Kent County MARYLAND

Planning Commission
Department of Planning, Housing, and Zoning

COUNTY COMMISSIONERS HEARING ROOM
400 HIGH STREET
CHESTERTOWN, MARYLAND

AGENDA

Thursday, June 6, 2024
1:30 p.m.

Members of the public are welcome to attend meetings in person or via conference call.

Public participation and audio-only call-in number:

1. Dial **1-872-239-8359**
2. Enter Conference ID: **200 996 796#**

Members of the public are asked to mute their phones/devices, until the Commission Chair opens the floor for comment.

Members of the public may also watch the live video feed and view the video after the meeting at the County's YouTube channel at https://www.youtube.com/@kentcountygovernment2757.

MINUTES
May 2, 2024

DATE FOR JULY PLANNINING COMMISSION MEETING

APPLICATIONS FOR REVIEW

22-67 Everton Industrial, Lot 1 – Major Site Plan (Preliminary)
Map 31, Parcel 6, Part 1, Lot 1 near Millington – First Election District – Employment Center (EC)

23-28 Everton Industrial, Lot 2 – Major Site Plan (Preliminary)
Map 31, Parcel 6, Part 1, Lot 2 near Millington – First Election District – Employment Center (EC)

GENERAL DISCUSSION

Map Change Request for review by Planning Commission

Final version of Official Zoning Map for recommendation

STAFF REPORTS

ADJOURN

Meetings are conducted in Open Session unless otherwise indicated. All or part of the Planning Commission meetings can be held in closed session under the authority of the MD Open Meetings Law by vote of the members. Breaks are at the call of the Chairman. Meetings are subject to audio and video recordings. All applicants will be given the time necessary to assure full public participation and a fair and complete review of all projects. Agenda items are subject to change due to cancellations.

Kent County MARYLAND

DRAFT

Planning Commission
Department of Planning, Housing, and Zoning

MINUTES

May 2, 2024
1:30 p.m.

Video recordings of the Kent County Planning Commission meeting are available online for viewing on the County's YouTube channel at https://www.youtube.com/@kentcountygovernment2757.

The Planning Commission met in regular session on Tuesday, May 2, 2024, in the County Commissioners' Hearing Room at 400 High Street, Chestertown, Maryland. Members of the public were invited to attend in person or via conference call.

The following members were in attendance: Chair Joe Hickman, Vice Chair Paul Ruge, Jim Saunders, Ray Strong, Paula Reeder, Sean Jones, and William Crowding. Planning Commission Attorney Cynthia L. McCann, Esquire, was present. Staff in attendance included William Mackey, AICP, Director; Carla Gerber, AICP, Deputy Director; Mark Carper, LEED Green Associate, Associate Planner; Rob Tracey, AICP, Associate Planner; Beth Grieb, Office Manager, and serving as Acting Clerk; and Tyler Arnold, GIS Coordinator.

Representatives for the Mason Solar project included Ted Hastings; Josh Spencer; and Tony Kupersmith, Esq. Members of the public who spoke regarding the Mason Solar project included Linda O'Connor; Richard James O'Connor; Janet Christensen-Lewis; and A. Elizabeth Watson, FAICP.

Applicants for rezoning requests included Lance Young, Esq.; Robin Brayton; Roy Hoagland;

Chair Hickman called the meeting to order at 1:30 p.m.

MINUTES

Ms. Reeder moved to approve the minutes from the April 4 and April 11 meetings, along with the closed session summary. Vice Chair Ruge seconded the motion. The minutes were approved unanimously.

APPLICATIONS FOR REVIEW

23-51 Minary's Dream Alliance Inc. – Major Site Plan (Preliminary)

The applicant withdrew this application prior to the meeting.

24-17 MDL 153 Mason Solar – Major Site Plan (Concept)

Mr. Mark Carper, Associate Planner, provided background information and staff comments related to the proposed 1 MW utility-scale solar energy system on a 335-acre farm zoned AZD.

Representatives from Pivot Energy and the project's attorney responded to questions and concerns raised by the Planning Commission and members of the public regarding screening, visual impacts, glare, electromagnetic fields, stormwater management, economic benefits, and the eligibility criteria for low to moderate income subscribers.

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Discussion of the immediately neighboring, historical, African American church led to the recommendation that the applicant utilize berms to screen the view of the proposed solar field from the historic church and cemetery.

Concept site plans receive only comments from the Planning Commission for the applicant's use in preparing for the preliminary site plan. No motion was offered.

24-18 MDL 153 Mason Solar – Special Exception

Based on the site plan discussion and after further discussion, Ms. Reeder moved to send a favorable recommendation for the special exception to the Kent County Board of Zoning Appeals with the following conditions: 1) that they provide evidence that the glare or reflection onto adjacent properties and adjacent roadways shall not interfere with traffic or create a safety hazard, and 2) they demonstrate that the proposed energy system will not interfere with the view of or from sites of significant public interest, and that the proposed development integrates into the existing landscape.

The motion was seconded by Vice Chair Ruge. The motion passed 6-1, with Chair Hickman opposed.

GENERAL DISCUSSION

Town of Betterton Annexation Request

Mr. Mackey presented the staff report related to the proposed request for annexation by the Town of Betterton.

Mr. Crowding moved to send a favorable recommendation to the Board of County Commissioners for the Town of Betterton's request to annex the American Legion property (Tax Map 4, Parcels 88 and 130), and to include a waiver of the five-year zoning designation. Ms. Reeder seconded the motion. The motion passed unanimously.

Map Change Requests for Review by Planning Commission

The Planning Commission reviewed several map change requests and made recommendations to the County Commissioners as follows:

Re #4 Harris / Chandler property (Map 12, Parcel 92), Mr. Crowding moved to send a favorable recommendation to change the zoning of the portion currently zoned Resource Conservation District to Critical Area Residential. Ms. Reeder seconded, and the motion passed unanimously.

Re #15 Lindauer property (Map 28, Parcels 31, Lot 2), Mr. Crowding moved to send a favorable recommendation to change the zoning of Lot 2 and Parcel 97 from Industrial to AZD. Mr. Vice Chair Ruge seconded, and the motion passed unanimously.

Re #33 Mills properties (Map 13, Parcels 109 and 33A), Mr. Crowding moved to send a favorable recommendation to change the zoning of Parcel 109 and Parcel 33A from AZD to Commercial. Mr. Strong seconded, and the motion passed unanimously.

Re #1 Brayton Family properties (Map 37, Parcel 76 and Parcel 97), Mr. Crowding moved to send a favorable recommendation to change the zoning from Intense Village to Commercial. Mr. Strong seconded, and the motion passed unanimously.

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RE #41 Hoagland property (Map 36, Parcel 24, Parcel 1, re applicant's request), Mr. Crowding moved to send a favorable recommendation to change the zoning from Community Residential to Village. Ms. Reeder seconded, and the motion passed unanimously.

Re Map D, the Hoagland property (Map 36, Parcel 24, a portion of Parcel 2, re staff request), Mr. Crowding moved to send a favorable recommendation to change the zoning on a portion of Parcel 2 from Community Residential to AZD. Mr. Strong seconded, and the motion passed unanimously.

Re #34 Kelly property (Map 51, Parcel 378), Mr. Crowding moved to send an unfavorable recommendation to change the zoning from Village to AZD. Vice Chair Ruge seconded, and the motion passed unanimously.

Re #35 Good House LLC properties (Map 27, Parcels 454, 470, 516, 577, and 691), Mr. Crowding moved to send an unfavorable recommendation to change the zoning from Critical Area Residential or Community Residential to Village. Vice Chair Ruge seconded, and the motion passed unanimously.

Re #36, Weinstein property (Map 7, Parcel 15B), Mr. Crowding moved to send an unfavorable recommendation regarding the requested change to the zoning district from Community Residential to Commercial. Vice Chair Ruge seconded, and the motion passed 6-0 with one abstention by Ms. Reeder.

Re #37 North property (Map 44, Parcel 110), this request was recommended to be added to the no-change list.

Re #38 Standiford / Yasinsky property (Map 45, Parcel 48, Lot 2), Ms. Reeder moved to send an unfavorable recommendation regarding the requested change from Resource Conservation District to Critical Area Residential. Mr. Crowding seconded, and the motion passed unanimously.

Re #39 Orr Property (Map 1, Parcel 302), Ms. Reeder moved to send an unfavorable recommendation regarding the requested change from Critical Area Residential to Community Residential. Mr. Strong seconded, and the motion passed unanimously.

Re #42 Kendall property (Map 48, Parcel 48), Mr. Crowding moved to send a favorable recommendation regarding the requested change from Community Residential to AZD. Mr. Strong seconded, and the motion passed unanimously.

Ms. Gerber read the consent list that includes all the applications for which no change in the zoning was requested. The consent list is attached to these minutes including an annotation that was added during the meeting.

Ms. Reeder moved to accept the list of "no change" requests as presented. Mr. Crowding seconded the motion, and it passed unanimously. The list is amended to these minutes with a notation added during the meeting.

Staff also presented a series of proposed map changes to correct zoning designations based on updated Critical Area mapping or due to property line adjustments since 2003. The Commission made favorable recommendations on Map A (Map 51, Parcel 169 Crosby area), Map B (Galena area), Map C (Betterton area), Map E (Golts area), Map F (Massey area), Map G (Chesterville Forest area), Map H (Harmony Corner / Molly's area), Map I (Kennedyville area), Map J (Still Pond area), and Map K (Coleman area).

Re Map A (Crosby area) Mr. Crowding moved to rezone to Village a portion of Map 51, Parcel 169, Lot 1 and Lot 2, to extend the Village zoning boundary from the northeast corner of Parcel 482 to the southeast corner of Parcel 202. Mr. Strong seconded, and the motion passed unanimously.

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Re Map B (Galena area), Mr. Crowding moved to rezone the properties as indicated on Map B, due to changes in the Critical Area (affecting multiple parcels including Map 7, Parcels 4 and 349; Map 15, Parcels 2, 159, and 240, *et al*). Mr. Strong seconded, and the motion passed unanimously.

Re Map C (Betterton area), Mr. Crowding moved to send a favorable recommendation to do the clean-up of the Critical Area designations of the parcels on Map C (affecting multiple parcels including Map 4, Parcels 16, 19, 88, 140*, et al*). Ms Reeder seconded, and the motion passed unanimously.

Re Map E (Golts area), Ms. Reeder moved to amend the zoning on (Map 17) Parcel 116, owned by DNR in Golts, to make the entire parcel AZD. Mr. Crowding seconded, and the motion passed unanimously.

Re Map F (Massey area), Ms. Reeder moved to make all of (Map 16) Parcel 31 Employment Center. Mr. Strong seconded, and the motion passed unanimously.

Re Map G (Chesterville Forest area), Mr. Crowding moved to accept staff's rezoning request on (Map 31) Parcel 143 to rezone all of the parcel to Community Residential. Vice Chair Ruge seconded, and the motion passed unanimously.

Re Map H (Harmony Corner / Molly's), Mr. Crowding moved to send a favorable recommendation to rezone all of Lot 2 of (Map 14) Parcel 76 to Commercial zoning. Vice Chair Ruge seconded, and the motion passed unanimously.

Re Map I (Kennedyville area), Mr. Crowding moved to accept staff's rezoning request to rezone all of Map 21, Parcel 163 to AZD. Mr. Strong seconded, and the motion passed unanimously.

Re Map J (Still Pond area), Mr. Crowding moved to accept staff's rezoning request to change the zoning on Parcel 38A to all Commercial. Mr. Jones seconded, and the motion passed unanimously.

Re Map K (Coleman area), Mr. Crowding moved to accept staff's rezoning request to change the portion of Parcel 89 that is currently zoned Village to AZD. Vice Chair Ruge seconded, and the motion passed unanimously.

Ms. Gerber presented S&L Farms, LLC. Mr. Crowding moved to send a favorable recommendation to leave the zoning as is, for the property on Map 44, Parcel 313. Vice Chair Ruge seconded, and the motion passed unanimously.

STAFF REPORTS

Mr. Mackey summarized the role of staff in preparing recommendations for the Planning Commission's review.

ADJOURN

Vice Chair Ruge made a motion to adjourn. Mr. Jones seconded. The meeting adjourned at 4:30 p.m.

/s/ Joe Hickman	*/s/ Bill Mackey*
Joe Nickman, Chair	William Mackey, AICP, Director

Please note that a small portion of this document was created by Claude 3 from Anthropic, utilizing a transcript created by Microsoft Teams. Due to many highly-detailed motions, these minutes were created mostly by a human.

MAP #	OWNNAME1	LOT	MAP	PARCEL	Current	Change	Notes
11	F & S OPERATIONS LLC	3	0037	0485	IV	IV	Owner would like the zoning to stay the same.
11	HORSEY JOAN OZMAN		0037	0180	IV	IV	Owner wanted to make sure zoning stays the same.
11	JIMSTOWN LLC		0037	0044	IV	IV	Owner wanted to make sure zoning stays the same.
11	JIMSTOWN LLC		0037	0177	IV	IV	Owner wanted to make sure zoning stays the same.
11	LANDON WALTER F & TRACYE S	1	0037	0485	IV	IV	Owner wanted to make sure zoning stays the same.
11	SMITH SCOTT O & SHARI C	2	0037	0485	IV	IV	Owner wanted to make sure zoning stays the same.
11	SMITH TODD B & SMITH DIANE H	4	0037	0485	IV	IV	Owner wanted to make sure zoning stays the same.
16	LINS THOMAS IRVIN & DONNA MARIE		0027	0019	AZD	AZD	Owners wanted to make sure their zoning stays the same.
17	MACIELAG JOHN F & PATRICIA M		0055	0088	CAR	CAR	Owner wanted to make sure their zoning stays the same.
19	MAYO MARY JANE		0016	0006	EC	EC	Owner wanted to make sure their zoning stays the same.
22	SCHWARTZ JOHN A & SCHWARTZ PAMELA M		0020	0003	AZD	AZD	
23	SISCO ELIZABETH C		0046	0038	V	V	Owner wanted to make sure their zoning stays the same.

41	HOAGLAND ROY P		0035 D	0301	CC	C	Owner wanted to make sure zoning stays the same

John North 7490 QN12

Department of Planning, Housing, and Zoning

To: Kent County Planning Commission
From: Carla Gerber, Deputy Director
Meeting: June 6, 2024
Subject: Everton Industrial – Preliminary Site Plan Review

Executive Summary

Request by Applicant
Everton Industrial is requesting preliminary site plan review for two proposed manufacturing/warehouse buildings on newly created lots near the interchange of US 301 and MD 291.

Public Process
Per Article VI, Section 5 of the Kent County *Land Use Ordinance* the Planning Commission shall review and approve site plans.

Summary of Staff Report
The parent parcel is bisected by US 301 with 114.499 acres on the west side of the highway and approximately 98 acres on the east side. Two new lots are being created from the western tract via a minor subdivision. Because some setbacks are approved as part of subdivision review for industrial subdivisions, staff is recommending that the subdivision be approved by the Planning Commission at final site plan review. The proposed manufacturing/warehouse buildings will be located on the new parcels. The lots will be purchased from Millington Crossing Associates One, LLC and developed by Everton Industrial Development. Lot 1 will be 20.543 acres and Lot 2 will be 20.665 acres. Both lots have frontage along Edge Road and Lot 1 also has frontage on Chesterville Bridge Road. Both buildings will be 256,924 square feet and will be served by public sewer and water. Parking for employees and visitors will be located in the front of the buildings, and trailer parking will be provided to the side and rear of the buildings. Each building will have 45 loading dock spaces. As suggested by Robert Baldwin, District Manager for the Kent Soil and Water Conservation District, sediment and erosion control and stormwater management will be reviewed collaboratively between the County and the District.

The applicant has sufficiently addressed all preliminary site plan standards as prescribed by the Kent County Land Use Ordinance.

Staff Recommendation

Staff recommends that the Planning Commission approve the requested setbacks and waive the requirement that “curb cuts” be at least 3,000 feet apart. Staff also recommends that the Planning Commission grant preliminary approval.

PRELIMINARY STAFF REPORT

TO: Kent County Planning Commission
SUBJECT: Everton Industrial – Preliminary Site Plan Review
DATE: May 31, 2024

DESCRIPTION OF PROPOSAL

Everton Industrial is requesting minor subdivision approval and preliminary site plan review for two proposed manufacturing/warehouse buildings on newly created lots near the interchange of US 301 and MD 291. The parent parcel is bisected by US 301 with 114.499 acres on the west side of the highway and approximately 98 acres on the east side. The western side is zoned Employment Center, Agricultural Zoning District, and Resource Conservation District; the eastern side is zoned Commercial and Resource Conservation District. Two new lots are being created from the western tract via a minor subdivision which staff is recommending be approved by the Planning Commission at final site plan review. The proposed manufacturing/ warehouse buildings will be located on the new parcels and will be within the Employment Center district. Lot 1 will be 20.543 acres and Lot 2 will be 20.665 acres. Both lots have frontage along Edge Road, and Lot 1 also has frontage on Chesterville Bridge Road. Both buildings will be 256,924 square feet and will be served by public sewer and water. Parking for employees and visitors will be located in the front of the buildings, and trailer parking will be provided to the side and rear of the buildings. Each building will have 45 loading dock spaces. The buildings will be constructed as flex space and at this time information on potential tenants is not available.

GENERAL STANDARDS

I. Permitted Uses and Height, Area, and Bulk Requirements

A. *Applicable Laws*: Article V, Sections 14.2 of the *Kent County Land Use Ordinance* establish site plan review requirements for all permitted industrial uses in the Employment Center. The use proposed by the applicant is permitted as follows:

Distribution center and warehousing provided that a single building footprint does not exceed 75,00 square feet in size. The restriction on building footprint does not apply to the Employment Center District in the Route 301 corridor. In reviewing the site plan, the *Planning Commission*, or where applicable the Planning Director, shall consider the following:

a. The impact of the proposed business or industry on existing or planned public facilities.
b. The impact of the operation of facility on the surrounding area.
c. The health, safety and welfare of employees and residents of the neighborhood.

Article V, Sections 14.5 of the *Kent County Land Use Ordinance* establishes the density, height, width, bulk, and fence requirements for the Employment Center District.

Minimum Yard	Standard	Industrial Subdivision
Front - Primary Roads	100 feet*	100 feet*
Front – Other roads	Per subdivision review	***Per subdivision review***
Side and Rear –		
Adjacent to I, ICA, and EC	15 feet	***Per subdivision review***
Adjacent to AZD and RCD	40 feet	***Per subdivision review***
Adjacent to Public Road	100 feet^	100 feet^
Height – Industrial structure in 301 Corridor	60 feet	60 feet

Maximum Building Footprint Route 301 Corridor	NA	NA

*When a side or rear lot line coincides with a side or rear lot line of a property in a non-industrial zone, the required yard shall be landscaped and screened and shall be unoccupied by buildings, structures, or parking area.

^ May be reduced or increased during site plan review.

B. *Staff and TAC Comments*: The minor subdivision is considered an Industrial Subdivision. The parcels do not front onto a primary road. For Lot 1, which is a corner lot, Chesterville Bridge Road is the technical front yard, and the applicant is requesting a 50-foot front setback. The applicant is requesting a 15-foot setback along Edge Road which is consistent with the Land Use Ordinance requirement that there shall be a front yard of at least 15 feet on the side street of a corner lot in any district. For Lot 2, the applicant is requesting a 50-foot front setback along Edge Road. For the side and rear setbacks on both lots, which abut other land zoned Employment Center, the applicant is requesting a 15-foot setback which is consistent with the Standard Subdivision requirements. In this zoning district, setbacks are applied to parking as well as buildings.

Staff is requesting that the Planning Commission approve the requested setbacks. Given the location along US 301 and existing screening, a reduction of the front setback requirement is appropriate. In addition, the applicant is proposing to locate the buildings as far back as possible on the lots, with the parking between the road and the buildings.

II. Employment Center and Industrial Performance Standards:

A. *Comprehensive Plan*: "Insure that future development, redevelopment, and infill is completed in an environmentally and context sensitive manner." (Page 31)

B. *Applicable Law*: Article V, Section 14.6 of the *Kent County Land Use Ordinance* establishes the EC performance standards. These performance standards address noise, vibration, glare, air pollution, water pollution, radioactivity, electrical interference, smoke and particulate matter, toxic matter, and odor with compliance certified in an engineer's report.

A Certified Engineer's Report is required to prove that the uses proposed will not cause violations of Federal, State, or County laws or regulations and which must describe the proposed operation, all machines, processes, products and by-products, stating the nature and expected levels of emission or discharge to land, air, water or liquid, solid, or gaseous effluent and electrical impulses, vibrations and noise under normal operations and the specifications or treatment methods and mechanisms to be used to control such emission or discharge.

C. *Staff and TAC Comments*: The applicant is requesting that the Certified Engineer's Report be a condition of obtaining building and/or use permits. The applicant is aware of the standards and understands that all tenants must comply with the performance standards and submit the report.

III. Employment Center General Standards

A. *Comprehensive Plan*: "Promote the development of County employment centers." (Page 11)

B. *Applicable Law*: Article V, Section 14.7 of the *Kent County Land Use Ordinance* establish the EC general standards as follows:
   1. As a part of the site plan review, the applicant shall submit a statement that includes an explanation of the following:
      a. The type of raw materials, waste products, and other by-products associated with the process.
      b. The identity of all chemicals and solids to be discharged into the sewage system.
      c. The type and amount of traffic expected to be generated by the operation.
      d. The proposed hours of operation.
      e. The proposed architectural design (graphic or narrative) of all structures.
   2. The Planning Commission may require additional standards and requirements to those stated in this Article as are necessary for the protection of the environment and the health and safety of the citizens of the County.
   3. The use established shall not create or be a continuation of highway "strip" development with multiple access points creating highway hazards and visual clutter in so far as practical. A highway strip is two or more access points or "curb cuts" off of an existing State or County Road within 3,000 feet of each other. Any use in an employment center district shall have access at least 3,000 feet from any highway strip, in so far as possible. The Planning Commission may waive this requirement when the Commission finds all of the following:
      a. The proposal complies with the spirit and intent of the Land Use Ordinance and the Comprehensive Plan.
      b. That the waiver will not cause a substantial detriment to adjacent or neighboring property.
      c. That the waiver will not create a safety hazard or increase traffic congestion.
      d. The waiver is the minimum necessary to relieve a practical difficulty and is not sought for reasons of convenience, profit or caprice.
   4. Central water and sewer systems may be required by the Planning Commission in an Employment Center District. If a public system is available, use of such system shall be mandatory.
   5. Signs in industrial areas shall be permitted in accordance with the regulations contained in Article VI, Section 2 of this Ordinance.
   6. In so far as possible, all uses shall be conducted within a completely enclosed structure or be completely screened. Outdoor storage of materials and unfinished products is prohibited unless otherwise approved by the Planning Commission and subject to such conditions as may be determined by the Planning Commission.

C. *Staff and TAC Comments*:
   - §14.7.1: The applicant is constructing a flex space building and no information on potential tenants has been provided. No information is known at this time concerning the types of materials and products that will be handled or hours of operation. Additional information will be required for final review. A traffic study and architectural elevations have been submitted.
   - §14.7.3: The applicant is proposing multiple "curb cuts" for each parcel in order to keep traffic separated. Lot 1 will have two "curb cuts." One on Chesterville Bridge Road and one on Edge Road. The entrance on Chesterville Bridge Road will be angled in such a way that all vehicles will be forced to turn toward US 301 when leaving. Lot 2 will have three "curb cuts" with 200-300 feet between each one. SHA is in the process of transferring the right of way for Edge Road to the County. However, SHA has reviewed the entrances and "has determined that distances between entrances are acceptable as proposed, provided the sight distance clearing

is approved and performed." The Planning Commission will need to determine if a waiver is appropriate to allow multiple "curb cuts" that are less than 3,000 feet apart.

- §14.7.4: The proposed buildings will be served by public sewer and water. The Comprehensive Water and Sewerage Plan will need to be amended and it is likely that the project will need to be phased based on the tenants. The availability of sewer allocations may limit the amount of initial development and use of the proposed structures.
- §14.7.5: The location of a monument sign for each lot has been noted on the plans. No additional information on signs has been provided.
- §14.7.6: All uses will be conducted within the proposed buildings. If outdoor storage of material or unfinished products is needed, then the Planning Commission would have to approve this change.

IV. Environmental Standards

A. *Comprehensive Plan*: "Promote the use of best management practices such as stormwater management" (Page 61)

B. *Applicable Law*: Article V, Section 14.8 of the *Kent County Land Use Ordinance* establish the EC environmental standards which include forest conservation, nontidal wetlands, stream protection corridor, stormwater management, and water quality standards.

C. *Staff and TAC Comments*:

- §14.8.B.3 and Article VI, Section 8: The applicant has submitted a Forest Stand Delineation and Forest Conservation Plan as part of the subdivision application. The applicant will be deed restricting an area of forest for the net tract area being subdivided and for the area to be cleared. The total easement area will be 8.35 acres: 6.41 acres for the subdivision to meet the 15% forest cover requirement and 1.94 acres to mitigate at a rate of 0.25 acres for each acre cleared for the 7.75 acres to be cleared. The proposed clearing does not include sensitive areas such as floodplain, nontidal wetlands, stream protection corridors, or steep slopes. The field sampling sites did not identify any trees with diameters over 30 inches measured at 4.5 feet above the ground. The proposed clearing does not include any trees, shrubs, or plants that have been identified as rare, threatened, or endangered. The Forest Stand Delineation has a letter from DNR Wildlife and Heritage Service which includes guidelines that should be incorporated into the plan to protect Forest Interior Dwelling Bird (FIDS) habitat. Most of the guidelines are not applicable because the clearing is limited to the forest edge. DNR does recommend that clearing be restricted to within 300 feet of the existing forest edge, and with one exception due to a unique property line, the proposed clearing is less than 300 feet into the forest. The deepest point of clearing is 350 feet into the forest in one small area.
- §14.8.B.4-7: The majority of the existing forest is being retained which will preserve wildlife corridors. The applicant is proposing to create a 200-foot-wide forested buffer along Mill Branch, and the non-tidal wetlands and steep slopes have been delineated and will not be disturbed. Mill Branch is not considered a natural heritage area or Area of Critical State Concern.
- §14.8.B.8-10: As suggested by Robert Baldwin, District Manager for the Kent Soil and Water Conservation District, sediment and erosion control and stormwater management will be reviewed collaboratively between the County and the District. Preliminary stormwater management plans and calculations and preliminary sediment and erosion control plans have been submitted. Water quality will comply with the stormwater management regulations.

V. Design Standards

A. *Applicable Law*: Article V, Section 14.9 of the *Kent County Land Use Ordinance* establishes the EC design standards which address site access, landscaping, screening, and lighting. Site access should ensure vehicle and pedestrian safety and alleviate congestion. The applicant should demonstrate that access to the project is adequate and the roads which will be impacted have the capacity to handle the traffic generated by the proposed project and will not endanger the safety of the general public.

Screening is required to protect adjoining properties and roadways from noise, glare, and uses which are visually incompatible with neighboring land uses. Screening is also required where exterior storage areas are visible from roadways, sidewalks, or nearby residential properties, or where the Planning Commission determines that additional screening is necessary to protect properties in the area. When required, the screen shall be capable of providing year-round screening and consist of coniferous and deciduous trees and plants, species and sizes of which will be chosen to best accomplish an adequate screen (i.e. evergreens used for visual screening, deciduous trees for seasonal screening). Screening may include masonry, or wooden fencing used with or without berms. Screening and fencing shall be maintained in at least the same quality and quantity as initially approved.

Lighting on the site should be sufficient to provide for the safety and security of the business, its employees, and its customers. Lighting should also be designed to avoid glare onto adjacent properties and adjacent roadways and not interfere with traffic or create a safety hazard

B. *Staff and TAC Comments*:

- §14.9.B.1: The proposed development does not have frontage on a primary road. Given the location of Mill Branch and other site conditions, requiring connections between the proposed lots or adjacent parcels does not contribute to traffic circulation or safety. A traffic study has been provided and approved by SHA.
- §14.9.B.2: Onsite vehicular circulation has been designed to avoid conflicts between large trucks and passenger vehicles. The loading spaces and trailer parking does not block passage of other vehicles and is separated from sidewalks and passenger vehicle parking. Handicap parking is provided. Parking is not located within the proposed front yard setback.
- §14.9.B.4 and 5: Preliminary landscaping plans have been submitted. There is already significant mature screening around much of the property. The rears of both lots back onto the 200-foot protected stream corridor. Much of the front of the properties is screened from US 301 by existing vegetation on a parcel owned by SHA. The applicant will be providing additional screening where necessary. The landscaping uses native species and has a mix of plant types to provide seasonal interest and to avoid monoculture rows of trees. The road frontages and parking lots will be landscaped and kept in a neat and attractive condition.
- §14.9.B.6: A lighting plan has been submitted. The light poles will be 30 feet tall, and the light analysis shows that the glare does not extend onto adjacent properties.

VI. Parking and Loading

A. *Applicable Law*: Article VI, Section 1 of the *Kent County Land Use Ordinance* establishes the parking, loading, and bicycle parking standards.

B. *Staff and TAC Comments*: The applicant proposes parking and loading spaces that meet or exceed the minimum requirements. Parking for industrial uses and warehousing requires 1 space per 2 employees in the principal shift and 1 loading/unloading space per 20,000 square feet which is 13 spaces per building. The building on Lot 1 is proposed to have 260 employees, which would require 130 parking spaces. The site plan shows 134 spaces, with 5 that are handicap accessible. The loading dock has 45 spaces and there are 112 trailer parking spaces. The building on Lot 2 is proposed to have 230 employees, which would require 115 spaces. The site plan shows 115 spaces, with 5 that are handicap accessible. The loading dock has 45 spaces. Bicycle parking has not been shown on the site plan. One bicycle parking space is required for every 20 required auto parking spaces. Bicycle parking may be met by providing lockers or racks inside a building, adjacent to the building, in an accessory parking lot, or underneath an awning or marquee.

SITE PLAN REVIEW

A. *Comprehensive Plan*: "Require developers to engage and inform citizens during the development review process through the incorporation of a participation program." (Page 27)

B. *Applicable Law:* Article VI, Section 5 of the *Ordinance* establishes the procedures and standards for site plan review. The Planning Commission shall prepare findings of fact concerning the reasonable fulfillment of the objectives listed below.

1. Conformance with the Comprehensive Plan and, where applicable, the Village Master Plan.
2. Conformance with the provisions of all applicable rules and regulations of county, state, and federal agencies.
3. Convenience and safety of both vehicular and pedestrian movement within the site and in relationship to adjoining ways and properties.
4. Provisions for the off-street loading and unloading of vehicles incidental to the normal operation of the establishment, adequate lighting, and internal traffic control.
5. Reasonable demands placed on public services and infrastructure.
6. Adequacy of methods for sewage and refuse disposal, and the protection from pollution of both surface waters and groundwater. This includes minimizing soil erosion both during and after construction.
7. Protection of abutting properties and County amenities from any undue disturbance caused by excessive or unreasonable noise, smoke, vapors, fumes, dust, odors, glare, stormwater runoff, etc.
8. Minimizing the area over which existing vegetation is to be removed. Where tree removal is required, special attention shall be given to planting of replacement trees.
9. The applicant's efforts to integrate the proposed development into the existing landscape through design features such as vegetative buffers, roadside plantings, and the retention of open space and agricultural land.
10. The applicant's efforts to design the development to complement and enhance the rural and historic nature of the County including incorporating into the project forms and materials that reflect the traditional construction patterns of neighboring communities.
11. The building setbacks, area, and location of parking, architectural compatibility, signage, and landscaping of the development, and how these features harmonize with the surrounding townscape and the natural landscape.

C. *Staff and TAC Comments (and Potential Findings)*:

1. The proposal is consistent with many strategies and goals of the Comprehensive Plan, such as "Promote the development of County employment centers." (Page 11).
2. To the best of our knowledge, the subdivision and site plans conform with the provisions of all applicable rules and regulations. The Planning Commission would need to grant approval of the setbacks and "curb cuts".
3. Onsite vehicular circulation appears to promote clearly defined access to loading and trailer parking areas and the employee/visitor parking areas. Multiple entrances per parcel help to achieve this separation. Sidewalks across the front of the buildings promote safe pedestrian movement.
4. Provisions have been made for off-street loading and unloading. Adequate lighting is proposed and provisions for safe internal traffic flow have been included.
5. There are no known unreasonable demands on public services or infrastructure. The Planning Commission may wish to consider requiring some type of road maintenance concession.
6. The applicant is working with the Department of Public Works. The Comprehensive Water and Sewerage Plan will need to be amended. DPW is in discussion with the developer regarding available water and sewer service capacity and the extent of off-site improvements to water, sewer, and roads that will be necessary.
7. Stormwater management must be addressed in accordance with Article VI, Section 10. The plan and affiliated sureties must be approved prior to final site plan approval.
8. Sediment control must be addressed in accordance with Article VI, Section 9. The plan and affiliated sureties must be approved prior to final site plan approval.
9. Any proposed use will be required to submit a Certified Engineer's Report and must comply with the standards for noise, smoke, vapors, fumes, dust, odors, and glare.
10. A landscape plan has been prepared which will provide screening protection to abutting properties. The landscape plan must be finalized; sureties must be submitted prior to final site plan approval.
11. No parks or other places of public gathering are in the immediate vicinity.
12. The applicant has tried to integrate the proposed development into the existing landscape through the retention of existing vegetation. Site perspectives showing the proposed development from Route 301 and building elevations have been provided.
13. The landscape plan uses native species and includes a mix of plants to provide seasonal interest.
14. At the request of staff to consider expanding aesthetic elements in the building design that would add visual interest such as incorporating colors of the adjacent forest and interesting patterns to draw the eye across the façades, the applicant added a green and blue "ribbon" across the front of the proposed buildings. The Planning Commission may wish to discuss if this feature is sufficient to address the design standards.
15. A Citizen Participation meeting was held on October 19th.

STAFF RECOMMENDATION

Staff recommends that the Planning Commission approve the requested setbacks and waive the requirement that "curb cuts" be at least 3,000 feet apart. Staff also recommends that the Planning Commission grant preliminary approval.

Davis, Moore, Shearon & Associates, LLC

May 24, 2024

Mr. William Mackey, Planning Director
Kent County Department of Planning & Zoning
400 High Street
Chestertown, Maryland 21620

RE: MINOR SUBDIVISON PLAT AND FOREST CONSERVATION PLANS ON THE LANDS OF MILLINGTON CROSSING ASSOCIATES 1, LLC
KENT COUNTY TAX MAP 31, PARCEL 6-1
DMS & ASSOCIATES JOB #2021165

Dear Mr. Mackey,

Attached please find seven copies of the plats for the above referenced project. Based on the latest TAC comments dated May 8, 2024, no revisions were needed. We have modified the configuration of the forest retention area slightly to accommodate the sight distance requested by MDOT SHA. The plats have been signed and sealed by the surveyor of record.

We ask that you review this information for placement on the June 6, 2024, Planning Commission agenda. If you have questions or need additional information, please call me at 443-262-9130.

Sincerely,

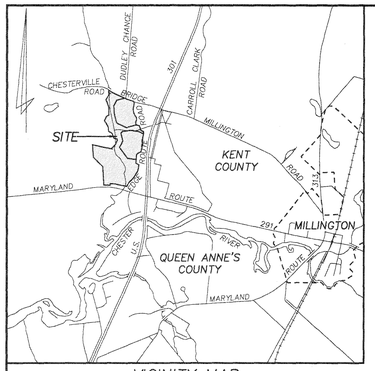
DMS & Associates, LLC

Kevin J. Shearon, P.E., LEED AP

Enclosures

pc: Mr. Russ Richardson, Millington Crossing Associates One, LLC (via email)
Mr. Kevin Vitelli, Esq. (via email)
Mr. Dan Gural, Everton Industrial (via email)

P.O. Box 80 Centreville, MD 21617
Phone: (443) 262-9130
Email: email@dmsandassociates.com



VICINITY MAP

SCALE 1" = 3000'

SITE NOTES

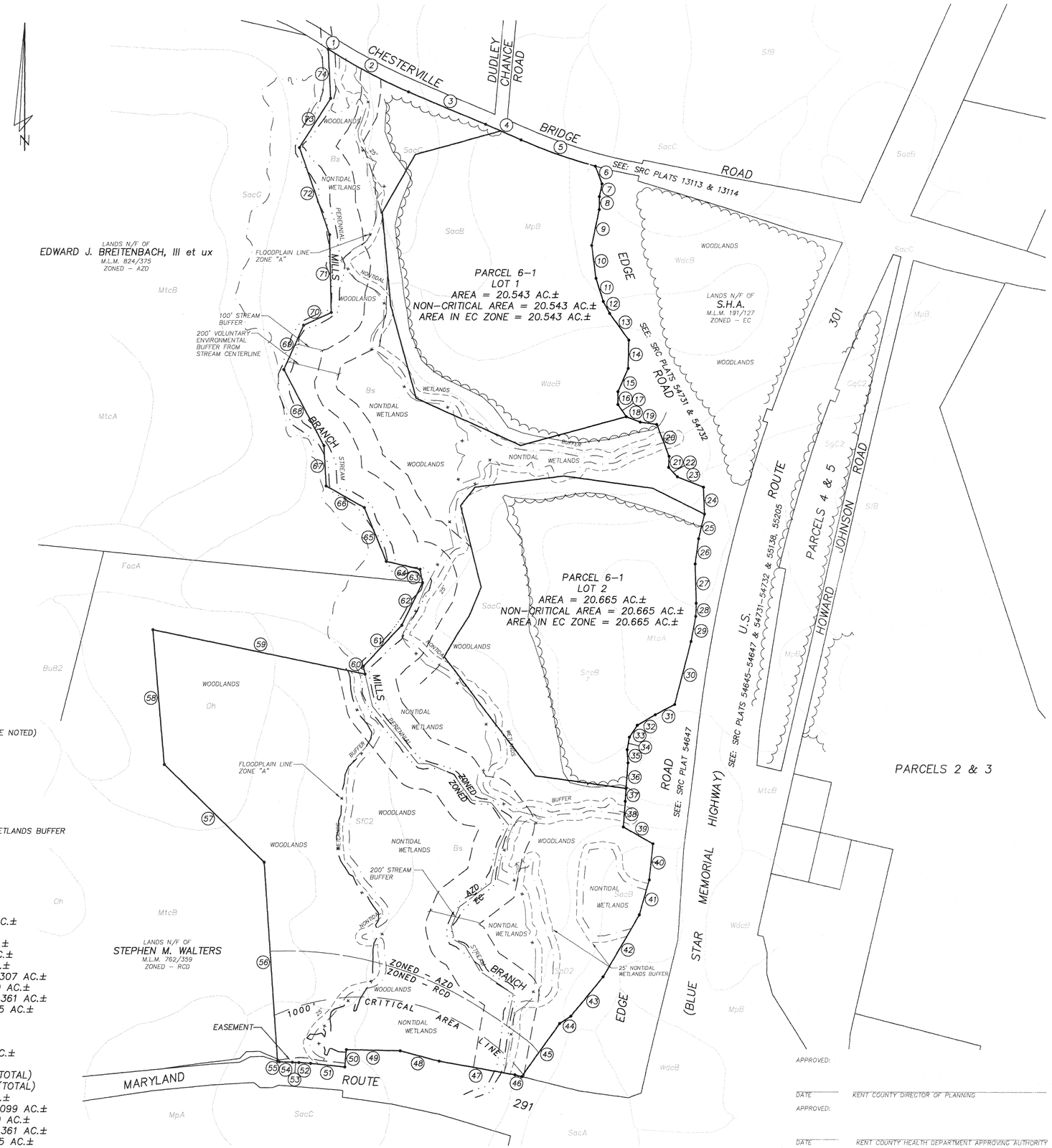
1. PROPERTY LINE INFORMATION FOR P. 6–1 SHOWN HEREON IS THE RESULT OF A FIELD RUN SURVEY BY MICHAEL A. SCOTT, INC. IN JUNE, 2017. HORIZONTAL DATUM IS NAD 83.
2. FOR DEED REFERENCE, SEE LIBER M.L.M. 892, FOLIO 458. NO PREVIOUS SUBDIVISIONS HAVE OCCURRED ON PARCEL 6.
3. CURRENT ZONING CLASSIFICATION – "RCD" (RESOURCE CONSERVATION DISTRICT, "AZD" (AGRICULTURAL ZONING DISTRICT) AND "EC" (EMPLOYMENT CENTER).
4. THE PROPERTY IS PARTIALLY LOCATED WITHIN THE CHESAPEAKE BAY CRITICAL AREA DESIGNATION – RCA (RESOURCE CONSERVATION AREA).
5. SITE IS PARTIALLY LOCATED WITHIN 100 YEAR FLOODPLAIN AS SCALED FROM FLOOD INSURANCE RATE MAP COMMUNITY PANEL No. 24029C213D (ZONE "A"), DATED JUNE 9, 2014.
6. SOILS SHOWN HEREON ARE SCALED FROM MAPS LOCATED AT THE FOLLOWING WEBSITE: http://websoilsurvey.nrcs.usda.gov FOR KENT COUNTY. HYDRIC SOILS ONSITE ARE – Bs & Oh.
7. THE PERENNIAL STREAM SHOWN HEREON IS SCALED FROM MARYLAND ENVIRONMENTAL RESOURCES AND LAND INFORMATION NETWORK WEBSITE http://gisapps.dnr.state.md.us.Merlin/index.html.
8. THE NONTIDAL WETLANDS SHOWN HEREON ARE TAKEN FROM A REPORT PREPARED BY DAVIS & ASSOCIATES, ENVIRONMENTAL CONSULTING, LLC, DATE JUNE 17, 2022 AND OTHER MAPPED WETLANDS. DELINEATION SHOWN HEREON HAS BEEN SCALED FROM THE REPORT AND HAS NOT BEEN FIELD VERIFIED.
9. STEEP SLOPES SHOWN HEREON ARE TAKEN FROM AERIAL TOPOGRAPHY FLOWN IN THE FALL OF 2013. VERTICAL DATUM IS NAVD 88.
10. WOODLANDS WITHIN THE DEVELOPMENT AREA ARE THE RESULT OF A FIELD RUN SURVEY BY MICHAEL A. SCOTT, INC. IN FEBRUARY, 2023. WOODLANDS OUTSIDE THE DEVELOPMENT AREA ARE SCALED FROM ORTHO PHOTOS FLOWN IN THE FALL OF 2019 AND VERIFIED BY A SITE VISIT.
11. THE PRESENCE OF ANY OTHER NATURAL RESOURCES (ie... EROSION HAZARD AREAS, etc...) DO NOT EXIST ON THE SITE AS VERIFIED BY A SITE VISIT IN DECEMBER, 2018.
12. THE MARYLAND DEPARTMENT OF NATURAL RESOURCES WILDLIFE AND HERITAGE SERVICE CONDUCTED AN ENVIRONMENTAL REVIEW OF THE SITE AND DETERMINED THAT THERE ARE NO OFFICIAL STATE OR FEDERAL RECORDS FOR LISTED PLANT OR ANIMAL SPECIES ON THE SITE. THE WILDLIFE AND HERITAGE SERVICE NOTED IN ITS RESPONSE LETTER, DATED JULY 20, 2022 THAT THE NO FORESTED AREA ON THE PROPERTY CONTAINS HABITAT FOR FOREST INTERIOR DWELLING BIRDS (FIDS).
13. CONTOURS SHOWN HEREON ARE TAKEN FROM AERIAL TOPOGRAPHY FLOWN IN THE FALL OF 2013. VERTICAL DATUM IS NAVD 88.
14. NEW PUBLIC SEWER WILL BE UTILIZED FOR SEWAGE DISPOSAL. NEW PUBLIC WATER WILL BE UTILIZED FOR POTABLE WATER SUPPLY AND FIRE SUPPRESSION.
15. SITE REQUIREMENTS (INDUSTRIAL SUBDIVISION):
    MINIMUM LOT SIZE = N/A
    FRONT BUILDING RESTRICTION LINE
    – 50' REQUESTED (NOT LOCATED ON "PRIMARY ROADS")
    SIDE BUILDING RESTRICTION LINE
    – 15' REQUESTED (PER "STANDARD" REQUIREMENTS)
    – 50' REQUESTED (ALONG "PUBLIC ROADS")
    REAR BUILDING RESTRICTION LINE
    – 15' REQUESTED (PER "STANDARD" REQUIREMENTS)
    BUILDING HEIGHT = 60'
    SECURITY FENCE HEIGHT = 8'
    MAXIMUM BUILDING SIZE = N/A

PERIMETER BOUNDARY COURSES AND DISTANCES

LINE	BEARING	DISTANCE
1	S 57°41'34" E	1.51'
2	S 62°21'18" E	352.90'
	R = 2182.12'	353.28'
3	S 66°59'35" E	326.95'
4	S 66°21'21" E	150.72'
5	S 70°39'12" E	307.67'
	R = 2052.82'	307.96'
6	S 20°30'34" E	73.87'
7	S 11°54'11" W	50.00'
8	S 00°35'35" W	50.99'
9	S 11°42'18" W	144.01'
10	S 07°20'51" E	129.32'
11	S 17°37'45" E	94.97'
12	S 28°15'11" E	51.90'
13	S 35°41'34" E	128.29'
14	S 01°15'22" W	111.22'
15	S 23°11'27" W	99.87'
16	S 00°07'11" W	50.77'
17	S 33°58'49" E	58.03'
18	S 68°40'47" E	58.60'
19	S 81°58'30" E	65.30'
20	S 20°54'55" E	133.03'
21	S 01°54'51" W	43.01'
22	S 42°19'28" E	50.50'
23	S 68°28'35" E	109.20'
24	S 02°21'44" E	105.02'
25	S 13°28'01" W	98.49'
26	S 07°48'59" W	100.00'
27	S 01°38'45" E	152.07'
28	S 02°06'21" W	50.25'
29	S 10°40'44" W	100.13'
30	S 14°39'33" W	251.79'
31	S 62°16'44" W	86.02'
32	S 59°22'45" W	80.43'
33	S 34°22'53" W	55.90'
34	S 10°06'25" W	50.04'
35	S 03°29'37" E	50.99'
36	S 04°22'58" W	100.18'
37	S 03°14'33" W	50.16'
38	S 04°22'58" W	100.18'
39	S 60°13'23" E	133.70'
40	S 05°56'11" W	142.56'
41	S 15°54'12" W	140.25'
42	S 30°18'58" W	280.31'
43	S 39°20'21" W	199.09'
44	S 56°03'57" W	52.20'
45	S 35°48'22" W	253.75'
46	N 76°14'08" W	27.73'
47	N 79°51'28" W	299.63'
48	N 75°01'11" W	157.13'
49	N 88°44'55" W	210.47'
50	S 04°59'46" W	68.07'
51	N 84°00'32" W	134.29'
52	N 86°13'17" W	45.78'
53	N 87°05'47" W	25.44'
54	N 88°02'02" W	50.87'
55	N 71°20'33" W	7.19'
56	N 03°51'09" W	778.07'
57	N 45°37'09" W	545.42'
58	N 04°49'35" W	525.33'
59	S 78°14'39" E	845.55'
60	N 11°59'39" W	30.93'
61	N 43°08'31" E	218.92'
62	N 26°05'41" E	183.60'
63	N 10°37'15" W	53.45'
64	N 76°44'35" W	134.76'
65	N 22°27'55" W	225.56'
66	N 60°27'05" W	171.11'
67	N 03°08'55" W	158.05'
68	N 27°39'55" W	336.87'
69	N 24°01'05" E	189.38'
70	N 65°08'05" E	118.58'
71	N 01°18'25" W	305.01'
72	N 19°07'05" W	359.26'
73	N 32°10'35" E	228.01'
74	N 02°50'27" W	190.14'

LEGEND

- DEED POINT (UNLESS OTHERWISE NOTED)
- AZD / EC — ZONING LINE
- EDGE OF EXISTING WOODSLINE
- FLOOD PLAIN LINE
- PERENNIAL STREAM
- NONTIDAL WETLAND MARGIN
- 25' BUFFER FROM NONTIDAL WETLANDS BUFFER
- MpB / WdcB — SOILS LINE AND TYPE



OWNER:

MILLINGTON CROSSING ASSOCIATES 1, LLC
c/o RUSS RICHARDSON
P.O. BOX 546
CHESTER HEIGHTS, PA 19017
PHONE No. 1–410–275–2714

DEVELOPER/ CONTRACT PURCHASER

EVERTON INDUSTRIAL
c/o DAN GURAL
266 ATSION ROAD
MEDFORD, NEW JERSEY 08055
PHONE No. 1–609–929–6025

SURVEYOR:

MICHAEL A.SCOTT, INC.
c/o MIKE SCOTT
400 SOUTH CROSS STREET
CHESTERTOWN, MARYLAND 21620
PHONE No. 1–410–778–2310

ENGINEER:

DMS & ASSOCIATES, LLC
c/o KEVIN J. SHEARON, P.E. LEED AP
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE No. 1–443–262–9130

GRAPHIC SCALE

200 0 100 200 400

1 inch = 200 ft.

EXISTING PARCEL 6–1

AREA = 114.499 AC.±
NON–CRITICAL AREA = 110.454 AC.±
CRITICAL AREA = 4.045 AC.±
AREA IN EC ZONE = 81.307 AC.±
AREA IN AZD ZONE = 25.787 AC.±
AREA IN RCD ZONE = 7.406 AC.±
NON–CRITICAL AREA IN EC ZONE = 81.307 AC.±
CRITICAL AREA IN EC ZONE = 0.000 AC.±
NON–CRITICAL AREA IN RCD ZONE = 3.361 AC.±
CRITICAL AREA IN RCD ZONE = 4.045 AC.±

REMAINING PARCEL 6–1

AREA = 73.291 AC.±
NON–CRITICAL AREA = 69.246 AC.±
CRITICAL AREA = 4.045 AC.±
AREA IN EC ZONE = 40.099 AC.± (TOTAL)
AREA IN AZD ZONE = 25.787 AC.± (TOTAL)
AREA IN RCD ZONE = 7.406 AC.±
NON–CRITICAL AREA IN EC ZONE = 40.099 AC.±
CRITICAL AREA IN EC ZONE = 0.000 AC.±
NON–CRITICAL AREA IN RCD ZONE = 3.361 AC.±
CRITICAL AREA IN RCD ZONE = 4.045 AC.±

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DAVIS, MOORE, SHEARON & ASSOCIATES, L.L.C.
P.O. BOX 80
CENTREVILLE, MARYLAND 21617

MICHAEL A. SCOTT INC.
400 S. CROSS STREET CHESTERTOWN, MD 21620 (410)778-2310

DATE	REVISION
10-14-23	PER TAC COMMENTS
10-9-23	PER TAC COMMENTS

MINOR SUBDIVISION PLAT
ON THE LANDS OF
MILLINGTON CROSSING ASSOCIATES 1, LLC
NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6–1
FIRST ELECTION DISTRICT, KENT COUNTY, MARYLAND
PREPARED FOR : EVERTON INDUSTRIAL

DATE	SCALE
MARCH '23	1" = 200'
JOB No.	DRAWN BY
2021165	J. MOORE
FOLDER Ref.	DESIGNED BY
31–2021165	

SHEET No. – 1 OF 5

CADD FILE – 21165–1

PERIMETER BOUNDARY COURSES AND DISTANCES

LINE	BEARING	DISTANCE
1	S 20°30'34" E	73.87'
2	S 11°54'11" W	50.00'
3	S 00°35'35" W	50.99'
4	S 11°42'18" W	144.01'
5	S 07°20'51" E	129.32'
6	S 17°37'45" E	94.97'
7	S 28°15'11" E	51.90'
8	S 35°41'34" E	128.29'
9	S 01°15'22" W	111.22'
10	S 23°11'27" W	99.87'
11	S 00°07'11" W	50.77'
12	S 33°58'49" E	58.03'
13	S 74°40'43" W	428.38'
14	N 65°19'17" W	447.97'
15	N 15°19'17" W	376.34'
16	N 05°39'55" W	365.29'
17	N 29°40'43" E	259.45'
18	N 74°40'43" E	345.59'
19	S 66°21'21" E	86.65'
20	S 70°39'12" E	307.67'
	R = 2052.82'	L = 307.96'

LEGEND

- DEED POINT (UNLESS OTHERWISE NOTED)
- EDGE OF EXISTING/PROPOSED WOODSLINE
- EDGE OF EXISTING WOODSLINE TO BE REMOVED
- FLOOD PLAIN LINE
- PERENNIAL STREAM
- NONTIDAL WETLAND MARGIN
- 25' BUFFER FROM NONTIDAL WETLANDS BUFFER
- EXISTING CONTOUR AND ELEVATION

GRAPHIC SCALE

100 0 50 100 200

1 inch = 100 ft.

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DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
P.O. BOX 80
CENTREVILLE, MARYLAND 21617

MICHAEL A. SCOTT INC.
400 S. CROSS STREET CHESTERTOWN, MD 21620 (410)778-2310

REVISION	DATE
PER TAC COMMENTS	10-18-22
PER TAC COMMENTS	10-9-23
PER TAC COMMENTS	5-24-24

MINOR SUBDIVISION PLAT (LOT 1)
ON THE LANDS OF
MILLINGTON CROSSING ASSOCIATES 1, LLC
NEAR THE TOWN OF MILLINGTON
TAX MAP - 31, GRID - 16, PARCEL - 6-1
FIRST ELECTION DISTRICT, KENT COUNTY, MARYLAND
PREPARED FOR : EVERTON INDUSTRIAL

DATE AUGUST '22
SCALE 1" = 100'
JOB No. 2021165
DRAWN BY J. MOORE
FOLDER Ref. 31-2021165
DESIGNED BY

SHEET No. - 2 OF 5

CADD FILE - 21165-2

PERIMETER BOUNDARY COURSES AND DISTANCES

LINE	BEARING	DISTANCE
1	S 13°28'01" W	98.49'
2	S 07°48'59" W	100.00'
3	S 01°38'45" E	152.07'
4	S 02°06'21" W	50.25'
5	S 10°40'44" W	100.13'
6	S 14°39'33" W	251.79'
7	S 62°16'44" W	86.02'
8	S 59°22'45" W	80.43'
9	S 34°22'53" W	55.90'
10	S 10°06'25" W	50.04'
11	S 03°29'37" E	50.99'
12	S 04°22'58" W	100.18'
13	N 82°09'25" W	357.39'
14	N 37°59'44" W	105.56'
15	N 37°21'28" W	477.89'
16	N 30°27'05" E	109.13'
17	N 32°52'28" E	74.30'
18	N 23°16'25" E	122.21'
19	N 14°12'41" W	328.24'
20	N 37°50'35" E	91.41'
21	N 82°50'35" E	350.00'
22	S 82°09'25" E	350.00'
23	S 63°33'00" E	225.77'

RESULTING
PARCEL 6-1, LOT 1
AREA = 20.543 AC.±

RESULTING
PARCEL 6-1, LOT 2
AREA = 20.665 AC.±
NON-CRITICAL AREA = 20.665 AC.±
AREA IN EC ZONE = 20.665 AC.±

LANDS N/F OF
EDWARD J. BREITENBACH, III et ux
M.L.M. 824/375
ZONED – AZD

LANDS N/F OF
STEPHEN M. WALTERS
M.L.M. 762/359
ZONED – RCD

LANDS N/F OF
S.H.A.
M.L.M. 191/127
ZONED – EC

PROTECTED FOREST RETENTION AREA #1 (DEED RESTRICTED)

PROTECTED FOREST RETENTION AREA #2 (DEED RESTRICTED)

PROTECTED FOREST RETENTION AREA #3 (DEED RESTRICTED)

LIMITS OF WOODLAND CLEARING

LIMITS OF WOODLAND CLEARING

LIMITS OF WOODLAND CLEARING

NONTIDAL WETLANDS

WOODLANDS

BUFFER

25'

100'

PERENNIAL STREAM

MILLS BRANCH

STREAM

FLOODPLAIN LINE ZONE "A"

MILLS BRANCH ROAD

SEE: SRC PLATS 54731 & 54732

SEE: SRC PLAT 54647

SEE: SRC PLATS 54645-54647 & 54731-54732 & 55138, 55205

U.S. ROUTE 301

EDGE ROAD

HOWARD JOHNSON ROAD

LEGEND

- DEED POINT (UNLESS OTHERWISE NOTED)
- EDGE OF EXISTING/PROPOSED WOODSLINE
- EDGE OF EXISTING WOODSLINE TO BE REMOVED
- FLOOD PLAIN LINE
- PERENNIAL STREAM
- NONTIDAL WETLAND MARGIN
- 25' BUFFER FROM NONTIDAL WETLANDS BUFFER
- EXISTING CONTOUR AND ELEVATION

GRAPHIC SCALE
100 0 50 100 200
1 inch = 100 ft.

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MICHAEL A. SCOTT INC.
400 S. CROSS STREET CHESTERTOWN, MD 21620 (410)778-2310

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
P.O. BOX 80
CENTREVILLE, MARYLAND 21617

REVISION	DATE
PER TAC COMMENTS	10-18-22
PER TAC COMMENTS	10-3-23
PER TAC COMMENTS	5-24-24

MINOR SUBDIVISION PLAT (LOT 2)
ON THE LANDS OF
MILLINGTON CROSSING ASSOCIATES 1, LLC
NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1
FIRST ELECTION DISTRICT, KENT COUNTY, MARYLAND
PREPARED FOR : EVERTON INDUSTRIAL

DATE	SCALE
MARCH '23	1" = 100'
JOB No.	DRAWN BY
2021165	J. MOORE
FOLDER Ref.	DESIGNED BY
31-2021165	

SHEET No. – 3 OF 5

CADD FILE – 21165-3

FOREST CONSERVATION WORKSHEET – PARCEL 6-1 (EC ZONE)

NET TRACT AREA

TOTAL TRACT AREA	= 114.50
DEDUCTIONS (CRITICAL AREA, AZD ZONE & LAND USE UNCHANGED)	= 60.95
NET TRACT AREA	= 53.55

LAND USE CATEGORY

ARA	MDR	IDA	HDR	MPD	CIA
0	0	0	0	0	1

AFFORESTATION THRESHOLD (Net Tract Area X 15%)	= 8.03
CONSERVATION THRESHOLD (Net Tract Area X 15%)	= 8.03

EXISTING FOREST COVER

EXISTING FOREST COVER WITHIN THE NET TRACT AREA	= 47.11
AREA OF FOREST ABOVE CONSERVATION THRESHOLD	= 39.08

BREAK EVEN POINT

BREAK EVEN POINT	= 15.85
FOREST CLEARING PERMITTED WITHOUT MITIGATION	= 31.26

PROPOSED FOREST CLEARING

TOTAL AREA OF FOREST TO BE CLEARED	= 7.75
TOTAL AREA OF FOREST TO BE RETAINED	= 39.36

PLANTING REQUIREMENTS

REFORESTATION FOR CLEARING ABOVE THE CONSERVATION THRESHOLD	= 0.00
REFORESTATION FOR CLEARING BELOW THE CONSERVATION THRESHOLD	= 0.00
CREDIT FOR RETENTION ABOVE THE CONSERVATION THRESHOLD	= 0.00
TOTAL REFORESTATION REQUIRED	= 0.00
TOTAL AFFORESTATION REQUIRED	= 0.00
TOTAL PLANTING REQUIRED	= 0.00

LEGEND

- BOUNDARY OF TOTAL TRACT
- ZONING LINE
- PERENNIAL STREAM
- EXISTING FOREST MARGIN
- FOREST TO BE CLEARED
- DEED RESTRICTED PROTECTED FOREST RETENTION AREA
- PROTECTED FOREST SIGNAGE LOCATION
- PROTECTED FOREST FENCING LOCATION
- FLOOD PLAIN LINE
- NONTIDAL WETLAND MARGIN
- 25' BUFFER FROM NONTIDAL WETLAND MARGIN
- TOPOGRAPHY CONTOUR AND ELEVATION
- PRIORITY RETENTION AREA

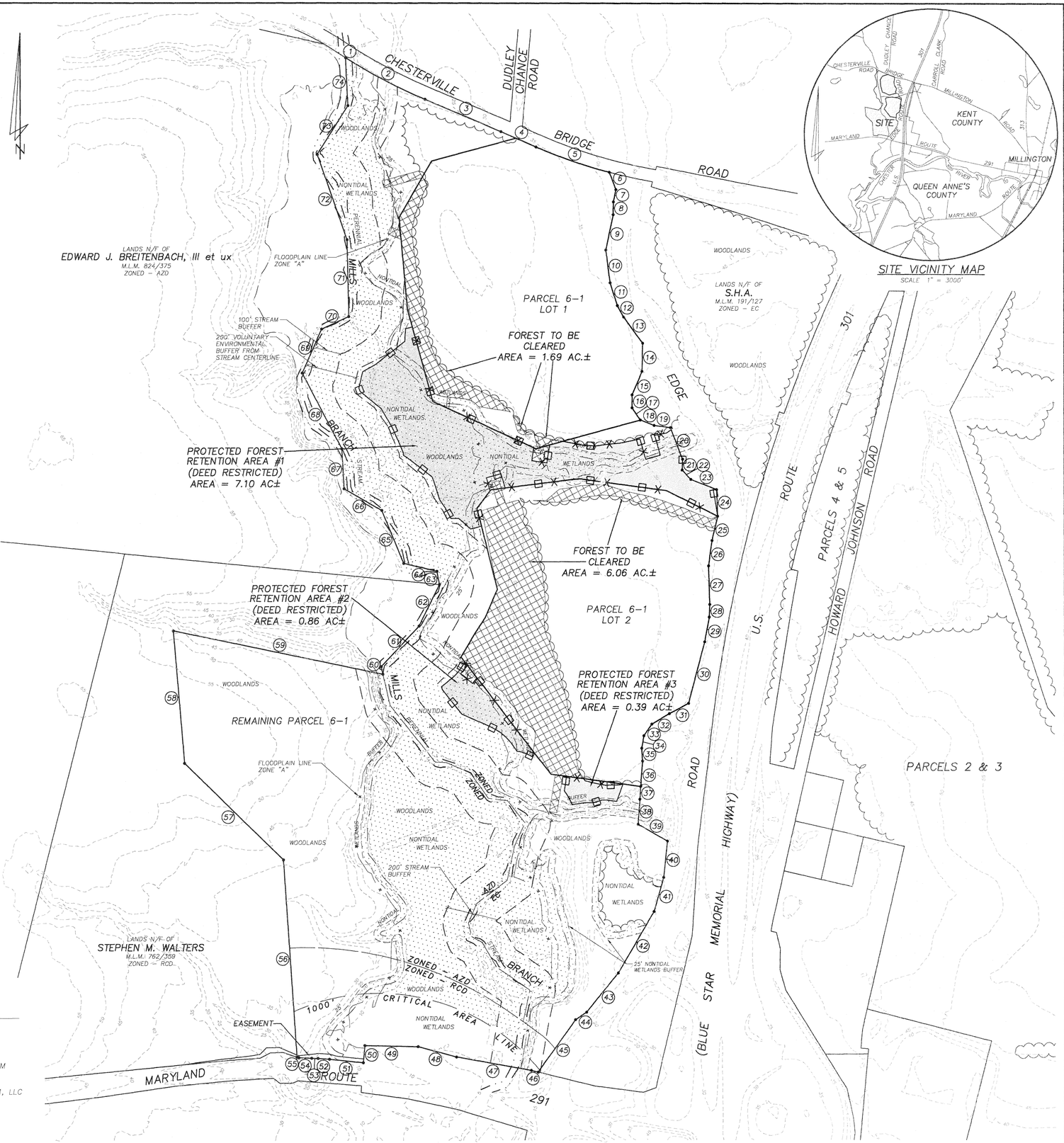
FOREST REQUIREMENTS AND CONSERVATION PROVIDED

PROPERTY ZONED – EMPLOYMENTS CENTER (EC)		
PROPERTY CONSERVATION THRESHOLDS: CONSERVATION	=	15%
AFFORESTATION	=	15%
TOTAL TRACT ACRES	114.50	AC.
CRITICAL AREA, AZD ZONE & RCD ZONE		
LAND USE UNCHANGED	60.95	AC.
NET TRACT	53.55	AC.
EXISTING FOREST	47.11	AC.
FOREST CONSERVATION REQUIRED	8.03	AC.
FOREST TO BE DEVELOPED AND/OR CLEARED	7.75	AC.
FOREST CONSERVATION PROVIDED	39.36	AC.
RETAINED FOREST	39.36 AC.	
RETAINED FOREST TO BE DEED RESTRICTED	8.35 AC.	

*** LIMITS OF DISTURBANCE = 42.70 AC. x 15% = 6.41 AC. ***
*** FOREST CLEARING = 7.75 AC. x .25 = 1.94 AC. ***

PERIMETER BOUNDARY COURSES AND DISTANCES

LINE	BEARING	DISTANCE
1	S 57°41'34" E	1.51'
2	S 62°21'18" E	352.90'
	R = 2182.12'	353.28'
3	S 66°59'35" E	326.95'
4	S 66°21'21" E	150.72'
5	S 70°39'12" E	307.67'
	R = 2052.82'	307.96'
6	S 20°30'34" E	73.87'
7	S 11°54'11" W	50.00'
8	S 00°35'35" W	50.99'
9	S 11°42'19" W	144.01'
10	S 07°20'51" E	129.32'
11	S 17°37'45" E	94.97'
12	S 28°15'11" E	51.90'
13	S 35°41'34" E	128.29'
14	S 01°15'22" W	111.22'
15	S 23°11'27" W	99.87'
16	S 00°07'11" W	50.77'
17	S 33°58'49" E	58.03'
18	S 68°40'47" E	58.60'
19	S 81°58'30" E	65.30'
20	S 20°54'55" E	133.03'
21	S 01°54'51" W	43.01'
22	S 42°19'28" E	50.50'
23	S 68°28'35" E	109.20'
24	S 02°21'44" E	105.02'
25	S 13°28'01" W	98.49'
26	S 07°48'59" W	100.00'
27	S 01°38'45" E	152.07'
28	S 02°06'21" W	50.25'
29	S 10°40'44" W	100.13'
30	S 14°39'33" W	251.79'
31	S 62°16'44" W	86.02'
32	S 59°22'45" W	80.43'
33	S 34°22'53" W	55.90'
34	S 10°06'25" W	50.04'
35	S 03°29'37" E	50.99'
36	S 04°22'58" W	100.18'
37	S 03°14'33" W	50.16'
38	S 04°22'58" W	100.18'
39	S 60°13'23" E	133.70'
40	S 05°56'11" W	142.56'
41	S 15°54'12" W	140.25'
42	S 30°18'58" W	280.31'
43	S 39°20'21" W	199.09'
44	S 56°03'57" W	52.20'
45	S 35°48'22" W	253.75'
46	N 76°14'08" W	27.73'
47	N 79°51'28" W	299.63'
48	N 75°01'11" W	157.13'
49	N 88°44'55" W	210.47'
50	S 04°59'46" W	68.07'
51	N 84°00'32" W	134.29'
52	N 86°13'17" W	45.78'
53	N 87°05'47" W	25.44'
54	N 88°02'02" W	50.87'
55	N 71°20'33" W	7.19'
56	N 03°51'09" W	778.07'
57	N 45°37'09" W	545.42'
58	N 04°49'35" W	525.33'
59	S 78°14'39" E	845.55'
60	N 11°59'39" W	30.93'
61	N 43°08'31" E	218.92'
62	N 26°05'41" E	183.60'
63	N 10°37'15" W	53.45'
64	N 76°44'35" W	134.76'
65	N 22°27'55" W	225.56'
66	N 60°27'05" W	171.11'
67	N 03°08'55" W	158.05'
68	N 27°39'55" W	336.87'
69	N 24°01'05" E	189.38'
70	N 65°08'05" E	118.58'
71	N 01°18'25" W	305.01'
72	N 19°07'05" W	359.26'
73	N 32°10'35" E	228.01'
74	N 02°50'27" W	190.14'



SITE VICINITY MAP
SCALE 1" = 3000'

OWNER:
MILLINGTON CROSSING ASSOCIATES 1, LLC
c/o RUSS RICHARDSON
P.O. BOX 546
CHESTER HEIGHTS, PA 19017
PHONE No. 1-410-275-2714

DEVELOPER/ CONTRACT PURCHASER
EVERTON INDUSTRIAL
c/o DAN GURAL
266 ATSION ROAD
MEDFORD, NEW JERSEY 08055
PHONE No. 1-609-929-6025

SURVEYOR:
MICHAEL A.SCOTT, INC.
c/o MIKE SCOTT
400 SOUTH CROSS STREET
CHESTERTOWN, MARYLAND 21620
PHONE No. 1-410-778-2310

ENGINEER:
DMS & ASSOCIATES, LLC
c/o KEVIN J. SHEARON, P.E. LEED AP
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE No. 1-443-262-9130

THIS FOREST CONSERVATION PLAN IS PREPARED BY DAVIS & ASSOCIATES ENVIRONMENTAL CONSULTING, LLC WHO MEETS THE FORESTRY REQUIREMENTS OF MARYLAND C.O.M.A.R. 08.19.01.06 AND ARE APPROVED BY THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, FOREST CONSERVATION PROGRAM AS PROFESSIONALS QUALIFIED TO CONDUCT FCP.

QUALIFIED PROFESSIONAL: DATE
DAVIS & ASSOCIATES ENVIRONMENTAL CONSULTING, LLC
P.O. BOX 733
CHESTERTOWN, MARYLAND 21620

GRAPHIC SCALE
200 0 100 200 400
1 inch = 200 ft.

APPROVED
FOREST CONSERVATION PLAN
(AUTHORIZATION)
DATE
FOREST CONSERVATION PROGRAM
LANDS OF
MILLINGTON CROSSING ASSOCIATES 1, LLC
KENT COUNTY, MARYLAND
TAX MAP 31, PARCEL 6-1
KENT COUNTY, MARYLAND

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DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
P.O. BOX 80
CENTREVILLE, MARYLAND 21617

DAVIS & ASSOCIATES ENVIRONMENTAL CONSULTING, LLC
P.O. BOX 733
Chestertown, Maryland 21620
Phone No. 410-507-9793

REVISION	DATE
PER TAC COMMENTS	10-18-22
PER TAC COMMENTS	10-9-23

FOREST CONSERVATION PLAT (FCP #023-03-)
ON THE LANDS OF
MILLINGTON CROSSING ASSOCIATES 1, LLC
NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 16, PARCEL – 6-1
FIRST ELECTION DISTRICT, KENT COUNTY, MARYLAND
PREPARED FOR : EVERTON INDUSTRIAL

DATE	MARCH '23
SCALE	1" = 200'
JOB No.	2021165
DRAWN BY	J. MOORE
FOLDER Ref.	31-2021165
DESIGNED BY	N. DAVIS
SHEET No.	4 OF 5
CADD FILE	21165-4

FOREST PROTECTION PLAN

ANY CLEARING, GRADING AND/OR CONSTRUCTION PROPOSED WITHIN 50 FEET OF PROTECTED FOREST AREAS MUST COMPLY WITH THE FOLLOWING FOREST PROTECTION PLAN:

1) *FIELD LOCATION OF THE PROTECTED FOREST AREA BOUNDARIES, IN ACCORDANCE WITH SURVEY COURSES AND DISTANCES AND CRITICAL ROOT ZONE DETERMINATION GIVEN IN THIS APPROVED FOREST CONSERVATION PLAN, FCP #23-03-   .*
2) *INSTALLATION OF PROTECTIVE SIGNAGE ALONG THE PROTECTED FOREST AREA BOUNDARIES IN ACCORDANCE WITH DETAILS ENCLOSED IN THIS APPROVED FOREST CONSERVATION PLAN, FCP #23-03-   .*
3) *NOTIFY THE KENT COUNTY DEPARTMENT OF PLANNING AND ZONING, FOREST CONSERVATION COORDINATOR TO CONDUCT PRE-CLEARING/GRADING/CONSTRUCTION FIELD INSPECTION OF THE BOUNDARY LOCATION AND INSTALLED FOREST PROTECTION DEVICES.*
4) *AFTER INSPECTION APPROVAL IS GRANTED, CONDUCT THE CLEARING, GRADING AND/OR CONSTRUCTION.*
5) *AFTER COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND BEFORE REMOVAL OF THE FOREST PROTECTION DEVICES, NOTIFY THE KENT COUNTY DEPARTMENT OF PLANNING AND ZONING, FOREST CONSERVATION COORDINATOR TO CONDUCT A FIELD INSPECTION OF THE PROTECTED FOREST AREAS.*

NOTES:

1) *PROTECTED FOREST AREA SHOWN HEREON ARE PROHIBITED FROM CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT BY A RESTRICTIVE DEED OF FOREST CONSERVATION EASEMENT RECORDED IN THE LAND RECORDS OF KENT COUNTY.*
2) *PRIORITY AREA SELECTED FOR FOREST CONSERVATION CONTAIN HYDRIC SOIL, SOIL WITH A K-FACTOR ≥ 0.35 ON SLOPES ≥ 15%, NONTIDAL WETLANDS AND THEIR 25' BUFFER, A NATURAL FORESTED BUFFER TO ADJOINING PROPERTIES, AND ARE PART OF A FOREST > 100 ACRES.*

FOREST PROTECTION TIMETABLE DURING DEVELOPMENT ACTIVITIES

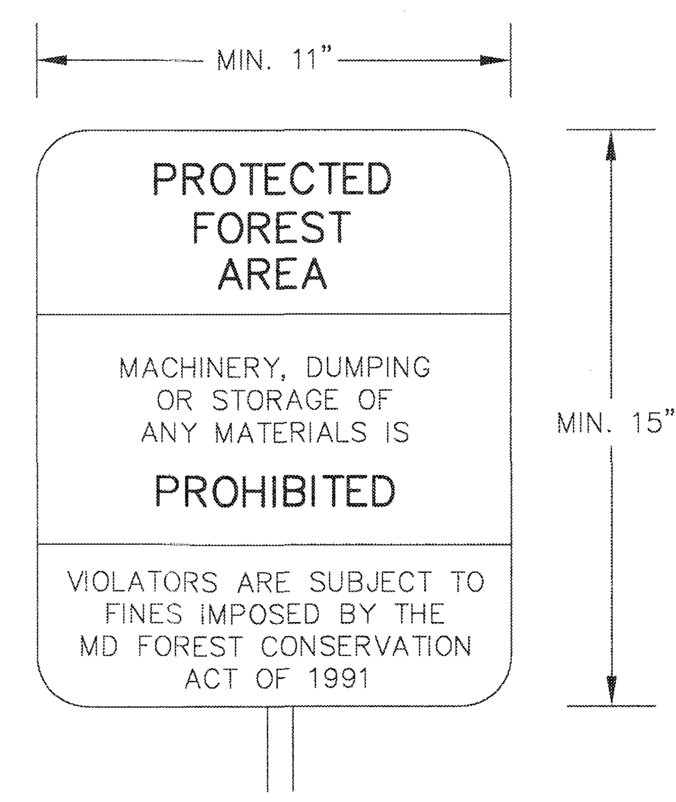
REQUIRED FOREST CONSERVATION INCLUDES THE RETENTION OF EXISTING FOREST ON THE WESTERN PORTION OF THE PROPERTY.

PROTECTIVE FENCING WILL BE PLACED AROUND A PORTION OF THE 8.35 ACRES PROTECTED FOREST AREA BOUNDARY UPON RECORDATION OF THE SUBDIVISION PLAT. PROTECTIVE SIGNS AND THEIR INSTALLATION SHALL MEET THE SPECIFICATIONS AND STANDARDS GIVEN IN THIS APPROVED FOREST CONSERVATION PLAN, FCP #23-03-   . SIGNS MUST BE MAINTAINED INDEFINITELY.

PROTECTIVE SIGNAGE WILL BE PLACED AROUND THE 8.35 ACRES PROTECTED FOREST AREA BOUNDARY UPON RECORDATION OF THE SUBDIVISION PLAT. PROTECTIVE SIGNS AND THEIR INSTALLATION SHALL MEET THE SPECIFICATIONS AND STANDARDS GIVEN IN THIS APPROVED FOREST CONSERVATION PLAN, FCP #23-03-   . SIGNS MUST BE MAINTAINED INDEFINITELY.

FOREST PROTECTION DEVICE

PROTECTIVE SIGNAGE DETAIL



A. SIGNS TO BE PLACED AT MAXIMUM OF 50 FEET INTERVALS ALONG PROTECTED FOREST BOUNDARY.

B. SIGNS CANNOT BE NAILED, SCREWED OR STAPLED TO TREES.

C. SIGNS WITH SIMILAR WORDING MAY BE OBTAINED FROM SURVEYOR/FORESTRY SUPPLY STORES.

FOREST PROTECTION DEVICE

PROTECTIVE FENCING DETAIL

CONSTRUCTION FENCING SUCH AS FILTER CLOTH, CHAIN-LINK, PLASTIC OR WIRE MESH, STAKED STRAW BALES, BARBED WIRE, OR SNOW FENCING MAY BE USED TO MARK BOUNDARIES OF "PROTECTED FOREST AREAS" DURING CLEARING, GRADING, AND/OR CONSTRUCTION; HOWEVER THE FENCE MUST MEET THE FOLLOWING REQUIREMENTS:

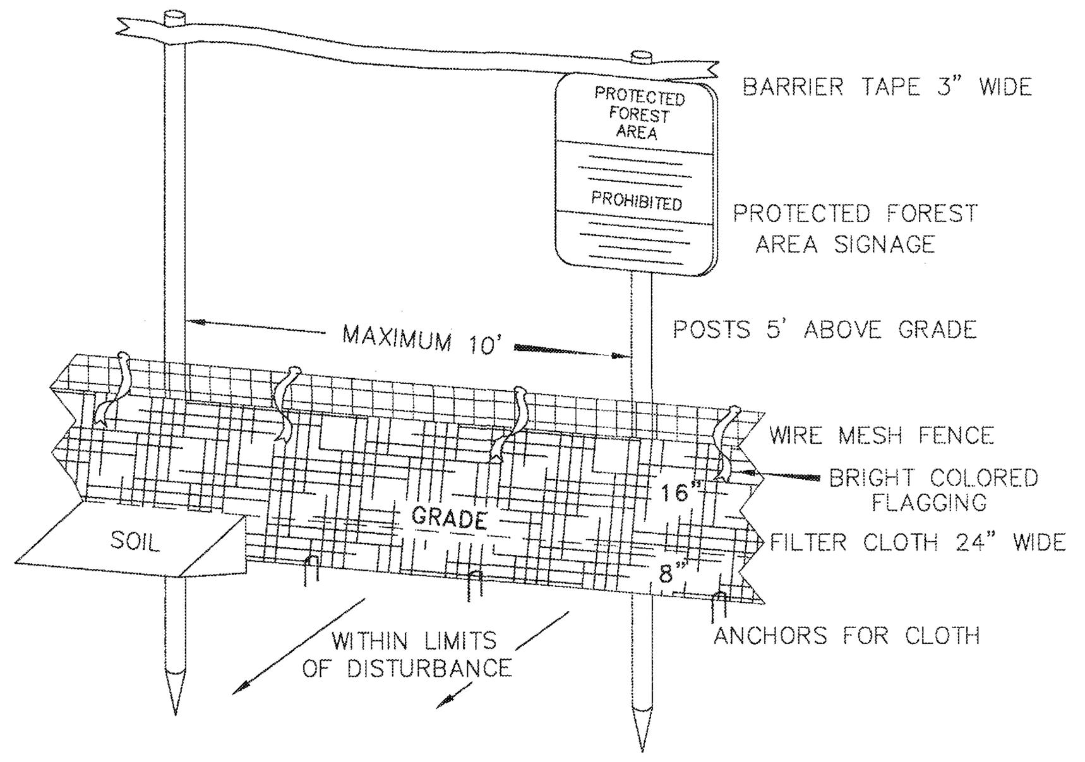
A) FENCE POSTS MUST BE A MINIMUM OF 5' ABOVE GRADE WITH CLOTH, MESH, WIRE OR SLATS SECURELY ATTACHED TO FORM A STRUCTURE CAPABLE OF RESISTING THE WEIGHT OF AN ADULT HUMAN. BRIGHTLY COLORED, 3" WIDE, PLASTIC, BARRIER TAPE MUST BE STRUNG BETWEEN THE TOPS OF EACH FENCE POST.

B) BRIGHTLY COLORED FENCING SLATS, MESH, OR CLOTH, EXTENDING FROM GROUND TO AT LEAST 4' ABOVE GRADE ARE RECOMMENDED. DRAB FENCING MATERIALS (CLOTH, WIRE) MAY BE HIGH-LIGHTED WITH COLORED FLAGGING STREAMERS AT FREQUENT INTERVALS ALONG THE UPPER EDGE.

C) PROTECTED FOREST AREA SIGNAGE (SEE ENCLOSED DETAIL) MUST BE ATTACHED TO FENCE POSTS A MINIMUM OF EVERY 50 FEET.

D) SEE STATE, MUNICIPAL OR COUNTY FOREST CONSERVATION MANUAL FOR ILLUSTRATIONS OF VARIOUS TYPES OF PROTECTED FOREST AREA FENCING, AND THE ENCLOSED EXAMPLE OF A MODIFIED STANDARD FILTER CLOTH FENCE USED FOR SEDIMENT CONTROL AND FOREST PROTECTION:

FENCING EXAMPLE

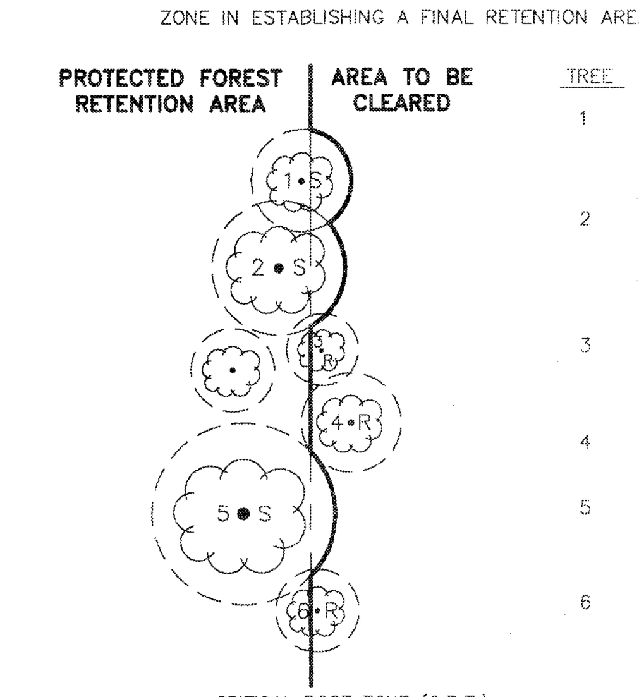


STANDARD FILTER CLOTH FENCING REQUIRED TO CONTROL EROSION SEDIMENT ON CONSTRUCTION SITES CAN ALSO BE USED AS THE PROTECTED FOREST AREA FENCING WITH SOME MODIFICATIONS (SEE ABOVE EXAMPLE) IF THE LIMITS OF CLEARING, GRADING AND/OR CONSTRUCTION ARE SYNONYMOUS WITH THE BOUNDARIES OF THE PROTECTED FOREST AREA OR IF LIMITS OF DEVELOPMENT DISTURBANCE ARE ANY DISTANCE OUTSIDE THE BOUNDARIES OF THE PROTECTED FOREST AREA.

CRITICAL ROOT ZONE

AREA OF ROOT PROTECTION NECESSARY FOR TREE SURVIVAL. DEFINED ZONE ENCIRCLES A TREE TRUNK ONE FOOT OUTWARD FOR EACH INCH OF TRUNK DIAMETER MEASURED AT 4.5 FEET ABOVE GROUND. MINIMUM RADIUS IS 8 FEET. THE ZONE IS 1.5 FEET OUTWARD FOR EACH TRUNK DIAMETER EQUALING OR EXCEEDING 30 INCHES, AND FOR ALL TREES WITHIN A RETENTION AREA LESS THAN 10,000 SQ. FT.

FIELD LOCATION AND MARKING OF THE PROTECTED FOREST BOUNDARY MAY REQUIRE A CRITICAL ROOT ZONE DETERMINATION FOR EACH INDIVIDUAL TREE IN CLOSE PROXIMITY TO THE BOUNDARY. THE DETERMINATION SAVES TREES WITH APPROXIMATELY 70 PERCENT OR MORE OF THE CRITICAL ROOT ZONE IN THE RETENTION AREA BY ADJUSTING THE RETENTION AREA BOUNDARY TO INCLUDE THE ENTIRE CRITICAL ROOT ZONE. THE FOLLOWING EXAMPLE SHOWS USE OF THE CRITICAL ROOT ZONE IN ESTABLISHING A FINAL RETENTION AREA BOUNDARY.



TREE	ASSESSMENT	DETERMINATION
1	APPROXIMATELY 65% OF C.R.Z. IN RETENTION AREA. WORTH MOVING BOUNDARY TO ACCOMMODATE TREE.	SAVE
2	APPROXIMATELY 80% OF C.R.Z. IN RETENTION AREA. MOVE BOUNDARY TO INCLUDE ENTIRE ZONE.	SAVE
3	APPROXIMATELY 25% OF C.R.Z. IN RETENTION AREA. NOT WORTH MOVING BOUNDARY.	REMOVE
4	NONE OF C.R.Z. IN RETENTION AREA.	REMOVE
5	NEARLY ENTIRE C.R.Z. WITHIN RETENTION AREA. MOVE BOUNDARY TO INCLUDE ENTIRE ZONE.	SAVE
6	TRUNK AND OVER 50% OF C.R.Z. OUTSIDE RETENTION AREA. NOT WORTH MOVING BOUNDARY.	REMOVE

— — — — CRITICAL ROOT ZONE (C.R.Z.)
——— — ——— PRELIMINARY RETENTION AREA BOUNDARY
——— FINAL RETENTION AREA BOUNDARY
R REMOVE TREE
S SAVE TREE

NOTES:

1) TREE SPECIES AND HEALTH SHOULD BE CONSIDERED IN C.R.Z. ASSESSMENTS ALONG THE RETENTION AREA BOUNDARY.
2) ANY DISTURBED CRITICAL ROOT ZONE IN THE RETENTION AREA MUST BE SHOWN ON THE FOREST CONSERVATION PLAN.
3) PRUNING, AERATION, TUNNELING, STORMWATER MANAGEMENT AND OTHER PROCEDURES (SEE EXAMPLES IN APPENDIX C OF 1995 STATE FOREST CONSERVATION TECHNICAL MANUAL, 2ND EDITION) SHOULD BE CONSIDERED TO ENSURE LONG TERM SURVIVAL OF RETAINED TREES.

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DATE	SCALE
MARCH '23	1" = 200'
JOB No. 2021165	DRAWN BY J. MOORE
FOLDER Ref. 31-2021165	DESIGNED BY
SHEET No. - 5 OF 5	
CADD FILE - 21165-5	

FOREST CONSERVATION PLAT (FCP #023-03-   )
ON THE LANDS OF
MILLINGTON CROSSING ASSOCIATES 1, LLC
NEAR THE TOWN OF MILLINGTON
TAX MAP - 31, GRID - 1E, PARCEL - 6-1
FIRST ELECTION DISTRICT, KENT COUNTY, MARYLAND
PREPARED FOR : EVERTON INDUSTRIAL

DATE	REVISION
10-18-22	PER TAC COMMENTS
10-9-23	PER TAC COMMENTS

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
P.O. BOX 80
CENTREVILLE, MARYLAND 21617

DAVIS & ASSOCIATES
ENVIRONMENTAL CONSULTING, LLC
P.O. BOX 733
Chestertown, Maryland 21620
Phone No. 410-507-9793

DATE 5/23/24 SEAL

Forest Stand Delineation and Stand Condition Narrative
River Road
Millington, MD 21651
Kent County, Maryland
Tax Map 31 Parcel 6

Prepared for:

Everton Industrial Development LLC
266 Atsion Road
Medford, NJ 08055

Prepared By:

Davis & Associates
Environmental Consulting, LLC
P.O. Box 733
Chestertown, MD 21620

June 8, 2022

1. Introduction

On June 7, 2022, Davis & Associates completed a forest stand delineation (FSD) for the property located on the north side of River Road (MD 291) in Kent County. The purpose of the FSD is to describe forest stands on the parcel for woodland conservation purposes in compliance with the Maryland Forest Conservation Act of 1991.

2. Site Description

The site is located on the north side of River Road about 0.28 mile east of US Route 301 in Millington in Kent County in Maryland (see vicinity map). The property is zoned agricultural and is currently undeveloped.

3. Methodology

The forest stands were delineated based on topography, soil types, and aspect. Sample points were randomly located within the study area. The delineation was field verified. The sampling was accomplished using a wedge prism with a basal area of 10. The diameter of each sample tree was measured at breast height. The data sheets completed during the survey are included as Appendix A. The forest structure of each stand was assessed based on canopy coverage, herbaceous groundcover, downed woody debris, invasive plant cover, and the number of shrub species.

4. Stand Condition Narrative

Based on the methodology, one forest stand was identified. Sensitive species do occur on the southern portion of the site based on a review of Maryland's Environmental Resources & Land Information Network (MERLIN). Coordination with the Maryland Department of Natural Resources Wildlife and Heritage Service has been initiated and a response will be incorporated into the report when it is received.

No historic sites or cultural features were found on the site during the field investigation, and none were noted based on a review of information available from MERLIN. Adjacent land use is industrial, commercial, residential, agricultural, and forest.

Forest Stand A

Forest Stand A is an uneven-aged mixed bottomland hardwood forest. Dominant overstory species include beech and poplar. Other overstory species include red oak, white oak, hickory, red maple and sweetgum. Shrub layer and ground cover species are moderately dense and is mostly paw paw. Diameters of the dominant trees range from 5 to 25 inches. Canopy coverage averages 100 percent. The basal area averages 70 square feet per acre. The stand includes a perennial stream, Mill Branch, that drains to the Chester River. There are approximately 73 trees per acre. The forest is considered Priority Area 1.

The forest is in good health. Green ash is a small component of the stand and the green ash is dead or dying from the emerald ash borer. No other significant disease or insect infestation was observed on the site.

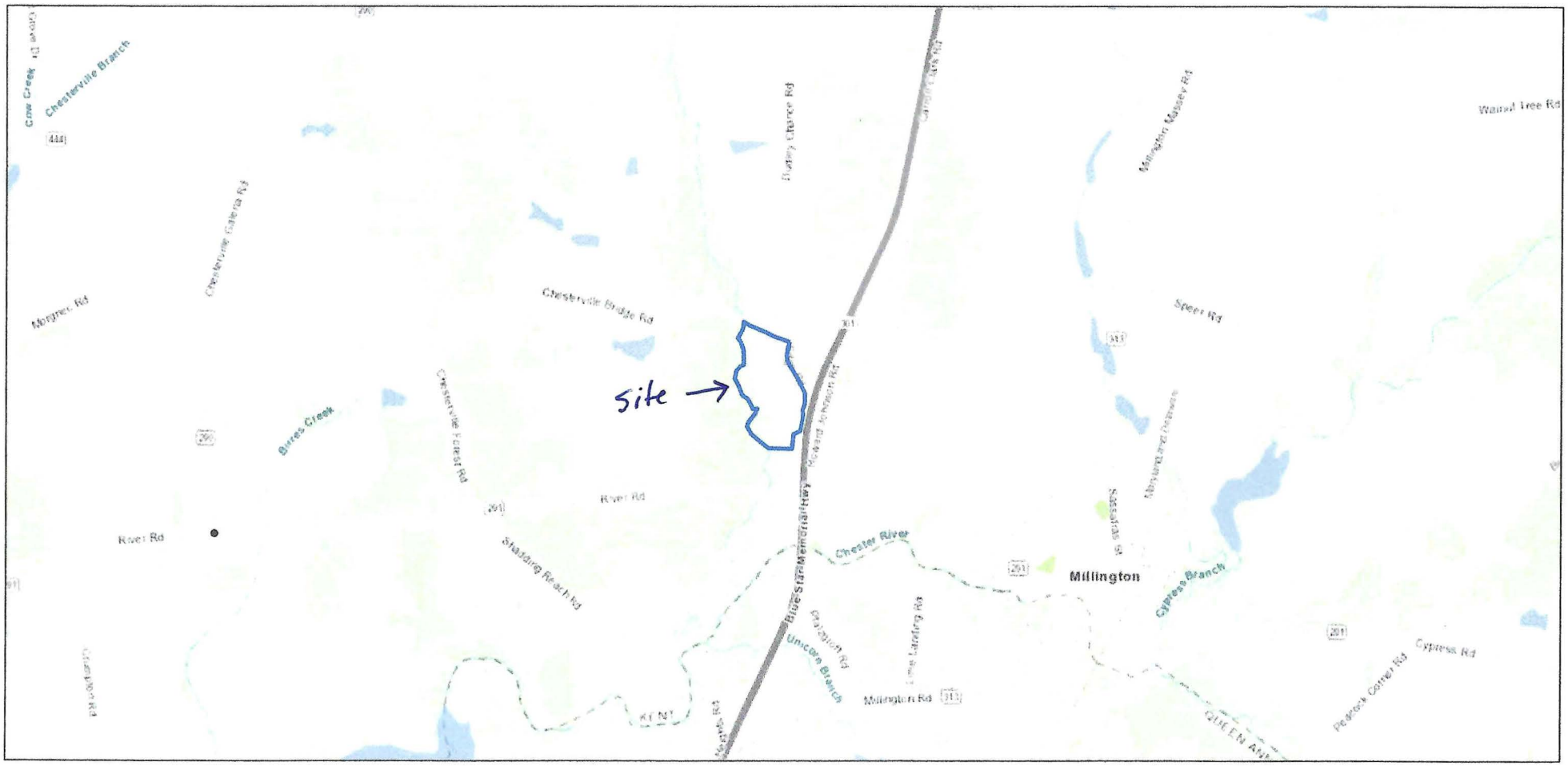
Soils in Forest Stands

Summary of Soil Map Unit Classifications for Stand A

Map Symbol	Soil Series
Bs	Bibb silt loam
CgC2	Colts Neck gravelly loam, 2 to 10 percent slopes, moderately eroded
MpB	Mattapex fine sandy loam, 2 to 5 percent slopes
MtcA	Mattapex silt loam, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain
SacB	Sassafras sandy loam, 2 to 5 percent slopes, Mid-Atlantic Coastal Plain
SacC	Sassafras sandy loam, 5 to 10 percent slopes, Mid-Atlantic Coastal Plain
SaD2	Sassafras sandy loam, 10 to 15 percent slopes, moderately eroded
SfC2	Sassafras loam, 5 to 10 percent slopes, moderately eroded
WdcB	Woodstown sandy loam, 2 to 5 percent slopes, Mid-Atlantic Coastal Plain

Appendix

Richardson Fresh Ponds Forest Stand Delineation Location Map



6/8/2022, 1:09:21 PM

State Boundary Mask

1:36,112

0 0.33 0.65 1.3 mi

0 0.5 1 2 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, MD iMAP, ESRI

Maryland Department of Natural Resources

VITA, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, METI/NASA, EPA, USDA | MD iMAP | MD iMAP, DoIT | MD iMAP, USDA | MD iMAP, USGS | MD iMAP, COMMERCE, DHCD, MDP, MHT, MDOT, MDOT SHA, USDOT, FHWA, DoIT | MD iMAP, MDP, MHT | MD iMAP, MDP, MHT, NPS | MD iMAP, MDP | MD iMAP,

Richardson Fresh Ponds Areas W-1 and W-2 Forest Stand Delineation Map

6/17/2022, 11:43:11 AM

1:8,268

0 0.07 0.15 0.3 mi

0 0.1 0.2 0.4 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, MD iMAP, DoIT

Maryland Department of Natural Resources

VITA, Esri, HERE, Garmin, GeoTechnologies, Inc., Intermap, USGS, METI/NASA, EPA, USDA | MD iMAP | MD iMAP, DoIT | MD iMAP, USDA | MD iMAP, USGS | MD iMAP, COMMERCE, DHCD, MDP, MHT, MDOT, MDOT SHA, USDOT, FHWA, DoIT | MD iMAP, MDP, MHT | MD iMAP, MDP, MHT, NPS | MD iMAP, MDP |

Soil Map—Kent County, Maryland
(Richardson Fresh Ponds Forest Stand Delineation Soil Map)

Map Scale: 1:5,690 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 250 500 1000 1500

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

Soil Map—Kent County, Maryland
(Richardson Fresh Ponds Forest Stand Delineation Soil Map)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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: Kent County, Maryland
Survey Area Data: Version 20, Aug 27, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

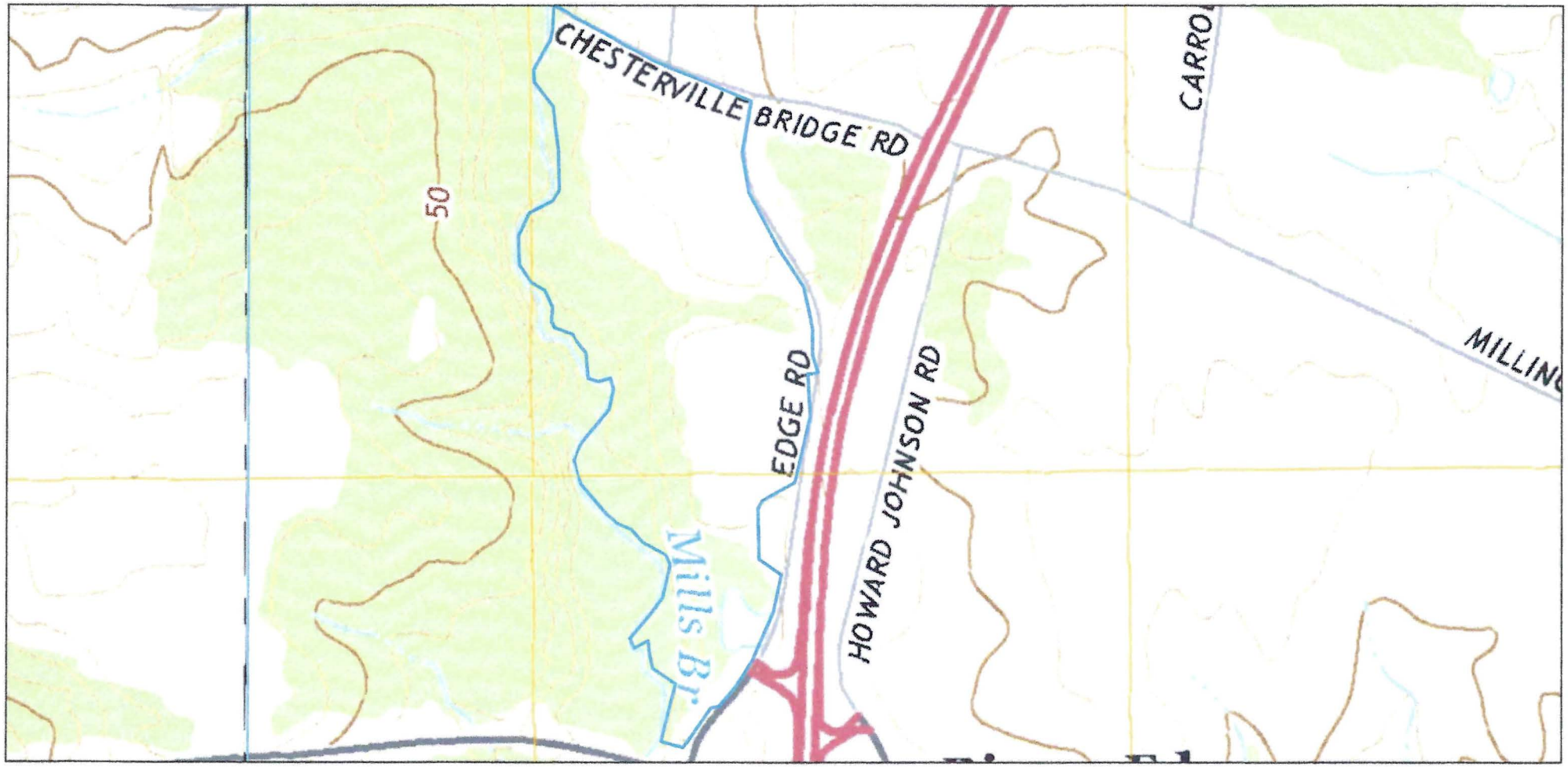
Date(s) aerial images were photographed: Jun 9, 2020—Jun 13, 2020

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
Bs	Bibb silt loam	29.7	38.1%
CgC2	Colts Neck gravelly loam, 2 to 10 percent slopes, moderately eroded	0.0	0.0%
MpB	Mattapex fine sandy loam, 2 to 5 percent slopes	9.8	12.5%
MtcA	Mattapex silt loam, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	3.8	4.9%
SacB	Sassafras sandy loam, 2 to 5 percent slopes, Mid-Atlantic Coastal Plain	11.8	15.0%
SacC	Sassafras sandy loam, 5 to 10 percent slopes, Mid-Atlantic Coastal Plain	12.0	15.4%
SaD2	Sassafras sandy loam, 10 to 15 percent slopes, moderately eroded	0.5	0.6%
SfC2	Sassafras loam, 5 to 10 percent slopes, moderately eroded	0.4	0.6%
WdcB	Woodstown sandy loam, 2 to 5 percent slopes, Mid-Atlantic Coastal Plain	10.1	13.0%
Totals for Area of Interest		**78.1**	**100.0%**

Richardson Fresh Ponds Areas W-1 and W-2 Topographic Map



6/17/2022, 11:50:09 AM

1:8,268

0 0.07 0.15 0.3 mi

0 0.1 0.2 0.4 km

MD IMAP, USGS, Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Maryland Department of Natural Resources

VITA, Esri, HERE, Garmin, GeoTechnologies, Inc., Intermap, USGS, METI/NASA, EPA, USDA | MD iMAP | MD iMAP, DoIT | MD iMAP, USDA | MD iMAP, USGS | MD iMAP, COMMERCE, DHCD, MDP, MHT, MDOT, MDOT SHA, USDOT, FHWA, DoIT | MD iMAP, MDP, MHT | MD iMAP, MDP, MHT, NPS | MD iMAP, MDP |

Davis &
Associates
Environmental
Consulting, LLC

PO Box 733
Chestertown, MD 21620
410-507-9793

June 17, 2022

Ms. Lori Byrne
Environmental Review Specialist
MD DNR- Wildlife and Heritage Service
Tawes State Office Building, E-1
580 Taylor Avenue
Annapolis, MD 21401

RE: Environmental Review for Lands of Richardson Fresh Ponds LLC
River Rd
Millington, MD 21651
Tax Map 31 Parcel 6

Dear Ms. Byrne,

Davis & Associates is requesting an environmental review for the above referenced parcel. The site is located in Millington in Kent County. There are sensitive species mapped on the site.

A vicinity map of the site location is attached.

Please call me at 410-507-9793 if you have any questions regarding this site.

Sincerely,

Noreen Davis

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor
Jeannie Haddaway-Riccio, Secretary
Allan Fisher, Deputy Secretary

July 20, 2022

Ms. Noreen Davis
Davis & Associates Environmental Consulting, LLC
P.O. Box 733
Chestertown, Maryland 21620

RE: Environmental Review for Lands of Richardson Fresh Ponds, LLC - River Road, Millington, Tax Map 31 Parcel 6, Kent County, Maryland.

Dear Ms. Davis:

The Wildlife and Heritage Service has determined that there are no official State or Federal records for listed plant or animal species within the delineated area shown on the map provided. We would like to point out, however, that our remote analysis suggests that the forested area on this property contains Forest Interior Dwelling Bird habitat. Populations of many bird species which depend on this type of forested habitat are declining in Maryland and throughout the eastern United States. The conservation of this habitat is mandated within the Chesapeake Bay Critical Area and must be addressed by the project plan. Specifically, if FIDS habitat is present, the following guidelines should be incorporated into the project plan (as applicable):

1. Restrict development to nonforested areas.
2. If forest loss or disturbance is unavoidable, concentrate or restrict development to the following areas:
   a. the perimeter of the forest (i.e., within 300 feet of existing forest edge)
   b. thin strips of upland forest less than 300 feet wide
   c. small, isolated forests less than 50 acres in size
   d. portions of the forest with low quality FIDS habitat, (i.e., areas that are already heavily fragmented, relatively young, exhibit low structural diversity, etc.)
3. Maximize the amount if forest "interior" (forest area >300 feet from the forest edge) within each forest tract (i.e., minimize the forest edge:area ratio). Circular forest tracts are ideal and square tracts are better than rectangular or long, linear forests.
4. Minimize forest isolation. Generally, forests that are adjacent, close to, or connected to other forests provide higher quality FIDS habitat than more isolated forests.
5. Limit forest removal to the "footprint" of houses and to that which is necessary for the placement of roads and driveways.
6. Minimize the number and length of driveways and roads.
7. Roads and driveways should be as narrow and as short as possible; preferably less than 25 and 15 feet, respectively
8. Maintain forest canopy closure over roads and driveways.
9. Maintain forest habitat up to the edges of roads and driveways; do not create or maintain mowed grassy berms.
10. Maintain or create wildlife corridors.

11. Do not remove or disturb forest habitat during April-August, the breeding season for most FIDS. This seasonal restriction may be expanded to February-August if certain early nesting FIDS (e.g., Barred Owl) are present.
12. Landscape homes with native trees, shrubs and other plants and/or encourage homeowners to do so.
13. Encourage homeowners to keep pet cats indoors or, if taken outside, kept on a leash or inside a fenced area.
14. In forested areas reserved from development, promote the development of a diverse forest understory by removing livestock from forested areas and controlling white-tailed deer populations. Do not mow the forest understory or remove woody debris and snags.
15. Afforestation efforts should target a) riparian or streamside areas that lack woody vegetative buffers, b) forested riparian areas less than 300 feet wide, and c) gaps or peninsulas of nonforested habitat within or adjacent to existing FIDS habitat.

The Critical Area Commission's document "A Guide to the Conservation of Forest Interior Dwelling Birds in the Chesapeake Bay Critical Area" provides details on development standards and information about mitigation for projects where impacts to FIDS habitat cannot be totally avoided. Mitigation plantings for impacts to FIDS habitat may be required under the local government's Critical Area Program. The amount of mitigation required is generally based in whether the guidelines listed above are followed.

Please be sure to let us know if the limits of proposed disturbance or overall site boundaries change and we will provide you with an updated evaluation. Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at lori.byrne@maryland.gov or at (410) 260-8573.

Sincerely,

Lori A. Byrne

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER# 2022.0961.ke
Cc: C. Jones, CAC

Richardson Fresh Ponds Areas W-1 and W-2 Sensitive SpeciesMap

6/17/2022, 12:14:19 PM

1:16,536

0 0.15 0.3 0.6 mi

0 0.25 0.5 1 km

MD iMAP, DNR, Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, MD iMAP, DoIT

Maryland Department of Natural Resources

VITA, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, METI/NASA, EPA, USDA | MD iMAP | MD iMAP, DoIT | MD iMAP, USDA | MD iMAP, USGS | MD iMAP, COMMERCE, DHCD, MDP, MHT, MDOT, MDOT SHA, USDOT, FHWA, DoIT | MD iMAP, MDP, MHT | MD iMAP, MDP, MHT, NPS | MD iMAP, MDP | MD iMAP,

Table D-4 : Forest Stand Summary Sheet

Property Name: Richardson Fresh Ponds

Prepared by: Noreen
Date: 6/17/22

Stand Variable	Stand # A Acreage 49.7	Stand # Acreage
Forest Association (SAF cover type)	Mixed Oak, Poplar	
Size class of dominant trees	18-22"	
Number of Trees/acre	67	
Number of tree species/plot	5	
Basal area	83	
Number of dead trees/acre	2	
List of common understory species	Pawpaw, beech red maple	
Number of shrubs 1/100 acre plot	1	
% Canopy coverage	100	
% Herbaceous cover	10	
% Downed woody material	20	
% Exotic or invasive species	0	
Forest Structure Value		
Comments	Buffer for Mill Creek and 2 tributaries Priority Area 1	

Table D-3: Forest Structure Data Sheet

Property : Richardson Fresh Ponds **Prepared by:** Noreen Davis
Stand #: A **Plot #:** 1 **Date:** 6/6/22

Forest Structure Variable	sample point 1	sample point 2	sample point 3	sample point 4	sample point 5	% yes
Canopy coverage	Y	Y	Y	Y	Y	100
herbaceous ground cover	N	N	N	N	N/Y	10
downed woody debris	N	N	Y	N	N	20
invasive plant cover	N	N	N	N	N	0
number of shrub species (1/100 acre)	1 - paw paw					

Forest Structure Sampling Method:

1/10 acre plot,
5 sample points

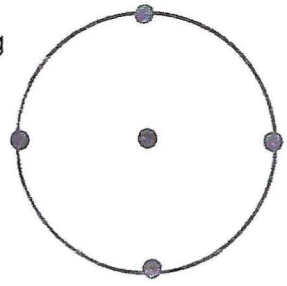


Table D-1: Field Sampling Data Sheet

Property Name: Richardson Fresh Ponds Prepared by: [illegible]
Stand # A Plot # 1 Date: 6/6/12

	Size Class of Trees Within the Sample Plot				
Tree Species (note dominant and co-dominant species)	Number of Trees 2-6" dbh	Number of Trees 6-10" dbh	Number of Trees 11-17" dbh	Number of Trees 18-29" dbh	Number of Trees >30" dbh
Poplar				24, 23'	
Beech					
Sweetgum		6'		21'	
hickory					
blackgum		8'		13, 19	
Number of Trees per size class					
List of understory species	pawpaw sweetgum blackgum				
Basal Area	70				
Number of Dead Trees per plot	1				
Comments					

Table D-1: Field Sampling Data Sheet

Property Name: Richardson Fresh Pools Prepared by: Nora
Stand # A Plot # 3 Date: 6/6/02

	Size Class of Trees Within the Sample Plot				
Tree Species (note dominant and co-dominant species)	Number of Trees 2-6" dbh	Number of Trees 6-10" dbh	Number of Trees 11-17" dbh	Number of Trees 18-29" dbh	Number of Trees >30" dbh
Sweetgum				13'	
Poplar					
Beech			11'		
Hickory			11'		
Blackgum		7'			
Red Maple			19'	20'	
Green Ash			16'		
White Oak			17'		
Number of Trees per size class					
List of understory species	Paw paw skunk cabbage.				
Basal Area					
Number of Dead Trees per plot	2				
Comments					

Table D-1: Field Sampling Data Sheet

Property Name: Richardson Fresh Ponds Prepared by: Noreen
Stand # A Plot # 4 Date: 6/6/22

	Size Class of Trees Within the Sample Plot				
Tree Species (note dominant and co-dominant species)	Number of Trees 2-6" dbh	Number of Trees 6-10" dbh	Number of Trees 11-17" dbh	Number of Trees 18-29" dbh	Number of Trees >30" dbh
Poplar				19, 20	
Hickory			14		
Beech				20	
Sweetgum			16		
Red maple		10		22	
Number of Trees per size class					
List of understory species	Paw Paw				
Basal Area	70				
Number of Dead Trees per plot	2 - green ash				
Comments					

Table D-1: Field Sampling Data Sheet

Property Name: Richardson Fresh Ponds
Stand # A Plot # 5
Prepared by: Norcen
Date: 6/6/22

	Size Class of Trees Within the Sample Plot				
Tree Species (note dominant and co-dominant species)	Number of Trees 2-6" dbh	Number of Trees 6-10" dbh	Number of Trees 11-17" dbh	Number of Trees 18-29" dbh	Number of Trees >30" dbh
Poplar			17, 16'	18'	
hickory		~15			
red oak				22+	
beech		10'	16'	21'	
Number of Trees per size class					
List of understory species	beech				
Basal Area	80				
Number of Dead Trees per plot					
Comments					

Table D-1: Field Sampling Data Sheet

Property Name: Richardson Fresh Ponds Prepared by: Noreen
Stand # A Plot # 6 Date: 6/6/22

	Size Class of Trees Within the Sample Plot				
Tree Species (note dominant and co-dominant species)	Number of Trees 2-6" dbh	Number of Trees 6-10" dbh	Number of Trees 11-17" dbh	Number of Trees 18-29" dbh	Number of Trees >30" dbh
Beech			17		
hickory			15, 13		
red maple		10	16	20	
sycamore				18	
red oak				21	
Number of Trees per size class					
List of understory species	beech, pawpaw, sweetgum				
Basal Area	80				
Number of Dead Trees per plot	1				
Comments					

Table D-1: Field Sampling Data Sheet

Property Name: Richardson Fresh Ponds Prepared by: Noreen
Stand # A Plot # 7 Date: 6/6/22

	Size Class of Trees Within the Sample Plot				
Tree Species (note dominant and co-dominant species)	Number of Trees 2-6" dbh	Number of Trees 6-10" dbh	Number of Trees 11-17" dbh	Number of Trees 18-29" dbh	Number of Trees >30" dbh
Poplar		'10	'17	19'	
red oak				'23, '24	
hickory			'15		
white oak				19'	
sweetgum			'16	'18'	
Number of Trees per size class					
List of understory species	beech, pawpaw				
Basal Area	90				
Number of Dead Trees per plot	0				
Comments					

Table D-1: Field Sampling Data Sheet

Property Name: Richardson
Stand # A Plot # 8

Prepared by: Noreen
Date: 6/6/13

	Size Class of Trees Within the Sample Plot				
Tree Species (note dominant and co-dominant species)	Number of Trees 2-6" dbh	Number of Trees 6-10" dbh	Number of Trees 11-17" dbh	Number of Trees 18-29" dbh	Number of Trees >30" dbh
Red maple				21.	
Sweetgum			17, 15		
Birch				20'	
Sycamore				19,	
Poplar		10	16, 17'		
Red Oak				25.	
Number of Trees per size class					
List of understory species					
Basal Area	90				
Number of Dead Trees per plot					
Comments					

Table D-1: Field Sampling Data Sheet

Property Name: Richardson Fresh Pools Prepared by: Norcen
Stand # A Plot # 9 Date: 6/6/22

	Size Class of Trees Within the Sample Plot				
Tree Species (note dominant and co-dominant species)	Number of Trees 2-6" dbh	Number of Trees 6-10" dbh	Number of Trees 11-17" dbh	Number of Trees 18-29" dbh	Number of Trees >30" dbh
Poplar			16; 17'	19'	
red oak				25; 23'	
White oak				18'	
beech				21', 19'	
Number of Trees per size class					
List of understory species					
Basal Area	80				
Number of Dead Trees per plot					
Comments					

Table D-1: Field Sampling Data Sheet

Property Name: Richardson F.P. Prepared by: Noreen
Stand # A Plot # 10 Date: 6/6/13

	Size Class of Trees Within the Sample Plot				
Tree Species (note dominant and co-dominant species)	Number of Trees 2-6" dbh	Number of Trees 6-10" dbh	Number of Trees 11-17" dbh	Number of Trees 18-29" dbh	Number of Trees >30" dbh
Beech				19, 23"	
Red Maple		9, 10		25, 19"	
Sweetgum			16, 17"	18"	
Red Oak				22, 21"	
Number of Trees per size class					
List of understory species					
Basal Area	110				
Number of Dead Trees per plot					
Comments					

Table D-1: Field Sampling Data Sheet

Property Name: Richardson FP Prepared by: Norean
Stand # A Plot # 11 Date: 6/6/13

	Size Class of Trees Within the Sample Plot				
Tree Species (note dominant and co-dominant species)	Number of Trees 2-6" dbh	Number of Trees 6-10" dbh	Number of Trees 11-17" dbh	Number of Trees 18-29" dbh	Number of Trees >30" dbh
Poplar		17, 10'	12		
White Oak				18'	
Beech				27, 19'	
Red Oak				24, 21'	
Hickory			17'	19'	
Number of Trees per size class					
List of understory species	beech, paw paw				
Basal Area	100				
Number of Dead Trees per plot					
Comments					

Table D-1: Field Sampling Data Sheet

Property Name: Richardson FD Prepared by: Noreen
Stand # A Plot # 12 Date: 6/6/22

	Size Class of Trees Within the Sample Plot				
Tree Species (note dominant and co-dominant species)	Number of Trees 2-6" dbh	Number of Trees 6-10" dbh	Number of Trees 11-17" dbh	Number of Trees 18-29" dbh	Number of Trees >30" dbh
Sycamore				18,	
Sweetgum			15,16		
red maple			14,	21,	
poplar			17		
beech				18,	
Number of Trees per size class					
List of understory species	Paw paw				
Basal Area	70				
Number of Dead Trees per plot	2				
Comments					

CHECKLIST OF EXISTING PROPERTY FEATURES

TOPOGRAPHY LEVEL	YES
SLOPES ≥ 25%	YES
HIGHLY ERODIBLE SOIL ON SLOPES ≥ 15%	YES
HYDRIC SOIL	YES
100-YEAR FLOOD PLAIN	YES
INTERMITTENT STREAM	NO
PERENNIAL STREAM	YES
TIDAL WETLAND	NO
NONTIDAL WETLAND	YES
STAND PART OF FOREST ≥ 100 ACRES	YES
FORESTED ADJOINING PROPERTY	YES
TREES ≥ 30 INCHES DIAMETER	NO
CRITICAL HABITAT OF RARE OR ENDANGERED SPECIES	NO
HISTORICAL AND/OR ARCHAEOLOGICAL SITE	NO
CULTURAL FEATURE	NO
DISSECTING ROAD	NO

LEGEND

- BOUNDARY OF TOTAL TRACT
- EC / AZD — ZONING LINE
- PERENNIAL STREAM
- SfB / WdcB — SOIL TYPE AND CONFIGURATION
- EXISTING FOREST MARGIN
- FOREST STAND
- FLOODPLAIN LINE
- NONTIDAL WETLAND MARGIN
- PRIORITY RETENTION AREA

FOREST STAND DELINEATION NOTES

1. SITE VICINITY MAP AND PROPERTY FOREST COVER ARE TAKEN FROM THE 2019 KENT COUNTY AERIAL PHOTOGRAPHY MAP AND THE LATTER VERIFIED BY THE SITE VISIT.
2. SOIL TYPES AND CONFIGURATIONS ARE TAKEN FROM THE WEBSITE: http://websoilsurvey.nrcs.usda.gov FOR KENT COUNTY, MARYLAND.
3. PERENNIAL STREAMS DOES OCCUR ON THE PROPERTY ACCORDING TO THE U.S. GEOLOGICAL SURVEY, 1986 (PHOTOREVISED) MILLINGTON, MARYLAND TOPOGRAPHIC QUADRANGLE MAP.
4. NONTIDAL WETLANDS SHOWN HEREON ARE SCALED FROM A REPORT PREPARED BY DAVIS & ASSOCIATES ENVIRONMENTAL CONSULTING, LLC IN JUNE, 20.22.
5. 100-YEAR FLOOD PLAIN DOES OCCUR ON THE PROPERTY ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY, 2014 KENT COUNTY, MD UNINCORPORATED AREAS, FLOOD INSURANCE RATE MAP 24029 PANEL 0213 D.
6. TOPOGRAPHIC CONTOURS AND ELEVATIONS ARE TAKEN FROM AERIAL TOPOGRAPHY FLOWN IN THE FALL OF 2013.
7. CRITICAL HABITATS AND RARE OR ENDANGERED SPECIES WERE NOT FOUND DURING THE SITE VISIT AND THE PROPERTY IS NOT LISTED IN THE MARYLAND DEPARTMENT OF NATURAL RESOURCES COMAR 08.03.08,
8. CULTURAL FEATURES DO NOT EXIST ON THE PROPERTY.
9. HISTORICAL APPEARING STRUCTURES OR REMNANTS WERE NOT FOUND DURING THE SITE VISIT.
10. THE PROPERTY IS , "RCD" (RESOURCE CONSERVATION DISTRICT), "AZD" (AGRICULTURAL ZONING DISTRICT) AND "EC" (EMPLOYMENT CENTER) BY THE KENT COUNTY DEPARTMENT OF PLANNING AND ZONING.
11. PROPERTY BEARINGS AND DISTANCES ARE TAKEN FROM A BOUNDARY SURVEY PREPARED BY MICHAEL A. SCOTT, INC. IN JUNE, 2017. SEE DEED REFERENCE LIBER M.L.M. 892, FOLIO 458.

ACRES SUMMARY FOR FOREST STAND DELINEATION

TOTAL TRACT		114.50
CHESAPEAKE BAY CRITICAL AREA	7.41	
LAND USE UNCHANGED	0.00	
NET TRACT		107.09
EXISTING FOREST	72.03	
PORTION PRIORITY FOR RETENTION (INCLUDES WETLANDS AND BUFFERS)	36.99	

FOREST STAND SUMMARY

STAND	ACRES	SUCCESSIONAL STAGE	RETENTION PRIORITY	DOMINANT SPECIES	DIAMETER CLASS	CO-DOMINANT SPECIES
1	25.79	MATURE	11.20 ACRES	AMERICAN BEECH, HICKORY WHITE OAK, RED OAK	6 – 25 INCHES	AMERICAN BEECH FLOWERING DOGWOOD HICKORY, WHITE OAK RED OAK
2	46.24	MATURE	33.89 ACRES	YELLOW-POPLAR, AMERICAN BEECH	8 – 24 INCHES	PAW-PAW RED MAPLE SWEET GUM

PROPERTY SOILS

SYMBOL	SERIES	HYDRIC INDICATORS	K-FACTOR > 0.35 ON LEVEL TO 15% SLOPE	K-FACTOR > 0.35 ON SLOPES > 15%	LIMITATIONS FOR EFFLUENT DISPOSAL	LIMITATIONS FOR HOMESITES	LIMITATIONS FOR VEHICLE ROADWAYS
Bs	BIBB SILT LOAM	?	No	No	?	?	?
MpB	MATTAPEX FINE SANDY LOAM	?	No	No	?	?	?
MtcA	MATTAPEX SILT LOAM	?	No	No	?	?	?
Oh	OTHELLO SILT LOAM	?	No	No	?	?	?
SacB	SASSAFRAS SANDY LOAM	?	No	No	?	?	?
SacC	SASSAFRAS SANDY LOAM	?	No	No	?	?	?
SaD2	SASSAFRAS SANDY LOAM	?	Yes	No	?	?	?
SfC2	SASSAFRAS LOAM	?	No	No	?	?	?
WdcB	WOODSTOWN SANDY LOAM	?	No	No	?	?	?

THIS FOREST CONSERVATION PLAN IS PREPARED BY DAVIS & ASSOCIATES ENVIRONMENTAL CONSULTING, LLC WHO MEETS THE FORESTRY REQUIREMENTS OF MARYLAND C.O.M.A.R. 08.19.01.06 AND ARE APPROVED BY THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, FOREST CONSERVATION PROGRAM AS PROFESSIONALS QUALIFIED TO CONDUCT FSD.

QUALIFIED PROFESSIONAL: DATE

DAVIS & ASSOCIATES ENVIRONMENTAL CONSULTING, LLC
P.O. BOX 733
CHESTERTOWN, MARYLAND 21620

GRAPHIC SCALE

200 0 100 200 400

1 inch = 200 ft.

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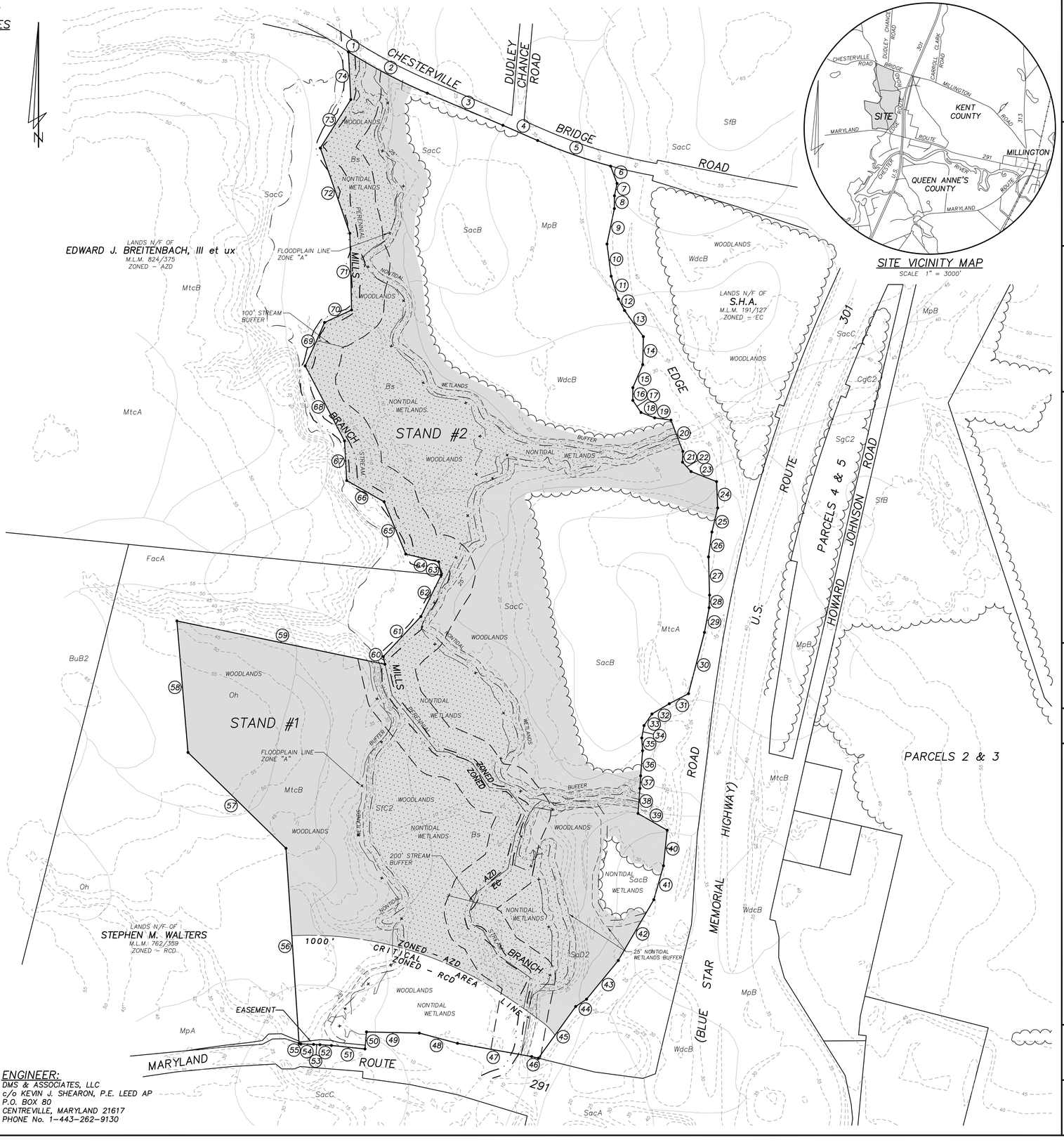
PERIMETER BOUNDARY COURSES AND DISTANCES

LINE	BEARING	DISTANCE
1	S 57°41'34" E	1.51'
2	S 62°21'18" E	352.90'
	R = 2182.12'	353.28'
3	S 66°59'35" E	326.95'
4	S 66°21'21" E	150.72'
5	S 70°39'12" E	307.67'
	R = 2052.82'	307.96'
6	S 20°30'34" E	73.87'
7	S 11°54'11" W	50.00'
8	S 00°35'35" W	50.99'
9	S 11°42'18" W	144.01'
10	S 07°20'51" E	129.32'
11	S 17°37'45" E	94.97'
12	S 28°15'11" E	51.90'
13	S 35°41'34" E	128.29'
14	S 01°15'22" W	111.22'
15	S 23°11'27" W	99.87'
16	S 00°07'11" W	50.77'
17	S 33°58'49" E	58.03'
18	S 68°40'47" E	58.60'
19	S 81°58'30" E	65.30'
20	S 20°54'55" E	133.03'
21	S 01°54'51" W	43.01'
22	S 42°19'28" E	50.50'
23	S 68°28'35" E	109.20'
24	S 02°21'44" E	105.02'
25	S 13°28'01" W	98.49'
26	S 07°48'59" W	100.00'
27	S 01°38'45" E	152.07'
28	S 02°06'21" W	50.25'
29	S 10°40'44" W	100.13'
30	S 14°39'33" W	251.79'
31	S 62°16'44" W	86.02'
32	S 59°22'45" W	80.43'
33	S 34°22'53" W	55.90'
34	S 10°06'25" W	50.04'
35	S 03°29'37" E	50.99'
36	S 04°22'58" W	100.18'
37	S 03°14'33" W	50.16'
38	S 04°22'58" W	100.18'
39	S 60°13'23" E	133.70'
40	S 05°56'11" W	142.56'
41	S 15°54'12" W	140.25'
42	S 30°18'58" W	280.31'
43	S 39°20'21" W	199.09'
44	S 56°03'57" W	52.20'
45	S 35°48'22" W	253.75'
46	N 76°14'08" W	27.73'
47	N 79°51'28" W	299.63'
48	N 75°01'11" W	157.13'
49	N 88°44'55" W	210.47'
50	S 04°59'46" W	68.07'
51	N 84°00'32" W	134.29'
52	N 86°13'17" W	45.78'
53	N 87°05'47" W	25.44'
54	N 88°02'02" W	50.87'
55	N 71°20'33" W	7.19'
56	N 03°51'09" W	778.07'
57	N 45°37'09" W	545.42'
58	N 04°49'35" W	525.33'
59	S 78°14'39" E	845.55'
60	N 11°59'39" W	30.93'
61	N 43°08'31" E	218.92'
62	N 26°05'41" E	183.60'
63	N 10°37'15" W	53.45'
64	N 76°44'35" W	134.76'
65	N 22°27'55" W	225.56'
66	N 60°27'05" W	171.11'
67	N 03°08'55" W	158.05'
68	N 27°39'55" W	336.92'
69	N 24°01'05" E	189.38'
70	N 65°08'05" E	118.58'
71	N 01°18'25" W	305.01'
72	N 19°07'05" W	359.26'
73	N 32°10'35" E	228.01'
74	N 02°50'27" W	190.14'



SITE VICINITY MAP

SCALE 1" = 3000'

OWNER:

MILLINGTON CROSSING ASSOCIATES ONE, LLC
c/o RUSS RICHARDSON
P.O. BOX 546
CHESTER HEIGHTS, PA 19017
PHONE No. 1-410-275-2714

SURVEYOR:

MICHAEL A.SCOTT, INC.
c/o MIKE SCOTT
400 SOUTH CROSS STREET
CHESTERTOWN, MARYLAND 21620
PHONE No. 1-410-778-2310

ENGINEER:

DMS & ASSOCIATES, LLC
c/o KEVIN J. SHEARON, P.E. LEED AP
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE No. 1-443-262-9130

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. EXPIRATION DATE:

SEAL

DATE

REVISION

DATE

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

FOREST STAND DELINEATION
ON THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
NEAR THE TOWN OF MAILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6
FIRST ELECTION DISTRICT, KENT COUNTY, MARYLAND
PREPARED FOR – EVERTON INDUSTRIAL

DATE	AUGUST '22
SCALE	1" = 200'
JOB No.	2021165
DRAWN BY	J. MOORE
FOLDER Ref.	31-2021165
DESIGNED BY	

SHEET No. –

CADD FILE – 21165FSD

Lands of Richardson Fresh Ponds LLC
River Road
Millington, MD 21651
Kent County, Maryland
Tax Map 31 Parcel 6 Areas W-1 and W-2
Wetland Delineation Report

Prepared for:

Everton Industrial Development LLC
266 Atsion Road
Medford, NJ 08055

Prepared by:

Davis & Associates
Environmental Consulting, LLC
410-507-9793
PO Box 733
Chestertown, MD 21620

June 17, 2022

Introduction

Davis & Associates completed a wetland delineation investigation for the property located in Kent County, Maryland on June 7, 2022. The purpose of the investigation was to determine the extent, location, and classification of any wetlands or waters of the U.S. on on Areas W-1 and W-2. This report summarizes our investigation and results. The following attachments are included:

- Attachment 1. Vicinity Map
- Attachment 2. Aerial Photograph with Preliminary Wetland Delineation
- Attachment 3. Kent County Soil Survey Map
- Attachment 4: Routine Wetland Determination Data Forms

Description of the Property

The site is located on the north side of River Road about 0.19 mile east of its intersection with US Route 301 in Millington in Kent County in Maryland (see Attachment 1). The site is undeveloped. The site is owned by Richardson Fresh Ponds LLC, PO Box 546, Chester Heights, PA 19017. The latitude is 39.275981 and the longitude is -75.869152. The property is not located within the Chesapeake Bay Critical Area.

Methodology

The wetland delineation was conducted in accordance with the U.S. Army Corps of Engineers' Wetland Delineation Manual (USACE, 1987) and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Plain Region (USACE 2012). These manuals utilize a three-parameter approach to identifying wetlands, which includes the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology. All three parameters normally must be present for an area to be considered a wetland under the USACE jurisdiction in accordance with Section 404 of the Clean Water Act.

The wetland investigation included an evaluation of the Kent County Soil Survey and available topographic maps of the property.

Soils

A hydric soil is defined as a soil "that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part" (Federal Register, July 13, 1994). According to the USACE's Wetland Delineation Manual (USACE, 1987), common hydric soil indicators include a low chroma matrix (chroma less than 2, value greater than 4), concretions, and listing on local or national hydric soils lists.

The following soils were mapped on the property in the Kent County Soil Survey (USDA, NRCS):

Table 1. Summary of Soil Map Unit Classifications

Map Symbol	Soil Series
Bs	Bibb silt loam
CgC2	Colts Neck gravelly loam, 2 to 10 percent slopes, moderately eroded
MpB	Mattapex fine sandy loam, 2 to 5 percent slopes
MtcA	Mattapex silt loam, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain
SacB	Sassafras sandy loam, 2 to 5 percent slopes, Mid-Atlantic Coastal Plain
SacC	Sassafras sandy loam, 5 to 10 percent slopes, Mid-Atlantic Coastal Plain
SaD2	Sassafras sandy loam, 10 to 15 percent slopes, moderately eroded
SfC2	Sassafras loam, 5 to 10 percent slopes, moderately eroded
SgC2	Sassafras gravelly loam, 5 to 10 percent slopes, moderately eroded
WdcB	Woodstown sandy loam, 2 to 5 percent slopes, Mid-Atlantic Coastal Plain

A copy of the soil map is included as Attachment 3.

Vegetation

Plant species observed on the property were identified and the wetland indicator status for each species was determined from the *US Army Corps of Engineers, North American Digital Flora: National Wetland Plant List, Atlantic and Coastal Plain 2016.* The indicator status of a certain species indicates the probability that it will occur in a wetland of the northeast region of the United States. The indicator status designations are presented for each species identified at the property in Attachment 4. The following is an explanation of the indicator status designations:

OBL = Obligate Wetland
(greater than 99 % probability of occurrence in wetland)

FACW = Facultative Wetland
(greater than 66 % to less than 99 % probability of occurrence in wetland)

FAC = Facultative
(33 % to 66 % probability of occurrence in wetland)

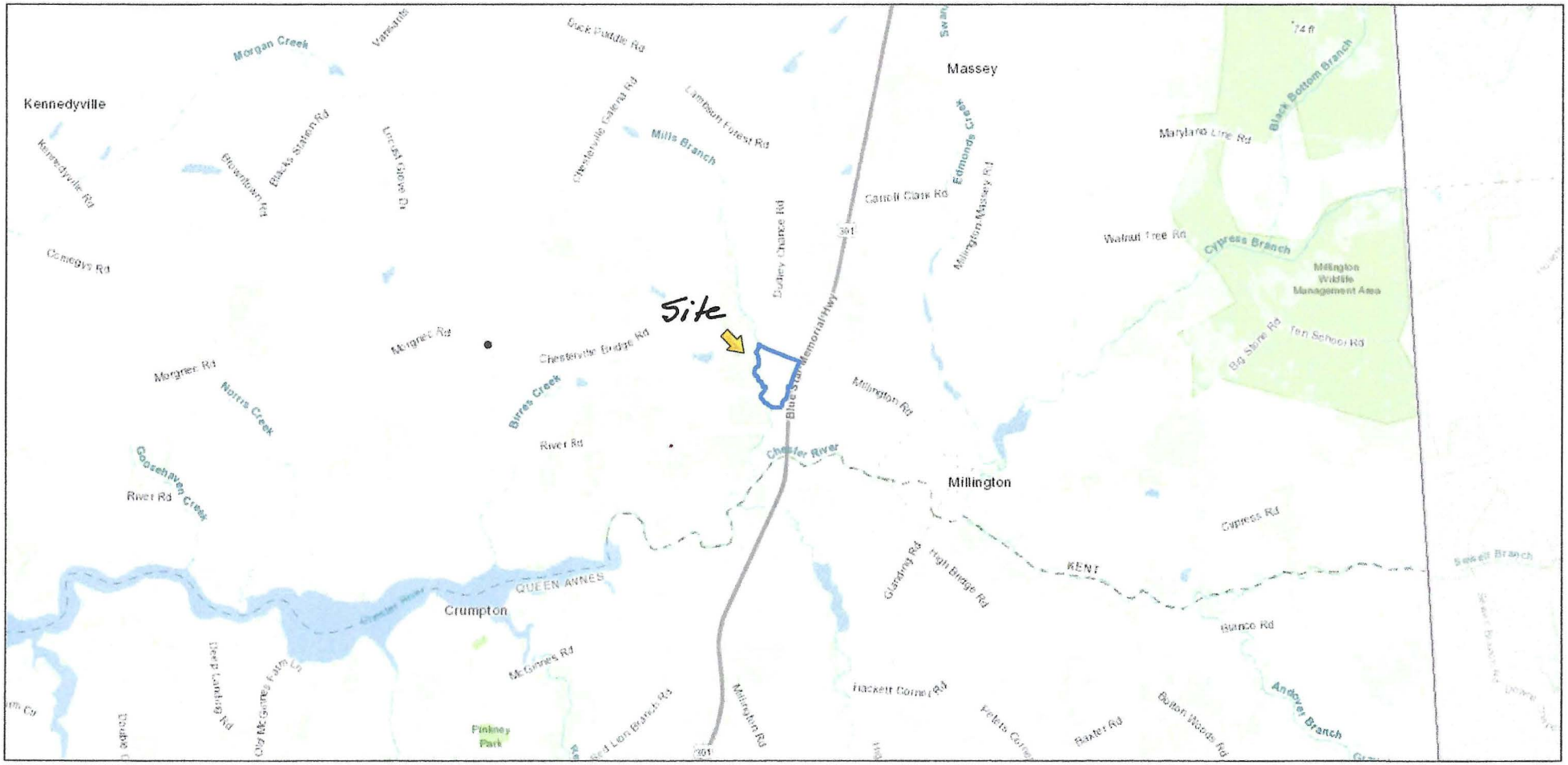
FACU = Facultative Upland
(1 % to less than 33 % probability of occurrence in wetland)

UPL = Obligate Upland
(less than 1% probability of occurrence in wetland)

Attachment 1

Richardson Fresh Ponds Wetland Delineation Location Map

N



6/6/2022, 1:29:12 PM

State Boundary Mask

1:72,224

0 0.5 1 2 mi

0 1 2 4 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, MD iMAP, ESRI

Maryland Department of Natural Resources

VITA, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, METI/NASA, NGA, EPA, USDA | MD iMAP | MD iMAP, DoIT | MD iMAP, USDA | MD iMAP, USGS | MD iMAP, COMMERCE, DHCD, MDP, MHT, MDOT, MDOT SHA, USDOT, FHWA, DoIT | MD iMAP, MDP, MHT | MD iMAP, MDP, MHT, NPS | MD iMAP, MDP | MD

Attachment 2

Richardson Fresh Ponds Wetland Delineation Map

↑N

6/6/2022, 1:31:31 PM

Six Inch Imagery 2014-2016

State Boundary Mask

Property Boundary

Wetland

1:9,028

0 0.07 0.15 0.3 mi

0 0.13 0.25 0.5 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, MD iMAP, DoIT, MD iMAP, ESRI

Maryland Department of Natural Resources

VITA, Esri, HERE, Garmin, GeoTechnologies, Inc., Intermap, USGS, METI/NASA, EPA, USDA | MD iMAP | MD iMAP, DoIT | MD iMAP, USDA | MD iMAP, USGS | MD iMAP, COMMERCE, DHCD, MDP, MHT, MDOT, MDOT SHA, USDOT, FHWA, DoIT | MD iMAP, MDP, MHT | MD iMAP, MDP, MHT, NPS | MD iMAP, MDP |

Attachment 3

Soil Map—Kent County, Maryland
(Richardson Fresh Ponds Wetland Delineation Soil Map)

Map Scale: 1:5,720 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

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

Soil Map—Kent County, Maryland
(Richardson Fresh Ponds Wetland Delineation Soil Map)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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: Kent County, Maryland
Survey Area Data: Version 20, Aug 27, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 9, 2020—Jun 13, 2020

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
Bs	Bibb silt loam	29.9	31.4%
CgC2	Colts Neck gravelly loam, 2 to 10 percent slopes, moderately eroded	1.0	1.1%
MpB	Mattapex fine sandy loam, 2 to 5 percent slopes	14.4	15.2%
MtcA	Mattapex silt loam, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	4.3	4.5%
SacB	Sassafras sandy loam, 2 to 5 percent slopes, Mid-Atlantic Coastal Plain	12.2	12.8%
SacC	Sassafras sandy loam, 5 to 10 percent slopes, Mid-Atlantic Coastal Plain	14.4	15.1%
SaD2	Sassafras sandy loam, 10 to 15 percent slopes, moderately eroded	0.4	0.4%
SfC2	Sassafras loam, 5 to 10 percent slopes, moderately eroded	0.4	0.5%
SgC2	Sassafras gravelly loam, 5 to 10 percent slopes, moderately eroded	0.0	0.0%
WdcB	Woodstown sandy loam, 2 to 5 percent slopes, Mid-Atlantic Coastal Plain	18.1	19.1%
Totals for Area of Interest		**95.1**	**100.0%**

Attachment 4

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Richardson Fresh Ponds W-1 + W-2 City/County: Millington / Kent Sampling Date: 6/9/22

Applicant/Owner: Everton Industrial State: _____ Sampling Point: SP1

Investigator(s): N. Davis Section, Township, Range: _____

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): _____ Slope (%): 0-10%

Subregion (LRR or MLRA): LRR T Lat: 39.27598 Long: -75.869152 Datum: _____

Soil Map Unit Name: B5 – Bibb silt loam NWI classification: PFO1A/C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? no Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? no (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ✓ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ✓	No _____	Depth (inches): surface

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SP1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pensylvanica	2	Y	FACW
2. Liquidambar styraciflua	2	Y	FAC
3. Acer rubrum	5	Y	FAC
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Symplocarpus foetidus	40	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 6/3		10YR 7/8	5				
5-12	10YR 6/1							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12) **(LRR T, U)**
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

Wes Moore
Governor
Aruna Miller
Lieutenant Governor
Paul J. Wiedefeld
Secretary
William Pines, P.E.
Administrator

May 17, 2024

Kevin Shearon, P.E., LEED AP
Davis, Moore, Shearon and Associates, LLC
P.O. Box 80
Centreville, MD 21617

RE: Kent County
Everton
Millington Crossing
23apke003xx

Dear Mr. Shearon:

The Maryland Department of Transportation State Highway Administration (SHA) has reviewed the entrance plans, and we are pleased to respond. SHA has determined that distances between entrances are acceptable as proposed, provided the sight distance clearing is approved and performed. This determination has been formulated through collective review of the SHA Access Manual, proposed plan set, and site visit.

If you have any questions, please contact Henry R. Dierker via email at hdierker@mdot.maryland.gov or via phone at 410-810-3244.

Sincerely,

Henry R. Dierker III
Access Permits Regional Engineer

(STM/HD)

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

Wes Moore
Governor
Aruna Miller
Lieutenant Governor
Paul J. Wiedefeld
Secretary
William Pines, P.E.
Administrator

April 25, 2024

Mr. Brad Schmid
Traffic Concepts, Inc.
7525 Connelley Drive, Suite B
Hanover, MD 21076

RE: Kent County
US 301
Millington Crossing Warehouses
SHA Tracking No. 23apke003xx
Mile Point: 0.89

Dear Mr. Schmid:

Thank you for the opportunity to review the Point-by-Point Response and revised Traffic Impact Study (TIS) for the proposed Millington Crossing Warehouses in Kent County. The Maryland Department of Transportation State Highway Administration (SHA) has reviewed the TIS, and we are pleased to advise the TIS is **Approved with Comments**.

If you have any questions regarding the comments, please contact the Reviewer directly using the contact information that has been provided.

Travel Forecasting and Analysis Division (TFAD): (Elham Shayanfar, 410-545-5642, eshayanfar@mdot.maryland.gov)

- The 445 ft intersection sight distance satisfies the AASHTO guidelines for passenger cars.
- However, under the same conditions, a combination truck requires 675 ft intersection sight distance.
    - Ideally, we want to meet the 675 ft sight distance due to the truck traffic for this development.
- As stated in our previous comments, the limited sight distance for the south building truck access raises safety concerns and needs to be addressed.
    - We recommend restricting the access to right-in only and directing trucks to exit via the southern access point.

Access Management:

Plan submittal should reflect the above comments. Any submissions should be made to Mr. Ken Fender at 615 Morgnec Road, Chestertown, MD 21620, attention of Mr. Henry Dierker, III. Please reference the SHA tracking number on future submissions.

Please keep in mind that you can view the reviewer and project status via the SHA Access Management web page at https://roads.maryland.gov/mdotsha/pages/amd.aspx. If you have any questions or require additional information, please contact Mr. Henry Dierker, III at 410-778-3061, by using our toll-free number (in Maryland only) at 1-800-637-9740 (x3244), or via email at hdierker@mdot.maryland.gov.

Sincerely,

Richard Baker

Richard Baker
Assistant District Two Engineer--Traffic

STM/(HD)

TRAFFIC IMPACT STUDY

MILLINGTON CROSSING -WAREHOUSE

PROJECT #3906

KENT COUNTY, MD

DECEMBER 2023

PREPARED FOR:
EVERTON INDUSTRIAL

PREPARED BY:

TRAFFIC CONCEPTS, INC.

7525 CONNELLEY DRIVE
SUITE B
HANOVER, MARYLAND 21076
(410)760-2911
www.traffic-concepts.com

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Millington Crossing Associates One, LLC warehouse project that is planned with two lots along the west side of MD 701A (Edge Road).

Proposed Project: The project consists of two 256,924 sqf warehouse buildings.

Scope of Services & Methodology: The key intersections listed below define the study area. **The intersection counts were conducted on October 25, 2022, when schools were in session**.

US Route 301 (Blue Star Memorial Highway) @ MD 313 (Galena Road) (Unsignalized)	SB US Route 301 (Blue Star Memorial Highway) @ Chesterville Bridge Road (Unsignalized)
SB US Route 301 (Blue Star Memorial Highway) @ MD 701A (Edge Road) Ramps (Unsignalized)	NB US Route 301 (Blue Star Memorial Highway) @ MD 701 (Howard Johnson Road) Ramps (Unsignalized)
Chesterville Bridge Road @ MD 701A (Edge Road) (Unsignalized)	MD 291 (Cypress Street) @ MD 701A (Edge Road) (Roundabout)
MD 291 (Cypress Street) @ MD 701 (Howard Johnson Road) (Roundabout)	Chesterville Bridge Road @ North Building Truck Access (Unsignalized)
MD 701A (Edge Road) @ North Building Car Access (Unsignalized)	MD 701A (Edge Road) @ South Building Truck Access (Unsignalized)
MD 701A (Edge Road) @ South Building Car Access (Unsignalized)	

Analysis Methodology: The traffic study is comprised of an Existing, Background, and Future traffic condition. The key intersections were analyzed under each traffic condition, which is explained with the following formula:

Total Future Traffic = *(**Existing Condition** – current intersection turning movement volumes + **Background Condition** – 2 % Growth Rate compounder over 2 years + **Future Condition** - site generated traffic and passby)*

All key intersections were analyzed with the Critical Lane Volume (CLV) methodology and the MD 301 and MD 313 unsignalized intersection was analyzed with the Highway Capacity Manual (HCM) software.

New Site Generated (Peak Hour) Trips: The new site generated peak hour trips listed below were generated with land use data contained in the *Institute of Transportation Engineers, Trip Generation Manual 11th Edition*.

SITE TRIPS:	**AM**		**PM**	
	IN	**OUT**	**IN**	**OUT**
Warehousing				
ITE Land Use Code 150				
513.85k gsf				
New Truck Trips	8	2	4	11
New Car Trips	58	17	20	53
Total New Trips	**66**	**19**	**24**	**64**

CONCLUSION:

At the total future build-out condition (2025), the CLV analyses determined that all key intersections would continue to operate at adequate overall level of service "A" condition.

Based on the traffic study results, we recommend that this development be approved from a traffic level of service standpoint.

INTRODUCTION

Millington Crossing Associates One, LLC proposed to construct two warehousing buildings in Kent County. The site is located along the west side of MD 701A (Edge Road) just south of Chesterville Bridge Road, as shown on Exhibit 1.

Project Development

The developer plans to construct 513,848 gsf of warehousing. The site plan is included in the appendix.

Site Access

The developer plans to create three new full movement access for the south proposed lots along the west side of MD 701A. The north lot will have one new full movement access along the west side of MD 701A and one left-in, right-out, left-out access along the south side of Chesterville Bridge Road.

Key Intersections

The key intersections listed below were analyzed during the weekday morning and evening peak time periods.

- US Route 301 (Blue Star Memorial Highway) @ MD 313 (Galena Road) (Unsignalized)
- SB US Route 301 (Blue Star Memorial Highway) @ Chesterville Bridge Road (Unsignalized)
- SB US Route 301 (Blue Star Memorial Highway) @ MD 701A (Edge Road) Ramps (Unsignalized)
- NB US Route 301 (Blue Star Memorial Highway) @ MD 701 (Howard Johnson Road) Ramps (Unsignalized)
- Chesterville Bridge Road @ MD 701A (Edge Road) (Unsignalized)
- MD 291 (Cypress Street) @ MD 701A (Edge Road) (Roundabout)
- MD 291 (Cypress Street) @ MD 701 (Howard Johnson Road) (Roundabout)
- Chesterville Bridge Road @ North Building Truck Access (Unsignalized) (Future Only)
- MD 701A (Edge Road) @ North Building Car Access (Unsignalized) (Future Only)
- MD 701A (Edge Road) @ South Building Truck Access (Unsignalized) (Future Only)
- MD 701A (Edge Road) @ South Building Car Access (Unsignalized) (Future Only)

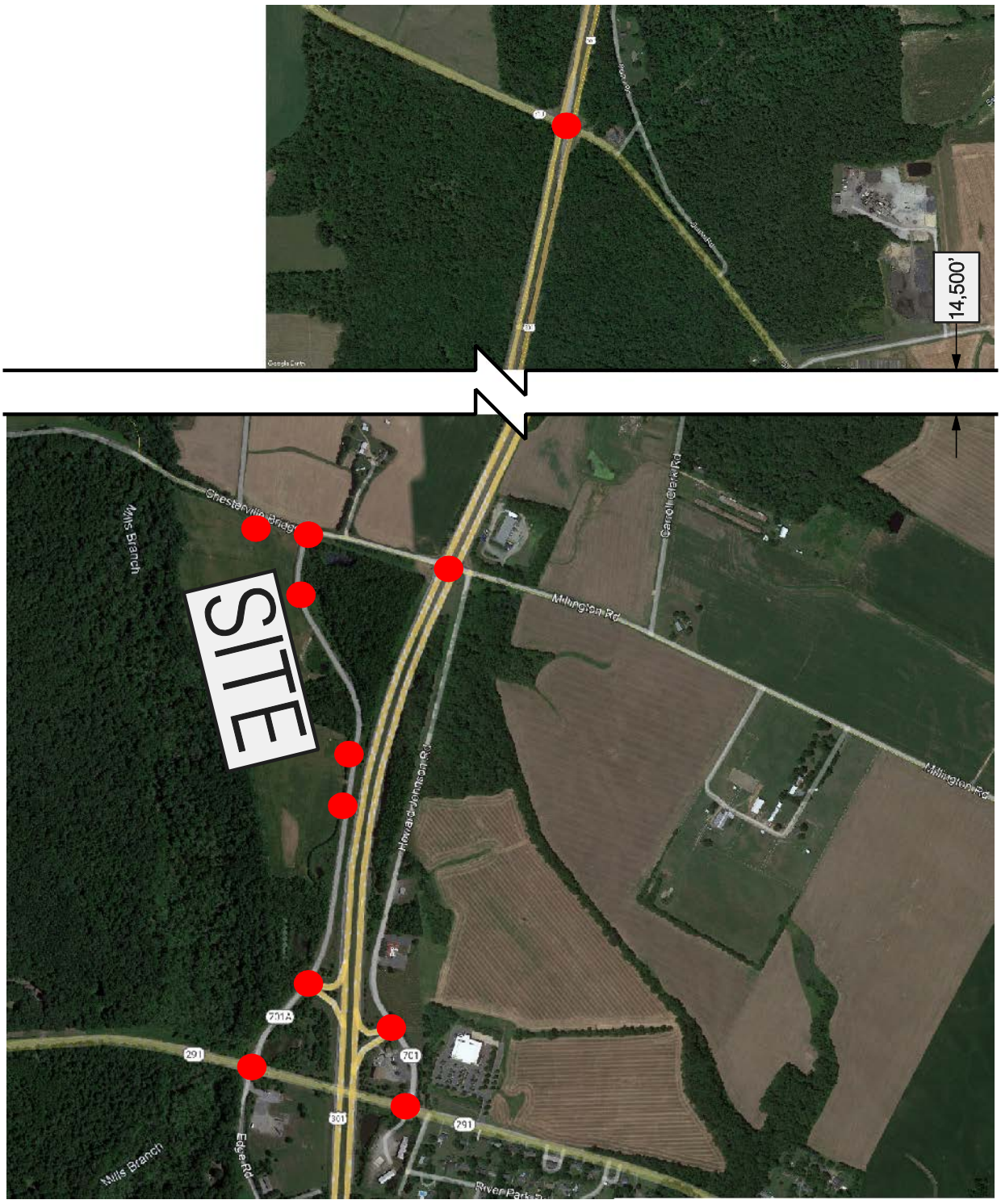
Study Methodology

The key intersections were analyzed during the existing, background, and future traffic condition. The existing condition determines the baseline intersection levels of service with recent intersection turning movement counts. The background condition includes both regional traffic traveling through the study area along arterial and collector roadways, which is represented with a growth rate, and local traffic generated by nearby approved background developments that are not constructed. The background trips are added to the existing traffic volumes to create the total background traffic volumes.

The future traffic condition determines the site generated peak hour trips. The total background traffic volumes are then added to the future peak hour trips to create the total future traffic volumes.

Analysis Methods

All key intersections were analyzed using the Critical Lane Volume (CLV) method except for the two roundabout intersections which were analyzed using SIDRA. The US Route 301 and MD 313 intersection was also analyzed with the Highway Capacity Manual (HCM) method and a queuing analysis were conducted for dedicated turn lanes at this intersection at proposed future traffic conditions. The existing lane configurations are shown on Exhibit 2.



● - Intersection Studied

NOT TO SCALE

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EXHIBIT 1
Site Location Map

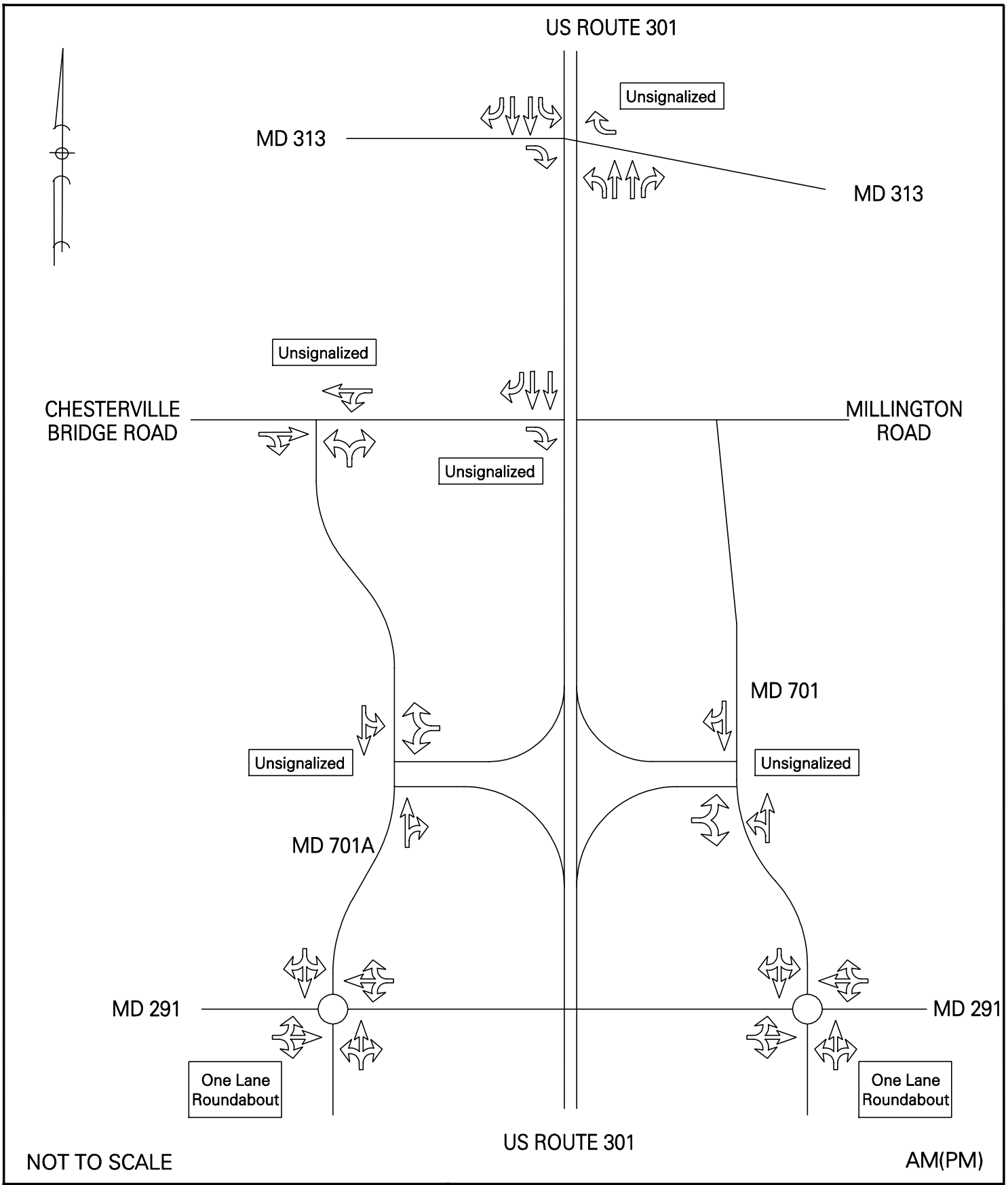

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EXHIBIT 2

Existing Lane Configuration

EXISTING CONDITION

The existing traffic condition determines the peak hour traffic volumes that represent the base line traffic condition. The intersection turning movement counts, conducted at the key intersections, are provided in Appendix IV. The peak one-hour intersection movements are displayed on Exhibit 3.

CRITICAL LANE ANALYSIS

	AM CLV(LOS)	PM CLV(LOS)
US 301 @ MD 313	348(A)	408(A)
SB US 301 @ Chesterville Bridge Road	221(A)	268(A)
SB US 301 @ MD 701A Ramps	103(A)	144(A)
NB US 301 @ MD 701 Ramps	92(A)	154(A)
Chesterville Bridge Road @ MD 701A	22(A)	31(A)

HIGHWAY CAPACITY MANUAL, UNSIGNALIZED INTERSECTION (TWSC)

US 301 @ MD 313

	Approach LOS AM(PM)
Eastbound	A(B)
Westbound	A(A)
Northbound	A(A)
Southbound	A(A)

SIDRA ROUNDABOUT ANYLSYS

US 291 @ MD 701A

Overall LOS
AM(PM)

A(A)

US 291 @ MD 701

Overall LOS
AM(PM)

A(A)

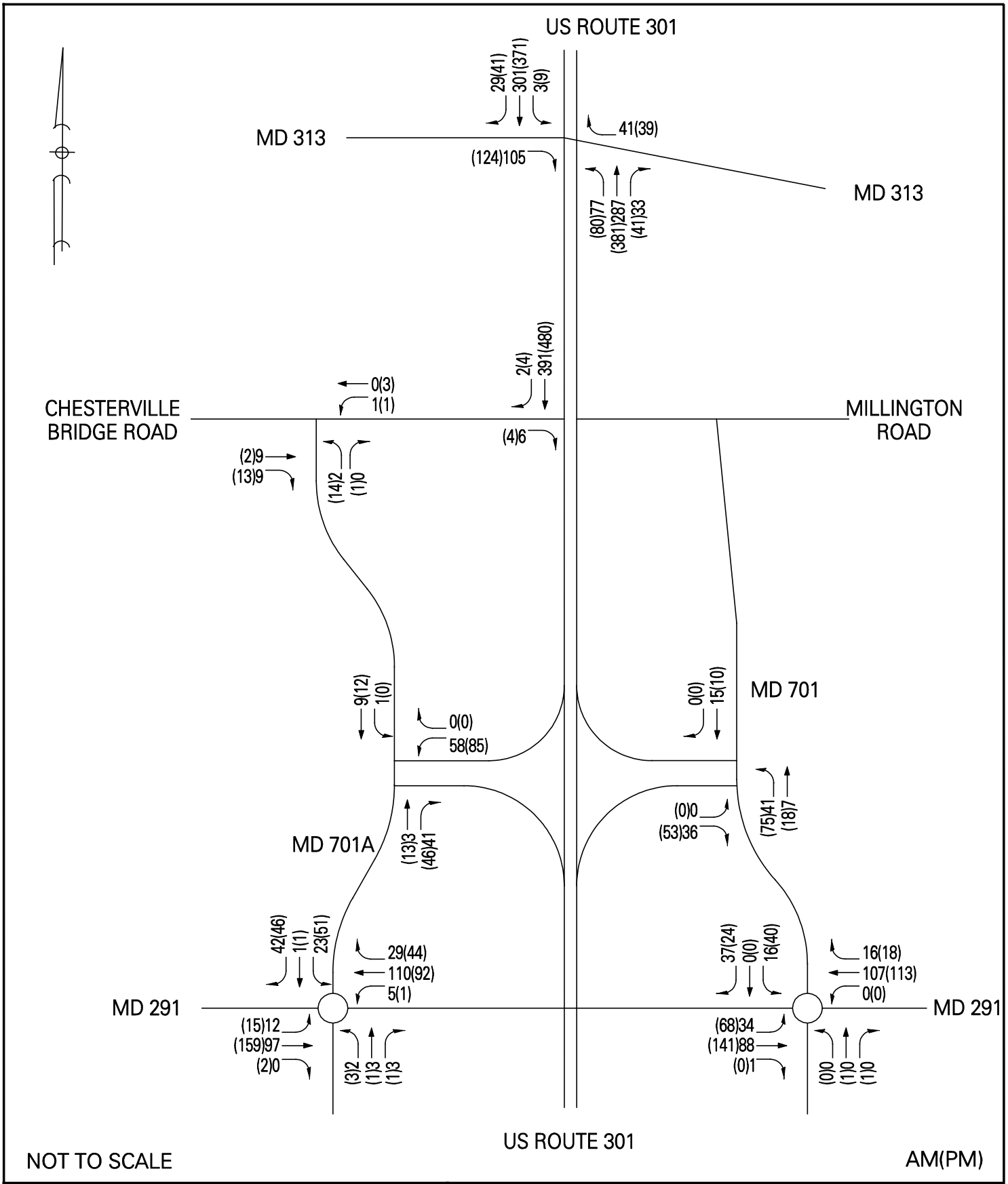

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EXHIBIT 3
Existing Traffic Volumes

BACKGROUND CONDITION

The background condition accounts for regional traffic that travels through the study area that is represented by a growth rate and local traffic generated by nearby background developments.

A 2 percent growth rate to the through traffic volumes over the project build-out period, which is two (2) years. Exhibit 4 shows the traffic volume increase.

Background developments are defined as approved projects that are not yet constructed or are not fully constructed. There are no current background developments in the area that would impact the intersections in this study.

The total background traffic volumes shown on Exhibit 5 were developed by adding the existing traffic volumes (Exhibit 3) with traffic generated by the growth rates. The background LOS results are listed on the following page and the LOS calculations are provided in Appendix I, II and III.

CRITICAL LANE ANALYSIS

	AM CLV(LOS)	PM CLV(LOS)
US 301 @ MD 313	361(A)	424(A)
SB US 301 @ Chesterville Bridge Road	230(A)	278(A)
SB US 301 @ MD 701A Ramps	103(A)	144(A)
NB US 301 @ MD 701 Ramps	92(A)	154(A)
Chesterville Bridge Road @ MD 701A	22(A)	31(A)

HIGHWAY CAPACITY MANUAL, UNSIGNALIZED INTERSECTION (TWSC)

US 301 @ MD 313

	Approach LOS AM(PM)
Eastbound	A(B)
Westbound	A(A)
Northbound	A(A)
Southbound	A(A)

SIDRA ROUNDABOUT ANYLSYS

US 291 @ MD 701A

Overall LOS
AM(PM)

A(A)

US 291 @ MD 701

Overall LOS
AM(PM)

A(A)

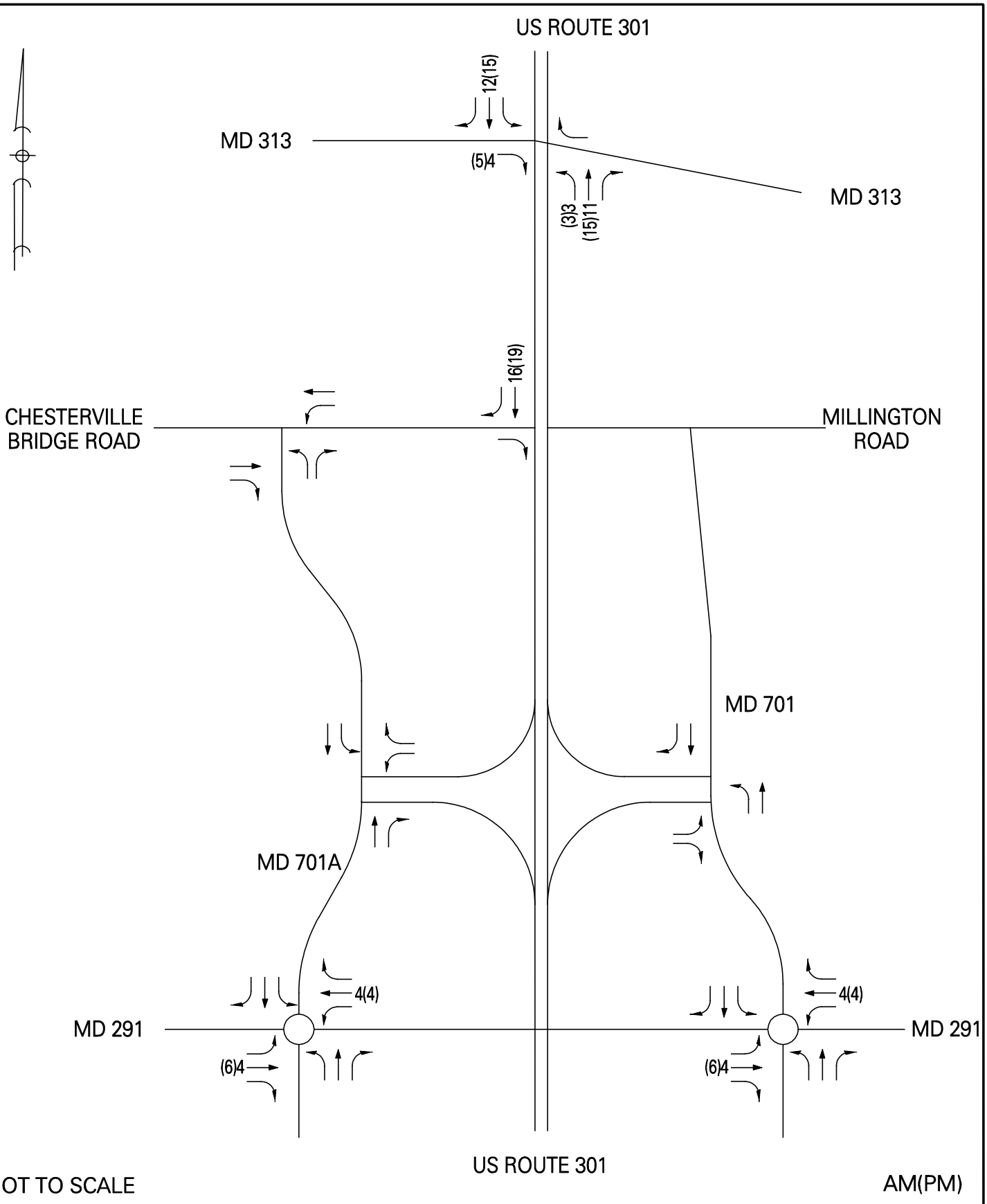

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EXHIBIT 4

Projected Growth Rates

(2% for Two Years)

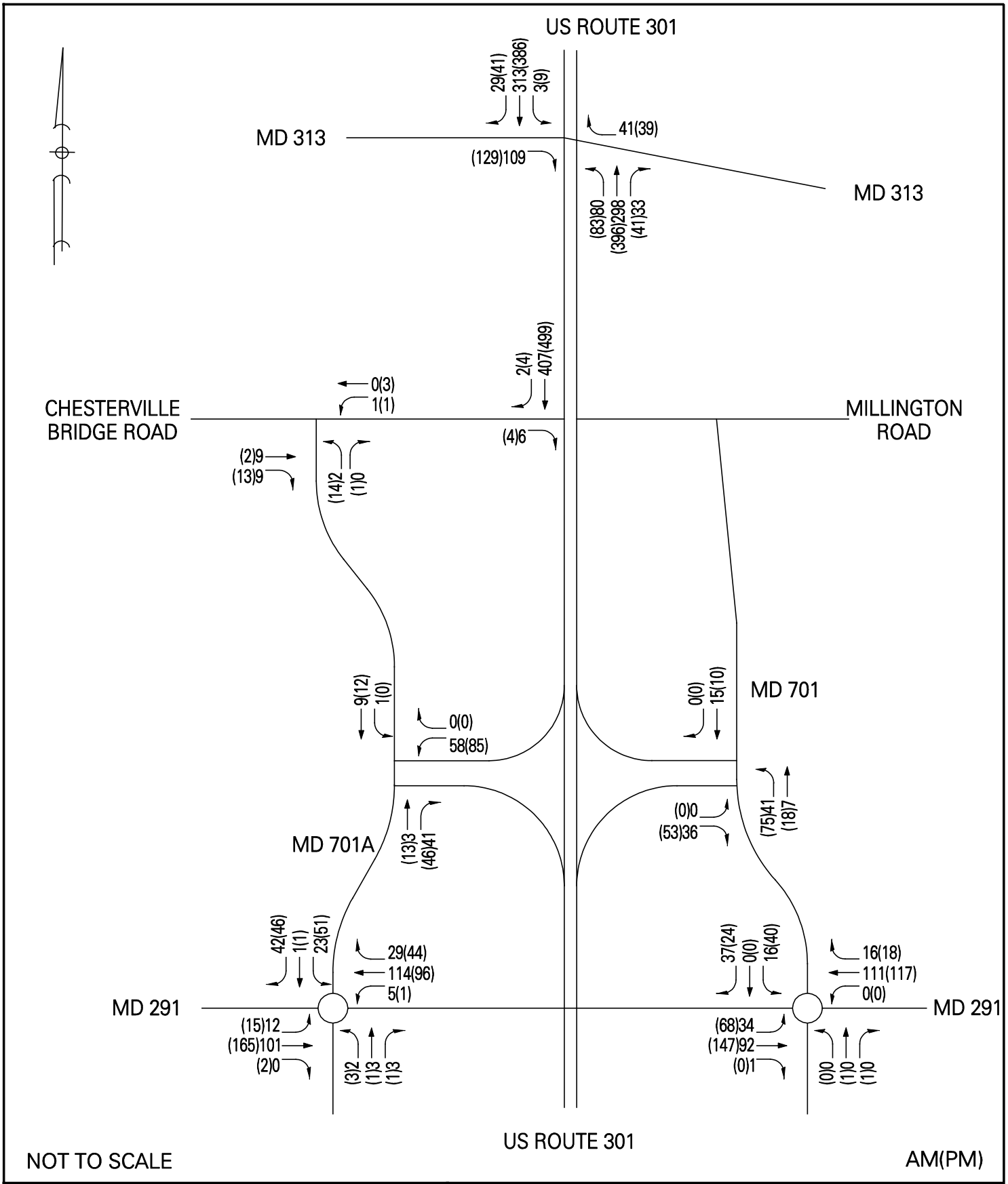

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EXHIBIT 5

Background Traffic Volumes

FUTURE CONDITION

The future traffic condition determines the new peak hour trips generated by 513,848 gsf of warehousing. The new site trips were generated with data contained in the Institute of Transportation Engineers' (ITE), Trip Generation Manual, 11th Edition. The ITE trip data are provided in Appendix V.

SITE TRIPS:

	AM		PM	
	IN	**OUT**	**IN**	**OUT**
Warehousing				
ITE Land Use Code 150				
513.85k gsf				
New Truck Trips*	8	2	4	11
New Car Trips*	58	17	20	53
Total New Trips	**66**	**19**	**24**	**64**

*The distribution between truck and car trips was taken from the ITE Trip Distribution Data Plots for Trucks using the Peak AM and PM graphs and are located in Appendix V.

The new site trips distribution patterns shown on Exhibit 6 and Exhibit 7 and are based on the existing traffic pattern and information contained and approved traffic studies. The total future traffic volumes (Exhibit 8) were generated by adding the new site trips to the total background trips (Exhibit 5). The key intersections were analyzed with the total future traffic volumes, as reported below and on the following page. The CLV, HCM and SIDRA reports are included in Appendix I, II and III. Autoturn exhibits can be found in Appendix VI and show future truck traffic will be able to safely use the existing roundabouts with no modifications.

CRITICAL LANE ANALYSIS

	AM CLV(LOS)	PM CLV(LOS)
US 301 @ MD 313	383(A)	437(A)
SB US 301 @ Chesterville Bridge Road	238(A)	281(A)
SB US 301 @ MD 701A Ramps	161(A)	183(A)
NB US 301 @ MD 701 Ramps	124(A)	193(A)
Chesterville Bridge Road @ MD 701A	35(A)	35(A)
Chesterville Bridge Road @ North Building Truck Access	23(A)	24(A)
MD 701A @ North Building Car Access	45(A)	66(A)
MD 701A @ South Building Truck Access	39(A)	53(A)
MD 701A @ South Building Car Access	65(A)	83(A)

HIGHWAY CAPACITY MANUAL, UNSIGNALIZED INTERSECTION (TWSC)

US 301 @ MD 313

	Approach LOS AM(PM)
Eastbound	B(B)
Westbound	A(A)
Northbound	A(A)
Southbound	A(A)

SIDRA ROUNDABOUT ANYLSYS

US 291 @ MD 701A

Overall LOS
AM(PM)

A(A)

US 291 @ MD 701

Overall LOS
AM(PM)

A(A)

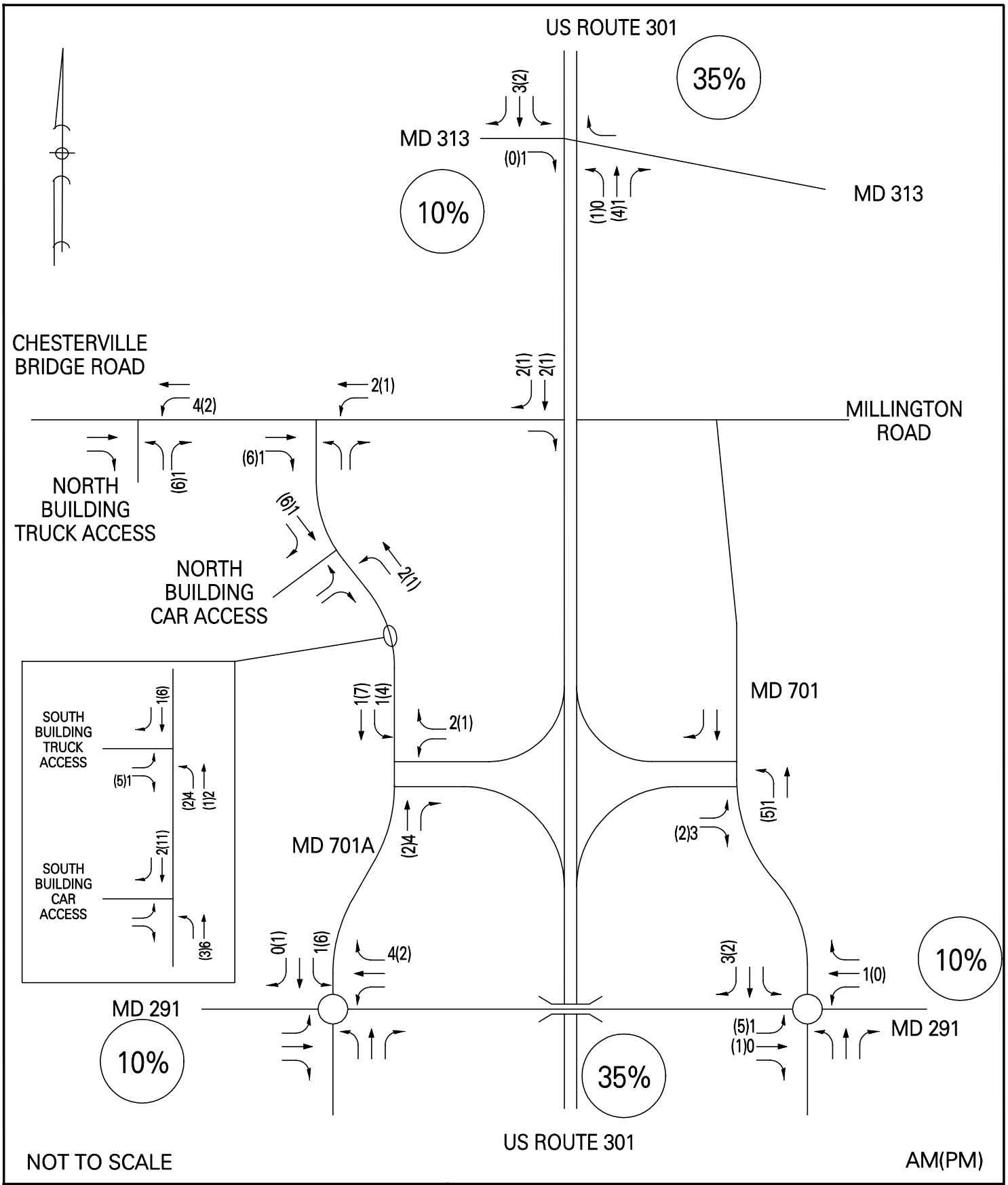

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EXHIBIT 6

Site Generated Traffic - Trucks

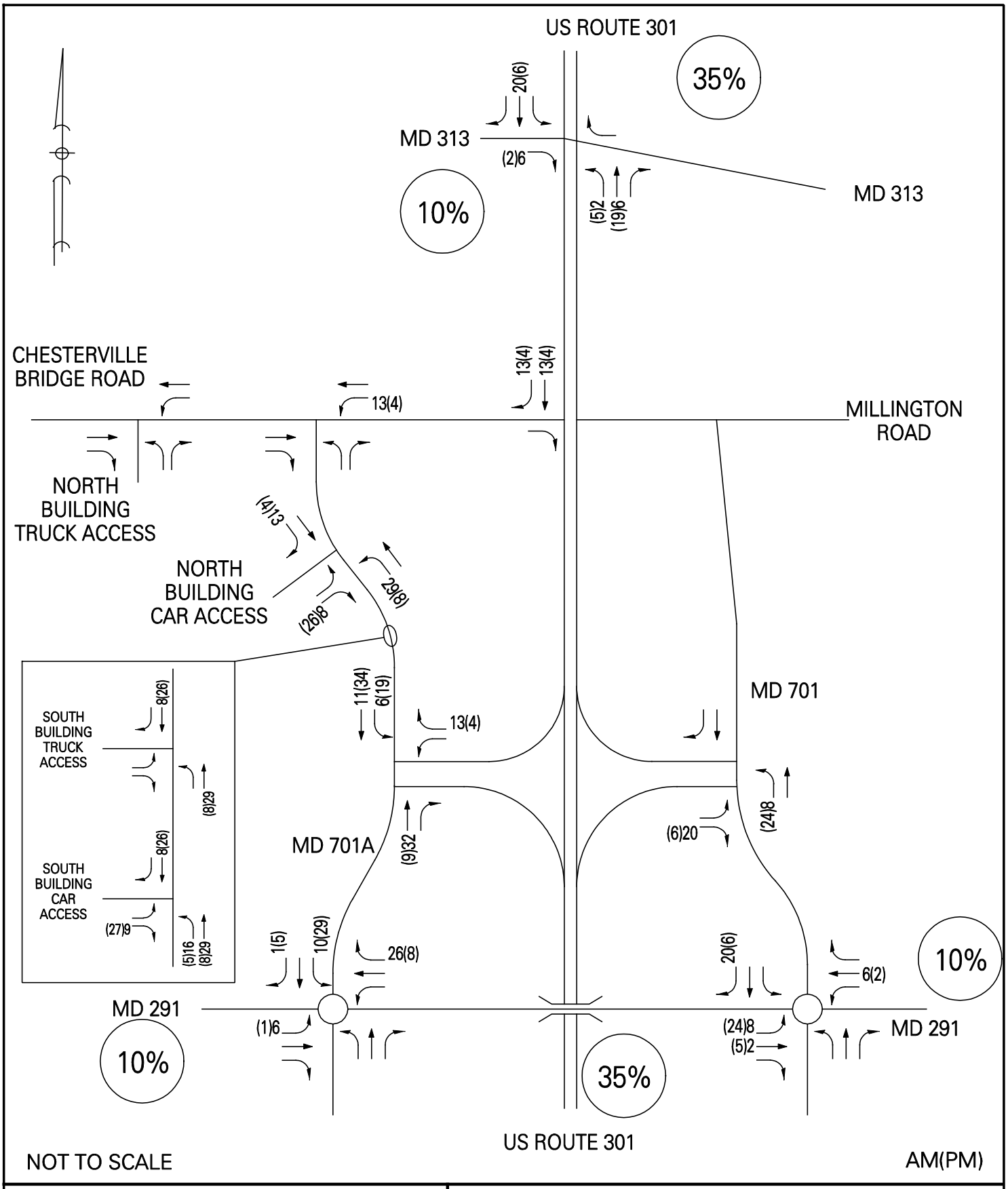

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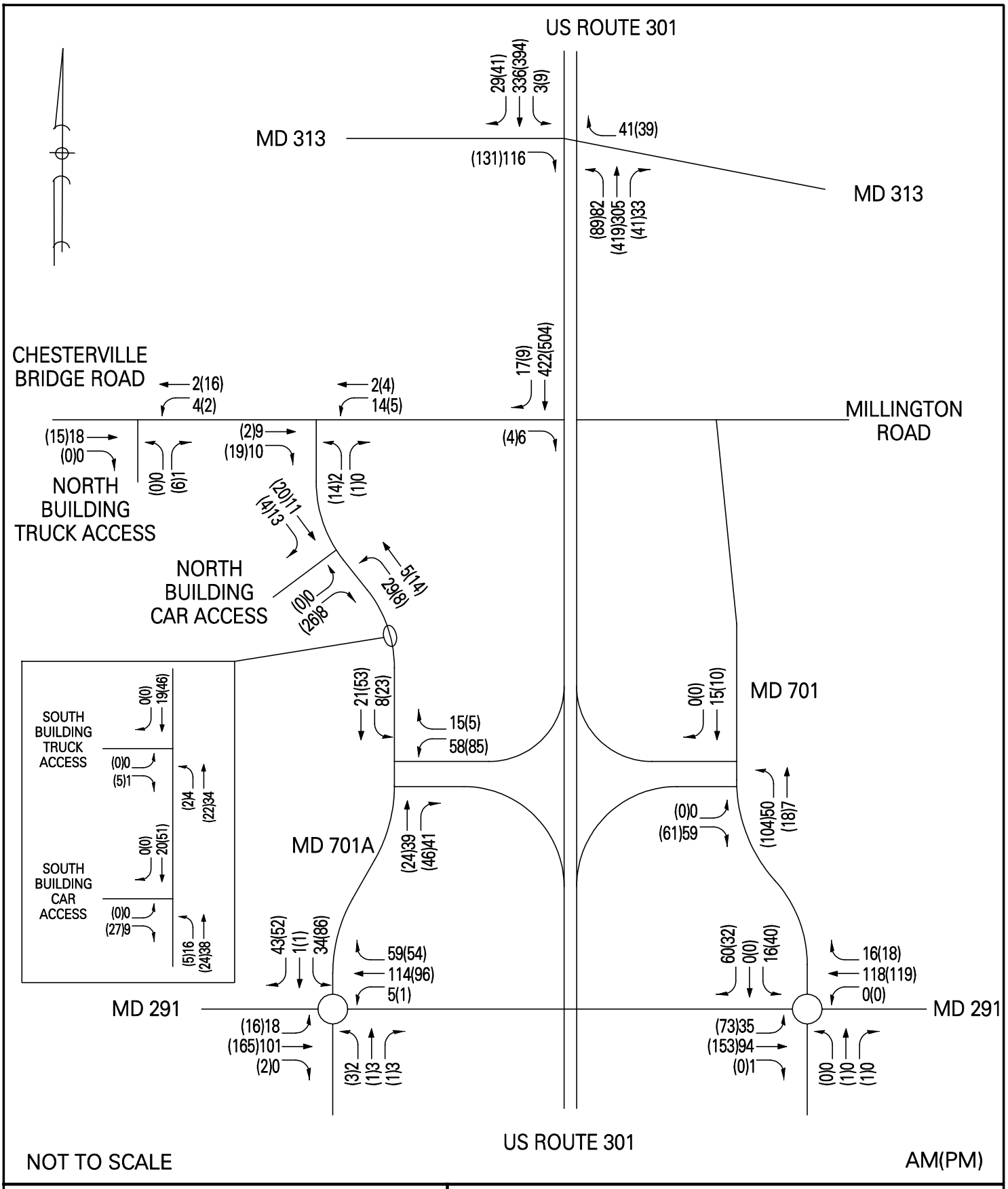
EXHIBIT 7

Site Generated Traffic - Passenger Cars



TRAFFIC CONCEPTS, INC. 7525 Connelley Drive Suite B Hanover, Maryland 21076 410-760-2911	EXHIBIT 8 Total Future Traffic Volumes

Queuing Analysis

A queuing analysis was also conducted for the northbound left turn movement at the US 301 at MD 313 unsignalized intersection. The SHA 95th Percentile Back-of-Queue formula was used to generate vehicle queues for the total future traffic volumes.

SHA Formula - $\frac{\text{Volume x Cycle Length}}{3600}$ x 1.4 X 25' = Queue

US 40 @ Site Access (Unsignalized)

Eastbound Left

AM Peak = [(82 x 1.0) x 90)]/3600 X 1.4 X 25' = 72'
PM Peak = [(89 x 1.0) x 90)]/3600 X 1.4 X 25' = 78'

Storage Length = 1500'

CONCLUSIONS AND RECOMMENDATIONS

The Critical Lane Volume (CLV) results show that all of the study intersections would operate at “A” levels of service under the total future traffic condition. The Highway Capacity Manual (HCM) analysis determined the key intersections would operate with adequate “B” or better conditions levels of service (LOS) at projected future traffic conditions. Sidra analysis determined the key roundabouts would operate at “A” levels of service under the total future traffic condition. Additionally, the queuing analyses show adequate storage is available at the key intersection where left turn bays exist.

Therefore, based on the study results, we recommend approval of this development from a traffic impact standpoint.

APPENDIX I
CLV CALCULATIONS

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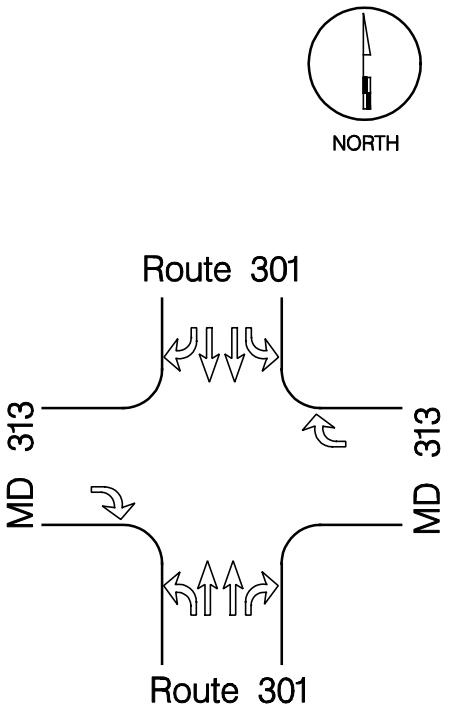
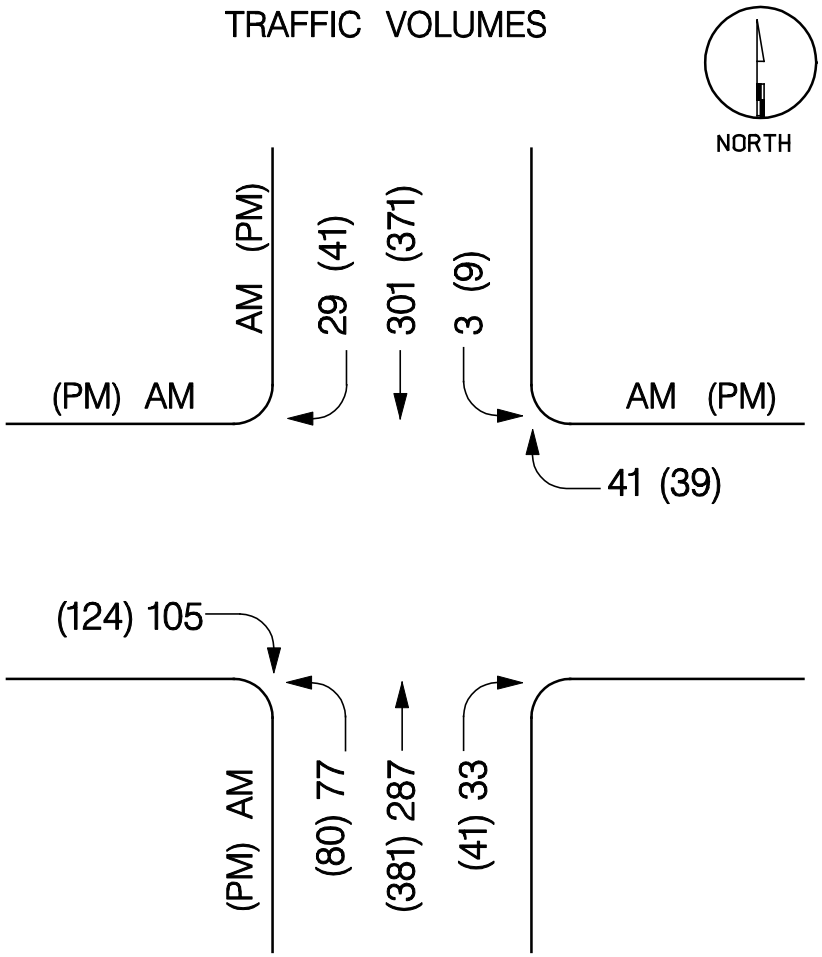
LANE CONFIGURATION



TRAFFIC VOLUMES



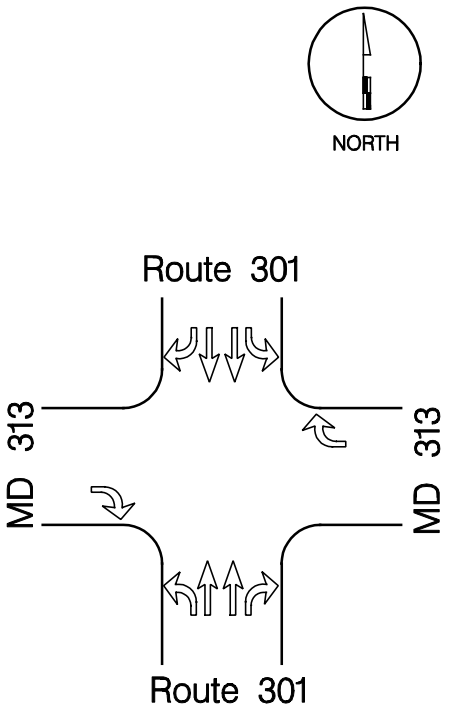
		TOTAL VOLUME	*	LUF	+	OPPOSING LEFTS	*	LUF	=	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	287	*	0.55	+	3	*	1	=	161	
	SB	301	*	0.55	+	77	*	1	=	243*	
	EB	105	*	1					=	105*	A
	WB	41	*	1					=	41	348
PM	NB	381	*	0.55	+	9	*	1	=	219	
	SB	371	*	0.55	+	80	*	1	=	284*	
	EB	124	*	1					=	124*	A
	WB	39	*	1					=	39	408

CRITICAL LANE ANALYSIS

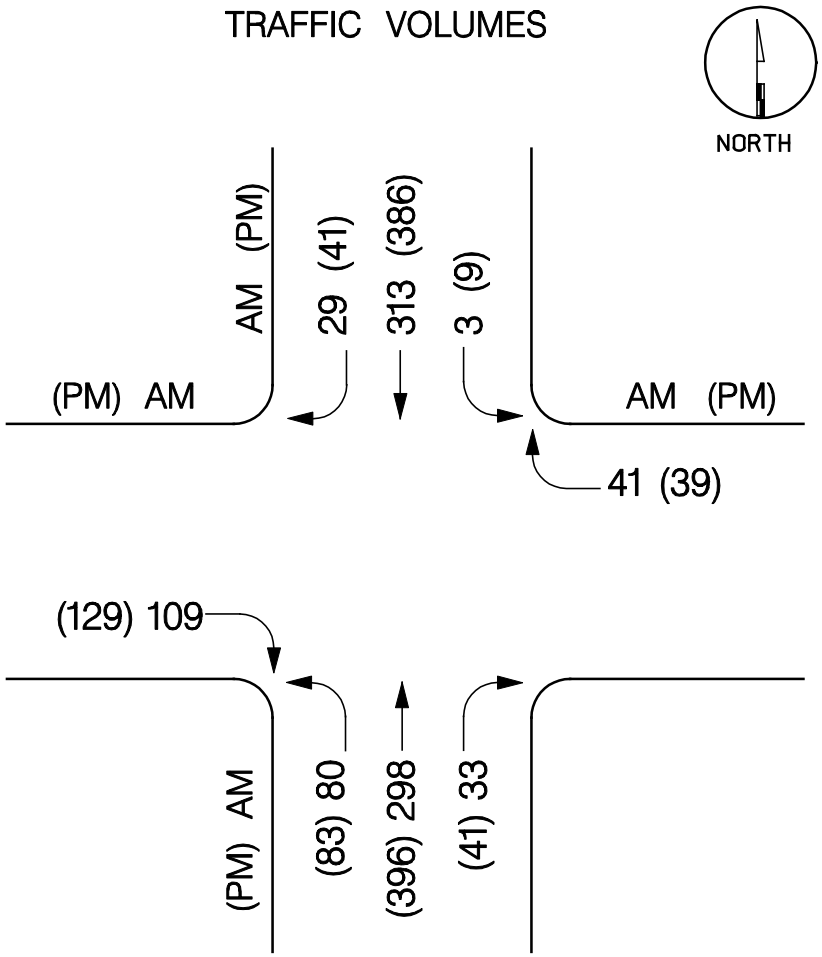
Prepared By: B. SCHMID Condition: EXISTING

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



TRAFFIC VOLUMES



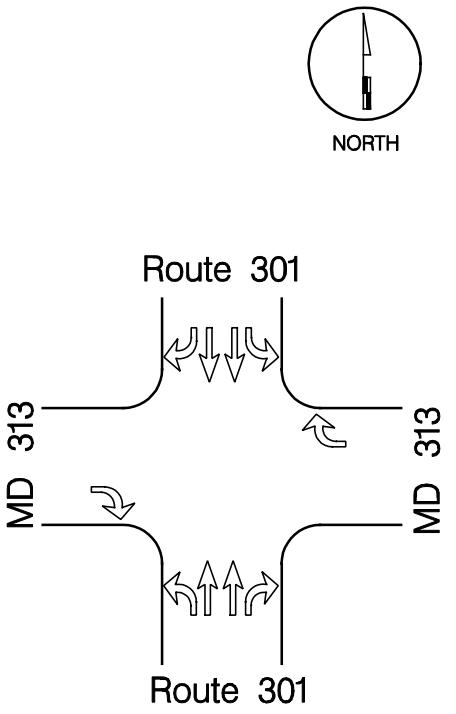
		TOTAL VOLUME	*	LUF	+	OPPOSING LEFTS	*	LUF	=	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	298	*	0.55	+	3	*	1	=	167	
	SB	313	*	0.55	+	80	*	1	=	252*	
	EB	109	*	1					=	109*	A
	WB	41	*	1					=	41	361
PM	NB	396	*	0.55	+	9	*	1	=	227	
	SB	386	*	0.55	+	83	*	1	=	295*	
	EB	129	*	1					=	129*	A
	WB	39	*	1					=	39	424

CRITICAL LANE ANALYSIS

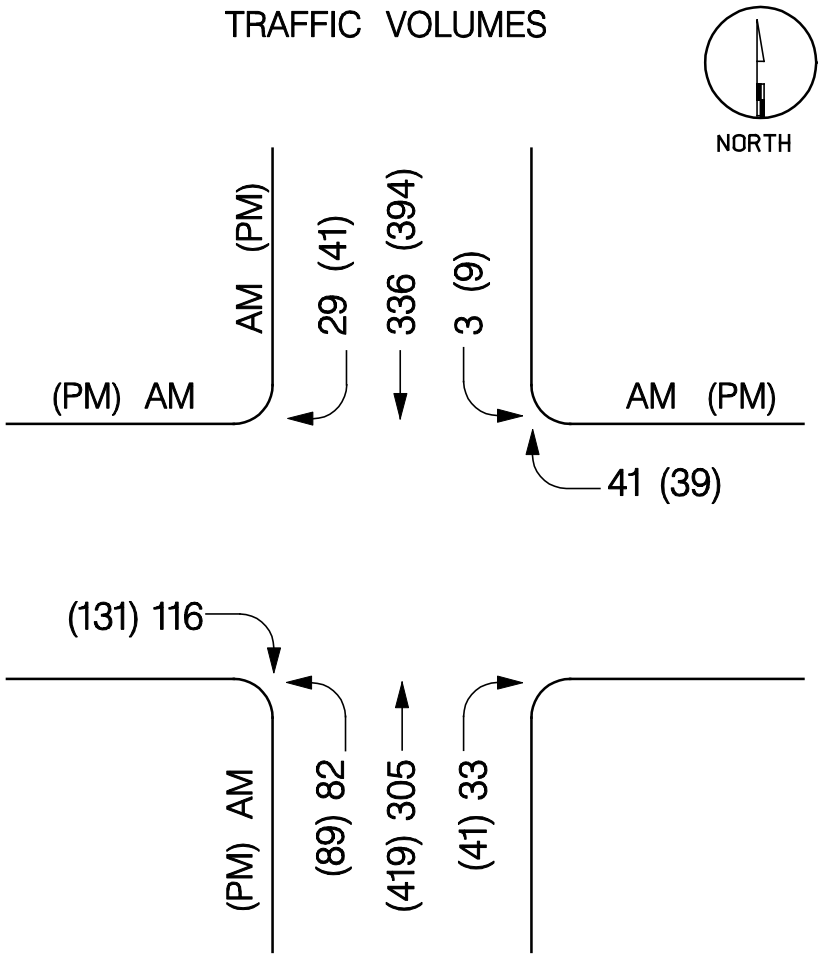
Prepared By: B. SCHMID Condition: BACKGROUND

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



TRAFFIC VOLUMES



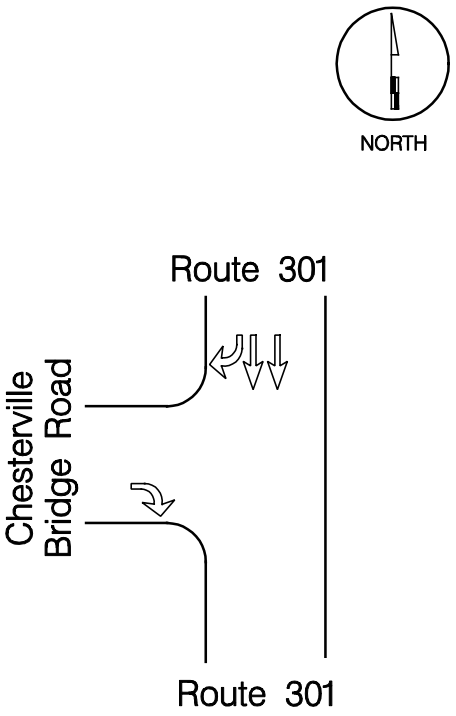
		TOTAL VOLUME * LUF			+	OPPOSING LEFTS * LUF			=	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	305	*	0.55	+	3	*	1	=	171	
	SB	336	*	0.55	+	82	*	1	=	267*	
	EB	116	*	1					=	116*	A
	WB	41	*	1					=	41	383
PM	NB	419	*	0.55	+	9	*	1	=	239	
	SB	394	*	0.55	+	89	*	1	=	306*	
	EB	131	*	1					=	131*	A
	WB	39	*	1					=	39	437

CRITICAL LANE ANALYSIS

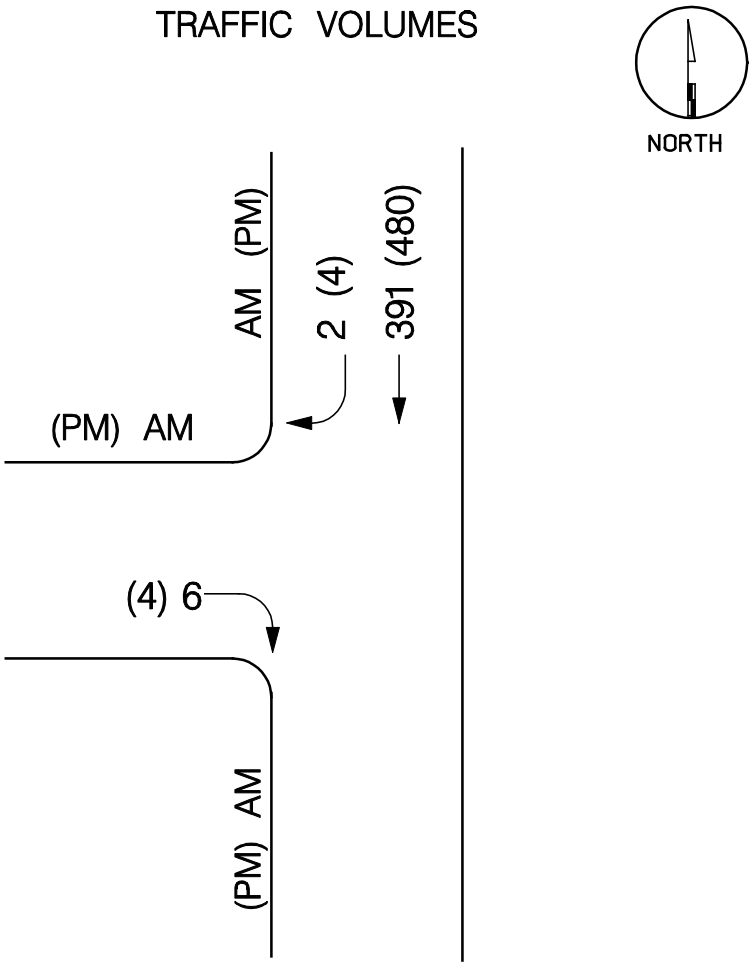
Prepared By: B. SCHMID Condition: FUTURE

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



TRAFFIC VOLUMES



		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =		CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB				
	SB	391 * 0.55	=	215*	
	EB	6 * 1	=	6*	A
	WB				221
PM	NB				
	SB	480 * 0.55	=	264*	
	EB	4 * 1	=	4*	B
	WB				268

CRITICAL LANE ANALYSIS

Prepared By: B. SCHMID Condition: EXISTING

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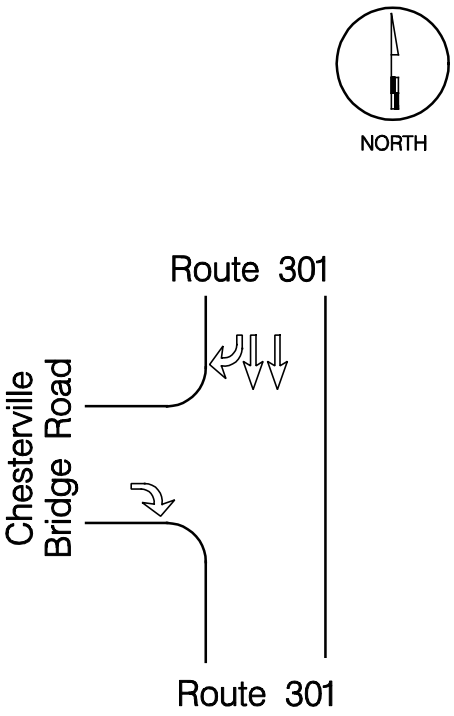
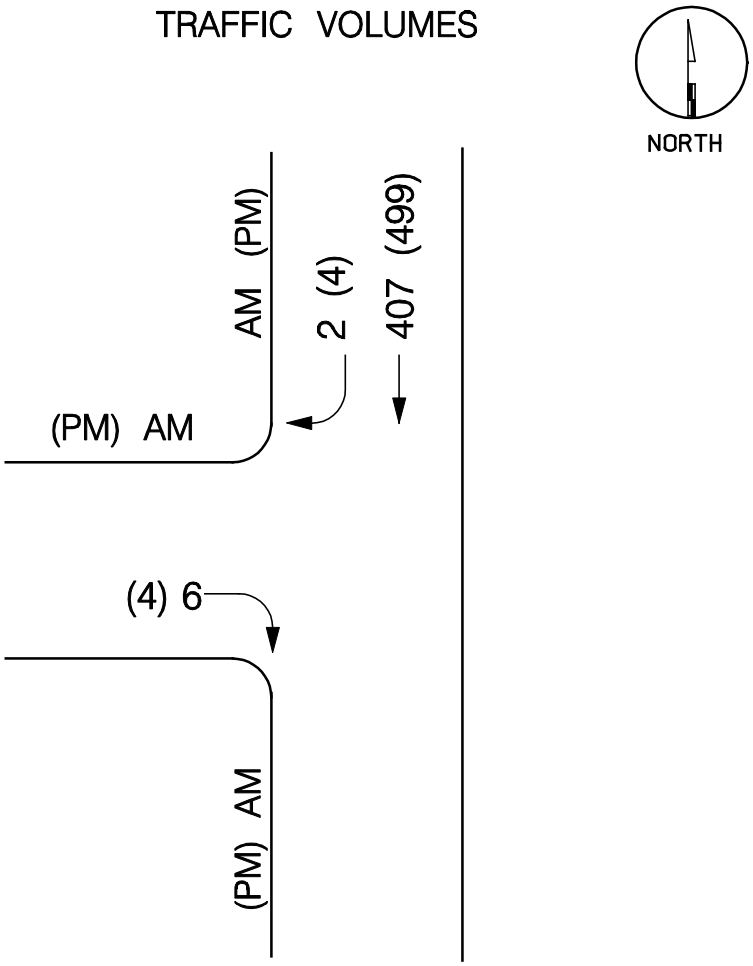
LANE CONFIGURATION



TRAFFIC VOLUMES



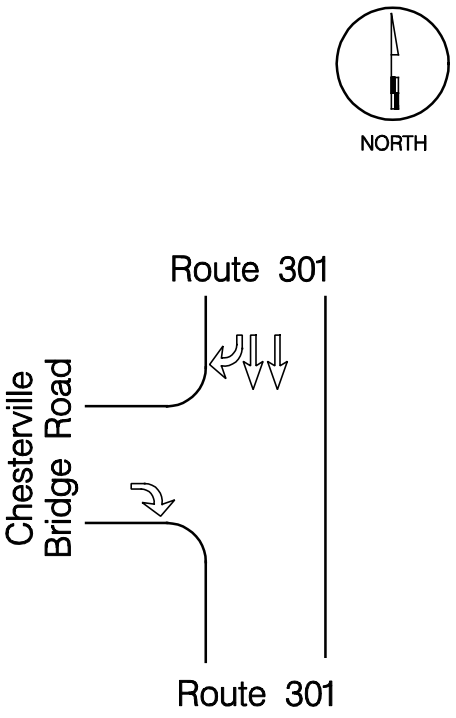
		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =		CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB				
	SB	407 * 0.55	=	224*	
	EB	6 * 1	=	6*	A
	WB				230
PM	NB				
	SB	499 * 0.55	=	274*	
	EB	4 * 1	=	4*	B
	WB				278

CRITICAL LANE ANALYSIS

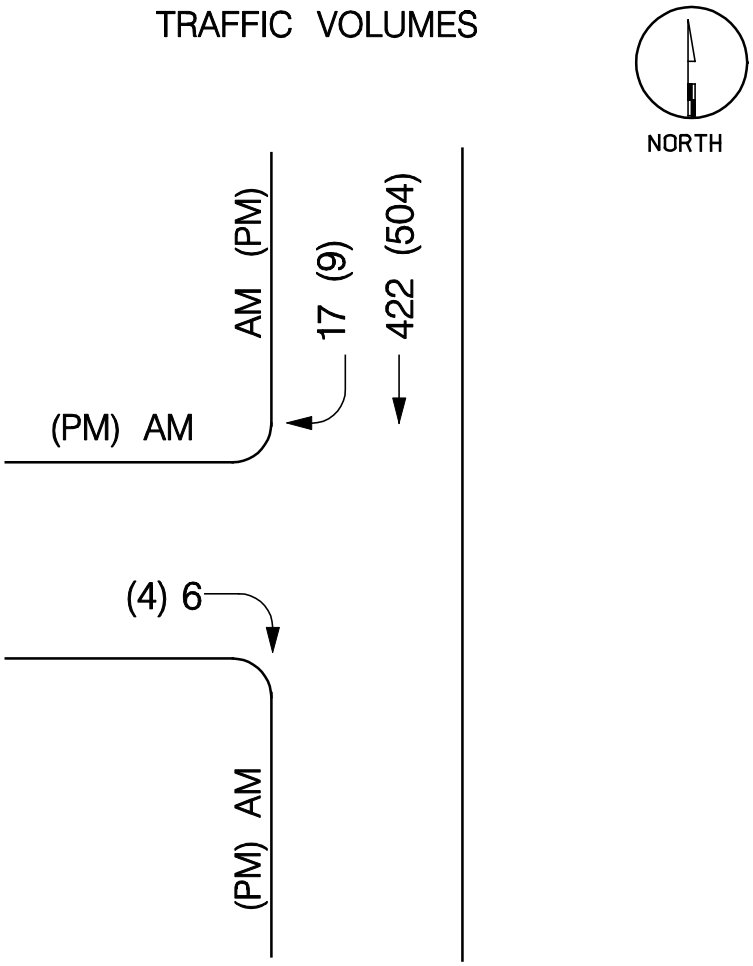
Prepared By: B. SCHMID Condition: BACKGROUND

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



TRAFFIC VOLUMES



		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =		CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB				
	SB	422 * 0.55	=	232*	
	EB	6 * 1	=	6*	A
	WB				238
PM	NB				
	SB	504 * 0.55	=	277*	
	EB	4 * 1	=	4*	B
	WB				281

CRITICAL LANE ANALYSIS

Prepared By: B. SCHMID Condition: FUTURE

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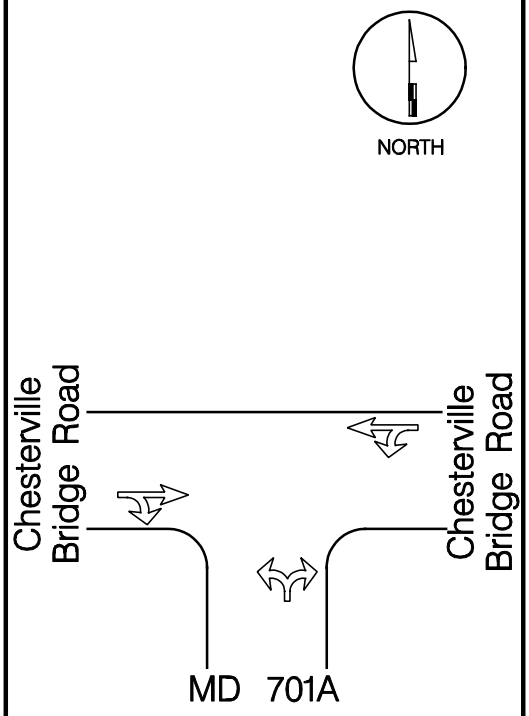
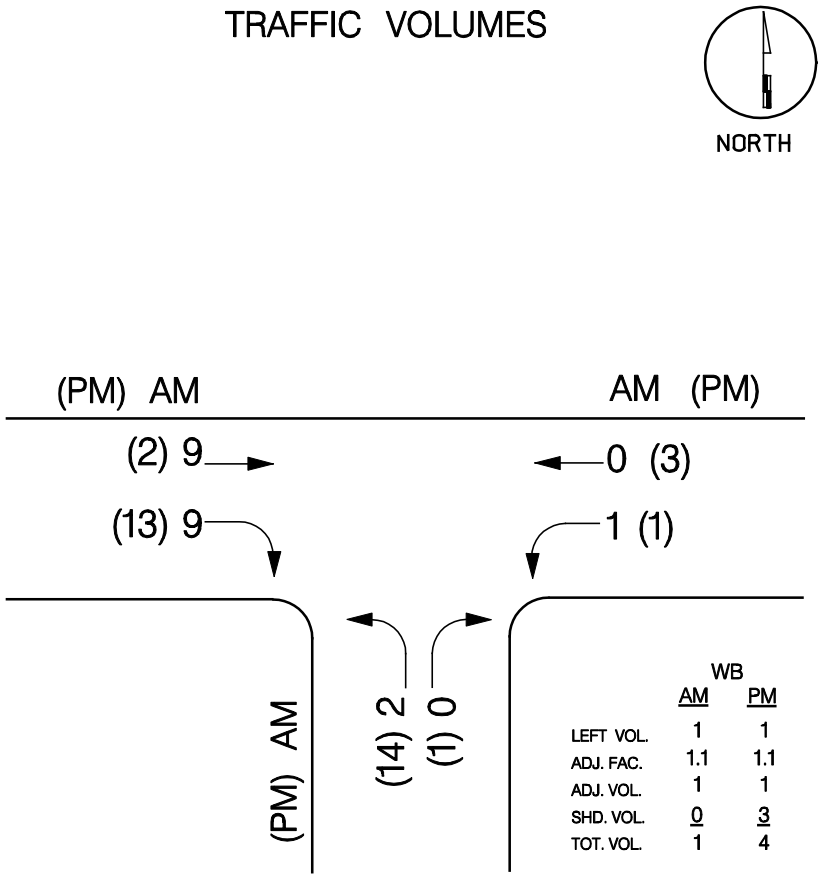
LANE CONFIGURATION



TRAFFIC VOLUMES



	WB AM	WB PM
LEFT VOL.	1	1
ADJ. FAC.	1.1	1.1
ADJ. VOL.	1	1
SHD. VOL.	0	3
TOT. VOL.	1	4

		TOTAL VOLUME * LUF			+	OPPOSING LEFTS * LUF			=	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	2	*	1					=	2*	
	SB				—				=	—	
	EB	(9+9)	*	1	+	1	*	1	=	19*	A
	WB	1	*	1						1	22
PM	NB	(14+1)	*	1					=	15*	
	SB				—				=	—	
	EB	(2+13)	*	1	+	1	*	1	=	16*	A
	WB	4	*	1						4	31

CRITICAL LANE ANALYSIS

Prepared By: B. SCHMID Condition: EXISTING

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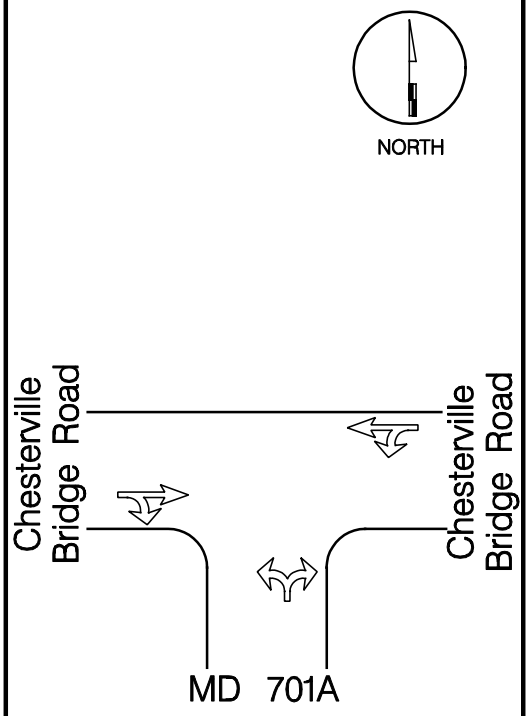
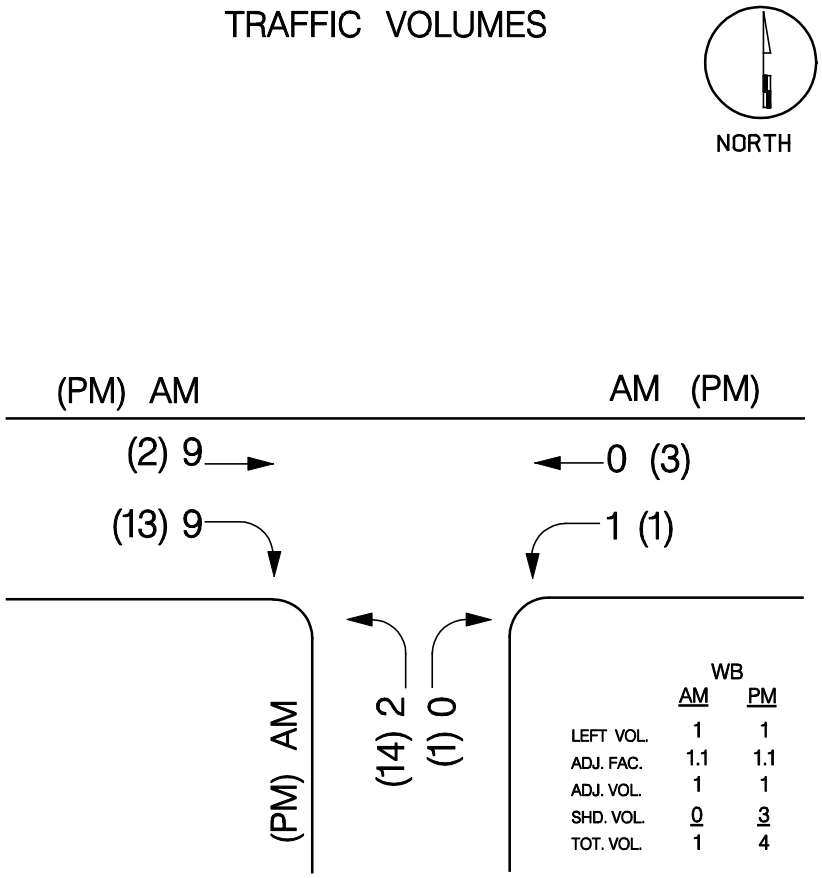
LANE CONFIGURATION



TRAFFIC VOLUMES



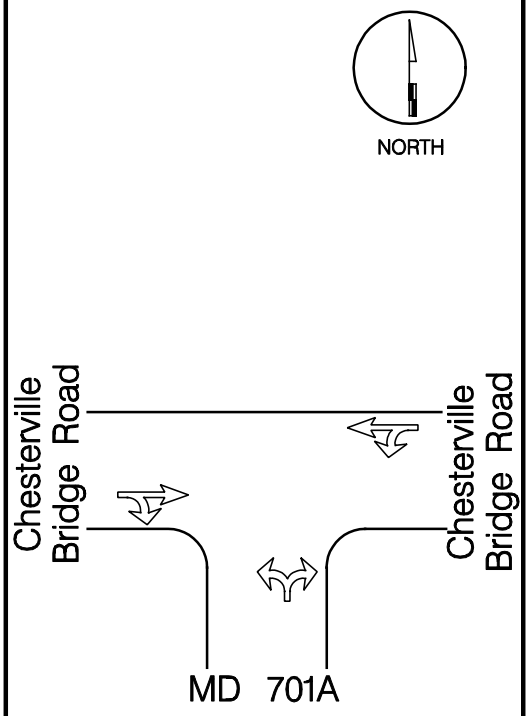
		TOTAL VOLUME * LUF			+	OPPOSING LEFTS * LUF			=	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	2	*	1					=	2*	
	SB				—				=	—	
	EB	(9+9)	*	1	+	1	*	1	=	19*	A
	WB	1	*	1						1	22
PM	NB	(14+1)	*	1					=	15*	
	SB				—				=	—	
	EB	(2+13)	*	1	+	1	*	1	=	16*	A
	WB	4	*	1						4	31

CRITICAL LANE ANALYSIS

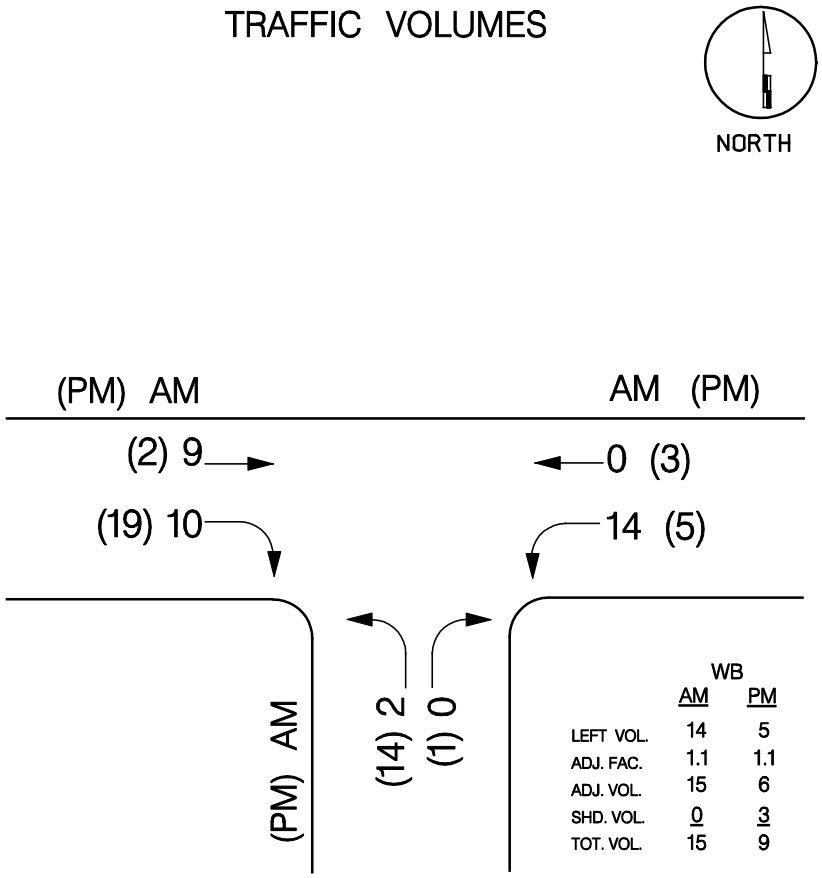
Prepared By: B. SCHMID Condition: BACKGROUND

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



TRAFFIC VOLUMES



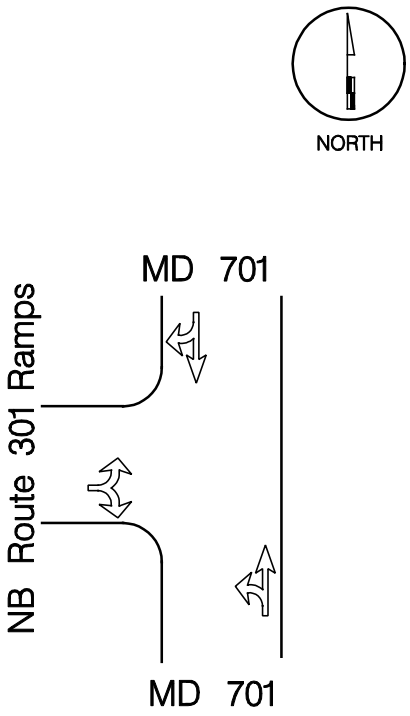
		TOTAL VOLUME * LUF			+	OPPOSING LEFTS * LUF			=	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	2	*	1					=	2*	
	SB				—				=	—	
	EB	(9+10)	*	1	+	14	*	1	=	33*	A
	WB	15	*	1						15	35
PM	NB	(14+1)	*	1					=	15*	
	SB				—				=	—	
	EB	(2+13)	*	1	+	5	*	1	=	20*	A
	WB	9	*	1						9	35

CRITICAL LANE ANALYSIS

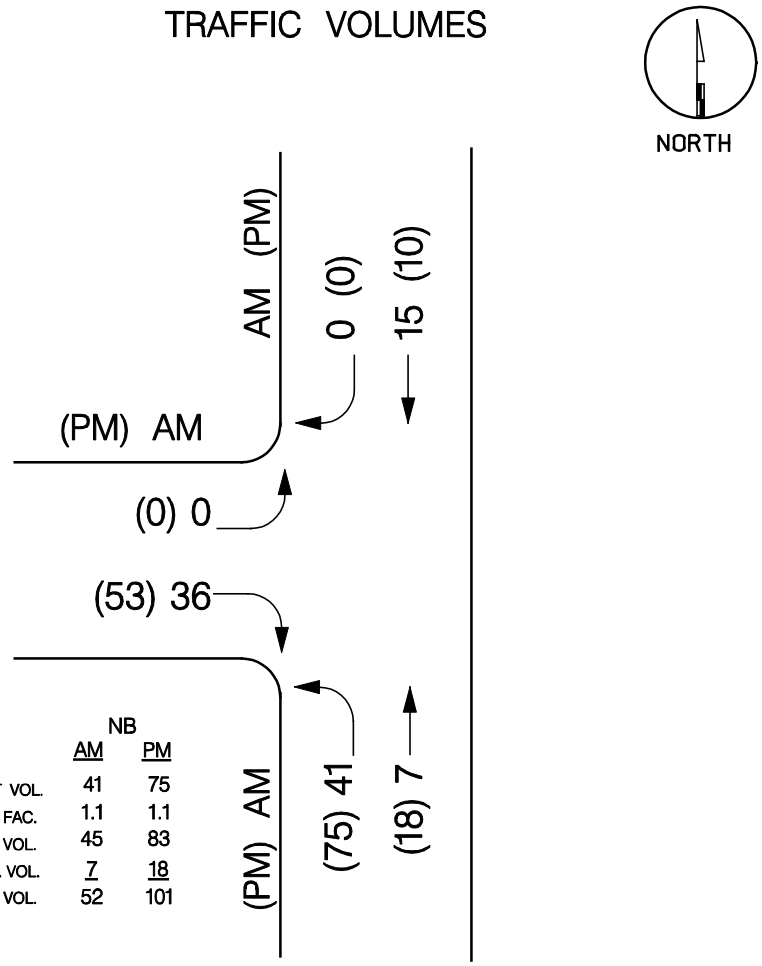
Prepared By: B. SCHMID Condition: FUTURE

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



TRAFFIC VOLUMES



NB

	AM	PM
LEFT VOL.	41	75
ADJ. FAC.	1.1	1.1
ADJ. VOL.	45	83
SHD. VOL.	7	18
TOT. VOL.	52	101

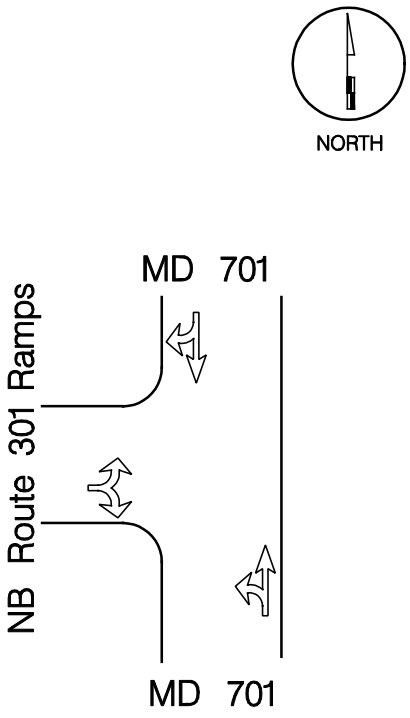
		TOTAL VOLUME * LUF			+	OPPOSING LEFTS * LUF			=	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	52	*	1					=	52	
	SB	15	*	1	+	41	*	1	=	56*	
	EB	36	*	1					=	36*	A
	WB				—					—	92
PM	NB	101	*	1					=	101*	
	SB	10	*	1	+	75	*	1	=	85	
	EB	53	*	1					=	53*	A
	WB				—					—	154

CRITICAL LANE ANALYSIS

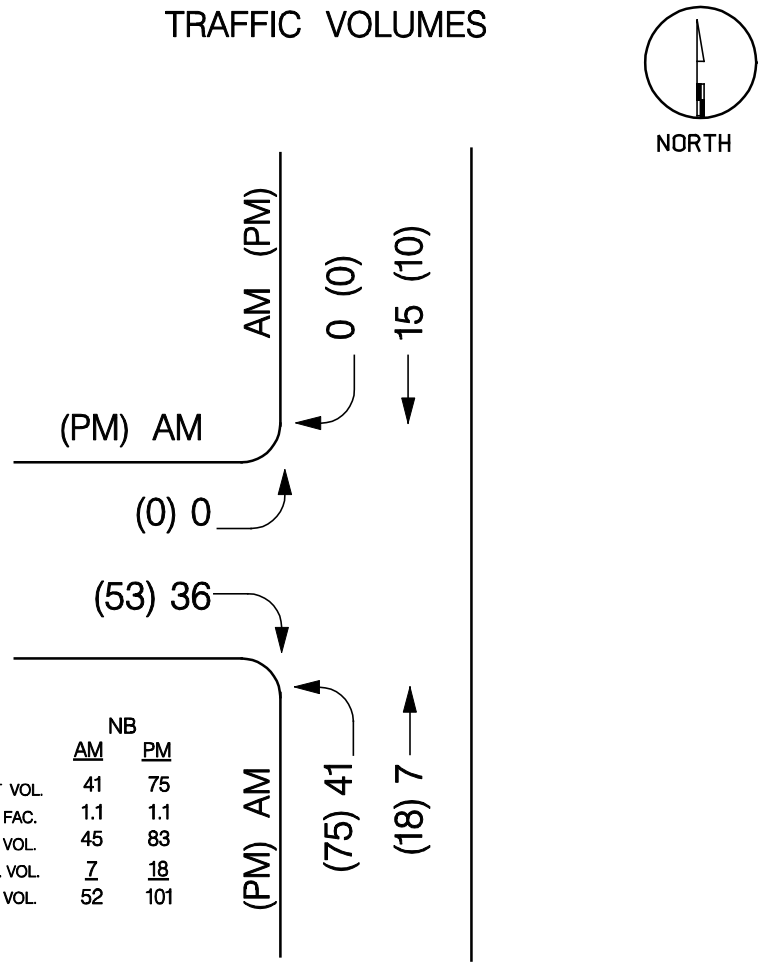
Prepared By: B. SCHMID Condition: EXISTING

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



TRAFFIC VOLUMES



NB

	AM	PM
LEFT VOL.	41	75
ADJ. FAC.	1.1	1.1
ADJ. VOL.	45	83
SHD. VOL.	7	18
TOT. VOL.	52	101

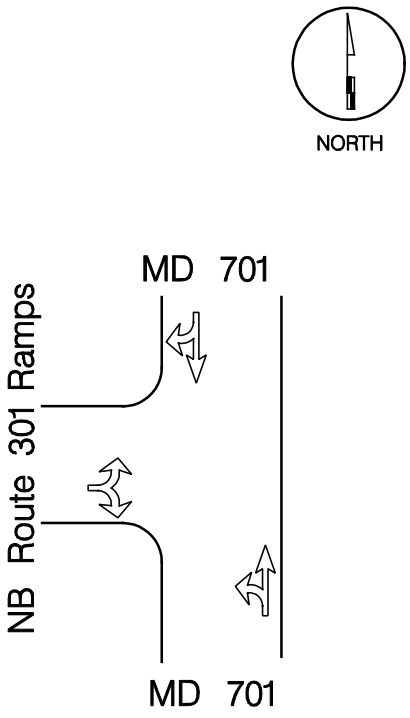
		TOTAL VOLUME * LUF			+	OPPOSING LEFTS * LUF			=	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	52	*	1					=	52	
	SB	15	*	1	+	41	*	1	=	56*	
	EB	36	*	1					=	36*	A
	WB				—					—	92
PM	NB	101	*	1					=	101*	
	SB	10	*	1	+	75	*	1	=	85	
	EB	53	*	1					=	53*	A
	WB				—					—	154

CRITICAL LANE ANALYSIS

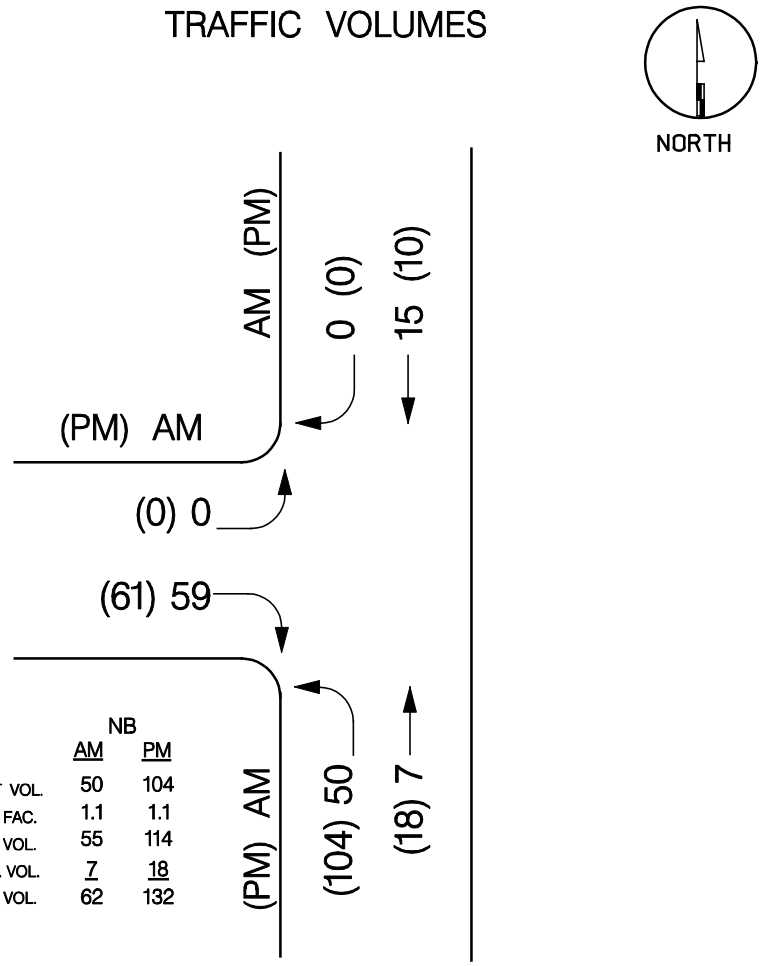
Prepared By: B. SCHMID Condition: BACKGROUND

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



TRAFFIC VOLUMES



NB

	AM	PM
LEFT VOL.	50	104
ADJ. FAC.	1.1	1.1
ADJ. VOL.	55	114
SHD. VOL.	7	18
TOT. VOL.	62	132

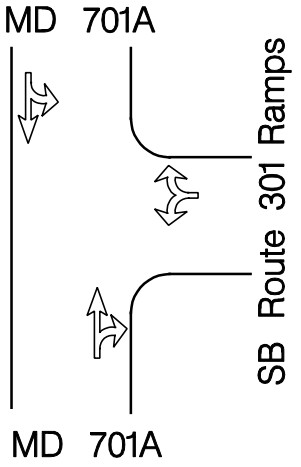
		TOTAL VOLUME * LUF			+	OPPOSING LEFTS * LUF			=	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	62	*	1					=	62	
	SB	15	*	1	+	50	*	1	=	65*	
	EB	59	*	1					=	59*	A
	WB				—					—	124
PM	NB	132	*	1					=	132*	
	SB	10	*	1	+	104	*	1	=	114	
	EB	61	*	1					=	61*	A
	WB				—					—	193

CRITICAL LANE ANALYSIS

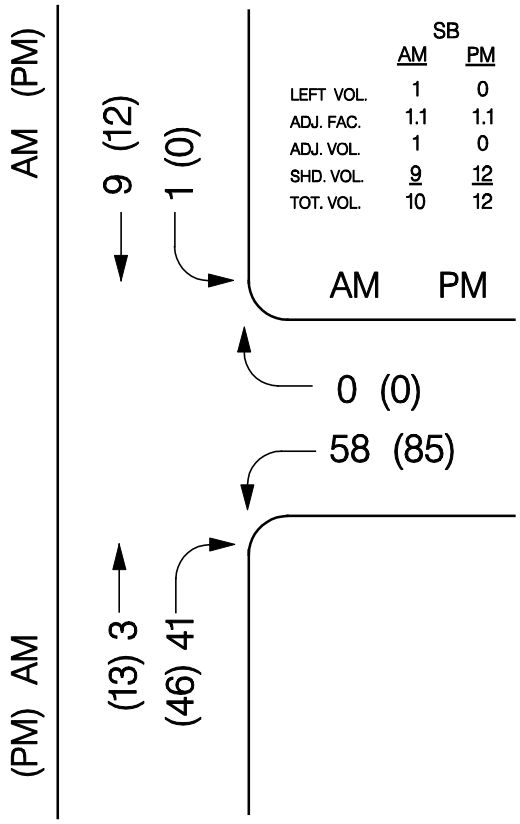
Prepared By: B. SCHMID Condition: FUTURE

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



TRAFFIC VOLUMES



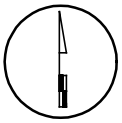
		TOTAL VOLUME * LUF			+	OPPOSING LEFTS * LUF			=	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	(3+41)	*	1	+	1	*	1	=	45*	
	SB	10	*	1					=	10	
	EB				—					—	A
	WB	58	*	1					=	58*	103
PM	NB	(13+46)	*	1	+	0	*	1	=	59*	
	SB	12	*	1					=	12	
	EB				—					—	A
	WB	85	*	1					=	85*	144

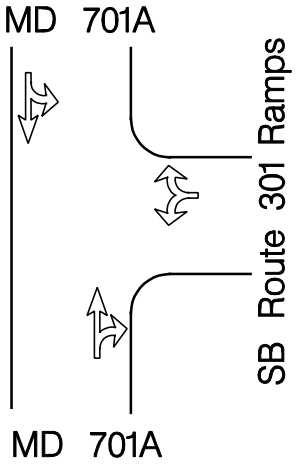
CRITICAL LANE ANALYSIS

Prepared By: B. SCHMID Condition: EXISTING

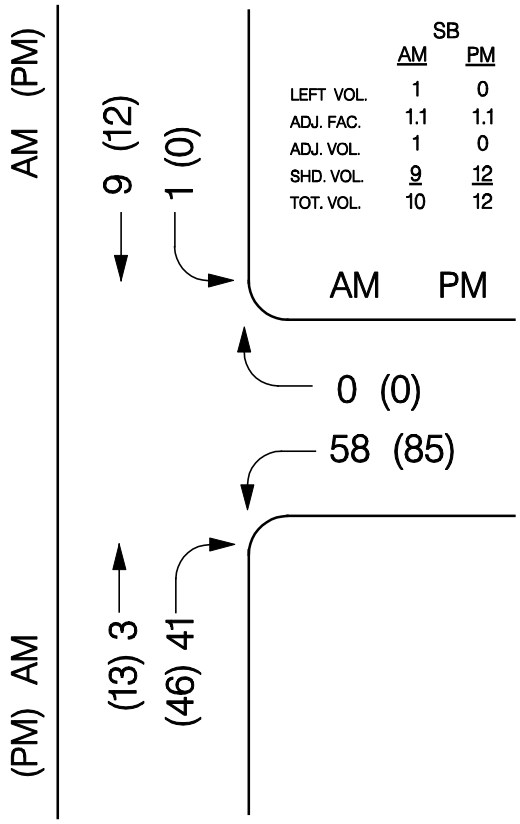
TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION





TRAFFIC VOLUMES



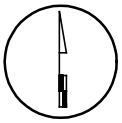
		TOTAL VOLUME * LUF			+	OPPOSING LEFTS * LUF			=	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	(3+41)	*	1	+	1	*	1	=	45*	
	SB	10	*	1					=	10	
	EB				—					—	A
	WB	58	*	1					=	58*	103
PM	NB	(13+46)	*	1	+	0	*	1	=	59*	
	SB	12	*	1					=	12	
	EB				—					—	A
	WB	85	*	1					=	85*	144

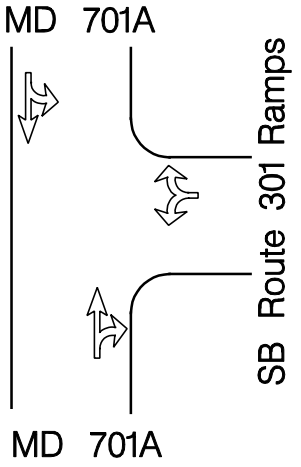
CRITICAL LANE ANALYSIS

Prepared By: B. SCHMID Condition: BACKGROUND

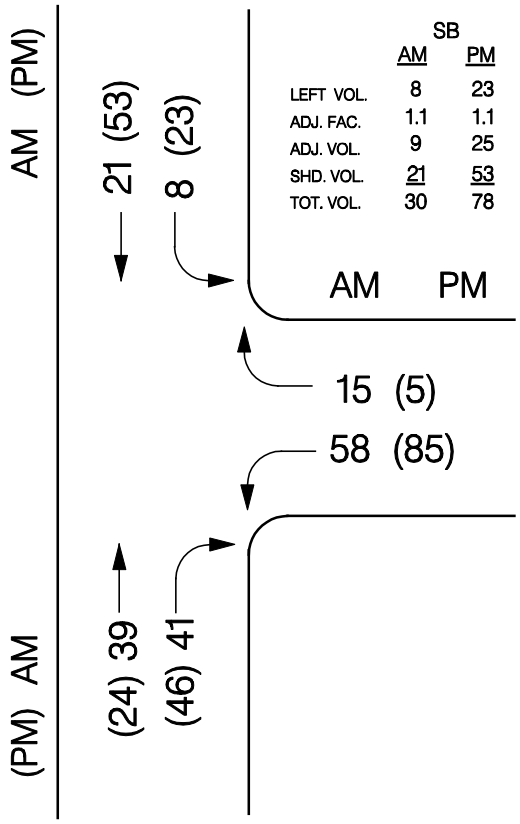
TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION





TRAFFIC VOLUMES



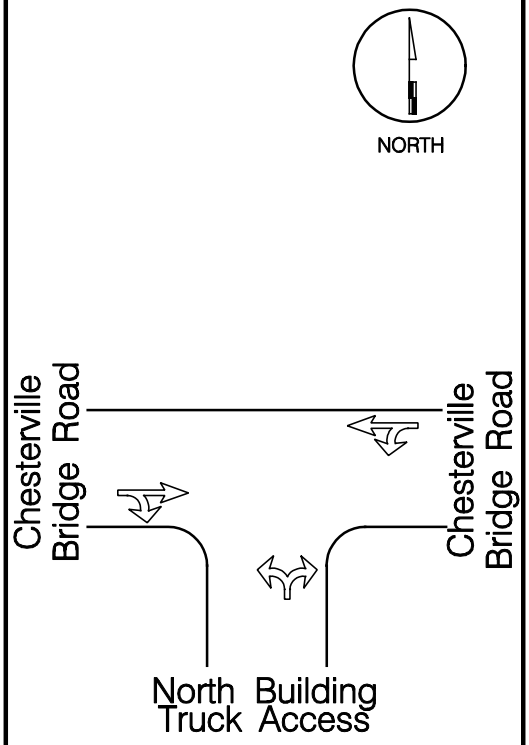
		TOTAL VOLUME * LUF			+	OPPOSING LEFTS * LUF			=	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	(39 + 41)	*	1	+	8	*	1	=	88*	
	SB	30	*	1					=	30	
	EB	—								—	A
	WB	(58 + 15)	*	1					=	73*	161
PM	NB	(24 + 46)	*	1	+	23	*	1	=	93*	
	SB	78	*	1					=	78	
	EB	—								—	A
	WB	(85 + 5)	*	1					=	90*	183

CRITICAL LANE ANALYSIS

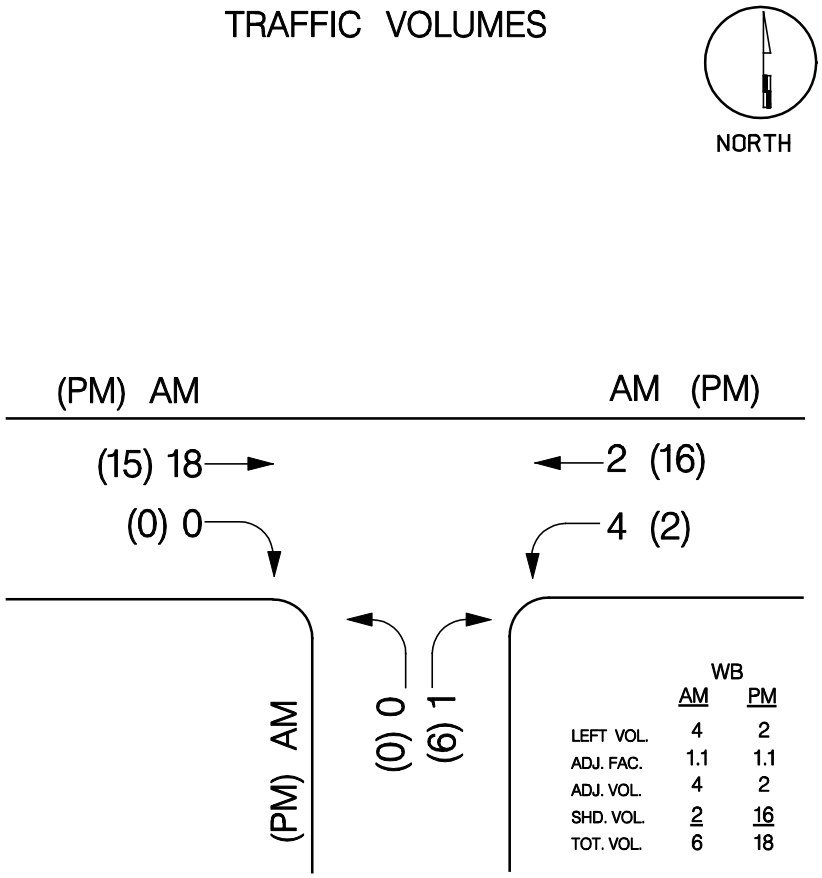
Prepared By: B. SCHMID Condition: FUTURE

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



TRAFFIC VOLUMES



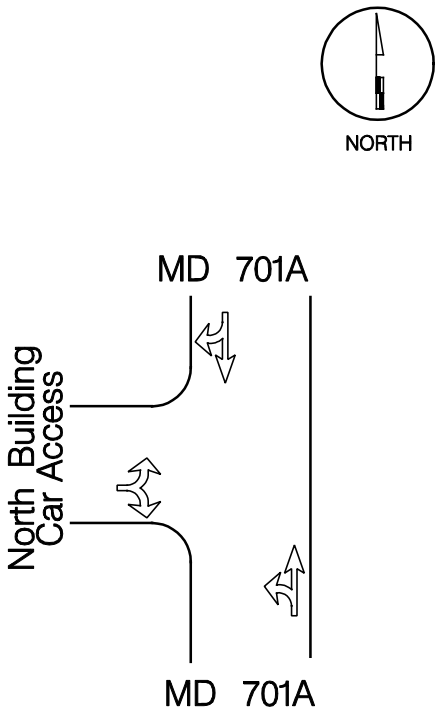
		TOTAL VOLUME * LUF			+	OPPOSING LEFTS * LUF			=	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	1	*	1					=	1*	
	SB				—				=	—	
	EB	18	*	1	+	4	*	1	=	22*	A
	WB	6	*	1						6	23
PM	NB	6	*	1					=	6*	
	SB				—				=	—	
	EB	15	*	1	+	2	*	1	=	17	A
	WB	18	*	1						18*	24

CRITICAL LANE ANALYSIS

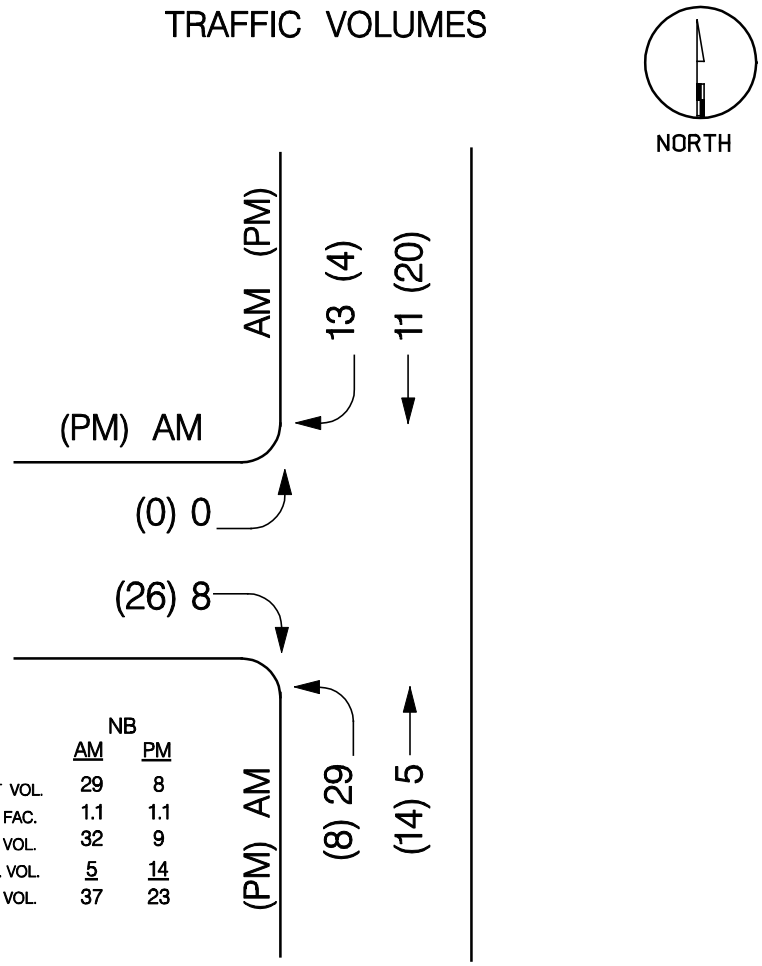
Prepared By: B. SCHMID Condition: FUTURE

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



TRAFFIC VOLUMES



NB	AM	PM
LEFT VOL.	29	8
ADJ. FAC.	1.1	1.1
ADJ. VOL.	32	9
SHD. VOL.	5	14
TOT. VOL.	37	23

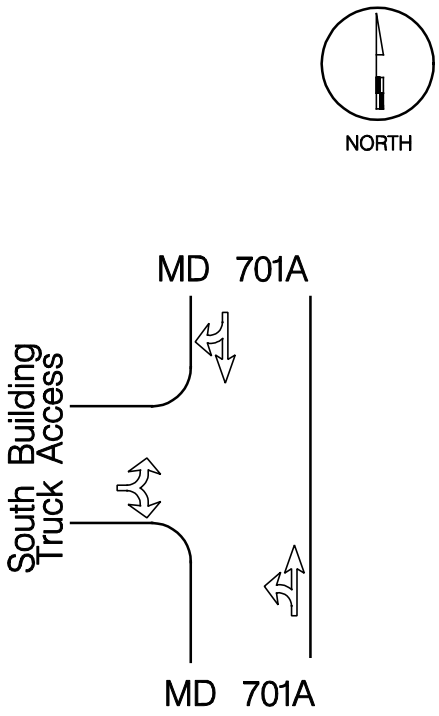
		TOTAL VOLUME * LUF			+	OPPOSING LEFTS * LUF			=	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	37	*	1					=	37*	
	SB	(20+4)	*	1	+	8	*	1	=	32	
	EB	8	*	1					=	8*	A
	WB				—					—	45
PM	NB	23	*	1					=	23	
	SB	(11+13)	*	1	+	26	*	1	=	40*	
	EB	26	*	1					=	26*	A
	WB				—					—	66

CRITICAL LANE ANALYSIS

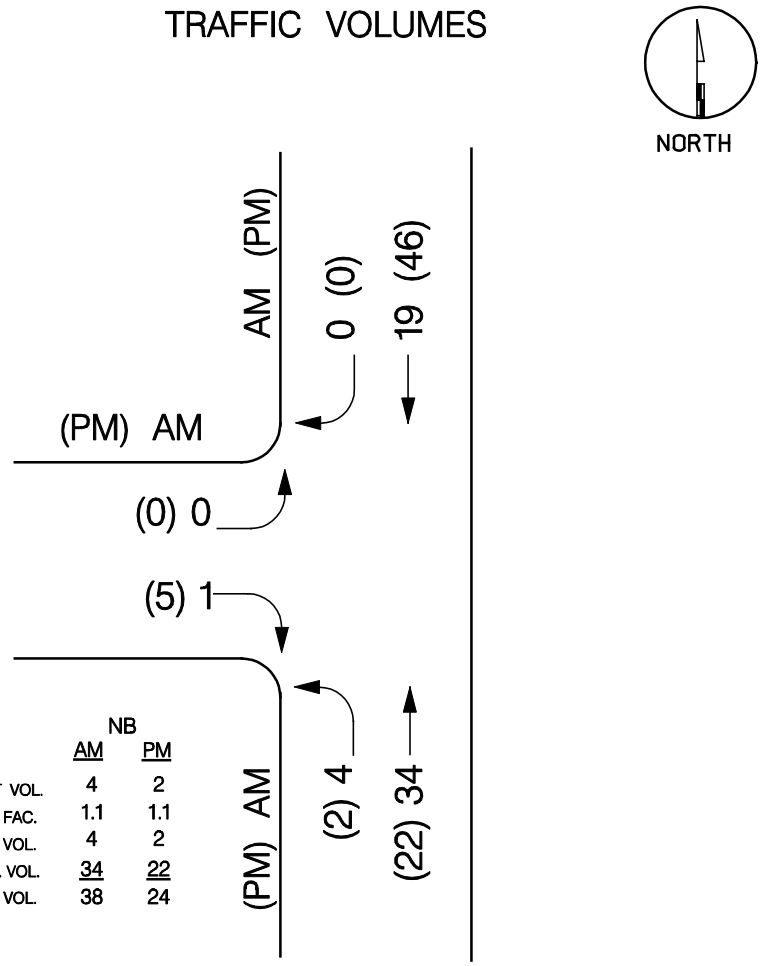
Prepared By: B. SCHMID Condition: FUTURE

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



TRAFFIC VOLUMES



NB

	AM	PM
LEFT VOL.	4	2
ADJ. FAC.	1.1	1.1
ADJ. VOL.	4	2
SHD. VOL.	34	22
TOT. VOL.	38	24

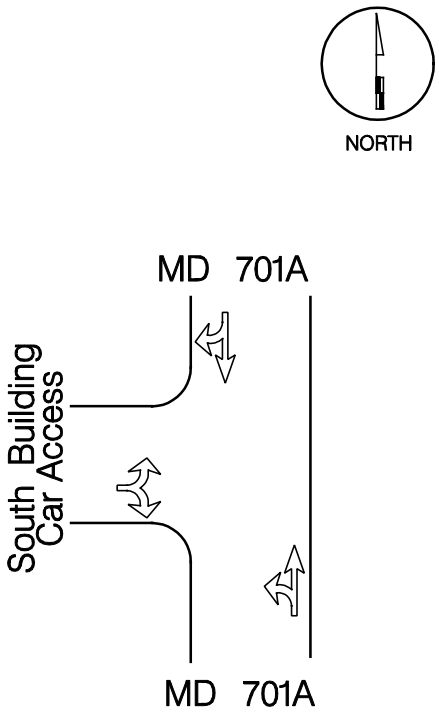
		TOTAL VOLUME * LUF			+	OPPOSING LEFTS * LUF			=	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	38	*	1					=	38*	
	SB	19	*	1	+	4	*	1	=	23	
	EB	1	*	1					=	1*	A
	WB				—					—	39
PM	NB	24	*	1					=	24	
	SB	46	*	1	+	2	*	1	=	48*	
	EB	5	*	1					=	5*	A
	WB				—					—	53

CRITICAL LANE ANALYSIS

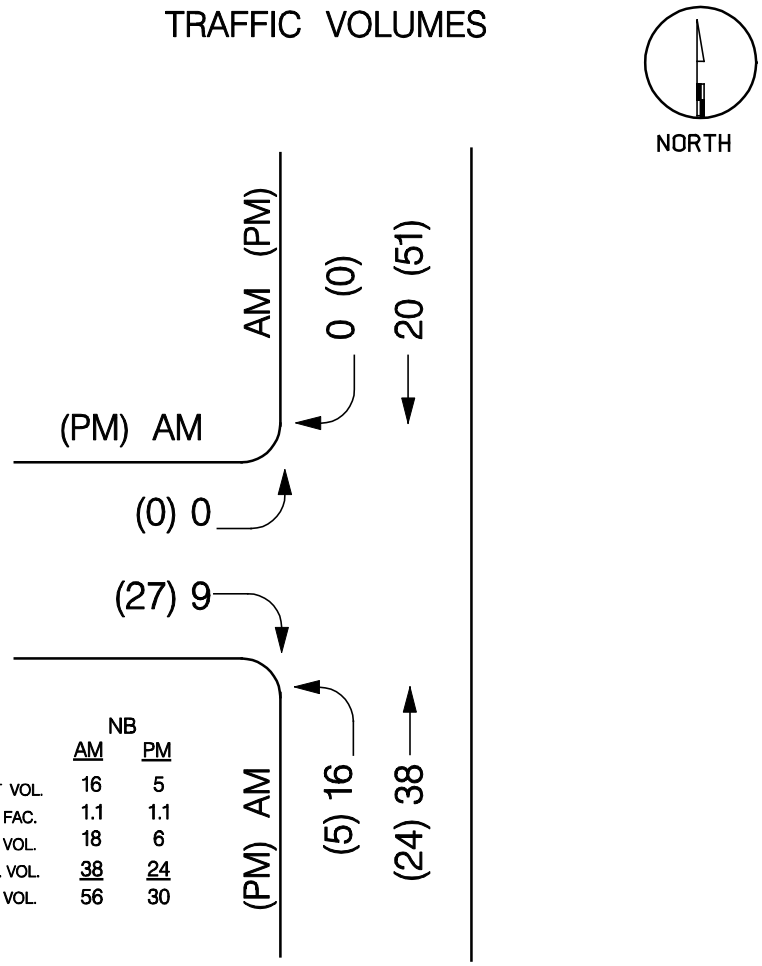
Prepared By: B. SCHMID Condition: FUTURE

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



TRAFFIC VOLUMES



NB

	AM	PM
LEFT VOL.	16	5
ADJ. FAC.	1.1	1.1
ADJ. VOL.	18	6
SHD. VOL.	38	24
TOT. VOL.	56	30

		TOTAL VOLUME * LUF			+	OPPOSING LEFTS * LUF			=	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	56	*	1					=	56*	
	SB	20	*	1	+	16	*	1	=	36	
	EB	9	*	1					=	9*	A
	WB				—					—	65
PM	NB	30	*	1					=	30	
	SB	51	*	1	+	5	*	1	=	56*	
	EB	27	*	1					=	27*	A
	WB				—					—	83

CRITICAL LANE ANALYSIS

Prepared By: B. SCHMID Condition: FUTURE

APPENDIX II
HCM
CALCULATIONS

HCS Two-Way Stop-Control Report

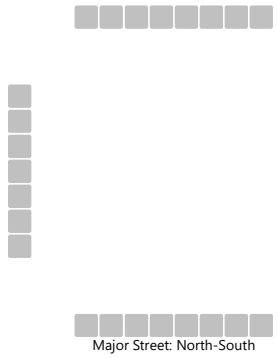
General Information

Analyst	B. SCHMID
Agency/Co.	TRAFFIC CONCEPTS, INC.
Date Performed	1/10/2023
Analysis Year	2023
Time Analyzed	EXISTING AM
Intersection Orientation	North-South
Project Description	3906

Site Information

Intersection	ROUTE 301 AND MD 313
Jurisdiction	HARFORD
East/West Street	MD 313
North/South Street	ROUTE 301
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	1	0	1	2	1	0	1	2	1
Configuration				R				R		L	T	R		L	T	R
Volume (veh/h)				105				41	0	77	287	33	0	3	301	29
Percent Heavy Vehicles (%)				3				3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No				No				No				No			
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9				6.9		4.1				4.1		
Critical Headway (sec)				6.96				6.96		4.16				4.16		
Base Follow-Up Headway (sec)				3.3				3.3		2.2				2.2		
Follow-Up Headway (sec)				3.33				3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				114				45		84				3		
Capacity, c (veh/h)				849				859		1189				1201		
v/c Ratio				0.13				0.05		0.07				0.00		
95% Queue Length, Q_{95} (veh)				0.5				0.2		0.2				0.0		
Control Delay (s/veh)				9.9				9.4		8.3				8.0		
Level of Service (LOS)				A				A		A				A		
Approach Delay (s/veh)	9.9				9.4				1.6				0.1			
Approach LOS	A				A				A				A			

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HCS Two-Way Stop-Control Report

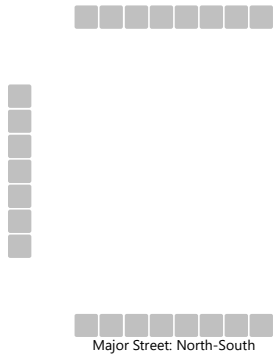
General Information

Analyst	B. SCHMID
Agency/Co.	TRAFFIC CONCEPTS, INC.
Date Performed	1/10/2023
Analysis Year	2023
Time Analyzed	EXISTING PM
Intersection Orientation	North-South
Project Description	3906

Site Information

Intersection	ROUTE 301 AND MD 313
Jurisdiction	HARFORD
East/West Street	MD 313
North/South Street	ROUTE 301
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	1	0	1	2	1	0	1	2	1
Configuration				R				R		L	T	R		L	T	R
Volume (veh/h)				124				39	0	80	381	41	0	9	371	41
Percent Heavy Vehicles (%)				3				3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No				No				No				No			
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9				6.9		4.1				4.1		
Critical Headway (sec)				6.96				6.96		4.16				4.16		
Base Follow-Up Headway (sec)				3.3				3.3		2.2				2.2		
Follow-Up Headway (sec)				3.33				3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				135				42		87				10		
Capacity, c (veh/h)				802				796		1102				1092		
v/c Ratio				0.17				0.05		0.08				0.01		
95% Queue Length, Q_{95} (veh)				0.6				0.2		0.3				0.0		
Control Delay (s/veh)				10.4				9.8		8.5				8.3		
Level of Service (LOS)				B				A		A				A		
Approach Delay (s/veh)	10.4				9.8				1.4				0.2			
Approach LOS	B				A				A				A			

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HCS Two-Way Stop-Control Report

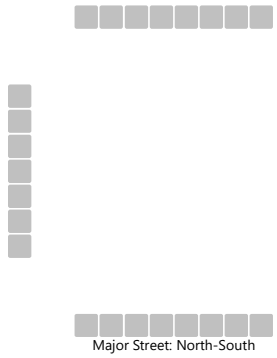
General Information

Analyst	B. SCHMID
Agency/Co.	TRAFFIC CONCEPTS, INC.
Date Performed	1/10/2023
Analysis Year	2023
Time Analyzed	EXISTING AM
Intersection Orientation	North-South
Project Description	3906

Site Information

Intersection	ROUTE 301 AND MD 313
Jurisdiction	HARFORD
East/West Street	MD 313
North/South Street	ROUTE 301
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	1	0	1	2	1	0	1	2	1
Configuration				R				R		L	T	R		L	T	R
Volume (veh/h)				109				41	0	80	298	33	0	3	313	29
Percent Heavy Vehicles (%)				3				3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No				No				No				No			
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9				6.9		4.1				4.1		
Critical Headway (sec)				6.96				6.96		4.16				4.16		
Base Follow-Up Headway (sec)				3.3				3.3		2.2				2.2		
Follow-Up Headway (sec)				3.33				3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				118				45		87				3		
Capacity, c (veh/h)				841				851		1176				1188		
v/c Ratio				0.14				0.05		0.07				0.00		
95% Queue Length, Q_{95} (veh)				0.5				0.2		0.2				0.0		
Control Delay (s/veh)				10.0				9.5		8.3				8.0		
Level of Service (LOS)				A				A		A				A		
Approach Delay (s/veh)	10.0				9.5				1.6				0.1			
Approach LOS	A				A				A				A			

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HCS Two-Way Stop-Control Report

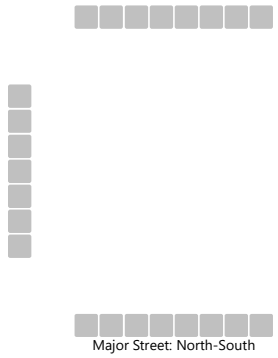
General Information

Analyst	B. SCHMID
Agency/Co.	TRAFFIC CONCEPTS, INC.
Date Performed	1/10/2023
Analysis Year	2023
Time Analyzed	BACKGROUND PM
Intersection Orientation	North-South
Project Description	3906

Site Information

Intersection	ROUTE 301 AND MD 313
Jurisdiction	HARFORD
East/West Street	MD 313
North/South Street	ROUTE 301
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	1	0	1	2	1	0	1	2	1
Configuration				R				R		L	T	R		L	T	R
Volume (veh/h)				129				39	0	83	396	41	0	9	386	41
Percent Heavy Vehicles (%)				3				3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No				No				No				No			
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9				6.9		4.1				4.1		
Critical Headway (sec)				6.96				6.96		4.16				4.16		
Base Follow-Up Headway (sec)				3.3				3.3		2.2				2.2		
Follow-Up Headway (sec)				3.33				3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				140				42		90				10		
Capacity, c (veh/h)				793				786		1086				1076		
v/c Ratio				0.18				0.05		0.08				0.01		
95% Queue Length, Q_{95} (veh)				0.6				0.2		0.3				0.0		
Control Delay (s/veh)				10.5				9.8		8.6				8.4		
Level of Service (LOS)				B				A		A				A		
Approach Delay (s/veh)	10.5				9.8				1.4				0.2			
Approach LOS	B				A				A				A			

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HCS Two-Way Stop-Control Report

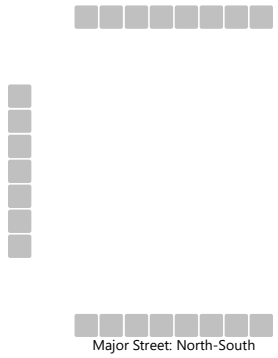
General Information

Analyst	B. SCHMID
Agency/Co.	TRAFFIC CONCEPTS, INC.
Date Performed	1/10/2023
Analysis Year	2025
Time Analyzed	FUTURE AM
Intersection Orientation	North-South
Project Description	3906

Site Information

Intersection	ROUTE 301 AND MD 313
Jurisdiction	HARFORD
East/West Street	MD 313
North/South Street	ROUTE 301
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	1	0	1	2	1	0	1	2	1
Configuration				R				R		L	T	R		L	T	R
Volume (veh/h)				116				41	0	82	305	33	0	3	336	29
Percent Heavy Vehicles (%)				3				3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No				No				No				No			
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9				6.9		4.1				4.1		
Critical Headway (sec)				6.96				6.96		4.16				4.16		
Base Follow-Up Headway (sec)				3.3				3.3		2.2				2.2		
Follow-Up Headway (sec)				3.33				3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				126				45		89				3		
Capacity, c (veh/h)				825				846		1151				1181		
v/c Ratio				0.15				0.05		0.08				0.00		
95% Queue Length, Q_{95} (veh)				0.5				0.2		0.3				0.0		
Control Delay (s/veh)				10.1				9.5		8.4				8.1		
Level of Service (LOS)				B				A		A				A		
Approach Delay (s/veh)	10.1				9.5				1.6				0.1			
Approach LOS	B				A				A				A			

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HCS Two-Way Stop-Control Report

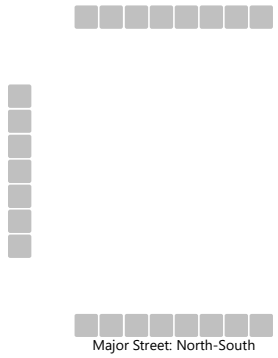
General Information

Analyst	B. SCHMID
Agency/Co.	TRAFFIC CONCEPTS, INC.
Date Performed	1/10/2023
Analysis Year	2025
Time Analyzed	FUTURE PM
Intersection Orientation	North-South
Project Description	3906

Site Information

Intersection	ROUTE 301 AND MD 313
Jurisdiction	HARFORD
East/West Street	MD 313
North/South Street	ROUTE 301
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	1	0	1	2	1	0	1	2	1
Configuration				R				R		L	T	R		L	T	R
Volume (veh/h)				131				39	0	89	419	41	0	9	394	41
Percent Heavy Vehicles (%)				3				3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No				No				No				No			
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9				6.9		4.1				4.1		
Critical Headway (sec)				6.96				6.96		4.16				4.16		
Base Follow-Up Headway (sec)				3.3				3.3		2.2				2.2		
Follow-Up Headway (sec)				3.33				3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				142				42		97				10		
Capacity, c (veh/h)				788				772		1078				1053		
v/c Ratio				0.18				0.05		0.09				0.01		
95% Queue Length, Q_{95} (veh)				0.7				0.2		0.3				0.0		
Control Delay (s/veh)				10.6				9.9		8.7				8.4		
Level of Service (LOS)				B				A		A				A		
Approach Delay (s/veh)	10.6				9.9				1.4				0.2			
Approach LOS	B				A				A				A			

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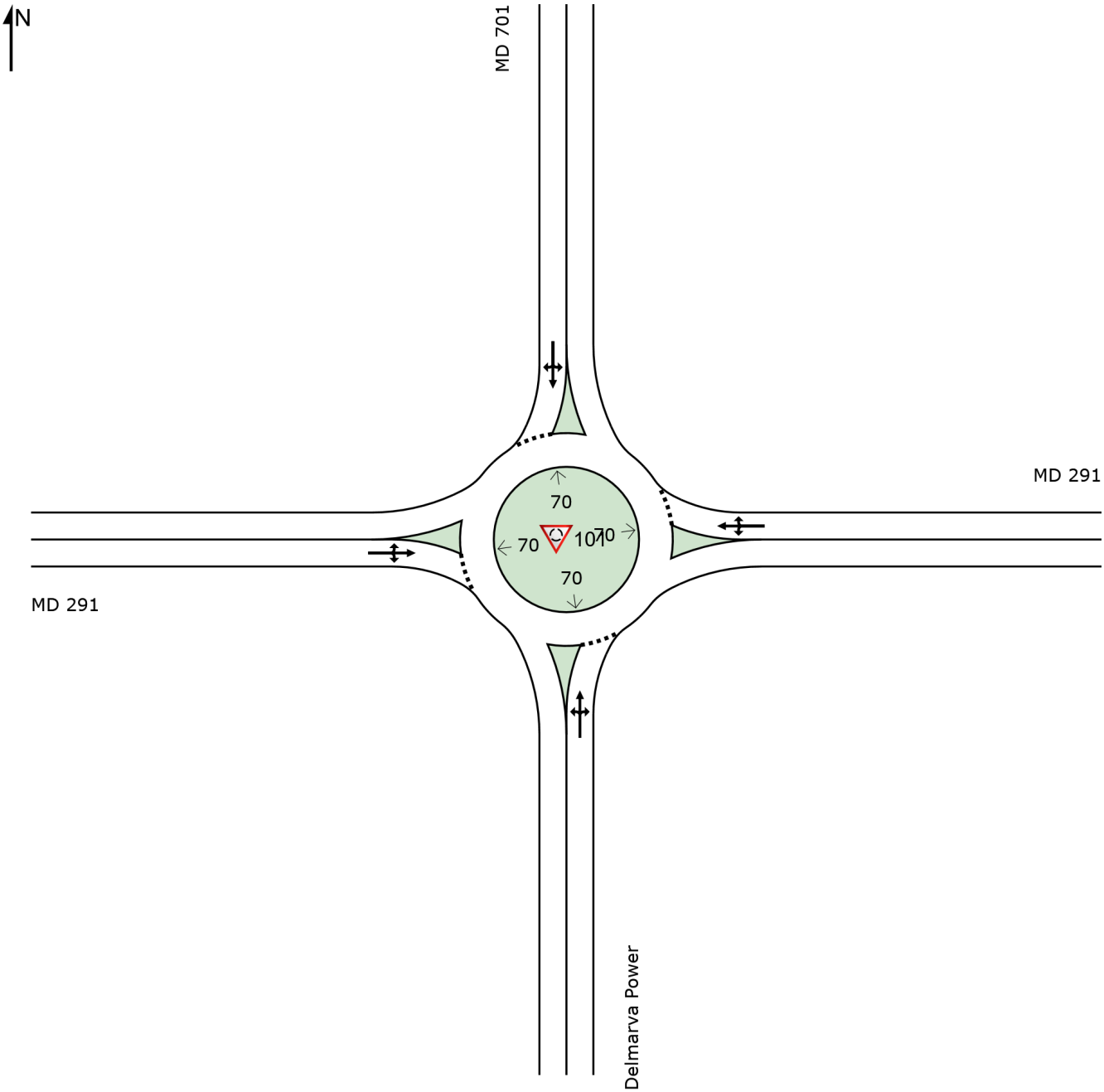
APPENDIX III
SIDRA
CALCULATIONS

SITE LAYOUT

Site: 101 [MD 291 @ MD 701 - FUT AM (Site Folder: General)]

#3906
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 101 [MD 291 @ MD 701 - EX AM (Site Folder: General)]

#3906
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Delmarva Power														
3	L2	1	3.0	1	3.0	0.003	3.2	LOS A	0.0	0.3	0.27	0.11	0.27	34.4
8	T1	1	3.0	1	3.0	0.003	3.2	LOS A	0.0	0.3	0.27	0.11	0.27	34.5
18	R2	1	3.0	1	3.0	0.003	3.2	LOS A	0.0	0.3	0.27	0.11	0.27	33.7
Approach		3	3.0	3	3.0	0.003	3.2	LOS A	0.0	0.3	0.27	0.11	0.27	34.2
East: MD 291														
1	L2	1	3.0	1	3.0	0.101	3.6	LOS A	0.5	11.6	0.14	0.05	0.14	35.0
6	T1	107	3.0	113	3.0	0.101	3.6	LOS A	0.5	11.6	0.14	0.05	0.14	35.1
16	R2	16	3.0	17	3.0	0.101	3.6	LOS A	0.5	11.6	0.14	0.05	0.14	34.2
Approach		124	3.0	131	3.0	0.101	3.6	LOS A	0.5	11.6	0.14	0.05	0.14	35.0
North: MD 701														
7	L2	16	3.0	17	3.0	0.048	3.4	LOS A	0.2	5.1	0.25	0.12	0.25	34.4
4	T1	1	3.0	1	3.0	0.048	3.4	LOS A	0.2	5.1	0.25	0.12	0.25	34.5
14	R2	37	3.0	39	3.0	0.048	3.4	LOS A	0.2	5.1	0.25	0.12	0.25	33.6
Approach		54	3.0	57	3.0	0.048	3.4	LOS A	0.2	5.1	0.25	0.12	0.25	33.9
West: MD 291														
5	L2	34	3.0	36	3.0	0.099	3.5	LOS A	0.4	11.3	0.09	0.02	0.09	34.3
2	T1	88	3.0	93	3.0	0.099	3.5	LOS A	0.4	11.3	0.09	0.02	0.09	34.4
12	R2	1	3.0	1	3.0	0.099	3.5	LOS A	0.4	11.3	0.09	0.02	0.09	33.6
Approach		123	3.0	129	3.0	0.099	3.5	LOS A	0.4	11.3	0.09	0.02	0.09	34.4
All Vehicles		304	3.0	320	3.0	0.101	3.5	LOS A	0.5	11.6	0.14	0.05	0.14	34.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [MD 291 @ MD 701 - EX AM (Site Folder: General)]

#3906
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Delmarva Power														
3	L2	1	3.0	1	3.0	0.003	3.6	LOS A	0.0	0.3	0.38	0.19	0.38	34.2
8	T1	1	3.0	1	3.0	0.003	3.6	LOS A	0.0	0.3	0.38	0.19	0.38	34.3
18	R2	1	3.0	1	3.0	0.003	3.6	LOS A	0.0	0.3	0.38	0.19	0.38	33.5
Approach		3	3.0	3	3.0	0.003	3.6	LOS A	0.0	0.3	0.38	0.19	0.38	34.0
East: MD 291														
1	L2	1	3.0	1	3.0	0.117	3.9	LOS A	0.5	13.5	0.21	0.09	0.21	34.8
6	T1	113	3.0	124	3.0	0.117	3.9	LOS A	0.5	13.5	0.21	0.09	0.21	34.9
16	R2	18	3.0	20	3.0	0.117	3.9	LOS A	0.5	13.5	0.21	0.09	0.21	34.1
Approach		132	3.0	145	3.0	0.117	3.9	LOS A	0.5	13.5	0.21	0.09	0.21	34.8
North: MD 701														
7	L2	40	3.0	44	3.0	0.061	3.6	LOS A	0.3	6.6	0.27	0.13	0.27	33.5
4	T1	1	3.0	1	3.0	0.061	3.6	LOS A	0.3	6.6	0.27	0.13	0.27	33.6
14	R2	24	3.0	26	3.0	0.061	3.6	LOS A	0.3	6.6	0.27	0.13	0.27	32.8
Approach		65	3.0	71	3.0	0.061	3.6	LOS A	0.3	6.6	0.27	0.13	0.27	33.3
West: MD 291														
5	L2	68	3.0	75	3.0	0.181	4.3	LOS A	0.9	22.5	0.17	0.06	0.17	33.8
2	T1	141	3.0	155	3.0	0.181	4.3	LOS A	0.9	22.5	0.17	0.06	0.17	33.9
12	R2	1	3.0	1	3.0	0.181	4.3	LOS A	0.9	22.5	0.17	0.06	0.17	33.1
Approach		210	3.0	231	3.0	0.181	4.3	LOS A	0.9	22.5	0.17	0.06	0.17	33.9
All Vehicles		410	3.0	451	3.0	0.181	4.1	LOS A	0.9	22.5	0.20	0.09	0.20	34.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [MD 291 @ MD 701 - BACK AM (Site Folder: General)]

#3906
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Delmarva Power														
3	L2	1	3.0	1	3.0	0.003	3.2	LOS A	0.0	0.3	0.28	0.11	0.28	34.4
8	T1	1	3.0	1	3.0	0.003	3.2	LOS A	0.0	0.3	0.28	0.11	0.28	34.5
18	R2	1	3.0	1	3.0	0.003	3.2	LOS A	0.0	0.3	0.28	0.11	0.28	33.7
Approach		3	3.0	3	3.0	0.003	3.2	LOS A	0.0	0.3	0.28	0.11	0.28	34.2
East: MD 291														
1	L2	1	3.0	1	3.0	0.105	3.6	LOS A	0.5	12.0	0.14	0.05	0.14	34.9
6	T1	111	3.0	117	3.0	0.105	3.6	LOS A	0.5	12.0	0.14	0.05	0.14	35.1
16	R2	16	3.0	17	3.0	0.105	3.6	LOS A	0.5	12.0	0.14	0.05	0.14	34.2
Approach		128	3.0	135	3.0	0.105	3.6	LOS A	0.5	12.0	0.14	0.05	0.14	35.0
North: MD 701														
7	L2	16	3.0	17	3.0	0.048	3.4	LOS A	0.2	5.1	0.26	0.12	0.26	34.3
4	T1	1	3.0	1	3.0	0.048	3.4	LOS A	0.2	5.1	0.26	0.12	0.26	34.5
14	R2	37	3.0	39	3.0	0.048	3.4	LOS A	0.2	5.1	0.26	0.12	0.26	33.6
Approach		54	3.0	57	3.0	0.048	3.4	LOS A	0.2	5.1	0.26	0.12	0.26	33.9
West: MD 291														
5	L2	34	3.0	36	3.0	0.102	3.6	LOS A	0.5	11.7	0.09	0.02	0.09	34.3
2	T1	92	3.0	97	3.0	0.102	3.6	LOS A	0.5	11.7	0.09	0.02	0.09	34.5
12	R2	1	3.0	1	3.0	0.102	3.6	LOS A	0.5	11.7	0.09	0.02	0.09	33.6
Approach		127	3.0	134	3.0	0.102	3.6	LOS A	0.5	11.7	0.09	0.02	0.09	34.4
All Vehicles		312	3.0	328	3.0	0.105	3.6	LOS A	0.5	12.0	0.14	0.05	0.14	34.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: M:\3900\3906\TIS\SIDRA\MD 291 @ MD 701.sip9

MOVEMENT SUMMARY

Site: 101 [MD 291 @ MD 701 - BACK PM (Site Folder: General)]

#3906
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Delmarva Power														
3	L2	1	3.0	1	3.0	0.003	3.6	LOS A	0.0	0.3	0.39	0.19	0.39	34.2
8	T1	1	3.0	1	3.0	0.003	3.6	LOS A	0.0	0.3	0.39	0.19	0.39	34.3
18	R2	1	3.0	1	3.0	0.003	3.6	LOS A	0.0	0.3	0.39	0.19	0.39	33.4
Approach		3	3.0	3	3.0	0.003	3.6	LOS A	0.0	0.3	0.39	0.19	0.39	33.9
East: MD 291														
1	L2	1	3.0	1	3.0	0.121	3.9	LOS A	0.5	14.0	0.22	0.09	0.22	34.8
6	T1	117	3.0	129	3.0	0.121	3.9	LOS A	0.5	14.0	0.22	0.09	0.22	34.9
16	R2	18	3.0	20	3.0	0.121	3.9	LOS A	0.5	14.0	0.22	0.09	0.22	34.1
Approach		136	3.0	149	3.0	0.121	3.9	LOS A	0.5	14.0	0.22	0.09	0.22	34.8
North: MD 701														
7	L2	40	3.0	44	3.0	0.061	3.6	LOS A	0.3	6.6	0.27	0.14	0.27	33.5
4	T1	1	3.0	1	3.0	0.061	3.6	LOS A	0.3	6.6	0.27	0.14	0.27	33.6
14	R2	24	3.0	26	3.0	0.061	3.6	LOS A	0.3	6.6	0.27	0.14	0.27	32.8
Approach		65	3.0	71	3.0	0.061	3.6	LOS A	0.3	6.6	0.27	0.14	0.27	33.3
West: MD 291														
5	L2	68	3.0	75	3.0	0.186	4.4	LOS A	0.9	23.3	0.17	0.06	0.17	33.8
2	T1	147	3.0	162	3.0	0.186	4.4	LOS A	0.9	23.3	0.17	0.06	0.17	33.9
12	R2	1	3.0	1	3.0	0.186	4.4	LOS A	0.9	23.3	0.17	0.06	0.17	33.1
Approach		216	3.0	237	3.0	0.186	4.4	LOS A	0.9	23.3	0.17	0.06	0.17	33.9
All Vehicles		420	3.0	462	3.0	0.186	4.1	LOS A	0.9	23.3	0.20	0.09	0.20	34.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: M:\3900\3906\TIS\SIDRA\MD 291 @ MD 701.sip9

MOVEMENT SUMMARY

Site: 101 [MD 291 @ MD 701 - FUT AM (Site Folder: General)]

#3906
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Delmarva Power														
3	L2	1	3.0	1	3.0	0.003	3.2	LOS A	0.0	0.3	0.28	0.11	0.28	34.4
8	T1	1	3.0	1	3.0	0.003	3.2	LOS A	0.0	0.3	0.28	0.11	0.28	34.5
18	R2	1	3.0	1	3.0	0.003	3.2	LOS A	0.0	0.3	0.28	0.11	0.28	33.7
Approach		3	3.0	3	3.0	0.003	3.2	LOS A	0.0	0.3	0.28	0.11	0.28	34.2
East: MD 291														
1	L2	1	3.0	1	3.0	0.110	3.7	LOS A	0.5	12.8	0.14	0.05	0.14	34.9
6	T1	118	3.0	124	3.0	0.110	3.7	LOS A	0.5	12.8	0.14	0.05	0.14	35.0
16	R2	16	3.0	17	3.0	0.110	3.7	LOS A	0.5	12.8	0.14	0.05	0.14	34.2
Approach		135	3.0	142	3.0	0.110	3.7	LOS A	0.5	12.8	0.14	0.05	0.14	34.9
North: MD 701														
7	L2	16	3.0	17	3.0	0.069	3.6	LOS A	0.3	7.5	0.27	0.14	0.27	34.5
4	T1	1	3.0	1	3.0	0.069	3.6	LOS A	0.3	7.5	0.27	0.14	0.27	34.6
14	R2	60	3.0	63	3.0	0.069	3.6	LOS A	0.3	7.5	0.27	0.14	0.27	33.7
Approach		77	3.0	81	3.0	0.069	3.6	LOS A	0.3	7.5	0.27	0.14	0.27	33.9
West: MD 291														
5	L2	35	3.0	37	3.0	0.104	3.6	LOS A	0.5	12.0	0.09	0.02	0.09	34.3
2	T1	94	3.0	99	3.0	0.104	3.6	LOS A	0.5	12.0	0.09	0.02	0.09	34.4
12	R2	1	3.0	1	3.0	0.104	3.6	LOS A	0.5	12.0	0.09	0.02	0.09	33.6
Approach		130	3.0	137	3.0	0.104	3.6	LOS A	0.5	12.0	0.09	0.02	0.09	34.4
All Vehicles		345	3.0	363	3.0	0.110	3.6	LOS A	0.5	12.8	0.15	0.06	0.15	34.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [MD 291 @ MD 701 - FUT PM (Site Folder: General)]

#3906
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Delmarva Power														
3	L2	1	3.0	1	3.0	0.003	3.7	LOS A	0.0	0.3	0.40	0.20	0.40	34.1
8	T1	1	3.0	1	3.0	0.003	3.7	LOS A	0.0	0.3	0.40	0.20	0.40	34.2
18	R2	1	3.0	1	3.0	0.003	3.7	LOS A	0.0	0.3	0.40	0.20	0.40	33.4
Approach		3	3.0	3	3.0	0.003	3.7	LOS A	0.0	0.3	0.40	0.20	0.40	33.9
East: MD 291														
1	L2	1	3.0	1	3.0	0.121	3.9	LOS A	0.5	13.9	0.22	0.10	0.22	34.8
6	T1	118	3.0	130	3.0	0.121	3.9	LOS A	0.5	13.9	0.22	0.10	0.22	34.9
16	R2	16	3.0	18	3.0	0.121	3.9	LOS A	0.5	13.9	0.22	0.10	0.22	34.1
Approach		135	3.0	148	3.0	0.121	3.9	LOS A	0.5	13.9	0.22	0.10	0.22	34.8
North: MD 701														
7	L2	40	3.0	44	3.0	0.069	3.7	LOS A	0.3	7.5	0.28	0.14	0.28	33.6
4	T1	1	3.0	1	3.0	0.069	3.7	LOS A	0.3	7.5	0.28	0.14	0.28	33.7
14	R2	32	3.0	35	3.0	0.069	3.7	LOS A	0.3	7.5	0.28	0.14	0.28	32.9
Approach		73	3.0	80	3.0	0.069	3.7	LOS A	0.3	7.5	0.28	0.14	0.28	33.3
West: MD 291														
5	L2	73	3.0	80	3.0	0.195	4.5	LOS A	1.0	24.7	0.17	0.07	0.17	33.7
2	T1	153	3.0	168	3.0	0.195	4.5	LOS A	1.0	24.7	0.17	0.07	0.17	33.9
12	R2	1	3.0	1	3.0	0.195	4.5	LOS A	1.0	24.7	0.17	0.07	0.17	33.1
Approach		227	3.0	249	3.0	0.195	4.5	LOS A	1.0	24.7	0.17	0.07	0.17	33.8
All Vehicles		438	3.0	481	3.0	0.195	4.2	LOS A	1.0	24.7	0.21	0.09	0.21	34.0

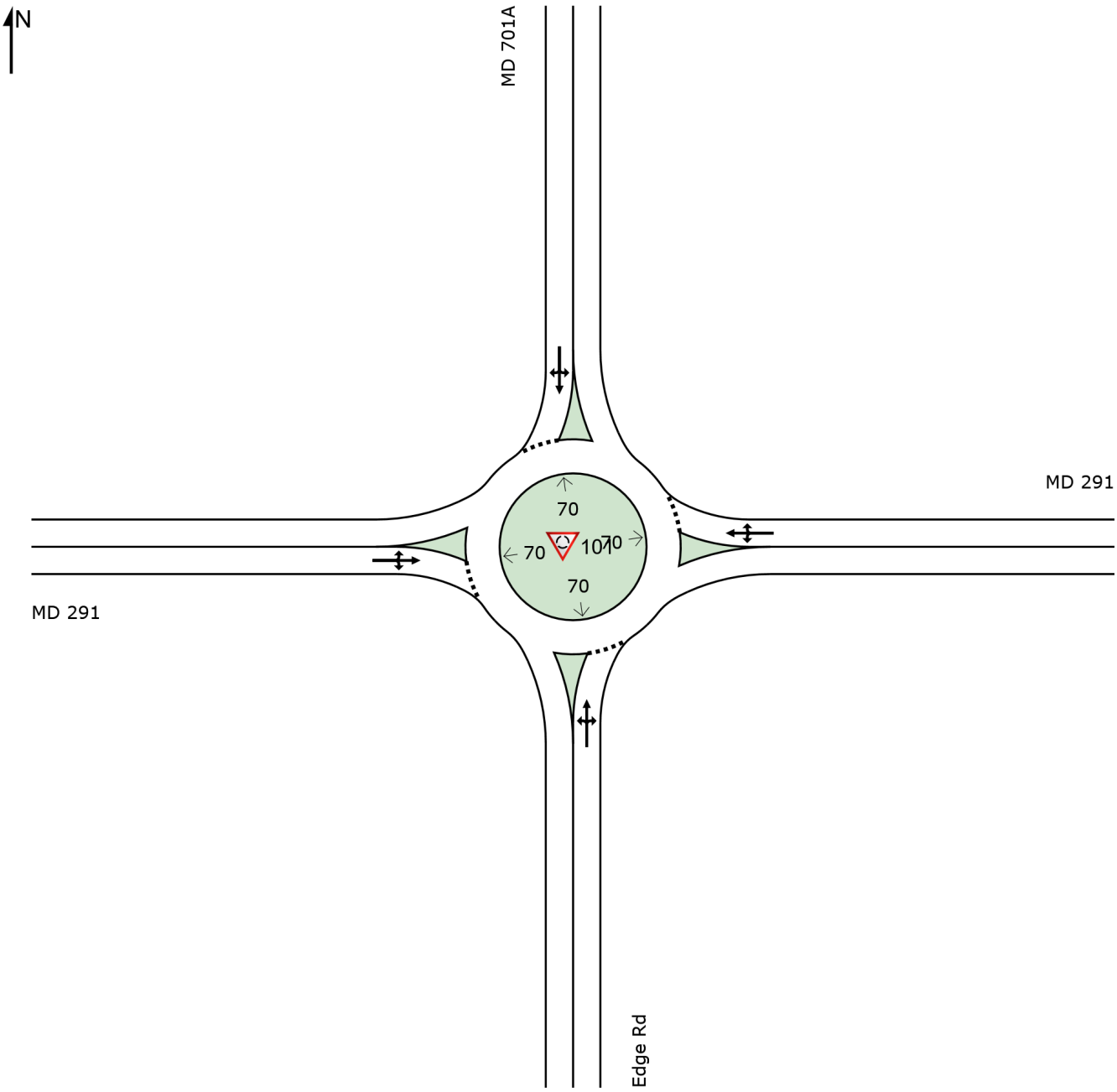
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 101 [MD 291 @ MD 701A - FUT AM (Site Folder: General)]

#3906
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 101 [MD 291 @ MD 701A - EX AM (Site Folder: General)]

#3906
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Edge Rd														
3	L2	2	3.0	2	3.0	0.008	3.2	LOS A	0.0	0.8	0.27	0.12	0.27	34.6
8	T1	3	3.0	3	3.0	0.008	3.2	LOS A	0.0	0.8	0.27	0.12	0.27	34.7
18	R2	3	3.0	3	3.0	0.008	3.2	LOS A	0.0	0.8	0.27	0.12	0.27	33.9
Approach		8	3.0	9	3.0	0.008	3.2	LOS A	0.0	0.8	0.27	0.12	0.27	34.4
East: MD 291														
1	L2	5	3.0	5	3.0	0.119	3.7	LOS A	0.5	14.0	0.09	0.02	0.09	34.9
6	T1	110	3.0	120	3.0	0.119	3.7	LOS A	0.5	14.0	0.09	0.02	0.09	35.0
16	R2	29	3.0	32	3.0	0.119	3.7	LOS A	0.5	14.0	0.09	0.02	0.09	34.1
Approach		144	3.0	157	3.0	0.119	3.7	LOS A	0.5	14.0	0.09	0.02	0.09	34.8
North: MD 701A														
7	L2	23	3.0	25	3.0	0.061	3.6	LOS A	0.3	6.6	0.27	0.13	0.27	34.1
4	T1	1	3.0	1	3.0	0.061	3.6	LOS A	0.3	6.6	0.27	0.13	0.27	34.3
14	R2	42	3.0	46	3.0	0.061	3.6	LOS A	0.3	6.6	0.27	0.13	0.27	33.4
Approach		66	3.0	72	3.0	0.061	3.6	LOS A	0.3	6.6	0.27	0.13	0.27	33.7
West: MD 291														
5	L2	12	3.0	13	3.0	0.092	3.5	LOS A	0.4	10.5	0.13	0.04	0.13	34.8
2	T1	97	3.0	105	3.0	0.092	3.5	LOS A	0.4	10.5	0.13	0.04	0.13	34.9
12	R2	1	3.0	1	3.0	0.092	3.5	LOS A	0.4	10.5	0.13	0.04	0.13	34.0
Approach		110	3.0	120	3.0	0.092	3.5	LOS A	0.4	10.5	0.13	0.04	0.13	34.9
All Vehicles		328	3.0	357	3.0	0.119	3.6	LOS A	0.5	14.0	0.14	0.05	0.14	34.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [MD 291 @ MD 701A - EX PM (Site Folder: General)]

#3906
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Edge Rd														
3	L2	3	3.0	3	3.0	0.006	3.6	LOS A	0.0	0.6	0.37	0.19	0.37	33.6
8	T1	1	3.0	1	3.0	0.006	3.6	LOS A	0.0	0.6	0.37	0.19	0.37	33.7
18	R2	1	3.0	1	3.0	0.006	3.6	LOS A	0.0	0.6	0.37	0.19	0.37	32.9
Approach		5	3.0	6	3.0	0.006	3.6	LOS A	0.0	0.6	0.37	0.19	0.37	33.4
East: MD 291														
1	L2	1	3.0	1	3.0	0.120	3.7	LOS A	0.6	14.1	0.10	0.03	0.10	34.9
6	T1	92	3.0	106	3.0	0.120	3.7	LOS A	0.6	14.1	0.10	0.03	0.10	35.0
16	R2	44	3.0	51	3.0	0.120	3.7	LOS A	0.6	14.1	0.10	0.03	0.10	34.2
Approach		137	3.0	157	3.0	0.120	3.7	LOS A	0.6	14.1	0.10	0.03	0.10	34.7
North: MD 701A														
7	L2	51	3.0	59	3.0	0.094	3.8	LOS A	0.4	10.5	0.26	0.13	0.26	33.6
4	T1	1	3.0	1	3.0	0.094	3.8	LOS A	0.4	10.5	0.26	0.13	0.26	33.7
14	R2	46	3.0	53	3.0	0.094	3.8	LOS A	0.4	10.5	0.26	0.13	0.26	32.9
Approach		98	3.0	113	3.0	0.094	3.8	LOS A	0.4	10.5	0.26	0.13	0.26	33.3
West: MD 291														
5	L2	15	3.0	17	3.0	0.161	4.2	LOS A	0.8	19.5	0.20	0.08	0.20	34.4
2	T1	159	3.0	183	3.0	0.161	4.2	LOS A	0.8	19.5	0.20	0.08	0.20	34.6
12	R2	2	3.0	2	3.0	0.161	4.2	LOS A	0.8	19.5	0.20	0.08	0.20	33.7
Approach		176	3.0	202	3.0	0.161	4.2	LOS A	0.8	19.5	0.20	0.08	0.20	34.5
All Vehicles		416	3.0	478	3.0	0.161	4.0	LOS A	0.8	19.5	0.18	0.08	0.18	34.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [MD 291 @ MD 701A - BACK AM (Site Folder: General)]

#3906
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Edge Rd														
3	L2	2	3.0	2	3.0	0.008	3.2	LOS A	0.0	0.8	0.28	0.12	0.28	34.6
8	T1	3	3.0	3	3.0	0.008	3.2	LOS A	0.0	0.8	0.28	0.12	0.28	34.7
18	R2	3	3.0	3	3.0	0.008	3.2	LOS A	0.0	0.8	0.28	0.12	0.28	33.9
Approach		8	3.0	9	3.0	0.008	3.2	LOS A	0.0	0.8	0.28	0.12	0.28	34.4
East: MD 291														
1	L2	5	3.0	5	3.0	0.122	3.7	LOS A	0.6	14.4	0.09	0.02	0.09	34.8
6	T1	114	3.0	124	3.0	0.122	3.7	LOS A	0.6	14.4	0.09	0.02	0.09	35.0
16	R2	29	3.0	32	3.0	0.122	3.7	LOS A	0.6	14.4	0.09	0.02	0.09	34.1
Approach		148	3.0	161	3.0	0.122	3.7	LOS A	0.6	14.4	0.09	0.02	0.09	34.8
North: MD 701A														
7	L2	23	3.0	25	3.0	0.061	3.6	LOS A	0.3	6.6	0.27	0.14	0.27	34.1
4	T1	1	3.0	1	3.0	0.061	3.6	LOS A	0.3	6.6	0.27	0.14	0.27	34.3
14	R2	42	3.0	46	3.0	0.061	3.6	LOS A	0.3	6.6	0.27	0.14	0.27	33.4
Approach		66	3.0	72	3.0	0.061	3.6	LOS A	0.3	6.6	0.27	0.14	0.27	33.7
West: MD 291														
5	L2	12	3.0	13	3.0	0.096	3.5	LOS A	0.4	10.9	0.13	0.04	0.13	34.8
2	T1	101	3.0	110	3.0	0.096	3.5	LOS A	0.4	10.9	0.13	0.04	0.13	34.9
12	R2	1	3.0	1	3.0	0.096	3.5	LOS A	0.4	10.9	0.13	0.04	0.13	34.0
Approach		114	3.0	124	3.0	0.096	3.5	LOS A	0.4	10.9	0.13	0.04	0.13	34.8
All Vehicles		336	3.0	365	3.0	0.122	3.6	LOS A	0.6	14.4	0.14	0.05	0.14	34.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [MD 291 @ MD 701A - BACK PM (Site Folder: General)]

#3906
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Edge Rd														
3	L2	3	3.0	3	3.0	0.006	3.6	LOS A	0.0	0.6	0.38	0.20	0.38	33.5
8	T1	1	3.0	1	3.0	0.006	3.6	LOS A	0.0	0.6	0.38	0.20	0.38	33.6
18	R2	1	3.0	1	3.0	0.006	3.6	LOS A	0.0	0.6	0.38	0.20	0.38	32.9
Approach		5	3.0	6	3.0	0.006	3.6	LOS A	0.0	0.6	0.38	0.20	0.38	33.4
East: MD 291														
1	L2	1	3.0	1	3.0	0.124	3.8	LOS A	0.6	14.6	0.10	0.03	0.10	34.9
6	T1	96	3.0	110	3.0	0.124	3.8	LOS A	0.6	14.6	0.10	0.03	0.10	35.0
16	R2	44	3.0	51	3.0	0.124	3.8	LOS A	0.6	14.6	0.10	0.03	0.10	34.2
Approach		141	3.0	162	3.0	0.124	3.8	LOS A	0.6	14.6	0.10	0.03	0.10	34.7
North: MD 701A														
7	L2	51	3.0	59	3.0	0.095	3.8	LOS A	0.4	10.6	0.26	0.13	0.26	33.6
4	T1	1	3.0	1	3.0	0.095	3.8	LOS A	0.4	10.6	0.26	0.13	0.26	33.7
14	R2	46	3.0	53	3.0	0.095	3.8	LOS A	0.4	10.6	0.26	0.13	0.26	32.9
Approach		98	3.0	113	3.0	0.095	3.8	LOS A	0.4	10.6	0.26	0.13	0.26	33.3
West: MD 291														
5	L2	15	3.0	17	3.0	0.166	4.3	LOS A	0.8	20.3	0.20	0.08	0.20	34.4
2	T1	165	3.0	190	3.0	0.166	4.3	LOS A	0.8	20.3	0.20	0.08	0.20	34.5
12	R2	2	3.0	2	3.0	0.166	4.3	LOS A	0.8	20.3	0.20	0.08	0.20	33.7
Approach		182	3.0	209	3.0	0.166	4.3	LOS A	0.8	20.3	0.20	0.08	0.20	34.5
All Vehicles		426	3.0	490	3.0	0.166	4.0	LOS A	0.8	20.3	0.18	0.08	0.18	34.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [MD 291 @ MD 701A - FUT AM (Site Folder: General)]

#3906
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Edge Rd														
3	L2	2	3.0	2	3.0	0.008	3.3	LOS A	0.0	0.8	0.30	0.13	0.30	34.6
8	T1	3	3.0	3	3.0	0.008	3.3	LOS A	0.0	0.8	0.30	0.13	0.30	34.7
18	R2	3	3.0	3	3.0	0.008	3.3	LOS A	0.0	0.8	0.30	0.13	0.30	33.8
Approach		8	3.0	9	3.0	0.008	3.3	LOS A	0.0	0.8	0.30	0.13	0.30	34.3
East: MD 291														
1	L2	5	3.0	5	3.0	0.148	4.0	LOS A	0.7	17.9	0.12	0.03	0.12	34.7
6	T1	114	3.0	124	3.0	0.148	4.0	LOS A	0.7	17.9	0.12	0.03	0.12	34.8
16	R2	59	3.0	64	3.0	0.148	4.0	LOS A	0.7	17.9	0.12	0.03	0.12	34.0
Approach		178	3.0	193	3.0	0.148	4.0	LOS A	0.7	17.9	0.12	0.03	0.12	34.5
North: MD 701A														
7	L2	34	3.0	37	3.0	0.073	3.7	LOS A	0.3	7.9	0.28	0.14	0.28	33.9
4	T1	1	3.0	1	3.0	0.073	3.7	LOS A	0.3	7.9	0.28	0.14	0.28	34.0
14	R2	43	3.0	47	3.0	0.073	3.7	LOS A	0.3	7.9	0.28	0.14	0.28	33.2
Approach		78	3.0	85	3.0	0.073	3.7	LOS A	0.3	7.9	0.28	0.14	0.28	33.5
West: MD 291														
5	L2	18	3.0	20	3.0	0.102	3.6	LOS A	0.5	11.7	0.15	0.05	0.15	34.6
2	T1	101	3.0	110	3.0	0.102	3.6	LOS A	0.5	11.7	0.15	0.05	0.15	34.7
12	R2	1	3.0	1	3.0	0.102	3.6	LOS A	0.5	11.7	0.15	0.05	0.15	33.9
Approach		120	3.0	130	3.0	0.102	3.6	LOS A	0.5	11.7	0.15	0.05	0.15	34.7
All Vehicles		384	3.0	417	3.0	0.148	3.8	LOS A	0.7	17.9	0.16	0.06	0.16	34.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [MD 291 @ MD 701A - FUT PM (Site Folder: General)]

#3906
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Edge Rd														
3	L2	3	3.0	3	3.0	0.006	3.8	LOS A	0.0	0.6	0.41	0.22	0.41	33.5
8	T1	1	3.0	1	3.0	0.006	3.8	LOS A	0.0	0.6	0.41	0.22	0.41	33.6
18	R2	1	3.0	1	3.0	0.006	3.8	LOS A	0.0	0.6	0.41	0.22	0.41	32.8
Approach		5	3.0	6	3.0	0.006	3.8	LOS A	0.0	0.6	0.41	0.22	0.41	33.3
East: MD 291														
1	L2	1	3.0	1	3.0	0.133	3.8	LOS A	0.6	15.8	0.11	0.03	0.11	34.9
6	T1	96	3.0	110	3.0	0.133	3.8	LOS A	0.6	15.8	0.11	0.03	0.11	35.0
16	R2	54	3.0	62	3.0	0.133	3.8	LOS A	0.6	15.8	0.11	0.03	0.11	34.1
Approach		151	3.0	174	3.0	0.133	3.8	LOS A	0.6	15.8	0.11	0.03	0.11	34.7
North: MD 701A														
7	L2	86	3.0	99	3.0	0.135	4.2	LOS A	0.6	15.6	0.27	0.14	0.27	33.2
4	T1	1	3.0	1	3.0	0.135	4.2	LOS A	0.6	15.6	0.27	0.14	0.27	33.3
14	R2	52	3.0	60	3.0	0.135	4.2	LOS A	0.6	15.6	0.27	0.14	0.27	32.5
Approach		139	3.0	160	3.0	0.135	4.2	LOS A	0.6	15.6	0.27	0.14	0.27	33.0
West: MD 291														
5	L2	16	3.0	18	3.0	0.175	4.5	LOS A	0.8	21.2	0.26	0.13	0.26	34.3
2	T1	165	3.0	190	3.0	0.175	4.5	LOS A	0.8	21.2	0.26	0.13	0.26	34.4
12	R2	2	3.0	2	3.0	0.175	4.5	LOS A	0.8	21.2	0.26	0.13	0.26	33.6
Approach		183	3.0	210	3.0	0.175	4.5	LOS A	0.8	21.2	0.26	0.13	0.26	34.4
All Vehicles		478	3.0	549	3.0	0.175	4.2	LOS A	0.8	21.2	0.22	0.10	0.22	34.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

APPENDIX IV
TRAFFIC COUNT INFORMATION

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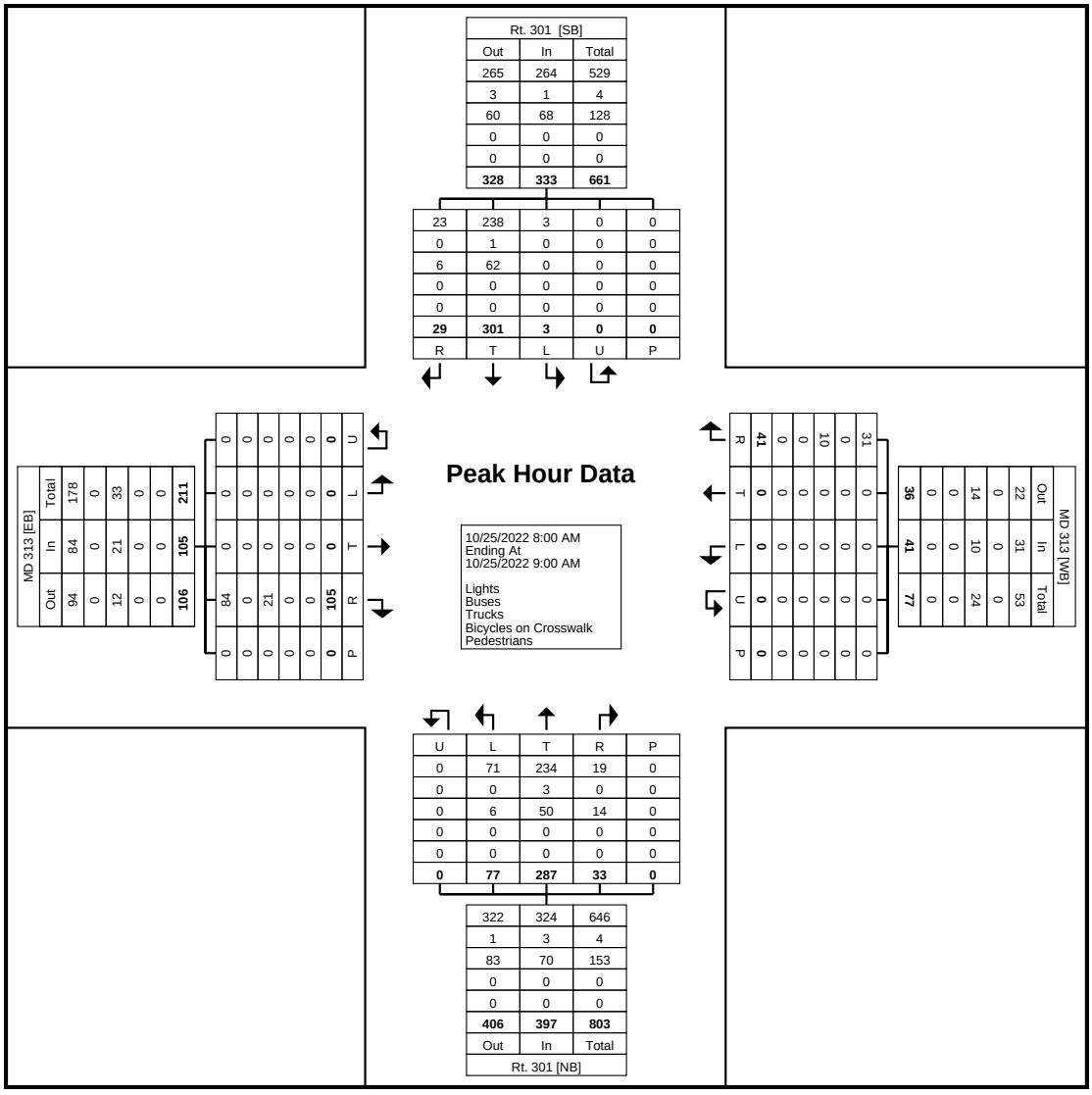
Kent County, MD
Route 301 & MD 313
Tuesday, October 25, 2022
Location: 39.319754, -75.846661

Count Name: Rt. 301 & MD 313
Site Code:
Start Date: 10/25/2022
Page No: 4



Turning Movement Peak Hour Data Plot (8:00 AM)

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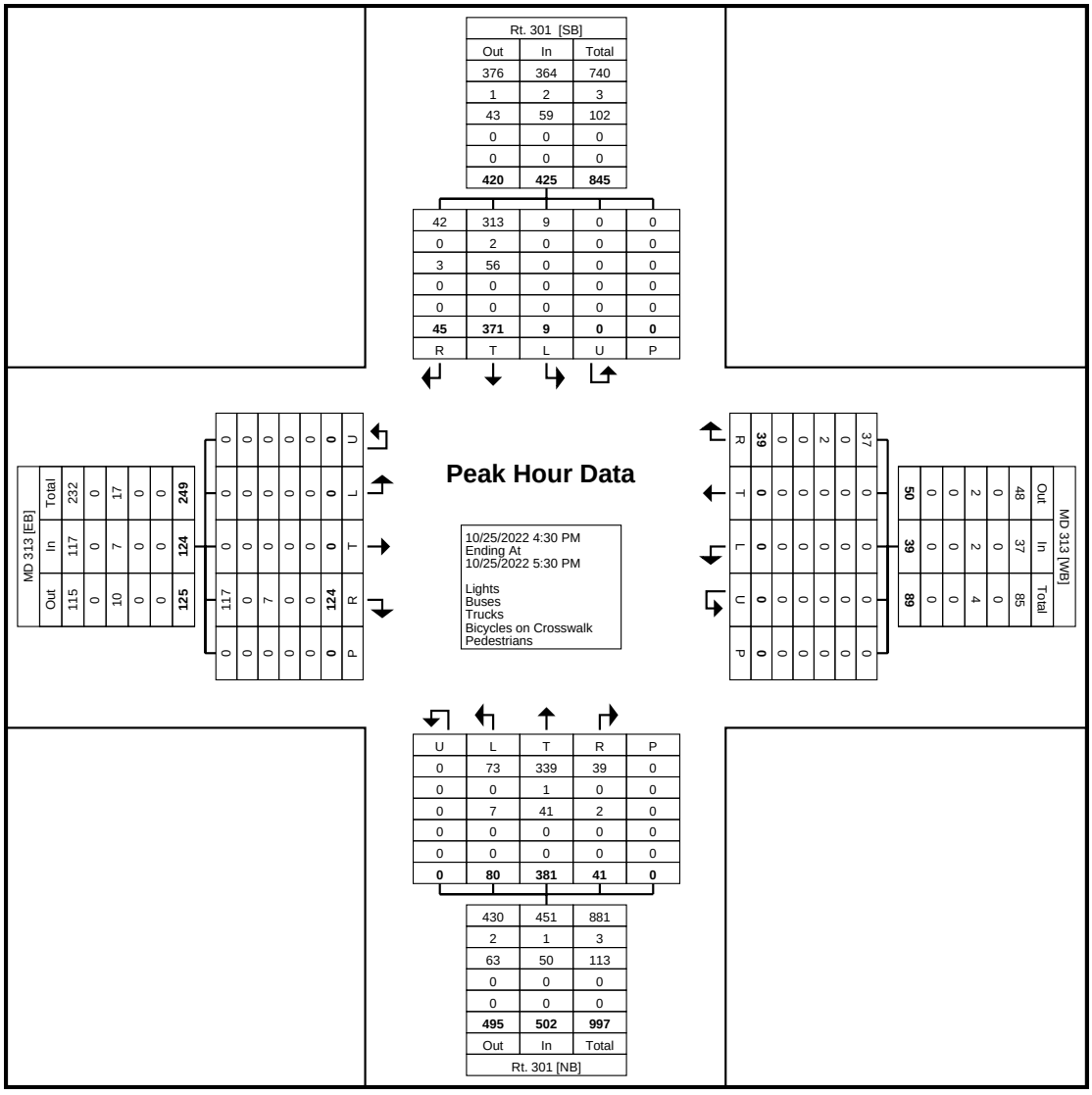
Kent County, MD
Route 301 & MD 313
Tuesday, October 25, 2022
Location: 39.319754, -75.846661

Count Name: Rt. 301 & MD 313
Site Code:
Start Date: 10/25/2022



Turning Movement Peak Hour Data Plot (4:30 PM)

Kent County, MD
Route 301 SB & Chesterville Bridge Rd
Tuesday, October 25, 2022
Location: 39.274186, -75.861809

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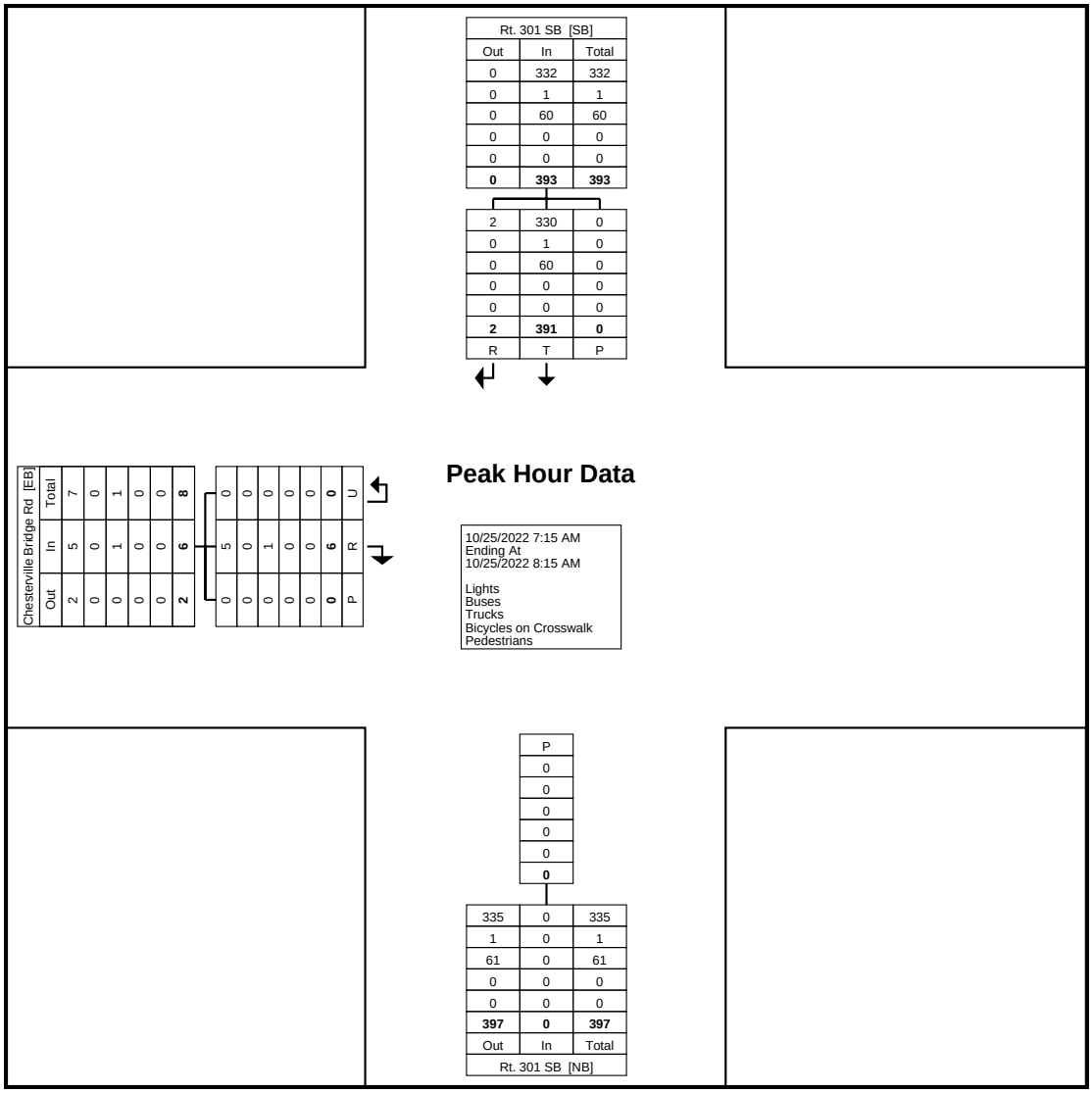
Count Name: Rt. 301 SB & Chesterville Bridge Rd
Site Code:
Start Date: 10/25/2022



Turning Movement Peak Hour Data Plot (7:15 AM)

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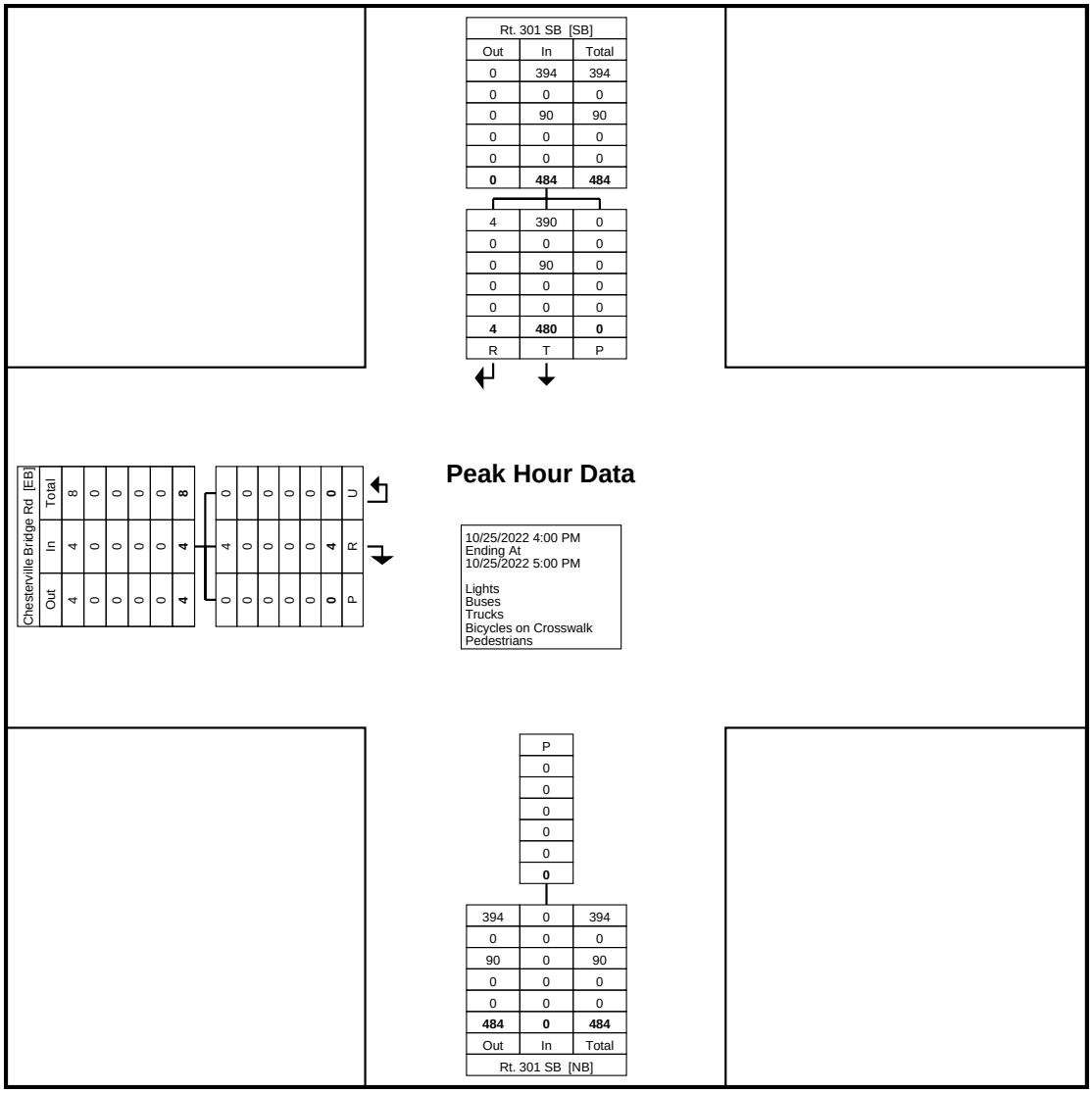
Kent County, MD
Route 301 SB & Chesterville Bridge Rd
Tuesday, October 25, 2022
Location: 39.274186, -75.861809

Count Name: Rt. 301 SB & Chesterville Bridge Rd
Site Code:
Start Date: 10/25/2022
Page No: 6



Turning Movement Peak Hour Data Plot (4:00 PM)

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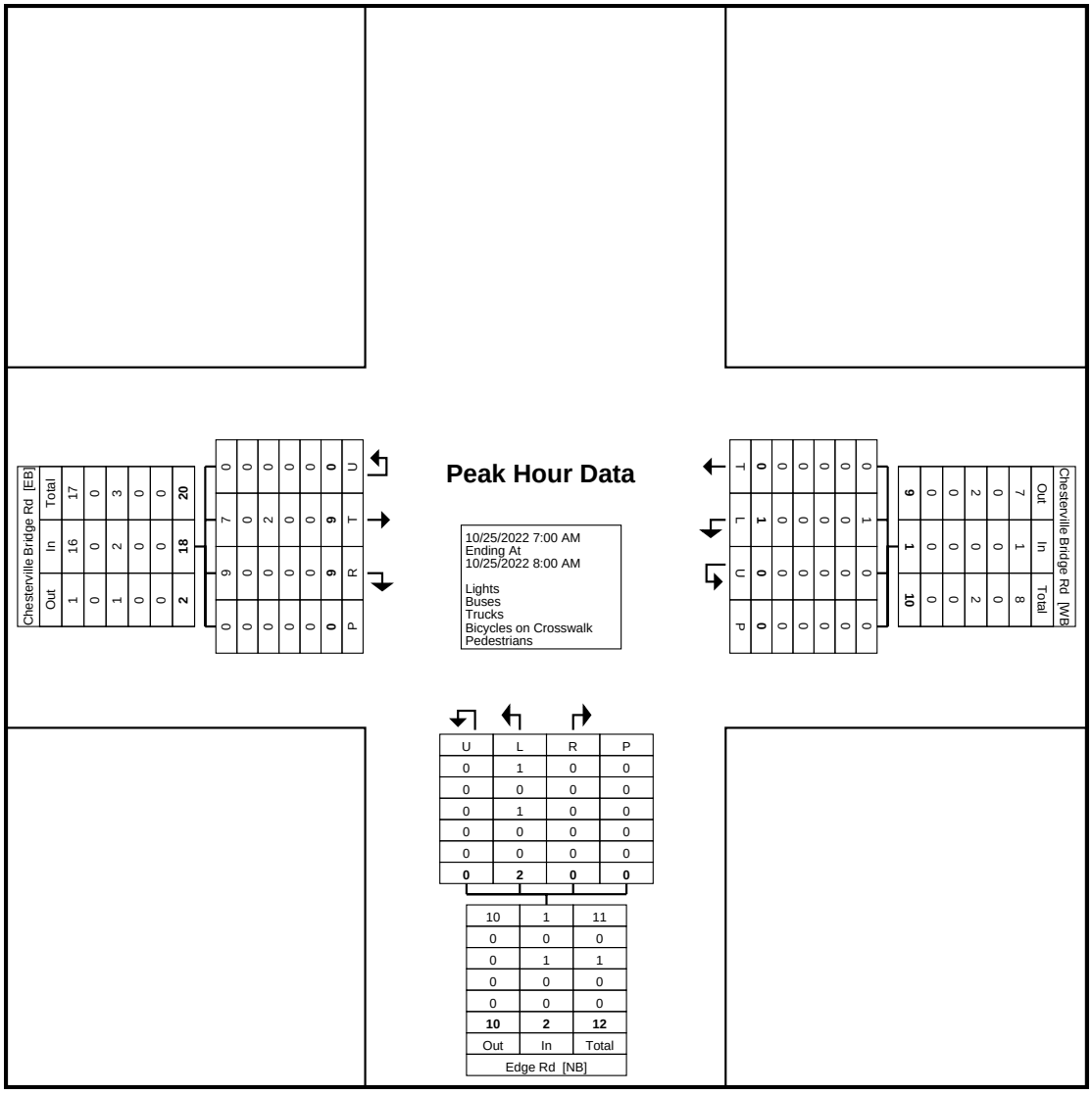
Kent County, MD
Chesterville Bridge Rd & Edge Rd
Tuesday, October 25, 2022
Location: 39.274795, -75.8651

Count Name: Chesterville Bridge Rd & Edge Rd
Site Code:
Start Date: 10/25/2022
Page No: 4



Chesterville Bridge Rd [EB]							
	Total	17	0	3	0	0	**20**
In	16	0	2	0	0	**18**
Out	1	0	1	0	0	**2**

0	0	0	0	0	**0**	U
7	0	2	0	0	**9**	T
9	0	0	0	0	**9**	R
0	0	0	0	0	**0**	P

T	**0**	0	0	0	0	0	0
L	**1**	0	0	0	0	1	
U	**0**	0	0	0	0	0	
P	**0**	0	0	0	0	0	

9	0	0	2	0	7	Out	Chesterville Bridge Rd [WB]
1	0	0	0	0	1	In	
10	0	0	2	0	8	Total	

U	L	R	P
0	1	0	0
0	0	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	**2**	**0**	**0**

10	1	11
0	0	0
0	1	1
0	0	0
0	0	0
10	**2**	**12**
Out	In	Total
Edge Rd [NB]		

Turning Movement Peak Hour Data Plot (7:00 AM)

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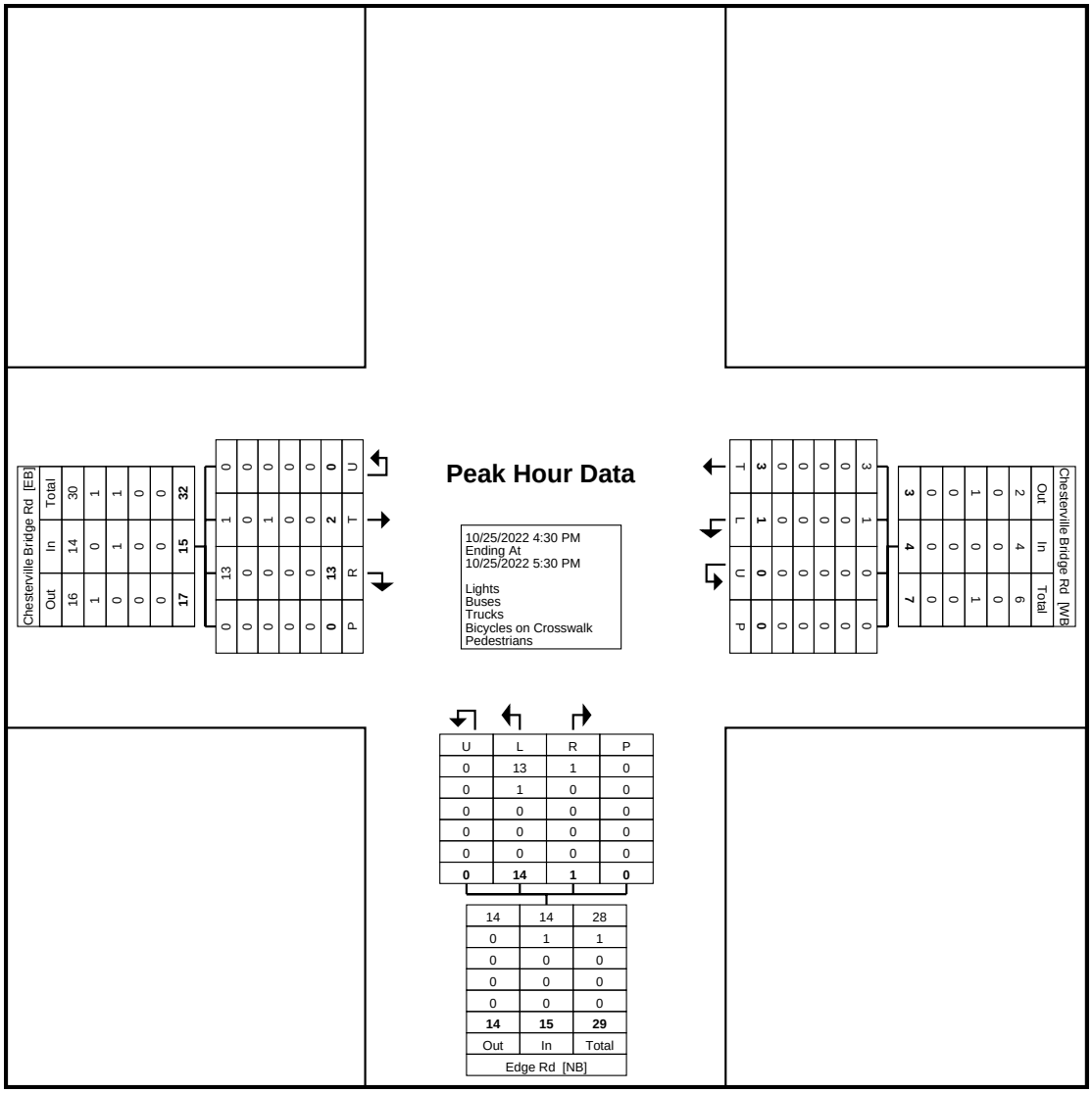
Kent County, MD
Chesterville Bridge Rd & Edge Rd
Tuesday, October 25, 2022
Location: 39.274795, -75.8651

Count Name: Chesterville Bridge Rd & Edge Rd
Site Code:
Start Date: 10/25/2022
Page No: 6



U	L	R	P
0	13	1	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	**14**	**1**	**0**

14	14	28
0	1	1
0	0	0
0	0	0
0	0	0
14	**15**	**29**
Out	In	Total

Turning Movement Peak Hour Data Plot (4:30 PM)

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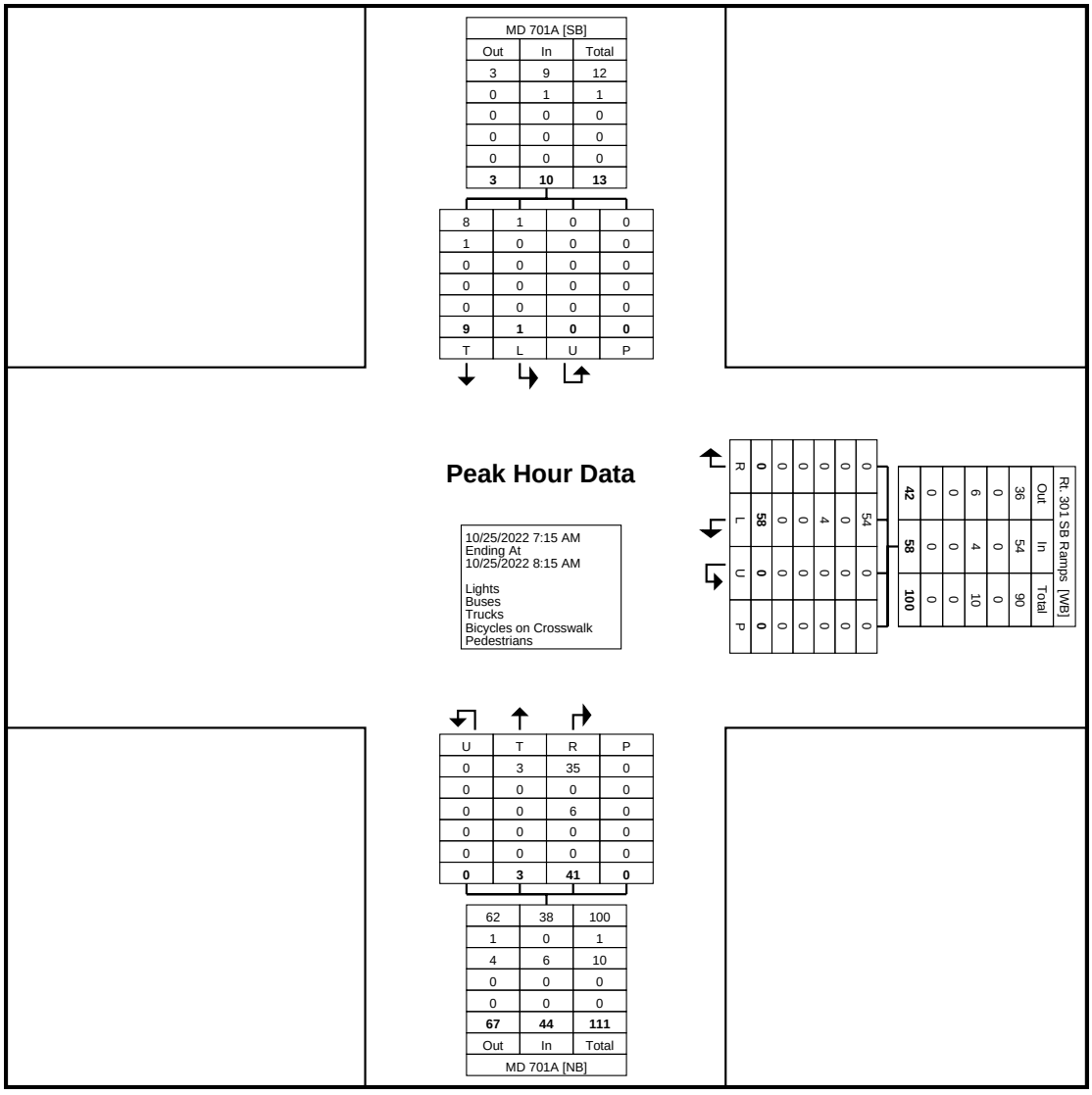
Kent County, MD
MD 701A & Route 301 SB Ramps
Tuesday, October 25, 2022
Location: 39.266222, -75.865035

Count Name: MD 701A & Rt. 301 SB Ramps
Site Code:
Start Date: 10/25/2022
Page No: 4



Turning Movement Peak Hour Data Plot (7:15 AM)

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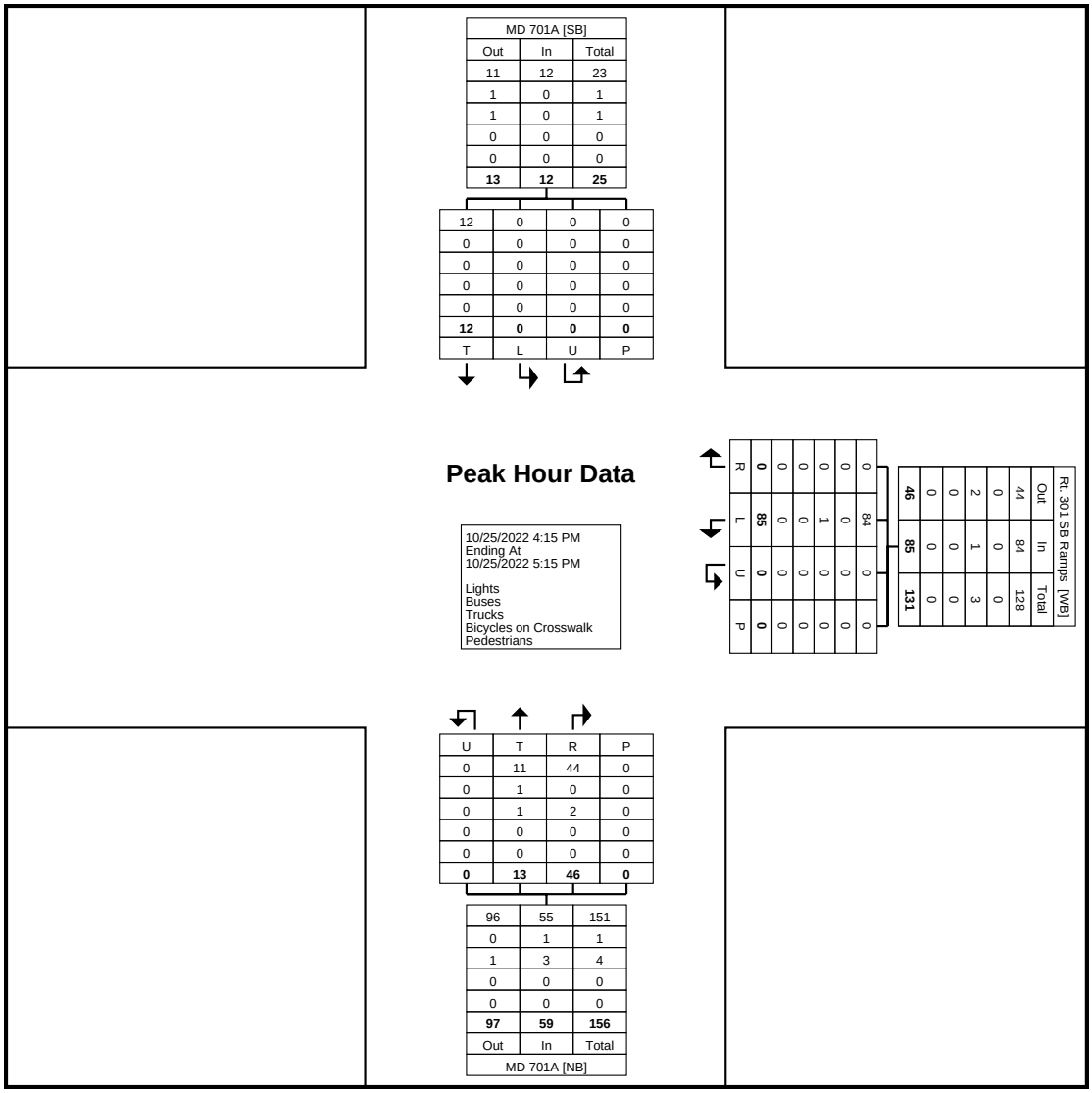
Kent County, MD
MD 701A & Route 301 SB Ramps
Tuesday, October 25, 2022
Location: 39.266222, -75.865035

Count Name: MD 701A & Rt. 301 SB Ramps
Site Code:
Start Date: 10/25/2022



Turning Movement Peak Hour Data Plot (4:15 PM)

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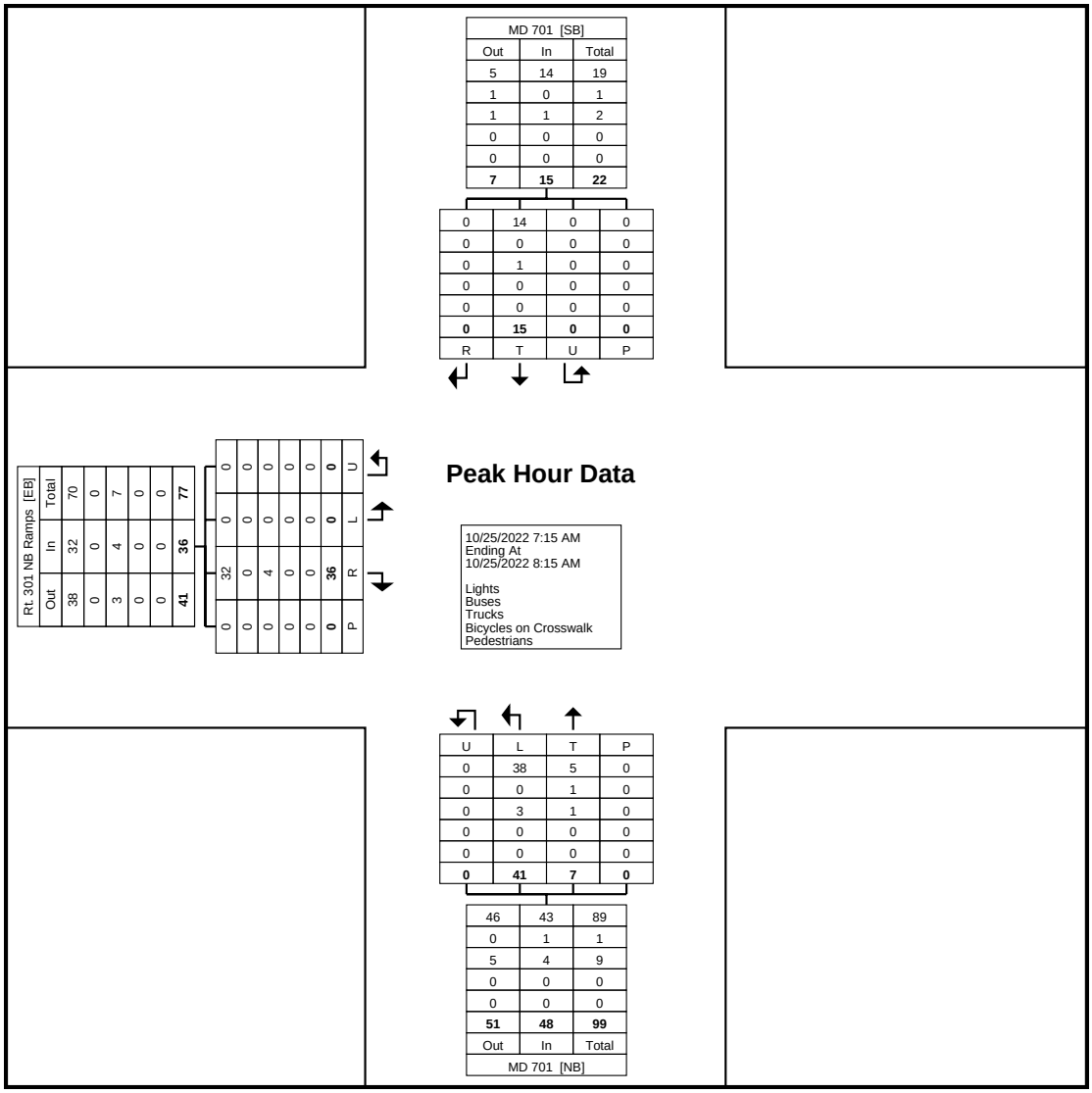
Kent County, MD
MD 701 & Route 301 NB Ramps
Tuesday, October 25, 2022
Location: 39.265396, -75.863044

Count Name: MD 701 & Rt. 301 NB Ramps
Site Code:
Start Date: 10/25/2022
Page No: 4



Turning Movement Peak Hour Data Plot (7:15 AM)

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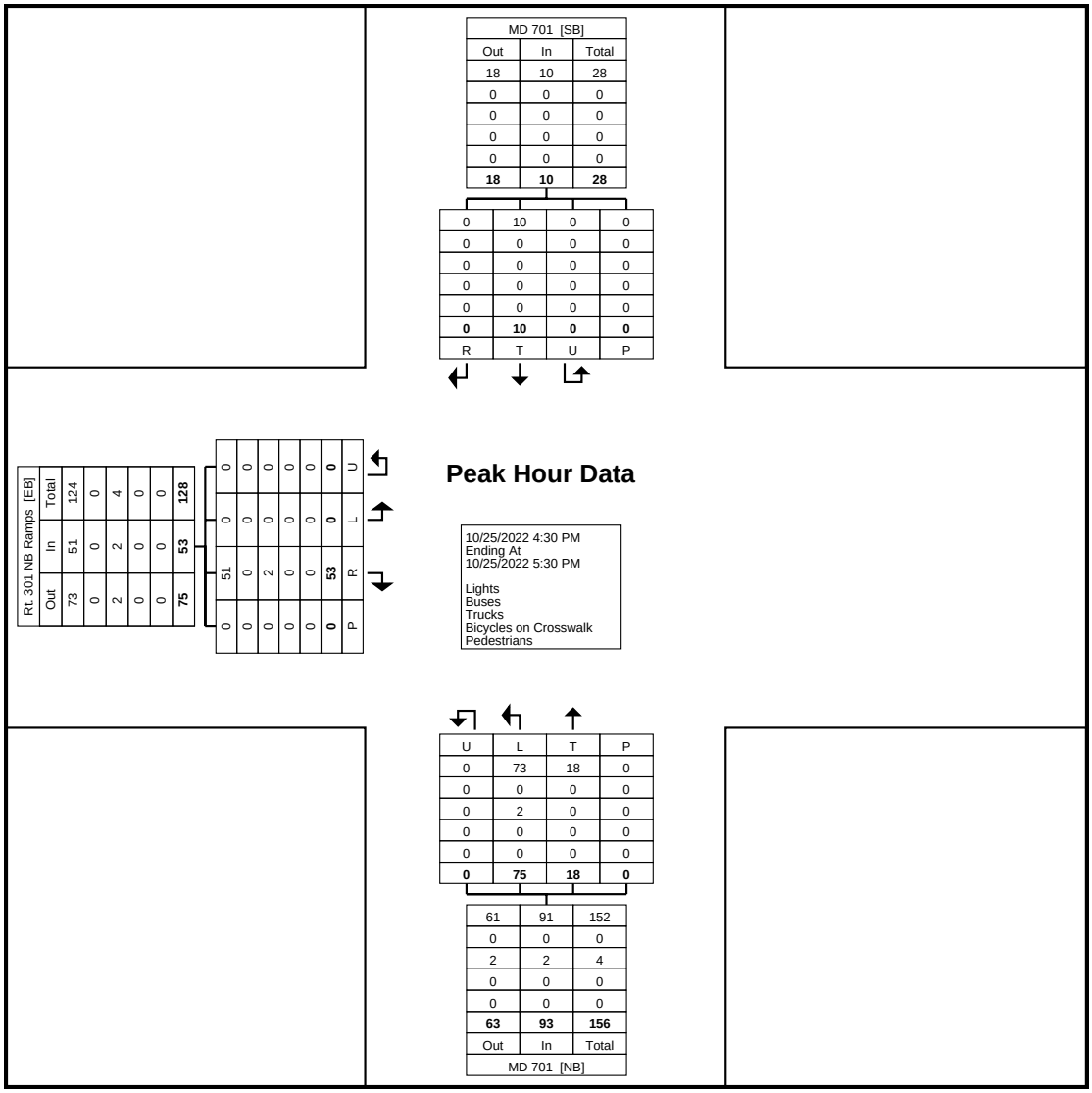
Kent County, MD
MD 701 & Route 301 NB Ramps
Tuesday, October 25, 2022
Location: 39.265396, -75.863044

Count Name: MD 701 & Rt. 301 NB Ramps
Site Code:
Start Date: 10/25/2022
Page No: 6



Turning Movement Peak Hour Data Plot (4:30 PM)

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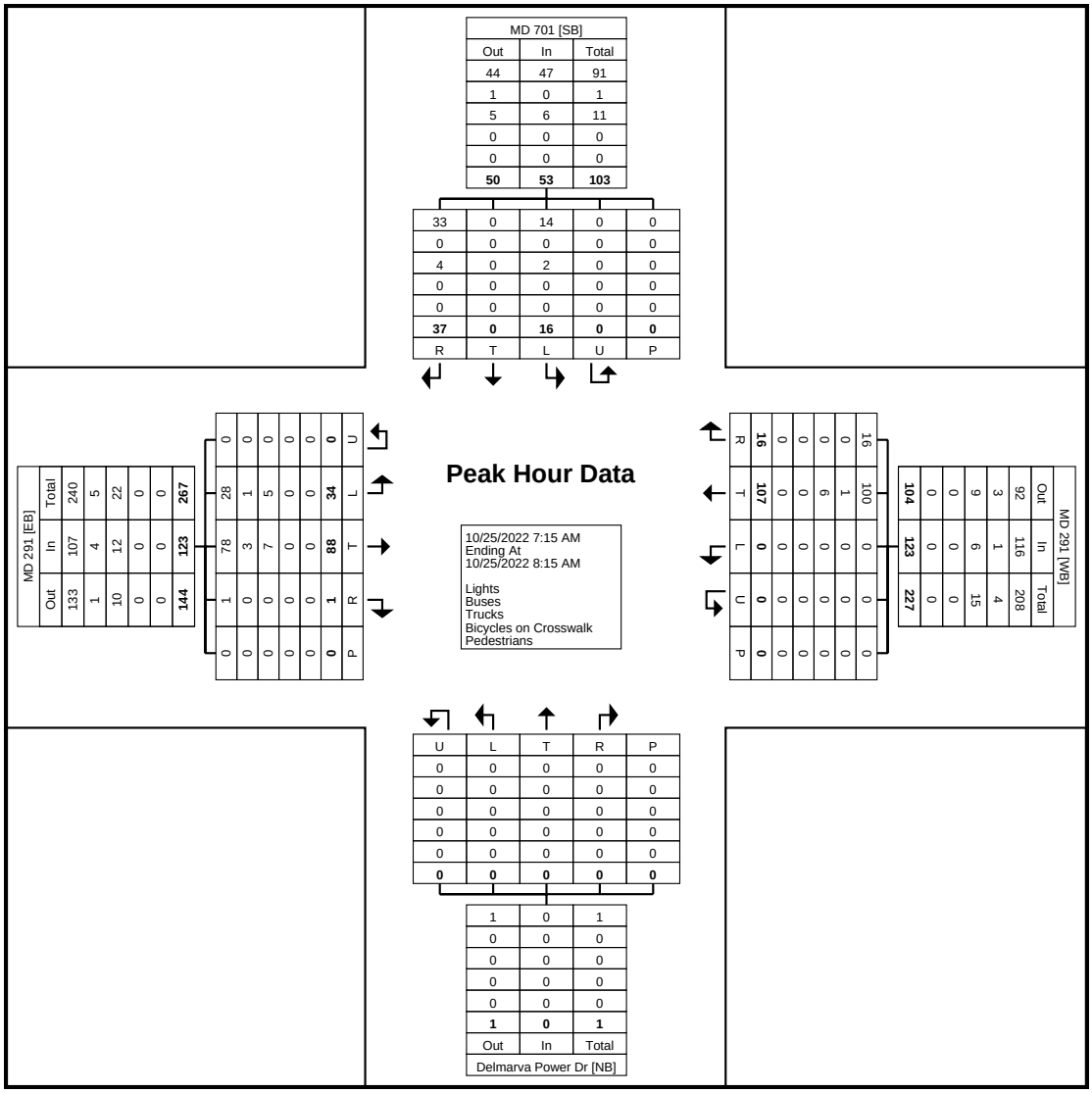
Kent County, MD
MD 291 & MD 701 Roundabout
Tuesday, October 25, 2022
Location: 39.263873, -75.862595

Count Name: MD 291 & MD 701 Roundabout
Site Code:
Start Date: 10/25/2022



Turning Movement Peak Hour Data Plot (7:15 AM)

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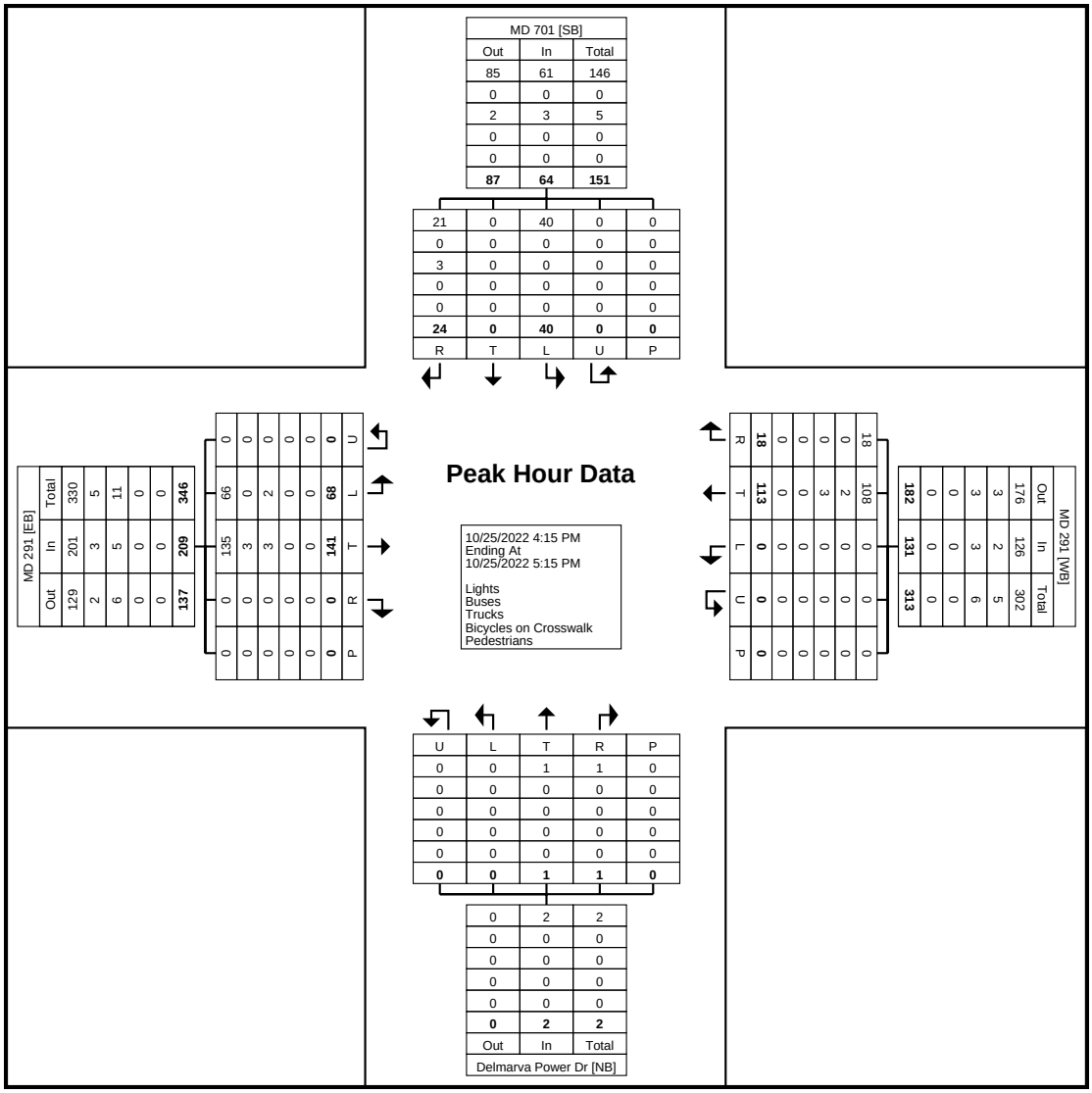
Kent County, MD
MD 291 & MD 701 Roundabout
Tuesday, October 25, 2022
Location: 39.263873, -75.862595

Count Name: MD 291 & MD 701 Roundabout
Site Code:
Start Date: 10/25/2022



Turning Movement Peak Hour Data Plot (4:15 PM)

Kent County, MD
MD 291 & MD 701 A
Roundabout
Tuesday, October 25, 2022
Location: 39.264641, -75.866398

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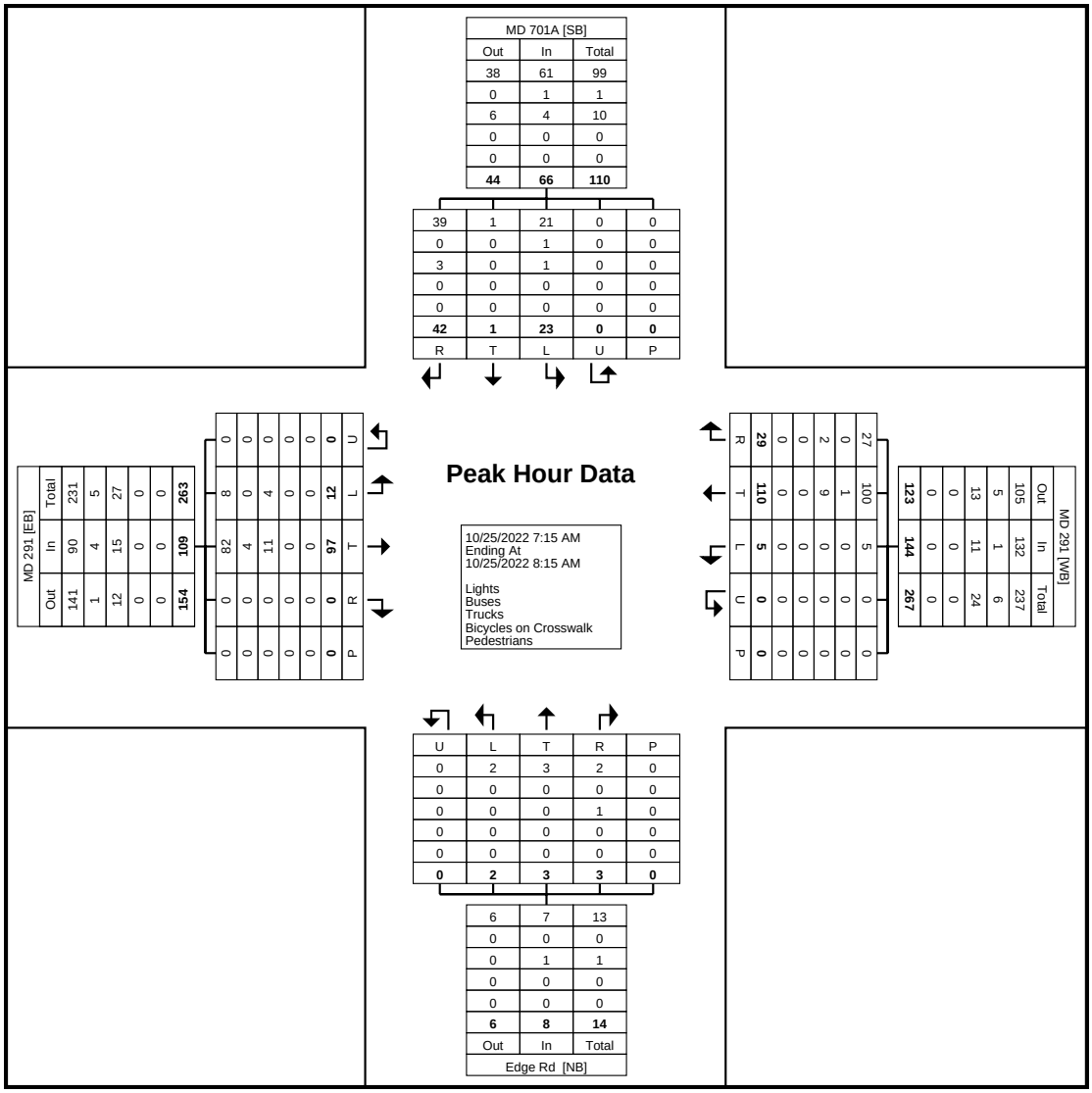
Count Name: MD 291 & MD 701A roundabout
Site Code:
Start Date: 10/25/2022



Turning Movement Peak Hour Data Plot (7:15 AM)

Kent County, MD
MD 291 & MD 701 A
Roundabout
Tuesday, October 25, 2022
Location: 39.264641, -
75.866398

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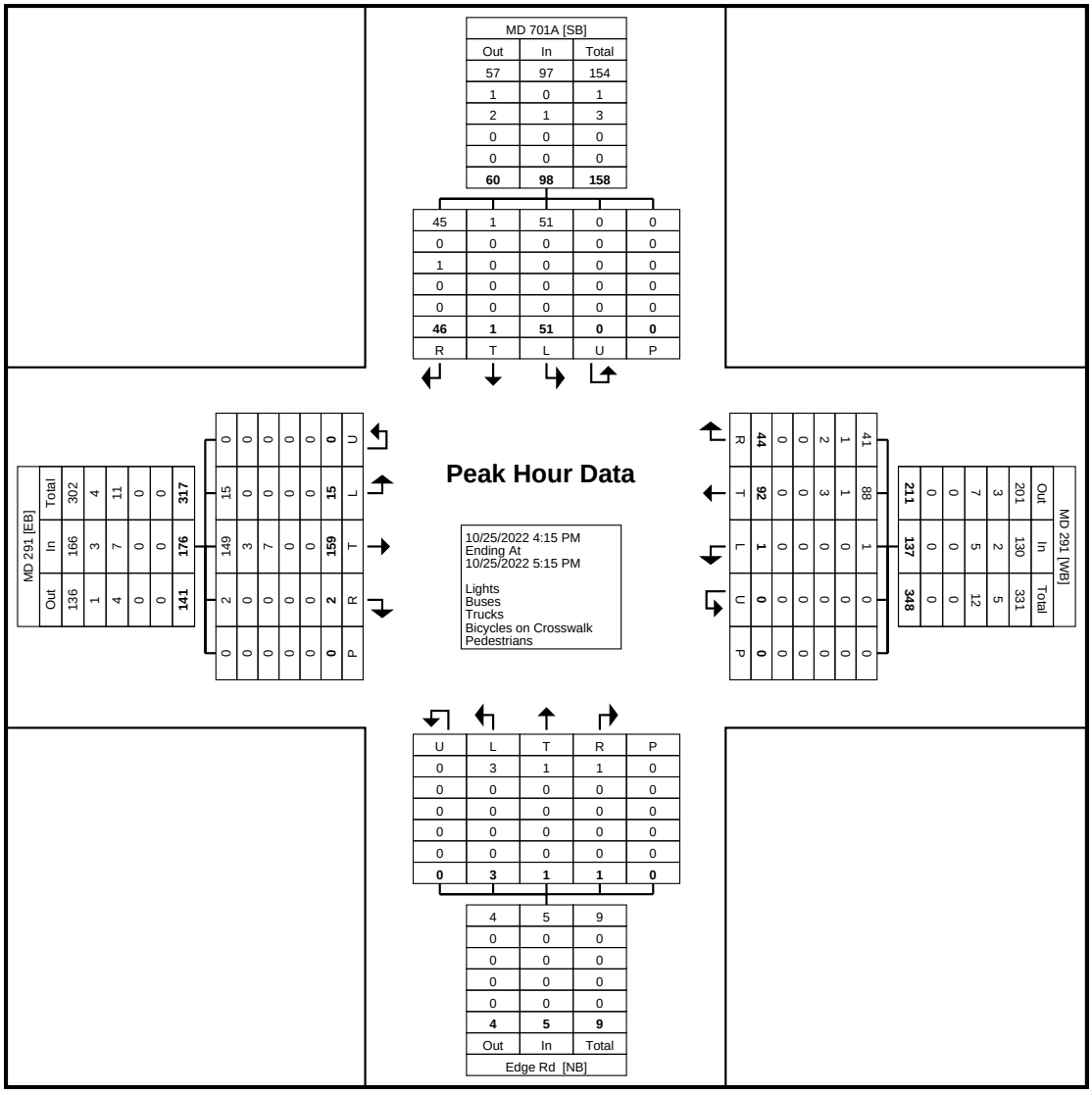
Count Name: MD 291 & MD
701A roundabout
Site Code:
Start Date: 10/25/2022
Page No: 6



Turning Movement Peak Hour Data Plot (4:15 PM)

APPENDIX V
SITE PLAN &
ITE TRIP DATA

PERIMETER BOUNDARY COURSES AND DISTANCES

LINE	BEARING	DISTANCE
1	S 20°30'34" E	73.87'
2	S 11°54'11" W	50.00'
3	S 00°35'35" W	50.99'
4	S 11°42'18" W	144.01'
5	S 07°20'51" E	129.32'
6	S 17°37'45" E	94.97'
7	S 28°15'11" E	51.90'
8	S 35°41'34" E	128.29'
9	S 01°15'22" W	111.22'
10	S 23°11'27" W	99.87'
11	S 00°07'11" W	50.77'
12	S 33°58'49" E	58.03'
13	S 74°40'43" W	428.38'
14	N 65°19'17" W	447.97'
15	N 15°19'17" W	376.34'
16	N 05°09'55" W	365.29'
17	N 29°40'43" E	259.45'
18	N 74°40'43" E	345.59'
19	S 66°21'21" E	86.65'
20	S 70°39'12" E	307.67'
	R = 2052.82'	L = 307.96'

LEGEND

- DEED POINT (UNLESS OTHERWISE NOTED)
- EDGE OF EXISTING/PROPOSED WOODSLINE
- EDGE OF WOODSLINE TO BE REMOVED
- FLOOD PLAIN LINE
- PERENNIAL STREAM
- NONTIDAL WETLAND MARGIN
- 25' BUFFER FROM NONTIDAL WETLANDS BUFFER
- MpB / WdcB — SOILS LINE AND TYPE
- L.O.D. — LIMITS OF DISTURBANCE

REMAINING PARCEL 6–1

LANDS N/F OF EDWARD J. BREITENBACH, III et ux
M.L.M. 824/375
ZONED – AZD

MILLS BRANCH

PROTECTED FOREST RETENTION AREA #1

SUBMERGED GRAVEL WETLANDS #2

SUBMERGED GRAVEL WETLANDS #3

SUBMERGED GRAVEL WETLANDS #4

SUBMERGED GRAVEL WETLANDS #1

PROPOSED 30' WIDE DRAINAGE EASEMENT

PROPOSED TRAILER PARKING 61 SPACES

PROPOSED TRAILER PARKING 51 SPACES

LOADING DOCKS 45 SPACES

PROPOSED 256,924 sq. ft.± MANUFACTURING/WAREHOUSE BUILDING

MECHANICAL ROOM

BIORETENTION AREA #1

BIORETENTION AREA #2

BIORETENTION AREA #3

PROPOSED MONUMENT SIGN

EXISTING STORMWATER MANAGEMENT POND

PARCEL 6–1 LOT 2

SEE: SRC PLATS 54731 & 54732

LANDS N/F OF S.H.A.
M.L.M. 191/127
ZONED – EC

TO MARYLAND ROUTE 291

TO U.S. ROUTE 301

CHESTERVILLE ROAD

DUDLEY CHANCE ROAD BRIDGE

50' R/W

FLOODPLAIN LINE ZONE "A"

GRAPHIC SCALE
60 0 30 60 120
1 inch = 60 ft.

PAVEMENT SHOWN ▭ SHALL BE MEDIUM DUTY BITUMINOUS CONCRETE

PROPOSED CONCRETE SIDEWALK TYPICAL WHERE SHOWN

PAVEMENT SHOWN ▭ SHALL BE HEAVY DUTY BITUMINOUS CONCRETE

AREA SHOWN ▭ SHALL BE 8" OF CONCRETE (MDOT SHA MIX No. 3) WITH 6x6 WELDED WIRE MESH (GAUGE 10)

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SITE STATISTICS

REMAINING PARCEL 6–1, LOT 1 SITE STATISTICS

GROSS SITE AREA	=	20.543 ac.±
NON–CRITICAL AREA	=	20.543 ac.±
CRITICAL AREA	=	0.000 ac.±
ZONE (EC)	=	20.543 ac.±
ZONE (AZD)	=	0.000 ac.±
ZONE (RCD)	=	0.000 ac.±

WAREHOUSE:

MAXIMUM BUILDING FOOTPRINT (ALLOWED)	=	N/A
MAXIMUM BUILDING FOOTPRINT (PROPOSED)	=	256,924 sq. ft.±
IMPERVIOUS AREA (EXISTING) (0.0%)	=	0.000 ac.±
IMPERVIOUS AREA (PROPOSED) (60.9%)	=	12.512 ac.±
LANDSCAPE AREA (EXISTING) (100%)	=	20.543 ac.±
LANDSCAPE AREA (PROPOSED) (39.1%)	=	8.031 ac.±

PARKING REQUIREMENTS:
INDUSTRIAL USES / WAREHOUSING:
1 space/2 employees X 260 EMPLOYEES = 130 SPACES
PARKING (PROVIDED) = 134 SPACES (5 HANDICAP ACCESSIBLE)

OFF–STREET LOADING REQUIREMENTS:
WAREHOUSING:
1 space/20,000 sq. ft. X 256,666 sq. ft. = 13 SPACES

PARKING (REQUIRED) = 13 SPACES
PARKING (PROVIDED) = 45 SPACES

KENT SOIL AND WATER CONSERVATION DISTRICT
KENT COUNTY DEPARTMENT OF PUBLIC WORKS
KENT COUNTY DEPARTMENT OF PLANNING AND ZONING
KENT COUNTY HEALTH DEPARTMENT

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. 22049, EXPIRATION DATE: 9–2–25

STATE OF MARYLAND — KEVIN W. KEENAN — No. 22049 — PROFESSIONAL ENGINEER

OCTOBER 9, 2023
DATE

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1–443–262–9130
FAX: 1–443–262–9148

DATE	REVISION
10–9–23	PER TAC COMMENTS

SITE PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6–1

DATE	MARCH '23
SCALE	1" = 60'
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31–2021165
DESIGNED BY	KJS
SHEET No. –	C–2.01
CADD FILE –	21165C2.01

SITE STATISTICS

REMAINING PARCEL 6-1, LOT 2 SITE STATISTICS

GROSS SITE AREA	=	20.665 ac.±
NON-CRITICAL AREA	=	20.665 ac.±
CRITICAL AREA	=	0.000 ac.±
ZONE (EC)	=	20.665 ac.±
ZONE (AZD)	=	0.000 ac.±
ZONE (RCD)	=	0.000 ac.±

WAREHOUSE:

MAXIMUM BUILDING FOOTPRINT (ALLOWED)	=	N/A
MAXIMUM BUILDING FOOTPRINT (PROPOSED)	=	256,924 sq. ft.±
IMPERVIOUS AREA (EXISTING) (0.0%)	=	0.000 ac.±
IMPERVIOUS AREA (PROPOSED) (60.9%)	=	12.587 ac.±
LANDSCAPE AREA (EXISTING) (100%)	=	20.665 ac.±
LANDSCAPE AREA (PROPOSED) (39.1%)	=	8.078 ac.±

PARKING REQUIREMENTS:
INDUSTRIAL USES / WAREHOUSING:
1 space/2 employees X 230 EMPLOYEES = 115 SPACES
PARKING (PROVIDED) = 115 SPACES (5 HANDICAP ACCESSIBLE)

OFF-STREET LOADING REQUIREMENTS:
WAREHOUSING:
1 space/20,000 sq. ft. X 256,924 sq. ft. = 13 SPACES

PARKING (REQUIRED) = 13 SPACES
PARKING (PROVIDED) = 61 SPACES

PAVEMENT SHOWN SHALL BE HEAVY DUTY BITUMINOUS CONCRETE

PAVEMENT SHOWN SHALL BE MEDIUM DUTY BITUMINOUS CONCRETE

AREA SHOWN SHALL BE 8" OF CONCRETE (MDOT SHA MIX No. 3) WITH 6x6 WELDED WIRE MESH (GAUGE 10)

PROPOSED CONCRETE SIDEWALK TYPICAL WHERE SHOWN

REMAINING PARCEL 6-1

LANDS N/F OF STEPHEN M. WALTERS
M.L.M. 762/359
ZONED - RCD

MILLS BRANCH

PERENNIAL STREAM

INTERMITTENT STREAM

NONTIDAL WETLANDS

WOODLANDS

BUFFER

100'

25'

PROTECTED FOREST RETENTION AREA #1

PROTECTED FOREST RETENTION AREA #2

PROTECTED FOREST RETENTION AREA #3

FLOODPLAIN LINE ZONE "A"

PROPOSED 30' WIDE DRAINAGE EASEMENT

SUBMERGED GRAVEL WETLANDS #1

SUBMERGED GRAVEL WETLANDS #2

PROPOSED TRAILER PARKING
57 SPACES

PROPOSED TRAILER PARKING
16 SPACES

PROPOSED TRAILER PARKING
45 SPACES

LOADING DOCKS
45 SPACES

PROPOSED 256,924 sq. ft.±
MANUFACTURING/WAREHOUSE BUILDING
F.F. ELEV. = 36.00

MECHANICAL ROOM

BIORETENTION AREA #5

BIORETENTION AREA #1, #2, #3 & #4

BIORETENTION AREA #8 & #9

BIORETENTION AREA #6 & #7

EXISTING STORMWATER MANAGEMENT POND

PROPOSED MONUMENT SIGN

L.O.D.

B.R.L.

EDGE ROAD

SEE: SRC PLAT 54647

US ROUTE 301
(BLUE STAR MEMORIAL HIGHWAY)
SEE: SRC PLATS 54645-54647 & 54731-54732 & 55138, 55205

LANDS N/F OF S.H.A.
M.L.M. 191/127
ZONED - EC

PARCEL 6-1
LOT 1

PERIMETER BOUNDARY COURSES AND DISTANCES

LINE	BEARING	DISTANCE
1	S 13°28'01" W	98.49'
2	S 07°48'59" W	100.00'
3	S 01°38'45" E	152.07'
4	S 02°06'21" W	50.25'
5	S 10°40'44" W	100.13'
6	S 14°39'33" W	251.79'
7	S 62°16'44" W	86.02'
8	S 59°22'45" W	80.43'
9	S 34°22'53" W	55.90'
10	S 10°06'25" W	50.04'
11	S 03°29'37" E	50.99'
12	S 04°22'58" W	100.18'
13	N 82°09'25" W	357.39'
14	N 37°59'44" W	105.56'
15	N 37°21'28" W	477.89'
16	N 30°27'05" E	109.13'
17	N 32°52'28" E	74.30'
18	N 23°16'25" E	122.21'
19	N 14°12'41" W	328.24'
20	N 37°50'35" E	91.41'
21	N 82°50'35" E	350.00'
22	S 82°09'25" E	350.00'
23	S 63°33'00" E	225.77'

NOTE:
SEE SUBDIVISION PLATS PREPARED BY DMS & ASSOCIATES, INC. FOR ADDITIONAL PROPERTY LINE INFORMATION

LEGEND

- DEED POINT (UNLESS OTHERWISE NOTED)
- EDGE OF EXISTING/PROPOSED WOODSLINE
- EDGE OF WOODSLINE TO BE REMOVED
- FLOOD PLAIN LINE
- PERENNIAL STREAM
- NONTIDAL WETLAND MARGIN
- 25' BUFFER FROM NONTIDAL WETLANDS BUFFER
- MpB / WdcB — SOILS LINE AND TYPE
- L.O.D. — LIMITS OF DISTURBANCE

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT — DATE

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

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. 22045, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN M. SCHNEIDER — No. 22045 — PROFESSIONAL ENGINEER

DATE: OCTOBER 9, 2023

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

DATE	REVISION
10-9-23	PER TAC COMMENTS

OVERALL SITE PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP - 31, GRID - 1E, PARCEL - 6-1

DATE	MARCH '23
SCALE	1" = 60'
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31-2021165
DESIGNED BY	KJS
SHEET No. -	C-2.01
CADD FILE -	21165C2201

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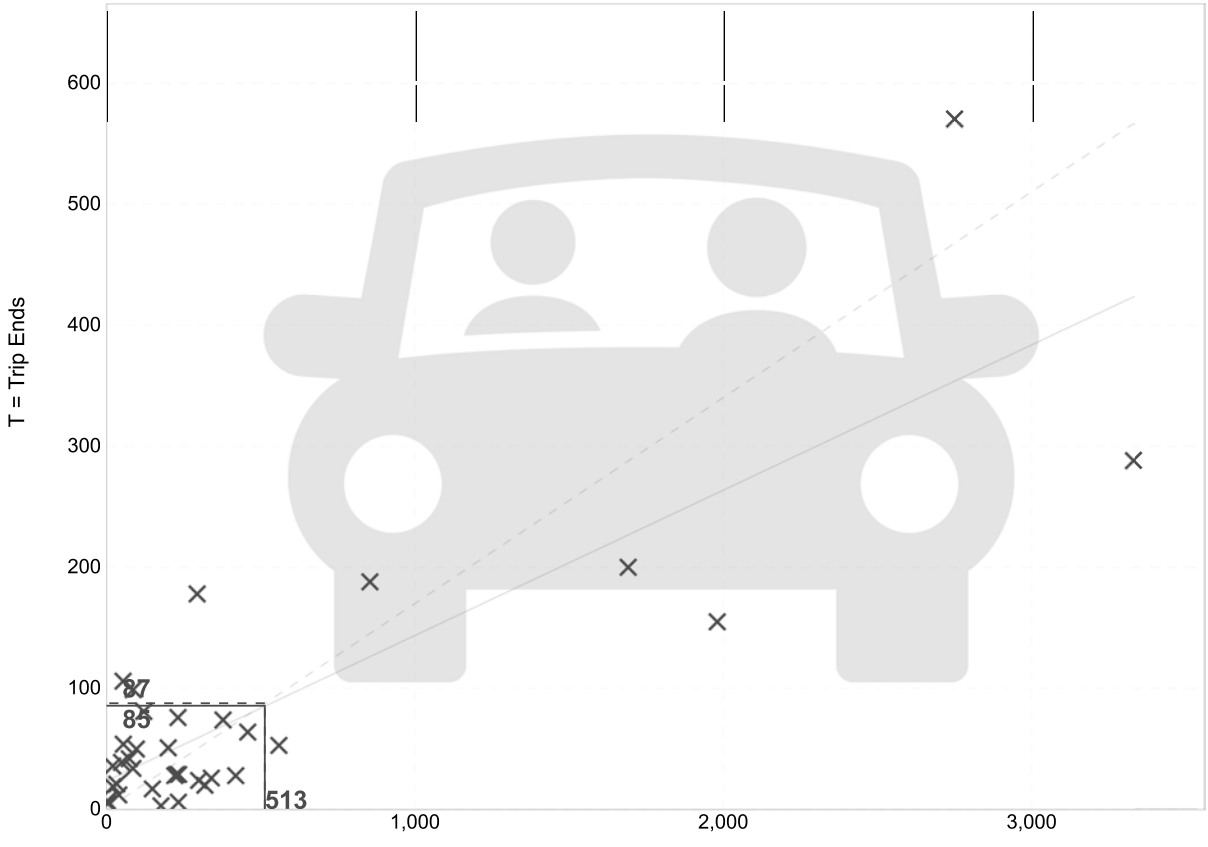
Warehousing
(150)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 36
Avg. 1000 Sq. Ft. GFA: 448
Directional Distribution: 77% entering, 23% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.17	0.02 - 1.93	0.19

Data Plot and Equation



Fitted Curve Equation: T = 0.12(X) + 23.62

R^2= 0.69

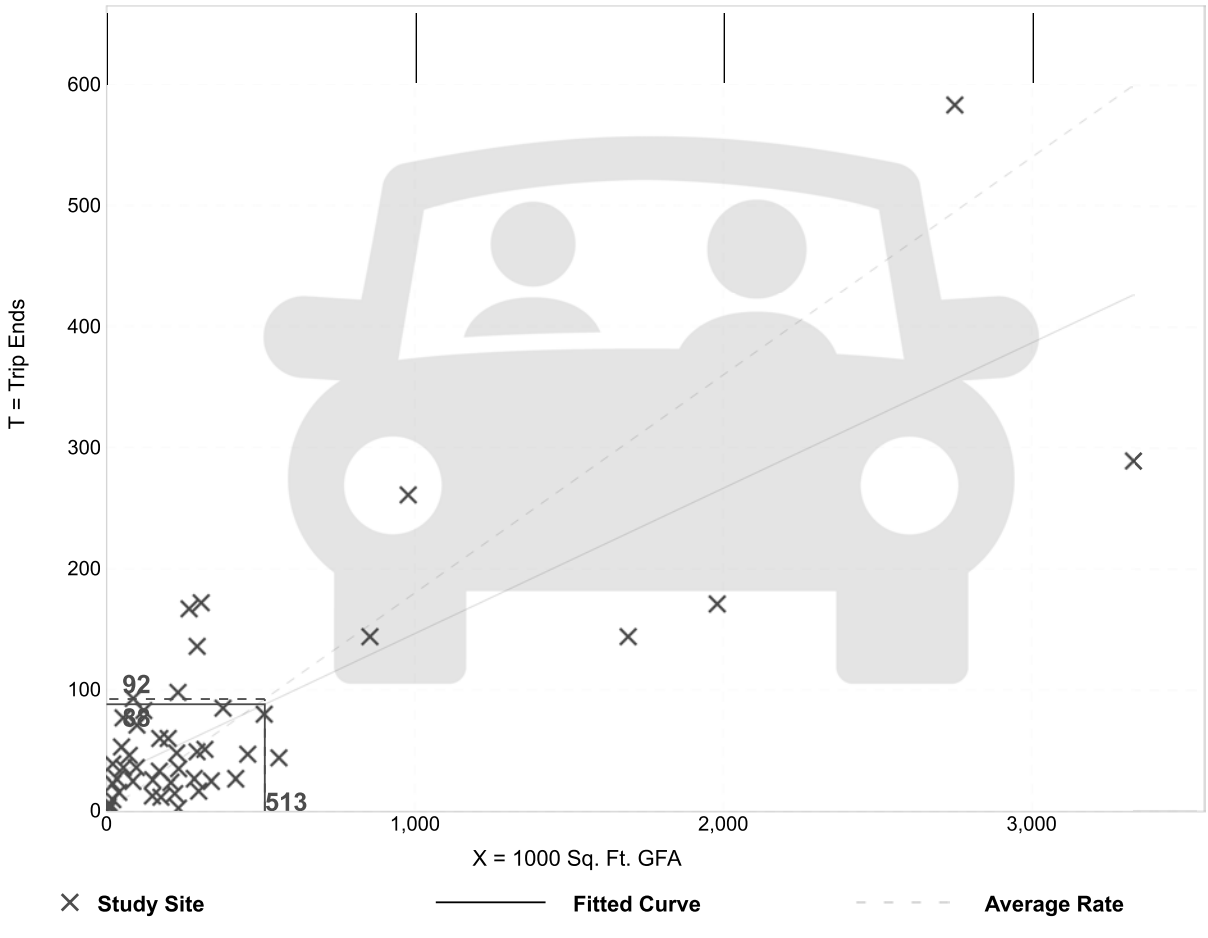
Warehousing
(150)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 49
Avg. 1000 Sq. Ft. GFA: 400
Directional Distribution: 28% entering, 72% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.18	0.01 - 1.80	0.18

Data Plot and Equation



Fitted Curve Equation: T = 0.12(X) + 26.48

R^2= 0.65

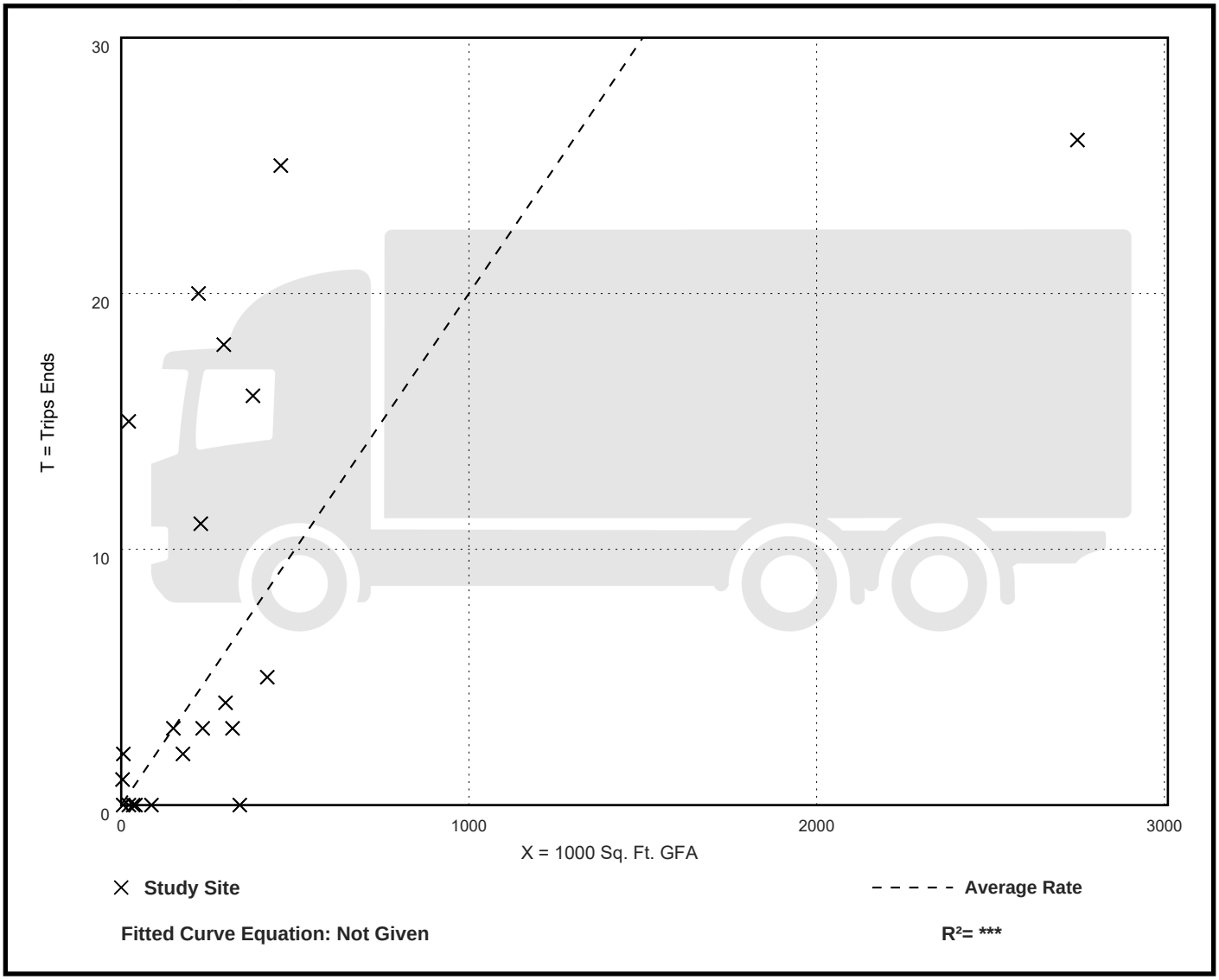
Warehousing
(150)

Truck Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 21
Avg. 1000 Sq. Ft. GFA: 309
Directional Distribution: 52% entering, 48% exiting

Truck Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.02	0.00 - 0.69	0.05

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= *

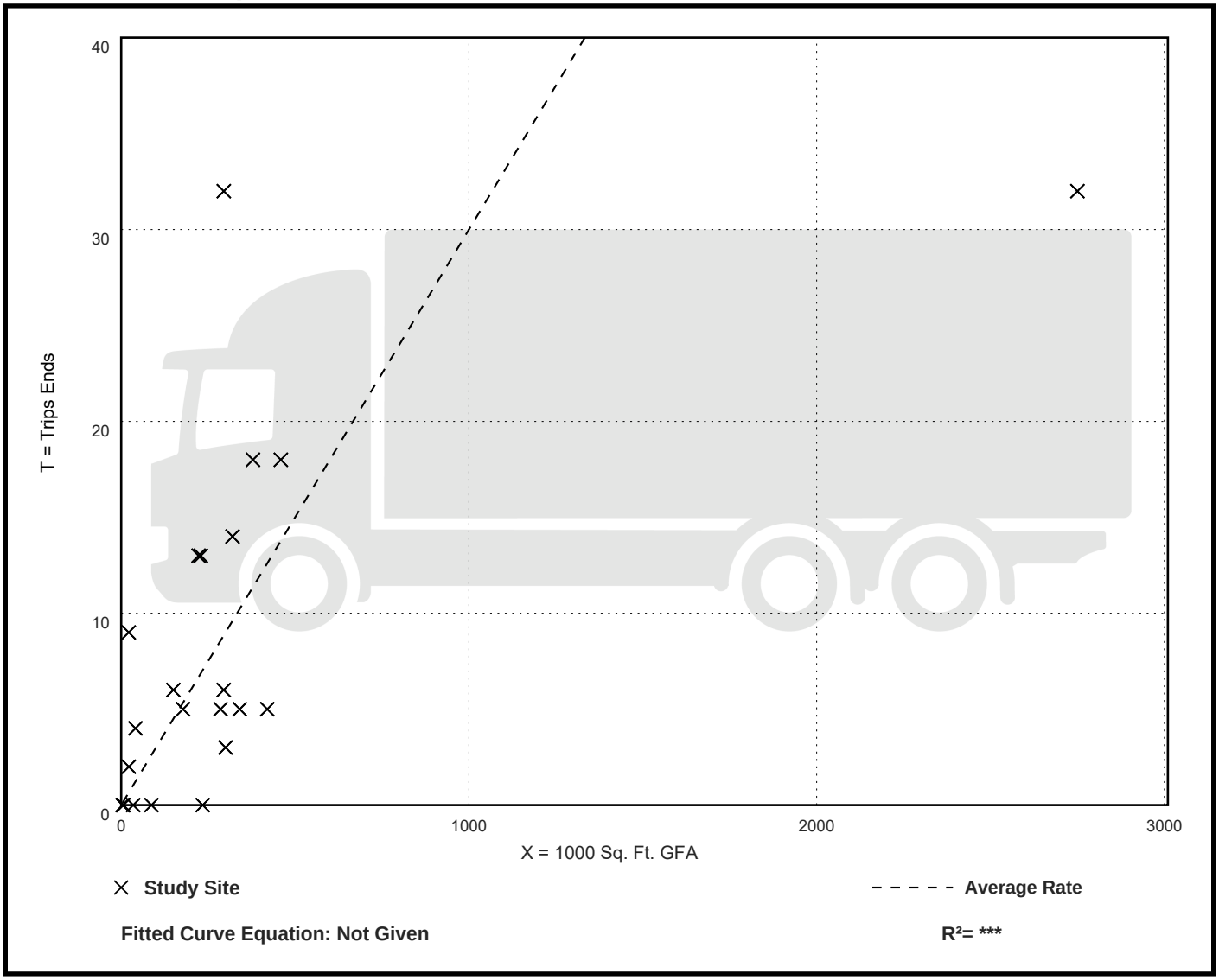
Warehousing
(150)

Truck Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 23
Avg. 1000 Sq. Ft. GFA: 308
Directional Distribution: 52% entering, 48% exiting

Truck Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.03	0.00 - 0.42	0.03

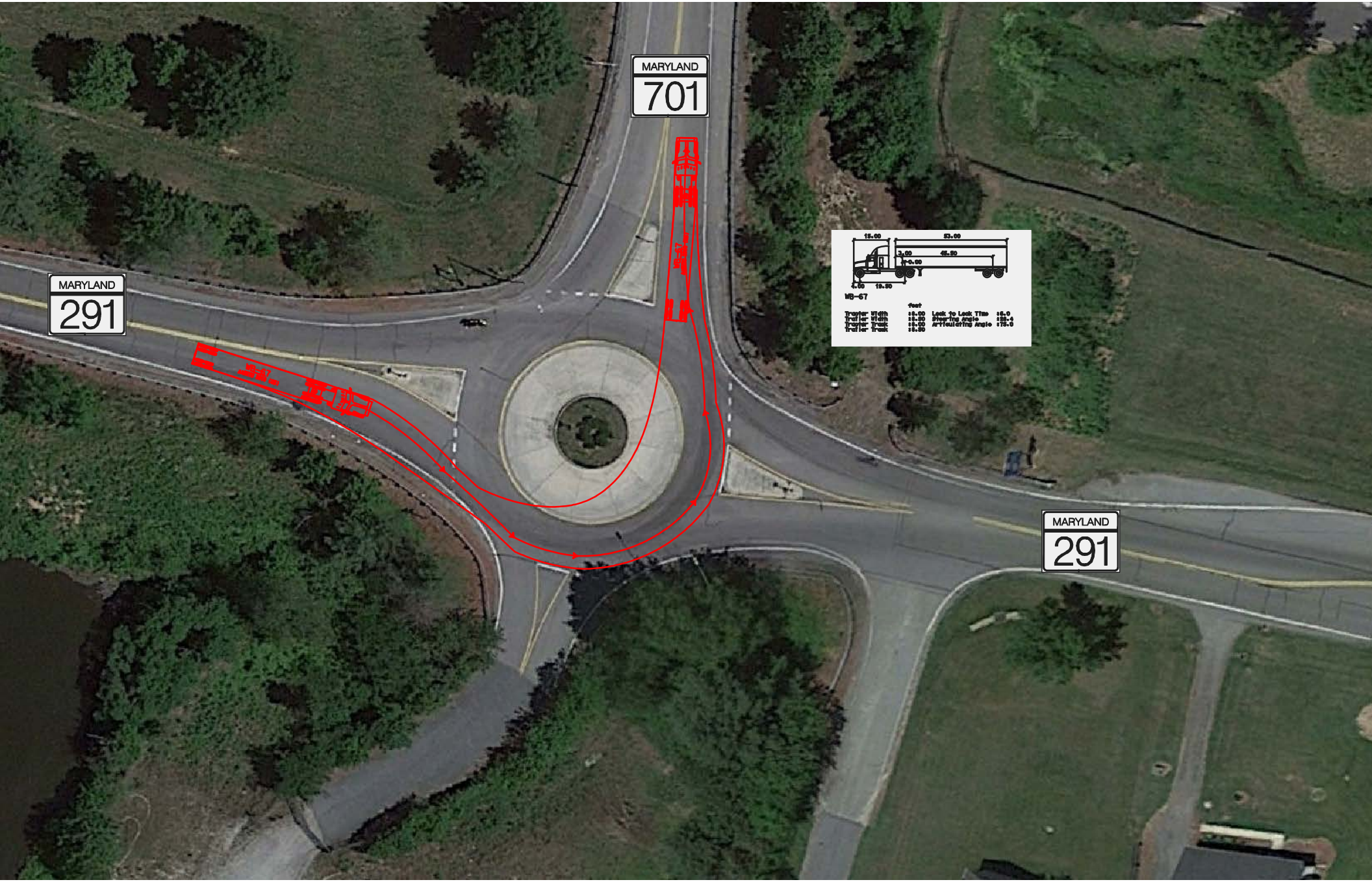
Data Plot and Equation

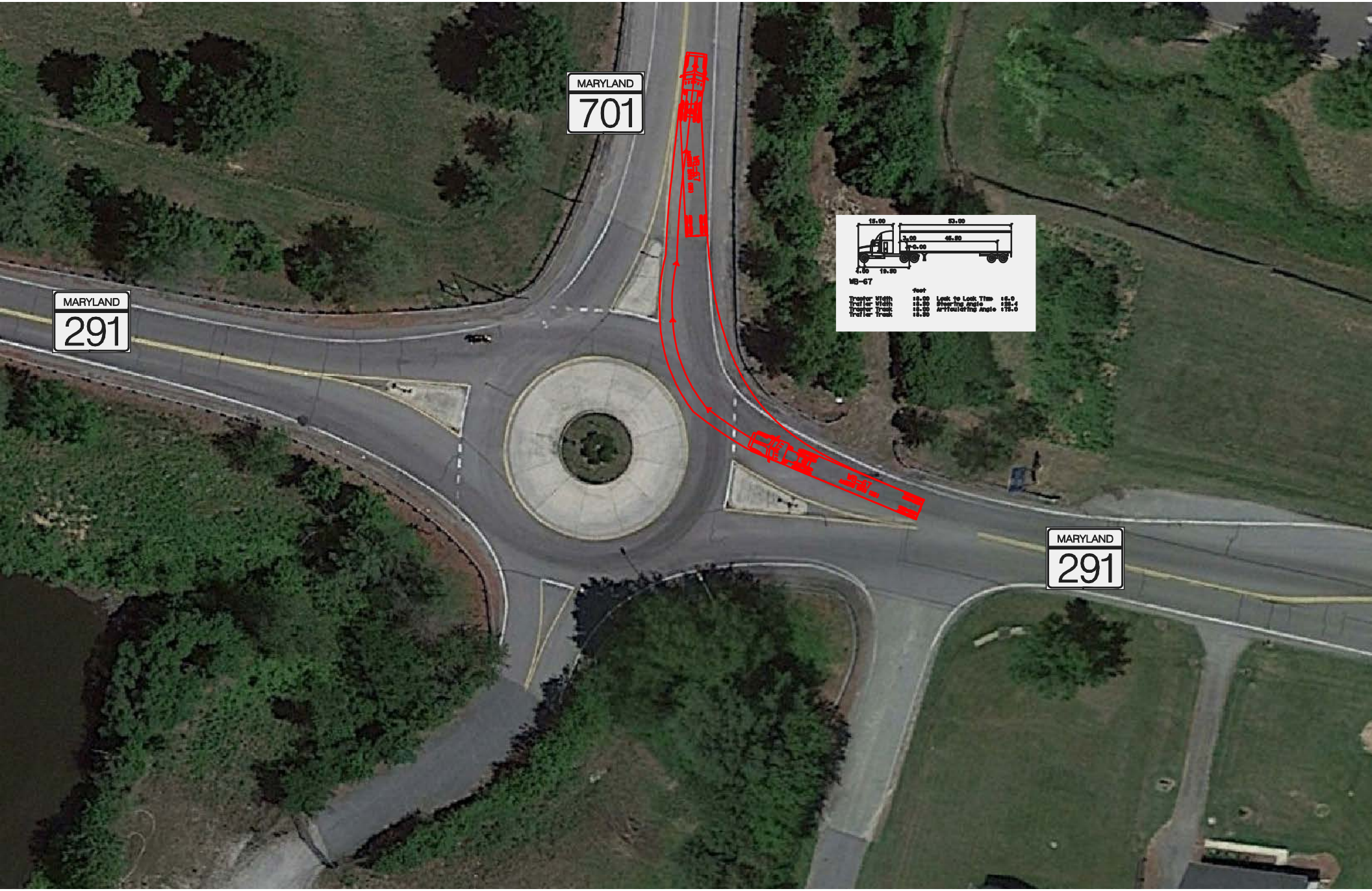


Fitted Curve Equation: Not Given

R^2= *

APPENDIX VI
AUTOTURN
EXHIBITS


MARYLAND
701
MARYLAND
291
MARYLAND
291
WB-67
feet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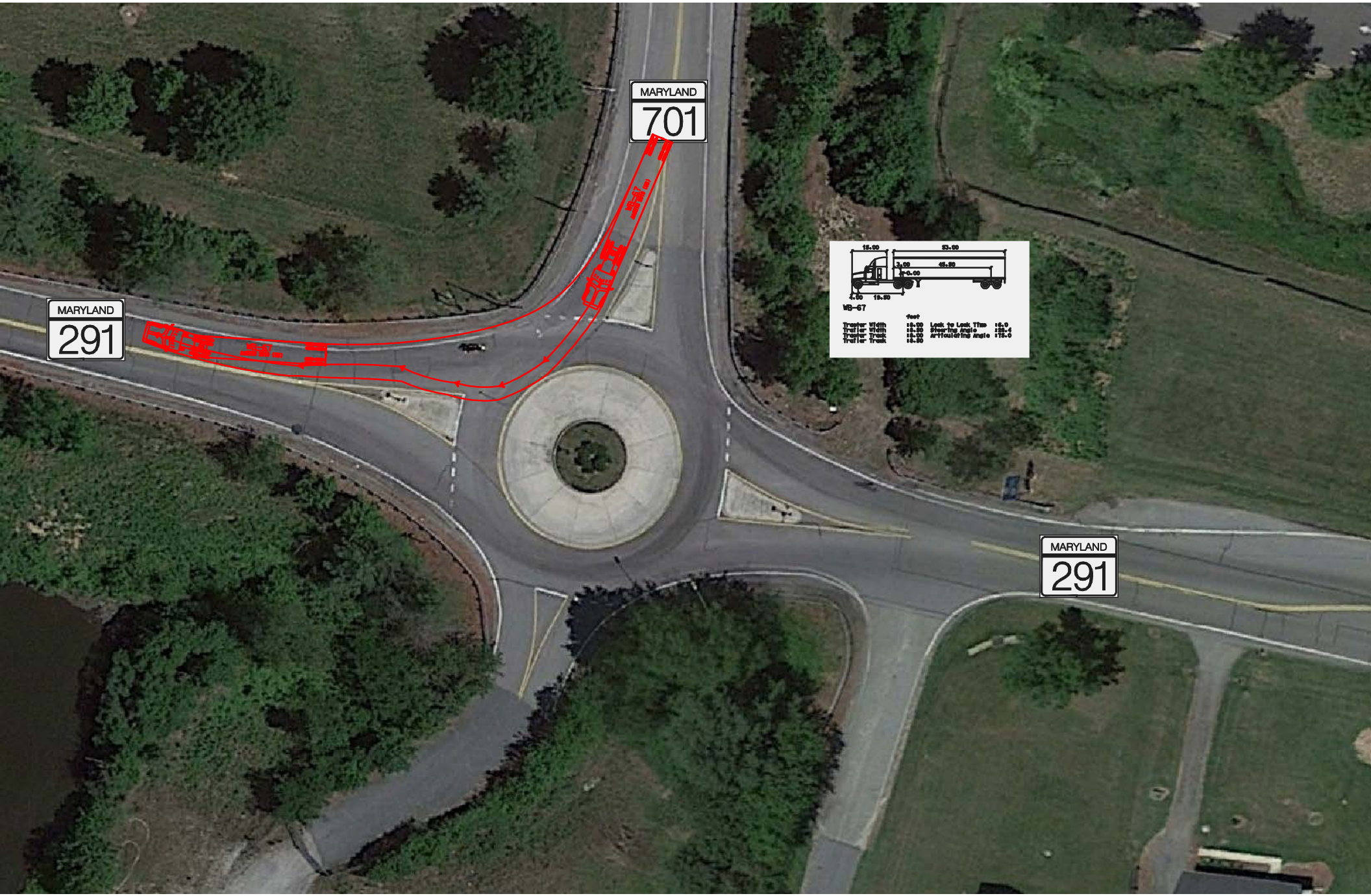
701
MARYLAND
291
MARYLAND
291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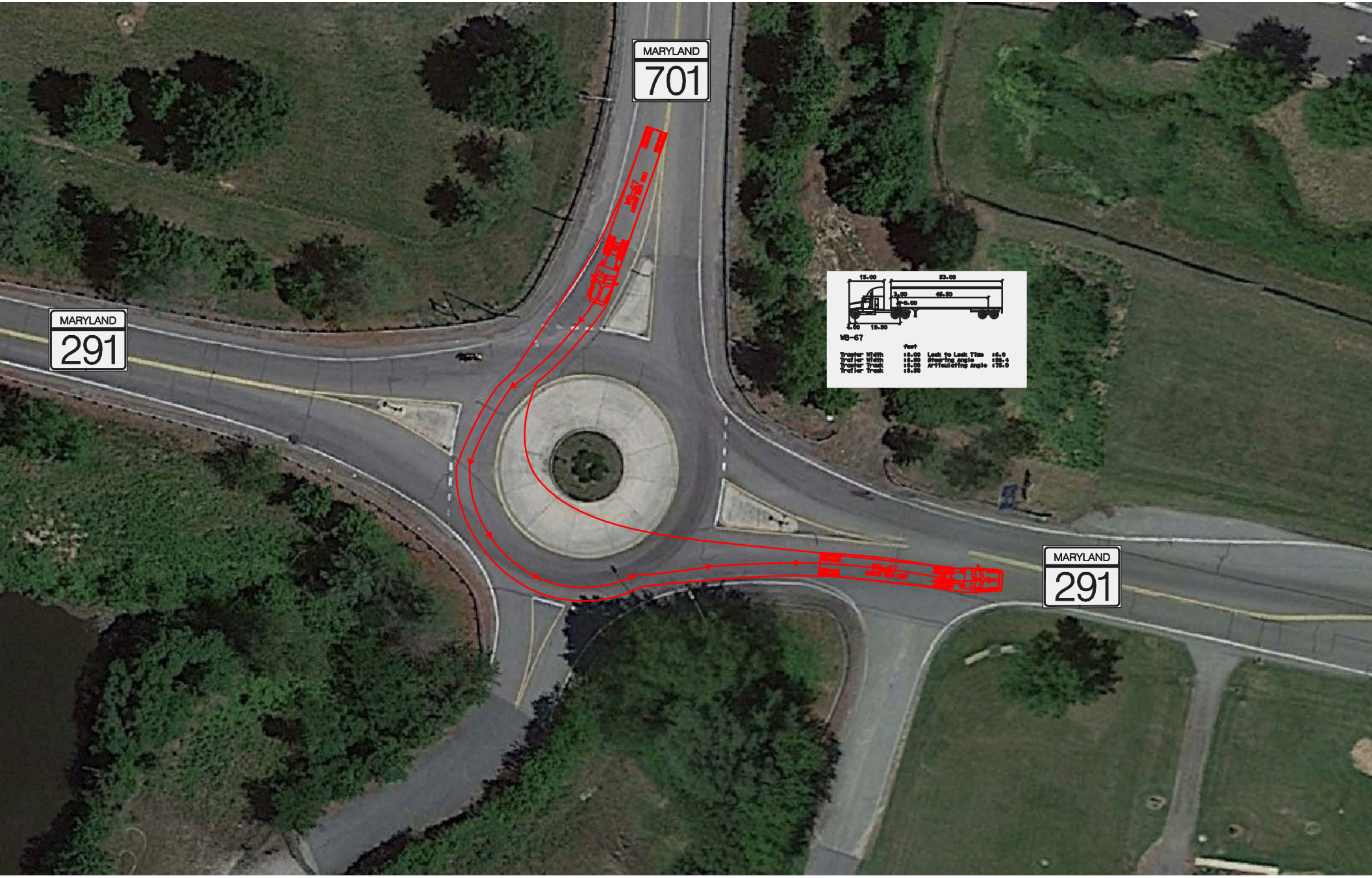
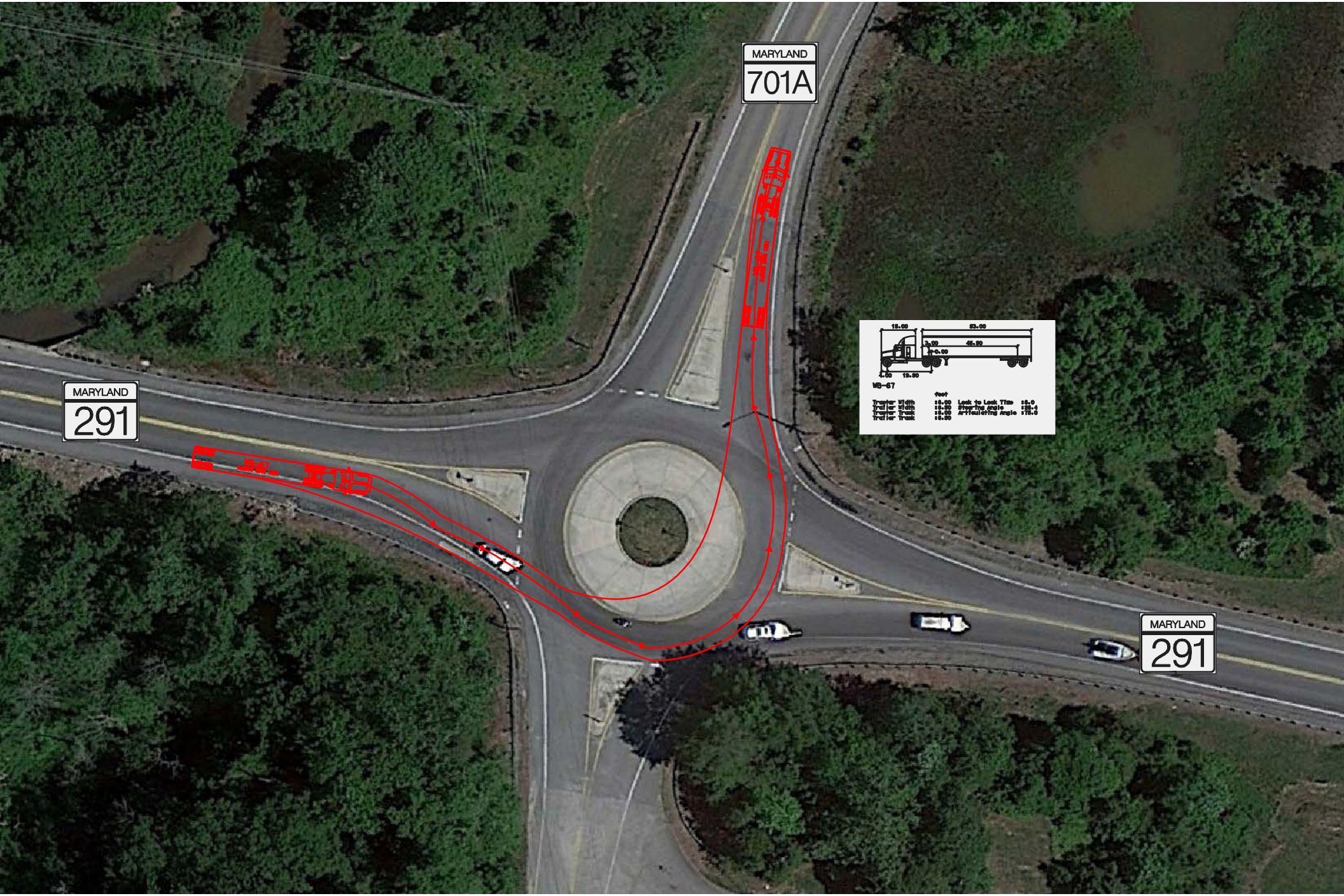
701
MARYLAND
291
MARYLAND
291
53.00
45.00
WB-67


MARYLAND
701
MARYLAND
291
MARYLAND
291
WB-67
Trailer Width
Trailer Track
Trailer Track
Trailer Track
Lock to Lock Time
Steering Angle
Articulating Angle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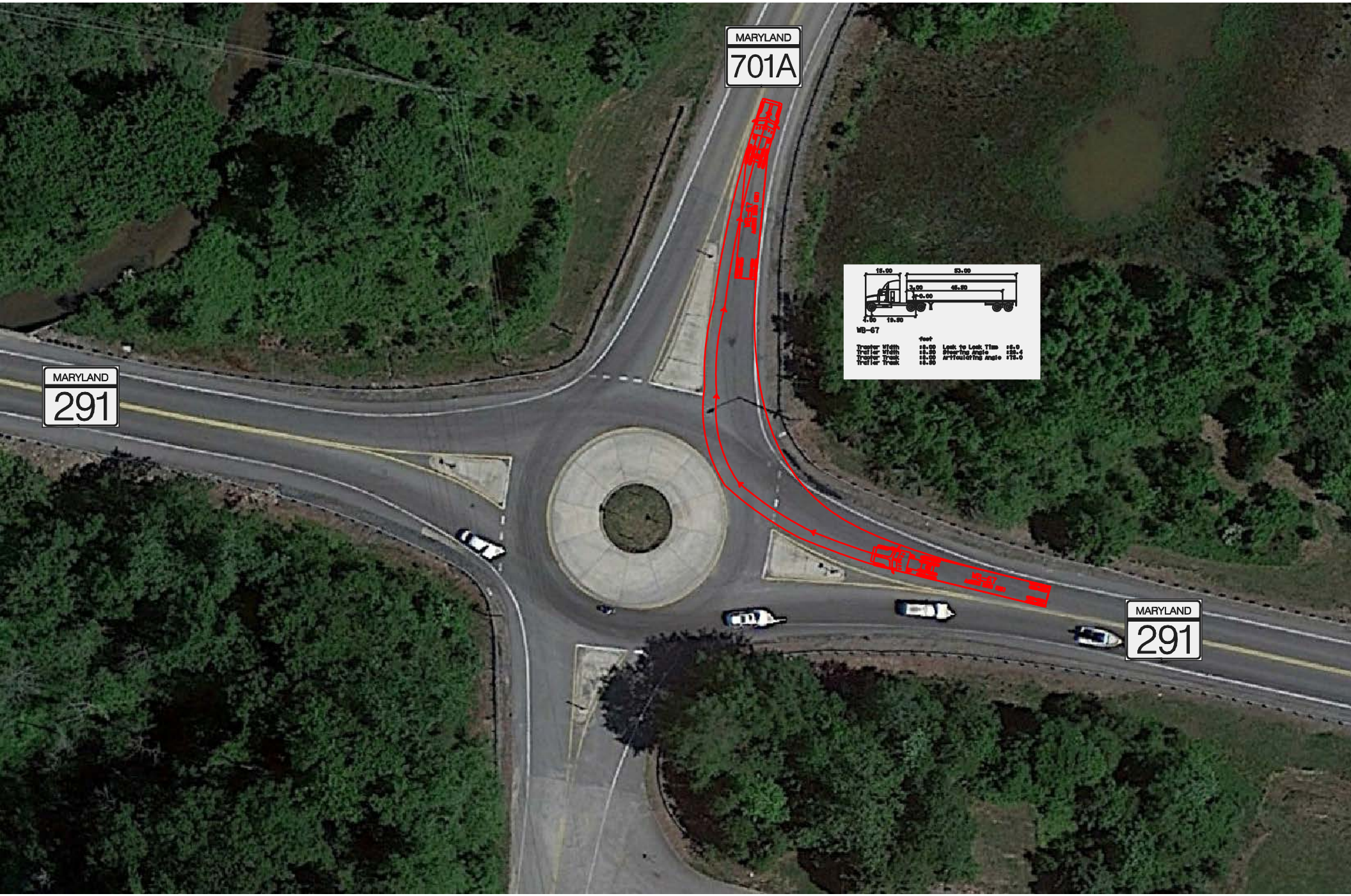
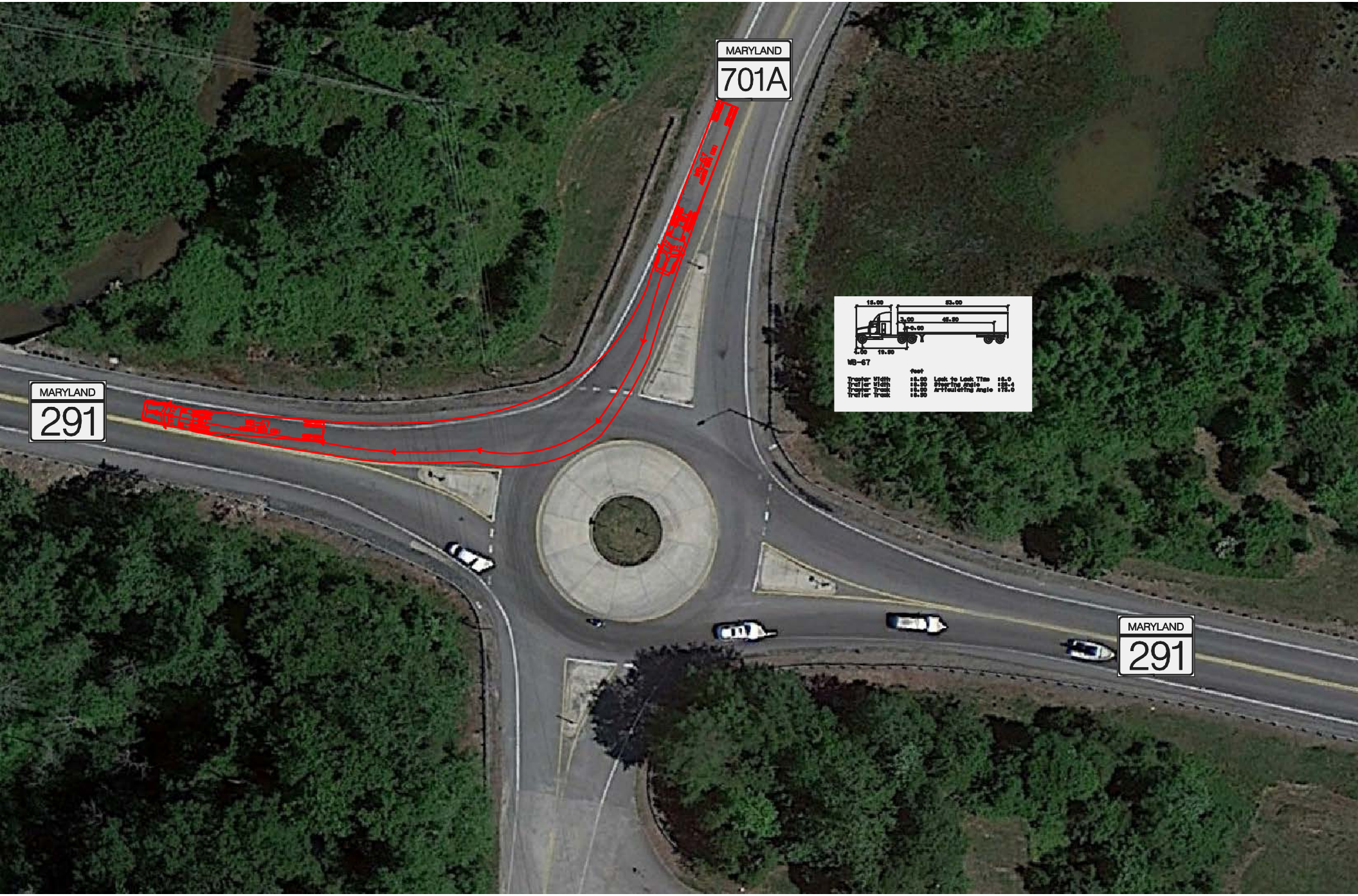

MARYLAND
701A
MARYLAND
291
MARYLAND
291
WB-67
Trailer Width
Trailer Track
Trailer Track
Lock to Lock Time
Steering Angle
Articulating Angle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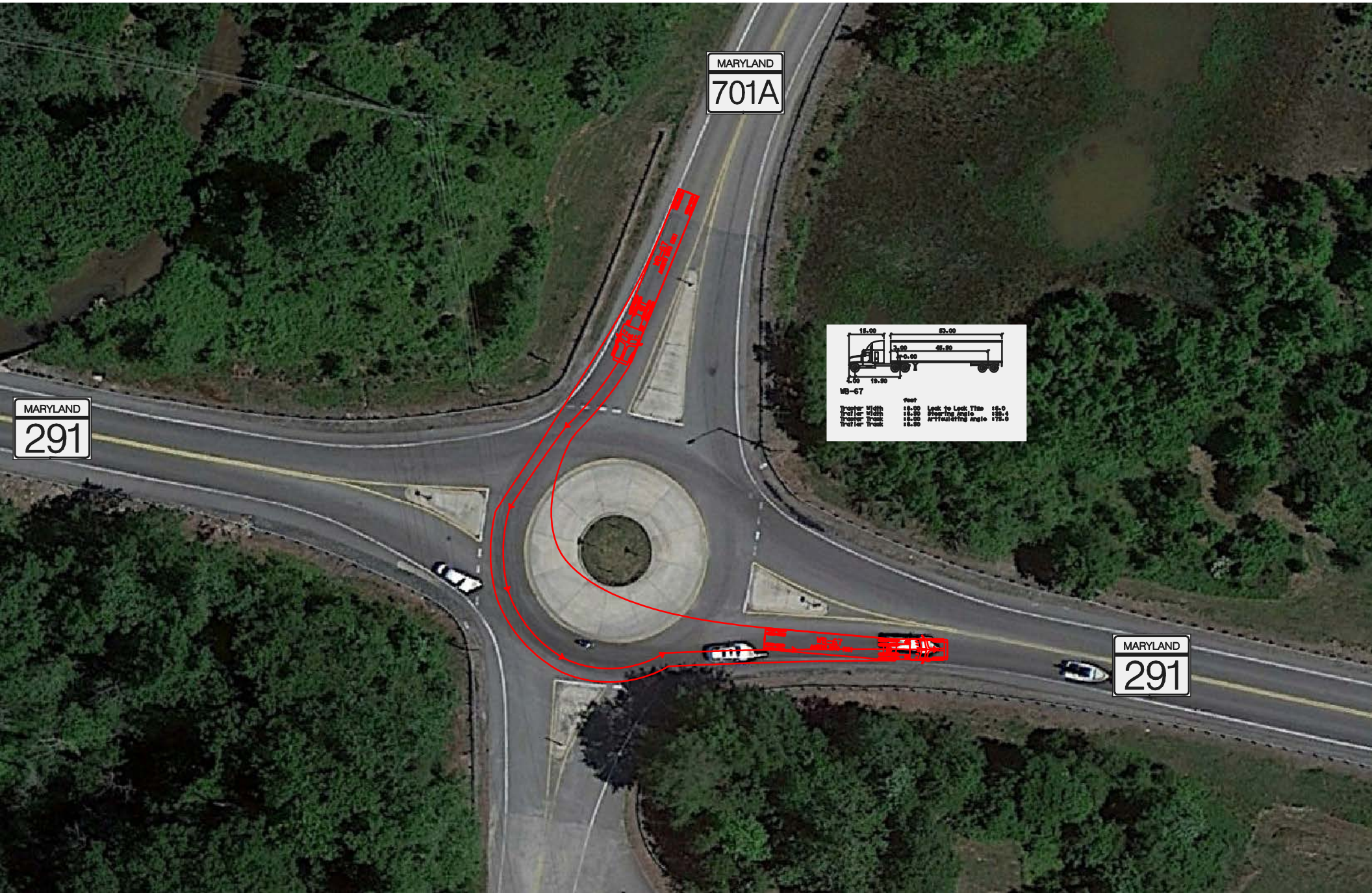
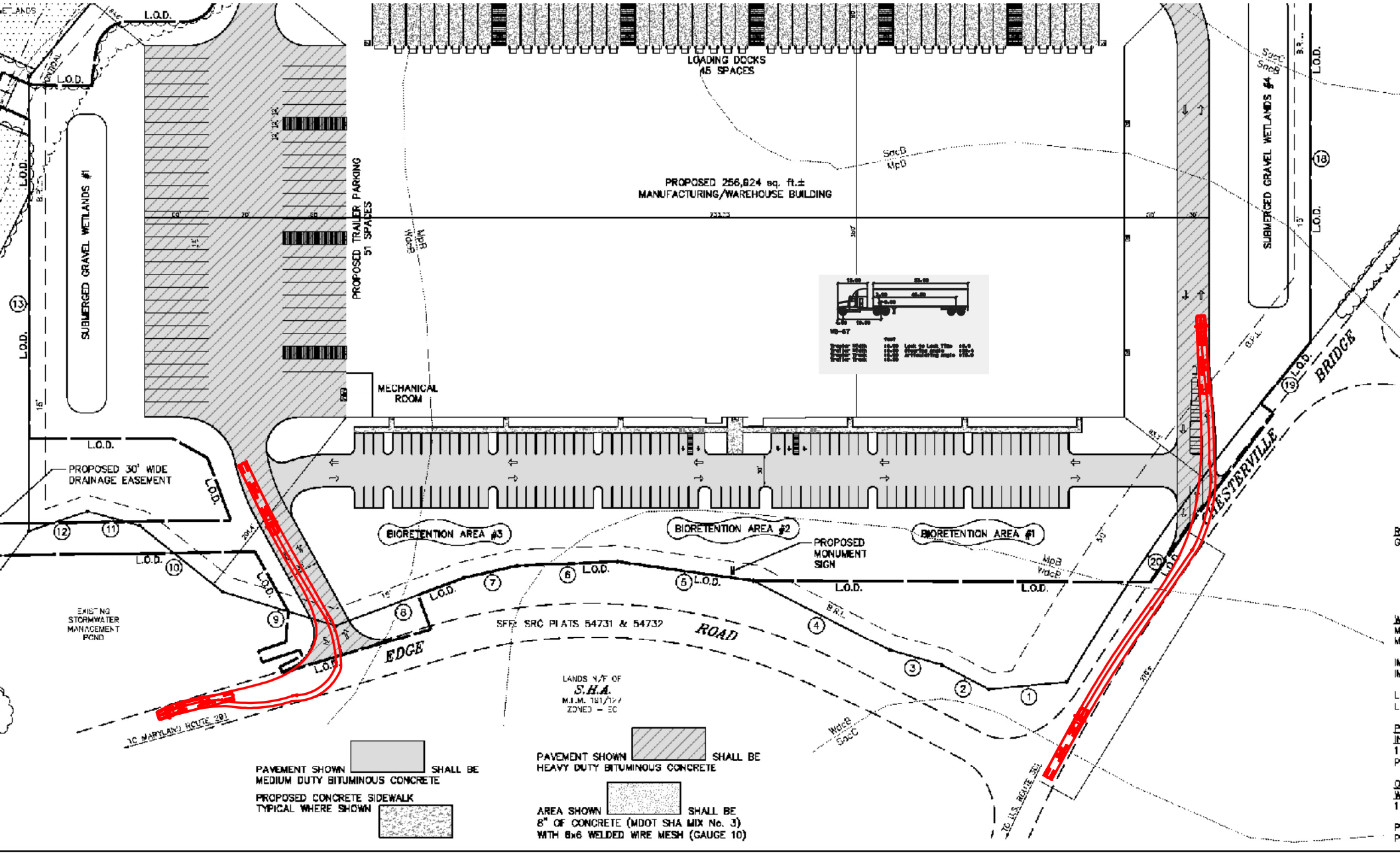
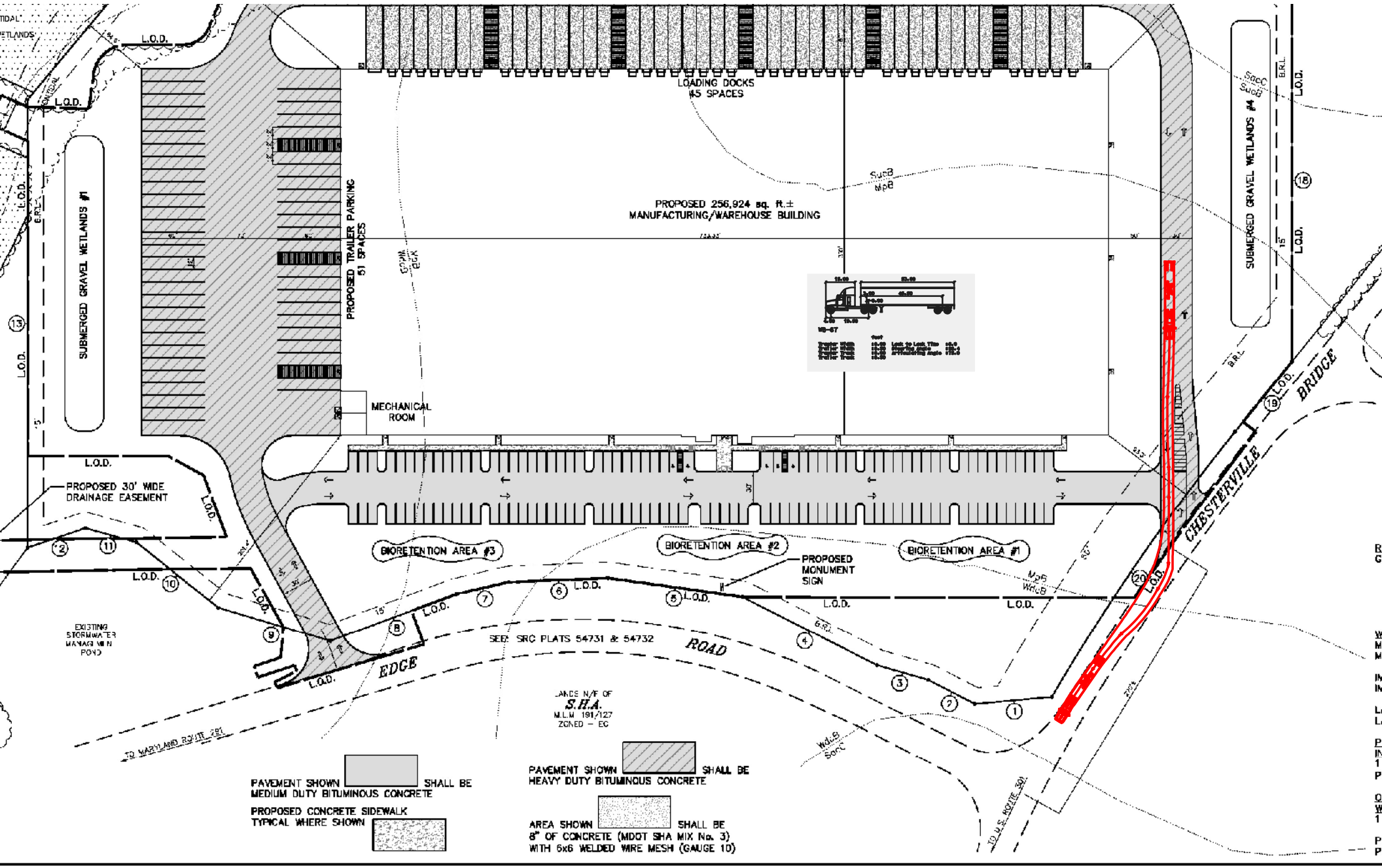
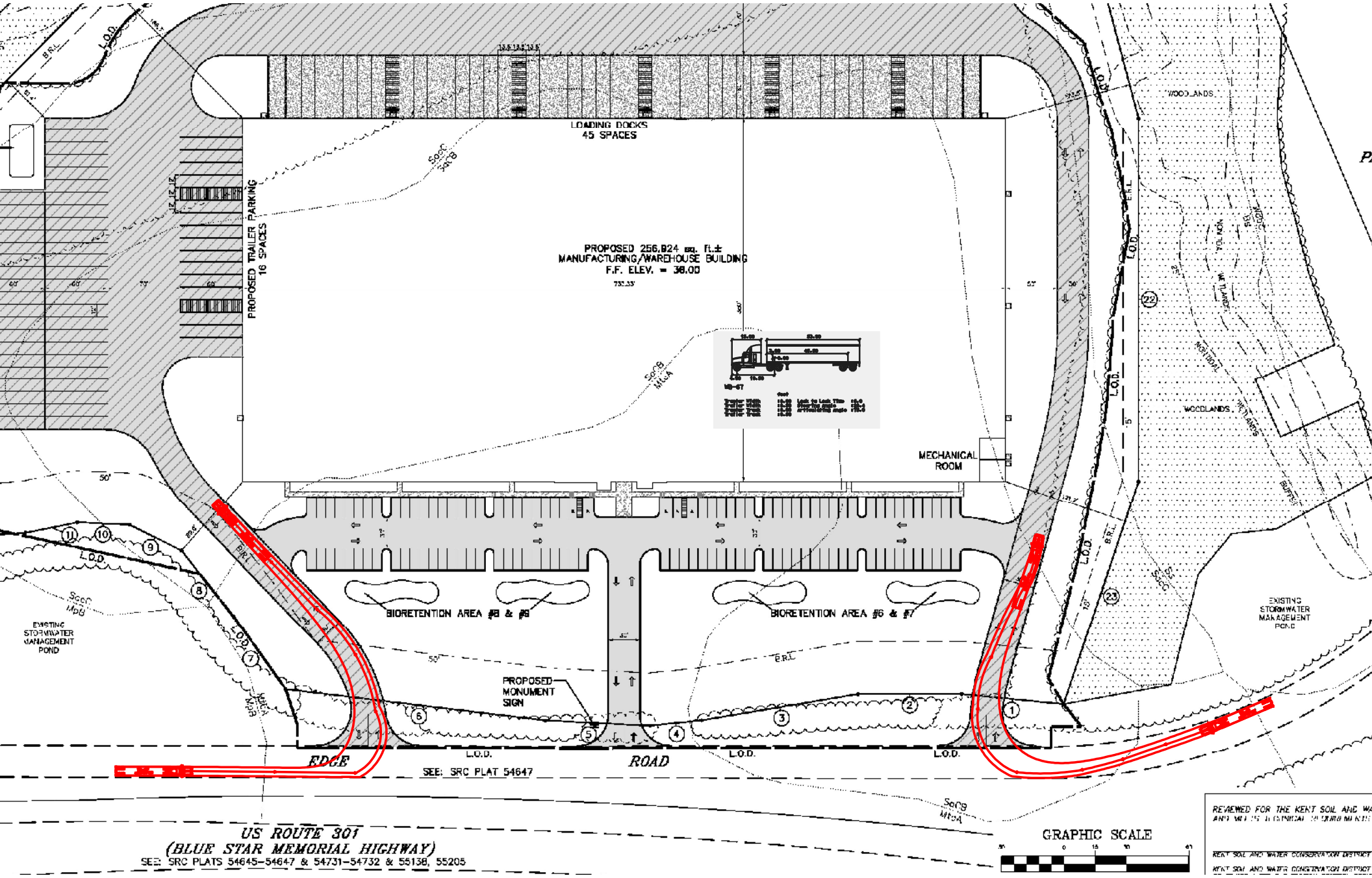
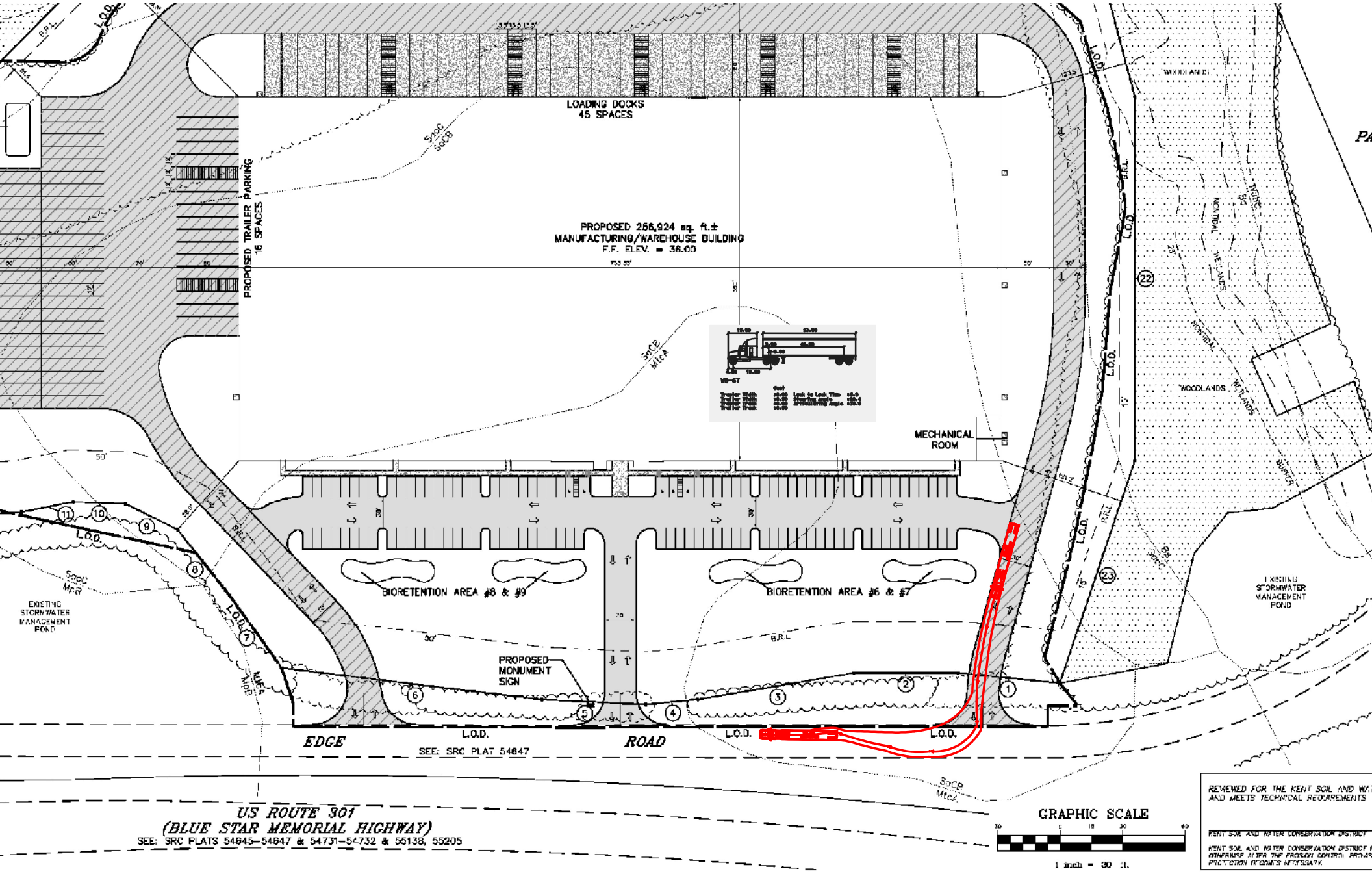
701A
MARYLAND
291
MARYLAND
291


MARYLAND
701A
MARYLAND
291
MARYLAND
291
15.00
53.00
3.00
40.50
10.00
4.00
19.50
WB-67
feet
Trailer Width 15.00
Trailer Width 15.00
Trailer Track 15.00
Trailer Track 15.00
Lock to Lock Time 15.0
Steering Angle 39.4
Articulating Angle 178.6


LOADING DOCKS
45 SPACES
PROPOSED 256,824 sq. ft.±
MANUFACTURING/WAREHOUSE BUILDING
PROPOSED TRAILER PARKING
51 SPACES
SUBMERGED GRAVEL WETLANDS #1
SUBMERGED GRAVEL WETLANDS #4
MECHANICAL
ROOM
PROPOSED 30' WIDE
DRAINAGE EASEMENT
BIORETENTION AREA #3
BIORETENTION AREA #2
BIORETENTION AREA #1
PROPOSED
MONUMENT
SIGN
EXISTING
STORMWATER
MANAGEMENT
POND
SEE SRC PLATS 54731 & 54732
EDGE
ROAD
BRIDGE
CHESTERVILLE
LANDS N/F OF
S.H.A.
M.L.M. 781/127
ZONED - EC
JC MARYLAND ROUTE 291
JC U.S. ROUTE 301
L.O.D.
PAVEMENT SHOWN SHALL BE
MEDIUM DUTY BITUMINOUS CONCRETE
PROPOSED CONCRETE SIDEWALK
TYPICAL WHERE SHOWN
PAVEMENT SHOWN SHALL BE
HEAVY DUTY BITUMINOUS CONCRETE
AREA SHOWN SHALL BE
8" OF CONCRETE (MDOT SHA MIX No. 3)
WITH 6x6 WELDED WIRE MESH (GAUGE 10)


LOADING DOCKS
#5 SPACES
PROPOSED 256,924 sq. ft.±
MANUFACTURING/WAREHOUSE BUILDING
PROPOSED TRAILER PARKING
51 SPACES
MECHANICAL
ROOM
SUBMERGED GRAVEL WETLANDS #1
SUBMERGED GRAVEL WETLANDS #4
PROPOSED 30' WIDE
DRAINAGE EASEMENT
BIORETENTION AREA #3
BIORETENTION AREA #2
BIORETENTION AREA #1
PROPOSED
MONUMENT
SIGN
EXISTING
STORMWATER
MANAGEMENT
POND
SEE SRC PLATS 54731 & 54732
EDGE
ROAD
CHESTERVILLE
BRIDGE
LANDS N/F OF
S.H.A.
M.L.M. 191/127
ZONED – EC
TO MARYLAND ROUTE 291
TO U.S. ROUTE 301
L.O.D.
B.R.L.
PAVEMENT SHOWN SHALL BE
MEDIUM DUTY BITUMINOUS CONCRETE
PROPOSED CONCRETE SIDEWALK
TYPICAL WHERE SHOWN
PAVEMENT SHOWN SHALL BE
HEAVY DUTY BITUMINOUS CONCRETE
AREA SHOWN SHALL BE
8" OF CONCRETE (MDOT SHA MIX No. 3)
WITH 6x6 WELDED WIRE MESH (GAUGE 10)


LOADING DOCKS
45 SPACES
PROPOSED TRAILER PARKING
16 SPACES
PROPOSED 256,824 sq. ft.±
MANUFACTURING/WAREHOUSE BUILDING
F.F. ELEV. = 36.00
MECHANICAL ROOM
BIORETENTION AREA #8 & #9
BIORETENTION AREA #6 & #7
PROPOSED MONUMENT SIGN
EXISTING STORMWATER MANAGEMENT POND
EXISTING STORMWATER MANAGEMENT POND
WOODLANDS
WOODLANDS
NONTIDAL WETLANDS
NONTIDAL WETLANDS
BUFFER
L.O.D.
B.R.L.
E.R.L.
EDGE
ROAD
SEE: SRC PLAT 54647
US ROUTE 301
(BLUE STAR MEMORIAL HIGHWAY)
SEE: SRC PLATS 54645-54647 & 54731-54732 & 55138, 55205
GRAPHIC SCALE
REVIEWED FOR THE KENT SOIL AND WA
KENT SOIL AND WATER CONSERVATION DISTRICT
KENT SOIL AND WATER CONSERVATION DISTRICT


LOADING DOCKS
45 SPACES
PROPOSED TRAILER PARKING
16 SPACES
PROPOSED 256,924 sq. ft.±
MANUFACTURING/WAREHOUSE BUILDING
F.F. ELEV. = 36.00
MECHANICAL
ROOM
BIORETENTION AREA #8 & #9
BIORETENTION AREA #6 & #7
PROPOSED
MONUMENT
SIGN
EXISTING
STORMWATER
MANAGEMENT
POND
EXISTING
STORMWATER
MANAGEMENT
POND
WOODLANDS
NONTIDAL WETLANDS
BUFFER
L.O.D.
B.R.L.
EDGE
ROAD
SEE: SRC PLAT 54647
US ROUTE 301
(BLUE STAR MEMORIAL HIGHWAY)
SEE: SRC PLATS 54645-54647 & 54731-54732 & 55138, 55205
GRAPHIC SCALE
1 inch = 30 ft.
REVIEWED FOR THE KENT SOIL AND WA
AND MEETS TECHNICAL REQUIREMENTS
KENT SOIL AND WATER CONSERVATION DISTRICT

Kent County Department of Planning, Housing and Zoning
Kent County Government Center
400 High Street • Chestertown, MD 21620
410-778-7475 (phone) • 410-810-2932 (fax)

SITE PLAN APPLICATION

File Number:_____ **Amount Paid:**_____ **Date:**_____

Project Name: LOT 1 - Everton Industrial office/warehouse

District: 1st Map: 31 Parcel: 6-1 Lot Size: 20.543ac Deed Ref: MLM 892/458 Zoning: EC

LOCATION: west side of Maryland Route 301 near Millington, north of MD Rte 291 and south of Chesterville Bridge Road

PROPOSED USE: Industrial office/manufacturing/warehouse

OWNER OF LAND:

Name: Millington Crossing Associates 1, LLC c/o Russ Richardson Telephone: 410-275-2714

Address: P.O. Box 546, Chester Heights, PA 19017 Email: russ.richardson@rpcrealtors.com

APPLICANT:

Name: Everton Industrial c/o Dan Gural Telephone: 609-929-6025

Address: 266 Atsion Road, Medford, NJ 08055 Email: dgural@evertonindustrial.net

AGENT/ATTORNEY (if any):

Name:_____ Telephone:_____

Address:_____ Email:_____

REGISTERED ENGINEER OR SURVEYOR:

Name: DMS & Associates, LLC c/o Kevin Shearon Telephone: 443-262-9130

Address: P.O. Box 80, Centreville, MD 21617 Email: kjs@dmsandassociates.com

Please provide the email of the one person who will be responsible for responding to comments. Only this person will be contacted by staff and will be the person responsible for forwarding the comments or requests for additional information to any other interested parties. EMAIL: kjs@dmsandassociates.com

Water Supply: ☒ Public System ☐ On lot system

Sewerage: ☒ Public System ☐ On lot system

TELEPHONE SERVICED BY: Verizon

ELECTRIC SERVICED BY: Delmarva Power

NOTICE: The Planning Office is not required to make out this Application. If the Planning Department assists you, it cannot be held responsible for its contents.

Agent 3/29/23

Signature of Applicant **Date**

☐ Concept Plan Approving Authority:_____ Date_____

☒ Preliminary Approving Authority:_____ Date_____

☐ Final Approving Authority:_____ Date_____

PROJECT NARRATIVE

Everton Industrial Development
Lot 1 of the lands of Millington Crossing Associates 1, LLC
Near Millington, Maryland

In accordance with Article VI, Section 5.4.B of the Kent County Zoning Ordinance, we offer the following:

The site is located on the west side of Maryland Route 301 near the Town of Millington. Following a subdivision process, this property will be identified as Tax Map 31, Parcel 6-1, Lot 1. This lot and Lot 2 are being subdivided from an overall 114.499 acre parcel owned by Millington Crossing Associates 1, LLC. Everton Industrial Development is the contract purchaser of Lot 1.

The lot is zoned Employment Center (EC) and will be 20.543 acres. The proposed development includes a 256,924-sf flex manufacturing/warehouse building with associated parking and loading docks.

The building is proposed to be connected to the Town of Millington / Kent County public water and sewer systems. A 10" diameter water line will be extended from an existing 10" main at the intersection of Edge Road and West Edge Road. The new main will extend along Edge Road past the two proposed lots to the intersection of Chesterville Bridge Road where it will be capped for future extension (by others) to loop back to the Town of Millington. A service lateral will be installed to connect the building to the new main. Fire hydrants will be provided along the route.

The building will also be served by public sewer. A grinder pump will be installed at the building. A small diameter force main lateral will connect to a new public 2" force main that will run within MDOT SHA right-of-way to a connection point near Maryland Route 301 and West Edge Road.

Forest Conservation was addressed during the subdivision process and resulted in a deed restricted area of 6.41 acres.

In accordance with Section 14.9.B.1-7 we offer the following relative to standards for site design (responses in *italics*):

1. Site Access
    a. Site access shall be subject to the following regulations to help ensure safety and alleviate traffic congestion:
        i. Where property abuts a primary, secondary, or a collector road, access to the property shall be by way of the secondary or collector road. Exceptions to this rule shall be instances where the Planning Commission,

P.O. Box 80 Centreville, MD 21617
Phone: (443) 262-9130
Email: email@dmsandassociates.com

or where applicable the Planning Director, determines that direct access onto the primary road would promote traffic safety.

The proposed development is located just off of US Route 301, but takes access from Chesterville Bridge Road and Edge Road. One tractor trailer access will be located on Chestertville Bridge Road. The orientation of the access is on an angle to the existing road in order to avoid tractor trailers from turning north onto Chesterville Bridge Road. The second access point will occur off of Edge Road. Both roads are owned and maintained by Kent County.

ii. Where one or more contiguous parcels abutting a primary road are under single ownership and any one of the parcels abuts a secondary or collector road, access to the property shall be by of the secondary road. Exceptions to this rule shall be instances where the Planning Commission, or where applicable the Planning Director, determines that direct access onto the primary road would promote traffic safety.

N/A – access to a primary road is not proposed.

iii. Only one direct approach onto a primary road from an individual parcel of record as of August 1, 1989 shall be permitted unless the Planning Commission, or where applicable the Planning Director, finds one of the following:

N/A – access to a primary road is not proposed.

iv. An additional entrance is significantly beneficial to the safety and operation of the highway.

1. One entrance is a safety hazard or increases traffic congestion.
2. The property is bisected by steep slopes, bodies of water, or other topographic feature so as to render some portion of the property inaccessible without additional road access.

N/A – access to a primary road is not proposed.

b. Where a proposed road is designated on an approved County or Town map, site plans for development adjacent to the designated roadway shall include provisions for future access to the roadway.

N/A – no new public roads are proposed.

c. Existing, planned, or platted streets on adjacent properties shall be continued when the Planning Commission or where applicable the Planning Director determines that the continuation is necessary for safe and reasonable circulation between the properties.

To our knowledge there are no existing, planned or platted streets on adjacent properties that would need to be connected through this development.

d. When deemed necessary by the Planning Commission or where applicable the Planning Director, developments shall provide access to adjacent tracts not presently developed.

Given the topography west of the proposed building sites, we request that a requirement to connect to adjacent tracts be waived.

e. Access shall be consolidated whenever possible.

The number of access points has been reduced from three to two.

f. Whenever possible, roads shall be constructed above the elevation of the 100-year floodplain.

The entire development envelope is above the 100-year floodplain.

g. The applicant shall demonstrate that access to the project is adequate and the roads which will be impacted have the capacity to handle the traffic generated by the proposed project and will not endanger the safety of the general public.

A Traffic Impact Study was completed as part of the subdivision process. The results show that all of the surrounding intersections will operate at Level of Service A or B following this development.

2. On-site Circulation
   a. Sites shall be designed to prevent awkward or dangerous vehicular flow.

   The site has been designed to separate employee/visitor vehicles from tractor trailers to the extent possible to promote a safer vehicular flow pattern.

   b. Loading and unloading spaces shall not block the passage of other vehicles on the service drive or major pedestrian ways or create blind spots when trucks are loading or unloading.

   All loading and unloading spaces are located behind or to the side of the building, away from other employee/visitor vehicles.

   c. Sites shall be designed to discourage pedestrians and vehicles from sharing the same pathways.

   Sidewalks have been provided along the building façade to aid in separating pedestrians from vehicles.

   d. Safe, convenient, and centralized handicap parking shall be provided.

   All ADA compliant spaces have been located closest to pedestrian entrance doors.

   e. Trash boxes must be accessible to collection trucks when all vehicle parking spaces are filled.

   Trash corrals will be located to the rear of the buildings to avoid conflict with employee/visitor vehicles.

   f. Parking shall not be permitted in the required front yard.

   With approval of the requested 50-ft width, no parking is located within the front yard.

3. Floodplain
   a. In order to prevent excessive flood damage and to allow for the protection of the natural and beneficial floodplain functions, all development, new construction, and substantial improvements to existing structures in all floodplain zones shall comply with the requirements of Article VI, Section 7 of this Ordinance, including but not limited to the following:
      i. Elevation of all new or substantially improved structures;
      ii. Compliance with venting and other construction standards; and
      iii. Submission and recordation, where applicable, of Elevation Certificates, Declaration of Land Restrictions, deed restrictions, and venting affidavits.

      N/A – development area is not within the floodplain.

b. Placement of buildings and materials. In general, buildings and accessory structures should be located entirely out of the floodplain, out of the flood protection setback, or on land that is least susceptible to flooding. All structures permitted in the floodplain shall be oriented so as to offer the least resistance to the flow of floodwaters.

The proposed building is located out of the floodplain.

c. General development shall not occur in the floodplain where alternative locations exist. Before a permit is issued, the applicant shall demonstrate that new structures cannot be located out of the floodplain and that encroachments onto the floodplain are minimized.

N/A – development area is not within the floodplain.

4. General Landscape Requirements
   a. The front yard shall be landscaped and shall be maintained in a neat and attractive condition.

      The front yards will be landscaped and maintained in a neat and attractive condition.

   b. Sites shall be permanently maintained in good condition with at least the same quality and quantity of landscaping as originally proposed.

      So noted.

   c. The landscape plan shall be prepared by a registered professional forester, landscape architect, or other professional with equivalent experience and qualifications.

      The landscape plan will be designed by a licensed landscape architect.

   d. The Planning Commission, or where applicable the Planning Director, may waive the landscape requirements when it is demonstrated that the spirit and intent of the requirement is accomplished through other means or the nature of the change is one that does not require additional landscaping.

      So noted.

5. Screening
   a. Screening is required to protect adjoining properties and roadways from noise, glare, and uses which are visually incompatible with neighboring land uses. Screening is required:
      i. On sites which involve loading or unloading (including the storage of vehicles and boats), trash, or disposal areas and where accessory buildings and structures are adjacent to residential properties.

         The site layouts have been designed to have all loading / unloading areas facing away from adjacent properties and public roads to the extent possible. Screening has been provided where areas may be visible.

      ii. Where exterior storage areas are visible from roadways, sidewalks, or nearby residential properties.

         N/A

      iii. When noise not typically occurring in residential areas is expected to project onto nearby properties.

It is not anticipated that excessive noise will occur at this site. Once an end user is identified, we will provide information relative to the Industrial Performance Standards.

iv. To screen parking areas from motorists, pedestrians, and adjoining residential properties.

Natural screening exists for these properties between Edge Road and US Route 301. Additional screening has been added along Chesterville Bridge Road near the existing residential homes.

v. Where the industrial district abuts a residential district or a primary or secondary road.

The property abuts agricultural fields and a few residences, and a service road. Additional screening has been added along Chesterville Bridge Road near the existing residential homes.

vi. Where the Planning Commission determines that additional screening is necessary to protect properties in the area.

So noted.

b. Landscaped screens shall be designed to complement other landscaping occurring naturally on the site, planted previously, or approved as a part of a site plan review. Whenever possible, existing vegetation and landform shall be used to create screens.

Natural screening exists onsite as well as on adjacent properties between Edge Road and US Route 301. Additional screening has been added along Chesterville Bridge Road near the existing residential homes.

c. The screen shall be capable of providing year round screening.

Screening added is evergreen to provide year round screening.

d. When noise is likely to be a factor, the screen shall be of sufficient construction to be an effective noise buffer.

So noted.

e. Screening shall consist of trees and plants and may include masonry, or wooden fencing used with or without berms. Screening shall consist of a functional and well-designed combination of the following:

i. Vegetative ground cover

ii. Coniferous and deciduous shrubs

1. Specimens of which will reach and maintain a minimum height of 5 feet of full vegetative growth.
2. Plants which measure a minimum of 3 feet in height at the time of planting and are expected to attain a 5-foot height within 3 years.
3. Coniferous and deciduous trees Species and sizes of which will be chosen to best accomplish an adequate screen (i.e., evergreens used for visual screening, deciduous trees for seasonal screening)

So noted.

f. Natural slopes and existing vegetation may be substituted for some or all of the requirements above, provided that these features serve to screen the area from adjoining properties and roadways. The Planning Commission, or where applicable the Planning Director, shall determine the acceptability of using existing slopes and vegetation for this purpose. The Planning Commission, or

where applicable the Planning Director, may waive screening where it is physically impossible to accomplish.

So noted.

g. Screening and fencing shall be maintained in at least the same quality and quantity as initially approved.

So noted.

6. Lighting
   a. Lighting on the site shall be designed to avoid glare onto adjacent properties.

      All site lighting will be dark sky compatible and will be directed downward to avoid glare onto adjacent properties.

   b. Lighting on the site shall be sufficient to provide for the safety and security of the business, its employees, and its customers.

      A lighting plan will be developed to provide a safe and secure environment for the business, its employees, and its customers / guests.

7. Site Planning External Relationship: Site planning within the District shall provide protection of individual lots from adverse surrounding influences and for protection of surrounding areas from adverse influences existing within the District. In particular:
   a. Principal vehicular access points shall be designed to encourage smooth traffic flow with controlled turning movements and minimum hazards to vehicular or pedestrian traffic. Storage, turn lanes, or traffic dividers may be required by the Planning Commission where existing or anticipated heavy flows indicate need. In general, streets shall not be connected with streets outside the District in such a way as to encourage the use of such streets by substantial amounts of through traffic.

      One tractor trailer access is located on Chestertville Bridge Road. The orientation of the access is on an angle to the existing road in order to avoid tractor trailers from turning north onto Chesterville Bridge Road. The second access points is off of Edge Road.

   b. Yards, fences, walls, or vegetative screening shall be provided where needed to protect residential districts or pubic streets from undesirable views, lighting, noise, or other offsite influences. In particular, outdoor storage, extensive off-street parking areas, and service areas for loading and unloading vehicles, and for storage and collection of refuse and garbage shall be effectively screened.

      Additional screening has been added along Chesterville Bridge Road near the existing residential homes.

This project is consistent with the Kent County Comprehensive Plan. The following are excerpts from the plan that show consistency with the proposed subdivision:

- Promote the development of the County employment centers.
  - The subdivision is proposed in the Employment Center zoning district which allows a variety of industrial scale developments.
- The County can encourage potential employers to locate in areas where employment and industrial uses are desirable and compatible.

- The County can also provide a stronger commercial/industrial tax base to help balance County tax revenues.
- Expand regulatory flexibility for the creation of and location of employment centers and industrial uses...Theses efforts will especially focus on the Worton area, and the US 301 corridor with a priority that the area between the Town of Millington and the lands surrounding the Route 291-Route 301 intersection be guided by the desired expansion of services and land use identified by Millington's municipal growth element.

Following recordation of the subdivision plats, Lots 1 & 2 will be owned, developed, and maintained by Everton Industrial Development, LLC, 266 Atsion Road, Medford, New Jersey, 08055. The balance of the parcel will be owned and maintained by Millington Crossing Associates 1, LLC, P.O. Box 546, Chester Heights, Pennsylvania, 19017.

Stormwater management has been addressed using Environmental Site Design to the Maximum Extent Practicable. A Stormwater Management Report has been provided.

INDUSTRIAL PERFORMANCE STANDARDS

Everton Industrial Development
Lot 1 of the lands of Millington Crossing Associates 1, LLC
Near Millington, Maryland

In accordance with Article V, Section 15.6 of the Kent County Zoning Ordinance, the following will be addressed once an end user has been identified:

1. NOISE
2. VIBRATION
3. GLARE
4. AIR POLLUTION
5. WATER POLLUTION
6. RADIOACTIVITY
7. ELECTRICAL INTERFERENCE
8. SMOKE AND PARTICULATE MATTER
9. TOXIC MATTER
10. ODOROUS MATTER

PRELIMINARY CONSTRUCTION PLANS
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES 1, LLC
FIRST ELECTION DISTRICT, KENT COUNTY, MARYLAND
NEAR THE TOWN OF MILLINGTON

SITE NOTES

1. PROPERTY LINE INFORMATION FOR P. 6–1 SHOWN HEREON IS THE RESULT OF A FIELD RUN SURVEY BY MICHAEL A. SCOTT, INC. IN JUNE, 2017. HORIZONTAL DATUM IS NAD 83/2011. SEE PRELIMINARY SUBDIVISION PLATS PREPARED BY DMS & ASSOCIATES, LLC FOR PARCEL 6–1, LOTS 1 AND 2 PROPERTY LINE AND FOREST CONSERVATION INFORMATION.
2. FOR DEED REFERENCE, SEE LIBER M.L.M. 892, FOLIO 458.
3. CURRENT ZONING CLASSIFICATION – "RCD" (RESOURCE CONSERVATION DISTRICT), "AZD" (AGRICULTURAL ZONING DISTRICT) AND "EC" (EMPLOYMENT CENTER).
4. THE PROPERTY IS PARTIALLY LOCATED WITHIN THE CHESAPEAKE BAY CRITICAL AREA DESIGNATION – RCA (RESOURCE CONSERVATION AREA).
5. SITE IS PARTIALLY LOCATED WITHIN 100 YEAR FLOODPLAIN AS SCALED FROM FLOOD INSURANCE RATE MAP COMMUNITY PANEL No. 24029C213D (ZONE "A"), DATED JUNE 9, 2014.
6. SOILS SHOWN HEREON ARE SCALED FROM MAPS LOCATED AT THE FOLLOWING WEBSITE: http://websoilsurvey.nrcs.usda.gov FOR KENT COUNTY. HYDRIC SOILS ONSITE ARE – Bs & Oh.
7. THE PERENNIAL STREAM SHOWN HEREON IS SCALED FROM MARYLAND ENVIRONMENTAL RESOURCES AND LAND INFORMATION NETWORK WEBSITE http://gisapps.dnr.state.md.us.Merlin/index.html.
8. THE NONTIDAL WETLANDS SHOWN HEREON ARE TAKEN FROM A REPORT PREPARED BY DAVIS & ASSOCIATES, ENVIRONMENTAL CONSULTING, LLC, DATE JUNE 17, 2022 AND OTHER MAPPED WETLANDS. DELINEATION SHOWN HEREON HAS BEEN SCALED FROM THE REPORT AND HAS NOT BEEN FIELD VERIFIED.
9. STEEP SLOPES SHOWN HEREON ARE TAKEN FROM AERIAL TOPOGRAPHY FLOWN IN THE FALL OF 2013. VERTICAL DATUM IS NAVD 88.
10. WOODLANDS WITHIN THE DEVELOPMENT AREA ARE THE RESULT OF A FIELD RUN SURVEY BY MICHAEL A. SCOTT, INC. IN FEBRUARY, 2023. WOODLANDS OUTSIDE THE DEVELOPMENT AREA ARE SCALED FROM ORTHO PHOTOS FLOWN IN THE FALL OF 2019 AND VERIFIED BY A SITE VISIT.
11. THE PRESENCE OF ANY OTHER NATURAL RESOURCES (ie... EROSION HAZARD AREAS, etc...) DO NOT EXIST ON THE SITE AS VERIFIED BY A SITE VISIT IN DECEMBER, 2018.
12. THE MARYLAND DEPARTMENT OF NATURAL RESOURCES WILDLIFE AND HERITAGE SERVICE CONDUCTED AN ENVIRONMENTAL REVIEW OF THE SITE AND DETERMINED THAT THERE ARE NO OFFICIAL STATE OR FEDERAL RECORDS FOR LISTED PLANT OR ANIMAL SPECIES ON THE SITE. THE WILDLIFE AND HERITAGE SERVICE NOTED IN ITS RESPONSE LETTER, DATED JULY 20, 2022 THAT THE NO FORESTED AREA ON THE PROPERTY CONTAINS HABITAT FOR FOREST INTERIOR DWELLING BIRDS (FIDS).
13. CONTOURS WITHIN THE DEVELOPMENT AREA ARE THE RESULT OF A FIELD RUN SURVEY BY MICHAEL A. SCOTT, INC. IN FEBRUARY, 2023. CONTOURS OUTSIDE THE DEVELOPMENT ARE THE RESULT OF AERIAL TOPOGRAPHY FLOWN IN THE FALL OF 2013. VERTICAL DATUM IS NAVD 88.
14. NEW PUBLIC SEWER WILL BE UTILIZED FOR SEWAGE DISPOSAL. NEW PUBLIC WATER WILL BE UTILIZED FOR POTABLE WATER SUPPLY AND FIRE SUPPRESSION.
15. SECURITY LIGHTING IS PROPOSED MOUNTED TO THE BUILDING. ADDITIONAL SITE LIGHTING PROPOSED IN THE PARKING LOT IS TO BE DARK SKY COMPATIBLE.
16. STORMWATER MANAGEMENT FOR THE SITE HAS BEEN ADDRESSED VIA THE IMPLEMENTATION OF ENVIRONMENTAL SITE DESIGN (ESD) TO THE MAXIMUM EXTENT PRACTICABLE (MEP).
18. ALL SIGNS SHALL COMPLY WITH THE CURRENT REGULATIONS OF KENT COUNTY CODE (SECTION 2. SIGNS. FOR THE EMPLOYMENT CENTER ZONE (EC).
19. SITE REQUIREMENTS (INDUSTRIAL SUBDIVISION):
    MINIMUM LOT SIZE = N/A
    FRONT BUILDING RESTRICTION LINE
    – 50' (NOT LOCATED ON "PRIMARY ROADS")
    SIDE BUILDING RESTRICTION LINE
    – 15' (PER "STANDARD" REQUIREMENTS)
    – 50' (ALONG "PUBLIC ROADS")
    REAR BUILDING RESTRICTION LINE
    – 15' (PER "STANDARD" REQUIREMENTS)
    SECURITY FENCE HEIGHT = 8'
    MAXIMUM BUILDING SIZE = N/A
    BUILDING HEIGHT PERMITTED = 60'
    BUILDING HEIGHT PROPOSED = 50.5'

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEET TECHNICAL REQUIREMENTS

APPROVED:

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

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

DEVELOPERS CERTIFICATION

I (WE) CERTIFY THAT:

A. ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THIS SEDIMENT AND EROSION CONTROL PLAN AND/OR STORMWATER MANAGEMENT PLAN, AND FURTHER, AUTHORIZED THE RIGHT OF ENTRY FOR PERIODIC ONSITE EVALUATION BY THE KENT SOIL AND WATER CONSERVATION DISTRICT SEDIMENT CONTROL INSPECTOR OR MARYLAND DEPARTMENT OF THE ENVIRONMENT.

B. ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATION OF ATTENDANCE AT THE DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT.

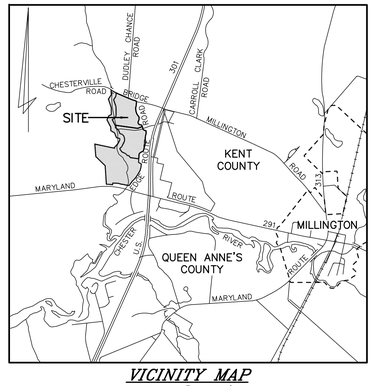
C. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR OR SUBCONTRACTOR TO NOTIFY THE ENGINEER OF ANY DEVIATION FROM THIS PLAN, ANY CHANGE MADE IN THIS PLAN WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER WILL PLACE RESPONSIBILITY FOR SAID CHANGE ON THE CONTRACTOR OR SUBCONTRACTOR.

SIGNATURE _____ DATE _____

ADDRESS _____ CARD No. _____

PHONE No. _____

Copyright © 2023, by DMS & ASSOCIATES, LLC



VICINITY MAP
SCALE 1" = 3000'

TABLE OF CONTENTS

OWNER:
MILLINGTON CROSSING
ASSOCIATES 1, LLC
c/o RUSS RICHARDSON
P.O. BOX 546
CHESTER HEIGHTS, PA 19017
PHONE No. 1–410–275–2714

DEVELOPER/ CONTRACT PURCHASER
EVERTON INDUSTRIAL
c/o DAN GURAL
266 ATSION ROAD
MEDFORD, NEW JERSEY 08055
PHONE No. 1–609–929–6025

SURVEYOR:
MICHAEL A.SCOTT, INC.
c/o MIKE SCOTT
400 SOUTH CROSS STREET
CHESTERTOWN, MARYLAND 21620
PHONE No. 1–410–778–2310

ENGINEER:
DMS & ASSOCIATES, LLC
c/o KEVIN J. SHEARON, P.E. LEED AP
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE No. 1–443–262–9130

NOTE:
SEDIMENT AND EROSION CONTROL
WILL BE STRICTLY ENFORCED

GENERAL NOTES

1. These drawings show information obtained from the best available records regarding pipes, conduits, telephone lines, and other structures and conditions which exist along the lines of the work both at and below the surface of the ground. The owner and engineer disclaim any responsibilities for the accuracy or completeness of said information being shown only for the convenience of the contractor, who must verify the information to his own satisfaction. If the contractor relies on said information, he does so at his own risk. The giving of the information on the contract drawings will not relieve the contractor of his obligations to support and protect all pipes, conduits, telephone lines, and other structures.
2. The contractor shall notify the following two (2) weeks prior to the start of construction and shall coordinate construction with the utility companies involved:

   Delmarva Power & Light Company ---------- 1–800–375–7117
   Miss Utility ---------- 1–800–441–8355
   DMS & Associates, LLC ---------- 1–443–262–9130
   Kent County Dept. Public Works ---------- 1–410–778–7439
   Kent Co. Sediment & Erosion Control Inspector – 1–410–778–7457
   Kent Co. Dept. of Water & Wastewater-------- 1–410–778–3287
   Maryland Department of the Environment------ 1–410–631–3510

3. All construction shall be marked for traffic and pedestrian safety.
4. The Contractor shall provide all equipment, labor, and materials for any miscellaneous or test pit excavations required by the Engineer.
5. The owner is responsible for the acquisition of all easements, both permanent and temporary.
6. The Contractor assumes all responsibility for any deviations from these plans unless said deviation is approved by the Engineer. Contractor shall receive written permission from the Engineer if a deviation of the plans is necessary.
7. All disturbed areas shall be smoothly graded to provide positive drainage in the direction of flow arrows herein and stabilized with topsoil, seed, and mulch. If settlement occurs, topsoil, seeding, and mulching shall be repeated until settlement subsides (See Erosion and Sediment Control Specifications).
8. All trash, trees, and underbrush are to be cleared and removed off site to an approved dump site by the contractor.
9. Any excess excavated material shall be removed off site by the contractor or material shall be placed on site as directed by the Engineer and/or Owner.
10. Any existing survey monumentation that is disturbed during construction shall be replaced by a registered surveyor at the contractor's expense.
11. The Contractor shall conduct his work in easements so that there will be a minimum of disturbance of the properties crossed. Any disturbed areas shall be restored to its original condition.
12. All materials and methods of construction shall conform to the drawings, specifications, local building codes, and the standard specifications and details of Kent County.
13. All drainage structures and swales shall remain functional during construction unless otherwise indicated on the plans.
14. All water valves, boxes and hydrants shall be set and adjusted to finish grade.
15. Wherever sewer or water mains or services run parallel to each other, a minimum horizontal separation of 10' shall be provided.
16. Minimum cover over the sewer main shall be 42".
17. All concrete used for utility work shall be in accordance with MD SHA Standards and Specifications for Mix No. 2.
18. All paving materials and methods shall be in accordance with the latest MD SHA Standards and Specifications and be supplied by a State Certified plant.
19. Trenches shall not remain open overnight. If it is necessary for trenches to remain open, steel plates capable of bearing traffic shall be used to completely cover the trench openings.
20. Erosion and Sediment Control will be strictly enforced by the Kent County Sediment and Erosion Control Inspector.

STATEMENT OF PURPOSE AND INTENT

THE SITE IS LOCATED ON THE WEST SIDE OF EDGE ROAD IN THE U.S. ROUTE 301 CORRIDOR NEAR THE TOWN OF MILLINGTON, MARYLAND. THE SITE IS CURRENTLY VACANT. THE INTENT OF THE PRELIMINARY SITE PLAN IS TO PROPOSE A MANUFACTURING/WAREHOUSE BUILDING AND ITS ASSOCIATED PARKING ON LOT 1 OF THE LANDS OF MILLINGTON CROSSING ASSOCIATES 1, LLC.

THE PURPOSE OF THIS PRELIMINARY SITE PLAN IS TO RECEIVE APPROVAL FOR PROPOSED DEVELOPMENT FROM THE KENT COUNTY PLANNING COMMISSION.

CONCRETE MONUMENT COORDINATE TABLE

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	CONC. MONUMENT SET	587604.1651	1633543.0798	——.——
2	CONC. MONUMENT SET	587234.9796	1633519.5611	——.——
3	CONC. MONUMENT SET	586883.3676	1633645.3015	——.——

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

KENT SOIL AND WATER CONSERVATION DISTRICT

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THE 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. 22049, EXPIRATION DATE: 9–2–25

STATE OF MARYLAND KEVIN JOSEPH SHEARON 22049 PROFESSIONAL ENGINEER

DATE NOVEMBER 15, 2023 SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE 1–443–262–9130
FAX 1–443–262–9148

DATE	REVISION
10–9–23	PER TAC COMMENTS
11–15–23	PER MDOT COMMENTS

TITLE SHEET
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES 1, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6–1

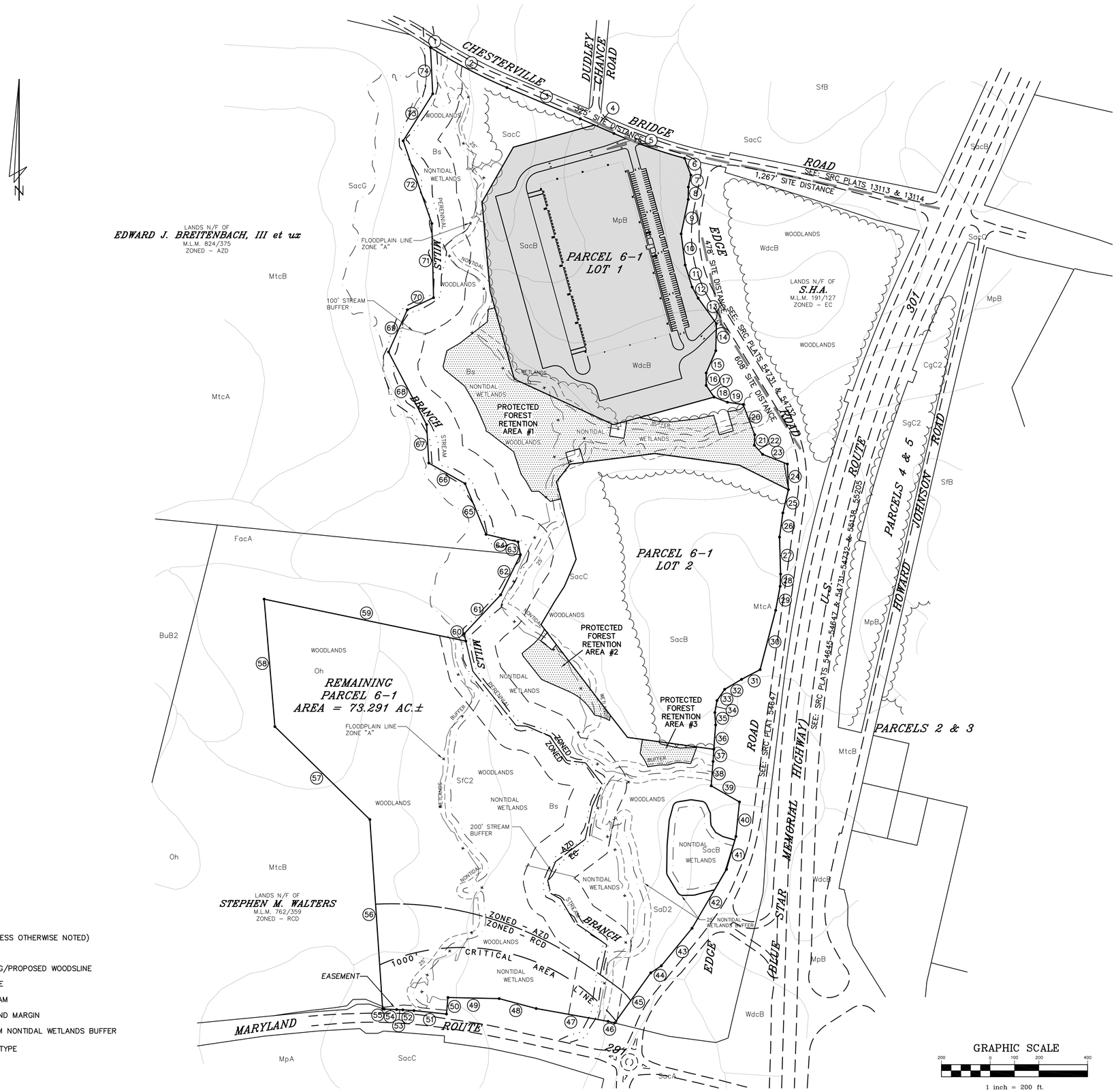
DATE	MARCH '23
SCALE	AS SHOWN
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31–2021165
DESIGNED BY	KJS
SHEET No. –	C–1.00
CADD FILE –	21165C100

SITE STATISTICS

OVERALL SITE STATISTICS		
GROSS SITE AREA	=	114.499 ac.±
NON-CRITICAL AREA	=	110.454 ac.±
CRITICAL AREA	=	4.045 ac.±
GROSS SITE AREA	=	**114.599 ac.±**
ZONE (EC)	=	81.307 ac.±
ZONE (AZD)	=	25.787 ac.±
ZONE (RCD)	=	7.406 ac.±
AREA WITHIN ZONE (EC)	=	**81.307 ac.±**
NON-CRITICAL AREA	=	81.307 ac.±
CRITICAL AREA	=	0.000 ac.±
AREA WITHIN ZONE (RCD)	=	**7.406 ac.±**
NON-CRITICAL AREA	=	3.361 ac.±
CRITICAL AREA	=	4.045 ac.±
REMAINING PARCEL 6-1 SITE STATISTICS		
GROSS SITE AREA	=	73.291 ac.±
NON-CRITICAL AREA	=	69.246 ac.±
CRITICAL AREA	=	4.045 ac.±
GROSS SITE AREA	=	**73.291 ac.±**
ZONE (EC)	=	40.099 ac.±
ZONE (AZD)	=	25.787 ac.±
ZONE (RCD)	=	7.406 ac.±
AREA WITHING ZONE (EC)	=	**40.099 ac.±**
NON-CRITICAL AREA	=	40.099 ac.±
CRITICAL AREA	=	0.000 ac.±
AREA WITHIN ZONE (RCD)	=	**7.406 ac.±**
NON-CRITICAL AREA	=	3.361 ac.±
CRITICAL AREA	=	4.045 ac.±

PERIMETER BOUNDARY COURSES AND DISTANCES

LINE	BEARING	DISTANCE
1	S 57°41'34" E	1.51'
2	S 62°21'18" E	352.90'
	R = 2182.12'	353.28'
3	S 66°59'35" E	326.95'
4	S 66°21'21" E	150.72'
5	S 70°39'12" E	307.67'
	R = 2052.82'	307.96'
6	S 20°30'34" E	73.87'
7	S 11°54'11" W	50.00'
8	S 00°36'35" W	50.99'
9	S 11°42'18" W	144.01'
10	S 07°20'51" E	129.32'
11	S 17°37'45" E	94.97'
12	S 28°15'11" E	51.90'
13	S 35°41'34" E	128.29'
14	S 01°15'22" W	111.22'
15	S 23°11'27" W	99.87'
16	S 00°07'11" W	50.77'
17	S 33°58'49" E	58.03'
18	S 68°40'47" E	58.60'
19	S 81°58'30" E	65.30'
20	S 20°54'55" E	133.03'
21	S 01°54'51" W	43.01'
22	S 42°19'28" E	50.50'
23	S 68°28'35" E	109.20'
24	S 02°21'44" E	105.02'
25	S 13°28'01" W	98.49'
26	S 07°48'59" W	100.00'
27	S 01°38'45" E	152.07'
28	S 02°08'21" W	50.25'
29	S 10°40'44" W	100.13'
30	S 14°39'33" W	251.79'
31	S 62°16'44" W	86.02'
32	S 59°22'45" W	80.43'
33	S 34°22'53" W	55.90'
34	S 10°06'25" W	50.04'
35	S 03°29'37" E	50.99'
36	S 04°22'58" W	100.18'
37	S 03°14'33" W	50.16'
38	S 04°22'58" W	100.18'
39	S 60°13'23" E	133.70'
40	S 05°56'11" W	142.56'
41	S 15°54'12" W	140.25'
42	S 30°18'58" W	280.31'
43	S 39°20'21" W	199.09'
44	S 56°03'57" W	52.20'
45	S 35°48'22" W	253.75'
46	N 76°14'08" W	27.73'
47	N 79°51'28" W	299.63'
48	N 75°01'11" W	157.13'
49	N 88°44'55" W	210.47'
50	S 04°59'46" W	68.07'
51	N 84°00'32" W	134.29'
52	N 86°13'17" W	45.78'
53	N 87°05'47" W	25.44'
54	N 88°02'02" W	50.87'
55	N 71°20'33" W	7.19'
56	N 03°51'09" W	778.07'
57	N 45°37'09" W	545.42'
58	N 04°49'35" W	525.33'
59	S 78°14'39" E	845.55'
60	N 11°59'39" W	30.93'
61	N 43°08'31" E	218.92'
62	N 26°05'41" E	183.60'
63	N 10°37'15" W	53.45'
64	N 76°44'35" W	134.76'
65	N 22°27'55" W	225.56'
66	N 60°27'05" W	171.11'
67	N 03°08'55" W	158.05'
68	N 27°39'55" W	336.87'
69	N 24°01'05" E	189.38'
70	N 65°08'05" E	118.58'
71	N 01°18'25" W	305.01'
72	N 19°07'05" W	359.26'
73	N 32°10'35" E	228.01'
74	N 02°50'27" W	190.14'



LEGEND

- DEED POINT (UNLESS OTHERWISE NOTED)
- AZD / EC — ZONING LINE
- EDGE OF EXISTING/PROPOSED WOODSLINE
- FLOOD PLAIN LINE
- PERENNIAL STREAM
- NONTIDAL WETLAND MARGIN
- 25' BUFFER FROM NONTIDAL WETLANDS BUFFER
- MpB / WdcB — SOILS LINE AND TYPE

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KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

KENT SOIL AND WATER CONSERVATION DISTRICT

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THE DOCUMENT 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. 20045 EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KENNETH JOHN KEARON — No. 20045 — PROFESSIONAL ENGINEER

DATE: OCTOBER 9, 2023

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

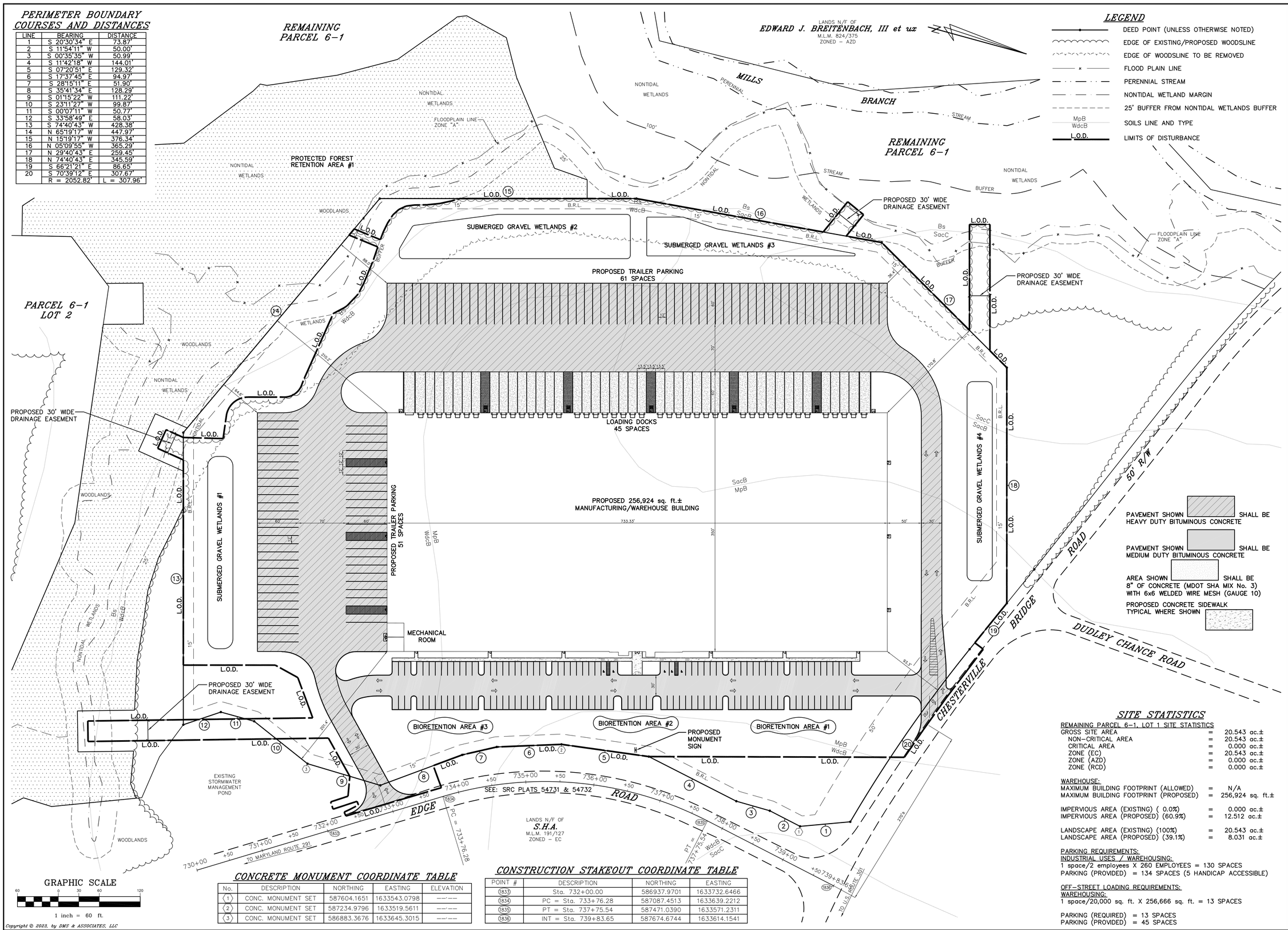
DATE	REVISION
10-9-23	PER TAC COMMENTS
5-24-24	PER TAC COMMENTS

OVERALL SITE PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

SCALE	1" = 200'
DRAWN BY	WJM
DESIGNED BY	KJS
DATE	MARCH '23
JOB No.	2021165
FOLDER Ref.	31-2021165
SHEET No. –	C-2.00
CADD FILE –	21165C200

PERIMETER BOUNDARY COURSES AND DISTANCES

LINE	BEARING	DISTANCE
1	S 20°30'34" E	73.87'
2	S 11°54'11" W	50.00'
3	S 00°35'35" W	50.99'
4	S 11°42'18" W	144.01'
5	S 07°20'51" E	129.32'
6	S 17°37'45" E	94.97'
7	S 28°15'11" E	51.90'
8	S 35°41'34" E	128.29'
9	S 01°15'22" W	111.22'
10	S 23°11'27" W	99.87'
11	S 00°07'11" W	50.77'
12	S 33°58'49" E	58.03'
13	S 74°40'43" W	428.38'
14	N 65°19'17" W	447.97'
15	N 15°19'17" W	376.34'
16	N 05°09'55" W	365.29'
17	N 29°40'43" E	259.45'
18	N 74°40'43" E	345.59'
19	S 66°21'21" E	86.65'
20	S 70°39'12" E	307.67'
	R = 2052.82'	L = 307.96'



LEGEND

- DEED POINT (UNLESS OTHERWISE NOTED)
- EDGE OF EXISTING/PROPOSED WOODSLINE
- EDGE OF WOODSLINE TO BE REMOVED
- FLOOD PLAIN LINE
- PERENNIAL STREAM
- NONTIDAL WETLAND MARGIN
- 25' BUFFER FROM NONTIDAL WETLANDS BUFFER
- MpB / WdcB — SOILS LINE AND TYPE
- L.O.D. — LIMITS OF DISTURBANCE

GRAPHIC SCALE
60 0 30 60 120
1 inch = 60 ft.

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CONCRETE MONUMENT COORDINATE TABLE

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	CONC. MONUMENT SET	587604.1651	1633543.0798	---'---
2	CONC. MONUMENT SET	587234.9796	1633519.5611	---'---
3	CONC. MONUMENT SET	586883.3676	1633645.3015	---'---

CONSTRUCTION STAKEOUT COORDINATE TABLE

POINT #	DESCRIPTION	NORTHING	EASTING
1833	Sta. 732+00.00	586937.9701	1633732.6466
1834	PC = Sta. 733+76.28	587087.4513	1633639.2212
1835	PT = Sta. 737+75.54	587471.0390	1633571.2311
1836	INT = Sta. 739+83.65	587674.6744	1633614.1541

SITE STATISTICS

REMAINING PARCEL 6–1, LOT 1 SITE STATISTICS

GROSS SITE AREA	=	20.543 ac.±
NON–CRITICAL AREA	=	20.543 ac.±
CRITICAL AREA	=	0.000 ac.±
ZONE (EC)	=	20.543 ac.±
ZONE (AZD)	=	0.000 ac.±
ZONE (RCD)	=	0.000 ac.±

WAREHOUSE:

MAXIMUM BUILDING FOOTPRINT (ALLOWED)	=	N/A
MAXIMUM BUILDING FOOTPRINT (PROPOSED)	=	256,924 sq. ft.±
IMPERVIOUS AREA (EXISTING) (0.0%)	=	0.000 ac.±
IMPERVIOUS AREA (PROPOSED) (60.9%)	=	12.512 ac.±
LANDSCAPE AREA (EXISTING) (100%)	=	20.543 ac.±
LANDSCAPE AREA (PROPOSED) (39.1%)	=	8.031 ac.±

PARKING REQUIREMENTS:
INDUSTRIAL USES / WAREHOUSING:
1 space/2 employees X 260 EMPLOYEES = 130 SPACES
PARKING (PROVIDED) = 134 SPACES (5 HANDICAP ACCESSIBLE)

OFF–STREET LOADING REQUIREMENTS:
WAREHOUSING:
1 space/20,000 sq. ft. X 256,666 sq. ft. = 13 SPACES

PARKING (REQUIRED) = 13 SPACES
PARKING (PROVIDED) = 45 SPACES

KENT COUNTY DEPARTMENT OF PUBLIC WORKS
KENT SOIL AND WATER CONSERVATION DISTRICT
KENT COUNTY DEPARTMENT OF PLANNING AND ZONING
KENT COUNTY HEALTH DEPARTMENT

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. 22049, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND KEVIN JAMES SHEARON No. 22049 PROFESSIONAL ENGINEER

DATE: NOVEMBER 15, 2023 SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

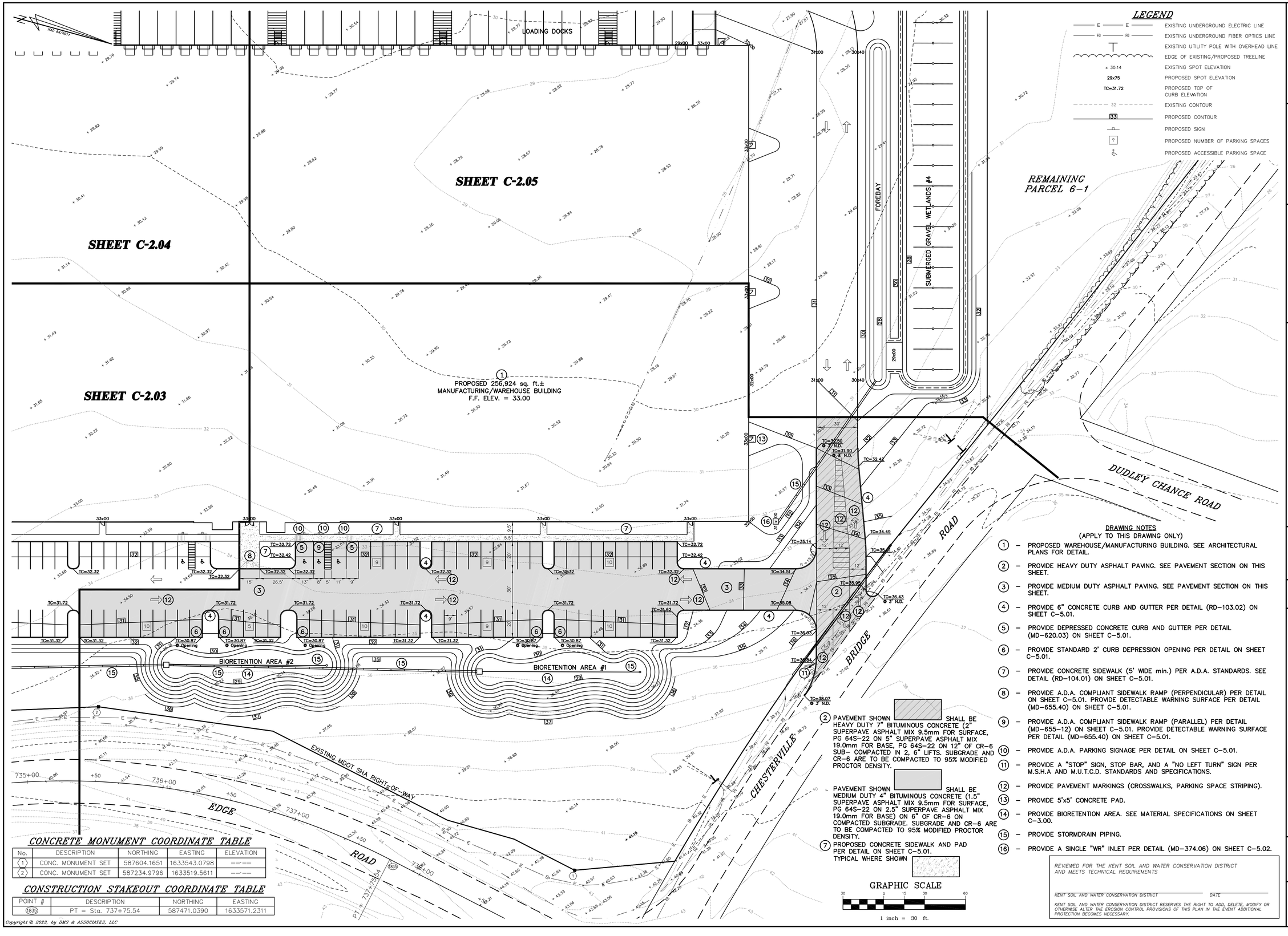
DATE	REVISION
10-9-23	PER TAC COMMENTS
11-15-23	PER MDOT COMMENTS
5-24-24	PER TAC COMMENTS

SITE PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6–1

DATE	MARCH '23
SCALE	1" = 60'
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31-2021165
DESIGNED BY	KJS

SHEET No. – C–2.01

CADD FILE – 21165C2.01



LEGEND

- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING UNDERGROUND FIBER OPTICS LINE
- EXISTING UTILITY POLE WITH OVERHEAD LINE
- EDGE OF EXISTING/PROPOSED TREELINE
- x 30.14 — EXISTING SPOT ELEVATION
- 29x75 — PROPOSED SPOT ELEVATION
- TC=31.72 — PROPOSED TOP OF CURB ELEVATION
- 32 — EXISTING CONTOUR
- 33 — PROPOSED CONTOUR
- PROPOSED SIGN
- PROPOSED NUMBER OF PARKING SPACES
- PROPOSED ACCESSIBLE PARKING SPACE

CONCRETE MONUMENT COORDINATE TABLE

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	CONC. MONUMENT SET	587604.1651	1633543.0798	---' ---
2	CONC. MONUMENT SET	587234.9796	1633519.5611	---' ---

CONSTRUCTION STAKEOUT COORDINATE TABLE

POINT #	DESCRIPTION	NORTHING	EASTING
1835	PT = Sta. 737+75.54	587471.0390	1633571.2311

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DRAWING NOTES
(APPLY TO THIS DRAWING ONLY)

1. – PROPOSED WAREHOUSE/MANUFACTURING BUILDING. SEE ARCHITECTURAL PLANS FOR DETAIL.
2. – PROVIDE HEAVY DUTY ASPHALT PAVING. SEE PAVEMENT SECTION ON THIS SHEET.
3. – PROVIDE MEDIUM DUTY ASPHALT PAVING. SEE PAVEMENT SECTION ON THIS SHEET.
4. – PROVIDE 6" CONCRETE CURB AND GUTTER PER DETAIL (RD–103.02) ON SHEET C–5.01.
5. – PROVIDE DEPRESSED CONCRETE CURB AND GUTTER PER DETAIL (MD–620.03) ON SHEET C–5.01.
6. – PROVIDE STANDARD 2' CURB DEPRESSION OPENING PER DETAIL ON SHEET C–5.01.
7. – PROVIDE CONCRETE SIDEWALK (5' WIDE min.) PER A.D.A. STANDARDS. SEE DETAIL (RD–104.01) ON SHEET C–5.01.
8. – PROVIDE A.D.A. COMPLIANT SIDEWALK RAMP (PERPENDICULAR) PER DETAIL ON SHEET C–5.01. PROVIDE DETECTABLE WARNING SURFACE PER DETAIL (MD–655.40) ON SHEET C–5.01.
9. – PROVIDE A.D.A. COMPLIANT SIDEWALK RAMP (PARALLEL) PER DETAIL (MD–655–12) ON SHEET C–5.01. PROVIDE DETECTABLE WARNING SURFACE PER DETAIL (MD–655.40) ON SHEET C–5.01.
10. – PROVIDE A.D.A. PARKING SIGNAGE PER DETAIL ON SHEET C–5.01.
11. – PROVIDE A "STOP" SIGN, STOP BAR, AND A "NO LEFT TURN" SIGN PER M.S.H.A AND M.U.T.C.D. STANDARDS AND SPECIFICATIONS.
12. – PROVIDE PAVEMENT MARKINGS (CROSSWALKS, PARKING SPACE STRIPING).
13. – PROVIDE 5'x5' CONCRETE PAD.
14. – PROVIDE BIORETENTION AREA. SEE MATERIAL SPECIFICATIONS ON SHEET C–3.00.
15. – PROVIDE STORMDRAIN PIPING.
16. – PROVIDE A SINGLE "WR" INLET PER DETAIL (MD–374.06) ON SHEET C–5.02.

(2) PAVEMENT SHOWN ▨ SHALL BE HEAVY DUTY 7" BITUMINOUS CONCRETE (2" SUPERPAVE ASPHALT MIX 9.5mm FOR SURFACE, PG 64S–22 ON 5" SUPERPAVE ASPHALT MIX 19.0mm FOR BASE, PG 64S–22 ON 12" OF CR–6 SUB– COMPACTED IN 2, 6" LIFTS. SUBGRADE AND CR–6 ARE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

PAVEMENT SHOWN ▨ SHALL BE MEDIUM DUTY 4" BITUMINOUS CONCRETE (1.5" SUPERPAVE ASPHALT MIX 9.5mm FOR SURFACE, PG 64S–22 ON 2.5" SUPERPAVE ASPHALT MIX 19.0mm FOR BASE) ON 6" OF CR–6 ON COMPACTED SUBGRADE. SUBGRADE AND CR–6 ARE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

(7) PROPOSED CONCRETE SIDEWALK AND PAD PER DETAIL ON SHEET C–5.01. TYPICAL WHERE SHOWN ▨

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

KENT SOIL AND WATER CONSERVATION DISTRICT

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THE DOCUMENT 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. 22045, EXPIRATION DATE: 9–2–25

STATE OF MARYLAND — KEVIN J. SHEARON — No. 22045 — PROFESSIONAL ENGINEER

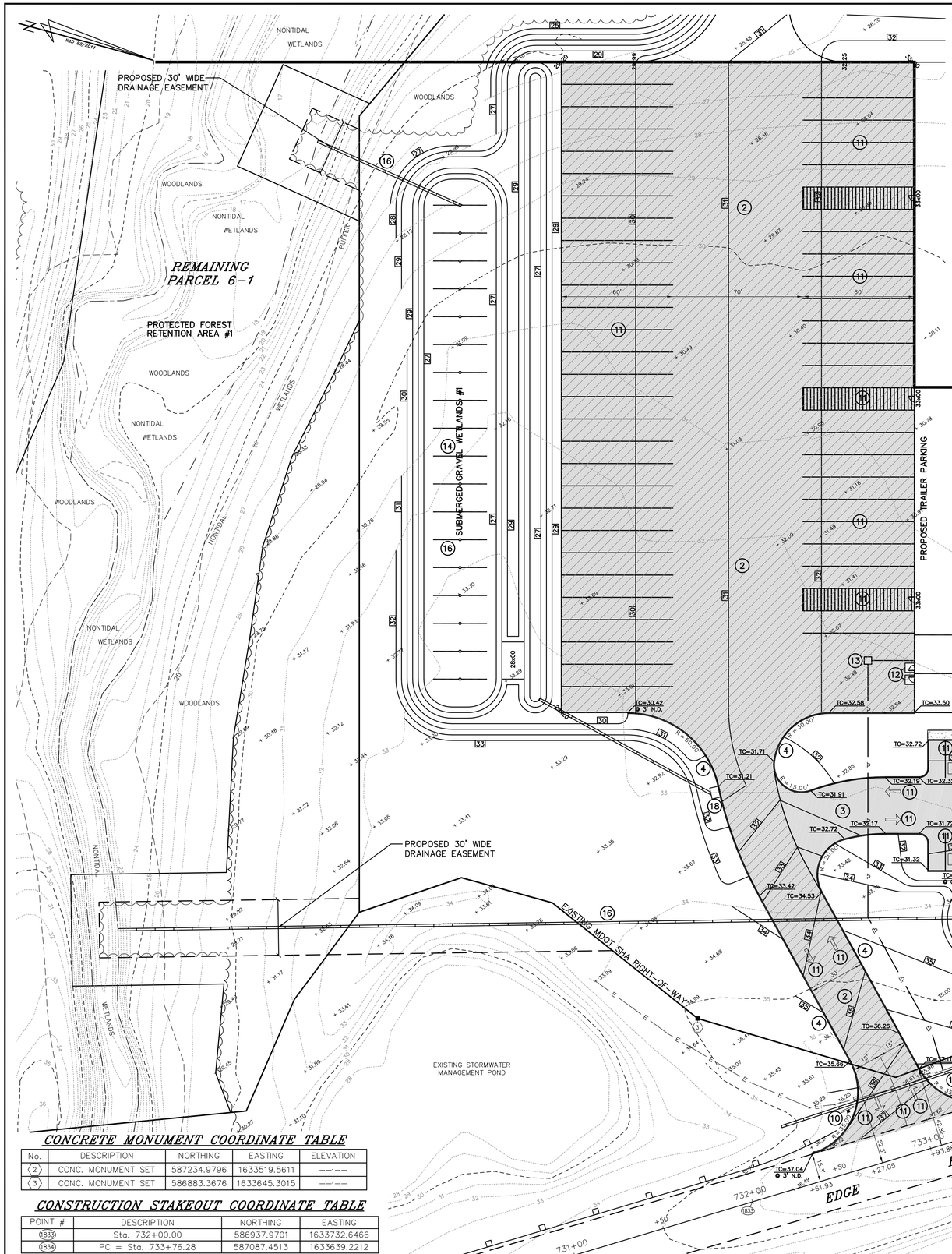
DATE: NOVEMBER 15, 2023 SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE : 1–443–262–3130
FAX : 1–443–262–3148

DATE	REVISION
10–9–23	PER TAC COMMENTS
11–15–23	PER MDOT COMMENTS

SITE AND GRADING PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6–1

DATE	MARCH '23
SCALE	1" = 30'
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31–2021165
DESIGNED BY	KJS
SHEET No. –	C–2.02
CADD FILE –	21165C202



DRAWING NOTES
(APPLY TO THIS DRAWING ONLY)

1. – PROPOSED WAREHOUSE/MANUFACTURING BUILDING. SEE ARCHITECTURAL PLANS FOR DETAIL.
2. – PROVIDE HEAVY DUTY ASPHALT PAVING. SEE PAVEMENT SECTION ON THIS SHEET.
3. – PROVIDE MEDIUM DUTY ASPHALT PAVING. SEE PAVEMENT SECTION ON THIS SHEET.
4. – PROVIDE 6" CONCRETE CURB AND GUTTER PER DETAIL (RD–103.02) ON SHEET C–5.01.
5. – PROVIDE DEPRESSED CONCRETE CURB AND GUTTER PER DETAIL (MD–620.03) ON SHEET C–5.01.
6. – PROVIDE STANDARD 2' CURB DEPRESSION OPENING PER DETAIL ON SHEET C–5.01.
7. – PROVIDE CONCRETE SIDEWALK (5' WIDE min.) PER A.D.A. STANDARDS. SEE DETAIL (RD–104.01) ON SHEET C–5.01.
8. – PROVIDE A.D.A. COMPLIANT SIDEWALK RAMP (PERPENDICULAR) PER DETAIL ON SHEET C–5.01. PROVIDE DETECTABLE WARNING SURFACE PER DETAIL (MD–655.40) ON SHEET C–5.01.
9. – PROVIDE A.D.A. PARKING SIGNAGE PER DETAIL ON SHEET C–5.01.
10. – PROVIDE A "STOP" SIGN AND BAR PER M.S.H.A AND M.U.T.C.D. STANDARDS AND SPECIFICATIONS.
11. – PROVIDE PAVEMENT MARKINGS (CROSSWALKS, PARKING SPACE STRIPING).
12. – PROVIDE CONCRETE 5'x5' CONCRETE PAD.
13. – PROVIDE ELECTRIC TRANSFORMER WITH CONCRETE BOLLARDS. CONTRACTOR SHALL CONTACT UTILITY OWNER FOR SPECIFICATIONS.
14. – PROVIDE SUBMERGED GRAVEL WETLANDS. SEE MATERIAL SPECIFICATIONS ON SHEET C–3.00.
15. – PROVIDE BIORETENTION AREA. SEE MATERIAL SPECIFICATIONS ON SHEET C–3.00.
16. – PROVIDE STORMDRAIN PIPING.
17. – PROVIDE A SINGLE "WR" INLET PER DETAIL (MD–374.06) ON SHEET C–5.02.
18. – PROVIDE A CURB INLET PER DETAIL (RD–106.01) ON SHEET C–5.01.

(2) PAVEMENT SHOWN SHALL BE HEAVY DUTY 7" BITUMINOUS CONCRETE (2" SUPERPAVE ASPHALT MIX 9.5mm FOR SURFACE, PG 64S–22 ON 5" SUPERPAVE ASPHALT MIX 19.0mm FOR BASE, PG 64S–22 ON 12" OF CR–6 SUB– COMPACTED IN 2, 6" LIFTS. SUBGRADE AND CR–6 ARE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

PAVEMENT SHOWN SHALL BE MEDIUM DUTY 4" BITUMINOUS CONCRETE (1.5" SUPERPAVE ASPHALT MIX 9.5mm FOR SURFACE, PG 64S–22 ON 2.5" SUPERPAVE ASPHALT MIX 19.0mm FOR BASE) ON 6" OF CR–6 ON COMPACTED SUBGRADE. SUBGRADE AND CR–6 ARE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

(7) PROPOSED CONCRETE SIDEWALK PER DETAIL ON SHEET C–5.01. TYPICAL WHERE SHOWN

SHEET C-2.04

SHEET C-2.02

(1) PROPOSED 256,924 sq. ft.± MANUFACTURING/WAREHOUSE BUILDING F.F. ELEV. = 33.00

LEGEND

- EXISTING UNDERGROUND ELECTRIC LINE
- PROPOSED UNDERGROUND ELECTRIC LINE
- EXISTING GUARDRAIL
- EDGE OF EXISTING/PROPOSED TREELINE
- x 30.14 — EXISTING SPOT ELEVATION
- 29x75 — PROPOSED SPOT ELEVATION
- TC=31.72 — PROPOSED TOP OF CURB ELEVATION
- 32 — EXISTING CONTOUR
- 33 — PROPOSED CONTOUR
- PROPOSED SIGN
- PROPOSED NUMBER OF PARKING SPACES
- PROPOSED ACCESSIBLE PARKING SPACE

CONCRETE MONUMENT COORDINATE TABLE

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
(2)	CONC. MONUMENT SET	587234.9796	1633519.5611	—.—
(3)	CONC. MONUMENT SET	586883.3676	1633645.3015	—.—

CONSTRUCTION STAKEOUT COORDINATE TABLE

POINT #	DESCRIPTION	NORTHING	EASTING
(833)	Sta. 732+00.00	586937.9701	1633732.6466
(834)	PC = Sta. 733+76.28	587087.4513	1633639.2212

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS
KENT SOIL AND WATER CONSERVATION DISTRICT
KENT COUNTY DEPARTMENT OF PLANNING AND ZONING
KENT COUNTY HEALTH DEPARTMENT

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE DOCUMENT 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. 20045 EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN JOSEPH SHEARON — No. 20045 — PROFESSIONAL ENGINEER
OCTOBER 9, 2023
SEAL
DATE

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

REVISION	DATE
PER TAC COMMENTS	10-9-23
PER MDOT COMMENTS	11-15-23
PER TAC COMMENTS	5-24-24

SITE AND GRADING PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6–1

DATE	MARCH '23
SCALE	1" = 30'
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31-2021165
DESIGNED BY	KJS
SHEET No. –	C–2.03
CADD FILE –	21165C203

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REVISED 10/6/2011

DRAWING NOTES
(APPLY TO THIS DRAWING ONLY)

1. – PROPOSED WAREHOUSE/MANUFACTURING BUILDING. SEE ARCHITECTURAL PLANS FOR DETAIL.
2. – PROVIDE HEAVY DUTY ASPHALT PAVING. SEE PAVEMENT SECTION ON THIS SHEET.
3. – PROVIDE CONCRETE 5'x5' CONCRETE PAD.
4. – PROVIDE RETAINING WALL. SEE STRUCTURAL PLANS FOR DETAIL.
5. – PROVIDE CONCRETE BOLLARDS. SEE ARCHITECTURAL PLANS FOR DETAIL.
7. – PROVIDE PAVEMENT MARKINGS (CROSSWALKS, PARKING SPACE STRIPING).
8. – PROVIDE SUBMERGED GRAVEL WETLANDS. SEE MATERIAL SPECIFICATIONS ON SHEET C–3.00.
9. – PROVIDE STORMDRAIN PIPING.

(2) PAVEMENT SHOWN ▨ SHALL BE HEAVY DUTY 7" BITUMINOUS CONCRETE (2" SUPERPAVE ASPHALT MIX 9.5mm FOR SURFACE, PG 64S–22 ON 5" SUPERPAVE ASPHALT MIX 19.0mm FOR BASE, PG 64S–22 ON 12" OF CR–6 SUB– COMPACTED IN 2, 6" LIFTS. SUBGRADE AND CR–6 ARE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

AREA SHOWN ▨ SHALL BE 8" OF CONCRETE (MDOT SHA MIX No. 3) WITH 6x6 WELDED WIRE MESH (GAUGE 10) ON 6" OF CR–6 ON COMPACTED SUBGRADE. CR–6 AND SUBGRADE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY. PROVIDE EXPANSION JOINTS AT 10' INTERVALS.

(7) PROPOSED CONCRETE PAD TYPICAL WHERE SHOWN ▨

REMAINING PARCEL 6–1

PROTECTED FOREST RETENTION AREA #1

SUBMERGED GRAVEL WETLANDS #2

SUBMERGED GRAVEL WETLANDS #3

FOREBAY

PROVIDE A 20' WIDE EARTH OVERFLOW WEIR WEIR ELEV. = 24.00

FLOODPLAIN LINE ZONE "A"

PROPOSED TRAILER PARKING

LOADING DOCKS

PROPOSED 256,924 sq. ft.± MANUFACTURING/WAREHOUSE BUILDING F.F. ELEV. = 33.00

SUBMERGED GRAVEL WETLANDS #1

PROTECTED FOREST RETENTION AREA #1

NONTIDAL WETLANDS

WOODLANDS

BUFFER

SHEET C-2.05

SHEET C-2.02

SHEET C-2.03

LEGEND

- FLOODPLAIN LINE
- EDGE OF EXISTING/PROPOSED TREELINE
- x 30.14 EXISTING SPOT ELEVATION
- 29x75 PROPOSED SPOT ELEVATION
- 32 EXISTING CONTOUR
- 33 PROPOSED CONTOUR

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS
KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING
KENT COUNTY HEALTH DEPARTMENT

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. 20045 EXPIRATION DATE: 9–2–25

STATE OF MARYLAND — KEVIN W. JOHNSON — 20045 — REGISTERED PROFESSIONAL ENGINEER

OCTOBER 9, 2023
DATE SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN, ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1–443–262–9130
FAX: 1–443–262–9148

REVISION	DATE
PER TAC COMMENTS	10–9–23
PER TAC COMMENTS	5–24–24

SITE AND GRADING PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6–1

DATE	MARCH '23
SCALE	1" = 30'
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31–2021165
DESIGNED BY	KJS
SHEET No. –	C–2.04
CADD FILE –	21165C204

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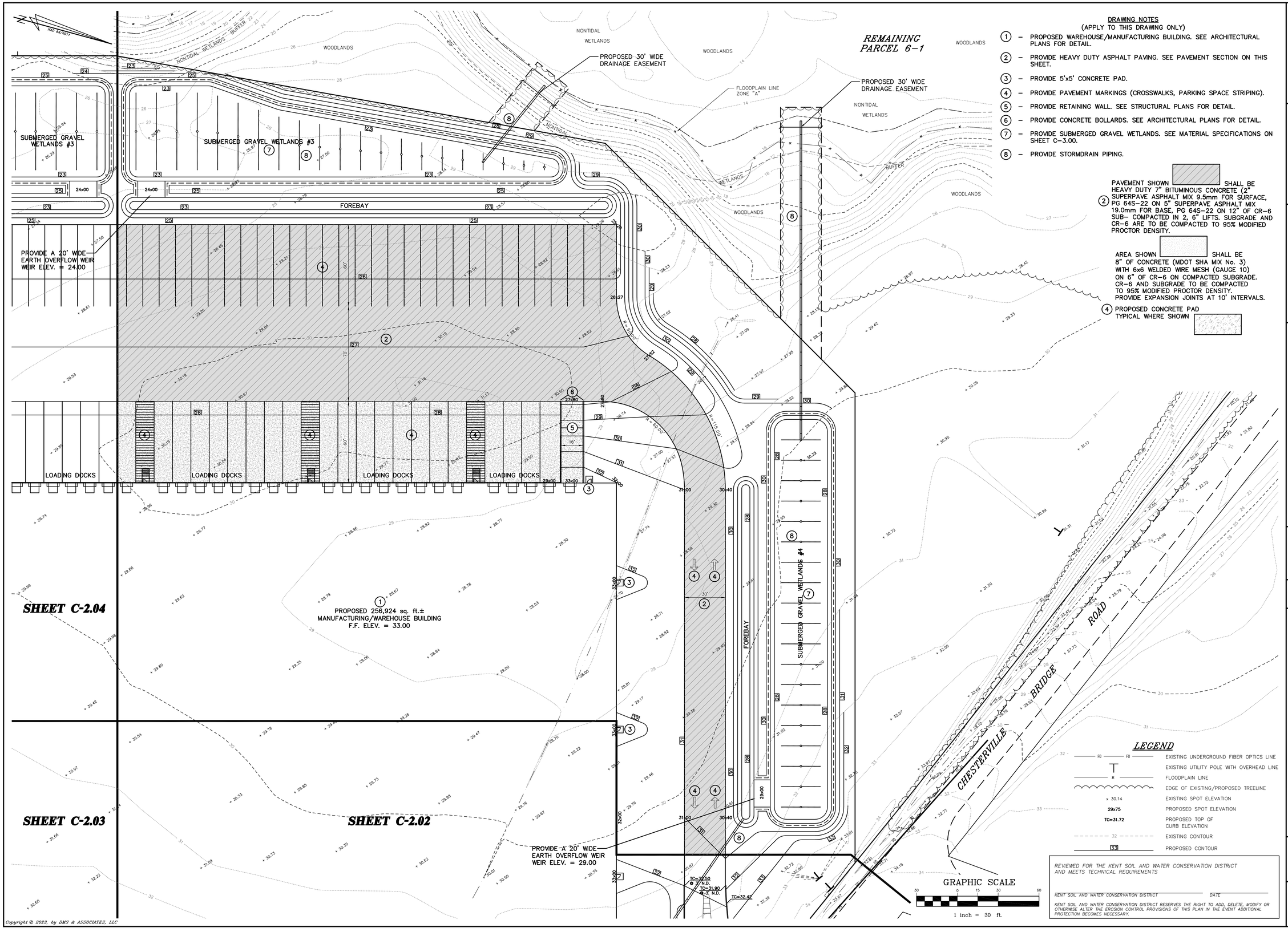

DRAWING NOTES
(APPLY TO THIS DRAWING ONLY)

1. – PROPOSED WAREHOUSE/MANUFACTURING BUILDING. SEE ARCHITECTURAL PLANS FOR DETAIL.
2. – PROVIDE HEAVY DUTY ASPHALT PAVING. SEE PAVEMENT SECTION ON THIS SHEET.
3. – PROVIDE 5'x5' CONCRETE PAD.
4. – PROVIDE PAVEMENT MARKINGS (CROSSWALKS, PARKING SPACE STRIPING).
5. – PROVIDE RETAINING WALL. SEE STRUCTURAL PLANS FOR DETAIL.
6. – PROVIDE CONCRETE BOLLARDS. SEE ARCHITECTURAL PLANS FOR DETAIL.
7. – PROVIDE SUBMERGED GRAVEL WETLANDS. SEE MATERIAL SPECIFICATIONS ON SHEET C-3.00.
8. – PROVIDE STORMDRAIN PIPING.

PAVEMENT SHOWN SHALL BE HEAVY DUTY 7" BITUMINOUS CONCRETE (2" SUPERPAVE ASPHALT MIX 9.5mm FOR SURFACE, PG 64S-22 ON 5" SUPERPAVE ASPHALT MIX 19.0mm FOR BASE, PG 64S-22 ON 12" OF CR-6 SUB- COMPACTED IN 2, 6" LIFTS. SUBGRADE AND CR-6 ARE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

AREA SHOWN SHALL BE 8" OF CONCRETE (MDOT SHA MIX No. 3) WITH 6x6 WELDED WIRE MESH (GAUGE 10) ON 6" OF CR-6 ON COMPACTED SUBGRADE. CR-6 AND SUBGRADE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY. PROVIDE EXPANSION JOINTS AT 10' INTERVALS.

PROPOSED CONCRETE PAD TYPICAL WHERE SHOWN

LEGEND

- EXISTING UNDERGROUND FIBER OPTICS LINE
- EXISTING UTILITY POLE WITH OVERHEAD LINE
- FLOODPLAIN LINE
- EDGE OF EXISTING/PROPOSED TREELINE
- x 30.14 — EXISTING SPOT ELEVATION
- 29x75 — PROPOSED SPOT ELEVATION
- TC=31.72 — PROPOSED TOP OF CURB ELEVATION
- 32 — EXISTING CONTOUR
- 33 — PROPOSED CONTOUR

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT — DATE

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

KENT SOIL AND WATER CONSERVATION DISTRICT

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT DOCUMENT 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. 20045, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — WILLIAM K. MOORE — No. 20045 — PROFESSIONAL ENGINEER

OCTOBER 9, 2023
DATE

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN, ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

DATE	REVISION
10-9-23	PER TAC COMMENTS

SITE AND GRADING PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

DATE	SCALE
MARCH '23	1" = 30'
JOB No.	DRAWN BY
2021165	WJM
FOLDER Ref.	DESIGNED BY
31-2021165	KJS

SHEET No. – C-2.05

CADD FILE – 211165C205

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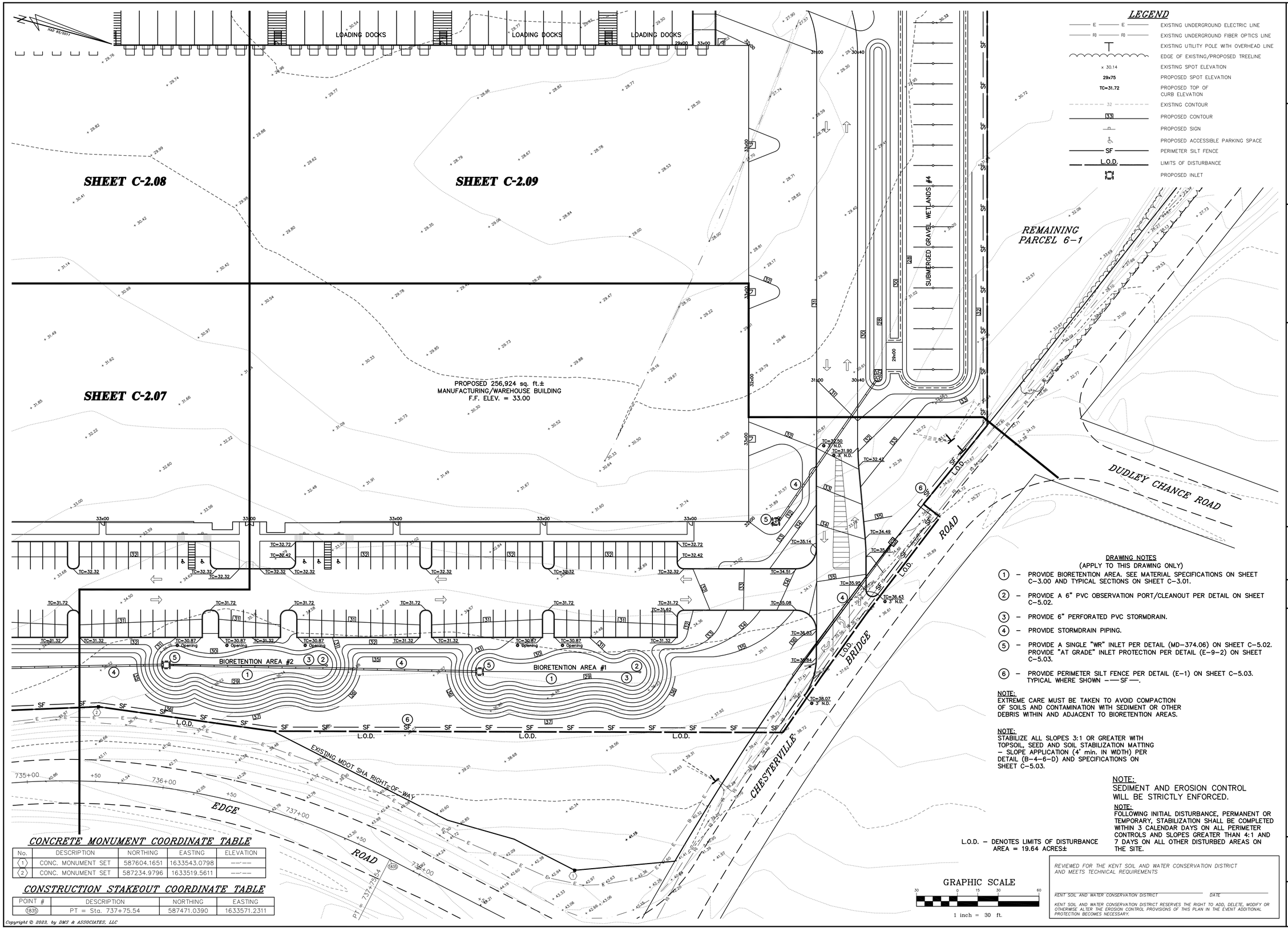

LEGEND

- E — E — EXISTING UNDERGROUND ELECTRIC LINE
- FO — FO — EXISTING UNDERGROUND FIBER OPTICS LINE
- EXISTING UTILITY POLE WITH OVERHEAD LINE
- EDGE OF EXISTING/PROPOSED TREELINE
- x 30.14 — EXISTING SPOT ELEVATION
- 29x75 — PROPOSED SPOT ELEVATION
- TC=31.72 — PROPOSED TOP OF CURB ELEVATION
- 32 — EXISTING CONTOUR
- 33 — PROPOSED CONTOUR
- PROPOSED SIGN
- PROPOSED ACCESSIBLE PARKING SPACE
- SF — PERIMETER SILT FENCE
- L.O.D. — LIMITS OF DISTURBANCE
- PROPOSED INLET

DRAWING NOTES
(APPLY TO THIS DRAWING ONLY)

1. – PROVIDE BIORETENTION AREA. SEE MATERIAL SPECIFICATIONS ON SHEET C-3.00 AND TYPICAL SECTIONS ON SHEET C-3.01.
2. – PROVIDE A 6" PVC OBSERVATION PORT/CLEANOUT PER DETAIL ON SHEET C-5.02.
3. – PROVIDE 6" PERFORATED PVC STORMDRAIN.
4. – PROVIDE STORMDRAIN PIPING.
5. – PROVIDE A SINGLE "WR" INLET PER DETAIL (MD-374.06) ON SHEET C-5.02. PROVIDE "AT GRADE" INLET PROTECTION PER DETAIL (E-9-2) ON SHEET C-5.03.
6. – PROVIDE PERIMETER SILT FENCE PER DETAIL (E-1) ON SHEET C-5.03. TYPICAL WHERE SHOWN – SF –.

NOTE:
EXTREME CARE MUST BE TAKEN TO AVOID COMPACTION OF SOILS AND CONTAMINATION WITH SEDIMENT OR OTHER DEBRIS WITHIN AND ADJACENT TO BIORETENTION AREAS.

NOTE:
STABILIZE ALL SLOPES 3:1 OR GREATER WITH TOPSOIL, SEED AND SOIL STABILIZATION MATTING – SLOPE APPLICATION (4' min. IN WIDTH) PER DETAIL (B-4-6-D) AND SPECIFICATIONS ON SHEET C-5.03.

NOTE:
SEDIMENT AND EROSION CONTROL WILL BE STRICTLY ENFORCED.

NOTE:
FOLLOWING INITIAL DISTURBANCE, PERMANENT OR TEMPORARY, STABILIZATION SHALL BE COMPLETED WITHIN 3 CALENDAR DAYS ON ALL PERIMETER CONTROLS AND SLOPES GREATER THAN 4:1 AND 7 DAYS ON ALL OTHER DISTURBED AREAS ON THE SITE.

L.O.D. – DENOTES LIMITS OF DISTURBANCE
AREA = 19.64 ACRES±

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

CONCRETE MONUMENT COORDINATE TABLE

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	CONC. MONUMENT SET	587604.1651	1633543.0798	---.---
2	CONC. MONUMENT SET	587234.9796	1633519.5611	---.---

CONSTRUCTION STAKEOUT COORDINATE TABLE

POINT #	DESCRIPTION	NORTHING	EASTING
835	PT = Sta. 737+75.54	587471.0390	1633571.2311

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT — DATE

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS — KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING — KENT COUNTY HEALTH DEPARTMENT

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THE 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. 22004, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN L. HEARON — 22004 — REGISTERED PROFESSIONAL ENGINEER

NOVEMBER 15, 2023
DATE SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

DATE	REVISION
10-9-23	PER TAC COMMENTS
11-15-23	PER MDOT COMMENTS

STORMWATER MANAGEMENT AND SEDIMENT & EROSION CONTROL
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

DATE	MARCH '23
SCALE	1" = 30'
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31-2021165
DESIGNED BY	KJS
SHEET No. –	C-2.06
CADD FILE –	211656C206

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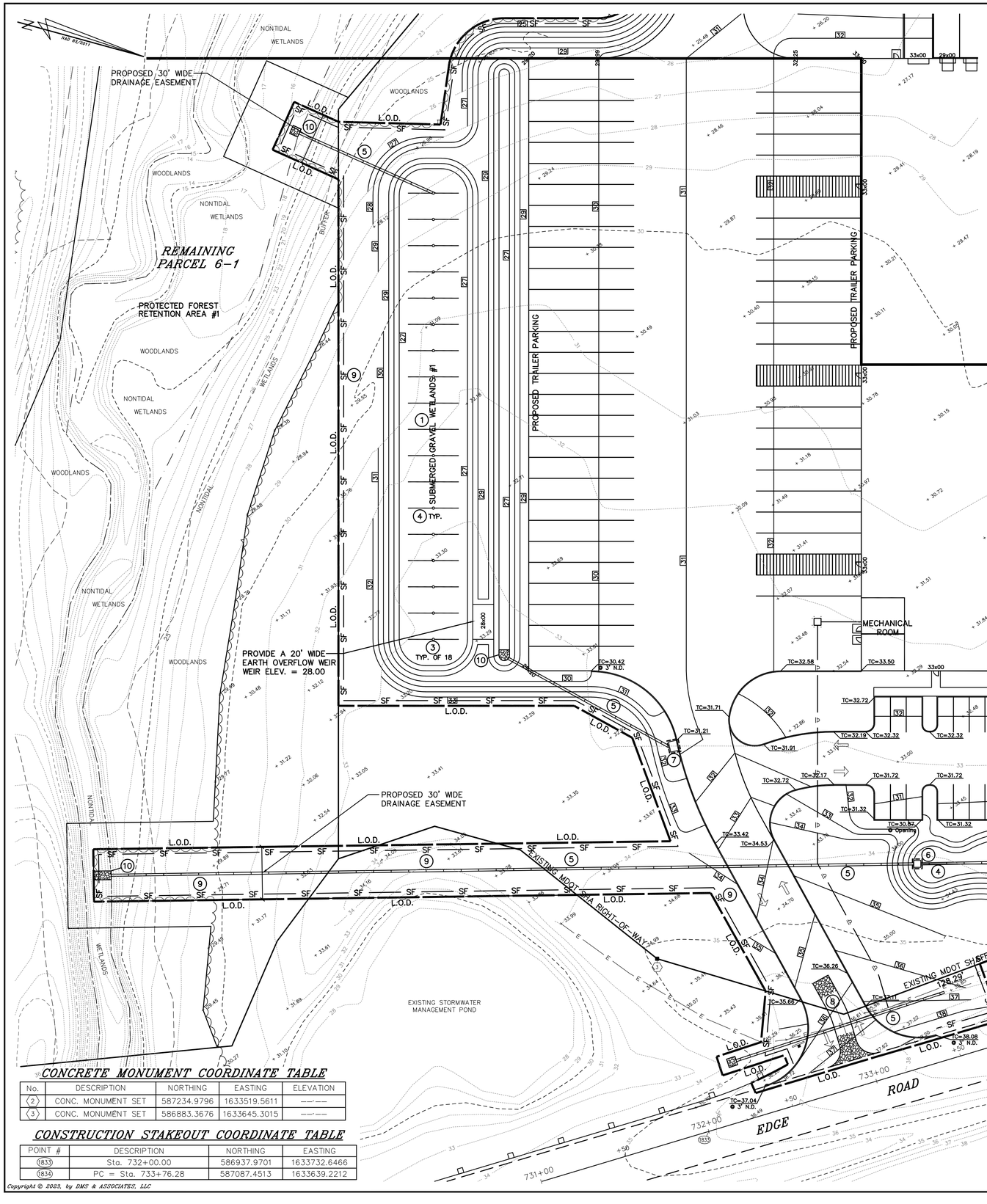

LEGEND

- EXISTING UNDERGROUND ELECTRIC LINE
- EDGE OF EXISTING/PROPOSED TREELINE
- x 30.14 — EXISTING SPOT ELEVATION
- 29x75 — PROPOSED SPOT ELEVATION
- TC=31.72 — PROPOSED TOP OF CURB ELEVATION
- 32 — EXISTING CONTOUR
- 33 — PROPOSED CONTOUR
- PROPOSED SIGN
- PROPOSED ACCESSIBLE PARKING SPACE
- SF — PERIMETER SILT FENCE
- L.O.D. — LIMITS OF DISTURBANCE
- STORMDRAIN INLET
- RIPRAP OUTLET PAD
- STABILIZED CONSTRUCTION ENTRANCE

NOTE:
EXTREME CARE MUST BE TAKEN TO AVOID COMPACTION OF SOILS AND CONTAMINATION WITH SEDIMENT OR OTHER DEBRIS WITHIN AND ADJACENT TO BIORETENTION AREAS.

NOTE:
STABILIZE ALL SLOPES 3:1 OR GREATER WITH TOPSOIL, SEED AND SOIL STABILIZATION MATTING – SLOPE APPLICATION (4' min. IN WIDTH) PER DETAIL (B-4-6-D) AND SPECIFICATIONS ON SHEET C-5.03.

DRAWING NOTES
(APPLY TO THIS DRAWING ONLY)

1. – PROVIDE SUBMERGED GRAVEL WETLANDS. SEE MATERIAL SPECIFICATIONS ON SHEET C-3.00 AND TYPICAL SECTIONS ON SHEET C-3.01.
2. – PROVIDE BIORETENTION AREA. SEE MATERIAL SPECIFICATIONS ON SHEET C-3.00 AND TYPICAL SECTIONS ON SHEET C-3.01.
3. – PROVIDE A 6" PVC OBSERVATION PORT/CLEANOUT PER DETAIL ON SHEET C-5.02.
4. – PROVIDE 6" PERFORATED PVC STORMDRAIN.
5. – PROVIDE STORMDRAIN PIPING.
6. – PROVIDE A SINGLE "WR" INLET PER DETAIL (MD-374.06) ON SHEET C-5.02. PROVIDE "AT GRADE" INLET PROTECTION PER DETAIL (E-9-2) ON SHEET C-5.03.
7. – PROVIDE A CURB INLET PER DETAIL (RD-106.01) ON SHEET C-5.01. PROVIDE "CURB" INLET PROTECTION PER DETAIL (E-9-3) ON SHEET C-5.03.
8. – PROVIDE A STABILIZED CONSTRUCTION ENTRANCE PER DETAIL (B-1) ON SHEET C-5.03
9. – PROVIDE PERIMETER SILT FENCE PER DETAIL (E-1) ON SHEET C-5.03. TYPICAL WHERE SHOWN –—SF—.
10. – PROVIDE RIPRAP OUTLET PROTECTION PER DETAIL (D-4-1-B) ON SHEET C-5.03.

SHEET C-2.08
SHEET C-2.09
SHEET C-2.06

NOTE:
SEDIMENT AND EROSION CONTROL WILL BE STRICTLY ENFORCED.

NOTE:
FOLLOWING INITIAL DISTURBANCE, PERMANENT OR TEMPORARY, STABILIZATION SHALL BE COMPLETED WITHIN 3 CALENDAR DAYS ON ALL PERIMETER CONTROLS AND SLOPES GREATER THAN 4:1 AND 7 DAYS ON ALL OTHER DISTURBED AREAS ON THE SITE.

L.O.D. – DENOTES LIMITS OF DISTURBANCE
AREA = 19.64 ACRES±

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT — DATE

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

CONCRETE MONUMENT COORDINATE TABLE

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
(2)	CONC. MONUMENT SET	587234.9796	1633519.5611	————
(3)	CONC. MONUMENT SET	586883.3676	1633645.3015	————

CONSTRUCTION STAKEOUT COORDINATE TABLE

POINT #	DESCRIPTION	NORTHING	EASTING
(1833)	Sta. 732+00.00	586937.9701	1633732.6466
(1834)	PC = Sta. 733+76.28	587087.4513	1633639.2212

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KENT COUNTY DEPARTMENT OF PUBLIC WORKS
KENT SOIL AND WATER CONSERVATION DISTRICT
KENT COUNTY DEPARTMENT OF PLANNING AND ZONING
KENT COUNTY HEALTH DEPARTMENT

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THE DOCUMENT 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. 22045, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN JAMES SHEARON — No. 22045 — PROFESSIONAL ENGINEER

NOVEMBER 15, 2023
DATE SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

REVISION	DATE
PER TAC COMMENTS	10-9-23
PER MDOT COMMENTS	11-15-23
PER TAC COMMENTS	5-24-24

STORMWATER MANAGEMENT AND SEDIMENT & EROSION CONTROL PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

SCALE	1" = 30'
DRAWN BY	WJM
DESIGNED BY	KJS
DATE	MARCH '23
JOB No.	2021165
FOLDER Ref.	31-2021165

SHEET No. – C-2.07
CADD FILE – 21165C207

REVISED 10/7/2011

DRAWING NOTES
(APPLY TO THIS DRAWING ONLY)

1. – PROVIDE SUBMERGED GRAVEL WETLANDS. SEE MATERIAL SPECIFICATIONS ON SHEET C–3.00 AND TYPICAL SECTIONS ON SHEET C–3.01.
2. – PROVIDE A 6" PVC OBSERVATION PORT/CLEANOUT PER DETAIL ON SHEET C–5.02.
3. – PROVIDE 6" PERFORATED PVC STORMDRAIN.
4. – PROVIDE STORMDRAIN PIPING.
5. – PROVIDE PERIMETER SILT FENCE PER DETAIL (E–1) ON SHEET C–5.03. TYPICAL WHERE SHOWN ——SF——.
6. – PROVIDE RIPRAP OUTLET PROTECTION PER DETAIL (D–4–1–B) ON SHEET C–5.03.

NOTE:
EXTREME CARE MUST BE TAKEN TO AVOID COMPACTION OF SOILS AND CONTAMINATION WITH SEDIMENT OR OTHER DEBRIS WITHIN AND ADJACENT TO BIORETENTION AREAS.

NOTE:
STABILIZE ALL SLOPES 3:1 OR GREATER WITH TOPSOIL, SEED AND SOIL STABILIZATION MATTING – SLOPE APPLICATION (4' min. IN WIDTH) PER DETAIL (B–4–6–D) AND SPECIFICATIONS ON SHEET C–5.03.

LEGEND

- FLOODPLAIN LINE
- EDGE OF EXISTING/PROPOSED TREELINE
- x 30.14 — EXISTING SPOT ELEVATION
- 29x75 — PROPOSED SPOT ELEVATION
- 32 — EXISTING CONTOUR
- 33 — PROPOSED CONTOUR
- SF — PERIMETER SILT FENCE
- L.O.D. — LIMITS OF DISTURBANCE
- RIPRAP OUTLET PAD

REMAINING PARCEL 6–1

PROTECTED FOREST RETENTION AREA #1

PROTECTED FOREST RETENTION AREA #1

PROTECTED FOREST RETENTION AREA #1

FLOODPLAIN LINE ZONE "A"

NONTIDAL WETLANDS

WOODLANDS

SUBMERGED GRAVEL WETLANDS #1

SUBMERGED GRAVEL WETLANDS #2

SUBMERGED GRAVEL WETLANDS #3

FOREBAY

PROVIDE A 20' WIDE EARTH OVERFLOW WEIR WEIR ELEV. = 24.00

PROPOSED TRAILER PARKING

LOADING DOCKS

PROPOSED 256,924 sq. ft.± MANUFACTURING/WAREHOUSE BUILDING F.F. ELEV. = 33.00

SHEET C-2.09

SHEET C-2.06

SHEET C-2.07

NOTE:
SEDIMENT AND EROSION CONTROL WILL BE STRICTLY ENFORCED.

NOTE:
FOLLOWING INITIAL DISTURBANCE, PERMANENT OR TEMPORARY, STABILIZATION SHALL BE COMPLETED WITHIN 3 CALENDAR DAYS ON ALL PERIMETER CONTROLS AND SLOPES GREATER THAN 4:1 AND 7 DAYS ON ALL OTHER DISTURBED AREAS ON THE SITE.

L.O.D. – DENOTES LIMITS OF DISTURBANCE
AREA = 19.64 ACRES±

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT — DATE

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS
KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT DOCUMENT 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. 22045, EXPIRATION DATE: 9–2–25

STATE OF MARYLAND — KEVIN JAMES SHEARON — No. 22045 — PROFESSIONAL ENGINEER

OCTOBER 9, 2023
SEAL
DATE

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1–443–262–9130
FAX: 1–443–262–9148

REVISION	DATE
PER TAC COMMENTS	10–9–23
PER TAC COMMENTS	5–24–24

STORMWATER MANAGEMENT AND SEDIMENT & EROSION CONTROL PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6–1

DATE	MARCH '23
JOB No.	2021165
FOLDER Ref.	31–2021165
SCALE	1" = 30'
DRAWN BY	WJM
DESIGNED BY	KJS
SHEET No. –	C–2.08
CADD FILE –	21165C208

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DRAWING NOTES
(APPLY TO THIS DRAWING ONLY)

1. – PROVIDE SUBMERGED GRAVEL WETLANDS. SEE MATERIAL SPECIFICATIONS ON SHEET C–3.00 AND TYPICAL SECTIONS ON SHEET C–3.01.
2. – PROVIDE A 6" PVC OBSERVATION PORT/CLEANOUT PER DETAIL ON SHEET C–5.02.
3. – PROVIDE 6" PERFORATED PVC STORMDRAIN.
4. – PROVIDE STORMDRAIN PIPING.
5. – PROVIDE PERIMETER SILT FENCE PER DETAIL (E–1) ON SHEET C–5.03. TYPICAL WHERE SHOWN ——SF——.
6. – PROVIDE RIPRAP OUTLET PROTECTION PER DETAIL (D–4–1–B) ON SHEET C–5.03.

NOTE:
EXTREME CARE MUST BE TAKEN TO AVOID COMPACTION OF SOILS AND CONTAMINATION WITH SEDIMENT OR OTHER DEBRIS WITHIN AND ADJACENT TO BIORETENTION AREAS.

NOTE:
STABILIZE ALL SLOPES 3:1 OR GREATER WITH TOPSOIL, SEED AND SOIL STABILIZATION MATTING – SLOPE APPLICATION (4' min. IN WIDTH) PER DETAIL (B–4–6–D) AND SPECIFICATIONS ON SHEET C–5.03.

LEGEND

- E — E — EXISTING UNDERGROUND ELECTRIC LINE
- FO — FO — EXISTING UNDERGROUND FIBER OPTICS LINE
- EXISTING UTILITY POLE WITH OVERHEAD LINE
- FLOODPLAIN LINE
- EDGE OF EXISTING/PROPOSED TREELINE
- x 30.14 EXISTING SPOT ELEVATION
- 29x75 PROPOSED SPOT ELEVATION
- 32 EXISTING CONTOUR
- 33 PROPOSED CONTOUR
- SF PERIMETER SILT FENCE
- L.O.D. LIMITS OF DISTURBANCE
- PROPOSED RIPRAP OUTLET PAD

NOTE:
SEDIMENT AND EROSION CONTROL WILL BE STRICTLY ENFORCED.

NOTE:
FOLLOWING INITIAL DISTURBANCE, PERMANENT OR TEMPORARY, STABILIZATION SHALL BE COMPLETED WITHIN 3 CALENDAR DAYS ON ALL PERIMETER CONTROLS AND SLOPES GREATER THAN 4:1 AND 7 DAYS ON ALL OTHER DISTURBED AREAS ON THE SITE.

L.O.D. – DENOTES LIMITS OF DISTURBANCE
AREA = 19.64 ACRES±

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT — DATE

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS
KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THE DOCUMENT 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. 20045, EXPIRATION DATE: 9–2–25

STATE OF MARYLAND — KEVIN J. SHEARON — No. 20045 — PROFESSIONAL ENGINEER

OCTOBER 9, 2023
DATE

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

DATE	REVISION
10-9-23	PER TAC COMMENTS

STORMWATER MANAGEMENT AND SEDIMENT & EROSION CONTROL PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6–1

DATE	SCALE
MARCH '23	1" = 30'
JOB No.	DRAWN BY
2021165	WJM
FOLDER Ref.	DESIGNED BY
31-2021165	KJS

SHEET No. – C–2.09

CADD FILE – 211650209

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B.4.C Specifications for Micro–Bioretention

1. Materials Specifications

The allowable materials to be used in bioretention area are detailed in Table B.4.1

2. Filtering Media or Planting Soil

The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the bioretention area that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05.

The planting soil shall be tested and shall meet following criteria:

- –Soil Component – Loamy Sand or Sandy Loam (USDA Soil Textural Classification)
- –Organic Content – Minimum 10% by dry weight (ASTM D 2974). In general, this can be met with a mixture of loamy sand (60%–65%) and compost (35% to 40%) or sandy loam (30%), coarse sand (30%), and compost (40%).
- –Clay Content – Media shall have a clay content of less than 5%.
- –pH Range – Should be between 5.5 – 7.0. Amendments (e.g., lime, iron sulfate plus sulfur) may be mixed into the soil to increase or decrease pH.

There shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH, and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled topsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the topsoil was excavated.

3. Compaction

It is very important to minimize compaction of both the base of bioretention practices and the required backfill. When possible, use excavation hoes to remove original soil. If practices are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high pressure tires will cause excessive compaction resulting in reduced infiltration rates and is not acceptable. Compaction will significantly contribute to design failure.

Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to refracture the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling the optional sand layer. Pump any ponded water before preparing (rototilling) base.

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When backfilling the bioretention facility, place soil in lifts 12" to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

4. Plant Material

See Landscape Plans.

5. Plant Installation

Compost is a better organic material source, is less likely to float, and should be placed in the invert and other low areas. Mulch should be placed in surrounding to a uniform thickness of 2" to 3". Shredded or chipped hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.

Rootstock of the plant materials shall be kept moist during transport and on–site storage. The plant root ball should be planted so 1/8th of the ball is above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

Grasses and legume seed should be drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non–grass ground cover planting specifications.

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

6. Underdrains

Underdrains should meet the following criteria (See profiles for modifications to specifications below):

- –Pipe–Should be 4" to 6" diameter, slotted or perforated rigid plastic pipe (ASTMF 758, Type PS 28, or AASHTO–M–278) in a gravel layer. The preferred material is slotted, 4" rigid pipe (e.g., PVC or HDPE).
- –Perforations–If perforated pipe is used, perforations should be ⅜"diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with a ¼"(No. 4 or 4x4) galvanized hardware cloth.
- –Gravel–The gravel layer (No. 57 stone preferred) shall be at least 3" thick above and below the underdrain.
- –The main collector pipe shall be at a minimum 0.5% slope.
- –A rigid, non–perforated observation well must be provided (one per every 1,0000 square feet) to provide a clean–out port and monitor performance of the filter.
- –A 4" layer of pea gravel (1/8" to 3/8" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".

The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean–out pipes must be provided (one minimum per every 1000 square feet of surface area).

7. Miscellaneous

The bioretention facility may not be constructed until all contributing drainage area has been stabilized.

MATERIAL SPECIFICATIONS FOR MICRO–BIORETENTION.

MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTINGS	SEE LANDSCAPE PLANS	SEE PLAN	PLANTINGS ARE SITE–SPECIFIC – SEE LANDSCAPE PLAN
PLANTINGS SOILS (2' to 4' DEEP)	LOAMY SAND (60% to 65%) & COMPOST (35% to 40%) or SANDY LOAM (30%), COARSE SAND (30%) & COMPOST (40%)	N/A	USDA SOIL TYPES LOAMY SAND OR SANDY LOAM; CLAY CONTENT < 5%
ORGANIC CONTENT	Min. 10% BY DRY WEIGHT (ASTM D 2974)		
PEA GRAVEL DIAPHRAGM	PEA GRAVEL; ASTM–D–448	No. 8 or No. 9 (1/8" to 3/8")	
CURRENT DRAIN	ORNAMENTAL STONE; WASHED COBBLES	STONE: 2" to 5"	
GEOTEXTILE	SEE APPENDIX A, TABLE A.4	N/A	PE TYPE 1 NONWOVEN
GRAVEL (UNDERDRAINS AND INFILTRATION BERMS)	AASHTO M–43	No. 57 or No. 6 AGGREGATE (3/8" to 3/4")	
UNDERDRAIN PIPING	F 758, TYPE PS 28 or AASHTO M–278	4" to 6" RIGID (SCH–40) PVC or SDR–35	SLOTTED OR PERFORATED PIPE; 3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES. PERFORATED PIPE SHALL BE WRAPPED WITH 1/4" GALVANIZED HARDWARE CLOTH
POURED IN PLACE CONCRETE (IF REQUIRED)	MSHA MIX No. 3; f_c = 3500 psi @ 28 DAYS, NORMAL WEIGHT, AIR–ENTRAINED; REINFORCING TO MEET ASTM–615–60	N/A	ON–SITE TESTING OF POURED–IN–PLACE CONCRETE REQUIRED: 28 DAY STRENGTH AND SLUMP TEST; ALL CONCRETE DESIGN (CAST–IN–PLACE OR PRE–CAST) NOT USING PREVIOUSLY APPROVED STATE OR LOCAL STANDARDS REQUIRES DESIGN DRAWINGS SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND – DESIGN TO INCLUDE MEETING ACI CODE 350.R/89; VERTICAL LOADING [H–10 OR H–20]; ALLOWABLE HORIZONTAL LOADING (BASED ON SOIL PRESSURES); AND ANALYSIS OF POTENTIAL CRACKING
SAND	AASHTO M–6 or ASTM–C–33	0.02" to 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE (AASHTO) #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTION ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND

MICRO–BIORETENTION MAINTENANCE SCHEDULE

DESCRIPTION	METHOD	FREQUENCY	TIME OF THE YEAR
SOIL			
INSPECT AND REPAIR EROSION, RESEED	VISUAL	MONTHLY	MONTHLY
ORGANIC LAYER			
TOPSOIL MEDIA SHALL BE REMOVED AND REPLACED WHEN PONDING DRAWDOWN EXCEEDS 48 HOURS	VISUAL	AFTER MAJOR STORM EVENTS	WHENEVER NEEDED
PLANTS			
REMOVAL AND REPLACEMENT OF ALL DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT	SEE PLANTING SPECS.	TWICE A YEAR	3/15 to 4/30 AND 10/1 to 11/30
INSPECT FOR DISEASE/PEST PROBLEMS	VISUAL	ONCE A MONTH (AVERAGE)	INSPECT MORE FREQUENTLY IN WARMER MONTHS
DETERMINE IF TREATMENT IS WARRANTED. USE LEAST TOXIC TREATMENT APPROACH	BY HAND	N/A	VARIES, DEPENDS ON DISEASE OR INSECT INFESTATION
WATERING OF PLANT MATERIAL SHALL TAKE PLACE FOR FOURTEEN CONSECUTIVE DAYS AFTER PLANTING HAS BEEN COMPLETED UNLESS THERE IS SUFFICIENT NATURAL RAINFALL	BY HAND	IMMEDIATELY AFTER COMPLETION OF PROJECT	N/A

BIORETENTION AND SUBMERGED GRAVEL WETLANDS SYSTEM SCHEDULE

SYSTEM NUMBER	SURFACE ELEVATION	TEMPORARY PONDING DEPTH	PIPE INVERT	PLANTING SOIL THICKNESS	PEA GRAVEL THICKNESS	# 57 STONE THICKNESS
BIO #1	___.__	12"	___.__	__"	4"	__"
BIO #2	___.__	12"	___.__	__"	4"	__"
BIO #3	___.__	12"	___.__	__"	4"	__"
SGW #1	___.__	12"	___.__	__"	4"	__"
SGW #2	___.__	12"	___.__	__"	4"	__"
SGW #3	___.__	12"	___.__	__"	4"	__"
SGW #4	___.__	12"	___.__	__"	4"	__"

INSPECTION REQUIREMENTS DURING CONSTRUCTION

THE CONTRACTOR SHALL NOTIFY THE QUEEN ANNE'S COUNTY DEPARTMENT OF PUBLIC WORKS STORMWATER ENGINEER AT 410–758–0925 THREE (3) DAYS IN ADVANCE OF BEGINNING CONSTRUCTION FOR THE FOLLOWING:

FOR BIORETENTION AREAS:
- (a) DURING EXCAVATION TO SUBRADE;
- (b) DURING PLACEMENT OF BACKFILL AND PLACEMENT OF UNDERDRAIN SYSTEMS;
- (c) DURING PLACEMENT OF PEA GRAVEL AND ALL FILTER MEDIA;
- (d) DURING CONSTRUCTION OF ANY APPURTENANT CONVEYANCE SYSTEMS SUCH AS DIVERSION STRUCTURES, INLETS, OUTLETS AND FLOW DISTRIBUTION STRUCTURES;
- (e) UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION AND BEFORE ALLOWING RUNOFF TO ENTER THE BIORETETNTION AREAS.

FOR SUBMERGED GRAVEL WETLAND:
- (a) DURING EXCAVATION TO SUBGRADE
- (b) DURING PLACEMENT OF BACKFILL OF PERFORATED INLET PIPE AND OBSERVATION WELLS
- (c) DURING PLACEMENT OF GEOTEXTILES AND ALL FILTER MEDIA
- (d) DURING CONSTRUCTION OF ANY APPURTENANT CONVEYANCE SYSTEMS SUCH AS DIVERSION STRUCTURES, INLETS, OUTLETS, AND FLOW DISTRIBUTION STRUCTURES.
- (e) UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION, AND BEFORE ALLOWING RUNOFF TO ENTER THE WETLAND.
- (f) DURING FLOODING OF SUBMERGED GRAVEL WETLAND BEDS TO VERIFY GRADE AND FUNCTION.

FOR STORMDRAINS:
- (a) DURING EXCAVATION TO SUBGRADE
- (b) DURING PLACEMENT OF PIPES
- (c) DURING CONSTRUCTION OF ANY APPURTENANT CONVEYANCE SYSTEMS
- (d) DURING COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION

FINAL LOT GRADING TO ENSURE COMPLIANCE WITH ROOFTOP AND NON–ROOFTOP DISCONNECTION CREDIT CRITERIA

MAINTENANCE SCHEDULE

THE OWNER OF THE PROPERTY WILL ESTABLISH AN INSPECTION AND MAINTENANCE LOG UPON COMPLETION OF THE STORMWATER MANAGEMENT FACILITIES. THE LOG WILL BE UPDATED QUARTERLY OR AFTER ANY MAJOR STORM. THE LOG WILL BE MADE AVAILABLE FOR REVIEW UPON REQUEST BY THE QUEEN ANNE'S COUNTY DEPARTMENT OF PUBLIC WORKS INSPECTION DIVISION.

SUBMERGED GRAVEL WETLANDS:
THE FOLLOWING ITEMS SHALL BE ADDRESSED TO ENSURE PROPER MAINTENANCE AND LONG–TERM PERFORMANCE OF SUBMERGED GRAVEL WETLANDS:

INSPECTION AND MAINTENANCE:

1st YEAR POST–CONSTRUCTION:
INSPECTION FREQUENCY SHALL BE AFTER EVERY MAJOR STORM IN THE FIRST YEAR FOLLOWING CONSTRUCTION.

- INSPECT TO BE CERTAIN SYSTEM DRAINS WITHIN 24–72 hrs.(WITHIN THE DESIGN PERIOD, BUT ALSO NOT SO QUICKLY AS TO MINIMIZE STORMWATER MANAGEMENT
- WATERING PLANTS AS NECESSARY DURING THE FIRST GROWING SEASON
- RE–VEGETATING POORLY ESTABLISHED AREAS AS NECESSARY
- TREATING DISEASED VEGETATION AS NECESSARY
- QUARTERLY INSPECTION OF SOIL AND REPAIRING ERODED AREAS, ESPECIALLY ON SLOPES.
- CHECKING INLETS, OUTLETS AND OVERFLOW SPILLWAY FOR BLOCKAGE, STRUCTURAL INTEGRITY AND EVIDENCE OF EROSION & SEDIMENTATION.

POST–CONSTRUCTION:
INSPECTION FREQUENCY SHALL BE AT LEAST EVERY 6 MONTHS THEREAFTER, AS PER USEPA GOOD HOUSE–KEEPING REQUIREMENTS. INSPECTION FREQUENCY CAN BE REDUCED TO ANNUAL FOLLOWING 2 YEARS OF MONITORING THAT INDICATES THE RATE OF SEDIMENT ACCUMULATION IS LESS THAN THE CLEANING CRITERIA LISTED BELOW. INSPECTIONS SHALL FOCUS ON:

- CHECKING THE FILTER SURFACE FOR DENSE COMPLETE, ROOT MAT ESTABLISHMENT ACROSS THE WETLAND SURFACE. THOROUGH REVEGETAION WITH GRASSES, FORBS AND SHRUBS IS NECESSARY. UNLIKE BIORETENTION, WHERE MULCH IS COMMONLY USED, COMPLETE SURFACE COVERAGE WITH VEGETATION IS NEEDED.
- CHECKING THE GRAVEL WETLAND SURFACE FOR STANDING WATER OR OTHER EVIDENCE OF RISER CLOGGING, SUCH AS DISCOLORED OR ACCUMULATED SEDIMENTS.
- CHECKING THE SEDIMENTATION CHAMBER OR FOREBAY FOR SEDIMENT ACCUMULATION, TRASH AND DEBRIS.
- INSPECT TO BE CERTAIN SEDIMENTATION FOREBAY DRAINS WITHIN 24 TO 72 hrs.
- CHECKING INLETS, OUTLETS AND OVERFLOW SPILLWAY FOR BLOCKAGE, STRUCTURAL INTEGRITY AND EVIDENCE OF EROSION.
- REMOVAL OF DECAYING VEGETATION, LITTER, DEBRIS, INVASIVE SPECIES AND WOODY VEGETATION.

CLEANING CRITERIA FOR SEDIMENTATION FOREBAY:
SEDIMENT SHALL BE REMOVED FROM THE SEDIMENTATION CHAMBER (FOREBAY) WHEN IT ACCUMULATES TO A DEPTH OF MORE THAN 3 inches (30 cm) OR 10 PERCENT OF THE PRETREATMENT VOLUME. THE SEDIMENTATION FOREBAY SHALL BE CLEANED OF VEGETATION IF PERSISTENT STANDING WATER AND WETLAND VEGETATION BECOMES DOMINANT. THE CLEANING INTERVAL IS APPROXIMATELY EVERY 4 YEARS. A DRY SEDIMENTATION FOREBAY IS THE OPTIMAL CONDITION WHILE IN PRACTICE THIS CONDITION IS RARELY ACHIEVED. THE SEDIMENTATION CHAMBER, FOREBAY AND TREATMENT CELL OUTLET DEVICE SHOULD BE CLEANED WHEN DRAWDOWN TIMES EXCEED 60 TO 72 hrs. MATERIALS CAN BE REMOVED WITH HEAVY CONSTRUCTION EQUIPMENT; HOWEVER THIS EQUIPMENT SHALL NOT TRACK ON THE WETLAND SURFACE. REVEGETATION OF DISTURBED AREAS AS NECESSARY. REMOVED SEDIMENTS SHOULD BE DEWATERED (IF NECESSARY) AND DISPOSED OF IN AN ACCEPTABLE MANNER.

CLEANING CRITERIA FOR GRAVEL WETLAND TREATMENT CELLS:
SEDIMENT SHALL BE REMOVED FROM THE GRAVEL WETLAND SURFACE WHEN IT ACCUMULATES TO A DEPTH OF SEVERAL INCHES (>10 cm) ACROSS THE WETLAND SURFACE. MATERIALS SHOULD BE REMOVED WITH RAKES RATHER THAN HEAVY CONSTRUCTION EQUIPMENT TO AVOID COMPACTION OF THE GRAVEL WETLAND SURFACE. HEAVY EQUIPMENT COULD BE USED IF THE SYSTEM IS DESIGNED WITH DIMENSIONS THAT ALLOW EQUIPMENT TO BE LOCATED OUTSIDE THE GRAVEL WETLAND, WHILE A BACKHOE SHOVEL REACHES INSIDE THE GRAVEL WETLAND TO REMOVE SEDIMENT. REMOVED SEDIMENTS SHALL BE DEWATERED (IF NECESSARY) AND DISPOSED OF IN AN ACCEPTABLE MANNER.

DRAINING AND FLUSHING GRAVEL WETLAND TREATMENT CELLS:
FOR MAINTENANCE IT MAY BE NECESSARY TO DRAIN OR FLUSH THE TREATMENT CELLS. PUMP OUT WATER FROM THE SYSTEM FROM THE NYLOPLAST HYDRAULIC CONTROL STRUCTURE AND FROM OTHER YARD GRATES. FLUSHING THE RISERS AND HORIZONTAL SUBDRAINS IS THE MOST EFFECTIVE WITH THE ENTIRE SYSTEM DRAINED. FLUSHED WATER AND SEDIMENT SHALL BE COLLECTED AND PROPERLY DISPOSED.

BMP MATERIAL SPECIFICATIONS FOR SUBMERGED GRAVEL WETLANDS

MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTINGS	SEE PLAN	SEE PLAN	PLANTINGS ARE SITE–SPECIFIC – SEE LANDSCAPE PLAN FOR PLANT SPECIES
WETLAND MEDIA	LOAMY SAND COMPOST SANDY LOAM, COARSE SAND & COMPOST	N/A	USDA SOIL TYPES LOAMY SAND OR SANDY LOAM; CLAY CONTENT < 5% ORGANIC MATER CONTENT SHALL BE GREATER THAN 15% HYDRAULIC CONDUCTIVITY SHALL BE BETWEEN 0.01 AND 0.10 ft/day
PEA GRAVEL DIAPHRAGM	PEA GRAVEL; ASTM–D–448	No. 8 or No. 9 (1/8" to 3/8")	
UNDERDRAIN STONE	AASHTO M–43	No. 57 or No. 6 AGGREGATE (3/8" to 3/4")	
UNDERDRAIN PIPING	F 758, TYPE PS 28 or AASHTO M–278	4" to 6" RIGID (SCH–40) PVC or SDR–35	SLOTTED OR PERFORATED PIPE; 3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES. PERFORATED PIPE SHALL BE WRAPPED WITH 1/4" GALVANIZED HARDWARE CLOTH

ENTIRE SITE STORMWATER MANAGEMENT SUMMARY TABLE

STEP No.	REQUIREMENT	VOLUME REQ.	VOLUME PRO.	NOTES
1	WATER QUALITY (WQv)	___ ac.–ft.	___ ac.–ft.	SUBMERGED GRAVEL WETLANDS
2	RECHARGE (Rev)	___ ac.–ft.	___ ac.–ft.	SUBMERGED GRAVEL WETLANDS
3	CHANNEL PROTECTION (Cpv)	___ ac.–ft.	___ ac.–ft.	VOLUME REQUIREMENT DETERMINED AFTER ESD VOLUME CONSIDERATION
4	OVERBANK FLOOD (Qp)	___ ac.–ft.	___ ac.–ft.	2–YEAR & 10–YEAR QUANTITY MANAGEMENT
	EXTREME FLOOD (Qf)	N/A	N/A	NOT REQUIRED BY REVIEWING AUTHORITY

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THE DOCUMENT 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. 20045, EXPIRATION DATE: 9–2–25

STATE OF MARYLAND – KENNETH JOSEPH SHEARON – No. 20045 – PROFESSIONAL ENGINEER

OCTOBER 9, 2023
DATE SEAL

DATE	REVISION
10–9–23	PER TAC COMMENTS

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1–443–262–9130
FAX: 1–443–262–9148

STORMWATER MANAGEMENT SPECIFICATIONS
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6–1

DATE	MARCH '23
SCALE	AS SHOWN
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31–2021165
DESIGNED BY	KJS
SHEET No. –	C–3.00
CADD FILE –	21165C300

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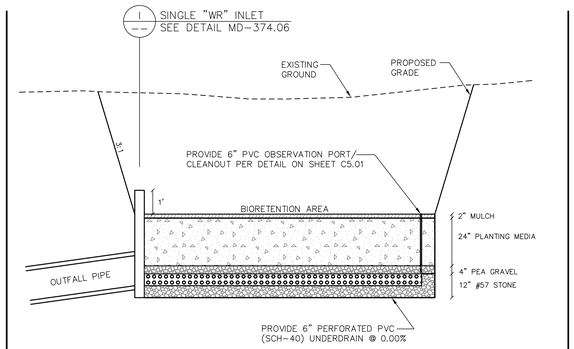
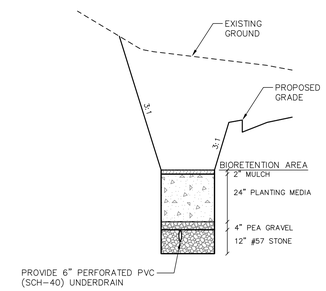


NOTE:
STABILIZE ALL SIDE SLOPES WITH TOPSOIL, SEED AND SOIL STABILIZATION MATTING – SLOPE APPLICATION

NOTE:
SEE CONSTRUCTION SPECIFICATIONS ON SHEET C-3.00

TYPICAL BIORETENTION SECTION

SCALE 1" = 30' HORIZONTAL
1" = 3' VERTICAL

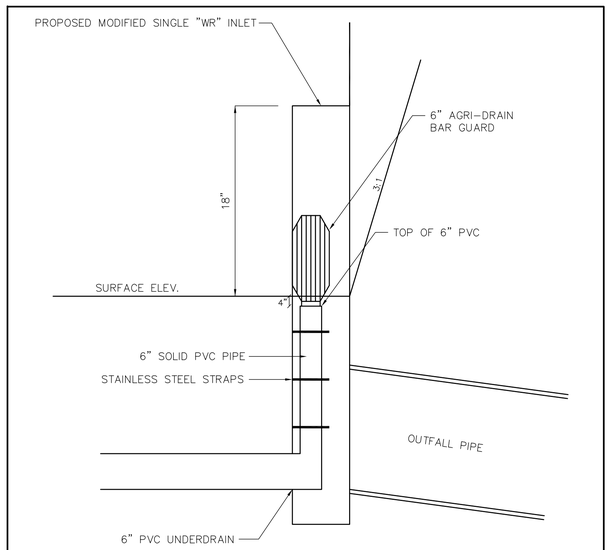


NOTE:
STABILIZE ALL SIDE SLOPES WITH TOPSOIL, SEED AND SOIL STABILIZATION MATTING – SLOPE APPLICATION

NOTE:
SEE CONSTRUCTION SPECIFICATIONS ON SHEET C-3.00

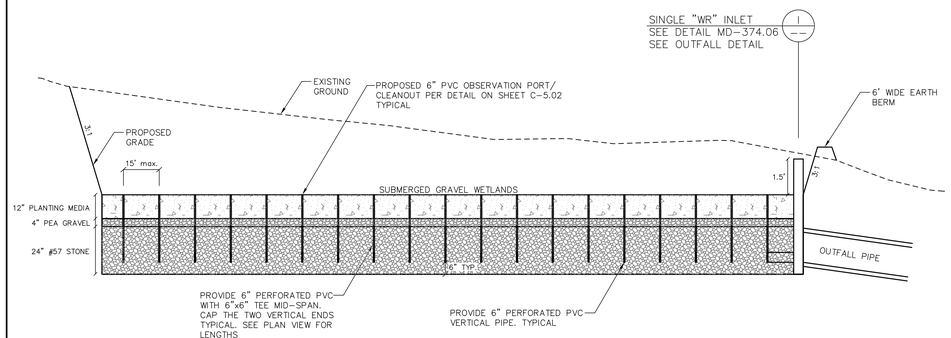
TYPICAL BIORETENTION SECTION

SCALE 1" = 30' HORIZONTAL
1" = 3' VERTICAL



SUBMERGED GRAVEL WETLANDS OUTFALL DETAIL

NOT TO SCALE

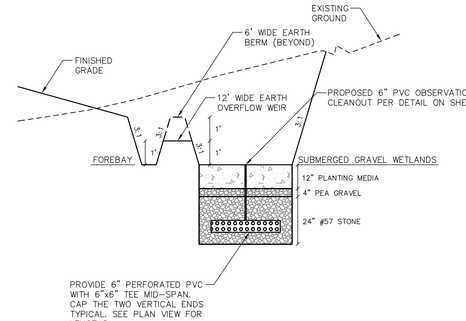


NOTE:
STABILIZE ALL SIDE SLOPES WITH TOPSOIL, SEED AND SOIL STABILIZATION MATTING – SLOPE APPLICATION

NOTE:
SEE CONSTRUCTION SPECIFICATIONS ON SHEET C-3.00

TYPICAL SUBMERGED GRAVEL WETLANDS SECTION

SCALE 1" = 30' HORIZONTAL
1" = 3' VERTICAL



NOTE:
STABILIZE ALL SIDE SLOPES WITH TOPSOIL, SEED AND SOIL STABILIZATION MATTING – SLOPE APPLICATION

NOTE:
SEE CONSTRUCTION SPECIFICATIONS ON SHEET C-3.00

TYPICAL SUBMERGED GRAVEL WETLANDS SECTION

SCALE 1" = 30' HORIZONTAL
1" = 3' VERTICAL

AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT *DATE*

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

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. 20045, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND * KEVIN W. KEARON * 20045 * REGISTERED PROFESSIONAL ENGINEER

OCTOBER 9, 2023
DATE SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

REVISION	DATE
PER TAC COMMENTS	10-9-23

TYPICAL STORMWATER MANAGEMENT SECTIONS
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

SCALE	AS SHOWN
DRAWN BY	WJM
DESIGNED BY	KJS
DATE	MARCH '23
JOB No.	2021165
FOLDER Ref.	31-2021165
SHEET No. –	C-3.01
CADD FILE –	21165C301

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LEGEND

- DEED POINT (UNLESS OTHERWISE NOTED)
- PERENNIAL STREAM
- NONTIDAL WETLANDS
- EDGE OF EXISTING WOODSLINE
- S — EXISTING SEWER LINE
- W — EXISTING WATER LINE

LANDS N/F OF
STEPHEN M. WALTERS
M.L.M. 762/359

LANDS N/F OF
EDWARD J. BREITENBACH, III et ux
M.L.M. 824/375

LANDS N/F OF
MICHAEL S. & VERONICA SHANNAHAN
M.L.M. 149/306

LANDS N/F OF
WALTER C. & ELLEN E. RUEBECK
M.L.M. 75/17

LANDS N/F OF
JOHN E. KOSTIC
M.L.M. 410/167

LANDS N/F OF
GURIT SINGH, et al & NAVNEET KAUR
M.L.M. 762/359

LANDS N/F OF
S.H.A.
M.L.M. 191/127

REMAINING PARCEL 6-1

PARCEL 6-1 LOT 1

PARCEL 6-1 LOT 2

PARCELS 2 & 3

PARCELS 4 & 5

WOODLANDS

NONTIDAL WETLANDS

MILLS BRANCH

EDGE ROAD

WEST EDGE ROAD

CHESTER RIVER

MARYLAND ROUTE 291

(BLUE STAR MEMORIAL HIGHWAY)

U.S. ROUTE 301

HOWARD JOHNSON ROAD

DUDLEY CHANCE ROAD

CHESTERVILLE BRIDGE ROAD

EXISTING 2" HDPE FORCE MAIN

EXISTING 10" PVC (C-900) WATER MAIN

PROVIDE 10" PVC (C-900) WATER MAIN

PROVIDE 2" HDPE FORCE MAIN

PROVIDE 10" PVC CAP FOR FUTURE EXTENSION

PROVIDE 2" TERMINAL FLUSHING CONNECTION

GRAPHIC SCALE
200 0 100 200 400
1 inch = 200 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THE DOCUMENT 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. 22049, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN O'HEARON — No. 22049 — PROFESSIONAL ENGINEER

DATE OCTOBER 9, 2023

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

REVISION	DATE
PER TAC COMMENTS	10-9-23
PER TAC COMMENTS	5-24-24

OVERALL UTILITY PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

DATE	MARCH '23
SCALE	1" = 200'
JOB No.	202165
DRAWN BY	WJM
FOLDER Ref.	31-202165
DESIGNED BY	KJS

SHEET No. – C-4.00

CADD FILE – 211650400

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LEGEND

- DEED POINT (UNLESS OTHERWISE NOTED)
- EXISTING GUARDRAIL
- PERENNIAL STREAM
- NONTIDAL WETLANDS
- EDGE OF EXISTING WOODSLINE
- S — EXISTING SEWER LINE
- W — EXISTING WATER LINE

LANDS N/F OF
MICHAEL S. & VERONICA SHANNAHAN
M.L.M. 149/306

LANDS N/F OF
WALTER C. & ELLEN E. RUEBECK
M.L.M. 75/17

LANDS N/F OF
JOHN E. KOSTIC
M.L.M. 410/167

LANDS N/F OF
CURIT SINGH, et al & NAVNEET KAUR
M.L.M. 762/359

LANDS N/F OF
S.H.A.
M.L.M. 191/127

EXISTING 8" WATER MAIN TO BE ABANDONED ONCE NEW 10" PVC WATER MAIN BECOMES OPERATIONAL

PROVIDE 10" PVC (C-900) WATER MAIN TO BE LOCATED A MINIMUM OF 3.5' BELOW FINISHED GRADE

PROVIDE A 10"x10" TEE AND VALVE TO CONNECT TO EXISTING 10" WATER MAIN PER DETAIL ON SHEET C-4.00

EXISTING 10" PVC (C-900) WATER MAIN

PROVIDE 2" HDPE FORCE MAIN

PROVIDE A WATERTIGHT CONNECTION BETWEEN EXISTING 2" HDPE FORCE MAIN AND NEW 2" HDPE FORCE MAIN

EXISTING 2" HDPE FORCE MAIN

NOTE:
CONTRACTOR SHALL DIRECTIONALLY DRILL NEW 10" PVC WATER MAIN UNDER MARYLAND ROUTE 291 AND THE ACCESSES ON AND OFF OF U.S. ROUTE 301

NOTE:
CONTRACTOR SHALL DIRECTIONALLY DRILL NEW 2" HDPE FORCE MAIN UNDER MARYLAND ROUTE 291 AND THE ACCESSES ON AND OFF OF U.S. ROUTE 301

PROVIDE 10" PVC (C-900) WATER MAIN TO BE LOCATED 2' FROM EDGE OF EXISTING PAVEMENT. WHERE AN EXISTING EXISTING GUARDRAIL IS LOCATED NEXT TO THE EDGE OF EXISTING PAVEMENT, THE CONTRACTOR SHALL LOCATE THE WATER MAIN WITHIN THE PAVEMENT AND PROVIDE TRENCH REPAIR AS NECESSARY PER DETAIL ON SHEET C-4.00

PROPOSED FIRE HYDRANT PER DETAIL ON SHEET C-4.00 TYPICAL WHERE SHOWN – (FH)

PROVIDE AN INLINE FLUSHING CONNECTION PER DETAIL ON SHEET C-4.00 TYPICAL WHERE SHOWN – (IFC)

PROVIDE A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN NEW 10" PVC WATER MAIN AND NEW 2" HDPE FORCE MAIN

SEE SHEET C-4.02 FOR CONTINUATION

MATCHLINE

WOODLANDS
NONTIDAL WETLANDS

EDGE ROAD
CHESTER RIVER
WEST EDGE ROAD
MARYLAND ROUTE 291
MILLS BRANCH
U.S. ROUTE 301 (BLUE STAR MEMORIAL HIGHWAY)

GRAPHIC SCALE
100 0 50 100 200
1 inch = 100 ft.

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REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT — DATE

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS
KENT COUNTY DEPARTMENT OF PLANNING AND ZONING
KENT COUNTY HEALTH DEPARTMENT
KENT SOIL AND WATER CONSERVATION DISTRICT

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THE DOCUMENT 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. 22045, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN W. SHEARON — No. 22045 — PROFESSIONAL ENGINEER

OCTOBER 9, 2023
DATE

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

DATE	REVISION
10-6-23	PER TAC COMMENTS

UTILITY PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

DATE	MARCH '23
SCALE	1" = 100'
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31-2021165
DESIGNED BY	KJS
SHEET No. –	C-4.01
CADD FILE –	21165C401

LEGEND

- DEED POINT (UNLESS OTHERWISE NOTED)
- EXISTING CONTOUR
- PERENNIAL STREAM
- NONTIDAL WETLANDS
- EDGE OF EXISTING WOODSLINE

WOODLANDS

MILLS BRANCH

NONTIDAL WETLANDS

WOODLANDS

SEE SHEET C-4.01 FOR CONTINUATION

MATCHLINE

PROPOSED 256,924 sq. ft.± MANUFACTURING/WAREHOUSE BUILDING F.F. ELEV. = 33.00

LOADING DOCKS

TRAILER PARKING SPACES

PROVIDE 6" PVC GRAVITY SEWER WITH CLEANOUT PER DETAIL ON SHEET C-4.00

PROVIDE A WATER METER PER DETAIL ON SHEET C-4.00

PROVIDE A GRINDER PUMP PER DETAIL ON SHEET C-4.00

PROVIDE A 1-1/4" HDPE FORCE MAIN

PROPOSED FIRE HYDRANT. PER DETAIL ON SHEET C-4.00 TYPICAL WHERE SHOWN - (FH)

PROVIDE 10" PVC PLUG AND WITNESS POST FOR FUTURE EXTENSION

PROVIDE 2"x1-1/4" TEE. PROVIDE 1-14" HDPE FORCE MAIN WITH PLUG AND WITNESS POST FOR FUTURE EXTENSION

PROVIDE 10"x6" TEE AND VALVE PER DETAIL ON SHEET C-4.00. PROVIDE 6" PLUG WITH WITNESS POST FOR FUTURE EXTENSION

PROVIDE 10"x6" TEE AND VALVE PER DETAIL ON SHEET C-4.00.

PROVIDE 10" PVC (C-900) WATER MAIN TO BE LOCATED A MINIMUM OF 3.5' BELOW FINISHED GRADE

PROVIDE 10" PVC (C-900) WATER MAIN TO BE LOCATED 2' FROM EDGE OF EXISTING PAVEMENT. WHERE AN EXISTING EXISTING GUARDRAIL IS LOCATED NEXT TO THE EDGE OF EXISTING PAVEMENT. THE CONTRACTOR SHALL LOCATE THE WATER MAIN WITHIN THE PAVEMENT AND PROVIDE TRENCH REPAIR AS NECESSARY. SEE DETAIL ON SHEET C-4.00

PROVIDE 2" HDPE FORCE MAIN

PROVIDE AN INLINE FLUSHING CONNECTION PER DETAIL ON SHEET C-4.00 TYPICAL WHERE SHOWN - (IFC)

PROVIDE A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN NEW 10" PVC WATER MAIN AND NEW 2" HDPE FORCE MAIN

PROVIDE 2"x1-1/4" TEE.

PROVIDE 2" TERMINAL FLUSHING CONNECTION PER DETAIL ON SHEET C-4.00

LANDS N/F OF S.H.A. M.L.M. 191/127

DUDLEY CHANCE ROAD

BRIDGE

CHESTERVILLE ROAD

U.S. ROUTE 301 (BLUE STAR MEMORIAL HIGHWAY)

HOWARD JOHNSON ROAD

PARCELS 4 & 5

PARCELS 2 & 3

GRAPHIC SCALE

100 0 50 100 200

1 inch = 100 ft.

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CONCRETE MONUMENT COORDINATE TABLE

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
(1)	CONC. MONUMENT SET	587604.1651	1633543.0798	---'---
(2)	CONC. MONUMENT SET	587234.9796	1633519.5611	---'---
(3)	CONC. MONUMENT SET	586883.3676	1633645.3015	---'---
(4)	CONC. MONUMENT SET	586117.8198	1633906.9826	---'---
(5)	CONC. MONUMENT SET	585915.5964	1633909.5034	---'---
(6)	CONC. MONUMENT SET	585573.6069	1633827.2280	---'---

CONSTRUCTION STAKEOUT COORDINATE TABLE

POINT #	DESCRIPTION	NORTHING	EASTING
(7)	Sta. 717+50.00	585564.0979	1633896.5808
(831)	Sta. 722+00.00	586009.9169	1633957.7808
(832)	PC = Sta. 724+81.23	586288.5363	1633996.0283
(842)	PT = Sta. 728+43.34	586635.5227	1633921.6755
(833)	Sta. 732+00.00	586937.9701	1633732.6466
(834)	PC = Sta. 733+76.28	587087.4513	1633639.2212
(835)	PT = Sta. 737+75.54	587471.0390	1633571.2311
(836)	INT = Sta. 739+83.65	587674.6744	1633614.1541

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ *DATE* _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE 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. 22045, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND KEVIN W. MCCARTHY 22045 PROFESSIONAL ENGINEER

NOVEMBER 15, 2023

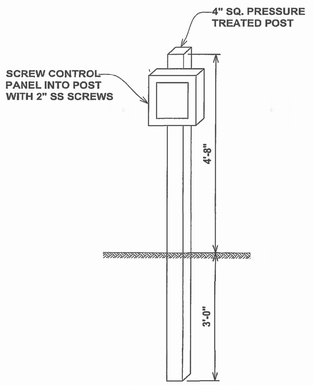
DATE SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

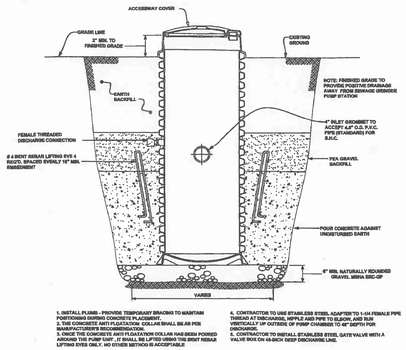
REVISION	DATE
PER TAC COMMENTS	10-9-23
PER MDOT COMMENTS	11-15-23
PER TAC COMMENTS	5-24-24

UTILITY PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP - 31, GRID - 1E, PARCEL - 6-1

SCALE	1" = 100'
DRAWN BY	WJM
DESIGNED BY	KJS
DATE	MARCH '23
JOB No.	2021165
FOLDER Ref.	31-2021165
SHEET No. -	C-4.02
CADD FILE -	21165C402

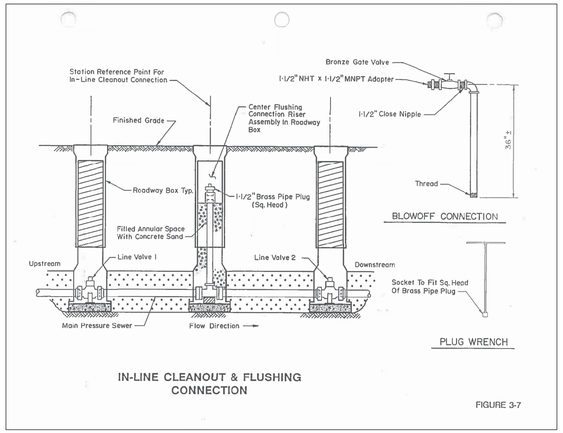


GRINDER PUMP MOUNTING DETAIL
NOT TO SCALE



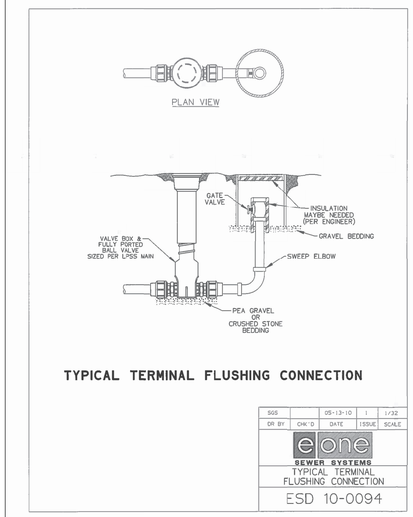
1. INSTALL PLUMB - PROVIDE TEMPORARY BRACING TO MAINTAIN POSITIONING DURING CONCRETE PLACEMENT.
2. THE CONCRETE ANTI FLOTATION COLLAR SHALL BE AS PER MANUFACTURERS RECOMMENDATIONS.
3. ONCE THE CONCRETE ANTI FLOTATION COLLAR HAS BEEN POURED AROUND THE PUMP UNIT, IT SHALL BE LIFTED USING THE BENT REBAR LIFTING EYES ONLY. NO OTHER METHOD IS ACCEPTABLE
4. CONTRACTOR TO USE STAINLESS STEEL ADAPTER TO 1-1/4 FEMALE PIPE THREAD AT DISCHARGE, NIPPLE AND PIPE TO ELBOW, AND RUN PIPE TO TOP OF OUTSIDE OF PUMP CHAMBER TO 42" DEPTH FOR VENTILATION.
5. CONTRACTOR TO INSTALL STAINLESS STEEL GATE VALVE WITH A VALVE BOX ON 45 INCH DEEP DISCHARGE LINE.

SEWAGE GRINDER PUMP UNIT INSTALLATION



IN-LINE CLEANOUT & FLUSHING CONNECTION

FIGURE 3-7



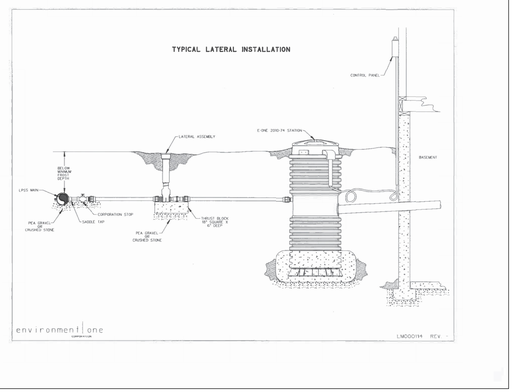
TYPICAL TERMINAL FLUSHING CONNECTION

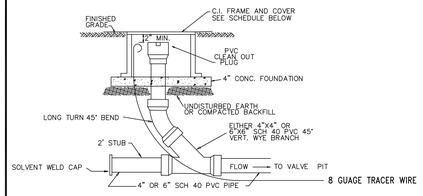
SGS		05-13-10	1	1/32
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

TYPICAL TERMINAL FLUSHING CONNECTION

ESD 10-0094





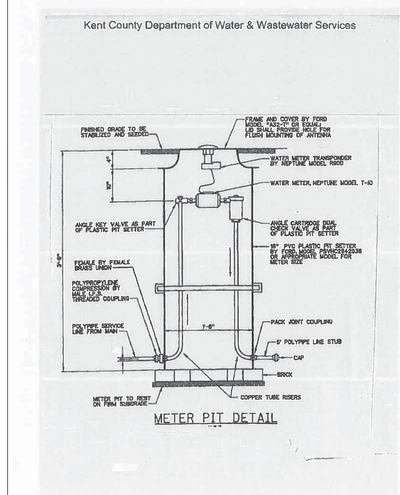
Right of Way and Traffic Bearing Areas

FRAME AND COVER REQUIRED	
PIPE SIZE	CASTING #
4"	BC UTILITIES A-1100-N
6"	BC UTILITIES B-1160
8"	BC UTILITIES B-1181

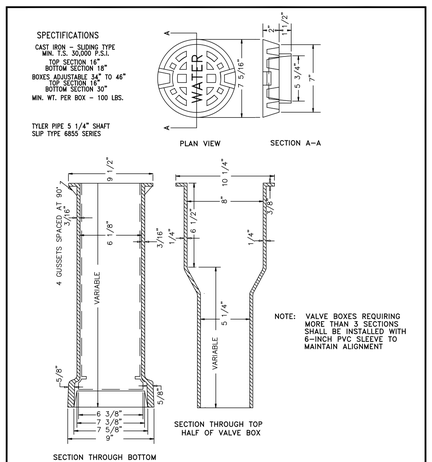
Notes:
1. Right of Way clean outs are also necessary at the edge of any easements.
2. Traffic Bearing Areas are defined as being in, or within 3 feet of, any paving, driveways, or any other area where vehicular traffic is likely.
3. Tracer wire to be uncoated copper.

DATE	REVISION
SCALE NTS	
DRAWN BY	
APPROVED BY	
FILE dt-gs-co	

Gravity Sewer Cleanouts

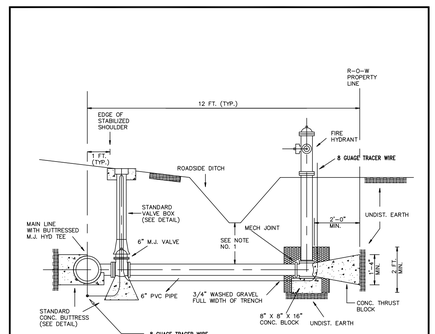


METER PIT DETAIL



DATE	REVISION
SCALE NTS	
DRAWN BY	
APPROVED BY	
FILE dt-wtr-vbox5	

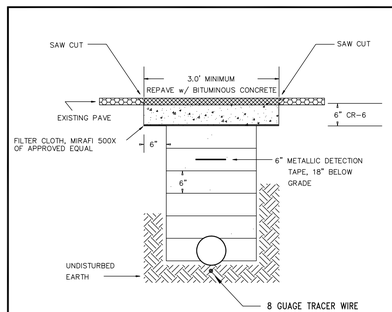
Water Valve Box and Cover



NOTES:
1. MAINTAIN 3.5 FOOT OF COVER THROUGH ROADSIDE DITCH. IF UNABLE TO MAINTAIN ADEQUATE COVER, ROTATE THE MECHANICAL JOINT HYDRANT TEE AND UTILIZE APPROPRIATE FITTINGS. AS A LAST RESORT, ENCASE THE 6 INCH SERVICE LINE WITH CONCRETE IF COVER IS INADEQUATE.
2. TRACER WIRE TO BE UNCOATED COPPER.

DATE	REVISION
SCALE NTS	
DRAWN BY	
APPROVED BY	
FILE dt-wtr-hydrant	

Water Fire Hydrant Setting



NOTES:
1. CONTRACTOR IS TO MAINTAIN CR-6 IN TRENCH TO COUNTY SATISFACTION THROUGHOUT LENGTH OF CONTRACT OR UNTIL PERMANENTLY PAVED.
2. BACKFILL TO BE SELECT MATERIAL, OR IF DIRECTED BY COUNTY, NATIVE MATERIAL.
3. BACKFILL TO BE PLACED IN 6 INCH LIFTS WITH EACH LIFT COMPACTED TO AT LEAST 90%.
4. BACKFILL TO BE WELL TAMPED TO SPRINGLINE OF PIPE.
5. PAVEMENT TO BE BITUMINOUS CONCRETE IN ACCORDANCE WITH COUNTY ROADS SPECS FOR COMMERCIAL STREETS.
6. FINISH TRENCH GRADE SHALL MATCH EXISTING CROSS SLOPE.
7. PROVIDE AN UNCOATED, 8 GAUGE COPPER WIRE BENEATH ALL PVC, HDPE, & PE PIPE.

DATE	REVISION
SCALE NTS	
DRAWN BY	
APPROVED BY	
FILE dt-gn-trench3	

Roadway Trench Repair Permanent Bituminous Concrete

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

KENT SOIL AND WATER CONSERVATION DISTRICT

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE 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. 20045 EXPIRATION DATE: 9-2-25

STATE OF MARYLAND * TIMOTHY MARK HEARON * 20045 * REGISTERED PROFESSIONAL ENGINEER

OCTOBER 9, 2023
DATE SEAL

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT — DATE

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN, ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

DATE	REVISION
10-9-23	PER TAC COMMENTS

UTILITY DETAILS
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP - 31, GRID - 1E, PARCEL - 6-1

DATE	MARCH '23
SCALE	AS SHOWN
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31-2021165
DESIGNED BY	KJS
SHEET No. -	C-5.00
CADD FILE -	21165C500

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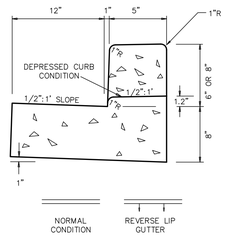


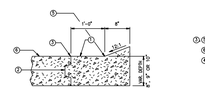
NOTES:

1. ALL STRAIGHT CURB AND GUTTER SHALL BE SHA MIX NO. 2, 3,500 PSI – 28 DAY COMPRESSION STRENGTH.
2. PROVIDE REVERSE LIP GUTTER PAN TO MATCH ADJACENT PAVEMENT WHERE WATER FLOWS AWAY FROM CURB AND WHERE CALLED FOR ON CONSTRUCTION DRAWINGS.
3. CURB HEIGHT SHALL BE ADJUSTED AND SET OUT ON CONSTRUCTION DRAWINGS. MINIMUM HORIZONTAL TRANSITION FROM 6" TO 8" HEIGHT IS 10'.
4. ALL METHODS OF CONSTRUCTION AND LOCATIONS OF CONSTRUCTION OR CONTRACTION JOINTS SHALL BE CONSISTENT WITH THE MDOT/SHA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, 2001 EDITION.

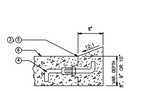
SCALE: NO SCALE
REVISIONS:

6" CURB & GUTTER DETAIL

STANDARD NO. RD-103.02



DEPRESSED CURB FOR COMBINATION CONCRETE CURB & GUTTER FOR SIDEWALK RAMPS



DEPRESSED CONCRETE CURB FOR SIDEWALK RAMPS

① SLOPE GUTTER PAN 8" PER FOOT TOWARD FLOW LINE ON ALL ROADWAYS INCLUDING SUPERELEVATED SECTIONS, EXCEPT INTERCHANGE RAMPS.
② PROVIDE KEY AND LONGITUDINAL TIE BAR AS REQUIRED; SEE NOTE A
③ ROADWAY PAVEMENT CONSTRUCTION JOINT
④ LONGITUDINAL TIE DEVICE "J" BAR MODIFIED
⑤ FLOW LINE
⑥ ROADWAY PAVEMENT SLOPE

NOTES

A. RIGID PAVEMENT ROADWAY ADJACENT TO COMBINATION CURB AND GUTTER AND CLOSED SECTION ROADWAY USING RIGID PAVEMENT WITH COMBINATION CURB AND GUTTER SHALL BE KEYED AND TIED AT THE ROADWAY PAVEMENT CONSTRUCTION JOINT. REFER TO STANDARD MD 570.01 FOR METHOD OF KEYWAY AND LONGITUDINAL TIE DEVICES. SPACING OF THE TIE BARS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. RIGID PAVEMENT AND CURB SHALL BE CONSTRUCTED AS MONOLITHIC. TIE DEVICES AND KEYS ARE NOT REQUIRED WHEN USING FLEXIBLE PAVEMENT FOR ROADWAY.
B. MAXIMUM JOINT SPACING FOR CONCRETE CURB AND COMBINATION CURB & GUTTER IS 10'. SEE SPECIFICATION FOR LOCATIONS AND DESCRIPTION OF TREATMENT FOR THE TYPES OF JOINTS USED.
C. PAYMENT FOR DEPRESSING THE CURB WILL BE INCIDENTAL TO THE CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR THE ITEM CONCRETE CURB OR COMBINATION CONCRETE CURB AND GUTTER, AS SPECIFIED IN THE CONTRACT DOCUMENTS.

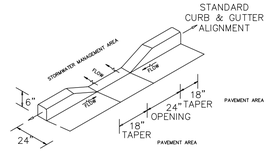
SPECIFICATION 602	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

	APPROVAL + SHA REVISIONS	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	2-10-04	APPROVAL 3-31-04
REVISED	4-15-09	REVISED 4-1-06
REVISED	6-21-16	REVISED 5-20-16
REVISED		REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

DEPRESSED CONCRETE CURB AND COMBINATION DEPRESSED CONCRETE CURB & GUTTER FOR SIDEWALK RAMPS

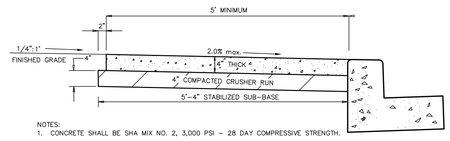
STANDARD NO. MD-620.03



CURB DEPRESSION OPENING TO BE CONSTRUCTED WITHIN ALIGNMENT OF STANDARD CURB & GUTTER

STANDARD 2' CURB DEPRESSION OPENING

NOT TO SCALE



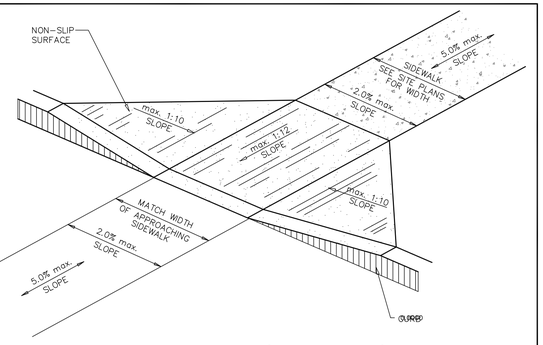
NOTES:

1. CONCRETE SHALL BE SHA MIX NO. 2, 3,000 PSI – 28 DAY COMPRESSIVE STRENGTH.
2. STABILIZED SUB-BASE SHALL BE 4 INCHES MINIMUM COMPACTED CR-6 (OR APPROVED EQUAL) PLACED AND COMPACTED ON APPROVED SUBGRADE TO 95% OF THE MODIFIED PROCTOR DENSITY FOR THE MATERIAL
3. ALL AREAS WITHIN THE RIGHT-OF-WAY AND EASEMENTS SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE TO ROADWAY DRAINAGE SYSTEMS AND STABILIZED WITH A MINIMUM OF 4 INCHES OF TOPSOIL, SEEDED AND MULCHED PER NRCS SPECIFICATIONS.
4. SIDEWALKS TO BE MAINTAINED BY PROPERTY OWNER.
5. ALL METHODS OF CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE TOWN OF CHESTERTOWN STANDARDS AND A.D.A. REQUIREMENTS. ALL MATERIAL SPECIFICATIONS SHALL COMPLY WITH THE 2001 EDITION OF THE MARYLAND STATE HIGHWAY ADMINISTRATION'S "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS" MANUAL AND ANY ADDENDUM THERETO.
6. MAXIMUM CROSS SLOPE = 2.0% MAXIMUM RUNNING SLOPE = 5.0%

SCALE: NO SCALE
REVISIONS:

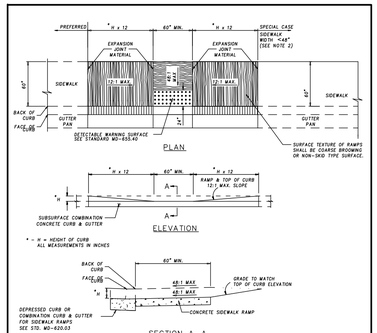
SIDEWALK

STANDARD NO. RD-104.01



ADA SIDEWALK RAMP (PERPENDICULAR)

NOT TO SCALE



NOTES

1. TO BE USED WHERE SIDEWALK IS ADJACENT TO THE CURB. THIS STANDARD MAY BE MODIFIED TO SUIT A PARTICULAR LOCATION.
2. WHERE 60" SIDEWALK CAN NOT BE PROVIDED, A DESIGN WAIVER MUST BE REQUESTED.
3. NO TRAVERSABLE SLOPE ON THE RAMP OR SIDEWALK SHALL EXCEED 12:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL, OR 48:1 PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL. THE CROSS-SLOPE OF THE LANDING AREA CANNOT EXCEED GRADE 48:1 MAX.
4. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STD. MD-655.01.
5. SIDEWALK RAMPS TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE RAMP ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED RAMP VARIES FROM STANDARD CASES.
6. TRANSITION PANELS TO TIE INTO EXISTING SIDEWALK MUST BE A MINIMUM OF 5' IN LENGTH

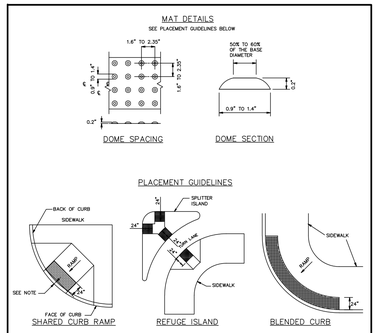
SPECIFICATION 603 & 611	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

	APPROVAL + SHA REVISIONS	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	2-10-04	APPROVAL 3-31-04
REVISED	2-15-08	REVISED 4-1-08
REVISED	6-21-16	REVISED 5-20-16
REVISED		REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

SIDEWALK RAMPS PARALLEL

STANDARD NO. MD-655.12



WHERE ISLANDS OR MEDIANS ARE LESS THAN 6 FEET WIDE, THE DETECTABLE WARNING SHOULD EXTEND ACROSS THE FULL LENGTH OF THE CUT THROUGH THE ISLAND OR MEDIAN

NOTES

1. THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 TO 8 INCHES FROM THE FACE OF CURB.
2. FOR SKEWED APPLICATIONS DETECTABLE WARNING SHALL BE PLACED SUCH THAT THE DOMES CLOSEST TO THE BACK OF CURB ARE NO LESS THAN 6" AND NO MORE THAN 3.0" FROM THE BACK OF CURB. TRUNCATED DOME SURFACES SHALL BE CONSTRUCTED SO THAT FULL DOMES ONLY.
3. DETECTABLE WARNING SURFACE SHALL BE PAID FOR IN ACCORDANCE WITH SECTION 611 OF THE SPECIFICATIONS.
4. DETECTABLE WARNING SURFACES ARE REQUIRED AT STREET CROSSING & SIGNALIZED INTERSECTIONS.

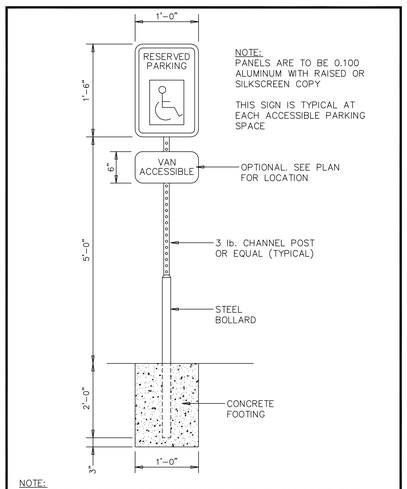
SPECIFICATION 602	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

	APPROVAL + SHA REVISIONS	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	2-10-04	APPROVAL 3-31-04
REVISED	2-15-08	REVISED 4-1-06
REVISED		REVISED
REVISED		REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

DETECTABLE WARNING SURFACE

STANDARD NO. MD-655.40



NOTE:
PANELS ARE TO BE 0.100 ALUMINUM WITH RAISED OR SILKSCREEN COPY

THIS SIGN IS TYPICAL AT EACH ACCESSIBLE PARKING SPACE

NOTE:
SIGN SHALL BE INSTALLED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT, ACCESSIBILITY FOR BUILDINGS AND FACILITIES, AS AMENDED

TYPICAL H/C ACCESSIBLE PARKING SIGN

NOT TO SCALE

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE DOCUMENT 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. 22045 EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN W. MOORE — 22045 — REGISTERED PROFESSIONAL ENGINEER

DATE: OCTOBER 9, 2023

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE : 1-443-282-9130
FAX : 1-443-282-9148

DATE	REVISION
10-9-23	PER TAC COMMENTS

SITE DETAILS
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

DATE	MARCH '23
JOB No.	202165
FOLDER Ref.	31-202165
SCALE	AS SHOWN
DRAWN BY	WJM
DESIGNED BY	KJS

SHEET No. – C-5.01

CADD FILE – 211165C501

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

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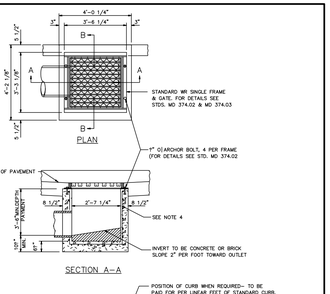


GENERAL NOTES

1. CONCRETE TO BE MIX NO. 3 (3,000 PSI).
2. SIZE, TYPE, AND DIRECTION OF INLET CONNECTION WILL VARY TO SUIT CONDITIONS.
3. SEE SHA LATEST SPECIFICATIONS FOR INLETS.
4. WALL REINFORCEMENT SHALL BE ONE LAYER OF NO.4 DEFORMED BARS @ 6" C/C, TWO WAYS, AND HAVE 3.5" COVER FROM INSIDE WALL.
5. BASE REINFORCEMENT SHALL BE ONE LAYER OF NO.4 DEFORMED BARS @ 6" C/C , TWO WAYS, WITH 2" COVER FROM TOP OF BASE.
6. FLAGE 1/4" EXPANSION MATERIAL OF THE SAME TYPE AND THICKNESS AS USED BETWEEN THE FRAME AND ABUTTING ROAD PAVEMENT, AND BETWEEN ENDS OF INLET CURB AND NORMAL CURB.
7. BRICK FOR MASONRY TO COMPLY WITH THE SHA SPECIFICATION.
8. FOR UNDEPRESSED INLETS USE NORMAL PAVEMENT SLOPE.
9. LADDER RUNGS SHALL BE IN ACCORDANCE WITH STD MD 383.91 AND MD 383.92 OR AS DIRECTED BY THE ENGINEER.
10. FROM THE CURB LINE, INLET HAS BEEN DESIGNED FOR HS-25 LOADING ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND FOR A MAXIMUM DEPTH OF 15'-0".

SPECIFICATION	CATEGORY CODE ITEMS
305	

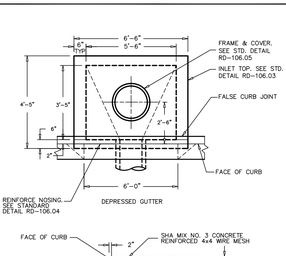
APPROVED — DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

	APPROVAL + SHA REVIEW	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	5-15-75	5-22-75
REVISED	10-1-01	5-24-06
REVISED	10-7-14	3-29-16
REVISED		

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

SINGLE WR INLET

STANDARD NO. MD-374.06



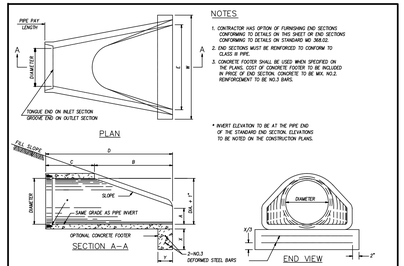
NOTES:

1. CHANNEL SHALL BE BRICK OR HAND FORMED CONCRETE MIN. THICKNESS OF 4". SLOPE SIDES TO PIPE INVERT. MORTAR SHALL BE "TYPE S".
2. PROVIDE LIFT HOOKS IN UNEXPOSED SURFACES TO ACCOMMODATE FIELD PLACEMENT.

SCALE:	
NO SCALE	
REVISIONS:	

STANDARD CURB INLET

STANDARD NO. RD-106.01



NOTES

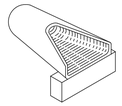
1. CONTRACTOR HAS OPTION OF FURNISHING END SECTIONS CONFORMING TO DETAILS ON THIS SHEET OR END SECTIONS CONFORMING TO DETAILS ON STANDARD NO 368.02
2. END SECTIONS MUST BE REINFORCED TO CONFORM TO CLASS III PIPE.
3. CONCRETE FOOTER SHALL BE USED WHEN SPECIFIED ON THE PLANS. COST OF CONCRETE FOOTER TO BE INCLUDED IN PRICE OF END SECTION. CONCRETE TO BE MIX. NO.2. REINFORCEMENT TO BE NO.3 BARS.

* INVERT ELEVATION TO BE AT THE PIPE END OF THE STANDARD END SECTION. ELEVATIONS TO BE NOTED ON THE CONSTRUCTION PLANS.

QUANTITIES FOR ESTIMATING PURPOSES ONLY

DIMENSIONS										QUANTITIES	
CONCRETE END SECTION						CONCRETE FOOTER					
DIA.	SLOPE	A	B	C	D	E	W	X	Y	CONC. C.Y.	STEEL LBS.
12"	3:1	4"	2'-0"	4'-0⅝"	6'-0⅝"	2'-0"	3'-0"	12"	9"	0.08	24.00
15"	3:1	6⅜"	2'-4"	3'-10"	6'-2"	2'-4"	3'-4"	12"	9"	0.10	28.50
18"	3:1	10⅜"	2'-2"	4'-0"	6'-2"	3'-0"	4'-0"	12"	9"	0.11	33.00
21"	3:1	8"	3'-0"	3'-9⅜"	6'-10⅜"	3'-4"	4'-4"	12"	9"	0.13	37.50
24"	3:1	11"	3'-7"	3'-6"	6'-3"	4'-0"	5'-0"	13"	9"	0.17	42.00
27"	3:1	10⅜"	4'-10⅜"	3'-0"	6'-10⅜"	4'-6"	5'-6"	13"	9"	0.19	46.50
30"	3:1	1'-1"	4'-5"	1'-10"	6'-3"	5'-0"	6'-0"	13"	9"	0.21	51.00
33"	3:1	1'-2"	4'-7"	2'-2"	6'-3"	5'-6"	6'-6"	13"	9"	0.23	55.50
36"	3:1	1'-1⅜"	5'-3"	2'-1"	6'-10⅜"	6'-0"	7'-0"	13"	9"	0.25	62.25
42"	3:1	1'-1⅜"	5'-3"	2'-10"	6'-3"	6'-6"	7'-9"	13"	9"	0.27	66.75
48"	3:1	2'-1"	6'-0"	2'-2"	6'-3"	7'-0"	8'-6"	18"	12"	0.47	73.50
54"	2.4:1	2'-3"	5'-2"	2'-10"	6'-3"	7'-6"	9'-0"	18"	12"	0.50	78.00
60"	2:1	2'-7"	4'-11"	3'-8⅜"	6'-1⅜"	8'-0"	9'-6"	18"	12"	0.53	82.50
66"	2:1	2'-4"	6'-6"	1'-9"	6'-3"	8'-6"	10'-0"	18"	12"	0.56	87.00
72"	2:1	2'-10"	6'-6"	1'-9"	6'-3"	9'-0"	10'-9"	18"	12"	0.60	93.75

SEE NOTE 3 ABOVE FOR CONCRETE FOOTER



ISOMETRIC VIEW

SPECIFICATION	CATEGORY CODE ITEMS
305	

APPROVED — DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

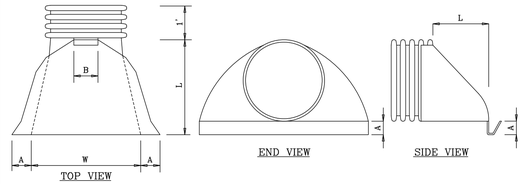
	APPROVAL + SHA REVIEW	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	5-15-06	5-22-06
REVISED	7-11-06	5-25-06
REVISED	7-11-08	11-27-09
REVISED		

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE

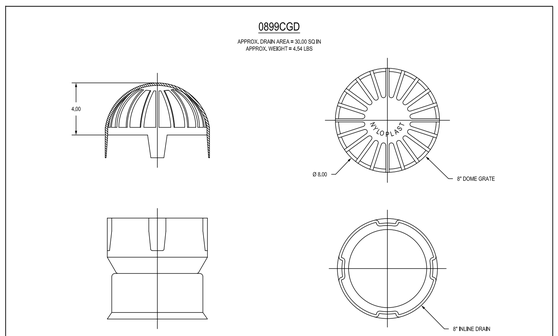
STANDARD NO. MD-368.01

ADS END SECTION DIMENSIONS



PART No.	PIPE SIZE	A	B	H	L	W
1210NP	12" & 15"	6.5"	10"	6.5"	25"	29"
1810NP	18"	7.5"	15"	6.5"	32"	35"
2410NP	24"	7.5"	18"	6.5"	36"	45"
3010NP	30"	10.5"	N/A	7.0"	53"	68"
3610NP	36"	10.5"	N/A	7.0"	53"	68"

ADS



ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE
GRATE HAS A LIGHT DUTY RATING
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-228

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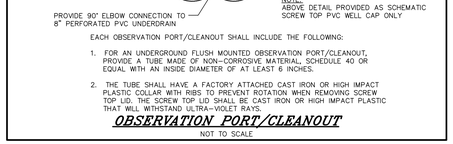
DRAWN BY	EBC	MATERIAL	DUCTILE IRON
DATE	3-3-06		
APPD BY	CJA	PROJECT NO./NAME	
DATE	3-3-06		
DWG SIZE	A	SCALE 1:4	SHEET 1 OF 1

Nyloplast
3126 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2442
FAX (770) 932-2490
www.nyloplastinc.com

TITLE: 8 IN DOME GRATE ASSEMBLY

DWG NO. 7001-110-197 REV A



NOTE:
ABOVE DETAIL PROVIDED AS SCHEMATIC SCREW TOP PVC WELL CAP ONLY

EACH OBSERVATION PORT/CLEANOUT SHALL INCLUDE THE FOLLOWING:

1. FOR AN UNDERGROUND FLUSH MOUNTED OBSERVATION PORT/CLEANOUT, PROVIDE A TUBE MADE OF NON-CORROSIVE MATERIAL, SCHEDULE 40 OR EQUAL WITH AN INSIDE DIAMETER OF AT LEAST 6 INCHES.
2. THE TUBE SHALL HAVE A FACTORY ATTACHED CAST IRON OR HIGH IMPACT PLASTIC COLLAR WITH RIBS TO PREVENT ROTATION WHEN REMOVING SCREW TOP LID. THE SCREW TOP LID SHALL BE CAST IRON OR HIGH IMPACT PLASTIC THAT WILL WITHSTAND ULTRA-VIOLET RAYS.

OBSERVATION PORT/CLEANOUT
NOT TO SCALE

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

KENT SOIL AND WATER CONSERVATION DISTRICT

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THE DOCUMENT 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. 20045 EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN W. MOORE — 20045 — REGISTERED PROFESSIONAL ENGINEER

DATE OCTOBER 9, 2023

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE : 1-443-262-9130
FAX : 1-443-262-9148

DATE	REVISION
10-9-23	PER TAC COMMENTS

DATE MARCH '23
JOB No. 2021165
FOLDER Ref. 31-2021165
SCALE AS SHOWN
DRAWN BY W.M
DESIGNED BY K.S

STORMWATER MANAGEMENT DETAILS
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

SHEET No. – C-5.02

CADD FILE – 21165C502

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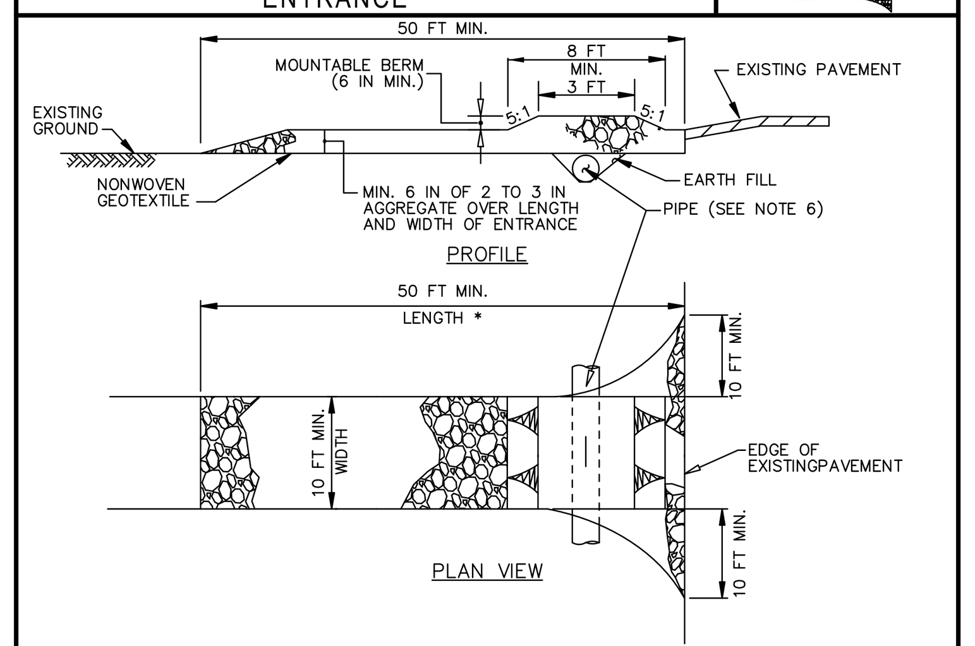
DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

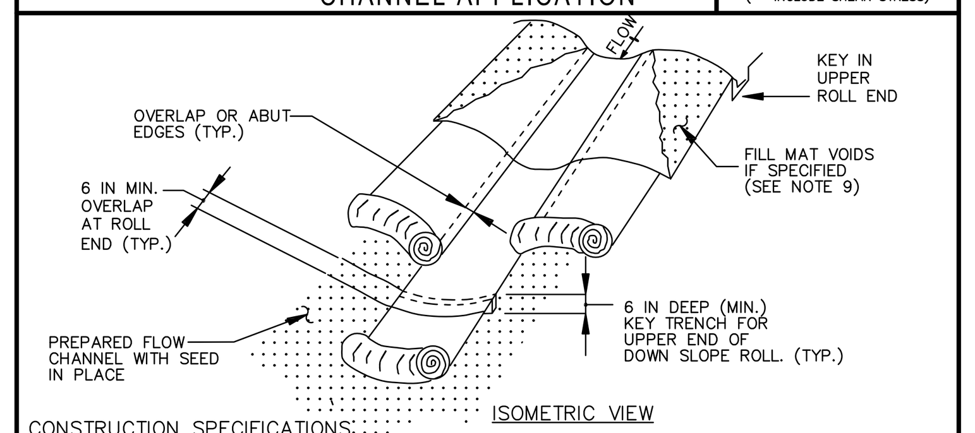
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING 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 B-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL: PSSMC – * lb/ft² (* INCLUDE SHEAR STRESS)



CONSTRUCTION SPECIFICATIONS

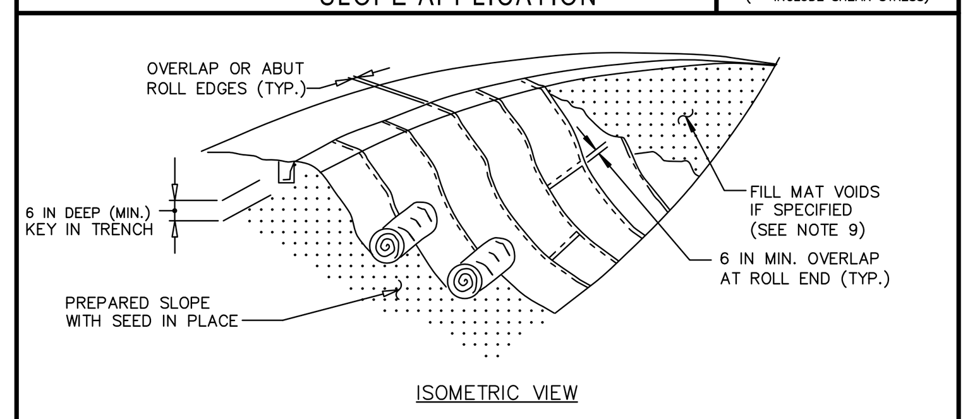
1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON–DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON–LEACHING AND NON–TOXIC TO VEGETATION AND SEED GERMINATION AND NON–INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 ½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH–SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B–4 VEGETATIVE STABILIZATION.

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-4-6-D PERMANENT SOIL STABILIZATION MATTING SLOPE APPLICATION

STANDARD SYMBOL: PSSMS – * lb/ft² (* INCLUDE SHEAR STRESS)



CONSTRUCTION SPECIFICATIONS

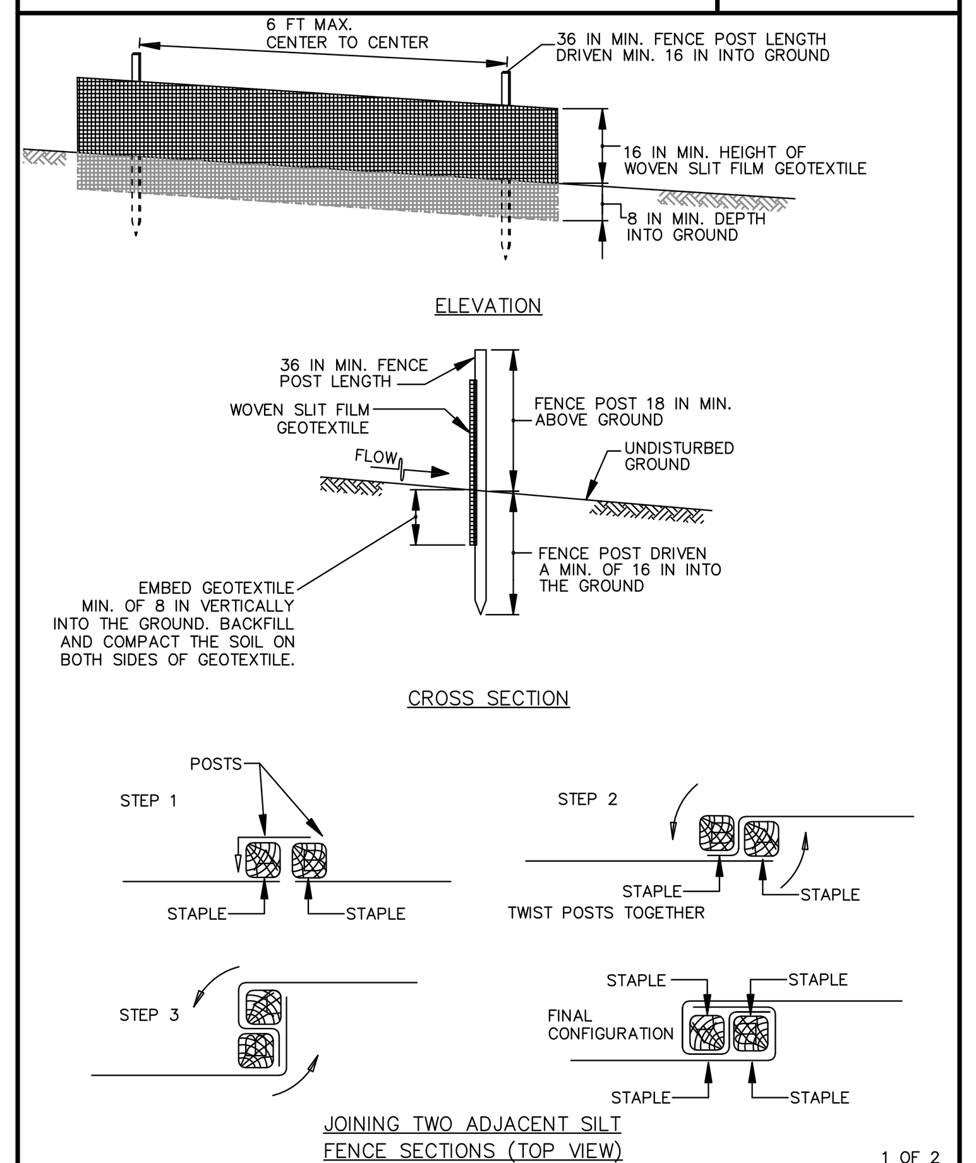
1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON–DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON–LEACHING AND NON–TOXIC TO VEGETATION AND SEED GERMINATION AND NON–INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH–SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING DOWN SLOPE. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B–4 VEGETATIVE STABILIZATION.

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-1 SILT FENCE

STANDARD SYMBOL: SF



1 OF 2

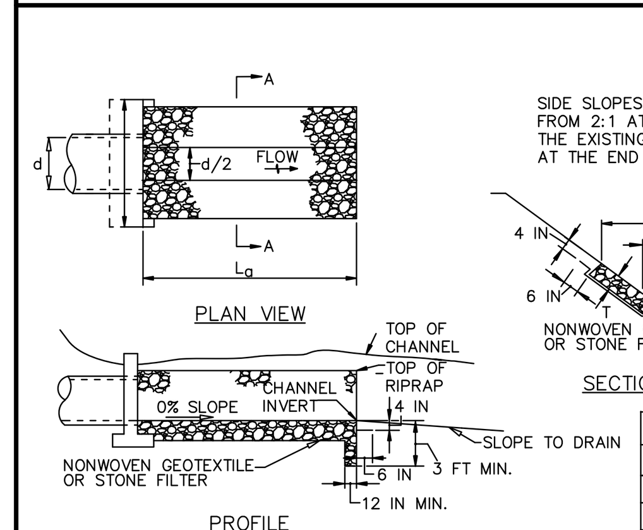
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL D-4-1-B ROCK OUTLET PROTECTION II

STANDARD SYMBOL: ROPII

DISCHARGE TO CONFINED CHANNEL SECTION



RIPRAP	
CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

CONSTRUCTION SPECIFICATIONS

1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (⅜ TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

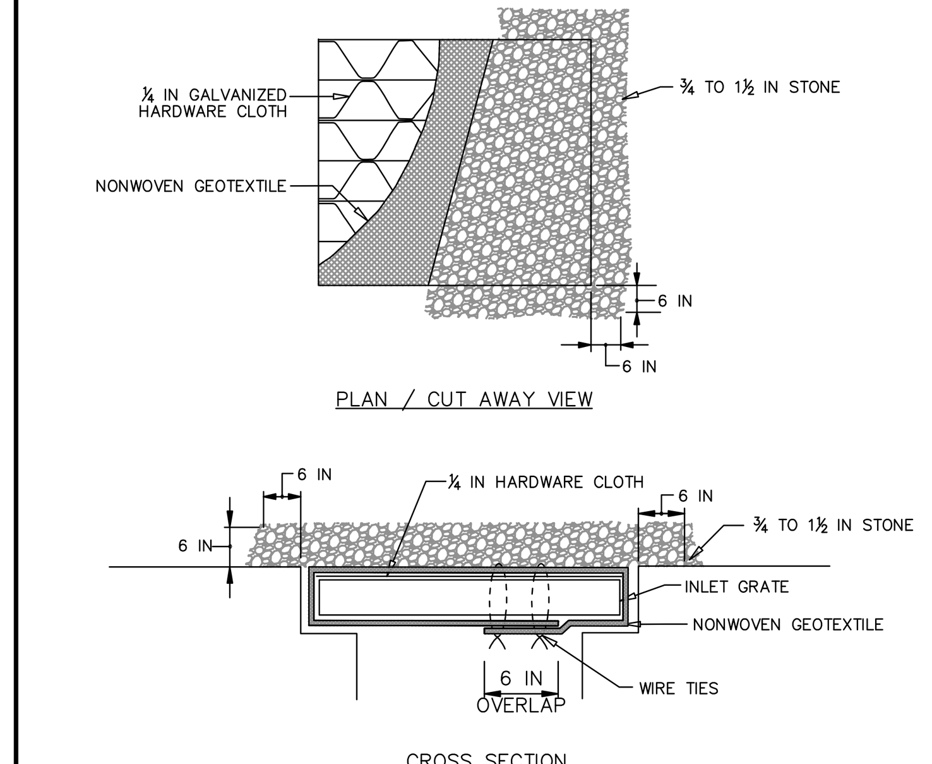
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-2 AT-GRADE INLET PROTECTION

STANDARD SYMBOL: AGIP

MAXIMUM DRAINAGE AREA = 1 ACRE



CONSTRUCTION SPECIFICATIONS

1. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS.
2. LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
3. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
4. 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.

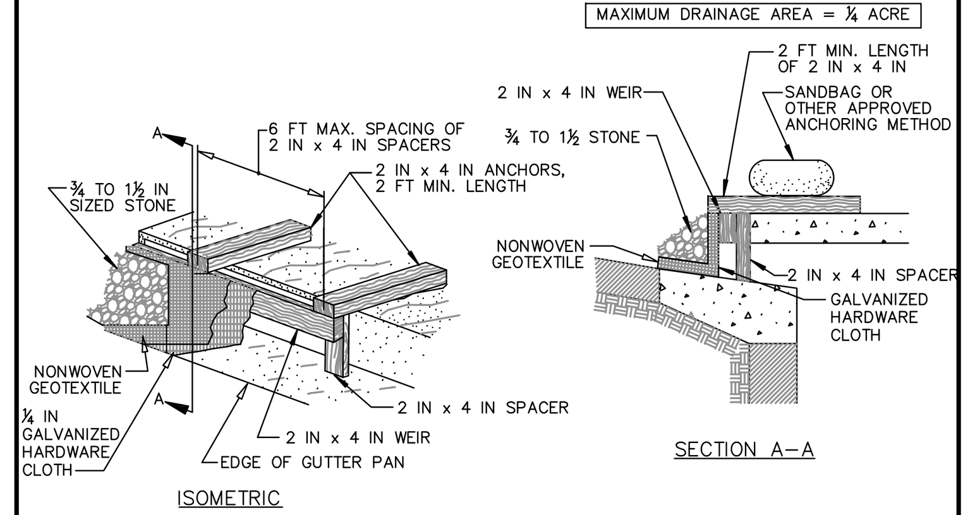
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL: CIP

MAXIMUM DRAINAGE AREA = ¼ ACRE



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

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± ⅙ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" 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

GENERAL NOTES

1. Notification of Kent County (410–778–7457) at least five (5) days prior to the start of work.
2. Prior to the start of work, the Contractor is to obtain County approval of any proposed plan changes and sequence of construction, specifically relating to installation, inspection, maintenance and removal of erosion and sediment control measures.
3. Sediment control measures are not to be removed until the areas served have established vegetative cover, or with the permission of the Kent County Sediment Control Inspector.
4. When pumping sediment–laden water, the discharge must be directed to an approved sediment trapping measure prior to release from the site.
5. All temporary stockpiles are to be located within areas protected by sediment control measures, and are to be temporary stabilized.
6. All sediment control dikes, swales, basins and flow lines to basins will be temporarily seeded immediately upon installation to reduce the contribution to sediment loading.
7. Disposal of excess earth materials on State or Federal property requires MDE Approval, otherwise materials are to be disposed of at a location approved by the local authority.
8. Temporary soil erosion control and sediment control measures are to be provided as per the approved plan prior to grading operations. Location adjustments are to be made in the field as necessary. The minimum area practical shall be disturbed for the minimum possible time.
9. If grading is completed out of a seeding season, graded areas are to be temporarily stabilized by mulch and mulch anchoring. Mulch material shall be unweathered, unchopped small grain straw spread at the rate of 1« to 2 tons per acre. Mulch anchoring to be accomplished by an approved method, use of a mulch anchoring tool is recommended where possible.
10. Implementation of the sediment control plan shall be in accordance with the "2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control", of the Department.
11. The Contractor is responsible for implementation and maintenance of the approved plan, and all other measures necessary to control, filter, or prevent sediment from leaving the site.
12. In case where stormwater management structures are a part of site development, removal of sediment control structures may not be accomplished before the contributing drainage area to the stormwater management structure is dewatered and stabilized.
13. On sites where infiltration techniques are utilized for the control of stormwater, extreme care must be taken to prevent all runoff from entering the structure during construction.
14. Sediment control for utility construction in areas outside of designed controls:
    (a) Excavated trench material shall be placed on the high side of the trench.
    (b) Immediately following pipe installation the trench shall be backfilled, compacted and stabilized at the end of each working day.
    (c) Temporary silt fence or straw bale dikes shall be placed immediately downstream of any disturbed area intended to remain disturbed longer than one working day.
15. All points on construction ingress and egress shall be protected to prevent tracking of mud onto public ways.
16. Site information:

Total Area of Site	20.543 Acres
Area Disturbed	19.64 Acres
Area to be Roofed or Paved	12.51 Acres
Total Cut	37,785 cy*
Total Fill	33,818 cy*

* – CUT AND FILL AMOUNTS ARE APPROXIMATE THE CONTRACTOR SHALL DO A SEPARATE TAKE–OFF

EROSION & 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 days (7) as to all other disturbed or graded areas on the project site.

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 rye grass shall be applied at a rate of 50 lbs. per acre using suitable equipment. Mulching shall be accomplished immediately after seeding

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

6.) Mulching shall be unchopped, unrotted, small grain straw applied at a rate of 2–2 1/2 tons per acre. Anchor mulch with a mulch anchoring tool on the contour. Wood cellulose fiber may be used for anchoring straw at 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 manufacture 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 be disking or other suitable means. Mulching shall be accomplished as discussed in Item #6 of these specifications.

Seed Mixture (For Hazard Zone 7a) (From Table B–3)					Fertilizer Rate (10–20–20)			Lime Rate
No.	Species	Appl. Rate (lbs./ac.)	Seeding Dates	Seeding Depths	N	P205	K20	
7	CREEPING RED FESCUE KENTUCKY BLUEGRASS	60 lbs 15 lbs.	3/1–5/15 8/15–10/15	1/4" to 1/2"	45 lb/ac 1 lb/ 1000 sf	90 lb/ac 2 lb/ 1000 sf	90 lb/ac 2 lb/ 1000 sf	2 tons/ac 90 lb/ 1000 sf
8	TALL FESCUE	100 lbs.	3/1–5/15 8/15–10/15	1/4" to 1/2"				
9	TALL FESCUE KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	60 lbs 40 lbs. 20 lbs.	3/1–5/15 8/15–10/15	1/4" to 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 the Subcontractor.

MAINTENANCE SCHEDULE

PREVENTATIVE MAINTENANCE SHALL BE ENSURED THROUGH INSPECTION OF ALL INFILTRATION SYSTEMS, RETENTION, OR DETENTION STRUCTURES BY THE KENT COUNTY INSPECTOR. THE INSPECTION SHALL OCCUR DURING THE FIRST YEAR OF OPERATION AND AT LEAST ONCE EVERY 2 YEARS THEREAFTER.

NOTE:

AN ASBUILT SURVEY OF THE STORMWATER MANAGEMENT FACILITY WILL BE PERFORMED AND IF THE AS–BUILT DOES NOT SUBSTANTIALLY REFLECT THE STORMWATER FACILITY DESIGN, THE CONTRACTOR SHALL MAKE ANY CHANGES OR ADDITIONS TO BRING THE FACILITY IN COMPLIANCE WITH THE DESIGN AS DIRECTED BY THE SOIL CONSERVATION TECHNICIAN OF KENT COUNTY.

ASBUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THE "ASBUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE ______________ P.E. No. ______________

DATE ______________

INSPECTION CHECKLIST

THE CONTRACTOR SHALL NOTIFY THE KENT COUNTY SEDIMENT AND EROSION CONTROL INSPECTOR AT (778–7457) AT THE FOLLOWING POINTS:

1. THE REQUIRED PRECONSTRUCTION MEETING.
2. FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES.
3. PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL STRUCTURE.
4. PRIOR TO REMOVAL OF ALL SEDIMENT AND EROSION CONTROL DEVICES.
5. PRIOR TO FINAL ACCEPTANCE.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT ______________ *DATE* ______________

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

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. 200499 EXPIRATION DATE: 9–2–25

OCTOBER 9, 2023

SEAL

DATE

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN, ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE : 1–443–262–9130
FAX : 1–443–262–9148

DATE	REVISION
10–9–23	PER TAC COMMENTS

SEDIMENT AND EROSION CONTROL DETAILS AND SPECIFICATIONS

FOR A

MANUFACTURING/WAREHOUSE BUILDING

ON LOT 1, THE LANDS OF

MILLINGTON CROSSING ASSOCIATES ONE, LLC

FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON

TAX MAP – 31, GRID – 1E, PARCEL – 6–1

DATE: MARCH '23	SCALE: AS SHOWN
JOB No.: 2021165	DRAWN BY: WJM
FOLDER Ref.: 31–2021165	DESIGNED BY: KJS

SHEET No. – C–5.03

CADD FILE – 21165C503

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PERIMETER BOUNDARY COURSES AND DISTANCES

LINE	BEARING	DISTANCE
1	S 20°30'34" E	73.87'
2	S 11°54'11" W	50.00'
3	S 00°35'35" W	50.99'
4	S 11°42'18" W	144.01'
5	S 07°20'51" E	129.32'
6	S 17°37'45" E	94.97'
7	S 28°15'11" E	51.90'
8	S 35°41'34" E	128.29'
9	S 01°15'22" W	111.22'
10	S 23°11'27" W	99.87'
11	S 00°07'11" W	50.77'
12	S 33°58'49" E	58.03'
13	S 74°40'43" W	428.38'
14	N 65°19'17" W	447.97'
15	N 15°19'17" W	376.34'
16	N 05°09'55" W	365.29'
17	N 29°40'43" E	259.45'
18	N 74°40'43" E	345.59'
19	S 66°21'21" E	86.65'
20	S 70°39'12" E	307.67'
	R = 2052.82'	L = 307.96'

REMAINING PARCEL 6-1

PROTECTED FOREST RETENTION AREA #1

NONTIDAL WETLANDS

FLOODPLAIN LINE ZONE "A"

WOODLANDS

LANDS N/F OF
EDWARD J. BREITENBACH, III et ux
M.L.M. 824/375
ZONED – AZD

MILLS BRANCH PERENNIAL STREAM

100' BUFFER

25' BUFFER

REMAINING PARCEL 6-1

PROPOSED 30' WIDE DRAINAGE EASEMENT

SUBMERGED GRAVEL WETLANDS #2

SUBMERGED GRAVEL WETLANDS #3

PARCEL 6-1 LOT 2

LOADING DOCKS
45 SPACES

PROPOSED 256,924 sq. ft.±
MANUFACTURING/WAREHOUSE BUILDING

PROPOSED TRAILER PARKING
35 SPACES

SUBMERGED GRAVEL WETLANDS #1

SUBMERGED GRAVEL WETLANDS #4

BIORETENTION AREA #3

BIORETENTION AREA #2

BIORETENTION AREA #1

EXISTING STORMWATER MANAGEMENT POND

SEE: SRC PLATS 54731 & 54732

LANDS N/F OF
S.H.A.
M.L.M. 191/127
ZONED – EC

50' R/W

DUDLEY CHANCE ROAD

CHESTERVILLE ROAD

EDGE BRIDGE ROAD

TO MARYLAND ROUTE 291

TO U.S. ROUTE 301

GRAPHIC SCALE
60 0 30 60 120
1 inch = 60 ft.

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KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

KENT SOIL AND WATER CONSERVATION DISTRICT

STATE OF MARYLAND – DANIEL L. DAVIS – 21165 – REGISTERED LANDSCAPE ARCHITECT

NOVEMBER 7, 2023
DATE

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
P.O. BOX 240
CENTREVILLE, MARYLAND 21617

HUSTEAD Landscape Architecture, LLC
120 Bay Meadows Lane Stevensville, MD. 21666
Phone : 443.988.2394
E-mail: Vhustead@Husteadla.com Web: www.Husteadla.com

REVISION	DATE
PER TAC COMMENTS	10-9-23
PER TAC COMMENTS	5-24-24

OVERALL LANDSCAPE PLAN

FOR A

MANUFACTURING/WAREHOUSE BUILDING

ON LOT 1, THE LANDS OF

MILLINGTON CROSSING ASSOCIATES ONE, LLC

FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON

TAX MAP – 31, GRID – 1E, PARCEL – 6-1

DATE	MARCH '23
SCALE	1" = 60'
JOB No.	2021165
DRAWN BY	VH
FOLDER Ref.	31-2021165
DESIGNED BY	VH

SHEET No. – L-1.00

CADD FILE – 21165L100

LOADING DOCKS

REMAINING PARCEL 6-1

SHEET L-1.03

SHEET L-1.02

PROPOSED 256,924 sq. ft.±
MANUFACTURING/WAREHOUSE BUILDING
F.F. ELEV. = 33.00

SUBMERGED GRAVEL WETLANDS #4

2 JV
PO
3 JV
PO
4 TA
2 CC
10 IV
3 NB
BIORETENTION AREA #2
10 IV
10 IG
5 IG
3 IO
3 IO
10 IG
6 NB
BIORETENTION AREA #1
5 TA
2 CC
3 IO
5 IG

DUDLEY CHANCE ROAD

CHESTERVILLE ROAD BRIDGE

EDGE ROAD

735+00
+50
736+00
737+00
+50
738+00
+50
+75.54

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT DATE

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

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KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

KENT SOIL AND WATER CONSERVATION DISTRICT

STATE OF MARYLAND — DAVID W. HUSTEAD — No. 2200 — LANDSCAPE ARCHITECT

NOVEMBER 7, 2023
DATE SEAL

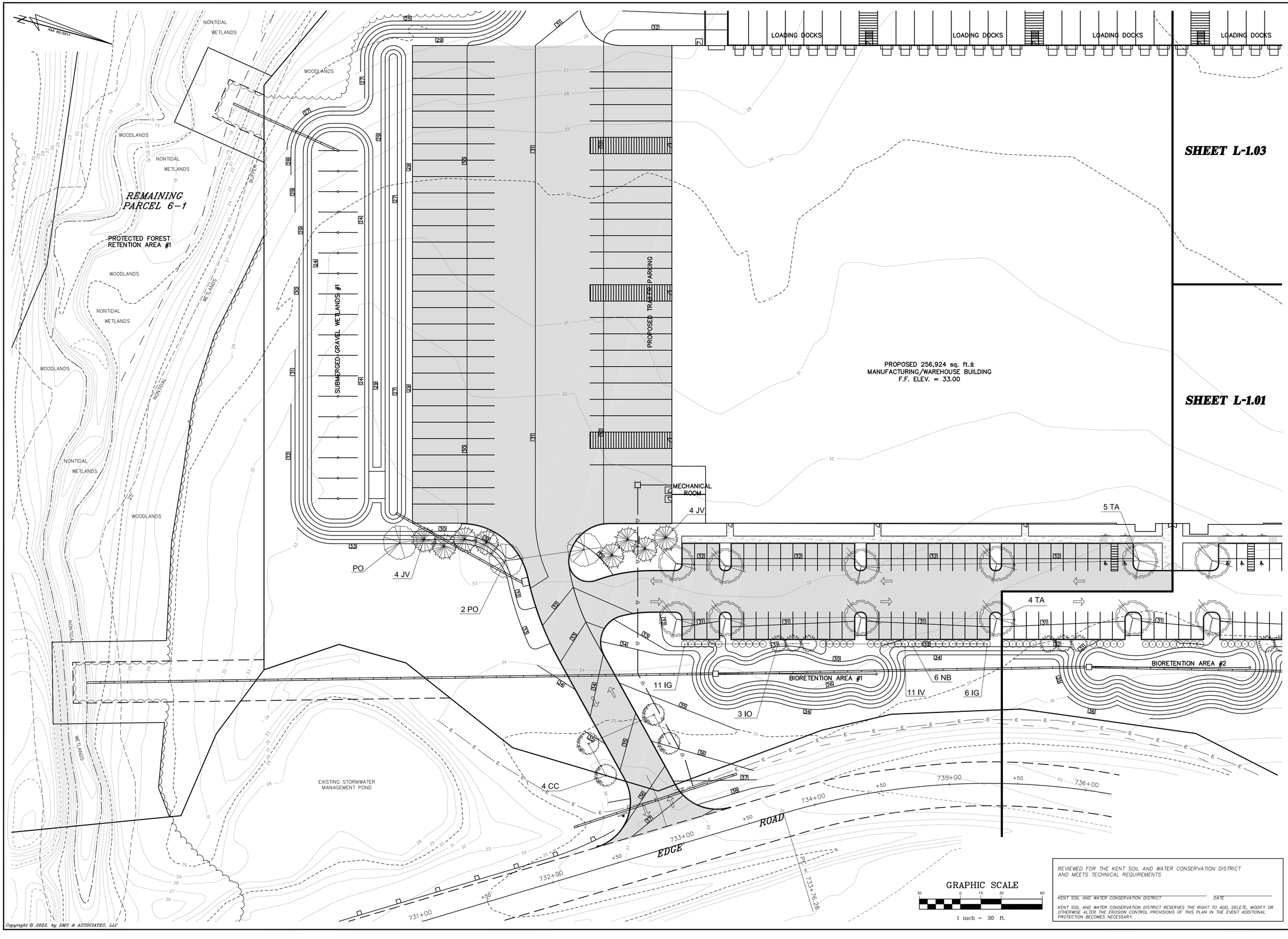
DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
CENTREVILLE, MARYLAND 21617

HUSTEAD Landscape Architecture, LLC
120 Bay Meadows Lane Stevensville, MD. 21666
Phone - 443.988.2294
E-mail: Vhustead@Husteadla.com Web: www.Husteadla.com

DATE	REVISION
10-9-23	PER TAC COMMENTS

LANDSCAPE PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP - 31, GRID - 1E, PARCEL - 6-1

DATE	MARCH '23
JOB No.	2021165
FOLDER Ref.	31-2021165
SCALE	1" = 30'
DRAWN BY	VH
DESIGNED BY	VH
SHEET No. -	L-1.01
CADD FILE -	21165L101



REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

KENT SOIL AND WATER CONSERVATION DISTRICT

STATE OF MARYLAND — DAVID V. HUSTEAD — No. 21165 — LANDSCAPE ARCHITECT

NOVEMBER 7, 2023
DATE SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
P.O. BOX 210
CENTREVILLE, MARYLAND 21617

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120 Bay Meadows Lane Stevensville, MD. 21666
Phone: 443.988.2294
E-mail: Vhustead@Hustealla.com Web: www.Hustealla.com

DATE	REVISION
10-9-23	PER TAC COMMENTS
5-24-24	PER TAC COMMENTS

LANDSCAPE PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP - 31, GRID - 1E, PARCEL - 6-1

DATE	SCALE
MARCH '23	1" = 30'
JOB No.	DRAWN BY
2021165	VH
FOLDER Ref.	DESIGNED BY
31-2021165	VH

SHEET No. - L-1.02

CADD FILE - 21165L102

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REMAINING PARCEL 6-1

SUBMERGED GRAVEL WETLANDS #3

SUBMERGED GRAVEL WETLANDS #3

NONTIDAL WETLANDS - BUFFER

NONTIDAL WETLANDS

WOODLANDS

NONTIDAL WETLANDS

FLOODPLAIN LINE ZONE "A"

NONTIDAL WETLANDS

WOODLANDS

NONTIDAL WETLANDS

WOODLANDS

WETLANDS

BUFFER

WOODLANDS

WOODLANDS

LOADING DOCKS

LOADING DOCKS

LOADING DOCKS

LOADING DOCKS

PROPOSED 256,924 sq. ft.±
MANUFACTURING/WAREHOUSE BUILDING
F.F. ELEV. = 33.00

SUBMERGED GRAVEL WETLANDS #4

5 QC

5 CA

6 JV

4 PV

4 AS

5 CA

3 PV

8 JV

4 QC

3 PV

6 CA

4 IO

3 JV

PO

CHESTERVILLE ROAD

BRIDGE

SHEET L-1.02

SHEET L-1.01

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT — DATE

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

STATE OF MARYLAND — LANDSCAPE ARCHITECT — 1201

NOVEMBER 7, 2023
DATE

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
P.O. BOX 210
CENTREVILLE, MARYLAND 21617

HUSTEAD Landscape Architecture, LLC
120 Bay Meadows Lane Stevensville, MD. 21666
Phone : 443.988.2394
E-mail: Vhustead@Husteadla.com Web: www.Husteadla.com

REVISION	DATE
PER TAC COMMENTS	10-9-23

LANDSCAPE PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 1, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP - 31, GRID - 1E, PARCEL - 6-1

DATE	MARCH '23
SCALE	1" = 30'
JOB No.	2021165
DRAWN BY	VH
FOLDER Ref.	31-2021165
DESIGNED BY	VH

SHEET No. - L-1.03

CADD FILE - 21165L103

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Schedule

Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
	P3-2		6	Lithonia Lighting	DSX1 LED P3 30K 70CRI T2M	D-Series Size 1 Area Luminaire P3 Performance Package 3000K CCT 70 CRI Type 2 Medium	1	13055	0.95	102.17	Max: 11887cd
	P3-3		16	Lithonia Lighting	DSX1 LED P3 30K 70CRI T3M	D-Series Size 1 Area Luminaire P3 Performance Package 3000K CCT 70 CRI Type 3 Medium	1	13206	0.95	102.17	Max: 11053cd
	P6-FT		22	Lithonia Lighting	DSX1 LED P6 30K 70CRI TFTM	D-Series Size 1 Area Luminaire P6 Performance Package 3000K CCT 70 CRI Forward Throw	1	20140	0.95	165.25	Max: 18145cd
	P6-5		3	Lithonia Lighting	DSX1 LED P6 30K 70CRI T5M	D-Series Size 1 Area Luminaire P6 Performance Package 3000K CCT 70 CRI Type 5 Medium	1	20579	0.95	165.25	Max: 11289cd
	P9-5		2	Lithonia Lighting	DSX1 LED P9 30K 70CRI T5M	D-Series Size 1 Area Luminaire P9 Performance Package 3000K CCT 70 CRI Type 5 Medium	1	34071	0.95	277.07	Max: 18691cd
	W2		8	Lithonia Lighting	WDGE2 LED P4 30K 70CRI T1S	WDGE2 LED WITH P4 - PERFORMANCE PACKAGE, 3000K, 70CRI, TYPE 1 SHORT OPTIC	1	4295	0.95	46.6589	Max: 4553cd
	W3		46	Lithonia Lighting	WDGE3 LED P4 70CRI R4 30K	WDGE3 LED WITH P4 - PERFORMANCE PACKAGE, 3000K, 70CRI, TYPE 4 OPTIC	1	11554	0.95	87.8914	Max: 6818cd

D-Series Size 1
LED Area Luminaire

DLC LISTED PREMIUM · DLC LISTED · NIGHTTIME FRIENDLY · BAA

Catalog Number

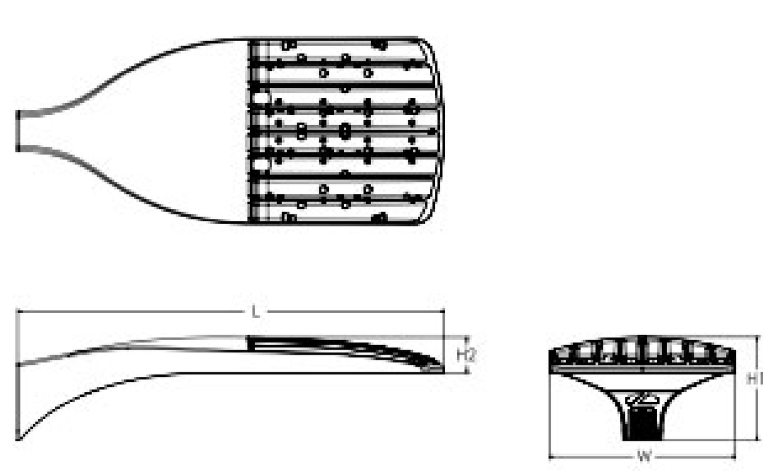
Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA:	0.69 ft² (0.06 m²)
Length:	32.71" (83.1 cm)
Width:	14.26" (36.2 cm)
Height H1:	7.88" (20.0 cm)
Height H2:	2.73" (6.9 cm)
Weight:	34 lbs (15.4 kg)



Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature[2]	Color Rendering Index[2]	Distribution		Voltage	Mounting
DSX1 LED	**Forward optics** P1, P6, P2, P7, P3, P8, P4, P9, P5; **Rotated optics** P10[1], P12[1], P11[1], P13[1]	(this section 70CRI only) 30K 3000K; 40K 4000K; 50K 5000K; (this section 80CRI only, extended lead times apply) 27K 2700K; 30K 3000K; 35K 3500K; 40K 4000K; 50K 5000K	70CRI; 70CRI; 70CRI; 80CRI; 80CRI; 80CRI; 80CRI; 80CRI	AFR Automotive front row; T1S Type I short; T2M Type II medium; T3M Type III medium; T3LG Type III low glare[3]; T4M Type IV medium; T4LG Type IV low glare[3]; TFTM Forward throw medium	T5M Type V medium; T5LG Type V low glare; T5W Type V wide; BLC3 Type III backlight control[3]; BLC4 Type IV backlight control[3]; LCCO Left corner cutoff[3]; RCCO Right corner cutoff[3]	MVOLT (120V-277V)[4]; HVOLT (347V-480V)[5,6]; XVOLT (277V - 480V)[7,8]; 120[16,26]; 208[16,26]; 240[16,26]; 277[16,26]; 347[16,26]; 480[16,26]	**Shipped included** SPA Square pole mounting (#8 drilling); RPA Round pole mounting (#8 drilling); SPA5 Square pole mounting #5 drilling[9]; RPA5 Round pole mounting #5 drilling[9]; SPA8N Square narrow pole mounting #8 drilling; WBA Wall bracket[10]; MA Mast arm adapter (mounts on 2 3/8" OD horizontal tenon)

Control options		Other options	Finish (required)
Shipped installed NLTAIR2 PIRHN nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8–40' mounting height, ambient sensor enabled at 2fc.[11,12,20,21]; PIR High/low, motion/ambient sensor, 8–40' mounting height, ambient sensor enabled at 2fc[13,20,21]; PER NEMA twist-lock receptacle only (controls ordered separate)[14]; PER5 Five-pin receptacle only (controls ordered separate)[14,21]	PER7 Seven-pin receptacle only (controls ordered separate)[14,21]; FAO Field adjustable output[15,21]; BL30 Bi-level switched dimming, 30%[16,21]; BL50 Bi-level switched dimming, 50%[16,21]; DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[17]; DS Dual switching[18,19,21]	**Shipped installed** SPD20KV 20KV surge protection; HS Houseside shield (black finish standard)[22]; L90 Left rotated optics[1]; R90 Right rotated optics[1]; CCE Coastal Construction[23]; HA 50°C ambient operation[24]; BAA Buy America(n) Act Compliant; SF Single fuse (120, 277, 347V)[26]; DF Double fuse (208, 240, 480V)[26]; **Shipped separately** EGSR External Glare Shield (reversible, field install required, matches housing finish); BSDB Bird Spikes (field install required)	DDBXD Dark Bronze; DBLXD Black; DNAXD Natural Aluminum; DWHXD White; DDBTXD Textured dark bronze; DBLBXD Textured black; DNATXD Textured natural aluminum; DWHGXD Textured white

LITHONIA LIGHTING
COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com
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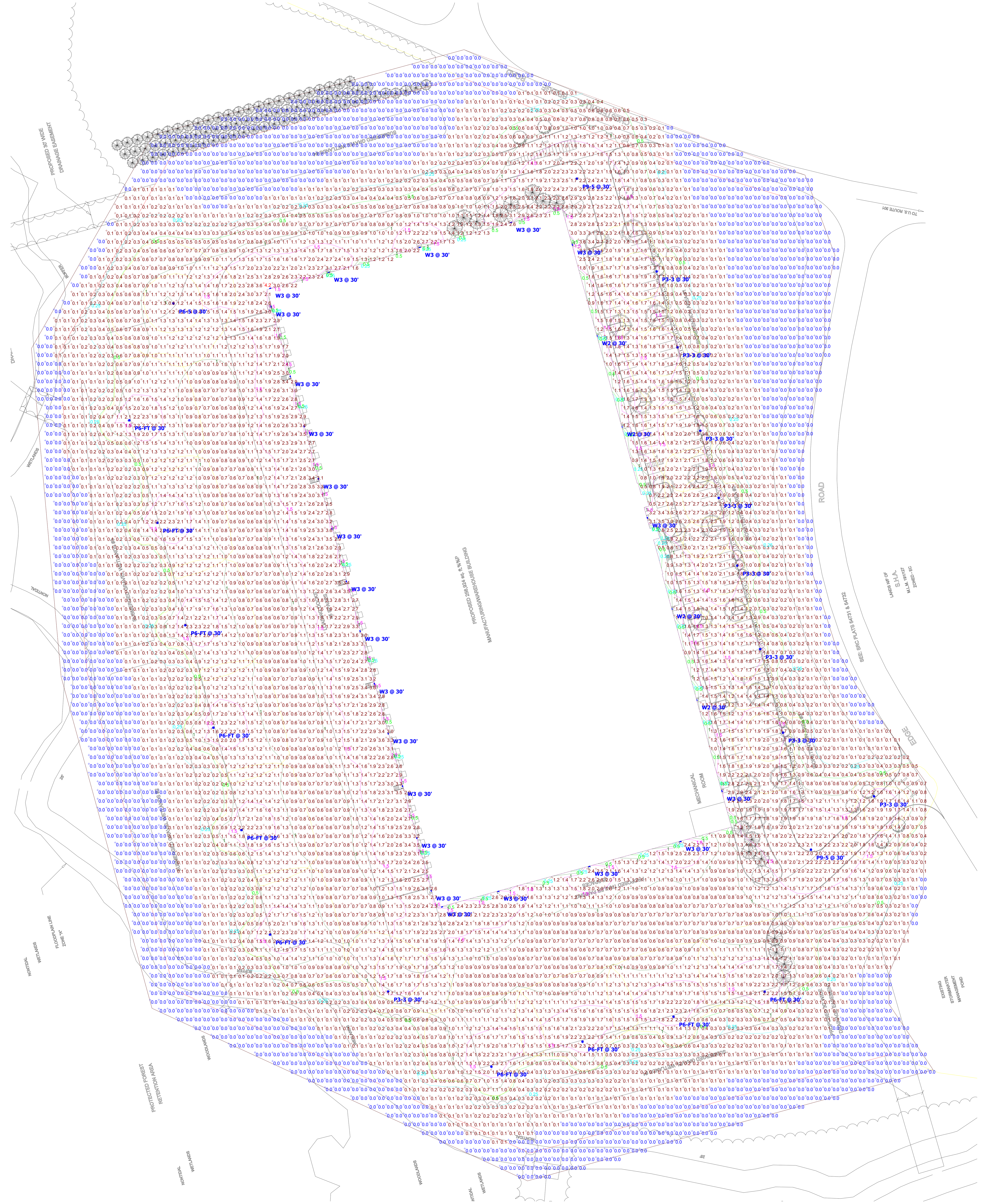
DSX1-LED
Rev. 09/05/23
Page 1 of 10



Plan View

VISUAL

Site Lighting Photometric Plan
Millington Crossing - Lot 1
Millington, MD

Designer
R. Renshaw
Date
11/09/2023
Scale
1" = 60'
Drawing No.

Summary
Draft 2

1 of 1

Kent County Department of Planning, Housing and Zoning
Kent County Government Center
400 High Street • Chestertown, MD 21620
410-778-7475 (phone) • 410-810-2932 (fax)

SITE PLAN APPLICATION

File Number:_____ **Amount Paid:**_____ **Date:**_____

Project Name: LOT 2 - Everton Industrial office/warehouse

District: 1st Map: 31 Parcel: 6-1 Lot Size: 20.665ac Deed Ref: MLM 892/458 Zoning: EC

LOCATION: west side of Maryland Route 301 near Millington, north of MD Rte 291 and south of Chesterville Bridge Road

PROPOSED USE: Industrial office/manufacturing/warehouse

OWNER OF LAND:

Name: Millington Crossing Associates 1, LLC c/o Russ Richardson Telephone: 410-275-2714

Address: P.O. Box 546, Chester Heights, PA 19017 Email: russ.richardson@rpcrealtors.com

APPLICANT:

Name: Everton Industrial c/o Dan Gural Telephone: 609-929-6025

Address: 266 Atsion Road, Medford, NJ 08055 Email: dgural@evertonindustrial.net

AGENT/ATTORNEY (if any):

Name:_____ Telephone:_____

Address:_____ Email:_____

REGISTERED ENGINEER OR SURVEYOR:

Name: DMS & Associates, LLC c/o Kevin Shearon Telephone: 443-262-9130

Address: P.O. Box 80, Centreville, MD 21617 Email: kjs@dmsandassociates.com

Please provide the email of the one person who will be responsible for responding to comments. Only this person will be contacted by staff and will be the person responsible for forwarding the comments or requests for additional information to any other interested parties. EMAIL: kjs@dmsandassociates.com

Water Supply: ☒ Public System ☐ On lot system

Sewerage: ☒ Public System ☐ On lot system

TELEPHONE SERVICED BY: Verizon

ELECTRIC SERVICED BY: Delmarva Power

NOTICE: The Planning Office is not required to make out this Application. If the Planning Department assists you, it cannot be held responsible for its contents.

AGENT 3/29/23

Signature of Applicant **Date**

☐ Concept Plan Approving Authority:_____ Date_____

☒ Preliminary Approving Authority:_____ Date_____

☐ Final Approving Authority:_____ Date_____

PROJECT NARRATIVE

Everton Industrial Development
Lot 2 of the lands of Millington Crossing Associates 1, LLC
Near Millington, Maryland

In accordance with Article VI, Section 5.4.B of the Kent County Zoning Ordinance, we offer the following:

The site is located on the west side of Maryland Route 301 near the Town of Millington. Following a subdivision process, this property will be identified as Tax Map 31, Parcel 6-1, Lot 2. This lot and Lot 1 are being subdivided from an overall 114.499 acre parcel owned by Millington Crossing Associates 1, LLC. Everton Industrial Development is the contract purchaser of Lot 2.

The lot is zoned Employment Center (EC) and will be 20.665 acres. The proposed development includes a 256,924-sf flex manufacturing/warehouse building with associated parking and loading docks.

The building is proposed to be connected to the Town of Millington / Kent County public water and sewer systems. A 10" diameter water line will be extended from an existing 10" main at the intersection of Edge Road and West Edge Road. The new main will extend along Edge Road past the two proposed lots to the intersection of Chesterville Bridge Road where it will be capped for future extension (by others) to loop back to the Town of Millington. A service lateral will be installed to connect the building to the new main. Fire hydrants will be provided along the route.

The building will also be served by public sewer. A grinder pump will be installed at the building. A small diameter force main lateral will connect to a new public 2" force main that will run within MDOT SHA right-of-way to a connection point near Maryland Route 301 and West Edge Road.

Forest Conservation was addressed during the subdivision process and resulted in a deed restricted area of 6.41 acres.

In accordance with Section 14.9.B.1-7 we offer the following relative to standards for site design (responses in *italics*):

1. Site Access
    a. Site access shall be subject to the following regulations to help ensure safety and alleviate traffic congestion:
        i. Where property abuts a primary, secondary, or a collector road, access to the property shall be by way of the secondary or collector road. Exceptions to this rule shall be instances where the Planning Commission,

P.O. Box 80 Centreville, MD 21617
Phone: (443) 262-9130
Email: email@dmsandassociates.com

or where applicable the Planning Director, determines that direct access onto the primary road would promote traffic safety.

The proposed development is located just off of US Route 301, but takes access from Edge Road, a secondary road. Two combined tractor trailer and employee entrances are proposed to create a loop to the rear loading docks, and one dedicated employee/visitor entrance is proposed.

ii. Where one or more contiguous parcels abutting a primary road are under single ownership and any one of the parcels abuts a secondary or collector road, access to the property shall be by of the secondary road. Exceptions to this rule shall be instances where the Planning Commission, or where applicable the Planning Director, determines that direct access onto the primary road would promote traffic safety.

N/A – access to a primary road is not proposed.

iii. Only one direct approach onto a primary road from an individual parcel of record as of August 1, 1989 shall be permitted unless the Planning Commission, or where applicable the Planning Director, finds one of the following:

N/A – access to a primary road is not proposed.

iv. An additional entrance is significantly beneficial to the safety and operation of the highway.

1. One entrance is a safety hazard or increases traffic congestion.
2. The property is bisected by steep slopes, bodies of water, or other topographic feature so as to render some portion of the property inaccessible without additional road access.

N/A – access to a primary road is not proposed.

b. Where a proposed road is designated on an approved County or Town map, site plans for development adjacent to the designated roadway shall include provisions for future access to the roadway.

N/A – no new public roads are proposed.

c. Existing, planned, or platted streets on adjacent properties shall be continued when the Planning Commission or where applicable the Planning Director determines that the continuation is necessary for safe and reasonable circulation between the properties.

To our knowledge there are no existing, planned or platted streets on adjacent properties that would need to be connected through this development.

d. When deemed necessary by the Planning Commission or where applicable the Planning Director, developments shall provide access to adjacent tracts not presently developed.

Given the topography west of the proposed building sites, we request that a requirement to connect to adjacent tracts be waived.

e. Access shall be consolidated whenever possible.

Tractor trailer and employee access points on either end of the building have been consolidated.

f. Whenever possible, roads shall be constructed above the elevation of the 100-year floodplain.

The entire development envelope is above the 100-year floodplain.

g. The applicant shall demonstrate that access to the project is adequate and the roads which will be impacted have the capacity to handle the traffic generated by the proposed project and will not endanger the safety of the general public.

A Traffic Impact Study was completed as part of the subdivision process. The results show that all of the surrounding intersections will operate at Level of Service A or B following this development.

2. On-site Circulation
   a. Sites shall be designed to prevent awkward or dangerous vehicular flow.

      The site has been designed to separate employee/visitor vehicles from tractor trailers to the extent possible to promote a safer vehicular flow pattern.

   b. Loading and unloading spaces shall not block the passage of other vehicles on the service drive or major pedestrian ways or create blind spots when trucks are loading or unloading.

      All loading and unloading spaces are located behind or to the side of the building, away from other employee/visitor vehicles.

   c. Sites shall be designed to discourage pedestrians and vehicles from sharing the same pathways.

      Sidewalks have been provided along the building façade to aid in separating pedestrians from vehicles.

   d. Safe, convenient, and centralized handicap parking shall be provided.

      All ADA compliant spaces have been located closest to pedestrian entrance doors.

   e. Trash boxes must be accessible to collection trucks when all vehicle parking spaces are filled.

      Trash corrals will be located to the rear of the buildings to avoid conflict with employee/visitor vehicles.

   f. Parking shall not be permitted in the required front yard.

      With approval of the requested 50-ft width, no parking is located within the front yard.

3. Floodplain
   a. In order to prevent excessive flood damage and to allow for the protection of the natural and beneficial floodplain functions, all development, new construction, and substantial improvements to existing structures in all floodplain zones shall comply with the requirements of Article VI, Section 7 of this Ordinance, including but not limited to the following:
      i. Elevation of all new or substantially improved structures;
      ii. Compliance with venting and other construction standards; and
      iii. Submission and recordation, where applicable, of Elevation Certificates, Declaration of Land Restrictions, deed restrictions, and venting affidavits.

      N/A – development area is not within the floodplain.

b. Placement of buildings and materials. In general, buildings and accessory structures should be located entirely out of the floodplain, out of the flood protection setback, or on land that is least susceptible to flooding. All structures permitted in the floodplain shall be oriented so as to offer the least resistance to the flow of floodwaters.

The proposed building is located out of the floodplain.

c. General development shall not occur in the floodplain where alternative locations exist. Before a permit is issued, the applicant shall demonstrate that new structures cannot be located out of the floodplain and that encroachments onto the floodplain are minimized.

N/A – development area is not within the floodplain.

4. General Landscape Requirements
   a. The front yard shall be landscaped and shall be maintained in a neat and attractive condition.

      The front yards will be landscaped and maintained in a neat and attractive condition.

   b. Sites shall be permanently maintained in good condition with at least the same quality and quantity of landscaping as originally proposed.

      So noted.

   c. The landscape plan shall be prepared by a registered professional forester, landscape architect, or other professional with equivalent experience and qualifications.

      The landscape plan will be designed by a licensed landscape architect.

   d. The Planning Commission, or where applicable the Planning Director, may waive the landscape requirements when it is demonstrated that the spirit and intent of the requirement is accomplished through other means or the nature of the change is one that does not require additional landscaping.

      So noted.

5. Screening
   a. Screening is required to protect adjoining properties and roadways from noise, glare, and uses which are visually incompatible with neighboring land uses. Screening is required:
      i. On sites which involve loading or unloading (including the storage of vehicles and boats), trash, or disposal areas and where accessory buildings and structures are adjacent to residential properties.

         The site layouts have been designed to have all loading / unloading areas facing away from adjacent properties and public roads to the extent possible. Screening has been provided where areas may be visible.

      ii. Where exterior storage areas are visible from roadways, sidewalks, or nearby residential properties.

         N/A

      iii. When noise not typically occurring in residential areas is expected to project onto nearby properties.

It is not anticipated that excessive noise will occur at this site. Once an end user is identified, we will provide information relative to the Industrial Performance Standards.

iv. To screen parking areas from motorists, pedestrians, and adjoining residential properties.

Natural screening exists for these properties between Edge Road and US Route 301. Screening has been provided where areas may be visible.

v. Where the industrial district abuts a residential district or a primary or secondary road.

N/A – this lot does not abut a residential district.

vi. Where the Planning Commission determines that additional screening is necessary to protect properties in the area.

So noted.

b. Landscaped screens shall be designed to complement other landscaping occurring naturally on the site, planted previously, or approved as a part of a site plan review. Whenever possible, existing vegetation and landform shall be used to create screens.

Natural screening exists onsite as well as on adjacent properties between Edge Road and US Route 301. Screening has been provided where areas may be visible.

c. The screen shall be capable of providing year round screening.

Screening added is evergreen to provide year round screening.

d. When noise is likely to be a factor, the screen shall be of sufficient construction to be an effective noise buffer.

So noted.

e. Screening shall consist of trees and plants and may include masonry, or wooden fencing used with or without berms. Screening shall consist of a functional and well-designed combination of the following:

i. Vegetative ground cover

ii. Coniferous and deciduous shrubs

1. Specimens of which will reach and maintain a minimum height of 5 feet of full vegetative growth.
2. Plants which measure a minimum of 3 feet in height at the time of planting and are expected to attain a 5-foot height within 3 years.
3. Coniferous and deciduous trees Species and sizes of which will be chosen to best accomplish an adequate screen (i.e., evergreens used for visual screening, deciduous trees for seasonal screening)

So noted.

f. Natural slopes and existing vegetation may be substituted for some or all of the requirements above, provided that these features serve to screen the area from adjoining properties and roadways. The Planning Commission, or where applicable the Planning Director, shall determine the acceptability of using existing slopes and vegetation for this purpose. The Planning Commission, or where applicable the Planning Director, may waive screening where it is physically impossible to accomplish.

So noted.

g. Screening and fencing shall be maintained in at least the same quality and quantity as initially approved.

So noted.

6. Lighting
   a. Lighting on the site shall be designed to avoid glare onto adjacent properties.

      All site lighting will be dark sky compatible and will be directed downward to avoid glare onto adjacent properties.

   b. Lighting on the site shall be sufficient to provide for the safety and security of the business, its employees, and its customers.

      A lighting plan will be developed to provide a safe and secure environment for the business, its employees, and its customers / guests.

7. Site Planning External Relationship: Site planning within the District shall provide protection of individual lots from adverse surrounding influences and for protection of surrounding areas from adverse influences existing within the District. In particular:
   a. Principal vehicular access points shall be designed to encourage smooth traffic flow with controlled turning movements and minimum hazards to vehicular or pedestrian traffic. Storage, turn lanes, or traffic dividers may be required by the Planning Commission where existing or anticipated heavy flows indicate need. In general, streets shall not be connected with streets outside the District in such a way as to encourage the use of such streets by substantial amounts of through traffic.

      Two combined tractor trailer and employee entrances are proposed to create a loop to the rear loading docks, and one dedicated employee/visitor entrance is proposed.

   b. Yards, fences, walls, or vegetative screening shall be provided where needed to protect residential districts or pubic streets from undesirable views, lighting, noise, or other offsite influences. In particular, outdoor storage, extensive off-street parking areas, and service areas for loading and unloading vehicles, and for storage and collection of refuse and garbage shall be effectively screened.

      Additional screening has been added.

This project is consistent with the Kent County Comprehensive Plan. The following are excerpts from the plan that show consistency with the proposed subdivision:

- Promote the development of the County employment centers.
  - The subdivision is proposed in the Employment Center zoning district which allows a variety of industrial scale developments.
- The County can encourage potential employers to locate in areas where employment and industrial uses are desirable and compatible.
- The County can also provide a stronger commercial/industrial tax base to help balance County tax revenues.
- Expand regulatory flexibility for the creation of and location of employment centers and industrial uses...Theses efforts will especially focus on the Worton area, and the US 301

corridor with a priority that the area between the Town of Millington and the lands surrounding the Route 291-Route 301 intersection be guided by the desired expansion of services and land use identified by Millington's municipal growth element.

Following recordation of the subdivision plats, Lots 1 & 2 will be owned, developed, and maintained by Everton Industrial Development, LLC, 266 Atsion Road, Medford, New Jersey, 08055. The balance of the parcel will be owned and maintained by Millington Crossing Associates 1, LLC, P.O. Box 546, Chester Heights, Pennsylvania, 19017.

Stormwater management has been addressed using Environmental Site Design to the Maximum Extent Practicable. A Stormwater Management Report has been provided.

INDUSTRIAL PERFORMANCE STANDARDS

Everton Industrial Development
Lot 2 of the lands of Millington Crossing Associates 1, LLC
Near Millington, Maryland

In accordance with Article V, Section 15.6 of the Kent County Zoning Ordinance, the following will be addressed once an end user has been identified:

1. NOISE
2. VIBRATION
3. GLARE
4. AIR POLLUTION
5. WATER POLLUTION
6. RADIOACTIVITY
7. ELECTRICAL INTERFERENCE
8. SMOKE AND PARTICULATE MATTER
9. TOXIC MATTER
10. ODOROUS MATTER

PRELIMINARY CONSTRUCTION PLANS
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES 1, LLC
FIRST ELECTION DISTRICT, KENT COUNTY, MARYLAND
NEAR THE TOWN OF MILLINGTON

SITE NOTES

1. PROPERTY LINE INFORMATION FOR P. 6–1 SHOWN HEREON IS THE RESULT OF A FIELD RUN SURVEY BY MICHAEL A. SCOTT, INC. IN JUNE, 2017. HORIZONTAL DATUM IS NAD 83/2011. SEE PRELIMINARY SUBDIVISION PLATS PREPARED BY DMS & ASSOCIATES, LLC FOR PARCEL 6–1, LOTS 1 AND 2 PROPERTY LINE AND FOREST CONSERVATION INFORMATION.
2. FOR DEED REFERENCE, SEE LIBER M.L.M. 892, FOLIO 458.
3. CURRENT ZONING CLASSIFICATION – "RCD" (RESOURCE CONSERVATION DISTRICT), "AZD" (AGRICULTURAL ZONING DISTRICT) AND "EC" (EMPLOYMENT CENTER).
4. THE PROPERTY IS PARTIALLY LOCATED WITHIN THE CHESAPEAKE BAY CRITICAL AREA DESIGNATION – RCA (RESOURCE CONSERVATION AREA).
5. SITE IS PARTIALLY LOCATED WITHIN 100 YEAR FLOODPLAIN AS SCALED FROM FLOOD INSURANCE RATE MAP COMMUNITY PANEL No. 24029C213D (ZONE "A"), DATED JUNE 9, 2014.
6. SOILS SHOWN HEREON ARE SCALED FROM MAPS LOCATED AT THE FOLLOWING WEBSITE: http://websoilsurvey.nrcs.usda.gov FOR KENT COUNTY. HYDRIC SOILS ONSITE ARE – Bs & Oh.
7. THE PERENNIAL STREAM SHOWN HEREON IS SCALED FROM MARYLAND ENVIRONMENTAL RESOURCES AND LAND INFORMATION NETWORK WEBSITE http://gisapps.dnr.state.md.us.Merlin/index.html.
8. THE NONTIDAL WETLANDS SHOWN HEREON ARE TAKEN FROM A REPORT PREPARED BY DAVIS & ASSOCIATES, ENVIRONMENTAL CONSULTING, LLC, DATE JUNE 17, 2022 AND OTHER MAPPED WETLANDS. DELINEATION SHOWN HEREON HAS BEEN SCALED FROM THE REPORT AND HAS NOT BEEN FIELD VERIFIED.
9. STEEP SLOPES SHOWN HEREON ARE TAKEN FROM AERIAL TOPOGRAPHY FLOWN IN THE FALL OF 2013. VERTICAL DATUM IS NAVD 88.
10. WOODLANDS WITHIN THE DEVELOPMENT AREA ARE THE RESULT OF A FIELD RUN SURVEY BY MICHAEL A. SCOTT, INC. IN FEBRUARY, 2023. WOODLANDS OUTSIDE THE DEVELOPMENT AREA ARE SCALED FROM ORTHO PHOTOS FLOWN IN THE FALL OF 2019 AND VERIFIED BY A SITE VISIT.
11. THE PRESENCE OF ANY OTHER NATURAL RESOURCES (ie... EROSION HAZARD AREAS, etc...) DO NOT EXIST ON THE SITE AS VERIFIED BY A SITE VISIT IN DECEMBER, 2018.
12. THE MARYLAND DEPARTMENT OF NATURAL RESOURCES WILDLIFE AND HERITAGE SERVICE CONDUCTED AN ENVIRONMENTAL REVIEW OF THE SITE AND DETERMINED THAT THERE ARE NO OFFICIAL STATE OR FEDERAL RECORDS FOR LISTED PLANT OR ANIMAL SPECIES ON THE SITE. THE WILDLIFE AND HERITAGE SERVICE NOTED IN ITS RESPONSE LETTER, DATED JULY 20, 2022 THAT THE NO FORESTED AREA ON THE PROPERTY CONTAINS HABITAT FOR FOREST INTERIOR DWELLING BIRDS (FIDS).
13. CONTOURS WITHIN THE DEVELOPMENT AREA ARE THE RESULT OF A FIELD RUN SURVEY BY MICHAEL A. SCOTT, INC. IN FEBRUARY, 2023. CONTOURS OUTSIDE THE DEVELOPMENT ARE THE RESULT OF AERIAL TOPOGRAPHY FLOWN IN THE FALL OF 2013. VERTICAL DATUM IS NAVD 88.
14. NEW PUBLIC SEWER WILL BE UTILIZED FOR SEWAGE DISPOSAL. NEW PUBLIC WATER WILL BE UTILIZED FOR POTABLE WATER SUPPLY AND FIRE SUPPRESSION.
15. SECURITY LIGHTING IS PROPOSED MOUNTED TO THE BUILDING. ADDITIONAL SITE LIGHTING PROPOSED IN THE PARKING LOT IS TO BE DARK SKY COMPATIBLE.
16. STORMWATER MANAGEMENT FOR THE SITE HAS BEEN ADDRESSED VIA THE IMPLEMENTATION OF ENVIRONMENTAL SITE DESIGN (ESD) TO THE MAXIMUM EXTENT PRACTICABLE (MEP).
18. ALL SIGNS SHALL COMPLY WITH THE CURRENT REGULATIONS OF KENT COUNTY CODE (SECTION 2. SIGNS. FOR THE EMPLOYMENT CENTER ZONE (EC).
19. SITE REQUIREMENTS (INDUSTRIAL SUBDIVISION):
    MINIMUM LOT SIZE = N/A
    FRONT BUILDING RESTRICTION LINE
    – 50' (NOT LOCATED ON "PRIMARY ROADS")
    SIDE BUILDING RESTRICTION LINE
    – 15' (PER "STANDARD" REQUIREMENTS)
    – 50' (ALONG "PUBLIC ROADS")
    REAR BUILDING RESTRICTION LINE
    – 15' (PER "STANDARD" REQUIREMENTS)
    SECURITY FENCE HEIGHT = 8'
    MAXIMUM BUILDING SIZE = N/A
    BUILDING HEIGHT PERMITTED = 60'
    BUILDING HEIGHT PROPOSED = 50.5'

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEET TECHNICAL REQUIREMENTS

APPROVED:

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

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

DEVELOPERS CERTIFICATION

I (WE) CERTIFY THAT:

A. ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THIS SEDIMENT AND EROSION CONTROL PLAN AND/OR STORMWATER MANAGEMENT PLAN, AND FURTHER, AUTHORIZED THE RIGHT OF ENTRY FOR PERIODIC ONSITE EVALUATION BY THE KENT SOIL AND WATER CONSERVATION DISTRICT SEDIMENT CONTROL INSPECTOR OR MARYLAND DEPARTMENT OF THE ENVIRONMENT.

B. ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATION OF ATTENDANCE AT THE DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT.

C. 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 FOR SAID CHANGE ON THE CONTRACTOR OR SUBCONTRACTOR.

SIGNATURE _____ DATE _____

ADDRESS _____ CARD No. _____

PHONE No. _____

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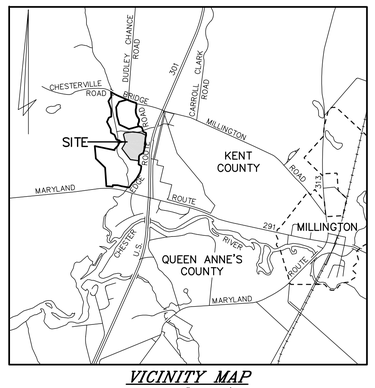


VICINITY MAP
SCALE 1" = 3000'

TABLE OF CONTENTS

OWNER:
MILLINGTON CROSSING
ASSOCIATES 1, LLC
c/o RUSS RICHARDSON
P.O. BOX 546
CHESTER HEIGHTS, PA 19017
PHONE No. 1–410–275–2714

DEVELOPER/ CONTRACT PURCHASER
EVERTON INDUSTRIAL
c/o DAN GURAL
266 ATSION ROAD
MEDFORD, NEW JERSEY 08055
PHONE No. 1–609–929–6025

SURVEYOR:
MICHAEL A.SCOTT, INC.
c/o MIKE SCOTT
400 SOUTH CROSS STREET
CHESTERTOWN, MARYLAND 21620
PHONE No. 1–410–778–2310

ENGINEER:
DMS & ASSOCIATES, LLC
c/o KEVIN J. SHEARON, P.E. LEED AP
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE No. 1–443–262–9130

NOTE:
SEDIMENT AND EROSION CONTROL
WILL BE STRICTLY ENFORCED

GENERAL NOTES

1. These drawings show information obtained from the best available records regarding pipes, conduits, telephone lines, and other structures and conditions which exist along the lines of the work both at and below the surface of the ground. The owner and engineer disclaim any responsibilities for the accuracy or completeness of said information being shown only for the convenience of the contractor, who must verify the information to his own satisfaction. If the contractor relies on said information, he does so at his own risk. The giving of the information on the contract drawings will not relieve the contractor of his obligations to support and protect all pipes, conduits, telephone lines, and other structures.
2. The contractor shall notify the following two (2) weeks prior to the start of construction and shall coordinate construction with the utility companies involved:

   Delmarva Power & Light Company ---------- 1–800–375–7117
   Miss Utility ---------- 1–800–441–8355
   DMS & Associates, LLC ---------- 1–443–262–9130
   Kent County Dept. Public Works ---------- 1–410–778–7439
   Kent Co. Sediment & Erosion Control Inspector – 1–410–778–7457
   Kent Co. Dept. of Water & Wastewater-------- 1–410–778–3287
   Maryland Department of the Environment------ 1–410–631–3510

3. All construction shall be marked for traffic and pedestrian safety.
4. The Contractor shall provide all equipment, labor, and materials for any miscellaneous or test pit excavations required by the Engineer.
5. The owner is responsible for the acquisition of all easements, both permanent and temporary.
6. The Contractor assumes all responsibility for any deviations from these plans unless said deviation is approved by the Engineer. Contractor shall receive written permission from the Engineer if a deviation of the plans is necessary.
7. All disturbed areas shall be smoothly graded to provide positive drainage in the direction of flow arrows herein and stabilized with topsoil, seed, and mulch. If settlement occurs, topsoil, seeding, and mulching shall be repeated until settlement subsides (See Erosion and Sediment Control Specifications).
8. All trash, trees, and underbrush are to be cleared and removed off site to an approved dump site by the contractor.
9. Any excess excavated material shall be removed off site by the contractor or material shall be placed on site as directed by the Engineer and/or Owner.
10. Any existing survey monumentation that is disturbed during construction shall be replaced by a registered surveyor at the contractor's expense.
11. The Contractor shall conduct his work in easements so that there will be a minimum of disturbance of the properties crossed. Any disturbed areas shall be restored to its original condition.
12. All materials and methods of construction shall conform to the drawings, specifications, local building codes, and the standard specifications and details of Kent County.
13. All drainage structures and swales shall remain functional during construction unless otherwise indicated on the plans.
14. All water valves, boxes and hydrants shall be set and adjusted to finish grade.
15. Wherever sewer or water mains or services run parallel to each other, a minimum horizontal separation of 10' shall be provided.
16. Minimum cover over the sewer main shall be 42".
17. All concrete used for utility work shall be in accordance with MD SHA Standards and Specifications for Mix No. 2.
18. All paving materials and methods shall be in accordance with the latest MD SHA Standards and Specifications and be supplied by a State Certified plant.
19. Trenches shall not remain open overnight. If it is necessary for trenches to remain open, steel plates capable of bearing traffic shall be used to completely cover the trench openings.
20. Erosion and Sediment Control will be strictly enforced by the Kent County Sediment and Erosion Control Inspector.

STATEMENT OF PURPOSE AND INTENT

THE SITE IS LOCATED ON THE WEST SIDE OF EDGE ROAD IN THE U.S. ROUTE 301 CORRIDOR NEAR THE TOWN OF MILLINGTON, MARYLAND. THE SITE IS CURRENTLY VACANT. THE INTENT OF THE PRELIMINARY SITE PLAN IS TO PROPOSE A MANUFACTURING/WAREHOUSE BUILDING AND ITS ASSOCIATED PARKING ON LOT 2 OF THE LANDS OF MILLINGTON CROSSING ASSOCIATES 1, LLC.

THE PURPOSE OF THIS PRELIMINARY SITE PLAN IS TO RECEIVE APPROVAL FOR PROPOSED DEVELOPMENT FROM THE KENT COUNTY PLANNING COMMISSION.

CONCRETE MONUMENT COORDINATE TABLE

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
(4)	CONC. MONUMENT SET	586117.8198	1633906.9826	——'——
(5)	CONC. MONUMENT SET	585915.5964	1633909.5034	——'——
(6)	CONC. MONUMENT SET	585573.6069	1633827.2280	——'——

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

KENT SOIL AND WATER CONSERVATION DISTRICT

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT 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. 20045, EXPIRATION DATE: 9–2–25

STATE OF MARYLAND — KEVIN JOSEPH SHEARON — No. 20045 — PROFESSIONAL ENGINEER

DATE NOVEMBER 15, 2023 SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE 1–443–262–9130
FAX 1–443–262–9148

DATE	REVISION
10–9–23	PER TAC COMMENTS
11–15–23	PER MDOT COMMENTS

TITLE SHEET
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES 1, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6–1

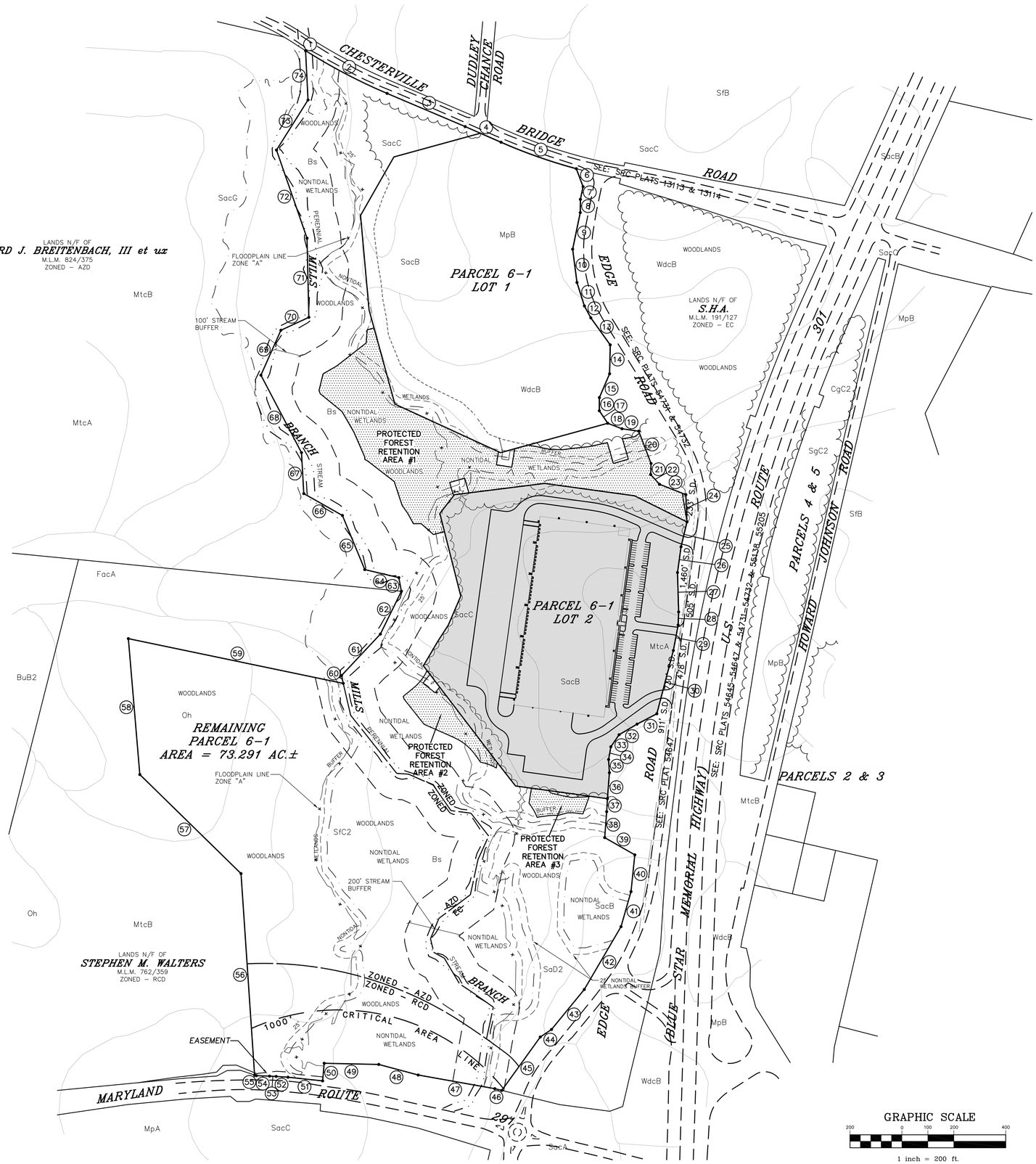
DATE	MARCH '23
SCALE	AS SHOWN
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31–2021165
DESIGNED BY	KJS
SHEET No. –	C–1.00
CADD FILE –	21165C2100

SITE STATISTICS

OVERALL SITE STATISTICS		
GROSS SITE AREA	=	114.499 ac.±
NON-CRITICAL AREA	=	110.454 ac.±
CRITICAL AREA	=	4.045 ac.±
GROSS SITE AREA	=	**114.599 ac.±**
ZONE (EC)	=	81.307 ac.±
ZONE (AZD)	=	25.787 ac.±
ZONE (RCD)	=	7.406 ac.±
AREA WITHIN ZONE (EC)	=	**81.307 ac.±**
NON-CRITICAL AREA	=	81.307 ac.±
CRITICAL AREA	=	0.000 ac.±
AREA WITHIN ZONE (RCD)	=	**7.406 ac.±**
NON-CRITICAL AREA	=	3.361 ac.±
CRITICAL AREA	=	4.045 ac.±
REMAINING PARCEL 6-1 SITE STATISTICS		
GROSS SITE AREA	=	73.291 ac.±
NON-CRITICAL AREA	=	69.246 ac.±
CRITICAL AREA	=	4.045 ac.±
GROSS SITE AREA	=	**73.291 ac.±**
ZONE (EC)	=	40.099 ac.±
ZONE (AZD)	=	25.787 ac.±
ZONE (RCD)	=	7.406 ac.±
AREA WITHING ZONE (EC)	=	**40.099 ac.±**
NON-CRITICAL AREA	=	40.099 ac.±
CRITICAL AREA	=	0.000 ac.±
AREA WITHIN ZONE (RCD)	=	**7.406 ac.±**
NON-CRITICAL AREA	=	3.361 ac.±
CRITICAL AREA	=	4.045 ac.±

PERIMETER BOUNDARY COURSES AND DISTANCES

LINE	BEARING	DISTANCE
1	S 57°41'34" E	1.51'
2	S 62°21'18" E	352.90'
	R = 2182.12'	353.28'
3	S 66°59'35" E	326.95'
4	S 66°21'21" E	150.72'
5	S 70°39'12" E	307.67'
	R = 2052.82'	307.96'
6	S 20°30'34" E	73.87'
7	S 11°54'11" W	50.00'
8	S 00°35'35" W	50.99'
9	S 11°42'18" W	144.01'
10	S 07°20'51" E	129.32'
11	S 17°37'45" E	94.97'
12	S 28°15'11" E	51.90'
13	S 35°41'34" E	128.29'
14	S 01°15'22" W	111.22'
15	S 23°11'27" W	99.87'
16	S 00°07'11" W	50.77'
17	S 33°58'49" E	58.03'
18	S 68°40'47" E	58.60'
19	S 81°58'30" E	65.30'
20	S 20°54'55" E	133.03'
21	S 01°54'51" W	43.01'
22	S 42°19'28" E	50.50'
23	S 68°28'35" E	109.20'
24	S 02°21'44" E	105.02'
25	S 13°28'01" W	98.49'
26	S 07°48'59" W	100.00'
27	S 01°38'45" E	152.07'
28	S 02°06'21" W	50.25'
29	S 10°40'44" W	100.13'
30	S 14°39'33" W	251.79'
31	S 62°16'44" W	86.02'
32	S 59°22'45" W	80.43'
33	S 34°22'53" W	55.90'
34	S 10°06'25" W	50.04'
35	S 03°29'37" E	50.99'
36	S 04°22'58" W	100.18'
37	S 03°14'33" W	50.16'
38	S 04°22'58" W	100.18'
39	S 60°13'23" E	133.70'
40	S 05°56'11" W	142.56'
41	S 15°54'12" W	140.25'
42	S 30°18'58" W	280.31'
43	S 39°20'21" W	199.09'
44	S 56°03'57" W	52.20'
45	S 35°48'22" W	253.75'
46	N 76°14'08" W	27.73'
47	N 79°51'28" W	299.63'
48	N 75°01'11" W	157.13'
49	N 88°44'55" W	210.47'
50	S 04°59'46" W	68.07'
51	N 84°00'32" W	134.29'
52	N 86°13'17" W	45.78'
53	N 87°05'47" W	25.44'
54	N 88°02'02" W	50.87'
55	N 71°20'33" W	7.19'
56	N 03°51'09" W	778.07'
57	N 45°37'09" W	545.42'
58	N 04°49'35" W	525.33'
59	S 78°14'39" E	845.55'
60	N 11°59'39" W	30.93'
61	N 43°08'31" E	218.92'
62	N 26°05'41" E	183.60'
63	N 10°37'15" W	53.45'
64	N 76°44'35" W	134.76'
65	N 22°27'55" W	225.56'
66	N 60°27'05" W	171.11'
67	N 03°08'55" W	158.05'
68	N 27°39'55" W	336.87'
69	N 24°01'05" E	189.38'
70	N 65°08'05" E	118.58'
71	N 01°18'25" W	305.01'
72	N 19°07'05" W	359.26'
73	N 32°10'35" E	228.01'
74	N 02°50'27" W	190.14'



LEGEND

- DEED POINT (UNLESS OTHERWISE NOTED)
- AZD / EC — ZONING LINE
- EDGE OF EXISTING/PROPOSED WOODSLINE
- FLOOD PLAIN LINE
- PERENNIAL STREAM
- NONTIDAL WETLAND MARGIN
- 25' BUFFER FROM NONTIDAL WETLANDS BUFFER
- MpB / WdcB — SOILS LINE AND TYPE

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KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

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. 22049, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KENNETH L. DAVIS — 22049 — PROFESSIONAL ENGINEER

OCTOBER 9, 2023
DATE

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

REVISION	DATE
PER TAC COMMENTS	10-9-23
PER TAC COMMENTS	5-24-24

OVERALL SITE PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

SCALE	1" = 200'
DRAWN BY	WJM
DESIGNED BY	KJS
DATE	MARCH '23
JOB No.	2021165
FOLDER Ref.	31-2021165
SHEET No. –	C-2.00
CADD FILE –	21165C2200

SITE STATISTICS

REMAINING PARCEL 6–1, LOT 2 SITE STATISTICS

GROSS SITE AREA	=	20.665 ac.±
NON–CRITICAL AREA	=	20.665 ac.±
CRITICAL AREA	=	0.000 ac.±
ZONE (EC)	=	20.665 ac.±
ZONE (AZD)	=	0.000 ac.±
ZONE (RCD)	=	0.000 ac.±
WAREHOUSE:		
MAXIMUM BUILDING FOOTPRINT (ALLOWED)	=	N/A
MAXIMUM BUILDING FOOTPRINT (PROPOSED)	=	256,924 sq. ft.±
IMPERVIOUS AREA (EXISTING) (0.0%)	=	0.000 ac.±
IMPERVIOUS AREA (PROPOSED) (60.9%)	=	12.587 ac.±
LANDSCAPE AREA (EXISTING) (100%)	=	20.665 ac.±
LANDSCAPE AREA (PROPOSED) (39.1%)	=	8.078 ac.±

PARKING REQUIREMENTS:
INDUSTRIAL USES / WAREHOUSING:
1 space/2 employees X 230 EMPLOYEES = 115 SPACES
PARKING (PROVIDED) = 115 SPACES (5 HANDICAP ACCESSIBLE)

OFF–STREET LOADING REQUIREMENTS:
WAREHOUSING:
1 space/20,000 sq. ft. X 256,924 sq. ft. = 13 SPACES

PARKING (REQUIRED) = 13 SPACES
PARKING (PROVIDED) = 61 SPACES

PAVEMENT SHOWN SHALL BE HEAVY DUTY BITUMINOUS CONCRETE

PAVEMENT SHOWN SHALL BE MEDIUM DUTY BITUMINOUS CONCRETE

AREA SHOWN SHALL BE 8" OF CONCRETE (MDOT SHA MIX No. 3) WITH 6x6 WELDED WIRE MESH (GAUGE 10)

PROPOSED CONCRETE SIDEWALK TYPICAL WHERE SHOWN

REMAINING PARCEL 6–1

LANDS N/F OF STEPHEN M. WALTERS
M.L.M. 762/359
ZONED – RCD

MILLS BRANCH

PERENNIAL STREAM

NONTIDAL WETLANDS

WOODLANDS

BUFFER

100'

25'

PROTECTED FOREST RETENTION AREA #1

PROTECTED FOREST RETENTION AREA #2

PROTECTED FOREST RETENTION AREA #3

FLOODPLAIN LINE ZONE "A"

PROPOSED 30' WIDE DRAINAGE EASEMENT

SUBMERGED GRAVEL WETLANDS #1

SUBMERGED GRAVEL WETLANDS #2

PROPOSED TRAILER PARKING
57 SPACES

LOADING DOCKS
45 SPACES

PROPOSED TRAILER PARKING – 45 SPACES

PROPOSED TRAILER PARKING
16 SPACES

PROPOSED 256,924 sq. ft.±
MANUFACTURING/WAREHOUSE BUILDING
F.F. ELEV. = 36.00

MECHANICAL ROOM

BIORETENTION AREA #5

BIORETENTION AREA #1, #2, #3 & #4

BIORETENTION AREA #8 & #9

BIORETENTION AREA #6 & #7

EXISTING STORMWATER MANAGEMENT POND

PROPOSED MONUMENT SIGN

L.O.D.

B.R.L.

WETLANDS

STREAM

PC = 724+81.23

PT = 728+43.34

EDGE OF ROAD

SEE: SRC PLAT 54647

LANDS N/F OF S.H.A.
M.L.M. 191/127
ZONED – EC

PARCEL 6–1
LOT 1

PERIMETER BOUNDARY COURSES AND DISTANCES

LINE	BEARING	DISTANCE
1	S 13°28'01" W	98.49'
2	S 07°48'59" W	100.00'
3	S 01°38'45" E	152.07'
4	S 02°06'21" W	50.25'
5	S 10°40'44" W	100.13'
6	S 14°39'33" W	251.79'
7	S 62°16'44" W	86.02'
8	S 59°22'45" W	80.43'
9	S 34°22'53" W	55.90'
10	S 10°06'25" W	50.04'
11	S 03°29'37" E	50.99'
12	S 04°22'58" W	100.18'
13	N 82°09'25" W	357.39'
14	N 37°59'44" W	105.56'
15	N 37°21'28" W	477.89'
16	N 30°27'05" E	109.13'
17	N 32°52'28" E	74.30'
18	N 23°16'25" E	122.21'
19	N 14°12'41" W	328.24'
20	N 37°50'35" E	91.41'
21	N 82°50'35" E	350.00'
22	S 82°09'25" E	350.00'
23	S 63°33'00" E	225.77'

NOTE:
SEE SUBDIVISION PLATS PREPARED BY DMS & ASSOCIATES, INC. FOR ADDITIONAL PROPERTY LINE INFORMATION

LEGEND

- DEED POINT (UNLESS OTHERWISE NOTED)
- EDGE OF EXISTING/PROPOSED WOODSLINE
- EDGE OF WOODSLINE TO BE REMOVED
- FLOOD PLAIN LINE
- PERENNIAL STREAM
- NONTIDAL WETLAND MARGIN
- 25' BUFFER FROM NONTIDAL WETLANDS BUFFER
- MpB / WdcB — SOILS LINE AND TYPE
- L.O.D. — LIMITS OF DISTURBANCE

CONCRETE MONUMENT COORDINATE TABLE

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
4	CONC. MONUMENT SET	586117.8198	1633906.9826	---'---
5	CONC. MONUMENT SET	585915.5964	1633909.5034	---'---
6	CONC. MONUMENT SET	585573.6069	1633827.2280	---'---

CONSTRUCTION STAKEOUT COORDINATE TABLE

POINT #	DESCRIPTION	NORTHING	EASTING
7	Sta. 717+50.00	585564.0979	1633896.5808
1831	Sta. 722+00.00	586009.9169	1633957.7808
1832	PC = Sta. 724+81.23	586288.5363	1633996.0283
842	PT = Sta. 728+43.34	586635.5227	1633921.6755

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT — DATE

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

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. 22045, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN J. SHEARON — No. 22045 — PROFESSIONAL ENGINEER

NOVEMBER 15, 2023
DATE — SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

REVISION	DATE
PER TAC COMMENTS	10-9-23
PER MDOT COMMENTS	11-15-23
PER TAC COMMENTS	5-24-24

OVERALL SITE PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6–1

DATE	MARCH '23
SCALE	1" = 60'
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31-2021165
DESIGNED BY	KJS
SHEET No. –	C-2.01
CADD FILE –	21165C2201

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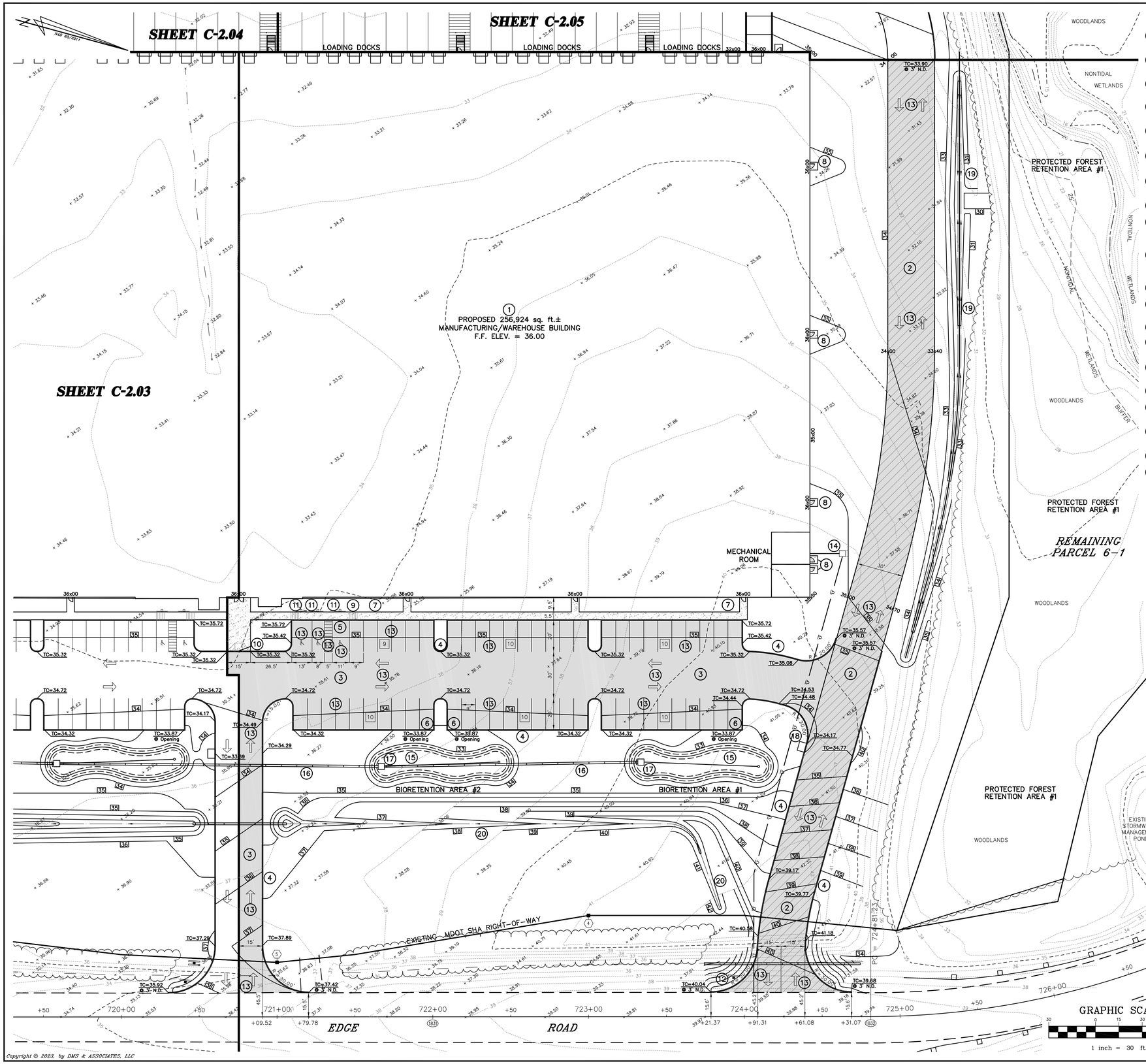

DRAWING NOTES
(APPLY TO THIS DRAWING ONLY)

1. – PROPOSED WAREHOUSE/MANUFACTURING BUILDING. SEE ARCHITECTURAL PLANS FOR DETAIL.
2. – PROVIDE HEAVY DUTY ASPHALT PAVING. SEE PAVEMENT SECTION ON THIS SHEET.
3. – PROVIDE MEDIUM DUTY ASPHALT PAVING. SEE PAVEMENT SECTION ON THIS SHEET.
4. – PROVIDE 6" CONCRETE CURB AND GUTTER PER DETAIL (RD–103.02) ON SHEET C–5.01.
5. – PROVIDE DEPRESSED CONCRETE CURB AND GUTTER PER DETAIL (MD–620.03) ON SHEET C–5.01.
6. – PROVIDE STANDARD 2' CURB DEPRESSION OPENING PER DETAIL ON SHEET C–5.01.
7. – PROVIDE CONCRETE SIDEWALK (5' WIDE min.) PER A.D.A. STANDARDS. SEE DETAIL (RD–104.01) ON SHEET C–5.01.
8. – PROVIDE 5'x5' CONCRETE PAD.
9. – PROVIDE A.D.A. COMPLIANT SIDEWALK RAMP (PERPENDICULAR) PER DETAIL ON SHEET C–5.01. PROVIDE DETECTABLE WARNING SURFACE PER DETAIL (MD–655.40) ON SHEET C–5.01.
10. – PROVIDE A.D.A. COMPLIANT SIDEWALK RAMP (PARALLEL) PER DETAIL (MD–655–12) ON SHEET C–5.01. PROVIDE DETECTABLE WARNING SURFACE PER DETAIL (MD–655.40) ON SHEET C–5.01.
11. – PROVIDE A.D.A. PARKING SIGNAGE PER DETAIL ON SHEET C–5.01.
12. – PROVIDE A "STOP" SIGN AND BAR PER M.S.H.A AND M.U.T.C.D. STANDARDS AND SPECIFICATIONS.
13. – PROVIDE PAVEMENT MARKINGS (CROSSWALKS, PARKING SPACE STRIPING).
14. – PROVIDE ELECTRIC TRANSFORMER WITH CONCRETE BOLLARDS. CONTRACTOR SHALL CONTACT UTILITY OWNER OF SPECIFICATIONS.
15. – PROVIDE BIORETENTION AREA. SEE MATERIAL SPECIFICATIONS ON SHEET C–3.00.
16. – PROVIDE STORMDRAIN PIPING.
17. – PROVIDE A SINGLE "WR" INLET PER DETAIL (MD–374.06) ON SHEET C–5.02.
18. – PROVIDE A COG/COS OPENING PER DETAIL (MD–374.68) ON SHEET C–5.02.
19. – PROVIDE A 2' WIDE TRAPEZOIDAL DITCH WITH 3:1 SIDE SLOPES @ 1.25%.
20. – PROVIDE A "V–DITCH" WITH 3:1 SIDE SLOPES.

(2) PAVEMENT SHOWN SHALL BE HEAVY DUTY 7" BITUMINOUS CONCRETE (2" SUPERPAVE ASPHALT MIX 9.5mm FOR SURFACE, PG 64S–22 ON 5" SUPERPAVE ASPHALT MIX 19.0mm FOR BASE, PG 64S–22 ON 12" OF CR–6 SUB– COMPACTED IN 2, 6" LIFTS. SUBGRADE AND CR–6 ARE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

(3) PAVEMENT SHOWN SHALL BE MEDIUM DUTY 4" BITUMINOUS CONCRETE (1.5" SUPERPAVE ASPHALT MIX 9.5mm FOR SURFACE, PG 64S–22 ON 2.5" SUPERPAVE ASPHALT MIX 19.0mm FOR BASE) ON 6" OF CR–6 ON COMPACTED SUBGRADE. SUBGRADE AND CR–6 ARE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

(7) PROPOSED CONCRETE SIDEWALK AND PAD. PER DETAIL ON SHEET C–5.01.

(8) TYPICAL WHERE SHOWN

E E	EXISTING UNDERGROUND ELECTRIC LINE
T T T	EXISTING UNDERGROUND ELECTRIC LINE
	EXISTING GUARDRAIL
	EDGE OF EXISTING/PROPOSED TREELINE
× 30.14	EXISTING SPOT ELEVATION
29x75	PROPOSED SPOT ELEVATION
TC=31.72	PROPOSED TOP OF CURB ELEVATION
32	EXISTING CONTOUR
33	PROPOSED CONTOUR
	PROPOSED SIGN
?	PROPOSED NUMBER OF PARKING SPACES
	PROPOSED ACCESSIBLE PARKING SPACE

CONCRETE MONUMENT COORDINATE TABLE

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
4	CONC. MONUMENT SET	586117.8198	1633906.9826	————
5	CONC. MONUMENT SET	585915.5964	1633909.5034	————

CONSTRUCTION STAKEOUT COORDINATE TABLE

POINT #	DESCRIPTION	NORTHING	EASTING
831	Sta. 722+00.00	586009.9169	1633957.7808
832	PC = Sta. 724+81.23	586288.5363	1633996.0283

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS
KENT SOIL AND WATER CONSERVATION DISTRICT
KENT COUNTY DEPARTMENT OF PLANNING AND ZONING
KENT COUNTY HEALTH DEPARTMENT

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. 22004 EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN J. SHEARON — 22004 — REGISTERED PROFESSIONAL ENGINEER

NOVEMBER 15, 2023
DATE SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

REVISION	DATE
PER TAC COMMENTS	10-9-23
PER TAC COMMENTS	5-24-24

SITE AND GRADING PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6–1

SCALE	1" = 30'
DRAWN BY	WJM
DESIGNED BY	KJS
DATE	MARCH '23
JOB No.	2021165
FOLDER Ref.	31–2021165
SHEET No. –	C–2.02
CADD FILE –	21165C2202

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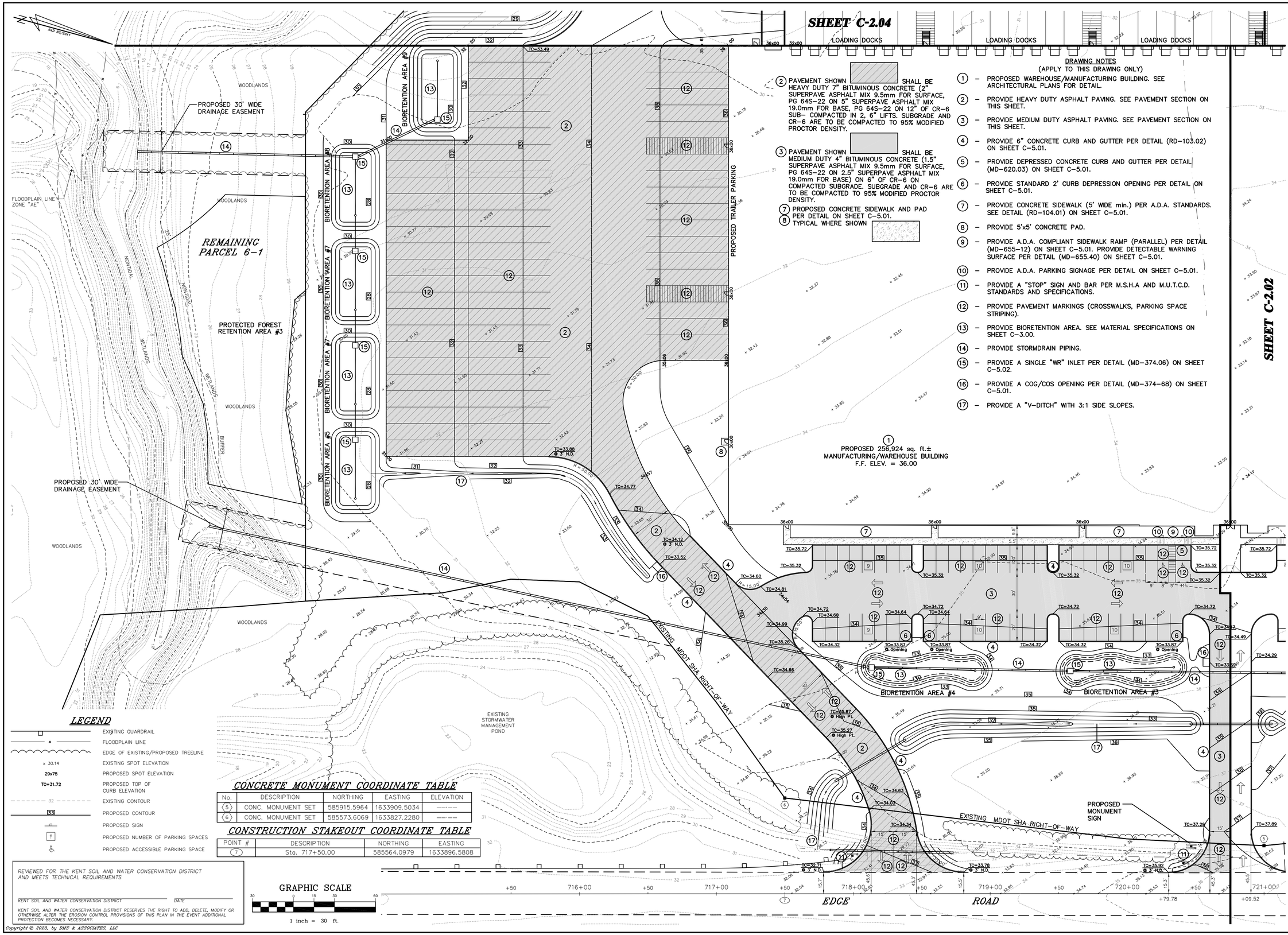
SHEET C-2.04

SHEET C-2.02



DRAWING NOTES
(APPLY TO THIS DRAWING ONLY)

1. – PROPOSED WAREHOUSE/MANUFACTURING BUILDING. SEE ARCHITECTURAL PLANS FOR DETAIL.
2. – PROVIDE HEAVY DUTY ASPHALT PAVING. SEE PAVEMENT SECTION ON THIS SHEET.
3. – PROVIDE MEDIUM DUTY ASPHALT PAVING. SEE PAVEMENT SECTION ON THIS SHEET.
4. – PROVIDE 6" CONCRETE CURB AND GUTTER PER DETAIL (RD–103.02) ON SHEET C–5.01.
5. – PROVIDE DEPRESSED CONCRETE CURB AND GUTTER PER DETAIL (MD–620.03) ON SHEET C–5.01.
6. – PROVIDE STANDARD 2' CURB DEPRESSION OPENING PER DETAIL ON SHEET C–5.01.
7. – PROVIDE CONCRETE SIDEWALK (5' WIDE min.) PER A.D.A. STANDARDS. SEE DETAIL (RD–104.01) ON SHEET C–5.01.
8. – PROVIDE 5'x5' CONCRETE PAD.
9. – PROVIDE A.D.A. COMPLIANT SIDEWALK RAMP (PARALLEL) PER DETAIL (MD–655–12) ON SHEET C–5.01. PROVIDE DETECTABLE WARNING SURFACE PER DETAIL (MD–655.40) ON SHEET C–5.01.
10. – PROVIDE A.D.A. PARKING SIGNAGE PER DETAIL ON SHEET C–5.01.
11. – PROVIDE A "STOP" SIGN AND BAR PER M.S.H.A AND M.U.T.C.D. STANDARDS AND SPECIFICATIONS.
12. – PROVIDE PAVEMENT MARKINGS (CROSSWALKS, PARKING SPACE STRIPING).
13. – PROVIDE BIORETENTION AREA. SEE MATERIAL SPECIFICATIONS ON SHEET C–3.00.
14. – PROVIDE STORMDRAIN PIPING.
15. – PROVIDE A SINGLE "WR" INLET PER DETAIL (MD–374.06) ON SHEET C–5.02.
16. – PROVIDE A COG/COS OPENING PER DETAIL (MD–374–68) ON SHEET C–5.01.
17. – PROVIDE A "V–DITCH" WITH 3:1 SIDE SLOPES.

(2) PAVEMENT SHOWN ▭ SHALL BE HEAVY DUTY 7" BITUMINOUS CONCRETE (2" SUPERPAVE ASPHALT MIX 9.5mm FOR SURFACE, PG 64S–22 ON 5" SUPERPAVE ASPHALT MIX 19.0mm FOR BASE, PG 64S–22 ON 12" OF CR–6 SUB– COMPACTED IN 2, 6" LIFTS. SUBGRADE AND CR–6 ARE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

(3) PAVEMENT SHOWN ▭ SHALL BE MEDIUM DUTY 4" BITUMINOUS CONCRETE (1.5" SUPERPAVE ASPHALT MIX 9.5mm FOR SURFACE, PG 64S–22 ON 2.5" SUPERPAVE ASPHALT MIX 19.0mm FOR BASE) ON 6" OF CR–6 ON COMPACTED SUBGRADE. SUBGRADE AND CR–6 ARE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

(7) PROPOSED CONCRETE SIDEWALK AND PAD PER DETAIL ON SHEET C–5.01.

(8) TYPICAL WHERE SHOWN ▭

(1) PROPOSED 256,924 sq. ft.± MANUFACTURING/WAREHOUSE BUILDING F.F. ELEV. = 36.00

LEGEND

□	EXISTING GUARDRAIL
×	FLOODPLAIN LINE
	EDGE OF EXISTING/PROPOSED TREELINE
x 30.14	EXISTING SPOT ELEVATION
29x75	PROPOSED SPOT ELEVATION
TC=31.72	PROPOSED TOP OF CURB ELEVATION
32	EXISTING CONTOUR
33	PROPOSED CONTOUR
	PROPOSED SIGN
?	PROPOSED NUMBER OF PARKING SPACES
	PROPOSED ACCESSIBLE PARKING SPACE

CONCRETE MONUMENT COORDINATE TABLE

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
5	CONC. MONUMENT SET	585915.5964	1633909.5034	---.---
6	CONC. MONUMENT SET	585573.6069	1633827.2280	---.---

CONSTRUCTION STAKEOUT COORDINATE TABLE

POINT #	DESCRIPTION	NORTHING	EASTING
7	Sta. 717+50.00	585564.0979	1633896.5808

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

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KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

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. 22004, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN JOSEPH KILDEA — 22004 — REGISTERED PROFESSIONAL ENGINEER

NOVEMBER 15, 2023
SEAL
DATE

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN, ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

REVISION	DATE
PER TAC COMMENTS	10-9-23
PER MDOT COMMENTS	11-15-23

SITE AND GRADING PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6–1

DATE	MARCH '23
SCALE	1" = 30'
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31-2021165
DESIGNED BY	KJS
SHEET No. –	C–2.03
CADD FILE –	21165C2203

RSD 60/2011

DRAWING NOTES
(APPLY TO THIS DRAWING ONLY)

1. – PROPOSED WAREHOUSE/MANUFACTURING BUILDING. SEE ARCHITECTURAL PLANS FOR DETAIL.
2. – PROVIDE HEAVY DUTY ASPHALT PAVING. SEE PAVEMENT SECTION ON THIS SHEET.
3. – PROVIDE 6" CONCRETE CURB AND GUTTER PER DETAIL (RD-103.02) ON SHEET C-5.01.
4. – PROVIDE 5'x5' CONCRETE PAD.
5. – PROVIDE RETAINING WALL. SEE STRUCTURAL PLANS FOR DETAIL.
6. – PROVIDE CONCRETE BOLLARDS. SEE ARCHITECTURAL PLANS FOR DETAIL.
7. – PROVIDE PAVEMENT MARKINGS (CROSSWALKS, PARKING SPACE STRIPING).
8. – PROVIDE SUBMERGED GRAVEL WETLANDS. SEE MATERIAL SPECIFICATIONS ON SHEET C-3.00.
9. – PROVIDE STORMDRAIN PIPING.
10. – PROVIDE A CURB INLET PER DETAIL (RD-106.01) ON SHEET C-5.01.

(2) PAVEMENT SHOWN ▨ SHALL BE HEAVY DUTY 7" BITUMINOUS CONCRETE (2" SUPERPAVE ASPHALT MIX 9.5mm FOR SURFACE, PG 64S-22 ON 5" SUPERPAVE ASPHALT MIX 19.0mm FOR BASE, PG 64S-22 ON 12" OF CR-6 SUB- COMPACTED IN 2, 6" LIFTS. SUBGRADE AND CR-6 ARE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

AREA SHOWN ▨ SHALL BE 8" OF CONCRETE (MDOT SHA MIX No. 3) WITH 6x6 WELDED WIRE MESH (GAUGE 10) ON 6" OF CR-6 ON COMPACTED SUBGRADE. CR-6 AND SUBGRADE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY. PROVIDE EXPANSION JOINTS AT 10' INTERVALS.

(4) PROPOSED CONCRETE SIDEWALK PER DETAIL ON SHEET C-5.01. TYPICAL WHERE SHOWN ▨

LEGEND

——— x ———	FLOODPLAIN LINE
∿∿∿∿∿	EDGE OF EXISTING/PROPOSED TREELINE
x 30.14	EXISTING SPOT ELEVATION
29x75	PROPOSED SPOT ELEVATION
TC=31.72	PROPOSED TOP OF CURB ELEVATION
32	EXISTING CONTOUR
33	PROPOSED CONTOUR

REMAINING PARCEL 6-1

PROPOSED 30' WIDE DRAINAGE EASEMENT

FLOODPLAIN LINE ZONE "AE"

PROTECTED FOREST RETENTION AREA #2

PROTECTED FOREST RETENTION AREA #3

SUBMERGED GRAVEL WETLANDS #1

FOREBAY

BIORETENTION AREA #4

BIORETENTION AREA #5

PROPOSED TRAILER PARKING

LOADING DOCKS

(1) PROPOSED 256,924 sq. ft.± MANUFACTURING/WAREHOUSE BUILDING F.F. ELEV. = 36.00

SHEET C-2.03

SHEET C-2.05

SHEET C-2.02

WOODLANDS, NONTIDAL WETLANDS, BUFFER, STREAM, 100' BUFFER

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

KENT SOIL AND WATER CONSERVATION DISTRICT

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. 22045, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN J. SHEARON — 22045 — REGISTERED PROFESSIONAL ENGINEER

DATE: OCTOBER 9, 2023 SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN, ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

REVISION	DATE
PER TAC COMMENTS	10-9-23

SITE AND GRADING PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

SCALE	1" = 30'
DRAWN BY	WJM
DESIGNED BY	KJS
DATE	MARCH '23
JOB No.	2021165
FOLDER Ref.	31-2021165
SHEET No. –	C-2.04
CADD FILE –	21165C2204

Copyright © 2023, by DMS & ASSOCIATES, LLC

DRAWING NOTES
(APPLY TO THIS DRAWING ONLY)

1. – PROPOSED WAREHOUSE/MANUFACTURING BUILDING. SEE ARCHITECTURAL PLANS FOR DETAIL.
2. – PROVIDE HEAVY DUTY ASPHALT PAVING. SEE PAVEMENT SECTION ON THIS SHEET.
3. – PROVIDE 6" CONCRETE CURB AND GUTTER PER DETAIL (RD–103.02) ON SHEET C–5.01.
4. – PROVIDE 5'x5' CONCRETE PAD.
5. – PROVIDE RETAINING WALL. SEE STRUCTURAL PLANS FOR DETAIL.
6. – PROVIDE CONCRETE BOLLARDS. SEE ARCHITECTURAL PLANS FOR DETAIL.
7. – PROVIDE PAVEMENT MARKINGS (CROSSWALKS, PARKING SPACE STRIPING)
8. – PROVIDE SUBMERGED GRAVEL WETLANDS. SEE MATERIAL SPECIFICATIONS ON SHEET C–3.00.
9. – PROVIDE STORMDRAIN PIPING.
10. – PROVIDE A CURB INLET PER DETAIL (RD–106.01) ON SHEET C–5.01.

(2) PAVEMENT SHOWN SHALL BE HEAVY DUTY 7" BITUMINOUS CONCRETE (2" SUPERPAVE ASPHALT MIX 9.5mm FOR SURFACE, PG 64S–22 ON 5" SUPERPAVE ASPHALT MIX 19.0mm FOR BASE, PG 64S–22 ON 12" OF CR–6 SUB– COMPACTED IN 2, 6" LIFTS. SUBGRADE AND CR–6 ARE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

AREA SHOWN SHALL BE 8" OF CONCRETE (MDOT SHA MIX No. 3) WITH 6x6 WELDED WIRE MESH (GAUGE 10) ON 6" OF CR–6 ON COMPACTED SUBGRADE. CR–6 AND SUBGRADE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY. PROVIDE EXPANSION JOINTS AT 10' INTERVALS.

(4) PROPOSED CONCRETE PAD TYPICAL WHERE SHOWN

LEGEND

- FLOODPLAIN LINE
- EDGE OF EXISTING/PROPOSED TREELINE
- x 30.14 — EXISTING SPOT ELEVATION
- 30x80 — PROPOSED SPOT ELEVATION
- TC=31.72 — PROPOSED TOP OF CURB ELEVATION
- 32 — EXISTING CONTOUR
- 33 — PROPOSED CONTOUR

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT DOCUMENT 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. 22045, EXPIRATION DATE: 9–2–25

STATE OF MARYLAND — KEVIN J. SHEARON — No. 22045 — PROFESSIONAL ENGINEER

DATE: OCTOBER 9, 2023 SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN, ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1–443–262–3130
FAX: 1–443–262–3148

REVISION	DATE
PER TAC COMMENTS	10–9–23
PER TAC COMMENTS	5–24–24

SITE AND GRADING PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6–1

DATE	MARCH '23
SCALE	1" = 30'
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31–2021165
DESIGNED BY	KJS
SHEET No. –	C–2.05
CADD FILE –	21165C2205

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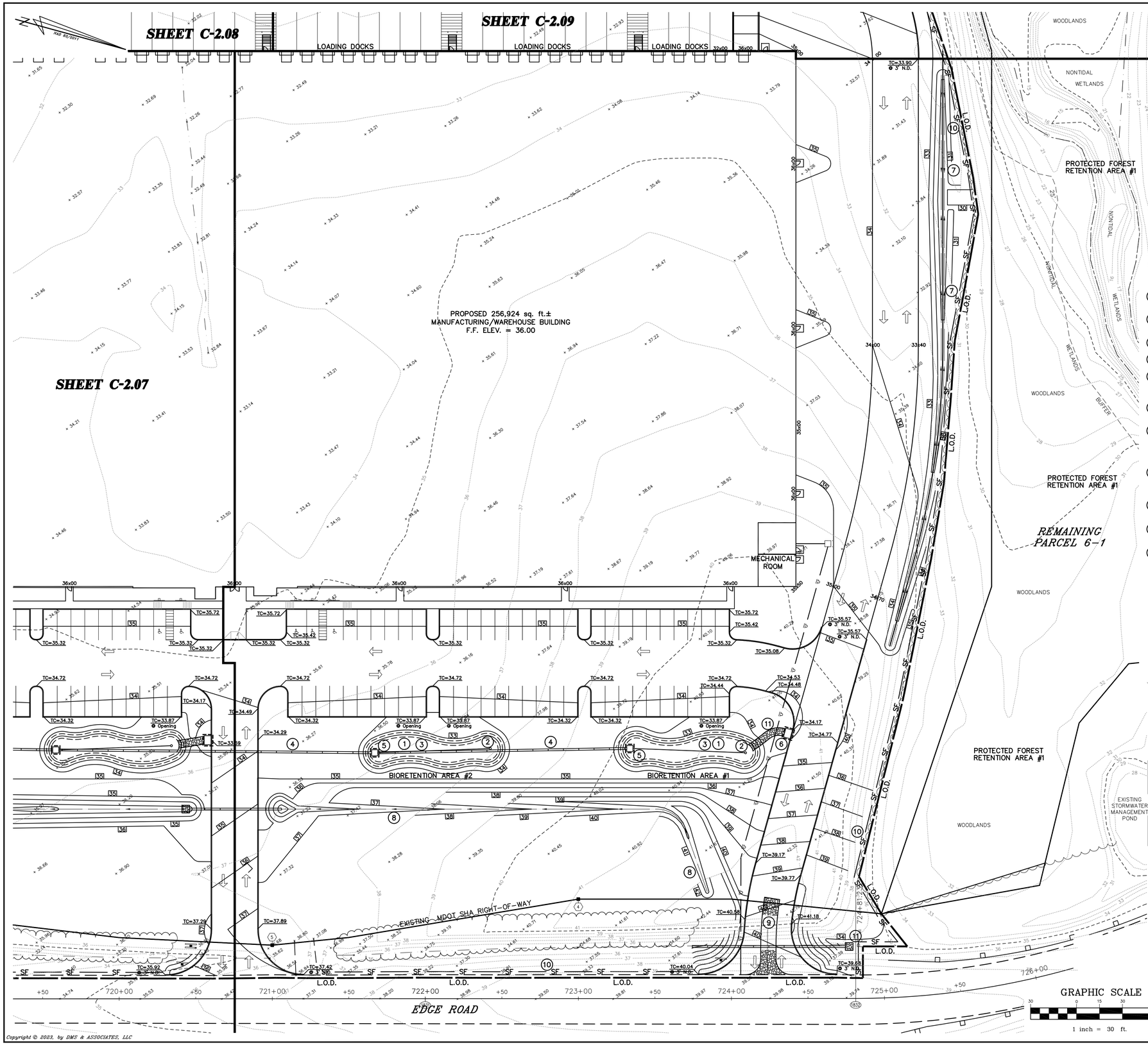

DRAWING NOTES
(APPLY TO THIS DRAWING ONLY)

1. – PROVIDE BIORETENTION AREA. SEE MATERIAL SPECIFICATIONS ON SHEET C-3.00 AND TYPICAL SECTIONS ON SHEET C-3.01.
2. – PROVIDE A 6" PVC OBSERVATION PORT/CLEANOUT PER DETAIL ON SHEET C-5.02.
3. – PROVIDE 6" PERFORATED PVC STORMDRAIN.
4. – PROVIDE STORMDRAIN PIPING.
5. – PROVIDE A SINGLE "WR" INLET PER DETAIL (MD-374.06) ON SHEET C-5.02. PROVIDE "AT GRADE" INLET PROTECTION PER DETAIL (E-9-2) ON SHEET C-5.03.
6. – PROVIDE A COG/COS OPENING PER DETAIL (MD-374-68) ON SHEET C-5.01.
7. – PROVIDE A 2' WIDE TRAPEZOIDAL DITCH WITH 3:1 SIDE SLOPES @ 1.25% STABILIZE WITH TOPSOIL, SEED AND SOIL STABILIZATION MATTING – CHANNEL APPLICATION PER DETAIL (B-4-6-C) ON SHEET C-5.03.
8. – PROVIDE A "V-DITCH" WITH 3:1 SIDE SLOPES. STABILIZE WITH TOPSOIL, SEED AND SOIL STABILIZATION MATTING – CHANNEL APPLICATION PER DETAIL (B-4-6-C) ON SHEET C-5.03.
9. – PROVIDE A STABILIZED CONSTRUCTION ENTRANCE PER DETAIL (B-1) ON SHEET C-5.03.
10. – PROVIDE PERIMETER SILT FENCE PER DETAIL (E-1) ON SHEET C-5.03. TYPICAL WHERE SHOWN – —SF— .
11. – PROVIDE RIPRAP OUTLET PROTECTION PER DETAIL (D-4-1-B) ON SHEET C-5.03.

LEGEND

E E	EXISTING UNDERGROUND ELECTRIC LINE
A A A	EXISTING UNDERGROUND ELECTRIC LINE
	EXISTING GUARDRAIL
	EDGE OF EXISTING/PROPOSED TREELINE
× 30.14	EXISTING SPOT ELEVATION
29x75	PROPOSED SPOT ELEVATION
TC=31.72	PROPOSED TOP OF CURB ELEVATION
32	EXISTING CONTOUR
33	PROPOSED CONTOUR
	PROPOSED SIGN
	PROPOSED ACCESSIBLE PARKING SPACE

CONCRETE MONUMENT COORDINATE TABLE

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
4	CONC. MONUMENT SET	586117.8198	1633906.9826	——.——
5	CONC. MONUMENT SET	585915.5964	1633909.5034	——.——

CONSTRUCTION STAKEOUT COORDINATE TABLE

POINT #	DESCRIPTION	NORTHING	EASTING
831	Sta. 722+00.00	586009.9169	1633957.7808
832	PC = Sta. 724+81.23	586288.5363	1633996.0283

L.O.D. – DENOTES LIMITS OF DISTURBANCE
AREA = 20.42 ACRES±

NOTE:
SEDIMENT AND EROSION CONTROL WILL BE STRICTLY ENFORCED.

NOTE:
FOLLOWING INITIAL DISTURBANCE, PERMANENT OR TEMPORARY, STABILIZATION SHALL BE COMPLETED WITHIN 3 CALENDAR DAYS ON ALL PERIMETER CONTROLS AND SLOPES GREATER THAN 4:1 AND 7 DAYS ON ALL OTHER DISTURBED AREAS ON THE SITE.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT *DATE*

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THE DOCUMENT 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. 22046, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND * KEVIN W. HEARON * 22046 * REGISTERED PROFESSIONAL ENGINEER

NOVEMBER 15, 2023
DATE SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

REVISION	DATE
PER TAC COMMENTS	10-9-23
PER MDOT COMMENTS	11-15-23
PER TAC COMMENTS	5-24-24

STORMWATER MANAGEMENT AND SEDIMENT & EROSION CONTROL PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

SCALE	1" = 30'
DRAWN BY	WJM
DESIGNED BY	KJS
DATE	MARCH '23
JOB No.	2021165
FOLDER Ref.	31-2021165
SHEET No. –	C-2.06
CADD FILE –	21165C2206

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SHEET C-2.08

SHEET C-2.06

PROPOSED 30' WIDE DRAINAGE EASEMENT

PROPOSED 30' WIDE DRAINAGE EASEMENT

FLOODPLAIN LINE ZONE "AE"

REMAINING PARCEL 6-1

PROTECTED FOREST RETENTION AREA #3

BIORETENTION AREA #9

BIORETENTION AREA #8

BIORETENTION AREA #7

BIORETENTION AREA #5

BIORETENTION AREA #4

BIORETENTION AREA #3

PROPOSED TRAILER PARKING

PROPOSED 256,924 sq. ft.± MANUFACTURING/WAREHOUSE BUILDING F.F. ELEV. = 36.00

LOADING DOCKS

LOADING DOCKS

LOADING DOCKS

EXISTING STORMWATER MANAGEMENT POND

EXISTING MDOT SHA RIGHT-OF-WAY

WOODLANDS

NONTIDAL WETLANDS

BUFFER

L.O.D.

SF

LEGEND

- EXISTING GUARDRAIL
- FLOODPLAIN LINE
- EDGE OF EXISTING/PROPOSED TREELINE
- × 30.14 — EXISTING SPOT ELEVATION
- 29×75 — PROPOSED SPOT ELEVATION
- TC=31.72 — PROPOSED TOP OF CURB ELEVATION
- 32 — EXISTING CONTOUR
- 33 — PROPOSED CONTOUR
- PROPOSED SIGN
- PROPOSED ACCESSIBLE PARKING SPACE

SEDIMENT AND EROSION CONTROL WILL BE STRICTLY ENFORCED.

NOTE:
FOLLOWING INITIAL DISTURBANCE, PERMANENT OR TEMPORARY, STABILIZATION SHALL BE COMPLETED WITHIN 3 CALENDAR DAYS ON ALL PERIMETER CONTROLS AND SLOPES GREATER THAN 4:1 AND 7 DAYS ON ALL OTHER DISTURBED AREAS ON THE SITE.

L.O.D. – DENOTES LIMITS OF DISTURBANCE
AREA = 20.42 ACRES±

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT — *DATE*

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

Copyright © 2023, by DMS & ASSOCIATES, LLC

CONCRETE MONUMENT COORDINATE TABLE

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
(5)	CONC. MONUMENT SET	585915.5964	1633909.5034	—.—
(6)	CONC. MONUMENT SET	585573.6069	1633827.2280	—.—

CONSTRUCTION STAKEOUT COORDINATE TABLE

POINT #	DESCRIPTION	NORTHING	EASTING
(7)	Sta. 717+50.00	585564.0979	1633896.5808

DRAWING NOTES
(APPLY TO THIS DRAWING ONLY)

1. – PROVIDE BIORETENTION AREA. SEE MATERIAL SPECIFICATIONS ON SHEET C-3.00 AND TYPICAL SECTIONS ON SHEET C-3.01.
2. – PROVIDE A 6" PVC OBSERVATION PORT/CLEANOUT PER DETAIL ON SHEET C-5.02.
3. – PROVIDE 6" PERFORATED PVC STORMDRAIN.
4. – PROVIDE STORMDRAIN PIPING.
5. – PROVIDE A SINGLE "WR" INLET PER DETAIL (MD-374.06) ON SHEET C-5.02. PROVIDE "AT GRADE" INLET PROTECTION PER DETAIL (E-9-2) ON SHEET C-5.03.
6. – PROVIDE A COG/COS OPENING PER DETAIL (MD-374-68) ON SHEET C-5.01.
7. – PROVIDE A "V-DITCH" WITH 3:1 SIDE SLOPES. STABILIZE WITH TOPSOIL, SEED AND SOIL STABILIZATION MATTING – CHANNEL APPLICATION PER DETAIL (B-4-6-C) ON SHEET C-5.03.
8. – PROVIDE PERIMETER SILT FENCE PER DETAIL (E-1) ON SHEET C-5.03. TYPICAL WHERE SHOWN ——SF——.
9. – PROVIDE RIPRAP OUTLET PROTECTION PER DETAIL (D-4-1-B) ON SHEET C-5.03.

EDGE ROAD

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

KENT SOIL AND WATER CONSERVATION DISTRICT

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT DOCUMENT 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. 22045, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN WILLIAM HEARON — No. 22045 — PROFESSIONAL ENGINEER

NOVEMBER 15, 2023
DATE

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

REVISION	DATE
PER TAC COMMENTS	10-9-23
PER MDOT COMMENTS	11-15-23

STORMWATER MANAGEMENT AND SEDIMENT & EROSION CONTROL PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

SCALE	1" = 30'
DRAWN BY	WJM
DESIGNED BY	KJS
DATE	MARCH '23
JOB No.	2021165
FOLDER Ref.	31-2021165
SHEET No. –	C-2.07
CADD FILE –	21165C2207

REVISED 05/2011

DRAWING NOTES
(APPLY TO THIS DRAWING ONLY)

1. – PROVIDE SUBMERGED GRAVEL WETLANDS. SEE MATERIAL SPECIFICATIONS ON SHEET C-3.00 AND TYPICAL SECTIONS ON SHEET C-3.01.
2. – PROVIDE A 6" PVC OBSERVATION PORT/CLEANOUT PER DETAIL ON SHEET C-5.02.
3. – PROVIDE 6" PERFORATED PVC STORMDRAIN.
4. – PROVIDE STORMDRAIN PIPING.
5. – PROVIDE A CURB INLET PER DETAIL (RD-106.01) ON SHEET C-5.01. PROVIDE "CURB" INLET PROTECTION PER DETAIL (E-9-3) ON SHEET C-5.03.
6. – PROVIDE PERIMETER SILT FENCE PER DETAIL (E-1) ON SHEET C-5.03. TYPICAL WHERE SHOWN – SF –.
7. – PROVIDE RIPRAP OUTLET PROTECTION PER DETAIL (D-4-1-B) ON SHEET C-5.03.

LEGEND

×	FLOODPLAIN LINE
	EDGE OF EXISTING/PROPOSED TREELINE
x 30.14	EXISTING SPOT ELEVATION
29x75	PROPOSED SPOT ELEVATION
TC=31.72	PROPOSED TOP OF CURB ELEVATION
32	EXISTING CONTOUR
33	PROPOSED CONTOUR

REMAINING PARCEL 6-1

PROPOSED 30' WIDE DRAINAGE EASEMENT

PROTECTED FOREST RETENTION AREA #2

PROTECTED FOREST RETENTION AREA #3

SUBMERGED GRAVEL WETLANDS #1

FOREBAY

BIORETENTION AREA #4

BIORETENTION AREA #5

PROPOSED TRAILER PARKING

LOADING DOCKS

SHEET C-2.07

SHEET C-2.06

SHEET C-2.09

PROPOSED 256,924 sq. ft.±
MANUFACTURING/WAREHOUSE BUILDING
F.F. ELEV. = 36.00

L.O.D. – DENOTES LIMITS OF DISTURBANCE
AREA = 20.42 ACRES±

SEDIMENT AND EROSION CONTROL WILL BE STRICTLY ENFORCED.

NOTE:
FOLLOWING INITIAL DISTURBANCE, PERMANENT OR TEMPORARY, STABILIZATION SHALL BE COMPLETED WITHIN 3 CALENDAR DAYS ON ALL PERIMETER CONTROLS AND SLOPES GREATER THAN 4:1 AND 7 DAYS ON ALL OTHER DISTURBED AREAS ON THE SITE.

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT — DATE

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

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. 22045, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN J. SHEARON — No. 22045 — PROFESSIONAL ENGINEER

OCTOBER 9, 2023
DATE

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-282-9130
FAX: 1-443-282-9148

REVISION	DATE
PER TAC COMMENTS	10-9-23

STORMWATER MANAGENT AND SEDIMENT & EROSCION CONTROL PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

DATE	MARCH '23
JOB No.	2021165
FOLDER Ref.	31-2021165
SCALE	1" = 30'
DRAWN BY	WJM
DESIGNED BY	KJS
SHEET No. –	C-2.08
CADD FILE –	21165C2208

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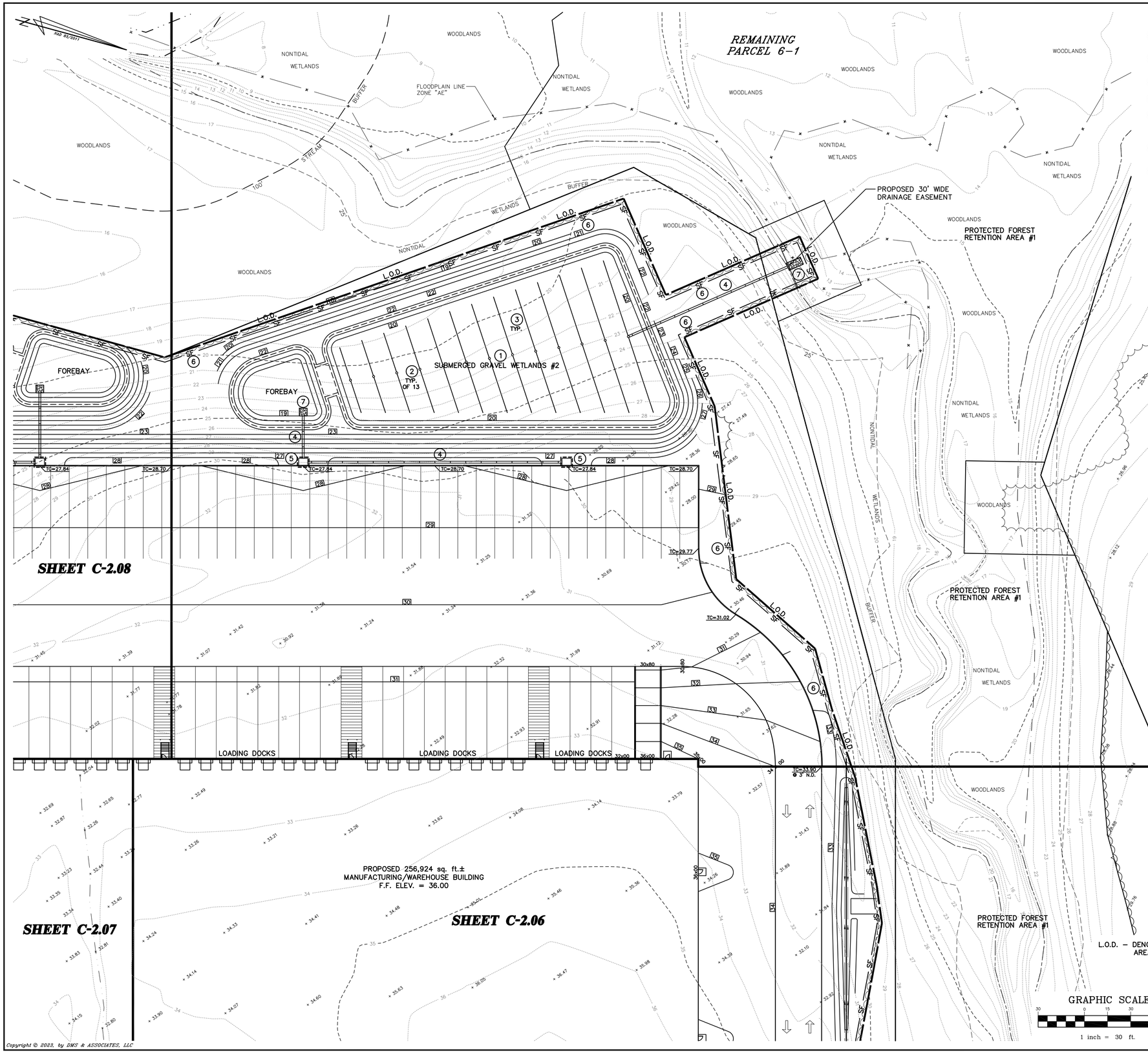

DRAWING NOTES
(APPLY TO THIS DRAWING ONLY)

1. – PROVIDE SUBMERGED GRAVEL WETLANDS. SEE MATERIAL SPECIFICATIONS ON SHEET C-3.00 AND TYPICAL SECTIONS ON SHEET C-3.01.
2. – PROVIDE A 6" PVC OBSERVATION PORT/CLEANOUT PER DETAIL ON SHEET C-5.02.
3. – PROVIDE 6" PERFORATED PVC STORMDRAIN.
4. – PROVIDE STORMDRAIN PIPING.
5. – PROVIDE A CURB INLET PER DETAIL (RD-106.01) ON SHEET C-5.01. PROVIDE "CURB" INLET PROTECTION PER DETAIL (E-9-3) ON SHEET C-5.03.
6. – PROVIDE PERIMETER SILT FENCE PER DETAIL (E-1) ON SHEET C-5.03. TYPICAL WHERE SHOWN ——SF——.
7. – PROVIDE RIPRAP OUTLET PROTECTION PER DETAIL (D-4-1-B) ON SHEET C-5.03.

LEGEND

- FLOODPLAIN LINE
- EDGE OF EXISTING/PROPOSED TREELINE
- x 30.14 — EXISTING SPOT ELEVATION
- 30x80 — PROPOSED SPOT ELEVATION
- TC=31.72 — PROPOSED TOP OF CURB ELEVATION
- 32 — EXISTING CONTOUR
- 33 — PROPOSED CONTOUR

SEDIMENT AND EROSION CONTROL WILL BE STRICTLY ENFORCED.

NOTE:
FOLLOWING INITIAL DISTURBANCE, PERMANENT OR TEMPORARY, STABILIZATION SHALL BE COMPLETED WITHIN 3 CALENDAR DAYS ON ALL PERIMETER CONTROLS AND SLOPES GREATER THAN 4:1 AND 7 DAYS ON ALL OTHER DISTURBED AREAS ON THE SITE.

L.O.D. – DENOTES LIMITS OF DISTURBANCE
AREA = 20.42 ACRES±

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

KENT SOIL AND WATER CONSERVATION DISTRICT

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT 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. 22045, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN WILLIAM SIMPSON — No. 22045 — PROFESSIONAL ENGINEER

DATE: OCTOBER 9, 2023

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

DATE	REVISION
10-9-23	PER TAC COMMENTS
5-24-24	PER TAC COMMENTS

STORMWATER MANAGEMENT AND SEDIMENT & EROSION CONTROL PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

DATE	MARCH '23
JOB No.	2021165
FOLDER Ref.	31-2021165
SCALE	1" = 30'
DRAWN BY	WJM
DESIGNED BY	KJS
SHEET No. –	C-2.09
CADD FILE –	21165C2209

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B.4.C Specifications for Micro–Bioretention

1. Materials Specifications

The allowable materials to be used in bioretention area are detailed in Table B.4.1

2. Filtering Media or Planting Soil

The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the bioretention area that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05.

The planting soil shall be tested and shall meet following criteria:

- –Soil Component – Loamy Sand or Sandy Loam (USDA Soil Textural Classification)
- –Organic Content – Minimum 10% by dry weight (ASTM D 2974). In general, this can be met with a mixture of loamy sand (60%–65%) and compost (35% to 40%) or sandy loam (30%), coarse sand (30%), and compost (40%).
- –Clay Content – Media shall have a clay content of less than 5%.
- –pH Range – Should be between 5.5 – 7.0. Amendments (e.g., lime, iron sulfate plus sulfur) may be mixed into the soil to increase or decrease pH.

There shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH, and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled topsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the topsoil was excavated.

3. Compaction

It is very important to minimize compaction of both the base of bioretention practices and the required backfill. When possible, use excavation hoes to remove original soil. If practices are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high pressure tires will cause excessive compaction resulting in reduced infiltration rates and is not acceptable. Compaction will significantly contribute to design failure.

Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to refracture the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling the optional sand layer. Pump any ponded water before preparing (rototilling) base.

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When backfilling the bioretention facility, place soil in lifts 12" to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

4. Plant Material

See Landscape Plans.

5. Plant Installation

Compost is a better organic material source, is less likely to float, and should be placed in the invert and other low areas. Mulch should be placed in surrounding to a uniform thickness of 2" to 3". Shredded or chipped hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.

Rootstock of the plant materials shall be kept moist during transport and on–site storage. The plant root ball should be planted so 1/8th of the ball is above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

Grasses and legume seed should be drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non–grass ground cover planting specifications.

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

6. Underdrains

Underdrains should meet the following criteria (See profiles for modifications to specifications below):

- –Pipe–Should be 4" to 6" diameter, slotted or perforated rigid plastic pipe (ASTMF 758, Type PS 28, or AASHTO–M–278) in a gravel layer. The preferred material is slotted, 4" rigid pipe (e.g., PVC or HDPE).
- –Perforations–If perforated pipe is used, perforations should be ⅜"diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with a ¼"(No. 4 or 4x4) galvanized hardware cloth.
- –Gravel–The gravel layer (No. 57 stone preferred) shall be at least 3" thick above and below the underdrain.
- –The main collector pipe shall be at a minimum 0.5% slope.
- –A rigid, non–perforated observation well must be provided (one per every 1,0000 square feet) to provide a clean–out port and monitor performance of the filter.
- –A 4" layer of pea gravel (1/8" to 3/8" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".

The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean–out pipes must be provided (one minimum per every 1000 square feet of surface area).

7. Miscellaneous

The bioretention facility may not be constructed until all contributing drainage area has been stabilized.

MATERIAL SPECIFICATIONS FOR MICRO–BIORETENTION.

MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTINGS	SEE LANDSCAPE PLANS	SEE PLAN	PLANTINGS ARE SITE–SPECIFIC – SEE LANDSCAPE PLAN
PLANTINGS SOILS (2' to 4' DEEP)	LOAMY SAND (60% to 65%) & COMPOST (35% to 40%) or SANDY LOAM (30%), COARSE SAND (30%) & COMPOST (40%)	N/A	USDA SOIL TYPES LOAMY SAND OR SANDY LOAM; CLAY CONTENT < 5%
ORGANIC CONTENT	Min. 10% BY DRY WEIGHT (ASTM D 2974)		
PEA GRAVEL DIAPHRAGM	PEA GRAVEL; ASTM–D–448	No. 8 or No. 9 (1/8" to 3/8")	
CURRENT DRAIN	ORNAMENTAL STONE; WASHED COBBLES	STONE: 2" to 5"	
GEOTEXTILE	SEE APPENDIX A, TABLE A.4	N/A	PE TYPE 1 NONWOVEN
GRAVEL (UNDERDRAINS AND INFILTRATION BERMS)	AASHTO M–43	No. 57 or No. 6 AGGREGATE (3/8" to 3/4")	
UNDERDRAIN PIPING	F 758, TYPE PS 28 or AASHTO M–278	4" to 6" RIGID (SCH–40) PVC or SDR–35	SLOTTED OR PERFORATED PIPE; 3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES. PERFORATED PIPE SHALL BE WRAPPED WITH 1/4" GALVANIZED HARDWARE CLOTH
POURED IN PLACE CONCRETE (IF REQUIRED)	MSHA MIX No. 3; f_c = 3500 psi @ 28 DAYS, NORMAL WEIGHT, AIR–ENTRAINED; REINFORCING TO MEET ASTM–615–60	N/A	ON–SITE TESTING OF POURED–IN–PLACE CONCRETE REQUIRED: 28 DAY STRENGTH AND SLUMP TEST; ALL CONCRETE DESIGN (CAST–IN–PLACE OR PRE–CAST) NOT USING PREVIOUSLY APPROVED STATE OR LOCAL STANDARDS REQUIRES DESIGN DRAWINGS SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND – DESIGN TO INCLUDE MEETING ACI CODE 350.R/89; VERTICAL LOADING [H–10 OR H–20]; ALLOWABLE HORIZONTAL LOADING (BASED ON SOIL PRESSURES); AND ANALYSIS OF POTENTIAL CRACKING
SAND	AASHTO M–6 or ASTM–C–33	0.02" to 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE (AASHTO) #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTION ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND

MICRO–BIORETENTION MAINTENANCE SCHEDULE

DESCRIPTION	METHOD	FREQUENCY	TIME OF THE YEAR
SOIL			
INSPECT AND REPAIR EROSION, RESEED	VISUAL	MONTHLY	MONTHLY
ORGANIC LAYER			
TOPSOIL MEDIA SHALL BE REMOVED AND REPLACED WHEN PONDING DRAWDOWN EXCEEDS 48 HOURS	VISUAL	AFTER MAJOR STORM EVENTS	WHENEVER NEEDED
PLANTS			
REMOVAL AND REPLACEMENT OF ALL DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT	SEE PLANTING SPECS.	TWICE A YEAR	3/15 to 4/30 AND 10/1 to 11/30
INSPECT FOR DISEASE/PEST PROBLEMS	VISUAL	ONCE A MONTH (AVERAGE)	INSPECT MORE FREQUENTLY IN WARMER MONTHS
DETERMINE IF TREATMENT IS WARRANTED. USE LEAST TOXIC TREATMENT APPROACH	BY HAND	N/A	VARIES, DEPENDS ON DISEASE OR INSECT INFESTATION
WATERING OF PLANT MATERIAL SHALL TAKE PLACE FOR FOURTEEN CONSECUTIVE DAYS AFTER PLANTING HAS BEEN COMPLETED UNLESS THERE IS SUFFICIENT NATURAL RAINFALL	BY HAND	IMMEDIATELY AFTER COMPLETION OF PROJECT	N/A

BIORETENTION AND SUBMERGED GRAVEL WETLANDS SYSTEM SCHEDULE

SYSTEM NUMBER	SURFACE ELEVATION	TEMPORARY PONDING DEPTH	PIPE INVERT	PLANTING SOIL THICKNESS	PEA GRAVEL THICKNESS	# 57 STONE THICKNESS
BIO #1	___.__	12"	___.__	__"	4"	__"
BIO #2	___.__	12"	___.__	__"	4"	__"
BIO #3	___.__	12"	___.__	__"	4"	__"
BIO #4	___.__	12"	___.__	__"	4"	__"
BIO #5	___.__	12"	___.__	__"	4"	__"
BIO #6	___.__	12"	___.__	__"	4"	__"
BIO #7	___.__	12"	___.__	__"	4"	__"
BIO #8	___.__	12"	___.__	__"	4"	__"
BIO #9	___.__	12"	___.__	__"	4"	__"
SGW #1	___.__	12"	___.__	__"	4"	__"
SGW #2	___.__	12"	___.__	__"	4"	__"

BMP MATERIAL SPECIFICATIONS FOR SUBMERGED GRAVEL WETLANDS

MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTINGS	SEE PLAN	SEE PLAN	PLANTINGS ARE SITE–SPECIFIC – SEE LANDSCAPE PLAN FOR PLANT SPECIES
WETLAND MEDIA	LOAMY SAND COMPOST SANDY LOAM, COARSE SAND & COMPOST	N/A	USDA SOIL TYPES LOAMY SAND OR SANDY LOAM; CLAY CONTENT < 5% ORGANIC MATER CONTENT SHALL BE GREATER THAN 15% HYDRAULIC CONDUCTIVITY SHALL BE BETWEEN 0.01 AND 0.10 ft/day
PEA GRAVEL DIAPHRAGM	PEA GRAVEL; ASTM–D–448	No. 8 or No. 9 (1/8" to 3/8")	
UNDERDRAIN STONE	AASHTO M–43	No. 57 or No. 6 AGGREGATE (3/8" to 3/4")	
UNDERDRAIN PIPING	F 758, TYPE PS 28 or AASHTO M–278	4" to 6" RIGID (SCH–40) PVC or SDR–35	SLOTTED OR PERFORATED PIPE; 3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES. PERFORATED PIPE SHALL BE WRAPPED WITH 1/4" GALVANIZED HARDWARE CLOTH

INSPECTION REQUIREMENTS DURING CONSTRUCTION

THE CONTRACTOR SHALL NOTIFY THE QUEEN ANNE'S COUNTY DEPARTMENT OF PUBLIC WORKS STORMWATER ENGINEER AT 410–758–0925 THREE (3) DAYS IN ADVANCE OF BEGINNING CONSTRUCTION FOR THE FOLLOWING:

FOR BIORETENTION AREAS:
- (a) DURING EXCAVATION TO SUBRADE;
- (b) DURING PLACEMENT OF BACKFILL AND PLACEMENT OF UNDERDRAIN SYSTEMS;
- (c) DURING PLACEMENT OF PEA GRAVEL AND ALL FILTER MEDIA;
- (d) DURING CONSTRUCTION OF ANY APPURTENANT CONVEYANCE SYSTEMS SUCH AS DIVERSION STRUCTURES, INLETS, OUTLETS AND FLOW DISTRIBUTION STRUCTURES;
- (e) UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION AND BEFORE ALLOWING RUNOFF TO ENTER THE BIORETETNTION AREAS.

FOR SUBMERGED GRAVEL WETLAND:
- (a) DURING EXCAVATION TO SUBGRADE
- (b) DURING PLACEMENT OF BACKFILL OF PERFORATED INLET PIPE AND OBSERVATION WELLS
- (c) DURING PLACEMENT OF GEOTEXTILES AND ALL FILTER MEDIA
- (d) DURING CONSTRUCTION OF ANY APPURTENANT CONVEYANCE SYSTEMS SUCH AS DIVERSION STRUCTURES, INLETS, OUTLETS, AND FLOW DISTRIBUTION STRUCTURES.
- (e) UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION, AND BEFORE ALLOWING RUNOFF TO ENTER THE WETLAND.
- (f) DURING FLOODING OF SUBMERGED GRAVEL WETLAND BEDS TO VERIFY GRADE AND FUNCTION.

FOR STORMDRAINS:
- (a) DURING EXCAVATION TO SUBGRADE
- (b) DURING PLACEMENT OF PIPES
- (c) DURING CONSTRUCTION OF ANY APPURTENANT CONVEYANCE SYSTEMS
- (d) DURING COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION

FINAL LOT GRADING TO ENSURE COMPLIANCE WITH ROOFTOP AND NON–ROOFTOP DISCONNECTION CREDIT CRITERIA

MAINTENANCE SCHEDULE

THE OWNER OF THE PROPERTY WILL ESTABLISH AN INSPECTION AND MAINTENANCE LOG UPON COMPLETION OF THE STORMWATER MANAGEMENT FACILITIES. THE LOG WILL BE UPDATED QUARTERLY OR AFTER ANY MAJOR STORM. THE LOG WILL BE MADE AVAILABLE FOR REVIEW UPON REQUEST BY THE QUEEN ANNE'S COUNTY DEPARTMENT OF PUBLIC WORKS INSPECTION DIVISION.

SUBMERGED GRAVEL WETLANDS:
THE FOLLOWING ITEMS SHALL BE ADDRESSED TO ENSURE PROPER MAINTENANCE AND LONG–TERM PERFORMANCE OF SUBMERGED GRAVEL WETLANDS:

INSPECTION AND MAINTENANCE:

1st YEAR POST–CONSTRUCTION:
INSPECTION FREQUENCY SHALL BE AFTER EVERY MAJOR STORM IN THE FIRST YEAR FOLLOWING CONSTRUCTION.

- INSPECT TO BE CERTAIN SYSTEM DRAINS WITHIN 24–72 hrs.(WITHIN THE DESIGN PERIOD, BUT ALSO NOT SO QUICKLY AS TO MINIMIZE STORMWATER MANAGEMENT
- WATERING PLANTS AS NECESSARY DURING THE FIRST GROWING SEASON
- RE–VEGETATING POORLY ESTABLISHED AREAS AS NECESSARY
- TREATING DISEASED VEGETATION AS NECESSARY
- QUARTERLY INSPECTION OF SOIL AND REPAIRING ERODED AREAS, ESPECIALLY ON SLOPES.
- CHECKING INLETS, OUTLETS AND OVERFLOW SPILLWAY FOR BLOCKAGE, STRUCTURAL INTEGRITY AND EVIDENCE OF EROSION & SEDIMENTATION.

POST–CONSTRUCTION:
INSPECTION FREQUENCY SHALL BE AT LEAST EVERY 6 MONTHS THEREAFTER, AS PER USEPA GOOD HOUSE–KEEPING REQUIREMENTS. INSPECTION FREQUENCY CAN BE REDUCED TO ANNUAL FOLLOWING 2 YEARS OF MONITORING THAT INDICATES THE RATE OF SEDIMENT ACCUMULATION IS LESS THAN THE CLEANING CRITERIA LISTED BELOW. INSPECTIONS SHALL FOCUS ON:

- CHECKING THE FILTER SURFACE FOR DENSE COMPLETE, ROOT MAT ESTABLISHMENT ACROSS THE WETLAND SURFACE. THOROUGH REVEGETAION WITH GRASSES, FORBS AND SHRUBS IS NECESSARY. UNLIKE BIORETENTION, WHERE MULCH IS COMMONLY USED, COMPLETE SURFACE COVERAGE WITH VEGETATION IS NEEDED.
- CHECKING THE GRAVEL WETLAND SURFACE FOR STANDING WATER OR OTHER EVIDENCE OF RISER CLOGGING, SUCH AS DISCOLORED OR ACCUMULATED SEDIMENTS.
- CHECKING THE SEDIMENTATION CHAMBER OR FOREBAY FOR SEDIMENT ACCUMULATION, TRASH AND DEBRIS.
- INSPECT TO BE CERTAIN SEDIMENTATION FOREBAY DRAINS WITHIN 24 TO 72 hrs.
- CHECKING INLETS, OUTLETS AND OVERFLOW SPILLWAY FOR BLOCKAGE, STRUCTURAL INTEGRITY AND EVIDENCE OF EROSION.
- REMOVAL OF DECAYING VEGETATION, LITTER, DEBRIS, INVASIVE SPECIES AND WOODY VEGETATION.

CLEANING CRITERIA FOR SEDIMENTATION FOREBAY:
SEDIMENT SHALL BE REMOVED FROM THE SEDIMENTATION CHAMBER (FOREBAY) WHEN IT ACCUMULATES TO A DEPTH OF MORE THAN 3 inches (30 cm) OR 10 PERCENT OF THE PRETREATMENT VOLUME. THE SEDIMENTATION FOREBAY SHALL BE CLEANED OF VEGETATION IF PERSISTENT STANDING WATER AND WETLAND VEGETATION BECOMES DOMINANT. THE CLEANING INTERVAL IS APPROXIMATELY EVERY 4 YEARS. A DRY SEDIMENTATION FOREBAY IS THE OPTIMAL CONDITION WHILE IN PRACTICE THIS CONDITION IS RARELY ACHIEVED. THE SEDIMENTATION CHAMBER, FOREBAY AND TREATMENT CELL OUTLET DEVICE SHOULD BE CLEANED WHEN DRAWDOWN TIMES EXCEED 60 TO 72 hrs. MATERIALS CAN BE REMOVED WITH HEAVY CONSTRUCTION EQUIPMENT; HOWEVER THIS EQUIPMENT SHALL NOT TRACK ON THE WETLAND SURFACE. REVEGETATION OF DISTURBED AREAS AS NECESSARY. REMOVED SEDIMENTS SHOULD BE DEWATERED (IF NECESSARY) AND DISPOSED OF IN AN ACCEPTABLE MANNER.

CLEANING CRITERIA FOR GRAVEL WETLAND TREATMENT CELLS:
SEDIMENT SHALL BE REMOVED FROM THE GRAVEL WETLAND SURFACE WHEN IT ACCUMULATES TO A DEPTH OF SEVERAL INCHES (>10 cm) ACROSS THE WETLAND SURFACE. MATERIALS SHOULD BE REMOVED WITH RAKES RATHER THAN HEAVY CONSTRUCTION EQUIPMENT TO AVOID COMPACTION OF THE GRAVEL WETLAND SURFACE. HEAVY EQUIPMENT COULD BE USED IF THE SYSTEM IS DESIGNED WITH DIMENSIONS THAT ALLOW EQUIPMENT TO BE LOCATED OUTSIDE THE GRAVEL WETLAND, WHILE A BACKHOE SHOVEL REACHES INSIDE THE GRAVEL WETLAND TO REMOVE SEDIMENT. REMOVED SEDIMENTS SHALL BE DEWATERED (IF NECESSARY) AND DISPOSED OF IN AN ACCEPTABLE MANNER.

DRAINING AND FLUSHING GRAVEL WETLAND TREATMENT CELLS:
FOR MAINTENANCE IT MAY BE NECESSARY TO DRAIN OR FLUSH THE TREATMENT CELLS. PUMP OUT WATER FROM THE SYSTEM FROM THE NYLOPLAST HYDRAULIC CONTROL STRUCTURE AND FROM OTHER YARD GRATES. FLUSHING THE RISERS AND HORIZONTAL SUBDRAINS IS THE MOST EFFECTIVE WITH THE ENTIRE SYSTEM DRAINED. FLUSHED WATER AND SEDIMENT SHALL BE COLLECTED AND PROPERLY DISPOSED.

ENTIRE SITE STORMWATER MANAGEMENT SUMMARY TABLE

STEP No.	REQUIREMENT	VOLUME REQ.	VOLUME PRO.	NOTES
1	WATER QUALITY (WQv)	_.__ ac.–ft.	_.__ ac.–ft.	SUBMERGED GRAVEL WETLANDS
2	RECHARGE (Rev)	_.__ ac.–ft.	_.__ ac.–ft.	SUBMERGED GRAVEL WETLANDS
3	CHANNEL PROTECTION (Cpv)	_.__ ac.–ft.	_.__ ac.–ft.	VOLUME REQUIREMENT DETERMINED AFTER ESD VOLUME CONSIDERATION
4	OVERBANK FLOOD (Qp)	_.__ ac.–ft.	_.__ ac.–ft.	2–YEAR & 10–YEAR QUANTITY MANAGEMENT
	EXTREME FLOOD (Qf)	N/A	N/A	NOT REQUIRED BY REVIEWING AUTHORITY

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ *DATE* _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE DOCUMENT WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NUMBER No. 22045 EXPIRATION DATE: 9–2–25

STATE OF MARYLAND – KEVIN J. SHEARON – No. 22045 – PROFESSIONAL ENGINEER

OCTOBER 9, 2023

DATE SEAL

DATE	REVISION
10–9–23	PER TAC COMMENTS

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1–443–262–9130
FAX: 1–443–262–9148

STORMWATER MANAGEMENT SPECIFICATIONS FOR A

MANUFACTURING/WAREHOUSE BUILDING

ON LOT 2, THE LANDS OF

MILLINGTON CROSSING ASSOCIATES ONE, LLC

FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON

TAX MAP – 31, GRID – 1E, PARCEL – 6–1

SCALE	AS SHOWN
DRAWN BY	WJM
DESIGNED BY	KJS
DATE	MARCH '23
JOB No.	2021165
FOLDER Ref.	31–2021165
SHEET No.	C–3.00
CADD FILE	21165C2300

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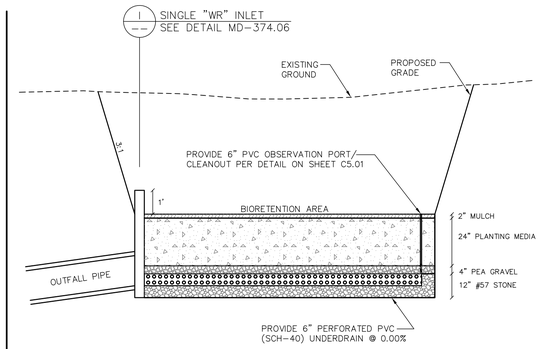
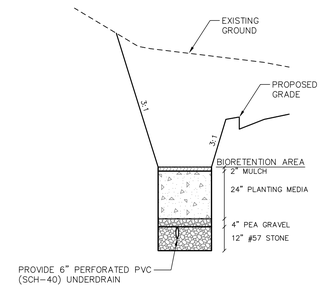


NOTE:
STABILIZE ALL SIDE SLOPES WITH TOPSOIL, SEED AND SOIL STABILIZATION MATTING – SLOPE APPLICATION

NOTE:
SEE CONSTRUCTION SPECIFICATIONS ON SHEET C-3.00

TYPICAL BIORETENTION SECTION

SCALE 1" = 30' HORIZONTAL
1" = 3' VERTICAL

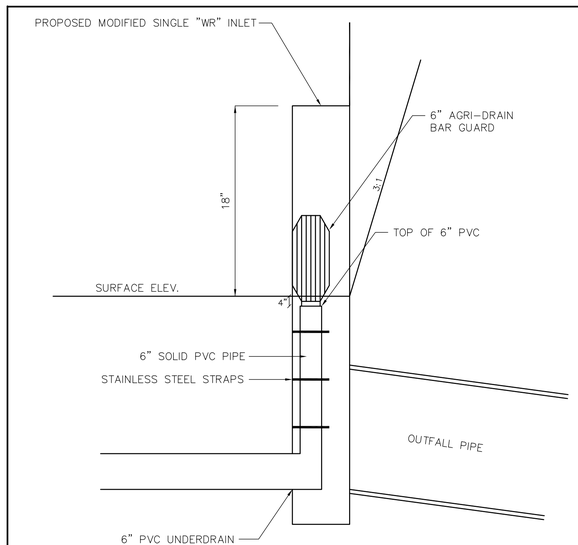


NOTE:
STABILIZE ALL SIDE SLOPES WITH TOPSOIL, SEED AND SOIL STABILIZATION MATTING – SLOPE APPLICATION

NOTE:
SEE CONSTRUCTION SPECIFICATIONS ON SHEET C-3.00

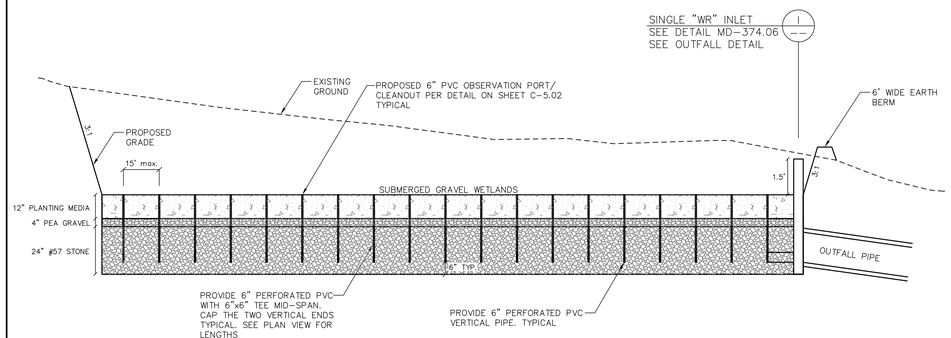
TYPICAL BIORETENTION SECTION

SCALE 1" = 30' HORIZONTAL
1" = 3' VERTICAL



SUBMERGED GRAVEL WETLANDS OUTFALL DETAIL

NOT TO SCALE

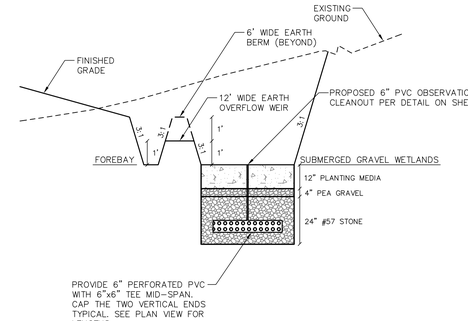


NOTE:
STABILIZE ALL SIDE SLOPES WITH TOPSOIL, SEED AND SOIL STABILIZATION MATTING – SLOPE APPLICATION

NOTE:
SEE CONSTRUCTION SPECIFICATIONS ON SHEET C-3.00

TYPICAL SUBMERGED GRAVEL WETLANDS SECTION

SCALE 1" = 30' HORIZONTAL
1" = 3' VERTICAL



NOTE:
STABILIZE ALL SIDE SLOPES WITH TOPSOIL, SEED AND SOIL STABILIZATION MATTING – SLOPE APPLICATION

NOTE:
SEE CONSTRUCTION SPECIFICATIONS ON SHEET C-3.00

TYPICAL SUBMERGED GRAVEL WETLANDS SECTION

SCALE 1" = 30' HORIZONTAL
1" = 3' VERTICAL

AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT *DATE*

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

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. 20045 EXPIRATION DATE: 9-2-25

STATE OF MARYLAND * KEVIN W. MOORE * 20045 * REGISTERED PROFESSIONAL ENGINEER

OCTOBER 9, 2023
DATE SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

REVISION	DATE
PER TAC COMMENTS	10-9-23

TYPICAL STORMWATER MANAGEMENT SECTIONS
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

SCALE	AS SHOWN
DRAWN BY	WJM
DESIGNED BY	KJS
DATE	MARCH '23
JOB No.	2021165
FOLDER Ref.	31-2021165
SHEET No. –	C-3.01
CADD FILE –	2116SC2301

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LEGEND

- DEED POINT (UNLESS OTHERWISE NOTED)
- PERENNIAL STREAM
- NONTIDAL WETLANDS
- EDGE OF EXISTING WOODSLINE
- S — EXISTING SEWER LINE
- W — EXISTING WATER LINE

LANDS N/F OF
STEPHEN M. WALTERS
M.L.M. 762/359

LANDS N/F OF
EDWARD J. BREITENBACH, III et ux
M.L.M. 824/375

LANDS N/F OF
MICHAEL S. & VERONICA SHANNAHAN
M.L.M. 149/306

LANDS N/F OF
WALTER C. & ELLEN E. RUEBECK
M.L.M. 75/17

LANDS N/F OF
JOHN E. KOSTIC
M.L.M. 410/167

LANDS N/F OF
GURIT SINGH, et al & NAVNEET KAUR
M.L.M. 762/359

LANDS N/F OF
S.H.A.
M.L.M. 191/127

REMAINING PARCEL 6-1

PARCEL 6-1 LOT 1

PARCEL 6-1 LOT 2

PARCELS 2 & 3

PARCELS 4 & 5

WOODLANDS

NONTIDAL WETLANDS

MILLS BRANCH

EDGE ROAD

ROUTE 291

MARYLAND ROUTE 301

(BLUE STAR MEMORIAL HIGHWAY)

U.S. ROUTE 301

DUDLEY CHANCE ROAD

CHESTERVILLE BRIDGE ROAD

HOWARD JOHNSON ROAD

WEST EDGE ROAD

CHESTER RIVER

EXISTING 2" HDPE FORCE MAIN

EXISTING 10" PVC (C-900) WATER MAIN

PROVIDE 10" PVC (C-900) WATER MAIN

PROVIDE 2" HDPE FORCE MAIN

PROVIDE 2" TERMINAL FLUSHING CONNECTION

PROVIDE 10" PVC CAP FOR FUTURE EXTENSION

GRAPHIC SCALE
200 0 100 200 400
1 inch = 200 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ *DATE* _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

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KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THE DOCUMENT 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. 22049, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN JOSEPH SHEARON — No. 22049 — PROFESSIONAL ENGINEER

OCTOBER 9, 2023
DATE

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

REVISION	DATE
PER TAC COMMENTS	10-9-23
PER TAC COMMENTS	5-24-24

OVERALL UTILITY PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

DATE	MARCH '23
SCALE	1" = 200'
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31-2021165
DESIGNED BY	KJS

SHEET No. – C-4.00

CADD FILE – 21165C2400

LEGEND

- DEED POINT (UNLESS OTHERWISE NOTED)
- EXISTING GUARDRAIL
- PERENNIAL STREAM
- NONTIDAL WETLANDS
- EDGE OF EXISTING WOODSLINE
- S — EXISTING SEWER LINE
- W — EXISTING WATER LINE

LANDS N/F OF
MICHAEL S. & VERONICA SHANNAHAN
M.L.M. 149/306

LANDS N/F OF
WALTER C. & ELLEN E. RUEBECK
M.L.M. 75/17

EXISTING 8" WATER MAIN TO BE ABANDONED ONCE NEW 10" PVC WATER MAIN BECOMES OPERATIONAL

PROVIDE 10" PVC (C-900) WATER MAIN TO BE LOCATED A MINIMUM OF 3.5' BELOW FINISHED GRADE

EDGE ROAD

ROUTE 291

PROVIDE A 10"x10" TEE AND VALVE TO CONNECT TO EXISTING 10" WATER MAIN PER DETAIL ON SHEET C-4.00

LANDS N/F OF
JOHN E. KOSTIC
M.L.M. 410/167

CHESTER RIVER

WEST EDGE ROAD

EXISTING 10" PVC (C-900) WATER MAIN

LANDS N/F OF
CURIT SINGH, et al & NAVNEET KAUR
M.L.M. 762/359

PROVIDE 2" HDPE FORCE MAIN

MARYLAND ROUTE 291

LANDS N/F OF
S.H.A.
M.L.M. 191/127

PROVIDE AN INLINE FLUSHING CONNECTION PER DETAIL ON SHEET C-4.00 TYPICAL WHERE SHOWN – (IFC)

PROVIDE A WATERTIGHT CONNECTION BETWEEN EXISTING 2" HDPE FORCE MAIN AND NEW 2" HDPE FORCE MAIN

EXISTING 2" HDPE FORCE MAIN

NOTE:
CONTRACTOR SHALL DIRECTIONALLY DRILL NEW 2" HDPE FORCE MAIN UNDER MARYLAND ROUTE 291 AND THE ACCESSES ON AND OFF OF U.S. ROUTE 301

U.S. ROUTE 301 (BLUE STAR MEMORIAL HIGHWAY)

NOTE:
CONTRACTOR SHALL DIRECTIONALLY DRILL NEW 10" PVC WATER MAIN UNDER MARYLAND ROUTE 291 AND THE ACCESSES ON AND OFF OF U.S. ROUTE 301

PROVIDE 10" PVC (C-900) WATER MAIN TO BE LOCATED 2' FROM EDGE OF EXISTING PAVEMENT. WHERE AN EXISTING EXISTING GUARDRAIL IS LOCATED NEXT TO THE EDGE OF EXISTING PAVEMENT, THE CONTRACTOR SHALL LOCATE THE WATER MAIN WITHIN THE PAVEMENT AND PROVIDE TRENCH REPAIR AS NECESSARY PER DETAIL ON SHEET C-4.00

PROPOSED FIRE HYDRANT PER DETAIL ON SHEET C-4.00 TYPICAL WHERE SHOWN – (FH)

MILLS BRANCH

EDGE ROAD

PROVIDE A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN NEW 10" PVC WATER MAIN AND NEW 2" HDPE FORCE MAIN

WOODLANDS

NONTIDAL WETLANDS

SEE SHEET C-4.02 FOR CONTINUATION

MATCHLINE

GRAPHIC SCALE
100 0 50 100 200
1 inch = 100 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ *DATE* _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

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KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THE DOCUMENT 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. 22045, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN W. MOORE — 22045 — REGISTERED PROFESSIONAL ENGINEER

DATE: OCTOBER 9, 2023 SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

DATE	REVISION
10-9-23	PER TAC COMMENTS

UTILITY PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

DATE	MARCH '23
SCALE	1" = 100'
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31-2021165
DESIGNED BY	KJS
SHEET No. –	C-4.01
CADD FILE –	21165C2401

LEGEND

- DEED POINT (UNLESS OTHERWISE NOTED)
- EXISTING CARTRAIL
- PERENNIAL STREAM
- NONTIDAL WETLANDS
- EDGE OF EXISTING WOODSLINE

WOODLANDS

MILLS BRANCH

NONTIDAL WETLANDS

WOODLANDS

SEE SHEET C-4.01 FOR CONTINUATION

MATCHLINE

TRAILER PARKING SPACES

LOADING DOCKS

PROPOSED 256,924 sq. ft.± MANUFACTURING/WAREHOUSE BUILDING F.F. ELEV. = 36.00

MECHANICAL ROOM

PROVIDE A GRINDER PUMP PER DETAIL ON SHEET C-4.00

PROVIDE 6" PVC GRAVITY SEWER WITH CLEANOUT PER DETAIL ON SHEET C-4.00

PROVIDE A WATER METER PER DETAIL ON SHEET C-4.00

PROVIDE 2" HDPE FORCE MAIN

PROVIDE AN INLINE FLUSHING CONNECTION PER DETAIL ON SHEET C-4.00 TYPICAL WHERE SHOWN – (IFC)

PROVIDE A MINIMUM OF 10' HORIZONTAL SEPARATION BETWEEN NEW 10" PVC WATER MAIN AND NEW 2" HDPE FORCE MAIN

PROVIDE 2"x1-1/4" TEE.

PROVIDE 2" TERMINAL FLUSHING CONNECTION PER DETAIL ON SHEET C-4.00

PROVIDE 1"-1/4" HDPE FORCE MAIN WITH PLUG AND WITNESS POST FOR FUTURE EXTENSION

PROVIDE 6" PLUG WITH WITNESS POST FOR FUTURE EXTENSION

PROVIDE 10" PVC PLUG AND WITNESS POST FOR FUTURE EXTENSION

PROPOSED FIRE HYDRANT. PER DETAIL ON SHEET C-4.00 TYPICAL WHERE SHOWN – (FH)

PROVIDE A 1-1/4" HDPE FORCE MAIN

PROVIDE 10"x6" TEE AND VALVE PER DETAIL ON SHEET C-4.00.

PROVIDE 10" PVC (C-900) WATER MAIN TO BE LOCATED A MINIMUM OF 3.5' BELOW FINISHED GRADE

PROVIDE 10" PVC (C-900) WATER MAIN TO BE LOCATED 2' FROM EDGE OF EXISTING PAVEMENT. WHERE AN EXISTING EXISTING GUARDRAIL IS LOCATED NEXT TO THE EDGE OF EXISTING PAVEMENT. THE CONTRACTOR SHALL LOCATE THE WATER MAIN WITHIN THE PAVEMENT AND PROVIDE TRENCH REPAIR AS NECESSARY. SEE DETAIL ON SHEET C-4.00

LANDS N/F OF S.H.A. M.L.M. 191/127

DUDLEY CHANCE ROAD

BRIDGE

CHESTERVILLE ROAD

U.S. ROUTE 301 (BLUE STAR MEMORIAL HIGHWAY)

HOWARD JOHNSON ROAD

PARCELS 2 & 3

PARCELS 4 & 5

EDGE

(IFC)

(FH)

CONCRETE MONUMENT COORDINATE TABLE

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	CONC. MONUMENT SET	587604.1651	1633543.0798	---.---
2	CONC. MONUMENT SET	587234.9796	1633519.5611	---.---
3	CONC. MONUMENT SET	586883.3676	1633645.3015	---.---
4	CONC. MONUMENT SET	586117.8198	1633906.9826	---.---
5	CONC. MONUMENT SET	585915.5964	1633909.5034	---.---
6	CONC. MONUMENT SET	585573.6069	1633827.2280	---.---

CONSTRUCTION STAKEOUT COORDINATE TABLE

POINT #	DESCRIPTION	NORTHING	EASTING
7	Sta. 717+50.00	585564.0979	1633896.5808
831	Sta. 722+00.00	586009.9169	1633957.7808
832	PC = Sta. 724+81.23	586288.5363	1633996.0283
842	PT = Sta. 728+43.34	586635.5227	1633921.6755
833	Sta. 732+00.00	586937.9701	1633732.6466
834	PC = Sta. 733+76.28	587087.4513	1633639.2212
835	PT = Sta. 737+75.54	587471.0390	1633571.2311
836	INT = Sta. 739+83.65	587674.6744	1633614.1541

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT — DATE

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

GRAPHIC SCALE

100 0 50 100 200

1 inch = 100 ft.

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KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE 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. 22049, EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN M. SHEARON — REG. NO. 22049 — PROFESSIONAL ENGINEER

NOVEMBER 15, 2023

DATE SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN,
ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

DATE	REVISION
10-9-23	PER TAC COMMENTS
11-15-23	PER MDOT COMMENTS
5-24-24	PER TAC COMMENTS

UTILITY PLAN

FOR A

MANUFACTURING/WAREHOUSE BUILDING

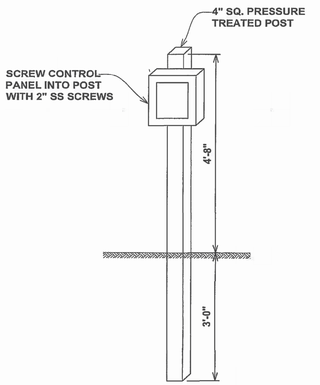
ON LOT 2, THE LANDS OF

MILLINGTON CROSSING ASSOCIATES ONE, LLC

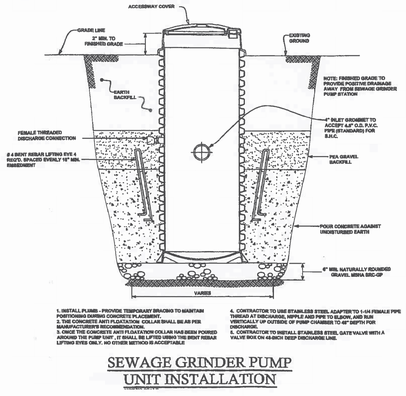
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON

TAX MAP – 31, GRID – 1E, PARCEL – 6-1

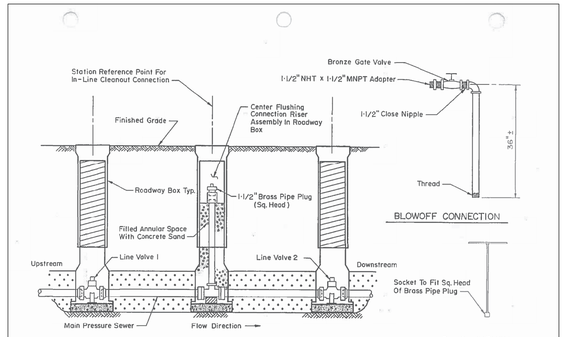
DATE	MARCH '23
SCALE	1" = 100'
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31-2021165
DESIGNED BY	KJS
SHEET No. –	C-4.02
CADD FILE –	21165C2402



GRINDER PUMP MOUNTING DETAIL
NOT TO SCALE

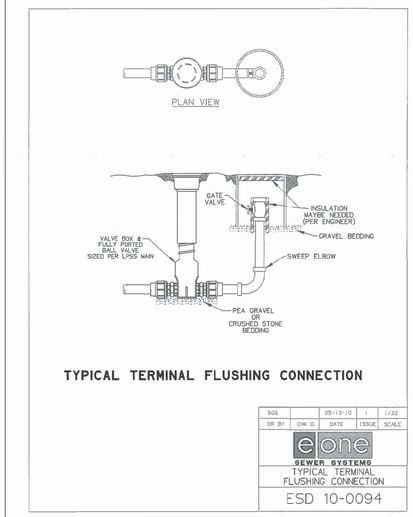


SEWAGE GRINDER PUMP UNIT INSTALLATION



IN-LINE CLEANOUT & FLUSHING CONNECTION

FIGURE 3-7



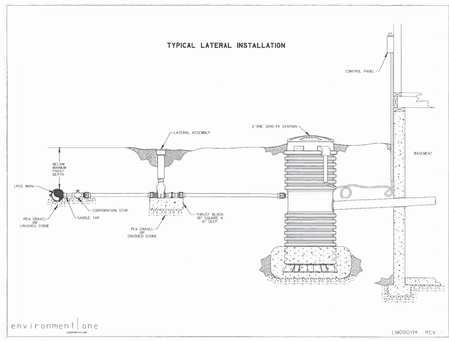
TYPICAL TERMINAL FLUSHING CONNECTION

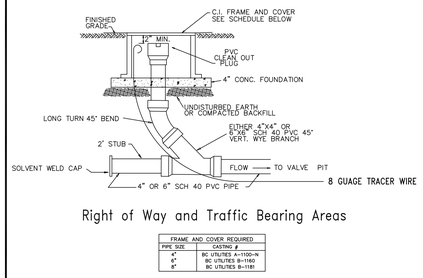
SGS		05-13-10	1	1/32
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

TYPICAL TERMINAL FLUSHING CONNECTION

ESD 10-0094





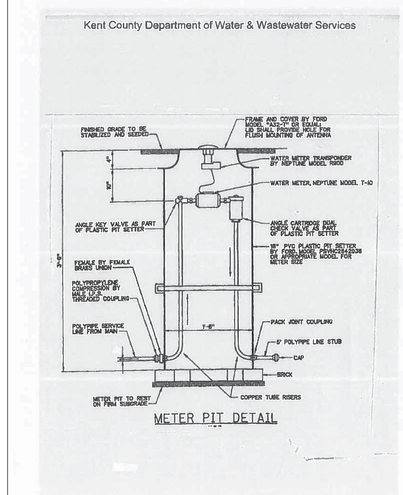
Right of Way and Traffic Bearing Areas

FRAME AND COVER REQUIRED	
PIPE SIZE	CASTING #
4"	BC UTILITIES A-1100-N
6"	BC UTILITIES B-1160
8"	BC UTILITIES B-1181

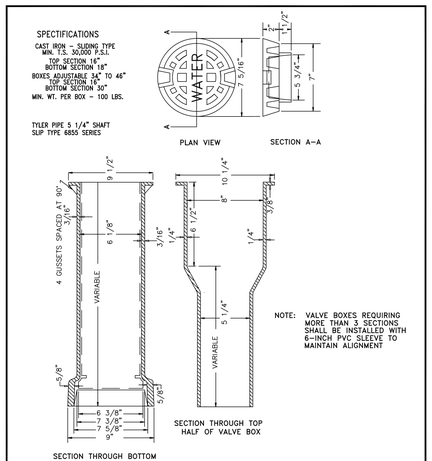
Notes:
1. Right of Way clean outs are also necessary at the edge of any easements.
2. Traffic Bearing Areas are defined as being in, or within 3 feet of, any paving, driveways, or any other area where vehicular traffic is likely.
3. Tracer wire to be uncoated copper.

DATE	REVISION
SCALE NTS	
DRAWN BY	
APPROVED BY	
FILE dt-gs-co	

Gravity Sewer Cleanouts

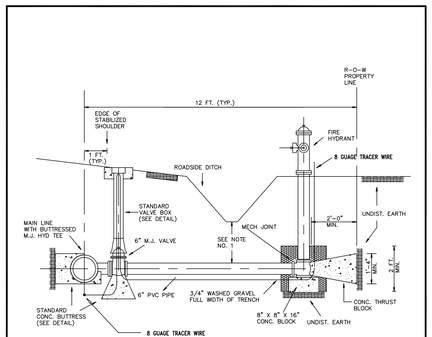


METER PIT DETAIL



DATE	REVISION
SCALE NTS	
DRAWN BY	
APPROVED BY	
FILE dt-wtr-vbox5	

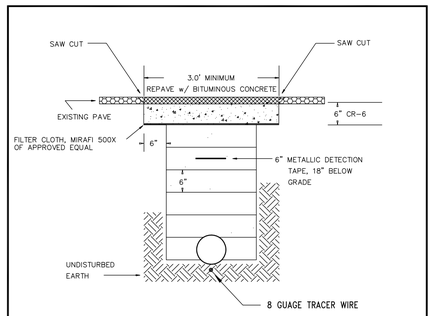
Water Valve Box and Cover



NOTES:
1. MAINTAIN 3.5 FOOT OF COVER THROUGH ROADSIDE DITCH. IF UNABLE TO MAINTAIN ADEQUATE COVER, ROTATE THE MECHANICAL JOINT HYDRANT TEE AND UTILIZE APPROPRIATE FITTINGS. AS A LAST RESORT, ENCASE THE 6 INCH SERVICE LINE WITH CONCRETE IF COVER IS INADEQUATE.
2. TRACER WIRE TO BE UNCOATED COPPER.

DATE	REVISION
SCALE NTS	
DRAWN BY	
APPROVED BY	
FILE dt-wtr-hydrant	

Water Fire Hydrant Setting



NOTES:
1. CONTRACTOR IS TO MAINTAIN CR-6 IN TRENCH TO COUNTY SATISFACTION THROUGHOUT LENGTH OF CONTRACT OR UNTIL PERMANENTLY PAVED.
2. BACKFILL TO BE SELECT MATERIAL, OR IF DIRECTED BY COUNTY, NATIVE MATERIAL.
3. BACKFILL TO BE PLACED IN 6 INCH LIFTS WITH EACH LIFT COMPACTED TO AT LEAST 90%.
4. BACKFILL TO BE WELL TAMPED TO SPRINGLINE OF PIPE.
5. PAVEMENT TO BE BITUMINOUS CONCRETE IN ACCORDANCE WITH COUNTY ROADS SPECS FOR COMMERCIAL STREETS.
6. FINISH TRENCH GRADE SHALL MATCH EXISTING CROSS SLOPE.
7. PROVIDE AN UNCOATED, 8 GAUGE COPPER WIRE BENEATH ALL PVC, HDPE, & PE PIPE.

DATE	REVISION
SCALE NTS	
DRAWN BY	
APPROVED BY	
FILE dt-gn-trench3	

Roadway Trench Repair Permanent Bituminous Concrete

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT *DATE*

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

KENT SOIL AND WATER CONSERVATION DISTRICT

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE DOCUMENT 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. 20045 EXPIRATION DATE: 9-2-25

STATE OF MARYLAND — KEVIN M. SHEARON — 20045 — REGISTERED PROFESSIONAL ENGINEER

DATE: OCTOBER 9, 2023

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN, ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE: 1-443-262-9130
FAX: 1-443-262-9148

DATE	REVISION
10-9-23	PER TAC COMMENTS

UTILITY DETAILS
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP - 31, GRID - 1E, PARCEL - 6-1

DATE	MARCH '23
SCALE	AS SHOWN
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31-2021165
DESIGNED BY	KJS
SHEET No. -	C-5.00
CADD FILE -	21165C2500

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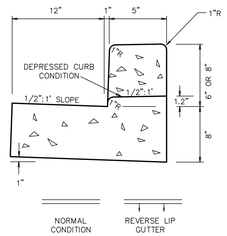


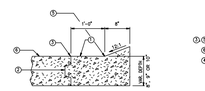
NOTES:

1. ALL STRAIGHT CURB AND GUTTER SHALL BE SHA MIX NO. 2, 3,500 PSI – 28 DAY COMPRESSION STRENGTH.
2. PROVIDE REVERSE LIP GUTTER PAN TO MATCH ADJACENT PAVEMENT WHERE WATER FLOWS AWAY FROM CURB AND WHERE CALLED FOR ON CONSTRUCTION DRAWINGS.
3. CURB HEIGHT SHALL BE ADJUSTED AND SET OUT ON CONSTRUCTION DRAWINGS. MINIMUM HORIZONTAL TRANSITION FROM 6" TO 8" HEIGHT IS 10'.
4. ALL METHODS OF CONSTRUCTION AND LOCATIONS OF CONSTRUCTION OR CONTRACTION JOINTS SHALL BE CONSISTENT WITH THE MDOT/SHA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, 2001 EDITION.

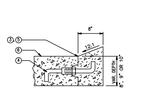
SCALE: NO SCALE
REVISIONS:

6" CURB & GUTTER DETAIL

STANDARD NO. RD-103.02



DEPRESSED CURB FOR COMBINATION CONCRETE CURB & GUTTER FOR SIDEWALK RAMPS



DEPRESSED CONCRETE CURB FOR SIDEWALK RAMPS

① SLOPE GUTTER PAN 8" PER FOOT TOWARD FLOW LINE ON ALL ROADWAYS INCLUDING SUPERELEVATED SECTIONS, EXCEPT INTERCHANGE RAMPS.
② PROVIDE KEY AND LONGITUDINAL TIE BAR AS REQUIRED; SEE NOTE A
③ ROADWAY PAVEMENT CONSTRUCTION JOINT
④ LONGITUDINAL TIE DEVICE "J" BAR MODIFIED
⑤ FLOW LINE
⑥ ROADWAY PAVEMENT SLOPE

NOTES

A. RIGID PAVEMENT ROADWAY ADJACENT TO COMBINATION CURB AND GUTTER AND CLOSED SECTION ROADWAY USING RIGID PAVEMENT WITH COMBINATION CURB AND GUTTER SHALL BE KEYED AND TIED AT THE ROADWAY PAVEMENT CONSTRUCTION JOINT. REFER TO STANDARD MD 570.01 FOR METHOD OF KEYWAY AND LONGITUDINAL TIE DEVICES. SPACING OF THE TIE BARS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. RIGID PAVEMENT AND CURB SHALL BE CONSTRUCTED AS MONOLITHIC. TIE DEVICES AND KEYS ARE NOT REQUIRED WHEN USING FLEXIBLE PAVEMENT FOR ROADWAY.
B. MAXIMUM JOINT SPACING FOR CONCRETE CURB AND COMBINATION CURB & GUTTER IS 10'. SEE SPECIFICATION FOR LOCATIONS AND DESCRIPTION OF TREATMENT FOR THE TYPES OF JOINTS USED.
C. PAYMENT FOR DEPRESSING THE CURB WILL BE INCIDENTAL TO THE CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR THE ITEM CONCRETE CURB OR COMBINATION CONCRETE CURB AND GUTTER, AS SPECIFIED IN THE CONTRACT DOCUMENTS.

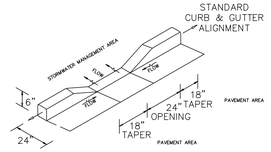
SPECIFICATION 602	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

	APPROVAL • SHA REVISION	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	2-10-04	APPROVAL 3-31-04
REVISED	4-23-04	REVISED 5-20-04
REVISED	6-21-16	REVISED 5-20-16
REVISED		REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

DEPRESSED CONCRETE CURB AND COMBINATION DEPRESSED CONCRETE CURB & GUTTER FOR SIDEWALK RAMPS

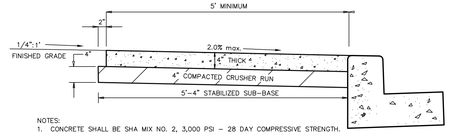
STANDARD NO. MD-620.03



CURB DEPRESSION OPENING TO BE CONSTRUCTED WITHIN ALIGNMENT OF STANDARD CURB & GUTTER

STANDARD 2' CURB DEPRESSION OPENING

NOT TO SCALE



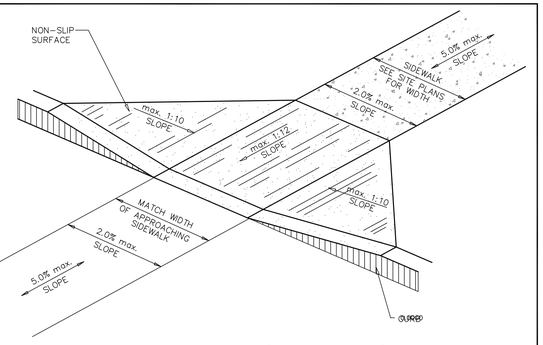
NOTES:

1. CONCRETE SHALL BE SHA MIX NO. 2, 3,000 PSI – 28 DAY COMPRESSIVE STRENGTH.
2. STABILIZED SUB-BASE SHALL BE 4 INCHES MINIMUM COMPACTED CR-6 (OR APPROVED EQUAL) PLACED AND COMPACTED ON APPROVED SUBGRADE TO 95% OF THE MODIFIED PROCTOR DENSITY FOR THE MATERIAL
3. ALL AREAS WITHIN THE RIGHT-OF-WAY AND EASEMENTS SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE TO ROADWAY DRAINAGE SYSTEMS AND STABILIZED WITH A MINIMUM OF 4 INCHES OF TOPSOIL, SEEDED AND MULCHED PER NRCS SPECIFICATIONS.
4. SIDEWALKS TO BE MAINTAINED BY PROPERTY OWNER.
5. ALL METHODS OF CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE TOWN OF CHESTERTOWN STANDARDS AND A.D.A. REQUIREMENTS. ALL MATERIAL SPECIFICATIONS SHALL COMPLY WITH THE 2001 EDITION OF THE MARYLAND STATE HIGHWAY ADMINISTRATION'S "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS" MANUAL AND ANY ADDENDUM THERETO.
6. MAXIMUM CROSS SLOPE = 2.0% MAXIMUM RUNNING SLOPE = 5.0%

SCALE: NO SCALE
REVISIONS:

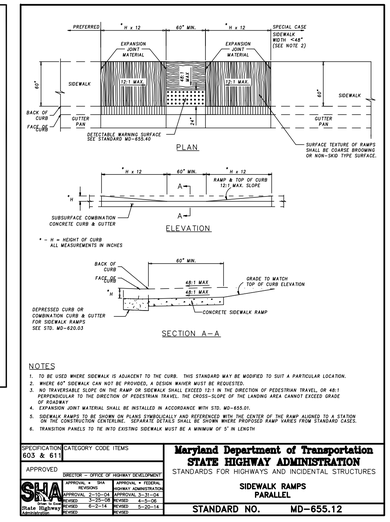
SIDEWALK

STANDARD NO. RD-104.01



ADA SIDEWALK RAMP (PERPENDICULAR)

NOT TO SCALE



NOTES

1. TO BE USED WHERE SIDEWALK IS ADJACENT TO THE CURB. THIS STANDARD MAY BE MODIFIED TO SUIT A PARTICULAR LOCATION.
2. WHERE 60" SIDEWALK CAN NOT BE PROVIDED, A DESIGN WAIVER MUST BE REQUESTED.
3. NO TRAVERSABLE SLOPE ON THE RAMP OR SIDEWALK SHALL EXCEED 12:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL, OR 48:1 PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL. THE CROSS-SLOPE OF THE LANDING AREA CANNOT EXCEED GRADE 48:1 MAX.
4. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STD. MD-655.01.
5. SIDEWALK RAMPS TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE RAMP ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED RAMP VARIES FROM STANDARD CASES.
6. TRANSITION PANELS TO TIE INTO EXISTING SIDEWALK MUST BE A MINIMUM OF 5' IN LENGTH

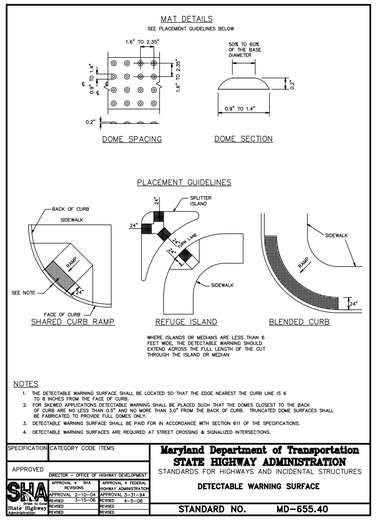
SPECIFICATION 603 & 611	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

	APPROVAL • SHA REVISION	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	2-10-04	APPROVAL 3-31-04
REVISED	2-15-06	REVISED 4-5-06
REVISED	6-21-16	REVISED 5-20-16
REVISED		REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

SIDEWALK RAMPS PARALLEL

STANDARD NO. MD-655.12



NOTES

1. THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 TO 8 INCHES FROM THE FACE OF CURB.
2. FOR SKEWED APPLICATIONS DETECTABLE WARNING SHALL BE PLACED SUCH THAT THE DOMES CLOSEST TO THE BACK OF CURB ARE NO LESS THAN 6" AND NO MORE THAN 3.0" FROM THE BACK OF CURB. TRUNCATED DOME SURFACES SHALL BE CONTINUOUS FOR THE FULL CURB RAMP.
3. DETECTABLE WARNING SURFACE SHALL BE PAID FOR IN ACCORDANCE WITH SECTION 611 OF THE SPECIFICATIONS.
4. DETECTABLE WARNING SURFACES ARE REQUIRED AT STREET CROSSING & SIGNALIZED INTERSECTIONS.

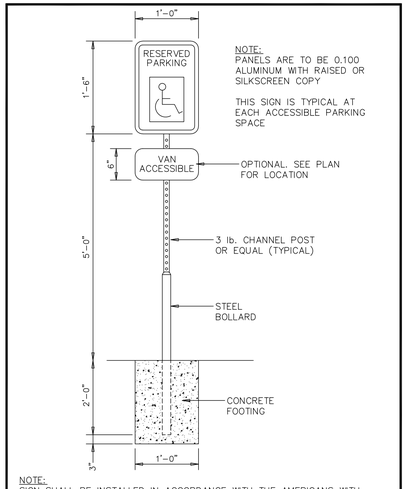
SPECIFICATION 602	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

	APPROVAL • SHA REVISION	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	2-10-04	APPROVAL 3-31-04
REVISED	2-15-06	REVISED 4-5-06
REVISED	6-21-16	REVISED 5-20-16
REVISED		REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

DETECTABLE WARNING SURFACE

STANDARD NO. MD-655.40



NOTE:
PANELS ARE TO BE 0.100 ALUMINUM WITH RAISED OR SILKSCREEN COPY

THIS SIGN IS TYPICAL AT EACH ACCESSIBLE PARKING SPACE

NOTE:
SIGN SHALL BE INSTALLED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT, ACCESSIBILITY FOR BUILDINGS AND FACILITIES, AS AMENDED

TYPICAL H/C ACCESSIBLE PARKING SIGN

NOT TO SCALE

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

KENT SOIL AND WATER CONSERVATION DISTRICT

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE DOCUMENT 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. 20045 EXPIRATION DATE: 9-2-25

STATE OF MARYLAND KEVIN W. MOORE 20045 REGISTERED PROFESSIONAL ENGINEER

OCTOBER 9, 2023
DATE

SEAL

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ENGINEERING, DRAFTING/DESIGN, ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
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FAX : 1-443-282-9148

DATE	REVISION
10-9-23	PER TAC COMMENTS

SITE DETAILS
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

DATE	SCALE
MARCH '23	AS SHOWN
JOB No.	DRAWN BY
202165	WJM
FOLDER Ref.	DESIGNED BY
31-202165	KJS

SHEET No. – C-5.01

CADD FILE – 21165C2501

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

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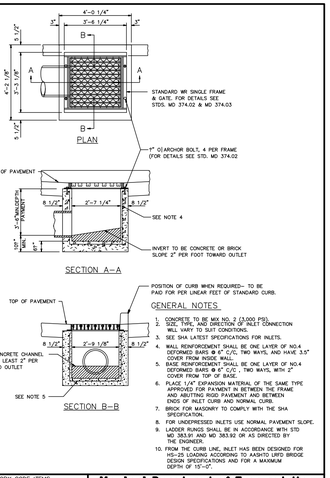


SPECIFICATION	CATEGORY CODE ITEMS
305	

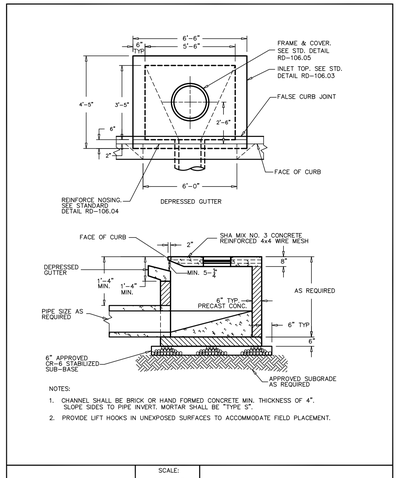
APPROVED — DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

	APPROVAL + SHA REVISIONS	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
State Highway Administration	APPROVAL 5-5-75	APPROVAL 5-22-75
	REVISED 10-1-01	REVISED 5-24-06
	REVISED 10-7-14	REVISED 3-29-16
	REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

SINGLE WR INLET

STANDARD NO. MD-374.06

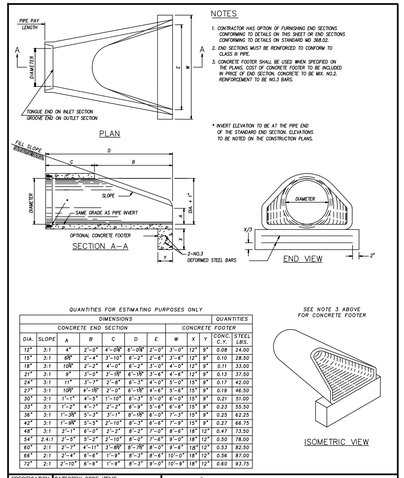


NOTES:
1. CHANNEL SHALL BE BRICK OR HAND FORMED CONCRETE MIN. THICKNESS OF 4". SLOPE SIDES TO PIPE INVERT. MORTAR SHALL BE "TYPE S".
2. PROVIDE LIFT HOOKS IN UNEXPOSED SURFACES TO ACCOMMODATE FIELD PLACEMENT.

SCALE:	
NO SCALE	
REVISIONS:	

STANDARD CURB INLET

STANDARD NO. RD-106.01



NOTES
1. CONTRACTOR HAS OPTION OF FURNISHING END SECTIONS CONFORMING TO DETAILS ON THIS SHEET OR END SECTIONS CONFORMING TO DETAILS ON STANDARD NO 368.02
2. END SECTIONS MUST BE REINFORCED TO CONFORM TO CLASS III PIPE.
3. CONCRETE FOOTER SHALL BE USED WHEN SPECIFIED ON THE PLANS. COST OF CONCRETE FOOTER TO BE INCLUDED IN PRICE OF END SECTION. CONCRETE TO BE MIX. NO.3. REINFORCEMENT TO BE NO.3 BARS.

* INVERT ELEVATION TO BE AT THE PIPE END OF THE STANDARD END SECTION. ELEVATIONS TO BE NOTED ON THE CONSTRUCTION PLANS.

QUANTITIES FOR ESTIMATING PURPOSES ONLY

DIMENSIONS									QUANTITIES	
CONCRETE END SECTION						CONCRETE FOOTER			CONC. C.Y.	STEEL LBS.
DIA.	SLOPE	A	B	C	D	E	W	X	Y	
12"	3:1	4"	2'-0"	4'-0"	8'-0"	2'-0"	3'-0"	12"	9"	0.08	24.00
15"	3:1	4"	2'-4"	3'-10"	8'-2"	2'-4"	3'-4"	12"	9"	0.10	28.50
18"	3:1	10"	2'-2"	4'-0"	8'-2"	2'-0"	4'-0"	12"	9"	0.11	33.00
21"	3:1	8"	2'-5"	3'-9"	8'-10"	2'-4"	4'-4"	12"	9"	0.13	37.50
24"	3:1	11"	3'-7"	2'-6"	8'-3"	4'-0"	5'-0"	15"	9"	0.17	42.00
27"	3:1	10"	4'-10"	3'-0"	8'-10"	4'-6"	5'-6"	15"	9"	0.19	46.50
30"	3:1	1'-1"	4'-5"	1'-10"	8'-3"	5'-0"	6'-0"	15"	9"	0.21	51.00
33"	3:1	1'-2"	4'-7"	2'-2"	8'-3"	5'-6"	6'-6"	15"	9"	0.23	55.50
36"	3:1	1'-3"	5'-2"	2'-1"	8'-10"	6'-0"	7'-0"	15"	9"	0.25	62.25
42"	3:1	1'-9"	5'-3"	2'-10"	8'-3"	6'-6"	7'-9"	15"	9"	0.27	66.75
48"	3:1	2'-1"	6'-0"	2'-2"	8'-3"	7'-0"	8'-6"	18"	12"	0.47	73.50
54"	2.4:1	2'-3"	5'-2"	2'-10"	8'-3"	7'-6"	9'-0"	18"	12"	0.50	78.00
60"	2:1	2'-7"	4'-11"	3'-8"	8'-10"	8'-0"	9'-6"	18"	12"	0.53	82.50
66"	2:1	2'-4"	6'-6"	1'-9"	8'-3"	8'-6"	10'-0"	18"	12"	0.56	87.00
72"	2:1	2'-10"	6'-6"	1'-9"	8'-3"	9'-0"	10'-9"	18"	12"	0.60	93.75

SEE NOTE 3 ABOVE FOR CONCRETE FOOTER

ISOMETRIC VIEW

SPECIFICATION	CATEGORY CODE ITEMS
305	

APPROVED — DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

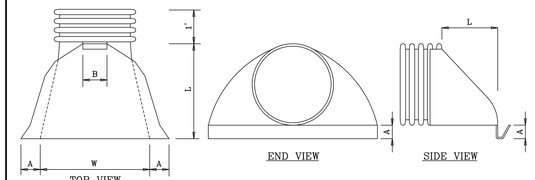
	APPROVAL + SHA REVISIONS	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
State Highway Administration	APPROVAL 5-5-75	APPROVAL 12-13-84
	REVISED 10-1-01	REVISED 5-25-06
	REVISED 7-1-09	REVISED 7-27-09
	REVISED	REVISED

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE

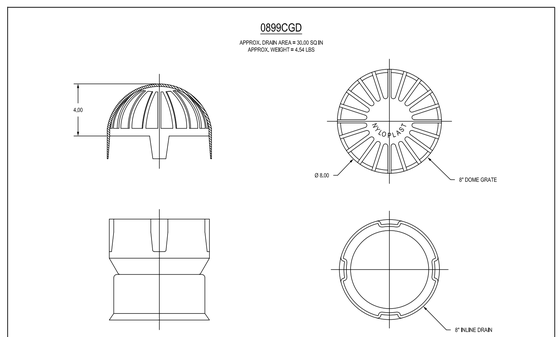
STANDARD NO. MD-368.01

ADS END SECTION DIMENSIONS



PART No.	PIPE SIZE	A	B	H	L	W
1210NP	12" & 15"	6.5"	10"	6.5"	25"	29"
1810NP	18"	7.5"	15"	6.5"	32"	35"
2410NP	24"	7.5"	18"	6.5"	36"	45"
3010NP	30"	10.5"	N/A	7.0"	53"	68"
3610NP	36"	10.5"	N/A	7.0"	53"	68"

ADS



ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE
GRATE HAS A LIGHT DUTY RATING
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-228

THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONFER, TRANSFER, OR LICENSE THE USE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN. REPRODUCTION OF THIS PRINT OR ANY INFORMATION OR ARTICLE SHOWN HEREON, OR THE DISCLOSURE OF ANY ARTICLE HEREFROM, FOR THE DISCLOSURE TO OTHERS IS FORBIDDEN, EXCEPT BY SPECIFIC WRITTEN PERMISSION FROM NYLOPLAST.

DRAWN BY	EBC	MATERIAL	DUCTILE IRON
DATE	3-3-06		
APPD BY	CJA	PROJECT NO./NAME	
DATE	3-3-06		
DWG SIZE	A	SCALE 1:4	SHEET 1 OF 1

Nyloplast
3139 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2442
FAX (770) 932-2490
www.nyloplastinc.com

TITLE: 8 IN DOME GRATE ASSEMBLY
DWG NO. 7001-110-197 REV A

NOTE:
ABOVE DETAIL PROVIDED AS SCHEMATIC SCREW TOP PVC WELL CAP ONLY

EACH OBSERVATION PORT/CLEANOUT SHALL INCLUDE THE FOLLOWING:

1. FOR AN UNDERGROUND FLUSH MOUNTED OBSERVATION PORT/CLEANOUT, PROVIDE A TUBE MADE OF NON-CORROSIVE MATERIAL, SCHEDULE 40 OR EQUAL WITH AN INSIDE DIAMETER OF AT LEAST 6 INCHES.
2. THE TUBE SHALL HAVE A FACTORY ATTACHED CAST IRON OR HIGH IMPACT PLASTIC COLLAR WITH RIBS TO PREVENT ROTATION WHEN REMOVING SCREW TOP LID. THE SCREW TOP LID SHALL BE CAST IRON OR HIGH IMPACT PLASTIC THAT WILL WITHSTAND ULTRA-VIOLET RAYS.

OBSERVATION PORT/CLEANOUT
NOT TO SCALE

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS
KENT COUNTY DEPARTMENT OF PLANNING AND ZONING
KENT COUNTY HEALTH DEPARTMENT
KENT SOIL AND WATER CONSERVATION DISTRICT

PROFESSIONAL CERTIFICATION.
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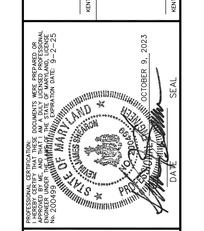

DATE

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CENTREVILLE, MARYLAND 21617
PHONE : 1-443-262-9130
FAX : 1-443-262-9148

REVISION	DATE
PER TAC COMMENTS	10-9-23

STORMWATER MANAGEMENT DETAILS
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

DATE	MARCH '23
SCALE	AS SHOWN
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31-2021165
DESIGNED BY	KJS

SHEET No. – C-5.02

CADD FILE – 21165C2502

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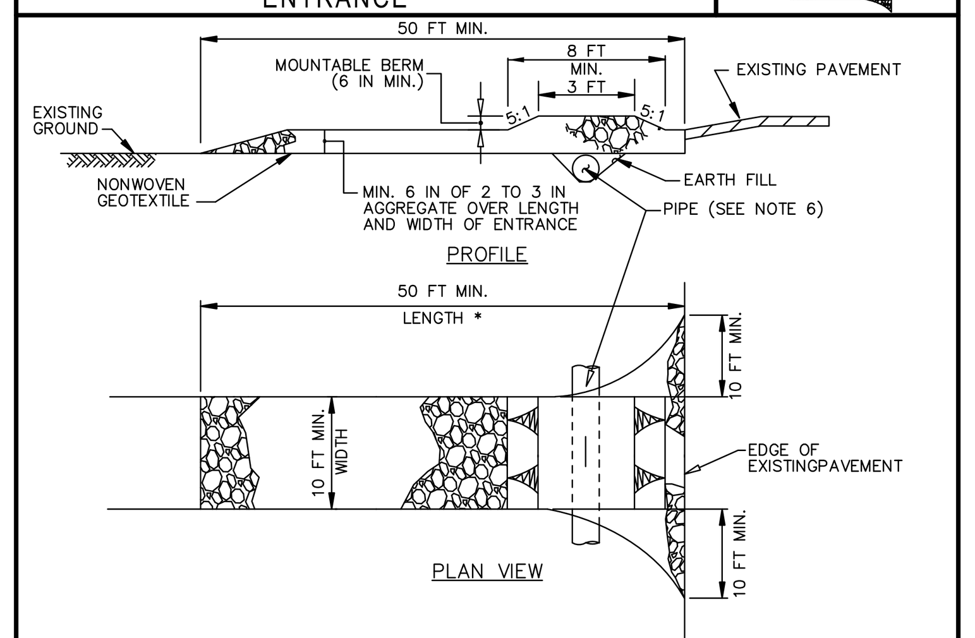
DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

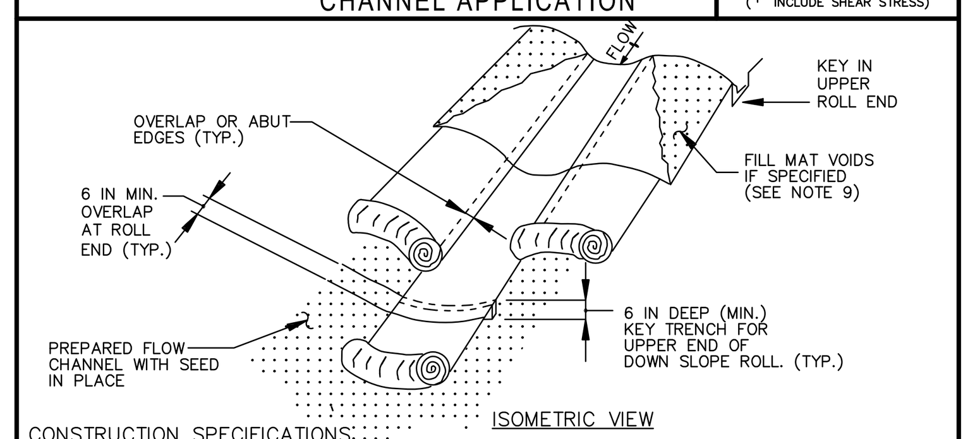
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING 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 B-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL: PSSMC – * lb/ft² (* INCLUDE SHEAR STRESS)



CONSTRUCTION SPECIFICATIONS

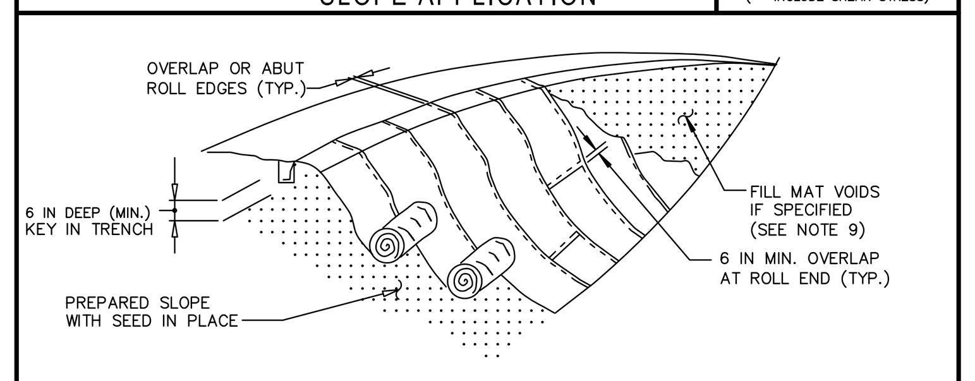
1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 ½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

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-4-6-D PERMANENT SOIL STABILIZATION MATTING SLOPE APPLICATION

STANDARD SYMBOL: PSSMS – * lb/ft² (* INCLUDE SHEAR STRESS)



CONSTRUCTION SPECIFICATIONS

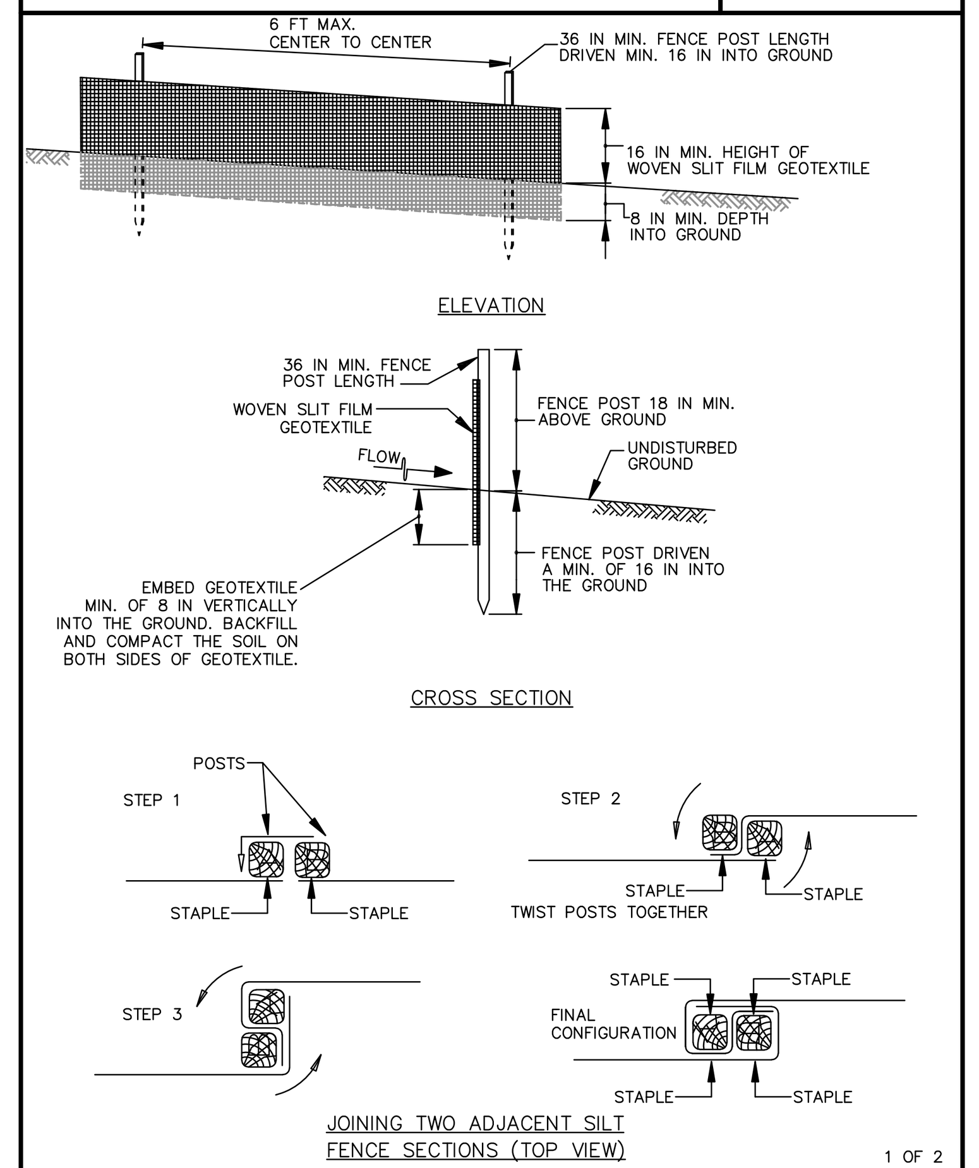
1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING DOWN SLOPE. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

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-1 SILT FENCE

STANDARD SYMBOL: —SF—



1 OF 2

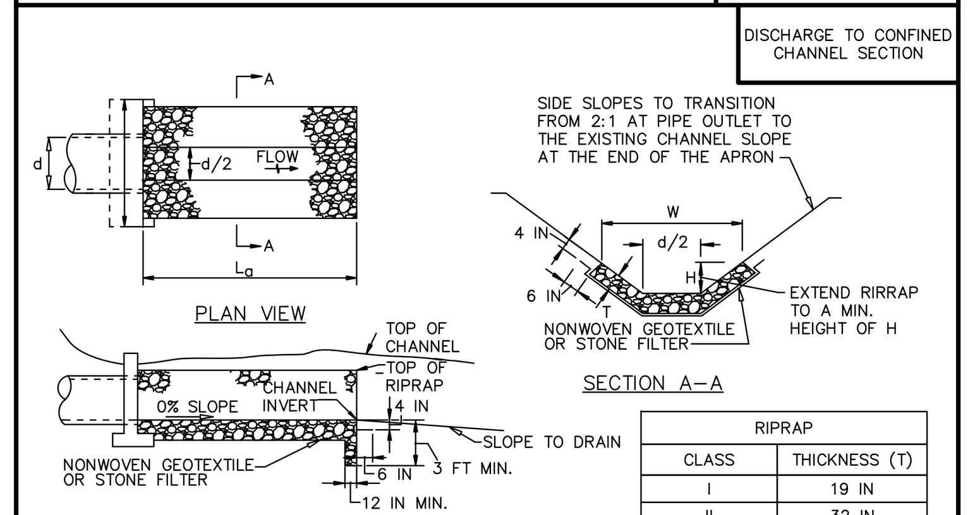
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL D-4-1-B ROCK OUTLET PROTECTION II

STANDARD SYMBOL: ROPII

DISCHARGE TO CONFINED CHANNEL SECTION



RIPRAP	
CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

CONSTRUCTION SPECIFICATIONS

1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (⅜ TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

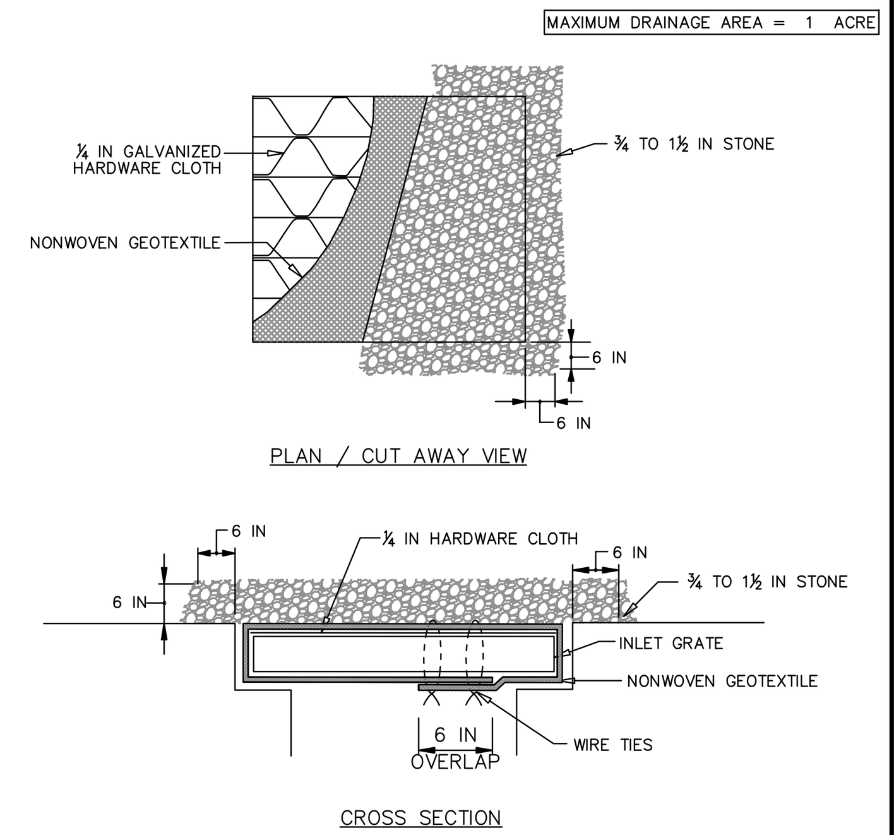
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-2 AT-GRADE INLET PROTECTION

STANDARD SYMBOL: AGIP

MAXIMUM DRAINAGE AREA = 1 ACRE



CONSTRUCTION SPECIFICATIONS

1. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
3. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
4. 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.

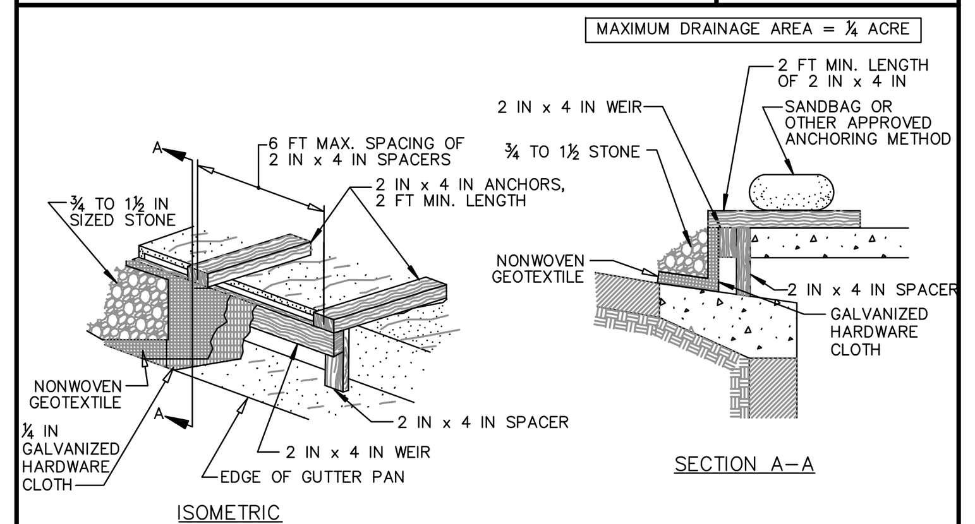
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL: CIP

MAXIMUM DRAINAGE AREA = ¼ ACRE



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

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: —SF—

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± 1/16 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" 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.

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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

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GENERAL NOTES

1. Notification of Kent County (410-778-7457) at least five (5) days prior to the start of work.
2. Prior to the start of work, the Contractor is to obtain County approval of any proposed plan changes and sequence of construction, specifically relating to installation, inspection, maintenance and removal of erosion and sediment control measures.
3. Sediment control measures are not to be removed until the areas served have established vegetative cover, or with the permission of the Kent County Sediment Control Inspector.
4. When pumping sediment-laden water, the discharge must be directed to an approved sediment trapping measure prior to release from the site.
5. All temporary stockpiles are to be located within areas protected by sediment control measures, and are to be temporary stabilized.
6. All sediment control dikes, swales, basins and flow lines to basins will be temporarily seeded immediately upon installation to reduce the contribution to sediment loading.
7. Disposal of excess earth materials on State or Federal property requires MDE Approval, otherwise materials are to be disposed of at a location approved by the local authority.
8. Temporary soil erosion control and sediment control measures are to be provided as per the approved plan prior to grading operations. Location adjustments are to be made in the field as necessary. The minimum area practical shall be disturbed for the minimum possible time.
9. If grading is completed out of a seeding season, graded areas are to be temporarily stabilized by mulch and mulch anchoring. Mulch material shall be unweathered, unchopped small grain straw spread at the rate of 1« to 2 tons per acre. Mulch anchoring to be accomplished by an approved method, use of a mulch anchoring tool is recommended where possible.
10. Implementation of the sediment control plan shall be in accordance with the "2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control", of the Department.
11. The Contractor is responsible for implementation and maintenance of the approved plan, and all other measures necessary to control, filter, or prevent sediment from leaving the site.
12. In case where stormwater management structures are a part of site development, removal of sediment control structures may not be accomplished before the contributing drainage area to the stormwater management structure is dewatered and stabilized.
13. On sites where infiltration techniques are utilized for the control of stormwater, extreme care must be taken to prevent all runoff from entering the structure during construction.
14. Sediment control for utility construction in areas outside of designed controls:
    (a) Excavated trench material shall be placed on the high side of the trench.
    (b) Immediately following pipe installation the trench shall be backfilled, compacted and stabilized at the end of each working day.
    (c) Temporary silt fence or straw bale dikes shall be placed immediately downstream of any disturbed area intended to remain disturbed longer than one working day.
15. All points on construction ingress and egress shall be protected to prevent tracking of mud onto public ways.
16. Site information:

Total Area of Site	20.665 Acres
Area Disturbed	20.42 Acres
Area to be Roofed or Paved	12.59 Acres
Total Cut	29,164 cy*
Total Fill	36,035 cy*

* – CUT AND FILL AMOUNTS ARE APPROXIMATE THE CONTRACTOR SHALL DO A SEPARATE TAKE-OFF

EROSION & 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 days (7) as to all other disturbed or graded areas on the project site.

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 rye grass shall be applied at a rate of 50 lbs. per acre using suitable equipment. Mulching shall be accomplished immediately after seeding

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

6.) Mulching shall be unchopped, unrotted, small grain straw applied at a rate of 2-2 1/2 tons per acre. Anchor mulch with a mulch anchoring tool on the contour. Wood cellulose fiber may be used for anchoring straw at 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 manufacture 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 be disking or other suitable means. Mulching shall be accomplished as discussed in Item #6 of these specifications.

Seed Mixture (For Hazard Zone 7a) (From Table B-3)					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Appl. Rate (lbs./ac.)	Seeding Dates	Seeding Depths	N	P205	K20	
7	CREEPING RED FESCUE KENTUCKY BLUEGRASS	60 lbs 15 lbs.	3/1-5/15 8/15-10/15	1/4" to 1/2"	45 lb/ac 1 lb/ 1000 sf	90 lb/ac 2 lb/ 1000 sf	90 lb/ac 2 lb/ 1000 sf	2 tons/ac 90 lb/ 1000 sf
8	TALL FESCUE	100 lbs.	3/1-5/15 8/15-10/15	1/4" to 1/2"				
9	TALL FESCUE KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	60 lbs 40 lbs. 20 lbs.	3/1-5/15 8/15-10/15	1/4" to 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 the Subcontractor.

MAINTENANCE SCHEDULE

PREVENTATIVE MAINTENANCE SHALL BE ENSURED THROUGH INSPECTION OF ALL INFILTRATION SYSTEMS, RETENTION, OR DETENTION STRUCTURES BY THE KENT COUNTY INSPECTOR. THE INSPECTION SHALL OCCUR DURING THE FIRST YEAR OF OPERATION AND AT LEAST ONCE EVERY 2 YEARS THEREAFTER.

NOTE:

AN ASBUILT SURVEY OF THE STORMWATER MANAGEMENT FACILITY WILL BE PERFORMED AND IF THE AS-BUILT DOES NOT SUBSTANTIALLY REFLECT THE STORMWATER FACILITY DESIGN, THE CONTRACTOR SHALL MAKE ANY CHANGES OR ADDITIONS TO BRING THE FACILITY IN COMPLIANCE WITH THE DESIGN AS DIRECTED BY THE SOIL CONSERVATION TECHNICIAN OF KENT COUNTY.

ASBUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THE "ASBUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE ____________ P.E. No. ____________

DATE ____________

INSPECTION CHECKLIST

THE CONTRACTOR SHALL NOTIFY THE KENT COUNTY SEDIMENT AND EROSION CONTROL INSPECTOR AT (778-7457) AT THE FOLLOWING POINTS:

1. THE REQUIRED PRECONSTRUCTION MEETING.
2. FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES.
3. PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL STRUCTURE.
4. PRIOR TO REMOVAL OF ALL SEDIMENT AND EROSION CONTROL DEVICES.
5. PRIOR TO FINAL ACCEPTANCE.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT ____________ *DATE* ____________

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

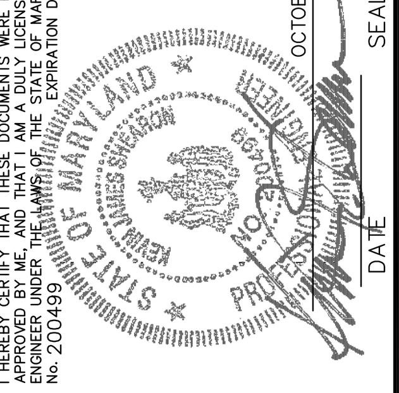
KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

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. 200499 EXPIRATION DATE: 9-2-25



OCTOBER 9, 2023

DATE

SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN, ENVIRONMENTAL SERVICES & SURVEYING
P.O. BOX 80
CENTREVILLE, MARYLAND 21617
PHONE : 1-443-262-9130
FAX : 1-443-262-9148

DATE	REVISION
10-9-23	PER TAC COMMENTS

SEDIMENT AND EROSION CONTROL DETAILS AND SPECIFICATIONS

FOR A

MANUFACTURING/WAREHOUSE BUILDING

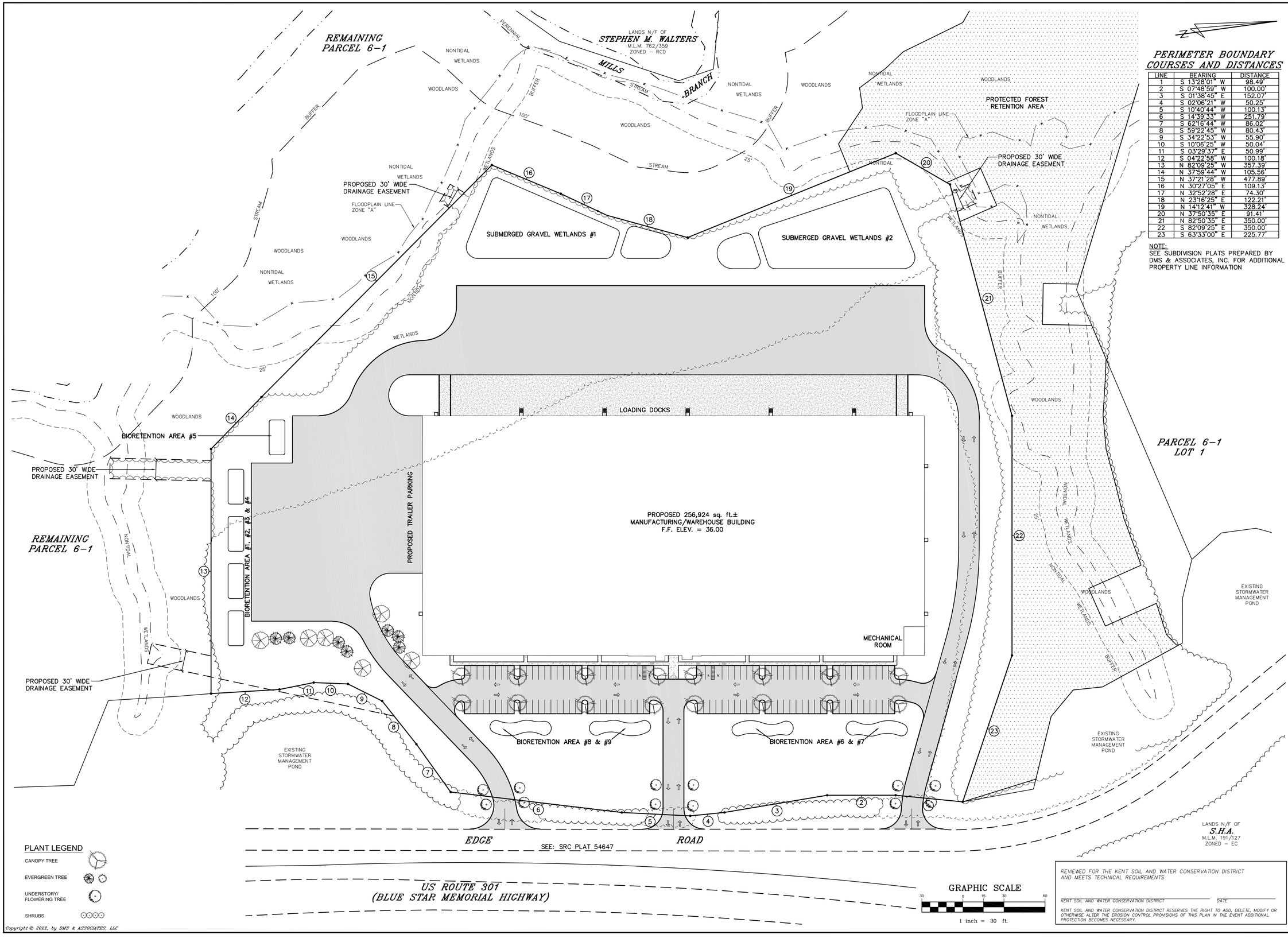
ON LOT 2, THE LANDS OF

MILLINGTON CROSSING ASSOCIATES ONE, LLC

FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON

TAX MAP – 31, GRID – 1E, PARCEL – 6-1

DATE MARCH '23	SCALE AS SHOWN	
JOB No. 2021165	DRAWN BY WJM	
FOLDER Ref. 31-2021165	DESIGNED BY KJS	
SHEET No. – C-5.03		
CADD FILE – 21165C2503		



PERIMETER BOUNDARY COURSES AND DISTANCES

LINE	BEARING	DISTANCE
1	S 13°28'01" W	98.49'
2	S 07°48'59" W	100.00'
3	S 01°38'45" E	152.07'
4	S 02°06'21" W	50.25'
5	S 10°40'44" W	100.13'
6	S 14°39'33" W	251.79'
7	S 62°16'44" W	86.02'
8	S 59°22'45" W	80.43'
9	S 34°22'53" W	55.90'
10	S 10°06'25" W	50.04'
11	S 03°29'37" E	50.99'
12	S 04°22'58" W	100.18'
13	N 82°09'25" W	357.39'
14	N 37°59'44" W	105.56'
15	N 37°21'28" W	477.89'
16	N 30°27'05" E	109.13'
17	N 32°52'28" E	74.30'
18	N 23°16'25" E	122.21'
19	N 14°12'41" W	328.24'
20	N 37°50'35" E	91.41'
21	N 82°50'35" E	350.00'
22	S 82°09'25" E	350.00'
23	S 63°33'00" E	225.77'

NOTE:
SEE SUBDIVISION PLATS PREPARED BY DMS & ASSOCIATES, INC. FOR ADDITIONAL PROPERTY LINE INFORMATION

PLANT LEGEND

CANOPY TREE
EVERGREEN TREE
UNDERSTORY/ FLOWERING TREE
SHRUBS

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS
KENT SOIL AND WATER CONSERVATION DISTRICT
KENT COUNTY DEPARTMENT OF PLANNING AND ZONING
KENT COUNTY HEALTH DEPARTMENT

STATE OF MARYLAND — LANDSCAPE ARCHITECT — DAVID M. HUSTEAD — 1200

NOVEMBER 6, 2023
DATE SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
P.O. BOX 210
CENTREVILLE, MARYLAND 21617

HUSTEAD Landscape Architecture, LLC
120 Bay Meadows Lane Stevensville, MD. 21666
Phone : 443.988.2394
E-mail: Vhustead@Hustealla.com Web: www.Hustealla.com

DATE	REVISION

OVERALL LANDSCAPE PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
THIRD ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP - 31, GRID - 1E, PARCEL - 6-1

DATE	MARCH '23
SCALE	1" = 60'
JOB No.	2021165
DRAWN BY	VH
FOLDER Ref.	31-2021165
DESIGNED BY	VH
SHEET No. -	L-1.00
CADD FILE -	21165L2100

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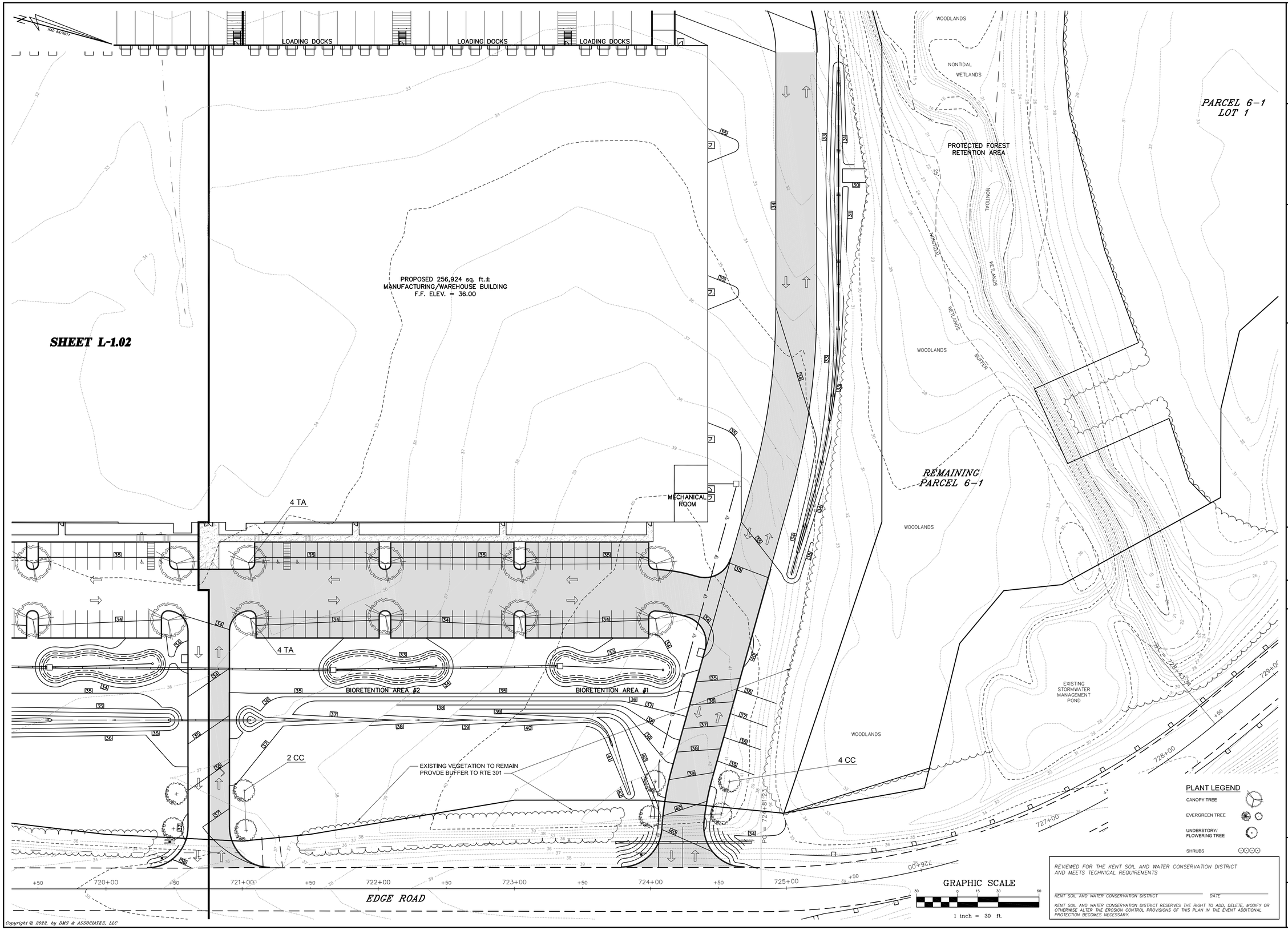

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT _____ DATE _____

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

STATE OF MARYLAND — DAVID M. HUSTEAD — No. 21665 — REGISTERED LANDSCAPE ARCHITECT

NOVEMBER 8, 2023
DATE SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
P.O. BOX 190
CENTREVILLE, MARYLAND 21617

HUSTEAD Landscape Architecture, LLC
120 Bay Meadows Lane Stevensville, MD. 21666
Phone : 443.988.2294
E-mail: Vhustead@Husteadla.com Web: www.Husteadla.com

REVISION
DATE

LANDSCAPE PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
THIRD ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

DATE	MARCH '23
SCALE	1" = 30'
JOB No.	2021165
DRAWN BY	VH
FOLDER Ref.	31-2021165
DESIGNED BY	VH
SHEET No. –	L-1.01
CADD FILE –	21165L2101

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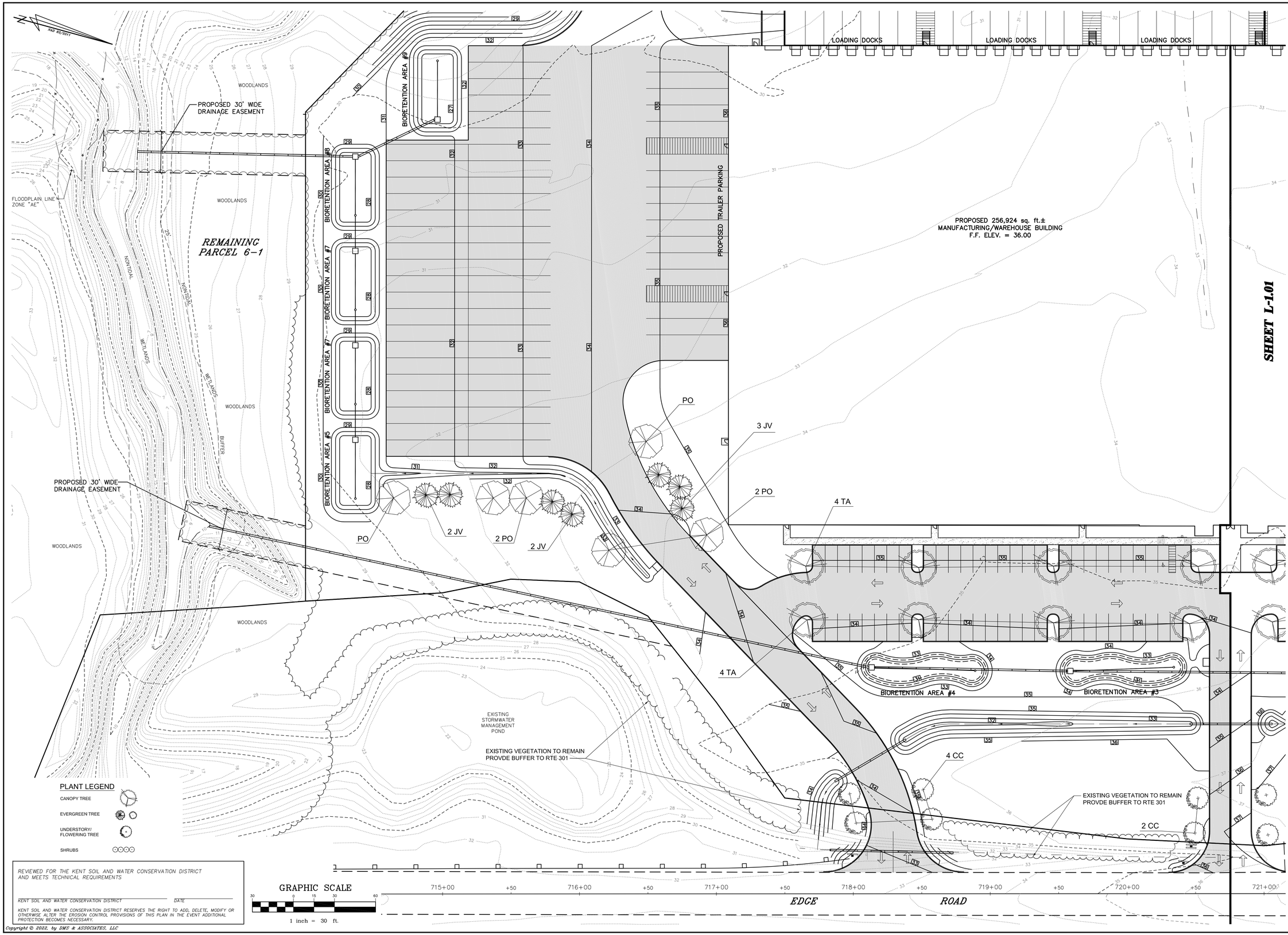

SHEET L-1.01

PLANT LEGEND

- CANOPY TREE
- EVERGREEN TREE
- UNDERSTORY/ FLOWERING TREE
- SHRUBS

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT — DATE

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

GRAPHIC SCALE
30 0 15 30 60
1 inch = 30 ft.

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KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT SOIL AND WATER CONSERVATION DISTRICT

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

STATE OF MARYLAND — LANDSCAPE ARCHITECT — 1201 — LAWRENCE W. HUSTEAD

NOVEMBER 8, 2023
DATE — SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
CENTREVILLE, MARYLAND 21617
P.O. BOX 190

HUSTEAD Landscape Architecture, LLC
120 Bay Meadows Lane Stevensville, MD. 21666
Phone - 443.988.2294
E-mail: Vhustead@Husteadla.com Web: www.Husteadla.com

REVISION

DATE

LANDSCAPE PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
THIRD ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

DATE: MARCH '23
SCALE: 1" = 30'
JOB No. 2021165
DRAWN BY VH
FOLDER Ref. 31-2021165
DESIGNED BY VH
SHEET No. – L-1.02
CADD FILE – 21165L102

LANDSCAPING SPECIFICATIONS

OVERALL COMPLIANCE WITH THE TERMS OF THIS LANDSCAPE PLAN INCLUDING ALL MAINTENANCE AND WARRANTY REQUIREMENTS PRESCRIBED HEREON IS THE RESPONSIBILITY OF THE OWNER/DEVELOPER. MAINTENANCE, WARRANTY AND PLANT MATERIAL SURVIVAL RESPONSIBILITIES OF THE LANDSCAPE CONTRACTOR SHALL BE AS SPECIFICALLY NEGOTIATED BETWEEN OWNER/
DEVELOPER AND CONTRACTOR.
ALL WORK SHALL BE ACCOMPLISHED WITH QUALIFIED PERSONNEL, UTILIZING INDUSTRY STANDARD PRACTICES AND TECHNIQUES. THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE INSTALLATION OF ALL LANDSCAPING SHOWN OR IMPLIED ON THIS PLAN. PRIOR TO INSTALLATION, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OR PLAN PREPARER IF SITE PLANTING CONDITIONS WARRANT RE-DESIGN CONSIDERATION AND VERIFY THE RECEIPT OF MOST CURRENT APPROVED BUFFER MANAGEMENT PLAN.

A. MATERIALS
(1) PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES, AND GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT, THEY SHALL HAVE BEEN ROOT PRUNED WITHIN THE LAST TWO YEARS.

THEY SHALL BE SOUND, HEALTHY AND VIGOROUS, WELL BRANCHED AND DENSELY FOLIATED WHEN IN LEAF. THEY SHALL BE FREE OF DISEASE, PEST, EGGS OR LARVAE, AND SHALL HAVE A HEALTHY, DEVELOPED ROOT SYSTEM, TREES AND SHRUBS SHALL NOT BE PRUNED BEFORE DELIVERY. ALL PLANTS WITH A DAMAGED OR CROOKED LEADER OR MULTIPLE LEADERS, ABRASIONS ON THE BARK, SUNSCALD, DISFIGURING KNOTS OR FRESH CUTS OVER 1 1/2" WILL BE REJECTED. 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. THE LANDSCAPE ARCHITECT OR PLAN PREPARER SHALL REJECT ANY AND ALL PLANT MATERIAL THAT DOES NOT MEET SPECIFICATIONS, IS DISEASED, OR IS OTHERWISE UNHEALTHY.

NO CHANGE IN QUANTITY, SIZE, KIND OR QUALITY OF PLANT SPECIFIED WILL BE PERMITTED WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT/DESIGNER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE PLANT COUNT AND IN ANY INSTANCE WHERE THERE IS A DISCREPANCY BETWEEN THE PLAN VIEW AND THE LANDSCAPE SCHEDULE, THE PLAN VIEW SHALL PRESIDE.

(2) TOPSOIL SHALL BE FERTILE, FRIABLE AND TYPICAL OF THE LOCALITY. IT SHALL BE FREE OF STONES, LUMPS, PLANTS, ROOTS, STICKS AND SHALL NOT BE DELIVERED IN A FROZEN OR MUDDY CONDITION. COMPACTED SOILS THAT CANNOT BE RESTORED TO A REASONABLE PLANTING SOIL SHALL BE REMOVED AND REPLACED WITH FRIABLE NATIVE SOILS.

(3) PLANTING SOIL (BACKFILL MIX) SHALL BE THREE PARTS NATIVE TOPSOIL AND ONE PART LEAF-GRO.

(4) STAKING MATERIALS: GUY WIRE SHALL BE PLIABLE 12 GAUGE GALVANIZED TWISTED TWO STRAND WIRE. HOSE SHALL BE A SUITABLE LENGTH OF TWO-PLY, REINFORCED BLACK RUBBER HOSE 3/4" INCH IN DIAMETER; STAKES SHALL CONFORM TO THE DETAIL ON THIS SHEET.

(5) MULCH: MULCH SHALL BE ORGANIC DOUBLE SHREDDED HARDWOOD BARK FREE OF HERBICIDES, LARGE CHUNKS AND WEEDS AND SEED AND AGED A MINIMUM OF 6 MONTHS.

B. APPLICABLE SPECIFICATIONS AND STANDARDS:
(1) "STANDARDIZED PLANT NAMES," LATEST EDITION AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE.
(2) "AMERICAN STANDARD FOR NURSERY STOCK," LATEST EDITION, AMERICAN ASSOCIATION OF NURSERYMEN.

C. PRE-DELIVERY DIGGING AND HANDLING OF PLANT MATERIALS:
(1) IMMEDIATELY BEFORE DIGGING, SPRAY ALL EVERGREEN OR DECIDUOUS PLANT MATERIAL IN FULL LEAF WITH ANTI-DESICCANT, APPLYING AN ADEQUATE FILM OVER TRUNKS, BRANCHES, TWIGS, AND/ OR FOLIAGE.
(2) DIG BALL AND BURLAP (B&B) PLANTS WITH FIRM NATURAL BALLS OF EARTH, OF DIAMETER NOT LESS THAN THAT RECOMMENDED BY AMERICAN STANDARD FOR NURSERY STOCK, AND OF SUFFICIENT DEPTH TO INCLUDE THE FIBROUS AND FEEDING ROOTS. PLANTS MOVED WITH A BALL WILL NOT BE ACCEPTED IF THE BALL IS CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATIONS.
(3) THE LANDSCAPE CONTRACTOR SHALL PLAN DELIVER AND PLANT INSTALLATION TO MINIMIZE STRESS ON PLANT MATERIAL. 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. THE LACK OF AVAILABLE WATER SHALL NOT RELIEVE THE CONTRACTOR OF ADEQUATE MAINTENANCE.

D. SITE PREPARATION:
PLANTING AREAS THAT HAVE BEEN IN CONSISTENT AGRICULTURAL PRODUCTION SHALL BE PLANTED WITH NO OTHER REQUIRED SITE PREPARATION.

PLANTING AREAS THAT ARE VEGETATED AND STABLE WITH MINIMAL WEEDS SHALL BE MOWED TO 8" OR AS REQUIRED FOR PLANTING OR SEEDLING INSTALLATION.

E. EXCAVATION OF PLANTING AREAS:
THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK. 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 THE CONTRACTOR.

STAKE OUT ON THE GROUND LOCATIONS FOR PLANTS AND OUTLINES OF AREA TO BE PLANTED AND OBTAIN APPROVAL OF THE LANDSCAPE ARCHITECT/DESIGNER BEFORE EXCAVATION IS BEGUN. CONTRACTOR IS TO CAUTIOUSLY TEST PIT AREAS WHERE UNDERGROUND UTILITIES (ELECTRIC, GAS, CABLE/COMMUNICATIONS LINES, WATER LINES, SEWER, ROOF LEADERS, STORM DRAIN PIPE, ETC.) ARE SUSPECTED TO EXIST AND WHERE PROPOSED TO BE PLACED ACCORDING TO PLAN TO AVOID ANY DAMAGE OR DISRUPTIONS TO SERVICES. DO NOT PLACE PLANTS DIRECTLY OVER ANY EXISTING UNDERGROUND UTILITIES. OFFSET A REASONABLE AND PRACTICAL DISTANCE TO AVOID ANY IMMINENT OR FUTURE CONFLICT.

F. PLANTING OPERATIONS:
DO NOT MIX OR PLACE SOILS AND SOIL AMENDMENTS IN FROZEN, WET OR MUDDY CONDITION. SUSPEND SOIL SPREADING, GRADING AND TILLING OPERATIONS DURING PERIODS OF EXCESS SOIL MOISTURE UNTIL MOISTURE CONTENT REACHES ACCEPTABLE LEVELS TO ATTAIN THE REQUIRED RESULTS, UNIFORMLY MOISTEN EXCESSIVELY DRY SOIL THAT IS NOT WORKABLE AND TOO DUSTY.

TREE PITS SHALL BE EXCAVATED TO A DEPTH THAT ALLOWS FOR THE PLANTS TO BE SET AT THE SAME RELATIONSHIP TO FINISHED GRADE AS THEY BORE TO THE GROUND FROM WHICH THEY WERE DUG. ADD 1 OZ. OF MYCOAPPLY ENDO GRANULAR PER 2 CU.FT. OF BACKSOIL TO THE SIDES OF THE ROOTBALL. PLANTING PITS SHALL BE DUG A MINIUM OF 6 INCHES BELOW THE ROOT BALL AND 2 FEET PAST THE EDGE OF THE ROOT BALL TO ALLOW ROOM FOR AN EXPANDED AREA OF PLANTING SOIL. USE PLANTING SOIL TO BACKFILL APPROXIMATELY 2/3 FULL, WATER THOROUGHLY BEFORE INSTALLING REMAINDER OF THE PLANTING SOIL TO TOP OF PIT, ELIMINATING ALL AIR POCKETS. SET PLANTS PLUMB AND BRACE RIGIDLY IN POSITION UNTIL THE PLANTING SOIL HAS BEEN STAMPED SOLIDLY AROUND THE BALL AND ROOTS, CUT ROPES OR STRINGS FROM TOP OF BALL AFTER PLANT HAS BEEN SET. LEAVE BURLAP OR CLOTH WRAPPING INTACT AROUND BALLS. TURN UNDER AND BURY PORTIONS OF BURLAP AT TOP OF BALL. FOR CONTAINER GROWN PERENNIALS, CAREFULLY REMOVE FROM CONTAINERS WITHOUT BREAKING APART PLANTS OR ROOT SYSTEMS AND GENTLY LOOSEN SOIL. PLACE IN PIT EXCAVATED TO THE DEPTH THAT ALLOWS FOR THE PLANT TO BE SET AT ITS FORMER GRADE. BACKFILL TO 2/3 FULL AND WATER THOROUGHLY. BACKFILL WITH REMAINING PLANTING SOIL TO TOP OF PIT, ELIMINATING ALL AIR POCKETS. DISPOSE OF REMOVED CONTAINERS OFFSITE AT AN APPROVED LANDFILL.

PROTECT PLANTS AT ALL TIMES FROM SUN OR DRYING WINDS, PLANTS THAT CANNOT BE PLANTED IMMEDIATELY ON DELIVERY SHALL BE KEPT IN THE SHADE, WELL PROTECTED WITH SOIL, WET MOSS OR OTHER ACCEPTABLE MATERIAL AND SHALL BE KEPT WELL WATERED. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN THREE DAYS AFTER DELIVERY, PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES. PLANTS SHALL BE LIFTED AND HANDLED FROM THE BOTTOM OF THE BALL ONLY.

MULCH ALL PITS AND BEDS WITH A TWO-INCH LAYER OF BARKMULCH IMMEDIATELY AFTER PLANTING. TO WORKED BEDS OF HERBACEOUS PERENNIALS ADD MULCH TO A DEPTH OF 2". PROVIDE AN 3-FOOT DIAMETER MULCH CIRCLE AROUND THE BASE OF ALL LARGE TREES. IN NO INSTANCE IS MULCH TO BE PILED AGAINST THE BASE OF TREE AND SHRUB TRUNKS. MULCH AREAS AROUND BASE OF EACH PLANT AND IN PLANTER AREAS. WATER ALL PLANTS IMMEDIATELY AFTER PLANTING.

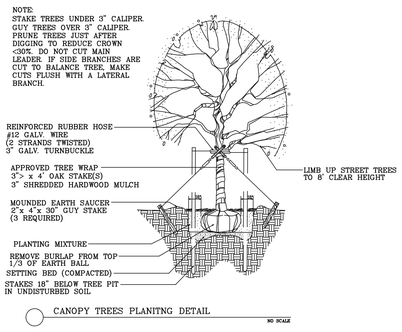
G. STAKING AND PRUNING:
STAKE LARGE TREES IMMEDIATELY AFTER PLANTING. PLANTS SHALL STAND PLUMB AFTER STAKING. STAKES AND GUY WIRES SHALL BE OF THE SIZE AND MATERIAL SPECIFIED ABOVE AND POSITIONED AS SHOWN ON THE ACCOMPANYING PLANTING DETAIL. THEY SHALL BE REMOVED AT THE END OF THE GUARANTEE PERIOD AND DISPOSED OF OFF SITE BY THE CONTRACTOR.

REMOVE ALL DEAD WOOD, SUCKERS, OR BROKEN BRANCHES AND PRESERVE THE NATURAL CHARACTER OF THE PLANT.

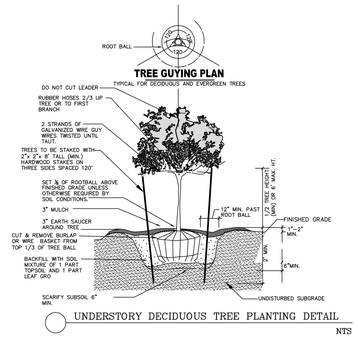
H. POST PLANTING RESPONSIBILITIES:
THE OWNER/DEVELOPER THROUGH HIS/HER CONTRACT WITH THE LANDSCAPE CONTRACTOR IS RESPONSIBLE AND SHALL INSURE ADEQUATE MAINTENANCE IS PROVIDED THROUGH THE INSTALLATION AND WARRANTY PERIOD AND FINAL INSPECTION BY THE COUNTY.

I. GUARANTEE:
TREES AND HERBACEOUS PERENNIALS SHALL BE GUARANTEED FOR TWO (2) FULL YEARS FROM THE DATE THAT THE LANDSCAPE INSTALLATION IS ACCEPTED AS COMPLETE AND HAVE A 100% SURVIVABILITY RATING AT THE END OF THE TWO YEARS. PLANT MATERIAL NOT FOUND TO BE IN A HEALTHY, VIGOROUS CONDITION AT THE BEGINNING OF THE SECOND GROWING SEASON IS TO BE REPLACED. BARE-ROOT SEEDLINGS SHALL BE GUARANTEED FOR A PERIOD OF FIVE (5) YEARS AND HAVE A 50% SURVIVABILITY RATE AT THE END OF 5 YEARS. SEEDLINGS NOT FOUND TO BE IN A HEALTHY VIGOROUS CONDITION AT THE END OF THE FIVE-YEAR PERIOD ARE TO BE REPLACED.

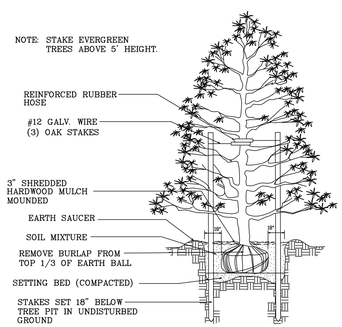
PLANTING DETAILS



CANOPY TREES PLANTING DETAIL
NO SCALE



UNDERSTORY DECIDUOUS TREE PLANTING DETAIL
NTS



EVERGREEN TREES PLANTING DETAIL
NTS

PLANT SCHEDULE

KEY	QUA	BOTANICAL NAME	COMMON NAME	NATIVE	SIZE
		Canopy Trees			
PO	6	Platanus occidentalis	Sycamore	Y	2 - 2 ½" Cal. B&B
TA	16	Tilia americana	Basswood	Y	2 - 2 ½" Cal. B&B
		Understory Trees			
CC	12	Cercis canadensis	Eastern Redbud	Y	1 - 1 1.2" Cal. B&B
		Evergreen Trees			
JV	7	Juniperus virginana'Burkii'	Burkii Estern Redcedar	Y	5 - 6' Ht. B&B

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT — DATE

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

KENT COUNTY DEPARTMENT OF PLANNING AND ZONING

KENT COUNTY HEALTH DEPARTMENT

KENT SOIL AND WATER CONSERVATION DISTRICT

STATE OF MARYLAND — LANDSCAPE ARCHITECT — LARRY HUSTEAD

NOVEMBER 8, 2023
DATE — SEAL

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
P.O. BOX 240
CENTREVILLE, MARYLAND 21617

HUSTEAD Landscape Architecture, LLC
120 Bay Meadows Lane Stevensville, MD. 21666
Phone: 443.988.2294
E-mail: Vhustead@Husteadla.com Web: www.Husteadla.com

REVISION	DATE

LANDSCAPE DETAILS AND SPECIFICATIONS
FOR A
MANUFACTURING/WARHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
THIRD ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 1E, PARCEL – 6-1

SCALE	AS SHOWN
DRAWN BY	VH
DESIGNED BY	VH
DATE	MARCH '23
JOB No.	2021165
FOLDER Ref.	31-2021165
SHEET No. –	L-1.03
CADD FILE –	21165L2103

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Schedule

Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
	P3-2		6	Lithonia Lighting	DSX1 LED P3 30K 70CRI T2M	D-Series Size 1 Area Luminaire P3 Performance Package 3000K CCT 70 CRI Type 2 Medium	1	13055	0.95	102.17	 Max: 11887cd
	P3-3		7	Lithonia Lighting	DSX1 LED P3 30K 70CRI T3M	D-Series Size 1 Area Luminaire P3 Performance Package 3000K CCT 70 CRI Type 3 Medium	1	13206	0.95	102.17	 Max: 11053cd
	P6-FT		12	Lithonia Lighting	DSX1 LED P6 30K 70CRI TFTM	D-Series Size 1 Area Luminaire P6 Performance Package 3000K CCT 70 CRI Forward Throw	1	20140	0.95	165.25	 Max: 18145cd
	P6-5		2	Lithonia Lighting	DSX1 LED P6 30K 70CRI T5M	D-Series Size 1 Area Luminaire P6 Performance Package 3000K CCT 70 CRI Type 5 Medium	1	20579	0.95	165.25	 Max: 11289cd
	W2		4	Lithonia Lighting	WDGE2 LED P4 30K 70CRI T1S	WDGE2 LED WITH P4 - PERFORMANCE PACKAGE, 3000K, 70CRI, TYPE 1 SHORT OPTIC	1	4295	0.95	46.6589	 Max: 4553cd
	W3		23	Lithonia Lighting	WDGE3 LED P4 70CRI R4 30K	WDGE3 LED WITH P4 - PERFORMANCE PACKAGE, 3000K, 70CRI, TYPE 4 OPTIC	1	11554	0.95	87.8914	 Max: 6818cd

D-Series Size 1
LED Area Luminaire

Catalog Number

Notes

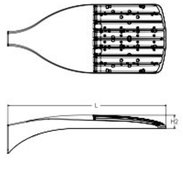
Type

Hit the Tab key or mouse over the page to see all interactive elements.

d*series

Specifications

EPA:	0.69 ft² (0.06 m²)
Length:	32.71" (83.1 cm)
Width:	14.26" (36.2 cm)
Height H1:	7.88" (20.0 cm)
Height H2:	2.73" (6.9 cm)
Weight:	34 lbs (15.4 kg)



Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature[1]	Color Rendering Index[1]	Distribution	Voltage	Mounting
DSX1 LED	**Forward optics**	(this section 70CRI only)		AFR Automotive front row	MVOLT (120V-277V)[4]	**Shipped included**
	P1 P6	30K 3000K	70CRI	T1S Type I short	HVOLT (347V-480V)[4]	SPA Square pole mounting (#8 drilling)
	P2 P7	40K 4000K	70CRI	T2M Type II medium	XVOLT (277V - 480V)[5,6]	RPA Round pole mounting (#8 drilling)
	P3 P8	50K 5000K	70CRI	T3M Type III medium	120[6,26]	SPA5 Square pole mounting #5 drilling[9]
	P4 P9	(this section 80CRI only, extended lead times apply)		T3LG Type III low glare[2]	208[6,26]	RPA5 Round pole mounting #5 drilling[9]
	P5	**Rotated optics**		T4M Type IV medium	240[6,26]	SPA8N Square narrow pole mounting #8 drilling
		P10[3] P12[3]	80CRI	T4LG Type IV low glare[2]	277[6,26]	WBA Wall bracket[10]
		P11[3] P13[3]	80CRI	TFTM Forward throw medium	347[6,26]	MA Mast arm adapter (mounts on 2 3/8" OD horizontal tenon)
			80CRI		480[6,26]	
			80CRI			

Control options		Other options		Finish (required)	
Shipped installed		**Shipped installed**		DDBXD	Dark Bronze
NLTAIR2 PIRHN	nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8–40' mounting height, ambient sensor enabled at 2fc[7,11,12,30,31]	SPD20KV	20kV surge protection	DBLXD	Black
PIR	High/low, motion/ambient sensor, 8–40' mounting height, ambient sensor enabled at 2fc[11,30,31]	HS	Houseside shield (black finish standard)[32]	DNAXD	Natural Aluminum
PER	NEMA twist-lock receptacle only (controls ordered separate)[13]	L90	Left rotated optics[1]	DWHXD	White
PERS	Five-pin receptacle only (controls ordered separate)[14,31]	R90	Right rotated optics[1]	DDBTXD	Textured dark bronze
PER7	Seven-pin receptacle only (controls ordered separate)[14,31]	CCE	Coastal Construction[33]	DBLBXD	Textured black
FAO	Field adjustable output[15,31]	HA	50°C ambient operation[34]	DNATXD	Textured natural aluminum
BL30	Bi-level switched dimming, 30%[8,31]	BAA	Buy American Act Compliant	DWHGXD	Textured white
BL50	Bi-level switched dimming, 50%[8,31]	SF	Single fuse (120, 277, 347V)[26]		
DMG	0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[17]	DF	Double fuse (208, 240, 480V)[26]		
DS	Dual switching[16,18,31]	**Shipped separately**			
		EGSR	External Glare Shield (reversible, field install required, matches housing finish)		
		BSDB	Bird Spikes (field install required)		

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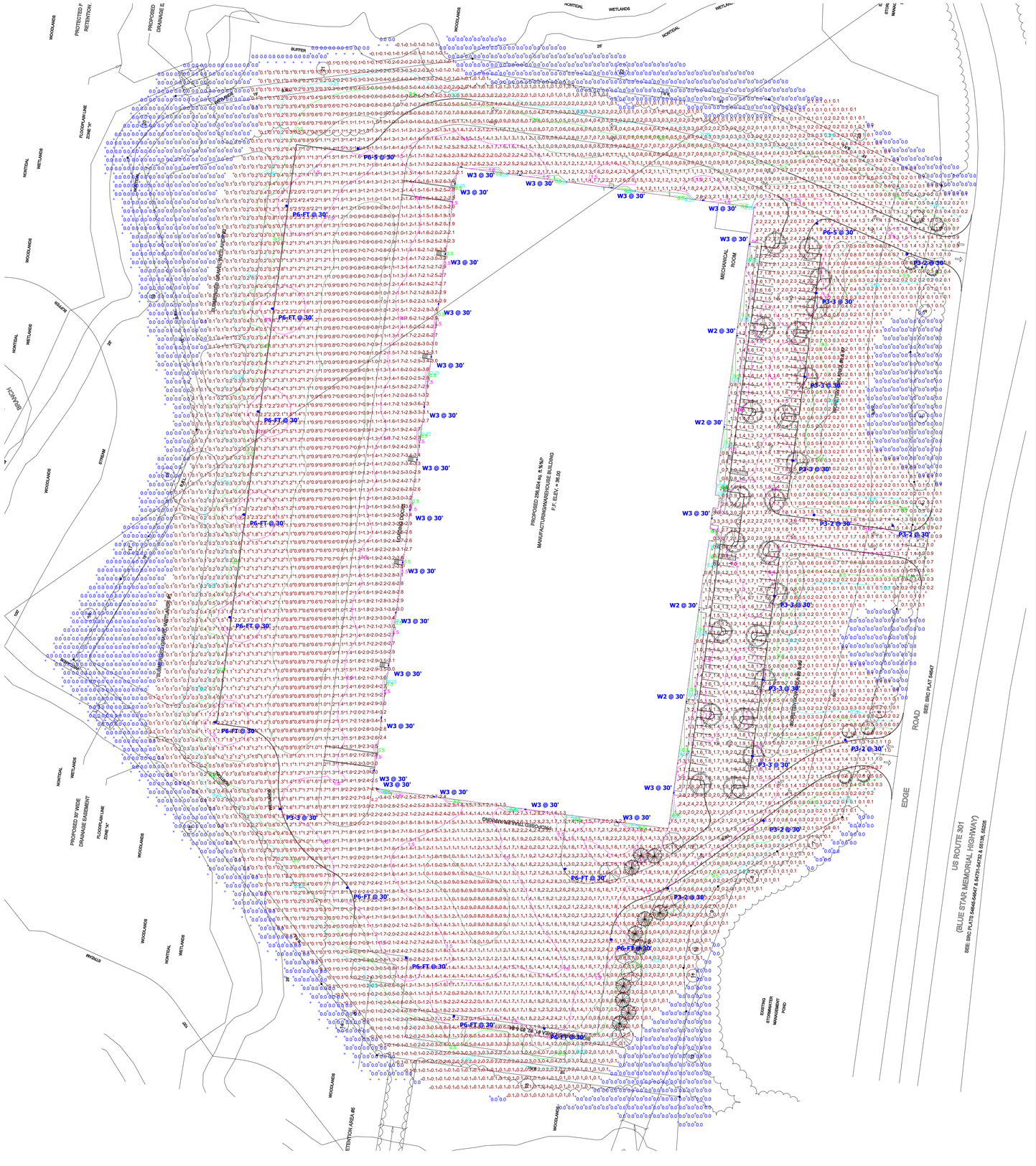

Site Lighting Photometric Plan
Millington Crossing - Lot 2
Millington, MD

Designer
R. Renshaw
Date
11/14/2023
Scale
1" = 60'
Drawing No.

Summary
Draft 1

M+H ARCHITECTS

10.19.2023

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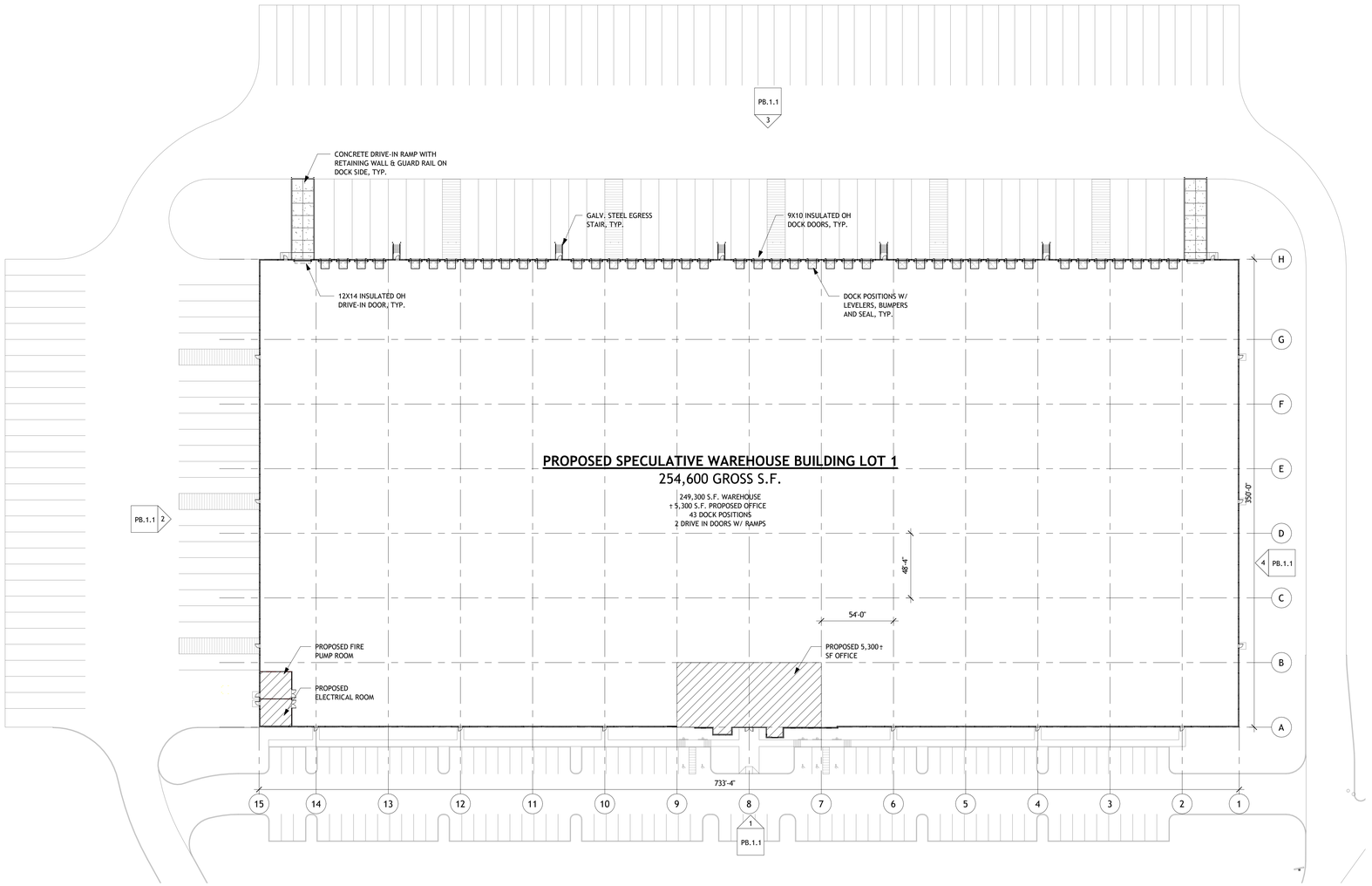
MILLINGTON, MARYLAND

MILLINGTON CROSSING

EVERTON INDUSTRIAL DEVELOPMENT
A BROWNFIELD REDEVELOPMENT COMPANY



1 **FIRST FLOOR**
1" = 40'-0"

M+H ARCHITECTS

ARCHITECT:
Mitchell and Hugeback Architects, Inc.
D.B.A. M+H Architects
12747 Olive Blvd., Suite 150
St. Louis, MO 63141
314-878-3500
www.mha.us.com

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MILLINGTON CROSSING

31, GRID - 1E PARCEL - 6-1 - LOT 1
MILLINGTON, MARYLAND

EVERTON INDUSTRIAL DEVELOPMENT

Licensee Name: LAWRENCE T. VALENZA
Discipline: Registered Architect
Licensee Registration No.: 20135
Registration Expires: 10/30/25

STATE OF MARYLAND · LAWRENCE T. VALENZA · 20135 · REGISTERED ARCHITECT

10-18-23

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REVISION:

Sheet Issue Date:	10/18/23
Job Number:	23004.10
Drawn By:	MI
Checked By:	JN/SN
Drawing Title:	

FLOOR PLAN - LOT 1

PB.1.0

EXTERIOR MATERIALS LEGEND:

PAINT COLORS:

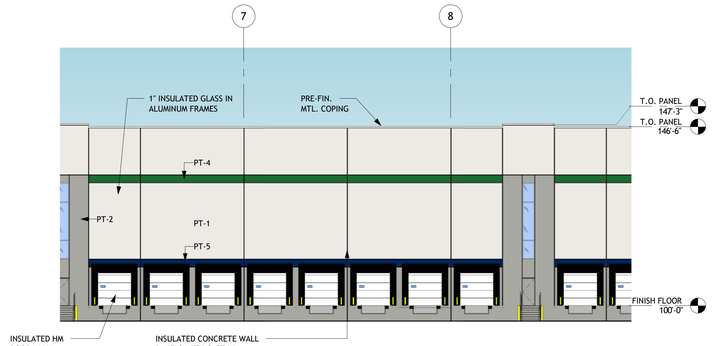
- PT-1 PAINTED CONCRETE PANEL LIGHT
- PT-2 PAINTED CONCRETE PANEL MEDIUM
- PT-3 PAINTED CONCRETE PANEL DARK
- PT-4 DARK GREE
- PT-5 DARK BLUE

COPING

- PREFINISHED ALUMINUM TO MATCH ADJACENT WALL COLOR TYP. EXACT COLOR TO BE SELECTED BY ARCHITECT FROM MANUF. FULL RANGE OF COLORS

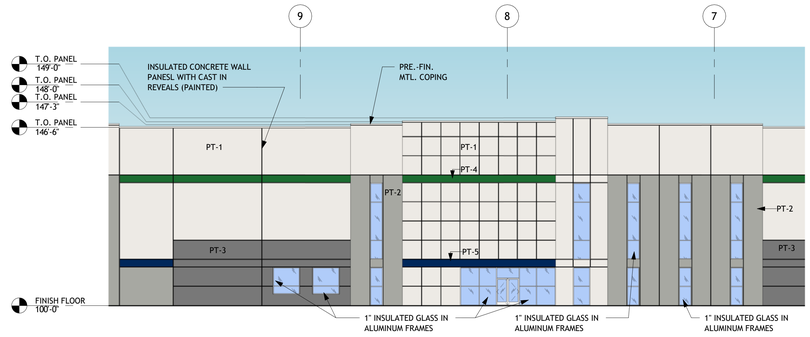
GLAZING

- THERMALLY BROKEN, CLEAR ANODIZED ALUMINUM FRAMES WITH TINTED, INSULATED GLASS.



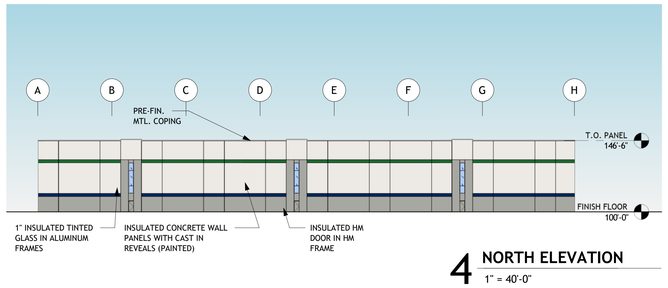
6 ENLARGED NORTH DOCK ELEVATION

1/16" = 1'-0"



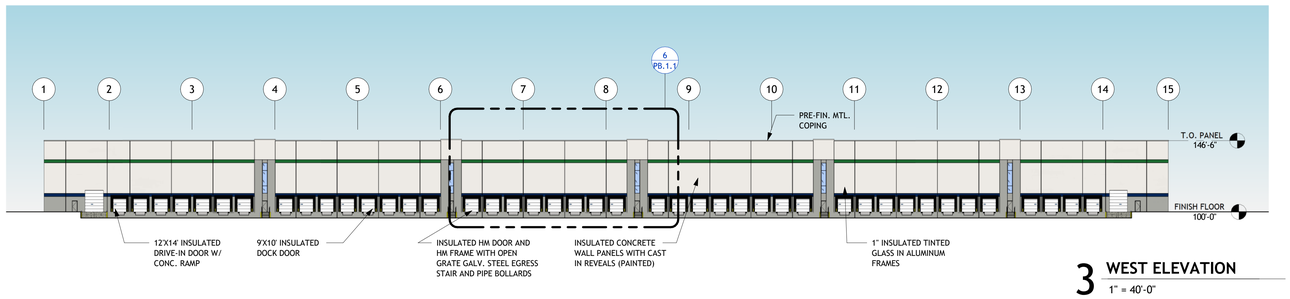
5 ENLARGED SOUTH ELEVATION

1/16" = 1'-0"



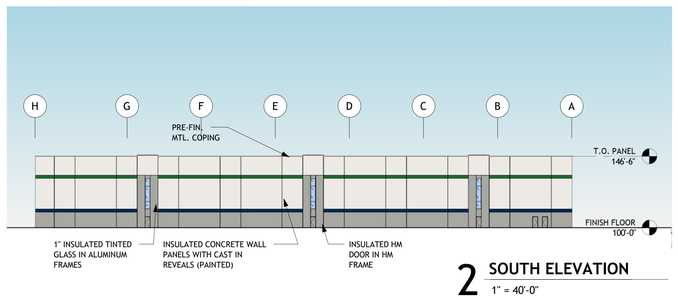
4 NORTH ELEVATION

1" = 40'-0"



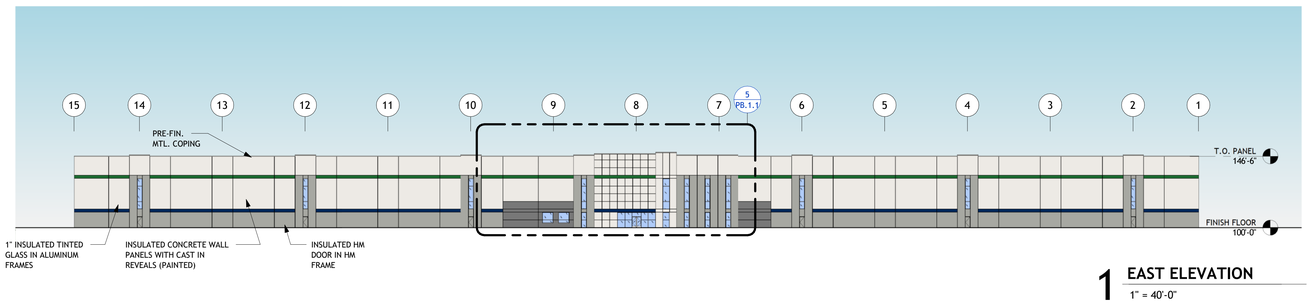
3 WEST ELEVATION

1" = 40'-0"



2 SOUTH ELEVATION

1" = 40'-0"



1 EAST ELEVATION

1" = 40'-0"

M+H ARCHITECTS

ARCHITECT:
Mitchell and Hugeback Architects, Inc.
D.B.A. M+H Architects
12747 Olive Blvd., Suite 150
St. Louis, MO 63141
314-878-3500
www.mha.us.com

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MILLINGTON CROSSING

31, GRID - 1E PARCEL - 6-1 - LOT 1
MILLINGTON, MARYLAND

EVERTON INDUSTRIAL DEVELOPMENT

Licensee Name: LAWRENCE T. VALENZA
Discipline: Registered Architect
Licensee Registration No.: 20135
Registration Expires: 10/30/25

STATE OF MARYLAND · LAWRENCE THOMAS VALENZA · 20135 · ARCHITECT

10-18-23

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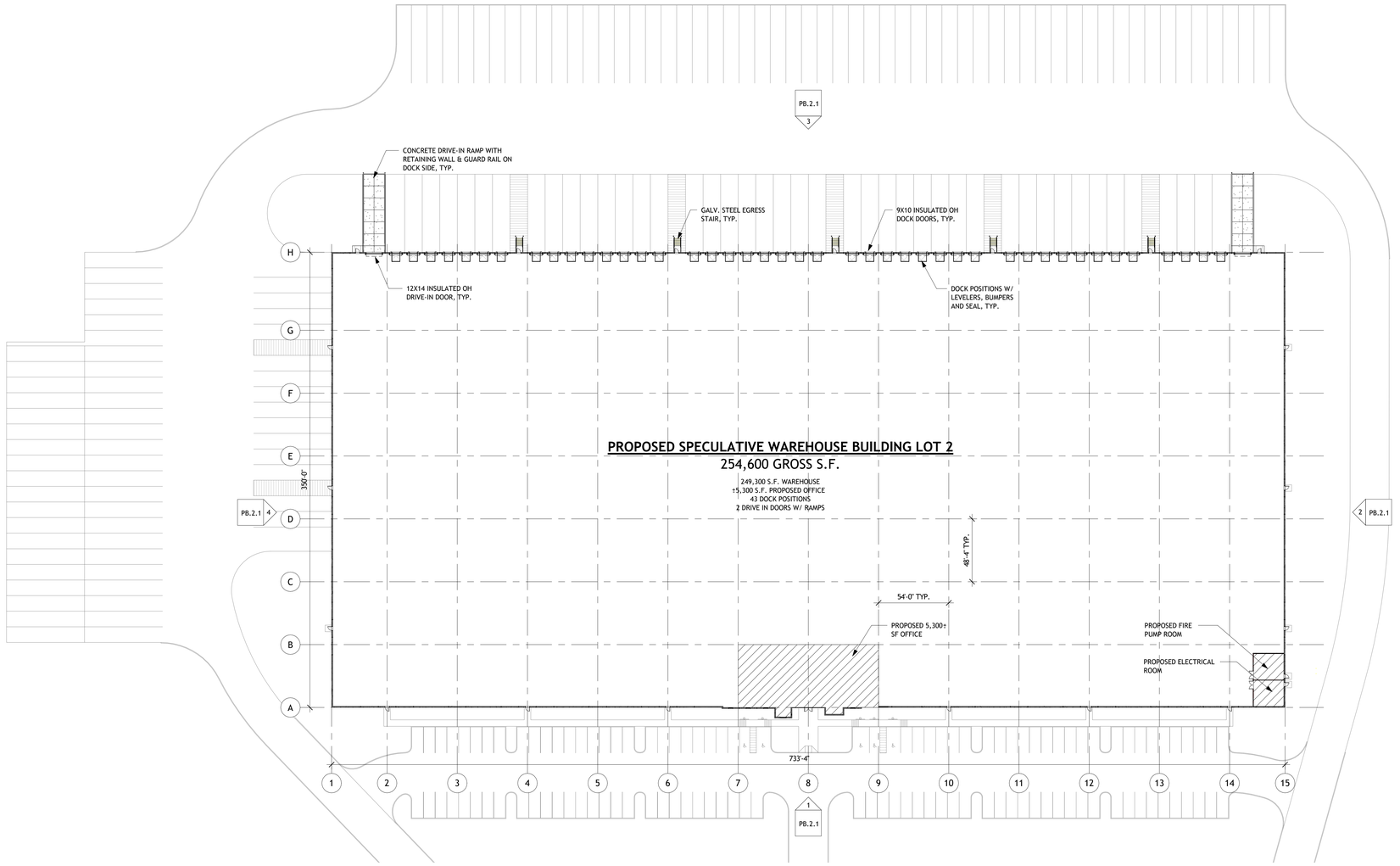
Checked By:	JN/SN

Drawing Title:

ELEVATIONS - LOT 1

PB.1.1



1 **FIRST FLOOR**
1" = 40'-0"

M+H ARCHITECTS

ARCHITECT:
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MILLINGTON CROSSING

31, GRID - 1E PARCEL - 6-1 - LOT 2
MILLINGTON, MARYLAND

EVERTON INDUSTRIAL DEVELOPMENT

Licensee Name: LAWRENCE T. VALENZA
Discipline: Registered Architect
Licensee Registration No.: 20135
Registration Expires: 10/30/25

10-18-23

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REVISION:

Sheet Issue Date:	10/18/23
Job Number:	23004.20
Drawn By:	MI
Checked By:	JN/SN

Drawing Title:

FLOOR PLAN - LOT 2

PB.2.0

EXTERIOR MATERIALS LEGEND:

PAINT COLORS:

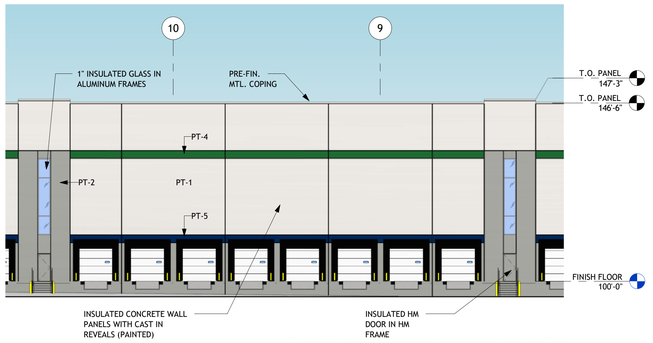
- PT-1 PAINTED CONCRETE PANEL LIGHT
- PT-2 PAINTED CONCRETE PANEL MEDIUM
- PT-3 PAINTED CONCRETE PANEL DARK
- PT-4 DARK GREEN
- PT-5 DARK BLUE

COPING

- PREFINISHED ALUMINUM TO MATCH ADJACENT WALL COLOR TYP. EXACT COLOR TO BE SELECTED BY ARCHITECT FROM MANUF. FULL RANGE OF COLORS

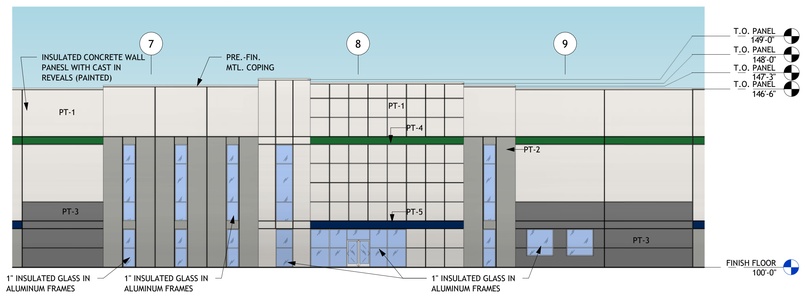
GLAZING

- THERMALLY BROKEN, CLEAR ANODIZED ALUMINUM FRAMES WITH TINTED, INSULATED GLASS.



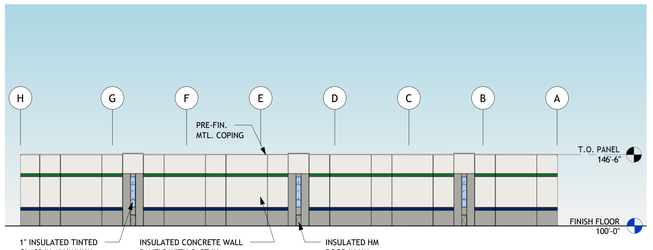
6 ENLARGED WEST DOCK ELEVATION

1/16" = 1'-0"



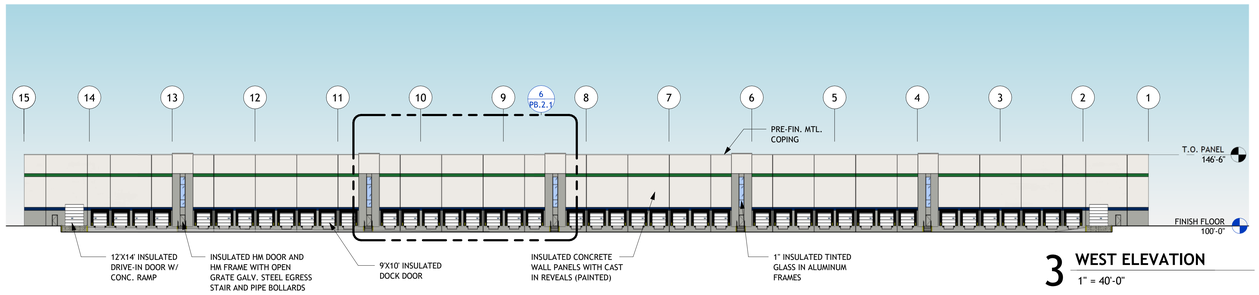
5 ENLARGED EATH ELEVATION

1/16" = 1'-0"



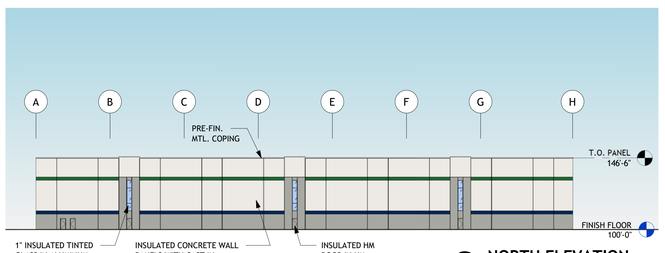
4 SOUTH ELEVATION

1" = 40'-0"



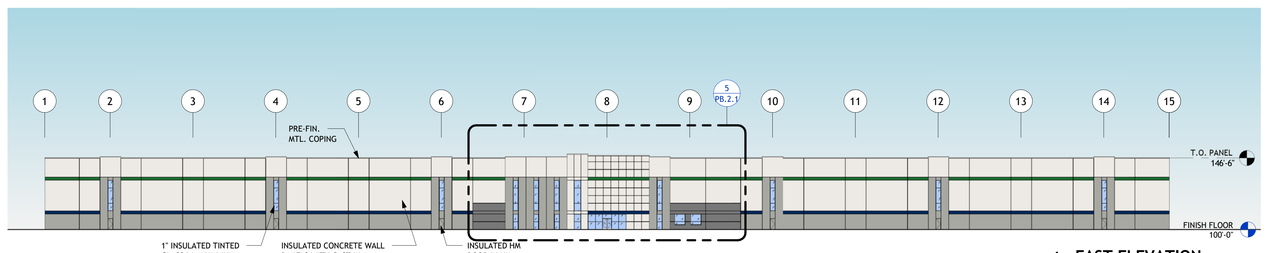
3 WEST ELEVATION

1" = 40'-0"



2 NORTH ELEVATION

1" = 40'-0"



1 EAST ELEVATION

1" = 40'-0"

M+H ARCHITECTS

ARCHITECT:
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MILLINGTON CROSSING

31, GRID - 1E PARCEL - 6-1 - LOT 2
MILLINGTON, MARYLAND

EVERTON INDUSTRIAL DEVELOPMENT

Licensee Name: LAWRENCE T. VALENZA
Discipline: Registered Architect
Licensee Registration No.: 20135
Registration Expires: 10/30/25

STATE OF MARYLAND · LAWRENCE T. VALENZA · 20135 · REGISTERED ARCHITECT

10-18-23

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Drawn By:	MI
Checked By:	JN/SN
Drawing Title:	

ELEVATIONS - LOT 2

PB.2.1

M+H ARCHITECTS

10.19.2023

BUILDING 2

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MILLINGTON, MARYLAND

MILLINGTON CROSSING - NORTHBOUND

EVERTON
INDUSTRIAL DEVELOPMENT
A BROWNFIELD REDEVELOPMENT COMPANY

M+H ARCHITECTS

10.19.2023

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MILLINGTON, MARYLAND

MILLINGTON CROSSING - SOUTHBOUND

EVERTON
INDUSTRIAL DEVELOPMENT
A BROWNFIELD REDEVELOPMENT COMPANY

M+H ARCHITECTS

10.30.2023

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MILLINGTON, MARYLAND

MILLINGTON CROSSING - LOOKING SOUTH

EVERTON
INDUSTRIAL DEVELOPMENT
A BROWNFIELD REDEVELOPMENT COMPANY

PLANNING COMMISSION
FOR KENT COUNTY, MARYLAND

MILLINGTON CROSSING ASSOCIATES ONE, LLC – MINOR SUBDIVISION MAP 31, PARCEL 6, PART 1 NEAR MILLINGTON	* * *	CASE NO. 22-68

****

EVERTON INDUSTRIAL, LOT 1 – MAJOR SITE PLAN (PRELIMINARY) MAP 31, PARCL 6, PART 1 NEAR MILLINGTON	* * *	CASE NO. 22-67

****

EVERTON INDUSTRIAL, LOT 2 – MAJOR SITE PLAN (PRELIMINARY) MAP 31, PARCEL 6, PART 1, LOT 1 NEAR MILLINGTON	* * *	CASE NO. 23-28

* * * * * * * * * * * * * * *

Legal Argument regarding Section 14.8 of the County's Zoning Ordinance

Section 14.8 of the County's Zoning Ordinance provides that "contiguous forest that connects the largest undeveloped or most vegetated tracts of land within and adjacent to the site" "shall be left in an undisturbed condition unless the applicant demonstrates, to the satisfaction of the Department of Planning and Zoning, that reasonable efforts have been made to protect [the contiguous forest] and the plan cannot be reasonably altered. ZO § 14.8(B)(3)(d)(ii).

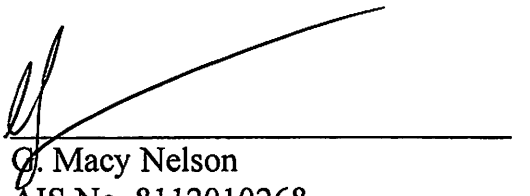
Here, the forest on the Subject Property is contiguous forest subject to the preservation requirements of Section 14.8(B)(3)(d)(ii). The Applicant proposes to remove 7.75 acres of forest on the Subject Property. *See* Forest Conservation Plat (FCP #023-03). Accordingly, the Applicant proposes to remove 7.75 acres of contiguous forest subject to the preservation requirements of Section 14.8(B)(3)(d)(ii).

Therefore, the Applicant has the burden of proving, and the Department of Planning and Zoning has the duty of finding, that the Applicant has taken "reasonable efforts...to protect [the contiguous forest] and the plan cannot be reasonably altered." *See* ZO § 14.8(B)(3)(d)(ii).

However, nowhere in the Applicant's application materials does the Applicant address the efforts it has taken to protect the contiguous forest, nor does the Applicant address why the plan cannot be reasonably altered to avoid impacts to the contiguous forest. Similarly, at no point during the TAC review of the application did Planning Staff raise or address this issue.

As a result, the only appropriate action is for the application to be remanded to TAC so that the Applicant and the Department of Planning and Zoning can address this issue as required by the zoning ordinance.

Respectfully submitted,



G. Macy Nelson
AIS No. 8112010268
Law Office of G. Macy Nelson, LLC
600 Washington Avenue, Suite 202
Towson, Maryland 21204
(410) 296-8166
gmacynelson@gmacynelson.com

MEMORANDUM

TO: Macy Nelson

FROM: Lawrence Green, PE, PTOE

DATE: May 30, 2024

SUBJECT: Millington Crossing - Trip Generation/Site Access Assessment

The purpose of this memorandum is to examine the trip generation rates utilized in the Millington Crossing Warehouse development Traffic Impact Study report prepared by Traffic Concepts, Inc. dated December 2023, and to assess the proposed site access system for the development.

SITE TRIP GENERATION

The proposed development is a 513,850 square foot Warehouse development with 490 employees (separated into 2 parcels – see attached site plans) in Kent County, Maryland. Traffic Concepts chose Land Use 150 – Warehousing trip generation rates as contained in the 11th Edition of the Institute of Transportation Engineer's (ITE) Trip Generation manual to generate trips for this development. The description of Land Use 150 in the Trip Generation Manual is as follows:

- Land Use 150 Warehousing - A warehouse is primarily devoted to the storage of materials, but it may also include office and maintenance areas.

As noted in the description of this land use, the specific uses of the warehouse can include storage of materials, office uses, and/or maintenance uses. ITE allows the calculation of the anticipated trips generated to be determined from a square footage basis or an employee basis. Traffic Concepts chose to use the square footage basis even though the actual uses within the warehouse could vary significantly, and the number of employees for the development was a known quantity. The submitted site plan for this development anticipates a total of 490 employees (see attached site plans showing employee numbers) that would be a more accurate parameter for the trip generation of the development since the number of employees is main trip generating characteristic for Warehouse developments.

Shown below is a table of the trip generation calculations using both the building square footage and employees for Land Use 150 Warehousing development in the 11th Edition of the ITE Trip Generation Manual.

513,850 SQUARE FOOT WAREHOUSE DEVELOPMENT WITH 490 EMPLOYEES

Land Use Assumed	Daily Trips	AM Peak Hour	PM Peak Hour
Warehousing (Land Use 150) – Square Footage Basis	850	85	88
Warehousing (Land Use 150) – Employee Basis	2475	299	323

As noted above, the calculated trip generation for Millington Crossing varies greatly depending upon the input variable utilized in the calculation. The employee-based trip generation calculation will generate 1,625 more Daily Trips (a 191% increase), 214 more AM Peak Hour Trips (a 252% increase), and 235 more PM Peak Hour Trips (a 267% increase) than the trip generation assumption based upon the square footage of the building. Since the number of anticipated employees to work at Millington Crossing is a more representative trip generating characteristic, the employee-based trip generation characteristic should have been used in the calculation. As noted in the description of Land Use 150 Warehousing, the uses varied greatly in the development of the trip generation rates based upon building square footage.

SITE ACCESS ASSESSMENT

Lot 1 Site Plan proposes one (1) full movement driveway on Edge Road and one (1) full movement driveway on Chesterville Bridge Road. Based upon the American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets, 2018 7th Edition (AASHTO Green Book), indicates that junctions of minor roads (such as driveways) should intersect with more important roadways with less than a 15-degree skew (see attached reference). In addition, *The Traffic Engineering Handbook* states that: "Crossing roadways should intersect at 90 degrees if possible, and not less than 75 degrees." It further states that: "Intersections with severe skew angles (e.g., 60 degrees or less) often experience operational or safety problems. The proposed site driveway for Lot 1 on Chesterville Bridge Road intersects at an approximate 45-degree skew and should be removed for safety and operational reasons.

The Maryland Department of Transportation State Highway Administration (SHA) examined the proposed development and the site access system. Lot 2 includes 3 driveways on Edge Road (MD 701A). Due to a horizontal curve on Edge Road, SHA has determined that the northern driveway serving Lot 2 does not provide adequate sight distance for vehicles to safely egress the driveway to Edge Road. Therefore, SHA recommended that this driveway be redesigned as a right-in only driveway. However, the submitted site plan for Lot 2 does not show this restricted operation.

The ramps to/from northbound US 301 and the ramps to/from southbound US 301 that are located north of the MD 291 bridge over US 301 provide the highest capacity access for the Millington Crossing site and would be least impactful to the more local roadway network. Therefore, measures to encourage the usage of these ramps to/from US 301 should be encouraged.

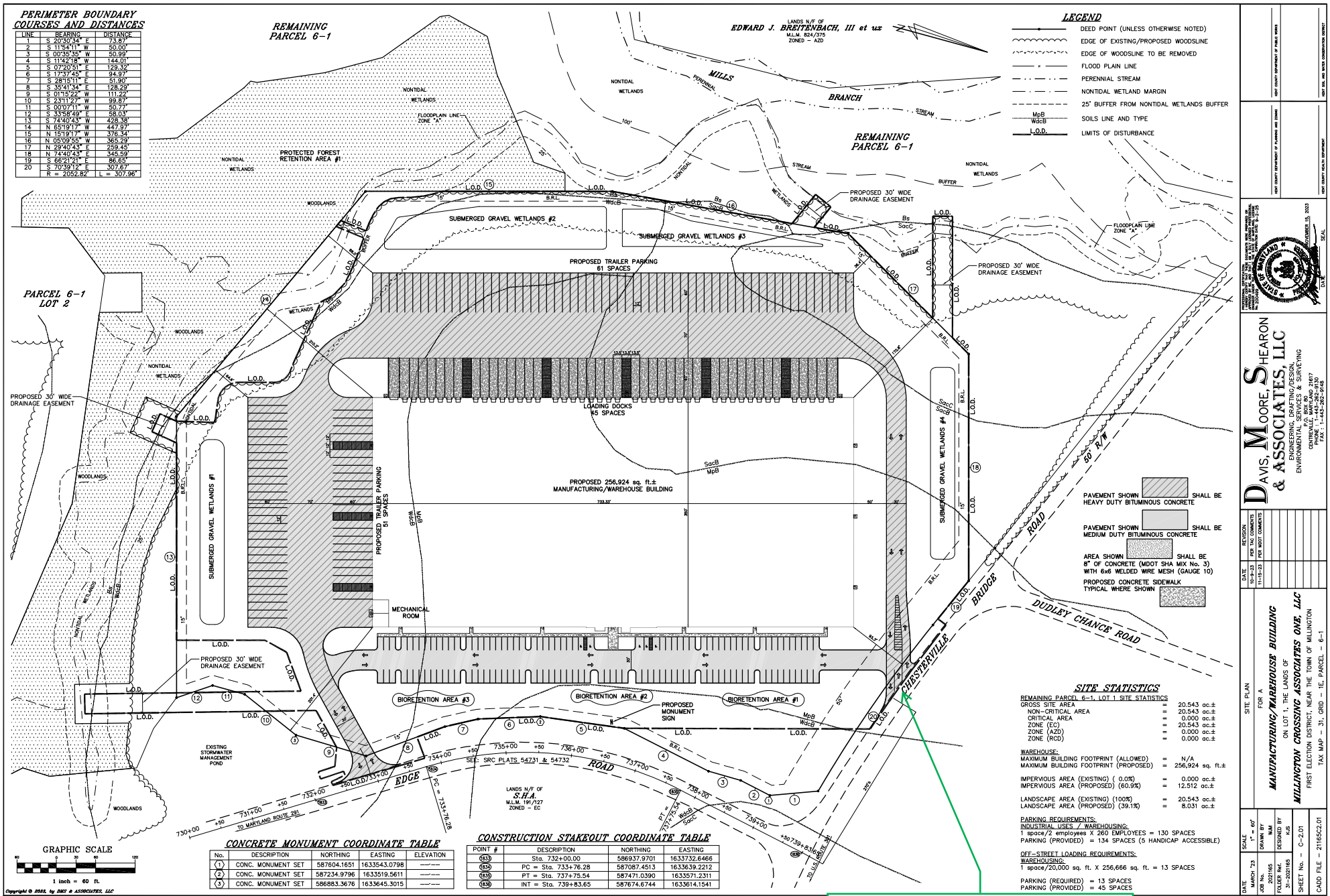
CONCLUSIONS

A review of the December 2023 Traffic Impact Study prepared for the proposed Millington Crossing Warehouse development revealed that the trip generation for the site has likely been underestimated by a factor of 3-4 times than was indicated in the traffic report. A re-evaluation of the traffic impact of this development should be done.

The proposed site access on Chesterville Bridge Road intersects at a 45-degree angle and violates the guidelines stipulated in the AASHTO Green Book and should be removed. All access for Lot 1 should be provided on Edge Road (MD 701A). The northern site access driveway for Lot 2 should be redesigned as

a right-in only to address sight distance limitations as identified by SHA. The best access for the site is provided by the ramping system to/from US 301 located north of the MD 291 bridge. Ways to encourage the usage of the access to/from US 301 should be sought. One way to encourage the usage of this ramping system to/from US 301 would be the removal of the site access driveway on Chesterville Bridge Road that would provide all access for both lots along Edge Road.

LOT 1



SITE STATISTICS

REMAINING PARCEL 6-1, LOT 1 SITE STATISTICS

GROSS SITE AREA	=	20.543 ac.±
NON-CRITICAL AREA	=	20.543 ac.±
CRITICAL AREA	=	0.000 ac.±
ZONE (EC)	=	20.543 ac.±
ZONE (AZD)	=	0.000 ac.±
ZONE (RCD)	=	0.000 ac.±

WAREHOUSE:

MAXIMUM BUILDING FOOTPRINT (ALLOWED)	=	N/A
MAXIMUM BUILDING FOOTPRINT (PROPOSED)	=	256,924 sq. ft.±
IMPERVIOUS AREA (EXISTING) (0.0%)	=	0.000 ac.±
IMPERVIOUS AREA (PROPOSED) (60.9%)	=	12.512 ac.±
LANDSCAPE AREA (EXISTING) (100%)	=	20.543 ac.±
LANDSCAPE AREA (PROPOSED) (39.1%)	=	8.031 ac.±

PARKING REQUIREMENTS:
INDUSTRIAL USES / WAREHOUSING:
1 space/2 employees X 260 EMPLOYEES = 130 SPACES
PARKING (PROVIDED) = 134 SPACES (5 HANDICAP ACCESSIBLE)

OFF-STREET LOADING REQUIREMENTS:
WAREHOUSING:
1 space/20,000 sq. ft. X 256,666 sq. ft. = 13 SPACES

PARKING (REQUIRED) = 13 SPACES
PARKING (PROVIDED) = 45 SPACES

CONCRETE MONUMENT COORDINATE TABLE

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	CONC. MONUMENT SET	587604.1651	1633543.0798	---.---
2	CONC. MONUMENT SET	587234.9796	1633519.5611	---.---
3	CONC. MONUMENT SET	586883.3676	1633645.3015	---.---

CONSTRUCTION STAKEOUT COORDINATE TABLE

POINT #	DESCRIPTION	NORTHING	EASTING
1633	Sta. 732+00.00	586937.9701	1633732.6466
1634	PC = Sta. 733+76.28	587087.4513	1633639.2212
1630	PT = Sta. 737+75.54	587471.0390	1633571.2311
1630	INT = Sta. 739+83.65	587674.6744	1633614.1541

Substandard skewed intersection design with 45 degree approach

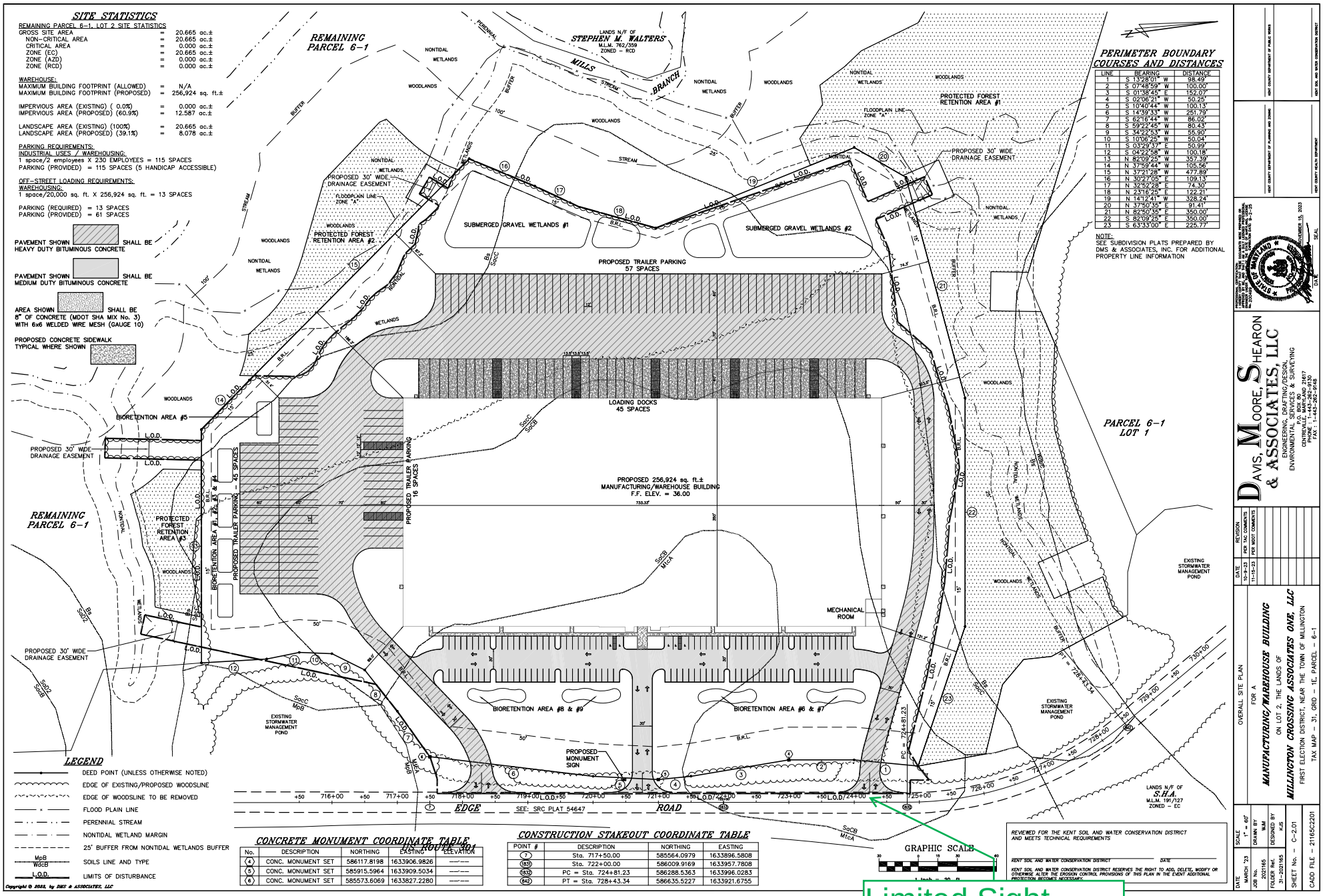
DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN, ENVIRONMENTAL SERVICES & SURVEYING
CENTREVILLE, MARYLAND 21617
P.O. BOX 80
FAX: 1-443-262-9148

DATE	REVISION
10-13-23	PER TAC COMMENTS
11-15-23	PER MDOT COMMENTS

SITE PLAN FOR A MANUFACTURING/WAREHOUSE BUILDING ON LOT 1, THE LANDS OF MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP – 31, GRID – 16, PARCEL – 6-1

DATE: MARCH '23 | SCALE: 1" = 60' | DRAWN BY: WJH | DESIGNED BY: KJS
JOB No.: 2021165 | FOLDER Ref. 31-2021165 | SHEET No. – C-2.01 | CADD FILE – 21165C2.01

LOT 2



PERIMETER BOUNDARY COURSES AND DISTANCES

LINE	BEARING	DISTANCE
1	S 13°58'01" W	98.49'
2	S 07°48'59" W	100.00'
3	S 01°38'45" E	152.07'
4	S 02°06'21" W	50.25'
5	S 10°40'44" W	100.13'
6	S 14°39'33" W	251.79'
7	S 62°16'44" W	86.02'
8	S 59°22'48" W	80.43'
9	S 34°22'53" W	55.90'
10	S 10°06'25" W	50.04'
11	S 03°29'17" E	50.99'
12	S 04°22'58" W	100.18'
13	N 82°09'25" W	357.39'
14	N 37°59'44" W	105.56'
15	N 37°21'28" W	477.89'
16	N 30°27'05" E	109.13'
17	N 32°52'28" E	74.30'
18	N 23°16'25" E	122.21'
19	N 14°12'41" W	328.24'
20	N 37°50'35" E	91.41'
21	N 82°50'35" E	350.00'
22	S 82°09'25" E	350.00'
23	S 63°33'00" E	225.77'

NOTE:
SEE SUBDIVISION PLATS PREPARED BY DMS & ASSOCIATES, INC. FOR ADDITIONAL PROPERTY LINE INFORMATION

CONCRETE MONUMENT COORDINATE TABLE

No.	DESCRIPTION	NORTHING	EASTING	ELEVATION
4	CONC. MONUMENT SET	586117.8198	1633906.9826	---.---
5	CONC. MONUMENT SET	585915.5964	1633909.5034	---.---
6	CONC. MONUMENT SET	585573.6069	1633827.2280	---.---

CONSTRUCTION STAKEOUT COORDINATE TABLE

POINT #	DESCRIPTION	NORTHING	EASTING
2	Sta. 717+50.00	585564.0979	1633896.5808
833	Sta. 722+00.00	586009.9169	1633957.7808
832	PC = Sta. 724+81.23	586288.5363	1633906.0283
842	PT = Sta. 728+43.34	586635.5227	1633921.6755

REVIEWED FOR THE KENT SOIL AND WATER CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

KENT SOIL AND WATER CONSERVATION DISTRICT DATE

KENT SOIL AND WATER CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS
KENT COUNTY DEPARTMENT OF PLANNING AND ZONING
KENT COUNTY HEALTH DEPARTMENT
KENT SOIL AND WATER CONSERVATION DISTRICT

PROFESSIONAL ENGINEER 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. 22300, EXPIRATION DATE: NOVEMBER 15, 2023
STATE OF MARYLAND — JOSEPH A. SHEARON, III — 22300 — REGISTERED PROFESSIONAL ENGINEER
SEAL
DATE

DAVIS, MOORE, SHEARON & ASSOCIATES, LLC
ENGINEERING, DRAFTING/DESIGN, ENVIRONMENTAL PLANNING & SURVEYING
CENTREVILLE, MARYLAND 21617
P.O. BOX 80
PHONE: 1-443-262-0150
FAX: 1-443-262-9448

DATE	REVISION
10-6-23	PER SCD COMMENTS
11-15-23	PER MDOT COMMENTS

OVERALL SITE PLAN
FOR A
MANUFACTURING/WAREHOUSE BUILDING
ON LOT 2, THE LANDS OF
MILLINGTON CROSSING ASSOCIATES ONE, LLC
FIRST ELECTION DISTRICT, NEAR THE TOWN OF MILLINGTON
TAX MAP - 31, GRID - 16, PARCEL - 6-1

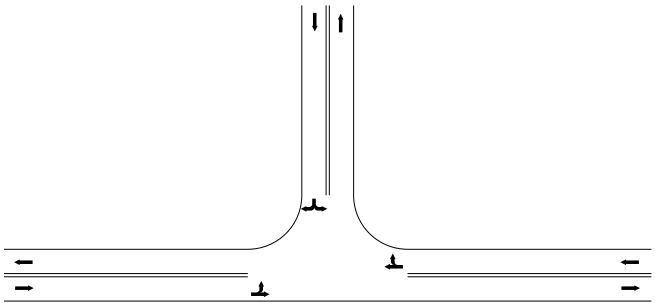
DATE	MARCH '23
SCALE	1" = 60'
JOB No.	2021165
DRAWN BY	WJM
FOLDER Ref.	31-2021165
DESIGNED BY	KJS
SHEET No. -	C-2.01
CADD FILE -	2116SC2201

Limited Sight Distance

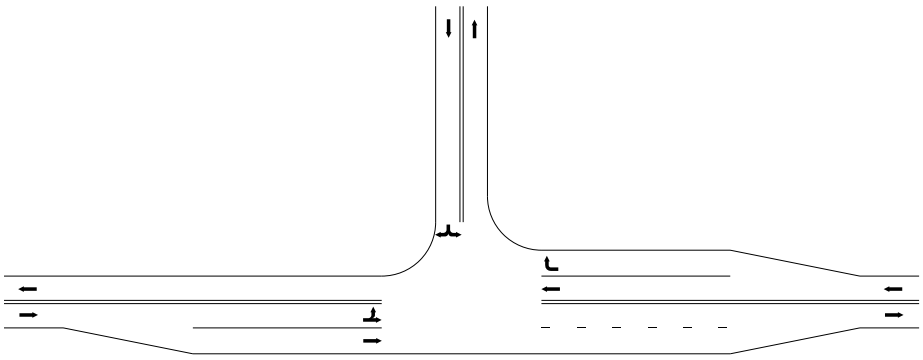
9.3.1 Three-Leg Intersections

9.3.1.1 Basic Types of Intersections

Basic forms of three-leg or T intersections are illustrated in Figures 9-5 and 9-6. The most common type of three-leg conventional intersection, as shown in Figure 9-5A, has the normal pavement width of both roadways maintained except for the paved corner radii or where widening is needed to accommodate the selected design vehicle. This type of unchannelized intersection is generally suitable for junctions of minor or local roads and junctions of minor roads with more important roadways where the angle of intersection is not generally more than 15 degrees from perpendicular (i.e., from approximately 75 to 105 degrees). In rural areas, this intersection type is usually used in conjunction with two-lane roadways carrying light traffic. In suburban or urban areas, it may be satisfactory for higher volumes and for multilane roads. Where speeds or turning movements, or both, are high, an additional surface width or flaring may be provided for maneuverability, as shown in Figure 9-5B and 9-5C, but such provision should consider the effects of widening on pedestrian crossing distances.



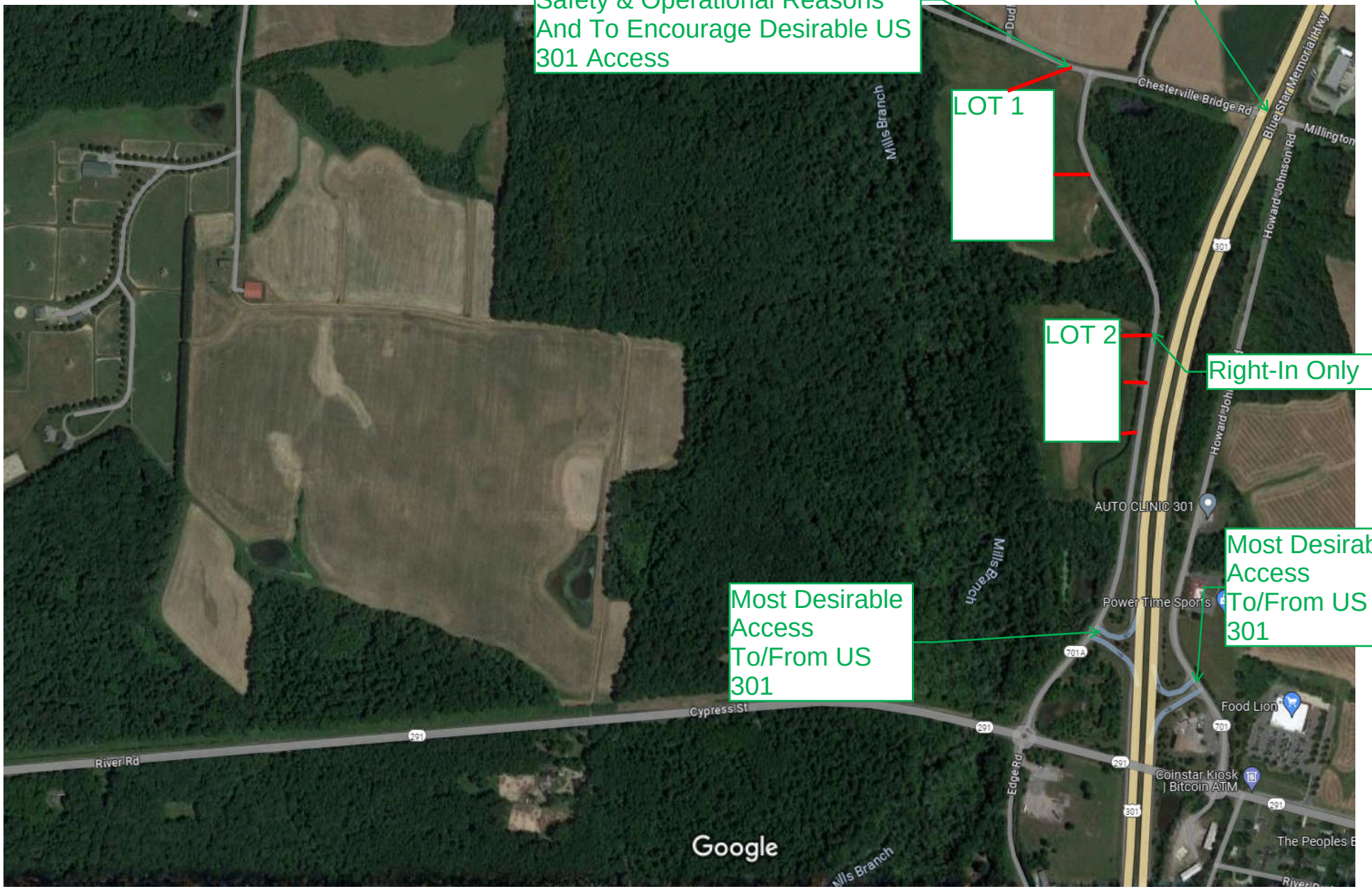
Single Lane Approaches
– A –



Right-Turn Lane and Bypass Lane
– B –

Figure 9-5. Three-Leg Intersections

Accessed by account: North Carolina Dept of Transportation | User: Timothy Anderson | Date: Fri Jan 25 15:32:39 2019 | IP address: 199.90.35.10
© 2018 by the American Association of State Highway and Transportation Officials.
All rights reserved. Duplication is a violation of applicable law.


Google Maps
45-Degree Skew Intersection that Should Be Removed for Safety & Operational Reasons And To Encourage Desirable US 301 Access
Least Desirable Access To/From US 301
LOT 1
LOT 2
Right-In Only
Most Desirable Access To/From US 301
Most Desirable Access To/From US 301
Chesterville Bridge Rd
Mills Branch
Howard Johnson Rd
BlueStar Memorial Hwy
Millington
AUTO CLINIC 301
Power Time Sports
Food Lion
Coinstar Kiosk | Bitcoin ATM
Cypress St
River Rd
Edge Rd
Google
Imagery ©2024 Airbus, Maxar Technologies, Map data ©2024 500 ft

PLANNING COMMISSION
FOR KENT COUNTY, MARYLAND

MILLINGTON CROSSING ASSOCIATES ONE, LLC – MINOR SUBDIVISION MAP 31, PARCEL 6, PART 1 NEAR MILLINGTON	*	CASE NO. 22-68

****

EVERTON INDUSTRIAL, LOT 1 – MAJOR SITE PLAN (PRELIMINARY) MAP 31, PARCL 6, PART 1 NEAR MILLINGTON	*	CASE NO. 22-67

****

EVERTON INDUSTRIAL, LOT 2 – MAJOR SITE PLAN (PRELIMINARY) MAP 31, PARCEL 6, PART 1, LOT 1 NEAR MILLINGTON	*	CASE NO. 23-28

* * * * * * * * * * * * * * *

RECUSAL MEMORANDUM

We represent Kent Conservation and Preservation Alliance ("KCPA") and certain citizens. We are submitting several memoranda in accordance with the Planning Commission Bylaws, Section 7 – Rules of Procedure, which states in relevant part that "[i]f any Person wishes to bring to the Board's attention complex data, reports, or arguments, that Person should submit the material in writing one week before the hearing . . . ." This memorandum concerns a matter of what we view as mandatory recusal under Title 18,

Chapter 18 of the Maryland Rules for Judges and Judicial Appointees. We first lay out applicable statutory and case law and then discuss that as it applies to a factual circumstance regarding a member of the Planning Commission, Paula Reeder.

Rule 18-102.11, "Disqualification," states that a judge shall disqualify themselves in proceedings where their impartiality "might reasonably be questioned." There are several enumerated circumstances where recusal is required, but for the purposes of this controversy, we cite Subsections (a)(1) and (a)(4). Subsection (a)(1) states that a judge shall recuse themselves where they have "a personal bias or prejudice concerning a party or a party's attorney, or personal knowledge of facts that are in dispute in the proceeding," and subsection (a)(4) states that the judge shall recuse themselves where "the judge, while a judge or a judicial candidate, has made a public statement, other than in a court proceeding, judicial decision, or opinion, that commits or appears to commit the judge to reach a particular result or rule in a particular way in the proceeding or controversy." The case of *Regan v. State Bd. of Chiropractic Exam'rs*, 355 Md. 397 (1999) establishes that these rules also bind all quasi-judicial administrative bodies, because "[t]he doctrine that every person is entitled to a fair and impartial hearing applies to an administrative agency exercising judicial or quasi-judicial functions, and is specifically applicable to issues of disqualification . . . ." *See id.* at 408; *see also Kenwood Gardens Condominiums, Inc. v. Whalen Properties, LLC,* 449 Md. 313, 339 n.9 (2016). Likewise, the Supreme Court of Maryland has stated that "[p]rocedural due process, guaranteed to persons in this State by Article 24 of the Maryland Declaration of Rights, requires that administrative agencies

performing adjudicatory or quasi-judicial functions observe the basic principles of fairness as to parties appearing before them." *Maryland State Police v. Zeigler*, 330 Md. 540, 559 (1993). While many other cases stand for the same principle, in summary, if there is an appearance of impartiality that would trigger recusal, a quasi-judicial arbiter should preemptively recuse themselves but also shall recuse themselves upon motion.

The development contemplated at the Subject Property is longstanding and contentious. It is uncontroversial to state that there are people opposed to this development such as our clients, as well as people who are supportive of it. Such opinions are cherished and welcomed in good governance, but not by factfinders, who are expected to remain neutral and objective in their determinations. Among our concerns to be presented in opposition to this case is the concern of truck traffic impacts on the 291/301 overpass bridge as it relates to both motorists and cyclists, particularly with regard to cyclist safety along the bridge. To this end, on December 6, 2022, one of our named clients Janet Christensen-Lewis, the chair of the KCPA, wrote a letter to the editor of the Chestertown Spy, providing her lay argument about cyclist vulnerability along the bridge and how it may be impacted by the then-nascent development at the Subject Property.

We stress at this moment that it is fine to disagree with this analysis, and that several people did disagree and made public comments to that effect. But questions of recusal are analyzed under objective "reasonable person" standards, and the comment made by Paula Reeder subsequent to and directly addressed to this letter to the editor demonstrated not only an unalterably closed mind to the mere argument about bicycle access at the bridge,

but personal animus against the entire KCPA. We have attached the letter and this response as Exhibit A to this memorandum, and quote it in excerpts here that she believed Mrs. Christensen-Lewis's comments "couldn't be further from the truth," that "[t]his is just more baseless, anti-any development harem-scarem from KCPA," and that it was "enough already!" At this point in time, Paula Reeder had been appointed to the Planning Commission and was therefore actively sitting as a quasi-judicial member of that body. Thus, not only did she demonstrate clear and obvious "personal bias or prejudice" against our clients and their argument regarding at least this one potential impact of the Subject Property development, but she demonstrated a broader prejudice against the entire *operational procedure* of the KCPA, and made these public comments while "as a judge" outside of a court proceeding "that commit[ted] or appear[ed] to commit the judge to reach a particular result or rule in a particular way in the proceeding or controversy."

It is possible that Paula Reeder has had a change of heart since the time of this post and is committed to a more objective analysis of cases going forward. Nevertheless, in accordance with Maryland case law, "a party must file a timely motion in order to initiate the recusal procedure." *Miller v. Kirkpatrick*, 377 Md. 335, 358 (2003). "A timely motion ordinarily is not one that represents 'the possible withholding of a recusal motion as a weapon to use only in the event of some unfavorable ruling.' Consequently, the motion generally should be filed 'as soon as the basis for it becomes known and relevant.'" *Id.* (quoting *Surratt v. Prince George's County*, 320 Md. 439, 468–69 (1990)). Therefore, and also in accordance with the Planning Commission Bylaws, we are not given the lenience

of waiting to file a motion of recusal so as to take Ms. Reeder's proverbial pulse and see if she will act differently in the forthcoming Planning Commission Bylaws. We are obliged to file this motion for recusal preemptively based on prior comments made by Ms. Reeder as the administrative equivalent of a judge that foreclose her from further participation in this case. Such recusal is non-discretionary under Rule 18-102, as it states that a judge *shall* disqualify themselves in any of the enumerated circumstances such as having personal bias or making public comment, while a judge, with regard to a particular controversy. *See generally* MD. RULES JUDGES 18-102.11, *et seq.*

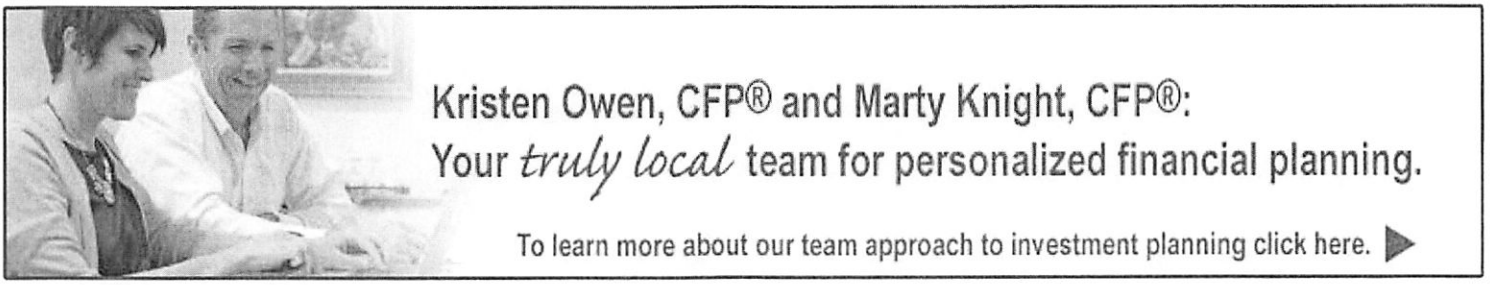
Consequently, we expect Ms. Reeder to recuse herself from any further proceedings related to the Subject Property, so as to protect our clients' procedural due process rights and ensure an objective hearing process regarding the submitted site plan and associated documents. As stated in our opening paragraph, we will submit other distinct concerns via separate memoranda for organizational purposes.

Respectfully submitted,

G. Macy Nelson
AIS No. 8112010268
Law Office of G. Macy Nelson, LLC
600 Washington Avenue, Suite 202
Towson, Maryland 21204
(410) 296-8166
gmacynelson@gmacynelson.com

EXHIBIT A

MENU



8 Letters to Editor

Letter to Editor: Cycling, Safety and Development

December 6, 2022 by Letter to Editor

Share / Save

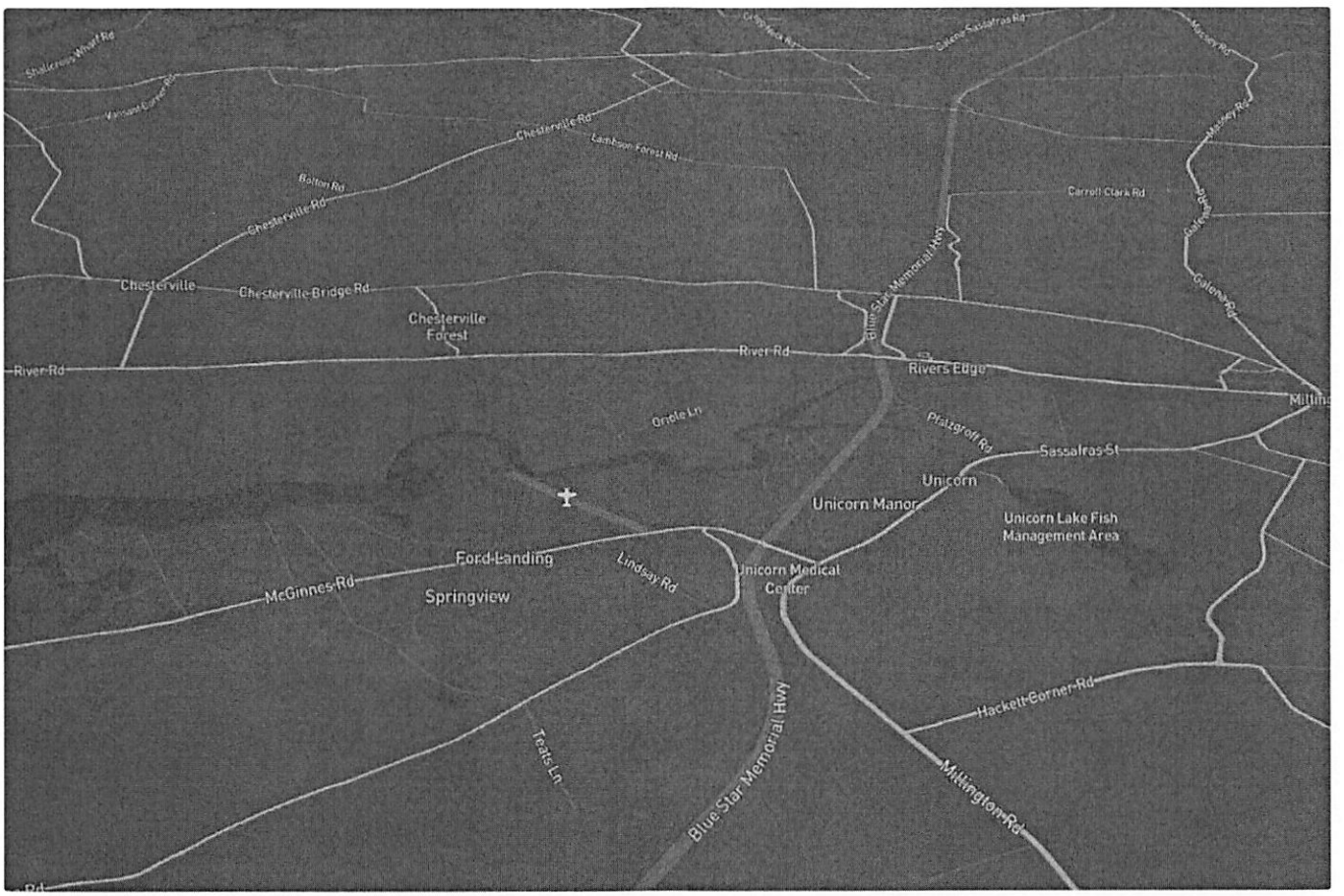
In a recent hearing before the Kent County Planning Commission (November 3, 2022) a representative for Everton, INC, a New Jersey based corporation, presented a plan for a distribution warehouse on the corner of Edge and Chesterville Bridge Road.

Let us set aside for the moment the cost to the environment, water, and air quality that over 1 million-sf of impervious roof and asphalt surface, 132 truck bays, and the 400 parking spaces proposed for the new distribution warehouses will create, instead focusing on another problem related to the mammoth sized project; the impact on the safety of cyclists.

The access and egress for the proposed warehouses will involve the 291/301 overpass, the two roundabouts, Howard Johnson, Edge, and Chesterville Bridge Roads. The Kent County overpass was built in 1989 before Maryland's State Legislature mandated that the safety of bike and pedestrian modes of transportation be incorporated in the Maryland Transportation Plan. Current Maryland regulations for shoulder widths on overpasses calls for 4-5-ft dependent on speed and percent of truck traffic. The 301 overpass on 291 is already a roadway that cyclist feel vulnerable on, documented in the Maryland Bicycle and Pedestrian Master Plan 2019 .

MENU

on the current traffic flow, with shoulder widths which are narrow, varying between 0- and 29-inches of uneven, cracked, and crumbling asphalt edges. The safety of cyclist which is already problematic will, as vehicular traffic increases and skews towards tractor-trailers, deteriorate further unless mitigation is required. The 291 overpass and the 290 underpass are the only alternatives for cyclists to avoid tangling directly with 301 traffic on at grade crossings in Kent County all of which are rated F by the state.



Strava Global Heat Map

Kent County has a large and growing number of cyclist which the State has an interest in promoting. The county's rural roads attract cycling clubs, races, events, and tours, as bicycle tourism is becoming a fast-growing economic factor. Cycling data compiled and published in the form of a heat map, based on users from the widely used cycling APP Strava, gives a vivid picture of where bicycles travel. The 291 overpass, the roundabouts and Howard Johnson Rd show up as the most heavily traversed roads in the county, with Edge and Chesterville Bridge Rd used to a lesser degree.

Ordinance (LUO). However, the LUO gives no one permission "by right" to jeopardize the life of cyclists and pedestrians. Kent County cycling residents and tourists should not face deteriorating road conditions caused by development.

State Highway, the Kent County Planning Commission and Commissioners must seriously consider the safety everyone including vulnerable cyclist and pedestrians by ensuring their protection from injury or death on the county and state roads through proper mitigations and upgrades before development is approved.

For concerns about the road conditions for cyclists in Kent County contact Nate Evans, Active Transportation Planner, MDOT, nevans1mdot.maryland.gov

For information/concerns about this project contact Mr. William Mackey, Director of Planning, Zoning and Housing wmackey@kentgov.org

Janet Christensen-Lewis
Millington

The Spy Newspapers may periodically employ the assistance of artificial intelligence (AI) to enhance the clarity and accuracy of our content.

Filed Under: 8 Letters to Editor

← Silent Auction Fundraiser at Tish Gallery

Temporary Fix at Best by Howard Freedlander →

Letters to Editor

Michael Bitting says

December 15, 2022 at 9:57 AM

This is absurd. Our local NIMBY-in-Chief ceaselessly objecting to any attempt to improve the economic conditions in Kent County. The utter pretentiousness of Janet Christensen-Lewis always amazes me. I would love to know what qualifies her to speak against any attempt to inch into the 21st century. From renewable energy expert, zoning expert, economist, and now master cyclist, she wears many hats. I think she might be better off

☰ MENU

Deirdre LaMotte says

December 16, 2022 at 6:50 PM

Curious. I see nothing wrong with NIMBYism,
why would residents not be able to voice a concern?
I know nothing about a mega warehouse but she is correct. Why use prime farmland and pave over it like
beautiful Middletown? I jest about "beautiful", but that town had arguably the best soil of all.

And you think hourly wage at a warehouse is worth
destroying land??

Paula Reeder says

December 18, 2022 at 1:19 PM

Anyone who drives on Chesterville Bridge Road knows that the road is in poor shape, has no viable side bars for bicyclists and is one of the least traveled roads in Kent County. Mrs. Christensen's contension that that road and the bypass are main thoroughfares for bicylists is pure bunk. Further, her claim that bicyclists utilization of the route that would serve traffic going to and from the proposed warehouse facilities represents a major economic contribution to Kent County that would be threatened by completion of the warehouse installation couldn't be further from the truth. The proposed warehouse location is smack in the middle of one of the few areas in Kent County specificall designated in the County Comprehensive Plan for industrial development. This is just more baseless, anti-any development harem-scarem from KCPA. Enough already! It's time for the County to embrace and move forward on clean development project proposals that will increase tax revenues necessary to support our ability to fund Kirwin related improvements to our school programs and other sorely needed economic development priorities.

John Lysinger says

December 22, 2022 at 12:08 PM

It's unfortunate that any member of Kent County's Planning Commission, to which Paula Reeder has recently been appointed, should announce her decision regarding any

MENU

equally clear that she embraces development with few, if any, boundaries. Thankfully, she will not be the only decisionmaker.

Write a Letter to the Editor on this Article

We encourage readers to offer their point of view on this article by submitting the following form. Editing is sometimes necessary and is done at the discretion of the editorial staff.

Search this website

PLANNING COMMISSION
FOR KENT COUNTY, MARYLAND

MILLINGTON CROSSING ASSOCIATES ONE, LLC – MINOR SUBDIVISION MAP 31, PARCEL 6, PART 1 NEAR MILLINGTON	* * *	CASE NO. 22-68

****

EVERTON INDUSTRIAL, LOT 1 – MAJOR SITE PLAN (PRELIMINARY) MAP 31, PARCL 6, PART 1 NEAR MILLINGTON	* * *	CASE NO. 22-67

****

EVERTON INDUSTRIAL, LOT 2 – MAJOR SITE PLAN (PRELIMINARY) MAP 31, PARCEL 6, PART 1, LOT 1 NEAR MILLINGTON	* * *	CASE NO. 23-28

* * * * * * * * * * * * * * *

SPECIAL LAW MEMORANDUM

We represent Kent Conservation and Preservation Alliance and certain citizens. We are submitting this memorandum in accordance with the Planning Commission Bylaws, Section 7 – Rules of Procedure, which states in relevant part that "[i]f any Person wishes to bring to the Board's attention complex data, reports, or arguments, that Person should submit the material in writing one week before the hearing . . .." This memorandum concerns a previous legal matter we had presented last year concerning an underlying

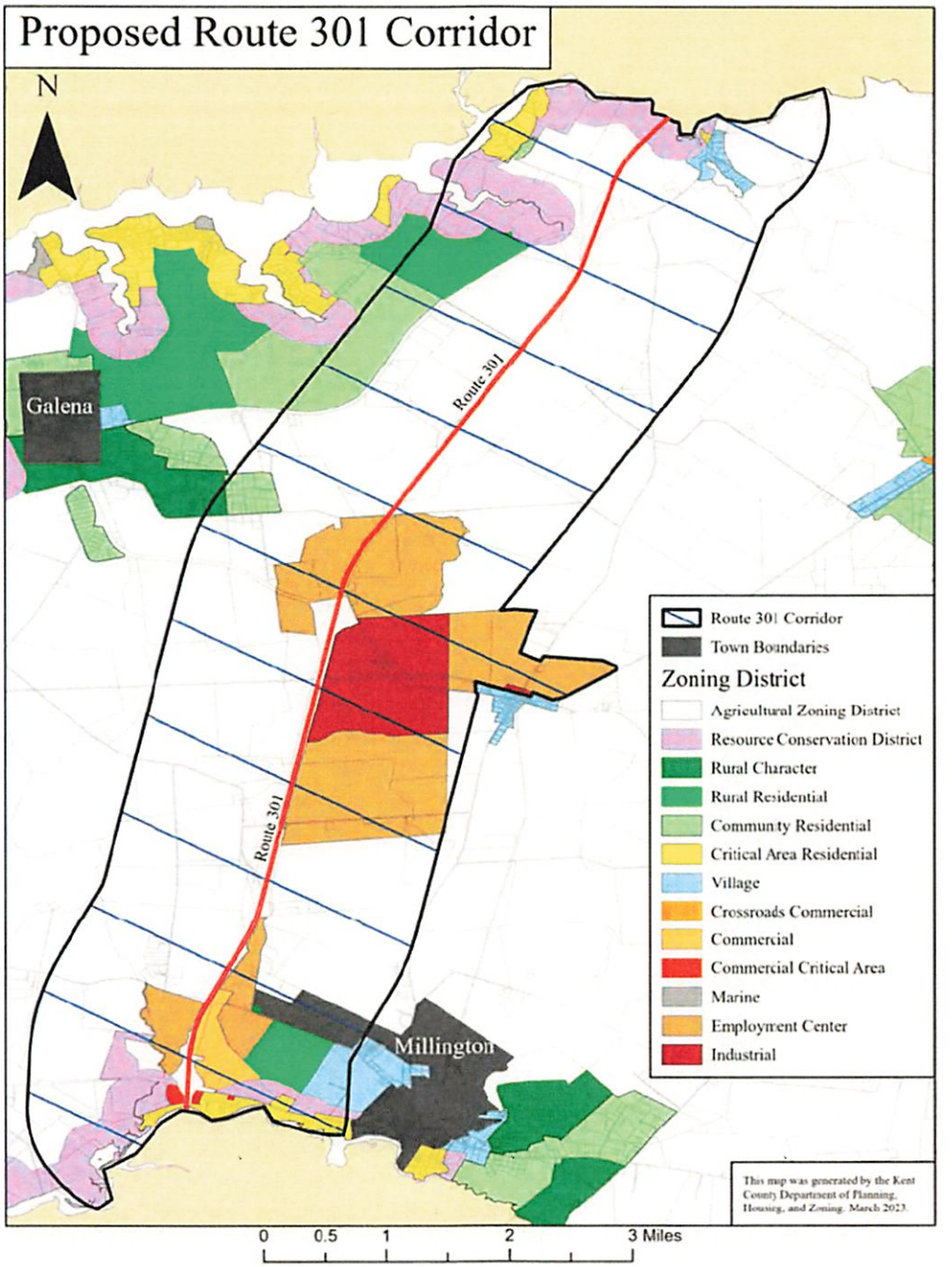
Zoning Text Amendment ("ZTA") that was heard before the Kent County Commissioners on June 13, 2023. Specifically, the ZTA contemplates raising the maximum height of certain types of industrial buildings in specific districts—Industrial, Commercial, and Employment Center—in the County, but only if constructed within the 301 Corridor. While the definition of "301 Corridor" has been a matter of some debate, the government's proposed definition when approving the ZTA was that it would encompass all land extending one mile to the east or west of any portion of U.S. Route 301.

We believe that the ZTA was wrongly approved due to the nature of how it was constructed as it first passed through the Planning Commission and then to the County Commissioners. Under the Maryland constitution, "special laws" are illegal, and the method of determining a special law is governed by a six-factor test:

> (1) "whether [the underlying purpose of the legislative enactment] was actually intended to benefit or burden a particular member or members of a class instead of an entire class";
> (2) "[w]hether particular individuals or entities are identified in the statute";
> (3) "[t]he substance and 'practical effect' of an enactment";
> (4) "[i]f a particular individual or business sought and received special advantages from the Legislature, or if other similar individuals or businesses were discriminated against by the legislation";
> (5) "[t]he public need and public interest underlying the enactment, and the inadequacy of the general law to serve the public need or public interest"; and
> (6) "whether [the legislative enactment is] arbitrary and without any reasonable basis[.]"

See generally Howard Cnty. v. McClain, 254 Md. App. 190, 198 (2022). We will briefly present our analysis with regard to this test.

The first two factors are analyzed concurrently. The second of the two factors is a *de minimis* issue according to courts that have reviewed special laws, *see generally id.* Nevertheless, in the Proposed Zoning letter for the ZTA, its owner Russ Richardson was clearly identified by name. Likewise, as to the first factor, the ZTA was narrowly tailored to only apply to a specific small band of land in Kent County, and then only to specific zoning categories in the County.



As seen in the chart above, the ZTA only applies to Industrial, Employment Center, and Commercial zoning, which results in a hypothetical application to a dozen properties. However, the properties in the northern part of the 301 Corridor do not have any existing

water and sewer service, which narrows the developable area that is able to take advantage of the ZTA to the few properties at the southern end of the County. These parcels are further limited by the developable envelopes of each, which makes construction of a Distribution Center-styled warehouse infeasible on the southerly Commercial properties. The only property owner in the entire area who both owns property large enough for development *and* has that property located in an area that is meaningfully capable of taking advantage of the ZTA is Russ Richardson, the owner of Millington Crossing Associates One, LLC.

The third special law factor speaks to substance and practical effect, and in this regard the ZTA is also a special law. The law, considered outside the context of comprehensive rezoning, affects one stretch along one roadway as opposed to being applied to bulk regulations of development generally, and thus it would permit a type of development 33% larger than previously allowed in only that one area. The specific stated goal of the ZTA and its associated submitted documents before this Commission and the County Commissioners was to permit this larger height scale for Distribution Center-styled warehouses, and no other types of industrial uses were defined by name or general parameter. Lastly, in accordance with typical development practices of Distribution Centers in Maryland and elsewhere, building multiple such centers in close proximity to each other simply never occurs, which means that even if the other properties east of 301 were to somehow consolidate under one deed and create a parcel large enough for a "competing warehouse," it would never practicably occur. In essence, the ZTA permits a

single use in a single parcel for the benefit of a single developer to be larger than bulk regulations would allow for any other similar use anywhere else in the County.

The fourth factor, as the Commission might note, cascades from the first, second, and third. The history of the ZTA was that it came about at the behest of a specific named individual to increase the developable size of his property in a manner that would financially benefit him, in such a way that other individuals or businesses looking to develop properties under the same general law would suddenly be at a commercial disadvantage, if not fully foreclosed from any meaningful competing use in the area affected by the ZTA. It has the effect of stratifying Mr. Richardson's parcels to acquire development advantages that are disallowed anywhere else in the County. And procedure is as important as function in this case; had this same type of law been contemplated as part of comprehensive rezoning it may have been legally sufficient even if it had a similar practical effect to the "first in time" developer, but because it came about due to the specific actions of that first developer, he therefore received a special advantage.

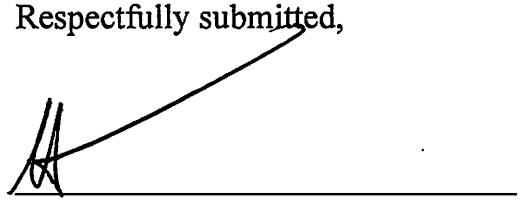
The fifth factor is one that the Planning Commission was previously familiar with, given that it voiced similar concerns about the ZTA as passed in 2023 and had instead proposed a broader ZTA that would apply generally to commercial and industrial zones. Simply put, there is no obvious public need to permitting a larger development size in this specific area for a specific type of use. While the Commission may find that there is an arguable public need for "marketable properties" in the County at large that is served by looser bulk regulations, this would clearly be a public need for the County *at large*. To

suggest that there is a public need for one specific developer in one specific area to have special bulk regulations for his project alone is contrary to any notion of a general public need, and a general law would have sufficed to provide such a need were it extant. Furthermore, any argument that a Distribution Center *could not* exist without the proposed ZTA would necessarily carry with it the underlying proposition that Distribution Centers are not actually compatible by right in the applicable zones and that the ZTA would be adding a new use by right only in a specific location.

As to the sixth and final factor, case law holds that the arbitrariness calculation is not a determination of whether the underlying purpose is arbitrary, but whether the *restrictions* are arbitrary. ""By narrowing [the bill] to such extent that it only applies to one property, the Council rendered [the bill] unreasonable." *McClain*, 254 Md. App. at 203–04. There appears to be no specific reason ever provided as to why the ZTA would only apply to a specific small area of the County (and consequently apply new *de facto* bulk restrictions to other I, C, and E-C zones County-wide), excepting that that's where the ZTA's primary advocate happens to own land that he wants to use in the specific manner permitted by the ZTA.

For the reasons stated above, we believe it is clear that the ZTA that is enabling the current size of the contemplated development is constitutionally illegal, and that the development cannot go forward with a maximum height greater than the baseline of 45 feet for a use of its type and location. As stated in our opening paragraph, we will submit other distinct concerns via separate memoranda for organizational purposes.

Respectfully submitted,



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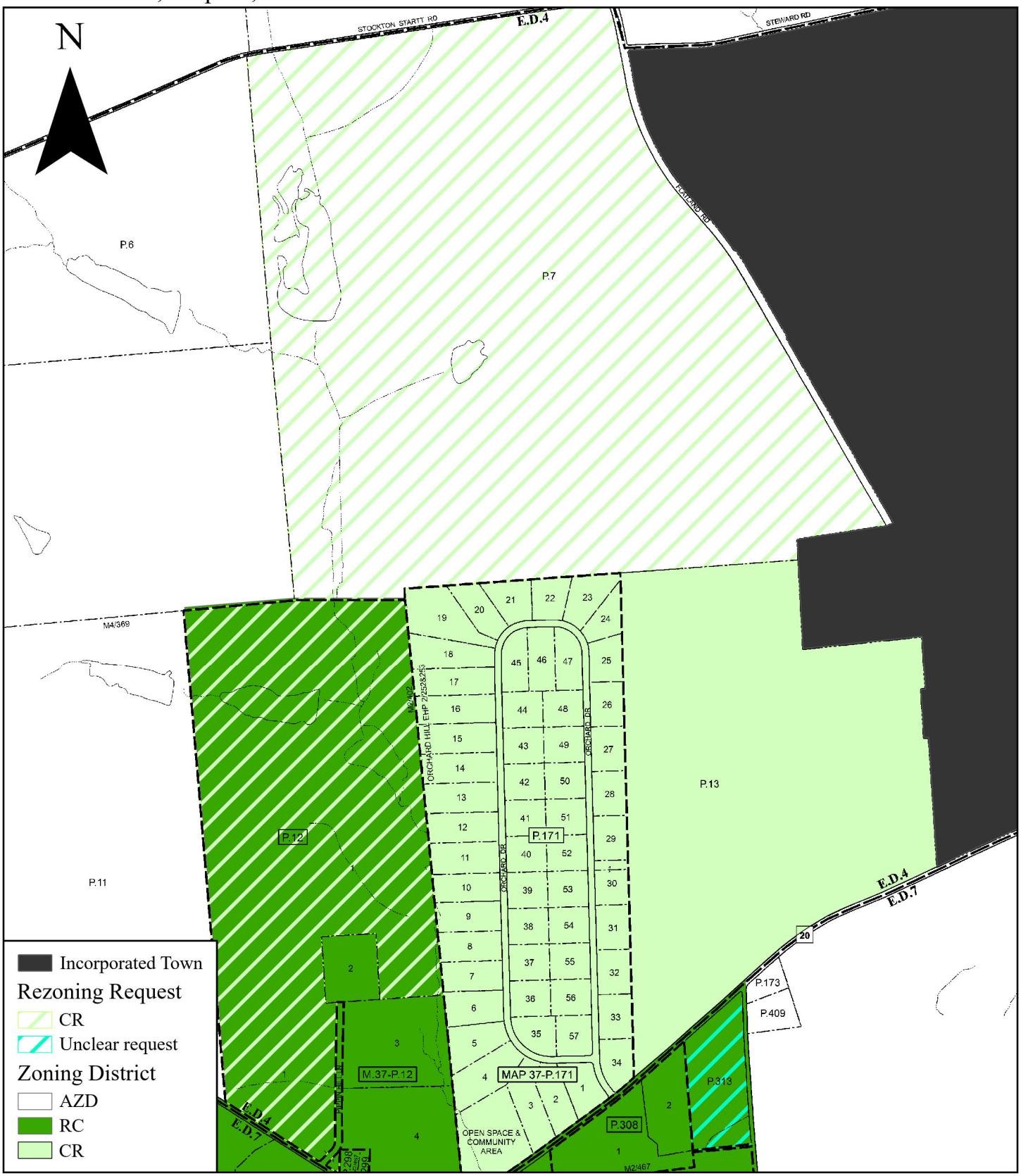
Kevin Kimble, 348 Flatland Rd, Map 37, Parcel 7 13

William and Anne Norris, 24904 Chestertown Rd, Map 37, Parcel 12, Lot 1

S and L Farms, Map 44, Parcel 313



Source: Kent County Department of Planning, Housing, and Zoning. 1 in = 1,000 ft
Map prepared February 2024.

Respondent

19 | Anonymous

18:26
Time to complete

1. Name: *

Joyce Rogers

2. Mailing Address: *

103 Patton Way elkton md. 21921

3. What would you like to do: *

- ( ) Propose a text change to the Land Use Ordinance.
- (•) Request a rezoning of your property.

4. In order to request a rezoning please provide the property address or location. If your property doesn't have an address, please include the Map and Parcel number as found on your tax bill.

Use this link if you need to look up your Map and Parcel Number: https://sdat.dat.maryland.gov/RealProperty/Pages/default.aspx (https://sdat.dat.maryland.gov/RealProperty/Pages/default.aspx) *

44/313

5. What is the current zoning of your property?

   Use this link to a mapping application if you need to find your zoning:
   http://kentcountymd.maps.arcgis.com/apps/webappviewer/index.html?id=def6d57892b740fcbaa7dc9afdf3ef33
   (http://kentcountymd.maps.arcgis.com/apps/webappviewer/index.html?id=def6d57892b740fcbaa7dc9afdf3ef33)

   Once you find your parcel, just click on it to find your zoning.

   Rural Character

6. What zoning district would you prefer? *

   Commercial Residential (C/R)

7. Would you also like to request a text change?

   - ( ) Yes
   - (•) No

8. Please provide your email address if you would like to be notified when new information is added to the Land Use Ordinance Update web page.

   jrogers3017@yahoo.com

From: Jamie Rogers
To: William Mackey
Subject: S & L Farms Zoning District
Date: Monday, May 20, 2024 3:39:47 PM

ATTENTION!
This email originated from an external source. DO NOT CLICK any links or attachments unless you recognize the sender and know the content is safe.
- KCIT Helpdesk

Good afternoon Mr. Mackey,

As per our conversation regarding new zoning designation for S & L Farms, MAP 44, Parcel 313 — I am submitting this letter as clarification.

We are requesting Community Residential .. in lieu of Commercial Residential as stated on our submitted form.

Thank you for your assistance and sorry for any confusion.

Joyce Rogers

Sent from my iPad

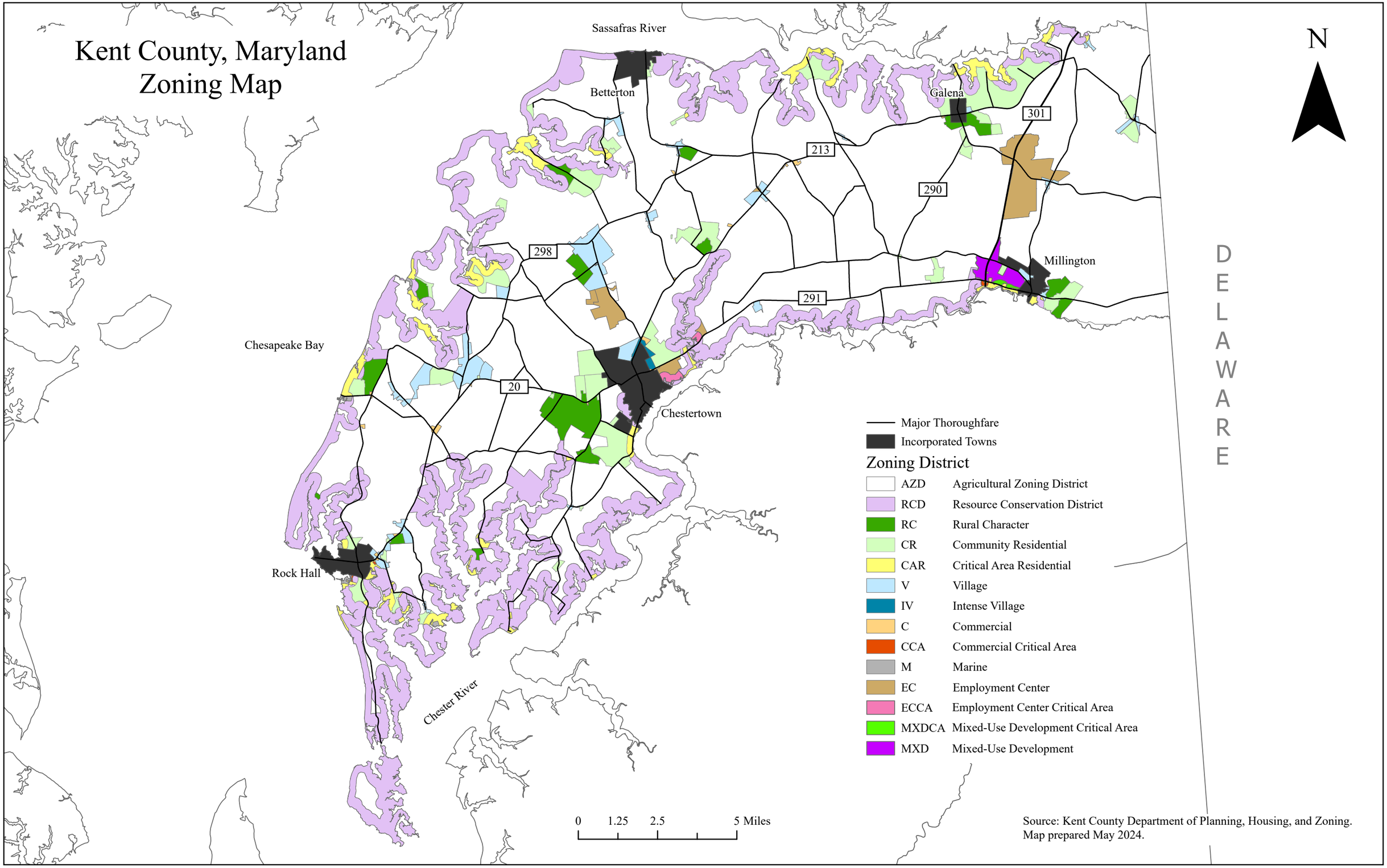
Comp Rezoning Map Change Requests - PC Recommendations

PDF MAP #	Owner	Tax Map	Parcel	Lot	Acres	Current Zoning	Requested Zoning	PC Recommendation
1	Brayton Family Limited Partnership	37	76	1	11.800	IV	C	Favorable
1	Brayton Family Limited Partnership	37	97		10.000	IV	C	Favorable
1	Wesley Brewer Properties LLC / Alden Yetman	37	38		0.996	AZD / IV	IV	Favorable
2	Olga Brooks	16	16		1.730	V	AZD	Unfavorable
3	Diane Lee Carey & Sandra A Ealy	51	105		0.720	CAR		No change
4	Anne Chandler & Arthur Harris III	12	92		118.000	AZD/RCD	CR / CAR	Favorable
5	John E Sr & Donna Marie Dottellis	7	339	5	6.000	CAR/RR	CR	No change
5	Leon K & Jo Ann M Hurlock	7	294		0.371	CAR	CAR	No change
5	Leon K & Jo Ann M Hurlock	7	296		0.375	CAR	CAR	No change
6	Barbara A Edwards	52	106		1.612	RCD/M	RCD	Favorable
6	Charlotte L Edwards et als	51	188		1.870	M	M	No change
6	Charlotte L Edwards et als	51	189		3.690	M	M	No change
6	Tillers Cottages LLC	51	187		0.501	M	M	No change
7	Walter & Cora M Gould	43	10		10.010	RC	RR	Favorable
8	John R Graziani	52	169		1.500	CR	AZD	Unfavorable
9	Haven Emporium LLC	50	69		1.030	CAR/M	M	Favorable
9	Haven Emporium LLC	50	141		0.860	CAR	M	Favorable
9	Haven Emporium LLC	50	23		7.090	CAR/M	M	Favorable
9	Haven Emporium LLC	50	142		0.258	CAR	M	Favorable
10	William Stevens & Ssuan Kelly Ingersoll	53	44		1.750	AZD	RR	Unfavorable
11	F & S Operations LLC	37	485	3	0.571	IV	IV	No change
11	Joan Ozman Horsey	37	180		4.710	IV	IV	No change
11	Jimstown LLC	37	44		0.830	IV	IV	No change
11	Jimstown LLC	37	177		21.504	IV	IV	No change
11	Walter F & Tracye S Landon	37	485	1	0.942	IV	IV	No change
11	Scott O & Shari C Smith	37	485	2	0.664	IV	IV	No change
11	Todd B & Diane H Smith	37	485	4	1.670	IV	IV	No change
12	Russ Richardson / Millington Crossing							Favorable
12B	Charles W Jones Jr et als	32	36		0.700	CAR	CAR	No change
13	Kevin G Kimble	37	7		331.000	AZD	CR	Favorable
13	William H & Anne J Norris	37	12	1	127.740	RC	CR	Favorable
13	S & L Farms LLC	44	313		10.100	RC	C/R	
14	Kinlaw Security Group LLC	35A	249		0.092	CR	C	Unfavorable
15	Alberta Frances & James E Lindauer	28	31	1	72.770	I	AZD	Favorable
15	Alberta Frances & James E Lindauer	28	31	2	2.000	I	AZD	Favorable
15	Michael Vargo & Milton P Glazer	28	160		46.000	AZD	EC	Favorable
15	Michael Vargo & Milton P Glazer	28	103		23.000	AZD	EC	Favorable
16	Thomas Irvin & Donna Marie Lins	27	19		26.500	AZD	AZD	No change
17	John F & Patricia M Macielag	55	88		25.540	CAR	CAR	No change
18	Massey Properties LLC	24	7		50.582	AZD/EC	AZD	Favorable
18	Massey Properties LLC	24	15		258.572	AZD/EC	AZD	Favorable

Comp Rezoning Map Change Requests - PC Recommendations

PDF MAP #	Owner	Tax Map	Parcel	Lot	Acres	Current Zoning	Requested Zoning	PC Recommendation
19	Mary Jane Mayo	16	6		198.363	EC	EC	No change
20	Phillips Station LLC	21	158		2.660	V	EC	Favorable
22	John A & Pamela M Schwartz	20	3		9.550	AZD	AZD	No change
23	Elizabeth C Sisco	46	38		0.500	V	V	No change
24	James H Smith				0.000	RC	AZD	Unfavorable
24	James H Smith	44	144		9.780	RC	AZD	Unfavorable
24	James H & Elizabeth R Smith	44	68		6.000	RC	AZD	Unfavorable
24	James H & Elizabeth R Smith	44	187		6.000	RC	AZD	Unfavorable
24	James H & Elizabeth R Smith	44	330		32.000	AZD	AZD	Unfavorable
25	Francis E & Georgia May Sweetman et als	17	10		0.300	CC	CC	No change
25	Francis Eugene Sweetman	17	58		1.450	CC	CC	No change
25	Francis Eugene Sweetman	17	81		0.200	CC	CC	No change
25	Francis Eugene Sweetman	17	125		0.200	V	CC	No change
27	Richard David E Walters & Dennis S Walters	15	8		79.580	AZD	CR	Favorable
28	Thomas E Weisenfels Trustee	8	83		0.893	CAR	RR	Unfavorable
29	William A Jr & Virginia I Wilson	31	21		5.000			No change
30	Chester River Yacht and Country Club - waterfront	44	15		0.000	CAR	M	Favorable
31	H And A Farm LLC	24	12	1	180.553	AZD/EC	EC	Unfavorable
33	Edward & Yvonne P Mills	13	109		2.324	CC/AZD	C	Favorable
33	Vonnie P Mills	14	33A		3.500	AZD	C	Favorable
34	Franklin A Kelley	51	378		1.706	V	AZD	Unfavorable
35	Good House LLC	27	470		0.344	CR	V	Unfavorable
35	Good House LLC	27	691		0.350	CR	V	Unfavorable
35	Good House LLC	27	444		0.379	CAR	V	Unfavorable
35	Good House LLC	27	577		0.355	CAR	V	Unfavorable
35	Good House LLC	27	516		0.435	CAR	V	Unfavorable
35	Good House LLC	27	58		2.000	V	V	No change
36	Bram Weinstein	7	15B		0.000	CR	C	Unfavorable
37	John D North	44	110		8.000	CR	CR	No change
38	John W Standiford & Karen A Yasinsky	45	48	2	4.590	RCD	CR	Unfavorable
39	John T & Deborah L Orr	7	302		3.000	CAR	CAR	No change
40	Hoagland Farm LLC	36	24	1	105.510	CR	V	Favorable
41	Roy P Hoagland	35D	301		0.278	CC	C	No change
42	Rebecca Anne & George H Kendall	48	48		2.000	CR	AZD	Favorable

Kent County, Maryland
Zoning Map



Source: Kent County Department of Planning, Housing, and Zoning.
Map prepared May 2024.