



**Town of Irvington, Virginia Planning Commission
Special Called Meeting, September 27, 2022
Irvington Baptist Church, 53 King Carter Drive, Irvington, VA**

Summary Minutes from the September 27 Special Called Meeting

1. Call To Order – Tom Chapman, Chair 6:30 PM

2. Roll Call to Determine Quorum

| | |
|----------|---------|
| Fuller | Present |
| Chapman | Present |
| Robinson | Present |
| Taylor | Present |
| Capps | Present |
| Pollard | Present |
| Clarke | Present |

Chair Determines Quorum is Present

3. Public Comment on CUPTIDES

- a. Aaron Brown and Wayne Savage gave an overview of the development plan.
 - i. Intent is to update many aspects of the existing the facility
 - ii. Includes construction of a new year-round spa and a new back of the house operation including a maintenance facility, employee parking and expanded and relocated guest parking.
 - iii. Construction is subject to conditions set forth in the “Tides Inn Master Plan Amendment”
 - iv. Commissioner Chapman asked what the timeline was for this development. The representatives answered that it was generally 5 years.
- b. An unidentified audience member asked about how the bamboo would be eradicated.
- c. Carolyn Elliott of 615 King Carter Drive spoke and objected to the revised setback (50 ft vs 54 ½ ft) of the new maintenance building, the reference to her property being the Elliot/ Hall parcel, and the details of the screening fence that will be installed near her property.



- d. Holmes Ginn of 142 Lancaster Road stated that there were erosion issues with the unpermitted construction entrance adjacent to his property. He also stated that the projected appearance of the previous waterfront improvement project that the Tides Inn recently completed does not match the original renderings, and cautioned the Town to be careful about relying on projected renderings.
- e. Buddy Spencer of 33 Reynolds Landing stated that the service entrance proposed for King Carter Drive is against zoning regulations and will present a mix of pedestrians and trucks on King Carter Drive.

4. Questions by the Commissioners to the Applicant

- a. Commissioner Pollard stated that he would abstain on any question related to the location of the service entrance on King Carter Drive.
- b. details of the fence. The applicant stated that three levels of treatment including BMP's, swales and ponds were being designed for the project. The applicant stated that they would be permitting the Lancaster Road entrance, would address the associated erosion issues, and the exact location of the termination of the fence is still to be determined.
- c. Commissioner Robinson queried the Zoning Administrator (ZA if there were any Town regulations relating to fences. He stated there were none. The ZA confirmed Commissioner Robinson's statement that "any property owner can go out and build any fence on their property without restriction".
- d. Commissioner Pollard queried if the applicant would agree to remove the bamboo according to Virginia Department of Conservation and Recreation (DCR) guidance. The applicant representative agreed.
- e. Commissioner Fuller voice a concern with some of the lack of specific details of the Lancaster Road paragraph of the Master Plan Agreement Amendment. The applicant representative clarified some of these details. Responding to queries from other Commissioners, the applicant representative stated that no VDOT traffic study was required but they would perform a traffic analysis and the Lancaster entrance would not be paved.
- f. Commissioner Capps asked the Zoning Administrator to clarify a previous public comment about business traffic dumping into a residential area. The Commissioner Chapman highlighted the associated zoning districts around the proposed King Carter entrance.



5. Discussion by the Commissioners

- a. Commissioner Taylor: Recommend we approve with conditions as discussed. Stated that we have approval for zoning, but have no authority to design, and we should not dictate design. Commissioner Chapman stated that we do have the authority to limit aspects of the installation with respect to how it impacts the value of neighboring properties.
- b. Commissioner Pollard: Reiterated language that bamboo should be removed to DCR standards. Stated that he considered the drawing showing the fence to be a reasonable reference requirement. He stated that the culvert issue with the spa and Lancaster Road entrance needs to be further documented. Finally, Commissioner Pollard stated that he is not comfortable with the ZA being the arbitrator of the bamboo removal.
- c. Commissioner Clarke: Agreed with Commissioner Pollard's comments except for the last (bamboo) and queried whether or not a permit would be involved. The Zoning Administrator responded "no", but there were varying opinions offered. Commissioner Clarke suggested that a permit be included as a condition.
- d. Commissioner Caps: No issues to discuss
- e. Commissioner Robinson: Stated that he felt that the bamboo issue, which was an issue between two private parties, had no place in a Zoning Amendment. Commissioner Robinson objected to the new service road entrance being located south of the manager's residence, as it would introduce additional commercial traffic to a residential area, off the narrow part of King Carter Drive. He acknowledged that even if relocating the entrance required a less efficient site design for the Tides, (providing less available parking and more impervious area) such a change was worth those sacrifices. Robinson stated he had no objections to a new entrance north of the manager's house.
- f. Commissioner Fuller: Agree with a lot of points being made, but has some concerns with ambiguity of some of the language in the agreement. Has some additional concerns about the use of Lancaster Road after construction has been completed, and wants to ensure that the residents are protected. Commissioner Fuller also queried the enforcement mechanism on either side of the agreement.
- g. Commissioner Chapman: Stated that the current version of the application amendment has been agreed upon by the Lancaster Road residents. Commissioner Chapman also stated that the site plan will not receive a zoning permit from the ZA unless it follows the terms and conditions of the CUP.



- h. Commissioner Pollard brought up the bamboo issue again, stating that he only had a concern about the ZA being the arbitrator of the removal, but noting Commissioner Robinson stated that the entire paragraph should be removed. Commissioner Robinson stated that he would be ok with the paragraph remaining as long as the last sentence was removed, and that the entire paragraph was “for information only” and the Town had not enforcement action related to it. The Commissioners agreed in general with the removal of the last sentence. In addition, they agreed adding “Such removal shall be in conformance with guidance from the Virginia Department of Conservation and Recreation.”
- i. Commissioner Capps asked about the permitting of the Lancaster Road access. The Commissioners decided that we do not need to make it an issue as a building permit could not be issued by the county without the proper VDOT permits.
- j. In further discussions about the fence, it was agreed by all parties that the western terminus of the fence adjoining the Hall property would extend to or beyond the western terminus of the current fence.
- k. Commissioner Robinson made the following motion:
- l. Motion: A Vehicular entrance is not allowed on King Carter Drive south of the Manager’s Residence. Tides does not need to come back to the Planning Commission or the Council for approval of the redesign, only to the Zoning Administrator”.**

Motion to Approve: Robinson
Second: Fuller

| | |
|----------|---------|
| Fuller | Approve |
| Chapman | Against |
| Robinson | Approve |
| Taylor | Against |
| Capps | Against |
| Pollard | Abstain |
| Clarke | Against |

Total: Yes = 2 No = 4 Abstain= 1 **Motion Denied**



6. Motion to forward CUPTIDES with the attached conditions to the Town Council, recommending approval.

Motion to Approve: Taylor

After the motion was made, Commissioner Fuller recommended that the points that were raised in the meeting, but not written down in the attached conditions be forwarded to the Town Council. This was agreed to be included as a part of the motion.

Second: Cappa

| | |
|----------|------------|
| Fuller | Approve |
| Chapman | Approve |
| Robinson | Disapprove |
| Taylor | Approve |
| Capps | Approve |
| Pollard | Approve |
| Clarke | Approve |

Total: Yes = 6 No = 1 **Motion Approved**

7. Adjournment

Motion to Adjourn: Taylor

Second: Fuller

| | |
|----------|---------|
| Fuller | Approve |
| Chapman | Approve |
| Robinson | Approve |
| Taylor | Approve |
| Capps | Approve |
| Pollard | Approve |
| Clarke | Approve |

Total: Yes = 7 No = 0 **Motion Approved**

Meeting Adjourned at 7:54 PM

Respectfully Submitted - Philip A. Robinson, Secretary



- Attachments:
- 1) CUPTIDES application
 - 2) Tides Inn CUP Sept 1 Site Plan
 - 3) Tides Water Quality Analysis
 - 4) Tides Cover Letter
 - 5) CUP Conditions as approved by PC



Application for Conditional Use Permit

Town of Irvington

P.O. Box 174, Irvington, VA 22480
804-438-6044 (Zoning & Land Use)
Application Fee \$200

Internal Use Only

RECEIVED _____
APP FEE PD _____
APPLICATION # _____
PC Public Hearing _____
TC Public Hearing _____

IMPORTANT NOTE: The application must be filled out completely. The application may not be signed by an agent or attorney but must be signed by the owner, agent of owner or owners before a Notary Public in the space provided on page 4.

Applicant Name (s): New Tides, LLC. c/o Aaron Brown

Tax Map Parcel(s): T.M. 33 Parcel 236

Address/Location: 480 King Carter Dr.

Deed Restrictions: Yes ___ No (If yes, attach copy of deed) Current Zoning B-1

Proposed Use: Existing Resort/Hotel

Acreeage of Parcel: 23.51 Overlay District(s): Chesapeake Bay Yes ___ No

| | | |
|---|---|--|
| Is this an amendment to an existing conditional use permit? If so, provide CUP number: | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| A scale drawing (see p.3) is required to be attached to any CUP application. Is a scale drawing attached to this application? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Is this an application for a private pier or dock? If so, please attach your VMRC and ACOE applications and permits. | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

Owner or Agent Contact: Wayne Savage, PE c/o Bay Design Group

Address: 40 Cross St., P.O. Box 51

City: Urbanna State: VA Zip: 23175

Phone Number: 804-693-2993 Email address: wsavage@baydesigngroup.com

Official Owner(s) of Record (If different than applicant): New Tides, LLC. c/o Aaron Brown

Address: 480 King Carter Dr.

City: Irvington State: VA Zip: 22480

Phone Number: 865-414-7024 Email address: Aaron@mdslp.com

Does the property owner also own or have any ownership interest in any abutting property? If yes, please list those tax map numbers:

33-235

33-229A

33-308A

Section 154.017 of the Town of Irvington Zoning Ordinance provides guidelines for conditional use permit applications. Please address the following standards which will be reviewed by the staff in analysis of your request. If you need assistance filling out these items, staff is available.

Provide a written statement demonstrating that:

1. The establishment, maintenance or operation of the CUP will not adversely affect the public health, safety, morals and general welfare and is in compliance with the Chesapeake Bay Act;
2. The establishment of the CUP will not substantially diminish or impair property values within the neighborhood nor will it be detrimental to the environment and surrounding properties;
3. The purpose of the CUP is to provide for certain uses which may not be compatible with certain surrounding uses or which may be compatible with surrounding uses only if the use in question is established in conformance with certain limiting conditions;
4. That proper landscape designs detailing plantings, screening for sight and sound and proper buffers be provided, that only certain appropriate activities shall occur;
5. Adequate utilities, and off street parking are provided;
6. That soil erosion and sedimentation be avoided;
7. The height, area, yard and sign limitations shall be the same as for other uses in the district;
8. That businesses and other operations be carried out only at appropriate times;
9. The establishment of the CUP is not in conflict with the Comprehensive Plan;
10. The CUP shall, in all other respects, conform to the applicable regulations of the zoning district in which it is located, except as such regulations may, in each instance, be modified by the Governing Body.

(Governing Body may impose reasonable conditions to make use compatible, to protect environment, surrounding properties, persons, neighborhood values.)

Please attach your written statement with this document upon submission.

Describe your request in detail and include any relevant information such as the number of persons involved in the use, operating hours, or any unique features of the proposed use.

The purpose of this project is to improve the existing resort/hotel amenities. The project includes the demolition and removal of multiple buildings, gravel paths, concrete areas, and other appurtenances and the construction of a spa facility, back of house facility, access roads and other appurtenances. As part of this project, there will be regrading of areas, removal of invasive bamboo and various trees/shrubs with an extensive replanting/landscaping plan in accordance with the Chesapeake Bay Act and impacts to the Resource Protection Area.

If any improvements are being proposed, briefly state whether new structures are to be constructed, existing structures are to be used or modifications, expansion, reconstruction, or additions are to be made to existing structures. If available, provide dimensions of any structures that will be used for this CUP.

This project is proposing the construction of a 8,000± sf Back of House facility with associated walkways, access drives and guest and staff parking areas; a 7,200± sf proposed building with access drive; two additions to the existing hotel building totaling 3,500± sf; a 1,500± sf proposed building; a 14,000± sf Spa Facility with guest cottages, associated walkways, decks and pools. Due to the growing popularity of the resort, expansion is needed to provide the necessary amenities for maintaining the resort while providing a luxury experience to the guests.

Attachments Required – provide three copies of each

1. *A scale drawing showing the size and shape of the parcel of land on which the proposed use is located.* Scale drawing shall show the size and shape of the parcel of land on which the proposed building is to be constructed, the nature of the proposed use of the building or land and the location of such building or use with respect to the property lines of said parcel of land to the right-of-way of any street or highway adjoining said parcel of land.
2. *Ownership information* – If ownership of the property is in the name of any type of legal entity or organization including, but not limited to, the name of a corporation, partnership or association, or in the name of a trust, or in a fictitious name, an acceptable document must be submitted certifying that the person signing below has the authority to do so.

Certification

State of Virginia, Town of Irvington, To Wit

I (We) Aaron Brown, being duly sworn, depose and say that I am the Owner/Or Agent of Owner of the property involved in the application. If I am not the Owner, I have attached written certification from the owner granting me the right to submit this application. I further declare that I have familiarized myself with the rules and regulations pertaining to preparing and filing this application and that the foregoing statements and answers provided herein are in all respects true and correct.

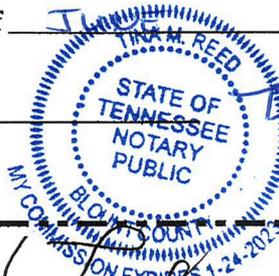
I have read this application, understand its intent, and freely consent to its filing. Furthermore, I have the power to authorize and hereby grant permission to Town of Irvington officials and other authorized government agents on official business to enter the property as necessary to process this application and to monitor compliance with any permit issued hereunder. I hereby have posted a notice on my property, near the boundary, in a place visible to the public notifying the public of my application.

[Signature] 6/30/22
Signature of Owner or Agent Date

480 King Carter Drive, Irvington, VA 865-414-7024
Mailing Address Phone No.

Subscribed and sworn to before me this 30th day of June, 20 22.

January 24, 2023
My Commission Expires



Tina M. Reed
Notary Public

[Signature] 6/30/2022
Signature of Property Owner Date

Mailing Address Phone No.

Subscribed and sworn to before me this 30th day of June, 20 22.

September 5, 2025
My Commission Expires

Catherine L. Wornom
Notary Public

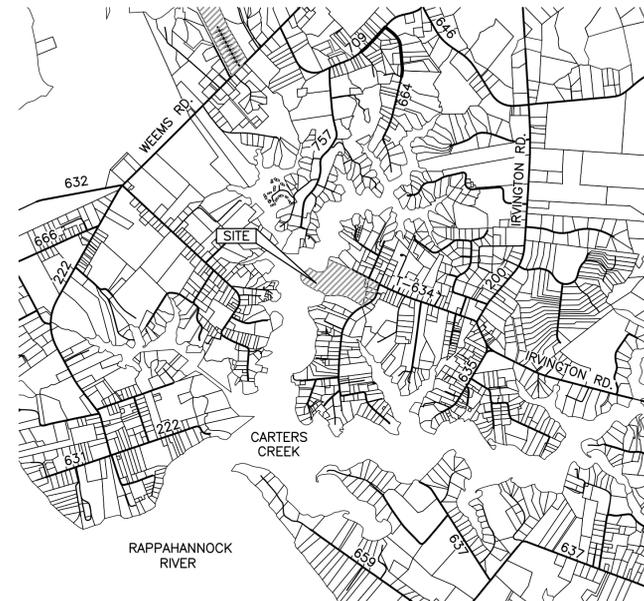
CATHERINE L. WORNOM
NOTARY PUBLIC, State of New York
No. 01W05048858
Qualified in Kings County
Commission Expires September 5, 2025

THE TIDES INN — MASTER SWM PLAN

TOWN OF IRVINGTON
LANCASTER COUNTY, VIRGINIA

GENERAL NOTES

- OWNER/DEVELOPER: NEW TIDES, LLC.
C/O ENCHANTMENT GROUP
480 KING CARTER DR.
IRVINGTON, VA 22480
- THE LAND DELINEATED HEREON IS LOCATED ON COUNTY TAX MAP 33 PARCELS 236.
- SITE IS ZONED: B-1 (GENERAL BUSINESS)
PRINCIPLE BUILDING SETBACKS: FRONT: 25' FROM R/W
SIDE: 35'
REAR: 35'
- PROPERTY REFERENCE: INST. NO. 15-1367
- VERTICAL DATUM: NAVD 1988 DATUM (NAVD 88).
- THIS PARCEL LIES IN ZONE X AND ZONE AE (EL. 5). AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN AND ZONE AE (EL. 5). AN AREA DETERMINED TO HAVE BASE FLOOD ELEVATIONS AS DEFINED ON THE NATIONAL FLOOD INSURANCE RATE MAP PANEL NO. 51103 C 0141 D, DATED OCTOBER 2, 2014. THE ZONE LINES SHOWN ARE APPROXIMATE AND SCALED FROM SAID MAP.
- PARCEL AREA = 23.66± AC.
- THERE ARE TIDAL WETLANDS LOCATED ON THE PROJECT SITE, HOWEVER NONE ARE IMPACTED BY THIS DEVELOPMENT.
- TOTAL AREA OF LAND DISTURBANCE = 11.25± AC.
- CONTRACTOR IS REQUIRED TO MAINTAIN ALL DITCHES, PIPE, AND OTHER DRAINAGE STRUCTURES FREE FROM OBSTRUCTION UNTIL ACCEPTED BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO MAINTAIN THE WATERWAYS IN OPERABLE CONDITION.
- THE LOCATION OF ALL EXISTING UTILITIES MAY OR MAY NOT BE SHOWN; ALL LOCATIONS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL EXISTING UTILITIES TO HIS SATISFACTION PRIOR TO EXCAVATION. THE CONTRACTOR SHALL PROVIDE PROPER NOTIFICATION TO "MISS UTILITY" (800-552-7001) PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL. THE FOLLOWING ITEMS SHALL BE CHECKED IN PARTICULAR:
A. THE SILT FENCE BARRIER SHALL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF THE SEDIMENT DEPOSITION REACHES HALF WAY TO THE TOP OF THE BARRIER.
B. THE SEEDED AREAS SHALL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREA SHALL BE FERTILIZED AND RESEEDED AS NEEDED.
- THE CONTRACTOR SHALL DO SUCH OVERLOT GRADING AS NECESSARY TO PRECLUDE PONDING OF WATER ADJACENT TO ROADWAY.
- A LAND DISTURBANCE PERMIT IS REQUIRED. PRIOR TO ANY LAND DISTURBANCE ACTIVITY, ALL TREE PROTECTION FENCING MUST BE IN PLACE AND INSPECTED BY A COUNTY INSPECTOR.
- BITUMINOUS SURFACE SHALL BE APPLIED BETWEEN APRIL 1ST AND NOVEMBER 1ST. ANY CHANGES SHALL BE APPROVED BY THE ENGINEER.
- THE RESPONSIBLE LAND DISTURBER FOR THE PROJECT SHALL BE IDENTIFIED ON THE LANCASTER COUNTY LAND DISTURBING PERMIT APPLICATION PRIOR TO ANY CLEARING, GRADING, OR OTHER LAND DISTURBANCE.
- EXTERIOR CONCRETE SHALL BE 3000 PSI WITH 5%-7% AIR ENTRAINMENT.
- ALL PROPOSED ON-SITE PAVEMENT MARKINGS SHALL BE REFLECTORIZED TYPE A (PAINT) OR TYPE B (PERFORMED OR THERMOPLASTIC MATERIAL) IN ACCORDANCE WITH THE LATEST EDITION OF THE VDOT ROAD & BRIDGE SPECIFICATIONS. PARKING SPACES SHALL BE DELINEATED BY 4" WHITE LINES (FEDERAL STANDARD COLOR #595-17886 OR EQUIV.). HANDICAPPED PARKING SPACES SHALL BE DELINEATED BY 4" BLUE LINES (BENNETT'S PAINT BLUE WAVE Q13-28T OR EQUIV.) FOR SPACES & SYMBOLS, FIRE LANES AND PARCEL PICK-UP MARKINGS SHALL BE 4" YELLOW (FEDERAL STANDARD COLOR #595-13538 OR EQUIV.).
- THE PROPERTY OWNER OR DEVELOPER, AS APPLICABLE, SHALL BE RESPONSIBLE FOR THE PERPETUATION & MAINTENANCE OF ALL SITE IMPROVEMENTS, INCLUDING LANDSCAPING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES ABOVE & BELOW GROUND DURING CONSTRUCTION. OWNER AND CONTRACTOR SHALL RESOLVE ANY CONFLICTS WITH EXISTING UTILITIES.
- INVERTS, SIZES, AND LOCATIONS OF ALL UNDERGROUND EXISTING UTILITIES SHOWN OR NOT SHOWN TO BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION BEGINS.
- PARKING TABULATION:
REQUIRED PARKING SPACES FOR INNS (1 PER EACH ACCOMMODATION) = (1)(100 ROOMS) = 100 PARKING SPACES
REQUIRED PARKING SPACES FOR RESTAURANTS (1 PER 100 SF OF FLOOR SPACE) = (1)(6,400 SF/100) = 64 PARKING SPACES
TOTAL REQUIRED PARKING SPACES = 164 PARKING SPACES
PROPOSED 10' X 20' STANDARD PARKING SPACES = 217 PARKING SPACES
PROPOSED 8' X 20' HANDICAPPED PARKING SPACES = 5 PARKING SPACES
PROPOSED 11' X 20' VAN ACCESSIBLE HANDICAPPED PARKING SPACES = 2 PARKING SPACES
TOTAL PROVIDED PARKING SPACES = 224 PARKING SPACES > 164 PARKING SPACES; THUS OK



VICINITY MAP

SCALE: 1" = 2000 FT

INDEX

- C1 — COVER
- C2 — EXISTING CONDITIONS
- C3 — MASTER LAYOUT
- C3A — CBPA AREA ANALYSIS
- C4 — EROSION & SEDIMENT CONTROL PLAN
- C5 — EROSION & SEDIMENT CONTROL DETAILS
- C6 — STORMWATER MANAGEMENT PLAN
- C7 — STORMWATER MANAGEMENT DETAILS
- L1 — LANDSCAPING PLAN & DETAILS

JOB NO.
19256-15

THIS DRAWING IS THE PROPERTY OF BAY DESIGN GROUP AND IS NOT TO BE REPRODUCED OR USED FOR ANY PROJECT IN WHOLE OR IN PART WITHOUT EXPRESS WRITTEN PERMISSION.

PROJECT MANAGER:
WAS

DESIGNED: WAS/BMW

CAD: BMW

CHECKED: WAS

FILED:

DATE: JUNE 10, 2022

REVISED: SEPT. 01, 2022

REVISED:



Engineering Surveying & Land Planning

www.baydesigngroup.com

40 CROSS ST., SUITE 100
P.O. BOX 51
URBANA, VA 23175
(804) 693-2993



PROJECT:

**THE TIDES INN
— MASTER
SWM PLAN**

TOWN OF IRVINGTON
LANCASTER COUNTY, VIRGINIA

SHEET:

COVER

SHEET NO:

C1

JOB NO.
19256-15

THIS DRAWING IS THE PROPERTY OF BAY DESIGN GROUP AND IS NOT TO BE REPRODUCED OR USED FOR ANY PROJECT IN WHOLE OR IN PART WITHOUT EXPRESS WRITTEN PERMISSION.

PROJECT MANAGER: WAS

DESIGNED: WAS/BMW

CAD: BMW

CHECKED: WAS

FILED:

DATE: JUNE 10, 2022

REVISED: SEPT. 01, 2022

REVISED:



Engineering Surveying & Land Planning

www.baydesigngroup.com

40 CROSS ST., SUITE 100
P.O. BOX 51
URBANA, VA 23175
(804) 693-2993



PROJECT:

**THE TIDES INN
- MASTER
SWM PLAN**

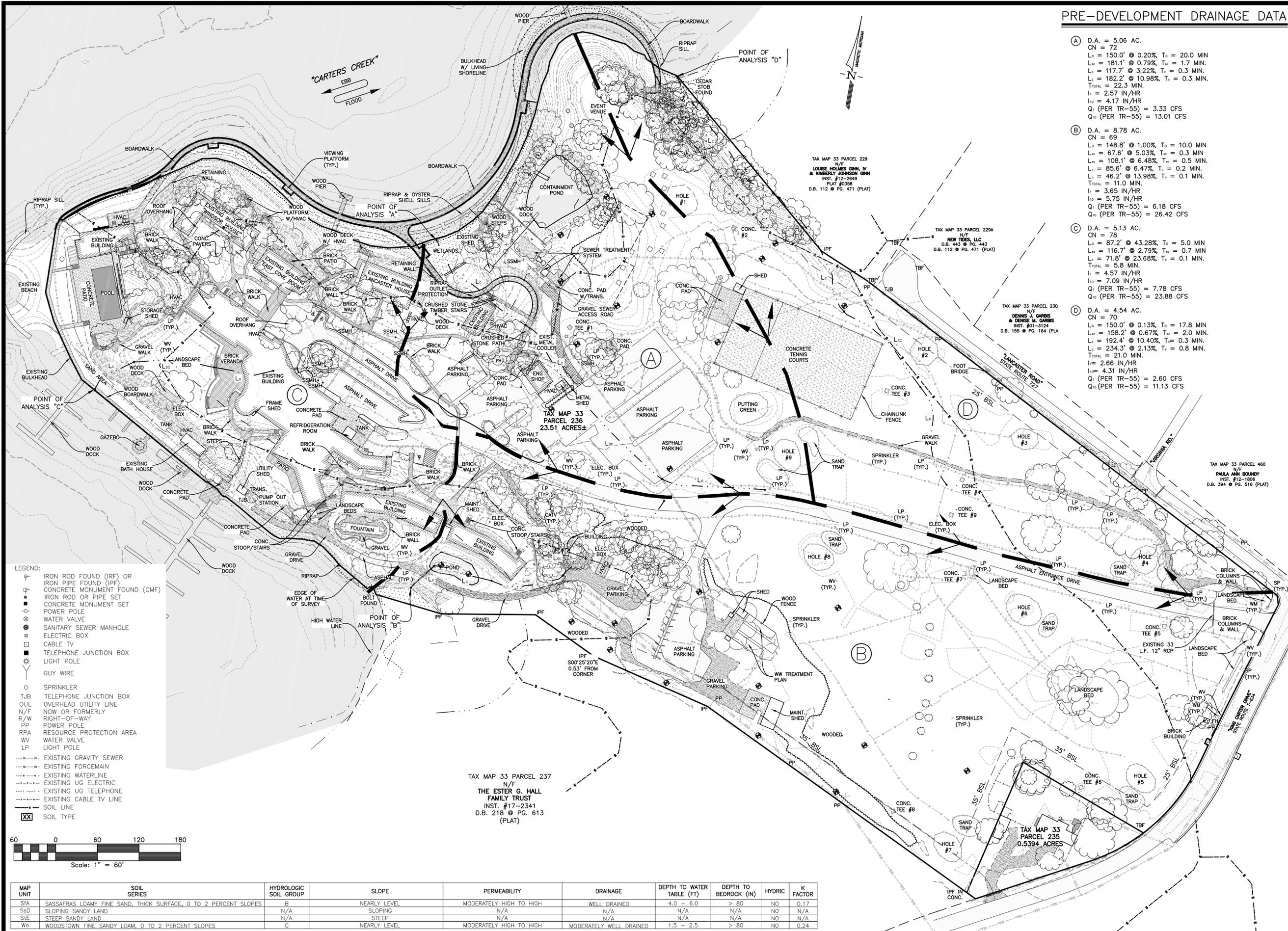
TOWN OF IRVINGTON
LANCASTER COUNTY, VIRGINIA

SHEET:

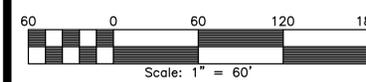
EXISTING
CONDITIONS

SHEET NO:

C2



- LEGEND:**
- ⊕ IRON ROD FOUND (IRF) OR IRON PIPE FOUND (IPF)
 - ⊕ CONCRETE MONUMENT FOUND (CMF)
 - ⊕ IRON ROD OR PIPE SET
 - ⊕ CONCRETE MONUMENT SET
 - ⊕ POWER POLE
 - ⊕ WATER VALVE
 - ⊕ SANITARY SEWER MANHOLE
 - ⊕ ELECTRIC BOX
 - ⊕ CABLE TV
 - ⊕ TELEPHONE JUNCTION BOX
 - ⊕ LIGHT POLE
 - ⊕ GUY WIRE
 - SPRINKLER
 - TJB TELEPHONE JUNCTION BOX
 - OUL OVERHEAD UTILITY LINE
 - N/F NOW OR FORMERLY
 - R/W RIGHT-OF-WAY
 - PP POWER POLE
 - RPA RESOURCE PROTECTION AREA
 - WV WATER VALVE
 - LP LIGHT POLE
 - EXISTING GRAVITY SEWER
 - EXISTING FORCEMAIN
 - EXISTING WATERLINE
 - EXISTING UG ELECTRIC
 - EXISTING UG TELEPHONE
 - EXISTING CABLE TV LINE
 - SOIL LINE
 - ⊗ SOIL TYPE



| MAP UNIT | SOIL SERIES | HYDROLOGIC SOIL GROUP | SLOPE | PERMEABILITY | DRAINAGE | DEPTH TO WATER TABLE (FT) | DEPTH TO BEDROCK (IN) | HYDRIC | K FACTOR |
|----------------|---|-----------------------|--------------|-------------------------|-------------------------|---------------------------|-----------------------|--------|----------|
| SfA | SASSAFRAS LOAMY FINE SAND, THICK SURFACE, 0 TO 2 PERCENT SLOPES | B | NEARLY LEVEL | MODERATELY HIGH TO HIGH | WELL DRAINED | 4.0 - 6.0 | > 80 | NO | 0.17 |
| SsD | SLOPING SANDY LAND | N/A | SLOPING | N/A | N/A | N/A | N/A | NO | N/A |
| StE | STEEP SANDY LAND | N/A | STEEP | N/A | N/A | N/A | N/A | NO | N/A |
| W _o | WOODSTOWN FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES | C | NEARLY LEVEL | MODERATELY HIGH TO HIGH | MODERATELY WELL DRAINED | 1.5 - 2.5 | > 80 | NO | 0.24 |

TAX MAP 33 PARCEL 229
N/F
LOUISE HOLMES GINN, IV
& KIMBERLY JOHNSON GINN
INST. #12-2649
PLAT #0358
D.B. 112 @ PG. 471 (PLAT)

TAX MAP 33 PARCEL 229A
N/F
NEW TIDES, LLC
D.B. 443 @ PG. 443
D.B. 112 @ PG. 471 (PLAT)

TAX MAP 33 PARCEL 230
N/F
DENNIS J. GARRETT
& DENISE M. GARRETT
INST. #01-3124
D.B. 155 @ PG. 164 (PLA)

TAX MAP 33 PARCEL 460
N/F
PAULA ANN BOUNDY
INST. #12-1806
D.B. 394 @ PG. 516 (PLAT)

TAX MAP 33 PARCEL 237
N/F
THE ESTER G. HALL
FAMILY TRUST
INST. #17-2341
D.B. 218 @ PG. 613
(PLAT)

TAX MAP 33 PARCEL 235
0.5394 ACRES

THIS DRAWING IS THE PROPERTY OF BAY DESIGN GROUP AND IS NOT TO BE REPRODUCED OR USED FOR ANY PROJECT IN WHOLE OR IN PART WITHOUT EXPRESS WRITTEN PERMISSION.

PROJECT MANAGER: WAS

DESIGNED: WAS/BMW

CAD: BMW

CHECKED: WAS

FILED:

DATE: JUNE 10, 2022

REVISED: SEPT. 01, 2022

REVISED:



Engineering Surveying & Land Planning

www.baydesigngroup.com

40 CROSS ST., SUITE 100
P.O. BOX 51
URBANA, VA 23175
(804) 693-2993



PROJECT:

**THE TIDES INN
- MASTER
SWM PLAN**

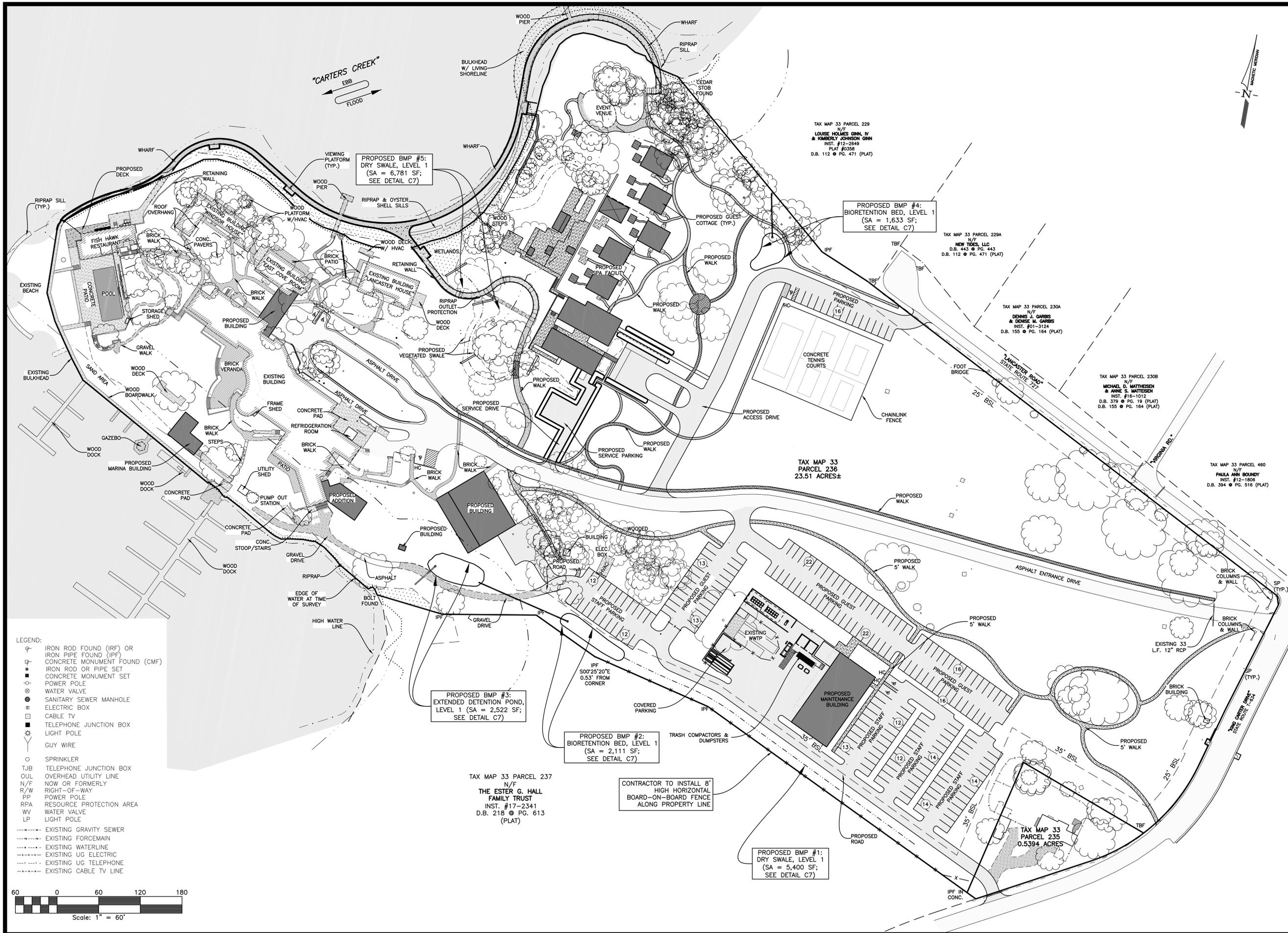
TOWN OF IRVINGTON
LANCASTER COUNTY, VIRGINIA

SHEET:

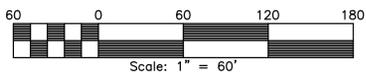
**MASTER
LAYOUT**

SHEET NO:

C3



- LEGEND:**
- ⊕ IRON ROD FOUND (IRF) OR IRON PIPE FOUND (IPF)
 - ⊕ CONCRETE MONUMENT FOUND (CMF)
 - ⊕ IRON ROD OR PIPE SET
 - ⊕ CONCRETE MONUMENT SET
 - ⊕ POWER POLE
 - ⊕ WATER VALVE
 - ⊕ SANITARY SEWER MANHOLE
 - ⊕ ELECTRIC BOX
 - ⊕ CABLE TV
 - ⊕ TELEPHONE JUNCTION BOX
 - ⊕ LIGHT POLE
 - ⊕ GUY WIRE
 - ⊕ SPRINKLER
 - ⊕ TELEPHONE JUNCTION BOX
 - ⊕ OVERHEAD UTILITY LINE
 - ⊕ NOW OR FORMERLY
 - ⊕ RIGHT-OF-WAY
 - ⊕ POWER POLE
 - ⊕ RESOURCE PROTECTION AREA
 - ⊕ WATER VALVE
 - ⊕ LIGHT POLE
 - ⊕ EXISTING GRAVITY SEWER
 - ⊕ EXISTING FORCEMAIN
 - ⊕ EXISTING WATERLINE
 - ⊕ EXISTING UG ELECTRIC
 - ⊕ EXISTING UG TELEPHONE
 - ⊕ EXISTING CABLE TV LINE





LEGEND:
 [Yellow hatched box] IMPERVIOUS AREA IN RPA (55,375 SF; 1.271 AC.)
 [Green hatched box] TOTAL IMPERVIOUS AREA (6.00 AC.)
 [Blue hatched box] CONSERVED OPEN SPACE (0.46 AC.)

LEGEND:
 [Yellow hatched box] IMPERVIOUS AREA IN RPA (55,372 S.F.; 1.271 AC.)
 [Green hatched box] TOTAL IMPERVIOUS AREA (7.96 AC.)
 [Blue hatched box] CONSERVED OPEN SPACE (0.46 AC.)

JOB NO. 19256-15

THIS DRAWING IS THE PROPERTY OF BAY DESIGN GROUP AND IS NOT TO BE REPRODUCED OR USED FOR ANY PROJECT IN WHOLE OR IN PART WITHOUT EXPRESS WRITTEN PERMISSION.

PROJECT MANAGER: WAS

DESIGNED: WAS/BMW

CAD: BMW

CHECKED: WAS

FILED:

DATE: JUNE 10, 2022

REVISED: SEPT. 01, 2022

REVISED:



www.baydesigngroup.com

40 CROSS ST., SUITE 100
 P.O. BOX 51
 URBANNA, VA 23175
 (804) 693-2993



PROJECT:

**THE TIDES INN
 - MASTER
 SWM PLAN**

TOWN OF IRVINGTON
 LANCASTER COUNTY, VIRGINIA

SHEET:

**CBPA
 AREA
 ANALYSIS**

SHEET NO:

C3A

JOB NO. 19256-15

THIS DRAWING IS THE PROPERTY OF BAY DESIGN GROUP AND IS NOT TO BE REPRODUCED OR USED FOR ANY PROJECT IN WHOLE OR IN PART WITHOUT EXPRESS WRITTEN PERMISSION.

PROJECT MANAGER: WAS

DESIGNED: WAS/BMW

CAD: BMW

CHECKED: WAS

FILED:

DATE: JUNE 10, 2022

REVISED: SEPT. 01, 2022

REVISED:



Engineering Surveying & Land Planning

www.baydesigngroup.com

40 CROSS ST., SUITE 100
P.O. BOX 51
URBANA, VA 23175
(804) 693-2993



PROJECT:

**THE TIDES INN
- MASTER
SWM PLAN**

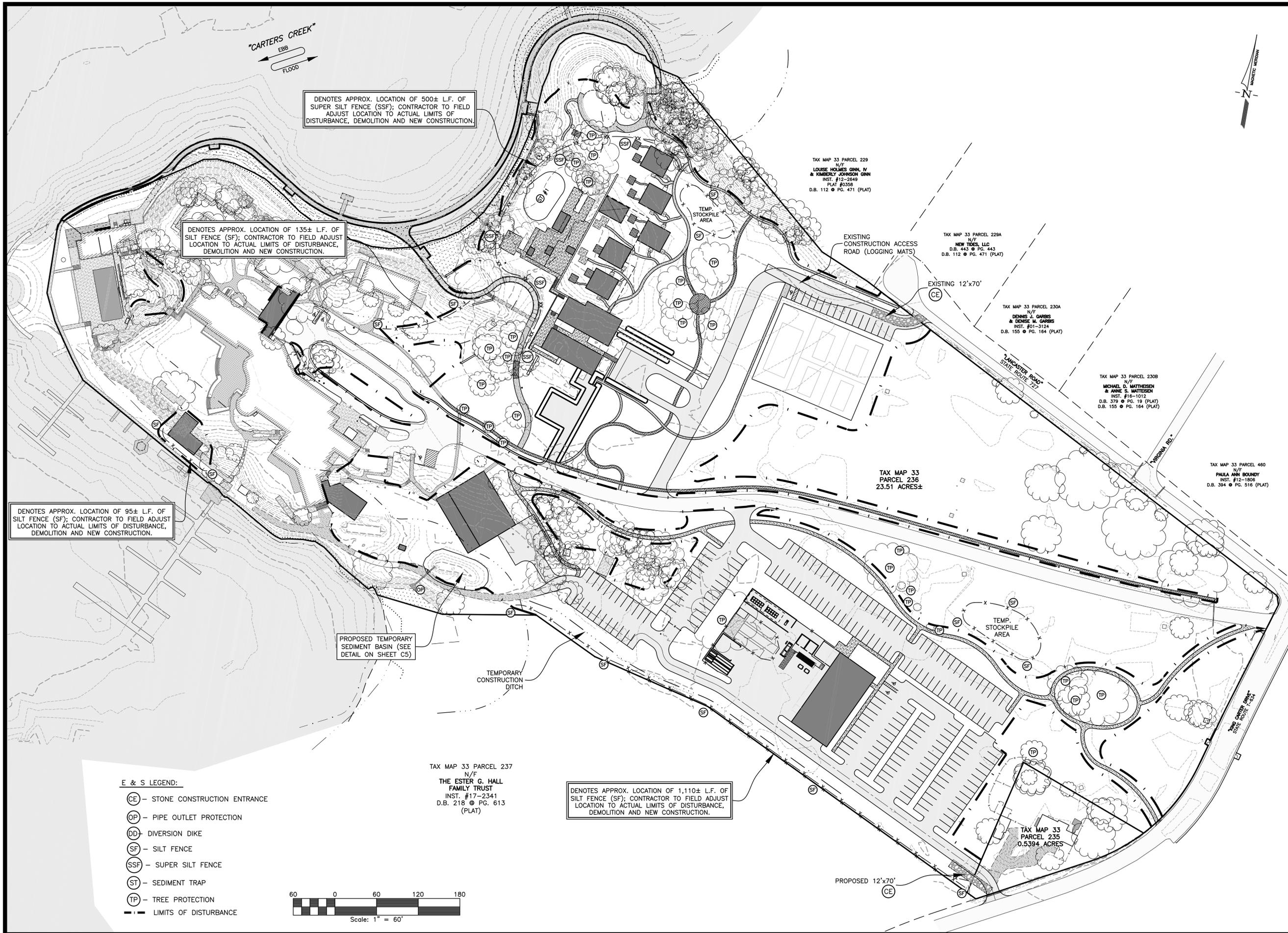
TOWN OF IRVINGTON
LANCASTER COUNTY, VIRGINIA

SHEET:

**EROSION &
SEDIMENT
CONTROL PLAN**

SHEET NO:

C4



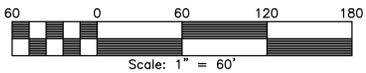
DENOTES APPROX. LOCATION OF 500± L.F. OF SUPER SILT FENCE (SSF); CONTRACTOR TO FIELD ADJUST LOCATION TO ACTUAL LIMITS OF DISTURBANCE, DEMOLITION AND NEW CONSTRUCTION.

DENOTES APPROX. LOCATION OF 135± L.F. OF SILT FENCE (SF); CONTRACTOR TO FIELD ADJUST LOCATION TO ACTUAL LIMITS OF DISTURBANCE, DEMOLITION AND NEW CONSTRUCTION.

DENOTES APPROX. LOCATION OF 95± L.F. OF SILT FENCE (SF); CONTRACTOR TO FIELD ADJUST LOCATION TO ACTUAL LIMITS OF DISTURBANCE, DEMOLITION AND NEW CONSTRUCTION.

DENOTES APPROX. LOCATION OF 1,110± L.F. OF SILT FENCE (SF); CONTRACTOR TO FIELD ADJUST LOCATION TO ACTUAL LIMITS OF DISTURBANCE, DEMOLITION AND NEW CONSTRUCTION.

- E & S LEGEND:**
- ⊙ - STONE CONSTRUCTION ENTRANCE
 - ⊙ - PIPE OUTLET PROTECTION
 - ⊙ - DIVERSION DIKE
 - ⊙ - SILT FENCE
 - ⊙ - SUPER SILT FENCE
 - ⊙ - SEDIMENT TRAP
 - ⊙ - TREE PROTECTION
 - LIMITS OF DISTURBANCE



TAX MAP 33 PARCEL 237
N/F
THE ESTER G. HALL
FAMILY TRUST
INST. #17-2341
D.B. 218 @ PG. 613
(PLAT)

TAX MAP 33 PARCEL 229
N/F
LOUISE HOLMES GINN, IV
& KIMBERLY JOHNSON GINN
INST. #12-2649
PLAT #0358
D.B. 112 @ PG. 471 (PLAT)

TAX MAP 33 PARCEL 228A
N/F
NEW TIDES, LLC
D.B. 443 @ PG. 443
D.B. 112 @ PG. 471 (PLAT)

TAX MAP 33 PARCEL 230A
N/F
DENISE J. GARIBIS
& DENISE M. GARIBIS
INST. #01-3124
D.B. 155 @ PG. 164 (PLAT)

TAX MAP 33 PARCEL 230B
N/F
MICHAEL D. MATTHESEN
& ANNE S. MATTHESEN
INST. #16-1012
D.B. 379 @ PG. 19 (PLAT)
D.B. 155 @ PG. 164 (PLAT)

TAX MAP 33 PARCEL 460
N/F
PAULA ANN BOUNDY
INST. #12-1806
D.B. 394 @ PG. 516 (PLAT)

TAX MAP 33
PARCEL 235
0.5394 ACRES

TAX MAP 33
PARCEL 236
23.51 ACRES±

EROSION CONTROL NOTES

- UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENTATION CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS 9VAC25-840 EROSION AND SEDIMENT CONTROL REGULATIONS. WHEN THE HANDBOOK CONFLICTS WITH THE REGULATIONS, THE REGULATIONS SHALL TAKE PRECEDENCE.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- PRIOR TO LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS OR OFF-SITE FILL ACTIVITIES, THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE LOCAL JURISDICTION AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE LOCAL JURISDICTION AT NO ADDITIONAL COST TO THE OWNER.
- SITE GRADING IS TO DRAIN TO THE PERMETER CONTROLS AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND CONSTRUCTION, UNTIL FINAL STABILIZATION IS ACHIEVED.
- DURING DEWATERING, WATER WILL BE PUMPED INTO SEDIMENT BASINS OR SILT TRAPS.
- THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES DAILY AND AFTER EACH RUNOFF PRODUCING RAINFALL. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY. A RECORD WILL BE MAINTAINED OF THE INSPECTIONS AND MAINTENANCE.
- SOIL STOCK PILES SHALL BE STABILIZED AND PROTECTED WITH SEDIMENT TRAPPING MEASURES.
- PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE FINAL GRADE OR WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN 1 YEAR.
- EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AS A FIRST STEP AND BE MADE FUNCTIONAL BEFORE ANY LAND DISTURBING ACTIVITIES SHALL MAINTAIN FUNCTION THROUGHOUT THE DURATION OF THE PROJECT TO FINAL APPROVAL AND RELEASE.
- STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
- BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS ARE MADE OPERATIONAL, ADEQUATE SILT PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
- ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED, AS DETERMINED BY THE COUNTY ENVIRONMENTAL INSPECTOR.
- ALL MINIMUM STANDARDS (MS) OF THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS APPLY TO THIS PROJECT.

SEEDING NOTES

- ALL STABILIZATION/SEEDING WILL BE ACCOMPLISHED IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
- ANY DISTURBED AREA NOT PAVED, SODDED, OR BUILT UPON WILL HAVE A MINIMUM OF 80% VEGETATIVE COVER PRIOR TO FINAL INSPECTION, AND WILL BE MAINTAINED TO CONTROL SOIL EROSION SATISFACTORILY AND SURVIVE SEVERE WEATHER CONDITIONS.
- STREAM DIVERSION AREAS, WATERWAYS, BANKS AND RELATED AREAS WILL BE SEEDED AND MULCHED AFTER WORK IN WATERCOURSE IS COMPLETED.
- WINTERIZATION - ANY DISTURBED AREA NOT PAVED, SODDED OR BUILT UPON BY OCTOBER 15 IS TO BE SEEDED AND MULCHED ON THAT DATE.
- TEMPORARY SEEDING WILL BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS WHICH MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 30 DAYS. FOR TEMPORARY SEEDING USE 50% OF THE RECOMMENDED RATES OF FERTILIZER, LIME AND FULL AMOUNT OF SEED AND MULCH REQUIRED FOR REGULAR SEEDING.
- ELECTRIC POWER, TELEPHONE, AND GAS SUPPLY TRENCHES ARE TO BE COMPLETED, SEEDED AND MULCHED WITHIN 7 DAYS AFTER BACKFILL.
- ALL TEMPORARY EARTH BERMS, DIVERSIONS, AND DAMS ARE TO BE MULCHED AND SEEDED FOR VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO ALL STOCKPILES ON SITE AS WELL AS SOIL (INTENTIONALLY) TRANSPORTED FROM THE PROJECT SITE.
- PERMANENT SEEDING MIXTURE:

| | |
|-------------------------|-----------------|
| KENTUCKY 31 TALL FESCUE | 93-108 lbs./Ac. |
| RED TOP GRASS | 2 lbs./Ac. |
| SEASONAL NURSE CROP | 20 lbs./Ac. |
| COMMON BERMUDAGRASS** | 0-15 lbs./Ac. |
| SERICEA LESPEDEZA** | 20 lbs./Ac. |
| TOTAL | 150 lbs./Ac. |
- SEASONAL NURSE CROP:

| |
|--|
| FEBRUARY - MARCH THRU APRIL - ANNUAL RYE |
| MAY 1 THRU AUGUST - FORTAL WHEAT |
| SEPTEMBER, OCTOBER THRU NOVEMBER 15 - ANNUAL RYE |
| NOVEMBER 16 THRU JANUARY - WINTER RYE |
- ** MAY THRU OCTOBER, USE HULLED SEED. ALL OTHER SEEDING PERIODS, USE UNHULLED SEED. KEEPING LOGGERS MAY BE ADDED TO ANY SLOPE OR LOW-MAINTENANCE MIX DURING WINTER SEEDING PERIODS; ADD 10-20 lbs./Ac. IN MIXES.
- SEEDING PREPARATION:

| |
|---|
| LIME AND FERTILIZER IS TO BE INCORPORATED INTO THE TOP 4 TO 6 INCHES OF THE SOIL BY DISCING OR OTHER MEANS AT THE FOLLOWING RATE: |
| LIME - PULVERIZED AGRICULTURAL GRADE LIMESTONE (OR EQUIVALENT) 2 TONS/AC. |
| FERTILIZER - 10-20-10 (OR EQUIVALENT) 1000 lbs./Ac. |
- MULCHING:

| |
|--|
| ALL PERMANENT SEEDING MUST BE MULCHED IMMEDIATELY UPON COMPLETION OF SEED APPLICATION WITH STRAW, HAY OR WOOD CELLULOSE FIBER (OR EQUIVALENT) IN AN AMOUNT SUFFICIENT TO SHADE A MINIMUM OF 50% OF THE AREA SEEDED AND/OR AS MAY BE REQUIRED TO PREVENT "WASHOUT". |
|--|

STANDARD NOTES

- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM WITH THE LATEST EDITION OF STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL TRANSPORTATION, EXCEPT WHERE COUNTY STANDARDS ARE APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE OWNER AT LEAST 48 HOURS PRIOR TO STARTING WORK ON THE PROJECT.
- ALL PERMITS, INSPECTIONS AND APPROVALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND AT HIS DISCRETION.
- CONTRACTOR IS REQUIRED TO MAINTAIN ALL DITCHES, PIPE, AND OTHER DRAINAGE STRUCTURES FREE FROM OBSTRUCTION UNTIL ACCEPTED BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED BY FAILURE TO MAINTAIN THE WATERWAYS IN OPERABLE CONDITION.
- CONTRACTOR SHALL DISPOSE OF ALL SURPLUS MATERIAL OFF-SITE IN AN APPROVED AREA AND MANNER AND IN ACCORDANCE WITH AN APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- THE LOCATION OF ALL EXISTING UTILITIES MAY OR MAY NOT BE SHOWN, AND WHERE SHOWN IS APPROXIMATE ONLY. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL EXISTING UTILITIES TO HIS SATISFACTION PRIOR TO EXCAVATION.
- THE CONTRACTOR SHALL PROVIDE PROPER NOTIFICATION TO "MISS UTILITY" (1-800-552-7001) PRIOR TO COMMENCING CONSTRUCTION.
- CONTRACTOR IS REQUIRED TO VISIT THE SITE PRIOR TO FIXING THE JOB. HE SHALL BRING TO THE ATTENTION OF THE ENGINEER ANY DISCREPANCIES NOTED IN HIS VISIT OR REVIEW OF THE CONTRACT DOCUMENTS.

DEVICE MAINTENANCE

- IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER EACH RUN-OFF PRODUCING RAINFALL. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:
- THE GRAVEL OUTLETS AND INLETS TO ALL PIPES AND DRAINAGE STRUCTURES WILL BE CHECKED REGULARLY FOR OBSTRUCTION WHICH WILL PREVENT DRAINAGE. IF THE GRAVEL IS CLOGGED BY SEDIMENT, IT SHALL BE REMOVED AND CLEANED OR REPLACED. AT A MINIMUM, MONTHLY INSPECTIONS SHALL BE PERFORMED DURING THE FIRST YEAR AFTER INSTALLATION.
 - THE SILT FENCE BARRIER WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETRIORATION OF THE FABRIC AND SEDIMENT WHICH IS REMOVED WHEN THE LEVEL OF THE SEDIMENT DEPOSITION REACHES HALF WAY TO THE TOP OF THE BARRIER.
 - THE SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS WHICH ARE NOT SEEDING AS NEEDED, MOWING OF ANY EMBANKMENTS WILL NOT OCCUR DURING THE FIRST YEAR OF GROWTH TO PERMIT SEEDED AREAS TO BECOME WELL ESTABLISHED.

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE DEMOLITION AND REMOVAL OF MULTIPLE BUILDINGS, GRAVEL PATHS, CONCRETE AREAS, AND OTHER APPURTENANCES AND THE CONSTRUCTION OF A SPA FACILITY, BACK OF HOUSE FACILITY, ACCESS ROADS AND OTHER APPURTENANCES. THE TOTAL LAND DISTURBANCE AS A RESULT OF THIS INSTALLATION WILL BE APPROXIMATELY 12.0± ACRES WITHIN THE 23.51± ACRE PARCEL. PROJECT CONSTRUCTION IS GENERALLY EXPECTED TO OCCUR IN A 24± MONTH PERIOD FROM SEPTEMBER 1, 2022 TO AUGUST 31, 2024.

EXISTING SITE CONDITIONS

THE EXISTING SITE IS DEVELOPED WITH B-1 (GENERAL BUSINESS) ZONING. THE NATURAL TOPOGRAPHY OF THE SITE HAS SLOPES AND DRAINAGE PATTERNS LEADING TO ONSITE DRAINAGE DITCHES, WHICH OUTFALL INTO EXISTING WETLANDS AND CARTERS CREEK, WHICH LEADS INTO THE RAPPAHANNOCK RIVER AND THEN THE CHESAPEAKE BAY.

ADJACENT PROPERTY

THE SITE IS BOUNDED ON THE NORTH BY RESIDENTIAL PARCELS AND LANCASTER RD., EAST BY KING CARTER RD., SOUTH BY RESIDENTIAL PARCELS AND WEST BY CARTERS CREEK.

OFF-SITE AREAS

NO OFFSITE DISTURBANCE IS NECESSARY FOR THIS DEVELOPMENT.

SOILS

SEE USDA SOIL SURVEY DATA SHEET C2.

CRITICAL EROSION AREAS

THE POTENTIAL FOR EROSION WILL EXIST IN THE DISTURBANCE AREA THAT IS NECESSARY FOR CONSTRUCTION. TEMPORARY SILT FENCE, DIVERSION DITCHES, AND SEDIMENT TRAP & BASIN WILL BE PLACED SO THAT SEDIMENT LADEN WATER IS FILTERED BEFORE OUTFALL INTO CARTERS CREEK. THE CONTRACTOR SHALL CHECK ALL CONTROL DEVICES REGULARLY FOR SIGNS OF ERODED MATERIALS AND NEEDED REPAIRS.

EROSION AND SEDIMENT CONTROL MEASURES

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE HANDBOOK. THE MINIMUM STANDARDS OF THE VESCH SHALL BE ADHERED TO UNLESS OTHERWISE WAIVED OR APPROVED BY A VARIANCE.

STRUCTURAL PRACTICES

- CONSTRUCTION ENTRANCE - 3.02
A STANDARD 12' X 70' STONE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SHOWN. SHOULD SEDIMENT BE TRANSPORTED ONTO KING CARTER RD., A WASHRACK PER THE VESCH SHALL BE INSTALLED.
- SILT FENCE/SUPER SILT FENCE BARRIER - 3.05
SILT FENCE SEDIMENT BARRIERS WILL BE INSTALLED DOWNSLOPE OF AREAS WITH MINIMAL GRADES TO FILTER SEDIMENT-LADEN RUNOFF FROM SHEET FLOW AS INDICATED ON THE PLANS.
- TEMPORARY DIVERSION DITCH - 3.12
A TEMPORARY DIVERSION DITCH SHALL BE INSTALLED ON THE SOUTH SIDE OF THE LIMITS OF DISTURBANCE TO DIRECT SEDIMENT LADEN WATER TO THE TEMPORARY SEDIMENT BASIN AS SHOWN ON THE PLANS.
- TEMPORARY SEDIMENT TRAP - 3.13
A TEMPORARY SEDIMENT TRAP SHALL BE INSTALLED AS SHOWN ON THE PLANS TO DETAIN SEDIMENT LADEN RUNOFF TO ALLOW THE MAJORITY OF SEDIMENT TO SETTLE.
- TEMPORARY SEDIMENT BASIN - 3.14
A TEMPORARY SEDIMENT BASIN SHALL BE INSTALLED TO FILTER AND REMOVE ALL SEDIMENT FROM THE STORM WATER RUNOFF GENERATED BY THE DRAINAGE AREA. REFER TO THE DETAIL BELOW.
- OUTLET PROTECTION - 3.18
CLASS I RIPRAP IS TO BE PLACED AT THE OUTLET OF THE EXISTING CULVERTS AS SHOWN.

VEGETATIVE PRACTICES

- TOP SOILING - 3.30
TOPSOIL WILL BE STRIPPED FROM AREAS TO BE GRADED AND TEMPORARILY STORED ON SITE (WITHIN DISTURBANCE AREA) FOR RE-USE IN FINAL GRADING/SEEDING.
- TEMPORARY SEEDING - 3.31
ALL DENUDED AREAS WHICH WILL BE LEFT DORMANT FOR EXTENDED PERIODS OF TIME SHALL BE SEEDED WITH FAST GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING. SELECTION OF THE SEED MIXTURE WILL DEPEND ON THE TIME OF YEAR IT IS APPLIED.
- EROSION CONTROL BLANKETS - 3.36 OR MULCH - 3.35
EROSION CONTROL BLANKETS WILL BE INSTALLED OVER FILL SLOPES WHICH HAVE BEEN BROUGHT TO FINAL GRADE AND HAVE BEEN SEEDED TO PROTECT THE SLOPES FROM RILL AND GULLY EROSION AND TO ALLOW SEED TO GERMINATE PROPERLY. MULCH (STRAW OR FIBER) WILL BE USED ON RELATIVELY FLAT AREAS AND WILL BE APPLIED AS A SECOND STEP IN THE SEEDING OPERATION.

MANAGEMENT STRATEGIES

- CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.
- CONSTRUCTION ENTRANCE AND SILT FENCE MEASURES WILL BE INSTALLED AS FIRST STEPS IN GRADING.
- TEMPORARY SEEDING OR OTHER STABILIZATION WILL FOLLOW IMMEDIATELY AFTER GRADING.
- THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.
- AFTER ACHIEVING ADEQUATE STABILIZATION, THE TEMPORARY E & S CONTROLS WILL BE CLEANED UP AND REMOVED AND ANY AREAS DISTURBED DURING THIS OPERATION WILL BE FERTILIZED AND RESEEDED AS NEEDED.

CONSTRUCTION SEQUENCING

- FLAG PRELIMINARY LIMITS OF DISTURBANCE.
- HOLD PRE CONSTRUCTION MEETING.
- INSTALL SILT FENCE, DIVERSION DITCHES, SEDIMENT BASIN, SEDIMENT TRAP AND CONSTRUCTION ENTRANCE.
- DEMOLISH AND REMOVE BUILDINGS AND APPURTENANCES.
- CLEAR AND ROUGH GRADE NEW CONSTRUCTION AREAS. ROUGH GRADING SHALL BE DONE IN SUCH A MANNER THAT ALL STORMWATER IS DIVERTED TO THE SILT FENCE AND SEDIMENT TRAPPING FEATURES.
- TEMPORARY SEED ALL DENUDED AREAS PER STATE EROSION AND SEDIMENT CONTROL REQUIREMENTS AS NECESSARY PRIOR TO FINE GRADING AND FINAL SEEDING.
- CONSTRUCT BUILDINGS, ACCESS ROADS AND OTHER APPURTENANCES.
- FINE GRADE, SEED, AND MULCH ALL DENUDED AREAS WITH PERMANENT SEEDING AND TOPSOIL.
- CONSTRUCT BMP'S.
- COUNTY INSPECTOR AND/OR BAY DESIGN GROUP ENGINEER SHALL PERFORM "FINAL CONFORMANCE" INSPECTION.

PERMANENT STABILIZATION

AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING. SEEDING SHALL BE DONE WITH KENTUCKY 31 TALL FESCUE ACCORDING TO STD. & SPEC. 3.32. PERMANENT SEEDING, OF THE HANDBOOK. EROSION CONTROL BLANKETS WILL BE INSTALLED OVER FILL SLOPES WHICH HAVE BEEN BROUGHT TO FINAL GRADE AND HAVE BEEN SEEDED TO PROTECT THE SLOPES FROM RILL AND GULLY EROSION AND TO ALLOW SEED TO GERMINATE PROPERLY. MULCH (STRAW OR FIBER) WILL BE USED ON RELATIVELY FLAT AREAS. IN ALL SEEDING OPERATIONS, SEED, FERTILIZER AND LIME WILL BE APPLIED PRIOR TO MULCHING.

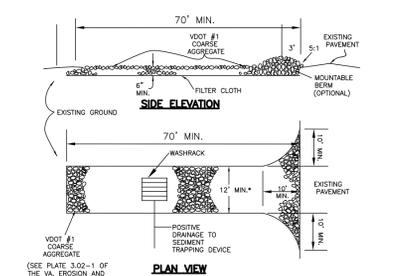
STORM WATER MANAGEMENT

THERE WILL BE AN INCREASE IN IMPERVIOUS AREA AS A RESULT OF THE CONSTRUCTION COMPARED TO THE CURRENTLY DEVELOPED CONDITION. HOWEVER, BMP ELEMENTS ARE UTILIZED WHICH REDUCE THE TOTAL RUNOFF BY 11,121 CF (SEE RUNOFF REDUCTION METHOD ANALYSIS SPREADSHEET FOR PROJECT) AND THE RESULTANT TOTAL RUNOFF IS DIRECTED TO CARTERS CREEK WHICH LEADS TO THE RAPPAHANNOCK RIVER, A NATURAL TIDAL OUTFALL. THIS, THE PROJECT IS IN COMPLIANCE WITH MS-19.

MAINTENANCE

IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER EACH RUNOFF PRODUCING RAINFALL BY THE REGISTERED LAND DISTURBER. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:

- THE SILT FENCE BARRIERS WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETRIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALF WAY TO THE TOP OF THE BARRIER.
- THE SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED

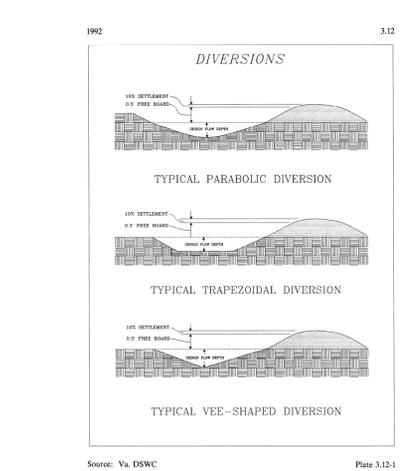


STONE CONSTRUCTION ENTRANCE

SCALE: NONE

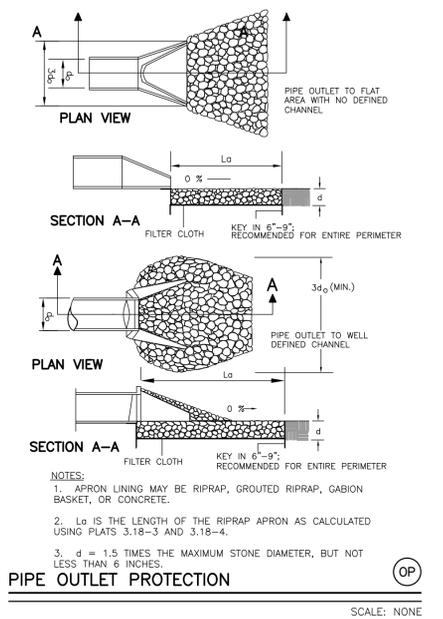
MAINTENANCE

- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY.
- THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND REWORKING OF EXISTING STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT.
- ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED ONTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.



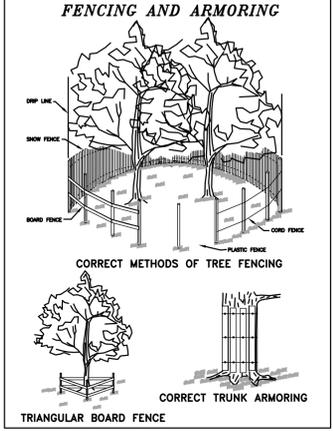
DIVERSION DITCH

SCALE: NONE



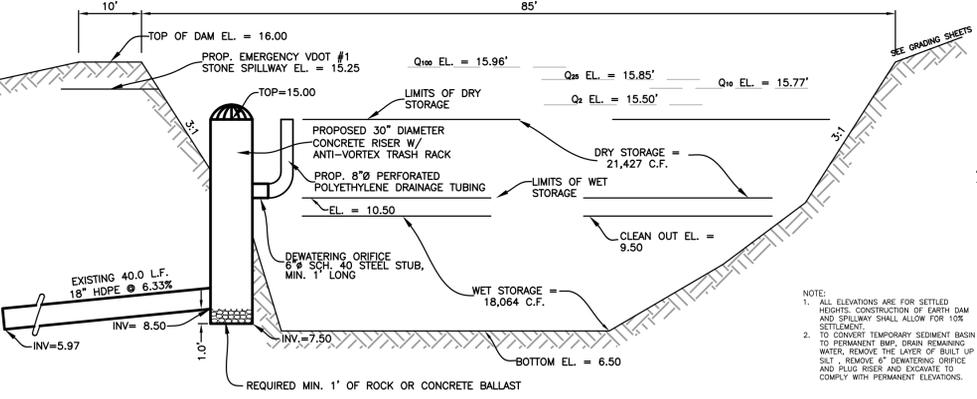
PIPE OUTLET PROTECTION

SCALE: NONE



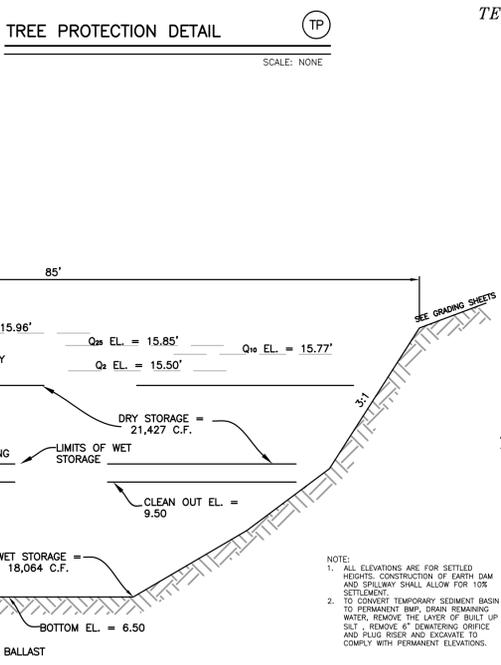
TREE PROTECTION DETAIL

SCALE: NONE



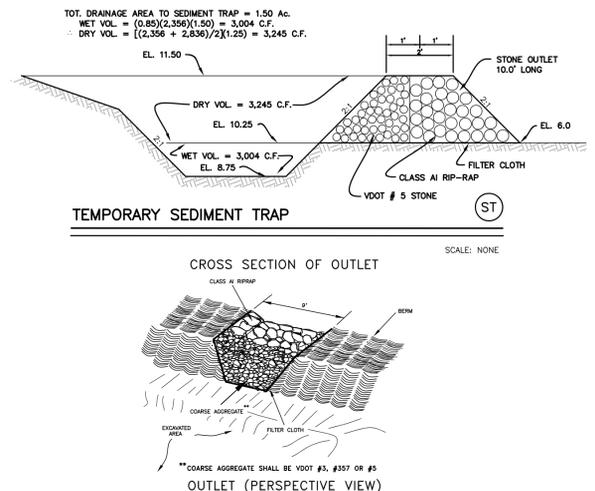
TEMPORARY SEDIMENT BASIN DETAIL

SCALE: NONE



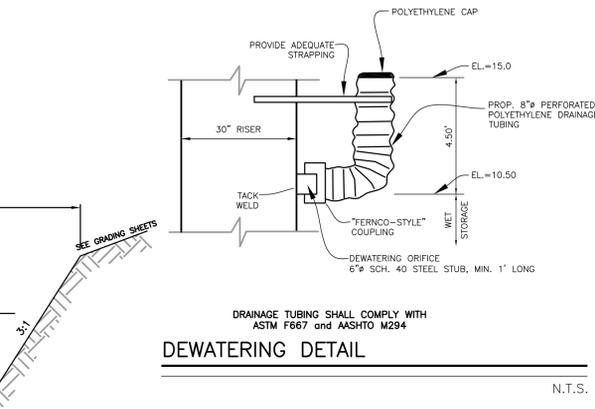
DEWATERING DETAIL

SCALE: NONE



TEMPORARY SEDIMENT TRAP

SCALE: NONE



SUPER SILT FENCE & SILT FENCE INSTALLATION

SCALE: NONE

| DESCRIPTION | SEDIMENT BASIN |
|--|----------------------|
| DESIGN HIGH WATER ELEVATION (25 yr.) | 15.85 |
| RISER CREST ELEVATION (RIM) | 15.00 |
| SEDIMENT CLEAN-OUT ELEVATION | 9.50 |
| PERMANENT DEWATERING OUTLET SIZE (HxW) OR (DIA.) | N/A |
| TEMPORARY DEWATERING OUTLET SIZE (HxW) OR (DIA.) | 6" |
| BAFFLES REQUIRED (L X H) | N/A |
| OUTFALL PIPE | 18" HDPE |
| ANTI-VORTEX RISER | I.D. 30" O.D. --- |
| ANTI-VORTEX CAP DIAMETER | I.D. 30" O.D. --- |
| NOTCH DIAMETER | --- |
| DIMENSION S | 10' |

- NOTES:
- ALL ELEVATIONS ARE FOR SETTLED HEIGHTS. CONSTRUCTION OF EARTH DAM AND SPILLWAY SHALL ALLOW FOR 10% SETTLEMENT.
 - CONVERT TEMPORARY SEDIMENT BASIN TO PERMANENT BMP. DRAIN REMAINING WATER. REMOVE THE LAYER OF BUILT UP SILT. REMOVE 6" DEWATERING ORIFICE AND PLUG RISER AND ESCAPE TO COMPLY WITH PERMANENT ELEVATIONS.

SCALE: NONE

- NOTES:
- SILT FENCE AND FILTER MUST BE ENTRENCHED. POST FOR SILT FENCES SHALL BE EITHER 2.5 X 2 INCH DIAMETER WOOD OR 1.25 POUNDS PER LINEAR FOOT STEEL WITH A MINIMUM LENGTH OF 5 FEET. STEEL POST SHALL HAVE PROJECTIONS FOR FASTENING WIRE TO THEM.
 - WIRE FENCE REINFORCEMENT FOR SILT FENCES USING STANDARD STRENGTH FILTER CLOTH SHALL BE A MINIMUM OF 42 INCHES IN HEIGHT, A MINIMUM OF 14 GAUGE AND SHALL HAVE A MAXIMUM MESH SPACING OF 6 INCHES.
 - POST SHALL BE SPACED A MAXIMUM OF 10 FEET APART AT THE BARRIER LOCATION AND DRAIN SECURELY INTO THE GROUND (MIN. OF 12 INCHES) WHEN EXTRA STRENGTH FABRIC IS USED. WITHOUT THE WIRE SUPPORT FENCE, POST SHALL NOT EXCEED 6 FEET.
 - WHEN EXTRA STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POST.
 - SEDIMENT MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
 - ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.
 - UNDER NO CIRCUMSTANCES SHOULD SILT FENCE BE CONSTRUCTED IN LIVE STREAMS.
 - SILT FENCE SHALL BE REMOVED UPON COMPLETION OF THE PROJECT.

SILT FENCE

SCALE: NONE

THIS DRAWING IS THE PROPERTY OF BAY DESIGN GROUP AND IS NOT TO BE REPRODUCED OR USED FOR ANY PROJECT IN WHOLE OR IN PART WITHOUT EXPRESS WRITTEN PERMISSION.

PROJECT MANAGER: WAS

DESIGNED: WAS/BMW

CAD: BMW

CHECKED: WAS

FILED:

DATE: JUNE 10, 2022

REVISED: SEPT. 01, 2022

REVISED:



Engineering Surveying & Land Planning

www.baydesigngroup.com

40 CROSS ST., SUITE 100
P.O. BOX 51
URBANA, VA 23175
(804) 693-2993



PROJECT:

THE TIDES INN - MASTER SWM PLAN

TOWN OF IRVINGTON
LANCASTER COUNTY, VIRGINIA

SHEET:

EROSION & SEDIMENT CONTROL DETAILS

SHEET NO:

C5

JOB NO. 19256-15

THIS DRAWING IS THE PROPERTY OF BAY DESIGN GROUP AND IS NOT TO BE REPRODUCED OR USED FOR ANY PROJECT IN WHOLE OR IN PART WITHOUT EXPRESS WRITTEN PERMISSION.

PROJECT MANAGER: WAS

DESIGNED: WAS/BMW

CAD: BMW

CHECKED: WAS

FILED:

DATE: JUNE 10, 2022

REVISED: SEPT. 01, 2022

REVISED:



Engineering Surveying & Land Planning

www.baydesigngroup.com

40 CROSS ST., SUITE 100
P.O. BOX 51
URBANA, VA 23175
(804) 693-2993



PROJECT:

**THE TIDES INN
- MASTER
SWM PLAN**

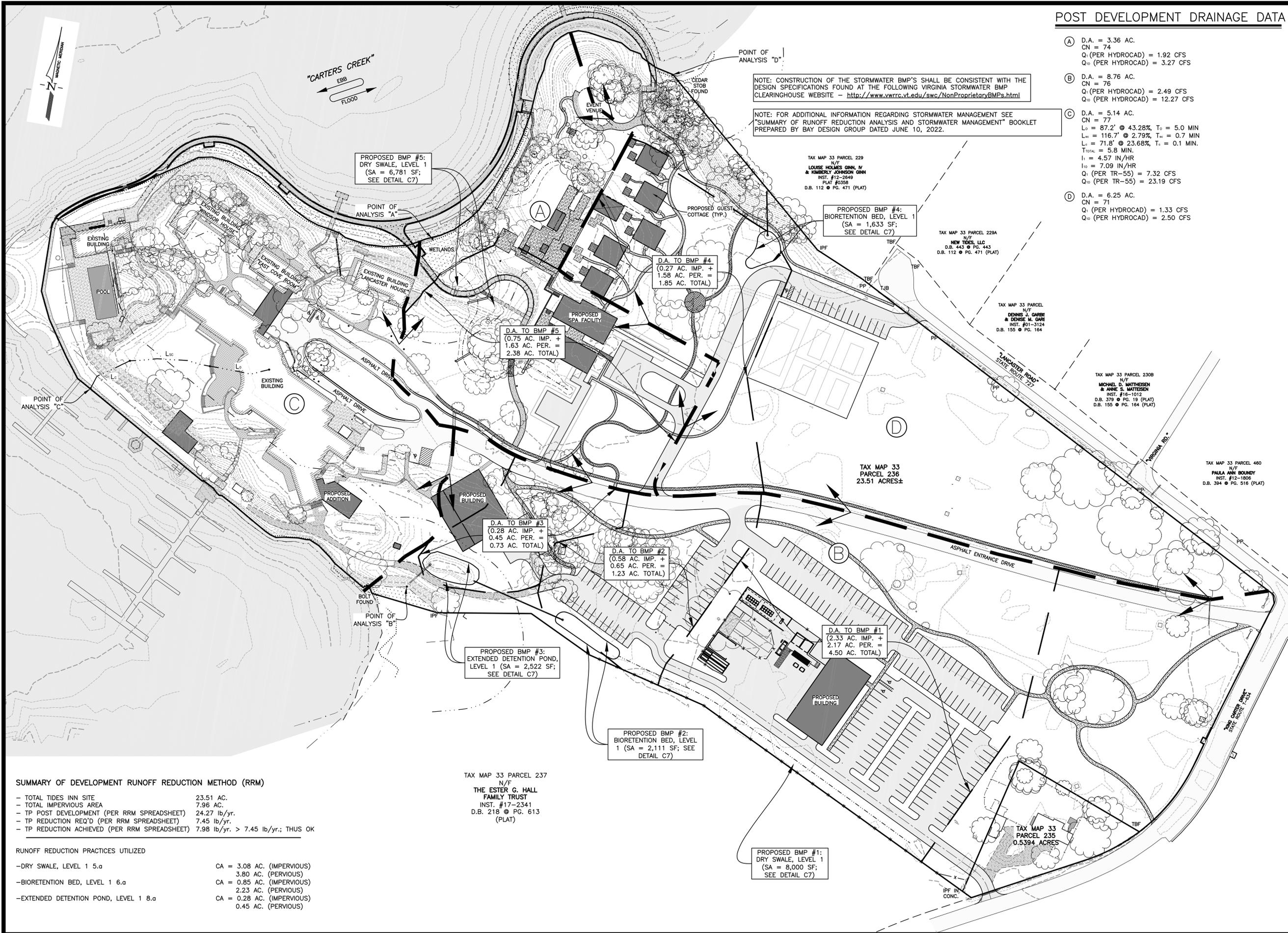
TOWN OF IRVINGTON
LANCASTER COUNTY, VIRGINIA

SHEET:

**STORMWATER
MANAGEMENT
PLAN**

SHEET NO:

C6



NOTE: CONSTRUCTION OF THE STORMWATER BMP'S SHALL BE CONSISTENT WITH THE DESIGN SPECIFICATIONS FOUND AT THE FOLLOWING VIRGINIA STORMWATER BMP CLEARINGHOUSE WEBSITE - <http://www.vwrrc.vt.edu/swc/NonProprietaryBMPs.html>

NOTE: FOR ADDITIONAL INFORMATION REGARDING STORMWATER MANAGEMENT SEE "SUMMARY OF RUNOFF REDUCTION ANALYSIS AND STORMWATER MANAGEMENT" BOOKLET PREPARED BY BAY DESIGN GROUP DATED JUNE 10, 2022.

- (A) D.A. = 3.36 AC.
CN = 74
Q₁ (PER HYDROCAD) = 1.92 CFS
Q₁₀ (PER HYDROCAD) = 3.27 CFS
- (B) D.A. = 8.76 AC.
CN = 76
Q₁ (PER HYDROCAD) = 2.49 CFS
Q₁₀ (PER HYDROCAD) = 12.27 CFS
- (C) D.A. = 5.14 AC.
CN = 77
L₀ = 87.2' @ 43.28%, T₀ = 5.0 MIN
L₁₀ = 116.7' @ 2.79%, T₁₀ = 0.7 MIN
L₂ = 71.8' @ 23.68%, T₂ = 0.1 MIN.
T_{TOTAL} = 5.8 MIN.
I₁ = 4.57 IN/HR
I₁₀ = 7.09 IN/HR
Q₁ (PER TR-55) = 7.32 CFS
Q₁₀ (PER TR-55) = 23.19 CFS
- (D) D.A. = 6.25 AC.
CN = 71
Q₁ (PER HYDROCAD) = 1.33 CFS
Q₁₀ (PER HYDROCAD) = 2.50 CFS

SUMMARY OF DEVELOPMENT RUNOFF REDUCTION METHOD (RRM)

- TOTAL TIDES INN SITE 23.51 AC.
- TOTAL IMPERVIOUS AREA 7.96 AC.
- TP POST DEVELOPMENT (PER RRM SPREADSHEET) 24.27 lb/yr.
- TP REDUCTION REQ'D (PER RRM SPREADSHEET) 7.45 lb/yr.
- TP REDUCTION ACHIEVED (PER RRM SPREADSHEET) 7.98 lb/yr. > 7.45 lb/yr.; THUS OK

RUNOFF REDUCTION PRACTICES UTILIZED

- DRY SWALE, LEVEL 1 5.a CA = 3.08 AC. (IMPERVIOUS)
3.80 AC. (PERVIOUS)
- BIORETENTION BED, LEVEL 1 6.a CA = 0.85 AC. (IMPERVIOUS)
2.23 AC. (PERVIOUS)
- EXTENDED DETENTION POND, LEVEL 1 8.a CA = 0.28 AC. (IMPERVIOUS)
0.45 AC. (PERVIOUS)

TAX MAP 33 PARCEL 237
N/F
THE ESTER G. HALL
FAMILY TRUST
INST. #17-2341
D.B. 218 @ PG. 613
(PLAT)

PROPOSED BMP #1:
DRY SWALE, LEVEL 1
(SA = 8,000 SF;
SEE DETAIL C7)

PROPOSED BMP #2:
BIORETENTION BED, LEVEL
1 (SA = 2,111 SF; SEE
DETAIL C7)

PROPOSED BMP #3:
EXTENDED DETENTION POND,
LEVEL 1 (SA = 2,522 SF;
SEE DETAIL C7)

D.A. TO BMP #3
(0.28 AC. IMP. +
0.45 AC. PER. =
0.73 AC. TOTAL)

D.A. TO BMP #2
(0.58 AC. IMP. +
0.65 AC. PER. =
1.23 AC. TOTAL)

D.A. TO BMP #5
(0.75 AC. IMP. +
1.63 AC. PER. =
2.38 AC. TOTAL)

D.A. TO BMP #4
(0.27 AC. IMP. +
1.58 AC. PER. =
1.85 AC. TOTAL)

D.A. TO BMP #1
(2.33 AC. IMP. +
2.17 AC. PER. =
4.50 AC. TOTAL)

TAX MAP 33
PARCEL 236
23.51 ACRES±

TAX MAP 33
PARCEL 235
0.5394 ACRES

TAX MAP 33 PARCEL
N/F
DENNIS J. GARRE
& DENISE M. GARRE
INST. #01-3124
D.B. 155 @ PG. 164

TAX MAP 33 PARCEL 2308
N/F
MICHAEL D. MATTHESEN
& ANNE S. MATTHESEN
INST. #16-1012
D.B. 379 @ PG. 19 (PLAT)
D.B. 155 @ PG. 164 (PLAT)

TAX MAP 33 PARCEL 229A
N/F
NEW TIDES, LLC
D.B. 443 @ PG. 443
D.B. 112 @ PG. 471 (PLAT)

TAX MAP 33 PARCEL 229
N/F
LOUISE HOLMES GINN, IV
& KIMBERLY JOHNSON GINN
INST. #12-2549
PLAT #0358
D.B. 112 @ PG. 471 (PLAT)

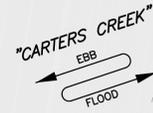
TAX MAP 33 PARCEL 460
N/F
PAULA ANN BOUNDY
INST. #12-1808
D.B. 304 @ PG. 516 (PLAT)

POINT OF
ANALYSIS "C"

POINT OF
ANALYSIS "B"

POINT OF
ANALYSIS "A"

POINT OF
ANALYSIS "D"



THIS DRAWING IS THE PROPERTY OF BAY DESIGN GROUP AND IS NOT TO BE REPRODUCED OR USED FOR ANY PROJECT IN WHOLE OR IN PART WITHOUT EXPRESS WRITTEN PERMISSION.

PROJECT MANAGER: WAS

DESIGNED: WAS/BMW

CAD: BMW

CHECKED: WAS

FILED:

DATE: JUNE 10, 2022

REVISED: SEPT. 01, 2022

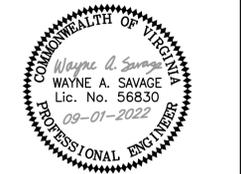
REVISED:



Engineering Surveying & Land Planning

www.baydesigngroup.com

40 CROSS ST., SUITE 100
P.O. BOX 51
URBANA, VA 23175
(804) 693-2993



PROJECT:

THE TIDES INN - MASTER SWM PLAN

TOWN OF IRVINGTON
LANCASTER COUNTY, VIRGINIA

SHEET:

STORMWATER DETAILS

SHEET NO:

C7

CHANNEL PROTECTION ANALYSIS (1 YR. 24 HR. DESIGN STORM USING TR-55 METHOD)

I.F. = 0.8 FOR TOTAL LAND DISTURBANCE GREATER THAN 1 ACRE

$$Q_{channel} < I.F. (Q_{pre-development} \times R_{V_{pre-development}}) / R_{V_{channel}}$$

POST DEVELOPMENT (POINT ANALYSIS A) = Q1 = 1.92 CFS < 0.8 (3.33 x 0.63) / 0.55 = 3.43 CFS; THUS OK

POST DEVELOPMENT (POINT ANALYSIS B) = Q1 = 2.49 CFS < 0.8 (6.18 x 0.51) / 0.64 = 3.94 CFS; THUS OK

POST DEVELOPMENT (POINT ANALYSIS D) = Q1 = 1.33 CFS < 0.8 (2.60 x 0.55) / 0.51 = 2.24 CFS; THUS OK

PEAK DISCHARGE IS REDUCED AND WATER QUALITY IS IMPROVED THUS, SWM FACILITIES ARE ADEQUATE.

FLOOD PROTECTION ANALYSIS (10 YR. 24 HR. DESIGN STORM CALCULATIONS USING TR-55 METHOD)

POST DEVELOPMENT (POINT ANALYSIS A) = Q10 = 3.27 CFS < PRE-DEVELOPMENT Q10 = 13.01 CFS; THUS OK

POST DEVELOPMENT (POINT ANALYSIS B) = Q10 = 12.27 CFS < PRE-DEVELOPMENT Q10 = 26.42 CFS; THUS OK

POST DEVELOPMENT (POINT ANALYSIS C) = Q10 = 23.19 CFS < PRE-DEVELOPMENT Q10 = 23.88 CFS; THUS OK

POST DEVELOPMENT (POINT ANALYSIS D) = Q10 = 2.50 CFS < PRE-DEVELOPMENT Q10 = 11.13 CFS; THUS OK

PEAK DISCHARGE IS REDUCED AND WATER QUALITY IS IMPROVED THUS, SWM FACILITIES ARE ADEQUATE.

POINT OF ANALYSIS C (D.A. "C")
DISCHARGE POINT:
AREA = 5.13 ACRES
Q10 (PER TR-55) = 23.19 CFS
L_{pond} = 1.356'
V_{pond} = 4 FPS
V10 = Q10/L_{pond} = 0.017 FPS < 4 FPS; THUS OK

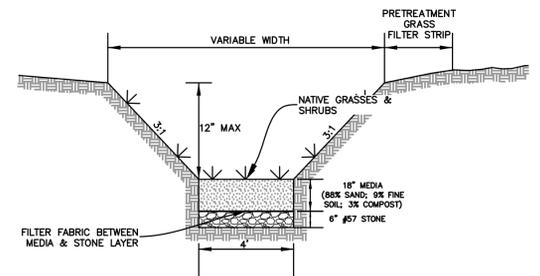
SINCE OUTFALL C IS A SHEETFLOW CONDITION WITH OUTFLOW THAT IS NON-EROSIVE, WATER QUANTITY IS SATISFIED BY 9VAC25-870.66.D.

BMP INSPECTION & MAINTENANCE

- I. GENERAL
 - A. PERIODIC INSPECTIONS (BUT NO LESS THAN ANNUAL) ARE THE RESPONSIBILITY OF THE PROPERTY OWNER AND SHALL BE CONDUCTED FOR THE BMP NOTED BELOW
 - B. INSPECTION REPORTS SHALL BE MAINTAINED ON-SITE AND PROVIDED TO DEQ AS REQUESTED.
 - C. INSPECTION RECORDS SHALL BE RETAINED FOR A MINIMUM OF 5 YEARS FROM INSPECTION DATE.
- II. BIORETENTION BED BMP (VDEQ STORMWATER DESIGN SPECIFICATION No. 9; V1.9; MARCH 1, 2011)
 - A. CONDUCT ANNUAL MAINTENANCE INSPECTION, PREFERABLY DURING MARCH TO MAY.
 - B. PERFORM PERIODIC MAINTENANCE PER FOLLOWING CHECKLIST:
 - i. MOW BIORETENTION TURF COVER.
 - ii. SPOT WEED, REPAIR EROSION, REMOVE TRASH, & RAKE MULCH.
 - iii. ADD REFORCEMENT PLANTING TO MAINTAIN THE DESIRED VEGETATION DENSITY
 - iv. REMOVE INVASIVE PLANTS USING RECOMMENDED CONTROL METHODS
 - v. STABILIZE THE CONTRIBUTING DRAINAGE AREA TO PREVENT EROSION
 - vi. INSPECT & CLEANUP; MAINTAIN 3" MULCH LAYER & PRUNE TREES & SHRUBS
- III. DRY SWALE (VDEQ STORMWATER DESIGN SPECIFICATION No. 10; V1.9; MARCH 1, 2011)
 - A. CONDUCT ANNUAL MAINTENANCE INSPECTION, PREFERABLY DURING MARCH TO MAY.
 - B. PERFORM PERIODIC MAINTENANCE PER FOLLOWING CHECKLIST:
 - i. RE-INFORCE PLANTINGS TO MAINTAIN 95% VEGETATION COVER.
 - ii. REMOVE ACCUMULATED SEDIMENT AND/OR TRASH ON FILTER BED.
 - iii. STABILIZE THE CONTRIBUTING DRAINAGE AREA TO PREVENT EROSION
 - vi. INSPECT & REPAIR SIDE SLOPES AND GRASS FILTER STRIP FROM EROSION.
- III. EXTENDED DETENTION BMP (VDEQ STORMWATER DESIGN SPECIFICATION No. 15; V1.8; APRIL 13, 2010)
 - A. CONDUCT ANNUAL MAINTENANCE INSPECTION, PREFERABLY DURING MARCH TO MAY.
 - B. PERFORM PERIODIC MAINTENANCE PER FOLLOWING CHECKLIST:
 - i. INSPECT CONDITION OF INLETS FOR MATERIAL DAMAGE AND EROSION
 - ii. INSPECT BANKS OF UPSTREAM AND DOWNSTREAM CHANNELS FOR INDICATION OF UNDERMINING
 - iii. INSPECT POND OUTFALL FOR EROSION, UNDERCUTTING, ETC.
 - iv. INSPECT PRINCIPAL SPILLWAY FOR EVIDENCE OF CORROSION, LEAKAGE, ETC.
 - v. INSPECT CONDITION OF TRASH RACK OR ORIFICE FOR CLOGGING, ETC.
 - vi. ENSURE MAINTENANCE ACCESS IS UNBLOCKED.
 - vii. INSPECT SIDE SLOPES FOR EVIDENCE OF EROSION, SLUMPING, ETC.

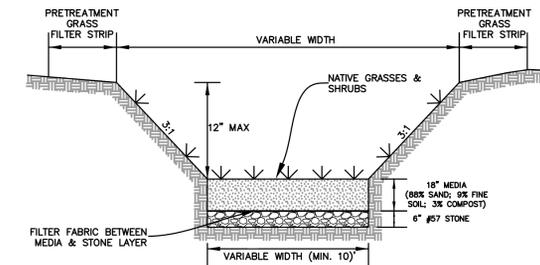
BMP CONSTRUCTION SEQUENCE

- A. BIORETENTION BED (VDEQ STORMWATER DESIGN SPECIFICATION No. 9; V1.9; MARCH 1, 2011)
 1. PROTECTION DURING SITE CONSTRUCTION, AS NOTED ABOVE, DRY SWALES SHOULD REMAIN OUTSIDE THE LIMIT OF DISTURBANCE DURING CONSTRUCTION TO PREVENT SOIL COMPACTION BY HEAVY EQUIPMENT. HOWEVER, THIS IS SELDOM PRACTICAL GIVEN THAT SWALES ARE A KEY PART OF THE DRAINAGE SYSTEM AT MOST SITES. IN THESE CASES, TEMPORARY E&S CONTROLS SUCH AS DIKES, SILT FENCES AND OTHER SIMILAR MEASURES SHOULD BE INTEGRATED INTO THE SWALE DESIGN THROUGHOUT THE CONSTRUCTION SEQUENCE. SPECIFICALLY, BARRIERS SHOULD BE INSTALLED AT KEY CHECK DAM LOCATIONS, EROSION CONTROL FABRIC SHOULD BE USED TO PROTECT THE CHANNEL, AND EXCAVATION SHOULD BE NO DEEPER THAN 2 FEET ABOVE THE PROPOSED INVERT OF THE BOTTOM OF THE PLANNED UNDERDRAIN. DRY SWALES THAT LACK UNDERDRAINS (AND RELY ON FILTRATION) MUST BE FULLY PROTECTED BY SILT FENCE OR CONSTRUCTION FENCING TO PREVENT COMPACTION BY HEAVY EQUIPMENT DURING CONSTRUCTION.
 2. INSTALLATION MAY ONLY BEGIN AFTER THE ENTIRE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED BY VEGETATION. THE DESIGNER SHOULD CHECK THE BOUNDARIES OF THE CONTRIBUTING DRAINAGE AREA TO ENSURE IT CONFORMS TO ORIGINAL DESIGN. ADDITIONAL E&S CONTROLS MAY BE NEEDED DURING SWALE CONSTRUCTION, PARTICULARLY TO DIVERT STORMWATER FROM THE DRY SWALE UNTIL THE FILTER BED AND SIDE SLOPES ARE FULLY STABILIZED. PRE-TREATMENT CELLS SHOULD BE EXCAVATED FIRST TO TRAP SEDIMENTS BEFORE THEY REACH THE PLANNED FILTER BEDS.
 3. EXCAVATORS OR BACKHOES SHOULD WORK FROM THE SIDES TO EXCAVATE THE DRY SWALE AREA TO THE APPROPRIATE DESIGN DEPTH AND DIMENSIONS. EXCAVATING EQUIPMENT SHOULD HAVE SCOOPS WITH ADEQUATE REACH SO THEY DO NOT HAVE TO SIT INSIDE THE FOOTPRINT OF THE DRY SWALE AREA.
 4. THE BOTTOM OF THE DRY SWALE SHOULD BE RIPPED, ROTO-TILLED OR OTHERWISE SCARIFIED TO PROMOTE GREATER INFILTRATION.
 5. PLACE AN ACCEPTABLE FILTER FABRIC ON THE UNDERGROUND (EXCAVATED) SIDES OF THE DRY SWALE WITH A MINIMUM 6 INCH OVERLAP. PLACE THE STONE NEEDED FOR STORAGE LAYER OVER THE FILTER BED. PERFORATE THE UNDERDRAIN PIPE AND CHECK ITS SLOPE. ADD THE REMAINING STONE JACKET, AND THEN PACK #57 STONE TO 3 INCHES ABOVE THE TOP OF THE UNDERDRAIN, AND THEN ADD 3 INCHES OF PEA GRAVEL AS A FILTER LAYER.
 6. ADD THE SOIL MEDIA IN 12-INCH LIFTS UNTIL THE DESIRED TOP ELEVATION OF THE DRY SWALE IS ACHIEVED. WAIT A FEW DAYS TO CHECK FOR SETTLEMENT, AND ADD ADDITIONAL MEDIA AS NEEDED.
 7. INSTALL CHECK DAMS, DRIVEWAY CULVERTS AND INTERNAL PRE-TREATMENT FEATURES, AS SPECIFIED IN THE PLAN.
 8. PREPARE PLANTING HOLES FOR SPECIFIED TREES AND SHRUBS, INSTALL EROSION CONTROL FABRIC WHERE NEEDED, SPREAD SEED OR LAY SOD, AND INSTALL ANY TEMPORARY IRRIGATION.
 9. PLANT LANDSCAPING MATERIALS AS SHOWN IN THE LANDSCAPING PLAN, AND WATER THEM WEEKLY DURING THE FIRST 2 MONTHS. THE CONSTRUCTION CONTRACT SHOULD INCLUDE A CARE AND REPLACEMENT WARRANTY TO ENSURE THAT VEGETATION IS PROPERLY ESTABLISHED AND SURVIVES DURING THE FIRST GROWING SEASON FOLLOWING CONSTRUCTION.
 10. CONDUCT A FINAL CONSTRUCTION INSPECTION AND DEVELOP A PUNCHLIST FOR FACILITY ACCEPTANCE.
- B. DRY SWALE (VDEQ STORMWATER DESIGN SPECIFICATION No. 10; V1.9; MARCH 1, 2011)
 1. PROTECTION DURING SITE CONSTRUCTION, AS NOTED ABOVE, DRY SWALES SHOULD REMAIN OUTSIDE THE LIMIT OF DISTURBANCE DURING CONSTRUCTION TO PREVENT SOIL COMPACTION BY HEAVY EQUIPMENT. HOWEVER, THIS IS SELDOM PRACTICAL GIVEN THAT SWALES ARE A KEY PART OF THE DRAINAGE SYSTEM AT MOST SITES. IN THESE CASES, TEMPORARY E&S CONTROLS SUCH AS DIKES, SILT FENCES AND OTHER SIMILAR MEASURES SHOULD BE INTEGRATED INTO THE SWALE DESIGN THROUGHOUT THE CONSTRUCTION SEQUENCE. SPECIFICALLY, BARRIERS SHOULD BE INSTALLED AT KEY CHECK DAM LOCATIONS, EROSION CONTROL FABRIC SHOULD BE USED TO PROTECT THE CHANNEL, AND EXCAVATION SHOULD BE NO DEEPER THAN 2 FEET ABOVE THE PROPOSED INVERT OF THE BOTTOM OF THE PLANNED UNDERDRAIN. DRY SWALES THAT LACK UNDERDRAINS (AND RELY ON FILTRATION) MUST BE FULLY PROTECTED BY SILT FENCE OR CONSTRUCTION FENCING TO PREVENT COMPACTION BY HEAVY EQUIPMENT DURING CONSTRUCTION.
 2. INSTALLATION MAY ONLY BEGIN AFTER THE ENTIRE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED BY VEGETATION. THE DESIGNER SHOULD CHECK THE BOUNDARIES OF THE CONTRIBUTING DRAINAGE AREA TO ENSURE IT CONFORMS TO ORIGINAL DESIGN. ADDITIONAL E&S CONTROLS MAY BE NEEDED DURING SWALE CONSTRUCTION, PARTICULARLY TO DIVERT STORMWATER FROM THE DRY SWALE UNTIL THE FILTER BED AND SIDE SLOPES ARE FULLY STABILIZED. PRE-TREATMENT CELLS SHOULD BE EXCAVATED FIRST TO TRAP SEDIMENTS BEFORE THEY REACH THE PLANNED FILTER BEDS.
 3. EXCAVATORS OR BACKHOES SHOULD WORK FROM THE SIDES TO EXCAVATE THE DRY SWALE AREA TO THE APPROPRIATE DESIGN DEPTH AND DIMENSIONS. EXCAVATING EQUIPMENT SHOULD HAVE SCOOPS WITH ADEQUATE REACH SO THEY DO NOT HAVE TO SIT INSIDE THE FOOTPRINT OF THE DRY SWALE AREA.
 4. THE BOTTOM OF THE DRY SWALE SHOULD BE RIPPED, ROTO-TILLED OR OTHERWISE SCARIFIED TO PROMOTE GREATER INFILTRATION.
 5. PLACE AN ACCEPTABLE FILTER FABRIC ON THE UNDERGROUND (EXCAVATED) SIDES OF THE DRY SWALE WITH A MINIMUM 6 INCH OVERLAP. PLACE THE STONE NEEDED FOR STORAGE LAYER OVER THE FILTER BED. PERFORATE THE UNDERDRAIN PIPE AND CHECK ITS SLOPE. ADD THE REMAINING STONE JACKET, AND THEN PACK #57 STONE TO 3 INCHES ABOVE THE TOP OF THE UNDERDRAIN, AND THEN ADD 3 INCHES OF PEA GRAVEL AS A FILTER LAYER.
 6. ADD THE SOIL MEDIA IN 12-INCH LIFTS UNTIL THE DESIRED TOP ELEVATION OF THE DRY SWALE IS ACHIEVED. WAIT A FEW DAYS TO CHECK FOR SETTLEMENT, AND ADD ADDITIONAL MEDIA AS NEEDED.
 7. INSTALL CHECK DAMS, DRIVEWAY CULVERTS AND INTERNAL PRE-TREATMENT FEATURES, AS SPECIFIED IN THE PLAN.
 8. PREPARE PLANTING HOLES FOR SPECIFIED TREES AND SHRUBS, INSTALL EROSION CONTROL FABRIC WHERE NEEDED, SPREAD SEED OR LAY SOD, AND INSTALL ANY TEMPORARY IRRIGATION.
 9. PLANT LANDSCAPING MATERIALS AS SHOWN IN THE LANDSCAPING PLAN, AND WATER THEM WEEKLY DURING THE FIRST 2 MONTHS. THE CONSTRUCTION CONTRACT SHOULD INCLUDE A CARE AND REPLACEMENT WARRANTY TO ENSURE THAT VEGETATION IS PROPERLY ESTABLISHED AND SURVIVES DURING THE FIRST GROWING SEASON FOLLOWING CONSTRUCTION.
 10. CONDUCT A FINAL CONSTRUCTION INSPECTION AND DEVELOP A PUNCHLIST FOR FACILITY ACCEPTANCE.
- C. EXTENDED DETENTION POND (VDEQ STORMWATER DESIGN SPECIFICATION No. 15; V1.9; MARCH 1, 2011)
 1. USE OF ED POND AS AN E&S CONTROL. AN ED POND MAY SERVE AS A SEDIMENT BASIN DURING PROJECT CONSTRUCTION. IF THIS IS DONE, THE VOLUME SHOULD BE BASED ON THE MORE STRINGENT SIZING RULE (EROSION AND SEDIMENT CONTROL REQUIREMENT VS. WATER QUALITY TREATMENT REQUIREMENT). INSTALLATION OF THE PERMANENT RISER SHOULD BE INITIATED DURING THE CONSTRUCTION PHASE, AND DESIGN ELEVATIONS SHOULD BE SET WITH FINAL CLEANOUT OF THE SEDIMENT BASIN AND CONVERSION TO THE POST-CONSTRUCTION ED POND IN MIND. THE BOTTOM ELEVATION OF THE ED POND SHOULD BE LOWER THAN THE BOTTOM ELEVATION OF THE TEMPORARY SEDIMENT BASIN. APPROPRIATE PROCEDURES SHOULD BE IMPLEMENTED TO PREVENT DISCHARGE OF TURBID WATERS WHEN THE BASIN IS BEING CONVERTED INTO AN ED POND.
 2. STABILIZE THE DRAINAGE AREA. ED PONDS SHOULD ONLY BE CONSTRUCTED AFTER THE CONTRIBUTING DRAINAGE AREA TO THE POND IS COMPLETELY STABILIZED. IF THE PROPOSED POND SITE WILL BE USED AS A SEDIMENT TRAP OR BASIN DURING THE CONSTRUCTION PHASE, THE CONSTRUCTION NOTES SHOULD CLEARLY INDICATE THAT THE FACILITY WILL BE DEWATERED, DREGGED AND RE-GRADED TO DESIGN DIMENSIONS AFTER THE ORIGINAL SITE CONSTRUCTION IS COMPLETE.
 3. ASSEMBLE CONSTRUCTION MATERIALS ON-SITE, MAKE SURE THEY MEET DESIGN SPECIFICATIONS, AND PREPARE ANY STAGING AREAS.
 4. CLEAR AND STRIP THE PROJECT AREA TO THE DESIRED SUB-GRADE.
 5. INSTALL E&S PRIOR TO CONSTRUCTION, INCLUDING TEMPORARY DE-WATERING DEVICES AND STORMWATER DIVERSION PRACTICES. ALL AREAS SURROUNDING THE POND THAT ARE GRADED OR DENuded DURING CONSTRUCTION MUST BE PLANTED WITH TURF GRASS, NATIVE PLANTINGS, OR OTHER APPROVED METHODS OF SOIL STABILIZATION.
 6. EXCAVATE THE CORE TRENCH AND INSTALL THE SPILLWAY PIPE.
 7. INSTALL THE RISER OR OUTFLOW STRUCTURE AND ENSURE THE OVERFLOW WEIR IS CONSTRUCTED LEVEL AT THE DESIGN ELEVATION.
 8. CONSTRUCT THE EMBANKMENT AND ANY INTERNAL BERMS IN 8 TO 12-INCH LIFTS AND COMPACT THE LIFTS WITH APPROPRIATE EQUIPMENT.
 9. EXCAVATE/GRADE UNTIL THE APPROPRIATE ELEVATION AND DESIRED CONTOURS ARE ACHIEVED FOR THE BOTTOM AND SIDE SLOPES OF THE ED POND.
 10. CONSTRUCT THE EMERGENCY SPILLWAY IN CUT OR STRUCTURALLY STABILIZED SOILS.
 11. INSTALL OUTLET PIPES, INCLUDING DOWNSTREAM RIP-RAP APRON PROTECTION.
 12. STABILIZE EXPOSED SOILS WITH TEMPORARY SEED MIXTURES APPROPRIATE FOR THE POND BUFFER. ALL AREAS ABOVE THE NORMAL POOL ELEVATION SHOULD BE PERMANENTLY STABILIZED BY HYDROSEEDING OR SEEDING OVER STRAW.
 13. PLANT THE POND BUFFER AREA, FOLLOWING THE LANDSCAPING PLAN (SEE SECTION 8.5 BELOW).



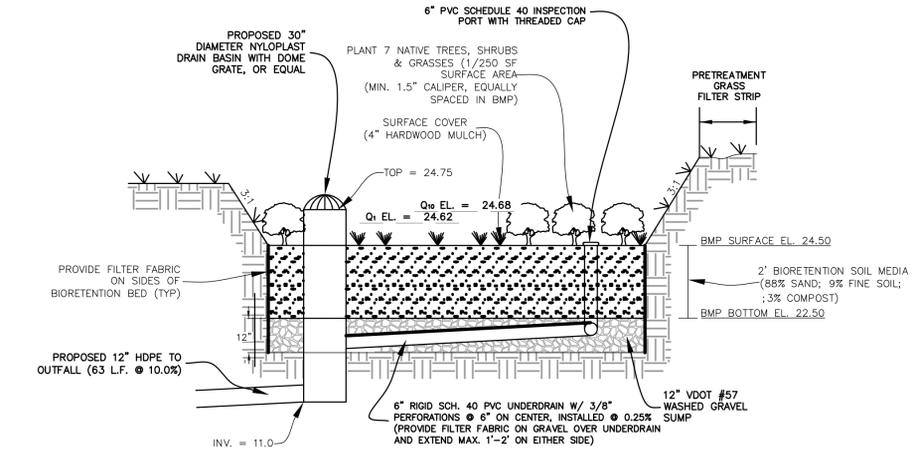
BMP #1: DRY SWALE

SCALE: NONE



BMP #5: DRY SWALE

SCALE: NONE

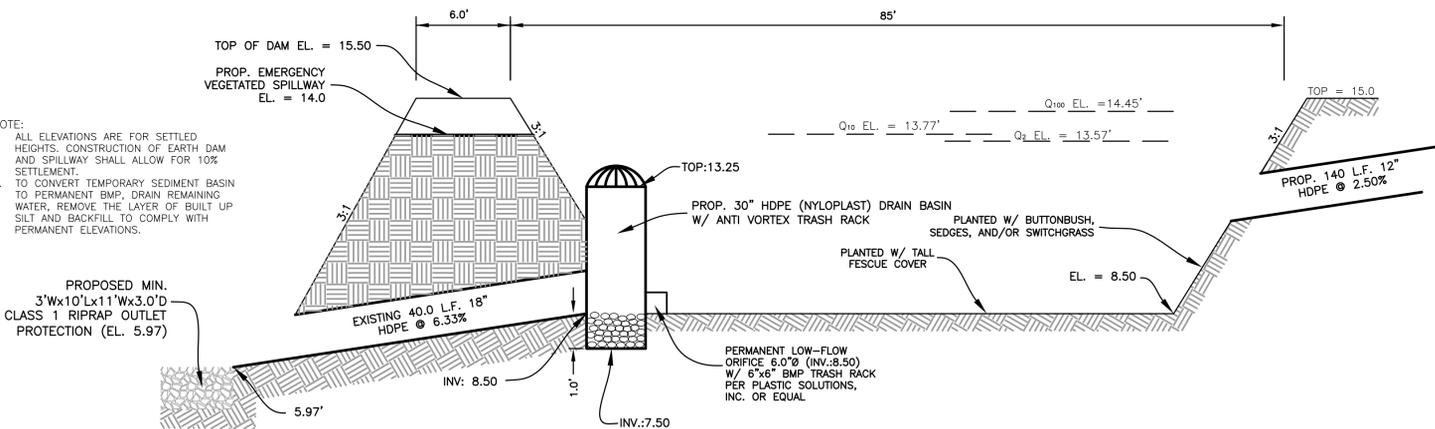


BMP #4: BIORETENTION BED, LEVEL 1

SCALE: NONE

$$REQ'D \text{ S.A.} = T_v/1.40 = [1.0(R)(A)/12]/1.40 = [1.0(0.31)(80,571 \text{ SF})/12]/1.40 = 1,487 \text{ SF}$$

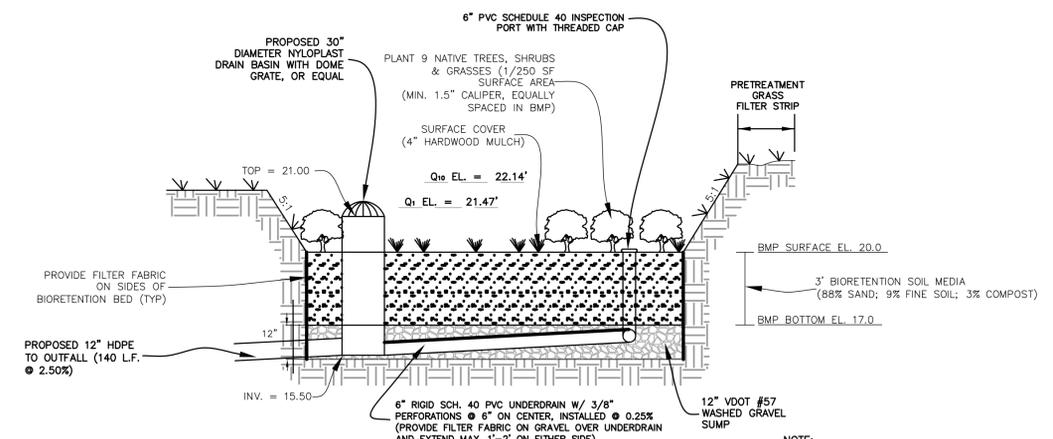
$$PROVIDED \text{ S.A.} = 1,633 \text{ SF} @ \text{ EL. } 24.0 > 1,487 \text{ SF}; \text{ THUS OK}$$



BMP #3: EXTENDED DETENTION POND

SCALE: NONE

NOTE:
1. ALL ELEVATIONS ARE FOR SETTLED HEIGHTS. CONSTRUCTION OF EARTH DAM AND SPILLWAY SHALL ALLOW FOR 10% SETTLEMENT.
2. TO CONVERT TEMPORARY SEDIMENT BASIN TO PERMANENT BMP, DRAIN REMAINING WATER, REMOVE THE LAYER OF BUILT UP SILT AND BACKFILL TO COMPLY WITH PERMANENT ELEVATIONS.



BMP #2: BIORETENTION BED, LEVEL 1

SCALE: NONE

$$REQ'D \text{ S.A.} = T_v/1.65 = [1.0(R)(A)/12]/1.65 = [[1.0(0.54)(53,562 \text{ SF})/12]-8,440]/1.65 = -3,654 \text{ SF}$$

$$PROVIDED \text{ S.A.} = 2,111 \text{ SF} @ \text{ EL. } 20.00 > -3,654 \text{ SF}; \text{ THUS OK}$$

NOTE:
1. ALL ELEVATIONS ARE FOR SETTLED HEIGHTS. CONSTRUCTION OF EARTH DAM AND SPILLWAY SHALL ALLOW FOR 10% SETTLEMENT.

THIS DRAWING IS THE PROPERTY OF BAY DESIGN GROUP AND IS NOT TO BE REPRODUCED OR USED FOR ANY PROJECT IN WHOLE OR IN PART WITHOUT EXPRESS WRITTEN PERMISSION.

PROJECT MANAGER: WAS

DESIGNED: WAS/BMW

CAD: BMW

CHECKED: WAS

FILED:

DATE: JUNE 10, 2022

REVISED: SEPT. 01, 2022

REVISED:



Engineering Surveying & Land Planning

www.baydesigngroup.com

40 CROSS ST., SUITE 100
P.O. BOX 51
URBANA, VA 23175
(804) 693-2993



PROJECT:

**THE TIDES INN
- MASTER
SWM PLAN**

TOWN OF IRVINGTON
LANCASTER COUNTY, VIRGINIA

SHEET:

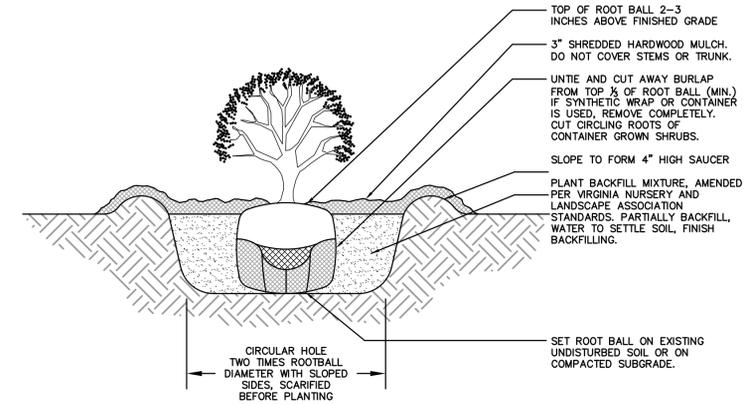
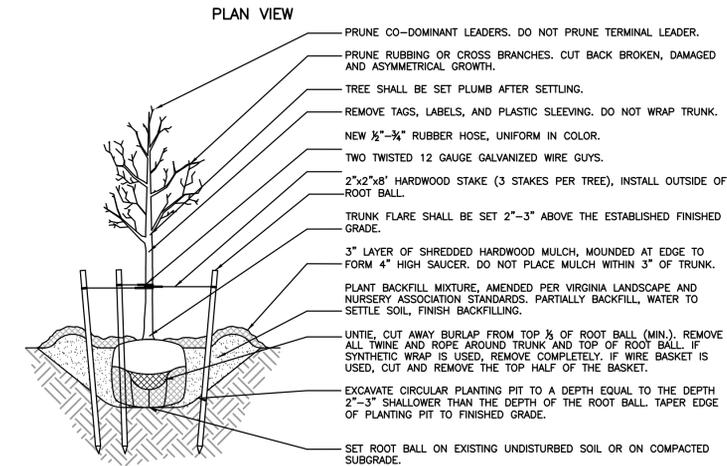
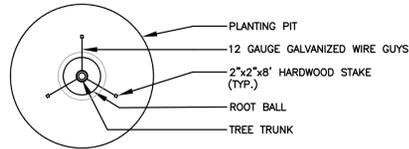
**LANDSCAPING
PLAN &
DETAILS**

SHEET NO:

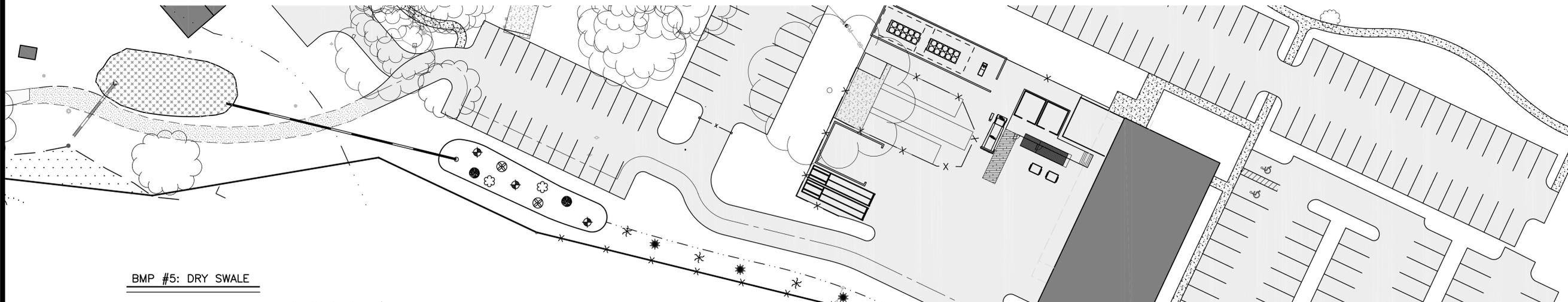
L1

LANDSCAPE NOTES:

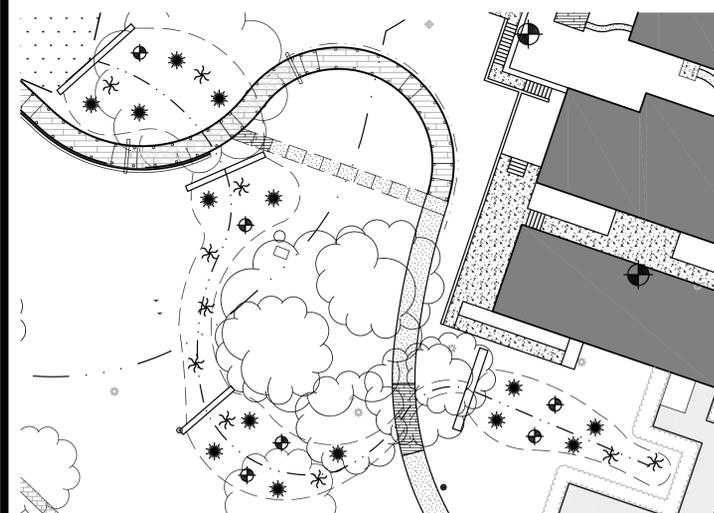
- ALL PLANT MATERIAL SHALL MEET OR EXCEED THE SPECIFICATIONS OF "THE AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (ANSI Z60.1-2004)
- CONTRACTOR SHALL COMPLY WITH "THE STANDARDIZED LANDSCAPE SPECIFICATIONS FOR THE COMMONWEALTH OF VIRGINIA", PUBLISHED BY THE VIRGINIA NURSERY & LANDSCAPE ASSOCIATION, EXCEPT AS STATED WITHIN THE DRAWINGS OR PROJECT SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATIONS OF ALL UTILITIES WITH MISS UTILITY (1-800-552-7001) PRIOR TO COMMENCING WORK.
- NO PLANT MATERIAL SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
- A COMPLETE LIST OF PLANTS, INCLUDING SCHEDULE OF INSTALLED SIZES, QUANTITIES, AND OTHER REQUIREMENTS IS SHOWN ON THE DRAWINGS. IN THE EVENT THAT QUANTITY DISCREPANCIES OR MATERIAL OMISSIONS OCCUR IN THE PLANT MATERIALS LIST, THE PLANTING PLANS SHALL GOVERN. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO BIDDING.
- EXISTING TREES TO REMAIN SHALL BE PROTECTED WITH TREE PROTECTION IN ACCORDANCE WITH THE VIRGINIA SEDIMENT AND EROSION CONTROL HANDBOOK (1992), STANDARD 3.38.
- CONTRACTOR SHALL NOT STORE VEHICLES OR MATERIALS WITHIN THE LANDSCAPE AREAS OR WITHIN DRIP LINES OF TREES. ANY DAMAGE TO EXISTING TREES, SHRUBS, OR LAWNS SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- THE DRAWINGS REFLECT PLANT QUANTITIES, PLANT TYPES, AND PLANT PLACEMENT AS REQUIRED BY ORDINANCE. WRITTEN APPROVAL FOR PLANT SUBSTITUTIONS OR RELOCATION MUST BE OBTAINED IN ADVANCE FROM THE LOCAL APPROVING AUTHORITY AND FROM THE OWNER'S REPRESENTATIVE. THE OWNER MAY INSTALL SUPPLEMENTAL PLANT MATERIAL IN ADDITION TO PLANTS SHOWN. REFER TO LOCAL ORDINANCES FOR RESTRICTIONS THAT MAY APPLY.
- GROUPINGS OF PLANTS SHALL BE MULCHED IN A CONTINUOUS FASHION.
- ALL AREAS NOT OTHERWISE DESIGNATED SHALL RECEIVE TURF SEED OR SOD AS SPECIFIED IN "THE STANDARDIZED LANDSCAPE SPECIFICATIONS FOR THE COMMONWEALTH OF VIRGINIA", PUBLISHED BY THE VIRGINIA NURSERY & LANDSCAPE ASSOCIATION, EXCEPT AS STATED WITHIN THE DRAWINGS OR PROJECT SPECIFICATIONS.
- ALL PLANT MATERIALS SHALL BE LIVING AND IN HEALTHY CONDITION WHEN INSTALLED.
- THE OWNER, OR HIS AGENT, SHALL BE RESPONSIBLE FOR THE MAINTENANCE, REPAIR, AND REPLACEMENT OF ALL LANDSCAPE MATERIALS.
- ALL PLANT MATERIAL SHALL BE TENDED AND MAINTAINED IN A HEALTHY GROWING CONDITION AND FREE FROM REFUSE AND DEBRIS AT ALL TIMES.
- ALL UNHEALTHY, DYING OR DEAD PLANTING MATERIAL SHALL BE REPLACED DURING NEXT PLANTING SEASON.
- WATER SHALL BE SUPPLIED BY OUTSIDE SPOUT ON BUILDINGS.



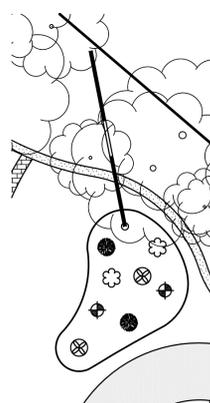
BMP #1, #2 & #3: DRY SWALE, BIORETENTION BED, EXTENDED DETENTION POND



BMP #5: DRY SWALE



BMP #4: BIORETENTION BED



PLANT TABLE

| SYMBOL | BOTANICAL NAME | COMMON NAME | PLANT TYPE | QUANTITY |
|--------|---------------------|---------------------|------------------|------------|
| ● | TAXODIUM DISTICHUM | BALD CYPRESS | LARGE TREE | 4 |
| ⊗ | BETULA NIGRA | RIVER BIRCH | LARGE TREE | 4 |
| ◆ | VIBURNUM DENTATUM | SOUTHERN ARROWWOOD | MEDIUM SHRUB | 11 |
| ⊕ | ITEA VIRGINICA | VIRGINIA SWEETSPIRE | MEDIUM SHRUB | 4 |
| ★ | PANICUM VIRGATUM | SWITCHGRASS | MEDIUM GRASS | 21 |
| ✱ | JUNCUS EFFUSUS | SOFT RUSH | MEDIUM GRASS | 18 |
| ▣ | FESTUCA ARUNDINACEA | TALL FESCUE | ORNAMENTAL GRASS | 2,522 S.F. |

NOTE:
1. SUBSTITUTION OF SPECIFIC PLANTS IS ACCEPTABLE WITH COUNTY APPROVAL, HOWEVER THE SUBSTITUTED PLANT MUST FULFILL THE PLANT TYPE REQUIREMENT.



Key

- ① Spa Parking (15 spaces)
- ② Arrival Court
- ③ Main Building
- ④ Guest Suite (Typ.)
- ⑤ Guest Garden (Typ.)
- ⑥ Bioswales/ Wier walls
- ⑦ BOH Loading/Mech. Equip.
- ⑧ Bluff Overlook
- ⑨ Spa Guest Trail
- ⑩ Meadow
- ⑪ Pinetum
- ⑫ Tides Inn Trail
- ⑬ Moored Yoga/Sauna Barge
- ⑭ Bridge
- ⑮ Path to Wharf
- ⑯ Hammock Grove

Spa | Revised Site Plan

GLUCKMAN TANG waterstreetstudio





LEGEND

- 1 - EXISTING PINE FOREST
- 2 - BACK OF HOUSE BUILDING (60X120')
- 3 - EXISTING SEWER PLANT TO REMAIN
- 4 - NEW/RELOCATED MECH. EQUIP.
- 5 - EMPLOYEE AREA W/ BENCHES
- 6 - LOADING PRECINCT WITH SCREENING FENCE
- 7 - GENERAL MANAGER'S HOUSE
- 8 - EXISTING ENTRY DRIVE
- 9 - SERVICE ENTRY DRIVE

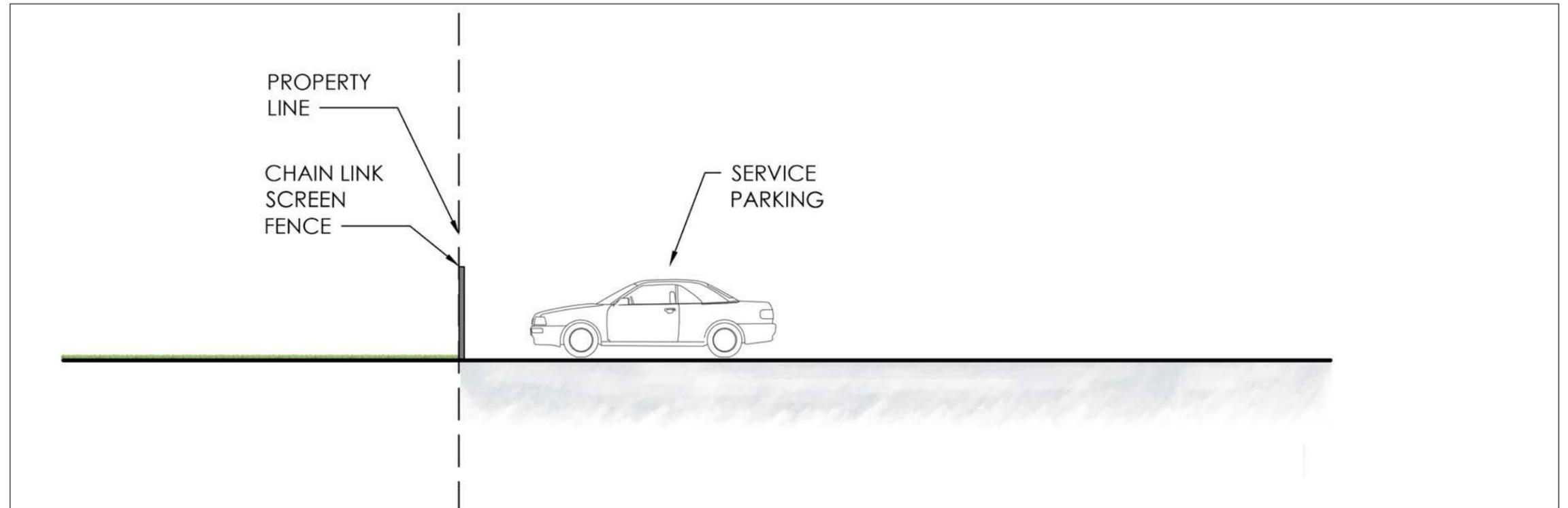
--- WOODEN FENCE

SEE CIVIL PLANS FOR PARKING AREA LAYOUT AND DETAILING

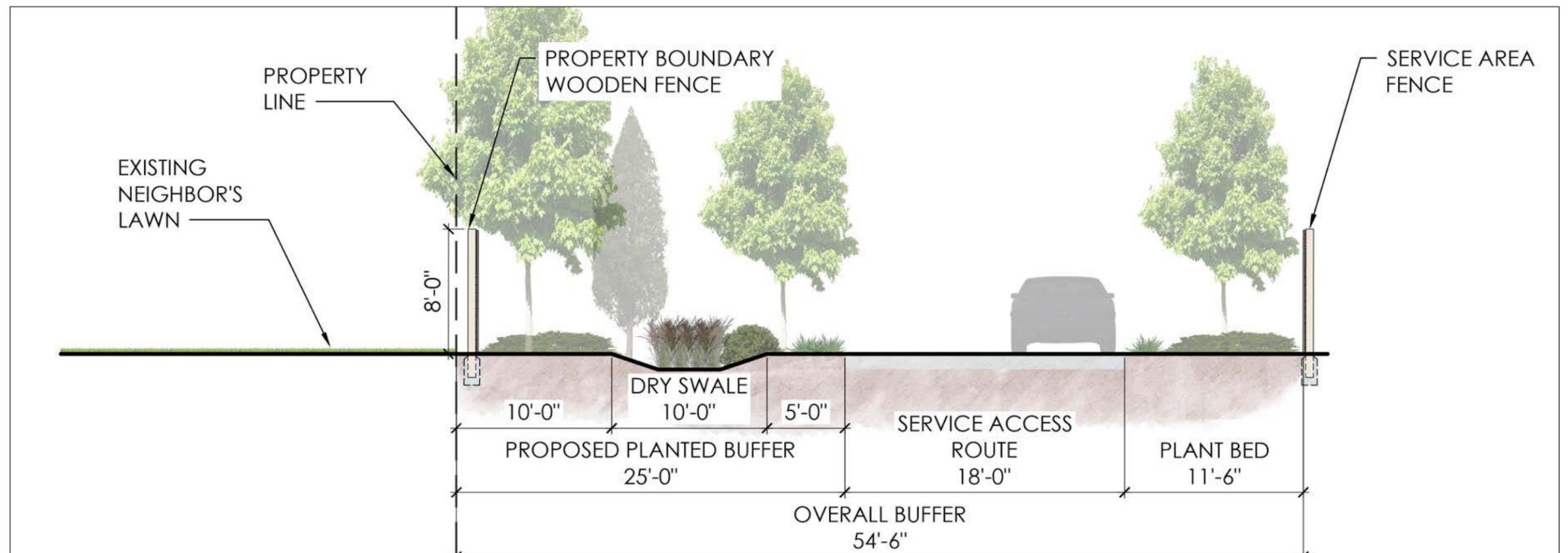


0 60' feet

SECTION I (BEFORE)



SECTION I (AFTER)



WOODEN FENCE EXAMPLE













TOWN OF IRVINGTON

4203 Irvington Rd
PO Box 174
Irvington, VA 22480
Zoning (804)-438-6044
lbrown@town.irvington.va.us

Water Quality Impact Assessment / Landscape Plan Agreement

This form is designed to aid in the assessment of impacts for proposed activities within a Resource Protection Areas (RPA) and to ensure proper replacement and installation of vegetation. The applicant shall complete and remit to the above address. For inquiries or appointments, contact Lara Brown, Zoning Administrator at (804) 438-6044.

Property Owner New Tides, LLC. **Address** 480 King Carter Dr., Irvington, VA 22480
c/o Aaron Brown

Tax Map# 33-236 **Phone#** 865-414-7024 **E-mail** Aaron@mdslp.com

Site 911 Address or driving directions: 480 King Carter Dr., Irvington, VA 22480

| | |
|--|--------------------------------------|
| Single-family residence <u> </u> | Accessory structure <u> </u> |
| Commercial/community development <input checked="" type="checkbox"/> | Silvicultural conversion <u> </u> |
| Agricultural conversion <u> </u> | Water access <u> </u> |
| Shoreline erosion project <u> </u> | Roadway <u> </u> |
| Grading <input checked="" type="checkbox"/> Fill <u> </u> | Bay Act violation <u> </u> |
| Redevelopment <input checked="" type="checkbox"/> Other: <u> </u> | |

Description of project: This project consists of the removal of multiple buildings, gravel paths, concrete areas and other appurtenances and the construction of a spa facility, back of house facility, access roads and other associated appurtenances.

ft² of impervious area within RPA 55,372 sf (BMP: no), type: Dry Swale, Bioretention Bed, Extended Detention Pond

ft² of land disturbance within RPA 67,016 sf

Land Disturbance Permit obtained: yes

Number of 10'x10' units: (ft² of land disturbance in RPA/100 = units) 670

Existing vegetation to be removed:

Trees (quantity, type, size) 28 trees-ranging from 4" - 30"; Crepe Myrtle (8), Pine (8), Oak (4), Cypress (3), Holly (1), Mimosa (1), Locust (1), Maple (1), Cedar (1)

Shrubs (quantity, type, size) Various (see attached plan)

Groundcovers Kudzu, Bamboo

Lawn grass (ft²)

This agreement must include a site plan showing:

| | | |
|---------------------|--|----------------------------|
| Lot size | RPA lines | Erosion control methods |
| Existing structures | Limit of wetlands | Limits of land disturbance |
| Proposed structures | Construction access | Replacement vegetation |
| Wooded areas | Shoreline | BMP's |
| Property lines | Existing vegetation to be removed within the RPA | |

The following is a general guideline used in determining the minimum amount of replacement vegetation for most projects. Replacement strategies may be site specific. Some vegetative BMP's may have separate guidelines.

Determining the required amount of replacement vegetation:

Option A: For small areas where the number and type of plants removed are known, replacement ratio is 2:1 for every canopy tree, 2:1 for every understory tree and 1:1 for every shrub removed. Replacement trees must be 2.5" caliper and shrubs must be 2' tall.

Option B: For large areas when units must be used instead of counting individual trees and shrubs: Calculate the number of units within the RPA that are to be disturbed, cleared, graded, become impervious, etc. Each 10'x10' area (100ft²) is a unit. Multiply .5 by the number of units to calculate the amount of trees required for planting. Multiply .5 by the number of units to calculate the amount of understory trees required for planting. Then multiply .75 by the number of units to calculate the amount of shrubs required. Trees shall be 1.5"-2" caliper and shrubs shall be 2' tall. Steep slopes (2:1 or greater) shall be planted with low woody shrubs, groundcovers, and warm season deep-rooted grasses.

Example:: A riprap project requires 5,150ft² of bank grading and removal of vegetation within the 100'RPA. $5,150/100 = 51.5$ rounded to 52 units.

26 canopy trees, 26 understory trees, and 39 shrubs would be required for the example.

OR

Your own landscape plan if approved by the Town of Irvington

- Site lines, Access Paths, Woodlot Management:

The following may be removed if determined necessary, but only after a site inspection by Town of Irvington staff: Trees that are dead, diseased, dying, uprooted, or leaning. Staff will discuss appropriate removal of vegetation to insure the health of all trophic layers and give instruction for replacement vegetation when required. The construction of access paths shall be done so to effectively control erosion and surfaced with only permeable material.

- Agriculture & Silviculture Conversion:

Where these land uses within the 100' RPA cease and are converted to other uses, the full 100' wide vegetative buffer shall be reestablished **with woody vegetation**.

- Chesapeake Bay Preservation Act Violation:

Unauthorized removal of vegetation within the Resource Protection Areas of the Town of Irvington is deemed a violation of the Chesapeake Bay Preservation Act, a class 1 misdemeanor. Replacement vegetation will be prescribed in addition to any other fines or penalties that may be levied.

June 29, 2022

Justin Nelson
Zoning Administrator
Town of Irvington
P.O. Box 174
Irvington, VA 22480

Re: ***Tide Inn
Conditional Use Permit***

Dear Mr. Nelson Et al.;

Please find attached the Conditional Use Permit (CUP) application and associated plan set for the proposed master development associated with the Tides Inn parcel (TM 33, Parcel 236) in the Town of Irvington, Lancaster County, Virginia. In coordination with the attached CUP application and per Town Zoning Ordinance Section 154.017, please find below our demonstration of compliance with included standards.

1. The master development improvements proposed as part of this project will not only improve the public health, safety, morals and general welfare of the Town, but additionally will positively impact the same for the economy of the Town. This project will provide safe ingress/egress and ADA accessibility for the guests of Tides Inn to the existing and proposed structures, which currently is non-existent or not per regulation. Additionally, this project will provide for a diverse ecosystem with the planting of hundreds of vegetative plantings throughout the property. By doing so, this project will be in strict conformance with the CBPA regulations. The appropriate Erosion & Sediment Control documentation has been submitted concurrently to Lancaster County staff and Stormwater Management documentation has been submitted concurrently to DEQ.
2. The master development of this project will improve the existing resort, which is one of the major revenue providers to the surrounding areas, and will not only improve the property value of the subject property, but will also positively affect surrounding properties. Additionally, this project will substantially improve the upland environments of the surrounding lands due to the extensive proposed landscaping.
3. This project is in conformance with the established zoning requirements of the Town of Irvington and the Chesapeake Bay protection measures of the state of Virginia.
4. The landscape design/details are included on the attached plan set.
5. The existing utilities throughout the site will be updated as applicable to the proposed development. A total of 224 parking spaces are being proposed as part of this master development, which exceeds the required 164 parking spaces per the Town Ordinance, thus ok.
6. An Erosion and Sediment Control Plan has been provided as part of the attached plan set.
7. The height and yard setbacks are included on the attached plan set.
8. The construction of this project will only take place during daylight hours under the normal business operating hours. The use of the development will be in conformance with the usual operation of the Tides Inn resort.
9. The property is zoned B-1 and this project is an extension of the existing resort which is in conformance with the B-1 zoning district and the comprehensive plan.
10. This project is in conformance with the code of the state of Virginia for resort uses and in conformance with all Town of Irvington requirements.

Thank you for your review of the attached Conditional Use Permit application. We look forward to a positive reaction on this project from Town staff and Town Council.

Sincerely,

Wayne A. Savage

Wayne A. Savage, PE
Senior Engineer

Cc: A. Brown w/ att

Tide's Inn Master Plan Amendment
Town of Irvington case number: CUPTides
Proposed Conditional Use Permit Conditions (PC Edits)

These conditions are imposed by the Town Council, Town of Irvington Virginia in connection with case no. CUPTides brought pursuant to an application by New Tides, LLC, owner of the Tides Inn, its successors and assigns ("Owner") for approval of a conditional use permit ("CUP") issued under section 154.017 and 154.086 of the Town Zoning Ordinance for approval of a revised master plan for the Tide's Inn resort ("Tide's Inn") located on property identified in the subject application (TM 33, Parcel 236) (the "Property") The following conditions shall apply:

1. Master Plan. Future development, redevelopment and expansion of the Tide's Inn shall be in general conformance with that certain master plan (the "Master Plan") entitled "The Tides Inn Master SWM Plan dated June 10, 2022 and revised September 1, 2022 made by Bay Design Group, which is incorporated by this reference. The Master Plan depicts the general location of buildings, roadways, parking areas, landscaping, screening and other development of the Property; except as specified below, minor deviations from and interpretation of the Master Plan may be made by the Town Zoning Administrator without further Town Council proceedings or approvals.
2. Maintenance Building Location. The Proposed Maintenance Building shown on the Master Plan shall be located no less than fifty (50) feet from the property line of the current Hall/Elliott property located to the south of the Tide's Inn and known as TM 33, Parcel 237 (the "Hall/Elliott Parcel".)
3. Bamboo Eradication. Owner shall at its expense take steps necessary to eradicate bamboo growing on the Hall/Elliott Parcel. Such eradication work may involve digging or other site work on the Hall/Elliott Parcel; any work on the Hall/Elliott Parcel shall be on a schedule and according to plans or procedures approved in advance by the owner of the Hall/Elliott Parcel. Such removal shall be in conformance with guidance from the Virginia Department of Conservation and Recreation.
4. Screening Fence. Owner shall install and maintain at its expense a board on board wooden screening fence eight (8) feet in height along the southern boundary line of the Property in the location shown on the Master Plan. The eastern terminus of the fence shall be no closer than 30' from King Carter Drive. The fence will be located on owner's property in its entirety. Additionally, the property boundary will be clearly marked prior to commencement of any construction activities. The western terminus of the new fence will extend at least as far as the existing fence.
5. Landscaping Plan. Landscaping of the Property shall be completed in accordance with the plan for the Property entitled "LANDSCAPE CONCEPT PLAN" made by Bay Design Group and Waterstreet Studio Landscape Architects dated September 2, 2022 previously submitted with the Master Plan, which is incorporated by this reference.
6. Spa Construction Plan for Lancaster Road. Construction of the proposed Spa Facility shall be undertaken pursuant to a construction management plan approved in advance by the Town Zoning Administrator. All construction contracts shall contain the following conditions:

- a. Light duty vehicular traffic allowed on Lancaster Road between the hours of 7 am – 5 pm
- b. Heavy duty commercial traffic on Lancaster Road shall be limited from Monday thru Friday between the hours of 8 am – 5 pm.
- c. Provide dust control as needed per VSCH Handbook
- d. Heavy duty commercial vehicles shall adhere to 10 MPH speed limit on Lancaster Road
- e. Truck turn arounds to occur on Tides Inn Property. Trucks and equipment will not be permitted to reverse down Lancaster Road.
- f. Lancaster Road will not be used for construction traffic during Tides Inn annual closure.

7. Lancaster Road Access. The newly established Lancaster Road access to the Tides Inn shall be, after spa construction described above, gated with restricted access. The gated Lancaster Road access may be used for occasional event vendors, emergency services, periodic service vehicles or access, but shall not be used by guests or employees of the Tide's Inn for daily access to the Property. The access will be limited to a Low Volume Commercial Entrance with not greater than fifty (50) vehicle trips per day, per VDOT standards.

8. HVAC Chiller Equipment. The proposed HVAC chiller equipment located adjacent to the existing wastewater treatment plant shall be enclosed by an acoustical screen wall. This wall to be designed by a Virginia licensed architect and adhere to all state and local noise emission code requirements.

9. Miscellaneous. The CUP approved in conjunction with these conditions shall have no expiration date, it being the intent of the Master Plan to govern long term improvements and redevelopment of the Tide's Inn. Further, these conditions and the Master Plan supersede any prior master plan applicable to the Property and any conditions previously imposed upon the Tide's Inn or the Property by prior CUP.