# Easton Staff Development Review
# MEETING AGENDA

Wednesday, May 28, 2025 - 11:00 AM
Council Chambers, Easton Town Office
14 S Harrison Street

## 1. Discussion Items

**a.**

| | |
|---|---|
| **Application Number:** | 2025 - 1454 / ESDR 25 - 05 |
| **Applicant:** | Rauch Inc. |
| **Location:** | 52 S. Washington Street (Foundation of Hope)<br>Tax Map 0104, Grid 0000, Parcel 1463 |
| **Zoning District:** | CB |
| **Request:** | Sketch site plan review for the construction of a commercial training building with associated stormwater management facilities and other facility improvements. |

**b.**

| | |
|---|---|
| **Application Number:** | 2025 - 1456 / ESDR 25 - 06 |
| **Applicant:** | Lane Engineering LLC |
| **Location:** | 9684, 9778, 9783, 9687 Technology Drive & 29001, 29004 I-Way Court<br>Tax Map 0025, Grid 0004, Parcels 0090 & 0092, Lots 1-4, 9, 10 |
| **Zoning District:** | PUD |
| **Request:** | Sketch PUD review for the development of 365 residential units and two (2) commercial buildings with associated stormwater management facilities and other facility improvements. |

**Town of Easton**
Engineering, Planning and Zoning
14 South Harrison Street, Easton, MD 21601

# Easton Staff Development Review

## Property Information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Address | 52 South Washington Street, Easton, MD 21601 | | | | | | |
| Tax Map | 0104 | Grid | 0000 | Parcel | 1463 | Lot | |
| Deed Refernce: | Liber | 02871 | Folio | 00437 | | | |
| Plat Reference: | Liber | | Folio | | | | |
| Base Zoning District | CB | Historic District | Y ☒ | N ☐ | Planning Redevelopment | Y ☐ | N ☒ |

Purpose of Application / Description of Work:

Proposed commercial training building with parking, ADA accessible sidewalks, utilities, and stormwater management.

## Owner

| | |
|---|---|
| Name | Foundation of Hope INC |
| Mailing Address | 8671 Camac Street, Easton, MD 21601 |
| Telephone No. | Email |

## Applicant / Agent

| | |
|---|---|
| Name | RAUCH inc - Brian Fitzgerald |
| Mailing Address | 106 N Harrison Street, Easton, MD 21601 |
| Telephone No. | Email |

## Surveyor / Engineer

| | | | | |
|---|---|---|---|---|
| Name | RAUCH inc | License No. | 11024 | Expiration Date 7/24/2026 |
| Mailing Address | 106 N Harrison Street, Easton, MD 21601 | | | |
| Telephone No. | | Email | | |

***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 5/6/2025

Printed Name of Applicant or Agent Brian Fitzgerald

*For Office Use Only*

Easton Staff Development Review Meeting Required Y [X] N [ ]

Easton Staff Development Review Meeting Date **05/28/2025**

Completeness Check Date **05/06/2025**

Revisions/Resubmissions Required Y [ ] N [ ] **TBD**

Resubmission Date

Documents Received Y [ ] N [ ]

Staff Determination

**Scheduled for May 28, 2025 Easton Staff Development Review**

**Historic District Certificate of Appropriateness issued October 28, 2024**

Planning Commission Required Y [ ] N [ ] **TBD**

BOZA Required Y [ ] N [ ] **TBD**

Historic District Commission Required Y [X] N [ ]

Resubmission for ESDR Required Y [ ] N [ ]

Staff Signature Samantha N. Smith Date **05/06/2025**

Revised 02-2019

**Town of Easton**
Engineering, Planning and Zoning
14 South Harrison Street, Easton, MD 21601

**2025 - 1454 / W 25 - 06**

# Supplemental Waiver Request Application

## Waiver Request Type

| | | |
|---|---|---|
| Sidewalk ☐ | Parking Spaces ☐ | Parking/Aisle Dimension ☐ |
| Landscaping & Buffering ☒ | Signage ☐ | Other ☐ |

## Project Information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Address | 52 South Washington Street, Easton, MD 21601 | | | | | | |
| Tax Map | 0104 | Grid | 0000 | Parcel | 1463 | Lot | N/A |
| Zoning District | CB | PC Meeting Date | | Historic District | Yes ☒ | No ☐ | |
| Owner or Agent | Rauch INC | | | | | | |
| Mailing Address | 106 North Harrison Street, Easton, MD 21601 | | | | | | |
| Telephone No. | | Email | | | | | |

## Request Details

Please attach a detailed description of the waiver request(s) being made and the justification(s) for requesting said waiver(s).

Rauch Engineering requests a bufferyard waiver for multiple edges of the plot due to space constraints available for planting large canopy trees and the width of the buffers. The frontage on South Washington and South Streets each have existing street trees and a constrained buffer width (class D). On the three remaining Class E Buffer edges, space is constrained for planting. Our strategy is to utilize native shrubs instead of the larger trees that may become problematic some years after installation. These shrubs are native and provide bird food/habitat. See exhibit below and cover sheet of plans for exact waivers requested.

X Ordinance Section Supporting Waiver Request. 28-1014.6.D. Limited space per code

***Any modifications during review shall warrant an updated application.***

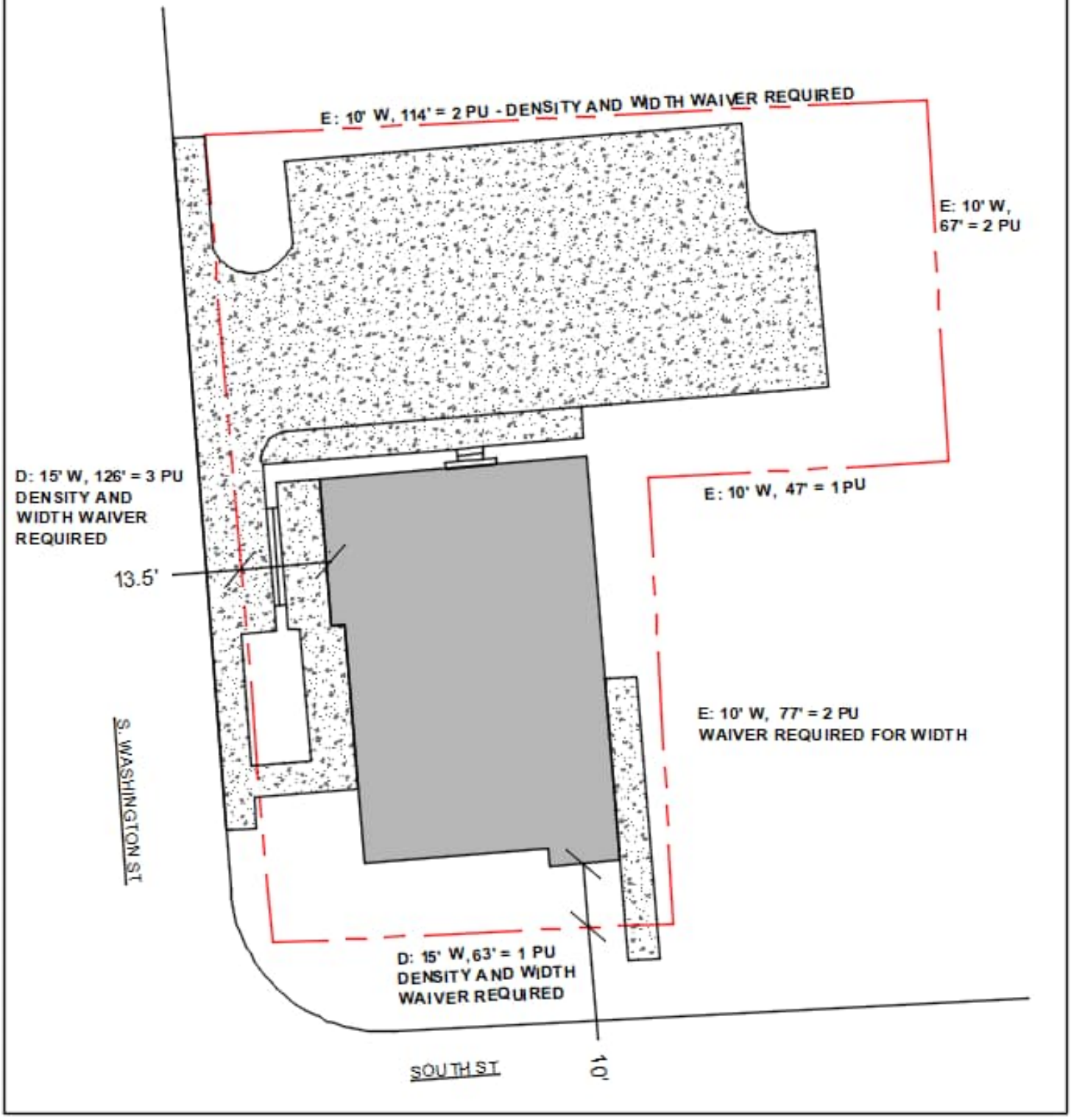
***I do hereby solemnly declare and affirm that the information provided by this application and the documents attached hereto accurately represent the conditions of the request and that submission of an incomplete application will be returned for correction prior to processing.***

Signature of Applicant or Agent

Date 5/6/2025

Printed Name of Applicant or Agent Brian Fitzgerald

# BUFFERYARD BOUNDARY MAP & PARCEL FRONTAGE SETBACK



**Town of Easton**
Planning and Zoning
14 S. Harrison Street Easton, MD 21601 410-822-1943
**HISTORIC DISTRICT COMMISSION**
**CERTIFICATE OF APPROPRIATENESS**

| | |
|---|---|
| **Meeting Date:** | **10/28/2024** |
| **Application Number:** | **2024-1318** |
| **Location:** | **52 S Washington Street** |
| **Applicant:** | **Timothy F. Crosby AIA** |

**Request**: The applicant is requesting approval for the construction of a new two-story, 5400 square foot structure on the vacant lot located on the corner of S. Washington Street and South Street. Proposed site improvements include the construction of an off-street parking area with seven (7) spaces, additional landscaping, and the addition of a small stormwater management feature. The materials proposed for this structure include vinyl-clad wood windows, fiberglass doors, a combination of brick and fiber cement siding, composite trim, PVC shutters, iron railings, standing seam metal roofing, and asphalt shingle roofing.

**The Applicant amended their application to reflect the use of half-round gutters and downspouts.**

Commissioner Stuart moved to **approve the amended application subject to the following conditions:**

1) **A minimum landscape buffer of three (3) feet shall be installed between the edge of the parking lot and S. Washington Street. Planting shall be of a native species, and at least 42" in height;**
2) **all HVAC equipment shall be located on a non-visible rooftop location or within a side yard location that is not visible from a public right of way;**
3) **trash receptacles shall be screened from view using opaque fencing;**
4) **half-round gutters and downspouts shall be utilized; and**
5) **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 Chairperson and/or Vice Chairperson of the Commission.**

Commissioner Bateman seconded the motion.
FOR: 4 - Demby, Bateman, Greer, Stuart

If the scope of work changes and or the materials and methods used are contrary to that understood by the application and any supplemental information provided, the work shall not continue until such time that the Commission is notified and said differences are considered and approved by the Commission.

"A Certificate of Appropriateness shall lapse upon the expiration of the corresponding Building Permit. For applications that require a building permit but for which none is issued, this Certificate of Appropriateness shall lapse six (6) months after issuance. In the event a building permit is not required, the Certificate of Appropriateness shall lapse six (6) months from its issuance if substantial work is not underway. For good cause shown, this period may be extended by the Commission".

In the event than any party is aggrieved by a decision of the Commission, the party has the right of appeal to the Board of Zoning Appeals in accordance with Article XIII of the Zoning Code. Appeal requests must be filed within thirty (30) days from the date of the Commission decision. Further appeal may be taken to the Circuit Court for Talbot County.

**Prior to start of work please contact the Building Inspection Department at 410 822 2525 to ensure all required building permits have been obtained. Also, please reach out to the Building Inspection department to ensure your project complies with the Town of Easton's building codes.**

Nicholas Johnson
Representative, Historic District Commission

11/13/2024
Date

# FOUNDATION OF HOPE

## SKETCH SITE PLAN

FOR

TOWN OF EASTON

TALBOT COUNTY, MARYLAND 21601

### SITE DATA

| | |
|---|---|
| PROPERTY ADDRESS: | 52 SOUTH WASHINGTON STREET, EASTON, MD 21601 |
| LONGITUDE: | 38°77'01.49" N |
| LATITUDE: | -76°08'46.61" W |
| TAX MAP: | 0104 |
| GRID: | 0000 |
| PARCEL: | 1463 |
| DEED REFERENCE: | *02871 / 00437* |
| SITE AREA: | 0.253 AC |
| FEMA FLOOD MAP: | PANEL 24041C0189D |
| LIMITS OF DISTURBANCE: | 1.589 A.C ± |
| CUT: | X |
| FILL: | X |
| NET: | X |

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

| | |
|---|---|
| PRESENT ZONING CLASSIFICATION: | CENTRAL BUSINESS COMMERCIAL |
| PROPOSED ZONING CLASSIFICATION: | CENTRAL BUSINESS COMMERCIAL |
| MAX LOT COVERAGE: | 90% |
| MAX BUILDING HEIGHT: | 60' |
| MINIMUM LOT SIZE: | 5,000 SQUARE FEET |
| MINIMUM FRONT SETBACK: | ESTABLISHED FRONT LINE OF BLOCK |
| MINIMUM REAR SETBACK: | ESTABLISHED REAR LINE OF BLOCK |
| MINIMUM SIDE SETBACKS : | NONE |
| PARKING SPACES REQUIRED: | TO BE DETERMINED DURING PLAN REVIEW PROCESS |
| PARKING SPACES PROVIDED: | X |
| OFFSTREET PARKING: | NOT REQUIRED |
| SURVEY DATUM | |
| HORIZONTAL: | NAD83 |
| VERTICAL: | NAVD88 |
| DATE OF SURVEY: | X/X/2025 |
| BENCHMARK: | |

### ENVIRONMENTAL NOTES:

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

### HYDROLOGY NOTES:

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

### STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIATION MUST BE COMPLETE WITHIN:

A. 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

B. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING

### CONTACT INFORMATION

| | |
|---|---|
| OWNER/DEVELOPER: | FOUNDATION OF H O P E INC<br>8671 CAMAC ST<br>EASTON, MD 21601<br>(410) 443-9936 |
| ENGINEER: | RAUCH Inc.<br>106 N HARRISON ST<br>EASTON, MARYLAND 21301<br>(410)770-9081 |

**LANDSCAPE IMPROVEMENTS - §§28-1014.6**

OVERALL TREES REQUIRED:
MINIMUM OF ONE (1) TREE PER 750 SQ. FT. OF BUILDING FOOTPRINT SHALL BE PROVIDED ON-SITE OR AS STREET TREES IN THE PUBLIC R/W FRONTAGE OF THE SITE. **2,540 SQ FT / 750 = 3.39 TREES. 3 STREET FRONTAGE TREES CURRENTLY EXIST IN GOOD CONDITION - 3 ADDITIONAL TREES (DOGWOOD) ARE PROVIDED ALONG SOUTHERN EDGE OF SITE.**

PARKING LOTS SHALL BE LANDSCAPED WITH AN EVERGREEN SHRUB HEDGE WHICH WILL GROW TO A MINIMUM 42" HEIGHT WITHIN 5 YEARS ALONG STREET FRONTAGE. **PROVIDED WITH THUJA OCC. 'HETZ MIDGET' BETWEEN PARKING AND S. WASHINGTON STREET.**

STREET TREES PROVIDED:
3 TREES ARE EXISTING - SITE IS CONSTRAINED FOR WIDTH; TREES ARE PROVIDED INTERNALLY AS SITE REASONABLY PROVIDES FOR.

PARKING LOT TREES PROVIDED:
PARKING LOT SIZE DOES NOT REQUIRE INTERNAL PLANTINGS.

**BUFFERYARD STANDARDS - §§28-1014.7**

PROPERTY LINE FRONTING SOUTH WASHINGTON STREET:
BUFFERYARD "D" - *15' WIDTH - 1 SHADE/CANOPY TREE, 1 EVERGREEN TREES & 5 LARGE SHRUBS PER 50 LF*
**WAIVER REQUIRED - YES, FOR PLANT DENSITY AND BUFFER WIDTH (13.5') - (1 CATALPA STREET TREE IS EXISTING IS GOOD HEALTH). MINIMAL AREA IS AVAILABLE IN BUFFER FOR PLANTING - 1 COLUMNAR PINE & 12 SHRUBS PROVIDED.**

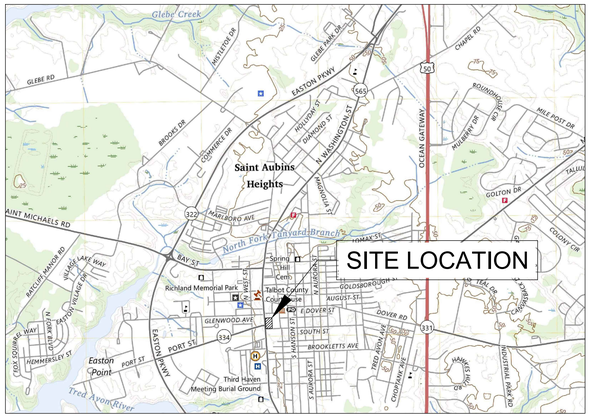
PROPERTY LINE FRONTING SOUTH STREET:
BUFFERYARD "D" - *15' WIDTH - 1 SHADE/CANOPY TREE, 1 EVERGREEN TREE & 5 LARGE SHRUBS PER 50 LF*
**WAIVER REQUIRED - YES, FOR PLANT DENSITY AND BUFFER WIDTH (10') - (2 RED OAK STREET TREES ARE EXISTING IN GOOD HEALTH), PLANTINGS ARE PROVIDED CLOSER TO THE BUILDING - 8 SHRUBS & 20 PERENNIALS PROVIDED.**

PROPERTY LINE WEST: SOUTHERN LINE CLOSER TO SOUTH ST. (77' L)
BUFFERYARD "E" - *10' WIDTH - 5 SHADE/CANOPY TREE, 8 EVERGREEN SHRUBS; OR 4 EVERGREEN TREES OR FENCE WITH 3EVERGREEN LARGE SHRUBS PER 50 LF*
**WAIVER REQUIRED - YES. FOR BUFFER WIDTH - 5 EVERGREEN TREES PROVIDED (TH. OCC. 'WINTERGREEN') WHERE BUFFER WIDTH ALLOWS.**

PROPERTY LINE ORIENTED EAST-WEST HALFWAY UP WESTERN EDGE (47' L)
BUFFERYARD "E" - *10' WIDTH - 5 SHADE/CANOPY TREE, 8 EVERGREEN SHRUBS; OR 4 EVERGREEN TREES OR FENCE WITH 3EVERGREEN LARGE SHRUBS PER 50 LF*
**WAIVER REQUIRED - NO, PLAN PROVIDES 2 HOLLY TREES, 1 MAGNOLIA TREE, AND 4 BIRD-FRIENDLY NATIVE UNDERSTORY SHRUBS AS SUBSTITUTION (BUFFER WIDTH CONSTRAINT).**

PROPERTY LINE WEST: NORTHERN LINE CLOSER TO VERIZON BUILDING. (66.5' L)
BUFFERYARD "E" - *10' WIDTH - 5 SHADE/CANOPY TREE, 8 EVERGREEN SHRUBS; OR 4 EVERGREEN TREES OR FENCE WITH 3EVERGREEN LARGE SHRUBS PER 50 LF*
**WAIVER REQUIRED - NO, 2 SERVICEBERRY TREES, 1 MAGNOLIA, 3 BIRD-FRIENDLY UNDERSTORY SHRUBS PROVIDED AS SUBSTITUTION (BUFFER WIDTH CONSTRAINT).**

PROPERTY LINE NORTHERN ADJACENT VERIZON BUILDING (113.5' L)
BUFFERYARD "E" - *10' WIDTH - 5 SHADE/CANOPY TREE, 8 EVERGREEN SHRUBS; OR 4 EVERGREEN TREES OR FENCE WITH 3EVERGREEN LARGE SHRUBS PER 50 LF*
**WAIVER REQUIRED - YES, FOR PLANT DENSITY AND BUFFER WIDTH. 8 SHRUBS ARE PROVIDED WHERE BUFFER WIDTH ALLOWS.**




VICINITY MAP
SCALE: 1" = 2,000'

### DRAWING LIST

| DRAWING NUMBER | DRAWING TITLE |
|---|---|
| G-100 | TITLE SHEET |
| V-101 | EXISTING CONDITIONS PLAN |
| C-100 | OVERALL SITE PLAN |
| C-201 | ESC AND STORMWATER MANAGEMENT PLAN |
| C-205.01 | ESC AND STORMWATER MANAGEMENT DETAILS |
| C-205.02 | STORMWATER MANAGEMENT DETAILS |
| C-301 | SITE GRADING PLAN |
| C-305 | SITE GRADING DETAILS |
| C-401 | UTILITY PLAN |
| C-405 | UTILITY DETAILS |
| L-501 | LANDSCAPE PLAN |
| L-505 | LANDSCAPE DETAILS |

### WATER QUANTITY

| STUDY POINT | STORM EVENT | 2-YEAR (cfs) | 10-YEAR (cfs) | 100-YEAR (cfs) |
|---|---|---|---|---|
| STUDY POINT 1 | EXISTING | 0.20 | 0.44 | 0.97 |
| | PROPOSED | 0.10 | 0.18 | 0.35 |
| CHANGE | CHANGE | -0.10 | -0.26 | -0.62 |
| STUDY POINT 2 | EXISTING | 0.05 | 0.12 | 0.28 |
| | PROPOSED | 0.00 | 0.00 | 0.00 |
| CHANGE | CHANGE | -0.05 | -0.12 | -0.28 |

### SITE REQUIRED ESDv

| DRAINAGE AREA | TYPE OF ESD PRACTICE | NAME OF ESD PRACTICE (STRUCTURE NAME) | ON-SITE OR OFF-SITE STRUCTURE | RUNOFF CURVE NUMBER (RCN) WEIGHTED | MARYLAND GRID COORDINATE NAD 83 NORTHING | MARYLAND GRID COORDINATE NAD 83 EASTING | ESD PRACTICE TOTAL DRAINAGE AREA (ACRES) | ESD PRACTICE IMPERVIOUS DRAINAGE AREA (ACRES) | SURFACE AREA OF ESD PRACTICE (ACRES) | TARGET PE (IN.) | ACTUAL PE (IN.) | TARGET ESDv ($FT^3$) | ACTUAL ESDv ($FT^3$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MBR-1 | BIORETENTION 1 | ON-SITE | | 404128.8956' | 1575858.8325' | 0.202 | 0.132 | 0.013 | 1.80 | 1.44 | 791 | 845 |
| TOTAL/ AVERAGE | | | | | | | 0.202 | 0.132 | 0.013 | 1.80 | 1.44 | 791 | 845 |

### 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 | | X |
| 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 | CTV |
| WATER PIPE | W | W |
| STORMWATER PIPE | | |
| UNDERDRAIN | | |
| SANITARY SEWER | SS | SS |
| FORCE MAIN SEWER | FM | FM |
| ENVIRONMENTAL | | Ψ |
| WETLAND LINE | | Ψ |
| FLOOD PLANE 100/500 YR | | |
| MEAN HIGH WATER | | MHW |
| MEAN LOW WATER | | MLW |
| CRITICAL AREA BOUNDARY | | CAB |
| BUFFER 25'/100' | | 25 |
| 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 | CuI | CuI |
| NYLOPLAST INLET | N | N |
| STORM DRAIN MANHOLE | D | D |
| SANITARY SEWER MANHOLE | S | S |
| CLEANOUT | C | C |
| GATE VALVE | GV | GV |
| STUB | | |
| SIGN | | |
| WATER METER | WM | WM |
| FIRE HYDRANT | | |
| WELL | W | W |
| BOLLARD | | |
| ELECTRIC TRANSFORMER | ELEC | ELEC |
| TELEPHONE PEDESTAL | T | T |
| UTILITY POLE | | |
| GUY WIRE | | |
| CONIFEROUS TREE | | |
| DECIDUOUS TREE | | |
| SPOT ELEVATION | 39.01 | 39.00 |
| LAND SLOPE | 0.41% | 0.41% |
| BENCHMARK | ELEV: 123 | |
| 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 |
| @ | AT |
| 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 |
| CuI | CUSTOM INLET |
| CY | CUBIC YARD |
| DI | DUCTILE IRON |
| E | EAST |
| EL/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 |
| NO | 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 |

### DESIGN PRINCIPLES FOR EASTON

(COMPREHENSIVE PLAN, PG. 29-31)

1. **INTEGRATED USES ARE DESIRABLE** - THE PROJECT CONSISTS OF COMMERCIAL BUSINESS AND STORMWATER MANAGEMENT.THIS PROJECT WILL ACCOMMODATE A 2,528 SQUARE FOOT OFFICE BUILDING AND WILL PROVIDE NECESSARY PARKING.
2. **NATURAL FEATURES SHOULD DETERMINE DESIGN** - THE SITE IS DEVELOPED TO MAINTAIN EXISTING NATURAL CONTOURS AND DRAINAGE PATHS AS WELL AS POSSIBLE. THERE ARE FEW NATURAL FEATURES ON THE EXISTING SITE AS THE ORIGINAL SITE INCLUDING REMAINING TREES.
3. **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.
4. **AMPLE OPEN SPACES SHOULD BE PROVIDED WITHIN AND AROUND NEIGHBORHOODS** - N/A, THIS IS NOT A RESIDENTIAL DEVELOPMENT.
5. **ARCHITECTURE SHOULD RESPECT EASTON'S HISTORIC DISTRICT** - THIS PROJECTS ARCHITECTURE RESPECTS EASTON'S HISTORIC DISTRICT AND IS BASED ON THE EXISTING URBAN CHARACTER OF SIMILAR BUILDING TYPES.
6. **SIGNS SHOULD INFORM BUT NOT DOMINATE** - THERE WILL BE MINIMAL SIGNAGE ON THE PROPOSED PROPERTY. SIGNAGE WILL BE PROVIDED FOR A.D.A. PARKING SPACE, ALONG WITH A FEW EXISTING SIGNS THAT WILL BE RELOCATED UPON COMPLETION OF CONSTRUCTION.
7. **NEIGHBORHOODS SHOULD CONTAIN A DIVERSITY OF HOUSING TYPES** - N/A, THIS IS NOT A RESIDENTIAL DEVELOPMENT.
8. **RESIDENTIAL DEVELOPMENTS SHOULD BE INTERESTING PLACES** - N/A, THIS IS NOT A RESIDENTIAL DEVELOPMENT.
9. **NEIGHBORHOODS SHOULD CONNECT** - PEDESTRIANS CAN TRAVERSE BETWEEN THE EXISTING SIDEWALK THAT TIES INTO THE PROPOSED SIDEWALK ADJACENT TO SOUTH WASHINGTON STREET.

### SEQUENCE OF CONSTRUCTION

| | | |
|---|---|---|
| 1. | NOTIFY MDE AT | (410) 901-4020 |
| | TALBOT COUNTY SOIL CONSERVATION DISTRICT AT | (410) 822-1583 |
| | TOWN OF EASTON DPW AT | (410) 822-0513 |
| 2. | PRE-CONSTRUCTION MEETING. | |
| 4. | INSTALL ALL SEDIMENT AND EROSION CONTROL MEASURES PER PLANS. | |
| 5. | DEMO PER PLAN. | |
| 6. | INSTALL UTILITIES. | |
| 7. | START SITE GRADING. | |
| 8. | START CONSTRUCTION. | |
| 9. | CONSTRUCT MICRO-BIORETENTION WETLAND AREA. DO NOT FINALIZE CONSTRUCTION OF THIS UNTIL EARTH DISTURBANCE IS COMPLETE. | |
| 10. | CONSTRUCT CURBS AND SIDEWALKS AS INDICATED ON THE PLANS. | |
| 11. | INSTALL BASE PAVEMENT | |
| 12. | PERMANENTLY STABILIZE REMAINING AREAS. | |
| 13. | MAINTAIN ALL PERIMETER CONTROLS AND SEDIMENT CONTROL DEVICES UNTIL FINAL STABILIZATION HAS BEEN COMPLETELY ESTABLISHED. | |
| 14. | 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 _____

1. 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.
2. 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.

COVER SHEET

FOR

FOUNDATION OF HOPE

TAX MAP 0104, ID 0000, PARCEL 1463

FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND

PREPARED FOR FOUNDATION OF HOPE


RAUCH INC
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 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

6-May-25

REVISIONS

| REV. # | DATE | DESCRIPTION |
|---|---|---|

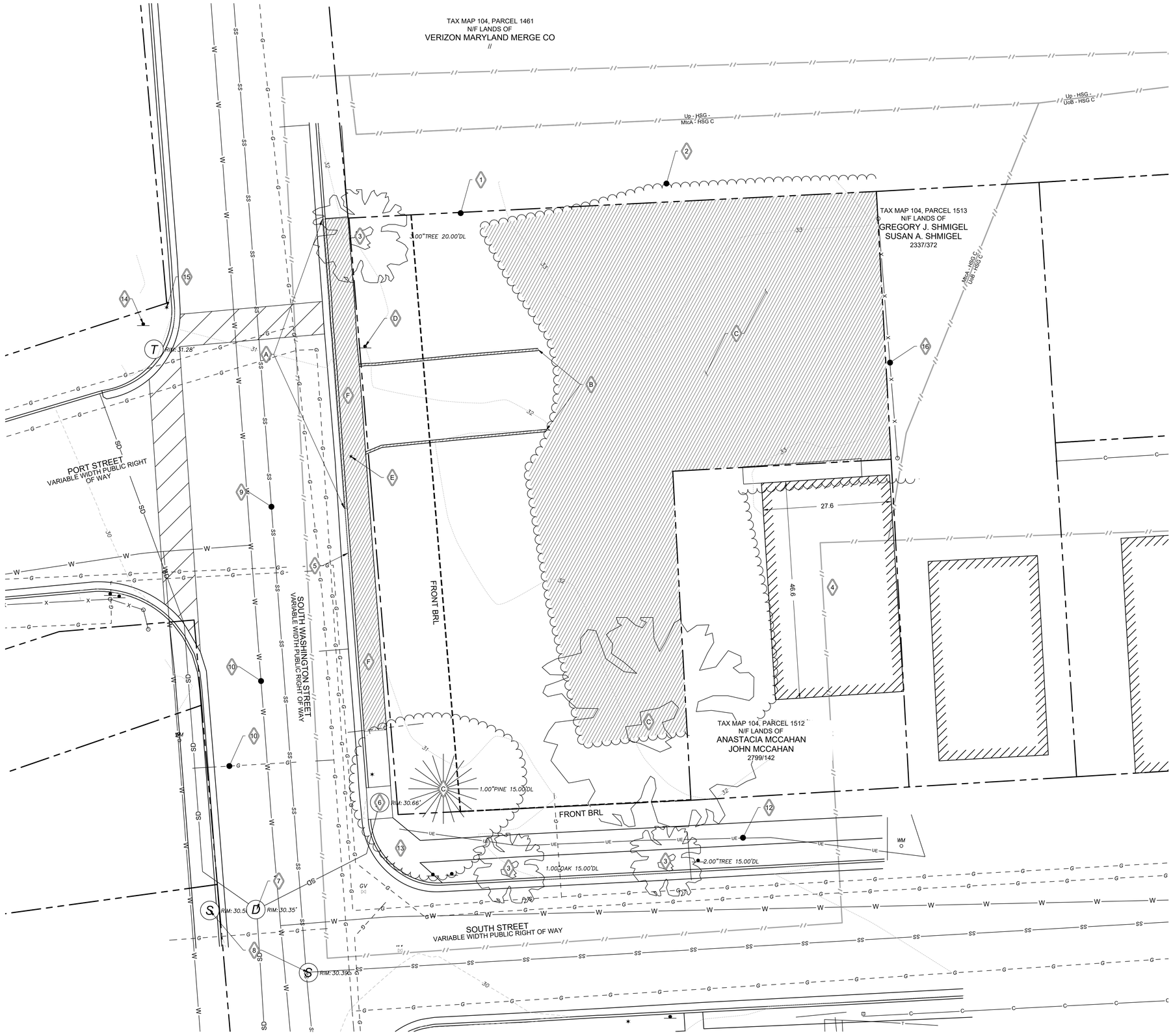
MISS UTILITY OF DELMARVA — DIAL BEFORE YOU DIG — 811

| | |
|---|---|
| DATE: | 5/6/2025 |
| SCALE: | N/A |
| DRAWN BY: | AK |
| DESIGNED BY: | AK |
| APPROVED BY: | |

SHEET NO.: G-100

DESIGN DEVELOPMENT

Z:\FOUNDATION OF HOPE\CIVIL\PRODUCTION PLANS\FOUNDATION OF HOPE - SITE PLAN.DWG




## EXISTING FEATURES

1. PROPERTY LINE
2. TREELINE
3. TREE
4. BUILDING
5. 6" CURB AND GUTTER
6. CURB INLET
7. STORM DRAIN MANHOLE
8. SEWER MANHOLE
9. SANITARY SEWER MAIN
10. WATER MAIN
11. GAS MAIN
12. UNDERGROUND ELECTRIC
13. CONCRETE SIDEWALK
14. SIGN TYP.
15. LAMP POST TYP.
16. FENCE

## DEMOLITION NOTES

- A. CURB AND GUTTER TO BE DEMOLISHED
- B. CONCRETE TO BE DEMOLISHED
- C. TREES TO BE DEMOLISHED
- D. SIGN TO BE RELOCATED
- E. LAMP POST TO BE RELOCATED
- F. CONCRETE SIDEWALK TO BE DEMOLISHED AND HAULED OFF SITE

GENERAL NOTE: CONTRACTOR SHALL TRY TO PRESERVE TREE ON SOUTH WEST CORNER OF PROPERTY

# EXISTING CONDITIONS AND DEMO PLAN

FOR

# FOUNDATION OF HOPE

TAX MAP 0104, ID 0000, PARCEL 1463

FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND

PREPARED FOR FOUNDATION OF HOPE

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REVISIONS

| REV. # | DATE | DESCRIPTION |
|---|---|---|

MISS UTILITY OF DELMARVA — CALL BEFORE YOU DIG — 811

| | |
|---|---|
| DATE: | 5/6/2025 |
| SCALE: | 1" = 10' |
| DRAWN BY: | AK |
| DESIGNED BY: | AK |
| APPROVED BY: | |

SHEET NO.: V-101

DESIGN DEVELOPMENT

Z:\FOUNDATION OF HOPE\CIVIL\PRODUCTION PLANS\FOUNDATION OF HOPE - SITE PLAN.DWG

## PROPOSED FEATURES

1. PROPERTY LINE
2. 2,538 S.F. OFFICE BUILDING
3. PERMEABLE PAVEMENT PARKING LOT. SEE DETAIL ON SHEET C-305
4. ADA COMPLIANT CONCRETE SIDEWALK. SEE DETAIL ON SHEET C-305
5. IBC COMPLIANT CONCRETE STAIRS WITH IBC COMPLIANT HANDRAILS. SEE DETAIL ON SHEET C-305
6. ADA COMPLIANT CONCRETE RAMP WITH HANDRAILS WITH ADA COMPLIANT HANDRAILS. SEE DETAIL ON SHEET C-305
7. 162 S.F. MICRO-BIORETENTION
8. WATER SERVICE LINE. SEE DETAIL ON SHEET C-404
9. SANITARY SEWER SERVICE. SEE DETAIL ON SHEET C-405
10. STANDARD 6" CURB AND GUTTER. SEE DETAIL ON SHEET C-305
11. 5' WIDE CURB OPENING. SEE DETAIL ON SHEET C-305
12. RELOCATED SIGN
13. RELOCATED LAMP POST
14. 4' X 6' ENTRY PIT
15. ELECTRIC AND FIBER FROM POLE TO PROPOSED TRANSFORMER AND COMM PEDESTAL
16. 4' X 6' RECEIVING PIT
17. 3 PHASE TRANSFORMER
18. COMMUNICATION PEDESTAL
19. TRASH RECEPTACLE AREA
20. SANITARY SEWER CLEANOUT
21. WATER METER PIT
22. HVAC ODU
23. SIDEWALK RAMP, SEE DETAIL ON SHEET C-305
24. ADA COMPLIANT CONCRETE RAMP, WITH LANDING

TAX MAP 104, PARCEL 1461
N/F LANDS OF
VERIZON MARYLAND MERGE CO
//

TAX MAP 104, PARCEL 1466
N/F LANDS OF
FAQUIR LLC
00857/00371

TAX MAP 104, PARCEL 1513
N/F LANDS OF
GREGORY J. SHMIGEL
SUSAN A. SHMIGEL
2337/372

TAX MAP 104, PARCEL 1512
N/F LANDS OF
ANASTACIA MCCAHAN
JOHN MCCAHAN
2799/142

TAX MAP 104, PARCEL 1511
N/F LANDS OF
PRICE TODD C
1329/00026

PORT STREET
VARIABLE WIDTH PUBLIC RIGHT OF WAY

SOUTH WASHINGTON STREET
VARIABLE WIDTH PUBLIC RIGHT OF WAY

SOUTH STREET
VARIABLE WIDTH PUBLIC RIGHT OF WAY

FRONT BRL

Up - HSG - MtcA - HSG C

NAD 83

0 10' 20'

Z:\FOUNDATION OF HOPE\CIVIL\PRODUCTION PLANS\FOUNDATION OF HOPE - SITE PLAN.DWG

# OVERALL SITE PLAN

FOR

# FOUNDATION OF HOPE

TAX MAP 0104, ID 0000, PARCEL 1463
FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND
PREPARED FOR FOUNDATION OF HOPE


RAUCH INC
Engineering | Survey | Architecture | Environmental
Main Office: 106 N Harrison St - Easton, MD 21601
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Phone: 410 770 9081 | 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

6-May-25

**REVISIONS**

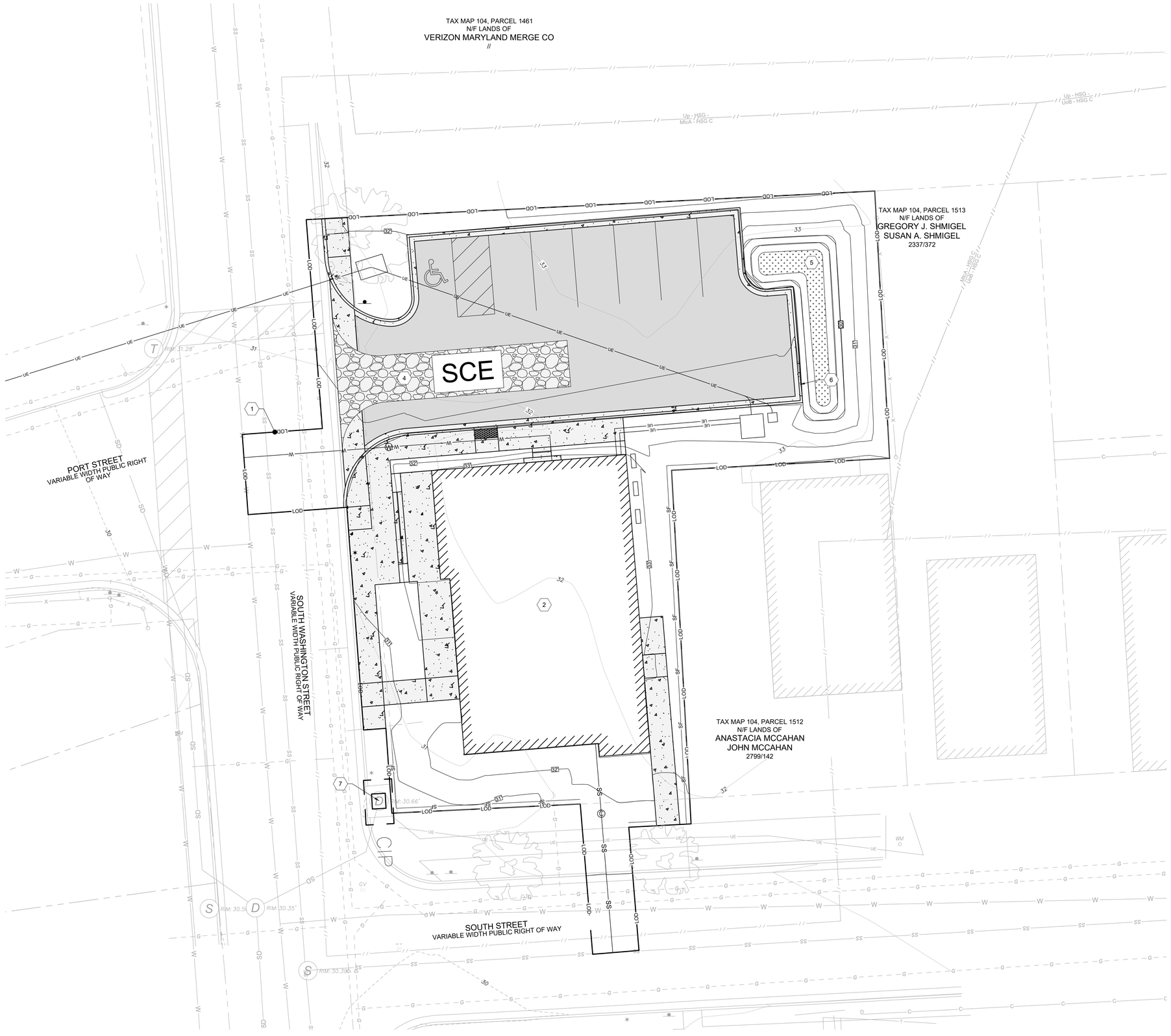
| REV. # | DATE | DESCRIPTION |
|---|---|---|

MISS UTILITY OF DELMARVA — 811

| | |
|---|---|
| DATE: | 5/6/2025 |
| SCALE: | 1" = 10' |
| DRAWN BY: | AK |
| DESIGNED BY: | AK |
| APPROVED BY: | |

**SHEET NO.:** C-100

**DESIGN DEVELOPMENT**




## PROPOSED FEATURES

1. LIMITS OF DISTURBANCE
2. 2,538 S.F. OFFICE BUILDING
3. SILT FENCE. SEE DETAIL ON SHEET C-205.01
4. STABILIZED CONSTRUCTION ENTRANCE, SEE DETAIL ON SHEET C-205.01
5. 162 S.F. MICRO-BIORETENTION
6. 5' WIDE CURB OPENING
7. CURB INLET PROTECTION. SEE DETAIL ON SHEET C-205.01

# ECS AND STORMWATER MANAGEMENT PLAN

FOR

# FOUNDATION OF HOPE

TAX MAP 0104, ID 0000, PARCEL 1463

FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND

PREPARED FOR FOUNDATION OF HOPE

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

6-May-25

**REVISIONS**

| REV. # | DATE | DESCRIPTION |
|---|---|---|

MISS UTILITY OF DELMARVA — ONE NUMBER. YOU DIG.

811

| | |
|---|---|
| DATE: | 5/6/2025 |
| SCALE: | 1" = 10' |
| DRAWN BY: | AK |
| DESIGNED BY: | AK |
| APPROVED BY: | |

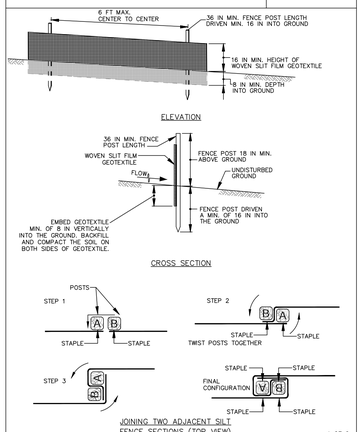
SHEET NO.: C-201

DESIGN DEVELOPMENT

Z:\FOUNDATION OF HOPE\CIVIL\PRODUCTION PLANS\FOUNDATION OF HOPE - SITE PLAN.DWG

## DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF




1 OF 2

CONSTRUCTION SPECIFICATIONS

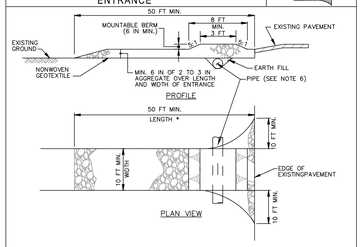
1. USE WOOD POSTS 1¾ X 1¾ ± ¾ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "L" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID–SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H–1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2

| MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL | | |
|---|---|---|
| U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION |

## DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



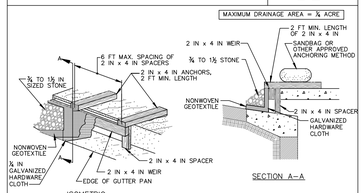

CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*50 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE TO FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H–1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

| MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL | | |
|---|---|---|
| U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION |

## DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL: CIP



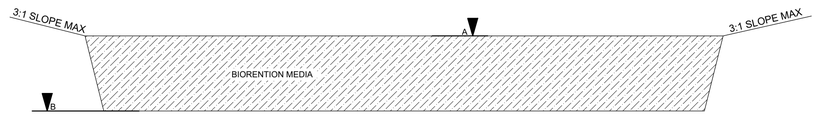

CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH x 4 INCH LUMBER
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS.
3. NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
4. ATTACH A CONTINUOUS PIECE OF ¼ INCH GALVANIZED HARDWARE CLOTH, WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
6. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 2 FEET LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
7. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
8. FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
9. AT NON–SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
10. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

| MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL | | |
|---|---|---|
| U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION |

## 0 BIORETENTION AREA

STANDARD DETAIL N.T.S.




NOTES:
- BIORETENTION MEDIA SHALL CONFORM TO TABLE B.4.1 MDE STORMWATER DESIGN MANUAL 2009 AND CONTAIN <5% CLAYS

CROSS SECTION

M-6 MICRO-BIORETENTION MAINTENANCE CRITERIA:

THE FOLLOWING ITEMS SHOULD BE ADDRESSED TO ENSURE PROPER MAINTENANCE AND LONG-TERM PERFORMANCE OF MICRO-BIORETENTION PRACTICES:

- PRIVATELY OWNED PRACTICES SHALL HAVE A MAINTENANCE PLAN AND SHALL BE PROTECTED BY EASEMENT, DEED RESTRICTION, ORDINANCE, OR OTHER LEGAL MEASURES PREVENTING ITS NEGLECT, ADVERSE ALTERATION, AND REMOVAL.
- THE TOP FEW INCHES OF FILTER MEDIA SHOULD BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN 48 HOURS. SILTS AND SEDIMENT SHOULD BE REMOVED FROM THE SURFACE OF THE FILTER BED WHEN ACCUMULATION EXCEEDS ONE INCH.
- WHERE PRACTICES ARE USED TO TREAT AREAS WITH HIGHER CONCENTRATIONS OF HEAVY METALS (E.G., PARKING LOTS, ROADS), MULCH SHOULD BE REPLACED ANNUALLY. OTHERWISE, THE TOP TWO TO THREE INCHES SHOULD BE REPLACED AS NECESSARY.
- OCCASIONAL PRUNING AND REPLACEMENT OF DEAD VEGETATION IS NECESSARY. IF SPECIFIC PLANTS ARE NOT SURVIVING, MORE APPROPRIATE SPECIES SHOULD BE USED. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.

INSPECTION:

REGULAR INSPECTIONS SHALL BE MADE DURING THE FOLLOWING STAGES OF CONSTRUCTION:

- DURING EXCAVATION OF SUBGRADE AND PLACEMENT AND BACKFILL OF UNDERDRAIN SYSTEMS.
- DURING PLACEMENT OF FILTER MEDIA.
- DURING CONSTRUCTION OF APPURTENANT CONVEYANCE. UPON COMPLETION OF FINAL GRADING OF ESTABLISHMENT OF PERMANENT STABILIZATION.

| BIORETENTION AREA | | |
|---|---|---|
| PRACTICE NAME | | SWM - 1 |
| | COMPONENT | ELEVATION - FT |
| A | BIORETENTION BED | 29.00 |
| B | BOTTOM OF MEDIA | 26.00 |

# ESC AND STORMWATER MANAGEMENT DETAILS

FOR

# FOUNDATION OF HOPE

TAX MAP 0104, ID 0000, PARCEL 1463

FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND

PREPARED FOR FOUNDATION OF HOPE


RAUCH INC
Engineering | Surveying | Architecture | Environmental
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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

6-May-25

REVISIONS

| REV. # | DATE | DESCRIPTION |
|---|---|---|

MISS UTILITY OF DELMARVA — ONE CALL DOES IT ALL! — 811

| | |
|---|---|
| DATE: | 5/6/2025 |
| SCALE: | N/A |
| DRAWN BY: | AK |
| DESIGNED BY: | AK |
| APPROVED BY: | |

SHEET NO.: C-205.01

DESIGN DEVELOPMENT

Z:\FOUNDATION OF HOPE\CIVIL\PRODUCTION PLANS\FOUNDATION OF HOPE - SITE PLAN.DWG

## 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 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.

1. Adequate vegetative stabilization requires 95 percent groundcover.

2. If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seedbed preparation, and seeding.

3. If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.

4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

**EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION**

1. Contractor shall install soil erosion and sediment control devices prior to any grading. Following initial disturbance or re-disturbance, permanent or temporary stabilization shall be completed within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes greater than three (3) horizontal to one (1) vertical (3:1) and seven (7) days as to all other disturbed or graded areas on the project site not under active grading.
2. All temporary erosion and sediment control devices are to be provided as indicated on this plan, with location adjustments to be made in the field as necessary, and to be maintained at the end of each working day until project completion. The minimum area practical shall be disturbed for the minimal amount of time possible.
3. Clearing and grubbing shall include all trees, brush, debris, root mat and organic materials to be removed.
4. Temporary seeding shall be accomplished between February 15th through April 30th, or August 15th through November 30th. During other times, temporary mulching shall be provided.
5. Temporary seeding shall conform to the following applications: 436 lbs. per acre of 10-20-20; 4,000 lbs. per acre of ground limestone, to be incorporated into the soil by disking or other suitable means. Annual ryegrass shall be applied at a rate of 50 lbs. per acre using suitable equipment. Mulching shall be accomplished immediately after seeding.

| Seed Mixture (For Hardiness Zone 7a) (From Table B.1) | | | | | Fertilizer Rate (10-20-20) | Lime Rate |
|---|---|---|---|---|---|---|
| No. | Species | Appl. Rate (lbs./ac.) | Seeding Dates | Seeding Depths | | |
| | ANNUAL RYEGRASS | 50# | 2/15 - 4/30<br>8/15 - 11/30 | ½" | | |
| | BARLEY | 96# | 2/15 - 4/30 / 8/15 - 11/30 | 1" | 436 lb/ac<br>10 lb/<br>1000 sf | 2 tons/ac<br>90 lb/<br>1000 sf |
| | OATS | 72# | 2/15 - 4/30 / 8/15 - 11/30 | 1" | | |
| | WHEAT | 120# | 2/15 - 4/30 / 8/15 - 11/30 | 1" | | |
| | CEREAL RYE | 112# | 2/15 - 4/30 / 8/15 - 12/15 | 1" | | |
| | FOXTAIL MILLET | 30# | 5/1 – 8/14 | ½" | | |
| | PEARL MILLET | 20# | 5/1 – 8/14 | ½" | | |

6. Mulching shall be unchopped, unrotted, small grain straw applied at a rate of 2-2½ tons per acre. Anchor mulch with a mulch anchoring tool on the Contour. Wood cellulose fiber may be used for anchoring straw at a rate of 750 lbs. per acre mixed with water at a maximum of 50 lbs. of wood cellulose fiber per 100 gals. of water, or with a synthetic liquid binder according to manufacturer recommendations. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1,500 lbs. per acre. Mix wood cellulose fiber with water to attain a mixture with a maximum of 50 lbs. of wood cellulose fiber per 100 gals. of water.
7. Permanent seeding shall be accomplished between March 1st through May 15th, or August 15th through October 15th. Permanent seeding at other than specified times will be allowed only upon written approval. Permanent seeding shall conform to the following applications: Permanent seeding for sites having disturbed over five (5) acres shall use fertilizer rates recommended by a soil testing agency and the recommendations provided in the Permanent Seeding Summary Table. Permanent seeding for conditions other than listed above shall be performed at the rates and dates as provided in the Permanent Seeding Summary Table below. Fertilizer and lime amendments shall be incorporated into the top 3"-5" of the soil by disking or other suitable means. Mulching shall be accomplished as discussed in item #6 of these specifications.

| Seed Mixture (For Hardiness Zone 7a) (From Table B.3) | | | | | Fertilizer Rate (10-20-20) | | | Lime Rate |
|---|---|---|---|---|---|---|---|---|
| No. | Species | Appl Rate (lbs/ac) | Seeding Dates | Seeding Depths | N | P2O5 | K2O | |
| 7 | CREEPING RED FESCUE<br>KENTUCKY BLUEGRASS | 60#<br>15# | 3/1 - 5/15<br>8/15 - 10/15 | 1/4" - 1/2" | 45 lb/ac<br>1 lb/<br>1000 sf | 90 lb/ac<br>2lb/<br>1000 sf | 90 lb/ac<br>2lb/<br>1000 sf | 2 tons/ac<br>90 lb/<br>1000 sq |
| 8 | TALL FESCUE | 100# | 3/1 - 5/15<br>8/15 - 10/15 | 1/4" - 1/2" | | | | |
| 9 | TALL FESCUE<br>KENTUCKY BLUEGRASS<br>PERENIAL RYEGERASS | 60#<br>40#<br>20# | 3/1 - 5/15<br>8/15 - 10/15 | 1/4" - 1/2" | | | | |
| | | | | | | | | |

8. Any spoil or borrow will be placed at a site approved by the Soil Conservation District.
9. All areas remaining or intended to remain disturbed for longer than seven (7) days shall be stabilized in accordance with the USDA, Natural Resources Conservation Service Standards and Specifications for Soil Erosion and Sediment Control in developing areas for critical area stabilization.
10. It will be the responsibility of the Contractor or Subcontractor to notify the Engineer of any deviation from this plan. Any change made in this plan without written authorization from the Engineer will place responsibility of said change on the Contractor or Subcontractor.

## 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

A. Soil Preparation
   1. Temporary Stabilization
      a. 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 rippers 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.
      b. Apply fertilizer and lime as prescribed on the plans.
      c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
   2. Permanent Stabilization
      a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
      i. Soil pH between 6.0 and 7.0.
      ii. Soluble salts less than 500 parts per million (ppm).
      iii. 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.
      iv. Soil contains 1.5 percent minimum organic matter by weight.
      v. Soil contains sufficient pore space to permit adequate root penetration.
      b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
      c. 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.
      d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
      e. 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. Seedbed loosening may be unnecessary on newly disturbed areas.

CONTINUED IN NEXT COLUMN

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

CONTINUED FROM PREVIOUS COLUMN

B. Topsoiling
   1. 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.
   2. 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.
   3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
      a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
      b. 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.
      c. The original soil to be vegetated contains material toxic to plant growth.
      d. The soil is so acidic that treatment with limestone is not feasible.
   4. Areas having slopes steeper than 2:1 require special consideration and design.
   5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
      a. 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.
      b. 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.
      c. 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.
   6. Topsoil Application
      a. Erosion and sediment control practices must be maintained when applying topsoil.
      b. 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.
      c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)
   1. Soil tests must be performed to determine the exact ratios 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.
   2. 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.
   3. 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.
   4. 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.
   5. 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

A. Seeding
   1. Specifications
      a. 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.
      b. 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.
      c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared especially 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. Seed 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 phyto-toxic materials.
   2. Application
      a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
      i. 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.
      ii. 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.
      b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
      i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
      c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
      i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P2O5 (phosphorous), 200 pounds per acre; K2O (potassium), 200 pounds per acre.
      i. 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.
      iii. Mix seed and fertilizer on site and seed immediately and without interruption.
      iv. When hydroseeding do not incorporate seed into the soil.

B. Mulching
   1. Mulch Materials (in order of preference)
      a. 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 species of grass is desired.
      b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
      i. 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.
      ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
      iii. 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.
      iv. WCFM material must not contain elements or compounds at concentration levels that will be phyto-toxic.
      v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.
   2. Application
      a. Apply mulch to all seeded areas immediately after seeding.
      b. 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.
      c. 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.
   3. Anchoring
      a. 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:
      i. 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.
      ii. 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.
      iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, 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.
      iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

**The following items have been addressed to meet the requirements of the GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY (NPDES NUMBER MDR10, STATE DISCHARGE PERMIT NUMBER 09GP).**

1) Utilization of environmental site design
2) Maintenance of limits of disturbance to protect natural areas
3) Control of construction equipment and vehicles
4) Evaluation and appropriate limitation of site clearing
5) Evaluation and designation of site area for phasing or sequencing
6) Identification of soils at high risk for erosion and advanced stabilization techniques to be used
7) Identification of steep slopes and designation of limitations on clearing them
8) Evaluation and designation of stabilization requirements and time limits and protection measures for discharges to the Chesapeake Bay, impaired waters or waters with an established Total Maximum Daily Load (TMDL)

## 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

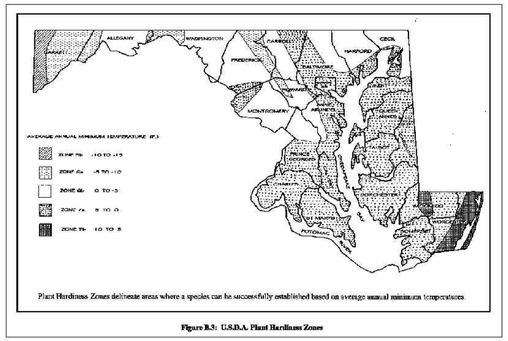
1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.

2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.

3. 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

| Seed Mixture (For Hardiness Zone 7a) (From Table B.1) | | | | | Fertilizer Rate (10-20-20) | Lime Rate |
|---|---|---|---|---|---|---|
| No. | Species | Appl. Rate (lbs./ac.) | Seeding Dates | Seeding Depths | | |
| | ANNUAL RYEGRASS | 50# | 2/15 - 4/30<br>8/15 - 11/30 | ½" | | |
| | BARLEY | 96# | 2/15 – 4/30; 8/15 – 11/30 | 1" | 436 lb/ac<br>10 lb/<br>1000 sf | 2 tons/ac<br>90 lb/<br>1000 sf |
| | OATS | 72# | 2/15 – 4/30; 8/15 – 11/30 | 1" | | |
| | WHEAT | 120# | 2/15 – 4/30; 8/15 – 11/30 | 1" | | |
| | CEREAL RYE | 112# | 2/15 – 4/30; 8/15 – 12/15 | 1" | | |
| | FOXTAIL MILLET | 30# | 5/1 – 8/14 | ½" | | |
| | PEARL MILLET | 20# | 5/1 – 8/14 | ½" | | |




Plant Hardiness Zones delineate areas where a species can be successfully established based on average annual minimum temperatures

**Figure B.3: U.S.D.A. Plant Hardiness Zones**

**Table B.1: Temporary Seeding for Site Stabilization**

| Plant Species | Seeding Rate 1/ | | Seeding Depth 2/ (inches) | Recommended Seeding Dates by Plant Hardiness Zone 3/ | | |
|---|---|---|---|---|---|---|
| | lb/ac | lb/1000 ft² | | 5b and 6a | 6b | 7a and 7b |
| **Cool-Season Grasses** | | | | | | |
| Annual Ryegrass (*Lolium perenne* ssp. *multiflorum*) | 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 (*Hordeum vulgare*) | 96 | 2.3 | 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 (*Avena sativa*) | 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 (*Triticum aestivum*) | 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 (*Secale cereale*) | 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** | | | | | | |
| Foxtail Millet (*Setaria italica*) | 30 | 0.7 | 0.5 | Jun 1 to Jul 31 | May 16 to Jul 31 | May 1 to Aug 14 |
| Pearl Millet (*Pennisetum glaucum*) | 20 | 0.5 | 0.5 | Jun 1 to Jul 31 | May 16 to Jul 31 | May 1 to Aug 14 |

NOTES:
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 warranted for the cool-season grasses.

Seeding mixes listed above are for temporary seedings, when planted alone. When planted as a nurse crop with permanent seed mixes, use 1/3 of the seeding rate listed above for barley, oats, and wheat. For smaller-seeded grasses (annual ryegrass, pearl millet, foxtail millet), do not exceed more than 5% (by weight) of the overall permanent seeding rate. Cereal rye generally should not be used as a nurse crop, unless planting will occur in very late fall beyond the seeding dates for other temporary seedings. Cereal rye has allelopathic properties that inhibit the germination and growth of other plants. If it must be used as a nurse crop, seed at 1/3 of the rate listed above.

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

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

3/ The planting dates listed are averages for each Zone and may require adjustment to reflect local conditions, especially near the boundaries of the zone.

## 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

A. Seed Mixtures
   1. General Use
      a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness 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 Seedin Summary. The Summary is to be placed on the plan.
      b. 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.
      c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
      d. 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 .
   2. Turfgrass Mixtures
      a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
      b. 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.
      i. 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.
      ii. 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.
      iii. 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 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
      iv. 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.

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

      c. 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)

      d. 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.
      e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (½ to 1inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Permanent Seeding Summary

| Seed Mixture (For Hardiness Zone 7a) (From Table B.3) | | | | | Fertilizer Rate (10-20-20) | | | Lime Rate |
|---|---|---|---|---|---|---|---|---|
| No. | Species | Appl. Rate (lbs./ac.) | Seeding Dates | Seeding Depths | N | P2O5 | K2O | |
| 7 | CREEPING RED FESCUE<br>KENTUCKY BLUEGRASS | 60#<br>15# | 2/15-4/30<br>8/15-10/31 | ¼"-½" | 45 lb/ac<br>1 lb/<br>1000 sf | 90 lb/ac<br>2 lb/<br>1000 sf | 90 lb/ac<br>2 lb/<br>1000 sf | 2 tons/ac<br>60 lb/<br>1000 sf |
| 8 | TALL FESCUE | 100# | 2/15-4/30<br>8/15-10/31 | ¼"-½" | | | | |
| 9 | TALL FESCUE<br>KENTUCKY BLUEGRASS<br>PERENIAL RYEGERASS | 60#<br>40#<br>20# | 2/15-4/30<br>8/15-10/31 | ¼"-½" | | | | |
| | | | | | | | | |

B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).
   1. General Specifications
      a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
      b. Sod must be machine cut at 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.
      c. 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.
      d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
      e. 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.
   2. Sod Installation
      a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
      b. 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.
      c. 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.
      d. 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.
   3. Sod Maintenance
      a. 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.
      b. After the first week, sod watering is required as necessary to maintain adequate moisture content.
      c. Do not mow until the sod is firmly rooted. No more than ⅓ 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.

**STORMWATER MANAGEMENT DETAILS**

FOR

**FOUNDATION OF HOPE**

TAX MAP 0104, ID 0000, PARCEL 1463

FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND

PREPARED FOR FOUNDATION OF HOPE

RAUCH INC
Engineering | Survey | Architecture | Environmental
Main Office: 108 N Harrison St • Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410 770 9081 | 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

6-May-25

| REVISIONS | | |
|---|---|---|
| REV. # | DATE | DESCRIPTION |

MISS UTILITY OF DELMARVA — CALL BEFORE YOU DIG — 811

| | |
|---|---|
| DATE: | 5/6/2025 |
| SCALE: | N/A |
| DRAWN BY: | AK |
| DESIGNED BY: | AK |
| APPROVED BY: | |

SHEET NO.: C-205.02

DESIGN DEVELOPMENT

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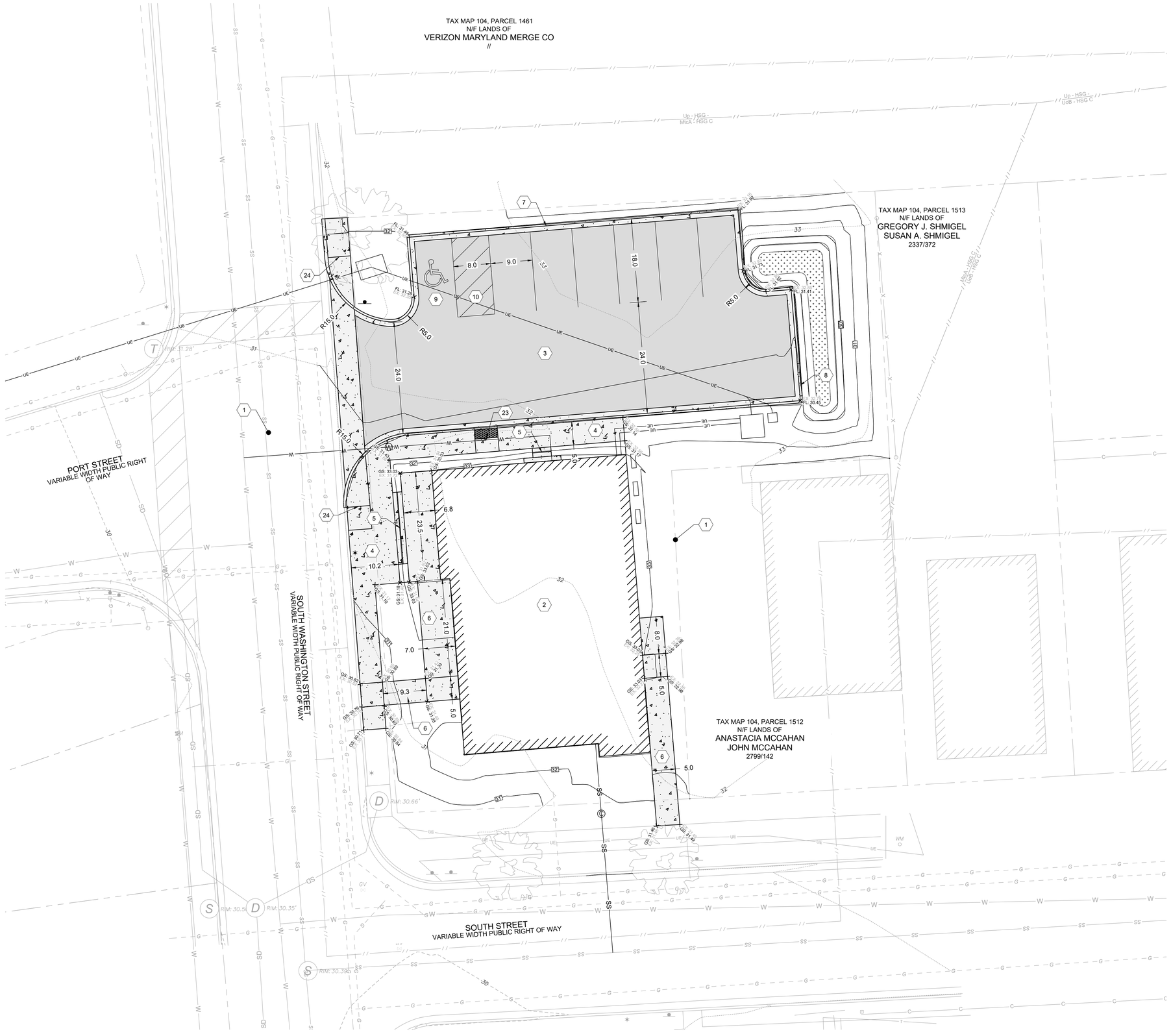


## PROPOSED FEATURES

1. PROPERTY LINE
2. 2,538 S.F. OFFICE BUILDING
   FINISH GRADE = 33.03
   FINISH FLOOR = 33.70
3. PERMEABLE PAVEMENT PARKING LOT. SEE DETAIL ON SHEET C-305
4. ADA COMPLIANT CONCRETE SIDEWALK. SEE DETAIL ON SHEET C-305
5. IBC COMPLIANT CONCRETE STAIRS WITH IBC COMPLIANT HANDRAILS. SEE DETAIL ON SHEET C-305
6. ADA COMPLIANT CONCRETE RAMP WITH ADA COMPLIANT HANDDRAILS.SEE DETAIL ON SHEET C-305
7. STANDARD 6" CURB AND GUTTER. SEE DETAIL ON SHEET C-305
8. 5' WIDE CURB OPENING
9. ADA COMPLIANT VAN ACCESSIBLE PARKING SPACE WITH ADA COMPLIANT SIGN
10. ADA COMPLIANT VAN ACCESSIBLE AISLE WITH ADA COMPLIANT SIGN
23. SIDEWALK RAMP, SEE DETAIL ON SHEET C-305
24. ADA COMPLIANT CONCRETE RAMP, WITH LANDING

# SITE GRADING PLAN

FOR

# FOUNDATION OF HOPE

TAX MAP 0104, ID 0000, PARCEL 1463

FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND

PREPARED FOR FOUNDATION OF HOPE

RAUCH INC.
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 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

6-May-25

**REVISIONS**

| REV. # | DATE | DESCRIPTION |
|---|---|---|

MISS UTILITY OF DELMARVA — ONE CALL DOES IT ALL! — 811

| | |
|---|---|
| DATE: | 5/6/2025 |
| SCALE: | 1" = 10' |
| DRAWN BY: | AK |
| DESIGNED BY: | AK |
| APPROVED BY: | |

SHEET NO.: C-301

DESIGN DEVELOPMENT

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**ASPHALT PAVEMENT FOR ROADS**

| | |
|---|---|
| SURFACE COURSE: | 2" HMA SUPERPAVE, 9.5 MM |
| BASE COURSE: | 4" HMA SUPERPAVE, 19.0 MM |
| SUB BASE: | 9" GRADED AGGREGATE BASE (GAB) |

**ASPHALT PAVEMENT FOR ALLEYS**

| | |
|---|---|
| SURFACE COURSE: | 2" HMA SUPERPAVE, 9.5 MM |
| BASE COURSE: | 2.5" HMA SUPERPAVE, 19.0 MM |
| SUB BASE: | 6" GRADED AGGREGATE BASE (GAB) |

**WEDGE/LEVEL**

9.5 MM: 0" - 1.50"

**CONCRETE PAVEMENT**

| | |
|---|---|
| SURFACE COURSE: | 8" PORTLAND CEMENT CONCRETE MIX #7 |
| SUB BASE: | 9" GRADED AGGREGATE BASE (GAB) |

**LIFT THICKNESS**

| | |
|---|---|
| 9.5 MM: | 0" - 1.50" (WEDGE/LEVEL ONLY) |
| 9.5 MM | 1.50" - 2.50" |
| 12.5 MM: | 2.00" - 3.00" |
| 19.0 MM: | 2.50" - 4.00" |
| GAB | 2.00" - 6.00" |
| COLD PATCH | 1.00" - 3.00" |

**NOTES**

1. ALL DEPTHS ARE FINISHED/COMPACTED DEPTHS.
2. CR-6 OR CR-8 MAY BE USED IN LIEU OF GRADED AGGREGATE BASE (GAB).
3. GAB MUST BE COMPACTED TO A MINIMUM OF 95% MODIFIED PROCTOR.
4. BASE COURSE MUST BE COMPACTED TO 92% MODIFIED PROCTOR.
5. SURFACE COURSE MUST BE COMPACTED TO 92% MODIFIED PROCTOR.
6. MODIFIED PROCTOR TEST RESULTS MUST BE PROVIDED.

| APPROVED | TOWN OF EASTON STANDARD DETAILS |
|---|---|
| RICK VAN EMBURGH, TOWN ENGINEER | **PAVING SPECIFICATIONS** |
| ISSUED: **JANUARY, 2025** | STANDARD NO: **TOE-R-1.01** |

**SUB-BASE**

1. SUB-GRADE SHALL BE PLACED ON PREPARED AND COMPACTED REFILLED EXCAVATIONS. MATERIALS AND METHODS OF CONSTRUCTION SHALL MEET THE PROVISIONS OF MD SHA STANDARDS, SECTION 208.
2. GRADED AGGREGATE BASE COURSE:
   a. GRADED AGGREGATE BASE SHALL BE PLACED ON PREPARED AND COMPACTED REFILLED EXCAVATIONS TO THE COMPACTED DEPTH AS SHOWN ON THE DRAWING DETAILS.
   b. GRADED AGGREGATE SHALL BE PER MD SHA STANDARD, SECTION 901.
   c. RECYCLED CRUSHED CONCRETE IS AN ACCEPTABLE ALTERNATIVE PROVIDED THICKNESS ADJUSTMENTS ARE MADE BASED ON SUPPLEMENTAL TESTING TO BE SUBMITTED BY A QUALIFIED TESTING LABORATORY AND APPROVED BY THE TOWN ENGINEER.

**TACK COAT**

1. COATING SHALL BE RESIDUAL ASPHALT UNIFORMILY SPREAD BY AN ASPHALT DISTRIBUTOR AT A RATE OF 0.05 GAL/SY (+/- 0.01 GAL/SY).
2. CONTRACTOR SHALL TAKE CARE NOT TO TRACK COAT ON SURFACE COURSES.

**HOT MIX ASPHALT PAVEMENT**

1. HOT MIX ASHPALT PAVEMENT SHALL CONSIST OF A NUMBER OF COURSES OF HMA SUPERPAVE MATERIAL AND AGGREGATE ON A PREPARED SUB-BASE AS SHOWN WITHIN THE TOWN STANDARDS.
2. MATERIALS AND METHODS OF CONSTURCTION SHALL MEET THE PROVISIONS OF SECTION 504 AND SECTION 904 OF THE MD SHA STANDARDS AND DETAILS.
3. SURFACE COURSES OF BITUMINOUS CONCRETE MIXES SHALL HAVE LESS THAN 15% RECYCLED ASPHALT PAVEMENT (RAP), UNLESS OTHERWISE APPROVED BY THE TOWN ENGINEER.
4. BASE COURSES SHALL HAVE NOT MORE THAN 20% RAP.
5. WEATHER RESTRICTIONS:
   a. SURFACE COURSE - MINIMUM SURFACE TEMPERATURE 40° AND RISING.
   b. BASE COURSE - MINIMUM SURFACE TEMPERATURE 32° AND RISING.

**CONCRETE PAVEMENT**

1. CONCRETE USED IN THE RESTORATION OF STREETS AND ROADS SHALL BE PLACED TO THE MINIMUM THICKNESS THAT SHALL BE APPROVED BY THE TOWN. CONCRETE MAY BE A BASE COURSE WITH A BITUMINOUS OVERLAY OR A FINISHED SURFACE COURSE.
2. CONCRETE PAVEMENT SHALL MEET THE PROVISIONS OF MD SHA STANDARDS, SECTION 522.
3. CONCRETE SIDEWALK AND CURB AND GUTTER RESTORATION SHALL BE AS INDICATED WITHIN THE TOWN STANDARDS.

**SOIL CEMENT**

1. WHERE THE CBR VALUES ARE FOUND TO BE LOW WITHIN THE PAVED AREA, THE TOWN WILL ALLOW THE SUB-GRADE TO BE REINFORCED BY A CEMENTIOUS MATERIAL BEING MIXED IN THE SUBGRADE. APPLICATION SHALL BE SUBJECT TO THE GEOTECHNICAL INVESTIGATION.
2. A MINIMUM OF 2" OF GRADED AGGREGATE SHALL BE INSTALLED BETWEEN THE AMEND-ED SOIL AND BITUMINOUS PAVEMENT.
3. MINIMUM MIX DEPTH OF THE SOIL CEMENT MIXTURE SHALL BE 8" WITH A 5-5.5% MIN. CEMENT CONTENT.

**TOLERANCES**

1. SURFACE PAVEMENT SHALL NOT DEVIATE MORE THAN 0.25" OVER 10', WHEN MEASURED PARALLEL AND PERPENDICULAR TO THE DIRECTION OF TRAVEL.

| APPROVED | TOWN OF EASTON STANDARD DETAILS |
|---|---|
| RICK VAN EMBURGH, TOWN ENGINEER | **PAVING NOTES** |
| ISSUED: **JANUARY, 2025** | STANDARD NO: **TOE-R-1.02** |

**SUBMITTALS**

1. SUBMIT MIX DESIGN FOR APPROVAL PRIOR TO PLACING CONCRETE (MD SHA MIX #3 FOR ALL CONCRETE SIDEWALKS, AIR ENTRAINED, MINIMUM 3,500 PSI MIX). FOR CURB AND GUTTER, UTILIZE MD SHA MIX #3, EXCEPT MAXIMUM WATER CEMENTITIOUS RATIO OF 0.45 AND 611 POUNDS MINIMUM CEMENTITIOUS MATERIALS, AIR ENTRAINED, MINIMUM 4,200 PSI MIX.
2. SUBMIT CONCRETE TESTING AGENCY FOR APPROVAL, WHICH CONTRACTOR OR PROJECT OWNER SHALL EMPLOY FOR INFIELD AND LABORATORY TESTING.

**CONCRETE PLACEMENT**

1. NOTIFY TOWN OF INTENTION TO POUR CONCRETE 24 HOURS PRIOR TO PERFORMING WORK. (PHONE: 410-820-8822).
2. DRIVER SHALL PRESENT COMPUTER GENERATED MIX DELIVERY TICKET UPON ARRIVAL TO SITE.
3. DO NOT ADD WATER TO MIX AT JOB SITE UNLESS APPROVED BY ENGINEER. DO NOT POUR CONCRETE DURING RAIN EVENTS.
4. TESTING AGENCY SHALL TEST FOR SLUMP, TEMPERATURE AND AIR ENTRAINMENT AT THE JOB SITE, PRIOR TO POURING EACH TRUCK LOAD DELIVERED TO SITE. THE MAXIMUM TIME FROM ADDING WATER AT PLANT TO DISCHARGE AT SITE SHALL BE WITHIN 1.5 HOURS. TESTING AGENCY SHALL VERIFY THAT SUB-GRADE IS PROPERLY COMPACTED.
5. TESTING AGENCY SHALL COLLECT CYLINDERS FOR COMPRESSION TESTING ON EACH TRUCK LOAD OF CONCRETE DELIVERED TO SITE PER ACI REQUIREMENTS.TEST RESULTS SHALL BE PROVIDED TO THE ENGINEER WITHIN 48 HOURS OF 7 AND 28 DAY BREAKS, REPORT SHALL INCLUDE LOCATION OF POUR PER PLAN STATIONING.
6. ENGINEER OF HIS/HER REPRESENTATIVE SHALL VERIFY THAT AREA OF CONCRETE WORK IS PROPERLY PREPARED, FREE OF WATER, FREE OF UNSTABLE MATERIALS AND THAT ALL REINFORCEMENT REQUIRED AT DRIVEWAYS, RAMPS, VALLEY GUTTERS, ETC. IS IN PLACE AND PROPERLY SUPPORTED.
7. COLD WEATHER CONCRETE PLACEMENT SHALL BE PROTECTED FROM DAMAGE AND FROST, FREEZING ACTION OR LOW TEMPERATURES. NO UNAPPROVED ADMIXTURES ARE PERMITTED.
8. CONCRETE CURB AND SIDEWALKS SHALL HAVE PROPER CONTROL JOINTS INSTALLED AT 10' INTERVAL FOR CURB AND 5' INTERVALS FOR SIDEWALK. EXPANSION JOINTS FOR CURBING SHALL BE AT EACH 100' INTERVAL PLUS AT EACH POINT OF TANGENT OR CURVE. SIDEWALKS SHALL HAVE EXPANSION JOINTS AT 20' INTERVALS OR AT CHANGE OF DIRECTION.

| APPROVED | TOWN OF EASTON STANDARD DETAILS |
|---|---|
| RICK VAN EMBURGH, TOWN ENGINEER | **CONCRETE QUICK REFERENCE LIST** |
| ISSUED: **JANUARY, 2025** | STANDARD NO: **TOE-R-1.03** |

**CENTERLINE PAVEMENT MARKINGS**

1. CENTERLINE PAVEMENT MARKINGS SHALL BE USED TO DELINEATE THE SEPARATION OF TRAFFIC LANES THAT HAVE OPPOSITE DIRECTION OF TRAVEL.
2. THE CENTERLINE SHALL BE IN THE GEOMETRICAL CENTER OF THE ROADWAY UNLESS OTHERWISE REQUIRED BY FIELD CONDITIONS.
3. ALL TWO WAY STREETS WITH AT LEAST 10' TRAVELL LANES SHALL HAVE A CENTERLINE.
4. THE CENTERLINE MARKING SHALL BE YELLOW LINES, CONFIGURATION TO BE APPROVED BY THE TOWN ENGINEER.
5. WHILE SEPARATING TRAFFIC LANES TRAVELING IN THE SAME DIRECTION, A SINGLE BROKEN WHITE LINE SHALL BE USED WHERE CROSSING LANES IS PERMITTED.

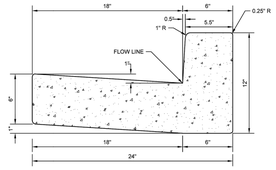
**EDGE LINE PAVEMENT MARKINGS**

1. EDGE LINE PAVEMENT MARKINGS SHALL BE USED TO DELINEATE THE SHOULDER AND TRAVEL LANES.
2. THE EDGE OF THE TRAVEL LANE SHALL CONSIST OF A SINGLE SOLID WHITE LINE.
3. EXCEPT FOR DOTTED EDGE LINE EXTENSIONS, EDGE LINES SHALL NOT BE EXTENDED THROUGH INTERSECTIONS OR MAJOR DRIVEWAYS.

**MARKING TYPE AND COMPOSITION**

1. MATERIAL SHALL BE HIGHLY DURABLE RETROREFLECTIVE POLYMERIC MATERIALS DESIGNED FOR USE AS TRANSVERSE LINES, NUMBERS, SYMBOLS AND ARROW MARKINGS SUBJECTED TO HIGH VOLUMES AND SEVERE WEAR CONDITIONS SUCH AS SHEAR ACTION FROM CROSSOVER OR ENCROACHMENT.
2. MATERIAL SHALL ADHERE TO ALL ASPHALT AND PORTLAND CEMENT CONCRETE PAVEMENT SURFACES AND ANY EXISTING PAVEMENT MARKINGS WHEN APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
3. THE MATERIAL SHALL BE CAPABLE OF CONFORMING TO PAVEMENT CONTOURS, BREAKS AND FAULTS, AND SHALL REMAIN IN PLACE ON PAVEMENT WITHOUT BEING DISPLACED BY TRAFFIC.
4. THE MATERIAL SHALL CONSIST OF POLYMERIC MATERIALS, PIGMENTS, BINDERS AND GLASS BEADS DISTRIBUTED ACROSS THE ENTIRE CROSS-SECTIONAL AREA.
5. THE MATERIAL SHALL PROVIDE A MINIMUM AVERAGE SKID RESISTANCE VALUE OF 50 BPN WHEN TESTED.
6. THE MATERIAL SHALL HAVE A MINIMUM THICKNESS OF 120 MILS WITHOUT ADHESIVE.
7. THE MATERIAL SHALL RETAIN A MINIMUM OF 65% ADHESIVE BOND AFTER 100 FREEZE-THAW CYCLES.

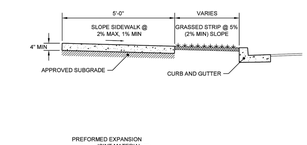
| APPROVED | TOWN OF EASTON STANDARD DETAILS |
|---|---|
| RICK VAN EMBURGH, TOWN ENGINEER | **PAVEMENT MARKINGS** |
| ISSUED: **JANUARY, 2025** | STANDARD NO: **TOE-R-1.04** |




**NOTES:**

1. ALL CONCRETE USED FOR CURB AND GUTTER SHALL BE SHA MIX #3.
2. CURB AND GUTTER SHALL HAVE CONTRACTION JOINTS EVERY 10'-0", AND EXPANSION JOINTS EVERY 40'-0". EXTRUDED CURB AND GUTTER SHALL CONTRACTION JOINTS EVERY 10'-0", AND EXPANSION JOINTS EVERY 100'-0".
3. DEPRESSED CURB AND GUTTER SHALL BE UTILIZED AT HANDICAPPED RAMPS WHEN TRANSITIONING FROM STANDARD CURB AND GUTTER.
4. MAXIMUM GUTTER SLOPE ON CURB RETURNS SHALL BE 2% WHERE HANDICAPPED RAMPS ARE REQUIRED.
5. SUBGRADE SHALL BE 2" MIN. #57 STONE, BRG, GAB, CR6, CR8, OR MILLINGS.

| APPROVED | TOWN OF EASTON STANDARD DETAILS |
|---|---|
| RICK VAN EMBURGH, TOWN ENGINEER | **STANDARD CURB & GUTTER** |
| ISSUED: **JANUARY, 2025** | STANDARD NO: **TOE-R-4.01** |



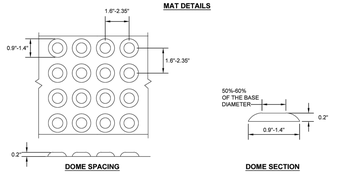

**EXPANSION JOINT DETAIL**

**NOTES:**

1. CONCRETE SHALL BE SHA MIX #3.
2. CONTRACTION JOINTS SHALL BE TOOLED AT 5'-0" INTERVALS (4' INTERVALS FOR 4' WIDE SIDEWALK).
3. EXPANSION JOINTS AT INTERVALS NOT GREATER THAN 20'-0".
4. ALL UNPAVED AREAS WITHIN STREET SIDELINES SHALL BE SEEDED OR SODDED PER SPECIFICATIONS.
5. SIDEWALKS AT DRIVEWAY LOCATIONS TO BE 8" THICK.
6. WHERE CONTINUOUS WIDTH OF TRAVEL IS LESS THAN 5'-0", PROVIDE PASSING ZONES AT AN INTERVAL NOT TO EXCEED 200' CENTER TO CENTER. ENTRANCES SHALL BE ACCEPTABLE PASSING ZONES PROVIDED PAVING WIDTH OF 5'-0" IS MAINTAINED AT 2% SLOPE.
7. GRASS STRIPS SHALL BE SLOPED TO PROVIDE POSITIVE DRAINAGE TOWARD STORMWATER FEATURES.
8. WHERE REVERSE SLOPES OF GRASS STRIPS AND SIDEWALKS ARE REQUIRED TO PROVIDE POSITIVE DRAINAGE TOWARDS A STORMWATER FEATURE, SPOT ELEVATIONS SHALL BE PROVIDED ON FRONT AND BACK OF SIDEWALK. (REVERSE SLOPES MUST BE APPROVED BY THE TOWN ENGINEER PRIOR TO CONSTRUCTION).
9. MAXIMUM SLOPE IN THE DIRECTION OF TRAVEL SHALL BE 5% IN LOCATIONS WITHOUT HANDICAPPED RAMPS.
10. SIDEWALKS SHALL COMPLY WITH ADA REQUIREMENTS PER THE MOST UP TO DATE DEPARTMENT OF JUSTICE REGULATION 28CFR PART 36.

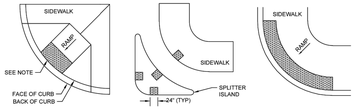
| APPROVED | TOWN OF EASTON STANDARD DETAILS |
|---|---|
| RICK VAN EMBURGH, TOWN ENGINEER | **CONCRETE SIDEWALK** |
| ISSUED: **JANUARY, 2025** | STANDARD NO: **TOE-R-5.01** |

**MAT DETAILS**




**DOME SPACING** **DOME SECTION**

**PLACEMENT GUIDELINES**




**SHARED CURB RAMP** **REFUGE ISLAND** **BLENDED CURB**

**NOTES:**

1. THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6"-8" FROM THE FACE OF THE CURB.
2. FOR SKEWED APPLICATIONS, DETECTABLE WARNING SHALL BE PLACED SUCH THAT THE DOMES CLOSEST TO THE BACK OF THE CURB ARE NO LESS THAN 0.5" AND NO MORE THAN 3.0" FROM THE BACK OF THE CURB.
3. TRUNCATED DOME SURFACES SHALL BE FABRICATED TO PROVIDE FULL DOMES ONLY.
4. DETECTABLE WARNING SURFACES ARE REQUIRED AT STREET CROSSINGS AND SIGNALIZED INTERSECTIONS.
5. WHERE ISLANDS OR MEDIANS ARE LESS THAN 6' WIDE, THE DETECTABLE WARNING SHOULD EXTEND ACROSS THE FULL LENGTH OF THE CUT THROUGH THE ISLAND OR MEDIAN.

| APPROVED | TOWN OF EASTON STANDARD DETAILS |
|---|---|
| RICK VAN EMBURGH, TOWN ENGINEER | **DETECTABLE WARNING SURFACES** |
| ISSUED: **JANUARY, 2025** | STANDARD NO: **TOE-R-5.08** |

**CAST-IN-PLACE CONCRETE SIDEWALK AND CURBING**

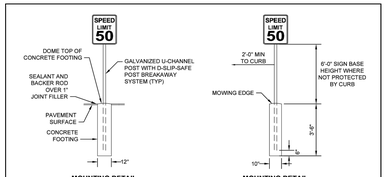
**A. SUBMITTALS**

1. SUBMIT MIX DESIGN FOR APPROVAL PRIOR TO PLACING CONCRETE. FOR ALL CONCRETE 1. SIDEWALKS, UTILIZE MD SHA MIX #3, AIR ENTRAINED, MINIMUM 3,500 PSI MIX. FOR CURB AND GUTTER, UTILIZE MD SHA MIX #3, EXCEPT MAXIMUM WATER CEMENTITIOUS RATIO OF 0.45 AND 611 POUNDS MINIMUM CEMENTITIOUS MATERIALS, AIR ENTRAINED, MINIMUM 4,200 PSI MIX.
2. SUBMIT CONCRETE TESTING AGENCY FOR APPROVAL, WHICH CONTRACTOR OR PROJECT OWNER SHALL EMPLOY FOR INFIELD AND LABORATORY TESTING.

**B. CONCRETE PLACEMENT**

1. NOTIFY THE TOWN ENGINEERING DEPARTMENT OF INTENTION TO POUR CONCRETE 24 HOURS PRIOR TO PERFORMING WORK AT 410-820-8822.
2. ENGINEER, OR THEIR REPRESENTATIVE, SHALL VERIFY THAT AREA OF CONCRETE WORK IS PROPERLY PREPARED, FREE OF WATER, FREE OF UNSTABLE MATERIALS AND THAT ALL REINFORCEMENT REQUIRED AT DRIVEWAYS, RAMPS, VALLEY GUTTERS, ETC. IS IN PLACE AND PROPERLY SUPPORTED.
3. TESTING AGENCY SHALL VERIFY THAT SUBGRADE IS PROPERLY COMPACTED.
4. DRIVER SHALL PRESENT COMPUTER GENERATED MIX DELIVERY TICKET UPON ARRIVAL TO SITE.
5. DO NOT ADD WATER TO MIX AT JOB SITE UNLESS APPROVED BY TOWN ENGINEER. DO NOT POUR CONCRETE DURING RAIN EVENTS.
6. TESTING AGENCY SHALL TEST FOR SLUMP, TEMPERATURE, AIR ENTRAINMENT AT THE JOB SITE, 6. PRIOR TO POURING EACH TRUCK LOAD DELIVERED TO SITE. THE MAXIMUM TIME FROM ADDING WATER TO THE BATCH AT PLANT TO DISCHARGE AT SITE SHALL BE 1.5 HOURS.
7. TESTING AGENCY SHALL COLLECT CYLINDERS FOR COMPRESSION TESTING ON EACH TRUCK LOAD OF CONCRETE DELIVERED TO SITE PER AMERICAN CONCRETE INSTITUTE (ACI) REQUIREMENTS.TEST RESULTS SHALL BE PROVIDED TO ENGINEER WITHIN 48 HOURS OF 7 AND 28 DAY BREAKS. REPORT SHALL INCLUDE LOCATION OF POUR PER PLAN STATIONING.
8. COLD WEATHER CONCRETE PLACEMENT SHALL BE PROTECTED FROM DAMAGE AND FROST.
9. CONCRETE CURB AND SIDEWALKS SHALL HAVE PROPER CONTROL JOINTS INSTALLED AT 10' INTERVALS FOR CURB AND 5' INTERVALS FOR SIDEWALK. CURB AND GUTTER SHALL HAVE CONTRACTION JOINTS EVERY 10', AND EXPANSION JOINTS EVERY 40'. EXTRUDED CURB AND GUTTER SHALL HAVE CONTRACTION JOINTS EVERY 10', AND EXPANSION JOINTS EVERY 100' AND AT A POINT OF TANGENT OR CURVE. SIDEWALKS SHALL HAVE EXPANSION JOINTS AT 20' INTERVALS OR AT A CHANGE OF DIRECTION.

| APPROVED | TOWN OF EASTON STANDARD DETAILS |
|---|---|
| RICK VAN EMBURGH, TOWN ENGINEER | **CONCRETE QUICK REFERENCE LIST** |
| ISSUED: **JANUARY, 2025** | STANDARD NO: **TOE-R-5.09** |

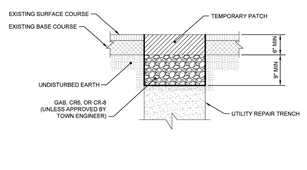



**MOUNTING DETAIL PAVED AREAS** **MOUNTING DETAIL UNPAVED AREAS**

**NOTES:**

1. REFER TO THE MARYLAND STATE HIGHWAY ADMINISTRATION "STANDARD BOOK" FOR DIMENSIONS AND COLORS OF ALL SIGNS NOT SHOWN.
2. ALL PROPOSED SIGNS MUST MEET THE MINIMUM REQUIREMENTS FOR RETROREFLECTIVITY SET FORTH BY THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES, MOST CURRENT EDITION.

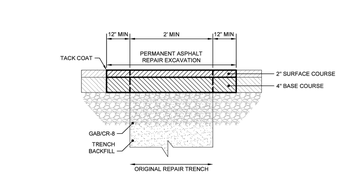
| APPROVED | TOWN OF EASTON STANDARD DETAILS |
|---|---|
| RICK VAN EMBURGH, TOWN ENGINEER | **SIGNS** |
| ISSUED: **JANUARY, 2025** | STANDARD NO: **TOE-R-7.03** |




**NOTES:**

1. PAVEMENT SHALL BE SAW CUT TO THE FULL DEPTH OF THE EXISTING PAVEMENT SECTION. ALL CUTS SHALL BE MADE IN STRAIGHT LINES.
2. TEMPORARY PATCH SHALL BE ONE OF THE FOLLOWING, PLACED AND COMPACTED IN LIFTS. (REFER TO TOE-R-1.01 FOR LIFT THICKNESS).
   a. GAB (CR6 OR CR8 MAY BE USED IN LIEU OF GAB)
   b. 9.5MM,12.5MM, OR 19.5MM HMA
   c. COLD PATCH
3. GAB MUST BE COMPACTED TO 95% MODIFIED PROCTOR, BASE/SURFACE PAVE MUST BE COMPACTED TO 92% MODIFIED PROCTOR.
4. A TEMPORARY GAB PATCH MUST BE CONVERTED TO COLD PATCH OR SUPERPAVE WITHIN 1 WEEK OF COMPLETION OF TRENCH WORK, UNLESS APPROVED BY THE TOWN ENGINEER.
5. TEMPORARY TRENCH RESTORATION MUST BE CONVERTED TO A PERMANENT TRENCH RESTORATION WITHIN 30 DAYS OF COMPLETION OF TRENCH WORK, UNLESS APPROVED BY THE TOWN ENGINEER. TEMPORARY TRENCH RESTORATION DONE AFTER NOVEMBER 20TH MUST BE CONVERTED TO A PERMANENT TRENCH RESTORATION BEFORE MAY 30TH OF THE FOLLOWING YEAR.
6. TEMPORARY RESTORATION MUST BE INSPECTED AND MAINTAINED EVERY 30 DAYS UNTIL THE PERMANENT RESTORATION IS COMPLETED. AN INSPECTION AND MAINTENANCE LOG MUST BE MAINTAINED.
7. CONTRACTOR MUST CONFIRM LIMITS OF PATCH REQUIRED WITH THE TOWN ENGINEER PRIOR TO START OF PATCH WORK.
8. A GEOTECHNICAL ENGINEER IS REQUIRED TO PROVIDE TESTING IN TRAFFIC BEARING AREAS. A VISUAL INSPECTION MAY BE PERFORMED IN NON-TRAFFIC BEARING AREAS.

| APPROVED | TOWN OF EASTON STANDARD DETAILS |
|---|---|
| RICK VAN EMBURGH, TOWN ENGINEER | **TEMPORARY PAVEMENT REPAIR FOR UTILITY TRENCHES** |
| ISSUED: **JANUARY, 2025** | STANDARD NO: **TOE-R-3.02** |




**NOTES:**

1. PAVEMENT SHALL BE SAW CUT TO THE FULL DEPTH OF THE EXISTING PAVEMENT SECTION. ALL CUTS SHALL BE MADE IN STRAIGHT LINES.
2. IF PATCH FALLS WITHIN 2' OF EXISTING CURB OR EDGE OF PAVING, CONTINUE RESTORATION TO EXISTING CURB OR EDGE OF PAVING.
3. GAB MUST BE COMPACTED TO 95% MODIFIED PROCTOR, BASE/SURFACE PAVE MUST BE COMPACTED TO 92% MODIFIED PROCTOR.
4. SURFACE COURSE, 2' OF 9.5MM SUPERPAVE. BASE COURSE: 4" OF 9.5MM, 12.5MM OR 19 0MM SUPERPAVE. (REFER TO TOE-R-1.01 FOR LIFT THICKNESS).
5. ADDITIONAL MILL AND OVERLAY MAY BE REQUIRED WHEN MULTIPLE PAVEMENT REPAIRS ARE LOCATED IN THE SAME RELATIVE VICINITY. LIMITS OF MILL AND OVERLAY, WHEN REQUIRED, WILL BE DETERMINED BY THE TOWN ENGINEER.
6. WHEN SURFACE AREAS OF REPAIR EXCEEDS 100 SF, THE 2' SURFACE COURSE SHALL EXTEND THE ENTIRE WIDTH OF THE TRAVEL LANE(S) AND/OR SHOULDER LIMITS OF MILL AND OVERLAY, WHEN REQUIRED, WILL BE DETERMINED BY THE TOWN ENGINEER.
7. CONTRACTOR MUST CONFIRM LIMITS OF PATCH REQUIRED WITH THE TOWN ENGINEER PRIOR TO START OF PATCH WORK.
8. ALL TEMPORARY PATCH ASPHALT MUST BE REMOVED PRIOR TO CONVERTING TO PERMANENT ASPHALT PAVEMENT REPAIR.
9. LIMIT OF ASPHALT PAVING SHALL EXTEND TO PATCHES WITHIN 20' OF MINIMUM ASPHALT LIMITS.

| APPROVED | TOWN OF EASTON STANDARD DETAILS |
|---|---|
| RICK VAN EMBURGH, TOWN ENGINEER | **PERMANENT PAVEMENT REPAIR FOR UTILITY TRENCHES** |
| ISSUED: **JANUARY, 2025** | STANDARD NO: **TOE-R-3.03** |

**GENERAL NOTES**

1. THIS SPECIFICATION SHALL APPLY TO ANY AND ALL UTILITY WORK OR STREET MODIFICATIONS, SUCH AS DRAINAGE IMPROVEMENTS, OR OTHER CONSTRUCTION DEEMED APPROPRIATE BY THE TOWN ENGINEER. THE CONTRACTOR SHALL RESTORE ALL SURFACES DAMAGED BY THEIR OPERATIONS TO THE WIDTHS AND EXTENT DETAILED OR SPECIFIED WITH.
2. SURFACE RESTORATION IN TOWN STREETS AND ROADS SHALL BE IN ACCORDANCE WITH THE MD STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS AND THESE TOWN STANDARDS.
3. EXISTING PAVEMENT SHALL BE TRIMMED TO SECURE A STRAIGHT, CLEAN EDGE FOR REMOVING. SAW CUT PAVEMENT AS SHOWN ON TOE-R-3.03 OR AS DIRECTED TO OBTAIN A CLEAN PAVEMENT EDGE. ALL TRENCHES SHALL BE CUT BACK BY ONE (1) FOOT TO EITHER SIDE OF THE TRENCH.
4. NO STAGGERED OR IRREGULAR LONGITUDINAL TRENCH REPAIRS WIDTHS SHALL BE ALLOWED. REPAIRS SHALL BE A UNIFORM WIDTH AND IN A STRAIGHT LINE.
5. MINIMUM TEMPORARY TRENCH RESTORATION WIDTH IS FIVE (5) FEET. ACTUAL WIDTH SHALL VARY BASED ON FIELD CONDITIONS AS DETERMINED BY TOWN ENGINEER.
6. ALL STREET REPAIR AREAS SHALL INCLUDE RESTORATION WHERE APPLICABLE, PLUS MILL AND OVERLAY. MILL AND OVERLAY SHALL INCLUDE THE FULL LANE WIDTH OF ANY STREET DISTURBED. ON HORIZONTAL CROSSINGS, THE MINIMUM RUN OF THE STREET TO BE MILLED AND OVERLAID SHALL BE THIRTY (207) FEET, CENTERED ON THE DISTURBANCE. WHERE MULTIPLE CROSS ROAD REPAIRS ARE CREATED, MILL AND OVERLAY SHALL CONTINUE THE FULL LANE WIDTH TO INCLUDE ALL TRENCHES WHERE CROSS ROAD REPAIRS ARE LESS THAN FIFTY (50) FEET APART. LONGITUDINAL TRENCHES SHALL INCLUDE MILL AND OVERLAY FOR ONE (1) FULL LANE FOR FIFTEEN (15) FEET BEYOND EXCAVATION FOR EACH LANE DISTURBED.
7. UNDERMINED AREAS SHALL BE GROUT FILLED OR CUT BACK.
8. A TEMPORARY TWO (2) INCH LAYER OF COLD PATCH SHALL BE PLACED ON UTILITY TRENCHES WHERE WEATHER CONDITIONS, OR OTHER DELAYS DO NOT PERMIT FINAL REPAIRS WITHIN SEVEN (7) CALENDAR DAYS.
9. METAL PLATING MAY BE USED AT THE END POINT OF THE UTILITY LAYING OPERATION AND MUST BE USED TO PROTECT THE INTEGRITY OF CONCRETE PATCHES. CONTRACTOR SHALL POST WARNING SIGNS.
10. ALL ADJUSTMENTS TO EXISTING UTILITIES MUST BE PRIOR TO PAVING OPERATIONS AND REPEATED IF THERE IS ANY DAMAGE DUE TO COMPACTING AND ROLLING OPERATIONS. MANHOLE OR CATCH BASIN ADJUSTMENTS SHALL BE DONE WITH ADJUSTMENT RINGS, BRICK COURSES, OR MORTAR LAYERS, SUBJECT TO TOWN OF EASTON AND/ OR EASTON UTILITIES AS REQUIRED.
11. PAVING OPERATIONS SHALL BE PERFORMED WHEN THE FOLLOWING MINIMUM TEMPERATURES ARE MET:
    a. 32° AND RISING FOR HOT MIX BASE COURSE.
    b. 40° AND RISING FOR HOT MIX SURFACE COURSE.
12. COMPACTED LIFT THICKNESS SHALL BE LIMITED TO:
    a. 2" FOR 9.5MM SUPERPAVE
    b. 3" FOR 12.5MM SUPERPAVE
    c. 4" FOR 19MM SUPERPAVE
    d. 6" FOR GRADED AGGREGATE
    e. 8"FOR BANK RUN GRAVEL
13. CATCH BASIN, INLETS, CURBS AND ALL OTHER APPURTENANCES SHALL BE ADEQUATELY COVERED AND PROTECTED PRIOR TO THE APPLICATION OF ANY BITUMINOUS MATERIALS. NO EARTH OR BITUMINOUS SHALL BE ALLOWED TO ENTER STORM DRAINAGE SYSTEM. SUITABLE CONTAINMENT PROVISIONS SHALL BE EMPLOYED TO PREVENT SURFACE RUNOFF OF BITUMINOUS MATERIALS.
14. THE FINAL SURFACE SHALL PROVIDE A SMOOTH TRANSITION, FREE OF ABRUPT CHANGES IN GRADE, IS MADE WITH WITH ADJACENT PAVEMENTS AND/OR SIDEWALK. NO DEPRESSIONS OR OTHER MISALIGNMENT SHALL OBSTRUCT, TRAP OR OTHERWISE MISDIRECT THE FLOW OF SURFACE WATER DRAINAGE.

**MAINTENANCE OF TRENCH REPAIRS**

1. ALL DEPRESSIONS APPEARING IN THE TRENCH REPAIR, STABILIZED BASE AND TEMPORARY PAVING SHALL BE PROPERLY BE REFILTED. IF THE CONTRACTOR FAILS TO MAKE REPAIRS WITHIN 48 HOURS AFTER RECEIPT OF WRITTEN NOTICE FROM THE TOWN ENGINEER, THE TOWN MAY REFILL SAID DEPRESSIONS, AND THE COST SHALL BE BILLED TO THE CONTRACTOR. IN CASE OF EMERGENCY, THE TOWN MAY REFILL ANY DEPRESSIONS, OR PROTECT WITH BARRICADES, WITHOUT GIVING

## PROPOSED FEATURES

1. PROPERTY LINE
2. 2,538 S.F. OFFICE BUILDING
3. SANITARY SEWER SERVICE. SEE DETAIL ON SHEET C-405
4. 1" COPPER TYPE K WATER SERVICE LINE. SEE DETAIL ON SHEET C-405
5. WATER METER PIT, 1" METER WITH 1 ½" SERVICE CONNECTION, TO BE SUPPLIED BY TOWN (TYP.) SEE DETAIL ON SHEET C-405
6. 4' X 6' ENTRY PIT
7. 1 - 4" DUCT (ELEC), 1 - 2 ½" DUCT (FIBER) FROM POLE TO PROPOSED TRANSFORMER AND COMM PEDESTAL. CONFIRM WITH EUC
8. 4' X 6' RECEIVING PIT
9. 3 PHASE TRANSFORMER
10. COMMUNICATION PEDESTAL
11. SANITARY SEWER CLEANOUT
12. HVAC OUTDOOR UNITS

TAX MAP 104, PARCEL 1461
N/F LANDS OF
VERIZON MARYLAND MERGE CO
//

TAX MAP 104, PARCEL 1466
N/F LANDS OF
FAQUIR LLC
00857/00371

TAX MAP 104, PARCEL 1513
N/F LANDS OF
GREGORY J. SHMIGEL
SUSAN A. SHMIGEL
2337/372

PORT STREET
VARIABLE WIDTH PUBLIC RIGHT OF WAY

SOUTH WASHINGTON STREET
VARIABLE WIDTH PUBLIC RIGHT OF WAY

SOUTH STREET
VARIABLE WIDTH PUBLIC RIGHT OF WAY

TAX MAP 104, PARCEL 1511
N/F LANDS OF
PRICE TODD C
1329/00026

TAX MAP 104, PARCEL 1512
N/F LANDS OF
ANASTACIA MCCAHAN
JOHN MCCAHAN
2799/142

E RIM: 27.05'
T RIM: 31.28'
D RIM: 30.66'
S RIM: 30.51'
D RIM: 30.35'
S RIM: 30.39'

# UTILITY PLAN

FOR

# FOUNDATION OF HOPE

TAX MAP 0104, ID 0000, PARCEL 1463
FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND
PREPARED FOR FOUNDATION OF HOPE


RAUCH INC.
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 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

6-May-25

**REVISIONS**

| REV. # | DATE | DESCRIPTION |
|---|---|---|

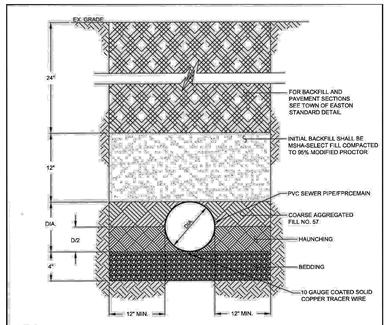
MISS UTILITY OF DELMARVA — 811

| | |
|---|---|
| DATE: | 5/6/2025 |
| SCALE: | 1" = 10' |
| DRAWN BY: | AK |
| DESIGNED BY: | AK |
| APPROVED BY: | |

SHEET NO.: C-401

DESIGN DEVELOPMENT

Z:\FOUNDATION OF HOPE\CIVIL\PRODUCTION PLANS\FOUNDATION OF HOPE - SITE PLAN.DWG




NOTES:
1. BEDDING, HAUNCHING AND FILL MATERIAL TO THE TOP OF PIPE SHALL BE COARSE AGGREGATE MEETING THE REQUIREMENTS OF AASHTO M43, SIZE NUMBER 57.
2. DURING HAUNCHING, CONTRACTOR SHALL CAREFULLY WORK GRAVEL DOWN AROUND THE BOTTOM OF THE PIPE.
3. WARNING TAPE SHALL BE PLACED 12" ABOVE PIPE AND 12" BELOW GRADE SURFACE.
4. CONTRACTOR TO PLACE FILL IN LIFTS, TAMPING AFTER EACH LIFT. LIFTS NOT TO EXCEED 6".
5. THOROUGHLY TAPE MECHANICAL CONNECTIONS OF TRACER WIRE WITH ELECTRICAL TAPE.
6. THE TRACING WIRE SHALL BE A CONTINUOUS CONDUCTOR CONNECTED TO ALL FITTINGS AND SERVICES.
7. ALL FITTINGS SHALL BE AS SPECIFIED IN AWWA C110-93, RESTRAINED MECHANICAL JOINT, DUCTILE IRON, PRESSURE RATED AT 350 PSI.
8. ALL FITTINGS SHALL BE RESTRAINED BY THRUST BLOCKS ACCORDING TO W-101.1.

| APPROVAL | REVISED | |
|---|---|---|
| EU ENGINEERING DEPARTMENT<br>1/31/2024<br>DATE | | EASTON UTILITIES STANDARD DETAILS<br>GRAVITY SEWER FORCEMAIN TRENCH |
| ISSUED: JANUARY 2024 | | STANDARD NO.: SS-100.1 |

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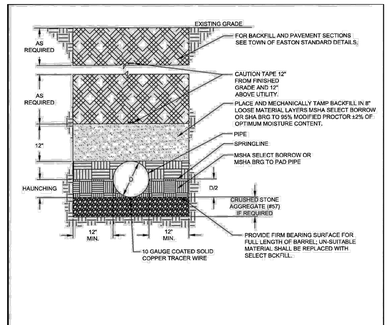


NOTES:
1. WARNING TAPE SHALL BE PLACED 12" ABOVE PIPE AND 12" BELOW GRADE SURFACE.
2. THE TRACING WIRE SHALL BE A CONTINUOUS CONDUCTOR CONNECTED TO ALL FITTINGS, FIRE HYDRANTS AND SERVICES.
3. ALL FITTINGS SHALL BE AS SPECIFIED IN AWWA C110, MECHANICAL JOINT, DUCTILE IRON, PRESSURE RATED AT 350 PSI.
4. ALL FITTINGS SHALL BE RESTRAINED BY THRUST BLOCKS ACCORDING TO EUC STANDARD DETAILS.
5. FIRM BEARING SHALL BE PROVIDED FOR FULL LENGTH OF BARREL. EXCAVATE FOR BELL HOLES.
6. AFTER PIPE IS INSTALLED ON BEDDING, PLACE BACKFILL IN LIFTS TO SPRINGLINE, CROWN AND COVER, TAMPING AFTER EACH LIFT. LIFTS NOT TO EXCEED 6".
7. THOROUGHLY TAPE MECHANICAL CONNECTIONS OF TRACER WIRE WITH ELECTRICAL TAPE.

| APPROVAL | REVISED | |
|---|---|---|
| EU ENGINEERING DEPARTMENT<br>1/31/2024<br>DATE | | EASTON UTILITIES STANDARD DETAILS<br>WATER MAIN INSTALLATION |
| ISSUED: JANUARY 2024 | | STANDARD NO.: W-100.1 |

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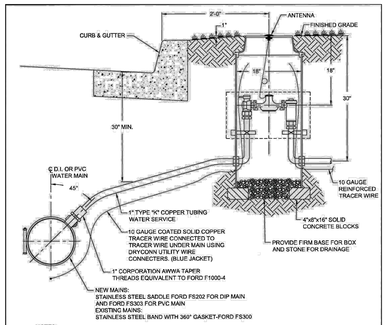


NOTES:
1. TUSING TO BE LAID LEVEL WITH TOP OF MAIN UNLESS OTHERWISE DIRECTED BY ENGINEER.
2. CORPORATION COCK TO BE LEFT OPEN, METER ANGLE VALVE LEFT CLOSED.
3. METER BOX MUELLER NO. 330RS1926PBBNN OR AN APPROVED EQUAL. FURNISHED AND INSTALLED BY CONTRACTOR. COVER SHALL BE TRUMBULL, POLYMER 367-5771 LID WITH WATER LOGO AND 367-5640 FOR TRAFFIC BEARING. FRAME SHALL BE AY MCDONALD TYPE C OR APPROVED EQUAL. A 2" DIA. HOLE SHALL BE DRILLED IN THE CENTER OF ALL LIDS FOR EXTERNAL ANTENNA INSTALLATION.
4. SURFACE RESTORATION SHALL BE PER TOWN OF EASTON STANDARDS.
5. PIPE SHALL BE TAPPED WITH A HOLE CUTTER THAT WILL RETAIN THE COUPON IN ACCORDANCE WITH UNI-BELL PLASTIC PIPE ASSOCIATION UNI-B-3.
6. THOROUGHLY TAPE MECHANICAL CONNECTIONS WITH ELECTRICAL TAPE.
7. METER SHALL BE FURNISHED BY EASTON UTILITIES.

| APPROVAL | REVISED | |
|---|---|---|
| EU ENGINEERING DEPARTMENT<br>1/31/2024<br>DATE | | EASTON UTILITIES STANDARD DETAILS<br>1" WATER SERVICE |
| ISSUED: JANUARY 2024 | | STANDARD NO.: W-103.1 |

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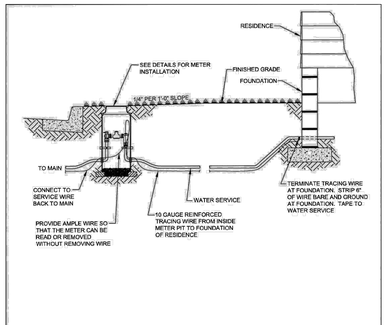


NOTES:
1. 10 GAUGE SOLID COPPER TRACER WIRE; BLUE JACKET.
2. THOROUGHLY TAPE MECHANICAL CONNECTIONS ON TRACER WIRE WITH ELECTRICAL TAPE.
3. INSTALLATION OF WATER SERVICE INTO FOUNDATION PER TOWN OF EASTON APPROVED PLUMBING CODE.

| APPROVAL | REVISED | |
|---|---|---|
| EU ENGINEERING DEPARTMENT<br>1/31/2024<br>DATE | | EASTON UTILITIES STANDARD DETAILS<br>WATER SERVICE CONNECTION |
| ISSUED: JANUARY 2024 | | STANDARD NO.: W-103.4 |

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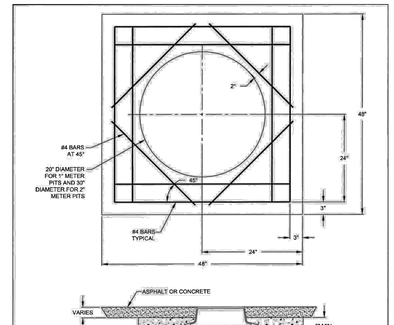


NOTES:
1. CONTRACTOR SHALL CONTACT EASTON UTILITIES PRIOR TO THE WATER METER PIT INSTALLATION FOR ALL TRAFFIC BEARING INSTALLATIONS.
2. PORTLAND CEMENT MIXTURE SHALL MEET OR EXCEED SHA MIX #2.
3. ALL REINFORCEMENT SHALL BE #4 REBAR UNLESS OTHERWISE NOTED.

| APPROVAL | REVISED | |
|---|---|---|
| EU ENGINEERING DEPARTMENT<br>1/31/2024<br>DATE | | EASTON UTILITIES STANDARD DETAILS<br>WATER METER PIT INSTALLATION-TRAFFIC BEARING |
| ISSUED: JANUARY 2024 | | STANDARD NO.: W-103.6 |

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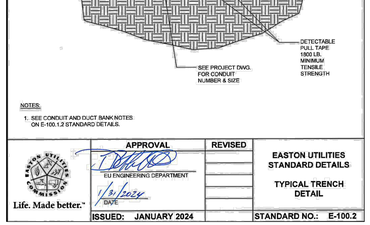


NOTES:
1. SEE CONDUIT AND DUCT BANK NOTES ON E-100.1.2 STANDARD DETAILS.

| APPROVAL | REVISED | |
|---|---|---|
| EU ENGINEERING DEPARTMENT<br>1/31/2024<br>DATE | | EASTON UTILITIES STANDARD DETAILS<br>TYPICAL TRENCH DETAIL |
| ISSUED: JANUARY 2024 | | STANDARD NO.: E-100.2 |

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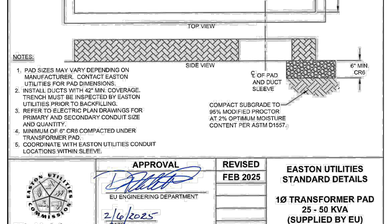


NOTES:
1. PAD SIZES MAY VARY DEPENDING ON MANUFACTURER. CONTACT EASTON UTILITIES FOR PAD DIMENSIONS.
2. INSTALL DUCTS WITH 42" MIN. COVERAGE. TRENCH MUST BE INSPECTED BY EASTON UTILITIES PRIOR TO BACKFILLING.
3. REFER TO ELECTRIC PLAN DRAWINGS FOR PRIMARY AND SECONDARY CONDUIT SIZE AND QUANTITY.
4. MINIMUM OF 6" CRS COMPACTED UNDER TRANSFORMER PAD.
5. COORDINATE WITH EASTON UTILITIES CONDUIT LOCATIONS WITHIN SLEEVE.

| APPROVAL | REVISED | |
|---|---|---|
| EU ENGINEERING DEPARTMENT<br>2/6/2025<br>DATE | FEB 2025 | EASTON UTILITIES STANDARD DETAILS<br>1Ø TRANSFORMER PAD 25 - 50 KVA (SUPPLIED BY EU) |
| ISSUED: JANUARY 2024 | | STANDARD NO.: E-101.1.1 |

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UTILITY DETAILS

FOR

# FOUNDATION OF HOPE

TAX MAP 0104, ID 0000, PARCEL 1463

FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND

PREPARED FOR FOUNDATION OF HOPE

RAUCH INC.
Engineering | Survey | Architecture | Environmental
Main Office: 108 N Harrison St - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410 770 9081 | 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

6-May-25

REVISIONS

| REV. # | DATE | DESCRIPTION |
|---|---|---|
| | | |

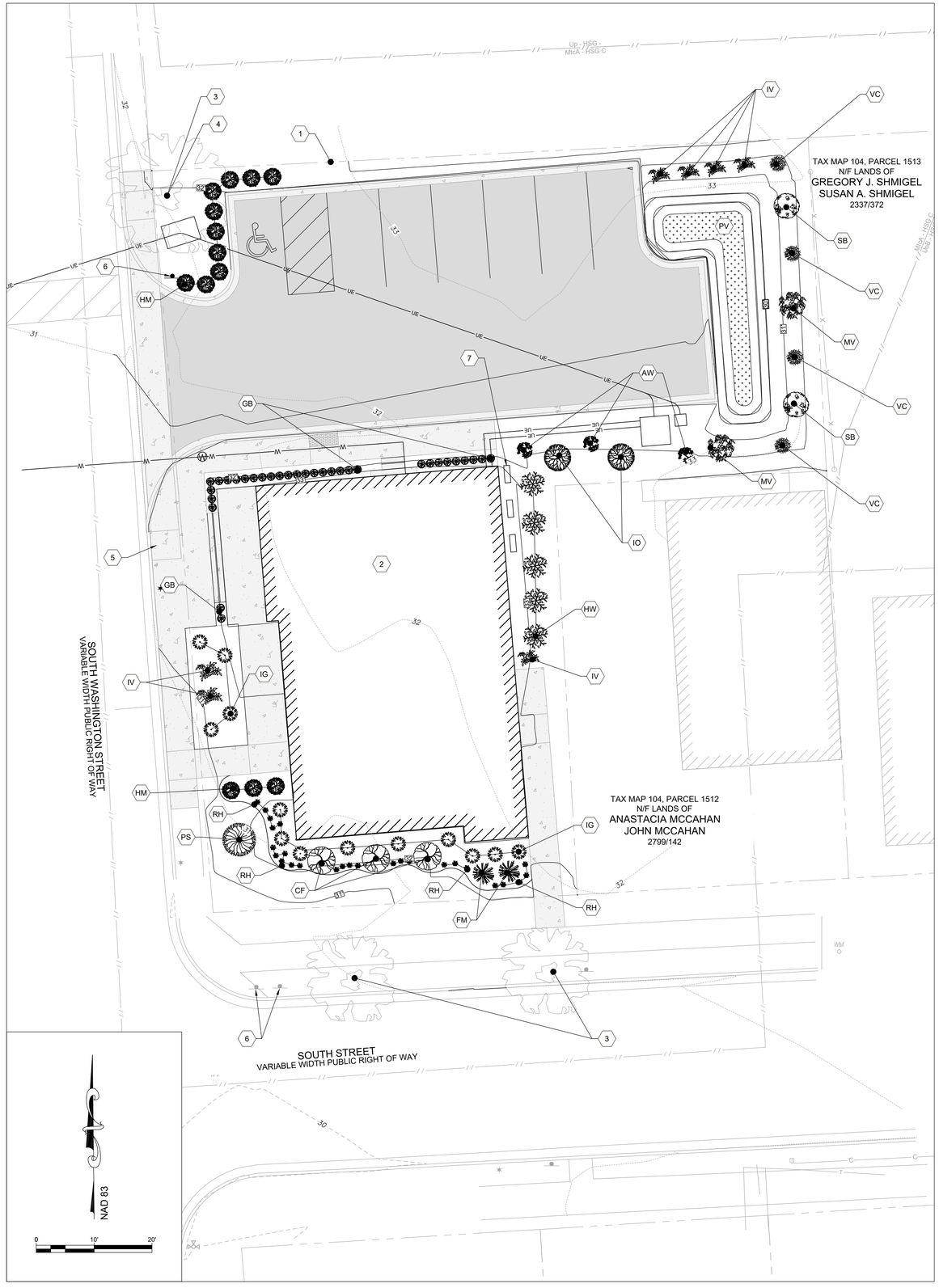
MISS UTILITY OF DELMARVA — 811

| | |
|---|---|
| DATE: | 5/6/2025 |
| SCALE: | N/A |
| DRAWN BY: | AK |
| DESIGNED BY: | AK |
| APPROVED BY: | |

SHEET NO.:
C-405

DESIGN DEVELOPMENT

Z:\FOUNDATION OF HOPE\CIVIL\PRODUCTION PLANS\FOUNDATION OF HOPE - SITE PLAN.DWG

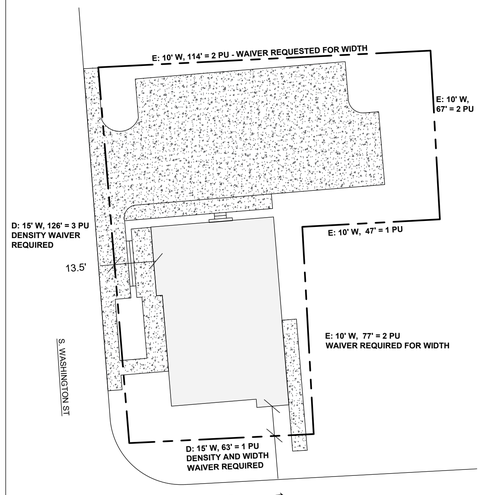



## PROPOSED FEATURES & PLANTINGS

1. LIMITS OF DISTURBANCE
2. 2,538 S.F. OFFICE BUILDING
3. EXISTING DECIDUOUS CANOPY TREE
4. INSTALL TREE PROTECTION PER DETAIL ON L-505.
5. EXISTING STREET LIGHT RELOCATED HERE.
6. EXISTING STREET SIGN TO REMAIN.
7. PROPOSED HVAC

- PS EASTERN PINE
- HW HETZ WINTERGREEN
- IO AMERICAN HOLLY
- CF DOGWOOD
- SB SERVICEBERRY
- MV SWEETBAY MAGNOLIA
- HM THUJA HETZ MIDGET
- IG INKBERRY
- GB INKBERRY GEM BOX
- FM FOTHERGILLA
- AW ARROWWOOD
- IV SWEETSPIRE
- VC HIGHBUSH BLUEBERRY
- RH BLACK-EYED SUSAN
- PV PANICUM VIGRATUM

**BUFFERYARD BOUNDARY MAP & PARCEL FRONTAGE SETBACK**




**PLANT SCHEDULE:**

| SYMBOL | QUAN | SCIENTIFIC NAME | COMMON NAME | SPECIFICATION | DIMENSIONS | SPACING |
|---|---|---|---|---|---|---|
| **EVERGREEN TREE** | | | | | | |
| PS | 1 | PINUS STROBUS 'FASTIGIATA' | COLUMNAR EASTERN PINE | 8-10' TALL | 8' X 35' | |
| HW | 5 | THUJA OCC. 'HETZ WINTERGREEN' | WESTERN ARBORVITAE | 8-10' TALL | 6' X 25' | 6' O.C. |
| IO | 2 | ILEX OPACA | AMERICAN HOLLY | 8-10' TALL | 15' X 25' | 8' O.C. |
| **MINOR DECIDUOUS TREE** | | | | | | |
| CF | 3 | CORNUS FL. 'APPALACHIAN SPRING' | FLOWERING DOGWOOD | 1.5" CALIPER B&B | 12' X 20' | 7' O.C. |
| SB | 2 | AMELANCHIER LAEVIS 'CUMULUS' | SERVICEBERRY | 1.75" CAL. B&B | 12' X 20' | 8' O.C. |
| MV | 2 | MAGNOLIA VIRGINIANA 'MOONGLOW' | SWEETBAY MAGNOLIA | 6' TALL | 12' X 20' | 8' O.C. |
| **EVERGREEN SHRUB** | | | | | | |
| HM | 13 | THUJA OCC. 'HETZ' MIDGET' | WESTERN ARBORVITAE | #7 | 3' X 4' | 4' O.C. |
| IG | 13 | ILEX GLABRA 'SHAMROCK' | INKBERRY | #7 | 3' X 5' | 5' O.C. |
| GB | 32 | ILEX GLABRA 'GEM BOX' | INKBERRY - MICRO | #2 | 2' X 3' | 3' O.C. |
| **DECIDUOUS SHRUB** | | | | | | |
| FM | 2 | FOTHERGILLA MAJOR 'MT AIRY' | WITCH ALDER | #7 | 3' X 5' | 5' O.C. |
| AW | 3 | VIBURNUM DENTATUM | ARROWWOOD | #7 | 6' X 12' | 7' O.C. |
| IV | 7 | ITEA VIRGINICA 'HENRY'S GARNET' | SWEETSPIRE | #5 | 3' X 5' | 4' O.C. |
| VC | 4 | VACCINIUM CORYMBOSUM 'BLUE CROP' | HIGHBUSH BLUEBERRY | #5 | 5' X 8' | 6' O.C. |
| **FLOWERING PERENNIAL** | | | | | | |
| RH | 26 | RUDBECKIA HIRTA | BLACK-EYED SUSAN | #1 | 1' X 2' | 2' O.C. |
| **STORMWATER GRASSES** | | | | | | |
| PV | 100 | PANICUM VIGRATUM 'CAPE BREEZE' | SWITCHGRASS | 2 X TRAYS OF 50 | 2" PLUG | 18" O.C. |

**TOWN OF EASTON LANDSCAPE NOTES:**

1. LANDSCAPE INSTALLER SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK. INSTALLER SHALL ENSURE THAT FINAL GRADES HAVE BEEN ESTABLISHED AND THE SITE IS READY FOR LANDSCAPE INSTALLATION.

2. LANDSCAPE INSTALLER SHALL MAINTAIN THE LANDSCAPE IMPROVEMENT AREAS IN A CLEAN CONDITION, REMOVING DEBRIS DAILY AT THE COMPLETION OF THE INSTALLATION.

3. 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.

4. 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 WORKED IN A RECTANGULAR FORM WITH THE SMALL DIMENSION TWICE THE DIAMETER OF THE ROOT BALL AND THE LARGE DIMENSION AT LEAST THREE (3) TIMES THE DIAMETER OF THE ROOT BALL. OPEN AREA TREE PITS SHALL BE EXCAVATED TO A MINIMUM DIMENSION OF TWICE THE ROOT BALL 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.

5. 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 A TWELVE INCH (12") MINIMUM OUTSIDE THE ROOT BALL.

6. ALL LANDSCAPE BEDS SHALL BE "V" EDGED AND MULCHED 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.

7. ALL TREES TO BE STAKED AND GUYED WITH HARDWOOD STAKES, MINIMUM OF TWO (2) - FIVE FEET (5') LONG, OR OTHER APPROVED GUYING SYSTEM. STAKES SHALL BE DRIVEN INTO STABLE SOILS. PROVIDE WIRE GUYS WITH RUBBER PROTECTANT OR OTHER APPROVED INDUSTRY PRACTICE.

8. LANDSCAPE INSTALLER SHALL MAINTAIN ALL PLANT MATERIALS THROUGH COMPLETION OF THE LANDSCAPE INSTALLATION, AND THEN AS REQUIRED BY THE OWNER.

9. 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 THE TOWN OF EASTON.

**PLANT MATERIAL NOTES:**

1. ALL REQUIRED PLANT MATERIAL SHALL BE OBTAINED FROM REPUTABLE NURSERY STOCK GROWERS OR RELOCATED FROM ON-SITE OR OTHER SITES VIA NURSERY STANDARD PLANT HANDLING AND DIGGING METHODS. THE TOWN MAY REJECT PLANT MATERIAL GROWN, HANDLED, OR INSTALLED IMPROPERLY.

2. ALL SPECIFIED PLANTINGS IN THIS PLAN ARE NATIVE TO THIS REGION.

3. UNLESS REQUIRED OTHERWISE BY THIS ORDINANCE OR ANY OTHER TOWN REGULATION, ALL REQUIRED PLANT MATERIAL SHALL CONFORM TO THE FOLLOWING MINIMUM SIZE SPECIFICATION AT INSTALLATION.

**WARRANTY NOTES:**

1. THE OWNER/DEVELOPER SHALL MAINTAIN ALL LANDSCAPE IMPROVEMENTS PROVIDING ADEQUATE GROWING CONDITIONS TO ENSURE HEALTHY, VIGOROUS PLANT SURVIVAL AND GROWTH. THE TOWN RESERVES THE RIGHT TO PERIODICALLY REVIEW INSTALLED LANDSCAPES AND REPORT AND SIGNIFICANT DEFICIENCIES TO THE OWNER/DEVELOPER. AT THE END OF TWO (2) GROWING SEASONS, AND /OR AT ANY TIME PRIOR TO, THE TOWN SHALL ASSESS THE LANDSCAPE IMPROVEMENTS AND DIRECT REPLACEMENT OR REVITALIZATION OF ANY DEFICIENT AREAS. THE OWNER SHALL REPAIR OR REPLACE DEFICIENT ITEMS WITHIN THIRTY (30) CALENDAR DAYS/

2. UNLESS AN AMENDED LANDSCAPING PLAN IS SUBMITTED TO AND APPROVED BY THE PLANNING AND ZONING COMMISSION, FAILURE TO MAINTAIN, REPAIR OR REPLACE ANY REQUIRED AND APPROVED LANDSCAPE IMPROVEMENTS SHALL BE CONSIDERED A VIOLATION OF THIS ORDINANCE AND SHALL BE ENFORCED IN ACCORDANCE WITH SECTION 28 - 1308 HEREIN.

# LANDSCAPE & LIGHTING PLAN

FOR

# FOUNDATION OF HOPE

TAX MAP 0104, ID 0000, PARCEL 1463

FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND

PREPARED FOR FOUNDATION OF HOPE

RAUCH INC.
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 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

6-May-25

REVISIONS

| REV. # | DATE | DESCRIPTION |
|---|---|---|

MISS UTILITY OF DELMARVA — ONE CALL BEFORE YOU DIG — 811

| | |
|---|---|
| DATE: | 5/6/2025 |
| SCALE: | 1" = 10' |
| DRAWN BY: | GJR |
| DESIGNED BY: | GJR |
| APPROVED BY: | |

SHEET NO.: L-501

DESIGN DEVELOPMENT

Z:\FOUNDATION OF HOPE\CIVIL\PRODUCTION PLANS\FOUNDATION OF HOPE - SITE PLAN.DWG

**LANDSCAPE PLANTING REQUIREMENTS**

**GENERAL REQUIREMENTS:**

- COMPLIANCE WITH THE TERMS OF THIS LANDSCAPE PLAN, INCLUDING ALL MAINTENANCE AND WARRANTY REQUIREMENTS PRESCRIBED HEREON IS THE RESPONSIBILITY OF THE OWNER. MAINTENANCE AND WARRANTY TERMS AND RESPONSIBILITIES OF THE CONTRACTOR SHALL BE NEGOTIATED BETWEEN OWNER AND CONTRACTOR.
- THE CONTRACTOR (CONTRACTOR) IS RESPONSIBLE FOR THE COMPLETE INSTALLATION OF ALL LANDSCAPING SHOWN OR IMPLIED ON THIS PLAN. PLANT QUANTITIES ARE SHOWN FOR CONVENIENCE ONLY AND SHALL BE VERIFIED PRIOR TO INSTALLATION. THE CONTRACTOR SHALL NOTIFY THE OWNER, OR DESIGNATED REPRESENTATIVE IF PROPOSED SPECIES AND/OR SITE PLANTING CONDITIONS WARRANT RE-DESIGN CONSIDERATIONS.
- THE CONTRACTOR SHALL DILIGENTLY ATTEMPT TO LOCATE THE SPECIFIED NATIVE PLANT MATERIAL. IF SPECIFIED PLANT MATERIALS CANNOT BE LOCATED, ALTERNATIVES MAY BE CONSIDERED AND APPROVED, IN ADVANCE, BY THE OWNER, OR DESIGNATED REPRESENTATIVE.
- PRIOR TO LANDSCAPE INSTALLATION, THE CONTRACTOR SHALL COORDINATE A SITE MEETING WITH THE OWNER, OR DESIGNATED REPRESENTATIVE TO REVIEW THE PLAN, SITE DRAINAGE CONDITIONS AND TO DETERMINE ANY FIELD ADJUSTMENTS NECESSARY.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK, AND SHALL COORDINATE WITH OTHER CONTRACTORS ON SITE AND MISS UTILITY TO VERIFY UTILITY LOCATIONS. ANY REPAIRS TO EXISTING UNDERGROUND UTILITIES REQUIRED AS A RESULT OF ACTIONS OF THE CONTRACTOR AND/OR HIS ASSIGNS SHALL BE BORNE BY CONTRACTOR.
- THE CONTRACTOR SHALL VERIFY THAT FINAL ROUGH GRADES HAVE BEEN ESTABLISHED AND THAT THE SITE IS READY FOR LANDSCAPE INSTALLATION. THE CONTRACTOR SHALL ENSURE THAT PLANTINGS WILL HAVE ADEQUATE DRAINAGE. THE CONTRACTOR SHALL INSTALL PLANT MATERIAL FACTORING IN ANY "FINAL" GRADING WORK TO BE COMPLETED AFTER LANDSCAPE INSTALLATION.
- THE CONTRACTOR SHALL LAY OUT BEDS AND POSITION PLANTS FOR APPROVAL BY OWNER, OR DESIGNATED REPRESENTATIVE. THE CONTRACTOR SHALL REVIEW ANY SIGNIFICANT FIELD ADJUSTMENTS PRIOR TO INSTALLATION.
  - **NOTE:** PLANTING WITHIN THE ROOT ZONE OF EXISTING TREES REQUIRES ADDITIONAL CARE. HAND DIGGING OF PLANTING HOLES AND ADJUSTMENT OF PLANTING LAYOUT MAY BE NECESSARY.
- THE CONTRACTOR SHALL MAINTAIN A CLEAN JOB SITE AND REMOVE ALL PLANTING AND RELATED DEBRIS DAILY DURING THE COURSE OF IMPLEMENTATION.
- THE OWNER, OR DESIGNATED REPRESENTATIVE SHALL REJECT ANY AND ALL PLANT MATERIAL THAT DOES NOT MEET SPECIFICATIONS, IS DISEASED OR OTHERWISE UNHEALTHY.
- ALL LANDSCAPE INSTALLATION SHALL BE ACCOMPLISHED WITH QUALIFIED PERSONNEL, UTILIZING INDUSTRY STANDARD PRACTICES AND TECHNIQUES.

**PLANT MATERIAL:**

- ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK AS APPROVED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE INC. LATEST EDITIONS.
- ALL PLANT MATERIAL SHALL BE NURSERY GROWN WITH SOUND HORTICULTURAL PRACTICES AND UNLESS OTHERWISE APPROVED BY THE OWNER, OR DESIGNATED REPRESENTATIVE, GROWN IN SOIL AND CLIMATE CONDITIONS SIMILAR TO THIS PROJECT SITE.
- ALL MATERIAL SHALL EXHIBIT HEALTHY GROWTH WITH GOOD BRANCHING STRUCTURE, DENSE FOLIAGE AND A FIBROUS, DEVELOPED ROOT SYSTEM.
- ALL MATERIAL SHALL BE FREE OF INSECT INFESTATION AND DISEASE. THE OWNER RESERVES THE RIGHT TO HAVE THE PLANT MATERIAL INSPECTED AND TAGGED AT THE GROWING SITE, AND TO REJECT ANY DEFICIENT MATERIAL AT THE JOB SITE.

**PLANT MATERIAL HANDLING:**

- ALL PLANT MATERIAL SHALL ARRIVE AT THE JOB SITE IN A HEALTHY CONDITION.
- THE CONTRACTOR SHALL STAGE DELIVERY AND PLANT INSTALLATION TO MINIMIZE STRESS ON PLANT MATERIAL.
- PLANT MATERIAL TO BE STAGED ON OR OFF THE JOB SITE SHALL BE LOCATED TO MAXIMIZE PROTECTION FROM HOT SUN AND DRYING WINDS, AND SHALL BE WATERED TO MAINTAIN A STRESS FREE CONDITION. ON-SITE WATER MAY NOT BE AVAILABLE FOR THE CONTRACTOR TO USE. THE LACK OF AVAILABLE WATER SHALL NOT RELIEVE THE CONTRACTOR OF ADEQUATE MAINTENANCE.

**PLANTING SCHEDULE:**

- PLANTING SCHEDULES SHALL COINCIDE WITH THE OVERALL PROGRESS OF SITE CONSTRUCTIONS.
- CERTAIN PLANT SPECIES REQUIRE SPECIFIC SEASON INSTALLATION AND SHALL BE COORDINATED APPROPRIATELY.
- PLANTING IS DISCOURAGED IN THE HOT, DRY PERIODS OF SUMMER AND DURING FROZEN GROUND CONDITIONS IN WINTER, BUT MAY BE CONSIDERED YEAR-ROUND WITH MAINTENANCE REQUIREMENTS ADDRESSED ACCORDINGLY.
- THE CONTRACTOR IS RESPONSIBLE FOR PLANT MATERIAL HEALTH AND VIGOR REGARDLESS OF WHEN THE MATERIAL IS INSTALLED.

**TREE & SHRUB PLANTINGS:**

- ALL TREE/SHRUB PLANTING PITS SHALL BE EXCAVATED TO A DEPTH SO THAT THE PLANT ROOT FLARE SHALL LIE AT THE FINISHED GRADE SURROUNDING THE PLANT. SOIL THAT MAY HAVE BEEN PLACED ON TOP OF ROOT BALL OR SETTLED AROUND TRUNK OR ROOT FLARE DURING TRANSPORT SHALL BE REMOVED TO ADEQUATELY EXPOSE ROOT FLARE SO PROPER PLANTING DEPTH CAN BE ESTABLISHED.
- THE ROOT BALL SHALL REST ON UNDISTURBED OR STABILIZED SOIL. THE CONTRACTOR SHALL NOTIFY THE OWNER, OR DESIGNATED REPRESENTATIVE IF THIS PLANTING DEPTH SPECIFICATION CANNOT BE IMPLEMENTED.
- TREE PLANTING PITS SHALL BE EXCAVATED DEPTH EQUAL TO THE HEIGHT OF THE ROOT BALL AND TO A WIDTH EQUALING TWICE THE ROOT BALL DIAMETER.
- EXCAVATED SOILS NOT PREVIOUSLY COMPACTED OR OTHERWISE DEGRADED SHALL BE RE-USED FOR PLANTING PIT BACKFILL. EXCAVATED SOILS UNSUITED FOR BACKFILL SHALL BE AMENDED WITH FRIABLE TOPSOIL TO CREATE A SUITABLE PLANTING SOIL AS APPROVED BY THE OWNER, OR DESIGNATED REPRESENTATIVE. EXCAVATED SOILS THAT CANNOT BE RESTORED TO A REASONABLE PLANTING SOIL SHALL BE REMOVED AND REPLACED WITH A SUITABLE PLANTING SOIL. NOTE: FOR BEDDING PURPOSES OR UNLESS OTHERWISE SPECIFIED HERON, THE CONTRACTOR SHALL ASSUME EXCAVATED SOILS ARE SUITABLE FOR PLANTING BACKFILL.
- SLOW RELEASE FERTILIZER TAB(S) (20-10-5, 21 GRAM, 2-YEAR) SHALL BE ADDED TO PLANTING HOLES AS PER MANUFACTURER'S SPECIFICATIONS.
- THE SIDES OF CONTAINER GROWN STOCK SHALL BE CUT OR SCARIFIED TO ELIMINATE BOUND ROOTS AND PROMOTE HEALTHY ROOT GROWTH.
- ALL SYNTHETIC MATERIALS FROM AROUND THE TREE TRUNK AND ROOT BALL SHALL BE REMOVED AND NOT EVIDENT WITHIN THE BACKFILL SOIL MIX. STRING, ROPE, SYNTHETIC BURLAP, PLASTIC STRAPPING, AND OTHER MATERIALS THAT WILL NOT DECOMPOSE IN THE SOIL SHALL BE REMOVED AT THE TIME OF PLANTING
- SOIL GRADES SHALL BE FEATHERED AROUND PLANTINGS TO BLEND WITH SURROUNDING LANDSCAPE OR TURF AREAS. EXCESS EXCAVATED SOIL SHALL BE REMOVED FROM JOB SITE.
- ALL TREES AND SHRUBS SHALL BE WATERED DURING PLANTING TO MINIMIZE AIR POCKETS AND TO ENSURE SOIL CONTACT WITH ROOTS.

**TREE STAKING/ GUYING:**

- TREES SHALL BE STAKED TO PREVENT TOPPLING BY STRONG WIND.
- STAKES SHALL BE INSTALLED ACORDING TO DETAIL PROVIDED ON PLAN. ANOTHER STAKING/GUYING METHOD MAY BE USED WITH APPROVAL OF OWNER'S REPRESENTATIVE.

**HERBACEOUS PLANT INSTALLATION:**

- ROOT MASSES SHALL BE MOIST, BUT NOT SATURATED, AT THE TIME OF PLANTING.
- PLANT PITS SHALL BE PREPARED USING A DIBBLE, SPADE OR MECHANICAL AUGER BY OPENING A HOLE AT THE PLANTING SITE. FOR PLANTINGS UNDER EXISTING TREES, PLANTING HOLES SHALL BE HAND-DUG AND LOCATIONS ADJUSTED TO ACCOMMODATE EXISTING TREE ROOTS.
- PLANTS SHALL BE PLACED IN PLANTING PITS IN A VERTICAL POSITION.
- SOIL SHALL BE BACKFILLED INTO PLANT PITS, LIGHTLY COMPRESSED TO ELIMINATE AIR POCKETS, AND FIRMED AROUND THE PLANTS.
- ALL PLANTS SHALL BE WATERED DURING PLANTING TO MINIMIZE AIR POCKETS AND TO ENSURE SOIL CONTACT WITH ROOTS.

**MULCHING:**

- THREE INCHES OF HARDWOOD MULCH SHALL BE APPLIED TO ALL NEWLY PLANTED TREES AND SHRUBS.
- THREE INCHES OF HARDWOOD MULCH SHALL BE APPLIED TO UPLAND HERBACEOUS PLANTING AREAS AS SHOWN ON THE PLANTING PLAN.
- WOOD CHIPS STOCKPILED FROM TREE REMOVAL PROCESS, OR COMPOSTED LEAVES, MAY BE USED AS MULCH UNDER EXISTING TREES.
- MULCH SHALL NOT BE APPLIED TO SWALE, FOREBAY, OR WETLAND PLANTING SHELF AREAS.

**MAINTENANCE**

**DURING CONSTRUCTION PERIOD:**

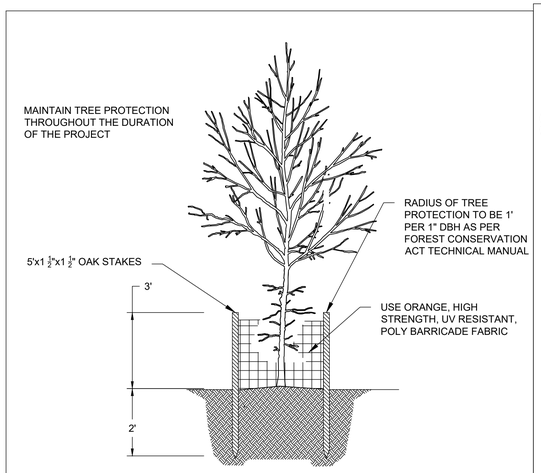
- THE CONTRACTOR SHALL MAINTAIN ALL PLANT MATERIAL THROUGHOUT JOB COMPLETION AND FINAL ACCEPTANCE. ALL PLANT MATERIAL SHALL BE WATERED, WEEDED, MULCHED, PRUNED AND TREATED FOR INSECT DAMAGE, FUNGUS OR DISEASE TO INSURE HEALTHY GROWING CONDITIONS. WATERING SHALL PROVIDE ADEQUATE MOISTURE TO SUPPORT VIGOROUS GROWTH. DURING TIMES OF NORMAL PRECIPITATION, ALL TREES SHALL RECEIVE 1", OR APPROX. 5-10 GALLONS OF WATER PER WEEK. PLANTS IN HEAVIER SOILS SHALL BE MONITORED TO AVOID OVER-WATERING. GATOR BAGS, WATERING TRAYS, IRRIGATION, HAND WATERING, OR OTHER INDUSTRY STANDARD TECHNIQUES SHALL BE EMPLOYED TO MAINTAIN ADEQUATE MOISTURE SUPPLY TO THE PLANT MATERIAL. THE CONTRACTOR SHALL INSTRUCT THE OWNER REGARDING THE REQUIRED AND PROPER ON-GOING MAINTENANCE OF LANDSCAPE MATERIAL.

**DURING WARRANTY PERIOD:**

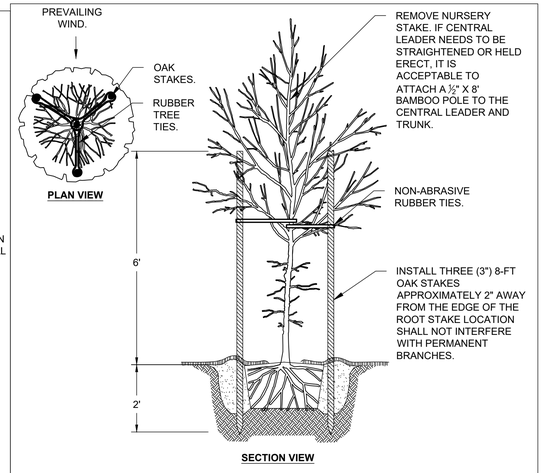
- THE CONTRACTOR SHALL VISIT THE SITE PERIODICALLY TO ADVISE OWNER OF ANY DEFICIENT CONDITIONS AFFECTING PLANT SURVIVABILITY. DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED (SEE WARRANTY BELOW).

**LANDSCAPE WARRANTIES**

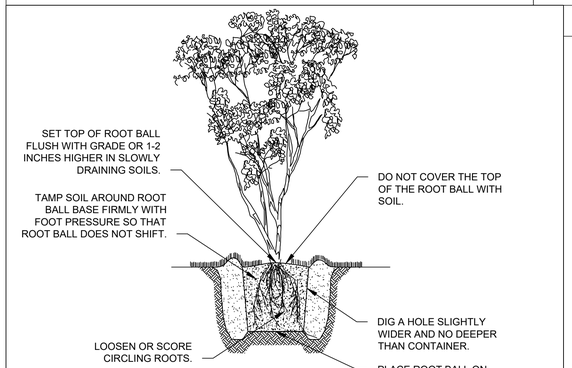
- THE CONTRACTOR SHALL GUARANTEE THAT ALL PLANTS ARE TRUE TO NAME, HAVE BEEN GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES, ARE FREE OF DISEASE, INSECTS, EGGS, LARVAE AND OTHER DEFECTS, ARE HEALTHY AT THE TIME OF PLANTING AND THAT ALL PLANTS HAVE BEEN PLANTED ACCORDING TO ACCEPTED LANDSCAPING PRACTICES.
- THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND CARE OF THE PLANTS IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES; INCLUDING: (A) ADEQUATE WATERING; (B) WEED CONTROL; (C) PROTECTION FROM HERBIVORY; (D) DISEASE AND INSECT CONTROL AFTER PLANTINGS HAVE BEEN ACCEPTED BY THE OWNER.
- SUBJECT TO THE ABOVE CONDITIONS, THE CONTRACTOR SHALL GUARANTEE 85% PLANT SURVIVAL FOR ONE YEAR FROM THE TIME OF INSTALLATION. IF AFTER ONE YEAR, THE TOTAL NUMBER OF PLANTS HAS FALLEN BELOW THIS THRESHOLD, THE CONTRACTOR SHALL MAKE A ONE-TIME REPLACEMENT OF PLANTINGS TO BRING PLANT NUMBERS TO THE TOTALS SPECIFIED FOR EACH SPECIES, OR FUNCTIONAL EQUIVALENT.
- THIS SURVIVAL GUARANTEE SHALL BE VOID IF: (A) PLANTS ARE NOT MAINTAINED BY THE OWNER ACCORDING TO GOOD HORTICULTURAL PRACTICES, INCLUDING, BUT NOT LIMITED TO THE PRACTICES SPECIFIED ABOVE; (B) PLANTINGS HAVE BEEN DAMAGED AS A RESULT OF NATURALLY OCCURRING EVENTS, INCLUDING BUT NOT LIMITED TO FLOODING, WIND, FIRE, OR DISEASE/PEST INFESTATIONS; (C) PLANTINGS HAVE BEEN DAMAGED BY OTHERS, INCLUDING CONTRACTORS OR UTILITIES PERFORMING WORK IN THE AREA; (D) PLANTINGS HAVE BEEN DAMAGED BY CONDITIONS NOT PRESENT AT THE TIME OF PLANTING, INCLUDING BUT NOT LIMITED TO CHANGES IN DRAINAGE PATTERNS, OR INAPPROPRIATE APPLICATION OF HERBICIDES.



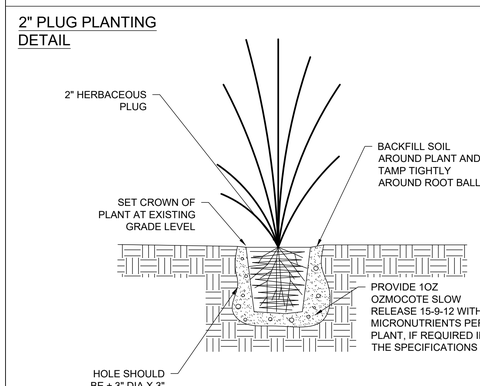

**STANDARD TREE PROTECTION FENCE**




**STANDARD TREE STAKE DETAIL**



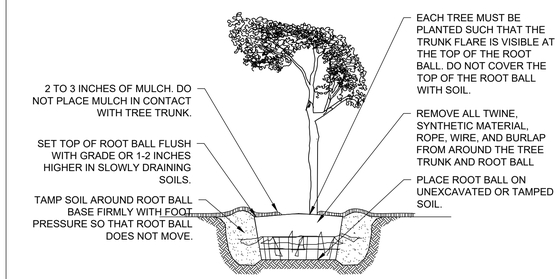

**CONTAINER TREE & SHRUB PLANTING DETAIL**




**2" PLUG PLANTING DETAIL**

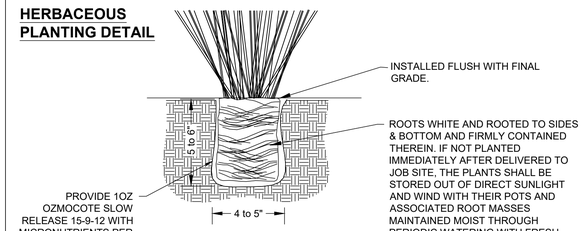
STAKE TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT.

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




**B&B TREE & SHRUB PLANTING DETAIL**

**HERBACEOUS PLANTING DETAIL**




## 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

A. Soil Preparation

1. Temporary Stabilization
   a. 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 rippers 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.
   b. Apply fertilizer and lime as prescribed on the plans.
   c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.

2. Permanent Stabilization
   a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
   i. Soil pH between 6.0 and 7.0.
   ii. Soluble salts less than 500 parts per million (ppm).
   iii. 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.
   iv. Soil contains 1.5 percent minimum organic matter by weight.
   v. Soil contains sufficient pore space to permit adequate root penetration.
   b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
   c. 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.
   d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
   e. 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. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

1. 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.

2. 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.

3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
   a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
   b. 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.
   c. The original soil to be vegetated contains material toxic to plant growth.
   d. The soil is so acidic that treatment with limestone is not feasible.

4. Areas having slopes steeper than 2:1 require special consideration and design.

5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
   a. 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.
   b. 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.
   c. 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.

6. Topsoil Application
   a. Erosion and sediment control practices must be maintained when applying topsoil.
   b. 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.
   c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios 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.

2. 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.

3. 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.

4. 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.

5. 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.

**EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION**

1. Contractor shall install soil erosion and sediment control devices prior to any grading. Following initial disturbance or re-disturbance, permanent or temporary stabilization shall be completed within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes greater than three (3) horizontal to one (1) vertical (3:1) and seven (7) days as to all other disturbed or graded areas on the project site not under active grading.
2. All temporary erosion and sediment control devices are to be provided as indicated on this plan, with location adjustments to be made in the field as necessary, and to be maintained at the end of each working day until project completion. The minimum area practical shall be disturbed for the minimal amount of time possible.
3. Clearing and grubbing shall include all trees, brush, debris, root mat and organic materials to be removed.
4. Temporary seeding shall be accomplished between February 15th through April 30th, or August 15th through November 30th. During other times, temporary mulching shall be provided.
5. Temporary seeding shall conform to the following applications: 436 lbs. per acre of 10-20-20; 4,000 lbs. per acre of ground limestone, to be incorporated into the soil by disking or other suitable means. Annual ryegrass shall be applied at a rate of 50 lbs. per acre using suitable equipment. Mulching shall be accomplished immediately after seeding.

| Seed Mixture (For Hardiness Zone 7a) (From Table B.1) | | | | | Fertilizer Rate (10-20-20) | Lime Rate |
|---|---|---|---|---|---|---|
| No. | Species | Appl. Rate (lbs./ac.) | Seeding Dates | Seeding Depths | | |
| | ANNUAL RYEGRASS | 50# | 2/15 - 4/30<br>8/15 - 11/30 | ½" | 436 lb/ac<br>10 lb/<br>1000 sf | 2 tons/ac<br>90 lb/<br>1000 sf |
| | BARLEY | 96# | 2/15 - 4/30 / 8/15 - 11/30 | 1" | | |
| | OATS | 72# | 2/15 - 4/30 / 8/15 - 11/30 | 1" | | |
| | WHEAT | 120# | 2/15 - 4/30 / 8/15 - 11/30 | 1" | | |
| | CEREAL RYE | 112# | 2/15 - 4/30 / 8/15 - 12/15 | 1" | | |
| | FOXTAIL MILLET | 30# | 5/1 - 8/14 | ½" | | |
| | PEARL MILLET | 20# | 5/1 - 8/14 | ½" | | |

6. Mulching shall be unchopped, unrotted, small grain straw applied at a rate of 2-2½ tons per acre. Anchor mulch with a mulch anchoring tool on the Contour. Wood cellulose fiber may be used for anchoring straw at a rate of 750 lbs. per acre mixed with water at a maximum of 50 lbs. of wood cellulose fiber per 100 gals. of water, or with a synthetic liquid binder according to manufacturer recommendations. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1,500 lbs. per acre. Mix wood cellulose fiber with water to attain a mixture with a maximum of 50 lbs. of wood cellulose fiber per 100 gals. of water.
7. Permanent seeding shall be accomplished between March 1st through May 15th, or August 15th through October 15th. Permanent seeding at other than specified times will be allowed only upon written approval. Permanent seeding shall conform to the following applications: Permanent seeding for sites having disturbed over five (5) acres shall use fertilizer rates recommended by a soil testing agency and the recommendations provided in the Permanent Seeding Summary Table. Permanent seeding for conditions other than listed above shall be performed at the rates and dates as provided in the Permanent Seeding Summary Table below. Fertilizer and lime amendments shall be incorporated into the top 3"-5" of the soil by disking or other suitable means. Mulching shall be accomplished as discussed in Item #6 of these specifications.

| Seed Mixture (For Hardiness Zone 7a) (From Table B.3) | | | | | Fertilizer Rate (10-20-20) | | | Lime Rate |
|---|---|---|---|---|---|---|---|---|
| No. | Species | Appl Rate (lbs/ac) | Seeding Dates | Seeding Depths | N | P2O5 | K2O | |
| 7 | CREEPING RED FESCUE<br>KENTUCKY BLUEGRASS | 60#<br>15# | 3/1 - 5/15<br>8/15 - 10/15 | 1/4" - 1/2" | 45 lb/ac<br>1lb/<br>1000 sf | 90<br>lb/ac<br>2lb/<br>1000 sf | 90 lb/ac<br>2lb/<br>1000 sf | 2 tons/ac<br>90 lb/<br>1000 sq |
| 8 | TALL FESCUE | 100# | 3/1 - 5/15<br>8/15 - 10/15 | 1/4" - 1/2" | | | | |
| 9 | TALL FESCUE<br>KENTUCKY BLUEGRASS<br>PERRENIAL RYEGRASS | 60#<br>40#<br>20# | 3/1 - 5/15<br>8/15 - 10/15 | 1/4" - 1/2" | | | | |
| | | | | | | | | |

8. Any spoil or borrow will be placed at a site approved by the Soil Conservation District.
9. All areas remaining or intended to remain disturbed for longer than seven (7) days shall be stabilized in accordance with the USDA, Natural Resources Conservation Service Standards and Specifications for Soil Erosion and Sediment Control in developing areas for critical area stabilization.
10. It will be the responsibility of the Contractor or Subcontractor to notify the Engineer of any deviation from this plan. Any change made in this plan without written authorization from the Engineer will place responsibility of said change on the Contractor or Subcontractor.

LANDSCAPE DETAILS

FOR

FOUNDATION OF HOPE

TAX MAP 0104, ID 0000, PARCEL 1463

FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND

PREPARED FOR FOUNDATION OF HOPE


RAUCH INC.
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 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

6-May-25

**REVISIONS**

| REV. # | DATE | DESCRIPTION |
|---|---|---|

MISS UTILITY OF DELMARVA — 811

| | |
|---|---|
| DATE: | 5/6/2025 |
| SCALE: | N/A |
| DRAWN BY: | GJR |
| DESIGNED BY: | GJR |
| APPROVED BY: | |

SHEET NO.: L-505

DESIGN DEVELOPMENT

Z:\FOUNDATION OF HOPE\CIVIL\PRODUCTION PLANS\FOUNDATION OF HOPE - SITE PLAN.DWG

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EASTON - MARYLAND

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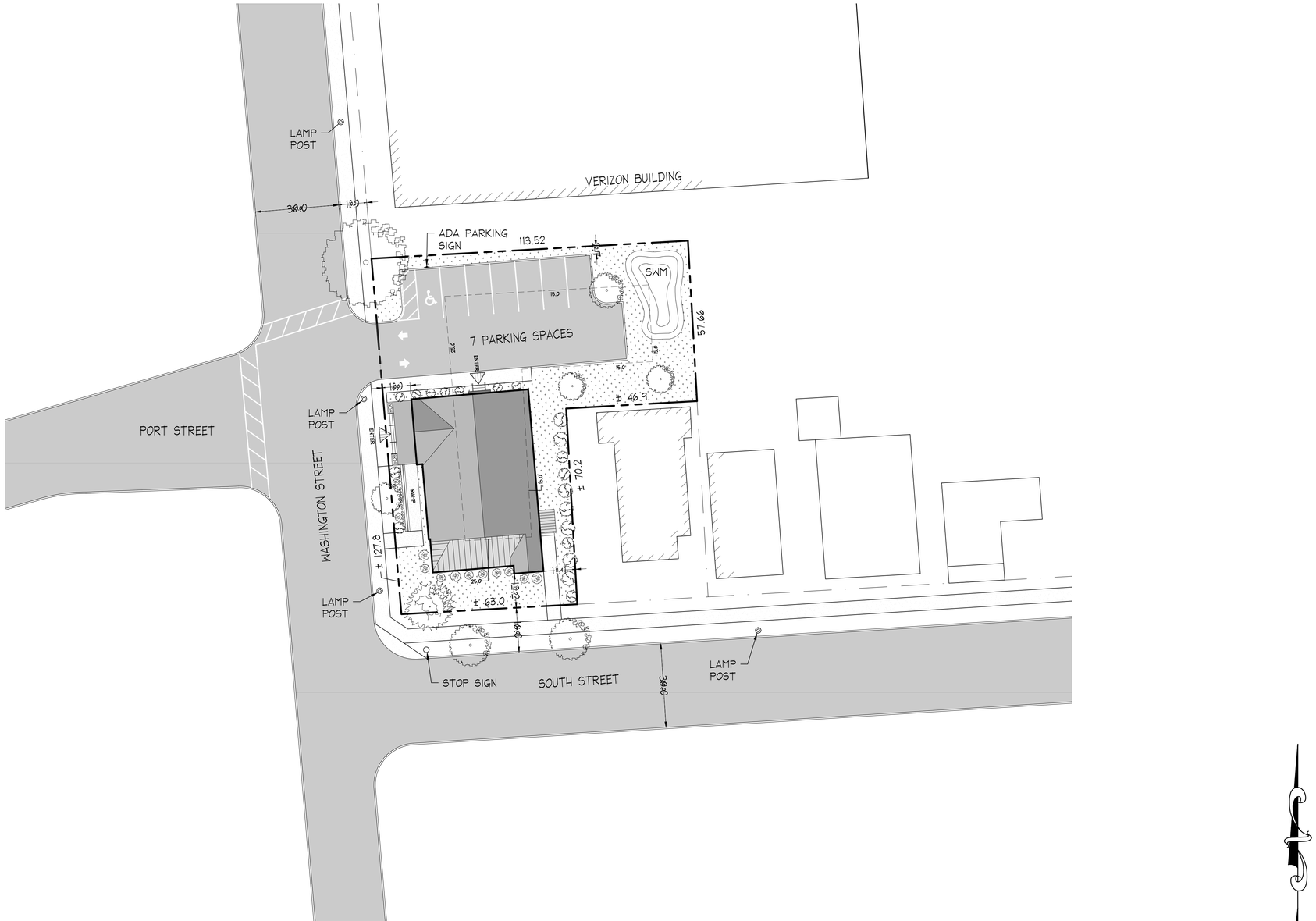


1 / C101 SITE PLAN - PROPOSED
SCALE: 1" = 20'

SCALE 0' 20' 40' 60' 80' 100'


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NEW COMMERCIAL / OFFICE BUILDING FOR:

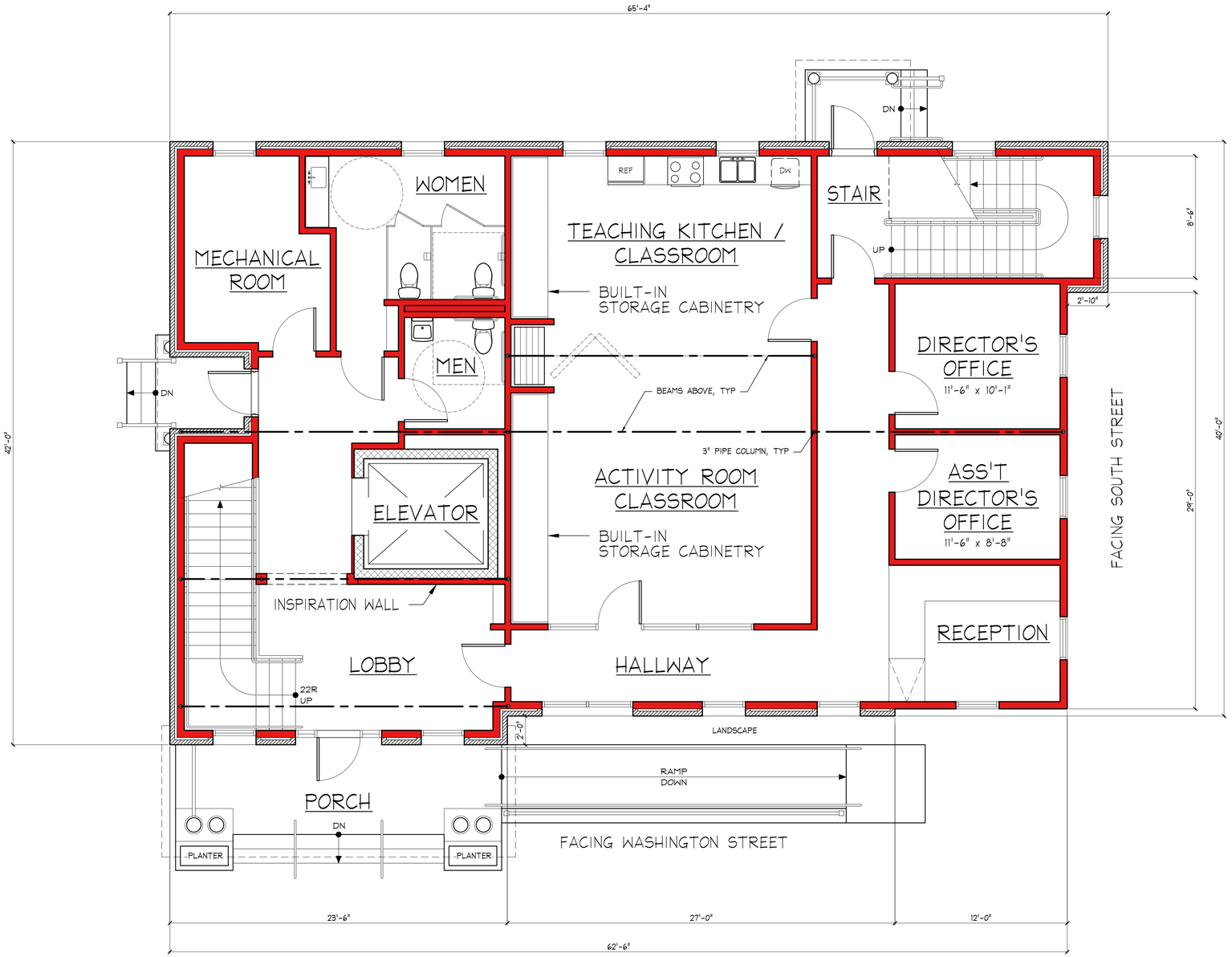
# FOUNDATION OF HOPE, INC

51 SOUTH WASHINGTON STREET
EASTON, MARYLAND 21601

| REV # | REVISION | DATE |
|---|---|---|
| 1 | SCHEMATIC DESIGN ISSUE FOR REVIEW | 6/10/22 |

## SITE PLAN - PROPOSED

| | |
|---|---|
| DRAWN BY: | PGA |
| REVIEWED BY: | TFC |
| PROJECT NUMBER: | 0092022 |
| SCALE: | AS NOTED |
| ISSUE DATE: | 4/21/2022 |
| PROJECT STATUS: | SD |
| DRAWING NUMBER: | C101 |




1 / A101 FIRST FLOOR PLAN - PROPOSED

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

N PROJECT NORTH

0" 4' 8' 12' 20' GRAPHIC SCALE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| A | SCHEMATIC DESIGN ISSUE FOR REVIEW | 6/10/22 |
| B | SCHEMATIC DESIGN ISSUE FOR REVIEW | 8/3/23 |

## FIRST FLOOR PLAN - PROPOSED

| | |
|---|---|
| DRAWN BY: | CR |
| REVIEWED BY: | TFC |
| PROJECT NUMBER: | 0092022 |
| SCALE: | AS NOTED |
| ISSUE DATE: | 4/21/2022 |
| PROJECT STATUS: | SD |
| DRAWING NUMBER: | A101 |



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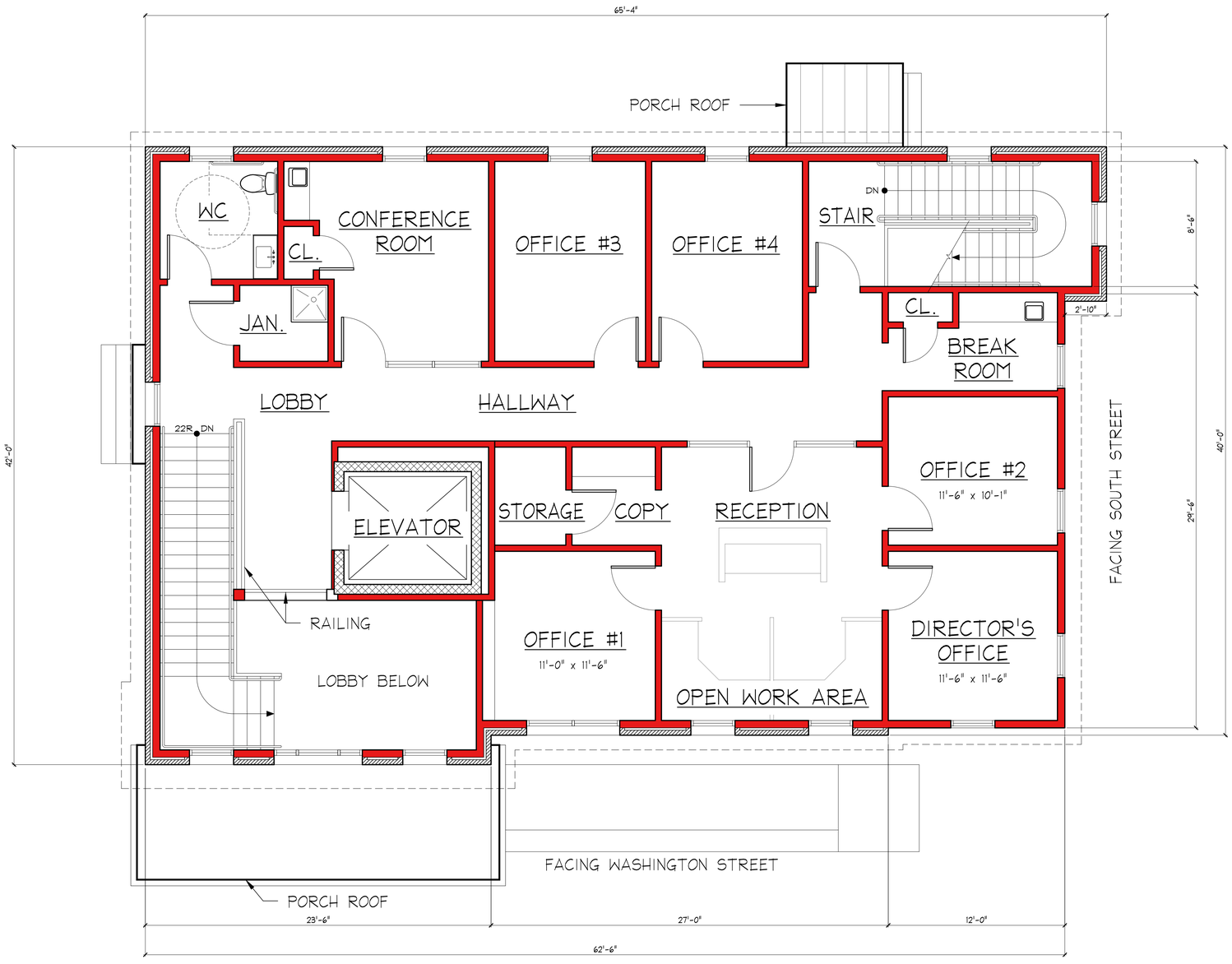


1 / A102 SECOND FLOOR PLAN - PROPOSED
SCALE: 1/4" = 1'-0"

N PROJECT NORTH

0" 4' 8' 12' 20'
GRAPHIC SCALE


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| B | SCHEMATIC DESIGN ISSUE FOR REVIEW | 8/3/23 |

## SECOND FLOOR PLAN - PROPOSED

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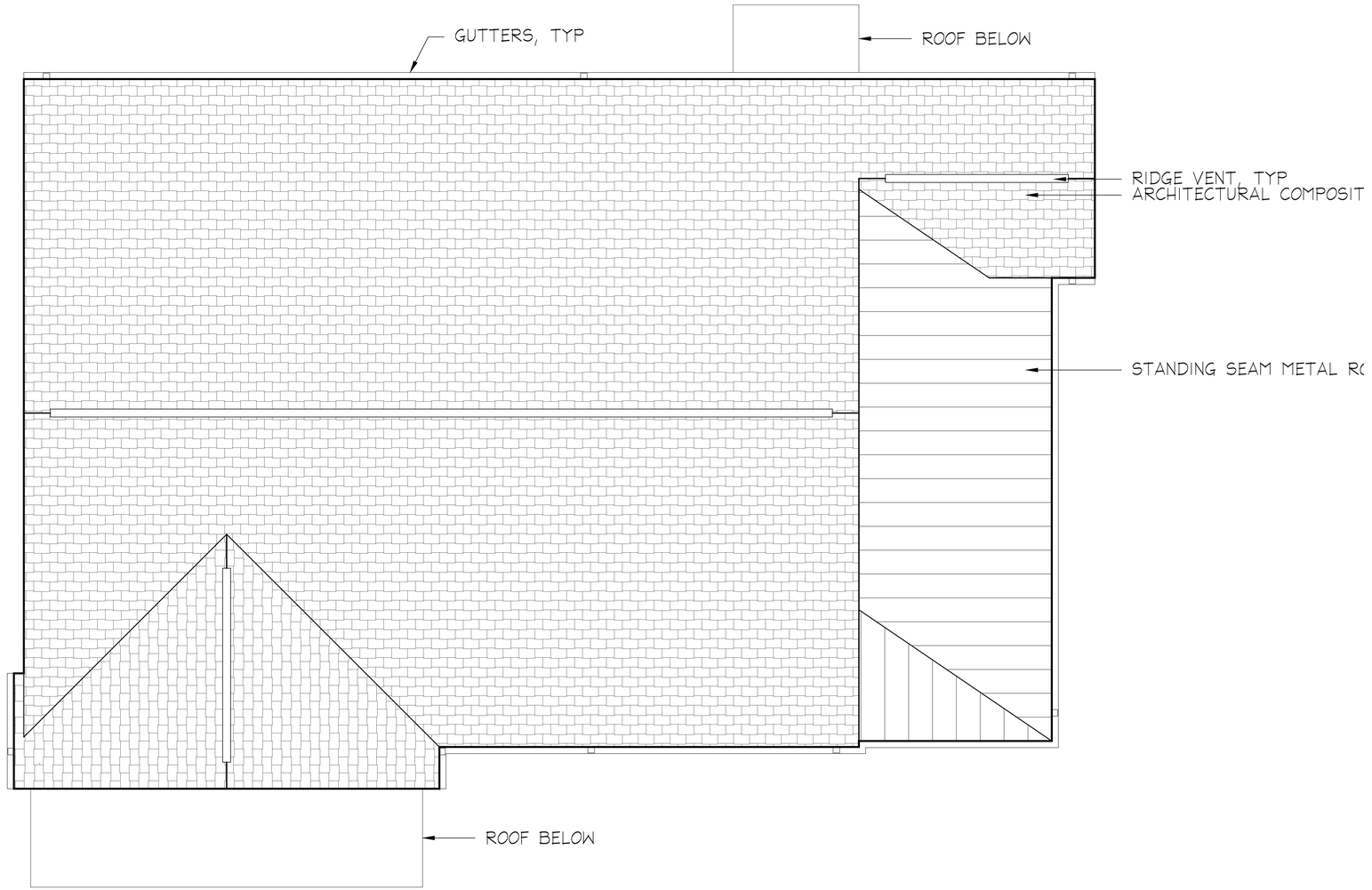
|---|---|
| DRAWN BY: | CR |
| REVIEWED BY: | TFC |
| PROJECT NUMBER: | 0092022 |
| SCALE: | AS NOTED |
| ISSUE DATE: | 4/21/2022 |
| PROJECT STATUS: | SD |
| DRAWING NUMBER: | A102 |




1 / A103 ROOF PLAN - PROPOSED
SCALE: 1/4" = 1'-0"

N
PROJECT NORTH

0" 4' 8' 12' 20'
GRAPHIC SCALE

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## ROOF PLAN - PROPOSED

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| DRAWN BY: | CR |
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| PROJECT NUMBER: | 0092022 |
| SCALE: | AS NOTED |
| ISSUE DATE: | 4/21/2022 |
| PROJECT STATUS: | SD |
| DRAWING NUMBER: | A103 |

1 / A201 WEST ELEVATION - PROPOSED
SCALE: 1/4" = 1'-0"


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| 1 | SCHEMATIC DESIGN ISSUE FOR REVIEW | 6/10/22 |

## BUILDING ELEVATIONS PROPOSED OPTION A

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| DRAWN BY: | PGA |
| REVIEWED BY: | TFC |
| PROJECT NUMBER: | 0092022 |
| SCALE: | AS NOTED |
| ISSUE DATE: | 4/21/2022 |
| PROJECT STATUS: | SD |
| DRAWING NUMBER: | R201 |


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1 / A201 WEST ELEVATION - PROPOSED

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


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| A | SCHEMATIC DESIGN ISSUE FOR REVIEW | 6/10/22 |

## BUILDING ELEVATIONS PROPOSED OPTION A

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| SCALE: | AS NOTED |
| ISSUE DATE: | 4/21/2022 |
| PROJECT STATUS: | SD |
| DRAWING NUMBER: | A201 |

1 / A202 SOUTH ELEVATION - PROPOSED

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


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## BUILDING ELEVATIONS PROPOSED OPTION A

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| DRAWN BY: | CR |
| REVIEWED BY: | TFC |
| PROJECT NUMBER: | 0092022 |
| SCALE: | AS NOTED |
| ISSUE DATE: | 4/21/2022 |
| PROJECT STATUS: | SD |
| DRAWING NUMBER: | A202 |

1 / A203 EAST ELEVATION - PROPOSED

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


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| A | SCHEMATIC DESIGN ISSUE FOR REVIEW | 6/10/22 |

## BUILDING ELEVATIONS PROPOSED OPTION A

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|---|---|
| DRAWN BY: | CR |
| REVIEWED BY: | TFC |
| PROJECT NUMBER: | 0092022 |
| SCALE: | AS NOTED |
| ISSUE DATE: | 4/21/2022 |
| PROJECT STATUS: | SD |
| DRAWING NUMBER: | A203 |

1 / A204 NORTH ELEVATION - PROPOSED

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


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# BUILDING ELEVATIONS PROPOSED OPTION A

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|---|---|
| DRAWN BY: | CR |
| REVIEWED BY: | TFC |
| PROJECT NUMBER: | 0092022 |
| SCALE: | AS NOTED |
| ISSUE DATE: | 4/21/2022 |
| PROJECT STATUS: | SD |
| DRAWING NUMBER: | A204 |

RAUCH inc.
engineering design & development services

# STORMWATER MANAGEMENT ANALYSIS

FOR

# *FOUNDATION OF HOPE*

PREPARED FOR

**FOUNDATION OF HOPE**


**PREPARED BY**
**RAUCH, INC**
**106 N. HARRISON STREET**
**EASTON, MD 21601**


**6th of May 2025**

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 — 5/6/2025 DATE
EXPIRATION DATE 7/24/2026

RAUCH inc.
engineering design & development services

# STORMWATER MANAGEMENT ANALYSIS – NARRATIVE

## EXISTING CONDITIONS

The project site under analysis is located in the town of Easton, Maryland, in Talbot County. It is bordered by South Washington Street and South Street.

The site's existing conditions vary between its two sections. The eastern portion comprised of mostly trees and brush while the western side is comprised of grass land. 100% of the existing soils within the proposed limits of disturbance are Hydrologic Soil Type C.

## PROPOSED CONDITIONS

Foundation of Hope involves the construction of a 2,538 SF office building, and a permeable pavement parking lot on a singular parcel of land. ADA-compliant sidewalks will be provided adjacent to South Washington Street. One micro-bioretention area and other stormwater management facilities will be included as well. Water and sewer extensions from the existing water and sewer in adjacent roads will also be included.

The proposed impervious will be treated for quality management by the permeable pavement and the micro-bioretention area. The ponding in the bioretention areas will be used as quantity management.

Proposed conditions during the 2-, 10-, and 100-year storm events have been analyzed and show postconstruction peak flows for the 2-, and 10-year storm events are less than preconstruction peak flows at the Study Points.

The maps included with this report detail all drainage areas with times of concentration.

## STORMWATER QUALITY NOTES:

The above quality stormwater management practices meet the Environmental Site Design Volume required for the site.

**106 N. Harrison Street - Easton, MD 21601**
**office: 410.770.9081 | fax: 410.770.3667**
**email: design@raucheng.com | web: www.raucheng.com**

## WATER QUANTITY

Volume control is provided within the micro-bioretention areas and a permeable pavement parking lot and by managing/maintaining existing times of concentrations within existing and reshaped drainage areas.

The existing curb inlet, Study Point #1, adjacent to South Washington Street will continue to take on much of the proposed site drainage on the western and southern parts of the site, Drainage Area #1. This 3,810 SF area will be comprised of roadway, sidewalk, and grass.

The remaining 8,795 SF, Drainage Area #2, which includes the roof of the office building, the permeable pavement parking lot, concrete sidewalk and grass will all ultimately finds its way into the micro-bioretention, Study Point #2. A curb opening at the southeast corner of the pavement lot will allow any water to do so. Gutter and downspouts will collect the area covered by the roof of the office building which will be piped underground to a location that will lead to the micro-bioretention.

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 1 | EXISTING | 0.20 | 0.44 | 0.97 |
| | PROPOSED | 0.10 | 0.18 | 0.35 |
| CHANGE | CHANGE | -0.10 | -0.26 | -0.62 |
| STUDY POINT 2 | EXISTING | 0.05 | 0.12 | 0.28 |
| | PROPOSED | 0.00 | 0.00 | 0.00 |
| CHANGE | CHANGE | -0.05 | -0.12 | -0.28 |

## NATURAL AREA PRESERVATION

The stormwater management facilities for this project have been designed to preserve natural areas such as existing tree lines as best as possible.

## WATER QUALITY – ESDv/WQv

Quality control is provided within the Micro-Bioretention area, and by managing/maintaining existing times of concentrations within existing and reshaped drainage areas.

The summary of the calculations is shown below:

**SITE REQUIRED ESDv (SEE ATTACHMENTS FOR SPECIFIC CALCULATIONS):**

**ESDv REQUIRED: 791 CF**

**ESDv PROVIDED: 845 CF**

**Micro-bioretention summary**

| M-6 | Direct drainage | | | | Indirect drainage | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Micro-Scale Practices* | 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) | Total catchment area ------ Total ESDv to practice | Practice Specific Parameter(s) | | | | Bed area % of direct catchement area | WQV or ESDv provided (cf) | Runoff Volume Remaining (cf) | Down-Gradient Practice and Row | SOIL TYPE | Baseline Phosphorous Removal Efficiency | Adjusted Removal Rate | P Load to Practice (lbs/yr) | Load Reduction (lbs/yr) | Remaining Load (lbs/yr) |
| | | 27% | 1.56 | | | | 8,795 | Bed Surface Area (sf) | Top of Ponding Surface Area (sf) | Ponding Depth (ft) | Media Depth (ft) | | | | | | | | | |
| Micro-Bioretention 1 | 8,795 | 0.2965151 | 339 | 587 | 0 | 0 | 587 | 162 | 311 | 0.5 | 3 | 1.8% | 313 | 274 | | | | #VALUE! | 0.15 | #VALUE! | #VALUE! |
| Total | 10,013 | | | 847 | | 0 | | | | | | | 313 | 534 | | | #VALUE! | #VALUE! | 0.21 | #VALUE! | #VALUE! |

**Permeable Pavement summary**

| | Direct drainage | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Micro-Scale Practices* | Contributing Drainage Area (sf) | % Impervious Cover ---------- RV | To fully treat sub area ------- PE required ------- WQV required | Max available WQv or ESDv from CDA (cf) | Practice Specific Parameter(s) | WQV or ESDv provided (cf) | Runoff Volume Remaining (cf) | Down-Gradient Practice and Row | Baseline Phosphorous Removal Efficiency | Adjusted Removal Rate | P Load to Practice (lbs/yr) | Load Reduction (lbs/yr) | Remaining Load (lbs/yr) | | Watershed-inches treated (PE Provided) | Annual Rainfall Treated (%) |
| | | 100% | 2.18 | | Subbase Thickness (in) | | | | | | | | | | | |
| Pemeable Pavement (C Soils) | 3,327 | 0.95 | 574 | 711 | 12 | 532 | 179 | | 40% | 48.79% | 0.18 | 0.09 | 0.09 | | 2.02 | 100.72% |
| Total | 3,327 | | | 711 | | 532 | 179 | | 40% | 48.79% | 0.18 | 0.09 | 0.09 | | 2.02 | 100.72% |

# 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.

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**office: 410.770.9081 | fax: 410.770.3667**
**email: design@raucheng.com | web: www.raucheng.com**

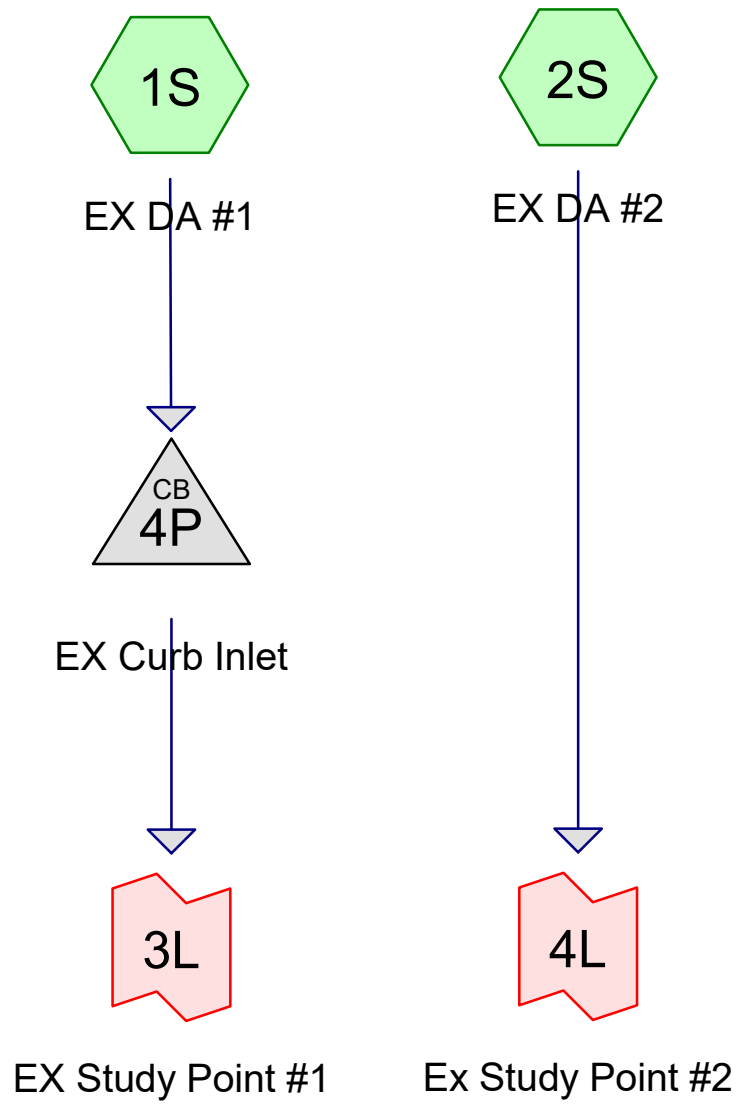
# ESD Calculations

| *Micro-Scale Practices* | 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) | Total catchment area ------ Total ESDv to practice | Practice Specific Parameter(s) | | | | Bed area % of direct catchement area | WQV or ESDv provided (cf) | Runoff Volume Remaining (cf) | Down-Gradient Practice and Row | SOIL TYPE | Baseline Phosphorous Removal Efficiency | Adjusted Removal Rate | P Load to Practice (lbs/yr) | Load Reduction (lbs/yr) | Remaining Load (lbs/yr) | Watershed-inches treated (PE Provided) | Annual Rainfall Treated (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Bed Surface Area (sf) | Top of Ponding Surface Area (sf) | Ponding Depth (ft) | Media Depth (ft) | | | | | | | | | | | | |
| | | 27% | 1.56 | | | | 8,795 | | | | | | | | | | | | | | | | |
| Micro-Bioretention 1 | 8,795 | 0.2965151 | 339 | 587 | 0 | 0 | 587 | 162 | 311 | 0.5 | 3 | 1.8% | 313 | 274 | | | #VALUE! | #VALUE! | 0.15 | #VALUE! | #VALUE! | 1.44 | 91.95% |
| Total | 10,013 | | | 847 | | 0 | | | | | | | 313 | 534 | | | #VALUE! | #VALUE! | 0.21 | #VALUE! | #VALUE! | 1.00 | 82.48% |

| *Micro-Scale Practices* | Contributing Drainage Area (sf) | % Impervious Cover ---------- RV | To fully treat sub area ------- PE required ------- WQV required | Max available WQv or ESDv from CDA (cf) | Practice Specific Parameter(s) | WQV or ESDv provided (cf) | Runoff Volume Remaining (cf) | Down-Gradient Practice and Row | Baseline Phosphorous Removal Efficiency | Adjusted Removal Rate | P Load to Practice (lbs/yr) | Load Reduction (lbs/yr) | Remaining Load (lbs/yr) | Watershed-inches treated (PE Provided) | Annual Rainfall Treated (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 100% | 2.18 | | Subbase Thickness (in) | | | | | | | | | | |
| Pemeable Pavement (C Soils) | 3,327 | 0.95 | 574 | 711 | 12 | 532 | 179 | | 40% | 48.79% | 0.18 | 0.09 | 0.09 | 2.02 | 100.72% |
| Total | 3,327 | | | 711 | | 532 | 179 | | 40% | 48.79% | 0.18 | 0.09 | 0.09 | 2.02 | 100.72% |

# Analysis of Existing Conditions

# Existing Conditions




Subcat Reach Pond Link

**Routing Diagram for HydoCAD - Foundation of Hope**
Prepared by Rauch Inc, Printed 5/6/2025
HydroCAD® 10.20-3h s/n 02413 © 2024 HydroCAD Software Solutions LLC

## Rainfall Events Listing (selected events)

| Event# | Event Name | Storm Type | Curve | Mode | Duration (hours) | B/B | Depth (inches) | AMC |
|---|---|---|---|---|---|---|---|---|
| 1 | 2-Year | NOAA 24-hr | C | Default | 24.00 | 1 | 3.33 | 2 |
| 2 | 10-Year | NOAA 24-hr | C | Default | 24.00 | 1 | 5.20 | 2 |
| 3 | 100-Year | NOAA 24-hr | C | Default | 24.00 | 1 | 8.98 | 2 |

## Area Listing (selected nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|---|---|---|
| 0.259 | 74 | >75% Grass cover, Good, HSG C (1S, 2S) |
| 0.030 | 98 | Paved roads w/curbs & sewers, HSG A (1S) |
| **0.289** | **76** | **TOTAL AREA** |

## Soil Listing (selected nodes)

| Area (acres) | Soil Group | Subcatchment Numbers |
|---|---|---|
| 0.030 | HSG A | 1S |
| 0.000 | HSG B | |
| 0.259 | HSG C | 1S, 2S |
| 0.000 | HSG D | |
| 0.000 | Other | |
| **0.289** | | **TOTAL AREA** |

## Ground Covers (selected nodes)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 0.000 | 0.000 | 0.259 | 0.000 | 0.000 | 0.259 | >75% Grass cover, Good | 1S, 2S |
| 0.030 | 0.000 | 0.000 | 0.000 | 0.000 | 0.030 | Paved roads w/curbs & sewers | 1S |
| **0.030** | **0.000** | **0.259** | **0.000** | **0.000** | **0.289** | **TOTAL AREA** | |

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 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 1S: EX DA #1** Runoff Area=9,766 sf 13.35% Impervious Runoff Depth=1.31"
Flow Length=170' Tc=14.1 min CN=77 Runoff=0.20 cfs 0.024 af

**Subcatchment 2S: EX DA #2** Runoff Area=2,839 sf 0.00% Impervious Runoff Depth=1.12"
Flow Length=79' Slope=0.0150 '/' Tc=13.0 min CN=74 Runoff=0.05 cfs 0.006 af

**Pond 4P: EX Curb Inlet** Peak Elev=28.07' Inflow=0.20 cfs 0.024 af
Outflow=0.20 cfs 0.024 af

**Link 3L: EX Study Point #1** Inflow=0.20 cfs 0.024 af
Primary=0.20 cfs 0.024 af

**Link 4L: Ex Study Point #2** Inflow=0.05 cfs 0.006 af
Primary=0.05 cfs 0.006 af

**Total Runoff Area = 0.289 ac Runoff Volume = 0.030 af Average Runoff Depth = 1.26"**
**89.65% Pervious = 0.259 ac 10.35% Impervious = 0.030 ac**

## Summary for Subcatchment 1S: EX DA #1

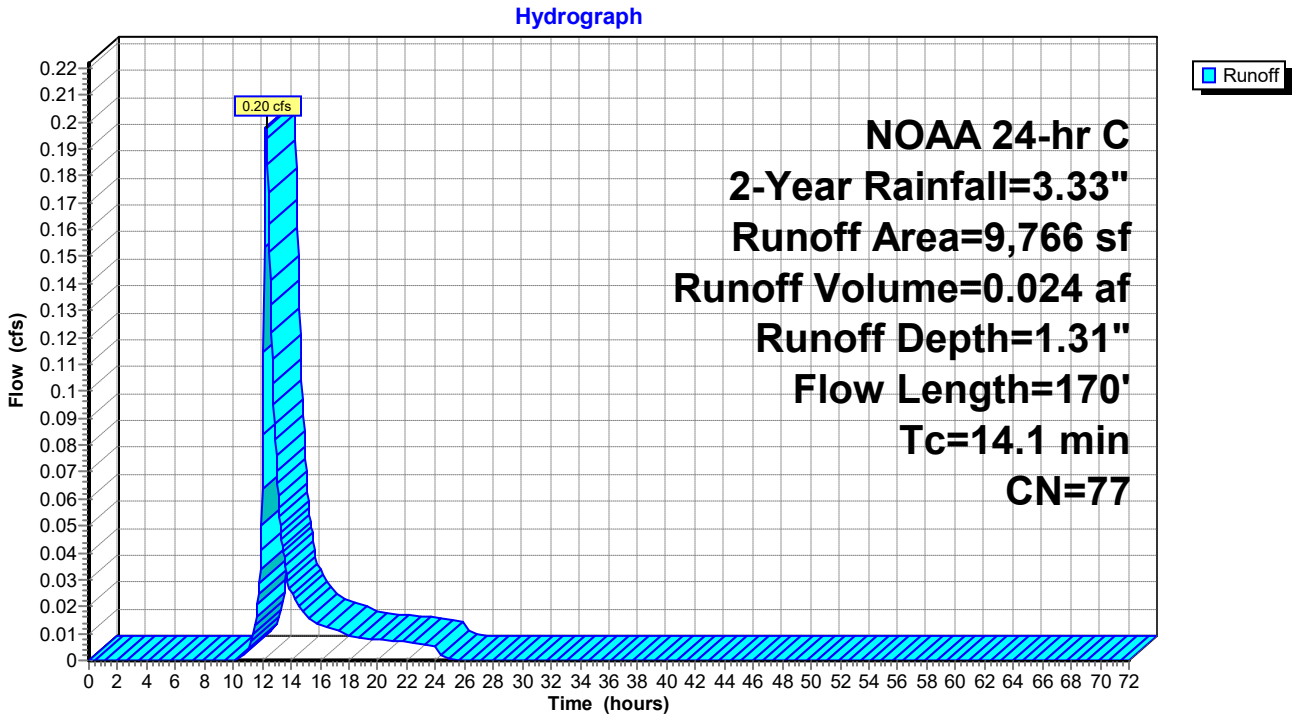
Runoff = 0.20 cfs @ 12.26 hrs, Volume= 0.024 af, Depth= 1.31"
Routed to Pond 4P : EX Curb Inlet

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.33"

| Area (sf) | CN | Description |
|---|---|---|
| 8,462 | 74 | >75% Grass cover, Good, HSG C |
| 1,304 | 98 | Paved roads w/curbs & sewers, HSG A |
| 9,766 | 77 | Weighted Average |
| 8,462 | | 86.65% Pervious Area |
| 1,304 | | 13.35% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.6 | 100 | 0.0214 | 0.12 | | **Sheet Flow,** Grass: Dense n= 0.240 P2= 3.33" |
| 0.5 | 70 | 0.0114 | 2.17 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 14.1 | 170 | Total | | | |

## Subcatchment 1S: EX DA #1



## Hydrograph for Subcatchment 1S: EX DA #1

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 |
| 2.00 | 0.08 | 0.00 | 0.00 |
| 3.00 | 0.12 | 0.00 | 0.00 |
| 4.00 | 0.16 | 0.00 | 0.00 |
| 5.00 | 0.21 | 0.00 | 0.00 |
| 6.00 | 0.26 | 0.00 | 0.00 |
| 7.00 | 0.32 | 0.00 | 0.00 |
| 8.00 | 0.40 | 0.00 | 0.00 |
| 9.00 | 0.49 | 0.00 | 0.00 |
| 10.00 | 0.61 | 0.00 | 0.00 |
| 11.00 | 0.80 | 0.01 | 0.00 |
| 12.00 | 1.59 | 0.25 | **0.06** |
| 13.00 | 2.53 | 0.76 | **0.07** |
| 14.00 | 2.72 | 0.88 | 0.03 |
| 15.00 | 2.84 | 0.96 | 0.02 |
| 16.00 | 2.93 | 1.02 | 0.01 |
| 17.00 | 3.01 | 1.07 | 0.01 |
| 18.00 | 3.07 | 1.12 | 0.01 |
| 19.00 | 3.12 | 1.15 | 0.01 |
| 20.00 | 3.17 | 1.19 | 0.01 |
| 21.00 | 3.21 | 1.22 | 0.01 |
| 22.00 | 3.25 | 1.25 | 0.01 |
| 23.00 | 3.29 | 1.28 | 0.01 |
| 24.00 | **3.33** | **1.31** | 0.01 |
| 25.00 | 3.33 | 1.31 | 0.00 |
| 26.00 | 3.33 | 1.31 | 0.00 |
| 27.00 | 3.33 | 1.31 | 0.00 |
| 28.00 | 3.33 | 1.31 | 0.00 |
| 29.00 | 3.33 | 1.31 | 0.00 |
| 30.00 | 3.33 | 1.31 | 0.00 |
| 31.00 | 3.33 | 1.31 | 0.00 |
| 32.00 | 3.33 | 1.31 | 0.00 |
| 33.00 | 3.33 | 1.31 | 0.00 |
| 34.00 | 3.33 | 1.31 | 0.00 |
| 35.00 | 3.33 | 1.31 | 0.00 |
| 36.00 | 3.33 | 1.31 | 0.00 |
| 37.00 | 3.33 | 1.31 | 0.00 |
| 38.00 | 3.33 | 1.31 | 0.00 |
| 39.00 | 3.33 | 1.31 | 0.00 |
| 40.00 | 3.33 | 1.31 | 0.00 |
| 41.00 | 3.33 | 1.31 | 0.00 |
| 42.00 | 3.33 | 1.31 | 0.00 |
| 43.00 | 3.33 | 1.31 | 0.00 |
| 44.00 | 3.33 | 1.31 | 0.00 |
| 45.00 | 3.33 | 1.31 | 0.00 |
| 46.00 | 3.33 | 1.31 | 0.00 |
| 47.00 | 3.33 | 1.31 | 0.00 |
| 48.00 | 3.33 | 1.31 | 0.00 |
| 49.00 | 3.33 | 1.31 | 0.00 |
| 50.00 | 3.33 | 1.31 | 0.00 |
| 51.00 | 3.33 | 1.31 | 0.00 |
| 52.00 | 3.33 | 1.31 | 0.00 |
| 53.00 | 3.33 | 1.31 | 0.00 |
| 54.00 | 3.33 | 1.31 | 0.00 |
| 55.00 | 3.33 | 1.31 | 0.00 |
| 56.00 | 3.33 | 1.31 | 0.00 |
| 57.00 | 3.33 | 1.31 | 0.00 |
| 58.00 | 3.33 | 1.31 | 0.00 |
| 59.00 | 3.33 | 1.31 | 0.00 |
| 60.00 | 3.33 | 1.31 | 0.00 |
| 61.00 | 3.33 | 1.31 | 0.00 |
| 62.00 | 3.33 | 1.31 | 0.00 |
| 63.00 | 3.33 | 1.31 | 0.00 |
| 64.00 | 3.33 | 1.31 | 0.00 |
| 65.00 | 3.33 | 1.31 | 0.00 |
| 66.00 | 3.33 | 1.31 | 0.00 |
| 67.00 | 3.33 | 1.31 | 0.00 |
| 68.00 | 3.33 | 1.31 | 0.00 |
| 69.00 | 3.33 | 1.31 | 0.00 |
| 70.00 | 3.33 | 1.31 | 0.00 |
| 71.00 | 3.33 | 1.31 | 0.00 |
| 72.00 | 3.33 | 1.31 | 0.00 |

## Summary for Subcatchment 2S: EX DA #2

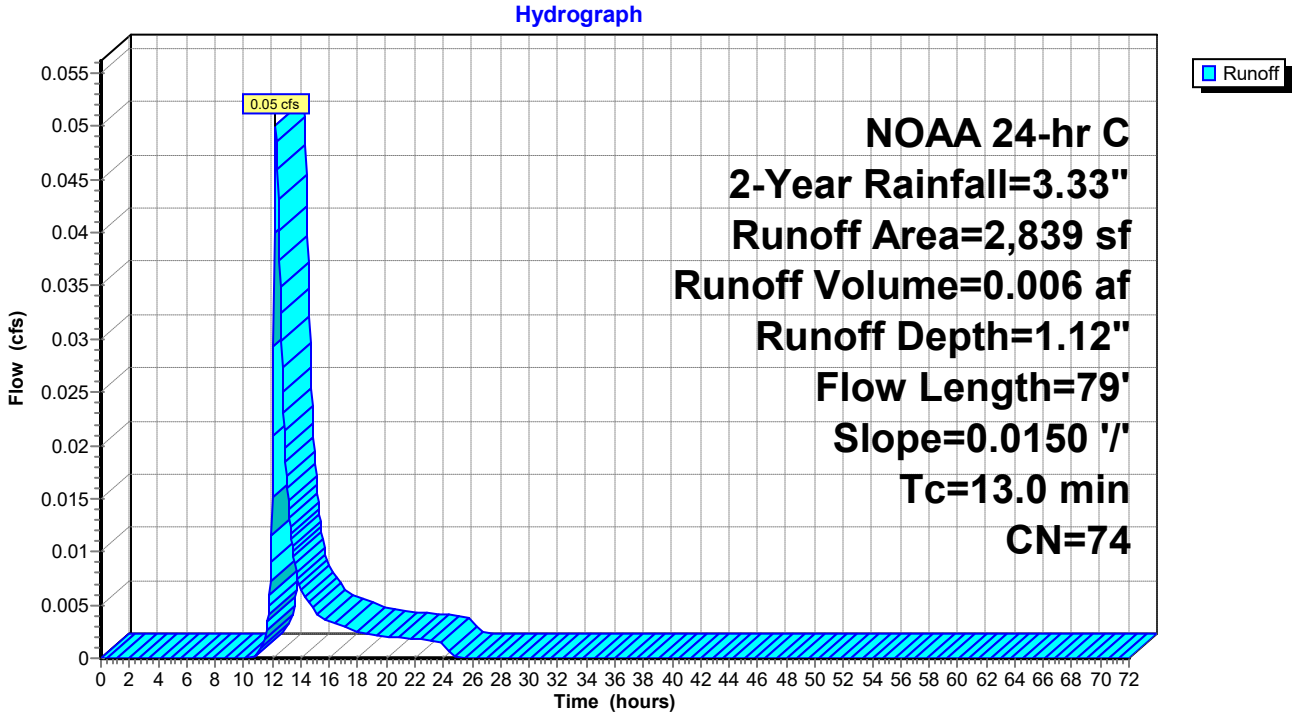
Runoff = 0.05 cfs @ 12.25 hrs, Volume= 0.006 af, Depth= 1.12"
Routed to Link 4L : Ex Study Point #2

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.33"

| Area (sf) | CN | Description |
|---|---|---|
| 2,839 | 74 | >75% Grass cover, Good, HSG C |
| 2,839 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.0 | 79 | 0.0150 | 0.10 | | **Sheet Flow,** Grass: Dense n= 0.240 P2= 3.33" |

## Subcatchment 2S: EX DA #2



## Hydrograph for Subcatchment 2S: EX DA #2

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 |
| 2.00 | 0.08 | 0.00 | 0.00 |
| 3.00 | 0.12 | 0.00 | 0.00 |
| 4.00 | 0.16 | 0.00 | 0.00 |
| 5.00 | 0.21 | 0.00 | 0.00 |
| 6.00 | 0.26 | 0.00 | 0.00 |
| 7.00 | 0.32 | 0.00 | 0.00 |
| 8.00 | 0.40 | 0.00 | 0.00 |
| 9.00 | 0.49 | 0.00 | 0.00 |
| 10.00 | 0.61 | 0.00 | 0.00 |
| 11.00 | 0.80 | 0.00 | 0.00 |
| 12.00 | 1.59 | 0.18 | **0.02** |
| 13.00 | 2.53 | 0.63 | **0.02** |
| 14.00 | 2.72 | 0.74 | 0.01 |
| 15.00 | 2.84 | 0.81 | 0.00 |
| 16.00 | 2.93 | 0.86 | 0.00 |
| 17.00 | 3.01 | 0.91 | 0.00 |
| 18.00 | 3.07 | 0.95 | 0.00 |
| 19.00 | 3.12 | 0.98 | 0.00 |
| 20.00 | 3.17 | 1.02 | 0.00 |
| 21.00 | 3.21 | 1.05 | 0.00 |
| 22.00 | 3.25 | 1.07 | 0.00 |
| 23.00 | 3.29 | 1.10 | 0.00 |
| 24.00 | **3.33** | **1.12** | 0.00 |
| 25.00 | 3.33 | 1.12 | 0.00 |
| 26.00 | 3.33 | 1.12 | 0.00 |
| 27.00 | 3.33 | 1.12 | 0.00 |
| 28.00 | 3.33 | 1.12 | 0.00 |
| 29.00 | 3.33 | 1.12 | 0.00 |
| 30.00 | 3.33 | 1.12 | 0.00 |
| 31.00 | 3.33 | 1.12 | 0.00 |
| 32.00 | 3.33 | 1.12 | 0.00 |
| 33.00 | 3.33 | 1.12 | 0.00 |
| 34.00 | 3.33 | 1.12 | 0.00 |
| 35.00 | 3.33 | 1.12 | 0.00 |
| 36.00 | 3.33 | 1.12 | 0.00 |
| 37.00 | 3.33 | 1.12 | 0.00 |
| 38.00 | 3.33 | 1.12 | 0.00 |
| 39.00 | 3.33 | 1.12 | 0.00 |
| 40.00 | 3.33 | 1.12 | 0.00 |
| 41.00 | 3.33 | 1.12 | 0.00 |
| 42.00 | 3.33 | 1.12 | 0.00 |
| 43.00 | 3.33 | 1.12 | 0.00 |
| 44.00 | 3.33 | 1.12 | 0.00 |
| 45.00 | 3.33 | 1.12 | 0.00 |
| 46.00 | 3.33 | 1.12 | 0.00 |
| 47.00 | 3.33 | 1.12 | 0.00 |
| 48.00 | 3.33 | 1.12 | 0.00 |
| 49.00 | 3.33 | 1.12 | 0.00 |
| 50.00 | 3.33 | 1.12 | 0.00 |
| 51.00 | 3.33 | 1.12 | 0.00 |
| 52.00 | 3.33 | 1.12 | 0.00 |
| 53.00 | 3.33 | 1.12 | 0.00 |
| 54.00 | 3.33 | 1.12 | 0.00 |
| 55.00 | 3.33 | 1.12 | 0.00 |
| 56.00 | 3.33 | 1.12 | 0.00 |
| 57.00 | 3.33 | 1.12 | 0.00 |
| 58.00 | 3.33 | 1.12 | 0.00 |
| 59.00 | 3.33 | 1.12 | 0.00 |
| 60.00 | 3.33 | 1.12 | 0.00 |
| 61.00 | 3.33 | 1.12 | 0.00 |
| 62.00 | 3.33 | 1.12 | 0.00 |
| 63.00 | 3.33 | 1.12 | 0.00 |
| 64.00 | 3.33 | 1.12 | 0.00 |
| 65.00 | 3.33 | 1.12 | 0.00 |
| 66.00 | 3.33 | 1.12 | 0.00 |
| 67.00 | 3.33 | 1.12 | 0.00 |
| 68.00 | 3.33 | 1.12 | 0.00 |
| 69.00 | 3.33 | 1.12 | 0.00 |
| 70.00 | 3.33 | 1.12 | 0.00 |
| 71.00 | 3.33 | 1.12 | 0.00 |
| 72.00 | 3.33 | 1.12 | 0.00 |

## Summary for Pond 4P: EX Curb Inlet

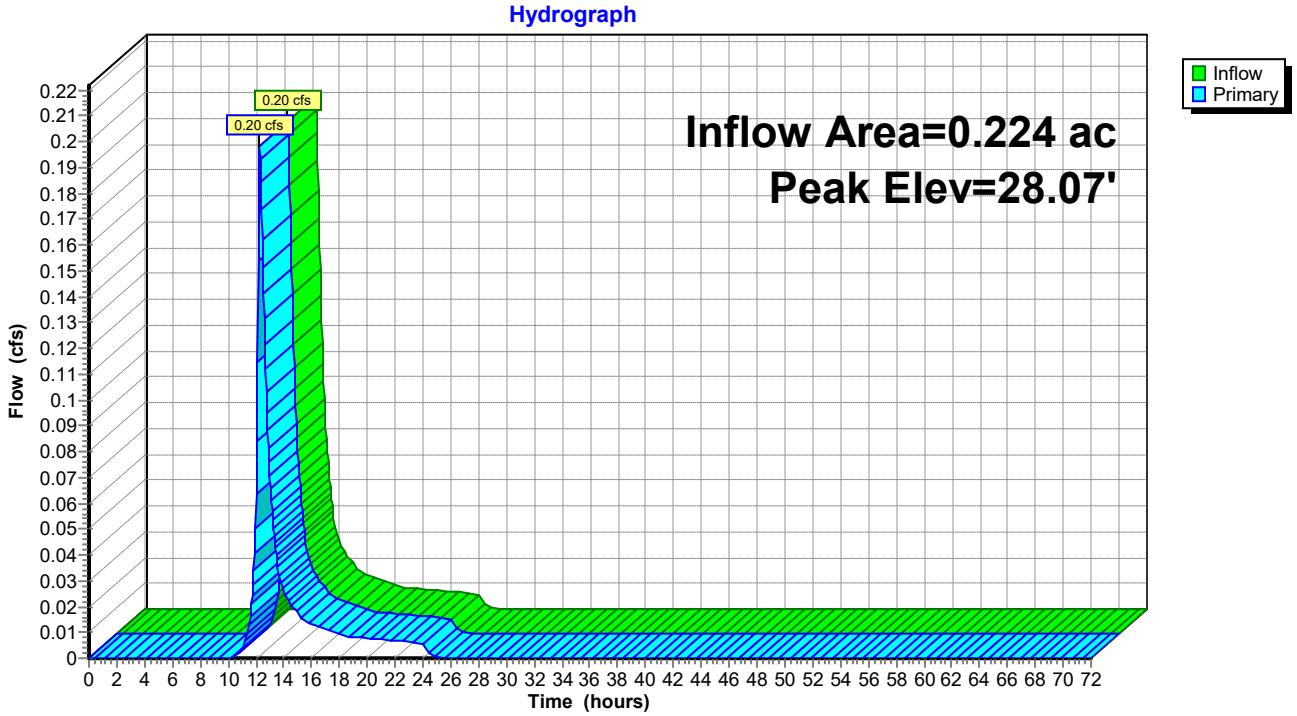
Inflow Area = 0.224 ac, 13.35% Impervious, Inflow Depth = 1.31" for 2-Year event
Inflow = 0.20 cfs @ 12.26 hrs, Volume= 0.024 af
Outflow = 0.20 cfs @ 12.26 hrs, Volume= 0.024 af, Atten= 0%, Lag= 0.0 min
Primary = 0.20 cfs @ 12.26 hrs, Volume= 0.024 af
Routed to Link 3L : EX Study Point #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 28.07' @ 12.26 hrs

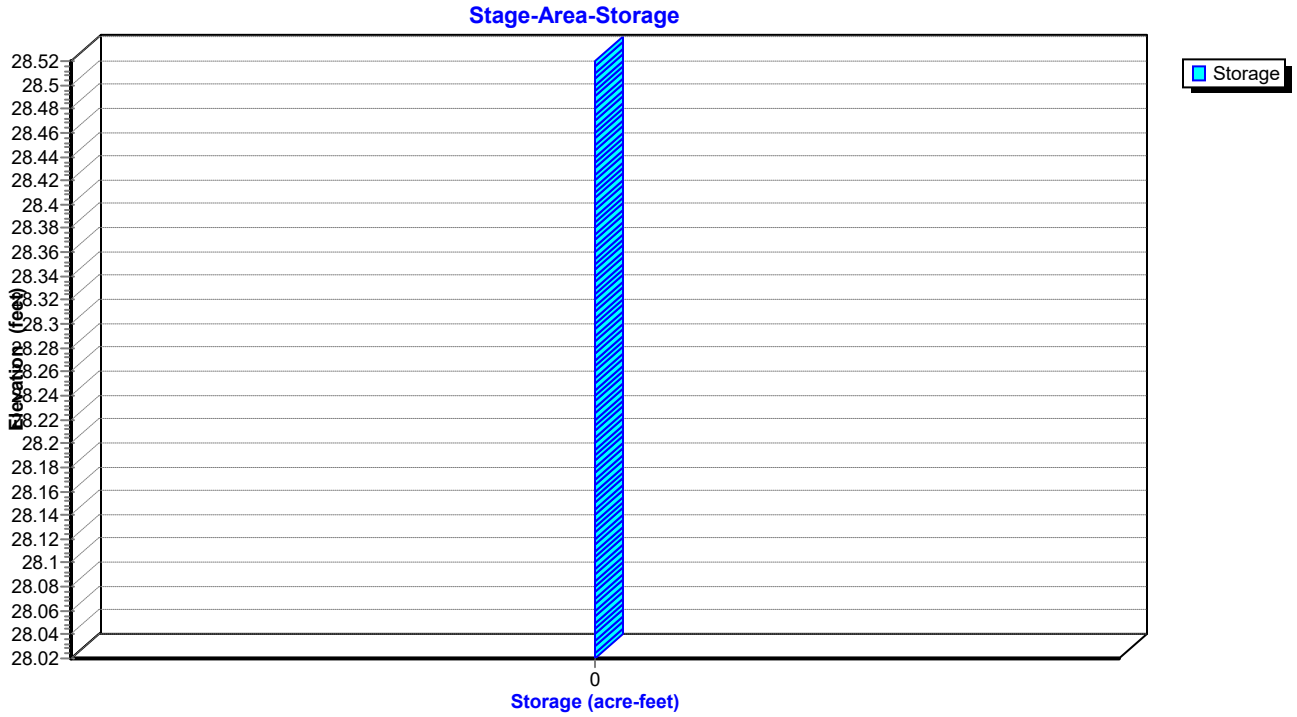
| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 28.02' | **72.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.20 cfs @ 12.26 hrs HW=28.07' TW=0.00' (Dynamic Tailwater)
**1=Orifice/Grate** (Orifice Controls 0.20 cfs @ 0.70 fps)

### Pond 4P: EX Curb Inlet



## Pond 4P: EX Curb Inlet



## Hydrograph for Pond 4P: EX Curb Inlet

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 28.02 | 0.00 | 52.00 | 0.00 | 28.02 | 0.00 |
| 1.00 | 0.00 | 28.02 | 0.00 | 53.00 | 0.00 | 28.02 | 0.00 |
| 2.00 | 0.00 | 28.02 | 0.00 | 54.00 | 0.00 | 28.02 | 0.00 |
| 3.00 | 0.00 | 28.02 | 0.00 | 55.00 | 0.00 | 28.02 | 0.00 |
| 4.00 | 0.00 | 28.02 | 0.00 | 56.00 | 0.00 | 28.02 | 0.00 |
| 5.00 | 0.00 | 28.02 | 0.00 | 57.00 | 0.00 | 28.02 | 0.00 |
| 6.00 | 0.00 | 28.02 | 0.00 | 58.00 | 0.00 | 28.02 | 0.00 |
| 7.00 | 0.00 | 28.02 | 0.00 | 59.00 | 0.00 | 28.02 | 0.00 |
| 8.00 | 0.00 | 28.02 | 0.00 | 60.00 | 0.00 | 28.02 | 0.00 |
| 9.00 | 0.00 | 28.02 | 0.00 | 61.00 | 0.00 | 28.02 | 0.00 |
| 10.00 | 0.00 | 28.02 | 0.00 | 62.00 | 0.00 | 28.02 | 0.00 |
| 11.00 | 0.00 | 28.02 | 0.00 | 63.00 | 0.00 | 28.02 | 0.00 |
| 12.00 | **0.06** | **28.04** | **0.06** | 64.00 | 0.00 | 28.02 | 0.00 |
| 13.00 | **0.07** | **28.04** | **0.07** | 65.00 | 0.00 | 28.02 | 0.00 |
| 14.00 | 0.03 | 28.03 | 0.03 | 66.00 | 0.00 | 28.02 | 0.00 |
| 15.00 | 0.02 | 28.03 | 0.02 | 67.00 | 0.00 | 28.02 | 0.00 |
| 16.00 | 0.01 | 28.03 | 0.01 | 68.00 | 0.00 | 28.02 | 0.00 |
| 17.00 | 0.01 | 28.03 | 0.01 | 69.00 | 0.00 | 28.02 | 0.00 |
| 18.00 | 0.01 | 28.03 | 0.01 | 70.00 | 0.00 | 28.02 | 0.00 |
| 19.00 | 0.01 | 28.03 | 0.01 | 71.00 | 0.00 | 28.02 | 0.00 |
| 20.00 | 0.01 | 28.03 | 0.01 | 72.00 | 0.00 | 28.02 | 0.00 |
| 21.00 | 0.01 | 28.03 | 0.01 | | | | |
| 22.00 | 0.01 | 28.02 | 0.01 | | | | |
| 23.00 | 0.01 | 28.02 | 0.01 | | | | |
| 24.00 | 0.01 | 28.02 | 0.01 | | | | |
| 25.00 | 0.00 | 28.02 | 0.00 | | | | |
| 26.00 | 0.00 | 28.02 | 0.00 | | | | |
| 27.00 | 0.00 | 28.02 | 0.00 | | | | |
| 28.00 | 0.00 | 28.02 | 0.00 | | | | |
| 29.00 | 0.00 | 28.02 | 0.00 | | | | |
| 30.00 | 0.00 | 28.02 | 0.00 | | | | |
| 31.00 | 0.00 | 28.02 | 0.00 | | | | |
| 32.00 | 0.00 | 28.02 | 0.00 | | | | |
| 33.00 | 0.00 | 28.02 | 0.00 | | | | |
| 34.00 | 0.00 | 28.02 | 0.00 | | | | |
| 35.00 | 0.00 | 28.02 | 0.00 | | | | |
| 36.00 | 0.00 | 28.02 | 0.00 | | | | |
| 37.00 | 0.00 | 28.02 | 0.00 | | | | |
| 38.00 | 0.00 | 28.02 | 0.00 | | | | |
| 39.00 | 0.00 | 28.02 | 0.00 | | | | |
| 40.00 | 0.00 | 28.02 | 0.00 | | | | |
| 41.00 | 0.00 | 28.02 | 0.00 | | | | |
| 42.00 | 0.00 | 28.02 | 0.00 | | | | |
| 43.00 | 0.00 | 28.02 | 0.00 | | | | |
| 44.00 | 0.00 | 28.02 | 0.00 | | | | |
| 45.00 | 0.00 | 28.02 | 0.00 | | | | |
| 46.00 | 0.00 | 28.02 | 0.00 | | | | |
| 47.00 | 0.00 | 28.02 | 0.00 | | | | |
| 48.00 | 0.00 | 28.02 | 0.00 | | | | |
| 49.00 | 0.00 | 28.02 | 0.00 | | | | |
| 50.00 | 0.00 | 28.02 | 0.00 | | | | |
| 51.00 | 0.00 | 28.02 | 0.00 | | | | |

## Stage-Area-Storage for Pond 4P: EX Curb Inlet

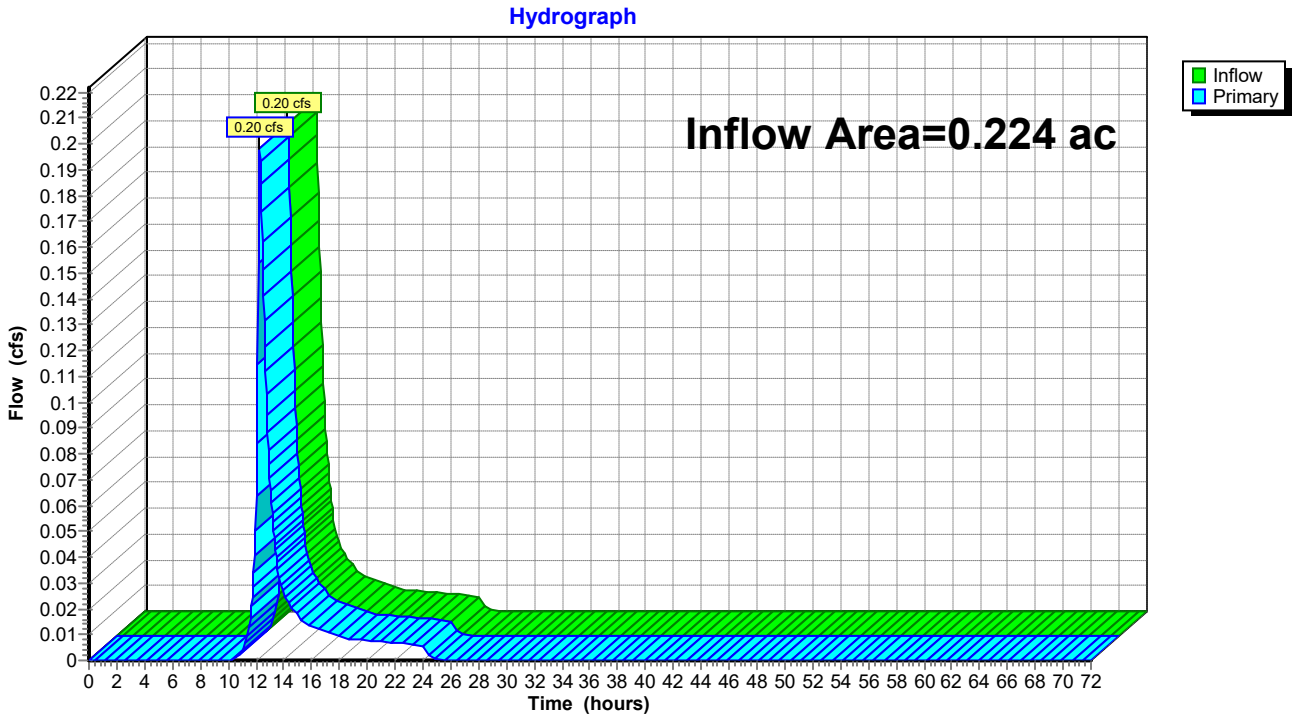
| Elevation (feet) | Storage (acre-feet) |
|---|---|
| 28.02 | **0.000** |
| 28.03 | 0.000 |
| 28.04 | 0.000 |
| 28.05 | 0.000 |
| 28.06 | 0.000 |
| 28.07 | 0.000 |
| 28.08 | 0.000 |
| 28.09 | 0.000 |
| 28.10 | 0.000 |
| 28.11 | 0.000 |
| 28.12 | 0.000 |
| 28.13 | 0.000 |
| 28.14 | 0.000 |
| 28.15 | 0.000 |
| 28.16 | 0.000 |
| 28.17 | 0.000 |
| 28.18 | 0.000 |
| 28.19 | 0.000 |
| 28.20 | 0.000 |
| 28.21 | 0.000 |
| 28.22 | 0.000 |
| 28.23 | 0.000 |
| 28.24 | 0.000 |
| 28.25 | 0.000 |
| 28.26 | 0.000 |
| 28.27 | 0.000 |
| 28.28 | 0.000 |
| 28.29 | 0.000 |
| 28.30 | 0.000 |
| 28.31 | 0.000 |
| 28.32 | 0.000 |
| 28.33 | 0.000 |
| 28.34 | 0.000 |
| 28.35 | 0.000 |
| 28.36 | 0.000 |
| 28.37 | 0.000 |
| 28.38 | 0.000 |
| 28.39 | 0.000 |
| 28.40 | 0.000 |
| 28.41 | 0.000 |
| 28.42 | 0.000 |
| 28.43 | 0.000 |
| 28.44 | 0.000 |
| 28.45 | 0.000 |
| 28.46 | 0.000 |
| 28.47 | 0.000 |
| 28.48 | 0.000 |
| 28.49 | 0.000 |
| 28.50 | 0.000 |
| 28.51 | 0.000 |
| 28.52 | 0.000 |

## Summary for Link 3L: EX Study Point #1

Inflow Area = 0.224 ac, 13.35% Impervious, Inflow Depth = 1.31" for 2-Year event
Inflow = 0.20 cfs @ 12.26 hrs, Volume= 0.024 af
Primary = 0.20 cfs @ 12.26 hrs, Volume= 0.024 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

## Link 3L: EX Study Point #1



## Hydrograph for Link 3L: EX Study Point #1

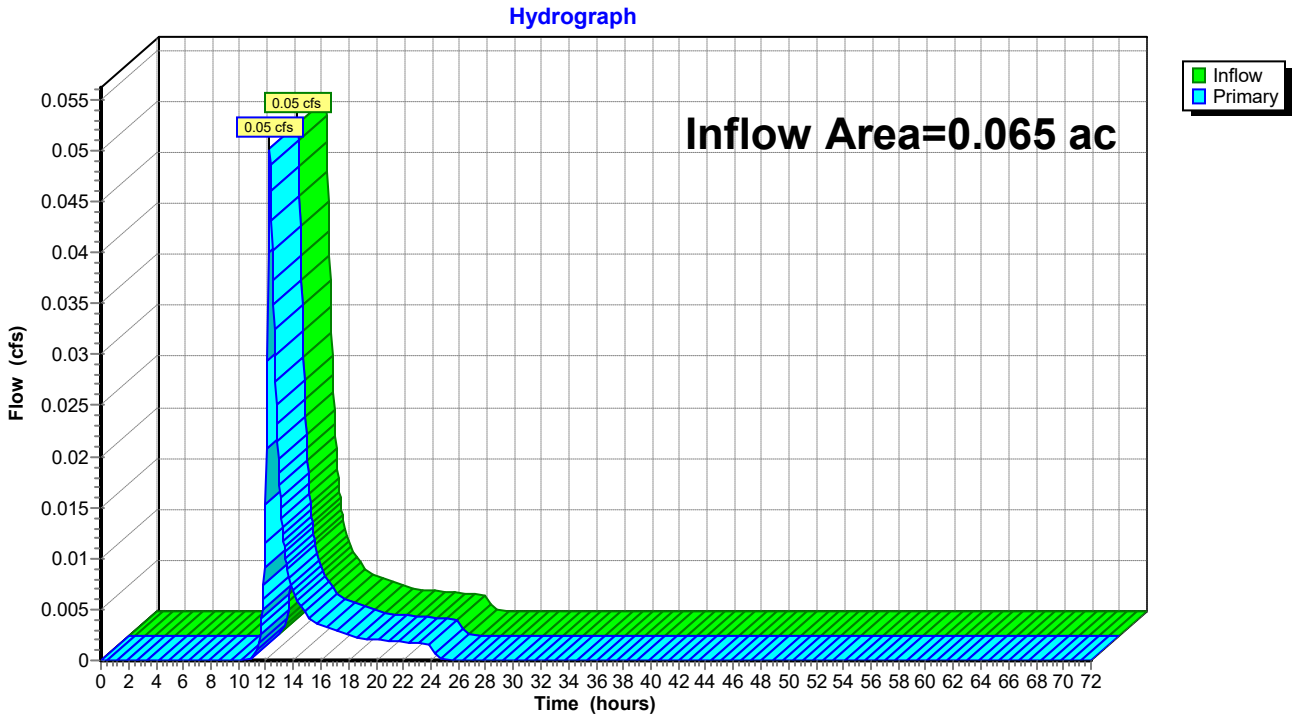
| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | **0.00** | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | **0.06** | 0.00 | **0.06** | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | **0.07** | 0.00 | **0.07** | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.03 | 0.00 | 0.03 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.02 | 0.00 | 0.02 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.01 | 0.00 | 0.01 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.01 | 0.00 | 0.01 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.01 | 0.00 | 0.01 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.01 | 0.00 | 0.01 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.01 | 0.00 | 0.01 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.01 | 0.00 | 0.01 | | | | |
| 22.00 | 0.01 | 0.00 | 0.01 | | | | |
| 23.00 | 0.01 | 0.00 | 0.01 | | | | |
| 24.00 | 0.01 | 0.00 | 0.01 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

## Summary for Link 4L: Ex Study Point #2

Inflow Area = 0.065 ac, 0.00% Impervious, Inflow Depth = 1.12" for 2-Year event
Inflow = 0.05 cfs @ 12.25 hrs, Volume= 0.006 af
Primary = 0.05 cfs @ 12.25 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

## Link 4L: Ex Study Point #2



## Hydrograph for Link 4L: Ex Study Point #2

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | **0.00** | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | **0.02** | 0.00 | **0.02** | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | **0.02** | 0.00 | **0.02** | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.01 | 0.00 | 0.01 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | | | | |
| 22.00 | 0.00 | 0.00 | 0.00 | | | | |
| 23.00 | 0.00 | 0.00 | 0.00 | | | | |
| 24.00 | 0.00 | 0.00 | 0.00 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 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 1S: EX DA #1** Runoff Area=9,766 sf 13.35% Impervious Runoff Depth=2.79"
Flow Length=170' Tc=14.1 min CN=77 Runoff=0.44 cfs 0.052 af

**Subcatchment 2S: EX DA #2** Runoff Area=2,839 sf 0.00% Impervious Runoff Depth=2.52"
Flow Length=79' Slope=0.0150 '/' Tc=13.0 min CN=74 Runoff=0.12 cfs 0.014 af

**Pond 4P: EX Curb Inlet** Peak Elev=28.10' Inflow=0.44 cfs 0.052 af
Outflow=0.44 cfs 0.052 af

**Link 3L: EX Study Point #1** Inflow=0.44 cfs 0.052 af
Primary=0.44 cfs 0.052 af

**Link 4L: Ex Study Point #2** Inflow=0.12 cfs 0.014 af
Primary=0.12 cfs 0.014 af

**Total Runoff Area = 0.289 ac Runoff Volume = 0.066 af Average Runoff Depth = 2.73"**
**89.65% Pervious = 0.259 ac 10.35% Impervious = 0.030 ac**

## Summary for Subcatchment 1S: EX DA #1

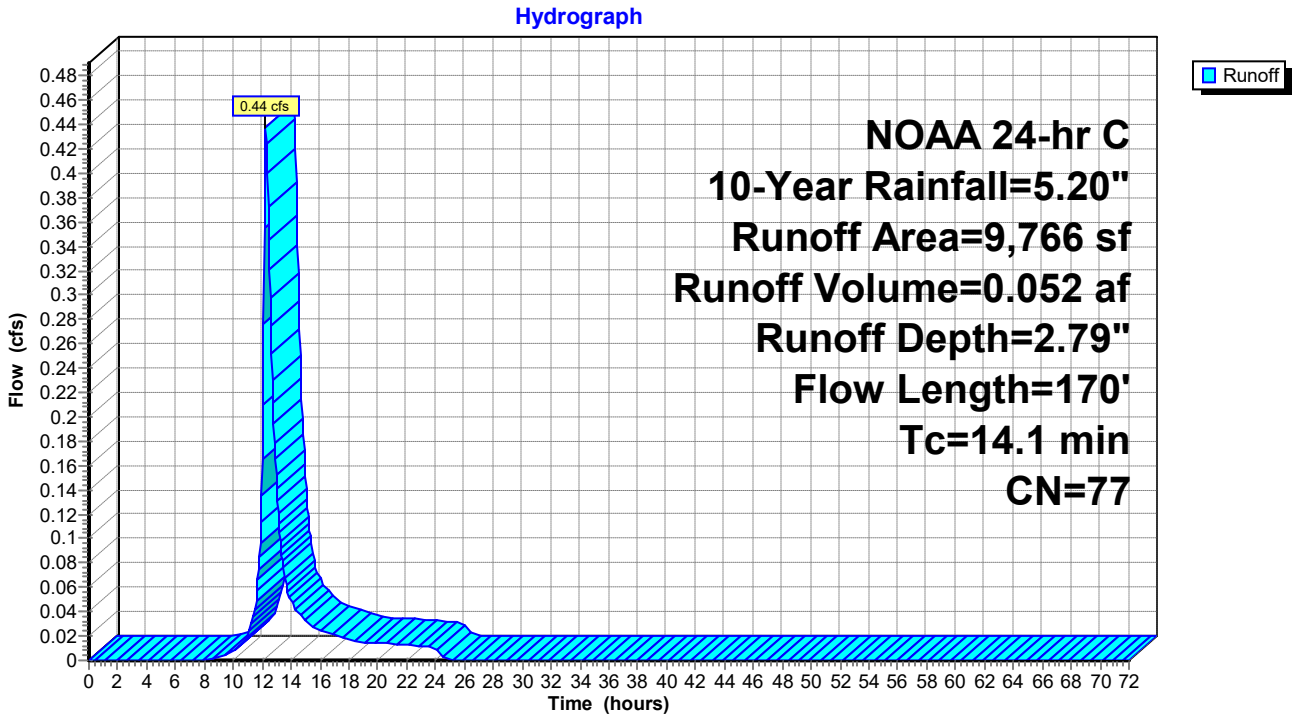
Runoff = 0.44 cfs @ 12.25 hrs, Volume= 0.052 af, Depth= 2.79"
Routed to Pond 4P : EX Curb Inlet

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 10-Year Rainfall=5.20"

| Area (sf) | CN | Description |
|---|---|---|
| 8,462 | 74 | >75% Grass cover, Good, HSG C |
| 1,304 | 98 | Paved roads w/curbs & sewers, HSG A |
| 9,766 | 77 | Weighted Average |
| 8,462 | | 86.65% Pervious Area |
| 1,304 | | 13.35% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.6 | 100 | 0.0214 | 0.12 | | **Sheet Flow,** Grass: Dense n= 0.240 P2= 3.33" |
| 0.5 | 70 | 0.0114 | 2.17 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 14.1 | 170 | Total | | | |

### Subcatchment 1S: EX DA #1



## Hydrograph for Subcatchment 1S: EX DA #1

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 |
| 2.00 | 0.12 | 0.00 | 0.00 |
| 3.00 | 0.18 | 0.00 | 0.00 |
| 4.00 | 0.25 | 0.00 | 0.00 |
| 5.00 | 0.33 | 0.00 | 0.00 |
| 6.00 | 0.41 | 0.00 | 0.00 |
| 7.00 | 0.51 | 0.00 | 0.00 |
| 8.00 | 0.62 | 0.00 | 0.00 |
| 9.00 | 0.76 | 0.01 | 0.00 |
| 10.00 | 0.95 | 0.04 | 0.01 |
| 11.00 | 1.25 | 0.12 | 0.02 |
| 12.00 | 2.48 | 0.73 | **0.17** |
| 13.00 | 3.95 | 1.77 | **0.14** |
| 14.00 | 4.25 | 2.01 | 0.05 |
| 15.00 | 4.44 | 2.16 | 0.03 |
| 16.00 | 4.58 | 2.27 | 0.02 |
| 17.00 | 4.69 | 2.37 | 0.02 |
| 18.00 | 4.79 | 2.45 | 0.02 |
| 19.00 | 4.87 | 2.51 | 0.02 |
| 20.00 | 4.95 | 2.58 | 0.01 |
| 21.00 | 5.02 | 2.64 | 0.01 |
| 22.00 | 5.08 | 2.69 | 0.01 |
| 23.00 | 5.14 | 2.74 | 0.01 |
| 24.00 | **5.20** | **2.79** | 0.01 |
| 25.00 | 5.20 | 2.79 | 0.00 |
| 26.00 | 5.20 | 2.79 | 0.00 |
| 27.00 | 5.20 | 2.79 | 0.00 |
| 28.00 | 5.20 | 2.79 | 0.00 |
| 29.00 | 5.20 | 2.79 | 0.00 |
| 30.00 | 5.20 | 2.79 | 0.00 |
| 31.00 | 5.20 | 2.79 | 0.00 |
| 32.00 | 5.20 | 2.79 | 0.00 |
| 33.00 | 5.20 | 2.79 | 0.00 |
| 34.00 | 5.20 | 2.79 | 0.00 |
| 35.00 | 5.20 | 2.79 | 0.00 |
| 36.00 | 5.20 | 2.79 | 0.00 |
| 37.00 | 5.20 | 2.79 | 0.00 |
| 38.00 | 5.20 | 2.79 | 0.00 |
| 39.00 | 5.20 | 2.79 | 0.00 |
| 40.00 | 5.20 | 2.79 | 0.00 |
| 41.00 | 5.20 | 2.79 | 0.00 |
| 42.00 | 5.20 | 2.79 | 0.00 |
| 43.00 | 5.20 | 2.79 | 0.00 |
| 44.00 | 5.20 | 2.79 | 0.00 |
| 45.00 | 5.20 | 2.79 | 0.00 |
| 46.00 | 5.20 | 2.79 | 0.00 |
| 47.00 | 5.20 | 2.79 | 0.00 |
| 48.00 | 5.20 | 2.79 | 0.00 |
| 49.00 | 5.20 | 2.79 | 0.00 |
| 50.00 | 5.20 | 2.79 | 0.00 |
| 51.00 | 5.20 | 2.79 | 0.00 |
| 52.00 | 5.20 | 2.79 | 0.00 |
| 53.00 | 5.20 | 2.79 | 0.00 |
| 54.00 | 5.20 | 2.79 | 0.00 |
| 55.00 | 5.20 | 2.79 | 0.00 |
| 56.00 | 5.20 | 2.79 | 0.00 |
| 57.00 | 5.20 | 2.79 | 0.00 |
| 58.00 | 5.20 | 2.79 | 0.00 |
| 59.00 | 5.20 | 2.79 | 0.00 |
| 60.00 | 5.20 | 2.79 | 0.00 |
| 61.00 | 5.20 | 2.79 | 0.00 |
| 62.00 | 5.20 | 2.79 | 0.00 |
| 63.00 | 5.20 | 2.79 | 0.00 |
| 64.00 | 5.20 | 2.79 | 0.00 |
| 65.00 | 5.20 | 2.79 | 0.00 |
| 66.00 | 5.20 | 2.79 | 0.00 |
| 67.00 | 5.20 | 2.79 | 0.00 |
| 68.00 | 5.20 | 2.79 | 0.00 |
| 69.00 | 5.20 | 2.79 | 0.00 |
| 70.00 | 5.20 | 2.79 | 0.00 |
| 71.00 | 5.20 | 2.79 | 0.00 |
| 72.00 | 5.20 | 2.79 | 0.00 |

## Summary for Subcatchment 2S: EX DA #2

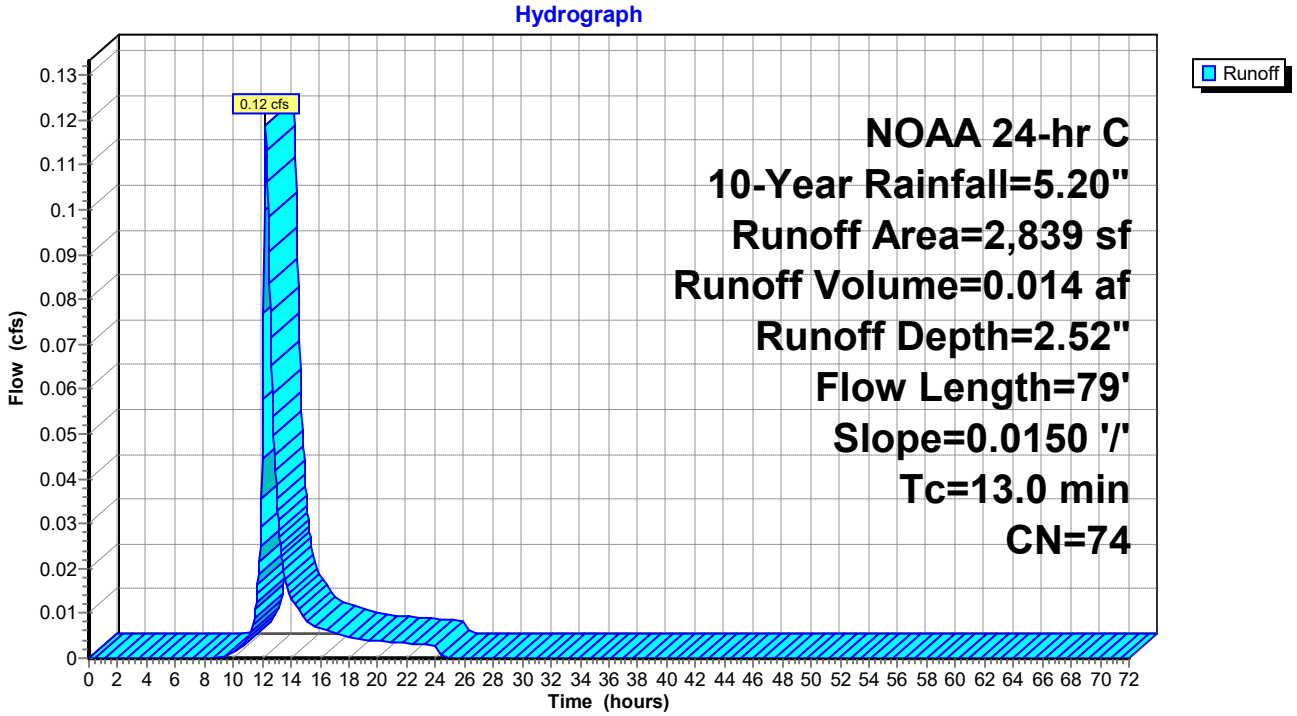
Runoff = 0.12 cfs @ 12.24 hrs, Volume= 0.014 af, Depth= 2.52"
Routed to Link 4L : Ex Study Point #2

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 10-Year Rainfall=5.20"

| Area (sf) | CN | Description |
|---|---|---|
| 2,839 | 74 | >75% Grass cover, Good, HSG C |
| 2,839 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.0 | 79 | 0.0150 | 0.10 | | **Sheet Flow,** Grass: Dense n= 0.240 P2= 3.33" |

## Subcatchment 2S: EX DA #2



## Hydrograph for Subcatchment 2S: EX DA #2

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 |
| 2.00 | 0.12 | 0.00 | 0.00 |
| 3.00 | 0.18 | 0.00 | 0.00 |
| 4.00 | 0.25 | 0.00 | 0.00 |
| 5.00 | 0.33 | 0.00 | 0.00 |
| 6.00 | 0.41 | 0.00 | 0.00 |
| 7.00 | 0.51 | 0.00 | 0.00 |
| 8.00 | 0.62 | 0.00 | 0.00 |
| 9.00 | 0.76 | 0.00 | 0.00 |
| 10.00 | 0.95 | 0.02 | 0.00 |
| 11.00 | 1.25 | 0.07 | 0.00 |
| 12.00 | 2.48 | 0.60 | **0.04** |
| 13.00 | 3.95 | 1.56 | **0.04** |
| 14.00 | 4.25 | 1.78 | 0.01 |
| 15.00 | 4.44 | 1.93 | 0.01 |
| 16.00 | 4.58 | 2.03 | 0.01 |
| 17.00 | 4.69 | 2.12 | 0.01 |
| 18.00 | 4.79 | 2.20 | 0.00 |
| 19.00 | 4.87 | 2.26 | 0.00 |
| 20.00 | 4.95 | 2.32 | 0.00 |
| 21.00 | 5.02 | 2.38 | 0.00 |
| 22.00 | 5.08 | 2.43 | 0.00 |
| 23.00 | 5.14 | 2.48 | 0.00 |
| 24.00 | **5.20** | **2.52** | 0.00 |
| 25.00 | 5.20 | 2.52 | 0.00 |
| 26.00 | 5.20 | 2.52 | 0.00 |
| 27.00 | 5.20 | 2.52 | 0.00 |
| 28.00 | 5.20 | 2.52 | 0.00 |
| 29.00 | 5.20 | 2.52 | 0.00 |
| 30.00 | 5.20 | 2.52 | 0.00 |
| 31.00 | 5.20 | 2.52 | 0.00 |
| 32.00 | 5.20 | 2.52 | 0.00 |
| 33.00 | 5.20 | 2.52 | 0.00 |
| 34.00 | 5.20 | 2.52 | 0.00 |
| 35.00 | 5.20 | 2.52 | 0.00 |
| 36.00 | 5.20 | 2.52 | 0.00 |
| 37.00 | 5.20 | 2.52 | 0.00 |
| 38.00 | 5.20 | 2.52 | 0.00 |
| 39.00 | 5.20 | 2.52 | 0.00 |
| 40.00 | 5.20 | 2.52 | 0.00 |
| 41.00 | 5.20 | 2.52 | 0.00 |
| 42.00 | 5.20 | 2.52 | 0.00 |
| 43.00 | 5.20 | 2.52 | 0.00 |
| 44.00 | 5.20 | 2.52 | 0.00 |
| 45.00 | 5.20 | 2.52 | 0.00 |
| 46.00 | 5.20 | 2.52 | 0.00 |
| 47.00 | 5.20 | 2.52 | 0.00 |
| 48.00 | 5.20 | 2.52 | 0.00 |
| 49.00 | 5.20 | 2.52 | 0.00 |
| 50.00 | 5.20 | 2.52 | 0.00 |
| 51.00 | 5.20 | 2.52 | 0.00 |
| 52.00 | 5.20 | 2.52 | 0.00 |
| 53.00 | 5.20 | 2.52 | 0.00 |
| 54.00 | 5.20 | 2.52 | 0.00 |
| 55.00 | 5.20 | 2.52 | 0.00 |
| 56.00 | 5.20 | 2.52 | 0.00 |
| 57.00 | 5.20 | 2.52 | 0.00 |
| 58.00 | 5.20 | 2.52 | 0.00 |
| 59.00 | 5.20 | 2.52 | 0.00 |
| 60.00 | 5.20 | 2.52 | 0.00 |
| 61.00 | 5.20 | 2.52 | 0.00 |
| 62.00 | 5.20 | 2.52 | 0.00 |
| 63.00 | 5.20 | 2.52 | 0.00 |
| 64.00 | 5.20 | 2.52 | 0.00 |
| 65.00 | 5.20 | 2.52 | 0.00 |
| 66.00 | 5.20 | 2.52 | 0.00 |
| 67.00 | 5.20 | 2.52 | 0.00 |
| 68.00 | 5.20 | 2.52 | 0.00 |
| 69.00 | 5.20 | 2.52 | 0.00 |
| 70.00 | 5.20 | 2.52 | 0.00 |
| 71.00 | 5.20 | 2.52 | 0.00 |
| 72.00 | 5.20 | 2.52 | 0.00 |

## Summary for Pond 4P: EX Curb Inlet

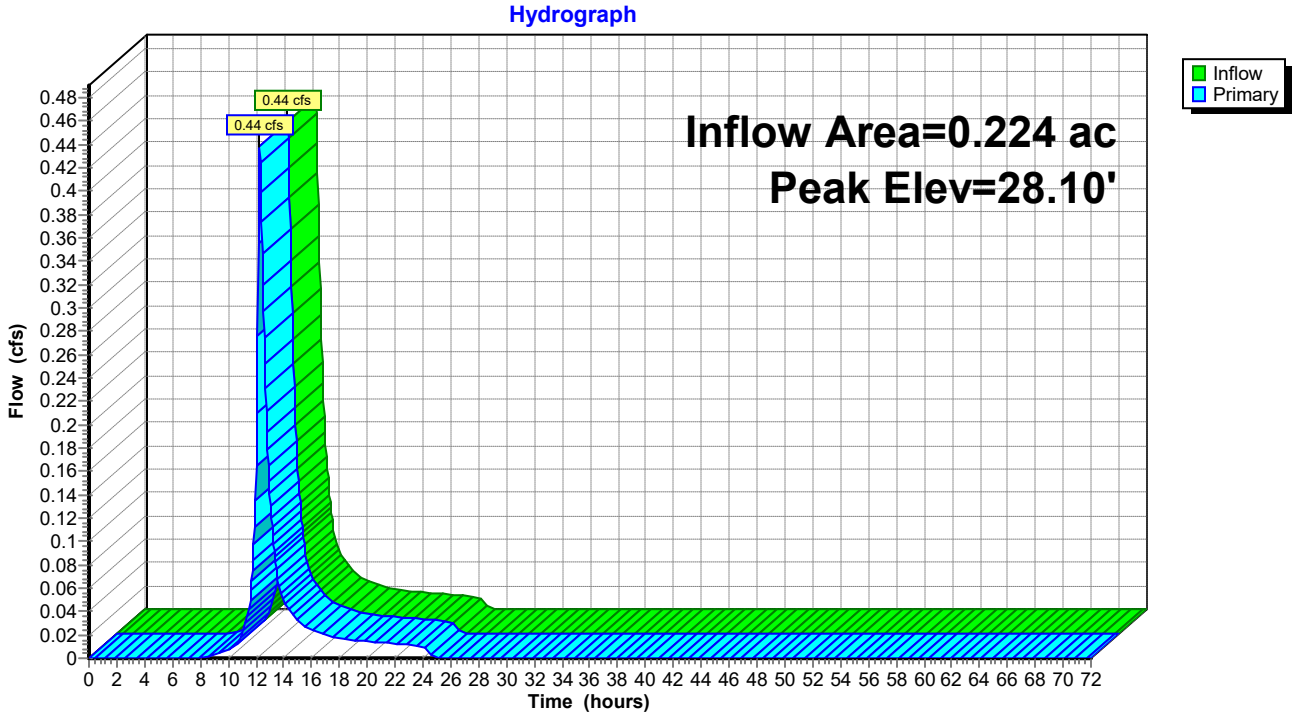
Inflow Area = 0.224 ac, 13.35% Impervious, Inflow Depth = 2.79" for 10-Year event
Inflow = 0.44 cfs @ 12.25 hrs, Volume= 0.052 af
Outflow = 0.44 cfs @ 12.25 hrs, Volume= 0.052 af, Atten= 0%, Lag= 0.0 min
Primary = 0.44 cfs @ 12.25 hrs, Volume= 0.052 af
Routed to Link 3L : EX Study Point #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 28.10' @ 12.25 hrs

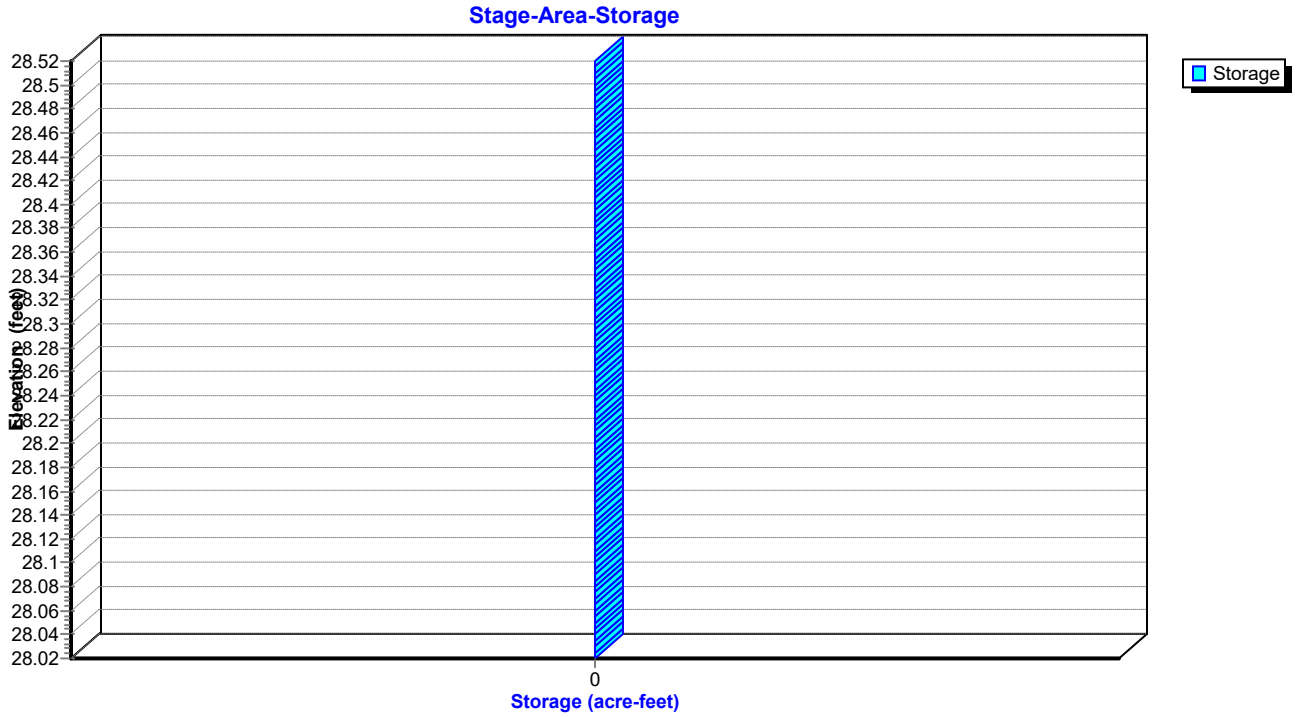
| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 28.02' | **72.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.44 cfs @ 12.25 hrs HW=28.10' TW=0.00' (Dynamic Tailwater)
**1=Orifice/Grate** (Orifice Controls 0.44 cfs @ 0.91 fps)

## Pond 4P: EX Curb Inlet



## Pond 4P: EX Curb Inlet



## Hydrograph for Pond 4P: EX Curb Inlet

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 28.02 | 0.00 |
| 1.00 | 0.00 | 28.02 | 0.00 |
| 2.00 | 0.00 | 28.02 | 0.00 |
| 3.00 | 0.00 | 28.02 | 0.00 |
| 4.00 | 0.00 | 28.02 | 0.00 |
| 5.00 | 0.00 | 28.02 | 0.00 |
| 6.00 | 0.00 | 28.02 | 0.00 |
| 7.00 | 0.00 | 28.02 | 0.00 |
| 8.00 | 0.00 | 28.02 | 0.00 |
| 9.00 | 0.00 | 28.02 | 0.00 |
| 10.00 | 0.01 | 28.03 | 0.01 |
| 11.00 | 0.02 | 28.03 | 0.02 |
| 12.00 | **0.17** | **28.06** | **0.17** |
| 13.00 | **0.14** | **28.06** | **0.14** |
| 14.00 | 0.05 | 28.04 | 0.05 |
| 15.00 | 0.03 | 28.03 | 0.03 |
| 16.00 | 0.02 | 28.03 | 0.02 |
| 17.00 | 0.02 | 28.03 | 0.02 |
| 18.00 | 0.02 | 28.03 | 0.02 |
| 19.00 | 0.02 | 28.03 | 0.02 |
| 20.00 | 0.01 | 28.03 | 0.01 |
| 21.00 | 0.01 | 28.03 | 0.01 |
| 22.00 | 0.01 | 28.03 | 0.01 |
| 23.00 | 0.01 | 28.03 | 0.01 |
| 24.00 | 0.01 | 28.03 | 0.01 |
| 25.00 | 0.00 | 28.02 | 0.00 |
| 26.00 | 0.00 | 28.02 | 0.00 |
| 27.00 | 0.00 | 28.02 | 0.00 |
| 28.00 | 0.00 | 28.02 | 0.00 |
| 29.00 | 0.00 | 28.02 | 0.00 |
| 30.00 | 0.00 | 28.02 | 0.00 |
| 31.00 | 0.00 | 28.02 | 0.00 |
| 32.00 | 0.00 | 28.02 | 0.00 |
| 33.00 | 0.00 | 28.02 | 0.00 |
| 34.00 | 0.00 | 28.02 | 0.00 |
| 35.00 | 0.00 | 28.02 | 0.00 |
| 36.00 | 0.00 | 28.02 | 0.00 |
| 37.00 | 0.00 | 28.02 | 0.00 |
| 38.00 | 0.00 | 28.02 | 0.00 |
| 39.00 | 0.00 | 28.02 | 0.00 |
| 40.00 | 0.00 | 28.02 | 0.00 |
| 41.00 | 0.00 | 28.02 | 0.00 |
| 42.00 | 0.00 | 28.02 | 0.00 |
| 43.00 | 0.00 | 28.02 | 0.00 |
| 44.00 | 0.00 | 28.02 | 0.00 |
| 45.00 | 0.00 | 28.02 | 0.00 |
| 46.00 | 0.00 | 28.02 | 0.00 |
| 47.00 | 0.00 | 28.02 | 0.00 |
| 48.00 | 0.00 | 28.02 | 0.00 |
| 49.00 | 0.00 | 28.02 | 0.00 |
| 50.00 | 0.00 | 28.02 | 0.00 |
| 51.00 | 0.00 | 28.02 | 0.00 |
| 52.00 | 0.00 | 28.02 | 0.00 |
| 53.00 | 0.00 | 28.02 | 0.00 |
| 54.00 | 0.00 | 28.02 | 0.00 |
| 55.00 | 0.00 | 28.02 | 0.00 |
| 56.00 | 0.00 | 28.02 | 0.00 |
| 57.00 | 0.00 | 28.02 | 0.00 |
| 58.00 | 0.00 | 28.02 | 0.00 |
| 59.00 | 0.00 | 28.02 | 0.00 |
| 60.00 | 0.00 | 28.02 | 0.00 |
| 61.00 | 0.00 | 28.02 | 0.00 |
| 62.00 | 0.00 | 28.02 | 0.00 |
| 63.00 | 0.00 | 28.02 | 0.00 |
| 64.00 | 0.00 | 28.02 | 0.00 |
| 65.00 | 0.00 | 28.02 | 0.00 |
| 66.00 | 0.00 | 28.02 | 0.00 |
| 67.00 | 0.00 | 28.02 | 0.00 |
| 68.00 | 0.00 | 28.02 | 0.00 |
| 69.00 | 0.00 | 28.02 | 0.00 |
| 70.00 | 0.00 | 28.02 | 0.00 |
| 71.00 | 0.00 | 28.02 | 0.00 |
| 72.00 | 0.00 | 28.02 | 0.00 |

## Stage-Area-Storage for Pond 4P: EX Curb Inlet

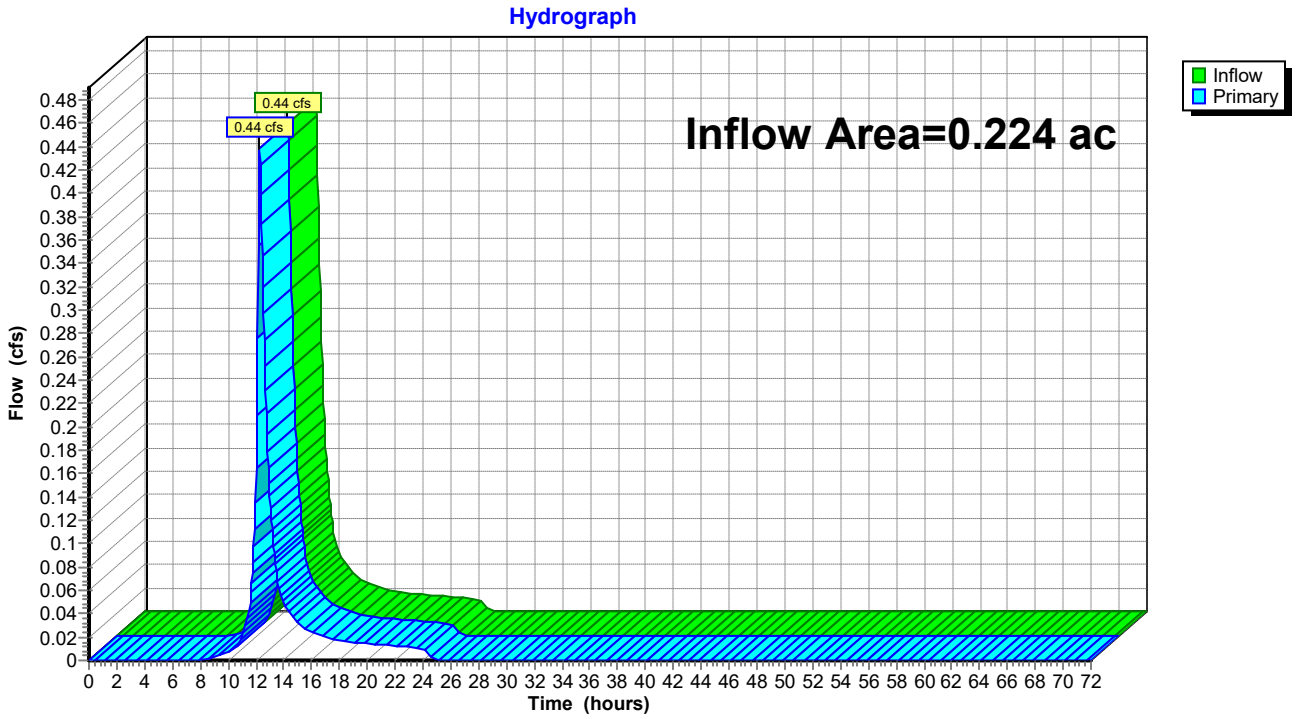
| Elevation (feet) | Storage (acre-feet) |
|---|---|
| 28.02 | **0.000** |
| 28.03 | 0.000 |
| 28.04 | 0.000 |
| 28.05 | 0.000 |
| 28.06 | 0.000 |
| 28.07 | 0.000 |
| 28.08 | 0.000 |
| 28.09 | 0.000 |
| 28.10 | 0.000 |
| 28.11 | 0.000 |
| 28.12 | 0.000 |
| 28.13 | 0.000 |
| 28.14 | 0.000 |
| 28.15 | 0.000 |
| 28.16 | 0.000 |
| 28.17 | 0.000 |
| 28.18 | 0.000 |
| 28.19 | 0.000 |
| 28.20 | 0.000 |
| 28.21 | 0.000 |
| 28.22 | 0.000 |
| 28.23 | 0.000 |
| 28.24 | 0.000 |
| 28.25 | 0.000 |
| 28.26 | 0.000 |
| 28.27 | 0.000 |
| 28.28 | 0.000 |
| 28.29 | 0.000 |
| 28.30 | 0.000 |
| 28.31 | 0.000 |
| 28.32 | 0.000 |
| 28.33 | 0.000 |
| 28.34 | 0.000 |
| 28.35 | 0.000 |
| 28.36 | 0.000 |
| 28.37 | 0.000 |
| 28.38 | 0.000 |
| 28.39 | 0.000 |
| 28.40 | 0.000 |
| 28.41 | 0.000 |
| 28.42 | 0.000 |
| 28.43 | 0.000 |
| 28.44 | 0.000 |
| 28.45 | 0.000 |
| 28.46 | 0.000 |
| 28.47 | 0.000 |
| 28.48 | 0.000 |
| 28.49 | 0.000 |
| 28.50 | 0.000 |
| 28.51 | 0.000 |
| 28.52 | 0.000 |

## Summary for Link 3L: EX Study Point #1

Inflow Area = 0.224 ac, 13.35% Impervious, Inflow Depth = 2.79" for 10-Year event
Inflow = 0.44 cfs @ 12.25 hrs, Volume= 0.052 af
Primary = 0.44 cfs @ 12.25 hrs, Volume= 0.052 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

## Link 3L: EX Study Point #1



## Hydrograph for Link 3L: EX Study Point #1

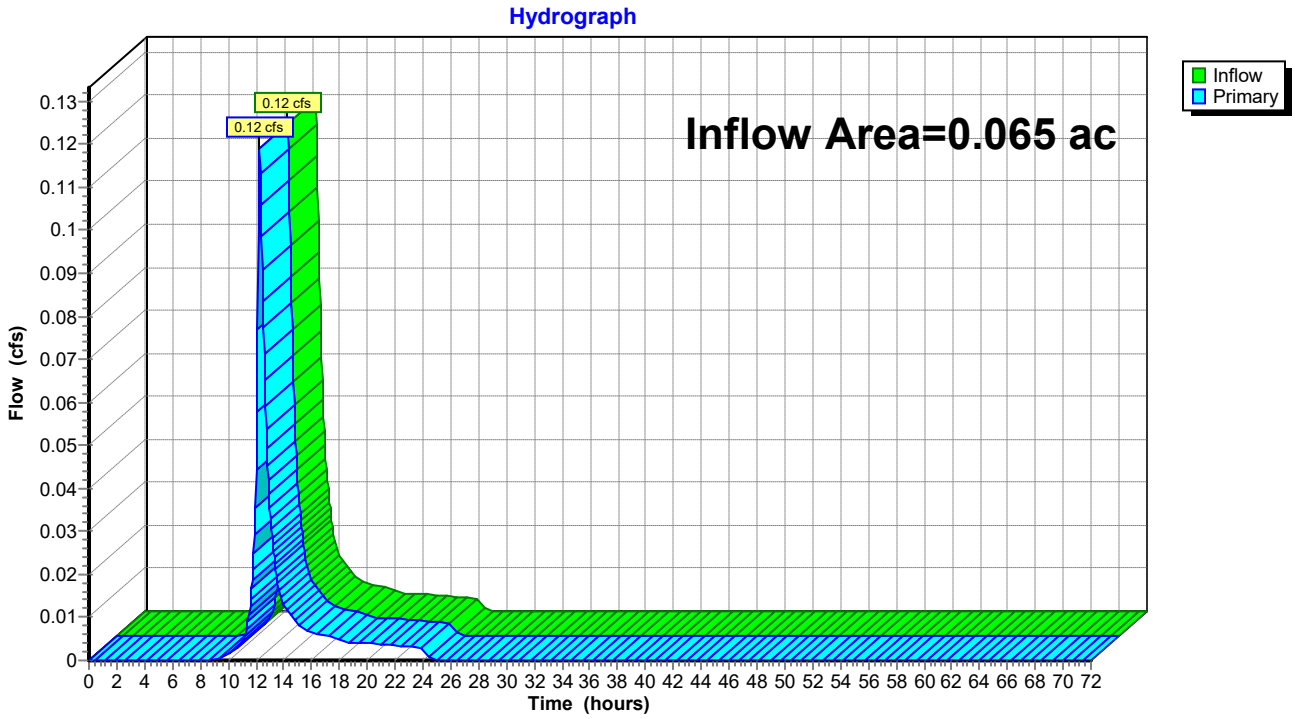
| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | **0.00** | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.01 | 0.00 | 0.01 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.02 | 0.00 | 0.02 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | **0.17** | 0.00 | **0.17** | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | **0.14** | 0.00 | **0.14** | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.05 | 0.00 | 0.05 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.03 | 0.00 | 0.03 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.02 | 0.00 | 0.02 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.02 | 0.00 | 0.02 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.02 | 0.00 | 0.02 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.02 | 0.00 | 0.02 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.01 | 0.00 | 0.01 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.01 | 0.00 | 0.01 | | | | |
| 22.00 | 0.01 | 0.00 | 0.01 | | | | |
| 23.00 | 0.01 | 0.00 | 0.01 | | | | |
| 24.00 | 0.01 | 0.00 | 0.01 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

## Summary for Link 4L: Ex Study Point #2

Inflow Area = 0.065 ac, 0.00% Impervious, Inflow Depth = 2.52" for 10-Year event
Inflow = 0.12 cfs @ 12.24 hrs, Volume= 0.014 af
Primary = 0.12 cfs @ 12.24 hrs, Volume= 0.014 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

## Link 4L: Ex Study Point #2



## Hydrograph for Link 4L: Ex Study Point #2

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | **0.00** | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | **0.04** | 0.00 | **0.04** | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | **0.04** | 0.00 | **0.04** | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.01 | 0.00 | 0.01 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.01 | 0.00 | 0.01 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.01 | 0.00 | 0.01 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.01 | 0.00 | 0.01 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | | | | |
| 22.00 | 0.00 | 0.00 | 0.00 | | | | |
| 23.00 | 0.00 | 0.00 | 0.00 | | | | |
| 24.00 | 0.00 | 0.00 | 0.00 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 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 1S: EX DA #1** Runoff Area=9,766 sf 13.35% Impervious Runoff Depth=6.18"
Flow Length=170' Tc=14.1 min CN=77 Runoff=0.97 cfs 0.115 af

**Subcatchment 2S: EX DA #2** Runoff Area=2,839 sf 0.00% Impervious Runoff Depth=5.81"
Flow Length=79' Slope=0.0150 '/' Tc=13.0 min CN=74 Runoff=0.28 cfs 0.032 af

**Pond 4P: EX Curb Inlet** Peak Elev=28.16' Inflow=0.97 cfs 0.115 af
Outflow=0.97 cfs 0.115 af

**Link 3L: EX Study Point #1** Inflow=0.97 cfs 0.115 af
Primary=0.97 cfs 0.115 af

**Link 4L: Ex Study Point #2** Inflow=0.28 cfs 0.032 af
Primary=0.28 cfs 0.032 af

**Total Runoff Area = 0.289 ac Runoff Volume = 0.147 af Average Runoff Depth = 6.10"**
**89.65% Pervious = 0.259 ac 10.35% Impervious = 0.030 ac**

## Summary for Subcatchment 1S: EX DA #1

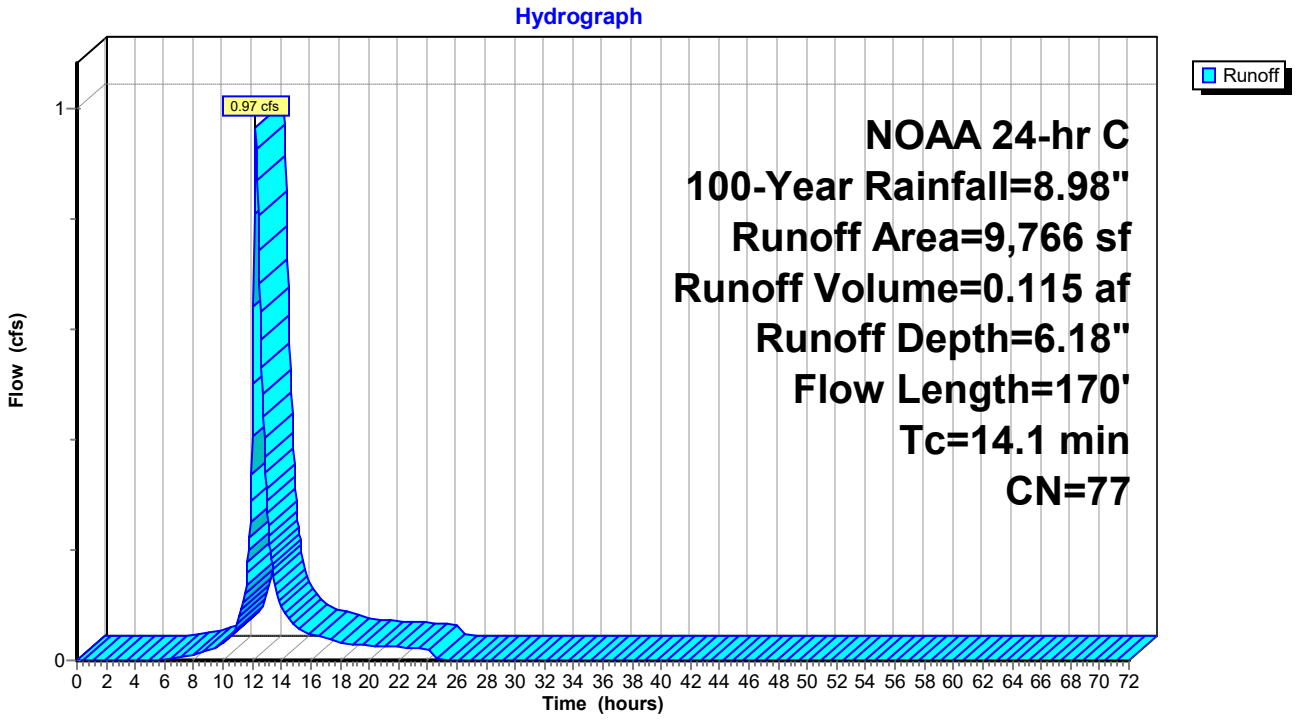
Runoff = 0.97 cfs @ 12.25 hrs, Volume= 0.115 af, Depth= 6.18"
Routed to Pond 4P : EX Curb Inlet

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year Rainfall=8.98"

| Area (sf) | CN | Description |
|---|---|---|
| 8,462 | 74 | >75% Grass cover, Good, HSG C |
| 1,304 | 98 | Paved roads w/curbs & sewers, HSG A |
| 9,766 | 77 | Weighted Average |
| 8,462 | | 86.65% Pervious Area |
| 1,304 | | 13.35% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.6 | 100 | 0.0214 | 0.12 | | **Sheet Flow,** Grass: Dense n= 0.240 P2= 3.33" |
| 0.5 | 70 | 0.0114 | 2.17 | | **Shallow Concentrated Flow,** Paved Kv= 20.3 fps |
| 14.1 | 170 | Total | | | |

## Subcatchment 1S: EX DA #1



## Hydrograph for Subcatchment 1S: EX DA #1

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.10 | 0.00 | 0.00 |
| 2.00 | 0.20 | 0.00 | 0.00 |
| 3.00 | 0.32 | 0.00 | 0.00 |
| 4.00 | 0.44 | 0.00 | 0.00 |
| 5.00 | 0.57 | 0.00 | 0.00 |
| 6.00 | 0.71 | 0.00 | 0.00 |
| 7.00 | 0.88 | 0.02 | 0.01 |
| 8.00 | 1.08 | 0.07 | 0.01 |
| 9.00 | 1.31 | 0.14 | 0.02 |
| 10.00 | 1.64 | 0.27 | 0.03 |
| 11.00 | 2.16 | 0.53 | 0.07 |
| 12.00 | 4.28 | 2.03 | **0.40** |
| 13.00 | 6.82 | 4.21 | **0.29** |
| 14.00 | 7.34 | 4.68 | 0.10 |
| 15.00 | 7.67 | 4.97 | 0.06 |
| 16.00 | 7.90 | 5.19 | 0.05 |
| 17.00 | 8.10 | 5.37 | 0.04 |
| 18.00 | 8.27 | 5.52 | 0.03 |
| 19.00 | 8.41 | 5.65 | 0.03 |
| 20.00 | 8.54 | 5.77 | 0.03 |
| 21.00 | 8.66 | 5.89 | 0.03 |
| 22.00 | 8.78 | 5.99 | 0.02 |
| 23.00 | 8.88 | 6.09 | 0.02 |
| 24.00 | **8.98** | **6.18** | 0.02 |
| 25.00 | 8.98 | 6.18 | 0.00 |
| 26.00 | 8.98 | 6.18 | 0.00 |
| 27.00 | 8.98 | 6.18 | 0.00 |
| 28.00 | 8.98 | 6.18 | 0.00 |
| 29.00 | 8.98 | 6.18 | 0.00 |
| 30.00 | 8.98 | 6.18 | 0.00 |
| 31.00 | 8.98 | 6.18 | 0.00 |
| 32.00 | 8.98 | 6.18 | 0.00 |
| 33.00 | 8.98 | 6.18 | 0.00 |
| 34.00 | 8.98 | 6.18 | 0.00 |
| 35.00 | 8.98 | 6.18 | 0.00 |
| 36.00 | 8.98 | 6.18 | 0.00 |
| 37.00 | 8.98 | 6.18 | 0.00 |
| 38.00 | 8.98 | 6.18 | 0.00 |
| 39.00 | 8.98 | 6.18 | 0.00 |
| 40.00 | 8.98 | 6.18 | 0.00 |
| 41.00 | 8.98 | 6.18 | 0.00 |
| 42.00 | 8.98 | 6.18 | 0.00 |
| 43.00 | 8.98 | 6.18 | 0.00 |
| 44.00 | 8.98 | 6.18 | 0.00 |
| 45.00 | 8.98 | 6.18 | 0.00 |
| 46.00 | 8.98 | 6.18 | 0.00 |
| 47.00 | 8.98 | 6.18 | 0.00 |
| 48.00 | 8.98 | 6.18 | 0.00 |
| 49.00 | 8.98 | 6.18 | 0.00 |
| 50.00 | 8.98 | 6.18 | 0.00 |
| 51.00 | 8.98 | 6.18 | 0.00 |
| 52.00 | 8.98 | 6.18 | 0.00 |
| 53.00 | 8.98 | 6.18 | 0.00 |
| 54.00 | 8.98 | 6.18 | 0.00 |
| 55.00 | 8.98 | 6.18 | 0.00 |
| 56.00 | 8.98 | 6.18 | 0.00 |
| 57.00 | 8.98 | 6.18 | 0.00 |
| 58.00 | 8.98 | 6.18 | 0.00 |
| 59.00 | 8.98 | 6.18 | 0.00 |
| 60.00 | 8.98 | 6.18 | 0.00 |
| 61.00 | 8.98 | 6.18 | 0.00 |
| 62.00 | 8.98 | 6.18 | 0.00 |
| 63.00 | 8.98 | 6.18 | 0.00 |
| 64.00 | 8.98 | 6.18 | 0.00 |
| 65.00 | 8.98 | 6.18 | 0.00 |
| 66.00 | 8.98 | 6.18 | 0.00 |
| 67.00 | 8.98 | 6.18 | 0.00 |
| 68.00 | 8.98 | 6.18 | 0.00 |
| 69.00 | 8.98 | 6.18 | 0.00 |
| 70.00 | 8.98 | 6.18 | 0.00 |
| 71.00 | 8.98 | 6.18 | 0.00 |
| 72.00 | 8.98 | 6.18 | 0.00 |

## Summary for Subcatchment 2S: EX DA #2

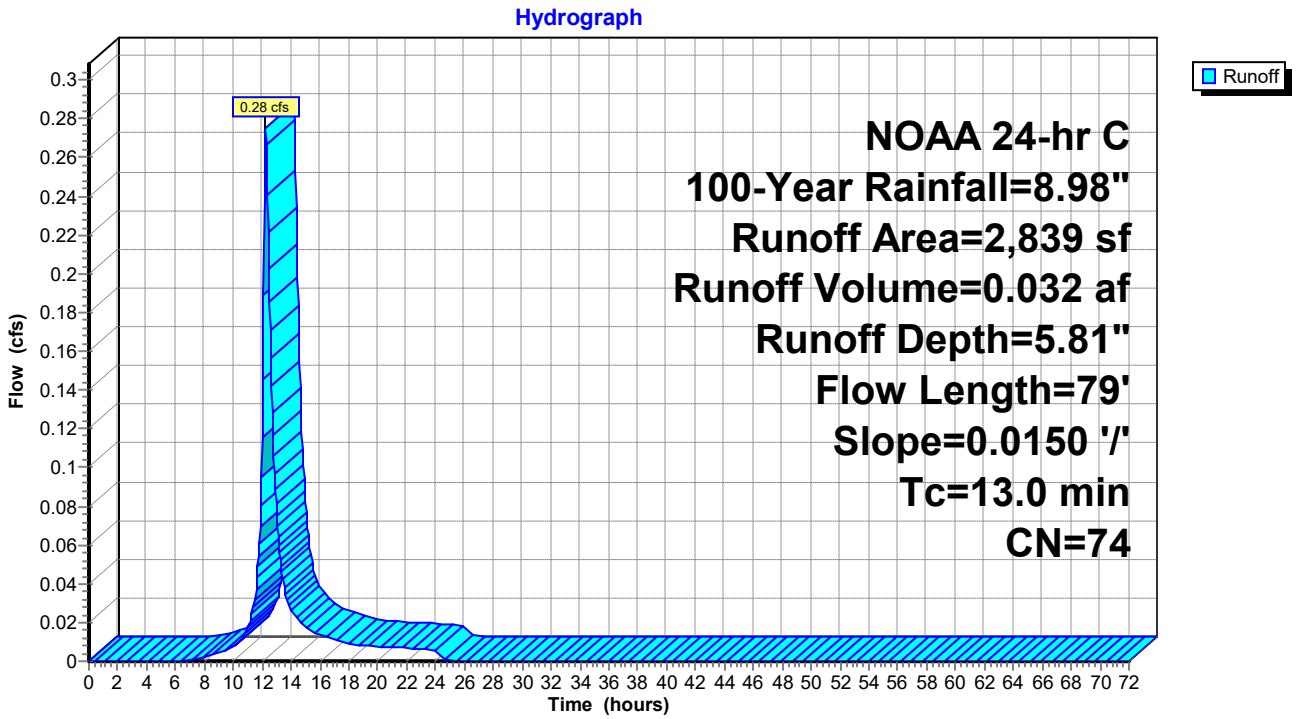
Runoff = 0.28 cfs @ 12.23 hrs, Volume= 0.032 af, Depth= 5.81"
Routed to Link 4L : Ex Study Point #2

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year Rainfall=8.98"

| Area (sf) | CN | Description |
|---|---|---|
| 2,839 | 74 | >75% Grass cover, Good, HSG C |
| 2,839 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.0 | 79 | 0.0150 | 0.10 | | **Sheet Flow,** Grass: Dense n= 0.240 P2= 3.33" |

## Subcatchment 2S: EX DA #2



## Hydrograph for Subcatchment 2S: EX DA #2

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.10 | 0.00 | 0.00 |
| 2.00 | 0.20 | 0.00 | 0.00 |
| 3.00 | 0.32 | 0.00 | 0.00 |
| 4.00 | 0.44 | 0.00 | 0.00 |
| 5.00 | 0.57 | 0.00 | 0.00 |
| 6.00 | 0.71 | 0.00 | 0.00 |
| 7.00 | 0.88 | 0.01 | 0.00 |
| 8.00 | 1.08 | 0.04 | 0.00 |
| 9.00 | 1.31 | 0.09 | 0.00 |
| 10.00 | 1.64 | 0.20 | 0.01 |
| 11.00 | 2.16 | 0.42 | 0.02 |
| 12.00 | 4.28 | 1.80 | **0.12** |
| 13.00 | 6.82 | 3.89 | **0.08** |
| 14.00 | 7.34 | 4.34 | 0.03 |
| 15.00 | 7.67 | 4.63 | 0.02 |
| 16.00 | 7.90 | 4.84 | 0.01 |
| 17.00 | 8.10 | 5.02 | 0.01 |
| 18.00 | 8.27 | 5.17 | 0.01 |
| 19.00 | 8.41 | 5.29 | 0.01 |
| 20.00 | 8.54 | 5.41 | 0.01 |
| 21.00 | 8.66 | 5.52 | 0.01 |
| 22.00 | 8.78 | 5.63 | 0.01 |
| 23.00 | 8.88 | 5.72 | 0.01 |
| 24.00 | **8.98** | **5.81** | 0.01 |
| 25.00 | 8.98 | 5.81 | 0.00 |
| 26.00 | 8.98 | 5.81 | 0.00 |
| 27.00 | 8.98 | 5.81 | 0.00 |
| 28.00 | 8.98 | 5.81 | 0.00 |
| 29.00 | 8.98 | 5.81 | 0.00 |
| 30.00 | 8.98 | 5.81 | 0.00 |
| 31.00 | 8.98 | 5.81 | 0.00 |
| 32.00 | 8.98 | 5.81 | 0.00 |
| 33.00 | 8.98 | 5.81 | 0.00 |
| 34.00 | 8.98 | 5.81 | 0.00 |
| 35.00 | 8.98 | 5.81 | 0.00 |
| 36.00 | 8.98 | 5.81 | 0.00 |
| 37.00 | 8.98 | 5.81 | 0.00 |
| 38.00 | 8.98 | 5.81 | 0.00 |
| 39.00 | 8.98 | 5.81 | 0.00 |
| 40.00 | 8.98 | 5.81 | 0.00 |
| 41.00 | 8.98 | 5.81 | 0.00 |
| 42.00 | 8.98 | 5.81 | 0.00 |
| 43.00 | 8.98 | 5.81 | 0.00 |
| 44.00 | 8.98 | 5.81 | 0.00 |
| 45.00 | 8.98 | 5.81 | 0.00 |
| 46.00 | 8.98 | 5.81 | 0.00 |
| 47.00 | 8.98 | 5.81 | 0.00 |
| 48.00 | 8.98 | 5.81 | 0.00 |
| 49.00 | 8.98 | 5.81 | 0.00 |
| 50.00 | 8.98 | 5.81 | 0.00 |
| 51.00 | 8.98 | 5.81 | 0.00 |
| 52.00 | 8.98 | 5.81 | 0.00 |
| 53.00 | 8.98 | 5.81 | 0.00 |
| 54.00 | 8.98 | 5.81 | 0.00 |
| 55.00 | 8.98 | 5.81 | 0.00 |
| 56.00 | 8.98 | 5.81 | 0.00 |
| 57.00 | 8.98 | 5.81 | 0.00 |
| 58.00 | 8.98 | 5.81 | 0.00 |
| 59.00 | 8.98 | 5.81 | 0.00 |
| 60.00 | 8.98 | 5.81 | 0.00 |
| 61.00 | 8.98 | 5.81 | 0.00 |
| 62.00 | 8.98 | 5.81 | 0.00 |
| 63.00 | 8.98 | 5.81 | 0.00 |
| 64.00 | 8.98 | 5.81 | 0.00 |
| 65.00 | 8.98 | 5.81 | 0.00 |
| 66.00 | 8.98 | 5.81 | 0.00 |
| 67.00 | 8.98 | 5.81 | 0.00 |
| 68.00 | 8.98 | 5.81 | 0.00 |
| 69.00 | 8.98 | 5.81 | 0.00 |
| 70.00 | 8.98 | 5.81 | 0.00 |
| 71.00 | 8.98 | 5.81 | 0.00 |
| 72.00 | 8.98 | 5.81 | 0.00 |

## Summary for Pond 4P: EX Curb Inlet

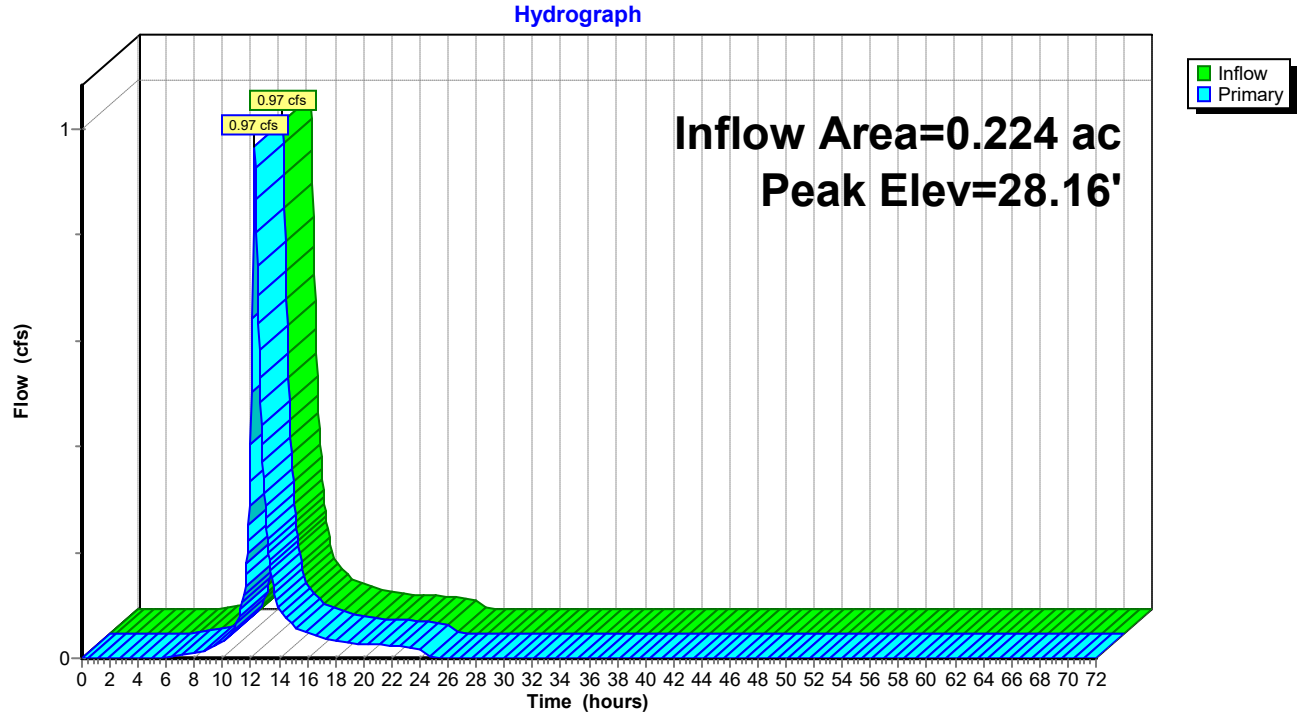
Inflow Area = 0.224 ac, 13.35% Impervious, Inflow Depth = 6.18" for 100-Year event
Inflow = 0.97 cfs @ 12.25 hrs, Volume= 0.115 af
Outflow = 0.97 cfs @ 12.25 hrs, Volume= 0.115 af, Atten= 0%, Lag= 0.0 min
Primary = 0.97 cfs @ 12.25 hrs, Volume= 0.115 af
Routed to Link 3L : EX Study Point #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 28.16' @ 12.25 hrs

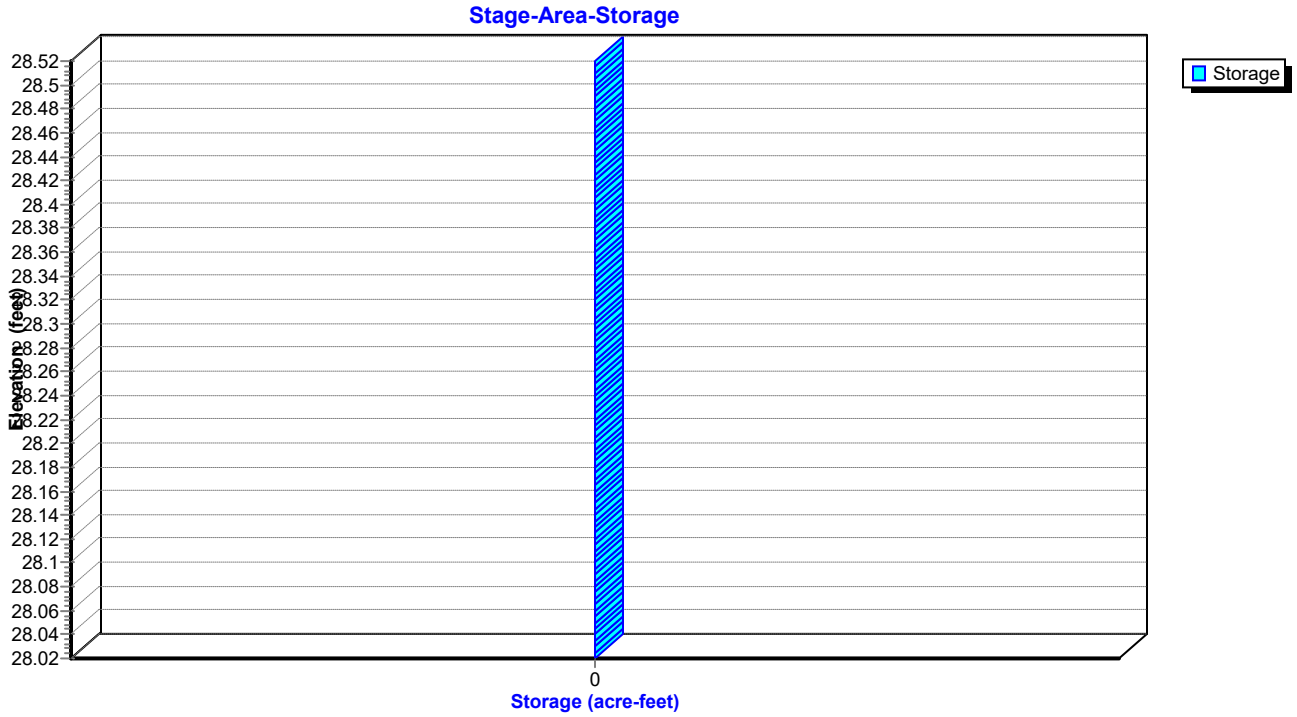
| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 28.02' | **72.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.96 cfs @ 12.25 hrs HW=28.16' TW=0.00' (Dynamic Tailwater)
**1=Orifice/Grate** (Orifice Controls 0.96 cfs @ 1.18 fps)

## Pond 4P: EX Curb Inlet



## Pond 4P: EX Curb Inlet



## Hydrograph for Pond 4P: EX Curb Inlet

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 28.02 | 0.00 | 52.00 | 0.00 | 28.02 | 0.00 |
| 1.00 | 0.00 | 28.02 | 0.00 | 53.00 | 0.00 | 28.02 | 0.00 |
| 2.00 | 0.00 | 28.02 | 0.00 | 54.00 | 0.00 | 28.02 | 0.00 |
| 3.00 | 0.00 | 28.02 | 0.00 | 55.00 | 0.00 | 28.02 | 0.00 |
| 4.00 | 0.00 | 28.02 | 0.00 | 56.00 | 0.00 | 28.02 | 0.00 |
| 5.00 | 0.00 | 28.02 | 0.00 | 57.00 | 0.00 | 28.02 | 0.00 |
| 6.00 | 0.00 | 28.02 | 0.00 | 58.00 | 0.00 | 28.02 | 0.00 |
| 7.00 | 0.01 | 28.02 | 0.01 | 59.00 | 0.00 | 28.02 | 0.00 |
| 8.00 | 0.01 | 28.03 | 0.01 | 60.00 | 0.00 | 28.02 | 0.00 |
| 9.00 | 0.02 | 28.03 | 0.02 | 61.00 | 0.00 | 28.02 | 0.00 |
| 10.00 | 0.03 | 28.03 | 0.03 | 62.00 | 0.00 | 28.02 | 0.00 |
| 11.00 | 0.07 | 28.04 | 0.07 | 63.00 | 0.00 | 28.02 | 0.00 |
| 12.00 | **0.40** | **28.10** | **0.40** | 64.00 | 0.00 | 28.02 | 0.00 |
| 13.00 | **0.29** | **28.08** | **0.29** | 65.00 | 0.00 | 28.02 | 0.00 |
| 14.00 | 0.10 | 28.05 | 0.10 | 66.00 | 0.00 | 28.02 | 0.00 |
| 15.00 | 0.06 | 28.04 | 0.06 | 67.00 | 0.00 | 28.02 | 0.00 |
| 16.00 | 0.05 | 28.04 | 0.05 | 68.00 | 0.00 | 28.02 | 0.00 |
| 17.00 | 0.04 | 28.04 | 0.04 | 69.00 | 0.00 | 28.02 | 0.00 |
| 18.00 | 0.03 | 28.03 | 0.03 | 70.00 | 0.00 | 28.02 | 0.00 |
| 19.00 | 0.03 | 28.03 | 0.03 | 71.00 | 0.00 | 28.02 | 0.00 |
| 20.00 | 0.03 | 28.03 | 0.03 | 72.00 | 0.00 | 28.02 | 0.00 |
| 21.00 | 0.03 | 28.03 | 0.03 | | | | |
| 22.00 | 0.02 | 28.03 | 0.02 | | | | |
| 23.00 | 0.02 | 28.03 | 0.02 | | | | |
| 24.00 | 0.02 | 28.03 | 0.02 | | | | |
| 25.00 | 0.00 | 28.02 | 0.00 | | | | |
| 26.00 | 0.00 | 28.02 | 0.00 | | | | |
| 27.00 | 0.00 | 28.02 | 0.00 | | | | |
| 28.00 | 0.00 | 28.02 | 0.00 | | | | |
| 29.00 | 0.00 | 28.02 | 0.00 | | | | |
| 30.00 | 0.00 | 28.02 | 0.00 | | | | |
| 31.00 | 0.00 | 28.02 | 0.00 | | | | |
| 32.00 | 0.00 | 28.02 | 0.00 | | | | |
| 33.00 | 0.00 | 28.02 | 0.00 | | | | |
| 34.00 | 0.00 | 28.02 | 0.00 | | | | |
| 35.00 | 0.00 | 28.02 | 0.00 | | | | |
| 36.00 | 0.00 | 28.02 | 0.00 | | | | |
| 37.00 | 0.00 | 28.02 | 0.00 | | | | |
| 38.00 | 0.00 | 28.02 | 0.00 | | | | |
| 39.00 | 0.00 | 28.02 | 0.00 | | | | |
| 40.00 | 0.00 | 28.02 | 0.00 | | | | |
| 41.00 | 0.00 | 28.02 | 0.00 | | | | |
| 42.00 | 0.00 | 28.02 | 0.00 | | | | |
| 43.00 | 0.00 | 28.02 | 0.00 | | | | |
| 44.00 | 0.00 | 28.02 | 0.00 | | | | |
| 45.00 | 0.00 | 28.02 | 0.00 | | | | |
| 46.00 | 0.00 | 28.02 | 0.00 | | | | |
| 47.00 | 0.00 | 28.02 | 0.00 | | | | |
| 48.00 | 0.00 | 28.02 | 0.00 | | | | |
| 49.00 | 0.00 | 28.02 | 0.00 | | | | |
| 50.00 | 0.00 | 28.02 | 0.00 | | | | |
| 51.00 | 0.00 | 28.02 | 0.00 | | | | |

## Stage-Area-Storage for Pond 4P: EX Curb Inlet

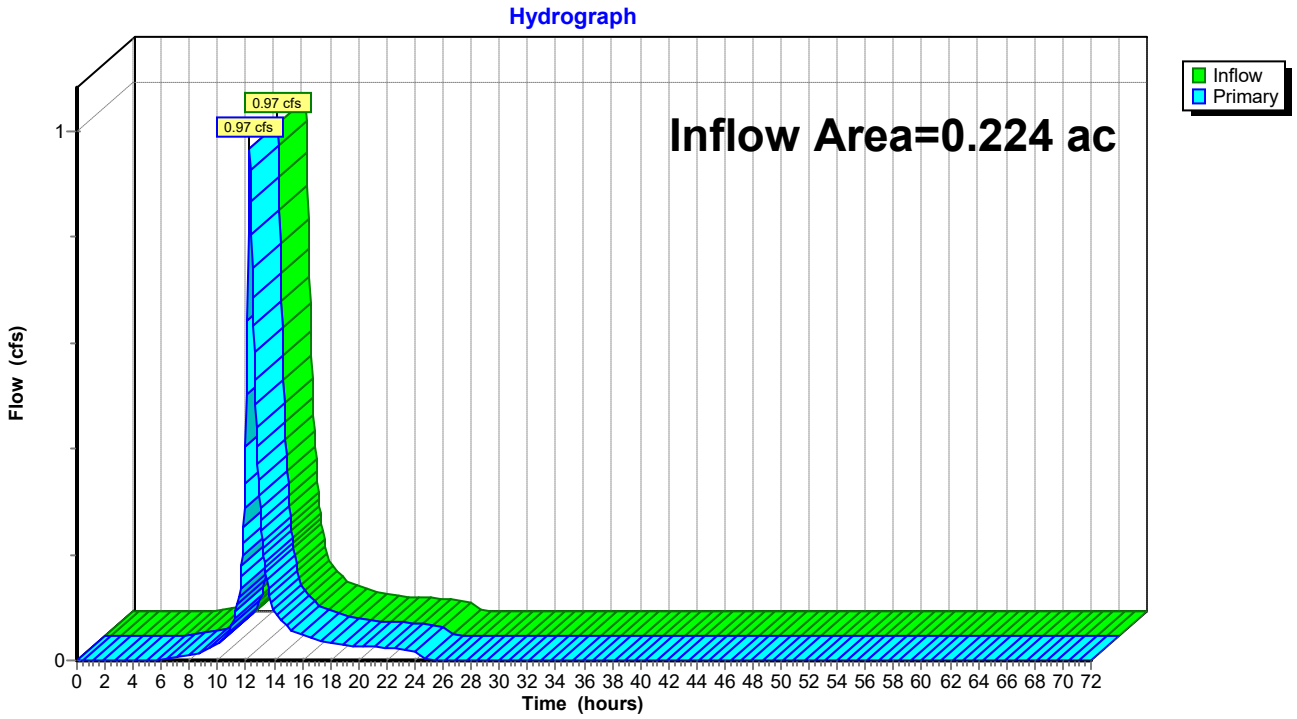
| Elevation (feet) | Storage (acre-feet) |
|---|---|
| 28.02 | **0.000** |
| 28.03 | 0.000 |
| 28.04 | 0.000 |
| 28.05 | 0.000 |
| 28.06 | 0.000 |
| 28.07 | 0.000 |
| 28.08 | 0.000 |
| 28.09 | 0.000 |
| 28.10 | 0.000 |
| 28.11 | 0.000 |
| 28.12 | 0.000 |
| 28.13 | 0.000 |
| 28.14 | 0.000 |
| 28.15 | 0.000 |
| 28.16 | 0.000 |
| 28.17 | 0.000 |
| 28.18 | 0.000 |
| 28.19 | 0.000 |
| 28.20 | 0.000 |
| 28.21 | 0.000 |
| 28.22 | 0.000 |
| 28.23 | 0.000 |
| 28.24 | 0.000 |
| 28.25 | 0.000 |
| 28.26 | 0.000 |
| 28.27 | 0.000 |
| 28.28 | 0.000 |
| 28.29 | 0.000 |
| 28.30 | 0.000 |
| 28.31 | 0.000 |
| 28.32 | 0.000 |
| 28.33 | 0.000 |
| 28.34 | 0.000 |
| 28.35 | 0.000 |
| 28.36 | 0.000 |
| 28.37 | 0.000 |
| 28.38 | 0.000 |
| 28.39 | 0.000 |
| 28.40 | 0.000 |
| 28.41 | 0.000 |
| 28.42 | 0.000 |
| 28.43 | 0.000 |
| 28.44 | 0.000 |
| 28.45 | 0.000 |
| 28.46 | 0.000 |
| 28.47 | 0.000 |
| 28.48 | 0.000 |
| 28.49 | 0.000 |
| 28.50 | 0.000 |
| 28.51 | 0.000 |
| 28.52 | 0.000 |

## Summary for Link 3L: EX Study Point #1

Inflow Area = 0.224 ac, 13.35% Impervious, Inflow Depth = 6.18" for 100-Year event
Inflow = 0.97 cfs @ 12.25 hrs, Volume= 0.115 af
Primary = 0.97 cfs @ 12.25 hrs, Volume= 0.115 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

### Link 3L: EX Study Point #1



## Hydrograph for Link 3L: EX Study Point #1

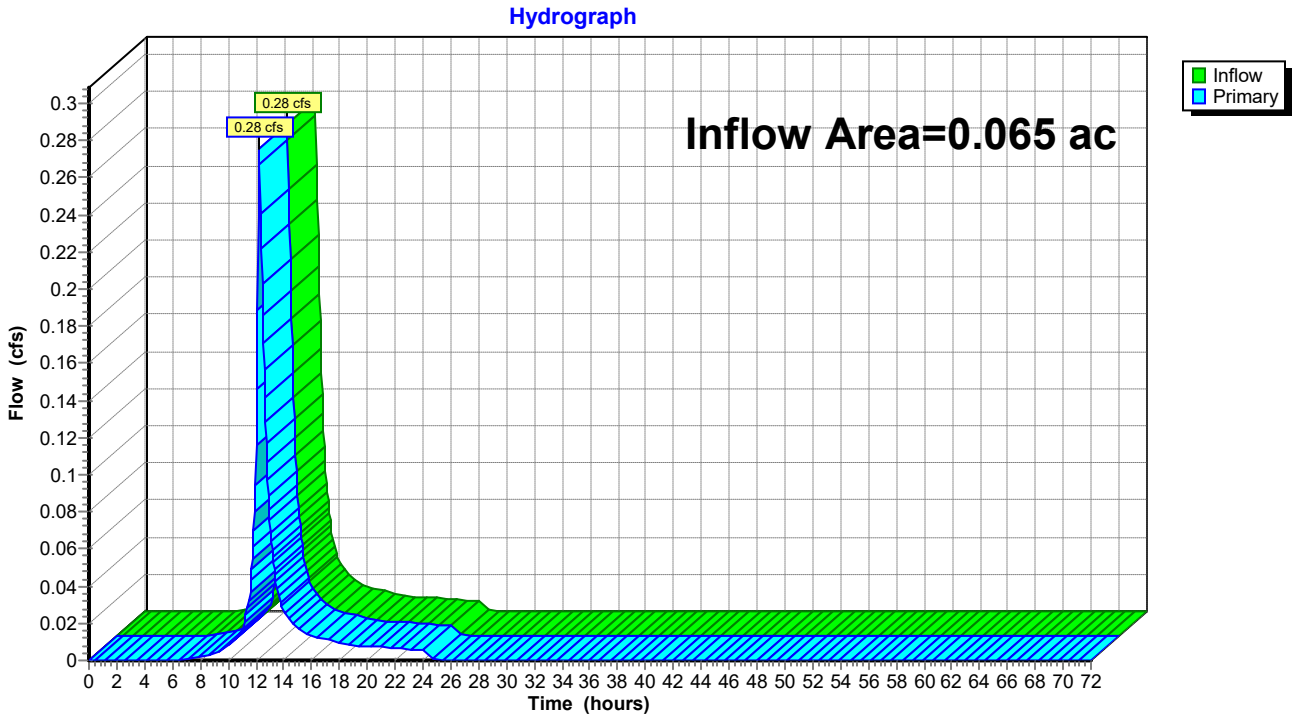
| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | **0.00** | 0.00 | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.01 | 0.00 | 0.01 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.01 | 0.00 | 0.01 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.02 | 0.00 | 0.02 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.03 | 0.00 | 0.03 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.07 | 0.00 | 0.07 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | **0.40** | 0.00 | **0.40** | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | **0.29** | 0.00 | **0.29** | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.10 | 0.00 | 0.10 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.06 | 0.00 | 0.06 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.05 | 0.00 | 0.05 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.04 | 0.00 | 0.04 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.03 | 0.00 | 0.03 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.03 | 0.00 | 0.03 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.03 | 0.00 | 0.03 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.03 | 0.00 | 0.03 | | | | |
| 22.00 | 0.02 | 0.00 | 0.02 | | | | |
| 23.00 | 0.02 | 0.00 | 0.02 | | | | |
| 24.00 | 0.02 | 0.00 | 0.02 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

## Summary for Link 4L: Ex Study Point #2

Inflow Area = 0.065 ac, 0.00% Impervious, Inflow Depth = 5.81" for 100-Year event
Inflow = 0.28 cfs @ 12.23 hrs, Volume= 0.032 af
Primary = 0.28 cfs @ 12.23 hrs, Volume= 0.032 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

### Link 4L: Ex Study Point #2

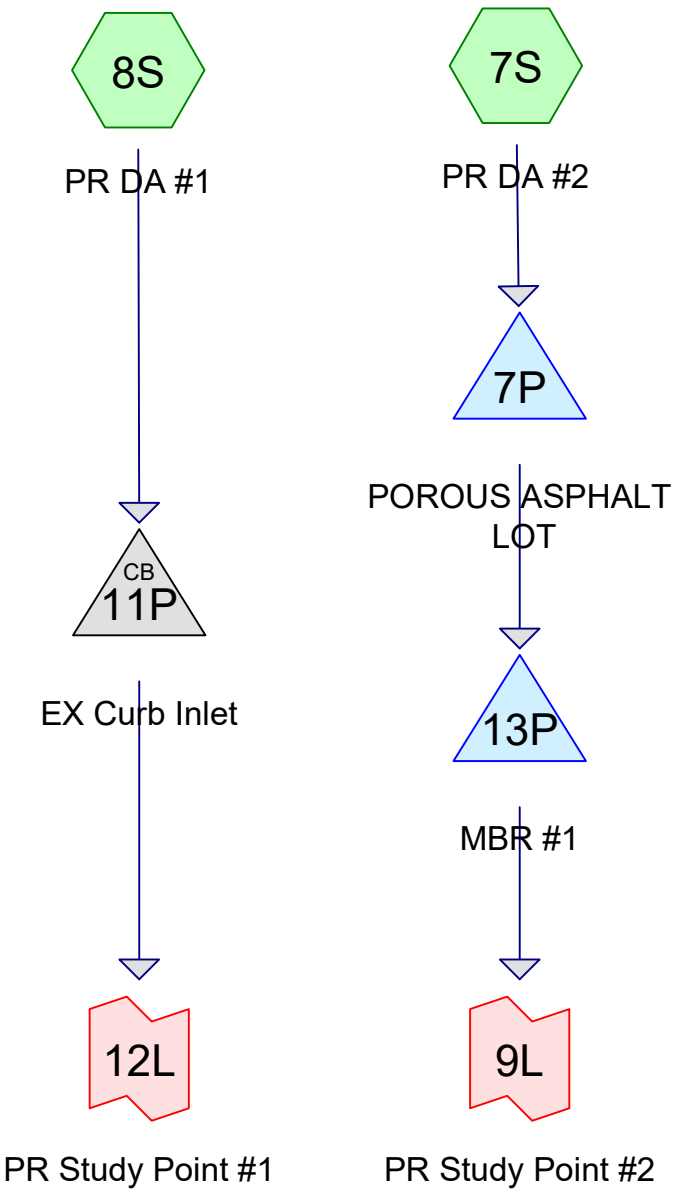


## Hydrograph for Link 4L: Ex Study Point #2

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | **0.00** | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.01 | 0.00 | 0.01 |
| 11.00 | 0.02 | 0.00 | 0.02 |
| 12.00 | **0.12** | 0.00 | **0.12** |
| 13.00 | **0.08** | 0.00 | **0.08** |
| 14.00 | 0.03 | 0.00 | 0.03 |
| 15.00 | 0.02 | 0.00 | 0.02 |
| 16.00 | 0.01 | 0.00 | 0.01 |
| 17.00 | 0.01 | 0.00 | 0.01 |
| 18.00 | 0.01 | 0.00 | 0.01 |
| 19.00 | 0.01 | 0.00 | 0.01 |
| 20.00 | 0.01 | 0.00 | 0.01 |
| 21.00 | 0.01 | 0.00 | 0.01 |
| 22.00 | 0.01 | 0.00 | 0.01 |
| 23.00 | 0.01 | 0.00 | 0.01 |
| 24.00 | 0.01 | 0.00 | 0.01 |
| 25.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 |

# Analysis of Proposed Conditions

# Proposed Conditions




Subcat Reach Pond Link

**Routing Diagram for HydoCAD - Foundation of Hope**
Prepared by Rauch Inc, Printed 5/6/2025
HydroCAD® 10.20-3h s/n 02413 © 2024 HydroCAD Software Solutions LLC

## Rainfall Events Listing (selected events)

| Event# | Event Name | Storm Type | Curve | Mode | Duration (hours) | B/B | Depth (inches) | AMC |
|---|---|---|---|---|---|---|---|---|
| 1 | 2-Year | NOAA 24-hr | C | Default | 24.00 | 1 | 3.33 | 2 |
| 2 | 10-Year | NOAA 24-hr | C | Default | 24.00 | 1 | 5.20 | 2 |
| 3 | 100-Year | NOAA 24-hr | C | Default | 24.00 | 1 | 8.98 | 2 |

## Area Listing (selected nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|---|---|---|
| 0.110 | 74 | >75% Grass cover, Good, HSG C (7S, 8S) |
| 0.121 | 98 | Paved parking, HSG A (7S, 8S) |
| 0.058 | 98 | Roofs, HSG A (7S) |
| **0.289** | **89** | **TOTAL AREA** |

## Soil Listing (selected nodes)

| Area (acres) | Soil Group | Subcatchment Numbers |
|---|---|---|
| 0.179 | HSG A | 7S, 8S |
| 0.000 | HSG B | |
| 0.110 | HSG C | 7S, 8S |
| 0.000 | HSG D | |
| 0.000 | Other | |
| **0.289** | | **TOTAL AREA** |

## Ground Covers (selected nodes)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|---|---|---|---|---|---|---|---|
| 0.000 | 0.000 | 0.110 | 0.000 | 0.000 | 0.110 | >75% Grass cover, Good | 7S, 8S |
| 0.121 | 0.000 | 0.000 | 0.000 | 0.000 | 0.121 | Paved parking | 7S, 8S |
| 0.058 | 0.000 | 0.000 | 0.000 | 0.000 | 0.058 | Roofs | 7S |
| **0.179** | **0.000** | **0.110** | **0.000** | **0.000** | **0.289** | **TOTAL AREA** | |

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 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 7S: PR DA #2** Runoff Area=8,795 sf 65.22% Impervious Runoff Depth=2.29"
Flow Length=46' Slope=0.0066 '/' Tc=8.0 min CN=90 Runoff=0.42 cfs 0.039 af

**Subcatchment 8S: PR DA #1** Runoff Area=3,810 sf 54.25% Impervious Runoff Depth=2.03"
Flow Length=181' Tc=21.8 min CN=87 Runoff=0.10 cfs 0.015 af

**Pond 7P: POROUS ASPHALT LOT** Peak Elev=28.59' Storage=490 cf Inflow=0.42 cfs 0.039 af
Outflow=0.08 cfs 0.039 af

**Pond 11P: EX Curb Inlet** Peak Elev=28.05' Inflow=0.10 cfs 0.015 af
Outflow=0.10 cfs 0.015 af

**Pond 13P: MBR #1** Peak Elev=27.99' Storage=0 cf Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

**Link 9L: PR Study Point #2** Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

**Link 12L: PR Study Point #1** Inflow=0.10 cfs 0.015 af
Primary=0.10 cfs 0.015 af

**Total Runoff Area = 0.289 ac Runoff Volume = 0.053 af Average Runoff Depth = 2.21"**
**38.10% Pervious = 0.110 ac 61.90% Impervious = 0.179 ac**

## Summary for Subcatchment 7S: PR DA #2

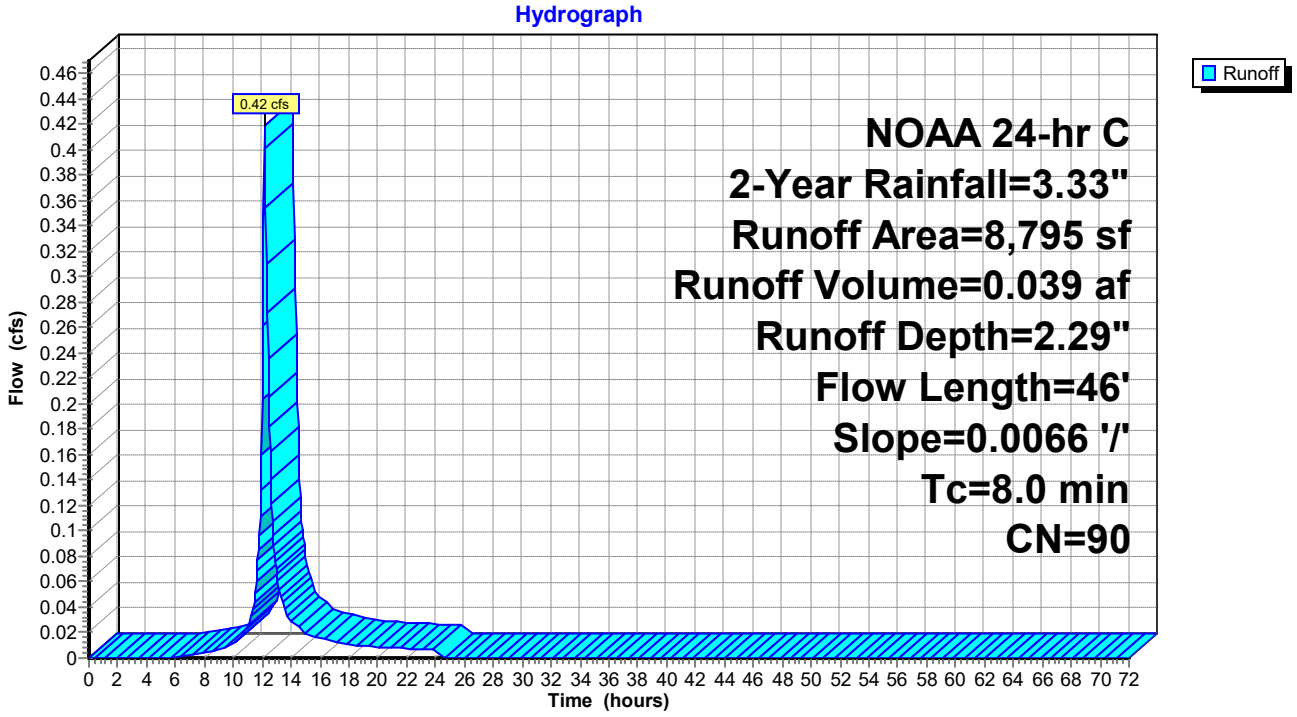
Runoff = 0.42 cfs @ 12.17 hrs, Volume= 0.039 af, Depth= 2.29"
Routed to Pond 7P : POROUS ASPHALT LOT

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.33"

| Area (sf) | CN | Description |
|---|---|---|
| 2,538 | 98 | Roofs, HSG A |
| 3,059 | 74 | >75% Grass cover, Good, HSG C |
| 3,198 | 98 | Paved parking, HSG A |
| 8,795 | 90 | Weighted Average |
| 3,059 | | 34.78% Pervious Area |
| 5,736 | | 65.22% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.0 | 46 | 0.0066 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 3.33" |

## Subcatchment 7S: PR DA #2



## Hydrograph for Subcatchment 7S: PR DA #2

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 |
| 2.00 | 0.08 | 0.00 | 0.00 |
| 3.00 | 0.12 | 0.00 | 0.00 |
| 4.00 | 0.16 | 0.00 | 0.00 |
| 5.00 | 0.21 | 0.00 | 0.00 |
| 6.00 | 0.26 | 0.00 | 0.00 |
| 7.00 | 0.32 | 0.01 | 0.00 |
| 8.00 | 0.40 | 0.02 | 0.00 |
| 9.00 | 0.49 | 0.05 | 0.01 |
| 10.00 | 0.61 | 0.10 | 0.01 |
| 11.00 | 0.80 | 0.20 | 0.03 |
| 12.00 | 1.59 | 0.75 | **0.20** |
| 13.00 | 2.53 | 1.56 | **0.07** |
| 14.00 | 2.72 | 1.73 | 0.03 |
| 15.00 | 2.84 | 1.84 | 0.02 |
| 16.00 | 2.93 | 1.92 | 0.02 |
| 17.00 | 3.01 | 1.99 | 0.01 |
| 18.00 | 3.07 | 2.04 | 0.01 |
| 19.00 | 3.12 | 2.09 | 0.01 |
| 20.00 | 3.17 | 2.14 | 0.01 |
| 21.00 | 3.21 | 2.18 | 0.01 |
| 22.00 | 3.25 | 2.22 | 0.01 |
| 23.00 | 3.29 | 2.26 | 0.01 |
| 24.00 | **3.33** | **2.29** | 0.01 |
| 25.00 | 3.33 | 2.29 | 0.00 |
| 26.00 | 3.33 | 2.29 | 0.00 |
| 27.00 | 3.33 | 2.29 | 0.00 |
| 28.00 | 3.33 | 2.29 | 0.00 |
| 29.00 | 3.33 | 2.29 | 0.00 |
| 30.00 | 3.33 | 2.29 | 0.00 |
| 31.00 | 3.33 | 2.29 | 0.00 |
| 32.00 | 3.33 | 2.29 | 0.00 |
| 33.00 | 3.33 | 2.29 | 0.00 |
| 34.00 | 3.33 | 2.29 | 0.00 |
| 35.00 | 3.33 | 2.29 | 0.00 |
| 36.00 | 3.33 | 2.29 | 0.00 |
| 37.00 | 3.33 | 2.29 | 0.00 |
| 38.00 | 3.33 | 2.29 | 0.00 |
| 39.00 | 3.33 | 2.29 | 0.00 |
| 40.00 | 3.33 | 2.29 | 0.00 |
| 41.00 | 3.33 | 2.29 | 0.00 |
| 42.00 | 3.33 | 2.29 | 0.00 |
| 43.00 | 3.33 | 2.29 | 0.00 |
| 44.00 | 3.33 | 2.29 | 0.00 |
| 45.00 | 3.33 | 2.29 | 0.00 |
| 46.00 | 3.33 | 2.29 | 0.00 |
| 47.00 | 3.33 | 2.29 | 0.00 |
| 48.00 | 3.33 | 2.29 | 0.00 |
| 49.00 | 3.33 | 2.29 | 0.00 |
| 50.00 | 3.33 | 2.29 | 0.00 |
| 51.00 | 3.33 | 2.29 | 0.00 |
| 52.00 | 3.33 | 2.29 | 0.00 |
| 53.00 | 3.33 | 2.29 | 0.00 |
| 54.00 | 3.33 | 2.29 | 0.00 |
| 55.00 | 3.33 | 2.29 | 0.00 |
| 56.00 | 3.33 | 2.29 | 0.00 |
| 57.00 | 3.33 | 2.29 | 0.00 |
| 58.00 | 3.33 | 2.29 | 0.00 |
| 59.00 | 3.33 | 2.29 | 0.00 |
| 60.00 | 3.33 | 2.29 | 0.00 |
| 61.00 | 3.33 | 2.29 | 0.00 |
| 62.00 | 3.33 | 2.29 | 0.00 |
| 63.00 | 3.33 | 2.29 | 0.00 |
| 64.00 | 3.33 | 2.29 | 0.00 |
| 65.00 | 3.33 | 2.29 | 0.00 |
| 66.00 | 3.33 | 2.29 | 0.00 |
| 67.00 | 3.33 | 2.29 | 0.00 |
| 68.00 | 3.33 | 2.29 | 0.00 |
| 69.00 | 3.33 | 2.29 | 0.00 |
| 70.00 | 3.33 | 2.29 | 0.00 |
| 71.00 | 3.33 | 2.29 | 0.00 |
| 72.00 | 3.33 | 2.29 | 0.00 |

## Summary for Subcatchment 8S: PR DA #1

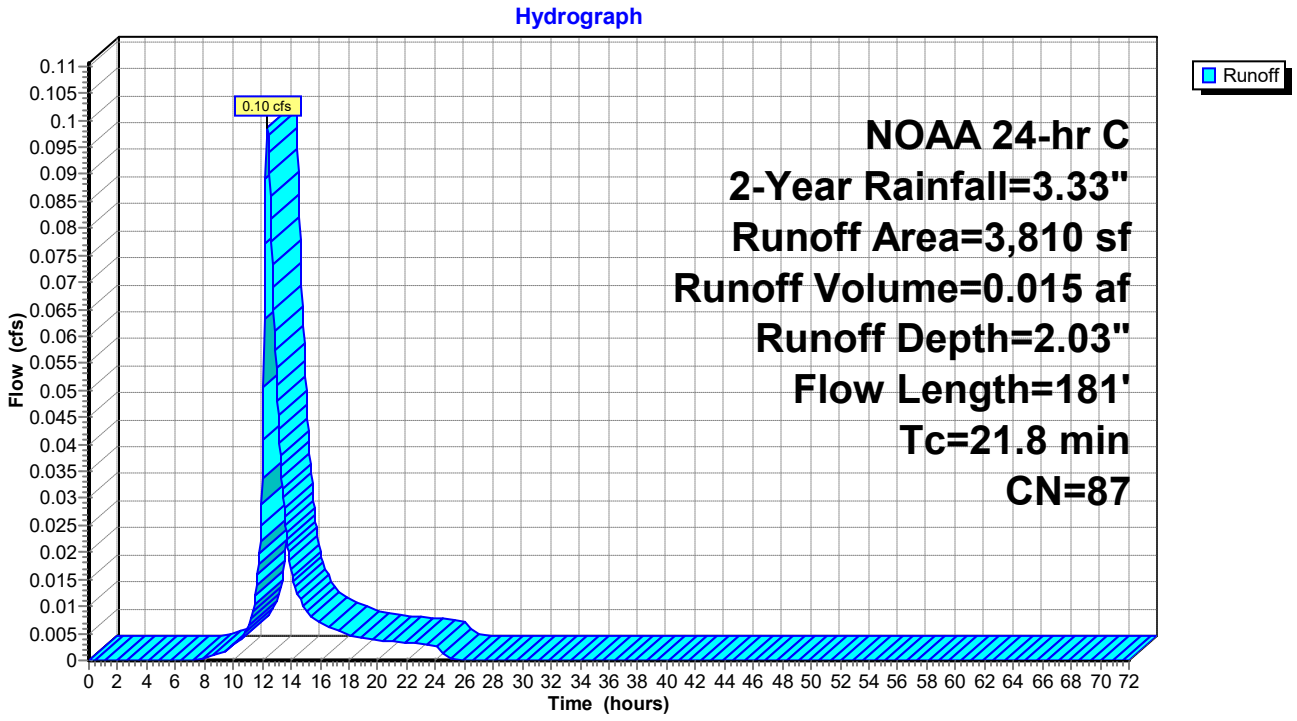
Runoff = 0.10 cfs @ 12.35 hrs, Volume= 0.015 af, Depth= 2.03"
Routed to Pond 11P : EX Curb Inlet

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.33"

| Area (sf) | CN | Description |
|---|---|---|
| 1,743 | 74 | >75% Grass cover, Good, HSG C |
| 2,067 | 98 | Paved parking, HSG A |
| 3,810 | 87 | Weighted Average |
| 1,743 | | 45.75% Pervious Area |
| 2,067 | | 54.25% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 20.5 | 100 | 0.0030 | 0.08 | | **Sheet Flow, Grass to East** Grass: Short n= 0.150 P2= 3.33" |
| 1.3 | 81 | 0.0028 | 1.07 | | **Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps |
| 21.8 | 181 | Total | | | |

### Subcatchment 8S: PR DA #1



## Hydrograph for Subcatchment 8S: PR DA #1

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.04 | 0.00 | 0.00 |
| 2.00 | 0.08 | 0.00 | 0.00 |
| 3.00 | 0.12 | 0.00 | 0.00 |
| 4.00 | 0.16 | 0.00 | 0.00 |
| 5.00 | 0.21 | 0.00 | 0.00 |
| 6.00 | 0.26 | 0.00 | 0.00 |
| 7.00 | 0.32 | 0.00 | 0.00 |
| 8.00 | 0.40 | 0.01 | 0.00 |
| 9.00 | 0.49 | 0.02 | 0.00 |
| 10.00 | 0.61 | 0.05 | 0.00 |
| 11.00 | 0.80 | 0.13 | 0.01 |
| 12.00 | 1.59 | 0.60 | **0.03** |
| 13.00 | 2.53 | 1.34 | **0.05** |
| 14.00 | 2.72 | 1.50 | 0.02 |
| 15.00 | 2.84 | 1.60 | 0.01 |
| 16.00 | 2.93 | 1.68 | 0.01 |
| 17.00 | 3.01 | 1.74 | 0.01 |
| 18.00 | 3.07 | 1.80 | 0.00 |
| 19.00 | 3.12 | 1.84 | 0.00 |
| 20.00 | 3.17 | 1.89 | 0.00 |
| 21.00 | 3.21 | 1.93 | 0.00 |
| 22.00 | 3.25 | 1.96 | 0.00 |
| 23.00 | 3.29 | 2.00 | 0.00 |
| 24.00 | **3.33** | **2.03** | 0.00 |
| 25.00 | 3.33 | 2.03 | 0.00 |
| 26.00 | 3.33 | 2.03 | 0.00 |
| 27.00 | 3.33 | 2.03 | 0.00 |
| 28.00 | 3.33 | 2.03 | 0.00 |
| 29.00 | 3.33 | 2.03 | 0.00 |
| 30.00 | 3.33 | 2.03 | 0.00 |
| 31.00 | 3.33 | 2.03 | 0.00 |
| 32.00 | 3.33 | 2.03 | 0.00 |
| 33.00 | 3.33 | 2.03 | 0.00 |
| 34.00 | 3.33 | 2.03 | 0.00 |
| 35.00 | 3.33 | 2.03 | 0.00 |
| 36.00 | 3.33 | 2.03 | 0.00 |
| 37.00 | 3.33 | 2.03 | 0.00 |
| 38.00 | 3.33 | 2.03 | 0.00 |
| 39.00 | 3.33 | 2.03 | 0.00 |
| 40.00 | 3.33 | 2.03 | 0.00 |
| 41.00 | 3.33 | 2.03 | 0.00 |
| 42.00 | 3.33 | 2.03 | 0.00 |
| 43.00 | 3.33 | 2.03 | 0.00 |
| 44.00 | 3.33 | 2.03 | 0.00 |
| 45.00 | 3.33 | 2.03 | 0.00 |
| 46.00 | 3.33 | 2.03 | 0.00 |
| 47.00 | 3.33 | 2.03 | 0.00 |
| 48.00 | 3.33 | 2.03 | 0.00 |
| 49.00 | 3.33 | 2.03 | 0.00 |
| 50.00 | 3.33 | 2.03 | 0.00 |
| 51.00 | 3.33 | 2.03 | 0.00 |
| 52.00 | 3.33 | 2.03 | 0.00 |
| 53.00 | 3.33 | 2.03 | 0.00 |
| 54.00 | 3.33 | 2.03 | 0.00 |
| 55.00 | 3.33 | 2.03 | 0.00 |
| 56.00 | 3.33 | 2.03 | 0.00 |
| 57.00 | 3.33 | 2.03 | 0.00 |
| 58.00 | 3.33 | 2.03 | 0.00 |
| 59.00 | 3.33 | 2.03 | 0.00 |
| 60.00 | 3.33 | 2.03 | 0.00 |
| 61.00 | 3.33 | 2.03 | 0.00 |
| 62.00 | 3.33 | 2.03 | 0.00 |
| 63.00 | 3.33 | 2.03 | 0.00 |
| 64.00 | 3.33 | 2.03 | 0.00 |
| 65.00 | 3.33 | 2.03 | 0.00 |
| 66.00 | 3.33 | 2.03 | 0.00 |
| 67.00 | 3.33 | 2.03 | 0.00 |
| 68.00 | 3.33 | 2.03 | 0.00 |
| 69.00 | 3.33 | 2.03 | 0.00 |
| 70.00 | 3.33 | 2.03 | 0.00 |
| 71.00 | 3.33 | 2.03 | 0.00 |
| 72.00 | 3.33 | 2.03 | 0.00 |

## Summary for Pond 7P: POROUS ASPHALT LOT

Inflow Area = 0.202 ac, 65.22% Impervious, Inflow Depth = 2.29" for 2-Year event
Inflow = 0.42 cfs @ 12.17 hrs, Volume= 0.039 af
Outflow = 0.08 cfs @ 12.84 hrs, Volume= 0.039 af, Atten= 80%, Lag= 40.2 min
Discarded = 0.08 cfs @ 12.84 hrs, Volume= 0.039 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 28.59' @ 12.84 hrs Surf.Area= 3,327 sf Storage= 490 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 38.8 min ( 853.8 - 815.0 )

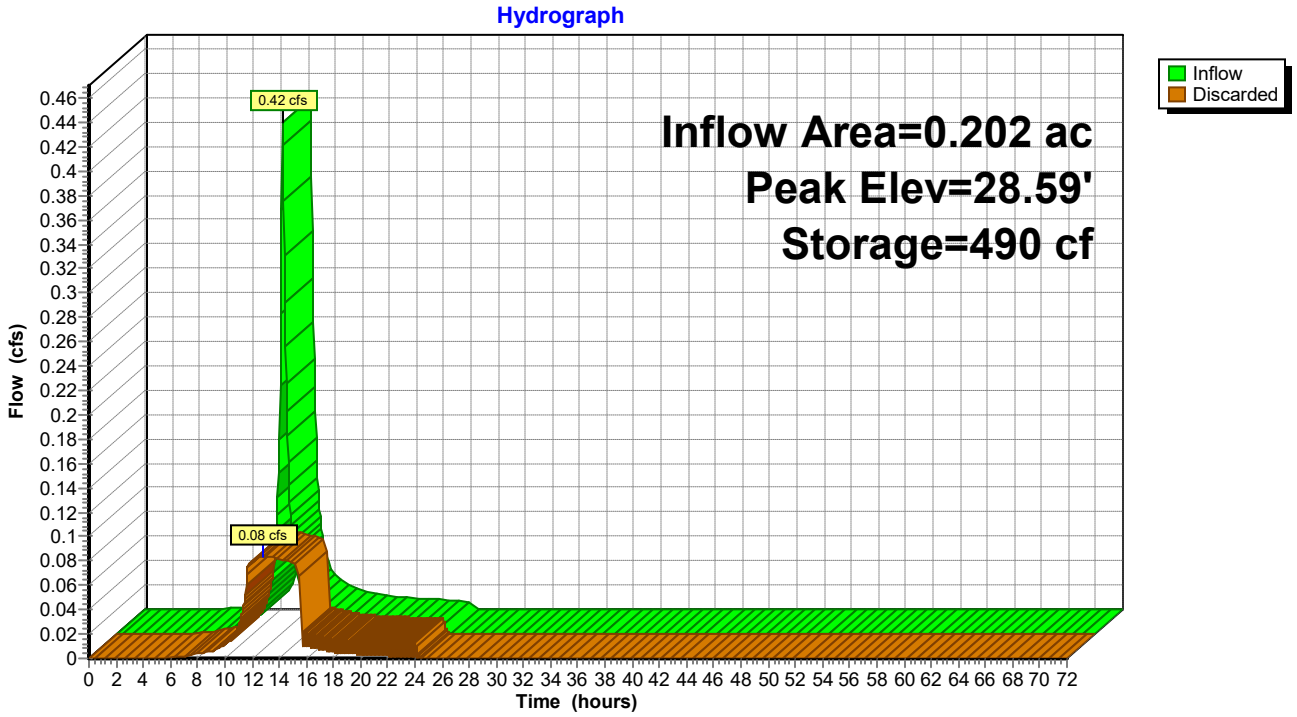
| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 28.22' | 2,395 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Voids (%) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|---|
| 28.22 | 3,327 | 269.0 | 0.0 | 0 | 0 | 3,327 |
| 28.23 | 3,327 | 269.0 | 40.0 | 13 | 13 | 3,330 |
| 28.39 | 3,327 | 269.0 | 40.0 | 213 | 226 | 3,373 |
| 28.40 | 3,327 | 269.0 | 40.0 | 13 | 240 | 3,375 |
| 30.02 | 3,327 | 269.0 | 40.0 | 2,156 | 2,395 | 3,811 |

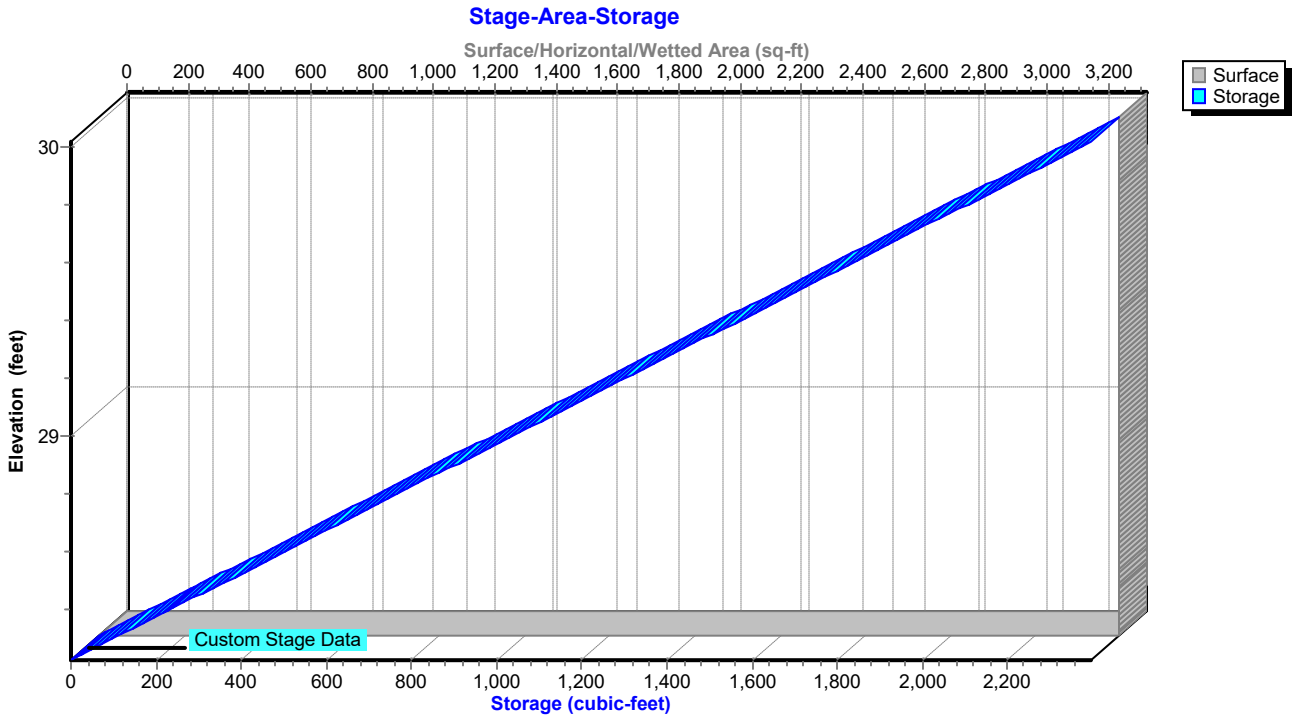
| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Discarded | 28.22' | **1.000 in/hr Exfiltration over Surface area**<br>Conductivity to Groundwater Elevation = 24.00' |

**Discarded OutFlow** Max=0.08 cfs @ 12.84 hrs HW=28.59' (Free Discharge)
**1=Exfiltration** ( Controls 0.08 cfs)

## Pond 7P: POROUS ASPHALT LOT




## Pond 7P: POROUS ASPHALT LOT



## Hydrograph for Pond 7P: POROUS ASPHALT LOT

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Discarded (cfs) |
|---|---|---|---|---|
| 0.00 | 0.00 | 0 | 28.22 | 0.00 |
| 2.50 | 0.00 | 0 | 28.22 | 0.00 |
| 5.00 | 0.00 | 0 | 28.22 | 0.00 |
| 7.50 | 0.00 | 0 | 28.22 | 0.00 |
| 10.00 | **0.01** | 0 | 28.22 | 0.01 |
| 12.50 | **0.18** | **442** | **28.55** | **0.08** |
| 15.00 | 0.02 | **136** | **28.32** | **0.08** |
| 17.50 | 0.01 | 0 | 28.22 | 0.01 |
| 20.00 | 0.01 | 0 | 28.22 | 0.00 |
| 22.50 | 0.01 | 0 | 28.22 | 0.00 |
| 25.00 | 0.00 | 0 | 28.22 | 0.00 |
| 27.50 | 0.00 | 0 | 28.22 | 0.00 |
| 30.00 | 0.00 | 0 | 28.22 | 0.00 |
| 32.50 | 0.00 | 0 | 28.22 | 0.00 |
| 35.00 | 0.00 | 0 | 28.22 | 0.00 |
| 37.50 | 0.00 | 0 | 28.22 | 0.00 |
| 40.00 | 0.00 | 0 | 28.22 | 0.00 |
| 42.50 | 0.00 | 0 | 28.22 | 0.00 |
| 45.00 | 0.00 | 0 | 28.22 | 0.00 |
| 47.50 | 0.00 | 0 | 28.22 | 0.00 |
| 50.00 | 0.00 | 0 | 28.22 | 0.00 |
| 52.50 | 0.00 | 0 | 28.22 | 0.00 |
| 55.00 | 0.00 | 0 | 28.22 | 0.00 |
| 57.50 | 0.00 | 0 | 28.22 | 0.00 |
| 60.00 | 0.00 | 0 | 28.22 | 0.00 |
| 62.50 | 0.00 | 0 | 28.22 | 0.00 |
| 65.00 | 0.00 | 0 | 28.22 | 0.00 |
| 67.50 | 0.00 | 0 | 28.22 | 0.00 |
| 70.00 | 0.00 | 0 | 28.22 | 0.00 |

## Stage-Area-Storage for Pond 7P: POROUS ASPHALT LOT

| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|---|---|---|
| 28.22 | **3,327** | 0 |
| 28.24 | 3,327 | 27 |
| 28.26 | 3,327 | 53 |
| 28.28 | 3,327 | 80 |
| 28.30 | 3,327 | 106 |
| 28.32 | 3,327 | 133 |
| 28.34 | 3,327 | 160 |
| 28.36 | 3,327 | 186 |
| 28.38 | 3,327 | 213 |
| 28.40 | 3,327 | 240 |
| 28.42 | 3,327 | 266 |
| 28.44 | 3,327 | 293 |
| 28.46 | 3,327 | 319 |
| 28.48 | 3,327 | 346 |
| 28.50 | 3,327 | 373 |
| 28.52 | 3,327 | 399 |
| 28.54 | 3,327 | 426 |
| 28.56 | 3,327 | 452 |
| 28.58 | 3,327 | 479 |
| 28.60 | 3,327 | 506 |
| 28.62 | 3,327 | 532 |
| 28.64 | 3,327 | 559 |
| 28.66 | 3,327 | 586 |
| 28.68 | 3,327 | 612 |
| 28.70 | 3,327 | 639 |
| 28.72 | 3,327 | 665 |
| 28.74 | 3,327 | 692 |
| 28.76 | 3,327 | 719 |
| 28.78 | 3,327 | 745 |
| 28.80 | 3,327 | 772 |
| 28.82 | 3,327 | 798 |
| 28.84 | 3,327 | 825 |
| 28.86 | 3,327 | 852 |
| 28.88 | 3,327 | 878 |
| 28.90 | 3,327 | 905 |
| 28.92 | 3,327 | 932 |
| 28.94 | 3,327 | 958 |
| 28.96 | 3,327 | 985 |
| 28.98 | 3,327 | 1,011 |
| 29.00 | 3,327 | 1,038 |
| 29.02 | 3,327 | 1,065 |
| 29.04 | 3,327 | 1,091 |
| 29.06 | 3,327 | 1,118 |
| 29.08 | 3,327 | 1,144 |
| 29.10 | 3,327 | 1,171 |
| 29.12 | 3,327 | 1,198 |
| 29.14 | 3,327 | 1,224 |
| 29.16 | 3,327 | 1,251 |
| 29.18 | 3,327 | 1,278 |
| 29.20 | 3,327 | 1,304 |
| 29.22 | 3,327 | 1,331 |
| 29.24 | 3,327 | 1,357 |
| 29.26 | 3,327 | 1,384 |
| 29.28 | 3,327 | 1,411 |
| 29.30 | 3,327 | 1,437 |
| 29.32 | 3,327 | 1,464 |
| 29.34 | 3,327 | 1,490 |
| 29.36 | 3,327 | 1,517 |
| 29.38 | 3,327 | 1,544 |
| 29.40 | 3,327 | 1,570 |
| 29.42 | 3,327 | 1,597 |
| 29.44 | 3,327 | 1,624 |
| 29.46 | 3,327 | 1,650 |
| 29.48 | 3,327 | 1,677 |
| 29.50 | 3,327 | 1,703 |
| 29.52 | 3,327 | 1,730 |
| 29.54 | 3,327 | 1,757 |
| 29.56 | 3,327 | 1,783 |
| 29.58 | 3,327 | 1,810 |
| 29.60 | 3,327 | 1,837 |
| 29.62 | 3,327 | 1,863 |
| 29.64 | 3,327 | 1,890 |
| 29.66 | 3,327 | 1,916 |
| 29.68 | 3,327 | 1,943 |
| 29.70 | 3,327 | 1,970 |
| 29.72 | 3,327 | 1,996 |
| 29.74 | 3,327 | 2,023 |
| 29.76 | 3,327 | 2,049 |
| 29.78 | 3,327 | 2,076 |
| 29.80 | 3,327 | 2,103 |
| 29.82 | 3,327 | 2,129 |
| 29.84 | 3,327 | 2,156 |
| 29.86 | 3,327 | 2,183 |
| 29.88 | 3,327 | 2,209 |
| 29.90 | 3,327 | 2,236 |
| 29.92 | 3,327 | 2,262 |
| 29.94 | 3,327 | 2,289 |
| 29.96 | 3,327 | 2,316 |
| 29.98 | 3,327 | 2,342 |
| 30.00 | 3,327 | 2,369 |
| 30.02 | 3,327 | **2,395** |

## Summary for Pond 11P: EX Curb Inlet

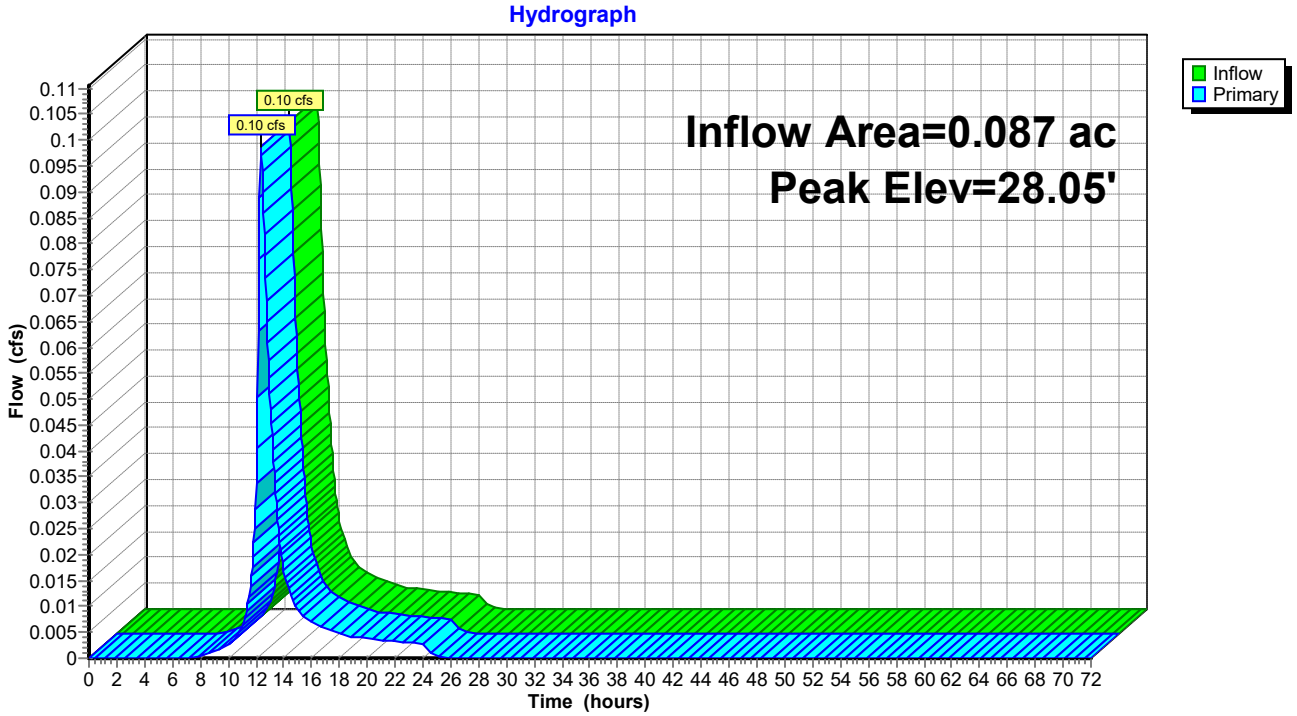
Inflow Area = 0.087 ac, 54.25% Impervious, Inflow Depth = 2.03" for 2-Year event
Inflow = 0.10 cfs @ 12.35 hrs, Volume= 0.015 af
Outflow = 0.10 cfs @ 12.35 hrs, Volume= 0.015 af, Atten= 0%, Lag= 0.0 min
Primary = 0.10 cfs @ 12.35 hrs, Volume= 0.015 af
Routed to Link 12L : PR Study Point #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 28.05' @ 12.35 hrs

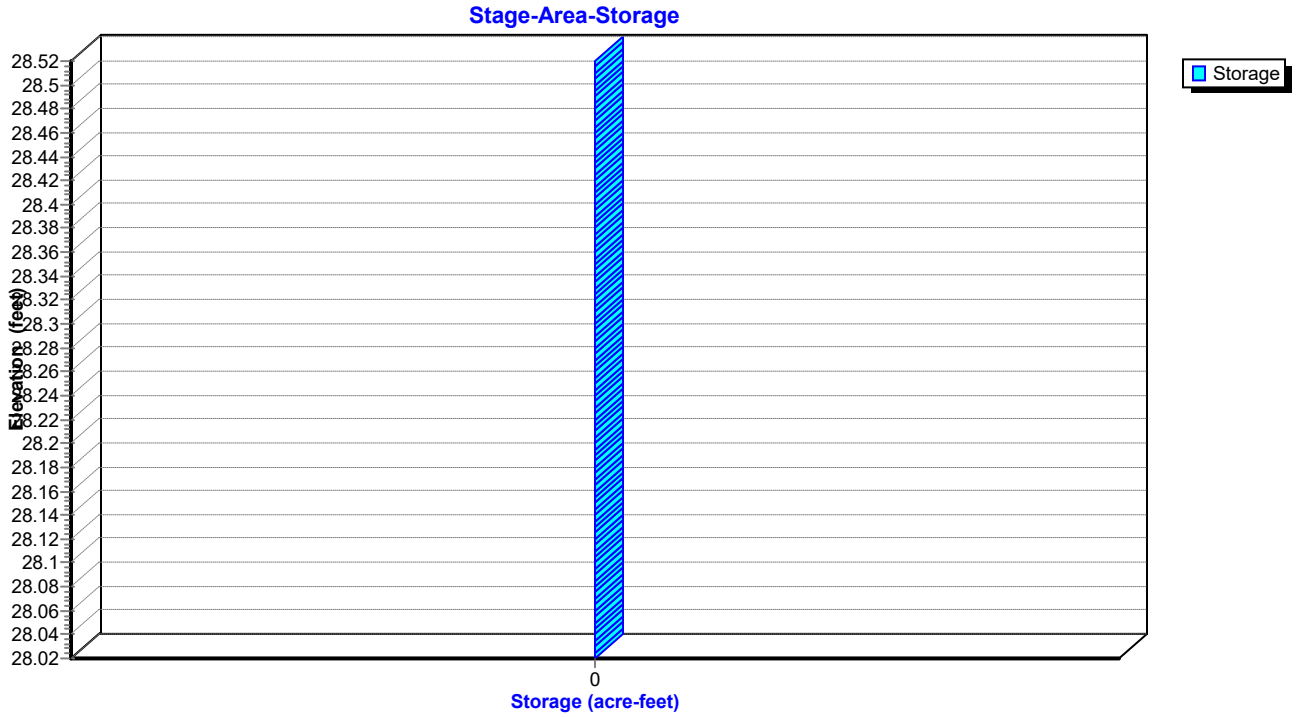
| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 28.02' | **72.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.10 cfs @ 12.35 hrs HW=28.05' TW=0.00' (Dynamic Tailwater)
**1=Orifice/Grate** (Orifice Controls 0.10 cfs @ 0.55 fps)

## Pond 11P: EX Curb Inlet



## Pond 11P: EX Curb Inlet



## Hydrograph for Pond 11P: EX Curb Inlet

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 28.02 | 0.00 | 52.00 | 0.00 | 28.02 | 0.00 |
| 1.00 | 0.00 | 28.02 | 0.00 | 53.00 | 0.00 | 28.02 | 0.00 |
| 2.00 | 0.00 | 28.02 | 0.00 | 54.00 | 0.00 | 28.02 | 0.00 |
| 3.00 | 0.00 | 28.02 | 0.00 | 55.00 | 0.00 | 28.02 | 0.00 |
| 4.00 | 0.00 | 28.02 | 0.00 | 56.00 | 0.00 | 28.02 | 0.00 |
| 5.00 | 0.00 | 28.02 | 0.00 | 57.00 | 0.00 | 28.02 | 0.00 |
| 6.00 | 0.00 | 28.02 | 0.00 | 58.00 | 0.00 | 28.02 | 0.00 |
| 7.00 | 0.00 | 28.02 | 0.00 | 59.00 | 0.00 | 28.02 | 0.00 |
| 8.00 | 0.00 | 28.02 | 0.00 | 60.00 | 0.00 | 28.02 | 0.00 |
| 9.00 | 0.00 | 28.02 | 0.00 | 61.00 | 0.00 | 28.02 | 0.00 |
| 10.00 | 0.00 | 28.02 | 0.00 | 62.00 | 0.00 | 28.02 | 0.00 |
| 11.00 | 0.01 | 28.02 | 0.01 | 63.00 | 0.00 | 28.02 | 0.00 |
| 12.00 | **0.03** | **28.03** | **0.03** | 64.00 | 0.00 | 28.02 | 0.00 |
| 13.00 | **0.05** | **28.04** | **0.05** | 65.00 | 0.00 | 28.02 | 0.00 |
| 14.00 | 0.02 | 28.03 | 0.02 | 66.00 | 0.00 | 28.02 | 0.00 |
| 15.00 | 0.01 | 28.03 | 0.01 | 67.00 | 0.00 | 28.02 | 0.00 |
| 16.00 | 0.01 | 28.03 | 0.01 | 68.00 | 0.00 | 28.02 | 0.00 |
| 17.00 | 0.01 | 28.02 | 0.01 | 69.00 | 0.00 | 28.02 | 0.00 |
| 18.00 | 0.00 | 28.02 | 0.00 | 70.00 | 0.00 | 28.02 | 0.00 |
| 19.00 | 0.00 | 28.02 | 0.00 | 71.00 | 0.00 | 28.02 | 0.00 |
| 20.00 | 0.00 | 28.02 | 0.00 | 72.00 | 0.00 | 28.02 | 0.00 |
| 21.00 | 0.00 | 28.02 | 0.00 | | | | |
| 22.00 | 0.00 | 28.02 | 0.00 | | | | |
| 23.00 | 0.00 | 28.02 | 0.00 | | | | |
| 24.00 | 0.00 | 28.02 | 0.00 | | | | |
| 25.00 | 0.00 | 28.02 | 0.00 | | | | |
| 26.00 | 0.00 | 28.02 | 0.00 | | | | |
| 27.00 | 0.00 | 28.02 | 0.00 | | | | |
| 28.00 | 0.00 | 28.02 | 0.00 | | | | |
| 29.00 | 0.00 | 28.02 | 0.00 | | | | |
| 30.00 | 0.00 | 28.02 | 0.00 | | | | |
| 31.00 | 0.00 | 28.02 | 0.00 | | | | |
| 32.00 | 0.00 | 28.02 | 0.00 | | | | |
| 33.00 | 0.00 | 28.02 | 0.00 | | | | |
| 34.00 | 0.00 | 28.02 | 0.00 | | | | |
| 35.00 | 0.00 | 28.02 | 0.00 | | | | |
| 36.00 | 0.00 | 28.02 | 0.00 | | | | |
| 37.00 | 0.00 | 28.02 | 0.00 | | | | |
| 38.00 | 0.00 | 28.02 | 0.00 | | | | |
| 39.00 | 0.00 | 28.02 | 0.00 | | | | |
| 40.00 | 0.00 | 28.02 | 0.00 | | | | |
| 41.00 | 0.00 | 28.02 | 0.00 | | | | |
| 42.00 | 0.00 | 28.02 | 0.00 | | | | |
| 43.00 | 0.00 | 28.02 | 0.00 | | | | |
| 44.00 | 0.00 | 28.02 | 0.00 | | | | |
| 45.00 | 0.00 | 28.02 | 0.00 | | | | |
| 46.00 | 0.00 | 28.02 | 0.00 | | | | |
| 47.00 | 0.00 | 28.02 | 0.00 | | | | |
| 48.00 | 0.00 | 28.02 | 0.00 | | | | |
| 49.00 | 0.00 | 28.02 | 0.00 | | | | |
| 50.00 | 0.00 | 28.02 | 0.00 | | | | |
| 51.00 | 0.00 | 28.02 | 0.00 | | | | |

## Stage-Area-Storage for Pond 11P: EX Curb Inlet

| Elevation (feet) | Storage (acre-feet) |
|---|---|
| 28.02 | **0.000** |
| 28.03 | 0.000 |
| 28.04 | 0.000 |
| 28.05 | 0.000 |
| 28.06 | 0.000 |
| 28.07 | 0.000 |
| 28.08 | 0.000 |
| 28.09 | 0.000 |
| 28.10 | 0.000 |
| 28.11 | 0.000 |
| 28.12 | 0.000 |
| 28.13 | 0.000 |
| 28.14 | 0.000 |
| 28.15 | 0.000 |
| 28.16 | 0.000 |
| 28.17 | 0.000 |
| 28.18 | 0.000 |
| 28.19 | 0.000 |
| 28.20 | 0.000 |
| 28.21 | 0.000 |
| 28.22 | 0.000 |
| 28.23 | 0.000 |
| 28.24 | 0.000 |
| 28.25 | 0.000 |
| 28.26 | 0.000 |
| 28.27 | 0.000 |
| 28.28 | 0.000 |
| 28.29 | 0.000 |
| 28.30 | 0.000 |
| 28.31 | 0.000 |
| 28.32 | 0.000 |
| 28.33 | 0.000 |
| 28.34 | 0.000 |
| 28.35 | 0.000 |
| 28.36 | 0.000 |
| 28.37 | 0.000 |
| 28.38 | 0.000 |
| 28.39 | 0.000 |
| 28.40 | 0.000 |
| 28.41 | 0.000 |
| 28.42 | 0.000 |
| 28.43 | 0.000 |
| 28.44 | 0.000 |
| 28.45 | 0.000 |
| 28.46 | 0.000 |
| 28.47 | 0.000 |
| 28.48 | 0.000 |
| 28.49 | 0.000 |
| 28.50 | 0.000 |
| 28.51 | 0.000 |
| 28.52 | 0.000 |

## Summary for Pond 13P: MBR #1

Inflow Area = 0.202 ac, 65.22% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 27.99' @ 0.00 hrs Surf.Area= 162 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no inflow)

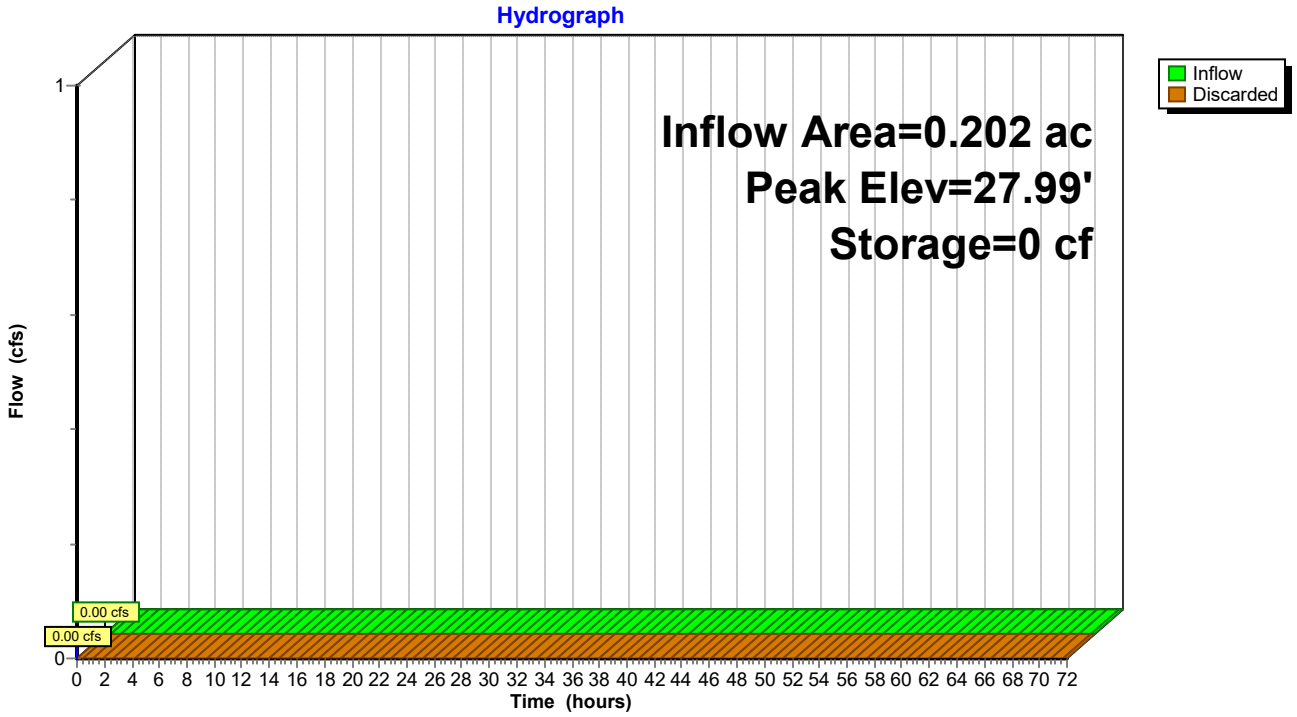
| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 27.99' | 545 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Voids (%) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|---|
| 27.99 | 162 | 91.0 | 0.0 | 0 | 0 | 162 |
| 28.00 | 162 | 91.0 | 40.0 | 1 | 1 | 163 |
| 29.50 | 311 | 101.0 | 100.0 | 349 | 349 | 373 |
| 30.00 | 476 | 113.0 | 100.0 | 195 | 545 | 584 |

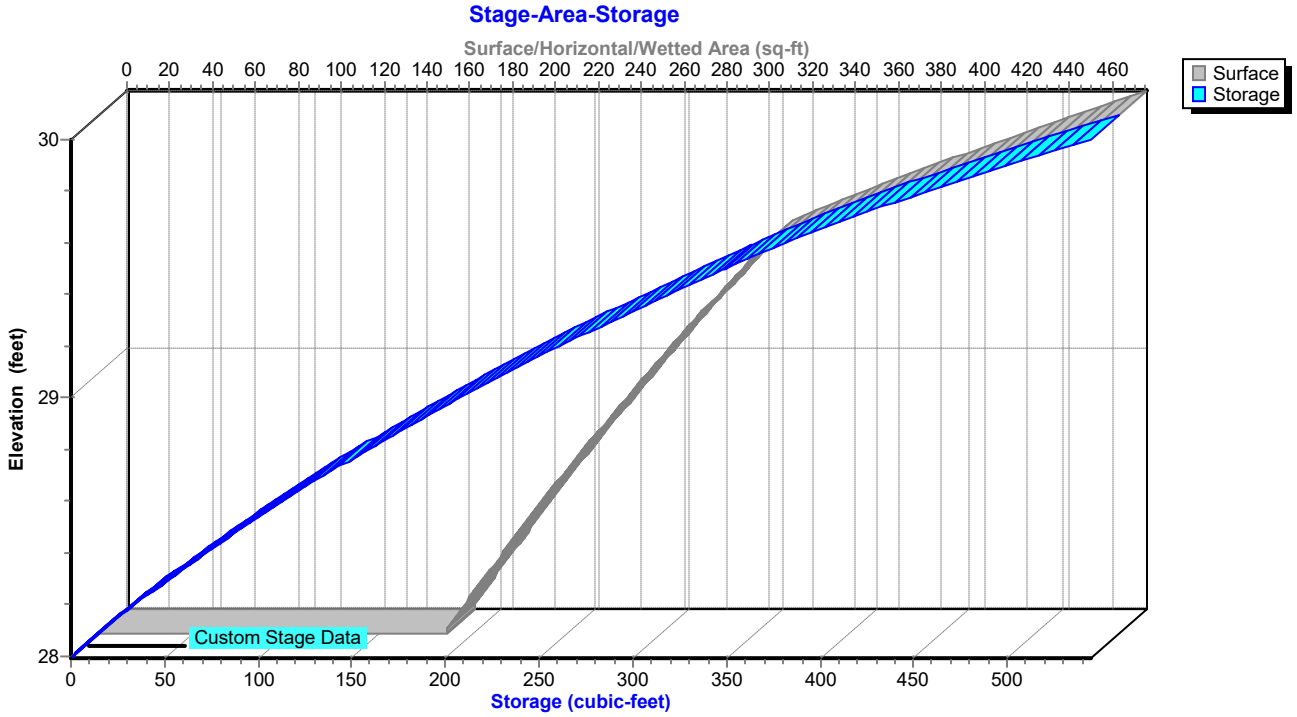
| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Discarded | 27.99' | **0.570 in/hr Exfiltration over Surface area**<br>Conductivity to Groundwater Elevation = 24.00' |

**Discarded OutFlow** Max=0.00 cfs @ 0.00 hrs HW=27.99' (Free Discharge)
↑**1=Exfiltration** (Passes 0.00 cfs of 0.00 cfs potential flow)

## Pond 13P: MBR #1




## Pond 13P: MBR #1



## Hydrograph for Pond 13P: MBR #1

| Time (hours) | Inflow (cfs) | Elevation (feet) | Discarded (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Discarded (cfs) |
|---|---|---|---|---|---|---|---|
| 0.00 | **0.00** | **27.99** | **0.00** | 52.00 | 0.00 | 27.99 | 0.00 |
| 1.00 | 0.00 | 27.99 | 0.00 | 53.00 | 0.00 | 27.99 | 0.00 |
| 2.00 | 0.00 | 27.99 | 0.00 | 54.00 | 0.00 | 27.99 | 0.00 |
| 3.00 | 0.00 | 27.99 | 0.00 | 55.00 | 0.00 | 27.99 | 0.00 |
| 4.00 | 0.00 | 27.99 | 0.00 | 56.00 | 0.00 | 27.99 | 0.00 |
| 5.00 | 0.00 | 27.99 | 0.00 | 57.00 | 0.00 | 27.99 | 0.00 |
| 6.00 | 0.00 | 27.99 | 0.00 | 58.00 | 0.00 | 27.99 | 0.00 |
| 7.00 | 0.00 | 27.99 | 0.00 | 59.00 | 0.00 | 27.99 | 0.00 |
| 8.00 | 0.00 | 27.99 | 0.00 | 60.00 | 0.00 | 27.99 | 0.00 |
| 9.00 | 0.00 | 27.99 | 0.00 | 61.00 | 0.00 | 27.99 | 0.00 |
| 10.00 | 0.00 | 27.99 | 0.00 | 62.00 | 0.00 | 27.99 | 0.00 |
| 11.00 | 0.00 | 27.99 | 0.00 | 63.00 | 0.00 | 27.99 | 0.00 |
| 12.00 | 0.00 | 27.99 | 0.00 | 64.00 | 0.00 | 27.99 | 0.00 |
| 13.00 | 0.00 | 27.99 | 0.00 | 65.00 | 0.00 | 27.99 | 0.00 |
| 14.00 | 0.00 | 27.99 | 0.00 | 66.00 | 0.00 | 27.99 | 0.00 |
| 15.00 | 0.00 | 27.99 | 0.00 | 67.00 | 0.00 | 27.99 | 0.00 |
| 16.00 | 0.00 | 27.99 | 0.00 | 68.00 | 0.00 | 27.99 | 0.00 |
| 17.00 | 0.00 | 27.99 | 0.00 | 69.00 | 0.00 | 27.99 | 0.00 |
| 18.00 | 0.00 | 27.99 | 0.00 | 70.00 | 0.00 | 27.99 | 0.00 |
| 19.00 | 0.00 | 27.99 | 0.00 | 71.00 | 0.00 | 27.99 | 0.00 |
| 20.00 | 0.00 | 27.99 | 0.00 | 72.00 | 0.00 | 27.99 | 0.00 |
| 21.00 | 0.00 | 27.99 | 0.00 | | | | |
| 22.00 | 0.00 | 27.99 | 0.00 | | | | |
| 23.00 | 0.00 | 27.99 | 0.00 | | | | |
| 24.00 | 0.00 | 27.99 | 0.00 | | | | |
| 25.00 | 0.00 | 27.99 | 0.00 | | | | |
| 26.00 | 0.00 | 27.99 | 0.00 | | | | |
| 27.00 | 0.00 | 27.99 | 0.00 | | | | |
| 28.00 | 0.00 | 27.99 | 0.00 | | | | |
| 29.00 | 0.00 | 27.99 | 0.00 | | | | |
| 30.00 | 0.00 | 27.99 | 0.00 | | | | |
| 31.00 | 0.00 | 27.99 | 0.00 | | | | |
| 32.00 | 0.00 | 27.99 | 0.00 | | | | |
| 33.00 | 0.00 | 27.99 | 0.00 | | | | |
| 34.00 | 0.00 | 27.99 | 0.00 | | | | |
| 35.00 | 0.00 | 27.99 | 0.00 | | | | |
| 36.00 | 0.00 | 27.99 | 0.00 | | | | |
| 37.00 | 0.00 | 27.99 | 0.00 | | | | |
| 38.00 | 0.00 | 27.99 | 0.00 | | | | |
| 39.00 | 0.00 | 27.99 | 0.00 | | | | |
| 40.00 | 0.00 | 27.99 | 0.00 | | | | |
| 41.00 | 0.00 | 27.99 | 0.00 | | | | |
| 42.00 | 0.00 | 27.99 | 0.00 | | | | |
| 43.00 | 0.00 | 27.99 | 0.00 | | | | |
| 44.00 | 0.00 | 27.99 | 0.00 | | | | |
| 45.00 | 0.00 | 27.99 | 0.00 | | | | |
| 46.00 | 0.00 | 27.99 | 0.00 | | | | |
| 47.00 | 0.00 | 27.99 | 0.00 | | | | |
| 48.00 | 0.00 | 27.99 | 0.00 | | | | |
| 49.00 | 0.00 | 27.99 | 0.00 | | | | |
| 50.00 | 0.00 | 27.99 | 0.00 | | | | |
| 51.00 | 0.00 | 27.99 | 0.00 | | | | |

## Stage-Area-Storage for Pond 13P: MBR #1

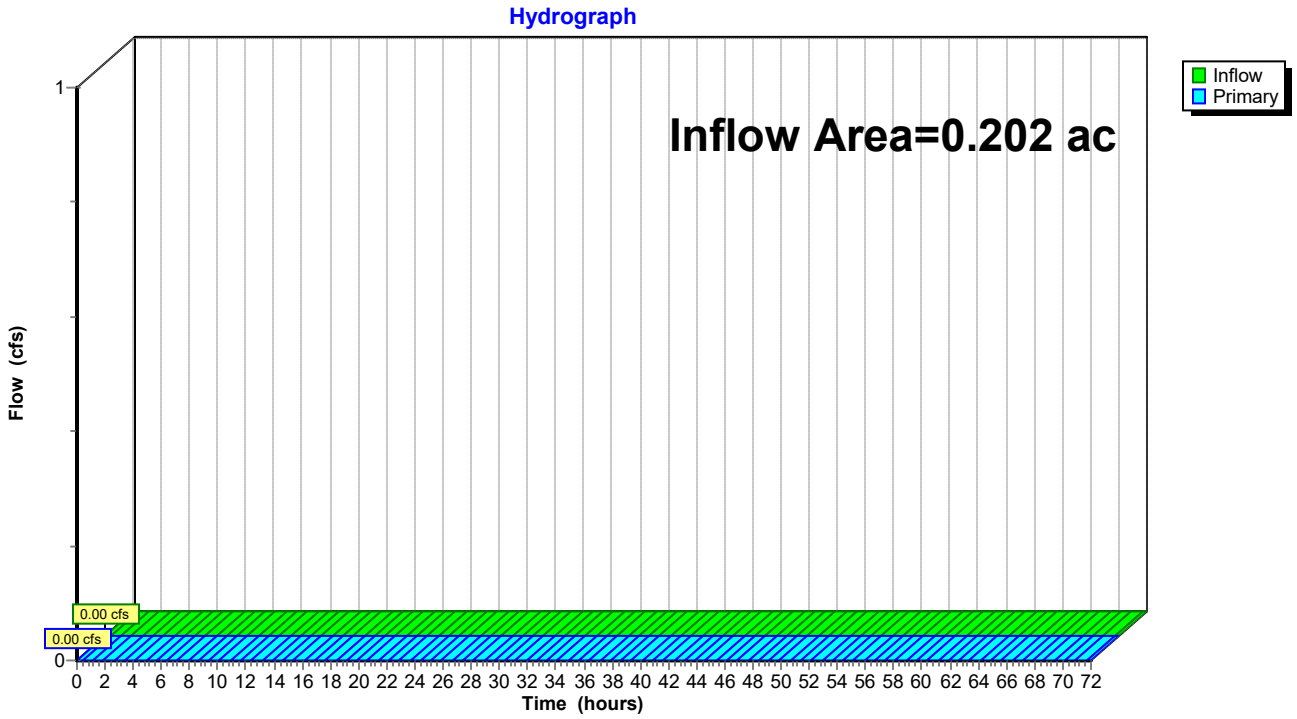
| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|---|---|---|
| 27.99 | 162 | 0 |
| 28.01 | 163 | 2 |
| 28.03 | 165 | 6 |
| 28.05 | 166 | 9 |
| 28.07 | 168 | 12 |
| 28.09 | 170 | 16 |
| 28.11 | 171 | 19 |
| 28.13 | 173 | 22 |
| 28.15 | 175 | 26 |
| 28.17 | 176 | 29 |
| 28.19 | 178 | 33 |
| 28.21 | 180 | 37 |
| 28.23 | 182 | 40 |
| 28.25 | 183 | 44 |
| 28.27 | 185 | 47 |
| 28.29 | 187 | 51 |
| 28.31 | 189 | 55 |
| 28.33 | 191 | 59 |
| 28.35 | 192 | 63 |
| 28.37 | 194 | 66 |
| 28.39 | 196 | 70 |
| 28.41 | 198 | 74 |
| 28.43 | 200 | 78 |
| 28.45 | 202 | 82 |
| 28.47 | 204 | 86 |
| 28.49 | 205 | 90 |
| 28.51 | 207 | 95 |
| 28.53 | 209 | 99 |
| 28.55 | 211 | 103 |
| 28.57 | 213 | 107 |
| 28.59 | 215 | 111 |
| 28.61 | 217 | 116 |
| 28.63 | 219 | 120 |
| 28.65 | 221 | 125 |
| 28.67 | 223 | 129 |
| 28.69 | 225 | 133 |
| 28.71 | 227 | 138 |
| 28.73 | 228 | 142 |
| 28.75 | 230 | 147 |
| 28.77 | 232 | 152 |
| 28.79 | 234 | 156 |
| 28.81 | 236 | 161 |
| 28.83 | 238 | 166 |
| 28.85 | 241 | 171 |
| 28.87 | 243 | 175 |
| 28.89 | 245 | 180 |
| 28.91 | 247 | 185 |
| 28.93 | 249 | 190 |
| 28.95 | 251 | 195 |
| 28.97 | 253 | 200 |
| 28.99 | 255 | 205 |
| 29.01 | 257 | 210 |
| 29.03 | 259 | 216 |
| 29.05 | 261 | 221 |
| 29.07 | 263 | 226 |
| 29.09 | 265 | 231 |
| 29.11 | 268 | 237 |
| 29.13 | 270 | 242 |
| 29.15 | 272 | 247 |
| 29.17 | 274 | 253 |
| 29.19 | 276 | 258 |
| 29.21 | 278 | 264 |
| 29.23 | 281 | 270 |
| 29.25 | 283 | 275 |
| 29.27 | 285 | 281 |
| 29.29 | 287 | 287 |
| 29.31 | 289 | 292 |
| 29.33 | 292 | 298 |
| 29.35 | 294 | 304 |
| 29.37 | 296 | 310 |
| 29.39 | 298 | 316 |
| 29.41 | 301 | 322 |
| 29.43 | 303 | 328 |
| 29.45 | 305 | 334 |
| 29.47 | 308 | 340 |
| 29.49 | 310 | 346 |
| 29.51 | 314 | 353 |
| 29.53 | 320 | 359 |
| 29.55 | 326 | 365 |
| 29.57 | 332 | 372 |
| 29.59 | 338 | 379 |
| 29.61 | 344 | 385 |
| 29.63 | 351 | 392 |
| 29.65 | 357 | 399 |
| 29.67 | 363 | 407 |
| 29.69 | 370 | 414 |
| 29.71 | 376 | 421 |
| 29.73 | 383 | 429 |
| 29.75 | 389 | 437 |
| 29.77 | 396 | 445 |
| 29.79 | 402 | 453 |
| 29.81 | 409 | 461 |
| 29.83 | 416 | 469 |
| 29.85 | 423 | 477 |
| 29.87 | 430 | 486 |
| 29.89 | 437 | 494 |
| 29.91 | 444 | 503 |
| 29.93 | 451 | 512 |
| 29.95 | 458 | 521 |
| 29.97 | 465 | 531 |
| 29.99 | **472** | **540** |

## Summary for Link 9L: PR Study Point #2

Inflow Area = 0.202 ac, 65.22% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

### Link 9L: PR Study Point #2



## Hydrograph for Link 9L: PR Study Point #2

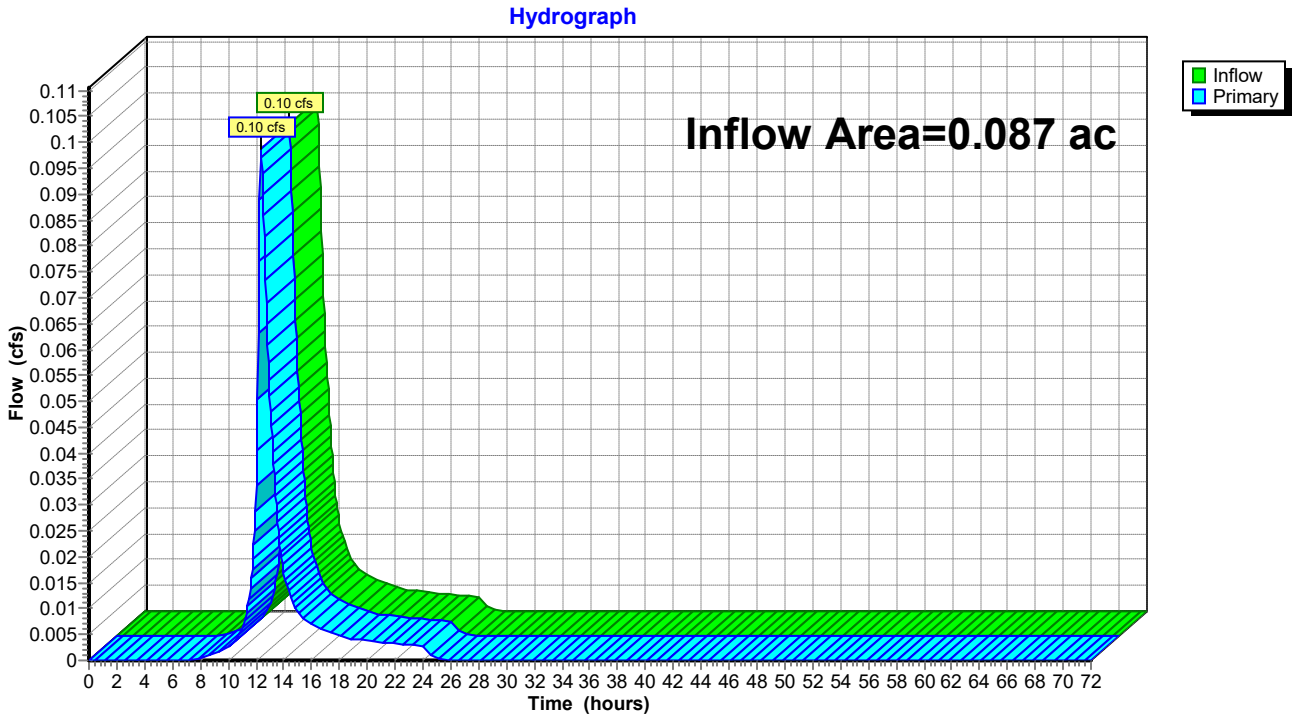
| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|---|---|---|---|
| 0.00 | **0.00** | **0.00** | **0.00** | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | | | | |
| 22.00 | 0.00 | 0.00 | 0.00 | | | | |
| 23.00 | 0.00 | 0.00 | 0.00 | | | | |
| 24.00 | 0.00 | 0.00 | 0.00 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

## Summary for Link 12L: PR Study Point #1

Inflow Area = 0.087 ac, 54.25% Impervious, Inflow Depth = 2.03" for 2-Year event
Inflow = 0.10 cfs @ 12.35 hrs, Volume= 0.015 af
Primary = 0.10 cfs @ 12.35 hrs, Volume= 0.015 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

## Link 12L: PR Study Point #1



## Hydrograph for Link 12L: PR Study Point #1

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | **0.00** | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.01 | 0.00 | 0.01 |
| 12.00 | **0.03** | 0.00 | **0.03** |
| 13.00 | **0.05** | 0.00 | **0.05** |
| 14.00 | 0.02 | 0.00 | 0.02 |
| 15.00 | 0.01 | 0.00 | 0.01 |
| 16.00 | 0.01 | 0.00 | 0.01 |
| 17.00 | 0.01 | 0.00 | 0.01 |
| 18.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 |

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 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 7S: PR DA #2** Runoff Area=8,795 sf 65.22% Impervious Runoff Depth=4.07"
Flow Length=46' Slope=0.0066 '/' Tc=8.0 min CN=90 Runoff=0.73 cfs 0.068 af

**Subcatchment 8S: PR DA #1** Runoff Area=3,810 sf 54.25% Impervious Runoff Depth=3.76"
Flow Length=181' Tc=21.8 min CN=87 Runoff=0.18 cfs 0.027 af

**Pond 7P: POROUS ASPHALT LOT** Peak Elev=29.07' Storage=1,132 cf Inflow=0.73 cfs 0.068 af
Outflow=0.09 cfs 0.068 af

**Pond 11P: EX Curb Inlet** Peak Elev=28.06' Inflow=0.18 cfs 0.027 af
Outflow=0.18 cfs 0.027 af

**Pond 13P: MBR #1** Peak Elev=27.99' Storage=0 cf Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

**Link 9L: PR Study Point #2** Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

**Link 12L: PR Study Point #1** Inflow=0.18 cfs 0.027 af
Primary=0.18 cfs 0.027 af

**Total Runoff Area = 0.289 ac Runoff Volume = 0.096 af Average Runoff Depth = 3.97"**
**38.10% Pervious = 0.110 ac 61.90% Impervious = 0.179 ac**

## Summary for Subcatchment 7S: PR DA #2

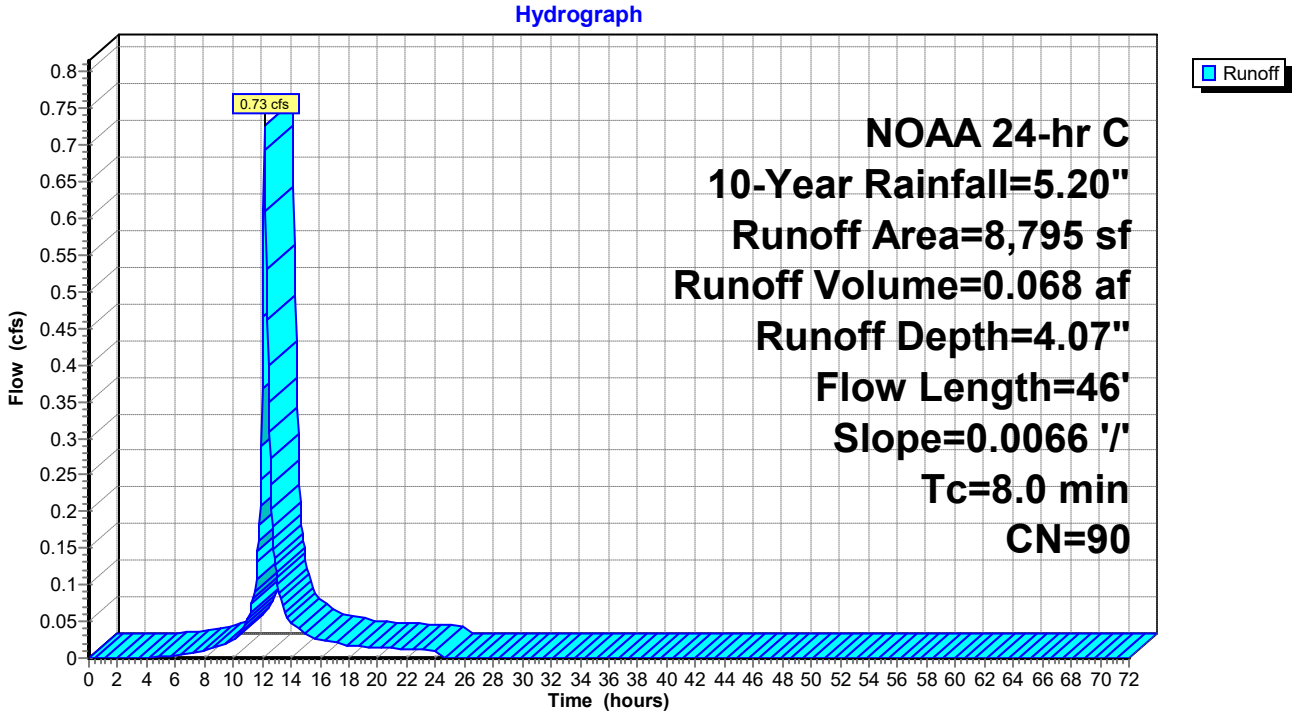
Runoff = 0.73 cfs @ 12.16 hrs, Volume= 0.068 af, Depth= 4.07"
Routed to Pond 7P : POROUS ASPHALT LOT

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 10-Year Rainfall=5.20"

| Area (sf) | CN | Description |
|---|---|---|
| 2,538 | 98 | Roofs, HSG A |
| 3,059 | 74 | >75% Grass cover, Good, HSG C |
| 3,198 | 98 | Paved parking, HSG A |
| 8,795 | 90 | Weighted Average |
| 3,059 | | 34.78% Pervious Area |
| 5,736 | | 65.22% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.0 | 46 | 0.0066 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 3.33" |

## Subcatchment 7S: PR DA #2



## Hydrograph for Subcatchment 7S: PR DA #2

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 |
| 2.00 | 0.12 | 0.00 | 0.00 |
| 3.00 | 0.18 | 0.00 | 0.00 |
| 4.00 | 0.25 | 0.00 | 0.00 |
| 5.00 | 0.33 | 0.01 | 0.00 |
| 6.00 | 0.41 | 0.03 | 0.00 |
| 7.00 | 0.51 | 0.06 | 0.01 |
| 8.00 | 0.62 | 0.11 | 0.01 |
| 9.00 | 0.76 | 0.18 | 0.02 |
| 10.00 | 0.95 | 0.29 | 0.03 |
| 11.00 | 1.25 | 0.49 | 0.05 |
| 12.00 | 2.48 | 1.51 | **0.37** |
| 13.00 | 3.95 | 2.87 | **0.11** |
| 14.00 | 4.25 | 3.16 | 0.05 |
| 15.00 | 4.44 | 3.34 | 0.03 |
| 16.00 | 4.58 | 3.47 | 0.03 |
| 17.00 | 4.69 | 3.58 | 0.02 |
| 18.00 | 4.79 | 3.67 | 0.02 |
| 19.00 | 4.87 | 3.75 | 0.02 |
| 20.00 | 4.95 | 3.82 | 0.01 |
| 21.00 | 5.02 | 3.89 | 0.01 |
| 22.00 | 5.08 | 3.96 | 0.01 |
| 23.00 | 5.14 | 4.01 | 0.01 |
| 24.00 | **5.20** | **4.07** | 0.01 |
| 25.00 | 5.20 | 4.07 | 0.00 |
| 26.00 | 5.20 | 4.07 | 0.00 |
| 27.00 | 5.20 | 4.07 | 0.00 |
| 28.00 | 5.20 | 4.07 | 0.00 |
| 29.00 | 5.20 | 4.07 | 0.00 |
| 30.00 | 5.20 | 4.07 | 0.00 |
| 31.00 | 5.20 | 4.07 | 0.00 |
| 32.00 | 5.20 | 4.07 | 0.00 |
| 33.00 | 5.20 | 4.07 | 0.00 |
| 34.00 | 5.20 | 4.07 | 0.00 |
| 35.00 | 5.20 | 4.07 | 0.00 |
| 36.00 | 5.20 | 4.07 | 0.00 |
| 37.00 | 5.20 | 4.07 | 0.00 |
| 38.00 | 5.20 | 4.07 | 0.00 |
| 39.00 | 5.20 | 4.07 | 0.00 |
| 40.00 | 5.20 | 4.07 | 0.00 |
| 41.00 | 5.20 | 4.07 | 0.00 |
| 42.00 | 5.20 | 4.07 | 0.00 |
| 43.00 | 5.20 | 4.07 | 0.00 |
| 44.00 | 5.20 | 4.07 | 0.00 |
| 45.00 | 5.20 | 4.07 | 0.00 |
| 46.00 | 5.20 | 4.07 | 0.00 |
| 47.00 | 5.20 | 4.07 | 0.00 |
| 48.00 | 5.20 | 4.07 | 0.00 |
| 49.00 | 5.20 | 4.07 | 0.00 |
| 50.00 | 5.20 | 4.07 | 0.00 |
| 51.00 | 5.20 | 4.07 | 0.00 |
| 52.00 | 5.20 | 4.07 | 0.00 |
| 53.00 | 5.20 | 4.07 | 0.00 |
| 54.00 | 5.20 | 4.07 | 0.00 |
| 55.00 | 5.20 | 4.07 | 0.00 |
| 56.00 | 5.20 | 4.07 | 0.00 |
| 57.00 | 5.20 | 4.07 | 0.00 |
| 58.00 | 5.20 | 4.07 | 0.00 |
| 59.00 | 5.20 | 4.07 | 0.00 |
| 60.00 | 5.20 | 4.07 | 0.00 |
| 61.00 | 5.20 | 4.07 | 0.00 |
| 62.00 | 5.20 | 4.07 | 0.00 |
| 63.00 | 5.20 | 4.07 | 0.00 |
| 64.00 | 5.20 | 4.07 | 0.00 |
| 65.00 | 5.20 | 4.07 | 0.00 |
| 66.00 | 5.20 | 4.07 | 0.00 |
| 67.00 | 5.20 | 4.07 | 0.00 |
| 68.00 | 5.20 | 4.07 | 0.00 |
| 69.00 | 5.20 | 4.07 | 0.00 |
| 70.00 | 5.20 | 4.07 | 0.00 |
| 71.00 | 5.20 | 4.07 | 0.00 |
| 72.00 | 5.20 | 4.07 | 0.00 |

## Summary for Subcatchment 8S: PR DA #1

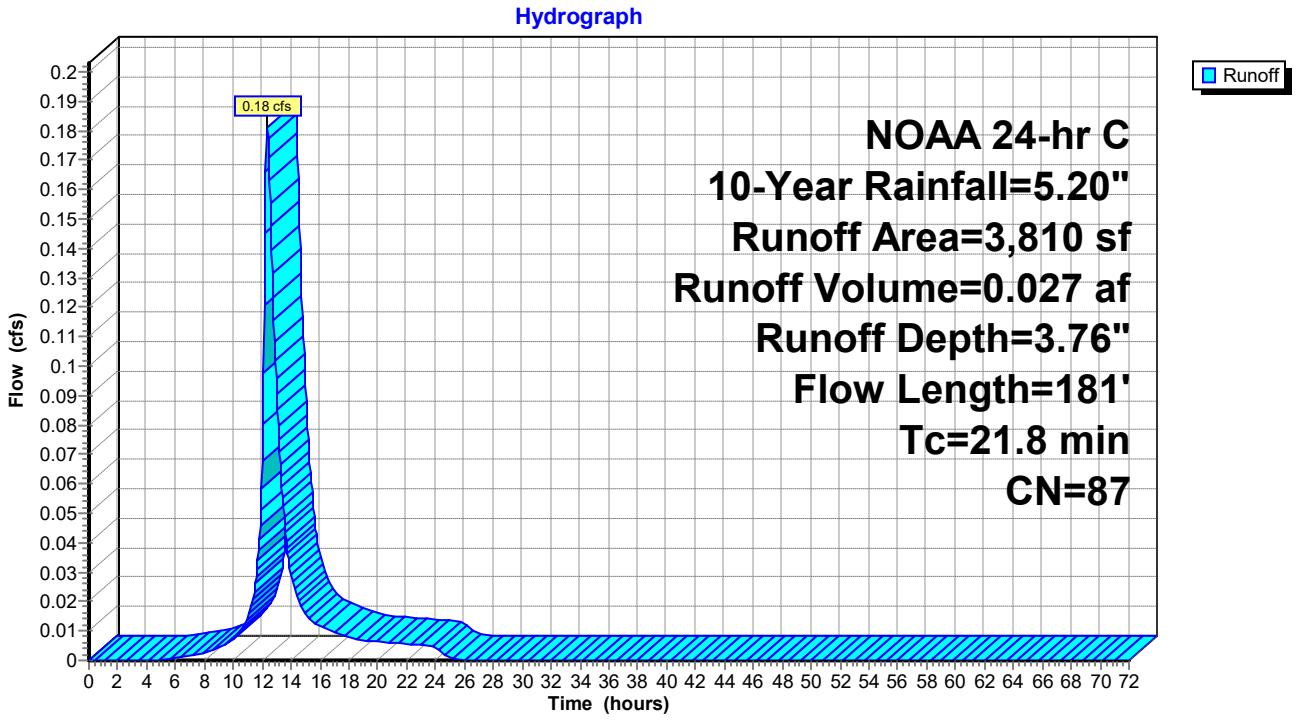
Runoff = 0.18 cfs @ 12.35 hrs, Volume= 0.027 af, Depth= 3.76"
Routed to Pond 11P : EX Curb Inlet

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 10-Year Rainfall=5.20"

| Area (sf) | CN | Description |
|---|---|---|
| 1,743 | 74 | >75% Grass cover, Good, HSG C |
| 2,067 | 98 | Paved parking, HSG A |
| 3,810 | 87 | Weighted Average |
| 1,743 | | 45.75% Pervious Area |
| 2,067 | | 54.25% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 20.5 | 100 | 0.0030 | 0.08 | | **Sheet Flow, Grass to East** Grass: Short n= 0.150 P2= 3.33" |
| 1.3 | 81 | 0.0028 | 1.07 | | **Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps |
| 21.8 | 181 | Total | | | |

### Subcatchment 8S: PR DA #1



## Hydrograph for Subcatchment 8S: PR DA #1

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.06 | 0.00 | 0.00 |
| 2.00 | 0.12 | 0.00 | 0.00 |
| 3.00 | 0.18 | 0.00 | 0.00 |
| 4.00 | 0.25 | 0.00 | 0.00 |
| 5.00 | 0.33 | 0.00 | 0.00 |
| 6.00 | 0.41 | 0.01 | 0.00 |
| 7.00 | 0.51 | 0.03 | 0.00 |
| 8.00 | 0.62 | 0.06 | 0.00 |
| 9.00 | 0.76 | 0.11 | 0.00 |
| 10.00 | 0.95 | 0.20 | 0.01 |
| 11.00 | 1.25 | 0.37 | 0.01 |
| 12.00 | 2.48 | 1.29 | **0.07** |
| 13.00 | 3.95 | 2.59 | **0.09** |
| 14.00 | 4.25 | 2.87 | 0.03 |
| 15.00 | 4.44 | 3.04 | 0.02 |
| 16.00 | 4.58 | 3.17 | 0.01 |
| 17.00 | 4.69 | 3.28 | 0.01 |
| 18.00 | 4.79 | 3.37 | 0.01 |
| 19.00 | 4.87 | 3.44 | 0.01 |
| 20.00 | 4.95 | 3.52 | 0.01 |
| 21.00 | 5.02 | 3.58 | 0.01 |
| 22.00 | 5.08 | 3.64 | 0.01 |
| 23.00 | 5.14 | 3.70 | 0.01 |
| 24.00 | **5.20** | **3.76** | 0.00 |
| 25.00 | 5.20 | 3.76 | 0.00 |
| 26.00 | 5.20 | 3.76 | 0.00 |
| 27.00 | 5.20 | 3.76 | 0.00 |
| 28.00 | 5.20 | 3.76 | 0.00 |
| 29.00 | 5.20 | 3.76 | 0.00 |
| 30.00 | 5.20 | 3.76 | 0.00 |
| 31.00 | 5.20 | 3.76 | 0.00 |
| 32.00 | 5.20 | 3.76 | 0.00 |
| 33.00 | 5.20 | 3.76 | 0.00 |
| 34.00 | 5.20 | 3.76 | 0.00 |
| 35.00 | 5.20 | 3.76 | 0.00 |
| 36.00 | 5.20 | 3.76 | 0.00 |
| 37.00 | 5.20 | 3.76 | 0.00 |
| 38.00 | 5.20 | 3.76 | 0.00 |
| 39.00 | 5.20 | 3.76 | 0.00 |
| 40.00 | 5.20 | 3.76 | 0.00 |
| 41.00 | 5.20 | 3.76 | 0.00 |
| 42.00 | 5.20 | 3.76 | 0.00 |
| 43.00 | 5.20 | 3.76 | 0.00 |
| 44.00 | 5.20 | 3.76 | 0.00 |
| 45.00 | 5.20 | 3.76 | 0.00 |
| 46.00 | 5.20 | 3.76 | 0.00 |
| 47.00 | 5.20 | 3.76 | 0.00 |
| 48.00 | 5.20 | 3.76 | 0.00 |
| 49.00 | 5.20 | 3.76 | 0.00 |
| 50.00 | 5.20 | 3.76 | 0.00 |
| 51.00 | 5.20 | 3.76 | 0.00 |
| 52.00 | 5.20 | 3.76 | 0.00 |
| 53.00 | 5.20 | 3.76 | 0.00 |
| 54.00 | 5.20 | 3.76 | 0.00 |
| 55.00 | 5.20 | 3.76 | 0.00 |
| 56.00 | 5.20 | 3.76 | 0.00 |
| 57.00 | 5.20 | 3.76 | 0.00 |
| 58.00 | 5.20 | 3.76 | 0.00 |
| 59.00 | 5.20 | 3.76 | 0.00 |
| 60.00 | 5.20 | 3.76 | 0.00 |
| 61.00 | 5.20 | 3.76 | 0.00 |
| 62.00 | 5.20 | 3.76 | 0.00 |
| 63.00 | 5.20 | 3.76 | 0.00 |
| 64.00 | 5.20 | 3.76 | 0.00 |
| 65.00 | 5.20 | 3.76 | 0.00 |
| 66.00 | 5.20 | 3.76 | 0.00 |
| 67.00 | 5.20 | 3.76 | 0.00 |
| 68.00 | 5.20 | 3.76 | 0.00 |
| 69.00 | 5.20 | 3.76 | 0.00 |
| 70.00 | 5.20 | 3.76 | 0.00 |
| 71.00 | 5.20 | 3.76 | 0.00 |
| 72.00 | 5.20 | 3.76 | 0.00 |

## Summary for Pond 7P: POROUS ASPHALT LOT

Inflow Area = 0.202 ac, 65.22% Impervious, Inflow Depth = 4.07" for 10-Year event
Inflow = 0.73 cfs @ 12.16 hrs, Volume= 0.068 af
Outflow = 0.09 cfs @ 13.14 hrs, Volume= 0.068 af, Atten= 87%, Lag= 58.7 min
Discarded = 0.09 cfs @ 13.14 hrs, Volume= 0.068 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 29.07' @ 13.14 hrs Surf.Area= 3,327 sf Storage= 1,132 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 94.0 min ( 892.5 - 798.6 )

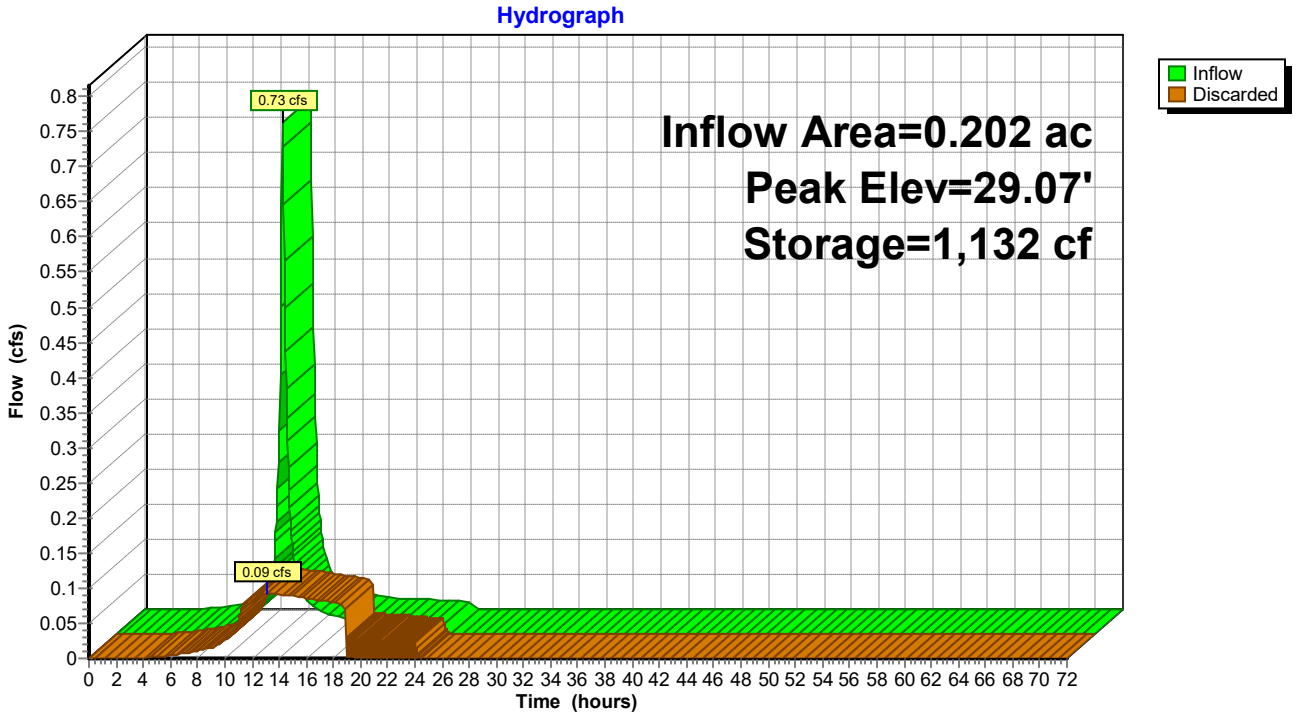
| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 28.22' | 2,395 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Voids (%) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|---|
| 28.22 | 3,327 | 269.0 | 0.0 | 0 | 0 | 3,327 |
| 28.23 | 3,327 | 269.0 | 40.0 | 13 | 13 | 3,330 |
| 28.39 | 3,327 | 269.0 | 40.0 | 213 | 226 | 3,373 |
| 28.40 | 3,327 | 269.0 | 40.0 | 13 | 240 | 3,375 |
| 30.02 | 3,327 | 269.0 | 40.0 | 2,156 | 2,395 | 3,811 |

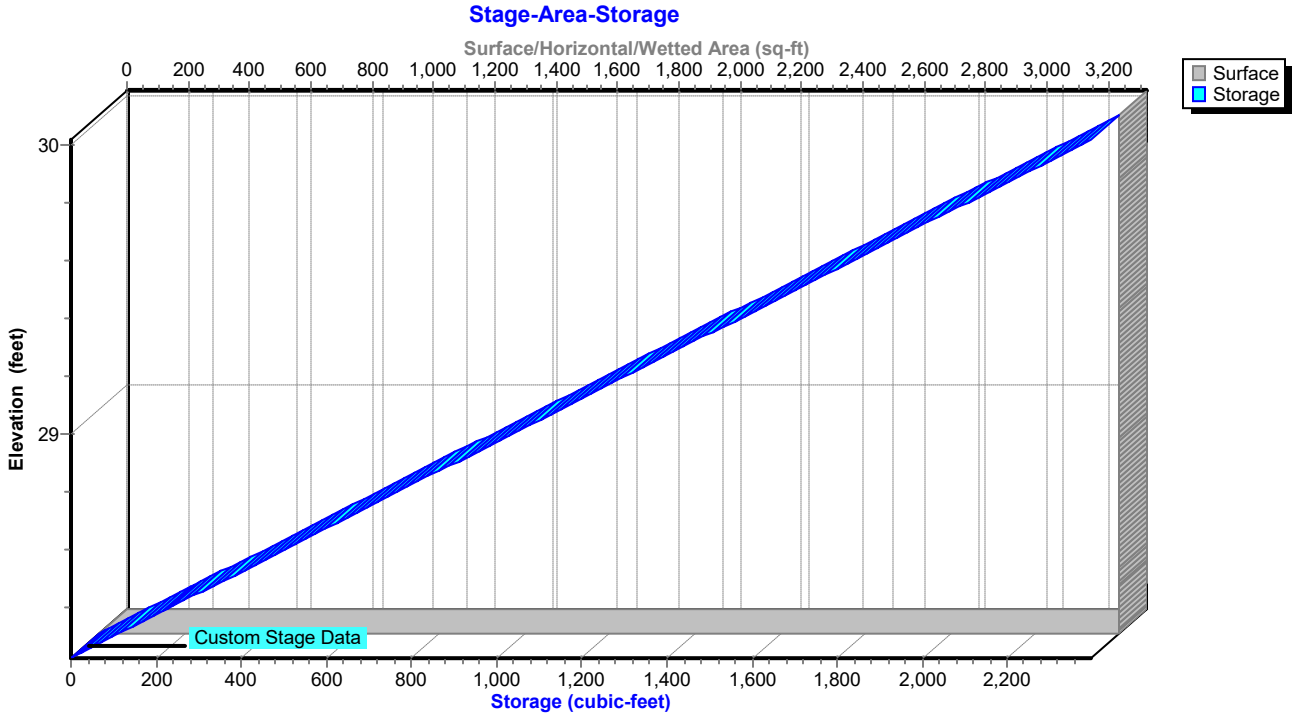
| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Discarded | 28.22' | **1.000 in/hr Exfiltration over Surface area**<br>Conductivity to Groundwater Elevation = 24.00' |

**Discarded OutFlow** Max=0.09 cfs @ 13.14 hrs HW=29.07' (Free Discharge)
**1=Exfiltration** ( Controls 0.09 cfs)

## Pond 7P: POROUS ASPHALT LOT




## Pond 7P: POROUS ASPHALT LOT



## Hydrograph for Pond 7P: POROUS ASPHALT LOT

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Discarded (cfs) |
|---|---|---|---|---|
| 0.00 | 0.00 | 0 | 28.22 | 0.00 |
| 2.50 | 0.00 | 0 | 28.22 | 0.00 |
| 5.00 | 0.00 | 0 | 28.22 | 0.00 |
| 7.50 | 0.01 | 0 | 28.22 | 0.01 |
| 10.00 | **0.03** | 0 | 28.22 | 0.03 |
| 12.50 | **0.31** | **971** | **28.95** | **0.09** |
| 15.00 | 0.03 | **865** | **28.87** | **0.09** |
| 17.50 | 0.02 | 320 | 28.46 | 0.08 |
| 20.00 | 0.01 | 0 | 28.22 | 0.00 |
| 22.50 | 0.01 | 0 | 28.22 | 0.00 |
| 25.00 | 0.00 | 0 | 28.22 | 0.00 |
| 27.50 | 0.00 | 0 | 28.22 | 0.00 |
| 30.00 | 0.00 | 0 | 28.22 | 0.00 |
| 32.50 | 0.00 | 0 | 28.22 | 0.00 |
| 35.00 | 0.00 | 0 | 28.22 | 0.00 |
| 37.50 | 0.00 | 0 | 28.22 | 0.00 |
| 40.00 | 0.00 | 0 | 28.22 | 0.00 |
| 42.50 | 0.00 | 0 | 28.22 | 0.00 |
| 45.00 | 0.00 | 0 | 28.22 | 0.00 |
| 47.50 | 0.00 | 0 | 28.22 | 0.00 |
| 50.00 | 0.00 | 0 | 28.22 | 0.00 |
| 52.50 | 0.00 | 0 | 28.22 | 0.00 |
| 55.00 | 0.00 | 0 | 28.22 | 0.00 |
| 57.50 | 0.00 | 0 | 28.22 | 0.00 |
| 60.00 | 0.00 | 0 | 28.22 | 0.00 |
| 62.50 | 0.00 | 0 | 28.22 | 0.00 |
| 65.00 | 0.00 | 0 | 28.22 | 0.00 |
| 67.50 | 0.00 | 0 | 28.22 | 0.00 |
| 70.00 | 0.00 | 0 | 28.22 | 0.00 |

## Stage-Area-Storage for Pond 7P: POROUS ASPHALT LOT

| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|---|---|---|
| 28.22 | **3,327** | 0 |
| 28.24 | 3,327 | 27 |
| 28.26 | 3,327 | 53 |
| 28.28 | 3,327 | 80 |
| 28.30 | 3,327 | 106 |
| 28.32 | 3,327 | 133 |
| 28.34 | 3,327 | 160 |
| 28.36 | 3,327 | 186 |
| 28.38 | 3,327 | 213 |
| 28.40 | 3,327 | 240 |
| 28.42 | 3,327 | 266 |
| 28.44 | 3,327 | 293 |
| 28.46 | 3,327 | 319 |
| 28.48 | 3,327 | 346 |
| 28.50 | 3,327 | 373 |
| 28.52 | 3,327 | 399 |
| 28.54 | 3,327 | 426 |
| 28.56 | 3,327 | 452 |
| 28.58 | 3,327 | 479 |
| 28.60 | 3,327 | 506 |
| 28.62 | 3,327 | 532 |
| 28.64 | 3,327 | 559 |
| 28.66 | 3,327 | 586 |
| 28.68 | 3,327 | 612 |
| 28.70 | 3,327 | 639 |
| 28.72 | 3,327 | 665 |
| 28.74 | 3,327 | 692 |
| 28.76 | 3,327 | 719 |
| 28.78 | 3,327 | 745 |
| 28.80 | 3,327 | 772 |
| 28.82 | 3,327 | 798 |
| 28.84 | 3,327 | 825 |
| 28.86 | 3,327 | 852 |
| 28.88 | 3,327 | 878 |
| 28.90 | 3,327 | 905 |
| 28.92 | 3,327 | 932 |
| 28.94 | 3,327 | 958 |
| 28.96 | 3,327 | 985 |
| 28.98 | 3,327 | 1,011 |
| 29.00 | 3,327 | 1,038 |
| 29.02 | 3,327 | 1,065 |
| 29.04 | 3,327 | 1,091 |
| 29.06 | 3,327 | 1,118 |
| 29.08 | 3,327 | 1,144 |
| 29.10 | 3,327 | 1,171 |
| 29.12 | 3,327 | 1,198 |
| 29.14 | 3,327 | 1,224 |
| 29.16 | 3,327 | 1,251 |
| 29.18 | 3,327 | 1,278 |
| 29.20 | 3,327 | 1,304 |
| 29.22 | 3,327 | 1,331 |
| 29.24 | 3,327 | 1,357 |
| 29.26 | 3,327 | 1,384 |
| 29.28 | 3,327 | 1,411 |
| 29.30 | 3,327 | 1,437 |
| 29.32 | 3,327 | 1,464 |
| 29.34 | 3,327 | 1,490 |
| 29.36 | 3,327 | 1,517 |
| 29.38 | 3,327 | 1,544 |
| 29.40 | 3,327 | 1,570 |
| 29.42 | 3,327 | 1,597 |
| 29.44 | 3,327 | 1,624 |
| 29.46 | 3,327 | 1,650 |
| 29.48 | 3,327 | 1,677 |
| 29.50 | 3,327 | 1,703 |
| 29.52 | 3,327 | 1,730 |
| 29.54 | 3,327 | 1,757 |
| 29.56 | 3,327 | 1,783 |
| 29.58 | 3,327 | 1,810 |
| 29.60 | 3,327 | 1,837 |
| 29.62 | 3,327 | 1,863 |
| 29.64 | 3,327 | 1,890 |
| 29.66 | 3,327 | 1,916 |
| 29.68 | 3,327 | 1,943 |
| 29.70 | 3,327 | 1,970 |
| 29.72 | 3,327 | 1,996 |
| 29.74 | 3,327 | 2,023 |
| 29.76 | 3,327 | 2,049 |
| 29.78 | 3,327 | 2,076 |
| 29.80 | 3,327 | 2,103 |
| 29.82 | 3,327 | 2,129 |
| 29.84 | 3,327 | 2,156 |
| 29.86 | 3,327 | 2,183 |
| 29.88 | 3,327 | 2,209 |
| 29.90 | 3,327 | 2,236 |
| 29.92 | 3,327 | 2,262 |
| 29.94 | 3,327 | 2,289 |
| 29.96 | 3,327 | 2,316 |
| 29.98 | 3,327 | 2,342 |
| 30.00 | 3,327 | 2,369 |
| 30.02 | 3,327 | **2,395** |

## Summary for Pond 11P: EX Curb Inlet

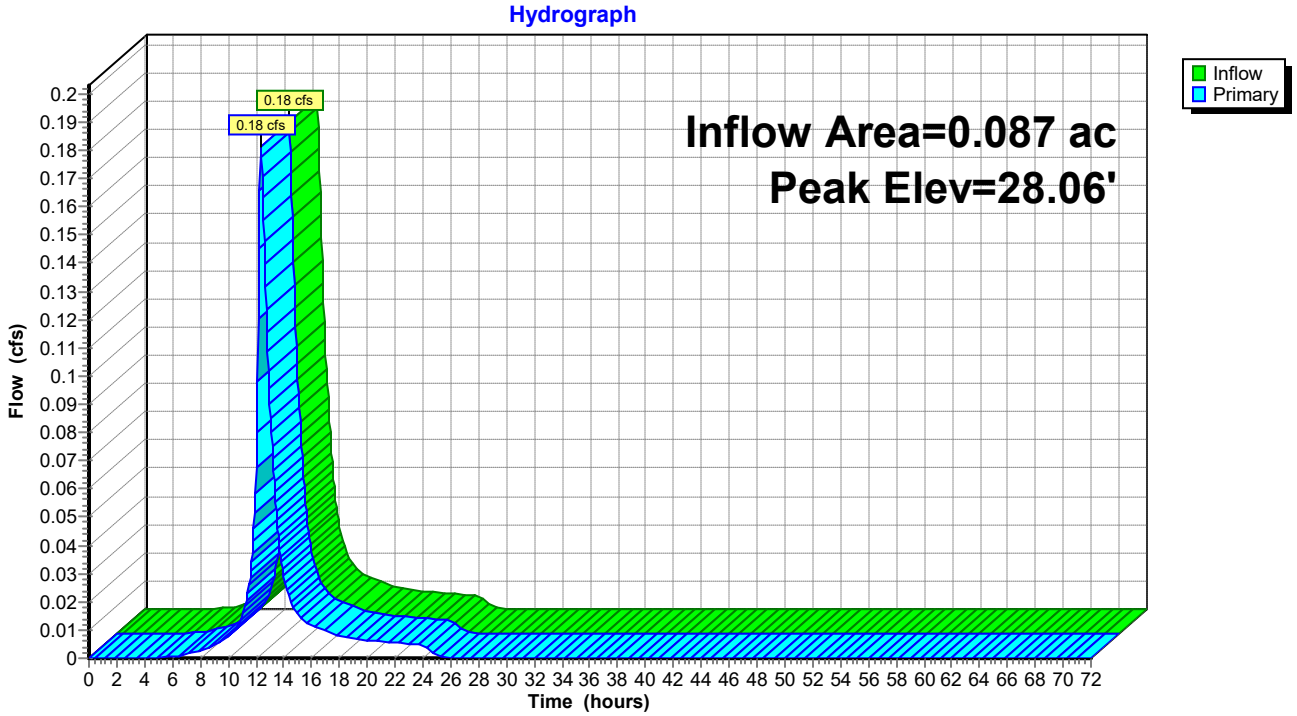
Inflow Area = 0.087 ac, 54.25% Impervious, Inflow Depth = 3.76" for 10-Year event
Inflow = 0.18 cfs @ 12.35 hrs, Volume= 0.027 af
Outflow = 0.18 cfs @ 12.35 hrs, Volume= 0.027 af, Atten= 0%, Lag= 0.0 min
Primary = 0.18 cfs @ 12.35 hrs, Volume= 0.027 af
Routed to Link 12L : PR Study Point #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 28.06' @ 12.35 hrs

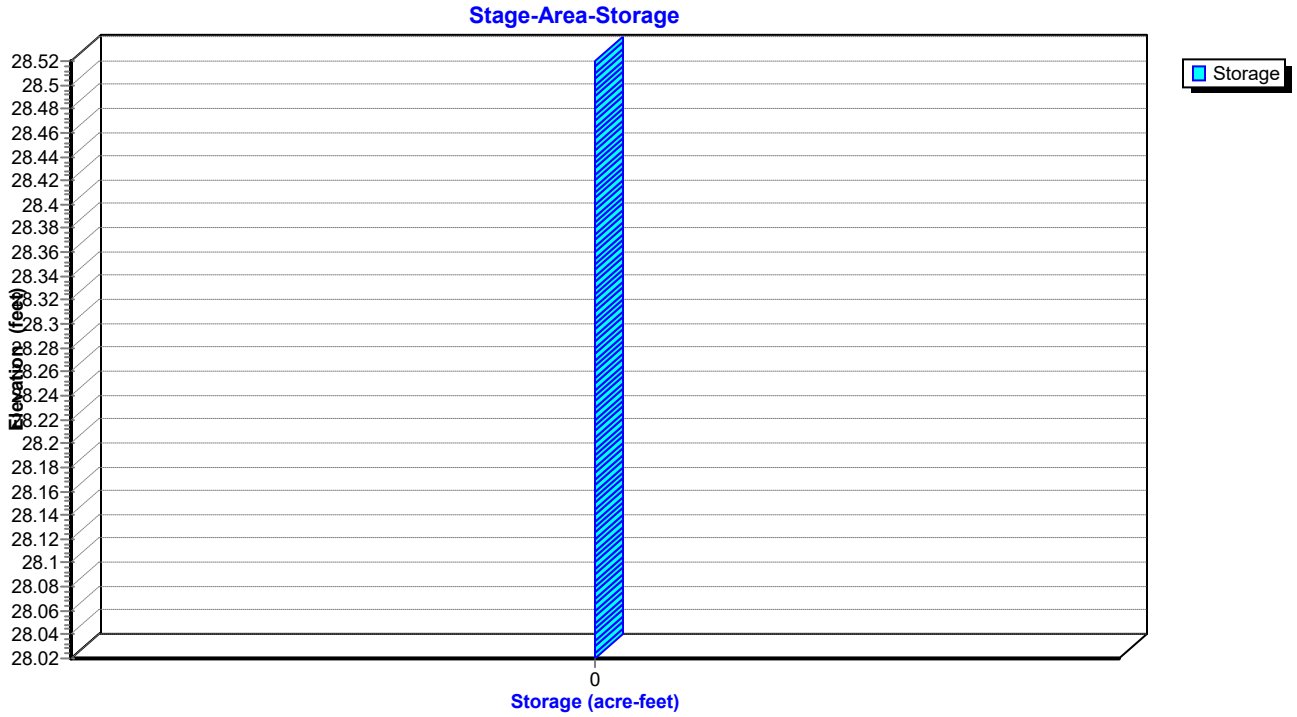
| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 28.02' | **72.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.18 cfs @ 12.35 hrs HW=28.06' TW=0.00' (Dynamic Tailwater)
↳**1=Orifice/Grate** (Orifice Controls 0.18 cfs @ 0.68 fps)

## Pond 11P: EX Curb Inlet



## Pond 11P: EX Curb Inlet



## Hydrograph for Pond 11P: EX Curb Inlet

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 28.02 | 0.00 | 52.00 | 0.00 | 28.02 | 0.00 |
| 1.00 | 0.00 | 28.02 | 0.00 | 53.00 | 0.00 | 28.02 | 0.00 |
| 2.00 | 0.00 | 28.02 | 0.00 | 54.00 | 0.00 | 28.02 | 0.00 |
| 3.00 | 0.00 | 28.02 | 0.00 | 55.00 | 0.00 | 28.02 | 0.00 |
| 4.00 | 0.00 | 28.02 | 0.00 | 56.00 | 0.00 | 28.02 | 0.00 |
| 5.00 | 0.00 | 28.02 | 0.00 | 57.00 | 0.00 | 28.02 | 0.00 |
| 6.00 | 0.00 | 28.02 | 0.00 | 58.00 | 0.00 | 28.02 | 0.00 |
| 7.00 | 0.00 | 28.02 | 0.00 | 59.00 | 0.00 | 28.02 | 0.00 |
| 8.00 | 0.00 | 28.02 | 0.00 | 60.00 | 0.00 | 28.02 | 0.00 |
| 9.00 | 0.00 | 28.02 | 0.00 | 61.00 | 0.00 | 28.02 | 0.00 |
| 10.00 | 0.01 | 28.03 | 0.01 | 62.00 | 0.00 | 28.02 | 0.00 |
| 11.00 | 0.01 | 28.03 | 0.01 | 63.00 | 0.00 | 28.02 | 0.00 |
| 12.00 | **0.07** | **28.04** | **0.07** | 64.00 | 0.00 | 28.02 | 0.00 |
| 13.00 | **0.09** | **28.05** | **0.09** | 65.00 | 0.00 | 28.02 | 0.00 |
| 14.00 | 0.03 | 28.03 | 0.03 | 66.00 | 0.00 | 28.02 | 0.00 |
| 15.00 | 0.02 | 28.03 | 0.02 | 67.00 | 0.00 | 28.02 | 0.00 |
| 16.00 | 0.01 | 28.03 | 0.01 | 68.00 | 0.00 | 28.02 | 0.00 |
| 17.00 | 0.01 | 28.03 | 0.01 | 69.00 | 0.00 | 28.02 | 0.00 |
| 18.00 | 0.01 | 28.03 | 0.01 | 70.00 | 0.00 | 28.02 | 0.00 |
| 19.00 | 0.01 | 28.03 | 0.01 | 71.00 | 0.00 | 28.02 | 0.00 |
| 20.00 | 0.01 | 28.02 | 0.01 | 72.00 | 0.00 | 28.02 | 0.00 |
| 21.00 | 0.01 | 28.02 | 0.01 | | | | |
| 22.00 | 0.01 | 28.02 | 0.01 | | | | |
| 23.00 | 0.01 | 28.02 | 0.01 | | | | |
| 24.00 | 0.00 | 28.02 | 0.00 | | | | |
| 25.00 | 0.00 | 28.02 | 0.00 | | | | |
| 26.00 | 0.00 | 28.02 | 0.00 | | | | |
| 27.00 | 0.00 | 28.02 | 0.00 | | | | |
| 28.00 | 0.00 | 28.02 | 0.00 | | | | |
| 29.00 | 0.00 | 28.02 | 0.00 | | | | |
| 30.00 | 0.00 | 28.02 | 0.00 | | | | |
| 31.00 | 0.00 | 28.02 | 0.00 | | | | |
| 32.00 | 0.00 | 28.02 | 0.00 | | | | |
| 33.00 | 0.00 | 28.02 | 0.00 | | | | |
| 34.00 | 0.00 | 28.02 | 0.00 | | | | |
| 35.00 | 0.00 | 28.02 | 0.00 | | | | |
| 36.00 | 0.00 | 28.02 | 0.00 | | | | |
| 37.00 | 0.00 | 28.02 | 0.00 | | | | |
| 38.00 | 0.00 | 28.02 | 0.00 | | | | |
| 39.00 | 0.00 | 28.02 | 0.00 | | | | |
| 40.00 | 0.00 | 28.02 | 0.00 | | | | |
| 41.00 | 0.00 | 28.02 | 0.00 | | | | |
| 42.00 | 0.00 | 28.02 | 0.00 | | | | |
| 43.00 | 0.00 | 28.02 | 0.00 | | | | |
| 44.00 | 0.00 | 28.02 | 0.00 | | | | |
| 45.00 | 0.00 | 28.02 | 0.00 | | | | |
| 46.00 | 0.00 | 28.02 | 0.00 | | | | |
| 47.00 | 0.00 | 28.02 | 0.00 | | | | |
| 48.00 | 0.00 | 28.02 | 0.00 | | | | |
| 49.00 | 0.00 | 28.02 | 0.00 | | | | |
| 50.00 | 0.00 | 28.02 | 0.00 | | | | |
| 51.00 | 0.00 | 28.02 | 0.00 | | | | |

## Stage-Area-Storage for Pond 11P: EX Curb Inlet

| Elevation (feet) | Storage (acre-feet) |
|---|---|
| 28.02 | **0.000** |
| 28.03 | 0.000 |
| 28.04 | 0.000 |
| 28.05 | 0.000 |
| 28.06 | 0.000 |
| 28.07 | 0.000 |
| 28.08 | 0.000 |
| 28.09 | 0.000 |
| 28.10 | 0.000 |
| 28.11 | 0.000 |
| 28.12 | 0.000 |
| 28.13 | 0.000 |
| 28.14 | 0.000 |
| 28.15 | 0.000 |
| 28.16 | 0.000 |
| 28.17 | 0.000 |
| 28.18 | 0.000 |
| 28.19 | 0.000 |
| 28.20 | 0.000 |
| 28.21 | 0.000 |
| 28.22 | 0.000 |
| 28.23 | 0.000 |
| 28.24 | 0.000 |
| 28.25 | 0.000 |
| 28.26 | 0.000 |
| 28.27 | 0.000 |
| 28.28 | 0.000 |
| 28.29 | 0.000 |
| 28.30 | 0.000 |
| 28.31 | 0.000 |
| 28.32 | 0.000 |
| 28.33 | 0.000 |
| 28.34 | 0.000 |
| 28.35 | 0.000 |
| 28.36 | 0.000 |
| 28.37 | 0.000 |
| 28.38 | 0.000 |
| 28.39 | 0.000 |
| 28.40 | 0.000 |
| 28.41 | 0.000 |
| 28.42 | 0.000 |
| 28.43 | 0.000 |
| 28.44 | 0.000 |
| 28.45 | 0.000 |
| 28.46 | 0.000 |
| 28.47 | 0.000 |
| 28.48 | 0.000 |
| 28.49 | 0.000 |
| 28.50 | 0.000 |
| 28.51 | 0.000 |
| 28.52 | 0.000 |

## Summary for Pond 13P: MBR #1

Inflow Area = 0.202 ac, 65.22% Impervious, Inflow Depth = 0.00" for 10-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 27.99' @ 0.00 hrs Surf.Area= 162 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no inflow)

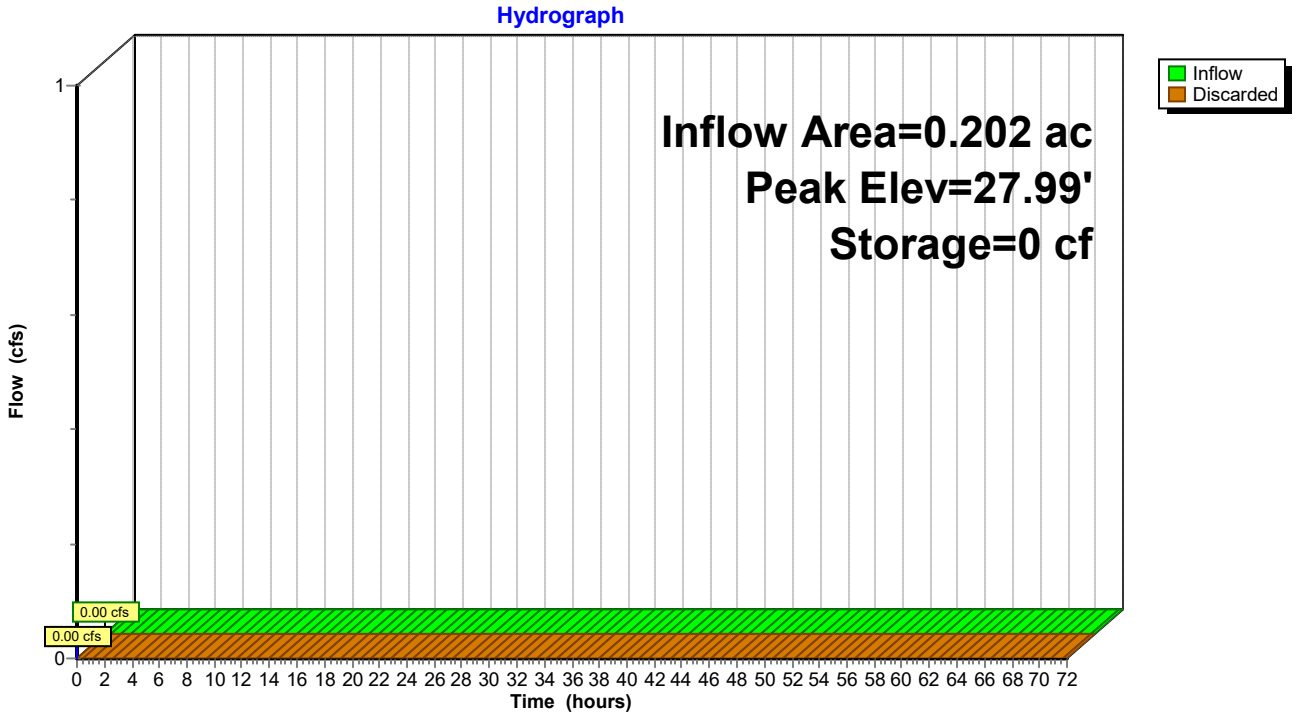
| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 27.99' | 545 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Voids (%) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|---|
| 27.99 | 162 | 91.0 | 0.0 | 0 | 0 | 162 |
| 28.00 | 162 | 91.0 | 40.0 | 1 | 1 | 163 |
| 29.50 | 311 | 101.0 | 100.0 | 349 | 349 | 373 |
| 30.00 | 476 | 113.0 | 100.0 | 195 | 545 | 584 |

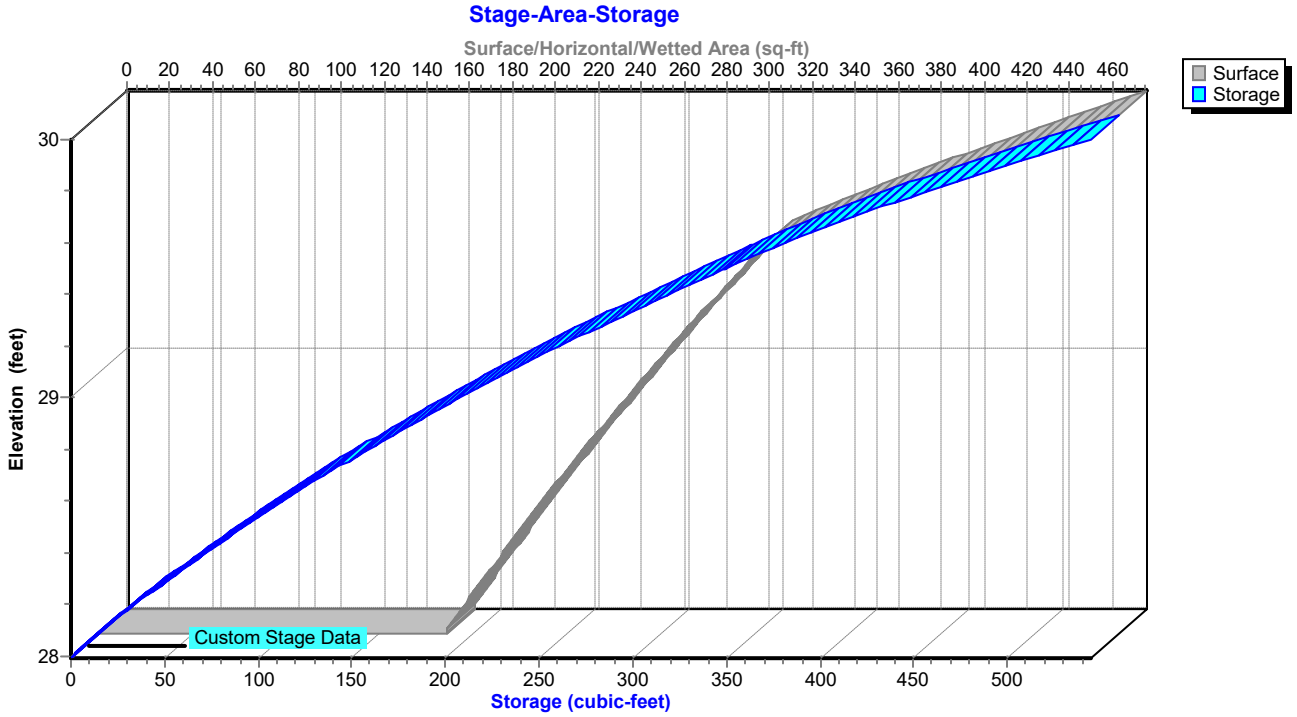
| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Discarded | 27.99' | **0.570 in/hr Exfiltration over Surface area**<br>Conductivity to Groundwater Elevation = 24.00' |

**Discarded OutFlow** Max=0.00 cfs @ 0.00 hrs HW=27.99' (Free Discharge)
↑**1=Exfiltration** (Passes 0.00 cfs of 0.00 cfs potential flow)

## Pond 13P: MBR #1




## Pond 13P: MBR #1



## Hydrograph for Pond 13P: MBR #1

| Time (hours) | Inflow (cfs) | Elevation (feet) | Discarded (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Discarded (cfs) |
|---|---|---|---|---|---|---|---|
| 0.00 | **0.00** | **27.99** | **0.00** | 52.00 | 0.00 | 27.99 | 0.00 |
| 1.00 | 0.00 | 27.99 | 0.00 | 53.00 | 0.00 | 27.99 | 0.00 |
| 2.00 | 0.00 | 27.99 | 0.00 | 54.00 | 0.00 | 27.99 | 0.00 |
| 3.00 | 0.00 | 27.99 | 0.00 | 55.00 | 0.00 | 27.99 | 0.00 |
| 4.00 | 0.00 | 27.99 | 0.00 | 56.00 | 0.00 | 27.99 | 0.00 |
| 5.00 | 0.00 | 27.99 | 0.00 | 57.00 | 0.00 | 27.99 | 0.00 |
| 6.00 | 0.00 | 27.99 | 0.00 | 58.00 | 0.00 | 27.99 | 0.00 |
| 7.00 | 0.00 | 27.99 | 0.00 | 59.00 | 0.00 | 27.99 | 0.00 |
| 8.00 | 0.00 | 27.99 | 0.00 | 60.00 | 0.00 | 27.99 | 0.00 |
| 9.00 | 0.00 | 27.99 | 0.00 | 61.00 | 0.00 | 27.99 | 0.00 |
| 10.00 | 0.00 | 27.99 | 0.00 | 62.00 | 0.00 | 27.99 | 0.00 |
| 11.00 | 0.00 | 27.99 | 0.00 | 63.00 | 0.00 | 27.99 | 0.00 |
| 12.00 | 0.00 | 27.99 | 0.00 | 64.00 | 0.00 | 27.99 | 0.00 |
| 13.00 | 0.00 | 27.99 | 0.00 | 65.00 | 0.00 | 27.99 | 0.00 |
| 14.00 | 0.00 | 27.99 | 0.00 | 66.00 | 0.00 | 27.99 | 0.00 |
| 15.00 | 0.00 | 27.99 | 0.00 | 67.00 | 0.00 | 27.99 | 0.00 |
| 16.00 | 0.00 | 27.99 | 0.00 | 68.00 | 0.00 | 27.99 | 0.00 |
| 17.00 | 0.00 | 27.99 | 0.00 | 69.00 | 0.00 | 27.99 | 0.00 |
| 18.00 | 0.00 | 27.99 | 0.00 | 70.00 | 0.00 | 27.99 | 0.00 |
| 19.00 | 0.00 | 27.99 | 0.00 | 71.00 | 0.00 | 27.99 | 0.00 |
| 20.00 | 0.00 | 27.99 | 0.00 | 72.00 | 0.00 | 27.99 | 0.00 |
| 21.00 | 0.00 | 27.99 | 0.00 | | | | |
| 22.00 | 0.00 | 27.99 | 0.00 | | | | |
| 23.00 | 0.00 | 27.99 | 0.00 | | | | |
| 24.00 | 0.00 | 27.99 | 0.00 | | | | |
| 25.00 | 0.00 | 27.99 | 0.00 | | | | |
| 26.00 | 0.00 | 27.99 | 0.00 | | | | |
| 27.00 | 0.00 | 27.99 | 0.00 | | | | |
| 28.00 | 0.00 | 27.99 | 0.00 | | | | |
| 29.00 | 0.00 | 27.99 | 0.00 | | | | |
| 30.00 | 0.00 | 27.99 | 0.00 | | | | |
| 31.00 | 0.00 | 27.99 | 0.00 | | | | |
| 32.00 | 0.00 | 27.99 | 0.00 | | | | |
| 33.00 | 0.00 | 27.99 | 0.00 | | | | |
| 34.00 | 0.00 | 27.99 | 0.00 | | | | |
| 35.00 | 0.00 | 27.99 | 0.00 | | | | |
| 36.00 | 0.00 | 27.99 | 0.00 | | | | |
| 37.00 | 0.00 | 27.99 | 0.00 | | | | |
| 38.00 | 0.00 | 27.99 | 0.00 | | | | |
| 39.00 | 0.00 | 27.99 | 0.00 | | | | |
| 40.00 | 0.00 | 27.99 | 0.00 | | | | |
| 41.00 | 0.00 | 27.99 | 0.00 | | | | |
| 42.00 | 0.00 | 27.99 | 0.00 | | | | |
| 43.00 | 0.00 | 27.99 | 0.00 | | | | |
| 44.00 | 0.00 | 27.99 | 0.00 | | | | |
| 45.00 | 0.00 | 27.99 | 0.00 | | | | |
| 46.00 | 0.00 | 27.99 | 0.00 | | | | |
| 47.00 | 0.00 | 27.99 | 0.00 | | | | |
| 48.00 | 0.00 | 27.99 | 0.00 | | | | |
| 49.00 | 0.00 | 27.99 | 0.00 | | | | |
| 50.00 | 0.00 | 27.99 | 0.00 | | | | |
| 51.00 | 0.00 | 27.99 | 0.00 | | | | |

## Stage-Area-Storage for Pond 13P: MBR #1

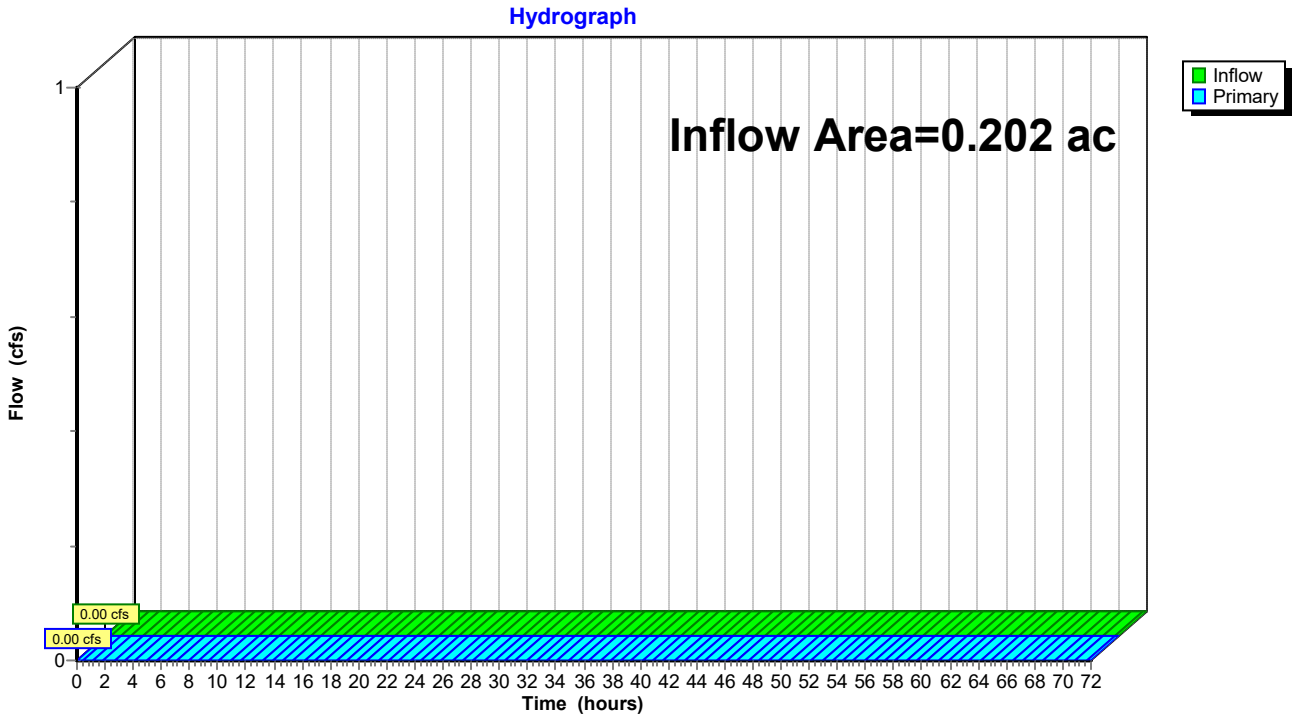
| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|---|---|---|
| 27.99 | 162 | 0 |
| 28.01 | 163 | 2 |
| 28.03 | 165 | 6 |
| 28.05 | 166 | 9 |
| 28.07 | 168 | 12 |
| 28.09 | 170 | 16 |
| 28.11 | 171 | 19 |
| 28.13 | 173 | 22 |
| 28.15 | 175 | 26 |
| 28.17 | 176 | 29 |
| 28.19 | 178 | 33 |
| 28.21 | 180 | 37 |
| 28.23 | 182 | 40 |
| 28.25 | 183 | 44 |
| 28.27 | 185 | 47 |
| 28.29 | 187 | 51 |
| 28.31 | 189 | 55 |
| 28.33 | 191 | 59 |
| 28.35 | 192 | 63 |
| 28.37 | 194 | 66 |
| 28.39 | 196 | 70 |
| 28.41 | 198 | 74 |
| 28.43 | 200 | 78 |
| 28.45 | 202 | 82 |
| 28.47 | 204 | 86 |
| 28.49 | 205 | 90 |
| 28.51 | 207 | 95 |
| 28.53 | 209 | 99 |
| 28.55 | 211 | 103 |
| 28.57 | 213 | 107 |
| 28.59 | 215 | 111 |
| 28.61 | 217 | 116 |
| 28.63 | 219 | 120 |
| 28.65 | 221 | 125 |
| 28.67 | 223 | 129 |
| 28.69 | 225 | 133 |
| 28.71 | 227 | 138 |
| 28.73 | 228 | 142 |
| 28.75 | 230 | 147 |
| 28.77 | 232 | 152 |
| 28.79 | 234 | 156 |
| 28.81 | 236 | 161 |
| 28.83 | 238 | 166 |
| 28.85 | 241 | 171 |
| 28.87 | 243 | 175 |
| 28.89 | 245 | 180 |
| 28.91 | 247 | 185 |
| 28.93 | 249 | 190 |
| 28.95 | 251 | 195 |
| 28.97 | 253 | 200 |
| 28.99 | 255 | 205 |
| 29.01 | 257 | 210 |
| 29.03 | 259 | 216 |
| 29.05 | 261 | 221 |
| 29.07 | 263 | 226 |
| 29.09 | 265 | 231 |
| 29.11 | 268 | 237 |
| 29.13 | 270 | 242 |
| 29.15 | 272 | 247 |
| 29.17 | 274 | 253 |
| 29.19 | 276 | 258 |
| 29.21 | 278 | 264 |
| 29.23 | 281 | 270 |
| 29.25 | 283 | 275 |
| 29.27 | 285 | 281 |
| 29.29 | 287 | 287 |
| 29.31 | 289 | 292 |
| 29.33 | 292 | 298 |
| 29.35 | 294 | 304 |
| 29.37 | 296 | 310 |
| 29.39 | 298 | 316 |
| 29.41 | 301 | 322 |
| 29.43 | 303 | 328 |
| 29.45 | 305 | 334 |
| 29.47 | 308 | 340 |
| 29.49 | 310 | 346 |
| 29.51 | 314 | 353 |
| 29.53 | 320 | 359 |
| 29.55 | 326 | 365 |
| 29.57 | 332 | 372 |
| 29.59 | 338 | 379 |
| 29.61 | 344 | 385 |
| 29.63 | 351 | 392 |
| 29.65 | 357 | 399 |
| 29.67 | 363 | 407 |
| 29.69 | 370 | 414 |
| 29.71 | 376 | 421 |
| 29.73 | 383 | 429 |
| 29.75 | 389 | 437 |
| 29.77 | 396 | 445 |
| 29.79 | 402 | 453 |
| 29.81 | 409 | 461 |
| 29.83 | 416 | 469 |
| 29.85 | 423 | 477 |
| 29.87 | 430 | 486 |
| 29.89 | 437 | 494 |
| 29.91 | 444 | 503 |
| 29.93 | 451 | 512 |
| 29.95 | 458 | 521 |
| 29.97 | 465 | 531 |
| 29.99 | **472** | **540** |

## Summary for Link 9L: PR Study Point #2

Inflow Area = 0.202 ac, 65.22% Impervious, Inflow Depth = 0.00" for 10-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

### Link 9L: PR Study Point #2



## Hydrograph for Link 9L: PR Study Point #2

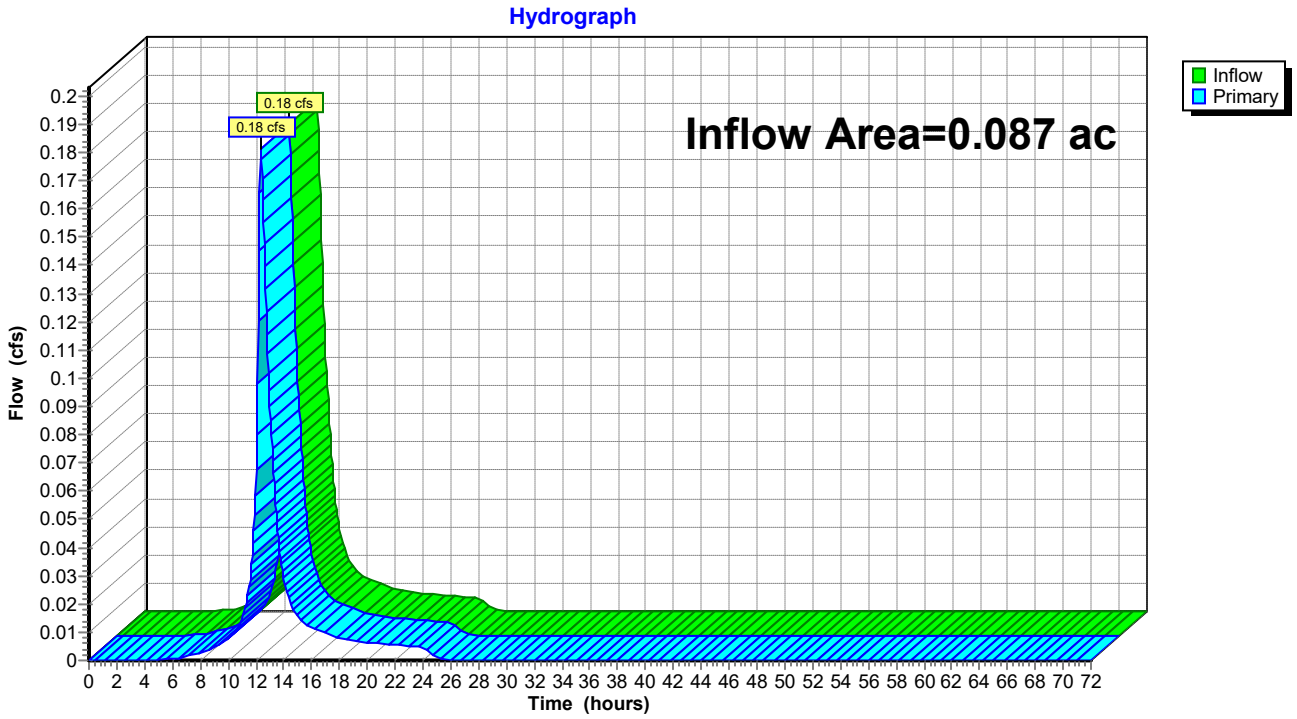
| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|---|---|---|---|
| 0.00 | **0.00** | **0.00** | **0.00** | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | | | | |
| 22.00 | 0.00 | 0.00 | 0.00 | | | | |
| 23.00 | 0.00 | 0.00 | 0.00 | | | | |
| 24.00 | 0.00 | 0.00 | 0.00 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

## Summary for Link 12L: PR Study Point #1

Inflow Area = 0.087 ac, 54.25% Impervious, Inflow Depth = 3.76" for 10-Year event
Inflow = 0.18 cfs @ 12.35 hrs, Volume= 0.027 af
Primary = 0.18 cfs @ 12.35 hrs, Volume= 0.027 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

## Link 12L: PR Study Point #1



## Hydrograph for Link 12L: PR Study Point #1

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | **0.00** | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.01 | 0.00 | 0.01 |
| 11.00 | 0.01 | 0.00 | 0.01 |
| 12.00 | **0.07** | 0.00 | **0.07** |
| 13.00 | **0.09** | 0.00 | **0.09** |
| 14.00 | 0.03 | 0.00 | 0.03 |
| 15.00 | 0.02 | 0.00 | 0.02 |
| 16.00 | 0.01 | 0.00 | 0.01 |
| 17.00 | 0.01 | 0.00 | 0.01 |
| 18.00 | 0.01 | 0.00 | 0.01 |
| 19.00 | 0.01 | 0.00 | 0.01 |
| 20.00 | 0.01 | 0.00 | 0.01 |
| 21.00 | 0.01 | 0.00 | 0.01 |
| 22.00 | 0.01 | 0.00 | 0.01 |
| 23.00 | 0.01 | 0.00 | 0.01 |
| 24.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 |

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 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 7S: PR DA #2** Runoff Area=8,795 sf 65.22% Impervious Runoff Depth=7.77"
Flow Length=46' Slope=0.0066 '/' Tc=8.0 min CN=90 Runoff=1.34 cfs 0.131 af

**Subcatchment 8S: PR DA #1** Runoff Area=3,810 sf 54.25% Impervious Runoff Depth=7.41"
Flow Length=181' Tc=21.8 min CN=87 Runoff=0.35 cfs 0.054 af

**Pond 7P: POROUS ASPHALT LOT** Peak Elev=45.85' Storage=2,395 cf Inflow=1.34 cfs 0.131 af
Outflow=0.40 cfs 0.131 af

**Pond 11P: EX Curb Inlet** Peak Elev=28.09' Inflow=0.35 cfs 0.054 af
Outflow=0.35 cfs 0.054 af

**Pond 13P: MBR #1** Peak Elev=27.99' Storage=0 cf Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

**Link 9L: PR Study Point #2** Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

**Link 12L: PR Study Point #1** Inflow=0.35 cfs 0.054 af
Primary=0.35 cfs 0.054 af

**Total Runoff Area = 0.289 ac Runoff Volume = 0.185 af Average Runoff Depth = 7.66"**
**38.10% Pervious = 0.110 ac 61.90% Impervious = 0.179 ac**

## Summary for Subcatchment 7S: PR DA #2

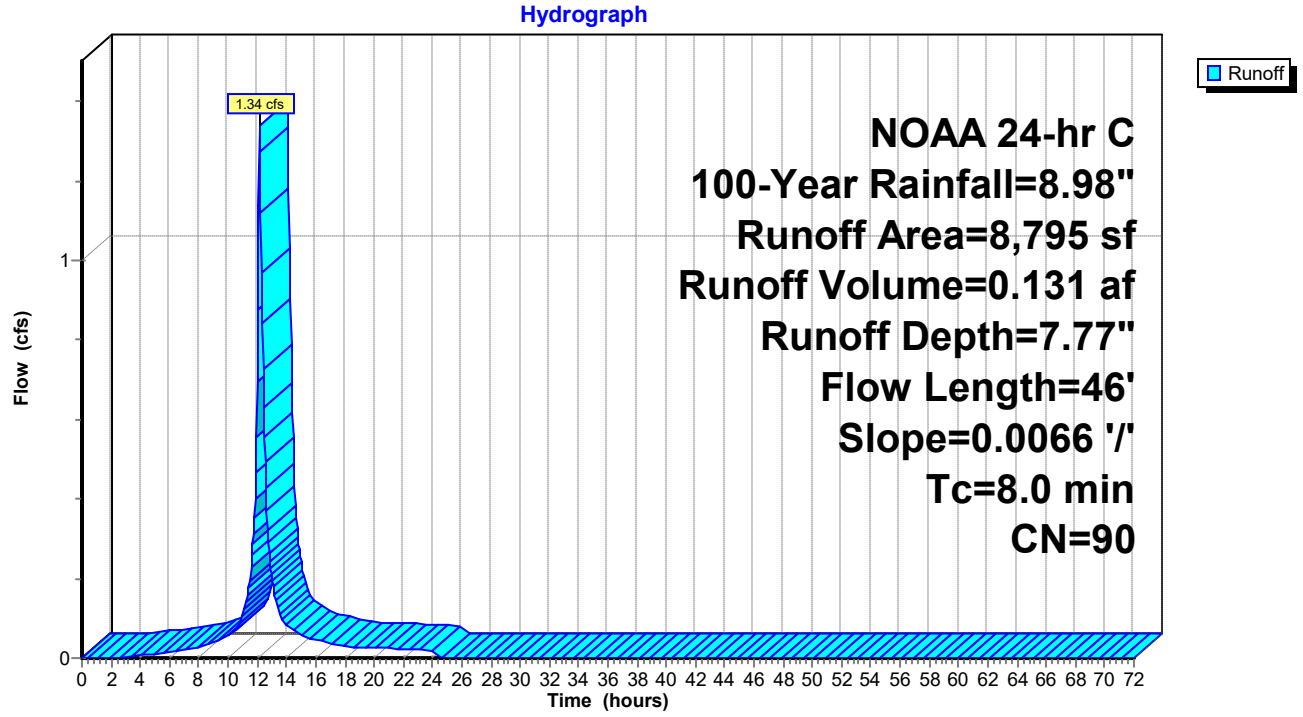
Runoff = 1.34 cfs @ 12.16 hrs, Volume= 0.131 af, Depth= 7.77"
Routed to Pond 7P : POROUS ASPHALT LOT

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year Rainfall=8.98"

| Area (sf) | CN | Description |
|---|---|---|
| 2,538 | 98 | Roofs, HSG A |
| 3,059 | 74 | >75% Grass cover, Good, HSG C |
| 3,198 | 98 | Paved parking, HSG A |
| 8,795 | 90 | Weighted Average |
| 3,059 | | 34.78% Pervious Area |
| 5,736 | | 65.22% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.0 | 46 | 0.0066 | 0.10 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 3.33" |

## Subcatchment 7S: PR DA #2



## Hydrograph for Subcatchment 7S: PR DA #2

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.10 | 0.00 | 0.00 |
| 2.00 | 0.20 | 0.00 | 0.00 |
| 3.00 | 0.32 | 0.01 | 0.00 |
| 4.00 | 0.44 | 0.04 | 0.01 |
| 5.00 | 0.57 | 0.08 | 0.01 |
| 6.00 | 0.71 | 0.15 | 0.01 |
| 7.00 | 0.88 | 0.24 | 0.02 |
| 8.00 | 1.08 | 0.37 | 0.03 |
| 9.00 | 1.31 | 0.54 | 0.04 |
| 10.00 | 1.64 | 0.79 | 0.06 |
| 11.00 | 2.16 | 1.23 | 0.11 |
| 12.00 | 4.28 | 3.19 | **0.70** |
| 13.00 | 6.82 | 5.65 | **0.20** |
| 14.00 | 7.34 | 6.16 | 0.08 |
| 15.00 | 7.67 | 6.48 | 0.06 |
| 16.00 | 7.90 | 6.71 | 0.05 |
| 17.00 | 8.10 | 6.91 | 0.04 |
| 18.00 | 8.27 | 7.07 | 0.03 |
| 19.00 | 8.41 | 7.21 | 0.03 |
| 20.00 | 8.54 | 7.34 | 0.03 |
| 21.00 | 8.66 | 7.46 | 0.02 |
| 22.00 | 8.78 | 7.57 | 0.02 |
| 23.00 | 8.88 | 7.67 | 0.02 |
| 24.00 | **8.98** | **7.77** | 0.02 |
| 25.00 | 8.98 | 7.77 | 0.00 |
| 26.00 | 8.98 | 7.77 | 0.00 |
| 27.00 | 8.98 | 7.77 | 0.00 |
| 28.00 | 8.98 | 7.77 | 0.00 |
| 29.00 | 8.98 | 7.77 | 0.00 |
| 30.00 | 8.98 | 7.77 | 0.00 |
| 31.00 | 8.98 | 7.77 | 0.00 |
| 32.00 | 8.98 | 7.77 | 0.00 |
| 33.00 | 8.98 | 7.77 | 0.00 |
| 34.00 | 8.98 | 7.77 | 0.00 |
| 35.00 | 8.98 | 7.77 | 0.00 |
| 36.00 | 8.98 | 7.77 | 0.00 |
| 37.00 | 8.98 | 7.77 | 0.00 |
| 38.00 | 8.98 | 7.77 | 0.00 |
| 39.00 | 8.98 | 7.77 | 0.00 |
| 40.00 | 8.98 | 7.77 | 0.00 |
| 41.00 | 8.98 | 7.77 | 0.00 |
| 42.00 | 8.98 | 7.77 | 0.00 |
| 43.00 | 8.98 | 7.77 | 0.00 |
| 44.00 | 8.98 | 7.77 | 0.00 |
| 45.00 | 8.98 | 7.77 | 0.00 |
| 46.00 | 8.98 | 7.77 | 0.00 |
| 47.00 | 8.98 | 7.77 | 0.00 |
| 48.00 | 8.98 | 7.77 | 0.00 |
| 49.00 | 8.98 | 7.77 | 0.00 |
| 50.00 | 8.98 | 7.77 | 0.00 |
| 51.00 | 8.98 | 7.77 | 0.00 |
| 52.00 | 8.98 | 7.77 | 0.00 |
| 53.00 | 8.98 | 7.77 | 0.00 |
| 54.00 | 8.98 | 7.77 | 0.00 |
| 55.00 | 8.98 | 7.77 | 0.00 |
| 56.00 | 8.98 | 7.77 | 0.00 |
| 57.00 | 8.98 | 7.77 | 0.00 |
| 58.00 | 8.98 | 7.77 | 0.00 |
| 59.00 | 8.98 | 7.77 | 0.00 |
| 60.00 | 8.98 | 7.77 | 0.00 |
| 61.00 | 8.98 | 7.77 | 0.00 |
| 62.00 | 8.98 | 7.77 | 0.00 |
| 63.00 | 8.98 | 7.77 | 0.00 |
| 64.00 | 8.98 | 7.77 | 0.00 |
| 65.00 | 8.98 | 7.77 | 0.00 |
| 66.00 | 8.98 | 7.77 | 0.00 |
| 67.00 | 8.98 | 7.77 | 0.00 |
| 68.00 | 8.98 | 7.77 | 0.00 |
| 69.00 | 8.98 | 7.77 | 0.00 |
| 70.00 | 8.98 | 7.77 | 0.00 |
| 71.00 | 8.98 | 7.77 | 0.00 |
| 72.00 | 8.98 | 7.77 | 0.00 |

## Summary for Subcatchment 8S: PR DA #1

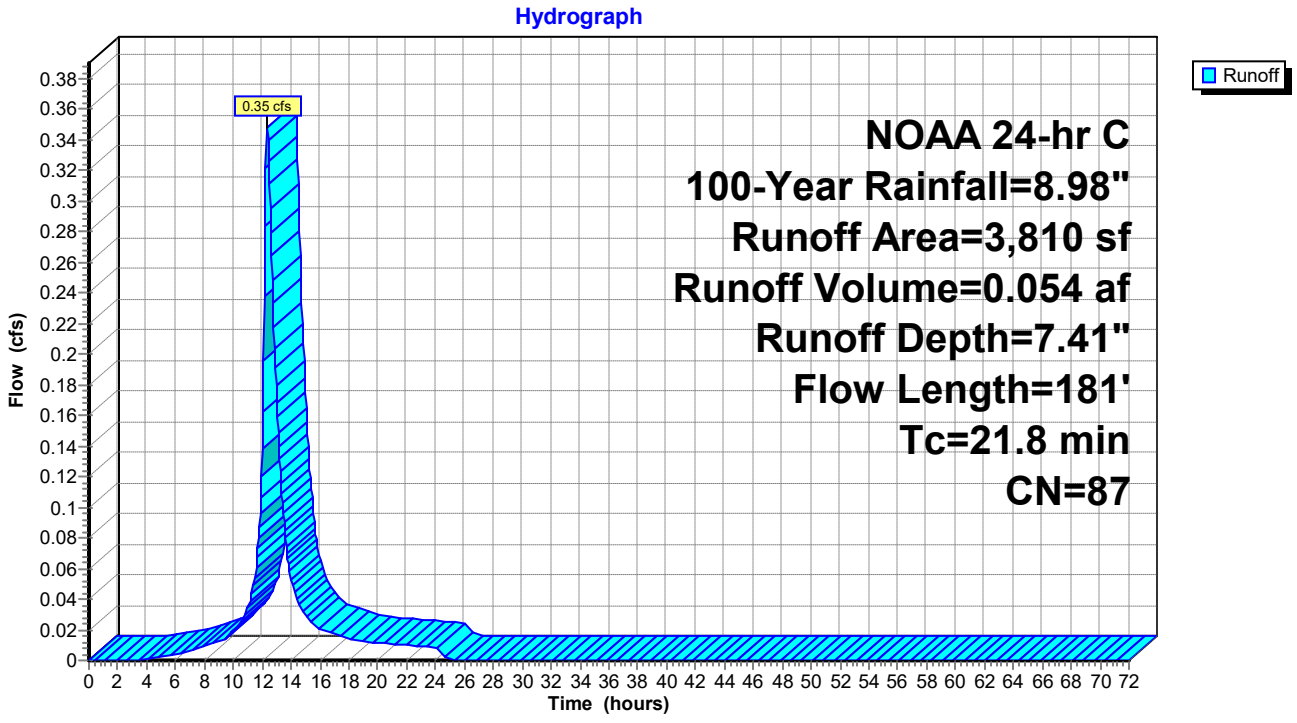
Runoff = 0.35 cfs @ 12.34 hrs, Volume= 0.054 af, Depth= 7.41"
Routed to Pond 11P : EX Curb Inlet

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year Rainfall=8.98"

| Area (sf) | CN | Description |
|---|---|---|
| 1,743 | 74 | >75% Grass cover, Good, HSG C |
| 2,067 | 98 | Paved parking, HSG A |
| 3,810 | 87 | Weighted Average |
| 1,743 | | 45.75% Pervious Area |
| 2,067 | | 54.25% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 20.5 | 100 | 0.0030 | 0.08 | | **Sheet Flow, Grass to East** Grass: Short n= 0.150 P2= 3.33" |
| 1.3 | 81 | 0.0028 | 1.07 | | **Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps |
| 21.8 | 181 | Total | | | |

### Subcatchment 8S: PR DA #1



## Hydrograph for Subcatchment 8S: PR DA #1

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.10 | 0.00 | 0.00 |
| 2.00 | 0.20 | 0.00 | 0.00 |
| 3.00 | 0.32 | 0.00 | 0.00 |
| 4.00 | 0.44 | 0.01 | 0.00 |
| 5.00 | 0.57 | 0.04 | 0.00 |
| 6.00 | 0.71 | 0.09 | 0.00 |
| 7.00 | 0.88 | 0.16 | 0.01 |
| 8.00 | 1.08 | 0.27 | 0.01 |
| 9.00 | 1.31 | 0.41 | 0.01 |
| 10.00 | 1.64 | 0.63 | 0.02 |
| 11.00 | 2.16 | 1.03 | 0.03 |
| 12.00 | 4.28 | 2.89 | **0.14** |
| 13.00 | 6.82 | 5.31 | **0.17** |
| 14.00 | 7.34 | 5.81 | 0.05 |
| 15.00 | 7.67 | 6.13 | 0.03 |
| 16.00 | 7.90 | 6.36 | 0.02 |
| 17.00 | 8.10 | 6.55 | 0.02 |
| 18.00 | 8.27 | 6.71 | 0.01 |
| 19.00 | 8.41 | 6.85 | 0.01 |
| 20.00 | 8.54 | 6.98 | 0.01 |
| 21.00 | 8.66 | 7.10 | 0.01 |
| 22.00 | 8.78 | 7.21 | 0.01 |
| 23.00 | 8.88 | 7.31 | 0.01 |
| 24.00 | **8.98** | **7.41** | 0.01 |
| 25.00 | 8.98 | 7.41 | 0.00 |
| 26.00 | 8.98 | 7.41 | 0.00 |
| 27.00 | 8.98 | 7.41 | 0.00 |
| 28.00 | 8.98 | 7.41 | 0.00 |
| 29.00 | 8.98 | 7.41 | 0.00 |
| 30.00 | 8.98 | 7.41 | 0.00 |
| 31.00 | 8.98 | 7.41 | 0.00 |
| 32.00 | 8.98 | 7.41 | 0.00 |
| 33.00 | 8.98 | 7.41 | 0.00 |
| 34.00 | 8.98 | 7.41 | 0.00 |
| 35.00 | 8.98 | 7.41 | 0.00 |
| 36.00 | 8.98 | 7.41 | 0.00 |
| 37.00 | 8.98 | 7.41 | 0.00 |
| 38.00 | 8.98 | 7.41 | 0.00 |
| 39.00 | 8.98 | 7.41 | 0.00 |
| 40.00 | 8.98 | 7.41 | 0.00 |
| 41.00 | 8.98 | 7.41 | 0.00 |
| 42.00 | 8.98 | 7.41 | 0.00 |
| 43.00 | 8.98 | 7.41 | 0.00 |
| 44.00 | 8.98 | 7.41 | 0.00 |
| 45.00 | 8.98 | 7.41 | 0.00 |
| 46.00 | 8.98 | 7.41 | 0.00 |
| 47.00 | 8.98 | 7.41 | 0.00 |
| 48.00 | 8.98 | 7.41 | 0.00 |
| 49.00 | 8.98 | 7.41 | 0.00 |
| 50.00 | 8.98 | 7.41 | 0.00 |
| 51.00 | 8.98 | 7.41 | 0.00 |
| 52.00 | 8.98 | 7.41 | 0.00 |
| 53.00 | 8.98 | 7.41 | 0.00 |
| 54.00 | 8.98 | 7.41 | 0.00 |
| 55.00 | 8.98 | 7.41 | 0.00 |
| 56.00 | 8.98 | 7.41 | 0.00 |
| 57.00 | 8.98 | 7.41 | 0.00 |
| 58.00 | 8.98 | 7.41 | 0.00 |
| 59.00 | 8.98 | 7.41 | 0.00 |
| 60.00 | 8.98 | 7.41 | 0.00 |
| 61.00 | 8.98 | 7.41 | 0.00 |
| 62.00 | 8.98 | 7.41 | 0.00 |
| 63.00 | 8.98 | 7.41 | 0.00 |
| 64.00 | 8.98 | 7.41 | 0.00 |
| 65.00 | 8.98 | 7.41 | 0.00 |
| 66.00 | 8.98 | 7.41 | 0.00 |
| 67.00 | 8.98 | 7.41 | 0.00 |
| 68.00 | 8.98 | 7.41 | 0.00 |
| 69.00 | 8.98 | 7.41 | 0.00 |
| 70.00 | 8.98 | 7.41 | 0.00 |
| 71.00 | 8.98 | 7.41 | 0.00 |
| 72.00 | 8.98 | 7.41 | 0.00 |

## Summary for Pond 7P: POROUS ASPHALT LOT

Inflow Area = 0.202 ac, 65.22% Impervious, Inflow Depth = 7.77" for 100-Year event
Inflow = 1.34 cfs @ 12.16 hrs, Volume= 0.131 af
Outflow = 0.40 cfs @ 12.75 hrs, Volume= 0.131 af, Atten= 70%, Lag= 35.0 min
Discarded = 0.40 cfs @ 12.75 hrs, Volume= 0.131 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 45.85' @ 12.75 hrs Surf.Area= 3,327 sf Storage= 2,395 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 187.2 min ( 968.4 - 781.2 )

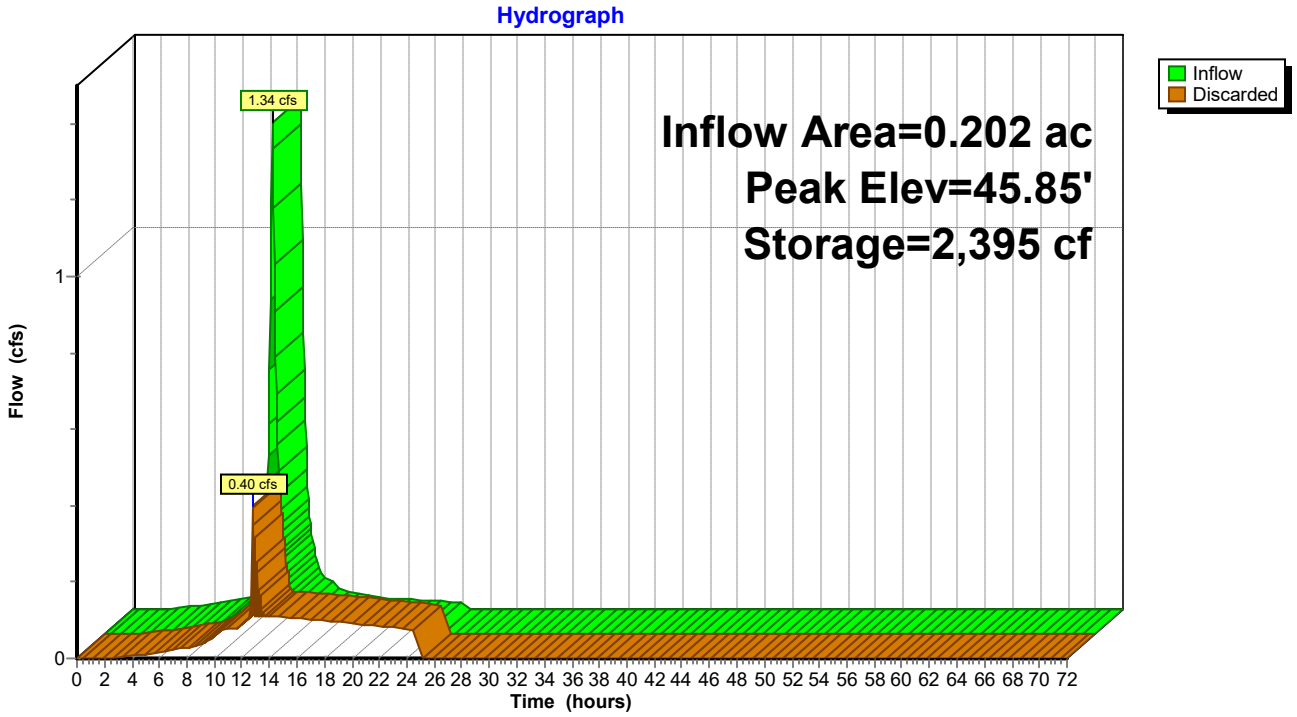
| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 28.22' | 2,395 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Voids (%) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|---|
| 28.22 | 3,327 | 269.0 | 0.0 | 0 | 0 | 3,327 |
| 28.23 | 3,327 | 269.0 | 40.0 | 13 | 13 | 3,330 |
| 28.39 | 3,327 | 269.0 | 40.0 | 213 | 226 | 3,373 |
| 28.40 | 3,327 | 269.0 | 40.0 | 13 | 240 | 3,375 |
| 30.02 | 3,327 | 269.0 | 40.0 | 2,156 | 2,395 | 3,811 |

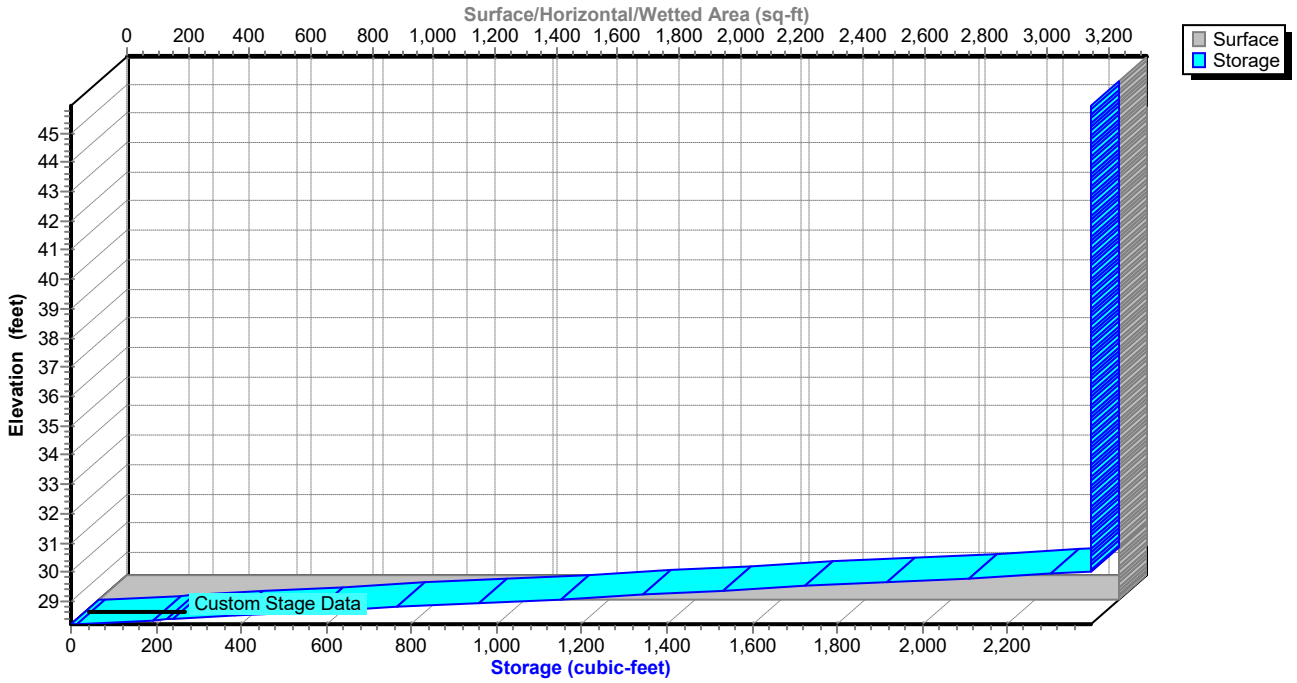
| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Discarded | 28.22' | **1.000 in/hr Exfiltration over Surface area**<br>Conductivity to Groundwater Elevation = 24.00' |

**Discarded OutFlow** Max=0.39 cfs @ 12.75 hrs HW=45.10' (Free Discharge)
**1=Exfiltration** ( Controls 0.39 cfs)

## Pond 7P: POROUS ASPHALT LOT




## Pond 7P: POROUS ASPHALT LOT



## Hydrograph for Pond 7P: POROUS ASPHALT LOT

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Discarded (cfs) |
|---|---|---|---|---|
| 0.00 | 0.00 | 0 | 28.22 | 0.00 |
| 2.50 | 0.00 | 0 | 28.22 | 0.00 |
| 5.00 | 0.01 | 0 | 28.22 | 0.01 |
| 7.50 | 0.02 | 0 | 28.22 | 0.02 |
| 10.00 | **0.06** | 0 | 28.22 | 0.06 |
| 12.50 | **0.56** | **2,172** | **29.85** | **0.11** |
| 15.00 | 0.06 | **2,234** | **29.90** | **0.11** |
| 17.50 | 0.03 | 1,691 | 29.49 | 0.10 |
| 20.00 | 0.03 | 1,085 | 29.04 | 0.09 |
| 22.50 | 0.02 | 507 | 28.60 | 0.08 |
| 25.00 | 0.00 | 0 | 28.22 | 0.00 |
| 27.50 | 0.00 | 0 | 28.22 | 0.00 |
| 30.00 | 0.00 | 0 | 28.22 | 0.00 |
| 32.50 | 0.00 | 0 | 28.22 | 0.00 |
| 35.00 | 0.00 | 0 | 28.22 | 0.00 |
| 37.50 | 0.00 | 0 | 28.22 | 0.00 |
| 40.00 | 0.00 | 0 | 28.22 | 0.00 |
| 42.50 | 0.00 | 0 | 28.22 | 0.00 |
| 45.00 | 0.00 | 0 | 28.22 | 0.00 |
| 47.50 | 0.00 | 0 | 28.22 | 0.00 |
| 50.00 | 0.00 | 0 | 28.22 | 0.00 |
| 52.50 | 0.00 | 0 | 28.22 | 0.00 |
| 55.00 | 0.00 | 0 | 28.22 | 0.00 |
| 57.50 | 0.00 | 0 | 28.22 | 0.00 |
| 60.00 | 0.00 | 0 | 28.22 | 0.00 |
| 62.50 | 0.00 | 0 | 28.22 | 0.00 |
| 65.00 | 0.00 | 0 | 28.22 | 0.00 |
| 67.50 | 0.00 | 0 | 28.22 | 0.00 |
| 70.00 | 0.00 | 0 | 28.22 | 0.00 |

## Stage-Area-Storage for Pond 7P: POROUS ASPHALT LOT

| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|---|---|---|
| 28.22 | **3,327** | 0 |
| 28.42 | 3,327 | 266 |
| 28.62 | 3,327 | 532 |
| 28.82 | 3,327 | 798 |
| 29.02 | 3,327 | 1,065 |
| 29.22 | 3,327 | 1,331 |
| 29.42 | 3,327 | 1,597 |
| 29.62 | 3,327 | 1,863 |
| 29.82 | 3,327 | 2,129 |
| 30.02 | 3,327 | **2,395** |
| 30.22 | 3,327 | 2,395 |
| 30.42 | 3,327 | 2,395 |
| 30.62 | 3,327 | 2,395 |
| 30.82 | 3,327 | 2,395 |
| 31.02 | 3,327 | 2,395 |
| 31.22 | 3,327 | 2,395 |
| 31.42 | 3,327 | 2,395 |
| 31.62 | 3,327 | 2,395 |
| 31.82 | 3,327 | 2,395 |
| 32.02 | 3,327 | 2,395 |
| 32.22 | 3,327 | 2,395 |
| 32.42 | 3,327 | 2,395 |
| 32.62 | 3,327 | 2,395 |
| 32.82 | 3,327 | 2,395 |
| 33.02 | 3,327 | 2,395 |
| 33.22 | 3,327 | 2,395 |
| 33.42 | 3,327 | 2,395 |
| 33.62 | 3,327 | 2,395 |
| 33.82 | 3,327 | 2,395 |
| 34.02 | 3,327 | 2,395 |
| 34.22 | 3,327 | 2,395 |
| 34.42 | 3,327 | 2,395 |
| 34.62 | 3,327 | 2,395 |
| 34.82 | 3,327 | 2,395 |
| 35.02 | 3,327 | 2,395 |
| 35.22 | 3,327 | 2,395 |
| 35.42 | 3,327 | 2,395 |
| 35.62 | 3,327 | 2,395 |
| 35.82 | 3,327 | 2,395 |
| 36.02 | 3,327 | 2,395 |
| 36.22 | 3,327 | 2,395 |
| 36.42 | 3,327 | 2,395 |
| 36.62 | 3,327 | 2,395 |
| 36.82 | 3,327 | 2,395 |
| 37.02 | 3,327 | 2,395 |
| 37.22 | 3,327 | 2,395 |
| 37.42 | 3,327 | 2,395 |
| 37.62 | 3,327 | 2,395 |
| 37.82 | 3,327 | 2,395 |
| 38.02 | 3,327 | 2,395 |
| 38.22 | 3,327 | 2,395 |
| 38.42 | 3,327 | 2,395 |
| 38.62 | 3,327 | 2,395 |
| 38.82 | 3,327 | 2,395 |
| 39.02 | 3,327 | 2,395 |
| 39.22 | 3,327 | 2,395 |
| 39.42 | 3,327 | 2,395 |
| 39.62 | 3,327 | 2,395 |
| 39.82 | 3,327 | 2,395 |
| 40.02 | 3,327 | 2,395 |
| 40.22 | 3,327 | 2,395 |
| 40.42 | 3,327 | 2,395 |
| 40.62 | 3,327 | 2,395 |
| 40.82 | 3,327 | 2,395 |
| 41.02 | 3,327 | 2,395 |
| 41.22 | 3,327 | 2,395 |
| 41.42 | 3,327 | 2,395 |
| 41.62 | 3,327 | 2,395 |
| 41.82 | 3,327 | 2,395 |
| 42.02 | 3,327 | 2,395 |
| 42.22 | 3,327 | 2,395 |
| 42.42 | 3,327 | 2,395 |
| 42.62 | 3,327 | 2,395 |
| 42.82 | 3,327 | 2,395 |
| 43.02 | 3,327 | 2,395 |
| 43.22 | 3,327 | 2,395 |
| 43.42 | 3,327 | 2,395 |
| 43.62 | 3,327 | 2,395 |
| 43.82 | 3,327 | 2,395 |
| 44.02 | 3,327 | 2,395 |
| 44.22 | 3,327 | 2,395 |
| 44.42 | 3,327 | 2,395 |
| 44.62 | 3,327 | 2,395 |
| 44.82 | 3,327 | 2,395 |
| 45.02 | 3,327 | 2,395 |
| 45.22 | 3,327 | 2,395 |
| 45.42 | 3,327 | 2,395 |
| 45.62 | 3,327 | 2,395 |
| 45.82 | 3,327 | 2,395 |

## Summary for Pond 11P: EX Curb Inlet

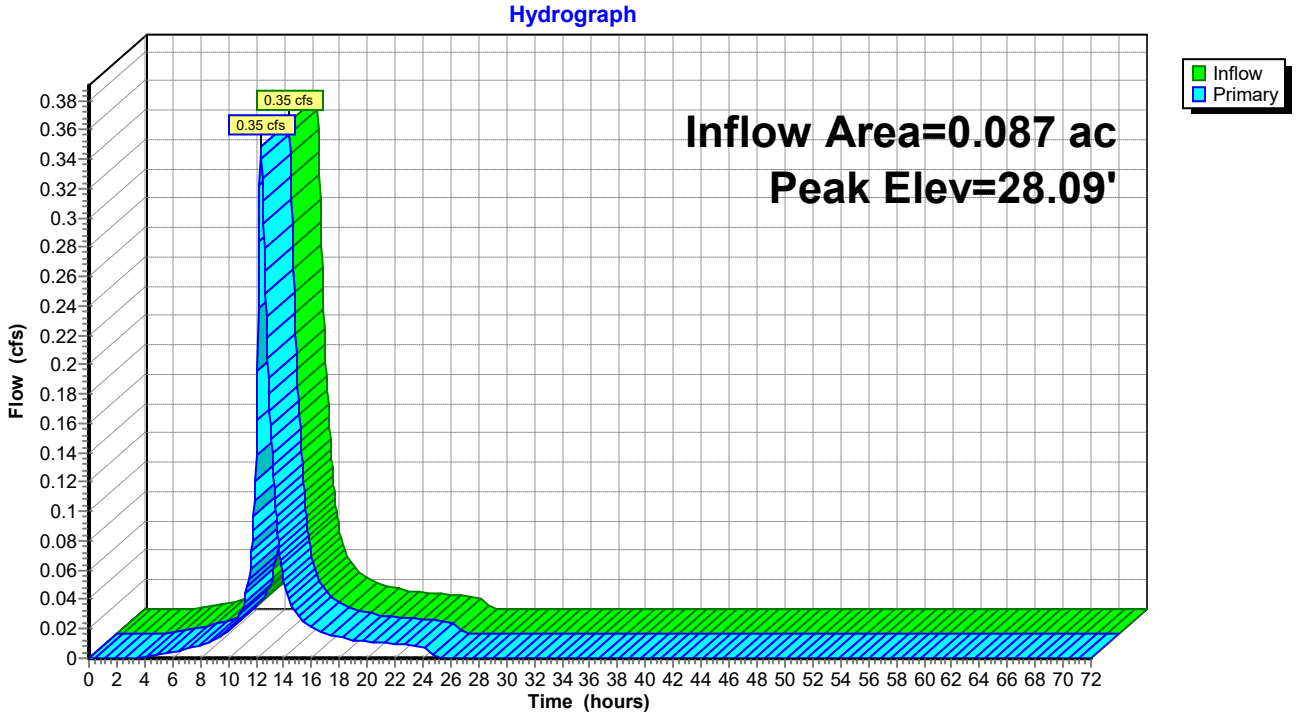
Inflow Area = 0.087 ac, 54.25% Impervious, Inflow Depth = 7.41" for 100-Year event
Inflow = 0.35 cfs @ 12.34 hrs, Volume= 0.054 af
Outflow = 0.35 cfs @ 12.34 hrs, Volume= 0.054 af, Atten= 0%, Lag= 0.0 min
Primary = 0.35 cfs @ 12.34 hrs, Volume= 0.054 af
Routed to Link 12L : PR Study Point #1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 28.09' @ 12.34 hrs

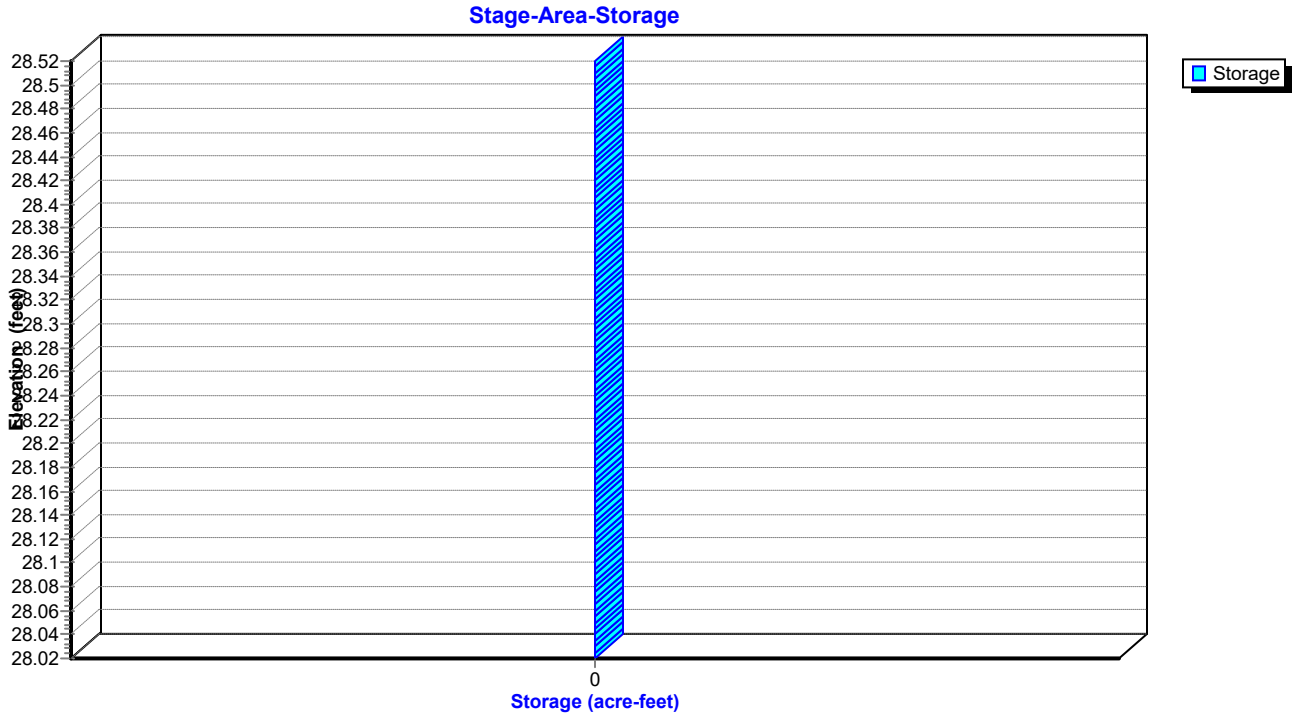
| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 28.02' | **72.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.35 cfs @ 12.34 hrs HW=28.09' TW=0.00' (Dynamic Tailwater)
**1=Orifice/Grate** (Orifice Controls 0.35 cfs @ 0.84 fps)

## Pond 11P: EX Curb Inlet



## Pond 11P: EX Curb Inlet



## Hydrograph for Pond 11P: EX Curb Inlet

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | 28.02 | 0.00 |
| 1.00 | 0.00 | 28.02 | 0.00 |
| 2.00 | 0.00 | 28.02 | 0.00 |
| 3.00 | 0.00 | 28.02 | 0.00 |
| 4.00 | 0.00 | 28.02 | 0.00 |
| 5.00 | 0.00 | 28.02 | 0.00 |
| 6.00 | 0.00 | 28.02 | 0.00 |
| 7.00 | 0.01 | 28.02 | 0.01 |
| 8.00 | 0.01 | 28.03 | 0.01 |
| 9.00 | 0.01 | 28.03 | 0.01 |
| 10.00 | 0.02 | 28.03 | 0.02 |
| 11.00 | 0.03 | 28.03 | 0.03 |
| 12.00 | **0.14** | **28.06** | **0.14** |
| 13.00 | **0.17** | **28.06** | **0.17** |
| 14.00 | 0.05 | 28.04 | 0.05 |
| 15.00 | 0.03 | 28.03 | 0.03 |
| 16.00 | 0.02 | 28.03 | 0.02 |
| 17.00 | 0.02 | 28.03 | 0.02 |
| 18.00 | 0.01 | 28.03 | 0.01 |
| 19.00 | 0.01 | 28.03 | 0.01 |
| 20.00 | 0.01 | 28.03 | 0.01 |
| 21.00 | 0.01 | 28.03 | 0.01 |
| 22.00 | 0.01 | 28.03 | 0.01 |
| 23.00 | 0.01 | 28.03 | 0.01 |
| 24.00 | 0.01 | 28.03 | 0.01 |
| 25.00 | 0.00 | 28.02 | 0.00 |
| 26.00 | 0.00 | 28.02 | 0.00 |
| 27.00 | 0.00 | 28.02 | 0.00 |
| 28.00 | 0.00 | 28.02 | 0.00 |
| 29.00 | 0.00 | 28.02 | 0.00 |
| 30.00 | 0.00 | 28.02 | 0.00 |
| 31.00 | 0.00 | 28.02 | 0.00 |
| 32.00 | 0.00 | 28.02 | 0.00 |
| 33.00 | 0.00 | 28.02 | 0.00 |
| 34.00 | 0.00 | 28.02 | 0.00 |
| 35.00 | 0.00 | 28.02 | 0.00 |
| 36.00 | 0.00 | 28.02 | 0.00 |
| 37.00 | 0.00 | 28.02 | 0.00 |
| 38.00 | 0.00 | 28.02 | 0.00 |
| 39.00 | 0.00 | 28.02 | 0.00 |
| 40.00 | 0.00 | 28.02 | 0.00 |
| 41.00 | 0.00 | 28.02 | 0.00 |
| 42.00 | 0.00 | 28.02 | 0.00 |
| 43.00 | 0.00 | 28.02 | 0.00 |
| 44.00 | 0.00 | 28.02 | 0.00 |
| 45.00 | 0.00 | 28.02 | 0.00 |
| 46.00 | 0.00 | 28.02 | 0.00 |
| 47.00 | 0.00 | 28.02 | 0.00 |
| 48.00 | 0.00 | 28.02 | 0.00 |
| 49.00 | 0.00 | 28.02 | 0.00 |
| 50.00 | 0.00 | 28.02 | 0.00 |
| 51.00 | 0.00 | 28.02 | 0.00 |
| 52.00 | 0.00 | 28.02 | 0.00 |
| 53.00 | 0.00 | 28.02 | 0.00 |
| 54.00 | 0.00 | 28.02 | 0.00 |
| 55.00 | 0.00 | 28.02 | 0.00 |
| 56.00 | 0.00 | 28.02 | 0.00 |
| 57.00 | 0.00 | 28.02 | 0.00 |
| 58.00 | 0.00 | 28.02 | 0.00 |
| 59.00 | 0.00 | 28.02 | 0.00 |
| 60.00 | 0.00 | 28.02 | 0.00 |
| 61.00 | 0.00 | 28.02 | 0.00 |
| 62.00 | 0.00 | 28.02 | 0.00 |
| 63.00 | 0.00 | 28.02 | 0.00 |
| 64.00 | 0.00 | 28.02 | 0.00 |
| 65.00 | 0.00 | 28.02 | 0.00 |
| 66.00 | 0.00 | 28.02 | 0.00 |
| 67.00 | 0.00 | 28.02 | 0.00 |
| 68.00 | 0.00 | 28.02 | 0.00 |
| 69.00 | 0.00 | 28.02 | 0.00 |
| 70.00 | 0.00 | 28.02 | 0.00 |
| 71.00 | 0.00 | 28.02 | 0.00 |
| 72.00 | 0.00 | 28.02 | 0.00 |

## Stage-Area-Storage for Pond 11P: EX Curb Inlet

| Elevation (feet) | Storage (acre-feet) |
|---|---|
| 28.02 | **0.000** |
| 28.03 | 0.000 |
| 28.04 | 0.000 |
| 28.05 | 0.000 |
| 28.06 | 0.000 |
| 28.07 | 0.000 |
| 28.08 | 0.000 |
| 28.09 | 0.000 |
| 28.10 | 0.000 |
| 28.11 | 0.000 |
| 28.12 | 0.000 |
| 28.13 | 0.000 |
| 28.14 | 0.000 |
| 28.15 | 0.000 |
| 28.16 | 0.000 |
| 28.17 | 0.000 |
| 28.18 | 0.000 |
| 28.19 | 0.000 |
| 28.20 | 0.000 |
| 28.21 | 0.000 |
| 28.22 | 0.000 |
| 28.23 | 0.000 |
| 28.24 | 0.000 |
| 28.25 | 0.000 |
| 28.26 | 0.000 |
| 28.27 | 0.000 |
| 28.28 | 0.000 |
| 28.29 | 0.000 |
| 28.30 | 0.000 |
| 28.31 | 0.000 |
| 28.32 | 0.000 |
| 28.33 | 0.000 |
| 28.34 | 0.000 |
| 28.35 | 0.000 |
| 28.36 | 0.000 |
| 28.37 | 0.000 |
| 28.38 | 0.000 |
| 28.39 | 0.000 |
| 28.40 | 0.000 |
| 28.41 | 0.000 |
| 28.42 | 0.000 |
| 28.43 | 0.000 |
| 28.44 | 0.000 |
| 28.45 | 0.000 |
| 28.46 | 0.000 |
| 28.47 | 0.000 |
| 28.48 | 0.000 |
| 28.49 | 0.000 |
| 28.50 | 0.000 |
| 28.51 | 0.000 |
| 28.52 | 0.000 |

## Summary for Pond 13P: MBR #1

Inflow Area = 0.202 ac, 65.22% Impervious, Inflow Depth = 0.00" for 100-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 27.99' @ 0.00 hrs Surf.Area= 162 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no inflow)

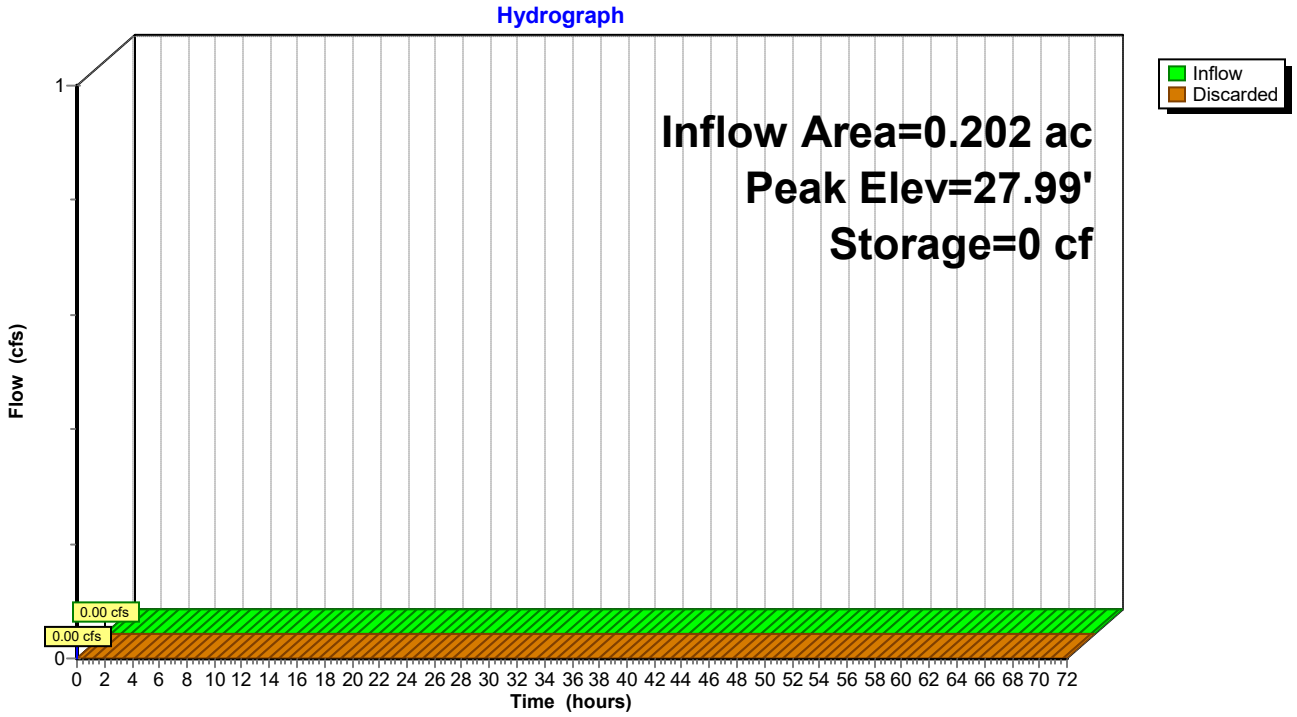
| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 27.99' | 545 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Voids (%) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|---|
| 27.99 | 162 | 91.0 | 0.0 | 0 | 0 | 162 |
| 28.00 | 162 | 91.0 | 40.0 | 1 | 1 | 163 |
| 29.50 | 311 | 101.0 | 100.0 | 349 | 349 | 373 |
| 30.00 | 476 | 113.0 | 100.0 | 195 | 545 | 584 |

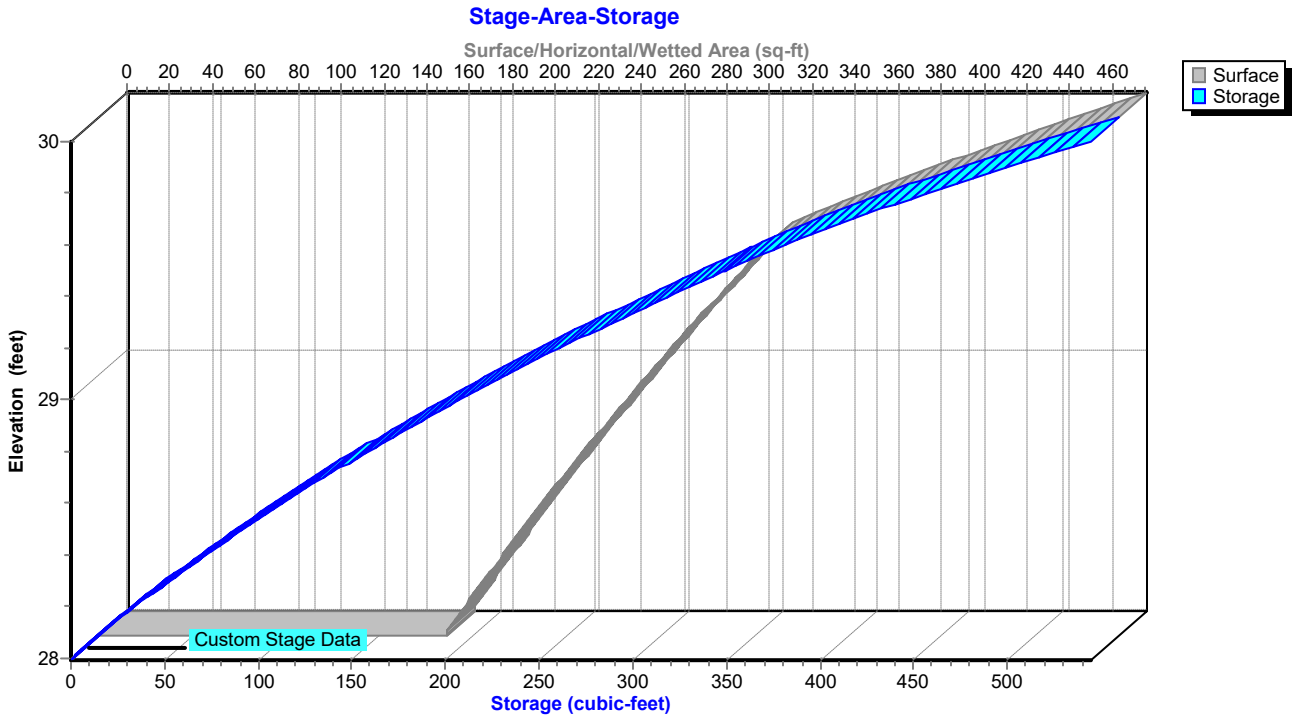
| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Discarded | 27.99' | **0.570 in/hr Exfiltration over Surface area**<br>Conductivity to Groundwater Elevation = 24.00' |

**Discarded OutFlow** Max=0.00 cfs @ 0.00 hrs HW=27.99' (Free Discharge)
↑**1=Exfiltration** (Passes 0.00 cfs of 0.00 cfs potential flow)

## Pond 13P: MBR #1




## Pond 13P: MBR #1



## Hydrograph for Pond 13P: MBR #1

| Time (hours) | Inflow (cfs) | Elevation (feet) | Discarded (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Discarded (cfs) |
|---|---|---|---|---|---|---|---|
| 0.00 | **0.00** | **27.99** | **0.00** | 52.00 | 0.00 | 27.99 | 0.00 |
| 1.00 | 0.00 | 27.99 | 0.00 | 53.00 | 0.00 | 27.99 | 0.00 |
| 2.00 | 0.00 | 27.99 | 0.00 | 54.00 | 0.00 | 27.99 | 0.00 |
| 3.00 | 0.00 | 27.99 | 0.00 | 55.00 | 0.00 | 27.99 | 0.00 |
| 4.00 | 0.00 | 27.99 | 0.00 | 56.00 | 0.00 | 27.99 | 0.00 |
| 5.00 | 0.00 | 27.99 | 0.00 | 57.00 | 0.00 | 27.99 | 0.00 |
| 6.00 | 0.00 | 27.99 | 0.00 | 58.00 | 0.00 | 27.99 | 0.00 |
| 7.00 | 0.00 | 27.99 | 0.00 | 59.00 | 0.00 | 27.99 | 0.00 |
| 8.00 | 0.00 | 27.99 | 0.00 | 60.00 | 0.00 | 27.99 | 0.00 |
| 9.00 | 0.00 | 27.99 | 0.00 | 61.00 | 0.00 | 27.99 | 0.00 |
| 10.00 | 0.00 | 27.99 | 0.00 | 62.00 | 0.00 | 27.99 | 0.00 |
| 11.00 | 0.00 | 27.99 | 0.00 | 63.00 | 0.00 | 27.99 | 0.00 |
| 12.00 | 0.00 | 27.99 | 0.00 | 64.00 | 0.00 | 27.99 | 0.00 |
| 13.00 | 0.00 | 27.99 | 0.00 | 65.00 | 0.00 | 27.99 | 0.00 |
| 14.00 | 0.00 | 27.99 | 0.00 | 66.00 | 0.00 | 27.99 | 0.00 |
| 15.00 | 0.00 | 27.99 | 0.00 | 67.00 | 0.00 | 27.99 | 0.00 |
| 16.00 | 0.00 | 27.99 | 0.00 | 68.00 | 0.00 | 27.99 | 0.00 |
| 17.00 | 0.00 | 27.99 | 0.00 | 69.00 | 0.00 | 27.99 | 0.00 |
| 18.00 | 0.00 | 27.99 | 0.00 | 70.00 | 0.00 | 27.99 | 0.00 |
| 19.00 | 0.00 | 27.99 | 0.00 | 71.00 | 0.00 | 27.99 | 0.00 |
| 20.00 | 0.00 | 27.99 | 0.00 | 72.00 | 0.00 | 27.99 | 0.00 |
| 21.00 | 0.00 | 27.99 | 0.00 | | | | |
| 22.00 | 0.00 | 27.99 | 0.00 | | | | |
| 23.00 | 0.00 | 27.99 | 0.00 | | | | |
| 24.00 | 0.00 | 27.99 | 0.00 | | | | |
| 25.00 | 0.00 | 27.99 | 0.00 | | | | |
| 26.00 | 0.00 | 27.99 | 0.00 | | | | |
| 27.00 | 0.00 | 27.99 | 0.00 | | | | |
| 28.00 | 0.00 | 27.99 | 0.00 | | | | |
| 29.00 | 0.00 | 27.99 | 0.00 | | | | |
| 30.00 | 0.00 | 27.99 | 0.00 | | | | |
| 31.00 | 0.00 | 27.99 | 0.00 | | | | |
| 32.00 | 0.00 | 27.99 | 0.00 | | | | |
| 33.00 | 0.00 | 27.99 | 0.00 | | | | |
| 34.00 | 0.00 | 27.99 | 0.00 | | | | |
| 35.00 | 0.00 | 27.99 | 0.00 | | | | |
| 36.00 | 0.00 | 27.99 | 0.00 | | | | |
| 37.00 | 0.00 | 27.99 | 0.00 | | | | |
| 38.00 | 0.00 | 27.99 | 0.00 | | | | |
| 39.00 | 0.00 | 27.99 | 0.00 | | | | |
| 40.00 | 0.00 | 27.99 | 0.00 | | | | |
| 41.00 | 0.00 | 27.99 | 0.00 | | | | |
| 42.00 | 0.00 | 27.99 | 0.00 | | | | |
| 43.00 | 0.00 | 27.99 | 0.00 | | | | |
| 44.00 | 0.00 | 27.99 | 0.00 | | | | |
| 45.00 | 0.00 | 27.99 | 0.00 | | | | |
| 46.00 | 0.00 | 27.99 | 0.00 | | | | |
| 47.00 | 0.00 | 27.99 | 0.00 | | | | |
| 48.00 | 0.00 | 27.99 | 0.00 | | | | |
| 49.00 | 0.00 | 27.99 | 0.00 | | | | |
| 50.00 | 0.00 | 27.99 | 0.00 | | | | |
| 51.00 | 0.00 | 27.99 | 0.00 | | | | |

## Stage-Area-Storage for Pond 13P: MBR #1

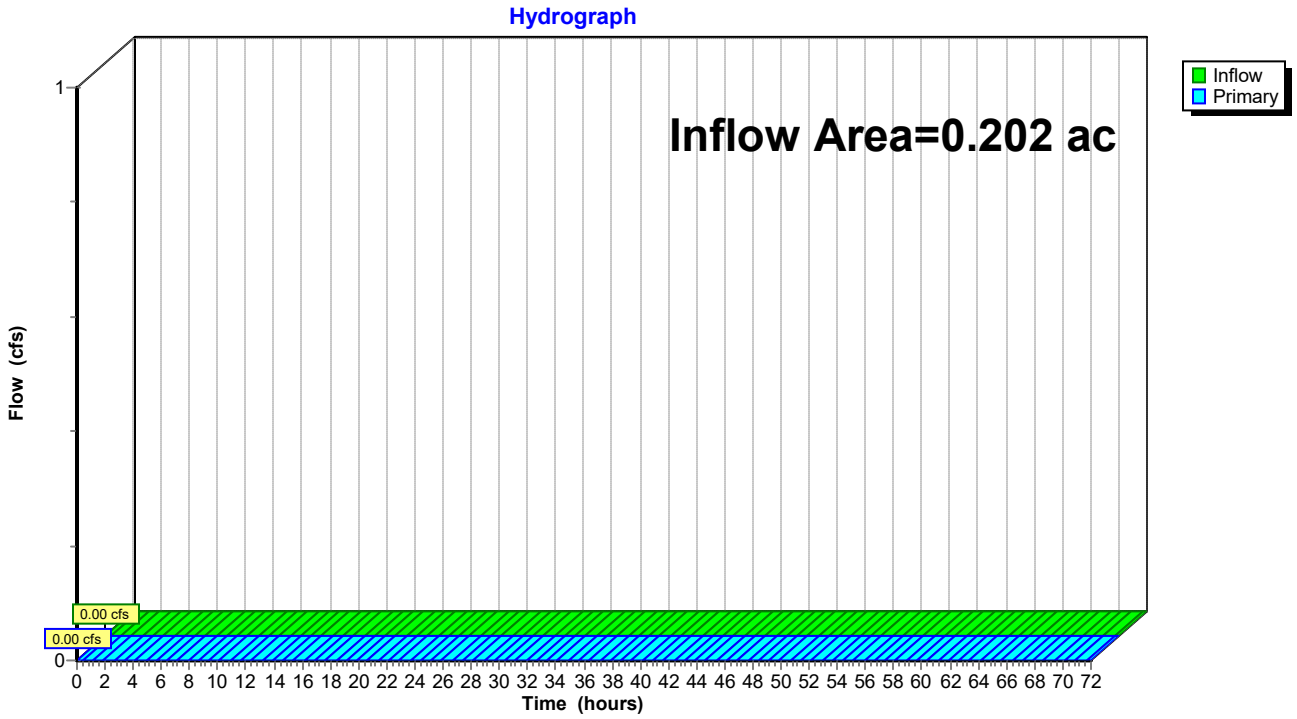
| Elevation (feet) | Surface (sq-ft) | Storage (cubic-feet) |
|---|---|---|
| 27.99 | 162 | 0 |
| 28.01 | 163 | 2 |
| 28.03 | 165 | 6 |
| 28.05 | 166 | 9 |
| 28.07 | 168 | 12 |
| 28.09 | 170 | 16 |
| 28.11 | 171 | 19 |
| 28.13 | 173 | 22 |
| 28.15 | 175 | 26 |
| 28.17 | 176 | 29 |
| 28.19 | 178 | 33 |
| 28.21 | 180 | 37 |
| 28.23 | 182 | 40 |
| 28.25 | 183 | 44 |
| 28.27 | 185 | 47 |
| 28.29 | 187 | 51 |
| 28.31 | 189 | 55 |
| 28.33 | 191 | 59 |
| 28.35 | 192 | 63 |
| 28.37 | 194 | 66 |
| 28.39 | 196 | 70 |
| 28.41 | 198 | 74 |
| 28.43 | 200 | 78 |
| 28.45 | 202 | 82 |
| 28.47 | 204 | 86 |
| 28.49 | 205 | 90 |
| 28.51 | 207 | 95 |
| 28.53 | 209 | 99 |
| 28.55 | 211 | 103 |
| 28.57 | 213 | 107 |
| 28.59 | 215 | 111 |
| 28.61 | 217 | 116 |
| 28.63 | 219 | 120 |
| 28.65 | 221 | 125 |
| 28.67 | 223 | 129 |
| 28.69 | 225 | 133 |
| 28.71 | 227 | 138 |
| 28.73 | 228 | 142 |
| 28.75 | 230 | 147 |
| 28.77 | 232 | 152 |
| 28.79 | 234 | 156 |
| 28.81 | 236 | 161 |
| 28.83 | 238 | 166 |
| 28.85 | 241 | 171 |
| 28.87 | 243 | 175 |
| 28.89 | 245 | 180 |
| 28.91 | 247 | 185 |
| 28.93 | 249 | 190 |
| 28.95 | 251 | 195 |
| 28.97 | 253 | 200 |
| 28.99 | 255 | 205 |
| 29.01 | 257 | 210 |
| 29.03 | 259 | 216 |
| 29.05 | 261 | 221 |
| 29.07 | 263 | 226 |
| 29.09 | 265 | 231 |
| 29.11 | 268 | 237 |
| 29.13 | 270 | 242 |
| 29.15 | 272 | 247 |
| 29.17 | 274 | 253 |
| 29.19 | 276 | 258 |
| 29.21 | 278 | 264 |
| 29.23 | 281 | 270 |
| 29.25 | 283 | 275 |
| 29.27 | 285 | 281 |
| 29.29 | 287 | 287 |
| 29.31 | 289 | 292 |
| 29.33 | 292 | 298 |
| 29.35 | 294 | 304 |
| 29.37 | 296 | 310 |
| 29.39 | 298 | 316 |
| 29.41 | 301 | 322 |
| 29.43 | 303 | 328 |
| 29.45 | 305 | 334 |
| 29.47 | 308 | 340 |
| 29.49 | 310 | 346 |
| 29.51 | 314 | 353 |
| 29.53 | 320 | 359 |
| 29.55 | 326 | 365 |
| 29.57 | 332 | 372 |
| 29.59 | 338 | 379 |
| 29.61 | 344 | 385 |
| 29.63 | 351 | 392 |
| 29.65 | 357 | 399 |
| 29.67 | 363 | 407 |
| 29.69 | 370 | 414 |
| 29.71 | 376 | 421 |
| 29.73 | 383 | 429 |
| 29.75 | 389 | 437 |
| 29.77 | 396 | 445 |
| 29.79 | 402 | 453 |
| 29.81 | 409 | 461 |
| 29.83 | 416 | 469 |
| 29.85 | 423 | 477 |
| 29.87 | 430 | 486 |
| 29.89 | 437 | 494 |
| 29.91 | 444 | 503 |
| 29.93 | 451 | 512 |
| 29.95 | 458 | 521 |
| 29.97 | 465 | 531 |
| 29.99 | **472** | **540** |

## Summary for Link 9L: PR Study Point #2

Inflow Area = 0.202 ac, 65.22% Impervious, Inflow Depth = 0.00" for 100-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

### Link 9L: PR Study Point #2



## Hydrograph for Link 9L: PR Study Point #2

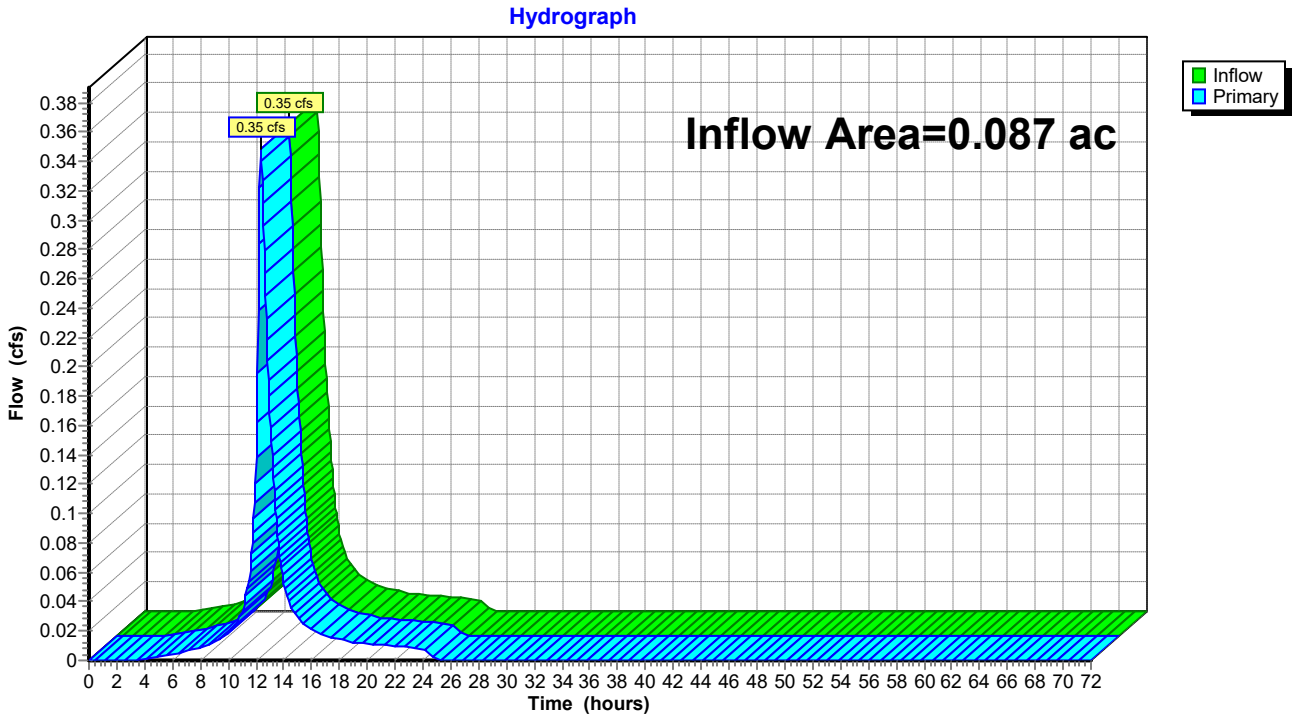
| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) | Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|---|---|---|---|
| 0.00 | **0.00** | **0.00** | **0.00** | 52.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 53.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 54.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 55.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 56.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 57.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 58.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 59.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 61.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 62.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 63.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 64.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 65.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 66.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 67.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 68.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 69.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 70.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 71.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 72.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | | | | |
| 22.00 | 0.00 | 0.00 | 0.00 | | | | |
| 23.00 | 0.00 | 0.00 | 0.00 | | | | |
| 24.00 | 0.00 | 0.00 | 0.00 | | | | |
| 25.00 | 0.00 | 0.00 | 0.00 | | | | |
| 26.00 | 0.00 | 0.00 | 0.00 | | | | |
| 27.00 | 0.00 | 0.00 | 0.00 | | | | |
| 28.00 | 0.00 | 0.00 | 0.00 | | | | |
| 29.00 | 0.00 | 0.00 | 0.00 | | | | |
| 30.00 | 0.00 | 0.00 | 0.00 | | | | |
| 31.00 | 0.00 | 0.00 | 0.00 | | | | |
| 32.00 | 0.00 | 0.00 | 0.00 | | | | |
| 33.00 | 0.00 | 0.00 | 0.00 | | | | |
| 34.00 | 0.00 | 0.00 | 0.00 | | | | |
| 35.00 | 0.00 | 0.00 | 0.00 | | | | |
| 36.00 | 0.00 | 0.00 | 0.00 | | | | |
| 37.00 | 0.00 | 0.00 | 0.00 | | | | |
| 38.00 | 0.00 | 0.00 | 0.00 | | | | |
| 39.00 | 0.00 | 0.00 | 0.00 | | | | |
| 40.00 | 0.00 | 0.00 | 0.00 | | | | |
| 41.00 | 0.00 | 0.00 | 0.00 | | | | |
| 42.00 | 0.00 | 0.00 | 0.00 | | | | |
| 43.00 | 0.00 | 0.00 | 0.00 | | | | |
| 44.00 | 0.00 | 0.00 | 0.00 | | | | |
| 45.00 | 0.00 | 0.00 | 0.00 | | | | |
| 46.00 | 0.00 | 0.00 | 0.00 | | | | |
| 47.00 | 0.00 | 0.00 | 0.00 | | | | |
| 48.00 | 0.00 | 0.00 | 0.00 | | | | |
| 49.00 | 0.00 | 0.00 | 0.00 | | | | |
| 50.00 | 0.00 | 0.00 | 0.00 | | | | |
| 51.00 | 0.00 | 0.00 | 0.00 | | | | |

## Summary for Link 12L: PR Study Point #1

Inflow Area = 0.087 ac, 54.25% Impervious, Inflow Depth = 7.41" for 100-Year event
Inflow = 0.35 cfs @ 12.34 hrs, Volume= 0.054 af
Primary = 0.35 cfs @ 12.34 hrs, Volume= 0.054 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

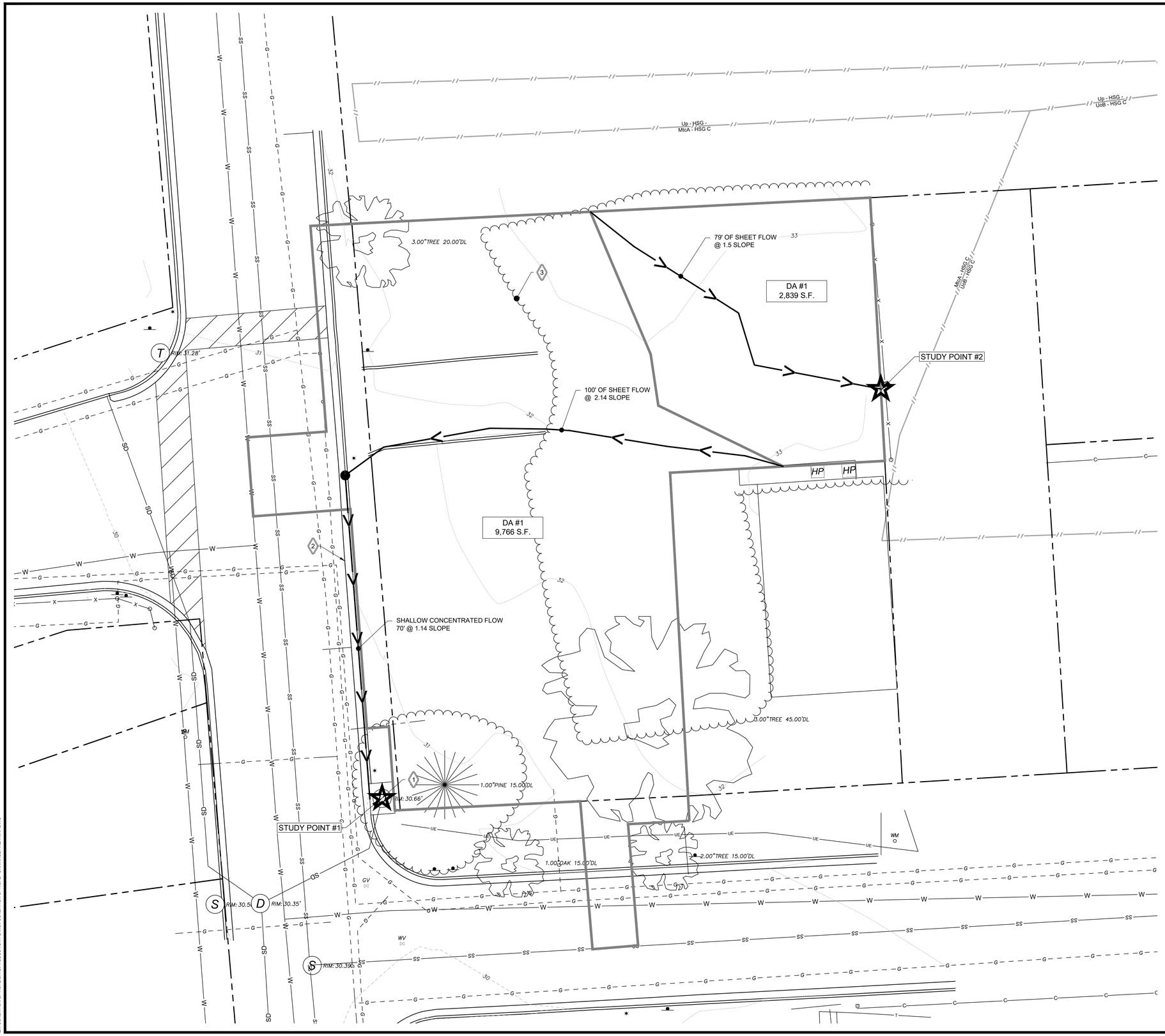
## Link 12L: PR Study Point #1



## Hydrograph for Link 12L: PR Study Point #1

| Time (hours) | Inflow (cfs) | Elevation (feet) | Primary (cfs) |
|---|---|---|---|
| 0.00 | 0.00 | **0.00** | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.01 | 0.00 | 0.01 |
| 8.00 | 0.01 | 0.00 | 0.01 |
| 9.00 | 0.01 | 0.00 | 0.01 |
| 10.00 | 0.02 | 0.00 | 0.02 |
| 11.00 | 0.03 | 0.00 | 0.03 |
| 12.00 | **0.14** | 0.00 | **0.14** |
| 13.00 | **0.17** | 0.00 | **0.17** |
| 14.00 | 0.05 | 0.00 | 0.05 |
| 15.00 | 0.03 | 0.00 | 0.03 |
| 16.00 | 0.02 | 0.00 | 0.02 |
| 17.00 | 0.02 | 0.00 | 0.02 |
| 18.00 | 0.01 | 0.00 | 0.01 |
| 19.00 | 0.01 | 0.00 | 0.01 |
| 20.00 | 0.01 | 0.00 | 0.01 |
| 21.00 | 0.01 | 0.00 | 0.01 |
| 22.00 | 0.01 | 0.00 | 0.01 |
| 23.00 | 0.01 | 0.00 | 0.01 |
| 24.00 | 0.01 | 0.00 | 0.01 |
| 25.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 |

# Stormwater Drainage Area Maps




# EXISTING DRAINAGE AREA MAP

FOR

TAX MAP 0104, ID 0000, PARCEL 1463
FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND
PREPARED FOR FOUNDATION OF HOPE

RAUCH INC.
Engineering | Survey | Architecture | Environmental
Main Office: 108 N Harrison St - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410 770 9081 | 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

6-May-25

| REVISIONS | | |
|---|---|---|
| REV. # | DATE | DESCRIPTION |

MISS UTILITY OF DELMARVA
811

| | |
|---|---|
| DATE: | 5/6/2025 |
| SCALE: | 1" = 10' |
| DRAWN BY: | AK |
| DESIGNED BY: | AK |
| APPROVED BY: | |

SHEET NO.: EX-DA-MAP

DESIGN DEVELOPMENT

Z:\FOUNDATION OF HOPE\CIVIL\PRODUCTION PLANS\FOUNDATION OF HOPE - DRAINAGE AREA MAP.DWG

PROPOSED CATCHMENT FEATURES

1. 162 S.F. MICRO-BIORETENTION
2. 3,327 S.F. PERMEABLE PAVEMENT PARKING LOT

PR DA #2
8,795 S.F.

PR DA #1
3,810 S.F.

STUDY POINT #2

47' OF SHEET FLOW
@ 0.66 SLOPE

100' OF SHEET FLOW
@ 0.30 SLOPE

STUDY POINT #1

SHALLOW CONCENTRATED FLOW
68' @ 0.28 SLOPE

Up - HSG - MtcA - HSG C

Up - HSG - UoB - HSG C

MtcA - HSG C
UoB - HSG C

LEGEND

- FLOWPATH
- DRAINAGE AREA
- SOILS BOUNDARY
- STUDY POINT

NAD 83

0 10' 20'

# PROPOSED DRAINAGE AREA MAP

FOR

TAX MAP 0104, ID 0000, PARCEL 1463
FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND
PREPARED FOR FOUNDATION OF HOPE


RAUCH INC.
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 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

6-May-25

REVISIONS

| REV. # | DATE | DESCRIPTION |
|---|---|---|

MISS UTILITY OF DELMARVA — ONE CALL DOES IT ALL! — 811

| | |
|---|---|
| DATE: | 5/6/2025 |
| SCALE: | 1" = 10' |
| DRAWN BY: | AK |
| DESIGNED BY: | AK |
| APPROVED BY: | |

SHEET NO.: PR-DA-MAP

DESIGN DEVELOPMENT

Z:\FOUNDATION OF HOPE\CIVIL\PRODUCTION PLANS\FOUNDATION OF HOPE - DRAINAGE AREA MAP.DWG

# 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

## Foundation of Hope Soils Report

# 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

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.

Map Scale: 1:567 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 5 10 20 30

Feet
0 25 50 100 150

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

## 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 21, Sep 6, 2024

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 |
|---|---|---|---|
| MtcA | Mattapex silt loam, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain | 0.8 | 50.8% |
| UoB | Udorthents, loamy, 0 to 5 percent slopes | 0.5 | 31.2% |
| Up | Urban land | 0.3 | 18.0% |
| **Totals for Area of Interest** | | **1.6** | **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

## MtcA—Mattapex silt loam, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain

### Map Unit Setting

*National map unit symbol:* 2thwt
*Elevation:* 0 to 90 feet
*Mean annual precipitation:* 42 to 46 inches
*Mean annual air temperature:* 55 to 59 degrees F
*Frost-free period:* 190 to 260 days
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Mattapex and similar soils:* 80 percent
*Minor components:* 20 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Mattapex

#### Setting

*Landform:* Depressions, flats, swales
*Landform position (three-dimensional):* Dip, talf
*Down-slope shape:* Concave, linear
*Across-slope shape:* Concave, linear
*Parent material:* Silty eolian deposits over fluviomarine sediments

#### Typical profile

*Ap - 0 to 11 inches:* silt loam
*BE - 11 to 15 inches:* silt loam
*Bt - 15 to 36 inches:* silt loam
*2C1 - 36 to 60 inches:* fine sandy loam
*2C2 - 60 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 low to moderately high (0.06 to 0.57 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:* High (about 9.6 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 2w
*Land capability classification (nonirrigated):* 2w
*Hydrologic Soil Group:* C
*Ecological site:* F153CY020MD - Moist Loess Upland
*Hydric soil rating:* No

**Minor Components**

**Nassawango**

*Percent of map unit:* 10 percent
*Landform:* Terraces, flats
*Landform position (three-dimensional):* Rise
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Ecological site:* F153CY030MD - Well Drained Loess Upland
*Hydric soil rating:* No

**Othello, drained**

*Percent of map unit:* 5 percent
*Landform:* Swales, depressions, flats
*Landform position (two-dimensional):* Footslope
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Ecological site:* F149AY090NJ - Coastal Plain Hardwood Swamp
*Hydric soil rating:* Yes

**Crosiadore**

*Percent of map unit:* 5 percent
*Landform:* Flats, depressions
*Landform position (three-dimensional):* Dip
*Down-slope shape:* Linear, concave
*Across-slope shape:* Linear, concave
*Ecological site:* F153CY020MD - Moist Loess Upland
*Hydric soil rating:* No

## UoB—Udorthents, loamy, 0 to 5 percent slopes

**Map Unit Setting**

*National map unit symbol:* 1vh0v
*Elevation:* 0 to 300 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:* Not prime farmland

**Map Unit Composition**

*Udorthents, loamy, and similar soils:* 90 percent
*Minor components:* 10 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Udorthents, Loamy**

**Setting**

*Landform:* Flats
*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Fluviomarine deposits

**Typical profile**

*AC - 0 to 2 inches:* loam
*C - 2 to 72 inches:* gravelly loam

**Properties and qualities**

*Slope:* 0 to 5 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Runoff class:* High
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to very high (0.01 to 19.98 in/hr)
*Depth to water table:* About 40 to 72 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Available water supply, 0 to 60 inches:* Moderate (about 8.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 2e
*Hydrologic Soil Group:* C
*Hydric soil rating:* No

**Minor Components**

**Urban land**

*Percent of map unit:* 10 percent
*Landform:* Flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

## Up—Urban land

**Map Unit Setting**

*National map unit symbol:* 1vh0w
*Elevation:* 0 to 300 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:* Not prime farmland

**Map Unit Composition**

*Urban land:* 90 percent
*Minor components:* 10 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Urban Land

#### Setting

*Landform:* Flats
*Down-slope shape:* Linear
*Across-slope shape:* Linear

### Minor Components

#### Udorthents, loamy

*Percent of map unit:* 10 percent
*Landform:* Broad interstream divides
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

# References

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Dear Mayor, Town Council, and Planning Commission Members:

Attached is a PUD application for the Fox Chase Estates residential community next to the new University of Maryland Shore Regional Medical Center. On the planned time-line, the Fox Chase Estates project will have homes for sale approximately six months prior to the opening of the new hospital.

This project represents a collaborative effort between the property owner, the community, elected officials and the hospital and comprises many unique and positive residential and commercial components. For example, the project offers up to six different residential unit types (with each type having multiple versions). The six types include large single family homes, medium Neo Traditional homes, 22 foot wide (double car garage) town homes and 20 foot wide (single car garage) town homes, condos and apartments (one, two and three bedroom).

And, while the Town of Easton code requires 25% of the homes be affordable (as defined by Town Code), this project exceeds that requirement.

Such a diverse offering is rare in the development world and speaks to our desire to work with the Town of Easton's goals to allow residents of diverse economic abilities to live together in the same community. In addition, Fox Chase estates is priced to attract non-traditional first time home buyers and allow them to create wealth and to move up to a larger homes (if so desired) without leaving the community.

In addition, community amenities, such as the club house, pool and pickleball courts, will allow all residents of the Fox Chase Estates to live and recreate together. Other amenities include 1.5 miles of wooded walking paths, a dog park and a two additional parks for elementary and pre-school aged youth (tot lots). These amenities will be overseen by a single HOA.

The PUD application also includes commercial and mixed use areas where a daycare center can be located (which was requested by the hospital) as well as a coffee shop, restaurant, dry cleaner, etc., so that residents will not need to travel as much outside the development.

Other unique highlights of the plan include future road stubs to neighboring properties (including the hospital), a secondary emergency access point and parking areas that exceed the code requirements.

Finally, per Article 7, Section 2 (Planning and Zoning Commission Review and Action) of the PUD code, the proposed PUD development conforms to the Town of Easton's Comprehensive Plan (*see* Sub-section (a)) and the Zoning Code (*see* Sub-section (b)); and complies with all Town engineering and design regulations and standards (*see* Sub-section (c)) and all Town, County, State and or Federal regulations, polices and plans (*see* Sub-section (d)); and for the reasons discussed above and additionally shown within the plans,

the proposed PUD project is superior and more innovative than conventional developments in the Town and provides greater public benefit without additional adverse impacts to public health, safety and the environment (*see* Sub-section (e)).

And, per Article 7, Section 3 (Mayor and Town Council Action), the proposed PUD development conforms to all applicable standards (*see* Sub-section (A1)); does not interfere with the adequate and orderly provision of the public services to the area (since the services are already at or on the site) (*see* Sub-section (A5)); and does not cause unacceptable traffic congestion or hazard either in or near the site or elsewhere in the Town or Talbot County (*see* Sub-section (A6)).

In addition, the proposed PUD development includes 25.43 acres of protected forestation land as well as a100 ft buffer around the perennial stream. The development also includes existing mature screening landscapes on roughly 90% of the residential portion of community from contiguous properties (*see* sub-section (A7-8)). Finally, the development will raise the value of surrounding properties. (sub-section (A9)).[1]

I would also like to point out that the development will have no more than 365 residential units, which is over 1,400 fewer units than what is otherwise allowed under the PUD density rules. Our team did not want to go higher than 365 units so that the socio-economic diversity of the project could be maintained.

In conclusion, the proposed PUD development directly supports the current and future needs of the Town by (1) partnering with the new hospital to ensure its success by providing nearby quality and affordable housing, (2) providing much-needed starter homes that meet the affordable housing requirements which will allow public safety employees, teachers and others (like our children) to live in the Town of Easton, and (3) provide socio-economic diversity.

Thank you for attention to this application and our team looks forward to working with you and answering all of your questions, concerns and or recommendations.

/s/

[1] Subsections A2 through A4 are addressed in the preceding paragraphs in relation to Section 2 requirements.

**Town of Easton**
Engineering, Planning and Zoning
14 South Harrison Street, Easton, MD 21601

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TOWN OF EASTON

# Easton Staff Development Review

## Property Information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Address | 9684, 9778, 9783, 9687 Technology Drive & 29001, 29004 I-Way Court, Easton, MD 21601 | | | | | | |
| Tax Map | 25 | Grid | 4 | Parcel | 92, 90 | Lot | 1 - 4, 9, 10 |
| Deed Refernce: | Liber | 2754, 2804 | Folio | 19, 456 | | | |
| Plat Reference: | Liber | 89, 4 | Folio | 149, 80G | | | |
| Base Zoning District | BC | Historic District Y ☐ N ☒ | | Planning Redevelopment Y ☐ N ☒ | | | |

Purpose of Application / Description of Work:

Proposed Fox Chase Estates development includes 365 residential units including single-family detached, town-home, and multifamily, as well as 2 commercial buildings and amenities. See enclosed narrative.

## Owner

| | | | |
|---|---|---|---|
| Name | Easton Sunrise Partners, LLC c/o Scott Wagner | | |
| Mailing Address | 928 Riverview Terrace, St Michaels, MD 21663 | | |
| Telephone No. | | Email | |

## Applicant / Agent

| | | | |
|---|---|---|---|
| Name | Lane Engineering, LLC c/o Brett Ewing, AICP | | |
| Mailing Address | 117 Bay Street, Easton, MD 21601 | | |
| Telephone No. | | Email | |

## Surveyor / Engineer

| | | | | | |
|---|---|---|---|---|---|
| Name | Jarret Beyer, P.E. | License No. | 48188 | Expiration Date | 12/28/2025 |
| Mailing Address | Lane Engineering, LLC, 117 Bay Street, Easton, MD 21601 | | | | |
| Telephone No. | | Email | | | |

***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 5/7/2025

Printed Name of Applicant or Agent Brett Ewing, AICP, Lane Engineering, LLC

*For Office Use Only*

Easton Staff Development Review Meeting Required Y [X] N [ ]

Easton Staff Development Review Meeting Date **05/28/2025**

Completeness Check Date **05/07/2025**

**2025-1456 / ESDR 25-06**

Revisions/Resubmissions Required Y [ ] N [ ] **TBD**

Resubmission Date

Documents Received Y [ ] N [ ]

Staff Determination

**Scheduled for May 28, 2025 Easton Staff Development Review**

Planning Commission Requir( Y [X] N [ ]

BOZA Required Y [ ] N [ ] **TBD**

Historic District Commission Required Y [ ] N [X]

Resubmission for ESDR Required Y [ ] N [ ] **TBD**

Staff Signature Samantha N. Smith Date **05/07/2025**

Revised 02-2019

**Town of Easton**
Engineering, Planning and Zoning
14 South Harrison Street, Easton, MD 21601

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TOWN OF EASTON

# Site Plan, PUD, Planned Healthcare Application

## Application Type

Planned Unit Development ☒ Amendment ☐ Health Care (HC) ☐ Site Plan ☒

## Subdivision Information

| | | | | | |
|---|---|---|---|---|---|
| Name | Fox Chase Estates | | | | |
| Original Property Size | Acres | 112.816 AC± | Square Feet | 4,914,265 SF± | |
| Telephone No. | | Email | | | |

## Site Plan Information

| | | | | | |
|---|---|---|---|---|---|
| Property Size | Acres | 112.816 AC± | Square Feet | 4,914,265 SF± | |
| Structure's Floor Area | 408,261 SF± | Footprint | Structure's Square Feet | 731,098 SF± | GFA |
| Area of Disturbance | 76 AC± | | Number of Dwelling Units | 365 | |

## Property Information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Address | 9684, 9778, 9783, 9687 Technology Drive & 29001, 29004 I-Way Court, Easton, MD 21601 | | | | | | |
| Tax Map | 25 | Grid | 4 | Parcel | 92, 90 | Lot | 1 - 4, 9, 10 |
| Deed Refernce: | Liber | 2754, 2804 | Folio | 19, 456 | | | |
| Plat Reference: | Liber | 89, 4 | Folio | 149, 80G | | | |
| Base Zoning District | BC | Historic Y ☐ N ☒ | Planned Redevelopment Y ☐ N ☒ | | | | |
| Source of Electricity | Easton | | | | | | |

## Owner

| | |
|---|---|
| Name | Easton Sunrise Partners, LLC c/o Scott Wagner |
| Mailing Address | 928 Riverview Terrace, St Michaels, MD 21663 |
| Telephone No. | Email |

## Applicant or Agent

| | |
|---|---|
| Name | Lane Engineering, LLC c/o Brett Ewing, AICP |
| Mailing Address | 117 Bay Street, Easton, MD 21601 |
| Telephone No. | Email |

## Surveyor / Engineer

| | | | | | |
|---|---|---|---|---|---|
| Name | Jarret Beyer, P.E. | License No. | 48188 | Expiration Date | 12/28/2025 |
| Mailing Address | Lane Engineering, LLC, 117 Bay Street, Easton, MD 21601 | | | | |
| Telephone No. | | Email | | | |

**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 5/7/2025

Printed Name of Applicant or Agent Brett Ewing, AICP, Lane Engineering, LLC

*For Office Use Only*

| | | | |
|---|---|---|---|
| Planning Commission Required | Y ☒ N ☐ | | |
| Planning Commission Meeting Date | **TBD** | | |
| Sketch Approval Date | | Project No. | **PUD 25-01** |
| Prelim/Dev. Approval Date | | Application No. | **2025-1456** |
| Final Approval Date | | Sketch Fee Paid | **05/07/2025** |
| Recordation Date | | Develop. Fee Paid | |

*Revised 02-2019*

# PUD SKETCH PLAN
## FOR
# FOX CHASE ESTATES
## IN THE TOWN OF EASTON
## TALBOT COUNTY, MD

SITE PLAN DATA

PROPERTY OWNER: EASTON SUNRISE PARTNERS, LLC

TAX PARCEL 92 (108.631 ACRES)
LOT 1 PROPERTY ADDRESS: 9684 TECHNOLOGY DRIVE, EASTON, MD 21601
LOT 2 PROPERTY ADDRESS: 9778 TECHNOLOGY DRIVE, EASTON, MD 21601
LOT 3 PROPERTY ADDRESS: 9783 TECHNOLOGY DRIVE, EASTON, MD 21601
LOT 4 PROPERTY ADDRESS: 9687 TECHNOLOGY DRIVE, EASTON, MD 21601
DEED REFERENCE: 2754/19
PLAT REFERENCE: 89/149

TAX PARCEL 90 (4.185 ACRES)
LOT 9 PROPERTY ADDRESS: 29001 I-WAY COURT, EASTON, MD 21601
LOT 10 PROPERTY ADDRESS: 29004 I-WAY COURT, EASTON, MD 21601
DEED REFERENCE: 2804/456
PLAT REFERENCE: 4/80G

CURRENT ZONING: BC

PROPOSED ZONING: PUD

SITE AREA: 112.816 ACRES TOTAL

EXISTING DEVELOPMENT: THE PARCEL IS CURRENTLY AGRICULTURAL TILLED FARM LAND WITH SOME WOODLANDS.

PROPOSED DEVELOPMENT: MIXED USE RESIDENTIAL & COMMERCIAL

| | |
|---|---|
| SINGLE FAMILY: | 61 LOTS |
| NEO-TRADITIONAL: | 47 LOTS |
| TOWNHOUSES: | |
| 20' WIDE UNITS: | 65 LOTS |
| 22' WIDE UNITS: | 72 LOTS |
| MULTI-FAMILY: | 120 UNITS |
| TOTAL DWELLING UNITS: | 365 UNITS |

2-STORY COMMERCIAL BUILDING (LOT 9): 20,000 SF GFA

2-STORY COMMERCIAL BUILDING (LOT 10): 23,000 SF GFA

RESIDENTIAL SETBACKS PROPOSED:

FRONT: 25'
SIDE: 8'
REAR: 15'

PARKING REQUIRED:

| | |
|---|---|
| SINGLE FAMILY DETACHED DWELLING: | 2 SPACES/DWELLING; 108 X 2 = 216 SPACES REQUIRED; 216 PROVIDED |
| TOWNHOME UNIT: | 2 SPACES/TOWNHOME; 137 X 2 = 274 SPACES REQUIRED; 274 PROVIDED |
| MULTIFAMILY: | MINIMUM (1 SPACE/PER DWELLING UNIT); 120 X 1 = 120 SPACES REQUIRED<br>MAXIMUM (2 SPACE/PER DWELLING UNIT); 120 X 2 = 240 SPACES REQUIRED<br>PROVIDED: 190 SPACES (1.58 SPACES/ UNIT)<br>BIKE SPACES (0.5 SPACES/ DU): 120 / 0.5 = 60 BIKE SPACES REQUIRED |
| COMMERCIAL BUILDING: | |
| LOT 9 (20,000 SF) | MINIMUM (1 SPACE/250 SF); 20,000/250 = 80 SPACES REQUIRED<br>MAXIMUM (1 SPACE/140 SF); 20,000/140 = 143 SPACES REQUIRED<br>PROVIDED: 80 SPACES<br>BIKE SPACES (1/ 10 PARKING SPACES): 80/ 10 = 8 BIKE SPACES REQUIRED |
| LOT 10 (23,000 SF) | MINIMUM (1 SPACE/250 SF); 23,000/250 = 92 SPACES REQUIRED<br>MAXIMUM (1 SPACE/140 SF); 23,000/140 = 164 SPACES REQUIRED<br>PROVIDED: 106 SPACES<br>BIKE SPACES (1/ 10 PARKING SPACES): 106/ 10 = 11 BIKE SPACES REQUIRED |

SITE LIGHTING; ALL PROPOSED SITE LIGHTING SHALL BE SHARP CUTOFF LUMINAIRES ON MAXIMUM 18' HIGH POLES RESULTING IN NO MORE THAN 1-FOOT-CANDLE OF LIGHT AT PROPERTY PERIMETER.

AMENITY RECREATIONAL OPEN SPACE: 30% (33.845 AC.) REQUIRED; 34.4% (38.794 AC.) PROVIDED (EXCLUDING STORMWATER MANAGEMENT AREAS)

STORMWATER MANAGEMENT: QUANTITY CONTROL IS ADDRESSED. QUALITY TREATMENT ADDRESSED BY PROVIDING ENVIRONMENTAL SITE DESIGN IN ACCORDANCE WITH CHAPTER 5 OF THE MARYLAND STORMWATER DESIGN MANUAL, PROVIDING ESDV TO THE MAXIMUM EXTENT PRACTICABLE (MEP).

APPLICATION COMPLIANCE: SEC. 28-701 (H)(1) (A) THROUGH (H)

A. PROPOSED DEVELOPMENT LAYOUT – SHOWN HEREIN.

B. 0.760 ACRES TO BE AMENITY PARCEL. 0.630 ACRES± TO BE USED FOR DOG PARK,
0.410 ACRES TO BE USED FOR TOT LOTS, 0.210 ACRES TO BE USED FOR TRAIL,
36.784 ACRES± TO BE USED FOR FOREST CONSERVATION EASEMENT AREA & STREAM BUFFER.

C. THE PROPOSED LAYOUT SHOWS 4.185 AC± OF COMMERCIAL AREA.

D. TYPE OF DWELLING UNITS ARE DESCRIBED ON SHEET 4.

E. RESIDENTIAL LOTS ARE SHOWN ON THE PROPOSED LAYOUT.

F. LAND USE TABULATIONS ARE AS FOLLOWS:

| | |
|---|---|
| – SINGLE FAMILY DETACHED DWELLINGS: | 16.449 AC (14.58% OF SITE) |
| – NEO-TRADITIONAL SINGLE FAMILY DETACHED DWELLINGS: | 7.704 AC (6.83% OF SITE) |
| – TOWNHOUSE UNITS: | 8.411 AC (7.46% OF SITE) |
| – MULTIFAMILY: | 4.912 AC (4.35% OF SITE) |
| – AMENITY/ RECREATIONAL OPEN SPACE: | 38.794 AC (34.39% OF SITE) |
| – STORMWATER MANAGEMENT/ OPEN LANDSCAPE AREAS (ISLANDS, MEDIANS, TRAFFIC CIRCLE, ETC.): | 19.222 AC (17.04% OF SITE) |
| – INTERNAL RIGHT-OF-WAYS & WIDENING: | 13.139 AC (11.65% OF SITE) |
| – COMMERCIAL AREAS (LOTS 9 & 10): | 4.185 AC (3.70% OF SITE) |
| – FOREST CONSERVATION EASEMENT AREA: | 25.434 AC± (INCLUDED IN OTHER AREAS) |
| – BUFFERYARDS: | 2.006 AC± (INCLUDED IN OTHER AREAS) |

G. RESIDENTIAL DENSITY TABULATION: (3.5 SFD DU/AC ALLOWED)
(5 MULTIFAMILY DU/AC ALLOWED)

| | |
|---|---|
| – SINGLE FAMILY DETACHED DWELLINGS: | 61 LOTS |
| – NEO-TRADITIONAL DETACHED DWELLINGS: | 47 |
| – TOWNHOMES: | 137 UNITS |
| – MULTIFAMILY: | 120 UNITS |

THE MAXIMUM DENSITY PERMITTED IN THE PUD DISTRICT IS 16 DU/ACRE.
THE PROPOSED DENSITY IS 3.36 DU/ACRE CONSISTENT WITH MDP GUIDELINES FOR SMART GROWTH.

H. CONCEPTUAL DWELLING & COMMERCIAL ELEVATIONS ARE INCLUDED WITH THIS SUBMITTAL.

I. PROPOSED VEHICULAR, PEDESTRIAN, AND BICYCLE CIRCULATION PROVIDED ON PLAN AND COMPLIANT WITH TOWN STANDARDS.

J. FOREST CONSERVATION HAS BEEN PREVIOUSLY SATISFIED FOR THIS SITE. REFER TO THE FOREST CONSERVATION PLAN INCLUDED AS PART OF A FINAL PLAT, PHASE 1, "EASTON TECHNOLOGY CENTER" PREPARED BY LANE ENGINEERING, INC., DATED MAY, 1997, RECORDED AMONG THE LAN RECORDS OF TALBOT COUNTY, MARYLAND, IN PLAT LIBER 4, BEGINNING AT FOLIO 80G.

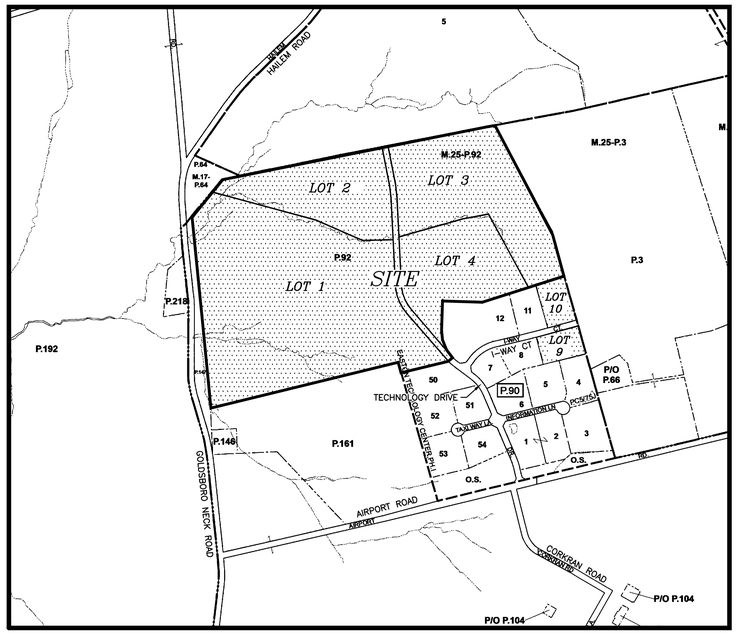
K. METES AND BOUNDS DESCRIPTION INCLUDED WITH THIS SUBMITTAL.

L. SITE & BUILDING ILLUSTRATIVES ENCLOSED.

M. SEE PUD COMPLIANCE NARRATIVE ENCLOSED.

N. ESTABLISHED DEVELOPMENT STANDARDS:

| | |
|---|---|
| – RESIDENTIAL SETBACKS: | SEE ABOVE |
| – PARKING LOT SETBACKS FROM PROPERTY LINES: | 1' PROPOSED |
| – MULTIFAMILY BUILDING HEIGHT: | 58'± PROPOSED |
| – MULTIFAMILY FRONT SETBACK PROPOSED: | 15' PROPOSED |




## VICINITY MAP

600' 300' 0' 300' 600' 1,200'
SCALE IN FEET

INDEX OF SHEETS


| SHEET No. | TITLE |
|---|---|
| 1 | TITLE SHEET & PROJECT NOTES |
| 2 | EXISTING CONDITIONS AND LINE REVISION |
| 3 | SKETCH CONCEPT PLAN |
| 4 | SUBDIVISION PLAT SKETCH & LOT EXHIBIT |
| 5 | LOT DETAILS |
| 6 | TRANSPORTATION EXHIBIT & STREET DETAILS |


LANDSCAPE REQUIREMENTS SUMMARY
PER ZONING ORDINANCE (ALL NATIVE SPECIES):

SECTION 1014.6.A.:

1. STREET TREES @ 1 TREE/25' OF STREET CENTERLINE LENGTH
10,085 LF / 25 = 404 TREES REQUIRED

LANDSCAPE BUFFERYARD REQUIREMENTS (SECTION 1014.7.E.)

10' WIDE LANDSCAPE BUFFERYARD 'E' (E1-E3)
4,249 LF LESS RIGHT-OF-WAY (60 LF) = 4,189 LF / 50' = 83.8 PLANT UNITS (PU)

1 SHADE/ CANOPY TREE X 83.8 PU = 84 SHADE/ CANOPY TREES REQUIRED
3 EVERGREEN TREES X 83.8 PU = 251 EVERGREEN TREES REQUIRED

10' WIDE LANDSCAPE BUFFERYARD 'E' (E4-E7)
3,665 LF LESS DELMARVA UTILITY EASEMENT & EMERGENCY ACCESS EASEMENT (275 LF)= 3,665 LF
3,665 LF / 50' = 73.3 PLANT UNITS (PU)

1 SHADE/ CANOPY TREE X 73.3 PU = 74 SHADE/ CANOPY TREES REQUIRED
3 EVERGREEN TREES X 73.3 PU = 220 EVERGREEN TREES REQUIRED

THE EXISTING FOREST CONSERVATION EASEMENT ALONG THESE AREAS MEETS OR EXCEEDS BUFFER YARD REQUIREMENT.

10' WIDE LANDSCAPE BUFFERYARD 'E' (E8)
405 LF / 50' = 8.1 PLANT UNITS (PU)

1 SHADE/ CANOPY TREE X 8.1 PU = 8 SHADE/ CANOPY TREES REQUIRED
3 EVERGREEN TREES X 8.1 PU = 24 EVERGREEN TREES REQUIRED

10' WIDE LANDSCAPE BUFFERYARD 'E' (E9)
482 LF / 50' = 8.1 PLANT UNITS (PU)

FENCE WITH 3 LARGE EVERGREEN SHRUBS X 8.1 PU = PRIVACY FENCE &
24 LARGE EVERGREEN SHRUBS REQUIRED

COMPREHENSIVE PLAN DESIGN PRINCIPLES RESPONSE NARRATIVE

PRINCIPLE #1- INTEGRATED USES ARE DESIRABLE- THIS DEVELOPMENT PROPOSAL ESTABLISHES ATTAINABLE HOUSING AT A TIME WHEN DEMAND IS HIGH BUT SUPPLY IS EXTREMELY LOW. EASTON'S HOUSING MARKET IS IN NEED OF A NEW COMMUNITY WITH HOUSING OPPORTUNITIES PROVIDED HEREIN.

PRINCIPLE #2- NATURAL FEATURES SHOULD DETERMINE DESIGN- A PERENNIAL STREAM WITH BUFFERS; SITE LAYOUT IS DICTATED TO AVOID BUFFERS BY MAXIMIZING DENSITY, COMPLIANCE WITH TOWN ZONING AND SUBDIVISION DESIGN STANDARDS, REDUCING IMPACTS TO NEIGHBORING PROPERTIES AND PROVIDING IDEAL LOCATIONS FOR AMENITY/ RECREATIONAL OPEN SPACE AND MIXED RESIDENTIAL AND COMMERCIAL USES.

PRINCIPLE #3- AUTOMOBILES SHOULD NOT DETERMINE DESIGN- COMMUNITY DESIGN FOCUSES ON PARKS/GREEN SPACE AS MAIN FOCAL POINTS AND TO REDUCE IMPACTS TO NEIGHBORING PROPERTIES. SIDEWALKS PROVIDED THROUGHOUT TO IMPROVE PEDESTRIAN CIRCULATION TO ACCOMMODATE AND UTILIZE THE SURROUNDING RECREATION AND COMMERCIAL SPACES.

PRINCIPLE #4- AMPLE OPEN SPACE SHOULD BE PROVIDED- THE PROJECT COMPLIES WITH THE TOWN'S PUD STANDARDS OF 30% OPEN SPACE, AND THE FOREST CONSERVATION REQUIREMENTS OF 25.434 ACRES AND WILL PROVIDE ADEQUATE PASSIVE AND ACTIVE RECREATIONAL OPPORTUNITIES FOR THE RESIDENTS.

PRINCIPLE #5- ARCHITECTURE SHOULD RESPECT EASTON'S HISTORICAL DEVELOPMENT- THIS APPLICATION PROPOSES ARCHITECTURE COMPATIBLE WITH EASTON'S WORKFORCE HOUSING, SINGLE & MULTIFAMILY DEVELOPMENTS AND UTILIZES MATERIALS AND DETAILING COMMONLY FOUND THROUGH-OUT EASTON.

PRINCIPLE #6- SIGNS SHOULD INFORM BUT NOT DOMINATE- SIGNAGE WILL COMPLY WITH BASE ZONING REQUIREMENTS.

PRINCIPLE #7- NEIGHBORHOODS SHOULD CONTAIN A DIVERSITY OF HOUSING TYPES- MULTIPLE DWELLING/TOWNHOME OPTIONS, EACH WITH MULTIPLE EXTENSION OPTIONS, ARE AVAILABLE FROM THE DEVELOPER/APPLICANT.

PRINCIPLE #8 RESIDENTIAL NEIGHBORHOODS SHOULD BE INTERESTING PLACES- COMMUNITY/ MULTIUSE PARKS INTEGRATED THROUGHOUT THE DEVELOPMENT TO ENHANCE THE CHARACTER OF THE NEIGHBORHOOD.

PRINCIPLE #9- NEIGHBORHOODS SHOULD CONNECT- TWO VEHICULAR ACCESS POINTS FOR FUTURE INTERCONNECTION ARE PROPOSED; COMMUNITY PROVIDES SIDEWALKS THROUGHOUT TO IMPROVE PEDESTRIAN MOVEMENT AND ACCESS TO COMMUNITY PARK AND COMMERCIAL SPACE.

STATEMENT OF PURPOSE & INTENT

THE PURPOSE OF THESE PLANS IS TO OBTAIN PUD SKETCH SITE PLAN APPROVAL FOR A PROPOSED MIXED USE RESIDENTIAL AND COMMERCIAL DEVELOPMENT.

SITE ADDRESS

TECHNOLOGY DRIVE
EASTON, MD 21601

OWNER

EASTON SUNRISE PARTNERS, LLC
928 RIVERVIEW TERRACE
ST. MICHAELS, MD 21663

LAND PLANNER/CIVIL ENGINEER

LANE ENGINEERING, LLC
C/O BRETT C. EWING, AICP
C/O JARRET BEYER, PE
117 BAY STREET
EASTON, MD 21601
(410) 822-8003

REVISIONS

| No. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | | |

WARNING!!
THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE QUANTITIES SHOWN ON THIS PLAN ARE FOR INFORMATIONAL AND PERMITTING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO HIS OWN SATISFACTION PRIOR TO BEGINNING CONSTRUCTION.

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BEFORE YOU DIG CALL
1-800-441-8355 OR 811
PROTECT YOURSELF, GIVE
TWO WORKING DAYS NOTICE


Lane Engineering, LLC
Established 1986
Civil Engineers • Land Planning • Land Surveyors
E-mail: general@lanei nc.com
Easton, MD 21601 (410) 822-8003
15 Washington St. Cambridge, MD 21613 (410) 221-0818
354 Pennsylvania Ave. Centreville, MD 21617 (410) 758-2095


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. 48188 , Expiration Date: 12/28/2025.

SEAL

STATE OF MARYLAND
BRETT CHRISTOPHER EWING
48188
PROFESSIONAL ENGINEER

5/7/25
DATE

TITLE SHEET & PROJECT NOTES

FOR
FOX CHASE ESTATES

*IN THE TOWN OF EASTON, ELECTION WARD 1*
*TALBOT COUNTY, MARYLAND*
*TAX MAP 25 GRID 4 PARCEL 92 LOTS 1, 2, 3 & 4*

| ISSUED FOR: | DATE: | BY: |
|---|---|---|
| AGENCY REVIEW | 5/7/25 | BCE |

| | |
|---|---|
| SHEET No. 1 OF 6 | DATE: |
| SCALE: AS NOTED | JOB No. 220210 |
| | FILE No. 3208 |

© LANE ENGINEERING, LLC


Date: 05/07/2025 - 8:39am User: wbarnhart Project Manager: BCE
Drawing Path: C:\awp\AcPublish_25408\RSK-PLTS-220210.dwg | Sheet1TitleSheet
XREF File(s): RSK-BASE-220210/XRN-BASE-220210/RBS-BASE-24368-220210/ALD-BASE-220210/CSK-BASE-220210/ULP-BASE-220210/CSK-Road-BASE-220210/CSK-LOT-BASE/XRN-LOTS-BASE-220210

## SITE NOTES

EXISTING ZONING CLASSIFICATION: BC (BUSINESS COMMERCIAL)
EXISTING SETBACKS:
FRONT– 40'
SIDE– 10'
REAR– 30'

THE PROPERTY SHOWN HEREON LIES ENTIRELY OUTSIDE OF THE CHESAPEAKE BAY CRITICAL AREA AS SHOWN ON THE TALBOT COUNTY CRITICAL AREA MAPS IN ACCORDANCE WITH TALBOT COUNTY BILL No. 1295, ENACTED AUGUST 12, 2014.

THE NONTIDAL WETLANDS AND ASSOCIATED BUFFERS SHOWN HEREON WERE TAKEN FROM A JURISDICTIONAL DETERMINATION PLAT, PREPARED BY LANE ENGINEERING, LLC, DATED 10–20–20.

THE STREAMS AND ASSOCIATED BUFFERS SHOWN HEREON WERE TAKEN FROM A JURISDICTIONAL DETERMINATION PLAT, PREPARED BY LANE ENGINEERING, LLC, DATED 10–20–20.

THE IMPROVEMENTS SHOWN HEREON WERE FIELD LOCATED BY LANE ENGINEERING, LLC ON 03–01–24.

THE DIMENSIONS OF BUILDINGS, STRUCTURES AND SETBACKS WERE MEASURED TO THE NEAREST 0.1 FOOT.

THE TREE LINE SHOWN HEREON WAS TAKEN FROM THE 2022 TALBOT COUNTY AERIALS AND IS APPROXIMATE ONLY.

THE CONTOURS SHOWN HEREON WERE TAKEN FROM FIELD RUN TOPOGRAPHY BY LANE ENGINEERING, LLC ON 03–01–24.

THE ELEVATIONS SHOWN HEREON ARE NAVD 1988 DATUM AS ESTABLISHED BY GPS METHODOLOGY TO CORS STATIONS MDNM (NGS CERTIFICATE PENDING) AND LOYF (PID DK7414) COMBINED FACTOR: 0.99995360.

THE COORDINATES SHOWN HEREON ARE BASED ON THE MARYLAND COORDINATE SYSTEM NAD83 (2011), AS ESTABLISHED BY GPS METHODOLOGY TO CORS STATIONS MDNM (NGS CERTIFICATE PENDING) AND LOYF (PID DK7414) COMBINED FACTOR: 0.99995360. THE DISTANCES SHOWN HEREON ARE GROUND BASED.

NO ABSTRACT OF TITLE, TITLE COMMITMENT, NOR RESULTS OF A TITLE SEARCH HAVE BEEN FURNISHED TO LANE ENGINEERING, LLC. THE BUILDING RESTRICTION LINES AS SHOWN HEREON ARE BASED SOLELY ON THE CURRENT TOWN OF EASTON COUNTY ZONING ORDINANCE APPLICABLE TO THE PROPERTY SHOWN HEREON AND ARE SUBJECT TO CHANGE WITH THE REVISION OF ZONING LAWS. OTHER DOCUMENTS OF RECORD MAY EXIST THAT MAY AFFECT THE SURVEYED PROPERTY REFLECTED HEREON, INCLUDING BUT NOT LIMITED TO EASEMENTS, ENCUMBRANCES, RESTRICTIVE COVENANTS, PLAT RESTRICTIONS OR ANY OTHER FACTS THAT AN ACCURATE, COMPLETE AND CURRENT TITLE SEARCH MAY DISCLOSE.

## FLOOD DATA

A PORTION OF THE PROPERTY SHOWN HEREON IS LOCATED IN THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP) SPECIAL FLOOD HAZARD AREA (SFHA) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD. THE PROPERTY IS MAPPED IN THE "AE" (EL 5) AND "X" FLOOD ZONES AS SHOWN ON THE FLOOD INSURANCE RATE MAPS FOR COMMUNITY NO. 240067, MAP NO. 24041C0180D FOR THE TOWN OF EASTON, MARYLAND. THE 1% ANNUAL CHANCE FLOOD (100–YEAR FLOOD), ALSO KNOWN AS THE BASE FLOOD, IS THE FLOOD THAT HAS A 1% CHANCE OF BEING EQUALED OR EXCEEDED IN ANY GIVEN YEAR. THE SFHA IS THE AREA SUBJECT TO FLOODING BY THE 1% ANNUAL CHANCE FLOOD. THE SFHA INCLUDES ZONES A, AE, AH, AO, AR, A99, V & VE. THE BASE FLOOD ELEVATION (BFE) IS THE WATER SURFACE ELEVATION OF THE 1% ANNUAL CHANCE FLOOD. FLOOD INSURANCE MAY BE REQUIRED FOR STRUCTURES LOCATED IN THE SPECIAL FLOOD HAZARD AREA.

FLOOD ZONE LEGEND
ZONES A, AE, AH, AO, AR, A99, V & VE – 1% ANNUAL CHANCE FLOOD
ZONE X – AREA OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD

THE FLOOD DATA SHOWN HEREON IS BASED ON AVAILABLE MAPPED AND/OR DIGITAL INFORMATION AND IS DEPICTED AS DIRECTED AND REQUIRED BY FEDERAL, STATE AND LOCAL REGULATIONS. IT IS SUBJECT TO DATA INACCURACIES AND REGULATORY CHANGE AND SHOULD BE VERIFIED PRIOR TO FINALIZING DEVELOPMENT OR IMPROVEMENT PLANS FOR THE SUBJECT LANDS.

## *ADJACENT PROPERTY OWNERS*

*TAX MAP 25, PARCEL 92*

| *LOT #* | *CURRENT OWNER* | *DEED* | *PLAT* | *ZONING* | *USE* |
|---|---|---|---|---|---|
| *LOT 4* | *29000 INFORMATION LANE, LLC* | *2412/251* | *4/80* | *BC* | *INDUSTRIAL* |
| *LOT 5* | *29000 INFORMATION LANE, LLC* | *2412/251* | *4/80* | *BC* | *INDUSTRIAL* |
| *LOT 8* | *DAVIS M. RICHARDSON & BARBI B. RICHARDSON* | *2256/350* | *4/80* | *BC* | *INDUSTRIAL* |
| *LOT 11* | *ZIG, LLC* | *2529/336* | *4/80* | *BC* | *INDUSTRIAL* |
| *LOT 12* | *EASTON SUNRISE PARTNERS, LLC* | *2705/413* | *91/51* | *BC* | *INDUSTRIAL* |
| *LOT 13* | *EASTON SUNRISE PARTNERS, LLC* | *2705/413* | *91/51* | *BC* | *INDUSTRIAL* |
| *LOT 50* | *AVAS 5150 TECHNOLOGY, LLC* | *2935/500* | *4/80* | *BC* | *INDUSTRIAL* |

### PROPERTY BOUNDARY CURVE TABLE

| CURVE | RADIUS | ARC LENGTH | TANGENT | CHD. BEARING | CHD. LENGTH |
|---|---|---|---|---|---|
| C1 | 725.00' | 108.11' | 54.16' | S 06°39'18" E | 108.01' |
| C2 | 775.00' | 115.57' | 57.89' | N 06°39'18" W | 115.46' |
| C3 | 525.00' | 360.93' | 187.93' | S 22°04'42" E | 353.87' |
| C4 | 475.00' | 326.56' | 170.03' | N 22°04'42" W | 320.17' |
| C7 | 325.00' | 248.80' | 130.86' | S 19°50'30" E | 242.77' |
| C8 | 375.00' | 14.08' | 7.04' | N 42°50'55" W | 14.08' |

### REVISIONS

| No. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | | |

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MISS UTILITY
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BEFORE YOU DIG CALL 1–800–441–8355 OR 811
PROTECT YOURSELF, GIVE TWO WORKING DAYS NOTICE


Lane Engineering, LLC
Established 1986
Civil Engineers • Land Planning • Land Surveyors
E–mail: general@lane–eng.com
117 Bay St. Easton, MD 21601 (410) 822–8003
15 Washington St. Cambridge, MD 21613 (410) 221–0818
354 Pennsylvania Ave. Centreville, MD 21617 (410) 758–2095


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. 48188 , Expiration Date: 12/28/2025.

SEAL
STATE OF MARYLAND
BRENT C. ENGLAND
48188
PROFESSIONAL ENGINEER
5/7/25
DATE

# EXISTING CONDITIONS & LINE REVISION PLAN

FOR
FOX CHASE ESTATES

*IN THE TOWN OF EASTON, ELECTION WARD 1*
*TALBOT COUNTY, MARYLAND*
*TAX MAP 25 GRID 4 PARCEL 92 LOTS 1, 2, 3 & 4*

ISSUED FOR: DATE: BY:
AGENCY REVIEW 5/7/25 BCE

SHEET No. 2 OF 6
SCALE: AS NOTED
DATE:
JOB No. 220210
FILE No. 3208

LANE ENGINEERING, LLC

Date: 05/07/2025 – 8:39am User: wbarnhart Project Manager: BCE
Drawing Path: C:\swap\XuPublish_25408\RSK–PLTS–220210.dwg | Sheet2ExistingConditions
XREF File(s): RSK–BASE–220210/XRH–BASE–220210/RBS–BASE–2438–220210/WLD–BASE–220210/CSK–BASE–220210/LLP–PUD–BASE–220210/CSK–Road–BASE–220210/CSK–LOT–BASE/XRN–LOTS–BASE–220210

## ESD SUMMARY CHART

| DRAINAGE AREA | TYPE OF ESD PRACTICE | TYPE OF ESD PRACTICE (STRUCTURE NAME) | ON-SITE OR OFF-SITE STRUCTURE | RUNOFF CURVE NUMBER (RCN) WEIGHTED | MARYLAND GRID COORDINATE NAD 83 METERS NORTHING | MARYLAND GRID COORDINATE NAD 83 METERS EASTING | ESD PRACTICE TOTAL DRAINAGE AREA (ACRES) | ESD PRACTICE IMPERVIOUS DRAINAGE AREA (ACRES) | SURFACE AREA OF ESD PRACTICE (ACRES) | TARGET PE (IN) | ACTUAL PE (IN) | TARGET ESDv ($FT^3$) | ACTUAL ESDv ($FT^3$) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SGW | – | ON-SITE | – | 419188.37 | 1576174.97 | 13.56 | 3.77 | 0.48 | – | – | 24,893 | 33,969 |
| 7 | SGW | – | ON-SITE | – | 419856.51 | 1575073.59 | 16.94 | 7.66 | 1.30 | – | – | 46,366 | 78,668 |
| 8 | SGW | – | ON-SITE | – | 420064.31 | 1576351.18 | 9.72 | 2.95 | 0.44 | – | – | 22,060 | 31,299 |
| 9 | SGW | – | ON-SITE | – | 420049.62 | 1577135.65 | 4.54 | 1.26 | 0.44 | – | – | 8,468 | 13,821 |
| 10 | SGW | – | ON-SITE | – | 420506.39 | 1576908.27 | 6.69 | 3.05 | 0.43 | – | – | 20,131 | 31,315 |
| 11 | SGW | – | ON-SITE | – | 420391.69 | 1576269.90 | 6.90 | 2.84 | 0.46 | – | – | 18,949 | 29,477 |
| 12 | SGW | – | ON-SITE | – | 420315.77 | 1575876.69 | 4.53 | 2.11 | 0.35 | – | – | 16,985 | 21,617 |
| 13 | SGW | – | ON-SITE | – | 420639.18 | 1575182.56 | 5.15 | 1.66 | 0.39 | – | – | 13,984 | 17,797 |
| 14 | SGW | – | ON-SITE | – | 419230.71 | 1577314.09 | 2.00 | 1.01 | 0.11 | – | – | 6,559 | 8,590 |
| 15 | SGW | – | ON-SITE | – | 419596.61 | 1577326.64 | 2.18 | 1.24 | 0.15 | – | – | 8,287 | 11,960 |

## SWM QUANTITY SUMMARY CHART

| PRACTICE | DA (ACRES) | IMPERVIOUS (ACRES) | RCN | Tc (MINUTES) | PRE 2 YEAR | POST 2 YEAR | WSE | PRE 10 YEAR | POST 10 YEAR | WSE | PRE 100 YEAR | POST 100 YEAR | WSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SWM #1 (POI #1) | 13.56 | 3.77 | – | 6.0 | 7.12 | 1.15 | – | 15.96 | 11.98 | – | – | – | – |
| SWM #2 (POI#2) | 17.27 | 7.71 | – | 6.4 | 17.49 | 0.60 | – | 38.65 | 8.73 | – | – | – | – |
| SWM #7 (POI #3) | 15.31 | 2.47 | – | 13.3 | 8.21 | 7.38 | – | 20.85 | 20.63 | – | – | – | – |
| SWM #3-6 (POI #4) | 35.03 | 10.10 | – | 11.6 | 14.56 | 0.99 | – | 36.82 | 16.48 | – | – | – | – |
| N/A (POI #5) | 1.86 | 0.29 | – | 6.8 | 3.30 | 0.22 | – | 9.16 | 2.05 | – | – | – | – |
| SWM #8 (POI #6) | 7.03 | 1.68 | – | 22.2 | 3.44 | 0.02 | – | 10.70 | 0.45 | – | – | – | – |
| SWM #9 (POI #7) | 2.00 | 1.01 | – | 6.0 | 2.43 | 0.30 | – | 4.93 | 4.07 | – | – | – | – |
| SWM #10 (POI #8) | 2.19 | 1.24 | – | 6.0 | 2.98 | 0.34 | – | 6.16 | 4.93 | – | – | – | – |

BUFFERYARD LEGEND

(E) 10' WIDE BUFFERYARD 'E'

NOTE: PROPOSED BUFFERYARDS UTILIZE LANDSCAPE OVERLAPPING CREDITS FOR FOREST CONSERVATION

NOTE:

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REVISIONS

| No. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | | |

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SEAL

STATE OF MARYLAND — ROBERT CHRISTOPHER EVANS — 48188 — PROFESSIONAL ENGINEER

5/7/25
DATE

# SKETCH CONCEPT PLAN

FOR

# FOX CHASE ESTATES

*IN THE TOWN OF EASTON, ELECTION WARD 1*
*TALBOT COUNTY, MARYLAND*
*TAX MAP 25 GRID 4 PARCEL 92 LOTS 1, 2, 3 & 4*

ISSUED FOR: AGENCY REVIEW — DATE: 5/7/25 — BY: BCE

SHEET No. 3 OF 6

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DATE:

JOB No. 220210

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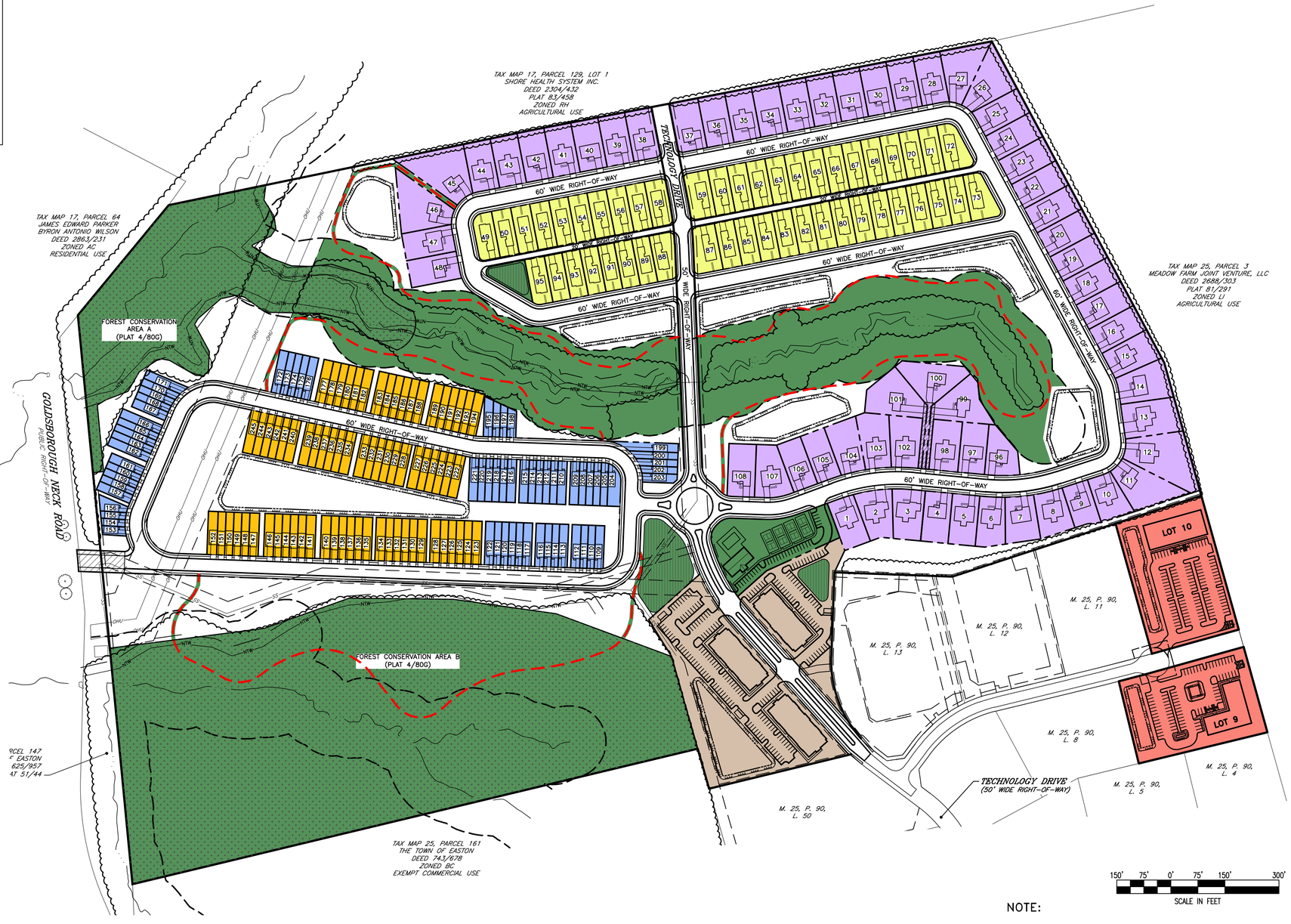
Drawing Path: C:\swap\AcPublish_25408\RSK-PLTS-220210.dwg | Sheet3SketchConceptPlan
XREF File(s): RSK-BASE-220210/XRN-BASE-220210/RBS-BASE-2438-220210/VLD-BASE-220210/CSK-BASE-220210/LUP-PUD-BASE-220210/CSK-Road-BASE-220210/CSK-LOT-BASE/XRN-LOTS-BASE-220210/RAR-BASE-Rev-220210

LEGEND

- SINGLE FAMILY LOT
- NEO-TRADITIONAL LOT
- 20' WIDE TOWNHOUSE LOT
- 22' WIDE TOWNHOUSE LOT
- MULTI-FAMILY PARCEL
- COMMERCIAL
- AMENITY/ RECREATIONAL OPEN SPACE
- EXISTING FOREST CONSERVATION

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SEAL

STATE OF MARYLAND
BRENT C. ENSOR
48188
PROFESSIONAL ENGINEER

5/7/25
DATE

# SUBDIVISION PLAT SKETCH & LOT EXHIBIT

FOR

## FOX CHASE ESTATES

*IN THE TOWN OF EASTON, ELECTION WARD 1*
*TALBOT COUNTY, MARYLAND*
*TAX MAP 25 GRID 4 PARCEL 92 LOTS 1, 2, 3 & 4*

| ISSUED FOR: | DATE: | BY: |
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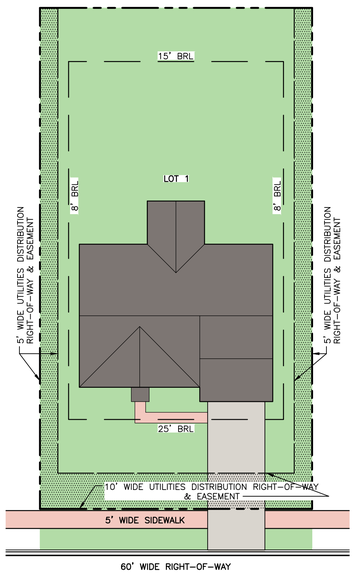
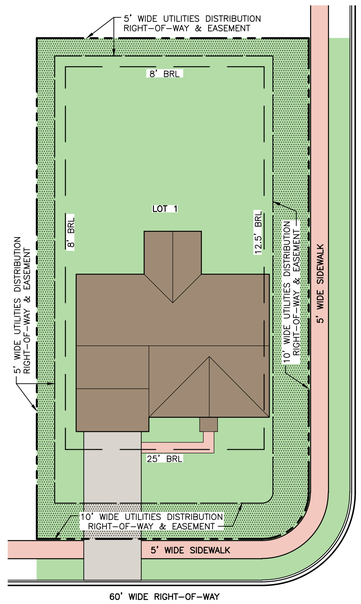
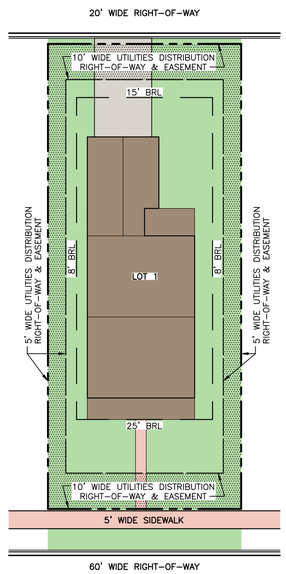


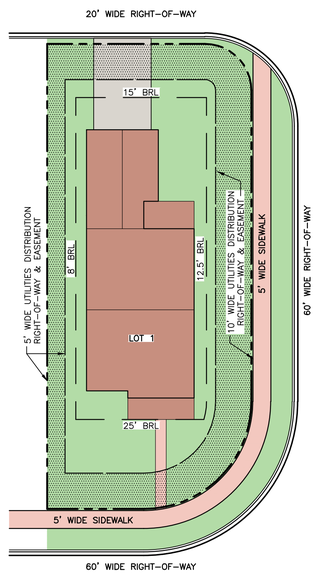

TYPICAL SINGLE FAMILY LOT DETAIL
(FRONT LOADED)
SCALE: 1" = 20'




TYPICAL SINGLE FAMILY CORNER LOT DETAIL
(FRONT LOADED)
SCALE: 1" = 20'




TYPICAL NEO-TRADITIONAL LOT DETAIL
(REAR LOADED)
SCALE: 1" = 20'




TYPICAL NEO-TRADITIONAL CORNER LOT DETAIL
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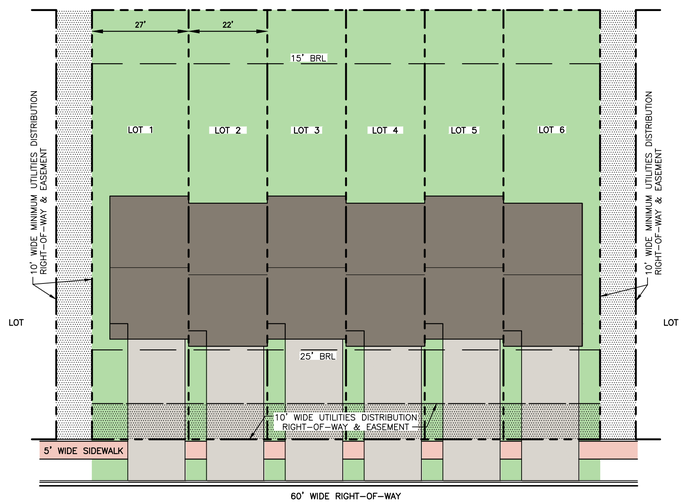
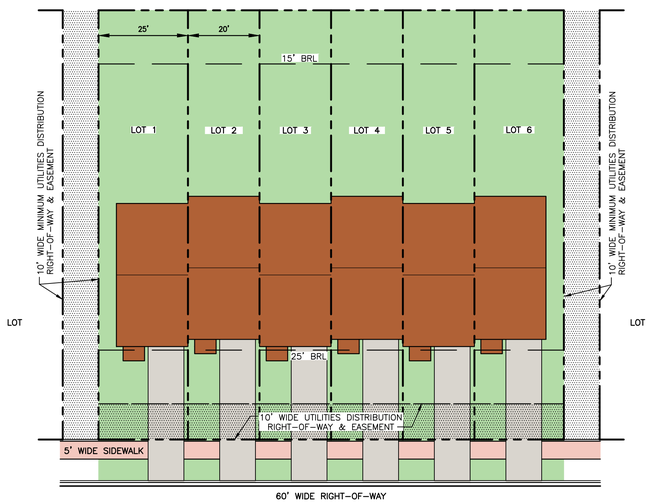



TYPICAL 22' WIDE TOWNHOUSE BLOCK DETAIL
SCALE: 1" = 20'




TYPICAL 20' WIDE TOWNHOUSE BLOCK DETAIL
SCALE: 1" = 20'

20' 10' 0' 10' 20' 40'
SCALE IN FEET

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SEAL

STATE OF MARYLAND
BRENT C. EARHART
48188
PROFESSIONAL ENGINEER

5/7/25
DATE

# LOT DETAILS

FOR
FOX CHASE ESTATES

*IN THE TOWN OF EASTON, ELECTION WARD 1*
*TALBOT COUNTY, MARYLAND*
*TAX MAP 25 GRID 4 PARCEL 92 LOTS 1, 2, 3 & 4*

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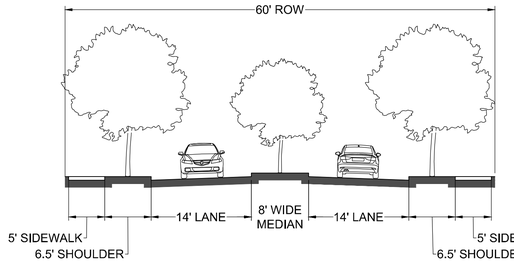
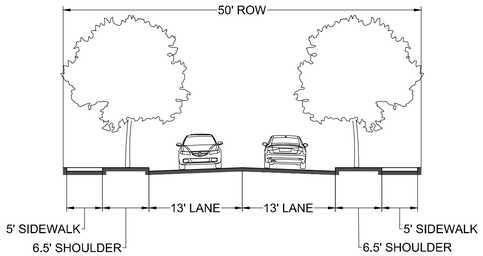
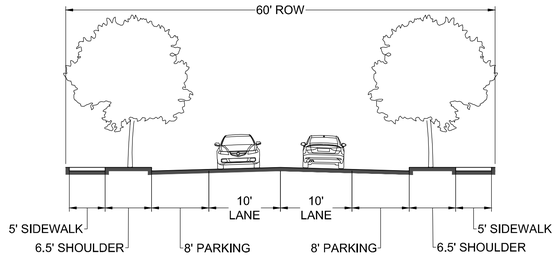


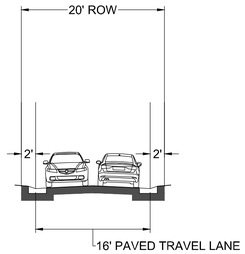

RESIDENTIAL SUB-COLLECTOR (BOULEVARD)
NOT TO SCALE




RESIDENTIAL COLLECTOR
NOT TO SCALE



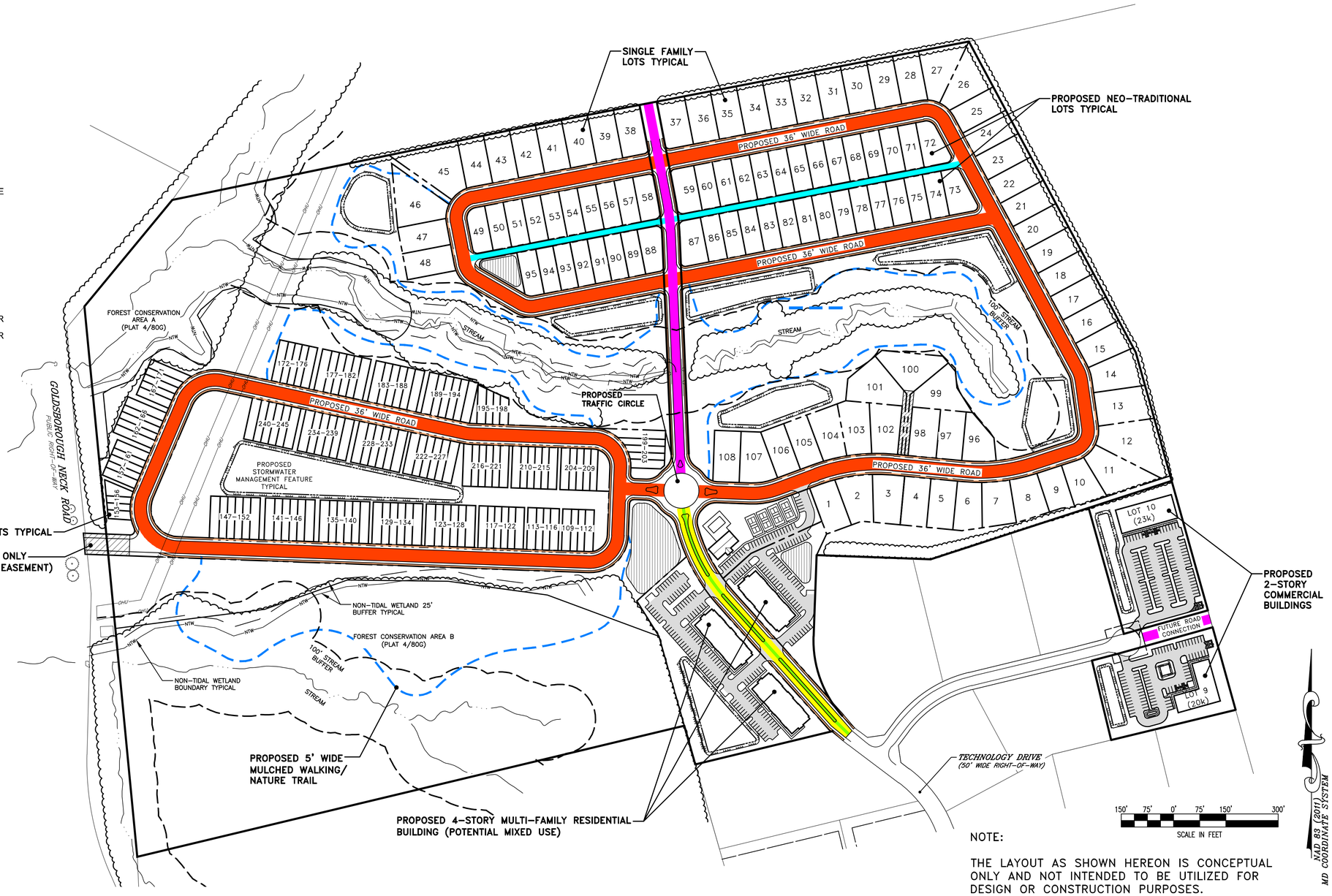

RESIDENTIAL SUB-COLLECTOR
NOT TO SCALE




RESIDENTIAL ALLEY
NOT TO SCALE

LEGEND

- RESIDENTIAL COLLECTOR
- RESIDENTIAL SUB-COLLECTOR
- RESIDENTIAL SUB-COLLECTOR BOULEVARD
- RESIDENTIAL ALLEY
- 5' MULCH PATH
- 5' PEDESTRIAN SIDEWALK
- PARKING AREAS

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SEAL

STATE OF MARYLAND BRENT C. ENGLISH 48188 REGISTERED PROFESSIONAL ENGINEER

5/7/25
DATE

# TRANSPORTATION EXHIBIT & STREET DETAILS

FOR
FOX CHASE ESTATES

*IN THE TOWN OF EASTON, ELECTION WARD 1*
*TALBOT COUNTY, MARYLAND*
*TAX MAP 25 GRID 4 PARCEL 92 LOTS 1, 2, 3 & 4*

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XREF File(s): RSK-BASE-220210/XRM-BASE-220210/RBS-BASE-2438-220210/WLD-BASE-220210/CSK-BASE-220210/LLP-PUD-BASE-220210/CSK-Road-BASE-220210/CSK-LOT-BASE/XRM-LOTS-BASE-220210/RAR-BASE-Rev-220210

PRODUCT ANALYSIS SHEET

# Roanoke

## GENERAL FEATURES

**Home Type:** Single Family Detached

**Series:** Ryan Core

**Footprint Min:** 50′ x 41′-0″

**Footprint Max:** 62′-8″ x 53′-8″

**Mean Roof Height:** 24′-4 1/8″

**Ceiling Height:** 9′-1 1/8″ First Floor
7′-11″ Basement & 8′-1 1/8″Second Floor

**Base Square Footage:** 2756
1st Floor: 1272
2nd Floor: 1484

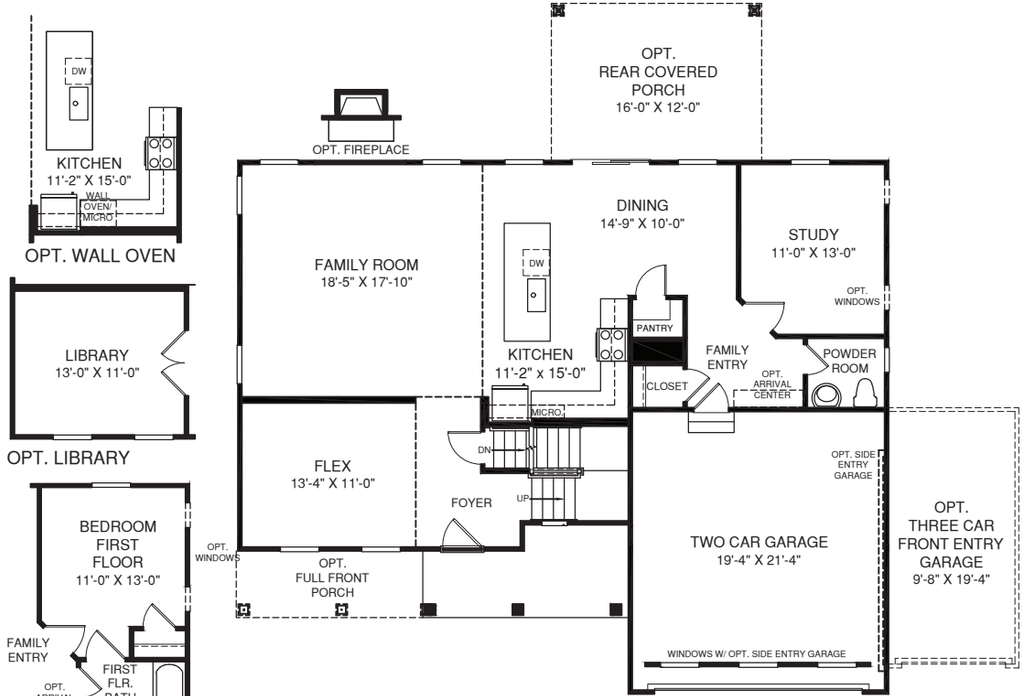
**Available Foundations:** Basement; Crawl, Slab

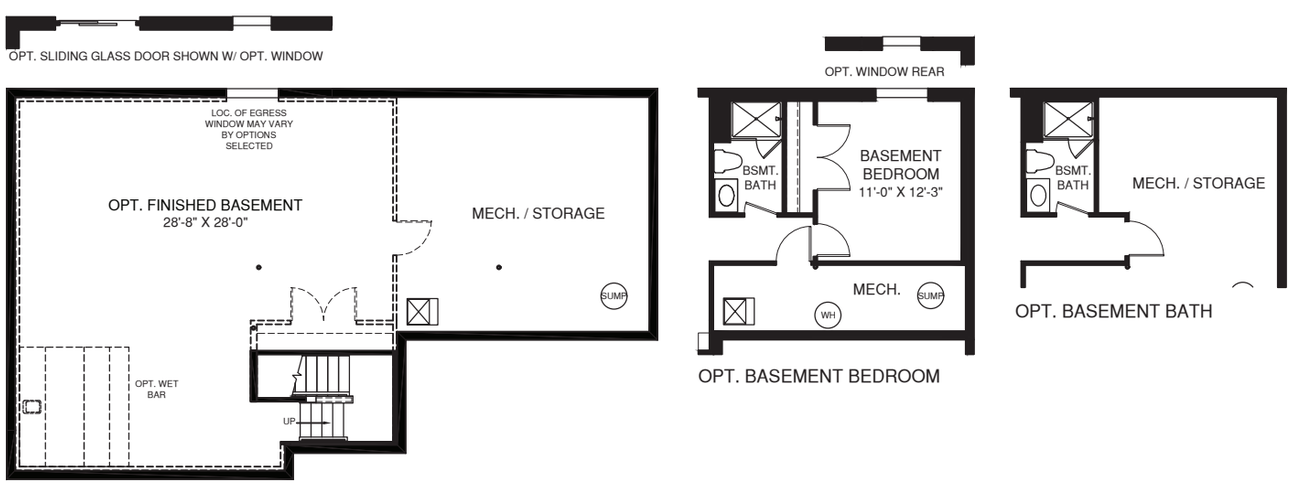
**Garage Type:** 2-car front or side entry; 3-car front entry

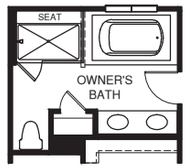
**Veneers Available:** Traditional full siding or full brick, partial brick & partial stone; Craftsman with stone or brick water table

**RNK00-01**

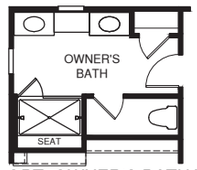
For Internal Use only. Information is believed to be correct at time of publication. Refer to most current blueprints for accuracy.



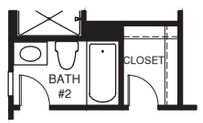



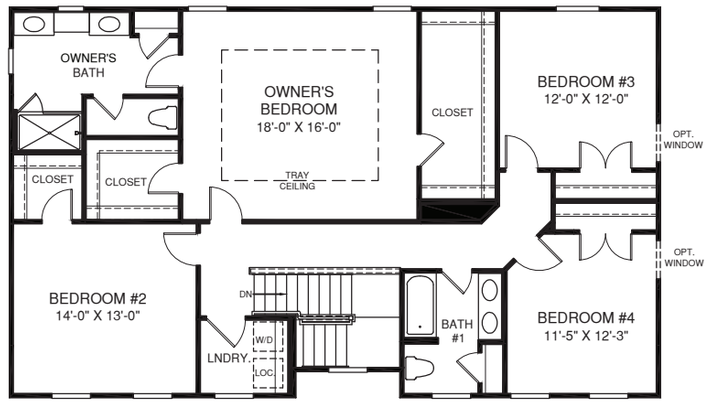

OPT. OWNER'S BATH W/ SOAKING TUB & SHOWER

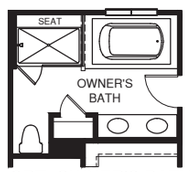



OPT. OWNER'S BATH W/ ROMAN SHOWER

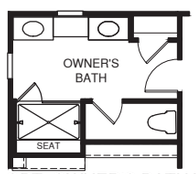



OPT. BATH #2

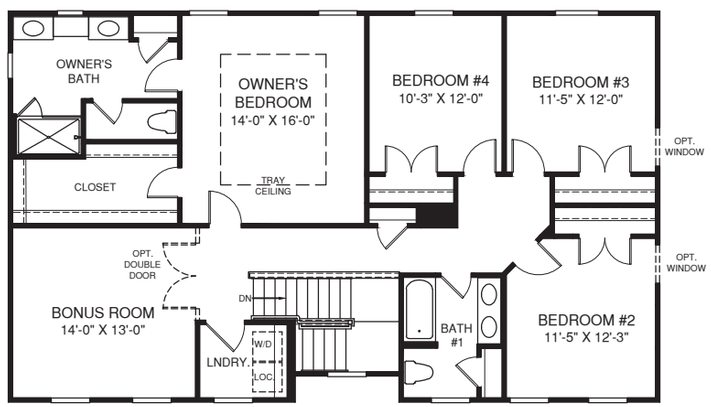



OPT. OWNER'S BATH W/ SOAKING TUB & SHOWER




OPT. OWNER'S BATH W/ ROMAN SHOWER




## RNK00-01 Roanoke

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PRODUCT ANALYSIS SHEET

# Powell

## GENERAL FEATURES

**Home Type:** Single Family Detached

**Series:** Ryan Core

**Footprint Min:** 50′ x 36′

**Footprint Max:** 62′-4″ x 43′

**Mean Roof Height:** 24′-1 7/16″

**Ceiling Height:** 9′-1″ First Floor
7′-11″ Basement, 8′-1″ Second Floor

**Base Square Footage:** 2454
1st Floor: 1074
2nd Floor: 1380

**Available Foundations:** Basement; Crawl, Slab

**Garage Type:** 2-car front or side entry, 3-car front entry

**Veneers Available:** Traditional full siding & full brick or partial brick & partial stone; Craftsman with stone or brick water table

**PWL00-01**

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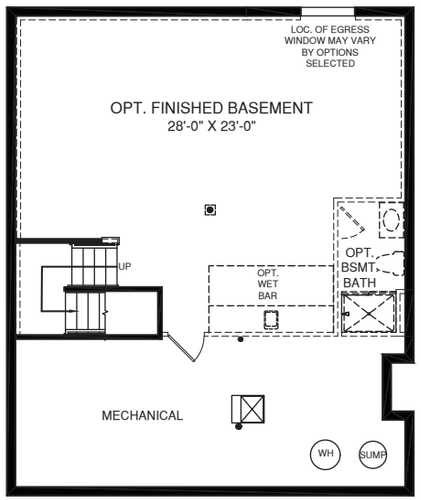
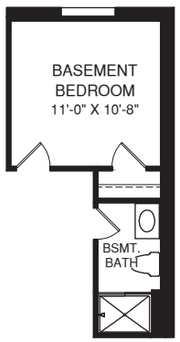
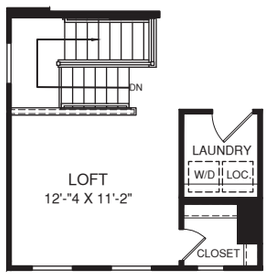
OPT. SLIDING GLASS DOOR SHOWN W/ OPT. WINDOW

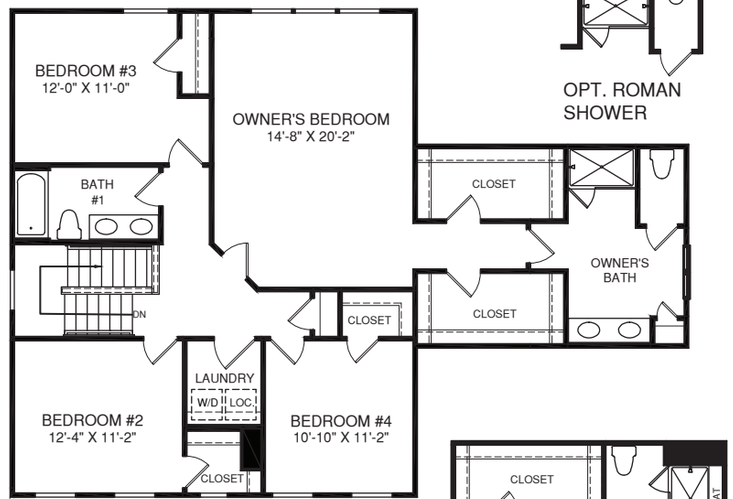


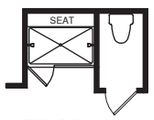




OPT. BASEMENT BEDROOM

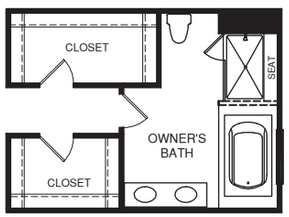



OPT. LOFT



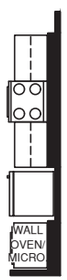




OPT. ROMAN SHOWER

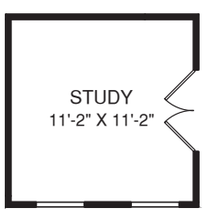



OPT. OWNER'S BATH W/ SOAKING TUB & SHOWER

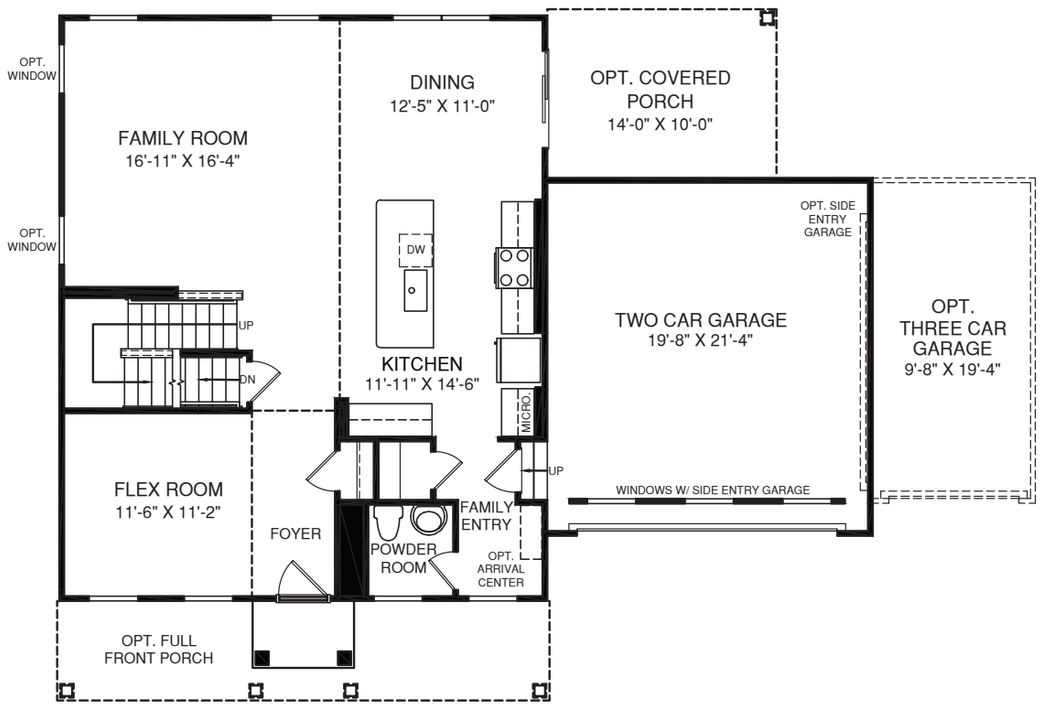



OPT. KITCHEN W/ RANGE AND WALL OVEN




OPT. STUDY




**PWL00-01 Powell**

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PRODUCT ANALYSIS SHEET

# Normandy

## GENERAL FEATURES

**Home Type:** Single Family Detached

**Series:** Ryan Core

**Footprint Min:** 54′ x 44′

**Footprint Max:** 66′-4″ x 56′-4″

**Mean Roof Height:** 26′-2″

**Ceiling Height:** 9′-1 1/8″ First Floor
7′-11″ Basement & 8′-1 1/8″Second Floor

**Base Square Footage:** 3765
1st Floor: 1780
2nd Floor: 1985

**Available Foundations:** Basement; Crawl, Slab

**Garage Type:** 2-car front or side entry; 3-car front; 3-car side with bolt on

**Veneers Available:** Traditional full siding, full brick, or stone watertable; Craftsman with stone water table or partial brick;

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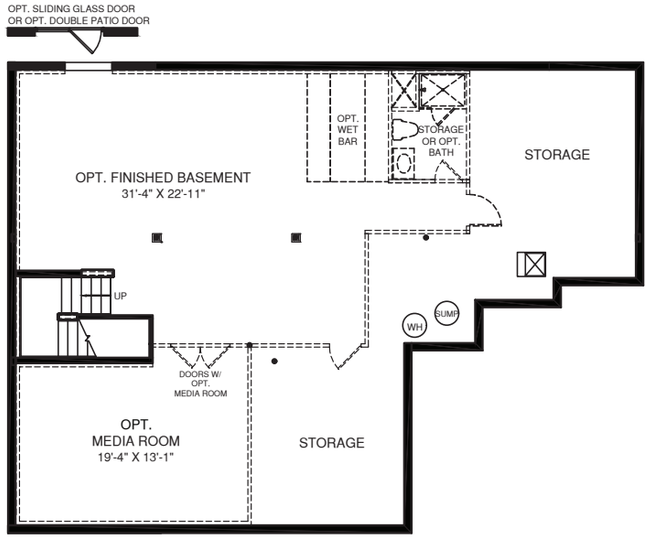
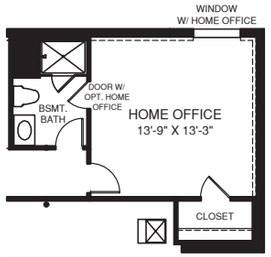
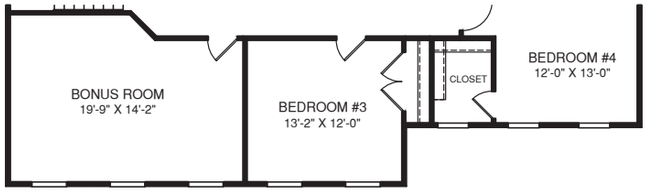
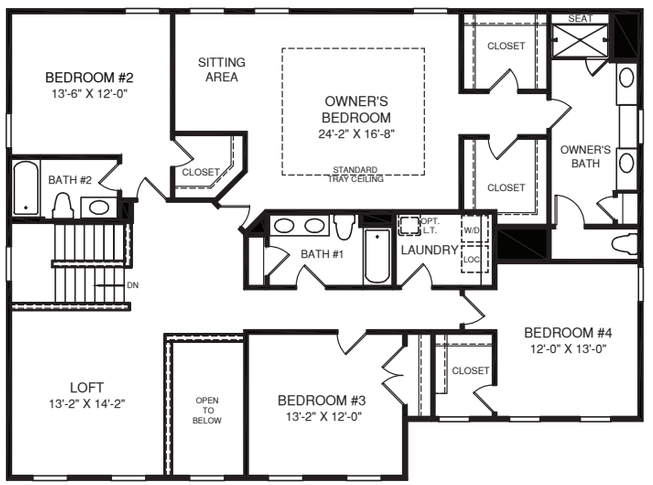


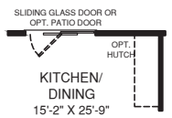

OPT. HOME OFFICE SHOWN
W/ OPT. BATH

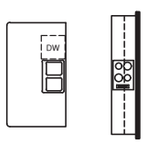



OPT. BONUS ROOM



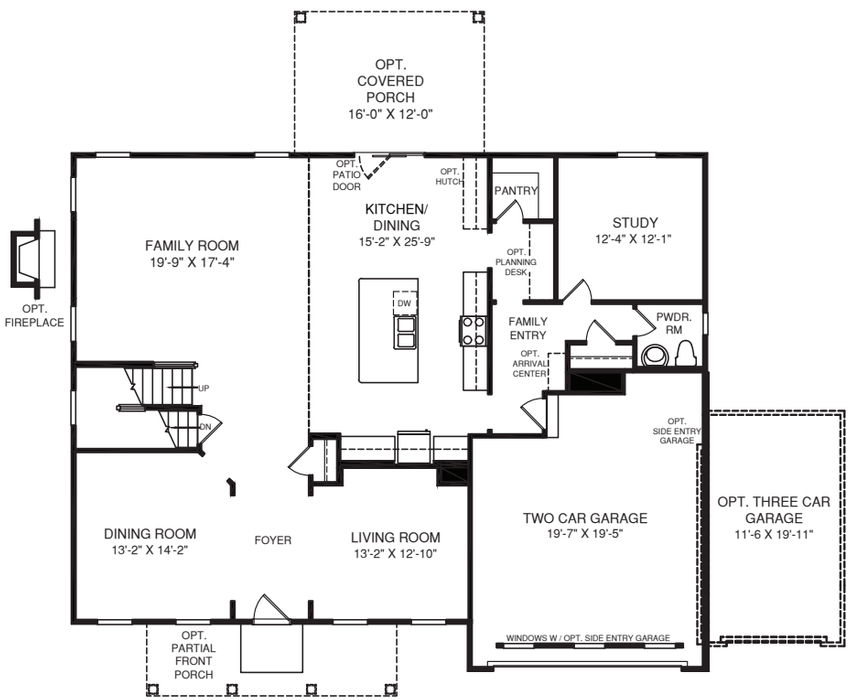
OPT. OWNER'S
BATH W/ TUB &
SHOWER

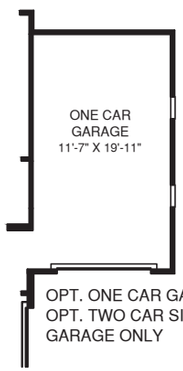


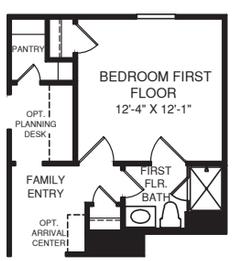
OPT. UPGRADE KITCHEN

OPT. LIBRARY IN LIEU
OF LIVING ROOM




OPT. ONE CAR GARAGE W/
OPT. TWO CAR SIDE ENTRY
GARAGE ONLY




OPT. BEDROOM FIRST
FLOOR

**NRM00-01 Normandy**

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PRODUCT ANALYSIS SHEET

# Mitchell

## GENERAL FEATURES

**Home Type:** Single Family Detached

**Series:** Ryan Core

**Footprint Min:** 30’ x 49’-0”

**Footprint Max:** 30’-4’’ x 73’-4”

**Mean Roof Height:** 27’-10 11/16”

**Ceiling Height:** 9’ First Floor
8’ Basement & 9’ Second Floor

**Base Square Footage:** 2748
1st Floor: 1358
2nd Floor: 1390

**Available Foundations:** Basement; Crawl, Slab

**Garage Type:** 2-car rear attached; 2-car detached

**Veneers Available:** Traditional full siding, partial brick & partial stone

**MIT00-01**
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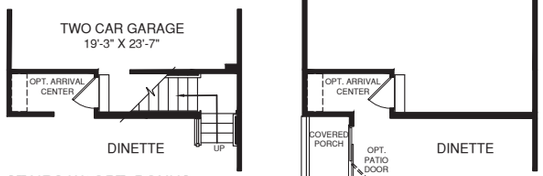
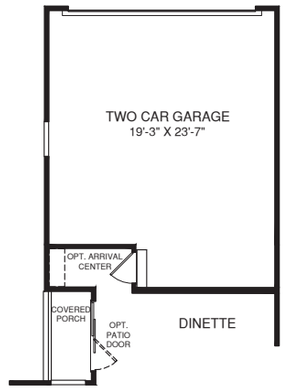
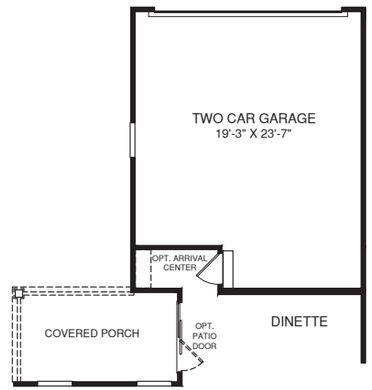


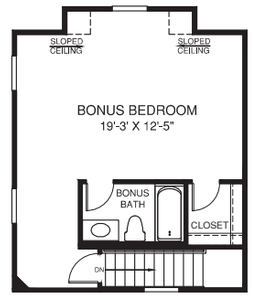

STAIRS W/ OPT. BONUS ROOM OR BONUS BEDROOM ABOVE REAR GARAGE



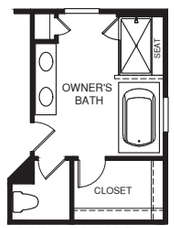

OPT. REAR ATTACHED GARAGE



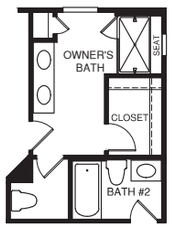

OPT. REAR ATTACHED GARAGE W/ OPT. EXPANDED REAR COVERED PORCH



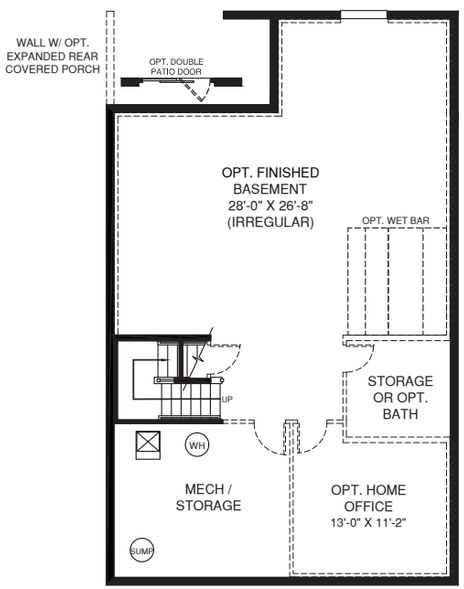

OPT. BONUS BEDROOM



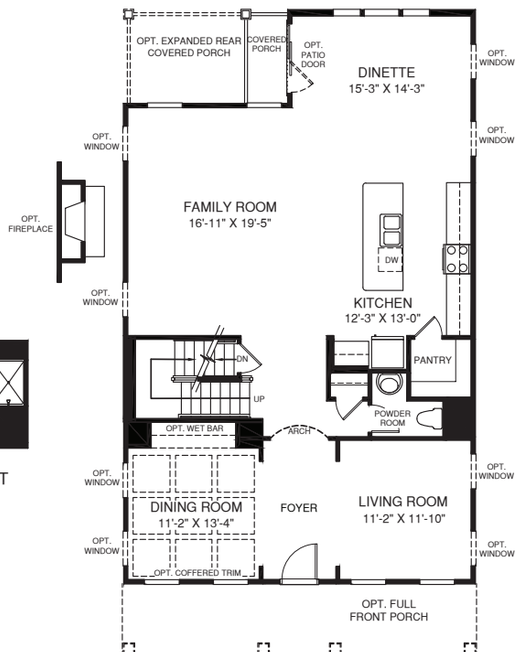

OPT. UPGRADE OWNER'S BATH

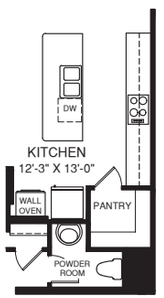



OPT. BATH #2

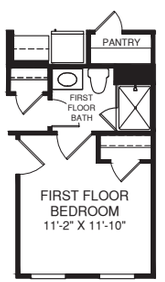


OPT. BASEMENT BATH

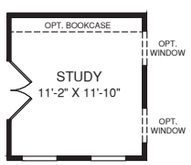


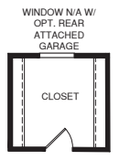

OPT. UPGRADE KITCHEN



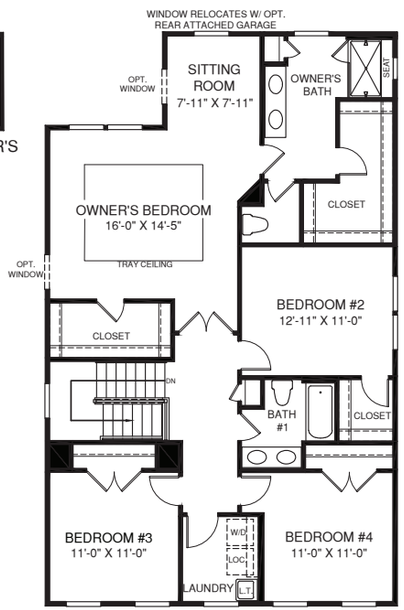

OPT. FIRST FLOOR BEDROOM

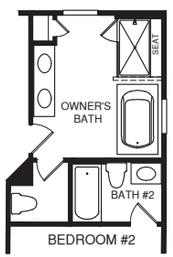



OPT. STUDY




OPT. OWNER'S CLOSET




OPT. UPGRADE OWNER'S BATH W/ OPT. BATH #2

## MIT00-01 Mitchell

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PRODUCT ANALYSIS SHEET

# Corsica

## GENERAL FEATURES

**Home Type:** Single Family Detached

**Series:** Ryan Core

**Footprint Min:** 54′ x 40′

**Footprint Max:** 68′ x 54′

**Mean Roof Height:** 25′-3 9/16″

**Ceiling Height:** 9′-1 1/8″First Floor
7′-11″ Basement & 8′-1 1/8″ Second Floor

**Base Square Footage:** 3371
1st Floor: 1525
2nd Floor: 1846

**Available Foundations:** Basement; Crawl, Slab

**Garage Type:** 2-car front or side entry; 3-car front; 3-car side with bolt on

**Veneers Available:** Traditional full siding, partial brick & partial stone; Craftsman with partial brick & partial stone

**COR00-01**

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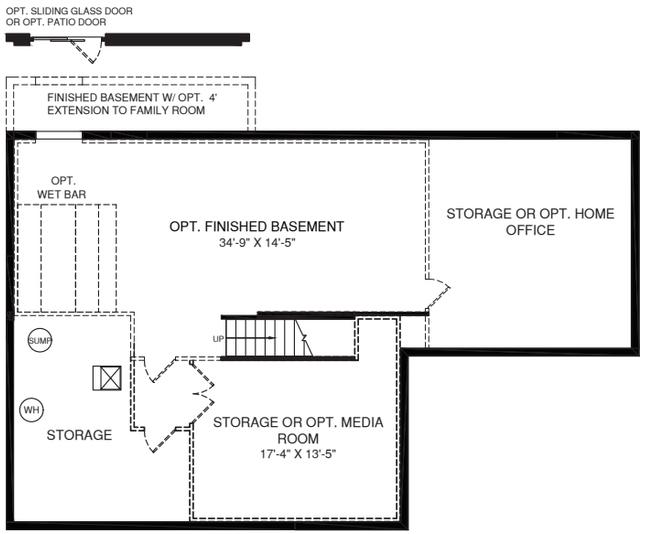
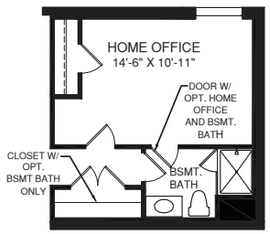
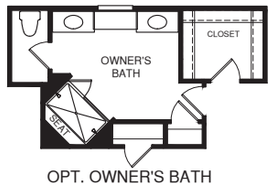
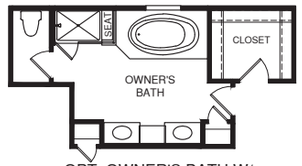


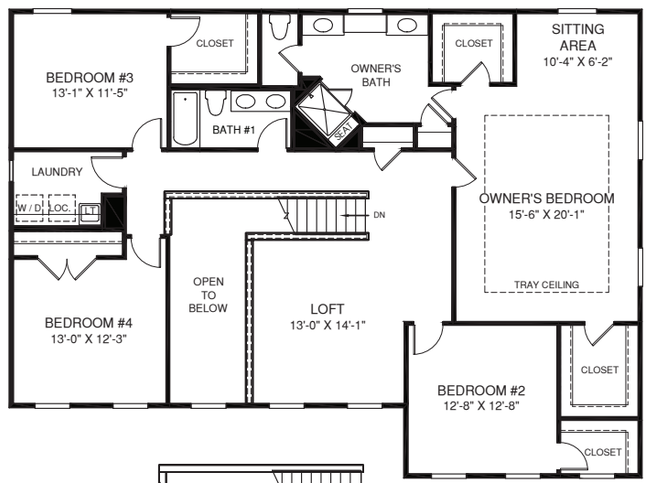

OPT. HOME OFFICE AND OPT. BSMT BATH

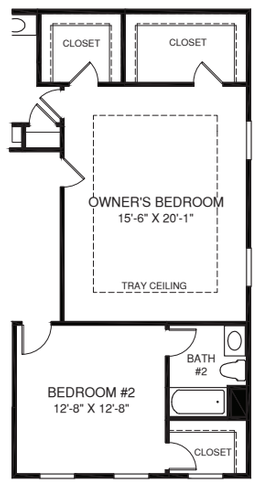



OPT. OWNER'S BATH W/ ROMAN SHOWER

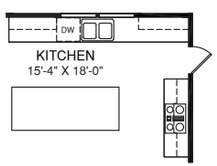



OPT. OWNER'S BATH W/ SOAKING TUB & SHOWER

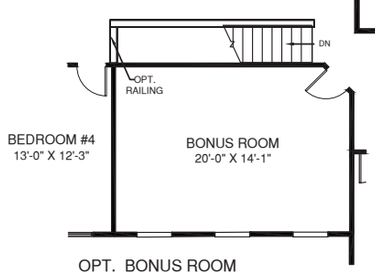


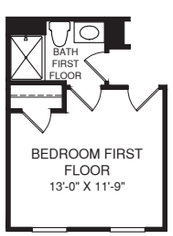

OPT. BATH #2



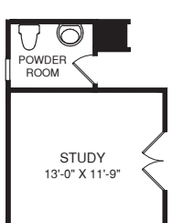

OPT. UPGRADE KITCHEN




OPT. BONUS ROOM




OPT. BEDROOM FIRST FLOOR

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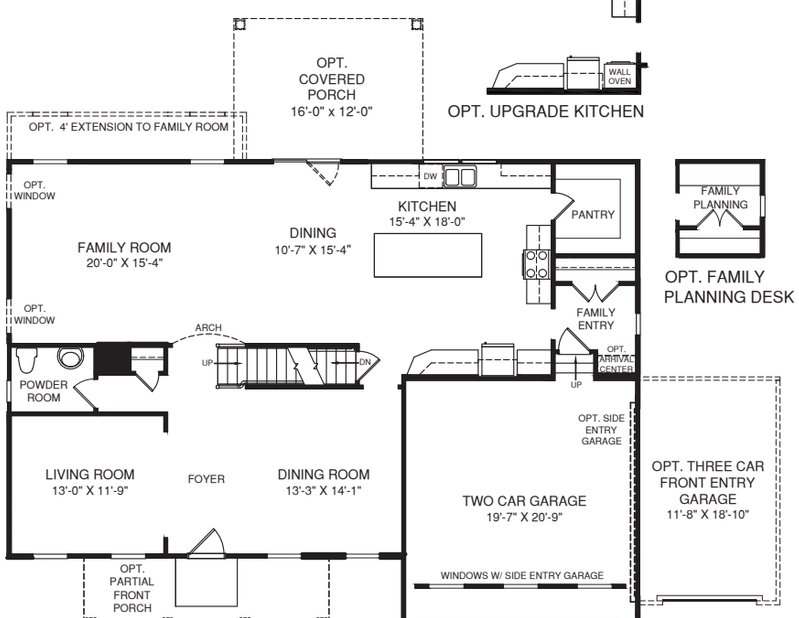





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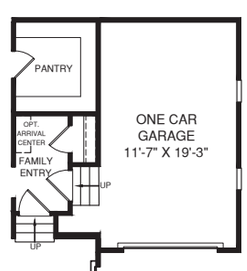


OPT. ONE CAR GARAGE W/ OPT. TWO CAR SIDE ENTRY GARAGE

**COR00-01 Corsica**

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PRODUCT ANALYSIS SHEET

# Sonata (Symphony II Series)

## GENERAL FEATURES

**Home Type:** Single Family Attached

**Series:** Ryan Core

**Footprint Min:** 22′ x 40′

**Footprint Max:** 22′ x 40′-4″
(Includes Upper Level Cantilever)

**Mean Roof Height:** 32′-10 3/8″

**Ceiling Height:** 9′-1 1/8″ Second Floor, 7′-11″ First Floor, & 8′-1 1/8″ Third Floor

**Base Square Footage:** 2233
1st Floor: 429
2nd Floor: 880
3rd Floor: 924

**Available Foundations:** Slab

**Garage Type:** 2-car front garage

**Veneers Available:** Traditional full siding or partial brick; Cottage in part stone, and Farmhouse.

**Sonata QSOND_00**
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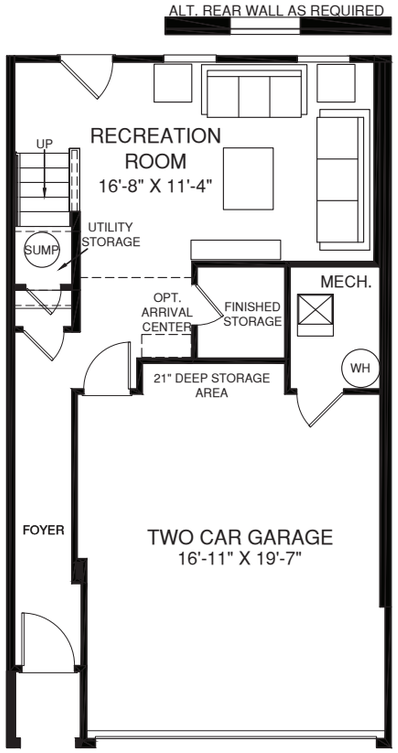
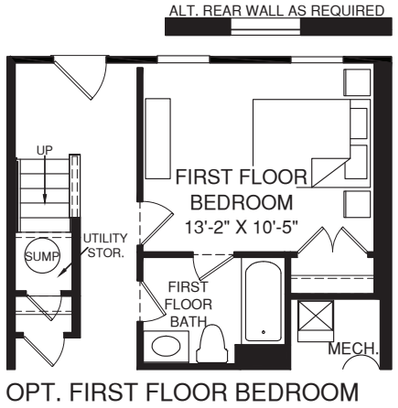
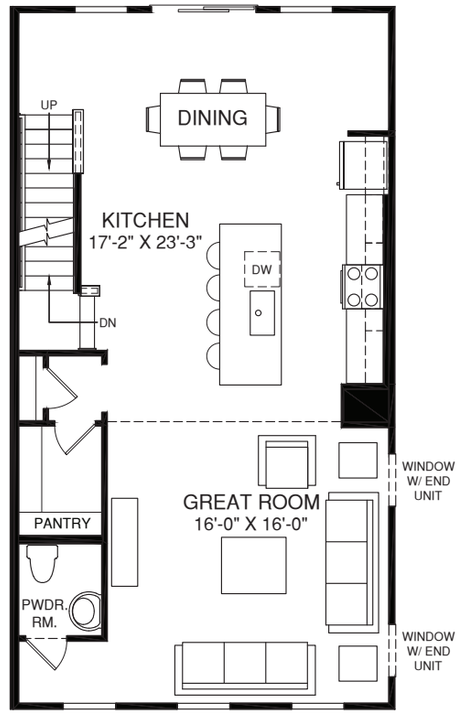
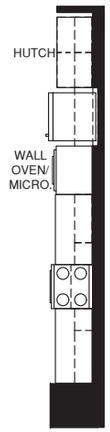
OPT. POWDER ROOM



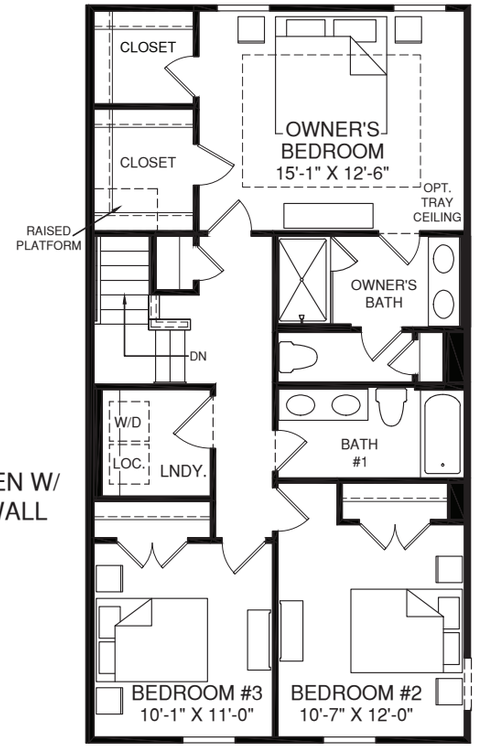



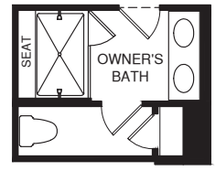

OPT. FIRST FLOOR BEDROOM




KITCHEN W/ OPT. WALL OVEN




OPT. OWNER'S BATH W/ ROMAN SHOWER

**Sonata QSOND_00**

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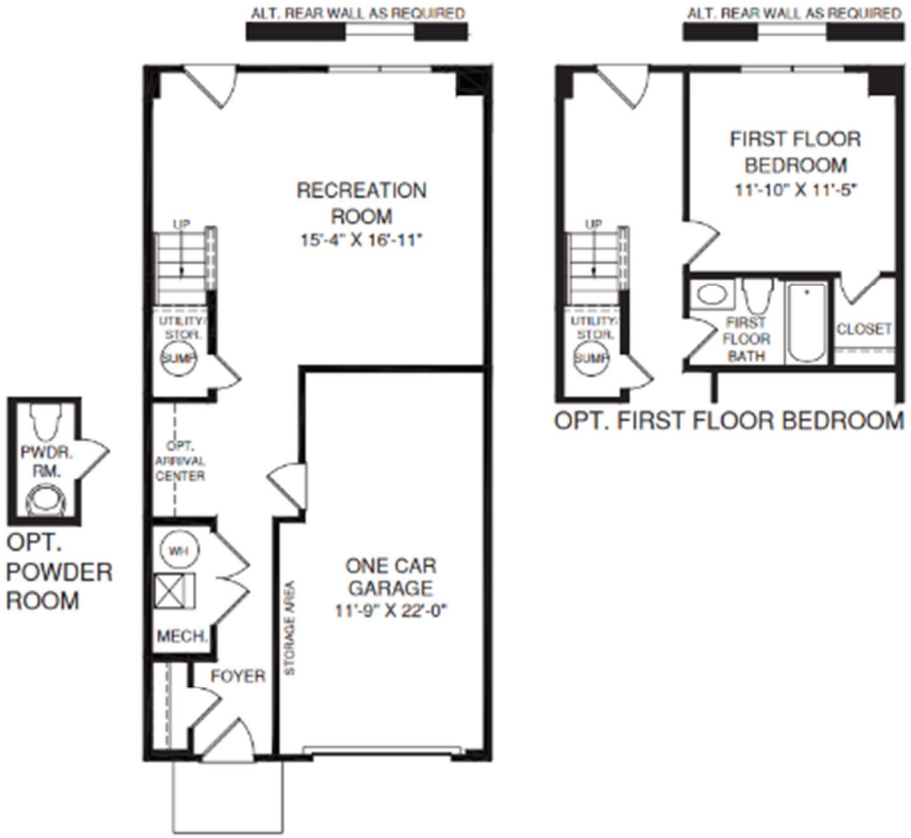
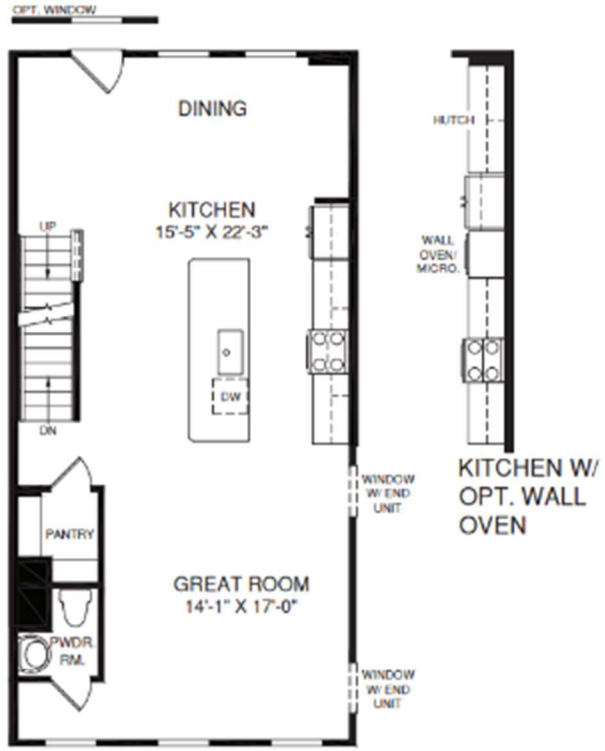
**Cadence**
**20' TH**




## First Floor Features

**Standard:**
- 8' Ceiling
- 1 Car Garage
- Foyer
- Covered Entry
- Recreation Room
- Coat Closet
- Utility/ Storage under stair

**Optional:**
- Powder Room
- Lower Level Bedroom w/ Lower Level Bath
  - (1) 30" Vanity
  - Walk in closet

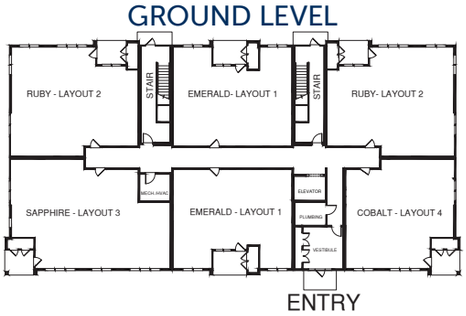
## Second Floor Features

**Standard:**
- 9' Ceiling
- Great Room
- Kitchen
  - Range/Oven
  - Walk-in Pantry
  - 10' Island
- Dining
- Finished Storage
- Powder Room

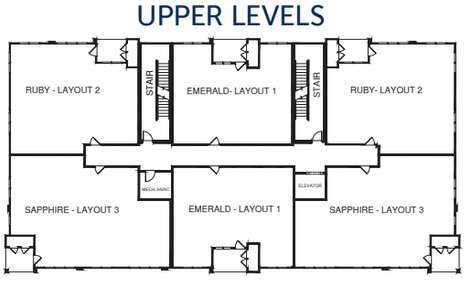
**Optional:**
- Kitchen w/ Range/ Wall Oven/ Hutch

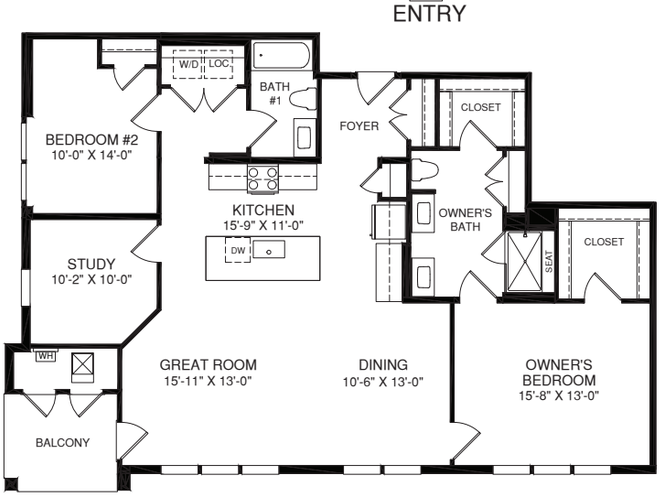
# MOSAIC

## GROUND LEVEL

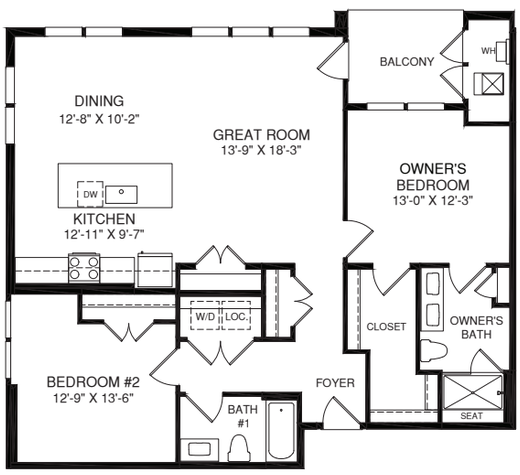



## UPPER LEVELS

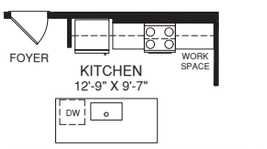


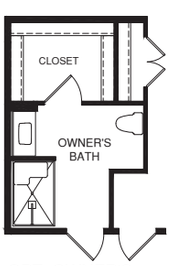

## THE SAPPHIRE



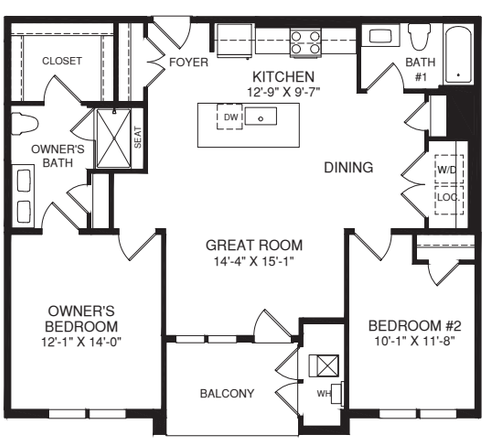

## THE RUBY



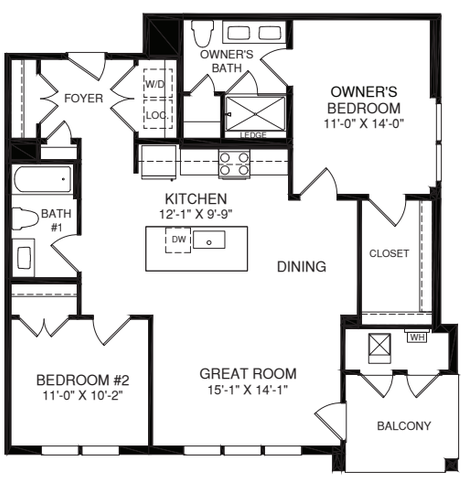

OPT. KITCHEN LAYOUT TYPE A




OPT. OWNER'S BATH TYPE A




## THE EMERALD




## THE COBALT


EQUAL HOUSING OPPORTUNITY

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Elevations shown are artist's concepts. Floor plans may vary per elevation. Ryan Homes reserves the right to make changes without notice or prior obligation.


RY1021MSC0Av00 RHWTW

Ryan Homes

Lane Engineering, LLC

# CONCEPT STORMWATER MANAGEMENT REPORT

## FOX CHASE ESTATES

EASTON, TALBOT COUNTY, MARYLAND

**PREPARED FOR:**

Easton Sunrise Partners, LLC
c/o Scott Wagner
928 Riverview Terrace
St. Michaels, Maryland 21663

**PREPARED BY:**

Jarret J. Beyer, P.E.

**DATE PREPARED:**

May 6, 2025

PROFESSIONAL CERTIFICATION: I hereby certify that this document was prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland, License No. 48188, Expiration Date: 12/28/2025.

**LANE ENGINEERING, LLC**
**117 BAY STREET**
**EASTON, MARYLAND 21601**
**410-822-8003**

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General Site Information ..... 3
Proposed Project ..... 4
Stormwater Management ..... 4
Stormwater Quality Treatment ..... 4
Stormwater Quantity Management ..... 5
Conclusion ..... 5

# Appendices

APPENDIX A : Stormwater Quality (ESD) Calculations
APPENDIX B : Stormwater Quantity Calculations
APPENDIX C: Pre-development Drainage Area Map
APPENDIX D: Post-development Drainage Area Map

# Introduction

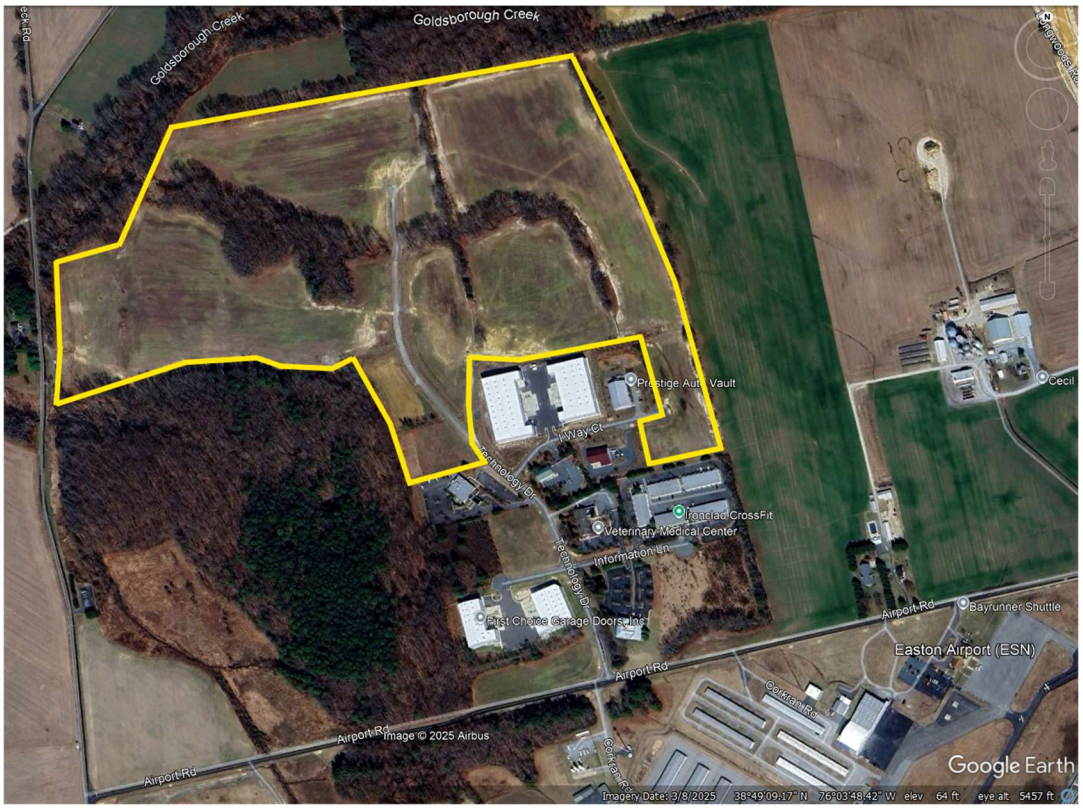
This report addresses the impacts of stormwater runoff resulting from the proposed development of this site located in Easton, MD. This stormwater management plan incorporates the requirements of the 2000 Maryland Stormwater Design Manual Volumes I and II (Manual) as currently updated. Development projects are required to be reviewed during the concept, preliminary site development, and final design stages. This report addresses stormwater requirements pertaining to the concept design stage and meets the intent of the guidelines and methodologies presented in the MDE document Environmental Site Design (ESD) Process & Computations dated July 2010.

# General Site Information

The site is 112.8 acres and located in Easton Technology Park at the north end of Technology Drive. The site is currently in agricultural use and has some woodlands. Surrounding lands consist of commercial development, farmland, and the future hospital to the north. Included in this concept stormwater management plan are two commercial parcels in the park, lots 9 and 10. These two parcels are also in agricultural use with some woodland. They are located at the east end of I Way Court, fronting the cul-de-sac.

The main site discharges to six main points and the two commercial parcels discharge to single point each. Soils are a mix of silts, sands, and loams. There is a heavy concentration of sandy loam on the north side of the main site and silts on the south side of the  main site and the two commercial parcels.

**Figure 1: Aerial View of Site**



# Proposed Project

The proposed development will consist of residential single-family homes, townhouses, and multi-family units. Two commercial parcels are included as well as residential community amenities such as a club house, pool, sport courts, tot lots, mulched walking/nature trail, and a dog park. The commercial parcels and community amenities are at concept level design currently. Two large forest conservation areas border the northwest and southwest sides of the development. Ten stormwater management features are proposed (eight on the main site and one each on the commercial parcels.)

# Stormwater Management

Stormwater management is conceptual currently but has been analyzed to meet quality and quantity requirements. There are thirteen drainage areas on the main site and each commercial parcel is its own drainage area. Treatment volumes have been calculated based on ponding volume only. We believe this is a conservative approach giving us a good starting point for discussion and refinement. Additional soils testing and discussion with the Town Engineer will potentially lead to different stormwater features coming in future submissions.

## Stormwater Quality Treatment

ESD requirements must be addressed for the project's entire limits of disturbance (LOD.) Calculations for this concept level analysis are based on the entirety of each individual drainage area. Please see Appendix A for calculations. Results of this analysis follow:

| ***Drainage Area*** | ***SWM Feature*** | ***Total Area (sf)*** | ***Impervious Area (sf)*** | ***Target $ESD_v$ (cf)*** | ***Provided $ESD_v$ (cf)*** |
|---|---|---|---|---|---|
| *1* | SWM #1 | 590,473 | 164,013 | 24,893 | 33,969 |
| *7* | SWM #2 | 738,117 | 333,604 | 46,366 | 78,668 |
| *8* | SWM #3 | 423,347 | 128,661 | 22,060 | 31,299 |
| *9* | SWM #4 | 197,851 | 54,821 | 8,468 | 13,821 |
| *10* | SWM #5 | 291,246 | 132,939 | 20,131 | 31,315 |
| *11* | SWM #6 | 300,706 | 123,660 | 18,949 | 29,477 |
| *12* | SWM #7 | 197,225 | 91,982 | 16,985 | 21,617 |
| *13* | SWM #8 | 224,335 | 72,286 | 13,984 | 17,797 |
| *14* | SWM #9 | 87,116 | 44,048 | 6,559 | 8,590 |
| *15* | SWM #10 | 95,173 | 53,816 | 8,287 | 11,960 |

Drainage areas 2, 3, 5, and 6 have small roof areas included. These roof areas are on the rear of the buildings, and it is not feasible to direct this runoff towards the street. These roof areas can be adequately treated by disconnect. Drainage area 4 does not have any contributing impervious area.

## Stormwater Quantity Management

Water quantity management is required for the 2 and 10-year peak storms, and safe conveyance is required for the 100-year peak storm. The existing and proposed site conditions were analyzed using HydroCAD software. Please see Appendix B. Results of this analysis follow:

| ***Study Point*** | ***Peak Runoff (cfs)*** | | | |
|---|---|---|---|---|
| | ***2-year*** | | ***10-year*** | |
| | ***Pre*** | ***Post*** | ***Pre*** | ***Post*** |
| *1* | 7.12 | 1.15 | 15.96 | 11.98 |
| *2* | 17.49 | 0.60 | 38.65 | 8.73 |
| *3* | 8.21 | 7.38 | 20.85 | 20.63 |
| *4* | 14.56 | 0.99 | 36.82 | 16.48 |
| *5* | 3.30 | 0.22 | 9.16 | 2.05 |
| *6* | 3.44 | 0.02 | 10.70 | 0.45 |
| *7* | 2.43 | 0.30 | 4.93 | 4.07 |
| *8* | 2.98 | 0.34 | 6.16 | 4.93 |

As seen above, the peak runoff leaving the project site at all study points will be reduced for all storm events.

Please see appendices C and D for pre- and post-development drainage area maps.

# Conclusion

This stormwater management analysis indicates that the proposed design will successfully meet and exceed stormwater quality and quantity requirements. Planning and design analysis indicates that stormwater quality and quantity management can be achieved as described above.

# APPENDIX A

STORMWATER QUALITY (ESD) CALCULATIONS

**SWM #1 - Drainage Area 1**

| | | | | |
|---|---|---|---|---|
| Total Area - B soils | 427,177 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 145,136 | sf | | |
| Percent Impervious (I) | 34 | % | = | 22,797 cf |
| Pe = | 1.8 | " | | |
| Rv = 0.05 +0.009(I) | 0.36 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - C soils | 129,927 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 18,877 | sf | | |
| Percent Impervious (I) | 15 | % | = | 1,957 cf |
| Pe = | 1.0 | " | | |
| Rv = 0.05 +0.009(I) | 0.18 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - D soils | 33,369 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 0 | sf | | |
| Percent Impervious (I) | 0 | % | = | 139 cf |
| Pe = | 1.0 | " | | |
| Rv = 0.05 +0.009(I) | 0.05 | | | |

| | | |
|---|---|---|
| **Total Target ESDv =** | **24,893** | **cf** |
| 75% of target = | 18,670 | cf |
| 10% of target = | 2,489 | cf |

*Site Development Design - Submerged Gravel Wetland (M-2):*

Based on the Cpv storm (2.8 in.): Max allowable ESDv that can be used:

V - B soils = $\frac{(P)(Rv)(A)}{12}$ = **35,462 cf**

V - C soils = $\frac{(P)(Rv)(A)}{12}$ = **5,480 cf**

V - D soils = $\frac{(P)(Rv)(A)}{12}$ = **389 cf**

**V - Total = 41,332 cf**

The computed ESDv provided is:

| | | |
|---|---|---|
| ESDv= | **33,969** | **cf** |
| Pretreatment= | **0** | **cf** |

| | | |
|---|---|---|
| Forebay Surface Area= | | sf |
| Forebay Ponding Area= | | sf |
| Forebay Ponding Depth= | | ft |
| Surface Area= | 20,975 | sf |
| Ponding Area= | 24,317 | sf |
| Ponding Depth= | 1.5 | ft |

Therefore, when assessing compliance with the MEP standard, the volume of runoff treated by this submerged gravel wetland practice is **33,969 cf.**

**SWM #2 - Drainage Area 7**

| | | | | |
|---|---|---|---|---|
| Total Area - B soils | 312,013 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 151,342 | sf | | |
| Percent Impervious (I) | 49 | % | = | 22,771 cf |
| Pe = | 1.8 | " | | |
| Rv = 0.05 +0.009(I) | 0.49 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - C soils | 305,695 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 114,513 | sf | | |
| Percent Impervious (I) | 37 | % | = | 15,780 cf |
| Pe = | 1.6 | " | | |
| Rv = 0.05 +0.009(I) | 0.39 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - D soils | 120,409 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 67,749 | sf | | |
| Percent Impervious (I) | 56 | % | = | 7,816 cf |
| Pe = | 1.4 | " | | |
| Rv = 0.05 +0.009(I) | 0.56 | | | |

| | | |
|---|---|---|
| **Total Target ESDv =** | **46,366** | **cf** |
| 75% of target = | 34,775 | cf |
| 10% of target = | 4,637 | cf |

*Site Development Design - Submerged Gravel Wetland (M-2):*

Based on the Cpv storm (2.8 in.): Max allowable ESDv that can be used:

| | | | | |
|---|---|---|---|---|
| V - B soils = | $\frac{(P)(Rv)(A)}{12}$ | = | 35,422 | cf |
| V - C soils = | $\frac{(P)(Rv)(A)}{12}$ | = | 27,614 | cf |
| V - D soils = | $\frac{(P)(Rv)(A)}{12}$ | = | 15,632 | cf |
| **V - Total =** | **78,668** | | **cf** | |

The computed ESDv provided is:

| | | |
|---|---|---|
| ESDv= | **90,132** | **cf** |
| Pretreatment= | **0** | **cf** |

| | | |
|---|---|---|
| Forebay Surface Area= | | sf |
| Forebay Ponding Area= | | sf |
| Forebay Ponding Depth= | | ft |
| Surface Area= | 56,734 | sf |
| Ponding Area= | 63,442 | sf |
| Ponding depth= | 1.5 | ft |

Therefore, when assessing compliance with the MEP standard, the volume of runoff treated by this submerged gravel wetland practice is **78,668 cf.**

**SWM #3 - Drainage Area 8**

| | | | | |
|---|---|---|---|---|
| Total Area - B Soils | 180,357 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 40,163 | sf | | |
| Percent Impervious (I) | 22 | % | = | 6,775 cf |
| Pe = | 1.8 | " | | |
| Rv = 0.05 +0.009(I) | 0.25 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - C Soils | 241,588 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 87,592 | sf | | |
| Percent Impervious (I) | 36 | % | = | 15,152 cf |
| Pe = | 2.0 | " | | |
| Rv = 0.05 +0.009(I) | 0.38 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - D Soils | 1,402 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 906 | sf | | |
| Percent Impervious (I) | 65 | % | = | 133 cf |
| Pe = | 1.8 | " | | |
| Rv = 0.05 +0.009(I) | 0.63 | | | |

| | | |
|---|---|---|
| **Total Target ESDv =** | **22,060** | **cf** |
| 75% of target = | 16,545 | cf |
| 10% of target = | 2,206 | cf |

*Site Development Design - Submerged Gravel Wetland (M-2):*

Based on the Cpv storm (2.8 in.): Max allowable ESDv that can be used:

V - B soils = $\frac{(P)(Rv)(A)}{12}$ = 10,538 cf

V - C soils = $\frac{(P)(Rv)(A)}{12}$ = 21,213 cf

V - D soils = $\frac{(P)(Rv)(A)}{12}$ = 207 cf

**V - Total = 31,958 cf**

The computed ESDv provided is:

| | | |
|---|---|---|
| ESDv= | **31,299** | **cf** |
| Pretreatment= | **0** | **cf** |

| | | |
|---|---|---|
| Forebay Surface Area= | 0 | sf |
| Forebay Ponding Area= | 0 | sf |
| Forebay Ponding Depth= | 0.00 | ft |
| Surface Area= | 19,263 | sf |
| Ponding Area= | 22,469 | sf |
| Ponding depth= | 1.5 | ft |

Therefore, when assessing compliance with the MEP standard, the volume of runoff treated by this submerged gravel wetland practice is **31,299 cf.**

**SWM #4 - Drainage Area 9**

| | | | | |
|---|---|---|---|---|
| Total Area - A Soils | 11,749 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 295 | sf | | |
| Percent Impervious (I) | 3 | % | = | 71 cf |
| Pe = | 1.0 | " | | |
| Rv = 0.05 +0.009(I) | 0.07 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - B Soils | 112,983 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 34,575 | sf | | |
| Percent Impervious (I) | 31 | % | = | 5,515 cf |
| Pe = | 1.8 | " | | |
| Rv = 0.05 +0.009(I) | 0.33 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - C Soils | 34,786 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 9,534 | sf | | |
| Percent Impervious (I) | 27 | % | = | 1,376 cf |
| Pe = | 1.6 | " | | |
| Rv = 0.05 +0.009(I) | 0.30 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - D Soils | 38,333 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 10,417 | sf | | |
| Percent Impervious (I) | 27 | % | = | 1,506 cf |
| Pe = | 1.6 | " | | |
| Rv = 0.05 +0.009(I) | 0.29 | | | |

| | | |
|---|---|---|
| **Total Target ESDv =** | **8,468** | **cf** |
| 75% of target = | 6,351 | cf |
| 10% of target = | 847 | cf |

*Site Development Design - Submerged Gravel Wetland (M-2):*

Based on the Cpv storm (2.8 in.): Max allowable ESDv that can be used:

| | | | | |
|---|---|---|---|---|
| V - A soils = | $\frac{(P)(Rv)(A)}{12}$ | = | 199 | cf |
| V - B soils = | $\frac{(P)(Rv)(A)}{12}$ | = | 8,579 | cf |
| V - C soils = | $\frac{(P)(Rv)(A)}{12}$ | = | 2,408 | cf |
| V - D soils = | $\frac{(P)(Rv)(A)}{12}$ | = | 2,635 | cf |
| **V - Total =** | **13,821** | **cf** | | |

The computed ESDv provided is: (SEE NEXT PAGE)

| | | |
|---|---|---|
| ESDv= | **30,832** | **cf** |
| Pretreatment= | **0** | **cf** |

| | | |
|---|---|---|
| Forebay Surface Area= | 0 | sf |
| Forebay Ponding Area= | 0 | sf |
| Forebay Ponding Depth= | 0.00 | ft |
| Surface Area= | 19,294 | sf |
| Ponding Area= | 21,815 | sf |
| Ponding depth= | 1.5 | ft |

Therefore, when assessing compliance with the MEP standard, the volume of runoff treated by this submerged gravel wetland practice is **13,821 cf.**

**SWM #5 - Drainage Area 10**

| | | | | |
|---|---|---|---|---|
| Total Area - A Soils | 175,719 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 81,275 | sf | | |
| Percent Impervious (I) | 46 | % | = | 12,290 cf |
| Pe = | 1.8 | " | | |
| Rv = 0.05 +0.009(I) | 0.47 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - B Soils | 30,705 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 10,273 | sf | | |
| Percent Impervious (I) | 33 | % | = | 1,617 cf |
| Pe = | 1.8 | " | | |
| Rv = 0.05 +0.009(I) | 0.35 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - C Soils | 84,822 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 41,391 | sf | | |
| Percent Impervious (I) | 49 | % | = | 6,224 cf |
| Pe = | 1.8 | " | | |
| Rv = 0.05 +0.009(I) | 0.49 | | | |

| | | |
|---|---|---|
| **Total Target ESDv =** | **20,131** | **cf** |
| 75% of target = | 15,098 | cf |
| 10% of target = | 2,013 | cf |

*Site Development Design - Submerged Gravel Wetland (M-2):*

Based on the Cpv storm (2.8 in.): Max allowable ESDv that can be used:

| | | | | |
|---|---|---|---|---|
| V - A soils = | $\frac{(P)(Rv)(A)}{12}$ | = | 19,118 | cf |
| V - B soils = | $\frac{(P)(Rv)(A)}{12}$ | = | 2,516 | cf |
| V - C soils = | $\frac{(P)(Rv)(A)}{12}$ | = | 9,682 | cf |
| **V - Total =** | **31,315** | | | **cf** |

The computed ESDv provided is:

| | | |
|---|---|---|
| ESDv= | **31,435** | **cf** |
| Pretreatment= | **0** | **cf** |

| | | |
|---|---|---|
| Forebay Surface Area= | 0 | sf |
| Forebay Ponding Area= | 0 | sf |
| Forebay Ponding Depth= | 0.00 | ft |
| Surface Area= | 18,903 | sf |
| Ponding Area= | 23,010 | sf |
| Ponding depth= | 1.5 | ft |

Therefore, when assessing compliance with the MEP standard, the volume of runoff treated by this submerged gravel wetland practice is **31,315 cf.**

**SWM #6 - Drainage Area 11**

| | | | | |
|---|---|---|---|---|
| Total Area - A Soils | 278,365 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 111,785 | sf | | |
| Percent Impervious (I) | 40 | % | = | 17,179 cf |
| Pe = | 1.8 | " | | |
| Rv = 0.05 +0.009(I) | 0.41 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - C Soils | 22,341 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 11,875 | sf | | |
| Percent Impervious (I) | 53 | % | = | 1,771 cf |
| Pe = | 1.8 | " | | |
| Rv = 0.05 +0.009(I) | 0.53 | | | |

| | | |
|---|---|---|
| **Total Target ESDv =** | **18,949** | **cf** |
| 75% of target = | 14,212 | cf |
| 10% of target = | 1,895 | cf |

*Site Development Design - Submerged Gravel Wetland (M-2):*

Based on the Cpv storm (2.8 in.): Max allowable ESDv that can be used:

V - A soils = $\frac{(P)(Rv)(A)}{12}$ = 26,722 cf

V - C soils = $\frac{(P)(Rv)(A)}{12}$ = 2,754 cf

**V - Total = 29,477 cf**

The computed ESDv provided is:

| | | |
|---|---|---|
| ESDv= | **33,116** | **cf** |
| Pretreatment= | **0** | **cf** |

| | | |
|---|---|---|
| Forebay Surface Area= | 0 | sf |
| Forebay Ponding Area= | 0 | sf |
| Forebay Ponding Depth= | 0.00 | ft |
| Surface Area= | 20,178 | sf |
| Ponding Area= | 23,976 | sf |
| Ponding depth= | 1.5 | ft |

Therefore, when assessing compliance with the MEP standard, the volume of runoff treated by this submerged gravel wetland practice is **29,477 cf.**

**SWM #7 - Drainage Area 12**

| | | | | |
|---|---|---|---|---|
| Total Area - A Soils | 102,584 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 52,349 | sf | | |
| Percent Impervious (I) | 51 | % | = | 9,578 cf |
| Pe = | 1.8 | " | | |
| Rv = 0.05 +0.009(I) | 0.51 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - B Soils | 23,522 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 13,027 | sf | | |
| Percent Impervious (I) | 55 | % | = | 2,365 cf |
| Pe = | 1.8 | " | | |
| Rv = 0.05 +0.009(I) | 0.55 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - C Soils | 71,119 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 26,606 | sf | | |
| Percent Impervious (I) | 37 | % | = | 5,042 cf |
| Pe = | 1.6 | " | | |
| Rv = 0.05 +0.009(I) | 0.39 | | | |

| | | |
|---|---|---|
| **Total Target ESDv =** | **16,985** | **cf** |
| 75% of target = | 12,739 | cf |
| 10% of target = | 1,698 | cf |

*Site Development Design - Submerged Gravel Wetland (M-2):*

Based on the Cpv storm (2.8 in.): Max allowable ESDv that can be used:

V - A soils = $\frac{(P)(Rv)(A)}{12}$ = 12,190 cf

V - B soils = $\frac{(P)(Rv)(A)}{12}$ = 3,010 cf

V - C soils = $\frac{(P)(Rv)(A)}{12}$ = 6,417 cf

**V - Total = 21,617 cf**

The computed ESDv provided is:

| | | |
|---|---|---|
| ESDv= | **25,466** | **cf** |
| Pretreatment= | **0** | **cf** |

| | | |
|---|---|---|
| Forebay Surface Area= | 0 | sf |
| Forebay Ponding Area= | 0 | sf |
| Forebay Ponding Depth= | 0.00 | ft |
| Surface Area= | 15,417 | sf |
| Ponding Area= | 18,538 | sf |
| Ponding depth= | 1.5 | ft |

Therefore, when assessing compliance with the MEP standard, the volume of runoff treated by this submerged gravel wetland practice is **21,617 cf.**

**SWM #8 - Drainage Area 13**

| | | | | |
|---|---|---|---|---|
| Total Area - A Soils | 146,888 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 52,940 | sf | | |
| Percent Impervious (I) | 36 | % | = | 10,082 cf |
| Pe = | 1.8 | " | | |
| Rv = 0.05 +0.009(I) | 0.37 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - B Soils | 36,945 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 14,694 | sf | | |
| Percent Impervious (I) | 40 | % | = | 2,763 cf |
| Pe = | 1.8 | " | | |
| Rv = 0.05 +0.009(I) | 0.41 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - C Soils | 40,502 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 4,652 | sf | | |
| Percent Impervious (I) | 11 | % | = | 1,139 cf |
| Pe = | 1.6 | " | | |
| Rv = 0.05 +0.009(I) | 0.15 | | | |

| | | |
|---|---|---|
| **Total Target ESDv =** | **13,984** | **cf** |
| 75% of target = | 10,488 | cf |
| 10% of target = | 1,398 | cf |

*Site Development Design - Submerged Gravel Wetland (M-2):*

Based on the Cpv storm (2.8 in.): Max allowable ESDv that can be used:

V - A soils = $\frac{(P)(Rv)(A)}{12}$ = 12,831 cf

V - B soils = $\frac{(P)(Rv)(A)}{12}$ = 3,517 cf

V - C soils = $\frac{(P)(Rv)(A)}{12}$ = 1,449 cf

**V - Total = 17,797 cf**

The computed ESDv provided is:

| | | |
|---|---|---|
| ESDv= | **27,092** | **cf** |
| Pretreatment= | **0** | **cf** |

| | | |
|---|---|---|
| Forebay Surface Area= | 0 | sf |
| Forebay Ponding Area= | 0 | sf |
| Forebay Ponding Depth= | 0.00 | ft |
| Surface Area= | 16,926 | sf |
| Ponding Area= | 19,196 | sf |
| Ponding depth= | 1.5 | ft |

Therefore, when assessing compliance with the MEP standard, the volume of runoff treated by this submerged gravel wetland practice is **17,797 cf.**

**SWM #9 - Drainage Area 14**

| | | | | |
|---|---|---|---|---|
| Total Area - B Soils | 8,733 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 2,236 | sf | | |
| Percent Impervious (I) | 26 | % | = | 327 cf |
| Pe = | 1.6 | " | | |
| Rv = 0.05 +0.009(I) | 0.28 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - C Soils | 61,466 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 34,045 | sf | | |
| Percent Impervious (I) | 55 | % | = | 5,057 cf |
| Pe = | 1.8 | " | | |
| Rv = 0.05 +0.009(I) | 0.55 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - D Soils | 16,917 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 7,767 | sf | | |
| Percent Impervious (I) | 46 | % | = | 1,175 cf |
| Pe = | 1.8 | " | | |
| Rv = 0.05 +0.009(I) | 0.46 | | | |

| | |
|---|---|
| **Total Target ESDv =** | **6,559 cf** |
| 75% of target = | 4,919 cf |
| 10% of target = | 656 cf |

*Site Development Design - Submerged Gravel Wetland (M-2):*

Based on the Cpv storm (2.8 in.): Max allowable ESDv that can be used:

V - B soils = $\frac{(P)(Rv)(A)}{12}$ = 571 cf

V - C soils = $\frac{(P)(Rv)(A)}{12}$ = 7,867 cf

V - D soils = $\frac{(P)(Rv)(A)}{12}$ = 1,828 cf

**V - Total = 10,266 cf**

The computed ESDv provided is:

| | | |
|---|---|---|
| ESDv= | **8,590** | **cf** |
| Pretreatment= | **0** | **cf** |

| | | |
|---|---|---|
| Forebay Surface Area= | 0 | sf |
| Forebay Ponding Area= | 0 | sf |
| Forebay Ponding Depth= | 0.00 | ft |
| Surface Area= | 4,816 | sf |
| Ponding Area= | 6,637 | sf |
| Ponding depth= | 1.5 | ft |

Therefore, when assessing compliance with the MEP standard, the volume of runoff treated by this submerged gravel wetland practice is **8,590 cf.**

**SWM #10 - Drainage Area 15**

| | | | | |
|---|---|---|---|---|
| Total Area - B Soils | 12,454 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 7,822 | sf | | |
| Percent Impervious (I) | 63 | % | = | 1,277 cf |
| Pe = | 2.0 | " | | |
| Rv = 0.05 +0.009(I) | 0.62 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - C Soils | 38,146 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 29,180 | sf | | |
| Percent Impervious (I) | 76 | % | = | 4,695 cf |
| Pe = | 2.0 | " | | |
| Rv = 0.05 +0.009(I) | 0.74 | | | |

| | | | | |
|---|---|---|---|---|
| Total Area - D Soils | 44,573 | sf | Target ESDv = | $\frac{(P_F)(Rv)(A)}{12}$ |
| Impervious Area | 16,814 | sf | | |
| Percent Impervious (I) | 38 | % | = | 2,315 cf |
| Pe = | 1.6 | " | | |
| Rv = 0.05 +0.009(I) | 0.39 | | | |

| | | |
|---|---|---|
| **Total Target ESDv =** | **8,287** | **cf** |
| 75% of target = | 6,215 | cf |
| 10% of target = | 829 | cf |

*Site Development Design - Submerged Gravel Wetland (M-2):*

Based on the Cpv storm (2.8 in.): Max allowable ESDv that can be used:

| | | | | |
|---|---|---|---|---|
| V - B soils = | $\frac{(P)(Rv)(A)}{12}$ | = | 1,788 | cf |
| V - C soils = | $\frac{(P)(Rv)(A)}{12}$ | = | 6,573 | cf |
| V - D soils = | $\frac{(P)(Rv)(A)}{12}$ | = | 4,051 | cf |
| **V - Total =** | **12,412** | | | **cf** |

The computed ESDv provided is:

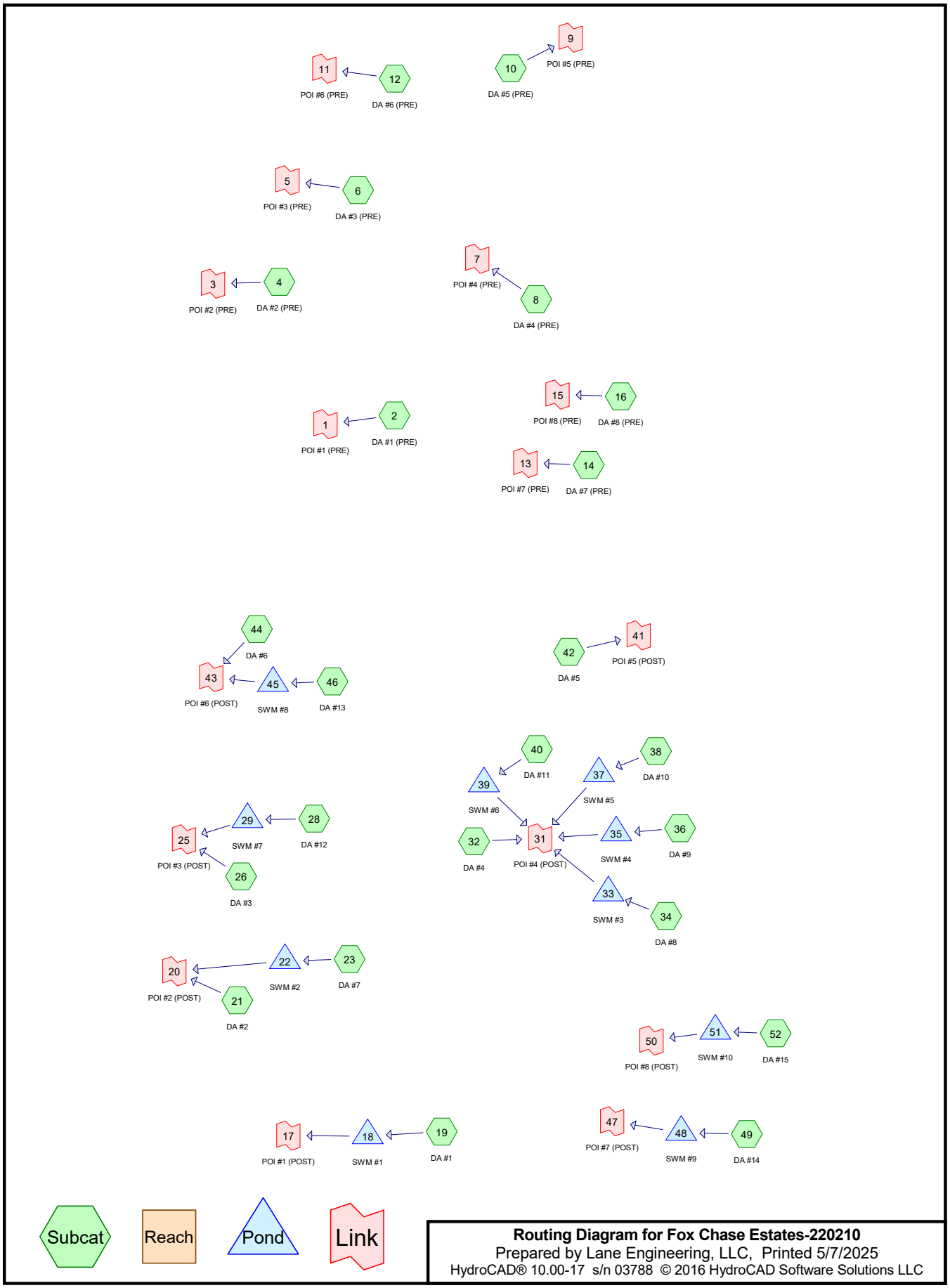
| | | |
|---|---|---|
| ESDv= | **11,960** | **cf** |
| Pretreatment= | **0** | **cf** |

| | | |
|---|---|---|
| Forebay Surface Area= | 0 | sf |
| Forebay Ponding Area= | 0 | sf |
| Forebay Ponding Depth= | 0.00 | ft |
| Surface Area= | 6,574 | sf |
| Ponding Area= | 9,372 | sf |
| Ponding depth= | 1.5 | ft |

Therefore, when assessing compliance with the MEP standard, the volume of runoff treated by this submerged gravel wetland practice is **11,960 cf.**

# APPENDIX B

STORMWATER QUANTITY CALCULATIONS




**Routing Diagram for Fox Chase Estates-220210**
Prepared by Lane Engineering, LLC, Printed 5/7/2025
HydroCAD® 10.00-17 s/n 03788 © 2016 HydroCAD Software Solutions LLC

## Summary for Link 1: POI #1 (PRE)

Inflow Area = 6.678 ac, 18.09% Impervious, Inflow Depth > 1.28" for 2-Yr event
Inflow = 7.12 cfs @ 12.11 hrs, Volume= 0.714 af
Primary = 7.12 cfs @ 12.11 hrs, Volume= 0.714 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Subcatchment 2: DA #1 (PRE)

Runoff = 7.12 cfs @ 12.11 hrs, Volume= 0.714 af, Depth> 1.28"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| | Area (sf) | CN | Description |
|---|---|---|---|
| * | 52,628 | 98 | Paved parking & Bldgs, HSG B |
| | 95,669 | 75 | Row crops, SR + CR, Good, HSG B |
| | 78,521 | 61 | >75% Grass cover, Good, HSG B |
| | 17,669 | 70 | Woods, Good, HSG C |
| | 42,219 | 82 | Row crops, SR + CR, Good, HSG C |
| | 4,179 | 74 | >75% Grass cover, Good, HSG C |
| | 290,885 | 76 | Weighted Average |
| | 238,257 | | 81.91% Pervious Area |
| | 52,628 | | 18.09% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.5 | 150 | 0.0290 | 0.20 | | **Sheet Flow, A-B**<br>Cultivated: Residue>20% n= 0.170 P2= 3.40" |
| 0.5 | 43 | 0.0310 | 1.58 | | **Shallow Concentrated Flow, B-C**<br>Cultivated Straight Rows Kv= 9.0 fps |
| 2.4 | 120 | 0.0270 | 0.82 | | **Shallow Concentrated Flow, C-POI**<br>Woodland Kv= 5.0 fps |
| 15.4 | 313 | Total | | | |

## Summary for Link 3: POI #2 (PRE)

Inflow Area = 19.343 ac, 1.97% Impervious, Inflow Depth > 1.34" for 2-Yr event
Inflow = 17.49 cfs @ 12.17 hrs, Volume= 2.163 af
Primary = 17.49 cfs @ 12.17 hrs, Volume= 2.163 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Subcatchment 4: DA #2 (PRE)

Runoff = 17.49 cfs @ 12.17 hrs, Volume= 2.163 af, Depth> 1.34"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| Area (sf) | CN | Description |
|---|---|---|
| 16,626 | 98 | Paved parking, HSG B |
| 51,570 | 55 | Woods, Good, HSG B |
| 343,838 | 75 | Row crops, SR + CR, Good, HSG B |
| 16,699 | 70 | Woods, Good, HSG C |
| 280,845 | 82 | Row crops, SR + CR, Good, HSG C |
| 132,997 | 80 | >75% Grass cover, Good, HSG D |
| 842,575 | 77 | Weighted Average |
| 825,949 | | 98.03% Pervious Area |
| 16,626 | | 1.97% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.2 | 150 | 0.0310 | 0.20 | | **Sheet Flow, A-B** Cultivated: Residue>20% n= 0.170 P2= 3.40" |
| 0.8 | 75 | 0.0330 | 1.63 | | **Shallow Concentrated Flow, B-C** Cultivated Straight Rows Kv= 9.0 fps |
| 8.3 | 449 | 0.0100 | 0.90 | | **Shallow Concentrated Flow, C-POI** Cultivated Straight Rows Kv= 9.0 fps |
| 21.3 | 674 | Total | | | |

## Summary for Link 5: POI #3 (PRE)

Inflow Area = 18.457 ac, 1.69% Impervious, Inflow Depth > 1.03" for 2-Yr event
Inflow = 8.21 cfs @ 12.36 hrs, Volume= 1.589 af
Primary = 8.21 cfs @ 12.36 hrs, Volume= 1.589 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Subcatchment 6: DA #3 (PRE)

Runoff = 8.21 cfs @ 12.36 hrs, Volume= 1.589 af, Depth> 1.03"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| Area (sf) | CN | Description |
|---|---|---|
| 5,800 | 98 | Paved parking, HSG A |
| 8,627 | 30 | Woods, Good, HSG A |
| 94,796 | 64 | Row crops, SR + CR, Good, HSG A |
| 2,886 | 98 | Paved parking, HSG B |
| 74,323 | 55 | Woods, Good, HSG B |
| 204,185 | 75 | Row crops, SR + CR, Good, HSG B |
| 4,921 | 98 | Paved parking, HSG C |
| 203,245 | 70 | Woods, Good, HSG C |
| 175,364 | 82 | Row crops, SR + CR, Good, HSG C |
| 18,225 | 77 | Woods, Good, HSG D |
| 11,600 | 85 | Row crops, SR + CR, Good, HSG D |
| 803,972 | 72 | Weighted Average |
| 790,365 | | 98.31% Pervious Area |
| 13,607 | | 1.69% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 14.0 | 150 | 0.0220 | 0.18 | | **Sheet Flow, A-B** Cultivated: Residue>20% n= 0.170 P2= 3.40" |
| 3.9 | 165 | 0.0200 | 0.71 | | **Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps |
| 6.6 | 451 | 0.0160 | 1.14 | | **Shallow Concentrated Flow, C-D** Cultivated Straight Rows Kv= 9.0 fps |
| 4.9 | 277 | 0.0110 | 0.94 | | **Shallow Concentrated Flow, D-E** Cultivated Straight Rows Kv= 9.0 fps |
| 2.9 | 215 | 0.0190 | 1.24 | | **Shallow Concentrated Flow, E-F** Cultivated Straight Rows Kv= 9.0 fps |
| 3.8 | 204 | 0.0100 | 0.90 | | **Shallow Concentrated Flow, F-POI** Cultivated Straight Rows Kv= 9.0 fps |
| 36.1 | 1,462 | Total | | | |

## Summary for Link 7: POI #4 (PRE)

Inflow Area = 25.115 ac, 0.00% Impervious, Inflow Depth > 1.04" for 2-Yr event
Inflow = 14.56 cfs @ 12.25 hrs, Volume= 2.177 af
Primary = 14.56 cfs @ 12.25 hrs, Volume= 2.177 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Subcatchment 8: DA #4 (PRE)

Runoff = 14.56 cfs @ 12.25 hrs, Volume= 2.177 af, Depth> 1.04"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| Area (sf) | CN | Description |
|---|---|---|
| 280,581 | 64 | Row crops, SR + CR, Good, HSG A |
| 29,286 | 30 | Woods, Good, HSG A |
| 344,253 | 75 | Row crops, SR + CR, Good, HSG B |
| 77,974 | 55 | Woods, Good, HSG B |
| 298,671 | 82 | Row crops, SR + CR, Good, HSG C |
| 22,136 | 70 | Woods, Good, HSG C |
| 36,346 | 85 | Row crops, SR + CR, Good, HSG D |
| 4,764 | 77 | Woods, Good, HSG D |
| 1,094,011 | 72 | Weighted Average |
| 1,094,011 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 17.8 | 150 | 0.0120 | 0.14 | | **Sheet Flow, A-B** Cultivated: Residue>20% n= 0.170 P2= 3.40" |
| 2.0 | 171 | 0.0260 | 1.45 | | **Shallow Concentrated Flow, B-C** Cultivated Straight Rows Kv= 9.0 fps |
| 1.5 | 83 | 0.0360 | 0.95 | | **Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps |
| 4.0 | 418 | 0.0380 | 1.75 | | **Shallow Concentrated Flow, D-POI** Cultivated Straight Rows Kv= 9.0 fps |
| 25.3 | 822 | Total | | | |

## Summary for Link 9: POI #5 (PRE)

Inflow Area = 7.160 ac, 0.00% Impervious, Inflow Depth > 0.88" for 2-Yr event
Inflow = 3.30 cfs @ 12.23 hrs, Volume= 0.525 af
Primary = 3.30 cfs @ 12.23 hrs, Volume= 0.525 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Subcatchment 10: DA #5 (PRE)

Runoff = 3.30 cfs @ 12.23 hrs, Volume= 0.525 af, Depth> 0.88"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| Area (sf) | CN | Description |
|---|---|---|
| 13,229 | 30 | Woods, Good, HSG A |
| 161,378 | 64 | Row crops, SR + CR, Good, HSG A |
| 7,458 | 55 | Woods, Good, HSG B |
| 28,591 | 75 | Row crops, SR + CR, Good, HSG B |
| 101,230 | 82 | Row crops, SR + CR, Good, HSG C |
| 311,886 | 69 | Weighted Average |
| 311,886 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 21.0 | 150 | 0.0080 | 0.12 | | **Sheet Flow, A-B** Cultivated: Residue>20% n= 0.170 P2= 3.40" |
| 4.6 | 330 | 0.0180 | 1.21 | | **Shallow Concentrated Flow, B-POI** Cultivated Straight Rows Kv= 9.0 fps |
| 25.6 | 480 | Total | | | |

## Summary for Link 11: POI #6 (PRE)

Inflow Area = 13.293 ac, 0.00% Impervious, Inflow Depth > 0.73" for 2-Yr event
Inflow = 3.44 cfs @ 12.43 hrs, Volume= 0.805 af
Primary = 3.44 cfs @ 12.43 hrs, Volume= 0.805 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Subcatchment 12: DA #6 (PRE)

Runoff = 3.44 cfs @ 12.43 hrs, Volume= 0.805 af, Depth> 0.73"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| Area (sf) | CN | Description |
|---|---|---|
| 37,107 | 30 | Woods, Good, HSG A |
| 371,149 | 64 | Row crops, SR + CR, Good, HSG A |
| 3,606 | 55 | Woods, Good, HSG B |
| 56,861 | 75 | Row crops, SR + CR, Good, HSG B |
| 7,529 | 70 | Woods, Good, HSG C |
| 102,783 | 82 | Row crops, SR + CR, Good, HSG C |
| 579,035 | 66 | Weighted Average |
| 579,035 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 15.5 | 150 | 0.0170 | 0.16 | | **Sheet Flow, A-B** Cultivated: Residue>20% n= 0.170 P2= 3.40" |
| 1.7 | 119 | 0.0160 | 1.14 | | **Shallow Concentrated Flow, B-C** Cultivated Straight Rows Kv= 9.0 fps |
| 2.5 | 48 | 0.0040 | 0.32 | | **Shallow Concentrated Flow, C-D** Woodland Kv= 5.0 fps |
| 3.7 | 125 | 0.0040 | 0.57 | | **Shallow Concentrated Flow, D-E** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 125 | 0.0320 | 1.61 | | **Shallow Concentrated Flow, E-F** Cultivated Straight Rows Kv= 9.0 fps |
| 1.6 | 90 | 0.0110 | 0.94 | | **Shallow Concentrated Flow, F-G** Cultivated Straight Rows Kv= 9.0 fps |
| 1.2 | 149 | 0.0540 | 2.09 | | **Shallow Concentrated Flow, G-H** Cultivated Straight Rows Kv= 9.0 fps |
| 1.3 | 132 | 0.0380 | 1.75 | | **Shallow Concentrated Flow, H-I** Cultivated Straight Rows Kv= 9.0 fps |
| 4.8 | 420 | 0.0260 | 1.45 | | **Shallow Concentrated Flow, I-J** Cultivated Straight Rows Kv= 9.0 fps |
| 5.5 | 361 | 0.0150 | 1.10 | | **Shallow Concentrated Flow, J-POI** Cultivated Straight Rows Kv= 9.0 fps |
| 39.1 | 1,719 | Total | | | |

## Summary for Link 13: POI #7 (PRE)

Inflow Area = 2.000 ac, 0.82% Impervious, Inflow Depth > 1.61" for 2-Yr event
Inflow = 2.43 cfs @ 12.14 hrs, Volume= 0.269 af
Primary = 2.43 cfs @ 12.14 hrs, Volume= 0.269 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Subcatchment 14: DA #7 (PRE)

Runoff = 2.43 cfs @ 12.14 hrs, Volume= 0.269 af, Depth> 1.61"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| | Area (sf) | CN | Description |
|---|---|---|---|
| * | 710 | 98 | Paved parking & Bldgs, HSG C |
| | 1,400 | 55 | Woods, Good, HSG B |
| | 2,754 | 70 | Woods, Good, HSG C |
| | 3,353 | 77 | Woods, Good, HSG D |
| | 7,333 | 75 | Row crops, SR + CR, Good, HSG B |
| | 58,002 | 82 | Row crops, SR + CR, Good, HSG C |
| | 13,564 | 85 | Row crops, SR + CR, Good, HSG D |
| | 87,116 | 81 | Weighted Average |
| | 86,406 | | 99.18% Pervious Area |
| | 710 | | 0.82% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 18.9 | 147 | 0.0100 | 0.13 | | **Sheet Flow, A-POI** Cultivated: Residue>20% n= 0.170 P2= 3.40" |

## Summary for Link 15: POI #8 (PRE)

Inflow Area = 2.185 ac, 0.37% Impervious, Inflow Depth > 1.55" for 2-Yr event
Inflow = 2.98 cfs @ 12.10 hrs, Volume= 0.282 af
Primary = 2.98 cfs @ 12.10 hrs, Volume= 0.282 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Subcatchment 16: DA #8 (PRE)

Runoff = 2.98 cfs @ 12.10 hrs, Volume= 0.282 af, Depth> 1.55"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| | Area (sf) | CN | Description |
|---|---|---|---|
| * | 356 | 98 | Paved parking & Bldgs, HSG C |
| | 8,938 | 55 | Woods, Good, HSG B |
| | 5,129 | 70 | Woods, Good, HSG C |
| | 5,975 | 77 | Woods, Good, HSG D |
| | 3,516 | 75 | Row crops, SR + CR, Good, HSG B |
| | 32,661 | 82 | Row crops, SR + CR, Good, HSG C |
| | 38,598 | 85 | Row crops, SR + CR, Good, HSG D |
| | 95,173 | 80 | Weighted Average |
| | 94,817 | | 99.63% Pervious Area |
| | 356 | | 0.37% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.9 | 150 | 0.0270 | 0.19 | | **Sheet Flow, A-B**<br>Cultivated: Residue>20% n= 0.170 P2= 3.40" |
| 0.8 | 64 | 0.0210 | 1.30 | | **Shallow Concentrated Flow, B-C**<br>Cultivated Straight Rows Kv= 9.0 fps |
| 0.9 | 85 | 0.0100 | 1.50 | | **Shallow Concentrated Flow, C-POI**<br>Grassed Waterway Kv= 15.0 fps |
| 14.6 | 299 | Total | | | |

## Summary for Link 17: POI #1 (POST)

Inflow Area = 13.555 ac, 27.78% Impervious, Inflow Depth > 0.51" for 2-Yr event
Inflow = 1.15 cfs @ 14.01 hrs, Volume= 0.576 af
Primary = 1.15 cfs @ 14.01 hrs, Volume= 0.576 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Pond 18: SWM #1

Inflow Area = 13.555 ac, 27.78% Impervious, Inflow Depth > 1.23" for 2-Yr event
Inflow = 23.12 cfs @ 11.99 hrs, Volume= 1.387 af
Outflow = 1.15 cfs @ 14.01 hrs, Volume= 0.576 af, Atten= 95%, Lag= 121.2 min
Primary = 1.15 cfs @ 14.01 hrs, Volume= 0.576 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 36.62' @ 14.01 hrs Surf.Area= 24,545 sf Storage= 36,944 cf

Plug-Flow detention time= 328.8 min calculated for 0.576 af (42% of inflow)
Center-of-Mass det. time= 192.6 min ( 1,046.2 - 853.6 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 35.00' | 100,688 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 35.00 | 20,975 | 728.5 | 0 | 0 | 20,975 |
| 38.00 | 27,786 | 785.0 | 72,902 | 72,902 | 28,149 |
| 39.00 | 27,786 | 785.0 | 27,786 | 100,688 | 28,934 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 34.67' | **18.0" Round Culvert** L= 26.0' Ke= 0.500<br>Inlet / Outlet Invert= 34.67' / 32.00' S= 0.1027 '/' Cc= 0.900<br>n= 0.012, Flow Area= 1.77 sf |
| #2 | Device 1 | 36.50' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #3 | Secondary | 38.00' | **185.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=1.15 cfs @ 14.01 hrs HW=36.62' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 1.15 cfs of 9.34 cfs potential flow)
└**2=Sharp-Crested Rectangular Weir** (Weir Controls 1.15 cfs @ 1.16 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=35.00' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Subcatchment 19: DA #1

Runoff = 23.12 cfs @ 11.99 hrs, Volume= 1.387 af, Depth> 1.23"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| Area (sf) | CN | Description |
|---|---|---|
| 164,015 | 98 | Paved parking, HSG C |
| 282,040 | 61 | >75% Grass cover, Good, HSG B |
| 111,049 | 74 | >75% Grass cover, Good, HSG C |
| 33,369 | 80 | >75% Grass cover, Good, HSG D |
| 590,473 | 75 | Weighted Average |
| 426,458 | | 72.22% Pervious Area |
| 164,015 | | 27.78% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, Min Tc per TR-55** |

## Summary for Link 20: POI #2 (POST)

Inflow Area = 17.266 ac, 44.68% Impervious, Inflow Depth > 0.22" for 2-Yr event
Inflow = 0.60 cfs @ 21.02 hrs, Volume= 0.312 af
Primary = 0.60 cfs @ 21.02 hrs, Volume= 0.312 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Subcatchment 21: DA #2

Runoff = 0.58 cfs @ 11.99 hrs, Volume= 0.034 af, Depth> 1.29"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| | Area (sf) | CN | Description |
|---|---|---|---|
| * | 2,400 | 98 | Buildings, HSG C |
| | 2,613 | 61 | >75% Grass cover, Good, HSG B |
| | 8,956 | 74 | >75% Grass cover, Good, HSG C |
| | 13,969 | 76 | Weighted Average |
| | 11,569 | | 82.82% Pervious Area |
| | 2,400 | | 17.18% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, Min Tc per TR-55** |

## Summary for Pond 22: SWM #2

Inflow Area = 16.945 ac, 45.20% Impervious, Inflow Depth > 1.70" for 2-Yr event
Inflow = 39.63 cfs @ 11.99 hrs, Volume= 2.394 af
Outflow = 0.59 cfs @ 21.05 hrs, Volume= 0.278 af, Atten= 99%, Lag= 543.2 min
Primary = 0.59 cfs @ 21.05 hrs, Volume= 0.278 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 23.58' @ 21.05 hrs Surf.Area= 60,220 sf Storage= 92,373 cf

Plug-Flow detention time= 582.2 min calculated for 0.278 af (12% of inflow)
Center-of-Mass det. time= 430.3 min ( 1,263.0 - 832.7 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 22.00' | 247,001 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 22.00 | 56,734 | 1,476.5 | 0 | 0 | 56,734 |
| 25.00 | 63,442 | 1,504.8 | 180,170 | 180,170 | 64,801 |
| 26.00 | 70,277 | 1,533.0 | 66,830 | 247,001 | 71,785 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 21.67' | **18.0" Round Culvert** L= 356.0' Ke= 0.500<br>Inlet / Outlet Invert= 21.67' / 17.50' S= 0.0117 '/' Cc= 0.900<br>n= 0.012, Flow Area= 1.77 sf |
| #2 | Device 1 | 23.50' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #3 | Secondary | 25.00' | **185.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=0.59 cfs @ 21.05 hrs HW=23.58' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.59 cfs of 9.16 cfs potential flow)
└**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.59 cfs @ 0.92 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=22.00' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Subcatchment 23: DA #7

Runoff = 39.63 cfs @ 11.99 hrs, Volume= 2.394 af, Depth> 1.70"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| | Area (sf) | CN | Description |
|---|---|---|---|
| * | 333,607 | 98 | Buildings & Pvmt |
| | 160,671 | 61 | >75% Grass cover, Good, HSG B |
| | 191,181 | 74 | >75% Grass cover, Good, HSG C |
| | 52,659 | 80 | >75% Grass cover, Good, HSG D |
| | 738,118 | 82 | Weighted Average |
| | 404,511 | | 54.80% Pervious Area |
| | 333,607 | | 45.20% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.9 | 1,014 | 0.0200 | 2.87 | | **Shallow Concentrated Flow, A-B** Paved Kv= 20.3 fps |
| 0.5 | 182 | 0.0050 | 5.52 | 17.33 | **Pipe Channel, B-C** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012 |
| 6.4 | 1,196 | Total | | | |

## Summary for Link 25: POI #3 (POST)

Inflow Area = 15.308 ac, 16.12% Impervious, Inflow Depth > 0.59" for 2-Yr event
Inflow = 7.38 cfs @ 12.09 hrs, Volume= 0.752 af
Primary = 7.38 cfs @ 12.09 hrs, Volume= 0.752 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Subcatchment 26: DA #3

Runoff = 7.38 cfs @ 12.09 hrs, Volume= 0.752 af, Depth> 0.84"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| | Area (sf) | CN | Description |
|---|---|---|---|
| * | 15,495 | 98 | Buildings, HSG C |
| | 36,656 | 39 | >75% Grass cover, Good, HSG A |
| | 145,878 | 61 | >75% Grass cover, Good, HSG B |
| | 262,508 | 74 | >75% Grass cover, Good, HSG C |
| | 9,050 | 80 | >75% Grass cover, Good, HSG D |
| | 469,587 | 68 | Weighted Average |
| | 454,092 | | 96.70% Pervious Area |
| | 15,495 | | 3.30% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 13.3 | 1,555 | 0.0170 | 1.96 | | **Shallow Concentrated Flow, A-B** Grassed Waterway Kv= 15.0 fps |

## Summary for Subcatchment 28: DA #12

Runoff = 8.15 cfs @ 11.99 hrs, Volume= 0.486 af, Depth> 1.29"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| | Area (sf) | CN | Description |
|---|---|---|---|
| * | 91,981 | 98 | Buildings & Pvmt |
| | 50,235 | 39 | >75% Grass cover, Good, HSG A |
| | 10,495 | 61 | >75% Grass cover, Good, HSG B |
| | 44,513 | 74 | >75% Grass cover, Good, HSG C |
| | 197,224 | 76 | Weighted Average |
| | 105,243 | | 53.36% Pervious Area |
| | 91,981 | | 46.64% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, Min Tc per TR-55** |

## Summary for Pond 29: SWM #7

Inflow Area = 4.528 ac, 46.64% Impervious, Inflow Depth > 1.29" for 2-Yr event
Inflow = 8.15 cfs @ 11.99 hrs, Volume= 0.486 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 31.27' @ 24.00 hrs Surf.Area= 17,979 sf Storage= 21,187 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 30.00' | 77,316 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 30.00 | 15,417 | 679.4 | 0 | 0 | 15,417 |
| 33.00 | 21,786 | 736.0 | 55,530 | 55,530 | 22,136 |
| 34.00 | 21,786 | 736.0 | 21,786 | 77,316 | 22,872 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 29.67' | **24.0" Round Culvert** L= 60.0' Ke= 0.500<br>Inlet / Outlet Invert= 29.67' / 29.00' S= 0.0112 '/' Cc= 0.900<br>n= 0.012, Flow Area= 3.14 sf |
| #2 | Device 1 | 31.50' | **4.0" Vert. Orifice/Grate** C= 0.600 |
| #3 | Device 1 | 32.00' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #4 | Secondary | 33.00' | **54.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=30.00' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.00 cfs of 0.66 cfs potential flow)
  ├─**2=Orifice/Grate** ( Controls 0.00 cfs)
  └─**3=Sharp-Crested Rectangular Weir** ( Controls 0.00 cfs)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=30.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Link 31: POI #4 (POST)

Inflow Area = 35.026 ac, 28.84% Impervious, Inflow Depth > 0.18" for 2-Yr event
Inflow = 0.99 cfs @ 12.10 hrs, Volume= 0.538 af
Primary = 0.99 cfs @ 12.10 hrs, Volume= 0.538 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Subcatchment 32: DA #4

Runoff = 0.99 cfs @ 12.10 hrs, Volume= 0.185 af, Depth> 0.31"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| Area (sf) | CN | Description |
|---|---|---|
| 122,451 | 39 | >75% Grass cover, Good, HSG A |
| 138,263 | 61 | >75% Grass cover, Good, HSG B |
| 50,514 | 74 | >75% Grass cover, Good, HSG C |
| 1,374 | 80 | >75% Grass cover, Good, HSG D |
| 312,602 | 55 | Weighted Average |
| 312,602 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 11.6 | 1,440 | 0.0190 | 2.07 | | **Shallow Concentrated Flow, A-B** Grassed Waterway Kv= 15.0 fps |

## Summary for Pond 33: SWM #3

Inflow Area = 9.719 ac, 30.39% Impervious, Inflow Depth > 1.35" for 2-Yr event
Inflow = 18.43 cfs @ 11.99 hrs, Volume= 1.095 af
Outflow = 0.66 cfs @ 15.28 hrs, Volume= 0.354 af, Atten= 96%, Lag= 197.2 min
Primary = 0.66 cfs @ 15.28 hrs, Volume= 0.354 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 39.59' @ 15.28 hrs Surf.Area= 22,602 sf Storage= 33,169 cf

Plug-Flow detention time= 382.9 min calculated for 0.354 af (32% of inflow)
Center-of-Mass det. time= 247.4 min ( 1,094.9 - 847.5 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 38.00' | 93,163 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 38.00 | 19,263 | 698.4 | 0 | 0 | 19,263 |
| 41.00 | 25,803 | 755.0 | 67,360 | 67,360 | 26,163 |
| 42.00 | 25,803 | 755.0 | 25,803 | 93,163 | 26,918 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 37.67' | **18.0" Round Culvert** L= 120.0' Ke= 0.500<br>Inlet / Outlet Invert= 37.67' / 35.00' S= 0.0223 '/' Cc= 0.900<br>n= 0.012, Flow Area= 1.77 sf |
| #2 | Device 1 | 39.50' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #3 | Secondary | 41.00' | **122.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=0.66 cfs @ 15.28 hrs HW=39.59' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.66 cfs of 9.19 cfs potential flow)
└**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.66 cfs @ 0.96 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=38.00' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Subcatchment 34: DA #8

Runoff = 18.43 cfs @ 11.99 hrs, Volume= 1.095 af, Depth> 1.35"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| | Area (sf) | CN | Description |
|---|---|---|---|
| * | 128,661 | 98 | Buildings & Pvmt |
| | 140,194 | 61 | >75% Grass cover, Good, HSG B |
| | 153,996 | 74 | >75% Grass cover, Good, HSG C |
| | 496 | 80 | >75% Grass cover, Good, HSG D |
| | 423,347 | 77 | Weighted Average |
| | 294,686 | | 69.61% Pervious Area |
| | 128,661 | | 30.39% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, Min Tc per TR-55** |

## Summary for Pond 35: SWM #4

Inflow Area = 4.542 ac, 27.71% Impervious, Inflow Depth > 1.17" for 2-Yr event
Inflow = 7.32 cfs @ 11.99 hrs, Volume= 0.442 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 51.96' @ 24.00 hrs Surf.Area= 20,879 sf Storage= 19,249 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 51.00' | 89,943 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 51.00 | 19,294 | 545.9 | 0 | 0 | 19,294 |
| 54.00 | 24,462 | 602.5 | 65,481 | 65,481 | 24,746 |
| 55.00 | 24,462 | 602.5 | 24,462 | 89,943 | 25,348 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 50.67' | **12.0" Round Culvert** L= 123.0' Ke= 0.500<br>Inlet / Outlet Invert= 50.67' / 50.00' S= 0.0054 '/' Cc= 0.900<br>n= 0.012, Flow Area= 0.79 sf |
| #2 | Device 1 | 52.50' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #3 | Secondary | 54.00' | **230.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=51.00' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.00 cfs of 0.37 cfs potential flow)
└**2=Sharp-Crested Rectangular Weir** ( Controls 0.00 cfs)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=51.00' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Subcatchment 36: DA #9

Runoff = 7.32 cfs @ 11.99 hrs, Volume= 0.442 af, Depth> 1.17"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| | Area (sf) | CN | Description |
|---|---|---|---|
| * | 54,821 | 98 | Buildings & Pvmt |
| | 11,454 | 39 | >75% Grass cover, Good, HSG A |
| | 78,408 | 61 | >75% Grass cover, Good, HSG B |
| | 25,252 | 74 | >75% Grass cover, Good, HSG C |
| | 27,916 | 80 | >75% Grass cover, Good, HSG D |
| | 197,851 | 74 | Weighted Average |
| | 143,030 | | 72.29% Pervious Area |
| | 54,821 | | 27.71% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, Min Tc per TR-55** |

## Summary for Pond 37: SWM #5

Inflow Area = 6.686 ac, 45.65% Impervious, Inflow Depth > 1.11" for 2-Yr event
Inflow = 10.17 cfs @ 12.00 hrs, Volume= 0.618 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 51.31' @ 24.00 hrs Surf.Area= 22,349 sf Storage= 26,919 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 50.00' | 96,082 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 50.00 | 18,903 | 898.4 | 0 | 0 | 18,903 |
| 53.00 | 27,243 | 954.9 | 68,839 | 68,839 | 27,687 |
| 54.00 | 27,243 | 954.9 | 27,243 | 96,082 | 28,642 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 49.67' | **24.0" Round Culvert** L= 131.0' Ke= 0.500<br>Inlet / Outlet Invert= 49.67' / 48.00' S= 0.0127 '/' Cc= 0.900<br>n= 0.012, Flow Area= 3.14 sf |
| #2 | Device 1 | 51.50' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #3 | Secondary | 53.00' | **350.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=50.00' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.00 cfs of 0.66 cfs potential flow)
└**2=Sharp-Crested Rectangular Weir** ( Controls 0.00 cfs)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=50.00' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Subcatchment 38: DA #10

Runoff = 10.17 cfs @ 12.00 hrs, Volume= 0.618 af, Depth> 1.11"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| | Area (sf) | CN | Description |
|---|---|---|---|
| * | 132,941 | 98 | Buildings & Pvmt |
| | 94,443 | 39 | >75% Grass cover, Good, HSG A |
| | 20,432 | 61 | >75% Grass cover, Good, HSG B |
| | 43,430 | 74 | >75% Grass cover, Good, HSG C |
| | 291,246 | 73 | Weighted Average |
| | 158,305 | | 54.35% Pervious Area |
| | 132,941 | | 45.65% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, Min Tc per TR-55** |

## Summary for Pond 39: SWM #6

Inflow Area = 6.903 ac, 41.12% Impervious, Inflow Depth > 0.65" for 2-Yr event
Inflow = 5.35 cfs @ 12.01 hrs, Volume= 0.375 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 42.77' @ 24.00 hrs Surf.Area= 22,052 sf Storage= 16,346 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 42.00' | 99,705 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 42.00 | 20,178 | 829.7 | 0 | 0 | 20,178 |
| 45.00 | 27,900 | 886.3 | 71,805 | 71,805 | 28,324 |
| 46.00 | 27,900 | 886.3 | 27,900 | 99,705 | 29,211 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 41.67' | **24.0" Round Culvert** L= 32.0' Ke= 0.500<br>Inlet / Outlet Invert= 41.67' / 38.50' S= 0.0991 '/' Cc= 0.900<br>n= 0.012, Flow Area= 3.14 sf |
| #2 | Device 1 | 43.50' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #3 | Secondary | 45.00' | **200.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=42.00' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.00 cfs of 0.66 cfs potential flow)
└**2=Sharp-Crested Rectangular Weir** ( Controls 0.00 cfs)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=42.00' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Subcatchment 40: DA #11

Runoff = 5.35 cfs @ 12.01 hrs, Volume= 0.375 af, Depth> 0.65"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| | Area (sf) | CN | Description |
|---|---|---|---|
| * | 123,660 | 98 | Buildings & Pvmt |
| | 166,580 | 39 | >75% Grass cover, Good, HSG A |
| | 10,466 | 74 | >75% Grass cover, Good, HSG C |
| | 300,706 | 64 | Weighted Average |
| | 177,046 | | 58.88% Pervious Area |
| | 123,660 | | 41.12% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, Min Tc per TR-55** |

## Summary for Link 41: POI #5 (POST)

Inflow Area = 1.861 ac, 15.38% Impervious, Inflow Depth > 0.25" for 2-Yr event
Inflow = 0.22 cfs @ 12.05 hrs, Volume= 0.039 af
Primary = 0.22 cfs @ 12.05 hrs, Volume= 0.039 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Subcatchment 42: DA #5

Runoff = 0.22 cfs @ 12.05 hrs, Volume= 0.039 af, Depth> 0.25"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| Area (sf) | CN | Description |
|---|---|---|
| 12,470 | 98 | Roofs, HSG B |
| 51,410 | 39 | >75% Grass cover, Good, HSG A |
| 17,184 | 61 | >75% Grass cover, Good, HSG B |
| 81,064 | 53 | Weighted Average |
| 68,594 | | 84.62% Pervious Area |
| 12,470 | | 15.38% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.8 | 66 | 0.0200 | 0.16 | | **Sheet Flow, A-POI** Grass: Short n= 0.150 P2= 3.40" |

## Summary for Link 43: POI #6 (POST)

Inflow Area = 7.029 ac, 23.94% Impervious, Inflow Depth > 0.03" for 2-Yr event
Inflow = 0.02 cfs @ 13.66 hrs, Volume= 0.016 af
Primary = 0.02 cfs @ 13.66 hrs, Volume= 0.016 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Subcatchment 44: DA #6

Runoff = 0.02 cfs @ 13.66 hrs, Volume= 0.016 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| | Area (sf) | CN | Description |
|---|---|---|---|
| | 64,881 | 39 | >75% Grass cover, Good, HSG A |
| | 15,954 | 74 | >75% Grass cover, Good, HSG C |
| * | 1,011 | 98 | Roofs, HSG C |
| | 81,846 | 47 | Weighted Average |
| | 80,835 | | 98.76% Pervious Area |
| | 1,011 | | 1.24% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 7.1 | 70 | 0.0200 | 0.16 | | **Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.40" |
| 11.8 | 80 | 0.0190 | 0.11 | | **Sheet Flow, B-C** Grass: Dense n= 0.240 P2= 3.40" |
| 3.3 | 362 | 0.0670 | 1.81 | | **Shallow Concentrated Flow, C-POI** Short Grass Pasture Kv= 7.0 fps |
| 22.2 | 512 | Total | | | |

## Summary for Pond 45: SWM #8

Inflow Area = 5.150 ac, 32.22% Impervious, Inflow Depth > 0.74" for 2-Yr event
Inflow = 4.78 cfs @ 12.00 hrs, Volume= 0.319 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 23.79' @ 24.00 hrs Surf.Area= 18,105 sf Storage= 13,900 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 23.00' | 79,228 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 23.00 | 16,925 | 490.4 | 0 | 0 | 16,925 |
| 26.00 | 21,593 | 546.9 | 57,635 | 57,635 | 21,842 |
| 27.00 | 21,593 | 546.9 | 21,593 | 79,228 | 22,388 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 22.67' | **24.0" Round Culvert** L= 37.0' Ke= 0.500<br>Inlet / Outlet Invert= 22.67' / 20.00' S= 0.0722 '/' Cc= 0.900<br>n= 0.012, Flow Area= 3.14 sf |
| #2 | Device 1 | 24.50' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #3 | Secondary | 26.00' | **134.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=23.00' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.00 cfs of 0.66 cfs potential flow)
└**2=Sharp-Crested Rectangular Weir** ( Controls 0.00 cfs)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=23.00' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Subcatchment 46: DA #13

Runoff = 4.78 cfs @ 12.00 hrs, Volume= 0.319 af, Depth> 0.74"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| | Area (sf) | CN | Description |
|---|---|---|---|
| * | 72,288 | 98 | Buildings & Pvmt |
| | 93,948 | 39 | >75% Grass cover, Good, HSG A |
| | 22,250 | 61 | >75% Grass cover, Good, HSG B |
| | 35,849 | 74 | >75% Grass cover, Good, HSG C |
| | 224,335 | 66 | Weighted Average |
| | 152,047 | | 67.78% Pervious Area |
| | 72,288 | | 32.22% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, Min Tc per TR-55** |

## Summary for Link 47: POI #7 (POST)

Inflow Area = 2.000 ac, 50.56% Impervious, Inflow Depth > 0.79" for 2-Yr event
Inflow = 0.30 cfs @ 13.46 hrs, Volume= 0.132 af
Primary = 0.30 cfs @ 13.46 hrs, Volume= 0.132 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Pond 48: SWM #9

Inflow Area = 2.000 ac, 50.56% Impervious, Inflow Depth > 2.01" for 2-Yr event
Inflow = 5.65 cfs @ 11.99 hrs, Volume= 0.334 af
Outflow = 0.30 cfs @ 13.46 hrs, Volume= 0.132 af, Atten= 95%, Lag= 88.2 min
Primary = 0.30 cfs @ 13.46 hrs, Volume= 0.132 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 57.63' @ 13.46 hrs Surf.Area= 6,730 sf Storage= 9,362 cf

Plug-Flow detention time= 310.6 min calculated for 0.132 af (39% of inflow)
Center-of-Mass det. time= 189.1 min ( 1,008.0 - 819.0 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 56.00' | 28,421 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 56.00 | 4,816 | 389.8 | 0 | 0 | 4,816 |
| 59.00 | 8,587 | 447.2 | 19,834 | 19,834 | 8,840 |
| 60.00 | 8,587 | 447.2 | 8,587 | 28,421 | 9,287 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 55.67' | **12.0" Round Culvert** L= 25.0' Ke= 0.500<br>Inlet / Outlet Invert= 55.67' / 55.50' S= 0.0068 '/' Cc= 0.900<br>n= 0.012, Flow Area= 0.79 sf |
| #2 | Device 1 | 57.50' | **2.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) |
| #3 | Device 1 | 58.00' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #4 | Secondary | 59.00' | **42.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=0.30 cfs @ 13.46 hrs HW=57.63' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.30 cfs of 4.55 cfs potential flow)
  ├**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.30 cfs @ 1.18 fps)
  └**3=Sharp-Crested Rectangular Weir** ( Controls 0.00 cfs)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=56.00' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Subcatchment 49: DA #14

Runoff = 5.65 cfs @ 11.99 hrs, Volume= 0.334 af, Depth> 2.01"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| | Area (sf) | CN | Description |
|---|---|---|---|
| * | 44,048 | 98 | Buildings & Parking, HSG C |
| | 6,497 | 61 | >75% Grass cover, Good, HSG B |
| | 27,421 | 74 | >75% Grass cover, Good, HSG C |
| | 9,150 | 80 | >75% Grass cover, Good, HSG D |
| | 87,116 | 86 | Weighted Average |
| | 43,068 | | 49.44% Pervious Area |
| | 44,048 | | 50.56% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, Min Tc per TR-55** |

## Summary for Link 50: POI #8 (POST)

Inflow Area = 2.185 ac, 56.55% Impervious, Inflow Depth > 0.75" for 2-Yr event
Inflow = 0.34 cfs @ 13.52 hrs, Volume= 0.137 af
Primary = 0.34 cfs @ 13.52 hrs, Volume= 0.137 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Pond 51: SWM #10

Inflow Area = 2.185 ac, 56.55% Impervious, Inflow Depth > 2.26" for 2-Yr event
Inflow = 6.87 cfs @ 11.99 hrs, Volume= 0.411 af
Outflow = 0.34 cfs @ 13.52 hrs, Volume= 0.137 af, Atten= 95%, Lag= 92.2 min
Primary = 0.34 cfs @ 13.52 hrs, Volume= 0.137 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 57.05' @ 13.52 hrs Surf.Area= 9,318 sf Storage= 12,294 cf

Plug-Flow detention time= 340.8 min calculated for 0.137 af (33% of inflow)
Center-of-Mass det. time= 213.7 min ( 1,021.5 - 807.8 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 55.50' | 40,157 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 55.50 | 6,574 | 607.5 | 0 | 0 | 6,574 |
| 58.50 | 12,296 | 664.0 | 27,861 | 27,861 | 12,601 |
| 59.50 | 12,296 | 664.0 | 12,296 | 40,157 | 13,265 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 55.17' | **12.0" Round Culvert** L= 14.0' Ke= 0.500<br>Inlet / Outlet Invert= 55.17' / 55.00' S= 0.0121 '/' Cc= 0.900<br>n= 0.012, Flow Area= 0.79 sf |
| #2 | Device 1 | 57.00' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #3 | Secondary | 58.50' | **271.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=0.34 cfs @ 13.52 hrs HW=57.05' TW=0.00' (Dynamic Tailwater)
↑—**1=Culvert** (Passes 0.34 cfs of 4.45 cfs potential flow)
↑—**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.34 cfs @ 0.77 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=55.50' (Free Discharge)
↑—**3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Subcatchment 52: DA #15

Runoff = 6.87 cfs @ 11.99 hrs, Volume= 0.411 af, Depth> 2.26"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-Yr Rainfall=3.40"

| | Area (sf) | CN | Description |
|---|---|---|---|
| * | 53,816 | 98 | Buildings & Parking, HSG C |
| | 4,632 | 61 | >75% Grass cover, Good, HSG B |
| | 8,966 | 74 | >75% Grass cover, Good, HSG C |
| | 27,759 | 80 | >75% Grass cover, Good, HSG D |
| | 95,173 | 89 | Weighted Average |
| | 41,357 | | 43.45% Pervious Area |
| | 53,816 | | 56.55% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 6.0 | | | | | **Direct Entry, Min Tc per TR-55** |

## Summary for Link 1: POI #1 (PRE)

Inflow Area = 6.678 ac, 18.09% Impervious, Inflow Depth > 2.77" for 10-Yr event
Inflow = 15.96 cfs @ 12.09 hrs, Volume= 1.539 af
Primary = 15.96 cfs @ 12.09 hrs, Volume= 1.539 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Link 3: POI #2 (PRE)

Inflow Area = 19.343 ac, 1.97% Impervious, Inflow Depth > 2.85" for 10-Yr event
Inflow = 38.65 cfs @ 12.16 hrs, Volume= 4.592 af
Primary = 38.65 cfs @ 12.16 hrs, Volume= 4.592 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Link 5: POI #3 (PRE)

Inflow Area = 18.457 ac, 1.69% Impervious, Inflow Depth > 2.39" for 10-Yr event
Inflow = 20.85 cfs @ 12.36 hrs, Volume= 3.673 af
Primary = 20.85 cfs @ 12.36 hrs, Volume= 3.673 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Link 7: POI #4 (PRE)

Inflow Area = 25.115 ac, 0.00% Impervious, Inflow Depth > 2.40" for 10-Yr event
Inflow = 36.82 cfs @ 12.20 hrs, Volume= 5.026 af
Primary = 36.82 cfs @ 12.20 hrs, Volume= 5.026 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Link 9: POI #5 (PRE)

Inflow Area = 7.160 ac, 0.00% Impervious, Inflow Depth > 2.15" for 10-Yr event
Inflow = 9.16 cfs @ 12.23 hrs, Volume= 1.282 af
Primary = 9.16 cfs @ 12.23 hrs, Volume= 1.282 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Link 11: POI #6 (PRE)

Inflow Area = 13.293 ac, 0.00% Impervious, Inflow Depth > 1.89" for 10-Yr event
Inflow = 10.70 cfs @ 12.42 hrs, Volume= 2.097 af
Primary = 10.70 cfs @ 12.42 hrs, Volume= 2.097 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Link 13: POI #7 (PRE)

Inflow Area = 2.000 ac, 0.82% Impervious, Inflow Depth > 3.23" for 10-Yr event
Inflow = 4.93 cfs @ 12.14 hrs, Volume= 0.538 af
Primary = 4.93 cfs @ 12.14 hrs, Volume= 0.538 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Link 15: POI #8 (PRE)

Inflow Area = 2.185 ac, 0.37% Impervious, Inflow Depth > 3.14" for 10-Yr event
Inflow = 6.16 cfs @ 12.07 hrs, Volume= 0.571 af
Primary = 6.16 cfs @ 12.07 hrs, Volume= 0.571 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Link 17: POI #1 (POST)

Inflow Area = 13.555 ac, 27.78% Impervious, Inflow Depth > 1.96" for 10-Yr event
Inflow = 11.98 cfs @ 12.30 hrs, Volume= 2.209 af
Primary = 11.98 cfs @ 12.30 hrs, Volume= 2.209 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Pond 18: SWM #1

Inflow Area = 13.555 ac, 27.78% Impervious, Inflow Depth > 2.69" for 10-Yr event
Inflow = 51.56 cfs @ 11.99 hrs, Volume= 3.036 af
Outflow = 11.98 cfs @ 12.30 hrs, Volume= 2.209 af, Atten= 77%, Lag= 18.9 min
Primary = 11.98 cfs @ 12.30 hrs, Volume= 2.209 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 37.40' @ 12.30 hrs Surf.Area= 26,352 sf Storage= 56,717 cf

Plug-Flow detention time= 166.1 min calculated for 2.209 af (73% of inflow)
Center-of-Mass det. time= 67.6 min ( 898.6 - 831.0 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 35.00' | 100,688 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 35.00 | 20,975 | 728.5 | 0 | 0 | 20,975 |
| 38.00 | 27,786 | 785.0 | 72,902 | 72,902 | 28,149 |
| 39.00 | 27,786 | 785.0 | 27,786 | 100,688 | 28,934 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 34.67' | **18.0" Round Culvert** L= 26.0' Ke= 0.500<br>Inlet / Outlet Invert= 34.67' / 32.00' S= 0.1027 '/' Cc= 0.900<br>n= 0.012, Flow Area= 1.77 sf |
| #2 | Device 1 | 36.50' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #3 | Secondary | 38.00' | **185.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=11.98 cfs @ 12.30 hrs HW=37.40' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 11.98 cfs @ 6.78 fps)
└**2=Sharp-Crested Rectangular Weir** (Passes 11.98 cfs of 22.41 cfs potential flow)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=35.00' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Link 20: POI #2 (POST)

Inflow Area = 17.266 ac, 44.68% Impervious, Inflow Depth > 1.83" for 10-Yr event
Inflow = 8.73 cfs @ 12.56 hrs, Volume= 2.628 af
Primary = 8.73 cfs @ 12.56 hrs, Volume= 2.628 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Pond 22: SWM #2

Inflow Area = 16.945 ac, 45.20% Impervious, Inflow Depth > 3.34" for 10-Yr event
Inflow = 77.37 cfs @ 11.99 hrs, Volume= 4.717 af
Outflow = 8.59 cfs @ 12.57 hrs, Volume= 2.554 af, Atten= 89%, Lag= 35.0 min
Primary = 8.59 cfs @ 12.57 hrs, Volume= 2.554 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 23.98' @ 12.57 hrs Surf.Area= 61,110 sf Storage= 116,401 cf

Plug-Flow detention time= 245.6 min calculated for 2.553 af (54% of inflow)
Center-of-Mass det. time= 134.5 min ( 948.0 - 813.5 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 22.00' | 247,001 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 22.00 | 56,734 | 1,476.5 | 0 | 0 | 56,734 |
| 25.00 | 63,442 | 1,504.8 | 180,170 | 180,170 | 64,801 |
| 26.00 | 70,277 | 1,533.0 | 66,830 | 247,001 | 71,785 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 21.67' | **18.0" Round Culvert** L= 356.0' Ke= 0.500<br>Inlet / Outlet Invert= 21.67' / 17.50' S= 0.0117 '/' Cc= 0.900<br>n= 0.012, Flow Area= 1.77 sf |
| #2 | Device 1 | 23.50' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #3 | Secondary | 25.00' | **185.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=8.59 cfs @ 12.57 hrs HW=23.98' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 8.59 cfs of 10.61 cfs potential flow)
└**2=Sharp-Crested Rectangular Weir** (Weir Controls 8.59 cfs @ 2.26 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=22.00' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Link 25: POI #3 (POST)

Inflow Area = 15.308 ac, 16.12% Impervious, Inflow Depth > 1.66" for 10-Yr event
Inflow = 20.63 cfs @ 12.08 hrs, Volume= 2.117 af
Primary = 20.63 cfs @ 12.08 hrs, Volume= 2.117 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Pond 29: SWM #7

Inflow Area = 4.528 ac, 46.64% Impervious, Inflow Depth > 2.78" for 10-Yr event
Inflow = 17.79 cfs @ 11.99 hrs, Volume= 1.048 af
Outflow = 0.37 cfs @ 17.86 hrs, Volume= 0.247 af, Atten= 98%, Lag= 352.4 min
Primary = 0.37 cfs @ 17.86 hrs, Volume= 0.247 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 32.03' @ 17.86 hrs Surf.Area= 19,601 sf Storage= 35,410 cf

Plug-Flow detention time= 431.0 min calculated for 0.247 af (24% of inflow)
Center-of-Mass det. time= 296.5 min ( 1,125.0 - 828.5 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 30.00' | 77,316 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 30.00 | 15,417 | 679.4 | 0 | 0 | 15,417 |
| 33.00 | 21,786 | 736.0 | 55,530 | 55,530 | 22,136 |
| 34.00 | 21,786 | 736.0 | 21,786 | 77,316 | 22,872 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 29.67' | **24.0" Round Culvert** L= 60.0' Ke= 0.500<br>Inlet / Outlet Invert= 29.67' / 29.00' S= 0.0112 '/' Cc= 0.900<br>n= 0.012, Flow Area= 3.14 sf |
| #2 | Device 1 | 31.50' | **4.0" Vert. Orifice/Grate** C= 0.600 |
| #3 | Device 1 | 32.00' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #4 | Secondary | 33.00' | **54.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=0.37 cfs @ 17.86 hrs HW=32.03' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.37 cfs of 17.62 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.25 cfs @ 2.89 fps)
  └─**3=Sharp-Crested Rectangular Weir** (Weir Controls 0.12 cfs @ 0.54 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=30.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Link 31: POI #4 (POST)

Inflow Area = 35.026 ac, 28.84% Impervious, Inflow Depth > 1.16" for 10-Yr event
Inflow = 16.48 cfs @ 12.17 hrs, Volume= 3.385 af
Primary = 16.48 cfs @ 12.17 hrs, Volume= 3.385 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Pond 33: SWM #3

Inflow Area = 9.719 ac, 30.39% Impervious, Inflow Depth > 2.87" for 10-Yr event
Inflow = 39.42 cfs @ 11.99 hrs, Volume= 2.323 af
Outflow = 11.00 cfs @ 12.26 hrs, Volume= 1.569 af, Atten= 72%, Lag= 16.0 min
Primary = 11.00 cfs @ 12.26 hrs, Volume= 1.569 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 40.09' @ 12.26 hrs Surf.Area= 23,719 sf Storage= 44,841 cf

Plug-Flow detention time= 181.9 min calculated for 1.569 af (68% of inflow)
Center-of-Mass det. time= 77.4 min ( 903.4 - 826.0 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 38.00' | 93,163 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 38.00 | 19,263 | 698.4 | 0 | 0 | 19,263 |
| 41.00 | 25,803 | 755.0 | 67,360 | 67,360 | 26,163 |
| 42.00 | 25,803 | 755.0 | 25,803 | 93,163 | 26,918 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 37.67' | **18.0" Round Culvert** L= 120.0' Ke= 0.500<br>Inlet / Outlet Invert= 37.67' / 35.00' S= 0.0223 '/' Cc= 0.900<br>n= 0.012, Flow Area= 1.77 sf |
| #2 | Device 1 | 39.50' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #3 | Secondary | 41.00' | **122.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=11.00 cfs @ 12.26 hrs HW=40.09' TW=0.00' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 11.00 cfs @ 6.22 fps)
↑—**2=Sharp-Crested Rectangular Weir** (Passes 11.00 cfs of 11.86 cfs potential flow)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=38.00' (Free Discharge)
↑—**3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Pond 35: SWM #4

Inflow Area = 4.542 ac, 27.71% Impervious, Inflow Depth > 2.60" for 10-Yr event
Inflow = 16.70 cfs @ 11.99 hrs, Volume= 0.984 af
Outflow = 0.47 cfs @ 15.85 hrs, Volume= 0.255 af, Atten= 97%, Lag= 231.7 min
Primary = 0.47 cfs @ 15.85 hrs, Volume= 0.255 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 52.57' @ 15.85 hrs Surf.Area= 21,920 sf Storage= 32,310 cf

Plug-Flow detention time= 421.3 min calculated for 0.255 af (26% of inflow)
Center-of-Mass det. time= 288.3 min ( 1,121.7 - 833.4 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 51.00' | 89,943 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 51.00 | 19,294 | 545.9 | 0 | 0 | 19,294 |
| 54.00 | 24,462 | 602.5 | 65,481 | 65,481 | 24,746 |
| 55.00 | 24,462 | 602.5 | 24,462 | 89,943 | 25,348 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 50.67' | **12.0" Round Culvert** L= 123.0' Ke= 0.500<br>Inlet / Outlet Invert= 50.67' / 50.00' S= 0.0054 '/' Cc= 0.900<br>n= 0.012, Flow Area= 0.79 sf |
| #2 | Device 1 | 52.50' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #3 | Secondary | 54.00' | **230.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=0.47 cfs @ 15.85 hrs HW=52.57' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.47 cfs of 3.61 cfs potential flow)
└─**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.47 cfs @ 0.86 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=51.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Pond 37: SWM #5

Inflow Area = 6.686 ac, 45.65% Impervious, Inflow Depth > 2.51" for 10-Yr event
Inflow = 23.75 cfs @ 11.99 hrs, Volume= 1.399 af
Outflow = 1.69 cfs @ 13.07 hrs, Volume= 0.652 af, Atten= 93%, Lag= 64.8 min
Primary = 1.69 cfs @ 13.07 hrs, Volume= 0.652 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 51.66' @ 13.07 hrs Surf.Area= 23,333 sf Storage= 35,013 cf

Plug-Flow detention time= 279.2 min calculated for 0.652 af (47% of inflow)
Center-of-Mass det. time= 155.6 min ( 991.4 - 835.8 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 50.00' | 96,082 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 50.00 | 18,903 | 898.4 | 0 | 0 | 18,903 |
| 53.00 | 27,243 | 954.9 | 68,839 | 68,839 | 27,687 |
| 54.00 | 27,243 | 954.9 | 27,243 | 96,082 | 28,642 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 49.67' | **24.0" Round Culvert** L= 131.0' Ke= 0.500<br>Inlet / Outlet Invert= 49.67' / 48.00' S= 0.0127 '/' Cc= 0.900<br>n= 0.012, Flow Area= 3.14 sf |
| #2 | Device 1 | 51.50' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #3 | Secondary | 53.00' | **350.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=1.69 cfs @ 13.07 hrs HW=51.66' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 1.69 cfs of 15.09 cfs potential flow)
└**2=Sharp-Crested Rectangular Weir** (Weir Controls 1.69 cfs @ 1.31 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=50.00' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Pond 39: SWM #6

Inflow Area = 6.903 ac, 41.12% Impervious, Inflow Depth > 1.77" for 10-Yr event
Inflow = 16.84 cfs @ 12.00 hrs, Volume= 1.020 af
Outflow = 0.45 cfs @ 17.72 hrs, Volume= 0.235 af, Atten= 97%, Lag= 343.8 min
Primary = 0.45 cfs @ 17.72 hrs, Volume= 0.235 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 43.57' @ 17.72 hrs Surf.Area= 24,054 sf Storage= 34,600 cf

Plug-Flow detention time= 470.5 min calculated for 0.235 af (23% of inflow)
Center-of-Mass det. time= 325.0 min ( 1,183.3 - 858.3 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 42.00' | 99,705 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 42.00 | 20,178 | 829.7 | 0 | 0 | 20,178 |
| 45.00 | 27,900 | 886.3 | 71,805 | 71,805 | 28,324 |
| 46.00 | 27,900 | 886.3 | 27,900 | 99,705 | 29,211 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 41.67' | **24.0" Round Culvert** L= 32.0' Ke= 0.500<br>Inlet / Outlet Invert= 41.67' / 38.50' S= 0.0991 '/' Cc= 0.900<br>n= 0.012, Flow Area= 3.14 sf |
| #2 | Device 1 | 43.50' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #3 | Secondary | 45.00' | **200.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=0.45 cfs @ 17.72 hrs HW=43.57' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.45 cfs of 14.44 cfs potential flow)
└**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.45 cfs @ 0.84 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=42.00' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Link 41: POI #5 (POST)

Inflow Area = 1.861 ac, 15.38% Impervious, Inflow Depth > 1.00" for 10-Yr event
Inflow = 2.05 cfs @ 12.01 hrs, Volume= 0.155 af
Primary = 2.05 cfs @ 12.01 hrs, Volume= 0.155 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Link 43: POI #6 (POST)

Inflow Area = 7.029 ac, 23.94% Impervious, Inflow Depth > 0.49" for 10-Yr event
Inflow = 0.45 cfs @ 12.24 hrs, Volume= 0.288 af
Primary = 0.45 cfs @ 12.24 hrs, Volume= 0.288 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Pond 45: SWM #8

Inflow Area = 5.150 ac, 32.22% Impervious, Inflow Depth > 1.93" for 10-Yr event
Inflow = 13.81 cfs @ 11.99 hrs, Volume= 0.828 af
Outflow = 0.36 cfs @ 17.47 hrs, Volume= 0.188 af, Atten= 97%, Lag= 328.8 min
Primary = 0.36 cfs @ 17.47 hrs, Volume= 0.188 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 24.56' @ 17.47 hrs Surf.Area= 19,278 sf Storage= 28,175 cf

Plug-Flow detention time= 467.2 min calculated for 0.188 af (23% of inflow)
Center-of-Mass det. time= 324.8 min ( 1,177.9 - 853.1 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 23.00' | 79,228 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 23.00 | 16,925 | 490.4 | 0 | 0 | 16,925 |
| 26.00 | 21,593 | 546.9 | 57,635 | 57,635 | 21,842 |
| 27.00 | 21,593 | 546.9 | 21,593 | 79,228 | 22,388 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 22.67' | **24.0" Round Culvert** L= 37.0' Ke= 0.500<br>Inlet / Outlet Invert= 22.67' / 20.00' S= 0.0722 '/' Cc= 0.900<br>n= 0.012, Flow Area= 3.14 sf |
| #2 | Device 1 | 24.50' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #3 | Secondary | 26.00' | **134.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=0.36 cfs @ 17.47 hrs HW=24.56' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.36 cfs of 14.37 cfs potential flow)
└**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.36 cfs @ 0.79 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=23.00' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Link 47: POI #7 (POST)

Inflow Area = 2.000 ac, 50.56% Impervious, Inflow Depth > 2.51" for 10-Yr event
Inflow = 4.07 cfs @ 12.17 hrs, Volume= 0.418 af
Primary = 4.07 cfs @ 12.17 hrs, Volume= 0.418 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Pond 48: SWM #9

Inflow Area = 2.000 ac, 50.56% Impervious, Inflow Depth > 3.74" for 10-Yr event
Inflow = 10.31 cfs @ 11.98 hrs, Volume= 0.623 af
Outflow = 4.07 cfs @ 12.17 hrs, Volume= 0.418 af, Atten= 61%, Lag= 11.3 min
Primary = 4.07 cfs @ 12.17 hrs, Volume= 0.418 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 58.12' @ 12.17 hrs Surf.Area= 7,368 sf Storage= 12,816 cf

Plug-Flow detention time= 182.4 min calculated for 0.418 af (67% of inflow)
Center-of-Mass det. time= 83.3 min ( 884.7 - 801.4 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 56.00' | 28,421 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 56.00 | 4,816 | 389.8 | 0 | 0 | 4,816 |
| 59.00 | 8,587 | 447.2 | 19,834 | 19,834 | 8,840 |
| 60.00 | 8,587 | 447.2 | 8,587 | 28,421 | 9,287 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 55.67' | **12.0" Round Culvert** L= 25.0' Ke= 0.500<br>Inlet / Outlet Invert= 55.67' / 55.50' S= 0.0068 '/' Cc= 0.900<br>n= 0.012, Flow Area= 0.79 sf |
| #2 | Device 1 | 57.50' | **2.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) |
| #3 | Device 1 | 58.00' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #4 | Secondary | 59.00' | **42.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=4.07 cfs @ 12.17 hrs HW=58.12' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 4.07 cfs of 5.28 cfs potential flow)
  ├**2=Sharp-Crested Rectangular Weir** (Weir Controls 2.99 cfs @ 2.57 fps)
  └**3=Sharp-Crested Rectangular Weir** (Weir Controls 1.08 cfs @ 1.13 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=56.00' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

## Summary for Link 50: POI #8 (POST)

Inflow Area = 2.185 ac, 56.55% Impervious, Inflow Depth > 2.53" for 10-Yr event
Inflow = 4.93 cfs @ 12.16 hrs, Volume= 0.461 af
Primary = 4.93 cfs @ 12.16 hrs, Volume= 0.461 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

## Summary for Pond 51: SWM #10

Inflow Area = 2.185 ac, 56.55% Impervious, Inflow Depth > 4.05" for 10-Yr event
Inflow = 11.99 cfs @ 11.98 hrs, Volume= 0.738 af
Outflow = 4.93 cfs @ 12.16 hrs, Volume= 0.461 af, Atten= 59%, Lag= 10.7 min
Primary = 4.93 cfs @ 12.16 hrs, Volume= 0.461 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 57.37' @ 12.16 hrs Surf.Area= 9,932 sf Storage= 15,326 cf

Plug-Flow detention time= 188.2 min calculated for 0.461 af (62% of inflow)
Center-of-Mass det. time= 86.4 min ( 877.9 - 791.5 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 55.50' | 40,157 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|---|---|---|---|---|---|
| 55.50 | 6,574 | 607.5 | 0 | 0 | 6,574 |
| 58.50 | 12,296 | 664.0 | 27,861 | 27,861 | 12,601 |
| 59.50 | 12,296 | 664.0 | 12,296 | 40,157 | 13,265 |

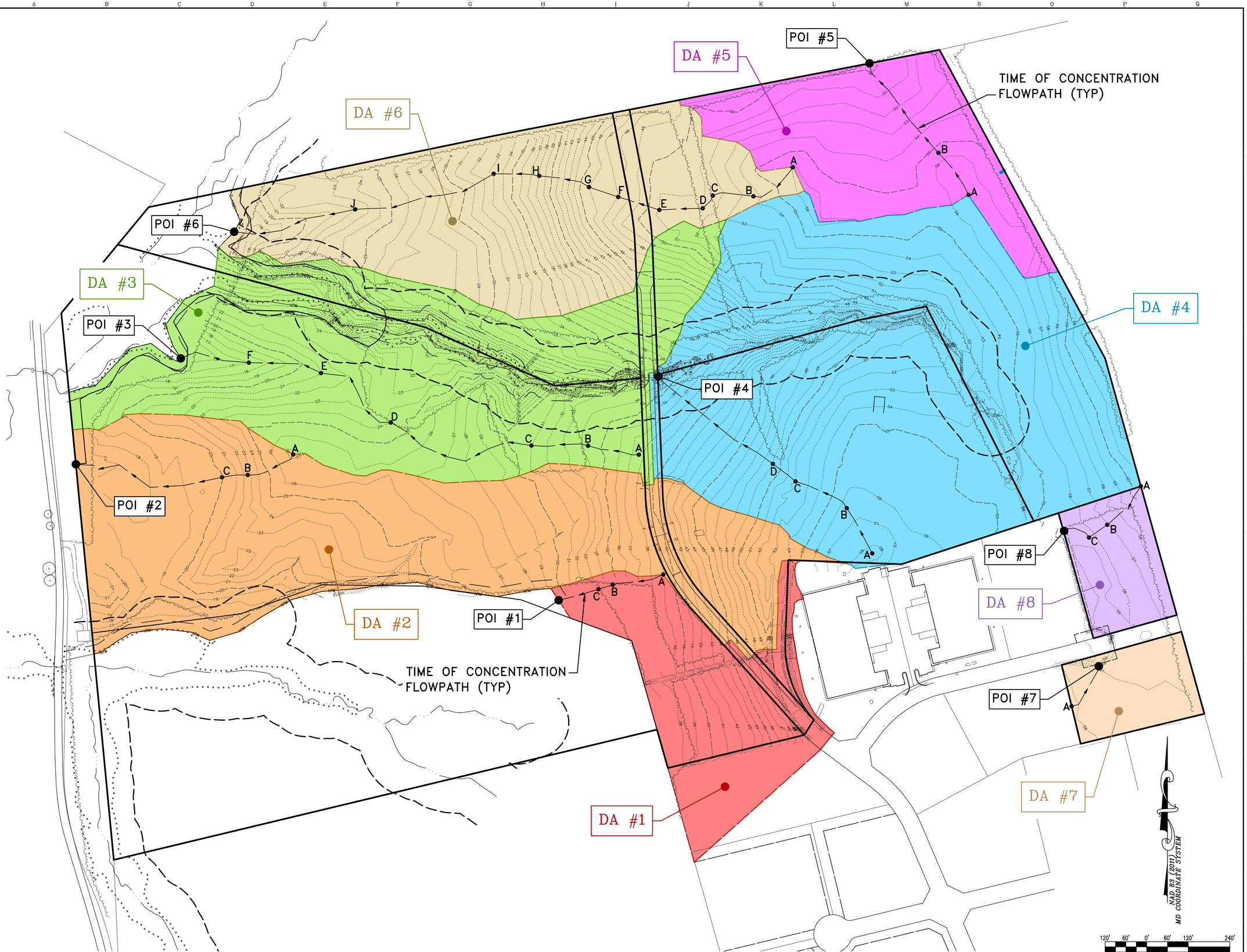
| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 55.17' | **12.0" Round Culvert** L= 14.0' Ke= 0.500<br>Inlet / Outlet Invert= 55.17' / 55.00' S= 0.0121 '/' Cc= 0.900<br>n= 0.012, Flow Area= 0.79 sf |
| #2 | Device 1 | 57.00' | **8.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s) |
| #3 | Secondary | 58.50' | **271.0' long x 2.0' breadth Broad-Crested Rectangular Weir**<br>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<br>Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32 |

**Primary OutFlow** Max=4.93 cfs @ 12.16 hrs HW=57.37' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 4.93 cfs @ 6.28 fps)
└**2=Sharp-Crested Rectangular Weir** (Passes 4.93 cfs of 5.89 cfs potential flow)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=55.50' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

# APPENDIX C

PRE-DEVELOPMENT DRAINAGE AREA MAP

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REVISIONS TO APPROVED PLANS

| No. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | | |

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PROFESSIONAL CERTIFICATION: I hereby certify that this document was prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland, License No. 48188, Expiration Date: 12/28/2025.

SEAL

STATE OF MARYLAND · JARRETT D. BEYER · 48188 · REGISTERED PROFESSIONAL ENGINEER

DATE

# PRE-DEVELOPMENT DRAINAGE AREA MAP

FOX CHASE ESTATES

*IN THE TOWN OF EASTON, ELECTION WARD 1*
*TALBOT COUNTY, MARYLAND*
*T.M. 25 GRID 4 P. 92 LOTS 1, 2, 3 & 4*

ISSUED/REVISED FOR: DATE: BY:

SHEET No. APPENDIX C

JOB No. 220210

SCALE: AS NOTED

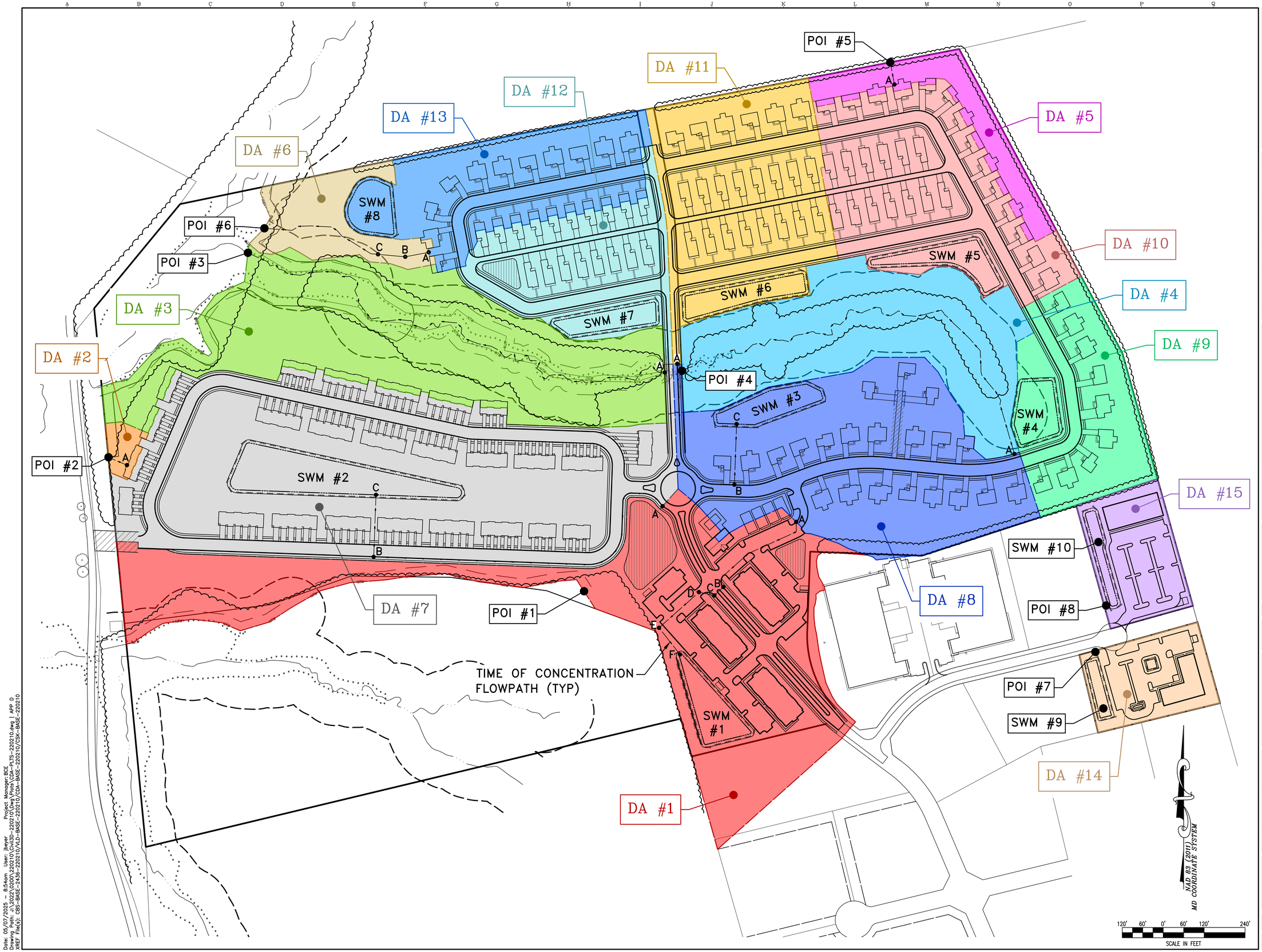
FILE No. 3208

Date: 05/07/2025 - 9:01am User: jbeyer Project Manager: BCE
Drawing Path: J:\2022\0200\220210\Civil3D-220210\Dwg\Plots\VDA-PLTS-220210.dwg | APP C
XREF File(s): CBS-BASE-2436-220210/XLD-BASE-220210/VSF-BASE-210099/VDA-BASE-220210

Land Desktop Inc.

# APPENDIX D

POST-DEVELOPMENT DRAINAGE AREA MAP

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REVISIONS TO APPROVED PLANS

| No. | DATE | DESCRIPTION | BY |
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PROFESSIONAL CERTIFICATION: I hereby certify that this document was prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland, License No. 48188 , Expiration Date: 12/28/2025.

SEAL

STATE OF MARYLAND — JAMES J. BOYER — 48188 — REGISTERED PROFESSIONAL ENGINEER

DATE

# POST-DEVELOPMENT DRAINAGE AREA MAP

## FOX CHASE ESTATES

*IN THE TOWN OF EASTON, ELECTION WARD 1*
*TALBOT COUNTY, MARYLAND*
*T.M. 25 GRID 4 P. 92 LOTS 1, 2, 3 & 4*

ISSUED/REVISED FOR: DATE: BY:

SHEET No. APPENDIX D

JOB No. 220210

SCALE: AS NOTED

FILE No. 3208

Date: 05/07/2025 - 8:54am User: jboyer Project Manager: BCE
Drawing Path: J:\2022\0200\220210\Civil3D-220210\Dwg\Plots\CDA-PLTS-220210.dwg | APP D
XREF File(s): CBS-BASE-2438-220210/MLD-BASE-220210/CDA-BASE-220210/CSK-BASE-220210

# TRAFFIC IMPACT ANALYSIS

# FOR

# TECHNOLOGY PARK

Prepared by:


**LENHART TRAFFIC CONSULTING, INC.**

*TRAFFIC ENGINEERING & TRANSPORTATION PLANNING*


**May 8, 2025**

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# Section 1 Introduction

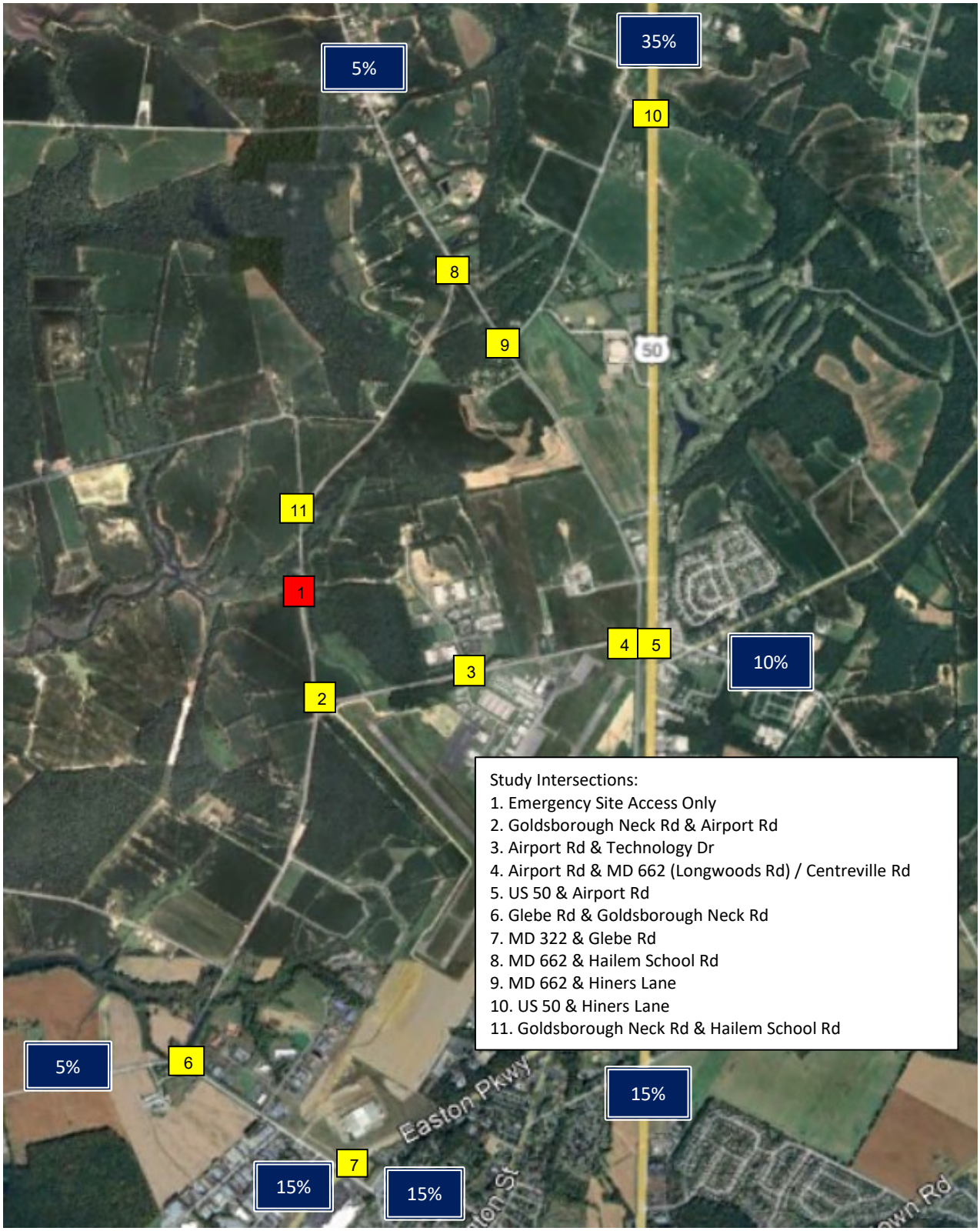
## 1.1 Project Description

This Traffic Impact Analysis (TIA) has been prepared for the proposed Technology Park development. The subject site is located in Easton, Maryland, and is proposed to be accessed via Technology Drive via Airport Road. **Exhibit 1** shows the location of the site. There is a proposed emergency access point along Goldsborough Neck Road which will not support typical vehicular traffic.

The site is proposed to be developed with a mix of uses and the exact proposed development is still being determined. For the purpose of this study, the most conservative potential development was analyzed which includes 137 single family attached (townhouse) units, 108 single family detached units. In addition, there are multiple proposed multilevel buildings that are anticipated to be developed with 120 multifamily units, 33,000 square feet of office space, and a 10,000 square foot day care center. A concept plan is provided in Appendix A.

## 1.2 Scope of Study

This TIA has been prepared in accordance with the scooping correspondence contained in Appendix A of the report. The Highway Capacity Manual (HCM) and Critical Lane Volume (CLV) methodologies were utilized to evaluate the study intersections.




| | | |
|---|---|---|
| Traffic Impact Analysis | Site Location Map | **Exhibit 1** |
| LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | | |

# Section 2 Existing Conditions

## 2.1 Description of Road Network

The key roads in the study area are:

- US 50 – a four-lane roadway classified as a principal arterial. The roadway has a posted speed limit of 55 MPH.
- Airport Road– a two-lane roadway classified as a major collector. The roadway has a posted speed limit of 35 MPH.
- Goldsborough Neck Road – a two-lane roadway classified as a local road. The roadway has a posted speed limit of 35 MPH.
- Glebe Road – a two-lane roadway classified as a local road. The roadway has a posted speed limit of 40 MPH.

## 2.2 Existing Lane Configurations

The Lane Use & Traffic Control Devices are shown on **Exhibit 2**. As discussed in this report, MD 662 (Longwoods Road) is currently closed between Airport Road and Hiners Lane due to ongoing construction for the UMMS Easton Hospital.

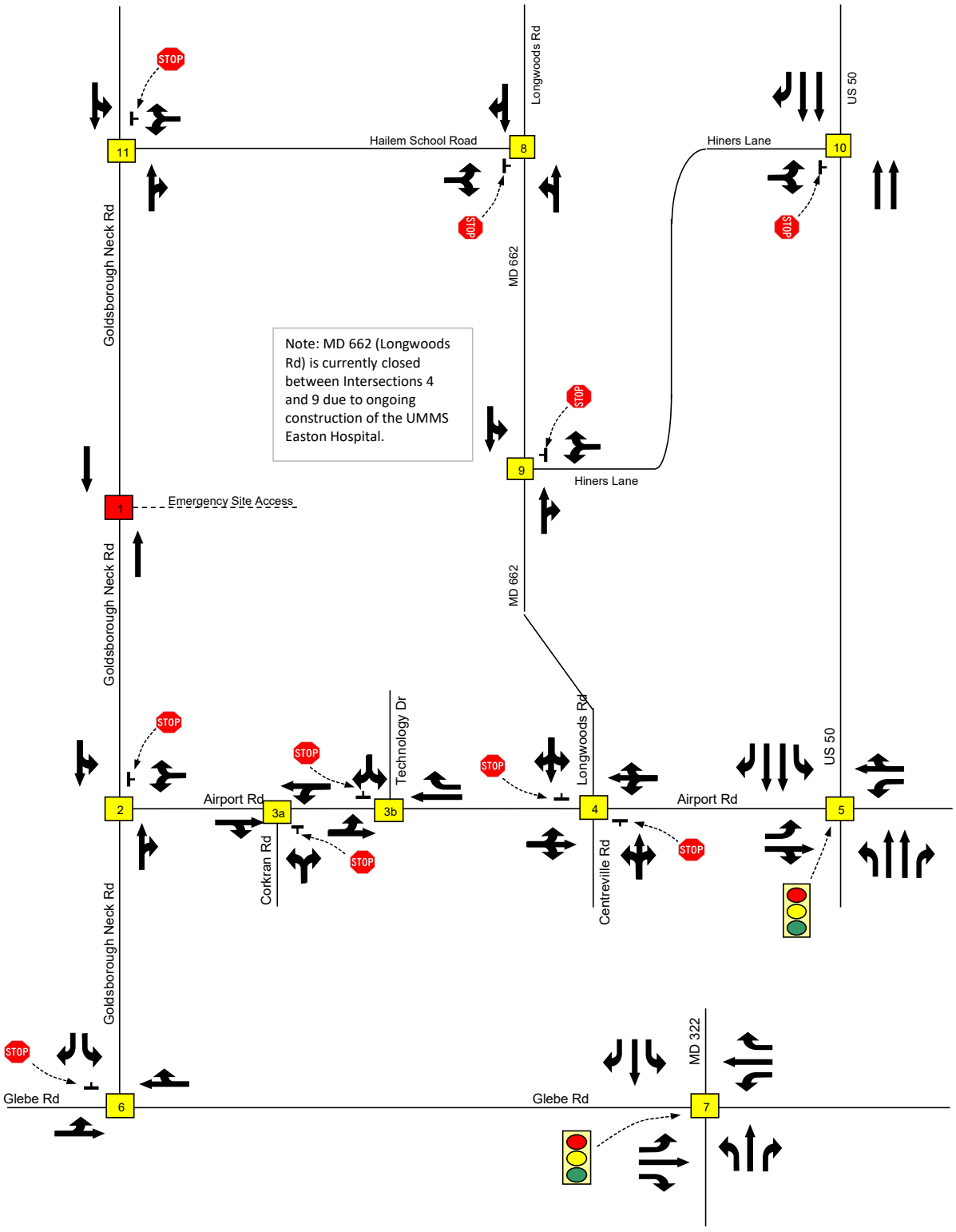
## 2.3 Existing Traffic Counts

Peak hour turning movement counts were conducted on Friday, September 13, 2024, and Saturday, September 14, 2024, and Wednesday, April 30, 2025 and are shown on **Exhibit 3a.**

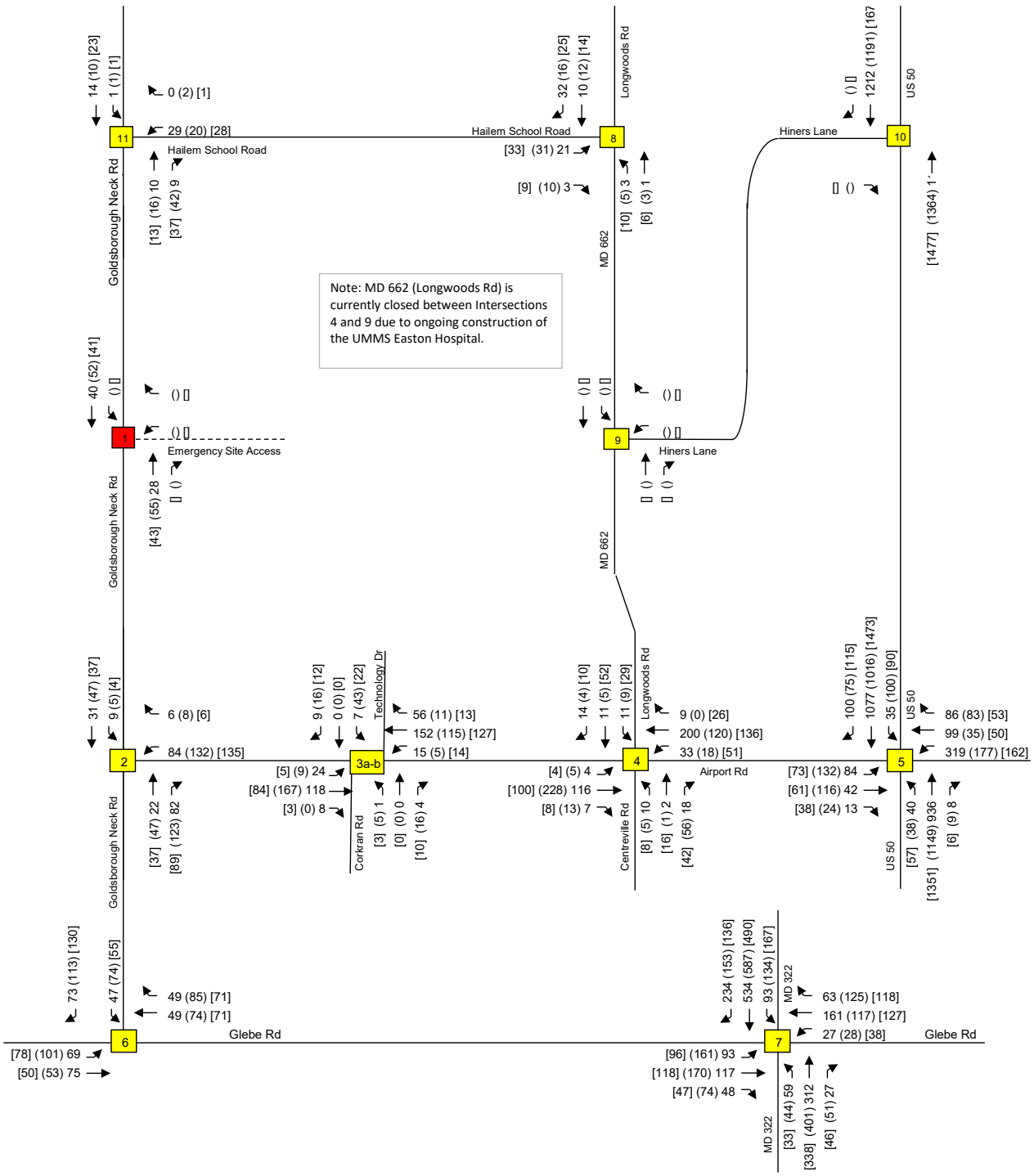
Given the current closure along MD 662, **Exhibit 3b** details assumed reroute of vehicles to utilize this connection for existing traffic. There are minimal residences and development along this stretch of roadway and therefore minimal vehicles are anticipated to reroute through this portion of MD 662 when the connection is reopened.

**Exhibit 3c** details the removal of construction traffic associated with the UMMS Easton Hospital which is currently exclusively utilizing MD 662 (Longwoods Road) for access to / from the site and US 50. Given the lack of other development along this stretch, it is assumed that 90% of traffic to/from this area is construction traffic and has been credited from studying Intersections 4 and 5 as shown on the Exhibit.

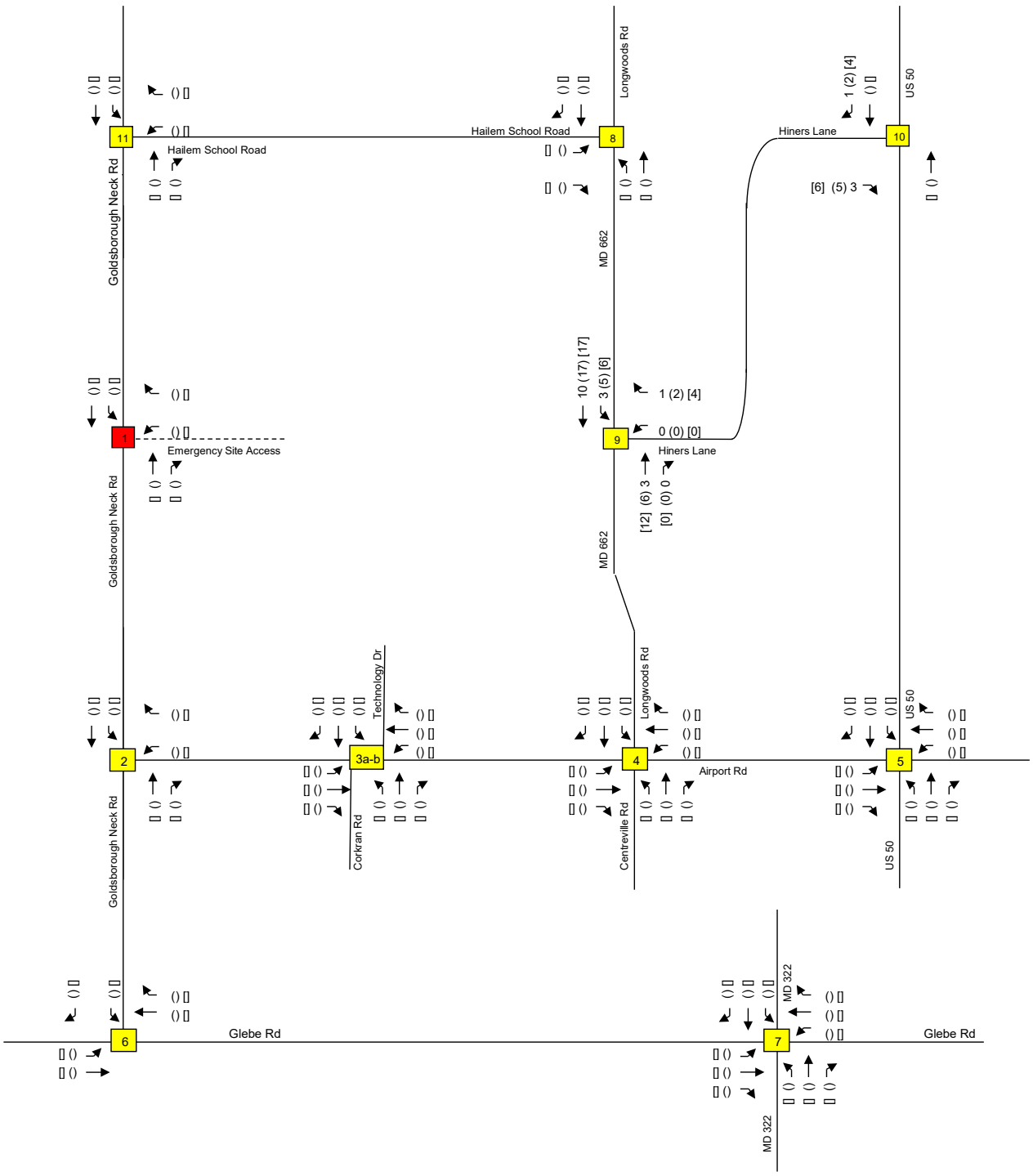
The resulting existing peak hour volumes are shown on **Exhibit 3d** and represent the existing volumes analyzed for the purposes of this study. Results of the HCM and CLV analyses for the existing condition are shown on Exhibit 10a and 10b.



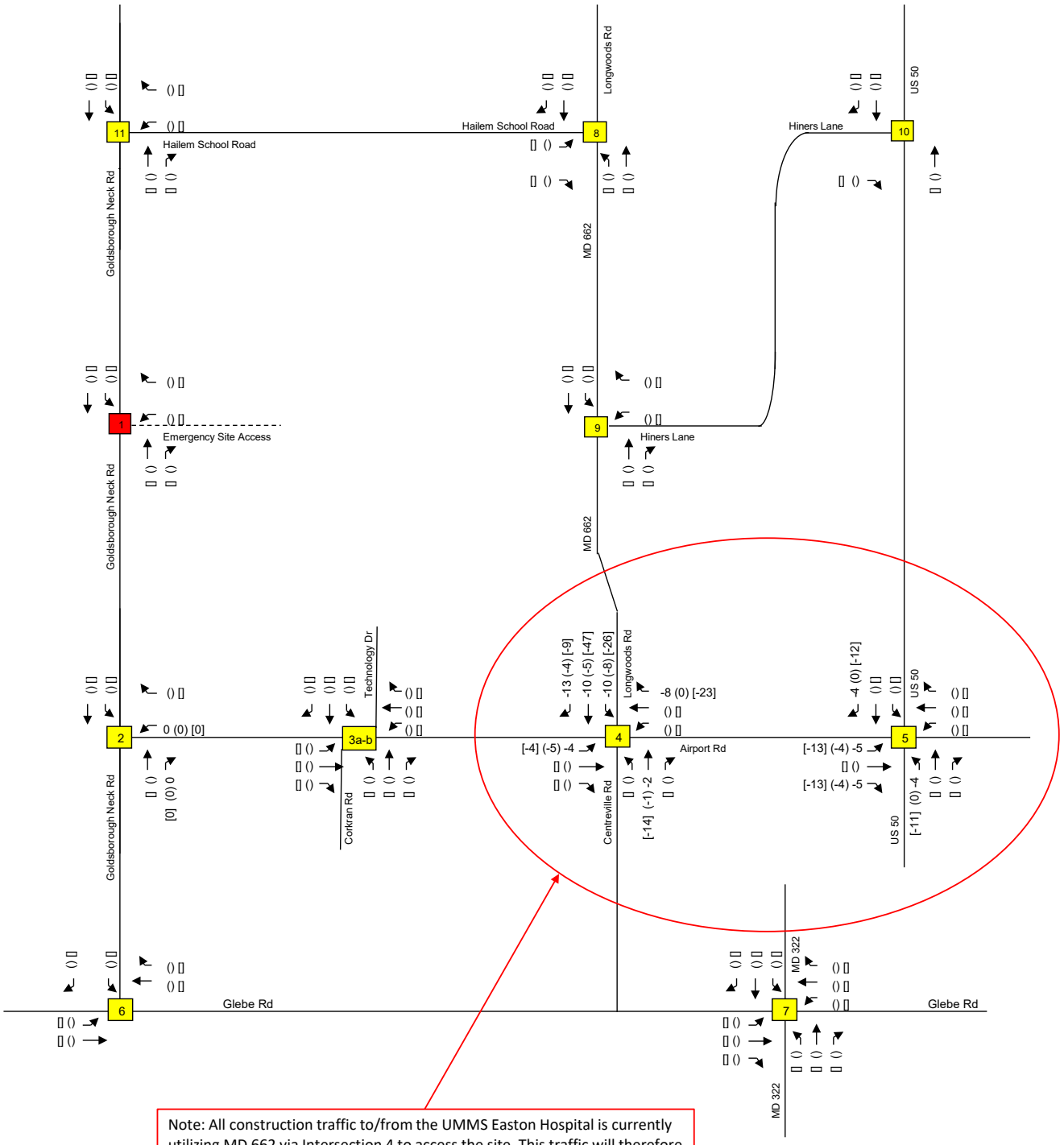

| Traffic Impact Analysis | Lane Use & Traffic Control Devices | **Exhibit 2** |
|---|---|---|
| LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Existing Lane Use ⟹ Proposed Lane Use | |




| Traffic Impact Analysis | Existing Peak Hour Volumes (Traffic Counts) | **Exhibit 3a** |
|---|---|---|
| LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | |

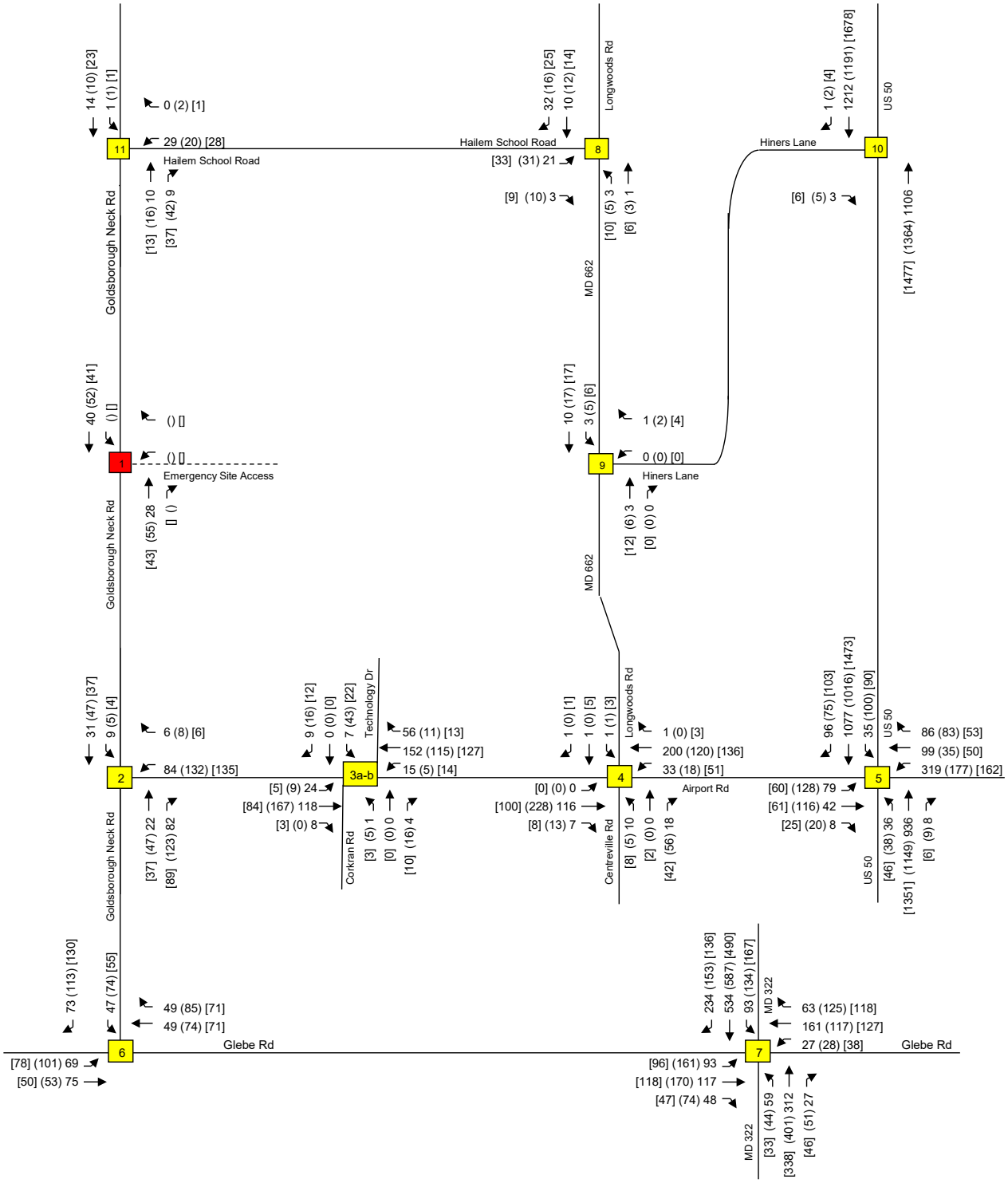



| Traffic Impact Analysis | Assumed Diversions due to Closure of Longwoods Road (UMMS Hospital) | **Exhibit 3b** |
|---|---|---|
| LENHART TRAFFIC CONSULTING, INC. 645 BALTIMORE ANNAPOLIS BLVD, SUITE 214 SEVERNA PARK, MD 21146 www.lenharttraffic.com | Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | |




Note: All construction traffic to/from the UMMS Easton Hospital is currently utilizing MD 662 via Intersection 4 to access the site. This traffic will therefore not be presnt under future conditions when the hospital is built. Therefore 90% of traffic to/from the north of Intersection 4 has been credited out of the existing volumes and flowed to Intersection 5 as shown above.

| Traffic Impact Analysis | Removal of Hospital Construction Traffic | **Exhibit 3c** |
|---|---|---|
| LENHART TRAFFIC CONSULTING, INC. 645 BALTIMORE ANNAPOLIS BLVD, SUITE 214 SEVERNA PARK, MD 21146 www.lenharttraffic.com | Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | |




| | | |
|---|---|---|
| Traffic Impact Analysis | Existing<br>Peak Hour Volumes | **Exhibit 3d** |
| LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | |

# Section 3 Background Conditions

## 3.1 Annual Growth

The Maryland Department of Transportation State Highway Administration's Average Daily Traffic Volumes (ADT's) have been reviewed for the past ten years and it was determined that average yearly growth in the area is approximately -0.43%. To provide a conservative analysis, a growth rate of 1% was applied for 3 years to the existing peak hour volumes and the resulting base peak hour volumes are shown on **Exhibit 4a.**

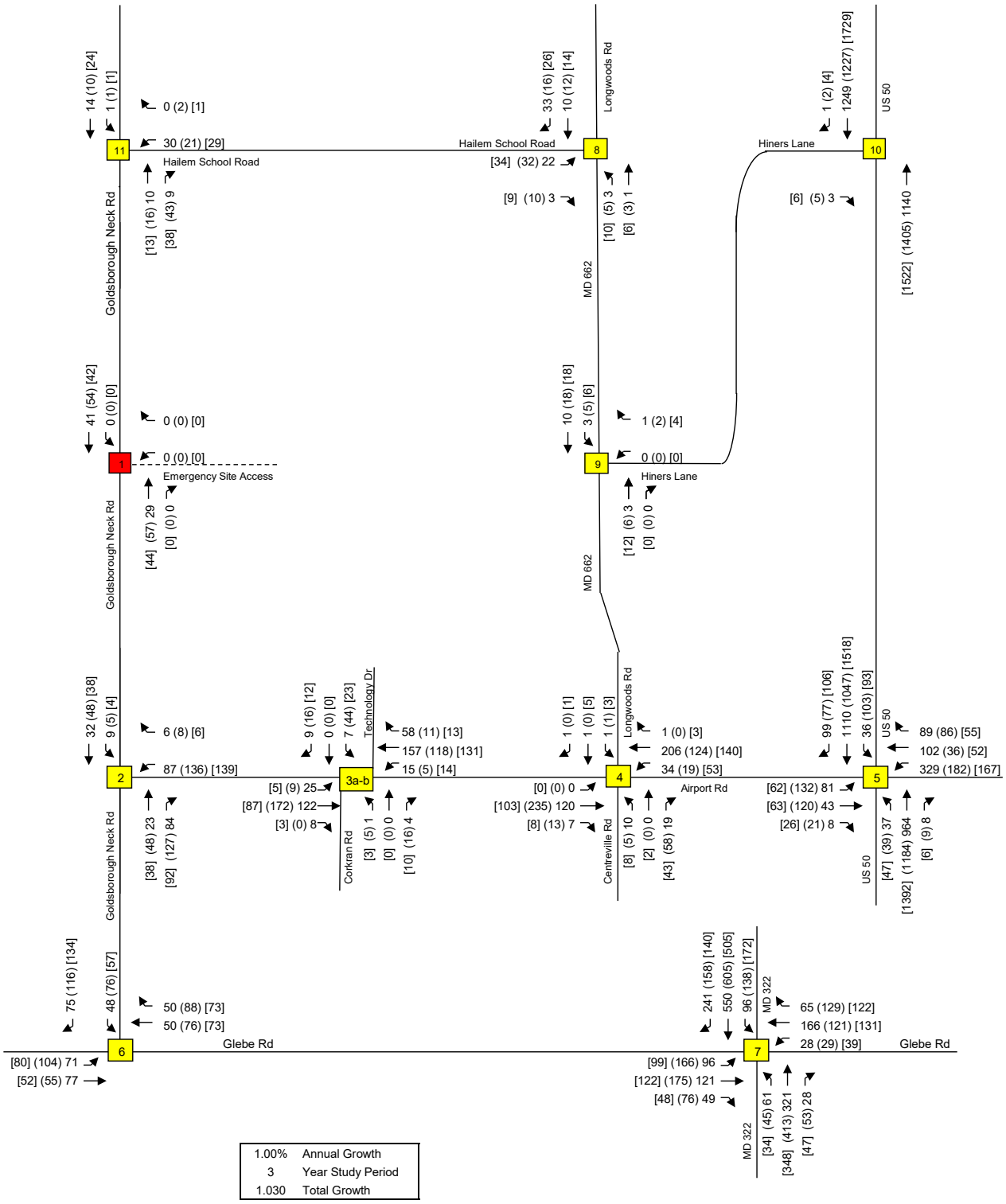
## 3.2 Background Developments

Background developments were identified through the scoping process. The location of each background development is shown in Appendix C (Exhibit C-1), along with background trip generation (Exhibit C-2) and assignment (Exhibits C-3 through C-8). **Exhibit 4b** shows the combined trip assignment due to the background developments.

## 3.3 Background Peak Hour Volumes

Background peak hour volumes, including regional growth and trips from approved developments, are shown on **Exhibit 5**.

Results of the HCM and CLV analyses for the background condition are shown on Exhibit 10a and 10b.

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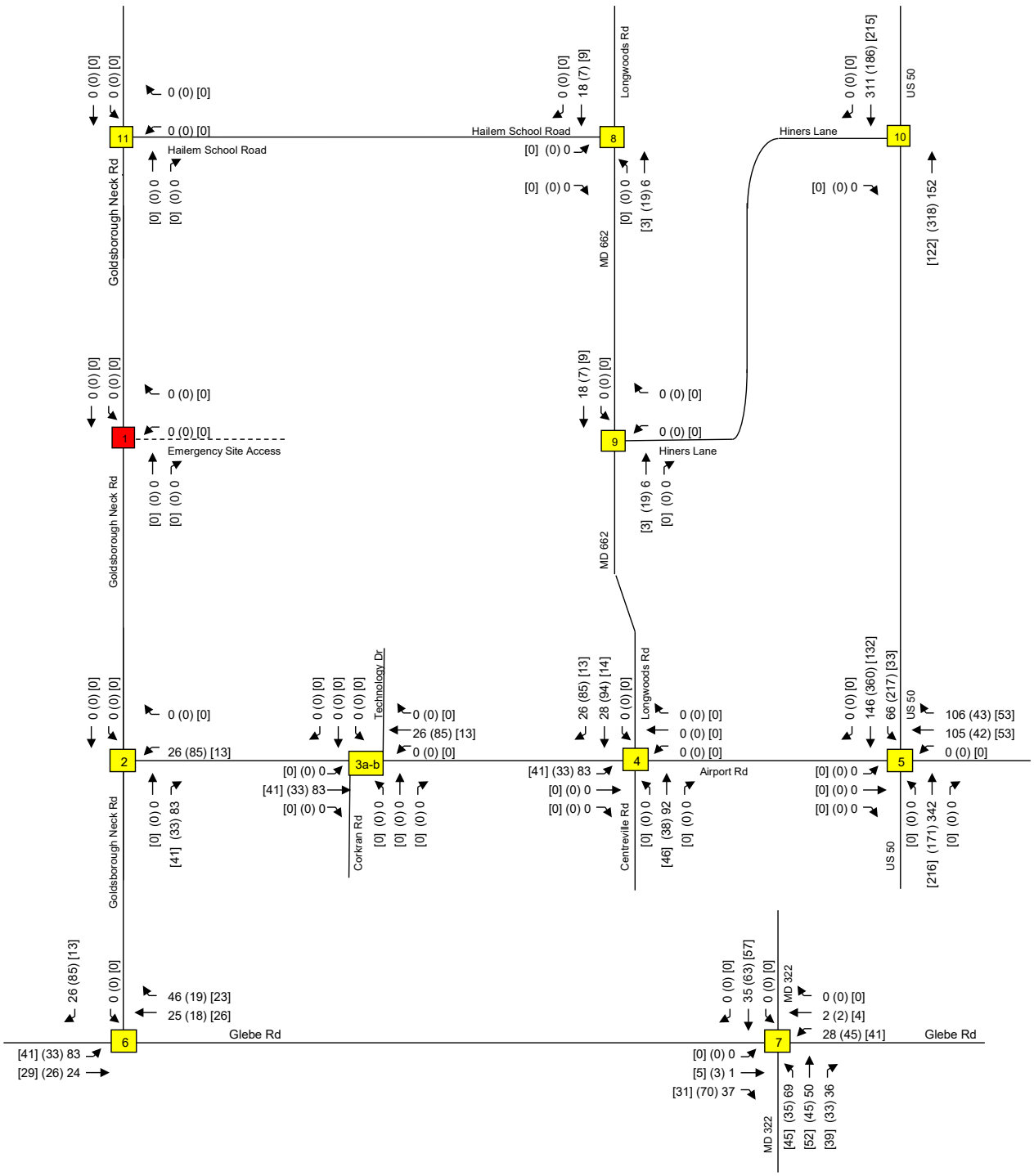
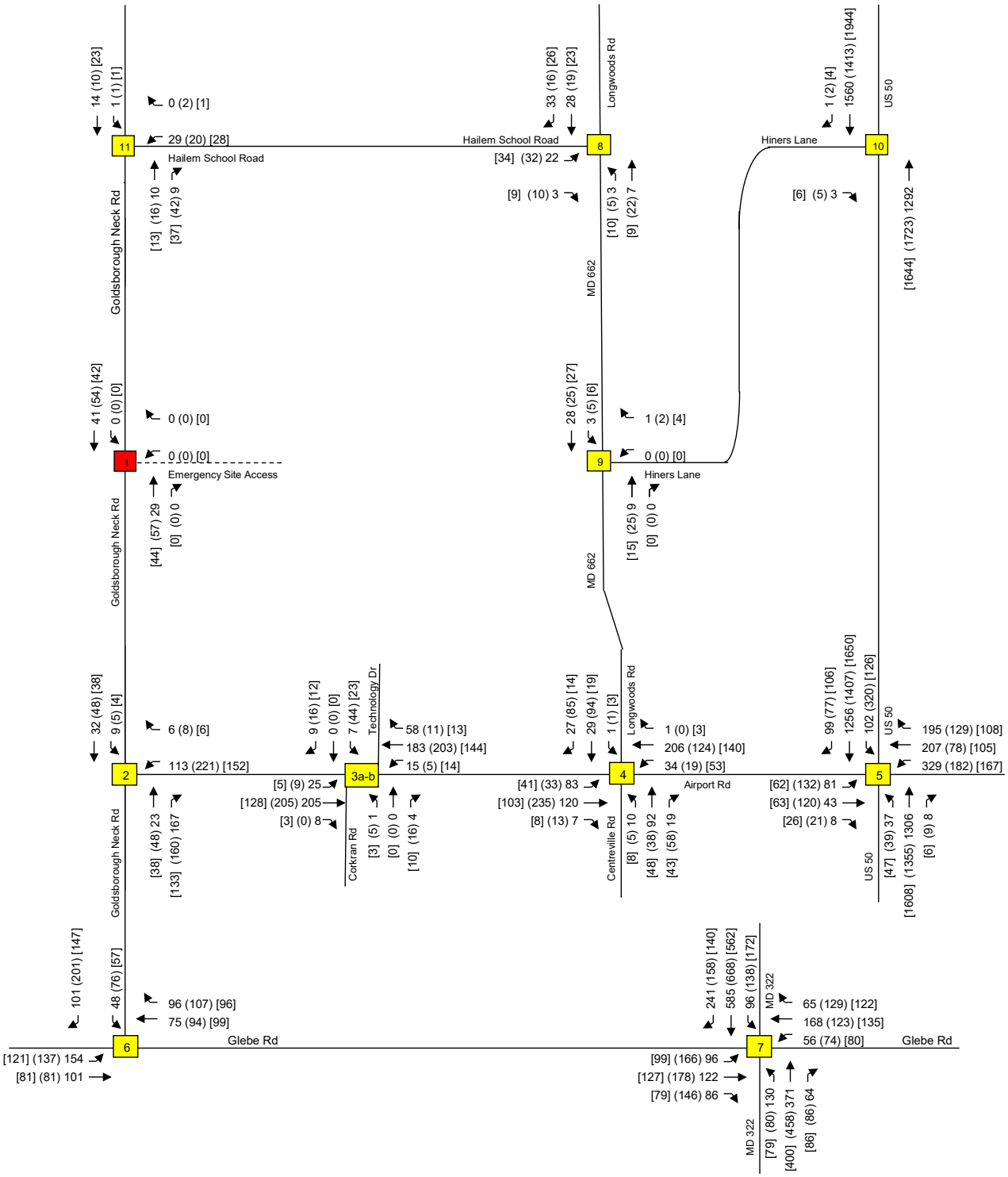
# Base
# Peak Hour Volumes

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

**Exhibit 4a**




| Traffic Impact Analysis | Combined Trips from Background Developments | **Exhibit 4b** |
|---|---|---|
| LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | |




| | | |
|---|---|---|
| Traffic Impact Analysis | Background<br>Peak Hour Volumes | **Exhibit 5** |
| LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | |

# Section 4 Projected Conditions with Site

## 4.1 Site Trip Generation

The site is proposed to be developed with a mix of uses and the exact proposed development is still being determined. For the purpose of this study, the most conservative potential development was analyzed which includes 137 single family attached (townhouse) units, 108 single family detached units. In addition, there are multiple proposed multilevel buildings that are anticipated to be developed with 120 multifamily units, 33,000 square feet of office space, and a 10,000 square foot day care center.

The trip generation for the proposed development is detailed on **Exhibit 6**. Trip generation rates and pass-by percentages were obtained from the ITE Trip Generation Manual, 11th Edition.

## 4.2 Site Trip Distribution & Trip Assignment

The primary and pass-by trip distribution and assignment is shown on **Exhibits 7a-7g,** and the combined site trip assignment is shown on **Exhibit 8** (sum of all vehicles shown on Exhibits 7a-7g).

## 4.3 Total Traffic Volumes

The Total Peak Hour Volumes are shown on **Exhibit 9**.

## 4.4 Project Level of Service

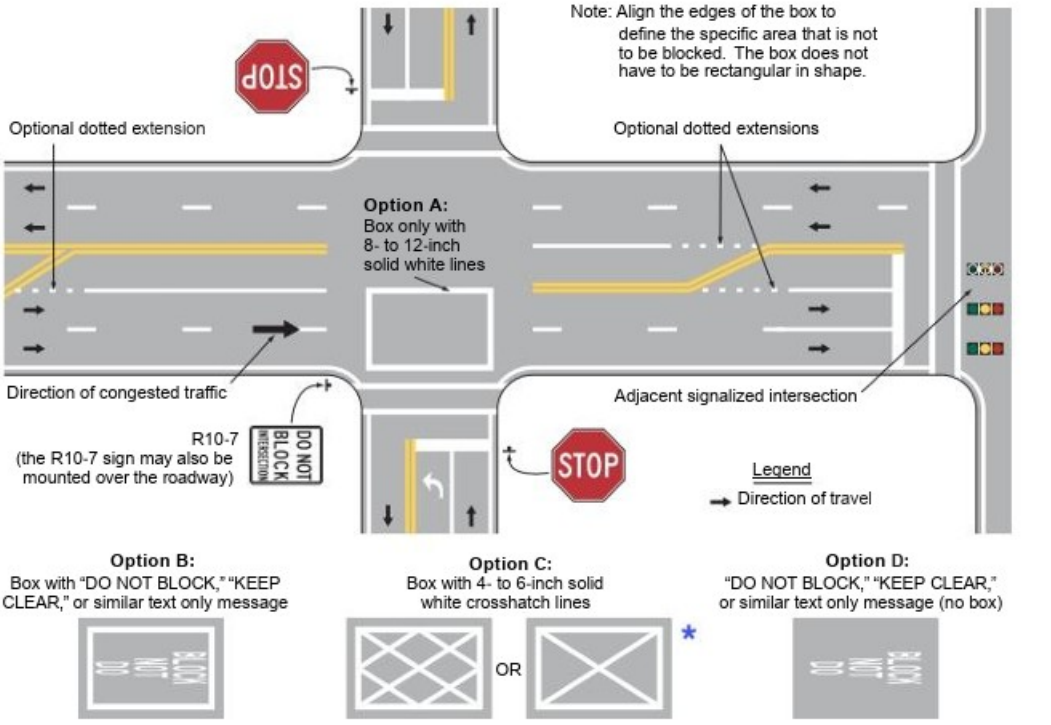
The total peak hour traffic volumes shown on Exhibit 9 were evaluated using the CLV and HCM methodologies. The results of the CLV and HCM analyses are shown on **Exhibits 10a and 10b**, respectively. The results show that all intersections operate at LOS D or better under total conditions with the exception of US 50 & Airport Road (Intersection 5).

In order to address operational concerns for US 50 & Airport Rd (Intersection 5), it is proposed that the shoulder on the westbound Black Dog Alley approach be improved and/or striped as a right turn lane for a distance of approximately 200 feet, resulting in a designated left turn, through, and right turn lane. As shown on Exhibit 10a, this improvement results in the intersection operating at LOS D via the CLV methodology thereby meeting MDOT SHA standards. As shown on Exhibit 10b, this improvement results in the intersection operating at LOS D via the HCM

methodology for all periods except for the evening peak hours. However, the improvement will substantially improve the intersection to a better delay than under background conditions. This improvement results in acceptable levels of service and/or fully mitigates the impact of the development at the intersection.

It should also be noted that the approach to US 50 along Airport Road has limited storage area due to the road paralleling US 50 (MD 662 (Longwoods Road) / Centreville Road). It is recommended that "Do Not Block Intersection" signage and pavement markings be installed per Section 3B.17 of the MD MUTCD for this intersection. A detail from the MD MUTCD showing the potential recommended improvements is shown below.

**Figure 3B-18. Do Not Block Intersection Markings**




* For State owned, operated, and maintained intersections, this marking shall be used with 10 inch solid white box lines and 5 inch solid white crosshatch lines.

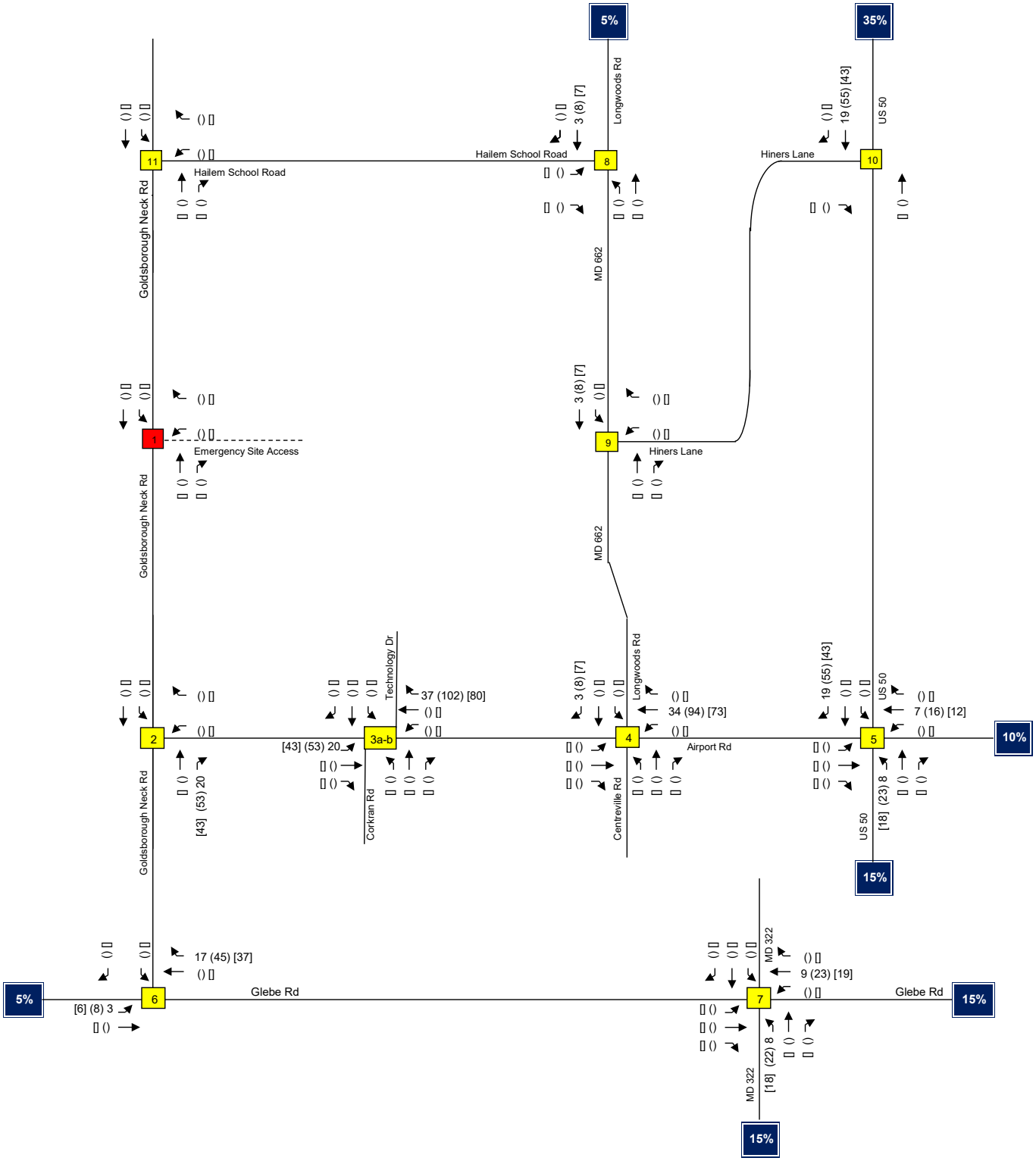
## Trip Generation Rates

| | Trip Distribution (In/Out) |
|---|---|
| **Single-Family Attached Housing (ITE-215, Units)** | |
| 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 |
| **Single-Family Detached Housing (ITE-210, Units)** | |
| Ln(Morning Trips) = 0.91 x Ln(Units) + 0.12 | 26/74 |
| Ln(Evening Trips) = 0.94 x Ln(Units) + 0.27 | 63/37 |
| Midday Sat. Trips = 0.84 x Units + 17.99 | 54/46 |
| **Multifamily Housing, Low-Rise (ITE-220, Units) [Not Close to Rail Transit]** | |
| Morning Trips = 0.31 x Units + 22.85 | 24/76 |
| Evening Trips = 0.43 x Units + 20.55 | 63/37 |
| Midday Sat. Trips = 0.41 x Units | 50/50 |
| **General Office (ksf, ITE-710)** | |
| Ln(Morning Trips) = 0.86 x Ln(ksf) + 1.16 | 88/12 |
| Ln(Evening Trips) = 0.83 x Ln(ksf) + 1.29 | 17/83 |
| Midday Sat. Trips = 0.52 x ksf | 54/46 |
| **Day Care Center (ksf, ITE-565)** | |
| Morning Trips = 11.00 x ksf | 53/47 |
| Evening Trips = 11.12 x ksf | 47/53 |
| Midday Sat. Trips = 1.70 x ksf | 50/50 |

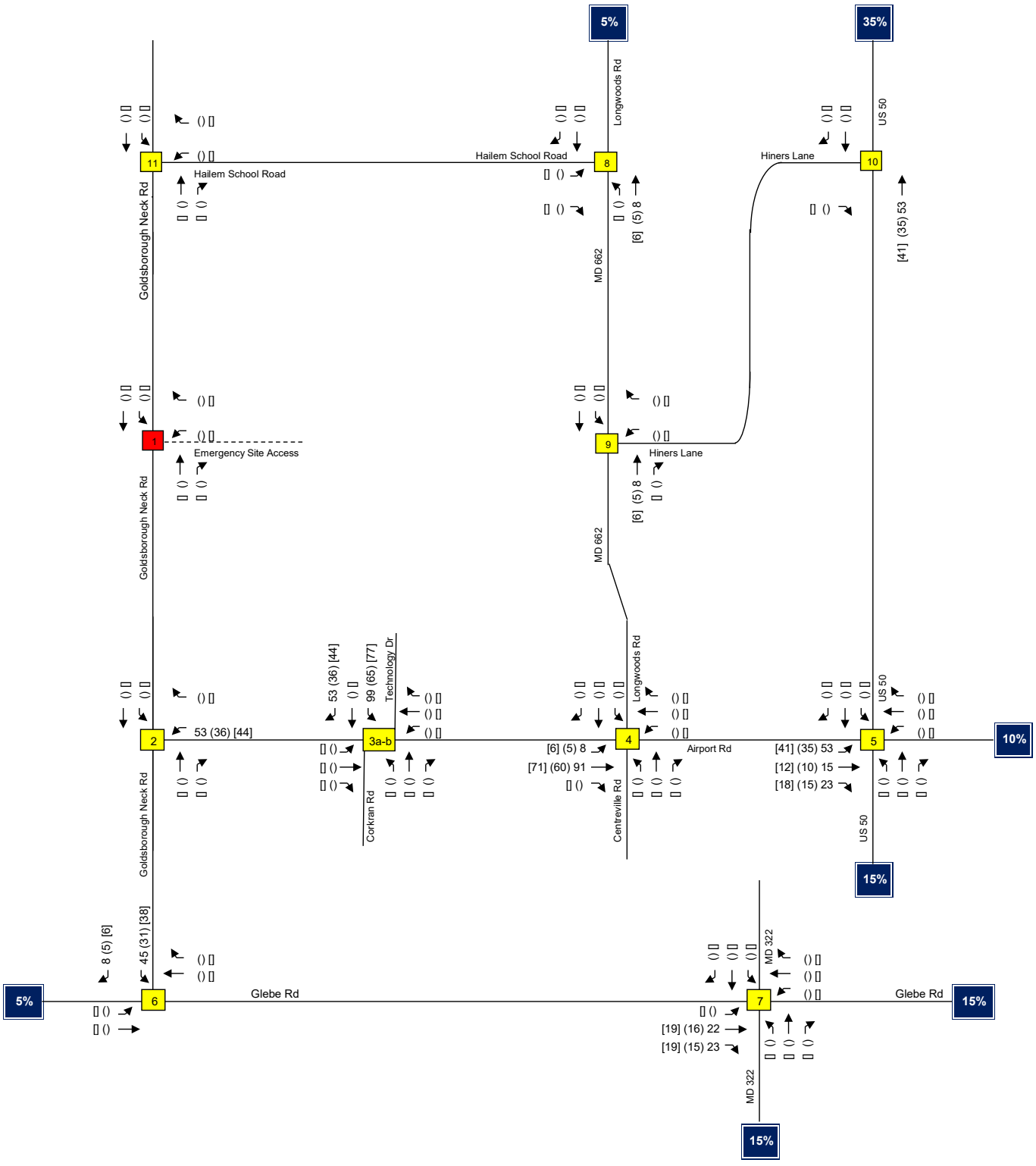
## Trip Generation Totals

| | | | | AM Peak | | | PM Peak | | | Sat. Mid-Day Peak | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | In | Out | Total | In | Out | Total | In | Out | Total |
| | Single-Family Attached Housing (ITE-215, Units) | 137 | units | 20 | 46 | 66 | 44 | 34 | 78 | 42 | 45 | 87 |
| | Single-Family Detached Housing (ITE-210, Units) | 108 | units | 21 | 59 | 80 | 67 | 40 | 107 | 56 | 47 | 103 |
| | Multifamily Housing, Low-Rise (ITE-220, Units) [Not Close to Rail Transit] | 120 | units | 14 | 46 | 60 | 45 | 27 | 72 | 24 | 25 | 49 |
| Lots 9 & 10 | General Office (ksf, ITE-710) | 33,000 | sq.ft. | 57 | 8 | 65 | 11 | 55 | 66 | 9 | 8 | 17 |
| | Day Care Center (ksf, ITE-565) | 10,000 | sq.ft. | 58 | 52 | 110 | 52 | 59 | 111 | 8 | 9 | 17 |
| | Passby Rates: AM Peak Hour = 44% (Assumed 1/2 of PM Rate) and PM Peak Hour = 44% | | | -26 | -22 | -48 | -23 | -26 | -49 | -4 | -3 | -7 |
| | | | **Total:** | **144** | **189** | **333** | **196** | **189** | **385** | **135** | **131** | **266** |

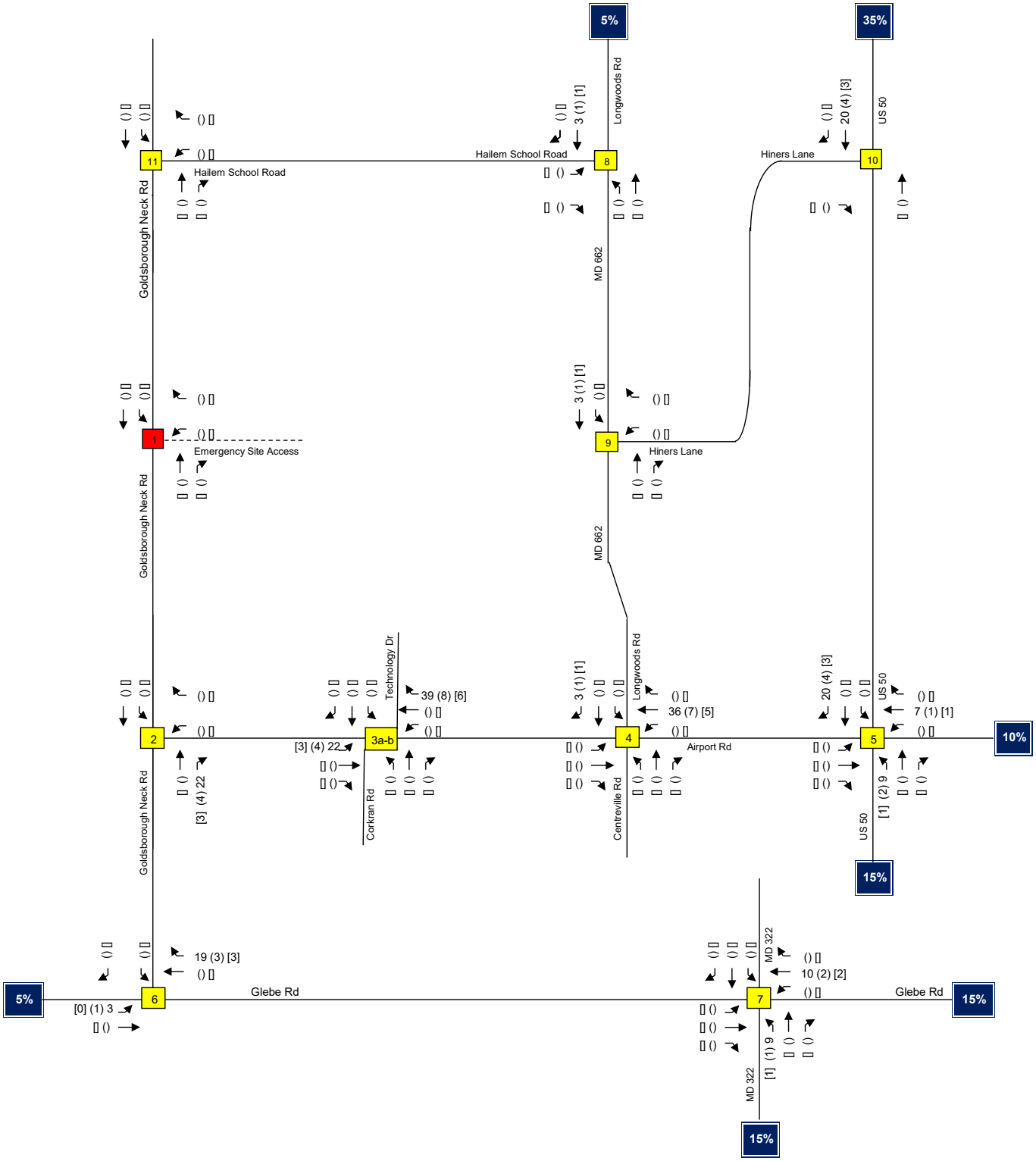
**NOTE: Trip Generation Rates obtained from the ITE Trip Generation Manual, 11th Edition**



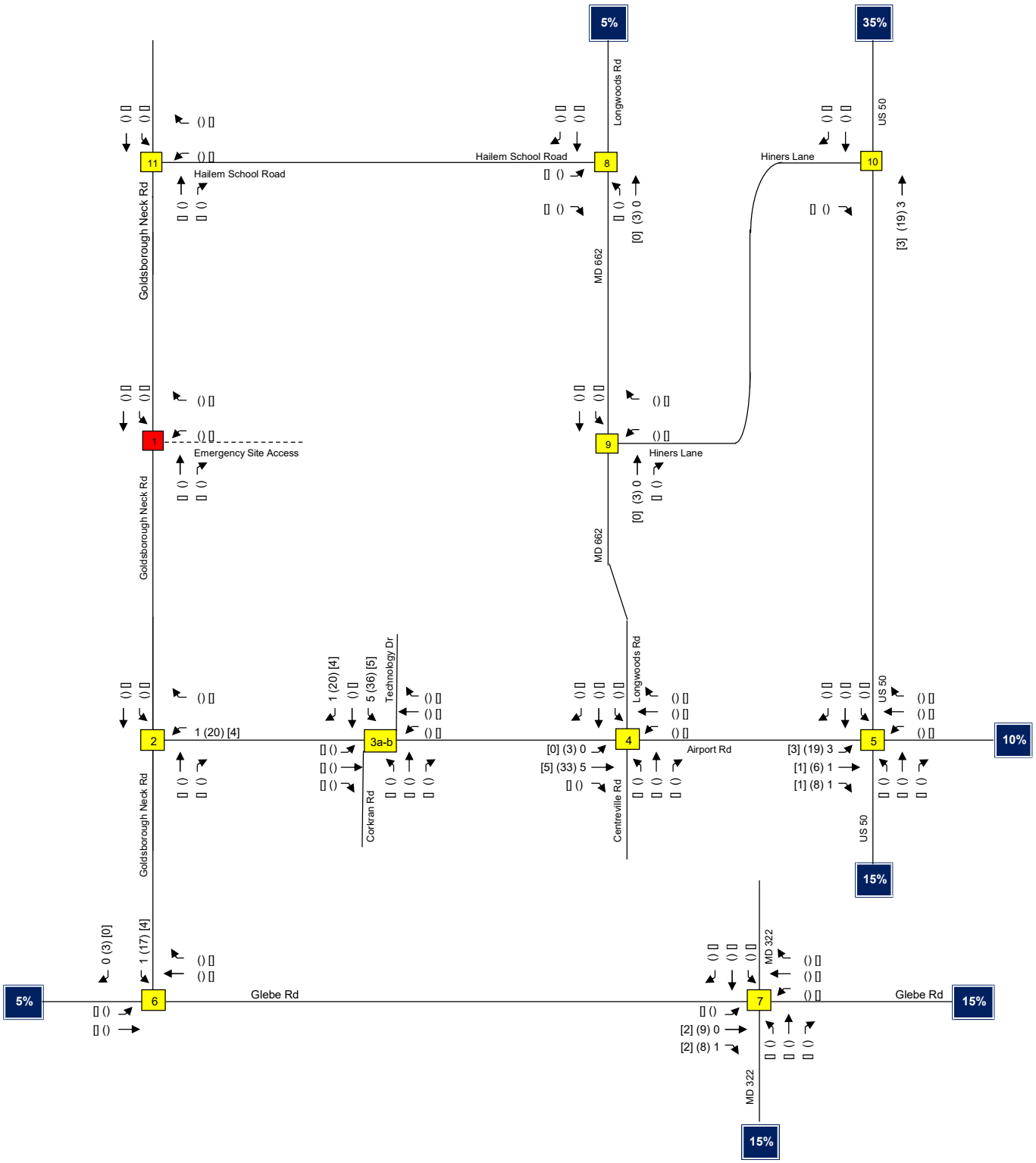

| Traffic Impact Analysis | Trip Assignment for Site<br>Residential Trips - Inbound | **Exhibit 7a** |
|---|---|---|
| LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | |




| | | |
|---|---|---|
| Traffic Impact Analysis<br>LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Trip Assignment for Site<br>Residential Trips - Outbound<br>Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | **Exhibit 7b** |




| Traffic Impact Analysis | Trip Assignment for Site<br>General Office Trips - Inbound | **Exhibit 7c** |
|---|---|---|
| LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | |

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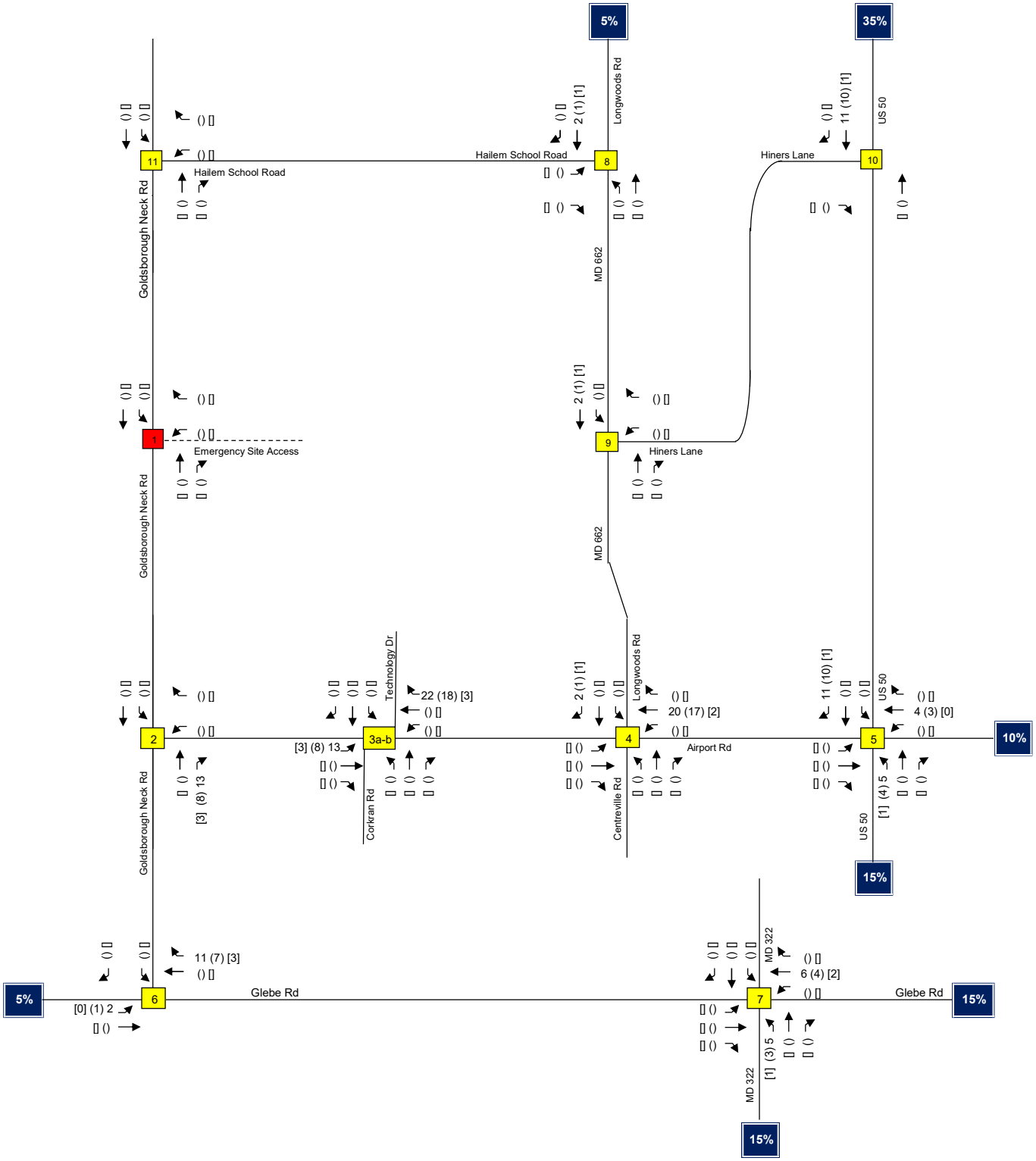
# Trip Assignment for Site
# General Office Trips - Outbound

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

**Exhibit 7d**

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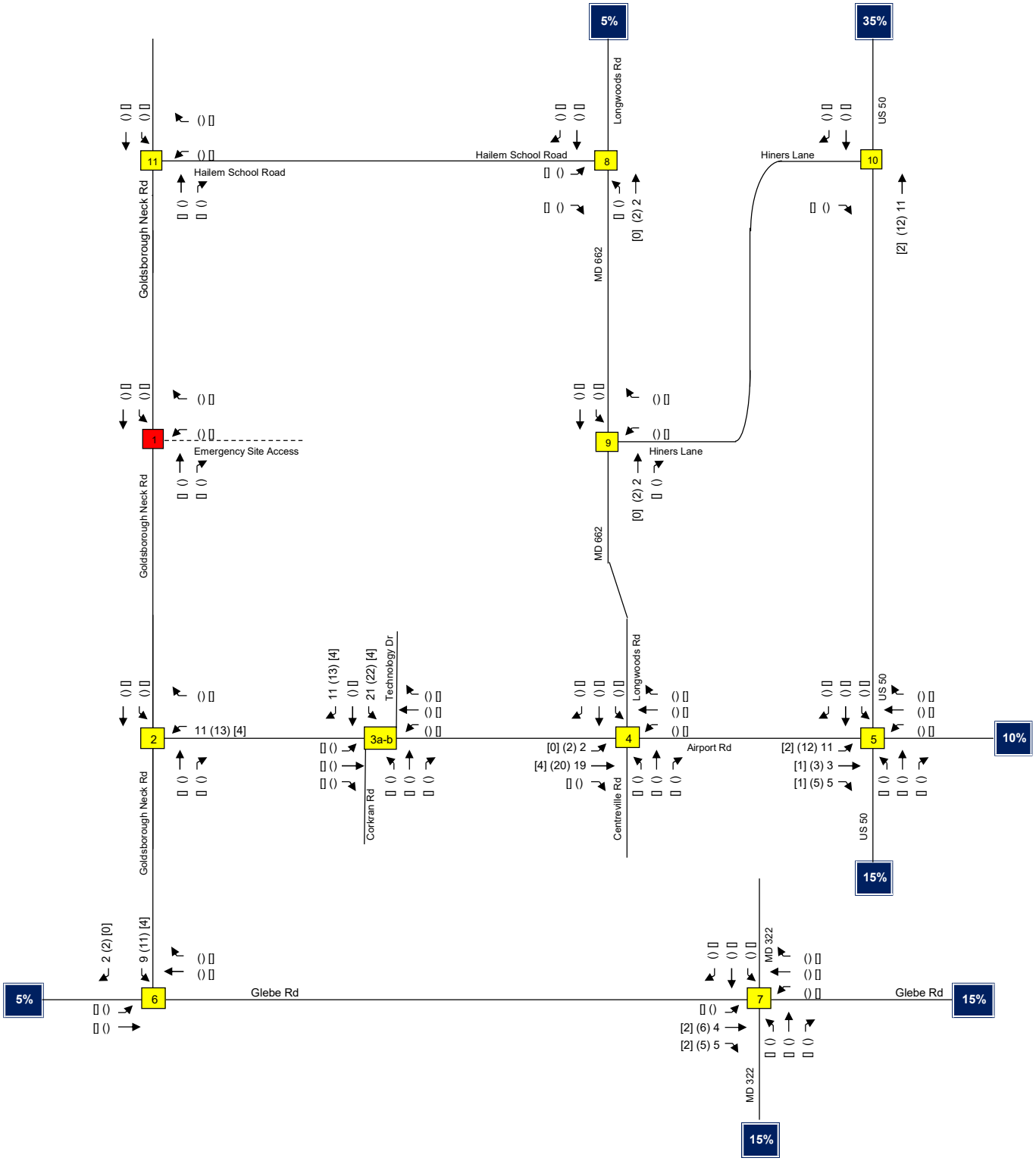
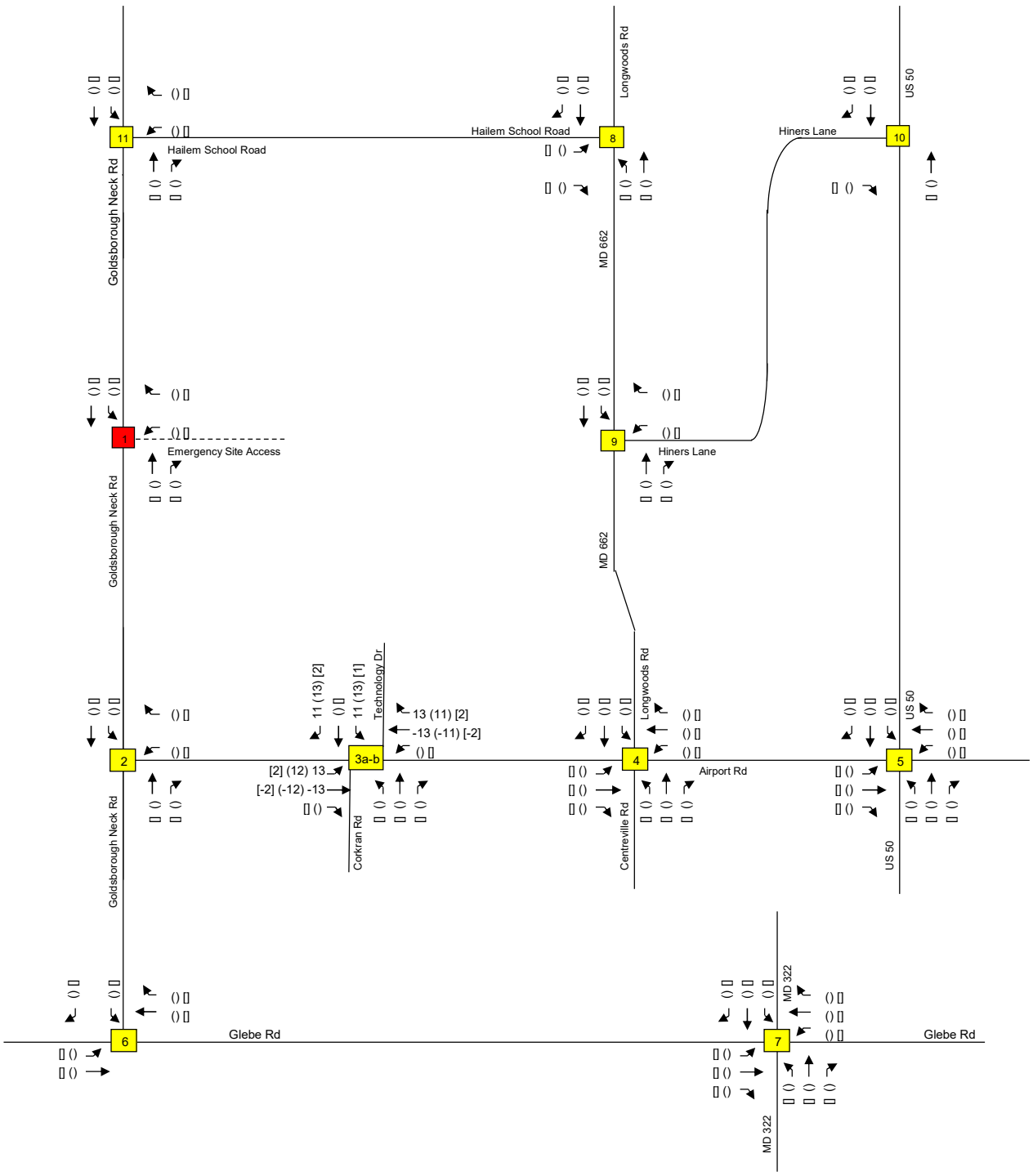
# Trip Assignment for Site Daycare Trips - Inbound

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

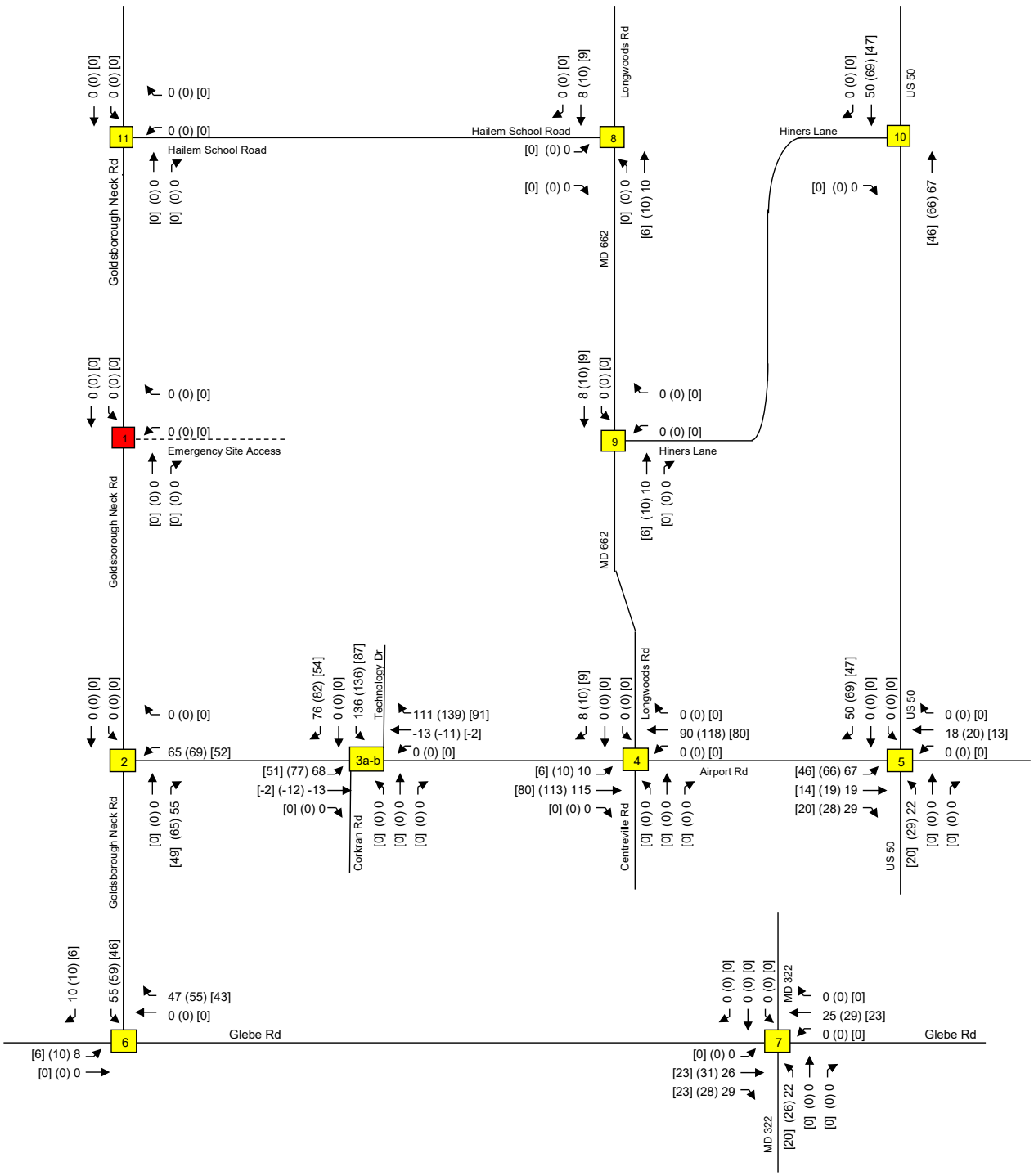
**Exhibit 7e**



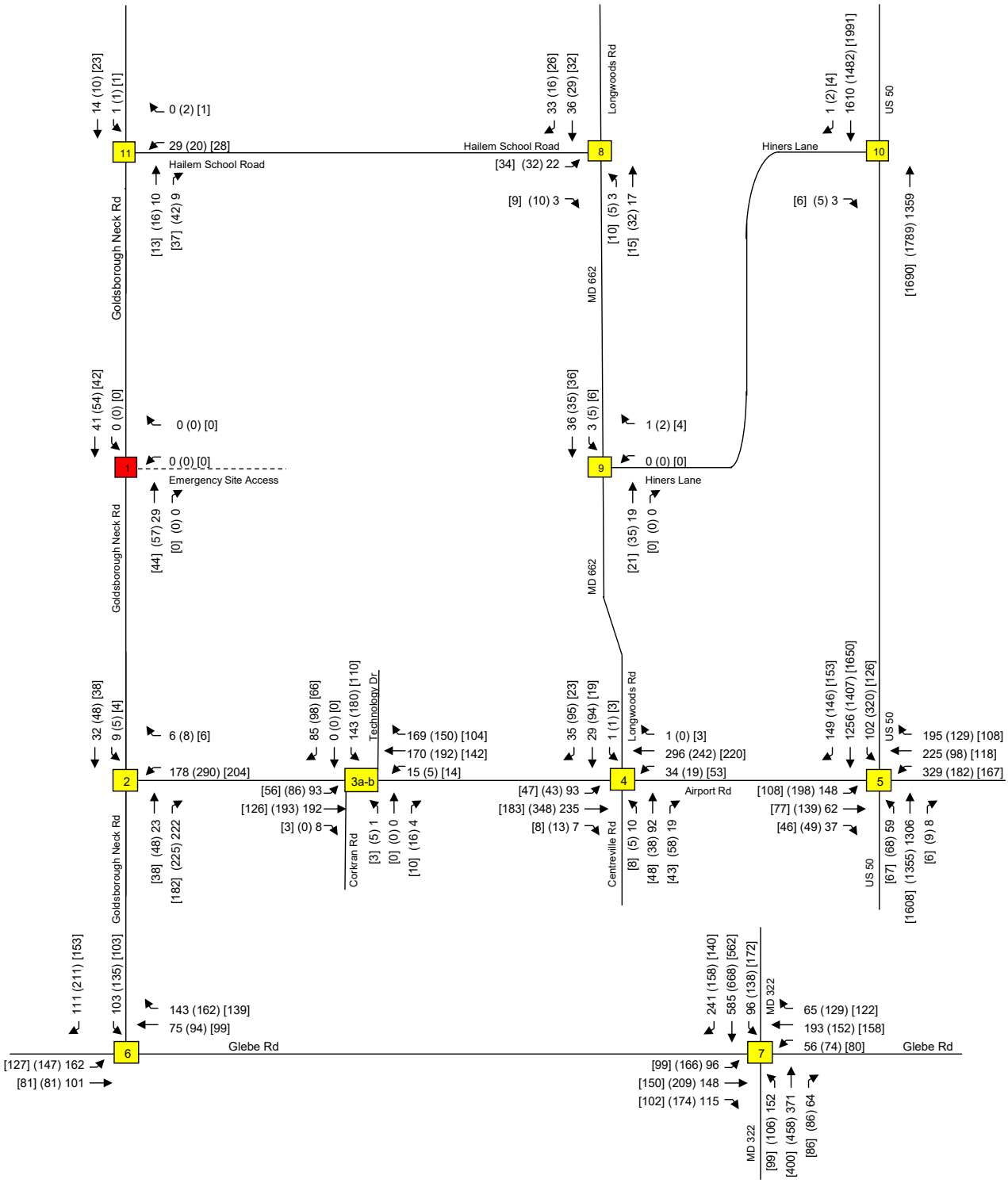

| Traffic Impact Analysis | Trip Assignment for Site<br>Daycare Trips - Outbound | **Exhibit 7f** |
|---|---|---|
| LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | |




| Traffic Impact Analysis | Trip Assignment for Site<br>Daycare Trips - Passby | **Exhibit 7g** |
|---|---|---|
| LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | |




| | | |
|---|---|---|
| Traffic Impact Analysis<br>LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Total Site<br>Trip Assignment<br>Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | **Exhibit 8** |




| Traffic Impact Analysis | Total<br>Peak Hour Volumes | **Exhibit 9** |
|---|---|---|
| LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | |

## Level-of-Service Results

| Morning Peak Hour | Existing LOS | Background LOS | Total LOS | LOS D or better? |
|---|---|---|---|---|
| 2). Golsdborough Neck Rd & Airport Rd | A / 203 | A / 318 | A / 438 | Y |
| 3). Airport Rd & Technology Dr | A / 267 | A / 314 | A / 705 | Y |
| 4). Airport Rd & MD 662 (Longwoods Rd)/Centreville Rd | A / 267 | A / 450 | A / 585 | Y |
| 5). US 50 & Airport Rd | A / 997 | D / 1303 | D / 1388 | Y |
| *w/ proposed improvements* | | | C / 1248 | Y |
| 6). Glebe Rd & Goldsborough Neck Rd | A / 214 | A / 373 | A / 528 | Y |
| 7). MD 322 & Glebe Rd | A / 847 | A / 979 | B / 1026 | Y |
| 8). MD 662 & Hailem School Rd | A / 69 | A / 89 | A / 97 | Y |
| 9). MD 662 & Hiners Ln | A / 14 | A / 32 | A / 40 | Y |
| 10). US 50 & Hiners Ln | A / 670 | A / 670 | A / 889 | Y |
| 11). Goldsborough Neck Rd & Hailem School Rd | A / 49 | A / 49 | A / 49 | Y |

| Evening Peak Hour | Existing LOS | Background LOS | Total LOS | LOS D or better? |
|---|---|---|---|---|
| 2). Golsdborough Neck Rd & Airport Rd | A / 315 | A / 442 | A / 576 | Y |
| 3). Airport Rd & Technology Dr | A / 250 | A / 302 | A / 735 | Y |
| 4). Airport Rd & MD 662 (Longwoods Rd)/Centreville Rd | A / 322 | A / 488 | A / 661 | Y |
| 5). US 50 & Airport Rd | B / 1045 | D / 1404 | E / 1490 | N |
| *w/ proposed improvements* | | | D / 1435 | Y |
| 6). Glebe Rd & Goldsborough Neck Rd | A / 334 | A / 431 | A / 538 | Y |
| 7). MD 322 & Glebe Rd | A / 909 | B / 1037 | B / 1092 | Y |
| 8). MD 662 & Hailem School Rd | A / 74 | A / 82 | A / 92 | Y |
| 9). MD 662 & Hiners Ln | A / 25 | A / 33 | A / 43 | Y |
| 10). US 50 & Hiners Ln | A / 755 | A / 755 | A / 989 | Y |
| 11). Goldsborough Neck Rd & Hailem School Rd | A / 81 | A / 81 | A / 81 | Y |

| Saturday Mid-Day Peak Hour | Existing LOS | Background LOS | Total LOS | LOS D or better? |
|---|---|---|---|---|
| 2). Golsdborough Neck Rd & Airport Rd | A / 271 | A / 333 | A / 434 | Y |
| 3). Airport Rd & Technology Dr | A / 199 | A / 217 | A / 507 | Y |
| 4). Airport Rd & MD 662 (Longwoods Rd)/Centreville Rd | A / 251 | A / 345 | A / 441 | Y |
| 5). US 50 & Airport Rd | B / 1104 | C / 1285 | D / 1344 | Y |
| *w/ proposed improvements* | | | C / 1300 | Y |
| 6). Glebe Rd & Goldsborough Neck Rd | A / 275 | A / 373 | A / 468 | Y |
| 7). MD 322 & Glebe Rd | A / 746 | A / 875 | A / 918 | Y |
| 8). MD 662 & Hailem School Rd | A / 91 | A / 102 | A / 111 | Y |
| 9). MD 662 & Hiners Ln | A / 28 | A / 38 | A / 47 | Y |
| 10). US 50 & Hiners Ln | A / 929 | B / 1075 | B / 1101 | Y |
| 11). Goldsborough Neck Rd & Hailem School Rd | A / 80 | A / 80 | A / 80 | Y |

## Level-of-Service Results

| Morning Peak Hour | | Existing LOS | Background LOS | Total LOS | LOS D or better? |
|---|---|---|---|---|---|
| 1). Goldsborough Neck Rd & Site Access (Emergency Only) | (unsignalized) | n/a | n/a | n/a | |
| Westbound Approach | | n/a | n/a | n/a | |
| 2). Golsdborough Neck Rd & Airport Rd | (unsignalized) | | | | |
| Westbound Approach | | A / 9.6 | B / 10.2 | B / 11.1 | Y |
| 3a). Airport Rd & Corkran Road (see Note 1) | (unsignalized) | | | | |
| Northbound Approach | | A / 9.3 | A / 9.9 | A / 9.9 | Y |
| 3b). Airport Rd & Technology Dr (see Note 1) | (unsignalized) | | | | |
| Southbound Approach | | B / 10.1 | B / 10.8 | C / 21.4 | Y |
| 4). Airport Rd & MD 662 (Longwoods Rd)/Centreville Rd | (unsignalized) | | | | |
| Northbound Approach | | B / 10.1 | C / 18.2 | D / 28.0 | Y |
| Southbound Approach | | B / 11.2 | B / 13.4 | C / 16.2 | Y |
| 5). US 50 & Airport Rd | (signalized) | D / 39.9 | E / 66.2 | F / 97.4 | Y |
| w/ Improvements | | | | D / 54.1 | Y |
| 6). Glebe Rd & Goldsborough Neck Rd | (unsignalized) | | | | |
| Southbound Approach | | A / 9.8 | B / 11.2 | B / 13.6 | Y |
| 7). MD 322 & Glebe Rd | (signalized) | B / 17.9 | B / 18.1 | B / 19.7 | Y |
| 8). MD 662 (Longwoods Rd) & Hailem School Road | (unsignalized) | | | | |
| Eastbound Approach | | A / 8.8 | A / 8.9 | A / 9.0 | Y |
| 9). MD 662 (Longwoods Rd) & Hiners Lane | (unsignalized) | | | | |
| Westbound Approach | | A / 8.3 | A / 8.4 | A / 8.4 | Y |
| 10). US 50 & Hiners Ln | (unsignalized) | | | | |
| Eastbound Approach (Free Rigl` | | B / 13.9 | C / 16.9 | C / 17.4 | Y |
| 11). Goldsborough Neck Rd & Hailem School Rd | (unsignalized) | | | | |
| Westbound Approach | | A / 8.8 | A / 8.8 | A / 8.8 | Y |

| Evening Peak Hour | | Existing LOS | Background LOS | Total LOS | LOS D or better? |
|---|---|---|---|---|---|
| 1). Goldsborough Neck Rd & Site Access (Emergency Only) | (unsignalized) | n/a | n/a | n/a | |
| Westbound Approach | | n/a | n/a | n/a | |
| 2). Golsdborough Neck Rd & Airport Rd | (unsignalized) | | | | |
| Westbound Approach | | B / 10.4 | B / 11.7 | B / 13.4 | Y |
| 3a). Airport Rd & Corkran Road (see Note 1) | (unsignalized) | | | | |
| Northbound Approach | | A / 9.6 | B / 10.0 | B / 10.1 | Y |
| 3b). Airport Rd & Technology Dr (see Note 1) | (unsignalized) | | | | |
| Southbound Approach | | B / 10.7 | B / 11.9 | D / 27.7 | Y |
| 4). Airport Rd & MD 662 (Longwoods Rd)/Centreville Rd | (unsignalized) | | | | |
| Northbound Approach | | B / 10.2 | B / 12.8 | C / 16.7 | Y |
| Southbound Approach | | B / 13.1 | B / 14.2 | C / 20.4 | Y |
| 5). US 50 & Airport Rd | (signalized) | D / 42.9 | F / 83.7 | F / 196.5 | N |
| w/ Improvements | | | | E / 62.8 | N |
| 6). Glebe Rd & Goldsborough Neck Rd | (unsignalized) | | | | |
| Southbound Approach | | B / 10.7 | B / 11.7 | B / 13.9 | Y |
| 7). MD 322 & Glebe Rd | (signalized) | C / 20.4 | C / 21.4 | C / 23.2 | Y |
| 8). MD 662 (Longwoods Rd) & Hailem School Road | (unsignalized) | | | | |
| Eastbound Approach | | A / 8.8 | A / 8.9 | A / 9.0 | Y |
| 9). MD 662 (Longwoods Rd) & Hiners Lane | (unsignalized) | | | | |
| Westbound Approach | | A / 8.4 | A / 8.4 | A / 8.5 | Y |
| 10). US 50 & Hiners Ln | (unsignalized) | | | | |
| Eastbound Approach (Free Right) | | B / 13.8 | C / 15.6 | C / 16.2 | Y |
| 11). Goldsborough Neck Rd & Hailem School Rd | (unsignalized) | | | | |
| Westbound Approach | | A / 8.8 | A / 8.8 | A / 8.8 | Y |

| Saturday Mid-Day Peak Hour | | Existing LOS | Background LOS | Total LOS | LOS D or better? |
|---|---|---|---|---|---|
| 1). Goldsborough Neck Rd & Site Access (Emergency Only) | (unsignalized) | n/a | n/a | n/a | |
| Westbound Approach | | n/a | n/a | n/a | |
| 2). Golsdborough Neck Rd & Airport Rd | (unsignalized) | | | | |
| Westbound Approach | | B / 10.1 | B / 10.5 | B / 11.3 | Y |
| 3a). Airport Rd & Corkran Road (see Note 1) | (unsignalized) | | | | |
| Northbound Approach | | A / 9.1 | A / 9.4 | A / 9.5 | Y |
| 3b). Airport Rd & Technology Dr (see Note 1) | (unsignalized) | | | | |
| Southbound Approach | | A / 9.8 | B / 10.2 | B / 13.7 | Y |
| 4). Airport Rd & MD 662 (Longwoods Rd)/Centreville Rd | (unsignalized) | | | | |
| Northbound Approach | | A / 9.7 | B / 12.6 | C / 15.1 | Y |
| Southbound Approach | | B / 11.7 | B / 12.1 | B / 13.4 | Y |
| 5). US 50 & Airport Rd | (signalized) | C / 33.5 | D / 40.2 | D / 48.5 | Y |
| w/ Improvements | | | | D / 43.6 | Y |
| 6). Glebe Rd & Goldsborough Neck Rd | (unsignalized) | | | | |
| Southbound Approach | | B / 10.1 | B / 11.0 | B / 12.4 | Y |
| 7). MD 322 & Glebe Rd | (signalized) | B / 17.4 | B / 18.0 | B / 19.6 | Y |
| 8). MD 662 (Longwoods Rd) & Hailem School Road | (unsignalized) | | | | |
| Eastbound Approach | | A / 8.8 | A / 8.9 | A / 9.0 | Y |
| 9). MD 662 (Longwoods Rd) & Hiners Lane | (unsignalized) | | | | |
| Westbound Approach | | A / 8.3 | A / 8.4 | A / 8.4 | Y |
| 10). US 50 & Hiners Ln | (unsignalized) | | | | |
| Eastbound Approach (Free Right) | | B / 13.9 | C / 16.9 | C / 17.4 | Y |
| 11). Goldsborough Neck Rd & Hailem School Rd | (unsignalized) | | | | |
| Westbound Approach | | A / 8.8 | A / 8.8 | A / 8.8 | Y |

Note:

1. Intersections 3a and 3b are labeled as 31 and 32, respectively, in the HCS output files.

# Section 5 Conclusions / Recommendations

## 5.1 Results of Analyses

This Traffic Impact Analysis (TIA) has been prepared for the proposed Technology Park development. The subject site is located in Easton, Maryland, and will be located off of Goldsborough Neck Road, just north of Airport Rd. **Exhibit 1** shows the location of the site.

The site is proposed to be developed with a mix of uses and the exact proposed development is still being determined. For the purpose of this study, the most conservative potential development was analyzed which includes 137 single family attached (townhouse) units, 108 single family detached units. In addition, there are multiple proposed multilevel buildings that are anticipated to be developed with 120 multifamily units, 33,000 square feet of office space, and a 10,000 square foot day care center.

Based on the analyses contained in this report:

- All study intersections operate at LOS D or better under existing, background, and total conditions using the CLV methodology with the exception of US 50 & Airport Road / Black Dog Alley (Intersection 5)
    - It is recommended the shoulder on the westbound Black Dog Alley approach be improved and/or restriped to provide three lanes (left turn/ through / right turn). With this improvement, the results of the CLV analyses indicate that the intersection will operate at LOS D for all traffic conditions.
- All signalized study intersections operate at LOS D or better and each stop-controlled approach operates with LOS C or better under existing, background, and total conditions using the HCM methodology also with the exception of US 50 & Airport Road / Black Dog Alley (Intersection 5).
    - The recommendation detailed above results in the intersection operating at LOS D and/or with lesser overall delay when compared to background conditions and therefore fully mitigates the impact of the development on the intersection and should be considered acceptable.
- It is recommended that “Do Not Block Intersection” signage and pavement markings be installed per Section 3B.17 of the MD MUTCD for Intersection 4 (Airport Road & Longwoods Road/Centreville Road).

In light of the findings contained in this report and the improvement to Intersection 5 detailed above, it is recommended that the proposed development be approved.

# Appendixx A

Supplemental Information
Turning Movement Counts

BUFFERYARD LEGEND

(E) 10' WIDE BUFFERYARD 'E'

NOTE: PROPOSED BUFFERYARDS UTILIZE LANDSCAPE OVERLAPPING CREDITS FOR FOREST CONSERVATION

NOTE:

THE LAYOUT AS SHOWN HEREON IS CONCEPTUAL ONLY AND NOT INTENDED TO BE UTILIZED FOR DESIGN OR CONSTRUCTION PURPOSES.

REVISIONS

| No. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| | | | |

WARNING!!

THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE QUANTITIES SHOWN ON THIS PLAN ARE FOR INFORMATIONAL AND PERMITTING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO HIS OWN SATISFACTION PRIOR TO BEGINNING CONSTRUCTION.

THE CONTRACTOR SHALL TEST PIT AND LOCATE EXISTING UNDERGROUND UTILITIES PRIOR TO THE BEGINNING OF ANY WORK ON-SITE. THE CONTRACTOR SHALL NOTIFY DEPT. OF PUBLIC WORKS OF ANY POSSIBLE CONFLICT AND REQUEST THE RELOCATION OF THE EXISTING UNDERGROUND UTILITIES BEFORE BEGINNING ANY WORK ON-SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY RELOCATION EXPENSE.

MISS UTILITY
DIG WITH CARE
BEFORE YOU DIG CALL 1-800-441-8355 OR 811
PROTECT YOURSELF, GIVE TWO WORKING DAYS NOTICE


Lane Engineering, LLC
Established 1986
Civil Engineers • Land Planning • Land Surveyors
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15 Washington St. Cambridge, MD 21613 (410) 221-0818
354 Pennsylvania Ave. Centreville, MD 21617 (410) 758-2095


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. 48188 , Expiration Date: 12/28/2025.

SEAL

STATE OF MARYLAND · JARRET J. BRYTEK · 48188 · REGISTERED PROFESSIONAL ENGINEER

DATE

# SKETCH CONCEPT PLAN

FOR

## EASTON TECHNOLOGY CENTER

*IN THE TOWN OF EASTON, ELECTION WARD 1*
*TALBOT COUNTY, MARYLAND*
*TAX MAP 25 GRID 4 PARCEL 92 LOTS 1, 2, 3 & 4*

ISSUED FOR: AGENCY REVIEW — DATE: 5/7/25 BY: BCE

SHEET No. 3 OF 6

SCALE: AS NOTED

DATE:

JOB No. 220210

FILE No. 3208

© LANE ENGINEERING, LLC


Date: 05/06/2025 - 11:22am User: wbarnhart Project Manager: BCE
Drawing Path: C:\swap\AcPublish_19868\RSK-PLTS-220210.dwg | Sheet:3SketchConceptPlan
XREF File(s): RSK-BASE-220210/XRN-BASE-220210/RBS-BASE-2438-220210/VLD-BASE-220210/CSK-BASE-220210/LUP-PUD-BASE-220210/CSK-Road-BASE-220210/CSK-LOT-BASE/XRN-LOTS-BASE-220210/RAR-BASE-Rev-220210

| | |
|---|---|
| **From:** | mlenhart |
| **To:** | Henry Dierker; Rick VanEmburgh |
| **Cc:** | Richard Baker (SHA); Stephanie McFaden (Consultant); Nick Driban; Dylan McAndrew; Ryan Wingate; mlenhart |
| **Subject:** | RE: TIA Scoping Materials for Technology park |
| **Date:** | Wednesday, December 4, 2024 3:03:05 PM |
| **Attachments:** | image001.png |

Hi Henry,

Thank you for the response. I do have a few questions/comments regarding the additional intersections and the requested times of counts.

1. We will include the Eastern Region Medical Center as requested. I see online that it will have 147 licensed beds plus an adjacent 60 ksf building for offices and outpatient services. Do you have any other information on that project you can share? If not, we'll just use a 147 bed hospital plus 60 ksf MOB.
2. We have already conducted the intersection turning movement counts at our proposed intersections. They were counted from 6:30-9:30 AM, 4-7 PM, and 10-2 on a Saturday. We've looked at other SHA counts in the area and these timeframes will cover the peak periods.
3. The medical center is being relocated to the northeast of this site with access along Longwoods Road. However, Longwoods Road in the vicinity of Hiners and Hailem School Road has an existing ADT of 1,195 vehicles per day, with peak hour volumes of less than 100 vehicles per hour in each direction. The proposed residential units in the Technology Park will generate very few trips up through those intersections (5% or less based on the assignment we provided in the scoping documents). Also, the US 50 at Hiners Lane intersection is a right-in and right-out only, with full accel and decel lanes. We project less than 10 peak hour trips from this site through any of those intersections that were requested in your email below. I understand that the medical center will add trips to the additional intersections you requested below, but the residential units proposed in the Technology Park will send very few trips through those. Based on this information, we'd request eliminating those intersections from the requested scope below as this site will have a negligible impact on those.

Thanks,
Mike

**Mike Lenhart, P.E., PTOE**
President

Office: (410) 216-3333 (Ext. 1)
Mobile: (410) 980-2367

LENHART TRAFFIC CONSULTING, INC.
645 BALTIMORE ANNAPOLIS BOULEVARD, SUITE 214
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**From:** Henry Dierker <HDierker@mdot.maryland.gov>
**Sent:** Wednesday, December 4, 2024 2:13 PM
**To:** mlenhart <mlenhart@LENHARTTRAFFIC.COM>; Rick VanEmburgh <rvanemburgh@eastonmd.gov>
**Cc:** Richard Baker (SHA) <RBaker@mdot.maryland.gov>; Stephanie McFaden (Consultant) <SMcFaden.consultant@mdot.maryland.gov>; Nick Driban <ndriban@LENHARTTRAFFIC.COM>; Dylan McAndrew <DMcAndrew@LENHARTTRAFFIC.COM>; Ryan Wingate <rwingate@LENHARTTRAFFIC.COM>; Henry Dierker <HDierker@mdot.maryland.gov>
**Subject:** RE: TIA Scoping Materials for Technology park

Mike,

SHA requests the following intersections to be included:
Longwoods Road (MD 662) @ Hailem School Road
Longwoods Road (MD 662) @ Hiners Lane
Ocean Gateway (US 50) @ Hiners Lane

Please include the background development of Eastern Regional Medical Center.

SHA requests the following TIS Study Times:
6:00 am to 9:00 am
3:00 pm to 6:00 pm
(Schools Nearby) 2:00 pm to 6:00 pm

**Henry R. Dierker III**
*Access Permits Regional Engineer*
District Two Traffic
410.810.3244 **office**
410-708-0013 **mobile**
Hdierker@mdot.maryland.gov
**Maryland State Highway Administration-District Two**
615 Morgnec Road, Chestertown, MD 21620

**From:** mlenhart <mlenhart@LENHARTTRAFFIC.COM>

**Sent:** Friday, November 22, 2024 3:47 PM
**To:** Henry Dierker <HDierker@mdot.maryland.gov>; Rick VanEmburgh <rvanemburgh@eastonmd.gov>
**Cc:** Richard Baker (SHA) <RBaker@mdot.maryland.gov>; Stephanie McFaden (Consultant) <SMcFaden.consultant@mdot.maryland.gov>; mlenhart <mlenhart@LENHARTTRAFFIC.COM>; Nick Driban <ndriban@LENHARTTRAFFIC.COM>; Dylan McAndrew <DMcAndrew@LENHARTTRAFFIC.COM>; Ryan Wingate <rwingate@LENHARTTRAFFIC.COM>
**Subject:** TIA Scoping Materials for Technology park

Hi Rick and Henry,

I am working with Lane Engineering on a master plan for the Technology Park located along the north side of Airport Road.

They have identified two concepts for the development which are attached for your information. One of the concepts includes 90 single family homes, 89 townhomes, and 24,000 sq ft of service or commercial based use. The other concept is very similar but includes an assisted living facility and slightly fewer residential units.

I've attached a pdf containing scoping documents for the TIA:

- Site location map and study intersections
- Trip generation for the two scenarios
- Background developments to be included in the TIA
- Traffic growth along US 50 and MD 322

We propose the following analyses:

1. AM, PM, and Saturday mid-day traffic counts/analyses
2. CLV and HCS analyses
3. 1.5% growth rate in traffic

Please let us know if this is ok or you have any questions/comments.

Thanks,
Mike

**Mike Lenhart, P.E., PTOE**
President

Office: (410) 216-3333 (Ext. 1)
Mobile: (410) 980-2367

| | |
|---|---|
| **From:** | mlenhart |
| **To:** | Mike Mertaugh |
| **Cc:** | Nick Driban; Dylan McAndrew; Brett Ewing; Jarret Beyer; Wayde Barnhart; Megan Phillips; Ray Clarke; Rick Van Emburgh; msalinas@eastonmd.gov; mlenhart; Lawrence Scott |
| **Subject:** | RE: TIA Scoping Materials for Technology park |
| **Date:** | Tuesday, January 21, 2025 2:53:58 PM |
| **Attachments:** | image001.png<br>image002.png |

Hi Mike,

Thank you for the feedback below. I believe we have received all of the scoping requests from SHA, the County, and the Town.

I'm not sure a scoping meeting is necessary but would be happy to hop on a virtual meeting with you and Rick to discuss any issues as needed.

Please confirm if you would like to meet. Otherwise, we are capturing the additional intersection you requested and will include that along with the two intersections requested by SHA.

Thanks,
Mike

**Mike Lenhart, P.E., PTOE**
President

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**From:** Mike Mertaugh <MMertaugh@talbotcountymd.gov>
**Sent:** Monday, December 30, 2024 3:18 PM
**To:** mlenhart <mlenhart@LENHARTTRAFFIC.COM>
**Cc:** Nick Driban <ndriban@LENHARTTRAFFIC.COM>; Dylan McAndrew <DMcAndrew@LENHARTTRAFFIC.COM>; Brett Ewing <bewing@leinc.com>; Jarret Beyer

<jbeyer@leinc.com>; Wayde Barnhart <wbarnhart@leinc.com>; Megan Phillips <mphillips@leinc.com>; Ray Clarke <rclarke@talbotcountymd.gov>; Rick Van Emburgh <rvanemburgh@eastonmd.gov>; msalinas@eastonmd.gov
**Subject:** RE: TIA Scoping Materials for Technology park

Mike-

Good to hear from you, it has certainly been a long time. Pretty busy here, which is evidenced by my delayed response.

The County has a few concerns related to traffic around and from this site and proposed development. In no particular order…

- Airport Road is also a County road, which is a significant concern to the County.

- Goldsborough Neck Road is a minor County road, which would be significantly impacted by additional traffic. If the County were to allow a new access/intersection on this corridor, we would anticipate some reconstruction and widening of that corridor.

- Traffic impacts to Airport Road from the Easton Technology Center development were only approved by the County for Phase 1 of this project (plat MAS PC4-80G).

- The Talbot County Roads Ordinance requires that development within any town impacting County roads must have a "Municipal Review" with the County (County Roads Ordinance Section 134-6.1.C.).

- For whatever reason, this Municipal Review with the County was not pursued by the developer of Lots created since the Phase 1 subdivision plat referenced above.

- The County has made efforts to resolve traffic impacts with this development which is still pending.

- Since the creation of the post phase 1 lots of Easton Technology Center, the County has been pursuing the design of upgrades to Airport Road due in part from anticipated traffic impact of further development of this business park.

- Talbot County agrees with the State that the Hailem School Road and Hiners Lane intersections with MD Route 662 should be evaluated, particularly with respect to your clients proposed project and the new regional medical center that is currently under construction on MD Route 662.

- Additionally, the Goldsboro Neck Road and Hailem School Road intersection should be evaluated. This may be particularly important if geometric reconfiguration is necessary

from traffic impacts.

We recommend that a pre-application/scoping meeting be held with the Town and the County to further discuss access and traffic related concerns associated with this project.

Thanks,

-Mike

**Michael L. Mertaugh, P.E.**
*Assistant County Engineer*
Development Review & Roads
410-770-8170
Talbot County Department of Public Works
215 Bay Street, Suite 6
Easton, Maryland 21601
Fax: 410-770-8176
TTY: 410-822-8735
E-Mail: mmertaugh@talbgov.org

---

**From:** mlenhart <mlenhart@LENHARTTRAFFIC.COM>
**Sent:** Friday, December 6, 2024 12:14 PM
**To:** Mike Mertaugh <MMertaugh@talbotcountymd.gov>
**Cc:** Nick Driban <ndriban@LENHARTTRAFFIC.COM>; Dylan McAndrew <DMcAndrew@LENHARTTRAFFIC.COM>; mlenhart <mlenhart@LENHARTTRAFFIC.COM>; Brett Ewing <bewing@leinc.com>; Jarret Beyer <jbeyer@leinc.com>; Wayde Barnhart <wbarnhart@leinc.com>; Megan Phillips <mphillips@leinc.com>
**Subject:** RE: TIA Scoping Materials for Technology park

Hi Mike,
It's been a while and I hope you are doing well.

I am working with Lane Engineering on a master plan for the Technology Park located along the north side of Airport Road. The project is located in the Town and as such we've provided a scoping email to the SHA and Town to confirm the scope of the traffic impact study.

Brett Ewing at Lane pointed out that the site will have access to Goldsborough Neck Road which is a County road, so I wanted to send this to you as well to get you engaged early in the process. Ultimately, we'll need a permit for the entrance onto Goldsborough Neck Road.

There are currently two potential concepts for the development which are attached for your information. One of the concepts includes 90 single family homes, 89 townhomes, and 24,000 sq ft of service or commercial based use. The other concept is very similar but includes an assisted living facility and slightly fewer residential units.

I've attached a pdf containing scoping documents for the TIA:

- Site location map and study intersections
- Trip generation for the two scenarios
- Background developments to be included in the TIA
- Traffic growth along US 50 and MD 322

We propose the following analyses:

1. AM, PM, and Saturday mid-day traffic counts/analyses
2. CLV and HCS analyses
3. 1.5% growth rate in traffic

SHA has responded that they are ok with the scoping as identified above and in the attached exhibits, but initially requested the addition of the following study intersections.

- Longwoods Road (MD 662) @ Hailem School Road
- Longwoods Road (MD 662) @ Hiners Lane
- Ocean Gateway (US 50) @ Hiners Lane

We've responded to SHA asking for elimination of these intersections for the following reasons:

1. Longwoods Road is currently closed at Hiners Lane for construction of the medical center. Therefore traffic patterns are temporarily inaccurate.
2. The proposed Technology Park will mostly be oriented to and from US 50 or to and from the Town via Goldsborough Neck Road to Glebe Road to MD 322. We have only 5% of the site trips going up to Longwoods Road which equates to less than 10 peak hour trips, therefore the project would not have a significant impact on those intersections.

Please let us know if this is ok or you have any questions/comments.

Thanks,
Mike

**Mike Lenhart, P.E., PTOE**
President

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Mobile: (410) 980-2367

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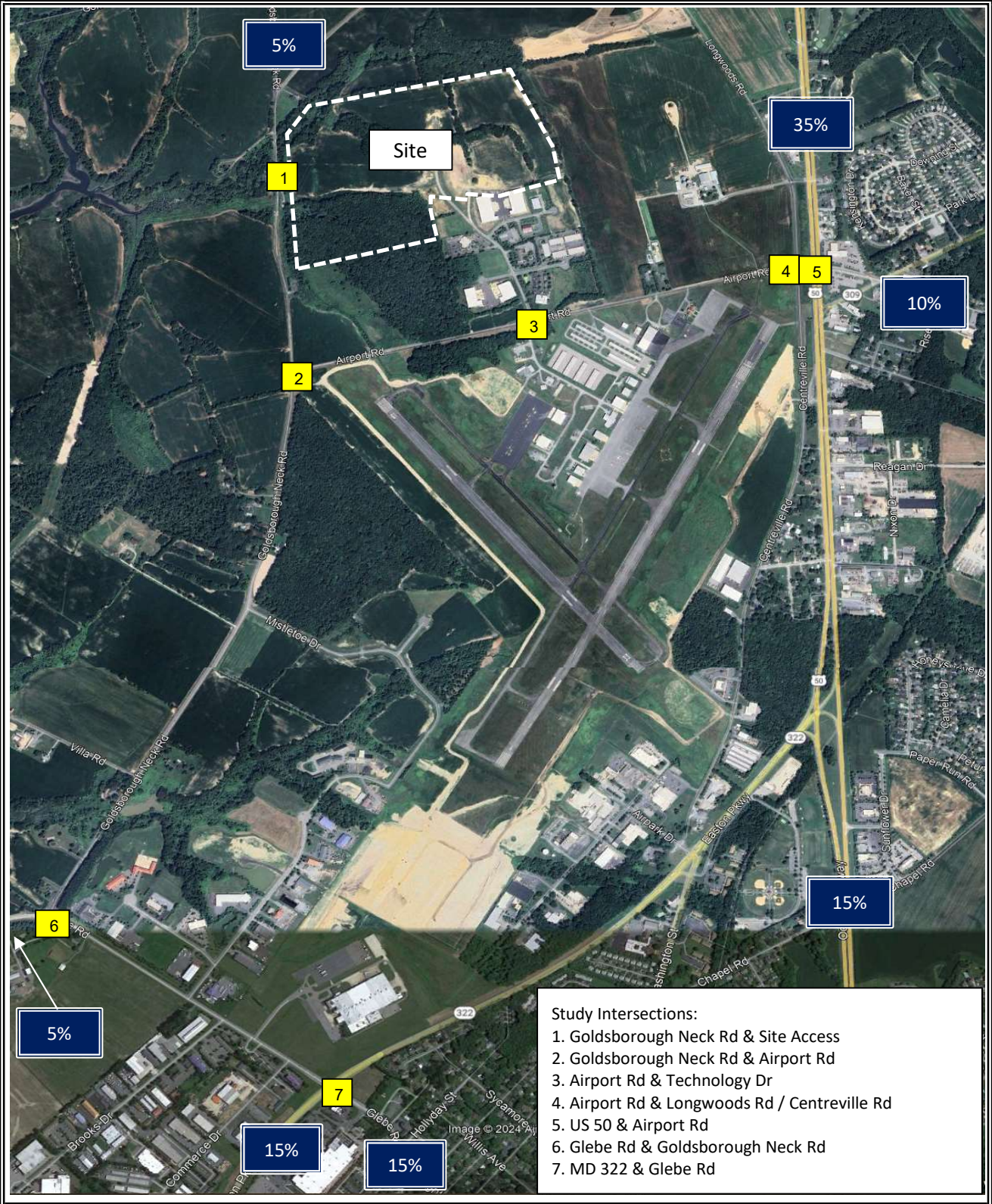



Study Intersections:
1. Goldsborough Neck Rd & Site Access
2. Goldsborough Neck Rd & Airport Rd
3. Airport Rd & Technology Dr
4. Airport Rd & Longwoods Rd / Centreville Rd
5. US 50 & Airport Rd
6. Glebe Rd & Goldsborough Neck Rd
7. MD 322 & Glebe Rd

| | | |
|---|---|---|
| Traffic Impact Analysis | Site Location Map | **Exhibit 1** |
| **LENHART TRAFFIC CONSULTING, INC.**<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | | |

## Trip Generation Rates

| | Trip Distribution (In/Out) |
|---|---|
| **Single-Family Attached Housing (ITE-215, Units)** | |
| 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 |
| **Single-Family Detached Housing (ITE-210, Units)** | |
| Ln(Morning Trips) = 0.91 x Ln(Units) + 0.12 | 26/74 |
| Ln(Evening Trips) = 0.94 x Ln(Units) + 0.27 | 63/37 |
| Midday Sat. Trips = 0.84 x Units + 17.99 | 54/46 |
| **General Office (ksf, ITE-710)** | |
| Ln(Morning Trips) = 0.86 x Ln(ksf) + 1.16 | 88/12 |
| Ln(Evening Trips) = 0.83 x Ln(ksf) + 1.29 | 17/83 |
| Midday Sat. Trips = 0.52 x ksf | 54/46 |
| **Assisted Living (ITE-254, Beds)** | |
| Morning Trips = 0.18 x Beds | 60/40 |
| Evening Trips = 0.24 x Beds | 39/61 |
| Midday Sat. Trips = 0.27 x Beds | 46/54 |

## Trip Generation Totals

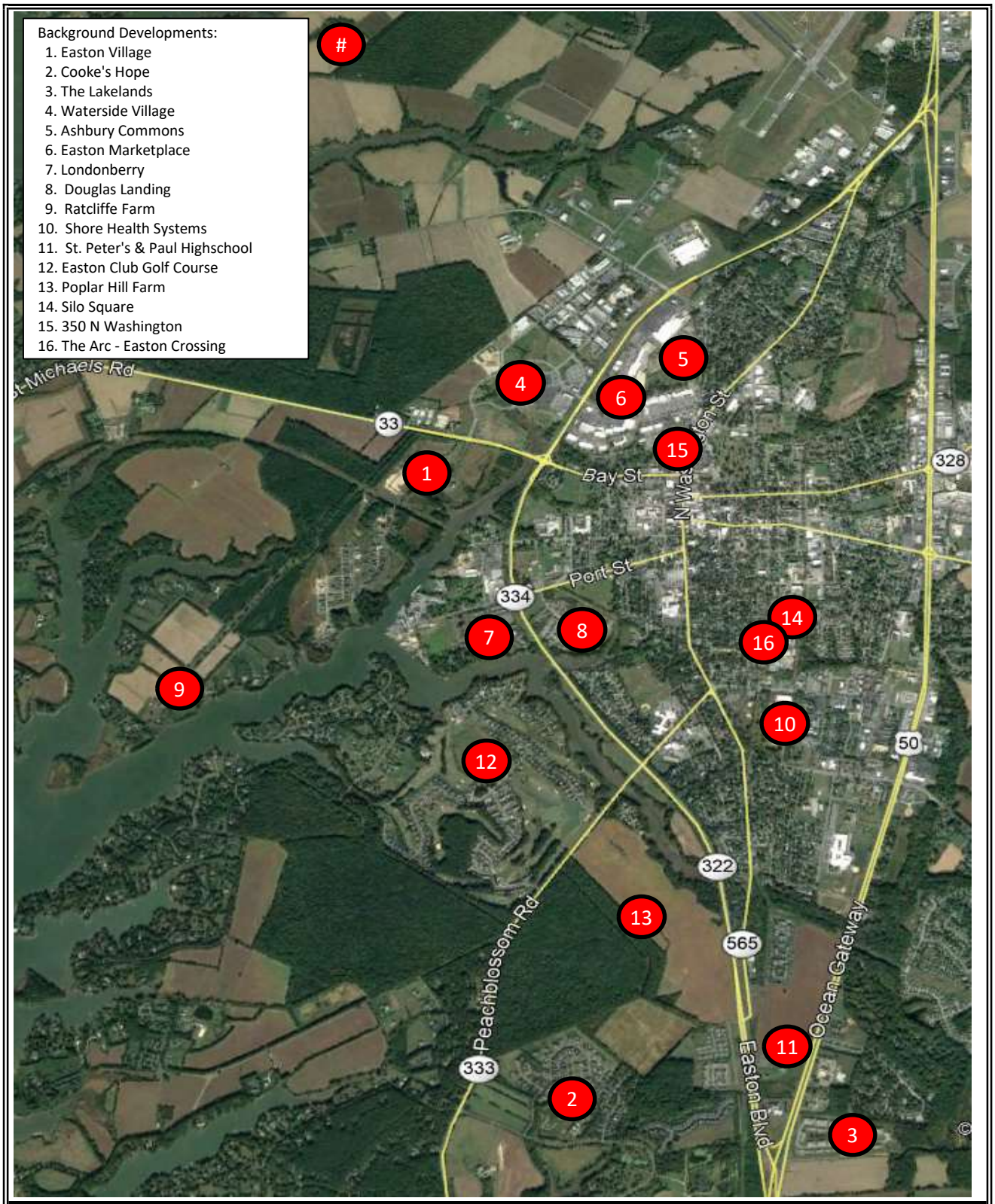
### Option A

| | | AM Peak | | | PM Peak | | | Sat. Mid-Day Peak | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | In | Out | Total | In | Out | Total | In | Out | Total |
| Single-Family Attached Housing (ITE-215, Units) | 89 units | 13 | 28 | 41 | 28 | 21 | 49 | 29 | 32 | 61 |
| Single-Family Detached Housing (ITE-210, Units) | 90 units | 18 | 50 | 68 | 57 | 33 | 90 | 47 | 40 | 87 |
| General Office (ksf, ITE-710) | 24,000 sq.ft. | 43 | 6 | 49 | 9 | 42 | 51 | 6 | 6 | 12 |
| | **Total:** | **74** | **84** | **158** | **94** | **96** | **190** | **82** | **78** | **160** |

### Option B

| | | AM Peak | | | PM Peak | | | Sat. Mid-Day Peak | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | In | Out | Total | In | Out | Total | In | Out | Total |
| Single-Family Attached Housing (ITE-215, Units) | 89 units | 13 | 28 | 41 | 28 | 21 | 49 | 29 | 32 | 61 |
| Single-Family Detached Housing (ITE-210, Units) | 72 units | 14 | 41 | 55 | 46 | 27 | 73 | 39 | 33 | 72 |
| Assisted Living (ITE-254, Beds) | 64 beds | 7 | 5 | 12 | 6 | 9 | 15 | 8 | 9 | 17 |
| General Office (ksf, ITE-710) | 24,000 sq.ft. | 43 | 6 | 49 | 9 | 42 | 51 | 6 | 6 | 12 |
| | **Total:** | **77** | **80** | **157** | **89** | **99** | **188** | **82** | **80** | **162** |

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




| | | |
|---|---|---|
| Traffic Impact Analysis | Location of Background Devs. | **Exhibit C1** |
| **LENHART TRAFFIC CONSULTING, INC.**<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | | |

## Trip Generation for Background Developments

| | | | AM Peak | | | PM Peak | | | Sat Mid-day Peak | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | In | Out | Total | In | Out | Total | In | Out | Total |
| 1 - Easton Village | 250 Single-Family Units Less 146 Built | 104 units remaining | 19 | 58 | 77 | 65 | 38 | 103 | 52 | 45 | 97 |
| 2 - Cookes Hope | 288 Single-Family Units Less 185 Built | 103 units remaining | 19 | 57 | 76 | 64 | 38 | 102 | 52 | 44 | 96 |
| 3 - The Lakelands | 158 Townhouse Units (All Built) | 0 units remaining | Built | | | | | | | | |
| 4. Waterside Village | Phase 1 - 203,878 SF of Retail (All Built) | 0 square feet remaining | Built | | | | | | | | |
| | Phase 1 - 38,157 SF of Office (All Built) | 0 square feet remaining | Built | | | | | | | | |
| | Phase 1 - 24,901 SF of Restaurant (Approx. 50% Built) | 12,451 square feet remaining | 68 | 56 | 124 | 76 | 46 | 122 | 71 | 68 | 139 |
| | Pass-by Trips for Phase 1 Restaurant (0% AM, 49% PM, 49% Saturday): | | 0 | 0 | 0 | -37 | -23 | -60 | -35 | -33 | -68 |
| | Primary Off-Site Trips for Phase 1 Restaurant: | | 68 | 56 | 124 | 39 | 23 | 62 | 36 | 35 | 71 |
| | Phase 1 - 3,651 SF of Bank (All Built) | 0 square feet remaining | Built | | | | | | | | |
| | Phase 2A - 40,000 SF of Retail (All Built) | 0 square feet remaining | Built | | | | | | | | |
| | Phase 2B - 60 Mid-rise Multifamily Units (Not Built) | 60 units | 6 | 16 | 22 | 16 | 10 | 26 | 13 | 13 | 26 |
| | Phase 2C - 37,500 SF of Retail (Not Built) | 37,500 square feet | 22 | 13 | 35 | 69 | 74 | 143 | 88 | 81 | 169 |
| | Pass-by Trips for Phase 2C Retail (0% AM, 34% PM, 34% Saturday): | | 0 | 0 | 0 | -23 | -25 | -48 | -30 | -28 | -58 |
| | Primary Off-Site Trips for Phase 2 Retail: | | 22 | 13 | 35 | 46 | 49 | 95 | 58 | 53 | 111 |
| | Phase 2D - 81,500 SF of Retail Less 76,500 SF Built | 5,000 square feet remaining | 3 | 2 | 5 | 9 | 10 | 19 | 12 | 11 | 23 |
| | Pass-by Trips for Phase 2D Retail (0% AM, 34% PM, 34% Saturday): | | 0 | 0 | 0 | -3 | -3 | -6 | -4 | -4 | -8 |
| | Primary Off-Site Trips for Phase 2D Retail: | | 3 | 2 | 5 | 6 | 7 | 13 | 8 | 7 | 15 |
| 5. Ashbury Commons | 64 Townhouse Units Less 40 Built | 24 units remaining | 3 | 8 | 11 | 8 | 5 | 13 | 8 | 9 | 17 |
| | 26 Single-Family Units Less 13 built | 13 units remaining | 2 | 8 | 10 | 8 | 5 | 13 | 6 | 6 | 12 |
| 6. Easton Marketplace | 15,000 SF Pharmacy (Not Built) | 15,000 square feet | 31 | 27 | 58 | 77 | 77 | 154 | 64 | 67 | 131 |
| | Pass-by Trips for Pharmacy (0% AM, 53% PM, 53% Saturday): | | 0 | 0 | 0 | -41 | -41 | -82 | -34 | -36 | -70 |
| | Primary Off-Site Trips for Pharmacy: | | 31 | 27 | 58 | 36 | 36 | 72 | 30 | 31 | 61 |
| 7. Londonberry | 41 Single-Family Units Less 38 Built | 3 units remaining | 0 | 2 | 2 | 2 | 1 | 3 | 2 | 1 | 3 |
| 8. Douglas Landing | 91 Townhouse Units Less 64 Built | 27 units remaining | 3 | 9 | 12 | 9 | 6 | 15 | 9 | 10 | 19 |
| | 48 Single-Family Units Less 43 built | 5 units remaining | 1 | 3 | 4 | 3 | 2 | 5 | 3 | 2 | 5 |
| 9 - Ratcliffe Farm | 15 Single-Family Units (All Built) | 0 units remaining | Built | | | | | | | | |
| 10 - Shore Health Systems Medical Campus | 352,000 SF of Hospital (All Built) | 0 square feet remaining | Built | | | | | | | | |
| 11. St. Peters and Paul | 500 Student Private School | 500 students | 244 | 156 | 400 | 37 | 48 | 85 | 0 | 0 | 0 |
| | 6 Field Soccer Complex | 6 fields | 4 | 2 | 6 | 65 | 34 | 99 | 116 | 125 | 241 |
| | 18,000 SF Family Life Center | 18,000 square feet | 4 | 2 | 6 | 4 | 5 | 9 | 29 | 21 | 50 |
| 12. Easton Club Golf Course | 18 Hole Golf Course | 18 holes | 25 | 7 | 32 | 28 | 24 | 52 | 27 | 28 | 55 |
| 13. Poplar Hill Farm | Single-Family Detached (ITE-210, Units) | 119 units | 22 | 67 | 89 | 76 | 44 | 120 | 64 | 54 | 118 |
| 14. Silo Square | Single-Family Attached Housing (ITE-215, Units) | 28 units | 3 | 6 | 9 | 7 | 6 | 13 | 12 | 12 | 24 |
| 15. 350 N Washington | Multifamily Housing, Low-Rise (ITE-220, Units) | 16 units | 1 | 5 | 6 | 5 | 3 | 8 | 3 | 4 | 7 |
| 16. The Arc - Easton Crossing (see note) | Multifamily Housing, Mid-Rise (ITE-221, Urban/Suburban, Units) [Not Close to Rail Transit] | 130 units | 11 | 35 | 46 | 31 | 20 | 51 | 27 | 25 | 52 |
| | Fast Casual Restaurant (ksf, ITE-930) | 3,000 sq.ft. | 2 | 2 | 4 | 21 | 17 | 38 | 54 | 44 | 98 |
| | **Total Primary Trips for All Background Developments:** | | 548 | 550 | 1098 | 584 | 461 | 1045 | 620 | 579 | 1199 |

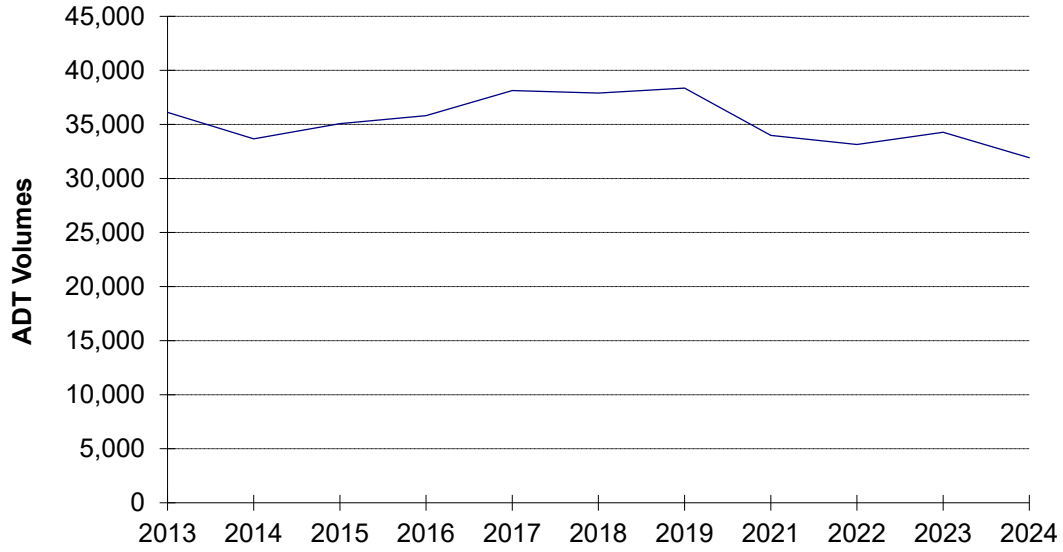
**Notes:**

1.
2. The size and type of restaurant within The Arc - Easton Crossing development is still TBD and will be updated as additional information becomes available.

# TRAFFIC GROWTH PROJECTION

**LOCATION:** **US 50, South of Airport Rd**
**REPORT DATE:** 09-Oct-24
**AVERAGE GROWTH:** -1.08%
**MATHEMATICAL GROWTH:** -1.23%

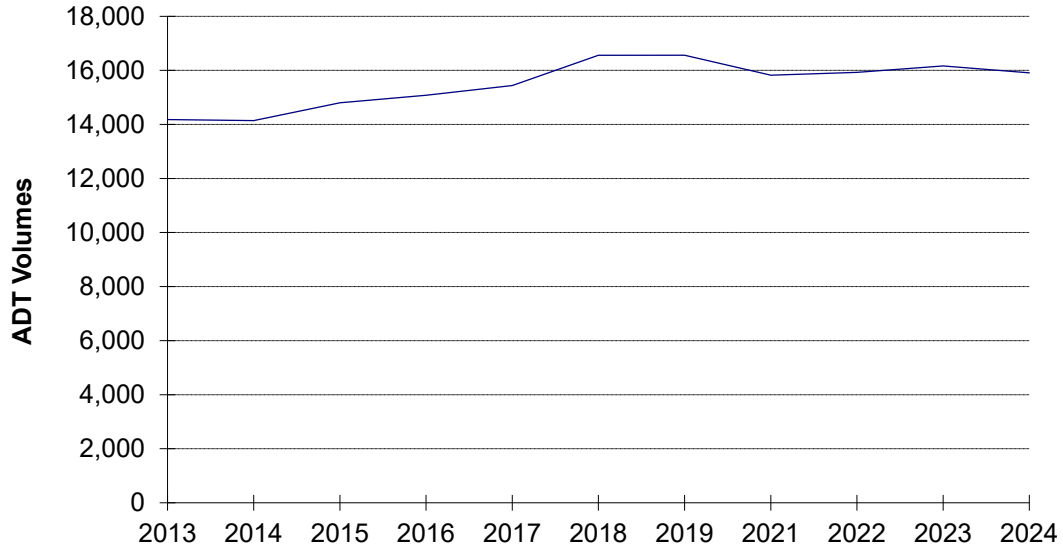
| Year | ADT Volume | Vol. increase | % increase | Average % |
|---|---|---|---|---|
| 2013 | 36,122 | | | |
| 2014 | 33,660 | -2,462 | -6.82% | -6.82% |
| 2015 | 35,071 | 1,411 | 4.19% | -1.31% |
| 2016 | 35,812 | 741 | 2.11% | -0.17% |
| 2017 | 38,130 | 2,318 | 6.47% | 1.49% |
| 2018 | 37,901 | -229 | -0.60% | 1.07% |
| 2019 | 38,362 | 461 | 1.22% | 1.10% |
| 2021 | 33,990 | -4,372 | -11.40% | -0.69% |
| 2022 | 33,141 | -849 | -2.50% | -0.91% |
| 2023 | 34,272 | 1,131 | 3.41% | -0.43% |
| 2024 | 31,920 | -2,352 | -6.86% | -1.08% |



# TRAFFIC GROWTH PROJECTION

**LOCATION:** **Easton Pkwy**
**REPORT DATE:** 09-Oct-24
**AVERAGE GROWTH:** 1.20%
**MATHEMATICAL GROWTH:** 1.16%

| Year | ADT Volume | Vol. increase | % increase | Average % |
|---|---|---|---|---|
| 2013 | 14,181 | | | |
| 2014 | 14,142 | -39 | -0.28% | -0.28% |
| 2015 | 14,800 | 658 | 4.65% | 2.19% |
| 2016 | 15,081 | 281 | 1.90% | 2.09% |
| 2017 | 15,442 | 361 | 2.39% | 2.17% |
| 2018 | 16,560 | 1,118 | 7.24% | 3.18% |
| 2019 | 16,561 | 1 | 0.01% | 2.65% |
| 2021 | 15,823 | -738 | -4.46% | 1.64% |
| 2022 | 15,924 | 101 | 0.64% | 1.51% |
| 2023 | 16,165 | 241 | 1.51% | 1.51% |
| 2024 | 15,910 | -255 | -1.58% | 1.20% |




TRAFFIC GROWTH
Easton Pkwy

## Weekday Morning Peak Hour (6:30 am - 9:30 am)

| | Goldsborough Neck Rd Northbound | | | | | Goldsborough Neck Rd Southbound | | | | | N/A Eastbound | | | | | Airport Rd 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 |
| 6:30-6:45 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 1 | 0 | 32 |
| 6:45-7:00 | 0 | 0 | 4 | 12 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 2 | 0 | 34 |
| 7:00-7:15 | 0 | 0 | 6 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 2 | 0 | 40 |
| 7:15-7:30 | 0 | 0 | 8 | 23 | 0 | 0 | 2 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 3 | 0 | 64 |
| 7:30-7:45 | 0 | 0 | 3 | 14 | 0 | 0 | 1 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 2 | 0 | 59 |
| 7:45-8:00 | 0 | 0 | 10 | 17 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 52 |
| 8:00-8:15 | 0 | 0 | 5 | 10 | 0 | 0 | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 15 | 0 | 1 | 0 | 40 |
| 8:15-8:30 | 0 | 0 | 2 | 12 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 2 | 0 | 50 |
| 8:30-8:45 | 0 | 0 | 10 | 22 | 0 | 0 | 2 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 3 | 0 | 67 |
| 8:45-9:00 | 0 | 0 | 3 | 28 | 0 | 0 | 3 | 12 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 1 | 0 | 67 |
| 9:00-9:15 | 0 | 0 | 7 | 20 | 0 | 0 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 1 | 50 |
| 9:15-9:30 | 0 | 0 | 4 | 25 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 1 | 1 | 47 |
| **Hourly Totals** | | | | | | | | | | | | | | | | | | | | | |
| 6:30-7:30 | 0 | 0 | 18 | 54 | 0 | 0 | 4 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70 | 0 | 8 | 0 | 170 |
| 6:45-7:45 | 0 | 0 | 21 | 58 | 0 | 0 | 5 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 85 | 0 | 9 | 0 | 197 |
| 7:00-8:00 | 0 | 0 | 27 | 63 | 0 | 0 | 4 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 95 | 0 | 7 | 0 | 215 |
| 7:15-8:15 | 0 | 0 | 26 | 64 | 0 | 0 | 5 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 87 | 0 | 6 | 0 | 215 |
| 7:30-8:30 | 0 | 0 | 20 | 53 | 0 | 0 | 5 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 93 | 0 | 5 | 0 | 201 |
| 7:45-8:45 | 0 | 0 | 27 | 61 | 0 | 0 | 6 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 84 | 0 | 6 | 0 | 209 |
| 8:00-9:00 | 0 | 0 | 20 | 72 | 0 | 0 | 8 | 33 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 83 | 0 | 7 | 0 | 228 |
| 8:15-9:15 | 0 | 0 | 22 | 82 | 0 | 0 | 9 | 31 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 84 | 0 | 6 | 1 | 239 |
| 8:30-9:30 | 0 | 0 | 24 | 95 | 0 | 0 | 8 | 29 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 70 | 0 | 5 | 2 | 237 |

| 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** |
| **8:15-9:15** | **0** | **0** | **22** | **82** | **0** | **0** | **9** | **31** | **0** | **4** | **0** | **0** | **0** | **0** | **0** | **0** | **84** | **0** | **6** | **1** | **239** |

## Weekday Evening Peak Hour (4 pm - 7 pm)

| | Goldsborough Neck Rd Northbound | | | | | Goldsborough Neck Rd Southbound | | | | | N/A Eastbound | | | | | Airport Rd 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 |
| 4:00-4:15 | 0 | 0 | 12 | 30 | 0 | 0 | 1 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 4 | 0 | 95 |
| 4:15-4:30 | 0 | 0 | 12 | 43 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 2 | 0 | 100 |
| 4:30-4:45 | 0 | 0 | 13 | 28 | 0 | 0 | 4 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 0 | 1 | 0 | 88 |
| 4:45-5:00 | 0 | 0 | 10 | 22 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 1 | 0 | 79 |
| 5:00-5:15 | 0 | 0 | 14 | 29 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 77 |
| 5:15-5:30 | 0 | 0 | 8 | 23 | 0 | 0 | 2 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 86 |
| 5:30-5:45 | 0 | 0 | 6 | 25 | 0 | 0 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 2 | 0 | 65 |
| 5:45-6:00 | 0 | 0 | 3 | 17 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 0 | 56 |
| 6:00-6:15 | 0 | 0 | 9 | 17 | 0 | 0 | 2 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 0 | 0 | 64 |
| 6:15-6:30 | 0 | 0 | 9 | 15 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 1 | 0 | 55 |
| 6:30-6:45 | 0 | 0 | 6 | 15 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 1 | 0 | 44 |
| 6:45-7:00 | 0 | 0 | 2 | 5 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 2 | 0 | 32 |
| **Hourly Totals** | | | | | | | | | | | | | | | | | | | | | |
| 4:00-5:00 | 0 | 0 | 47 | 123 | 0 | 0 | 5 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 132 | 0 | 8 | 0 | 362 |
| 4:15-5:15 | 0 | 0 | 49 | 122 | 0 | 0 | 4 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 120 | 0 | 4 | 0 | 344 |
| 4:30-5:30 | 0 | 0 | 45 | 102 | 0 | 0 | 6 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 135 | 0 | 2 | 0 | 330 |
| 4:45-5:45 | 0 | 0 | 38 | 99 | 0 | 0 | 4 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 0 | 3 | 0 | 307 |
| 5:00-6:00 | 0 | 0 | 31 | 94 | 0 | 0 | 4 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 0 | 2 | 0 | 284 |
| 5:15-6:15 | 0 | 0 | 26 | 82 | 0 | 0 | 6 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 122 | 0 | 2 | 0 | 271 |
| 5:30-6:30 | 0 | 0 | 27 | 74 | 0 | 0 | 5 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 108 | 0 | 3 | 0 | 240 |
| 5:45-6:45 | 0 | 0 | 27 | 64 | 0 | 0 | 4 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 2 | 0 | 219 |
| 6:00-7:00 | 0 | 0 | 26 | 52 | 0 | 0 | 5 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 92 | 0 | 4 | 0 | 195 |

| 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** | **47** | **123** | **0** | **0** | **5** | **47** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **132** | **0** | **8** | **0** | **362** |

Peak Hour
Turning Movement Count


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


**Intersection:** Goldsborough Neck Rd & Airport Rd
**Weather:** Clear
**Count by:** Count Cam DSS
**Count Day/Date:** Friday, September 13, 2024
**Jurisdiction:** Talbot County

Weekend Peak Hour (10:00 am - 3:00 pm)

| | Goldsborough Neck Rd Northbound | | | | | Goldsborough Neck Rd Southbound | | | | | N/A Eastbound | | | | | Airport Rd 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 | 6 | 23 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 1 | 0 | 48 |
| 10:15-10:30 | 0 | 0 | 9 | 33 | 0 | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 2 | 0 | 83 |
| 10:30-10:45 | 0 | 0 | 13 | 25 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 3 | 0 | 69 |
| 10:45-11:00 | 0 | 0 | 6 | 30 | 0 | 0 | 2 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 3 | 0 | 81 |
| 11:00-11:15 | 0 | 0 | 10 | 17 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 0 | 3 | 0 | 72 |
| 11:15-11:30 | 0 | 0 | 7 | 19 | 0 | 0 | 3 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 3 | 0 | 73 |
| 11:30-11:45 | 0 | 0 | 13 | 24 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 74 |
| 11:45-12:00 | 0 | 0 | 8 | 18 | 0 | 0 | 2 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 3 | 0 | 75 |
| 12:00-12:15 | 0 | 0 | 6 | 22 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 58 |
| 12:15-12:30 | 0 | 0 | 10 | 22 | 0 | 0 | 2 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 1 | 0 | 89 |
| 12:30-12:45 | 0 | 0 | 2 | 20 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 1 | 0 | 58 |
| 12:45-1:00 | 0 | 0 | 8 | 25 | 0 | 0 | 1 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 0 | 1 | 0 | 83 |
| 1:00-1:15 | 0 | 0 | 9 | 16 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 1 | 0 | 68 |
| 1:15-1:30 | 0 | 0 | 12 | 24 | 0 | 0 | 1 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 2 | 0 | 78 |
| 1:30-1:45 | 0 | 0 | 8 | 24 | 0 | 0 | 2 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 2 | 0 | 79 |
| 1:45-2:00 | 0 | 0 | 11 | 20 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 1 | 0 | 65 |

| Hourly Totals | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10:00-11:00 | 0 | 0 | 34 | 111 | 0 | 0 | 6 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 95 | 0 | 9 | 0 | 281 |
| 10:15-11:15 | 0 | 0 | 38 | 105 | 0 | 0 | 5 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 114 | 0 | 11 | 0 | 305 |
| 10:30-11:30 | 0 | 0 | 36 | 91 | 0 | 0 | 5 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 116 | 0 | 12 | 0 | 295 |
| 10:45-11:45 | 0 | 0 | 36 | 90 | 0 | 0 | 8 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 128 | 0 | 9 | 0 | 300 |
| 11:00-12:00 | 0 | 0 | 38 | 78 | 0 | 0 | 8 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 137 | 0 | 9 | 0 | 294 |
| 11:15-12:15 | 0 | 0 | 34 | 83 | 0 | 0 | 8 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 0 | 6 | 0 | 280 |
| 11:30-12:30 | 0 | 0 | 37 | 86 | 0 | 0 | 7 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 135 | 0 | 4 | 0 | 296 |
| 11:45-12:45 | 0 | 0 | 26 | 82 | 0 | 0 | 5 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 133 | 0 | 5 | 0 | 280 |
| 12:00-1:00 | 0 | 0 | 26 | 89 | 0 | 0 | 4 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 131 | 0 | 3 | 0 | 288 |
| 12:15-1:15 | 0 | 0 | 29 | 83 | 0 | 0 | 4 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 141 | 0 | 4 | 0 | 298 |
| 12:30-1:30 | 0 | 0 | 31 | 85 | 0 | 0 | 3 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 0 | 5 | 0 | 287 |
| 12:45-1:45 | 0 | 0 | 37 | 89 | 0 | 0 | 4 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 135 | 0 | 6 | 0 | 308 |
| 1:00-2:00 | 0 | 0 | 40 | 84 | 0 | 0 | 4 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 128 | 0 | 6 | 0 | 290 |

| 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** |
| **12:45-1:45** | **0** | **0** | **37** | **89** | **0** | **0** | **4** | **37** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **135** | **0** | **6** | **0** | **308** |

Peak Hour
Turning Movement Count

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

**Intersection:** Goldsborough Neck Rd & Airport Rd
**Weather:** Clear
**Count by:** Count Cam DSS
**Count Day/Date:** Saturday, September 14, 2024
**County:** Talbot County

## Weekday Morning Peak Hour (6:30 am - 9:30 am)

| | Corkran Rd Northbound | | | | | Technology Dr Southbound | | | | | Airport Rd Eastbound | | | | | Airport Rd 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 |
| 6:30-6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 21 | 0 | 0 | 0 | 3 | 30 | 3 | 0 | 62 |
| 6:45-7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 6 | 17 | 1 | 0 | 0 | 5 | 33 | 12 | 0 | 79 |
| 7:00-7:15 | 0 | 2 | 0 | 4 | 0 | 0 | 2 | 0 | 5 | 0 | 0 | 2 | 21 | 0 | 0 | 0 | 3 | 30 | 10 | 0 | 79 |
| 7:15-7:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 27 | 0 | 0 | 0 | 0 | 30 | 2 | 0 | 63 |
| 7:30-7:45 | 0 | 1 | 0 | 1 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 6 | 28 | 2 | 0 | 0 | 5 | 46 | 14 | 0 | 107 |
| 7:45-8:00 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 6 | 0 | 0 | 5 | 24 | 2 | 0 | 0 | 3 | 41 | 16 | 0 | 101 |
| 8:00-8:15 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 6 | 28 | 2 | 0 | 0 | 3 | 32 | 13 | 0 | 86 |
| 8:15-8:30 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 7 | 38 | 2 | 0 | 0 | 4 | 33 | 13 | 0 | 100 |
| 8:30-8:45 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 5 | 32 | 1 | 0 | 0 | 5 | 36 | 14 | 0 | 97 |
| 8:45-9:00 | 0 | 2 | 0 | 1 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 3 | 24 | 1 | 0 | 0 | 0 | 32 | 13 | 0 | 80 |
| 9:00-9:15 | 0 | 1 | 0 | 4 | 0 | 0 | 9 | 1 | 4 | 0 | 0 | 4 | 16 | 2 | 0 | 0 | 2 | 29 | 10 | 0 | 82 |
| 9:15-9:30 | 0 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 2 | 19 | 0 | 0 | 0 | 4 | 18 | 12 | 0 | 63 |
| **Hourly Totals** | | | | | | | | | | | | | | | | | | | | | |
| 6:30-7:30 | 0 | 2 | 0 | 4 | 0 | 0 | 9 | 1 | 8 | 0 | 0 | 11 | 86 | 1 | 0 | 0 | 11 | 123 | 27 | 0 | 283 |
| 6:45-7:45 | 0 | 3 | 0 | 5 | 0 | 0 | 8 | 1 | 9 | 0 | 0 | 16 | 93 | 3 | 0 | 0 | 13 | 139 | 38 | 0 | 328 |
| 7:00-8:00 | 0 | 3 | 0 | 6 | 0 | 0 | 8 | 1 | 13 | 0 | 0 | 15 | 100 | 4 | 0 | 0 | 11 | 147 | 42 | 0 | 350 |
| 7:15-8:15 | 0 | 1 | 0 | 3 | 0 | 0 | 6 | 1 | 9 | 0 | 0 | 19 | 107 | 6 | 0 | 0 | 11 | 149 | 45 | 0 | 357 |
| 7:30-8:30 | 0 | 1 | 0 | 4 | 0 | 0 | 7 | 0 | 9 | 0 | 0 | 24 | 118 | 8 | 0 | 0 | 15 | 152 | 56 | 0 | 394 |
| 7:45-8:45 | 0 | 0 | 0 | 3 | 0 | 0 | 7 | 0 | 9 | 0 | 0 | 23 | 122 | 7 | 0 | 0 | 15 | 142 | 56 | 0 | 384 |
| 8:00-9:00 | 0 | 2 | 0 | 3 | 0 | 0 | 6 | 0 | 5 | 0 | 0 | 21 | 122 | 6 | 0 | 0 | 12 | 133 | 53 | 0 | 363 |
| 8:15-9:15 | 0 | 3 | 0 | 6 | 0 | 0 | 15 | 1 | 8 | 0 | 0 | 19 | 110 | 6 | 0 | 0 | 11 | 130 | 50 | 0 | 359 |
| 8:30-9:30 | 0 | 5 | 0 | 5 | 0 | 0 | 18 | 1 | 9 | 0 | 0 | 14 | 91 | 4 | 0 | 0 | 11 | 115 | 49 | 0 | 322 |

| 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** | **1** | **0** | **4** | **0** | **0** | **7** | **0** | **9** | **0** | **0** | **24** | **118** | **8** | **0** | **0** | **15** | **152** | **56** | **0** | **394** |

## Weekday Evening Peak Hour (4 pm - 7 pm)

| | Corkran Rd Northbound | | | | | Technology Dr Southbound | | | | | Airport Rd Eastbound | | | | | Airport Rd 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 |
| 4:00-4:15 | 0 | 2 | 0 | 6 | 0 | 0 | 14 | 0 | 3 | 0 | 0 | 3 | 48 | 0 | 1 | 0 | 0 | 32 | 3 | 0 | 111 |
| 4:15-4:30 | 0 | 1 | 0 | 2 | 0 | 0 | 8 | 0 | 6 | 0 | 0 | 2 | 42 | 0 | 0 | 0 | 1 | 28 | 2 | 0 | 92 |
| 4:30-4:45 | 0 | 1 | 0 | 7 | 0 | 0 | 14 | 0 | 5 | 0 | 0 | 3 | 39 | 0 | 0 | 0 | 2 | 30 | 0 | 1 | 101 |
| 4:45-5:00 | 0 | 1 | 0 | 1 | 0 | 0 | 7 | 0 | 2 | 0 | 0 | 1 | 38 | 0 | 0 | 1 | 1 | 25 | 6 | 0 | 83 |
| 5:00-5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 8 | 0 | 0 | 1 | 44 | 0 | 0 | 0 | 1 | 28 | 10 | 0 | 107 |
| 5:15-5:30 | 0 | 2 | 0 | 2 | 0 | 0 | 11 | 0 | 3 | 0 | 1 | 4 | 36 | 0 | 0 | 0 | 0 | 16 | 2 | 0 | 77 |
| 5:30-5:45 | 0 | 0 | 0 | 6 | 0 | 0 | 5 | 0 | 2 | 0 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 16 | 4 | 0 | 61 |
| 5:45-6:00 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 2 | 0 | 0 | 1 | 23 | 2 | 0 | 0 | 0 | 16 | 0 | 0 | 54 |
| 6:00-6:15 | 0 | 1 | 0 | 2 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 2 | 24 | 0 | 0 | 0 | 0 | 9 | 1 | 0 | 45 |
| 6:15-6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 2 | 0 | 0 | 1 | 16 | 0 | 0 | 0 | 1 | 10 | 8 | 0 | 44 |
| 6:30-6:45 | 0 | 0 | 0 | 1 | 0 | 0 | 9 | 0 | 2 | 0 | 0 | 2 | 20 | 2 | 0 | 0 | 0 | 24 | 3 | 0 | 63 |
| 6:45-7:00 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 1 | 18 | 1 | 0 | 0 | 0 | 10 | 1 | 0 | 38 |
| **Hourly Totals** | | | | | | | | | | | | | | | | | | | | | |
| 4:00-5:00 | 0 | 5 | 0 | 16 | 0 | 0 | 43 | 0 | 16 | 0 | 0 | 9 | 167 | 0 | 1 | 1 | 4 | 115 | 11 | 1 | 389 |
| 4:15-5:15 | 0 | 3 | 0 | 10 | 0 | 0 | 44 | 0 | 21 | 0 | 0 | 7 | 163 | 0 | 0 | 1 | 5 | 111 | 18 | 1 | 384 |
| 4:30-5:30 | 0 | 4 | 0 | 10 | 0 | 0 | 47 | 0 | 18 | 0 | 1 | 9 | 157 | 0 | 0 | 1 | 4 | 99 | 18 | 1 | 369 |
| 4:45-5:45 | 0 | 3 | 0 | 9 | 0 | 0 | 38 | 0 | 15 | 0 | 1 | 6 | 146 | 0 | 0 | 1 | 2 | 85 | 22 | 0 | 328 |
| 5:00-6:00 | 0 | 2 | 0 | 10 | 0 | 0 | 39 | 0 | 15 | 0 | 1 | 6 | 131 | 2 | 0 | 0 | 1 | 76 | 16 | 0 | 299 |
| 5:15-6:15 | 0 | 3 | 0 | 12 | 0 | 0 | 27 | 0 | 10 | 0 | 1 | 7 | 111 | 2 | 0 | 0 | 0 | 57 | 7 | 0 | 237 |
| 5:30-6:30 | 0 | 1 | 0 | 10 | 0 | 0 | 22 | 0 | 9 | 0 | 0 | 4 | 91 | 2 | 0 | 0 | 1 | 51 | 13 | 0 | 204 |
| 5:45-6:45 | 0 | 1 | 0 | 5 | 0 | 0 | 26 | 0 | 9 | 0 | 0 | 6 | 83 | 4 | 0 | 0 | 1 | 59 | 12 | 0 | 206 |
| 6:00-7:00 | 0 | 1 | 0 | 4 | 0 | 0 | 22 | 0 | 9 | 0 | 0 | 6 | 78 | 3 | 0 | 0 | 1 | 53 | 13 | 0 | 190 |

| 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** | **5** | **0** | **16** | **0** | **0** | **43** | **0** | **16** | **0** | **0** | **9** | **167** | **0** | **1** | **1** | **4** | **115** | **11** | **1** | **389** |

Peak Hour
Turning Movement Count

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

**Intersection:** Airport Rd & Technology Dr
**Weather:** Clear
**Count by:** Count Cam DSS
**Count Day/Date:** Wednesday, April 30, 2025
**Jurisdiction:** Talbot County

Weekend Peak Hour (10:00 am - 2:00 pm)

| | Cokran Rd Northbound | | | | | Technology Dr Southbound | | | | | Airport Rd Eastbound | | | | | Airport Rd 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 | 1 | 1 | 2 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 2 | 20 | 1 | 0 | 0 | 3 | 10 | 4 | 0 | 49 |
| 10:15-10:30 | 0 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 6 | 31 | 0 | 0 | 0 | 4 | 35 | 13 | 0 | 96 |
| 10:30-10:45 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 23 | 0 | 0 | 0 | 1 | 20 | 3 | 0 | 53 |
| 10:45-11:00 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 28 | 2 | 0 | 0 | 1 | 29 | 2 | 0 | 65 |
| 11:00-11:15 | 0 | 0 | 0 | 4 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 14 | 2 | 0 | 0 | 0 | 39 | 2 | 0 | 67 |
| 11:15-11:30 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 1 | 20 | 0 | 0 | 0 | 3 | 32 | 1 | 0 | 63 |
| 11:30-11:45 | 0 | 1 | 0 | 2 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 3 | 24 | 2 | 0 | 0 | 3 | 29 | 0 | 0 | 69 |
| 11:45-12:00 | 0 | 0 | 0 | 2 | 0 | 0 | 12 | 0 | 9 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 4 | 30 | 1 | 0 | 78 |
| 12:00-12:15 | 0 | 1 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 2 | 19 | 0 | 0 | 0 | 4 | 27 | 7 | 0 | 68 |
| 12:15-12:30 | 0 | 1 | 0 | 2 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 21 | 1 | 0 | 0 | 3 | 41 | 5 | 0 | 78 |
| 12:30-12:45 | 0 | 0 | 0 | 8 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 3 | 21 | 0 | 0 | 0 | 0 | 27 | 5 | 0 | 69 |
| 12:45-1:00 | 0 | 1 | 0 | 1 | 0 | 0 | 5 | 0 | 1 | 0 | 0 | 0 | 22 | 2 | 0 | 0 | 1 | 34 | 4 | 0 | 71 |
| 1:00-1:15 | 0 | 1 | 0 | 4 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 4 | 33 | 5 | 0 | 65 |
| 1:15-1:30 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 24 | 1 | 0 | 0 | 3 | 30 | 1 | 0 | 65 |
| 1:30-1:45 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 1 | 19 | 2 | 0 | 0 | 0 | 39 | 0 | 0 | 67 |
| 1:45-2:00 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 25 | 1 | 0 | 0 | 3 | 28 | 4 | 0 | 67 |

| Hourly Totals | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10:00-11:00 | 0 | 2 | 1 | 5 | 0 | 0 | 13 | 0 | 2 | 0 | 0 | 10 | 102 | 3 | 0 | 0 | 9 | 94 | 22 | 0 | 263 |
| 10:15-11:15 | 0 | 1 | 0 | 7 | 0 | 0 | 11 | 0 | 3 | 0 | 0 | 10 | 96 | 4 | 0 | 0 | 6 | 123 | 20 | 0 | 281 |
| 10:30-11:30 | 0 | 2 | 0 | 5 | 0 | 0 | 10 | 0 | 4 | 0 | 0 | 5 | 85 | 4 | 0 | 0 | 5 | 120 | 8 | 0 | 248 |
| 10:45-11:45 | 0 | 3 | 0 | 6 | 0 | 0 | 9 | 0 | 6 | 0 | 0 | 7 | 86 | 6 | 0 | 0 | 7 | 129 | 5 | 0 | 264 |
| 11:00-12:00 | 0 | 2 | 0 | 8 | 0 | 0 | 20 | 0 | 15 | 0 | 0 | 6 | 78 | 4 | 0 | 0 | 10 | 130 | 4 | 0 | 277 |
| 11:15-12:15 | 0 | 3 | 0 | 8 | 0 | 0 | 22 | 0 | 13 | 0 | 0 | 6 | 83 | 2 | 0 | 0 | 14 | 118 | 9 | 0 | 278 |
| 11:30-12:30 | 0 | 3 | 0 | 10 | 0 | 0 | 22 | 0 | 12 | 0 | 0 | 5 | 84 | 3 | 0 | 0 | 14 | 127 | 13 | 0 | 293 |
| 11:45-12:45 | 0 | 2 | 0 | 16 | 0 | 0 | 23 | 0 | 11 | 0 | 0 | 5 | 81 | 1 | 0 | 0 | 11 | 125 | 18 | 0 | 293 |
| 12:00-1:00 | 0 | 3 | 0 | 15 | 0 | 0 | 16 | 0 | 3 | 0 | 0 | 5 | 83 | 3 | 0 | 0 | 8 | 129 | 21 | 0 | 286 |
| 12:15-1:15 | 0 | 3 | 0 | 15 | 0 | 0 | 13 | 0 | 5 | 0 | 0 | 3 | 79 | 3 | 0 | 0 | 8 | 135 | 19 | 0 | 283 |
| 12:30-1:30 | 0 | 4 | 0 | 14 | 0 | 0 | 11 | 0 | 4 | 0 | 0 | 5 | 82 | 3 | 0 | 0 | 8 | 124 | 15 | 0 | 270 |
| 12:45-1:45 | 0 | 4 | 0 | 8 | 0 | 0 | 10 | 0 | 4 | 0 | 0 | 3 | 80 | 5 | 0 | 0 | 8 | 136 | 10 | 0 | 268 |
| 1:00-2:00 | 0 | 4 | 0 | 9 | 0 | 0 | 5 | 0 | 6 | 0 | 0 | 3 | 83 | 4 | 0 | 0 | 10 | 130 | 10 | 0 | 264 |
| **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** | **3** | **0** | **10** | **0** | **0** | **22** | **0** | **12** | **0** | **0** | **5** | **84** | **3** | **0** | **0** | **14** | **127** | **13** | **0** | **293** |

Peak Hour
Turning Movement Count

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

**Intersection:** Cokran Rd & Airport Rd
**Weather:** Clear
**Count by:** Count Cam DSS
**Count Day/Date:** Saturday, September 14, 2024
**County:** Talbot County

## Weekday Morning Peak Hour (6:30 am - 9:30 am)

| | Centreville Rd Northbound | | | | | Longwoods Rd Southbound | | | | | Airport Rd Eastbound | | | | | Airport Rd 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 |
| 6:30-6:45 | 0 | 0 | 0 | 4 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 3 | 26 | 0 | 0 | 0 | 10 | 35 | 5 | 0 | 86 |
| 6:45-7:00 | 0 | 2 | 1 | 3 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | 18 | 0 | 0 | 0 | 4 | 56 | 1 | 0 | 90 |
| 7:00-7:15 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 3 | 18 | 1 | 0 | 0 | 8 | 37 | 5 | 0 | 76 |
| 7:15-7:30 | 0 | 0 | 1 | 4 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 1 | 26 | 0 | 0 | 0 | 4 | 35 | 5 | 0 | 80 |
| 7:30-7:45 | 0 | 2 | 0 | 8 | 0 | 0 | 2 | 2 | 4 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 10 | 58 | 2 | 0 | 121 |
| 7:45-8:00 | 0 | 1 | 0 | 4 | 0 | 0 | 4 | 3 | 3 | 0 | 0 | 1 | 22 | 3 | 0 | 0 | 6 | 60 | 2 | 0 | 109 |
| 8:00-8:15 | 0 | 2 | 2 | 2 | 0 | 0 | 3 | 2 | 3 | 0 | 0 | 2 | 25 | 1 | 0 | 0 | 8 | 39 | 3 | 0 | 92 |
| 8:15-8:30 | 0 | 5 | 0 | 4 | 0 | 0 | 2 | 4 | 4 | 0 | 0 | 1 | 36 | 3 | 0 | 0 | 9 | 43 | 2 | 0 | 113 |
| 8:30-8:45 | 0 | 6 | 3 | 7 | 0 | 0 | 4 | 2 | 3 | 0 | 0 | 1 | 30 | 2 | 0 | 0 | 5 | 41 | 2 | 0 | 106 |
| 8:45-9:00 | 0 | 4 | 1 | 13 | 0 | 0 | 2 | 4 | 2 | 0 | 0 | 0 | 26 | 1 | 0 | 0 | 8 | 43 | 3 | 0 | 107 |
| 9:00-9:15 | 0 | 1 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 26 | 3 | 0 | 0 | 11 | 43 | 5 | 0 | 95 |
| 9:15-9:30 | 0 | 8 | 0 | 8 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 22 | 1 | 0 | 0 | 4 | 26 | 2 | 0 | 75 |

| Hourly Totals | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6:30-7:30 | 0 | 3 | 3 | 11 | 0 | 0 | 5 | 2 | 5 | 0 | 0 | 9 | 88 | 1 | 0 | 0 | 26 | 163 | 16 | 0 | 332 |
| 6:45-7:45 | 0 | 5 | 3 | 15 | 0 | 0 | 5 | 3 | 9 | 0 | 0 | 6 | 95 | 1 | 0 | 0 | 26 | 186 | 13 | 0 | 367 |
| 7:00-8:00 | 0 | 4 | 2 | 16 | 0 | 0 | 8 | 6 | 10 | 0 | 0 | 5 | 99 | 4 | 0 | 0 | 28 | 190 | 14 | 0 | 386 |
| 7:15-8:15 | 0 | 5 | 3 | 18 | 0 | 0 | 10 | 8 | 12 | 0 | 0 | 4 | 106 | 4 | 0 | 0 | 28 | 192 | 12 | 0 | 402 |
| 7:30-8:30 | 0 | 10 | 2 | 18 | 0 | 0 | 11 | 11 | 14 | 0 | 0 | 4 | 116 | 7 | 0 | 0 | 33 | 200 | 9 | 0 | 435 |
| 7:45-8:45 | 0 | 14 | 5 | 17 | 0 | 0 | 13 | 11 | 13 | 0 | 0 | 5 | 113 | 9 | 0 | 0 | 28 | 183 | 9 | 0 | 420 |
| 8:00-9:00 | 0 | 17 | 6 | 26 | 0 | 0 | 11 | 12 | 12 | 0 | 0 | 4 | 117 | 7 | 0 | 0 | 30 | 166 | 10 | 0 | 418 |
| 8:15-9:15 | 0 | 16 | 4 | 28 | 0 | 0 | 9 | 10 | 9 | 0 | 0 | 3 | 118 | 9 | 0 | 0 | 33 | 170 | 12 | 0 | 421 |
| 8:30-9:30 | 0 | 19 | 4 | 32 | 0 | 0 | 8 | 7 | 7 | 0 | 0 | 2 | 104 | 7 | 0 | 0 | 28 | 153 | 12 | 0 | 383 |

| 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** | **10** | **2** | **18** | **0** | **0** | **11** | **11** | **14** | **0** | **0** | **4** | **116** | **7** | **0** | **0** | **33** | **200** | **9** | **0** | **435** |

## Weekday Evening Peak Hour (4 pm - 7 pm)

| | Centreville Rd Northbound | | | | | Longwoods Rd Southbound | | | | | Airport Rd Eastbound | | | | | Airport Rd 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 |
| 4:00-4:15 | 0 | 2 | 0 | 14 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 74 | 4 | 0 | 0 | 3 | 31 | 0 | 0 | 131 |
| 4:15-4:30 | 0 | 0 | 1 | 13 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 53 | 3 | 0 | 0 | 5 | 32 | 0 | 0 | 111 |
| 4:30-4:45 | 0 | 0 | 0 | 16 | 0 | 0 | 2 | 3 | 1 | 0 | 0 | 1 | 58 | 4 | 0 | 0 | 4 | 29 | 0 | 0 | 118 |
| 4:45-5:00 | 0 | 3 | 0 | 13 | 0 | 0 | 5 | 0 | 1 | 0 | 0 | 3 | 43 | 2 | 0 | 0 | 6 | 28 | 0 | 0 | 104 |
| 5:00-5:15 | 0 | 4 | 0 | 8 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 52 | 3 | 0 | 0 | 0 | 33 | 0 | 0 | 104 |
| 5:15-5:30 | 0 | 1 | 1 | 8 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 50 | 2 | 0 | 0 | 4 | 18 | 0 | 0 | 86 |
| 5:30-5:45 | 0 | 0 | 0 | 4 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 41 | 4 | 0 | 0 | 3 | 18 | 0 | 0 | 73 |
| 5:45-6:00 | 0 | 1 | 0 | 3 | 0 | 0 | 9 | 1 | 1 | 0 | 0 | 0 | 30 | 2 | 0 | 0 | 3 | 13 | 1 | 0 | 64 |
| 6:00-6:15 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 26 | 2 | 0 | 0 | 1 | 10 | 0 | 0 | 44 |
| 6:15-6:30 | 0 | 1 | 1 | 7 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 0 | 1 | 17 | 1 | 0 | 56 |
| 6:30-6:45 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 29 | 1 | 0 | 0 | 0 | 24 | 1 | 0 | 64 |
| 6:45-7:00 | 0 | 1 | 1 | 3 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 22 | 1 | 0 | 0 | 0 | 11 | 1 | 0 | 43 |

| Hourly Totals | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4:00-5:00 | 0 | 5 | 1 | 56 | 0 | 0 | 9 | 5 | 4 | 0 | 0 | 5 | 228 | 13 | 0 | 0 | 18 | 120 | 0 | 0 | 464 |
| 4:15-5:15 | 0 | 7 | 1 | 50 | 0 | 0 | 10 | 4 | 5 | 0 | 0 | 5 | 206 | 12 | 0 | 0 | 15 | 122 | 0 | 0 | 437 |
| 4:30-5:30 | 0 | 8 | 1 | 45 | 0 | 0 | 8 | 4 | 5 | 0 | 0 | 5 | 203 | 11 | 0 | 0 | 14 | 108 | 0 | 0 | 412 |
| 4:45-5:45 | 0 | 8 | 1 | 33 | 0 | 0 | 8 | 1 | 5 | 0 | 0 | 4 | 186 | 11 | 0 | 0 | 13 | 97 | 0 | 0 | 367 |
| 5:00-6:00 | 0 | 6 | 1 | 23 | 0 | 0 | 12 | 2 | 5 | 0 | 0 | 1 | 173 | 11 | 0 | 0 | 10 | 82 | 1 | 0 | 327 |
| 5:15-6:15 | 0 | 3 | 1 | 17 | 0 | 0 | 12 | 3 | 3 | 0 | 0 | 0 | 147 | 10 | 0 | 0 | 11 | 59 | 1 | 0 | 267 |
| 5:30-6:30 | 0 | 3 | 1 | 16 | 0 | 0 | 13 | 2 | 2 | 0 | 0 | 0 | 124 | 8 | 0 | 0 | 8 | 58 | 2 | 0 | 237 |
| 5:45-6:45 | 0 | 3 | 1 | 17 | 0 | 0 | 11 | 3 | 4 | 0 | 0 | 0 | 112 | 5 | 0 | 0 | 5 | 64 | 3 | 0 | 228 |
| 6:00-7:00 | 0 | 3 | 2 | 17 | 0 | 0 | 4 | 3 | 3 | 0 | 0 | 0 | 104 | 4 | 0 | 0 | 2 | 62 | 3 | 0 | 207 |

| 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** | **5** | **1** | **56** | **0** | **0** | **9** | **5** | **4** | **0** | **0** | **5** | **228** | **13** | **0** | **0** | **18** | **120** | **0** | **0** | **464** |

Peak Hour
Turning Movement Count


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


**Intersection:** Airport Rd & Centreville Rd
**Weather:** Clear
**Count by:** Count Cam DSS
**Count Day/Date:** Wednesday, April 30, 2025
**Jurisdiction:** Talbot County

Weekend Peak Hour (10:00 am - 2:00 pm)

| | Centerville Rd Northbound | | | | | Longwoods Rd Southbound | | | | | N/A Eastbound | | | | | Airport Rd 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 | 1 | 10 | 12 | 0 | 0 | 5 | 15 | 2 | 0 | 0 | 6 | 19 | 2 | 0 | 0 | 6 | 19 | 11 | 0 | 108 |
| 10:15-10:30 | 0 | 2 | 3 | 4 | 0 | 0 | 7 | 15 | 10 | 0 | 0 | 4 | 27 | 5 | 0 | 0 | 9 | 39 | 9 | 0 | 134 |
| 10:30-10:45 | 0 | 3 | 7 | 8 | 0 | 0 | 4 | 9 | 2 | 0 | 0 | 3 | 21 | 3 | 0 | 0 | 11 | 21 | 8 | 0 | 100 |
| 10:45-11:00 | 0 | 1 | 6 | 8 | 0 | 0 | 7 | 4 | 1 | 0 | 0 | 1 | 28 | 6 | 0 | 0 | 13 | 32 | 5 | 0 | 112 |
| 11:00-11:15 | 0 | 0 | 5 | 8 | 0 | 0 | 8 | 15 | 5 | 0 | 0 | 0 | 20 | 1 | 0 | 1 | 16 | 35 | 7 | 0 | 121 |
| 11:15-11:30 | 0 | 2 | 6 | 12 | 0 | 0 | 7 | 9 | 2 | 0 | 0 | 1 | 24 | 1 | 0 | 1 | 13 | 29 | 5 | 0 | 112 |
| 11:30-11:45 | 0 | 2 | 3 | 9 | 0 | 0 | 5 | 9 | 3 | 0 | 0 | 1 | 21 | 3 | 0 | 2 | 16 | 33 | 6 | 0 | 113 |
| 11:45-12:00 | 0 | 1 | 2 | 7 | 0 | 0 | 4 | 8 | 0 | 0 | 0 | 2 | 33 | 3 | 0 | 0 | 5 | 36 | 10 | 0 | 111 |
| 12:00-12:15 | 0 | 3 | 5 | 14 | 0 | 0 | 13 | 26 | 5 | 0 | 0 | 0 | 22 | 1 | 0 | 0 | 14 | 38 | 5 | 0 | 146 |
| 12:15-12:30 | 0 | 3 | 1 | 5 | 0 | 0 | 1 | 4 | 5 | 0 | 0 | 0 | 29 | 1 | 0 | 1 | 5 | 36 | 5 | 0 | 96 |
| 12:30-12:45 | 0 | 0 | 5 | 11 | 0 | 0 | 5 | 6 | 2 | 0 | 0 | 0 | 31 | 2 | 0 | 0 | 4 | 33 | 5 | 0 | 104 |
| 12:45-1:00 | 0 | 1 | 5 | 5 | 0 | 0 | 5 | 5 | 6 | 0 | 0 | 1 | 28 | 3 | 0 | 0 | 8 | 27 | 5 | 0 | 99 |
| 1:00-1:15 | 0 | 2 | 3 | 12 | 0 | 0 | 3 | 2 | 2 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 13 | 37 | 1 | 0 | 91 |
| 1:15-1:30 | 0 | 0 | 3 | 9 | 0 | 0 | 3 | 4 | 2 | 0 | 0 | 0 | 26 | 1 | 0 | 0 | 4 | 33 | 1 | 0 | 86 |
| 1:30-1:45 | 0 | 0 | 1 | 5 | 0 | 0 | 2 | 1 | 2 | 0 | 0 | 1 | 20 | 1 | 0 | 1 | 4 | 35 | 3 | 0 | 76 |
| 1:45-2:00 | 0 | 2 | 2 | 8 | 0 | 0 | 4 | 5 | 6 | 0 | 0 | 1 | 22 | 2 | 0 | 0 | 5 | 28 | 6 | 0 | 91 |

| Hourly Totals | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10:00-11:00 | 0 | 7 | 26 | 32 | 0 | 0 | 23 | 43 | 15 | 0 | 0 | 14 | 95 | 16 | 0 | 6 | 39 | 111 | 33 | 0 | 460 |
| 10:15-11:15 | 0 | 6 | 21 | 28 | 0 | 0 | 26 | 43 | 18 | 0 | 0 | 8 | 96 | 15 | 0 | 1 | 49 | 127 | 29 | 0 | 467 |
| 10:30-11:30 | 0 | 6 | 24 | 36 | 0 | 0 | 26 | 37 | 10 | 0 | 0 | 5 | 93 | 11 | 0 | 2 | 53 | 117 | 25 | 0 | 445 |
| 10:45-11:45 | 0 | 5 | 20 | 37 | 0 | 0 | 27 | 37 | 11 | 0 | 0 | 3 | 93 | 11 | 0 | 4 | 58 | 129 | 23 | 0 | 458 |
| 11:00-12:00 | 0 | 5 | 16 | 36 | 0 | 0 | 24 | 41 | 10 | 0 | 0 | 4 | 98 | 8 | 0 | 4 | 50 | 133 | 28 | 0 | 457 |
| 11:15-12:15 | 0 | 8 | 16 | 42 | 0 | 0 | 29 | 52 | 10 | 0 | 0 | 4 | 100 | 8 | 0 | 3 | 48 | 136 | 26 | 0 | 482 |
| 11:30-12:30 | 0 | 9 | 11 | 35 | 0 | 0 | 23 | 47 | 13 | 0 | 0 | 3 | 105 | 8 | 0 | 3 | 40 | 143 | 26 | 0 | 466 |
| 11:45-12:45 | 0 | 7 | 13 | 37 | 0 | 0 | 23 | 44 | 12 | 0 | 0 | 2 | 115 | 7 | 0 | 1 | 28 | 143 | 25 | 0 | 457 |
| 12:00-1:00 | 0 | 7 | 16 | 35 | 0 | 0 | 24 | 41 | 18 | 0 | 0 | 1 | 110 | 7 | 0 | 1 | 31 | 134 | 20 | 0 | 445 |
| 12:15-1:15 | 0 | 6 | 14 | 33 | 0 | 0 | 14 | 17 | 15 | 0 | 0 | 1 | 104 | 6 | 0 | 1 | 30 | 133 | 16 | 0 | 390 |
| 12:30-1:30 | 0 | 3 | 16 | 37 | 0 | 0 | 16 | 17 | 12 | 0 | 0 | 1 | 101 | 6 | 0 | 0 | 29 | 130 | 12 | 0 | 380 |
| 12:45-1:45 | 0 | 3 | 12 | 31 | 0 | 0 | 13 | 12 | 12 | 0 | 0 | 2 | 90 | 5 | 0 | 1 | 29 | 132 | 10 | 0 | 352 |
| 1:00-2:00 | 0 | 4 | 9 | 34 | 0 | 0 | 12 | 12 | 12 | 0 | 0 | 2 | 84 | 4 | 0 | 1 | 26 | 133 | 11 | 0 | 344 |

| 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** |
| **11:15-12:15** | **0** | **8** | **16** | **42** | **0** | **0** | **29** | **52** | **10** | **0** | **0** | **4** | **100** | **8** | **0** | **3** | **48** | **136** | **26** | **0** | **482** |

Peak Hour
Turning Movement Count

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

Intersection: Centerville Rd & Airport Rd
Weather: Clear
Count by: Count Cam DSS
Count Day/Date: Saturday, September 14, 2024
County: Talbot County

## Weekday Morning Peak Hour (6:30 am - 9:30 am)

| | US 50 Northbound | | | | | US 50 Southbound | | | | | Airport Rd Eastbound | | | | | Airport Rd 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 |
| 6:30-6:45 | 1 | 7 | 207 | 0 | 0 | 0 | 9 | 217 | 24 | 0 | 0 | 23 | 6 | 7 | 0 | 0 | 48 | 19 | 16 | 0 | 584 |
| 6:45-7:00 | 1 | 11 | 178 | 1 | 0 | 0 | 12 | 203 | 23 | 0 | 0 | 9 | 5 | 6 | 0 | 0 | 63 | 27 | 16 | 0 | 555 |
| 7:00-7:15 | 1 | 10 | 223 | 0 | 0 | 0 | 10 | 216 | 19 | 0 | 0 | 12 | 4 | 1 | 0 | 0 | 65 | 21 | 23 | 0 | 605 |
| 7:15-7:30 | 1 | 7 | 235 | 4 | 0 | 1 | 9 | 256 | 15 | 0 | 0 | 23 | 9 | 1 | 0 | 0 | 75 | 22 | 19 | 0 | 677 |
| 7:30-7:45 | 0 | 11 | 256 | 2 | 0 | 0 | 7 | 250 | 30 | 0 | 0 | 23 | 17 | 4 | 0 | 0 | 74 | 29 | 24 | 0 | 727 |
| 7:45-8:00 | 3 | 6 | 215 | 1 | 0 | 0 | 7 | 309 | 32 | 0 | 0 | 15 | 7 | 5 | 0 | 0 | 96 | 29 | 24 | 0 | 749 |
| 8:00-8:15 | 3 | 9 | 230 | 1 | 1 | 0 | 11 | 262 | 23 | 0 | 0 | 23 | 9 | 3 | 0 | 0 | 74 | 19 | 19 | 0 | 686 |
| 8:15-8:30 | 3 | 11 | 255 | 1 | 1 | 0 | 10 | 229 | 18 | 0 | 0 | 21 | 12 | 4 | 0 | 0 | 51 | 25 | 14 | 0 | 654 |
| 8:30-8:45 | 6 | 9 | 248 | 1 | 0 | 0 | 11 | 225 | 26 | 0 | 0 | 28 | 7 | 6 | 0 | 0 | 52 | 13 | 12 | 0 | 644 |
| 8:45-9:00 | 1 | 9 | 206 | 2 | 0 | 0 | 10 | 234 | 25 | 0 | 0 | 26 | 12 | 5 | 0 | 0 | 85 | 22 | 16 | 0 | 653 |
| 9:00-9:15 | 4 | 18 | 220 | 3 | 0 | 1 | 7 | 168 | 18 | 0 | 0 | 12 | 11 | 9 | 0 | 0 | 51 | 23 | 15 | 0 | 560 |
| 9:15-9:30 | 0 | 8 | 269 | 0 | 0 | 0 | 8 | 287 | 14 | 0 | 0 | 13 | 10 | 7 | 0 | 0 | 34 | 9 | 13 | 0 | 672 |
| **Hourly Totals** | | | | | | | | | | | | | | | | | | | | | |
| 6:30-7:30 | 4 | 35 | 843 | 5 | 0 | 1 | 40 | 892 | 81 | 0 | 0 | 67 | 24 | 15 | 0 | 0 | 251 | 89 | 74 | 0 | 2421 |
| 6:45-7:45 | 3 | 39 | 892 | 7 | 0 | 1 | 38 | 925 | 87 | 0 | 0 | 67 | 35 | 12 | 0 | 0 | 277 | 99 | 82 | 0 | 2564 |
| 7:00-8:00 | 5 | 34 | 929 | 7 | 0 | 1 | 33 | 1031 | 96 | 0 | 0 | 73 | 37 | 11 | 0 | 0 | 310 | 101 | 90 | 0 | 2758 |
| 7:15-8:15 | 7 | 33 | 936 | 8 | 1 | 1 | 34 | 1077 | 100 | 0 | 0 | 84 | 42 | 13 | 0 | 0 | 319 | 99 | 86 | 0 | 2840 |
| 7:30-8:30 | 9 | 37 | 956 | 5 | 2 | 0 | 35 | 1050 | 103 | 0 | 0 | 82 | 45 | 16 | 0 | 0 | 295 | 102 | 81 | 0 | 2818 |
| 7:45-8:45 | 15 | 35 | 948 | 4 | 2 | 0 | 39 | 1025 | 99 | 0 | 0 | 87 | 35 | 18 | 0 | 0 | 273 | 86 | 69 | 0 | 2735 |
| 8:00-9:00 | 13 | 38 | 939 | 5 | 2 | 0 | 42 | 950 | 92 | 0 | 0 | 98 | 40 | 18 | 0 | 0 | 262 | 79 | 61 | 0 | 2639 |
| 8:15-9:15 | 14 | 47 | 929 | 7 | 1 | 1 | 38 | 856 | 87 | 0 | 0 | 87 | 42 | 24 | 0 | 0 | 239 | 83 | 57 | 0 | 2512 |
| 8:30-9:30 | 11 | 44 | 943 | 6 | 0 | 1 | 36 | 914 | 83 | 0 | 0 | 79 | 40 | 27 | 0 | 0 | 222 | 67 | 56 | 0 | 2529 |
| **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** | **7** | **33** | **936** | **8** | **1** | **1** | **34** | **1077** | **100** | **0** | **0** | **84** | **42** | **13** | **0** | **0** | **319** | **99** | **86** | **0** | **2840** |

## Weekday Evening Peak Hour (4 pm - 7 pm)

| | US 50 Northbound | | | | | US 50 Southbound | | | | | Airport Rd Eastbound | | | | | Airport Rd 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 |
| 4:00-4:15 | 3 | 5 | 282 | 0 | 0 | 0 | 31 | 229 | 22 | 0 | 0 | 29 | 41 | 18 | 0 | 0 | 45 | 7 | 16 | 0 | 728 |
| 4:15-4:30 | 5 | 9 | 258 | 3 | 0 | 0 | 30 | 241 | 17 | 0 | 0 | 36 | 31 | 7 | 0 | 0 | 46 | 11 | 19 | 0 | 713 |
| 4:30-4:45 | 1 | 3 | 283 | 0 | 0 | 0 | 21 | 254 | 22 | 0 | 0 | 40 | 31 | 6 | 0 | 0 | 41 | 8 | 19 | 0 | 729 |
| 4:45-5:00 | 4 | 6 | 298 | 2 | 0 | 0 | 22 | 262 | 20 | 0 | 0 | 33 | 26 | 4 | 0 | 0 | 39 | 9 | 30 | 0 | 755 |
| 5:00-5:15 | 1 | 9 | 310 | 4 | 0 | 0 | 27 | 259 | 16 | 0 | 0 | 23 | 28 | 7 | 0 | 0 | 51 | 7 | 15 | 0 | 757 |
| 5:15-5:30 | 3 | 4 | 269 | 0 | 0 | 0 | 14 | 198 | 15 | 0 | 0 | 28 | 27 | 7 | 0 | 0 | 52 | 5 | 12 | 0 | 634 |
| 5:30-5:45 | 2 | 4 | 239 | 1 | 0 | 0 | 22 | 195 | 8 | 0 | 0 | 25 | 10 | 10 | 0 | 0 | 29 | 8 | 14 | 0 | 567 |
| 5:45-6:00 | 1 | 1 | 177 | 0 | 0 | 0 | 12 | 169 | 9 | 0 | 0 | 20 | 14 | 11 | 0 | 0 | 34 | 7 | 6 | 0 | 461 |
| 6:00-6:15 | 2 | 1 | 206 | 1 | 0 | 0 | 17 | 151 | 3 | 0 | 0 | 15 | 13 | 1 | 0 | 0 | 29 | 7 | 8 | 0 | 454 |
| 6:15-6:30 | 9 | 1 | 181 | 0 | 0 | 0 | 17 | 153 | 8 | 0 | 0 | 20 | 5 | 7 | 0 | 0 | 27 | 11 | 7 | 0 | 446 |
| 6:30-6:45 | 1 | 5 | 204 | 1 | 0 | 0 | 12 | 183 | 13 | 0 | 0 | 11 | 17 | 6 | 0 | 0 | 22 | 6 | 9 | 0 | 490 |
| 6:45-7:00 | 2 | 2 | 154 | 1 | 0 | 0 | 19 | 162 | 6 | 0 | 0 | 16 | 10 | 4 | 0 | 0 | 30 | 4 | 11 | 0 | 421 |
| **Hourly Totals** | | | | | | | | | | | | | | | | | | | | | |
| 4:00-5:00 | 13 | 23 | 1121 | 5 | 0 | 0 | 104 | 986 | 81 | 0 | 0 | 138 | 129 | 35 | 0 | 0 | 171 | 35 | 84 | 0 | 2925 |
| 4:15-5:15 | 11 | 27 | 1149 | 9 | 0 | 0 | 100 | 1016 | 75 | 0 | 0 | 132 | 116 | 24 | 0 | 0 | 177 | 35 | 83 | 0 | 2954 |
| 4:30-5:30 | 9 | 22 | 1160 | 6 | 0 | 0 | 84 | 973 | 73 | 0 | 0 | 124 | 112 | 24 | 0 | 0 | 183 | 29 | 76 | 0 | 2875 |
| 4:45-5:45 | 10 | 23 | 1116 | 7 | 0 | 0 | 85 | 914 | 59 | 0 | 0 | 109 | 91 | 28 | 0 | 0 | 171 | 29 | 71 | 0 | 2713 |
| 5:00-6:00 | 7 | 18 | 995 | 5 | 0 | 0 | 75 | 821 | 48 | 0 | 0 | 96 | 79 | 35 | 0 | 0 | 166 | 27 | 47 | 0 | 2419 |
| 5:15-6:15 | 8 | 10 | 891 | 2 | 0 | 0 | 65 | 713 | 35 | 0 | 0 | 88 | 64 | 29 | 0 | 0 | 144 | 27 | 40 | 0 | 2116 |
| 5:30-6:30 | 14 | 7 | 803 | 2 | 0 | 0 | 68 | 668 | 28 | 0 | 0 | 80 | 42 | 29 | 0 | 0 | 119 | 33 | 35 | 0 | 1928 |
| 5:45-6:45 | 13 | 8 | 768 | 2 | 0 | 0 | 58 | 656 | 33 | 0 | 0 | 66 | 49 | 25 | 0 | 0 | 112 | 31 | 30 | 0 | 1851 |
| 6:00-7:00 | 14 | 9 | 745 | 3 | 0 | 0 | 65 | 649 | 30 | 0 | 0 | 62 | 45 | 18 | 0 | 0 | 108 | 28 | 35 | 0 | 1811 |
| **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** |
| **4:15-5:15** | **11** | **27** | **1149** | **9** | **0** | **0** | **100** | **1016** | **75** | **0** | **0** | **132** | **116** | **24** | **0** | **0** | **177** | **35** | **83** | **0** | **2954** |

Peak Hour
Turning Movement Count


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


**Intersection:** US 50 & Airport Rd
**Weather:** Clear
**Count by:** Count Cam DSS
**Count Day/Date:** Wednesday, April 30, 2025
**Jurisdiction:** Talbot County

Weekend Peak Hour (10:00 am - 2:00 pm)

| | US 50 Northbound | | | | | US 50 Southbound | | | | | Airport Rd Eastbound | | | | | Airport Rd 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 | 4 | 11 | 239 | 4 | 0 | 1 | 7 | 406 | 12 | 0 | 0 | 21 | 8 | 4 | 0 | 0 | 35 | 14 | 7 | 0 | 773 |
| 10:15-10:30 | 3 | 11 | 345 | 0 | 0 | 1 | 13 | 368 | 28 | 0 | 0 | 23 | 9 | 6 | 0 | 0 | 37 | 19 | 17 | 0 | 880 |
| 10:30-10:45 | 2 | 9 | 256 | 3 | 0 | 1 | 9 | 340 | 12 | 0 | 0 | 19 | 10 | 7 | 0 | 0 | 35 | 16 | 13 | 0 | 732 |
| 10:45-11:00 | 1 | 14 | 313 | 1 | 0 | 2 | 5 | 436 | 27 | 0 | 0 | 20 | 16 | 7 | 0 | 0 | 43 | 10 | 21 | 0 | 916 |
| 11:00-11:15 | 2 | 9 | 330 | 1 | 0 | 0 | 15 | 401 | 35 | 0 | 0 | 14 | 15 | 9 | 0 | 0 | 40 | 9 | 4 | 0 | 884 |
| 11:15-11:30 | 3 | 13 | 334 | 1 | 0 | 1 | 25 | 389 | 26 | 0 | 0 | 18 | 19 | 9 | 0 | 0 | 48 | 9 | 13 | 0 | 908 |
| 11:30-11:45 | 4 | 11 | 313 | 1 | 0 | 4 | 25 | 316 | 26 | 0 | 0 | 15 | 12 | 8 | 0 | 0 | 40 | 15 | 12 | 0 | 802 |
| 11:45-12:00 | 5 | 10 | 310 | 2 | 0 | 1 | 17 | 417 | 29 | 0 | 0 | 20 | 13 | 12 | 0 | 0 | 41 | 13 | 13 | 0 | 903 |
| 12:00-12:15 | 2 | 9 | 394 | 2 | 0 | 1 | 16 | 351 | 34 | 0 | 0 | 20 | 17 | 9 | 0 | 0 | 33 | 13 | 15 | 0 | 916 |
| 12:15-12:30 | 3 | 13 | 341 | 3 | 0 | 1 | 21 | 334 | 23 | 0 | 0 | 22 | 12 | 8 | 0 | 0 | 35 | 11 | 10 | 0 | 837 |
| 12:30-12:45 | 3 | 7 | 314 | 1 | 0 | 1 | 12 | 354 | 23 | 0 | 0 | 21 | 18 | 9 | 0 | 0 | 52 | 12 | 15 | 0 | 842 |
| 12:45-1:00 | 4 | 5 | 249 | 2 | 0 | 1 | 9 | 425 | 25 | 0 | 0 | 19 | 11 | 6 | 0 | 0 | 36 | 10 | 13 | 0 | 815 |
| 1:00-1:15 | 2 | 6 | 311 | 0 | 0 | 1 | 14 | 325 | 35 | 0 | 0 | 15 | 14 | 4 | 0 | 0 | 31 | 12 | 10 | 1 | 780 |
| 1:15-1:30 | 0 | 5 | 303 | 2 | 0 | 0 | 5 | 334 | 29 | 0 | 0 | 16 | 12 | 2 | 0 | 0 | 34 | 4 | 6 | 0 | 752 |
| 1:30-1:45 | 3 | 4 | 297 | 2 | 0 | 2 | 17 | 361 | 29 | 0 | 0 | 12 | 9 | 4 | 0 | 0 | 27 | 8 | 14 | 0 | 789 |
| 1:45-2:00 | 7 | 6 | 323 | 2 | 0 | 0 | 16 | 362 | 18 | 0 | 0 | 20 | 13 | 4 | 0 | 0 | 41 | 16 | 10 | 0 | 838 |

| Hourly Totals | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10:00-11:00 | 10 | 45 | 1153 | 8 | 0 | 5 | 34 | 1550 | 79 | 0 | 0 | 83 | 43 | 24 | 0 | 0 | 150 | 59 | 58 | 0 | 3301 |
| 10:15-11:15 | 8 | 43 | 1244 | 5 | 0 | 4 | 42 | 1545 | 102 | 0 | 0 | 76 | 50 | 29 | 0 | 0 | 155 | 54 | 55 | 0 | 3412 |
| 10:30-11:30 | 8 | 45 | 1233 | 6 | 0 | 4 | 54 | 1566 | 100 | 0 | 0 | 71 | 60 | 32 | 0 | 0 | 166 | 44 | 51 | 0 | 3440 |
| 10:45-11:45 | 10 | 47 | 1290 | 4 | 0 | 7 | 70 | 1542 | 114 | 0 | 0 | 67 | 62 | 33 | 0 | 0 | 171 | 43 | 50 | 0 | 3510 |
| 11:00-12:00 | 14 | 43 | 1287 | 5 | 0 | 6 | 82 | 1523 | 116 | 0 | 0 | 67 | 59 | 38 | 0 | 0 | 169 | 46 | 42 | 0 | 3497 |
| 11:15-12:15 | 14 | 43 | 1351 | 6 | 0 | 7 | 83 | 1473 | 115 | 0 | 0 | 73 | 61 | 38 | 0 | 0 | 162 | 50 | 53 | 0 | 3529 |
| 11:30-12:30 | 14 | 43 | 1358 | 8 | 0 | 7 | 79 | 1418 | 112 | 0 | 0 | 77 | 54 | 37 | 0 | 0 | 149 | 52 | 50 | 0 | 3458 |
| 11:45-12:45 | 13 | 39 | 1359 | 8 | 0 | 4 | 66 | 1456 | 109 | 0 | 0 | 83 | 60 | 38 | 0 | 0 | 161 | 49 | 53 | 0 | 3498 |
| 12:00-1:00 | 12 | 34 | 1298 | 8 | 0 | 4 | 58 | 1464 | 105 | 0 | 0 | 82 | 58 | 32 | 0 | 0 | 156 | 46 | 53 | 0 | 3410 |
| 12:15-1:15 | 12 | 31 | 1215 | 6 | 0 | 4 | 56 | 1438 | 106 | 0 | 0 | 77 | 55 | 27 | 0 | 0 | 154 | 45 | 48 | 1 | 3275 |
| 12:30-1:30 | 9 | 23 | 1177 | 5 | 0 | 3 | 40 | 1438 | 112 | 0 | 0 | 71 | 55 | 21 | 0 | 0 | 153 | 38 | 44 | 1 | 3190 |
| 12:45-1:45 | 9 | 20 | 1160 | 6 | 0 | 4 | 45 | 1445 | 118 | 0 | 0 | 62 | 46 | 16 | 0 | 0 | 128 | 34 | 43 | 1 | 3137 |
| 1:00-2:00 | 12 | 21 | 1234 | 6 | 0 | 3 | 52 | 1382 | 111 | 0 | 0 | 63 | 48 | 14 | 0 | 0 | 133 | 40 | 40 | 1 | 3160 |

| 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** |
| **11:15-12:15** | **14** | **43** | **1351** | **6** | **0** | **7** | **83** | **1473** | **115** | **0** | **0** | **73** | **61** | **38** | **0** | **0** | **162** | **50** | **53** | **0** | **3529** |

Peak Hour
Turning Movement Count


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


**Intersection:** US 50 & Airport Rd
**Weather:** Clear
**Count by:** Count Cam DSS
**Count Day/Date:** Saturday, September 14, 2024
**County:** Talbot County

## Weekday Morning Peak Hour (6:30 am - 9:30 am)

| | N/A Northbound | | | | | Goldsborough Neck Rd Southbound | | | | | Glebe Rd Eastbound | | | | | Glebe Rd 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 |
| 6:30-6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 15 | 0 | 0 | 9 | 7 | 0 | 0 | 0 | 0 | 9 | 2 | 0 | 49 |
| 6:45-7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 10 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 12 | 9 | 0 | 50 |
| 7:00-7:15 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 15 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 11 | 6 | 0 | 56 |
| 7:15-7:30 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 21 | 0 | 0 | 18 | 13 | 0 | 0 | 0 | 0 | 8 | 11 | 0 | 81 |
| 7:30-7:45 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 23 | 0 | 0 | 11 | 6 | 0 | 0 | 0 | 0 | 12 | 10 | 0 | 75 |
| 7:45-8:00 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 17 | 0 | 0 | 12 | 16 | 0 | 0 | 0 | 0 | 30 | 17 | 0 | 99 |
| 8:00-8:15 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 16 | 0 | 0 | 10 | 7 | 0 | 0 | 0 | 0 | 19 | 4 | 0 | 71 |
| 8:15-8:30 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 25 | 0 | 0 | 10 | 13 | 0 | 0 | 0 | 0 | 14 | 5 | 0 | 76 |
| 8:30-8:45 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 21 | 0 | 0 | 14 | 19 | 0 | 0 | 0 | 0 | 11 | 16 | 0 | 93 |
| 8:45-9:00 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 19 | 0 | 0 | 17 | 17 | 0 | 0 | 0 | 0 | 12 | 14 | 0 | 91 |
| 9:00-9:15 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 20 | 0 | 0 | 16 | 17 | 0 | 0 | 0 | 0 | 16 | 11 | 0 | 92 |
| 9:15-9:30 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 13 | 0 | 0 | 22 | 22 | 0 | 0 | 0 | 0 | 10 | 8 | 0 | 86 |
| **Hourly Totals** | | | | | | | | | | | | | | | | | | | | | |
| 6:30-7:30 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 61 | 0 | 0 | 40 | 33 | 0 | 0 | 0 | 0 | 40 | 28 | 0 | 236 |
| 6:45-7:45 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 69 | 0 | 0 | 42 | 32 | 0 | 0 | 0 | 0 | 43 | 36 | 0 | 262 |
| 7:00-8:00 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 76 | 0 | 0 | 48 | 42 | 0 | 0 | 0 | 0 | 61 | 44 | 0 | 311 |
| 7:15-8:15 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 77 | 0 | 0 | 51 | 42 | 0 | 0 | 0 | 0 | 69 | 42 | 0 | 326 |
| 7:30-8:30 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 81 | 0 | 0 | 43 | 42 | 0 | 0 | 0 | 0 | 75 | 36 | 0 | 321 |
| 7:45-8:45 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 79 | 0 | 0 | 46 | 55 | 0 | 0 | 0 | 0 | 74 | 42 | 0 | 339 |
| 8:00-9:00 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 0 | 81 | 0 | 0 | 51 | 56 | 0 | 0 | 0 | 0 | 56 | 39 | 0 | 331 |
| 8:15-9:15 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 85 | 0 | 0 | 57 | 66 | 0 | 0 | 0 | 0 | 53 | 46 | 0 | 352 |
| 8:30-9:30 | 0 | 0 | 0 | 0 | 0 | 0 | 47 | 0 | 73 | 0 | 0 | 69 | 75 | 0 | 0 | 0 | 0 | 49 | 49 | 0 | 362 |

| 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 |
| **8:30-9:30** | **0** | **0** | **0** | **0** | **0** | **0** | **47** | **0** | **73** | **0** | **0** | **69** | **75** | **0** | **0** | **0** | **0** | **49** | **49** | **0** | **362** |

## Weekday Evening Peak Hour (4 pm - 7 pm)

| | N/A Northbound | | | | | Goldsborough Neck Rd Southbound | | | | | Glebe Rd Eastbound | | | | | Glebe Rd 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 |
| 4:00-4:15 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 27 | 0 | 0 | 25 | 14 | 0 | 0 | 0 | 0 | 20 | 26 | 0 | 132 |
| 4:15-4:30 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 23 | 0 | 0 | 31 | 18 | 0 | 0 | 0 | 0 | 19 | 16 | 0 | 129 |
| 4:30-4:45 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 31 | 0 | 0 | 29 | 13 | 0 | 0 | 0 | 0 | 16 | 22 | 0 | 124 |
| 4:45-5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 32 | 0 | 0 | 16 | 8 | 0 | 0 | 0 | 0 | 19 | 21 | 0 | 115 |
| 5:00-5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 23 | 0 | 0 | 16 | 17 | 0 | 0 | 0 | 0 | 13 | 17 | 0 | 99 |
| 5:15-5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 32 | 0 | 0 | 16 | 14 | 0 | 0 | 0 | 0 | 23 | 14 | 0 | 123 |
| 5:30-5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 23 | 0 | 0 | 15 | 11 | 0 | 0 | 0 | 0 | 14 | 14 | 0 | 84 |
| 5:45-6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 27 | 0 | 0 | 11 | 7 | 0 | 0 | 0 | 0 | 14 | 13 | 0 | 86 |
| 6:00-6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 21 | 0 | 0 | 10 | 8 | 0 | 0 | 0 | 0 | 10 | 22 | 0 | 78 |
| 6:15-6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 29 | 0 | 0 | 10 | 6 | 0 | 0 | 0 | 0 | 13 | 10 | 0 | 85 |
| 6:30-6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 19 | 0 | 0 | 12 | 5 | 0 | 0 | 0 | 0 | 8 | 12 | 0 | 61 |
| 6:45-7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 14 | 0 | 0 | 6 | 4 | 0 | 0 | 0 | 0 | 8 | 1 | 0 | 38 |
| **Hourly Totals** | | | | | | | | | | | | | | | | | | | | | |
| 4:00-5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 74 | 0 | 113 | 0 | 0 | 101 | 53 | 0 | 0 | 0 | 0 | 74 | 85 | 0 | 500 |
| 4:15-5:15 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 0 | 109 | 0 | 0 | 92 | 56 | 0 | 0 | 0 | 0 | 67 | 76 | 0 | 467 |
| 4:30-5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 69 | 0 | 118 | 0 | 0 | 77 | 52 | 0 | 0 | 0 | 0 | 71 | 74 | 0 | 461 |
| 4:45-5:45 | 0 | 0 | 0 | 0 | 0 | 0 | 63 | 0 | 110 | 0 | 0 | 63 | 50 | 0 | 0 | 0 | 0 | 69 | 66 | 0 | 421 |
| 5:00-6:00 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 0 | 105 | 0 | 0 | 58 | 49 | 0 | 0 | 0 | 0 | 64 | 58 | 0 | 392 |
| 5:15-6:15 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 0 | 103 | 0 | 0 | 52 | 40 | 0 | 0 | 0 | 0 | 61 | 63 | 0 | 371 |
| 5:30-6:30 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 100 | 0 | 0 | 46 | 32 | 0 | 0 | 0 | 0 | 51 | 59 | 0 | 333 |
| 5:45-6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 96 | 0 | 0 | 43 | 26 | 0 | 0 | 0 | 0 | 45 | 57 | 0 | 310 |
| 6:00-7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 83 | 0 | 0 | 38 | 23 | 0 | 0 | 0 | 0 | 39 | 45 | 0 | 262 |

| 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** | **0** | **0** | **0** | **0** | **74** | **0** | **113** | **0** | **0** | **101** | **53** | **0** | **0** | **0** | **0** | **74** | **85** | **0** | **500** |

Peak Hour
Turning Movement Count


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


**Intersection:** Goldsborough Neck Rd & Glebe Rd
**Weather:** Clear
**Count by:** Count Cam DSS
**Count Day/Date:** Friday, September 13, 2024
**Jurisdiction:** Talbot County

Weekend Peak Hour (10:00 am - 2:00 pm)

| | N/A Northbound | | | | | Goldsborough Neck Rd Southbound | | | | | Glebe Rd Eastbound | | | | | Glebe Rd 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 | 12 | 0 | 18 | 0 | 0 | 20 | 18 | 0 | 0 | 0 | 0 | 16 | 9 | 0 | 93 |
| 10:15-10:30 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 28 | 0 | 0 | 23 | 15 | 0 | 0 | 0 | 0 | 22 | 20 | 0 | 121 |
| 10:30-10:45 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 12 | 0 | 0 | 21 | 7 | 0 | 0 | 0 | 0 | 15 | 19 | 0 | 90 |
| 10:45-11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 24 | 0 | 0 | 22 | 14 | 0 | 0 | 0 | 0 | 12 | 18 | 0 | 106 |
| 11:00-11:15 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 26 | 0 | 0 | 10 | 14 | 0 | 0 | 0 | 0 | 16 | 25 | 0 | 107 |
| 11:15-11:30 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 24 | 0 | 0 | 19 | 7 | 0 | 0 | 0 | 0 | 24 | 13 | 0 | 103 |
| 11:30-11:45 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 26 | 0 | 0 | 27 | 12 | 0 | 0 | 0 | 0 | 15 | 16 | 0 | 111 |
| 11:45-12:00 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 29 | 0 | 0 | 18 | 18 | 0 | 0 | 0 | 0 | 22 | 10 | 0 | 116 |
| 12:00-12:15 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 24 | 0 | 0 | 12 | 6 | 0 | 0 | 1 | 0 | 19 | 13 | 0 | 94 |
| 12:15-12:30 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 42 | 0 | 0 | 18 | 9 | 0 | 0 | 0 | 0 | 22 | 19 | 0 | 124 |
| 12:30-12:45 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 25 | 0 | 0 | 11 | 9 | 0 | 0 | 0 | 0 | 17 | 13 | 0 | 91 |
| 12:45-1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 31 | 0 | 0 | 20 | 19 | 0 | 0 | 0 | 0 | 14 | 20 | 0 | 124 |
| 1:00-1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 29 | 0 | 0 | 15 | 12 | 0 | 0 | 0 | 0 | 20 | 14 | 0 | 103 |
| 1:15-1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 36 | 0 | 0 | 20 | 7 | 0 | 0 | 0 | 0 | 22 | 21 | 0 | 115 |
| 1:30-1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 34 | 0 | 0 | 23 | 12 | 0 | 0 | 0 | 0 | 15 | 16 | 0 | 113 |
| 1:45-2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 25 | 0 | 0 | 14 | 8 | 0 | 0 | 0 | 0 | 23 | 21 | 0 | 98 |

| Hourly Totals | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10:00-11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 57 | 0 | 82 | 0 | 0 | 86 | 54 | 0 | 0 | 1 | 0 | 65 | 66 | 0 | 411 |
| 10:15-11:15 | 0 | 0 | 0 | 0 | 0 | 0 | 61 | 0 | 90 | 0 | 0 | 76 | 50 | 0 | 0 | 0 | 0 | 65 | 82 | 0 | 424 |
| 10:30-11:30 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 0 | 86 | 0 | 0 | 72 | 42 | 0 | 0 | 0 | 0 | 67 | 75 | 0 | 406 |
| 10:45-11:45 | 0 | 0 | 0 | 0 | 0 | 0 | 63 | 0 | 100 | 0 | 0 | 78 | 47 | 0 | 0 | 0 | 0 | 67 | 72 | 0 | 427 |
| 11:00-12:00 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 105 | 0 | 0 | 74 | 51 | 0 | 0 | 0 | 0 | 77 | 64 | 0 | 437 |
| 11:15-12:15 | 0 | 0 | 0 | 0 | 0 | 0 | 69 | 0 | 103 | 0 | 0 | 76 | 43 | 0 | 0 | 1 | 0 | 80 | 52 | 0 | 424 |
| 11:30-12:30 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 0 | 121 | 0 | 0 | 75 | 45 | 0 | 0 | 1 | 0 | 78 | 58 | 0 | 445 |
| 11:45-12:45 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 0 | 120 | 0 | 0 | 59 | 42 | 0 | 0 | 1 | 0 | 80 | 55 | 0 | 425 |
| 12:00-1:00 | 0 | 0 | 0 | 0 | 0 | 0 | 69 | 0 | 122 | 0 | 0 | 61 | 43 | 0 | 0 | 1 | 0 | 72 | 65 | 0 | 433 |
| 12:15-1:15 | 0 | 0 | 0 | 0 | 0 | 0 | 63 | 0 | 127 | 0 | 0 | 64 | 49 | 0 | 0 | 0 | 0 | 73 | 66 | 0 | 442 |
| 12:30-1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 0 | 121 | 0 | 0 | 66 | 47 | 0 | 0 | 0 | 0 | 73 | 68 | 0 | 433 |
| 12:45-1:45 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 0 | 130 | 0 | 0 | 78 | 50 | 0 | 0 | 0 | 0 | 71 | 71 | 0 | 455 |
| 1:00-2:00 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 124 | 0 | 0 | 72 | 39 | 0 | 0 | 0 | 0 | 80 | 72 | 0 | 429 |

| 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** |
| **12:45-1:45** | **0** | **0** | **0** | **0** | **0** | **0** | **55** | **0** | **130** | **0** | **0** | **78** | **50** | **0** | **0** | **0** | **0** | **71** | **71** | **0** | **455** |

Peak Hour
Turning Movement Count

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

**Intersection:** Goldsborough Neck Rd & Glebe Rd
**Weather:** Clear
**Count by:** Count Cam DSS
**Count Day/Date:** Saturday, September 14, 2024
**County:** Talbot County

## Weekday Morning Peak Hour (6:30 am - 9:30 am)

| | MD 322 Northbound | | | | | MD 322 Southbound | | | | | Glebe Rd Eastbound | | | | | Glebe Rd 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 |
| 6:30-6:45 | 0 | 3 | 40 | 0 | 0 | 0 | 10 | 63 | 25 | 0 | 0 | 13 | 11 | 4 | 0 | 0 | 1 | 16 | 10 | 0 | 196 |
| 6:45-7:00 | 0 | 7 | 54 | 2 | 0 | 0 | 13 | 82 | 42 | 0 | 0 | 6 | 12 | 7 | 0 | 0 | 5 | 26 | 8 | 0 | 264 |
| 7:00-7:15 | 0 | 10 | 56 | 2 | 0 | 0 | 17 | 99 | 38 | 0 | 0 | 19 | 11 | 15 | 0 | 0 | 4 | 24 | 11 | 0 | 306 |
| 7:15-7:30 | 0 | 19 | 57 | 4 | 0 | 0 | 23 | 120 | 49 | 0 | 0 | 23 | 21 | 7 | 0 | 0 | 4 | 23 | 15 | 0 | 365 |
| 7:30-7:45 | 0 | 15 | 66 | 8 | 0 | 0 | 19 | 137 | 47 | 0 | 0 | 20 | 21 | 16 | 0 | 0 | 10 | 28 | 10 | 0 | 397 |
| 7:45-8:00 | 0 | 23 | 90 | 6 | 1 | 0 | 28 | 146 | 69 | 0 | 0 | 20 | 42 | 14 | 0 | 0 | 5 | 49 | 11 | 0 | 503 |
| 8:00-8:15 | 0 | 12 | 71 | 7 | 0 | 0 | 23 | 133 | 53 | 0 | 0 | 26 | 26 | 14 | 0 | 0 | 8 | 53 | 18 | 0 | 444 |
| 8:15-8:30 | 0 | 9 | 85 | 6 | 0 | 0 | 23 | 118 | 65 | 0 | 0 | 27 | 28 | 4 | 0 | 0 | 4 | 31 | 24 | 0 | 424 |
| 8:30-8:45 | 0 | 13 | 72 | 9 | 0 | 0 | 13 | 118 | 34 | 0 | 0 | 34 | 17 | 17 | 0 | 0 | 4 | 31 | 15 | 0 | 377 |
| 8:45-9:00 | 0 | 16 | 61 | 15 | 0 | 0 | 30 | 106 | 46 | 0 | 0 | 17 | 31 | 10 | 0 | 0 | 9 | 30 | 11 | 0 | 382 |
| 9:00-9:15 | 0 | 14 | 62 | 12 | 1 | 0 | 31 | 109 | 38 | 0 | 0 | 35 | 21 | 13 | 0 | 0 | 10 | 22 | 18 | 0 | 385 |
| 9:15-9:30 | 0 | 12 | 76 | 11 | 0 | 0 | 27 | 94 | 34 | 0 | 0 | 27 | 30 | 9 | 0 | 0 | 10 | 31 | 16 | 0 | 377 |
| **Hourly Totals** | | | | | | | | | | | | | | | | | | | | | |
| 6:30-7:30 | 0 | 39 | 207 | 8 | 0 | 0 | 63 | 364 | 154 | 0 | 0 | 61 | 55 | 33 | 0 | 0 | 14 | 89 | 44 | 0 | 1131 |
| 6:45-7:45 | 0 | 51 | 233 | 16 | 0 | 0 | 72 | 438 | 176 | 0 | 0 | 68 | 65 | 45 | 0 | 0 | 23 | 101 | 44 | 0 | 1332 |
| 7:00-8:00 | 0 | 67 | 269 | 20 | 1 | 0 | 87 | 502 | 203 | 0 | 0 | 82 | 95 | 52 | 0 | 0 | 23 | 124 | 47 | 0 | 1572 |
| 7:15-8:15 | 0 | 69 | 284 | 25 | 1 | 0 | 93 | 536 | 218 | 0 | 0 | 89 | 110 | 51 | 0 | 0 | 27 | 153 | 54 | 0 | 1710 |
| 7:30-8:30 | 0 | 59 | 312 | 27 | 1 | 0 | 93 | 534 | 234 | 0 | 0 | 93 | 117 | 48 | 0 | 0 | 27 | 161 | 63 | 0 | 1769 |
| 7:45-8:45 | 0 | 57 | 318 | 28 | 1 | 0 | 87 | 515 | 221 | 0 | 0 | 107 | 113 | 49 | 0 | 0 | 21 | 164 | 68 | 0 | 1749 |
| 8:00-9:00 | 0 | 50 | 289 | 37 | 0 | 0 | 89 | 475 | 198 | 0 | 0 | 104 | 102 | 45 | 0 | 0 | 25 | 145 | 68 | 0 | 1627 |
| 8:15-9:15 | 0 | 52 | 280 | 42 | 1 | 0 | 97 | 451 | 183 | 0 | 0 | 113 | 97 | 44 | 0 | 0 | 27 | 114 | 68 | 0 | 1569 |
| 8:30-9:30 | 0 | 55 | 271 | 47 | 1 | 0 | 101 | 427 | 152 | 0 | 0 | 113 | 99 | 49 | 0 | 0 | 33 | 114 | 60 | 0 | 1522 |
| **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** | **59** | **312** | **27** | **1** | **0** | **93** | **534** | **234** | **0** | **0** | **93** | **117** | **48** | **0** | **0** | **27** | **161** | **63** | **0** | **1769** |

## Weekday Evening Peak Hour (4 pm - 7 pm)

| | MD 322 Northbound | | | | | MD 322 Southbound | | | | | Glebe Rd Eastbound | | | | | Glebe Rd 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 |
| 4:00-4:15 | 0 | 16 | 97 | 15 | 0 | 0 | 33 | 145 | 34 | 0 | 0 | 46 | 44 | 26 | 0 | 0 | 10 | 34 | 33 | 0 | 533 |
| 4:15-4:30 | 0 | 8 | 116 | 15 | 0 | 0 | 30 | 137 | 46 | 0 | 0 | 47 | 36 | 11 | 0 | 0 | 6 | 22 | 28 | 0 | 502 |
| 4:30-4:45 | 0 | 5 | 89 | 16 | 0 | 0 | 33 | 141 | 28 | 0 | 0 | 39 | 49 | 20 | 0 | 0 | 7 | 33 | 38 | 0 | 498 |
| 4:45-5:00 | 0 | 15 | 99 | 5 | 0 | 0 | 38 | 164 | 45 | 0 | 0 | 29 | 41 | 17 | 0 | 0 | 5 | 28 | 26 | 0 | 512 |
| 5:00-5:15 | 0 | 9 | 86 | 23 | 0 | 0 | 32 | 126 | 24 | 0 | 0 | 45 | 39 | 29 | 0 | 0 | 8 | 28 | 35 | 0 | 484 |
| 5:15-5:30 | 0 | 11 | 95 | 10 | 0 | 0 | 49 | 156 | 32 | 0 | 0 | 26 | 24 | 13 | 0 | 0 | 9 | 18 | 25 | 0 | 468 |
| 5:30-5:45 | 0 | 2 | 59 | 12 | 0 | 0 | 30 | 126 | 32 | 0 | 0 | 36 | 32 | 6 | 0 | 0 | 6 | 20 | 28 | 0 | 389 |
| 5:45-6:00 | 0 | 8 | 99 | 3 | 0 | 0 | 37 | 131 | 33 | 0 | 0 | 18 | 15 | 12 | 0 | 0 | 5 | 23 | 30 | 0 | 414 |
| 6:00-6:15 | 0 | 6 | 76 | 4 | 0 | 0 | 21 | 119 | 29 | 0 | 0 | 20 | 28 | 11 | 0 | 0 | 13 | 20 | 19 | 0 | 366 |
| 6:15-6:30 | 0 | 7 | 74 | 9 | 0 | 0 | 29 | 129 | 34 | 0 | 0 | 15 | 24 | 9 | 0 | 0 | 4 | 12 | 26 | 0 | 372 |
| 6:30-6:45 | 0 | 6 | 63 | 4 | 0 | 0 | 30 | 98 | 18 | 0 | 0 | 23 | 16 | 5 | 0 | 0 | 3 | 10 | 18 | 0 | 294 |
| 6:45-7:00 | 0 | 6 | 62 | 6 | 0 | 0 | 20 | 92 | 16 | 0 | 0 | 17 | 15 | 7 | 0 | 0 | 3 | 9 | 14 | 0 | 267 |
| **Hourly Totals** | | | | | | | | | | | | | | | | | | | | | |
| 4:00-5:00 | 0 | 44 | 401 | 51 | 0 | 0 | 134 | 587 | 153 | 0 | 0 | 161 | 170 | 74 | 0 | 0 | 28 | 117 | 125 | 0 | 2045 |
| 4:15-5:15 | 0 | 37 | 390 | 59 | 0 | 0 | 133 | 568 | 143 | 0 | 0 | 160 | 165 | 77 | 0 | 0 | 26 | 111 | 127 | 0 | 1996 |
| 4:30-5:30 | 0 | 40 | 369 | 54 | 0 | 0 | 152 | 587 | 129 | 0 | 0 | 139 | 153 | 79 | 0 | 0 | 29 | 107 | 124 | 0 | 1962 |
| 4:45-5:45 | 0 | 37 | 339 | 50 | 0 | 0 | 149 | 572 | 133 | 0 | 0 | 136 | 136 | 65 | 0 | 0 | 28 | 94 | 114 | 0 | 1853 |
| 5:00-6:00 | 0 | 30 | 339 | 48 | 0 | 0 | 148 | 539 | 121 | 0 | 0 | 125 | 110 | 60 | 0 | 0 | 28 | 89 | 118 | 0 | 1755 |
| 5:15-6:15 | 0 | 27 | 329 | 29 | 0 | 0 | 137 | 532 | 126 | 0 | 0 | 100 | 99 | 42 | 0 | 0 | 33 | 81 | 102 | 0 | 1637 |
| 5:30-6:30 | 0 | 23 | 308 | 28 | 0 | 0 | 117 | 505 | 128 | 0 | 0 | 89 | 99 | 38 | 0 | 0 | 28 | 75 | 103 | 0 | 1541 |
| 5:45-6:45 | 0 | 27 | 312 | 20 | 0 | 0 | 117 | 477 | 114 | 0 | 0 | 76 | 83 | 37 | 0 | 0 | 25 | 65 | 93 | 0 | 1446 |
| 6:00-7:00 | 0 | 25 | 275 | 23 | 0 | 0 | 100 | 438 | 97 | 0 | 0 | 75 | 83 | 32 | 0 | 0 | 23 | 51 | 77 | 0 | 1299 |
| **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** | **44** | **401** | **51** | **0** | **0** | **134** | **587** | **153** | **0** | **0** | **161** | **170** | **74** | **0** | **0** | **28** | **117** | **125** | **0** | **2045** |

Peak Hour
Turning Movement Count


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


**Intersection:** MD 322 & Glebe Rd
**Weather:** Clear
**Count by:** Count Cam DSS
**Count Day/Date:** Friday, September 20, 2024
**Jurisdiction:** Talbot County

Weekend Peak Hour (10:00 am - 2:00 pm)

| | MD 322 Northbound | | | | | MD 322 Southbound | | | | | Glebe Rd Eastbound | | | | | Glebe Rd 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 | 9 | 72 | 4 | 0 | 0 | 38 | 100 | 27 | 0 | 0 | 25 | 16 | 8 | 0 | 0 | 4 | 20 | 18 | 0 | 341 |
| 10:15-10:30 | 0 | 4 | 79 | 13 | 0 | 0 | 29 | 110 | 17 | 0 | 0 | 18 | 16 | 9 | 0 | 0 | 3 | 29 | 30 | 0 | 357 |
| 10:30-10:45 | 0 | 10 | 70 | 9 | 0 | 0 | 32 | 94 | 29 | 0 | 0 | 24 | 29 | 3 | 0 | 0 | 7 | 23 | 41 | 0 | 371 |
| 10:45-11:00 | 0 | 12 | 70 | 11 | 0 | 0 | 54 | 116 | 31 | 0 | 0 | 18 | 31 | 6 | 0 | 0 | 7 | 31 | 32 | 0 | 419 |
| 11:00-11:15 | 0 | 4 | 76 | 8 | 0 | 0 | 26 | 127 | 21 | 0 | 0 | 21 | 27 | 7 | 0 | 0 | 6 | 23 | 35 | 0 | 381 |
| 11:15-11:30 | 0 | 9 | 74 | 15 | 0 | 0 | 48 | 124 | 35 | 0 | 0 | 20 | 24 | 9 | 0 | 0 | 7 | 36 | 29 | 0 | 430 |
| 11:30-11:45 | 0 | 6 | 72 | 12 | 0 | 0 | 38 | 117 | 28 | 0 | 0 | 28 | 25 | 11 | 0 | 0 | 13 | 34 | 30 | 0 | 414 |
| 11:45-12:00 | 0 | 9 | 105 | 10 | 0 | 0 | 31 | 119 | 30 | 0 | 0 | 28 | 32 | 8 | 0 | 0 | 8 | 28 | 28 | 0 | 436 |
| 12:00-12:15 | 0 | 9 | 87 | 9 | 1 | 0 | 50 | 130 | 43 | 0 | 0 | 20 | 37 | 19 | 0 | 0 | 10 | 29 | 31 | 0 | 474 |
| 12:15-12:30 | 0 | 4 | 73 | 20 | 1 | 0 | 36 | 113 | 34 | 0 | 0 | 32 | 22 | 10 | 0 | 0 | 12 | 20 | 29 | 0 | 405 |
| 12:30-12:45 | 0 | 3 | 66 | 21 | 0 | 0 | 38 | 129 | 28 | 0 | 0 | 24 | 28 | 4 | 0 | 0 | 9 | 31 | 33 | 0 | 414 |
| 12:45-1:00 | 0 | 7 | 102 | 19 | 0 | 0 | 30 | 98 | 27 | 0 | 0 | 28 | 33 | 12 | 0 | 0 | 12 | 23 | 39 | 0 | 430 |
| 1:00-1:15 | 0 | 7 | 83 | 17 | 0 | 0 | 32 | 93 | 23 | 0 | 0 | 21 | 32 | 10 | 0 | 0 | 5 | 26 | 26 | 0 | 375 |
| 1:15-1:30 | 0 | 5 | 76 | 7 | 0 | 0 | 33 | 85 | 21 | 0 | 0 | 28 | 23 | 7 | 0 | 0 | 13 | 29 | 26 | 0 | 353 |
| 1:30-1:45 | 0 | 3 | 83 | 17 | 0 | 0 | 28 | 113 | 22 | 0 | 0 | 23 | 24 | 12 | 0 | 0 | 9 | 36 | 38 | 0 | 408 |
| 1:45-2:00 | 0 | 7 | 107 | 14 | 0 | 0 | 40 | 115 | 27 | 0 | 0 | 25 | 24 | 3 | 0 | 0 | 11 | 26 | 28 | 0 | 427 |

| Hourly Totals | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10:00-11:00 | 0 | 35 | 291 | 37 | 0 | 0 | 153 | 420 | 104 | 0 | 0 | 85 | 92 | 26 | 0 | 0 | 21 | 103 | 121 | 0 | 1488 |
| 10:15-11:15 | 0 | 30 | 295 | 41 | 0 | 0 | 141 | 447 | 98 | 0 | 0 | 81 | 103 | 25 | 0 | 0 | 23 | 106 | 138 | 0 | 1528 |
| 10:30-11:30 | 0 | 35 | 290 | 43 | 0 | 0 | 160 | 461 | 116 | 0 | 0 | 83 | 111 | 25 | 0 | 0 | 27 | 113 | 137 | 0 | 1601 |
| 10:45-11:45 | 0 | 31 | 292 | 46 | 0 | 0 | 166 | 484 | 115 | 0 | 0 | 87 | 107 | 33 | 0 | 0 | 33 | 124 | 126 | 0 | 1644 |
| 11:00-12:00 | 0 | 28 | 327 | 45 | 0 | 0 | 143 | 487 | 114 | 0 | 0 | 97 | 108 | 35 | 0 | 0 | 34 | 121 | 122 | 0 | 1661 |
| 11:15-12:15 | 0 | 33 | 338 | 46 | 1 | 0 | 167 | 490 | 136 | 0 | 0 | 96 | 118 | 47 | 0 | 0 | 38 | 127 | 118 | 0 | 1755 |
| 11:30-12:30 | 0 | 28 | 337 | 51 | 2 | 0 | 155 | 479 | 135 | 0 | 0 | 108 | 116 | 48 | 0 | 0 | 43 | 111 | 118 | 0 | 1731 |
| 11:45-12:45 | 0 | 25 | 331 | 60 | 2 | 0 | 155 | 491 | 135 | 0 | 0 | 104 | 119 | 41 | 0 | 0 | 39 | 108 | 121 | 0 | 1731 |
| 12:00-1:00 | 0 | 23 | 328 | 69 | 2 | 0 | 154 | 470 | 132 | 0 | 0 | 104 | 120 | 45 | 0 | 0 | 43 | 103 | 132 | 0 | 1725 |
| 12:15-1:15 | 0 | 21 | 324 | 77 | 1 | 0 | 136 | 433 | 112 | 0 | 0 | 105 | 115 | 36 | 0 | 0 | 38 | 100 | 127 | 0 | 1625 |
| 12:30-1:30 | 0 | 22 | 327 | 64 | 0 | 0 | 133 | 405 | 99 | 0 | 0 | 101 | 116 | 33 | 0 | 0 | 39 | 109 | 124 | 0 | 1572 |
| 12:45-1:45 | 0 | 22 | 344 | 60 | 0 | 0 | 123 | 389 | 93 | 0 | 0 | 100 | 112 | 41 | 0 | 0 | 39 | 114 | 129 | 0 | 1566 |
| 1:00-2:00 | 0 | 22 | 349 | 55 | 0 | 0 | 133 | 406 | 93 | 0 | 0 | 97 | 103 | 32 | 0 | 0 | 38 | 117 | 118 | 0 | 1563 |
| **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** |
| **11:15-12:15** | **0** | **33** | **338** | **46** | **1** | **0** | **167** | **490** | **136** | **0** | **0** | **96** | **118** | **47** | **0** | **0** | **38** | **127** | **118** | **0** | **1755** |

Peak Hour
Turning Movement Count


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


**Intersection:** MD 322 & Glebe Rd
**Weather:** Clear
**Count by:** Count Cam DSS
**Count Day/Date:** Saturday, September 21, 2024
**County:** Talbot County

## Weekday Morning Peak Hour (6:30 am - 9:30 am)

| | Longwoods Rd Northbound | | | | | Longwoods Rd Southbound | | | | | Hailem School Rd Eastbound | | | | | N/A 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 |
| 6:30-6:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 6:45-7:00 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 5 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 7:00-7:15 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 7:15-7:30 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 7:30-7:45 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 7:45-8:00 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 7 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| 8:00-8:15 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| 8:15-8:30 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| 8:30-8:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 11 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 8:45-9:00 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 4 | 5 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 9:00-9:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 9:15-9:30 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 6 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |

| Hourly Totals | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6:30-7:30 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 7 | 19 | 0 | 0 | 14 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 48 |
| 6:45-7:45 | 0 | 4 | 5 | 0 | 0 | 0 | 0 | 6 | 19 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |
| 7:00-8:00 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 5 | 21 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 |
| 7:15-8:15 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 6 | 23 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 |
| 7:30-8:30 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 10 | 24 | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 62 |
| 7:45-8:45 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 10 | 32 | 0 | 0 | 21 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 70 |
| 8:00-9:00 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 11 | 30 | 0 | 0 | 17 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 67 |
| 8:15-9:15 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 11 | 29 | 0 | 0 | 15 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 65 |
| 8:30-9:30 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 9 | 28 | 0 | 0 | 14 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 62 |

| 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** |
| **7:45-8:45** | **0** | **3** | **1** | **0** | **0** | **0** | **0** | **10** | **32** | **0** | **0** | **21** | **0** | **3** | **0** | **0** | **0** | **0** | **0** | **0** | **70** |

## Weekday Evening Peak Hour (4 pm - 7 pm)

| | Longwoods Rd Northbound | | | | | Longwoods Rd Southbound | | | | | Hailem School Rd Eastbound | | | | | N/A 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 |
| 4:00-4:15 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 4 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 4:15-4:30 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 4 | 0 | 0 | 8 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| 4:30-4:45 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 5 | 4 | 0 | 0 | 7 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 4:45-5:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 0 | 0 | 5 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 5:00-5:15 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| 5:15-5:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 0 | 0 | 7 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 5:30-5:45 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 2 | 6 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 5:45-6:00 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 8 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 6:00-6:15 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 7 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 6:15-6:30 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 6:30-6:45 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 6:45-7:00 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |

| Hourly Totals | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4:00-5:00 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 14 | 14 | 0 | 0 | 24 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 72 |
| 4:15-5:15 | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 12 | 16 | 0 | 0 | 31 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 77 |
| 4:30-5:30 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 11 | 17 | 0 | 0 | 30 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 72 |
| 4:45-5:45 | 0 | 4 | 5 | 0 | 0 | 0 | 0 | 8 | 19 | 0 | 0 | 32 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 72 |
| 5:00-6:00 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 5 | 24 | 0 | 0 | 29 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 69 |
| 5:15-6:15 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 7 | 26 | 0 | 0 | 24 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 66 |
| 5:30-6:30 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 6 | 24 | 0 | 0 | 21 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 60 |
| 5:45-6:45 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 4 | 18 | 0 | 0 | 15 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 43 |
| 6:00-7:00 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 3 | 12 | 0 | 0 | 16 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |

| 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** |
| **4:15-5:15** | **0** | **5** | **3** | **0** | **0** | **0** | **0** | **12** | **16** | **0** | **0** | **31** | **0** | **10** | **0** | **0** | **0** | **0** | **0** | **0** | **77** |

Peak Hour
Turning Movement Count

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

**Intersection:** Longwoods Rd & Hailem School Rd
**Weather:** Clear
**Count by:** Count Cam DSS
**Count Day/Date:** Friday, December 6, 2024
**Jurisdiction:** Talbot County

| Weekend Peak Hour (10:00 am - 2:00 pm) | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Longwoods Rd Northbound | | | | | Longwoods Rd Southbound | | | | | Hailem School Rd Eastbound | | | | | N/A 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 | 3 | 1 | 0 | 0 | 0 | 0 | 3 | 5 | 0 | 0 | 7 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| 10:15-10:30 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 10:30-10:45 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 10:45-11:00 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 4 | 7 | 0 | 0 | 6 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 11:00-11:15 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| 11:15-11:30 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 11:30-11:45 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 7 | 4 | 0 | 0 | 10 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| 11:45-12:00 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 0 | 0 | 6 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 12:00-12:15 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 7 | 0 | 0 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| 12:15-12:30 | 0 | 5 | 4 | 0 | 0 | 0 | 0 | 2 | 5 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| 12:30-12:45 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 6 | 4 | 0 | 0 | 5 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| 12:45-1:00 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 7 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| 1:00-1:15 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 5 | 0 | 0 | 7 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 1:15-1:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 0 | 0 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 1:30-1:45 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 1:45-2:00 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 7 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| **Hourly Totals** | | | | | | | | | | | | | | | | | | | | | |
| 10:00-11:00 | 0 | 9 | 2 | 0 | 0 | 0 | 0 | 9 | 22 | 0 | 0 | 23 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 70 |
| 10:15-11:15 | 0 | 7 | 5 | 0 | 0 | 0 | 0 | 7 | 22 | 0 | 0 | 24 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 70 |
| 10:30-11:30 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 8 | 19 | 0 | 0 | 25 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 69 |
| 10:45-11:45 | 0 | 3 | 7 | 0 | 0 | 0 | 0 | 14 | 19 | 0 | 0 | 29 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 81 |
| 11:00-12:00 | 0 | 4 | 6 | 0 | 0 | 0 | 0 | 13 | 21 | 0 | 0 | 29 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 83 |
| 11:15-12:15 | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 14 | 23 | 0 | 0 | 29 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 84 |
| 11:30-12:30 | 0 | 10 | 6 | 0 | 0 | 0 | 0 | 14 | 25 | 0 | 0 | 33 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 97 |
| 11:45-12:45 | 0 | 13 | 7 | 0 | 0 | 0 | 0 | 13 | 25 | 0 | 0 | 28 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 93 |
| 12:00-1:00 | 0 | 11 | 8 | 0 | 0 | 0 | 0 | 13 | 23 | 0 | 0 | 30 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 89 |
| 12:15-1:15 | 0 | 10 | 8 | 0 | 0 | 0 | 0 | 15 | 21 | 0 | 0 | 29 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 87 |
| 12:30-1:30 | 0 | 5 | 4 | 0 | 0 | 0 | 0 | 15 | 21 | 0 | 0 | 25 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 75 |
| 12:45-1:45 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 9 | 20 | 0 | 0 | 30 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 67 |
| 1:00-2:00 | 0 | 2 | 6 | 0 | 0 | 0 | 0 | 10 | 15 | 0 | 0 | 29 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 66 |
| **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** | **10** | **6** | **0** | **0** | **0** | **0** | **14** | **25** | **0** | **0** | **33** | **0** | **9** | **0** | **0** | **0** | **0** | **0** | **0** | **97** |

Peak Hour
Turning Movement Count

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

**Intersection:** Longwoods Rd & Hailem School Rd
**Weather:** Clear
**Count by:** Count Cam DSS
**Count Day/Date:** Saturday, December 7, 2024
**County:** Talbot County

## Weekday Morning Peak Hour (6:30 am - 9:30 am)

| | Goldsborough Neck Rd Northbound | | | | | Goldsborough Neck Rd Southbound | | | | | N/A Eastbound | | | | | Hailem School Rd 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 |
| 6:30-6:45 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 11 |
| 6:45-7:00 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 11 |
| 7:00-7:15 | 0 | 0 | 1 | 3 | 0 | 0 | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 14 |
| 7:15-7:30 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 17 |
| 7:30-7:45 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 11 |
| 7:45-8:00 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 13 |
| 8:00-8:15 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 22 |
| 8:15-8:30 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 15 |
| 8:30-8:45 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 10 |
| 8:45-9:00 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 11 |
| 9:00-9:15 | 0 | 0 | 6 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 17 |
| 9:15-9:30 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 10 |
| **Hourly Totals** | | | | | | | | | | | | | | | | | | | | | |
| 6:30-7:30 | 0 | 0 | 3 | 11 | 0 | 0 | 2 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 53 |
| 6:45-7:45 | 0 | 0 | 7 | 11 | 0 | 0 | 1 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 53 |
| 7:00-8:00 | 0 | 0 | 10 | 10 | 0 | 0 | 1 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 55 |
| 7:15-8:15 | 0 | 0 | 10 | 9 | 0 | 0 | 1 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 0 | 0 | 63 |
| 7:30-8:30 | 0 | 0 | 12 | 11 | 0 | 0 | 1 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 0 | 0 | 61 |
| 7:45-8:45 | 0 | 0 | 9 | 10 | 0 | 0 | 1 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 0 | 0 | 60 |
| 8:00-9:00 | 0 | 0 | 6 | 11 | 0 | 0 | 1 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 58 |
| 8:15-9:15 | 0 | 0 | 11 | 14 | 0 | 0 | 1 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 1 | 0 | 53 |
| 8:30-9:30 | 0 | 0 | 8 | 14 | 0 | 0 | 1 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 2 | 0 | 48 |
| **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** | **10** | **9** | **0** | **0** | **1** | **14** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **29** | **0** | **0** | **0** | **63** |

## Weekday Evening Peak Hour (4 pm - 7 pm)

| | Goldsborough Neck Rd Northbound | | | | | Goldsborough Neck Rd Southbound | | | | | N/A Eastbound | | | | | Hailem School Rd 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 |
| 4:00-4:15 | 0 | 0 | 5 | 12 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 26 |
| 4:15-4:30 | 0 | 0 | 5 | 7 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 19 |
| 4:30-4:45 | 0 | 0 | 1 | 10 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 20 |
| 4:45-5:00 | 0 | 0 | 5 | 13 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 26 |
| 5:00-5:15 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 22 |
| 5:15-5:30 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 11 |
| 5:30-5:45 | 0 | 0 | 3 | 6 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 23 |
| 5:45-6:00 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 18 |
| 6:00-6:15 | 0 | 0 | 4 | 3 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 13 |
| 6:15-6:30 | 0 | 0 | 1 | 10 | 0 | 0 | 1 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 26 |
| 6:30-6:45 | 0 | 0 | 3 | 1 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 13 |
| 6:45-7:00 | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 9 |
| **Hourly Totals** | | | | | | | | | | | | | | | | | | | | | |
| 4:00-5:00 | 0 | 0 | 16 | 42 | 0 | 0 | 1 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 2 | 0 | 91 |
| 4:15-5:15 | 0 | 0 | 18 | 37 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 2 | 0 | 87 |
| 4:30-5:30 | 0 | 0 | 16 | 33 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 2 | 0 | 79 |
| 4:45-5:45 | 0 | 0 | 18 | 29 | 0 | 0 | 1 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 2 | 0 | 82 |
| 5:00-6:00 | 0 | 0 | 16 | 19 | 0 | 0 | 1 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 1 | 0 | 74 |
| 5:15-6:15 | 0 | 0 | 13 | 15 | 0 | 0 | 2 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 65 |
| 5:30-6:30 | 0 | 0 | 11 | 22 | 0 | 0 | 3 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 3 | 0 | 80 |
| 5:45-6:45 | 0 | 0 | 11 | 17 | 0 | 0 | 3 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 3 | 0 | 70 |
| 6:00-7:00 | 0 | 0 | 10 | 16 | 0 | 0 | 4 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 3 | 0 | 61 |
| **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** | **16** | **42** | **0** | **0** | **1** | **10** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **20** | **0** | **2** | **0** | **91** |

Peak Hour
Turning Movement Count


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


**Intersection:** Goldsborough Neck Rd & Hailem School Rd
**Weather:** Clear
**Count by:** Count Cam DSS
**Count Day/Date:** Friday, January 31, 2025
**Jurisdiction:** Talbot County

Weekend Peak Hour (10:00 am - 2:00 pm)

| | Goldsborough Neck Rd Northbound | | | | | Goldsborough Neck Rd Southbound | | | | | N/A Eastbound | | | | | Hailem School Rd 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 | 8 | 6 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 23 |
| 10:15-10:30 | 0 | 0 | 3 | 4 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 18 |
| 10:30-10:45 | 1 | 0 | 4 | 9 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 22 |
| 10:45-11:00 | 0 | 0 | 6 | 2 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 22 |
| 11:00-11:15 | 0 | 0 | 4 | 3 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 1 | 0 | 20 |
| 11:15-11:30 | 0 | 0 | 1 | 10 | 0 | 0 | 1 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 31 |
| 11:30-11:45 | 0 | 0 | 4 | 10 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 25 |
| 11:45-12:00 | 0 | 0 | 5 | 9 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 25 |
| 12:00-12:15 | 0 | 0 | 3 | 8 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 22 |
| 12:15-12:30 | 0 | 0 | 3 | 6 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 23 |
| 12:30-12:45 | 0 | 0 | 3 | 8 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 16 |
| 12:45-1:00 | 0 | 0 | 4 | 9 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 24 |
| 1:00-1:15 | 0 | 0 | 3 | 6 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 18 |
| 1:15-1:30 | 0 | 0 | 1 | 9 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 17 |
| 1:30-1:45 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 13 |
| 1:45-2:00 | 0 | 0 | 3 | 4 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 14 |
| **Hourly Totals** | | | | | | | | | | | | | | | | | | | | | |
| 10:00-11:00 | 1 | 0 | 21 | 21 | 0 | 0 | 1 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 1 | 0 | 85 |
| 10:15-11:15 | 1 | 0 | 17 | 18 | 0 | 0 | 2 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 2 | 0 | 82 |
| 10:30-11:30 | 1 | 0 | 15 | 24 | 0 | 0 | 3 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 2 | 0 | 95 |
| 10:45-11:45 | 0 | 0 | 15 | 25 | 0 | 0 | 2 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 2 | 0 | 98 |
| 11:00-12:00 | 0 | 0 | 14 | 32 | 0 | 0 | 2 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 2 | 0 | 101 |
| 11:15-12:15 | 0 | 0 | 13 | 37 | 0 | 0 | 1 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 1 | 0 | 103 |
| 11:30-12:30 | 0 | 0 | 15 | 33 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 1 | 0 | 95 |
| 11:45-12:45 | 0 | 0 | 14 | 31 | 0 | 0 | 1 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 1 | 0 | 86 |
| 12:00-1:00 | 0 | 0 | 13 | 31 | 0 | 0 | 1 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 0 | 0 | 85 |
| 12:15-1:15 | 0 | 0 | 13 | 29 | 0 | 0 | 1 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 81 |
| 12:30-1:30 | 0 | 0 | 11 | 32 | 0 | 0 | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 1 | 0 | 75 |
| 12:45-1:45 | 0 | 0 | 10 | 28 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 1 | 0 | 72 |
| 1:00-2:00 | 0 | 0 | 9 | 23 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 2 | 0 | 62 |
| **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** |
| **11:15-12:15** | **0** | **0** | **13** | **37** | **0** | **0** | **1** | **23** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **28** | **0** | **1** | **0** | **103** |

Peak Hour
Turning Movement Count

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

**Intersection:** Goldsborough Neck Rd & Hailem School Rd
**Weather:** Clear
**Count by:** Count Cam DSS
**Count Day/Date:** Saturday, February 1, 2025
**County:** Talbot County

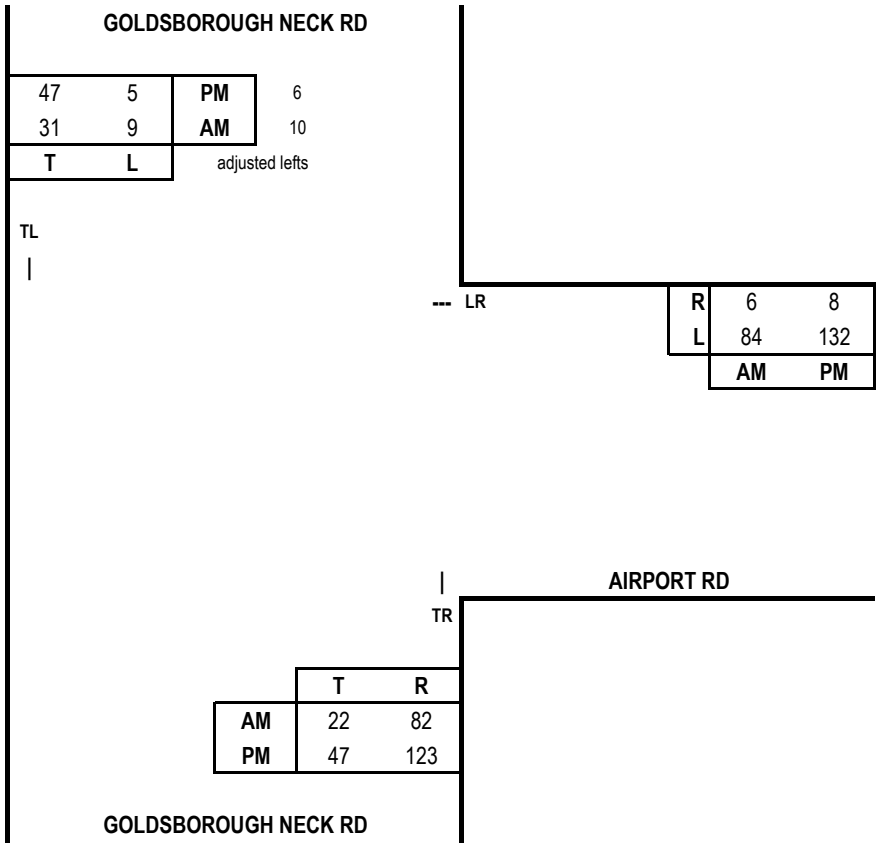
# Appendix B

Level of Service (LOS) Worksheets

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Airport Rd
**Analyst:** Lenhart Traffic
**Conditions:** Existing Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| WB | 90 | 1.00 | 90 | | | | 90 |
| NB | 104 | 1.00 | 104 | 9 | 1.00 | 9 | 113 |
| SB | 41 | 1.00 | 41 | | | | |

CLV TOTAL= **203**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| WB | 140 | 1.00 | 140 | | | | 140 |
| NB | 170 | 1.00 | 170 | 5 | 1.00 | 5 | 175 |
| SB | 53 | 1.00 | 53 | | | | |

CLV TOTAL= **315**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis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645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com


N

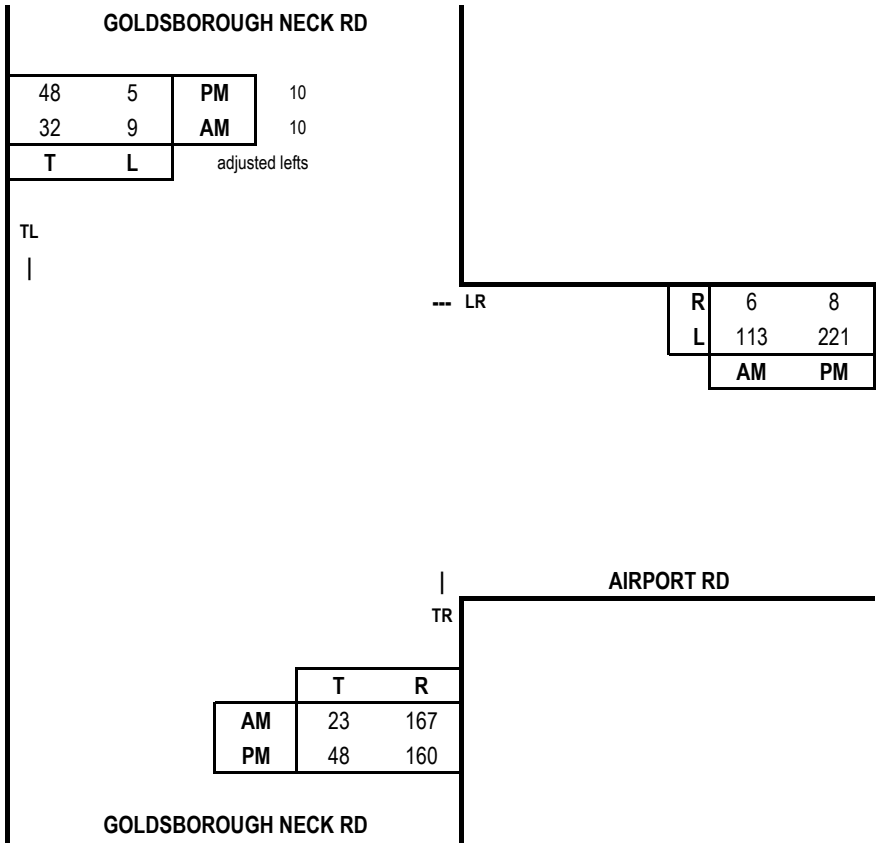
Goldsborough Neck Rd &
Airport Rd
(Existing Traffic)

**Intersection**
**2**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Airport Rd
**Analyst:** Lenhart Traffic
**Conditions:** Background Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| WB | 119 | 1.00 | 119 | | | | 119 |
| NB | 190 | 1.00 | 190 | 9 | 1.00 | 9 | 199 |
| SB | 42 | 1.00 | 42 | | | | |

CLV TOTAL= **318**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| WB | 229 | 1.00 | 229 | | | | 229 |
| NB | 208 | 1.00 | 208 | 5 | 1.00 | 5 | 213 |
| SB | 58 | 1.00 | 58 | | | | |

CLV TOTAL= **442**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis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www.lenharttraffic.com


Goldsborough Neck Rd & Airport Rd
(Background Traffic)

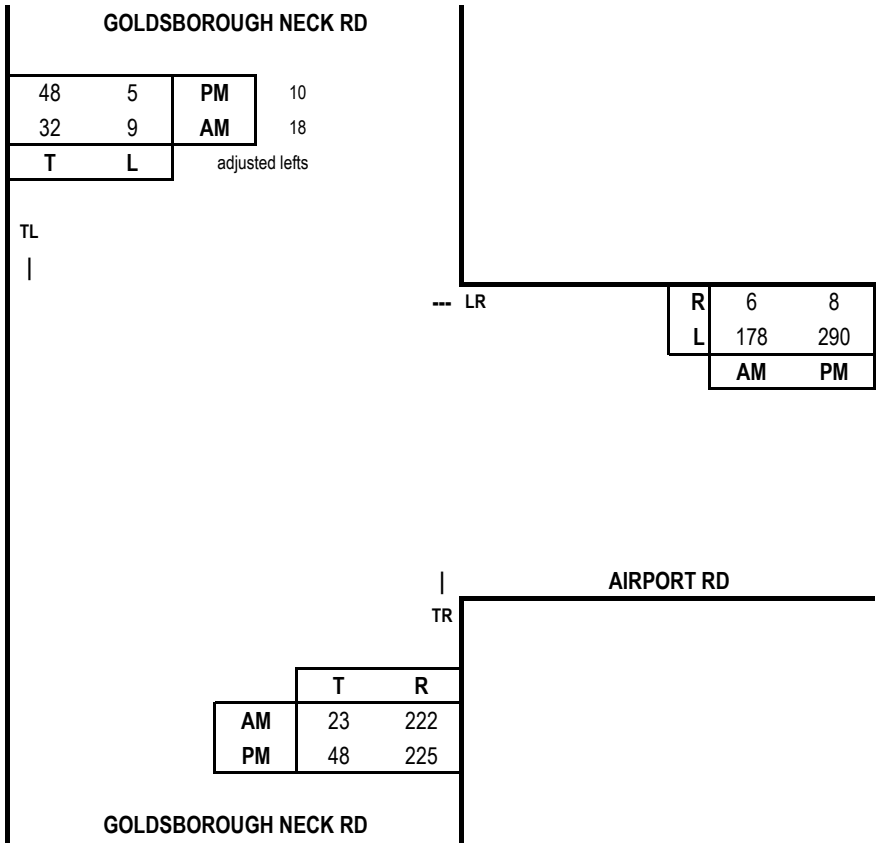
**Intersection 2**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Airport Rd
**Conditions:** Total Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| WB | 184 | 1.00 | 184 | | | | 184 |
| NB | 245 | 1.00 | 245 | 9 | 1.00 | 9 | 254 |
| SB | 50 | 1.00 | 50 | | | | |

CLV TOTAL= **438**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| WB | 298 | 1.00 | 298 | | | | 298 |
| NB | 273 | 1.00 | 273 | 5 | 1.00 | 5 | 278 |
| SB | 58 | 1.00 | 58 | | | | |

CLV TOTAL= **576**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis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645 BALTIMORE ANNAPOLIS BLVD, SUITE 214
SEVERNA PARK, MD 21146
www.lenharttraffic.com


N

Goldsborough Neck Rd &
Airport Rd
(Total Traffic)

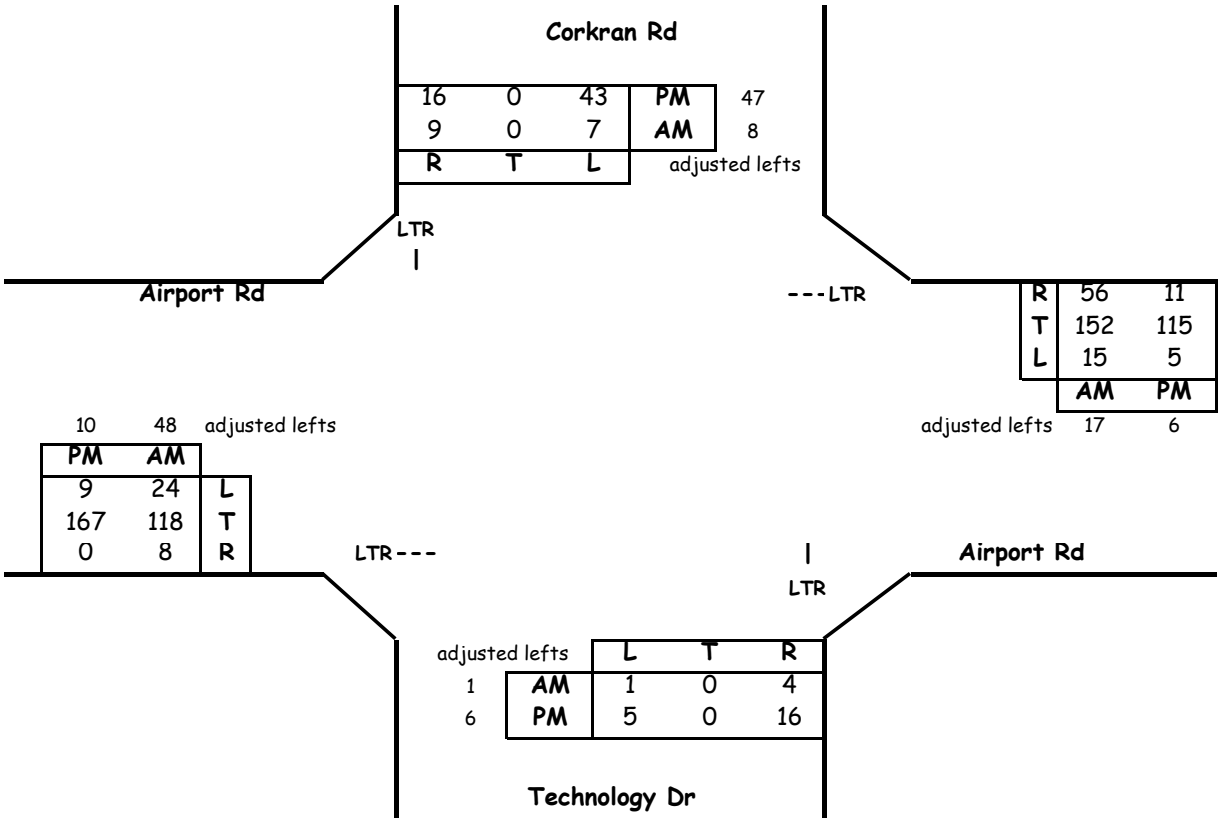
**Intersection**
**2**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** Airport Rd
**Minor Street:** Technology Dr
**Study Period:** Existing Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| NB | 5 | 1.00 | 5 | 7 | 1 | 7 | 18 |
| SB | 17 | 1.00 | 17 | 1 | 1 | 1 | |
| EB | 174 | 1 | 174 | 15 | 1 | 15 | 249 |
| WB | 225 | 1 | 225 | 24 | 1 | 24 | |

CLV TOTAL= **267**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| NB | 22 | 1.00 | 22 | 43 | 1 | 43 | 68 |
| SB | 63 | 1.00 | 63 | 5 | 1 | 5 | |
| EB | 177 | 1 | 177 | 5 | 1 | 5 | 182 |
| WB | 132 | 1 | 132 | 9 | 1 | 9 | |

CLV TOTAL= **250**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis


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


Airport Rd &
Technology Dr
(Existing Traffic)

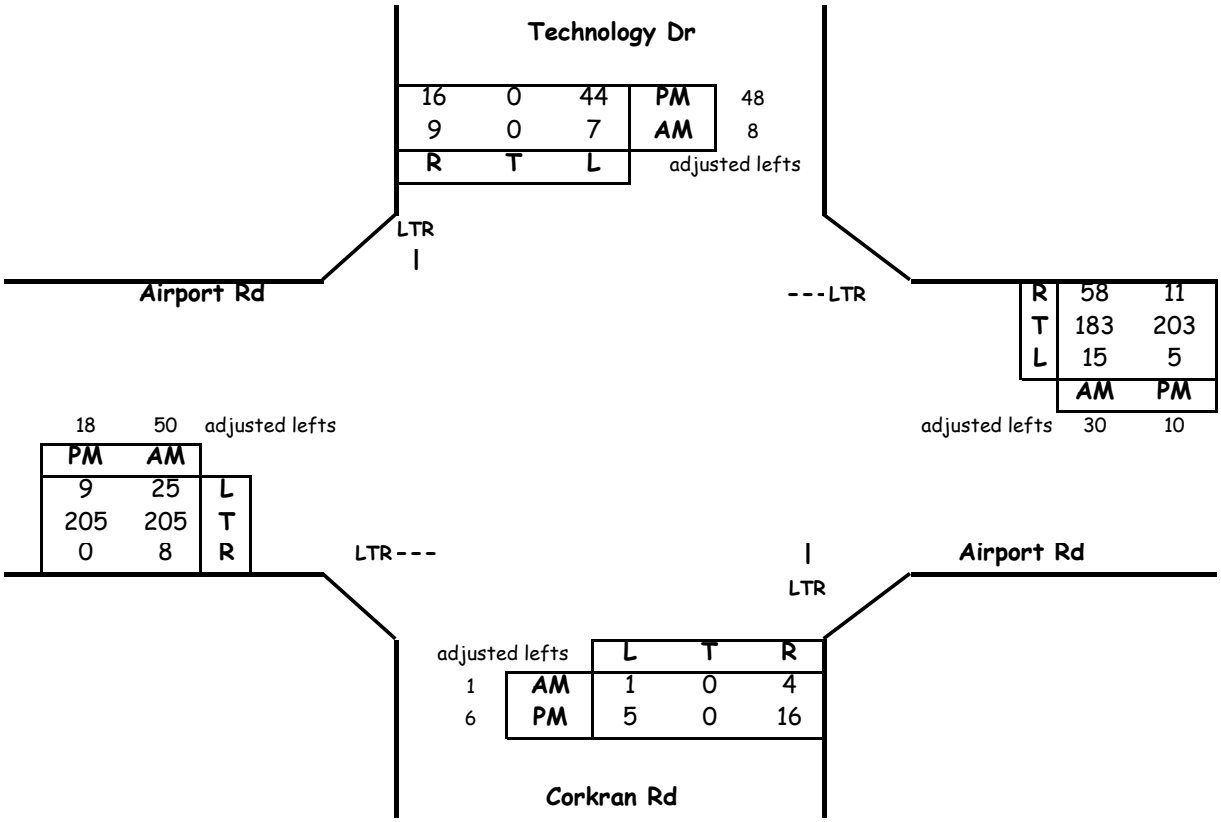
**Intersection**
**3**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** Airport Rd
**Minor Street:** Technology Dr
**Study Period:** Background Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| NB | 5 | 1.00 | 5 | 7 | 1 | 7 | 18 |
| SB | 17 | 1.00 | 17 | 1 | 1 | 1 | |
| EB | 263 | 1 | 263 | 15 | 1 | 15 | 296 |
| WB | 271 | 1 | 271 | 25 | 1 | 25 | |

CLV TOTAL= **314**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| NB | 22 | 1.00 | 22 | 44 | 1 | 44 | 69 |
| SB | 64 | 1.00 | 64 | 5 | 1 | 5 | |
| EB | 223 | 1 | 223 | 5 | 1 | 5 | 233 |
| WB | 224 | 1 | 224 | 9 | 1 | 9 | |

CLV TOTAL= **302**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis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Airport Rd & Technology Dr
(Background Traffic)

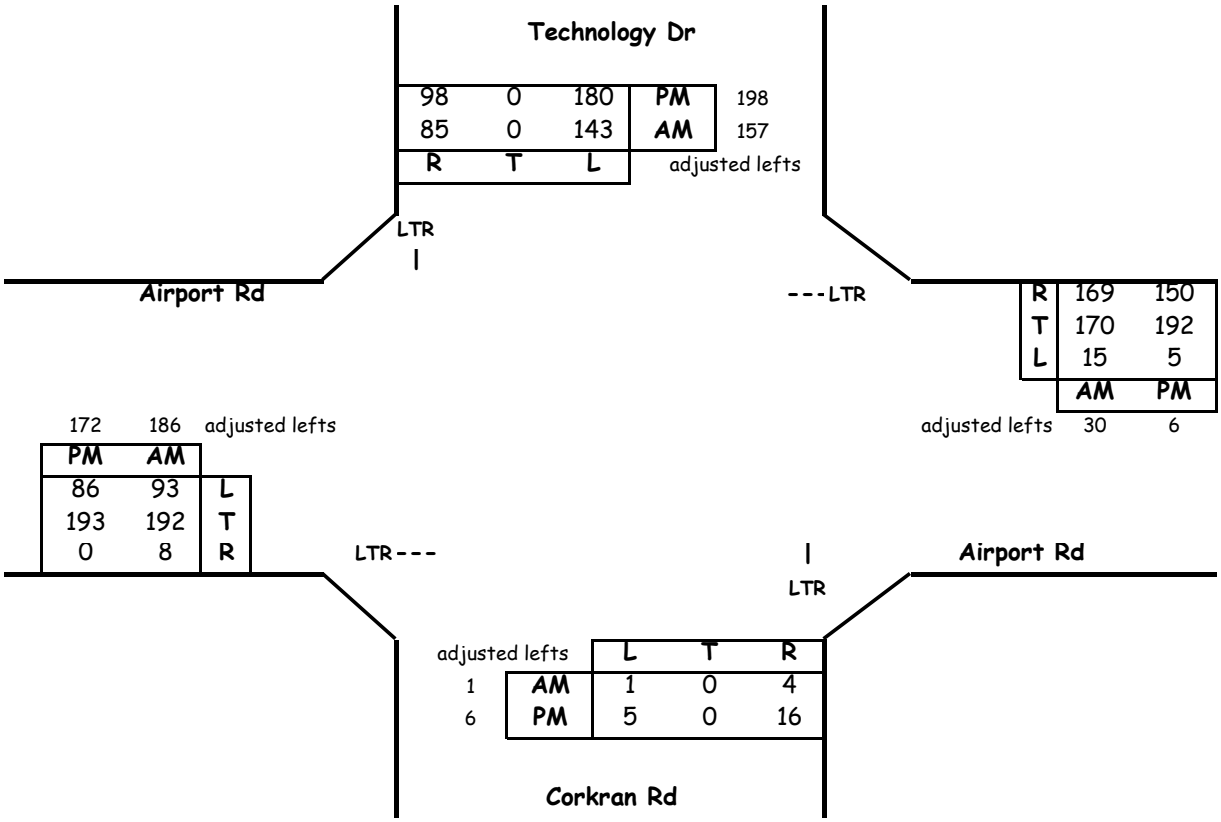
**Intersection 3**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** Airport Rd
**Minor Street:** Technology Dr
**Study Period:** Total Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| NB | 5 | 1.00 | 5 | 143 | 1 | 143 | 243 |
| SB | 242 | 1.00 | 242 | 1 | 1 | 1 | |
| EB | 386 | 1 | 386 | 15 | 1 | 15 | 462 |
| WB | 369 | 1 | 369 | 93 | 1 | 93 | |

CLV TOTAL= **705**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| NB | 22 | 1.00 | 22 | 180 | 1 | 180 | 301 |
| SB | 296 | 1.00 | 296 | 5 | 1 | 5 | |
| EB | 365 | 1 | 365 | 5 | 1 | 5 | 434 |
| WB | 348 | 1 | 348 | 86 | 1 | 86 | |

CLV TOTAL= **735**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis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Technology Dr
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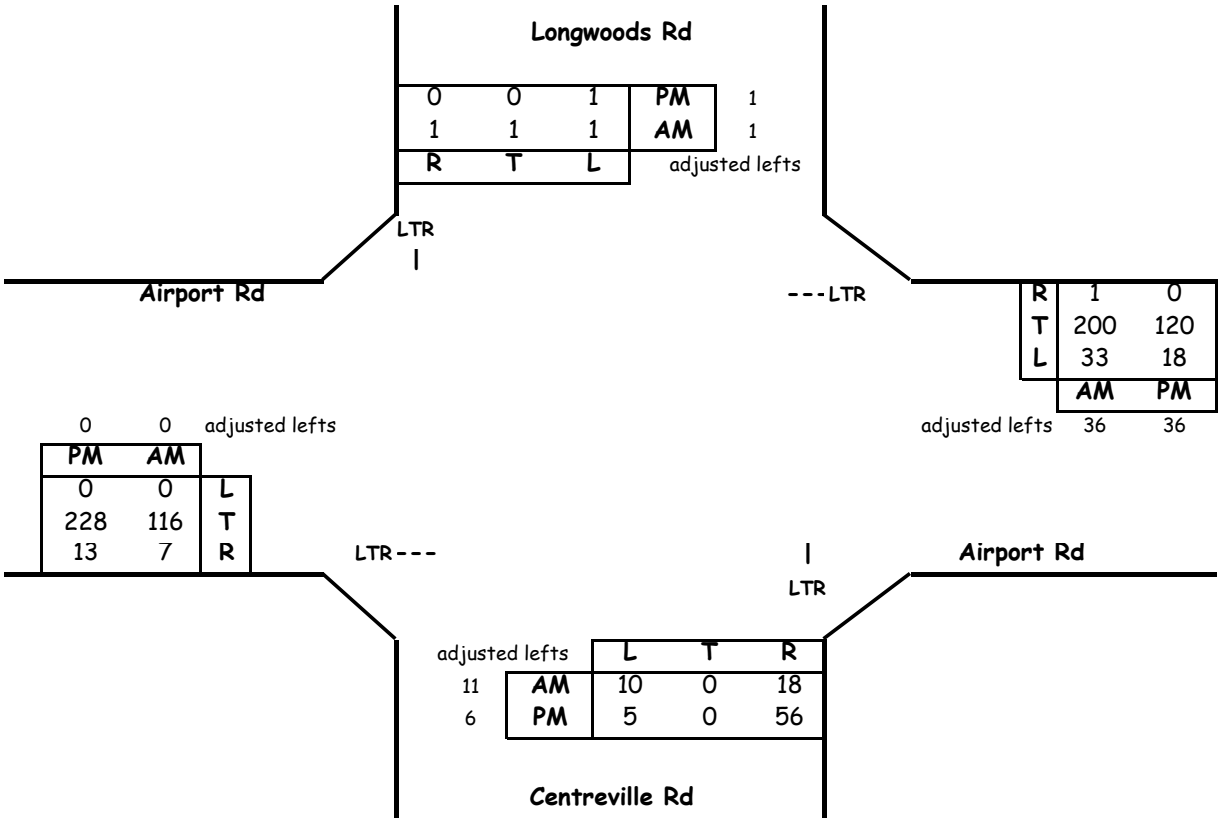
**Intersection**
**3**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** Airport Rd
**Minor Street:** Centreville Rd
**Study Period:** Existing Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| NB | 29 | 1.00 | 29 | 1 | 1 | 1 | 30 |
| SB | 3 | 1.00 | 3 | 10 | 1 | 10 | |
| EB | 123 | 1 | 123 | 33 | 1 | 33 | 237 |
| WB | 237 | 1 | 237 | 0 | 1 | 0 | |

CLV TOTAL= **267**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| NB | 62 | 1.00 | 62 | 1 | 1 | 1 | 63 |
| SB | 1 | 1.00 | 1 | 5 | 1 | 5 | |
| EB | 241 | 1 | 241 | 18 | 1 | 18 | 259 |
| WB | 156 | 1 | 156 | 0 | 1 | 0 | |

CLV TOTAL= **322**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis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Airport Rd &
Centreville Rd
(Existing Traffic)

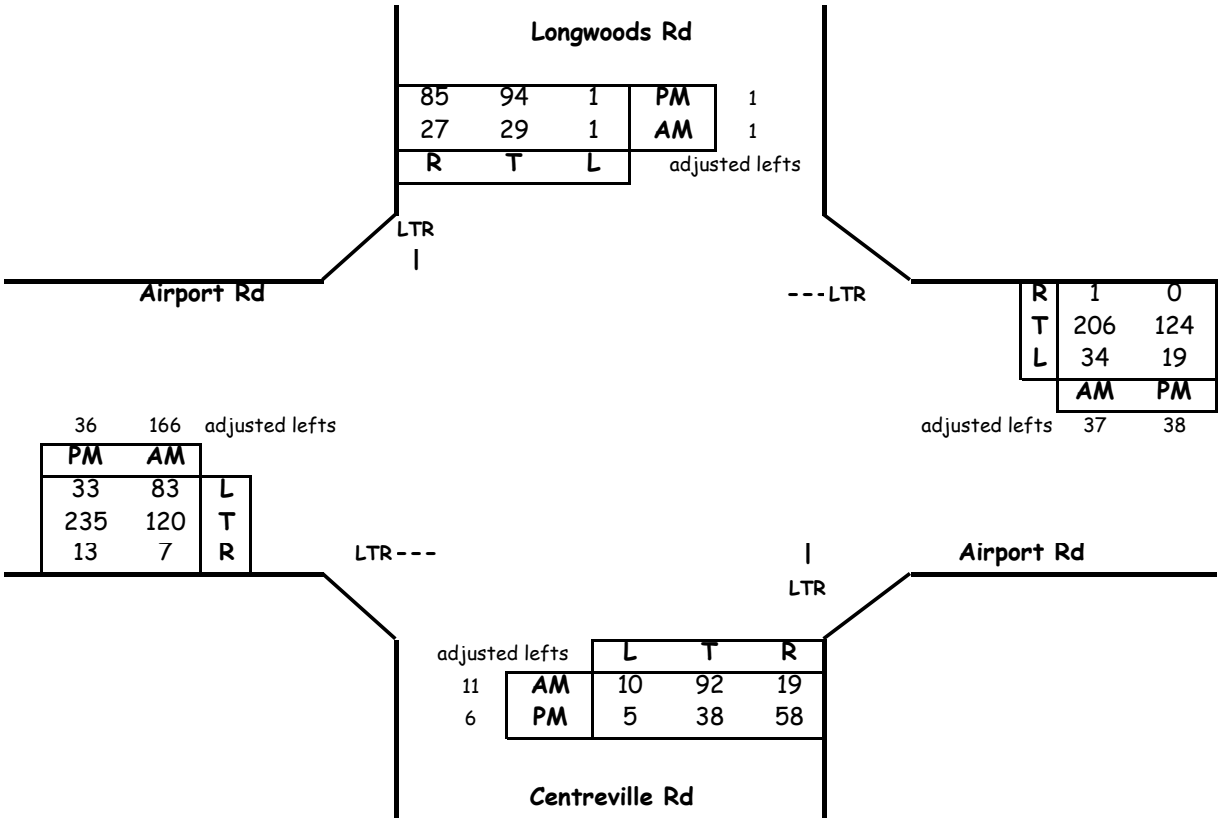
**Intersection**
**4**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** Airport Rd
**Minor Street:** Longwoods Rd
**Study Period:** Background Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| NB | 122 | 1.00 | 122 | 1 | 1 | 1 | 123 |
| SB | 57 | 1.00 | 57 | 10 | 1 | 10 | |
| EB | 293 | 1 | 293 | 34 | 1 | 34 | 327 |
| WB | 244 | 1 | 244 | 83 | 1 | 83 | |

CLV TOTAL= **450**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| NB | 102 | 1.00 | 102 | 1 | 1 | 1 | 185 |
| SB | 180 | 1.00 | 180 | 5 | 1 | 5 | |
| EB | 284 | 1 | 284 | 19 | 1 | 19 | 303 |
| WB | 162 | 1 | 162 | 33 | 1 | 33 | |

CLV TOTAL= **488**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis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Airport Rd &
Longwoods Rd
(Background Traffic)

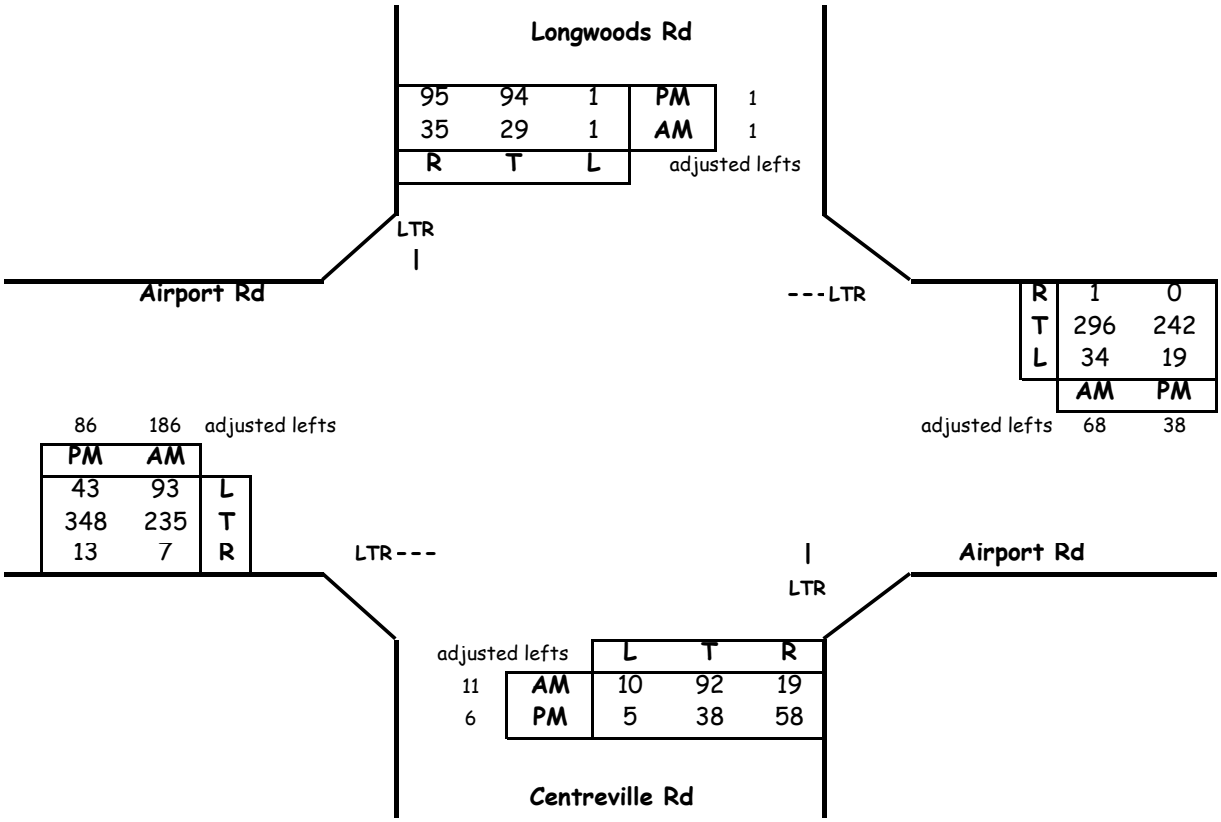
**Intersection**
**4**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** Airport Rd
**Minor Street:** Longwoods Rd
**Study Period:** Total Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| NB | 122 | 1.00 | 122 | 1 | 1 | 1 | 123 |
| SB | 65 | 1.00 | 65 | 10 | 1 | 10 | |
| EB | 428 | 1 | 428 | 34 | 1 | 34 | 462 |
| WB | 365 | 1 | 365 | 93 | 1 | 93 | |

CLV TOTAL= **585**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| NB | 102 | 1.00 | 102 | 1 | 1 | 1 | 195 |
| SB | 190 | 1.00 | 190 | 5 | 1 | 5 | |
| EB | 447 | 1 | 447 | 19 | 1 | 19 | 466 |
| WB | 280 | 1 | 280 | 43 | 1 | 43 | |

CLV TOTAL= **661**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis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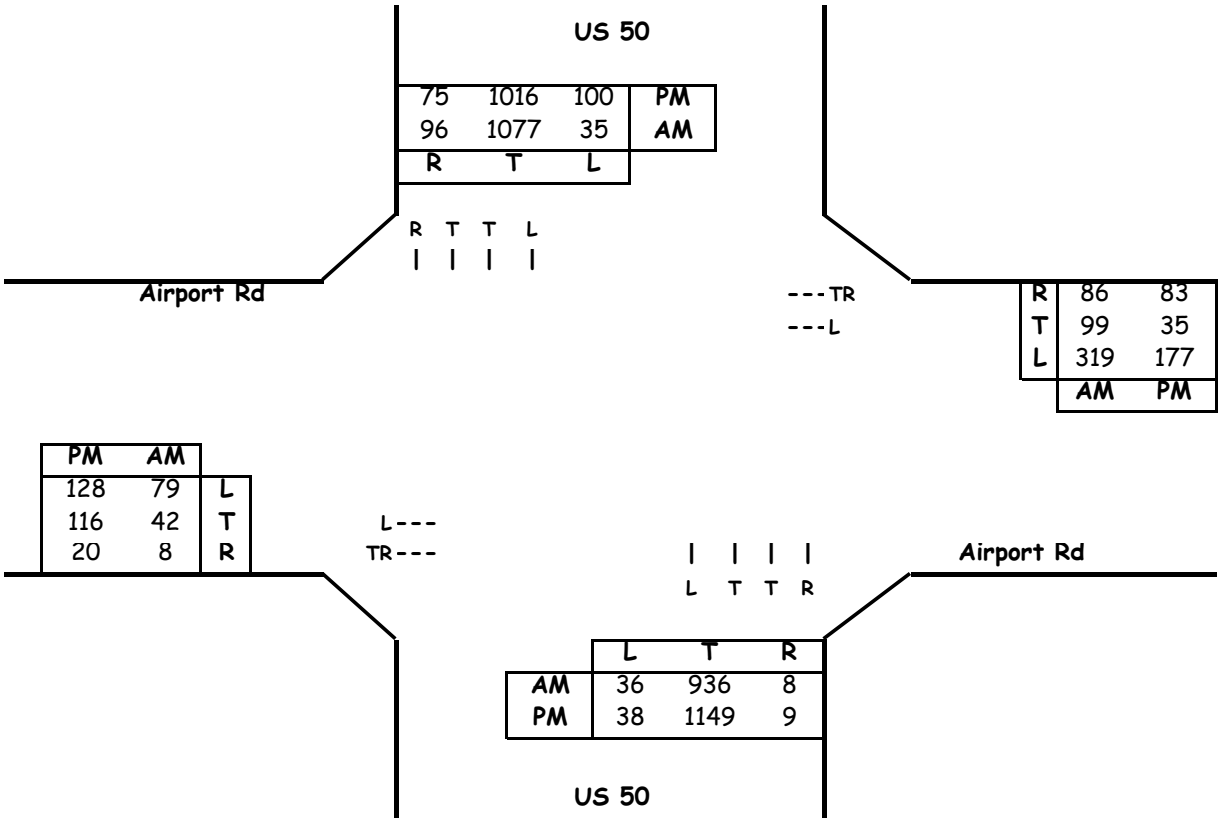
Airport Rd &
Longwoods Rd
(Total Traffic)

**Intersection**
**4**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** US 50 **Analyst:** Lenhart Traffic
**Minor Street:** Airport Rd
**Study Period:** Existing Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| NB | 936 | 0.55 | 515 | 35 | 1 | 35 | 628 |
| SB | 1077 | 0.55 | 592 | 36 | 1 | 36 | |
| EB | 50 | 1 | 50 | 319 | 1 | 319 | 369 |
| WB | 185 | 1 | 185 | 79 | 1 | 79 | |

CLV TOTAL= **997**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| NB | 1149 | 0.55 | 632 | 100 | 1 | 100 | 732 |
| SB | 1016 | 0.55 | 559 | 38 | 1 | 38 | |
| EB | 136 | 1 | 136 | 177 | 1 | 177 | 313 |
| WB | 118 | 1 | 118 | 128 | 1 | 128 | |

CLV TOTAL= **1045**
Level of Service (LOS )= **B**

Critical Lane Volume Analysis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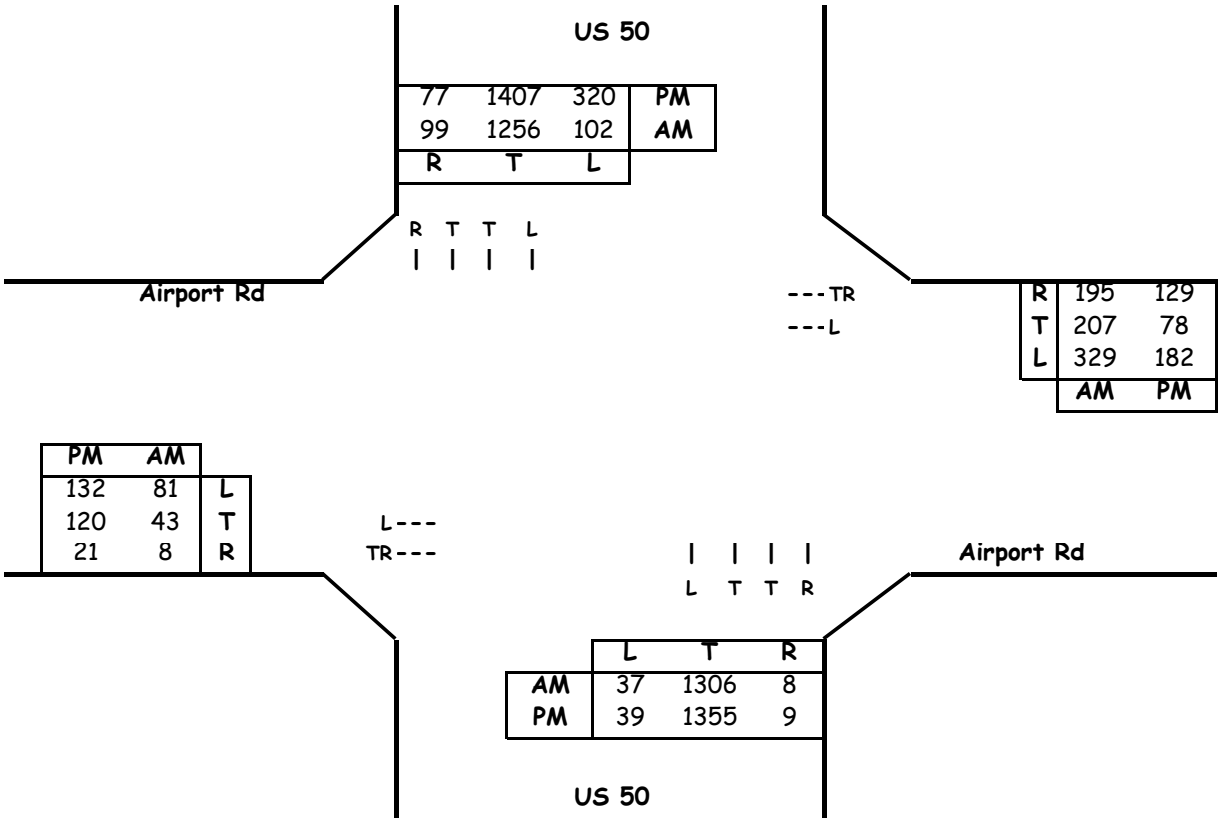
US 50 &
Airport Rd
(Existing Traffic)

**Intersection**
**5**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** US 50 **Analyst:** Lenhart Traffic
**Minor Street:** Airport Rd
**Study Period:** Background Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| NB | 1306 | 0.55 | 718 | 102 | 1 | 102 | 820 |
| SB | 1256 | 0.55 | 691 | 37 | 1 | 37 | |
| EB | 51 | 1 | 51 | 329 | 1 | 329 | 483 |
| WB | 402 | 1 | 402 | 81 | 1 | 81 | |

CLV TOTAL= **1303**
Level of Service (LOS )= **D**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| NB | 1355 | 0.55 | 745 | 320 | 1 | 320 | 1065 |
| SB | 1407 | 0.55 | 774 | 39 | 1 | 39 | |
| EB | 141 | 1 | 141 | 182 | 1 | 182 | 339 |
| WB | 207 | 1 | 207 | 132 | 1 | 132 | |

CLV TOTAL= **1404**
Level of Service (LOS )= **D**

Critical Lane Volume Analysis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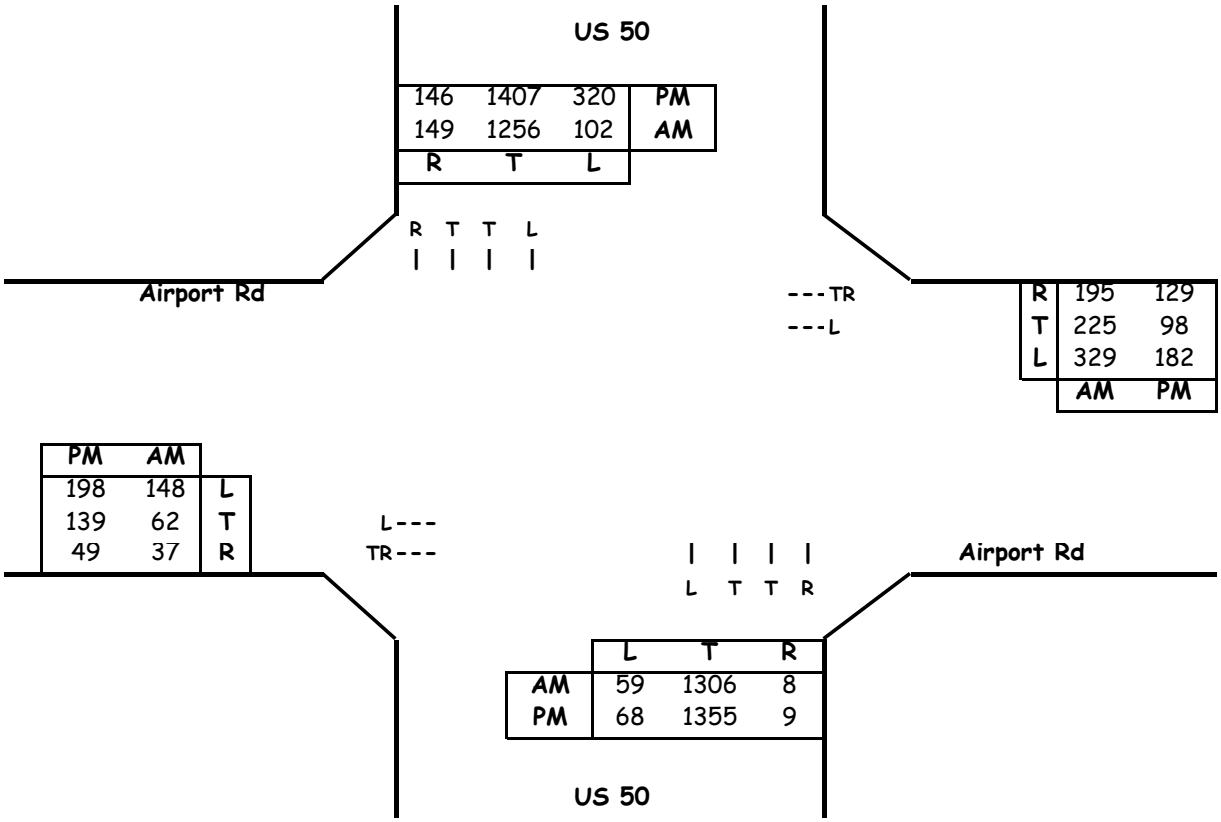
US 50 &
Airport Rd
(Background Traffic)

**Intersection**
**5**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** US 50 **Analyst:** Lenhart Traffic
**Minor Street:** Airport Rd
**Study Period:** Total Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| NB | 1306 | 0.55 | 718 | 102 | 1 | 102 | 820 |
| SB | 1256 | 0.55 | 691 | 59 | 1 | 59 | |
| EB | 99 | 1 | 99 | 329 | 1 | 329 | 568 |
| WB | 420 | 1 | 420 | 148 | 1 | 148 | |

CLV TOTAL= **1388**
Level of Service (LOS )= **D**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| NB | 1355 | 0.55 | 745 | 320 | 1 | 320 | 1065 |
| SB | 1407 | 0.55 | 774 | 68 | 1 | 68 | |
| EB | 188 | 1 | 188 | 182 | 1 | 182 | 425 |
| WB | 227 | 1 | 227 | 198 | 1 | 198 | |

CLV TOTAL= **1490**
Level of Service (LOS )= **E**

Critical Lane Volume Analysis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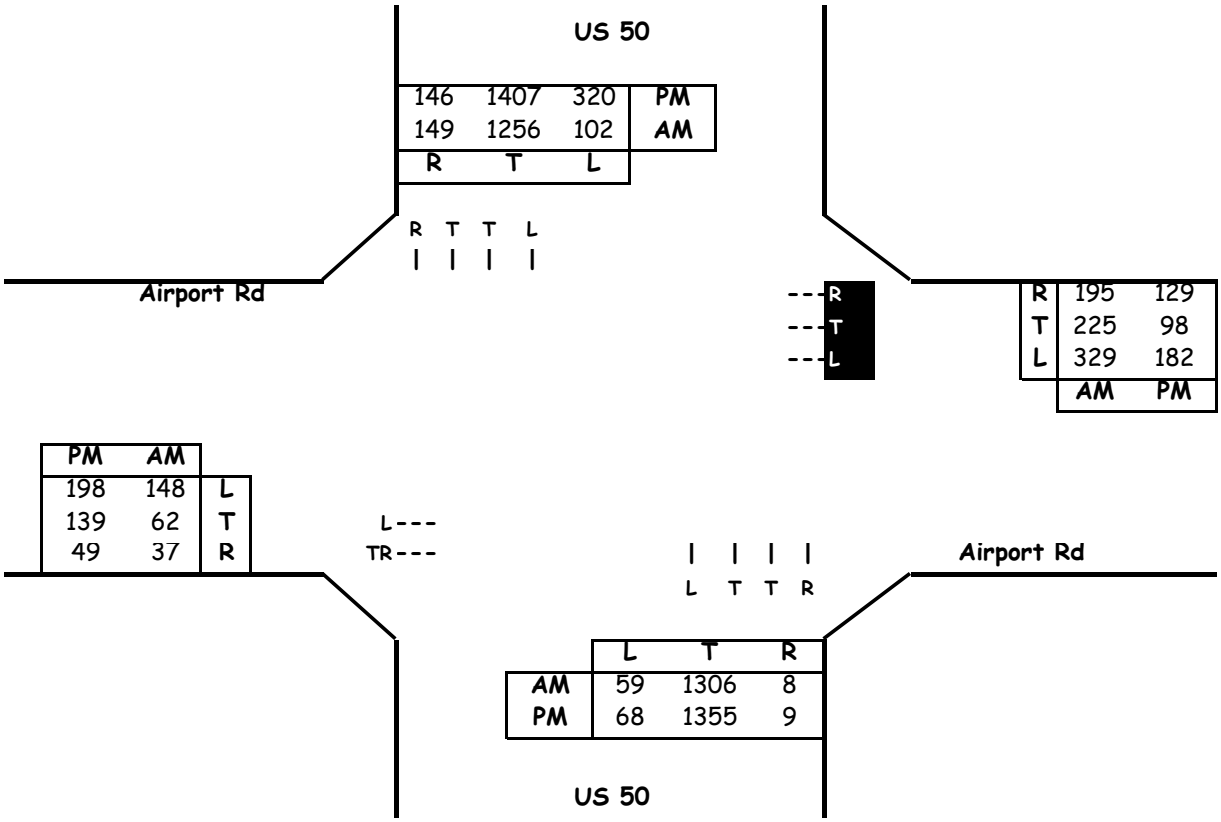
US 50 &
Airport Rd
(Total Traffic)

**Intersection**
**5**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** US 50 **Analyst:** Lenhart Traffic
**Minor Street:** Airport Rd
**Study Period:** Total Traffic w/ Improvements

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| NB | 1306 | 0.55 | 718 | 102 | 1 | 102 | 820 |
| SB | 1256 | 0.55 | 691 | 59 | 1 | 59 | |
| EB | 99 | 1 | 99 | 329 | 1 | 329 | 428 |
| WB | 225 | 1 | 225 | 148 | 1 | 148 | |

CLV TOTAL= **1248**
Level of Service (LOS )= **C**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| NB | 1355 | 0.55 | 745 | 320 | 1 | 320 | 1065 |
| SB | 1407 | 0.55 | 774 | 68 | 1 | 68 | |
| EB | 188 | 1 | 188 | 182 | 1 | 182 | 370 |
| WB | 98 | 1 | 98 | 198 | 1 | 198 | |

CLV TOTAL= **1435**
Level of Service (LOS )= **D**

Critical Lane Volume Analysis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US 50 &
Airport Rd
(Total Traffic w/ Improvements)

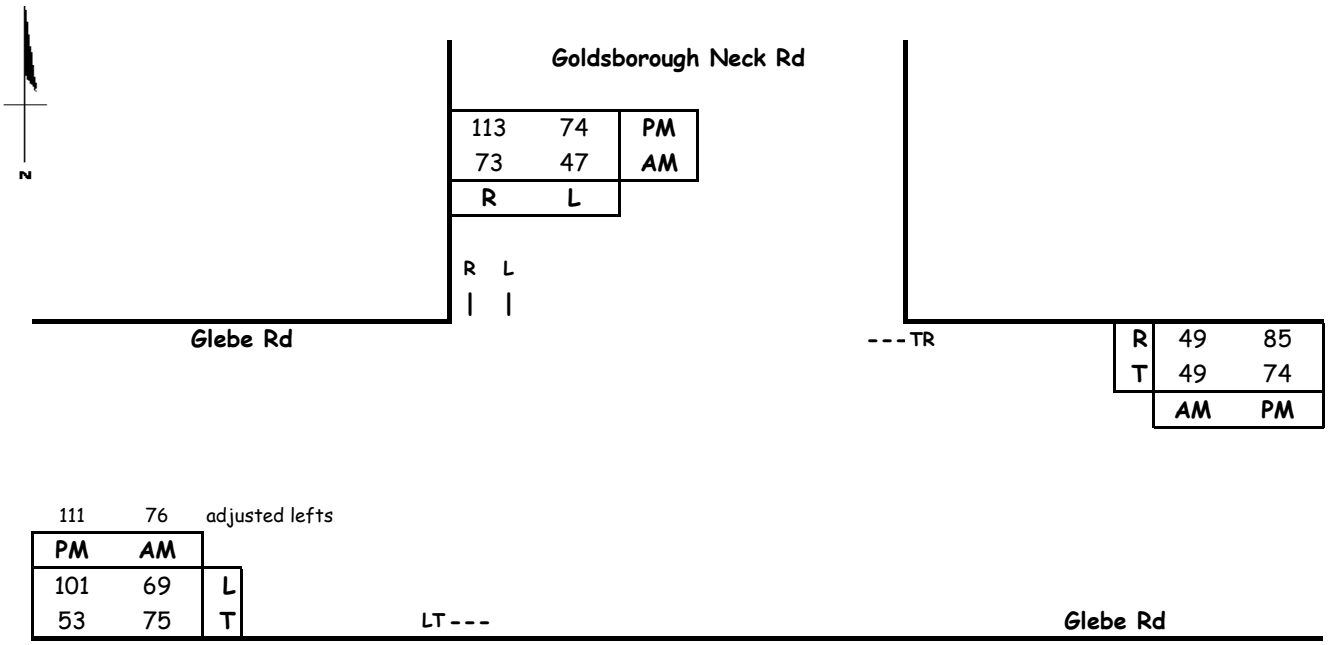
**Intersection**
**5**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Glebe Rd
**Conditions:** Existing Traffic

**Analyst:** Lenhart Traffic Consulting

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| SB | 47 | 1.00 | 47 | | | | 47 |
| EB | 151 | 1.00 | 151 | | | | 167 |
| WB | 98 | 1.00 | 98 | 69 | 1.00 | 69 | |
| | | | | | | CLV TOTAL= | 214 |
| | | | | | | Level of Service (LOS )= | A |

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| SB | 74 | 1.00 | 74 | | | | 74 |
| EB | 164 | 1.00 | 164 | | | | 260 |
| WB | 159 | 1.00 | 159 | 101 | 1.00 | 101 | |
| | | | | | | CLV TOTAL= | 334 |
| | | | | | | Level of Service (LOS )= | A |

Critical Lane Volume Analysis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Goldsborough Neck Rd &
Glebe Rd
(Existing Traffic)

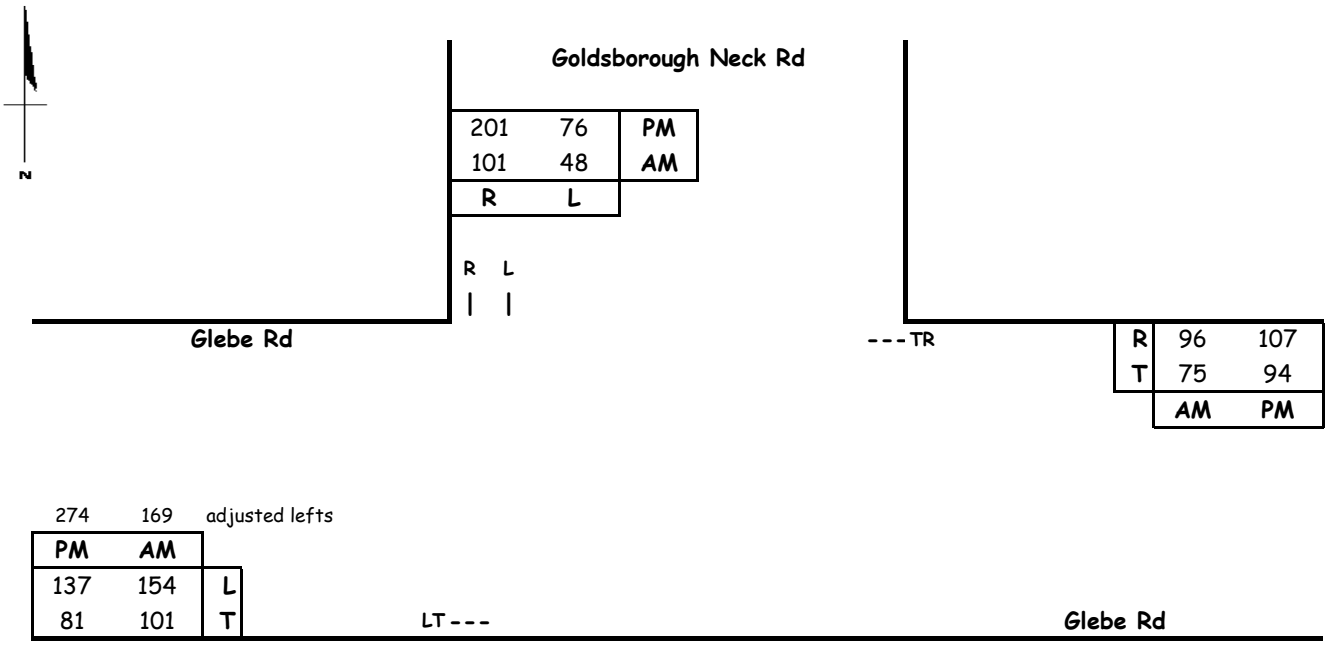
**Intersection**
**6**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Glebe Rd
**Conditions:** Background Traffic

**Analyst:** Lenhart Traffic Consulting

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| SB | 48 | 1.00 | 48 | | | | 48 |
| EB | 270 | 1.00 | 270 | | | | 325 |
| WB | 171 | 1.00 | 171 | 154 | 1.00 | 154 | |
| | | | | | | CLV TOTAL= | **373** |
| | | | | | | Level of Service (LOS )= | **A** |

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| SB | 76 | 1.00 | 76 | | | | 76 |
| EB | 355 | 1.00 | 355 | | | | 355 |
| WB | 201 | 1.00 | 201 | 137 | 1.00 | 137 | |
| | | | | | | CLV TOTAL= | **431** |
| | | | | | | Level of Service (LOS )= | **A** |

Critical Lane Volume Analysis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Goldsborough Neck Rd & Glebe Rd
(Background Traffic)

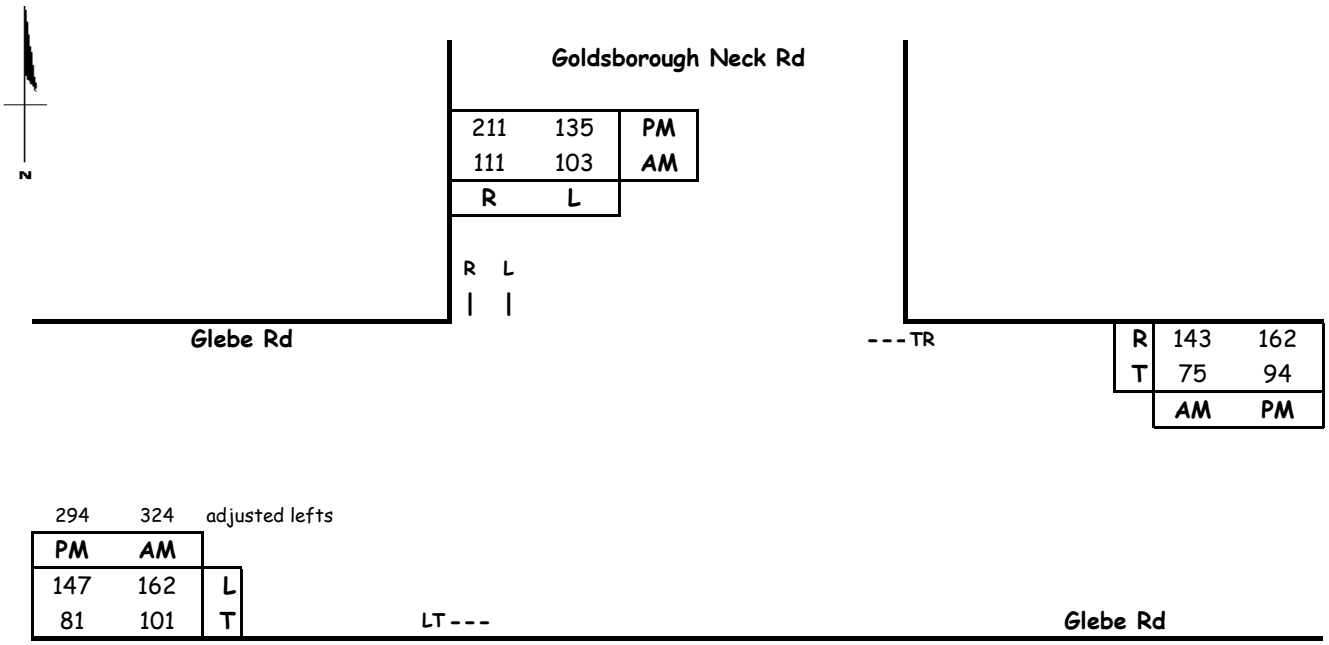
**Intersection 6**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Glebe Rd
**Conditions:** Total Traffic

**Analyst:** Lenhart Traffic Consulting

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| SB | 103 | 1.00 | 103 | | | | 103 |
| EB | 425 | 1.00 | 425 | | | | 425 |
| WB | 218 | 1.00 | 218 | 162 | 1.00 | 162 | |
| | | | | | | CLV TOTAL= | **528** |
| | | | | | | Level of Service (LOS )= | **A** |

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| SB | 135 | 1.00 | 135 | | | | 135 |
| EB | 375 | 1.00 | 375 | | | | 403 |
| WB | 256 | 1.00 | 256 | 147 | 1.00 | 147 | |
| | | | | | | CLV TOTAL= | **538** |
| | | | | | | Level of Service (LOS )= | **A** |

Critical Lane Volume Analysis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Goldsborough Neck Rd &
Glebe Rd
(Total Traffic)

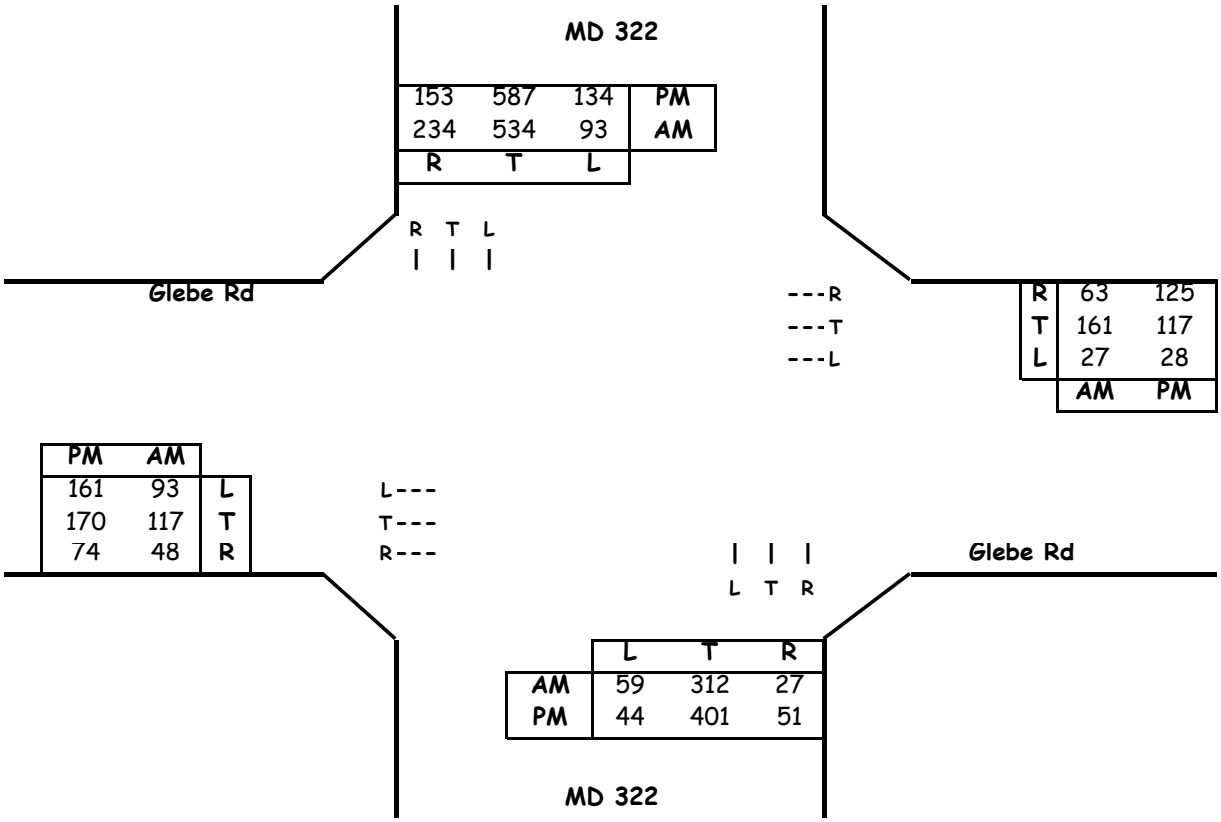
**Intersection**
**6**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** MD 322
**Minor Street:** Glebe Rd
**Study Period:** Existing Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| NB | 312 | 1.00 | 312 | 93 | 1 | 93 | 593 |
| SB | 534 | 1.00 | 534 | 59 | 1 | 59 | |
| EB | 117 | 1 | 117 | 27 | 1 | 27 | 254 |
| WB | 161 | 1 | 161 | 93 | 1 | 93 | |

CLV TOTAL= **847**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| NB | 401 | 1.00 | 401 | 134 | 1 | 134 | 631 |
| SB | 587 | 1.00 | 587 | 44 | 1 | 44 | |
| EB | 170 | 1 | 170 | 28 | 1 | 28 | 278 |
| WB | 117 | 1 | 117 | 161 | 1 | 161 | |

CLV TOTAL= **909**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis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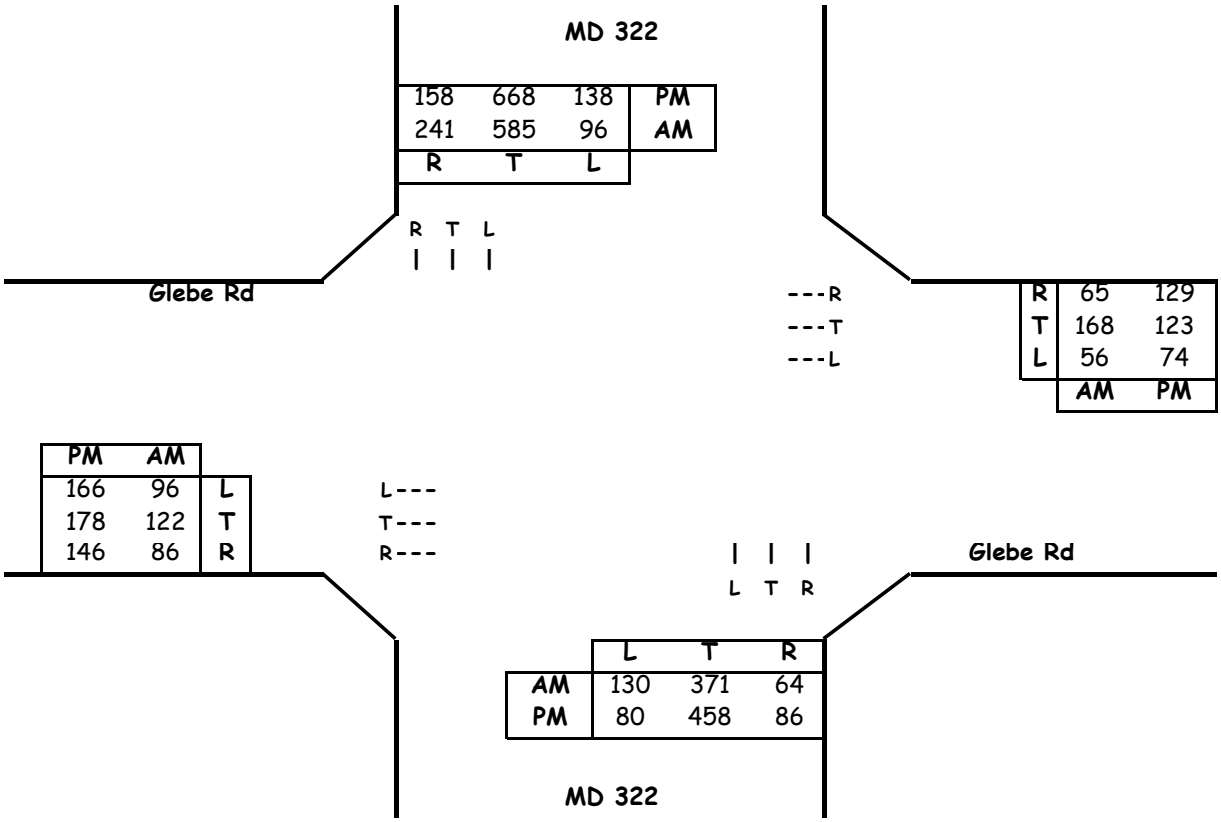
MD 322 &
Glebe Rd
(Existing Traffic)

**Intersection**
**7**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** MD 322 **Analyst:** Lenhart Traffic
**Minor Street:** Glebe Rd
**Study Period:** Background Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| NB | 371 | 1.00 | 371 | 96 | 1 | 96 | 715 |
| SB | 585 | 1.00 | 585 | 130 | 1 | 130 | |
| EB | 122 | 1 | 122 | 56 | 1 | 56 | 264 |
| WB | 168 | 1 | 168 | 96 | 1 | 96 | |

CLV TOTAL= **979**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| NB | 458 | 1.00 | 458 | 138 | 1 | 138 | 748 |
| SB | 668 | 1.00 | 668 | 80 | 1 | 80 | |
| EB | 178 | 1 | 178 | 74 | 1 | 74 | 289 |
| WB | 123 | 1 | 123 | 166 | 1 | 166 | |

CLV TOTAL= **1037**
Level of Service (LOS )= **B**

Critical Lane Volume Analysis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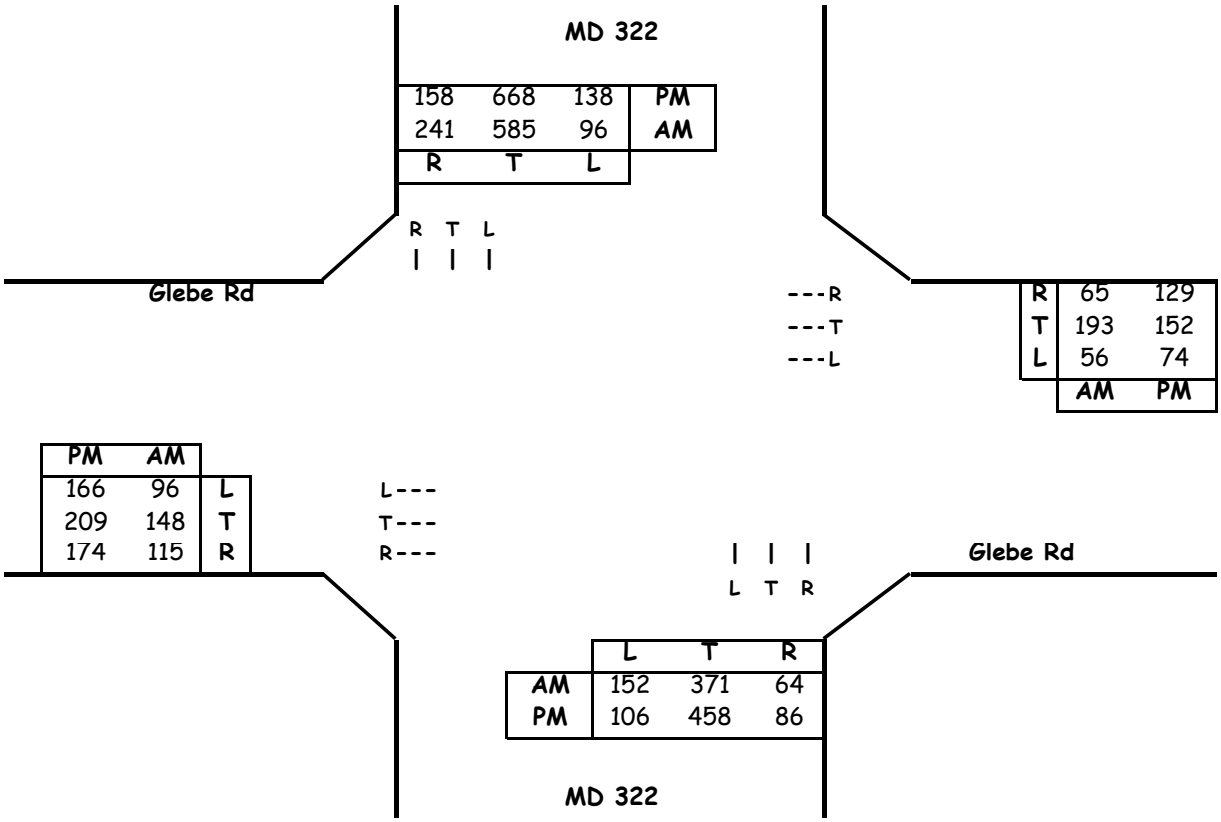
MD 322 & Glebe Rd
(Background Traffic)

**Intersection 7**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** MD 322 **Analyst:** Lenhart Traffic
**Minor Street:** Glebe Rd
**Study Period:** Background Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| NB | 371 | 1.00 | 371 | 96 | 1 | 96 | 737 |
| SB | 585 | 1.00 | 585 | 152 | 1 | 152 | |
| EB | 148 | 1 | 148 | 56 | 1 | 56 | 289 |
| WB | 193 | 1 | 193 | 96 | 1 | 96 | |

CLV TOTAL= **1026**
Level of Service (LOS )= **B**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| NB | 458 | 1.00 | 458 | 138 | 1 | 138 | 774 |
| SB | 668 | 1.00 | 668 | 106 | 1 | 106 | |
| EB | 209 | 1 | 209 | 74 | 1 | 74 | 318 |
| WB | 152 | 1 | 152 | 166 | 1 | 166 | |

CLV TOTAL= **1092**
Level of Service (LOS )= **B**

Critical Lane Volume Analysis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MD 322 & Glebe Rd
(Background Traffic)

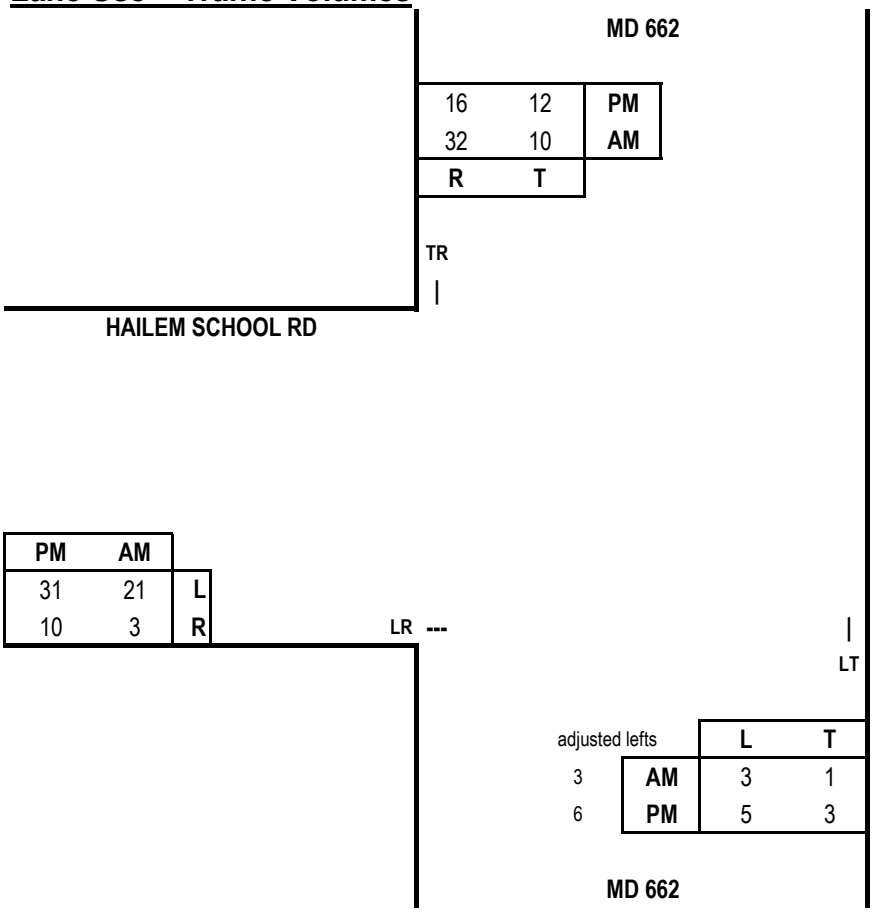
**Intersection 7**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** MD 662
**and:** Hailem School Rd
**Conditions:** Existing Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| EB | 24 | 1.00 | 24 | | | | 24 |
| NB | 4 | 1.00 | 4 | | | | 45 |
| SB | 42 | 1.00 | 42 | 3 | 1.00 | 3 | |
| | | | | | CLV TOTAL= | | 69 |
| | | | | | Level of Service (LOS )= | | A |

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| EB | 41 | 1.00 | 41 | | | | 41 |
| NB | 9 | 1.00 | 9 | | | | 33 |
| SB | 28 | 1.00 | 28 | 5 | 1.00 | 5 | |
| | | | | | CLV TOTAL= | | 74 |
| | | | | | Level of Service (LOS )= | | A |

Critical Lane Volume Analysis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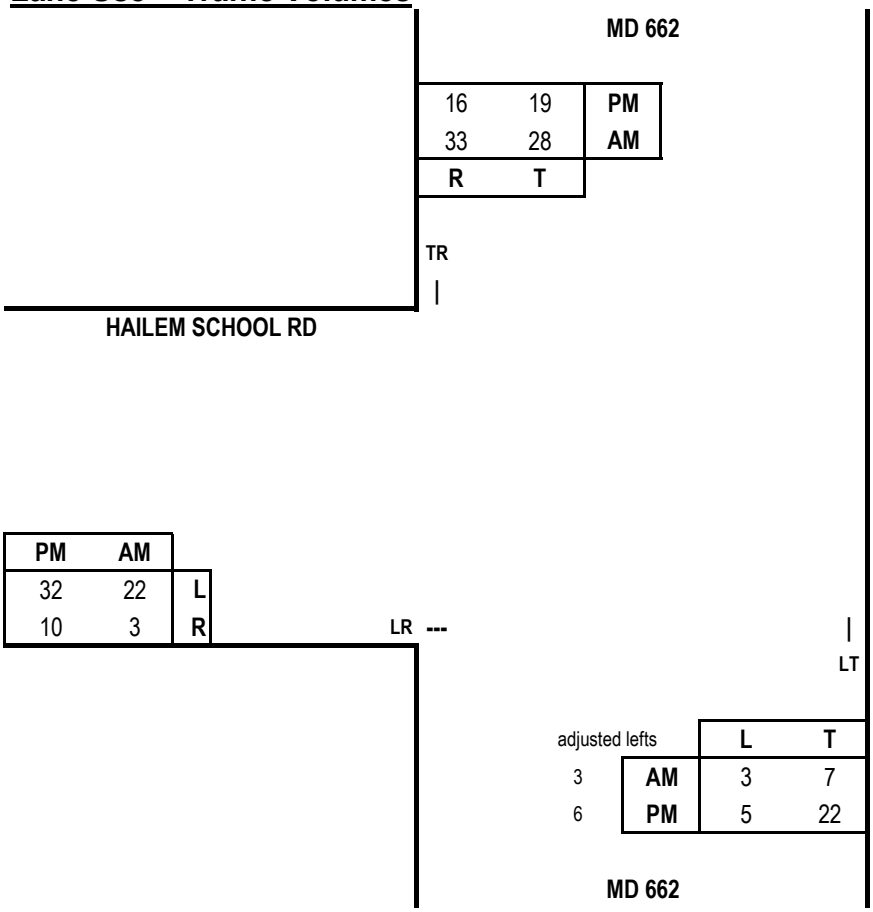
MD 662 &
Hailem School Rd
(Existing Traffic)

**Intersection**
**8**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** MD 662
**and:** Hailem School Rd
**Conditions:** Background Traffic
**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| EB | 25 | 1.00 | 25 | | | | 25 |
| NB | 10 | 1.00 | 10 | | | | 64 |
| SB | 61 | 1.00 | 61 | 3 | 1.00 | 3 | |
| | | | | | CLV TOTAL= | | 89 |
| | | | | | Level of Service (LOS )= | | A |

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| EB | 42 | 1.00 | 42 | | | | 42 |
| NB | 28 | 1.00 | 28 | | | | 40 |
| SB | 35 | 1.00 | 35 | 5 | 1.00 | 5 | |
| | | | | | CLV TOTAL= | | 82 |
| | | | | | Level of Service (LOS )= | | A |

Critical Lane Volume Analysis

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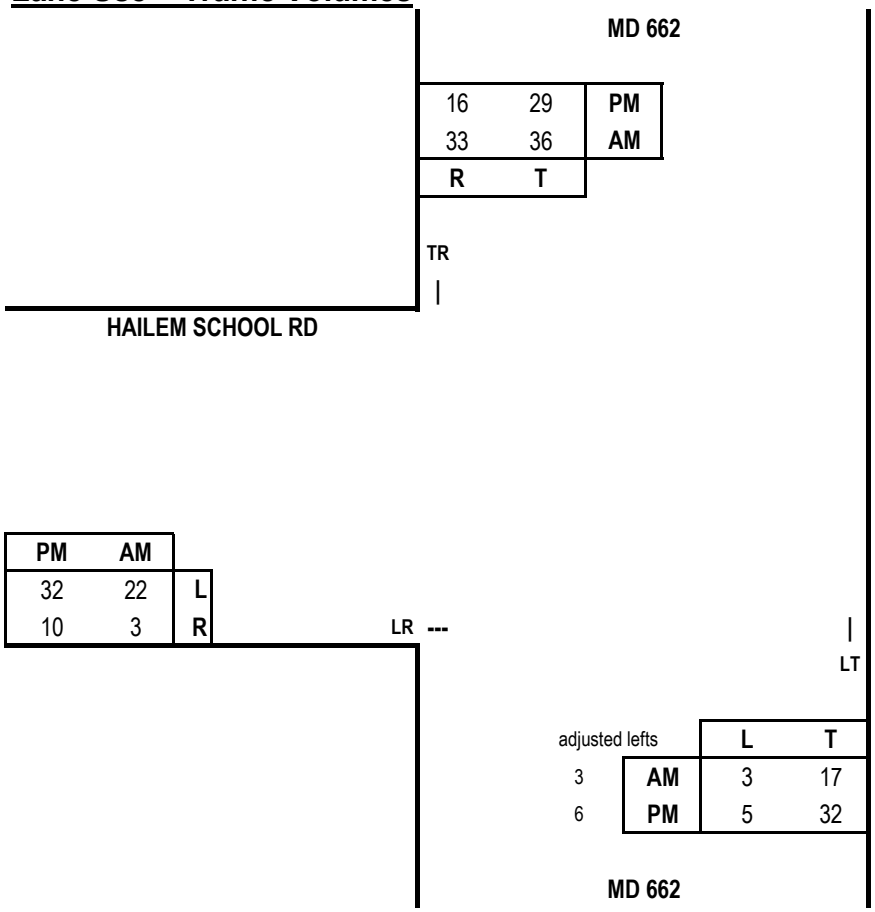
MD 662 &
Hailem School Rd
(Background Traffic)

**Intersection**
**8**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** MD 662
**and:** Hailem School Rd
**Conditions:** Total Traffic
**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| EB | 25 | 1.00 | 25 | | | | 25 |
| NB | 20 | 1.00 | 20 | | | | 72 |
| SB | 69 | 1.00 | 69 | 3 | 1.00 | 3 | |

CLV TOTAL= **97**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| EB | 42 | 1.00 | 42 | | | | 42 |
| NB | 38 | 1.00 | 38 | | | | 50 |
| SB | 45 | 1.00 | 45 | 5 | 1.00 | 5 | |

CLV TOTAL= **92**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis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MD 662 &
Hailem School Rd
(Total Traffic)

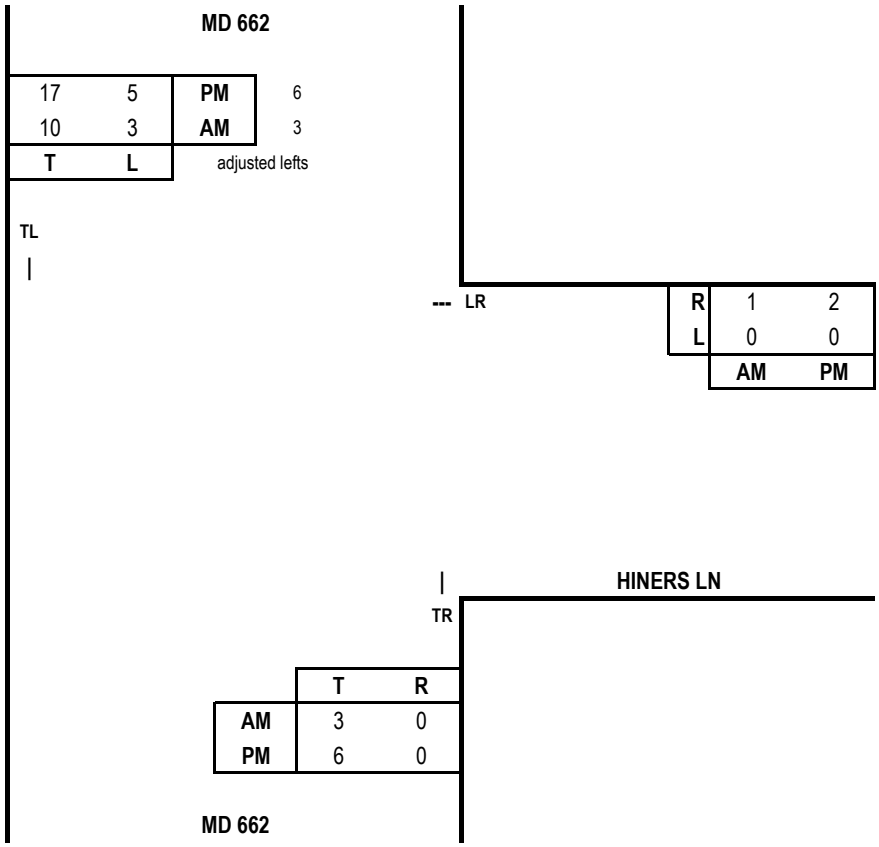
**Intersection**
**8**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** MD 662
**and:** Hiners Ln
**Conditions:** Existing Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| WB | 1 | 1.00 | 1 | | | | 1 |
| NB | 3 | 1.00 | 3 | 3 | 1.00 | 3 | 13 |
| SB | 13 | 1.00 | 13 | | | | |
| | | | | | | CLV TOTAL= | 14 |
| | | | | | | Level of Service (LOS )= | A |

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| WB | 2 | 1.00 | 2 | | | | 2 |
| NB | 6 | 1.00 | 6 | 5 | 1.00 | 5 | 23 |
| SB | 23 | 1.00 | 23 | | | | |
| | | | | | | CLV TOTAL= | 25 |
| | | | | | | Level of Service (LOS )= | A |

Critical Lane Volume Analysis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N

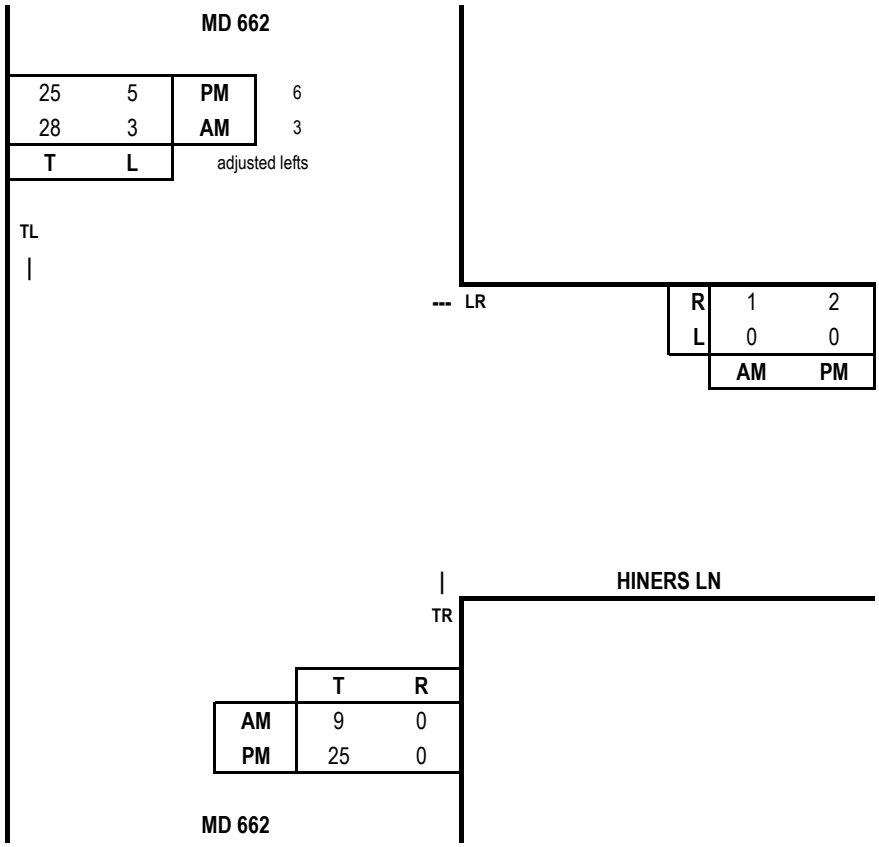
MD 662 &
Hiners Ln
(Existing Traffic)

**Intersection**
**9**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** MD 662
**and:** Hiners Ln
**Conditions:** Background Traffic
**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| WB | 1 | 1.00 | 1 | | | | 1 |
| NB | 9 | 1.00 | 9 | 3 | 1.00 | 3 | 31 |
| SB | 31 | 1.00 | 31 | | | | |

CLV TOTAL= **32**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| WB | 2 | 1.00 | 2 | | | | 2 |
| NB | 25 | 1.00 | 25 | 5 | 1.00 | 5 | 31 |
| SB | 31 | 1.00 | 31 | | | | |

CLV TOTAL= **33**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis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N

MD 662 &
Hiners Ln
(Background Traffic)

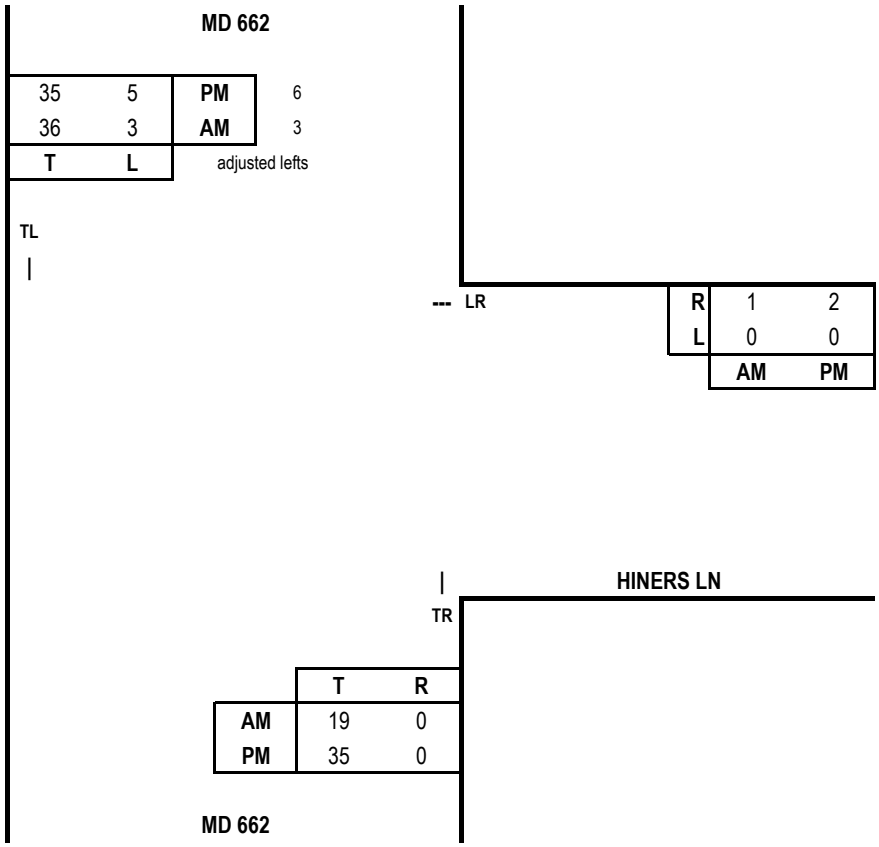
**Intersection 9**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** MD 662
**and:** Hiners Ln
**Conditions:** Total Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| WB | 1 | 1.00 | 1 | | | | 1 |
| NB | 19 | 1.00 | 19 | 3 | 1.00 | 3 | 39 |
| SB | 39 | 1.00 | 39 | | | | |

CLV TOTAL= **40**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| WB | 2 | 1.00 | 2 | | | | 2 |
| NB | 35 | 1.00 | 35 | 5 | 1.00 | 5 | 41 |
| SB | 41 | 1.00 | 41 | | | | |

CLV TOTAL= **43**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis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N

MD 662 &
Hiners Ln
(Total Traffic)

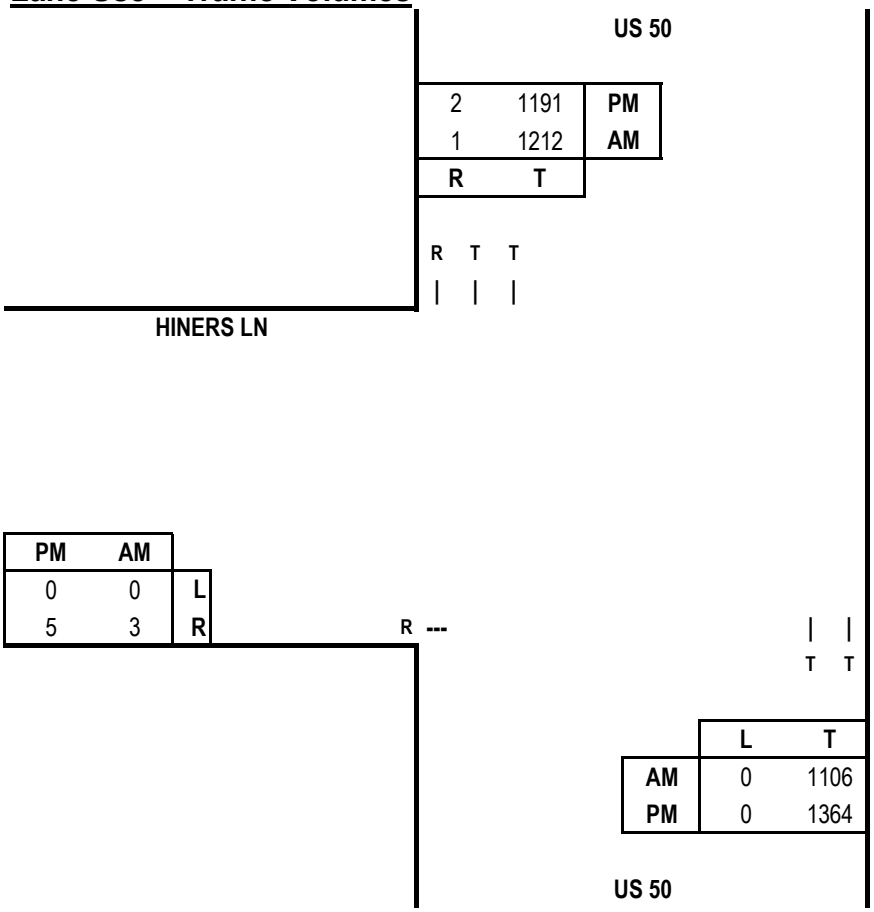
**Intersection**
**9**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** US 50
**and:** Hiners Ln
**Conditions:** Existing Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| EB | 3 | 1.00 | 3 | | | | 3 |
| NB | 1106 | 0.55 | 608 | | | | 667 |
| SB | 1212 | 0.55 | 667 | 0 | 0.00 | 0 | |

CLV TOTAL= **670**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| EB | 5 | 1.00 | 5 | | | | 5 |
| NB | 1364 | 0.55 | 750 | | | | 750 |
| SB | 1191 | 0.55 | 655 | 0 | 0.00 | 0 | |

CLV TOTAL= **755**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis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US 50 &
Hiners Ln
(Existing Traffic)

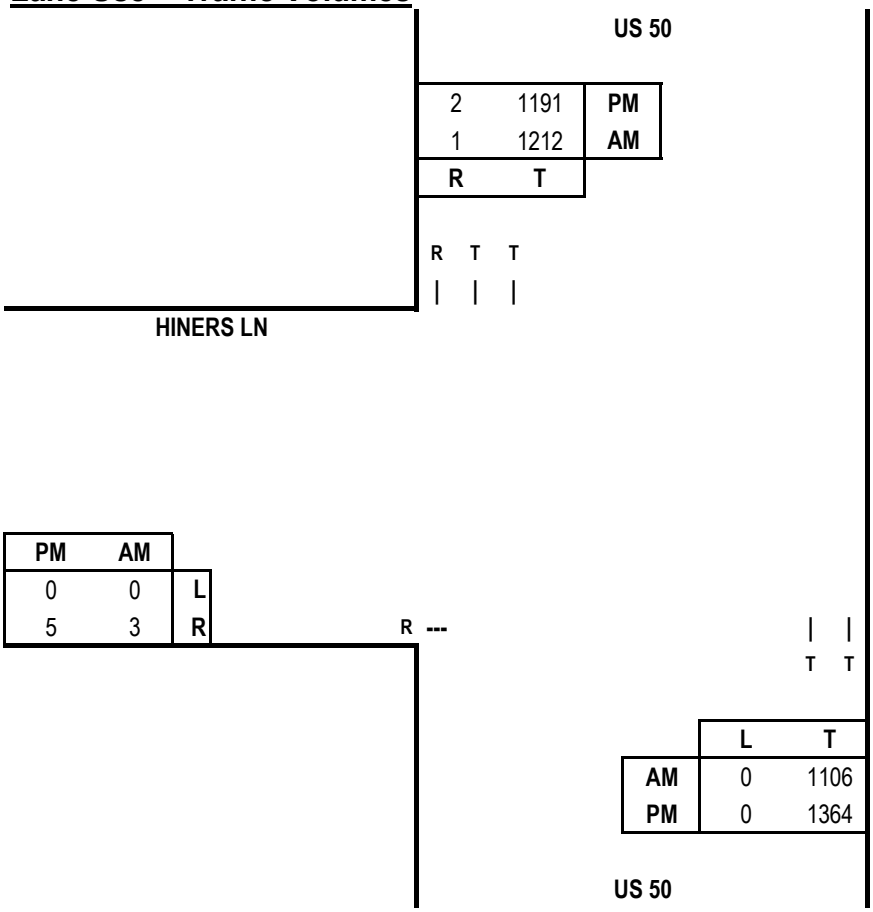
**Intersection 10**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** US 50
**and:** Hiners Ln
**Conditions:** Background Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| EB | 3 | 1.00 | 3 | | | | 3 |
| NB | 1106 | 0.55 | 608 | | | | 667 |
| SB | 1212 | 0.55 | 667 | 0 | 0.00 | 0 | |
| | | | | | CLV TOTAL= | | **670** |
| | | | | | Level of Service (LOS )= | | **A** |

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| EB | 5 | 1.00 | 5 | | | | 5 |
| NB | 1364 | 0.55 | 750 | | | | 750 |
| SB | 1191 | 0.55 | 655 | 0 | 0.00 | 0 | |
| | | | | | CLV TOTAL= | | **755** |
| | | | | | Level of Service (LOS )= | | **A** |

Critical Lane Volume Analysis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US 50 &
Hiners Ln
(Background Traffic)

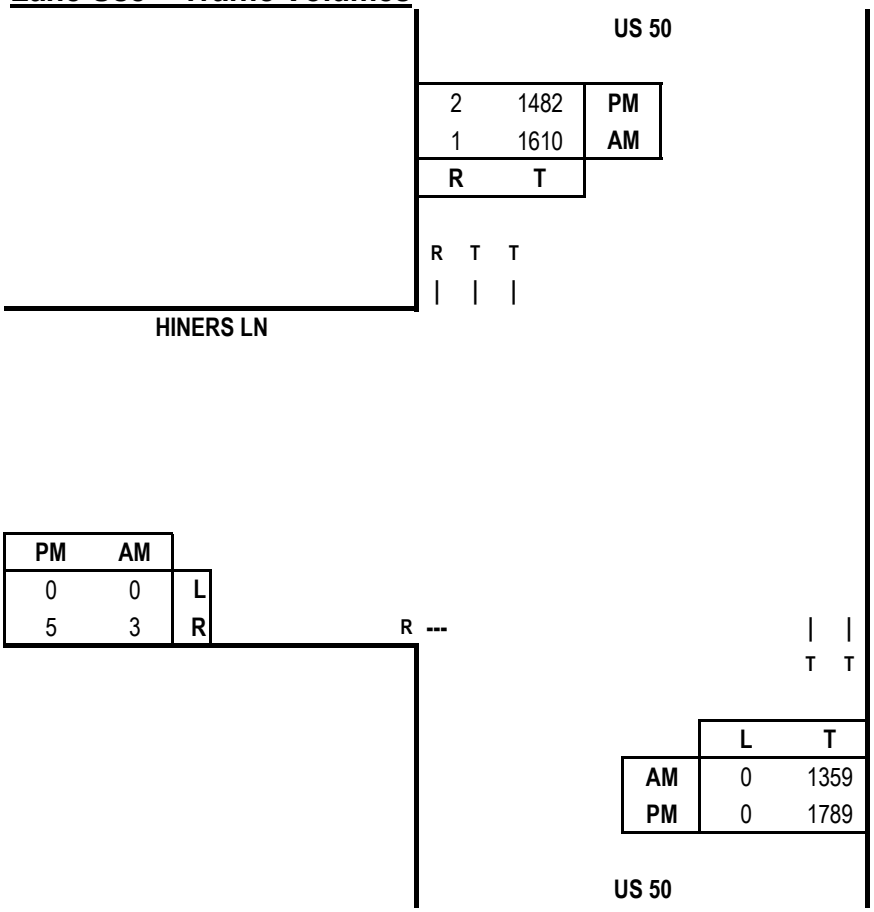
**Intersection**
**10**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** US 50
**and:** Hiners Ln
**Conditions:** Total Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| EB | 3 | 1.00 | 3 | | | | 3 |
| NB | 1359 | 0.55 | 747 | | | | 886 |
| SB | 1610 | 0.55 | 886 | 0 | 0.00 | 0 | |

CLV TOTAL= **889**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| EB | 5 | 1.00 | 5 | | | | 5 |
| NB | 1789 | 0.55 | 984 | | | | 984 |
| SB | 1482 | 0.55 | 815 | 0 | 0.00 | 0 | |

CLV TOTAL= **989**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis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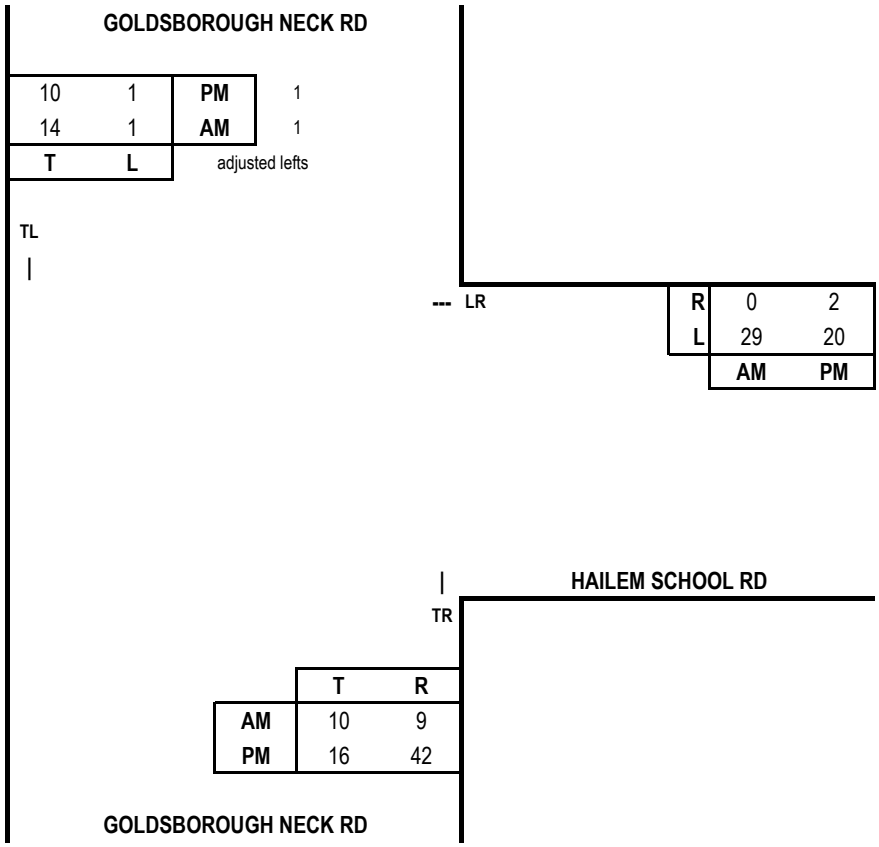
US 50 &
Hiners Ln
(Total Traffic)

**Intersection**
**10**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Hailem School Rd
**Analyst:** Lenhart Traffic
**Conditions:** Existing Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| WB | 29 | 1.00 | 29 | | | | 29 |
| NB | 19 | 1.00 | 19 | 1 | 1.00 | 1 | 20 |
| SB | 15 | 1.00 | 15 | | | | |

CLV TOTAL= **49**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| WB | 22 | 1.00 | 22 | | | | 22 |
| NB | 58 | 1.00 | 58 | 1 | 1.00 | 1 | 59 |
| SB | 11 | 1.00 | 11 | | | | |

CLV TOTAL= **81**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis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N

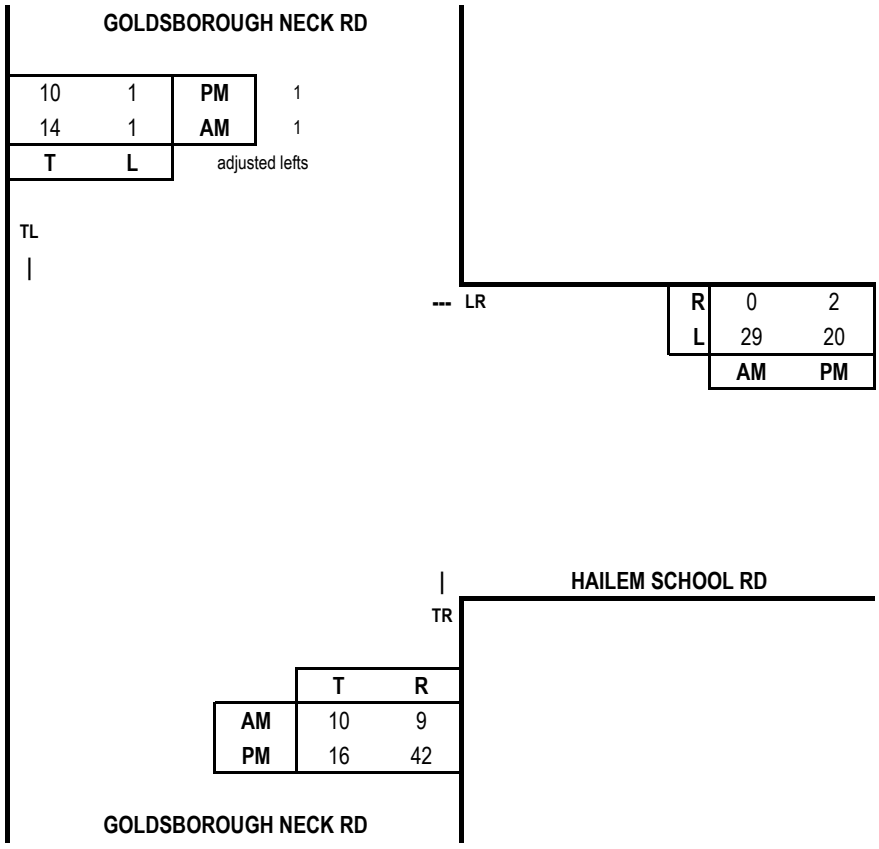
Goldsborough Neck Rd &
Hailem School Rd
(Existing Traffic)

**Intersection 11**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Hailem School Rd
**Conditions:** Background Traffic
**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| WB | 29 | 1.00 | 29 | | | | 29 |
| NB | 19 | 1.00 | 19 | 1 | 1.00 | 1 | 20 |
| SB | 15 | 1.00 | 15 | | | | |

CLV TOTAL= **49**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| WB | 22 | 1.00 | 22 | | | | 22 |
| NB | 58 | 1.00 | 58 | 1 | 1.00 | 1 | 59 |
| SB | 11 | 1.00 | 11 | | | | |

CLV TOTAL= **81**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis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N

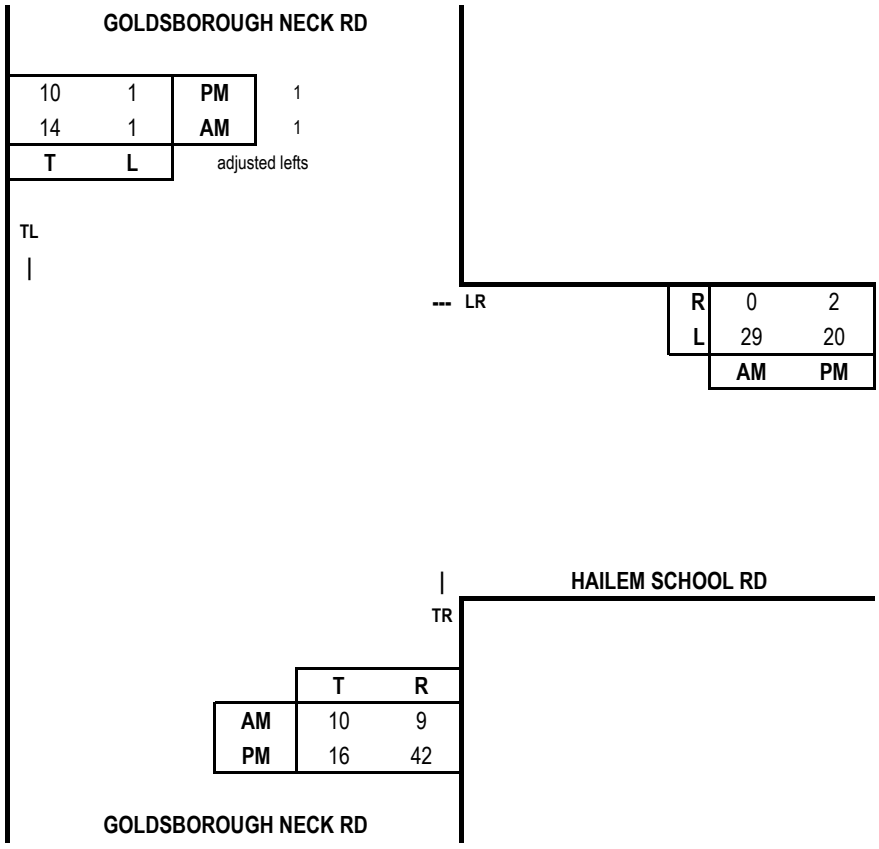
Goldsborough Neck Rd &
Hailem School Rd
(Background Traffic)

**Intersection**
**11**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Hailem School Rd
**Conditions:** Total Traffic
**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | AM CLV |
|---|---|---|---|---|---|---|---|
| WB | 29 | 1.00 | 29 | | | | 29 |
| NB | 19 | 1.00 | 19 | 1 | 1.00 | 1 | 20 |
| SB | 15 | 1.00 | 15 | | | | |

CLV TOTAL= **49**
Level of Service (LOS )= **A**

**Evening Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | PM CLV |
|---|---|---|---|---|---|---|---|
| WB | 22 | 1.00 | 22 | | | | 22 |
| NB | 58 | 1.00 | 58 | 1 | 1.00 | 1 | 59 |
| SB | 11 | 1.00 | 11 | | | | |

CLV TOTAL= **81**
Level of Service (LOS )= **A**

Critical Lane Volume Analysis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N

Goldsborough Neck Rd &
Hailem School Rd
(Total Traffic)

**Intersection**
**11**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Site Access
**Conditions:** Total Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes

## Capacity Analysis

**Sat. Midday Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | SAT CLV |
|---|---|---|---|---|---|---|---|
| WB | 0 | 1.00 | 0 | | | | 0 |
| NB | 44 | 1.00 | 44 | 0 | 1.00 | 0 | 44 |
| SB | 42 | 1.00 | 42 | | | | |
| | | | | | CLV TOTAL= | | **44** |
| | | | | | Level of Service (LOS )= | | **A** |

Critical Lane Volume Analysis


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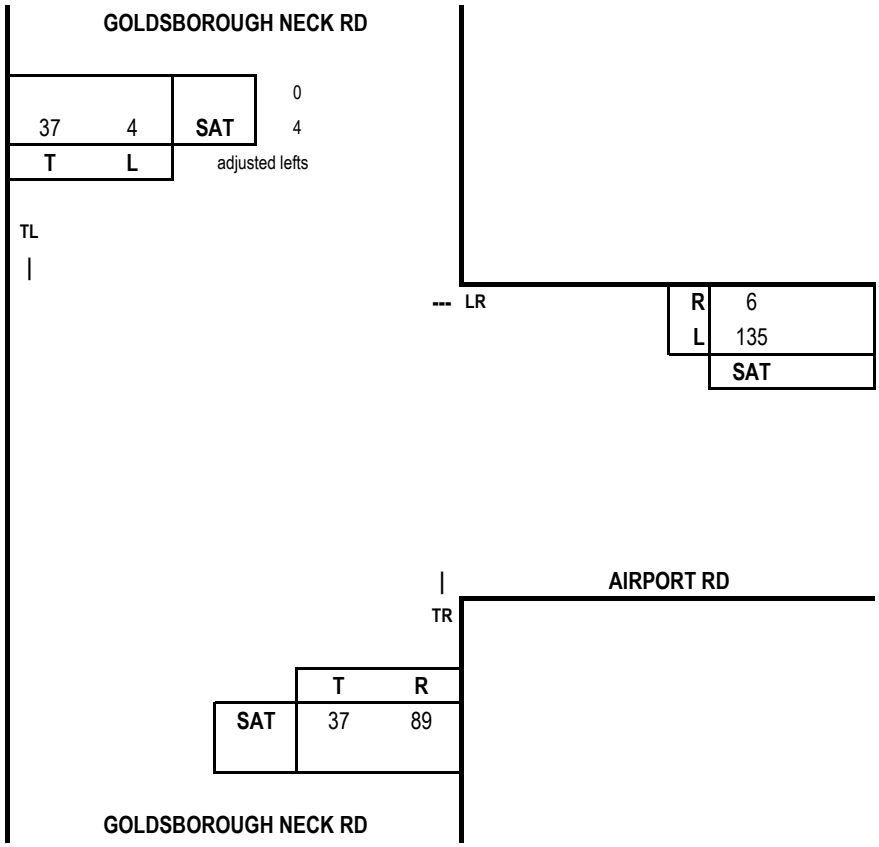
Goldsborough Neck Rd &
Site Access
(Total Traffic)

**Intersection**
**1 - Sat**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Airport Rd
**Analyst:** Lenhart Traffic
**Conditions:** Existing Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| WB | 141 | 1.00 | 141 | | | | 141 |
| NB | 126 | 1.00 | 126 | 4 | 1.00 | 4 | 130 |
| SB | 41 | 1.00 | 41 | | | | |
| | | | | | | CLV TOTAL= | 271 |
| | | | | | | Level of Service (LOS )= | A |

Critical Lane Volume Analysis


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

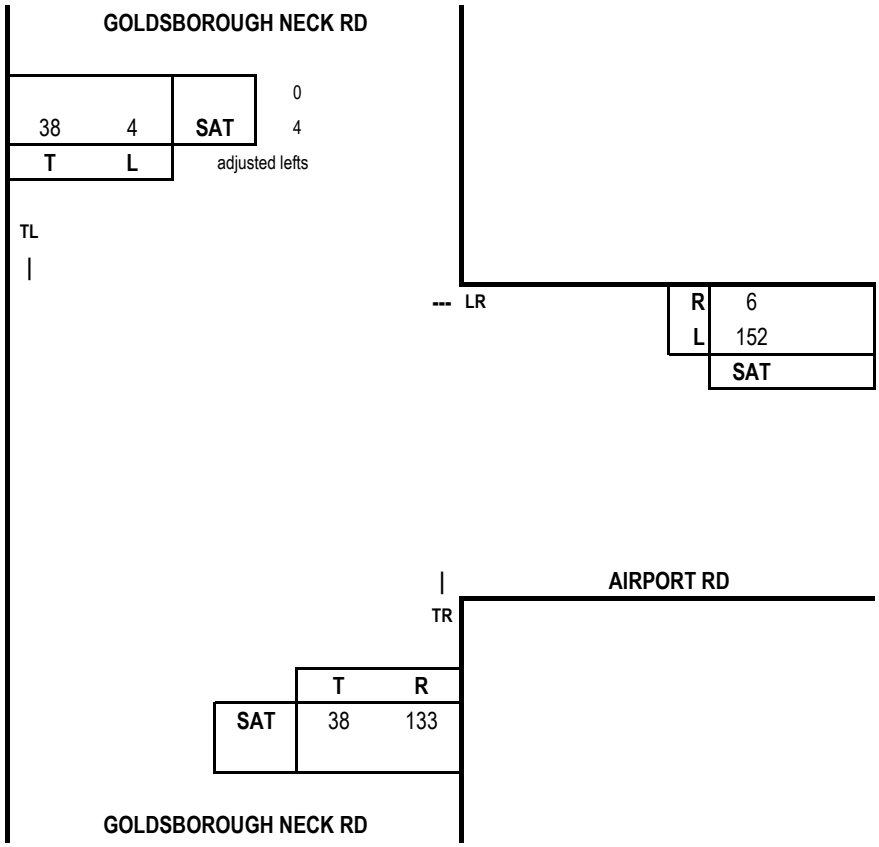

Goldsborough Neck Rd &
Airport Rd
(Existing Traffic)

**Intersection**
**2 - Sat**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Airport Rd
**Conditions:** Background Traffic
**Analyst:** Lenhart Traffic

### Lane Use + Traffic Volumes




### Capacity Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| WB | 158 | 1.00 | 158 | | | | 158 |
| NB | 171 | 1.00 | 171 | 4 | 1.00 | 4 | 175 |
| SB | 42 | 1.00 | 42 | | | | |
| | | | | | | CLV TOTAL= | 333 |
| | | | | | | Level of Service (LOS )= | A |

Critical Lane Volume Analysis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SEVERNA PARK, MD 21146
www.lenharttraffic.com


N

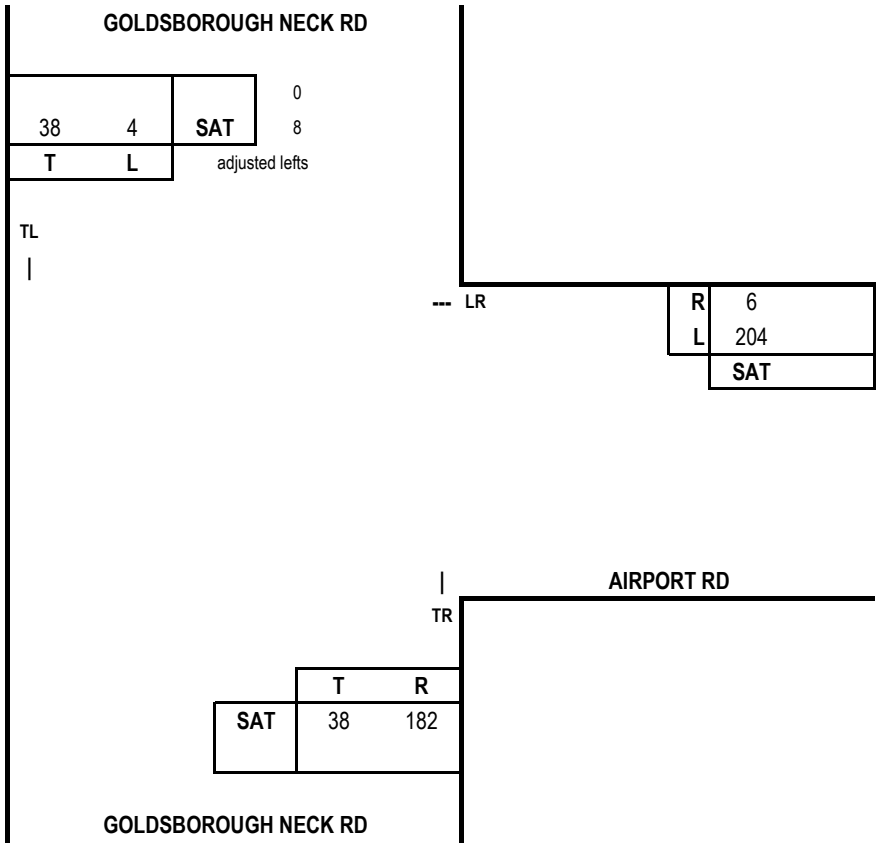
Goldsborough Neck Rd &
Airport Rd
(Background Traffic)

**Intersection**
**2- Sat**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Airport Rd
**Analyst:** Lenhart Traffic
**Conditions:** Total Traffic

### Lane Use + Traffic Volumes




### Capacity Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| WB | 210 | 1.00 | 210 | | | | 210 |
| NB | 220 | 1.00 | 220 | 4 | 1.00 | 4 | 224 |
| SB | 46 | 1.00 | 46 | | | | |
| | | | | | | CLV TOTAL= | 434 |
| | | | | | | Level of Service (LOS )= | A |

Critical Lane Volume Analysis


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


N

Goldsborough Neck Rd &
Airport Rd
(Total Traffic)

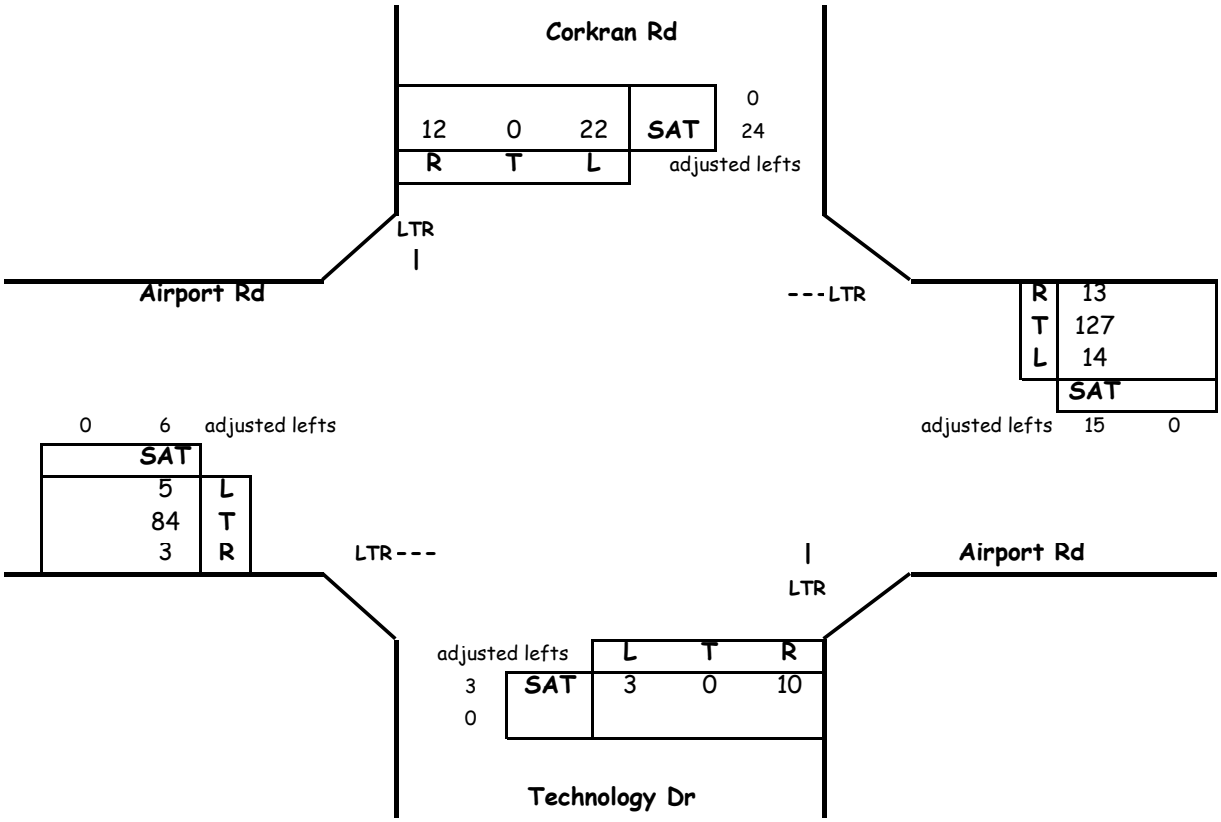
**Intersection**
**2- Sat**

## CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** Airport Rd
**Minor Street:** Technology Dr
**Study Period:** Existing Traffic

**Analyst:** Lenhart Traffic

### Lane Use + Traffic Volumes




### Critical Lane Volume Analysis

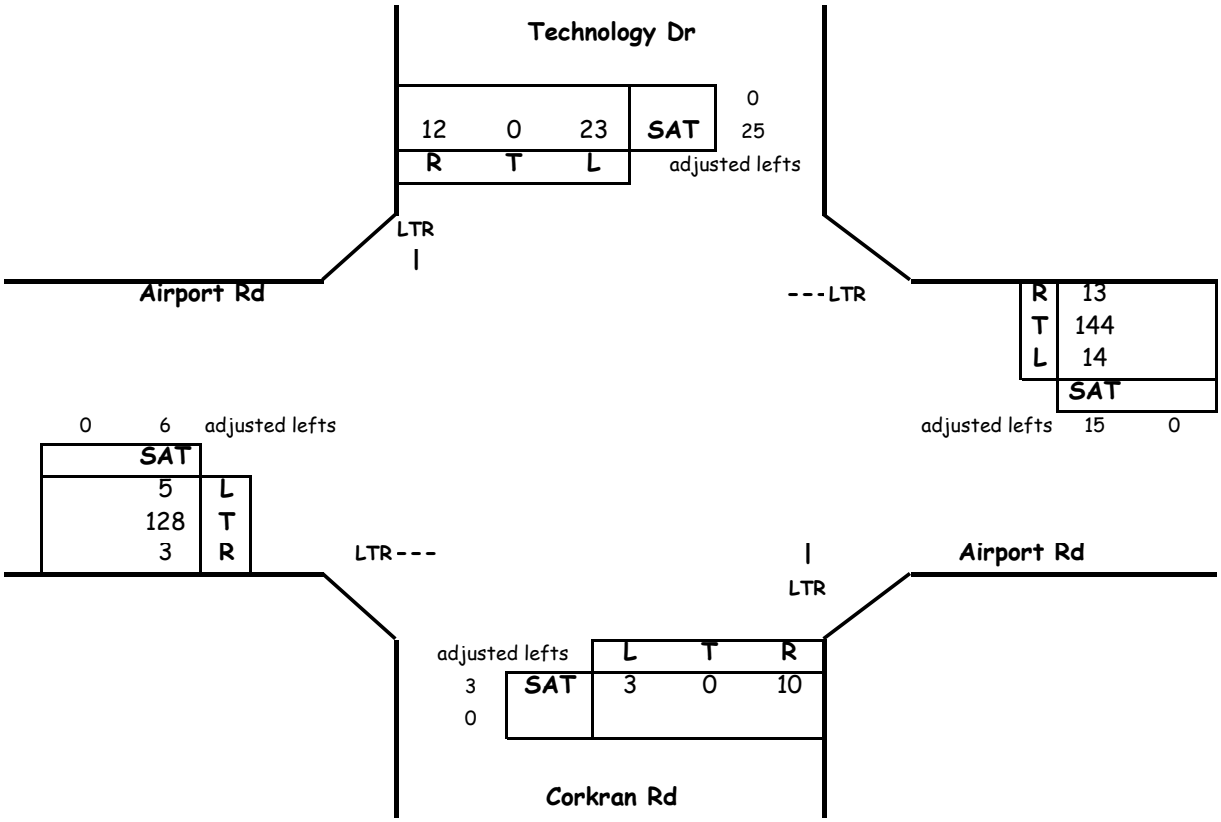
| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| NB | 13 | 1.00 | 13 | 22 | 1 | 22 | 39 |
| SB | 36 | 1.00 | 36 | 3 | 1 | 3 | |
| EB | 93 | 1 | 93 | 14 | 1 | 14 | 160 |
| WB | 155 | 1 | 155 | 5 | 1 | 5 | |
| | | | | | | CLV TOTAL= | 199 |
| | | | | | | Level of Service (LOS )= | A |

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** Airport Rd
**Minor Street:** Technology Dr
**Study Period:** Background Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| NB | 13 | 1.00 | 13 | 23 | 1 | 23 | 40 |
| SB | 37 | 1.00 | 37 | 3 | 1 | 3 | |
| EB | 137 | 1 | 137 | 14 | 1 | 14 | 177 |
| WB | 172 | 1 | 172 | 5 | 1 | 5 | |
| | | | | | | CLV TOTAL= | 217 |
| | | | | | | Level of Service (LOS )= | A |

Critical Lane Volume Analysis


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


Airport Rd & Technology Dr
(Background Traffic)

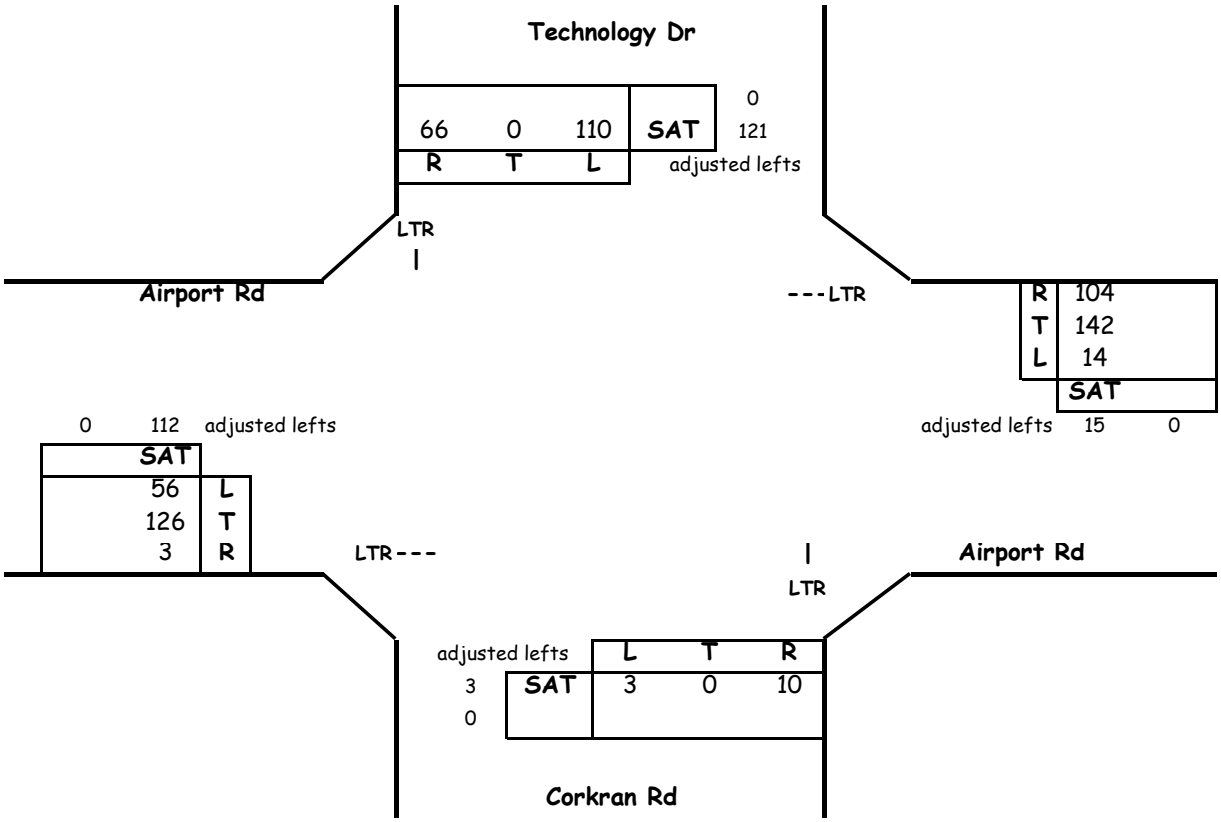
**Intersection**
**3 - Sat**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** Airport Rd
**Minor Street:** Technology Dr
**Study Period:** Total Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| NB | 13 | 1.00 | 13 | 110 | 1 | 110 | 190 |
| SB | 187 | 1.00 | 187 | 3 | 1 | 3 | |
| EB | 241 | 1 | 241 | 14 | 1 | 14 | 317 |
| WB | 261 | 1 | 261 | 56 | 1 | 56 | |
| | | | | | | CLV TOTAL= | 507 |
| | | | | | | Level of Service (LOS )= | A |

Critical Lane Volume Analysis

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

Airport Rd &
Technology Dr
(Total Traffic)

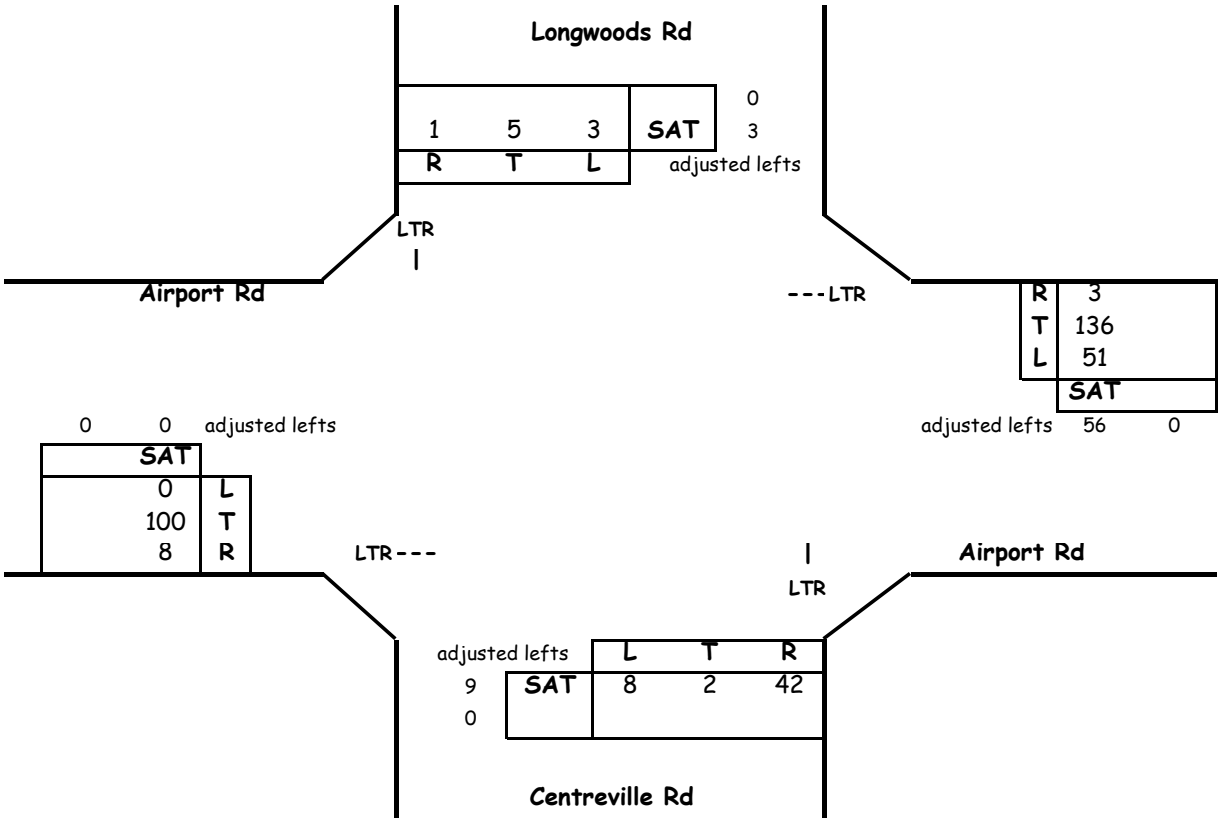
Intersection
**3 - Sat**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** Airport Rd
**Minor Street:** Centreville Rd
**Study Period:** Existing Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| NB | 53 | 1.00 | 53 | 3 | 1 | 3 | 56 |
| SB | 9 | 1.00 | 9 | 8 | 1 | 8 | |
| EB | 108 | 1 | 108 | 51 | 1 | 51 | 195 |
| WB | 195 | 1 | 195 | 0 | 1 | 0 | |
| | | | | | CLV TOTAL= | | 251 |
| | | | | | Level of Service (LOS )= | | A |

Critical Lane Volume Analysis

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SEVERNA PARK, MD 21146
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Airport Rd &
Centreville Rd
(Existing Traffic)

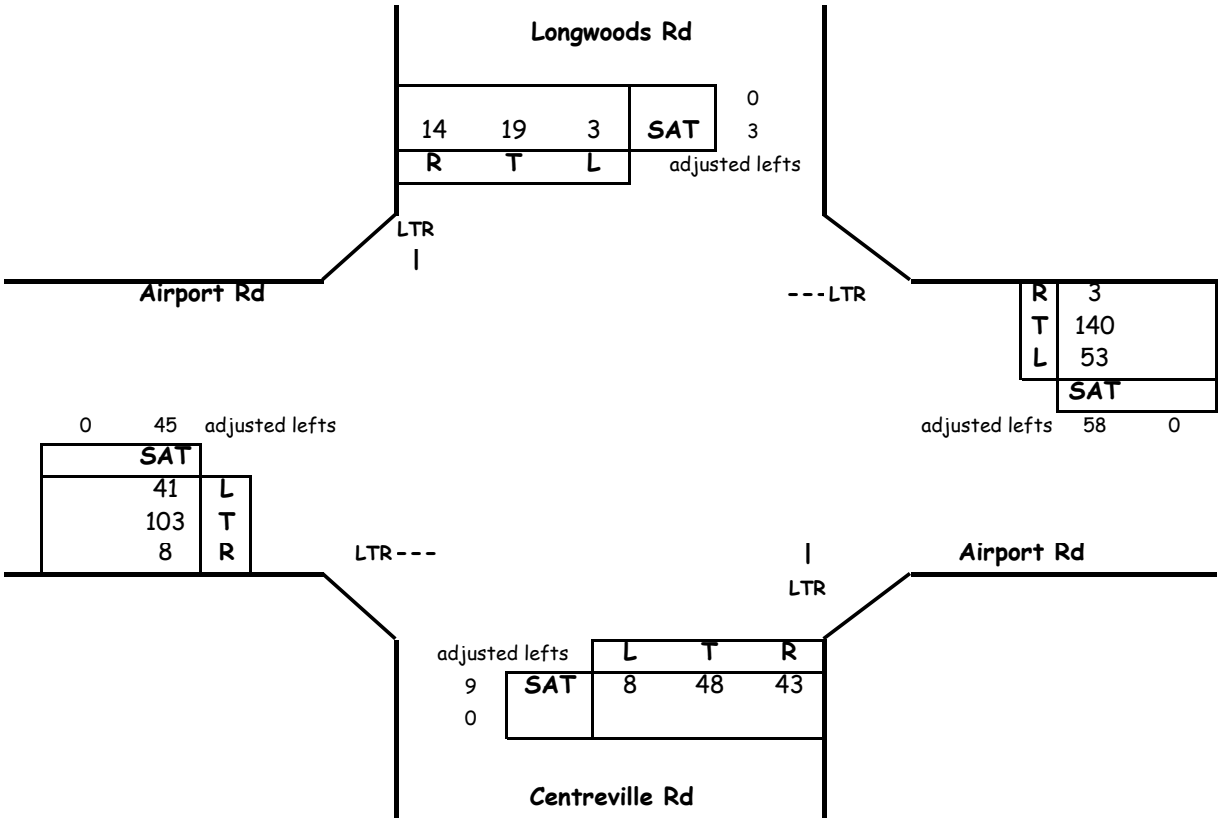
**Intersection**
**4 - Sat**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** Airport Rd
**Minor Street:** Longwoods Rd
**Study Period:** Background Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| NB | 100 | 1.00 | 100 | 3 | 1 | 3 | 103 |
| SB | 36 | 1.00 | 36 | 8 | 1 | 8 | |
| EB | 156 | 1 | 156 | 53 | 1 | 53 | 242 |
| WB | 201 | 1 | 201 | 41 | 1 | 41 | |
| | | | | | | CLV TOTAL= | 345 |
| | | | | | | Level of Service (LOS )= | A |

Critical Lane Volume Analysis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SEVERNA PARK, MD 21146
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Airport Rd &
Longwoods Rd
(Background Traffic)

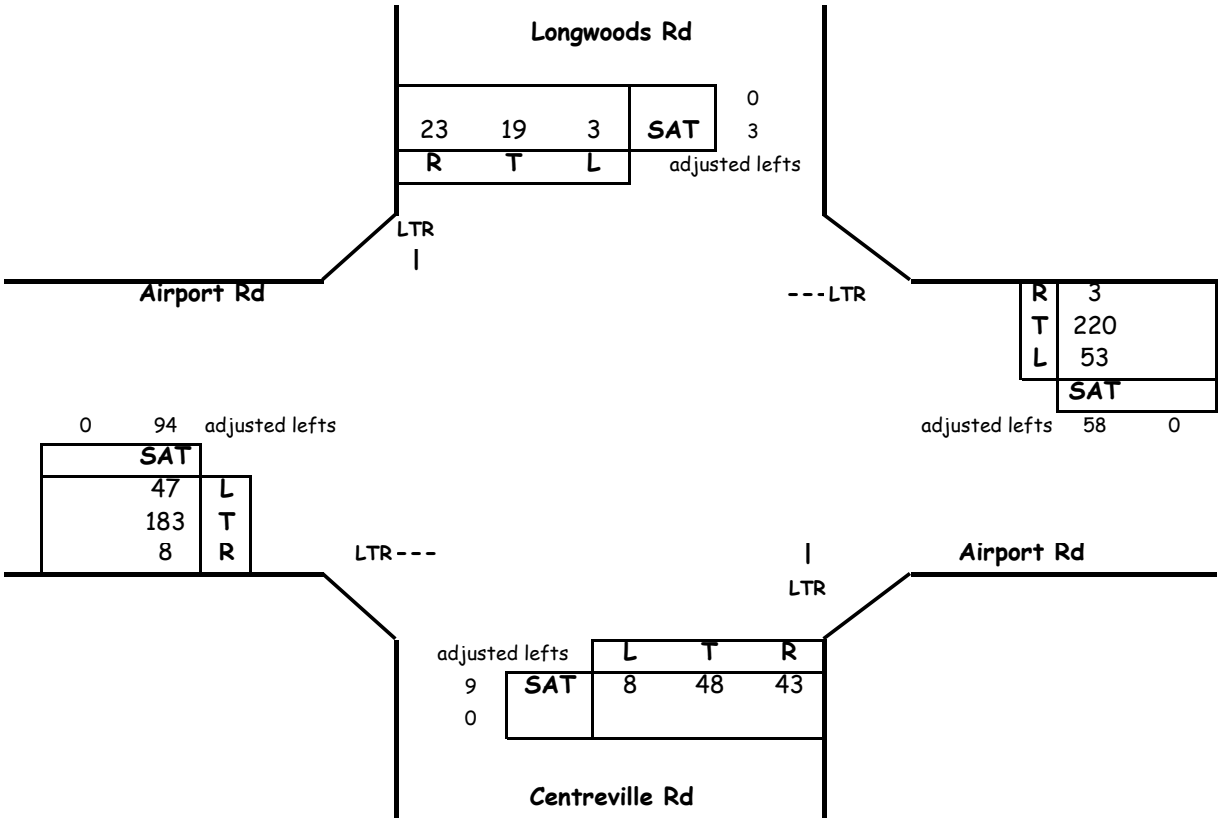
**Intersection**
**4 - Sat**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Main Line:** Airport Rd
**Minor Street:** Longwoods Rd
**Study Period:** Total Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| NB | 100 | 1.00 | 100 | 3 | 1 | 3 | 103 |
| SB | 45 | 1.00 | 45 | 8 | 1 | 8 | |
| EB | 285 | 1 | 285 | 53 | 1 | 53 | 338 |
| WB | 281 | 1 | 281 | 47 | 1 | 47 | |
| | | | | | | CLV TOTAL= | 441 |
| | | | | | | Level of Service (LOS )= | A |

Critical Lane Volume Analysis

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SEVERNA PARK, MD 21146
www.lenharttraffic.com

Airport Rd &
Longwoods Rd
(Total Traffic)

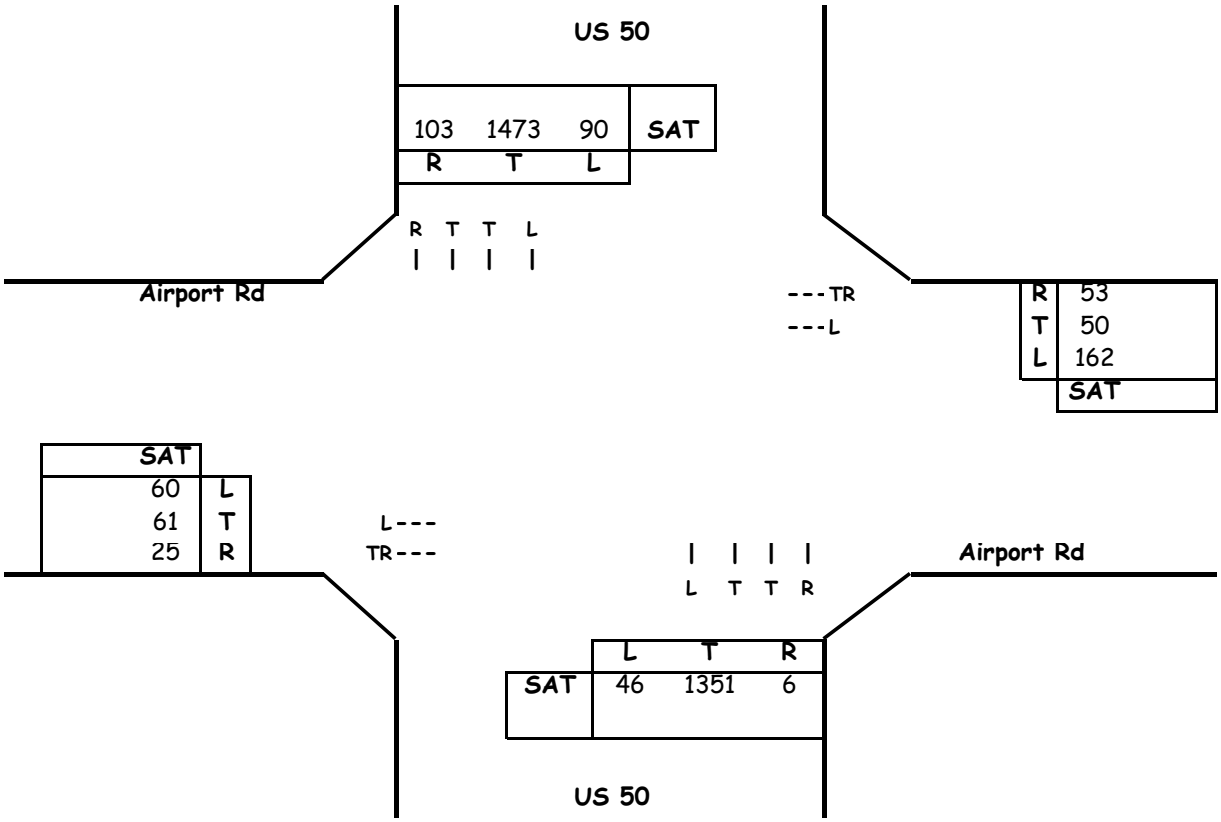
**Intersection**
**4 - Sat**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY

**Main Line:** US 50
**Minor Street:** Airport Rd
**Study Period:** Existing Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| NB | 1351 | 0.55 | 743 | 90 | 1 | 90 | 856 |
| SB | 1473 | 0.55 | 810 | 46 | 1 | 46 | |
| EB | 86 | 1 | 86 | 162 | 1 | 162 | 248 |
| WB | 103 | 1 | 103 | 60 | 1 | 60 | |
| | | | | | | CLV TOTAL= | **1104** |
| | | | | | | Level of Service (LOS )= | **B** |

Critical Lane Volume Analysis


LENHART TRAFFIC CONSULTING, INC.
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SEVERNA PARK, MD 21146
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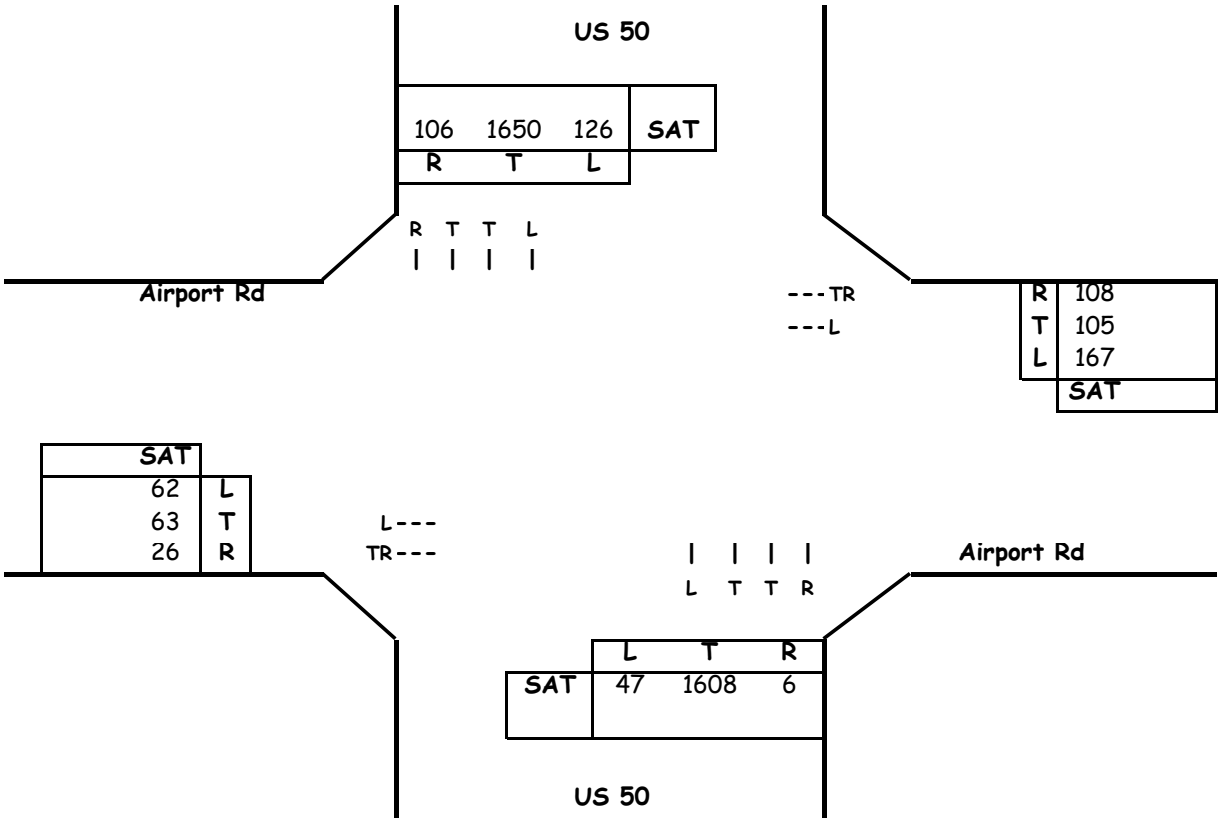
US 50 &
Airport Rd
(Existing Traffic)

**Intersection**
**5-Sat**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY

**Main Line:** US 50 **Analyst:** Lenhart Traffic
**Minor Street:** Airport Rd
**Study Period:** Background Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| NB | 1608 | 0.55 | 884 | 126 | 1 | 126 | 1010 |
| SB | 1650 | 0.55 | 908 | 47 | 1 | 47 | |
| EB | 89 | 1 | 89 | 167 | 1 | 167 | 275 |
| WB | 213 | 1 | 213 | 62 | 1 | 62 | |
| | | | | | | CLV TOTAL= | **1285** |
| | | | | | | Level of Service (LOS )= | ***C*** |

Critical Lane Volume Analysis


LENHART TRAFFIC CONSULTING, INC.
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SEVERNA PARK, MD 21146
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US 50 &
Airport Rd
(Background Traffic)

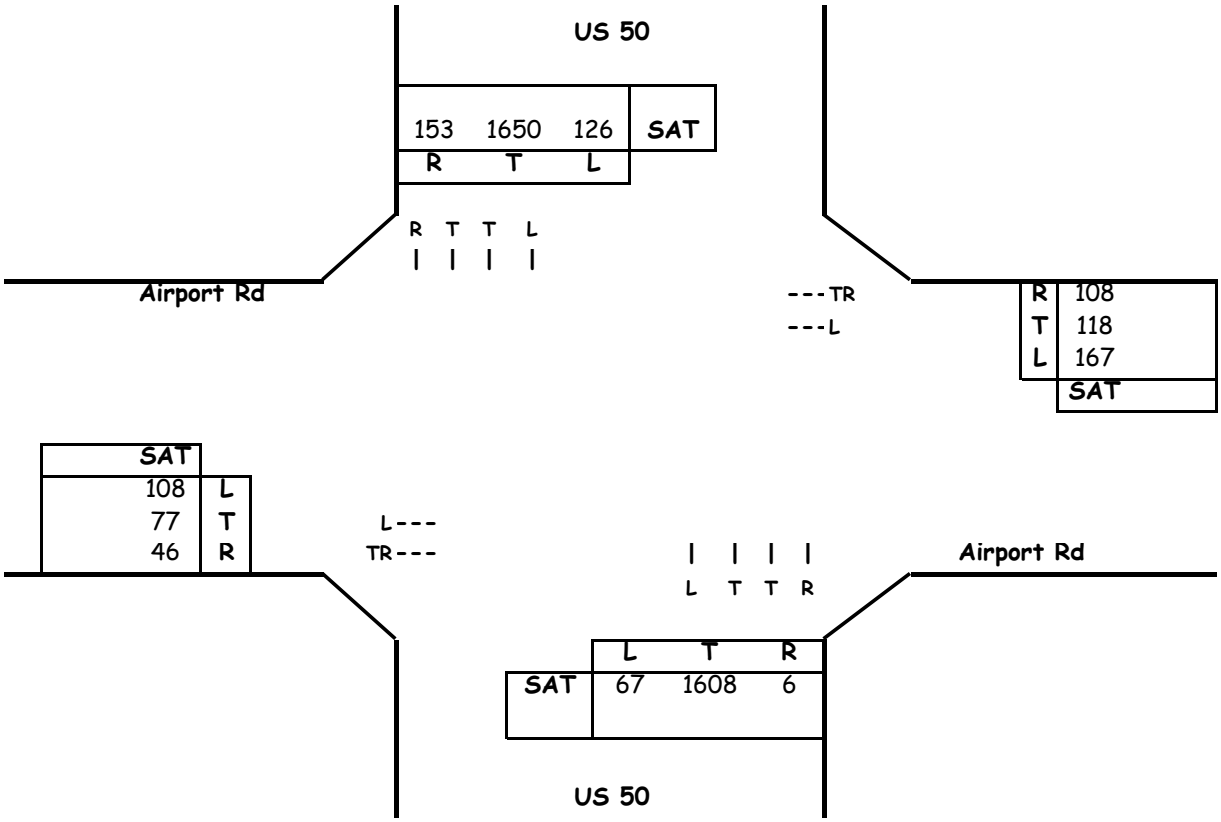
**Intersection**
**5-Sat**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY

**Main Line:** US 50
**Minor Street:** Airport Rd
**Study Period:** Total Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| NB | 1608 | 0.55 | 884 | 126 | 1 | 126 | 1010 |
| SB | 1650 | 0.55 | 908 | 67 | 1 | 67 | |
| EB | 123 | 1 | 123 | 167 | 1 | 167 | 334 |
| WB | 226 | 1 | 226 | 108 | 1 | 108 | |
| | | | | | | CLV TOTAL= | **1344** |
| | | | | | | Level of Service (LOS )= | **D** |

Critical Lane Volume Analysis


LENHART TRAFFIC CONSULTING, INC.
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SEVERNA PARK, MD 21146
www.lenharttraffic.com

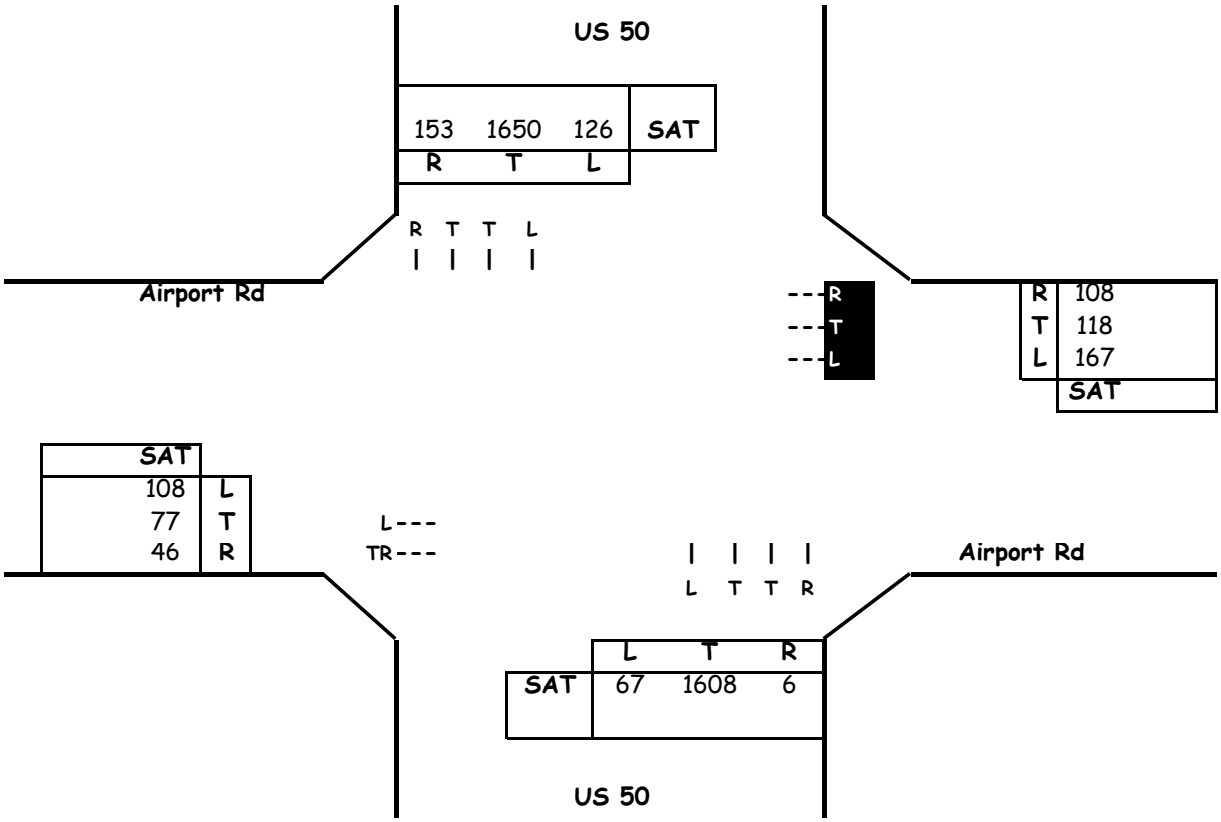

US 50 &
Airport Rd
(Total Traffic)

**Intersection**
**5-Sat**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY

**Main Line:** US 50 **Analyst:** Lenhart Traffic
**Minor Street:** Airport Rd
**Study Period:** Total Traffic w/ Improvements

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| NB | 1608 | 0.55 | 884 | 126 | 1 | 126 | 1010 |
| SB | 1650 | 0.55 | 908 | 67 | 1 | 67 | |
| EB | 123 | 1 | 123 | 167 | 1 | 167 | 290 |
| WB | 118 | 1 | 118 | 108 | 1 | 108 | |
| | | | | | | CLV TOTAL= | 1300 |
| | | | | | | Level of Service (LOS )= | C |

Critical Lane Volume Analysis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US 50 &
Airport Rd
(Total Traffic w/ Improvements)

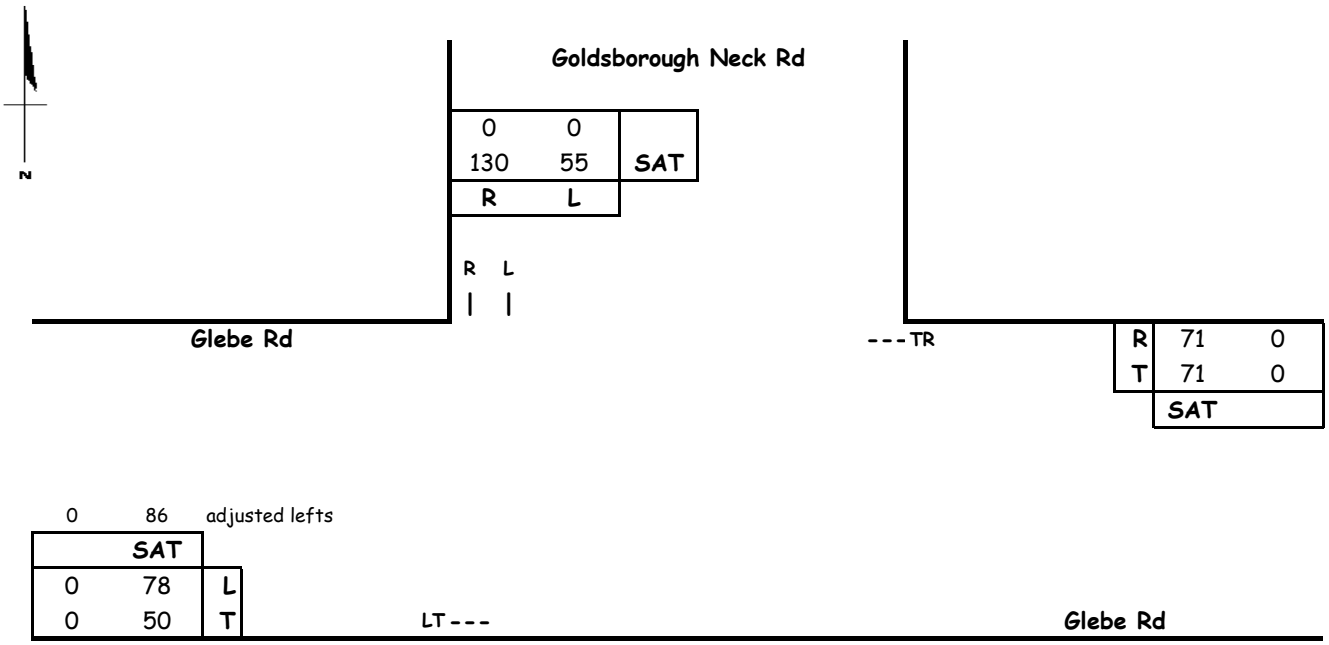
**Intersection**
**5-Sat**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Glebe Rd
**Conditions:** Existing Traffic

**Analyst:** Lenhart Traffic Consulting

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

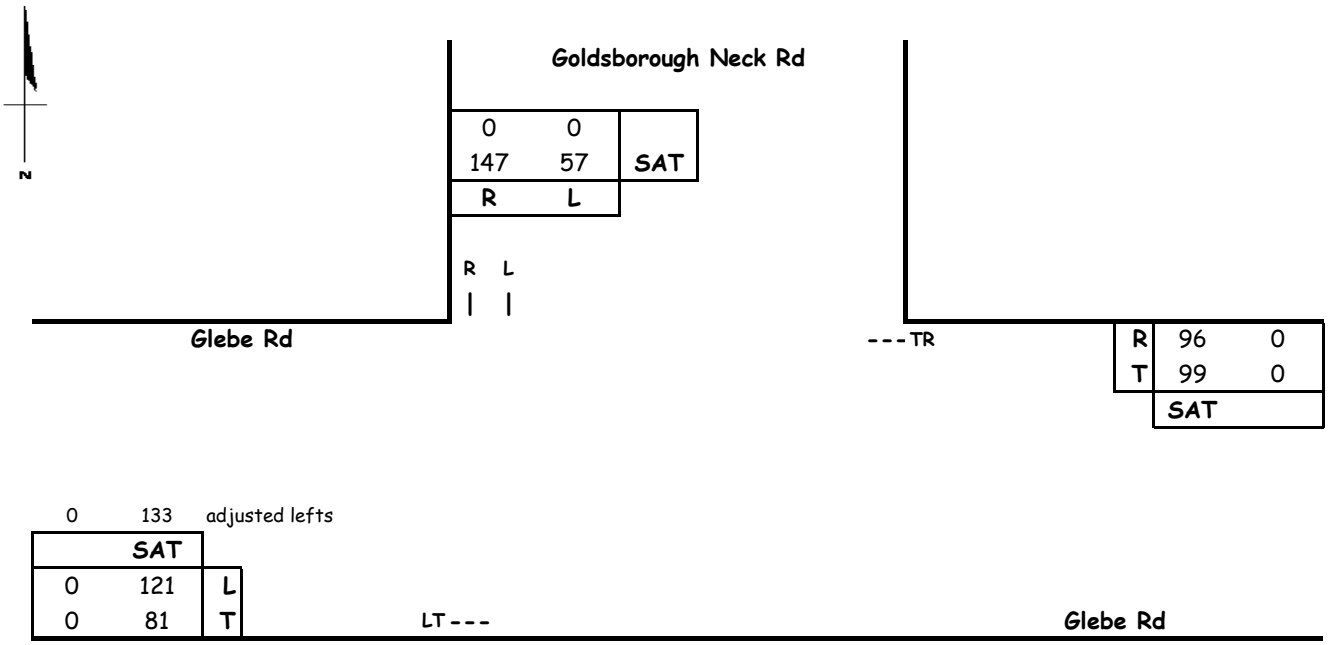
| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | SAT CLV |
|---|---|---|---|---|---|---|---|
| SB | 55 | 1.00 | 55 | | | | 55 |
| EB | 136 | 1.00 | 136 | | | | 220 |
| WB | 142 | 1.00 | 142 | 78 | 1.00 | 78 | |
| | | | | | CLV TOTAL= | | **275** |
| | | | | | Level of Service (LOS )= | | **A** |

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Glebe Rd
**Conditions:** Background Traffic

**Analyst:** Lenhart Traffic Consulting

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | SAT CLV |
|---|---|---|---|---|---|---|---|
| SB | 57 | 1.00 | 57 | | | | 57 |
| EB | 214 | 1.00 | 214 | | | | 316 |
| WB | 195 | 1.00 | 195 | 121 | 1.00 | 121 | |
| | | | | | CLV TOTAL= | | **373** |
| | | | | | Level of Service (LOS )= | | **A** |

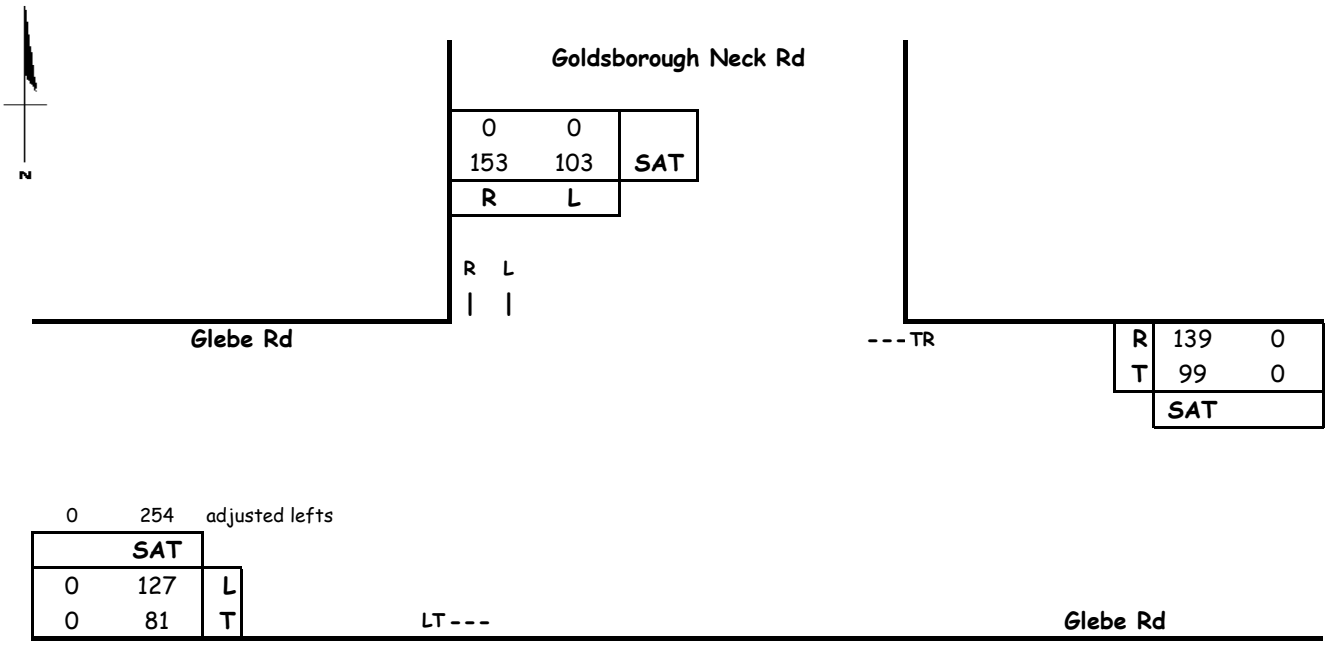
| | | |
|---|---|---|
| Critical Lane Volume Analysis<br>LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Goldsborough Neck Rd & Glebe Rd<br>(Background Traffic) | **Intersection**<br>**6 - Sat** |

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Glebe Rd
**Conditions:** Total Traffic

**Analyst:** Lenhart Traffic Consulting

## Lane Use + Traffic Volumes




## Capacity Analysis

**Morning Peak Hour**

| Dir | Thru Volumes VOL | x LUF | = Total | + Opposing Lefts VOL | x LUF | = Total | SAT CLV |
|---|---|---|---|---|---|---|---|
| SB | 103 | 1.00 | 103 | | | | 103 |
| EB | 335 | 1.00 | 335 | | | | 365 |
| WB | 238 | 1.00 | 238 | 127 | 1.00 | 127 | |
| | | | | | CLV TOTAL= | | **468** |
| | | | | | Level of Service (LOS )= | | **A** |

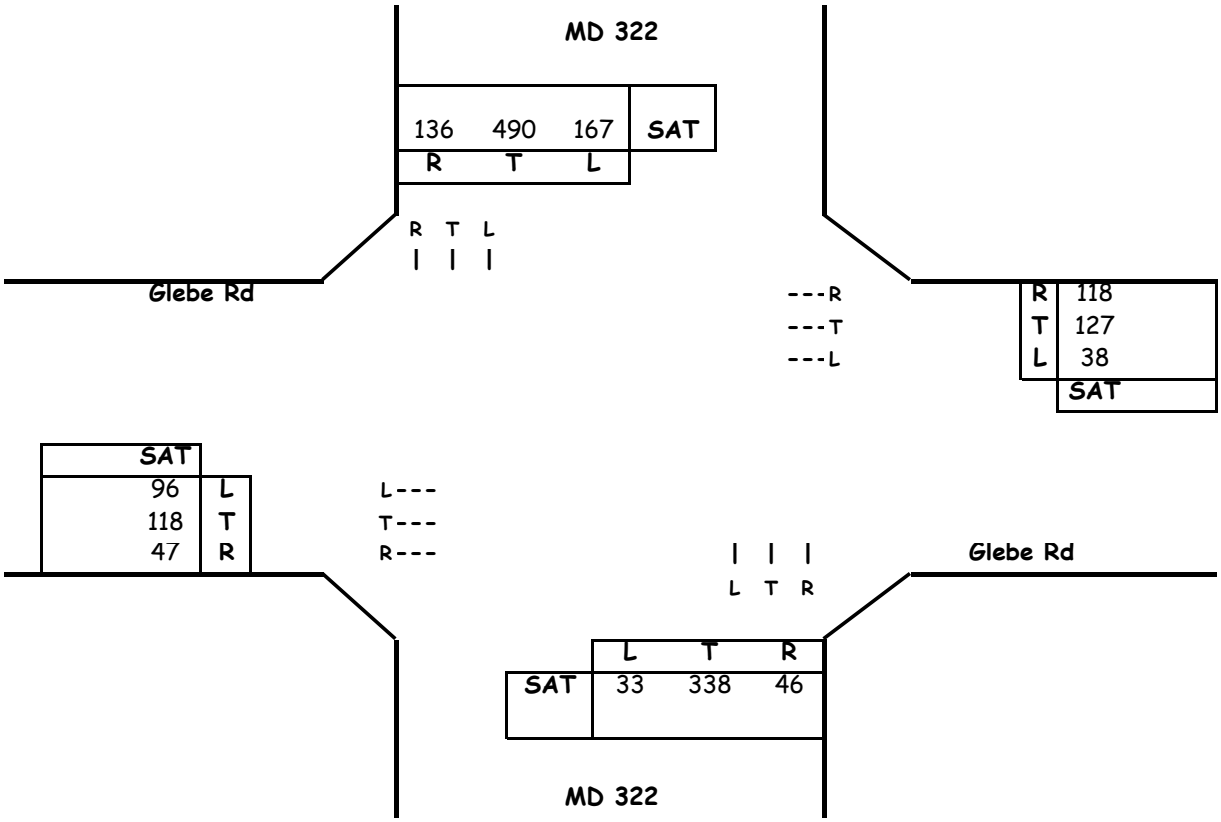
| | | | |
|---|---|---|---|
| Critical Lane Volume Analysis<br>LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | | Goldsborough Neck Rd & Glebe Rd<br>(Total Traffic) | **Intersection**<br>**6 - Sat** |

## CRITICAL LANE VOLUME (CLV) METHODOLOGY

**Main Line:** MD 322
**Minor Street:** Glebe Rd
**Study Period:** Existing Traffic

**Analyst:** Lenhart Traffic

### Lane Use + Traffic Volumes




### Critical Lane Volume Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| NB | 338 | 1.00 | 338 | 167 | 1 | 167 | 523 |
| SB | 490 | 1.00 | 490 | 33 | 1 | 33 | |
| EB | 118 | 1 | 118 | 38 | 1 | 38 | 223 |
| WB | 127 | 1 | 127 | 96 | 1 | 96 | |
| | | | | | | CLV TOTAL= | 746 |
| | | | | | | Level of Service (LOS )= | A |

Critical Lane Volume Analysis


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


MD 322 &
Glebe Rd
(Existing Traffic)

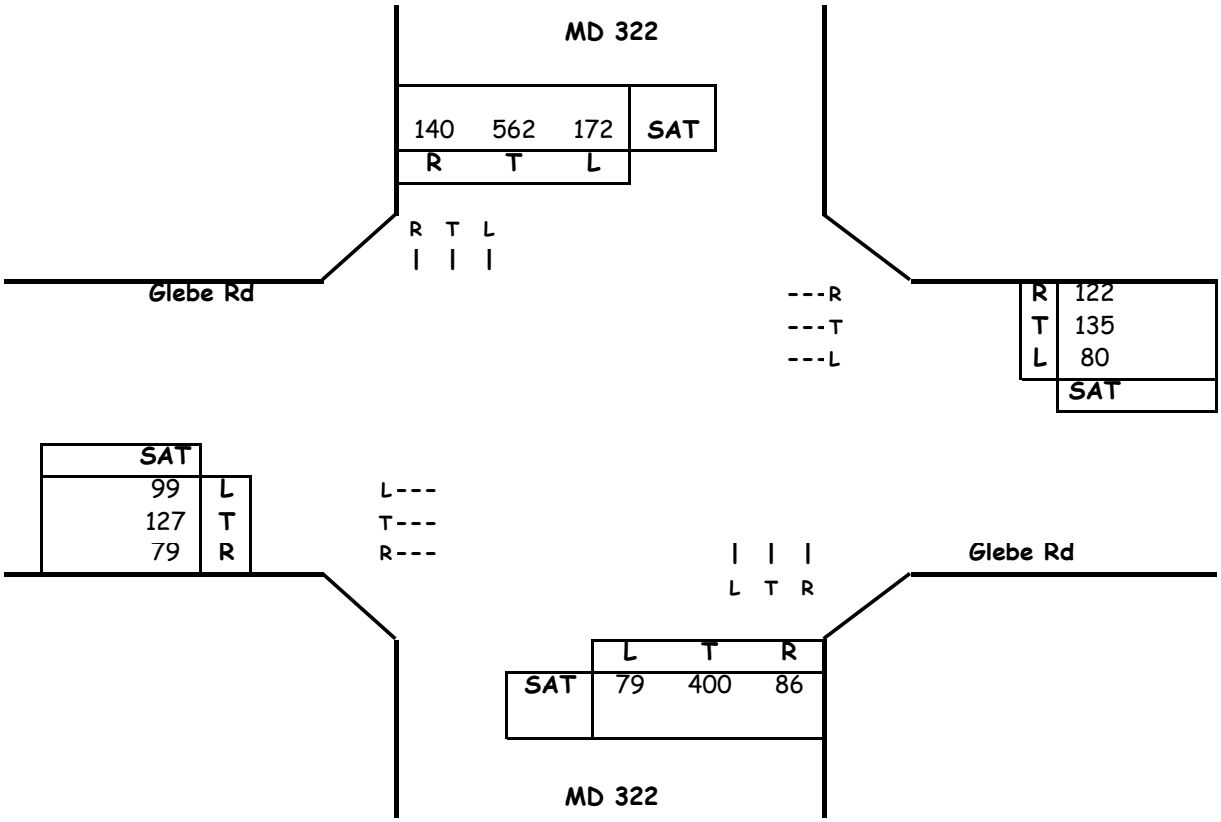
**Intersection**
**7 - Sat**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY

**Main Line:** MD 322
**Minor Street:** Glebe Rd
**Study Period:** Background Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| NB | 400 | 1.00 | 400 | 172 | 1 | 172 | 641 |
| SB | 562 | 1.00 | 562 | 79 | 1 | 79 | |
| EB | 127 | 1 | 127 | 80 | 1 | 80 | 234 |
| WB | 135 | 1 | 135 | 99 | 1 | 99 | |
| | | | | | | CLV TOTAL= | 875 |
| | | | | | | Level of Service (LOS )= | A |

Critical Lane Volume Analysis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MD 322 &
Glebe Rd
(Background Traffic)

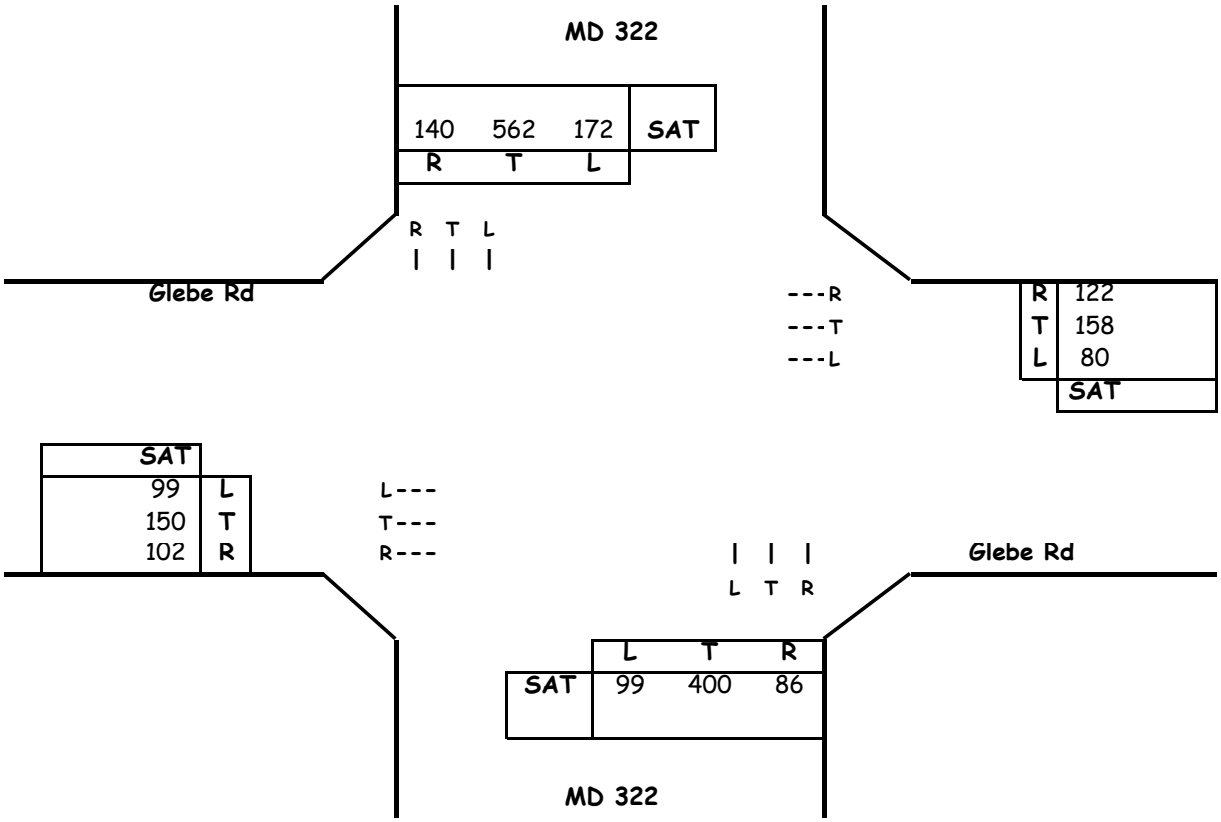
**Intersection**
**7 - Sat**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY

**Main Line:** MD 322
**Minor Street:** Glebe Rd
**Study Period:** Total Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Critical Lane Volume Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| NB | 400 | 1.00 | 400 | 172 | 1 | 172 | 661 |
| SB | 562 | 1.00 | 562 | 99 | 1 | 99 | |
| EB | 150 | 1 | 150 | 80 | 1 | 80 | 257 |
| WB | 158 | 1 | 158 | 99 | 1 | 99 | |
| | | | | | | CLV TOTAL= | **918** |
| | | | | | | Level of Service (LOS )= | **A** |

Critical Lane Volume Analysis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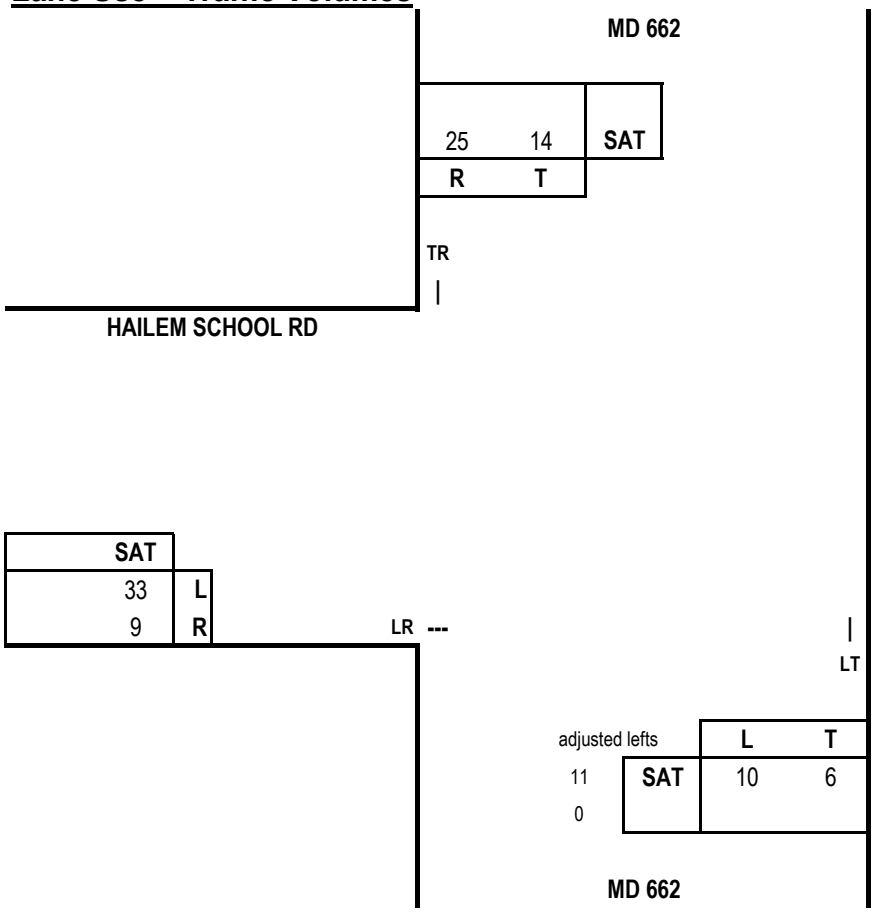
MD 322 & Glebe Rd
(Total Traffic)

**Intersection**
**7 - Sat**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** MD 662
**and:** Hailem School Rd
**Conditions:** Existing Traffic
**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| EB | 42 | 1.00 | 42 | | | | 42 |
| NB | 17 | 1.00 | 17 | | | | 49 |
| SB | 39 | 1.00 | 39 | 10 | 1.00 | 10 | |
| | | | | | | CLV TOTAL= | 91 |
| | | | | | | Level of Service (LOS )= | A |

Critical Lane Volume Analysis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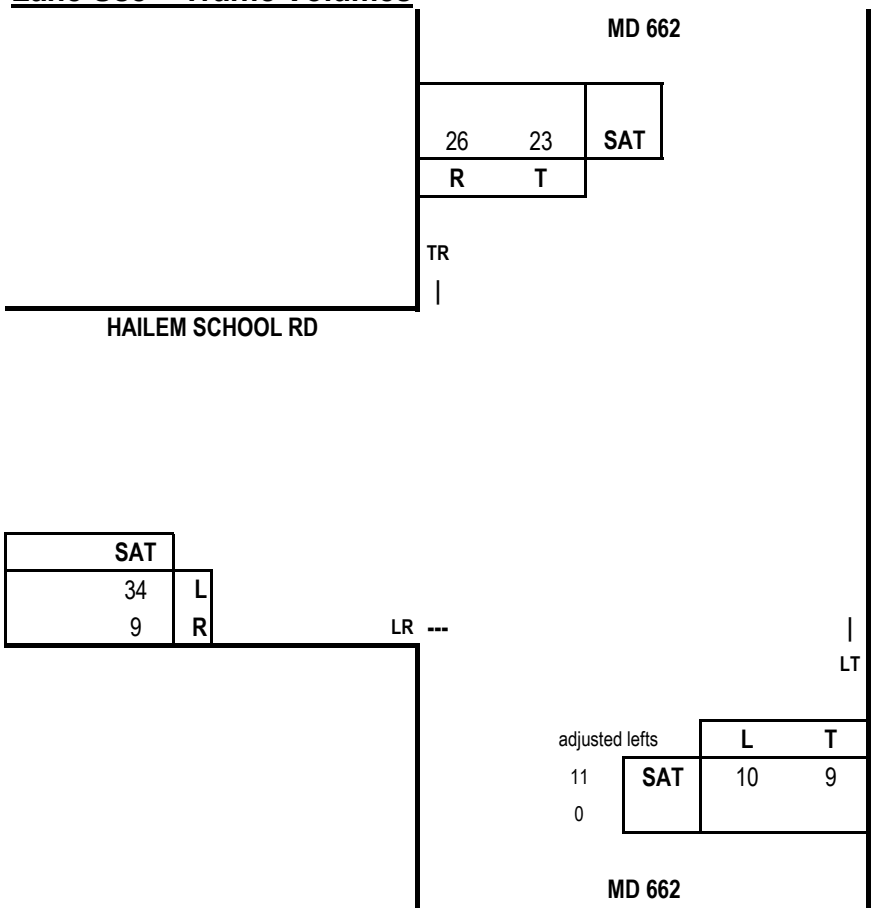
MD 662 &
Hailem School Rd
(Existing Traffic)

**Intersection**
**8**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** MD 662
**and:** Hailem School Rd
**Conditions:** Background Traffic
**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| EB | 43 | 1.00 | 43 | | | | 43 |
| NB | 20 | 1.00 | 20 | | | | 59 |
| SB | 49 | 1.00 | 49 | 10 | 1.00 | 10 | |
| | | | | | | CLV TOTAL= | 102 |
| | | | | | | Level of Service (LOS )= | A |

Critical Lane Volume Analysis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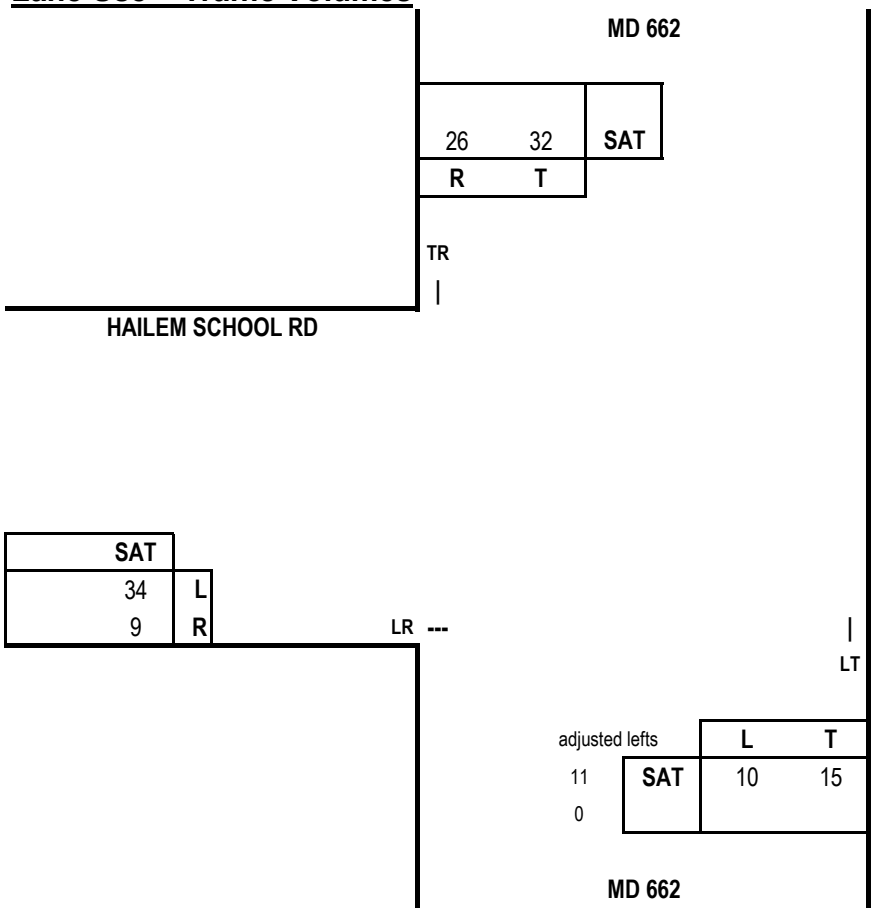
MD 662 &
Hailem School Rd
(Background Traffic)

**Intersection**
**8**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** MD 662
**and:** Hailem School Rd
**Conditions:** Total Traffic
**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | SAT |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| EB | 43 | 1.00 | 43 | | | | 43 |
| NB | 26 | 1.00 | 26 | | | | 68 |
| SB | 58 | 1.00 | 58 | 10 | 1.00 | 10 | |
| | | | | | | CLV TOTAL= | 111 |
| | | | | | | Level of Service (LOS )= | A |

Critical Lane Volume Analysis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MD 662 &
Hailem School Rd
(Total Traffic)

**Intersection**
**8**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** MD 662
**and:** Hiners Ln
**Conditions:** Existing Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes

## Capacity Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | Sat |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| WB | 4 | 1.00 | 4 | | | | 4 |
| NB | 12 | 1.00 | 12 | 6 | 1.00 | 6 | 24 |
| SB | 24 | 1.00 | 24 | | | | |
| | | | | | | CLV TOTAL= | 28 |
| | | | | | | Level of Service (LOS )= | A |

Critical Lane Volume Analysis


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N

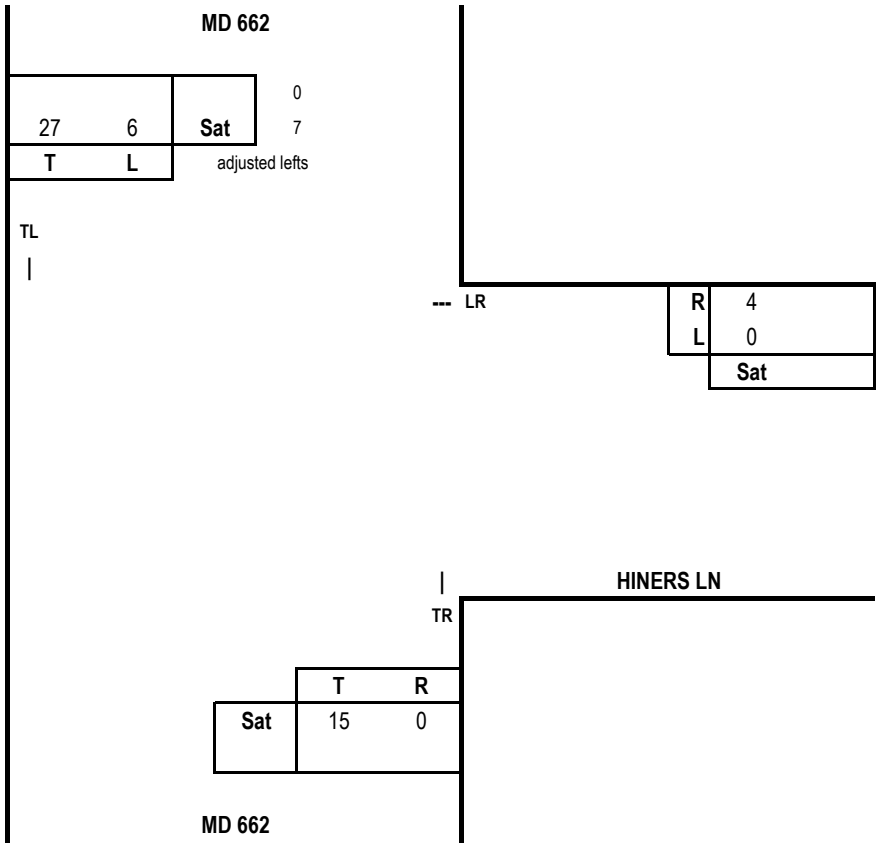
MD 662 &
Hiners Ln
(Existing Traffic)

**Intersection**
**9**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** MD 662
**and:** Hiners Ln
**Conditions:** Background Traffic
**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | Sat |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| WB | 4 | 1.00 | 4 | | | | 4 |
| NB | 15 | 1.00 | 15 | 6 | 1.00 | 6 | 34 |
| SB | 34 | 1.00 | 34 | | | | |
| | | | | | | CLV TOTAL= | 38 |
| | | | | | | Level of Service (LOS )= | A |

Critical Lane Volume Analysis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N

MD 662 &
Hiners Ln
(Background Traffic)

**Intersection**
**9**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** MD 662
**and:** Hiners Ln
**Conditions:** Total Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes

## Capacity Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | Sat |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| WB | 4 | 1.00 | 4 | | | | 4 |
| NB | 21 | 1.00 | 21 | 6 | 1.00 | 6 | 43 |
| SB | 43 | 1.00 | 43 | | | | |
| | | | | | | CLV TOTAL= | 47 |
| | | | | | | Level of Service (LOS )= | A |

Critical Lane Volume Analysis


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N

MD 662 &
Hiners Ln
(Total Traffic)

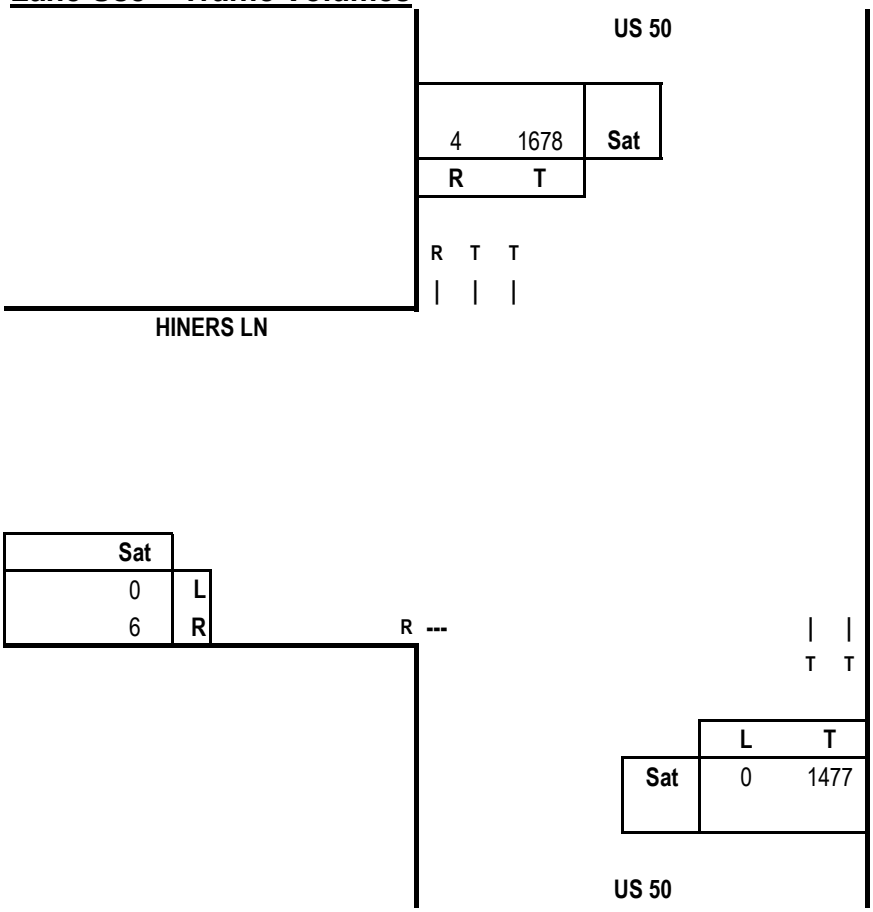
**Intersection**
**9**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** US 50
**and:** Hiners Ln
**Conditions:** Existing Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | Sat |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| EB | 6 | 1.00 | 6 | | | | 6 |
| NB | 1477 | 0.55 | 812 | | | | 923 |
| SB | 1678 | 0.55 | 923 | 0 | 0.00 | 0 | |
| | | | | | | CLV TOTAL= | **929** |
| | | | | | | Level of Service (LOS )= | **A** |

Critical Lane Volume Analysis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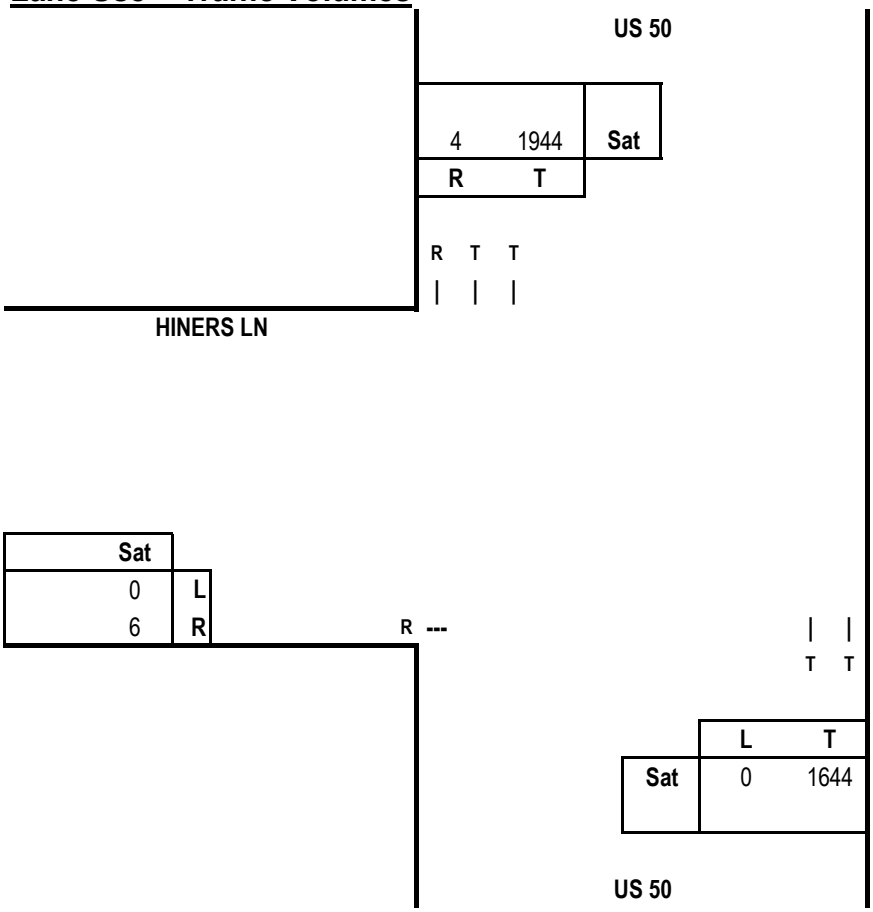
US 50 &
Hiners Ln
(Existing Traffic)

**Intersection**
**10**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** US 50
**and:** Hiners Ln
**Conditions:** Background Traffic
**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | Sat |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| EB | 6 | 1.00 | 6 | | | | 6 |
| NB | 1644 | 0.55 | 904 | | | | 1069 |
| SB | 1944 | 0.55 | 1069 | 0 | 0.00 | 0 | |
| | | | | | | CLV TOTAL= | **1075** |
| | | | | | | Level of Service (LOS )= | **B** |

Critical Lane Volume Analysis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US 50 &
Hiners Ln
(Background Traffic)

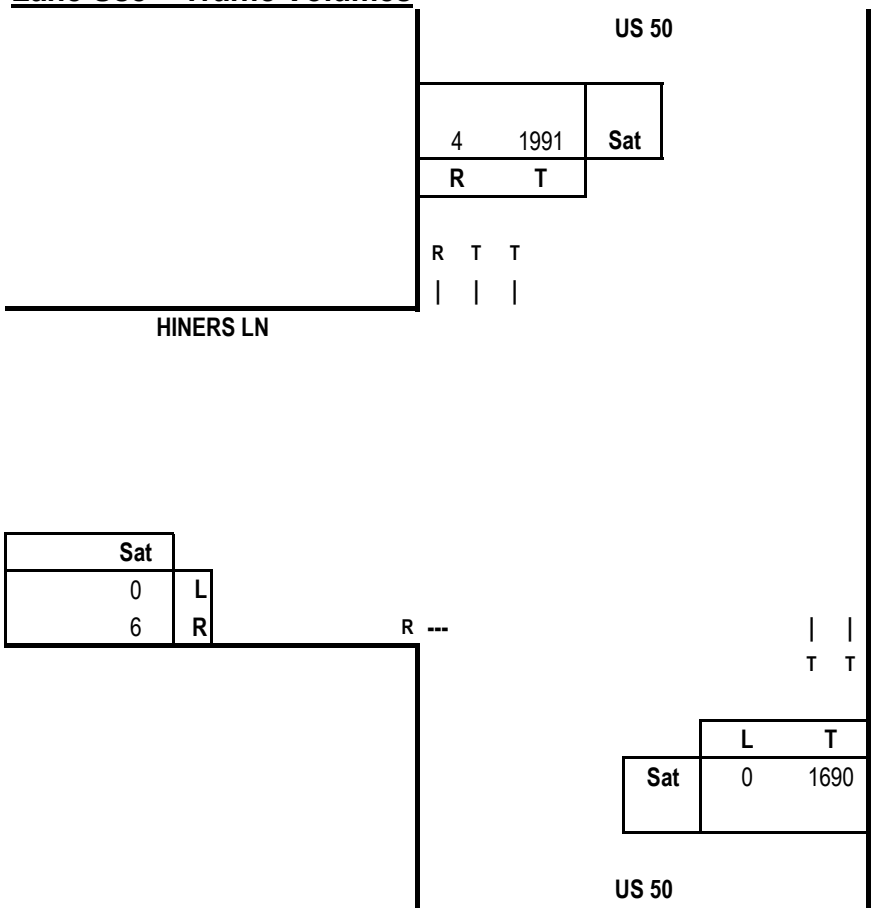
**Intersection**
**10**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** US 50
**and:** Hiners Ln
**Conditions:** Total Traffic

**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | Sat |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| EB | 6 | 1.00 | 6 | | | | 6 |
| NB | 1690 | 0.55 | 930 | | | | 1095 |
| SB | 1991 | 0.55 | 1095 | 0 | 0.00 | 0 | |
| | | | | | | CLV TOTAL= | 1101 |
| | | | | | | Level of Service (LOS )= | B |

Critical Lane Volume Analysis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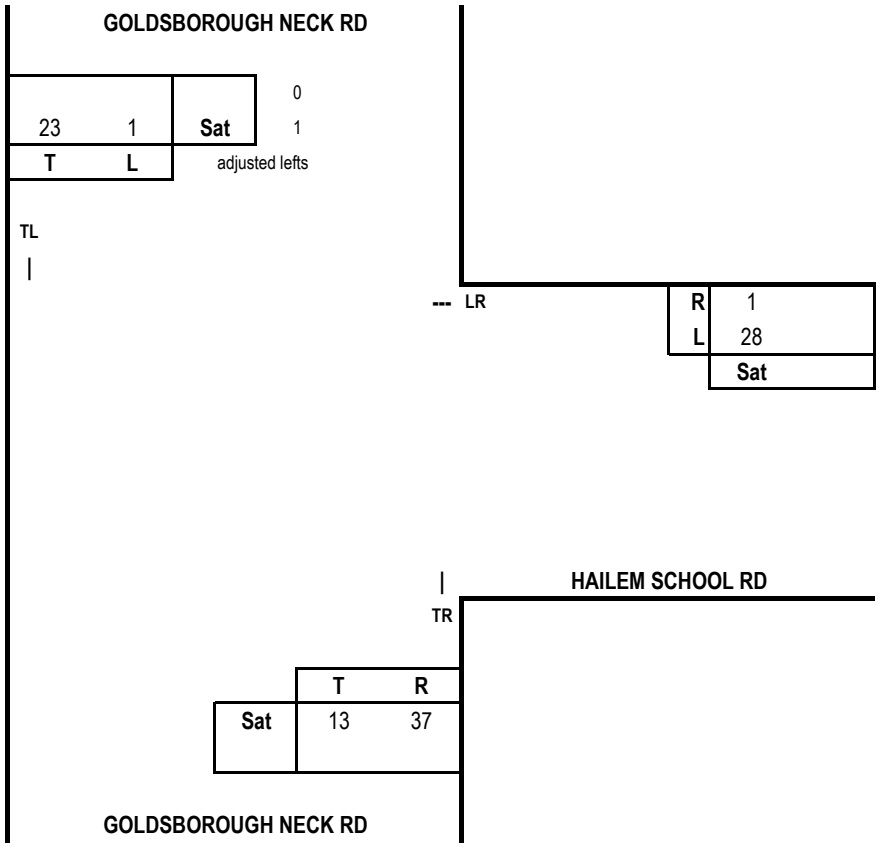
US 50 &
Hiners Ln
(Total Traffic)

**Intersection**
**10**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Hailem School Rd
**Analyst:** Lenhart Traffic
**Conditions:** Existing Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | Sat |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| WB | 29 | 1.00 | 29 | | | | 29 |
| NB | 50 | 1.00 | 50 | 1 | 1.00 | 1 | 51 |
| SB | 24 | 1.00 | 24 | | | | |
| | | | | | CLV TOTAL= | | 80 |
| | | | | | Level of Service (LOS )= | | A |

Critical Lane Volume Analysis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N

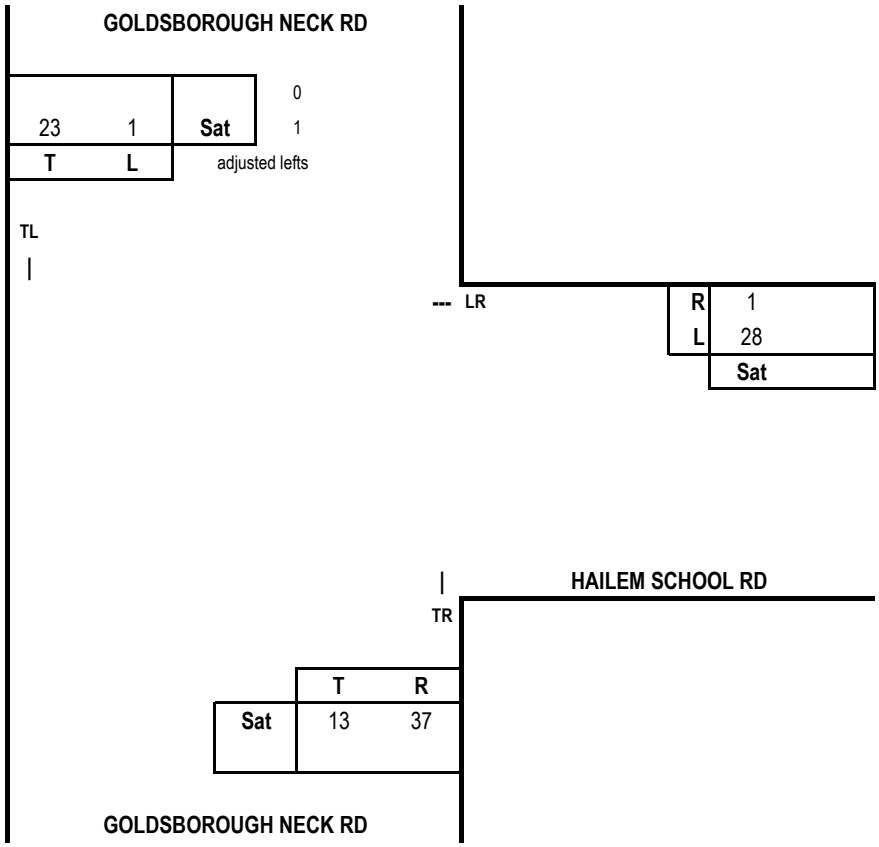
Goldsborough Neck Rd &
Hailem School Rd
(Existing Traffic)

**Intersection**
**11**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Hailem School Rd
**Conditions:** Background Traffic
**Analyst:** Lenhart Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | Sat |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| WB | 29 | 1.00 | 29 | | | | 29 |
| NB | 50 | 1.00 | 50 | 1 | 1.00 | 1 | 51 |
| SB | 24 | 1.00 | 24 | | | | |
| | | | | | CLV TOTAL= | | 80 |
| | | | | | Level of Service (LOS )= | | A |

Critical Lane Volume Analysis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N

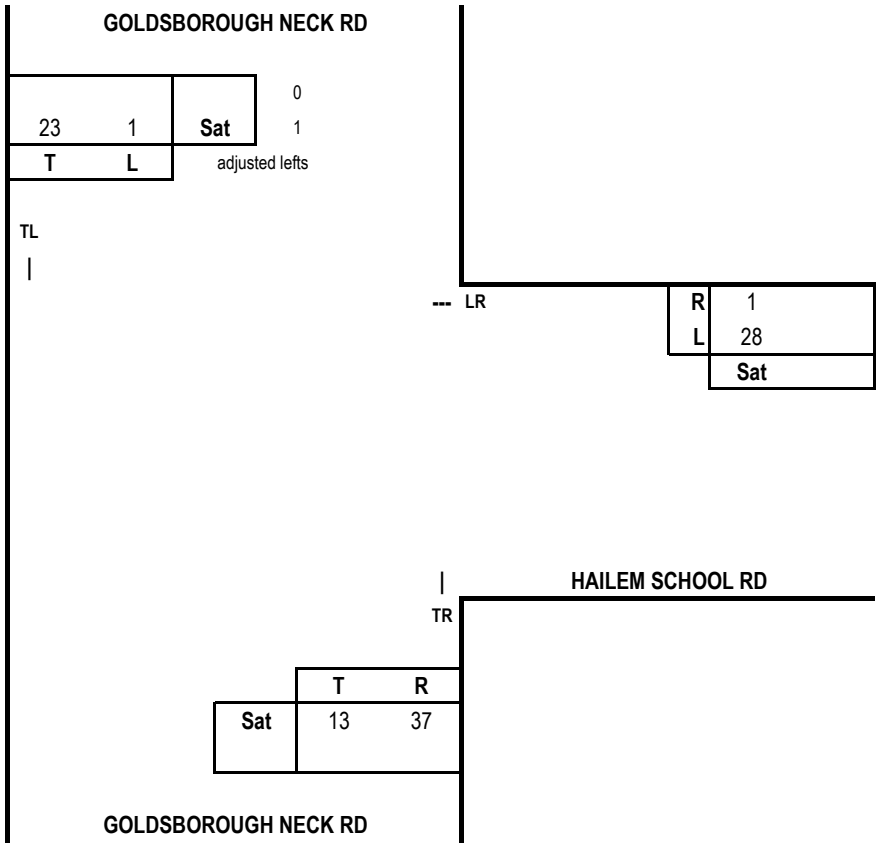
Goldsborough Neck Rd &
Hailem School Rd
(Background Traffic)

**Intersection**
**11**

# CRITICAL LANE VOLUME (CLV) METHODOLOGY
## for MSHA

**Intersection of:** Goldsborough Neck Rd
**and:** Hailem School Rd
**Analyst:** Lenhart Traffic
**Conditions:** Total Traffic

## Lane Use + Traffic Volumes




## Capacity Analysis

| Sat. Midday Peak Hour | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Thru Volumes | | | + Opposing Lefts | | | Sat |
| Dir | VOL | x LUF | = Total | VOL | x LUF | = Total | CLV |
| WB | 29 | 1.00 | 29 | | | | 29 |
| NB | 50 | 1.00 | 50 | 1 | 1.00 | 1 | 51 |
| SB | 24 | 1.00 | 24 | | | | |
| | | | | | CLV TOTAL= | | 80 |
| | | | | | Level of Service (LOS )= | | A |

Critical Lane Volume Analysis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N

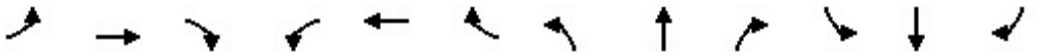
Goldsborough Neck Rd &
Hailem School Rd
(Total Traffic)

**Intersection**
**11**

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 84 | 6 | 22 | 82 | 9 | 31 |
| Future Volume (Veh/h) | 84 | 6 | 22 | 82 | 9 | 31 |
| 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) | 91 | 7 | 24 | 89 | 10 | 34 |
| 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 | 122 | 68 | | | 113 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 122 | 68 | | | 113 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 90 | 99 | | | 99 | |
| cM capacity (veh/h) | 867 | 995 | | | 1476 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 98 | 113 | 44 |
| Volume Left | 91 | 0 | 10 |
| Volume Right | 7 | 89 | 0 |
| cSH | 875 | 1700 | 1476 |
| Volume to Capacity | 0.11 | 0.07 | 0.01 |
| Queue Length 95th (ft) | 9 | 0 | 1 |
| Control Delay (s) | 9.6 | 0.0 | 1.7 |
| Lane LOS | A | | A |
| Approach Delay (s) | 9.6 | 0.0 | 1.7 |
| Approach LOS | A | | |

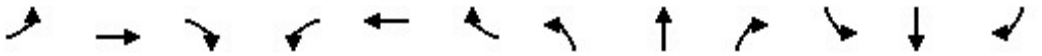
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.0 | | |
| Intersection Capacity Utilization | 20.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 0 | 116 | 7 | 33 | 200 | 1 | 10 | 0 | 18 | 1 | 1 | 1 |
| Future Volume (Veh/h) | 0 | 116 | 7 | 33 | 200 | 1 | 10 | 0 | 18 | 1 | 1 | 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) | 0 | 126 | 8 | 36 | 217 | 1 | 11 | 0 | 20 | 1 | 1 | 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) | | | | | 519 | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 218 | | | 134 | | | 421 | 420 | 130 | 440 | 424 | 218 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 218 | | | 134 | | | 421 | 420 | 130 | 440 | 424 | 218 |
| 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 | | | 98 | | | 98 | 100 | 98 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1352 | | | 1451 | | | 531 | 512 | 920 | 506 | 509 | 822 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 134 | 254 | 31 | 3 |
| Volume Left | 0 | 36 | 11 | 1 |
| Volume Right | 8 | 1 | 20 | 1 |
| cSH | 1352 | 1451 | 730 | 582 |
| Volume to Capacity | 0.00 | 0.02 | 0.04 | 0.01 |
| Queue Length 95th (ft) | 0 | 2 | 3 | 0 |
| Control Delay (s) | 0.0 | 1.3 | 10.1 | 11.2 |
| Lane LOS | | A | B | B |
| Approach Delay (s) | 0.0 | 1.3 | 10.1 | 11.2 |
| Approach LOS | | | B | B |

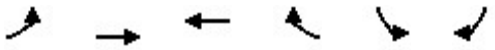
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.6 | | |
| Intersection Capacity Utilization | 32.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 79 | 42 | 8 | 319 | 99 | 86 | 36 | 936 | 8 | 35 | 1077 | 96 |
| Future Volume (vph) | 79 | 42 | 8 | 319 | 99 | 86 | 36 | 936 | 8 | 35 | 1077 | 96 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | 1.00 | 0.98 | | 1.00 | 0.93 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1817 | | 1770 | 1733 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.63 | 1.00 | | 0.54 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1177 | 1817 | | 1001 | 1733 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 86 | 46 | 9 | 347 | 108 | 93 | 39 | 1017 | 9 | 38 | 1171 | 104 |
| RTOR Reduction (vph) | 0 | 3 | 0 | 0 | 13 | 0 | 0 | 0 | 3 | 0 | 0 | 38 |
| Lane Group Flow (vph) | 86 | 52 | 0 | 347 | 188 | 0 | 39 | 1017 | 6 | 38 | 1171 | 66 |
| Turn Type | Perm | NA | | pm+pt | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | 2 | | | 6 |
| Actuated Green, G (s) | 19.4 | 19.4 | | 54.5 | 54.5 | | 8.7 | 136.1 | 136.1 | 8.6 | 136.0 | 136.0 |
| Effective Green, g (s) | 19.4 | 19.4 | | 54.5 | 54.5 | | 8.7 | 136.1 | 136.1 | 8.6 | 136.0 | 136.0 |
| Actuated g/C Ratio | 0.09 | 0.09 | | 0.26 | 0.26 | | 0.04 | 0.64 | 0.64 | 0.04 | 0.64 | 0.64 |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 107 | 165 | | 367 | 444 | | 72 | 2264 | 1012 | 71 | 2262 | 1012 |
| v/s Ratio Prot | | 0.03 | | c0.14 | 0.11 | | c0.02 | 0.29 | | 0.02 | c0.33 | |
| v/s Ratio Perm | 0.07 | | | c0.11 | | | | | 0.00 | | | 0.04 |
| v/c Ratio | 0.80 | 0.32 | | 0.95 | 0.42 | | 0.54 | 0.45 | 0.01 | 0.54 | 0.52 | 0.07 |
| Uniform Delay, d1 | 94.8 | 90.4 | | 74.8 | 66.0 | | 100.0 | 19.4 | 13.8 | 100.1 | 20.7 | 14.4 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 33.9 | 1.1 | | 32.9 | 0.7 | | 8.1 | 0.6 | 0.0 | 7.6 | 0.9 | 0.1 |
| Delay (s) | 128.6 | 91.6 | | 107.7 | 66.6 | | 108.1 | 20.0 | 13.9 | 107.6 | 21.5 | 14.6 |
| Level of Service | F | F | | F | E | | F | C | B | F | C | B |
| Approach Delay (s) | | 114.2 | | | 92.6 | | | 23.2 | | | 23.5 | |
| Approach LOS | | F | | | F | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 39.9 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.65 | | |
| Actuated Cycle Length (s) | 212.7 | Sum of lost time (s) | 18.0 |
| Intersection Capacity Utilization | 63.0% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

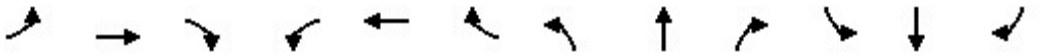
c Critical Lane Group



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 69 | 75 | 49 | 49 | 47 | 73 |
| Future Volume (Veh/h) | 69 | 75 | 49 | 49 | 47 | 73 |
| 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) | 75 | 82 | 53 | 53 | 51 | 79 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | 5 |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 106 | | | | 312 | 80 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 106 | | | | 312 | 80 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 95 | | | | 92 | 92 |
| cM capacity (veh/h) | 1485 | | | | 647 | 981 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 157 | 106 | 130 |
| Volume Left | 75 | 0 | 51 |
| Volume Right | 0 | 53 | 79 |
| cSH | 1485 | 1700 | 1614 |
| Volume to Capacity | 0.05 | 0.06 | 0.08 |
| Queue Length 95th (ft) | 4 | 0 | 7 |
| Control Delay (s) | 3.8 | 0.0 | 9.8 |
| Lane LOS | A | | A |
| Approach Delay (s) | 3.8 | 0.0 | 9.8 |
| Approach LOS | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.8 | | |
| Intersection Capacity Utilization | 24.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 93 | 117 | 48 | 27 | 161 | 63 | 59 | 312 | 27 | 93 | 534 | 234 |
| Future Volume (vph) | 93 | 117 | 48 | 27 | 161 | 63 | 59 | 312 | 27 | 93 | 534 | 234 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 |
| Flt Permitted | 0.43 | 1.00 | 1.00 | 0.57 | 1.00 | 1.00 | 0.40 | 1.00 | 1.00 | 0.55 | 1.00 | 1.00 |
| Satd. Flow (perm) | 804 | 1863 | 1583 | 1061 | 1863 | 1583 | 754 | 1863 | 1583 | 1018 | 1863 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 101 | 127 | 52 | 29 | 175 | 68 | 64 | 339 | 29 | 101 | 580 | 254 |
| RTOR Reduction (vph) | 0 | 0 | 44 | 0 | 0 | 58 | 0 | 0 | 7 | 0 | 0 | 59 |
| Lane Group Flow (vph) | 101 | 127 | 8 | 29 | 175 | 10 | 64 | 339 | 22 | 101 | 580 | 195 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 17.2 | 17.2 | 17.2 | 17.2 | 17.2 | 17.2 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 |
| Effective Green, g (s) | 17.2 | 17.2 | 17.2 | 17.2 | 17.2 | 17.2 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 |
| Actuated g/C Ratio | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Clearance Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 123 | 285 | 242 | 162 | 285 | 242 | 577 | 1427 | 1213 | 780 | 1427 | 1213 |
| v/s Ratio Prot | | 0.07 | | | 0.09 | | | 0.18 | | | c0.31 | |
| v/s Ratio Perm | c0.13 | | 0.01 | 0.03 | | 0.01 | 0.08 | | 0.01 | 0.10 | | 0.12 |
| v/c Ratio | 0.82 | 0.45 | 0.03 | 0.18 | 0.61 | 0.04 | 0.11 | 0.24 | 0.02 | 0.13 | 0.41 | 0.16 |
| Uniform Delay, d1 | 46.0 | 43.1 | 40.4 | 41.3 | 44.3 | 40.4 | 3.3 | 3.7 | 3.1 | 3.4 | 4.4 | 3.5 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 33.7 | 1.1 | 0.1 | 0.5 | 3.9 | 0.1 | 0.4 | 0.4 | 0.0 | 0.3 | 0.9 | 0.3 |
| Delay (s) | 79.7 | 44.2 | 40.4 | 41.8 | 48.2 | 40.5 | 3.7 | 4.1 | 3.1 | 3.7 | 5.3 | 3.8 |
| Level of Service | E | D | D | D | D | D | A | A | A | A | A | A |
| Approach Delay (s) | | 56.3 | | | 45.6 | | | 4.0 | | | 4.7 | |
| Approach LOS | | E | | | D | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 17.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.48 | | |
| Actuated Cycle Length (s) | 112.1 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 60.9% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 21 | 3 | 3 | 1 | 10 | 32 |
| Future Volume (Veh/h) | 21 | 3 | 3 | 1 | 10 | 32 |
| 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) | 23 | 3 | 3 | 1 | 11 | 35 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 36 | 28 | 46 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 36 | 28 | 46 | | | |
| 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 | 100 | 100 | | | |
| cM capacity (veh/h) | 975 | 1046 | 1562 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 26 | 4 | 46 |
| Volume Left | 23 | 3 | 0 |
| Volume Right | 3 | 0 | 35 |
| cSH | 983 | 1562 | 1700 |
| Volume to Capacity | 0.03 | 0.00 | 0.03 |
| Queue Length 95th (ft) | 2 | 0 | 0 |
| Control Delay (s) | 8.8 | 5.5 | 0.0 |
| Lane LOS | A | A | |
| Approach Delay (s) | 8.8 | 5.5 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.3 | | |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 1 | 3 | 0 | 3 | 10 |
| Future Volume (Veh/h) | 0 | 1 | 3 | 0 | 3 | 10 |
| 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) | 0 | 1 | 3 | 0 | 3 | 11 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 20 | 3 | | | 3 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 20 | 3 | | | 3 | |
| 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) | 995 | 1081 | | | 1619 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 1 | 3 | 14 |
| Volume Left | 0 | 0 | 3 |
| Volume Right | 1 | 0 | 0 |
| cSH | 1081 | 1700 | 1619 |
| Volume to Capacity | 0.00 | 0.00 | 0.00 |
| Queue Length 95th (ft) | 0 | 0 | 0 |
| Control Delay (s) | 8.3 | 0.0 | 1.6 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.3 | 0.0 | 1.6 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.7 | | |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 3 | 0 | 1106 | 1212 | 1 |
| Future Volume (Veh/h) | 0 | 3 | 0 | 1106 | 1212 | 1 |
| 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) | 0 | 3 | 0 | 1202 | 1317 | 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 | 1918 | 658 | 1318 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1918 | 658 | 1318 | | | |
| tC, single (s) | 6.8 | 6.9 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 99 | 100 | | | |
| cM capacity (veh/h) | 59 | 407 | 520 | | | |

| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|
| Volume Total | 3 | 601 | 601 | 658 | 658 | 1 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 3 | 0 | 0 | 0 | 0 | 1 |
| cSH | 407 | 1700 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.01 | 0.35 | 0.35 | 0.39 | 0.39 | 0.00 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 13.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | B | | | | | |
| Approach Delay (s) | 13.9 | 0.0 | | 0.0 | | |
| Approach LOS | B | | | | | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.0 | | | |
| Intersection Capacity Utilization | 43.5% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 29 | 0 | 10 | 9 | 1 | 14 |
| Future Volume (Veh/h) | 29 | 0 | 10 | 9 | 1 | 14 |
| 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) | 32 | 0 | 11 | 10 | 1 | 15 |
| 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 | 33 | 16 | | | 21 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 33 | 16 | | | 21 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 97 | 100 | | | 100 | |
| cM capacity (veh/h) | 980 | 1063 | | | 1595 | |

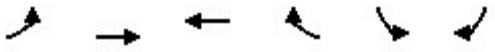
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 32 | 21 | 16 |
| Volume Left | 32 | 0 | 1 |
| Volume Right | 0 | 10 | 0 |
| cSH | 980 | 1700 | 1595 |
| Volume to Capacity | 0.03 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 3 | 0 | 0 |
| Control Delay (s) | 8.8 | 0.0 | 0.5 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.8 | 0.0 | 0.5 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.2 | | |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 118 | 8 | 15 | 161 | 1 | 4 |
| Future Volume (Veh/h) | 118 | 8 | 15 | 161 | 1 | 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) | 128 | 9 | 16 | 175 | 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 | | | 137 | | 340 | 132 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 137 | | 340 | 132 |
| tC, single (s) | | | 4.1 | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 99 | | 100 | 100 |
| cM capacity (veh/h) | | | 1447 | | 649 | 917 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 137 | 191 | 5 |
| Volume Left | 0 | 16 | 1 |
| Volume Right | 9 | 0 | 4 |
| cSH | 1700 | 1447 | 847 |
| Volume to Capacity | 0.08 | 0.01 | 0.01 |
| Queue Length 95th (ft) | 0 | 1 | 0 |
| Control Delay (s) | 0.0 | 0.7 | 9.3 |
| Lane LOS | | A | A |
| Approach Delay (s) | 0.0 | 0.7 | 9.3 |
| Approach LOS | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.5 | | |
| Intersection Capacity Utilization | 29.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 24 | 122 | 152 | 56 | 7 | 9 |
| Future Volume (Veh/h) | 24 | 122 | 152 | 56 | 7 | 9 |
| 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) | 26 | 133 | 165 | 61 | 8 | 10 |
| 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 | 226 | | | | 380 | 196 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 226 | | | | 380 | 196 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 99 | 99 |
| cM capacity (veh/h) | 1342 | | | | 610 | 846 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 159 | 226 | 18 |
| Volume Left | 26 | 0 | 8 |
| Volume Right | 0 | 61 | 10 |
| cSH | 1342 | 1700 | 722 |
| Volume to Capacity | 0.02 | 0.13 | 0.02 |
| Queue Length 95th (ft) | 1 | 0 | 2 |
| Control Delay (s) | 1.4 | 0.0 | 10.1 |
| Lane LOS | A | | B |
| Approach Delay (s) | 1.4 | 0.0 | 10.1 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.0 | | |
| Intersection Capacity Utilization | 32.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 113 | 6 | 23 | 167 | 9 | 32 |
| Future Volume (Veh/h) | 113 | 6 | 23 | 167 | 9 | 32 |
| 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) | 123 | 7 | 25 | 182 | 10 | 35 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 171 | 116 | | | 207 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 171 | 116 | | | 207 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 85 | 99 | | | 99 | |
| cM capacity (veh/h) | 813 | 936 | | | 1364 | |

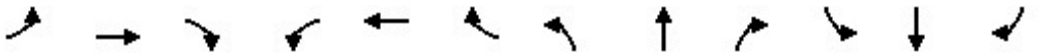
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 130 | 207 | 45 |
| Volume Left | 123 | 0 | 10 |
| Volume Right | 7 | 182 | 0 |
| cSH | 819 | 1700 | 1364 |
| Volume to Capacity | 0.16 | 0.12 | 0.01 |
| Queue Length 95th (ft) | 14 | 0 | 1 |
| Control Delay (s) | 10.2 | 0.0 | 1.7 |
| Lane LOS | B | | A |
| Approach Delay (s) | 10.2 | 0.0 | 1.7 |
| Approach LOS | B | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.7 | | |
| Intersection Capacity Utilization | 24.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 83 | 120 | 7 | 34 | 206 | 1 | 10 | 92 | 19 | 1 | 29 | 27 |
| Future Volume (Veh/h) | 83 | 120 | 7 | 34 | 206 | 1 | 10 | 92 | 19 | 1 | 29 | 27 |
| 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) | 90 | 130 | 8 | 37 | 224 | 1 | 11 | 100 | 21 | 1 | 32 | 29 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | 519 | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 225 | | | 138 | | | 658 | 613 | 134 | 684 | 616 | 224 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 225 | | | 138 | | | 658 | 613 | 134 | 684 | 616 | 224 |
| 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 % | 93 | | | 97 | | | 97 | 73 | 98 | 100 | 91 | 96 |
| cM capacity (veh/h) | 1344 | | | 1446 | | | 317 | 371 | 915 | 262 | 369 | 815 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 228 | 262 | 132 | 62 |
| Volume Left | 90 | 37 | 11 | 1 |
| Volume Right | 8 | 1 | 21 | 29 |
| cSH | 1344 | 1446 | 403 | 491 |
| Volume to Capacity | 0.07 | 0.03 | 0.33 | 0.13 |
| Queue Length 95th (ft) | 5 | 2 | 35 | 11 |
| Control Delay (s) | 3.5 | 1.3 | 18.2 | 13.4 |
| Lane LOS | A | A | C | B |
| Approach Delay (s) | 3.5 | 1.3 | 18.2 | 13.4 |
| Approach LOS | | | C | B |

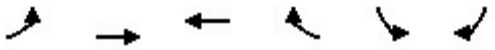
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 6.4 | | | |
| Intersection Capacity Utilization | 43.6% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 81 | 43 | 8 | 329 | 207 | 195 | 37 | 1306 | 8 | 102 | 1256 | 99 |
| Future Volume (vph) | 81 | 43 | 8 | 329 | 207 | 195 | 37 | 1306 | 8 | 102 | 1256 | 99 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | 1.00 | 0.98 | | 1.00 | 0.93 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1818 | | 1770 | 1727 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.20 | 1.00 | | 0.56 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 370 | 1818 | | 1036 | 1727 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 88 | 47 | 9 | 358 | 225 | 212 | 40 | 1420 | 9 | 111 | 1365 | 108 |
| RTOR Reduction (vph) | 0 | 3 | 0 | 0 | 14 | 0 | 0 | 0 | 4 | 0 | 0 | 39 |
| Lane Group Flow (vph) | 88 | 53 | 0 | 358 | 423 | 0 | 40 | 1420 | 5 | 111 | 1365 | 69 |
| Turn Type | Perm | NA | | pm+pt | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | 2 | | | 6 |
| Actuated Green, G (s) | 24.3 | 24.3 | | 59.4 | 59.4 | | 9.2 | 136.9 | 136.9 | 19.3 | 147.0 | 147.0 |
| Effective Green, g (s) | 24.3 | 24.3 | | 59.4 | 59.4 | | 9.2 | 136.9 | 136.9 | 19.3 | 147.0 | 147.0 |
| Actuated g/C Ratio | 0.11 | 0.11 | | 0.26 | 0.26 | | 0.04 | 0.60 | 0.60 | 0.08 | 0.64 | 0.64 |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 39 | 192 | | 366 | 447 | | 71 | 2114 | 945 | 149 | 2270 | 1015 |
| v/s Ratio Prot | | 0.03 | | c0.13 | 0.24 | | 0.02 | c0.40 | | c0.06 | 0.39 | |
| v/s Ratio Perm | c0.24 | | | 0.12 | | | | | 0.00 | | | 0.04 |
| v/c Ratio | 2.26 | 0.28 | | 0.98 | 0.95 | | 0.56 | 0.67 | 0.01 | 0.74 | 0.60 | 0.07 |
| Uniform Delay, d1 | 102.4 | 94.3 | | 81.4 | 83.3 | | 108.0 | 31.0 | 18.6 | 102.5 | 24.0 | 15.4 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 638.8 | 0.8 | | 40.7 | 29.1 | | 9.8 | 1.7 | 0.0 | 18.2 | 1.2 | 0.1 |
| Delay (s) | 741.2 | 95.1 | | 122.2 | 112.4 | | 117.8 | 32.7 | 18.6 | 120.7 | 25.1 | 15.5 |
| Level of Service | F | F | | F | F | | F | C | B | F | C | B |
| Approach Delay (s) | | 489.9 | | | 116.8 | | | 34.9 | | | 31.2 | |
| Approach LOS | | F | | | F | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 66.2 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 0.91 | | |
| Actuated Cycle Length (s) | 229.1 | Sum of lost time (s) | 18.0 |
| Intersection Capacity Utilization | 84.1% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

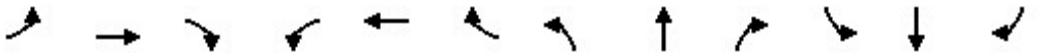
c Critical Lane Group



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 154 | 101 | 75 | 96 | 48 | 101 |
| Future Volume (Veh/h) | 154 | 101 | 75 | 96 | 48 | 101 |
| 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) | 167 | 110 | 82 | 104 | 52 | 110 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | 5 |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 186 | | | | 578 | 134 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 186 | | | | 578 | 134 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 88 | | | | 88 | 88 |
| cM capacity (veh/h) | 1388 | | | | 420 | 915 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 277 | 186 | 162 |
| Volume Left | 167 | 0 | 52 |
| Volume Right | 0 | 104 | 110 |
| cSH | 1388 | 1700 | 1309 |
| Volume to Capacity | 0.12 | 0.11 | 0.12 |
| Queue Length 95th (ft) | 10 | 0 | 11 |
| Control Delay (s) | 5.2 | 0.0 | 11.2 |
| Lane LOS | A | | B |
| Approach Delay (s) | 5.2 | 0.0 | 11.2 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.2 | | |
| Intersection Capacity Utilization | 37.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 96 | 122 | 86 | 56 | 168 | 65 | 130 | 371 | 64 | 96 | 585 | 241 |
| Future Volume (vph) | 96 | 122 | 86 | 56 | 168 | 65 | 130 | 371 | 64 | 96 | 585 | 241 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 |
| Flt Permitted | 0.42 | 1.00 | 1.00 | 0.56 | 1.00 | 1.00 | 0.37 | 1.00 | 1.00 | 0.51 | 1.00 | 1.00 |
| Satd. Flow (perm) | 776 | 1863 | 1583 | 1036 | 1863 | 1583 | 696 | 1863 | 1583 | 941 | 1863 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 104 | 133 | 93 | 61 | 183 | 71 | 141 | 403 | 70 | 104 | 636 | 262 |
| RTOR Reduction (vph) | 0 | 0 | 78 | 0 | 0 | 60 | 0 | 0 | 17 | 0 | 0 | 62 |
| Lane Group Flow (vph) | 104 | 133 | 15 | 61 | 183 | 11 | 141 | 403 | 53 | 104 | 636 | 200 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 17.7 | 17.7 | 17.7 | 17.7 | 17.7 | 17.7 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 |
| Effective Green, g (s) | 17.7 | 17.7 | 17.7 | 17.7 | 17.7 | 17.7 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 |
| Actuated g/C Ratio | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| Clearance Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 122 | 293 | 249 | 163 | 293 | 249 | 530 | 1420 | 1206 | 717 | 1420 | 1206 |
| v/s Ratio Prot | | 0.07 | | | 0.10 | | | 0.22 | | | c0.34 | |
| v/s Ratio Perm | c0.13 | | 0.01 | 0.06 | | 0.01 | 0.20 | | 0.03 | 0.11 | | 0.13 |
| v/c Ratio | 0.85 | 0.45 | 0.06 | 0.37 | 0.62 | 0.04 | 0.27 | 0.28 | 0.04 | 0.15 | 0.45 | 0.17 |
| Uniform Delay, d1 | 46.1 | 43.0 | 40.3 | 42.4 | 44.2 | 40.2 | 4.0 | 4.0 | 3.3 | 3.6 | 4.8 | 3.6 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 40.3 | 1.1 | 0.1 | 1.4 | 4.1 | 0.1 | 1.2 | 0.5 | 0.1 | 0.4 | 1.0 | 0.3 |
| Delay (s) | 86.4 | 44.1 | 40.4 | 43.8 | 48.4 | 40.3 | 5.2 | 4.5 | 3.4 | 4.0 | 5.8 | 3.9 |
| Level of Service | F | D | D | D | D | D | A | A | A | A | A | A |
| Approach Delay (s) | | 56.4 | | | 45.7 | | | 4.6 | | | 5.1 | |
| Approach LOS | | E | | | D | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 18.1 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 112.4 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 67.2% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 22 | 3 | 3 | 7 | 28 | 33 |
| Future Volume (Veh/h) | 22 | 3 | 3 | 7 | 28 | 33 |
| 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) | 24 | 3 | 3 | 8 | 30 | 36 |
| 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 | 62 | 48 | 66 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 62 | 48 | 66 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 97 | 100 | 100 | | | |
| cM capacity (veh/h) | 942 | 1021 | 1536 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 27 | 11 | 66 |
| Volume Left | 24 | 3 | 0 |
| Volume Right | 3 | 0 | 36 |
| cSH | 951 | 1536 | 1700 |
| Volume to Capacity | 0.03 | 0.00 | 0.04 |
| Queue Length 95th (ft) | 2 | 0 | 0 |
| Control Delay (s) | 8.9 | 2.0 | 0.0 |
| Lane LOS | A | A | |
| Approach Delay (s) | 8.9 | 2.0 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.5 | | |
| Intersection Capacity Utilization | 13.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 1 | 9 | 0 | 3 | 28 |
| Future Volume (Veh/h) | 0 | 1 | 9 | 0 | 3 | 28 |
| 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) | 0 | 1 | 10 | 0 | 3 | 30 |
| 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 | 46 | 10 | | | 10 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 46 | 10 | | | 10 | |
| 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) | 962 | 1071 | | | 1610 | |

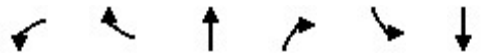
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 1 | 10 | 33 |
| Volume Left | 0 | 0 | 3 |
| Volume Right | 1 | 0 | 0 |
| cSH | 1071 | 1700 | 1610 |
| Volume to Capacity | 0.00 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 0 | 0 | 0 |
| Control Delay (s) | 8.4 | 0.0 | 0.7 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.4 | 0.0 | 0.7 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.7 | | |
| Intersection Capacity Utilization | 14.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 3 | 0 | 1292 | 1560 | 1 |
| Future Volume (Veh/h) | 0 | 3 | 0 | 1292 | 1560 | 1 |
| 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) | 0 | 3 | 0 | 1404 | 1696 | 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 | 2398 | 848 | 1697 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 2398 | 848 | 1697 | | | |
| tC, single (s) | 6.8 | 6.9 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 99 | 100 | | | |
| cM capacity (veh/h) | 28 | 305 | 372 | | | |

| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|
| Volume Total | 3 | 702 | 702 | 848 | 848 | 1 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 3 | 0 | 0 | 0 | 0 | 1 |
| cSH | 305 | 1700 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.01 | 0.41 | 0.41 | 0.50 | 0.50 | 0.00 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 16.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | C | | | | | |
| Approach Delay (s) | 16.9 | 0.0 | | 0.0 | | |
| Approach LOS | C | | | | | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.0 | | | |
| Intersection Capacity Utilization | 53.1% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 29 | 0 | 10 | 9 | 1 | 14 |
| Future Volume (Veh/h) | 29 | 0 | 10 | 9 | 1 | 14 |
| 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) | 32 | 0 | 11 | 10 | 1 | 15 |
| 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 | 33 | 16 | | | 21 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 33 | 16 | | | 21 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 97 | 100 | | | 100 | |
| cM capacity (veh/h) | 980 | 1063 | | | 1595 | |

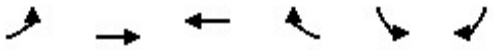
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 32 | 21 | 16 |
| Volume Left | 32 | 0 | 1 |
| Volume Right | 0 | 10 | 0 |
| cSH | 980 | 1700 | 1595 |
| Volume to Capacity | 0.03 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 3 | 0 | 0 |
| Control Delay (s) | 8.8 | 0.0 | 0.5 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.8 | 0.0 | 0.5 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.2 | | |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 205 | 8 | 15 | 192 | 1 | 4 |
| Future Volume (Veh/h) | 205 | 8 | 15 | 192 | 1 | 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) | 223 | 9 | 16 | 209 | 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 | | | 232 | | 468 | 228 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 232 | | 468 | 228 |
| tC, single (s) | | | 4.1 | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 99 | | 100 | 100 |
| cM capacity (veh/h) | | | 1336 | | 546 | 812 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 232 | 225 | 5 |
| Volume Left | 0 | 16 | 1 |
| Volume Right | 9 | 0 | 4 |
| cSH | 1700 | 1336 | 740 |
| Volume to Capacity | 0.14 | 0.01 | 0.01 |
| Queue Length 95th (ft) | 0 | 1 | 1 |
| Control Delay (s) | 0.0 | 0.6 | 9.9 |
| Lane LOS | | A | A |
| Approach Delay (s) | 0.0 | 0.6 | 9.9 |
| Approach LOS | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 32.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 25 | 209 | 183 | 58 | 7 | 9 |
| Future Volume (Veh/h) | 25 | 209 | 183 | 58 | 7 | 9 |
| 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) | 27 | 227 | 199 | 63 | 8 | 10 |
| 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 | 262 | | | | 512 | 230 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 262 | | | | 512 | 230 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 98 | 99 |
| cM capacity (veh/h) | 1302 | | | | 511 | 809 |

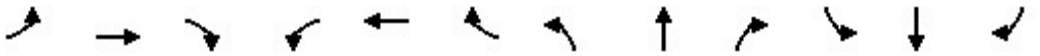
| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 254 | 262 | 18 |
| Volume Left | 27 | 0 | 8 |
| Volume Right | 0 | 63 | 10 |
| cSH | 1302 | 1700 | 643 |
| Volume to Capacity | 0.02 | 0.15 | 0.03 |
| Queue Length 95th (ft) | 2 | 0 | 2 |
| Control Delay (s) | 1.0 | 0.0 | 10.8 |
| Lane LOS | A | | B |
| Approach Delay (s) | 1.0 | 0.0 | 10.8 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.8 | | |
| Intersection Capacity Utilization | 38.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 178 | 6 | 23 | 222 | 9 | 32 |
| Future Volume (Veh/h) | 178 | 6 | 23 | 222 | 9 | 32 |
| 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) | 193 | 7 | 25 | 241 | 10 | 35 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 200 | 146 | | | 266 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 200 | 146 | | | 266 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 75 | 99 | | | 99 | |
| cM capacity (veh/h) | 782 | 902 | | | 1298 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 200 | 266 | 45 |
| Volume Left | 193 | 0 | 10 |
| Volume Right | 7 | 241 | 0 |
| cSH | 786 | 1700 | 1298 |
| Volume to Capacity | 0.25 | 0.16 | 0.01 |
| Queue Length 95th (ft) | 25 | 0 | 1 |
| Control Delay (s) | 11.1 | 0.0 | 1.8 |
| Lane LOS | B | | A |
| Approach Delay (s) | 11.1 | 0.0 | 1.8 |
| Approach LOS | B | | |

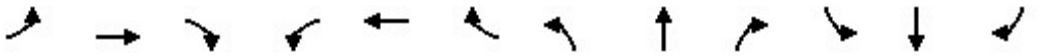
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.5 | | |
| Intersection Capacity Utilization | 31.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 93 | 235 | 7 | 34 | 296 | 1 | 10 | 92 | 19 | 1 | 29 | 35 |
| Future Volume (Veh/h) | 93 | 235 | 7 | 34 | 296 | 1 | 10 | 92 | 19 | 1 | 29 | 35 |
| 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) | 101 | 255 | 8 | 37 | 322 | 1 | 11 | 100 | 21 | 1 | 32 | 38 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | 519 | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 323 | | | 263 | | | 912 | 858 | 259 | 928 | 862 | 322 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 323 | | | 263 | | | 912 | 858 | 259 | 928 | 862 | 322 |
| 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 % | 92 | | | 97 | | | 95 | 62 | 97 | 99 | 88 | 95 |
| cM capacity (veh/h) | 1237 | | | 1301 | | | 201 | 263 | 780 | 157 | 261 | 718 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 364 | 360 | 132 | 71 |
| Volume Left | 101 | 37 | 11 | 1 |
| Volume Right | 8 | 1 | 21 | 38 |
| cSH | 1237 | 1301 | 285 | 391 |
| Volume to Capacity | 0.08 | 0.03 | 0.46 | 0.18 |
| Queue Length 95th (ft) | 7 | 2 | 58 | 16 |
| Control Delay (s) | 2.8 | 1.1 | 28.0 | 16.2 |
| Lane LOS | A | A | D | C |
| Approach Delay (s) | 2.8 | 1.1 | 28.0 | 16.2 |
| Approach LOS | | | D | C |

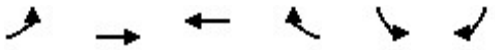
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 6.8 | | | |
| Intersection Capacity Utilization | 55.5% | ICU Level of Service | B | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 148 | 62 | 37 | 329 | 225 | 195 | 59 | 1306 | 8 | 102 | 1256 | 149 |
| Future Volume (vph) | 148 | 62 | 37 | 329 | 225 | 195 | 59 | 1306 | 8 | 102 | 1256 | 149 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | 1.00 | 0.94 | | 1.00 | 0.93 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1758 | | 1770 | 1733 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.21 | 1.00 | | 0.44 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 385 | 1758 | | 810 | 1733 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 161 | 67 | 40 | 358 | 245 | 212 | 64 | 1420 | 9 | 111 | 1365 | 162 |
| RTOR Reduction (vph) | 0 | 9 | 0 | 0 | 13 | 0 | 0 | 0 | 4 | 0 | 0 | 64 |
| Lane Group Flow (vph) | 161 | 98 | 0 | 358 | 444 | 0 | 64 | 1420 | 5 | 111 | 1365 | 98 |
| Turn Type | Perm | NA | | pm+pt | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | 2 | | | 6 |
| Actuated Green, G (s) | 30.5 | 30.5 | | 65.5 | 65.5 | | 13.8 | 135.5 | 135.5 | 19.6 | 141.3 | 141.3 |
| Effective Green, g (s) | 30.5 | 30.5 | | 65.5 | 65.5 | | 13.8 | 135.5 | 135.5 | 19.6 | 141.3 | 141.3 |
| Actuated g/C Ratio | 0.13 | 0.13 | | 0.28 | 0.28 | | 0.06 | 0.58 | 0.58 | 0.08 | 0.60 | 0.60 |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 50 | 229 | | 351 | 484 | | 104 | 2048 | 916 | 148 | 2136 | 955 |
| v/s Ratio Prot | | 0.06 | | c0.13 | 0.26 | | 0.04 | c0.40 | | c0.06 | 0.39 | |
| v/s Ratio Perm | c0.42 | | | 0.15 | | | | | 0.00 | | | 0.06 |
| v/c Ratio | 3.22 | 0.43 | | 1.02 | 0.92 | | 0.62 | 0.69 | 0.01 | 0.75 | 0.64 | 0.10 |
| Uniform Delay, d1 | 101.8 | 93.8 | | 80.2 | 81.7 | | 107.6 | 34.7 | 20.8 | 104.9 | 29.9 | 19.6 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 1048.7 | 1.3 | | 53.2 | 22.2 | | 10.3 | 2.0 | 0.0 | 19.0 | 1.5 | 0.2 |
| Delay (s) | 1150.5 | 95.1 | | 133.4 | 103.8 | | 117.9 | 36.6 | 20.8 | 123.9 | 31.4 | 19.8 |
| Level of Service | F | F | | F | F | | F | D | C | F | C | B |
| Approach Delay (s) | | 729.1 | | | 116.8 | | | 40.0 | | | 36.5 | |
| Approach LOS | | F | | | F | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 97.4 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.10 | | |
| Actuated Cycle Length (s) | 234.1 | Sum of lost time (s) | 18.0 |
| Intersection Capacity Utilization | 88.7% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

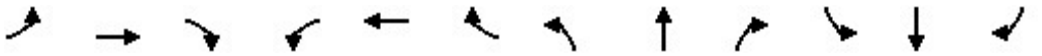
c Critical Lane Group



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 162 | 101 | 75 | 143 | 103 | 111 |
| Future Volume (Veh/h) | 162 | 101 | 75 | 143 | 103 | 111 |
| 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) | 176 | 110 | 82 | 155 | 112 | 121 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | 5 |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 237 | | | | 622 | 160 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 237 | | | | 622 | 160 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 87 | | | | 71 | 86 |
| cM capacity (veh/h) | 1330 | | | | 391 | 886 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 286 | 237 | 233 |
| Volume Left | 176 | 0 | 112 |
| Volume Right | 0 | 155 | 121 |
| cSH | 1330 | 1700 | 814 |
| Volume to Capacity | 0.13 | 0.14 | 0.29 |
| Queue Length 95th (ft) | 11 | 0 | 30 |
| Control Delay (s) | 5.4 | 0.0 | 13.6 |
| Lane LOS | A | | B |
| Approach Delay (s) | 5.4 | 0.0 | 13.6 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6.3 | | |
| Intersection Capacity Utilization | 42.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 96 | 148 | 115 | 56 | 193 | 65 | 152 | 371 | 64 | 96 | 585 | 241 |
| Future Volume (vph) | 96 | 148 | 115 | 56 | 193 | 65 | 152 | 371 | 64 | 96 | 585 | 241 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 |
| Flt Permitted | 0.37 | 1.00 | 1.00 | 0.49 | 1.00 | 1.00 | 0.37 | 1.00 | 1.00 | 0.50 | 1.00 | 1.00 |
| Satd. Flow (perm) | 690 | 1863 | 1583 | 921 | 1863 | 1583 | 686 | 1863 | 1583 | 935 | 1863 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 104 | 161 | 125 | 61 | 210 | 71 | 165 | 403 | 70 | 104 | 636 | 262 |
| RTOR Reduction (vph) | 0 | 0 | 104 | 0 | 0 | 59 | 0 | 0 | 18 | 0 | 0 | 66 |
| Lane Group Flow (vph) | 104 | 161 | 21 | 61 | 210 | 12 | 165 | 403 | 52 | 104 | 636 | 196 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 19.6 | 19.6 | 19.6 | 19.6 | 19.6 | 19.6 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 |
| Effective Green, g (s) | 19.6 | 19.6 | 19.6 | 19.6 | 19.6 | 19.6 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 |
| Actuated g/C Ratio | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 |
| Clearance Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 118 | 319 | 271 | 157 | 319 | 271 | 514 | 1396 | 1186 | 701 | 1396 | 1186 |
| v/s Ratio Prot | | 0.09 | | | 0.11 | | | 0.22 | | | c0.34 | |
| v/s Ratio Perm | c0.15 | | 0.01 | 0.07 | | 0.01 | 0.24 | | 0.03 | 0.11 | | 0.12 |
| v/c Ratio | 0.88 | 0.50 | 0.08 | 0.39 | 0.66 | 0.04 | 0.32 | 0.29 | 0.04 | 0.15 | 0.46 | 0.17 |
| Uniform Delay, d1 | 46.2 | 42.9 | 39.8 | 42.0 | 44.2 | 39.5 | 4.7 | 4.6 | 3.7 | 4.0 | 5.4 | 4.1 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 48.1 | 1.3 | 0.1 | 1.6 | 4.8 | 0.1 | 1.6 | 0.5 | 0.1 | 0.4 | 1.1 | 0.3 |
| Delay (s) | 94.4 | 44.2 | 39.9 | 43.6 | 49.1 | 39.6 | 6.4 | 5.1 | 3.8 | 4.5 | 6.5 | 4.4 |
| Level of Service | F | D | D | D | D | D | A | A | A | A | A | A |
| Approach Delay (s) | | 56.2 | | | 46.1 | | | 5.3 | | | 5.7 | |
| Approach LOS | | E | | | D | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 19.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.53 | | |
| Actuated Cycle Length (s) | 114.3 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 69.7% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 22 | 3 | 3 | 17 | 36 | 33 |
| Future Volume (Veh/h) | 22 | 3 | 3 | 17 | 36 | 33 |
| 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) | 24 | 3 | 3 | 18 | 39 | 36 |
| 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 | 81 | 57 | 75 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 81 | 57 | 75 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 97 | 100 | 100 | | | |
| cM capacity (veh/h) | 919 | 1009 | 1524 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 27 | 21 | 75 |
| Volume Left | 24 | 3 | 0 |
| Volume Right | 3 | 0 | 36 |
| cSH | 929 | 1524 | 1700 |
| Volume to Capacity | 0.03 | 0.00 | 0.04 |
| Queue Length 95th (ft) | 2 | 0 | 0 |
| Control Delay (s) | 9.0 | 1.1 | 0.0 |
| Lane LOS | A | A | |
| Approach Delay (s) | 9.0 | 1.1 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.2 | | |
| Intersection Capacity Utilization | 13.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 1 | 19 | 0 | 3 | 36 |
| Future Volume (Veh/h) | 0 | 1 | 19 | 0 | 3 | 36 |
| 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) | 0 | 1 | 21 | 0 | 3 | 39 |
| 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 | 66 | 21 | | | 21 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 66 | 21 | | | 21 | |
| 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) | 938 | 1056 | | | 1595 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 1 | 21 | 42 |
| Volume Left | 0 | 0 | 3 |
| Volume Right | 1 | 0 | 0 |
| cSH | 1056 | 1700 | 1595 |
| Volume to Capacity | 0.00 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 0 | 0 | 0 |
| Control Delay (s) | 8.4 | 0.0 | 0.5 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.4 | 0.0 | 0.5 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.5 | | |
| Intersection Capacity Utilization | 14.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 3 | 0 | 1359 | 1610 | 1 |
| Future Volume (Veh/h) | 0 | 3 | 0 | 1359 | 1610 | 1 |
| 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) | 0 | 3 | 0 | 1477 | 1750 | 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 | 2488 | 875 | 1751 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 2488 | 875 | 1751 | | | |
| tC, single (s) | 6.8 | 6.9 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 99 | 100 | | | |
| cM capacity (veh/h) | 24 | 292 | 354 | | | |

| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|
| Volume Total | 3 | 738 | 738 | 875 | 875 | 1 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 3 | 0 | 0 | 0 | 0 | 1 |
| cSH | 292 | 1700 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.01 | 0.43 | 0.43 | 0.51 | 0.51 | 0.00 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 17.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | C | | | | | |
| Approach Delay (s) | 17.4 | 0.0 | | 0.0 | | |
| Approach LOS | C | | | | | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.0 | | | |
| Intersection Capacity Utilization | 54.5% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 29 | 0 | 10 | 9 | 1 | 14 |
| Future Volume (Veh/h) | 29 | 0 | 10 | 9 | 1 | 14 |
| 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) | 32 | 0 | 11 | 10 | 1 | 15 |
| 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 | 33 | 16 | | | 21 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 33 | 16 | | | 21 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 97 | 100 | | | 100 | |
| cM capacity (veh/h) | 980 | 1063 | | | 1595 | |

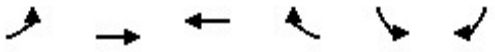
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 32 | 21 | 16 |
| Volume Left | 32 | 0 | 1 |
| Volume Right | 0 | 10 | 0 |
| cSH | 980 | 1700 | 1595 |
| Volume to Capacity | 0.03 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 3 | 0 | 0 |
| Control Delay (s) | 8.8 | 0.0 | 0.5 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.8 | 0.0 | 0.5 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.2 | | |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 192 | 8 | 15 | 255 | 1 | 4 |
| Future Volume (Veh/h) | 192 | 8 | 15 | 255 | 1 | 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) | 209 | 9 | 16 | 277 | 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 | | | 218 | | 522 | 214 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 218 | | 522 | 214 |
| tC, single (s) | | | 4.1 | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 99 | | 100 | 100 |
| cM capacity (veh/h) | | | 1352 | | 509 | 827 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 218 | 293 | 5 |
| Volume Left | 0 | 16 | 1 |
| Volume Right | 9 | 0 | 4 |
| cSH | 1700 | 1352 | 735 |
| Volume to Capacity | 0.13 | 0.01 | 0.01 |
| Queue Length 95th (ft) | 0 | 1 | 1 |
| Control Delay (s) | 0.0 | 0.5 | 9.9 |
| Lane LOS | | A | A |
| Approach Delay (s) | 0.0 | 0.5 | 9.9 |
| Approach LOS | | | A |

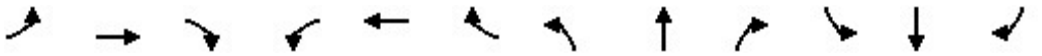
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 35.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 93 | 196 | 170 | 169 | 143 | 85 |
| Future Volume (Veh/h) | 93 | 196 | 170 | 169 | 143 | 85 |
| 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) | 101 | 213 | 185 | 184 | 155 | 92 |
| 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 | 369 | | | | 692 | 277 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 369 | | | | 692 | 277 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 92 | | | | 59 | 88 |
| cM capacity (veh/h) | 1190 | | | | 375 | 762 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 314 | 369 | 247 |
| Volume Left | 101 | 0 | 155 |
| Volume Right | 0 | 184 | 92 |
| cSH | 1190 | 1700 | 463 |
| Volume to Capacity | 0.08 | 0.22 | 0.53 |
| Queue Length 95th (ft) | 7 | 0 | 77 |
| Control Delay (s) | 3.2 | 0.0 | 21.4 |
| Lane LOS | A | | C |
| Approach Delay (s) | 3.2 | 0.0 | 21.4 |
| Approach LOS | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6.8 | | |
| Intersection Capacity Utilization | 57.9% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 148 | 62 | 37 | 329 | 225 | 195 | 59 | 1306 | 8 | 102 | 1256 | 149 |
| Future Volume (vph) | 148 | 62 | 37 | 329 | 225 | 195 | 59 | 1306 | 8 | 102 | 1256 | 149 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | 1.00 | 0.94 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1758 | | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.61 | 1.00 | | 0.49 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1130 | 1758 | | 909 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 161 | 67 | 40 | 358 | 245 | 212 | 64 | 1420 | 9 | 111 | 1365 | 162 |
| RTOR Reduction (vph) | 0 | 9 | 0 | 0 | 0 | 108 | 0 | 0 | 4 | 0 | 0 | 75 |
| Lane Group Flow (vph) | 161 | 98 | 0 | 358 | 245 | 104 | 64 | 1420 | 5 | 111 | 1365 | 87 |
| Turn Type | Perm | NA | | pm+pt | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | | | 2 | | | 6 |
| Actuated Green, G (s) | 36.2 | 36.2 | | 76.7 | 76.7 | 76.7 | 12.9 | 114.9 | 114.9 | 18.4 | 120.4 | 120.4 |
| Effective Green, g (s) | 36.2 | 36.2 | | 76.7 | 76.7 | 76.7 | 12.9 | 114.9 | 114.9 | 18.4 | 120.4 | 120.4 |
| Actuated g/C Ratio | 0.16 | 0.16 | | 0.34 | 0.34 | 0.34 | 0.06 | 0.51 | 0.51 | 0.08 | 0.54 | 0.54 |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 183 | 284 | | 450 | 639 | 543 | 102 | 1819 | 813 | 145 | 1906 | 852 |
| v/s Ratio Prot | | 0.06 | | c0.13 | 0.13 | | 0.04 | c0.40 | | c0.06 | 0.39 | |
| v/s Ratio Perm | c0.14 | | | 0.14 | | 0.07 | | | 0.00 | | | 0.06 |
| v/c Ratio | 0.88 | 0.34 | | 0.80 | 0.38 | 0.19 | 0.63 | 0.78 | 0.01 | 0.77 | 0.72 | 0.10 |
| Uniform Delay, d1 | 91.5 | 83.1 | | 61.2 | 55.5 | 51.6 | 103.0 | 44.1 | 26.5 | 100.4 | 38.7 | 25.2 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 34.7 | 0.7 | | 9.4 | 0.4 | 0.2 | 11.5 | 3.4 | 0.0 | 21.1 | 2.3 | 0.2 |
| Delay (s) | 126.2 | 83.8 | | 70.6 | 55.9 | 51.8 | 114.4 | 47.5 | 26.5 | 121.5 | 41.1 | 25.4 |
| Level of Service | F | F | | E | E | D | F | D | C | F | D | C |
| Approach Delay (s) | | 109.3 | | | 61.3 | | | 50.2 | | | 45.0 | |
| Approach LOS | | F | | | E | | | D | | | D | |

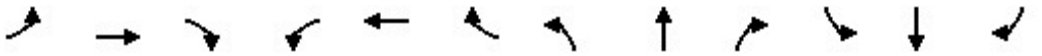
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 54.1 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.80 | | |
| Actuated Cycle Length (s) | 223.5 | Sum of lost time (s) | 18.0 |
| Intersection Capacity Utilization | 80.5% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 132 | 8 | 47 | 123 | 5 | 47 |
| Future Volume (Veh/h) | 132 | 8 | 47 | 123 | 5 | 47 |
| 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) | 143 | 9 | 51 | 134 | 5 | 51 |
| 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 | 179 | 118 | | | 185 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 179 | 118 | | | 185 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 82 | 99 | | | 100 | |
| cM capacity (veh/h) | 808 | 934 | | | 1390 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 152 | 185 | 56 |
| Volume Left | 143 | 0 | 5 |
| Volume Right | 9 | 134 | 0 |
| cSH | 814 | 1700 | 1390 |
| Volume to Capacity | 0.19 | 0.11 | 0.00 |
| Queue Length 95th (ft) | 17 | 0 | 0 |
| Control Delay (s) | 10.4 | 0.0 | 0.7 |
| Lane LOS | B | | A |
| Approach Delay (s) | 10.4 | 0.0 | 0.7 |
| Approach LOS | B | | |

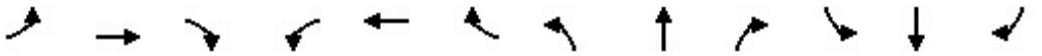
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.1 | | |
| Intersection Capacity Utilization | 24.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 0 | 228 | 13 | 18 | 120 | 0 | 5 | 0 | 56 | 1 | 0 | 0 |
| Future Volume (Veh/h) | 0 | 228 | 13 | 18 | 120 | 0 | 5 | 0 | 56 | 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) | 0 | 248 | 14 | 20 | 130 | 0 | 5 | 0 | 61 | 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) | | | | | 519 | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 130 | | | 262 | | | 425 | 425 | 255 | 486 | 432 | 130 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 130 | | | 262 | | | 425 | 425 | 255 | 486 | 432 | 130 |
| 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 | | | 98 | | | 99 | 100 | 92 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1455 | | | 1302 | | | 533 | 513 | 784 | 448 | 508 | 920 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 262 | 150 | 66 | 1 |
| Volume Left | 0 | 20 | 5 | 1 |
| Volume Right | 14 | 0 | 61 | 0 |
| cSH | 1455 | 1302 | 757 | 448 |
| Volume to Capacity | 0.00 | 0.02 | 0.09 | 0.00 |
| Queue Length 95th (ft) | 0 | 1 | 7 | 0 |
| Control Delay (s) | 0.0 | 1.2 | 10.2 | 13.1 |
| Lane LOS | | A | B | B |
| Approach Delay (s) | 0.0 | 1.2 | 10.2 | 13.1 |
| Approach LOS | | | B | B |

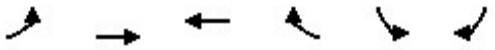
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 1.8 | | | |
| Intersection Capacity Utilization | 31.8% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 128 | 116 | 20 | 177 | 35 | 83 | 38 | 1149 | 9 | 100 | 1016 | 75 |
| Future Volume (vph) | 128 | 116 | 20 | 177 | 35 | 83 | 38 | 1149 | 9 | 100 | 1016 | 75 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | 1.00 | 0.98 | | 1.00 | 0.89 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1821 | | 1770 | 1666 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.67 | 1.00 | | 0.30 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1257 | 1821 | | 554 | 1666 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 139 | 126 | 22 | 192 | 38 | 90 | 41 | 1249 | 10 | 109 | 1104 | 82 |
| RTOR Reduction (vph) | 0 | 3 | 0 | 0 | 37 | 0 | 0 | 0 | 4 | 0 | 0 | 29 |
| Lane Group Flow (vph) | 139 | 145 | 0 | 192 | 91 | 0 | 41 | 1249 | 6 | 109 | 1104 | 53 |
| Turn Type | Perm | NA | | pm+pt | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | 2 | | | 6 |
| Actuated Green, G (s) | 27.8 | 27.8 | | 57.3 | 57.3 | | 9.2 | 137.0 | 137.0 | 18.9 | 146.7 | 146.7 |
| Effective Green, g (s) | 27.8 | 27.8 | | 57.3 | 57.3 | | 9.2 | 137.0 | 137.0 | 18.9 | 146.7 | 146.7 |
| Actuated g/C Ratio | 0.12 | 0.12 | | 0.25 | 0.25 | | 0.04 | 0.60 | 0.60 | 0.08 | 0.65 | 0.65 |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 154 | 223 | | 274 | 421 | | 71 | 2138 | 956 | 147 | 2290 | 1024 |
| v/s Ratio Prot | | 0.08 | | c0.08 | 0.05 | | 0.02 | c0.35 | | c0.06 | 0.31 | |
| v/s Ratio Perm | c0.11 | | | 0.10 | | | | | 0.00 | | | 0.03 |
| v/c Ratio | 0.90 | 0.65 | | 0.70 | 0.22 | | 0.58 | 0.58 | 0.01 | 0.74 | 0.48 | 0.05 |
| Uniform Delay, d1 | 98.1 | 94.8 | | 71.8 | 67.0 | | 106.8 | 27.4 | 17.8 | 101.5 | 20.5 | 14.6 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 44.9 | 6.7 | | 7.8 | 0.3 | | 10.9 | 1.2 | 0.0 | 18.1 | 0.7 | 0.1 |
| Delay (s) | 143.0 | 101.5 | | 79.7 | 67.2 | | 117.7 | 28.6 | 17.8 | 119.6 | 21.2 | 14.7 |
| Level of Service | F | F | | E | E | | F | C | B | F | C | B |
| Approach Delay (s) | | 121.6 | | | 74.7 | | | 31.3 | | | 29.1 | |
| Approach LOS | | F | | | E | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 42.9 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.66 | | |
| Actuated Cycle Length (s) | 226.7 | Sum of lost time (s) | 18.0 |
| Intersection Capacity Utilization | 69.4% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

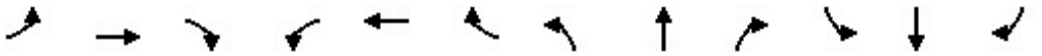
c Critical Lane Group



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 101 | 53 | 74 | 85 | 74 | 113 |
| Future Volume (Veh/h) | 101 | 53 | 74 | 85 | 74 | 113 |
| 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) | 110 | 58 | 80 | 92 | 80 | 123 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | 5 |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 172 | | | | 404 | 126 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 172 | | | | 404 | 126 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 92 | | | | 86 | 87 |
| cM capacity (veh/h) | 1405 | | | | 555 | 924 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 168 | 172 | 203 |
| Volume Left | 110 | 0 | 80 |
| Volume Right | 0 | 92 | 123 |
| cSH | 1405 | 1700 | 1409 |
| Volume to Capacity | 0.08 | 0.10 | 0.14 |
| Queue Length 95th (ft) | 6 | 0 | 13 |
| Control Delay (s) | 5.3 | 0.0 | 10.7 |
| Lane LOS | A | | B |
| Approach Delay (s) | 5.3 | 0.0 | 10.7 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.6 | | |
| Intersection Capacity Utilization | 31.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 161 | 170 | 74 | 28 | 117 | 125 | 44 | 401 | 51 | 134 | 587 | 153 |
| Future Volume (vph) | 161 | 170 | 74 | 28 | 117 | 125 | 44 | 401 | 51 | 134 | 587 | 153 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 |
| Flt Permitted | 0.59 | 1.00 | 1.00 | 0.45 | 1.00 | 1.00 | 0.36 | 1.00 | 1.00 | 0.48 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1102 | 1863 | 1583 | 844 | 1863 | 1583 | 674 | 1863 | 1583 | 890 | 1863 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 175 | 185 | 80 | 30 | 127 | 136 | 48 | 436 | 55 | 146 | 638 | 166 |
| RTOR Reduction (vph) | 0 | 0 | 65 | 0 | 0 | 111 | 0 | 0 | 14 | 0 | 0 | 44 |
| Lane Group Flow (vph) | 175 | 185 | 15 | 30 | 127 | 25 | 48 | 436 | 41 | 146 | 638 | 122 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 21.6 | 21.6 | 21.6 | 21.6 | 21.6 | 21.6 | 85.6 | 85.6 | 85.6 | 85.6 | 85.6 | 85.6 |
| Effective Green, g (s) | 21.6 | 21.6 | 21.6 | 21.6 | 21.6 | 21.6 | 85.6 | 85.6 | 85.6 | 85.6 | 85.6 | 85.6 |
| Actuated g/C Ratio | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 |
| Clearance Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 204 | 346 | 294 | 156 | 346 | 294 | 496 | 1372 | 1166 | 655 | 1372 | 1166 |
| v/s Ratio Prot | | 0.10 | | | 0.07 | | | 0.23 | | | c0.34 | |
| v/s Ratio Perm | c0.16 | | 0.01 | 0.04 | | 0.02 | 0.07 | | 0.03 | 0.16 | | 0.08 |
| v/c Ratio | 0.86 | 0.53 | 0.05 | 0.19 | 0.37 | 0.09 | 0.10 | 0.32 | 0.03 | 0.22 | 0.47 | 0.10 |
| Uniform Delay, d1 | 45.8 | 42.8 | 38.9 | 39.9 | 41.3 | 39.1 | 4.3 | 5.3 | 4.1 | 4.8 | 6.1 | 4.4 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 28.1 | 1.6 | 0.1 | 0.6 | 0.7 | 0.1 | 0.4 | 0.6 | 0.1 | 0.8 | 1.1 | 0.2 |
| Delay (s) | 73.9 | 44.3 | 38.9 | 40.5 | 42.0 | 39.3 | 4.7 | 5.9 | 4.2 | 5.6 | 7.3 | 4.5 |
| Level of Service | E | D | D | D | D | D | A | A | A | A | A | A |
| Approach Delay (s) | | 55.1 | | | 40.6 | | | 5.6 | | | 6.5 | |
| Approach LOS | | E | | | D | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 20.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.54 | | |
| Actuated Cycle Length (s) | 116.2 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 65.1% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 31 | 10 | 5 | 3 | 12 | 16 |
| Future Volume (Veh/h) | 31 | 10 | 5 | 3 | 12 | 16 |
| 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) | 34 | 11 | 5 | 3 | 13 | 17 |
| 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 | 34 | 22 | 30 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 34 | 22 | 30 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 97 | 99 | 100 | | | |
| cM capacity (veh/h) | 975 | 1056 | 1583 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 45 | 8 | 30 |
| Volume Left | 34 | 5 | 0 |
| Volume Right | 11 | 0 | 17 |
| cSH | 994 | 1583 | 1700 |
| Volume to Capacity | 0.05 | 0.00 | 0.02 |
| Queue Length 95th (ft) | 4 | 0 | 0 |
| Control Delay (s) | 8.8 | 4.6 | 0.0 |
| Lane LOS | A | A | |
| Approach Delay (s) | 8.8 | 4.6 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.2 | | |
| Intersection Capacity Utilization | 14.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 2 | 6 | 0 | 5 | 17 |
| Future Volume (Veh/h) | 0 | 2 | 6 | 0 | 5 | 17 |
| 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) | 0 | 2 | 7 | 0 | 5 | 18 |
| 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 | 35 | 7 | | | 7 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 35 | 7 | | | 7 | |
| 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) | 975 | 1075 | | | 1614 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 2 | 7 | 23 |
| Volume Left | 0 | 0 | 5 |
| Volume Right | 2 | 0 | 0 |
| cSH | 1075 | 1700 | 1614 |
| Volume to Capacity | 0.00 | 0.00 | 0.00 |
| Queue Length 95th (ft) | 0 | 0 | 0 |
| Control Delay (s) | 8.4 | 0.0 | 1.6 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.4 | 0.0 | 1.6 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.7 | | |
| Intersection Capacity Utilization | 15.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 5 | 0 | 1364 | 1191 | 2 |
| Future Volume (Veh/h) | 0 | 5 | 0 | 1364 | 1191 | 2 |
| 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) | 0 | 5 | 0 | 1483 | 1295 | 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 | 2036 | 648 | 1297 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 2036 | 648 | 1297 | | | |
| tC, single (s) | 6.8 | 6.9 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 99 | 100 | | | |
| cM capacity (veh/h) | 49 | 413 | 530 | | | |

| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|
| Volume Total | 5 | 742 | 742 | 648 | 648 | 2 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 5 | 0 | 0 | 0 | 0 | 2 |
| cSH | 413 | 1700 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.01 | 0.44 | 0.44 | 0.38 | 0.38 | 0.00 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 13.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | B | | | | | |
| Approach Delay (s) | 13.8 | 0.0 | | 0.0 | | |
| Approach LOS | B | | | | | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.0 | | | |
| Intersection Capacity Utilization | 42.9% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 20 | 2 | 16 | 42 | 1 | 10 |
| Future Volume (Veh/h) | 20 | 2 | 16 | 42 | 1 | 10 |
| 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) | 22 | 2 | 17 | 46 | 1 | 11 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 53 | 40 | | | 63 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 53 | 40 | | | 63 | |
| 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 | 100 | | | 100 | |
| cM capacity (veh/h) | 955 | 1031 | | | 1540 | |

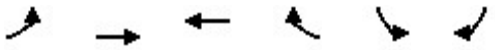
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 24 | 63 | 12 |
| Volume Left | 22 | 0 | 1 |
| Volume Right | 2 | 46 | 0 |
| cSH | 961 | 1700 | 1540 |
| Volume to Capacity | 0.02 | 0.04 | 0.00 |
| Queue Length 95th (ft) | 2 | 0 | 0 |
| Control Delay (s) | 8.8 | 0.0 | 0.6 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.8 | 0.0 | 0.6 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.2 | | |
| Intersection Capacity Utilization | 13.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 167 | 0 | 5 | 131 | 5 | 16 |
| Future Volume (Veh/h) | 167 | 0 | 5 | 131 | 5 | 16 |
| 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) | 182 | 0 | 5 | 142 | 5 | 17 |
| 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 | | | 182 | | 334 | 182 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 182 | | 334 | 182 |
| 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 | 98 |
| cM capacity (veh/h) | | | 1393 | | 659 | 861 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 182 | 147 | 22 |
| Volume Left | 0 | 5 | 5 |
| Volume Right | 0 | 0 | 17 |
| cSH | 1700 | 1393 | 805 |
| Volume to Capacity | 0.11 | 0.00 | 0.03 |
| Queue Length 95th (ft) | 0 | 0 | 2 |
| Control Delay (s) | 0.0 | 0.3 | 9.6 |
| Lane LOS | | A | A |
| Approach Delay (s) | 0.0 | 0.3 | 9.6 |
| Approach LOS | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | | 0.7 | |
| Intersection Capacity Utilization | | 20.9% | ICU Level of Service A |
| Analysis Period (min) | | 15 | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 9 | 183 | 115 | 11 | 43 | 16 |
| Future Volume (Veh/h) | 9 | 183 | 115 | 11 | 43 | 16 |
| 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) | 10 | 199 | 125 | 12 | 47 | 17 |
| 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 | 137 | | | | 350 | 131 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 137 | | | | 350 | 131 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 99 | | | | 93 | 98 |
| cM capacity (veh/h) | 1447 | | | | 643 | 919 |

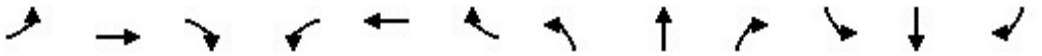
| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 209 | 137 | 64 |
| Volume Left | 10 | 0 | 47 |
| Volume Right | 0 | 12 | 17 |
| cSH | 1447 | 1700 | 698 |
| Volume to Capacity | 0.01 | 0.08 | 0.09 |
| Queue Length 95th (ft) | 1 | 0 | 8 |
| Control Delay (s) | 0.4 | 0.0 | 10.7 |
| Lane LOS | A | | B |
| Approach Delay (s) | 0.4 | 0.0 | 10.7 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.9 | | |
| Intersection Capacity Utilization | 27.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 221 | 8 | 48 | 160 | 5 | 48 |
| Future Volume (Veh/h) | 221 | 8 | 48 | 160 | 5 | 48 |
| 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) | 240 | 9 | 52 | 174 | 5 | 52 |
| 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 | 139 | | | 226 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 201 | 139 | | | 226 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 69 | 99 | | | 100 | |
| cM capacity (veh/h) | 785 | 909 | | | 1342 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 249 | 226 | 57 |
| Volume Left | 240 | 0 | 5 |
| Volume Right | 9 | 174 | 0 |
| cSH | 789 | 1700 | 1342 |
| Volume to Capacity | 0.32 | 0.13 | 0.00 |
| Queue Length 95th (ft) | 34 | 0 | 0 |
| Control Delay (s) | 11.7 | 0.0 | 0.7 |
| Lane LOS | B | | A |
| Approach Delay (s) | 11.7 | 0.0 | 0.7 |
| Approach LOS | B | | |

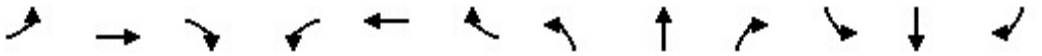
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.5 | | |
| Intersection Capacity Utilization | 31.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 33 | 235 | 13 | 19 | 124 | 0 | 5 | 38 | 58 | 1 | 94 | 85 |
| Future Volume (Veh/h) | 33 | 235 | 13 | 19 | 124 | 0 | 5 | 38 | 58 | 1 | 94 | 85 |
| 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) | 36 | 255 | 14 | 21 | 135 | 0 | 5 | 41 | 63 | 1 | 102 | 92 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | 519 | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 135 | | | 269 | | | 654 | 511 | 262 | 594 | 518 | 135 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 135 | | | 269 | | | 654 | 511 | 262 | 594 | 518 | 135 |
| 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 % | 98 | | | 98 | | | 98 | 91 | 92 | 100 | 77 | 90 |
| cM capacity (veh/h) | 1449 | | | 1295 | | | 273 | 447 | 777 | 345 | 443 | 914 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 305 | 156 | 109 | 195 |
| Volume Left | 36 | 21 | 5 | 1 |
| Volume Right | 14 | 0 | 63 | 92 |
| cSH | 1449 | 1295 | 570 | 584 |
| Volume to Capacity | 0.02 | 0.02 | 0.19 | 0.33 |
| Queue Length 95th (ft) | 2 | 1 | 18 | 36 |
| Control Delay (s) | 1.1 | 1.2 | 12.8 | 14.2 |
| Lane LOS | A | A | B | B |
| Approach Delay (s) | 1.1 | 1.2 | 12.8 | 14.2 |
| Approach LOS | | | B | B |

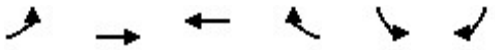
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 6.1 | | | |
| Intersection Capacity Utilization | 36.5% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 132 | 120 | 21 | 182 | 78 | 129 | 39 | 1355 | 9 | 320 | 1407 | 77 |
| Future Volume (vph) | 132 | 120 | 21 | 182 | 78 | 129 | 39 | 1355 | 9 | 320 | 1407 | 77 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | 1.00 | 0.98 | | 1.00 | 0.91 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1821 | | 1770 | 1689 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.62 | 1.00 | | 0.28 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1151 | 1821 | | 526 | 1689 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 143 | 130 | 23 | 198 | 85 | 140 | 42 | 1473 | 10 | 348 | 1529 | 84 |
| RTOR Reduction (vph) | 0 | 3 | 0 | 0 | 25 | 0 | 0 | 0 | 4 | 0 | 0 | 30 |
| Lane Group Flow (vph) | 143 | 150 | 0 | 198 | 200 | 0 | 42 | 1473 | 6 | 348 | 1529 | 54 |
| Turn Type | Perm | NA | | pm+pt | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | 2 | | | 6 |
| Actuated Green, G (s) | 29.0 | 29.0 | | 59.7 | 59.7 | | 9.5 | 136.6 | 136.6 | 25.5 | 152.6 | 152.6 |
| Effective Green, g (s) | 29.0 | 29.0 | | 59.7 | 59.7 | | 9.5 | 136.6 | 136.6 | 25.5 | 152.6 | 152.6 |
| Actuated g/C Ratio | 0.12 | 0.12 | | 0.25 | 0.25 | | 0.04 | 0.58 | 0.58 | 0.11 | 0.65 | 0.65 |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 141 | 224 | | 271 | 428 | | 71 | 2054 | 918 | 191 | 2295 | 1026 |
| v/s Ratio Prot | | 0.08 | | c0.08 | 0.12 | | 0.02 | c0.42 | | c0.20 | 0.43 | |
| v/s Ratio Perm | c0.12 | | | 0.10 | | | | | 0.00 | | | 0.03 |
| v/c Ratio | 1.01 | 0.67 | | 0.73 | 0.47 | | 0.59 | 0.72 | 0.01 | 1.82 | 0.67 | 0.05 |
| Uniform Delay, d1 | 103.2 | 98.6 | | 74.7 | 74.3 | | 111.0 | 35.5 | 20.8 | 104.9 | 25.6 | 15.1 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 79.6 | 7.7 | | 9.7 | 0.8 | | 12.5 | 2.2 | 0.0 | 389.7 | 1.5 | 0.1 |
| Delay (s) | 182.7 | 106.3 | | 84.4 | 75.1 | | 123.5 | 37.7 | 20.8 | 494.6 | 27.1 | 15.1 |
| Level of Service | F | F | | F | E | | F | D | C | F | C | B |
| Approach Delay (s) | | 143.2 | | | 79.5 | | | 39.9 | | | 109.6 | |
| Approach LOS | | F | | | E | | | D | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 83.7 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 0.89 | | |
| Actuated Cycle Length (s) | 235.3 | Sum of lost time (s) | 18.0 |
| Intersection Capacity Utilization | 89.5% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

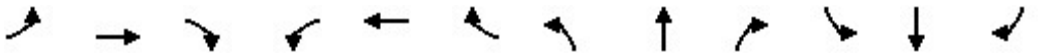
c Critical Lane Group



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 137 | 81 | 94 | 107 | 76 | 201 |
| Future Volume (Veh/h) | 137 | 81 | 94 | 107 | 76 | 201 |
| 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) | 149 | 88 | 102 | 116 | 83 | 218 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | 5 |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 218 | | | | 546 | 160 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 218 | | | | 546 | 160 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 89 | | | | 81 | 75 |
| cM capacity (veh/h) | 1352 | | | | 444 | 885 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 237 | 218 | 301 |
| Volume Left | 149 | 0 | 83 |
| Volume Right | 0 | 116 | 218 |
| cSH | 1352 | 1700 | 1222 |
| Volume to Capacity | 0.11 | 0.13 | 0.25 |
| Queue Length 95th (ft) | 9 | 0 | 24 |
| Control Delay (s) | 5.4 | 0.0 | 11.7 |
| Lane LOS | A | | B |
| Approach Delay (s) | 5.4 | 0.0 | 11.7 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6.3 | | |
| Intersection Capacity Utilization | 37.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 166 | 178 | 146 | 74 | 123 | 129 | 80 | 458 | 86 | 138 | 668 | 158 |
| Future Volume (vph) | 166 | 178 | 146 | 74 | 123 | 129 | 80 | 458 | 86 | 138 | 668 | 158 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 |
| Flt Permitted | 0.58 | 1.00 | 1.00 | 0.44 | 1.00 | 1.00 | 0.31 | 1.00 | 1.00 | 0.44 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1075 | 1863 | 1583 | 817 | 1863 | 1583 | 585 | 1863 | 1583 | 819 | 1863 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 180 | 193 | 159 | 80 | 134 | 140 | 87 | 498 | 93 | 150 | 726 | 172 |
| RTOR Reduction (vph) | 0 | 0 | 129 | 0 | 0 | 113 | 0 | 0 | 25 | 0 | 0 | 46 |
| Lane Group Flow (vph) | 180 | 193 | 30 | 80 | 134 | 27 | 87 | 498 | 68 | 150 | 726 | 126 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 22.1 | 22.1 | 22.1 | 22.1 | 22.1 | 22.1 | 85.6 | 85.6 | 85.6 | 85.6 | 85.6 | 85.6 |
| Effective Green, g (s) | 22.1 | 22.1 | 22.1 | 22.1 | 22.1 | 22.1 | 85.6 | 85.6 | 85.6 | 85.6 | 85.6 | 85.6 |
| Actuated g/C Ratio | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| Clearance Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 203 | 352 | 299 | 154 | 352 | 299 | 429 | 1366 | 1161 | 600 | 1366 | 1161 |
| v/s Ratio Prot | | 0.10 | | | 0.07 | | | 0.27 | | | c0.39 | |
| v/s Ratio Perm | c0.17 | | 0.02 | 0.10 | | 0.02 | 0.15 | | 0.04 | 0.18 | | 0.08 |
| v/c Ratio | 0.89 | 0.55 | 0.10 | 0.52 | 0.38 | 0.09 | 0.20 | 0.36 | 0.06 | 0.25 | 0.53 | 0.11 |
| Uniform Delay, d1 | 46.1 | 42.8 | 39.1 | 42.5 | 41.3 | 39.0 | 4.9 | 5.7 | 4.3 | 5.1 | 6.8 | 4.5 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 33.7 | 1.7 | 0.1 | 2.9 | 0.7 | 0.1 | 1.1 | 0.8 | 0.1 | 1.0 | 1.5 | 0.2 |
| Delay (s) | 79.8 | 44.5 | 39.2 | 45.5 | 42.0 | 39.1 | 5.9 | 6.4 | 4.4 | 6.1 | 8.3 | 4.7 |
| Level of Service | E | D | D | D | D | D | A | A | A | A | A | A |
| Approach Delay (s) | | 54.9 | | | 41.7 | | | 6.1 | | | 7.4 | |
| Approach LOS | | D | | | D | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 21.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.60 | | |
| Actuated Cycle Length (s) | 116.7 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 70.3% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 32 | 10 | 5 | 22 | 19 | 16 |
| Future Volume (Veh/h) | 32 | 10 | 5 | 22 | 19 | 16 |
| 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) | 35 | 11 | 5 | 24 | 21 | 17 |
| 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 | 64 | 30 | 38 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 64 | 30 | 38 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 96 | 99 | 100 | | | |
| cM capacity (veh/h) | 939 | 1045 | 1572 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 46 | 29 | 38 |
| Volume Left | 35 | 5 | 0 |
| Volume Right | 11 | 0 | 17 |
| cSH | 963 | 1572 | 1700 |
| Volume to Capacity | 0.05 | 0.00 | 0.02 |
| Queue Length 95th (ft) | 4 | 0 | 0 |
| Control Delay (s) | 8.9 | 1.3 | 0.0 |
| Lane LOS | A | A | |
| Approach Delay (s) | 8.9 | 1.3 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.0 | | |
| Intersection Capacity Utilization | 15.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 2 | 25 | 0 | 5 | 25 |
| Future Volume (Veh/h) | 0 | 2 | 25 | 0 | 5 | 25 |
| 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) | 0 | 2 | 27 | 0 | 5 | 27 |
| 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 | 64 | 27 | | | 27 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 64 | 27 | | | 27 | |
| 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) | 939 | 1048 | | | 1587 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 2 | 27 | 32 |
| Volume Left | 0 | 0 | 5 |
| Volume Right | 2 | 0 | 0 |
| cSH | 1048 | 1700 | 1587 |
| Volume to Capacity | 0.00 | 0.02 | 0.00 |
| Queue Length 95th (ft) | 0 | 0 | 0 |
| Control Delay (s) | 8.4 | 0.0 | 1.2 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.4 | 0.0 | 1.2 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.9 | | |
| Intersection Capacity Utilization | 15.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 5 | 0 | 1723 | 1413 | 2 |
| Future Volume (Veh/h) | 0 | 5 | 0 | 1723 | 1413 | 2 |
| 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) | 0 | 5 | 0 | 1873 | 1536 | 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 | 2472 | 768 | 1538 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 2472 | 768 | 1538 | | | |
| tC, single (s) | 6.8 | 6.9 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 99 | 100 | | | |
| cM capacity (veh/h) | 25 | 344 | 428 | | | |

| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|
| Volume Total | 5 | 936 | 936 | 768 | 768 | 2 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 5 | 0 | 0 | 0 | 0 | 2 |
| cSH | 344 | 1700 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.01 | 0.55 | 0.55 | 0.45 | 0.45 | 0.00 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 15.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | C | | | | | |
| Approach Delay (s) | 15.6 | 0.0 | | 0.0 | | |
| Approach LOS | C | | | | | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.0 | | | |
| Intersection Capacity Utilization | 51.0% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 20 | 2 | 16 | 42 | 1 | 10 |
| Future Volume (Veh/h) | 20 | 2 | 16 | 42 | 1 | 10 |
| 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) | 22 | 2 | 17 | 46 | 1 | 11 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 53 | 40 | | | 63 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 53 | 40 | | | 63 | |
| 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 | 100 | | | 100 | |
| cM capacity (veh/h) | 955 | 1031 | | | 1540 | |

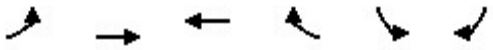
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 24 | 63 | 12 |
| Volume Left | 22 | 0 | 1 |
| Volume Right | 2 | 46 | 0 |
| cSH | 961 | 1700 | 1540 |
| Volume to Capacity | 0.02 | 0.04 | 0.00 |
| Queue Length 95th (ft) | 2 | 0 | 0 |
| Control Delay (s) | 8.8 | 0.0 | 0.6 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.8 | 0.0 | 0.6 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.2 | | |
| Intersection Capacity Utilization | 13.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 205 | 0 | 5 | 219 | 5 | 16 |
| Future Volume (Veh/h) | 205 | 0 | 5 | 219 | 5 | 16 |
| 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) | 223 | 0 | 5 | 238 | 5 | 17 |
| 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 | | | 223 | | 471 | 223 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 223 | | 471 | 223 |
| 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 | 98 |
| cM capacity (veh/h) | | | 1346 | | 549 | 817 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 223 | 243 | 22 |
| Volume Left | 0 | 5 | 5 |
| Volume Right | 0 | 0 | 17 |
| cSH | 1700 | 1346 | 735 |
| Volume to Capacity | 0.13 | 0.00 | 0.03 |
| Queue Length 95th (ft) | 0 | 0 | 2 |
| Control Delay (s) | 0.0 | 0.2 | 10.0 |
| Lane LOS | | A | B |
| Approach Delay (s) | 0.0 | 0.2 | 10.0 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.5 | | |
| Intersection Capacity Utilization | 25.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 9 | 221 | 203 | 11 | 44 | 16 |
| Future Volume (Veh/h) | 9 | 221 | 203 | 11 | 44 | 16 |
| 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) | 10 | 240 | 221 | 12 | 48 | 17 |
| 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 | 233 | | | | 487 | 227 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 233 | | | | 487 | 227 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 99 | | | | 91 | 98 |
| cM capacity (veh/h) | 1335 | | | | 536 | 812 |

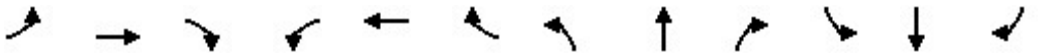
| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 250 | 233 | 65 |
| Volume Left | 10 | 0 | 48 |
| Volume Right | 0 | 12 | 17 |
| cSH | 1335 | 1700 | 588 |
| Volume to Capacity | 0.01 | 0.14 | 0.11 |
| Queue Length 95th (ft) | 1 | 0 | 9 |
| Control Delay (s) | 0.4 | 0.0 | 11.9 |
| Lane LOS | A | | B |
| Approach Delay (s) | 0.4 | 0.0 | 11.9 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.6 | | |
| Intersection Capacity Utilization | 29.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 290 | 8 | 48 | 225 | 5 | 48 |
| Future Volume (Veh/h) | 290 | 8 | 48 | 225 | 5 | 48 |
| 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) | 315 | 9 | 52 | 245 | 5 | 52 |
| 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 | 236 | 174 | | | 297 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 236 | 174 | | | 297 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 58 | 99 | | | 100 | |
| cM capacity (veh/h) | 749 | 869 | | | 1264 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 324 | 297 | 57 |
| Volume Left | 315 | 0 | 5 |
| Volume Right | 9 | 245 | 0 |
| cSH | 752 | 1700 | 1264 |
| Volume to Capacity | 0.43 | 0.17 | 0.00 |
| Queue Length 95th (ft) | 55 | 0 | 0 |
| Control Delay (s) | 13.4 | 0.0 | 0.7 |
| Lane LOS | B | | A |
| Approach Delay (s) | 13.4 | 0.0 | 0.7 |
| Approach LOS | B | | |

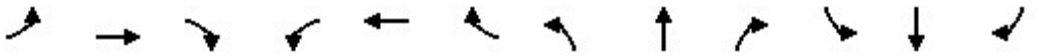
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6.4 | | |
| Intersection Capacity Utilization | 39.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 43 | 348 | 13 | 19 | 242 | 0 | 5 | 38 | 58 | 1 | 94 | 95 |
| Future Volume (Veh/h) | 43 | 348 | 13 | 19 | 242 | 0 | 5 | 38 | 58 | 1 | 94 | 95 |
| 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) | 47 | 378 | 14 | 21 | 263 | 0 | 5 | 41 | 63 | 1 | 102 | 103 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | 519 | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 263 | | | 392 | | | 938 | 784 | 385 | 868 | 791 | 263 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 263 | | | 392 | | | 938 | 784 | 385 | 868 | 791 | 263 |
| 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 % | 96 | | | 98 | | | 97 | 87 | 90 | 100 | 67 | 87 |
| cM capacity (veh/h) | 1301 | | | 1167 | | | 151 | 308 | 663 | 213 | 305 | 776 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 439 | 284 | 109 | 206 |
| Volume Left | 47 | 21 | 5 | 1 |
| Volume Right | 14 | 0 | 63 | 103 |
| cSH | 1301 | 1167 | 417 | 436 |
| Volume to Capacity | 0.04 | 0.02 | 0.26 | 0.47 |
| Queue Length 95th (ft) | 3 | 1 | 26 | 62 |
| Control Delay (s) | 1.2 | 0.8 | 16.7 | 20.4 |
| Lane LOS | A | A | C | C |
| Approach Delay (s) | 1.2 | 0.8 | 16.7 | 20.4 |
| Approach LOS | | | C | C |

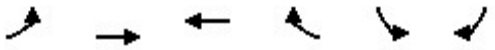
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 6.5 | | | |
| Intersection Capacity Utilization | 49.1% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 198 | 139 | 49 | 182 | 98 | 129 | 68 | 1355 | 9 | 320 | 1407 | 146 |
| Future Volume (vph) | 198 | 139 | 49 | 182 | 98 | 129 | 68 | 1355 | 9 | 320 | 1407 | 146 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | 1.00 | 0.96 | | 1.00 | 0.91 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1790 | | 1770 | 1704 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.14 | 1.00 | | 0.25 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 267 | 1790 | | 463 | 1704 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 215 | 151 | 53 | 198 | 107 | 140 | 74 | 1473 | 10 | 348 | 1529 | 159 |
| RTOR Reduction (vph) | 0 | 5 | 0 | 0 | 20 | 0 | 0 | 0 | 4 | 0 | 0 | 59 |
| Lane Group Flow (vph) | 215 | 199 | 0 | 198 | 227 | 0 | 74 | 1473 | 6 | 348 | 1529 | 100 |
| Turn Type | Perm | NA | | pm+pt | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | 2 | | | 6 |
| Actuated Green, G (s) | 30.5 | 30.5 | | 56.9 | 56.9 | | 15.0 | 135.6 | 135.6 | 25.5 | 146.1 | 146.1 |
| Effective Green, g (s) | 30.5 | 30.5 | | 56.9 | 56.9 | | 15.0 | 135.6 | 135.6 | 25.5 | 146.1 | 146.1 |
| Actuated g/C Ratio | 0.13 | 0.13 | | 0.25 | 0.25 | | 0.06 | 0.59 | 0.59 | 0.11 | 0.63 | 0.63 |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 35 | 235 | | 237 | 418 | | 114 | 2072 | 927 | 194 | 2233 | 999 |
| v/s Ratio Prot | | 0.11 | | c0.08 | 0.13 | | 0.04 | c0.42 | | c0.20 | 0.43 | |
| v/s Ratio Perm | c0.80 | | | 0.13 | | | | | 0.00 | | | 0.06 |
| v/c Ratio | 6.14 | 0.85 | | 0.84 | 0.54 | | 0.65 | 0.71 | 0.01 | 1.79 | 0.68 | 0.10 |
| Uniform Delay, d1 | 100.5 | 98.2 | | 93.1 | 76.0 | | 105.7 | 34.0 | 19.9 | 103.0 | 27.7 | 16.8 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2374.2 | 23.4 | | 21.7 | 1.4 | | 12.0 | 2.1 | 0.0 | 377.1 | 1.7 | 0.2 |
| Delay (s) | 2474.7 | 121.6 | | 114.8 | 77.4 | | 117.7 | 36.1 | 19.9 | 480.1 | 29.5 | 17.0 |
| Level of Service | F | F | | F | E | | F | D | B | F | C | B |
| Approach Delay (s) | | 1329.0 | | | 94.0 | | | 39.9 | | | 105.5 | |
| Approach LOS | | F | | | F | | | D | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 196.5 | HCM 2000 Level of Service | F |
| HCM 2000 Volume to Capacity ratio | 1.63 | | |
| Actuated Cycle Length (s) | 231.5 | Sum of lost time (s) | 18.0 |
| Intersection Capacity Utilization | 94.2% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

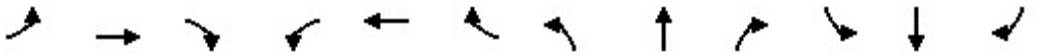
c Critical Lane Group



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 147 | 81 | 94 | 162 | 135 | 211 |
| Future Volume (Veh/h) | 147 | 81 | 94 | 162 | 135 | 211 |
| 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) | 160 | 88 | 102 | 176 | 147 | 229 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | 5 |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 278 | | | | 598 | 190 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 278 | | | | 598 | 190 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 88 | | | | 64 | 73 |
| cM capacity (veh/h) | 1285 | | | | 407 | 852 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 248 | 278 | 376 |
| Volume Left | 160 | 0 | 147 |
| Volume Right | 0 | 176 | 229 |
| cSH | 1285 | 1700 | 1042 |
| Volume to Capacity | 0.12 | 0.16 | 0.36 |
| Queue Length 95th (ft) | 11 | 0 | 42 |
| Control Delay (s) | 5.7 | 0.0 | 13.9 |
| Lane LOS | A | | B |
| Approach Delay (s) | 5.7 | 0.0 | 13.9 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 7.4 | | |
| Intersection Capacity Utilization | 44.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 166 | 209 | 174 | 74 | 152 | 129 | 106 | 458 | 86 | 138 | 668 | 158 |
| Future Volume (vph) | 166 | 209 | 174 | 74 | 152 | 129 | 106 | 458 | 86 | 138 | 668 | 158 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 |
| Flt Permitted | 0.52 | 1.00 | 1.00 | 0.38 | 1.00 | 1.00 | 0.31 | 1.00 | 1.00 | 0.44 | 1.00 | 1.00 |
| Satd. Flow (perm) | 960 | 1863 | 1583 | 711 | 1863 | 1583 | 574 | 1863 | 1583 | 811 | 1863 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 180 | 227 | 189 | 80 | 165 | 140 | 115 | 498 | 93 | 150 | 726 | 172 |
| RTOR Reduction (vph) | 0 | 0 | 151 | 0 | 0 | 112 | 0 | 0 | 26 | 0 | 0 | 48 |
| Lane Group Flow (vph) | 180 | 227 | 38 | 80 | 165 | 28 | 115 | 498 | 67 | 150 | 726 | 124 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 85.6 | 85.6 | 85.6 | 85.6 | 85.6 | 85.6 |
| Effective Green, g (s) | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 85.6 | 85.6 | 85.6 | 85.6 | 85.6 | 85.6 |
| Actuated g/C Ratio | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| Clearance Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 194 | 376 | 320 | 143 | 376 | 320 | 414 | 1344 | 1142 | 585 | 1344 | 1142 |
| v/s Ratio Prot | | 0.12 | | | 0.09 | | | 0.27 | | | c0.39 | |
| v/s Ratio Perm | c0.19 | | 0.02 | 0.11 | | 0.02 | 0.20 | | 0.04 | 0.18 | | 0.08 |
| v/c Ratio | 0.93 | 0.60 | 0.12 | 0.56 | 0.44 | 0.09 | 0.28 | 0.37 | 0.06 | 0.26 | 0.54 | 0.11 |
| Uniform Delay, d1 | 46.4 | 43.0 | 38.7 | 42.5 | 41.4 | 38.4 | 5.7 | 6.3 | 4.8 | 5.6 | 7.5 | 5.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 44.1 | 2.7 | 0.2 | 4.7 | 0.8 | 0.1 | 1.7 | 0.8 | 0.1 | 1.1 | 1.6 | 0.2 |
| Delay (s) | 90.6 | 45.7 | 38.8 | 47.2 | 42.2 | 38.5 | 7.4 | 7.1 | 4.9 | 6.7 | 9.1 | 5.2 |
| Level of Service | F | D | D | D | D | D | A | A | A | A | A | A |
| Approach Delay (s) | | 57.1 | | | 41.9 | | | 6.8 | | | 8.1 | |
| Approach LOS | | E | | | D | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 23.2 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.62 | | |
| Actuated Cycle Length (s) | 118.6 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 73.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 32 | 10 | 5 | 32 | 29 | 16 |
| Future Volume (Veh/h) | 32 | 10 | 5 | 32 | 29 | 16 |
| 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) | 35 | 11 | 5 | 35 | 32 | 17 |
| 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 | 86 | 40 | 49 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 86 | 40 | 49 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 96 | 99 | 100 | | | |
| cM capacity (veh/h) | 913 | 1031 | 1558 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 46 | 40 | 49 |
| Volume Left | 35 | 5 | 0 |
| Volume Right | 11 | 0 | 17 |
| cSH | 939 | 1558 | 1700 |
| Volume to Capacity | 0.05 | 0.00 | 0.03 |
| Queue Length 95th (ft) | 4 | 0 | 0 |
| Control Delay (s) | 9.0 | 0.9 | 0.0 |
| Lane LOS | A | A | |
| Approach Delay (s) | 9.0 | 0.9 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.4 | | |
| Intersection Capacity Utilization | 15.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 2 | 35 | 0 | 5 | 35 |
| Future Volume (Veh/h) | 0 | 2 | 35 | 0 | 5 | 35 |
| 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) | 0 | 2 | 38 | 0 | 5 | 38 |
| 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 | 86 | 38 | | | 38 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 86 | 38 | | | 38 | |
| 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) | 912 | 1034 | | | 1572 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 2 | 38 | 43 |
| Volume Left | 0 | 0 | 5 |
| Volume Right | 2 | 0 | 0 |
| cSH | 1034 | 1700 | 1572 |
| Volume to Capacity | 0.00 | 0.02 | 0.00 |
| Queue Length 95th (ft) | 0 | 0 | 0 |
| Control Delay (s) | 8.5 | 0.0 | 0.9 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.5 | 0.0 | 0.9 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.7 | | |
| Intersection Capacity Utilization | 16.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 5 | 0 | 1789 | 1482 | 2 |
| Future Volume (Veh/h) | 0 | 5 | 0 | 1789 | 1482 | 2 |
| 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) | 0 | 5 | 0 | 1945 | 1611 | 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 | 2584 | 806 | 1613 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 2584 | 806 | 1613 | | | |
| tC, single (s) | 6.8 | 6.9 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 98 | 100 | | | |
| cM capacity (veh/h) | 21 | 325 | 400 | | | |

| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|
| Volume Total | 5 | 972 | 972 | 806 | 806 | 2 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 5 | 0 | 0 | 0 | 0 | 2 |
| cSH | 325 | 1700 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.02 | 0.57 | 0.57 | 0.47 | 0.47 | 0.00 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 16.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | C | | | | | |
| Approach Delay (s) | 16.2 | 0.0 | | 0.0 | | |
| Approach LOS | C | | | | | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.0 | | | |
| Intersection Capacity Utilization | 52.8% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 20 | 2 | 16 | 42 | 1 | 10 |
| Future Volume (Veh/h) | 20 | 2 | 16 | 42 | 1 | 10 |
| 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) | 22 | 2 | 17 | 46 | 1 | 11 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 53 | 40 | | | 63 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 53 | 40 | | | 63 | |
| 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 | 100 | | | 100 | |
| cM capacity (veh/h) | 955 | 1031 | | | 1540 | |

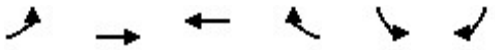
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 24 | 63 | 12 |
| Volume Left | 22 | 0 | 1 |
| Volume Right | 2 | 46 | 0 |
| cSH | 961 | 1700 | 1540 |
| Volume to Capacity | 0.02 | 0.04 | 0.00 |
| Queue Length 95th (ft) | 2 | 0 | 0 |
| Control Delay (s) | 8.8 | 0.0 | 0.6 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.8 | 0.0 | 0.6 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.2 | | |
| Intersection Capacity Utilization | 13.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 193 | 0 | 5 | 290 | 5 | 16 |
| Future Volume (Veh/h) | 193 | 0 | 5 | 290 | 5 | 16 |
| 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) | 210 | 0 | 5 | 315 | 5 | 17 |
| 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 | | | 210 | | 535 | 210 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 210 | | 535 | 210 |
| 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 | 98 |
| cM capacity (veh/h) | | | 1361 | | 504 | 830 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 210 | 320 | 22 |
| Volume Left | 0 | 5 | 5 |
| Volume Right | 0 | 0 | 17 |
| cSH | 1700 | 1361 | 724 |
| Volume to Capacity | 0.12 | 0.00 | 0.03 |
| Queue Length 95th (ft) | 0 | 0 | 2 |
| Control Delay (s) | 0.0 | 0.2 | 10.1 |
| Lane LOS | | A | B |
| Approach Delay (s) | 0.0 | 0.2 | 10.1 |
| Approach LOS | | | B |

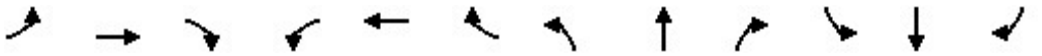
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.5 | | |
| Intersection Capacity Utilization | 29.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 86 | 209 | 192 | 150 | 180 | 98 |
| Future Volume (Veh/h) | 86 | 209 | 192 | 150 | 180 | 98 |
| 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) | 93 | 227 | 209 | 163 | 196 | 107 |
| 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 | 372 | | | | 704 | 290 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 372 | | | | 704 | 290 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 92 | | | | 47 | 86 |
| cM capacity (veh/h) | 1186 | | | | 372 | 749 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 320 | 372 | 303 |
| Volume Left | 93 | 0 | 196 |
| Volume Right | 0 | 163 | 107 |
| cSH | 1186 | 1700 | 452 |
| Volume to Capacity | 0.08 | 0.22 | 0.67 |
| Queue Length 95th (ft) | 6 | 0 | 121 |
| Control Delay (s) | 2.9 | 0.0 | 27.7 |
| Lane LOS | A | | D |
| Approach Delay (s) | 2.9 | 0.0 | 27.7 |
| Approach LOS | | | D |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 9.4 | | |
| Intersection Capacity Utilization | 61.0% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 198 | 139 | 49 | 182 | 98 | 129 | 68 | 1355 | 6 | 320 | 1407 | 146 |
| Future Volume (vph) | 198 | 139 | 49 | 182 | 98 | 129 | 68 | 1355 | 6 | 320 | 1407 | 146 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | 1.00 | 0.96 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1790 | | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.60 | 1.00 | | 0.40 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1111 | 1790 | | 742 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 215 | 151 | 53 | 198 | 107 | 140 | 74 | 1473 | 7 | 348 | 1529 | 159 |
| RTOR Reduction (vph) | 0 | 6 | 0 | 0 | 0 | 103 | 0 | 0 | 4 | 0 | 0 | 61 |
| Lane Group Flow (vph) | 215 | 198 | 0 | 198 | 107 | 37 | 74 | 1473 | 3 | 348 | 1529 | 98 |
| Turn Type | Perm | NA | | pm+pt | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | | | 2 | | | 6 |
| Actuated Green, G (s) | 46.8 | 46.8 | | 60.0 | 60.0 | 60.0 | 14.4 | 108.3 | 108.3 | 47.8 | 141.7 | 141.7 |
| Effective Green, g (s) | 46.8 | 46.8 | | 60.0 | 60.0 | 60.0 | 14.4 | 108.3 | 108.3 | 47.8 | 141.7 | 141.7 |
| Actuated g/C Ratio | 0.20 | 0.20 | | 0.26 | 0.26 | 0.26 | 0.06 | 0.47 | 0.47 | 0.21 | 0.62 | 0.62 |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 226 | 364 | | 232 | 486 | 413 | 111 | 1669 | 746 | 368 | 2184 | 976 |
| v/s Ratio Prot | | 0.11 | | c0.03 | 0.06 | | 0.04 | c0.42 | | c0.20 | 0.43 | |
| v/s Ratio Perm | c0.19 | | | 0.19 | | 0.02 | | | 0.00 | | | 0.06 |
| v/c Ratio | 0.95 | 0.55 | | 0.85 | 0.22 | 0.09 | 0.67 | 0.88 | 0.00 | 0.95 | 0.70 | 0.10 |
| Uniform Delay, d1 | 90.3 | 81.9 | | 91.0 | 66.5 | 64.1 | 105.3 | 54.9 | 32.1 | 89.6 | 29.6 | 17.9 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 46.1 | 1.7 | | 24.9 | 0.2 | 0.1 | 14.1 | 7.1 | 0.0 | 32.8 | 1.9 | 0.2 |
| Delay (s) | 136.4 | 83.5 | | 115.9 | 66.7 | 64.2 | 119.4 | 62.0 | 32.1 | 122.5 | 31.5 | 18.1 |
| Level of Service | F | F | | F | E | E | F | E | C | F | C | B |
| Approach Delay (s) | | 110.7 | | | 87.8 | | | 64.6 | | | 46.0 | |
| Approach LOS | | F | | | F | | | E | | | D | |

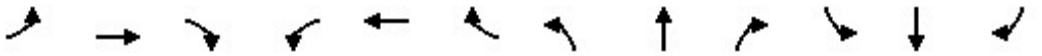
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 62.8 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 0.91 | | |
| Actuated Cycle Length (s) | 229.6 | Sum of lost time (s) | 18.0 |
| Intersection Capacity Utilization | 90.6% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 135 | 6 | 37 | 89 | 4 | 37 |
| Future Volume (Veh/h) | 135 | 6 | 37 | 89 | 4 | 37 |
| 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) | 147 | 7 | 40 | 97 | 4 | 40 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 136 | 88 | | | 137 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 136 | 88 | | | 137 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 83 | 99 | | | 100 | |
| cM capacity (veh/h) | 855 | 970 | | | 1447 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 154 | 137 | 44 |
| Volume Left | 147 | 0 | 4 |
| Volume Right | 7 | 97 | 0 |
| cSH | 859 | 1700 | 1447 |
| Volume to Capacity | 0.18 | 0.08 | 0.00 |
| Queue Length 95th (ft) | 16 | 0 | 0 |
| Control Delay (s) | 10.1 | 0.0 | 0.7 |
| Lane LOS | B | | A |
| Approach Delay (s) | 10.1 | 0.0 | 0.7 |
| Approach LOS | B | | |

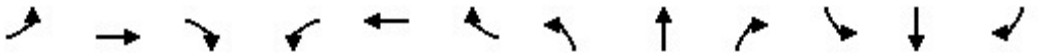
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.7 | | |
| Intersection Capacity Utilization | 21.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 0 | 100 | 8 | 51 | 136 | 3 | 8 | 2 | 42 | 3 | 5 | 1 |
| Future Volume (Veh/h) | 0 | 100 | 8 | 51 | 136 | 3 | 8 | 2 | 42 | 3 | 5 | 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) | 0 | 109 | 9 | 55 | 148 | 3 | 9 | 2 | 46 | 3 | 5 | 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) | | | | | 519 | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 151 | | | 118 | | | 376 | 374 | 114 | 420 | 378 | 150 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 151 | | | 118 | | | 376 | 374 | 114 | 420 | 378 | 150 |
| 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 | | | 96 | | | 98 | 100 | 95 | 99 | 99 | 100 |
| cM capacity (veh/h) | 1430 | | | 1470 | | | 560 | 536 | 939 | 501 | 533 | 897 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 118 | 206 | 57 | 9 |
| Volume Left | 0 | 55 | 9 | 3 |
| Volume Right | 9 | 3 | 46 | 1 |
| cSH | 1430 | 1470 | 829 | 546 |
| Volume to Capacity | 0.00 | 0.04 | 0.07 | 0.02 |
| Queue Length 95th (ft) | 0 | 3 | 6 | 1 |
| Control Delay (s) | 0.0 | 2.2 | 9.7 | 11.7 |
| Lane LOS | | A | A | B |
| Approach Delay (s) | 0.0 | 2.2 | 9.7 | 11.7 |
| Approach LOS | | | A | B |

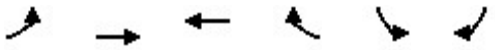
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 2.9 | | | |
| Intersection Capacity Utilization | 26.9% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 60 | 61 | 25 | 162 | 50 | 53 | 46 | 1351 | 6 | 90 | 1473 | 103 |
| Future Volume (vph) | 60 | 61 | 25 | 162 | 50 | 53 | 46 | 1351 | 6 | 90 | 1473 | 103 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | 1.00 | 0.96 | | 1.00 | 0.92 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1782 | | 1770 | 1718 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.68 | 1.00 | | 0.34 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1276 | 1782 | | 633 | 1718 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 65 | 66 | 27 | 176 | 54 | 58 | 50 | 1468 | 7 | 98 | 1601 | 112 |
| RTOR Reduction (vph) | 0 | 6 | 0 | 0 | 17 | 0 | 0 | 0 | 2 | 0 | 0 | 37 |
| Lane Group Flow (vph) | 65 | 87 | 0 | 176 | 95 | 0 | 50 | 1468 | 5 | 98 | 1601 | 75 |
| Turn Type | Perm | NA | | pm+pt | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | 2 | | | 6 |
| Actuated Green, G (s) | 16.2 | 16.2 | | 44.1 | 44.1 | | 11.4 | 136.2 | 136.2 | 17.0 | 141.8 | 141.8 |
| Effective Green, g (s) | 16.2 | 16.2 | | 44.1 | 44.1 | | 11.4 | 136.2 | 136.2 | 17.0 | 141.8 | 141.8 |
| Actuated g/C Ratio | 0.08 | 0.08 | | 0.21 | 0.21 | | 0.05 | 0.65 | 0.65 | 0.08 | 0.67 | 0.67 |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 98 | 136 | | 258 | 359 | | 95 | 2286 | 1022 | 142 | 2380 | 1064 |
| v/s Ratio Prot | | 0.05 | | c0.08 | 0.06 | | 0.03 | 0.41 | | c0.06 | c0.45 | |
| v/s Ratio Perm | 0.05 | | | c0.07 | | | | | 0.00 | | | 0.05 |
| v/c Ratio | 0.66 | 0.64 | | 0.68 | 0.26 | | 0.53 | 0.64 | 0.00 | 0.69 | 0.67 | 0.07 |
| Uniform Delay, d1 | 94.6 | 94.4 | | 73.5 | 69.8 | | 97.1 | 22.6 | 13.2 | 94.3 | 20.6 | 11.9 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 15.6 | 9.4 | | 7.2 | 0.4 | | 5.2 | 1.4 | 0.0 | 13.5 | 1.5 | 0.1 |
| Delay (s) | 110.3 | 103.8 | | 80.7 | 70.2 | | 102.3 | 24.0 | 13.2 | 107.8 | 22.2 | 12.0 |
| Level of Service | F | F | | F | E | | F | C | B | F | C | B |
| Approach Delay (s) | | 106.5 | | | 76.6 | | | 26.5 | | | 26.2 | |
| Approach LOS | | F | | | E | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 33.5 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.70 | | |
| Actuated Cycle Length (s) | 210.8 | Sum of lost time (s) | 18.0 |
| Intersection Capacity Utilization | 71.8% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

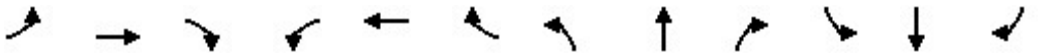
c Critical Lane Group



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 78 | 50 | 71 | 71 | 55 | 130 |
| Future Volume (Veh/h) | 78 | 50 | 71 | 71 | 55 | 130 |
| 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) | 85 | 54 | 77 | 77 | 60 | 141 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | 5 |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 154 | | | | 340 | 116 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 154 | | | | 340 | 116 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 94 | | | | 90 | 85 |
| cM capacity (veh/h) | 1426 | | | | 617 | 937 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 139 | 154 | 201 |
| Volume Left | 85 | 0 | 60 |
| Volume Right | 0 | 77 | 141 |
| cSH | 1426 | 1700 | 1336 |
| Volume to Capacity | 0.06 | 0.09 | 0.15 |
| Queue Length 95th (ft) | 5 | 0 | 13 |
| Control Delay (s) | 4.9 | 0.0 | 10.1 |
| Lane LOS | A | | B |
| Approach Delay (s) | 4.9 | 0.0 | 10.1 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.5 | | |
| Intersection Capacity Utilization | 28.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 96 | 118 | 47 | 38 | 127 | 118 | 33 | 338 | 46 | 167 | 490 | 136 |
| Future Volume (vph) | 96 | 118 | 47 | 38 | 127 | 118 | 33 | 338 | 46 | 167 | 490 | 136 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 |
| Flt Permitted | 0.53 | 1.00 | 1.00 | 0.56 | 1.00 | 1.00 | 0.43 | 1.00 | 1.00 | 0.53 | 1.00 | 1.00 |
| Satd. Flow (perm) | 983 | 1863 | 1583 | 1041 | 1863 | 1583 | 807 | 1863 | 1583 | 988 | 1863 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 104 | 128 | 51 | 41 | 138 | 128 | 36 | 367 | 50 | 182 | 533 | 148 |
| RTOR Reduction (vph) | 0 | 0 | 44 | 0 | 0 | 110 | 0 | 0 | 11 | 0 | 0 | 33 |
| Lane Group Flow (vph) | 104 | 128 | 7 | 41 | 138 | 18 | 36 | 367 | 39 | 182 | 533 | 115 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 85.8 | 85.8 | 85.8 | 85.8 | 85.8 | 85.8 |
| Effective Green, g (s) | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 85.8 | 85.8 | 85.8 | 85.8 | 85.8 | 85.8 |
| Actuated g/C Ratio | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Clearance Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 141 | 269 | 228 | 150 | 269 | 228 | 624 | 1442 | 1225 | 765 | 1442 | 1225 |
| v/s Ratio Prot | | 0.07 | | | 0.07 | | | 0.20 | | | c0.29 | |
| v/s Ratio Perm | c0.11 | | 0.00 | 0.04 | | 0.01 | 0.04 | | 0.02 | 0.18 | | 0.07 |
| v/c Ratio | 0.74 | 0.48 | 0.03 | 0.27 | 0.51 | 0.08 | 0.06 | 0.25 | 0.03 | 0.24 | 0.37 | 0.09 |
| Uniform Delay, d1 | 45.4 | 43.5 | 40.7 | 42.2 | 43.8 | 41.0 | 3.0 | 3.5 | 2.9 | 3.5 | 4.0 | 3.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 18.1 | 1.3 | 0.1 | 1.0 | 1.7 | 0.2 | 0.2 | 0.4 | 0.0 | 0.7 | 0.7 | 0.2 |
| Delay (s) | 63.5 | 44.9 | 40.8 | 43.2 | 45.5 | 41.2 | 3.1 | 3.9 | 2.9 | 4.2 | 4.7 | 3.2 |
| Level of Service | E | D | D | D | D | D | A | A | A | A | A | A |
| Approach Delay (s) | | 51.0 | | | 43.4 | | | 3.8 | | | 4.3 | |
| Approach LOS | | D | | | D | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 17.4 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.43 | | |
| Actuated Cycle Length (s) | 110.8 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 57.0% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 21 | 3 | 3 | 1 | 10 | 32 |
| Future Volume (Veh/h) | 21 | 3 | 3 | 1 | 10 | 32 |
| 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) | 23 | 3 | 3 | 1 | 11 | 35 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 36 | 28 | 46 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 36 | 28 | 46 | | | |
| 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 | 100 | 100 | | | |
| cM capacity (veh/h) | 975 | 1046 | 1562 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 26 | 4 | 46 |
| Volume Left | 23 | 3 | 0 |
| Volume Right | 3 | 0 | 35 |
| cSH | 983 | 1562 | 1700 |
| Volume to Capacity | 0.03 | 0.00 | 0.03 |
| Queue Length 95th (ft) | 2 | 0 | 0 |
| Control Delay (s) | 8.8 | 5.5 | 0.0 |
| Lane LOS | A | A | |
| Approach Delay (s) | 8.8 | 5.5 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.3 | | |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 1 | 3 | 0 | 3 | 10 |
| Future Volume (Veh/h) | 0 | 1 | 3 | 0 | 3 | 10 |
| 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) | 0 | 1 | 3 | 0 | 3 | 11 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 20 | 3 | | | 3 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 20 | 3 | | | 3 | |
| 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) | 995 | 1081 | | | 1619 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 1 | 3 | 14 |
| Volume Left | 0 | 0 | 3 |
| Volume Right | 1 | 0 | 0 |
| cSH | 1081 | 1700 | 1619 |
| Volume to Capacity | 0.00 | 0.00 | 0.00 |
| Queue Length 95th (ft) | 0 | 0 | 0 |
| Control Delay (s) | 8.3 | 0.0 | 1.6 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.3 | 0.0 | 1.6 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.7 | | |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 3 | 0 | 1106 | 1212 | 1 |
| Future Volume (Veh/h) | 0 | 3 | 0 | 1106 | 1212 | 1 |
| 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) | 0 | 3 | 0 | 1202 | 1317 | 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 | 1918 | 658 | 1318 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1918 | 658 | 1318 | | | |
| tC, single (s) | 6.8 | 6.9 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 99 | 100 | | | |
| cM capacity (veh/h) | 59 | 407 | 520 | | | |

| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|
| Volume Total | 3 | 601 | 601 | 658 | 658 | 1 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 3 | 0 | 0 | 0 | 0 | 1 |
| cSH | 407 | 1700 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.01 | 0.35 | 0.35 | 0.39 | 0.39 | 0.00 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 13.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | B | | | | | |
| Approach Delay (s) | 13.9 | 0.0 | | 0.0 | | |
| Approach LOS | B | | | | | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.0 | | | |
| Intersection Capacity Utilization | 43.5% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 20 | 2 | 16 | 42 | 1 | 10 |
| Future Volume (Veh/h) | 20 | 2 | 16 | 42 | 1 | 10 |
| 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) | 22 | 2 | 17 | 46 | 1 | 11 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 53 | 40 | | | 63 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 53 | 40 | | | 63 | |
| 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 | 100 | | | 100 | |
| cM capacity (veh/h) | 955 | 1031 | | | 1540 | |

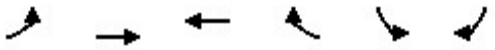
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 24 | 63 | 12 |
| Volume Left | 22 | 0 | 1 |
| Volume Right | 2 | 46 | 0 |
| cSH | 961 | 1700 | 1540 |
| Volume to Capacity | 0.02 | 0.04 | 0.00 |
| Queue Length 95th (ft) | 2 | 0 | 0 |
| Control Delay (s) | 8.8 | 0.0 | 0.6 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.8 | 0.0 | 0.6 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.2 | | |
| Intersection Capacity Utilization | 13.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 84 | 3 | 14 | 139 | 3 | 10 |
| Future Volume (Veh/h) | 84 | 3 | 14 | 139 | 3 | 10 |
| 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) | 91 | 3 | 15 | 151 | 3 | 11 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | | | 94 | | 274 | 92 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 94 | | 274 | 92 |
| tC, single (s) | | | 4.1 | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 99 | | 100 | 99 |
| cM capacity (veh/h) | | | 1500 | | 709 | 965 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 94 | 166 | 14 |
| Volume Left | 0 | 15 | 3 |
| Volume Right | 3 | 0 | 11 |
| cSH | 1700 | 1500 | 895 |
| Volume to Capacity | 0.06 | 0.01 | 0.02 |
| Queue Length 95th (ft) | 0 | 1 | 1 |
| Control Delay (s) | 0.0 | 0.7 | 9.1 |
| Lane LOS | | A | A |
| Approach Delay (s) | 0.0 | 0.7 | 9.1 |
| Approach LOS | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.9 | | |
| Intersection Capacity Utilization | 24.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 5 | 94 | 127 | 13 | 22 | 12 |
| Future Volume (Veh/h) | 5 | 94 | 127 | 13 | 22 | 12 |
| 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 | 102 | 138 | 14 | 24 | 13 |
| 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 | 152 | | | | 257 | 145 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 152 | | | | 257 | 145 |
| 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 | | | | 97 | 99 |
| cM capacity (veh/h) | 1429 | | | | 729 | 902 |

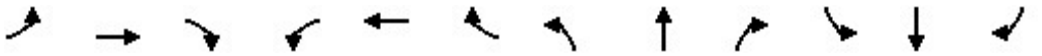
| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 107 | 152 | 37 |
| Volume Left | 5 | 0 | 24 |
| Volume Right | 0 | 14 | 13 |
| cSH | 1429 | 1700 | 782 |
| Volume to Capacity | 0.00 | 0.09 | 0.05 |
| Queue Length 95th (ft) | 0 | 0 | 4 |
| Control Delay (s) | 0.4 | 0.0 | 9.8 |
| Lane LOS | A | | A |
| Approach Delay (s) | 0.4 | 0.0 | 9.8 |
| Approach LOS | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.4 | | |
| Intersection Capacity Utilization | 19.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 152 | 6 | 38 | 133 | 4 | 38 |
| Future Volume (Veh/h) | 152 | 6 | 38 | 133 | 4 | 38 |
| 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) | 165 | 7 | 41 | 145 | 4 | 41 |
| 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 | 162 | 114 | | | 186 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 162 | 114 | | | 186 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 80 | 99 | | | 100 | |
| cM capacity (veh/h) | 826 | 939 | | | 1388 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 172 | 186 | 45 |
| Volume Left | 165 | 0 | 4 |
| Volume Right | 7 | 145 | 0 |
| cSH | 830 | 1700 | 1388 |
| Volume to Capacity | 0.21 | 0.11 | 0.00 |
| Queue Length 95th (ft) | 19 | 0 | 0 |
| Control Delay (s) | 10.5 | 0.0 | 0.7 |
| Lane LOS | B | | A |
| Approach Delay (s) | 10.5 | 0.0 | 0.7 |
| Approach LOS | B | | |

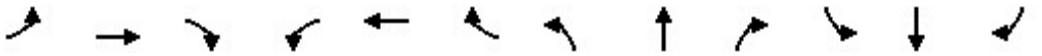
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.5 | | |
| Intersection Capacity Utilization | 25.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 41 | 103 | 8 | 53 | 140 | 3 | 8 | 48 | 43 | 3 | 19 | 14 |
| Future Volume (Veh/h) | 41 | 103 | 8 | 53 | 140 | 3 | 8 | 48 | 43 | 3 | 19 | 14 |
| 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) | 45 | 112 | 9 | 58 | 152 | 3 | 9 | 52 | 47 | 3 | 21 | 15 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | 519 | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 155 | | | 121 | | | 502 | 478 | 116 | 549 | 480 | 154 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 155 | | | 121 | | | 502 | 478 | 116 | 549 | 480 | 154 |
| 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 % | 97 | | | 96 | | | 98 | 89 | 95 | 99 | 95 | 98 |
| cM capacity (veh/h) | 1425 | | | 1467 | | | 431 | 453 | 936 | 366 | 451 | 892 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 166 | 213 | 108 | 39 |
| Volume Left | 45 | 58 | 9 | 3 |
| Volume Right | 9 | 3 | 47 | 15 |
| cSH | 1425 | 1467 | 581 | 545 |
| Volume to Capacity | 0.03 | 0.04 | 0.19 | 0.07 |
| Queue Length 95th (ft) | 2 | 3 | 17 | 6 |
| Control Delay (s) | 2.3 | 2.3 | 12.6 | 12.1 |
| Lane LOS | A | A | B | B |
| Approach Delay (s) | 2.3 | 2.3 | 12.6 | 12.1 |
| Approach LOS | | | B | B |

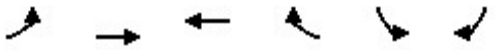
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 5.1 | | | |
| Intersection Capacity Utilization | 27.9% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 62 | 63 | 26 | 167 | 105 | 108 | 47 | 1608 | 6 | 126 | 1650 | 106 |
| Future Volume (vph) | 62 | 63 | 26 | 167 | 105 | 108 | 47 | 1608 | 6 | 126 | 1650 | 106 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | 1.00 | 0.96 | | 1.00 | 0.92 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1781 | | 1770 | 1721 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.61 | 1.00 | | 0.33 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1145 | 1781 | | 615 | 1721 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 67 | 68 | 28 | 182 | 114 | 117 | 51 | 1748 | 7 | 137 | 1793 | 115 |
| RTOR Reduction (vph) | 0 | 6 | 0 | 0 | 17 | 0 | 0 | 0 | 3 | 0 | 0 | 38 |
| Lane Group Flow (vph) | 67 | 90 | 0 | 182 | 214 | 0 | 51 | 1748 | 4 | 137 | 1793 | 77 |
| Turn Type | Perm | NA | | pm+pt | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | 2 | | | 6 |
| Actuated Green, G (s) | 16.9 | 16.9 | | 45.7 | 45.7 | | 11.7 | 136.1 | 136.1 | 21.1 | 145.5 | 145.5 |
| Effective Green, g (s) | 16.9 | 16.9 | | 45.7 | 45.7 | | 11.7 | 136.1 | 136.1 | 21.1 | 145.5 | 145.5 |
| Actuated g/C Ratio | 0.08 | 0.08 | | 0.21 | 0.21 | | 0.05 | 0.63 | 0.63 | 0.10 | 0.67 | 0.67 |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 89 | 139 | | 259 | 363 | | 95 | 2225 | 995 | 172 | 2379 | 1064 |
| v/s Ratio Prot | | 0.05 | | c0.08 | 0.12 | | 0.03 | c0.49 | | c0.08 | 0.51 | |
| v/s Ratio Perm | 0.06 | | | c0.07 | | | | | 0.00 | | | 0.05 |
| v/c Ratio | 0.75 | 0.64 | | 0.70 | 0.59 | | 0.54 | 0.79 | 0.00 | 0.80 | 0.75 | 0.07 |
| Uniform Delay, d1 | 97.7 | 96.8 | | 75.4 | 76.9 | | 99.7 | 29.4 | 14.9 | 95.5 | 23.5 | 12.2 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 29.7 | 9.8 | | 8.3 | 2.6 | | 5.7 | 2.9 | 0.0 | 22.0 | 2.3 | 0.1 |
| Delay (s) | 127.4 | 106.6 | | 83.7 | 79.5 | | 105.4 | 32.3 | 14.9 | 117.5 | 25.8 | 12.3 |
| Level of Service | F | F | | F | E | | F | C | B | F | C | B |
| Approach Delay (s) | | 115.2 | | | 81.4 | | | 34.3 | | | 31.2 | |
| Approach LOS | | F | | | F | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 40.2 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.78 | | |
| Actuated Cycle Length (s) | 216.4 | Sum of lost time (s) | 18.0 |
| Intersection Capacity Utilization | 82.7% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

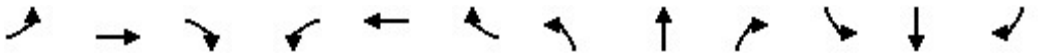
c Critical Lane Group



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 121 | 81 | 99 | 96 | 57 | 147 |
| Future Volume (Veh/h) | 121 | 81 | 99 | 96 | 57 | 147 |
| 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) | 132 | 88 | 108 | 104 | 62 | 160 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | 5 |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 212 | | | | 512 | 160 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 212 | | | | 512 | 160 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 90 | | | | 87 | 82 |
| cM capacity (veh/h) | 1358 | | | | 471 | 885 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 220 | 212 | 222 |
| Volume Left | 132 | 0 | 62 |
| Volume Right | 0 | 104 | 160 |
| cSH | 1358 | 1700 | 1228 |
| Volume to Capacity | 0.10 | 0.12 | 0.18 |
| Queue Length 95th (ft) | 8 | 0 | 16 |
| Control Delay (s) | 5.1 | 0.0 | 11.0 |
| Lane LOS | A | | B |
| Approach Delay (s) | 5.1 | 0.0 | 11.0 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.5 | | |
| Intersection Capacity Utilization | 35.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 99 | 127 | 79 | 80 | 135 | 122 | 79 | 400 | 86 | 172 | 562 | 140 |
| Future Volume (vph) | 99 | 127 | 79 | 80 | 135 | 122 | 79 | 400 | 86 | 172 | 562 | 140 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 |
| Flt Permitted | 0.51 | 1.00 | 1.00 | 0.53 | 1.00 | 1.00 | 0.39 | 1.00 | 1.00 | 0.49 | 1.00 | 1.00 |
| Satd. Flow (perm) | 942 | 1863 | 1583 | 992 | 1863 | 1583 | 726 | 1863 | 1583 | 909 | 1863 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 108 | 138 | 86 | 87 | 147 | 133 | 86 | 435 | 93 | 187 | 611 | 152 |
| RTOR Reduction (vph) | 0 | 0 | 73 | 0 | 0 | 113 | 0 | 0 | 21 | 0 | 0 | 35 |
| Lane Group Flow (vph) | 108 | 138 | 13 | 87 | 147 | 20 | 86 | 435 | 72 | 187 | 611 | 117 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 |
| Effective Green, g (s) | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 |
| Actuated g/C Ratio | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Clearance Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 139 | 276 | 234 | 147 | 276 | 234 | 559 | 1435 | 1219 | 700 | 1435 | 1219 |
| v/s Ratio Prot | | 0.07 | | | 0.08 | | | 0.23 | | | c0.33 | |
| v/s Ratio Perm | c0.11 | | 0.01 | 0.09 | | 0.01 | 0.12 | | 0.05 | 0.21 | | 0.07 |
| v/c Ratio | 0.78 | 0.50 | 0.05 | 0.59 | 0.53 | 0.08 | 0.15 | 0.30 | 0.06 | 0.27 | 0.43 | 0.10 |
| Uniform Delay, d1 | 45.6 | 43.6 | 40.7 | 44.2 | 43.8 | 40.8 | 3.3 | 3.8 | 3.1 | 3.7 | 4.4 | 3.2 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 23.4 | 1.4 | 0.1 | 6.3 | 2.0 | 0.2 | 0.6 | 0.5 | 0.1 | 0.9 | 0.9 | 0.2 |
| Delay (s) | 68.9 | 45.0 | 40.8 | 50.5 | 45.8 | 41.0 | 3.9 | 4.4 | 3.2 | 4.6 | 5.3 | 3.3 |
| Level of Service | E | D | D | D | D | D | A | A | A | A | A | A |
| Approach Delay (s) | | 51.7 | | | 45.1 | | | 4.1 | | | 4.8 | |
| Approach LOS | | D | | | D | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 18.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.48 | | |
| Actuated Cycle Length (s) | 111.2 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 61.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 22 | 3 | 3 | 7 | 28 | 33 |
| Future Volume (Veh/h) | 22 | 3 | 3 | 7 | 28 | 33 |
| 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) | 24 | 3 | 3 | 8 | 30 | 36 |
| 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 | 62 | 48 | 66 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 62 | 48 | 66 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 97 | 100 | 100 | | | |
| cM capacity (veh/h) | 942 | 1021 | 1536 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 27 | 11 | 66 |
| Volume Left | 24 | 3 | 0 |
| Volume Right | 3 | 0 | 36 |
| cSH | 951 | 1536 | 1700 |
| Volume to Capacity | 0.03 | 0.00 | 0.04 |
| Queue Length 95th (ft) | 2 | 0 | 0 |
| Control Delay (s) | 8.9 | 2.0 | 0.0 |
| Lane LOS | A | A | |
| Approach Delay (s) | 8.9 | 2.0 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.5 | | |
| Intersection Capacity Utilization | 13.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 1 | 9 | 0 | 3 | 28 |
| Future Volume (Veh/h) | 0 | 1 | 9 | 0 | 3 | 28 |
| 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) | 0 | 1 | 10 | 0 | 3 | 30 |
| 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 | 46 | 10 | | | 10 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 46 | 10 | | | 10 | |
| 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) | 962 | 1071 | | | 1610 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 1 | 10 | 33 |
| Volume Left | 0 | 0 | 3 |
| Volume Right | 1 | 0 | 0 |
| cSH | 1071 | 1700 | 1610 |
| Volume to Capacity | 0.00 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 0 | 0 | 0 |
| Control Delay (s) | 8.4 | 0.0 | 0.7 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.4 | 0.0 | 0.7 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.7 | | |
| Intersection Capacity Utilization | 14.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 3 | 0 | 1292 | 1560 | 1 |
| Future Volume (Veh/h) | 0 | 3 | 0 | 1292 | 1560 | 1 |
| 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) | 0 | 3 | 0 | 1404 | 1696 | 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 | 2398 | 848 | 1697 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 2398 | 848 | 1697 | | | |
| tC, single (s) | 6.8 | 6.9 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 99 | 100 | | | |
| cM capacity (veh/h) | 28 | 305 | 372 | | | |

| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|
| Volume Total | 3 | 702 | 702 | 848 | 848 | 1 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 3 | 0 | 0 | 0 | 0 | 1 |
| cSH | 305 | 1700 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.01 | 0.41 | 0.41 | 0.50 | 0.50 | 0.00 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 16.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | C | | | | | |
| Approach Delay (s) | 16.9 | 0.0 | | 0.0 | | |
| Approach LOS | C | | | | | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.0 | | | |
| Intersection Capacity Utilization | 53.1% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 20 | 2 | 16 | 42 | 1 | 10 |
| Future Volume (Veh/h) | 20 | 2 | 16 | 42 | 1 | 10 |
| 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) | 22 | 2 | 17 | 46 | 1 | 11 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 53 | 40 | | | 63 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 53 | 40 | | | 63 | |
| 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 | 100 | | | 100 | |
| cM capacity (veh/h) | 955 | 1031 | | | 1540 | |

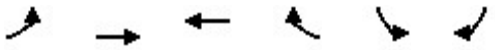
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 24 | 63 | 12 |
| Volume Left | 22 | 0 | 1 |
| Volume Right | 2 | 46 | 0 |
| cSH | 961 | 1700 | 1540 |
| Volume to Capacity | 0.02 | 0.04 | 0.00 |
| Queue Length 95th (ft) | 2 | 0 | 0 |
| Control Delay (s) | 8.8 | 0.0 | 0.6 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.8 | 0.0 | 0.6 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.2 | | |
| Intersection Capacity Utilization | 13.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 128 | 3 | 14 | 156 | 3 | 10 |
| Future Volume (Veh/h) | 128 | 3 | 14 | 156 | 3 | 10 |
| 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) | 139 | 3 | 15 | 170 | 3 | 11 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | | | 142 | | 340 | 140 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 142 | | 340 | 140 |
| tC, single (s) | | | 4.1 | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 99 | | 100 | 99 |
| cM capacity (veh/h) | | | 1441 | | 649 | 907 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 142 | 185 | 14 |
| Volume Left | 0 | 15 | 3 |
| Volume Right | 3 | 0 | 11 |
| cSH | 1700 | 1441 | 836 |
| Volume to Capacity | 0.08 | 0.01 | 0.02 |
| Queue Length 95th (ft) | 0 | 1 | 1 |
| Control Delay (s) | 0.0 | 0.7 | 9.4 |
| Lane LOS | | A | A |
| Approach Delay (s) | 0.0 | 0.7 | 9.4 |
| Approach LOS | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.8 | | |
| Intersection Capacity Utilization | 29.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 5 | 138 | 144 | 13 | 23 | 12 |
| Future Volume (Veh/h) | 5 | 138 | 144 | 13 | 23 | 12 |
| 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 | 150 | 157 | 14 | 25 | 13 |
| 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 | 171 | | | | 324 | 164 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 171 | | | | 324 | 164 |
| 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 | | | | 96 | 99 |
| cM capacity (veh/h) | 1406 | | | | 668 | 881 |

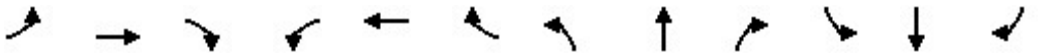
| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 155 | 171 | 38 |
| Volume Left | 5 | 0 | 25 |
| Volume Right | 0 | 14 | 13 |
| cSH | 1406 | 1700 | 728 |
| Volume to Capacity | 0.00 | 0.10 | 0.05 |
| Queue Length 95th (ft) | 0 | 0 | 4 |
| Control Delay (s) | 0.3 | 0.0 | 10.2 |
| Lane LOS | A | | B |
| Approach Delay (s) | 0.3 | 0.0 | 10.2 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.2 | | |
| Intersection Capacity Utilization | 21.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 204 | 6 | 38 | 182 | 4 | 38 |
| Future Volume (Veh/h) | 204 | 6 | 38 | 182 | 4 | 38 |
| 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) | 222 | 7 | 41 | 198 | 4 | 41 |
| 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 | 189 | 140 | | | 239 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 189 | 140 | | | 239 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 72 | 99 | | | 100 | |
| cM capacity (veh/h) | 798 | 908 | | | 1328 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 229 | 239 | 45 |
| Volume Left | 222 | 0 | 4 |
| Volume Right | 7 | 198 | 0 |
| cSH | 801 | 1700 | 1328 |
| Volume to Capacity | 0.29 | 0.14 | 0.00 |
| Queue Length 95th (ft) | 30 | 0 | 0 |
| Control Delay (s) | 11.3 | 0.0 | 0.7 |
| Lane LOS | B | | A |
| Approach Delay (s) | 11.3 | 0.0 | 0.7 |
| Approach LOS | B | | |

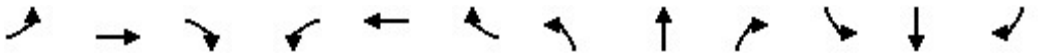
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.1 | | |
| Intersection Capacity Utilization | 31.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 47 | 183 | 8 | 53 | 220 | 3 | 8 | 48 | 43 | 3 | 19 | 23 |
| Future Volume (Veh/h) | 47 | 183 | 8 | 53 | 220 | 3 | 8 | 48 | 43 | 3 | 19 | 23 |
| 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) | 51 | 199 | 9 | 58 | 239 | 3 | 9 | 52 | 47 | 3 | 21 | 25 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | 519 | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 242 | | | 208 | | | 698 | 664 | 204 | 735 | 666 | 240 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 242 | | | 208 | | | 698 | 664 | 204 | 735 | 666 | 240 |
| 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 % | 96 | | | 96 | | | 97 | 85 | 94 | 99 | 94 | 97 |
| cM capacity (veh/h) | 1324 | | | 1363 | | | 309 | 351 | 837 | 264 | 350 | 798 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 259 | 300 | 108 | 49 |
| Volume Left | 51 | 58 | 9 | 3 |
| Volume Right | 9 | 3 | 47 | 25 |
| cSH | 1324 | 1363 | 463 | 477 |
| Volume to Capacity | 0.04 | 0.04 | 0.23 | 0.10 |
| Queue Length 95th (ft) | 3 | 3 | 22 | 9 |
| Control Delay (s) | 1.8 | 1.8 | 15.1 | 13.4 |
| Lane LOS | A | A | C | B |
| Approach Delay (s) | 1.8 | 1.8 | 15.1 | 13.4 |
| Approach LOS | | | C | B |

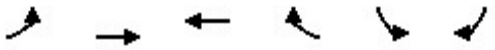
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 4.6 | | | |
| Intersection Capacity Utilization | 33.8% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 108 | 77 | 46 | 167 | 118 | 108 | 67 | 1608 | 6 | 126 | 1650 | 153 |
| Future Volume (vph) | 108 | 77 | 46 | 167 | 118 | 108 | 67 | 1608 | 6 | 126 | 1650 | 153 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | 1.00 | 0.94 | | 1.00 | 0.93 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1758 | | 1770 | 1729 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.61 | 1.00 | | 0.33 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1130 | 1758 | | 610 | 1729 | | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 117 | 84 | 50 | 182 | 128 | 117 | 73 | 1748 | 7 | 137 | 1793 | 166 |
| RTOR Reduction (vph) | 0 | 9 | 0 | 0 | 14 | 0 | 0 | 0 | 3 | 0 | 0 | 62 |
| Lane Group Flow (vph) | 117 | 125 | 0 | 182 | 231 | 0 | 73 | 1748 | 4 | 137 | 1793 | 104 |
| Turn Type | Perm | NA | | pm+pt | NA | | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | 2 | | | 6 |
| Actuated Green, G (s) | 26.9 | 26.9 | | 55.8 | 55.8 | | 14.8 | 136.0 | 136.0 | 21.6 | 142.8 | 142.8 |
| Effective Green, g (s) | 26.9 | 26.9 | | 55.8 | 55.8 | | 14.8 | 136.0 | 136.0 | 21.6 | 142.8 | 142.8 |
| Actuated g/C Ratio | 0.12 | 0.12 | | 0.25 | 0.25 | | 0.07 | 0.60 | 0.60 | 0.10 | 0.63 | 0.63 |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 133 | 208 | | 274 | 425 | | 115 | 2121 | 948 | 168 | 2227 | 996 |
| v/s Ratio Prot | | 0.07 | | c0.07 | 0.13 | | 0.04 | c0.49 | | c0.08 | 0.51 | |
| v/s Ratio Perm | c0.10 | | | 0.09 | | | | | 0.00 | | | 0.07 |
| v/c Ratio | 0.88 | 0.60 | | 0.66 | 0.54 | | 0.63 | 0.82 | 0.00 | 0.82 | 0.81 | 0.10 |
| Uniform Delay, d1 | 98.4 | 94.9 | | 72.6 | 74.4 | | 103.4 | 36.0 | 18.3 | 100.7 | 31.6 | 16.7 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 43.5 | 4.8 | | 6.0 | 1.4 | | 10.9 | 3.8 | 0.0 | 25.3 | 3.2 | 0.2 |
| Delay (s) | 141.9 | 99.8 | | 78.5 | 75.9 | | 114.3 | 39.8 | 18.3 | 126.0 | 34.8 | 16.9 |
| Level of Service | F | F | | E | E | | F | D | B | F | C | B |
| Approach Delay (s) | | 119.4 | | | 77.0 | | | 42.7 | | | 39.4 | |
| Approach LOS | | F | | | E | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 48.5 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.81 | | |
| Actuated Cycle Length (s) | 226.9 | Sum of lost time (s) | 18.0 |
| Intersection Capacity Utilization | 85.2% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

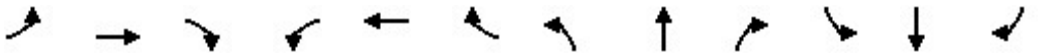
c Critical Lane Group



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 127 | 81 | 99 | 139 | 103 | 153 |
| Future Volume (Veh/h) | 127 | 81 | 99 | 139 | 103 | 153 |
| 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) | 138 | 88 | 108 | 151 | 112 | 166 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | 5 |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 259 | | | | 548 | 184 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 259 | | | | 548 | 184 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 89 | | | | 75 | 81 |
| cM capacity (veh/h) | 1306 | | | | 445 | 859 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 226 | 259 | 278 |
| Volume Left | 138 | 0 | 112 |
| Volume Right | 0 | 151 | 166 |
| cSH | 1306 | 1700 | 1105 |
| Volume to Capacity | 0.11 | 0.15 | 0.25 |
| Queue Length 95th (ft) | 9 | 0 | 25 |
| Control Delay (s) | 5.3 | 0.0 | 12.4 |
| Lane LOS | A | | B |
| Approach Delay (s) | 5.3 | 0.0 | 12.4 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6.1 | | |
| Intersection Capacity Utilization | 40.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 99 | 150 | 102 | 80 | 158 | 122 | 99 | 400 | 86 | 172 | 562 | 140 |
| Future Volume (vph) | 99 | 150 | 102 | 80 | 158 | 122 | 99 | 400 | 86 | 172 | 562 | 140 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 |
| Flt Permitted | 0.45 | 1.00 | 1.00 | 0.47 | 1.00 | 1.00 | 0.39 | 1.00 | 1.00 | 0.49 | 1.00 | 1.00 |
| Satd. Flow (perm) | 834 | 1863 | 1583 | 881 | 1863 | 1583 | 720 | 1863 | 1583 | 905 | 1863 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 108 | 163 | 111 | 87 | 172 | 133 | 108 | 435 | 93 | 187 | 611 | 152 |
| RTOR Reduction (vph) | 0 | 0 | 93 | 0 | 0 | 112 | 0 | 0 | 22 | 0 | 0 | 36 |
| Lane Group Flow (vph) | 108 | 163 | 18 | 87 | 172 | 21 | 108 | 435 | 71 | 187 | 611 | 116 |
| Turn Type | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | 8 | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 17.8 | 17.8 | 17.8 | 17.8 | 17.8 | 17.8 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 |
| Effective Green, g (s) | 17.8 | 17.8 | 17.8 | 17.8 | 17.8 | 17.8 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 | 85.7 |
| Actuated g/C Ratio | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| Clearance Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 131 | 294 | 250 | 139 | 294 | 250 | 548 | 1419 | 1205 | 689 | 1419 | 1205 |
| v/s Ratio Prot | | 0.09 | | | 0.09 | | | 0.23 | | | c0.33 | |
| v/s Ratio Perm | c0.13 | | 0.01 | 0.10 | | 0.01 | 0.15 | | 0.04 | 0.21 | | 0.07 |
| v/c Ratio | 0.82 | 0.55 | 0.07 | 0.63 | 0.59 | 0.08 | 0.20 | 0.31 | 0.06 | 0.27 | 0.43 | 0.10 |
| Uniform Delay, d1 | 45.8 | 43.7 | 40.3 | 44.2 | 43.9 | 40.4 | 3.8 | 4.2 | 3.3 | 4.0 | 4.8 | 3.4 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 32.5 | 2.3 | 0.1 | 8.5 | 3.0 | 0.1 | 0.8 | 0.6 | 0.1 | 1.0 | 1.0 | 0.2 |
| Delay (s) | 78.4 | 46.0 | 40.4 | 52.7 | 46.9 | 40.5 | 4.6 | 4.7 | 3.4 | 5.0 | 5.7 | 3.6 |
| Level of Service | E | D | D | D | D | D | A | A | A | A | A | A |
| Approach Delay (s) | | 53.5 | | | 46.0 | | | 4.5 | | | 5.2 | |
| Approach LOS | | D | | | D | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 19.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.50 | | |
| Actuated Cycle Length (s) | 112.5 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 63.9% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 22 | 3 | 3 | 17 | 36 | 33 |
| Future Volume (Veh/h) | 22 | 3 | 3 | 17 | 36 | 33 |
| 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) | 24 | 3 | 3 | 18 | 39 | 36 |
| 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 | 81 | 57 | 75 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 81 | 57 | 75 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 97 | 100 | 100 | | | |
| cM capacity (veh/h) | 919 | 1009 | 1524 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 27 | 21 | 75 |
| Volume Left | 24 | 3 | 0 |
| Volume Right | 3 | 0 | 36 |
| cSH | 929 | 1524 | 1700 |
| Volume to Capacity | 0.03 | 0.00 | 0.04 |
| Queue Length 95th (ft) | 2 | 0 | 0 |
| Control Delay (s) | 9.0 | 1.1 | 0.0 |
| Lane LOS | A | A | |
| Approach Delay (s) | 9.0 | 1.1 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.2 | | |
| Intersection Capacity Utilization | 13.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 1 | 19 | 0 | 3 | 36 |
| Future Volume (Veh/h) | 0 | 1 | 19 | 0 | 3 | 36 |
| 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) | 0 | 1 | 21 | 0 | 3 | 39 |
| 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 | 66 | 21 | | | 21 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 66 | 21 | | | 21 | |
| 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) | 938 | 1056 | | | 1595 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 1 | 21 | 42 |
| Volume Left | 0 | 0 | 3 |
| Volume Right | 1 | 0 | 0 |
| cSH | 1056 | 1700 | 1595 |
| Volume to Capacity | 0.00 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 0 | 0 | 0 |
| Control Delay (s) | 8.4 | 0.0 | 0.5 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.4 | 0.0 | 0.5 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.5 | | |
| Intersection Capacity Utilization | 14.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 0 | 3 | 0 | 1359 | 1610 | 1 |
| Future Volume (Veh/h) | 0 | 3 | 0 | 1359 | 1610 | 1 |
| 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) | 0 | 3 | 0 | 1477 | 1750 | 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 | 2488 | 875 | 1751 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 2488 | 875 | 1751 | | | |
| tC, single (s) | 6.8 | 6.9 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 99 | 100 | | | |
| cM capacity (veh/h) | 24 | 292 | 354 | | | |

| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 | SB 2 | SB 3 |
|---|---|---|---|---|---|---|
| Volume Total | 3 | 738 | 738 | 875 | 875 | 1 |
| Volume Left | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Right | 3 | 0 | 0 | 0 | 0 | 1 |
| cSH | 292 | 1700 | 1700 | 1700 | 1700 | 1700 |
| Volume to Capacity | 0.01 | 0.43 | 0.43 | 0.51 | 0.51 | 0.00 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 |
| Control Delay (s) | 17.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lane LOS | C | | | | | |
| Approach Delay (s) | 17.4 | 0.0 | | 0.0 | | |
| Approach LOS | C | | | | | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.0 | | | |
| Intersection Capacity Utilization | 54.5% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 20 | 2 | 16 | 42 | 1 | 10 |
| Future Volume (Veh/h) | 20 | 2 | 16 | 42 | 1 | 10 |
| 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) | 22 | 2 | 17 | 46 | 1 | 11 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | | None |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 53 | 40 | | | 63 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 53 | 40 | | | 63 | |
| 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 | 100 | | | 100 | |
| cM capacity (veh/h) | 955 | 1031 | | | 1540 | |

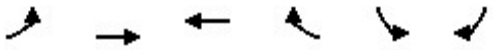
| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 24 | 63 | 12 |
| Volume Left | 22 | 0 | 1 |
| Volume Right | 2 | 46 | 0 |
| cSH | 961 | 1700 | 1540 |
| Volume to Capacity | 0.02 | 0.04 | 0.00 |
| Queue Length 95th (ft) | 2 | 0 | 0 |
| Control Delay (s) | 8.8 | 0.0 | 0.6 |
| Lane LOS | A | | A |
| Approach Delay (s) | 8.8 | 0.0 | 0.6 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.2 | | |
| Intersection Capacity Utilization | 13.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 126 | 3 | 14 | 208 | 3 | 10 |
| Future Volume (Veh/h) | 126 | 3 | 14 | 208 | 3 | 10 |
| 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) | 137 | 3 | 15 | 226 | 3 | 11 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | | | 140 | | 394 | 138 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 140 | | 394 | 138 |
| tC, single (s) | | | 4.1 | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 99 | | 100 | 99 |
| cM capacity (veh/h) | | | 1443 | | 604 | 910 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 |
|---|---|---|---|
| Volume Total | 140 | 241 | 14 |
| Volume Left | 0 | 15 | 3 |
| Volume Right | 3 | 0 | 11 |
| cSH | 1700 | 1443 | 821 |
| Volume to Capacity | 0.08 | 0.01 | 0.02 |
| Queue Length 95th (ft) | 0 | 1 | 1 |
| Control Delay (s) | 0.0 | 0.6 | 9.5 |
| Lane LOS | | A | A |
| Approach Delay (s) | 0.0 | 0.6 | 9.5 |
| Approach LOS | | | A |

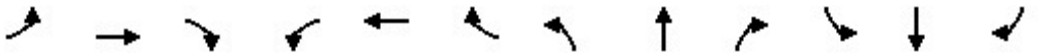
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | | 0.7 | |
| Intersection Capacity Utilization | | 31.9% | ICU Level of Service |
| Analysis Period (min) | | 15 | |



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (veh/h) | 56 | 136 | 142 | 104 | 110 | 66 |
| Future Volume (Veh/h) | 56 | 136 | 142 | 104 | 110 | 66 |
| 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) | 61 | 148 | 154 | 113 | 120 | 72 |
| 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 | 267 | | | | 480 | 210 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 267 | | | | 480 | 210 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 95 | | | | 77 | 91 |
| cM capacity (veh/h) | 1297 | | | | 519 | 830 |

| Direction, Lane # | EB 1 | WB 1 | SB 1 |
|---|---|---|---|
| Volume Total | 209 | 267 | 192 |
| Volume Left | 61 | 0 | 120 |
| Volume Right | 0 | 113 | 72 |
| cSH | 1297 | 1700 | 604 |
| Volume to Capacity | 0.05 | 0.16 | 0.32 |
| Queue Length 95th (ft) | 4 | 0 | 34 |
| Control Delay (s) | 2.6 | 0.0 | 13.7 |
| Lane LOS | A | | B |
| Approach Delay (s) | 2.6 | 0.0 | 13.7 |
| Approach LOS | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.8 | | |
| Intersection Capacity Utilization | 44.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



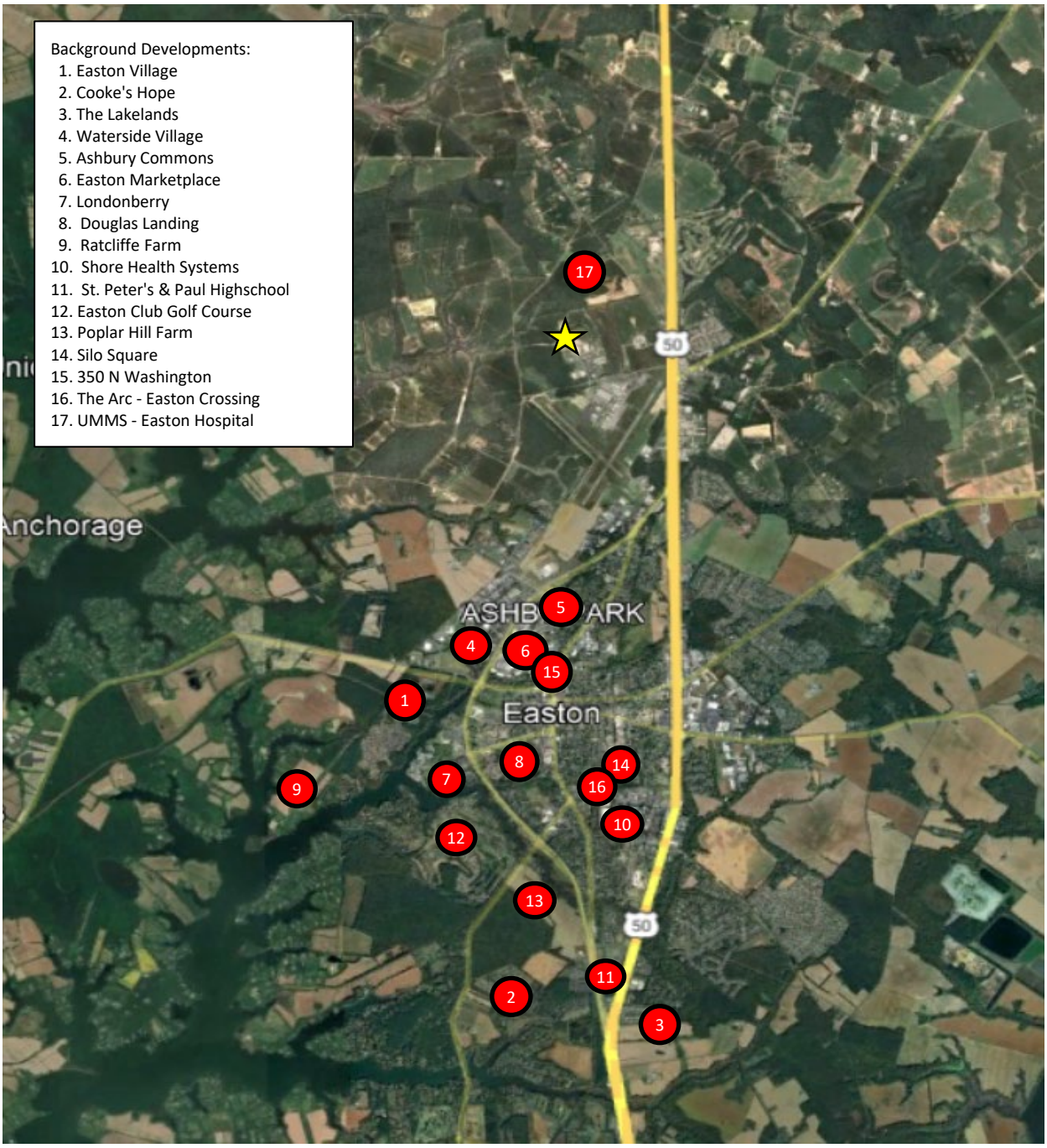
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 108 | 77 | 6 | 167 | 118 | 108 | 67 | 1608 | 6 | 126 | 1650 | 153 |
| Future Volume (vph) | 108 | 77 | 6 | 167 | 118 | 108 | 67 | 1608 | 6 | 126 | 1650 | 153 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Frt | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 1770 | 1841 | | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.67 | 1.00 | | 0.46 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 1257 | 1841 | | 852 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 117 | 84 | 7 | 182 | 128 | 117 | 73 | 1748 | 7 | 137 | 1793 | 166 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 0 | 91 | 0 | 0 | 3 | 0 | 0 | 58 |
| Lane Group Flow (vph) | 117 | 90 | 0 | 182 | 128 | 26 | 73 | 1748 | 4 | 137 | 1793 | 108 |
| Turn Type | Perm | NA | | pm+pt | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | | | 2 | | | 6 |
| Actuated Green, G (s) | 26.1 | 26.1 | | 50.4 | 50.4 | 50.4 | 14.2 | 138.7 | 138.7 | 21.7 | 146.2 | 146.2 |
| Effective Green, g (s) | 26.1 | 26.1 | | 50.4 | 50.4 | 50.4 | 14.2 | 138.7 | 138.7 | 21.7 | 146.2 | 146.2 |
| Actuated g/C Ratio | 0.12 | 0.12 | | 0.22 | 0.22 | 0.22 | 0.06 | 0.62 | 0.62 | 0.10 | 0.65 | 0.65 |
| Clearance Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 146 | 214 | | 272 | 418 | 355 | 112 | 2188 | 978 | 171 | 2306 | 1031 |
| v/s Ratio Prot | | 0.05 | | c0.06 | 0.07 | | 0.04 | c0.49 | | c0.08 | 0.51 | |
| v/s Ratio Perm | c0.09 | | | 0.09 | | 0.02 | | | 0.00 | | | 0.07 |
| v/c Ratio | 0.80 | 0.42 | | 0.67 | 0.31 | 0.07 | 0.65 | 0.80 | 0.00 | 0.80 | 0.78 | 0.10 |
| Uniform Delay, d1 | 96.6 | 92.1 | | 75.5 | 72.4 | 68.6 | 102.6 | 32.3 | 16.4 | 99.2 | 27.6 | 14.6 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 26.2 | 1.3 | | 6.1 | 0.4 | 0.1 | 12.8 | 3.2 | 0.0 | 23.0 | 2.7 | 0.2 |
| Delay (s) | 122.7 | 93.4 | | 81.6 | 72.8 | 68.6 | 115.4 | 35.4 | 16.4 | 122.1 | 30.2 | 14.8 |
| Level of Service | F | F | | F | E | E | F | D | B | F | C | B |
| Approach Delay (s) | | 109.9 | | | 75.4 | | | 38.6 | | | 35.0 | |
| Approach LOS | | F | | | E | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 43.6 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.79 | | |
| Actuated Cycle Length (s) | 224.3 | Sum of lost time (s) | 18.0 |
| Intersection Capacity Utilization | 78.6% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

# Appendix C

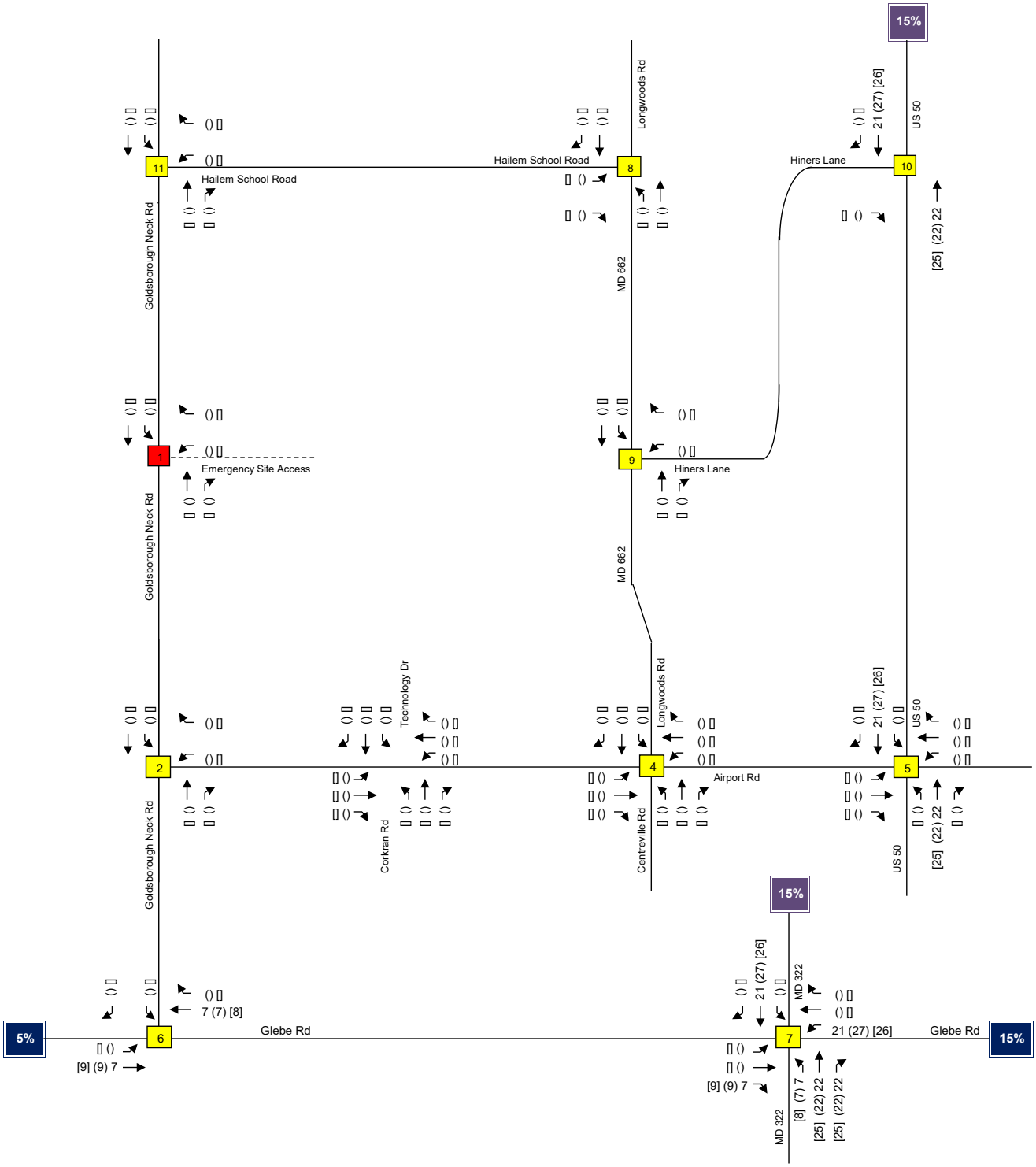
## Background Developments



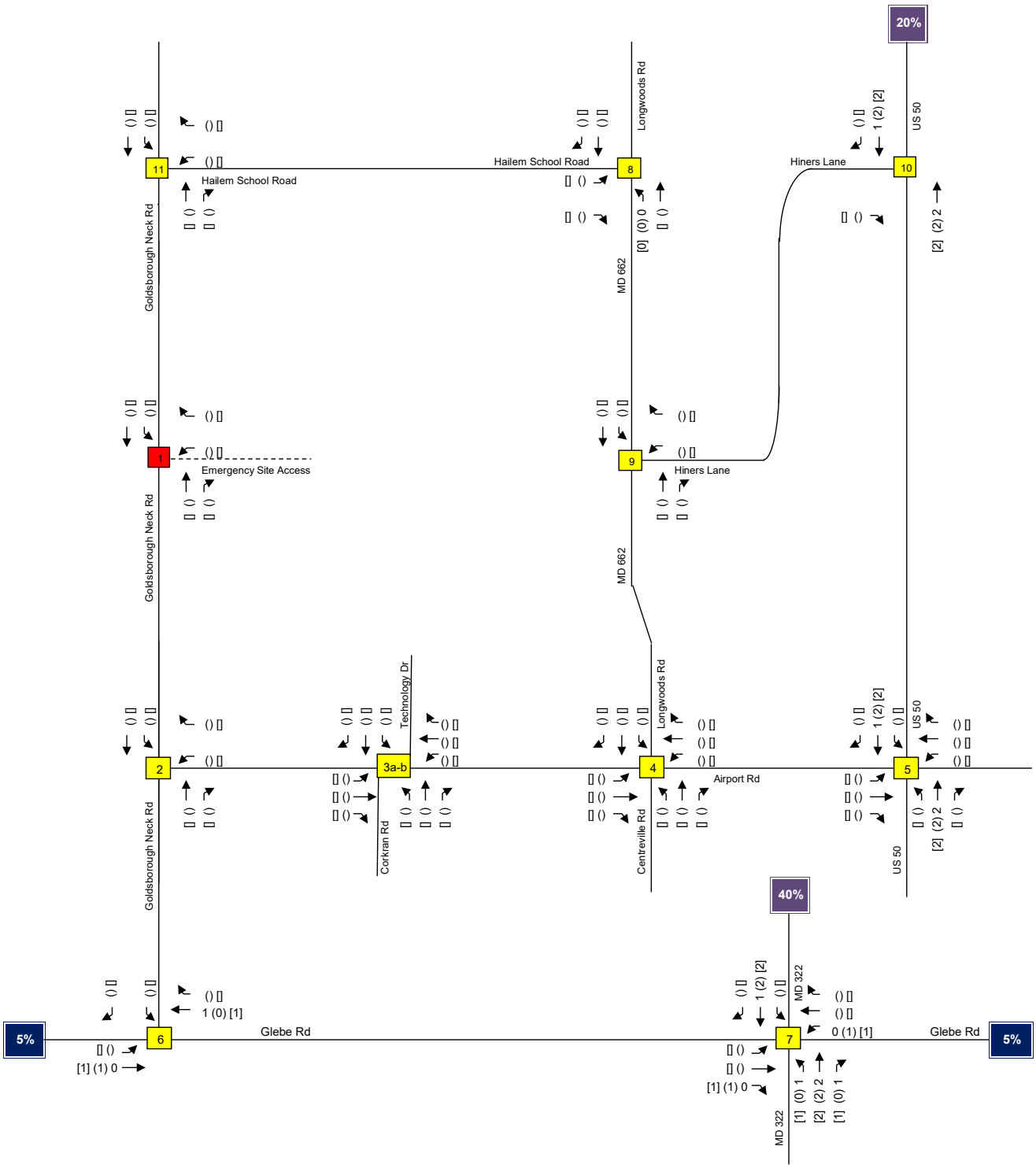

| | | |
|---|---|---|
| Traffic Impact Analysis | Location of Background Devs. | **Exhibit C-1** |
| LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | | |

## Trip Generation for Background Developments

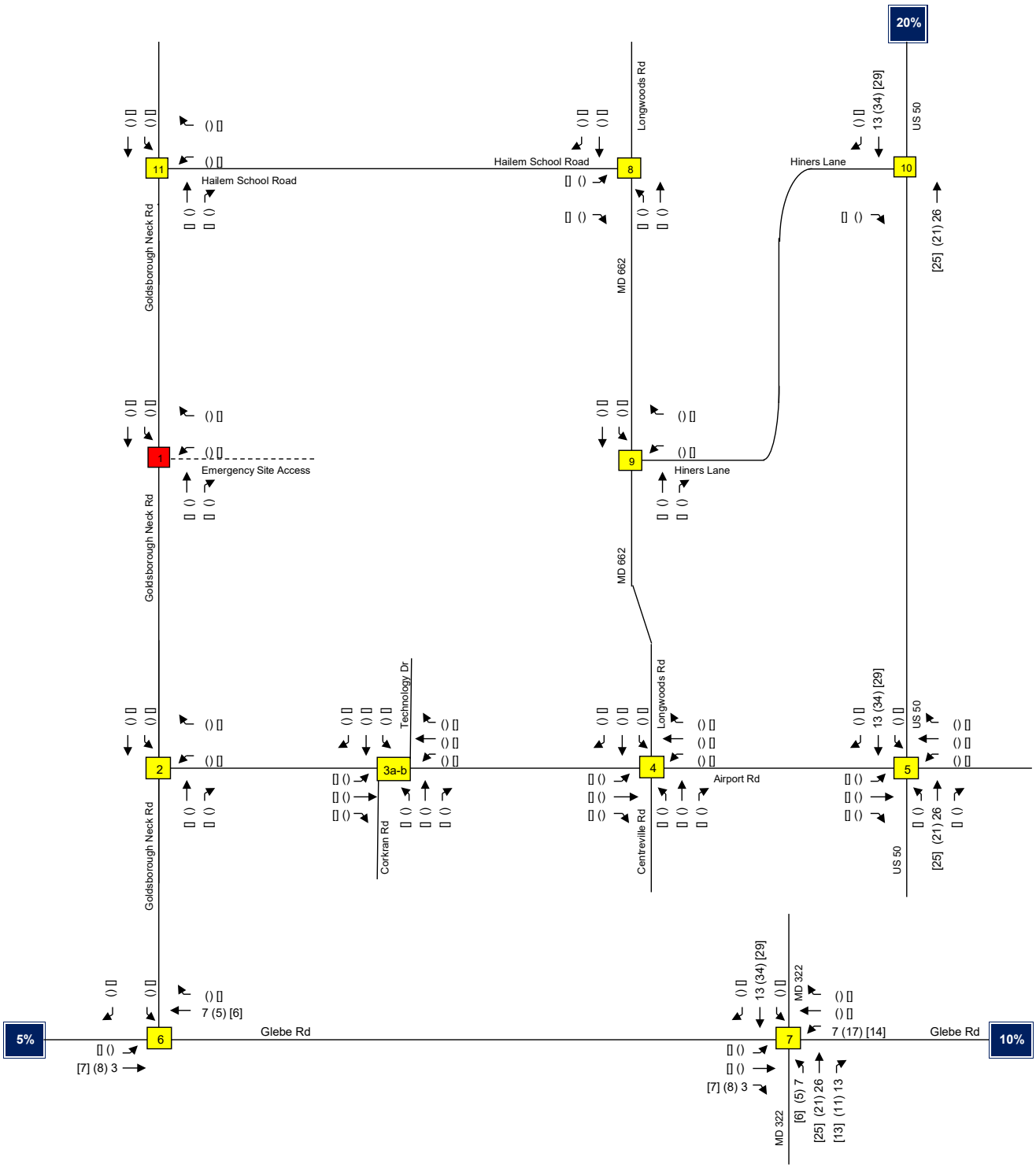
| | | | AM Peak | | | PM Peak | | | Sat Mid-day Peak | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | In | Out | Total | In | Out | Total | In | Out | Total |
| 1 - Easton Village | 250 Single-Family Units Less 225 Built | 25 units remaining | 5 | 14 | 19 | 16 | 9 | 25 | 12 | 11 | 23 |
| 2 - Cookes Hope | 288 Single-Family Units Less 185 Built | 103 units remaining | 19 | 57 | 76 | 64 | 38 | 102 | 52 | 44 | 96 |
| 3 - The Lakelands | 158 Townhouse Units (All Built) | 0 units remaining | Built | | | | | | | | |
| 4. Waterside Village | Phase 1 - 203,878 SF of Retail (All Built) | 0 square feet remaining | Built | | | | | | | | |
| | Phase 1 - 38,157 SF of Office (All Built) | 0 square feet remaining | Built | | | | | | | | |
| | Phase 1 - 24,901 SF of Restaurant (Approx. 50% Built) | 12,451 square feet remaining | 68 | 56 | 124 | 76 | 46 | 122 | 71 | 68 | 139 |
| | Pass-by Trips for Phase 1 Restaurant (0% AM, 49% PM, 49% Saturday): | | 0 | 0 | 0 | -37 | -23 | -60 | -35 | -33 | -68 |
| | Primary Off-Site Trips for Phase 1 Restaurant: | | 68 | 56 | 124 | 39 | 23 | 62 | 36 | 35 | 71 |
| | Phase 1 - 3,651 SF of Bank (All Built) | 0 square feet remaining | Built | | | | | | | | |
| | Phase 2A - 40,000 SF of Retail (All Built) | 0 square feet remaining | Built | | | | | | | | |
| | Phase 2B - 60 Mid-rise Multifamily Units (Not Built) | 60 units | 6 | 16 | 22 | 16 | 10 | 26 | 13 | 13 | 26 |
| | Phase 2C - 37,500 SF of Retail (Not Built) | 37,500 square feet | 22 | 13 | 35 | 69 | 74 | 143 | 88 | 81 | 169 |
| | Pass-by Trips for Phase 2C Retail (0% AM, 34% PM, 34% Saturday): | | 0 | 0 | 0 | -23 | -25 | -48 | -30 | -28 | -58 |
| | Primary Off-Site Trips for Phase 2 Retail: | | 22 | 13 | 35 | 46 | 49 | 95 | 58 | 53 | 111 |
| | Phase 2D - 81,500 SF of Retail Less 76,500 SF Built | 5,000 square feet remaining | 3 | 2 | 5 | 9 | 10 | 19 | 12 | 11 | 23 |
| | Pass-by Trips for Phase 2D Retail (0% AM, 34% PM, 34% Saturday): | | 0 | 0 | 0 | -3 | -3 | -6 | -4 | -4 | -8 |
| | Primary Off-Site Trips for Phase 2D Retail: | | 3 | 2 | 5 | 6 | 7 | 13 | 8 | 7 | 15 |
| 5. Ashbury Commons | 64 Townhouse Units Less 40 Built | 24 units remaining | 3 | 8 | 11 | 8 | 5 | 13 | 8 | 9 | 17 |
| | 26 Single-Family Units Less 13 built | 13 units remaining | 2 | 8 | 10 | 8 | 5 | 13 | 6 | 6 | 12 |
| 6. Easton Marketplace | 15,000 SF Pharmacy (Not Built) | 15,000 square feet | 31 | 27 | 58 | 77 | 77 | 154 | 64 | 67 | 131 |
| | Pass-by Trips for Pharmacy (0% AM, 53% PM, 53% Saturday): | | 0 | 0 | 0 | -41 | -41 | -82 | -34 | -36 | -70 |
| | Primary Off-Site Trips for Pharmacy: | | 31 | 27 | 58 | 36 | 36 | 72 | 30 | 31 | 61 |
| 7. Londonberry | 41 Single-Family Units Less 38 Built | 0 units remaining | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8. Douglas Landing | 91 Townhouse Units Less 64 Built | 27 units remaining | 3 | 9 | 12 | 9 | 6 | 15 | 9 | 10 | 19 |
| | 48 Single-Family Units Less 43 built | 5 units remaining | 1 | 3 | 4 | 3 | 2 | 5 | 3 | 2 | 5 |
| 9 - Ratcliffe Farm | 15 Single-Family Units (All Built) | 0 units remaining | Built | | | | | | | | |
| 10 - Shore Health Systems Medical Campus | 352,000 SF of Hospital (All Built) | 0 square feet remaining | Built | | | | | | | | |
| 11. St. Peters and Paul | 500 Student Private School | 500 students | 244 | 156 | 400 | 37 | 48 | 85 | 0 | 0 | 0 |
| | 6 Field Soccer Complex | 6 fields | 4 | 2 | 6 | 65 | 34 | 99 | 116 | 125 | 241 |
| | 18,000 SF Family Life Center | 18,000 square feet | 4 | 2 | 6 | 4 | 5 | 9 | 29 | 21 | 50 |
| 12. Easton Club Golf Course | 18 Hole Golf Course | 18 holes | 25 | 7 | 32 | 28 | 24 | 52 | 27 | 28 | 55 |
| 13. Poplar Hill Farm | Single-Family Detached (ITE-210, Units) | 119 units | 22 | 67 | 89 | 76 | 44 | 120 | 64 | 54 | 118 |
| 14. Silo Square | Single-Family Attached Housing (ITE-215, Units) | 28 units | 3 | 6 | 9 | 7 | 6 | 13 | 12 | 12 | 24 |
| 15. 350 N Washington | Multifamily Housing, Low-Rise (ITE-220, Units) | 16 units | 1 | 5 | 6 | 5 | 3 | 8 | 3 | 4 | 7 |
| 16. The Arc - Easton Crossing (see note) | Multifamily Housing, Mid-Rise (ITE-221, Urban/Suburban, Units) [Not Close to Rail Transit] | 130 units | 11 | 35 | 46 | 31 | 20 | 51 | 27 | 25 | 52 |
| | Fast Casual Restaurant (ksf, ITE-930) | 3,000 sq.ft. | 2 | 2 | 4 | 21 | 17 | 38 | 54 | 44 | 98 |
| 17. Shore Health Systems | Hospital - Phase 1 plus Future Phases (ksf, ITE-610) | 488,000 sq.ft. | 268 | 132 | 400 | 147 | 273 | 420 | 134 | 66 | 200 |
| | Medical Clinic - Phase 1 plus Future Phases (ksf, ITE-720) | 296,000 sq.ft. | 651 | 153 | 804 | 224 | 671 | 895 | 326 | 77 | 403 |
| | | Net Total: | 919 | 285 | 1204 | 371 | 944 | 1315 | 460 | 143 | 603 |



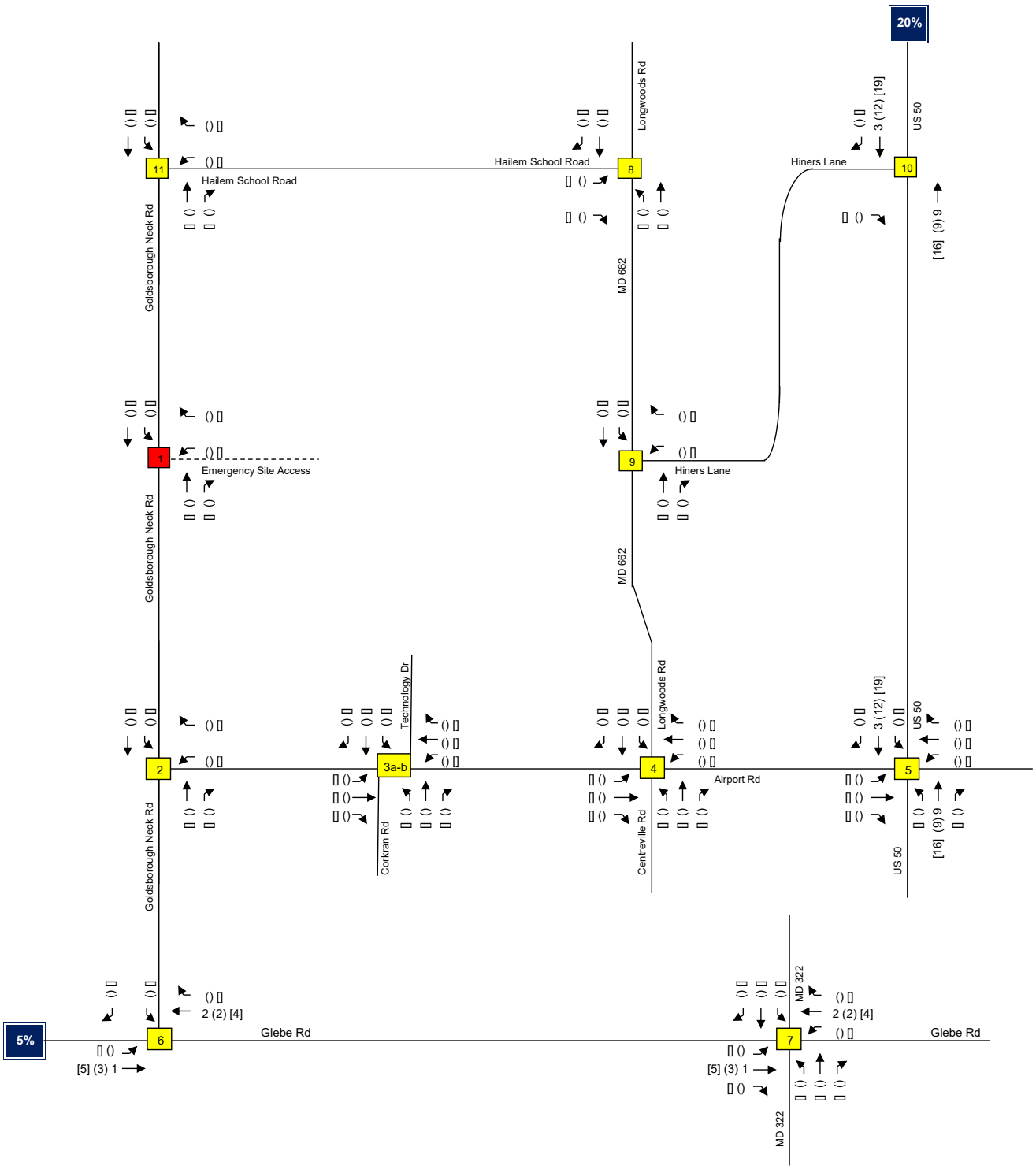

| Traffic Impact Analysis | Background Development<br>Trip Assignment - BDs 1, 4, 5, 6, 15 | **Exhibit C-3** |
|---|---|---|
| LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | |



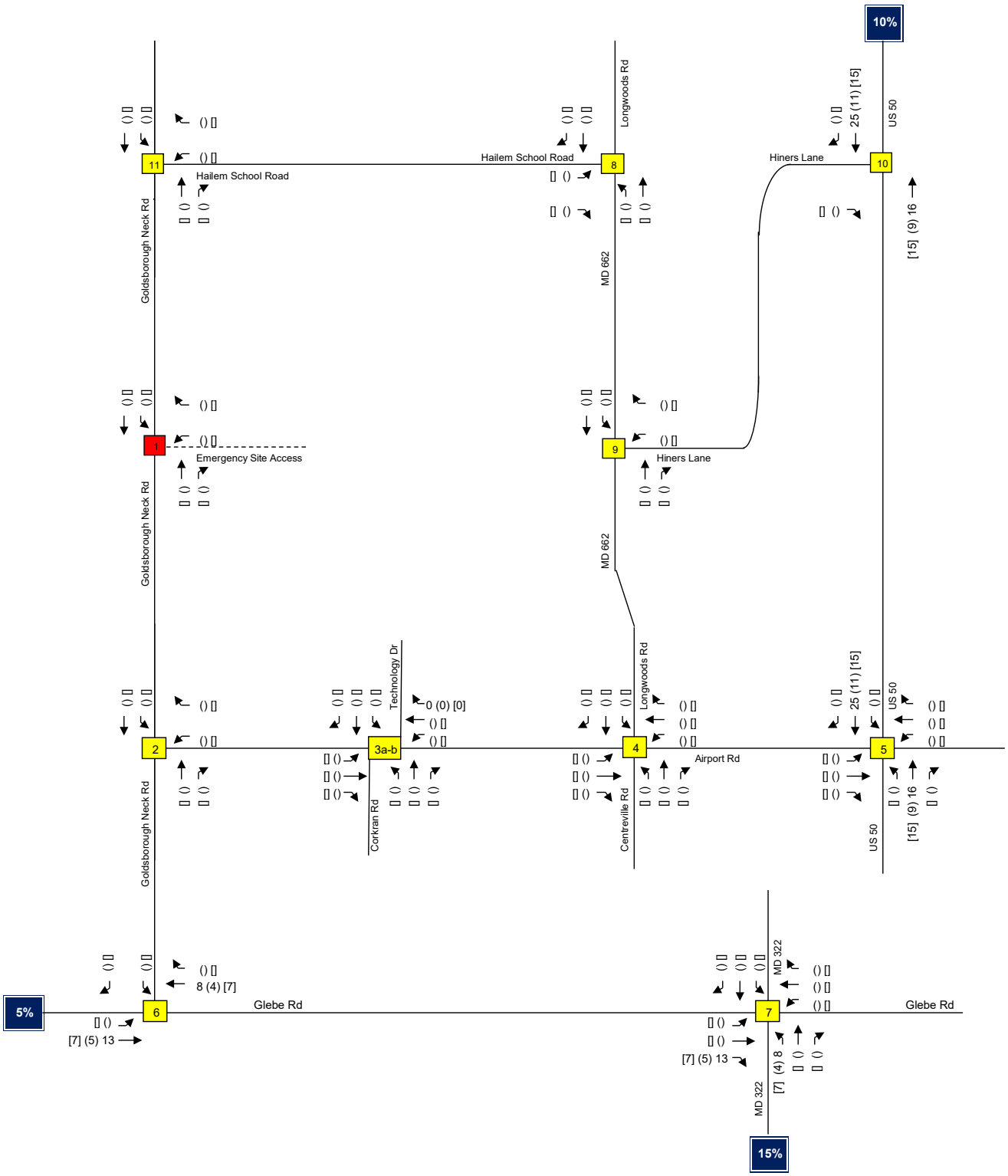

| Traffic Impact Analysis | Background Development<br>Trip Assignment - BDs 7 & 8 | **Exhibit C-4** |
|---|---|---|
| LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | |



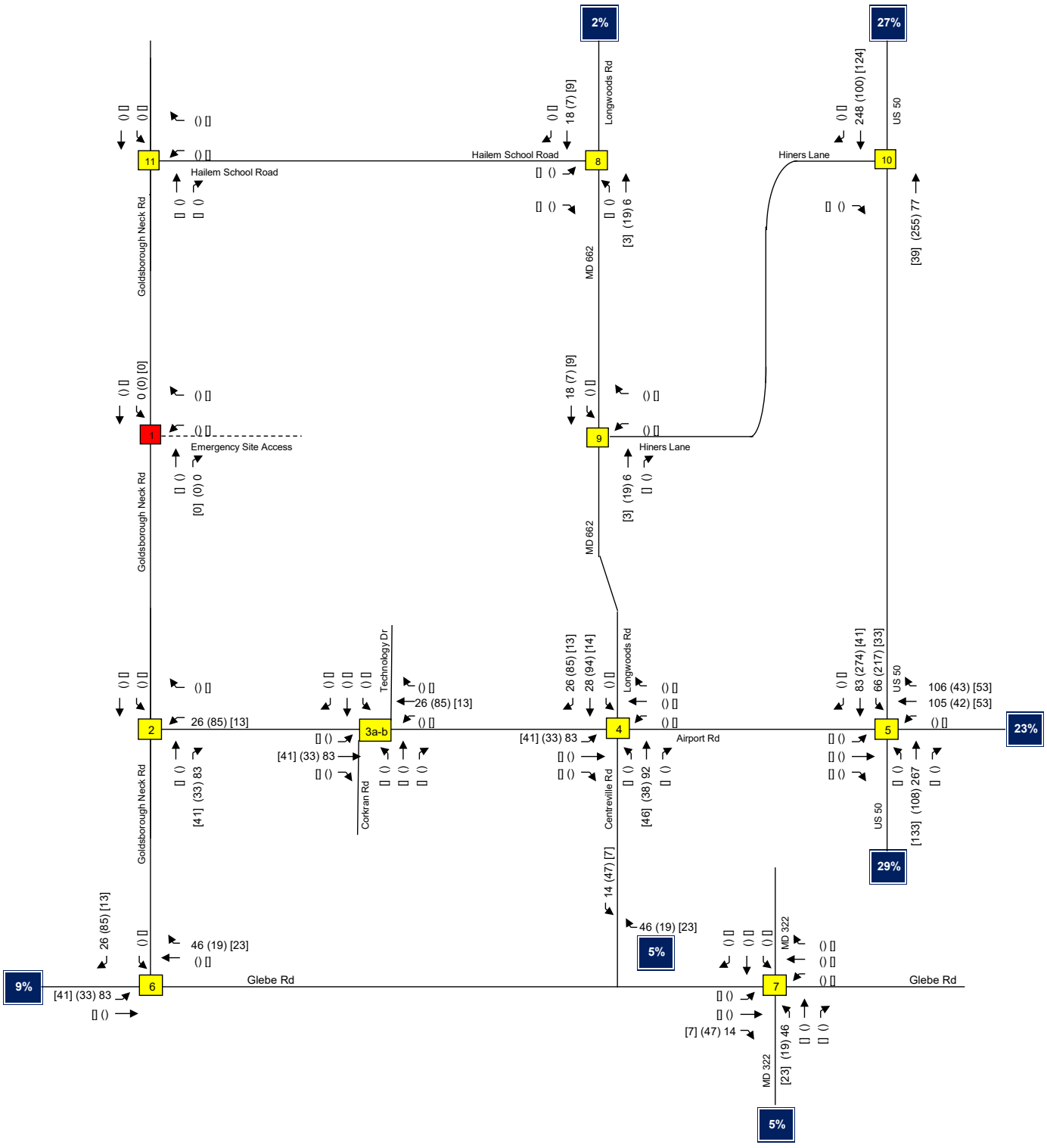

| Traffic Impact Analysis | Background Development<br>Trip Assignment - BDs 2, 12, 13 | **Exhibit C-5** |
|---|---|---|
| LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | |




| Traffic Impact Analysis | Background Development<br>Trip Assignment - BDs 14 & 16 | **Exhibit C-6** |
|---|---|---|
| LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | |




| Traffic Impact Analysis | Background Development<br>Trip Assignment - BD 11 | **Exhibit C-7** |
|---|---|---|
| LENHART TRAFFIC CONSULTING, INC.<br>645 BALTIMORE ANNAPOLIS BLVD, SUITE 214<br>SEVERNA PARK, MD 21146<br>www.lenharttraffic.com | Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | |




| Traffic Impact Analysis | Background Development Trip Assignment - BD 17 | **Exhibit C-8** |
|---|---|---|
| LENHART TRAFFIC CONSULTING, INC. 645 BALTIMORE ANNAPOLIS BLVD, SUITE 214 SEVERNA PARK, MD 21146 www.lenharttraffic.com | Key: xx = AM Peak Vol's (xx) = PM Peak Vol's [xx] = Sat Peak Vol's | |