/- 2022. I did a Google search on the history of the silo's and found several articles talking about a recent 40% reduction in trucks bringing grain to the site because the Town streets were too difficult to navigate, but I couldn't find any details on the actual volume of traffic associated with the silos. The ITE Trip Generation Manual does have trip generation information for a warehouse which would probably be the most closely related use to the silos (storage of goods or materials). The SDAT records indicate that the structure is 2,380 square feet which doesn't include the actual silos, but using the ITE trip generation formulas for 2,380 square feet indicates that the pre-existing silos could have generated 24 AM and 27 PM weekday trips, which is two to three times more than the proposed residential use. It does not have trip generation formulas for Saturdays. I think under any scenario we look at, the silos likely generated as much peak traffic as the proposed residential use, but the key point is that the silos likely generated mostly truck traffic which was highly impactful to the streets and neighborhood. The proposed use will be all residential trips and much more fitting with the neighborhood.

2. I've looked at the approved but unbuilt background developments in the area and don't think there's anything that would substantially impact S. Aurora Street in this area. As such, I would simply propose a 1.5% growth rate for a 5 year study period.

Please confirm this is ok. We're going to conduct traffic counts this upcoming Friday and Saturday.

Thanks,
Mike

Mike Lenhart, P.E., PTOE
President

Office: [\(410\) 216-3333](tel:4102163333) (Ext. 1)

Mobile: [\(410\) 980-2367](tel:4109802367)



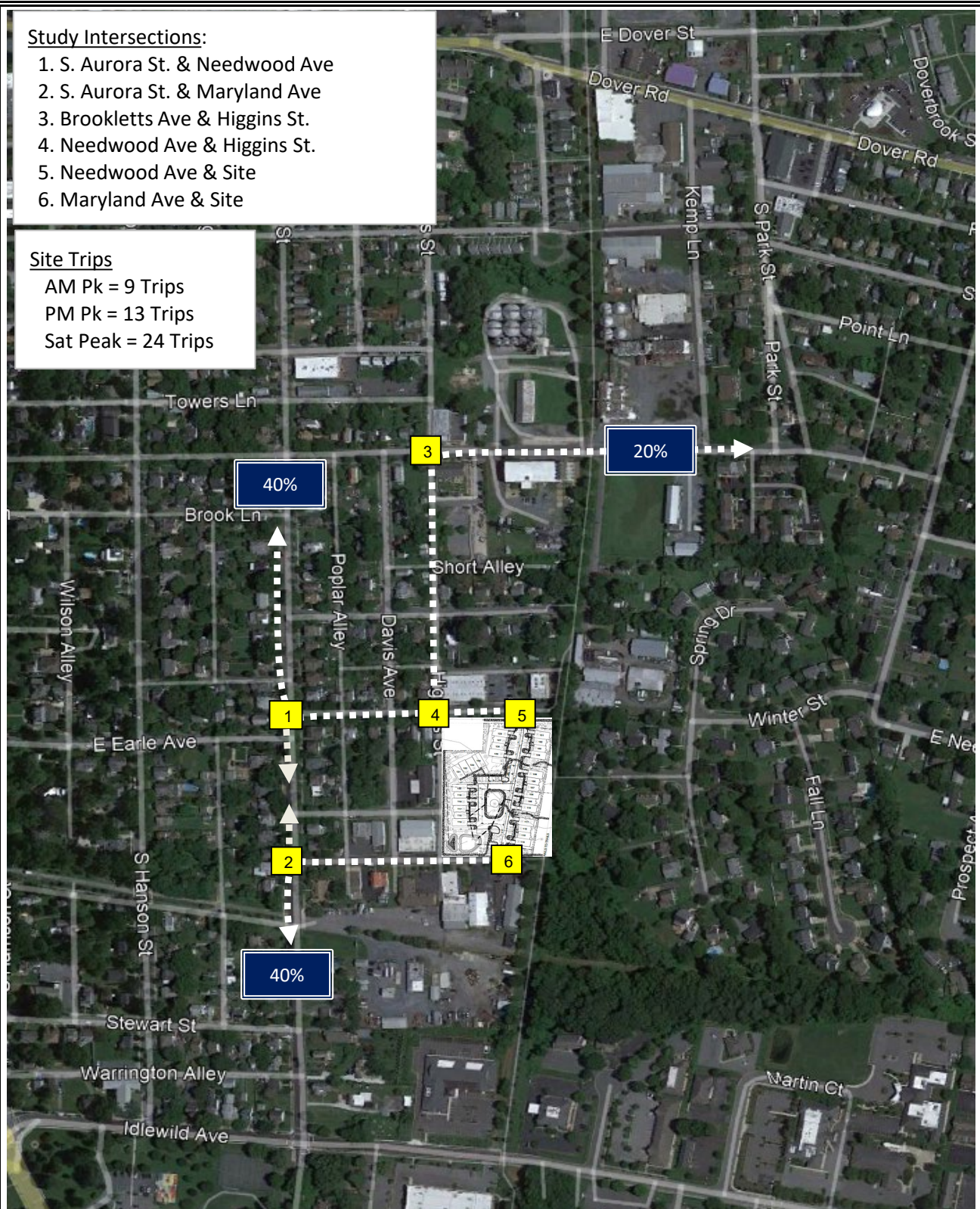
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Study Intersections:

1. S. Aurora St. & Needwood Ave
2. S. Aurora St. & Maryland Ave
3. Brookletts Ave & Higgins St.
4. Needwood Ave & Higgins St.
5. Needwood Ave & Site
6. Maryland Ave & Site

Site Trips

AM Pk = 9 Trips
PM Pk = 13 Trips
Sat Peak = 24 Trips



Trip Generation Memo

Site Location
Map

**Exhibit
1**



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Trip Generation Rates

Single-Family Attached Housing (ITE-215, Units)

Trip Distribution (In/Out)

Morning Trips = $0.52 \times \text{Units} - 5.70$	31/69
Evening Trips = $0.60 \times \text{Units} - 3.93$	57/43
$\text{Ln}(\text{Midday Sat. Trips}) = 0.82 \times \text{Ln}(\text{Units}) + 0.43$	48/52

Warehousing (ksf, ITE-150)

Morning Trips = $0.12 \times \text{ksf} + 23.62$	77/23
Evening Trips = $0.12 \times \text{ksf} + 26.48$	28/72
Midday Sat. Trips = $0.05 \times \text{ksf}$	64/36

Trip Generation Totals

			AM Peak			PM Peak			Sat. Mid-day Peak		
			In	Out	Total	In	Out	Total	In	Out	Total
Proposed	Single-Family Attached Housing (ITE-215, Units)	28 units	3	6	9	7	6	13	12	12	24
Pre-existing	Warehousing (ksf, ITE-150) [Grain Storage Facility]	2,380 sq.ft.	18	6	24	7	20	27	No Data		

NOTE: Trip Generation Rates obtained from the ITE Trip Generation Manual, 11th Edition

Traffic Impact Analysis	Trip Generation for Site	Exhibit 2
 LENHART TRAFFIC CONSULTING, INC. 645 BALTIMORE ANNAPOLIS BLVD, SUITE 214 SEVERNA PARK, MD 21146 www.lenharttraffic.com		

	Weekday Morning Peak Hour (6:00 am - 9:00 am)																					
	S. Aurora Street Northbound					S. Aurora Street Southbound					N/A Eastbound					Needwood Avenue Westbound						
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total	
6:00-6:15	0	0	8	1	0	0	0	9	0	0	0	0	0	0	0	0	2	0	0	0	0	20
6:15-6:30	0	0	8	1	0	0	0	12	0	0	0	0	0	0	0	0	3	0	1	0	0	25
6:30-6:45	0	0	21	0	0	0	0	12	0	0	0	0	0	0	0	0	1	0	2	0	0	36
6:45-7:00	0	0	17	2	0	0	1	22	0	0	0	0	0	0	0	0	0	0	0	1	0	42
7:00-7:15	0	0	26	1	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	1	0	53
7:15-7:30	0	0	31	0	0	0	1	62	0	0	0	0	0	0	0	0	0	0	0	4	0	94
7:30-7:45	0	0	61	0	0	0	1	68	0	0	0	0	0	0	0	0	2	0	0	2	0	132
7:45-8:00	0	0	74	3	1	0	1	39	0	2	0	0	0	0	0	0	1	0	1	0	0	119
8:00-8:15	0	0	44	0	0	0	0	33	0	0	0	0	0	0	0	0	1	0	2	0	0	80
8:15-8:30	0	0	60	1	3	0	1	34	0	3	0	0	0	0	0	0	0	0	1	0	0	97
8:30-8:45	0	0	40	0	0	0	1	36	0	0	0	0	0	0	0	0	1	0	0	0	0	78
8:45-9:00	0	0	42	4	4	0	4	40	0	0	0	0	0	0	0	0	2	0	0	1	0	92

Hourly Totals																					
6:00-7:00	0	0	46	3	0	0	1	46	0	0	0	0	0	0	0	0	4	0	3	1	104
6:15-7:15	0	0	72	4	0	0	1	72	0	0	0	0	0	0	0	0	4	0	3	2	158
6:30-7:30	0	0	95	3	0	0	2	122	0	0	0	0	0	0	0	0	1	0	2	6	231
6:45-7:45	0	0	135	3	0	0	3	178	0	0	0	0	0	0	0	0	2	0	0	8	329
7:00-8:00	0	0	192	4	1	0	3	195	0	2	0	0	0	0	0	0	3	0	1	7	408
7:15-8:15	0	0	210	3	1	0	3	202	0	2	0	0	0	0	0	0	4	0	3	6	434
7:30-8:30	0	0	239	4	4	0	3	174	0	5	0	0	0	0	0	0	4	0	4	2	439
7:45-8:45	0	0	218	4	4	0	3	142	0	5	0	0	0	0	0	0	3	0	4	0	383
8:00-9:00	0	0	186	5	7	0	6	143	0	3	0	0	0	0	0	0	4	0	3	1	358

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:30-8:30	0	0	239	4	4	0	3	174	0	5	0	0	0	0	0	0	4	0	4	2	439

	Weekday Evening Peak Hour (3:00 pm - 7:00 pm)																				
	S. Aurora Street Northbound					S. Aurora Street Southbound					N/A Eastbound					Needwood Avenue Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	0	0	46	1	0	0	1	43	0	0	0	0	0	0	0	0	1	0	0	0	92
3:15-3:30	0	0	45	0	0	0	0	34	0	0	0	0	0	0	0	0	0	0	1	0	80
3:30-3:45	0	0	39	1	1	0	1	33	0	0	0	0	0	0	0	0	0	0	0	0	74
3:45-4:00	0	0	42	1	0	0	4	41	0	0	0	0	0	0	0	0	1	0	0	1	89
4:00-4:15	0	0	50	1	0	0	1	40	0	0	0	0	0	0	0	0	2	0	1	1	95
4:15-4:30	0	0	41	1	0	0	1	47	0	0	0	0	0	0	0	0	1	0	1	0	92
4:30-4:45	0	0	45	1	1	0	0	36	0	0	0	0	0	0	0	0	1	0	0	0	83
4:45-5:00	0	0	43	0	0	0	0	51	0	0	0	0	0	0	0	0	2	0	3	0	99
5:00-5:15	0	0	36	1	0	0	2	32	0	0	0	0	0	0	0	0	1	0	2	0	74
5:15-5:30	0	0	34	1	0	0	0	45	0	0	0	0	0	0	0	0	0	0	0	0	80
5:30-5:45	0	0	39	1	0	0	2	41	0	0	0	0	0	0	0	0	2	0	3	2	88
5:45-6:00	0	0	31	2	0	0	0	19	0	0	0	0	0	0	0	0	3	0	0	0	55
6:00-6:15	0	0	28	1	0	0	0	34	0	0	0	0	0	0	0	0	1	0	0	0	64
6:15-6:30	0	0	23	0	0	0	0	11	0	0	0	0	0	0	0	0	1	0	1	0	36
6:30-6:45	0	0	19	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	35
6:45-7:00	0	0	32	0	0	0	0	19	0	0	0	0	0	0	0	0	1	0	1	0	53

Hourly Totals																					
3:00-4:00	0	0	172	3	1	0	6	151	0	0	0	0	0	0	0	2	0	1	1		337
3:15-4:15	0	0	176	3	1	0	6	148	0	0	0	0	0	0	0	3	0	2	2		341
3:30-4:30	0	0	172	4	1	0	7	161	0	0	0	0	0	0	0	4	0	2	2		353
3:45-4:45	0	0	178	4	1	0	6	164	0	0	0	0	0	0	0	5	0	2	2		362
4:00-5:00	0	0	179	3	1	0	2	174	0	0	0	0	0	0	0	6	0	5	1		371
4:15-5:15	0	0	165	3	1	0	3	166	0	0	0	0	0	0	0	5	0	6	0		349
4:30-5:30	0	0	158	3	1	0	2	164	0	0	0	0	0	0	0	4	0	5	0		337
4:45-5:45	0	0	152	3	0	0	4	169	0	0	0	0	0	0	0	5	0	8	2		343
5:00-6:00	0	0	140	5	0	0	4	137	0	0	0	0	0	0	0	6	0	5	2		299
5:15-6:15	0	0	132	5	0	0	2	139	0	0	0	0	0	0	0	6	0	3	2		289
5:30-6:30	0	0	121	4	0	0	2	105	0	0	0	0	0	0	0	7	0	4	2		245
5:45-6:45	0	0	101	3	0	0	0	80	0	0	0	0	0	0	0	5	0	1	0		190
6:00-7:00	0	0	102	1	0	0	0	80	0	0	0	0	0	0	0	3	0	2	0		188

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
4:00-5:00	0	0	179	3	1	0	2	174	0	0	0	0	0	0	0	0	6	0	5	1	371

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: S. Aurora Street & Needwood Avenue
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Friday, September 27, 2024
Jurisdiction: Town of Easton

Weekend Peak Hour (10:00 am - 2:00 pm)																					
Time:	S. Aurora Street Northbound					S. Aurora Street Southbound					N/A Eastbound					Needwood Avenue Westbound					Total
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
10:00-10:15	0	0	27	0	0	0	0	26	0	1	0	0	0	0	0	0	1	0	1	0	55
10:15-10:30	0	0	22	0	0	0	1	26	0	0	0	0	0	0	0	0	2	0	0	0	51
10:30-10:45	0	0	30	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	51
10:45-11:00	0	0	36	0	0	0	1	21	0	0	0	0	0	0	0	0	2	0	0	0	60
11:00-11:15	0	0	40	2	0	0	1	25	0	1	0	0	0	0	0	0	0	0	0	3	68
11:15-11:30	0	0	32	2	0	0	1	22	0	0	0	0	0	0	0	0	1	0	1	1	59
11:30-11:45	0	0	30	0	0	0	1	25	0	1	0	0	0	0	0	0	0	0	1	0	57
11:45-12:00	0	0	40	0	0	0	2	28	0	0	0	0	0	0	0	0	0	0	1	0	71
12:00-12:15	0	0	35	0	0	0	1	15	0	0	0	0	0	0	0	0	0	0	1	0	52
12:15-12:30	0	0	31	0	0	0	0	23	0	0	0	0	0	0	0	0	1	0	0	0	55
12:30-12:45	0	0	20	0	0	0	0	24	0	0	0	0	0	0	0	0	1	0	0	0	45
12:45-1:00	0	0	32	3	0	0	0	24	0	0	0	0	0	0	0	0	0	0	1	0	60
1:00-1:15	0	0	29	0	0	0	1	30	0	0	0	0	0	0	0	0	0	0	0	0	60
1:15-1:30	0	0	25	0	0	0	2	20	0	0	0	0	0	0	0	0	0	0	1	0	48
1:30-1:45	0	0	26	0	0	0	2	17	0	0	0	0	0	0	0	0	1	0	1	0	47
1:45-2:00	0	0	23	1	1	0	0	32	0	2	0	0	0	0	0	0	0	0	1	0	57

Hourly Totals																					
10:00-11:00	0	0	115	0	0	0	2	94	0	1	0	0	0	0	0	0	5	0	1	0	218
10:15-11:15	0	0	128	2	0	0	3	93	0	1	0	0	0	0	0	0	4	0	0	3	234
10:30-11:30	0	0	138	4	0	0	3	89	0	1	0	0	0	0	0	0	3	0	1	4	243
10:45-11:45	0	0	138	4	0	0	4	93	0	2	0	0	0	0	0	0	3	0	2	4	250
11:00-12:00	0	0	142	4	0	0	5	100	0	2	0	0	0	0	0	0	1	0	3	4	261
11:15-12:15	0	0	137	2	0	0	5	90	0	1	0	0	0	0	0	0	1	0	4	1	241
11:30-12:30	0	0	136	0	0	0	4	91	0	1	0	0	0	0	0	0	1	0	3	0	236
11:45-12:45	0	0	126	0	0	0	3	90	0	0	0	0	0	0	0	0	2	0	2	0	223
12:00-1:00	0	0	118	3	0	0	1	86	0	0	0	0	0	0	0	0	2	0	2	0	212
12:15-1:15	0	0	112	3	0	0	1	101	0	0	0	0	0	0	0	0	2	0	1	0	220
12:30-1:30	0	0	106	3	0	0	3	98	0	0	0	0	0	0	0	0	1	0	2	0	213
12:45-1:45	0	0	112	3	0	0	5	91	0	0	0	0	0	0	0	0	1	0	3	0	215
1:00-2:00	0	0	103	1	1	0	5	99	0	2	0	0	0	0	0	0	1	0	3	0	215
PM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
11:00-12:00	0	0	142	4	0	0	5	100	0	2	0	0	0	0	0	0	1	0	3	4	261

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: S. Aurora Street & Needwood Avenue
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, September 28, 2024
Jurisdiction: Town of Easton

	Weekday Morning Peak Hour (6:00 am - 9:00 am)																				
	S. Aurora Street Northbound					S. Aurora Street Southbound					N/A Eastbound					Maryland Avenue Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
6:00-6:15	0	0	10	0	0	0	1	9	0	0	0	0	0	0	0	0	0	0	0	0	20
6:15-6:30	0	0	9	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	23
6:30-6:45	0	0	20	2	0	0	1	12	0	0	0	0	0	0	0	0	0	0	0	1	35
6:45-7:00	0	0	18	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0	1	1	42
7:00-7:15	0	0	26	2	0	0	2	28	0	0	0	0	0	0	0	0	0	0	1	1	59
7:15-7:30	0	0	26	3	0	0	3	62	0	0	0	0	0	0	0	0	3	0	3	4	100
7:30-7:45	0	0	66	0	1	0	3	70	0	0	0	0	0	0	0	0	0	0	1	2	140
7:45-8:00	0	0	68	9	0	0	0	43	0	1	0	0	0	0	0	0	1	0	2	0	123
8:00-8:15	0	0	45	2	0	0	1	38	0	0	0	0	0	0	0	0	2	0	2	1	90
8:15-8:30	0	0	54	2	0	0	0	37	0	0	0	0	0	0	0	0	2	0	1	0	96
8:30-8:45	0	0	36	0	0	0	2	40	0	0	0	0	0	0	0	0	2	0	2	0	82
8:45-9:00	0	0	50	0	0	0	3	37	0	0	0	0	0	0	0	0	0	0	0	0	90

Hourly Totals																				
6:00-7:00	0	0	47	2	0	0	1	49	0	0	0	0	0	0	0	0	0	1	2	102
6:15-7:15	0	0	73	4	0	0	3	77	0	0	0	0	0	0	0	0	0	2	3	162
6:30-7:30	0	0	90	7	0	0	6	125	0	0	0	0	0	0	0	0	3	0	5	243
6:45-7:45	0	0	136	5	1	0	8	183	0	0	0	0	0	0	0	0	3	0	6	350
7:00-8:00	0	0	186	14	1	0	8	203	0	1	0	0	0	0	0	0	4	0	7	431
7:15-8:15	0	0	205	14	1	0	7	213	0	1	0	0	0	0	0	0	6	0	8	462
7:30-8:30	0	0	233	13	1	0	4	188	0	1	0	0	0	0	0	0	5	0	6	454
7:45-8:45	0	0	203	13	0	0	3	158	0	1	0	0	0	0	0	0	7	0	7	393
8:00-9:00	0	0	185	4	0	0	6	152	0	0	0	0	0	0	0	0	6	0	5	359

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:15-8:15	0	0	205	14	1	0	7	213	0	1	0	0	0	0	0	0	6	0	8	7	462

	Weekday Evening Peak Hour (3:00 pm - 7:00 pm)																				
	S. Aurora Street Northbound					S. Aurora Street Southbound					N/A Eastbound					Maryland Avenue Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	0	0	45	1	0	0	0	48	0	0	0	0	0	0	0	0	1	0	2	0	97
3:15-3:30	0	0	46	2	0	0	1	39	0	0	0	0	0	0	0	0	1	0	0	0	89
3:30-3:45	0	0	37	1	0	0	1	32	0	0	0	0	0	0	0	0	2	0	0	2	73
3:45-4:00	0	0	39	2	0	0	3	42	0	0	0	0	0	0	0	0	0	0	3	0	89
4:00-4:15	0	0	47	3	0	0	2	41	0	0	0	0	0	0	0	0	5	0	2	0	100
4:15-4:30	0	0	42	1	0	0	4	44	0	0	0	0	0	0	0	0	2	0	1	0	94
4:30-4:45	0	0	40	1	0	1	1	34	0	0	0	0	0	0	0	0	2	0	5	0	84
4:45-5:00	0	0	42	0	0	0	1	57	0	0	0	0	0	0	0	0	0	0	2	0	102
5:00-5:15	0	0	38	0	0	0	0	36	0	0	0	0	0	0	0	0	1	0	1	0	76
5:15-5:30	0	0	32	1	0	0	0	50	0	0	0	0	0	0	0	0	0	0	1	0	84
5:30-5:45	0	0	39	0	0	0	0	38	0	0	0	0	0	0	0	0	3	0	1	0	81
5:45-6:00	0	0	34	0	0	0	0	24	0	0	0	0	0	0	0	0	0	0	0	0	58
6:00-6:15	0	0	30	0	0	0	0	37	0	0	0	0	0	0	0	0	0	0	0	0	67
6:15-6:30	0	0	21	0	0	0	1	10	0	0	0	0	0	0	0	0	0	0	0	1	32
6:30-6:45	0	0	20	0	0	0	0	17	0	0	0	0	0	0	0	0	2	0	0	0	39
6:45-7:00	0	0	32	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	50

Hourly Totals																					
3:00-4:00	0	0	167	6	0	0	5	161	0	0	0	0	0	0	0	0	4	0	5	2	350
3:15-4:15	0	0	169	8	0	0	7	154	0	0	0	0	0	0	0	0	8	0	5	2	353
3:30-4:30	0	0	165	7	0	0	10	159	0	0	0	0	0	0	0	0	9	0	6	2	358
3:45-4:45	0	0	168	7	0	1	10	161	0	0	0	0	0	0	0	0	9	0	11	0	367
4:00-5:00	0	0	171	5	0	1	8	176	0	0	0	0	0	0	0	0	9	0	10	0	380
4:15-5:15	0	0	162	2	0	1	6	171	0	0	0	0	0	0	0	0	5	0	9	0	356
4:30-5:30	0	0	152	2	0	1	2	177	0	0	0	0	0	0	0	0	3	0	9	0	346
4:45-5:45	0	0	151	1	0	0	1	181	0	0	0	0	0	0	0	0	4	0	5	0	343
5:00-6:00	0	0	143	1	0	0	0	148	0	0	0	0	0	0	0	0	4	0	3	0	299
5:15-6:15	0	0	135	1	0	0	0	149	0	0	0	0	0	0	0	0	3	0	2	0	290
5:30-6:30	0	0	124	0	0	0	1	109	0	0	0	0	0	0	0	0	3	0	1	1	239
5:45-6:45	0	0	105	0	0	0	1	88	0	0	0	0	0	0	0	0	2	0	0	1	197
6:00-7:00	0	0	103	0	0	0	1	82	0	0	0	0	0	0	0	0	2	0	0	1	189

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
4:00-5:00	0	0	171	5	0	1	8	176	0	0	0	0	0	0	0	0	9	0	10	0	380

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: S. Aurora Street & Maryland Avenue
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Friday, September 27, 2024
Jurisdiction: Town of Easton

Weekend Peak Hour (10:00 am - 2:00 pm)																					
Time:	S. Aurora Street Northbound					S. Aurora Street Southbound					N/A Eastbound					Maryland Avenue Westbound					Total
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
10:00-10:15	0	0	31	1	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	1	58
10:15-10:30	0	0	21	1	0	0	0	31	0	0	0	0	0	0	0	0	1	0	0	0	54
10:30-10:45	0	0	30	0	0	0	0	22	0	0	0	0	0	0	0	0	0	0	0	0	52
10:45-11:00	0	0	36	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	61
11:00-11:15	0	0	42	2	0	0	1	25	0	0	0	0	0	0	0	0	0	0	0	4	70
11:15-11:30	0	0	30	0	0	0	0	24	0	0	0	0	0	0	0	0	2	0	1	0	57
11:30-11:45	0	0	30	0	0	0	1	24	0	0	0	0	0	0	0	0	0	0	1	0	56
11:45-12:00	0	0	41	1	0	0	0	29	0	0	0	0	0	0	0	0	0	0	0	0	71
12:00-12:15	0	0	35	1	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	48
12:15-12:30	0	0	30	0	0	0	0	27	0	0	0	0	0	0	0	0	1	0	0	0	58
12:30-12:45	0	0	19	1	0	0	0	24	0	0	0	0	0	0	0	0	0	0	1	0	45
12:45-1:00	0	0	29	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	2	0	61
1:00-1:15	0	0	29	0	0	0	0	32	0	1	0	0	0	0	0	0	0	0	0	0	61
1:15-1:30	0	0	22	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	1	0	44
1:30-1:45	0	0	25	1	0	0	1	16	0	0	0	0	0	0	0	0	2	0	0	0	45
1:45-2:00	0	0	26	1	0	0	1	30	0	0	0	0	0	0	0	0	0	0	0	0	58

Hourly Totals																					
10:00-11:00	0	0	118	2	0	0	0	104	0	0	0	0	0	0	0	0	1	0	0	1	226
10:15-11:15	0	0	129	3	0	0	1	103	0	0	0	0	0	0	0	0	1	0	0	4	241
10:30-11:30	0	0	138	2	0	0	1	96	0	0	0	0	0	0	0	0	2	0	1	4	244
10:45-11:45	0	0	138	2	0	0	2	98	0	0	0	0	0	0	0	0	2	0	2	4	248
11:00-12:00	0	0	143	3	0	0	2	102	0	0	0	0	0	0	0	0	2	0	2	4	258
11:15-12:15	0	0	136	2	0	0	1	89	0	0	0	0	0	0	0	0	2	0	2	0	232
11:30-12:30	0	0	136	2	0	0	1	92	0	0	0	0	0	0	0	0	1	0	1	0	233
11:45-12:45	0	0	125	3	0	0	0	92	0	0	0	0	0	0	0	0	1	0	1	0	222
12:00-1:00	0	0	113	2	0	0	0	93	0	0	0	0	0	0	0	0	1	0	3	0	212
12:15-1:15	0	0	107	1	0	0	0	113	0	1	0	0	0	0	0	0	1	0	3	0	226
12:30-1:30	0	0	99	1	0	0	0	107	0	1	0	0	0	0	0	0	0	0	4	0	212
12:45-1:45	0	0	105	1	0	0	1	99	0	1	0	0	0	0	0	0	2	0	3	0	212
1:00-2:00	0	0	102	2	0	0	2	99	0	1	0	0	0	0	0	0	2	0	1	0	209
PM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
11:00-12:00	0	0	143	3	0	0	2	102	0	0	0	0	0	0	0	0	2	0	2	4	258

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: S. Aurora Street & Maryland Avenue
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, September 28, 2024
Jurisdiction: Town of Easton

Time:	Weekday Morning Peak Hour (6:00 am - 9:00 am)																				Total
	Higgins Street Northbound					Higgins Street Southbound					Brookletts Avenue Eastbound					Brookletts Avenue Westbound					
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
6:00-6:15	0	0	0	0	0	0	4	0	1	0	0	0	4	0	0	0	0	11	0	0	20
6:15-6:30	0	0	0	0	0	0	6	0	1	0	0	0	3	0	0	0	0	17	0	0	27
6:30-6:45	0	0	0	1	0	0	4	0	0	0	0	0	10	0	0	0	1	29	0	1	45
6:45-7:00	0	0	0	2	0	0	3	1	2	0	0	0	15	0	1	0	0	33	0	0	56
7:00-7:15	0	0	0	0	3	0	2	0	2	0	0	0	17	0	0	0	0	34	0	0	55
7:15-7:30	0	0	0	2	0	0	2	0	4	0	0	0	25	0	0	0	2	45	0	1	80
7:30-7:45	0	0	0	2	0	0	3	1	1	0	0	0	25	1	1	0	1	42	0	0	76
7:45-8:00	0	1	0	1	0	0	4	1	3	0	0	0	36	0	0	0	0	32	0	0	78
8:00-8:15	0	1	0	4	0	0	0	1	2	0	0	0	74	1	1	0	1	41	0	0	125
8:15-8:30	0	2	0	1	0	0	1	0	2	0	0	0	49	0	4	0	0	62	0	0	117
8:30-8:45	0	0	0	4	0	0	0	0	0	0	0	0	25	0	0	0	1	50	0	0	80
8:45-9:00	0	3	0	2	0	0	3	1	1	0	0	0	27	0	2	0	2	35	0	1	74

Hourly Totals																					
6:00-7:00	0	0	0	3	0	0	13	1	3	0	0	0	28	0	1	0	1	79	0	1	130
6:15-7:15	0	0	0	3	3	0	15	1	5	0	0	0	45	0	1	0	1	113	0	1	188
6:30-7:30	0	0	0	5	3	0	11	1	8	0	0	0	67	0	1	0	3	141	0	2	242
6:45-7:45	0	0	0	6	3	0	10	2	9	0	0	0	82	1	2	0	3	154	0	1	273
7:00-8:00	0	1	0	5	3	0	11	2	10	0	0	0	103	1	1	0	3	153	0	1	294
7:15-8:15	0	2	0	9	0	0	9	3	10	0	0	0	160	2	2	0	4	160	0	1	362
7:30-8:30	0	4	0	8	0	0	8	3	8	0	0	0	184	2	6	0	2	177	0	0	402
7:45-8:45	0	4	0	10	0	0	5	2	7	0	0	0	184	1	5	0	2	185	0	0	405
8:00-9:00	0	6	0	11	0	0	4	2	5	0	0	0	175	1	7	0	4	188	0	1	404

AM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
7:45-8:45	0	4	0	10	0	0	5	2	7	0	0	0	184	1	5	0	2	185	0	0	405

	Weekday Evening Peak Hour (3:00 pm - 7:00 pm)																				
	Higgins Street Northbound					Higgins Street Southbound					Brookletts Avenue Eastbound					Brookletts Avenue Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	0	1	0	5	0	0	3	1	0	0	0	0	41	0	0	0	2	89	0	1	142
3:15-3:30	0	1	0	1	0	0	3	0	1	0	0	0	39	1	0	0	0	38	0	0	84
3:30-3:45	0	1	0	0	0	0	4	0	1	0	0	0	31	0	0	0	0	38	0	0	75
3:45-4:00	0	0	0	1	0	0	5	0	2	0	0	0	32	0	0	0	1	34	0	1	75
4:00-4:15	0	0	0	2	0	0	3	3	2	0	0	0	37	0	0	0	0	35	0	0	82
4:15-4:30	0	1	0	0	0	0	7	0	1	0	0	0	33	0	0	0	2	36	0	0	80
4:30-4:45	0	0	0	2	0	0	3	0	6	0	0	0	39	0	1	0	2	34	0	0	86
4:45-5:00	0	0	0	1	1	0	3	2	1	0	0	0	36	0	0	0	2	39	0	0	84
5:00-5:15	0	0	0	1	0	0	1	0	2	0	0	0	22	0	0	0	0	35	0	0	61
5:15-5:30	0	0	0	2	0	0	1	0	3	0	0	0	38	0	0	0	2	33	0	0	79
5:30-5:45	0	0	0	1	0	0	0	0	3	0	0	0	37	0	0	0	1	37	0	0	79
5:45-6:00	0	0	0	2	0	0	1	0	2	0	0	0	44	0	0	0	0	20	0	0	69
6:00-6:15	0	0	0	0	0	0	2	0	3	0	0	0	27	0	0	0	1	28	0	0	61
6:15-6:30	0	0	0	0	0	0	1	0	0	0	0	0	24	0	0	0	1	16	0	0	42
6:30-6:45	0	0	0	0	0	0	5	2	2	0	0	0	18	0	0	0	2	22	0	0	51
6:45-7:00	0	1	0	1	0	0	2	0	2	0	0	0	25	0	0	0	2	27	0	0	60

Hourly Totals																					
3:00-4:00	0	3	0	7	0	0	15	1	4	0	0	0	143	1	0	0	3	199	0	2	378
3:15-4:15	0	2	0	4	0	0	15	3	6	0	0	0	139	1	0	0	1	145	0	1	317
3:30-4:30	0	2	0	3	0	0	19	3	6	0	0	0	133	0	0	0	3	143	0	1	313
3:45-4:45	0	1	0	5	0	0	18	3	11	0	0	0	141	0	1	0	5	139	0	1	325
4:00-5:00	0	1	0	5	1	0	16	5	10	0	0	0	145	0	1	0	6	144	0	0	334
4:15-5:15	0	1	0	4	1	0	14	2	10	0	0	0	130	0	1	0	6	144	0	0	313
4:30-5:30	0	0	0	6	1	0	8	2	12	0	0	0	135	0	1	0	6	141	0	0	312
4:45-5:45	0	0	0	5	1	0	5	2	9	0	0	0	133	0	0	0	5	144	0	0	304
5:00-6:00	0	0	0	6	0	0	3	0	10	0	0	0	141	0	0	0	3	125	0	0	288
5:15-6:15	0	0	0	5	0	0	4	0	11	0	0	0	146	0	0	0	4	118	0	0	288
5:30-6:30	0	0	0	3	0	0	4	0	8	0	0	0	132	0	0	0	3	101	0	0	251
5:45-6:45	0	0	0	2	0	0	9	2	7	0	0	0	113	0	0	0	4	86	0	0	223
6:00-7:00	0	1	0	1	0	0	10	2	7	0	0	0	94	0	0	0	6	93	0	0	214

PM	Northbound					Southbound					Eastbound					Westbound					Total
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-4:00	0	3	0	7	0	0	15	1	4	0	0	0	143	1	0	0	3	199	0	2	378

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: Brookletts Avenue & Higgins Street
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Friday, September 27, 2024
Jurisdiction: Town of Easton

	Weekend Peak Hour (10:00 am - 2:00 pm)																				
	Higgins Street Northbound					Higgins Street Southbound					Brookletts Avenue Eastbound					Brookletts Avenue Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
10:00-10:15	0	0	0	0	0	0	0	0	2	1	0	0	14	0	0	0	0	20	0	2	36
10:15-10:30	0	0	0	3	0	0	1	0	0	0	0	0	18	0	0	0	0	27	0	0	49
10:30-10:45	0	0	0	1	1	0	1	0	1	0	0	0	17	0	0	0	1	28	0	0	49
10:45-11:00	0	1	0	0	0	0	1	0	0	0	0	0	19	0	0	0	0	29	0	0	50
11:00-11:15	0	0	0	0	0	0	3	1	1	0	0	0	21	0	1	0	0	29	0	0	55
11:15-11:30	0	0	0	0	0	0	4	1	1	0	0	0	16	0	0	0	0	23	0	0	45
11:30-11:45	0	0	0	1	1	0	2	0	0	0	0	0	20	0	0	0	0	24	0	0	47
11:45-12:00	0	1	0	1	0	0	1	2	0	0	0	0	22	0	0	0	0	21	0	0	48
12:00-12:15	0	0	0	0	0	0	1	0	1	0	0	0	27	0	0	0	0	20	0	0	49
12:15-12:30	0	0	0	2	0	0	2	1	3	0	0	0	19	0	0	0	1	22	0	0	50
12:30-12:45	0	0	0	0	3	0	2	0	1	0	0	0	18	0	0	0	0	32	0	0	53
12:45-1:00	0	0	0	1	0	0	0	1	4	0	0	0	25	0	0	0	0	23	0	0	54
1:00-1:15	0	0	0	0	0	0	1	1	0	0	0	0	18	0	0	0	0	30	0	0	50
1:15-1:30	0	0	0	1	0	0	2	0	2	0	0	0	18	0	0	0	0	19	0	0	42
1:30-1:45	0	1	0	2	0	0	1	1	0	0	0	0	16	0	0	0	0	27	0	0	48
1:45-2:00	0	0	0	1	0	0	1	0	2	0	0	0	14	0	0	0	0	13	0	0	31

Hourly Totals																					
10:00-11:00	0	1	0	4	1	0	3	0	3	1	0	0	68	0	0	0	1	104	0	2	188
10:15-11:15	0	1	0	4	1	0	6	1	2	0	0	0	75	0	1	0	1	113	0	0	205
10:30-11:30	0	1	0	1	1	0	9	2	3	0	0	0	73	0	1	0	1	109	0	0	201
10:45-11:45	0	1	0	1	1	0	10	2	2	0	0	0	76	0	1	0	0	105	0	0	199
11:00-12:00	0	1	0	2	1	0	10	4	2	0	0	0	79	0	1	0	0	97	0	0	197
11:15-12:15	0	1	0	2	1	0	8	3	2	0	0	0	85	0	0	0	0	88	0	0	190
11:30-12:30	0	1	0	4	1	0	6	3	4	0	0	0	88	0	0	0	1	87	0	0	195
11:45-12:45	0	1	0	3	3	0	6	3	5	0	0	0	86	0	0	0	1	95	0	0	203
12:00-1:00	0	0	0	3	3	0	5	2	9	0	0	0	89	0	0	0	1	97	0	0	209
12:15-1:15	0	0	0	3	3	0	5	3	8	0	0	0	80	0	0	0	1	107	0	0	210
12:30-1:30	0	0	0	2	3	0	5	2	7	0	0	0	79	0	0	0	0	104	0	0	202
12:45-1:45	0	1	0	4	0	0	4	3	6	0	0	0	77	0	0	0	0	99	0	0	194
1:00-2:00	0	1	0	4	0	0	5	2	4	0	0	0	66	0	0	0	0	89	0	0	171
PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
12:15-1:15	0	0	0	3	3	0	5	3	8	0	0	0	80	0	0	0	1	107	0	0	210

Peak Hour Turning Movement Count	Intersection: Brookletts Avenue & Higgins Street Weather: Clear Count by: Count Cam DSS Count Day/Date: Saturday, September 28, 2024 Jurisdiction: Town of Easton
 LENHART TRAFFIC CONSULTING, INC. 645 BALTIMORE ANNAPOLIS BLVD, SUITE 214 SEVERNA PARK, MD 21146 www.lenharttraffic.com	

	Weekday Morning Peak Hour (6:00 am - 9:00 am)																				
	Higgins Street Northbound					Higgins Street Southbound					Needwood Avenue Eastbound					Needwood Avenue Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
6:00-6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
6:15-6:30	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	3	0	0	5
6:30-6:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	3
6:45-7:00	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
7:00-7:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15-7:30	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
7:30-7:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	2
7:45-8:00	0	0	1	0	0	0	1	0	0	0	0	0	4	0	0	0	0	2	0	0	8
8:00-8:15	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	2	0	5
8:15-8:30	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	1	3
8:30-8:45	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	1	0	0	4
8:45-9:00	0	0	0	0	0	0	0	0	0	2	0	0	8	0	0	0	0	1	0	0	9

Hourly Totals																					
6:00-7:00	0	0	0	0	0	0	0	0	1	0	0	0	4	1	0	0	0	5	0	0	11
6:15-7:15	0	0	0	0	0	0	0	0	1	0	0	0	5	1	0	0	0	5	0	0	12
6:30-7:30	0	0	1	0	0	0	0	1	1	0	0	0	4	0	0	0	0	2	0	0	9
6:45-7:45	0	0	1	0	0	0	0	1	1	0	0	0	4	0	0	0	0	1	0	0	8
7:00-8:00	0	0	2	0	0	0	1	1	1	0	0	0	5	0	0	0	0	3	0	0	13
7:15-8:15	0	0	3	0	0	0	1	1	1	1	0	0	5	0	0	0	0	4	2	0	18
7:30-8:30	0	0	2	0	0	0	2	0	1	1	0	1	6	0	0	0	0	4	2	1	20
7:45-8:45	0	0	2	0	0	0	3	1	0	1	0	1	7	0	0	0	0	4	2	1	22
8:00-9:00	0	0	1	0	0	0	2	1	0	3	0	1	11	0	0	0	0	3	2	1	25

AM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
8:00-9:00	0	0	1	0	0	0	2	1	0	3	0	1	11	0	0	0	0	3	2	1	25

	Weekday Evening Peak Hour (3:00 pm - 7:00 pm)																				
	Higgins Street Northbound					Higgins Street Southbound					Needwood Avenue Eastbound					Needwood Avenue Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:00-3:15	0	0	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	1	0	5
3:15-3:30	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	3
3:30-3:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:45-4:00	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	2	0	0	6
4:00-4:15	0	0	0	0	0	0	0	1	2	0	0	1	0	0	0	0	0	2	0	0	6
4:15-4:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3
4:30-4:45	0	0	0	0	0	0	1	0	1	1	0	1	0	0	1	0	0	1	0	0	4
4:45-5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
5:00-5:15	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	4
5:15-5:30	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	3
5:30-5:45	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	1	0	6
5:45-6:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	0	4
6:00-6:15	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2
6:15-6:30	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	0	0	4
6:30-6:45	0	0	0	0	1	0	1	2	0	1	0	0	0	0	0	0	0	0	0	0	3
6:45-7:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Hourly Totals																					
3:00-4:00	0	1	1	1	0	0	0	3	1	0	0	1	3	0	0	0	0	3	1	0	15
3:15-4:15	0	1	1	0	0	0	0	3	2	0	0	1	3	0	0	0	0	5	0	0	16
3:30-4:30	0	1	2	0	0	0	0	1	2	0	0	1	3	0	0	0	0	6	0	0	16
3:45-4:45	0	0	2	0	0	0	1	1	3	1	0	2	3	0	1	0	0	7	0	0	21
4:00-5:00	0	0	1	0	0	0	1	1	3	1	0	2	0	0	1	0	0	7	0	0	17
4:15-5:15	0	0	2	0	0	0	1	0	2	1	0	1	1	0	1	0	0	6	0	0	15
4:30-5:30	0	0	1	0	0	0	1	1	3	1	0	2	1	0	1	0	0	4	0	0	15
4:45-5:45	0	1	1	0	0	0	0	1	2	0	0	1	3	0	0	0	0	5	1	0	15
5:00-6:00	0	1	1	0	0	0	0	1	2	0	0	2	3	0	0	0	0	6	1	0	17
5:15-6:15	0	1	0	0	0	0	0	1	2	0	0	3	2	0	0	0	0	5	1	0	15
5:30-6:30	0	1	0	0	0	0	0	1	2	0	0	2	2	0	0	0	0	7	1	0	16
5:45-6:45	0	0	0	0	1	0	1	3	2	1	0	2	0	0	0	0	0	5	0	0	15
6:00-7:00	0	0	0	0	2	0	1	3	2	1	0	1	0	0	0	0	0	2	0	0	12

PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
3:45-4:45	0	0	2	0	0	0	1	1	3	1	0	2	3	0	1	0	0	7	0	0	21

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: Needwood Avenue & Higgins Street
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Friday, September 27, 2024
Jurisdiction: Town of Easton

	Weekend Peak Hour (10:00 am - 2:00 pm)																				
	Higgins Street Northbound					Higgins Street Southbound					Needwood Avenue Eastbound					Needwood Avenue Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
10:00-10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
10:15-10:30	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	3
10:30-10:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
10:45-11:00	0	0	0	0	0	0	0	0	0	0	0	1	2	0	1	0	0	1	0	0	4
11:00-11:15	0	0	1	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	4
11:15-11:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2
11:30-11:45	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	3
11:45-12:00	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	1	0	6
12:00-12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
12:15-12:30	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	3
12:30-12:45	0	0	0	0	0	0	0	0	0	1	0	0	2	0	1	0	0	1	0	0	3
12:45-1:00	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	3
1:00-1:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
1:15-1:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2
1:30-1:45	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	2	0	0	5
1:45-2:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2

Hourly Totals																					
10:00-11:00	0	0	0	0	1	0	1	0	0	1	0	1	3	0	1	0	0	5	0	0	13
10:15-11:15	0	0	1	0	1	0	1	1	0	1	0	1	5	0	1	0	0	3	0	0	15
10:30-11:30	0	0	1	0	0	0	1	1	0	1	0	1	5	0	1	0	0	2	0	0	13
10:45-11:45	0	0	1	0	0	0	0	1	0	0	0	2	6	0	1	0	0	3	0	0	14
11:00-12:00	0	0	2	0	0	0	0	2	0	0	0	1	5	0	0	0	0	4	1	0	15
11:15-12:15	0	0	1	0	0	0	0	1	0	0	0	1	3	0	0	0	0	4	2	0	12
11:30-12:30	0	1	1	0	0	0	1	1	0	0	0	2	2	0	0	0	0	3	2	0	13
11:45-12:45	0	1	1	0	0	0	1	1	0	1	0	1	3	0	1	0	0	3	2	0	15
12:00-1:00	0	1	0	0	0	0	2	0	0	1	0	1	4	0	1	0	0	1	1	0	12
12:15-1:15	0	1	0	0	0	0	2	0	0	2	0	1	4	0	1	0	0	1	0	0	12
12:30-1:30	0	0	0	0	0	0	1	0	0	2	0	0	5	0	1	0	0	2	0	0	11
12:45-1:45	0	0	0	0	0	0	1	1	0	1	0	0	5	0	0	0	0	3	0	0	11
1:00-2:00	0	0	0	0	0	0	0	1	0	1	0	1	3	0	0	0	0	4	0	0	10
PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
10:15-11:15	0	0	1	0	1	0	1	1	0	1	0	1	5	0	1	0	0	3	0	0	15

Peak Hour
Turning Movement Count



LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com

Intersection: Needwood Avenue & Higgins Street
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, September 28, 2024
Jurisdiction: Town of Easton

Weekday Morning Peak Hour (6:00 am - 9:00 am)																					
Time	Higgins Street Northbound					Higgins Street Southbound					Maryland Avenue Eastbound					Maryland Avenue Westbound					Total
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
6:00-6:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
6:15-6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30-6:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
6:45-7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:00-7:15	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	3
7:15-7:30	0	0	0	0	3	0	0	0	1	0	0	1	3	0	0	0	0	3	1	0	9
7:30-7:45	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	5
7:45-8:00	0	0	0	0	5	0	0	0	0	1	1	4	5	0	0	0	0	2	0	0	12
8:00-8:15	0	0	0	0	3	0	0	0	0	0	1	0	1	0	1	0	0	1	1	0	4
8:15-8:30	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	3	1	0	6
8:30-8:45	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	4
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	3
Hourly Totals																					
6:00-7:00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	3
6:15-7:15	0	1	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	6
6:30-7:30	0	1	0	0	3	0	0	0	1	0	0	1	7	0	0	0	0	4	1	0	18
6:45-7:45	0	1	0	0	4	0	0	0	1	0	0	1	9	0	0	0	0	5	1	0	22
7:00-8:00	0	1	0	0	9	0	0	0	1	1	1	5	14	0	0	0	0	6	1	0	39
7:15-8:15	0	0	0	0	12	0	0	0	1	1	2	5	13	0	1	0	0	7	2	0	44
7:30-8:30	0	0	0	0	9	0	1	0	0	1	2	4	11	0	1	0	0	7	2	0	38
7:45-8:45	0	1	0	0	8	0	1	0	1	1	2	4	8	0	1	0	0	7	2	0	36
8:00-9:00	0	1	0	0	3	0	1	0	1	0	1	0	5	1	2	0	0	5	2	0	22
AM Peak Hour 7:15-8:15	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
	0	0	0	0	12	0	0	0	1	1	2	5	13	0	1	0	0	7	2	0	44
Weekday Evening Peak Hour (3:00 pm - 7:00 pm)																					
Time	Higgins Street Northbound					Higgins Street Southbound					Maryland Avenue Eastbound					Maryland Avenue Westbound					Total
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	
3:00-3:15	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2	0	0	4
3:15-3:30	0	1	0	0	0	0	0	0	2	0	0	1	1	0	0	0	0	1	0	0	6
3:30-3:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
3:45-4:00	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	2	1	0	7
4:00-4:15	0	0	0	0	3	0	0	0	1	0	1	0	4	0	0	0	0	4	0	0	10
4:15-4:30	0	0	0	0	6	0	0	0	0	0	1	0	3	0	0	0	0	3	1	0	8
4:30-4:45	0	4	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	1	0	0	8
4:45-5:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2
5:00-5:15	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
5:15-5:30	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	3
5:30-5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
5:45-6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00-6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15-6:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:30-6:45	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	3
6:45-7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Totals																					
3:00-4:00	0	1	0	0	0	0	1	0	2	0	1	1	7	0	0	0	0	5	1	0	19
3:15-4:15	0	1	0	0	3	0	0	0	3	0	2	1	10	0	0	0	0	7	1	0	28
3:30-4:30	0	0	0	0	9	0	0	0	1	0	3	0	12	0	0	0	0	9	2	0	36
3:45-4:45	0	4	0	0	9	0	0	0	3	0	3	0	11	0	0	0	0	10	2	0	42
4:00-5:00	0	4	0	0	9	0	0	0	3	0	2	0	9	0	0	0	0	9	1	0	37
4:15-5:15	0	4	1	0	6	0	0	0	3	0	1	0	5	0	0	0	0	5	1	0	26
4:30-5:30	0	4	1	0	0	0	1	0	3	0	0	1	2	0	0	0	0	3	0	0	15
4:45-5:45	0	0	1	0	0	0	1	0	1	0	0	1	1	0	0	0	0	5	0	0	10
5:00-6:00	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	4	0	0	8
5:15-6:15	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	4	0	0	6
5:30-6:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0	4
5:45-6:45	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	4
6:00-7:00	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	4
PM Peak Hour 3:45-4:45	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
	0	4	0	0	9	0	0	0	3	0	3	0	11	0	0	0	0	10	2	0	42
Peak Hour Turning Movement Count		Intersection: Maryland Avenue & Higgins Street Weather: Clear Count by: Count Cam DSS Count Day/Date: Friday, September 27, 2024 Jurisdiction: Town of Easton																			
LENHART TRAFFIC CONSULTING, INC.																					
645 BALTIMORE ANNAPOLIS BLVD, SUITE 214 SEVERNA PARK, MD 21146 www.lenharttraffic.com																					

	Weekend Peak Hour (10:00 am - 2:00 pm)																				
	Higgins Street Northbound					Higgins Street Southbound					Maryland Avenue Eastbound					Maryland Avenue Westbound					
Time:	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
10:00-10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15-10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30-10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45-11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00-11:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
11:15-11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30-11:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45-12:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:00-12:15	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	4
12:15-12:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2
12:30-12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45-1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00-1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15-1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30-1:45	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	3
1:45-2:00	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	3

Hourly Totals																					
10:00-11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:15-11:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
10:30-11:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
10:45-11:45	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	
11:00-12:00	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	3	
11:15-12:15	0	0	0	2	1	0	1	0	0	0	1	1	0	0	0	0	0	1	0	7	
11:30-12:30	0	0	0	2	1	0	1	0	0	0	1	2	0	0	0	0	0	2	0	9	
11:45-12:45	0	0	0	1	1	0	1	0	0	0	1	2	0	0	0	0	0	2	0	8	
12:00-1:00	0	0	0	1	1	0	0	0	0	0	1	2	0	0	0	0	0	2	0	7	
12:15-1:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2	
12:30-1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45-1:45	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	3	
1:00-2:00	1	0	0	1	0	0	0	1	0	0	0	1	0	0	1	0	1	0	1	7	
PM	Northbound					Southbound					Eastbound					Westbound					
Peak Hour	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	Total
11:30-12:30	0	0	0	2	1	0	1	0	0	0	1	2	0	0	0	0	0	2	0	0	9

Peak Hour Turning Movement Count	Intersection: Maryland Avenue & Higgins Street Weather: Clear Count by: Count Cam DSS Count Day/Date: Saturday, September 28, 2024 Jurisdiction: Town of Easton
 LENHART TRAFFIC CONSULTING, INC. 645 BALTIMORE ANNAPOLIS BLVD, SUITE 214 SEVERNA PARK, MD 21146 www.lenharttraffic.com	

Appendix B

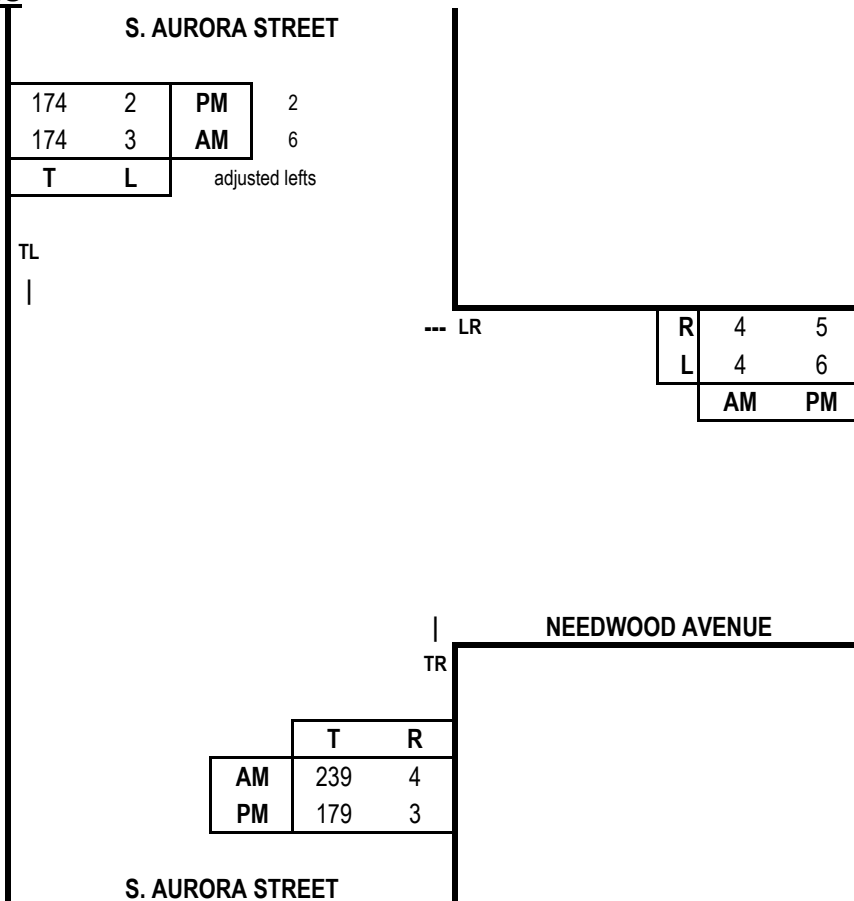
Level of Service (LOS) Worksheets

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: S. Aurora Street
and: Needwood Avenue
Conditions: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

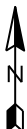
Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	8	1.00	8			
NB	243	1.00	243	3	1.00	3
SB	180	1.00	180			
CLV TOTAL=						254
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	11	1.00	11			
NB	182	1.00	182	2	1.00	2
SB	176	1.00	176			
CLV TOTAL=						195
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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**S. Aurora Street &
Needwood Avenue
(Existing Traffic)**

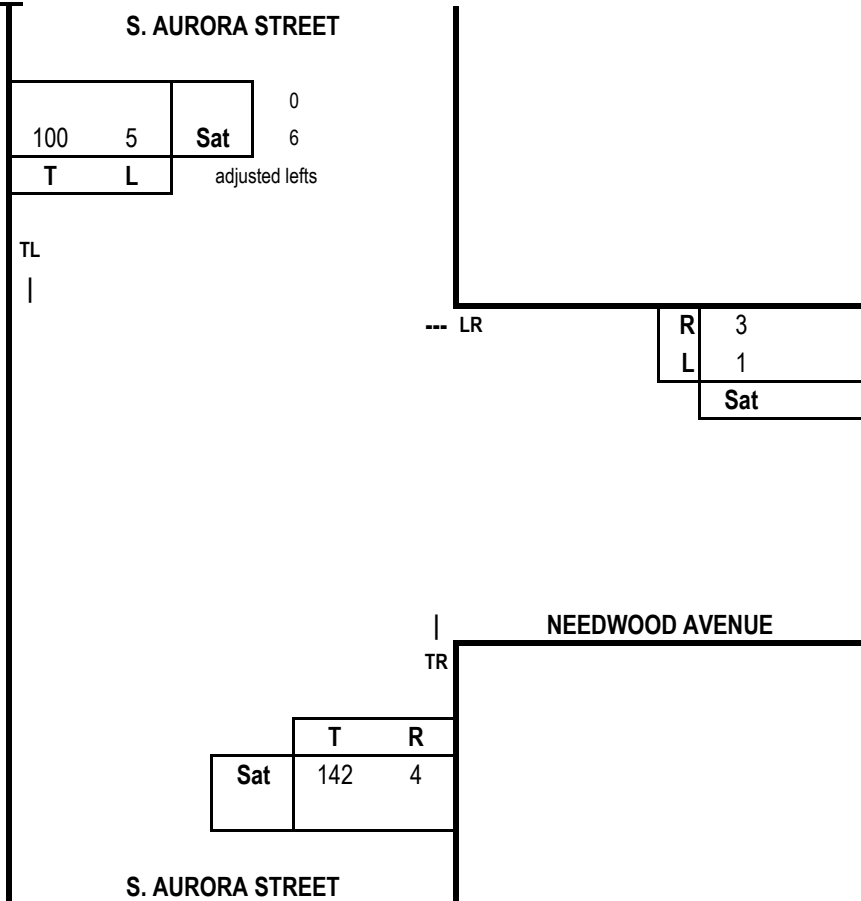
**Intersection
1**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: S. Aurora Street
and: Needwood Avenue
Conditions: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



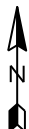
Capacity Analysis

Sat. Midday Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	4	1.00	4			
NB	146	1.00	146	5	1.00	5
SB	106	1.00	106			
CLV TOTAL=						155
Level of Service (LOS)=						A

Critical Lane Volume Analysis



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**S. Aurora Street &
Needwood Avenue
(Existing Traffic)**

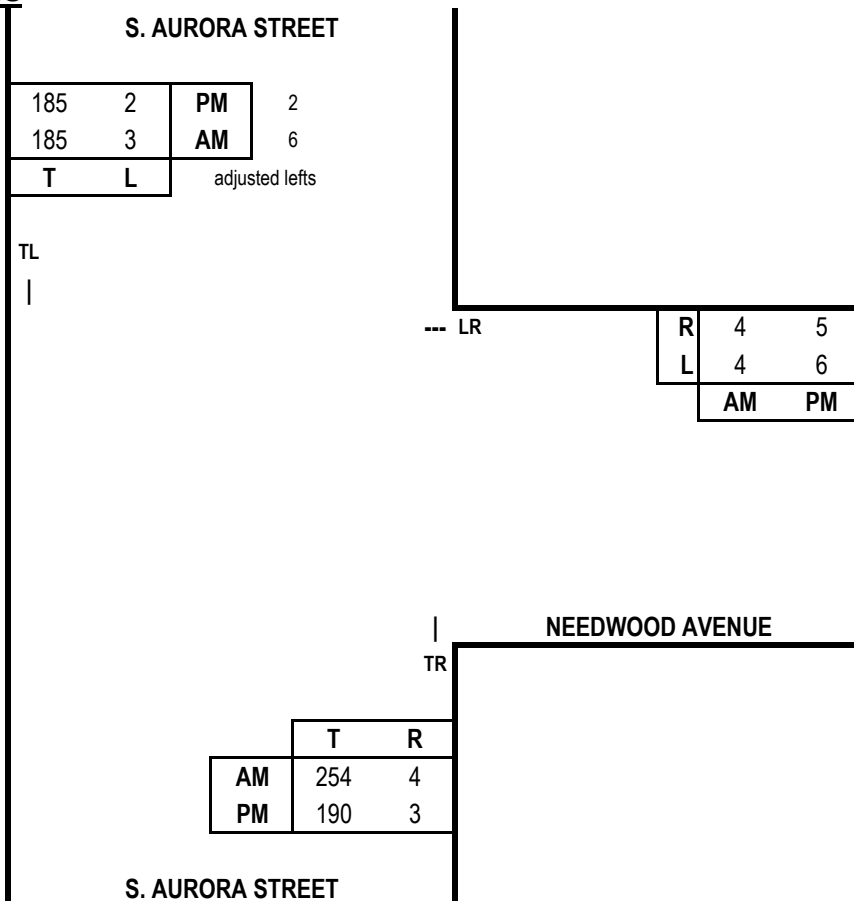
**Intersection
1**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: S. Aurora Street
and: Needwood Avenue
Conditions: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

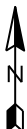
Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	8	1.00	8			
NB	258	1.00	258	3	1.00	3
SB	191	1.00	191			
CLV TOTAL=						269
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	11	1.00	11			
NB	193	1.00	193	2	1.00	2
SB	187	1.00	187			
CLV TOTAL=						206
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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**S. Aurora Street &
Needwood Avenue
(Background Traffic)**

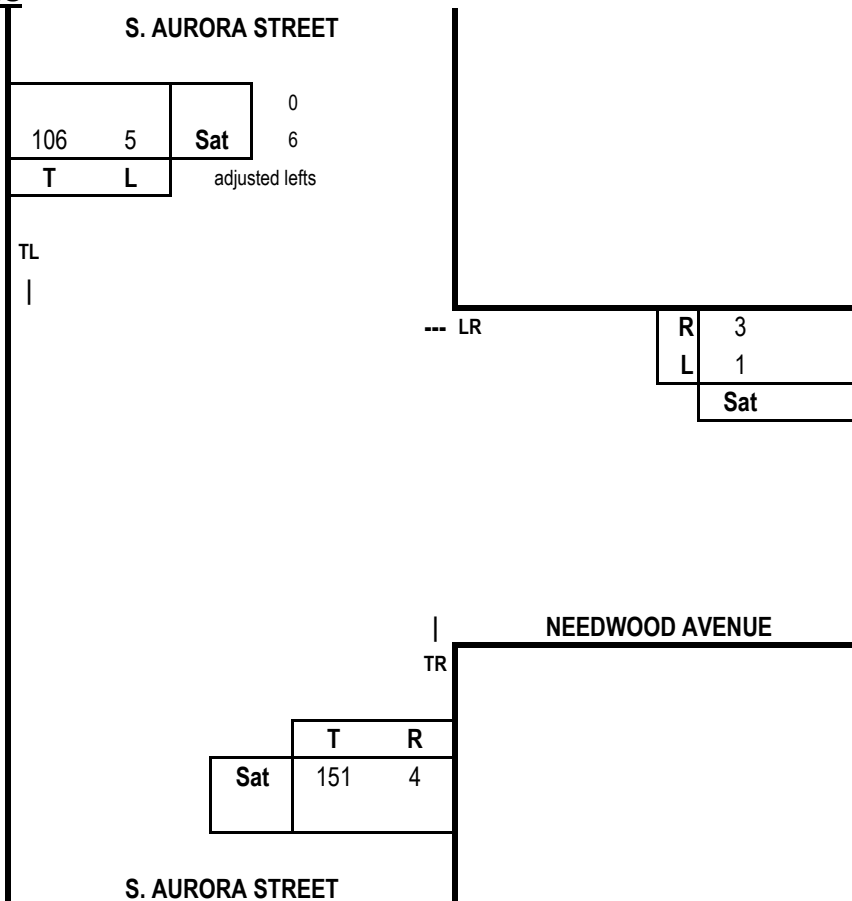
**Intersection
1**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: S. Aurora Street
and: Needwood Avenue
Conditions: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



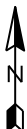
Capacity Analysis

Sat. Midday Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	4	1.00	4			
NB	155	1.00	155	5	1.00	5
SB	112	1.00	112			
CLV TOTAL=						164
Level of Service (LOS)=						A

Critical Lane Volume Analysis



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S. Aurora Street &
Needwood Avenue
(Background Traffic)

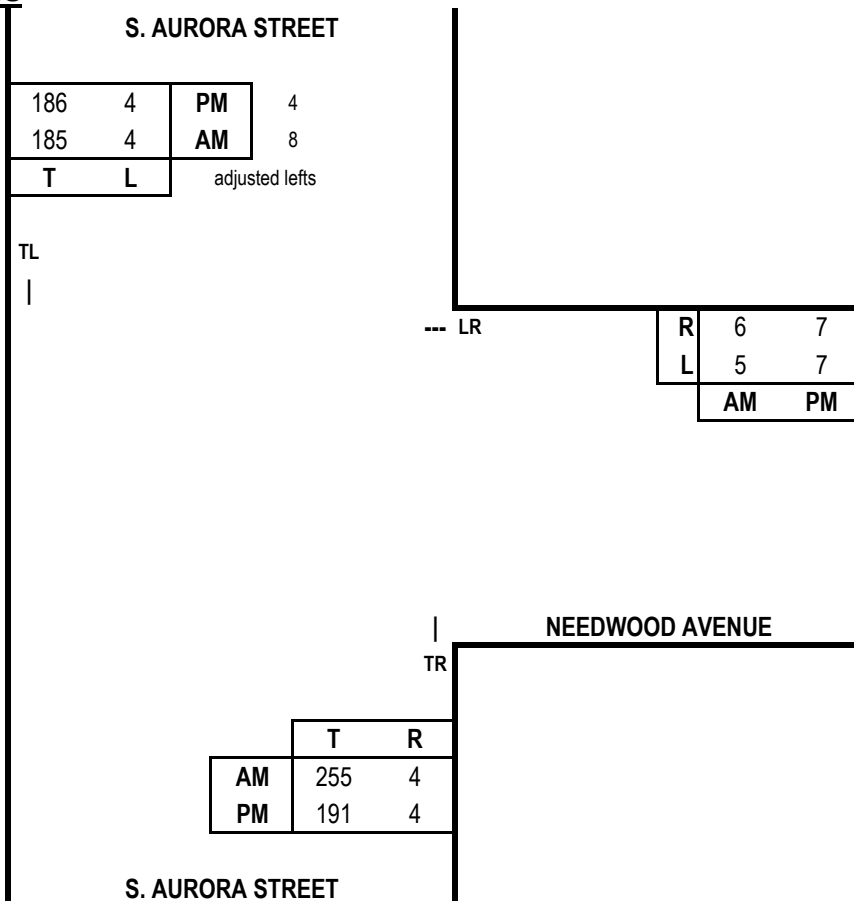
**Intersection
1**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: S. Aurora Street
and: Needwood Avenue
Conditions: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

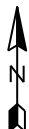
Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	11	1.00	11			
NB	259	1.00	259	4	1.00	4
SB	193	1.00	193			
CLV TOTAL=						274
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	14	1.00	14			
NB	195	1.00	195	4	1.00	4
SB	190	1.00	190			
CLV TOTAL=						213
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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**S. Aurora Street &
Needwood Avenue
(Total Traffic)**

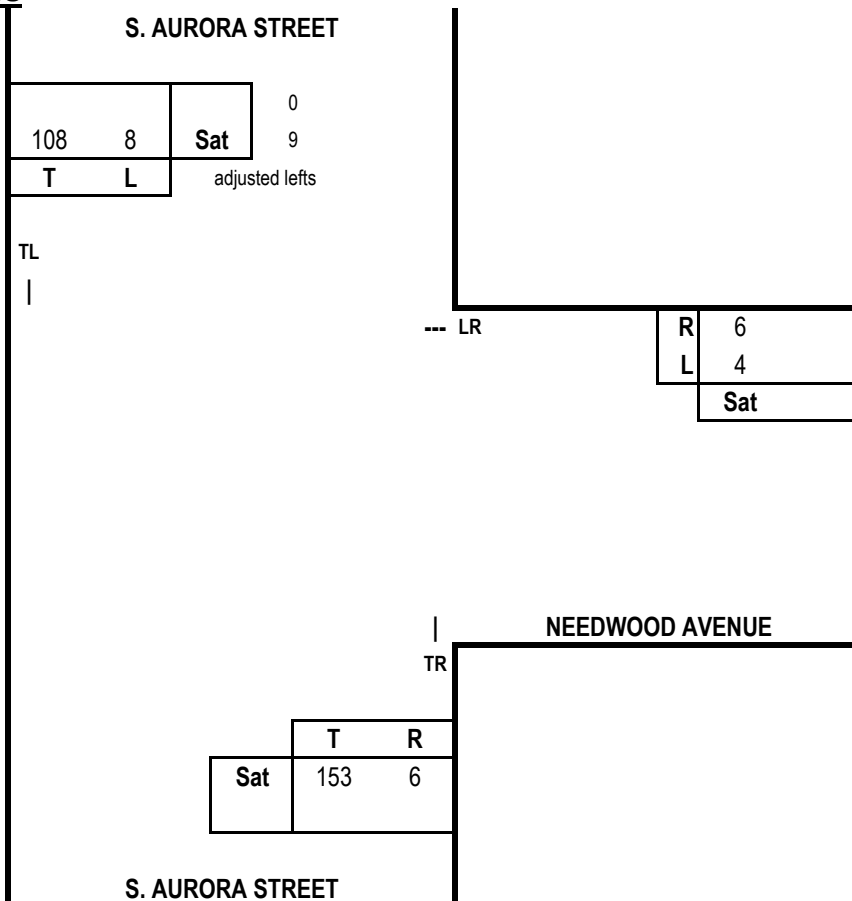
**Intersection
1**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: S. Aurora Street
and: Needwood Avenue
Conditions: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



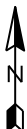
Capacity Analysis

Sat. Midday Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	10	1.00	10			
NB	159	1.00	159	8	1.00	8
SB	117	1.00	117			
CLV TOTAL=						177
Level of Service (LOS)=						A

Critical Lane Volume Analysis



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**S. Aurora Street &
Needwood Avenue
(Total Traffic)**

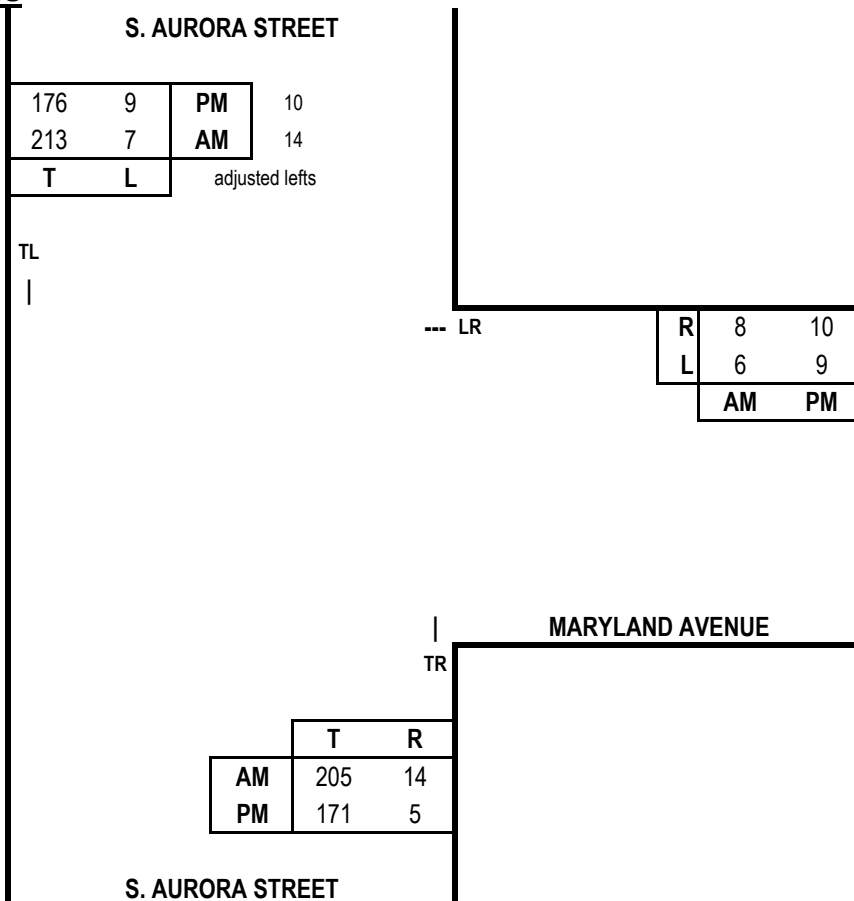
**Intersection
1**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: S. Aurora Street
and: Maryland Avenue
Conditions: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

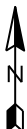
Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	14	1.00	14			
NB	219	1.00	219	7	1.00	7
SB	227	1.00	227			
CLV TOTAL=						241
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	19	1.00	19			
NB	176	1.00	176	9	1.00	9
SB	186	1.00	186			
CLV TOTAL=						205
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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**S. Aurora Street &
Maryland Avenue
(Existing Traffic)**

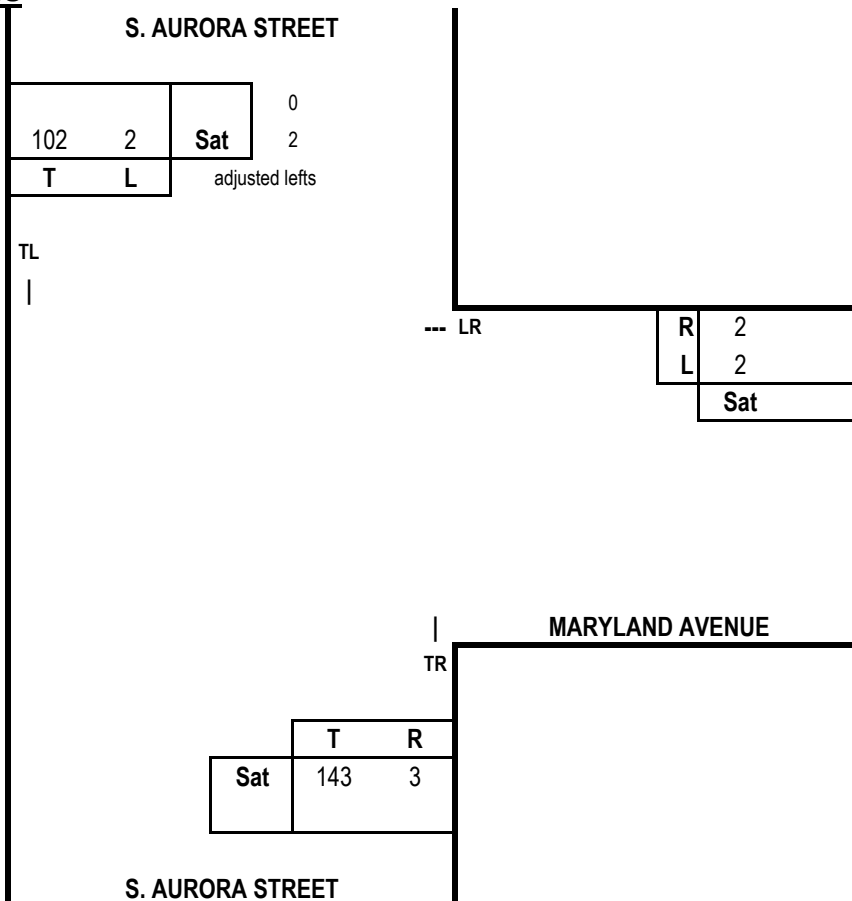
**Intersection
2**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: S. Aurora Street
and: Maryland Avenue
Conditions: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



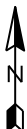
Capacity Analysis

Sat. Midday Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			Sat CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
WB	4	1.00	4				4
NB	146	1.00	146	2	1.00	2	148
SB	104	1.00	104				
CLV TOTAL=							152
Level of Service (LOS)=							A

Critical Lane Volume Analysis



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**S. Aurora Street &
Maryland Avenue
(Existing Traffic)**

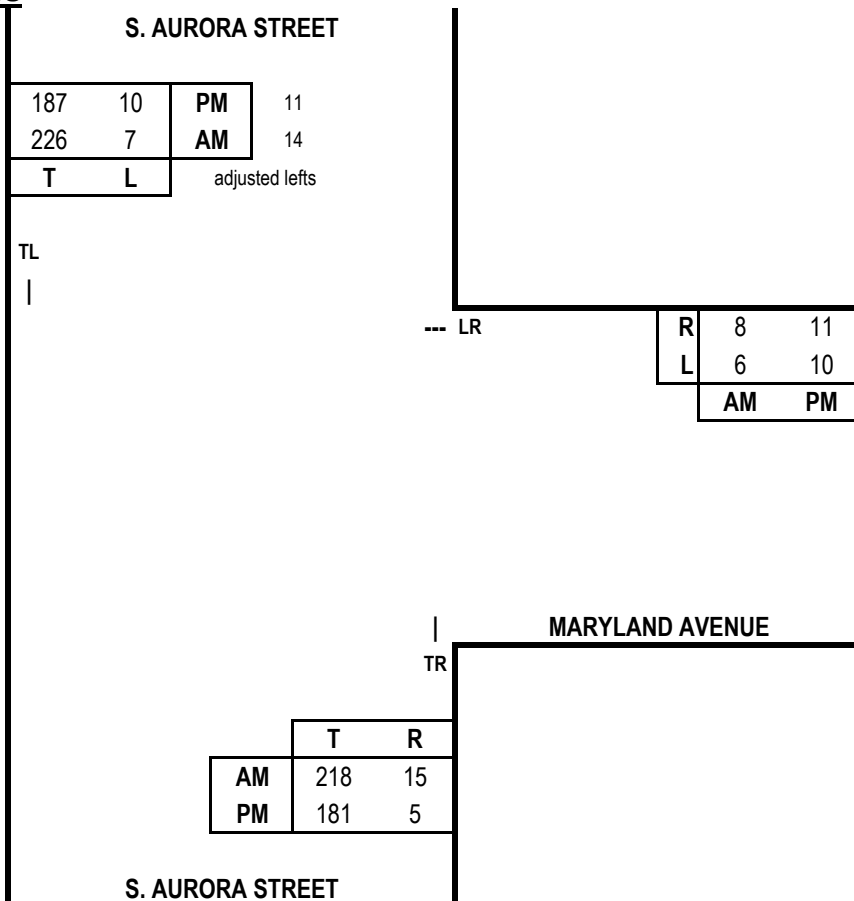
**Intersection
2**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: S. Aurora Street
and: Maryland Avenue
Conditions: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

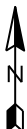
Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	14	1.00	14			
NB	233	1.00	233	7	1.00	7
SB	240	1.00	240			
CLV TOTAL=						254
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	21	1.00	21			
NB	186	1.00	186	10	1.00	10
SB	198	1.00	198			
CLV TOTAL=						219
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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**S. Aurora Street &
Maryland Avenue
(Background Traffic)**

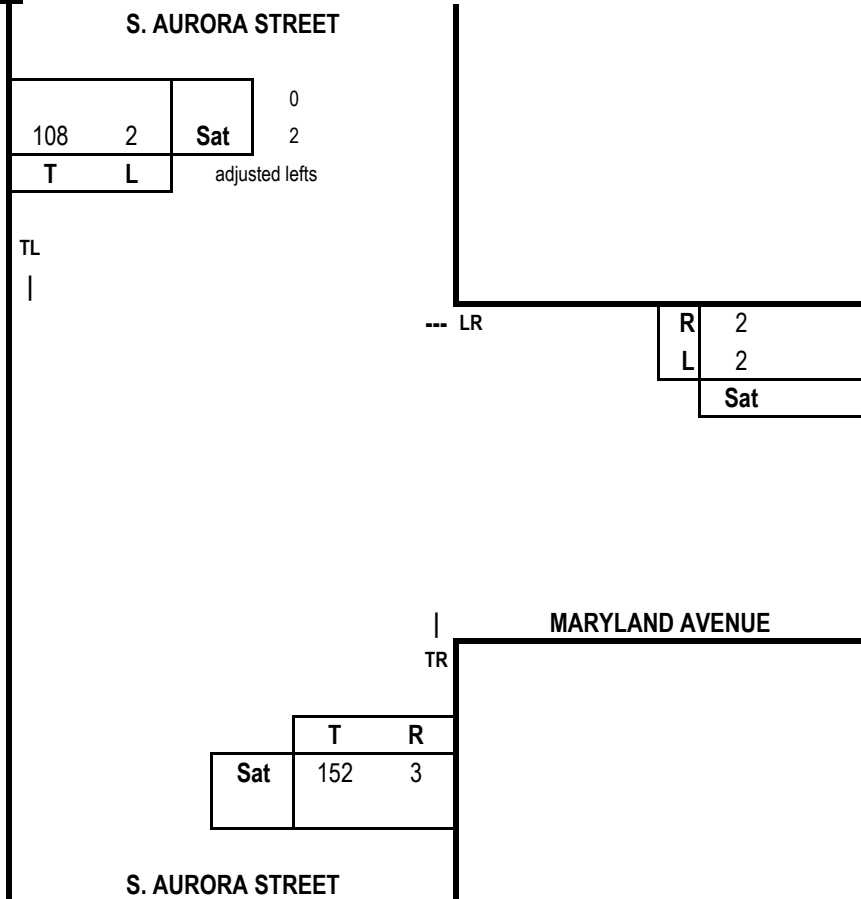
**Intersection
2**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: S. Aurora Street
and: Maryland Avenue
Conditions: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



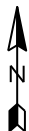
Capacity Analysis

Sat. Midday Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			Sat CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
WB	4	1.00	4				4
NB	155	1.00	155	2	1.00	2	157
SB	110	1.00	110				
CLV TOTAL=							161
Level of Service (LOS)=							A

Critical Lane Volume Analysis



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**S. Aurora Street &
Maryland Avenue
(Background Traffic)**

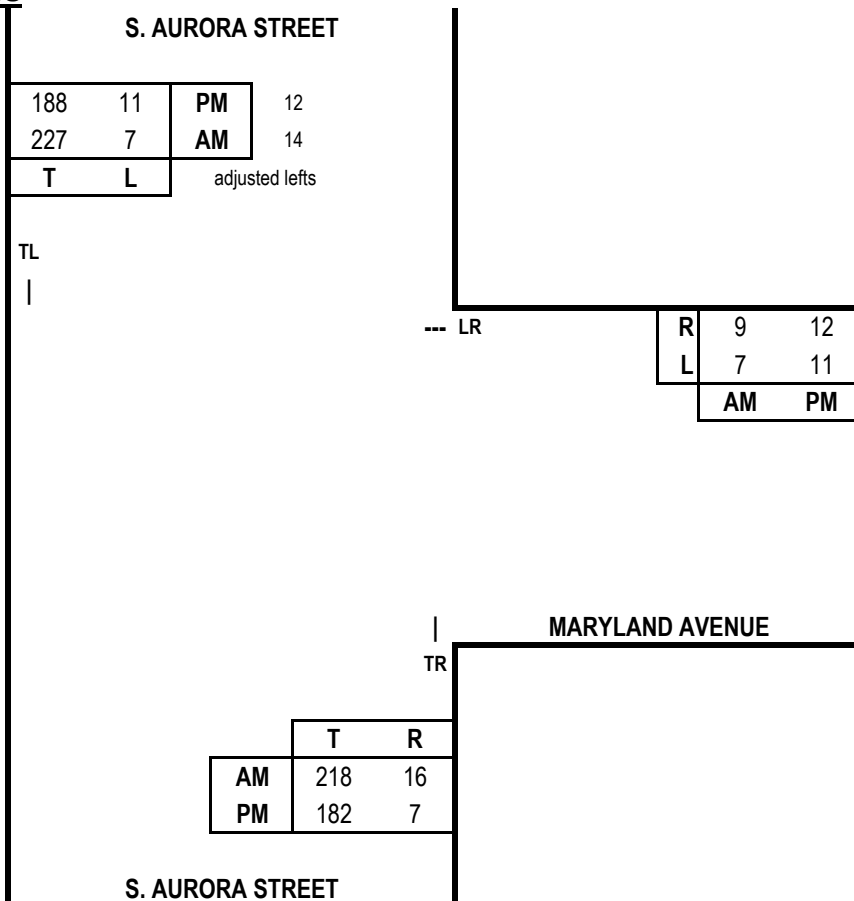
**Intersection
2**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: S. Aurora Street
and: Maryland Avenue
Conditions: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

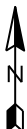
Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	16	1.00	16			
NB	234	1.00	234	7	1.00	7
SB	241	1.00	241			
CLV TOTAL=						257
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	23	1.00	23			
NB	189	1.00	189	11	1.00	11
SB	200	1.00	200			
CLV TOTAL=						223
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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**S. Aurora Street &
Maryland Avenue
(Total Traffic)**

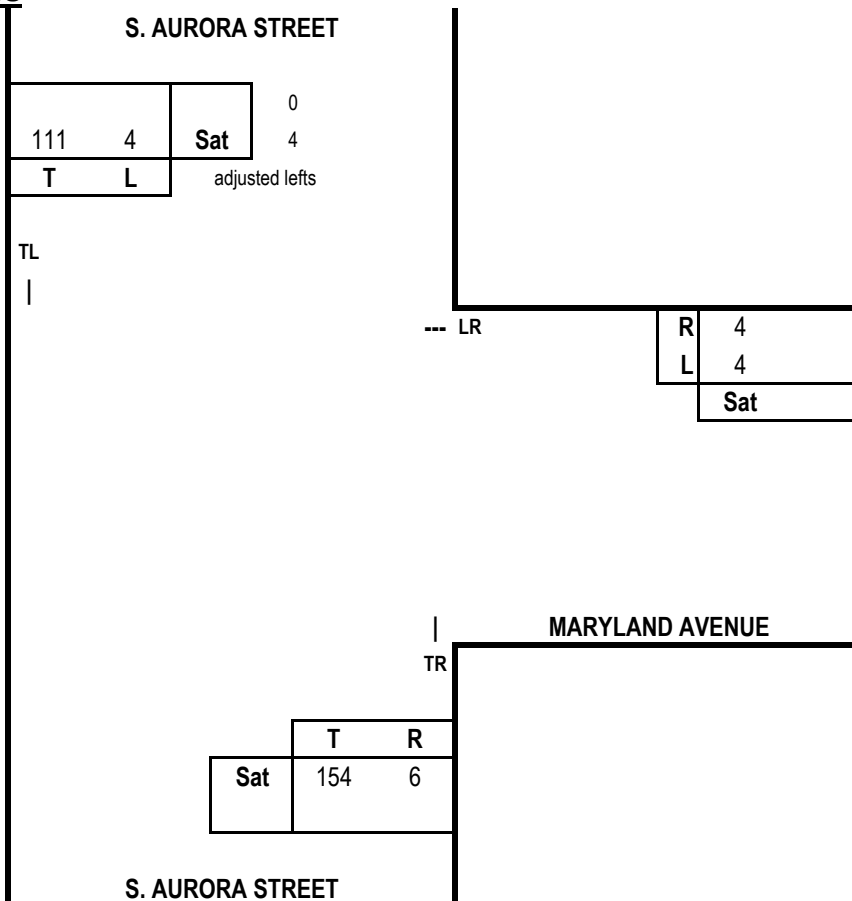
**Intersection
2**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: S. Aurora Street
and: Maryland Avenue
Conditions: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



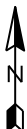
Capacity Analysis

Sat. Midday Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
WB	8	1.00	8			
NB	160	1.00	160	4	1.00	4
SB	115	1.00	115			
CLV TOTAL=						172
Level of Service (LOS)=						A

Critical Lane Volume Analysis



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**S. Aurora Street &
Maryland Avenue
(Total Traffic)**

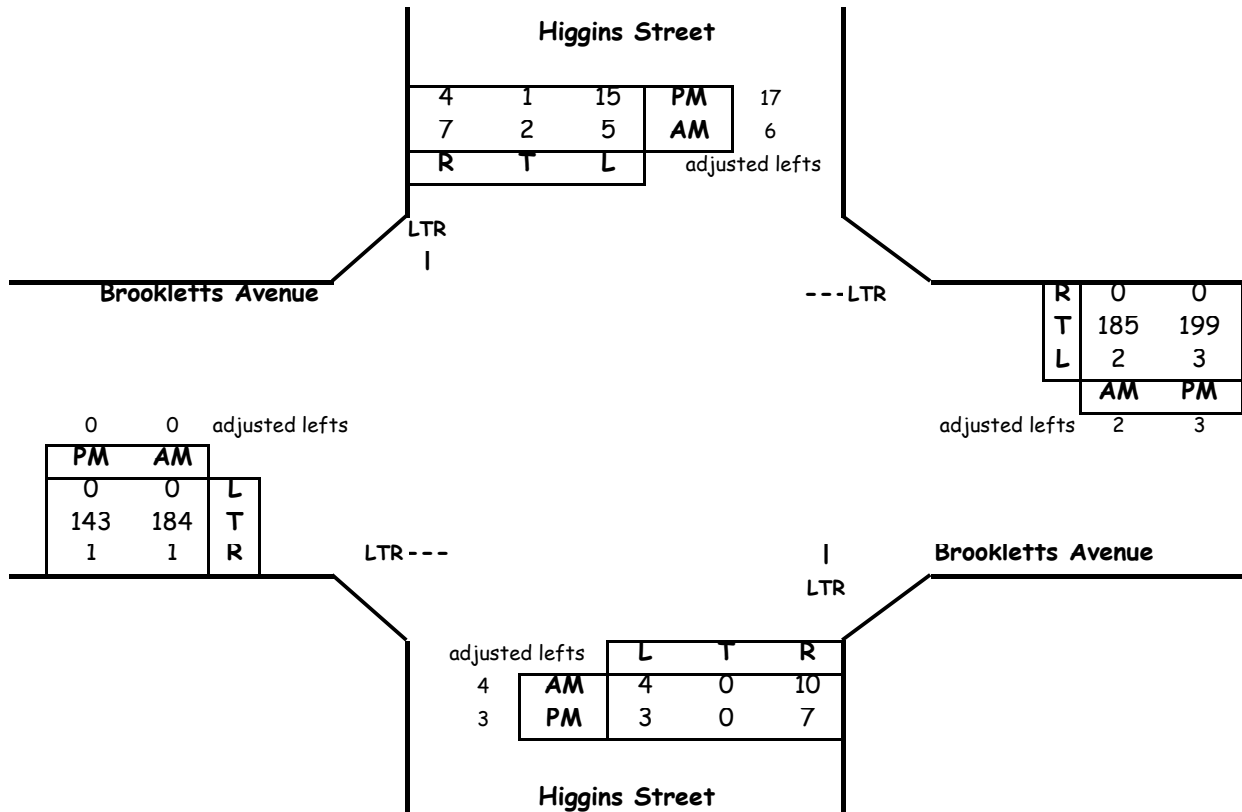
**Intersection
2**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Brookletts Avenue
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	14	1.00	14	5	1	5	19
SB	15	1.00	15	4	1	4	
EB	185	1	185	2	1	2	187
WB	187	1	187	0	1	0	
CLV TOTAL=							206
Level of Service (LOS) =							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF = Total		VOL	x LUF = Total		CLV
NB	10	1.00	10	15	1	15	25
SB	22	1.00	22	3	1	3	
EB	144	1	144	3	1	3	202
WB	202	1	202	0	1	0	
CLV TOTAL=							227
Level of Service (LOS) =							A

Critical Lane Volume Analysis



**Higgins Street &
Brookletts Avenue**
(Existing Traffic)

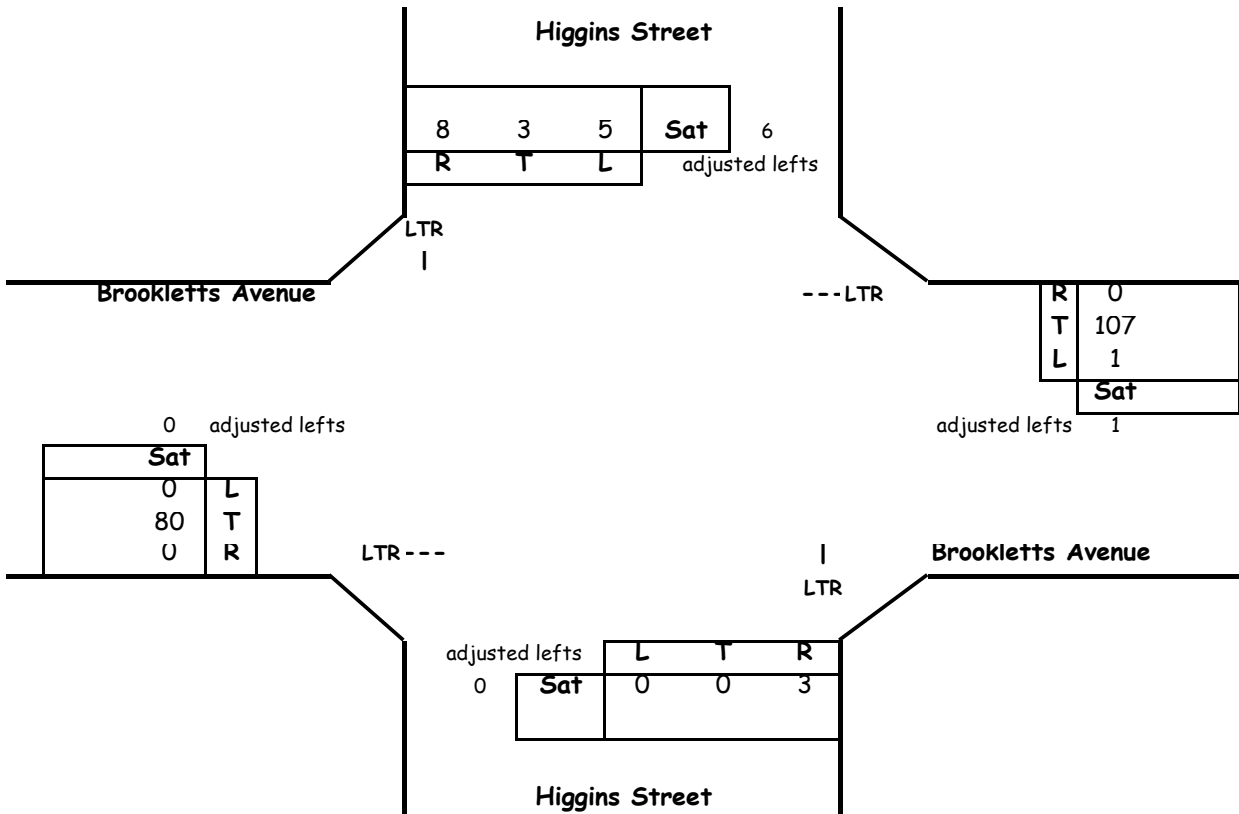
**Intersection
3**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Brookletts Avenue
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	3	1.00	3	5	1	5
SB	17	1.00	17	0	1	0
EB	80	1	80	1	1	1
WB	108	1	108	0	1	0
CLV TOTAL=						125
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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**Higgins Street &
 Brookletts Avenue**
 (Existing Traffic)

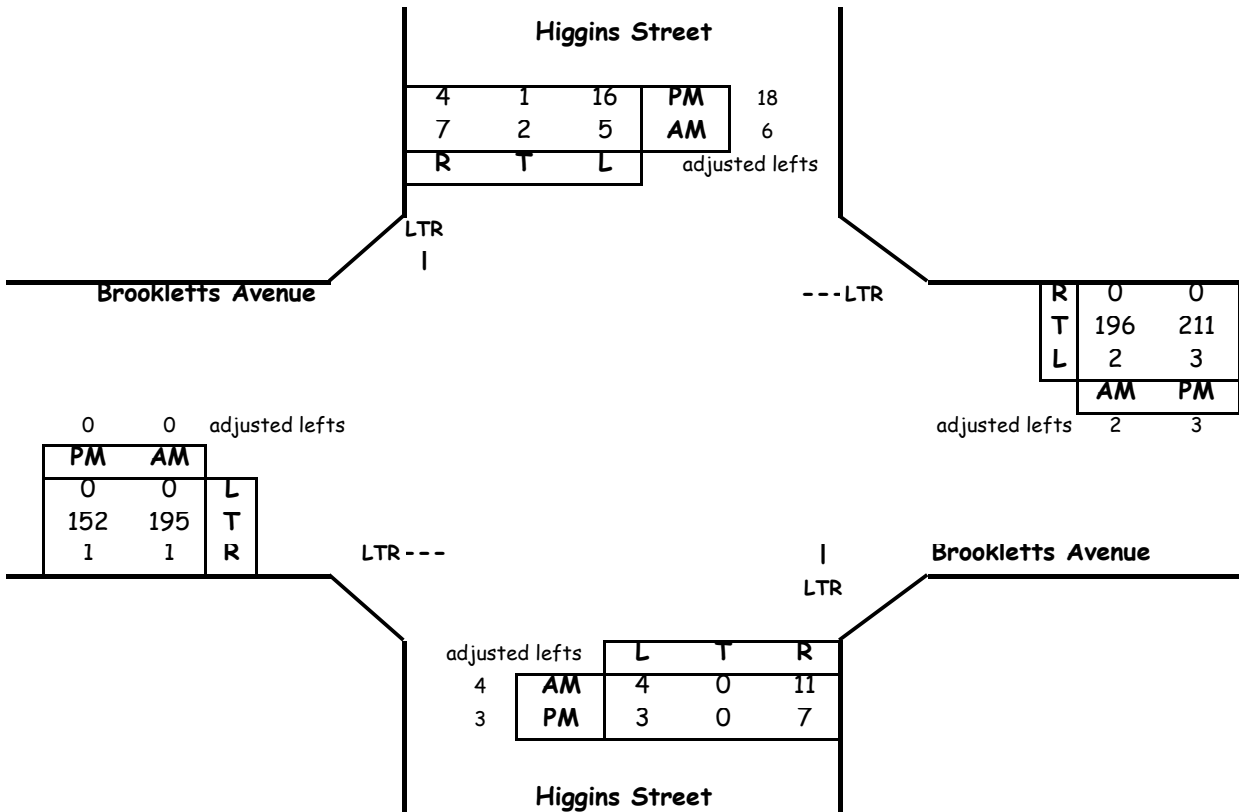
**Intersection
 3**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Brookletts Avenue
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	15	1.00	15	5	1	5
SB	15	1.00	15	4	1	4
EB	196	1	196	2	1	2
WB	198	1	198	0	1	0
CLV TOTAL=						218
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	10	1.00	10	16	1	16
SB	23	1.00	23	3	1	3
EB	153	1	153	3	1	3
WB	214	1	214	0	1	0
CLV TOTAL=						240
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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**Higgins Street &
 Brookletts Avenue**
 (Background Traffic)

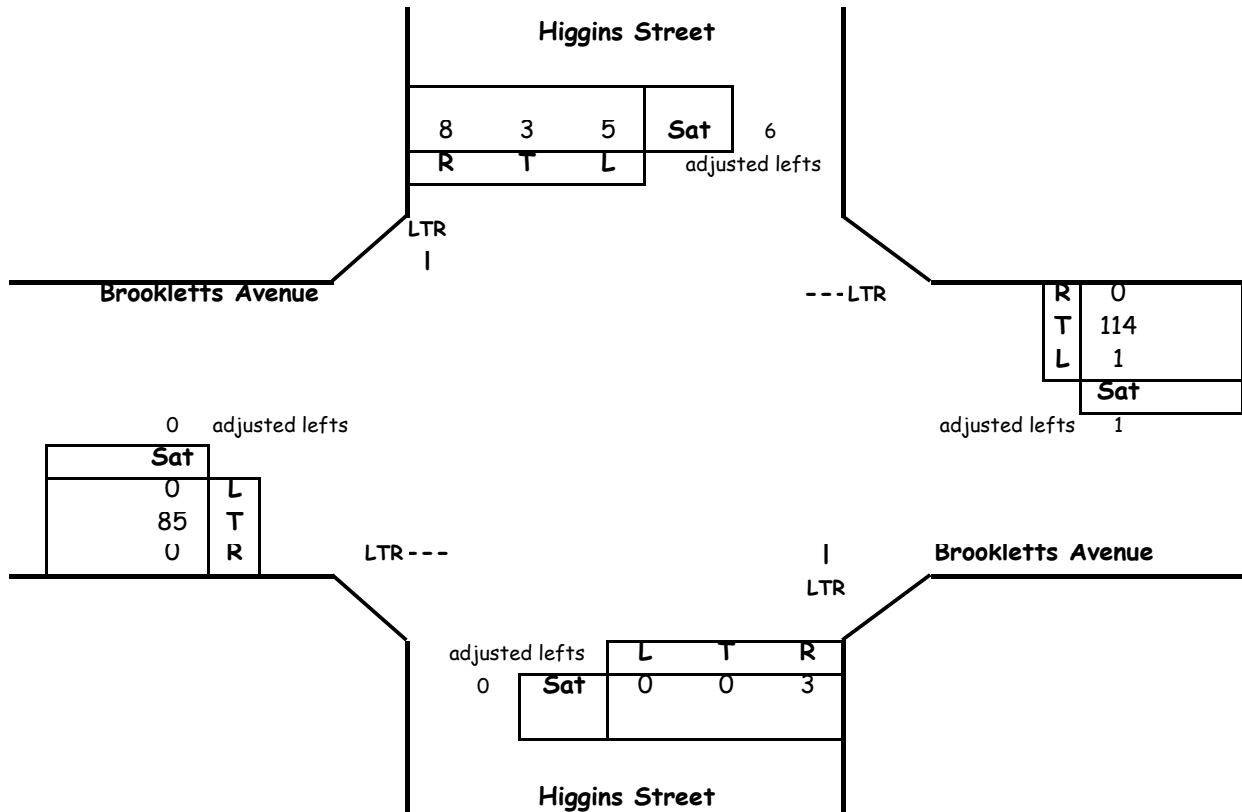
**Intersection
 3**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Brookletts Avenue
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			Sat
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	3	1.00	3	5	1	5	17
SB	17	1.00	17	0	1	0	
EB	85	1	85	1	1	1	115
WB	115	1	115	0	1	0	
CLV TOTAL=							132
Level of Service (LOS) =							A

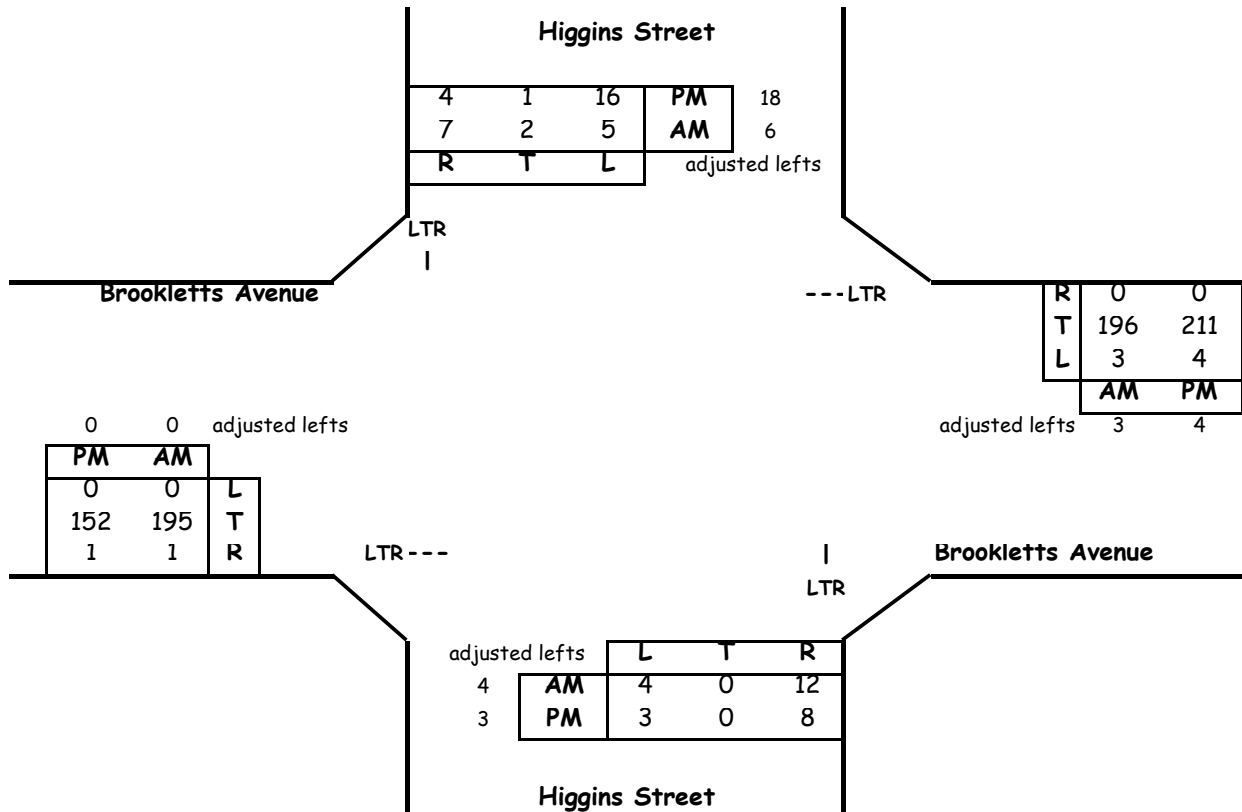
Critical Lane Volume Analysis		Higgins Street & Brookletts Avenue (Background Traffic)	Intersection 3
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CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Brookletts Avenue
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	16	1.00	16	5	1	5
SB	15	1.00	15	4	1	4
EB	196	1	196	3	1	3
WB	199	1	199	0	1	0
CLV TOTAL=						220
Level of Service (LOS)=						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	11	1.00	11	16	1	16
SB	23	1.00	23	3	1	3
EB	153	1	153	4	1	4
WB	215	1	215	0	1	0
CLV TOTAL=						242
Level of Service (LOS)=						A

Critical Lane Volume Analysis



**Higgins Street &
 Brookletts Avenue**
 (Existing Traffic)

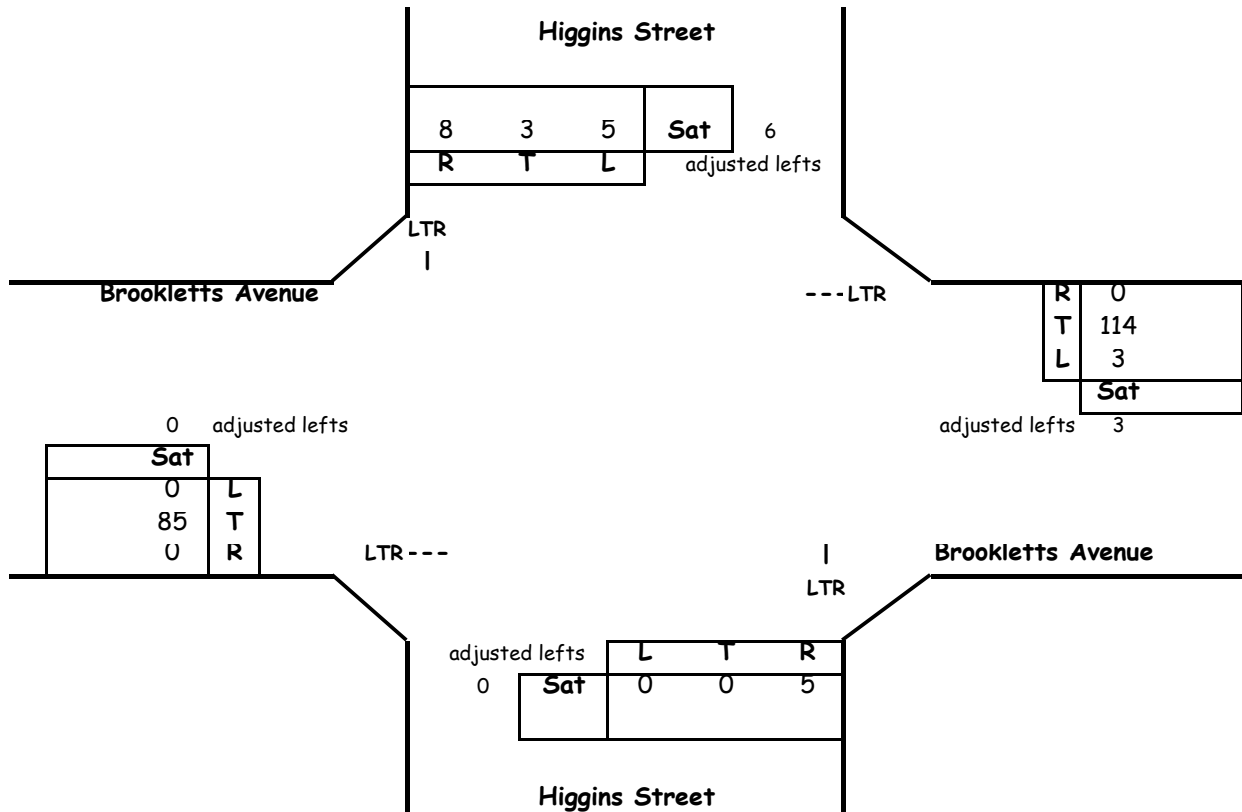
**Intersection
 3**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Brookletts Avenue
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			Sat
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	5	1.00	5	5	1	5	17
SB	17	1.00	17	0	1	0	
EB	85	1	85	3	1	3	117
WB	117	1	117	0	1	0	
CLV TOTAL=							134
Level of Service (LOS) =							A

Critical Lane Volume Analysis



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 (Existing Traffic)

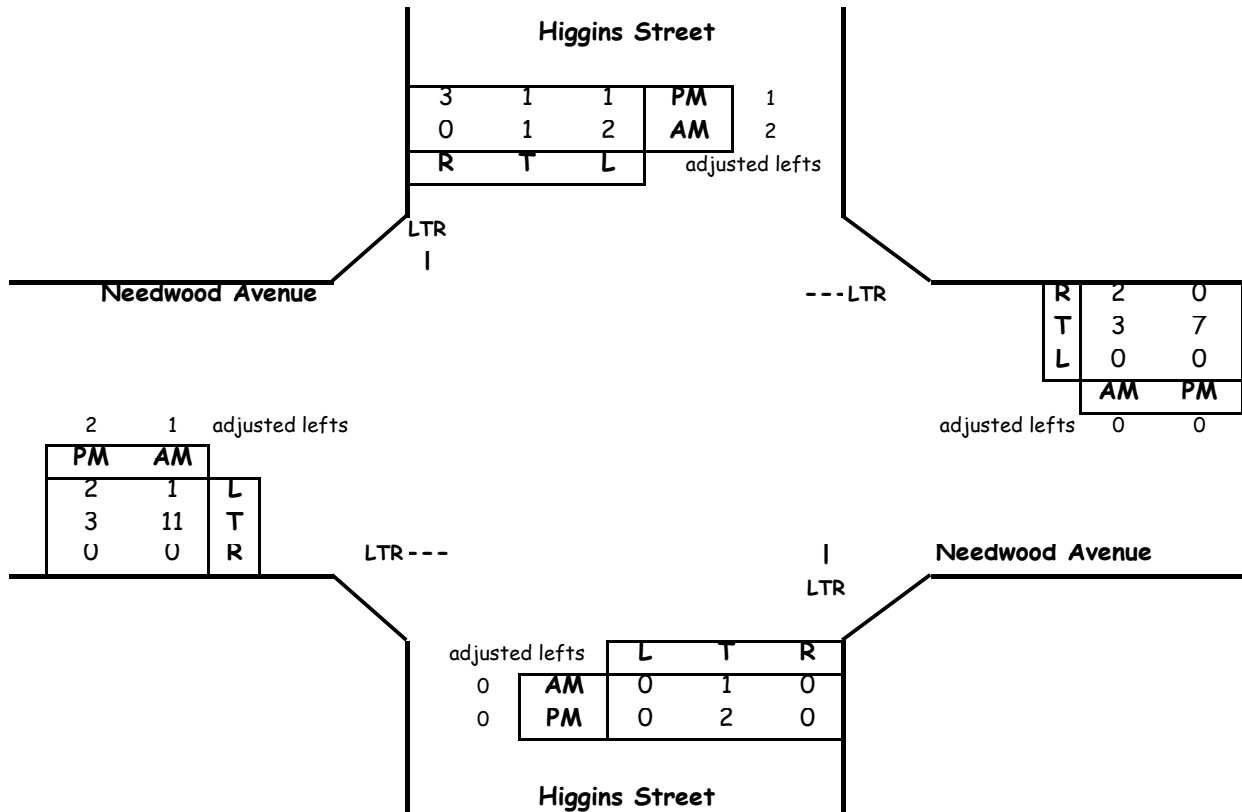
**Intersection
 3**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Needwood Avenue
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	1	1.00	1	2	1	2
SB	3	1.00	3	0	1	0
EB	12	1	12	0	1	0
WB	5	1	5	1	1	1
CLV TOTAL=						15
Level of Service (LOS)=						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	2	1.00	2	1	1	1
SB	5	1.00	5	0	1	0
EB	5	1	5	0	1	0
WB	7	1	7	2	1	2
CLV TOTAL=						14
Level of Service (LOS)=						A

Critical Lane Volume Analysis



**Higgins Street &
 Needwood Avenue**
 (Existing Traffic)

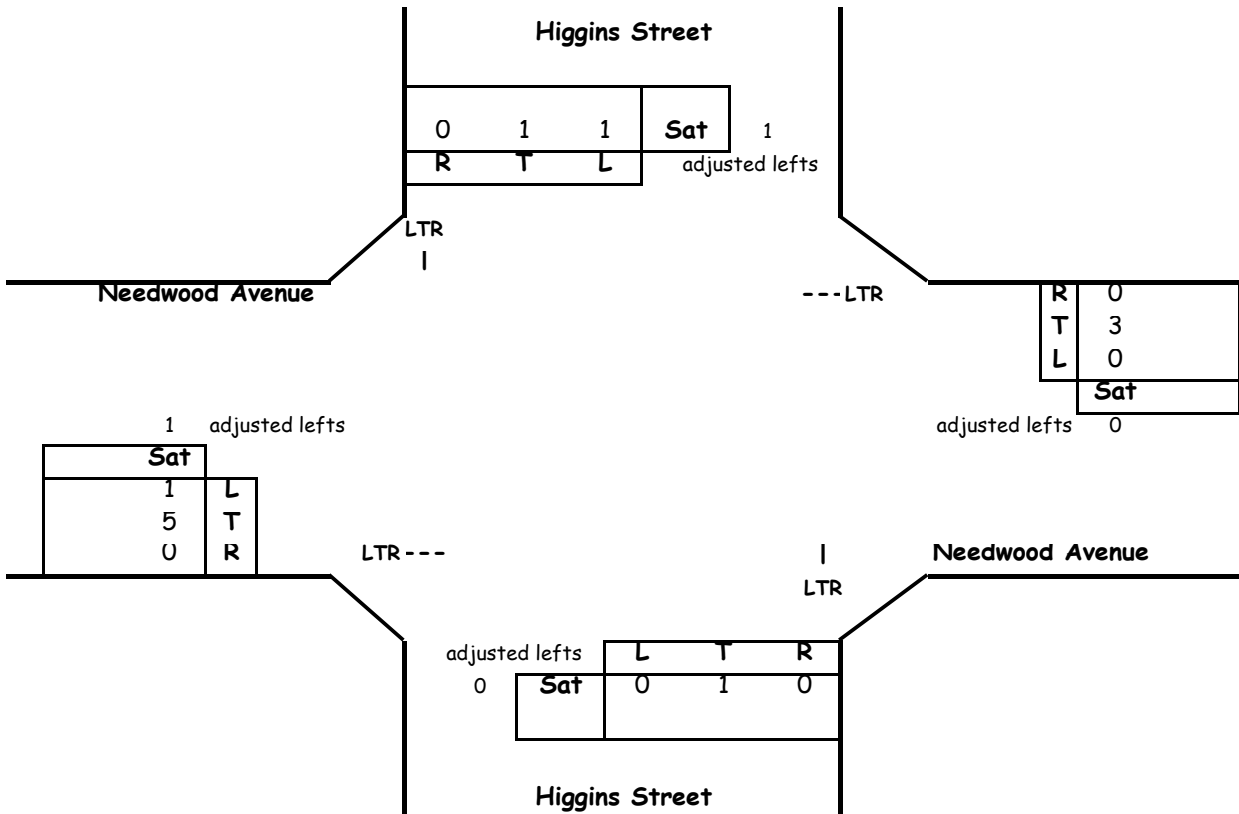
**Intersection
 4**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Needwood Avenue
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	1	1.00	1	1	1	1
SB	2	1.00	2	0	1	0
EB	6	1	6	0	1	0
WB	3	1	3	1	1	1
CLV TOTAL=						8
Level of Service (LOS)=						A

Critical Lane Volume Analysis



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**Higgins Street &
 Needwood Avenue**
 (Existing Traffic)

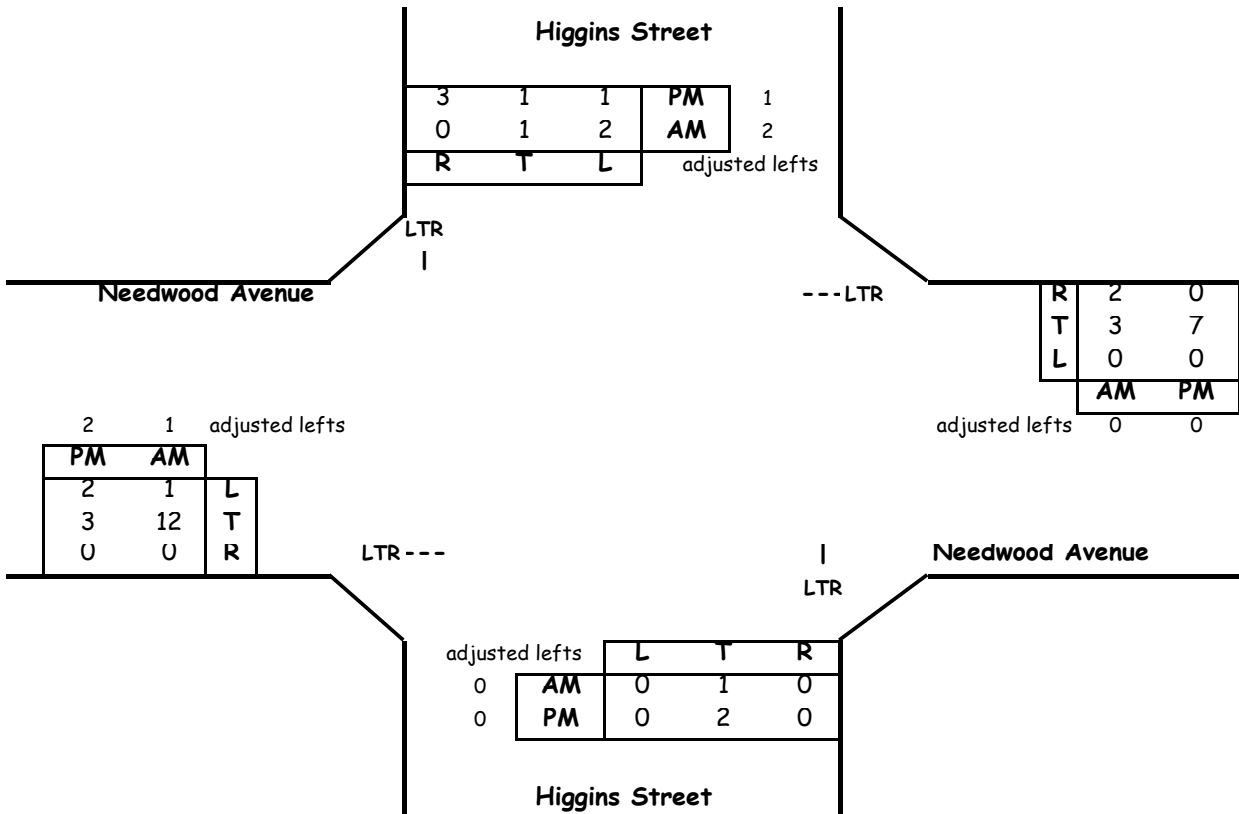
**Intersection
 4**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Needwood Avenue
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	1	1.00	1	2	1	2
SB	3	1.00	3	0	1	0
EB	13	1	13	0	1	0
WB	5	1	5	1	1	1
CLV TOTAL=						16
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	2	1.00	2	1	1	1
SB	5	1.00	5	0	1	0
EB	5	1	5	0	1	0
WB	7	1	7	2	1	2
CLV TOTAL=						14
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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**Higgins Street &
 Needwood Avenue**
 (Background Traffic)

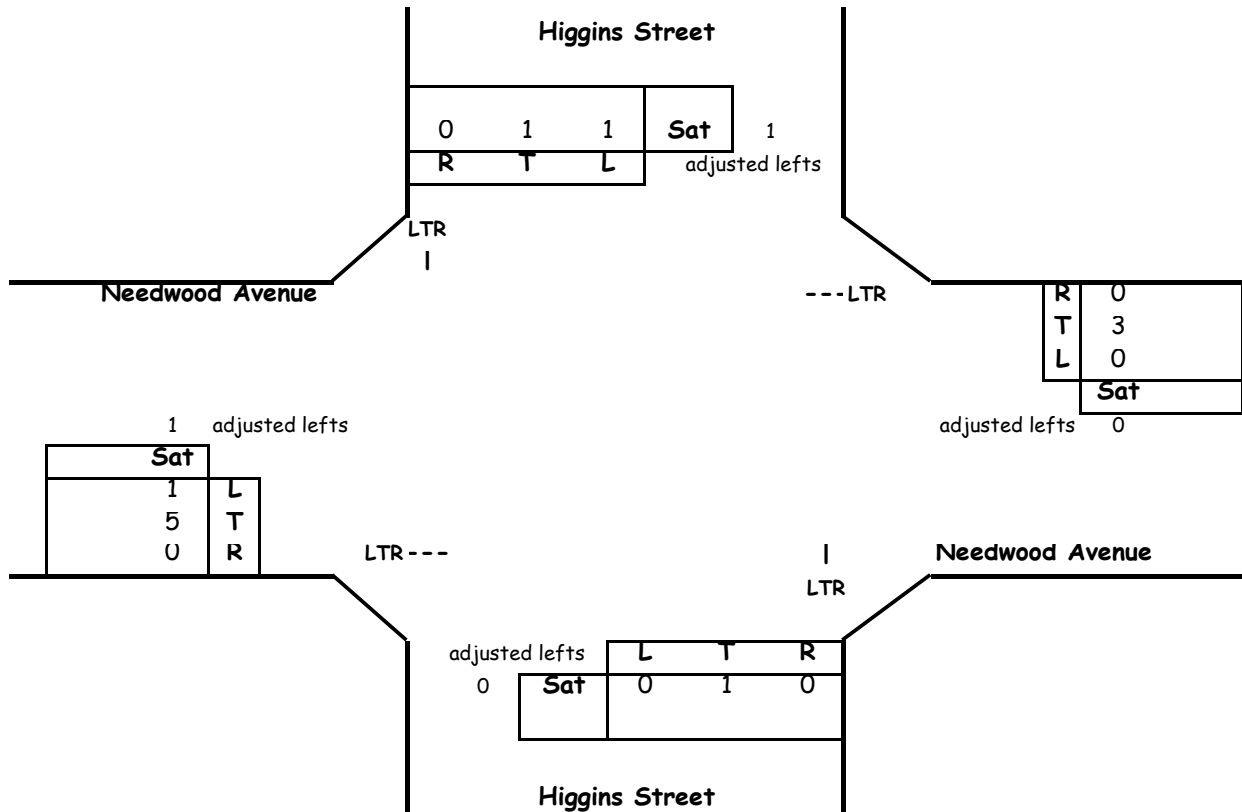
**Intersection
 4**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Needwood Avenue
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	1	1.00	1	1	1	1
SB	2	1.00	2	0	1	0
EB	6	1	6	0	1	0
WB	3	1	3	1	1	1
CLV TOTAL=						8
Level of Service (LOS)=						A

Critical Lane Volume Analysis



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**Higgins Street &
 Needwood Avenue**
 (Background Traffic)

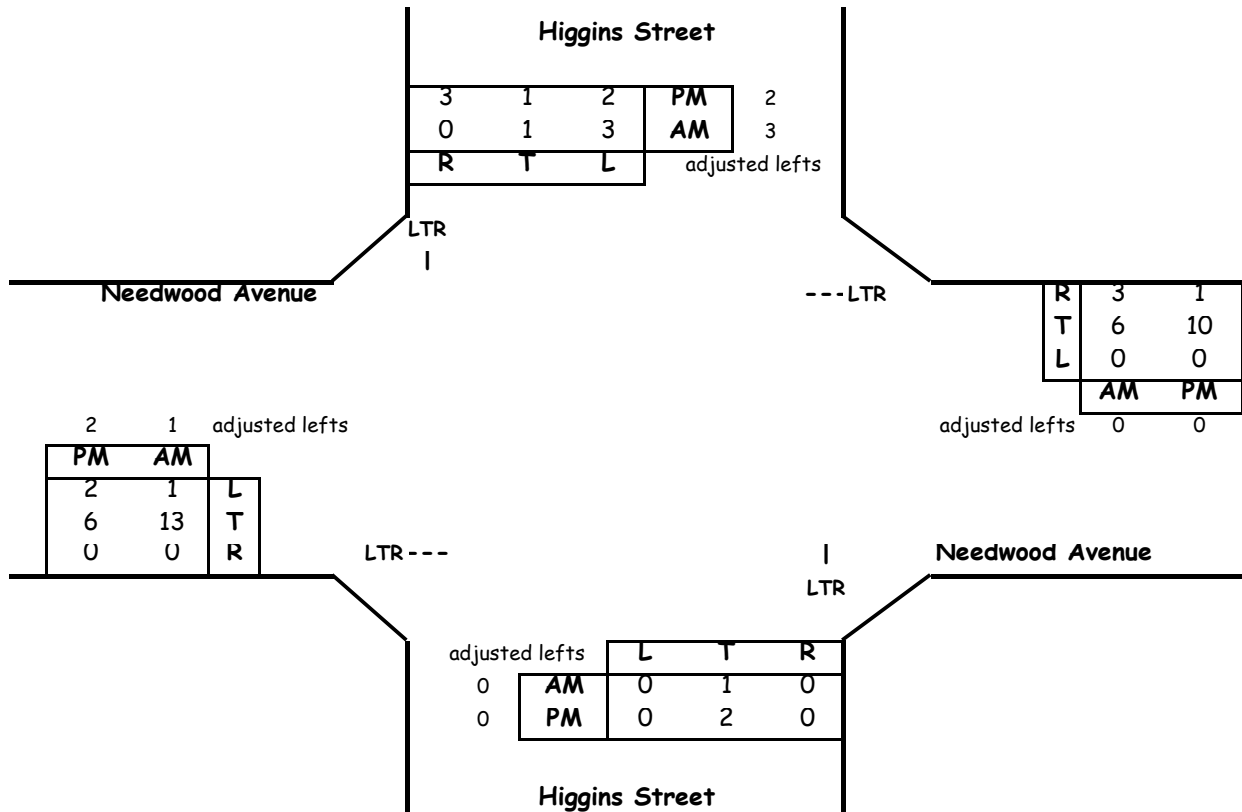
**Intersection
 4**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Needwood Avenue
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	1	1.00	1	3	1	3	4
SB	4	1.00	4	0	1	0	
EB	14	1	14	0	1	0	14
WB	9	1	9	1	1	1	
CLV TOTAL=							18
Level of Service (LOS) =							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF = Total		VOL	x LUF = Total		CLV
NB	2	1.00	2	2	1	2	6
SB	6	1.00	6	0	1	0	
EB	8	1	8	0	1	0	13
WB	11	1	11	2	1	2	
CLV TOTAL=							19
Level of Service (LOS) =							A

Critical Lane Volume Analysis



**Higgins Street &
 Needwood Avenue**
 (Total Traffic)

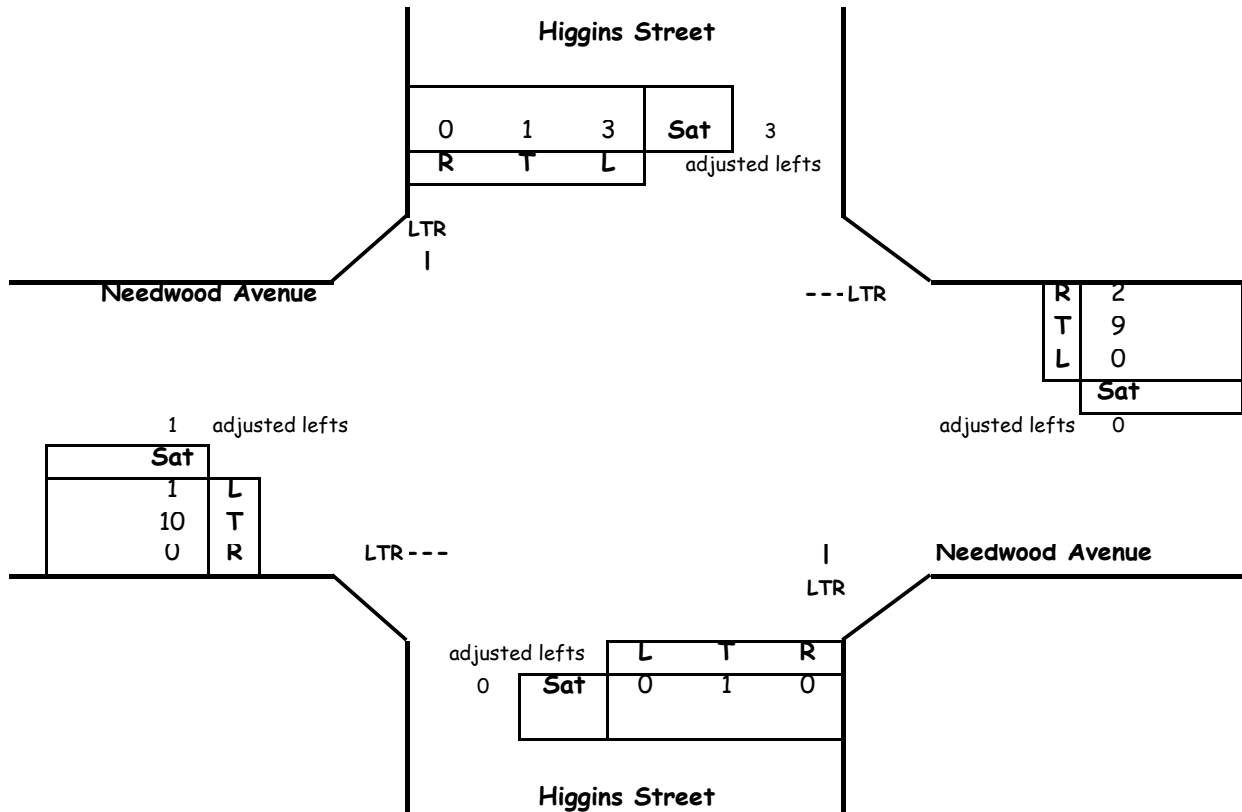
**Intersection
 4**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Needwood Avenue
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			Sat
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	1	1.00	1	3	1	3	4
SB	4	1.00	4	0	1	0	
EB	11	1	11	0	1	0	12
WB	11	1	11	1	1	1	
CLV TOTAL=							16
Level of Service (LOS) =							A

Critical Lane Volume Analysis



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**Higgins Street &
 Needwood Avenue**
 (Total Traffic)

**Intersection
 4**

Critical Lane Volume (CLV) Methodology for MSHA

Main Line: Needwood Avenue
Minor Street: Site Access
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

NEEDWOOD AVENUE

--- TL

	AM	PM
T	5	7
L	0	0

adjusted lefts 0 0

PM	AM	
4	13	T
0	0	R

TR ---

NEEDWOOD AVENUE

|
LR

Site Access

	L	R
AM	0	0
PM	0	0

Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	0	1.00	0			
EB	13	1.00	13	0	1.00	0
WB	5	1.00	5			
CLV TOTAL=						13
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	0	1.00	0			
EB	4	1.00	4	0	1.00	0
WB	7	1.00	7			
CLV TOTAL=						7
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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**Needwood Avenue &
 Site Access
 (Existing Traffic)**

**Intersection
 5**

Critical Lane Volume (CLV) Methodology for MSHA

Main Line: Needwood Avenue
Minor Street: Site Access
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

NEEDWOOD AVENUE

--- TL

	Sat	
T	3	
L	0	

adjusted lefts 0

	Sat	
	6	T
	0	R

TR ---

NEEDWOOD AVENUE

|
LR

Site Access

	L	R
Sat	0	0

Critical Lane Volume Analysis

Sat. Midday Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			Sat
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	0	1.00	0				0
EB	6	1.00	6	0	1.00	0	6
WB	3	1.00	3				
CLV TOTAL=							6
Level of Service (LOS) =							A

Critical Lane Volume Analysis



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Needwood Avenue &
 Site Access
 (Existing Traffic)

**Intersection
 5**

Critical Lane Volume (CLV) Methodology for MSHA

Main Line: Needwood Avenue
Minor Street: Site Access
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

NEEDWOOD AVENUE

--- TL

	AM	PM
T	5	7
L	0	0

adjusted lefts 0 0

PM	AM	
4	14	T
0	0	R

TR ---

NEEDWOOD AVENUE

|
LR

Site Access

	L	R
AM	0	0
PM	0	0

Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	0	1.00	0			
EB	14	1.00	14	0	1.00	0
WB	5	1.00	5			
CLV TOTAL=						14
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	0	1.00	0			
EB	4	1.00	4	0	1.00	0
WB	7	1.00	7			
CLV TOTAL=						7
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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**Needwood Avenue &
 Site Access
 (Background Traffic)**

**Intersection
 5**

Critical Lane Volume (CLV) Methodology for MSHA

Main Line: Needwood Avenue
Minor Street: Site Access
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

NEEDWOOD AVENUE

--- TL

	Sat	
T	3	
L	0	

adjusted lefts 0

	Sat	
	6	T
	0	R

TR ---

NEEDWOOD AVENUE

|
LR

Site Access

	L	R
Sat	0	0

Critical Lane Volume Analysis

Sat. Midday Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			Sat CLV
	VOL	x LUF	= Total	VOL	x LUF	= Total	
NB	0	1.00	0				0
EB	6	1.00	6	0	1.00	0	6
WB	3	1.00	3				
CLV TOTAL=							6
Level of Service (LOS) =							A

Critical Lane Volume Analysis



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Needwood Avenue &
 Site Access
 (Background Traffic)

Intersection
5

Critical Lane Volume (CLV) Methodology for MSHA

Main Line: Needwood Avenue
Minor Street: Site Access
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

NEEDWOOD AVENUE

--- TL

	AM	PM
T	5	7
L	0	0

adjusted lefts 0 0

PM	AM	
4	14	T
4	2	R

TR ---

NEEDWOOD AVENUE

|
LR

Site Access

	L	R
AM	4	0
PM	4	0

Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	4	1.00	4			
EB	16	1.00	16	0	1.00	0
WB	5	1.00	5			
CLV TOTAL=						20
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	4	1.00	4			
EB	8	1.00	8	0	1.00	0
WB	7	1.00	7			
CLV TOTAL=						12
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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**Needwood Avenue &
 Site Access
 (Total Traffic)**

**Intersection
 5**

Critical Lane Volume (CLV) Methodology for MSHA

Main Line: Needwood Avenue
Minor Street: Site Access
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

NEEDWOOD AVENUE

--- TL

	Sat	
T	3	
L	0	

adjusted lefts 0

	Sat	
	6	T
	7	R

TR ---

NEEDWOOD AVENUE

|
LR

Site Access

	L	R
Sat	8	0

Critical Lane Volume Analysis

Sat. Midday Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			Sat
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	8	1.00	8				8
EB	13	1.00	13	0	1.00	0	13
WB	3	1.00	3				
CLV TOTAL=							21
Level of Service (LOS) =							A

Critical Lane Volume Analysis



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Needwood Avenue &
 Site Access
 (Total Traffic)

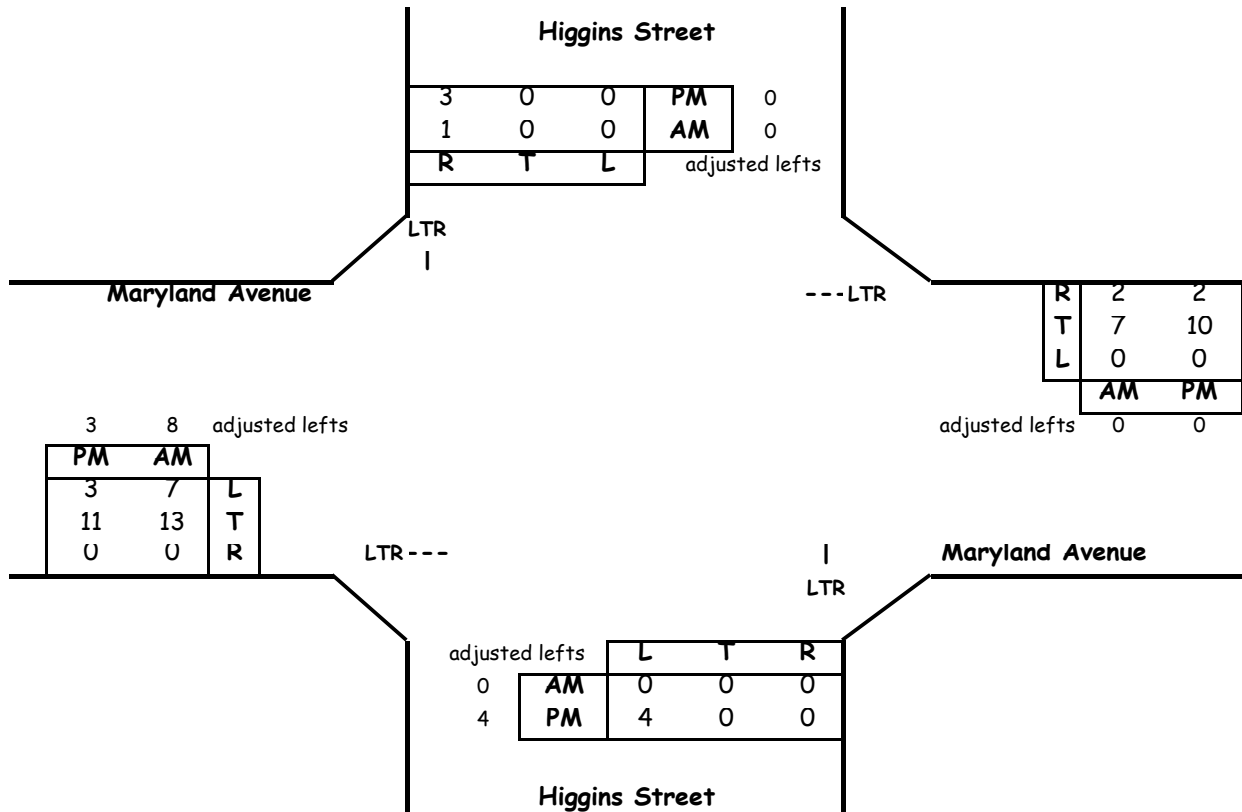
**Intersection
 5**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Maryland Avenue
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	0	1.00	0	0	1	0	1
SB	1	1.00	1	0	1	0	
EB	21	1	21	0	1	0	21
WB	9	1	9	7	1	7	
CLV TOTAL=							22
Level of Service (LOS) =							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF = Total		VOL	x LUF = Total		CLV
NB	4	1.00	4	0	1	0	7
SB	3	1.00	3	4	1	4	
EB	14	1	14	0	1	0	15
WB	12	1	12	3	1	3	
CLV TOTAL=							22
Level of Service (LOS) =							A

Critical Lane Volume Analysis



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**Higgins Street &
Maryland Avenue**
(Existing Traffic)

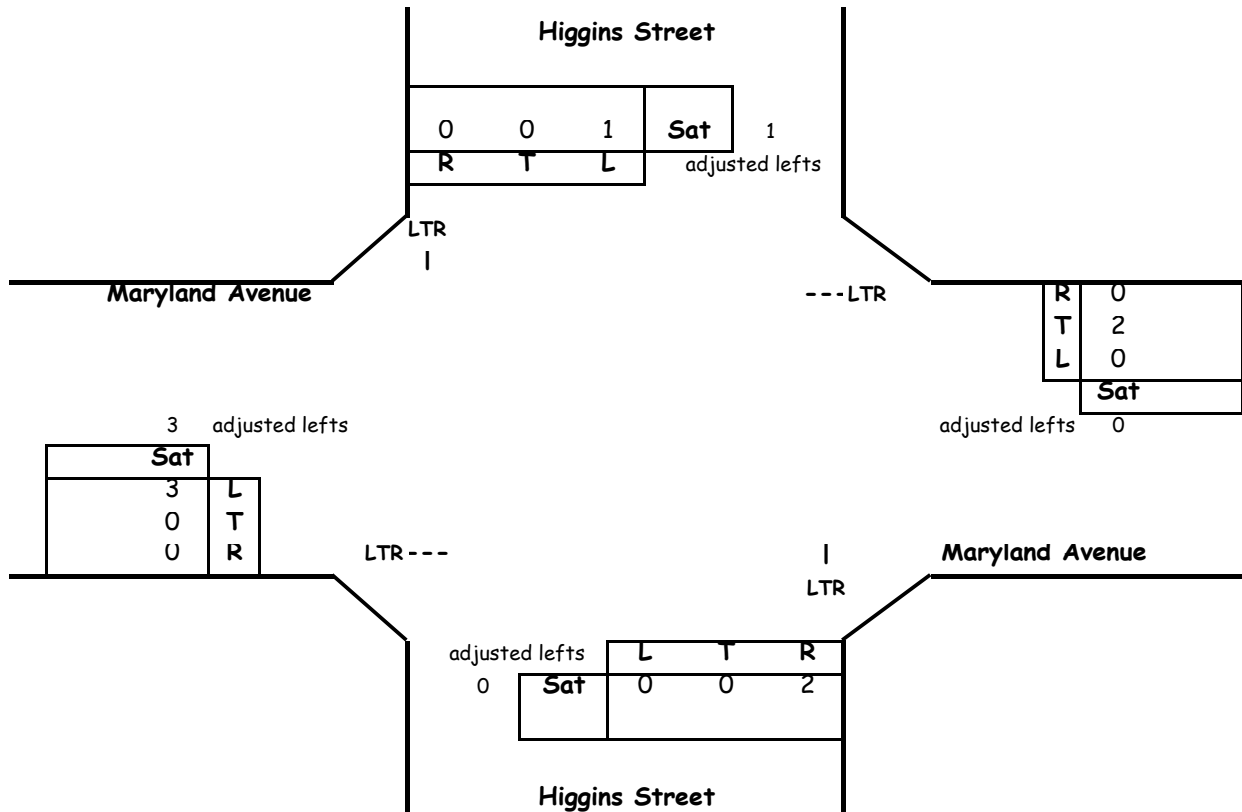
**Intersection
6**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Maryland Avenue
Study Period: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			Sat
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	2	1.00	2	1	1	1	3
SB	1	1.00	1	0	1	0	
EB	3	1	3	0	1	0	5
WB	2	1	2	3	1	3	
CLV TOTAL=							8
Level of Service (LOS) =							A

Critical Lane Volume Analysis



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**Higgins Street &
 Maryland Avenue**
 (Existing Traffic)

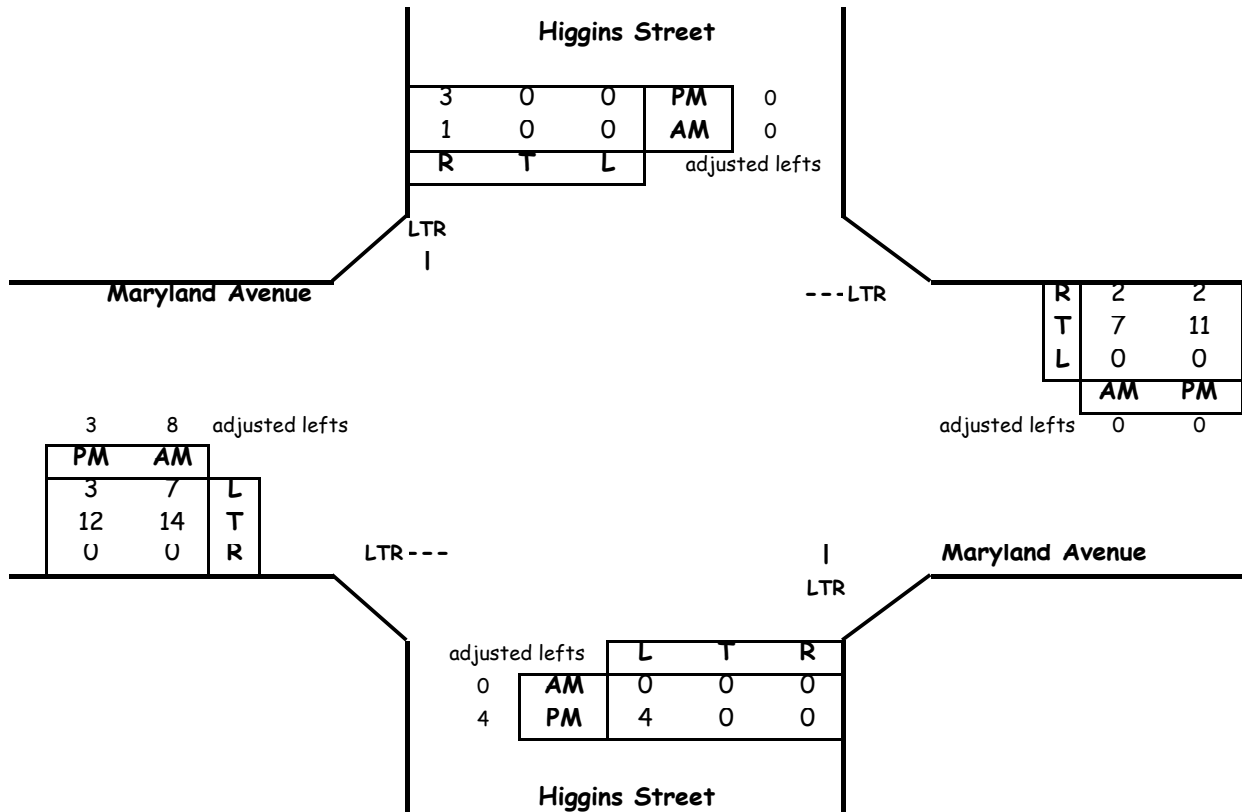
**Intersection
 6**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Maryland Avenue
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	0	1.00	0	0	1	0
SB	1	1.00	1	0	1	0
EB	22	1	22	0	1	0
WB	9	1	9	7	1	7
CLV TOTAL=						23
Level of Service (LOS) =						A

Evening Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	4	1.00	4	0	1	0
SB	3	1.00	3	4	1	4
EB	15	1	15	0	1	0
WB	13	1	13	3	1	3
CLV TOTAL=						23
Level of Service (LOS) =						A

Critical Lane Volume Analysis



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**Higgins Street &
 Maryland Avenue**
 (Background Traffic)

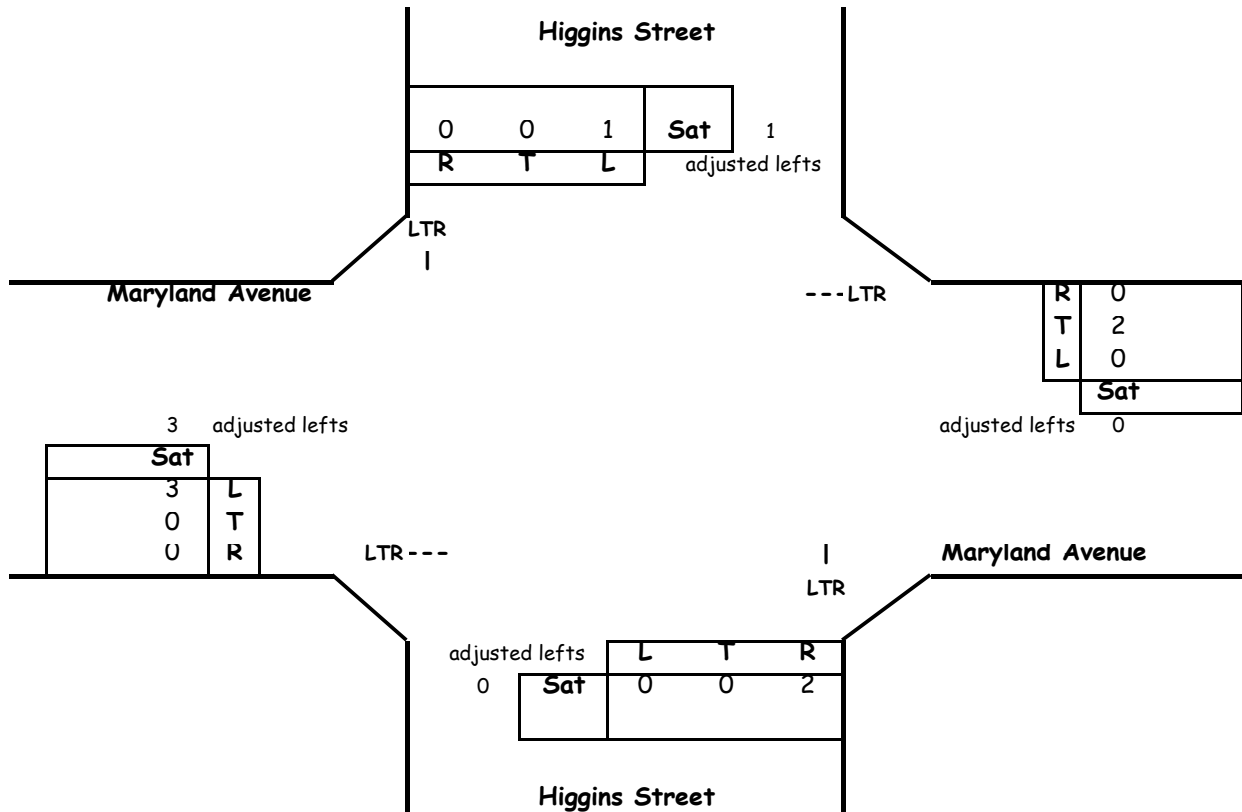
**Intersection
 6**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Maryland Avenue
Study Period: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			Sat
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	2	1.00	2	1	1	1	3
SB	1	1.00	1	0	1	0	
EB	3	1	3	0	1	0	5
WB	2	1	2	3	1	3	
CLV TOTAL=							8
Level of Service (LOS) =							A

Critical Lane Volume Analysis



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**Higgins Street &
 Maryland Avenue**
 (Background Traffic)

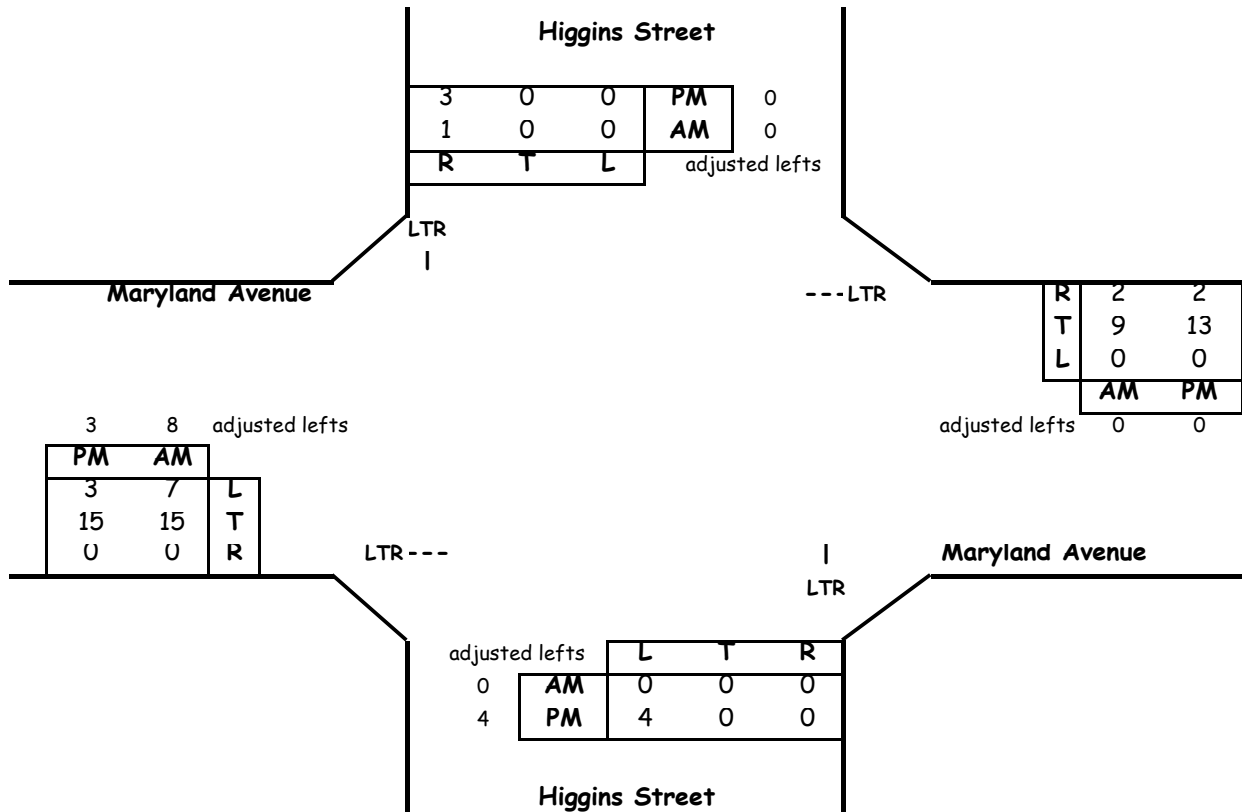
**Intersection
 6**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Maryland Avenue
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Morning Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			AM
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
NB	0	1.00	0	0	1	0	1
SB	1	1.00	1	0	1	0	
EB	23	1	23	0	1	0	23
WB	11	1	11	7	1	7	
CLV TOTAL=							24
Level of Service (LOS) =							A

Evening Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			PM
	VOL	x LUF = Total		VOL	x LUF = Total		CLV
NB	4	1.00	4	0	1	0	7
SB	3	1.00	3	4	1	4	
EB	18	1	18	0	1	0	18
WB	15	1	15	3	1	3	
CLV TOTAL=							25
Level of Service (LOS) =							A

Critical Lane Volume Analysis



**Higgins Street &
Maryland Avenue**
(Total Traffic)

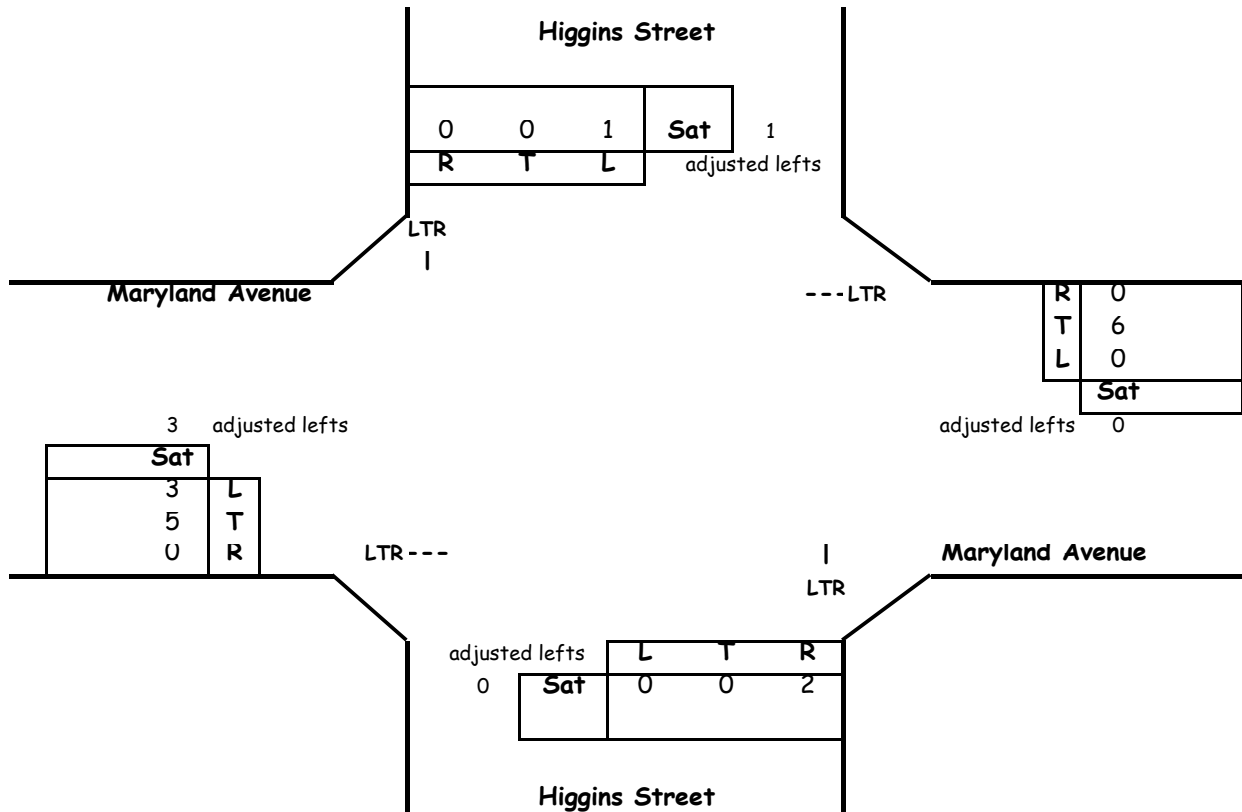
**Intersection
6**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Main Line: Higgins Street
Minor Street: Maryland Avenue
Study Period: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Critical Lane Volume Analysis

Sat. Midday Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
NB	2	1.00	2	1	1	1
SB	1	1.00	1	0	1	0
EB	8	1	8	0	1	0
WB	6	1	6	3	1	3
CLV TOTAL=						12
Level of Service (LOS)=						A

Critical Lane Volume Analysis



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**Higgins Street &
 Maryland Avenue**
 (Total Traffic)

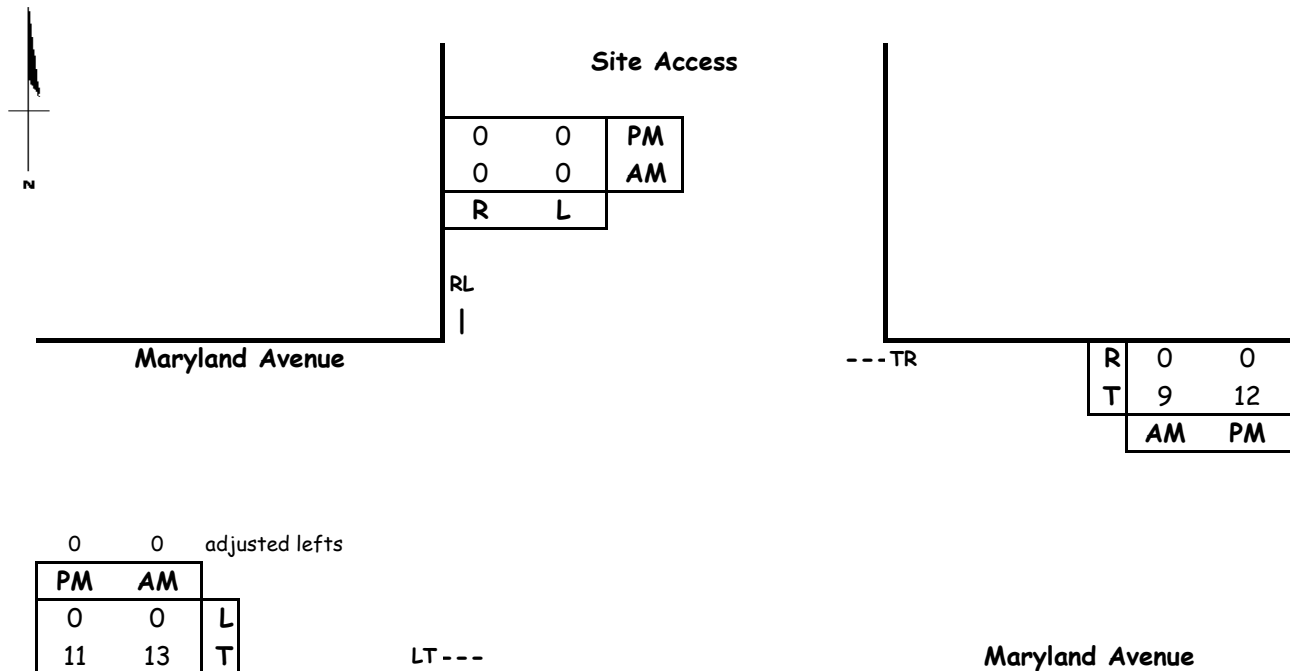
**Intersection
 6**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: Site Access
and: Maryland Avenue
Conditions: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour					
Dir	Thru Volumes			+ Opposing Lefts	AM CLV
	VOL	x LUF	= Total	VOL x LUF = Total	
SB	0	1.00	0		0
EB	13	1.00	13		13
WB	9	1.00	9	0 1.00 0	
CLV TOTAL=					13
Level of Service (LOS)=					A

Evening Peak Hour					
Dir	Thru Volumes			+ Opposing Lefts	PM CLV
	VOL	x LUF	= Total	VOL x LUF = Total	
SB	0	1.00	0		0
EB	11	1.00	11		12
WB	12	1.00	12	0 1.00 0	
CLV TOTAL=					12
Level of Service (LOS)=					A

Critical Lane Volume Analysis



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Site Access &
Maryland Avenue
(Existing Traffic)

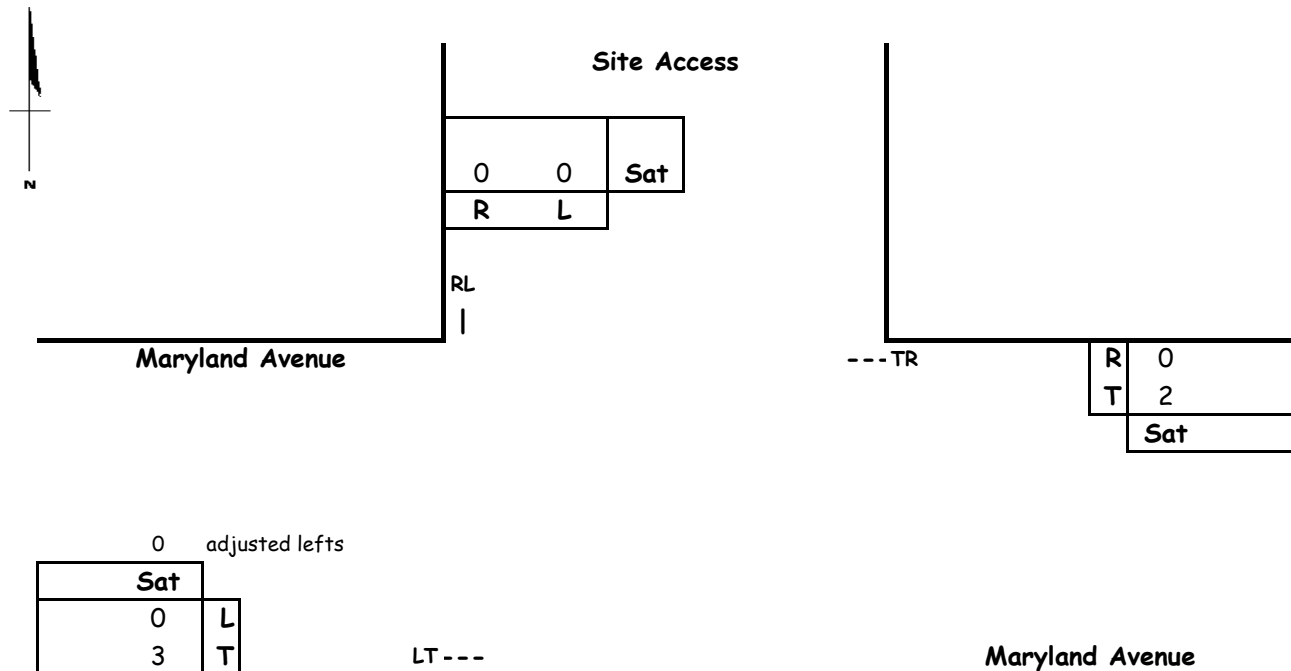
**Intersection
7**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: Site Access
and: Maryland Avenue
Conditions: Existing Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Sat. Midday Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			Sat
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
SB	0	1.00	0				0
EB	3	1.00	3				3
WB	2	1.00	2	0	1.00	0	
CLV TOTAL=							3
Level of Service (LOS)=							A

Critical Lane Volume Analysis

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Site Access &
Maryland Avenue
(Existing Traffic)

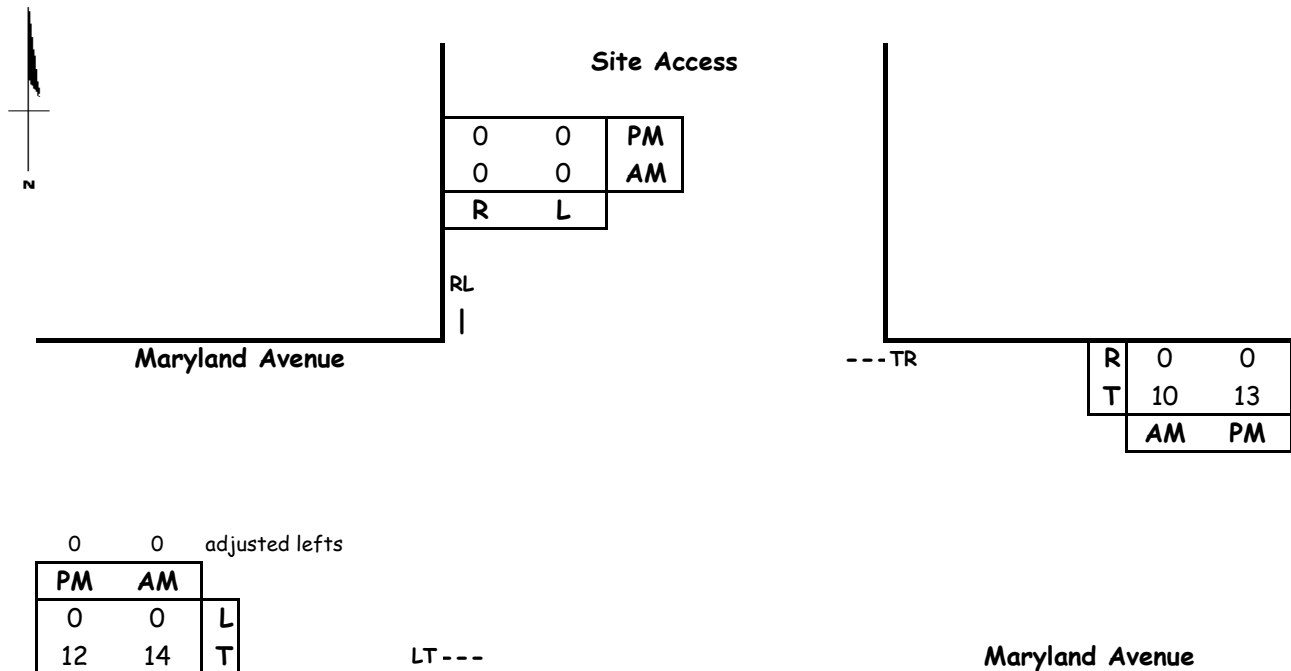
**Intersection
7**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: Site Access
and: Maryland Avenue
Conditions: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour					
Dir	Thru Volumes			+ Opposing Lefts	AM CLV
	VOL	x LUF	= Total	VOL x LUF = Total	
SB	0	1.00	0		0
EB	14	1.00	14		14
WB	10	1.00	10	0 1.00 0	
CLV TOTAL=					14
Level of Service (LOS)=					A

Evening Peak Hour					
Dir	Thru Volumes			+ Opposing Lefts	PM CLV
	VOL	x LUF	= Total	VOL x LUF = Total	
SB	0	1.00	0		0
EB	12	1.00	12		13
WB	13	1.00	13	0 1.00 0	
CLV TOTAL=					13
Level of Service (LOS)=					A

Critical Lane Volume Analysis



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Site Access &
Maryland Avenue
(Background Traffic)

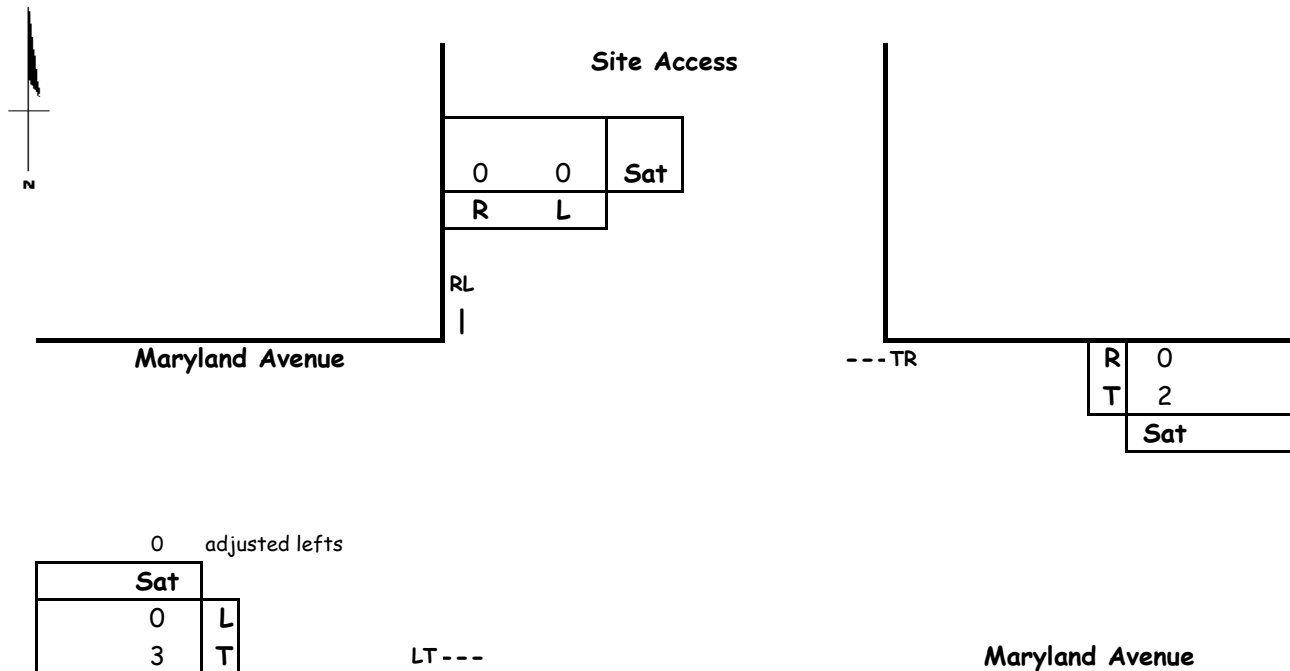
**Intersection
7**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: Site Access
and: Maryland Avenue
Conditions: Background Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Sat. Midday Peak Hour						
Dir	Thru Volumes			+ Opposing Lefts		
	VOL	x LUF	= Total	VOL	x LUF	= Total
SB	0	1.00	0			
EB	3	1.00	3			
WB	2	1.00	2	0	1.00	0
CLV TOTAL=						3
Level of Service (LOS)=						A

Critical Lane Volume Analysis

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(Background Traffic)

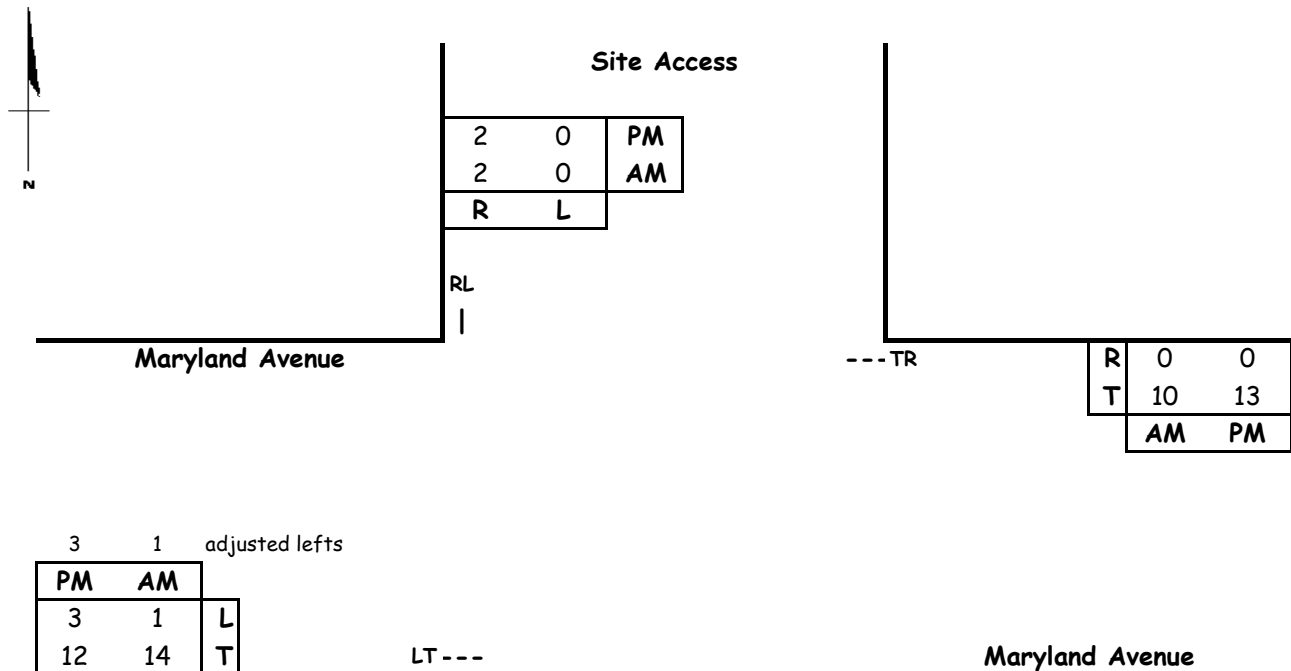
Intersection
7

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: Site Access
and: Maryland Avenue
Conditions: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Morning Peak Hour					
Dir	Thru Volumes			+ Opposing Lefts	AM CLV
	VOL	x LUF	= Total	VOL x LUF = Total	
SB	2	1.00	2		2
EB	15	1.00	15		15
WB	10	1.00	10	1 1.00 1	
CLV TOTAL=					17
Level of Service (LOS)=					A

Evening Peak Hour					
Dir	Thru Volumes			+ Opposing Lefts	PM CLV
	VOL	x LUF	= Total	VOL x LUF = Total	
SB	2	1.00	2		2
EB	15	1.00	15		16
WB	13	1.00	13	3 1.00 3	
CLV TOTAL=					18
Level of Service (LOS)=					A

Critical Lane Volume Analysis



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Site Access &
Maryland Avenue
(Total Traffic)

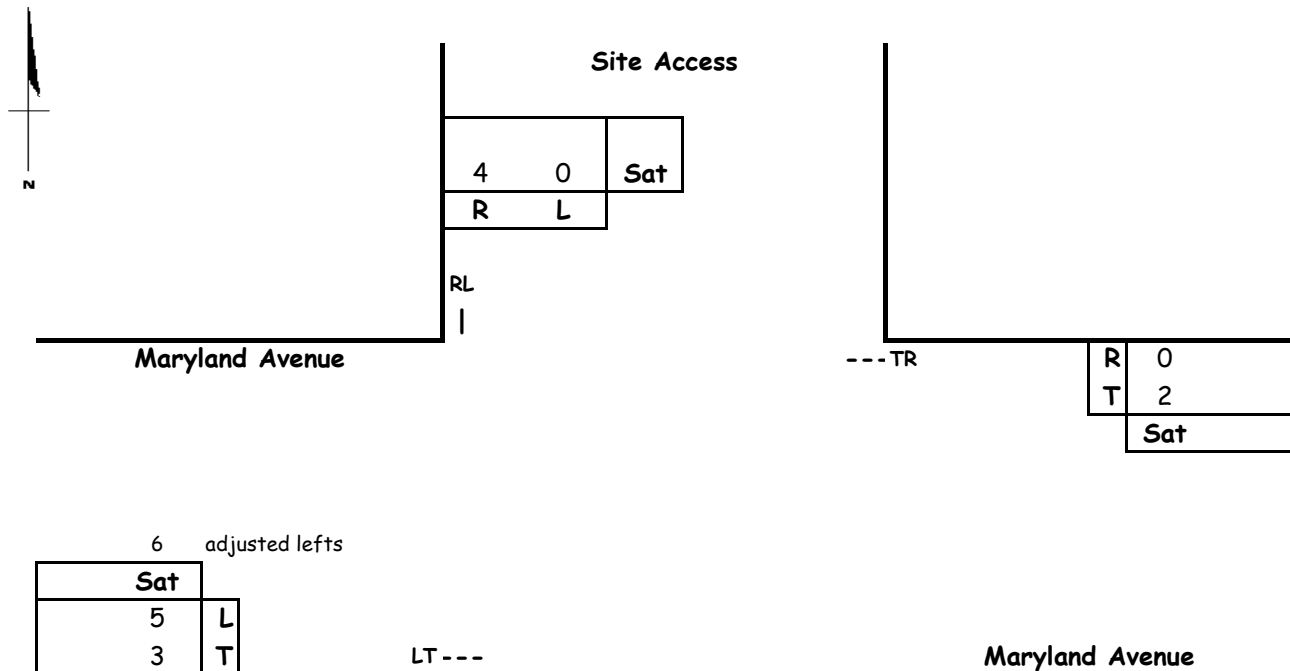
**Intersection
7**

CRITICAL LANE VOLUME (CLV) METHODOLOGY for MSHA

Intersection of: Site Access
and: Maryland Avenue
Conditions: Total Traffic

Analyst: Lenhart Traffic Consulting

Lane Use + Traffic Volumes



Capacity Analysis

Sat. Midday Peak Hour							
Dir	Thru Volumes			+ Opposing Lefts			Sat
	VOL	x LUF	= Total	VOL	x LUF	= Total	CLV
SB	4	1.00	4				4
EB	9	1.00	9				9
WB	2	1.00	2	5	1.00	5	
CLV TOTAL=							13
Level of Service (LOS)=							A

Critical Lane Volume Analysis

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Site Access &
Maryland Avenue
(Total Traffic)

Intersection
7

HCM Unsignalized Intersection Capacity Analysis

1: S. Aurora Street & Needwood Avenue

Silo Square Project
AM Existing

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	4	239	4	3	174
Future Volume (Veh/h)	4	4	239	4	3	174
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	4	260	4	3	189
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	457	262			264	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	457	262			264	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	560	777			1300	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	8	264	192			
Volume Left	4	0	3			
Volume Right	4	4	0			
cSH	651	1700	1300			
Volume to Capacity	0.01	0.16	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	10.6	0.0	0.1			
Lane LOS	B		A			
Approach Delay (s)	10.6	0.0	0.1			
Approach LOS	B					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			22.8%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 2: S. Aurora Street & Maryland Avenue

Silo Square Project
AM Existing

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	6	8	205	14	7	213
Future Volume (Veh/h)	6	8	205	14	7	213
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	9	223	15	8	232
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	478	230			238	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	478	230			238	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	542	809			1329	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	16	238	240			
Volume Left	7	0	8			
Volume Right	9	15	0			
cSH	666	1700	1329			
Volume to Capacity	0.02	0.14	0.01			
Queue Length 95th (ft)	2	0	0			
Control Delay (s)	10.5	0.0	0.3			
Lane LOS	B		A			
Approach Delay (s)	10.5	0.0	0.3			
Approach LOS	B					
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization		26.9%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Higgins Street & Brookletts Avenue

Silo Square Project
AM Existing

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	184	1	2	185	0	4	0	10	5	2	7
Future Volume (Veh/h)	0	184	1	2	185	0	4	0	10	5	2	7
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	200	1	2	201	0	4	0	11	5	2	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	201			201			414	406	200	416	406	201
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	201			201			414	406	200	416	406	201
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	100	99	99	100	99
cM capacity (veh/h)	1371			1371			541	534	840	539	533	840
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	201	203	15	15								
Volume Left	0	2	4	5								
Volume Right	1	0	11	8								
cSH	1371	1371	732	665								
Volume to Capacity	0.00	0.00	0.02	0.02								
Queue Length 95th (ft)	0	0	2	2								
Control Delay (s)	0.0	0.1	10.0	10.5								
Lane LOS		A	B	B								
Approach Delay (s)	0.0	0.1	10.0	10.5								
Approach LOS			B	B								
Intersection Summary												
Average Delay			0.8									
Intersection Capacity Utilization			21.3%	ICU Level of Service				A				
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

4: Higgins Street & Needwood Avenue

Silo Square Project
AM Existing

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	11	0	0	3	2	0	1	0	2	1	0
Future Volume (Veh/h)	1	11	0	0	3	2	0	1	0	2	1	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	12	0	0	3	2	0	1	0	2	1	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	5			12			18	19	12	18	18	4
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	5			12			18	19	12	18	18	4
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1616			1607			994	874	1069	994	875	1080
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	13	5	1	3								
Volume Left	1	0	0	2								
Volume Right	0	2	0	0								
cSH	1616	1607	874	951								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	0.6	0.0	9.1	8.8								
Lane LOS	A		A	A								
Approach Delay (s)	0.6	0.0	9.1	8.8								
Approach LOS			A	A								
Intersection Summary												
Average Delay			1.9									
Intersection Capacity Utilization			13.3%	ICU Level of Service				A				
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

5: Site Access & Needwood Avenue

Silo Square Project
AM Existing

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱	↘↙	
Traffic Volume (veh/h)	13	0	0	5	0	0
Future Volume (Veh/h)	13	0	0	5	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	0	0	5	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			14	19		14
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			14	19		14
tC, single (s)			4.1	6.4		6.2
tC, 2 stage (s)						
tF (s)			2.2	3.5		3.3
p0 queue free %			100	100		100
cM capacity (veh/h)			1604	998		1066
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	14	5	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1604	1700			
Volume to Capacity	0.01	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			6.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

6: Driveway/Higgins Street & Maryland Avenue

Silo Square Project
AM Existing

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	13	0	0	7	2	0	0	0	0	0	1
Future Volume (Veh/h)	7	13	0	0	7	2	0	0	0	0	0	1
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	14	0	0	8	2	0	0	0	0	0	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	10			14			40	40	14	39	39	9
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	10			14			40	40	14	39	39	9
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1610			1604			960	848	1066	962	849	1073
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	22	10	0	1								
Volume Left	8	0	0	0								
Volume Right	0	2	0	1								
cSH	1610	1604	1700	1073								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	2.7	0.0	0.0	8.4								
Lane LOS	A		A	A								
Approach Delay (s)	2.7	0.0	0.0	8.4								
Approach LOS			A	A								
Intersection Summary												
Average Delay				2.0								
Intersection Capacity Utilization				16.9%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis7: Maryland Avenue & Site Access

Silo Square Project
AM Existing



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	13	9	0	0	0
Future Volume (Veh/h)	0	13	9	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	14	10	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	10				24	10
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	10				24	10
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1610				992	1071
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	14	10	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1610	1700	1700			
Volume to Capacity	0.00	0.01	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			6.7%		ICU Level of Service	
Analysis Period (min)			15			
			A			

HCM Unsignalized Intersection Capacity Analysis

1: S. Aurora Street & Needwood Avenue

Silo Square Project
AM Background

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	4	254	4	3	185
Future Volume (Veh/h)	4	4	254	4	3	185
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	4	276	4	3	201
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	485	278			280	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	485	278			280	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	540	761			1283	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	8	280	204			
Volume Left	4	0	3			
Volume Right	4	4	0			
cSH	632	1700	1283			
Volume to Capacity	0.01	0.16	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	10.8	0.0	0.1			
Lane LOS	B		A			
Approach Delay (s)	10.8	0.0	0.1			
Approach LOS	B					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			23.6%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 2: S. Aurora Street & Maryland Avenue

Silo Square Project
AM Background

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	6	8	218	15	7	226
Future Volume (Veh/h)	6	8	218	15	7	226
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	9	237	16	8	246
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	507	245			253	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	507	245			253	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	522	794			1312	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	16	253	254			
Volume Left	7	0	8			
Volume Right	9	16	0			
cSH	647	1700	1312			
Volume to Capacity	0.02	0.15	0.01			
Queue Length 95th (ft)	2	0	0			
Control Delay (s)	10.7	0.0	0.3			
Lane LOS	B		A			
Approach Delay (s)	10.7	0.0	0.3			
Approach LOS	B					
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			27.5%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

3: Higgins Street & Brookletts Avenue

Silo Square Project
AM Background

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	195	1	2	196	0	4	0	11	5	2	7
Future Volume (Veh/h)	0	195	1	2	196	0	4	0	11	5	2	7
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	212	1	2	213	0	4	0	12	5	2	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	213			213			438	430	212	442	430	213
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	213			213			438	430	212	442	430	213
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	100	99	99	100	99
cM capacity (veh/h)	1357			1357			521	517	828	518	517	827
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	213	215	16	15								
Volume Left	0	2	4	5								
Volume Right	1	0	12	8								
cSH	1357	1357	722	647								
Volume to Capacity	0.00	0.00	0.02	0.02								
Queue Length 95th (ft)	0	0	2	2								
Control Delay (s)	0.0	0.1	10.1	10.7								
Lane LOS		A	B	B								
Approach Delay (s)	0.0	0.1	10.1	10.7								
Approach LOS			B	B								
Intersection Summary												
Average Delay			0.7									
Intersection Capacity Utilization			21.9%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

4: Higgins Street & Needwood Avenue

Silo Square Project
AM Background

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	12	0	0	3	2	0	1	0	2	1	0
Future Volume (Veh/h)	1	12	0	0	3	2	0	1	0	2	1	0
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	13	0	0	3	2	0	1	0	2	1	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	5			13			20	20	13	20	19	4
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	5			13			20	20	13	20	19	4
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1616			1606			993	873	1067	993	874	1080
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	14	5	1	3								
Volume Left	1	0	0	2								
Volume Right	0	2	0	0								
cSH	1616	1606	873	950								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	0.5	0.0	9.1	8.8								
Lane LOS	A		A	A								
Approach Delay (s)	0.5	0.0	9.1	8.8								
Approach LOS			A	A								
Intersection Summary												
Average Delay				1.9								
Intersection Capacity Utilization				13.3%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis

5: Site Access & Needwood Avenue

Silo Square Project
AM Background

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	14	0	0	5	0	0
Future Volume (Veh/h)	14	0	0	5	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	0	0	5	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			15		20	15
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			15		20	15
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1603		997	1065
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	15	5	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1603	1700			
Volume to Capacity	0.01	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			6.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

6: Driveway/Higgins Street & Maryland Avenue

Silo Square Project
AM Background

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	14	0	0	7	2	0	0	0	0	0	1
Future Volume (Veh/h)	7	14	0	0	7	2	0	0	0	0	0	1
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	15	0	0	8	2	0	0	0	0	0	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	10			15			41	41	15	40	40	9
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	10			15			41	41	15	40	40	9
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1610			1603			958	847	1065	960	848	1073
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	23	10	0	1								
Volume Left	8	0	0	0								
Volume Right	0	2	0	1								
cSH	1610	1603	1700	1073								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	2.5	0.0	0.0	8.4								
Lane LOS	A		A	A								
Approach Delay (s)	2.5	0.0	0.0	8.4								
Approach LOS			A	A								
Intersection Summary												
Average Delay				2.0								
Intersection Capacity Utilization				16.9%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis

7: Maryland Avenue & Site Access

Silo Square Project
AM Background



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	14	10	0	0	0
Future Volume (Veh/h)	0	14	10	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	15	11	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	11				26	11
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	11				26	11
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1608				989	1070
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	15	11	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1608	1700	1700			
Volume to Capacity	0.00	0.01	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			6.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

1: S. Aurora Street & Needwood Avenue

Silo Square Project
AM Total

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	5	6	255	4	4	185
Future Volume (Veh/h)	5	6	255	4	4	185
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	7	277	4	4	201
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	488	279			281	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	488	279			281	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	537	760			1282	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	12	281	205			
Volume Left	5	0	4			
Volume Right	7	4	0			
cSH	648	1700	1282			
Volume to Capacity	0.02	0.17	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	10.7	0.0	0.2			
Lane LOS	B		A			
Approach Delay (s)	10.7	0.0	0.2			
Approach LOS	B					
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			23.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 2: S. Aurora Street & Maryland Avenue

Silo Square Project
AM Total

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	7	9	218	16	7	227
Future Volume (Veh/h)	7	9	218	16	7	227
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	10	237	17	8	247
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	508	246			254	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	508	246			254	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	99			99	
cM capacity (veh/h)	521	793			1311	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	18	254	255			
Volume Left	8	0	8			
Volume Right	10	17	0			
cSH	644	1700	1311			
Volume to Capacity	0.03	0.15	0.01			
Queue Length 95th (ft)	2	0	0			
Control Delay (s)	10.8	0.0	0.3			
Lane LOS	B		A			
Approach Delay (s)	10.8	0.0	0.3			
Approach LOS	B					
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			27.6%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

3: Higgins Street & Brookletts Avenue

Silo Square Project
AM Total

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	195	1	3	196	0	4	0	12	5	2	7
Future Volume (Veh/h)	0	195	1	3	196	0	4	0	12	5	2	7
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	212	1	3	213	0	4	0	13	5	2	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	213			213			440	432	212	444	432	213
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	213			213			440	432	212	444	432	213
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	100	98	99	100	99
cM capacity (veh/h)	1357			1357			519	516	828	515	515	827
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	213	216	17	15								
Volume Left	0	3	4	5								
Volume Right	1	0	13	8								
cSH	1357	1357	726	645								
Volume to Capacity	0.00	0.00	0.02	0.02								
Queue Length 95th (ft)	0	0	2	2								
Control Delay (s)	0.0	0.1	10.1	10.7								
Lane LOS		A	B	B								
Approach Delay (s)	0.0	0.1	10.1	10.7								
Approach LOS			B	B								
Intersection Summary												
Average Delay			0.8									
Intersection Capacity Utilization			22.7%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

4: Higgins Street & Needwood Avenue

Silo Square Project
AM Total

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	13	0	0	6	3	0	1	0	3	1	0
Future Volume (Veh/h)	1	13	0	0	6	3	0	1	0	3	1	0
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	14	0	0	7	3	0	1	0	3	1	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	10			14			25	26	14	25	24	8
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	10			14			25	26	14	25	24	8
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1610			1604			985	867	1066	985	868	1073
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	15	10	1	4								
Volume Left	1	0	0	3								
Volume Right	0	3	0	0								
cSH	1610	1604	867	953								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	0.5	0.0	9.2	8.8								
Lane LOS	A		A	A								
Approach Delay (s)	0.5	0.0	9.2	8.8								
Approach LOS			A	A								
Intersection Summary												
Average Delay				1.7								
Intersection Capacity Utilization				13.3%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis

5: Site Access & Needwood Avenue

Silo Square Project
AM Total

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	14	2	0	5	4	0
Future Volume (Veh/h)	14	2	0	5	4	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	2	0	5	4	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			17		21	16
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			17		21	16
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1600		996	1063
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	17	5	4			
Volume Left	0	0	4			
Volume Right	2	0	0			
cSH	1700	1600	996			
Volume to Capacity	0.01	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	8.6			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	8.6			
Approach LOS			A			
Intersection Summary						
Average Delay			1.3			
Intersection Capacity Utilization			13.3%	ICU Level of Service		A
Analysis Period (min)			15			

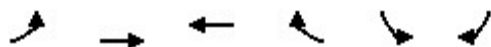
HCM Unsignalized Intersection Capacity Analysis 6: Driveway/Higgins Street & Maryland Avenue

Silo Square Project
AM Total

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	15	0	0	9	2	0	0	0	0	0	1
Future Volume (Veh/h)	7	15	0	0	9	2	0	0	0	0	0	1
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	16	0	0	10	2	0	0	0	0	0	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	12			16			44	44	16	43	43	11
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	12			16			44	44	16	43	43	11
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1607			1602			954	844	1063	956	845	1070
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	24	12	0	1								
Volume Left	8	0	0	0								
Volume Right	0	2	0	1								
cSH	1607	1602	1700	1070								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	2.4	0.0	0.0	8.4								
Lane LOS	A		A	A								
Approach Delay (s)	2.4	0.0	0.0	8.4								
Approach LOS			A	A								
Intersection Summary												
Average Delay				1.8								
Intersection Capacity Utilization				17.0%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis 7: Maryland Avenue & Site Access

Silo Square Project
AM Total



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	14	10	0	0	2
Future Volume (Veh/h)	1	14	10	0	0	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	15	11	0	0	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	11				28	11
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	11				28	11
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1608				986	1070
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	16	11	2			
Volume Left	1	0	0			
Volume Right	0	0	2			
cSH	1608	1700	1070			
Volume to Capacity	0.00	0.01	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.5	0.0	8.4			
Lane LOS	A		A			
Approach Delay (s)	0.5	0.0	8.4			
Approach LOS			A			
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			13.3%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

1: S. Aurora Street & Needwood Avenue

Silo Square Project
PM Existing

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	6	5	179	3	2	174
Future Volume (Veh/h)	6	5	179	3	2	174
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	5	195	3	2	189
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	390	196			198	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	390	196			198	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	613	845			1375	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	12	198	191			
Volume Left	7	0	2			
Volume Right	5	3	0			
cSH	692	1700	1375			
Volume to Capacity	0.02	0.12	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	10.3	0.0	0.1			
Lane LOS	B		A			
Approach Delay (s)	10.3	0.0	0.1			
Approach LOS	B					
Intersection Summary						
Average Delay		0.4				
Intersection Capacity Utilization		20.8%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

2: S. Aurora Street & Maryland Avenue

Silo Square Project
PM Existing

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	10	171	5	9	176
Future Volume (Veh/h)	9	10	171	5	9	176
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	11	186	5	10	191
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	400	188			191	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	400	188			191	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	99			99	
cM capacity (veh/h)	602	853			1383	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	21	191	201			
Volume Left	10	0	10			
Volume Right	11	5	0			
cSH	712	1700	1383			
Volume to Capacity	0.03	0.11	0.01			
Queue Length 95th (ft)	2	0	1			
Control Delay (s)	10.2	0.0	0.4			
Lane LOS	B		A			
Approach Delay (s)	10.2	0.0	0.4			
Approach LOS	B					
Intersection Summary						
Average Delay			0.7			
Intersection Capacity Utilization			26.6%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

3: Higgins Street & Brookletts Avenue

Silo Square Project
PM Existing

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	143	1	3	199	0	3	0	7	15	1	4
Future Volume (Veh/h)	0	143	1	3	199	0	3	0	7	15	1	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	155	1	3	216	0	3	0	8	16	1	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	216			156			382	378	156	386	378	216
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	216			156			382	378	156	386	378	216
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	100	99	97	100	100
cM capacity (veh/h)	1354			1424			572	553	890	567	553	824
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	156	219	11	21								
Volume Left	0	3	3	16								
Volume Right	1	0	8	4								
cSH	1354	1424	773	602								
Volume to Capacity	0.00	0.00	0.01	0.03								
Queue Length 95th (ft)	0	0	1	3								
Control Delay (s)	0.0	0.1	9.7	11.2								
Lane LOS		A	A	B								
Approach Delay (s)	0.0	0.1	9.7	11.2								
Approach LOS			A	B								
Intersection Summary												
Average Delay				0.9								
Intersection Capacity Utilization				22.9%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis

4: Higgins Street & Needwood Avenue

Silo Square Project
PM Existing

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	3	0	0	7	0	0	2	0	1	1	3
Future Volume (Veh/h)	2	3	0	0	7	0	0	2	0	1	1	3
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	3	0	0	8	0	0	2	0	1	1	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	8			3			18	15	3	16	15	8
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	8			3			18	15	3	16	15	8
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1612			1619			991	878	1081	997	878	1074
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	5	8	2	5								
Volume Left	2	0	0	1								
Volume Right	0	0	0	3								
cSH	1612	1619	878	1013								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	2.9	0.0	9.1	8.6								
Lane LOS	A		A	A								
Approach Delay (s)	2.9	0.0	9.1	8.6								
Approach LOS			A	A								
Intersection Summary												
Average Delay				3.8								
Intersection Capacity Utilization				13.3%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis

5: Site Access & Needwood Avenue

Silo Square Project
PM Existing

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱	↰	↱
Traffic Volume (veh/h)	4	0	0	7	0	0
Future Volume (Veh/h)	4	0	0	7	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	0	0	8	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			4		12	4
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			4		12	4
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1618		1008	1080
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	4	8	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1618	1700			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			6.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

6: Driveway/Higgins Street & Maryland Avenue

Silo Square Project
PM Existing

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	11	0	0	10	2	4	0	0	0	0	3
Future Volume (Veh/h)	3	11	0	0	10	2	4	0	0	0	0	3
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	12	0	0	11	2	4	0	0	0	0	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	13			12			33	31	12	30	30	12
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	13			12			33	31	12	30	30	12
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1606			1607			970	860	1069	977	861	1069
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	15	13	4	3								
Volume Left	3	0	4	0								
Volume Right	0	2	0	3								
cSH	1606	1607	970	1069								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	1.5	0.0	8.7	8.4								
Lane LOS	A		A	A								
Approach Delay (s)	1.5	0.0	8.7	8.4								
Approach LOS			A	A								
Intersection Summary												
Average Delay				2.3								
Intersection Capacity Utilization				13.3%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis

7: Maryland Avenue & Site Access

Silo Square Project
PM Existing



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	11	12	0	0	0
Future Volume (Veh/h)	0	11	12	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	12	13	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	13				25	13
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	13				25	13
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1606				991	1067
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	12	13	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1606	1700	1700			
Volume to Capacity	0.00	0.01	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			6.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

1: S. Aurora Street & Needwood Avenue

Silo Square Project
PM Background

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	6	5	190	3	2	185
Future Volume (Veh/h)	6	5	190	3	2	185
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	5	207	3	2	201
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	414	208			210	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	414	208			210	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	594	832			1361	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	12	210	203			
Volume Left	7	0	2			
Volume Right	5	3	0			
cSH	674	1700	1361			
Volume to Capacity	0.02	0.12	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	10.4	0.0	0.1			
Lane LOS	B		A			
Approach Delay (s)	10.4	0.0	0.1			
Approach LOS	B					
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			21.3%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

2: S. Aurora Street & Maryland Avenue

Silo Square Project
PM Background

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	10	11	181	5	10	187
Future Volume (Veh/h)	10	11	181	5	10	187
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	12	197	5	11	203
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	424	200			202	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	424	200			202	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	99			99	
cM capacity (veh/h)	582	841			1370	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	23	202	214			
Volume Left	11	0	11			
Volume Right	12	5	0			
cSH	693	1700	1370			
Volume to Capacity	0.03	0.12	0.01			
Queue Length 95th (ft)	3	0	1			
Control Delay (s)	10.4	0.0	0.5			
Lane LOS	B		A			
Approach Delay (s)	10.4	0.0	0.5			
Approach LOS	B					
Intersection Summary						
Average Delay		0.8				
Intersection Capacity Utilization		28.0%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

3: Higgins Street & Brookletts Avenue

Silo Square Project
PM Background

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	152	1	3	211	0	3	0	7	16	1	4
Future Volume (Veh/h)	0	152	1	3	211	0	3	0	7	16	1	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	165	1	3	229	0	3	0	8	17	1	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	229			166			405	400	166	408	401	229
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	229			166			405	400	166	408	401	229
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	100	99	97	100	100
cM capacity (veh/h)	1339			1412			552	537	879	547	536	810
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	166	232	11	22								
Volume Left	0	3	3	17								
Volume Right	1	0	8	4								
cSH	1339	1412	757	581								
Volume to Capacity	0.00	0.00	0.01	0.04								
Queue Length 95th (ft)	0	0	1	3								
Control Delay (s)	0.0	0.1	9.8	11.4								
Lane LOS		A	A	B								
Approach Delay (s)	0.0	0.1	9.8	11.4								
Approach LOS			A	B								
Intersection Summary												
Average Delay			0.9									
Intersection Capacity Utilization			23.5%	ICU Level of Service					A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

4: Higgins Street & Needwood Avenue

Silo Square Project
PM Background

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	3	0	0	7	0	0	2	0	1	1	3
Future Volume (Veh/h)	2	3	0	0	7	0	0	2	0	1	1	3
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	3	0	0	8	0	0	2	0	1	1	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	8			3			18	15	3	16	15	8
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	8			3			18	15	3	16	15	8
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1612			1619			991	878	1081	997	878	1074
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	5	8	2	5								
Volume Left	2	0	0	1								
Volume Right	0	0	0	3								
cSH	1612	1619	878	1013								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	2.9	0.0	9.1	8.6								
Lane LOS	A		A	A								
Approach Delay (s)	2.9	0.0	9.1	8.6								
Approach LOS			A	A								
Intersection Summary												
Average Delay				3.8								
Intersection Capacity Utilization				13.3%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis

5: Site Access & Needwood Avenue

Silo Square Project
PM Background

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱	↘↙	
Traffic Volume (veh/h)	4	0	0	7	0	0
Future Volume (Veh/h)	4	0	0	7	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	0	0	8	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			4	12	4	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			4	12	4	
tC, single (s)			4.1	6.4	6.2	
tC, 2 stage (s)						
tF (s)			2.2	3.5	3.3	
p0 queue free %			100	100	100	
cM capacity (veh/h)			1618	1008	1080	
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	4	8	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1618	1700			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			6.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

6: Driveway/Higgins Street & Maryland Avenue

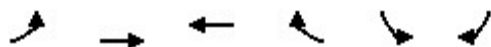
Silo Square Project
PM Background

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	12	0	0	11	2	4	0	0	0	0	3
Future Volume (Veh/h)	3	12	0	0	11	2	4	0	0	0	0	3
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	13	0	0	12	2	4	0	0	0	0	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	14			13			35	33	13	32	32	13
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	14			13			35	33	13	32	32	13
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1604			1606			967	858	1067	974	859	1067
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	16	14	4	3								
Volume Left	3	0	4	0								
Volume Right	0	2	0	3								
cSH	1604	1606	967	1067								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	1.4	0.0	8.7	8.4								
Lane LOS	A		A	A								
Approach Delay (s)	1.4	0.0	8.7	8.4								
Approach LOS			A	A								
Intersection Summary												
Average Delay				2.2								
Intersection Capacity Utilization				13.3%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis

7: Maryland Avenue & Site Access

Silo Square Project
PM Background



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	12	13	0	0	0
Future Volume (Veh/h)	0	12	13	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	13	14	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	14				27	14
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	14				27	14
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1604				988	1066
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	13	14	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1604	1700	1700			
Volume to Capacity	0.00	0.01	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			6.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

1: S. Aurora Street & Needwood Avenue

Silo Square Project
PM Total

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	7	7	191	4	4	186
Future Volume (Veh/h)	7	7	191	4	4	186
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	8	208	4	4	202
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	420	210			212	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	420	210			212	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	588	830			1358	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	16	212	206			
Volume Left	8	0	4			
Volume Right	8	4	0			
cSH	689	1700	1358			
Volume to Capacity	0.02	0.12	0.00			
Queue Length 95th (ft)	2	0	0			
Control Delay (s)	10.4	0.0	0.2			
Lane LOS	B		A			
Approach Delay (s)	10.4	0.0	0.2			
Approach LOS	B					
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			23.0%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

2: S. Aurora Street & Maryland Avenue

Silo Square Project
PM Total

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	11	12	182	7	11	188
Future Volume (Veh/h)	11	12	182	7	11	188
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	13	198	8	12	204
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	430	202			206	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	430	202			206	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	98			99	
cM capacity (veh/h)	577	839			1365	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	25	206	216			
Volume Left	12	0	12			
Volume Right	13	8	0			
cSH	689	1700	1365			
Volume to Capacity	0.04	0.12	0.01			
Queue Length 95th (ft)	3	0	1			
Control Delay (s)	10.4	0.0	0.5			
Lane LOS	B		A			
Approach Delay (s)	10.4	0.0	0.5			
Approach LOS	B					
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			28.9%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

3: Higgins Street & Brookletts Avenue

Silo Square Project
PM Total

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	152	1	4	211	0	3	0	8	16	1	4
Future Volume (Veh/h)	0	152	1	4	211	0	3	0	8	16	1	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	165	1	4	229	0	3	0	9	17	1	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None				None							
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	229			166			407	402	166	412	403	229
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	229			166			407	402	166	412	403	229
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	100	99	97	100	100
cM capacity (veh/h)	1339			1412			550	535	879	544	535	810
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	166	233	12	22								
Volume Left	0	4	3	17								
Volume Right	1	0	9	4								
cSH	1339	1412	765	578								
Volume to Capacity	0.00	0.00	0.02	0.04								
Queue Length 95th (ft)	0	0	1	3								
Control Delay (s)	0.0	0.2	9.8	11.5								
Lane LOS		A	A	B								
Approach Delay (s)	0.0	0.2	9.8	11.5								
Approach LOS			A	B								
Intersection Summary												
Average Delay			0.9									
Intersection Capacity Utilization			24.3%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

4: Higgins Street & Needwood Avenue

Silo Square Project
PM Total

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	6	0	0	10	1	0	2	0	2	1	3
Future Volume (Veh/h)	2	6	0	0	10	1	0	2	0	2	1	3
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	7	0	0	11	1	0	2	0	2	1	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	12			7			26	23	7	24	22	12
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	12			7			26	23	7	24	22	12
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1607			1614			980	869	1075	985	870	1069
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	9	12	2	6								
Volume Left	2	0	0	2								
Volume Right	0	1	0	3								
cSH	1607	1614	869	1003								
Volume to Capacity	0.00	0.00	0.00	0.01								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	1.6	0.0	9.2	8.6								
Lane LOS	A		A	A								
Approach Delay (s)	1.6	0.0	9.2	8.6								
Approach LOS			A	A								
Intersection Summary												
Average Delay				2.9								
Intersection Capacity Utilization				13.3%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis

5: Site Access & Needwood Avenue

Silo Square Project
PM Total

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	4	4	0	7	4	0
Future Volume (Veh/h)	4	4	0	7	4	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	4	0	8	4	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			8		14	6
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			8		14	6
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1612		1005	1077
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	8	8	4			
Volume Left	0	0	4			
Volume Right	4	0	0			
cSH	1700	1612	1005			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	8.6			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	8.6			
Approach LOS			A			
Intersection Summary						
Average Delay			1.7			
Intersection Capacity Utilization			13.3%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

6: Driveway/Higgins Street & Maryland Avenue

Silo Square Project

PM Total

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	15	0	0	13	2	4	0	0	0	0	3
Future Volume (Veh/h)	3	15	0	0	13	2	4	0	0	0	0	3
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	16	0	0	14	2	4	0	0	0	0	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	16			16			40	38	16	37	37	15
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	16			16			40	38	16	37	37	15
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1602			1602			960	853	1063	967	854	1065
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	19	16	4	3								
Volume Left	3	0	4	0								
Volume Right	0	2	0	3								
cSH	1602	1602	960	1065								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	1.2	0.0	8.8	8.4								
Lane LOS	A		A	A								
Approach Delay (s)	1.2	0.0	8.8	8.4								
Approach LOS			A	A								
Intersection Summary												
Average Delay				2.0								
Intersection Capacity Utilization				13.4%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis 7: Maryland Avenue & Site Access

Silo Square Project
PM Total



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	3	12	13	0	0	2
Future Volume (Veh/h)	3	12	13	0	0	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	13	14	0	0	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	14				33	14
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	14				33	14
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1604				979	1066
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	16	14	2			
Volume Left	3	0	0			
Volume Right	0	0	2			
cSH	1604	1700	1066			
Volume to Capacity	0.00	0.01	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	1.4	0.0	8.4			
Lane LOS	A		A			
Approach Delay (s)	1.4	0.0	8.4			
Approach LOS			A			
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utilization			13.3%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

1: S. Aurora Street & Needwood Avenue

Silo Square Project
Saturday Existing

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	3	142	4	5	100
Future Volume (Veh/h)	1	3	142	4	5	100
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	3	154	4	5	109
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	275	156			158	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	275	156			158	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	712	890			1422	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	4	158	114			
Volume Left	1	0	5			
Volume Right	3	4	0			
cSH	837	1700	1422			
Volume to Capacity	0.00	0.09	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	9.3	0.0	0.4			
Lane LOS	A		A			
Approach Delay (s)	9.3	0.0	0.4			
Approach LOS	A					
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			19.3%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

2: S. Aurora Street & Maryland Avenue

Silo Square Project
Saturday Existing

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	2	2	143	3	2	102
Future Volume (Veh/h)	2	2	143	3	2	102
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	2	155	3	2	111
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	272	156			158	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	272	156			158	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	717	889			1422	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	4	158	113			
Volume Left	2	0	2			
Volume Right	2	3	0			
cSH	794	1700	1422			
Volume to Capacity	0.01	0.09	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	9.6	0.0	0.1			
Lane LOS	A		A			
Approach Delay (s)	9.6	0.0	0.1			
Approach LOS	A					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			17.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

3: Higgins Street & Brookletts Avenue

Silo Square Project
Saturday Existing

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	80	0	1	107	0	0	0	3	5	3	8
Future Volume (Veh/h)	0	80	0	1	107	0	0	0	3	5	3	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	87	0	1	116	0	0	0	3	5	3	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	116			87			216	205	87	208	205	116
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	116			87			216	205	87	208	205	116
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	99	100	99
cM capacity (veh/h)	1473			1509			731	691	971	747	691	936
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	87	117	3	17								
Volume Left	0	1	0	5								
Volume Right	0	0	3	9								
cSH	1473	1509	971	823								
Volume to Capacity	0.00	0.00	0.00	0.02								
Queue Length 95th (ft)	0	0	0	2								
Control Delay (s)	0.0	0.1	8.7	9.5								
Lane LOS		A	A	A								
Approach Delay (s)	0.0	0.1	8.7	9.5								
Approach LOS			A	A								
Intersection Summary												
Average Delay	0.9											
Intersection Capacity Utilization	18.5%			ICU Level of Service					A			
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

4: Higgins Street & Needwood Avenue

Silo Square Project
Saturday Existing

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	5	0	0	3	0	0	1	0	1	1	0
Future Volume (Veh/h)	1	5	0	0	3	0	0	1	0	1	1	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	5	0	0	3	0	0	1	0	1	1	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	3			5			10	10	5	10	10	3
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	3			5			10	10	5	10	10	3
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1619			1616			1006	884	1078	1006	884	1081
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	6	3	1	2								
Volume Left	1	0	0	1								
Volume Right	0	0	0	0								
cSH	1619	1616	884	941								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	1.2	0.0	9.1	8.8								
Lane LOS	A		A	A								
Approach Delay (s)	1.2	0.0	9.1	8.8								
Approach LOS			A	A								
Intersection Summary												
Average Delay				2.8								
Intersection Capacity Utilization				13.3%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis

5: Site Access & Needwood Avenue

Silo Square Project
Saturday Existing

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱	↰	↱
Traffic Volume (veh/h)	6	0	0	3	0	0
Future Volume (Veh/h)	6	0	0	3	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	0	0	3	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			7		10	7
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			7		10	7
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1614		1010	1075
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	7	3	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1614	1700			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			6.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

6: Driveway/Higgins Street & Maryland Avenue

Silo Square Project
Saturday Existing

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	0	0	0	2	0	0	0	2	1	0	0
Future Volume (Veh/h)	3	0	0	0	2	0	0	0	2	1	0	0
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	0	0	0	2	0	0	0	2	1	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2			0			8	8	0	10	8	2
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2			0			8	8	0	10	8	2
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1620			1623			1010	885	1085	1005	885	1082
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	3	2	2	1								
Volume Left	3	0	0	1								
Volume Right	0	0	2	0								
cSH	1620	1623	1085	1005								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	7.2	0.0	8.3	8.6								
Lane LOS	A		A	A								
Approach Delay (s)	7.2	0.0	8.3	8.6								
Approach LOS			A	A								
Intersection Summary												
Average Delay				5.9								
Intersection Capacity Utilization				13.3%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis

7: Maryland Avenue & Site Access

Silo Square Project
Saturday Existing



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	3	2	0	0	0
Future Volume (Veh/h)	0	3	2	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	3	2	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2				5	2
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2				5	2
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1620				1017	1082
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	3	2	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1620	1700	1700			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			6.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

1: S. Aurora Street & Needwood Avenue

Silo Square Project
Saturday Background

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	3	151	4	5	106
Future Volume (Veh/h)	1	3	151	4	5	106
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	3	164	4	5	115
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	291	166			168	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	291	166			168	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	697	878			1410	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	4	168	120			
Volume Left	1	0	5			
Volume Right	3	4	0			
cSH	825	1700	1410			
Volume to Capacity	0.00	0.10	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	9.4	0.0	0.3			
Lane LOS	A		A			
Approach Delay (s)	9.4	0.0	0.3			
Approach LOS	A					
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			19.6%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

2: S. Aurora Street & Maryland Avenue

Silo Square Project
Saturday Background

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	2	2	152	3	2	108
Future Volume (Veh/h)	2	2	152	3	2	108
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	2	165	3	2	117
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	288	166			168	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	288	166			168	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	702	878			1410	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	4	168	119			
Volume Left	2	0	2			
Volume Right	2	3	0			
cSH	780	1700	1410			
Volume to Capacity	0.01	0.10	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	9.6	0.0	0.1			
Lane LOS	A		A			
Approach Delay (s)	9.6	0.0	0.1			
Approach LOS	A					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			18.2%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

3: Higgins Street & Brookletts Avenue

Silo Square Project
Saturday Background

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	85	0	1	114	0	0	0	3	5	3	8
Future Volume (Veh/h)	0	85	0	1	114	0	0	0	3	5	3	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	92	0	1	124	0	0	0	3	5	3	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	124			92			228	218	92	221	218	124
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	124			92			228	218	92	221	218	124
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	99	100	99
cM capacity (veh/h)	1463			1503			717	680	965	732	680	927
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	92	125	3	17								
Volume Left	0	1	0	5								
Volume Right	0	0	3	9								
cSH	1463	1503	965	811								
Volume to Capacity	0.00	0.00	0.00	0.02								
Queue Length 95th (ft)	0	0	0	2								
Control Delay (s)	0.0	0.1	8.7	9.5								
Lane LOS		A	A	A								
Approach Delay (s)	0.0	0.1	8.7	9.5								
Approach LOS			A	A								
Intersection Summary												
Average Delay			0.8									
Intersection Capacity Utilization			18.9%	ICU Level of Service					A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

4: Higgins Street & Needwood Avenue

Silo Square Project
Saturday Background

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	5	0	0	3	0	0	1	0	1	1	0
Future Volume (Veh/h)	1	5	0	0	3	0	0	1	0	1	1	0
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	5	0	0	3	0	0	1	0	1	1	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	3			5			10	10	5	10	10	3
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	3			5			10	10	5	10	10	3
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1619			1616			1006	884	1078	1006	884	1081
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	6	3	1	2								
Volume Left	1	0	0	1								
Volume Right	0	0	0	0								
cSH	1619	1616	884	941								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	1.2	0.0	9.1	8.8								
Lane LOS	A		A	A								
Approach Delay (s)	1.2	0.0	9.1	8.8								
Approach LOS			A	A								
Intersection Summary												
Average Delay				2.8								
Intersection Capacity Utilization				13.3%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis 5: Site Access & Needwood Avenue

Silo Square Project
Saturday Background

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↰	↰	↱
Traffic Volume (veh/h)	6	0	0	3	0	0
Future Volume (Veh/h)	6	0	0	3	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	0	0	3	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			7		10	7
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			7		10	7
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1614		1010	1075
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	7	3	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1614	1700			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			6.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

6: Driveway/Higgins Street & Maryland Avenue

Silo Square Project
Saturday Background

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	0	0	0	2	0	0	0	2	1	0	0
Future Volume (Veh/h)	3	0	0	0	2	0	0	0	2	1	0	0
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	0	0	0	2	0	0	0	2	1	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2			0			8	8	0	10	8	2
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2			0			8	8	0	10	8	2
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1620			1623			1010	885	1085	1005	885	1082
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	3	2	2	1								
Volume Left	3	0	0	1								
Volume Right	0	0	2	0								
cSH	1620	1623	1085	1005								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	7.2	0.0	8.3	8.6								
Lane LOS	A		A	A								
Approach Delay (s)	7.2	0.0	8.3	8.6								
Approach LOS			A	A								
Intersection Summary												
Average Delay				5.9								
Intersection Capacity Utilization				13.3%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis

7: Maryland Avenue & Site Access

Silo Square Project
Saturday Background



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	3	2	0	0	0
Future Volume (Veh/h)	0	3	2	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	3	2	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2				5	2
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2				5	2
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1620				1017	1082
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	3	2	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1620	1700	1700			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			6.7%		ICU Level of Service	
Analysis Period (min)			15		A	

HCM Unsignalized Intersection Capacity Analysis

1: S. Aurora Street & Needwood Avenue

Silo Square Project
Saturday Total

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	6	153	6	8	108
Future Volume (Veh/h)	4	6	153	6	8	108
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	7	166	7	9	117
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	304	170			173	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	304	170			173	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	683	874			1404	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	11	173	126			
Volume Left	4	0	9			
Volume Right	7	7	0			
cSH	794	1700	1404			
Volume to Capacity	0.01	0.10	0.01			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	9.6	0.0	0.6			
Lane LOS	A		A			
Approach Delay (s)	9.6	0.0	0.6			
Approach LOS	A					
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization		22.3%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

2: S. Aurora Street & Maryland Avenue

Silo Square Project
Saturday Total

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	4	154	6	4	111
Future Volume (Veh/h)	4	4	154	6	4	111
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	4	167	7	4	121
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	300	170			174	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	300	170			174	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	690	873			1403	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	8	174	125			
Volume Left	4	0	4			
Volume Right	4	7	0			
cSH	771	1700	1403			
Volume to Capacity	0.01	0.10	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	9.7	0.0	0.3			
Lane LOS	A		A			
Approach Delay (s)	9.7	0.0	0.3			
Approach LOS	A					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			19.1%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

3: Higgins Street & Brookletts Avenue

Silo Square Project
Saturday Total

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	85	0	3	114	0	0	0	5	5	3	8
Future Volume (Veh/h)	0	85	0	3	114	0	0	0	5	5	3	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	92	0	3	124	0	0	0	5	5	3	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	124			92			232	222	92	227	222	124
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	124			92			232	222	92	227	222	124
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	99	99	100	99
cM capacity (veh/h)	1463			1503			712	675	965	723	675	927
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	92	127	5	17								
Volume Left	0	3	0	5								
Volume Right	0	0	5	9								
cSH	1463	1503	965	807								
Volume to Capacity	0.00	0.00	0.01	0.02								
Queue Length 95th (ft)	0	0	0	2								
Control Delay (s)	0.0	0.2	8.7	9.6								
Lane LOS		A	A	A								
Approach Delay (s)	0.0	0.2	8.7	9.6								
Approach LOS			A	A								
Intersection Summary												
Average Delay			1.0									
Intersection Capacity Utilization			20.5%	ICU Level of Service					A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

4: Higgins Street & Needwood Avenue

Silo Square Project
Saturday Total

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	10	0	0	9	2	0	1	0	3	1	0
Future Volume (Veh/h)	1	10	0	0	9	2	0	1	0	3	1	0
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	11	0	0	10	2	0	1	0	3	1	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	12			11			24	25	11	24	24	11
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	12			11			24	25	11	24	24	11
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1607			1608			985	868	1070	985	869	1070
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	12	12	1	4								
Volume Left	1	0	0	3								
Volume Right	0	2	0	0								
cSH	1607	1608	868	953								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	0.6	0.0	9.2	8.8								
Lane LOS	A		A	A								
Approach Delay (s)	0.6	0.0	9.2	8.8								
Approach LOS			A	A								
Intersection Summary												
Average Delay				1.8								
Intersection Capacity Utilization				13.3%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis 5: Site Access & Needwood Avenue

Silo Square Project
Saturday Total

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱	↘↙	
Traffic Volume (veh/h)	6	7	0	3	8	0
Future Volume (Veh/h)	6	7	0	3	8	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	8	0	3	9	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			15		14	11
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			15		14	11
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	100
cM capacity (veh/h)			1603		1005	1070
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	15	3	9			
Volume Left	0	0	9			
Volume Right	8	0	0			
cSH	1700	1603	1005			
Volume to Capacity	0.01	0.00	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	0.0	0.0	8.6			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	8.6			
Approach LOS			A			
Intersection Summary						
Average Delay			2.9			
Intersection Capacity Utilization			13.3%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

6: Driveway/Higgins Street & Maryland Avenue

Silo Square Project
Saturday Total

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	5	0	0	6	0	0	0	2	1	0	0
Future Volume (Veh/h)	3	5	0	0	6	0	0	0	2	1	0	0
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	5	0	0	7	0	0	0	2	1	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	7			5			18	18	5	20	18	7
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	7			5			18	18	5	20	18	7
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1614			1616			995	874	1078	990	874	1075
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	8	7	2	1								
Volume Left	3	0	0	1								
Volume Right	0	0	2	0								
cSH	1614	1616	1078	990								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (ft)	0	0	0	0								
Control Delay (s)	2.7	0.0	8.3	8.6								
Lane LOS	A		A	A								
Approach Delay (s)	2.7	0.0	8.3	8.6								
Approach LOS			A	A								
Intersection Summary												
Average Delay				2.6								
Intersection Capacity Utilization				13.3%	ICU Level of Service				A			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis

7: Maryland Avenue & Site Access

Silo Square Project
Saturday Total



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↩	↩		↩	
Traffic Volume (veh/h)	5	3	2	0	0	4
Future Volume (Veh/h)	5	3	2	0	0	4
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	3	2	0	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2				15	2
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2				15	2
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1620				1001	1082
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	8	2	4			
Volume Left	5	0	0			
Volume Right	0	0	4			
cSH	1620	1700	1082			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	4.5	0.0	8.3			
Lane LOS	A		A			
Approach Delay (s)	4.5	0.0	8.3			
Approach LOS			A			
Intersection Summary						
Average Delay			5.0			
Intersection Capacity Utilization		14.6%		ICU Level of Service		A
Analysis Period (min)		15				

Appendix C

Reference Material

https://www.stardem.com/news/local_news/grain-site-near-downtown-easton-to-be-converted/article_44977295-8399-5ac4-94ea-c2ad2bf848d9.html

BUSINESS

Grain site near downtown Easton to be converted

By CHRISTINA AUFDERHEIDE caufderheide@chespub.com

Jun 10, 2022

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< >



EASTON — June marks the first month since the Perdue Agribusiness in downtown Easton has stopped receiving grains from trucks and farmers.

Many trucks stopped bringing grain to the site, citing the narrow roads in downtown Easton, claiming that they are too small for navigating large trucks through. As a result of the 40% reduction in the number of trucks coming to the site over the last 5 years, the Perdue Corporation is seeking to sell the 2.4-acre property, which includes 10 silos, to a company seeking to convert the site into living spaces.

Shutting the site down was bittersweet for Perdue, but the company has other grain sites available for trucks to haul and sell their grains.

[Add to cart](#)

“Since the construction of the company’s first graining-receiving facility in Salisbury, Maryland in 1960, Perdue AgriBusiness has focused on bringing value to Maryland grain farmers with our ‘You grow it – we will buy it’ promise to

ensure that they have a competitive local market for their crops,” said Bill See, spokesperson for Perdue. “Today we have a network of 12 grain-receiving facilities on Delmarva, including ones in Hurlock, Linkwood, Salisbury and Shiloh in Maryland.”

“The decision to close a grain facility is never easy, but over the past five years we have seen a nearly 40% reduction in total harvested grain received at the Easton facility, a trend that no longer aligns with our business plans,” See said. “We have been very transparent with farmers about our plans for the grain facility and understand the inconvenience of this closure.

A commercial real estate firm, SVN Miller, stands ready to work with Perdue to convert the 10 silos into 40 urban renewal, single-family residences where people can reside near downtown Easton, near the rails-to-trails network of walking and biking trails.

**Town of Easton**

Engineering, Planning and Zoning

14 South Harrison Street, Easton, MD 21601

Site Plan, PUD, Planned Healthcare Application**Application Type**Planned Unit Development ☐Amendment ☐Health Care (HC) ☐Site Plan ☒**Subdivision Information**

Name	N/A			
Original Property Size	Acres		Square Feet	
Telephone No.		Email		

Site Plan Information

Property Size	Acres	2.36	Square Feet	102,796
Structure's Floor Area	varies		Structure's Square Feet	varies
Area of Disturbance	2.52 ac		Number of Dwelling Units	28

Property Information

Address	410 Needwood Avenue, Easton, MD 21601				
Tax Map	105	Grid	EA	Parcel	2226
Deed Reference:	Liber	3105	Folio	287	
Plat Reference:	Liber	19	Folio	6	
Base Zoning District	CB	Historic	Y ☐ N ☒	Planned Redevelopment	Y ☒ N ☐
Source of Electricity	Easton Utilities Commission				

Owner

Name	Silo Square, LLC	
Mailing Address	999 Corporate Dr, Linthicum, MD 21090	
Telephone No.	410-384-4022	Email gdaniels@ccdmaryland.org

Applicant or Agent

Name	RAUCH inc. - Brian Fitzgerald - Agent of Silo Square, LLC	
Mailing Address	106 N. Harrison St, Easton, MD 21601	
Telephone No.	410-770-9081	Email Brian@raucheng.com

Surveyor / Engineer

Name	RAUCH inc.	License No.	11024	Expiration Date	July 24, 2026
Mailing Address	106 N. Harrison St, Easton, MD 21601				
Telephone No.	410-770-9081	Email	Brian@raucheng.com		

Any modifications during review shall warrant an updated application.

I hereby certify that I have reviewed and satisfied the Town of Easton Development Standards and that submission of an incomplete application will be returned for correction prior to processing.

Signature of Applicant or Agent

Date

B. E.

9/3/2024

Printed Name of Applicant or Agent

Brian Fitzgerald

For Office Use Only

Planning Commission Required

Y ☒ N ☐

Planning Commission Meeting Date

09/19/2024

Sketch Approval Date

Project No.

ESDR 24-15

Prelim/Dev. Approval Date

Application No.

2024 - 1261

Final Approval Date

Sketch Fee Paid

10/09/2024

Recordation Date

Develop. Fee Paid

Revised 02-2019



Town of Easton
Engineering, Planning and Zoning
14 South Harrison Street, Easton, MD 21601

RECEIVED
AUG 06 2024
TOWN OF EASTON

2024 - 1261 / ESDR 24 - 15

Supplemental Waiver Request Application

Waiver Request Type

Sidewalk ☐ Parking Spaces ☐ Parking/Aisle Dimension ☐
Landscaping & Buffering ☒ Signage ☐ Other ☐

Project Information

Address	410 Needwood Avenue, Easton, MD 21601				
Tax Map	0105	Grid	00EA	Parcel	2226
Zoning District	BC	PC Meeting Date		Historic District	Yes ☐ No ☒
Owner or Agent	Silo Square, LLC				
Mailing Address	999 Corporate Drive, Linthicum, MD 21090				
Telephone No.	410-384-4022	Email	jrondeau@thearcccr.org or jolinger@chesapeakeneighbors.org		

Request Details

Please attach a detailed description of the waiver request(s) being made and the justification(s) for requesting said waiver(s).

Desired installation of split-rail fence in bufferyard abutting Town's "Rails-to-Trails" path system. Applicant intends to utilize Bufferyard "E" option calling for "wall/fence with 3 evergreen shrubs" by installing split-rail fence and shrubs as noted in code.

☒ Ordinance Section Supporting Waiver Request.

28-1014.7.E.5(c)1-3

Any modifications during review shall warrant an updated application.

I do hereby solemnly declare and affirm that the information provided by this application and the documents attached hereto accurately represent the conditions of the request and that submission of an incomplete application will be returned for correction prior to processing.

Signature of Applicant or Agent

Date

Printed Name of Applicant or Agent

Brian Fitzgerald
8/6/24

Brian Fitzgerald



Town of Easton
Engineering, Planning and Zoning
14 South Harrison Street, Easton, MD 21601

RECEIVED
AUG 06 2024
TOWN OF EASTON

Easton Staff Development Review

Property Information

Address 410 Needwood Avenue, Easton, MD 21601
Tax Map 0105 Grid 00EA Parcel 2226 Lot
Deed Reference: Liber 03105 Folio 00287
Plat Reference: Liber Folio
Base Zoning District BC Historic District Y ☐ N ☒ Planning Redevelopment Y ☒ N ☐

Purpose of Application / Description of Work:

The project consists of demolition of existing grain silos on property within Town limits for construction of 28 attached single-family dwellings.

Owner

Name Silo Square, LLC
Mailing Address 999 Corporate Drive, Linthicum, MD 21090
Telephone No. 410-384-4022 Email jrondeau@thearcccr.org or jolinger@chesapeakeighbors.org

Applicant / Agent

Name Same as above
Mailing Address
Telephone No. Email

Surveyor / Engineer

Name Robert Rauch License No. 11024 Expiration Date 7/24/2026
Mailing Address 106 N. Harrison St, Easton, MD, 21601
Telephone No. 410-770-9081 Email robert@raucheng.com; brian@raucheng.com

Any modifications during review shall warrant an updated application.

I do hereby solemnly declare and affirm that the information provided by this application and the documents attached hereto accurately represent the conditions of the request and that submission of an incomplete application will be returned for correction prior to processing.

Signature of Applicant or Agent

Date 08/07/2024

Printed Name of Applicant or Agent

Robert Rauch

For Office Use Only

Easton Staff Development Review Meeting Required Y ☒ N ☐

Easton Staff Development Review Meeting Date **08/28/2024**

2024 - 1261 / ESDR 24 - 15

Completeness Check Date **08/07/2024**

Revisions/Resubmissions Required Y ☒ N ☐

Resubmission Date **10/02/2024**

Documents Received Y ☒ N ☐

Staff Determination

Scheduled for September 19, 2024 Planning Commission.

Scheduled for October 17, 2024 Planning Commission.

Planning Commission Required Y ☒ N ☐

BOZA Required Y ☐ N ☒

Historic District Commission Required Y ☐ N ☒

Resubmission for ESDR Required Y ☐ N ☒

Staff Signature *Samantha N. Smith*

Date **10/02/2024**

Revised 02-2019



TOWN OF EASTON

Planning & Zoning Department

14 South Harrison Street

P.O. Box 520

Easton, Maryland 21601

Easton Staff Development Review Worksheet

Date: August 28, 2024

Project: 410 Needwood Avenue

To: Mr. Brian Fitzgerald, Rauch Inc.

CC: Applicant, Silo Square, LLC

CC: Mr. Casey Rauch, Rauch Inc.

CC: Mr. Chris Schoenster, Rauch Inc.

The Easton Staff Development Review (ESDR) Committee meeting was held on August 28th at 11:00 am. Staff reviewed the proposed Planned Redevelopment Development (Infill) application. The site includes three-story townhomes (16 units) and two-story townhomes (12 units) on the property located at 410 Needwood Avenue, also known as Tax Map 105, Parcel 2226.

The Committee determined that the project will need to address all agency comments as specified in the attached review letters and at ESDR. It was determined by the Committee that the application may be scheduled for Planning Commission review. Please submit all revised documents.

The next Planning Commission meeting is scheduled for **Thursday, September 19, 2024 at 1:00 pm.**

Submit all documentation to the Planning and Zoning Department no later than Tuesday, September 3rd at 1:00 pm. All files for presentation at the Planning Commission, as described under **§Section 28-901.3.A.(1 through 13) of the Town's Zoning Ordinance**, need to be provided on a flash drive. In addition, provide a digital submittal (via email) of all supporting documents necessary for the Planning Commissions review, including **six paper copies.**

Please contact the Planning & Zoning Department at 410 822-1943 with any questions.

Sincerely,

Joseph A. Mayer

Plan Reviewer



TOWN OF EASTON PLANNING & ZONING DEPARTMENT

P.O. Box 520
Easton, Maryland 21601
410-822-1943
www.EastonMD.gov

DATE: August 28, 2024
TO: Casey Rauch & Chris Schoenster – Rauch, Inc. (Agent)
Jonathon Rondeau - % Silo Square, LLC (Owner)
Cc: Miguel Salinas – Director of Planning & Zoning Department
Rick VanEmburch – Town Engineer

FROM: Joseph A. Mayer - Plan Reviewer, Planning & Zoning Department
SUBJECT: 410 Needwood Avenue

We reviewed the **August 6, 2024** Sketch Plan Submittal for the Subject Project and have the following comments:

PLANNING & ZONING COMMENTS

Sketch Site Plan Review #1

1. Per Appendix B, Sketch Plan Submittal Checklist, *a statement describing the extent to which the application complies with the Recommended Design Principles for Easton set forth on pages 29-31 of the Comprehensive Plan.* Please respond to the nine (9) Recommended Design Principles and place them onto the Title Sheet, G-100.
2. Revise the Site Data on sheet G-100 to include all existing Zoning Districts; Business Commercial, PRD Boundary and **PUD Infill Boundary**.
3. Per Appendix B, Sketch Plan Submittal Checklist requires the location of exterior lighting to be shown on plan view.
4. Per § Section 28-308.2 J from the Town's Zoning Ordinance, *all on-site lighting unless approved otherwise by the Planning and Zoning Commission shall be low cut-off shielded luminaries at 18' height and light shall not shine off-site at levels greater than 1-foot candle.* Add a reference note within Site Data.
5. Per Appendix B, Sketch Plan Submittal Checklist, *show the location of all pedestrian walkways and sidewalks.* Show and label all existing sidewalks along Needwood Avenue and Maryland Avenue.
6. Indicate within the Site Data the overall proposed parking spaces, including the minimum and maximum parking space requirements.

7. Per § Section 28-501 B(1) through (8) from the Town's Zoning Ordinance, respond to the development requirements and add statements onto sheet G-100.
8. Indicate the type of screening proposed for the trash and recycling center.
9. Clearly show and label all building restriction lines on all applicable plan views.
10. Provide dimensions between the building units and property lines.
11. Dimension the existing roads and proposed drive aisle widths on all applicable plan views.
12. Per § Section 31-3.2 from the Town's Forest Conservation Ordinance #718, state on sheet G-100 exemption "O", *the proposed activity is on a previously developed area covered by impervious surface and is located within the priority funding area.*
13. Complete a Site Plan Application prior to submitting documents to the Planning Commission.
14. Per Appendix B, Sketch Plan Submittal Checklist, show *the location of any easements, rights-of-way or any other encumbrances which pertain to the property subject to the site plan review.* **Address this comment during Development Site Plan review.**
15. Verify that the proposed ADA parking spaces will be within the required cross slopes for the landing area, ramp run and overall parking space. Please note on plan view any spot elevations to confirm the spaces are compliant to ADA regulations. **Address this comment during Development Site Plan review.**
16. Revise the existing sidewalk ramp at the intersection of Maryland Avenue and South Higgins Street to current standards. **Address this comment during Development Site Plan review.**
17. Add lamp post detail to sheet C-305 . **Address this comment during Development Site Plan review.**

Please address review comments 1, 3, 5, 12 & 13 prior to your Planning Commission submission. All remaining comments are to be addressed prior to Preliminary Site Plan review.

Plan Review Status

Sketch Site Plan Review		Comments
Plans Approved	☐ Y ☒ N	Please review the comments above. Revise and resubmit.
Forest Stand Delineation & Forest Conservation Plan		
☐ Required ☐ Submitted ☐ Approved ☒ Exempt		Exempt from Forest Conservation per Article III, § 31-3.2 O. The proposed activity is on a previously developed area covered by impervious surface and is located within the priority funding area. Analysis - The site is within the priority funding area and is an existing developed area covered by impervious surface; abandoned silos, storage buildings, gravel road and utilities. The overall site area is 2.36 acres with sixteen (16) proposed 3-story townhomes and twelve (12) proposed 2-story townhomes with associated parking, stormwater management and landscaping. Required Forest Conservation would be 0.354 acres or 15,420 square feet. The intent of the project is to maximize density within the infill area and provide adequate facilities to accommodate the site. The applicant has provided a landscape plan with forty-two (42) deciduous-shade/canopy trees, thirty-two (32) understory trees and thirty-two (32) evergreen trees that is fifty-three (53) percent greater than the required forest conservation area. Based on the existing conditions and priority funding area, the staff determined that the project is exempt under <i>Ordinance #718, Article III, § 31-3.2 Exemption, "O", an activity on a previously developed area covered by impervious surface and located in the priority funding area.</i>
Other		
☒ Required ☐ Submitted ☐ Approved		<u>IMPACT FEES</u> Please note, there will be a required Impact Fee for the proposed townhouse units. The Town's Impact Fees and Inspection Fees are to be paid upon the time you pick up your Building Permit. Please provide building square footage with appropriate use for calculation of Impact Fee. Talbot County Impact Fees are due prior to obtaining your Building Permit. Please provide receipt of payment to the Town's Building Inspection Division. Please add estimated Town Impact Fee calculations to cover sheet and add note below calculations; <i>"Note: The Impact Fee indicated in this notation shall not be construed as vested and until submission of the building application."</i> <u>Supplemental Waiver Request Application</u> The applicant for 410 Needwood Avenue has requested a landscape and buffering waiver from Chapter 28-1014.7.E.5(c)1-3 of the Zoning Code. The application proposes the installation of a split-rail fence in the bufferyard abutting the Town's "Rails-to-Trails" path system. The applicant intends to utilize Bufferyard "E" option calling for "wall/fence with three (3) evergreen shrubs", as noted in the code by installing a split-rail fence and shrubs as an alternate design.

	Analysis - The staff supports the waiver request of the modified Bufferyard “E” along the “Rails-to-Trails”. The proposed design captures the spirit and intent of the bufferyard by utilizing the split-rail fence and evergreen shrubs along the East side of the property . The applicant's modified design highlights the amenity of the “Rails-to-Trails” and promotes the connectivity of neighborhoods and subdivisions.
--	--

Please contact me if you have any questions. Thank you.



TOWN OF
EASTON
ENGINEERING DEPARTMENT

DATE: August 27, 2024
TO: Brian Fitzgerald - Rauch
cc: Sierra Clem - Town of Easton
FROM: Rick Van Emburgh, P.E. – Town Engineer
SUBJECT: Silo Square
Sketch Plan Review

I reviewed the Application for the Subject project received on 8/7/2024.

The **Sketch Plan** is **Acceptable to the Engineering Department with the following Conditions:**

1. Proposed entrances should be similar to TOE-R-4.01.
2. Extend the proposed sidewalk on Needwood Avenue and Maryland Avenue to connect to the existing Rail Trail to the east of the property.
3. Proposed sidewalk on Higgins Street appears to be in conflict with existing utility poles. A Sidewalk Easement will likely be required because a portion of the proposed sidewalk is on private property.

The **Sketch Stormwater Management Plan** is **Approved.**

Please contact me if you have any questions. Thank you.

END OF DOCUMENT



TOWN OF EASTON
PO Box 520
Easton, Maryland 21601
(410)-822-2526 Fax (410)-822-8738
Office of Building Inspection.



ESDR- Building Inspection and Permit Department Comments

Date: August 14, 2024

Project; 28 Townhouse Units
Silo Square LLC
410 Needwood Ave
Easton, Maryland 21601

A Town of Easton Building Permit is required for all new construction. **Each building will require a separate Building Permit.**

The following lists items required on the construction drawings in order to apply for a Building Permit.

Contact this Department to verify current Building Codes including the Town of Easton's modifications prior to preparation of Building plans.

- Construction Documents (3 sets) for new construction will be required when application is made. Documents must be prepared by a registered Maryland Registered Architect, with original plans signed and sealed. Plans must include a code analysis listing classification (use group), construction type, and occupant loads. Items that must be addressed by the construction documents will be structural strength, means of egress (include travel distance), facilities, stability, sanitation, light and ventilation, energy conservation, Fire Separations and safety to life and property from fire and other hazards attributed to the built environment, **Accessibility**, and other safety requirements for public access.
- The Town of Easton, in accordance with the International Building Code Chapter 17, establishes a building inspections procedure that utilizes qualified, third-party professionals, when necessary, in addition to the Town's Building Inspectors. A copy of this can be found on the Town's Web Site.
- All mechanical, electrical, and plumbing permits as required must include 3 sets construction documents signed and sealed by a responsible party for the contractor receiving the permit. Be sure the Town of Easton modifications are included. Section 6-16 of the Town Code.
- An appointment may be set up with this department to review your permit application materials prior to permit application submission.
- **State Fire Marshal**, (410-822-7609) plan review and inspections are required. It is your responsibility to contact them and make application.



Easton Utilities Commission

Plan Review Comments

Date: Thursday, August 15, 2024

To: Joe Mayer; Nicholas Johnson; Sierra Clem

From: Kia Gibbs on behalf of Aaron Goller, PE

No. of Pages: 4

Regarding: 410 Needwood Ave - Silo Square

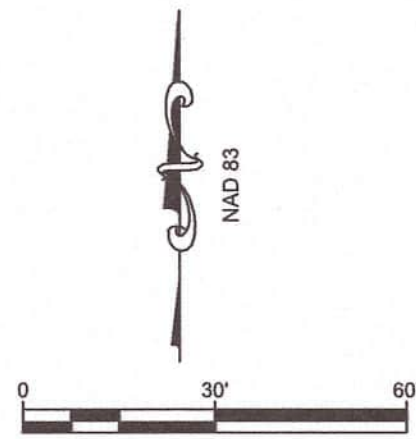
Phase: Sketch Site Plan

SUBM: 1

Status: Approved as Noted

Easton Utilities Commission has reviewed the above referenced plans and have provided the following comments. Please provide your corrections as listed below. Additional reviews will be required to ensure comments have been addressed. Items or documents not provided on initial submission will be subject to further review. Please contact Kia Gibbs, Admin Support at kgibbs@eucmail.com should you have any questions.

ITEM:	DRAWING / PAGE	COMMENTS:
1	401.02	Will the electric vehicle charging stations be metered by themselves?
2	General	Capital charges required for 28 EDU's in the amount of \$197,400.
3	C-101	Add terminal manhole to sewer on Higgins
4	C-101	Loop watermain to 6" main on Maryland
5	C-101	Move fire hydrant to looped main
6	C-101	Realign water for 121 to 124
7	General	Easements required for utilities
8	General	Install communication conduit with electric
9	C-101	See comments. Contact Easton Utilities for electric design. Meter locations, service size and panel schedule needed for design. Electric design shown on prints no approved.



PROPOSED FEATURES

- 1 UNIT TYPE A
- 2 UNIT TYPE B
- 3 UNIT TYPE C
- 4 PARK
- 5 WALKING TRAIL
- 6 SIGN
- 7 TRASH AND RECYCLING CENTER
- 8 STORMWATER SUBMERGED GRAVEL WETLAND AND FOREBAY
- 9 PARKING AREA. TYPICAL SPACE: 9'Wx18'L
- 10 HANDICAP PARKING SPACE - 9'Wx18'L WITH 9'Wx18'L AISLE. TYPICAL OF TWO
- 11 DRIVEWAY FOR GARAGE ACCESS - 12'Wx25'L
- 12 GAZEBO
- 13 EXISTING SEWER LATERAL TO BE DEMOLISHED - SEE V-101 FOR FURTHER DETAILS
- 14 PROPOSED 6' TALL BOARD-ON-BOARD FENCE
- 15 PROPOSED 4' TALL SPLIT-RAIL FENCE
- 16 PROPOSED 3' SIDEWALK FOR RESIDENTIAL ACCESS - TYPICAL
- 17 PROPOSED 5' SIDEWALK FOR PUBLIC USE - TYPICAL
- 18 PROPOSED ELECTRIC VEHICLE CHARGING STATIONS
- 19 PROPOSED CLUSTER MAILBOX
- 20 PROPOSED PARALLEL PARKING FOR MAILBOX ACCESS

FINISH FLOOR/GARAGE FLOOR ELEVATIONS:
UNITS 101-104: 37.25'
UNITS 105-110: 37.25'
UNITS 111-114: 37.00'
UNITS 115-120: 36.50'
UNITS 121-124: 36.50'
UNITS 125-128: 37.00'

LANDSCAPING LEGEND

- PROPOSED SHADE TREE - TYPE TO BE DETERMINED
- PROPOSED SHRUB - TYPE TO BE DETERMINED

OVERALL SITE PLAN

OF THE LANDS OF
SILO SQUARE, LLC
TAX MAP 0105, GRID 00EA, PARCEL 2226
EASTON, TALBOT COUNTY, MARYLAND
PREPARED FOR: SILO SQUARE, LLC



Main Office: 106 N Harrison St - Easton, MD 21601
Web: www.rauch-hc.com | Email: design@raucheng.com
Phone: 410 770 8081 | Fax: 410 770 3887



Professional Certification.
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 11024
Expiration Date: July 24, 2026

REVISIONS

REV. #	DATE	DESCRIPTION



DATE: 8/7/2024
SCALE: 1" = 30'
DRAWN BY: AF
DESIGNED BY: BBF
APPROVED BY:

SHEET NO.: **C-101**

FOR REVIEW

UTILITY FEATURES

- 1

6" SEWER LATERAL AND CLEANOUT (TYPICAL) PER
DETAIL ON C-405
- 2

X" WATER LATERAL AND METER PIT (TYPICAL) PER
DETAIL ON C-405
- 3

QTY-X" CONDUITS FOR ELECTRICAL AND
COMMUNICATIONS PRIMARY UTILITIES. SEE UTILITY
TRENCH DETAIL ON C-405
- 4

QTY-X" CONDUIT FOR STREETLIGHT. SEE UTILITY
TRENCH DETAIL ON C-405
- 5

QTY-X" CONDUITS FOR ELECTRICAL AND
COMMUNICATIONS SECONDARY UTILITIES TO
RESIDENCE. SEE UTILITY TRENCH DETAIL ON C-405
- 6

CONNECT NEW WATER MAIN TO EXISTING MAIN IN
MARYLAND AVENUE
- 7

6"x6" HYDRANT TEE
- 8

6"x6" TEE
- 9

6" 11.25-DEG BEND
- 10

6" GATE VALVE
- 11

6"x4" REDUCER
- 12

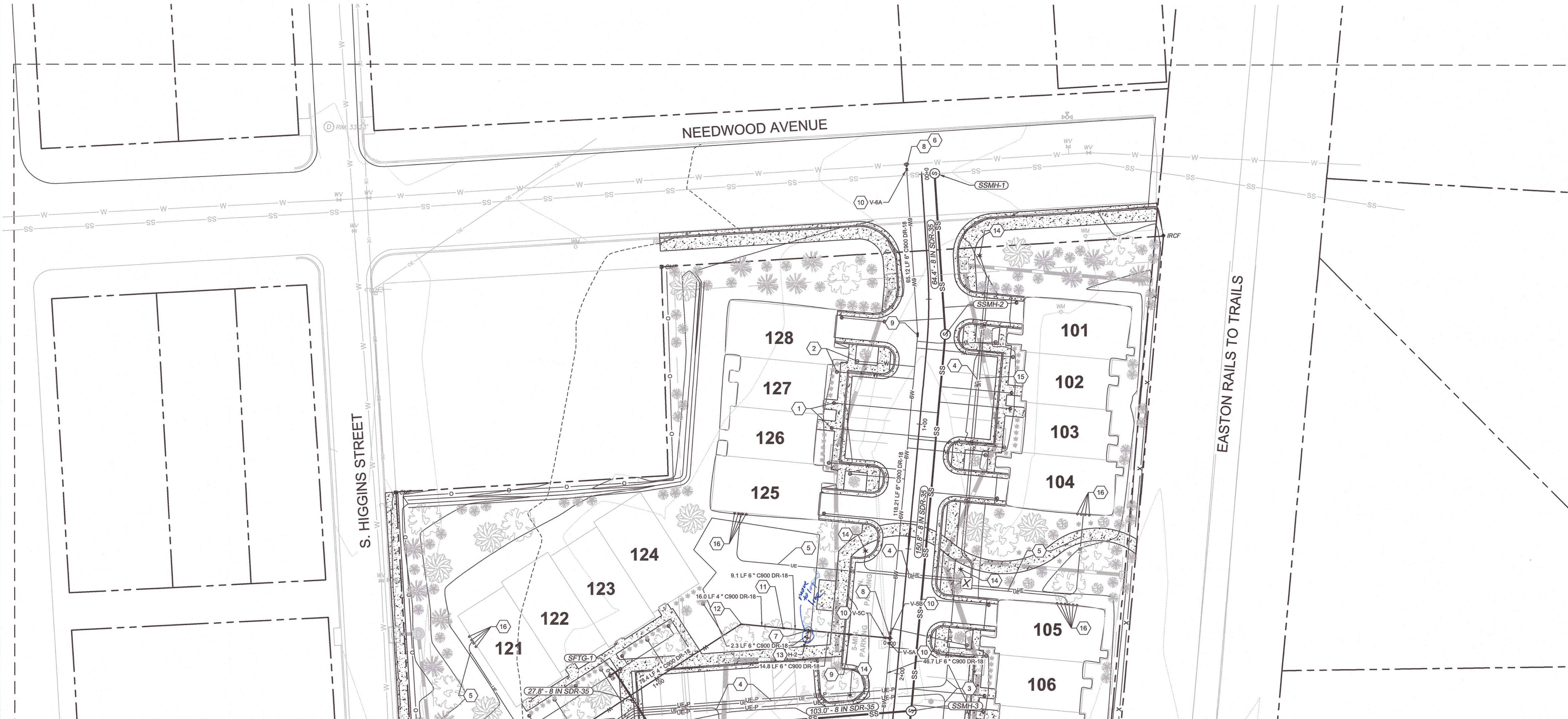
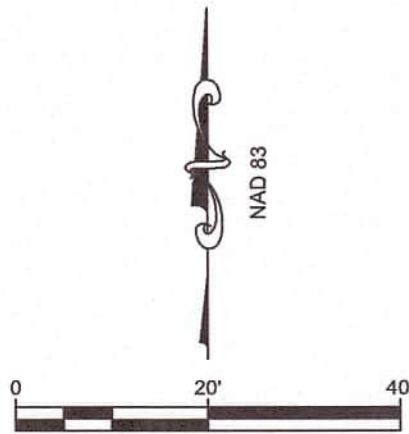
4" 45-DEG BEND
- 13

FIRE HYDRANT - SEE DETAIL SHEET C-405
- 14

STYLE POLE MOUNTED LAMP PER DETAIL ON C-405
- 15

QTY-X" CONDUIT FOR SIGN ILLUMINATION. SEE
UTILITY TRENCH DETAIL ON C-405
- 16

ELECTRICAL METER BOX CLUSTER - 4 OR 6 METERS
DEPENDING ON STRUCTURE REQUIREMENTS.



CONTINUATION - SEE SHEET C-401.02

UTILITY PLAN

OF THE LANDS OF
SILLO SQUARE, LLC
TAX MAP 0105, GRID 00EA, PARCEL 2226
EASTON, TALBOT COUNTY, MARYLAND
PREPARED FOR: SILLO SQUARE, LLC



Main Office: 108 N. Harrison St., Easton, MD 21601
Web: www.rauch-hc.com | Email: design@rauch-hc.com
Phone: 410.770.8081 | Fax: 410.770.3867



Professional Certification.
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 11024
Expiration Date: July 24, 2026

REVISIONS

REV. #	DATE	DESCRIPTION



DATE: 8/7/2024
SCALE: 1" = 20'
DRAWN BY: AF
DESIGNED BY: BBF
APPROVED BY:

SHEET NO.:
C-401.01

FOR
REVIEW

UTILITY FEATURES

- 1

6" SEWER LATERAL AND CLEANOUT (TYPICAL) PER
DETAIL ON C-405
- 2

X" WATER LATERAL AND METER PIT (TYPICAL) PER
DETAIL ON C-405
- 3

QTY-X" CONDUITS FOR ELECTRICAL AND
COMMUNICATIONS PRIMARY UTILITIES. SEE UTILITY
TRENCH DETAIL ON C-405
- 4

QTY-X" CONDUIT FOR STREETLIGHT. SEE UTILITY
TRENCH DETAIL ON C-405
- 5

QTY-X" CONDUIT FOR ELECTRIC VEHICLE CHARGING
STATION(S). SEE UTILITY TRENCH DETAIL ON C-405
- 6

QTY-X" CONDUITS FOR ELECTRICAL AND
COMMUNICATIONS SECONDARY UTILITIES TO
RESIDENCE. SEE UTILITY TRENCH DETAIL ON C-405
- 7

CONNECT NEW WATER MAIN TO EXISTING MAIN IN
SOUTH HIGGINS STREET
- 8

8"x6" TEE
- 9

6"x6" TEE
- 10

6" 11.25-DEG BEND
- 11

6" 22.5-DEG BEND
- 12

6" 45-DEG BEND
- 13

6" 90-DEG BEND
- 14

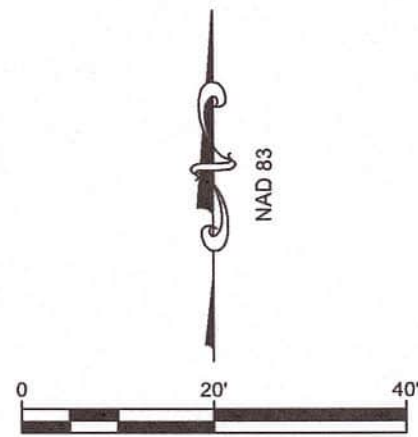
6" GATE VALVE
- 15

FIRE HYDRANT - SEE DETAIL SHEET C-405
- 16

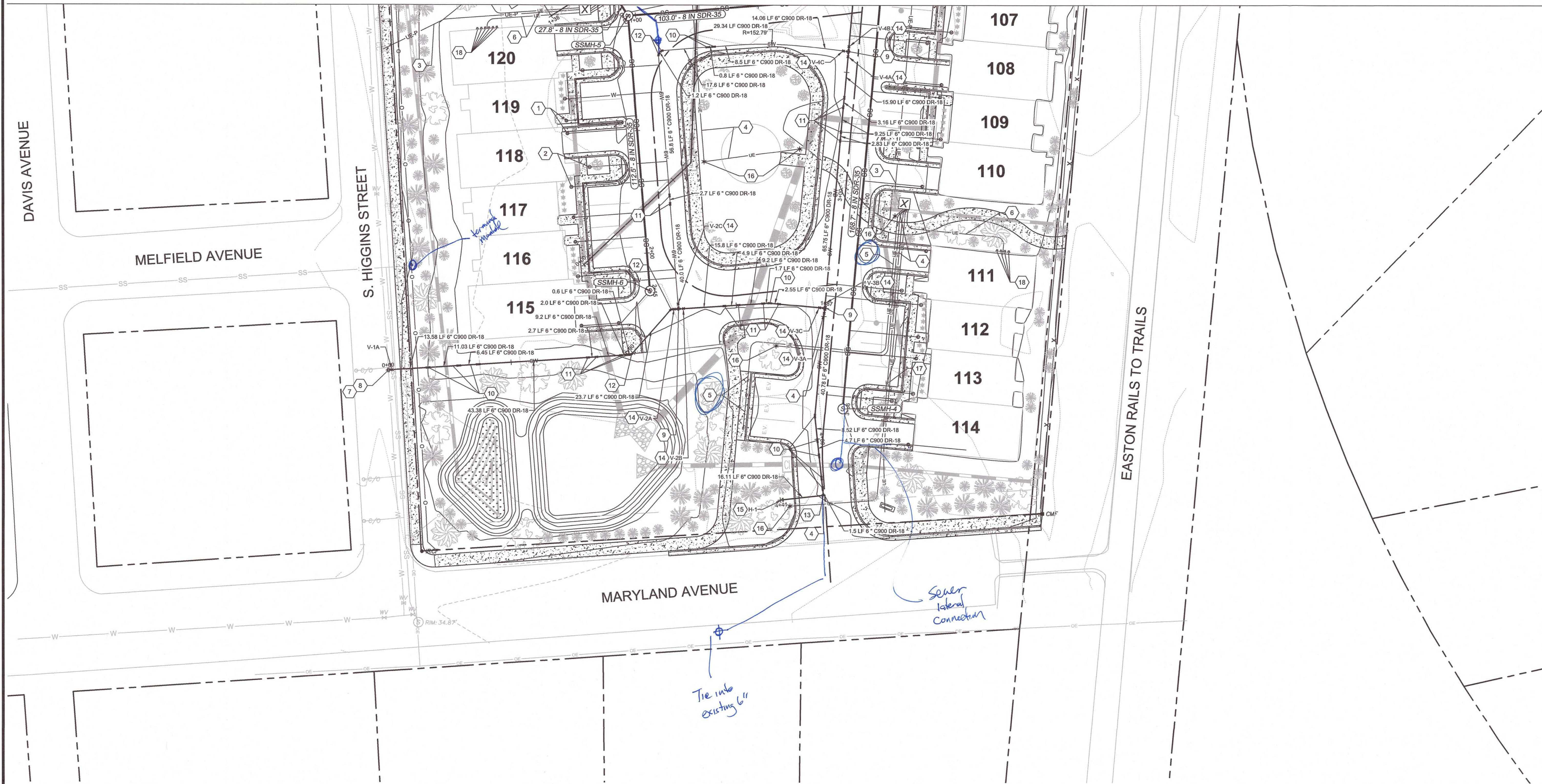
STYLE POLE MOUNTED LAMP PER DETAIL ON C-405
- 17

QTY-X" CONDUIT FOR SIGN ILLUMINATION. SEE
UTILITY TRENCH DETAIL ON C-405
- 18

ELECTRICAL METER BOX CLUSTER - 4 OR 6 METERS
DEPENDENT ON STRUCTURE REQUIREMENTS.



CONTINUATION - SEE SHEET C-401.01



UTILITY PLAN

OF THE LANDS OF
SILO SQUARE, LLC
TAX MAP 0105, GRID 00EA, PARCEL 2226
EASTON, TALBOT COUNTY, MARYLAND
PREPARED FOR: SILO SQUARE, LLC



Main Office: 108 N Harrison St., Easton, MD 21601
Web: www.rauch-hcc.com | Email: design@raucheng.com
Phone: 410 770 9881 | Fax: 410 770 3887



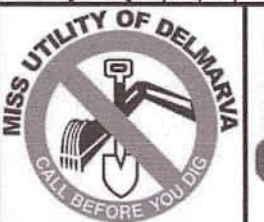
Professional Certification.
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 11024
Expiration Date: July 24, 2026

REVISIONS

DESCRIPTION

REV. # DATE



DATE: 8/7/2024
SCALE: 1" = 20'
DRAWN BY: AF
DESIGNED BY: BBF
APPROVED BY:

SHEET NO.:
C-401.02

FOR
REVIEW



STORMWATER MANAGEMENT ANALYSIS
FOR
SILO SQUARE
PREPARED FOR
CHESAPEAKE NEIGHBORS, LLC

PREPARED BY
RAUCH, INC
106 N. HARRISON STREET
EASTON, MD 21601

6th of August 2024



PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENCED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

ROBERT D. RAUCH, LICENCE NO. 11024
EXPIRATION DATE 7/24/2026

08/06/2024

DATE

Stormwater Management Narrative



STORMWATER MANAGEMENT ANALYSIS – NARRATIVE

EXISTING CONDITIONS

The project site being analyzed is in the town of Easton, Maryland, in Talbot County, between Maryland Avenue, Needwood Avenue, South Higgins Street, and Easton Rails to Trails. The existing conditions of the site include 14 silos, truck scales, and 2 buildings. The site is mostly on poorly drained HSG C/D soils, and the north part of the site is on HSG C soil.

The existing site drains through a series of sheet flow and shallow concentrated flow before ultimately reaching the Study Point (Curb inlet) located on South Higgins Street.

PROPOSED CONDITIONS

Silo Square involves the construction of 28 townhome units within 6 structures, a center park with a gazebo, parking, driving aisles, refuse area, and stormwater management facilities.

The majority of the proposed impervious will be treated for quality management by a submerged gravel wetland with a forebay. The ponding in the forebay and submerged gravel wetland will also be used as quantity management.

Proposed conditions during the 2-, 10-, and 100-year storm events have been analyzed and show postconstruction peak flows are less than preconstruction peak flows at the Study Point.

The maps included with this report detail all drainage areas with times of concentration.

WATER QUALITY – ESDv/WQv

The Submerged Gravel Wetland will have the required pretreatment forebay and the wetland itself will have 2' of gravel. The summary of the calculations is shown below:

SITE REQUIRED ESDv (SEE ATTACHMENTS FOR SPECIFIC CALCULATIONS):
ESDv REQUIRED: 3,197 CF

SUBMERGED GRAVEL WETLAND #1

FOREBAY:

DRAINAGE AREA:	83,507 SF	
BOTTOM SURFACE AREA:	1,672 SF	
TOP OF PONDING SURFACE AREA:	2,747 SF	
PONDING DEPTH:	2 FT	
ESDv PROVIDED:	4,419 CF	
10% ESDv PRETREATMENT REQUIRED:	320 CF	
10% ESDv PRETREATMENT PROVIDED:	4,419 CF > 320 CF	<u>OK</u>

SUBMERGED GRAVEL WETLAND#1:

GRAVEL BED AREA:

BOTTOM SURFACE AREA:	563 SF
TOP OF PONDING SURFACE AREA:	1,281 SF
MEDIA DEPTH:	2 FT
PONDING DEPTH:	2 FT
ESDv PROVIDED:	2,294 CF

ESDv PROVIDED (BOTH FOREBAY & GRAVEL AREA): 6,713 CF

75% ESDv TEMPORARY STORAGE REQUIRED:	2,398 CF	
75% ESDv TEMPORARY STORAGE PROVIDED:	6,263 > 2,398 CF	<u>OK</u>

CALCULATION SUMMARY:

ESDv REQUIRED =	3,197 CF	
<u>ESDv PROVIDED =</u>	<u>6,713 CF</u>	<u>OK</u>

STORMWATER QUALITY NOTES:

The above quality stormwater management practices meet the Environmental Site Design Volume required for the site.

WATER QUANTITY

Volume control is provided within both the submerged gravel wetland and by managing/maintaining existing times of concentrations within existing and reshaped drainage areas.

The East drainage area flows to a forebay, through a series of Yard and Curb Inlets, then the flow passes to the Submerge Gravel Wetland with is located in the Southeast corner of the site. Then the flow is discharged to the Study Point (Curb Inlet) on South Higgins Street.

Below is a summary of the proposed peak runoffs flows from the 2, 10, and 100-year storms compared to existing peak runoff flows from the same events.

STUDY POINT	STORM EVENT	2-YEAR (cfs)	10-YEAR (cfs)	100-YEAR (cfs)
STUDY POINT	EXISTING	8.60	15.15	23.03
	PROPOSED	2.71	4.89	20.04
CHANGE	CHANGE	5.89	10.26	2.99

NATURAL AREA PRESERVATION

The stormwater management facilities for this project have been designed to preserve natural areas such as existing treelines as best as possible.

CONCLUSION

This report shows that all requirements of the MDE stormwater design manual have been met for this site and natural areas have been preserved in meeting these guidelines.

ESD Calculations

Project Name:	Chesapeake Neighbors - Silo Square							
Date:	6-Aug-24							
	data input cells							
	calculation cells							
Step 1: Complete ESD Implementation Checklist								
<i>Check all of the Following ESD Practices That Were Implemented at Site</i>				Yes - No - N/A				
Environmental Mapping Was Conducted at Site Prior to Layout				YES				
Natural Areas Were Conserved (e.g., forests, wetlands, steep slopes, floodplains)				YES				
Stream, Wetland and Shoreline Buffers Were Reserved				YES				
Disturbance of Permeable Soils Was Minimized				YES				
Natural Flow Paths Were Maintained Across the Site				YES				
Building Layout Was Fingerprinted to Reduce Clearing and Grading at Site				YES				
Site Grading Promoted Sheetflow From Impervious Areas to Pervious Ones				YES				
Site Design Was Evaluated to Reduce Creation of Needless Impervious Cover				YES				
Site Design Was Evaluated to Maximize Disconnection of Impervious Cover				YES				
Site Design Was Evaluated to Identify Potential Hotspot Generating Area for Stormwater Treatment				YES				
Erosion and Sediment Control Practices and Post Construction Stormwater Management Practices Were Integrated into a Comprehensive Plan				YES				
Tree Planting Was Used at the Site to Convert Turf Areas into Forest				YES				
Step 2: Calculate Site Imperviousness and Water Quality Volume, WQv (for redevelopment)								
defined as A single tract, lot, parcel of land or combination of tracts, lots parcels of land that are in one ownership or are contiguous and in diverse ownership where development is to be performed as part of a unit, subdivision or project. See page 5.117 in the design handbook. This means that a project may be classed as redevelopment even if the LOD is less than 40% impervious								
Total SITE Area, A (acres or sq-ft)	106730							
Existing SITE Impervious Area (acres or sq-ft)	56058							
SITE percent impervious	53%							
Development Category (for ESD)	Redevelopment							
LOD Area, A (acres)	2.45							
Existing LOD Impervious Surface Area (acres)	1.29							
Proposed LOD Impervious Surface Area (acres)	1.42							
Rainfall Depth, P (in)	1.0							
Existing LOD Imperviousness, I_{pre}	53%							
Proposed LOD Imperviousness, I_{post}	58%							
<i>Water Quality Calculation for Redevelopment Only</i>								
Required Treatment Area (acres)	0.643							
Runoff Coefficient, R_v	0.95							
Water Quality Volume, WQv (cf)	2,219							

Step 4: Calculate Environmental Site Design (ESD) Rainfall Target, P_E								
% Soil Type A	0%		RCN Soil Type A	73.22				
% Soil Type B	0%		RCN Soil Type B	82.22				
% Soil Type C	47%		RCN Soil Type C	87.22				
% Soil Type D	53%		RCN Soil Type D	90.61				
Target Pre-Developed Condition, RCN_{woods}	73.71	Post-Developed Condition, RCN	89.02					
Soil Type A ESD Rainfall Target, P_E (in)	0.00							
Soil Type B ESD Rainfall Target, P_E (in)	0.00							
Soil Type C ESD Rainfall Target, P_E (in)	2.20							
Soil Type D ESD Rainfall Target, P_E (in)	2.00							
	1yr							
Maximum P_E (in)	2.7							
Site ESD Rainfall Target, P_E (in)		2.09						
ESD Runoff Depth, Q_E (in)		1.99						
ESD Runoff Volume, ESD_v (cf)		978						
Site Rainfall Target, P_E (in)		1.33						
Total Site Treatment Volume (cf)		3,197						

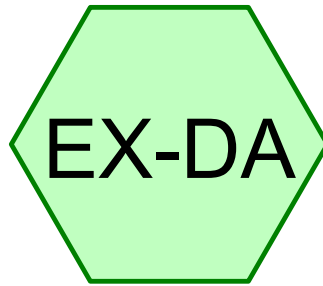
Step 6: Select Micro-Scale Practices to Treat the ESD Rainfall Target								
<i>Micro-Scale Practices</i>	P _E Credit Description	Contributing Drainage Area (sf)	Direct ESDv Received by Practice (cf)	WQv or ESDv from Up- Gradient Practices (cf)	WQv or ESDv credit (cf)	Runoff Volume Remaining (cf)		
Submerged Gravel Wetlands	ESDv credit is based on design storage volume	83,507	11,086	6667	6,713	11,039		

Step 7: Check for ESDv to MEP compliance and Revise Site If Necessary								
	Drainage Area Treated (sf)	83,507			WQv or ESDv Treated (cf) using ESD practices	6,713		
					P _E achieved (inches)	2.80		
					Entire ESDv Treated Through ESD Practices?	YES		
					ESDv Remaining? (cf)	0		
					If ESDV is not fully treated, is ESD to MEP achieved?	YES		
					Redevelopment WQv Requirements Met Through ESD Practices?	YES		
<i>New Development Water Quality Volume Requirements</i>					WQv Remaining? (cf)	0		
Required Treatment Area (acres)	0.14							
Runoff Coefficient, Rv	0.95							
Water Quality Volume, WQv (cf)	0				New Development WQv Requirements Met Through ESD Practices?	N/A		
					WQv Remaining? (cf)	0		

M-2

	Direct drainage				Indirect drainage		Total catchment area ----- Total ESDv to practice	Practice Specific Parameter(s)				WQV or ESDv provided (cf)	Runoff Volume Remaining (cf)	Down-Gradient Practice and Row	SOIL TYPE
	Contributing Drainage Area (sf)	% Impervious Cover ----- RV	To fully treat sub area ----- PE required ----- WQV required	Max available WQv or ESDv from CDA (cf)	Area of upstream catchment (sf)	WQv or ESDv from Up-Gradient Practices (cf)		Bed Surface Area (sf)	Top of Ponding Surface Area (sf)	Ponding Depth (ft)	Media Depth (ft)				
<i>Micro-Scale Practices</i>															
Forebay #1	83,507	60%	1.89	11,086	0	0	83,507	1,672	2,747	2	0	4,419	6,667	Submerged Gravel Wetlands 2	C/D
		0.59	7777				11086								
Submerged Gravel Wetlands #1		0%	1.00	0	83507	6667	83,507	563	1,281	2	2	2,294	4,372		C/D
		0.05	0				6667								
Total	83,507			11,086		6,667						6,713	11,039		

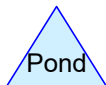
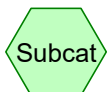
Analysis of Existing Conditions



EX-DA



EX-SP-1



Routing Diagram for Chesapeake Neighbors - Silo Square - Pre demo - Proposed

Prepared by Rauch Inc, Printed 7/22/2024

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Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EX-DA: EX-DA

Runoff Area=106,730 sf 52.52% Impervious Runoff Depth=2.18"
Flow Length=624' Tc=3.8 min CN=88 Runoff=8.60 cfs 0.445 af

Link EX-SP-1: EX-SP-1

Inflow=8.60 cfs 0.445 af
Primary=8.60 cfs 0.445 af

Total Runoff Area = 2.450 ac Runoff Volume = 0.445 af Average Runoff Depth = 2.18"
47.48% Pervious = 1.163 ac 52.52% Impervious = 1.287 ac

Summary for Subcatchment EX-DA: EX-DA

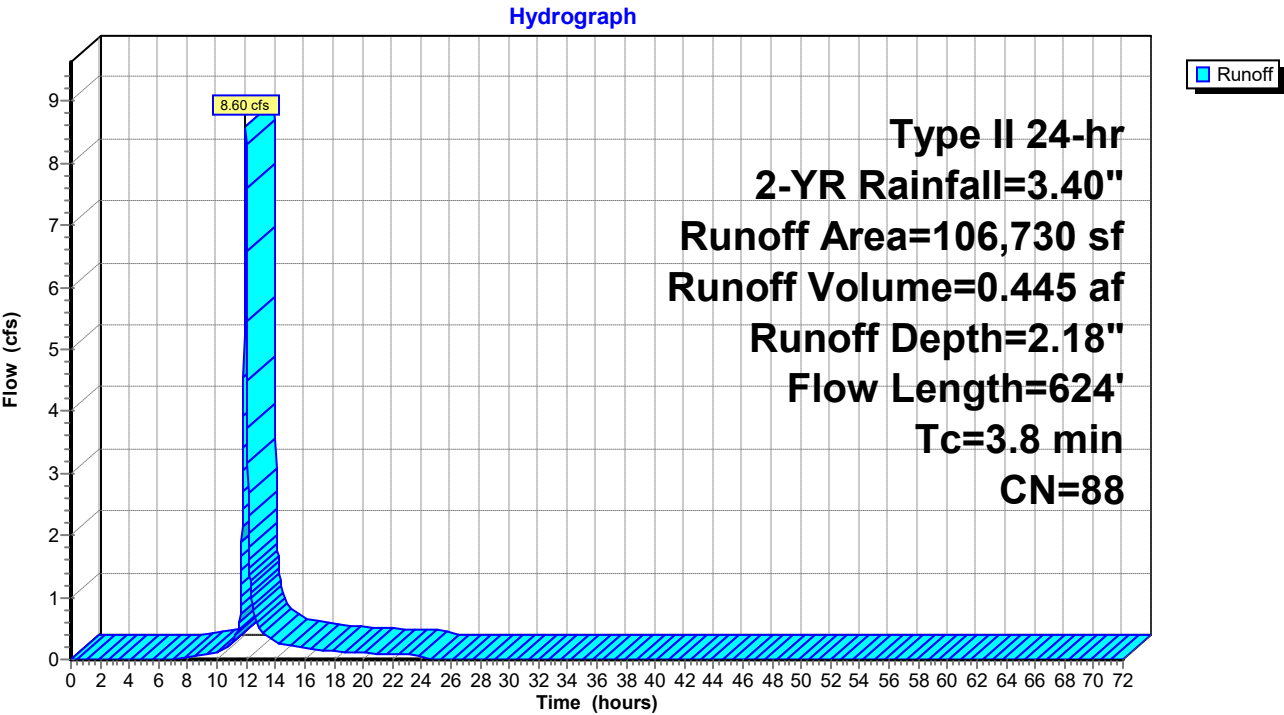
Runoff = 8.60 cfs @ 11.96 hrs, Volume= 0.445 af, Depth= 2.18"
 Routed to Link EX-SP-1 : EX-SP-1

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
 Type II 24-hr 2-YR Rainfall=3.40"

Area (sf)	CN	Description
28,399	98	Paved parking, HSG C
21,828	74	>75% Grass cover, Good, HSG C
27,658	98	Paved parking, HSG D
28,845	80	>75% Grass cover, Good, HSG D
106,730	88	Weighted Average
50,673		47.48% Pervious Area
56,057		52.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	100	0.0082	0.99		Sheet Flow, Gravel Smooth surfaces n= 0.011 P2= 3.40"
0.9	105	0.0083	1.85		Shallow Concentrated Flow, Gravel Paved Kv= 20.3 fps
0.3	29	0.0127	1.81		Shallow Concentrated Flow, Grassed Unpaved Kv= 16.1 fps
0.9	390	0.0117	7.51	67.62	Channel Flow, Channeled paved Area= 9.0 sf Perim= 19.0' r= 0.47' n= 0.013 Asphalt, smooth
3.8	624	Total			

Subcatchment EX-DA: EX-DA

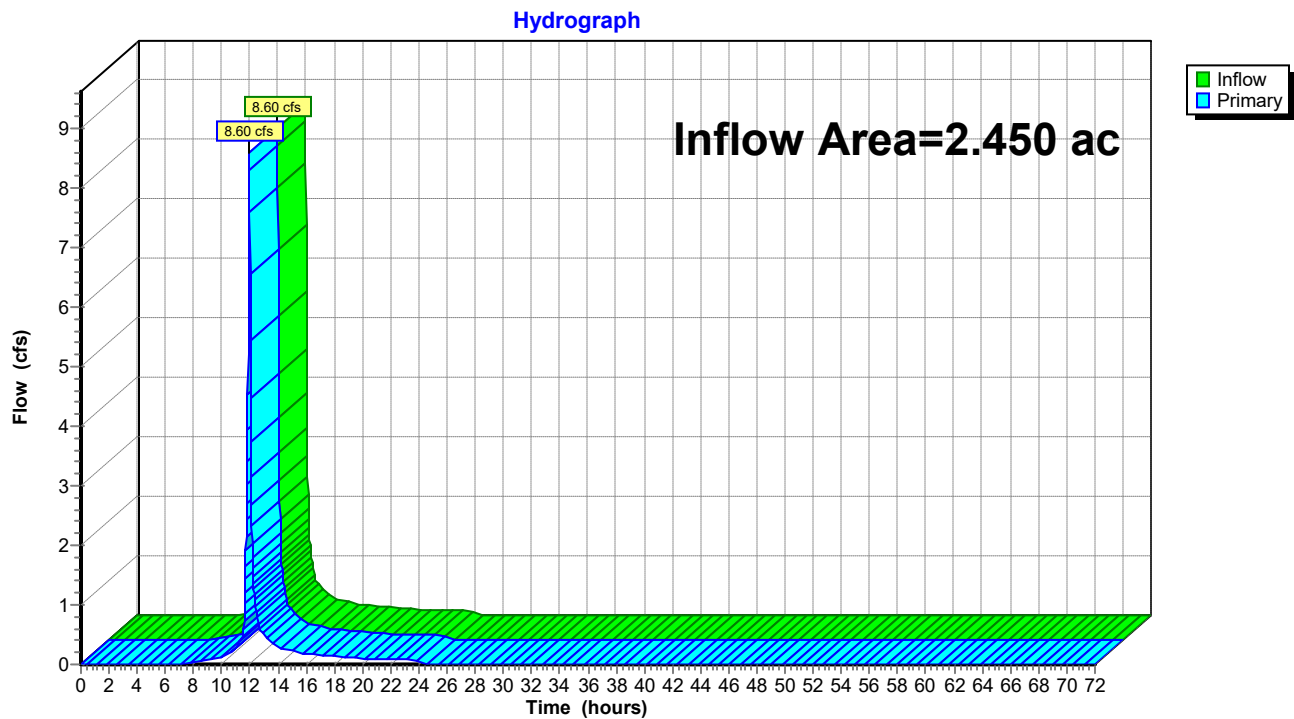


Summary for Link EX-SP-1: EX-SP-1

Inflow Area = 2.450 ac, 52.52% Impervious, Inflow Depth = 2.18" for 2-YR event
 Inflow = 8.60 cfs @ 11.96 hrs, Volume= 0.445 af
 Primary = 8.60 cfs @ 11.96 hrs, Volume= 0.445 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs

Link EX-SP-1: EX-SP-1



Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EX-DA: EX-DA

Runoff Area=106,730 sf 52.52% Impervious Runoff Depth=3.95"
Flow Length=624' Tc=3.8 min CN=88 Runoff=15.15 cfs 0.807 af

Link EX-SP-1: EX-SP-1

Inflow=15.15 cfs 0.807 af
Primary=15.15 cfs 0.807 af

Total Runoff Area = 2.450 ac Runoff Volume = 0.807 af Average Runoff Depth = 3.95"
47.48% Pervious = 1.163 ac 52.52% Impervious = 1.287 ac

Summary for Subcatchment EX-DA: EX-DA

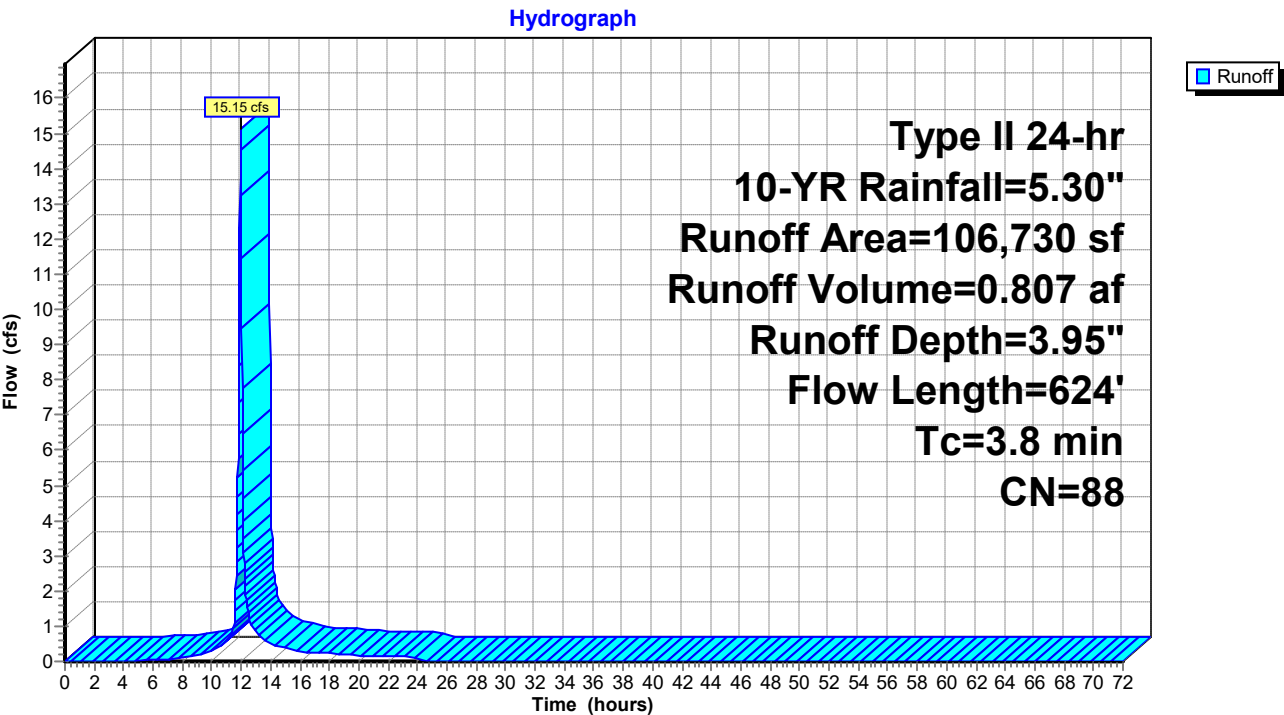
Runoff = 15.15 cfs @ 11.96 hrs, Volume= 0.807 af, Depth= 3.95"
 Routed to Link EX-SP-1 : EX-SP-1

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
 Type II 24-hr 10-YR Rainfall=5.30"

Area (sf)	CN	Description
28,399	98	Paved parking, HSG C
21,828	74	>75% Grass cover, Good, HSG C
27,658	98	Paved parking, HSG D
28,845	80	>75% Grass cover, Good, HSG D
106,730	88	Weighted Average
50,673		47.48% Pervious Area
56,057		52.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	100	0.0082	0.99		Sheet Flow, Gravel Smooth surfaces n= 0.011 P2= 3.40"
0.9	105	0.0083	1.85		Shallow Concentrated Flow, Gravel Paved Kv= 20.3 fps
0.3	29	0.0127	1.81		Shallow Concentrated Flow, Grassed Unpaved Kv= 16.1 fps
0.9	390	0.0117	7.51	67.62	Channel Flow, Channeled paved Area= 9.0 sf Perim= 19.0' r= 0.47' n= 0.013 Asphalt, smooth
3.8	624	Total			

Subcatchment EX-DA: EX-DA

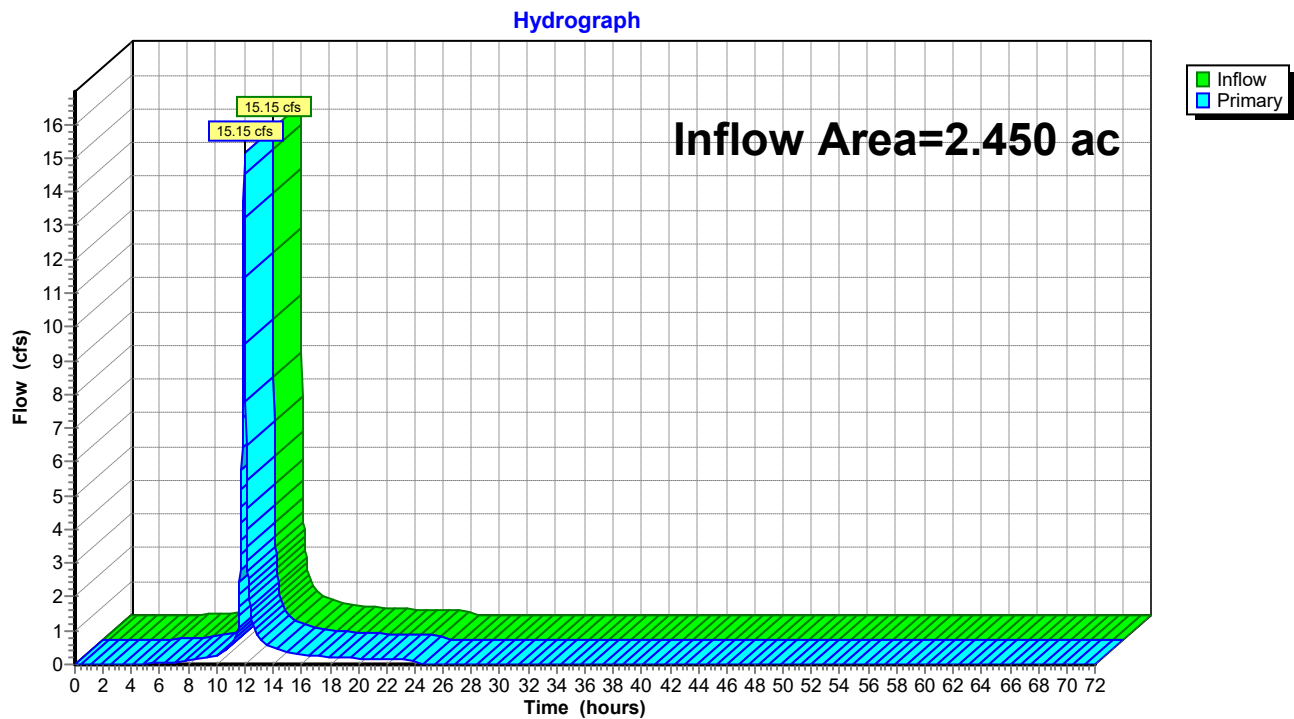


Summary for Link EX-SP-1: EX-SP-1

Inflow Area = 2.450 ac, 52.52% Impervious, Inflow Depth = 3.95" for 10-YR event
 Inflow = 15.15 cfs @ 11.96 hrs, Volume= 0.807 af
 Primary = 15.15 cfs @ 11.96 hrs, Volume= 0.807 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs

Link EX-SP-1: EX-SP-1



Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EX-DA: EX-DA

Runoff Area=106,730 sf 52.52% Impervious Runoff Depth=6.18"
Flow Length=624' Tc=3.8 min CN=88 Runoff=23.03 cfs 1.261 af

Link EX-SP-1: EX-SP-1

Inflow=23.03 cfs 1.261 af
Primary=23.03 cfs 1.261 af

Total Runoff Area = 2.450 ac Runoff Volume = 1.261 af Average Runoff Depth = 6.18"
47.48% Pervious = 1.163 ac 52.52% Impervious = 1.287 ac

Summary for Subcatchment EX-DA: EX-DA

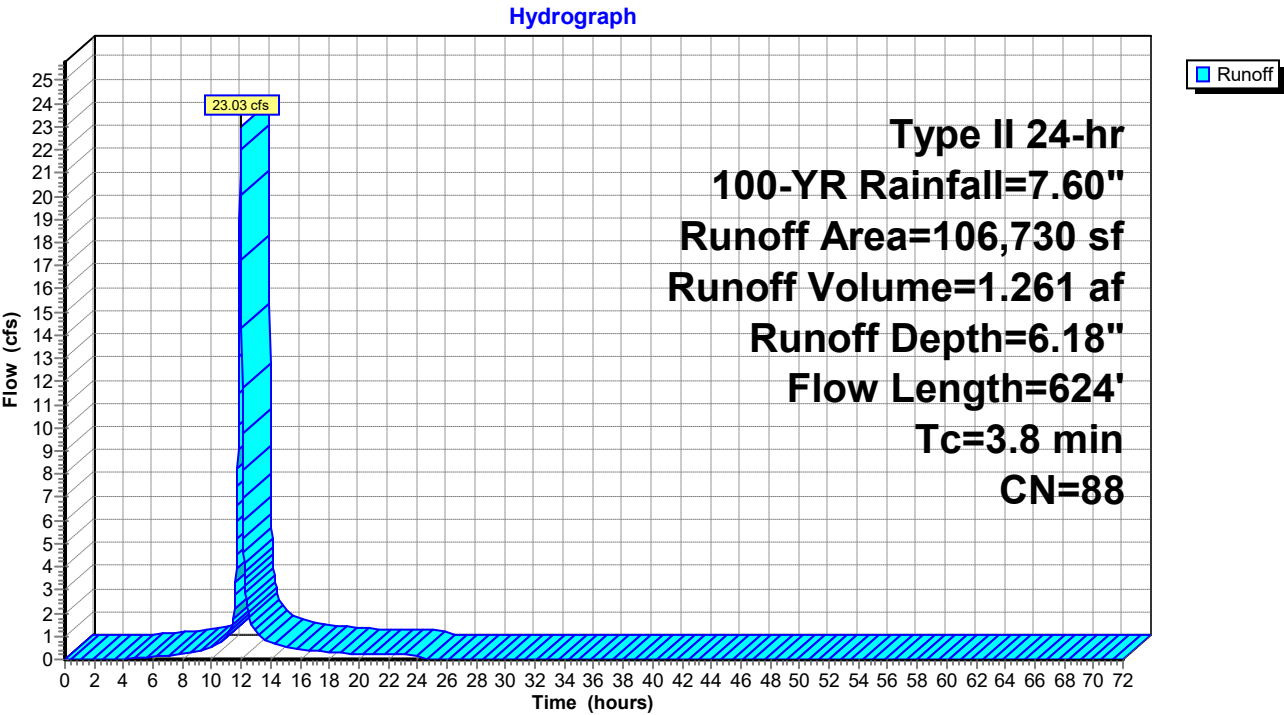
Runoff = 23.03 cfs @ 11.96 hrs, Volume= 1.261 af, Depth= 6.18"
 Routed to Link EX-SP-1 : EX-SP-1

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
 Type II 24-hr 100-YR Rainfall=7.60"

Area (sf)	CN	Description
28,399	98	Paved parking, HSG C
21,828	74	>75% Grass cover, Good, HSG C
27,658	98	Paved parking, HSG D
28,845	80	>75% Grass cover, Good, HSG D
106,730	88	Weighted Average
50,673		47.48% Pervious Area
56,057		52.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	100	0.0082	0.99		Sheet Flow, Gravel Smooth surfaces n= 0.011 P2= 3.40"
0.9	105	0.0083	1.85		Shallow Concentrated Flow, Gravel Paved Kv= 20.3 fps
0.3	29	0.0127	1.81		Shallow Concentrated Flow, Grassed Unpaved Kv= 16.1 fps
0.9	390	0.0117	7.51	67.62	Channel Flow, Channeled paved Area= 9.0 sf Perim= 19.0' r= 0.47' n= 0.013 Asphalt, smooth
3.8	624	Total			

Subcatchment EX-DA: EX-DA

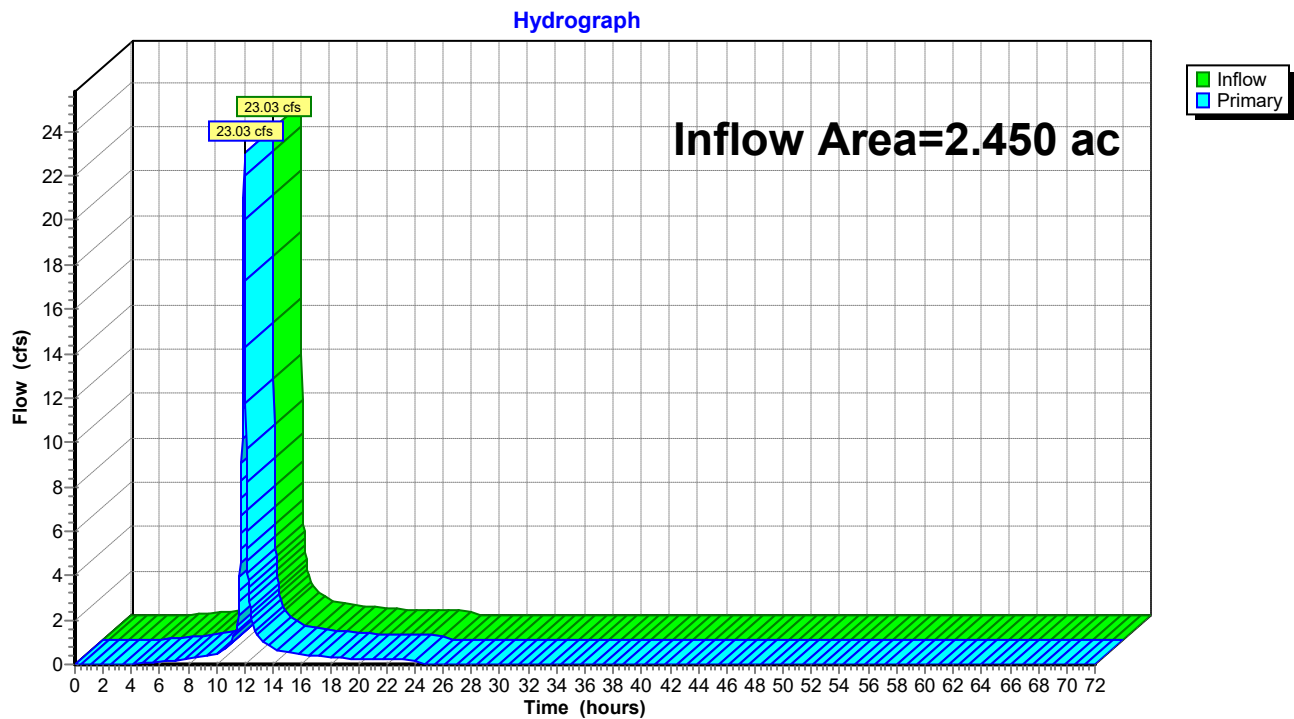


Summary for Link EX-SP-1: EX-SP-1

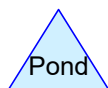
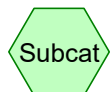
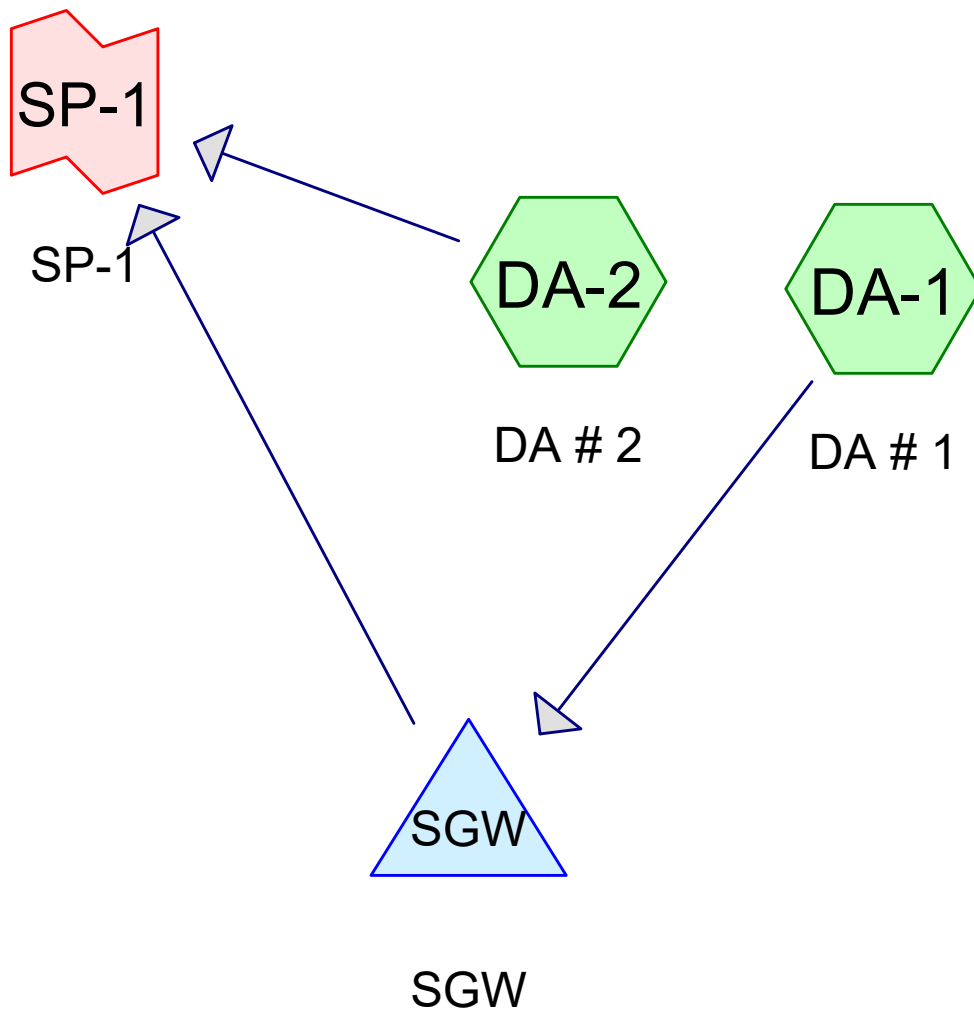
Inflow Area = 2.450 ac, 52.52% Impervious, Inflow Depth = 6.18" for 100-YR event
Inflow = 23.03 cfs @ 11.96 hrs, Volume= 1.261 af
Primary = 23.03 cfs @ 11.96 hrs, Volume= 1.261 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs

Link EX-SP-1: EX-SP-1



Analysis of Proposed Conditions



Routing Diagram for Chesapeake Neighbors - Silo Square - Pre demo - Proposed
Prepared by Rauch Inc, Printed 7/22/2024
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Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment DA-1: DA # 1 Runoff Area=82,560 sf 61.89% Impervious Runoff Depth=2.35"
Flow Length=499' Tc=10.2 min CN=90 Runoff=4.85 cfs 0.372 af

Subcatchment DA-2: DA # 2 Runoff Area=24,169 sf 44.95% Impervious Runoff Depth=2.09"
Flow Length=266' Tc=4.5 min CN=87 Runoff=1.79 cfs 0.097 af

Pond SGW: SGW Peak Elev=33.15' Storage=5,668 cf Inflow=4.85 cfs 0.372 af
Outflow=1.33 cfs 0.372 af

Link SP-1: SP-1 Inflow=2.71 cfs 0.469 af
Primary=2.71 cfs 0.469 af

Total Runoff Area = 2.450 ac Runoff Volume = 0.469 af Average Runoff Depth = 2.30"
41.94% Pervious = 1.028 ac 58.06% Impervious = 1.422 ac

Summary for Subcatchment DA-1: DA # 1

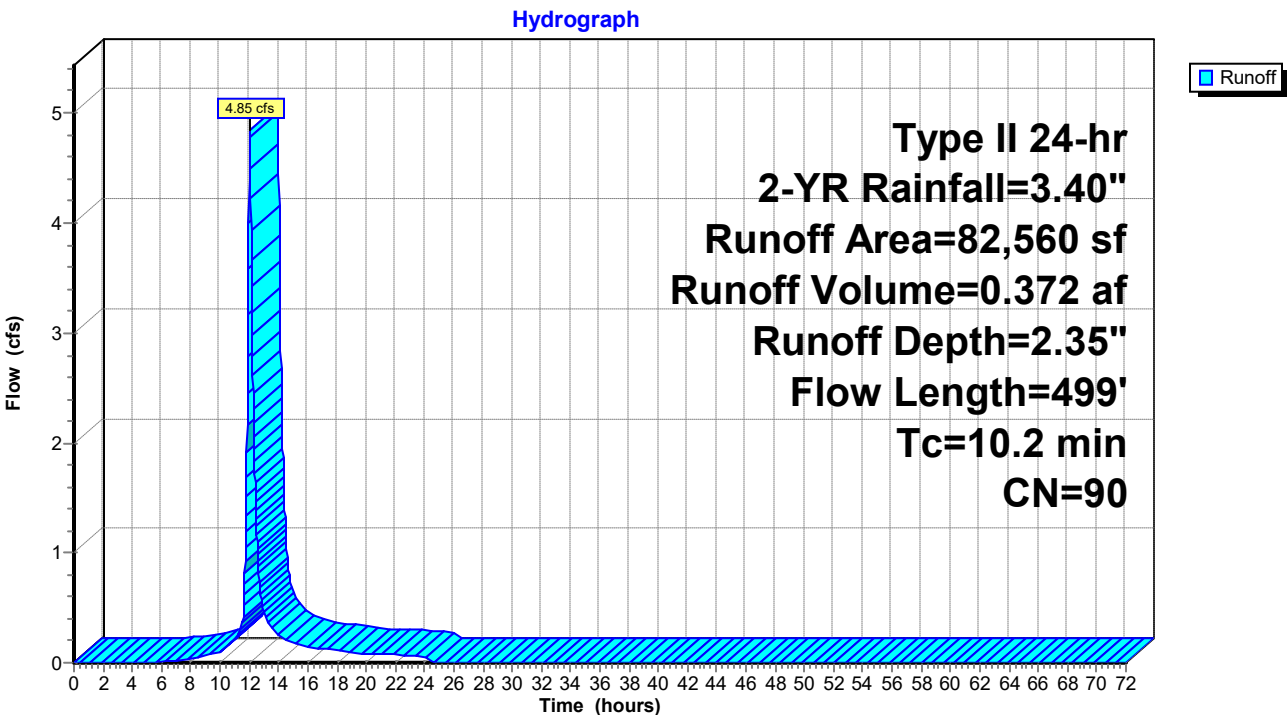
Runoff = 4.85 cfs @ 12.03 hrs, Volume= 0.372 af, Depth= 2.35"
Routed to Pond SGW : SGW

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type II 24-hr 2-YR Rainfall=3.40"

Area (sf)	CN	Description
28,716	98	Paved parking, HSG C
13,526	74	>75% Grass cover, Good, HSG C
22,381	98	Paved parking, HSG D
17,937	80	>75% Grass cover, Good, HSG D
82,560	90	Weighted Average
31,463		38.11% Pervious Area
51,097		61.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	69	0.0172	0.15		Sheet Flow, Grass
					Grass: Short n= 0.150 P2= 3.40"
2.7	430	0.0021	2.70	2.12	Pipe Channel, Piped
					12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25'
					n= 0.010 PVC, smooth interior
10.2	499	Total			

Subcatchment DA-1: DA # 1



Summary for Subcatchment DA-2: DA # 2

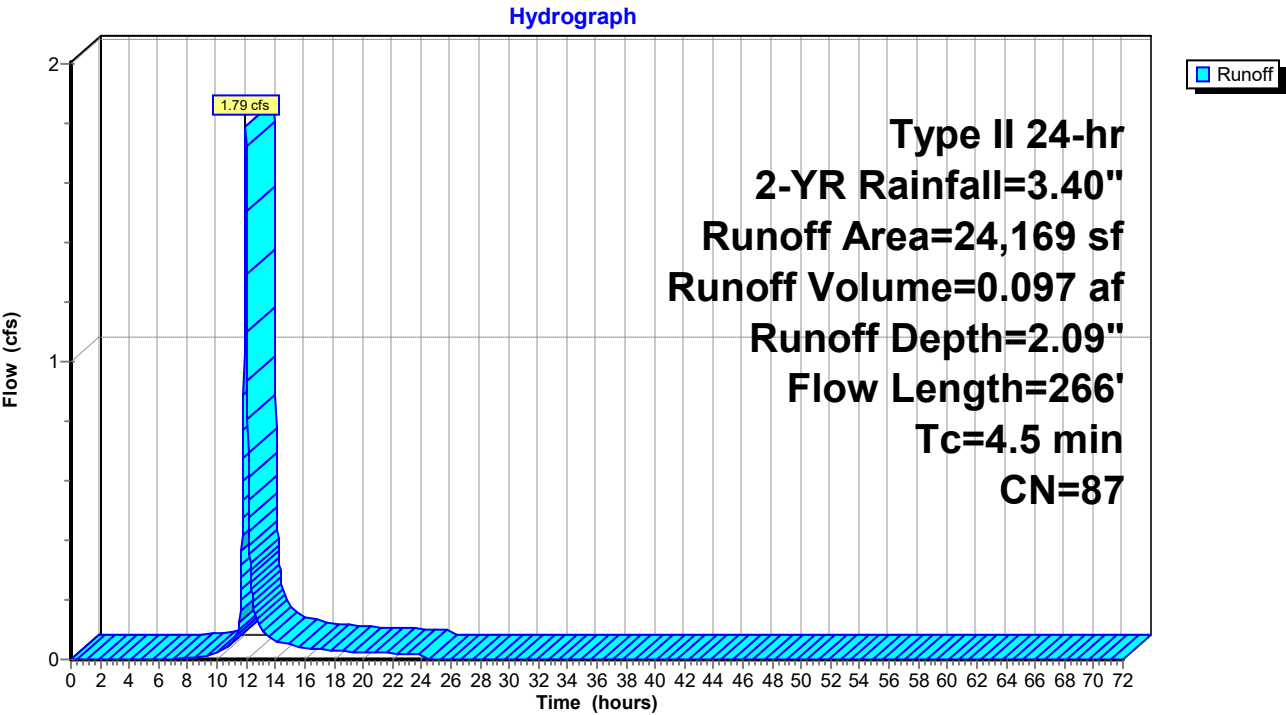
Runoff = 1.79 cfs @ 11.97 hrs, Volume= 0.097 af, Depth= 2.09"
 Routed to Link SP-1 : SP-1

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
 Type II 24-hr 2-YR Rainfall=3.40"

Area (sf)	CN	Description
3,657	98	Paved parking, HSG C
4,328	74	>75% Grass cover, Good, HSG C
7,208	98	Paved parking, HSG D
8,976	80	>75% Grass cover, Good, HSG D
24,169	87	Weighted Average
13,304		55.05% Pervious Area
10,865		44.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	14	0.0200	0.12		Sheet Flow, Grass Grass: Short n= 0.150 P2= 3.40"
1.9	200	0.0100	1.80	1.26	Channel Flow, Grass Conveyance Swale Area= 0.7 sf Perim= 3.2' r= 0.22' n= 0.030 Earth, grassed & winding
0.6	52	0.0067	1.47	0.15	Channel Flow, Paved Channel Flow Area= 0.1 sf Perim= 1.6' r= 0.06' n= 0.013 Concrete, trowel finish
4.5	266	Total			

Subcatchment DA-2: DA # 2



Summary for Pond SGW: SGW

Inflow Area = 1.895 ac, 61.89% Impervious, Inflow Depth = 2.35" for 2-YR event
 Inflow = 4.85 cfs @ 12.03 hrs, Volume= 0.372 af
 Outflow = 1.33 cfs @ 12.47 hrs, Volume= 0.372 af, Atten= 73%, Lag= 26.6 min
 Primary = 1.33 cfs @ 12.47 hrs, Volume= 0.372 af
 Routed to Link SP-1 : SP-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
 Starting Elev= 31.17' Surf.Area= 563 sf Storage= 977 cf
 Peak Elev= 33.15' @ 12.47 hrs Surf.Area= 3,462 sf Storage= 5,668 cf (4,690 cf above start)

Plug-Flow detention time= 77.6 min calculated for 0.349 af (94% of inflow)
 Center-of-Mass det. time= 25.8 min (837.4 - 811.6)

Volume	Invert	Avail.Storage	Storage Description			
#1	26.49'	8,918 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
26.49	563	261.2	0.0	0	0	563
26.50	563	261.2	40.0	2	2	566
30.83	563	261.2	40.0	975	977	1,697
30.84	563	261.2	0.0	0	977	1,699
31.49	563	261.2	0.0	0	977	1,869
31.50	2,235	261.2	100.0	13	990	1,872
32.01	2,587	275.4	100.0	1,229	2,219	2,493
33.00	3,367	308.0	100.0	2,939	5,158	4,034
34.00	4,028	336.6	100.0	3,693	8,850	5,536
34.01	10,000	400.0	100.0	68	8,918	9,252

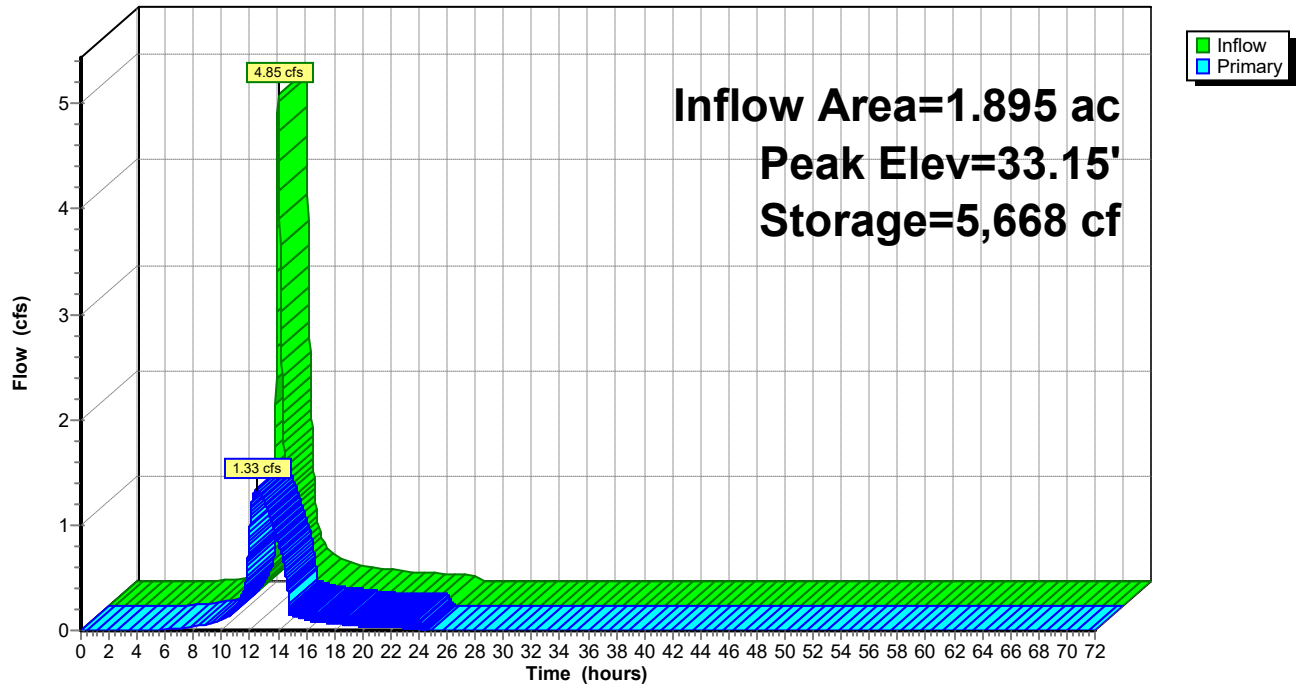
Device	Routing	Invert	Outlet Devices
#1	Primary	31.17'	12.0" Round Culvert L= 228.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 31.17' / 30.00' S= 0.0051 '/' Cc= 0.900 n= 0.012 HDPE, Flow Area= 0.79 sf
#2	Device 1	26.75'	6.0" Vert. Collection Pipe C= 0.600 Limited to weir flow at low heads
#3	Device 1	33.50'	18.0" x 18.0" Horiz. Structure Rim C= 0.600 Limited to weir flow at low heads
#4	Primary	34.00'	130.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=1.33 cfs @ 12.47 hrs HW=33.15' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 1.33 cfs of 3.35 cfs potential flow)
- 2=Collection Pipe (Orifice Controls 1.33 cfs @ 6.77 fps)
- 3=Structure Rim (Controls 0.00 cfs)
- 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

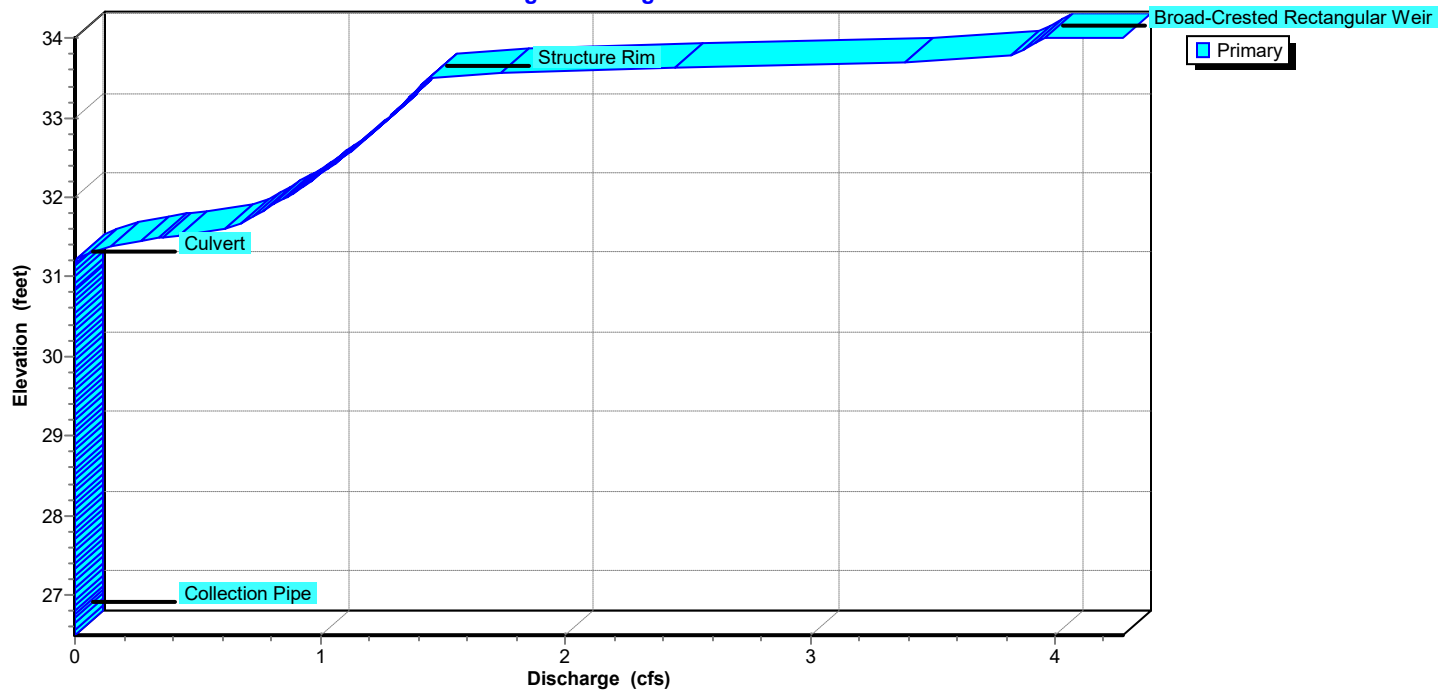
Pond SGW: SGW

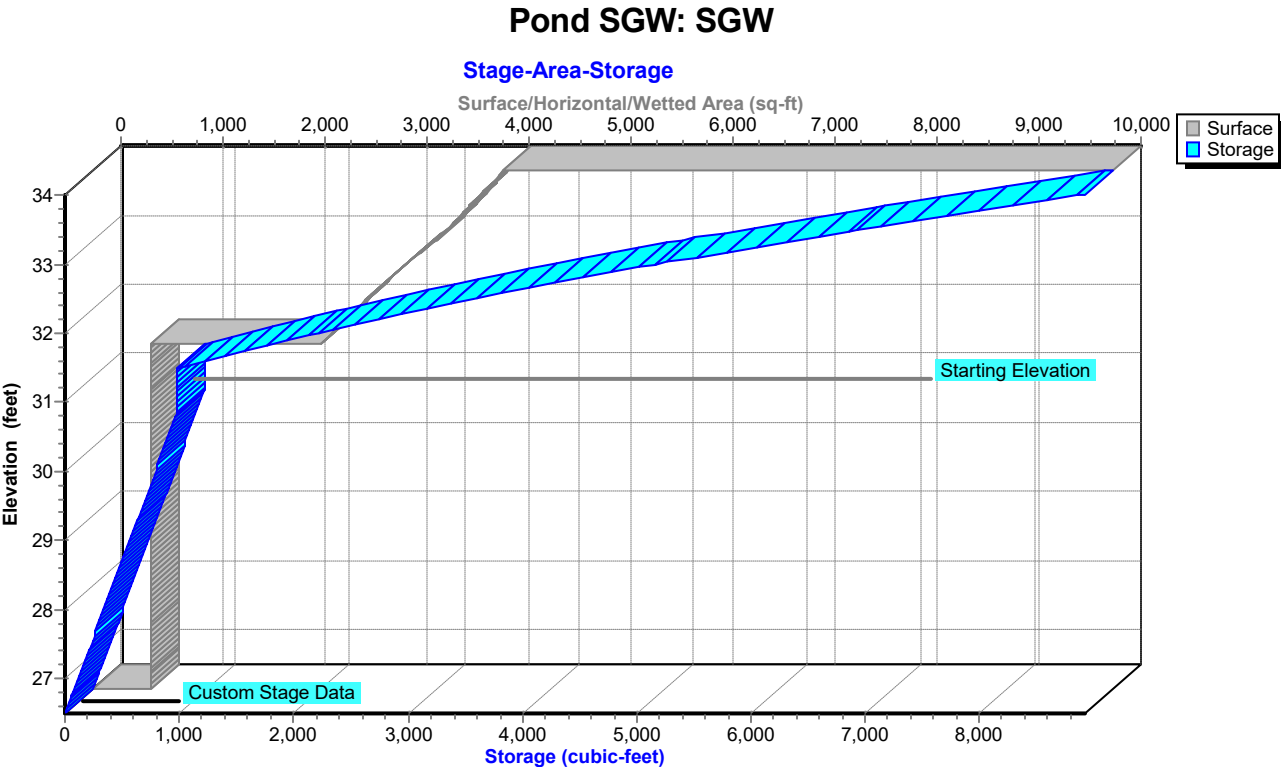
Hydrograph



Pond SGW: SGW

Stage-Discharge





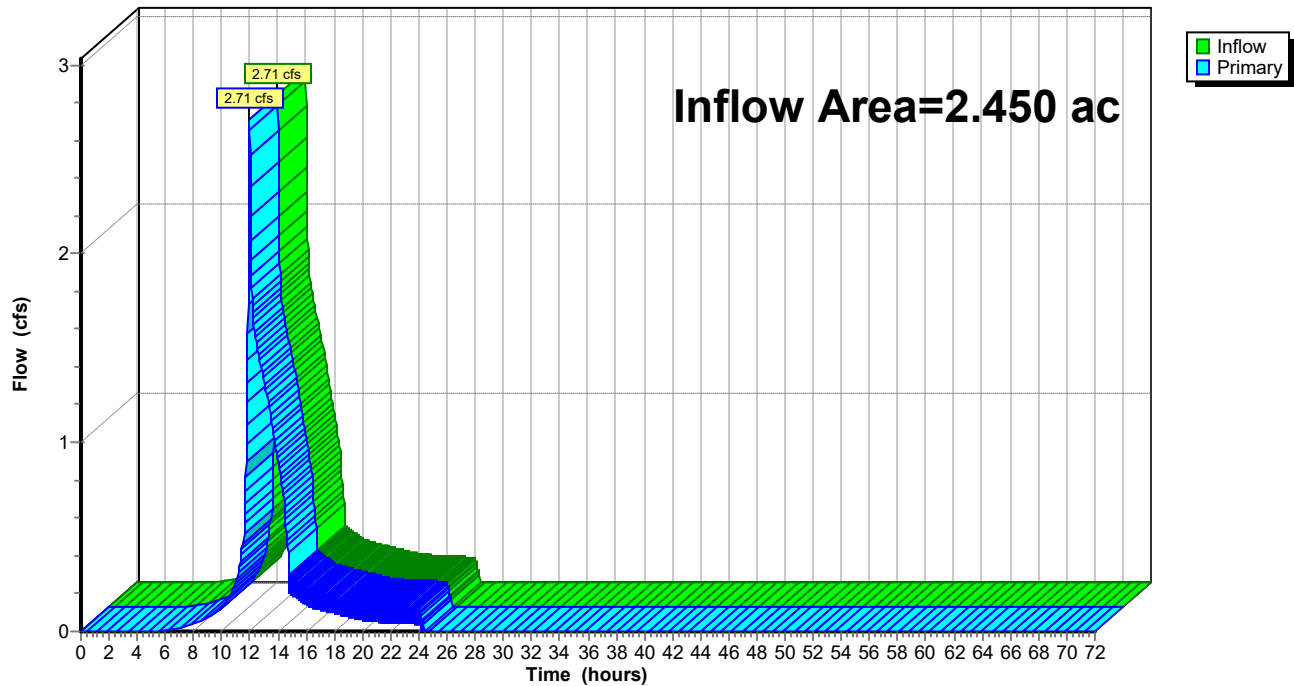
Summary for Link SP-1: SP-1

Inflow Area = 2.450 ac, 58.06% Impervious, Inflow Depth = 2.30" for 2-YR event
 Inflow = 2.71 cfs @ 11.98 hrs, Volume= 0.469 af
 Primary = 2.71 cfs @ 11.98 hrs, Volume= 0.469 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs

Link SP-1: SP-1

Hydrograph



Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment DA-1: DA # 1 Runoff Area=82,560 sf 61.89% Impervious Runoff Depth=4.17"
Flow Length=499' Tc=10.2 min CN=90 Runoff=8.39 cfs 0.658 af

Subcatchment DA-2: DA # 2 Runoff Area=24,169 sf 44.95% Impervious Runoff Depth=3.85"
Flow Length=266' Tc=4.5 min CN=87 Runoff=3.21 cfs 0.178 af

Pond SGW: SGW Peak Elev=33.90' Storage=8,444 cf Inflow=8.39 cfs 0.658 af
Outflow=3.89 cfs 0.658 af

Link SP-1: SP-1 Inflow=4.89 cfs 0.836 af
Primary=4.89 cfs 0.836 af

Total Runoff Area = 2.450 ac Runoff Volume = 0.836 af Average Runoff Depth = 4.09"
41.94% Pervious = 1.028 ac 58.06% Impervious = 1.422 ac

Summary for Subcatchment DA-1: DA # 1

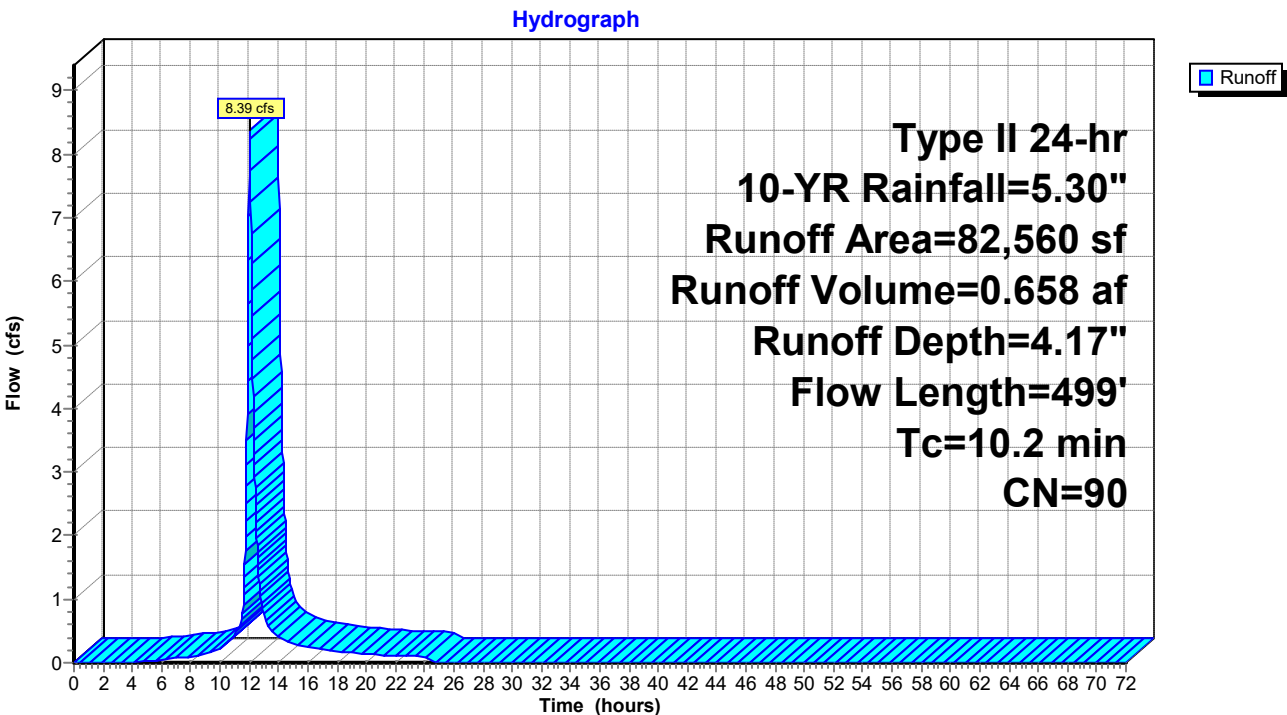
Runoff = 8.39 cfs @ 12.03 hrs, Volume= 0.658 af, Depth= 4.17"
Routed to Pond SGW : SGW

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type II 24-hr 10-YR Rainfall=5.30"

Area (sf)	CN	Description
28,716	98	Paved parking, HSG C
13,526	74	>75% Grass cover, Good, HSG C
22,381	98	Paved parking, HSG D
17,937	80	>75% Grass cover, Good, HSG D
82,560	90	Weighted Average
31,463		38.11% Pervious Area
51,097		61.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	69	0.0172	0.15		Sheet Flow, Grass Grass: Short n= 0.150 P2= 3.40"
2.7	430	0.0021	2.70	2.12	Pipe Channel, Piped 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.010 PVC, smooth interior
10.2	499	Total			

Subcatchment DA-1: DA # 1



Summary for Subcatchment DA-2: DA # 2

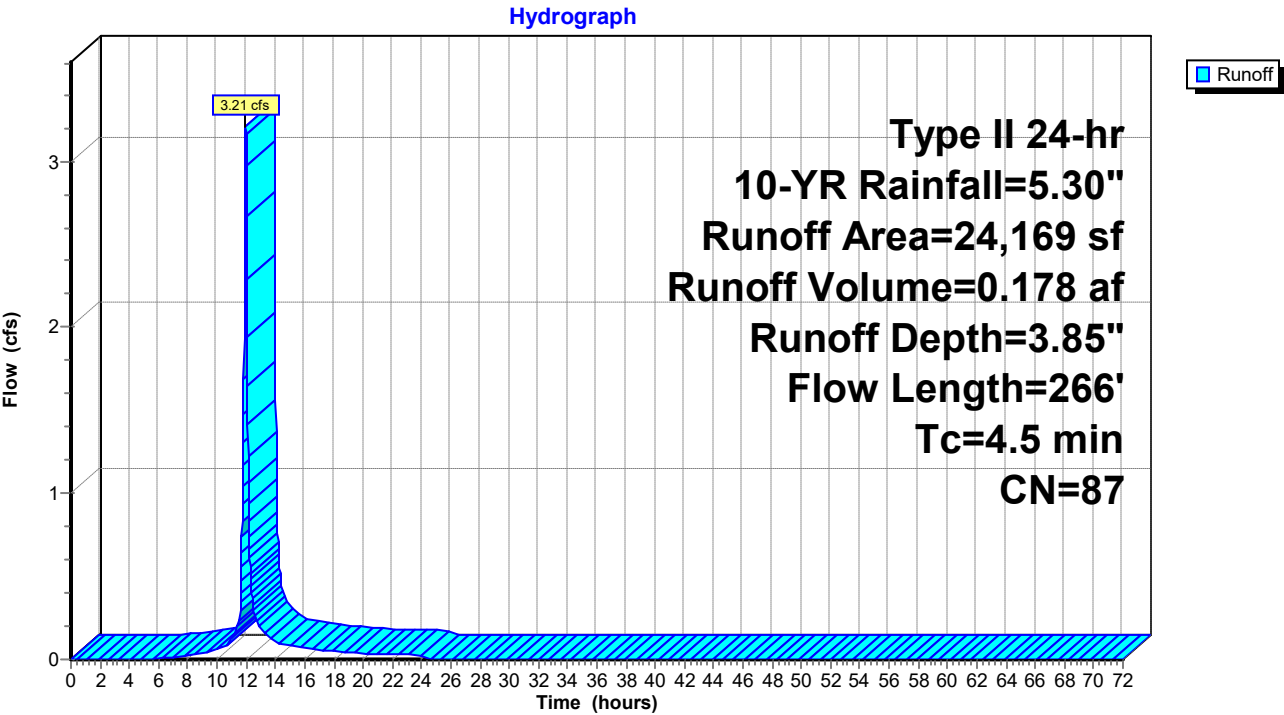
Runoff = 3.21 cfs @ 11.97 hrs, Volume= 0.178 af, Depth= 3.85"
 Routed to Link SP-1 : SP-1

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
 Type II 24-hr 10-YR Rainfall=5.30"

Area (sf)	CN	Description
3,657	98	Paved parking, HSG C
4,328	74	>75% Grass cover, Good, HSG C
7,208	98	Paved parking, HSG D
8,976	80	>75% Grass cover, Good, HSG D
24,169	87	Weighted Average
13,304		55.05% Pervious Area
10,865		44.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	14	0.0200	0.12		Sheet Flow, Grass Grass: Short n= 0.150 P2= 3.40"
1.9	200	0.0100	1.80	1.26	Channel Flow, Grass Conveyance Swale Area= 0.7 sf Perim= 3.2' r= 0.22' n= 0.030 Earth, grassed & winding
0.6	52	0.0067	1.47	0.15	Channel Flow, Paved Channel Flow Area= 0.1 sf Perim= 1.6' r= 0.06' n= 0.013 Concrete, trowel finish
4.5	266	Total			

Subcatchment DA-2: DA # 2



Summary for Pond SGW: SGW

Inflow Area = 1.895 ac, 61.89% Impervious, Inflow Depth = 4.17" for 10-YR event
 Inflow = 8.39 cfs @ 12.03 hrs, Volume= 0.658 af
 Outflow = 3.89 cfs @ 12.28 hrs, Volume= 0.658 af, Atten= 54%, Lag= 15.3 min
 Primary = 3.89 cfs @ 12.28 hrs, Volume= 0.658 af
 Routed to Link SP-1 : SP-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
 Starting Elev= 31.17' Surf.Area= 563 sf Storage= 977 cf
 Peak Elev= 33.90' @ 12.28 hrs Surf.Area= 3,958 sf Storage= 8,444 cf (7,466 cf above start)

Plug-Flow detention time= 62.4 min calculated for 0.635 af (97% of inflow)
 Center-of-Mass det. time= 27.8 min (823.4 - 795.6)

Volume	Invert	Avail.Storage	Storage Description			
#1	26.49'	8,918 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
26.49	563	261.2	0.0	0	0	563
26.50	563	261.2	40.0	2	2	566
30.83	563	261.2	40.0	975	977	1,697
30.84	563	261.2	0.0	0	977	1,699
31.49	563	261.2	0.0	0	977	1,869
31.50	2,235	261.2	100.0	13	990	1,872
32.01	2,587	275.4	100.0	1,229	2,219	2,493
33.00	3,367	308.0	100.0	2,939	5,158	4,034
34.00	4,028	336.6	100.0	3,693	8,850	5,536
34.01	10,000	400.0	100.0	68	8,918	9,252

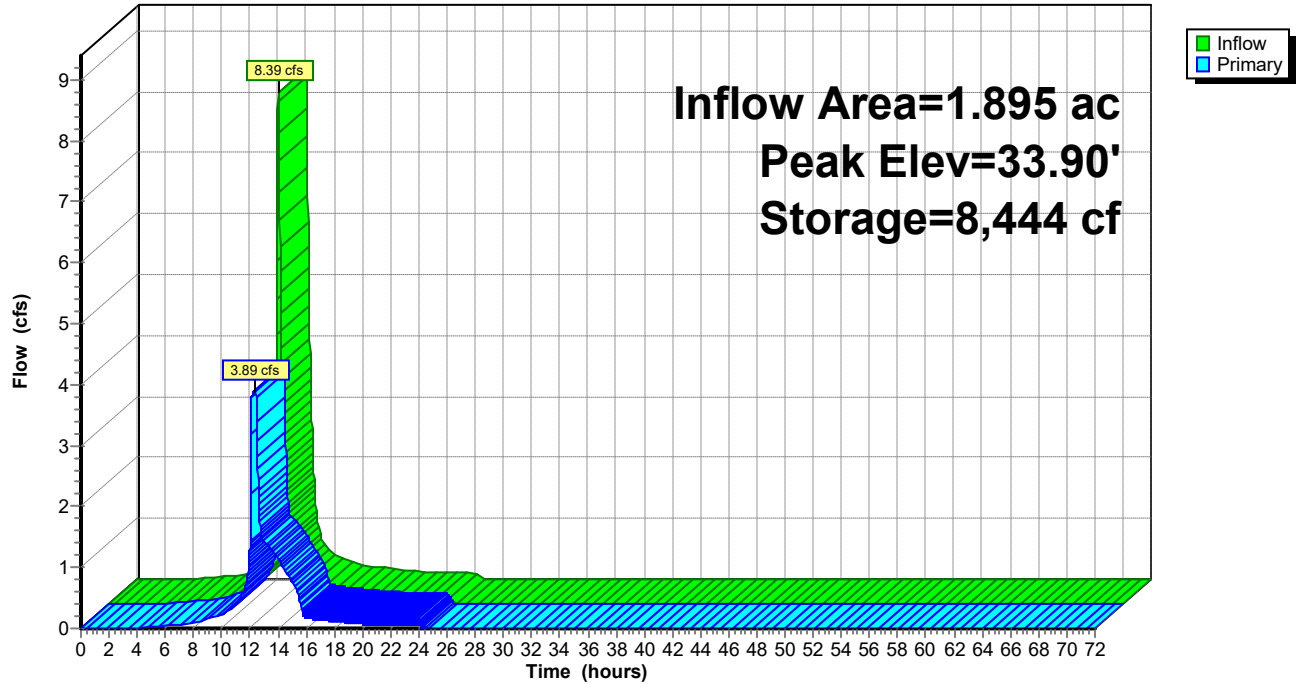
Device	Routing	Invert	Outlet Devices
#1	Primary	31.17'	12.0" Round Culvert L= 228.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 31.17' / 30.00' S= 0.0051 '/' Cc= 0.900 n= 0.012 HDPE, Flow Area= 0.79 sf
#2	Device 1	26.75'	6.0" Vert. Collection Pipe C= 0.600 Limited to weir flow at low heads
#3	Device 1	33.50'	18.0" x 18.0" Horiz. Structure Rim C= 0.600 Limited to weir flow at low heads
#4	Primary	34.00'	130.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=3.89 cfs @ 12.28 hrs HW=33.90' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Barrel Controls 3.89 cfs @ 4.95 fps)
- 2=Collection Pipe (Passes < 1.56 cfs potential flow)
- 3=Structure Rim (Passes < 4.92 cfs potential flow)
- 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

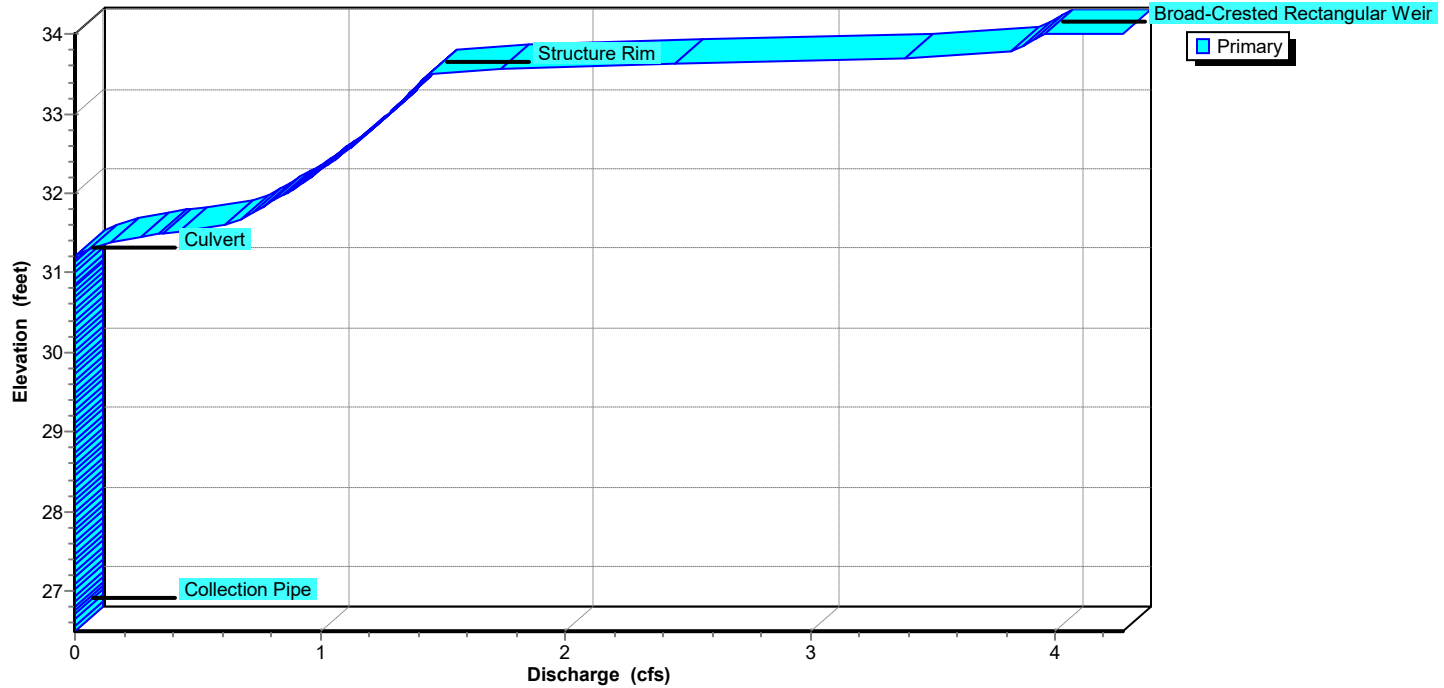
Pond SGW: SGW

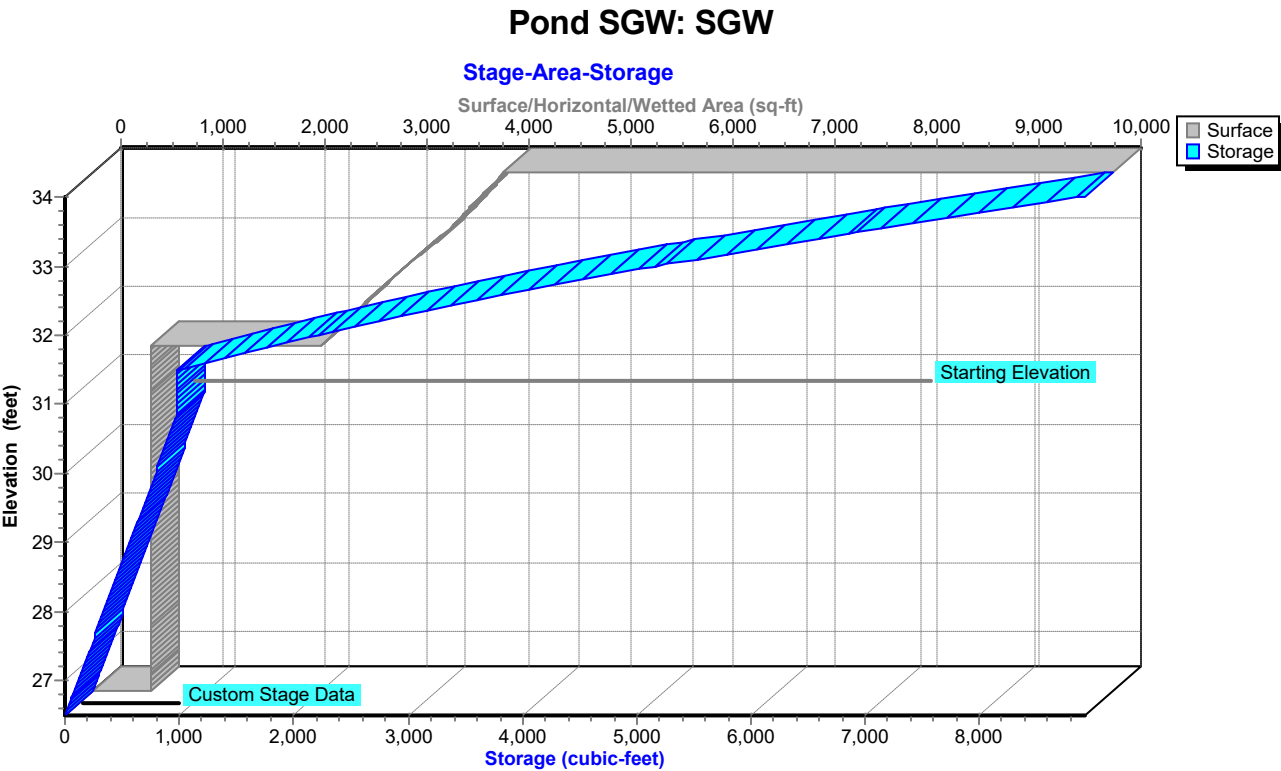
Hydrograph



Pond SGW: SGW

Stage-Discharge





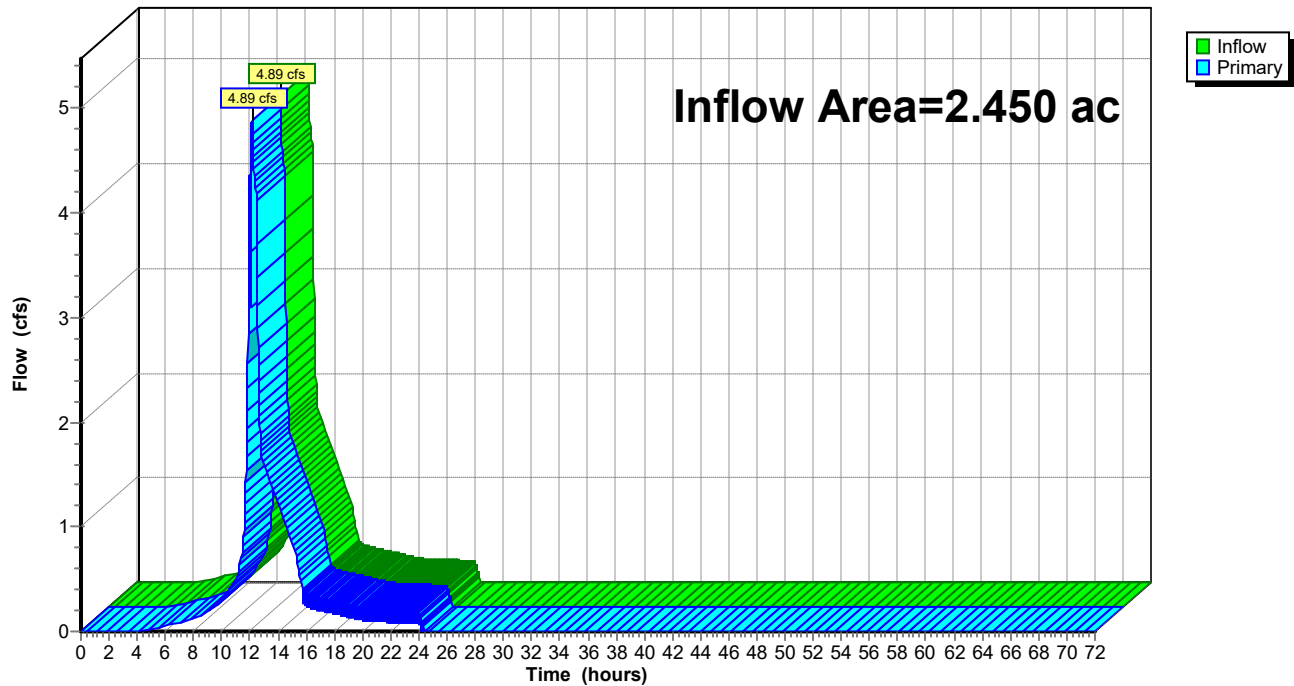
Summary for Link SP-1: SP-1

Inflow Area = 2.450 ac, 58.06% Impervious, Inflow Depth = 4.09" for 10-YR event
 Inflow = 4.89 cfs @ 12.15 hrs, Volume= 0.836 af
 Primary = 4.89 cfs @ 12.15 hrs, Volume= 0.836 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs

Link SP-1: SP-1

Hydrograph



Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment DA-1: DA # 1 Runoff Area=82,560 sf 61.89% Impervious Runoff Depth=6.41"
Flow Length=499' Tc=10.2 min CN=90 Runoff=12.63 cfs 1.013 af

Subcatchment DA-2: DA # 2 Runoff Area=24,169 sf 44.95% Impervious Runoff Depth=6.06"
Flow Length=266' Tc=4.5 min CN=87 Runoff=4.92 cfs 0.280 af

Pond SGW: SGW Peak Elev=34.12' Storage=8,918 cf Inflow=12.63 cfs 1.013 af
Outflow=17.07 cfs 1.013 af

Link SP-1: SP-1 Inflow=20.04 cfs 1.293 af
Primary=20.04 cfs 1.293 af

Total Runoff Area = 2.450 ac Runoff Volume = 1.293 af Average Runoff Depth = 6.33"
41.94% Pervious = 1.028 ac 58.06% Impervious = 1.422 ac

Summary for Subcatchment DA-1: DA # 1

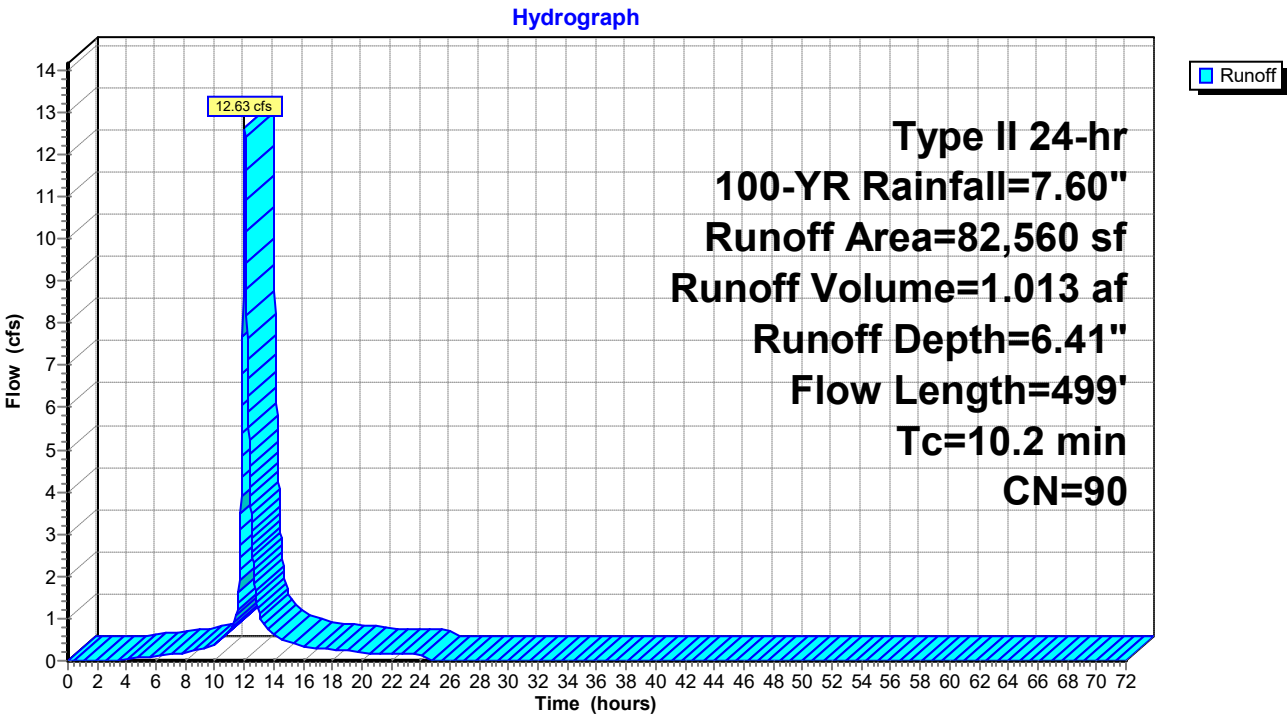
Runoff = 12.63 cfs @ 12.03 hrs, Volume= 1.013 af, Depth= 6.41"
Routed to Pond SGW : SGW

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type II 24-hr 100-YR Rainfall=7.60"

Area (sf)	CN	Description
28,716	98	Paved parking, HSG C
13,526	74	>75% Grass cover, Good, HSG C
22,381	98	Paved parking, HSG D
17,937	80	>75% Grass cover, Good, HSG D
82,560	90	Weighted Average
31,463		38.11% Pervious Area
51,097		61.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	69	0.0172	0.15		Sheet Flow, Grass Grass: Short n= 0.150 P2= 3.40"
2.7	430	0.0021	2.70	2.12	Pipe Channel, Piped 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.010 PVC, smooth interior
10.2	499	Total			

Subcatchment DA-1: DA # 1



Summary for Subcatchment DA-2: DA # 2

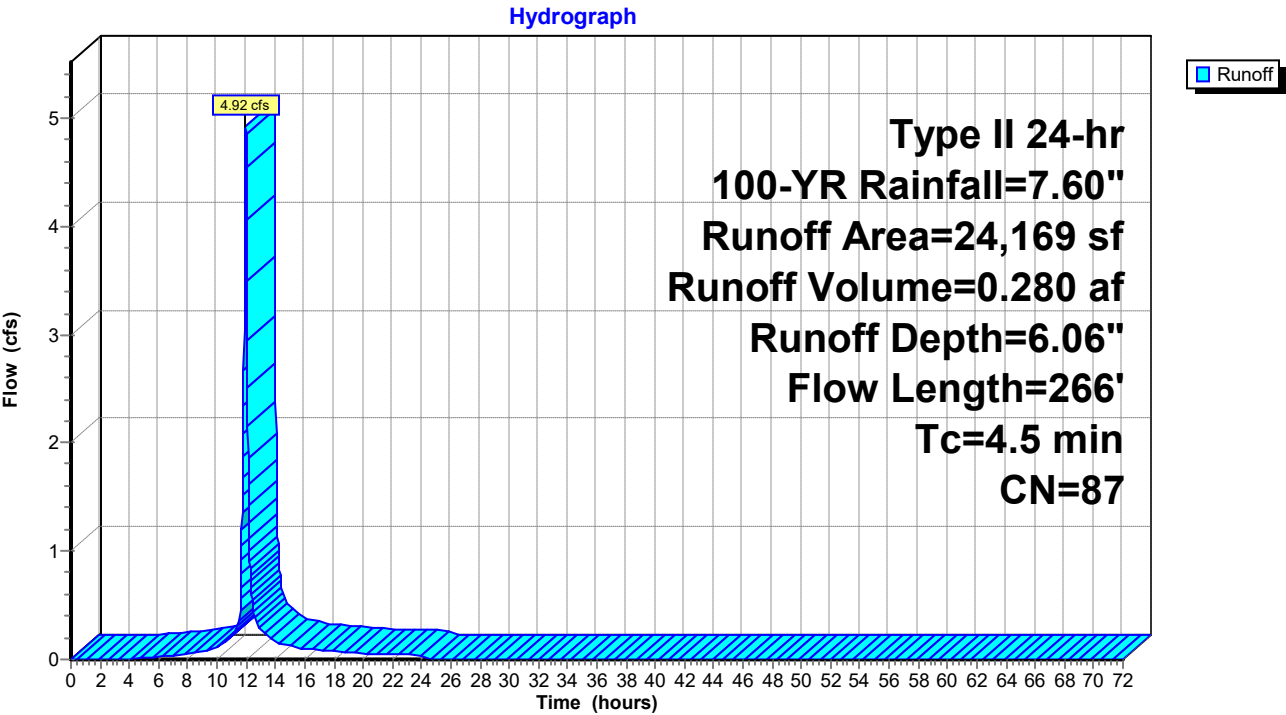
Runoff = 4.92 cfs @ 11.96 hrs, Volume= 0.280 af, Depth= 6.06"
 Routed to Link SP-1 : SP-1

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
 Type II 24-hr 100-YR Rainfall=7.60"

Area (sf)	CN	Description
3,657	98	Paved parking, HSG C
4,328	74	>75% Grass cover, Good, HSG C
7,208	98	Paved parking, HSG D
8,976	80	>75% Grass cover, Good, HSG D
24,169	87	Weighted Average
13,304		55.05% Pervious Area
10,865		44.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	14	0.0200	0.12		Sheet Flow, Grass Grass: Short n= 0.150 P2= 3.40"
1.9	200	0.0100	1.80	1.26	Channel Flow, Grass Conveyance Swale Area= 0.7 sf Perim= 3.2' r= 0.22' n= 0.030 Earth, grassed & winding
0.6	52	0.0067	1.47	0.15	Channel Flow, Paved Channel Flow Area= 0.1 sf Perim= 1.6' r= 0.06' n= 0.013 Concrete, trowel finish
4.5	266	Total			

Subcatchment DA-2: DA # 2



Summary for Pond SGW: SGW

Inflow Area = 1.895 ac, 61.89% Impervious, Inflow Depth = 6.41" for 100-YR event
 Inflow = 12.63 cfs @ 12.03 hrs, Volume= 1.013 af
 Outflow = 17.07 cfs @ 12.06 hrs, Volume= 1.013 af, Atten= 0%, Lag= 1.9 min
 Primary = 17.07 cfs @ 12.06 hrs, Volume= 1.013 af
 Routed to Link SP-1 : SP-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
 Starting Elev= 31.17' Surf.Area= 563 sf Storage= 977 cf
 Peak Elev= 34.12' @ 12.06 hrs Surf.Area= 10,000 sf Storage= 8,918 cf (7,941 cf above start)

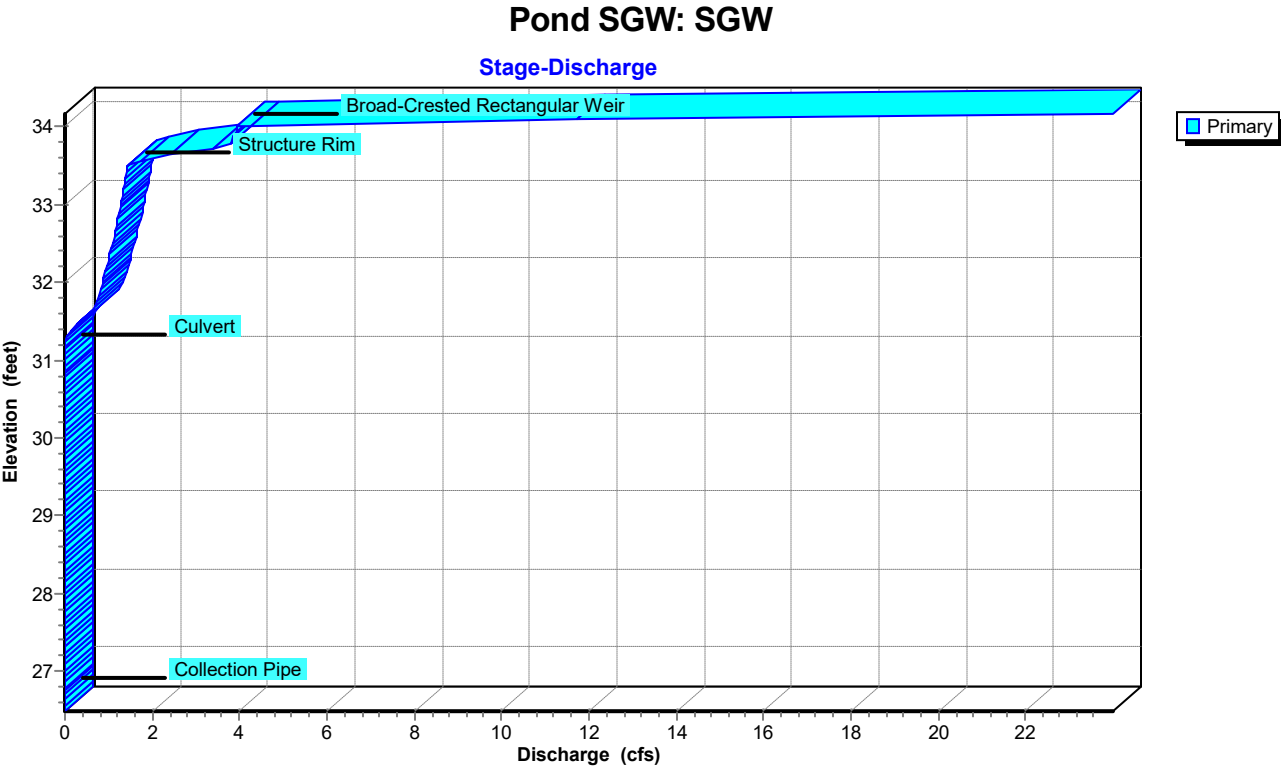
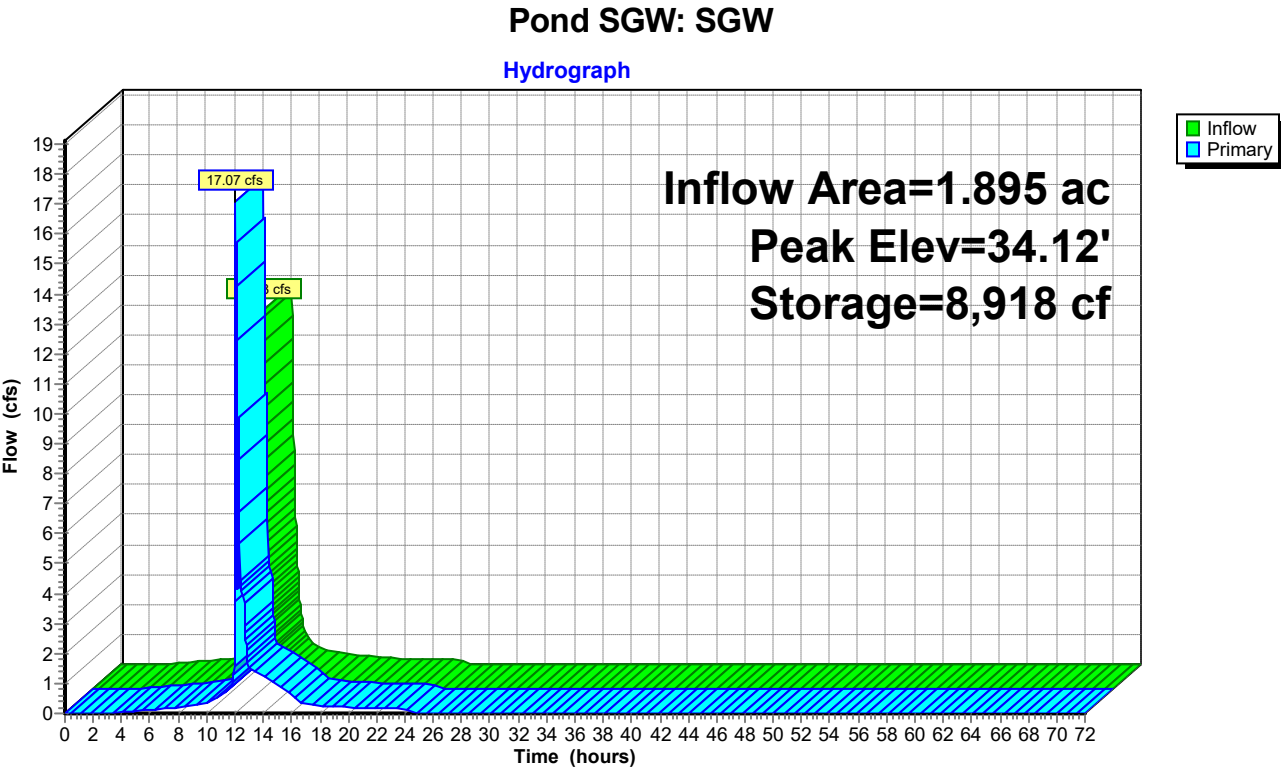
Plug-Flow detention time= 48.9 min calculated for 0.990 af (98% of inflow)
 Center-of-Mass det. time= 24.1 min (808.2 - 784.1)

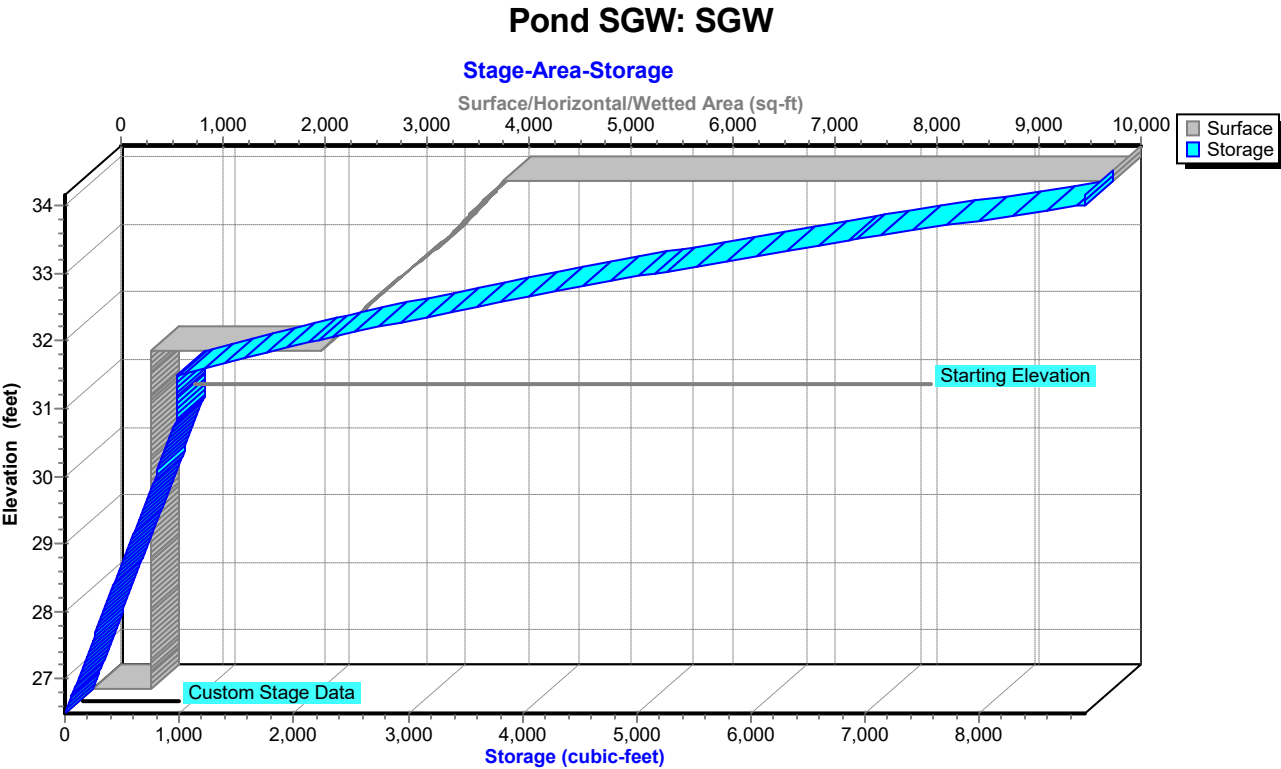
Volume	Invert	Avail.Storage	Storage Description			
#1	26.49'	8,918 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
26.49	563	261.2	0.0	0	0	563
26.50	563	261.2	40.0	2	2	566
30.83	563	261.2	40.0	975	977	1,697
30.84	563	261.2	0.0	0	977	1,699
31.49	563	261.2	0.0	0	977	1,869
31.50	2,235	261.2	100.0	13	990	1,872
32.01	2,587	275.4	100.0	1,229	2,219	2,493
33.00	3,367	308.0	100.0	2,939	5,158	4,034
34.00	4,028	336.6	100.0	3,693	8,850	5,536
34.01	10,000	400.0	100.0	68	8,918	9,252

Device	Routing	Invert	Outlet Devices
#1	Primary	31.17'	12.0" Round Culvert L= 228.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 31.17' / 30.00' S= 0.0051 '/' Cc= 0.900 n= 0.012 HDPE, Flow Area= 0.79 sf
#2	Device 1	26.75'	6.0" Vert. Collection Pipe C= 0.600 Limited to weir flow at low heads
#3	Device 1	33.50'	18.0" x 18.0" Horiz. Structure Rim C= 0.600 Limited to weir flow at low heads
#4	Primary	34.00'	130.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=16.79 cfs @ 12.06 hrs HW=34.12' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Barrel Controls 4.04 cfs @ 5.14 fps)
- 2=Collection Pipe (Passes < 1.62 cfs potential flow)
- 3=Structure Rim (Passes < 8.52 cfs potential flow)
- 4=Broad-Crested Rectangular Weir (Weir Controls 12.76 cfs @ 0.82 fps)





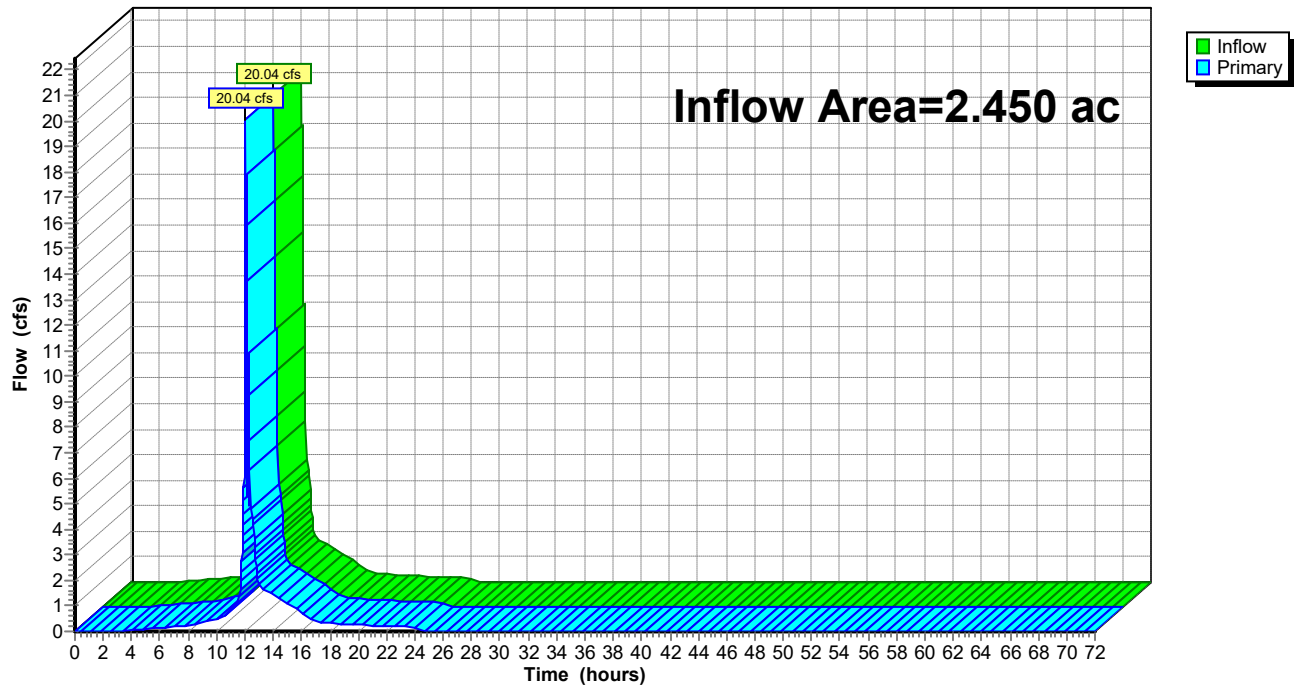
Summary for Link SP-1: SP-1

Inflow Area = 2.450 ac, 58.06% Impervious, Inflow Depth = 6.33" for 100-YR event
 Inflow = 20.04 cfs @ 12.06 hrs, Volume= 1.293 af
 Primary = 20.04 cfs @ 12.06 hrs, Volume= 1.293 af, Atten= 0%, Lag= 0.0 min

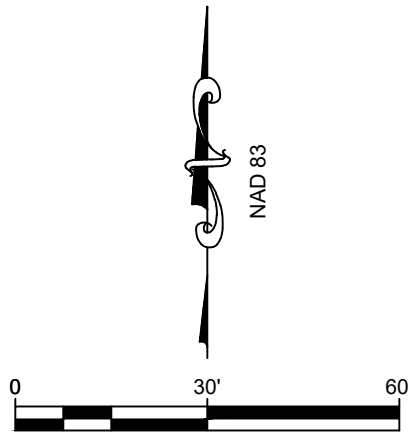
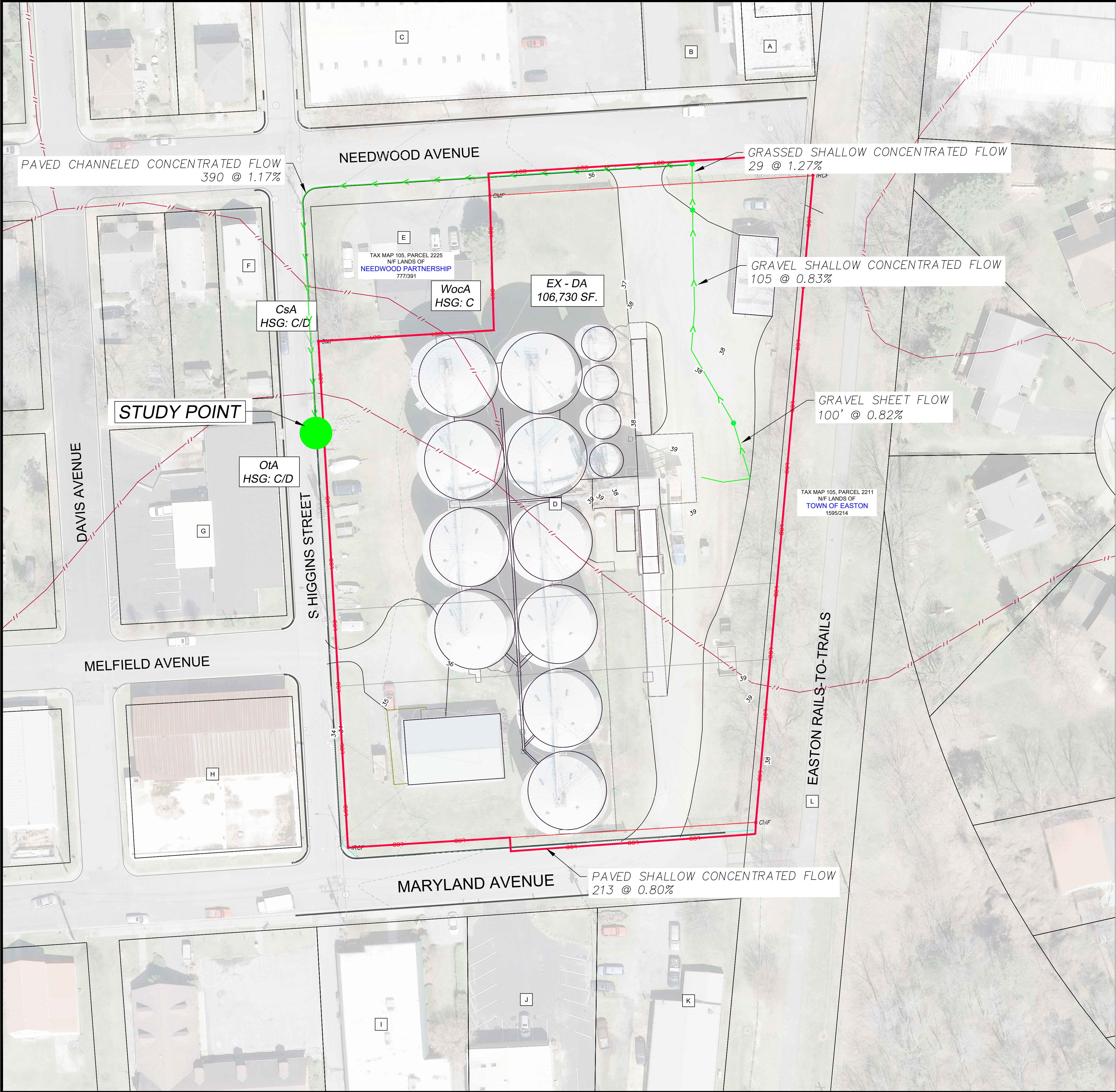
Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs

Link SP-1: SP-1

Hydrograph



Stormwater Drainage Area Maps



STUDY POINT	STORM EVENT	2-YEAR (cfs)	10-YEAR (cfs)	100-YEAR (cfs)
STUDY POINT	EXISTING	8.60	15.15	23.03
	PROPOSED	2.71	4.89	20.04
CHANGE	CHANGE	5.89	10.26	2.99

LEGEND

FLOWPATH

DRAINAGE AREA

SOILS BOUNDARY

PROPERTY DATA

- A

WARRINGTON DAN W, WARRINGTON REBECCA DIXON
M/G/P: 0105/0000/4533 - B/P: 00961/00816
- B

KNAUER IRVIN C JR KNAUER MARGARET E
M/G/P: -/- - B/P: 00693/00234
- C

411 NEEDWOOD LLC
M/G/P: 0105/0000/2214 - B/P: 01302/00939
- D

SILO SQUARE LLC
M/G/P: 0105/00EA/2226 - B/P: 03105/00287
- E

NEEDWOOD PARTNERSHIP
M/G/P: 0105/000EA/2225 - B/P: 00777/00391
- F

EASTON VENTURES LLC
M/G/P: 0105/00EA/2224 - B/P: 02340/00451
- G

KC RENTAL PROPERTIES, LLC
M/G/P: 0105/0000/2234 - B/P: 01279/00343
- H

ASPRO INC
M/G/P: 0105/000EA/2233 - B/P: 00814/00892
- I

WILLOW CONSTRUCTION INC
M/G/P: 0105/000EA/2229 - B/P: 02958/00252
- J

WALBRIDGE REAL ESTATE INVESTMENTS LLC
M/G/P: 0105/000EA/2228 - B/P: 02589/00013
- K

LORD STUART PROPERTIES LLC
M/G/P: 0105/000EA/2227 - B/P: 02532/00125
- L

TOWN OF EASTON
M/G/P: 0105/000EA/2211 - B/P: 01595/00214

SOIL DATA				
Map Unit Symbol	Name	Hydrologic Soil Group	K-Factor	Hydric?
WocA	Woodstown loam, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	C	0.37	No
OIA	Othello silt loams, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	C/D	0.43	Yes
CsA	Crosiadore silt loam, 0 to 2 percent slopes	C/D	0.49	Yes

PRECONSTRUCTION - QUANTITY ANALYSIS MAP

OF THE LANDS OF

SILO SQUARE, LLC

TAX MAP 0105, GRID 00EA, PARCEL 2226

EASTON, TALBOT COUNTY, MARYLAND

PREPARED FOR: SILO SQUARE, LLC

RAUCH

Engineering | Survey | Architecture | Environmental

Main Office: 106 N Harrison St - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@rauch.com
Phone: 410 770 8081 | Fax: 410 770 3987

24-Jul-24

Professional Certification.

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 11024

Expiration Date: July 24, 2022

REVISIONS		DESCRIPTION	
REV. #	DATE		

MARYLAND PROFESSIONAL ENGINEER

811

DATE: 7/22/2024

SCALE: 1" = 30'

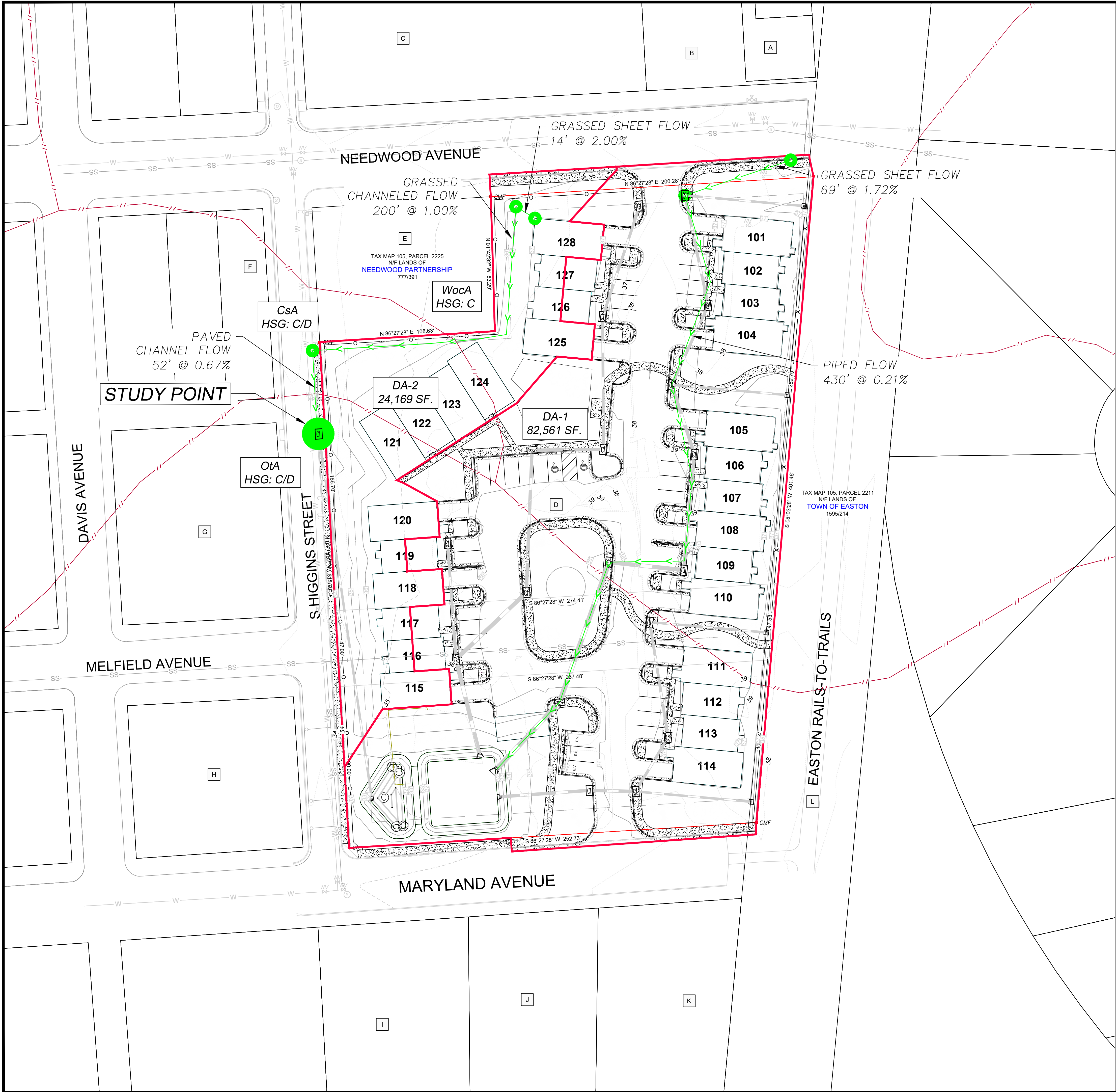
DRAWN BY: BO

DESIGNED BY:

APPROVED BY:

SHEET NO.: SWM -101

FOR REVIEW



STUDY POINT	STORM EVENT	2-YEAR (cfs)	10-YEAR (cfs)	100-YEAR (cfs)
STUDY POINT	EXISTING	8.60	15.15	23.03
	PROPOSED	2.71	4.89	20.04
CHANGE	CHANGE	5.89	10.26	2.99

LEGEND

FLOWPATH

DRAINAGE AREA

SOILS BOUNDARY

PROPERTY DATA

- A

WARRINGTON DAN W, WARRINGTON REBECCA DIXON
M/G/P: 0105/0000/4533 - B/P: 00961/00816
- B

KNAUER IRVIN C JR KNAUER MARGARET E
M/G/P: -/- - B/P: 00693/00234
- C

411 NEEDWOOD LLC
M/G/P: 0105/0000/2214 - B/P: 01302/00939
- D

SILO SQUARE LLC
M/G/P: 0105/00EA/2226 - B/P: 03105/00287
- E

NEEDWOOD PARTNERSHIP
M/G/P: 0105/000EA/2225 - B/P: 00777/00391
- F

EASTON VENTURES LLC
M/G/P: 0105/00EA/2224 - B/P: 02340/00451
- G

KC RENTAL PROPERTIES, LLC
M/G/P: 0105/0000/2234 - B/P: 01279/00343
- H

ASPRO INC
M/G/P: 0105/000EA/2233 - B/P: 00814/00892
- I

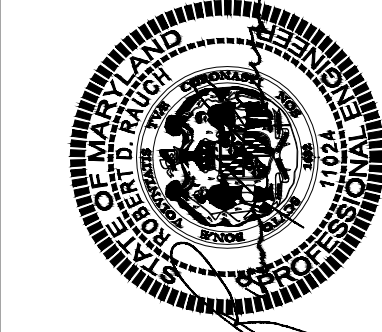
WILLOW CONSTRUCTION INC
M/G/P: 0105/000EA/2229 - B/P: 02958/00252
- J

WALBRIDGE REAL ESTATE INVESTMENTS LLC
M/G/P: 0105/000EA/2228 - B/P: 02589/00013
- K

LORD STUART PROPERTIES LCC
M/G/P: 0105/000EA/2227 - B/P: 02532/00125
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Professional Certification.
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 11024
Expiration Date: July 24, 2022

REVISIONS

REV. #	DATE	DESCRIPTION

DATE: 7/22/2024
SCALE: 1" = 30'
DRAWN BY: BO
DESIGNED BY:
APPROVED BY:
SHEET NO.: SWM - 102
FOR REVIEW

POSTCONSTRUCTION - QUANTITY ANALYSIS MAP

OF THE LANDS OF

SILO SQUARE

TAX MAP 0105, GRID 00EA, PARCEL 2226
EASTON, TALBOT COUNTY, MARYLAND
PREPARED FOR: SILO SQUARE, LLC

Soils Report



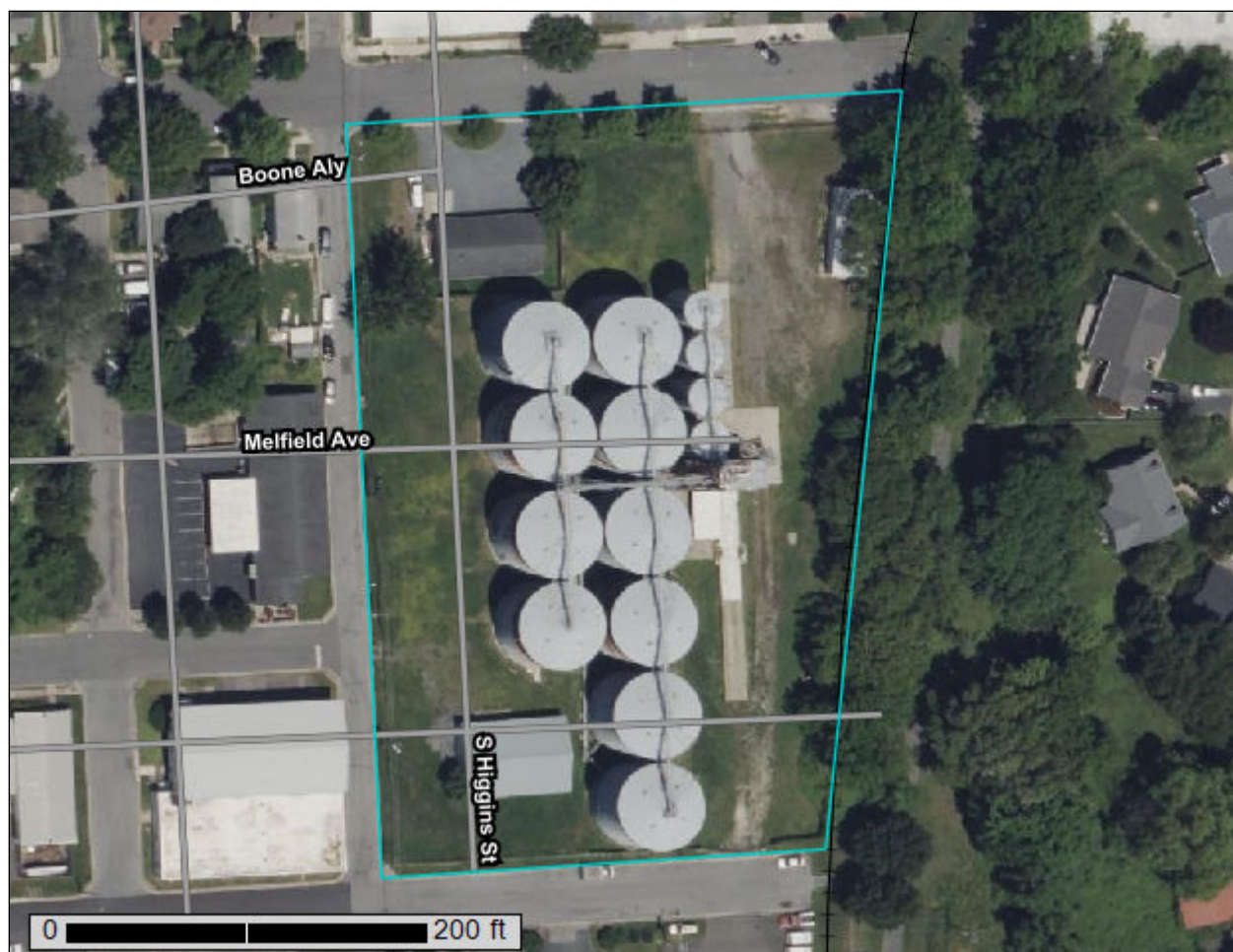
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Talbot County, Maryland**



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Talbot County, Maryland
Survey Area Data: Version 20, Sep 12, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CsA	Crosiadore silt loam, 0 to 2 percent slopes	0.2	6.9%
OtA	Othello silt loams, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	1.2	43.6%
WocA	Woodstown loam, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	1.3	49.5%
Totals for Area of Interest		2.7	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate

pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Talbot County, Maryland

CsA—Crosiadore silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: nmd5

Elevation: 0 to 100 feet

Mean annual precipitation: 42 to 48 inches

Mean annual air temperature: 52 to 58 degrees F

Frost-free period: 180 to 220 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Crosiadore and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Crosiadore

Setting

Landform: Depressions, flats

Landform position (three-dimensional): Talf

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Parent material: Silty eolian deposits over fluviomarine sediments

Typical profile

Ap - 0 to 10 inches: silt loam

Bt - 10 to 28 inches: silt loam

2Btg - 28 to 33 inches: sandy loam

2Cg - 33 to 50 inches: sandy loam

2C1 - 50 to 57 inches: gravelly loamy sand

2C2 - 57 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)

Depth to water table: About 10 to 20 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D

Ecological site: F153CY020MD - Moist Loess Upland

Hydric soil rating: No

Minor Components

Mattapex

Percent of map unit: 10 percent
Landform: Flats
Landform position (three-dimensional): Rise
Ecological site: F153CY020MD - Moist Loess Upland
Hydric soil rating: No

Kentuck

Percent of map unit: 5 percent
Landform: Depressions
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

Elkton

Percent of map unit: 5 percent
Landform: Swales, flats, depressions
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

Othello

Percent of map unit: 5 percent
Landform: Flats, depressions, drainageways, swales
Landform position (three-dimensional): Dip
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

OtA—Othello silt loams, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain

Map Unit Setting

National map unit symbol: 2thwn
Elevation: 0 to 100 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 46 to 68 degrees F
Frost-free period: 210 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Othello, drained, and similar soils: 48 percent
Othello, undrained, and similar soils: 28 percent
Minor components: 24 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Othello, Drained

Setting

Landform: Swales, depressions, flats
Landform position (two-dimensional): Footslope

Custom Soil Resource Report

Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Parent material: Silty eolian deposits over fluviomarine deposits

Typical profile

Ap - 0 to 9 inches: silt loam
Btg - 9 to 29 inches: silt loam
2BCg - 29 to 34 inches: sandy loam
2Cg - 34 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 10 to 20 inches
Frequency of flooding: None
Frequency of ponding: Rare
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

Description of Othello, Undrained

Setting

Landform: Drainageways, swales, depressions, flats
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Parent material: Silty eolian deposits over fluviomarine deposits

Typical profile

Oe - 0 to 2 inches: peat
A - 2 to 4 inches: silt loam
Eg - 4 to 10 inches: silt loam
Btg - 10 to 29 inches: silt loam
2BCg - 29 to 35 inches: sandy loam
2Cg - 35 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 0 to 10 inches
Frequency of flooding: None
Frequency of ponding: Occasional

Custom Soil Resource Report

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: C/D

Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp

Hydric soil rating: Yes

Minor Components

Mattapex

Percent of map unit: 7 percent

Landform: Broad interstream divides, swales, depressions, flats

Landform position (two-dimensional): Summit, footslope

Landform position (three-dimensional): Talf, dip

Down-slope shape: Linear, concave

Across-slope shape: Linear, concave

Ecological site: F153CY020MD - Moist Loess Upland

Hydric soil rating: No

Crosiadore

Percent of map unit: 7 percent

Landform: Depressions, fluvio-marine terraces, flats

Landform position (two-dimensional): Footslope, summit

Landform position (three-dimensional): Tread, dip, talf

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Ecological site: F153CY020MD - Moist Loess Upland

Hydric soil rating: No

Kentuck, undrained

Percent of map unit: 5 percent

Landform: Swales, depressions, flats

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Dip, talf

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp

Hydric soil rating: Yes

Fallsington, undrained

Percent of map unit: 5 percent

Landform: Drainageways, swales, depressions, flats

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Dip, talf

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp

Hydric soil rating: Yes

WocA—Woodstown loam, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain

Map Unit Setting

National map unit symbol: 2thx4

Elevation: 0 to 90 feet

Mean annual precipitation: 40 to 50 inches

Mean annual air temperature: 55 to 59 degrees F

Frost-free period: 210 to 240 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Woodstown and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodstown

Setting

Landform: Flats, broad interstream divides, depressions, fluviomarine terraces

Landform position (two-dimensional): Summit, footslope

Landform position (three-dimensional): Tread, talf, dip

Down-slope shape: Linear, concave

Across-slope shape: Linear, concave

Parent material: Loamy fluviomarine deposits

Typical profile

Ap - 0 to 7 inches: loam

E - 7 to 11 inches: sandy loam

Bt - 11 to 29 inches: sandy loam

BCg - 29 to 45 inches: fine sandy loam

Cg - 45 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)

Depth to water table: About 20 to 40 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Custom Soil Resource Report

Hydrologic Soil Group: C

Ecological site: F149AY130NJ - Moist Loamy Upland

Hydric soil rating: No

Minor Components

Hammonton

Percent of map unit: 6 percent

Landform: Broad interstream divides, flats

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: F149AY130NJ - Moist Loamy Upland

Hydric soil rating: No

Fallsington

Percent of map unit: 6 percent

Landform: Swales, depressions, flats, drainageways

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Dip, talf

Down-slope shape: Concave, linear

Across-slope shape: Linear, concave

Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp

Hydric soil rating: Yes

Hambrook

Percent of map unit: 4 percent

Landform: Flats, fluviomarine terraces

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread, talf

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: F149AY170MD - Well Drained Fine-Loamy Upland

Hydric soil rating: No

Mattapex

Percent of map unit: 4 percent

Landform: Depressions, flats, broad interstream divides, swales

Landform position (two-dimensional): Footslope, summit

Landform position (three-dimensional): Dip, talf

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Ecological site: F153CY020MD - Moist Loess Upland

Hydric soil rating: No

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Custom Soil Resource Report

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TOWN OF EASTON
Planning & Zoning Department
P.O. Box 520
Easton, Maryland 21601

September 24, 2024

Rauch Inc.
% Mr. Brian Fitzgerald
106 N. Harrison Street
Easton, Maryland 21601

Re: Application 2024 - 1261
410 Needwood Avenue
Tax Map 0105, Grid 00EA, Parcel 2226
Easton, Maryland 21601

Dear Mr. Fitzgerald,

At their regularly scheduled meeting on September 19, 2024, the Town of Easton Planning Commission (Commission) reviewed the above application to request Sketch Site Plan approval for the construction of sixteen (16) proposed 3-story townhomes and twelve (12) proposed 2-story townhomes, and a landscape and buffering waiver.

The Commission voted 3-0 to table the application pending the submission of a Traffic Impact Study, and the submission of a revised site plan exhibiting the removal of the proposed western facing fence.

Should you have questions concerning the above finding, please contact this office at 410-822-1943.

Sincerely,

Samantha N. Smith

Samantha N. Smith, Administrative Specialist
Planning & Zoning Department
410-822-1943 ssmith@eastonMD.gov

CC: Silo Square, LLC
 Zachary A. Smith, *Esq.*



TOWN OF EASTON

14 South Harrison Street
Easton, Maryland 21601

October 2, 2024

Dear Resident,

The Easton Planning Commission (Commission) will hold a public meeting on **Thursday, October 17, 2024 at 1:00 p.m.** in the Easton Town Council Chambers located on the second floor of 14 South Harrison Street. The Town of Easton Zoning Ordinance requires that owners of property located within 400 feet of a parcel on which certain types of applications are pending be given notice of upcoming meetings or hearings. If you are a tenant in or an owner of a multi-unit building, please distribute or post this notice in a visible location for all other tenants or owners to view. If you are a tenant of a rental property, please notify the property owner that this notice letter has been distributed to their property. Notice has also been sent to the Star Democrat, a sign has been posted at the subject property and the hearing agenda has been posted on the Town of Easton website: <http://eastonmd.gov/>.

This letter is sent to inform you that Rauch Inc. (Applicant) is scheduled to appear on behalf of Silo Square, LLC and pursuant to application 2024 - 1261 to obtain Sketch Site Plan approval for the construction of 28 attached single-family dwellings located within the Planned Redevelopment (PR) Overlay District at 410 Needwood Avenue, also known as Tax Map 0105, Grid 00EA, Parcel 2226. The proposed development includes three-story townhomes (16 units) and two-story townhomes (12 units) with associated parking, stormwater management, and landscaping improvements including the demolition of the existing abandoned silos and storage buildings on the property. The Applicant is also seeking a supplemental waiver from the landscaping and bufferyard requirements of Chapter 28-1014.7.E.5(c)1-3 of the Zoning Code. This application was unanimously tabled by the Commission at their September 19, 2024 meeting pending the submission of a Traffic Impact Study, and the submission of a revised Site Plan exhibiting the removal of the previously proposed western facing fence.

Copies of the proposed application are on file and available for public review in the Town's Planning Office at 14 South Harrison Street between the hours of 8:30 a.m. and 4:00 p.m., Monday through Friday. **In addition, digital copies will be available for review one week prior to the scheduled meeting via the Town's website at <https://www.eastonmd.gov/129/Agendas-Minutes>.** If you have any questions regarding this application, please contact the Planning Office at (410) 822-1943 or via email at ssmith@eastonMD.gov.

Samantha N. Smith

Samantha N. Smith, Administrative Specialist
Planning & Zoning Department
410-822-1943 ssmith@eastonMD.gov



***Subject property posting pursuant to Section
28-901.2.H.2 of the Town of Easton Zoning Code -
October 2, 2024.***

August 28, 2024

Mr. Jonathon Rondeau
President
The Arc Central Chesapeake Region
18 N Hanson St.,
Easton, MD 21601

RE: ARC – Silo Square Townhouse development

Dear Mr. Rondeau

As a neighbor and a retired architect, I am extremely disappointed with the site plan and architectural design of the proposed Silo Square development being proposed by The ARC/Chesapeake Communities.

The plans presented at the Easton Staff Development Review meeting on August 28th represent a rejection of many of the planning principles which make Easton special. The site plan does not respect the street grid and lots layout of the existing town. Instead, it is a typical suburban layout, with groups of townhouses arranged around parking lots, plopped down in one of the last remaining developable parcels adjacent to the historic core of Easton.

The architecture of the buildings, which can only be described as cost-conscious contemporary, fails to say “Easton” or Eastern Shore in any way. These could be built anywhere, and their style will age quickly. The Doverbrook project – while also built on a budget – say “home” much better than these townhouses.

The need for affordable / attainable housing should not negate this project’s opportunity to extend the “silo district” neighborhood; both in form and feel. This project should not create a separate enclave which, while meeting development density goals and efficiently accommodating cars, also isolates its residents from the adjacent community.

Suggested improvements: Extend the current street grid and sidewalks, use on-street parking rather than parking lots, and consider using more traditional architectural forms and materials. These would help this development merge into the town, rather than stand apart.

Maury Schlesinger
304 Winton Ave.

Cc: Miguel Salinas, Director of Planning and Zoning
Jennifer Dindinger, Chairperson – Planning Commission
Megan Cook, Mayor



Samantha Smith <ssmith@eastonmd.gov>

The silo square development

1 message

Megan fillippo

To: Planningcommission@eastonmd.gov

Wed, Sep 18, 2024 at 8:56 PM

I am writing to address my concerns about the planned neighborhood where the silos are. I live in between Davis street and Higgins street. This new development would directly affect the neighborhood my son and I live in. I don't understand how I have to jump through hoops to get anything improved on my historic home but these new townhouses can be built that don't provide any fluidity to the historic district. My other MAJOR concern is the traffic. The streets are hardly able to handle the amount of cars now and only one car at a time can go through on Higgins's and Davis street when there are cars parked on the street. I can't tell you how many times I've seen side mirrors ripped off or damaged because of the lack of space for cars to drive through safely. Another problem is the intersection of Brookletts street at Higgins and Davis street. It's so hard to see oncoming traffic when trying to pull out and I've seen accidents and MANY near misses. I'd like to believe most traffic could stay on Maryland Ave and needwood however it's obvious Davis and Higgins street would be constantly used as a through way to get to Brookletts. The schools are already wayyy over crowded, the hospital is constantly on level red or yellow(not enough life sustaining equipment like bypass machines or critical care support) the town of Easton needs to start prioritizing our veterans, the growing elderly population and the need to have sufficient infrastructure to support so many new housing developments. I thank you for your time and appreciate your consideration in saying no to "the proposed silo square development"



Silo Square Project

Maury Schlesinger

To: Samantha Smith <ssmith@eastonmd.gov>

Thu, Sep 19, 2024 at 5:30 PM

I request that my entire prepared remarks be entered into the record:

Mr. Chairperson and Commission members

I'm Maury Schlesinger, I live at 304 Winton Ave, two blocks from the proposed project, I'm a retired architect with experience in urban redevelopment and campus planning.

A number of my neighbors in the 'Silo District' met recently and shared these concerns about the project:

1. It's not in character with Easton. Its insular site plan doesn't fit the street and alley fabric of the town.
2. Its contemporary architecture clashes with the adjacent historic district.
3. There is no shared public space. It lacks connections to the adjacent neighborhood.
4. It will generate additional traffic on the narrow streets.
5. It will affect the design of future adjacent redevelopment.

Let me expand:

The project does not meet several goals of the Comprehensive Plan.

Principle No. 3: "Automobiles shall not determine design"

The proposed project places perpendicular parking at the center of its plan.

The townhouses surround a parking lot.

Principle 4: Ample Open Space

With the exception of the silo gazebo island in the middle of the parking, there is no public open space, and no space which would be attractive to the broader community to utilize as park or recreational space.

Principle 6: Respect Easton's Historical Development

The architectural aesthetic clashes with the neighboring historic district. If the design intent was to recall the former silos on the site, only a few might see this connection. The contemporary design and materials will age quickly, which will not benefit the rentability of the units. While not required, reference to the Historic District design guidelines would have been good start. Why not use traditional architectural elements as seen at Dixon Square, Tree Haven, Daly Gardens or the new Doverbrook project.

Principle 9: Neighborhoods should connect

One *could* walk through the project from Needwood to Maryland Aves: however, the sidewalks within the project jig and jag around driveways and parking spaces. They're made for going from car to front door. This design does not meet the Comprehensive Plan goal to ... "promote community and increase

social interaction through walking between developments,” And as stated earlier, the plan does not respect the existing street grid or alley structure of the neighborhood. (and many folks walk the alleys in our neighborhood, generating conversations and personal connections)

Impact on health and safety

The project WILL increase traffic on Maryland and Needwood Avenues as well as very narrow Higgins Street and Davis Avenue. No mitigation is proposed. Meanwhile, Melfield Avenue, on which there are no homes, is not used for vehicular access to the site.

FURTHER, We contend the project does not comply with Development Standards under the Planned Redevelopment Overlay District, which state - QUOTE:

“The commission shall consider the existing character of the neighborhood.”

Both in its layout and architecture, as proposed, Silo Square stands apart.

We ask you to think about these questions:

- What will be the long-term effect of this project? Will the surrounding industrial properties remain in 5-10-20 years?
- Do we want each of those parcels to be **redeveloped** like this? Shouldn't the pattern for their future improvements be established now?

Easton needs the attainable housing proposed by Chesapeake Community Development and the ARC. And they have made a significant effort at public outreach for their project at Easton Crossing on Brooklets Ave. But there's been no opportunity for input on Silo Square.

This is partly a fault of a flawed process. This hearing is the first and ONLY opportunity for the community to reflect on a proposal which was just made public a few weeks ago at the Staff Development Design Review meeting.

We urge the Planning Commission to defer decision on this project and give CCD and its design consultants the opportunity to work with the community to improve the proposed site plan and architecture. Let's make these new homes fit into the fabric of “The Silo District” so its residents and we neighbors are all part of one community.

From: Samantha Smith <ssmith@eastonmd.gov>
Sent: Thursday, August 29, 2024 8:21 AM
To: Maury Schlesinger <mzschlesinger@live.com>
Subject: Re: Silo Square Project

[Quoted text hidden]



Samantha Smith <ssmith@eastonmd.gov>

Silo Square Development Proposal Concerns

1 message

Sarah Hilderbrand

Wed, Sep 18, 2024 at 9:18 PM

To: planningcommission@eastonmd.gov, "ssmith@eastonmd.gov" <ssmith@eastonmd.gov>

To the attention of the Planning and Zoning Committee,

I cannot attend the Planning Commission meeting on 9/19, so I am writing to express my concerns about the proposed development at 401 Needwood Avenue (Silo Square). The proposal to build 28 townhouses with parking for each seems a higher density than this location can support. The parcel is between two dead end streets running east to west and serviced by north-south streets that are essentially single lane if vehicles park along them. The additional traffic this proposed development would add to this area seems dangerous for the current infrastructure to accommodate, and even with parking provided on site seems likely to increase the parking in the surrounding area beyond its capacity. While the development plans indicate the installation of sidewalks on site, the existing area is lacking in sidewalks that will be needed to connect pedestrians out to the main streets, adding to the safety concerns with the increased traffic.

The increased impervious surface of the development plan raises concerns about stormwater runoff and other environmental concerns. Please consider every opportunity to soak in and filter water on the property, not just relying on one stormwater BMP that, if compromised, will create a serious issue. Also, please consider how to address the temperatures of the stormwater leaving the site which will likely be greatly increased due to the changes in impervious surface. Please ensure that the plantings in the buffer and along the sidewalks and driveways will shade these areas in a manner consistent with the tree canopy goals of the rest of the Town of Easton.

For these reasons and others made clear by neighbors, I encourage the committee to consider reducing the density of the allowed development to better address these issues and make this new development a part of the community not isolated from it.

Respectfully,

Sarah Hilderbrand

South Aurora St Resident



Samantha Smith <ssmith@eastonmd.gov>

Silo Townhomes

1 message

Maclay, Michelle <Michelle.Maclay@offitkurman.com>

Wed, Sep 25, 2024 at 12:24 PM

To: "PlanningCommission@eastonMD.gov" <PlanningCommission@eastonmd.gov>

The Silo townhomes do not fit at all the vibe of Easton. We don't need more cars on small streets, either : (



Michelle Maclay

7501 Wisconsin Avenue

Suite 1000W

Senior LSS & Eviction Assistant Administrator

Bethesda, MD 20814

D 240.507.1731

T 240.507.1700

F 240.507.1735

Michelle.Maclay@offitkurman.com

offitkurman.com



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Thomas Ledvina
7585 Pollys Hill Lane
Easton, Maryland
13 October 2024

Mr. Lynn B. Thomas, Jr.
Town Planner
Town of Easton
14 S. Harrison Street
P.O. Box 520
Easton, Maryland 21601

Re: Silo Square Development

Dear Mr. Thomas:

I have listened to the first discussion of this proposed development during September's meeting of the Town of Easton Planning Commission, reviewed the documents in the package and submit the following comments. Please share them with the Planning Commission.

I am very familiar with the location of this project. I frequently walk the Rails to Trails segment that borders the east side of the project. I also frequently walk the surrounding area, especially Aurora Street between Idlewild Avenue and Goldsborough. I have worked on Habitat for Humanity projects on Locust Street and on Prospect Avenue for the past two years or more. I enjoy the small town, historic feel of the area, especially the architecture. Every house is different, but you can sense that they are all related. Others can describe it in architectural terms, but the houses all reflect the small-town, neighborly intimacy that helps define Easton. It is this character of the neighborhoods that surround the project on three sides that helps pull the town together. This is a great opportunity to fold a new residential development into the existing neighborhoods.

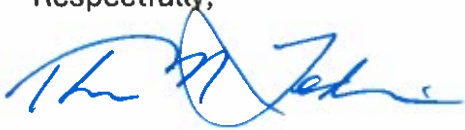
Sadly, despite the many attractive features to this proposed development, the modernistic renderings are totally foreign to the existing character of the surrounding neighborhoods. The flat roofs, trim that emphasizes the boxy shape, and even the front doors, have nothing in common with the neighborhoods that surround it. Section 28-501.B6 of the Town Code requires that the existing character of the neighborhood must be considered before a planned redevelopment is approved. I have walked and driven all over this part of the town and find nothing in the surrounding area that remotely resembles the contemporary/modernistic approach proposed here.

Principle 5 of the Comprehensive Plan and Section 28-901.2G of the Town Code state that the architecture should respect Easton's historical development. Principle 5, which "is perhaps the most important Design Principle in the struggle to make Easton a unique place," states that Easton wants developers "to look at the past for a blueprint of the future. Much is the same relative to architecture. New development in Easton, especially new commercial development, should look to buildings constructed prior to the 1940's for an example of what to emulate."

Despite the token use of a gazebo to tie the new use to the old, the contemporary/modernistic architecture proposed here boldly and proudly disrespects Easton's historic roots. Besides failing to comply with the Town Code and the Comprehensive Plan, which is reason enough to require a redo, the architectural contrast here will have real repercussions for the residents, many of whom will be seeking the more attainable housing it promises. The stark architectural contrast of this development will suggest that its residents are different than those of the surrounding neighborhoods, contradicting efforts to make Easton more inclusive. That is a result no one wants.

Because of these issues, I believe that the Planning Commission cannot approve this development until the architectural style is revised to comply with the Town Code and Comprehensive. This failing can be fixed and the revised plan can deliver on all the promise that redevelopment of this site holds.

Respectfully,

A handwritten signature in blue ink, appearing to read "The M. John", is written below the word "Respectfully,".

RECEIVED
OCT 15 2024
TOWN OF EASTON



Samantha Smith <ssmith@eastonmd.gov>

Silo Square

2 messages

Maury Schlesinger

Wed, Oct 16, 2024 at 4:36 PM

To: "PlanningCommission@eastonmd.gov" <PlanningCommission@eastonmd.gov>

After you deferred approval of the project at your September meeting, a number of neighbors and I met with a representative of The ARC / Chesapeake Community Development. Unfortunately, Mr. Benincasa clearly indicated the architectural design will not be changed. I will attend tomorrow's Planning Commission meeting to again voice our displeasure.

However, there are several practical issues which you could address. And I ask that you include these as conditions if you approve the project:

- A. Chesapeake Community Development shall fund construction of sidewalks on the third-party-owned parcel at 400 Needwood Ave. CCD's plans show new sidewalks on its property on the south side of Needwood Ave. and the east side of Higgins Street. As they don't own the remaining corner, the town must should use its rights to build sidewalks that wrap around the entire block.
- B. Chesapeake Community Development shall fund changes off their site to the address additional traffic on Higgins Street, Davis, Maywood, Needwood, and Maryland Avenues. The specific changes would need to be identified by traffic engineers, but potentially one-way flows, additional stop signs, reduced speed limits, etc. will be required to address speed and safety issues as there will be an increase in vehicles traveling through our neighborhood.
- C. Chesapeake Community Development shall include in its contract with its contractor(s), that all construction and workers' vehicles will use only Maywood and/or Melfield Avenues to access the site from Aurora Avenue, and shall not use Needwood and Davis Avenues, and Higgins street north of Needwood Ave. during the period of construction.

Respectfully,

Maury Schlesinger, RA
304 Winton Ave.



TOWN OF EASTON

Planning & Zoning Department

STAFF MEMORANDUM

TO: EASTON PLANNING AND ZONING COMMISSION

FROM: LYNN B. THOMAS, JR., AICP
TOWN PLANNER

DATE: MAY 6, 2024
UPDATED - AUGUST 2, 2024 & SEPTEMBER 12, 2024

SUBJECT: PROPOSED ZONING CODE AMENDMENTS - FOLLOW-UP

NOTE - This memo has simply been updated (9/12/24) to reflect the discussion/decisions made at the August 15, 2024 meeting.

As we continue to consider potential Zoning Code Amendments, here is a copy of everything in my original memorandum from May, with annotations/notes concerning what was discussed/decided up to this point (as of this date such changes reflect the discussions at the July 18, 2024 and August 15, 2024 meetings). Such notes are indicated in **bold, red, underlined font**. I do not intend to revisit any such comments at this time (although, feel free to email me if I have gotten something obviously wrong or you have any answer to a question I pose). Rather, my strong preference is to get through the complete list once, make all the revisions the Commission has suggested along the way, and have one final (hopefully) review of the proposal as revised and in Ordinance format. Please note that we got through the so-called “no-brainers” (items 1-12) at the July meeting and made it through item 18 at your August meeting. We thus have six issues remaining (19-23 are additional possible Zoning amendments and issue 24 is a Subdivision Regulation amendment).

The Commission will recall that potential Zoning Code amendments were presented and discussed at your March meeting. At that time, you assigned each proposed change to one of several categories. One of which were for proposed changes identified as so-called

“no-brainers” and the others which were categorized such that additional research and/or discussion was requested. For simplicity sake, I have lumped all of the latter together here. Here then are the various proposed amendments, beginning with the “No-Brainers”:

1. **Add definitions for sheds, swimming pools, and patios** - We have no definitions for these common structures and given that they have unique standards (e.g., setbacks) it is important to establish precisely what each term encompasses. In addition, the ordinance needs to specify whether, and to what extent, we may allow encroachment of patios into setbacks.

Shed - a small accessory structure used to store items related to or used in connection with a residence.

Shed - ~~an small~~ accessory structure used to store items related to or used in connection with a residence, excluding portable storage units.

**** - Also add to supplemental standards for sheds that the maximum footprint shall be the lesser of 10% of the lot area or 1,000 square feet.**

Swimming pool - any artificial structure, basin, chamber or tank, except a private spa, either above or below ground, which is used or intended to be used for the primary purpose of swimming, diving, wading or recreational bathing. A swimming pool includes all associated equipment, structures and facilities located within a common enclosure. A unit used in conjunction with the private practice of a physician or physical therapist is not a swimming pool.

Patio - an uncovered horizontal structure with a surface height, at any point, no greater than two feet (2') above grade, intended for use as an outdoor amenity space.

Patio - an ~~uncovered~~ unenclosed horizontal structure with a surface height, at any point, no greater than two feet (2') above grade, intended for use as an outdoor amenity space.

2. **Removal of "Tree of Heaven" as a suitable street tree** -

This is a highly invasive species and not appropriate for planting generally ,or specifically as a Street Tree.

Currently Tree of Heaven is listed in Section 28-1014.3 under the exceptions to the acceptable plant species list, indicating it is “suitable as street tree only.” If we want to prohibit its use under any scenario, we simply need to change that note to read “Not suitable in any location.” This is consistent with several other species on this list (e.g., Bradford Pear, or Black **and** Honey locust).

I also understand that there is a desire to address the osage orange in the same manner. Just like the tree of heaven, it is currently listed as “suitable as street trees only.” Banning it everywhere would be accomplished identical to what is proposed for the tree of heaven above.

3. Reducing the site triangle distance for some zones and clarifying whether an alley and street corner is considered an intersection

There is some thought amongst staff that rather than using a blanket standard, sight triangles should be determined by the design speed of the street, the type of traffic control at the intersection, and the location of the travel ways from the edge of buildings at the corners, at least on urban streets. In any event, the AASHTO Green Book addresses the determination of clear sight triangles and the Town Engineer's Standard Details may also provide additional requirements and guidance. Any changes to the site triangle distance or intersection design in general will require close coordination with the Town Engineer.

Attachment 3 is a more detailed and context-specific version of this standard from St. Petersburg, FL. I think this might be what we are looking for, although the distances used there may not necessarily be the same as we would adopt.

4. Re-visit restaurant use types to allow more flexibility for hybrid take out/eat in restaurants -

The current zoning code lists four types of restaurants: Fast Food, Carry Out/Deli, Night Club, and Sit Down. It does not particularly describe a sit-down restaurant with carry out service, which has become almost commonplace since the COVID Pandemic. This is occasionally an issue with regards to the question of the use and more commonly when trying to determine the appropriate parking requirement.

I am not sure this is as much of an issue for the use table as it is (or could be) for parking requirements, at least if we assume that carryout is an acceptable activity associated with any type of restaurant. Beyond parking, what is the impact difference for a restaurant that does a moderate carry-out business vs one that does little or none?

Our parking standards for the various restaurant uses are currently fairly consistent, with a minimum ratio of 1 space per ~~100~~ **200** sf GFA and maximum of 1 per 50 for all types except carry-out (which is 1 per 300 and 1 per 200). Given this and the caveat in the paragraph above, I am not sure there is a need to change anything, unless you want to build in flexibility for relief from the minimum parking requirements for any restaurant type when a “significant” portion of the business is anticipated to come from carry-out service. This could obviously be a basis for a parking waiver, but building in administrative flexibility might be appropriate in this specific scenario.

***** - Clean-up our definitions of restaurant types and tighten up parking waiver provisions.**

5. **Removing "Parking Districts" from code** - This is an outdated reference to an old code and an old practice whereby businesses located within a defined geographic area could pay a fee in lieu of providing required off-street parking. It was eliminated probably 20 years ago so the reference should be removed from the Zoning Code.

This will be accomplished (hopefully!) with a simple Search and Delete command.

6. **Revisit minimum parking space requirements** - This is simply a suggestion to look at national standards to make sure we are not out of sync with contemporary recommendations.

One of the hottest trends in Planning circles currently involves drastic changes to parking standards, highlighted by a handful of communities who have eliminated parking minimums altogether. Such communities have decided to allow parking to be determined by market forces rather than (potentially) prescriptive formulas, many of which are based on national averages and may be subject to changes in business operations or characteristics over time that are not reflected in the standards.

Our parking ratios were fairly comprehensively updated with the last comprehensive Zoning Code Update in 2021. As such, barring a significant across-the-board change such as that described above, I do not see the need for changes to our parking standards. If there are any specific uses you have concerns about, I will be happy to do some additional research to see what other communities impose.

***** - My notes indicate the following suggestions/questions:**

- Add caveat to minimum parking requirements (will have to review recording to see what that was referring to).
- Perhaps look at Single Family Attached Parking Standard.
- Delete the Maximum Parking limit for MMH types.

7. **Change language for parking space dimensions -**

Are our dimensional requirements for parking spaces appropriate?

The dimensional requirements for parking spaces are found in Table 10.1, which is copied below:

Table 10.1

Angle	Minimum Stall Width (W)	Minimum Stall Length (L)	Minimum Aisle Width (Maneuvering Space) (A)
90°	9 feet	18 feet **	24 feet (25')
60°	9 feet	18 feet **	18 feet one-way (16') 22 feet two-way (20')
45°	9 feet	18 feet **	16 feet one-way (12') 22 feet two-way (19')
30°	9 feet	18 feet **	14 feet one-way (12') 22 feet two-way (19')
Parallel	8 feet	22 feet	16 feet one-way 22 feet two-way

**** - Vehicle Overhang:** Up to two (2) feet of vehicle overhang into any planter area is allowed provided the planter is a minimum of six feet wide, in this situation the minimum required depth of the parking stall may be reduced by up to two 2 feet When utilizing this option, curbing shall be utilized at the edge of the paved area, rather than wheel stops.

The standards highlighted in yellow are the recommendations from the 21st Century Land Development Code, a source I frequently reference. The Commission should discuss whether or not they are in favor of changing these (or any other) of our standards. If so, the actual change is easy to make.

**** - My notes indicated a desire to make the highlighted 90 degree aisle width change but maintain all other current standards.**

8. **Conflicting statements in Article 12 -** Check this section for internal conflicts regarding non-conformities. Also, consider changing from 6 months to 12 consecutive months for a nonconforming use to be considered to be abandoned unless the use was disrupted due to repair or remodeling.

With regards to the time frame for abandonment, that would be a very straightforward change to Section 28-1201 E, as follows:

E. Any non-conforming use, including the non-conforming use of a lot, parcel or structure that is discontinued or abandoned for a period of ~~six (6) months~~, **one (1) year**, shall not be resumed thereafter and any future use of lot, parcel, or structure shall conform to the provisions of this Ordinance. Any structure that is moved for any reason for any distance by the owner, shall be required to conform to the regulations for the zoning district in which it is located after it is moved. In the case of any dispute as to whether a non-conforming use is abandoned or discontinued, the burden of proof shall be upon the property owner.

9. Map Corrections -

- a. Waterside Village is indicated as CG rather than PUD
- b. Parcel on Creamery and another on Wrightson behind the Seafood Market/Deli are both shown as CG but should have been changed to CB in 2021 Update.
- c. Elliott Road Apartment site is now PUD
- d. Gannon Range site is now PUD
- e. Should we consider changing the base zoning of any part of the properties in the general vicinity of the ill-fated Mansion Apartment on August Street? They are now CB. Was suggested at the meeting that they should be residential, even though until 2021 they were Industrial (I-1).

I think items a through d speak for themselves and simply need to be changed. Item e is potentially subject to further discussion, although so long as the properties in question are also within the PR Overlay, the base zoning is not terribly important except that if it is a residential classification, that does potentially limit the scope/scale of any proposed commercial use. Otherwise, essentially anything can be proposed, subject to site plan approval.

10. MXW window and door placement standards. - There is a seemingly contradictory statement that Zach Smith identified that says "The uses on the ground floor shall be visible from and/or accessible to the street through the use of windows and doors on at least 50% of the length of the first floor street frontage. At least 60% or more than 90% of the total surface area of the front elevation shall be in public entrances and windows (including retail display windows)." 28-312.4.4

10. MXW window and door placement standards. - There is a seemingly contradictory statement that Zach Smith identified that says "The **Retail** uses on the ground floor shall

be visible from and/or accessible to the street through the use of windows and doors on at least 50% of the length of the first floor street frontage. At least ~~6~~50% or more than 90% of the total surface area of the front elevation shall be in public entrances and windows (including retail display windows)." 28-312.4.4

This is seemingly easy. We just need to decide which provision we would like to see be the standard and eliminate the other (or, figure out a way to clearly distinguish between the two).

11. MXW LEED standard is outdated -

Simply need to change LEED Bronze to LEED Certified.

This is definitely easy and, again, a simple Search and Replace will hopefully fix this issue.

12. Clean up usage of the terms single-family attached and townhomes - are these synonymous or is there a difference and if so, what is it and does that affect how each is treated on the use table?

**** - Use the broadest term possible and add “including, for example, townhomes”...**

Just a guess, but I am thinking that the term “single-family attached” was originally used in the Zoning Code to disassociate this type of housing from multi-family and the process and/or stigma that was at one time, rightly or wrongly, associated with such uses. I would like to think we have generally moved beyond that now and would favor simply referring to the use as Townhouses or Townhomes. They are, afterall, included amongst the Missing Middle Housing Options. If you agree, this would be another Search and Replace fix, although in this case it would be a fairly extensive one.

*******ENDED HERE AT JULY 18TH MEETING*******

Next are the potential amendments that were identified as needing some level of additional discussion. A number of them deal with various issues associated with the Sign Regulations and you specifically grouped those together, so I will include those next:

13. Revised internal illumination standards for signage - The current illumination

standards for signs are somewhat limited for internal illumination. They are as follows:

- i. Individual backlit letters which are silhouetted against a softly illuminated wall;
- ii. Individual letters with translucent faces, containing soft lighting elements inside each letter; and

- iii. Metal **or** faced box signs with cut-out letters and soft-glow fluorescent tubes.

The most common form of internal illumination involves something like item iii, but rarely with metal-faced signs. Instead, they are generally a plastic-like material. They are very common and unless we want to create an even larger number of non-conforming signs, we should probably legitimize them by expressly allowing them in this list, and if we do want to prohibit them, the Code should more clearly make such a statement. There may also be a middle-ground and if so, we should specify what that is. One example of this is from the City of Alexandria, VA who prohibits internally illuminated translucent **rectangular** panel signs (but allows them in other shapes). If the Commission is interested in adding this as a possibility, I suggest we add to this session, something like the following:

- iv. Translucent panel signs that are non rectangular in shape.

The Commission directed staff to check with sign companies for suggestions and/or clarification of illumination types or standards that are missing in Easton.

14. **Revised language regarding signage not being located above the eave line** - The Ordinance currently addresses this issue by stating that:

B. Wall signs shall not be mounted higher than the eave line or top of the parapet wall of the building and no portions of the sign shall extend beyond the ends of the wall to which it is attached.

This poses an issue because there are certain roof types where a wall sign would seem appropriate, but are precluded based on this language. A front-facing gable (a la the Amish Market) is one example. If that is the only configuration where we believe an exception is warranted, the solution may be as simple as revising the language above to something like:

B. Wall signs shall not be mounted higher than the eave line or top of the parapet wall of the building and no portions of the sign shall extend beyond the ends of the wall to which it is attached. Such signs may extend above the eave line on facades with a front-facing gable roof, in which case such signs shall not extend above the top of the gable.

The Commission determined this proposed amendment is not necessary.

15. **Removal of fuel price regulations for freestanding signs** - There is actually a State Law that also regulates fuel price signs and our local zoning regulations appear to be at

conflict with them. We should either make them consistent, or perhaps eliminate our regulation and simply allow the State law (whatever it is at any given moment) to apply.

The State Law is found in **Maryland Code BUSINESS REGULATION § 10-315 -**

Advertising signs. The current Zoning Code allows such signs, but limits them in size to 3 square feet. As I read this State Law, it does not regulate size (and in fact, indicates that such signs are exempt from local zoning number or area limitations), but rather simply requires such signs to be “readable by passing motorists.” I think the simplest fix to this issue is something like the following:

H. Signs affixed to the top or sides of an operable fuel dispensing pump ~~shall not exceed three (3) square feet in area,~~ **per the standards of MD Code Business Regulation Section 10-315, provided such sign** and shall only display instructional or price information, and shall not include advertising copy pertaining to any product, sale or promotion.

The Commision supported this proposed amendment as drafted.

16. **Freestanding signs where a solid base isn't practical** - Our sign regulations currently require freestanding signs to be constructed on a solid base that is at least as wide as the sign face. We make exceptions in the CB (Central Business) District out of recognition that there likely is insufficient room to accommodate an otherwise permitted freestanding sign given the small lot sizes and the degree to which these lots are usually covered. These properties may have, for example, a post-mounted sign or a projecting sign. Some property-owners in the CG Zoning District have suggested that site constraints limit their ability to comply with this standard as well.

Before adopting changes that grant such relief, I think it is important to determine whether this is actually a widespread problem or relatively isolated to a few properties, possibly with unique circumstances. If the former, it may be legitimate to consider offering some form of relief, but if the latter, that is the textbook example of a Variance for such relief.

I frankly am skeptical that properties in the CG Zoning District are constrained to the point that they cannot locate a sign in conformance with our Regulations. I suspect that instead, they simply do not want to, either for reasons related to cost or a perceived competitive disadvantage. Unless you think our signs standards are too onerous I do not recommend relief in the CG similar to what we offer in the CB. If you want to consider any form of relief, perhaps it is to allow the replacement of a non-conforming sign with one that may not necessarily fully comply with today's regulations, but moves the sign closer (and the more you can detail what that entails, the better).

The Commission indicated they were not in favor of this proposed amendment.

The remainder of the proposed changes were identified as appropriate for additional discussion, but not sign-related in nature. They are:

17. **Donation Centers** - The proposal that initiated this round of amendments is attached, as prepared by the representative from Planet Aid. If you have been by Giant and seen the “Donation Center” at the far end of the parking lot (next to the main entrance drive between Wal*Mart and the Shopping Center), over the course of the last several months, you will know what they are seeking to legitimize.

The Commission indicated they were in favor of the proposed amendment subject to a couple of revisions (see attached).

18. **Additional differentiation criteria for single family homes** - The current Supplemental Standards for Single Family Detached home differentiation, is as follows:

a. Calculations of Differences in Appearance

1. Differences in bulk and massing shall be reviewed for two (2) lots on either side of the proposed unit on the same side of the street.
2. Where lots are interrupted by an intervening street, parkland or similar feature of at least fifty (50) feet in width, no review shall be necessary.
3. The proposed unit shall be considered different from any vacant lot for which no building permit has been issued without requiring further documentation.

b. Differentiation

The proposed unit shall differ from each other house in at least two (2) of the five criteria listed below, unless the units differ with respect to the number of full stories (#2) then only #2 is required.

1. The unit is a different housing type.
 - a. Single-family detached;
 - b. Zero lot line (where allowed);

- c. Single-family attached; or
 - d. Single-family detached rotated ninety (90) degrees (i.e. the narrower façade fronts the street as opposed to the wider façade).
- 2. The unit differs in the number of full stories.
- 3. The unit is served by a different type of garage.
 - a. Front-load garage;
 - b. Side-load garage;
 - c. Rear-load garage;
 - d. Detached garage;
 - e. Carport; or
 - f. No Garage.
- 4. The unit has a different roof type
 - a. Gable
 - b. Hip;
 - c. Gambrel
 - d. Mansard;
 - e. Roof types a through d rotated ninety (90) degrees; or
 - f. Flat.

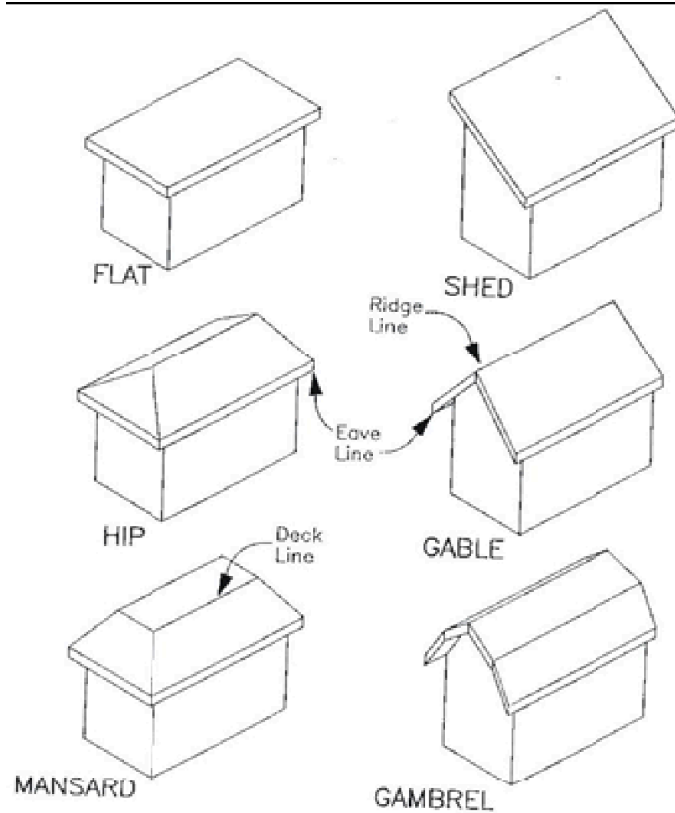


Figure 10.1 Sample Roof Types

5. The unit has variation in the articulation of the front façade.
 - a. Garage setback from the front façade of at least four (4) feet;
 - b. Covered, open walled porch of at least six (6) feet in depth extending at least thirty-three (33) percent of the width of the front façade; or
 - c. Other articulation of the front façade at least four (4) feet in depth, extending at least thirty-three (33) percent of the width of the front façade.
6. Although not required, differentiation in color between adjacent homes is strongly encouraged.

I would like to add more options for folks to choose from, and if we add enough, require compliance with more of them (e.g., 3 of 7 rather than 2 of 5). Some possibilities:

7. Different cladding materials.

8. Different window sizing and groupings.
9. Difference in number of dormers.
10. Addition of a bay window that projects a minimum of one foot from the front wall, as measured from the ground up.
11. Change of roof pitch of at least two units of change as measured by a roof's vertical rise over its horizontal span (e., 6/12 pitch to 8/12 pitch).

This issue generated a fair amount of discussion. There was support to increase the options available to satisfy this differentiation standard similar to what is proposed. On the other hand, there was a feeling expressed that the issue with the appearance of our residential subdivisions is not necessarily the similarity of homes as much as it was about failing to adhere to “good design principles.” Ultimately the Commission determined that this is an issue that should be deferred until after completion of the Comprehensive Plan Update.

*****ENDED HERE AT AUGUST 15TH MEETING*****

19. More specifics on what driveway materials are dust free and resistant to erosion -

We have received several requests for gravel driveways, presumably to reduce costs. The zoning ordinance states that "all off-street parking facilities shall be constructed of dust-free materials, have a surface resistant to erosion, drained so as to prevent damage to abutting properties or public streets, and maintained properly by the owner". Historically, gravel and stone were considered to satisfy this standard. More recently, we have interpreted this standard to exclude gravel and crushed aggregate. This prohibition is due to gravel spilling out into the rights-of-way. This is bad for seniors, wheelchairs, and people with physical disabilities or limited mobility. In addition, gravel is eventually compacted and considered an impervious surface (people have made the argument that gravel driveways are good for stormwater infiltration). More consideration and clarification for this standard needs to be made. For example, do we continue to prohibit, but allow exceptions for gravel parking areas for agriculturally-zoned properties, temporary and overflow parking areas, or for areas devoted to commercial vehicle storage? In addition, discussion should be held with the Town Engineer regarding any other equivalent and acceptable paving material(s).

Here is the language in question along with a suggested revision (to at least initiate the discussion):

All off-street parking facilities shall be constructed of dust-free materials, have a surface resistant to erosion, drained so as to prevent damage to abutting properties or public streets, and

maintained properly by the owner. Dust free material shall include concrete or bituminous surface. Semi-pervious materials, such as permeable pavers, porous asphalt, porous concrete, grass-crete, or gravel-crete may be used for residential driveways, vehicle storage areas, designated employee parking areas, or parking spaces provided in excess of the maximum parking requirement (subject to an approved Parking waiver). Any other parking or maneuvering space may utilize semi-pervious materials subject to Planning Commission approval. All off-street parking areas shall be constructed in accordance with the construction specifications as may be developed and maintained by the Town Engineer. Surfaces in areas designated as accessible parking and/or accessible pedestrian paths shall meet all applicable federal and State of Maryland standards.

20. Food trucks - The Zoning Code regulates Food Trucks (mobile food uses) on private property. Although food trucks on public property (e.g., on streets or in government-owned parks or parking lots) are also common, those would be regulated in other parts of the Town Code. Currently food trucks on private property are only permitted in limited circumstances:

- a. At an active construction site (the idea being they could provide a lunch option to construction workers).
- b. In association with an approved Special Event (e.g., ABC Store is Having Customer Appreciation Day and as part of the celebration, Food Trucks will be present).
- c. In the Planned Redevelopment District on a site that bears some connection to the principal use (e.g., Four Sisters sells products from their store and Rise Up sells menu items to compliment the coffee shop).

Along with short-term rentals, Food Trucks are probably the issue I get asked about the most and people are surprised/disappointed by how limiting our rules are. Arguments for allowing them more generally are that they provide more variety in food selection, they provide some lower cost options, they bring a sense of vibrancy to an area, and they can be a way for prospective restaurateurs to get established before moving on to a traditional brick-and-mortar business. The arguments against, in the past, have been primarily two-fold. First, some say they promote a “carnival atmosphere” that Easton has long sought to avoid. Second, there is concern about the impact food trucks may have on traditional restaurants. If the Commission is of a mind that there is a role for more food trucks in Easton, I believe the two primary objections can be addressed with appropriate supplemental standards.

I believe there are several different variations of food truck uses. One is when food trucks set-up in specified locations, usually on-street, in a public parking lot, or in a park.

Here in Easton at least, this scenario would not be regulated by the Zoning Code as it does not specifically address uses in the public realm. Another scenario is when a private property owner wants to establish them permanently or semi-permanently either independently or in conjunction with existing use on the property. This scenario is currently limited to item c above. If you are open to expanding the options for this scenario, I think we would simply delete the phrase “In the Planned Redevelopment District” and say something like “Where indicated as permitted in the Table of Permissible Uses...” You can then maintain the requirement of a connection to the principal use, or delete it and essentially allow a food truck to operate the same as a brick and mortar establishment. A third scenario is one where multiple food trucks are set up on a site. This could be on a permanent basis or Temporarily (and perhaps in association with some special event). Some jurisdictions refer to this by terms such as “Food Truck Court.”

I would like the Commission to discuss this issue and indicate the direction they would like to go before proposing something (if anything) for this item.

21. Parking standards for single-family detached - Since at least 1976, the parking requirement for single-family detached houses has been two spaces, and the Code has indicated that a driveway with minimum dimensions of 10' by 35' shall be deemed adequate for meeting that requirement. There has been discussion at some of your more recent subdivision reviews concerning the overall appropriateness of this standard. Issues raised include:

- Garages should count as parking spaces (they never have on the basis that there is no guarantee that they won't become filled up with the homeowners “stuff” and thus not be available for parking).
- If a driveway of 10' x 35' cannot be provided (or the homeowner does not want to provide it) are there other arrangements that are appropriate and if so, what are the dimensional requirements for them? This is increasingly an issue where we are encouraging houses to be built closer to the street (i.e., with 15' setbacks) and still allowing front-loaded garages.
- On-street parking should count. The short answer to why it does not is that this is an off-street parking requirement. However, this is now being viewed by many (especially new urbanists and like-minded planners) as a particularly suburban standard that is detrimental to supporting or reinstating a more urban design in communities. In fact, one of my New Urbanist resources recommends subtracting the amount of on-street parking fronting single family housing, from the required off-street parking. Presumably in most cases this will satisfy the requirement. See also attached discussion from the Form Based Codes book that Tal Bone

bequeathed me when he left the Commission. There are a number of good points/observations.

We seem to have multiple options for addressing this issue, depending on how much additional flexibility you want to allow. Starting with the issue of allowing garage space to count as the required parking, while I have not found a jurisdiction which expressly says that garage parking does or does not count, it is in some cases implied. For example, one jurisdiction that I found stipulates that “enclosed space” (which I take to mean a garage and perhaps a carport) may be counted towards the required parking provided that an apron is constructed adjacent to the garage that is equal to the width of the garage and a minimum of 20’ deep. I presume this is a safeguard against the garage space being filled with “stuff” and thus unable to accommodate vehicles. Another jurisdiction goes even further by actually requiring “a minimum of two (2) enclosed parking spaces with a minimum driveway width of sixteen (16) feet.” This jurisdiction also couples this requirement with standards that preclude a front-loaded garage that extends closer to the street than the house does.

I think the solution to this issue may be to build on the existing language and add as many additional options for compliance as you deem appropriate, as follows, for example:

J. Single-family and duplex units may satisfy their off-street parking requirements utilizing any combination of the following options:

(1) A driveway ten (10) feet wide and thirty-five (35) feet long shall be deemed sufficient parking space, for single family or each unit in a duplex.

(2) Space within a structure (e.g., a garage or carport) may be used towards the satisfaction of the parking requirement provided that a parking apron that is at least as wide as the structure and extends a minimum of 20’ away from the structure, is constructed immediately adjacent to said structure.

(3) A parking pad of at least 9’ x 18’ per space is provided on-site.

(4) ??? (Other options? On-street parking allowance?)

22. Backing into the Street from a Parking Space - Another standard that has been part of our regulations since, at least, 1976, is one which states: “ All off-street parking spaces, other than for a single family or duplex dwelling, which requires vehicles to back into a public road, street or highway are prohibited.” We are finding that this can pose a challenge for infill projects, specifically for potential Missing Middle Housing projects. A thought for consideration - perhaps the limiting factor should not be the use, but rather

the type of street onto which such backing would occur. I offer as Exhibit A, the parking lot behind Town Hall, which has a lot more cars backing onto this (admittedly busy) side street than would occur at a MMH type, and yet in 34 years at the Town (most of which has been in an office overlooking this parking lot) I have not witnessed a single accident on this street.

As a starting point for this discussion, I offer the following suggested revision:

D. All off-street parking spaces, ~~other than for a single family or duplex dwelling,~~ which requires vehicles to back into a public road, street or highway, **other than a residential street (as classified by the Easton Subdivision Regulations)** are prohibited.

I would largely defer to Rick on this, but we may also need to consider deleting (or revising) the following standard in conjunction with any changes to item D, above:

I. No parking spaces except those proposed for single family or duplex residences shall have direct access to a public way.

23. **Clarifying intrusions into easements vs setbacks** - The Code allows for exceptions for certain structures or features to extend into the Building Setback. This is generally not an issue, but it can be when the intrusion is also into//over an easement, which is not uncommon. The beginning of that section along with suggested clarifying language is:

SECTION 28 – 1006 OTHER EXCEPTIONS TO SETBACK REQUIREMENTS

Provided they do not encroach upon any recorded easements, the following features may project into required setbacks as hereinafter set forth.

24. **Subdivision Amendment** - In addition to the foregoing potential Zoning Code Amendments, there is one revision needed to the Subdivision Regulations. In Section 409 (e) Acknowledgements and Notations, we need to add the following required plat note:

**A UTILITIES DISTRIBUTION RIGHT-OF-WAY AND EASEMENT IS HEREBY
DEDICATED TO THE TOWN OF EASTON IN AND OVER STRIPS OF LAND TEN (10)**

FEET IN WIDTH ALONG THOSE BOUNDARY LINES CONTIGUOUS TO ANY STREET OR ALLEY AND FIVE (5) FEET IN WIDTH ON EACH SIDE OF SIDE LOT LINES.

Early in the discussion phase of the last Subdivision Regulations Update, this note was flagged for discussion as to whether it was necessary as the preliminary plat standards require that the Applicant shows the proposed location of all rights-of-way and easements. In further discussion with Easton Utilities it was determined that this language is needed and should have been left in the Regulations. Unfortunately, when I cleaned up the document, apparently instead of simply removing the highlighting of this statement, I instead deleted it. The correction is simply to just add the statement back in, where it was and just as stated in the previous version of the document.

Attachment 1 - Proposed Donation Center Text Amendment

I. Donation Bins

- a. No person or other legal entity shall place or maintain any Donation Bin on the premises open to the public except when issued a permit by the Building Inspection Division in accordance with this section.
- b. All Donation Bins shall be appropriately located so as not to interfere with sight triangles, on-site circulation, required setbacks, landscaping, parking and any other requirements that have been imposed as part of the site plan approval for the property, and shall be placed on a concrete or paved surface.
- c. The Donation Bin shall be of a type that is enclosed by use of a receiving door and locked so that the contents of the bin may not be accessed by anyone other than those responsible for the retrieval of the contents.
- d. The Donation Bin shall not cover a ground surface area in excess of thirty-one (31) square feet, nor be more than seven (7) feet in height.
- e. Donation Bins must be maintained and kept in good repair. The Donation Bins area shall be maintained in a safe, orderly condition. Donation bins shall have no rust, peeling paint or graffiti. The areas around the Donation Bin must be kept clean and free of garbage and debris on the premises where the Donation Bin is located. Each Donation Bin shall be regularly emptied of its contents so that it does not overflow.
- f. There shall be no more than two Donation Bins per property.
- g. A permit for a Donation Bin shall be required. The permit shall be issued by the Building Inspection Division, but can only be granted in compliance with the following:
 - i. The Donation Bin is owned by a duly registered organization in good standing in the State of Maryland. The applicant shall submit a statement of declaration of whether the organization is “for profit” or “not for profit”. A “not for profit” must submit proof of the organization’s 501 c (3) designation and a “for profit” must submit proof of the organization’s tax ID as well as name and address of the owner;
 - ii. Each duly registered non profit organization shall be permitted to have a maximum of eight (8) Donation Bins within the Town of Easton;
 - iii. The type, size and location of the Donation Bin comply with this subsection;

- iv. The applicant submits a letter of authority/permission from the property owners upon which the Donation Bin is proposed to be located;
- v. The name, address and telephone number of the organization is displayed on each Donation Bin;
- vi. The general use of any donations or funds raised from the sale of the donations are displayed on each Donation Bin. If the organization is “for profit” the Donation Bin shall be labeled “For Profit” and “Not tax Deductible”; and
- vii. All information required to be displayed on the Donation Bin shall be in lettering not smaller than one and a half (1.5) inches tall and must be in contrasting color with the background.

h. Applications for donation bins shall include contact information for the individual or organization responsible for addressing any maintenance issues.

2. Donation Centers

Donation Center – A variation of a Donation Bin that is larger, equipped with lights and monitored via security camera 24 hours per day, seven days per week.

- a. Except as hereby modified, Donation Centers shall comply with all Supplemental Standards applicable to Donation Bins.
- b. Donation Centers shall not cover a ground surface area in excess of one hundred sixty (160) square feet, nor be more than eight (8) feet in height, exclusive of equipment installed on top of the Donation Center.
- c. The Donation Center shall be equipped with lights to provide a safe environment for any citizen who wishes to donate items after dark.
- d. The Donation Center shall be equipped and maintained in working condition with 24/7 video monitoring.
- e. The Donation Center shall be attended and/or serviced by the organization operating the Donation Center at least three times per week.
- f. The Donation Center may not occupy more than four off-street parking spaces.
- g. Donation Centers shall be placed on the property of vacant businesses or the parking area of businesses with a clearly demonstrable excess of parking. Such Centers may also be located outside of parking lots on such sites. In either case, such Centers shall be located so as to not interfere with traffic and circulation of the establishment.

- h. Donation Centers established at the site of vacant businesses shall cease to operate at said site within 30 days of the Application of a Use and Occupancy permit for the property, unless the new business owner agrees to the continuation of the Donation Center and can demonstrate that the locational criteria specified in item g above will continue to be satisfied.
- i. There shall be no more than one (1) Donation Center within a one (1) mile radius.
- j. Any given property may have one (1) Donation Center or two (2) Donation Bins.

Attachment 2 - Form-Based Codes Parking Commentary

(See March Mmeo)



VISIBILITY TRIANGLE REQUIREMENTS

Pedestrians and motorists passing through traffic intersections must be able to see clearly around corners in order to avoid collisions. Clear visibility at intersections of streets, alleys, driveways and sidewalks is a matter of safety.

The ability to see around corners can be impaired by the growth of trees, plants, vehicle parking and even fence installations. Visibility triangle rules require that certain areas of the private property and the abutting City right-of-way be maintained and clear of visibility obstructions.

VISIBILITY TRIANGLE RULES

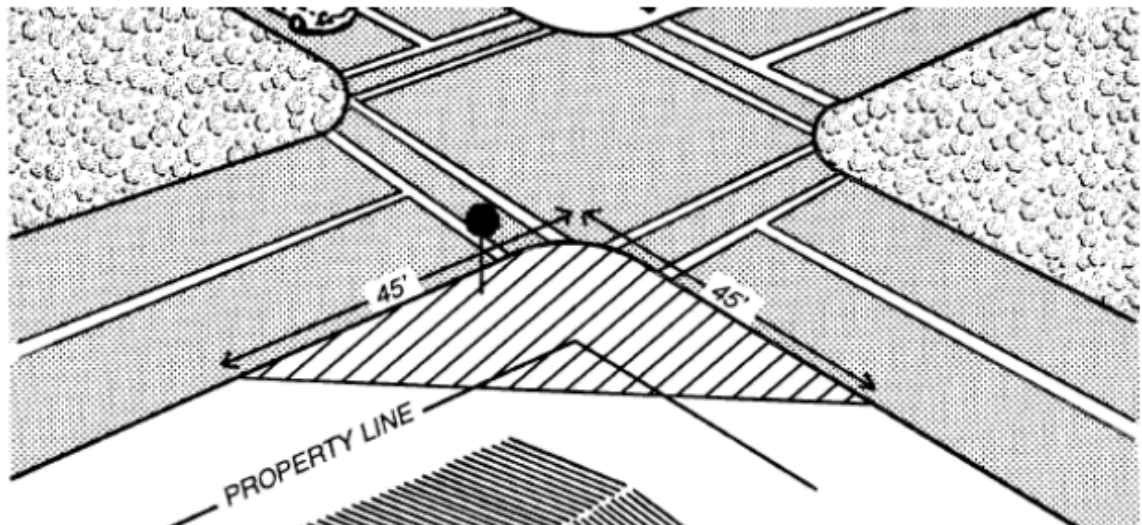
In the measured visibility triangle, the following restrictions apply:

- **No structures** can be placed except fences, walls or berms not higher than three feet
- **No motor vehicle**, trailer or other equipment is allowed to park, stand or stop
- **No vegetation** can be planted or allowed to grow **higher than three feet**, except for one tree on the private property and two trees in the City right-of-way with any tree having **branches no lower than eight feet**

VISIBILITY TRIANGLE DESCRIPTIONS & DIAGRAMS

STREET INTERSECTION

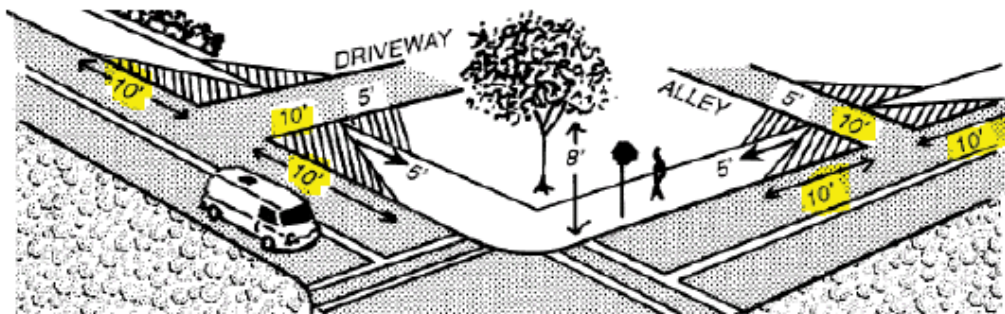
The visibility triangle for a street intersection is a triangle with 45-foot sides, starting at the corner where two curb lines intersect and extending out away from this corner intersection, but still following curb lines.



VISIBILITY TRIANGLE REQUIREMENTS

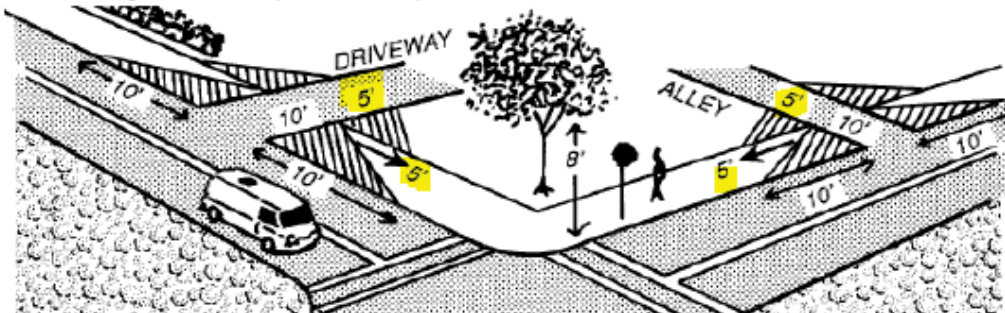
INTERSECTIONS OF ALLEYS OR DRIVEWAYS WITH STREETS

The visibility triangle for intersections of alleys or driveway with streets is a triangle with 10-foot sides extending from the intersection of the curb line but following the edge of the alley or driveway



INTERSECTIONS OF ALLEYS OR DRIVEWAYS WITH SIDEWALKS

The visibility triangle for intersections of alleys or driveways with sidewalks is a triangle with five foot sides extending from the intersection formed using the edge of the sidewalk furthest from the street and the edge of the alley or driveway



EXCEPTIONS

As of April 17, 1998, any lawfully constructed structure (any structure built with a City Building Permit and having received a final approved inspection) is grandfathered and does not have to comply with visibility triangle requirements.

Other visibility triangle exemptions include:

- Benches
- Fire hydrants
- Government signs
- Sign posts
- Traffic control devices
- Utility control devices
- Utility poles

Two types of Zoning Districts – DC (Downtown Center) and CCT-2 (Corridor Commercial Traditional-2) – are not subject to the visibility

triangle regulations. This is because many of the existing buildings were allowed to be built years ago, partially in the triangle area, in addition to there being large numbers of traffic signal-controlled intersections which do not require the same degree of visibility.

Regardless of visibility triangle regulations, property owners must take responsibility to trim trees, plants and grass on their property and in the City right-of-way that abuts their property in order to comply with City Codes. Also, in the City right-of-way, property owners must obtain a minor easement and permit from the City's Engineering and Capital Improvements Department to build any structure of any height (for example, a fence).