FINAL PLAN SIGNATURES

DATE: January 18, 2022

TO: Amy Pflaum, County Standards Engineer, DES
Kamal 'Nick' Taktak, Construction Management Supervisor, DES
Dave Hundelt, Planning Supervisor, WSS Bureau, DES
Dennis Leach, Deputy Director, Transportation and Development, DES
John Mir, Project Manager, Facilities Design & Construction Bureau, DES

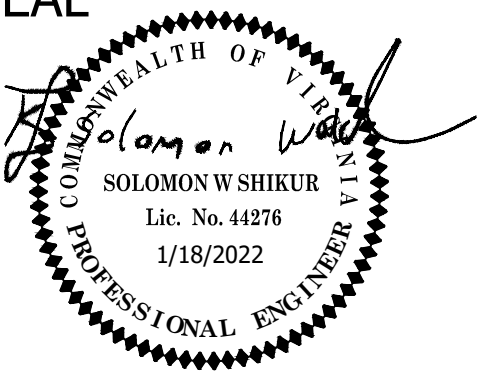
FROM: Sara Buckley, Design Engineer

PROJECT: SLT1 - NORTHSIDE SALT STORAGE SITE
SE CORNER OF OLD DOMINION DR & 26TH ST N

ATTACHMENT: FINAL DESIGN PLAN SET (26 SHEETS)

Attached you will find the final design plan for the above-referenced project. Please conduct a final review of the set to confirm all the comments have been addressed. Once your final review is complete, please sign your name in your designated space on the signature block below, ensuring both your signature and date stay within the borders. Upon receiving all signatures, the signature block will be inserted into each sheet of the final design plan set to be included in the construction documents.

SEAL



APPROVALS DATE

Amy Pflaum 01/18/22
QUALITY CONTROL ENGINEER

Adam E Kulawy 1/20/22
CONSTRUCTION MANAGEMENT SUPERVISOR

1.21.2022
WATER, SEWER, STREETS BUREAU CHIEF

Dennis M. Leach 01/27/22
TRANSPORTATION DIRECTOR

John Mir 1/27/22
PROJECT MANAGER

Reviewing Bureau/Agency	Reviewer	Review Completed Date
TE&O (Traffic Signal, MOT Plan, Pavement Markings and Signage	Nazia Ahzan	12/21/2021
Transit	Diane Trent/Mark Mainardi	12/09/2021
Water, Sewer, Streets	Jon Lawler	1/18/2022
DPR Forestry and Landscaping	Vincent Verweij	12/23/2021
Engineering Bureau	Amy Pflaum	12/15/2021
Transportation Planning	Allison Bullock	12/09/2021
Facilities Design & Construction	John Mir	12/09/2021
OSEM	Christine Simpson	12/13/2021
DPR Planning and Development	Walter Gonzalez	12/16/2021
Development Services	Diana McColgan	12/09/2021
Construction	Mannan Qureshi	1/4/2022

For 100% Signature Submissions only:
I certify that all required approvals (LDA, WMATA, VDOT, TEO, etc) have been secured.

Solomon Wolk
Design Team Supervisor

NOTE: DO NOT FORWARD. PLEASE RETURN THE PLAN SET AND THIS SIGNATURE SHEET TO SARA BUCKLEY.

REVISED ON 01/07/2021

ARLINGTON
VIRGINIA

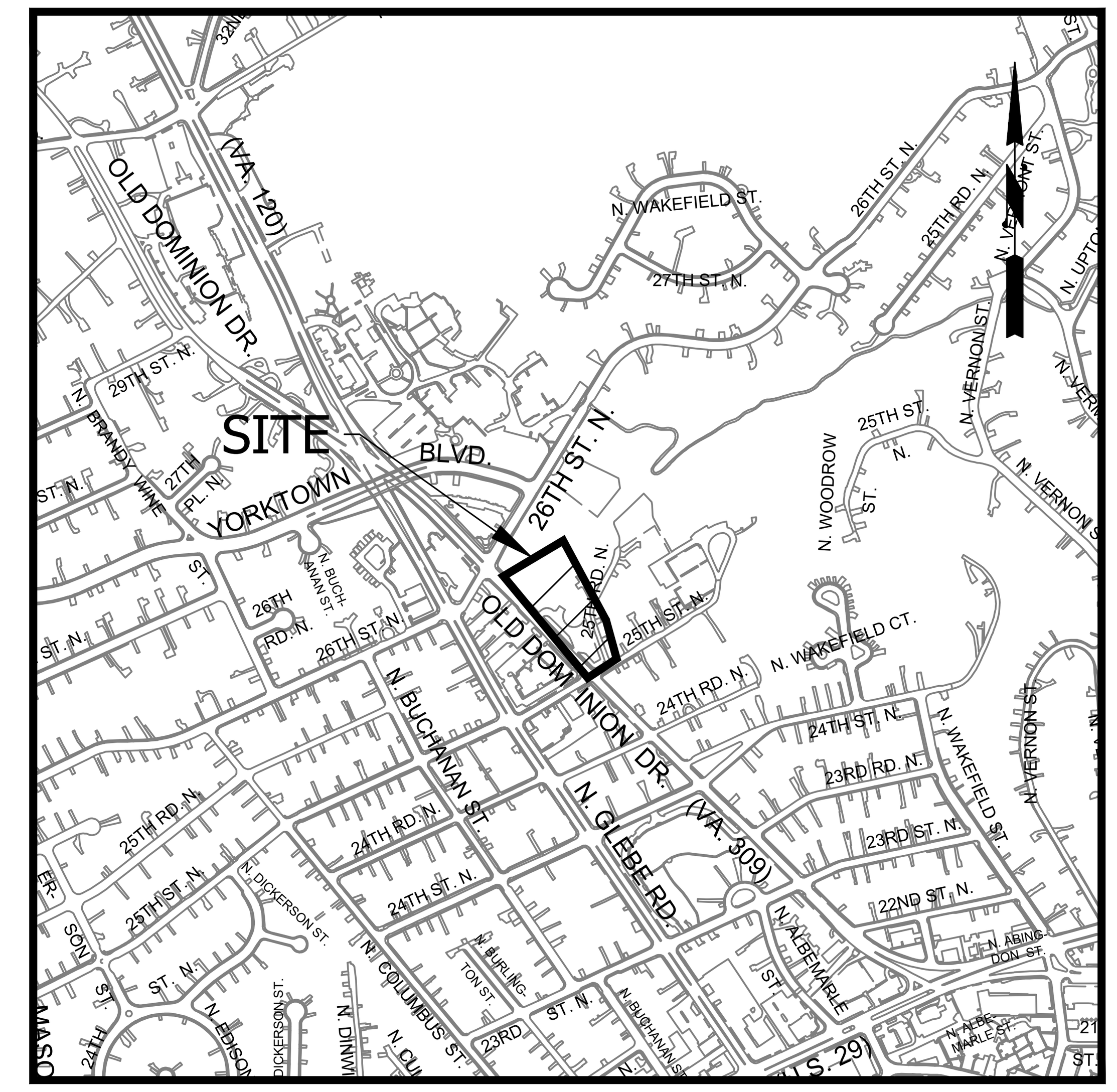
ENGINEER
DEPARTMENT OF
ENVIRONMENTAL SERVICES

FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629 FAX: 703.228.3606
WWW.ARLINGTONVA.US

OWNER
DES/OD/WSS

CONTRACTOR
TO BE DETERMINED

LOCATION MAP



0 600 1200
GRAPHIC SCALE

CONSTRUCTION DRAWINGS FOR:

NORTHSIDE SALT STORAGE SITE
SE CORNER OF OLD DOMINION DR & 26TH ST N

PROJECT NUMBER: SLT1

GENERAL NOTES:

GENERAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION WORK FOR THIS PROJECT SHALL CONFORM TO THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES, CONSTRUCTION STANDARDS AND SPECIFICATIONS, AND WHERE APPLICABLE THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE SPECIFICATIONS, AND ROAD AND BRIDGE STANDARDS. THE LATEST EDITIONS OF EACH RELEVANT MANUAL SHALL BE USED.
2. ALL CONSTRUCTION AND WORK ACTIVITIES SHALL COMPLY WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND ALL OTHER RELEVANT WORK SAFETY REQUIREMENTS, LATEST EDITIONS.
3. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT OFFICER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS.
4. THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 811 FOR MARKING THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES (i.e. WATER, SEWER, GAS, TELEPHONE, ELECTRIC, AND CABLE TV) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION OR CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO IDENTIFY AND PROTECT ALL OTHER UTILITY LINES FOUND IN THE WORK SITE AREA BELONGING TO OTHER OWNERS THAT ARE NOT MEMBERS OF "MISS UTILITY". PRIVATE WATER, SEWER AND GAS LATERALS WILL NOT BE MARKED BY MISS UTILITY OR THE COUNTY. THE CONTRACTOR SHALL LOCATE AND PROTECT THESE SERVICES DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT THE WORK AND SHALL RETAIN A PROFESSIONAL LAND SURVEYOR LICENSED IN THE COMMONWEALTH OF VIRGINIA TO PROVIDE ALL NECESSARY CONSTRUCTION LAYOUTS AND ESTABLISH ALL CONTROL LINES, GRADES, AND ELEVATION DURING CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A COPY OF ALL CUT SHEETS FOR REVIEW, PER THE SPECIFICATIONS. THE COST OF ALL NECESSARY SURVEYING SERVICES SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND, UNLESS OTHERWISE SPECIFIED, THE COST SHALL BE INCORPORATED INTO THE COSTS FOR RELEVANT ITEMS.
6. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM BEST AVAILABLE RECORDS AND SHALL BE CONSIDERED TO BE APPROXIMATE. WHEN CONSTRUCTION ACTIVITY REACHES IN PROXIMITY TO EXISTING UTILITIES, THE TRENCH(ES) SHALL BE OPENED A SUFFICIENT DISTANCE AHEAD OF THE WORK OR TEST PITS SHALL BE MADE TO VERIFY THE EXACT LOCATION AND INVERTS OF THE UTILITY TO ALLOW FOR POSSIBLE CHANGES IN THE LINE OR GRADE AS DIRECTED BY OFFICER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING UTILITIES AND THE RELATED STRUCTURES. ALL EXISTING UTILITY SYSTEMS SHALL BE PROTECTED TO PREVENT DAMAGE DURING THE CONTRACTOR'S OPERATIONS. ANY SYSTEM DAMAGED SHALL BE PROMPTLY REPAIRED AT NO COST TO THE OWNER.
7. EXISTING MANHOLE FRAMES, COVERS, VALVE BOXES, AND OTHER APPURTENANCES SHALL BE ADJUSTED TO THE FINAL GRADE OR REPLACED, AS NECESSARY. UNLESS OTHERWISE SPECIFIED, THE COST FOR THIS SHALL BE CONSIDERED INCIDENTAL TO THE WORK, AND SHALL BE INCORPORATED INTO THE COSTS FOR RELEVANT ITEMS.
8. THE CONTRACTOR SHALL PROVIDE ADA COMPLIANT ACCESS THROUGH OR AROUND THE SITE AT ALL TIMES AND SHALL ENSURE THE SAFETY OF ALL THOSE PASSING THROUGH OR ADJACENT TO THE SITE.
9. ALL SIDEWALK AND CURB AND GUTTER DEMOLITION SHALL BEGIN AND END AT THE CONSTRUCTION JOINT NEAREST TO THE DEPICTED DEMOLITION EXTENTS WITH A NEAT SAWCUT LINE TO FULL DEPTH OF PAVEMENT SECTION.

STORMWATER AND ENVIRONMENTAL PROTECTION

10. THE CONTRACTOR SHALL CONFINE ALL ACTIVITIES AT THE SITE ASSOCIATED WITH CONSTRUCTION ACTIVITIES, TO INCLUDE STORAGE OF EQUIPMENT AND OR MATERIALS, ACCESS TO THE WORK, FORMWORK, ETC. TO WITHIN THE DESIGNATED LIMITS OF DISTURBANCE (LOD).

TREE PROTECTION

11. TREES SHALL BE PROTECTED PER THE REQUIREMENTS OF ARLINGTON PARKS & RECREATION STANDARD.

TRAFFIC CONTROL

12. CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER AT LEAST 3 WORKING DAYS PRIOR TO DISTURBING ANY EXISTING, OR INSTALLING ANY NEW, TRAFFIC SIGNS, SIGNALS, OR OTHER TRAFFIC CONTROL DEVICES.
13. THE CONTRACTOR SHALL PREMARK THE LAYOUT OF ANY PERMANENT TRAFFIC CONTROL STRIPING, INDICATING THE PROPOSED LOCATION AND TYPE OF MARKING TO BE INSTALLED. THE PREMARKING MAY CONSIST OF TYPE D TAPE, CHALK, OR LUMBER CRAYONS. THE CONTRACTOR SHALL ALLOW 3 WORKING DAYS FOR THE INSPECTION AND APPROVAL OF THE PREMARKINGS PRIOR TO PLACING THE PERMANENT MARKINGS.
14. THE CONTRACTOR SHALL SUBMIT ANY REQUESTS FOR TEMPORARY "NO PARKING" RESTRICTIONS TO THE PROJECT OFFICER AT LEAST 5 BUSINESS DAYS PRIOR TO THE DESIRED ONSET OF RESTRICTIONS. PRIOR TO A REQUEST FOR THE REMOVAL OF ACCESS TO ANY ADA PARKING SPACE THE CONTRACTOR MUST HAVE MADE PROVISION FOR ALTERNATIVE ADA PARKING AS INDICATED ON THE APPROVED PLAN OR AS DIRECTED BY THE PROJECT OFFICER.
15. WHEN THE APPROVED PLAN CALLS FOR THE REMOVAL OF ANY PARKING METER THE CONTRACTOR MUST MAKE A REQUEST TO THE PROJECT OFFICER AT LEAST ONE WEEK IN ADVANCE OF THE DESIRED REMOVAL. THE PROJECT OFFICER WILL THEN COORDINATE THE PARKING METER REMOVAL WITH TRAFFIC ENGINEERING AND OPERATIONS.
16. THE CONTRACTOR SHALL PRESERVE ALL BUS STOPS, INCLUDING MAINTAINING ADEQUATE ACCESSIBILITY THROUGH AND ADJACENT TO THE CONSTRUCTION FOR BUSES AND THEIR PASSENGERS. THE CONTRACTOR SHALL NOT CLOSE, RELOCATE, OR OTHERWISE MODIFY A BUS STOP WITHOUT PRIOR REQUEST OF THE PROJECT OFFICER. ANY RELOCATION OR CLOSURE OF A BUS STOP SHALL REQUIRE AT LEAST FOUR WEEKS ADVANCE NOTICE FOR COORDINATION WITH THE COUNTY'S BUS STOP COORDINATOR - 703-228-3049.
17. WHEN CONDITIONS WARRANT DUE TO TRAFFIC VOLUMES, PATTERNS, OR SPECIAL EVENTS, THE COUNTY MAY SUSPEND OR OTHERWISE DIRECT THE CONTRACTOR'S ACTIVITIES TO PROTECT THE PUBLIC AND OR THE COUNTY'S TRANSPORTATION NETWORK.

WATER DISTRIBUTION, STORM AND SANITARY SEWER SYSTEMS

18. UNLESS OTHERWISE DIRECTED, CONTRACTORS ARE EXPRESSLY PROHIBITED FROM OPERATING ANY WATER VALVES OR APPURTENANCES. CONTRACTORS SHALL SUBMIT ALL REQUESTS FOR VALVE OPERATIONS TO THE PROJECT OFFICER AT LEAST 1 WEEK IN ADVANCE OF THE REQUIRED OPERATION.
19. IN THE EVENT OF A WATER OR SEWER EMERGENCY, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COUNTY'S WATER CONTROL CENTER AT 703-228-6555 AND THE PROJECT OFFICER.
20. THE CONTRACTOR SHALL COORDINATE ALL UTILITY SHUTOFFS, DISCONNECTS, AND/OR ABANDONMENT WITH UTILITY OWNER AND PROJECT OFFICER AT LEAST 1 WEEK IN ADVANCE OF THE REQUIRED INTERRUPTION.

FIRE DEPARTMENT NOTES:

21. ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED UNOBSTRUCTED AND ACCESSIBLE AT ALL TIMES IN ACCORDANCE WITH SECTIONS 508.5.4 AND 508.5.5 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
22. ACCESS TO BUILDINGS FOR FIREFIGHTING SHALL BE MAINTAINED AT ALL TIMES. EXISTING FIRE APPARATUS ACCESS ROADS (FIRE LANES) SHALL BE KEPT CLEAR OF OBSTRUCTIONS IN ACCORDANCE WITH SECTION 503.4 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE. ACCESS TO CONSTRUCTION SITES SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH SECTION 1410 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
23. IN THE EVENT THAT EXISTING FIRE DEPARTMENT CONNECTIONS OR FIRE APPARATUS ACCESS ROADS (FIRE LANES) MUST BE OBSTRUCTED TO FACILITATE CONSTRUCTION ACTIVITIES, CONTACT THE ARLINGTON COUNTY FIRE DEPARTMENT FIRE PREVENTION OFFICE AT 703-228-4644 TO COORDINATE REVIEW AND APPROVAL OF TEMPORARY FIRE DEPARTMENT CONNECTIONS AND/OR FIRE APPARATUS ACCESS ROADS PRIOR TO CREATING THE OBSTRUCTION.

Sheet List Table

SHEET NUMBER	SHEET TITLE
C000.1	COVER SHEET
C002.1	DETAILS - 1
C002.2	DETAILS - 2
C006.1	LEGEND
C011.1	EXISTING CONDITIONS PLAN
C021.1	DEMOLITION PLAN
C031.1	EROSION AND SEDIMENT CONTROL PLAN PHASE 1
C031.2	EROSION AND SEDIMENT CONTROL PLAN PHASE 2
C031.3	TREE PROTECTION AND REMOVAL PLAN
C031.4	TREE INVENTORY
C031.5	TREE PLANTING PLAN
C032.1	EROSION AND SEDIMENT CONTROL NOTES
C032.2	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
C035.1	SWPPP
C041.1	SITE PLAN
C041.2	GRADING PLAN
C045.1	GEOMETRIC CONTROL PLAN
C071.1	STORM SEWER DRAINAGE DIVIDES (PRE-EXISTING)
C071.2	STORM SEWER DRAINAGE DIVIDES (PROPOSED)
C073.1	STORM SEWER PROFILES
C075.1	STORM COMPUTATIONS
C082.1	SWM NOTES AND DETAILS
C083.1	SWM PLAN
C085.1	SWM CALCULATIONS
C085.2	STORMWATER DETENTION CALCULATIONS
C121.1	MAINTENANCE OF TRAFFIC PLAN

PROJECT NOTE: IF APPLICABLE,THE ON-CALL CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THE APPROVED MOT PLAN BY THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES.

SWM #18-0199
LDA-41281

ADT

14,000 - OLD DOMINION DR BETWEEN 22ND ST N AND N GLEBE RD - 2019 - VDOT TRAFFIC STUDY

STREET CLASSIFICATION

OLD DOMINION DRIVE - MAJOR ARTERIAL
25TH STREET NORTH - MINOR ARTERIAL

POSTED SPEED

OLD DOMINION DRIVE - 30 MPH
25TH STREET NORTH - 25 MPH

ARLINGTON
VIRGINIA

DEPARTMENT OF
ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

SEAL

COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44276
1/6/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum — QUALITY CONTROL ENGINEER	01/18/22
Adam E Kulaury — CONSTRUCTION MANAGEMENT SUPERVISOR	1/20/22
WATER, SEWER, STREETS BUREAU CHIEF	1.21.2022
Dennis M. Leach — TRANSPORTATION DIRECTOR	01/27/22
John Mir — PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

COVER SHEET

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:

C000.1

FILENAME: SLT1-200-COVER.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY

REVISED ON 01/07/2021

PARTIAL EXCEPTION TO POST-CONSTRUCTION STORMWATER MANAGEMENT REQUIREMENTS
FOR PROJECT #LDA18212 (SWM#18-0199)

ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
Director's Office
2100 Clarendon Boulevard, Suite 900, Arlington, VA 22201
TEL 703-228-3520 FAX 703-228-3504 www.arlingtonva.us

October 1, 2018

Mr. George May, P.E.
Deputy Director, DES Facilities and Engineering
1400 N. Uhle Street, Suite 403
Arlington, VA 22201

Re: Temporary salt storage structure at Old Dominion Drive and 25th Street North,
SWM No.18-0199

Dear Mr. May:

Your request for a partial exception to the post-construction stormwater management (SWM) requirements of Arlington County's Stormwater Management Ordinance (§60-11.A of the County Code) for the land disturbing activity related to the above-named project is approved, subject to the following conditions:

1. You must provide on-site detention and conveyance of stormwater to mitigate impacts from the temporary salt storage structure to adjacent properties and the downstream storm drainage system, per your approved plans.
2. The temporary structure shall be in place for no more than five (5) years from the date of LDA permit issuance.
3. The stormwater compliance calculations for the permanent development of the site shall use the existing site conditions (prior to the installation of any temporary structures) as the baseline. Your current LDA plan must show these baseline computations.

These conditions shall be reflected in the design and mitigation measures and details shown on your project's grading plan, LDA18212, before it will be approved.

In granting this exception with conditions, I have concluded that the required findings established under Section 60-11.D of the County Code have been met due to the following considerations:

- Finding (i). *The exception is the minimum necessary to afford relief.* The condition that the temporary use provide on-site detention and conveyance of stormwater to mitigate impacts to adjacent properties and the downstream storm drainage system satisfies this finding.
- Finding (ii). *Reasonable and appropriate conditions are imposed so that the intent of the Act, the Regulations, and this chapter are preserved.* The conditions imposed above satisfy this finding.
- Finding (iii). *Granting the exception will not confer any special privileges that are denied in other similar circumstances.* The critical public safety function of the facility is unique. There are not other parties in similar circumstances regulated under the code. In addition, the requirements that the temporary structure be removed within five (5) years and that the permanent development use existing conditions as the baseline means that full compliance with Chapter 60 will ultimately be required.
- Finding (iv). *Exception requests are not based upon conditions or circumstances that are self-imposed or self-created.* The determination that the current facility is unsafe occurred in May 2018, without sufficient time to plan, design, and construct a new permanent facility before the start of the winter snow season. I have concluded that this is not a self-imposed or self-created circumstance.

In addition, although not a requirement of Chapter 60, I am noting in this letter that your landscape plan must document, in addition to the usual requirement to provide tree condition, tree removal, and tree replacement computations, the quantity of replacement trees required should any of the trees that have been pruned fail to survive. These replacement trees shall be provided with the implementation of the permanent plan.

Thank you for your efforts to work with my team to address the stormwater compliance challenges for this project. If you have any additional questions, please contact Qianqian Li at 703) 228-0129 or qli@arlingtonva.us.

Sincerely,

Greg Emanuel
Director

cc:
Luis Araya, DES/DS
Lisa Maher, DES/DS
Qianqian Li, DES/DS
Demetra McBride, DES/OSEM
Jason Papacosma, DES/OSEM
Julie Massie, CAO

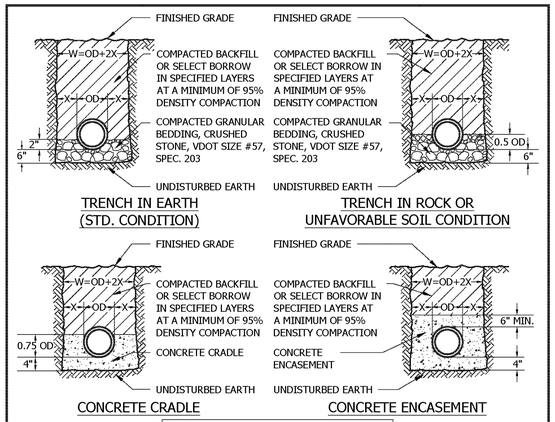


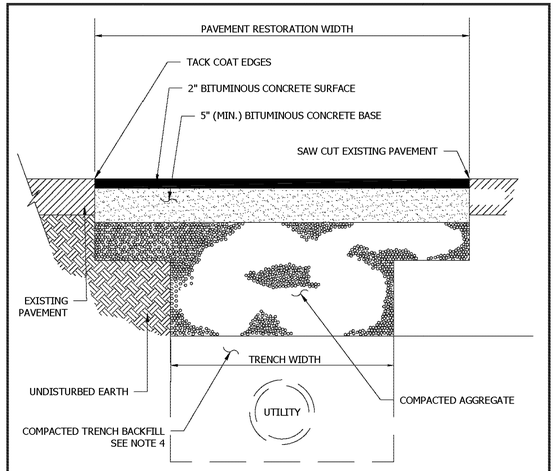
TABLE 3	
PIPE SIZE	X
12" & LESS	**
12" - 30"	12"
33" - 42"	15"
48" & LARGER	18"
** TRENCH WIDTH (W) SHALL BE 3'-0" MAX.	
WIDTH OF TRENCH (W) = OD+2X WHERE X IS DISTANCE FROM OUTSIDE OF PIPE TO EDGE OF TRENCH	

NOTES:
1. CONCRETE FOR CRADLES AND ENCASEMENTS TO HAVE f'c = 3,000 PSI AT 28 DAYS.
2. POUR CONCRETE AGAINST UNDISTURBED EARTH.
3. FOR CONTINUOUS CONDUIT IN TRENCH CONDITIONS THE WIDTH OF TRENCH (W) SHALL BE OD+2X (MAX.).
4. THE WIDTH OF TRENCH FOR ALL OTHER PIPE DIAMETERS SHALL BE ACCORDING TO TABLE 3.
5. FOR PAVEMENT RESTORATION SEE M-6.0.

PIPE AND BEDDING DETAILS FOR TRENCH CONDITIONS

ARLINGTON VIRGINIA — ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES

ISSUED 9/14/2020
DRAWING NO. **M-3.0**

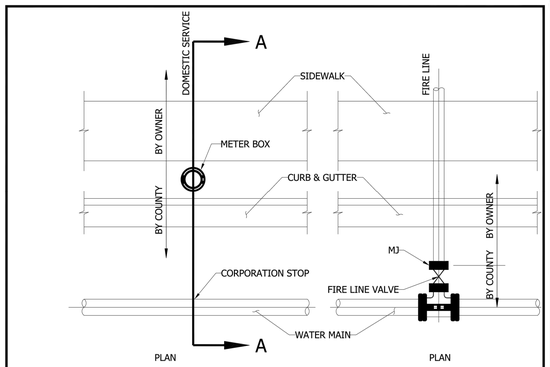


NOTES:
1. WHEN THE DISTANCE FROM THE EDGE OF EXISTING PAVEMENT TO THE EDGE OF THE PAVEMENT RESTORATION PAYMENT WIDTH IS 3' OR LESS THEN THE ADDITIONAL PAVEMENT SHALL BE REMOVED AND REPLACED BACK TO THE EDGE.
2. THICKNESS OF BASE MAY BE REDUCED TO 3" WHEN PATCH IS BEING MADE IN PAVEMENTS OF SURFACE TREATED GRAVEL, AND DIRECTED BY THE PROJECT OFFICER.
3. WHEN WIDENING OR PATCHING A STREET WITH ASPHALT, A NEAT, CLEAN JOINT OF AT LEAST ONE (1) INCH IN DEPTH BETWEEN OLD AND NEW PAVEMENT SHALL BE PROVIDED FOR TOPPING SO AS TO ELIMINATE THE NEED FOR FEATHERING OF THE OVERLAY.
4. FOR TRENCH AND BEDDING DETAILS, SEE DRAWING No. M-3.0.

STANDARD PAVEMENT RESTORATION FOR UTILITY CUTS

ARLINGTON VIRGINIA — ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES

ISSUED 9/14/2020
DRAWING NO. **M-6.0**



SERVICE SIZE	METER SIZE	BOX SIZE
1"	3/4"	18"
1 1/2"	1 1/2"	24"
2"	2"	36"

LEGEND
MJ - MECHANICAL JOINT

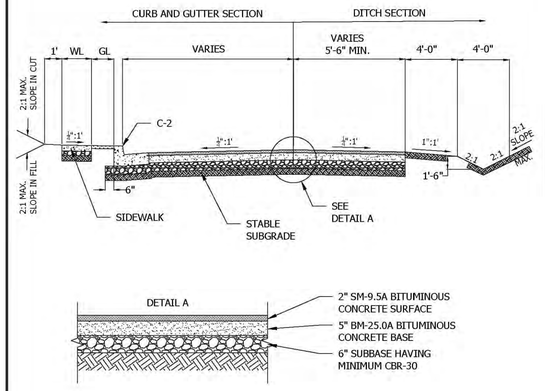
NOTES :
1. SERVICES WILL BE INSTALLED AFTER ALL FEES HAVE BEEN PAID AND ALL SITE CONDITIONS FOR SETTING THE METER HAVE BEEN MET.
2. THE PROPERTY OWNER'S PLUMBER SHALL BE RESPONSIBLE FOR CONNECTING TO THE COUNTY METER INSTALLATION. PLUMBER SHALL NOT ENTER METER BOX.

WATER SERVICE CONNECTIONS 2-INCH AND SMALLER

1 7/01/2020 REVISION & DATE

ARLINGTON VIRGINIA — ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES

DRAWING NO. **W-8.0**

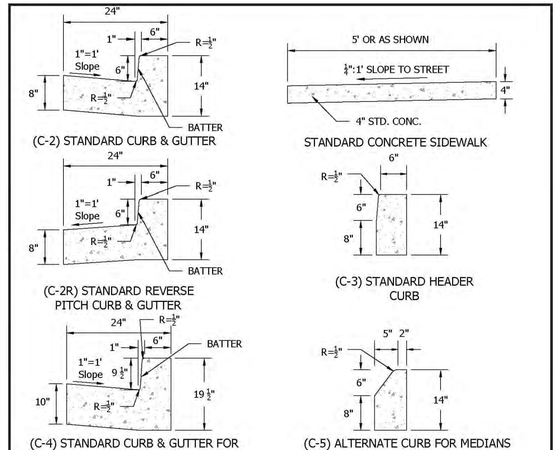


NOTES:
1. PAVEMENT SECTION SHALL BE AS SHOWN ABOVE UNLESS SPECIFICALLY NOTED ON THE APPROVED CONSTRUCTION DRAWINGS.
2. WHEN THERE IS A DIFFERENCE IN ELEVATION BETWEEN THE RIGHT SIDE AND LEFT SIDE CURB & GUTTER, THE CROWN OF THE STREET SHALL BE NO CLOSER THAN 8' FROM THE EDGE OF THE GUTTER ON THE HIGH SIDE.
3. WL/R - WIDTH OF SIDEWALK, LEFT/RIGHT SIDE.
4. GL/R - WIDTH OF GRASS STRIP, LEFT/RIGHT SIDE.
5. WL/R AND GL/R SHALL BE PER THE HORIZONTAL CONSTRUCTION STANDARDS OR AS NOTED ON THE APPROVED CONSTRUCTION DRAWINGS.

TYPICAL SECTIONS LOCAL RESIDENTIAL STREETS

ARLINGTON VIRGINIA — ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES

ISSUED 9/14/2020
DRAWING NO. **R-1.1**



NOTES:
1. SECTION C-3 IS TO BE USED ONLY WITH RIGID TYPE PAVEMENT UNLESS OTHERWISE DIRECTED IN WRITING OR WHEN SHOWN ON APPROVED PLANS.
2. EXPANSION JOINTS IN HEADER CURB AND STANDARD CURB AND GUTTER SHALL BE 40' APART OR AT EXPANSION JOINTS IN CONCRETE PAVEMENT.
3. EXPANSION JOINTS MAY BE OMITTED IF 1/8" JOINTS ARE PLACED EVERY 10' OF LESS
4. EXPANSION JOINTS IN THE SIDEWALK SHALL BE 40' APART. IF ADJACENT TO CONCRETE CURB, EXPANSION JOINTS SHALL MATCH JOINT OF CURB. AN EXPANSION JOINT SHALL BE PLACED BETWEEN CURB AND SIDEWALK.
5. SEE DRAWING R-2.2 FOR DETAIL OF SIDEWALK STRESS COLUMN TO BE PLACED UNDER SIDEWALK WHEN PLACED ADJACENT TO BACK OF CURB.
6. SEE ARLINGTON COUNTY SPECIFICATION SECTIONS 02611 AND 03100 FOR MATERIAL SPECS.
7. PROVIDE 6" MINIMUM AGGREGATE BASE HAVING CBR-30 UNDER CURB AND GUTTER.
8. PROVIDE 3" MINIMUM AGGREGATE BASE HAVING CBR-30 UNDER SIDEWALK
9. WHENEVER CURB ABUTTS RIGID PAVEMENT, PROVIDE LONGITUDINAL JOINT PER VDOT PR-2.
10. SECTION C-5 TO BE USED WHEN BICYCLE LANE RUNS ALONG A MEDIAN.

CONCRETE CURB & GUTTER AND SIDEWALK

ARLINGTON VIRGINIA — ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES

ISSUED 9/14/2020
DRAWING NO. **R-2.0**

ARLINGTON
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DEPARTMENT OF ENVIRONMENTAL SERVICES
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ENGINEERING BUREAU
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SEAL

COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44376
1/6/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	01/18/22
Adam E Kulavy, CONSTRUCTION MANAGEMENT SUPERVISOR	1/20/22
WATER, SEWER, STREETS BUREAU CHIEF	1.21.2022
Dennis M Leach, TRANSPORTATION DIRECTOR	01/27/22
John Mir, PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

DETAILS - 1

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:

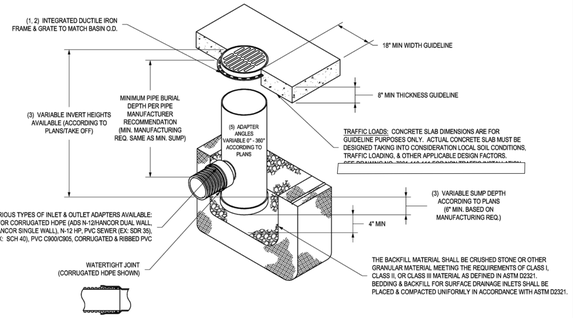
AS SHOWN

C002.1

FILENAME: SLT1-204-DETAILS.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY

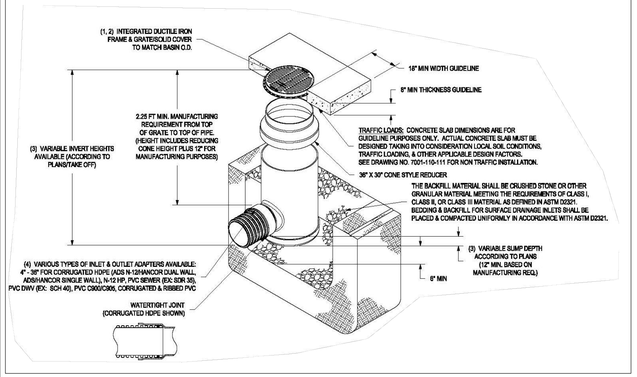
REVISED ON 01/07/2021

TYP. 18" DRAIN BASIN

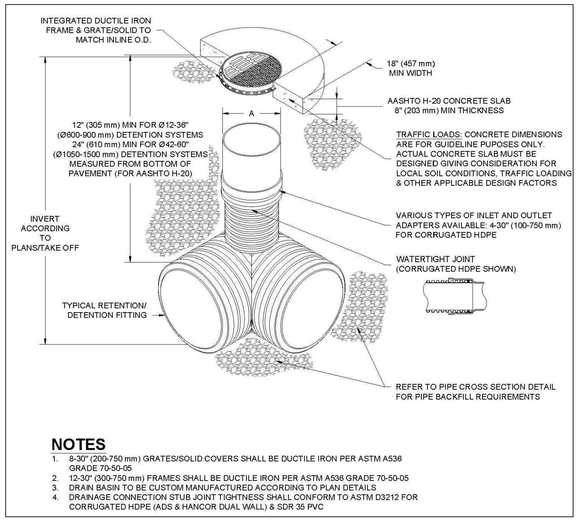


1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS.

TYP. 36" DRAIN BASIN

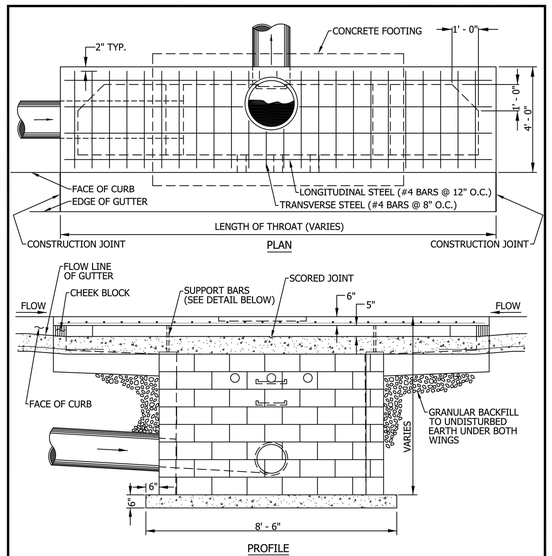


30" INLINE DRAIN



NOTES

1. 8-30" (200-750 mm) GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
2. 12-30" (300-750 mm) FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
4. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC



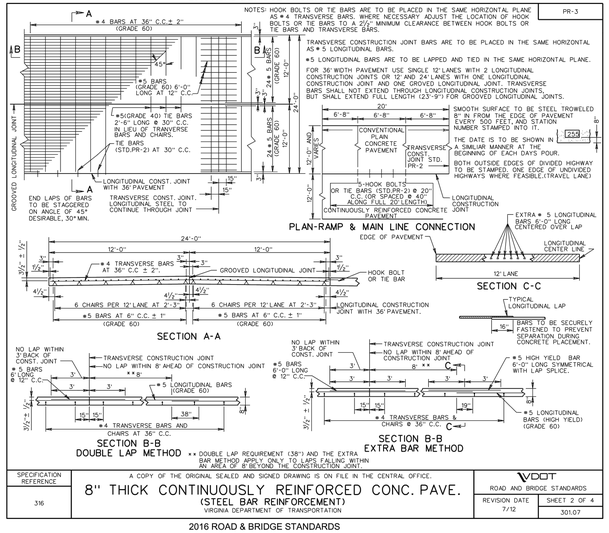
NOTES:
1. LENGTH OF THROAT VARIES, AS SHOWN ON APPROVED PLANS, FROM 8'-6" TO 16'-0".
2. FOR ADDITIONAL NOTES AND DETAILS, SEE DRAWINGS D-1.1 AND D-1.2.
3. PROVIDE 2% MINIMUM SLOPE ON SHELF INSIDE EACH EXTENDED THROAT (SEE DRAWING D-1.4 FOR THROAT SHELF DETAIL).
4. 2 -#4 BARS - 6' LONG SHALL BE PLACED IN EACH END OF THE THROAT. THESE BARS SHALL EXTEND A MINIMUM OF 3' BEYOND THE EDGE OF THE CATCH BASIN AND 3' INTO THE THROAT. BEND AS REQUIRED.

CATCH BASIN WITH EXTENDED THROATS FOR SAGS, CB-2A

ARLINGTON VIRGINIA — ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES

ISSUED 9/14/2020 — DRAWING NO. **D-1.3**

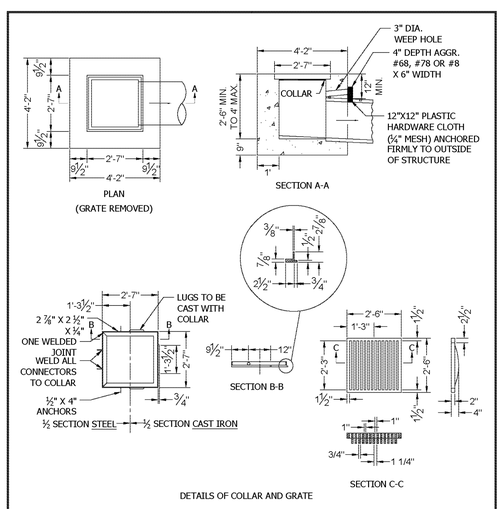
2016 ROAD & BRIDGE STANDARDS



** DOUBLE LAP REQUIREMENT (38") AND THE EXTRA BAR METHOD APPLY ONLY TO LAPS FALLING WITHIN AN AREA OF 8' BEYOND THE CONSTRUCTION JOINT.

SPECIFICATION REFERENCE	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.	VDOT ROAD AND BRIDGE STANDARDS
316	8" THICK CONTINUOUSLY REINFORCED CONC. PAVE. (STEEL BAR REINFORCEMENT) VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE 7/12 — SHEET 2 OF 4 — 301.07

2016 ROAD & BRIDGE STANDARDS

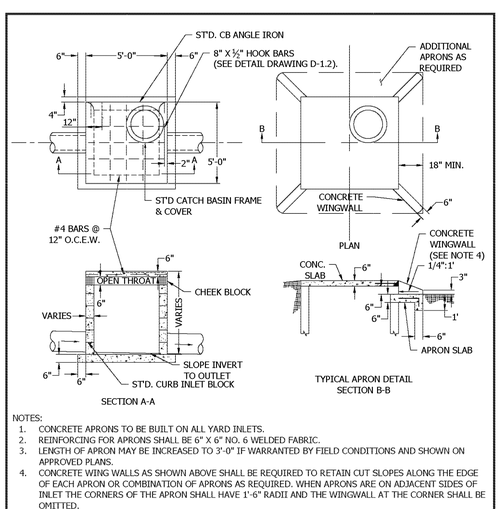


NOTES:
1. INVERT OF INLET TO BE AS SHOWN ON PLANS.
2. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
3. GRATE INLET TO BE ADA COMPLIANT WHEN USED IN A PEDESTRIAN TRAFFIC AREA. GRATE VANES TO BE ORIENTED PERPENDICULAR TO BICYCLE TRAFFIC .

NONROADWAY SHALLOW GRATE INLET 15" TO 24" PIPE MAXIMUM

ARLINGTON VIRGINIA — ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES

ISSUED 9/14/2020 — DRAWING NO. **D-1.9**

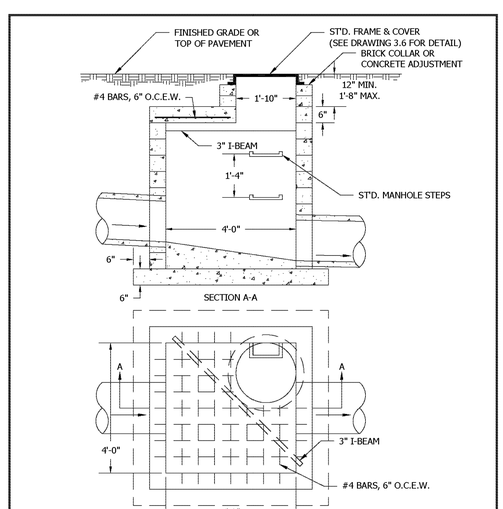


NOTES:
1. CONCRETE APRONS TO BE BUILT ON ALL YARD INLETS.
2. REINFORCING FOR APRONS SHALL BE 6" X 6" NO. 6 WELDED FABRIC.
3. LENGTH OF APRON MAY BE INCREASED TO 3'-0" IF WARRANTED BY FIELD CONDITIONS AND SHOWN ON APPROVED PLANS.
4. CONCRETE WING WALLS AS SHOWN ABOVE SHALL BE REQUIRED TO RETAIN CUT SLOPES ALONG THE EDGE OF EACH APRON OR COMBINATION OF APRONS AS REQUIRED. WHEN APRONS ARE ON ADJACENT SIDES OF INLET THE CORNERS OF THE APRON SHALL HAVE 1'-6" RADII AND THE WINGWALL AT THE CORNER SHALL BE OMITTED.
5. YARD INLETS DEEPER THAN 4' SHALL HAVE STEPS PLACED AS SHOWN
6. DIMENSIONS OF YARD INLETS SHOWN ARE FOR PIPE SIZES UP TO AND INCLUDING 33" PIPE, WHILE PROVIDING A MINIMUM OF 6" CLEARANCE WHEN POSSIBLE FROM INSIDE WALL OF STRUCTURE TO O.D. OF PIPE. INLETS FOR PIPES GREATER THAN 33" SHALL REQUIRE A SPECIAL DESIGN.
7. SYMMETRICAL CHANNELS SHALL BE FORMED IN THE INVERT OF THE BOX FROM THE INLET PIPE TO THE OUTLET PIPE PER DRAWING D-2.1 FOR PAVING OF INVERT. SEE NOTE 5, DRAWING 1.1.
8. PROVIDE STANDARD 4" X 4" X 3/8" ANGLE IRON FOR FULL LENGTH OF THROAT.
9. THE INSIDE WALLS, AS THEY ARE LAID, SHALL BE PARGETED WITH MORTAR A MINIMUM OF 1/2" THICK.

YARD INLET

ARLINGTON VIRGINIA — ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES

ISSUED 9/14/2020 — DRAWING NO. **D-1.10**



NOTES:
1. EXPOSED MANHOLE FRAME, LID, GRATES AND BEAMS TO BE FIELD PAINTED WITH BLACK ASPHALTIC PAINT.
2. PROVIDE 1 1/2" OF COVER FOR ALL REINFORCING STEEL.
3. EACH MANHOLE INVERT SHALL BE INDIVIDUALLY SHAPED TO PROVIDE A SMOOTH FLOW LINE THROUGH MANHOLE. (SEE DRAWING D-2.1 AND NOTE 5 ON DRAWING D-1.1).
4. MANHOLES DEEPER THAN 4'-0" SHALL HAVE STEPS 1'-4" O.C. (SEE DRAWING M-2.0).
5. FOR DETAILS OF MANHOLE BLOCK, SEE DRAWING D-2.0.

STORM SEWER MANHOLE, MH-1 FOR PIPE SIZES 15" THROUGH 36"

ARLINGTON VIRGINIA — ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES

ISSUED 9/14/2020 — DRAWING NO. **D-3.0**

ARLINGTON
VIRGINIA

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FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

SEAL

COMMONWEALTH OF VIRGINIA — SOLOMON W SHIKUR — Lic. No. 44376 — 1/6/2022 — PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum — QUALITY CONTROL ENGINEER	01/18/22
Adam E Kulawy — CONSTRUCTION MANAGEMENT SUPERVISOR	1/20/22
WATER, SEWER, STREETS BUREAU CHIEF	1.21.2022
Dennis M. Leach — TRANSPORTATION DIRECTOR	01/27/22
John Mir — PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

DETAILS - 2

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:

AS SHOWN

C002.2

FILENAME: SLT1-204-DETAILS.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY

REVISED ON 01/07/2021

LINETYPE LEGEND

FEATURE	EXISTING	PROPOSED
BUILDING		
CENTERLINE / BASELINE		
COMMUNICATIONS CABLE	COM COM	COM COM
CONTOURS - MAJOR, MINOR	250 250	250
CRITICAL ROOT ZONE	CRZ CRZ	CRZ CRZ
EASEMENT		
ELECTRIC (UNDERGROUND)	UGE UGE	UGE UGE
FENCE (MATERIAL NOTED)		X X X X X
FIBER OPTIC	FO FO	FO FO
GAS LINE	GAS GAS	GAS GAS
X" GAS LINE (SIZE INCLUDED IF AVAILABLE)	#" g #" g #" g	#" G #" G
GUARDRAIL		
HARDSCAPE FEATURE (MATERIAL NOTED)		
LIMITS OF DISTURBANCE	LOD LOD	LOD LOD
LIMITS OF WORK	LOW LOW	LOW LOW
OVERHEAD WIRES		
PAVEMENT MINI SKIP LINE		
PAVEMENT SKIP LINE		
PROPERTY LINE		
RIGHT-OF-WAY LINE		
ROOT PRUNING	RP RP	RP RP
SANITARY SEWER	SAN	SAN
SANITARY SEWER UNDER 20" (SIZE INCLUDED IF AVAILABLE)	#" s #" s	
SANITARY SEWER OVER 20"		
SILT FENCE	X X X X X	X X X X X
STORM (SIZE NOTED)	STM STM	
STREAM		
STREET LIGHT CONDUIT	SL SL	SL SL
TELEPHONE (UNDERGROUND)	UGT UGT	UGT UGT
TREE LINE		
TREE PROTECTION FENCE	TP TP	TP TP
WALL		
WATERLINE UNDER 20" (SIZE INCLUDED IF AVAILABLE)	#" w #" w	
WATERLINE OVER 20"		

SYMBOL LEGEND

EXISTING FEATURE	PROPOSED FEATURE
EX CABLE PEDESTAL	
EX ELECTRIC BOX	
EX FIRE HYDRANT	PROP FIRE HYDRANT
EX GAS VALVE	PROP GAS VALVE
EX GROUND LIGHT	
EX GUY WIRES	
EX IRON PIPE OR PIN	
EX LIGHT POLE	PROP LIGHT POLE
EX MAILBOX	
EX MONUMENT	
EX PARKING METER	
EX PAY STATION	PROP PAY STATION
EX SANITARY MANHOLE	PROP SANITARY MANHOLE
EX STORM BASIN	PROP STORM CATCH BASIN (TO SCALE)
EX STORM MANHOLE	PROP STORM MANHOLE
EX TELEPHONE PEDESTAL	
EX TRAFFIC CONTROL BOX	
EX TRAFFIC SIGN	PROP TRAFFIC SIGN
EX TRASH CAN	PROP TRASH CAN
EX TRAVERSE	
EX TREES, WOODED AREA	PROPOSED TREE
	PROPOSED TREE REMOVAL
EX UTILITY MANHOLE TYPE INDICATED ELEC, TELE, ETC	
EX UTILITY POLE	PROP UTILITY POLE
EX WATER MANHOLE	PROP WATER MANHOLE
EX WATER METER	PROP WATER METER
EX WATER VALVE	PROP WATER VALVE
EX YARD INLET	PROP YARD INLET (TO SCALE)
EX BENCHMARK	CONSTRUCTION NOTES (LEADER TO AREA AFFECTED)
	DETAIL NUMBER (SEE NOTE)
NORTH ARROW	CURVE NUMBER (SEE CURVE TABLE)
	LINE NUMBER (SEE LINE TABLE)
	TEST HOLE

SYMBOL LEGEND

EXISTING FEATURE	PROPOSED FEATURE
EX STRIPING	PROP STRIPING
EX BUS STOP	PROP BUS STOP

LABEL LEGEND

EXISTING	PROPOSED
EXISTING SANITARY STRUCTURE NUMBER (XXXX)	PROPOSED SANITARY SEWER STRUCTURE NUMBER (XXXX)
EXISTING STORM SEWER STRUCTURE NUMBER (XXXX)	PROPOSED STORM SEWER STRUCTURE NUMBER (XXXX)

HATCH LEGEND

PROP MILL & OVERLAY SEE TYPICAL SECTION FOR DETAILS	
PROP FULL DEPTH ASPHALT SEE TYPICAL SECTION FOR DETAILS	
PROP CONCRETE	
REPLACE & MATCH EXISTING DRIVEWAY OR LEADWALK. SEE CONSTRUCTION NOTES	
DEMOLITION AREA	

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SEAL

COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44376
1/6/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
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Adam E Kulawy CONSTRUCTION MANAGEMENT SUPERVISOR	1/20/22
[signature] WATER, SEWER, STREETS BUREAU CHIEF	1.21.2022
Dennis M Leach TRANSPORTATION DIRECTOR	01/27/22
John Mir PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

LEGEND

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:

N/A

C006.1

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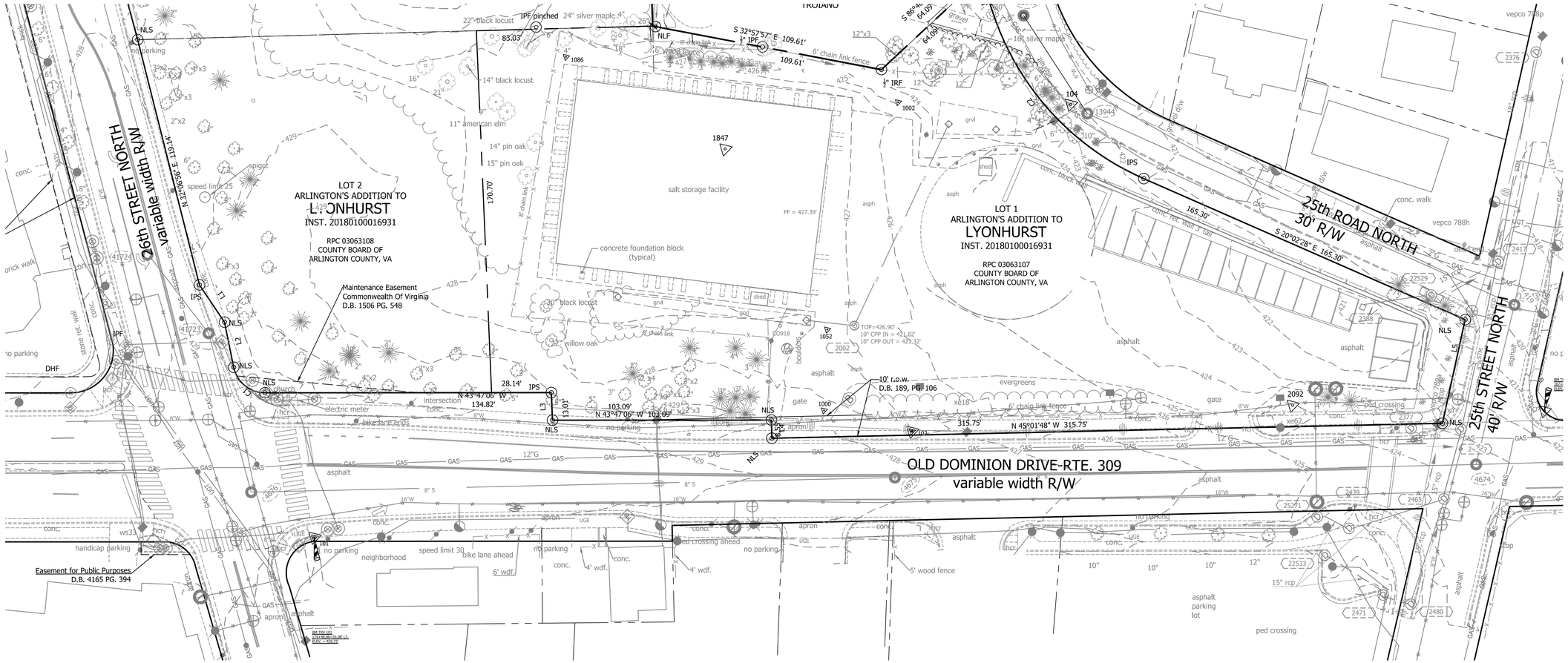
REVISED ON 01/07/2021



SURVEYOR'S CERTIFICATE

I, NATHAN ORR, A DULY LICENSED LAND SURVEYOR IN THE COMMONWEALTH OF VIRGINIA, DO HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE BOUNDARY SURVEY DELINEATED HEREON IS IN ACCORDANCE WITH THE MINIMUM STANDARDS AND PROCEDURES ESTABLISHED BY THE VIRGINIA STATE BOARD OF ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS AND LANDSCAPE ARCHITECTS AND IS NOW IN THE NAME OF THE COUNTY BOARD OF ARLINGTON COUNTY, VIRGINIA AS ACQUIRED BY THE FOLLOWING:

RPC 03063001: DEED BOOK 258 AT PAGE 148, DEED BOOK 258 AT PAGE 149, AND DEED BOOK 377 AT PAGE 231.

RPC 03063002: DEED BOOK 2531 AT PAGE 535

RPC 03063003: DEED BOOK 2531 AT PAGE 537

RPC 03063004: DEED BOOK 2531 AT PAGE 540

RPC 03063005: DEED BOOK 4119 AT PAGE 400

RPC 03063006: DEED BOOK 2548 AT PAGE 1014

RPC 03063008: DEED BOOK 1377 AT PAGE 228, DEED BOOK 1377 AT PAGE 238, AND DEED BOOK 1414 AT PAGE 355

ALL OF WHICH ARE RECORDED AMONG THE LAND RECORDS OF ARLINGTON COUNTY, VIRGINIA.

I FURTHER CERTIFY THAT THIS TOPOGRAPHIC SURVEY SHOWN HEREON WAS COMPLETED UNDER MY DIRECT AND RESPONSIBLE CHARGE FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED FROM 02/16/2017 TO 05/05/2017; AND THAT THE PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

NATHAN A. ORR L.S. #3178 DATE 05/12/17

COMMONWEALTH OF VIRGINIA
NATHAN A. ORR
Lic. No. 3178
05/12/17
LAND SURVEYOR

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF STEVEN J. LEARNARD, L.S. FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED DURING 05/2021; AND THAT THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

COMMONWEALTH OF VIRGINIA
5-20-2021
STEVEN J. LEARNARD
Lic. No. 2380
LAND SURVEYOR

SANITARY SEWER TABULATION:

#41724
TOP = 428.67
C/L INV. = 421.04

#41723
TOP = 429.94
C/L INV. = 420.89

#4676
TOP = 429.54
C/L INV. = 420.48

#4675
TOP = 428.32
C/L INV. = 417.32

#4674
TOP = 423.45
NOT ACCESSIBLE
INVERT OUT PER RECORD = 412.53

#4672
TOP = 414.18
C/L INV. = 402.55

#13943
TOP = 419.45
C/L INV. = 413.05

#13728
TOP = 416.42
C/L INV. = 413.46

#13944
TOP = 421.99
C/L INV. = 415.39

#13945
TOP = 420.45
C/L INV. = 415.92

STORM SEWER TABULATION

#1960
TOP = 406.84
18" RCP INV. IN (1949) = 393.41

#1949
TOP = 408.34
18" RCP INV. IN (1957) = NOT ACCESSIBLE
18" RCP INV. OUT (1960) = NOT ACCESSIBLE

#1957
TOP = 408.76
18" RCP INV. OUT (1949) = 405.91

#2022
TOP = 410.76
15" RCP INV. IN (2053) = 405.09

#2053
TOP = 418.88
15" RCP INV. OUT (2022) = 414.11
15" RCP INV. IN (2078) = 414.61

#2078
TOP = 424.02
15" RCP INV. OUT (2053) = 420.34

#2376
TOP = 416.11
18" RCP INV. IN (2417) = 411.36

#2417
YARD INLET
MANHOLE RIM = 418.41
15" RCP INV. IN (22529) = 416.01
18" RCP INV. OUT (2376) = 412.16
INLET THROAT = ?

#22529
TOP = 419.48
RCP INV. (2388) NOT ACCESSIBLE
15" RCP INV. OUT (2417) = 416.45

#2388
TOP GRATE = 420.69
DEBRIS FILLED, NOT ACCESSIBLE

#2377
TOP = 423.79
15" RCP INV. OUT (2456) NOT ACCESSIBLE

#2456
TOP = 422.83
15" RCP INV. IN (2377) = 420.60
15" RCP INV. OUT (2417) = 420.54
15" RCP INV. IN (2465) = 420.44

#2465
TOP = 423.74
15" RCP INV. OUT (2456) = 420.46
INV. IN (2480) NOT ACCESSIBLE
15" RCP INV. IN (2439) = 420.96

#2480
TOP = 424.38
15" RCP INV. IN (2471) = 421.53
15" RCP INV. OUT (2465) = 421.48

#25271
TOP = 425.20
15" RCP INV. OUT (2439) = 422.70

#2439
TOP = 425.28
15" RCP INV. IN (25271) = 422.28
15" RCP INV. OUT (2465) = 421.95

CULVERT
12" RCP INV. IN = 391.29
12" RCP INV. OUT = 390.36

SMP 1
TOP = 402.66
CL/INV. = 395.68
15" RCP INV. OUT (SMP 2) = 396.21
SEE SMP1 DETAIL FOR WEIR ELEVATIONS

SMP 2
TOP OF END WALL = 398.50
INV. 15" RCP (SMP 1) = 396.22

SMP 3
TOP OF GRATE=397.23'
3-3/4" ORIFICE EXTERIOR OF STRUCTURE=394.46'
3-3/4" ORIFICE INTERIOR OF STRUCTURE=394.60'
15" INV. OUT = 394.19'

CONTROL TABLE:

#100	7015045.01	11873820.61	427.12	TRV 100
#101	7014794.95	11873604.67	429.73	TRV 101
#102	7014626.21	11873835.35	428.13	TRV 102
#103	7014417.82	11874048.19	421.80	TRV 103
#104	7014678.79	11873998.27	422.06	TRV 104
#105	7014887.14	11874091.65	403.99	TRV 105
#106	7015084.15	11874221.51	391.25	TRV 106
#107	7015380.76	11874342.75	385.00	TRV 107
#108	7015406.21	11874188.91	400.95	TRV 108
#109	7015335.26	11873966.66	417.21	TRV 109
#1847	7014781.75	11873870.64	426.40	FLY 1847
#2092	7014505.28	11873968.11	425.08	FLY 2092

CONTROL DATA:

Point No.	Northing(Y)	Easting(X)	Elev(Z)	Description
101	7014794.9500	11873604.6660	429.73	TRV 101
102	7014626.2080	11873835.3460	428.13	TRV 102
1000	7014662.9233	11873813.7663	428.46	TFLY
1002	7014738.1634	11873942.8377	424.98	TFLY
1052	7014688.1514	11873842.3807	427.21	TFLY
1086	7014865.8504	11873850.1155	427.36	TFLY

ARLINGTON
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SEAL

COMMONWEALTH OF VIRGINIA
Solomon W Shikur
SOLOMON W SHIKUR
Lic. No. 44376
1/6/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
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Dennis M. Leach TRANSPORTATION DIRECTOR	01/27/22
John Mir PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

EXISTING CONDITIONS PLAN

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

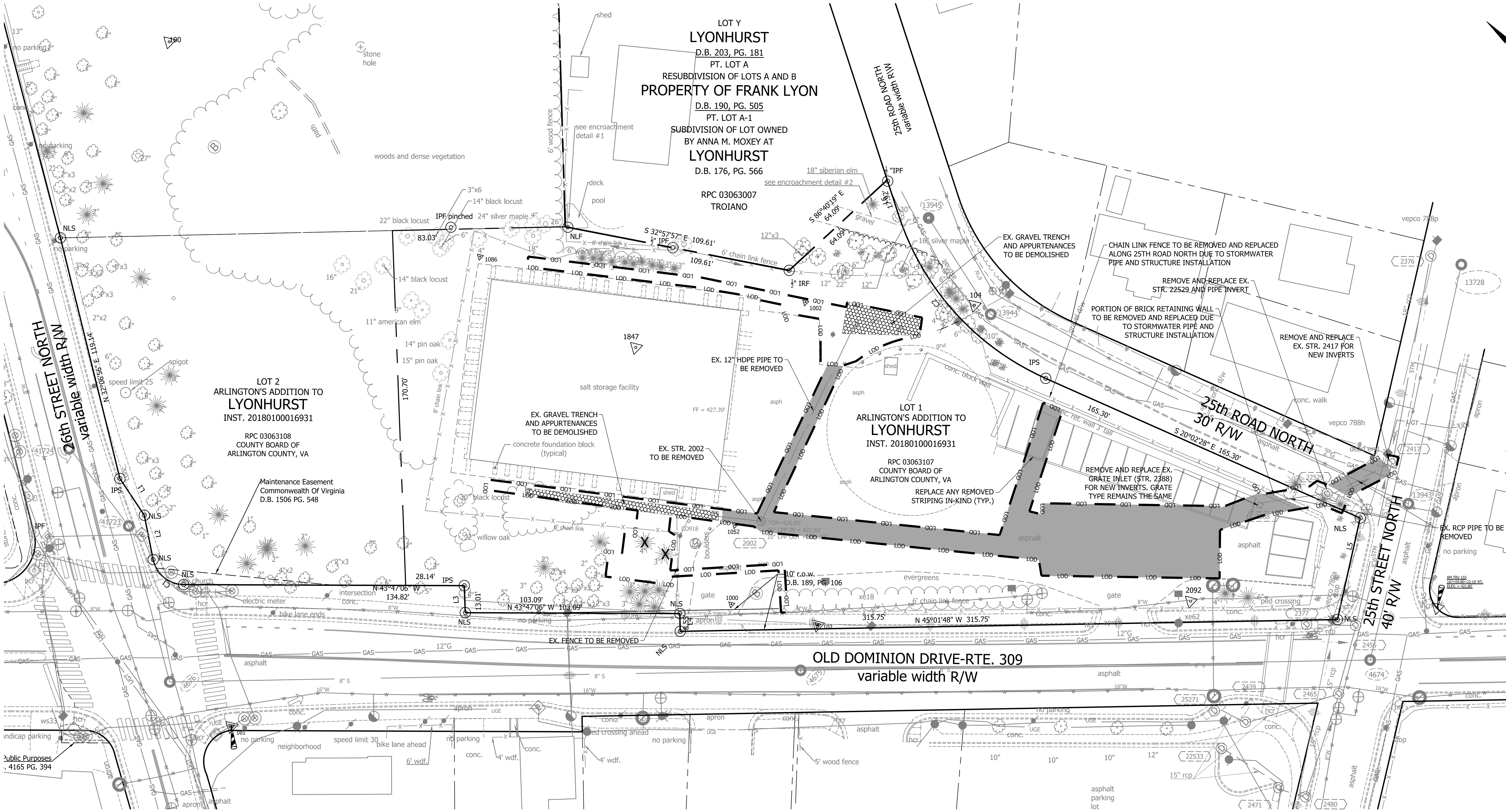
PLOTTED: JANUARY 6 2022

SCALE:

0 25 50
GRAPHIC SCALE

C011.1

FILENAME: SLT1-214-EXISTING_CONDITIONS.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY



LOT Y
LYONHURST
D.B. 203, PG. 181
PT. LOT A
RESUBDIVISION OF LOTS A AND B
PROPERTY OF FRANK LYON
D.B. 190, PG. 505
PT. LOT A-1
SUBDIVISION OF LOT OWNED
BY ANNA M. MOXEY AT
LYONHURST
D.B. 176, PG. 566
RPC 03063007
TROIANO
LOT 2
ARLINGTON'S ADDITION TO
LYONHURST
INST. 20180100016931
RPC 03063108
COUNTY BOARD OF
ARLINGTON COUNTY, VA
Maintenance Easement
Commonwealth Of Virginia
D.B. 1506 PG. 548
LOT 1
ARLINGTON'S ADDITION TO
LYONHURST
INST. 20180100016931
RPC 03063107
COUNTY BOARD OF
ARLINGTON COUNTY, VA
salt storage facility
woods and dense vegetation
26th STREET NORTH
variable width R/W
25th ROAD NORTH
variable width R/W
25th ROAD NORTH
30' R/W
25th STREET NORTH
40' R/W
OLD DOMINION DRIVE-RTE. 309
variable width R/W
EX. GRAVEL TRENCH
AND APPURTENANCES
TO BE DEMOLISHED
EX. 12" HDPE PIPE TO
BE REMOVED
EX. STR. 2002
TO BE REMOVED
CHAIN LINK FENCE TO BE REMOVED AND REPLACED
ALONG 25TH ROAD NORTH DUE TO STORMWATER
PIPE AND STRUCTURE INSTALLATION
REMOVE AND REPLACE EX.
STR. 22529 AND PIPE INVERT
PORTION OF BRICK RETAINING WALL
TO BE REMOVED AND REPLACED DUE
TO STORMWATER PIPE AND
STRUCTURE INSTALLATION
REMOVE AND REPLACE
EX. STR. 2417 FOR
NEW INVERTS
REMOVE AND REPLACE EX.
GRATE INLET (STR. 2388)
FOR NEW INVERTS. GRATE
TYPE REMAINS THE SAME
REPLACE ANY REMOVED
STRIPING IN-KIND (TYP.)
EX. RCP PIPE TO BE
REMOVED
EX. FENCE TO BE REMOVED
S 32°57'57" E 109.61'
S 20°02'28" E 165.30'
N 45°01'48" W 315.75'
N 43°47'06" W 134.82'
N 43°47'06" W 103.09'
10' r.o.w.
D.B. 189, PG. 106

ARLINGTON
VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
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ENGINEERING BUREAU
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FAX: 703.228.3606

SEAL

COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44276
1/6/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum — QUALITY CONTROL ENGINEER	01/18/22
Adam E. Kulaw — CONSTRUCTION MANAGEMENT SUPERVISOR	1/20/22
WATER, SEWER, STREETS BUREAU CHIEF	1.21.2022
Dennis M. Leach — TRANSPORTATION DIRECTOR	01/27/22
John Wir — PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

DEMOLITION PLAN

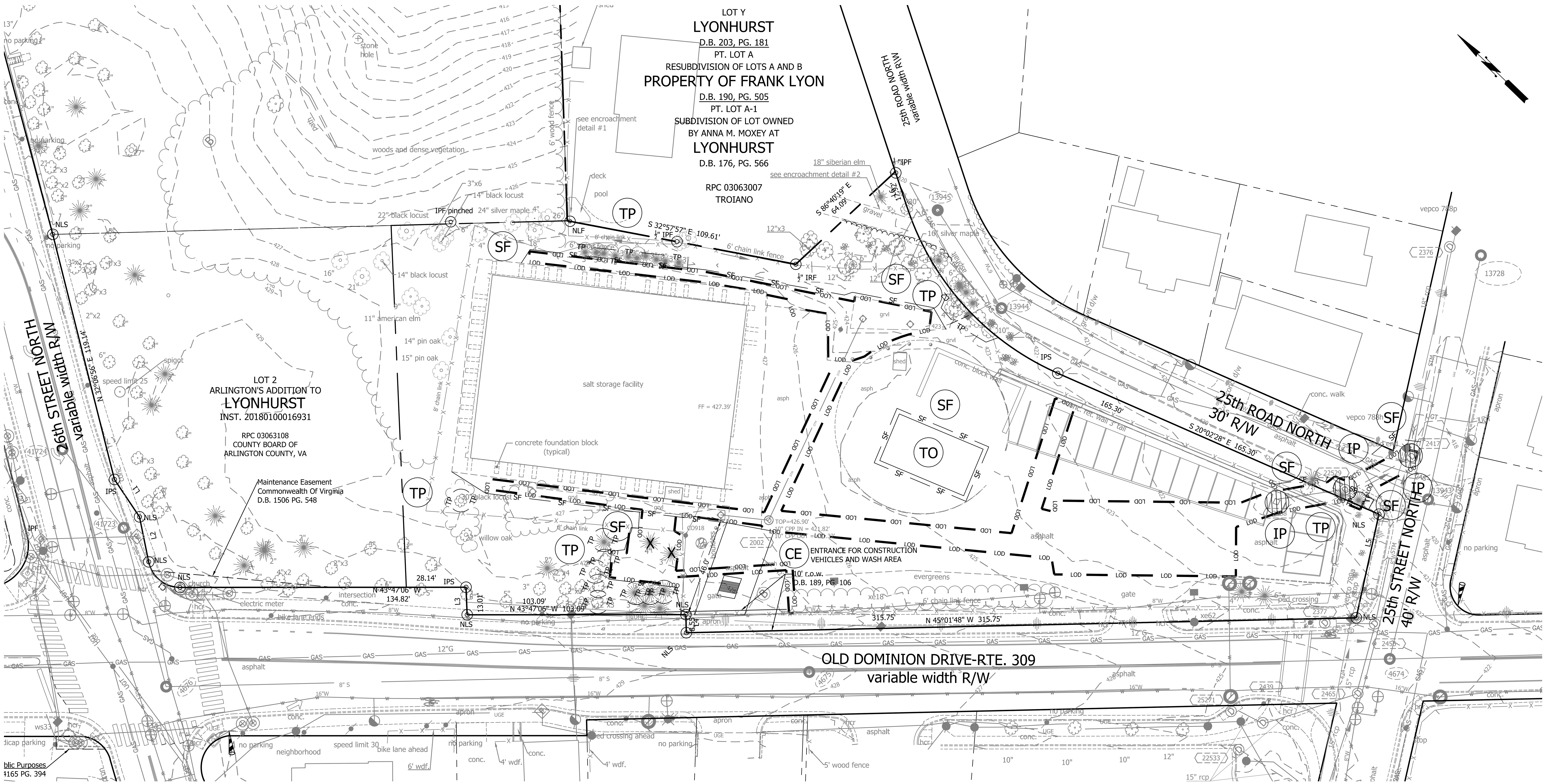
DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:

0 25 50
GRAPHIC SCALE

C021.1



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REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

EROSION AND SEDIMENT CONTROL PLAN PHASE 1

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:
0 25 50
GRAPHIC SCALE

EROSION AND SEDIMENT CONTROL LEGEND

3.02	TEMPORARY CONSTRUCTION ENTRANCE	CE	
3.05	TEMPORARY SILT FENCE	SF	— SF —
3.07	STORM DRAIN INLET PROTECTION	IP	
3.38	TREE PROTECTION	TP	— TP —
3.30	TOPSOILING - STOCKPILE	TO	
	LIMITS OF DISTURBANCE		— LOD —

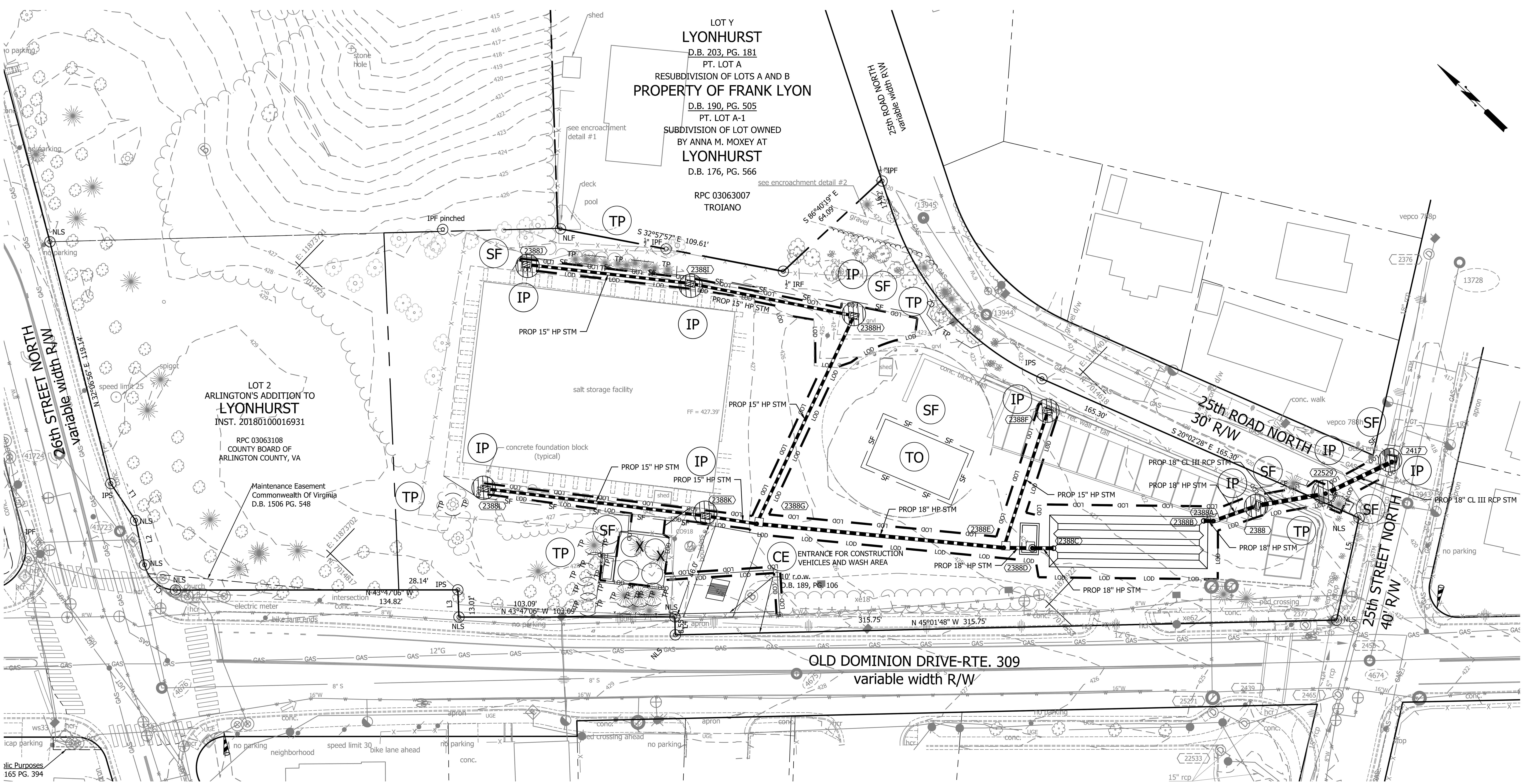
PROTECT TREE PRIOR TO AND DURING CONSTRUCTION. CONTACT ARLINGTON COUNTY FORESTER PRIOR TO INSTALLATION OF TREE PROTECTION, OR BEGINNING ANY WORK ADJACENT TO TREE. ROOT PRUNING AND HAND DIGGING AS REQUIRED BY COUNTY FORESTER OR AS SHOWN ON PLAN.

EXISTING TREE TO BE REMOVED BY OTHERS X

SEE SHEET C031.3 FOR DETAILED TREE PROTECTION AND REMOVAL PLAN.

C031.1

REVISED ON 01/07/2021



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1/6/2022
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[illegible] CONSTRUCTION MANAGEMENT SUPERVISOR	1/20/22
[illegible] WATER, SEWER, STREETS BUREAU CHIEF	1.21.2022
Dennis M. Leach TRANSPORTATION DIRECTOR	01/27/22
John Mir PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

EROSION AND SEDIMENT CONTROL PLAN PHASE 2

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:
0 25 50
GRAPHIC SCALE

C031.2

FILENAME: SLT1-224-E_AND_S_PLAN.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY

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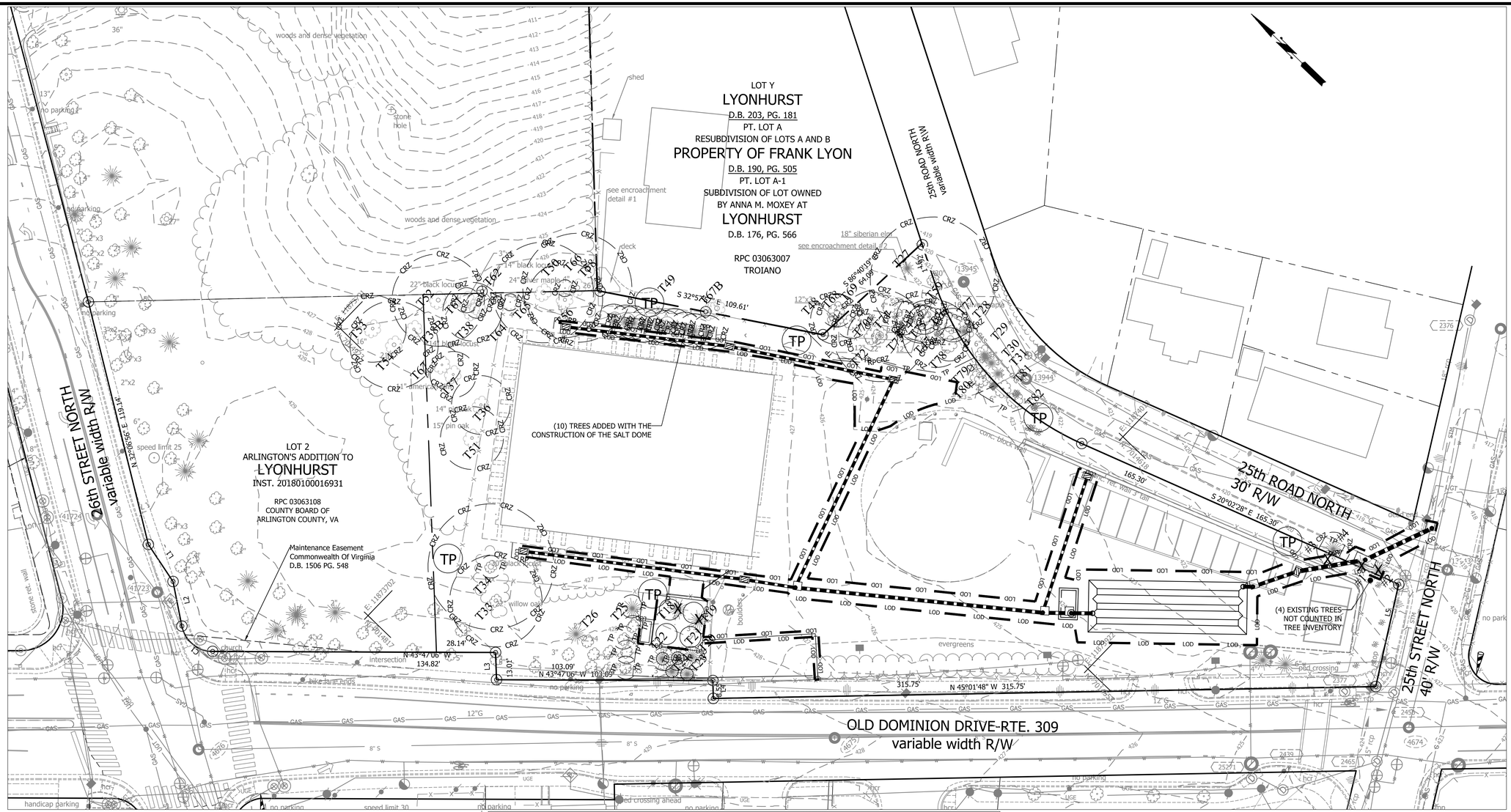
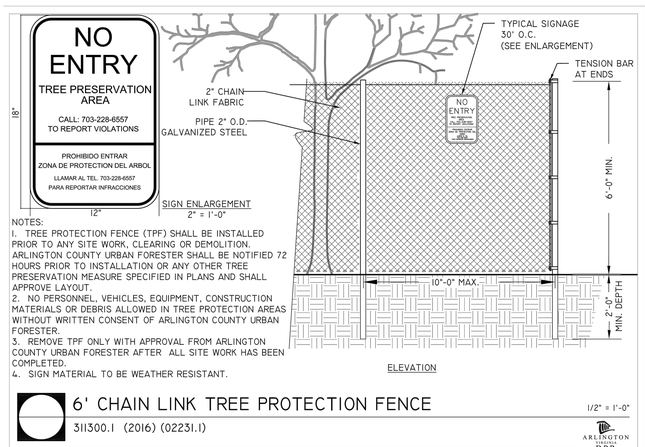


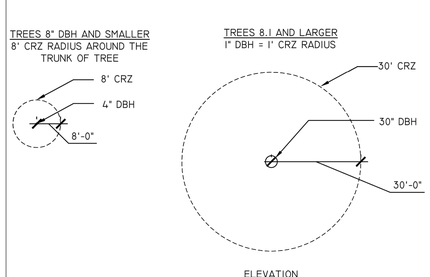


NOTES:
1. TREE PROTECTION FENCE (TPF) SHALL BE INSTALLED PRIOR TO ANY SITE WORK, CLEARING OR DEMOLITION. ARLINGTON COUNTY URBAN FORESTER SHALL BE NOTIFIED 72 HOURS PRIOR TO INSTALLATION OR ANY OTHER TREE PRESERVATION MEASURE SPECIFIED IN PLANS AND SHALL APPROVE LAYOUT.
2. NO PERSONNEL, VEHICLES, EQUIPMENT, CONSTRUCTION MATERIALS OR DEBRIS ALLOWED IN TREE PROTECTION AREAS WITHOUT WRITTEN CONSENT OF ARLINGTON COUNTY URBAN FORESTER.
3. REMOVE TPF ONLY WITH APPROVAL FROM ARLINGTON COUNTY URBAN FORESTER AFTER ALL SITE WORK HAS BEEN COMPLETED.
4. SIGN MATERIAL TO BE WEATHER RESISTANT.

6' CHAIN LINK TREE PROTECTION FENCE

3I1300.1 (2016) (02231.1)

1/2" = 1'-0"



NOTES:

1. GRAPHICALLY, THE CRITICAL ROOT ZONE (CRZ) IS REPRESENTED AS A CIRCULAR REGION MEASURED OUTWARD FROM A TREE TRUNK REPRESENTING THE AREA OF ROOTS THAT MUST BE MAINTAINED OR PROTECTED FOR THE TREE'S SURVIVAL.

2. THE CRZ OF A TREE IS THE ZONE IN WHICH THE MAJORITY OF THE ROOTS LAY. 95% OF THE ROOTS OF MOST TREES WILL BE FOUND IN THE UPPER 12-18" OF THE SOIL. MOST OF THE ROOTS THAT SUPPLY THE NUTRIENTS AND WATER TO THE TREE ARE FOUND JUST BELOW THE SOIL SURFACE. THE TOTAL AMOUNT OF A TREE'S ROOTS ARE GENERALLY PROPORTIONAL TO THE VOLUME OF THE TREE'S CANOPY. THEREFORE, IF THE ROOTS ONLY PENETRATE A THIN LAYER OF SOIL, THEN THE ROOTS MUST SPREAD FAR FROM THE TREE, BEYOND THE EXTENSION OF THE CANOPY.

3. PLOT ACCURATE TRUNK LOCATIONS OF ALL TREES GREATER THAN 3" DIAMETER AT BREAST HEIGHT (DBH) AND/OR TREE STANDS WITHIN DEVELOPMENT AREAS ON ALL PLANS FOR THE PROJECT AND DELINEATE THEIR ESTIMATED CRITICAL ROOT ZONE.

4. PLOT ACCURATE TRUNK LOCATIONS OF OFFSITE TREES WHICH WILL HAVE THEIR CRZ AFFECTED BY DEVELOPMENT AND DELINEATE THEIR ESTIMATED CRITICAL ROOT ZONE.

TREE PROTECTION DETAIL FOR DETERMINING CRITICAL ROOT ZONE

3I1300.3 (2019)

N.T.S.

LEGEND:

CRITICAL ROOT ZONE	CRZ
TREE PROTECTION	TP
ROOT PRUNING	RP
TREE TO BE REMOVED	X
TREE #	T##

TREE REPLACEMENT SCHEDULE

TREE #	SPECIES	SIZE DBH (IN)	CONDITION (%)	SPECIES RATING	TOTAL SCORE	REPLACEMENT
T18	Acer negundo	4"	80	50		1
T19	Acer negundo	3"	80	50		1
#1	Cupressocyparis leylandii	5"	100			1
#2	Cupressocyparis leylandii	7"	100			1
#3	Ulumus pumila	5.5"	50			1

TREES UNDER 10" REPLACED AT 1:1, SCORING UNNECESSARY

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REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

TREE PROTECTION AND REMOVAL PLAN

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:

0 25 50
GRAPHIC SCALE

C031.3

FILENAME: SLT1-225-TREE_PROTECTION_INVENTORY.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY

REVISED ON 01/07/2021

TREE INVENTORY WORKSHEET (Rev. 12/2021)

TREE INVENTORY DATE: 9/13/2018 (PRIOR TO CONSTRUCTION OF PROJECT FMP1)

TREE#	DBH	SPECIES	CONDITION	SPECIES RATING	REPLACEMENT VALUE	REPLACEMENT	POSSIBLE FUTURE REPLACEMENT	PROPOERTY OWNERSHIP	CUT	PRUNE	PRESERVE	NOTE
T18	4"	NA	80	50	-	-		ACG	CUT	-	-	
T19	3"	NA	80	50	-	-		ACG	CUT	-	-	
T20	3"	NA	80	50	-	-		ACG	-	-	PRESERVE	
T21	3"	NA	80	50	-	-		ACG	-	-	PRESERVE	
T22	3"	NA	80	50	-	-		ACG	-	-	PRESERVE	
T23	3"	NA	80	50	-	-		ACG	-	-	PRESERVE	
T24	3"	NA	80	50	-	-		ACG	-	-	PRESERVE	
T25	4"	NA	80	50	-	-		ACG	-	-	PRESERVE	
T26	2"	NA	80	50	-	-		ACG	-	-	PRESERVE	
T27	na	NA	80	50	-	-		ACG	-	-	PRESERVE	
T28	2"	NA	80	50	-	-		ACG	-	-	PRESERVE	
T29	3"	NA	80	50	-	-		ACG	-	-	PRESERVE	
T30	3"	NA	80	50	-	-		ACG	-	-	PRESERVE	
T31	2"	NA	80	50	-	-		ACG	-	-	PRESERVE	
T33	22"	Willow Oak	65	75	-	-		ACG	-	-	PRESERVE	
T34	30"	Black Locust	60	55	-	-		ACG	-	PRUNE	PRESERVE	
T36	14"	Pin Oak	80	75	-	-		ACG	-	-	PRESERVE	
T37	11"	American Elm	70	70	-	-		ACG	-	-	PRESERVE	
T38	14"	Black Locust	30	55	-	-		ACG	-	-	PRESERVE	
T38B	14"	Black Locust	30	55	-	-		ACG	-	-	PRESERVE	
T47	16"	Silver Maple	55	45	-	-		ACG	-	-	PRESERVE	
T48	18"	Siberian Elm	55	35	-	-		Private	-	-	PRESERVE	
T49	16"	Black Locust	65	55	-	-		Private	-	-	PRESERVE	
T50	24"	Silver Maple	35	45	-	-		ACG	-	PRUNE	PRESERVE	
T51	15"	Pin Oak	75	75	-	-		ACG	-	-	PRESERVE	
T52	22"	Black Locust	50	55	-	-		ACG	-	-	PRESERVE	
T53	16"	NA	80	80	-	-		ACG	-	-	PRESERVE	
T54	21"	NA	80	80	-	-		ACG	-	-	PRESERVE	
T56	18"	Black Locust	NA	-	-	-		ACG	-	PRUNE	PRESERVE	
T58	26"	Black Locust	NA	-	-	-		ACG	-	PRUNE	PRESERVE	
T59	30"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T61	3"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T62	6"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T65	4"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T66	4"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T67	9"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T67B	na	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T68	12"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T69	2"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T70	4"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T71	4"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T72	12"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T73	22"	NA	NA	-	-	-		ACG	-	PRUNE	PRESERVE	
T74	6"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T75	12"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T76	6"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T77	4"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T78	2"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T79	4"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T80	4"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T81	6"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
T82	10"	NA	NA	-	-	-		ACG	-	-	PRESERVE	
#1	5"	Cupressocyoaris leylandii	100					ACG	CUT	-	-	
#2	7"	Cupressocyoaris leylandii	100					ACG	CUT	-	-	
#3	5.5"	Ulumus pumila	50					ACG	CUT	-	-	
#4	2"	Juniperus virginiana	100					ACG	-	PRUNE	PRESERVE	
Total: 56						**0**	**0**		**5**	**6**	**51**	

TREE SUMMARY TABLE

TOTAL EXISTING TREES (AS OF 9/13/18):	91
TREES REMOVED FROM PROJECT FMP1:	39
TREES ADDED AFTER PROJECT FMP1:	10
EXISTING TREES (CURRENT):	66
TREES TO BE REMOVED:	5
TOTAL TREE REPLACEMENT:	5*

*SEE SHEET C031.5 - TREE PLANTING PLAN FOR TREE REPLACEMENT SCHEDULE

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WATER, SEWER, STREETS BUREAU CHIEF

Dennis M. Leach 01/27/22
TRANSPORTATION DIRECTOR

John Mir 1/27/22
PROJECT MANAGER

REVISIONS DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

TREE INVENTORY

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:

N/A

C031.4

FILENAME: SLT1-225-TREE_PROTECTION_INVENTORY.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY

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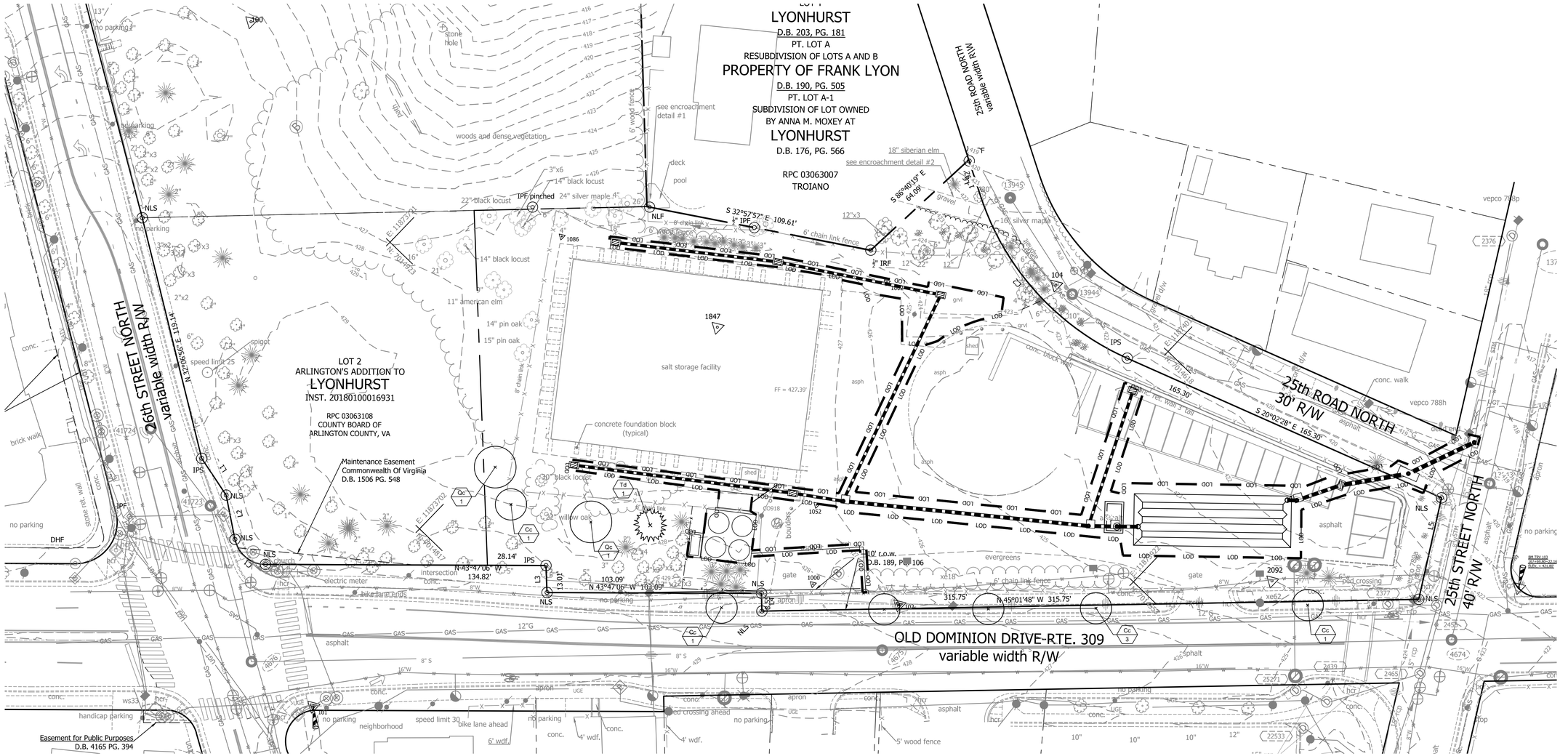

ROOT PRUNING

311300.5 (2019)

N.T.S.

ARLINGTON DPR

NOTES

1. ROOT PRUNING SHALL BE DONE WITH A TRENCHER OR VIBRATORY PLOW TO A DEPTH OF 12". ROOTS OVER 1.5" IN DIAMETER SHALL HAVE A CLEAN CUT MADE BY A CLEAN SAW ON THE SURFACE OF THE ROOT, WHICH IS STILL ATTACHED TO THE TREE. DO NOT BREAK OR CHOP. DO NOT PAINT THE CUT ROOT END. IF EXCAVATION IS FOR INSTALLATION OF UNDERGROUND UTILITIES, LEAVE THE ROOT INTACT AND THREAD THE LINES UNDERNEATH.

2. ROOT PRUNING SHALL TAKE PLACE PRIOR TO ANY CLEARING AND GRADING. EXACT LOCATION OF TREE PROTECTION AREAS SHALL BE STAKED OR FLAGGED PRIOR TO TRENCHING AND SHALL BE APPROVED BY ARLINGTON COUNTY URBAN FORESTER.

3. ROOT PRUNING SHALL BE CONDUCTED WITH THE SUPERVISION OF AN ISA CERTIFIED ARBORIST.

4. BACKFILL THE ROOT-PRUNING TRENCH WITH APPROVED LOOSE TOPSOIL MIX AND TOP WITH 3-4" BARK MULCH AND MARK LOCATION FOR FUTURE REFERENCE. SILT FENCE MAY BE INSTALLED IN TRENCH PRIOR TO BACKFILLING AS LONG AS THE TRENCH IS NOT OPEN FOR LONGER THAN 48 HOURS WITHOUT WATERING.

5. ROOT PRUNING WORK SHALL NOT BE DONE WHEN MORE THAN THE TOP 1 INCH OF SOIL IS FROZEN. ROOT PRUNING SHALL NOT BE UNDERTAKEN WHEN THE SOIL IS WET AND CONDITIONS ARE MUDDY.

6. THE ARLINGTON COUNTY URBAN FORESTER SHALL BE NOTIFIED 72 HOURS PRIOR TO TRENCHING AND WHEN ALL ROOT PRUNING AND TREE PROTECTION FENCE INSTALLATION IS COMPLETE.

PLANT SCHEDULE						
QTY	LABEL	SPECIES	NAME	SIZE	CONT	NOTES
2	Qc	Quercus coccinea	Scarlet Oak	2"	B&B	
1	Td	Taxodium distichum	Bald Cypress	2"	B&B	
6	Cc	Cercis canadensis	Redbud	7-8'	B&B	SINGLE STEM

NOTE: CALL THE URBAN FORESTER AT 703-228-6557, 72 HOURS BEFORE PLANTING, TO SCHEDULE INSPECTION OF THE TREES TO BE PLANTED. BEFORE 1 YEAR AFTER PLANTING, ENSURE WARRANTIED TREES ARE CHECKED FOR SURVIVAL, AND REPLACED IF NEEDED. THE URBAN FORESTER WILL COORDINATE WITH DPR STAFF ON SCHEDULING INSPECTIONS 2 YEARS AFTER PLANTING TO ASSUME RESPONSIBILITY.

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NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

TREE PLANTING PLAN

DESIGNED: SEB
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PLOTTED: JANUARY 6 2022

SCALE:

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GRAPHIC SCALE

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FILENAME: SLT1-225-TREE_PROTECTION_INVENTORY.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY

REVISED ON 01/07/2021

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION:

THE PROJECT IS LOCATED AT THE SOUTHEAST CORNER OF OLD DOMINION DRIVE AND 26TH STREET NORTH. THE NORTHSIDE SALT STORAGE SITE PROJECT CONSISTS OF STORMWATER QUALITY AND QUANTITY IMPROVEMENTS FOR PROJECT #LDA18212 (SWM#18-0199) WHICH WAS GRANTED A PARTIAL EXCEPTION TO THE POST-CONSTRUCTION SWM REQUIREMENTS (SEE SHEET C002.1 FOR APPROVED PARTIAL EXCEPTION LETTER). THE LIMITS OF DISTURBANCE ARE WITHIN THE EXISTING ARLINGTON COUNTY R.O.W. AND ARLINGTON COUNTY-OWNED PROPERTY. THE LIMITS OF DISTURBANCE IS 9,074 SF (0.2083 AC). THERE ARE NO PRESENT FOODPLAINS OR RESOURCE PROTECTION AREAS ON THE PROJECT SITE.

EXISTING SITE CONDITIONS:

THE SITE CONSISTS OF AN EXISTING SALT STORAGE FACILITY, ASPHALT PARKING AREA AND SITE APPURTENANCE STORAGE AREA, AND TWO EXISTING GRAVEL STORMWATER DETENTION BASINS. THE PROJECT SITE IS LOCATED WITHIN THE DONALDSON RUN WATERSHED. THE EXISTING TOPOGRAPHY HAS SLOPES RANGING FROM 1% TO 10%. THERE IS AN EXISTING GRATE INLET DRAINAGE STRUCTURE LOCATED ON THE SUBJECT PROPERTY WHICH TIES INTO AN EXISTING CURB INLET LOCATED ON 25TH ROAD NORTH (AT THE CORNER OF 25TH ROAD NORTH AND 25TH STREET NORTH). THE EXISTING STORM SEWER NETWORK EVENTUALLY OUTFALLS AT DONALDSON RUN. THE CURRENT LAND COVER IS PRIMARILY IMPERVIOUS, AND ALSO FEATURES GRASSY AREAS. THE SITE HAS A HYDROLOGIC SOIL GROUP OF TYPE D SOIL, AND THE SOIL TYPE IS "4B - URBAN LAND-SASSAFRAS-NEABSCO COMPLEX".

ADJACENT PROPERTIES:

THE SUBJECT PROPERTY IS BOUND BY OLD DOMINION DRIVE, 25TH STREET NORTH, AND 25TH ROAD NORTH. SINGLE FAMILY RESIDENTIAL HOMES ARE LOCATED TO THE NORTHEAST OF THE SUBJECT PROPERTY.

CRITICAL AREAS:

THERE ARE NO STEEP SLOPES OR CRITICAL AREAS LOCATED WITHIN THE LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES:

THE EROSION AND SEDIMENT CONTROL MEASURES FOR THIS PROJECT AREA INCLUDE CONSTRUCTION ENTRANCE, TREE PROTECTION FENCE, SILT FENCE WITH WIRE SUPPORT, AND INLET PROTECTION. INLET PROTECTION IS REQUIRED OUTSIDE THE PROJECT LIMITS WHEN/WHERE WATER FROM DISTURBED AREA FLOWS.

PERMANENT STABILIZATION:

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH GRASS, MULCH OR SOD. SEE THE PROPOSED PLANS FOR ADDITIONAL INFORMATION.

STORMWATER RUNOFF CONSIDERATIONS:

TOTAL LAND DISTURBANCE...................= 9,074 SF* (0.2083 ACRES)
PRE-IMPROVEMENT IMPERVIOUS AREA.....= 5,996 SF (0.1365 ACRES)
POST-IMPROVEMENT IMPERVIOUS AREA...= 5,996 SF (0.1365 ACRES)
INCREASED IMPERVIOUS AREA................= N/A
*TOTAL LAND DISTURBANCE INCLUDES THE DISTURBANCE FOR PROPOSED WORK HEREIN THIS CONSTRUCTION PLAN SET. THERE IS NO INCREASE IN IMPERVIOUS AREA. PROPOSED WORK IS LIMITED TO INCLUDE STORMWATER IMPROVEMENTS.

SOILS INFORMATION:

THE FOLLOWING SOILS ARE FOUND ON SITE (SEE SOILS MAP ON SHEET C032.2 FOR LOCATION)

SOIL#:	SOIL NAME:	HYDROLOGIC GROUP:	ERODABILITY:
4B	URBAN LAND--SASSAFRAS-NEABSCO COMPLEX	D	N/A

FLOODPLAIN AND RESOURCE PROTECTION AREA (RPA):

THERE ARE NO FLOODPLAIN OR RESOURCE PROTECTION AREAS LOCATED WITHIN THIS PROJECT SITE

EROSION & SEDIMENT CONTROL PROJECT PHASING

1. PHASE I:

a. PRE-CONSTRUCTION MEETING WITH THE PROJECT OFFICER, CONTRACTOR, AND COUNTY INSPECTOR.
b. INSTALL THE TEMPORARY CONSTRUCTION ENTRANCE IN THE LOCATION SHOWN ON THE E&S PHASE I PLAN. MUD AND DEBRIS SHALL BE WASHED FROM ALL TRUCKS EXISTING THE SITE.
c. INSTALL PERIMETER TREE DEMARCATION FENCING IN THE FORM OF TREE PROTECTION FENCE (TP) AS SHOWN ON E&S PHASE I PLAN.
d. PERFORM INITIAL PERIMETER CLEARING TO INSTALL REMAINDER OF PERIMETER CONTROLS SUCH AS SILT FENCE (SF), SUPER SILT FENCE (SSF), AND INLET PROTECTION (IP) AS PER THE PHASE I PLAN.
e. SEED AND MULCH ALL EARTHEN CONTROLS.
f. CONTACT ARLINGTON COUNTY PROJECT OFFICER FOR A PERIMETER INSPECTION PRIOR TO CLEARING THE REMAINDER OF THE SITE IN ORDER TO OBTAIN PHASE II GRADING PERMIT.
g. CLEAR THE SITE TO THE LIMITS AS SHOWN ON THE CONSTRUCTION PLANS.

2. PHASE II:

a. BEGIN UTILITY CONSTRUCTION, INSTALL ALL UTILITIES UNDERGROUND UTILITIES AND BEGIN SITE GRADING.
b. INLET PROTECTION (IP) SHALL BE PROVIDED AT STORM DRAIN INLETS AS THEY ARE CONSTRUCTED.
c. ONCE THE SITE IS BOUGHT TO NEAR FINAL GRADE, AND THE UTILITY CONSTRUCTION IS COMPLETE, COMMENCE CONSTRUCTION OF CURB & GUTTER, STREET, SIDEWALKS, AND OTHER IMPROVEMENTS
d. THE CONTROL MEASURES MAY NOT BE REMOVED UNTIL ALL OF THE DISTURBED AREAS HAVE BEEN STABILIZED AND ONLY AS APPROVED AND DIRECTED BY THE INSPECTOR.

RUNOFF SHALL BE TREATED WITH SILT FENCE AND INLET PROTECTION PRIOR TO ENTERING MAJOR STORM SEWER SYSTEMS.

EROSION AND SEDIMENT CONTROL MEASURES

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

1. STRUCTURAL PRACTICES

a. TEMPORARY CONSTRUCTION ENTRANCE - VESCH 3.02
a.a. A TEMPORARY CONSTRUCTION ENTRANCE WITH A WASH RACK SHALL BE INSTALLED AT THE EXISTING ACCESS POINT TO THE SITE. DURING MUDDY CONDITIONS, DRIVERS OF CONSTRUCTION VEHICLES WILL BE REQUIRED TO WASH THEIR WHEELS BEFORE RE-ENTERING THE LOCAL ROADWAYS.
a.b. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC WASHING OF THE MATS AND/OR REPLACEMENT OF WOOD CHIPS AS NECESSARY.
a.c. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
a.d. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED INTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.
b. SILT FENCE - VESCH 3.05
b.a. SILT FENCE WILL BE INSTALLED WITH THE E&S PLAN TO FILTER RUNOFF FROM DISTURBED AREAS. RUNOFF SHALL NOT BE DIRECTED PARALLEL TO THE INSTALLATION OF SILT FENCE.
b.b. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
b.c. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM UNDERCUTTING.
b.d. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
b.e. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
b.f. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, THEN PREPARED AND SEEDED.
c. TEMPORARY DIVERSION DIKE - VESCH 3.09
c.a. A SYSTEM OF TEMPORARY DIKES, TO DIRECT FLOW INTO PROPOSED & EXISTING STORM SEWER STRUCTURES WILL BE INSTALLED AS INDICATED IN EROSION & SEDIMENT CONTROL PLAN.
c.b. THE STRUCTURES SHALL BE INSPECTED AFTER EACH RAIN EVENT AND REPAIRS SHALL BE MADE AS NECESSARY.
d. STORM DRAIN INLET PROTECTION - VESCH 3.07
d.a. ALL EXISTING & PROPOSED STORM SEWER INLETS IN AND AROUND THE PROJECT LIMITS SHALL BE PROTECTED DURING CONSTRUCTION. SEDIMENT-LADEN WATER SHALL BE FILTERED BEFORE ENTERING THE STORM SEWER INLETS.
d.b. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT AND REPAIRS SHALL BE MADE AS NECESSARY.
d.c. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
e. DEWATERING STRUCTURE - VESCH 3.26
e.a. SEDIMENT LADEN OR TURBID WATER SHALL BE FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE.
e.b. THE FILTERING DEVICES MUST BE INSPECTED FREQUENTLY AND REPAIRED OR REPLACED ONCE THE SEDIMENT BUILD-UP PREVENTS THE STRUCTURE FROM FUNCTIONING AS DESIGNED.
e.c. THE ACCUMULATED SEDIMENT WHICH IS REMOVED FROM A DEWATERING DEVICE MUST BE SPREAD ON-SITE AND STABILIZED OR DISPOSED OF AT AN APPROVED DISPOSAL SITE AS PER THE APPROVED PLAN.
f. TREE PROTECTION - VESCH 3.38
f.a. ALL TREES ARE TO BE PROTECTED UNLESS OTHERWISE DIRECTED BY THE COUNTY INSPECTOR AND URBAN FORESTER. THE COUNTY'S URBAN FORESTER (703-228-1863) SHALL INSPECT ALL TREE PROTECTION 72 HOURS PRIOR TO THE START OF CONSTRUCTION. IN SPITE OF PRECAUTIONS, SOME DAMAGE TO PROTECTED TREES MAY OCCUR. IN SUCH CASES, THE FOLLOWING MAINTENANCE GUIDELINES SHALL BE FOLLOWED:
f.a.a. SOIL AERATION: IF THE SOIL HAS BECOME COMPACTED OVER THE ROOT ZONE OF ANY TREE, THE GROUND SHALL BE AERATED BY PUNCHING HOLES WITH AN IRON BAR. THE BAR SHALL BE DRIVEN 1-FOOT DEEP AND THEN MOVED BACK AND FORTH UNTIL THE SOIL IS LOOSENED. THIS PROCEDURE SHALL BE REPEATED EVERY 18 INCHES UNTIL ALL OF THE COMPACTED SOIL BENEATH THE CROWN OF THE TREE HAS BEEN LOOSENED.
f.a.b. REPAIR OF DAMAGE:
f.a.A.a. ANY DAMAGE TO THE CROWN, TRUNK, OR ROOT SYSTEM OF ANY TREE RETAINED ON THE SITE SHALL BE REPAIRED IMMEDIATELY.
f.a.A.b. WHENEVER MAJOR ROOT OR BARK DAMAGE OCCURS, REMOVE SOME FOLIAGE TO REDUCE THE DEMAND FOR WATER AND NUTRIENTS.
f.a.A.c. DAMAGED ROOTS SHALL IMMEDIATELY BE CUT OFF CLEANLY INSIDE THE EXPOSED OR DAMAGED AREA. CUT SURFACES SHALL BE PAINTED WITH APPROVED TREE PAINT, AND MOIST PEAT MOSS, BURLAP, OR TOPSOIL SHALL BE SPREAD OVER THE EXPOSED AREA.
f.a.A.d. TO TREAT BARK DAMAGE, CAREFULLY CUT AWAY ALL LOOSENED BARK BACK INTO THE UNDAMAGED AREA, TAPER THE CUT AT THE TOP AND BOTTOM, AND PROVIDE DRAINAGE AT THE BASE OF THE WOUND.
f.a.A.e. ALL TREE LIMBS DAMAGED DURING CONSTRUCTION OR REMOVED FOR ANY OTHER REASON SHALL BE CUT OFF ABOVE THE COLLAR AT THE PRECEDING BRANCH JUNCTION.
f.a.A.f. CARE FOR SERIOUS INJURIES SHALL BE PRESCRIBED BY A FORESTER OR A TREE SPECIALIST.
f.b. FERTILIZATION: BROADLEAF TREES THAT HAVE BEEN STRESSED OR DAMAGED SHALL RECEIVE A HEAVY APPLICATION OF FERTILIZER TO AID THEIR RECOVERY.
f.b.a. TREES SHALL BE FERTILIZED IN THE LATE FALL (AFTER OCTOBER 1) OR THE EARLY SPRING (FROM THE TIME FROST IS OUT OF THE GROUND UNTIL MAY 1). FALL APPLICATIONS ARE PREFERRED, AS THE NUTRIENTS WILL BE MADE AVAILABLE OVER A LONGER PERIOD OF TIME.
f.b.b. FERTILIZER SHALL BE APPLIED TO THE SOIL OVER THE FEEDER ROOTS. IN NO CASE SHALL IT BE APPLIED CLOSER THAN 3 FEET TO THE TRUNK. THE ROOT SYSTEM OF CONIFERS EXTENDS SOME DISTANCE BEYOND THE DRIP LINE. INCREASE THE AREA TO BE FERTILIZED BY ONE FOURTH THE AREA OF THE CROWN.
f.b.c. FERTILIZER SHALL BE APPLIED USING APPROVED FERTILIZATION METHODS AND EQUIPMENT.
f.b.d. FORMULATIONS AND APPLICATION RATES SHALL CONFORM TO THE GUIDELINES GIVEN IN TABLE 3.38-A OF VESCH.

2. VEGETATIVE PRACTICES

a. TOPSOILING (STOCKPILE) - VESCH 3.30
a.a. TOPSOIL WILL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATIONS MAY HAVE TO BE LOCATED OFF-SITE AND ARE TO BE STABILIZED WITH TEMPORARY VEGETATION. PRIOR TO LAND-DISTURBING ACTIVITIES, THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY E&S PLAN (IF THE STOCKPILE IS LOCATED OFF-SITE). THIS SUPPLEMENTAL PLAN WOULD HAVE TO BE APPROVED BY THE PLAN APPROVING AUTHORITY BEFORE ANY OFF-SITE ACTIVITY COMMENCES.
b. TEMPORARY SEEDING - VESCH 3.31
b.a. ALL DENUDED AREAS, WHICH WILL BE LEFT DORMANT FOR EXTENDED PERIODS OF TIME SHALL BE SEEDED WITH FAST GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING. SELECTION OF THE SEED MIXTURE WILL DEPEND ON THE TIME OF YEAR IT IS APPLIED.
b.b. SEE SHEET III-288 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) FOR ALLOWABLE PLANTING MATERIAL, SEEDING RATES, AND DATES. THE PLANTING REQUIREMENTS OF THE "SOUTH" SHALL BE FOLLOWED. LIMING SHALL BE BASED ON TABLE 3.31-A OF VESCH. FERTILIZERS SHALL BE APPLIED AS 600 LB/ACRE. THE FERTILIZER SHALL BE INCORPORATED INTO THE TOP 2-4" OF SOIL. SEED SHALL BE EVENLY APPLIED AND SMALL GRAINS SHALL BE PLANTED NO MORE THAN 1.5" DEEP. SEEDING MADE IN FALL FOR WINTER COVER AND DURING HOT SUMMER MONTHS SHALL BE MULCHED.
c. EROSION CONTROL BLANKET AND MULCHING - VESCH 3.36 AND 3.35
c.a. EROSION CONTROL BLANKETS WILL BE INSTALLED OVER FILL SLOPES WHICH HAVE BEEN BROUGHT TO FINAL GRADE AND HAVE BEEN SEEDED TO PROTECT THE SLOPES FROM RILL AND GULLY EROSION AND TO ALLOW SEED TO GERMINATE PROPERLY. MULCH (STRAW OR FIBER) WILL BE USED ON RELATIVELY FLAT AREAS AND WILL BE APPLIED AS A SECOND STEP IN SEEDING OPERATION.
d. DUST CONTROL - VESCH 3.39
d.a. DUST SHALL BE CONTROLLED USING A VARIETY OF METHODS SUCH AS VEGETATIVE COVER, MULCH, TILLAGE, IRRIGATION, SPRAY-ON ADHESIVES, STONE BARRIERS, AND CALCIUM CHLORIDE. THE IMPLEMENTATION OF THE DUST CONTROL METHODS SHALL BE INSTALLED PER SECTION 3.39 OF VESCH
e. PERMANENT SEEDING - VESCH 3.32
e.a. SINCE THE SUBJECT SITE IS LOCATED WITHIN THE COASTAL PLAIN AREA OF VIRGINIA, SHEET III-304 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK SHALL BE FOLLOWED FOR FINAL SEEDING MATERIAL, SEEDING RATES, AND DATES OF APPLICATION.
f. SODDING - VESCH 3.33
f.a. SODDED AREAS SHALL BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLANS. SOIL TESTS SHALL BE MADE TO DETERMINE THE EXACT REQUIREMENTS FOR LIME AND FERTILIZER. PRIOR TO LAYING SOD, SOIL SURFACE SHALL BE CLEAR OF TRASH, DEBRIS AND LARGE OBJECTS. QUALITY OF SOD SHALL BE STATE CERTIFIED TO ENSURE GENETIC PURITY AND HIGH QUALITY. SOD SHALL NOT BE LAID ON FROZEN SOIL SURFACE, OR IN EXCESSIVELY WET OR DRY WEATHER. SOD SHALL BE DELIVERED AND INSTALLED WITHIN 36 HOURS, AND SHALL BE INSTALLED PER PAGE III-339 OF VESCH.

THE EROSION AND SEDIMENT CONTROL INSPECTOR SHALL HAVE THE AUTHORITY TO ADD OR DELETE EROSION AND SEDIMENT CONTROLS AS NEEDED IN THE FIELD. IN ADDITION, NO SEDIMENT TRAPS OR BASINS MAY BE REMOVED WITHOUT PRIOR APPROVAL OF THE INSPECTOR.

EROSION AND SEDIMENT CONTROL MANAGEMENT MEASURES

LANDSCAPE / TREE PRESERVATION NOTES

PRIOR TO ANY LAND DISTURBING ACTIVITY, THE CONTRACTOR SHALL CONTACT THE ARLINGTON COUNTY ARBORIST TO SCHEDULE AN INSPECTION.

LAND CONSERVATION NOTES:

1. NO DISTURBED AREA WILL REMAIN DENUDED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OR HIS AGENT.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING. FIRST AREAS TO BE CLEARED ARE TO BE THOSE REQUIRED FOR THE PERIMETER CONTROLS.
3. ALL STORM AND SANITARY SEWER LINES NOT IN STREETS ARE TO BE MULCHED AND SEEDED WITHIN 5 DAYS AFTER BACKFILL. NO MORE THAN 100 FEET ARE TO BE OPEN AT ANY ONE TIME.
4. ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEEDED AND MULCHED WITHIN 5 DAYS AFTER BACKFILLING.
5. ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS ARE TO BE MULCHED AND SEEDED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO ALL SOIL STOCKPILES.
6. DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION.
7. ANY DISTURBED AREA NOT COVERED BY NOTE 1 ABOVE AND NOT PAVED, SODDED OR BUILT UPON BY NOV. 1, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED IMMEDIATELY WITH HAY OR STRAW MULCH AT THE RATE OF 2 TONS/ACRE AND OVER-SEEDED BY APRIL 15.
8. AT THE COMPLETION OF ANY PROJECT CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED.

EROSION & SEDIMENT CONTROL PROGRAM:

1. THE EROSION CONTROL PLAN IS INTENDED TO ESTABLISH ENTRANCES AND PERIMETER CONTROL MEASURES WHICH INCLUDES SILT FENCE (SF), INLET PROTECTION (IP), AND OTHER CONTROLS SPECIFIED ON THE PLANS.
2. WHERE CONSISTENT WITH JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL SHALL BE PLACED IN STREAMBEDS. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 7 DAYS SHALL BE SEEDED AND MULCHED. WHEN SPOIL IS PLACED ON THE DOWNHILL SIDE OF TRENCH, IT SHALL BE BACKSLOPED TO DRAIN TOWARD THE TRENCH. WHEN NECESSARY TO DEWATER THE TRENCH, THE PUMP DISCHARGE HOSE SHALL OUTLET IN A STABILIZED AREA OR A SEDIMENT TRAPPING DEVICE.
3. ALL PRACTICES AND CONTROL DEVICES DESCRIBED HEREIN SHALL CONFORM TO THE CURRENT VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH). IN ADDITION, THE CONTRACTOR SHALL TAKE THE FOLLOWING STEPS TO MINIMIZE THE VOLUME OF SILT:
   a. CONTRACTOR SHALL EVALUATE THE SITE TO DETERMINE EXTENSIVE CUT AND FILL AREAS, AND SHALL WORK THOSE AREAS TO MINIMIZE THE USE OF HEAVY EQUIPMENT. CONTRACTOR SHALL BRING DISTURBED AREAS TO GRADE (ROUGH OR FINISHED) AND STABILIZE THOSE AREAS WITH TEMPORARY OR PERMANENT VEGETATION. THESE DISTURBED AREAS SHALL BE STABILIZED PRIOR TO BEGINNING WORK IN ANOTHER AREA.
   b. FILL AREAS SHALL BE COMPACTED COMPLETELY PRIOR TO THE END OF EACH WORK DAY. FILL SLOPE SURFACES SHALL BE KEPT ROUGH TO REDUCE SHEET EROSION OF THE SLOPES. CONTRACTOR SHALL RE-DIRECT CONCENTRATED RUNOFF, BY EARTH BERMS OR OTHER DEVICES, AROUND ACTIVELY DISTURBED AREAS TO STABILIZED OUTLETS.
   c. CUT SLOPES SHALL BE PROTECTED FROM CONCENTRATED FLOW BY BERMS (ABOVE THE SLOPE) AND DIRECTED AROUND THE DISTURBED AREA TO STABILIZED OUTLETS.
4. MEASURES TO CONTROL EROSION AND SILTATION SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT STATE AND LOCAL REGULATIONS. THE INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND/OR THE APPROVAL OF THE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OR HIS AGENT OF ANY LEGAL RESPONSIBILITY WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA AND CHAPTER 57 OF THE ARLINGTON COUNTY CODE.
5. ALL AREAS, ON OR OFF-SITE, THAT ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS SEED MIXTURE OR SOD THAT IS INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. ALL SLOPES 3:1 AND GREATER SHALL BE RECEIVE SOIL STABILIZATION IN ACCORDANCE WITH THE SPECIFICATIONS.
6. WHERE STREAM CROSSINGS ARE REQUIRED FOR EQUIPMENT, TEMPORARY CULVERTS SHALL BE PROVIDED.
7. FOR FURTHER REQUIREMENTS AND DETAILS OF TREE PRESERVATION, PLANTING, EROSION AND SEDIMENT CONTROL, SEE COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS AND/OR THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.
2. THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
5. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN THE AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION AND SEDIMENT CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
6. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
7. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
8. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
9. THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
10. ALL BIOFILTERS SHALL BE KEPT OFF-LINE UNTIL CONSTRUCTION IS COMPLETED AND ALL AREAS HAVE BEEN PROPERLY STABILIZED. THIS SHALL BE ACHIEVED BY USING INLET PROTECTION AT THE CURB CUTS AND STORMWATER CATCH BASINS LEADING DIRECTLY INTO THE BIOFILTERS.
11. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.

PRE-STORM EROSION & SEDIMENTATION CHECKLIST:

PER GENERAL EROSION AND SEDIMENT CONTROL NOTE 6, THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL (ESC) MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE COUNTY. THESE SUPPLEMENTARY PRACTICES ARE IN ADDITION TO THOSE SHOWN IN AN EROSION AND SEDIMENT CONTROL PLAN. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE MODIFIED AS NEEDED TO ENSURE ONLY CLEAR WATER IS DISCHARGED FROM THE SITE.

THE FOLLOWING ACTIONS SHALL BE TAKEN PRIOR TO STORM EVENTS WITH PREDICTED HEAVY AND/OR LARGE VOLUME RAINFALL TO PREVENT SEDIMENT DISCHARGES FROM A CONSTRUCTION SITE. A TYPICAL SUMMER THUNDERSTORM IS AN EXAMPLE OF A STORM EVENT WITH PREDICTED HEAVY AND/OR LARGE VOLUME RAINFALL.

1. PERIMETER CONTROLS
   a. SILT FENCE SHALL BE CHECKED FOR UNDERMINING, HOLES, OR DETERIORATION OF THE FABRIC. FENCING SHALL BE REPLACED IMMEDIATELY IF THE FABRIC IS DAMAGED OR WON. SILT FENCE MUST BE TRENCHED INTO THE GROUND PER STATE SPECIFICATIONS (VESCH STD & SPEC 3.09).
   b. WOODEN STAKES OR STEEL POSTS SHALL BE PROPERLY SECURED UPRIGHT INTO THE GROUND. DAMAGED POSTS OR STAKES MUST BE REPLACED.
   c. SEDIMENT THAT HAS ACCUMULATED AGAINST THE SILT FENCE SHALL BE REMOVED. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE LEVEL REACHES ONE-HALF THE HEIGHT OF THE FENCING.
   d. HAY BALES OR A STONE BERM SHALL BE PLACED ACROSS THE CONSTRUCTION ENTRANCE TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE.
2. EXPOSED SLOPES AND SOIL
   a. EXPOSED SLOPES NOT AT THE FINAL STABILIZATION PHASE SHALL BE COVERED WITH TARPS, PLASTIC SHEETING, OR EROSION CONTROL MATTING. COVERING MATERIAL SHALL BE PROPERLY SECURED/ANCHORED.
   b. CONTROLS SHALL BE INSTALLED TO PREVENT CONCENTRATED FLOW DOWN AN EXPOSED SLOPE. BERMS OR DIVERSION DIKES SHALL BE INSTALLED AT THE TOP OF CUT/EXPOSED SLOPES TO DIRECT STORM FLOW AROUND THE DISTURBED AREA.
   c. EXPOSED SLOPES AT THE FINAL STABILIZATION PHASE SHALL BE STABILIZED USING SLOPE STABILIZATION PRACTICES SUCH AS SOIL STABILIZATION BLANKETS OR MATTING AS SPECIFIED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH STD & SPEC 3.36). BLANKETS OR MATS MUST BE PROPERLY SECURED AND ANCHORED TO THE SLOPE USING STAPLES, PINS, OR STAKES.
   d. SEEDED AREAS SHALL BE CHECKED AND RESEEDED AS NECESSARY TO COVER EXPOSED SOIL. RECENTLY SEEDED AREAS SHALL BE PROTECTED BY STRAW OR SOIL STABILIZATION BLANKETS TO PREVENT SEEDING FROM BEING WASHED AWAY.
3. STOCKPILES
   a. STOCKPILED SOIL AND OTHER LOOSE MATERIALS THAT CAN BE WASHED AWAY SHALL BE COVERED WITH A TARP, PLASTIC SHEETING, OR OTHER STABILIZATION MATTING. THE COVER MUST BE PROPERLY SECURED/ANCHORED DOWN TO PREVENT IT FROM BEING BLOWN OFF AND EXPOSING MATERIALS TO RAIN. CONTROLS SUCH AS HAY BALES OR BOOMS SHALL BE PLACED ALONG THE PERIMETER OF THE STOCKPILE (DOWNHILL SIDE).
4. INLET PROTECTION
   a. INLET PROTECTION CONTROLS SHALL BE INSPECTED TO ENSURE THEY ARE FUNCTIONING PROPERLY AND FLOODING WILL NOT OCCUR. CLOGGED OR DAMAGED CONTROLS MUST BE REPLACED IMMEDIATELY. ENSURE CONTROLS ALLOW FOR OVERFLOW/BYPASS OF STORMWATER RUNOFF DURING SIGNIFICANT STORM EVENTS.

IN ADDITION TO THESE PRE-STORM ACTIONS, ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES MUST BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL.

POLLUTION PREVENTION PLAN NOTES (STORMWATER MANUAL - SECTION 2.4)

1. ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY ARLINGTON COUNTY'S MS4 PERMIT, UNLESS THE STATE WATER CONTROL BOARD, THE VIRGINIA SOIL AND WATER CONSERVATION BOARD (BOARD), OR ARLINGTON COUNTY DETERMINES THE DISCHARGE TO BE A SIGNIFICANT SOURCE OF POLLUTANTS TO SURFACE WATERS:
   a. WATER LINE FLUSHING; LANDSCAPE IRRIGATION; DIVERTED STREAM FLOWS; RISING GROUND WATERS; UNCONTAMINATED GROUND WATER INFILTRATION (AS DEFINED AT 40 CFR 35.2005(20)); UNCONTAMINATED PUMPED GROUND WATER; DISCHARGES FROM POTABLE WATER SOURCES; FOUNDATION DRAINS; AIR CONDITIONING CONDENSATION; IRRIGATION WATER; SPRINGS; WATER FROM CRAWL SPACE PUMPS; FOOTING DRAINS; LAWN WATERING; INDIVIDUAL RESIDENTIAL CAR WASHING; FLOWS FROM RIPARIAN HABITATS AND WETLANDS; DECHLORINATED SWIMMING POOL DISCHARGES; DISCHARGES OR FLOWS FROM FIREFIGHTING; AND, OTHER ACTIVITIES GENERATING DISCHARGES IDENTIFIED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY AS NOT REQUIRING VPDES AUTHORIZATION.
2. APPROPRIATE CONTROLS MUST BE IMPLEMENTED TO PREVENT ANY NON-STORMWATER DISCHARGES NOT INCLUDED ON THE ABOVE LIST (E.G., CONCRETE WASH WATER, PAINT WASH WATER, VEHICLE WASH WATER, DETERGENT WASH WATER, ETC.) FROM BEING DISCHARGED INTO ARLINGTON COUNTY'S MS4 SYSTEM, WHICH INCLUDES THE CURB AND GUTTER SYSTEM, AS WELL AS CATCH BASINS AND OTHER STORM DRAIN INLETS, OR STREAM NETWORK.
3. PER CHAPTER 26 OF THE ARLINGTON COUNTY CODE, IT SHALL BE UNLAWFUL FOR ANY PERSON TO DISCHARGE DIRECTLY OR INDIRECTLY INTO THE STORM SEWER SYSTEM OR STATE WATERS, ANY SUBSTANCE LIKELY, IN THE OPINION OF THE COUNTY MANAGER, TO HAVE AN ADVERSE EFFECT ON THE STORM SEWER SYSTEM OR STATE WATERS.

UTILITY INSTALLATION:

UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

1. NO MORE THAN 100 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
2. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
3. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
4. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
5. STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
6. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
9. ANY DISTURBED AREA NOT COVERED BY NOTE #1 ABOVE AND PAVED, SODDED OR BUILT UPON BY NOVEMBER 1ST, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED WITH HAY OR STRAW AT THE RATE OF 2 TONS PER ACRE AND OVER-SEEDED NO LATER THAN MAY 15TH.
10. AT THE COMPLETION OF THE CONSTRUCTION PROJECT AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED. ARLINGTON COUNTY INSPECTOR TO APPROVE REMOVAL OF ALL TEMPORARY SILTATION MEASURES.

MAINTENANCE PROGRAM:

THE FOLLOWING IS A PROGRAM OF MAINTENANCE FOR THE MECHANICAL CONTROLS SPECIFIED IN THIS NARRATIVE AND ON THE PLAN:

1. THE SITE SUPERINTENDENT OR HIS/HER REPRESENTATIVE SHALL MAKE A VISUAL INSPECTION OF ALL MECHANICAL CONTROLS AND NEWLY STABILIZED AREA (I.E. SEEDED AND MULCHED AND/OR SODDED AREAS) ON A DAILY BASIS; ESPECIALLY AFTER A HEAVY RAINFALL EVENT TO ENSURE THAT ALL CONTROLS ARE MAINTAINED AND PROPERLY FUNCTIONING. ANY DAMAGED CONTROLS SHALL BE REPAIRED PRIOR TO THE END OF THE WORK DAY INCLUDING RE-SEEDING AND MULCHING OR RE-SODDING IF NECESSARY.
2. ALL SEDIMENT TRAPPING DEVICES SHALL BE CLEARED OUT AT 50% TRAP CAPACITY AND THE SEDIMENT SHALL BE DISPOSED OF BY SPREADING ON THE SITE OR IF NOT SUITABLE FOR FILL, HAULING AWAY AND DEPOSITING AT AN ACCEPTABLE DUMP SITE.
3. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PREVENT MUD AND/OR OTHER DEBRIS FROM BEING ENTERED ONTO EXISTING SWM/BMP FACILITIES OR DOWNSTREAM WATER WAYS. SHOULD OFF-SITE AREAS BECOME POLLUTED BY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING THE AFFECTED AREAS TO THE SATISFACTION OF THE INSPECTOR.
4. AT THE COMPLETION OF CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ANY REMAINING DENUDED AREAS SHALL BE STABILIZED. CERTAIN DEVICES MAY BE REMOVED PRIOR TO CONSTRUCTION COMPLETION BUT ONLY WITH THE APPROVAL OF THE COUNTY INSPECTOR.
5. AFTER CONSTRUCTION OPERATIONS HAVE ENDED, ALL DISTURBED AREAS SHALL BE STABILIZED. UPON APPROVAL OF THE COUNTY INSPECTOR, MECHANICAL SEDIMENT CONTROLS SHALL BE REMOVED AND THE GROUND PERMANENTLY STABILIZED WITH VEGETATION WITHIN 30 DAYS.

ARLINGTON
VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

SEAL
COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44276
1/6/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum — QUALITY CONTROL ENGINEER	01/18/22
Adam E Kulaury — CONSTRUCTION MANAGEMENT SUPERVISOR	1/20/22
WATER, SEWER, STREETS BUREAU CHIEF	1.21.2022
Dennis M. Leach — TRANSPORTATION DIRECTOR	01/27/22
John Mir — PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

EROSION AND SEDIMENT CONTROL NOTES

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

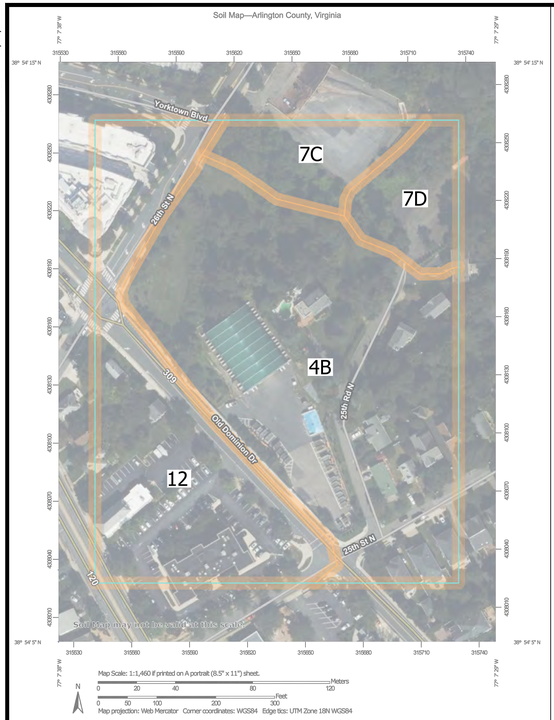
PLOTTED: JANUARY 6 2022

SCALE: N/A

C032.1

FILENAME: SLT1-220-E_AND_S_NOTES_SWPPP.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY

REVISED ON 01/07/2021

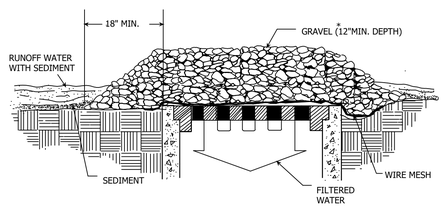


Natural Resources Conservation Service — Web Soil Survey, National Cooperative Soil Survey — 9/16/2021 Page 1 of 3

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4B	Urban land-Sassafras-Neabsco complex, 3 to 8 percent slopes	6.0	53.6%
7C	Glenelg-Urban land complex, 8 to 15 percent slopes	0.9	7.7%
7D	Glenelg-Urban land complex, 15 to 25 percent slopes	0.8	7.3%
12	Urban land-Udorthents complex, 2 to 15 percent slopes	3.5	31.5%
Totals for Area of Interest		**11.2**	**100.0%**

GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER



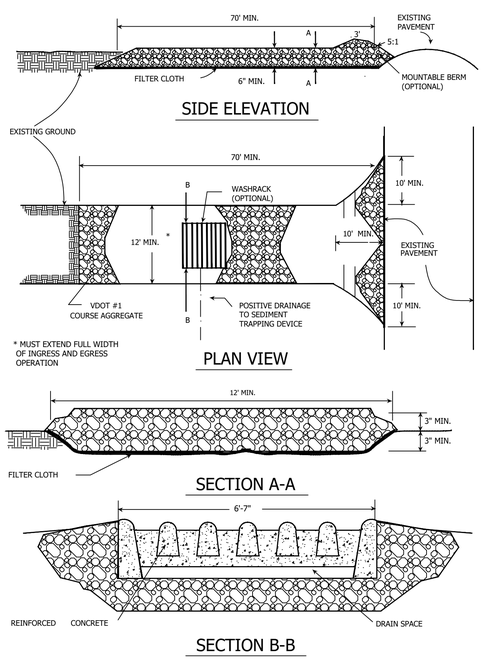
SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

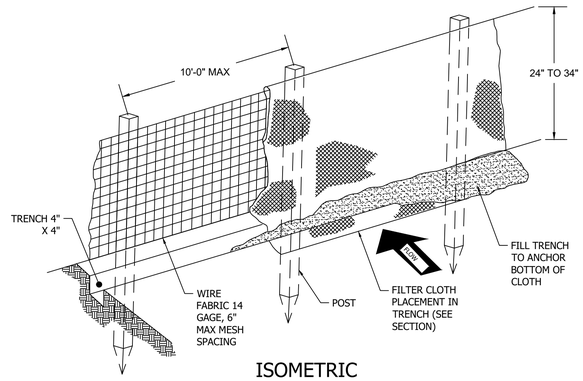
* GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE.

SOURCE: VA. DSWC — PLATE. 3.07-2

STONE CONSTRUCTION ENTRANCE



SOURCE: ADAPTED from 1983 Maryland Standards for Soil erosion and Sediment Control, and Va. DSWC — Plate 3.02-1



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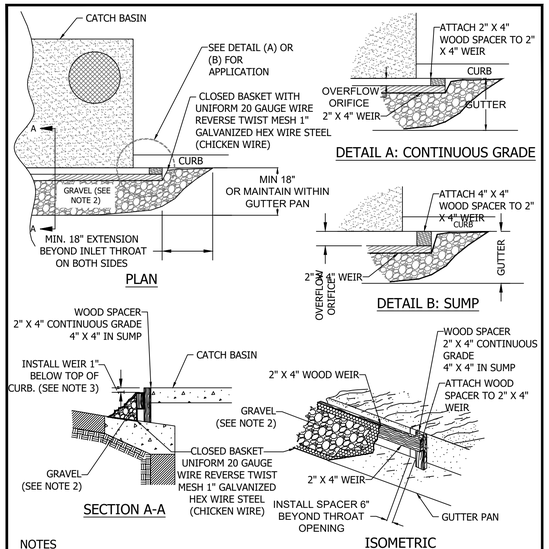
SILT FENCE — NOT TO SCALE

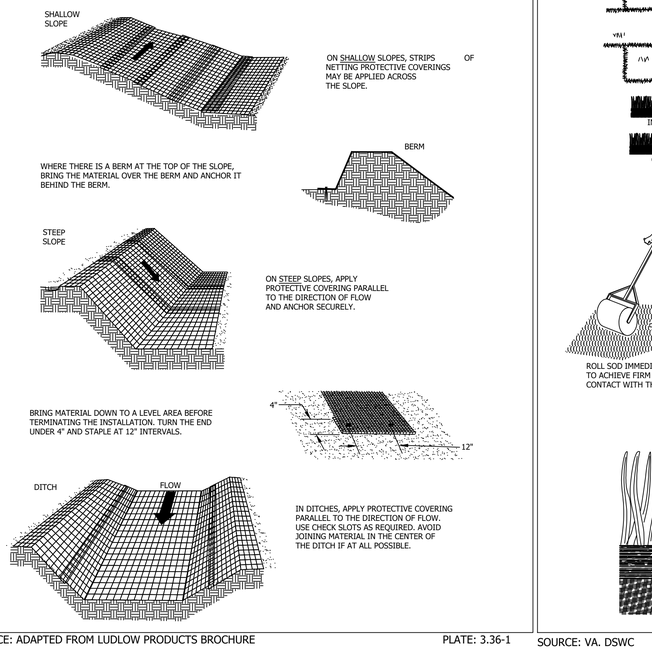


NOTES
1. DIMENSIONAL LUMBER SIZES SHOW.
2. GRAVEL SHALL BE VDOT COARSE AGGREGATE #3, # 357 OR #5.
3. WEIR HEIGHT MAY BE ADJUSTED BY PROJECT OFFICER OR INSPECTOR IN FLOOD PRONE AREAS.
4. PAINT 2"X4" WEIR, CLOSED BASKET, AND GUTTER WITH HIGH VISIBILITY INCANDESCENT ORANGE PAINT.
5. REMOVE SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE THE PROTECTION.

CURB INLET PROTECTION — REVISION & DATE

ARLINGTON VIRGINIA — ARLINGTON COUNTY, VIRGINIA, DEPARTMENT OF ENVIRONMENTAL SERVICES — DRAWING NO. 3.07-7 (ACG)

TYPICAL ORIENTATION OF TREATMENT - 1 (SOIL STABILIZATION BLANKET)



SOURCE: ADAPTED FROM LUDLOW PRODUCTS BROCHURE — PLATE: 3.36-1

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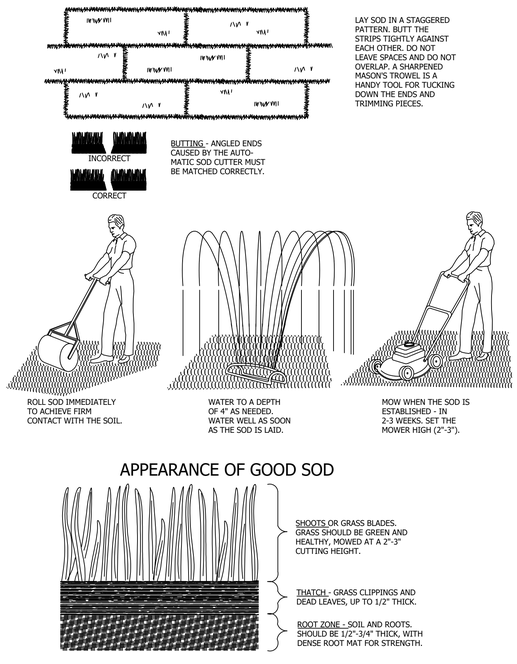

APPEARANCE OF GOOD SOD

SOURCE: VA. DSWC — PLATE: 3.33-1

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

SEAL

COMMONWEALTH OF VIRGINIA — SOLOMON W SHIKUR — Lic. No. 44376 — 1/6/2022 — PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum — QUALITY CONTROL ENGINEER	01/18/22
Adam E Lulavy — CONSTRUCTION MANAGEMENT SUPERVISOR	1/20/22
WATER, SEWER, STREETS BUREAU CHIEF	1.21.2022
Dennis M Leach — TRANSPORTATION DIRECTOR	01/27/22
John Mir — PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE: AS SHOWN

C032.2

FILENAME: SLT1-220-E_AND_S_NOTES_SWPPP.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY

REVISED ON 01/07/2021

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
Arlington County Projects
(Linear Development / Stormwater Retrofit)

For Construction Activities At:
Northside Salt Storage Site
SE Corner of Old Dominion Dr. & 26th St. N.
Arlington, VA, 22207

Latitude: 38.902942 N (decimal degrees)

Longitude: 77.126444 W (decimal degrees)

Construction Activity Operator:

Arlington County
Department of Environmental Services
2100 Clarendon Blvd., Suite 813
Arlington, VA 22201
c/o Solomon Shikur, P.E.
(703)228-3654
sshikur@arlingtonva.us
(703)228-6555 (24-hour Emergency)

SWPPP Preparation Date:

October 25, 2021

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: _____

1.0 SWPPP Documents Located Onsite & Available for Review

SWPPP Document Type	Located Onsite & Available for Review?	
Registration Statement	☒ Yes	☐ NA
Notice of Coverage Letter	☐ Yes	☒ NA
Construction General Permit	☐ Yes	☒ NA
Pollution Prevention Plan	☒ Yes	☐ NA
Erosion & Sediment Control Plan	☒ Yes	☐ NA
Stormwater Management Plan	☒ Yes	☐ NA
LDA Permit	☒ Yes	☐ NA

Required documents must be kept at a centralized location on the project site (i.e. in a mail box or other container)

2.0 Authorized Non-Stormwater Discharges

Type of Authorized Non-Stormwater Discharges	Likely Present at Your Project Site?	
Uncontaminated excavation dewatering	☒ Yes	☐ No
Landscape irrigation	☒ Yes	☐ No
Others [describe]	☐ Yes	☒ No

3.0 Pollution Prevention Awareness

Employees will be given a "walk through" of the site identifying areas of possible pollution and will be shown Erosion and Sediment Controls and Pollution Prevention Practices (identified in Sections 4.0 and 5.0 of this SWPPP) that are applicable to their assigned job duties. A refresher meeting and "walk through" will be conducted on an as needed basis.

4.0 Erosion & Sediment Controls

Select all that apply	Erosion & Sediment Control	Estimated Installation Date	Estimated Removal Date	Responsible Party
☒	Construction Entrance (Std. & Spec. 3.02)			Construction Activity Operator (See Cover Page)
☒	Silt Fence (Std. & Spec. 3.05)			
☐	Culvert Inlet Protection (Std. & Spec. 3.08)			
☒	Outlet Protection (Std. & Spec. 3.18)		NA	
☐	Temporary Seeding (Std. & Spec. 3.31)	As required	NA	
☐	Permanent Seeding (Std. & Spec. 3.32)		NA	
☐	Sodding (Std. & Spec. 3.33)		NA	
☐	Mulching (Std. & Spec. 3.35)		NA	
☐	Safety Fence (Std. & Spec 3.01)			
☒	Storm Drain Inlet Protection			

	(Std. & Spec 3.08 and/or Arlington County Std. & Spec from approved ESC plan)			
☒	Dewatering (Std. & Spec 3.26 and/or Arlington County Std. & Spec from approved ESC plan)			
☐	Turbidity Curtain (Std. & Spec 3.27 and/or Arlington County Std. & Spec from approved ESC plan)			
☒	Tree Protection (Arlington County Std. & Spec from approved ESC plan)			
☐	Stream Crossing / Cofferdams (Std. & Spec 3.25 or on plan)			
☐	Pump Around System (detail on approved plan)			
☐	Rip Rap (Std. & Spec. 3-19)			

Pre-Storm Erosion and Sediment Control Checklist
The following actions shall be taken prior to storm events with predicted heavy and/or large volume rainfall to prevent sediment discharges from a construction site. A typical summer thunderstorm is an example of a storm event with predicted heavy and/or large volume rainfall.

☒ Perimeter controls (silt fence, hay bales, stone berms) used to prevent sediment from leaving the site shall be checked for undermining, holes, or deterioration and repaired/replaced if needed.

☒ Sediment that has accumulated against perimeter controls shall be removed if the depth exceeds more than 1/2 of the silt fence height.

☒ Exposed soil or slopes shall be covered with straw, tarps, plastic sheeting, or erosion control matting. Covering material shall be properly secured/anchored.

☒ Stockpiled soil and other loose materials that can be washed away shall be covered with a tarp, plastic sheeting, or other stabilization matting. The cover must be properly secured / anchored down to prevent it from being blown off and exposing materials to rain. Controls such as hay bales or booms should be placed along the perimeter of the stock pile (downhill side). Stockpiled materials should not obstruct flow along the curb line.

☒ Inlet protection controls shall be inspected to ensure they are installed per approved ESC plan, are functioning properly, and maintained as needed.

STANDARD NOTE FROM STORMWATER MANUAL: 2.4 POLLUTION PREVENTION PLAN (P2 PLAN)

ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY ARLINGTON COUNTY'S MS4 PERMIT, UNLESS THE STATE WATER CONTROL BOARD, THE VIRGINIA SOIL AND WATER CONSERVATION BOARD (BOARD), OR ARLINGTON COUNTY DETERMINES THE DISCHARGE TO BE A SIGNIFICANT SOURCE OF POLLUTANTS TO SURFACE WATERS:

WATER LINE FLUSHING; LANDSCAPE IRRIGATION; DIVERTED STREAM FLOWS; RISING GROUND WATERS; UNCONTAMINATED GROUND WATER INFILTRATION (AS DEFINED AT 40 CFR 35.2005(20)); UNCONTAMINATED PUMPED GROUND WATER; DISCHARGES FROM POTABLE WATER SOURCES; FOUNDATION DRAINS; AIR CONDITIONING CONDENSATION; IRRIGATION WATER; SPRINGS; WATER FROM CRAWL SPACE PUMPS; FOOTING DRAINS; LAWN WATERING; INDIVIDUAL RESIDENTIAL CAR WASHING; FLOWS FROM RIPARIAN HABITATS AND WETLANDS; DECHLORINATED SWIMMING POOL DISCHARGES; DISCHARGES OR FLOWS FROM FIRE FIGHTING; AND, OTHER ACTIVITIES GENERATING DISCHARGES IDENTIFIED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY AS NOT REQUIRING VPDES AUTHORIZATION.

APPROPRIATE CONTROLS MUST BE IMPLEMENTED TO PREVENT ANY NON-STORMWATER DISCHARGES NOT INCLUDED ON THE ABOVE LIST (E.G., CONCRETE WASH WATER, PAINT WASH WATER, VEHICLE WASH WATER, DETERGENT WASH WATER, ETC.) FROM BEING DISCHARGED INTO ARLINGTON COUNTY'S MS4 SYSTEM, WHICH INCLUDES THE CURB AND GUTTER SYSTEM, AS WELL AS CATCH BASINS AND OTHER STORM DRAIN INLETS, OR
STREAM NETWORK.

PER CHAPTER 26 OF THE ARLINGTON COUNTY CODE, IT SHALL BE UNLAWFUL FOR ANY PERSON TO DISCHARGE DIRECTLY OR INDIRECTLY INTO THE STORM SEWER SYSTEM OR STATE WATERS, ANY SUBSTANCE LIKELY, IN THE OPINION OF THE COUNTY MANAGER, TO HAVE AN ADVERSE EFFECT ON THE STORM SEWER SYSTEM OR STATE WATERS.

5.0 Potential Sources of Pollution & Pollution Prevention Practices

Pollutant-Generating Activity	Likely Present at your Project Site?	Sediment	Nutrients	Heavy Metals	pH (acids and bases)	Pesticides & Herbicides	Oil & Grease	Bacteria & Viruses	Trash, Debris, Solids	Other Toxic Chemicals	Pollution Prevention Practice	Responsible Party
Clearing, grading, excavating, and un-stabilized areas	☒ Yes ☐ No	X	X						X		(1)	Construction Activity Operator (See Cover Page of this SWPPP)
Paving and saw cutting operations	☒ Yes ☐ No	X					X		X		(2)	
Concrete operations, washout, and cement waste	☒ Yes ☐ No			X	X				X		(3)	
Washing / cleaning	☐ Yes ☒ No	X	X	X	X		X		X	X	(4)	
Dewatering operations	☒ Yes ☐ No	X	X						X		(5)	
Material / chemical use and storage	☐ Yes ☒ No	X	X	X	X	X	X		X	X	(6)	
Equipment and vehicle maintenance	☐ Yes ☒ No				X		X		X	X	(7)	
Waste management / disposal	☒ Yes ☐ No								X	X	(8)	
Sanitary waste	☒ Yes ☐ No		X		X			X			(9)	
Nutrient management	☐ Yes ☒ No	X	X						X	X	(10)	

7.0 Spill Prevention & Response

Most spills can be cleaned up using a spill kit. Absorbent/oil dry, sealable containers, plastic bags, and shovels/brooms are suggested minimum spill response items that should be available at the project site.

1st Priority: Protect all people
2nd Priority: Protect equipment and property
3rd Priority: Protect the environment

1. Check for hazards (flammable material, noxious fumes, cause of spill) – if flammable liquid, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911. LARGE SPILLS ARE LIKELY TO PRESENT A HAZARD.
2. Ensure the spill area is safe to enter and that it does not pose an immediate threat to health or safety of any person.
3. Stop the spill source.
4. Call co-workers and supervisor for assistance and to make them aware of the spill and potential dangers.
5. If possible, stop spill from spreading and/or entering storm drains (use absorbent or other materials as necessary).
6. If spilled material has entered a storm drain; contact Arlington County Fire Department and project manager.
7. Clean up spilled material according to manufacturer specifications, for liquid spills use absorbent materials and do not flush area with water.
8. Properly dispose of cleanup materials and used absorbent material according to manufacturer specifications.

Emergency Contacts:

Local Contacts

Arlington County Fire & Police	703-558-2222
DES Water, Sewer, Streets 24-Hour Emergency	703-228-6555
Washington Gas Emergency	703-750-1400

Nights, Holidays & Weekends

VA Dept. of Emergency Management	804-674-2400
24 Hour Reporting Service	

Spill kit on site: ☐ Yes ☐ No

Location(s) of spill kit: _____

10/25/2021
date

Qianqian Li, P.E.
ESC Program Administrator
Department of Environmental Sevices
2100 Clarendon Boulevard, Suite 813
Arlington, Virginia 22201

Re: Erosion and Sediment Control Permit Application for:
4753 Old Dominion Drive
street address
SE Corner of Old Dominion Dr. and 26th St N.
lot, block, section subdivision
permit number

Dear Mrs. Li:

I hereby certify that I accept the responsibilities of Responsible Land Disturber for the above referenced project. I understand that these responsibilities include:

1. Reviewing the erosion and sedimentation (E&S) plan for the project.
2. Walking the site prior to construction to identify critical areas.
3. Conducting a pre-construction briefing with earth moving and site contractors to present the E&S plan and highlight the presence of critical areas, the limits of clearing and the required E&S controls and tree protection measures to be installed. Call 703-228-0760 to schedule pre-construction meeting.
4. Regularly inspecting the site during construction to ensure that all E&S controls are functioning and are adequate to address erosion and sedimentation. Inspect the site 48 hours after a runoff-generating storm, and provide a copy of the inspection findings to the county.
5. Reporting to the owner the presence inadequate or non functioning E&S controls when they are observed.
6. Ensuring that temporary soil stabilization is applied within 7 days to areas denuded that will remain undisturbed for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.
7. Calling (703) 228-0760 at least 80 hours before demolishing any structure.

I may be reached at 703-228-3654 with questions about this plan or my execution of the duties of
telephone number
Responsible Land Disturber.

Sincerely,

signed
Solomon W. Shikur
name printed
44276
professional registration (type and number)

ARLINGTON
VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

SEAL

COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44276
1/6/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum QUALITY CONTROL ENGINEER	01/18/22
Adam E Kulawy CONSTRUCTION MANAGEMENT SUPERVISOR	1/20/22
_____ WATER, SEWER, STREETS BUREAU CHIEF	1.21.2022
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John Mir PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

SWPPP

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:

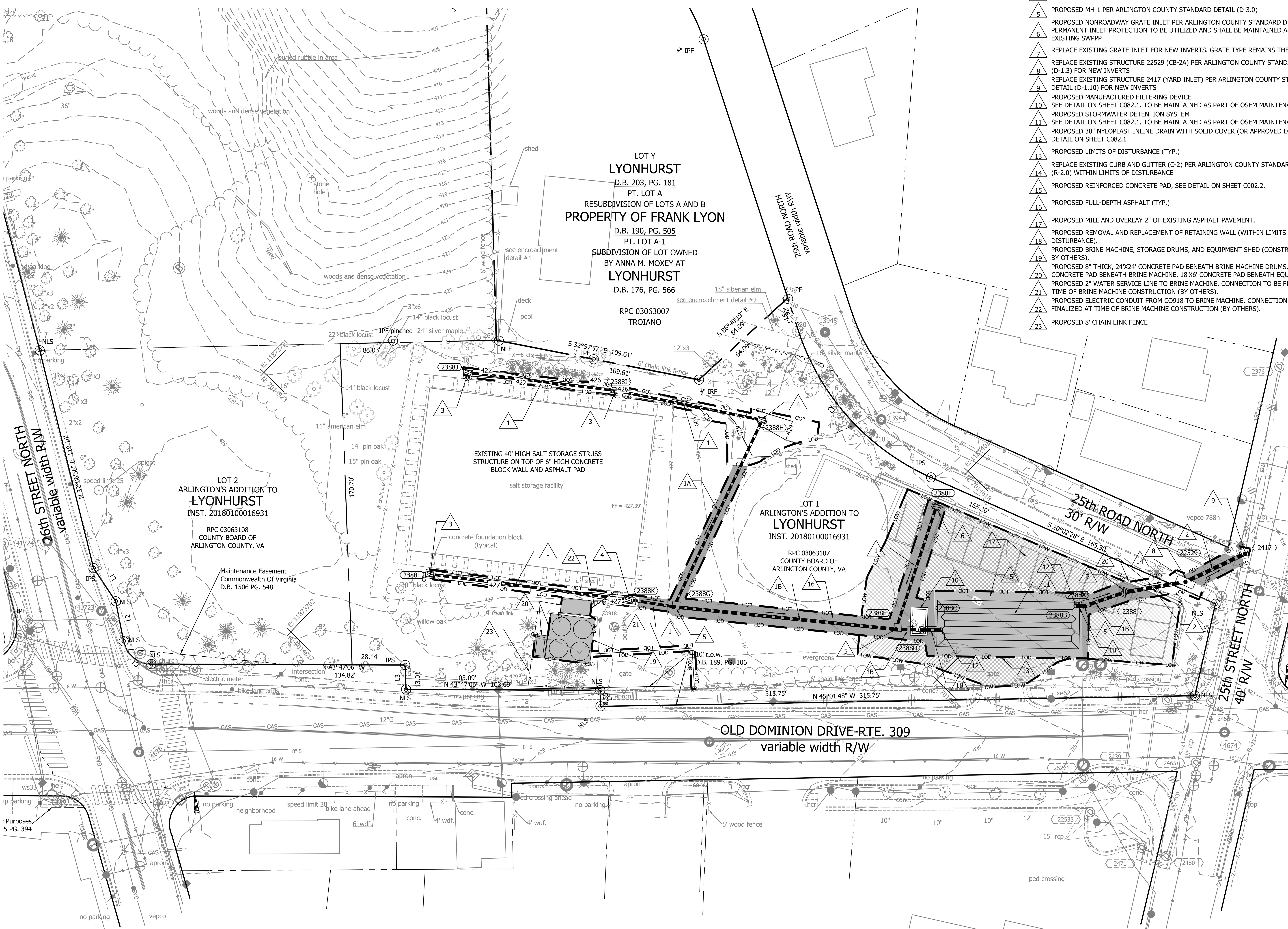
N/A

C035.1

FILENAME: SLT1-220-E_AND_S_NOTES_SWPPP.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY

CONSTRUCTION NOTES

1	PROPOSED 15" HP STORM PIPE
1A	REMOVE EXISTING PIPE AND INSTALL PROPOSED 15" HP STORM PIPE AS SHOWN ON C073.1
1B	PROPOSED 18" HP STORM PIPE
2	REMOVE EXISTING RCP STORM PIPE AND INSTALL PROPOSED 18" CLASS III RCP STORM PIPE
3	NYLOPLAST DRAIN BASIN WITH STANDARD 18" FRAME AND GRATE, OR APPROVED EQUAL
4	PROPOSED 3'x3' NYLOPLAST INLET OR APPROVED EQUAL. PERMANENT INLET PROTECTION TO BE UTILIZED AND SHALL BE MAINTAINED AS PART OF EXISTING SWPPP
5	PROPOSED MH-1 PER ARLINGTON COUNTY STANDARD DETAIL (D-3.0)
6	PROPOSED NONROADWAY GRATE INLET PER ARLINGTON COUNTY STANDARD DETAIL (D-1.9). PERMANENT INLET PROTECTION TO BE UTILIZED AND SHALL BE MAINTAINED AS PART OF EXISTING SWPPP
7	REPLACE EXISTING GRATE INLET FOR NEW INVERTS. GRATE TYPE REMAINS THE SAME
8	REPLACE EXISTING STRUCTURE 22529 (CB-2A) PER ARLINGTON COUNTY STANDARD DETAIL (D-1.3) FOR NEW INVERTS
9	REPLACE EXISTING STRUCTURE 2417 (YARD INLET) PER ARLINGTON COUNTY STANDARD DETAIL (D-1.10) FOR NEW INVERTS
10	PROPOSED MANUFACTURED FILTERING DEVICE SEE DETAIL ON SHEET C082.1. TO BE MAINTAINED AS PART OF OSEM MAINTENANCE
11	PROPOSED STORMWATER DETENTION SYSTEM SEE DETAIL ON SHEET C082.1. TO BE MAINTAINED AS PART OF OSEM MAINTENANCE
12	PROPOSED 30" NYLOPLAST INLINE DRAIN WITH SOLID COVER (OR APPROVED EQUAL), SEE DETAIL ON SHEET C082.1
13	PROPOSED LIMITS OF DISTURBANCE (TYP.)
14	REPLACE EXISTING CURB AND GUTTER (C-2) PER ARLINGTON COUNTY STANDARD DETAIL (R-2.0) WITHIN LIMITS OF DISTURBANCE
15	PROPOSED REINFORCED CONCRETE PAD, SEE DETAIL ON SHEET C002.2.
16	PROPOSED FULL-DEPTH ASPHALT (TYP.)
17	PROPOSED MILL AND OVERLAY 2" OF EXISTING ASPHALT PAVEMENT.
18	PROPOSED REMOVAL AND REPLACEMENT OF RETAINING WALL (WITHIN LIMITS OF DISTURBANCE).
19	PROPOSED BRINE MACHINE, STORAGE DRUMS, AND EQUIPMENT SHED (CONSTRUCTION DONE BY OTHERS).
20	PROPOSED 8" THICK, 24'X24' CONCRETE PAD BENEATH BRINE MACHINE DRUMS, 12'X6.5' CONCRETE PAD BENEATH BRINE MACHINE, 18'X6' CONCRETE PAD BENEATH EQUIPMENT SHED.
21	PROPOSED 2" WATER SERVICE LINE TO BRINE MACHINE. CONNECTION TO BE FINALIZED AT TIME OF BRINE MACHINE CONSTRUCTION (BY OTHERS).
22	PROPOSED ELECTRIC CONDUIT FROM CO918 TO BRINE MACHINE. CONNECTION TO BE FINALIZED AT TIME OF BRINE MACHINE CONSTRUCTION (BY OTHERS).
23	PROPOSED 8' CHAIN LINK FENCE


LOT Y
LYONHURST
D.B. 203, PG. 181
PT. LOT A
RESUBDIVISION OF LOTS A AND B
PROPERTY OF FRANK LYON
D.B. 190, PG. 505
PT. LOT A-1
SUBDIVISION OF LOT OWNED
BY ANNA M. MOXEY AT
LYONHURST
D.B. 176, PG. 566
RPC 03063007
TROIANO
LOT 2
ARLINGTON'S ADDITION TO
LYONHURST
INST. 20180100016931
RPC 03063108
COUNTY BOARD OF
ARLINGTON COUNTY, VA
LOT 1
ARLINGTON'S ADDITION TO
LYONHURST
INST. 20180100016931
RPC 03063107
COUNTY BOARD OF
ARLINGTON COUNTY, VA
EXISTING 40' HIGH SALT STORAGE STRUSS
STRUCTURE ON TOP OF 6" HIGH CONCRETE
BLOCK WALL AND ASPHALT PAD
salt storage facility
Maintenance Easement
Commonwealth Of Virginia
D.B. 1506 PG. 548
26th STREET NORTH
variable width R/W
25th ROAD NORTH
30' R/W
25th ROAD NORTH
variable width R/W
25th STREET NORTH
40' R/W
OLD DOMINION DRIVE-RTE. 309
variable width R/W
woods and dense vegetation
concrete foundation block
(typical)
10' r.o.w.
D.B. 189, PG. 106

ARLINGTON
VIRGINIA

DEPARTMENT OF
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SEAL

COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44276
1/6/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum — QUALITY CONTROL ENGINEER	01/18/22
Adam E. Kulawy — CONSTRUCTION MANAGEMENT SUPERVISOR	1/20/22
WATER, SEWER, STREETS BUREAU CHIEF	1.21.2022
Dennis M. Leach — TRANSPORTATION DIRECTOR	01/27/22
John Mir — PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

SITE PLAN

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

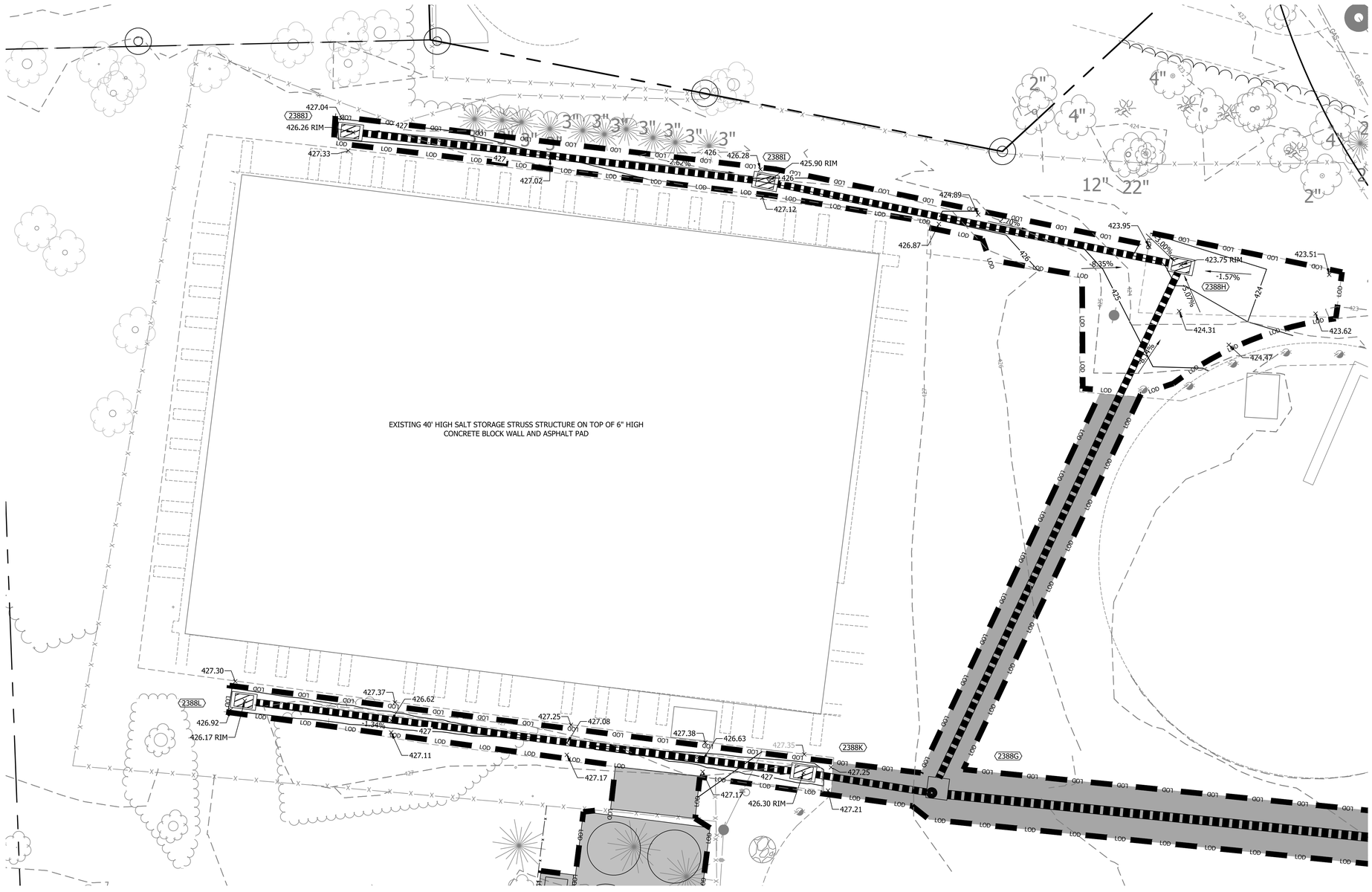
PLOTTED: JANUARY 6 2022

SCALE:

0 25 50
GRAPHIC SCALE

C041.1

REVISED ON 01/07/2021



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 WATER, SEWER, STREETS BUREAU CHIEF	1.21.2022
Dennis M Leach TRANSPORTATION DIRECTOR	01/27/22
John Ma PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

GRADING PLAN

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

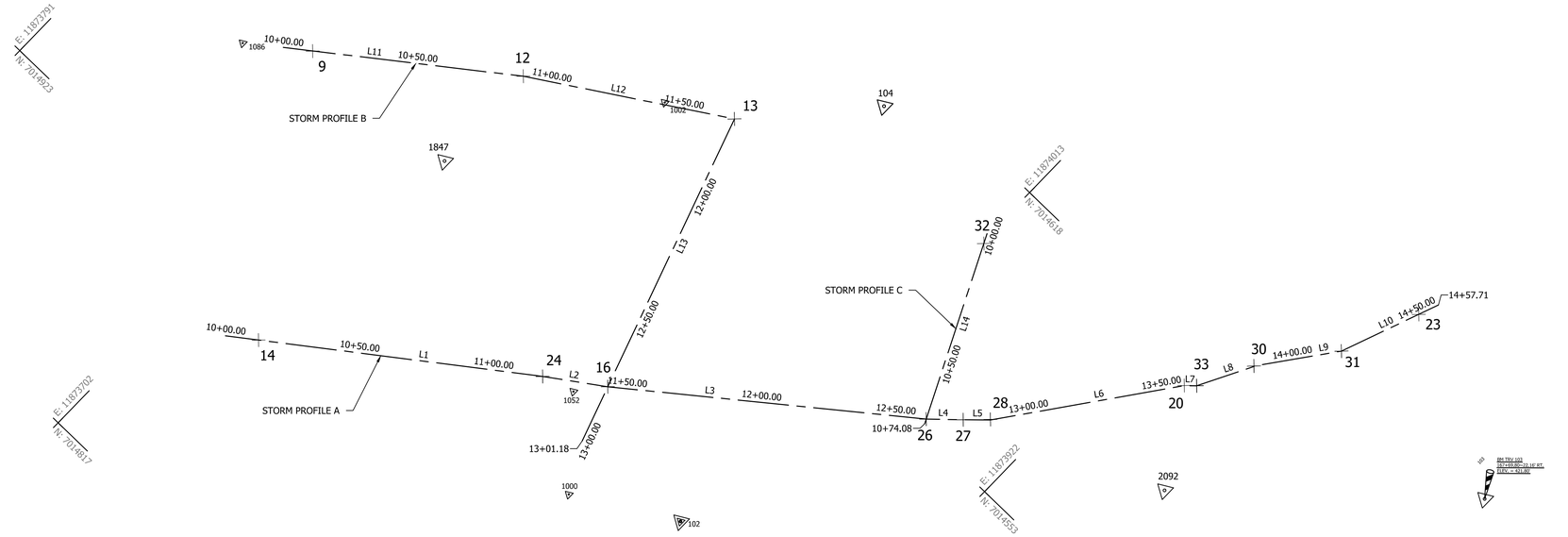
PLOTTED: JANUARY 6 2022

SCALE:

0 10 20
GRAPHIC SCALE

C041.2

REVISED ON 01/07/2021



Point Table				
Point #	Name	Northing	Easting	Elevation
9	2388j	7014845.1770	11873866.0129	426.26
12	2388i	7014782.5848	11873913.4967	425.90
13	2388h	7014715.3600	11873956.4348	423.75
14	2388l	7014785.2835	11873775.1207	426.15
16	2388g	7014680.2131	11873852.5176	426.95
20	2388b	7014526.9697	11874001.1439	421.44
23	2417	7014482.8258	11874080.4069	418.40
24	2388k	7014700.2460	11873838.5248	426.51
26	2388e	7014587.0844	11873925.8259	424.31
27	2388d	7014577.0598	11873935.1567	424.00
28	2388c	7014569.9000	11873942.2658	423.78
30	2388	7014513.4523	11874024.2529	420.75
31	22529	7014493.9737	11874050.7298	419.47
32	2388f	7014616.8781	11873987.4276	422.90
33	2388a	7014523.6164	11874004.2833	421.33

ALIGNMENT: STORM PROFILE A										
Curve/Line #	Length	Radius	Line/Chord Bearing	Chord Length	Delta (Δ)	Tangent	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L1	116.03'		S36° 42' 30.42"E				10+00.00	11+16.03	7014795.18, 11873767.74	7014702.16, 11873837.09
L2	22.03'		S34° 55' 59.13"E				11+20.83	11+42.86	7014698.28, 11873839.90	7014680.21, 11873852.52
L3	118.52'		S38° 12' 32.41"E				11+42.86	12+61.38	7014680.21, 11873852.52	7014587.08, 11873925.83
L4	13.70'		S42° 56' 49.61"E				12+61.38	12+75.07	7014587.08, 11873925.83	7014577.06, 11873935.16
L5	10.10'		S43° 35' 45.59"E				12+75.07	12+85.17	7014577.06, 11873935.16	7014569.75, 11873942.12
L6	72.90'		S54° 04' 03.12"E				12+85.17	13+58.07	7014569.75, 11873942.12	7014526.97, 11874001.14
L7	4.59'		S43° 05' 25.98"E				13+58.07	13+62.66	7014526.97, 11874001.14	7014523.61, 11874004.28
L8	22.30'		S62° 37' 40.93"E				13+62.66	13+84.96	7014523.61, 11874004.28	7014513.36, 11874024.08
L9	30.34'		S53° 39' 33.29"E				13+87.58	14+17.92	7014511.95, 11874026.29	7014493.97, 11874050.73
L10	39.80'		S69° 24' 42.41"E				14+17.92	14+57.71	7014493.97, 11874050.73	7014479.98, 11874087.98

ALIGNMENT: STORM PROFILE B										
Curve/Line #	Length	Radius	Line/Chord Bearing	Chord Length	Delta (Δ)	Tangent	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L11	89.53'		S37° 09' 14.03"E				10+00.00	10+89.53	7014853.95, 11873859.42	7014782.58, 11873913.50
L12	79.77'		S32° 34' 02.81"E				10+89.53	11+69.30	7014782.58, 11873913.50	7014715.36, 11873956.43
L13	131.87'		S71° 18' 48.87"W				11+69.30	13+01.18	7014715.36, 11873956.43	7014673.11, 11873831.51

ALIGNMENT: STORM PROFILE C										
Curve/Line #	Length	Radius	Line/Chord Bearing	Chord Length	Delta (Δ)	Tangent	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L14	74.08'		S64° 09' 25.91"W				10+00.00	10+74.08	7014618.58, 11873990.86	7014586.29, 11873924.20

CONTROL DATA:

Point No.	Northing(Y)	Easting(X)	Elev(Z)	Description
101	7014794.9500	11873604.6660	429.73	TRV 101
102	7014626.2080	11873835.3460	428.13	TRV 102
1000	7014662.9233	11873813.7663	428.46	TFLY
1002	7014738.1634	11873942.8377	424.98	TFLY
1052	7014688.1514	11873842.3807	427.21	TFLY
1086	7014865.8504	11873850.1155	427.36	TFLY

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SOLOMON W SHIKUR
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1/6/2022
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 WATER, SEWER, STREETS BUREAU CHIEF	1.21.2022
Dennis M Leach TRANSPORTATION DIRECTOR	01/27/22
John Mir PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

GEOMETRIC CONTROL PLAN

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:

0 25 50
GRAPHIC SCALE

C045.1

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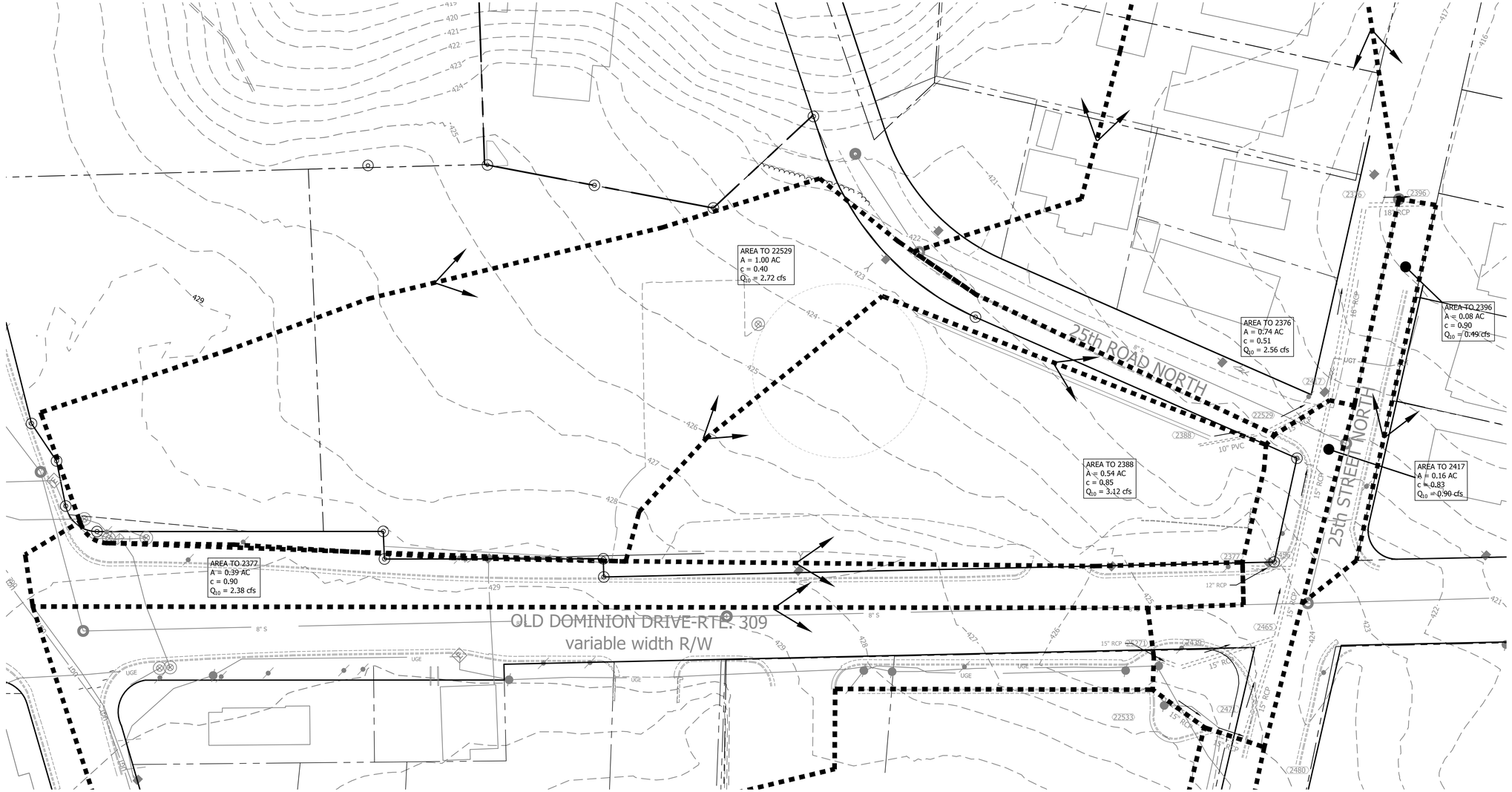

LEGEND

- EXISTING STORM SEWER LINE (18" RCP)
- CATCH BASIN
- YARD INLET / GRATE INLET
- JUNCTION BOX / MANHOLE
- (2376) STRUCTURE NUMBER
- DRAINAGE DIVIDES
- OUTFALL

NOT FOR CONSTRUCTION
THIS SHEET FOR CALCULATION PURPOSES ONLY

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SEAL

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1/6/2022
PROFESSIONAL ENGINEER

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Dennis M Leach, TRANSPORTATION DIRECTOR	01/27/22
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REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

STORM SEWER DRAINAGE DIVIDES (PRE-EXISTING)

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

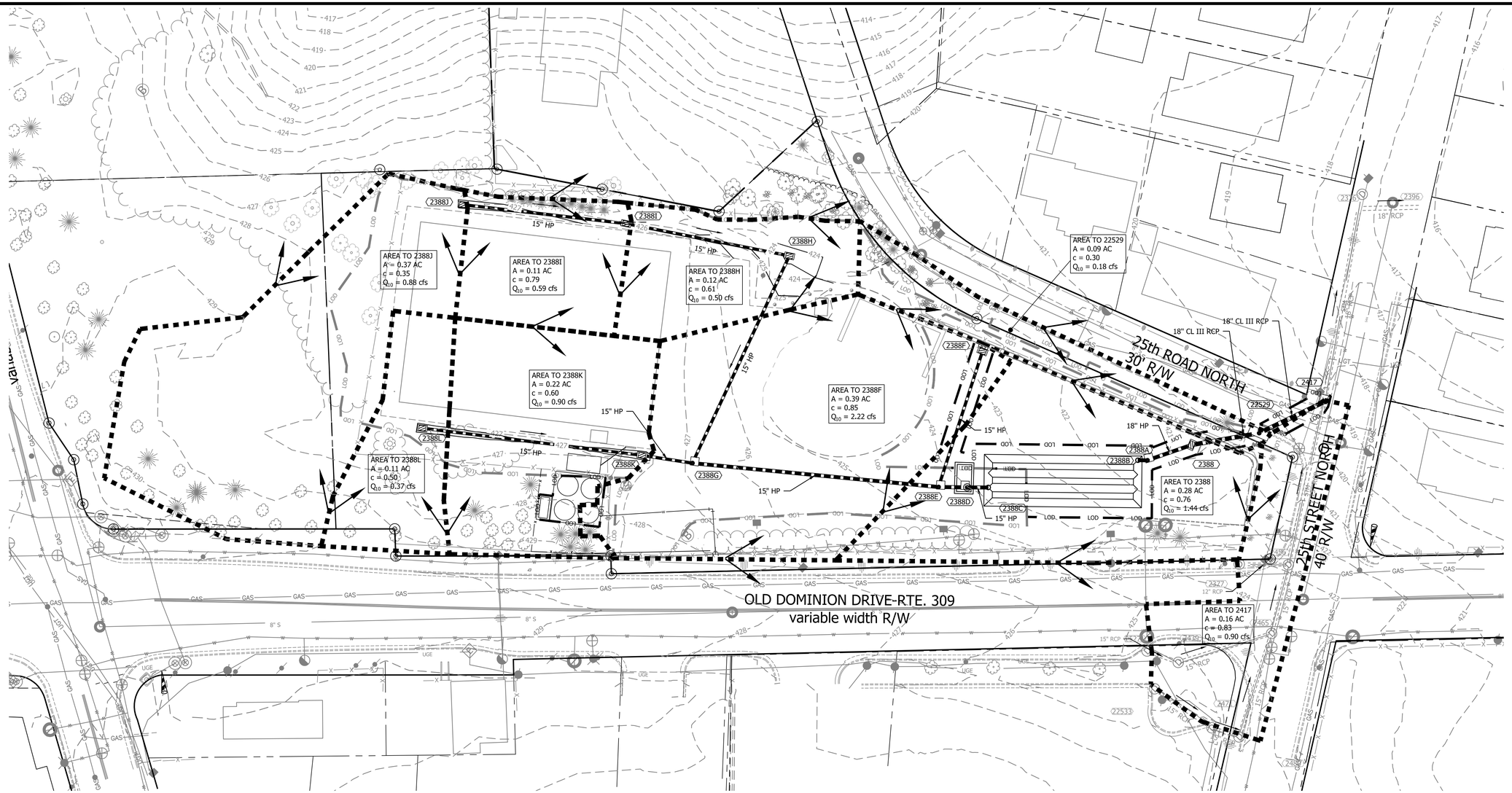
SCALE:

0 25 50
GRAPHIC SCALE

C071.1

FILENAME: SLT1-250-DRAINAGE_DIVIDES_EX.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY

REVISED ON 01/07/2021



LEGEND

- PROPOSED STORM SEWER LINE — 18" RCP
- EXISTING STORM SEWER LINE — 18" RCP
- CATCH BASIN
- YARD INLET / GRATE INLET
- JUNCTION BOX / MANHOLE
- 2376 — STRUCTURE NUMBER
- DRAINAGE DIVIDES
- OUTFALL

NOT FOR CONSTRUCTION
THIS SHEET FOR CALCULATION PURPOSES ONLY

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1/6/2022
PROFESSIONAL ENGINEER

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Adam E Kulawy, CONSTRUCTION MANAGEMENT SUPERVISOR	1/20/22
WATER, SEWER, STREETS BUREAU CHIEF	1.21.2022
Dennis M. Leach, TRANSPORTATION DIRECTOR	01/27/22
John Mir, PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

STORM SEWER DRAINAGE DIVIDES (PROPOSED)

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:

0 25 50
GRAPHIC SCALE

C071.2

FILENAME: SLT1-250-DRAINAGE_DIVIDES_PROP.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY

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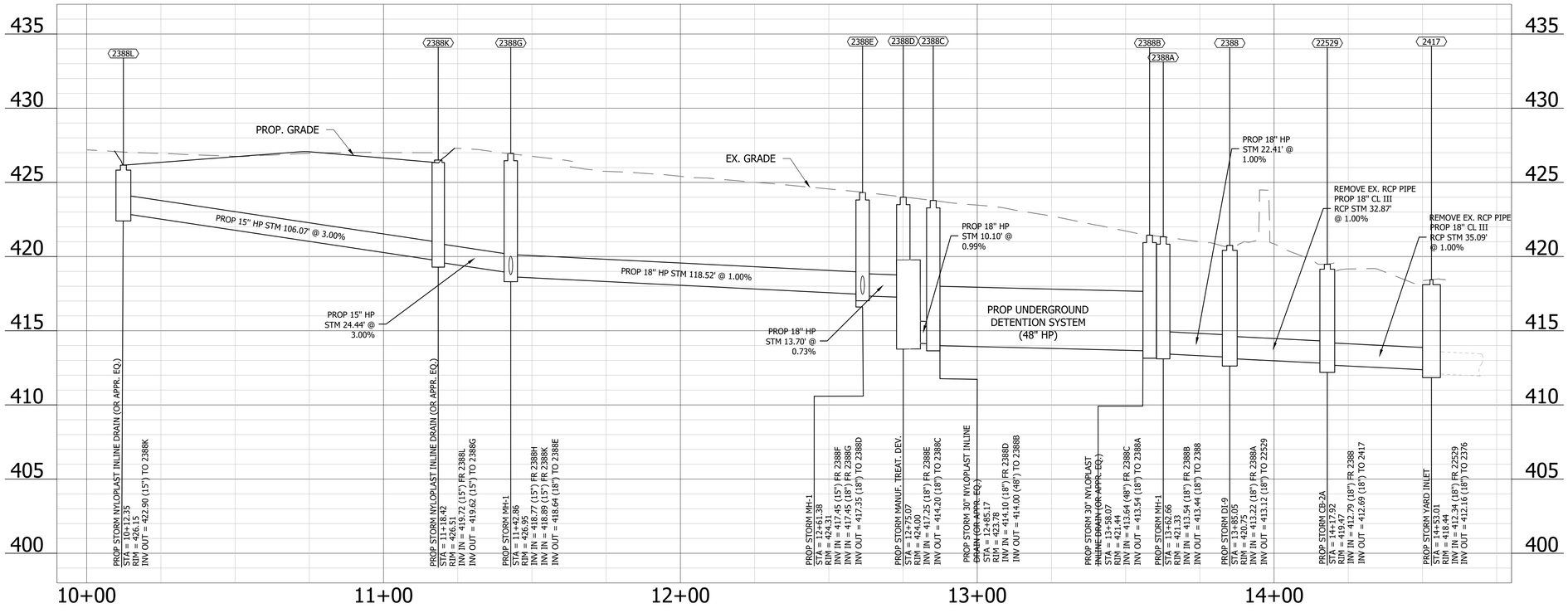
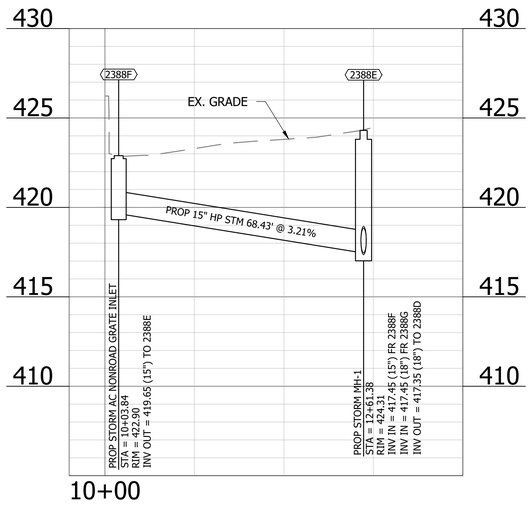
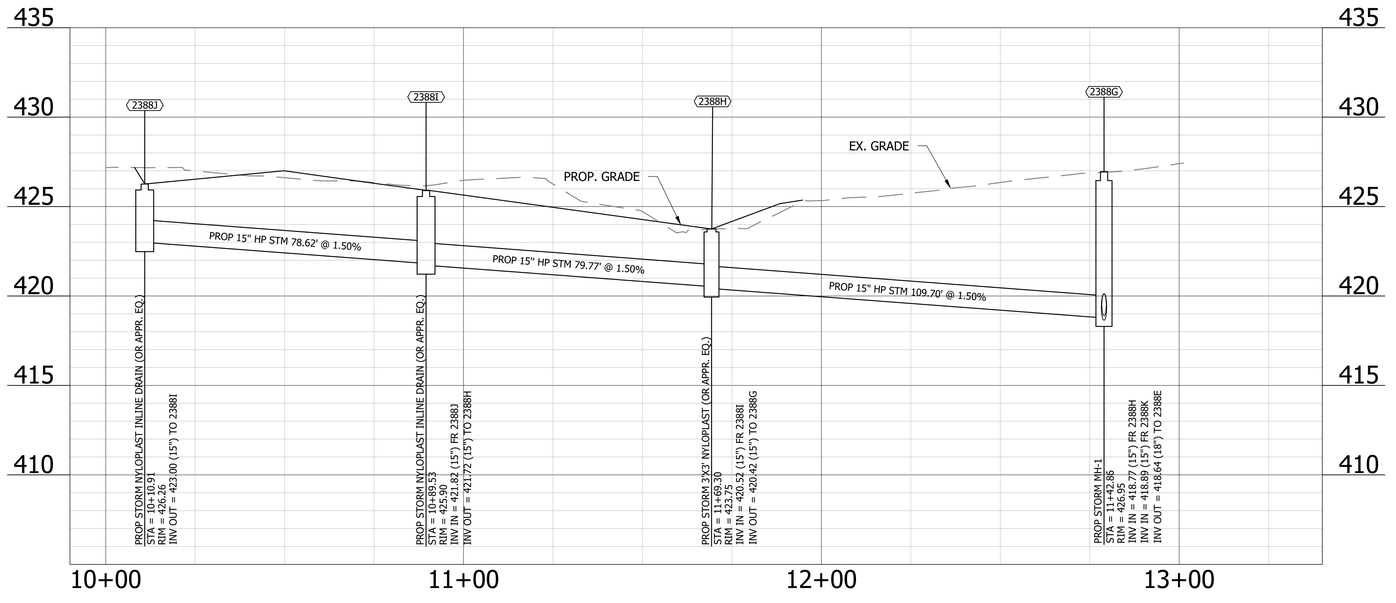


STORM PROFILE A



STORM PROFILE C



STORM PROFILE B

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John Mir PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

STORM SEWER PROFILES

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:
0 10 20
VERT. SCALE
0 20 40
HORIZ. SCALE

C073.1

FILENAME: SLT1-252-STORM_SEWER_PROFILES.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY

REVISED ON 01/07/2021

Storm Inlet Computations Sheet

Inlet				Flow						Curb Inlet														Grate Inlets			Yard Inlets				Operation	
Number	Type	Length (Ft)	Station	Drainage Area (Acres)	C	CA	I (In/Hr)	Q Incr (CFS)	Q Carryover (CFS)	QT (CFS)	S Gutter Slope (Ft/Ft)	Sx Crossslope (Ft/Ft)	T (Spread)	W (Ft)	W/T	Sw (Ft/Ft)	Sw/Sx	E0	Local Depression (in)	a (in)	S'w	Se (ft/ft)	n Value	LT (Ft)	L/LT	d(FT)	T Spread @ Sag (Ft)	Perimeter (Ft)	Area (SF)	H Flow Depth (ft)	Q/L	h Throat Height (Ft)	H Flow Depth (Ft)	H/h	E(%)	Q; Intercepted (CFS)
22529	CB-2B	8.00		0.09	0.30	0.03	5.70	0.18	0.00	0.18	0.025	0.010	4.55	1.50	0.33	0.083	8.30	1.00	2.5	3.81	0.21	0.22	0.013	3.23	2.48	0.31								100%	0.18
2388	CB-3	....		0.28	0.76	0.21	5.70	1.44	0.00	1.44																		4.00	4.00	0.37					100%	1.44
2388A	MH-1																																			
2388B	MH-1																																			
2388C	MH-1																																			
2388D	MH-1																																			
2388E	MH-1																																			
2388G	DI-3C																																			
2388H	CB-3	....		0.12	0.61	0.07	5.70	0.50	0.00	0.50																		3.00	2.25	0.22					100%	0.50
2388I	CB-3	....		0.11	0.79	0.09	5.70	0.59	0.00	0.59																		1.50	0.56	0.27					100%	0.59
2388J	CB-3	....		0.37	0.35	0.13	5.70	0.88	0.00	0.88																		4.77	0.56	0.21					100%	0.88
2388K	CB-3	....		0.22	0.60	0.13	5.70	0.90	0.00	0.90																		5.00	6.25	0.23					100%	0.90
2388L	CB-3	....		0.11	0.50	0.06	5.70	0.37	0.00	0.37																		4.00	4.00	0.15					100%	0.37
2388F	CB-3	....		0.39	0.85	0.33	5.70	2.25	0.00	2.25																		5.00	6.25	0.43					100%	2.25

Hydraulic Grade Line Computations

Inlet Structure	Upstream Structure	Outlet Water Surface Elev. (Ft)	Do (In)	Qo (CFS)	Lo (Ft)	Sfo (%)	Hf (Ft)	Junction Loss										Final H (Ft)	Inlet Water Surface Elev. (Ft)	Rim Elev. (Ft)
								Vo (Ft/S)	Ho (Ft)	Qi	Vi (Ft/s)	QiVi	Vi2/2g (Ft)	Hi (Ft)	Angle (deg)	H Del (Ft)	Ht (Ft)	1.3 Ht (Ft)	0.5 Ht (Ft)			
2417																				411.36
22529		413.45	18	5.25	31.701	0.25%	0.08	3.46	0.05					0.17		0.09	0.31	0.00	0.15	0.23	413.45	419.47
	2388		18							5.13	5.51	28.27	0.47	0.17	15.76	0.09	0.20					
2388		413.87	18	5.13	32.872	0.24%	0.08	5.51	0.12					0.11		0.07	0.30	0.00	0.15	0.23	414.11	420.75
	2388A		18							4.08	4.45	18.16	0.31	0.11	18.95	0.07	0.24					
2388A		414.11	18	4.08	24.490	0.13%	0.03	4.45	0.08					0.15		0.14	0.37	0.00	0.19	0.22	414.73	421.53
	2388B		18							4.08	5.31	21.66	0.44	0.15	27.61	0.14	0.32					
2388B		414.73	18	4.08	4.614	0.13%	0.01	5.31	0.11					0.05		0.01	0.18	0.00	0.09	0.09	414.82	421.62
	2388C		48							4.40	3.15	13.86	0.15	0.05	5.53	0.01	0.08					
2388C		414.65	48	4.40	71.901	0.00%	0.00	3.15	0.04					0.20		0.05	0.29	0.00	0.14	0.14	414.90	423.78
	2388D		18							4.40	6.00	26.40	0.56	0.20	6.93	0.05	0.09					
2388D		417.79	18	4.40	10.097	0.15%	0.02	6.00	0.14					0.20		0.01	0.35	0.00	0.17	0.19	417.98	424.00
	2388E		18							4.41	6.08	26.81	0.57	0.20	0.64	0.01	0.01					
2388E		417.98	18	4.41	13.696	0.15%	0.02	6.08	0.17								0.17	0.00	0.09	0.11	418.58	424.31
	2388G		18							2.68	3.29	8.82	0.17	0.06	4.75	0.01	0.07					
	2388F		15							2.25	2.58	5.81	0.10	0.04	107.14	0.08	0.77					
2388G		418.58	18	2.68	118.520	0.06%	0.07	3.29	0.05								0.05	0.00	0.03	0.09	419.81	426.95
	2388H		15							1.79	4.78	8.56	0.35	0.12	109.52	0.27	0.77					
	2388K		15							1.06	4.47	4.74	0.31	0.11	3.28	0.01	0.05					
2388H		419.81	15	1.79	109.701	0.07%	0.07	4.78	0.09					0.07		0.16	0.32	0.42	0.21	0.28	421.63	423.75
	2388I		15							1.38	3.69	5.09	0.21	0.07	103.88	0.16	0.75					
2388I		421.63	15	1.38	79.767	0.04%	0.03	3.69	0.05					0.05		0.01	0.11	0.14	0.07	0.10	422.79	425.90
	2388J		15							0.88	2.95	2.60	0.14	0.05	4.59	0.01	0.06					
2388K		419.89	15	1.06	24.436	0.02%	0.01	4.47	0.08					0.01		0.00	0.09	0.12	0.06	0.07	420.68	426.51
	2388L		15							0.37	1.61	0.60	0.04	0.01	1.78	0.00	0.03					

Storm Sewer Design Computations

OUTFALL FROM SALT DOME FACILITY

From Point	To Point	Area Drain "A" Acres	Runoff Coefficient C	CA Incremental	CA Accumulative	Inlet Time Min	Rainfall In/Hr	Runoff Q CFS	Invert Elevations Upper End	Invert Elevations Lower End	Length Ft	Slope %	Dia In	Capacity CFS	Velocity FPS	Flow Time Min	Remarks
22529	2417	0.09	0.30	0.03	1.05	5.0	6.79	5.25 *	412.57	412.25	31.701	1.00%	18	10.55	4.16	0.14	
2388	22529	0.28	0.76	0.21	1.02	5.0	6.79	5.13	413.00	412.67	32.872	1.00%	18	10.52	5.17	0.15	
2388A	2388	0.00	0.00	0.00	0.81	5.0	6.79	4.08	413.34	413.10	24.490	1.00%	18	11.26	4.45	0.14	
2388B	2388A	0.00	0.00	0.00	0.81	5.0	6.79	4.08	413.49	413.44	4.614	1.00%	18	11.84	4.88	0.03	
2388D	2388C	0.00	0.00	0.00	0.81	5.0	6.79	4.40	414.10	414.00	10.097	1.00%	18	11.32	5.28	0.06	
2388E	2388D	0.00	0.00	0.00	0.81	5.0	6.79	4.41	417.29	417.15	13.696	1.00%	18	11.50	5.32	0.08	
2388G	2388E	0.00	0.00	0.00	0.48	5.0	6.79	2.68	418.58	417.39	118.520	1.00%	18	11.40	3.59	1.13	
2388H	2388G	0.12	0.61	0.07	0.29	5.0	6.79	1.79	420.42	418.77	109.701	1.50%	15	8.58	4.19	1.17	
2388I	2388H	0.11	0.79	0.09	0.22	5.0	6.79	1.38	421.72	420.52	79.767	1.50%	15	8.58	3.51	1.13	
2388J	2388I	0.37	0.35	0.13	0.13	5.0	6.79	0.88	423.00	421.82	78.621	1.50%	15	8.57	2.94	1.83	
2388K	2388G	0.22	0.60	0.13	0.19	5.0	6.79	1.06	419.62	418.89	24.436	3.00%	15	12.09	3.78	0.40	
2388L	2388K	0.11	0.50	0.06	0.06	5.0	6.79	0.37	422.90	419.72	106.074	3.00%	15	12.11	1.96	5.81	
2388F	2388E	0.39	0.85	0.33	0.33	5.0	6.79	2.25	419.65	417.45	68.430	3.21%	15	13.07	3.23	0.62	

FLOW FROM 22529 - 2417: 5.25 CFS*
PROPOSED FLOW IN EX. PIPE (2417 TO 2376) = PROPOSED OUTFALL FROM SALT DOME FACILITY + OFFSITE FLOW = 5.25 CFS + 15.11 CFS = 20.36 CFS
PROPOSED FLOW IN PIPE (2417 TO 2376) < EXISTING FLOW IN PIPE (2417 TO 2376)
20.36 CFS < 20.94 CFS

STORM SEWER DESIGN COMPUTATIONS - PRE-IMPROVEMENT CONDITIONS PRIOR TO CONSTRUCTION OF SALT STORAGE STRUCTURE

STORM SEWER DESIGN COMPUTATIONS

Project: NORTHERN SALT STORAGE SITE - PHASE II (SALT) — PRE-IMPROVEMENT CONDITIONS

OUTFALL FROM SALT DOME FACILITY

From Point	To Point	Drainage Area	C Factor	C x A Increment	C x A Cumm.	Inlet Time Min.	Rain Fall In/Hr	Runoff Q C.F.S.	Invert Elev. Upper End	Invert Elev. Lower End	Length FT.	Slope %	Dia. IN.	Capacity Q C.F.S.	VEL. F.P.S.	Flow Time MIN.
22533	2471	1.08	0.84	0.91	0.91	5.00	6.79	6.16	423.20	422.29	33.3	2.74%	15	10.71	9.03	0.06
2471	2480	0.00	0	0.00	0.91	5.00	6.79	6.16	421.59	421.53	13.7	0.44%	15	4.28	3.49	0.07
2480	2465	0.20	0.73	0.15	1.05	5.00	6.79	7.15	421.48	420.75	52.1	1.40%	15	7.67	7.10	0.12
25271	2439	1.11	0.62	0.69	0.69	5.00	6.79	4.67	422.70	422.28	15.9	2.64%	15	10.52	8.32	0.03
2439	2465	0.00	0	0.00	0.69	5.00	6.79	4.67	421.95	420.96	46.9	2.11%	15	9.42	7.66	0.10
2465	2456	0.00	0	0.00	1.74	5.00	6.79	11.82	420.46	420.44	33.8	0.06%	15	1.57	1.28	0.44
2377	2456	0.39	0.9	0.35	0.35	5.00	6.79	2.38	420.85	420.60	23.5	1.06%	15	6.68	4.98	0.08
2456	2417	0.00	0	0.00	2.09	5.00	6.79	14.21	420.54	415.00	80.8	6.85%	15	16.96	15.48	0.09
2388	22529	0.54	0.85	0.46	0.46	5.00	6.79	3.12	419.27	417.64	32.8	4.97%	10	4.90	9.51	0.06
22529	2417	1.00	0.4	0.40	0.86	5.00	6.79	5.83	416.45	416.01	35.1	1.25%	15	7.25	6.57	0.09
2417	2376	0.16	0.83	0.13	3.08	5.00	6.79	20.94	412.16	411.36	100.3	0.80%	18	9.40	5.32	0.31

OFFSITE FLOW (FROM OLD DOMINION DRIVE & 25TH STREET NORTH) TO PIPE (2417 TO 2376) = 20.94 CFS - 5.83 CFS = 15.11 CFS

POST-IMPROVEMENT CONDITIONS PRIOR TO PROPOSED STORMWATER MANAGEMENT IMPROVEMENTS

STORM SEWER DESIGN COMPUTATIONS

Project: NORTHERN SALT STORAGE SITE - PHASE II (SALT) — POST-IMPROVEMENT CONDITIONS

OUTFALL FROM SALT DOME FACILITY

From Point	To Point	Drainage Area	C Factor	C x A Increment	C x A Cumm.	Inlet Time Min.	Rain Fall In/Hr	Runoff Q C.F.S.	Invert Elev. Upper End	Invert Elev. Lower End	Length FT.	Slope %	Dia. IN.	Capacity Q C.F.S.	VEL. F.P.S.	Flow Time MIN.
22533	2471	1.08	0.84	0.91	0.91	5.00	6.79	6.16	423.20	422.29	33.3	2.74%	15	10.71	9.03	0.06
2471	2480	0.00	0	0.00	0.91	5.00	6.79	6.16	421.59	421.53	13.7	0.44%	15	4.28	3.49	0.07
2480	2465	0.20	0.73	0.15	1.05	5.00	6.79	7.15	421.48	420.75	52.1	1.40%	15	7.67	7.10	0.12
25271	2439	1.11	0.62	0.69	0.69	5.00	6.79	4.67	422.70	422.28	15.9	2.64%	15	10.52	8.32	0.03
2439	2465	0.00	0	0.00	0.69	5.00	6.79	4.67	421.95	420.96	46.9	2.11%	15	9.42	7.66	0.10
2465	2456	0.00	0	0.00	1.74	5.00	6.79	11.82	420.46	420.44	33.8	0.06%	15	1.57	1.28	0.44
2377	2456	0.39	0.9	0.35	0.35	5.00	6.79	2.38	420.85	420.60	23.5	1.06%	15	6.68	4.98	0.08
2456	2417	0.00	0	0.00	2.09	5.00	6.79	14.21	420.54	415.00	80.8	6.85%	15	16.96	15.48	0.09
2388	22529	1.08	0.64	0.69	0.69	5.00	6.79	4.69	419.27	417.64	32.8	4.97%	10	4.90	10.23	0.05
22529	2417	0.13	0.35	0.05	0.88	5.00	6.79	5.97	416.45	416.01	35.1	1.25%	15	7.25	6.19	0.09
2417	2376	0.16	0.83	0.13	3.10	5.00	6.79	21.08	412.16	411.36	100.3	0.80%	18	9.40	5.32	0.31
BASIN1	STR 1	0.17	0.84	0.14	0.14	5.00	6.79	0.97	423.00	422.50	22.2	2.26%	10	4.77	6.86	0.05
STR 1	BASIN2	0.00	0	0.00	0.14	5.00	6.79	0.97	422.00	419.22	102.9	2.70%	10	5.22	7.31	0.23
BASIN2	STR 2	0.00	0	0.00	0.14	5.00	6.79	0.97	418.80	417.20	176.6	0.91%	12	4.91	4.87	0.60
STR 2	22529	0.00	0	0.00	0.14	5.00	6.79	0.97	417.00	416.80	36.6	0.55%	12	3.82	4.06	0.15

OFFSITE FLOW (FROM OLD DOMINION DRIVE & 25TH STREET NORTH) TO PIPE (2417 TO 2376) = 21.08 CFS - 5.97 CFS = 15.11 CFS

ARLINGTON
VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
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COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44276
1/6/2022
PROFESSIONAL ENGINEER

APPROVALS DATE

Amy Pflaum 01/18/22
QUALITY CONTROL ENGINEER

Adam E Kulawy 1/20/22
CONSTRUCTION MANAGEMENT SUPERVISOR

1.21.2022
WATER, SEWER, STREETS BUREAU CHIEF

Dennis M. Leach 01/27/22
TRANSPORTATION DIRECTOR

John Mir 1/27/22
PROJECT MANAGER

REVISIONS DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

STORM COMPUTATIONS

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:

N/A

C075.1

FILENAME: SLT1-253-STORM_COMPUTATIONS.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY

REVISED ON 01/07/2021

Certification Letter for Proprietary BMP

Company Name
Address

Date

Stormwater Specialist
Department of Environmental Services
2100 Clarendon Blvd
Suite 705
Arlington, VA 22201

RE: Stormwater Management Facility (SWMF) As-Built Certification
[PROJECT NAME]
[PROJECT ADDRESS]
Arlington, VA
[BUILDING PERMIT #], [LDA#], [SWM#]

Dear Sir or Madam,

We have inspected the **[TYPE OF SWMF FACILITY]** facility that was constructed as part of the above referenced project and determined that it has been installed in accordance to the County approved plan dated **[INSERT DATE OF ENGINEER'S STAMP ON APPROVED PLANS]**. The approved **[TYPE OF SWMF FACILITY]** facility is comprised of **[INSERT DESCRIPTION OF STRUCTURE INCLUDING SIZE/DIMENSIONS AND MODEL #]** with **[NUMBER, SIZE AND TYPE OF CARTRIDGES]** that treats stormwater runoff for this project.

Based on the as-built conditions of the site, facility **[X]** treats **[TOTAL AREA TREATED]** of which **[AMOUNT OF IMPERVIOUS AREA TREATED]** is impervious. Facility **[Y]** treats **[TOTAL AREA TREATED]** of which **[AMOUNT OF IMPERVIOUS AREA TREATED]** is impervious, therefore the facility meets the requirements of the Arlington County's Stormwater Ordinance.

For reference, the as-built drawings are attached showing the sizing of the facility along with the activation letter from the manufacturer. As required, the as-built drawings include the inverts for all inflow/outfall pipes connected to the facility. Therefore, it is our professional opinion that the facility was installed in accordance to the County approved plan and that the facility is functioning as designed.

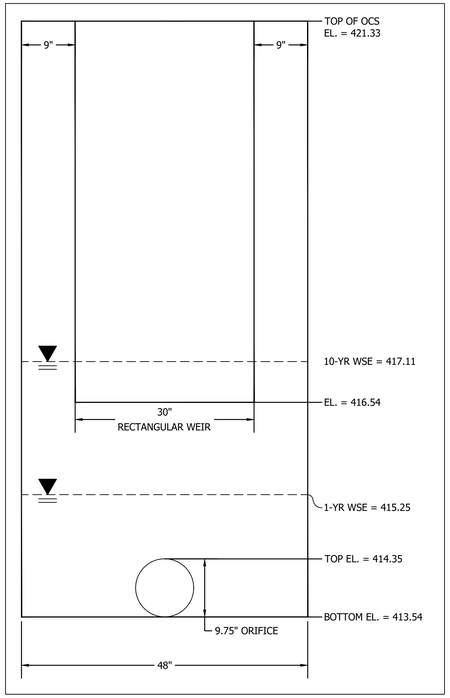
If you have any questions regarding the above-mentioned facility, please do not hesitate to call me.

Respectfully,

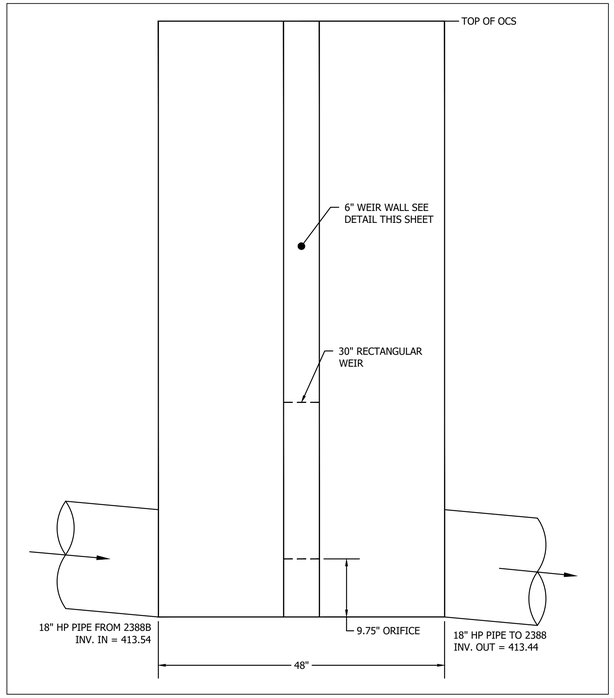
COMMONWEALTH OF VIRGINIA
PLACE NAME HERE
Lic. No.0000
PROFESSIONAL ENGINEER

Attachments:
1. As-built drawings
2. Activation Letter from manufacturer

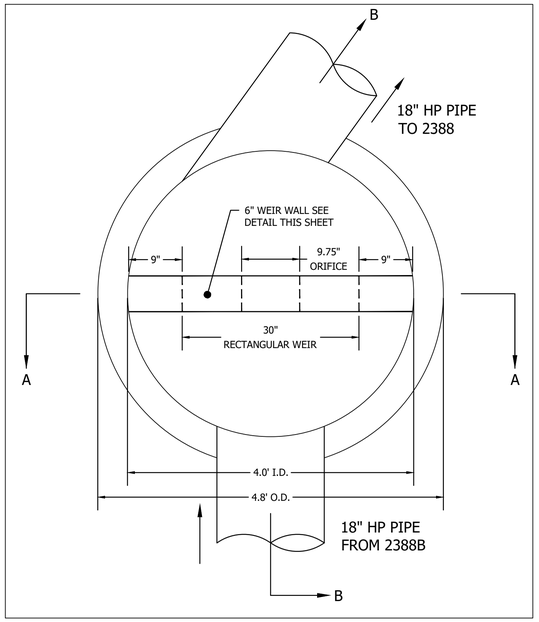
Proprietary BMP | November 2016



OUTLET CONTROL STRUCTURE (2388A) SECTION A-A

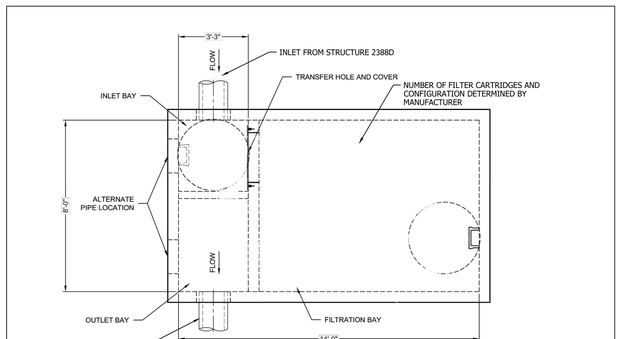


OUTLET CONTROL STRUCTURE (2388A) SECTION B-B

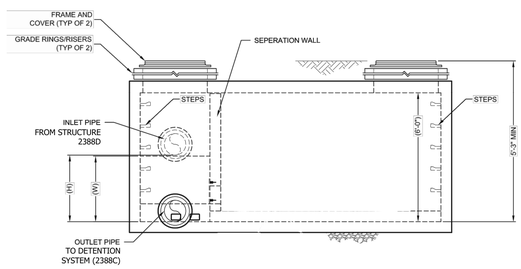


OUTLET CONTROL STRUCTURE (2388A) PLAN VIEW

SEE OUTLET CONTROL STRUCTURE (OCS) LOCATION ON SHEET C083.1
SEE OUTLET CONTROL STRUCTURE CALCULATIONS ON SHEET C085.2



PLAN



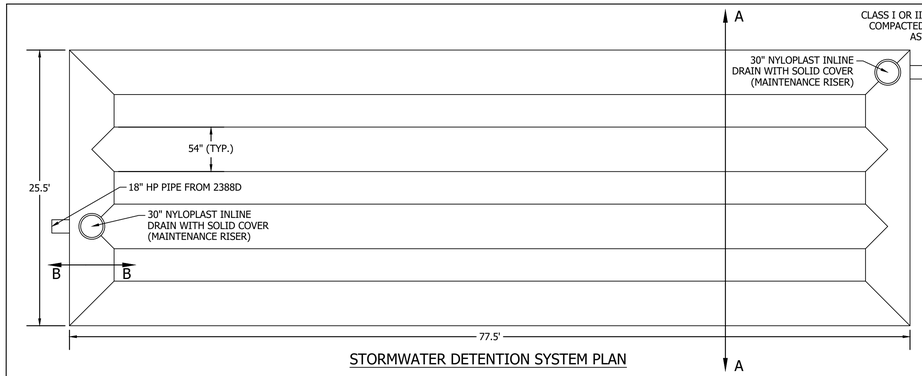
ELEVATION

MANUFACTURED FILTERING DEVICE DETAIL

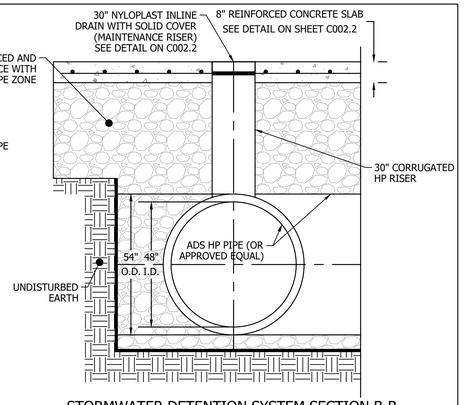
SELECTED MANUFACTURED FILTERING DEVICE SHALL BE CONTECH STORMFILTER OR APPROVED EQUAL, SHALL HAVE A 50% PHOSPHORUS REMOVAL EFFICIENCY, AND SHALL BE ON THE VIRGINIA STORMWATER BMP CLEARINGHOUSE APPROVED LIST OF FILTERING DEVICES AWARDED 50% TP REMOVAL EFFICIENCY.

MAINTENANCE NOTE

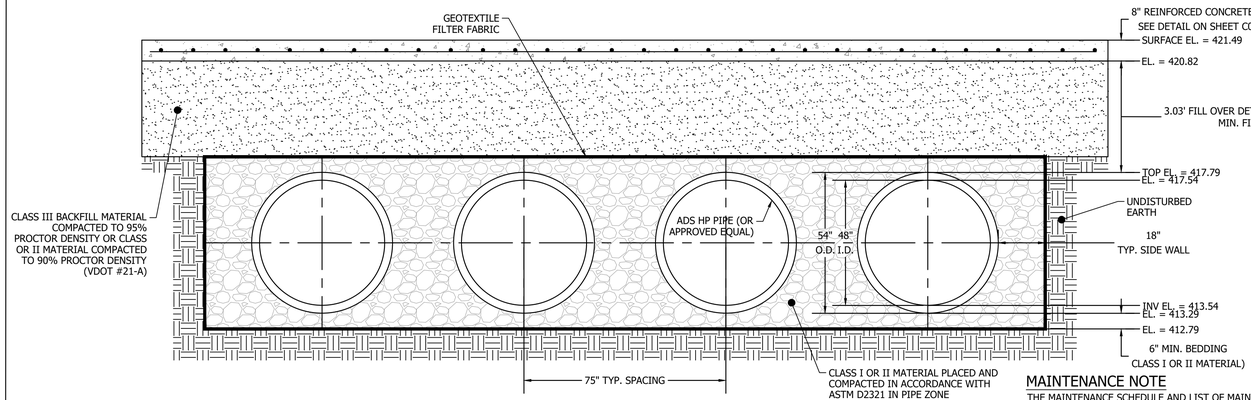
THE MAINTENANCE SCHEDULE AND LIST OF MAINTENANCE TASKS AND METHODS WILL DEPEND ON THE MANUFACTURER SELECTED BY THE CONTRACTOR.
AT A MINIMUM, INSPECTION OF THE FILTERING DEVICE SHALL TAKE PLACE TWICE A YEAR. SEDIMENT ACCUMULATION OF 4" OR MORE AT THE BOTTOM OF THE VAULT SHOULD BE CLEANED. OTHER MAINTENANCE WORKS SUCH AS FILTER CLEANING AND/OR REPLACEMENT SHALL FOLLOW MANUFACTURER'S RECOMMENDATIONS.



STORMWATER DETENTION SYSTEM PLAN



STORMWATER DETENTION SYSTEM SECTION B-B



STORMWATER DETENTION SYSTEM SECTION A-A

REQUIRED STORMWATER DETENTION VOLUME = 3902 CF (SEE C085.1 - SWM CALCULATIONS)
INSTALLED STORAGE VOLUME = 4,100 CF
FACILITY LENGTH = 77.5 FT
FACILITY WIDTH = 25.5 FT

MAINTENANCE NOTE

THE MAINTENANCE SCHEDULE AND LIST OF MAINTENANCE TASKS AND METHODS WILL DEPEND ON THE MANUFACTURER SELECTED BY THE CONTRACTOR.
AT A MINIMUM, INSPECTION OF THE UNDERGROUND DETENTION SYSTEM SHALL TAKE PLACE ONCE A YEAR, RECOMMENDED DURING A DRY SEASON. MAINTENANCE SHALL BE DONE THROUGH THE TWO MAINTENANCE RISERS. CLEANING SHOULD BE DONE TO MAINTAIN PROPER STORAGE AND FLOW.
OTHER MAINTENANCE WORKS SHALL FOLLOW MANUFACTURER'S RECOMMENDATIONS.

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COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
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1/6/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
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Adam E Kulawy, CONSTRUCTION MANAGEMENT SUPERVISOR	1/20/22
WATER, SEWER, STREETS BUREAU CHIEF	1.21.2022
Dennis M. Leach, TRANSPORTATION DIRECTOR	01/27/22
John Mir, PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

SWM NOTES AND DETAILS

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

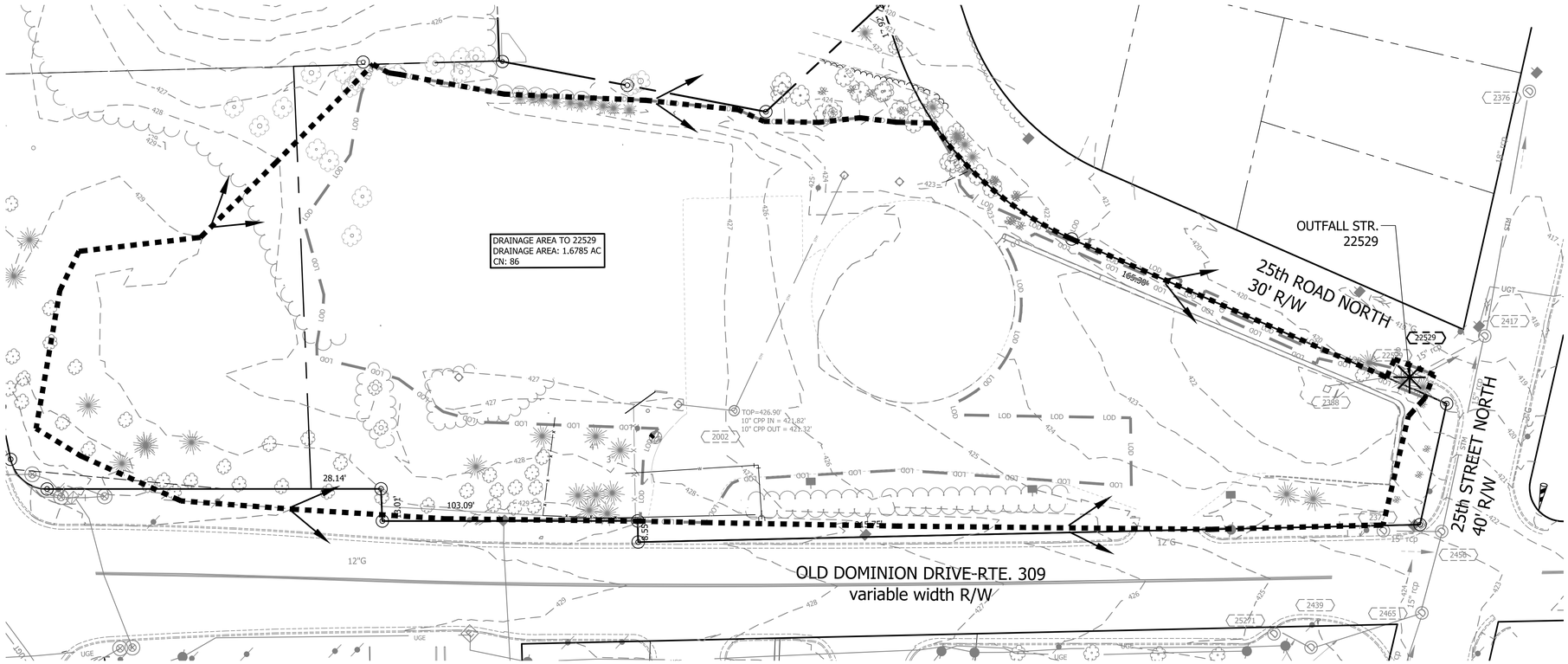
SCALE:

N/A

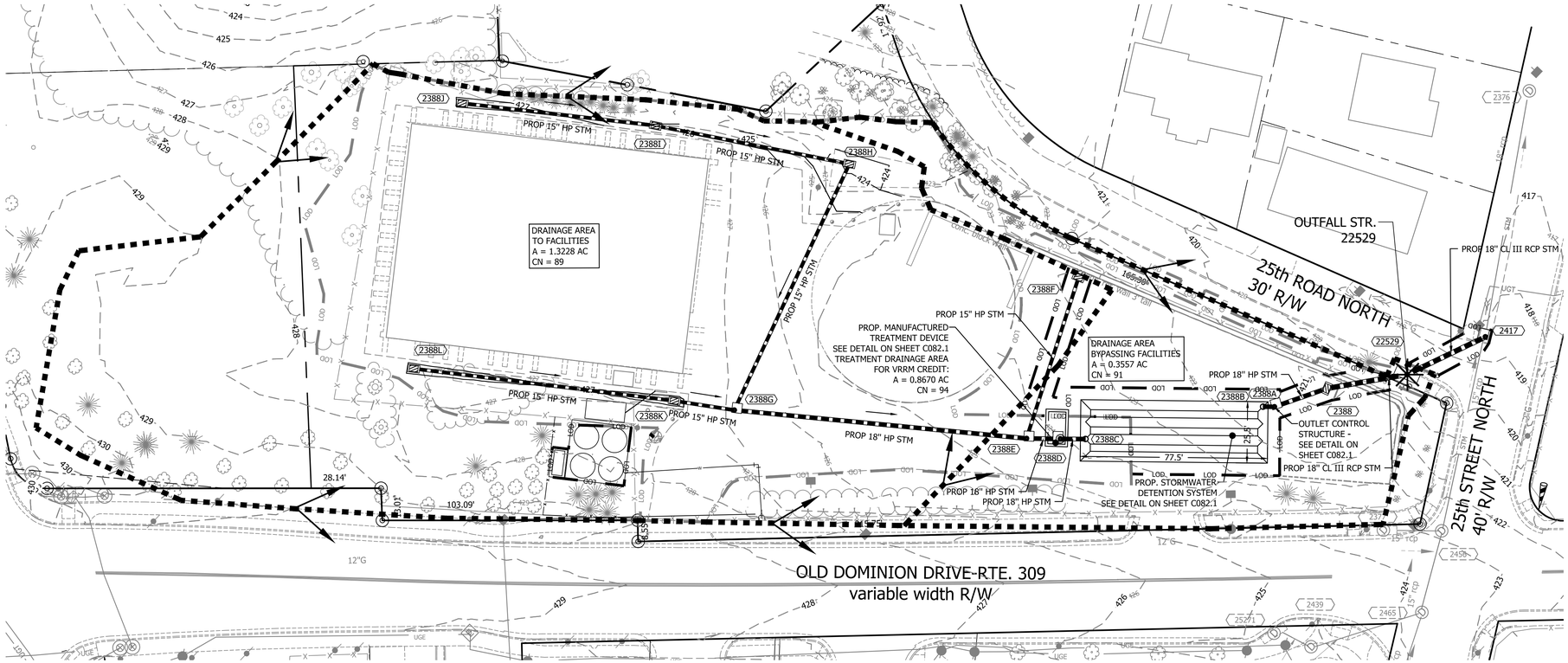
C082.1

FILENAME: SLT1-254-SWM_DIVIDES_AND_COMPS.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY

REVISED ON 01/07/2021



EXISTING SWM DRAINAGE AREA



PROPOSED SWM DRAINAGE AREA

LIMITS OF DISTURBANCE LEGEND

EXISTING LIMITS OF DISTURBANCE PER PROJECT #LDA18212 (SWM#18-0199). STORMWATER IMPROVEMENTS INCLUDED IN THIS PROJECT ARE DESIGNED ACCORDING TO PROJECT #LDA18212 LIMITS OF DISTURBANCE, IN ACCORDANCE WITH AN EXISTING PARTIAL EXCEPTION TO THE POST-CONSTRUCTION SWM REQUIREMENTS (SEE SHEET C002.1 FOR APPROVED PARTIAL EXCEPTION LETTER). — LOD

ADDITIONAL LIMITS OF DISTURBANCE FOR PROPOSED STORMWATER IMPROVEMENTS WHICH DID NOT OCCUR FROM PROJECT #LDA18212 - THE SUM OF EXISTING LIMITS OF DISTURBANCE FROM PROJECT #LDA18212 AND ADDITIONAL LIMITS OF DISTURBANCE ARE REFLECTED IN THE VRRM COMPUTATIONS FOUND ON SHEET C085.1. — LOD

STORMWATER NARRATIVE

THE SUBJECT PROPERTY IS LOCATED AT THE SOUTHEAST CORNER OF OLD DOMINION DRIVE AND 26TH STREET NORTH AND CLASSIFIES AS A REDEVELOPMENT PROJECT. THE SALT STORAGE FACILITY ON THIS SITE WAS BUILT IN 2019. THE SITE WAS GRANTED A PARTIAL EXCEPTION TO THE POST-CONSTRUCTION STORMWATER MANAGEMENT REQUIREMENTS OF ARLINGTON COUNTY'S STORMWATER MANAGEMENT ORDINANCE - SECTION 60-11A. THE EXCEPTION WAS BASED ON SECTION 60-11.d OF THE ORDINANCE AND WAS GRANTED FOR FIVE YEARS. THIS PLAN PROPOSES STORMWATER MANAGEMENT / BMP IN ORDER TO MAKE THE SITE COMPLIANT WITH STORMWATER MANAGEMENT REQUIREMENTS BEFORE THE EXCEPTION EXPIRES IN OCTOBER 2023. THE EXCEPTION LETTER IS ATTACHED ON SHEET C002.1.

THE STORMWATER MANAGEMENT COMPUTATIONS ARE BASED ON THE LIMITS OF DISTURBANCE CREATED DURING THE INSTALLATION OF THE SALT STORAGE FACILITY AND IMPERVIOUS AREA CREATED BECAUSE OF IT, AS WELL AS THE ADDITIONAL DISTURBANCE TO INSTALL THE SWM / BMP FACILITIES PROPOSED WITH THIS PLAN. THE TOTAL LIMITS OF DISTURBANCE IS 0.9868 ACRES, WHERE THE EXISTING IMPERVIOUS AREA (IMPERVIOUS AREA IN THE PRE-EXISTING CONDITIONS - BEFORE INSTALLATION OF THE SALT STORAGE FACILITY IN 2019) IS 0.4345 ACRES AND THE PROPOSED IMPERVIOUS AREA IS 0.7518 ACRES, RESULTING IN AN INCREASE OF IMPERVIOUS AREA BY 0.3173 ACRES. THERE IS NO NEW IMPERVIOUS AREA PROPOSED WITH THIS PLAN TO INSTALL THE SWM / BMP.
THE OUTFALL POINT IS DIRECTLY DOWNSTREAM FROM THE LIMITS OF DISTURBANCE, LOCATED AT YARD INLET #2417.

WATER QUALITY (9VAC25-870-63):
THE WATER QUALITY REQUIREMENT OF THE SITE IS EVALUATED BASED ON 9VAC25-870-63A.2. COMPLIANCE WITH THE SUBJECT SECTION IS DETERMINED IN ACCORDANCE WITH 9VAC25-970-65 BY MAKING USE OF THE VA RUNOFF REDUCTION METHOD REDEVELOPMENT COMPLIANCE SPREADSHEET AS SHOWN ON SHEET C085.1. THE POST-DEVELOPMENT TP LOAD REDUCTION REQUIRED FOR THE SUBJECT PROPERTY IS 0.6649 LB/YR. A MANUFACTURED TREATMENT DEVICE IS PROPOSED TO TREAT 0.8670 ACRES, WHERE THE CALCULATIONS DEMONSTRATE THAT THIS BMP WILL SATISFY THE TOTAL POLLUTANT REDUCTION REQUIREMENT OF THE SITE.

PER THE "USE OF STRUCTURAL STORMWATER TREATMENT SYSTEMS" MEMO, ISSUED BY ARLINGTON COUNTY STORMWATER MANAGEMENT AND REVISED ON MARCH 30, 2018, THE USE OF A MANUFACTURED TREATMENT DEVICE TO TREAT ROOF AND TURF AREAS IS NOT PERMITTED. AN EXCEPTION IS REQUESTED FOR THIS PROJECT, SWM #18-0199. THE MANUFACTURED TREATMENT DEVICE IS LOCATED DOWNSTREAM OF THE INLETS WHICH COLLECT THE SURFACE RUNOFF FROM THE ASPHALT PARKING LOT FOR THE EXISTING SALT STORAGE FACILITY. ROOF RUNOFF IS ADDITIONAL TREATED AREA, AND IS COLLECTED IN AREA DRAINS AND IS CONVEYED THROUGH THE PROPOSED STORM PIPE NETWORK RATHER THAN DIRECTLY PIPING THE STORMWATER TO THE MANUFACTURED TREATMENT DEVICE. ADDITIONALLY, DUE TO THE EXISTING SITE PHYSICAL CONSTRAINTS AND LOCATION OF THE EXISTING STORM PIPE NETWORK WHERE THE PROPOSED STORM PIPE NETWORK IS CONNECTING TO, UTILIZATION OF ANY BMP WITH RUNOFF REDUCTION IS NOT FEASIBLE. A MANUFACTURED TREATMENT DEVICE IS THE OPTIMAL BMP FOR TREATING THE REQUIRED WATER QUALITY FOR THIS SITE.

WATER QUANTITY (9VAC25-870-66):
COMPLIANCE WITH CHANNEL & FLOOD PROTECTION REQUIREMENTS OF THE SITE IS DEMONSTRATED IN ACCORDANCE WITH 9VAC25-870-66B1a AND b OF THE VSMP. THE CHANNEL AND FLOOD PROTECTION STORAGE VOLUMES ESTIMATED BY THE WATER QUANTITY ENERGY BALANCE WORKSHEET (SHEET C085.1) ARE PROVIDED IN THE ON-SITE UNDERGROUND DETENTION CHAMBER FACILITY. STORAGE VOLUME REQUIREMENTS AND CALCULATIONS HAVE BEEN PROVIDED ON THIS SHEET (SEE STORMWATER DETENTION CHAMBER DETAIL) AND SHEET C085.1.
PRE AND POST DEVELOPMENT RUNOFF CALCULATIONS ARE PERFORMED USING THE TR-55 APPLICATION FOR THE 1-YEAR STORM AND 10-YEAR STORM FOR THE 0.9868 ACRES OF DISTURBANCE. AS DEMONSTRATED WITH THE ROUTING COMPUTATION ON SHEET C085.2 THE UNDERGROUND DETENTION CHAMBER FACILITY HAS BEEN DESIGNED SUCH THAT THE CHANNEL & FLOOD PROTECTION REQUIREMENTS OF THE SITE ARE SATISFIED.

SEE STORMWATER DETENTION CALCULATIONS ON SHEET C085.2

NOT FOR CONSTRUCTION
THIS SHEET FOR CALCULATION PURPOSES ONLY

ARLINGTON
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COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44376
1/6/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum, QUALITY CONTROL ENGINEER	01/18/22
Adam E Kulavy, CONSTRUCTION MANAGEMENT SUPERVISOR	1/20/22
WATER, SEWER, STREETS BUREAU CHIEF	1.21.2022
Dennis M. Leach, TRANSPORTATION DIRECTOR	01/27/22
John Mir, PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

SWM PLAN

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:

0 25 50
GRAPHIC SCALE

C083.1

FILENAME: SLT1-254-SWM_DIVIDES_AND_COMPS.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY

REVISED ON 01/07/2021

Stormwater Management Facility Information- Revised 3/19/2019

Facility Type**	Description	Location	LDA Permit #	Project SWM #	Building Permit #	Facility ID	BMP downstream of another BMP (in Series)?	Upstream (Primary) BMP	Chesapeake Bay Segment	Watershed	HUC6	Soils	Runoff Treated (in)	Volume Treated (ft^3)	Treated Area (acres)	Forest Area (acres)	Turf Area (acres)	Impervious Area (acres)	RPC	Phosphorus Efficiency (%)	Nitrogen Efficiency (%)	Sediment Efficiency (%)	TP load removed (lbs)	TN load removed (lbs)
MANUFACTURED BMP	Manufactured Treatment Device	Parking Lot, West of UG Detention	LDA41281	18-0199		18-0199A	No		POTTF_VA	Donaldson Run	PL24	C/D	1.00	2460.5592	0.8670		0.2083	0.6587	3063107	0.00	0.00	0.00	0.7721	

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Version 3.0

○ 2011 BMP Standards and Specifications ⊙ 2013 Draft BMP Standards and Specifications

Project Name: Northern Salt Storage Site
Date: 9/30/2021
Linear Development Project? No

CLEAR ALL (Ctrl+Shift+R)

data input cells
constant values
calculation cells
final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area *(acres)* → 0.9868

Maximum reduction required:	10%
The site's net increase in impervious cover (acres) is:	0.3173
Post-Development TP Load Reduction for Site (lb/yr):	0.6649

Check:
BMP Design Specifications List: 2013 Draft Stds & Specs
Linear project? No
Land cover areas entered correctly? ✔
Total disturbed area entered? ✔

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed forest/open space					0.0000
Managed Turf (acres) -- disturbed, graded for yards or other turf to be				0.5523	0.5523
Impervious Cover (acres)				0.4345	0.4345
					0.9868

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested					0.0000
Managed Turf (acres) -- disturbed, graded for yards or other turf to be				0.2350	0.2350
Impervious Cover (acres)				0.7518	0.7518
Area Check	OK.	OK.	OK.	OK.	0.9868

Drainage Area A

CLEAR BMP AREAS

Drainage Area A Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)					0.0000	0.0000
Managed Turf (acres)				0.2083	0.2083	0.2500
Impervious Cover (acres)				0.6587	0.6587	0.9500
				Total	0.8670	

Total Phosphorus Available for Removal in D.A. A (lb/yr) 1.5460
Post Development Treatment Volume in D.A. A (ft^3) 2,460.5592

Stormwater Best Management Practices (RR = Runoff Reduction)

--Select from dropdown lists-

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft^3)	Runoff Reduction (ft^3)	Remaining Runoff Volume (ft^3)	Total BMP Treatment Volume (ft^3)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
14. Manufactured Treatment Devices (no RR)													
14.b. Manufactured Treatment Device-Filtering	0	0.2083	0.6587	0.0000	0.0000	2,460.5592	2,460.5592	50	0.0000	1.5442	0.7721	0.7721	

Site Results (Water Quality Compliance)

Area Checks	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
FOREST/OPEN SPACE (ac)	0.0000	0.0000	0.0000	0.0000	0.0000	OK.
IMPERVIOUS COVER (ac)	0.6587	0.0000	0.0000	0.0000	0.0000	OK.
IMPERVIOUS COVER TREATED (ac)	0.6587	0.0000	0.0000	0.0000	0.0000	OK.
MANAGED TURF AREA (ac)	0.2083	0.0000	0.0000	0.0000	0.0000	OK.
MANAGED TURF AREA TREATED (ac)	0.2083	0.0000	0.0000	0.0000	0.0000	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft^3) 2,805.8448

Runoff Reduction Volume and TP By Drainage Area

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
RUNOFF REDUCTION VOLUME ACHIEVED (ft^3)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	1.5460	0.0000	0.0000	0.0000	0.0000	1.5460
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.7721	0.0000	0.0000	0.0000	0.0000	0.7721
TP LOAD REMAINING (lb/yr)	0.7739	0.0000	0.0000	0.0000	0.0000	0.7739
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	1.7629
TP LOAD REDUCTION REQUIRED (lb/yr)	0.6649
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.7721
TP LOAD REMAINING (lb/yr):	0.9908
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	0.0000 **

** TARGET TP REDUCTION EXCEEDED BY 0.1072 LB/YEAR **

Total Nitrogen (For Information Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	12.6116
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	0.0000
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	12.6116

Sara SLT1
County, Virginia
Storm Data

Rainfall Depth by Rainfall Return Period

1-Yr (in)	2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)
2.62	3.17	3.99	4.87	5.96	7.02	8.22

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type II
Dimensionless Unit Hydrograph: <standard>

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period 1-Yr (cfs)	10-Yr (cfs)
SUBAREAS		
PRE	2.27	5.28
POST	2.93	5.91

Sub-Area Summary Table

Sub-Area Identifier	Drainage Area (ac)	Time of Concentration (hr)	Curve Number	Receiving Reach	Sub-Area Description
PRE	.99	0.100	88	Outlet	
POST	.99	0.100	94	Outlet	

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use		Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
PRE	Open space; grass cover > 75%	(good)	D	.552	80
	Paved parking lots, roofs, driveways		D	.434	98
	Total Area / Weighted Curve Number			.99	88
POST	Open space; grass cover > 75%	(good)	D	.235	80
	Paved parking lots, roofs, driveways		D	.752	98
	Total Area / Weighted Curve Number			.99	94
OFFSITE	Open space; grass cover > 75%	(good)	D	.403	80
	Total Area / Weighted Curve Number			.4	80

SWM Water Quantity Energy Balance Worksheet

SITE AREA (acre) 0.99

	1-year		10-year	
	PRE	POST (adjusted)	PRE	POST (adjusted)
P	2.62	2.62	4.87	4.87
CN	88	94	88	94
S=1000/CN-10	1.36	0.64	1.36	0.64
0.2S	0.27	0.13	0.27	0.13
RV=(P-0.2S)^2/(P-0.2S)+S	1.48	1.98	3.55	4.18

QPost Development <= I.F.* (Qpre-development* RVpre-development)/RVDeveloped + Qoffsite)

I.F 0.9

CHANNEL PROTECTION	
Qpre-development	2.27
QPost Development	2.93
RVPost Development (with runoff reduction)	1.9842
Qoffsite	0.59
Qallowable	2.06
Qallowable/QPost Development	0.70
Vs/Vr	0.207886787
Vs	0.41
Storage required (cf)	1478

FLOOD CONTROL	
Qpre-development	5.28
QPost Development	5.91
RVPost Development (with runoff reduction)	4.1798
Qoffsite	1.73
Qallowable	4.48
Qallowable/QPost Development	0.76
Vs/Vr	0.190239169
Vs	0.80
Storage required (cf)	2848

Runoff Volume and Curve Number Calculations

Enter design storm rainfall depths (in):

1-year storm	2-year storm	10-year storm
2.62	3.17	4.87

Drainage Area Curve Numbers and Runoff Depths*

Curve numbers (CN, CNadj) and runoff depths ($RV_{Developed}$) are computed with and without reduction practices.

Drainage Area A		A Soils	B Soils	C Soils	D Soils
Forest/Open Space -- undisturbed, protected forest/open space or reforested land	Area (acres)	0.0000	0.0000	0.0000	0.0000
	CN	30	55	70	77
Managed Turf -- disturbed, graded for yards or other turf to be mowed/managed	Area (acres)	0.0000	0.0000	0.0000	0.2083
	CN	39	61	74	80
Impervious Cover	Area (acres)	0.0000	0.0000	0.0000	0.6587
	CN	98	98	98	98

Total Area (acres):	0.8670
Runoff Reduction Volume (ft^3):	0.0000

$CN_{(D.A. A)}$ 94

	1-year storm	2-year storm	10-year storm
$RV_{Developed}$ *(watershed-inch)* with no Runoff Reduction*	1.9842	2.5147	4.1798
$RV_{Developed}$ *(watershed-inch)* with Runoff Reduction*	1.9842	2.5147	4.1798
Adjusted CN*	94	94	94

Site Information - Revised 9/19/2017

Project SWM #	LDA Permit #	Disturbed Area (acres)	% Pre-Impervious	% Post-Impervious	Pre-Development TP load (lb/yr)	Post-Development TP load (lb/yr)	TP load reduction achieved (lb/yr)	Pre-Development TN load (lb/yr)	Post-Development TN load (lb/yr)	TN load reduction achieved (lb/yr)	Total Site Area (acres)	Pre-Forest Area (acres)	Pre-Turf Area (acres)	Pre-Impervious Area (acres)	Post-Forest Area (acres)	Post-Turf Area (acres)	Post-Impervious Area (acres)	Pre-Runoff Volume	Post-Runoff Volume	Runoff Volume Reducation Achieved	Site Latitude (Decimal Degrees)	Site Longitude (Decimal Degrees)	Anticipated Start Date
18-0199	LDA41281	0.9868	44.0	76.2	1.26	1.76	0.77	8.99	12.61	0.00	0.9868	0.0000	0.5523	0.4345	0.0000	0.2350	0.7518	1999.5855	2805.8448	0.0000	38.902561	-77.125986	11/15/2022

ARLINGTON
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COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44376
1/6/2022
PROFESSIONAL ENGINEER

APPROVALS DATE

Amy Pflaum 01/18/22
QUALITY CONTROL ENGINEER
Adam E Lulavy 1/20/22
CONSTRUCTION MANAGEMENT SUPERVISOR
1.21.2022
WATER, SEWER, STREETS BUREAU CHIEF
Dennis M. Leach 01/27/22
TRANSPORTATION DIRECTOR
John Mir 1/27/22
PROJECT MANAGER

REVISIONS DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

SWM CALCULATIONS

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:

N/A

C085.1

FILENAME: SLT1-254-SWM_DIVIDES_AND_COMPS.DWG PATH: Q:\DATA\SLT1\DESIGN\CAD\ACTIVE PLOTTED BY: SBUCKLEY

PONDPACK REPORT SUMMARY - PEAK FLOWS

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)
EX. AREA	1 year	1	8,067.000	11.950	3.35
EX. AREA	10 year	10	20,537.000	11.950	8.28
PROP. AREA TO FAC	1 year	1	7,397.000	11.950	3.04
PROP. AREA TO FAC	10 year	10	17,632.000	11.950	6.97
PROP. AREA BYPASS FAC	1 year	1	2,196.000	11.950	0.89
PROP. AREA BYPASS FAC	10 year	10	5,015.000	11.950	1.95

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)
22529 (EX)	1 year	1	8,067.000	11.950	3.35
22529 (EX)	10 year	10	20,537.000	11.950	8.28
22529 (PROP)	1 year	1	9,574.000	12.000	2.77
22529 (PROP)	10 year	10	22,608.000	12.050	5.72

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ft³)	Time to Peak (hours)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ft³)
UG DET. (IN)	1 year	1	7,397.000	11.950	3.04	(N/A)	(N/A)
UG DET. (OUT)	1 year	1	7,377.000	12.050	2.06 *	415.01	1,244.000
UG DET. (IN)	10 year	10	17,632.000	11.950	6.97	(N/A)	(N/A)
UG DET. (OUT)	10 year	10	17,593.000	12.050	4.45 **	417.15	3,540.000

* POST-DEVELOPMENT PEAK FLOW FOR 1-YEAR STORM: **2.06CFS** = **2.06CFS (QALLOWABLE)**
(SEE ENERGY BALANCE EQUATION ON SHEET C085.1, CHANNEL PROTECTION)

** POST-DEVELOPMENT PEAK FLOW FOR 10-YEAR STORM: **4.45CFS** < **4.48CFS (QALLOWABLE)**
(SEE ENERGY BALANCE EQUATION ON SHEET C085.1, FLOOD CONTROL)

OUTLET CONTROL STRUCTURE SUMMARY

Structure ID: Riser - 1
Structure Type: Culvert-Circular

Number of Barrels	1
Diameter	18.0 in
Length	24.50 ft
Length (Computed Barrel)	24.50 ft
Slope (Computed)	0.018 ft/ft

Structure ID: Orifice - 1
Structure Type: Orifice-Circular

Number of Openings	1
Elevation	413.54 ft
Orifice Diameter	9.8 in
Orifice Coefficient	0.600

Structure ID: Weir - 1
Structure Type: Rectangular Weir

Number of Openings	1
Elevation	417.04 ft
Weir Length	2.50 ft
Weir Coefficient	3.00 (ft^0.5)/s

Label: Composite Outlet Structure - 1
Scenario: 1 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
413.54	0.00	(N/A)	0.00
414.04	0.48	(N/A)	0.00
414.54	1.47	(N/A)	0.00
415.04	2.10	(N/A)	0.00
415.54	2.63	(N/A)	0.00
416.04	3.08	(N/A)	0.00
416.54	3.49	(N/A)	0.00
417.04	3.86	(N/A)	0.00
417.54	6.59	(N/A)	0.00

Label: Composite Outlet Structure - 1
Scenario: 10 year

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
413.54	0.00	(N/A)	0.00
414.04	0.48	(N/A)	0.00
414.54	1.47	(N/A)	0.00
415.04	2.10	(N/A)	0.00
415.54	2.63	(N/A)	0.00
416.04	3.08	(N/A)	0.00
416.54	3.49	(N/A)	0.00
417.04	3.86	(N/A)	0.00
417.54	6.59	(N/A)	0.00

SLT1 Pondpack report

Subsection: Unit Hydrograph Summary
Label: EX. AREA
Scenario: 1 year

Storm Event	1-year
Return Event	1 years
Duration	24.000 hours
Depth	2.6 in
Time of Concentration (Composite)	0.100 hours
Area (User Defined)	1.679 acres
Computational Time Increment	0.013 hours
Time to Peak (Computed)	11.933 hours
Flow (Peak, Computed)	3.39 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	11.950 hours
Flow (Peak Interpolated Output)	3.35 ft³/s
Drainage Area	
SCS CN (Composite)	86.000
Area (User Defined)	1.679 acres
Maximum Retention (Pervious)	1.6 in
Maximum Retention (Pervious, 20 percent)	0.3 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.3 in
Runoff Volume (Pervious)	8,079.444 ft³
Hydrograph Volume (Area under Hydrograph curve)	
Volume	8,067.000 ft³
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.100 hours
Computational Time Increment	0.013 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

SLT1 Pondpack report

Subsection: Unit Hydrograph Summary
Label: EX. AREA
Scenario: 10 year

Storm Event	10-year
Return Event	10 years
Duration	24.000 hours
Depth	4.9 in
Time of Concentration (Composite)	0.100 hours
Area (User Defined)	1.679 acres
Computational Time Increment	0.013 hours
Time to Peak (Computed)	11.933 hours
Flow (Peak, Computed)	8.48 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	11.950 hours
Flow (Peak Interpolated Output)	8.28 ft³/s
Drainage Area	
SCS CN (Composite)	86.000
Area (User Defined)	1.679 acres
Maximum Retention (Pervious)	1.6 in
Maximum Retention (Pervious, 20 percent)	0.3 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.4 in
Runoff Volume (Pervious)	20,562.710 ft³
Hydrograph Volume (Area under Hydrograph curve)	
Volume	20,537.000 ft³
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.100 hours
Computational Time Increment	0.013 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

SLT1 Pondpack report

Subsection: Unit Hydrograph Summary
Label: PROP. AREA BYPASS FAC
Scenario: 1 year

Storm Event	1-year
Return Event	1 years
Duration	24.000 hours
Depth	2.6 in
Time of Concentration (Composite)	0.100 hours
Area (User Defined)	0.356 acres
Computational Time Increment	0.013 hours
Time to Peak (Computed)	11.933 hours
Flow (Peak, Computed)	0.91 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	11.950 hours
Flow (Peak Interpolated Output)	0.89 ft³/s
Drainage Area	
SCS CN (Composite)	91.000
Area (User Defined)	0.356 acres
Maximum Retention (Pervious)	1.0 in
Maximum Retention (Pervious, 20 percent)	0.2 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.7 in
Runoff Volume (Pervious)	2,199.001 ft³
Hydrograph Volume (Area under Hydrograph curve)	
Volume	2,196.000 ft³
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.100 hours
Computational Time Increment	0.013 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

SLT1 Pondpack report

Subsection: Unit Hydrograph Summary
Label: PROP. AREA BYPASS FAC
Scenario: 10 year

Storm Event	10-year
Return Event	10 years
Duration	24.000 hours
Depth	4.9 in
Time of Concentration (Composite)	0.100 hours
Area (User Defined)	0.356 acres
Computational Time Increment	0.013 hours
Time to Peak (Computed)	11.933 hours
Flow (Peak, Computed)	2.01 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	11.950 hours
Flow (Peak Interpolated Output)	1.95 ft³/s
Drainage Area	
SCS CN (Composite)	91.000
Area (User Defined)	0.356 acres
Maximum Retention (Pervious)	1.0 in
Maximum Retention (Pervious, 20 percent)	0.2 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.9 in
Runoff Volume (Pervious)	5,020.641 ft³
Hydrograph Volume (Area under Hydrograph curve)	
Volume	5,015.000 ft³
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.100 hours
Computational Time Increment	0.013 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

SLT1 Pondpack report

Subsection: Unit Hydrograph Summary
Label: PROP. AREA TO FAC
Scenario: 1 year

Storm Event	1-year
Return Event	1 years
Duration	24.000 hours
Depth	2.6 in
Time of Concentration (Composite)	0.100 hours
Area (User Defined)	1.323 acres
Computational Time Increment	0.013 hours
Time to Peak (Computed)	11.933 hours
Flow (Peak, Computed)	3.10 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	11.950 hours
Flow (Peak Interpolated Output)	3.04 ft³/s
Drainage Area	
SCS CN (Composite)	89.000
Area (User Defined)	1.323 acres
Maximum Retention (Pervious)	1.2 in
Maximum Retention (Pervious, 20 percent)	0.2 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.5 in
Runoff Volume (Pervious)	7,406.885 ft³
Hydrograph Volume (Area under Hydrograph curve)	
Volume	7,397.000 ft³
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.100 hours
Computational Time Increment	0.013 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

SLT1 Pondpack report

Subsection: Unit Hydrograph Summary
Label: PROP. AREA TO FAC
Scenario: 10 year

Storm Event	10-year
Return Event	10 years
Duration	24.000 hours
Depth	4.9 in
Time of Concentration (Composite)	0.100 hours
Area (User Defined)	1.323 acres
Computational Time Increment	0.013 hours
Time to Peak (Computed)	11.933 hours
Flow (Peak, Computed)	7.16 ft³/s
Output Increment	0.050 hours
Time to Flow (Peak Interpolated Output)	11.950 hours
Flow (Peak Interpolated Output)	6.97 ft³/s
Drainage Area	
SCS CN (Composite)	89.000
Area (User Defined)	1.323 acres
Maximum Retention (Pervious)	1.2 in
Maximum Retention (Pervious, 20 percent)	0.2 in
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.7 in
Runoff Volume (Pervious)	17,652.757 ft³
Hydrograph Volume (Area under Hydrograph curve)	
Volume	17,632.000 ft³
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	0.100 hours
Computational Time Increment	0.013 hours
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670

SLT1 Pondpack report

Subsection: Time vs. Elevation
Label: UG DET. (OUT)
Scenario: 1 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	413.54	413.54	413.54	413.54	413.54
0.250	413.54	413.54	413.54	413.54	413.54
0.500	413.54	413.54	413.54	413.54	413.54
0.750	413.54	413.54	413.54	413.54	413.54
1.000	413.54	413.54	413.54	413.54	413.54
1.250	413.54	413.54	413.54	413.54	413.54
1.500	413.54	413.54	413.54	413.54	413.54
1.750	413.54	413.54	413.54	413.54	413.54
2.000	413.54	413.54	413.54	413.54	413.54
2.250	413.54	413.54	413.54	413.54	413.54
2.500	413.54	413.54	413.54	413.54	413.54
2.750	413.54	413.54	413.54	413.54	413.54
3.000	413.54	413.54	413.54	413.54	413.54
3.250	413.54	413.54	413.54	413.54	413.54
3.500	413.54	413.54	413.54	413.54	413.54
3.750	413.54	413.54	413.54	413.54	413.54
4.000	413.54	413.54	413.54	413.54	413.54
4.250	413.54	413.54	413.54	413.54	413.54
4.500	413.54	413.54	413.54	413.54	413.54
4.750	413.54	413.54	413.54	413.54	413.54
5.000	413.54	413.54	413.54	413.54	413.54
5.250	413.54	413.54	413.54	413.54	413.54
5.500	413.54	413.54	413.54	413.54	413.54
5.750	413.54	413.54	413.54	413.54	413.54
6.000	413.54	413.54	413.54	413.54	413.54
6.250	413.54	413.54	413.54	413.54	413.54
6.500	413.54	413.54	413.54	413.54	413.54
6.750	413.54	413.54	413.54	413.54	413.54
7.000	413.54	413.54	413.54	413.54	413.54
7.250	413.54	413.54	413.54	413.54	413.54
7.500	413.54	413.54	413.54	413.54	413.54
7.750	413.54	413.54	413.55	413.55	413.55
8.000	413.55	413.55	413.55	413.55	413.55
8.250	413.55	413.55	413.55	413.55	413.55
8.500	413.55	413.55	413.55	413.55	413.55
8.750	413.55	413.55	413.56	413.56	413.56
9.000	413.56	413.56	413.56	413.56	413.56
9.250	413.56	413.56	413.56	413.56	413.56
9.500	413.56	413.56	413.57	413.57	413.57
9.750	413.57	413.57	413.57	413.57	413.57
10.000	413.57	413.58	413.58	413.58	413.58
10.250	413.58	413.58	413.59	413.59	413.59
10.500	413.59	413.59	413.60	413.60	413.60
10.750	413.61	413.61	413.61	413.62	413.62
11.000	413.62	413.63	413.63	413.64	413.65
11.250	413.65	413.66	413.67	413.68	413.69
11.500	413.70	413.72	413.75	413.82	413.93
11.750	414.07	414.18	414.34	414.56	414.78
12.000	414.94	415.01	414.93	414.77	414.60
12.250	414.43	414.30	414.20	414.13	414.08
12.500	414.04	413.98	413.94	413.90	413.87
12.750	413.84	413.82	413.80	413.79	413.78
13.000	413.77	413.76	413.75	413.74	413.73
13.250	413.73	413.72	413.72	413.71	413.71
13.500	413.70	413.70	413.69	413.69	413.69
13.750	413.68	413.68	413.68	413.67	413.67
14.000	413.67	413.66	413.66	413.66	413.66
14.250	413.65	413.65	413.65	413.65	413.65
14.500	413.65	413.65	413.65	413.64	413.64
14.750	413.64	413.64	413.64	413.64	413.64
15.000	413.64	413.64	413.63	413.63	413.63
15.250	413.63	413.63	413.63	413.63	413.63
15.500	413.63	413.63	413.62	413.62	413.62
15.750	413.62	413.62	413.62	413.62	413.62
16.000	413.62	413.61	413.61	413.61	413.61
16.250	413.61	413.61	413.61	413.61	413.61
16.500	413.61	413.61	413.61	413.61	413.61
16.750	413.61	413.61	413.61	413.61	413.61
17.000	413.61	413.60	413.60	413.60	413.60
17.250	413.60	413.60	413.60	413.60	413.60
17.500	413.60	413.60	413.60	413.60	413.60
17.750	413.60	413.60	413.60	413.60	413.60
18.000	413.60	413.60	413.60	413.60	413.60
18.250	413.60	413.60	413.60	413.59	413.59
18.500	413.59	413.59	413.59	413.59	413.59
18.750	413.59	413.59	413.59	413.59	413.59
19.000	413.59	413.59	413.59	413.59	413.59
19.250	413.59	413.59	413.59	413.59	413.59
19.500	413.59	413.59	413.59	413.59	413.58
19.750	413.58	413.58	413.58	413.58	413.58
20.000	413.58	413.58	413.58	413.58	413.58
20.250	413.58	413.58	413.58	413.58	413.58
20.500	413.58	413.58	413.58	413.58	413.58
20.750	413.58	413.58	413.58	413.58	413.58
21.000	413.58	413.58	413.58	413.58	413.58
21.250	413.58	413.58	413.58	413.58	413.58
21.500	413.58	413.58	413.58	413.58	413.58
21.750	413.58	413.58	413.58	413.58	413.58
22.000	413.58	413.58	413.58	413.58	413.58
22.250	413.58	413.58	413.58	413.58	413.58
22.500	413.58	413.58	413.58	413.58	413.58
22.750	413.58	413.58	413.58	413.58	413.58
23.000	413.58	413.58	413.58	413.58	413.58
23.250	413.58	413.58	413.58	413.58	413.58
23.500	413.58	413.58	413.58	413.58	413.58
23.750	413.58	413.58	413.58	413.58	413.58
24.000	413.58	(N/A)	(N/A)	(N/A)	(N/A)

SLT1 Pondpack report

Subsection: Time vs. Elevation
Label: UG DET. (OUT)
Scenario: 10 year

Time vs. Elevation (ft)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	413.54	413.54	413.54	413.54	413.54
0.250	413.54	413.54	413.54	413.54	413.54
0.500	413.54	413.54	413.54	413.54	413.54
0.750	413.54	413.54	413.54	413.54	413.54
1.000	413.54	413.54	413.54	413.54	413.54
1.250	413.54	413.54	413.54	413.54	413.54
1.500	413.54	413.54	413.54	413.54	413.54
1.750	413.54	413.54	413.54	413.54	413.54
2.000	413.54	413.54	413.54	413.54	413.54
2.250	413.54	413.54	413.54	413.54	413.54
2.500	413.54	413.54	413.54	413.54	413.54
2.750	413.54	413.54	413.54	413.54	413.54
3.000	413.54	413.54	413.54	413.54	413.54
3.250	413.54	413.54	413.54	413.54	413.54
3.500	413.54	413.54	413.54	413.54	413.54
3.750	413.54	413.54	413.54	413.54	413.54
4.000	413.54	413.54	413.54	413.54	413.54
4.250	413.54	413.54	413.54	413.54	413.54
4.500	413.54	413.54	413.54	413.54	413.54
4.750	413.54	413.54	413.55	413.55	413.55
5.000	413.55	413.55	413.55	413.55	413.55
5.250	413.55	413.55	413.55	413.55	413.55
5.500	413.55	413.55	413.56	413.56	413.56
5.750	413.56	413.56	413.56	413.56	413.56
6.000	413.56	413.56	413.56	413.56	413.56
6.250	413.56	413.57	413.57	413.57	413.57
6.500	413.57	413.57	413.57	413.57	413.57
6.750	413.57	413.57	413.57	413.57	413.58
7.000	413.58	413.58	413.58	413.58	413.58
7.250	413.58	413.58	413.58	413.58	413.58
7.500	413.58	413.59	413.59	413.59	413.59
7.750	413.59	413.59	413.59	413.59	413.59
8.000	413.59	413.59	413.60	413.60	413.60
8.250	413.60	413.60	413.60	413.60	413.61
8.500	413.61	413.61	413.61	413.62	413.62
8.750	413.62	413.62	413.62	413.63	413.63
9.000	413.63	413.63	413.64	413.64	413.64
9.250	413.64	413.64	413.64	413.65	413.65
9.500	413.65	413.65	413.65	413.65	413.65
9.750	413.66	413.66	413.66	413.67	413.67
10.000	413.67	413.68	413.68	413.69	413.69
10.250	413.70	413.70	413.71	413.71	413.72
10.500	413.73	413.73	413.74	413.75	413.76
10.750	413.76	413.77	413.78	413.79	413.80
11.000	413.81	413.82	413.84	413.85	413.87
11.250	413.89	413.91	413.93	413.96	413.98
11.500	414.01	414.05	414.11	414.20	414.36
11.750	414.57	414.82	415.17	415.69	416.30
12.000	416.85	417.15	416.96	416.61	416.25
12.250	415.92	415.63	415.37	415.14	414.93
12.500	414.74	414.57	414.42	414.30	414.22
12.750	414.16	414.12	414.09	414.07	414.05
13.000	414.03	414.00	413.98	413.97	413.95
13.250	413.94	413.92	413.91	413.90	413.89
13.500	413.88	413.87	413.86	413.86	413.85
13.750	413.84	413.83	413.83	413.82	413.81
14.000	413.81	413.80	413.79	413.79	413.78
14.250	413.78	413.78	413.77	413.77	413.77
14.500	413.76	413.76	413.76	413.76	413.76
14.750	413.75	413.75	413.75	413.75	413.74
15.000	413.74	413.74	413.74	413.74	413.73
15.250	413.73	413.73	413.73	413.72	413.72
15.500	413.72	413.72	413.72	413.71	413.71
15.750	413.71	413.71	413.70	413.70	413.70
16.000	413.70	413.70	413.69	413.69	413.69
16.250	413.69	413.69	413.69	413.69	413.68
16.500	413.68	413.68	413.68	413.68	413.68
16.750	413.68	413.68	413.68	413.68	413.68
17.000	413.68	413.67	413.67	413.67	413.67
17.250	413.67	413.67	413.67	413.67	413.67
17.500	413.67	413.67	413.67	413.67	413.66
17.750	413.66	413.66	413.66	413.66	413.66
18.000	413.66	413.66	413.66	413.66	413.66
18.250	413.66	413.65	413.65	413.65	413.65
18.500	413.65	413.65	413.65	413.65	413.65
18.750	413.65	413.65	413.65	413.65	413.64
19.000	413.64	413.64	413.64	413.64	413.64
19.250	413.64	413.64	413.64	413.64	413.64
19.500	413.64	413.63	413.63	413.63	413.63
19.750	413.63	413.63	413.63	413.63	413.63
20.000	413.63	413.63	413.63	413.63	413.63
20.250	413.62	413.62	413.62	413.62	413.62
20.500	413.62	413.62	413.62	413.62	413.62
20.750	413.62	413.62	413.62	413.62	413.62
21.000	413.62	413.62	413.62	413.62	413.62
21.250	413.62	413.62	413.62	413.62	413.62
21.500	413.62	413.62	413.62	413.62	413.62
21.750	413.62	413.62	413.62	413.62	413.62
22.000	413.62	413.62	413.62	413.62	413.62
22.250	413.62	413.62	413.62	413.62	413.62
22.500	413.62	413.62	413.62	413.62	413.62
22.750	413.62	413.62	413.62	413.62	413.62
23.000	413.62	413.62	413.61	413.61	413.61
23.250	413.61	413.61	413.61	413.61	413.61
23.500	413.61	413.61	413.61	413.61	413.61
23.750	413.61	413.61	413.61	413.61	413.61
24.000	413.61	(N/A)	(N/A)	(N/A)	(N/A)

SLT1 Pondpack report

Subsection: Time vs. Volume
Label: UG DET.
Scenario: 1 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
0.000	0.000	0.000	0.000	0.000	0.000
0.250	0.000	0.000	0.000	0.000	0.000
0.500	0.000	0.000	0.000	0.000	0.000
0.750	0.000	0.000	0.000	0.000	0.000
1.000	0.000	0.000	0.000	0.000	0.000
1.250	0.000	0.000	0.000	0.000	0.000
1.500	0.000	0.000	0.000	0.000	0.000
1.750	0.000	0.000	0.000	0.000	0.000
2.000	0.000	0.000	0.000	0.000	0.000
2.250	0.000	0.000	0.000	0.000	0.000
2.500	0.000	0.000	0.000	0.000	0.000
2.750	0.000	0.000	0.000	0.000	0.000
3.000	0.000	0.000	0.000	0.000	0.000
3.250	0.000	0.000	0.000	0.000	0.000
3.500	0.000	0.000	0.000	0.000	0.000
3.750	0.000	0.000	0.000	0.000	0.000
4.000	0.000	0.000	0.000	0.000	0.000
4.250	0.000	0.000	0.000	0.000	0.000
4.500	0.000	0.000	0.000	0.000	0.000
4.750	0.000	0.000	0.000	0.000	0.000
5.000	0.000	0.000	0.000	0.000	0.000
5.250	0.000	0.000	0.000	0.000	0.000
5.500	0.000	0.000	0.000	0.000	0.000
5.750	0.000	0.000	0.000	0.000	0.000
6.000	0.000	0.000	0.000	0.000	0.000
6.250	0.000	0.000	0.000	0.000	0.000
6.500	0.000	0.000	0.000	0.000	0.000
6.750	0.000	0.000	0.000	0.000	0.000
7.000	0.000	0.000	0.000	0.000	0.000
7.250	0.000	0.000	0.000	1.000	1.000
7.500	1.000	1.000	1.000	1.000	1.000
7.750	1.000	1.000	1.000	1.000	1.000
8.000	1.000	2.000	2.000	2.000	2.000
8.250	2.000	2.000	2.000	2.000	2.000
8.500	3.000	3.000	3.000	3.000	3.000
8.750	3.000	3.000	4.000	4.000	4.000
9.000	4.000	4.000	5.000	5.000	5.000
9.250	5.000	5.000	5.000	6.000	6.000
9.500	6.000	6.000	6.000	6.000	6.000
9.750	7.000	7.000	7.000	8.000	8.000
10.000	8.000	8.000	9.000	9.000	10.000
10.250	10.000	10.000	11.000	11.000	12.000
10.500	12.000	13.000	14.000	14.000	15.000
10.750	16.000	16.000	17.000	18.000	19.000
11.000	21.000	22.000	24.000	26.000	29.000
11.250	32.000	35.000	38.000	41.000	45.000
11.500	49.000	57.000	78.000	118.000	188.000
11.750	293.000	389.000	537.000	758.000	989.000
12.000	1,172.000	1,244.000	1,161.000	977.000	794.000
12.250	621.000	494.000	405.000	349.000	305.000
12.500	270.000	225.000	192.000	166.000	146.000
12.750	130.000	117.000	106.000	97.000	91.000
13.000	85.000	79.000	74.000	70.000	66.000
13.250	63.000	60.000	57.000	54.000	52.000
13.500	50.000	49.000	47.000	46.000	44.000
13.750	43.000	42.000	40.000	39.000	38.000
14.000	37.000	36.000	35.000	34.000	33.000
14.250	32.000	32.000	31.000	30.000	30.000
14.500	30.000	29.000	29.000	28.000	28.000
14.750	27.000	27.000	27.000	26.000	26.000
15.000	25.000	25.000	25.000	24.000	24.000
15.250	23.000	23.000	23.000	22.000	22.000
15.500	21.000	21.000	21.000	20.000	20.000
15.750	19.000	19.000	19.000	19.000	18.000
16.000	18.000	18.000	18.000	17.000	17.000
16.250	17.000	17.000	17.000	17.000	17.000
16.500	16.000	16.000	16.000	16.000	16.000
16.750	16.000	16.000	16.000	16.000	16.000
17.000	16.000	15.000	15.000	15.000	15.000
17.250	15.000	15.000	15.000	15.000	15.000
17.500	15.000	15.000	14.000	14.000	14.000
17.750	14.000	14.000	14.000	14.000	14.000
18.000	14.000	14.000	14.000	14.000	13.000
18.250	13.000	13.000	13.000	13.000	13.000
18.500	13.000	13.000	13.000	13.000	13.000
18.750	12.000	12.000	12.000	12.000	12.000
19.000	12.000	12.000	12.000	12.000	12.000
19.250	12.000	11.000	11.000	11.000	11.000
19.500	11.000	11.000	11.000	11.000	11.000
19.750	11.000	11.000	10.000	10.000	10.000
20.000	10.000	10.000	10.000	10.000	10.000
20.250	10.000	10.000	10.000	10.000	10.000
20.500	10.000	10.000	10.000	10.000	10.000
20.750	10.000	10.000	9.000	9.000	9.000
21.000	9.000	9.000	9.000	9.000	9.000
21.250	9.000	9.000	9.000	9.000	9.000
21.500	9.000	9.000	9.000	9.000	9.000
21.750	9.000	9.000	9.000	9.000	9.000
22.000	9.000	9.000	9.000	9.000	9.000
22.250	9.000	9.000	9.000	9.000	9.000
22.500	9.000	9.000	9.000	9.000	9.000
22.750	9.000	9.000	9.000	9.000	9.000
23.000	9.000	9.000	9.000	9.000	9.000
23.250	9.000	9.000	9.000	9.000	9.000
23.500	9.000	9.000	9.000	9.000	8.000
23.750	8.000	8.000	8.000	8.000	8.000
24.000	8.000	(N/A)	(N/A)	(N/A)	(N/A)

SLT1 Pondpack report

Subsection: Time vs. Volume
Label: UG DET.
Scenario: 10 year

Time vs. Volume (ft³)

Output Time increment = 0.050 hours
Time on left represents time for first value in each row.

Time (hours)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)	Volume (ft³)
0.000	0.000	0.000	0.000	0.000	0.000
0.250	0.000	0.000	0.000	0.000	0.000
0.500	0.000	0.000	0.000	0.000	0.000
0.750	0.000	0.000	0.000	0.000	0.000
1.000	0.000	0.000	0.000	0.000	0.000
1.250	0.000	0.000	0.000	0.000	0.000
1.500	0.000	0.000	0.000	0.000	0.000
1.750	0.000	0.000	0.000	0.000	0.000
2.000	0.000	0.000	0.000	0.000	0.000
2.250	0.000	0.000	0.000	0.000	0.000
2.500	0.000	0.000	0.000	0.000	0.000
2.750	0.000	0.000	0.000	0.000	0.000
3.000	0.000	0.000	0.000	0.000	0.000
3.250	0.000	0.000	0.000	0.000	0.000
3.500	0.000	0.000	0.000	0.000	0.000
3.750	0.000	0.000	0.000	0.000	0.000
4.000	0.000	0.000	0.000	0.000	0.000
4.250	0.000	0.000	0.000	0.000	0.000
4.500	0.000	0.000	1.000	1.000	1.000
4.750	1.000	1.000	1.000	1.000	2.000
5.000	2.000	2.000	2.000	2.000	2.000
5.250	2.000	3.000	3.000	3.000	3.000
5.500	3.000	3.000	4.000	4.000	4.000
5.750	4.000	4.000	4.000	5.000	5.000
6.000	5.000	5.000	5.000	5.000	6.000
6.250	6.000	6.000	6.000	6.000	7.000
6.500	7.000	7.000	7.000	7.000	7.000
6.750	8.000	8.000	8.000	8.000	8.000
7.000	9.000	9.000	9.000	9.000	9.000
7.250	10.000	10.000	10.000	10.000	10.000
7.500	11.000	11.000	11.000	11.000	11.000
7.750	12.000	12.000	12.000	12.000	12.000
8.000	13.000	13.000	13.000	13.000	14.000
8.250	14.000	15.000	15.000	15.000	16.000
8.500	16.000	17.000	17.000	18.000	18.000
8.750	19.000	20.000	21.000	22.000	23.000
9.000	23.000	24.000	25.000	26.000	27.000
9.250	27.000	28.000	29.000	29.000	29.000
9.500	30.000	30.000	31.000	32.000	32.000
9.750	33.000	35.000	36.000	37.000	39.000
10.000	40.000	41.000	43.000	45.000	47.000
10.250	49.000	51.000	53.000	56.000	59.000
10.500	63.000	66.000	70.000	74.000	78.000
10.750	83.000	88.000	94.000	99.000	106.000
11.000	113.000	120.000	128.000	138.000	149.000
11.250	161.000	175.000	189.000	205.000	224.000
11.500	244.000	278.000	326.000	406.000	555.000
11.750	764.000	1,033.000	1,440.000	2,047.000	2,749.000
12.000	3,304.000	3,540.000	3,400.000	3,080.000	2,696.000
12.250	2,323.000	1,986.000	1,677.000	1,402.000	1,154.000
12.500	939.000	767.000	611.000	500.000	422.000
12.750	373.000	339.000	313.000	293.000	277.000
13.000	260.000	242.000	226.000	212.000	201.000
13.250	192.000	184.000	177.000	170.000	164.000
13.500	157.000	151.000	145.000	140.000	135.000
13.750	130.000	125.000	121.000	116.000	112.000
14.000	108.000	104.000	100.000	97.000	94.000
14.250	92.000	90.000	88.000	87.000	85.000
14.500	84.000	82.000	81.000	80.000	79.000
14.750	77.000	76.000	75.000	74.000	72.000
15.000	71.000	70.000	69.000	68.000	66.000
15.250	65.000	64.000	63.000	61.000	60.000
15.500	59.000	58.000	57.000	55.000	54.000
15.750	53.000	52.000	51.000	51.000	50.000
16.000	49.000	48.000	47.000	47.000	46.000
16.250	45.000	45.000	45.000	44.000	44.000
16.500	43.000	43.000	43.000	42.000	42.000
16.750	42.000	41.000	41.000	41.000	41.000
17.000	40.000	40.000	40.000	39.000	39.000
17.250	39.000	38.000	38.000	38.000	38.000
17.500	37.000	37.000	37.000	36.000	36.000
17.750	36.000	35.000	35.000	35.000	35.000
18.000	34.000	34.000	34.000	33.000	33.000
18.250	33.000	32.000	32.000	32.000	31.000
18.500	31.000	31.000	31.000	30.000	30.000
18.750	30.000	29.000	29.000	29.000	28.000
19.000	28.000	28.000	27.000	27.000	27.000
19.250	27.000	26.000	26.000	26.000	25.000
19.500	25.000	25.000	24.000	24.000	24.000
19.750	24.000	23.000	23.000	23.000	22.000
20.000	22.000	22.000	21.000	21.000	21.000
20.250	21.000	21.000	21.000	20.000	20.000
20.500	20.000	20.000	20.000	20.000	20.000
20.750	20.000	20.000	20.000	20.000	20.000
21.000	20.000	20.000	19.000	19.000	19.000
21.250	19.000	19.000	19.000	19.000	19.000
21.500	19.000	19.000	19.000	19.000	19.000
21.750	19.000	19.000	19.000	19.000	19.000
22.000	19.000	19.000	19.000	19.000	18.000
22.250	18.000	18.000	18.000	18.000	18.000
22.500	18.000	18.000	18.000	18.000	18.000
22.750	18.000	18.000	18.000	18.000	18.000
23.000	18.000	18.000	18.000	18.000	18.000
23.250	18.000	18.000	18.000	18.000	18.000
23.500	18.000	17.000	17.000	17.000	17.000
23.750	17.000	17.000	17.000	17.000	17.000
24.000	17.000	(N/A)	(N/A)	(N/A)	(N/A)

ARLINGTON
VIRGINIA

DEPARTMENT OF
ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

SEAL

COMMONWEALTH OF VIRGINIA
SOLOMON W SHIKUR
Lic. No. 44276
1/6/2022
PROFESSIONAL ENGINEER

APPROVALS	DATE
Amy Pflaum — QUALITY CONTROL ENGINEER	01/18/22
Adam E Kulaury — CONSTRUCTION MANAGEMENT SUPERVISOR	1/20/22
WATER, SEWER, STREETS BUREAU CHIEF	1.21.2022
Dennis M. Leach — TRANSPORTATION DIRECTOR	01/27/22
John Mir — PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

STORMWATER DETENTION CALCULATIONS

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:

N/A

C085.2

REVISED ON 01/07/2021

GENERAL MOT NOTES:

1. PROJECT IS A "TYPE A" TMP PROJECT. THIS PROJECT SUPPORTS FOR THE IMPROVEMENT OF THE NORTHSIDE SALT STORAGE SITE.
2. THE DESIGN FOR THE NORTHSIDE SALT STORAGE PROJECT INCLUDES STORMWATER IMPROVEMENTS, SUCH AS QUALITY AND QUANTITY DESIGN, AND A PROPOSED STORM PIPE NETWORK WHICH WILL CONNECT TO AN EXISTING STORM PIPE NETWORK.
3. THE WORKING HOURS WITHIN ARLINGTON COUNTY RIGHT-OF-WAY ARE AS FOLLOWS:

MON. TO FRI.	SATURDAY	SUNDAY
9:00 AM TO 4:00 PM	*Not Allowed	*Not Allowed

4. BEFORE AND AFTER WORKING HOURS, ALL TRAVEL LANES SHALL BE OPENED TO THE MOTORISTS.
5. NO LANE CLOSURES WILL BE ALLOWED FROM NOON ON THE DAY BEFORE A HOLIDAY UNTIL NOON ON THE WORKDAY FOLLOWING THE HOLIDAY. HOLIDAYS INCLUDE ALL STATE AND FEDERAL HOLIDAYS.
6. MAINTENANCE OF TRAFFIC (MOT) PLAN WHICH INCLUDES THE SEQUENCE OF CONSTRUCTION (SOC) WAS REVIEWED AND APPROVED BY THE ARLINGTON COUNTY TRANSPORTATION ENGINEERING AND OPERATION (TE&O) BUREAU.
7. THE CONTRACTOR SHALL COORDINATE WITH ARLINGTON COUNTY TRANSIT BUREAU (703-228-3049) AT LEAST 4 WEEKS PRIOR TO COMMENCEMENT OF WORK FOR APPROVAL, IF TRANSIT IS AFFECTED.
8. THE CONTRACTOR SHALL RETAIN PEDESTRIAN ACCESS TO THE BUS STOPS LOCATED WITHIN THE CONSTRUCTION ZONE FOR THE DURATION OF THE PROJECT.
9. THE CONTRACTOR SHALL :
   A. DESIGNATE A PERSON ASSIGNED TO THE PROJECT WHO WILL HAVE THE PRIMARY RESPONSIBILITY, WITH SUFFICIENT AUTHORITY, FOR IMPLEMENTING THE TMP/MOT/SOC AND OTHER SAFETY AND MOBILITY ASPECTS OF THE PERMIT WORK. THIS PERSON SHALL COORDINATE WITH THE ARLINGTON COUNTY CONSTRUCTION MANAGER FOR THE DURATION OF THE PROJECT.
   B. ENSURE THAT PERSONNEL ASSIGNED TO THE PROJECT ARE TRAINED IN TRAFFIC CONTROL TO A LEVEL COMMENSURATE WITH THEIR RESPONSIBILITIES IN ACCORDANCE WITH VDOT'S WORK ZONE TRAFFIC CONTROL TRAINING GUIDELINES.
   C. PERFORM REVIEWS OF THE CONSTRUCTION AREA TO ENSURE COMPLIANCE WITH CONTRACT DOCUMENTS AT REGULARLY SCHEDULED INTERVALS AT THE DIRECTION OF THE ENGINEER. CONTRACTORS SHALL MAINTAIN AN APPROVED COPY OF THE TEMPORARY TRAFFIC CONTROL PLAN AT THE WORK SITE AT ALL TIMES.
11. THIS TMP/MOT/SOC PLAN IS INTENDED AS A GUIDE. IT IS NOT TO ENUMERATE EVERY DETAIL WHICH MUST BE CONSIDERED IN THE CONSTRUCTION OF EACH PHASE, BUT ONLY TO TO SHOW THE GENERAL HANDLING OF EXISTING TRAFFIC. IF THE CONTRACTOR IS TO DEVIATE FROM THE APPROVED TMP, A NEW OR REVISED TMP MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
12. ALL AREAS EXCAVATED BELOW THE EXISTING PAVEMENT SURFACE AND WITHIN THE CLEAR ZONE AT THE CONCLUSION OF EACH WORKDAY, SHALL BE BACKFILLED UP TO EXISTING PAVEMENT OR NEWLY CONSTRUCTED PAVEMENT SURFACE FOR THE SAFETY AND PROTECTION OF VEHICULAR TRAFFIC.
13. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FOR THE DURATION OF THE PROJECT. CONTRACTOR SHALL ADD ANY ADDITIONAL TEMPORARY MEASURES NECESSARY TO FACILITATE PROPER, POSITIVE DRAINAGE FOR THE DURATION OF CONSTRUCTION.
14. EACH PHASE OF CONSTRUCTION SHALL BE COMPLETED PRIOR TO THE START OF THE NEXT PHASE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

FIRE DEPARTMENT NOTES:

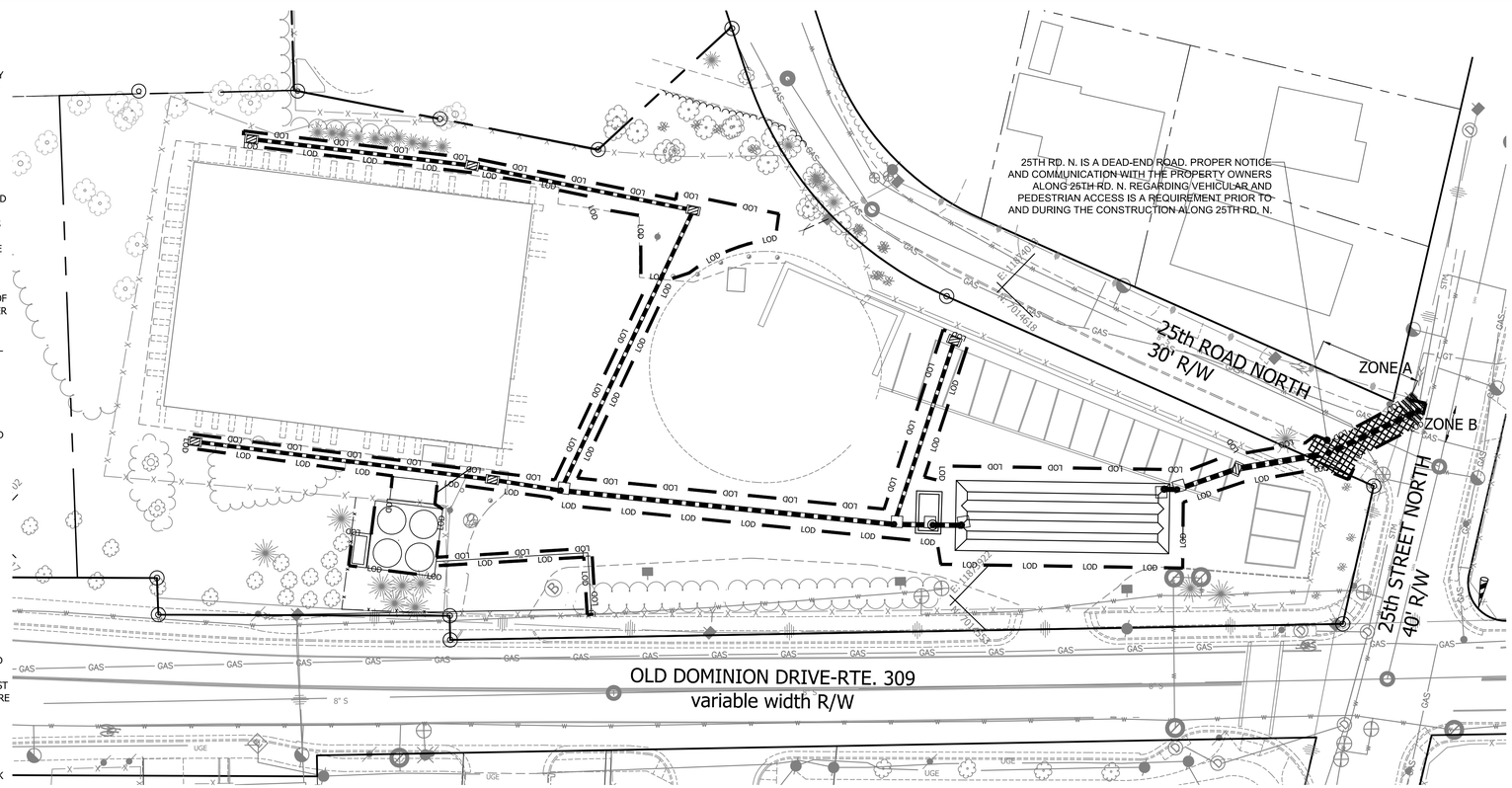
1. ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED UNOBSTRUCTED AND ACCESSIBLE AT ALL TIMES IN ACCORDANCE WITH SECTIONS 508.5.4 AND 508.5.5 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
2. ACCESS TO BUILDINGS FOR FIREFIGHTING SHALL BE MAINTAINED AT ALL TIMES. EXISTING FIRE APPARATUS ACCESS ROADS (FIRE LANES) SHALL BE KEPT CLEAR OF OBSTRUCTIONS IN ACCORDANCE WITH SECTION 503.4 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE. ACCESS TO CONSTRUCTION SITES SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH SECTION 1410 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
3. IN THE EVENT THAT EXISTING FIRE DEPARTMENT CONNECTIONS OR FIRE APPARATUS ACCESS ROADS (FIRE LANES) MUST BE OBSTRUCTED TO FACILITATE CONSTRUCTION ACTIVITIES, CONTACT THE ARLINGTON COUNTY FIRE DEPARTMENT FIRE PREVENTION OFFICE AT 703-228-4644 TO COORDINATE REVIEW AND APPROVAL OF TEMPORARY FIRE DEPARTMENT CONNECTIONS AND/OR FIRE APPARATUS ACCESS ROADS PRIOR TO CREATING THE OBSTRUCTION.

GENERAL SEQUENCE OF CONSTRUCTION:

1. TRAFFIC CONTROL DEVICES AND SAFETY MEASURES SHALL COMPLY WITH THE LATEST EDITION OF THE VIRGINIA WORK AREA PROTECTION MANUAL, VDOT's GUIDELINES FOR TEMPORARY TRAFFIC CONTROL, FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, ARLINGTON COUNTY STANDARDS, THE TRAFFIC CONTROL PLANS INCLUDED IN THE CONSTRUCTION DRAWINGS, AND/OR AS DIRECTED BY THE PROJECT OFFICER.
2. THE CONTRACTOR SHALL SUBMIT A DETAILED SCHEDULE WHICH INDICATES START AND FINISH DATES FOR EACH SEGMENT OF THE WORK. THE SCHEDULE SHALL INDICATE THE DURATION OF ALL LANE OR SHOULDER CLOSURES. THE CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER A MINIMUM OF 3 BUSINESS DAYS IN ADVANCE OF PROCEEDING TO THE NEXT WORK SEGMENT.
3. THE CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER OF PARKING RESTRICTION NEEDS A MINIMUM OF 3 BUSINESS DAYS PRIOR TO COMMENCEMENT OF WORK FOR EACH SEGEMENT. COUNTY PROJECT OFFICER SHALL RESTRICT PARKING BY CONTACTING DES - PERMITTING SECTION, 703-228-4798.
4. PORTABLE VARIABLE MESSAGE SIGNS WITH CLOSURE INFORMATION MUST BE INSTALLED AHEAD OF WORK AREA 3 WEEKS PRIOR TO CLOSURE.
5. DURING CONSTRUCTION, THE CONTRACTOR SHALL EITHER MAINTAIN APPROPRIATE SIGHT DISTANCE TO ALL TRAFFIC SIGNS OR PROVIDE FOR TEMPORARY SIGNAGE OR FLAGGERS TO GUIDE TRAFFIC THROUGH WORK ZONES.
6. THE CONTRACTOR SHALL MINIMIZE THE DURATION OF ANY BLOCKAGE TO PRIVATE ENTRANCES AND DRIVEWAYS. THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF DRIVEWAY CLOSURE FOR APPROVAL BY THE PROJECT OFFICER. THE PROJECT OFFICER SHALL BE NOTIFIED A MINIMUM OF 3 BUSINESS DAYS IN ADVANCE OF SUCH ACTIVITIES. THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE TEMPORARY CLOSURE OF ACCESS TO THE PROPERTY. THE CONTRACTOR SHALL MAKE ALL PRIVATE ENTRANCES AND DRIVEWAYS ACCESSIBLE AT THE CONCLUSION OF EACH WORKDAY.
7. ANY EXCAVATIONS WHICH ARE SPECIFICALLY APPROVED BY THE PROJECT OFFICER TO REMAIN OPEN PAST NORMAL WORKING HOURS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PROTECTED IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND AS APPROVED BY THE PROJECT OFFICER.
8. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, INCLUDING ACCESS TO BUS STOP SHELTERS, UNLESS OTHERWISE APPROVED IN THE PLANS.
9. PEDESTRIAN TRAFFIC SHALL BE SEPARATED FROM WORK ZONES WITH APPROPRIATE MEASURES IN ACCORDANCE WITH MUTCD.
10. ADEQUATE PROVISIONS FOR PERSONS WITH DISABILITIES SHALL BE PROVIDED AT ALL TIMES PER ADA REQUIREMENTS.
11. WHEN NECESSARY, PEDESTRIANS SHALL BE APPROPRIATELY DIRECTED WITH ADVANCED WARNING SIGNS PLACED AT INTERSECTIONS, TO CROSS TO THE OPPOSITE SIDE OF THE ROADWAY IN ORDER TO PREVENT CONFLICT WITH MIDBLOCK WORK SITES.
12. PEDESTRIANS SHALL NOT BE LED INTO CONFLICT WITH WORK SITE EQUIPMENT, OPERATIONS, AND/OR VEHICLES MOVING THROUGH OR AROUND THE WORK SITE.
13. THE CONTRACTOR SHALL NOTIFY ARLINGTON COUNTY TRANSIT BUREAU, 703-228-3049, A MINIMUM OF 4 WEEKS PRIOR TO COMMENCEMENT OF WORK, IF TRANSIT IS AFFECTED.
14. IF WORK DONE AT SIGNALIZED INTERSECTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING VEHICLE DETECTION AT ALL TIMES DURING THE PROJECT. CONTACT SIGNAL ITS TEAM DONALD CUNNINGHAM AT 703-228-6655 72 HOURS PRIOR TO COMMENCEMENT OF WORK.
15. THE CONTRACTOR SHALL COMPLY WITH "RESTRICTED" WORKING HOURS AS DEFINED BY VDOT AND AS NOTED ON THE APPROVED VDOT PERMIT WHEN WORKING WITHIN THE VDOT RIGHT-OF-WAY. THE CONTRACTOR IS RESPONSIBLE FOR SATISFYING ALL VDOT PERMIT REQUIREMENTS.
16. MAINTENANCE OF TRAFFIC PLANS AND DETAILS SHOWN HERE SHALL BE FOLLOWED BY THE CONTRACTOR DURING CONSTRUCTION. SHOULD THE CONTRACTOR DESIRE TO FOLLOW AN ALTERNATE PLAN, HE SHALL SUBMIT THE PLAN PRIOR TO CONSTRUCTION FOR REVIEW AND APPROVAL. ALTERNATIVE PLAN PREPARATION SHALL BE NO COST TO THE COUNTY.
17. DIRECTIONAL ARROWS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS ARE FOR INFORMATION ONLY AND ARE NOT TO BE PLACED AS PAVEMENT MARKINGS.
18. THE CONTRACTOR SHALL COVER ANY EXISTING SIGNS WHICH ARE NOT APPLICABLE OR ARE IN CONFLICT WITH THIS MOT PLAN.
19. THE CONTRACTOR SHALL ERADICATE AND RE-STRIPE AS NECESSARY ANY EXISTING PAVEMENT MARKINGS THAT ARE IN CONFLICT WITH OR DO NOT ALIGN WITH THE TEMPORARY PAVEMENT MARKINGS OR NEW TRAFFIC PATTERNS.
20. THE CONTRACTOR SHALL ERADICATE ALL TEMPORARY PAVEMENT MARKINGS, INCLUDING TEMPORARY MARKED CROSSWALKS ONCE THE WORK AREA(S) ASSOCIATED WITH THE MARKINGS HAS BEEN COMPLETED.
21. CONTRACTOR SHALL NOTIFY ARLINGTON COUNTY PUBLIC SCHOOLS TWO WEEKS PRIOR TO STARTING CONSTRUCTION.

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL KEEP LOCAL PEDESTRIAN AND VEHICULAR ACCESS TO THE PROPERTIES ALONG 25TH RD. N. AT ALL TIMES DURING CONSTRUCTION.



MAINTENANCE OF TRAFFIC PLAN

ZONE TABLE

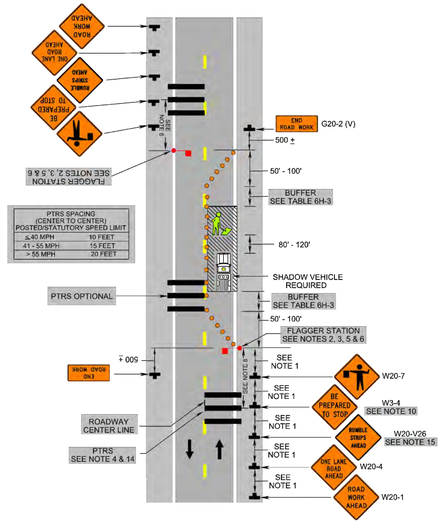
ZONE #	TTC# VEHICULAR	TTC# PEDESTRIAN	COMMENTS	MAXIMUM DURATION	WORK HOURS
A	TTC 23.2	N/A	- STORMWATER PIPE CONSTRUCTION IN ROADWAY	5 DAYS	9:00 A.M. - 4:00 P.M. (M-F)
B	TTC 23.2	N/A	- STORMWATER STRUCTURE REMOVAL AND REPLACEMENT	5 DAYS	9:00 A.M. - 4:00 P.M. (M-F)

MOT ZONE LEGEND

ZONE A

ZONE B

Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.2)



1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019
3: Revision 2.1 – 11/1/2020

Typical Traffic Control
Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.2)
NOTES

Guidance:

1. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.*
2. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the flagger station and transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. Generally speaking, motorists should have a clear line of sight from the graphic flagger symbol sign to the flagger.*
3. *To maintain efficient traffic flow in a flagging operation on a two-lane roadway, the maximum time motorists should be stopped at a flagger station is 8 minutes for high volume roadways (average daily traffic of 500 or more vehicles per day) to a maximum of 12 minutes for low volume roadways (less than 500 vehicles per day). For additional information see Section 6E.07.*[3]

Standard:

4. **Portable Temporary Rumble Strips (PTRS) shall be used as noted in Section 6F.99.**
5. **Flagging stations shall be located far enough in advance of the work space to permit approaching traffic to reduce speed and/or stop before passing the work space and allow sufficient distance for departing traffic in the left lane to return to the right lane before reaching opposing traffic (see Table 6H-3 on Page 6H-55).**
6. **All flaggers shall be state certified and have their certification card in their possession when performing flagging duties (see Section 6E.01, Qualifications for Flaggers).**
7. **Cone spacing shall be based on the posted speed and the values in Table 6H-4 on Page 6H-6.**[1]
8. **A shadow vehicle with at least one high intensity amber rotating, flashing, or**[1] **oscillating light shall be parked 80'-120' in advance of the first work crew.**

Option:

8. A SLOW (W21-V10) sign[2] may be required in this area to give advance warning of the operation ahead by slowing approaching traffic prior to reaching the flagger station or queued traffic.

Guidance:

9. *If the queue of traffic reaches the BE PREPARED TO STOP (W3-4) sign then the signs, and if used the* PTRS[1] *should be readjusted at greater distances.*
10. *When a highway-rail crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the highway-rail grade crossing, the temporary traffic control zone should be extended so that the transition area precedes the highway-rail crossing (see Figure TTC-36 for additional information on highway-rail crossings).*

Standard:

11. **At night, flagger stations shall be illuminated, except in emergencies (see Section 6E.08).**

Option:

12. Cones may be eliminated when using a pilot vehicle operation or when the total roadway width is 20 feet or less.
13. For low-volume situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6E).

Standard:[1]

14. **When used**[2]**, three portable temporary rumble (PTRS) strips shall be installed across the entire travel lane adjacent to the BE PREPARED TO STOP (W3-4) sign. The portable temporary rumble strips shall be monitored and adjusted as necessary during the work shift to ensure proper placement on the roadway. When the PTRS are installed, the RUMBLE STRIPS AHEAD (W20-V26) sign shall also be utilized.**

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

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Adam E Kulawy, CONSTRUCTION MANAGEMENT SUPERVISOR	1/20/22
WATER, SEWER, STREETS BUREAU CHIEF	1.21.2022
Dennis M. Leach, TRANSPORTATION DIRECTOR	01/27/22
John Mir, PROJECT MANAGER	1/27/22

REVISIONS	DATE

NORTHSIDE SALT STORAGE SITE
SLT1
SE CORNER OF OLD DOMINION DR & 26TH ST N

MAINTENANCE OF TRAFFIC PLAN

DESIGNED: SEB
DRAWN: SEB
CHECKED: SWS

PLOTTED: JANUARY 6 2022

SCALE:

0 25 50
GRAPHIC SCALE

C121.1

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