Erosion and Sediment Control and Stormwater Management
Hampton Roads Workshop for Contractors
February 20, 2020 in Hampton

8:00 Check-in and Breakfast

8:30 Welcome and Brief Review of 2019 Construction General Permit and Requirements for Different Types of Projects – Noah Hill, DEQ

8:45 Local Inspector Perspectives - Common E&S Violations and Remedies

David Mergen, City of Chesapeake

- Sequencing of construction
- Temporary sediment basins/sediment traps
- Alternative control methods
- Site stabilization

Odell Glenn, City of Norfolk

- Construction entrance
- Silt fence
- Dewatering activities

10:15 Break

10:30 Local Inspector Perspectives – Common E&S Violations and Remedies Continued

Laura Nusz, City of Newport News

- Inlet protection
- Concrete and paint washout

10:45 Stormwater Pollution Prevention

Odell Glenn, City of Norfolk

- Stormwater Pollution Prevention Plan requirements

Laura Nusz, City of Newport News

- Stormwater Pollution Prevention Plan inspections

11:45 Role of DEQ and Local Governments – Noah Hill, DEQ

12:00 Questions and Wrap-up

Virginia Stormwater Management Program

Welcome and Overview of Changes to the 2019 Construction General Permit

Noah Hill

Stormwater Compliance Lead, TRO

Virginia Department of Environmental Quality

February 7, 2020

Construction General Permit Updates

- **Section 1 – Definitions**
- Revised definition of “final stabilization” as it pertains to homebuilders establishing temporary stabilization to address new requirements for written documentation and certification that homeowners are provided with information regarding the importance of final stabilization.
- **Section 30 – Authorization to discharge**
- Updated the regulation language for clarity and consistency with other general VPDES permits adopted by the Board and with other parts of this regulation.
- Updated list of nonstormwater authorized discharges to indicate that discharges of potable water is only authorized when “managed in a manner to avoid an instream impact.” Ex. dechlorination measures

Updates Continued

Section 60 – Termination of general permit coverage

- Updated language to clarify that operators are required to submit an accurate and complete notice of termination.
- Updated language to clarify that a notice of termination is not required for single-family residential structures that are not required to submit a registration statement.
- Revised notice of termination provisions to require final stabilization rather than temporary stabilization for individual lots in residential construction projects. The definition of final stabilization includes temporary stabilization for individual lots in residential construction.
- Updated the notice of termination provisions to require physical address to be provided if available and the latitude and longitude of the construction activity in decimal degrees to the ten-thousandths place.
- Added language to clarify that permanent control measure information is required for both water quantity and water quality measures.
- Revised notice of termination provision to clarify requirement to provide proof of recordation for stormwater management facility maintenance agreements.
- Added requirement that for individual lots in residential construction only, operators are to provide homeowners with written information about the importance of final stabilization and require documentation and signed certification from the permittee that the homeowner has been notified as part of the SWPPP documents that must be maintained for 3 years.

Updates Continued

- **Section 70 – General permit**
- *Part I – Discharge Authorization and Special Conditions*
  - Limitations on Coverage: Updated the Water Quality Assessment Integrated Report date from 2012 to 2016.
  - Updated the language regarding waters impaired for nutrients or sediment or for which a TMDL has been approved and exceptional waters for clarity.
  - Added discharges to waters deemed impaired or for which a TMDL has been approved for Polychlorinated biphenyl (PCB) unless in accordance with SWPPP requirements in Part II B 6 and Part II G 2.
  - Updated list of nonstormwater authorized discharges to indicate that discharges of potable water is only authorized when "managed in a manner to avoid an instream impact".
- *Part II – Stormwater Pollution Prevention Plan*
  - Added SWPPP requirements for waters impaired for nutrients or sediment or for which a TMDL has been approved or exceptional waters from Part I.
  - Added SWPPP requirements for waters impaired for PCB or for which a TMDL has been approved applicable to construction activities involving demolition of structures 10,000 square foot or greater and that were built or renovated prior to January 1, 1980.
  - Added language to require SWPPP be updated "as soon as possible" when determined necessary, but retained requirement that the update is performed no later than 7 days.
  - Revised requirement for SWPPP inspections to be conducted within 24 hours after a measurable storm event instead of 48 hours if using rain 10/5 and rain event inspection schedule
  - Clarified SWPPP inspection requirements for areas reaching final grade or that will remain dormant for more than 14 days.
  - Added requirement for SWPPP inspection to be added to the SWPPP no later than 4 days after inspection is conducted.
  - Added provision that allows for SWPPP inspection to be delayed in the event of adverse weather if SWPPP inspection cannot be safely conducted.

QUESTIONS?

Noah Hill

Noah.hill@deq.Virginia.gov

(757) 373-9459

https://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx

A Local Perspective

Common ESC Challenges & Solutions

City of Chesapeake

February 8, 2020

ESC Challenges & Solutions

- Sequence of Construction
- Temporary Sediment Basins/Traps
- Alternative Control Measures
- Site Stabilization

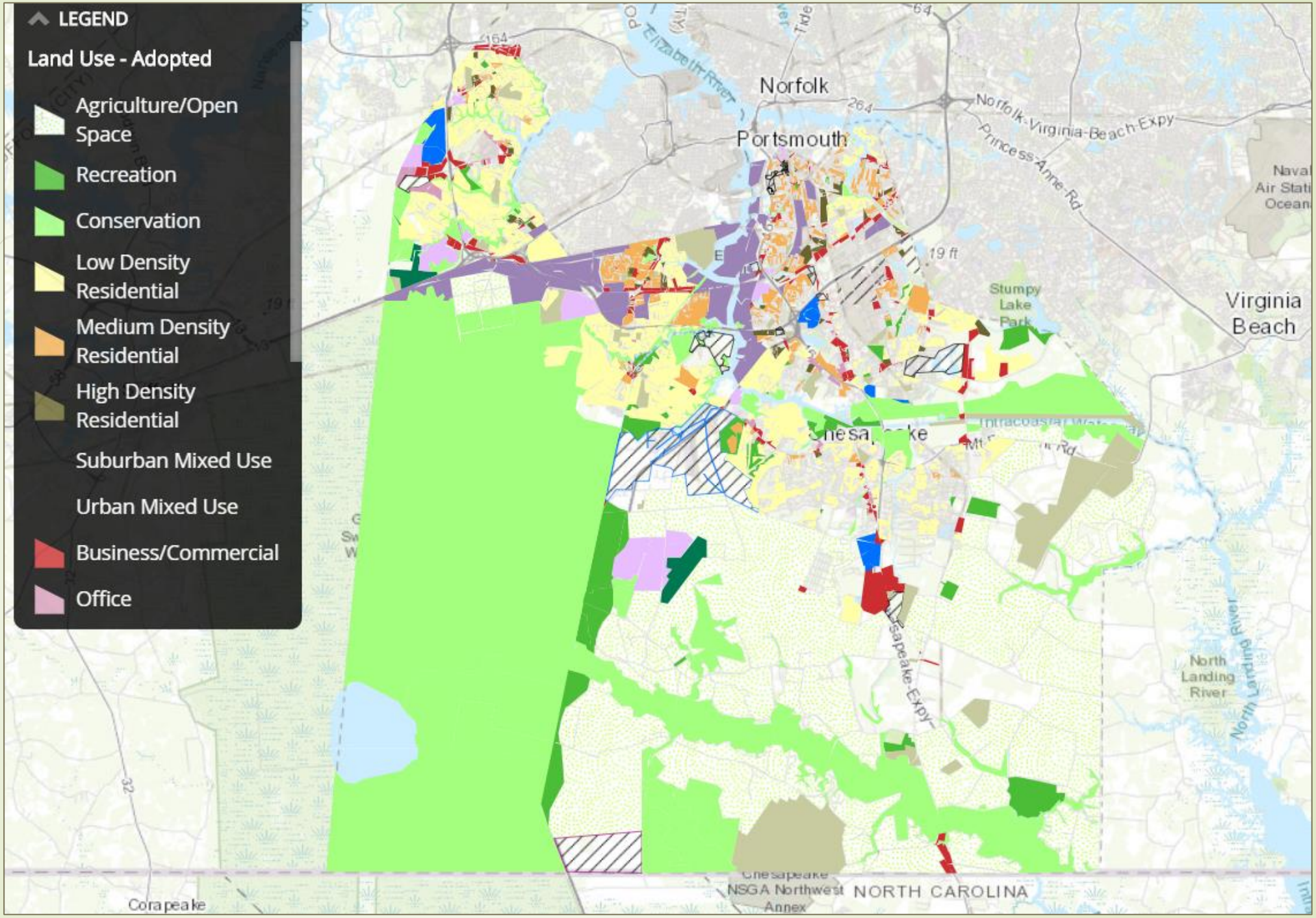
What is Chesapeake?

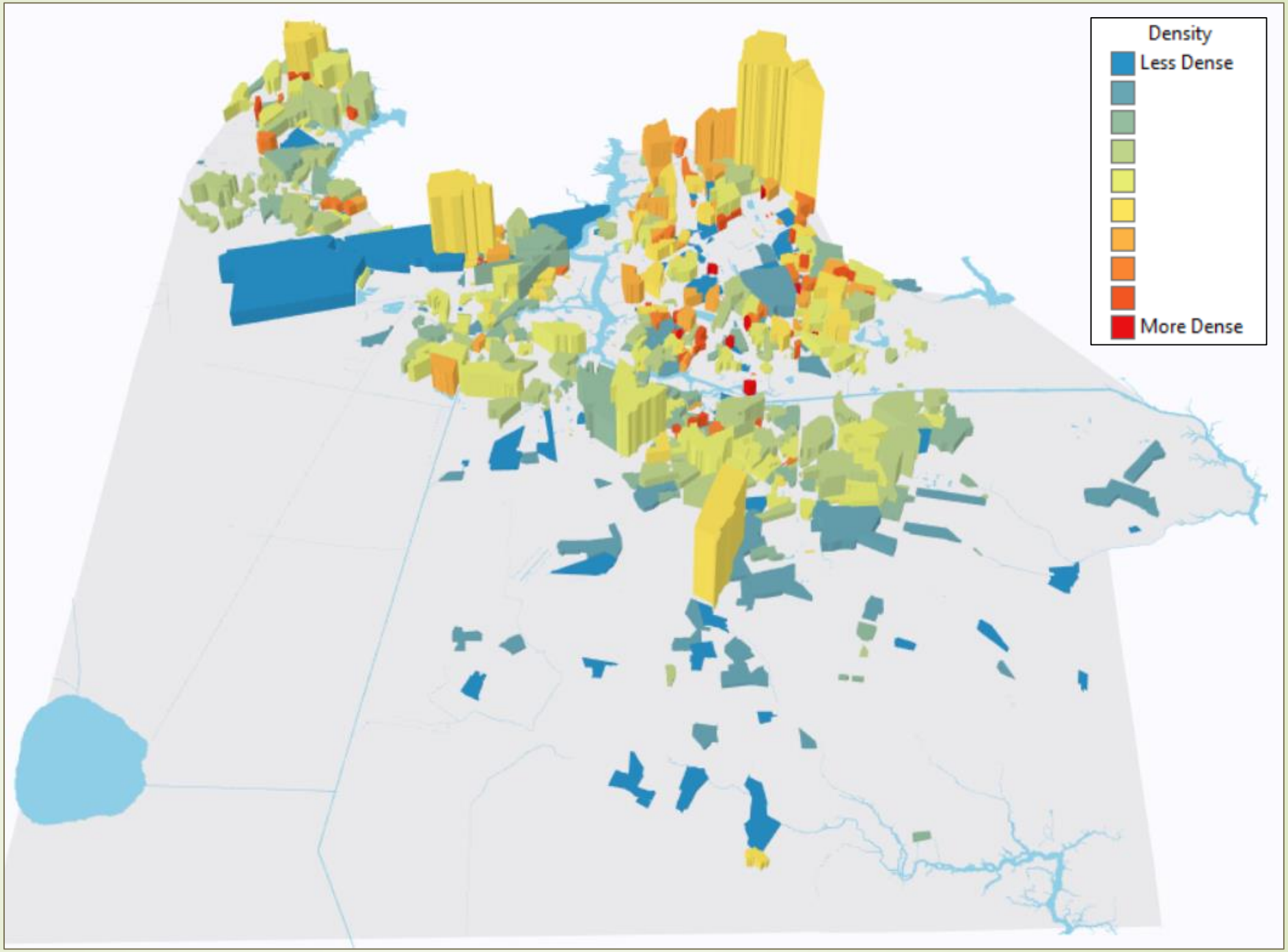
- The City of Chesapeake is the 36th largest metro area in the country with over 1.6 million residents and is the 2nd largest city in Hampton Roads with 353 square miles of land area bordering the cities of Suffolk, Norfolk, Virginia Beach and the state of North Carolina.

- Chesapeake drains to the Atlantic Intracoastal Waterway, Elizabeth River, North Landing River, Northwest River, and the Great Dismal Swamp.

- The City of Chesapeake was created with the merger of Norfolk County and the City of South Norfolk in 1963 and was the site of the battle of Great Bridge which took place on December 9, 1775.

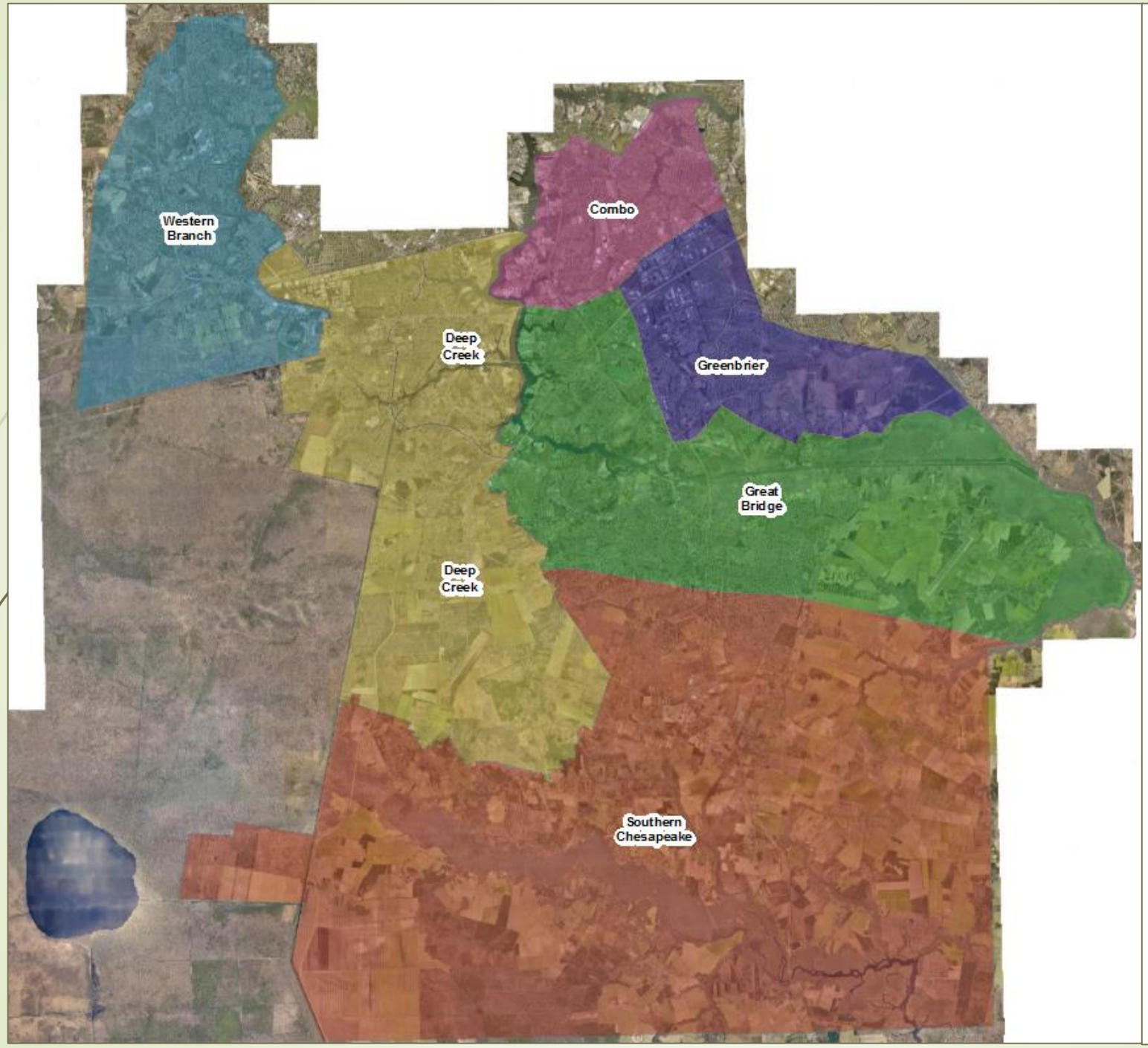
- Chesapeake is one of the fastest growing cities in Virginia, with a population increase of 46.2% from 1990 and 2010.


LEGEND
Land Use - Adopted
Agriculture/Open Space
Recreation
Conservation
Low Density Residential
Medium Density Residential
High Density Residential
Suburban Mixed Use
Urban Mixed Use
Business/Commercial
Office
Norfolk
Portsmouth
Virginia Beach
Norfolk-Virginia-Beach-Expy
Princess-Anne-Rd
Stumpy Lake Park
Old Elizabeth River
North Landing River
Chesapeake-Expy
Intracoastal Waterway
Chesapeake
NSGA Northwest Annex
NORTH CAROLINA
Coropeake
19 ft
164
264
64
32


Density
Less Dense
More Dense

Environmental Quality Services (EQS)

- David Mergen, ESC Inspection Program Manager
- Debbie Butler, Construction Inspector Supervisor
- Kenny Matthews, CI3 (Greenbrier)
- Tommy Berry, CI3 (Greenbrier)
- Jessica Doyle, CI2 (Deep Creek)
- Mark Perry, CI2 (Great Bridge & Hickory)
- Christian Richey, CI2 (Western Branch)
- Dennis McCoy, CI2 (South Norfolk & Indian River)
- Amy Staggs, CI2



Public Works - Engineering Division

Organizational Structure

Environmental Quality Services

- Director of PublicWorks — Martin, Eric
  - Environmental Quality Coord. — Brumbaugh, Barbara
    - Environmental Specialist I — Talbot, Susan
      - Eng Tech III — Eason, Mary
      - Eng Tech III — Harris, Cecil
      - Eng Tech III — Ussery, Randy
      - Eng Tech III — Best Jr., Stephen
- Asst. Director of Public Works — Sorey, Earl
  - Env. Specialist II — Mergen, David
    - Environmental Specialist I — Foster, Emily
    - Construction Insp Supv — Butler, Debbie
      - Const Insp III — Matthews, Kenny
      - Const Insp III — Berry, Tommy
      - Const Insp II — Doyle, Jessica
      - Const Insp II — Perry, Mark
      - Const Insp II — Richey, Christian
      - Const Insp II — Staggs, Amy
      - Const Insp II — McCoy, Dennis
      - Const Insp II — Vacant 61001

Construction Sequence

The following Sequence of Construction is intended to allow the simultaneous installation of the sanitary sewer and temporary sediment basin. The intent is to work in a region, excavate the temporary sediment basin (TSB) and place select material on the building pad areas and streets while removing unsuitable material from the building areas and streets and placing it in the bottom of the TSB. Temporary swales/ditches will be excavated from the proposed low points of the streets or at other locations as needed and will be connected to the TSB, an existing ditch or proposed pipe that connects to the TSB in the region.

Because the sanitary sewer is a linear disturbance that will be protected by perimeter silt fence and check dams, its installation may be installed outside the limits of a region that contains a TSB.

Part I

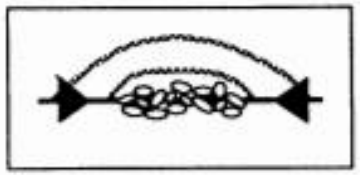
1. Clear area for perimeter silt fence.
2. Install perimeter silt fence
3. Install check dams in existing ditches where shown on the plans and at other places deemed necessary
4. Clear area for construction entrance and entry roadway.
5. Install two pipes in eastern ditch adjacent to the construction entrance.

Part II

1. Clear region (see plan for approximate limits of each region)
2. Begin excavating the TSB
3. Install the TSB outlet control structure and downstream pipes and/or ditches.
4. Begin installing the gravity sewer from the lowest point at Thistley Lane.
5. Remove unsuitable material from the building and street areas, and begin excavating streets to subgrade.
6. Place unsuitable material in the bottom of the TSB.
7. Remove select material from the TSB and place in the streets and building areas.
8. Install pipes that connect lakes and/or TSBs.
9. Install storm drainage per the approved site plans.
10. Install water mains per the approved plans.
11. Install sanitary sewer laterals and water service lines and other appurtenances.

- **Preconstruction Meeting!!!**
- Early & close coordination with engineers, contractors and inspectors
- Flexible but detailed enough to meet the minimum standards
- Understand project phasing & impact on existing/future residents
- Know when to execute red-line plans, FCR & plan revisions
- Anticipate utility conflicts, seasonal variability, soil types and groundwater
- **Document, Document, Document!!!**

STD & SPEC 3.13



TEMPORARY SEDIMENT TRAP

ST

Definition

A temporary ponding area formed by constructing an earthen embankment with a stone outlet.

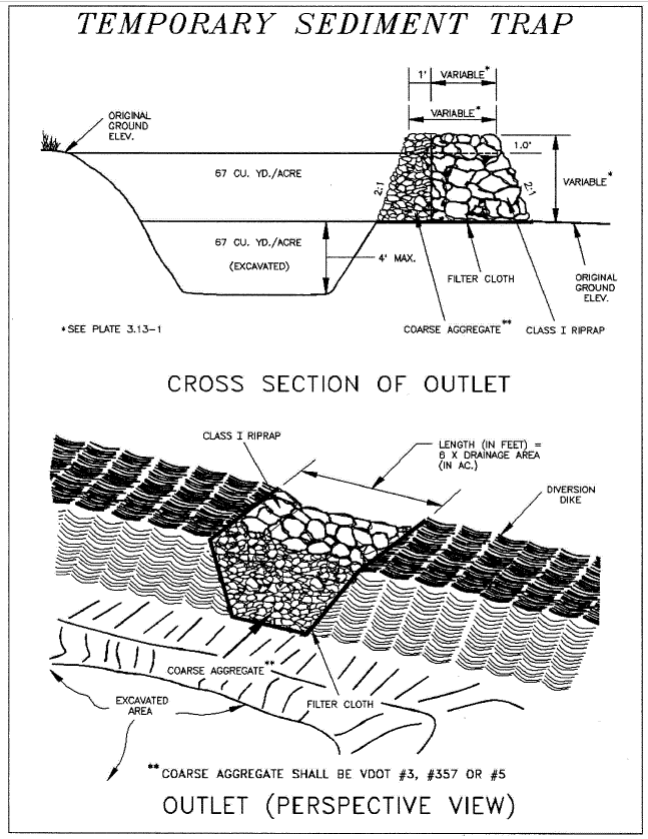
Purpose

To detain sediment-laden runoff from small disturbed areas long enough to allow the majority of the sediment to settle out.

Planning Considerations

Sediment traps should be used only for small drainage areas. If the contributing drainage area is 3 acres or greater, refer to SEDIMENT BASIN (Std. & Spec. 3.14).

Sediment traps, along with other perimeter controls intended to trap sediment, shall be constructed as a first step in any land-disturbing activity and shall be made functional before upslope land disturbance takes place. **Minimum Standard No. 4**



Maintenance

1. Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one half the design volume of the wet storage. Sediment removal from the basin shall be deposited in a suitable area and in such a manner that it will not erode and cause sedimentation problems.

2. Filter stone shall be regularly checked to ensure that filtration performance is maintained. Stone choked with sediment shall be removed and cleaned or replaced.

3. The structure should be checked regularly to ensure that it is structurally sound and has not been damaged by erosion or construction equipment. The height of the stone outlet should be checked to ensure that its center is at least 1 foot below the top of the embankment.

EROSION & SEDIMENT CONTROL AND DEMOLITION PLAN

OF

MITSUBISHI

TAX PARCEL: 0280000000790

WASHINGTON BOROUGH CHESAPEAKE, VIRGINIA

FEBRUARY, 2016

BENCHMARK DATA

CHESAPEAKE B.M. 108 BRASS DISK SET IN CONC. 4'± BELOW GROUND SURFACE LOCATED AT THE INTERSECTION OF EDEN WAY NORTH AND RIVER BIRCH RUN NAVD 88 DATUM ELEVATION 17.3± (GPS)

SITE DATA

PROPERTY ZONED: PUD

TOTAL ACRES: 97.7

DISTURBED ACREAGE: 4.52

DEVELOPER

MACSONS

MR. ANDREW DUNNUM

P.O. BOX 1770

NORFOLK, VA 23501

PHONE: 757-624-1733

EMAIL: ADUNNUM@MACSONS.COM

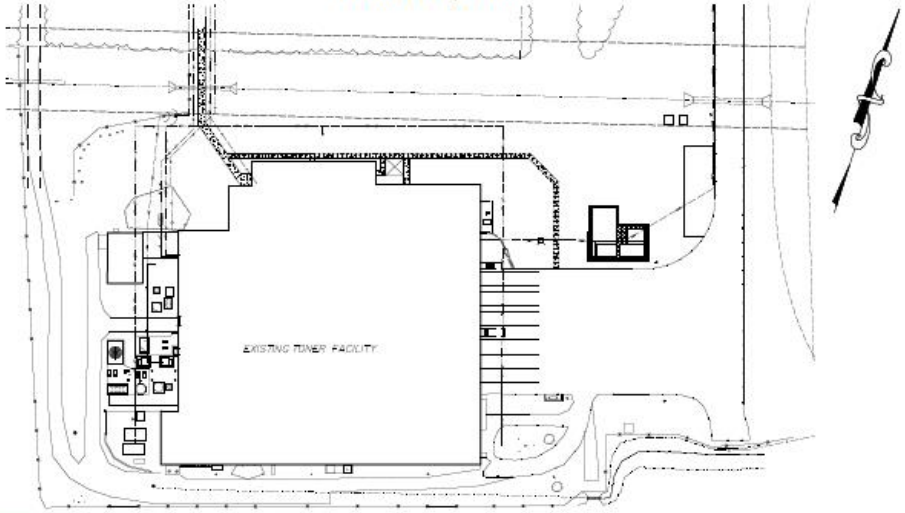
FLOOD PLAIN NOTE:

THIS PROPERTY APPEARS TO LIE WITHIN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 500 YEAR FLOOD PLAIN AS SHOWN ON THE FEMA FLOOD MAP COMMUNITY PANEL # 515531 0066 F.

LANDSCAPE NOTES:

1. NORMAL LANDSCAPE CODE REQUIREMENTS PER CZO 19-600 SHALL APPLY AT FINAL SITE PLAN.

2. AS PART OF THE CITY OF CHESAPEAKE'S TREE PROTECTION STRATEGY FOR THE URBAN FOREST, EXISTING HEALTHY TREES ON PRIVATE PROPERTY MAY COUNT FOR THE TREE CANOPY REQUIREMENTS, PROVIDED THEY ARE PROTECTED DURING CONSTRUCTION UTILIZING ARBORICULTURAL INDUSTRY STANDARDS. THE DEVELOPER IS HIGHLY ENCOURAGED TO PROCURE THE SERVICE OF A CERTIFIED ARBORIST EARLY IN THE DEVELOPMENT AND SAVE HEALTHY TREES WHERE POSSIBLE.



GRAPHIC SCALE

SITE LOCATION MAP

SCALE: 1"=1000'

VICINITY MAP 1"=2000'

CONSTRUCTION PLAN ASSIGNMENT

RE: MITSUBISHI

THE UNDERSIGNED ENGINEER/FIRM AGREES THAT THE CITY OF CHESAPEAKE SHALL HAVE THE RIGHT TO USE THESE PLANS TO COMPLETE THE PERMANENT PHYSICAL IMPROVEMENTS IN THE EVENT THAT THE DEVELOPER DEFAULTS IN THEIR OBLIGATIONS TO COMPLETE THESE FACILITIES AS REQUIRED BY CITY CODE. THE UNDERSIGNED ENGINEER ALSO AGREES THAT THE CITY MAY USE THESE PLANS FOR "AS-BUILT" RECORDS AS NECESSARY. THE ENGINEER/FIRM FURTHER AGREES THAT THESE RIGHTS TO USE THE PLANS SHALL BE PROVIDED WITHOUT COST TO THE CITY.

NAME STUART W. BONNELL P.E. TITLE PROJECT MANAGER

FIRM HASSELL and FOLKES, P.C.

SIGNATURE DATE 3-04-2016

REGIONAL CONSENT ORDER

THIS IS TO CERTIFY THAT THE SEWER FLOWS FOR THIS PROJECT WERE DESIGNED IN ACCORDANCE WITH REGIONAL TECHNICAL STANDARDS.

SIGNATURE DATE 3-04-2016

APPROVED FOR CONSTRUCTION

CHESAPEAKE DEPT OF DEVELOPMENT & PERMITS

YES	NO	N/A	
✓			Erosion and Sediment Control
		✓	Entrance and Site Improvements
		✓	Stormwater Quality (BMP)
		✓	Street Improvements
		✓	Drainage Improvements
		✓	Public Utilities Improvements
		✓	Soil Drainage Management Plan (SDMP)
		✓	Landscape Plan

Date: Mar 18, 2016

Refer to Approval Letter

NOTIFY Miss Utilities At 1-800-552-7001 or 811 For Location of Existing Utilities

HASSELL & FOLKES, P.C.
ENGINEERS-SURVEYORS-PLANNERS
385 VOLVO PARKWAY
CHESAPEAKE, VIRGINIA 23320
PHONE (757) 424-3967 FAX (757) 547-4446
www.hassellandfolkes.com

Project No.	14-074-1
Date	03-04-2016
Scale	1"=25'
Drawn	WFC
Checked	SWB

NO.	DATE

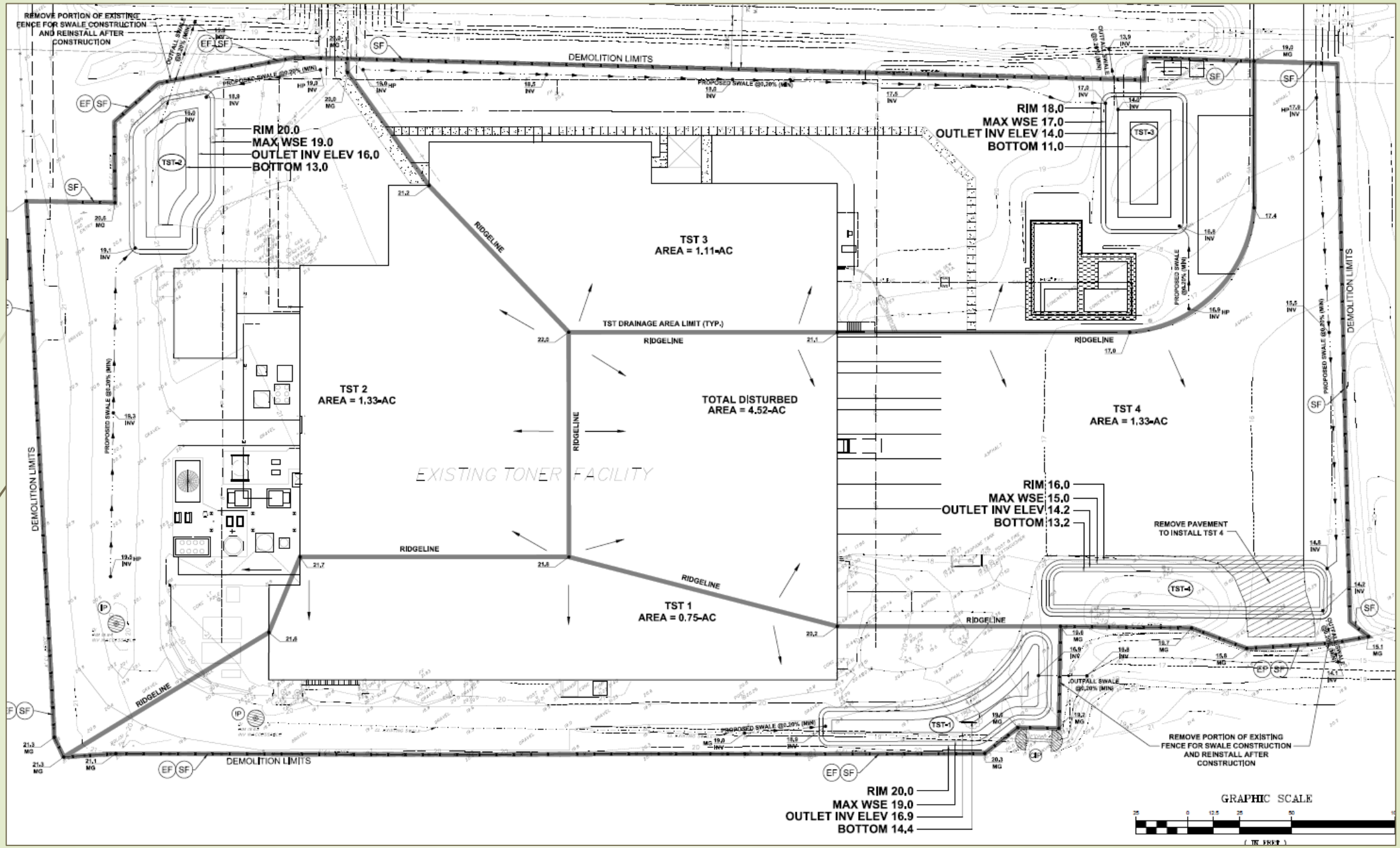
COMMONWEALTH OF VIRGINIA
STUART W. BONNELL
Lic. No. 023602
PROFESSIONAL ENGINEER
03-04-2016

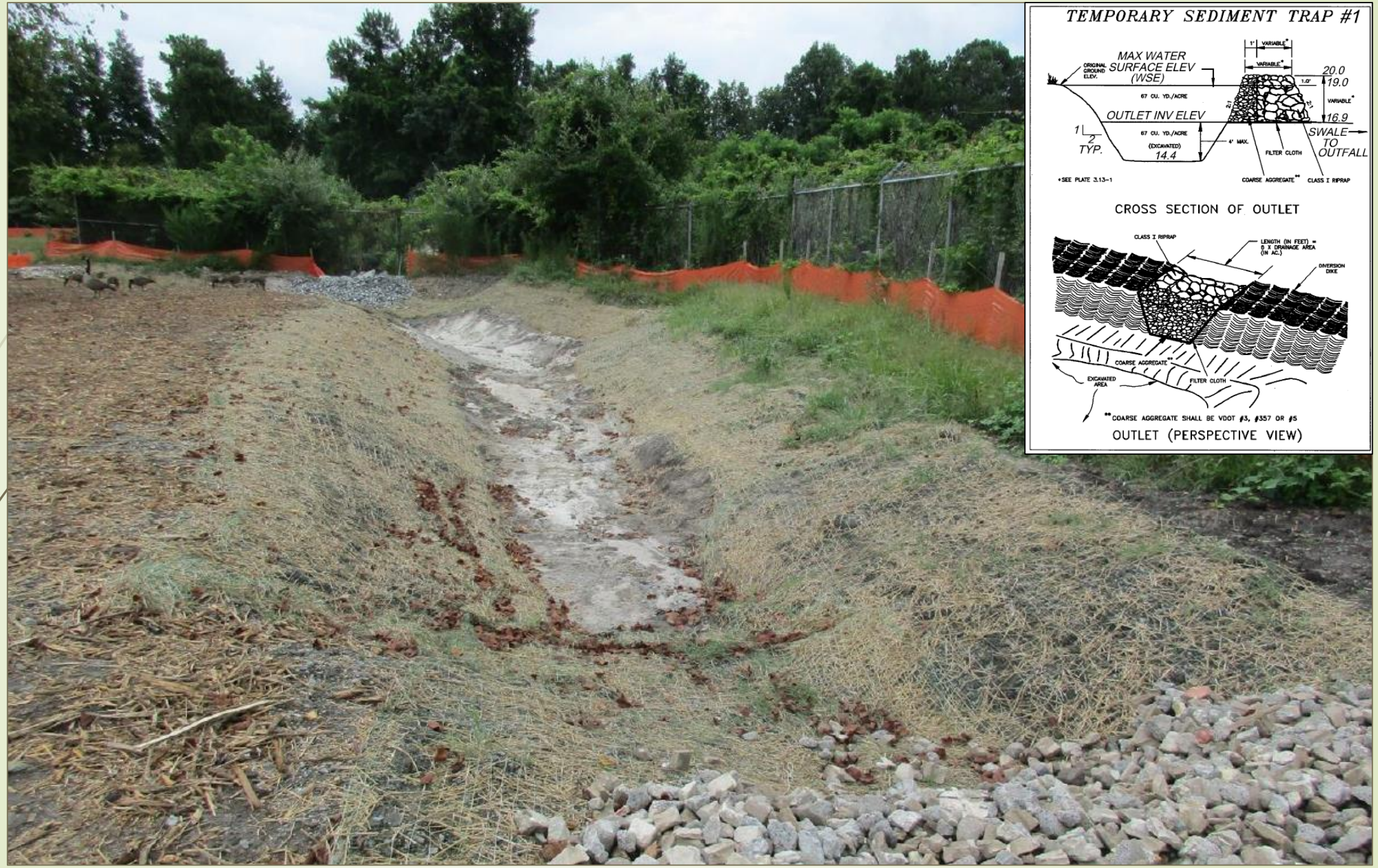
EROSION & SEDIMENT CONTROL AND DEMOLITION PLAN OF MITSUBISHI

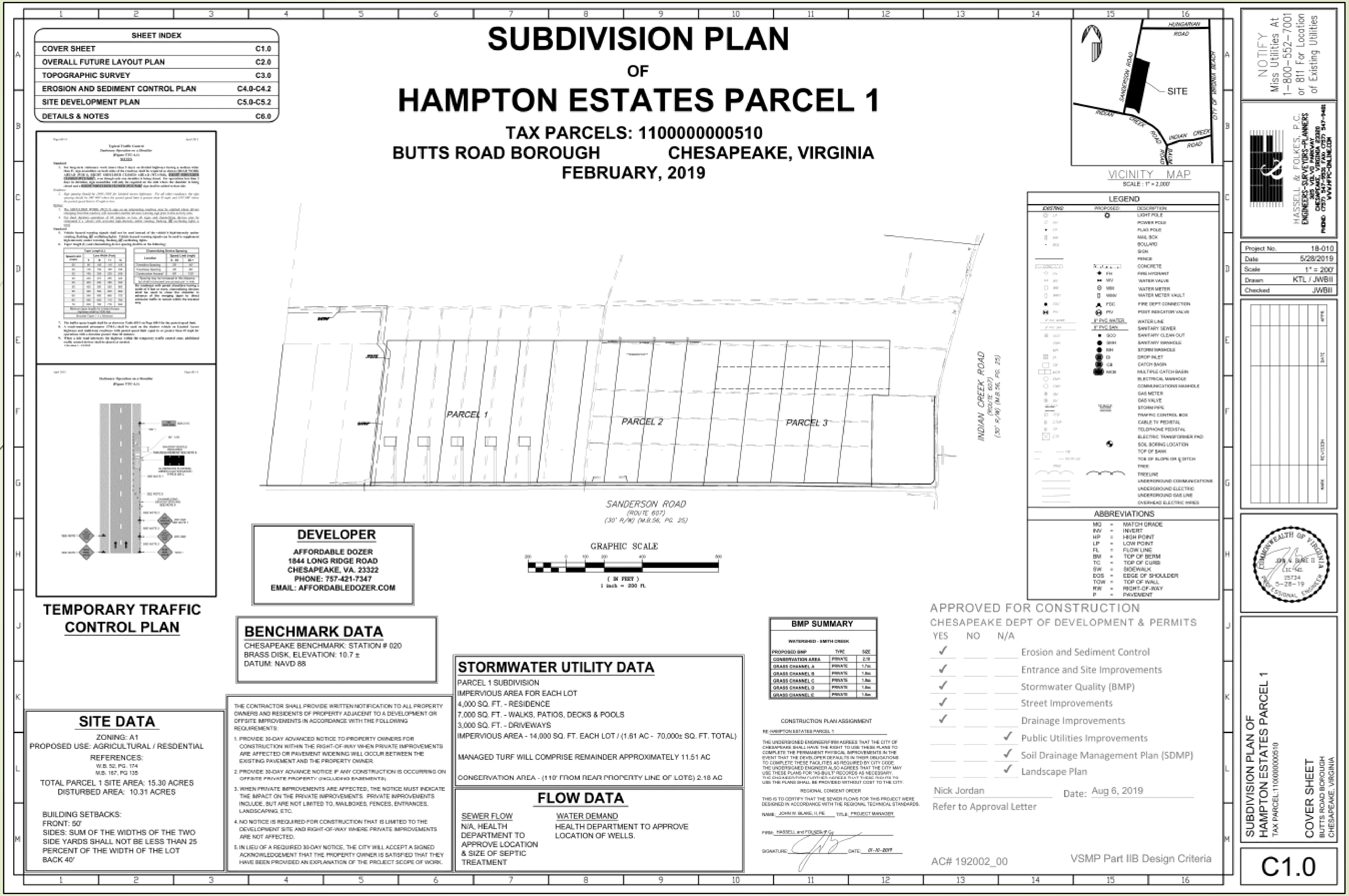
COVER SHEET

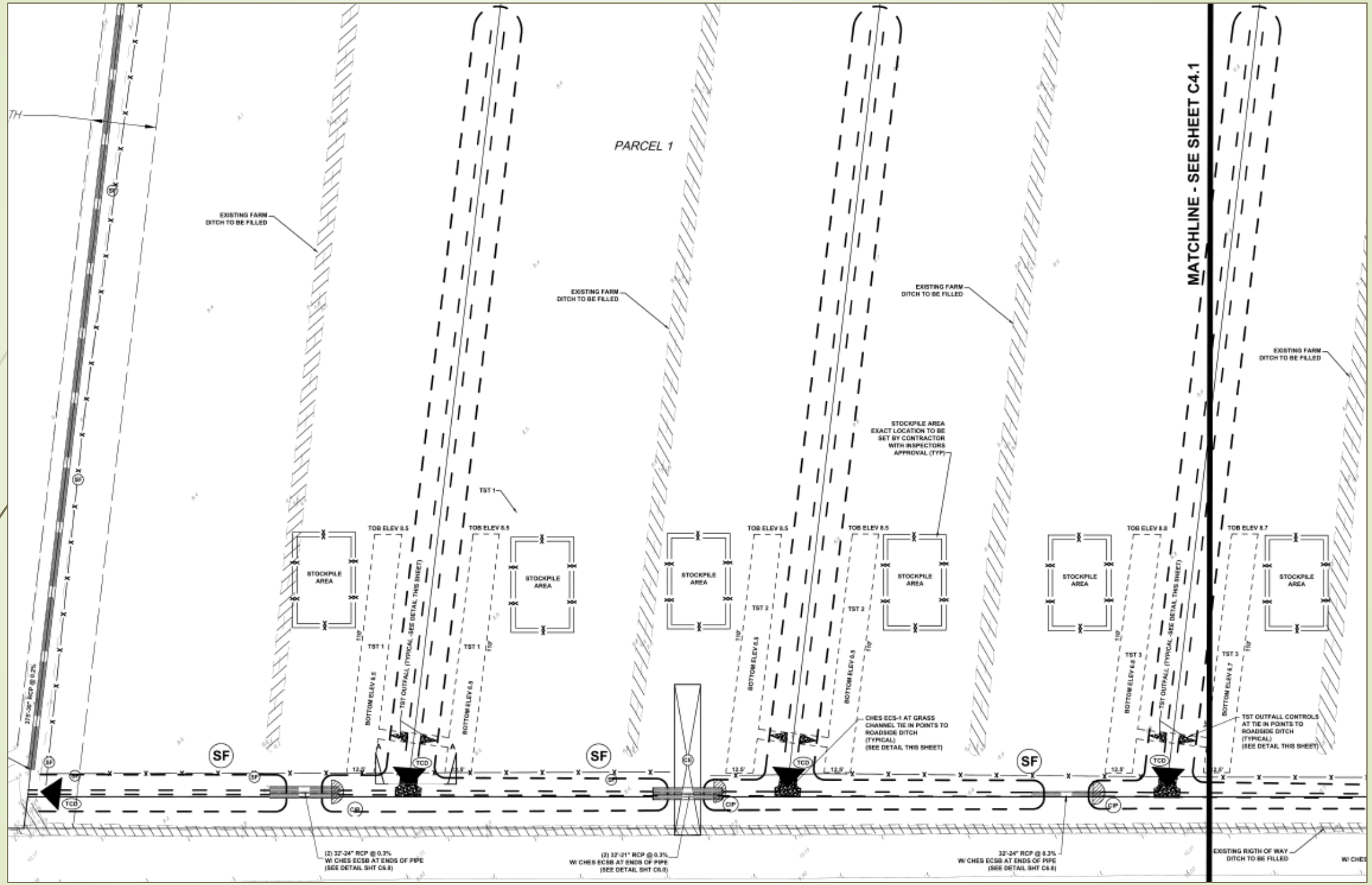
TAX PARCEL 0280000000790
CHESAPEAKE, VIRGINIA

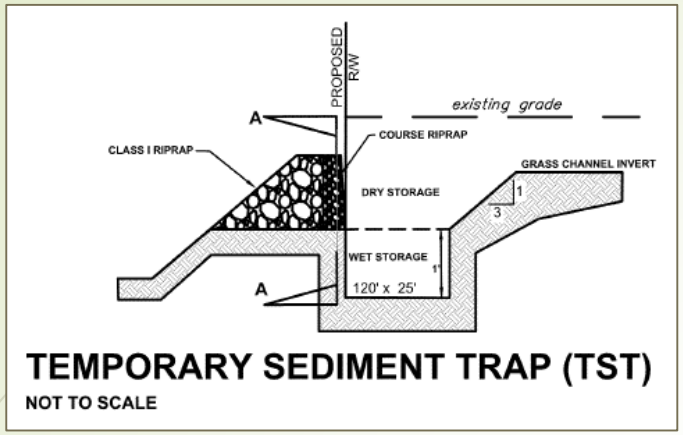
C101


REMOVE PORTION OF EXISTING FENCE FOR SWALE CONSTRUCTION AND REINSTALL AFTER CONSTRUCTION
DEMOLITION LIMITS
RIM 20.0
MAX WSE 19.0
OUTLET INV ELEV 16.0
BOTTOM 13.0
TST-2
TST 3
AREA = 1.11-AC
RIDGELINE
TST DRAINAGE AREA LIMIT (TYP.)
TST 2
AREA = 1.33-AC
TOTAL DISTURBED
AREA = 4.52-AC
EXISTING TONER FACILITY
TST 1
AREA = 0.75-AC
RIM 18.0
MAX WSE 17.0
OUTLET INV ELEV 14.0
BOTTOM 11.0
TST-3
TST 4
AREA = 1.33-AC
RIM 16.0
MAX WSE 15.0
OUTLET INV ELEV 14.2
BOTTOM 13.2
REMOVE PAVEMENT TO INSTALL TST 4
TST-4
TST-1
RIM 20.0
MAX WSE 19.0
OUTLET INV ELEV 16.9
BOTTOM 14.4
GRAPHIC SCALE


TEMPORARY SEDIMENT TRAP #1
MAX WATER SURFACE ELEV (WSE)
ORIGINAL GROUND ELEV.
67 CU. YD./ACRE
OUTLET INV ELEV
67 CU. YD./ACRE
(EXCAVATED)
14.4
1
2
TYP.
4' MAX.
VARIABLE*
1.0'
20.0
19.0
16.9
SWALE TO OUTFALL
FILTER CLOTH
COARSE AGGREGATE**
CLASS I RIPRAP
*SEE PLATE 3.13-1
CROSS SECTION OF OUTLET
CLASS I RIPRAP
LENGTH (IN FEET) = 5 X DRAINAGE AREA (IN AC.)
DIVERSION DIKE
COARSE AGGREGATE**
EXCAVATED AREA
FILTER CLOTH
**COARSE AGGREGATE SHALL BE VDOT #3, #357 OR #5
OUTLET (PERSPECTIVE VIEW)

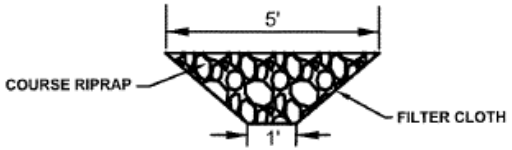

SUBDIVISION PLAN
OF
HAMPTON ESTATES PARCEL 1
TAX PARCELS: 1100000000510
BUTTS ROAD BOROUGH
CHESAPEAKE, VIRGINIA
FEBRUARY, 2019
SHEET INDEX
COVER SHEET C1.0
OVERALL FUTURE LAYOUT PLAN C2.0
TOPOGRAPHIC SURVEY C3.0
EROSION AND SEDIMENT CONTROL PLAN C4.0-C4.2
SITE DEVELOPMENT PLAN C5.0-C5.2
DETAILS & NOTES C6.0
TEMPORARY TRAFFIC CONTROL PLAN
PARCEL 1
PARCEL 2
PARCEL 3
SANDERSON ROAD
INDIAN CREEK ROAD
GRAPHIC SCALE
DEVELOPER
AFFORDABLE DOZER
1844 LONG RIDGE ROAD
CHESAPEAKE, VA. 23322
PHONE: 757-421-7347
EMAIL: AFFORDABLEDOZER.COM
BENCHMARK DATA
CHESAPEAKE BENCHMARK: STATION # 020
BRASS DISK, ELEVATION: 10.7 ±
DATUM: NAVD 88
SITE DATA
ZONING: A1
PROPOSED USE: AGRICULTURAL / RESDENTIAL
REFERENCES:
W.B. 52, PG. 174
M.B. 167, PG 135
TOTAL PARCEL 1 SITE AREA: 15.30 ACRES
DISTURBED AREA: 10.31 ACRES
BUILDING SETBACKS:
FRONT: 50'
SIDES: SUM OF THE WIDTHS OF THE TWO SIDE YARDS SHALL NOT BE LESS THAN 25 PERCENT OF THE WIDTH OF THE LOT
BACK 40'
STORMWATER UTILITY DATA
PARCEL 1 SUBDIVISION
IMPERVIOUS AREA FOR EACH LOT
4,000 SQ. FT. - RESIDENCE
7,000 SQ. FT. - WALKS, PATIOS, DECKS & POOLS
3,000 SQ. FT. - DRIVEWAYS
IMPERVIOUS AREA - 14,000 SQ. FT. EACH LOT / (1.61 AC - 70,000± SQ. FT. TOTAL)
MANAGED TURF WILL COMPRISE REMAINDER APPROXIMATELY 11.51 AC
CONSERVATION AREA - (110' FROM REAR PROPERTY LINE OF LOTS) 2.18 AC
FLOW DATA
SEWER FLOW
N/A, HEALTH DEPARTMENT TO APPROVE LOCATION & SIZE OF SEPTIC TREATMENT
WATER DEMAND
HEALTH DEPARTMENT TO APPROVE LOCATION OF WELLS.
BMP SUMMARY
VICINITY MAP
SITE
LEGEND
ABBREVIATIONS
APPROVED FOR CONSTRUCTION
CHESAPEAKE DEPT OF DEVELOPMENT & PERMITS
YES NO N/A
Erosion and Sediment Control
Entrance and Site Improvements
Stormwater Quality (BMP)
Street Improvements
Drainage Improvements
Public Utilities Improvements
Soil Drainage Management Plan (SDMP)
Landscape Plan
Nick Jordan
Date: Aug 6, 2019
Refer to Approval Letter
AC# 192002_00
VSMP Part IIB Design Criteria
NOTIFY Miss Utilities At 1-800-552-7001 or 811 For Location of Existing Utilities
Project No. 18-010
Date 5/28/2019
Scale 1" = 200'
Drawn KTL / JWBII
Checked JWBII
SUBDIVISION PLAN OF HAMPTON ESTATES PARCEL 1
COVER SHEET
C1.0


PARCEL 1
EXISTING FARM DITCH TO BE FILLED
STOCKPILE AREA
EXACT LOCATION TO BE SET BY CONTRACTOR WITH INSPECTORS APPROVAL (TYP)
TOB ELEV 8.5
TOB ELEV 8.0
TOB ELEV 8.7
TST 1
TST 2
TST 3
110'
BOTTOM ELEV 6.5
BOTTOM ELEV 6.8
BOTTOM ELEV 6.7
TST OUTFALL (TYPICAL -SEE DETAIL THIS SHEET)
CHES ECS-1 AT GRASS CHANNEL TIE IN POINTS TO ROADSIDE DITCH (TYPICAL) (SEE DETAIL THIS SHEET)
TST OUTFALL CONTROLS AT TIE IN POINTS TO ROADSIDE DITCH (TYPICAL) (SEE DETAIL THIS SHEET)
SF
TCD
CIP
12.5'
(2) 32'-24" RCP @ 0.3% W/ CHES ECSB AT ENDS OF PIPE (SEE DETAIL SHT C6.8)
(2) 32'-21" RCP @ 0.3% W/ CHES ECSB AT ENDS OF PIPE (SEE DETAIL SHT C6.8)
32'-24" RCP @ 0.3% W/ CHES ECSB AT ENDS OF PIPE (SEE DETAIL SHT C6.8)
EXISTING RIGTH OF WAY DITCH TO BE FILLED
MATCHLINE - SEE SHEET C4.1



TEMPORARY SEDIMENT TRAP (TST)

NOT TO SCALE



TEMPORARY SEDIMENT TRAP OUTFALL CROSS SECTION

NOT SCALE

SITE DEVELOPMENT PLAN OF
GREAT BRIDGE PRIMARY REPLACEMENT
CHESAPEAKE, VIRGINIA

SITE DATA

1. THE PROPERTY IS CURRENTLY LEGALLY DESCRIBED AS FOLLOWS:
14.73 ACRES AS SHOWN ON PLAT ENTITLED "PLAT SHOWING PORTION OF CITY OF CHESAPEAKE PROPERTY" AND RECORDED AS MAP BOOK 97, PAGE 113 AND DESCRIBED IN DEED BOOK 2509, AT PAGE 25 IN THE CLERK'S OFFICE OF THE CIRCUIT COURT OF THE CITY OF CHESAPEAKE, VIRGINIA. [TAX ID #0598000000266] (@1532 WATERS ROAD)

2. TAX MAP #: 0470000000832

3. ZONING: O-I – OFFICE AND INSTITUTIONAL

4. SOURCE OF TITLE AND LAST PLACE OF RECORD:
@408 CEDAR ROAD – [D.B. 2509, P. 25) (TAX ID @0470000000832]

5. AREA OF PROPERTY: 653,274.1 SQUARE FEET OR 19.129 ACRES
AREA OF ALBEMARLE DRIVE: 55,209.8 SQUARE FEET OR 1.267 ACRES
PROJECT AREA: 888,482.1 SQUARE FEET OR 20.397 ACRES

6. THIS PROPERTY FALLS WITHIN THE SOUTHERN BRANK OF THE ELIZABETH RIVER WATERSHED.

7. ELEVATIONS SHOWN HEREON ARE EXPRESSED IN FEET AND BASED UPON NAVD 88 VERTICAL CONTROL UTILIZING STATION NUMBER "ALBEMARLE" (ELEV 12.35)

8. THE PROPERTY SHOWN HEREON APPEARS TO FALL WITHIN FLOOD ZONE "AE ELEV=7" (THE 1% ANNUAL FLOOD (100-YEAR FLOOD)), ALSO KNOWN AS THE BASE FLOOD, IS THE FLOOD THAT HAS A 1% CHANCE OF BEING EQUALED OR EXCEEDED IN ANY GIVEN YEAR.) FLOOD ZONE "X SHADED" (AREAS OF 0.2% ANNUAL CHANCE FLOOD.) FLOOD ZONE "X UNSHADED" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN AS SHOWN ON F.E.M.A.'S FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR THE CITY OF CHESAPEAKE, VIRGINIA, COMMUNITY PANEL No. 510034 0050D DATED DECEMBER 16, 2014.

WPL IS NOT A PARTY IN DETERMINING THE REQUIREMENTS FOR FLOOD INSURANCE ON THE PROPERTY SHOWN HEREON. THIS SURVEY DOES NOT IMPLY THAT THIS PROPERTY WILL OR WILL NOT BE SUBJECT TO FLOODING. FOR FURTHER INFORMATION, CONTACT THE LOCAL COMMUNITY FLOOD OFFICIAL.

9. AREA OF LAND DISTURBANCE: 888,482.1 SQUARE FEET OR 20.397 ACRES

10. SEWER DEMAND:
PRE-DEVELOPMENT: 12.00 GPM AVG (36.08 GPM PEAK) 5,760 GPD– RTS
POST-DEVELOPMENT: 13.04 GPM AVG (38.13 GPM PEAK) 6,260 GPD– RTS

11. WATER DEMAND:
DOMESTIC: 548.5 STU = 149.6 GPM
FIRE: 1,250 GPM

12. STORMWATER MANAGEMENT:
1-YEAR RUNOFF RATES: Qpre = 31.06 CFS Qpost = 18.78 CFS
10-YEAR RUNOFF RATES: Qpre = 84.33 CFS Qpost = 70.44 CFS

WATER QUALITY & TREATMENT:
REQUIRED REMOVAL = 8.42 LBS
PROVIDED REMOVAL = 8.42 LBS

13. UTILITIES
A) DOMESTIC WATER: CITY OF CHESAPEAKE
B) SEWER SERVICE: CITY OF CHESAPEAKE
C) FIRE PROTECTION: CITY OF CHESAPEAKE
D) TELEPHONE: VERIZON
E) POWER: DOMINION VIRGINIA POWER
F) GAS: COLUMBIA NATURAL GAS
G) TRASH DISPOSAL: CITY OF CHESAPEAKE
H) CABLE: COX

14. PREVIOUS APPROVALS
NOT APPLICABLE

15. IT IS THE DEVELOPER'S RESPONSIBILITY TO OBTAIN CLEARANCES FROM THE VIRGINIA DEPARTMENT OF HEALTH (VDH) AND THE DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ).

16. PARKING REQUIREMENTS:
2 SPACES PER CLASSROOM

26 CLASSROOMS X 2 SPACES EACH = 52 REQUIRED SPACES

PROVIDED: 111 SPACES
PROVIDED HC: 7 SPACES
TOTAL: 118 SPACES

BMP INFORMATION

NAME	SOURCE OF FLOW	TYPE OF BMP	TREATMENT VOLUME (CF)	DRAINAGE AREA (AC)
A1	PRIVATE	DRY SWALE /FILTERING PRACTICE	6,352	1.52
A2	PRIVATE	DRY SWALE /FILTERING PRACTICE	4,417	0.99
B1	PRIVATE	DRY SWALE /FILTERING PRACTICE	6,352	1.11
B2	PRIVATE	DRY SWALE /FILTERING PRACTICE	25,289	3.05
C1	PRIVATE	DRY SWALE	6,063	2.76
D1	PRIVATE	DRY DETENTION	–	0.30
D2	PRIVATE	DRY DETENTION	–	0.52

LOCATION MAP SCALE : 1"=2,000'

THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO ALL PROPERTY OWNERS AND RESIDENTS OF PROPERTY ADJACENT TO A DEVELOPMENT OR OFFSITE IMPROVEMENTS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:
1. PROVIDE 30-DAY ADVANCED NOTICE TO PROPERTY OWNERS FOR CONSTRUCTION WITHIN THE RIGHT-OF-WAY WHEN PRIVATE IMPROVEMENTS ARE AFFECTED OR PAVEMENT WIDENING WILL OCCUR BETWEEN THE EXISTING PAVEMENT AND THE PROPERTY OWNER.
2. PROVIDE 30-DAY ADVANCE NOTICE IF ANY CONSTRUCTION IS OCCURRING ON OFFSITE PRIVATE PROPERTY (INCLUDING EASEMENTS).
3. WHEN PRIVATE IMPROVEMENTS ARE AFFECTED, THE NOTICE MUST INDICATE THE IMPACT ON THE PRIVATE IMPROVEMENTS. PRIVATE IMPROVEMENTS INCLUDE, BUT ARE NOT LIMITED TO, MAILBOXES, FENCES, ENTRANCES, LANDSCAPING, ETC.
4. NO NOTICE IS REQUIRED FOR CONSTRUCTION THAT IS LIMITED TO THE DEVELOPMENT SITE AND RIGHT-OF-WAY WHERE PRIVATE IMPROVEMENTS ARE NOT AFFECTED.
5. IN LIEU OF A REQUIRED 30-DAY NOTICE, THE CITY WILL ACCEPT A SIGNED ACKNOWLEDGEMENT THAT THE PROPERTY OWNER IS SATISFIED THAT THEY HAVE BEEN PROVIDED AN EXPLANATION OF THE PROJECT SCOPE OF WORK.

SHEET INDEX

PROJECT DATA

1. OWNER/APPLICANT:
CHESAPEAKE PUBLIC SCHOOLS
C/O GREG HANSON
312 CEDAR ROAD
CHESAPEAKE, VA 23322
PH: (757) 547-0013
FAX: (757) 547-0142

2. DESIGN CONSULTANT:
WPL
242 MUSTANG TRAIL, STE 8
VIRGINIA BEACH, VIRGINIA 23452
PH: (757) 431-1041
FAX: (757) 463-1412

BEFORE YOU DIG, TO MISS THE UTILITIES CALL
" MISS UTILITY "
OF VIRGINIA 811

ALL CONSTRUCTION DESIGNS, METHODS, AND MATERIALS MUST BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CHESAPEAKE DEPT. OF DEVELOPMENT & PERMITS SUBJECT TO ITS INSPECTION AND CONTROL.

NOTE :

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE ONSITE T.B.M. w/ EXISTING ELEVATIONS. THE CONTRACTOR SHALL IMMEDIATELY CONTACT WPL @ 431-1041 IF ANY DISCREPANCIES ARE FOUND IN ELEVATIONS SHOWN.

CONTRACTOR TO NOTIFY ADJACENT PROPERTY OWNERS THIRTY (30) DAYS PRIOR TO COMMENCING CONSTRUCTION.

THIS IS TO CERTIFY THAT THE SEWER FLOWS FOR THIS PROJECT WERE DESIGNED IN ACCORDANCE WITH THE REGIONAL TECHNICAL STANDARDS.

SIGNED: _____, P.E. or L.S.

THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CHESAPEAKE CITY CODE AND ALL VOLUMES OF THE CHESAPEAKE "PUBLIC FACILITIES MANUAL".

SIGNED: _____, P.E. or L.S.

CONSTRUCTION PLAN ASSIGNMENT

RE: GREAT BRIDGE PRIMARY - SITE DEVELOPMENT PLAN
SUBDIVISION/SITE PLAN (NAME AS SHOWN ON PLAN)

THE UNDERSIGNED ENGINEER/FIRM AGREES THAT THE CITY OF CHESAPEAKE SHALL HAVE THE RIGHT TO USE THESE PLANS TO COMPLETE THE PERMANENT PHYSICAL IMPROVEMENTS IN THE EVENT THAT THE DEVELOPER DEFAULTS IN HIS OBLIGATIONS TO COMPLETE THESE FACILITIES AS REQUIRED BY CITY CODE. THE UNDERSIGNED ENGINEER ALSO AGREES THAT THE CITY MAY USE THESE PLANS FOR THE PREPARATION OF "AS BUILT" RECORDS AS NECESSARY. THE ENGINEER/FIRM FURTHER AGREES THAT THESE RIGHTS TO USE THE PLANS SHALL BE PROVIDED WITHOUT COST TO THE CITY.

NAME: WALTER WEEKS TITLE: VICE-PRESIDENT
FIRM: WPL
SIGNATURE: _____ DATE: 8/4/2017

RESPONSIBLE LAND DISTURBER

THE FOLLOWING PERSON, WALTER L. WEEKS, IS IDENTIFIED AS THE RESPONSIBLE LAND DISTURBER WHO WILL BE IN CHARGE OF AND RESPONSIBLE FOR CARRYING OUT THE LAND DISTURBING ACTIVITY. THIS PERSON MEETS THE APPLICABLE REQUIREMENTS OF VIRGINIA CODE SECTION 10.1-563 AND 10.1-568 BY VIRTUE OF THE FOLLOWING (CHECK THE CATEGORY THAT APPLIES):

_____ RESPONSIBLE LAND DISTURBER CERTIFICATE.
_____ DCR CERTIFICATION FOR COMBINED ADMINISTRATOR, PLAN REVIEWER, INSPECTOR, OR CONTRACTOR.
X VA PROFESSIONAL ENGINEER, LAND SURVEYOR, LANDSCAPE ARCHITECT, OR ARCHITECT.

UPON AWARD OF THE CONTRACT AND BEFORE ANY LAND DISTURBING ACTIVITY CAN BEGIN, THE CONTRACTOR SHALL EXECUTE AND SUBMIT A RESPONSIBLE LAND DISTURBER NOTIFICATION FORM TO THE DEPARTMENT OF PLANNING, 306 CEDAR ROAD, CHESAPEAKE, VIRGINIA 23322 TEL: (757) 382-6345. AWARD OF THE CONTRACT WILL RELEASE THE ABOVE SIGNER OF ALL RESPONSIBILITY.

APPROVED FOR CONSTRUCTION
CHESAPEAKE DEPT OF DEVELOPMENT & PERMITS

YES	NO	N/A	
✓			Erosion and Sediment Control
✓			Entrance and Site Improvements
✓			Stormwater Quality (BMP)
✓			Street Improvements
✓			Drainage Improvements
✓			Public Utilities Improvements
		✓	Soil Drainage Management Plan (SDMP)
✓			Landscape Plan

Nick Jordan Date: Sep 1, 2017
Refer to Approval Letter
VSMP Part IIB Design Criteria
AC# 174021_00

WPL
Landscape Architecture
Land Surveying
Civil Engineering
wplells.com 757.431.1041

COMMONWEALTH OF VIRGINIA
WALTER L. WEEKS
Lic. No. 031552
8/4/2017
PROFESSIONAL ENGINEER

PRELIMINARY	WLW
DESIGNED	WLW
DRAWN	MBR
CHECKED	WLW

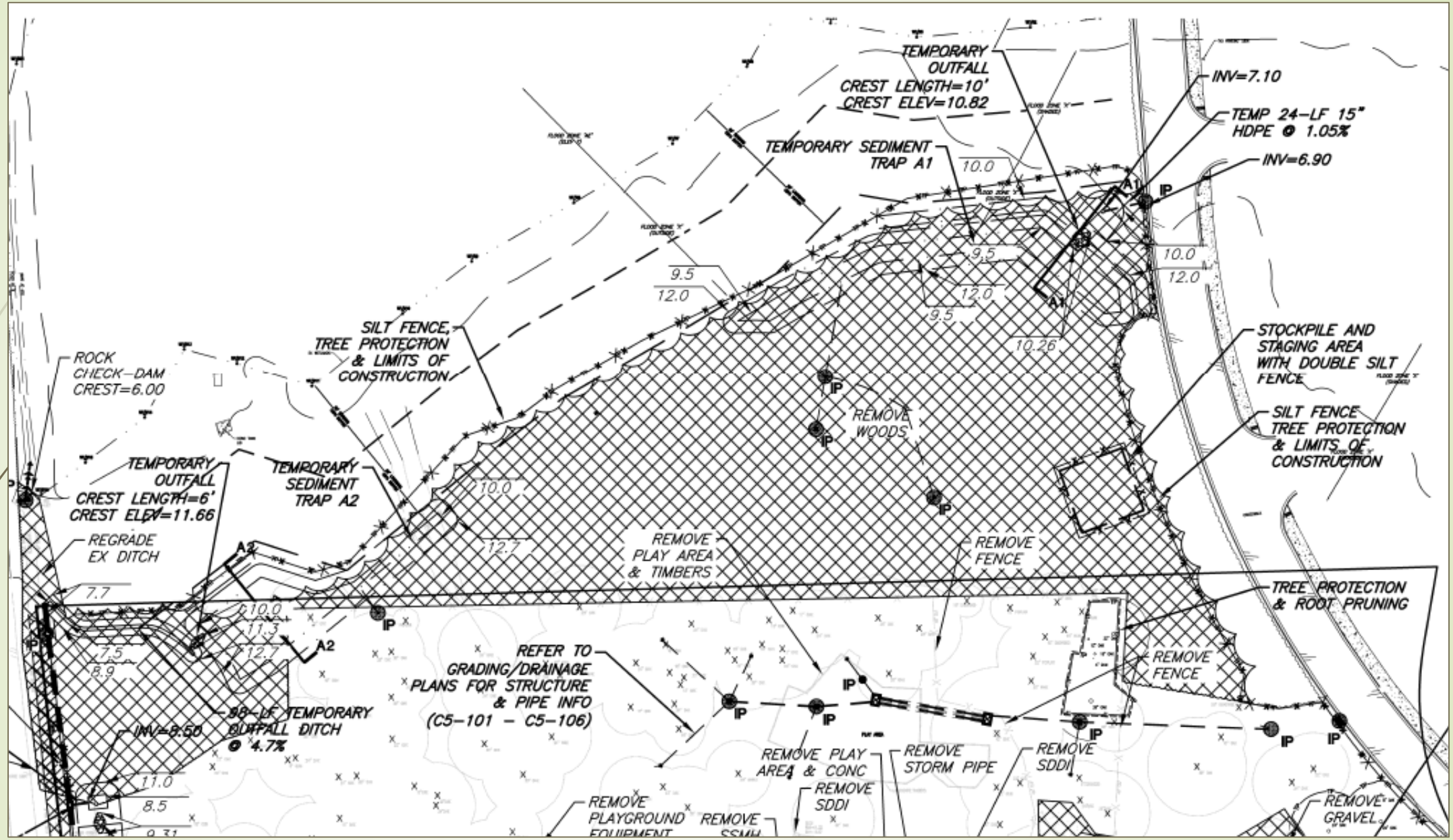
REVISIONS	DESCRIPTION	DATE

PROJECT NO 1503
DATE 8/4/2017

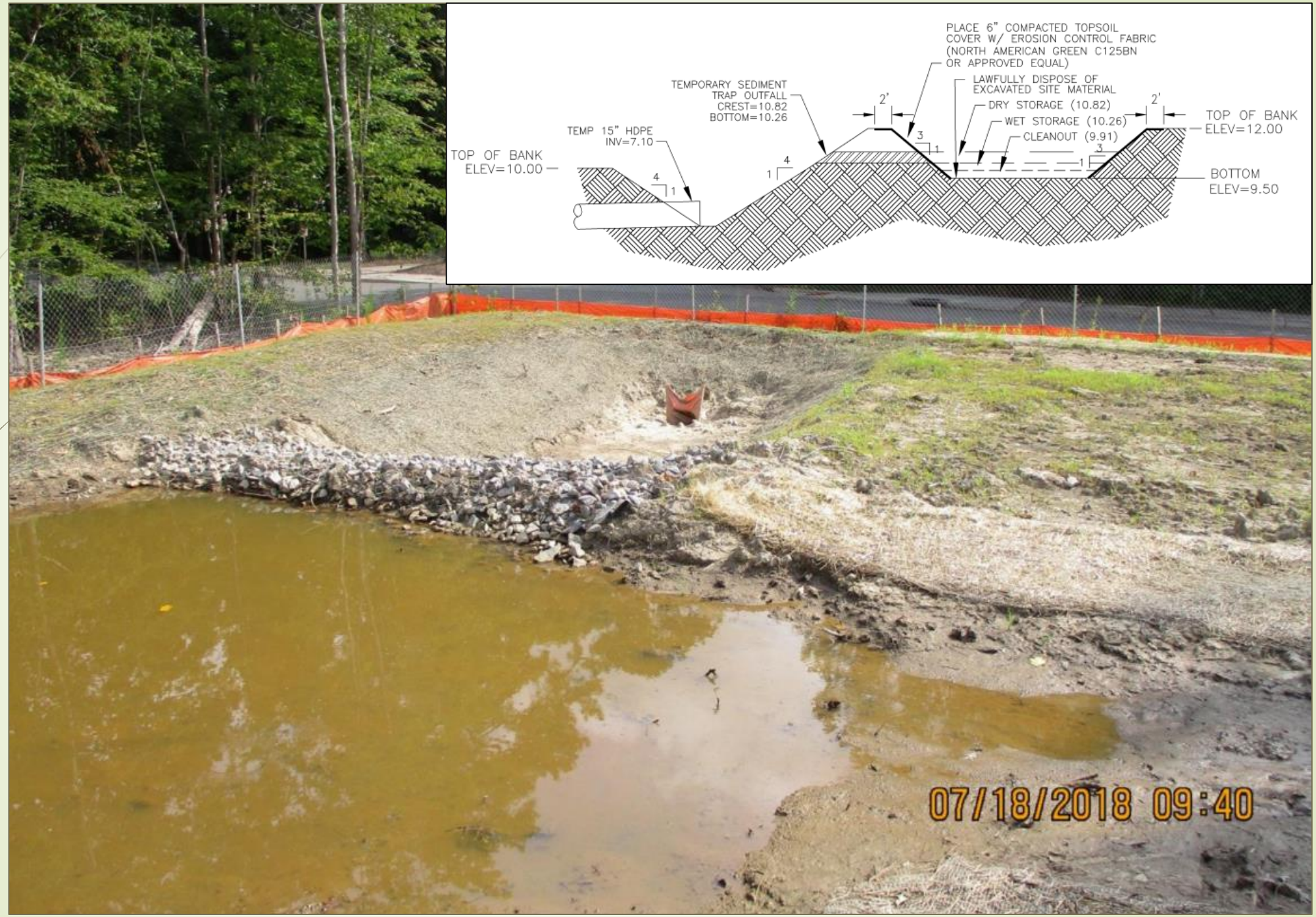
GREAT BRIDGE PRIMARY SCHOOL
CHESAPEAKE
STATE PROJECT NO. 1364B-00-100
SHEET TITLE
COVER SHEET & SITE DATA

WALLER TODD & SADLER ARCHITECTS
1909 CYPRESS AVENUE
VIRGINIA BEACH, VA 23451
(757) 417-0140

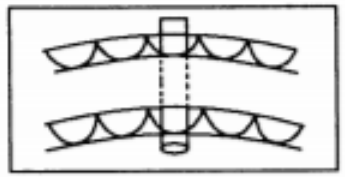
SHEET NUMBER
C1-000


TEMPORARY OUTFALL
CREST LENGTH=10'
CREST ELEV=10.82
INV=7.10
TEMP 24-LF 15" HDPE @ 1.05%
INV=6.90
TEMPORARY SEDIMENT TRAP A1
10.0
9.5
12.0
10.26
SILT FENCE, TREE PROTECTION & LIMITS OF CONSTRUCTION
ROCK CHECK-DAM CREST=6.00
STOCKPILE AND STAGING AREA WITH DOUBLE SILT FENCE
SILT FENCE TREE PROTECTION & LIMITS OF CONSTRUCTION
REMOVE WOODS
TEMPORARY OUTFALL
CREST LENGTH=6'
CREST ELEV=11.66
TEMPORARY SEDIMENT TRAP A2
REGRADE EX DITCH
12.7
REMOVE PLAY AREA & TIMBERS
REMOVE FENCE
TREE PROTECTION & ROOT PRUNING
7.7
11.3
7.5
8.9
REFER TO GRADING/DRAINAGE PLANS FOR STRUCTURE & PIPE INFO (C5-101 - C5-106)
98-LF TEMPORARY OUTFALL DITCH @ 4.7%
INV=8.50
11.0
8.5
REMOVE PLAY AREA & CONC
REMOVE SDDI
REMOVE STORM PIPE
REMOVE SDDI
REMOVE PLAYGROUND EQUIPMENT
REMOVE SSMH
REMOVE GRAVEL


04/16/2018 09:40


PLACE 6" COMPACTED TOPSOIL
COVER W/ EROSION CONTROL FABRIC
(NORTH AMERICAN GREEN C125BN
OR APPROVED EQUAL)
LAWFULLY DISPOSE OF
EXCAVATED SITE MATERIAL
TEMPORARY SEDIMENT
TRAP OUTFALL
CREST=10.82
BOTTOM=10.26
DRY STORAGE (10.82)
WET STORAGE (10.26)
CLEANOUT (9.91)
TEMP 15" HDPE
INV=7.10
TOP OF BANK
ELEV=10.00
TOP OF BANK
ELEV=12.00
BOTTOM
ELEV=9.50
2'
2'
3
1
4
1
4
1
3
1
07/18/2018 09:40

STD & SPEC 3.14



TEMPORARY SEDIMENT BASIN

SB

Definition

A temporary barrier or dam with a controlled stormwater release structure formed by constructing an embankment of compacted soil across a drainageway.

Purpose

To detain sediment-laden runoff from disturbed areas in "wet" and "dry" storage long enough for the majority of the sediment to settle out.

Conditions Where Practice Applies

Below disturbed areas where the total contributing drainage area is equal to or greater than three (3) acres. There must be sufficient space and appropriate topography for the

Sediment basins, along with other perimeter controls which are intended to trap sediment, shall be constructed as a first step in any land disturbing activity and shall be made functional before upslope land disturbance takes place (MS #4).

Maintenance

The basin embankment should be checked regularly to ensure that it is structurally sound and has not been damaged by erosion or construction equipment.

The emergency spillway should be checked regularly to ensure that its lining is well established and erosion-resistant.

The basin should be checked after each runoff-producing rainfall for sediment cleanout. When the sediment reaches the clean-out level, it shall be removed and properly disposed of.

SITE DEVELOPMENT PLANS
Greenbrier North Commerce Park
Parcel B-1-A
Washington Borough
Chesapeake, Virginia

Project Title: Greenbrier North Commerce Park Parcel B-1-A					
ROW Estimate					
Date: 3/2019					
No.	Description	Quantity	Unit	Unit Price	Total Price
	Mobilization				
1	Mobilization	1	LS	$4,000.00	$4,000.00
2	Traffic Control	1	LS	$5,000.00	$5,000.00
	Erosion and Sediment Control				
1	Construction Entrance	2	EA	$3,950.00	$7,900.00
2	Inlet Protection	7	EA	$220.00	$1,540.00
3	Silt Fence Reinforced Silt Fence	1100	LF	$8.50	$9,350.00
4	Culvert Inlet Protection	3	EA	$600.00	$1,800.00
5	Seed and Stabilize Right of Way for E&S Compliance	2000	SY	$2.00	$4,000.00
	Demolition				
1	Clearing for 36cm Connection at Steppingstone Square	1	LS	$8,250.00	$8,250.00
2	Remove Monument Sign	1	EA	$1,100.00	$1,100.00
3	Remove Concrete Curb and Gutter	80	LF	$10.00	$800.00
	Sanitary Sewer				
	Force Main Relocation				
1	Connect to Existing Force Main - Smith	1	EA	$3,750.00	$3,750.00
2	6" PVC Force Main Crossing Smith Ave	85	LF	$60.00	$5,270.00
3	Pavement Patching for Road Crossing	48	SY	$90.00	$4,320.00
	Waterline				
	Offsite - Right of Way				
1	Connect to Existing Waterline	1	EA	$4,050.00	$4,050.00
2	12" Gate Valve	1	EA	$2,850.00	$2,850.00
3	12" Ductile Iron Waterline Across Smith Ave	100	LF	$67.75	$6,775.00
4	Select Backfill for Waterline	46	CY	$24.00	$960.00
5	Pavement Patching for Crossing	85	SY	$90.00	$6,850.00
6	Remove and Replace Curb and Gutter Damaged During	25	LF	$65.00	$1,625.00
	Storm Drainage				
	Outfall Right of Way				
1	Connect to Interbasin	1	EA	$2,000.00	$2,000.00
2	Connect to Existing Structure	2	EA	$3,700.00	$7,400.00
3	Reconstruct CB2	1	EA	$5,500.00	$5,500.00
4	Reconstruct SD3	1	EA	$5,500.00	$5,500.00
5	Storm Drain Manhole (5'-8')	2	EA	$5,765.00	$11,530.00
6	Storm Drain Manhole (5'-10')	2	EA	$7,480.50	$14,961.00
7	Outfall Structure	1	EA	$4,980.00	$4,980.00
8	Drop Inlet (5-8')	1	EA	$3,600.00	$3,600.00
9	12" RCP (5-8')	18	LF	$53.00	$902.00
10	30" RCP (5'-8')	550	LF	$76.00	$41,800.00
11	32" RCP (5'-10')	152	LF	$80.00	$12,160.00
12	36" RCP (5'-10')	139	LF	$106.00	$15,042.00
13	36" Flared End Section	1	EA	$2,834.50	$2,834.50
14	Stone seeding for Storm Drain	315	YD	$42.00	$9,030.00
15	Pavement Patching for Road Crossing	80	SY	$98.00	$8,190.00
	Concrete				$0.00
1	Curb and Gutter replacement	60	LF	$19.00	$1,140.00
8	CG10A Concrete Entrance	185	SY	$105.00	$19,425.00
	GRAND TOTAL				$238,000.00

VICINITY MAP SCALE: 1"=1000'

LEGEND

FORCE MAIN
UNDERGROUND WATER
STORM DRAINAGE
SANITARY SEWER
FENCE
TREE LINE
UNDERGROUND ELECTRIC
UNDERGROUND COMMUNICATION VERIZON
UNDERGROUND COMMUNICATION COX
UNDERGROUND COMMUNICATION OTHER
UNDERGROUND GAS
PROPERTY LINE
EASEMENT
CURB
CURB AND GUTTER
TREE
CONTOURS
TELEPHONE PEDESTAL
TELEPHONE MANHOLE
YARD DROP INLET
CURB INLET
STORM DRAIN MANHOLE
SANITARY MANHOLE
SANITARY CLEANOUT
FIRE HYDRANT
WATER METER
WATER VALVE
FORCE MAIN VALVE
ELECTRIC MANHOLE
LIGHT POLE
LAMP
TRANSFORMER
GROUND SHOT ELEVATION
TEST BORING
IRON ROD FOUND
PAVEMENT MARKING
UTILITY POLE
HANDICAPPED PARKING
ABOVE GROUND HANDICAPPED PARKING SIGN
ABOVE GROUND HANDICAPPED PARKING SIGN (VAN ACCESSIBLE)

OWNER
ECONOMIC DEVELOPMENT AUTHORITY FOR
THE CITY OF CHESAPEAKE
#676 INDEPENDENCE PKWY, SUITE 200
CHESAPEAKE, VA. 23320

DEVELOPER
BAYLOR CORPORATION
CONTACT: JIM BAYLOR
#248 WEST BUTE STREET, SUITE 200
NORFOLK, VA. 23510
PHONE: 757-622-7555

ZONING
MI - LIGHT INDUSTRIAL DISTRICT
FRONT YARD SETBACK - 25 FEET
REAR YARD SETBACK - 35 FEET
SIDE YARD SETBACK - 10 FEET
BUILDING HEIGHT LIMIT - 35 FT IF ADJACENT TO A RESIDENTIALLY ZONED PROPERTY. 75 FT IF NOT LOCATED ADJACENT TO RESIDENTIAL PROPERTY.
USE PERMIT NO# UP-13-22
REZONING NO# R-13-17

INTENDED USE
LIGHT INDUSTRIAL

PARCEL ID
0200000001150

PARKING CALCULATIONS
FOR M-1 ZONING:
1 SPACE FOR EVERY 200 S.F. OF GROSS FLOOR AREA DEVOTED TO OFFICE SPACE, CUSTOMER SERVICE, OR RETAIL SALES:
6,000 S.F. OFFICE SPACE / 200 S.F. PER PARKING SPACE = 30 SPACES
0.5 SPACES FOR EVERY 1000 S.F. OF REMAINING GROSS FLOOR AREA:
88,000 S.F. WAREHOUSE / 1000 S.F. PER PARKING 0.5 SPACES = 44 SPACES

REQUIRED PARKING SPACES: 74
PROVIDED PARKING SPACES: 128 (INCLUDING HANDICAP)
REQUIRED HANDICAP SPACES: 6 SPACES WITH 1 VAN ACCESSIBLE SPACE RESERVED FOR A WHEELCHAIR USER
HANDICAP SPACES PROVIDED: 16 (8 VAN ACCESSIBLE)

FLOOD ZONE
PROPERTY SHOWN ON THIS PLAN DOES NOT APPEAR TO LIE IN A FLOOD ZONE AS SHOWN ON THE FEMA FLOOD BOUNDARY MAP 5100340017D, DATED DECEMBER 16, 2014

BENCHMARK AND DATUM
THE MERIDIAN SOURCE AND COORDINATES FOR THIS SURVEY/PLAT IS/ARE BASED ON THE CITY OF CHESAPEAKE GEODETIC CONTROL NETWORK WHICH REFERS TO VIRGINIA STATE PLANE COORDINATES SOUTH ZONE (NAD 83). CONTROL MONUMENTS #PS-24 7 #PS-45

ELEVATIONS ARE EXPRESSED IN FEET AND BASED ON THE CITY OF CHESAPEAKE GEODETIC CONTROL NETWORK WHICH REFERS TO NAVD88. CONTROL STATION #PS24

STATISTICAL DATA
TOTAL PARCEL AREA: 392,644 SQ.FT. OR 9.0139 ACRES
EXISTING
IMPERVIOUS AREA
CONCRETE: 836 SQ.FT. or 0.0192 ACRES; 0.2%
TOTAL: 836 SQ.FT. or 0.0192 ACRES; 0.2%
GREEN AREA: 391,808 SQ.FT. or 8.9947 ACRES; 99.8%

PROPOSED
IMPERVIOUS AREA
BUILDING: 94,000 SQ.FT. or 2.1579 ACRES, 23.9%
ASPHALT: 120,881 SQ.FT. or 2.7750 ACRES, 30.8%
CONCRETE: 26,128 SQ.FT. or 0.5998 ACRES, 6.7%
POND: 14,838 SQ. FT or 0.3406 ACRES, 3.8%
GRAVEL: 38,183 SQ.FT. or 0.8766 ACRES, 9.7%
TOTAL: 294,030 SQ.FT. OR 6.7499 ACRES, 74.9%
GREEN AREA: 98,614 SQ.FT. OR 2.2639 ACRES; 25.1%

TOTAL INCREASE IN IMPERVIOUS AREA - 293,194 SQ.FT. OR 6.7308 ACRES

TOTAL DISTURBED AREA: 414,100 SQ.FT. OR 9.506 ACRES

SANITARY SEWER CALCULATIONS
OFFICE
6,000 SF x 0.1 GPD/SF = 600 GPD
600 GPD / (12 HR DURATION DAY / 60 MIN/HR)= .83 GPM
PEAK FACTOR = 0.83 GPM x 3 = 2.50 GPM

STORAGE
88,000 SF x .05 GPD/SF= 4,400 GPD
4,400 GPD / (24 HR DURATION DAY / 60 MIN/HR)= 3.06 GPM
PEAK FACTOR = 3.06 x 3 = 9.17 GPM

TOTAL PEAK FLOW = 11.67 GPM

STORMWATER MANAGEMENT
THIS PARCEL IS PART OF THE SEVTC CORPORATE PARK MASTER STORMWATER MANAGEMENT PLAN PREPARED BY AMERICAN ENGINEERING MAY 12, 2015. THE PARCEL IS CONSIDERED TO BE GRANDFATHERED AND THE AREA WILL BE SUBJECT TO THE PART IIC TECHNICAL CRITERIA IN ACCORDANCE WITH OPTION 7 OF THE MASTER PLAN A LEVEL 1 RETENTION POND IS PROPOSED ON SITE TO HANDLE THE QUANTITY AND QUALITY REQUIREMENTS FOR THE SITE.

BMP - LEVEL 1 RETENTION POND
OWNERSHIP - PRIVATE
PERMANENT POOL CAPACITY - 0.843 ACRE-FT
EXTENDED DETENTION CAPACITY @EMERGENCY SPILLWAY - 2.04 ACRE-FT
BMP DRAINAGE AREA - 8.66 ACRES (6.73 ACRES IMPERVIOUS)

DOMESTIC WATER FLOW DATA
EACH BUILDING HAS DOMESTIC PEAK FLOW REQUIREMENT OF: 31 GPM
A 3/4" DOMESTIC METER AND 1" SERVICE LINE IS PROVIDED.

FIRE PROTECTION FLOW DATA
TYPE OF CONSTRUCTION : IIB
BUILDING SPRINKLER SYSTEM : FULL
THE LARGEST BUILDING IS 12,000 SQ.FT.
EXTERNAL FIRE FLOW : 1,500 GPM (REDUCED TO 900 DUE TO PROVIDING AN ESFR SPRINKLER SYSTEM)
INTERNAL SPRINKLER DEMAND : 1,192 GPM
TOTAL FIRE FLOW : 1,692 GPM

RE: Greenbrier North Commerce Park - Parcel B-1-A

This is to certify that the sewer flows for this project were designed in accordance with the regional technical standards.

Name: Kevin Siegel, P.E.
Firm: ATCS PLC

Signature 6/10/2019 Date

RESPONSIBLE LAND DISTURBER
The following person Jason Robertson (print), is identified as the Responsible Land Disturber who will be in charge of and responsible for carrying out the land disturbing activity. This person meets the applicable requirements of Virginia Code Section 62.1-44.15:52 and 62.1-44.15:55 by virtue of the following (check the category that applies):
X Responsible land disturber certificate
___ DCR / DEQ certification for combined administrator, administrator reviewer, inspector or contractor
___ VA professional engineer, land surveyor, landscape architect, or architect.
Award of the contract will relieve the above signer of all responsibility.

PLAN CERTIFICATION
These plans have been prepared in accordance with the applicable sections of the Chesapeake City Code and all Volumes of the Chesapeake "Public Facilities Manual"

Signed: _____ P.E.

All construction standards, unless otherwise noted on the plans, are in accordance with latest volume of the Public Facilities Manual of the Department of Public Works, City of Chesapeake, Virginia. Prior to construction, contractors are required to obtain a copy of these standards.

RE: Greenbrier North Commerce Park - Parcel B-1-A

The undersigned engineer / firm agrees that the City of Chesapeake shall have the right to use these plans to complete the permanent physical improvements in the event that the developer defaults in his obligations to complete these facilities as required by City code. The undersigned engineer also agrees that the City may use these plans for the preparation of "As Built" records as necessary. The engineer / firm further agrees that these rights to use the plans shall be provided without cost to the City.

Name: Kevin Siegel, P.E.
Firm: ATCS PLC

Signature 6/10/2019 Date

Sheet List Table

Sheet Number	Sheet Title	Sheet Description
1	GI001	COVER SHEET
2	GI002	NOTES & OVERALL PLAN
3	VF101	EXISTING CONDITIONS
4	VF102	EXISTING CONDITIONS
5	CD101	E&S CONTROL AND DEMOLITION PLAN
6	CD102	E&S CONTROL AND DEMOLITION PLAN
7	CD501	E&S CONTROL NOTES & NARRATIVE
8	CS101	SITE LAYOUT PLAN
9	CS102	SITE LAYOUT PLAN
10	CS501	SITE LAYOUT DETAILS
11	CS502	SITE LAYOUT DETAILS
12	CG101	SITE GRADING PLAN
13	CG102	SITE GRADING PLAN
14	CG103	PRE & POST DRAINAGE AREA MAPS
15	CG501	SITE GRADING DETAILS
16	CG502	SITE GRADING DETAILS
17	CU101	SITE UTILITY PLAN
18	CU102	SITE UTILITY PLAN
19	CU201	UTILITY PROFILES
20	CU202	UTILITY PROFILES
21	CU203	UTILITY PROFILES
22	CU204	UTILITY PROFILES
23	CU501	SITE UTILITY DETAILS
24	CU502	SITE UTILITY DETAILS
25	CU503	SITE UTILITY DETAILS
26	FP101	FIRE PROTECTION DETAILS
27	LP101	LANDSCAPE PLAN
28	LP102	LANDSCAPE PLAN
29	LP501	LANDSCAPE NOTES & DETAILS

REFERENCE DRAWINGS
ES-1 SITE PLAN - LIGHTING
ES-2 SITE PLAN - LIGHTING
ES-3 LIGHTING DETAILS

ADJACENT PROPERTY OWNERS
THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO ALL PROPERTY OWNERS AND RESIDENTS OF PROPERTY ADJACENT TO A DEVELOPMENT OR OFFSITE IMPROVEMENTS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS

A. PROVIDE 30-DAY ADVANCED NOTICE TO PROPERTY OWNERS FOR CONSTRUCTION WITHIN THE RIGHT-OF-WAY WHEN PRIVATE IMPROVEMENTS ARE AFFECTED OR PAVEMENT WIDENING WILL OCCUR BETWEEN THE EXISTING PAVEMENT AND THE PROPERTY OWNER.
B. PROVIDE 30-DAY ADVANCE NOTICE IF ANY CONSTRUCTION IS OCCURRING ON OFFSITE PRIVATE PROPERTY (INCLUDING EASEMENTS)
C. WHEN PRIVATE IMPROVEMENTS ARE AFFECTED, THE NOTICE MUST INDICATE THE IMPACT ON THE PRIVATE IMPROVEMENTS. PRIVATE IMPROVEMENTS INCLUDE, BUT ARE NOT LIMITED TO, MAILBOXES, FENCES, ENTRANCES, LANDSCAPING, ETC.
D. NO NOTICE IS REQUIRED FOR CONSTRUCTION THAT IS LIMITED TO THE DEVELOPMENT SITE AND RIGHT-OF-WAY WHERE PRIVATE IMPROVEMENTS ARE NOT AFFECTED.
E. IN LIEU OF A REQUIRED 30-DAY NOTICE, THE CITY WILL ACCEPT A SIGNED ACKNOWLEDGEMENT THAT THE PROPERTY OWNER IS SATISFIED THAT THEY HAVE BEEN PROVIDED AN EXPLANATION OF THE PROJECT SCOPE OF WORK

APPROVED FOR CONSTRUCTION
CHESAPEAKE DEPT OF DEVELOPMENT & PERMITS

YES	NO	N/A	
✓			Erosion and Sediment Control
✓			Entrance and Site Improvements
✓			Stormwater Quality (BMP)
✓			Street Improvements
✓			Drainage Improvements
✓			Public Utilities Improvements
	✓		Soil Drainage Management Plan (SDMP)
✓			Landscape Plan

Date: Sep 5, 2019
Refer to Approval Letter

APPROVED UNDER THE VIRGINIA STORMWATER MANAGEMENT REGULATIONS PART IIC CRITERIA WITH LEVEL 1 RETENTION BASIN

ALL CONSTRUCTION DESIGNS, METHODS, AND MATERIALS MUST BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CHESAPEAKE DEPT. OF DEVELOPMENT & PERMITS SUBJECT TO ITS INSPECTION AND CONTROL.

AC-194018-00

REVISION NO.	DESCRIPTION	DATE
1	REVISIONS PER CITY COMMENTS	4/29/2019
2	REVISIONS PER CITY COMMENTS	5/17/2019
3	REVISIONS PER CITY COMMENTS	6/10/2019

SUBMISSION NO.	DATE

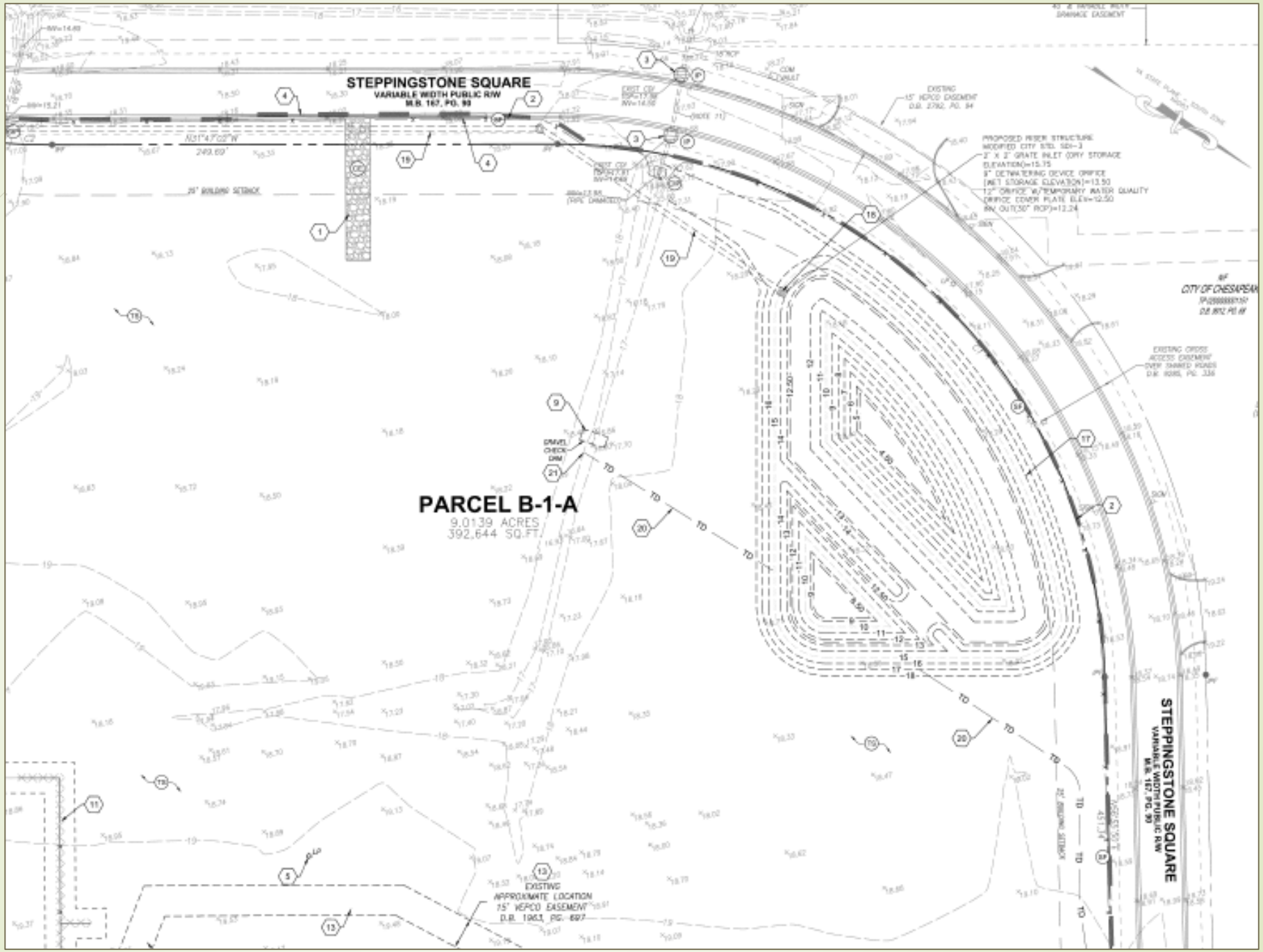
COMMONWEALTH OF VIRGINIA
KEVIN MARC SIEGEL
Lic. No. 047966
6/10/19
PROFESSIONAL ENGINEER

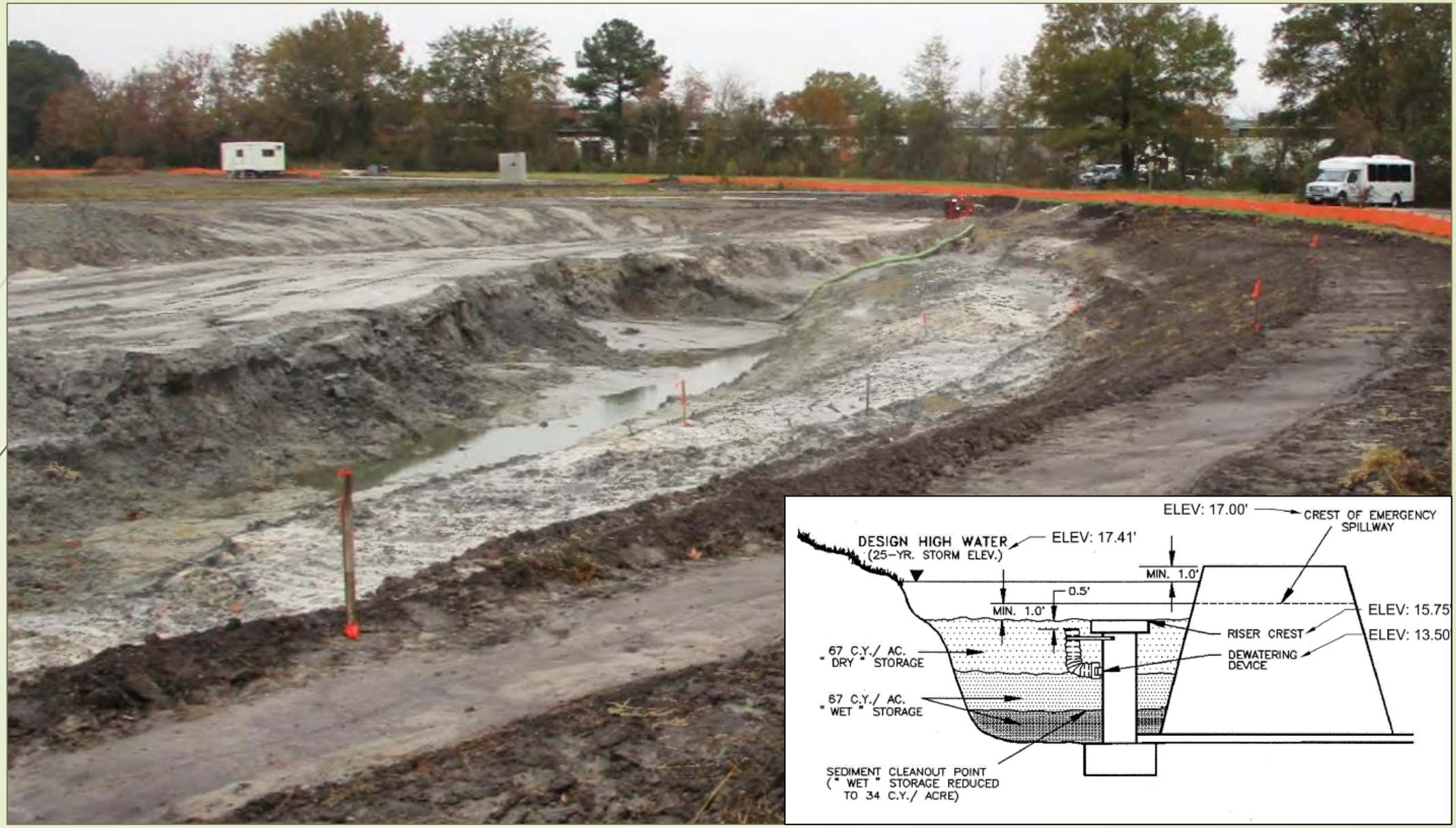
ATCS®
690 TOWN CENTER DRIVE, SUITE 201
NEWPORT NEWS, VIRGINIA 23606
(757) 504-2976 FAX (757) 637-0276
HAMPTON ROADS - RICHMOND
CHESAPEAKE - WILLIAMSBURG
WALDORF - ROANOKE - WASHINGTON, DC
WWW.ATCSPLC.COM

COVER SHEET
GREENBRIER NORTH COMMERCE PARK
PARCEL B-1-A
LOCATION
CHESAPEAKE, VIRGINIA

AUTHOR: RAB
CHECK: KMS
PROJ#: 09-0062
DATE: 2021/2019
SCALE: NTS

SHEET
GI001
SHEET: 1 OF 29


STEPPINGSTONE SQUARE
VARIABLE WIDTH PUBLIC R/W
M.B. 167, PG. 99
PARCEL B-1-A
9.0139 ACRES
392,644 SQ.FT.
PROPOSED RISER STRUCTURE
MODIFIED CITY STD. SD-3
2' X 2' GRATE INLET (DRY STORAGE
ELEVATION)=15.75
8" DEWATERING DEVICE ORIFICE
(WET STORAGE ELEVATION)=13.50
12" ORIFICE W/TEMPORARY WATER QUALITY
ORIFICE COVER PLATE ELEV=12.50
INV. OUT(30" RCP)=12.24
EXISTING
15' WEPCO EASEMENT
D.B. 1963, PG. 697
EXISTING
APPROXIMATE LOCATION
15' WEPCO EASEMENT
D.B. 2762, PG. 94
GRAVEL
CHECK
DAM
STEPPINGSTONE SQUARE
VARIABLE WIDTH PUBLIC R/W
M.B. 167, PG. 99


ELEV: 17.00'
CREST OF EMERGENCY SPILLWAY
DESIGN HIGH WATER (25-YR. STORM ELEV.)
ELEV: 17.41'
MIN. 1.0'
0.5'
MIN. 1.0'
ELEV: 15.75'
RISER CREST
ELEV: 13.50'
DEWATERING DEVICE
67 C.Y./ AC. " DRY " STORAGE
67 C.Y./ AC. " WET " STORAGE
SEDIMENT CLEANOUT POINT (" WET " STORAGE REDUCED TO 34 C.Y./ ACRE)

- Ensure functioning outfall with temporary water control structure
- Ensure close coordination for sequence of construction (i.e., suitable material)
- Conversion to permanent SWM when contributing drainage area is fully stabilized
- Stabilize cut/fill slopes immediately and track perpendicular to the slopes
- Closely monitor dewatering operation to minimize downstream impacts
- Consider “wet socking” or wellpoint systems for high water tables (running sand)
- “Box cutting” is not permitted

Alternative ESC Measures

- Siltworm
- Filtrexx
- SiltSoxx
- Erosion Eels
- GutterBuddy
- Econocurb
- DiamondSock

2- Stage Combo Use As Delineation

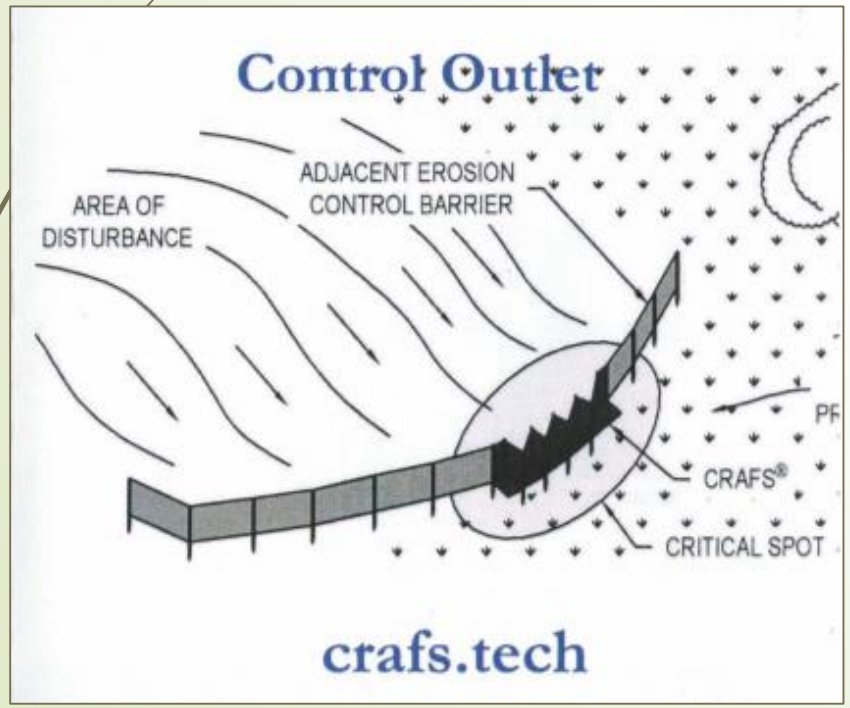
- Designed for linear projects where SAFETY and SEDIMENT control are of equal importance.
- High visible green delineation built into the top 5" creates a dual purpose for contractors by combining two fence systems into one; therefore, creating a savings in reduced cost in areas of installation, material and labor.
- 2-Stages of stormwater release - Helps prevent flooding and releases cleaner top water when flow is restricted.
- Reduces hydrostatic pressure that leads to failure or undermining.
- Horizontal belts woven within the fabric for staple attachment points.
- Available pre-assembled on wood post at 4' or 6' centers
- Also available in 500' & 1000' Master Rolls that can be used with wood or steel posts. Can be sliced/plowed in.

CRAFS®

Corrugated Retention and Filtration Systems for Sedimentation Control

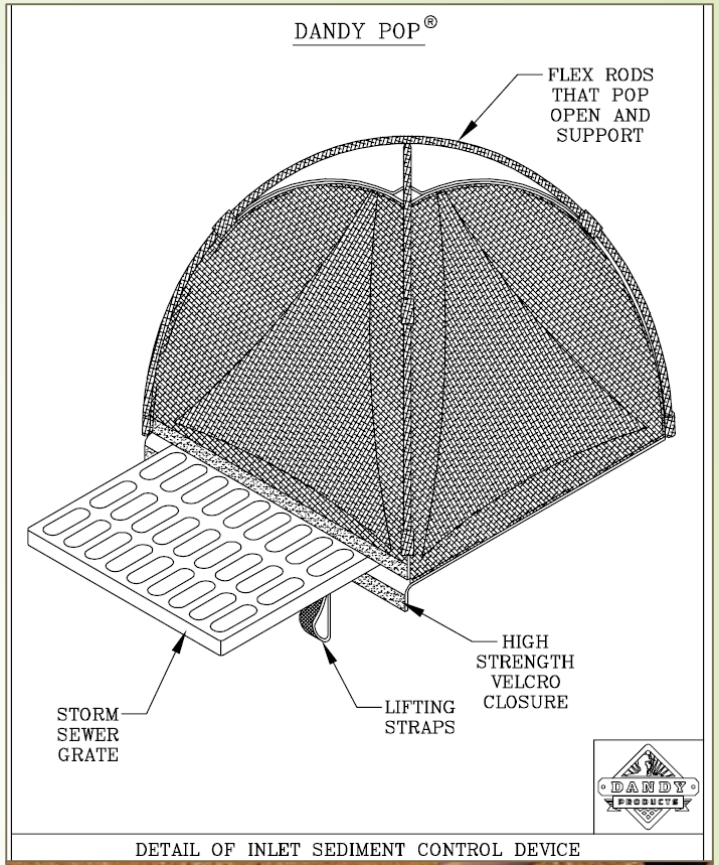
Control Outlets

- Engineered for structural stability and rapid filtered seepage
- Multiple adjacent retention & filtration wedges divide and distribute runoff entering the system
- Provides a **Control Outlet** that prevents sediment contamination to adjacent property and waterways
- 95% sediment trapping efficiency



SILT - SAVER

EROSION AND SEDIMENT CONTROL PRODUCTS



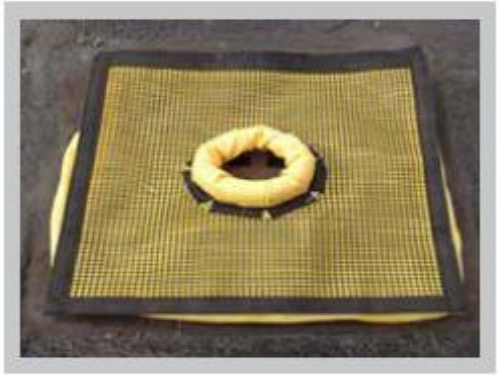
DETAIL OF INLET SEDIMENT CONTROL DEVICE

GRATE GATOR

An innovative new “above grate” stormwater filter

GrateGator is an “above the grate” stormwater filter designed to remove sediment and debris from stormwater as it enters the catch basin. Manufactured with a durable, high flow filter, the GrateGator has superior flow rates to alternative methods or products used in this application. With built in overflow protection, the GrateGator is efficient at filtering out contaminents while allowing bypass during exteme wet weather events. GrateGator can be cleaned and reused over and over for the life of the project.

Type HD



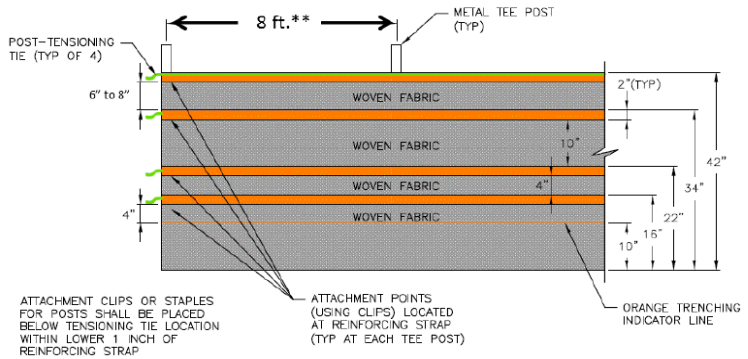
Type A

Type B

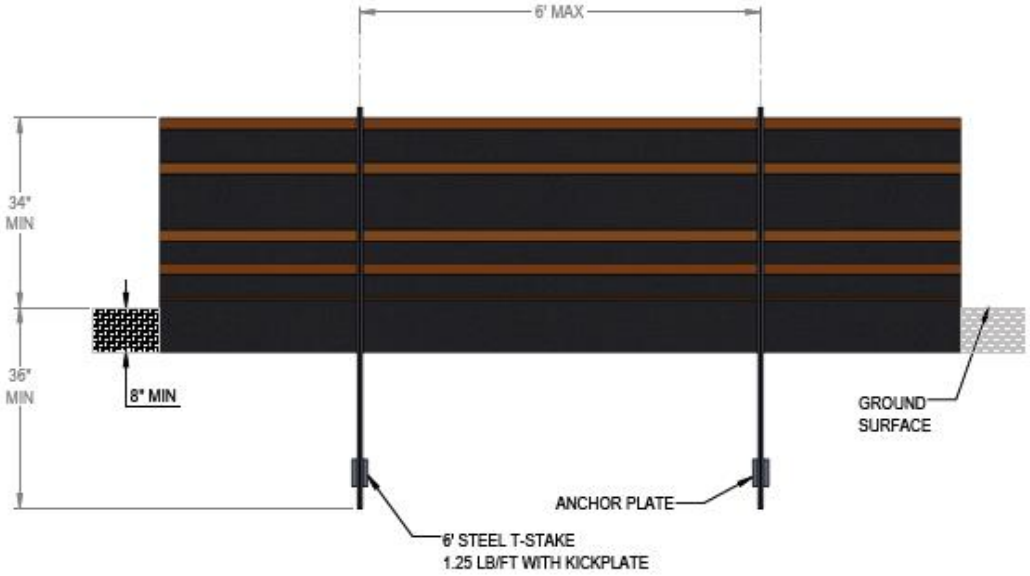
SMARTfence 42 is a heavy-duty, high-tensile/ high-modulus, woven geotextile sediment fence. Designed using a value engineering approach, it is equivalent in strength and stiffness to that of wire or chain-link backed silt fence for less money, significantly lower carbon emissions and less material waste.

This woven geotextile fence is specifically designed and fabricated to withstand high-tensile stresses and to prevent excessive material elongation and strain. It is built to resist fence deflection and ultimate failure due to ripping, sagging or overturning from forces associated with excessive backwater depths, debris flows and overtopping.

SMARTfence® HD



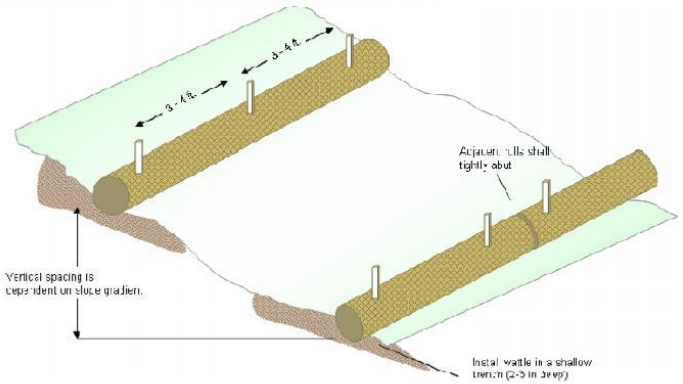
** Recommended post spacing reduces to 4 ft. to 6 ft. spacing in fence installations at low areas of the watershed where excess backwater depth behind the fence of anticipated during storm events



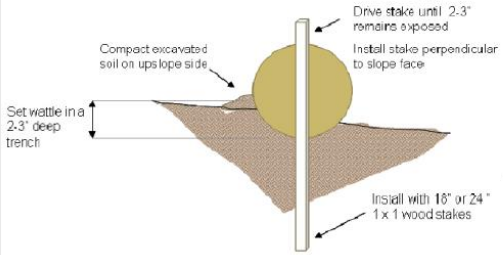
NORTH AMERICAN GREEN®

A tensar. Company

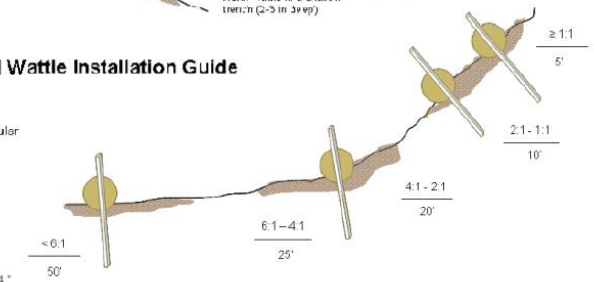
Straw Wattle Installation Guide



Typical Wattle Installation Guide



Entrenchment Detail



Typical Wattle Spacing based on Slope Gradient

- Ditch Check Dams
- Effective Sediment Control
- Diversion Dikes
- Fast & Easy Installation
- Drop Inlet Protection
- Conforms to Curves & Rough Terrain
- Continuous Barrier
- Lightweight & Durable
- Temporary Ditch Liner
- Reusable
- Stream & Pond Protection

Manufactured by Triangular Silt Dike™ Company, Inc.
US Patent No. 5,605,416

Triangular Silt Dike™

Development Advisory – 50
July 30, 2019

Builder Responsibility on Single Family Vegetation

The City met with TBA in 2016 to clarify the responsibilities of builders on erosion and sediment control. The City provided guidance to the builders regarding stabilization requirements. It has come to the City's attention that there has been frequent noncompliance, therefore the City is sending out this Development Advisory which will reemphasize the requirements.

The City is required to enforce stabilization requirements on all new and infill single family construction lots in accordance with DEQ regulations.

Single family is treated differently than land disturbing activities in multifamily and commercial projects where a bond has been posted by a contractor or developer which is not released until the site is fully vegetated. Although full vegetation is the intent of the regulations, vegetation is not required for single family in order to obtain a CO.

The minimum requirements for single family home construction from the DEQ regulations are:

> "The homebuilder establishing temporary soil stabilization, including perimeter controls for an individual lot prior to occupation of the home by the homeowner, and informing the homeowner of the need for, and benefits of, final stabilization."

The minimum builder responsibility is:

- Broadcast seed and 75% straw mulch or hydroseed (see attached Examples of Temporary Stabilization).
- Advise the homeowner of benefits of final stabilization.

The homeowner is responsible for the following:

- Achieving final stabilization with a mature stand of grass, evenly distributed that will inhibit erosion.

This stabilization is to be in place within seven (7) days of achieving final grade. This requirement has been added to the building inspector's checklist of requirements prior to issuance of a CO.

In the coming weeks the City will provide a handout for builders to inform them of their responsibility and include information to be provided to new homeowners' regarding their obligations once they assume ownership.

Temporary vegetation will be added to the CO checklist on August 5, 2019. This is not a new requirement, but one that requires more City scrutiny to insure compliance with state stormwater management regulations. If you have any questions contact Dave Mergen at 757 382-6307 or dmergen@cityofchesapeake.net or Pat Hughes at 757 382-6239 or phughes@cityofchesapeake.net.

“Final stabilization"

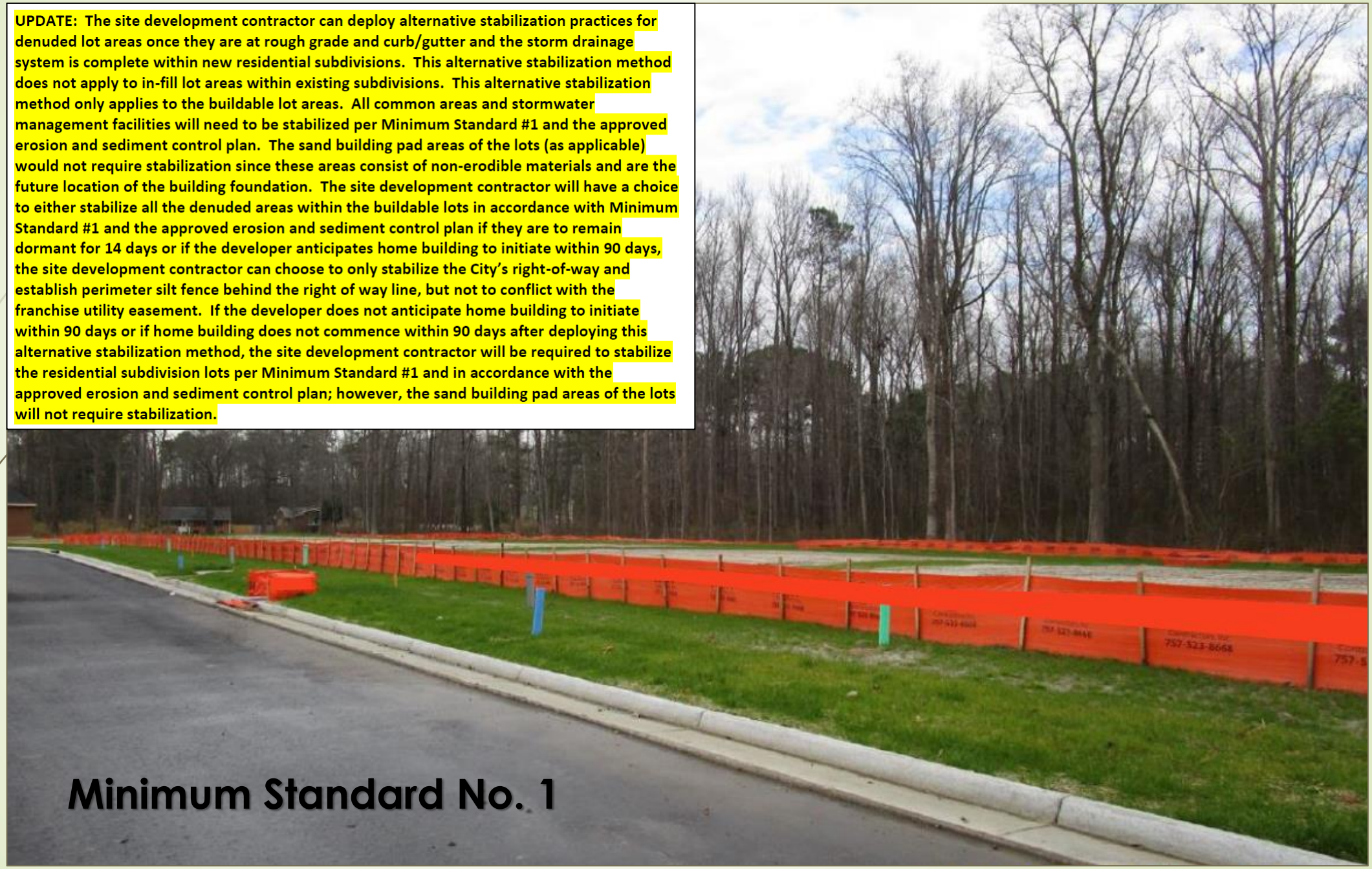
- For individual lots in residential construction, final stabilization can occur by….
- The homebuilder establishing temporary soil stabilization, including perimeter controls for an individual lot prior to occupation of the home by the homeowner, and providing written notification to the homeowner of the need for, and benefits of, final stabilization.
- The operator shall maintain a copy of the written notification and a signed statement certifying that the information was provided to the homeowner within their SWPPP for three years.

Total Maximum Daily Loads (TMDLs)

Does this proposed land-disturbing activity discharge to a surface water identified as impaired or for which a TMDL wasteload allocation has been established and approved prior to the term of the general permit for (i) sediment or a sediment-related parameter or (ii) nutrients? **Yes**. If YES, then the following general permit (Part I B 4 a) and SWPPP requirements (Part II B 5) must be implemented for the land-disturbing activity:

- Permanent or temporary soil stabilization shall be applied to denuded areas within seven (7) days after final grade is reached on any portion of the site;
- Nutrients (e.g., fertilizers) shall be applied in accordance with manufacturer's recommendations or an approved nutrient management plan and shall not be applied during rainfall events;
- Inspections shall be conducted at a frequency of (i) at least once every four (4) business days or (ii) at least once every (5) business days and no later than 24 hours following a measurable storm event. In the event that a measurable storm event occurs when there are more than 24 hours between business days, the inspection shall be conducted on the next business day; and
- Representative inspections used by utility line installation, pipeline construction, or other similar linear construction activities shall inspect all outfalls.

UPDATE: The site development contractor can deploy alternative stabilization practices for denuded lot areas once they are at rough grade and curb/gutter and the storm drainage system is complete within new residential subdivisions. This alternative stabilization method does not apply to in-fill lot areas within existing subdivisions. This alternative stabilization method only applies to the buildable lot areas. All common areas and stormwater management facilities will need to be stabilized per Minimum Standard #1 and the approved erosion and sediment control plan. The sand building pad areas of the lots (as applicable) would not require stabilization since these areas consist of non-erodible materials and are the future location of the building foundation. The site development contractor will have a choice to either stabilize all the denuded areas within the buildable lots in accordance with Minimum Standard #1 and the approved erosion and sediment control plan if they are to remain dormant for 14 days or if the developer anticipates home building to initiate within 90 days, the site development contractor can choose to only stabilize the City's right-of-way and establish perimeter silt fence behind the right of way line, but not to conflict with the franchise utility easement. If the developer does not anticipate home building to initiate within 90 days or if home building does not commence within 90 days after deploying this alternative stabilization method, the site development contractor will be required to stabilize the residential subdivision lots per Minimum Standard #1 and in accordance with the approved erosion and sediment control plan; however, the sand building pad areas of the lots will not require stabilization.



Minimum Standard No. 1

- Phase your land disturbance
- Monitor franchise utility work
- Erosion control matting is required for all slopes 3:1 or steeper
- Monitor seasonal cover crops (i.e., winter rye) to ensure permanent stabilization
- At least 75% straw mulch is required for broadcast seed applications
- Ensure final grade material is “clean” and contains adequate top soil
- Time of year restrictions – winter vs. summer grass species – sod applications

Questions?

David Mergen
Environmental Specialist II
City of Chesapeake
Department of Public Works
306 Cedar Road
dmergen@cityofchesapeake.net
(757) 382-6307
(757) 531-5931

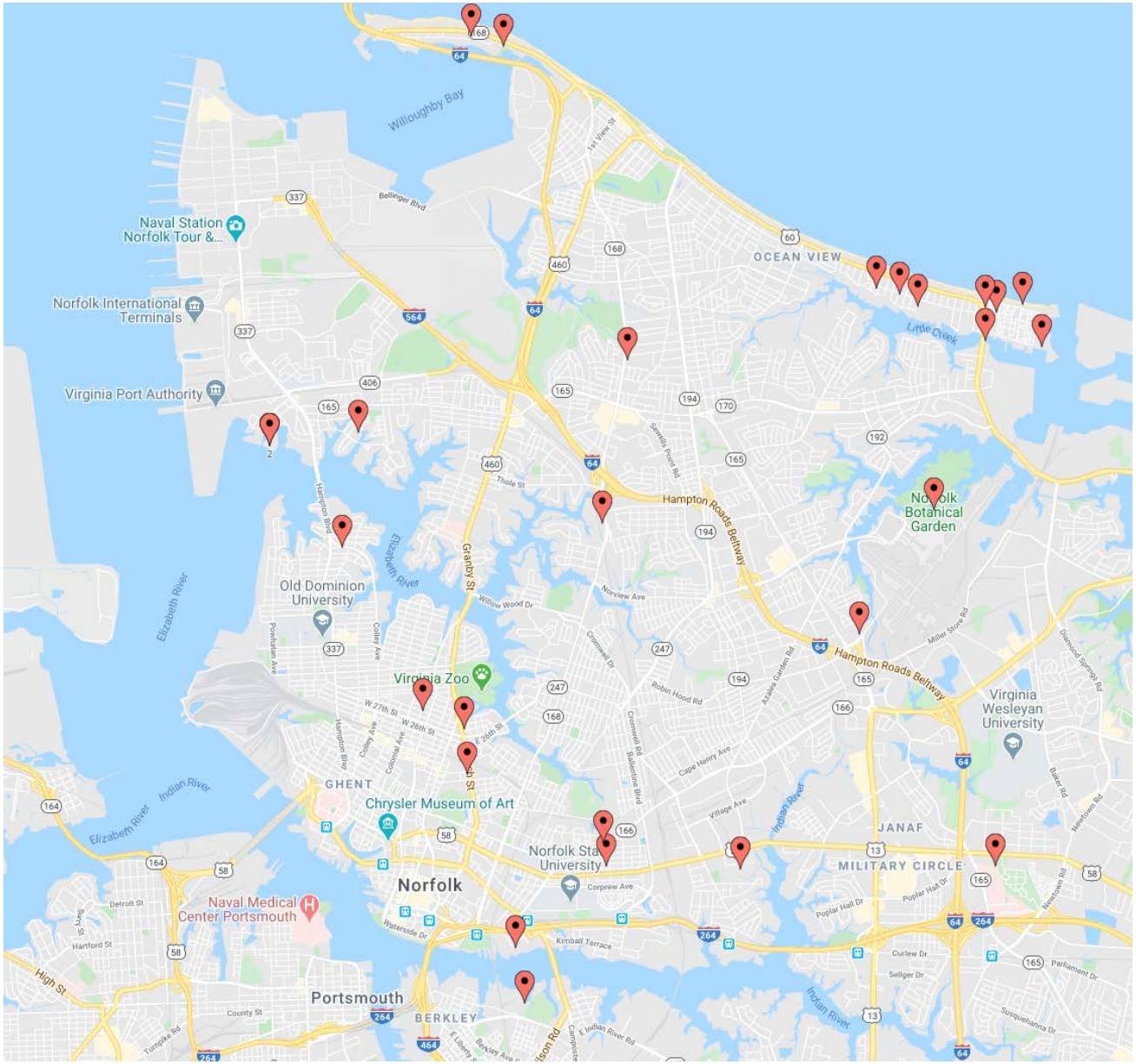
THE CITY OF NORFOLK

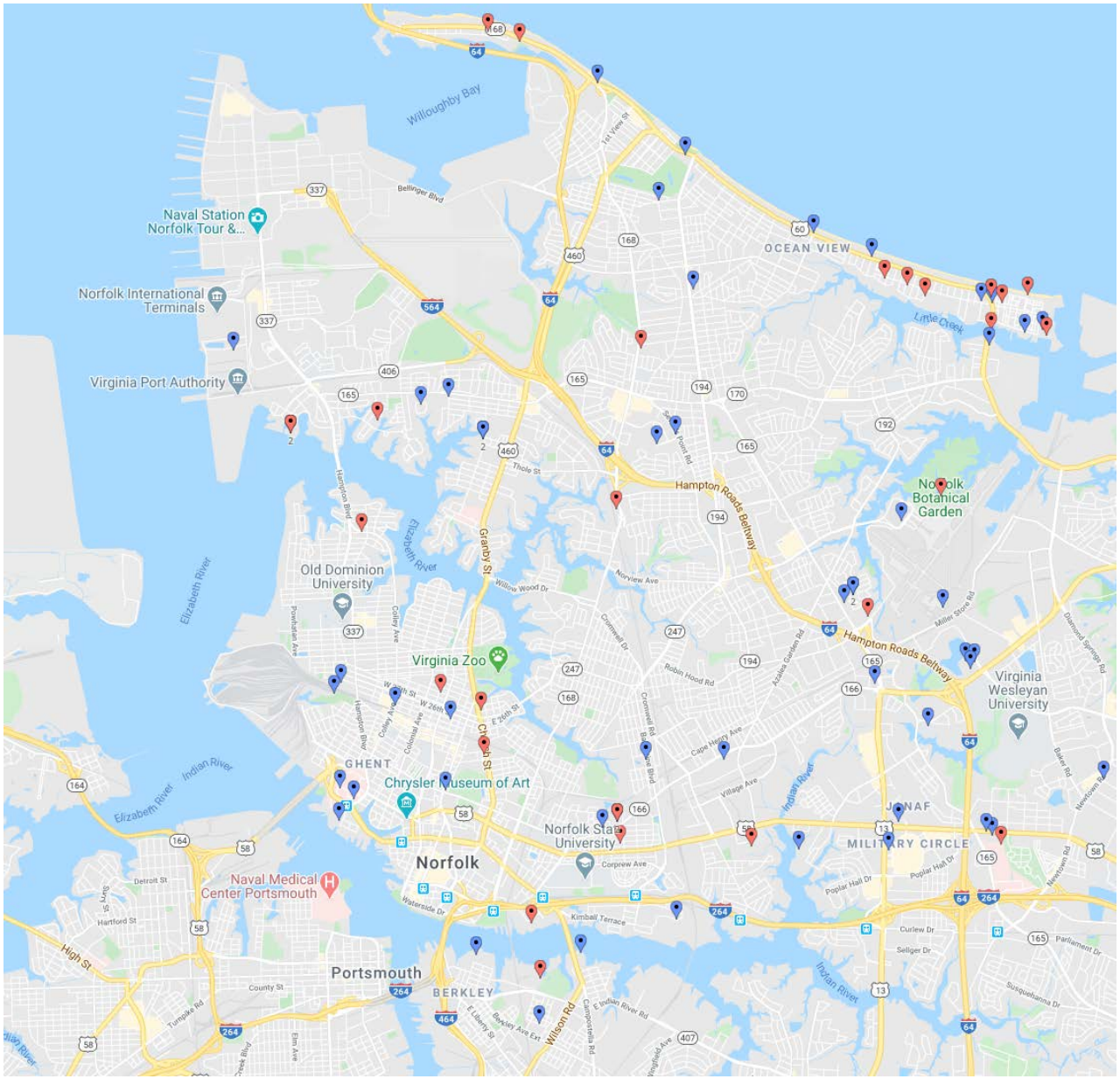
Bureau of Environmental Services

Local Inspector Perspectives

Common E&S Violations and Remedies

Odell Glenn – Construction Compliance Programs Manager


Willoughby Bay
Naval Station Norfolk Tour &...
Norfolk International Terminals
Virginia Port Authority
OCEAN VIEW
Little Creek
Hampton Roads Beltway
Norfolk Botanical Garden
Old Dominion University
Elizabeth River
Granby St
Virginia Zoo
Virginia Wesleyan University
GHENT
Chrysler Museum of Art
Norfolk State University
JANAF
MILITARY CIRCLE
Norfolk
Naval Medical Center Portsmouth
Portsmouth
BERKLEY
Indian River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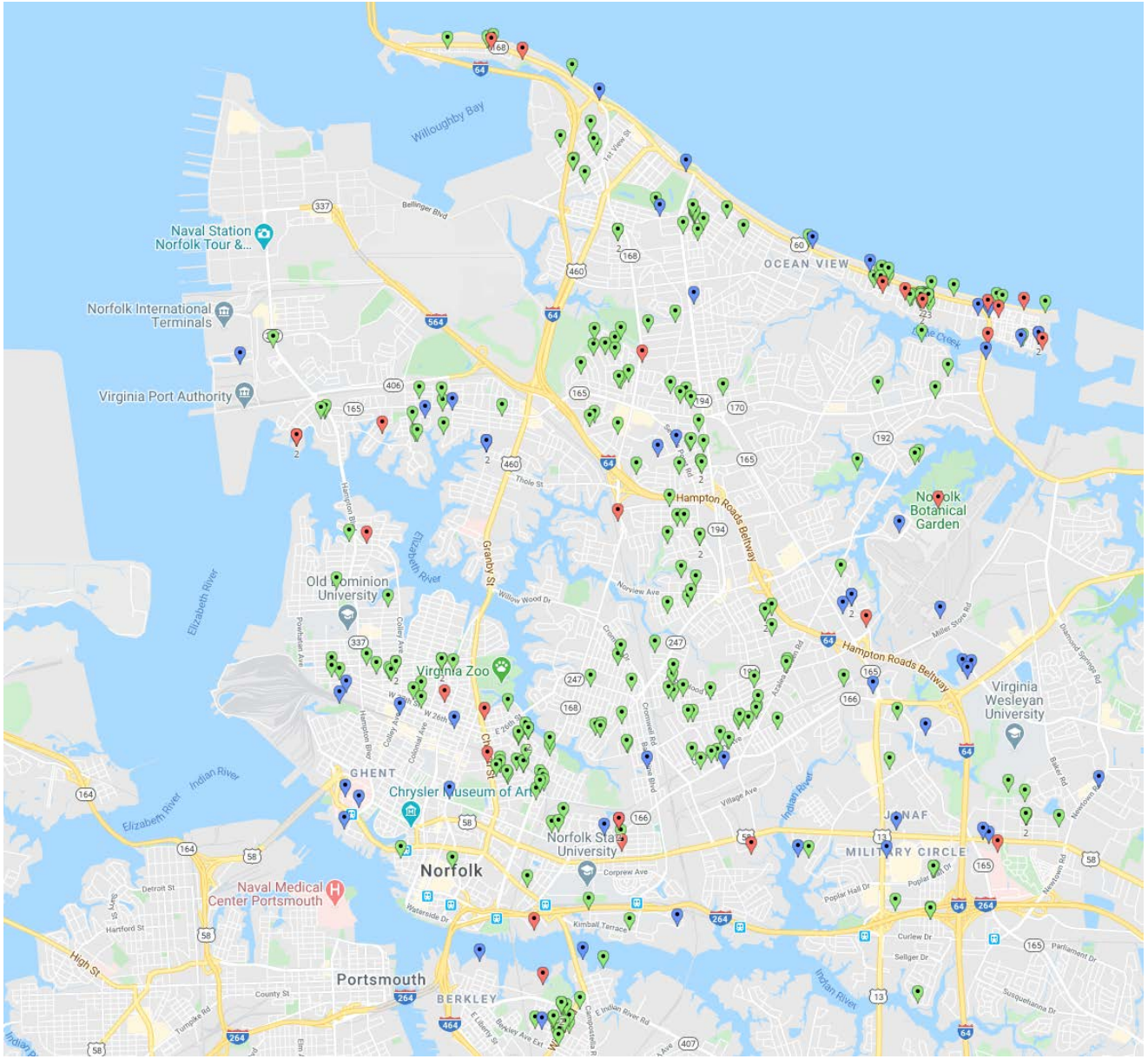
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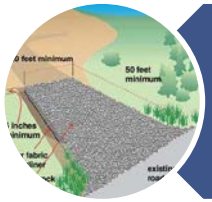
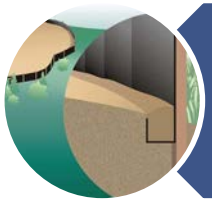
Portsmouth
BERKLEY
High St

E&S Compliance

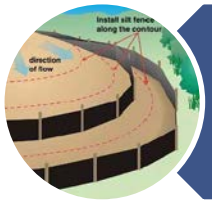


Construction Entrances

Street Sweeping



Perimeter control – Silt Fence



Stockpile Perimeter Control

Dewatering Operations

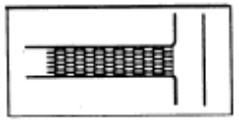
NORFOLK

Construction Entrance

1992 3.02

STD & SPEC 3.02

TEMPORARY STONE CONSTRUCTION ENTRANCE



CE

Definition

A stabilized stone pad with a filter fabric underliner located at points of vehicular ingress and egress on a construction site.

Purpose

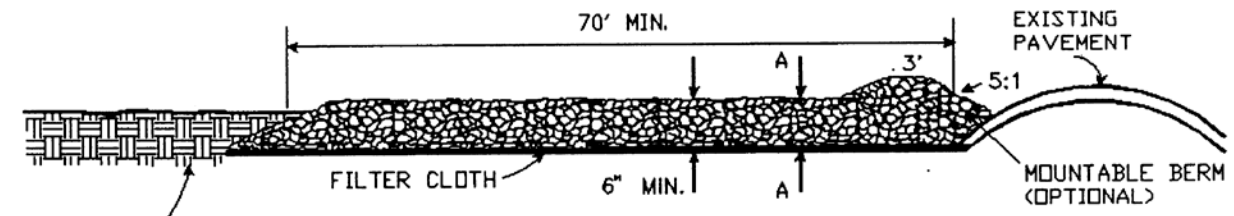
To reduce the amount of mud transported onto paved public roads by motor vehicles or runoff.

Conditions Where Practice Applies

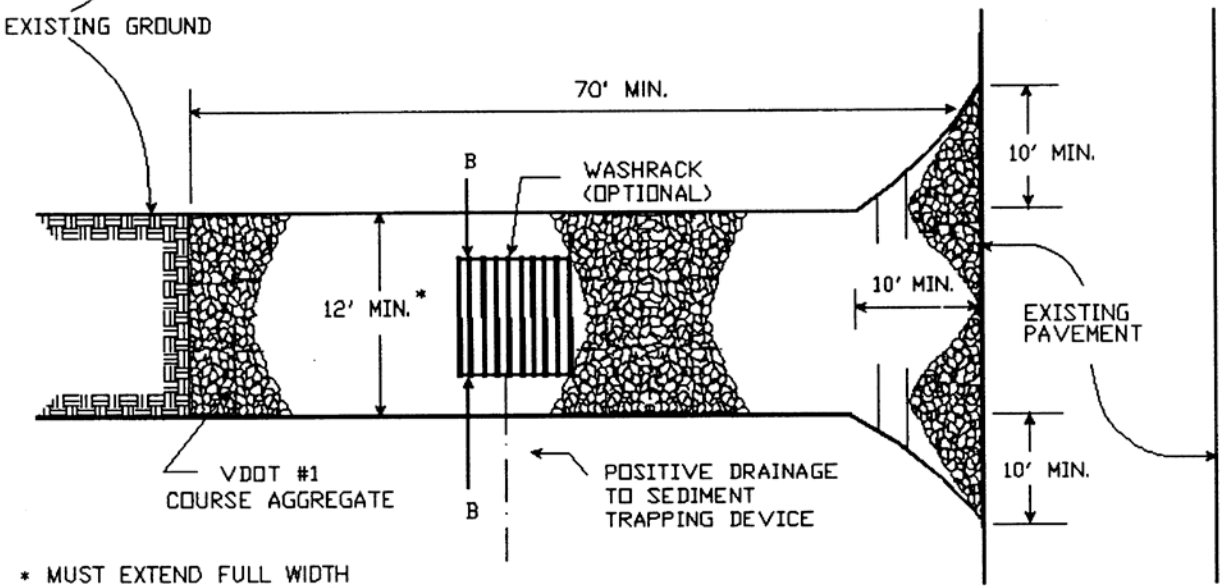
Wherever traffic will be leaving a construction site and move directly onto a public road or other paved area.

NORFOLK

STONE CONSTRUCTION ENTRANCE

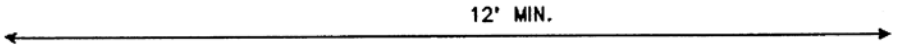


SIDE ELEVATION



* MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION

PLAN VIEW



Stone Size

VDOT #1

VDOT #3

NORFOLK

Stone Size

VDOT #1

Crushed Concrete

NORFOLK

Construction Entrance

Ineffective Construction Entrances

Construction Entrance

Ineffective Construction Entrance

Ineffective Construction Entrance

Ineffective Construction Entrances

Construction Entrance

Construction Entrance

Construction Entrance

Construction Entrance

Sediment Tracking Onto Street

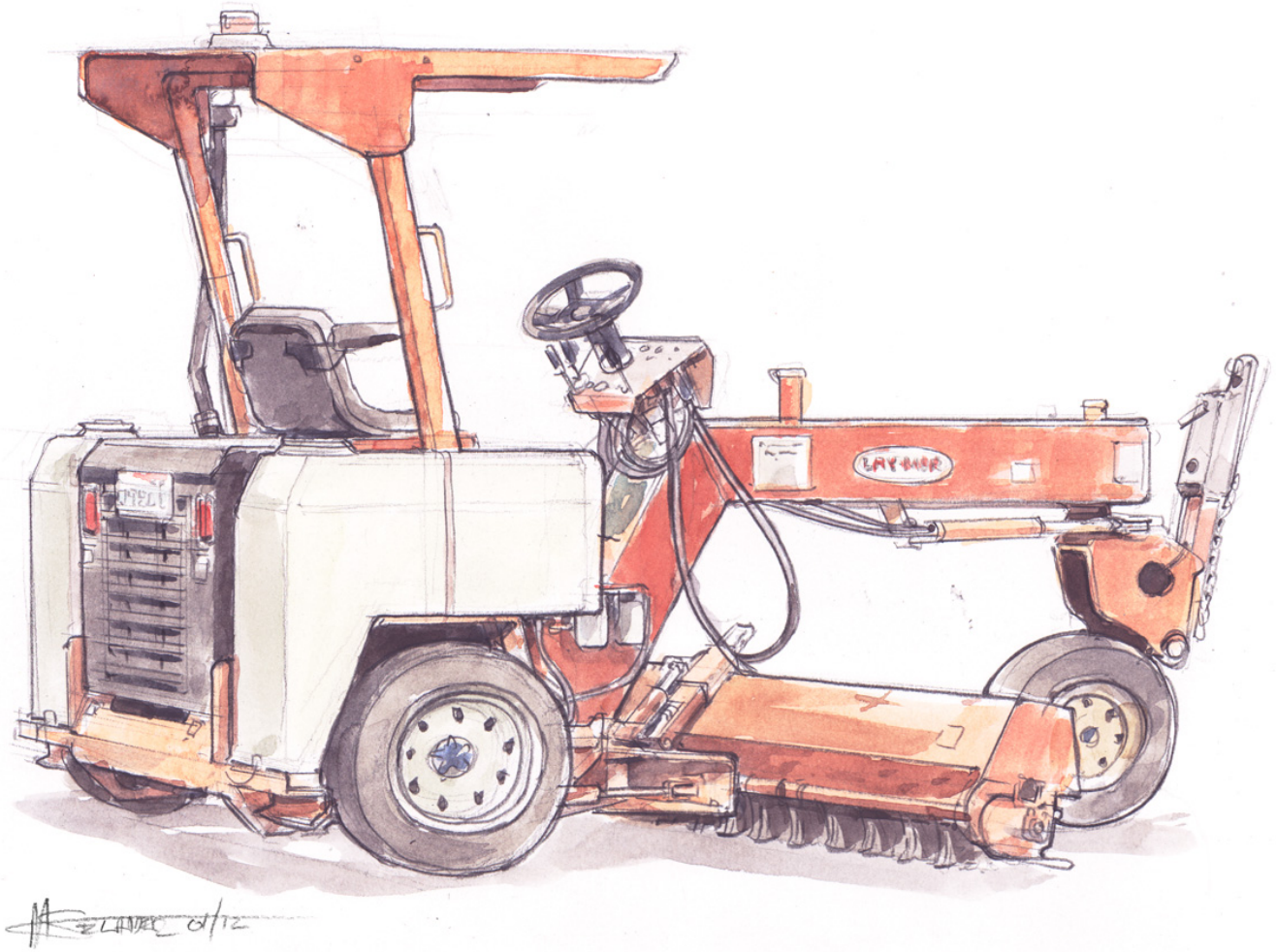
Tracking

Tracking

Tracking

Tracking

Sweeping Street

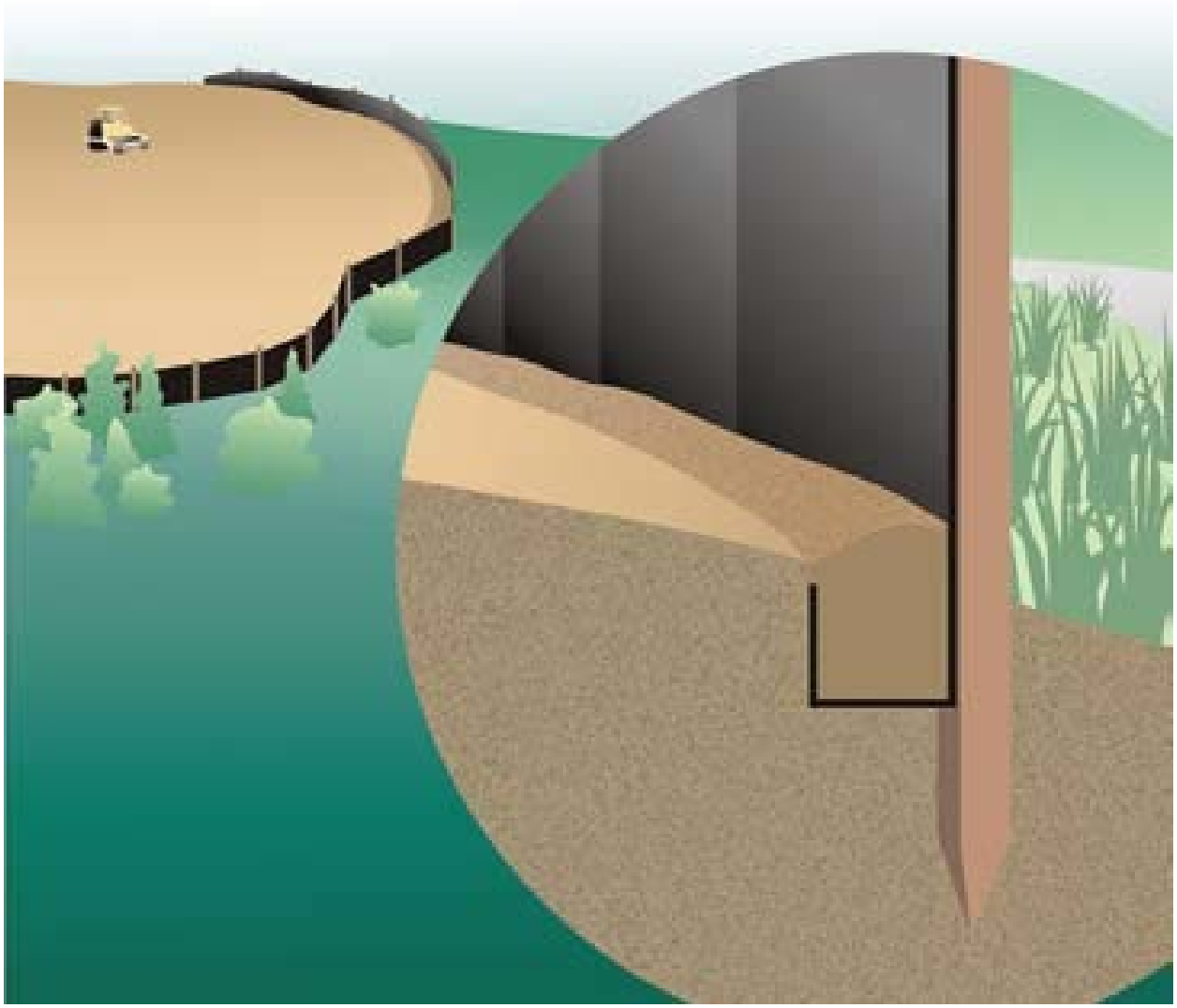


Hand Brooms

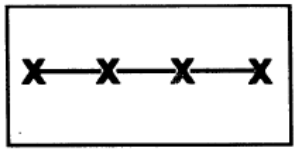
Tractors

Collection Attachment

Silt Fence



STD & SPEC 3.05



SILT FENCE

SF

Definition

A temporary sediment barrier consisting of a synthetic filter fabric stretched across and attached to supporting posts and entrenched.

Purposes

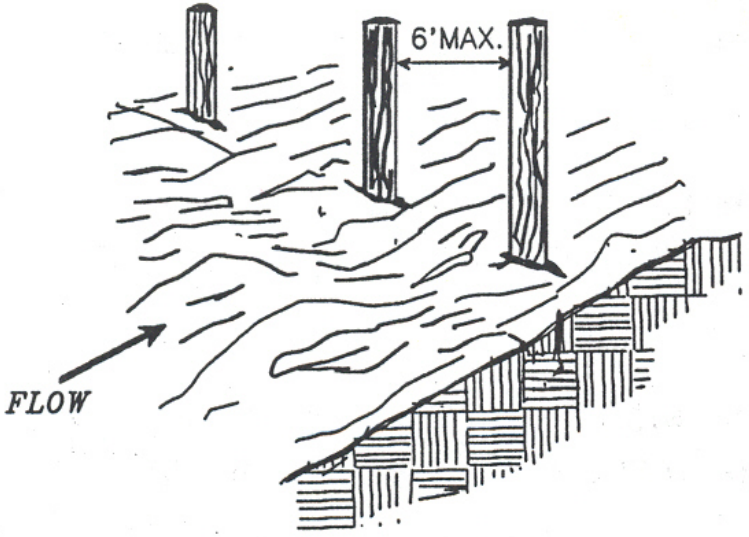
1. To intercept and detain small amounts of sediment from disturbed areas during construction operations in order to prevent sediment from leaving the site.

2. To decrease the velocity of sheet flows and low-to-moderate level channel flows.

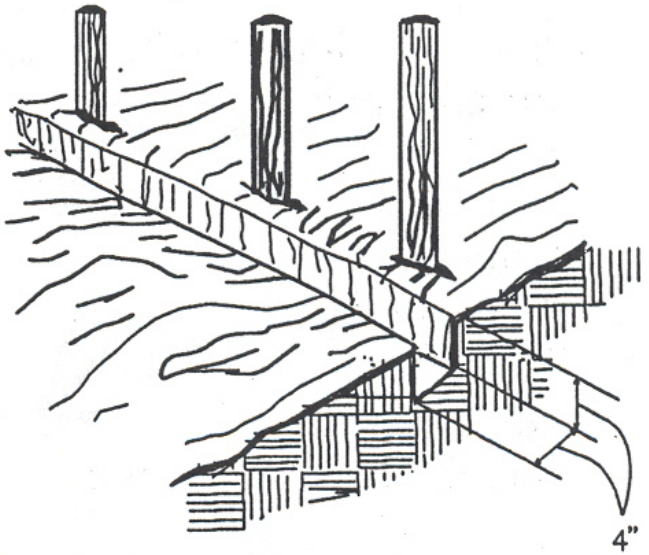
NORFOLK

CONSTRUCTION OF A SILT FENCE (WITHOUT WIRE SUPPORT)

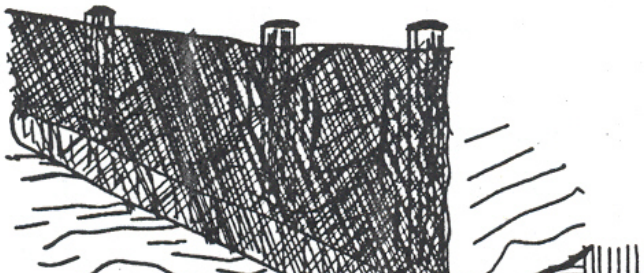
1. SET THE STAKES.



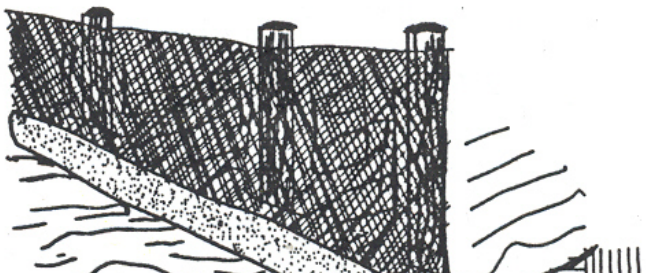
2. EXCAVATE A 4"X 4" TRENCH UPSLOPE ALONG THE LINE OF STAKES.



3. STAPLE FILTER MATERIAL TO STAKES AND EXTEND IT INTO THE TRENCH.



4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



Properly Installed Silt Fence

No Silt Fence

Properly Installed Silt Fence

NORFOLK

Silt Fence Installed Incorrectly

Improperly Installed Silt Fence

Improperly Installed Silt Fence

Ineffective Silt Fence

Properly Installed Silt Fence

Properly Installed Silt Fence

Properly Installed Silt Fence

Common Silt Fence Violation

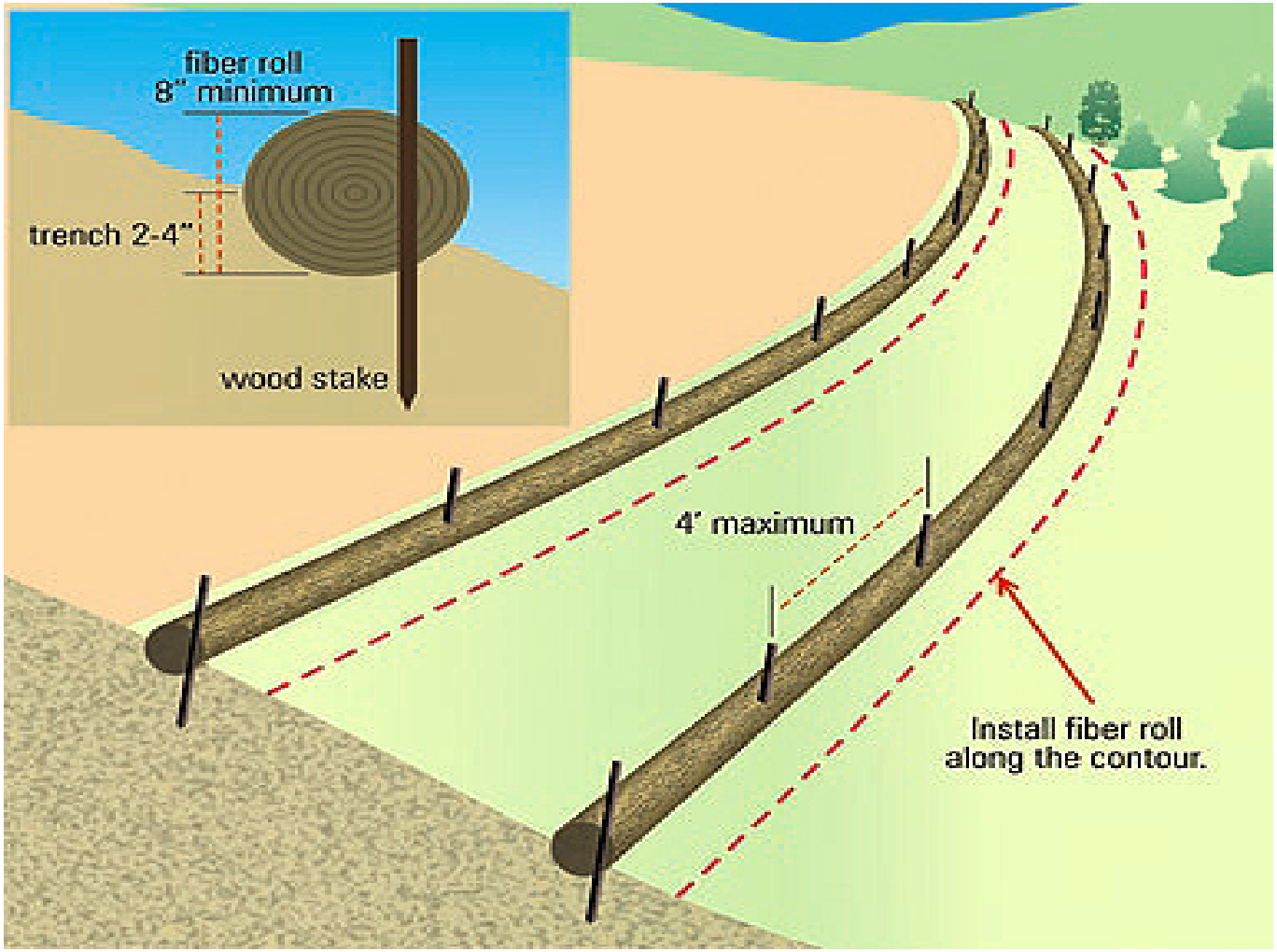
Safety Fence & Silt Fence

Securely sealed at joint

Securely sealed at joint

No Silt Fence

Wattles


fiber roll
8" minimum
trench 2-4"
wood stake
4' maximum
Install fiber roll
along the contour.

Effective Wattles

Effective Wattles

Ineffective Wattles

Ineffective Wattles

Soil Stockpile Perimeter Control

Soil Stockpile Perimeter Control

No Soil Stockpile Perimeter Control

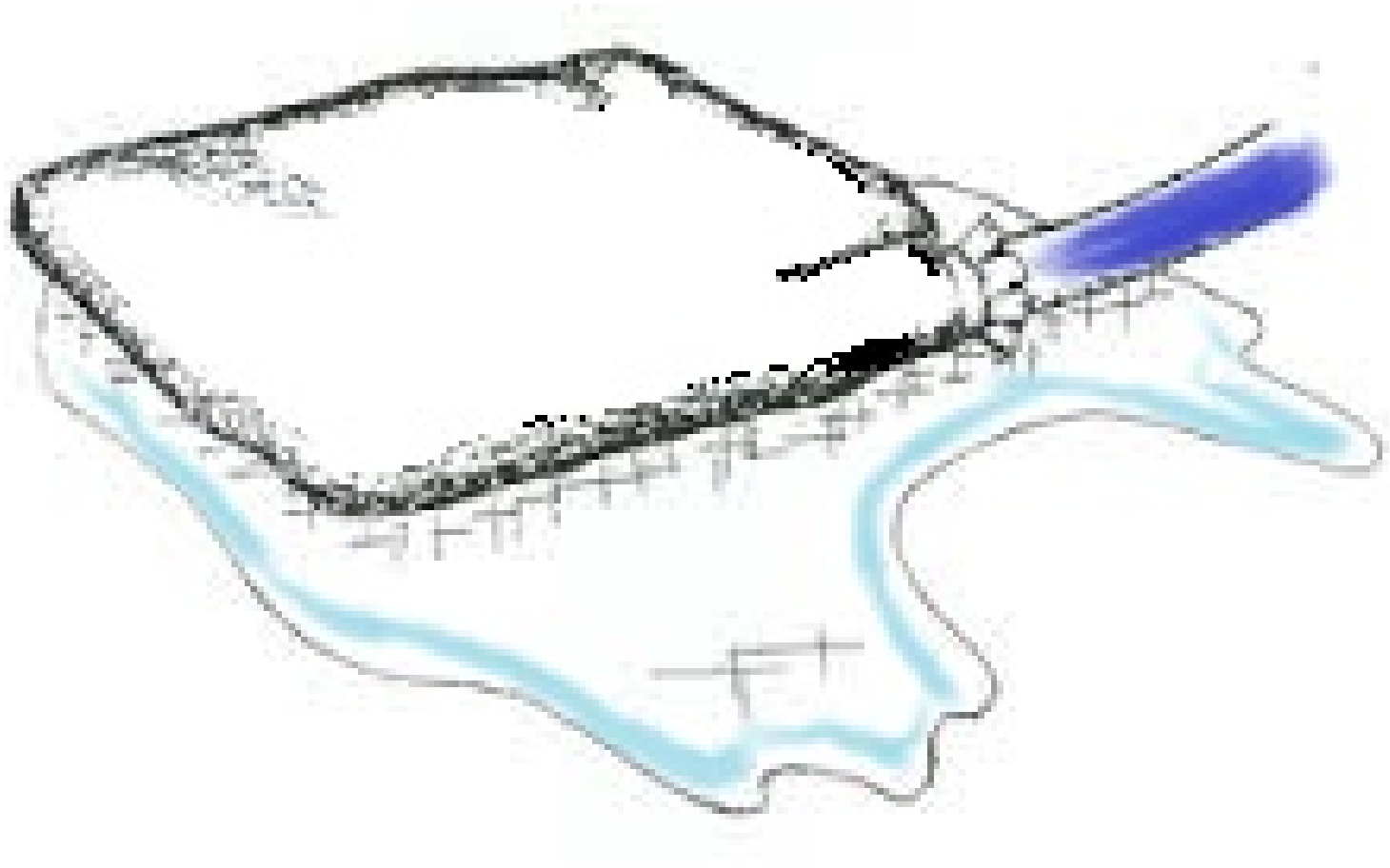
Soil Stockpile Perimeter Control

Improper Stockpile Location

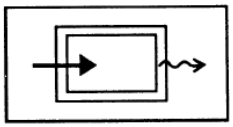
Soil Stockpile Perimeter Control

Improper Stockpile Perimeter Control

Dewatering



STD & SPEC 3.26



DEWATERING STRUCTURE

DS

Definition

A temporary settling and filtering device for water which is discharged from dewatering activities.

Purpose

To filter sediment-laden water prior to the water being discharged off-site.

Conditions Where Practice Applies

Wherever sediment-laden water must be removed from a construction site by means of pumping.

NORFOLK

No Filter bag

No Filter bag

No Filter bag

Wrong Size Filter bag

Wrong Size Filter bag

Filter bag in Stone

Not a Filterbag

Dewatering Causing Erosion

Dewatering To Nearest Inlet

Dewatering Baffles

Duct Tape

Dewatering Clamp

Filter bag in Stone

Dewatering On Stone

Ineffective Filter bag

Ineffective Filter bag

Dewatering Through Stockpile

Dewatering to nearest inlet

Dewatering Offsite

Dewatering Over Large Distance

Dewatering Over Large Distance

Dewatering Over Large Distance

Pump placed in sediment

Pump placed in stone

Filter bag in Creek

Filter bag in Creek

Filter bag in Creek

Filter bag in Creek

Settling tanks

Settling tanks

BEFORE and After

Before and AFTER

Summary

- *Follow good practices for you CEs*
- *Make sure your SF is installed properly*
- *Filter your dewatering operations*

Questions?

Odell Glenn 664-4365
odell.glenn@norfolk .gov

NORFOLK

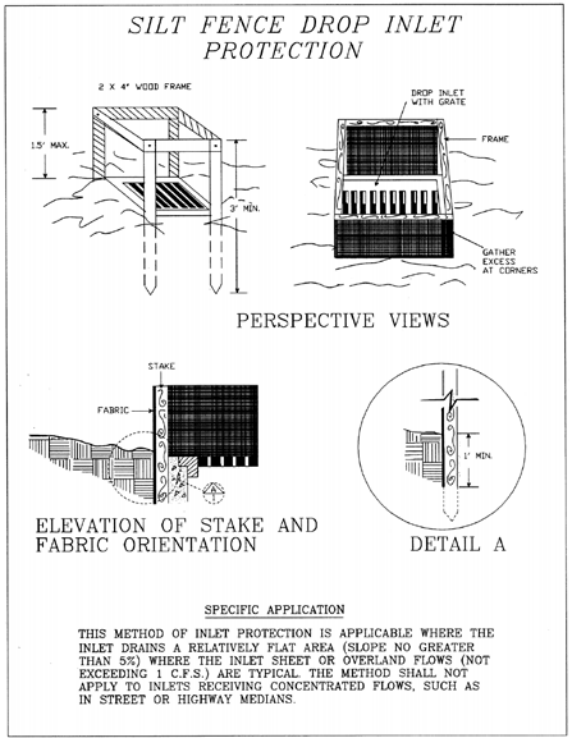
Inlet Protection

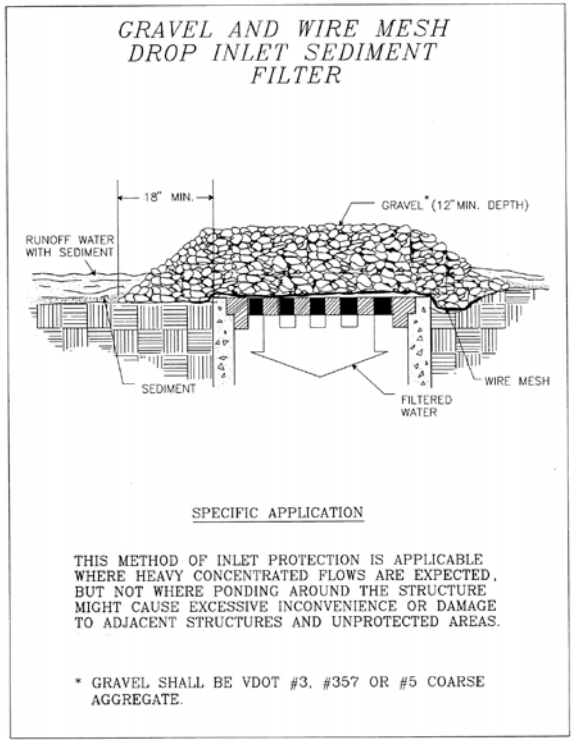
February 7 & 20, 2020
City of Newport News

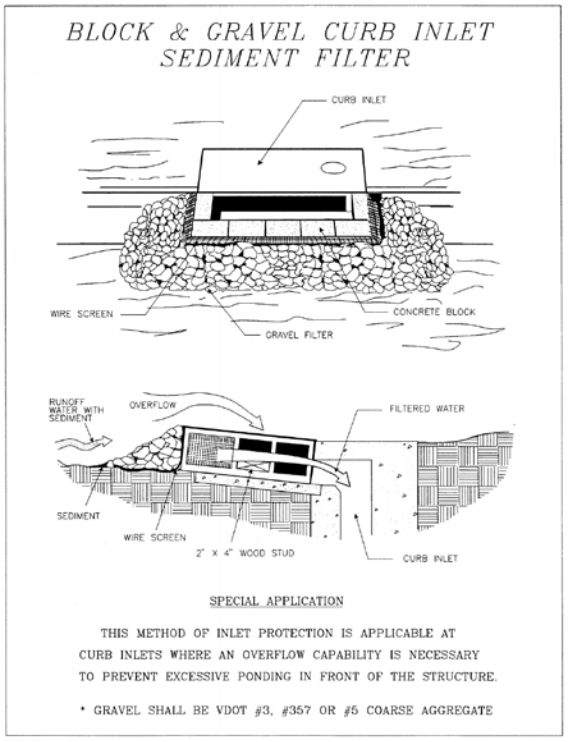
Newport News
Where Great Things Are Happening

Inlet Protection

VESCH 3.07

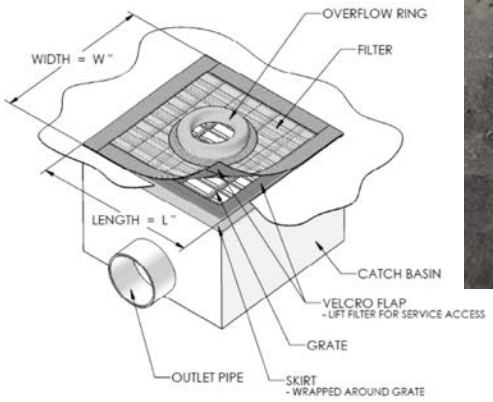


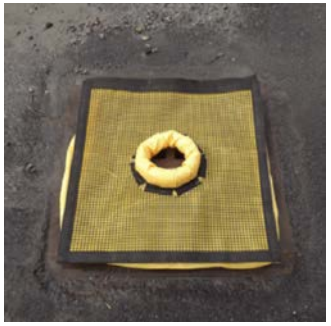


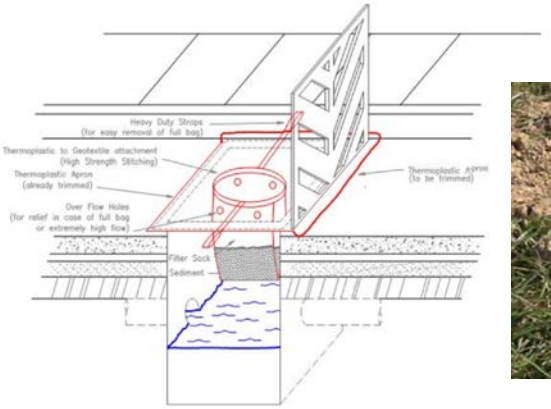


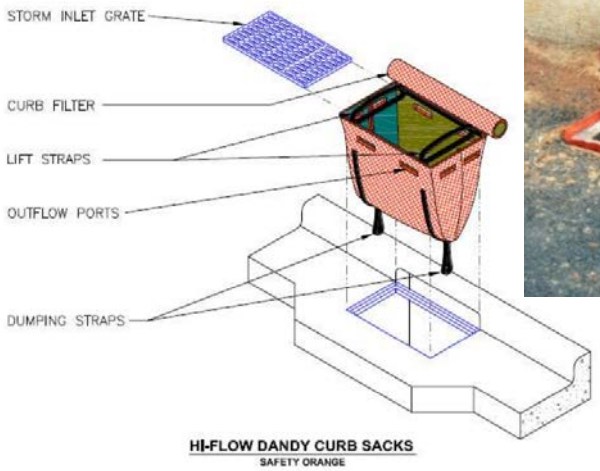
Inlet Protection

Manufactured





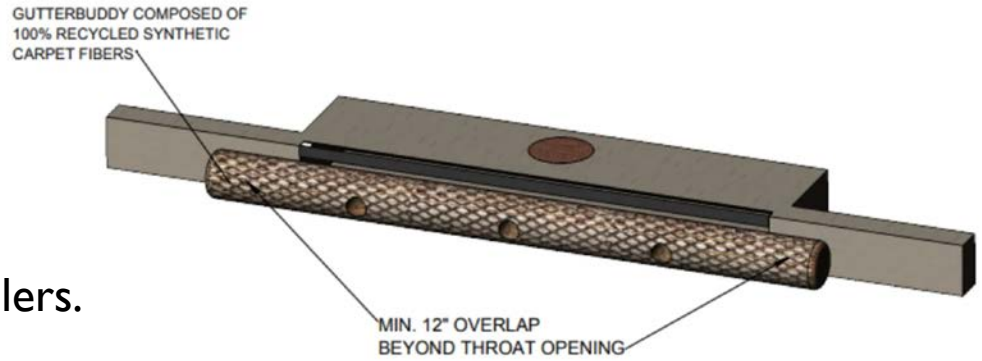




Inlet Protection

Manufactured

- A note about Gutter Buddies:
  - Rarely installed correctly!
  1. Min. 12” overlap on each side of inlet throat
  2. Overflow holes parallel to curb or pointing slightly up
  - Poorly Maintained
    - Inundated with sediment
      - Hard to wash
    - Fall down into the inlets
      - NN: Problem with boat propellers.

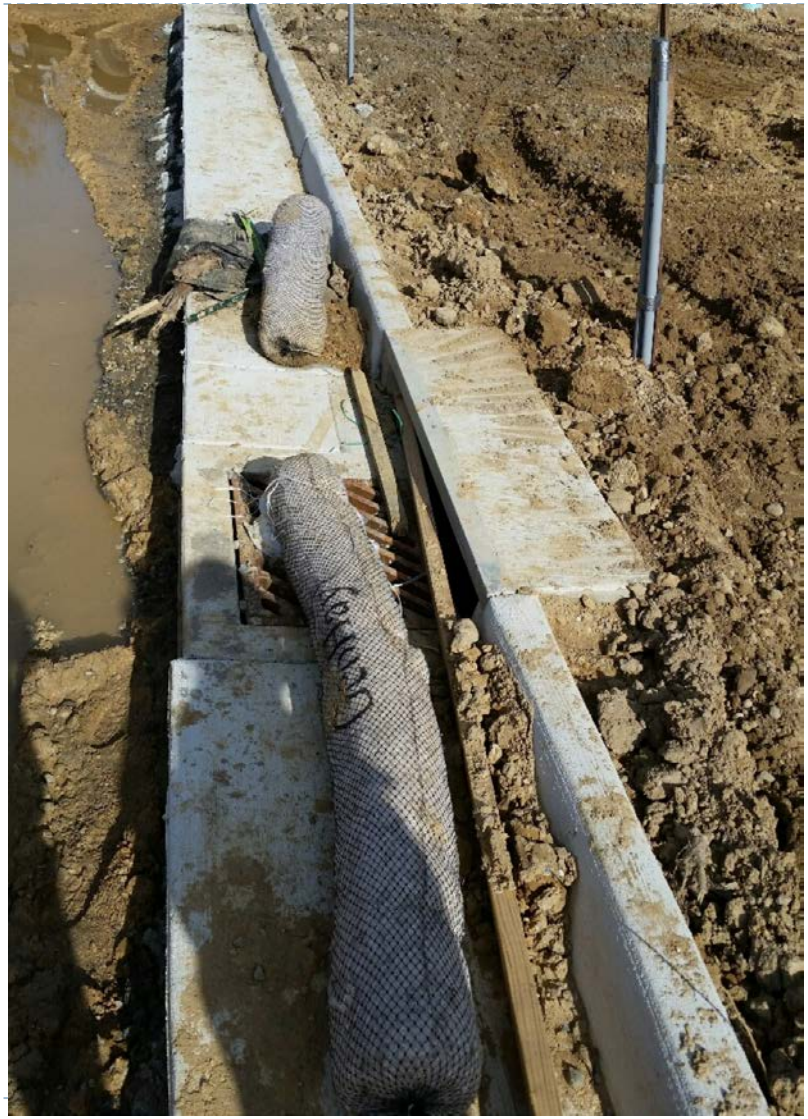


Fallen Gutter Buddy

Removed IP

Removed IP

Incorrect/Moved IP



Inadequate/Moved IP

Inadequate IP

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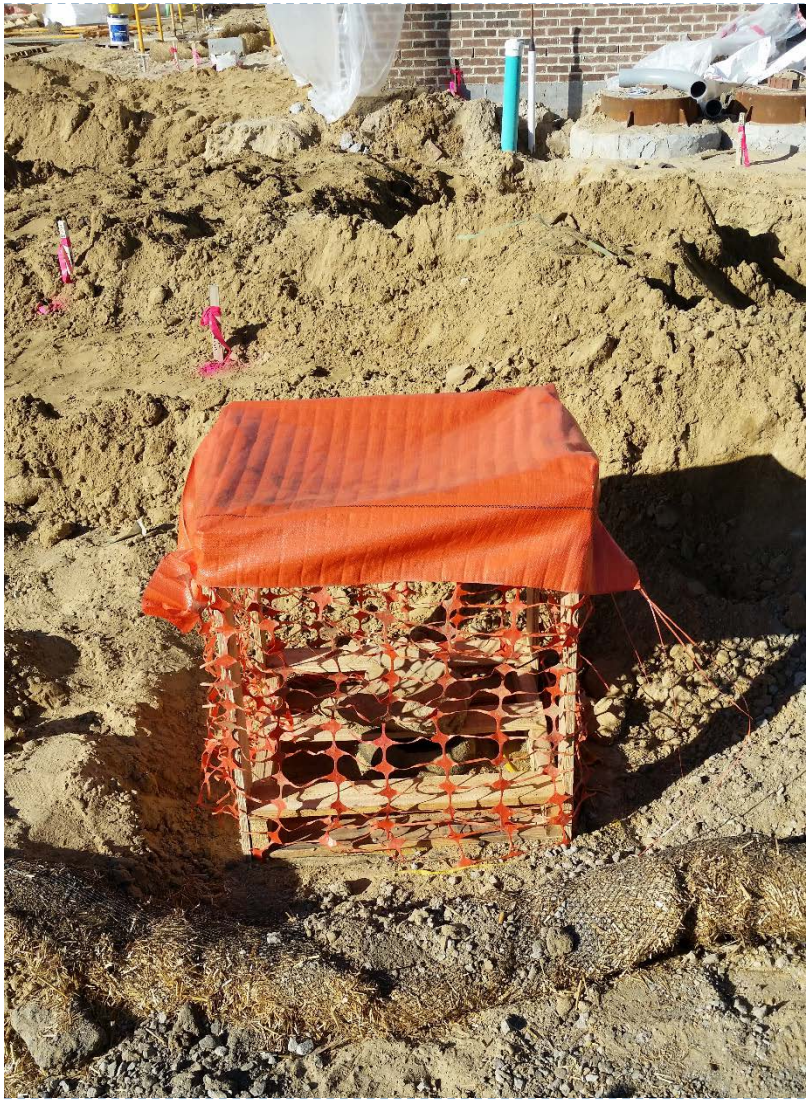
Where Great Things Are Happening

Inadequate & Damaged IP

Damaged IP w/Trash

Inundated IP

Inundated/Incorrect IP



Inundated IP

Missing IP

Missing IP

Acceptable IP

Acceptable IP

Additional Resources

- Virginia E&S Program
  - https://www.deq.virginia.gov/Programs/Water/StormwaterManagement/ErosionandSedimentControl.aspx
- DEQ E&S Handbook
  - https://www.deq.virginia.gov/Programs/Water/StormwaterManagement/Publications/ESCHandbook.aspx

Proper Concrete Washout Procedures

February 7 & 20, 2020
City of Newport News

Newport News
Where Great Things Are Happening

What's in Concrete?

- Three Primary Ingredients:
  - Water
  - Aggregate
  - Portland Cement

- Portland cement contains:
  - Clay
  - Limestone
  - Oxides of calcium, aluminum, silicon, and other metals.

What's in concrete washwater?

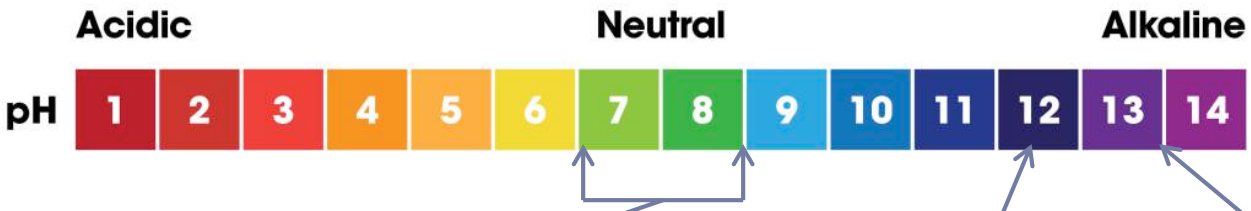
- It's not just water!
- Slurry of toxic metals
  - Caused by the chemical reaction called hydration.
  - Aluminum, Barium, Chromium, Chromium 6, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Selenium, Sodium, Vanadium, and Zinc.
- Trace elements of petroleum products
- Suspended solids
- Sediment

Why is this harmful?

- Human: It's caustic and corrosive.
- Aquatic life: Harms fish gill & eyes. Interferes with reproduction. Death.
- Vegetation: Inhibited growth, damage to soil, substantial alteration of soil and plant chemical composition.
- Groundwater: Polluted water can percolate down through the soil and ultimately enter into the watershed.

High pH increases the toxicity of other substances in the surface waters and soils.

pH of Concrete Washwater



6.5-8.5

12

13.5

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Where Great Things Are Happening

Unacceptable Washouts

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Where Great Things Are Happening

Unacceptable Washouts

Newport News
Where Great Things Are Happening

Unacceptable Washouts

Unacceptable Washouts

Unacceptable Washouts

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Where Great Things Are Happening

Unacceptable Washouts

No Washouts!

No Washouts!

Acceptable Washouts

Acceptable Washouts

Other Activities

- It's not just concrete!
- Regulations include mortaring, stucco, and grout activities.
- Cleaning brick with Muriatic acid.
- Exposed aggregate using Control-Set.
- Requires containment systems similar to concrete washout facilities.

One More Time…

- Concrete wash water is not just water!
  - Toxic metals, petroleum products, suspended solids, and sediment.
- Washing concrete trucks in anything other than an approved facility is a violation of Federal and State law.
- There are several types of approved washout facilities to utilize.
- Include mortaring and other activities.

Additional Resources

- EPA Concrete Washout Handout:
  - https://www3.epa.gov/npdes/pubs/concretewashout.pdf
- Youtube video:
  - https://www.youtube.com/watch?v=Agt3XibuNcI

SWPPP Inspections

February 7 & 20, 2020
City of Newport News

Inspection Types

- Two types of SWPPP inspections:
  - Impaired waters:
  - Contractor
    - Every 4 business days OR
    - Every 5 business days AND within 24 hours of a measurable rain event (0.25" or greater)
  - Locality/DEQ Inspector
    - Periodic

Contractor Inspections

- Needs to be completed by qualified person
  - Ex. Certified RLD
- Inspect:
  - E&S measures
  - Stormwater Management Components

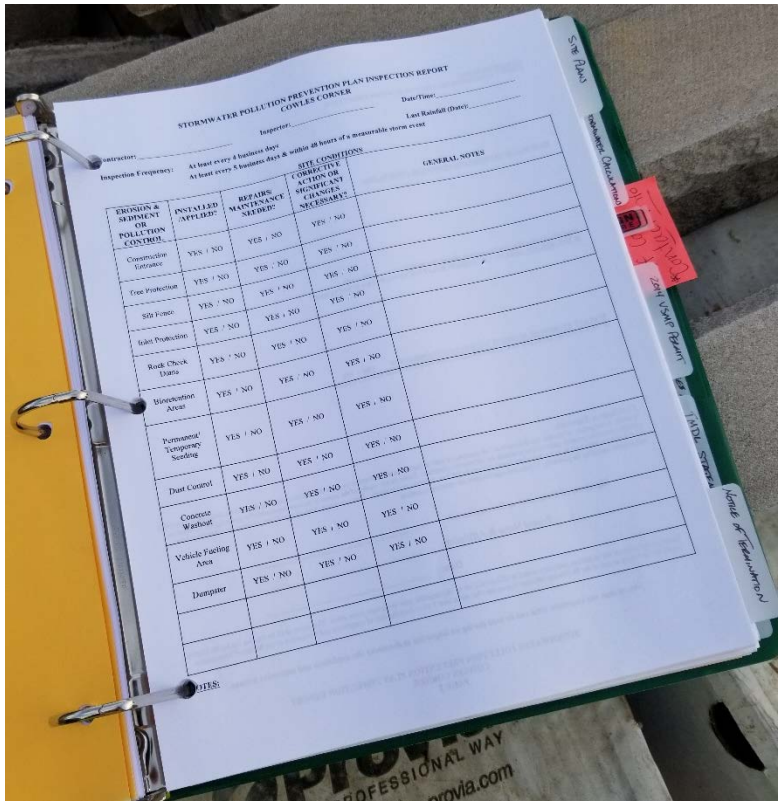
Contractor Inspections

- Inspection reports need to include:
  - Basic Information:
    - Certification Statement
    - Signed & Dated
    - Date of last rain event (5 day inspection)
  - Detailed checklist of E&S and SWM components
  - Description of deficiency
  - Description of corrective action
    - Dated and Initialed

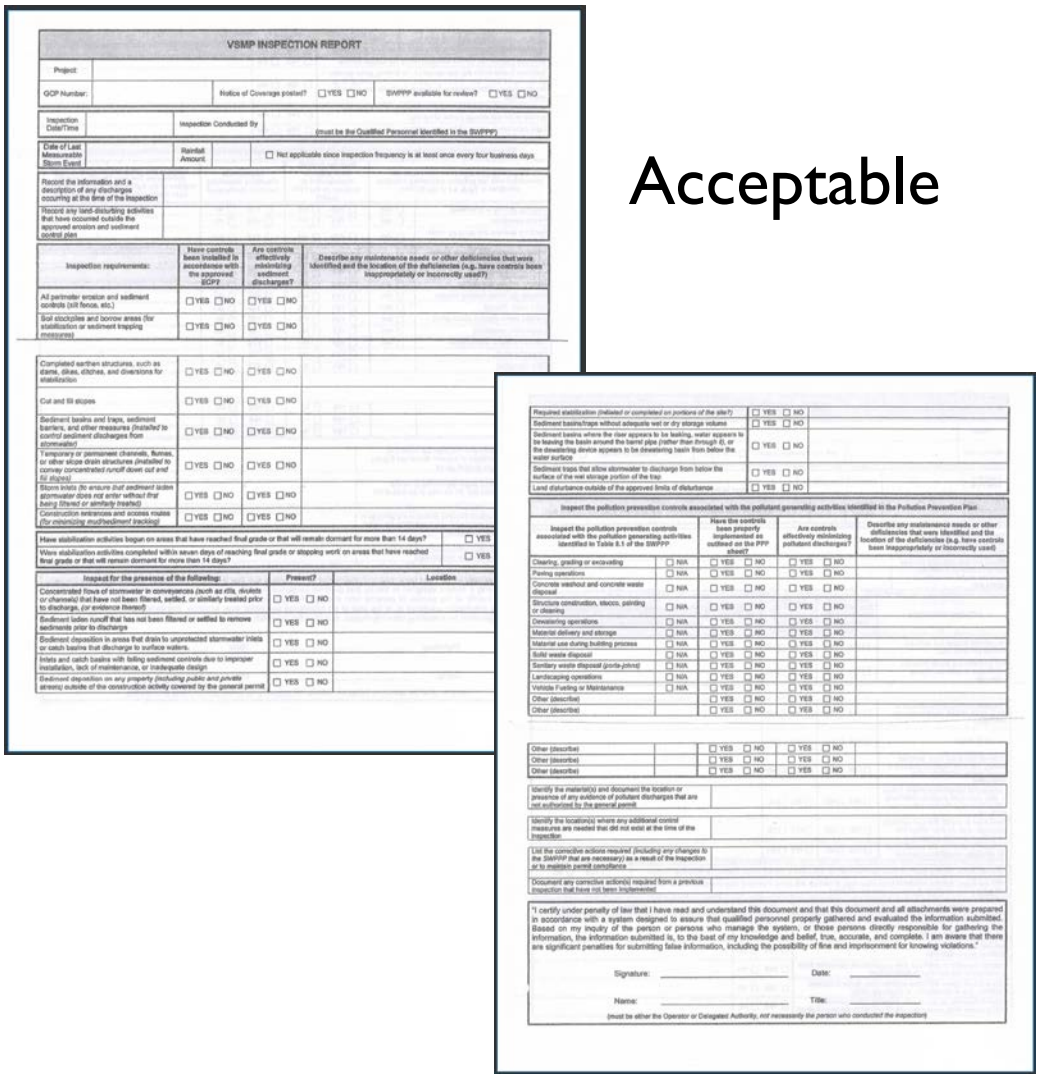
- No such thing as perfect site!
  - Inspections need to note deficiencies.

Contractor Inspections

Unacceptable



Acceptable



Locality/DEQ Inspections

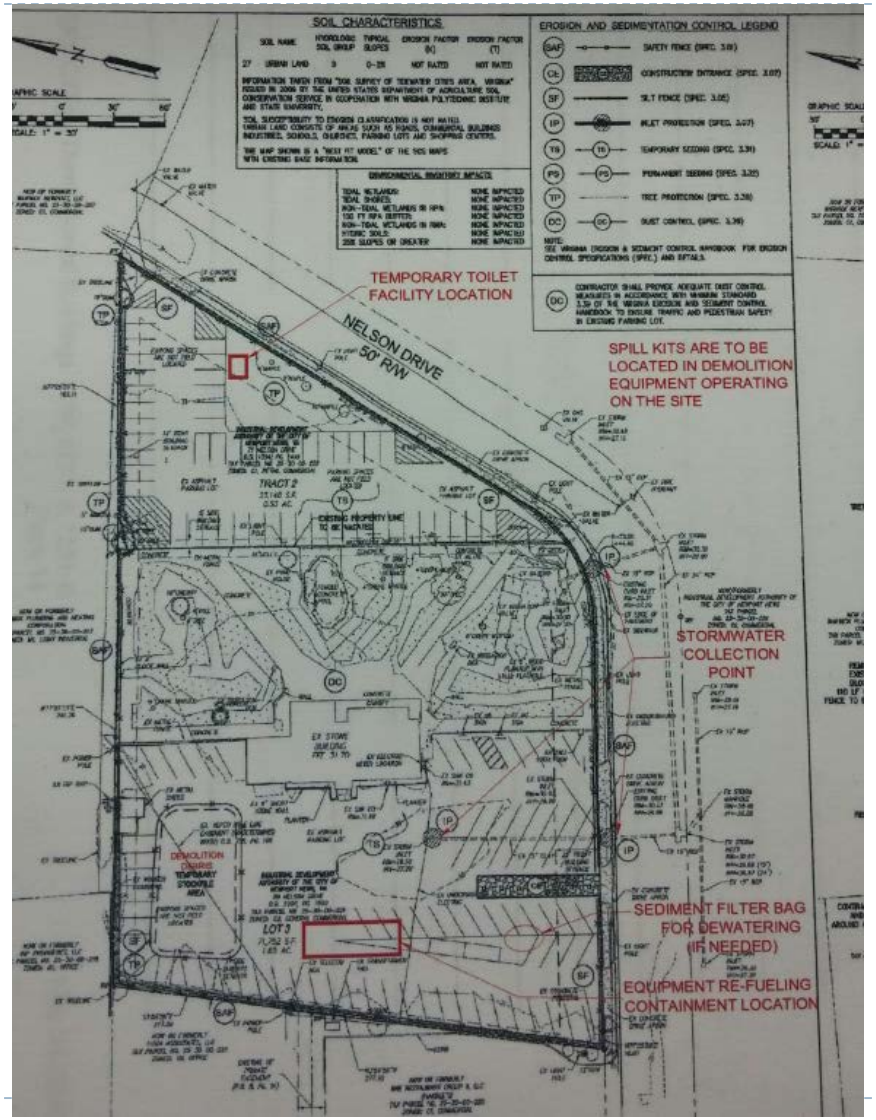
- Inspect the inspector!
- Review SWPPP Documents
  - Correct documents in SWPPP binder
  - Making amendments to documents
  - Completing inspections
- Site Inspection
  - Required documents posted
  - Stormwater management components being maintained
  - Pollutants contained

Common SWPPP Mistakes

- SWPPP Binder
  - Not organized or tabbed
  - Missing required documents
    - 2019 CGP Permit
    - List of impaired waters
    - Delegation of authority
    - Qualified person documents
  - Not amending documents
    - List of contractors
    - Major grading activities
    - Locations of pollutants onsite*
    - Onsite training log

Newport News
Where Great Things Are Happening

SWPPP: Pollutant Locations



Site Inspection

Incorrect/ missing postings

Site Inspection

Uncontained trash
and building materials

Site Inspection

Dumpsters over capacity

New 2019 Requirement:

(9) Minimize the exposure of waste materials to precipitation by closing or covering waste containers during precipitation events and at the end of the business day, or implementing other similarly effective practices. Minimization of exposure is not required in cases where the exposure to precipitation will not result in a discharge of pollutants; and

Site Inspection

Uncontained paint washout

Site Inspection

Concrete Washout

Site Inspection

Leaking equipment

Site Inspection

Improperly stored building materials

Site Inspection

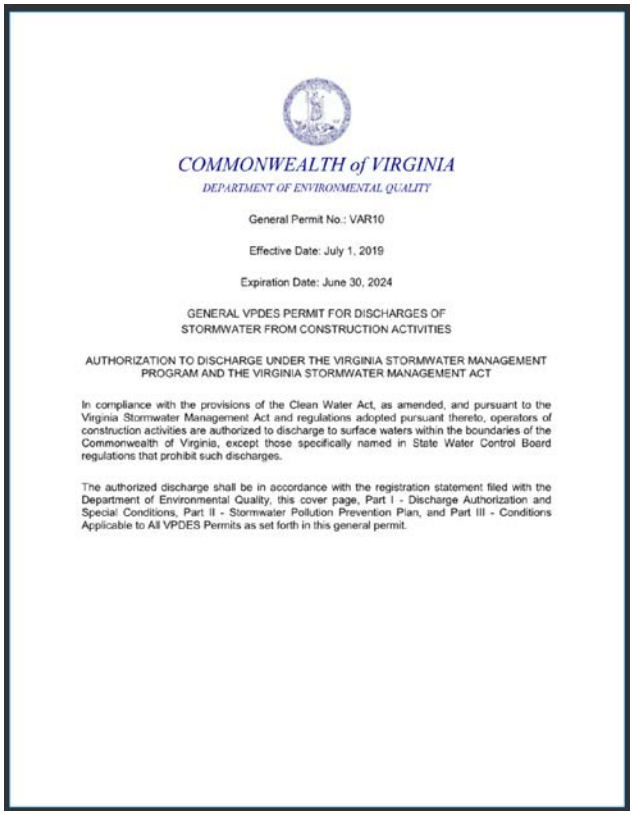
Damaged fuel tank

Site Inspection

Improperly located/
leaking porta john

Final Thoughts…

- Read the new DEQ CGP permit!
- Organize your SWPPP binder
- Update your SWPPP on a regular basis (within 7 days of changes)
  - Living document
- Inspect your site
  - Correct frequency
  - E&S and SWM items
- Minimize discharges
  - Keep site clean
  - Exercise best management practices



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

General Permit No.: VAR10

Effective Date: July 1, 2019

Expiration Date: June 30, 2024

GENERAL VPDES PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES

AUTHORIZATION TO DISCHARGE UNDER THE VIRGINIA STORMWATER MANAGEMENT PROGRAM AND THE VIRGINIA STORMWATER MANAGEMENT ACT

In compliance with the provisions of the Clean Water Act, as amended, and pursuant to the Virginia Stormwater Management Act and regulations adopted pursuant thereto, operators of construction activities are authorized to discharge to surface waters within the boundaries of the Commonwealth of Virginia, except those specifically named in State Water Control Board regulations that prohibit such discharges.

The authorized discharge shall be in accordance with the registration statement filed with the Department of Environmental Quality, this cover page, Part I - Discharge Authorization and Special Conditions, Part II - Stormwater Pollution Prevention Plan, and Part III - Conditions Applicable to All VPDES Permits as set forth in this general permit.

Additional Resources

- EPA: Developing your Stormwater Pollution Prevention Plan (2007):
  - https://www.epa.gov/npdes/developing-stormwater-pollution-prevention-plan-swppp
- DEQ Virginia Stormwater Management Program:
  - https://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits.aspx
- DEQ Construction General Permit:
  - https://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx

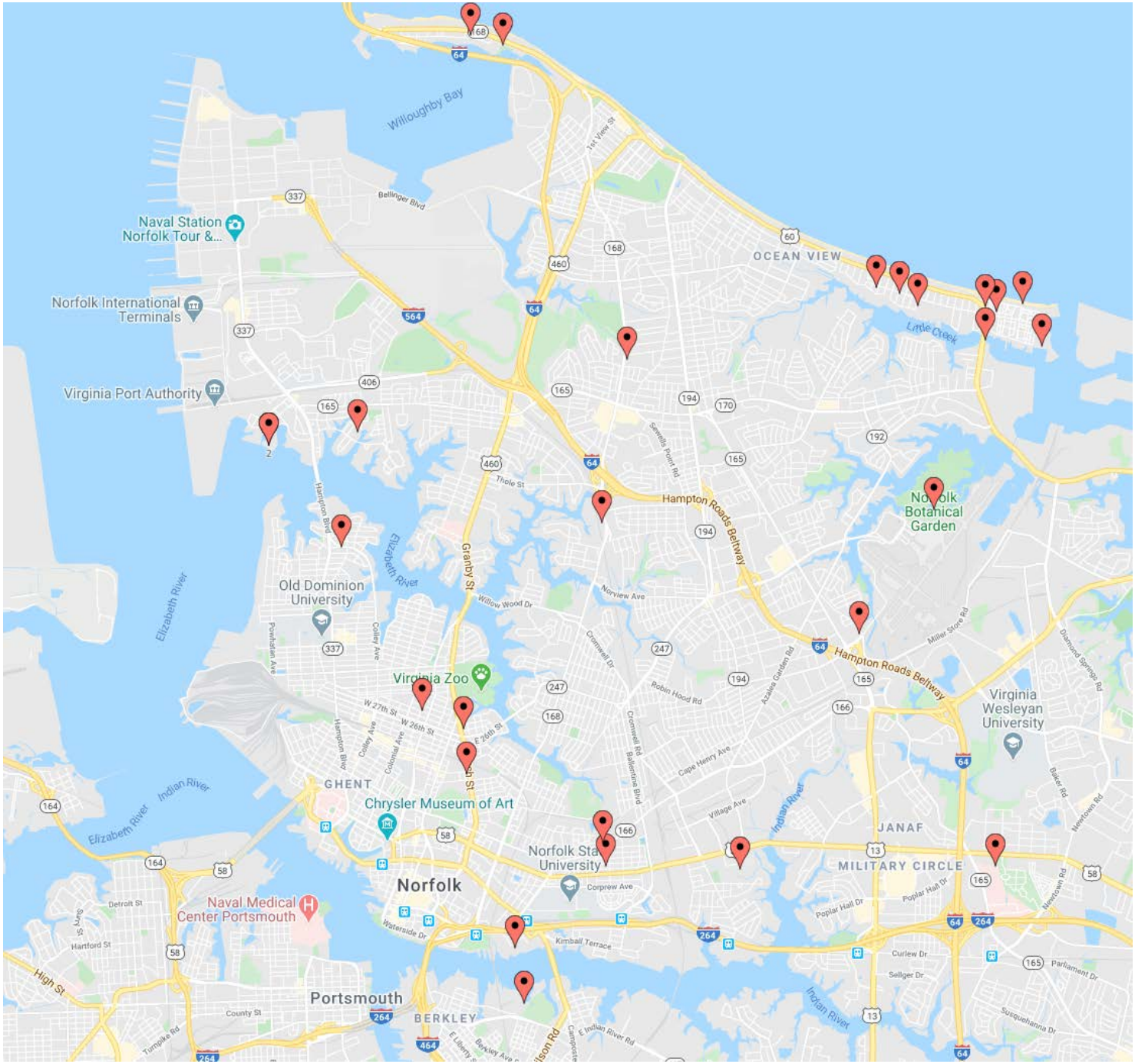
THE CITY OF NORFOLK

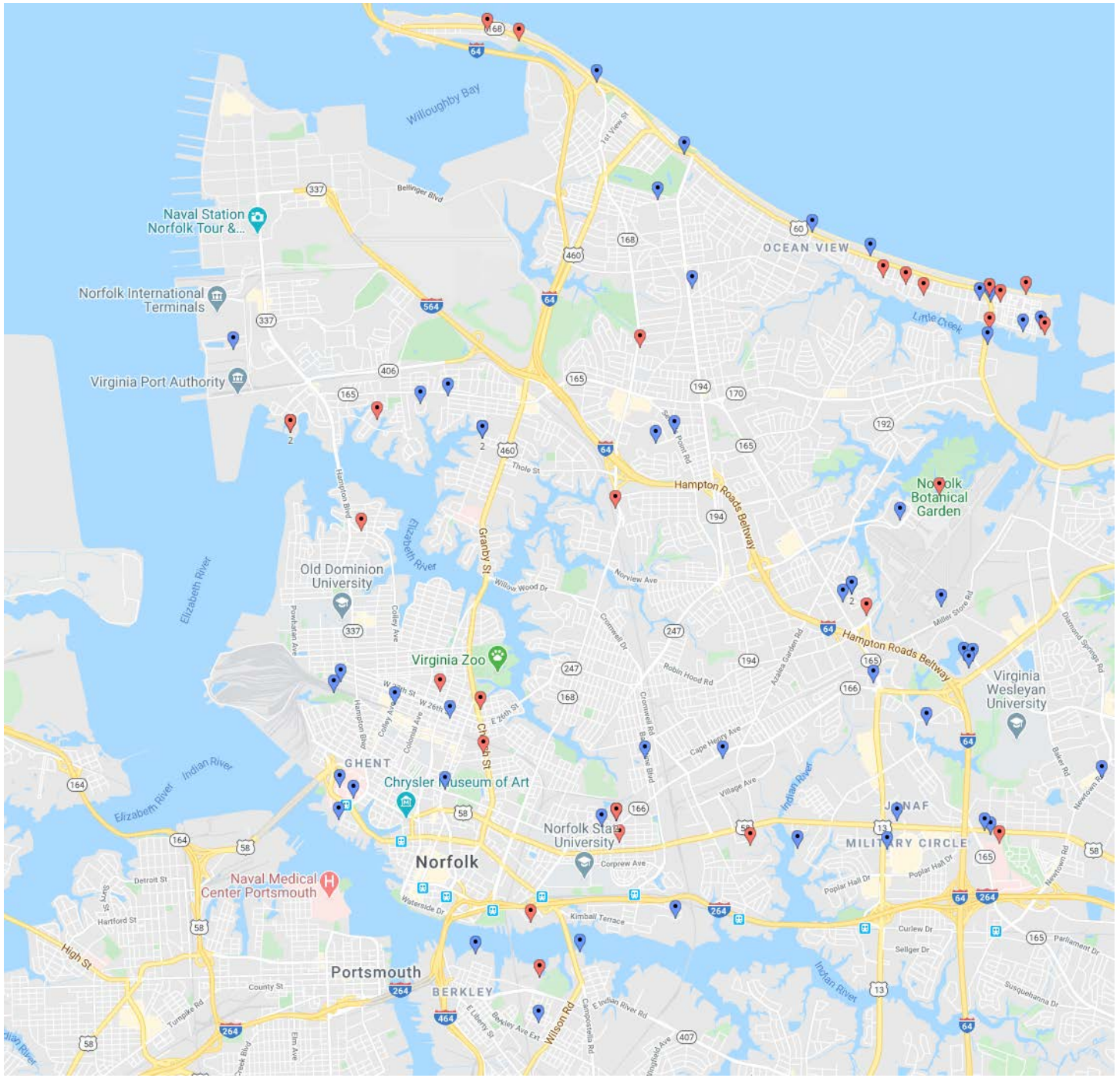
Bureau of Environmental Services

VSMP CGP SWPPP Requirements

Odell Glenn – Construction Compliance
Programs Manager

NORFOLK


Willoughby Bay
Naval Station Norfolk Tour &...
Norfolk International Terminals
Virginia Port Authority
OCEAN VIEW
Little Creek
Hampton Roads Beltway
Norfolk Botanical Garden
Old Dominion University
Elizabeth River
Granby St
Virginia Zoo
Virginia Wesleyan University
GHENT
Chrysler Museum of Art
Norfolk State University
JANAF
MILITARY CIRCLE
Norfolk
Naval Medical Center Portsmouth
Portsmouth
BERKLEY
Indian River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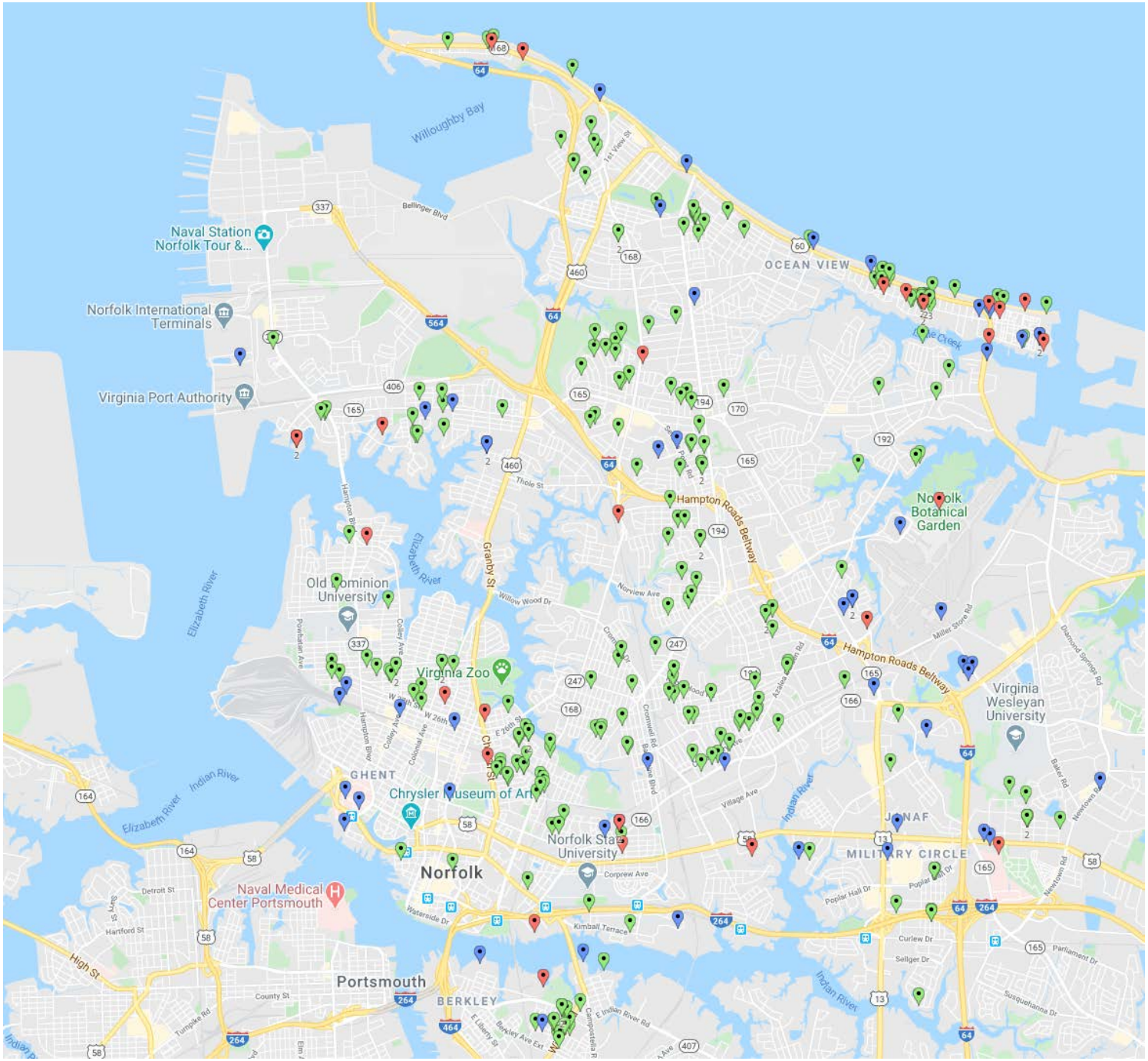
Norfolk
Naval Medical Center Portsmouth
Portsmouth
BERKLEY
Indian River
Wilson Rd
High St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Granby St
Chapel St
Colley Ave
Hampton Blvd
Colonial Ave
Willow Wood Dr
Norview Ave
Corprew Ave
Kimball Terrace
Poplar Hall Dr
Curlew Dr
Selliger Dr
Parliament Dr
Susquehanna Dr
Miller Store Rd
Diamond Springs Rd
Baker Rd
Newtown Rd
Village Ave
Thole St
Waterside Dr
Detroit St
Hartford St
High St
County St
Turnpike Rd
E Indian River Rd
Berkley Ave Ext
E Liberty St
Campostella Rd
Tidal Creek

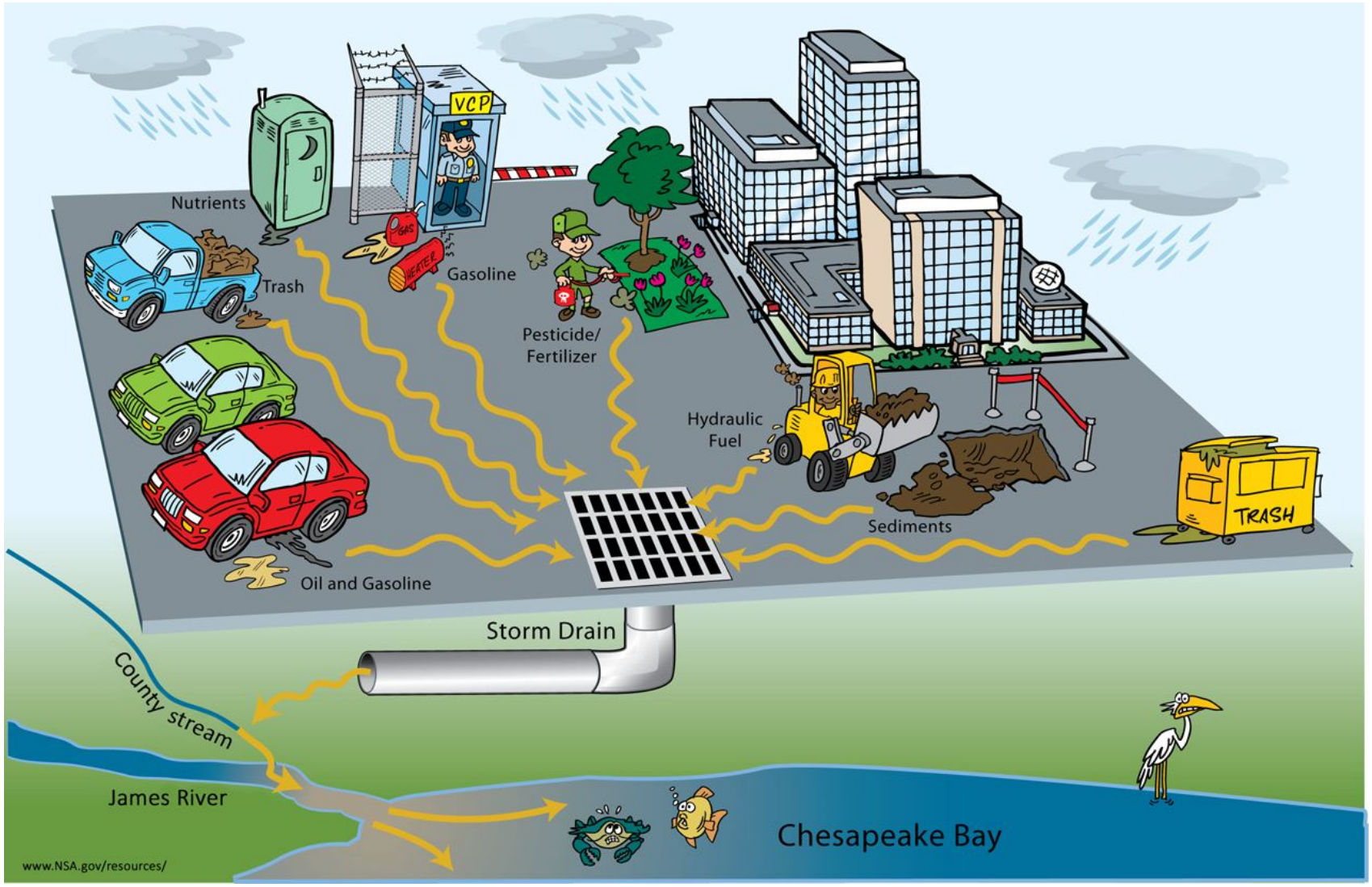
NORFOLK

No Erosion Control

Sediment Entering Storm Drain System

Sediment Entering Creek

Storm Drain Discharges to Waterway



NORFOLK

STORM WATER POLLUTION PREVENTION PLAN
(SWPPP)

For: Site Plan #

Project Title

CITY OF NORFOLK, VIRGINIA

Prepared by:

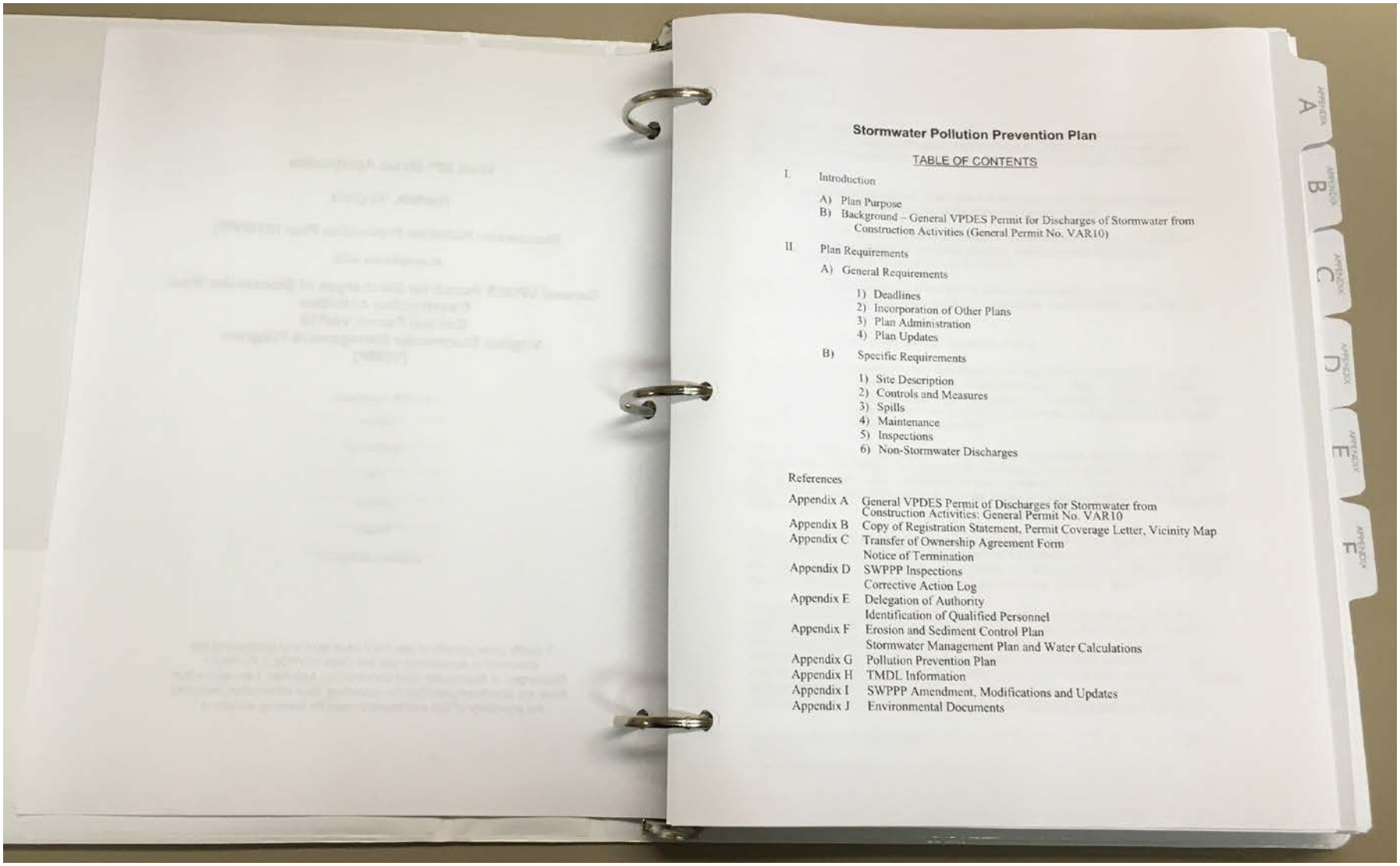
When are VSMP CGPs required?

- Greater than 1 acre
- Common plan of Developments > 1 acre

SWPPP Elements

- E&S Plan
- Stormwater Management Plan
- Pollution Prevention Plan

SWPPP book

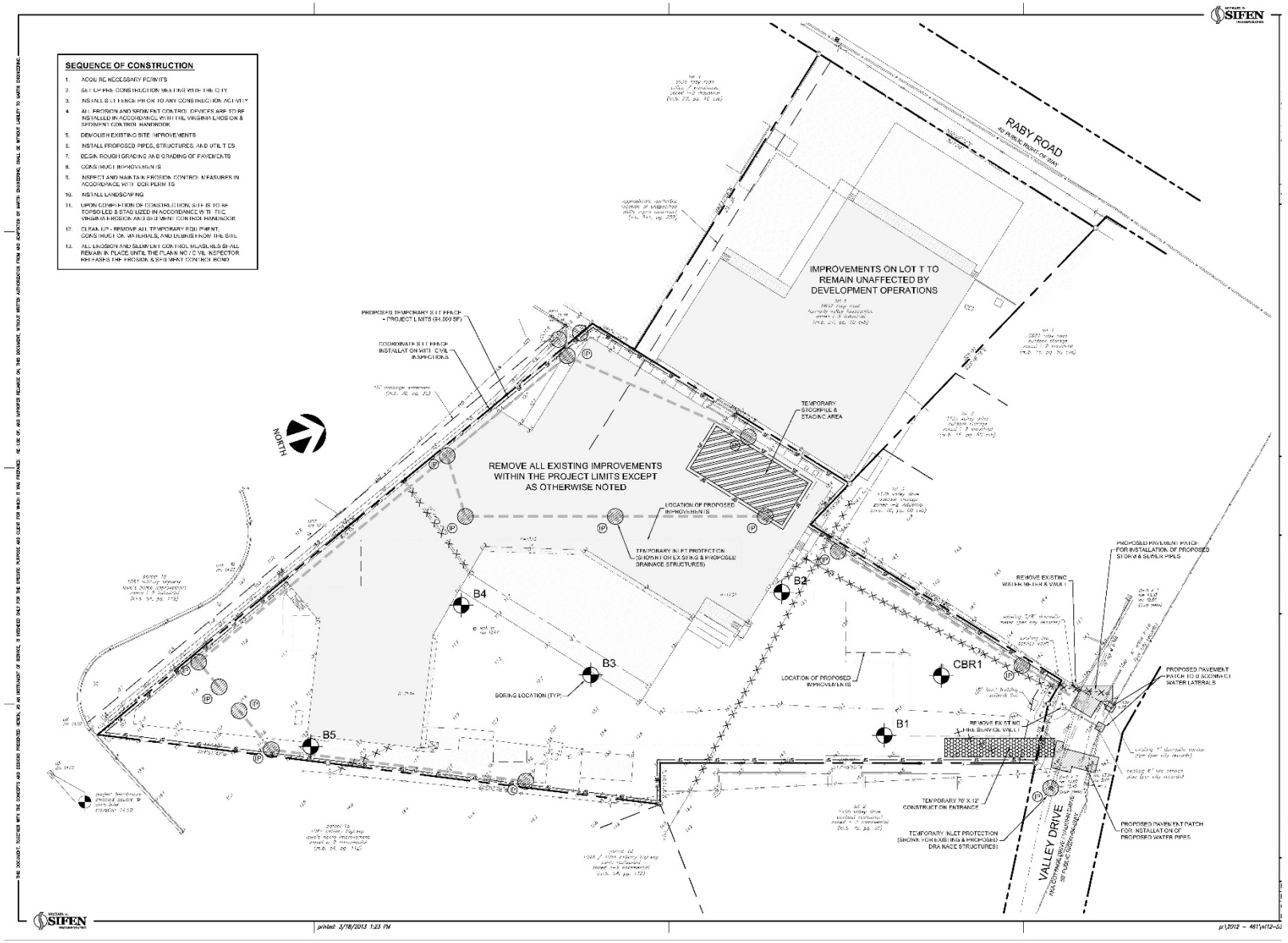


Stormwater Pollution Prevention Plan

TABLE OF CONTENTS

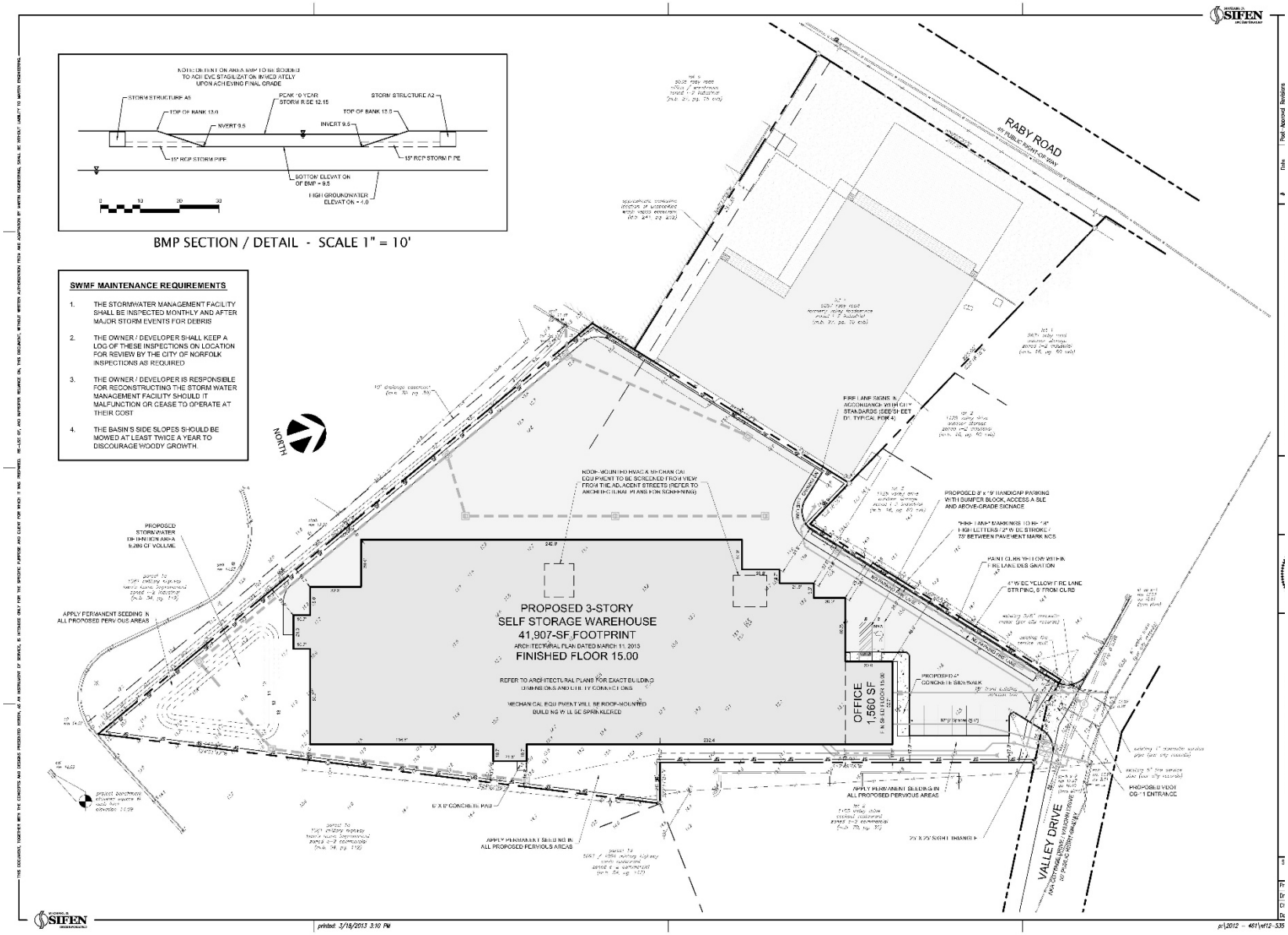
NORFOLK

E&S Plan



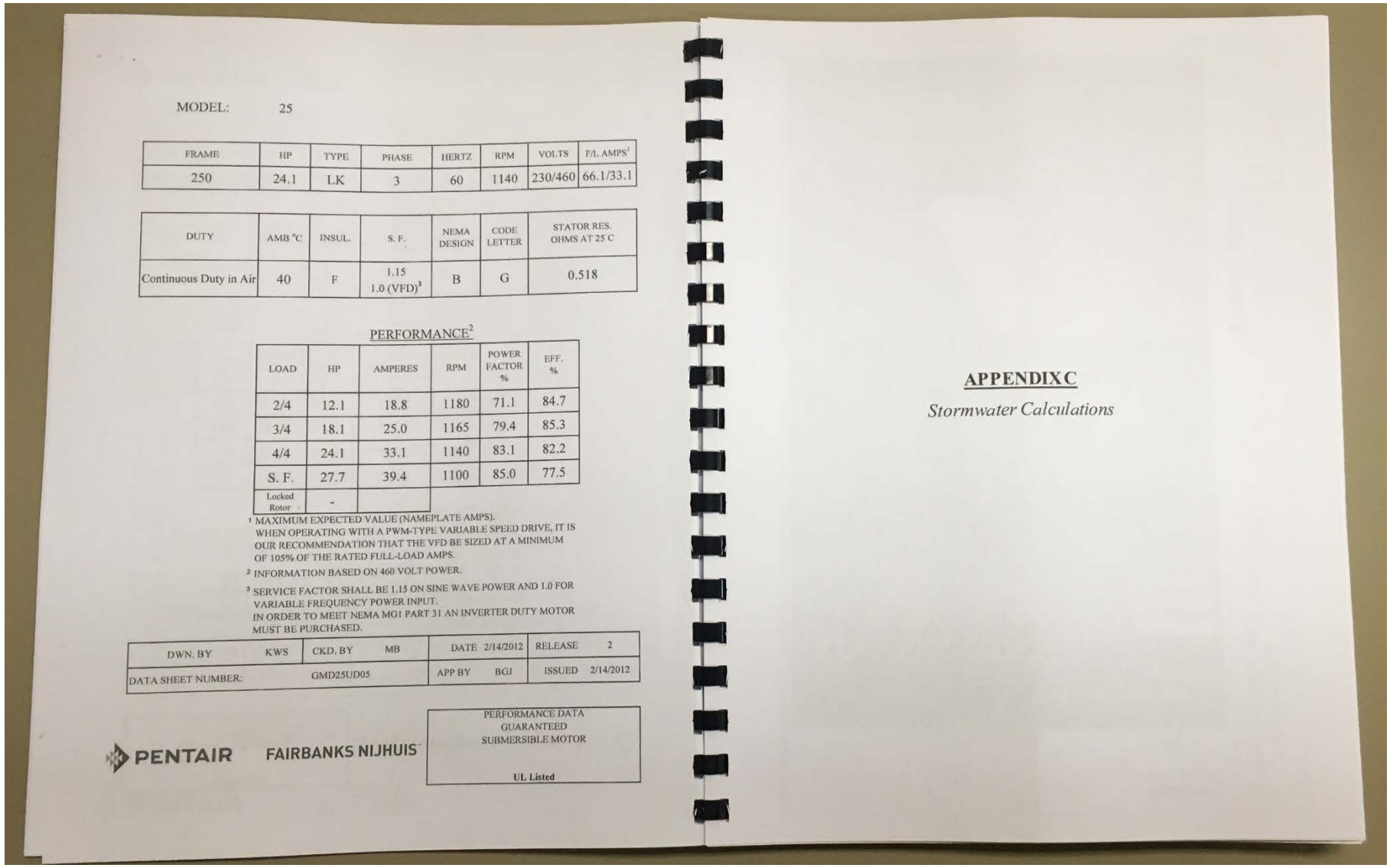
NORFOLK

SW Plan


BMP SECTION / DETAIL - SCALE 1" = 10'
SWMF MAINTENANCE REQUIREMENTS
1. THE STORMWATER MANAGEMENT FACILITY SHALL BE INSPECTED MONTHLY AND AFTER MAJOR STORM EVENTS FOR DEBRIS
2. THE OWNER / DEVELOPER SHALL KEEP A LOG OF THESE INSPECTIONS ON LOCATION FOR REVIEW BY THE CITY OF NORFOLK INSPECTIONS AS REQUIRED
3. THE OWNER / DEVELOPER IS RESPONSIBLE FOR RECONSTRUCTING THE STORM WATER MANAGEMENT FACILITY SHOULD IT MALFUNCTION OR CEASE TO OPERATE AT THEIR COST
4. THE BASIN'S SIDE SLOPES SHOULD BE MOWED AT LEAST TWICE A YEAR TO DISCOURAGE WOODY GROWTH.
NORTH
RABY ROAD
PROPOSED 3-STORY
SELF STORAGE WAREHOUSE
41,907-SF FOOTPRINT
ARCHITECTURAL PLAN DATED MARCH 11, 2013
FINISHED FLOOR 15.00
OFFICE
1,560 SF
VALLEY DRIVE
APPLY PERMANENT SEEDING IN ALL PROPOSED PERVIOUS AREAS
PROPOSED STORMWATER DETENTION AREA
6,280 CF VOLUME
PROPOSED 8' X 9' HANDICAP PARKING WITH BUMPER BLOCK, ACCESS A SLE AND ABOVE-GRADE SIGNAGE
FIRE LANE SIGNS IN ACCORDANCE WITH CITY STANDARDS (SEE SHEET D1, TYPICAL FDK-4)
PROPOSED 6" CONCRETE SIDEWALK
PROPOSED VDOT CG-1 ENTRANCE
6' X 6' CONCRETE PAD
25' X 25' SIGHT TRIANGLE


NORFOLK

Stormwater Calculations for BMPs



MODEL: 25

FRAME	HP	TYPE	PHASE	HERTZ	RPM	VOLTS	F/L AMPS[1]
250	24.1	LK	3	60	1140	230/460	66.1/33.1

DUTY	AMB °C	INSUL.	S. F.	NEMA DESIGN	CODE LETTER	STATOR RES. OHMS AT 25°C
Continuous Duty in Air	40	F	1.15 1.0 (VFD)[3]	B	G	0.518

PERFORMANCE[2]

LOAD	HP	AMPERES	RPM	POWER FACTOR %	EFF. %
2/4	12.1	18.8	1180	71.1	84.7
3/4	18.1	25.0	1165	79.4	85.3
4/4	24.1	33.1	1140	83.1	82.2
S. F.	27.7	39.4	1100	85.0	77.5
Locked Rotor	-				

[1] MAXIMUM EXPECTED VALUE (NAMEPLATE AMPS). WHEN OPERATING WITH A PWM-TYPE VARIABLE SPEED DRIVE, IT IS OUR RECOMMENDATION THAT THE VFD BE SIZED AT A MINIMUM OF 105% OF THE RATED FULL-LOAD AMPS.

[2] INFORMATION BASED ON 460 VOLT POWER.

[3] SERVICE FACTOR SHALL BE 1.15 ON SINE WAVE POWER AND 1.0 FOR VARIABLE FREQUENCY POWER INPUT. IN ORDER TO MEET NEMA MG1 PART 31 AN INVERTER DUTY MOTOR MUST BE PURCHASED.

DWN. BY	KWS	CKD. BY	MB	DATE 2/14/2012	RELEASE 2
DATA SHEET NUMBER:		GMD25UD05		APP BY BGJ	ISSUED 2/14/2012

PENTAIR FAIRBANKS NIJHUIS

PERFORMANCE DATA GUARANTEED SUBMERSIBLE MOTOR

UL Listed

APPENDIX C

Stormwater Calculations

Pollution Prevention Plan

Construction Site Pollutants									
		Other Pollutants							
Areas of Consideration	Primary Pollutant: Sediment	Nutrients	Heavy metals	pH (acids & bases)	Pesticides & herbicides	Oil & grease	Bacteria & viruses	Trash, debris, solids	Other toxic chemicals
Clearing, grading, excavating, and unstabilized areas	✓							✓	
Paving operations	✓							✓	
Concrete washout and waste			✓	✓				✓	
Structure construction/ painting/cleaning		✓		✓				✓	✓
Demolition and debris disposal	✓							✓	
Dewatering operations	✓	✓							
Drilling and blasting operations	✓			✓				✓	
Material delivery and storage	✓	✓	✓	✓	✓	✓		✓	✓

SWPPP Book Elements

- Site and activity description
- Registration Statement
- Coverage Letter from DEQ
- VAR 10 Document
- Delegation of Authority form

SWPPP Book Elements

- Person Implementing P2 Plan
- Qualified Personnel Conducting Inspections
- Subcontractor Certification Forms
- Site map updates
- Land Disturbance Record
- Potential Pollutants and Locations

VSMP Registration Statement

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
GENERAL VPDES PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES (VAR10)
REGISTRATION STATEMENT 2019

PERMIT #: _____
PLAN/ID #: _____
TECHNICAL CRITERIA: **IIB** ☐ **IIC** ☐

Application type. (CHOOSE ONE)
- ☐ **NEW PERMIT ISSUANCE**
- ☐ **MODIFICATION WITH ACREAGE INCREASE**
- ☐ **MODIFICATION WITHOUT ACREAGE INCREASE**
- ☐ **EXISTING PERMIT RE-ISSUANCE**

Section I. Operator/Permittee Information.

A. Construction Activity Operator (Permittee). The person or entity that is applying for permit coverage and will have operational control over construction activities to ensure compliance with the general permit. A person with signatory authority for this operator must sign the certification in Section VI. (per Part III. K. of the VAR10 Permit).

Operator Name: _____
Contact person: _____
Address: _____
City, State Zip Code: _____
Phone Number: _____
Primary Email: _____
CC Email: _____

B. Billing Information (leave blank if same as the Operator identified in Section I. A. above). This entity will receive Annual Permit Maintenance and Permit Modification Fee invoices (if applicable).

Name: _____
Contact Person: _____
Address: _____
City, State Zip Code: _____
Phone Number: _____
Primary Email: _____
CC Email: _____

C. May we transmit correspondence electronically? You must choose **YES** and include a valid email in order to pay by credit card and to receive your permit coverage approval letter via email: **YES** ☐ **NO** ☐

Section II. Construction Activity Location Information. Project site information.

A. Include a site map showing the location of the existing or proposed land-disturbing activities, the limits of land disturbance, construction entrances and all water bodies receiving stormwater discharges from the site.

B. Construction Activity Name: _____
Address: _____
City and/or County and Zip Code: _____
Latitude and Longitude (6-digit, decimal degrees format): _____

C. Construction Activity Entrance Location (description, street address and/or latitude/longitude in decimal degrees): _____

NORFOLK

VSMP Registration Statement

CONSTRUCTION GENERAL PERMIT (VAR10) REGISTRATION STATEMENT 2019

Section VI. Certification. A person representing the operator as identified in Section I. A. and meeting the requirements of 9VAC25-880-70. Part III. K must physically sign this certification. A typed signature is not acceptable. Please note that operator is defined in 9VAC25-870-10 as follows:

"Operator" means the owner or operator of any facility or activity subject to the Act and this chapter. In the context of stormwater associated with a large or small construction activity, operator means any person associated with a construction project that meets either of the following two criteria: (i) the person has direct operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications or (ii) the person has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a stormwater pollution prevention plan for the site or other state permit or VSMP authority permit conditions (i.e., they are authorized to direct workers at a site to carry out activities required by the stormwater pollution prevention plan or comply with other permit conditions). In the context of stormwater discharges from Municipal Separate Storm Sewer Systems (MS4s), operator means the operator of the regulated MS4 system.

9VAC25-880-70. Part III. K. Signatory Requirements. *Registration Statement. All Registration Statements shall be signed as follows:*

a. For a corporation: by a responsible corporate officer. For the purpose of this chapter, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation; or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for state permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this chapter, a principal executive officer of a public agency includes: (i) the chief executive officer of the agency or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

Certification: "I certify under penalty of law that I have read and understand this Registration Statement and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Printed Name: _____

Signature (signed in ink): _____

Date Signed: _____

Section VII. Submittal Instructions. Submit this form to the VSMP Authority. If the locality is the VSMP Authority, please send your Registration Statement submittal directly to the locality; do NOT send this form to DEQ. A list of local VSMP Authorities is available here: VSMP Authorities.

If DEQ is the VSMP Authority, please send to:

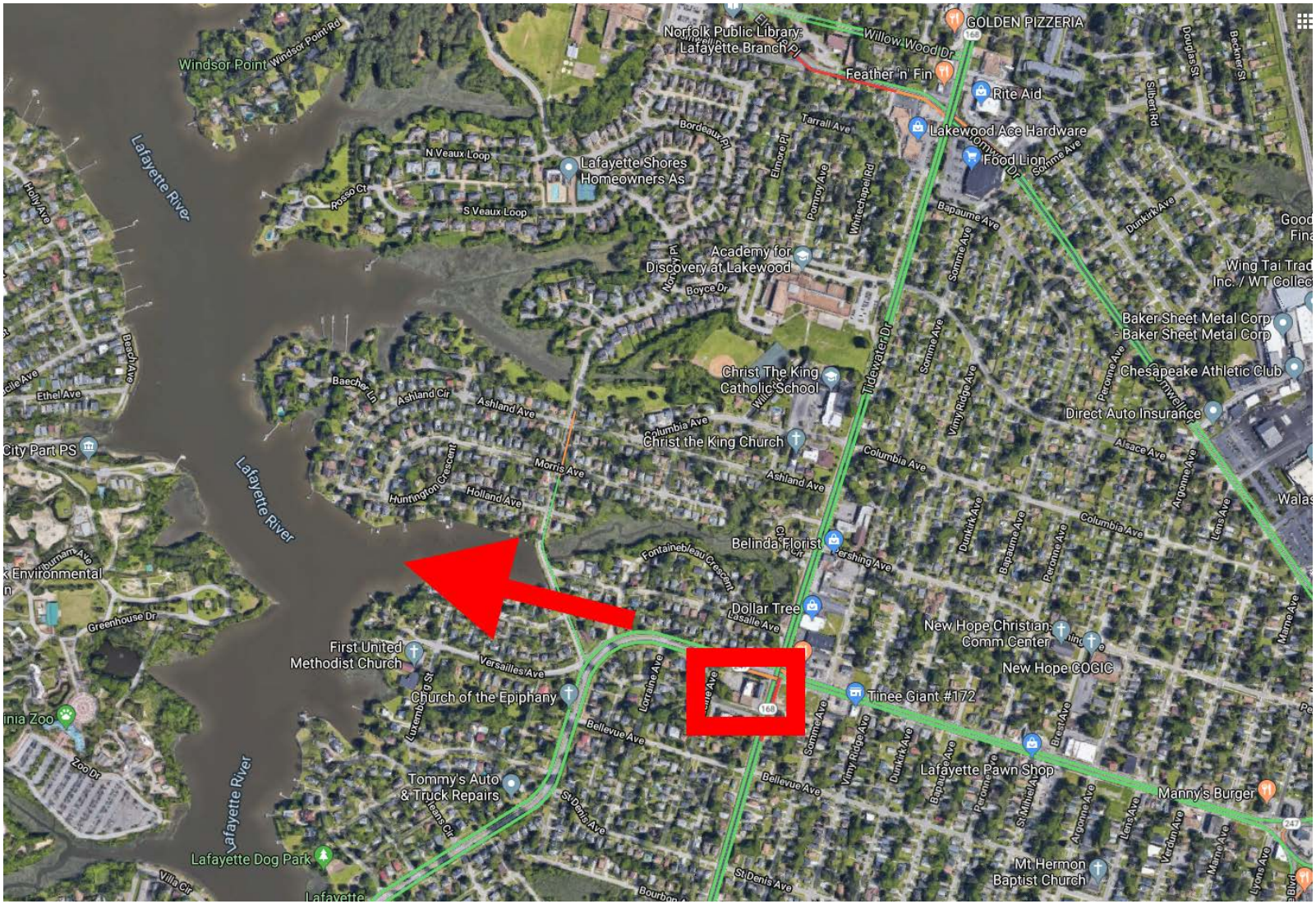
Department of Environmental Quality
Office of Stormwater Management Suite 1400
PO Box 1105
Richmond VA 23218
constructiongp@deq.virginia.gov

If the locality is the VSMP Authority, please send to:

The Local VSMP Authority *(insert address below)*

NORFOLK

Map Showing Receiving Waters



NORFOLK

Common Plan of Development

City of Norfolk

STORMWATER POLLUTION PREVENTION PLAN

SWPPP APPROVED

SINGLE FAMILY RESIDENCE
COMMON PLAN of DEVELOPMENT
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

For Construction Activities At:

Project/Site Name: _____

Project/Site Location & Address: _____

City, State, Zip Code: _____

Amount of Land Disturbance: _____

Construction Activity Operator:

Company/Organization Name: _____

Name: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____

Email Address: _____

24-hour Emergency Contact: _____

CERTIFICATION

"I certify under penalty of law that I have read and understand this document and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Operator Name: _____

Title: _____

Signature: _____

Date: _____

NORFOLK

Registration Statement

- When: PRIOR to land disturbing activities
- Fees:
- Small (1 - 5 acres) $ 2700
- Large (>5 - 10 acres) $ 3400
- Large (>10-50 acres) $ 4500
- DEQ's share 28%
- Charges for Permit Modification and Transfer
- Yearly Maintenance Fee on Permit

- SWPPP: Must be prepared prior to permit issuance

NORFOLK

VSMP Approval Letter

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
1111 E. Main Street, Suite 1400, Richmond, Virginia 23219
P.O. Box 1105, Richmond, Virginia 23218
(800) 592-5482
www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director
(804) 698-4000

October 24, 2019

RE: Coverage under the VPDES Construction General Permit (VAR10)
General Permit Number

Demolition
Norfolk

Dear Permittee:

DEQ has reviewed your Registration Statement received complete on October 16, 2019 and determined that the proposed 3.15 acre land-disturbing activity is covered under the General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10). The effective date of your coverage under this general permit is July 1, 2019 or the date of this letter, whichever is later. You may obtain a copy of the general permit from http://www.deq.virginia.gov/Portals/0/DEQ/Water/Publications/CGP2019.pdf.

The general permit contains the conditions of coverage and Stormwater Pollution Prevention Plan (SWPPP) requirements. Please print the general permit and read it carefully as you will be responsible for compliance with all permit conditions. Coverage under this construction general permit does not relieve the operator of complying with all other federal, state, or local laws and regulations.

Our records indicate that your site may discharge to waters identified as impaired or exceptional. Please see below for additional requirements:

1. Does this proposed land-disturbing activity discharge to a surface water identified as impaired or for which a TMDL wasteload allocation has been established and approved prior to the term of the general permit for for (i) sediment or a sediment-related parameter or (ii) nutrients? **Yes**. If YES, then the following general permit (Part I B 4 a) and SWPPP requirements (Part II B 5) must be implemented for the land-disturbing activity:

   - Permanent or temporary soil stabilization shall be applied to denuded areas within seven (7) days after final grade is reached on any portion of the site;
   - Nutrients (e.g., fertilizers) shall be applied in accordance with manufacturer's recommendations or an approved nutrient management plan and shall not be applied during rainfall events;
   - Inspections shall be conducted at a frequency of (i) at least once every four (4) business days or (ii) at least once every (5) business days and no later than 24 hours following a measurable storm event. In the event that a measurable storm event occurs when there are more than 24 hours between business days, the inspection shall be conducted on the next business day; and
   - Representative inspections used by utility line installation, pipeline construction, or other similar linear construction activities shall inspect all outfalls.

NORFOLK

Permit & Contact Posting

NORFOLK

VAR 10 Document

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

General Permit No.: VAR10

Effective Date: July 1, 2019

Expiration Date: June 30, 2024

GENERAL VPDES PERMIT FOR DISCHARGES OF
STORMWATER FROM CONSTRUCTION ACTIVITIES

AUTHORIZATION TO DISCHARGE UNDER THE VIRGINIA STORMWATER MANAGEMENT PROGRAM AND THE VIRGINIA STORMWATER MANAGEMENT ACT

In compliance with the provisions of the Clean Water Act, as amended, and pursuant to the Virginia Stormwater Management Act and regulations adopted pursuant thereto, operators of construction activities are authorized to discharge to surface waters within the boundaries of the Commonwealth of Virginia, except those specifically named in State Water Control Board regulations that prohibit such discharges.

The authorized discharge shall be in accordance with the registration statement filed with the Department of Environmental Quality, this cover page, Part I - Discharge Authorization and Special Conditions, Part II - Stormwater Pollution Prevention Plan, and Part III - Conditions Applicable to All VPDES Permits as set forth in this general permit.

NORFOLK

Delegation Form

City of Norfolk

Bureau of Environmental Services

GENERAL CONTRACTOR
DELEGATION FORM

I, the undersigned, hereby delegate _____
Project Superintendent(s) or Compliance Officer(s) as the Stormwater Pollution Prevention Plan (SWPPP) Coordinator and as the authorized signatory for all reports required by this permit and other information requested by the Owner or authorized representative of the Owner in accordance with the provisions of the General Permit.

The delegated individual will be responsible for compliance with all aspects of the SWPPP and responsible for implement the approved Erosion Sediment Control and Stormwater Plan.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,

_____ _____
Signature Date

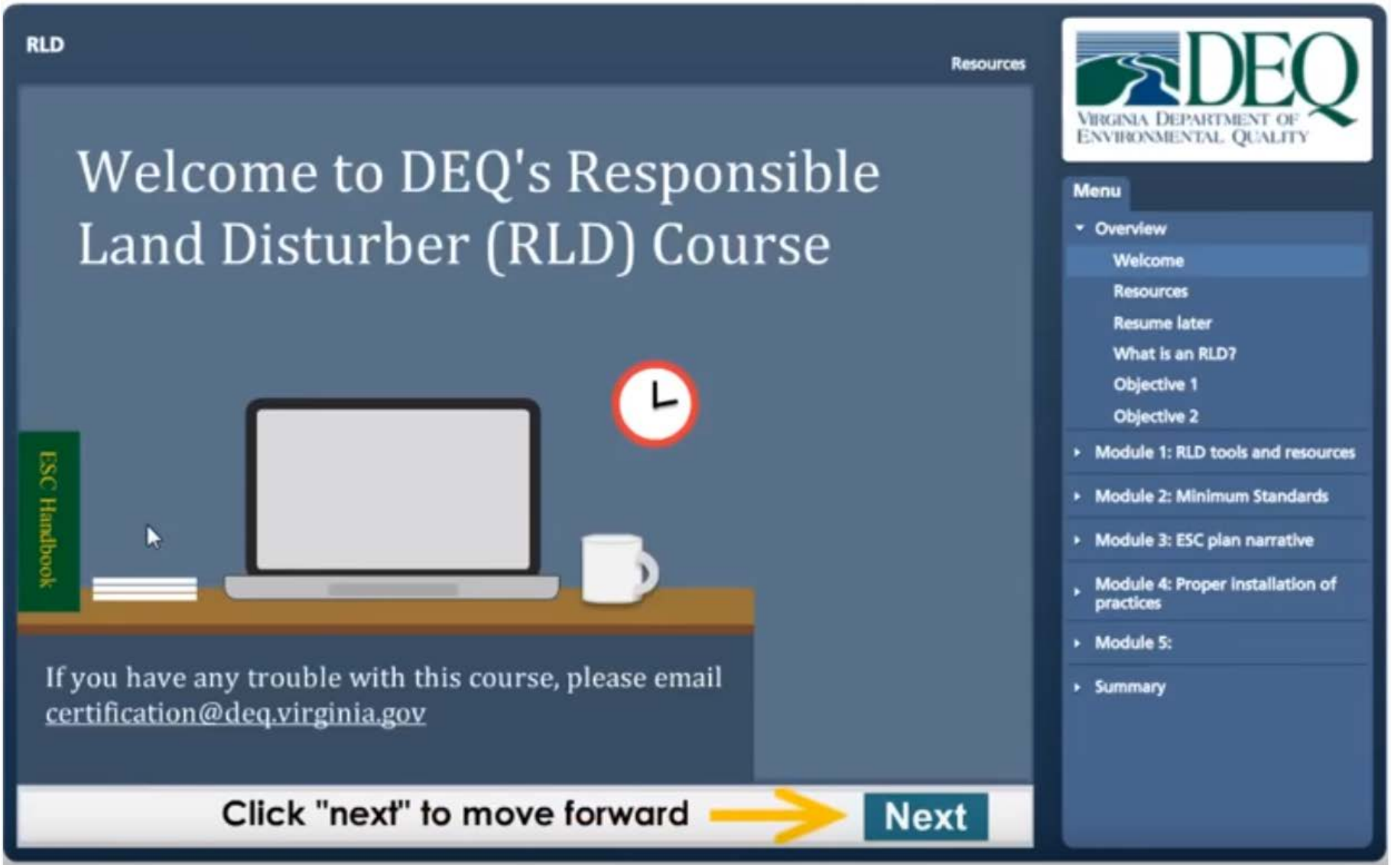
_____
Printed Name

_____
Title

_____
Company

NORFOLK

Qualified Personnel Conducting Inspections



NORFOLK

Qualified Personnel Conducting Inspections

COMMONWEALTH OF VIRGINIA

State Water Control Board

629 East Main Street, Richmond, Virginia 23219

RESPONSIBLE LAND DISTURBER

CERTIFICATE NUMBER

EXPIRATION DATE

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

NORFOLK

Qualified Personnel Conducting Inspections

most

Municipal Online Stormwater Training Center

ABOUT COURSES VIDEOS CASE STORIES RESOURCES FEATURES CONTACT

User Account | Log Out

EROSION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES

Course Catalog ▼

AT A GLANCE

Status: Open

Release Date: 2017-01-01

Length: 2:00 (Hours & Minutes)

Cost: FREE

Eligible For: Certificate of Completion

Level: Intermediate

Language: English

This course provides an overview of erosion principles, sediment control practices, & stormwater management requirements during construction throughout the Chesapeake Bay. This course is for anyone who wants to understand the principles and practices needed to keep polluted stormwater from leaving construction sites. Individuals responsible for demonstrating compliance with an Erosion Sediment Control plan or the conditions of a Construction General Permit will find the material a useful starting place.

You may take this course as a refresher but it will not replace statutory

Go to Course

Low Impact Development Center

NORFOLK

Qualified Personnel Conducting Inspections

CERTIFICATE

OF COMPLETION

This is to certify that:

Odell Glenn

has successfully completed the course *Erosion and Sediment Control for Construction Sites* presented by the Municipal Online Stormwater Training Center.

August 2, 2019
Contact Hours: 2

most

Municipal Online Stormwater Training Center

NORFOLK

Person Implementing P2 Plan

City of Norfolk

Department of City Planning

Bureau of Environmental Services

CONTRACTOR CERTIFICATIONS

The Contractor and subcontractor(s) that will implement the pollutant control measures described in the SWPPP must be identified below. Each must sign a statement certifying that they understand the VSMP general permit authorizing storm water discharges during construction. These statements must be maintained in the SWPPP file on site.

Contractor or subcontractor implementing the SWPPP:

_____

Business Name

_____

Business Address

_____

Business Telephone Number

_____

Activities contractor or subcontractor responsible for:

CERTIFICATION:

"I certify under penalty of law that I understand the terms and conditions of the VSMP General Permit for Discharges of Storm water from Construction Activities (VAR 10) and the SWPPP that authorizes storm water discharges associated with land disturbing activities from the construction site identified as part of this certification."

_____ _____

Signature Date

_____

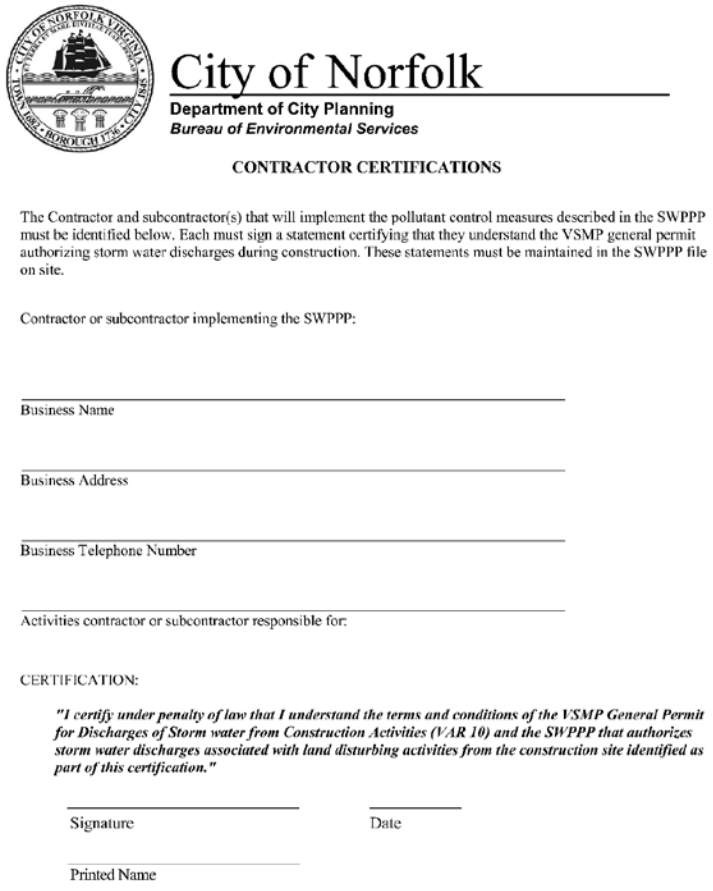
Printed Name

NORFOLK

•Sub–Contractor Certifications

- The VSMP CGP requires a form for contractors with pollutants

- Contractor responsibilities should be outlined in SWPPP



City of Norfolk
Department of City Planning
Bureau of Environmental Services

CONTRACTOR CERTIFICATIONS

The Contractor and subcontractor(s) that will implement the pollutant control measures described in the SWPPP must be identified below. Each must sign a statement certifying that they understand the VSMP general permit authorizing storm water discharges during construction. These statements must be maintained in the SWPPP file on site.

Contractor or subcontractor implementing the SWPPP:

Business Name

Business Address

Business Telephone Number

Activities contractor or subcontractor responsible for:

CERTIFICATION:

"I certify under penalty of law that I understand the terms and conditions of the VSMP General Permit for Discharges of Storm water from Construction Activities (VAR 10) and the SWPPP that authorizes storm water discharges associated with land disturbing activities from the construction site identified as part of this certification."

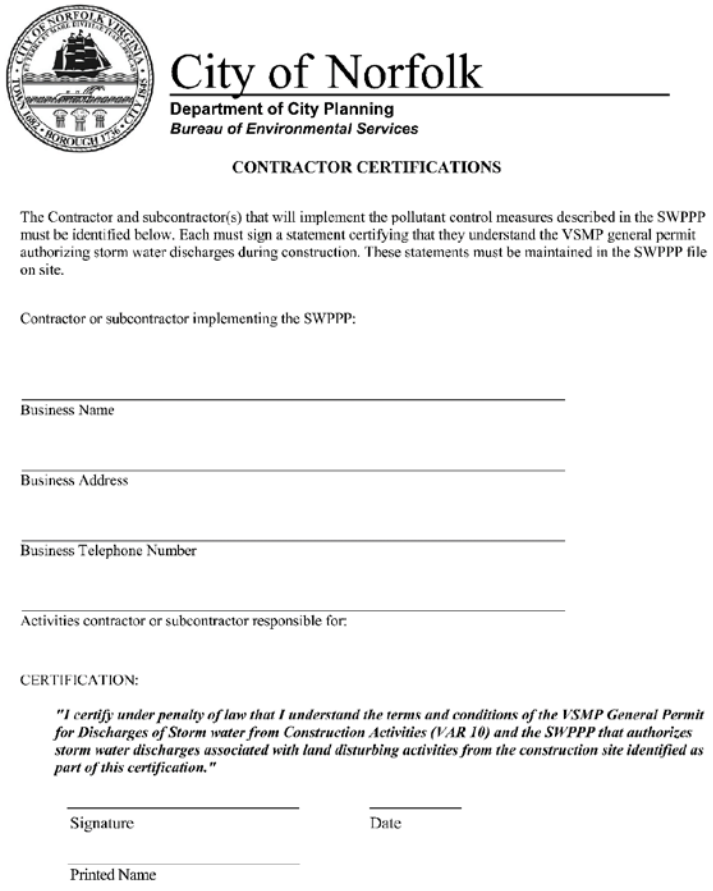
Signature Date

Printed Name

•Sub–Contractor Certifications

- The VSMP CGP requires a form for *ALL CONTRACTORS*

- Contractor responsibilities should be outlined in SWPPP



City of Norfolk

Department of City Planning

Bureau of Environmental Services

CONTRACTOR CERTIFICATIONS

The Contractor and subcontractor(s) that will implement the pollutant control measures described in the SWPPP must be identified below. Each must sign a statement certifying that they understand the VSMP general permit authorizing storm water discharges during construction. These statements must be maintained in the SWPPP file on site.

Contractor or subcontractor implementing the SWPPP:

Business Name

Business Address

Business Telephone Number

Activities contractor or subcontractor responsible for:

CERTIFICATION:

"I certify under penalty of law that I understand the terms and conditions of the VSMP General Permit for Discharges of Storm water from Construction Activities (VAR 10) and the SWPPP that authorizes storm water discharges associated with land disturbing activities from the construction site identified as part of this certification."

Signature Date

Printed Name

Land Disturbance Record

SITE STABILIZATION and CONSTRUCTION ACTIVITY DATES

A record of dates when land disturbing activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be maintained by the Contractor until final site stabilization is achieved and the Notice of Termination is filed. The dates can be entered in the following form, or on a different form. A differing form must be approved in writing by the Owner, prior to use.

LAND DISTURBING ACTIVITIES

Description of Activity: _____

Site Contractor: _____

Location: _____

Begin (date): _____ End (date): _____

Description of Activity: _____

Site Contractor: _____

Location: _____

Begin (date): _____ End (date): _____

Description of Activity: _____

Site Contractor: _____

Location: _____

Begin (date): _____ End (date): _____

NORFOLK

Potential Pollutants

5.1 Potential Sources of Pollution

Instructions (see CGP Part 7.2.7):

- Identify and describe all pollutant-generating activities at your site (e.g., paving operations; concrete, paint, and stucco washout and waste disposal; solid waste storage and disposal).
- For each pollutant-generating activity, include an inventory of pollutants or pollutant constituents associated with that activity (e.g., sediment, fertilizers, and/or pesticides, paints, solvents, fuels), which could be exposed to rainfall or snowmelt, and could be discharged from your construction site. You must take into account where potential spills and leaks could occur that contribute pollutants to stormwater discharges.

Construction Site Pollutants

INSERT TEXT OR USE TABLE BELOW

Pollutant-Generating Activity	**Pollutants or Pollutant Constituents** (that could be discharged if exposed to stormwater)	**Location on Site** (or reference SWPPP site map where this is shown)

Potential Pollutants

5.2 Spill Prevention and Response

Instructions (see CGP Parts 2.3.6 and 7.2.6.vii):

- Describe procedures you will use to prevent and respond to leaks, spills, and other releases. You must implement the following at a minimum:
  - ✓ Procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases. Identify the name or title of the employee(s) responsible for detection and response of spills or leaks; and
  - ✓ Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity consistent with Part 2.3.6 and established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302, occurs during a 24-hour period. Contact information must be in locations that are readily accessible and available.
- Some projects/site may be required to develop a Spill Prevention Control and Countermeasure (SPCC) plan under a separate regulatory program (40 CFR 112). If you are required to develop an SPCC plan, or you already have one, you should include references to the relevant requirements from your plan.

INSERT SPILL PREVENTION AND RESPONSE PROCEDURES HERE

5.3 Fueling and Maintenance of Equipment or Vehicles

Instructions (see CGP Parts 2.3.1 and 7.2.6):

- Describe equipment/vehicle fueling and maintenance practices that will be implemented to eliminate the discharge of spilled or leaked chemicals (e.g., providing secondary containment *(examples: spill berms, decks, spill containment pallets)* and cover where appropriate, and/or having spill kits readily available.)

General

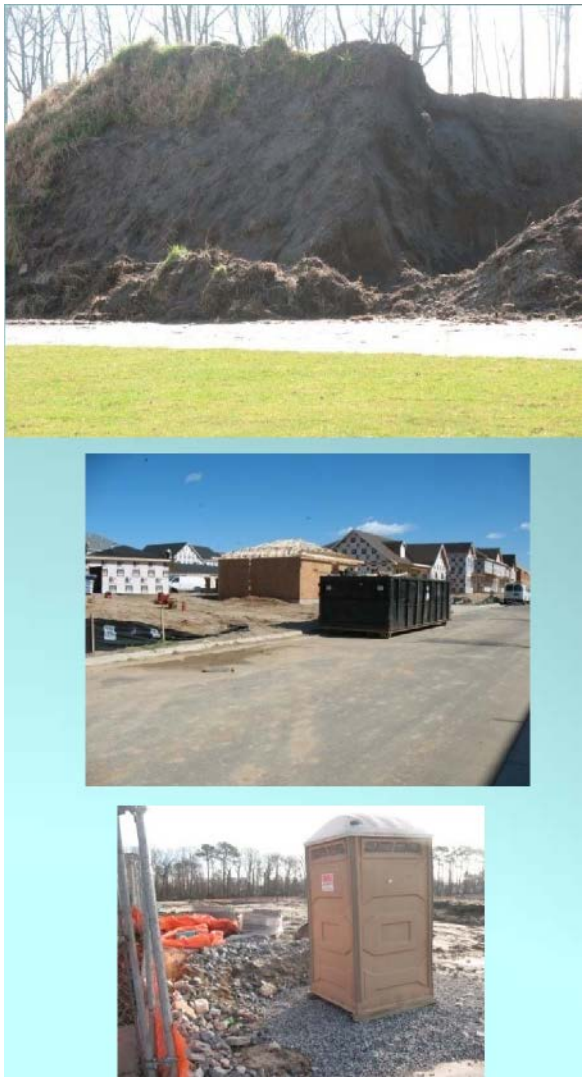
- INSERT GENERAL DESCRIPTION OF HOW YOU WILL COMPLY WITH THE CGP PART 2.3.1

Specific Pollution Prevention Practices

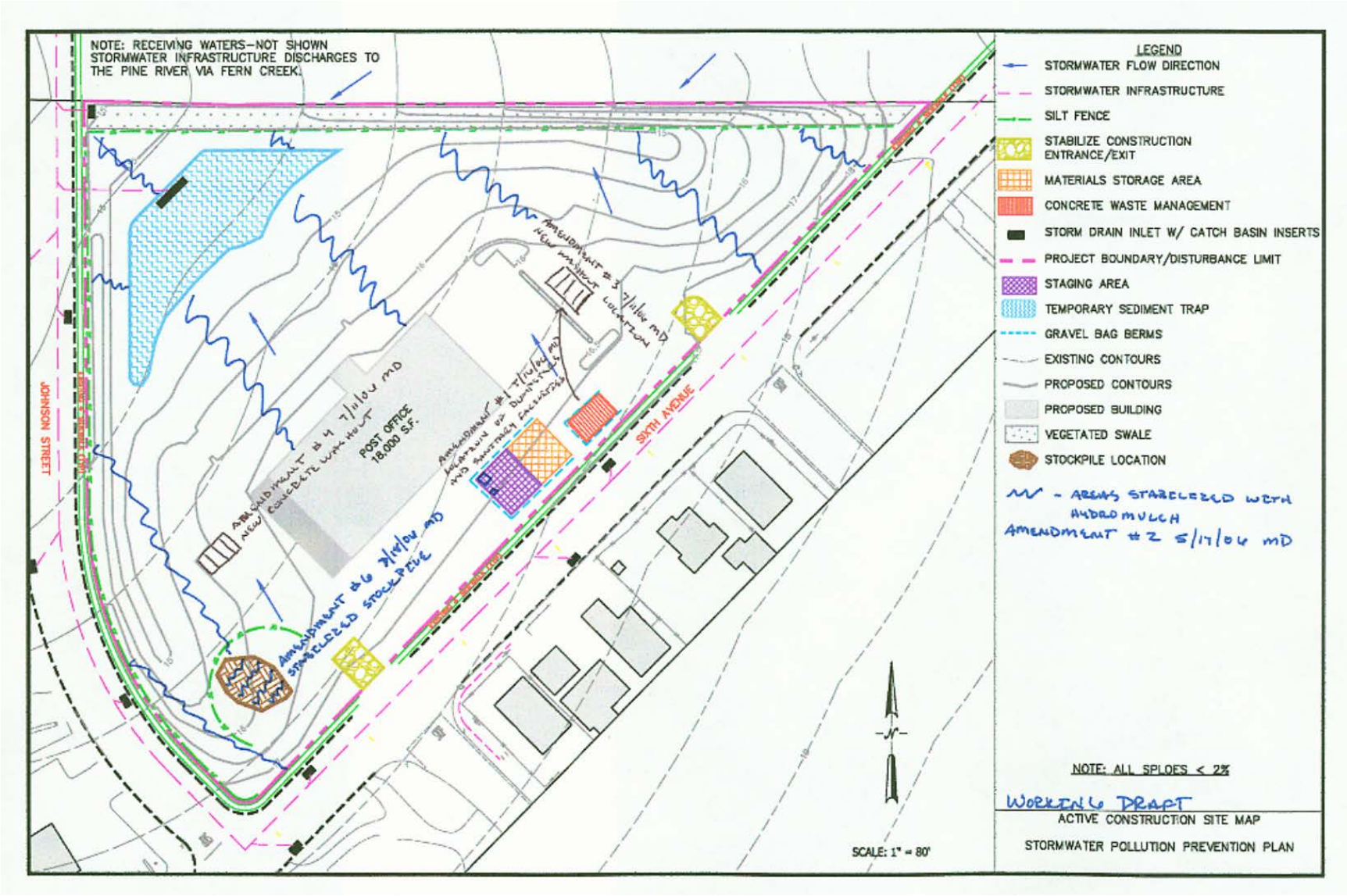
INSERT NAME OF POLLUTION PREVENTION PRACTICE
Description: INSERT DESCRIPTION OF PRACTICE TO BE INSTALLED

SWPPP Map

- SWPPP posting location -Entrance
- Concrete wash out
- Mason's staging area
- Topsoil stockpile location
- Portable Toilets
- Fuel tank & Spill Kit Location
- Dumpster location
- Materials storage / Laydown area
- Equipment maintenance areas
- Additional proposed E&S measures



SWPPP Map Updates



NORFOLK

Self-Inspections

- Inspect all control measures every **4 business days** or **every 5 business days and within 24 hours or any rainfall 0.25" or greater**

- Document deficiencies & corrective actions

- Many E&S / SWPPP inspection forms available

SWPPP Inspection Report

Project Name: _____

Project Address: _____

Inspection Date: ___/___/___ Inspection Time: ___:___ am / pm

Weather: _____

Reason for Inspection: ❑Regular Inspection ❑Pre-Rainfall Inspection
❑Re-Inspection ❑Post-Rainfall Inspection: _____total

Has a sediment discharge occurred since the last inspection? ❑Yes ❑No
Are the pollutant control measures in compliance with E&S regulations? ❑Yes ❑No

Item Description	*In Compliance at the Time of Inspection*		
Construction Entrances	❑ Yes	❑ No	❑ N/A
Silt Fence	❑ Yes	❑ No	❑ N/A
Inlet Protection	❑ Yes	❑ No	❑ N/A
Check Dams	❑ Yes	❑ No	❑ N/A
Tree Protection	❑ Yes	❑ No	❑ N/A
Sediment Traps / Basins	❑ Yes	❑ No	❑ N/A
Diversion Dikes	❑ Yes	❑ No	❑ N/A
Stockpile Stabilization	❑ Yes	❑ No	❑ N/A
Soil Stabilization	❑ Yes	❑ No	❑ N/A
Turbidity Curtain	❑ Yes	❑ No	❑ N/A
Chemical Storage	❑ Yes	❑ No	❑ N/A
Site Free of Trash/Litter	❑ Yes	❑ No	❑ N/A
Concrete Washout	❑ Yes	❑ No	❑ N/A
Dewatering Devices	❑ Yes	❑ No	❑ N/A
Other:	❑ Yes	❑ No	❑ N/A

The inspection reveals that deficiencies are present in the above categories.
The following actions are required to correct the deficiencies:

_____

_____

_____

_____

_____

_____

_____

Inspection performed by:

_____

Print name and Title Signature

NORFOLK

Project Completion

- File Notice of Termination (NOT) upon final stabilization
- Include permanent BMP list
- Maintain complete SWPPP for three years

City of Norfolk

Department of Planning and Community Development

Notice of Termination: 2019

Permit Coverage Number (VAR10####):_____

Section I. Operator/Permittee Information. The person or entity that has active permit coverage approval and operational control over construction activities to ensure compliance with the general permit. A person with signatory authority for this operator must sign the certification in Section VII (per Part III. K. of the VAR10 Permit).

Construction Activity Operator Name: _____

Contact Person: _____

Address: _____

City, State, Zip Code: _____

Phone Number: _____

Primary Email: _____

CC Email: _____

Section II. Construction Activity Location Information. Project site information.

Construction Activity Name: _____

Address: _____

City and/or County and Zip Code: _____

Latitude and Longitude (6-digit, decimal degrees format): _____

Section III. Reason for Terminating Coverage under the General Permit. The operator shall submit a Notice of Termination within 30 days after meeting one or more of the following conditions (select one or more):

☐ **A.** Necessary permanent control measures included in the SWPPP for the site are in place and functioning effectively **and** final stabilization has been achieved on all portions of the site for which the operator is responsible. When applicable, long-term responsibility and maintenance requirements for permanent control measures shall be recorded in the local land records prior to the submission of a Notice of Termination;

☐ **B.** Another operator has assumed control over all areas of the site that have not been finally stabilized and obtained coverage for the ongoing discharge;

☐ **C.** Coverage under an alternative VPDES or state permit has been obtained; or

☐ **D.** For residential construction only, temporary soil stabilization has been completed, the operator has provided written notification to the homeowner about the importance of final stabilization and incorporating a copy of the notification and signed certification statement into the SWPPP, and the residence has been transferred to the homeowner.

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Section IV. Participation in a Regional Stormwater Management Plan. If your site discharges to a regional stormwater management facility, provide information related to the regional stormwater management plan. Attach a separate list if discharging to multiple regional facilities.

Regional Stormwater Management Facility Type:	
Address:	
City and/or County and Zip Code:	
Latitude and Longitude (6-digit, decimal degrees format):	
Total Acres Treated by Regional Facility (report to one-hundredth of an acre):	
Impervious Acres Treated by Regional Facility (report to one-hundredth of an acre):	

Section V. Perpetual Nutrient Credits. If your site is utilizing nutrient credits, provide information related to the perpetual nutrient credits that were acquired in accordance with § 62.1-44.15:35 of the Code of Virginia. Attach a separate list if needed.

Nonpoint Nutrient Credit Generating Entity (Bank Name):	
Perpetual Nutrient Credits Acquired (pounds/acres/year):	

Include the affidavit of sale for all nutrient credits acquired. Is the affidavit of sale of nutrient credits attached? ☐**YES** ☐**NO**

Section VI. Permanent Control Measures. If applicable, list the post-development stormwater management facilities or best management practices (BMPs) that were constructed and installed as part of this activity to comply with the stormwater management technical criteria (structural and nonstructural, on-site and off-site). Attach a separate list if needed.

If you have permanent control measures, the following items are required to be included with this form in order to complete your Notice of Termination submittal:

☐ **A.** Engineer's Certification Statement
☐ **B.** As-built plans (construction record drawings) – digital
☐ **C.** As-built plans (construction record drawings) – full-sized, paper
☐ **D.** Stormwater Management Plans – digital
☐ **E.** BMP Maintenance Agreement – notarized original, for public and private projects under DEQ's VSMP Authority

Stormwater Management Facility Types *(please choose from the following bmp types):*

Bioretention 1
Bioretention 2
Bioretention basin
Bioretention filter
Constructed Wetland 1
Constructed Wetland 2
Constructed wetlands
Dry Swale 1
Dry Swale 2
Extended detention (2 x WQ Vol)
Extended Detention Pond 1
Extended Detention Pond 2
Extended detention-enhanced
Filtering Practice 1
Filtering Practice 2
Grass Channel
Grassed swale
Infiltration (1 x WQ Vol)
Infiltration (2 x WQ Vol)
Infiltration 1
Infiltration 2
Other IIB (manufactured treatment device, etc.)
Other IIC (manufactured treatment device, etc.)
Permeable Pavement 1
Permeable Pavement 2
Rainwater Harvesting
Retention basin I (3 x WQ Vol)
Retention basin II (4 x WQ Vol)
Retention basin III (4 x WQ Vol with aquatic bench)
Sand filter
Sheetflow to Vegetated Filter or Conserved Open Space 2
Soil Amendments
Urban Bioretention
Vegetated filter strip
Vegetated Roof 1
Vegetated Roof 2
Wet Pond 1
Wet Pond 2
Wet Swale 1
Wet Swale 2

NORFOLK

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 1111 E. Main Street, Suite 1400, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

March 04, 2019

RE: Notice of Termination under the VPDES Construction General Permit (VAR10)
General Permit No.

Commercial
Norfolk

Dear Permittee:

The Department of Environmental Quality (DEQ) has reviewed and approved your Notice of Termination received on February 28, 2019. Your termination of general permit coverage is effective upon the date of this letter unless you provide an objection in accordance with the paragraph below.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty (30) days from the date you received this decision within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Virginia Department of Environmental Quality.

If you have any questions about this letter, please contact the DEQ Office of Stormwater Management at ConstructionGP@deq.virginia.gov.

Sincerely,

Jaime B. Robb

Jaime B. Robb, Manager
Office of Stormwater Management

NORFOLK

City of Norfolk

Department of Planning and Community Development

SWPPP: Ongoing Maintenance Checklist

SWPPP Must Be Kept On-site and Organized in to Combined SWPPP Binder

- ☐ VSMP Approval Letter
  - ☐ Posted
  - ☐ Contact information (Readable)

- ☐ SWPPP site map: Items to be located on plan (red-lined)
  - ☐ Modified E&S controls & additional details
  - ☐ Concrete Washout (10 mil poly)
  - ☐ Trash Cans / Dumpster
  - ☐ Fuel Storage
  - ☐ Portable Toilets
  - ☐ Spill Kit
  - ☐ Hazardous Materials

- ☐ Permit Operator Forms
  - ☐ Registration Letter - Signed by Corporate Officer
  - ☐ Delegation form (may assign role if SWPPP not maintained by Corporate Officer)
  - ☐ Contractor Certification form

- ☐ Land Disturbance Record
  - ☐ Grading Activities
  - ☐ Stabilization

- ☐ Self inspections
  - ☐ Frequency: 5 business days & Rainfall event .25" (Must record rainfall)
  - ☐ Frequency: 4 business days
  - ☐ Weather information recorded day of inspection
  - ☐ E & S deficiencies corrected or certification statement - no deficiencies

- ☐ Upset & Bypass
  - ☐ Upset: unintentional and temporary noncompliance
  - ☐ Even for minor spills and runoff
  - ☐ 24 hour notice
  - ☐ 5 day written notice

- ☐ Spill Kit
  - ☐ Clearly marked on-site
  - ☐ List of trained individuals

- ☐ Closing Procedure
  - ☐ Termination Notice - Submit at end of construction
  - ☐ Retain records for 3 years

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City of Norfolk

SWPPP INSPECTION REPORT

Project Name: _____

Project Address: _____ CGP #: _____

Inspection Date: Inspection Time: ___:___ pm Weather:_____

Reason for Inspection: ❑ Pre-Construction ❑ Regular ❑ Re-Inspection ❑ Final

	Item Description		In Compliance at the Time of Inspection		
SWPPP Book	SWPPP Located On-site		❑ Yes	❑ No	
	General Site Information		❑ Yes	❑ No	
	VAR 10 in SWPPP		❑ Yes	❑ No	
	Signed Registration Statement and Coverage letter		❑ Yes	❑ No	
	VSMP Permit Letter and SWPPP Location Information Displayed		❑ Yes	❑ No	
	SWPPP Site Map / Approved Plan		❑ Yes	❑ No	
	Rain Gauge On-site		❑ Yes	❑ No	❑ N/A
	Potential Pollutants Description and Location		❑ Yes	❑ No	
	Delegation of Authority		❑ Yes	❑ No	
	Identify Person Implementing Pollution Prevention Practices		❑ Yes	❑ No	
	RLD - Qualified Personnel Conducting Inspections		❑ Yes	❑ No	
	Subcontractor Forms		❑ Yes	❑ No	
	Self Inspections		❑ Yes	❑ No	
	Land Disturbance Record		❑ Yes	❑ No	
	Stormwater Calculations for BMPs		❑ Yes	❑ No	❑ N/A
	Spill Kit On-site		❑ Yes	❑ No	❑ N/A
	Termination Notice		❑ Yes	❑ No	❑ N/A
E&S Controls	Construction Entrances	(CE)	❑ Yes	❑ No	❑ N/A
	Silt Fence	(SF)	❑ Yes	❑ No	❑ N/A
	Inlet Protection	(IP)	❑ Yes	❑ No	❑ N/A
	Check Dams	(CD)	❑ Yes	❑ No	❑ N/A
	Tree Protection	(TP)	❑ Yes	❑ No	❑ N/A
	Sediment Traps	(ST)	❑ Yes	❑ No	❑ N/A
	Stockpile Stabilization	(SPS)	❑ Yes	❑ No	❑ N/A
	Soil Stabilization	(SS)	❑ Yes	❑ No	❑ N/A
	Diversion Dikes	(DD)	❑ Yes	❑ No	❑ N/A

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Item Description (continued)	In Compliance at the Time of Inspection		
Outlet Protection	❑ Yes	❑ No	❑ N/A
Turbidity Curtains (TC)	❑ Yes	❑ No	❑ N/A
Dewatering Devices (DW)	❑ Yes	❑ No	❑ N/A
Laydown / Storage Areas	❑ Yes	❑ No	❑ N/A
Public Roads Free of Dust and Debris	❑ Yes	❑ No	❑ N/A
Discharge Points Free of Sediment Deposits	❑ Yes	❑ No	❑ N/A
Concrete / Masonry Washout (CW)	❑ Yes	❑ No	❑ N/A
Chemicals in Controlled Area	❑ Yes	❑ No	❑ N/A
Dumpsters Secured/Covered	❑ Yes	❑ No	❑ N/A
Temporary Fuel Tanks	❑ Yes	❑ No	❑ N/A
Other:	❑ Yes	❑ No	❑ N/A
	❑ Yes	❑ No	❑ N/A

P2 Plan

Trash/Debris on Site: No _____

Sediment Leaving Site: No _____

The inspection reveals that deficiencies are present in the above categories.
The following actions are required to correct the deficiencies:

Violations: ☐ 1st ☐ 2nd ☐ 3rd / Stop Work

Reinspection Date / Compliance Time: ____ calendar days from the receipt of this notice.

Reported to:_____
Print Name

_____
Signature

_____
Phone Number Date

Inspector:_____
Print Name

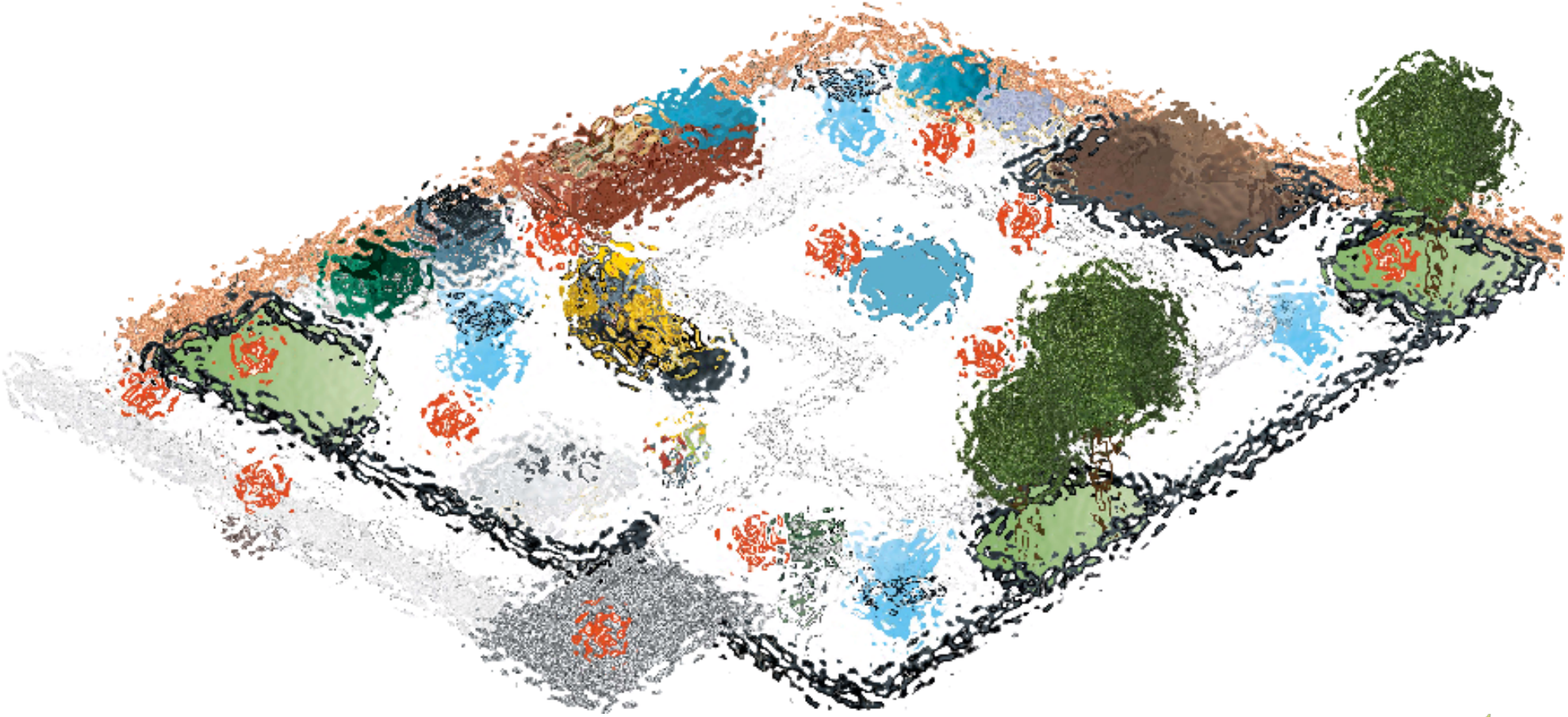
_____
Signature

_____
Phone Number Date

NORFOLK

Questions?

Odell Glenn 664-4365
odell.glenn@norfolk .gov



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DEQ
VIRGINIA DEPARTMENT OF
ENVIRONMENTAL QUALITY

Virginia Stormwater Management Program

DEQ's Compliance Monitoring Strategy

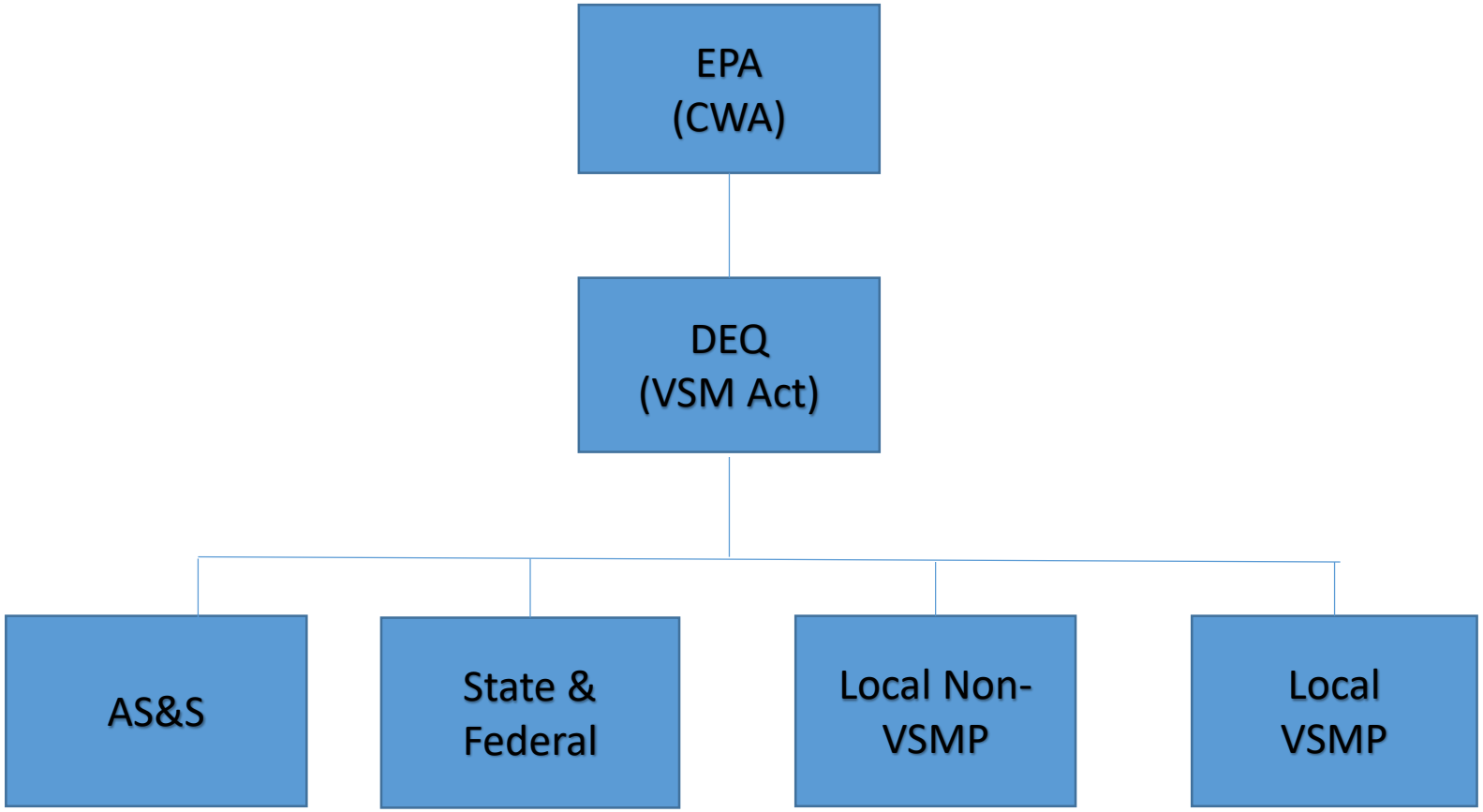
Noah Hill

Stormwater Compliance Lead, TRO

Virginia Department of Environmental Quality

February 7, 2020

Regulatory Hierarchy



Annual Standard & Specifications

- Approved and reviewed by DEQ
- Describes how land-disturbing activities shall be conducted
- Still require site-specific SWM and ESC plans
- Required to conduct compliance inspections
- DEQ performs random inspections and inspections in response to complaint
- DEQ may take enforcement actions

State and Federal

- DEQ reviews stormwater and ESC plans
- DEQ reviews Registration Statements
- Conduct compliance inspections and enforcement
- DEQ may approve AS&S
- DEQ may approve as a VSMP authority

Non-VSMP Localities

- DEQ reviews stormwater plans for locality. Locality reviews ESC plans.
- DEQ reviews Registration Statement and issues CGP
- DEQ conduct VSMP compliance inspections. Locality conducts ESC inspections.
- DEQ enforces the CGP. Locality enforces ESC ordinances.
- Long-term maintenance agreements for stormwater facilities are recorded with DEQ.

Local VSMP Authorities

Local Government

- Reviews and Approves Plans
- Review Registration Statements
- Conducts Compliance Inspections
- Investigates complaints
- Enforce VSMP requirements through local program and ordinances

DEQ

- Issues the CGP
- Joint Inspections with localities
  - Asses local programs
  - Support local programs/inspectors
  - Compliance issues are referred to localities for follow-up
- Provide Program Support/Assistance
- Review Local Programs
- Enforce the CGP and VSMP law/regulations as required

DEQ's Compliance Monitoring (CMS) Strategy

Purpose: The CMS provides a consistent approach and plan for DEQ's regional offices and their respective staff to follow

Objective:

- Increase in site visits and inspections,
- Empowerment of local VSMP authorities,
- Education through compliance assistance, and
- Compliance through enforcement

Disclaimer: *The document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate any particular method nor does it prohibit any alternative method. If alternative proposals are made, such proposals should be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.*

VIRGINIA'S RISK BASED INSPECTION STRATEGY (RBIS)

- Provide a framework for compliance and to assure optimum coverage and thoroughness during inspection activities of the regulated community,
- Assure that obligations under the State Water Control Law and federal grant agreements are met,
- Provide guidance and assistance for operating plan commitments, budgeting, and resource requirements, and
- Ensure inspections are conducted in a consistent and timely manner

RBIS Qualifiers

- Compliance History and Activity Size
- Environmental Sensitivity
- Multi-media Applicability
- Agency Exposure/Sectors
- Oversight

DEQ Site Assessment (Points Assessment Criteria)

- Groups violations in standardized categories
- Assess points based on type of violation
- Points assess range from 0.25 – 4 points per type of violation
- Points should be evaluated cumulative over a 12 month period
- Points should double for repeat occurrences of violations types
- Warning letter should be issued for points greater or equal to 2 but less than 4 points. Notice of violation should be issued for 4 or more points

		(first occurrence)	
4	Failure to develop a stormwater pollution prevention plan. **OR** Failure to have an 1. Approved Erosion and Sediment Control (ESC) Plan, agreement in lieu of a plan, or ESC plan prepared in accordance with annual standards and specifications. 2. Pollution prevention components 3. Approved or incorporated Stormwater Management (SWM) Plan or SWM plan prepared in accordance with annual standards and specifications.	**3** **1** **1** **1** **1**	The lack of all the documents noted under this section is a failure to develop a SWPPP. Failure to develop a SWPPP may be established by lack of SWPPP at the site along with verbal or written confirmation from the operator that a SWPPP has not been developed or failure to provide the SWPPP in response to a Request for Information (RFI). When a SWPPP is available onsite, assess the document for required components based on a Focused or Comprehensive inspection report. In no situation should the assessment under this section (Item #4) and Item #5 exceed 3 points total.
5	Failure to Implement Permit and/or SWPPP Requirements or comply with SWM Plan or E&S Plan, not otherwise specifically listed.	**0.25**	Should be used for violations that are not specifically listed. Points are assessed per requirement. Examples of components considered may include: a copy of the coverage letter, a copy of the CGP, delegation of authority, identification of qualified personnel, identification of contractors, dates of major grading or stabilization measures initiated, posting of coverage, criteria for TMDL WLA addressed (other than inspections). In no situation should the assessment under this section (Item #5) and Item #4 exceed 3 points total.
6	Failure to maintain SWPPP on site or make available when dormant.	**0.5**	This assumes that a SWPPP was developed; but neither the SWPPP nor the location where it can be found is onsite.
7	Failure to install or to properly install or maintain ESC or other pollution prevention measures.	**0.25 - 2**	Points are assessed for the overall site. The upper end of the range may be used when many control measures or one or more critical control measures, have not been installed or not properly installed. The lower end of the range may be used for routine maintenance issues.

QUESTIONS?

Noah Hill

Noah.hill@deq.Virginia.gov

(757) 373-9459