

SURVEY NOTES

- 1. THE PROPERTY DELINEATED HERON IS LOCATED IN FAIRFAX COUNTY. SEE CHART BELOW.
- THE TOPOGRAPHY SHOWN HERON IS A RESULT OF A FIELD SURVEY PERFORMED BY THIS FIRM IN SEPTEMBER 2016. CONTOUR INTERVAL=2' (NGVD 29). 3. THE BOUNDARY SHOWN HEREON IS A RESULT OF A FIELD SURVEY PERFORMED BY RINKER DESIGN ASSOCIATES, P.C. IN SEPTEMBER 2016 (VIRGINIA STATE GRID NORTH - VCS 83).

CONSTRUCTION NOTES

- THE CONTRACTOR SHALL VISIT THE SITE AND SHALL VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING A BID FOR THE CONSTRUCTION OF THE PROJECT.
- THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND MAKE ALL INSPECTIONS NECESSARY IN ORDER TO DETERMINE THE FULL EXTENT OF THE WORK REQUIRED TO MAKE THE PROPOSED WORK CONFORM TO THE DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK, CONDITIONS, AND CONFIRMATION AND CONDITION OF EXISTING GROUND SURFACE AND THE CHARACTER OF THE EQUIPMENT AND FACILITIES NEEDED PRIOR TO AND DURING EXECUTION OF THE WORK. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE CHARACTER, QUANTITY AND QUALITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED. ANY INACCURACIES OR DISCREPANCIES BETWEEN THE DRAWINGS AND SPECIFICATIONS MUST BE BROUGHT TO THE OWNER'S ATTENTION IN ORDER TO CLARIFY THE EXACT NATURE OF THE WORK TO BE PERFORMED PRIOR TO THE COMMENCEMENT OF ANY WORK.
- ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT EDITION OF THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL (PFM) AND THE VIRGINIA DEPARTMENT OF TRANSPORTATION (V.D.O.T.) STANDARDS AND SPECIFICATIONS.
- ALL CONSTRUCTION WITHIN THE V.D.O.T. RIGHT-OF-WAY SHALL CONFORM TO THE PROVISIONS CONTAINED IN THE V.D.O.T. LAND USE PERMIT ISSUED FOR THE LOCATION. THE CONTRACTOR SHALL BE THOROUGHLY FAMILIARIZED WITH THE REQUIREMENTS OF THIS LAND USF PFRMIT PRIOR TO THE START OF ANY CONSTRUCTION IN V.D.O.T. RIGHT-OF-WAY.
- UNLESS MORE STRINGENT COMPACTION REQUIREMENTS ARE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS, THE INSTALLATION OF TRENCH BACKFILL AND THE RESTORATION OF DISTURBED AREAS SHALL BE COMPACTED IN ACCORDANCE WITH THE CURRENT EDITION OF THE V.D.O.T. ROAD AND BRIDGE SPECIFICATIONS. ALL COMPACTION SHALL BE AT ±2% OF THE OPTIMUM MOISTURE
- 6. ALL SUBGRADE, SUBBASE, BASE AND SHOULDER MATERIAL SHALL BE PLACED AND COMPACTED TO THE DENSITY SPECIFIED IN THE CURRENT EDITION OF THE V.D.O.T. ROAD AND BRIDGE SPECIFICATIONS. ALL COMPACTION SHALL BE AT ±2% OF THE OPTIMUM MOISTURE CONTENT.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEARING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING THE V.D.O.T. RIGHT-OF-WAY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN ALL STREETS AND ALLAY DUST AND TO TAKE WHATFVER MEASURES NECESSARY TO INSURE THE ROAD(S) ARE MAINTAINED IN A CLEAN. MUD AND DUST FREE CONDITION AT ALL TIMES. THE CONTRACTOR WILL COMPLY WITH ALL STIPULATIONS OF THE V.D.O.T. LAND USE PERMIT REGARDING CONSTRUCTION ENTRANCE MAINTENANCE AND REPAIRS.
- CONTRACTOR TO ADJUST MANHOLE, VALVE, AND METER BOX COVERS BEFORE PLACING ASPHALT SEAL CAP.
- WHERE EXISTING NATURAL DRAINAGE DITCHES OR STREAM BANKS ARE DISTURBED DURING CONSTRUCTION THE CONTRACTOR SHALL RESTORE THIS AREA TO ORIGINAL ALIGNMENT, GRADE AND INVERT.
- 10. THE FOLLOWING PROVISIONS SHALL APPLY TO THE USE OF SHEETING AND SHORING:
- A. SHEETING AND SHORING OR OTHER APPROVED METHODS FOR TRENCH BRACING MAY BE REQUIRED ON THIS CONTRACT AS NEEDED TO MEET ALL SAFETY REQUIREMENTS.
- UNLESS OTHERWISE DIRECTED BY THE ENGINEER, SHEETING AND SHORING WILL BE REMOVED FROM ALL TRENCHES PRIOR TO BACKFILLING OPERATIONS.
- UNLESS SPECIFICALLY IDENTIFIED IN THE CONTRACT DOCUMENTS, NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR SHEETING AND SHORING.
- 11. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGES TO THE EXISTING ROADS, TRAILS, UTILITIES, AND OTHER PARK FACILITIES
- WHICH OCCURS AS A RESULT OF THE PROJECT CONSTRUCTION WITHIN OR CONTIGUOUS TO THE EXISTING RIGHT-OF-WAY. 12. ALL STREET CUT AND PATCH WORK IN PUBLIC RIGHT-OF-WAY REQUIRED FOR UTILITIES INSTALLATION SHALL BE PERFORMED IN STRICT
- ACCORDANCE WITH COUNTY AND/OR VDOT STANDARDS AND SPECIFICATIONS. 13. NO BLASTING WILL BE ALLOWED WITHIN THIS PROJECT.
- 14. THE APPROVAL OF THIS PLAN SHALL IN NO WAY GRANT PERMISSION BY THE COUNTY FOR THE CONTRACTOR TO TRESPASS ON OFF-SITE PROPERTIES.
- 15. THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF COMPLY WITH OTHER APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.
- 16. ALL UTILITIES NOTED TO BE RELOCATED OR REMOVED SHALL BE AT THE CONTRACTORS EXPENSE, TO INCLUDE ALL POLES AND
- STRUCTURES AS REQUIRED. ALL POLES REQUIRED TO BE RELOCATED MUST ME MOVED PRIOR TO CONSTRUCTION. THESE PLANS MAKE NO REPRESENTATION AS TO THE SUBSURFACE CONDITIONS AND THE PRESENCE OF SUBSURFACE WATER OR THE
- NEED FOR SUBSURFACE DRAINAGE FACILITIES. 18. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING ALL NECESSARY INSPECTIONS.
- 19. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE SAFE CONSTRUCTION SITE AND COMPLYING WITH ALL OSHA REGULATION.
- EMERGENCY VEHICLE ACCESS SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION.
- 21. ALL FINISHED GRADING, SEEDING, SODDING OR PAVING SHALL BE DONE IN SUCH A MANNER TO PRECLUDE THE PONDING OF WATER. 22. THE ENGINEER SHALL NOT HAVE CONTROL OVER OR CHARGE OF AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK SHOWN ON THESE PLANS. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SCHEDULE OR FAILURE TO CARRY OUT THE WORK. THE ENGINEER IS NOT RESPONSIBLE FOR ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTOR, OR THEIR AGENTS OR FMPLOYFES. OR OF ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK.
- 23. PRIOR TO CONSTRUCTION, A TRAIL STAKEOUT WALK THROUGH WITH THE CONTRACTOR, PARK AUTHORITY, AND A REPRESENTATIVE FROM THE URBAN FOREST MANAGEMENT DIVISION WILL TAKE PLACE. WHERE POSSIBLE AND/OR APPROPRIATE, THE TRAIL WILL BE SHIFTED SLIGHTLY TO AVOID TREES AND UNIQUE VEGETATION.
- THE PROPOSED TRAIL IS A COUNTYWIDE TRAILS PLAN DESIGNATED TRAIL THAT IS PARTIALLY LOCATED ON LAND OWNED AND MAINTAINED BY THE FAIRFAX COUNTY PARK AUTHORITY.
- 25. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO GRAVES OR BURIAL GROUNDS LOCATED ON THIS SITE.
- 26. THERE SHALL BE NO STORAGE OF HERBICIDES, PESTICIDES OR TOXIC HAZARDOUS SUBSTANCES AS SET FORTH IN TITLE 40, CODE OF
- FEDERAL REGULATIONS (CFR), PARTS 116.4 AND 261.30 ET. SEQ., IN THE FLOODPLAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING THE SITE FROM UNAUTHORIZED ACCESS AT ALL TIMES DURING

ADA ACCESS NARRATIVE

ADA ACCESS TO THE PROPOSED TRAIL IS PROVIDED VIA ASHGROVE LANE. THE LENGTH OF THE PROPOSED TRAIL IS ADA ACCESSIBLE WITH SLOPES NOT EXCEEDING 5%.

UTILITY NOTES

- 1 THE UTILITY INFORMATION SHOWN ON THESE PLANS IS TAKEN FROM INFORMATION PROVIDED BY AN UNDERGROUND UTILITY DESIGNATING AND LOCATING COMPANY AND IN SOME CASES, FROM INFORMATION RECEIVED FROM THE UTILITY COMPANIES. THE DEPARTMENT OF PUBLICS WORKS AND ENVIRONMENTAL SERVICES DOES NOT GUARANTEE THAT THE UTILITY INFORMATION SHOWN ON THE PLANS IS COMPLETE OR ACCURATE. THE CONTRACTOR MUST VERIFY THE UTILITY LOCATIONS PRIOR TO CONSTRUCTION. ALL EXISTING UNDERGROUND UTILITIES SHALL BE MARKED IN THE FILED BY MISS UTILITY PRIOR TO CONSTRUCTION. THE
- CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING THE FIELD MARKING OF UTILITIES WITH MISS UTILITY. ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF ANY
- CONSTRUCTION IN THE VICINITY OF THESE UTILITIES. THE CONTRACTOR SHALL CONFORM TO THE PROVISIONS AS SPECIFIED IN THE CURRENT VIRGINIA ADMINISTRATIVE CODE (VAC) SECTION 20 VAC 5-309-140, EXCAVATOR'S RESPONSIBILITIES TO AVOID DAMAGE, DISLOCATING OR DISTURBANCE OF UTILITY LINES,
 - AS FOLLOWS: "ANY PERSON EXCAVATING AROUND UNDERGROUND UTILITY LINES SHALL TAKE ALL REASONABLE STEPS TO PROTECT SUCH
 - UTILITY LINES. THESE STEPS SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
 - A THE FXCAVATOR SHALL PLAN THE EXCAVATION IN SUCH A MANNER TO AVOID DAMAGE TO, AND MINIMIZE INTFRFFRENCE WITH. UNDERGROUND UTILITY LINES IN AN NEAR THE CONSTRUCTION AREA.
 - THE EXCAVATOR SHALL EXPOSE THE UNDERGROUND UTILITY LINE TO ITS EXTREMITIES BY HAND DIGGING WITHIN THE EXCAVATION AREA WHEN EXCAVATION IS EXPECTED TO COME WITHIN TWO FEET OF THE MARKED LOCATION OF THE UNDERGROUND UTILITY LINE.
 - THE EXCAVATOR SHALL NOT UTILIZE MECHANIZED EQUIPMENT WITHIN TWO FEET OF THE EXTREMITIES OF ALL EXPOSED UTILITY LINES.
 - THE EXCAVATOR SHALL MAINTAIN A REASONABLE CLEARANCE., TO INCLUDE THE WIDTH OF THE UTILITY LINE, IF KNOWN, PLUS 24 INCHES, BETWEEN THE MARKED OR STAKED LOCATION OF AN UNDERGROUND UTILITY LINE AND THE CUTTING EDGE OR POINT OF ANY MECHANIZED EQUIPMENT, CONSIDERING THE KNOWN LIMIT OF CONTROL OF THE CUTTING EDGE OR POINT TO AVOID DAMAGE TO THE UTILITY LINE.
 - E. THE EXCAVATOR SHALL PROVIDE PROPER SUPPORT FOR THE UNDERGROUND UTILITY LINES DURING EXCAVATION ACTIVITIES. DURING BACKFILL OPERATIONS, THE EXCAVATOR SHALL USE THE SAME OR SIMILAR BACKFILL MATERIAL THAT WAS ORIGINALLY AROUND THE UTILITY LINE, ENSURE THERE IS PROPER COMPACTION AROUND THE UTILITY LINE, PROTECT ALL TRACER WIRES, AND PROTECT OR REPLACE WARNING TABLES."
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT EXISTING UTILITIES ARE DISCONNECTED, PRIOR TO CLEARING THE SITE OF TREES, BUILDING, FOUNDATIONS, ETC. WITHIN THE LIMITS OF CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS INDICATED ON THE CONSTRUCTION PLANS.
- THE CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED CONSTRUCTION, EXCAVATION AT LEAST 2 WORKING DAYS, BUT NOT MORE THAN 10 WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION IN ACCORDANCE WITH CHAPTER 63 OF FAIRFAX COUNTY CODE. NAMES AND TELEPHONE NUMBERS OF THE OPERATORS OF UNDERGROUND UTILITY LINES IN FAIRFAX APPEAR ON THIS SHEET. THESE NUMBERS WILL ALSO BE USED TO SERVE EMERGENCY CONDITION NOTICE AS REQUIRED BY CHAPTER 63 OF THE FAIRFAX COUNTY CODE.

UTILITIES <u>EMERGNECY</u> PRIMARY UTILITY COMPANIES AMERICAN TELEPHONE & TELEGRAPH CO. 1-800-241-3624 1-800-543-8911/703-631-5363 (METRO) COLUMBIA GAS OF VIRGINIA 1-800-835-7191 (24 HRS) COLUMBIA GAS TRANSMISSION CORP. 1*–800–926–2728* COLONIAL PIPELINE CO. 703-313-6527 OR 703-313-6531 COX COMMUNICATIONS 703-591.2606 DOMINION VIRGINIA POWER FAIRFAX COUNTY WATER AUTHORITY *703–698–5613* 703-323-1211 FAIRFAX CO. WASTEWATER COLLECTION DIVISION 703–385–7915 OR 703–385–7924 (24 HRS) FAIRFAX CITY WATER SERVICE 703–691–2131 OR 911 FAIRFAX COUNTY PUBLIC SAFETY 703-248-5044 FALLS CHURCH PUBLIC UTILITES/WATER 1-800-852-6700 MCI, INTERNATIONAL 1-800-624-9675/1-972-656-5474 MCI, WORLD METROPOLITAN FIBER SYSTEMS 703*–852–6700* 703-335-0500 NORTHERN VIRGINIA ELEC. CO-OP 1-800-440-8475 (24 HRS) TRANSCO GAS PIPELINE CO. 703-435-6860 STATION 185 (703-368-3255) TOWN OF HERNDON PUBLIC WORKS 703-255-6381 AFTER 5PM, 703-255-6385 TOWN OF VIENNA WATER SERVICE 1-800-521-0579 (24 HRS) SPRINT (GLOBAL ONE)

WASHINGTON GAS <u>FIBER OPTIC COMPANIES</u> ABOVENET COMMUNICATIONS COMCAST COMMUNICATIONS IN RESTON

SMART TRAFFIC SIGNAL SYSTEM

VERIZON (BELL ATLANTIC)

VERIZON (SOUTH)

ELANTIC TELECOM/CAVALIER TELEPHONE COMPANY FIBERLIGHT, LCC FIBERGATE VERIZON BUSINESS (FORMERLY MCI) QUEST GOVERNMENT SERVICES

QWEST COMMUNICATIONS YIPES COMMUNICATION, INC XSPEDIUS COMMUNICATIONS XO COMMUNICATIONS

BY

APPROVED

1*–888–636–2778* 1-888-634-1840 (PAGER) (AFTER HOURS 703-841-7700) 1-888-662-5700 1-800-672-0181 *703-822-9743* 703–391–5782; (CELL 703–598–1721) 1-800-388-6460 610-613-0979 1-800-521-0579 1-877-740-6600 1*–800–937–7473*

1-800-275-2355/703-954-2222 (24 HRS)

703–750–1000 (GAS LEAK 703–750–4831)

1-800-745-1944 (EMERGENCY REPAIR)

703-383-2790

1-866-295-9696

FAIRFAX COUNTY PARK AUTHORITY Lic. No. 039407

DESCRIPTION

TAX MAP: 28-2 & 29-

12055 GOVERNMENT CENTER PARKWAY, SUITE 406 FAIRFAX, VA., 22035-1118

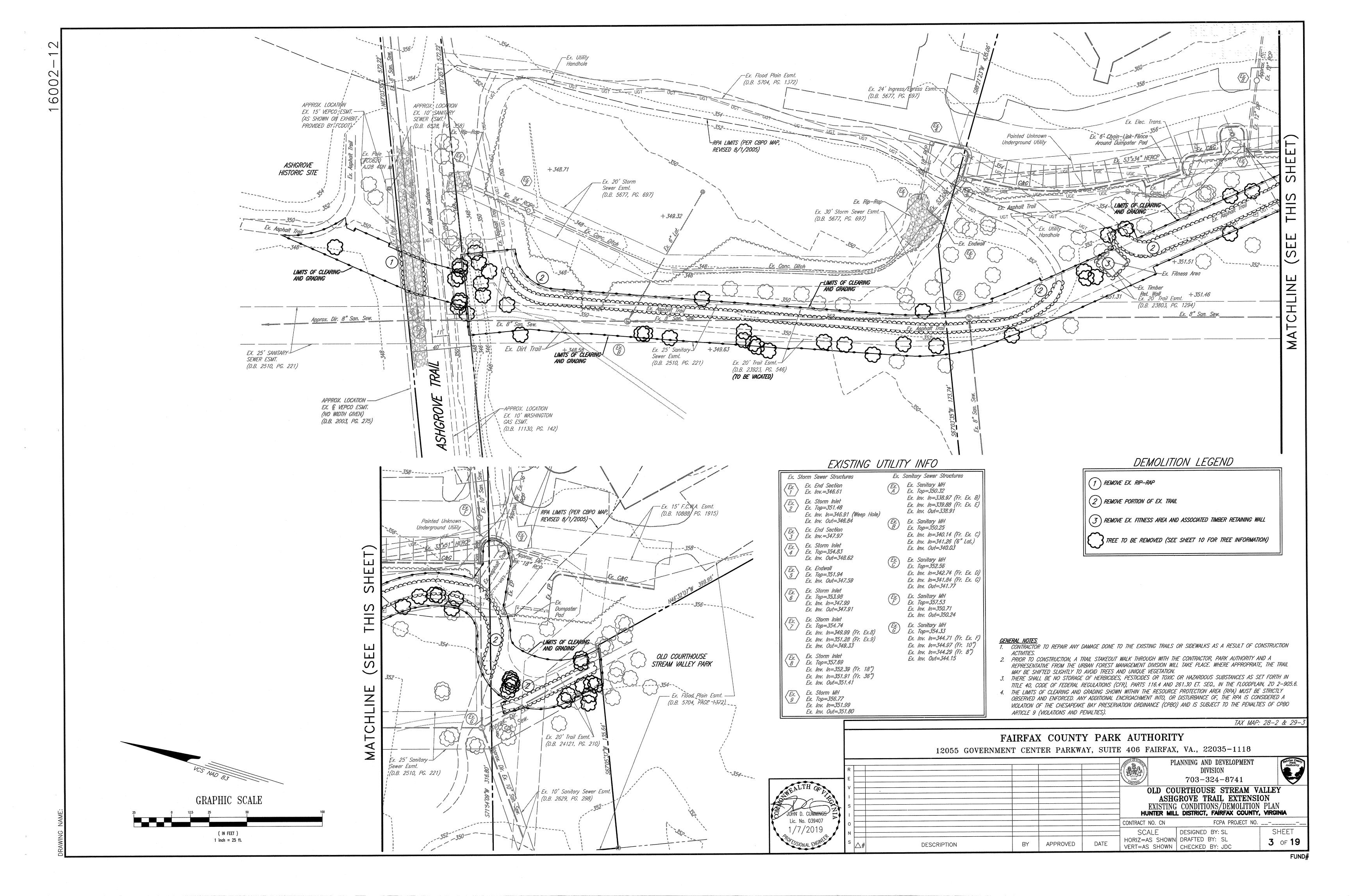
PLANNING AND DEVELOPMENT DIVISION 703-324-8741 OLD COURTHOUSE STREAM VALLEY

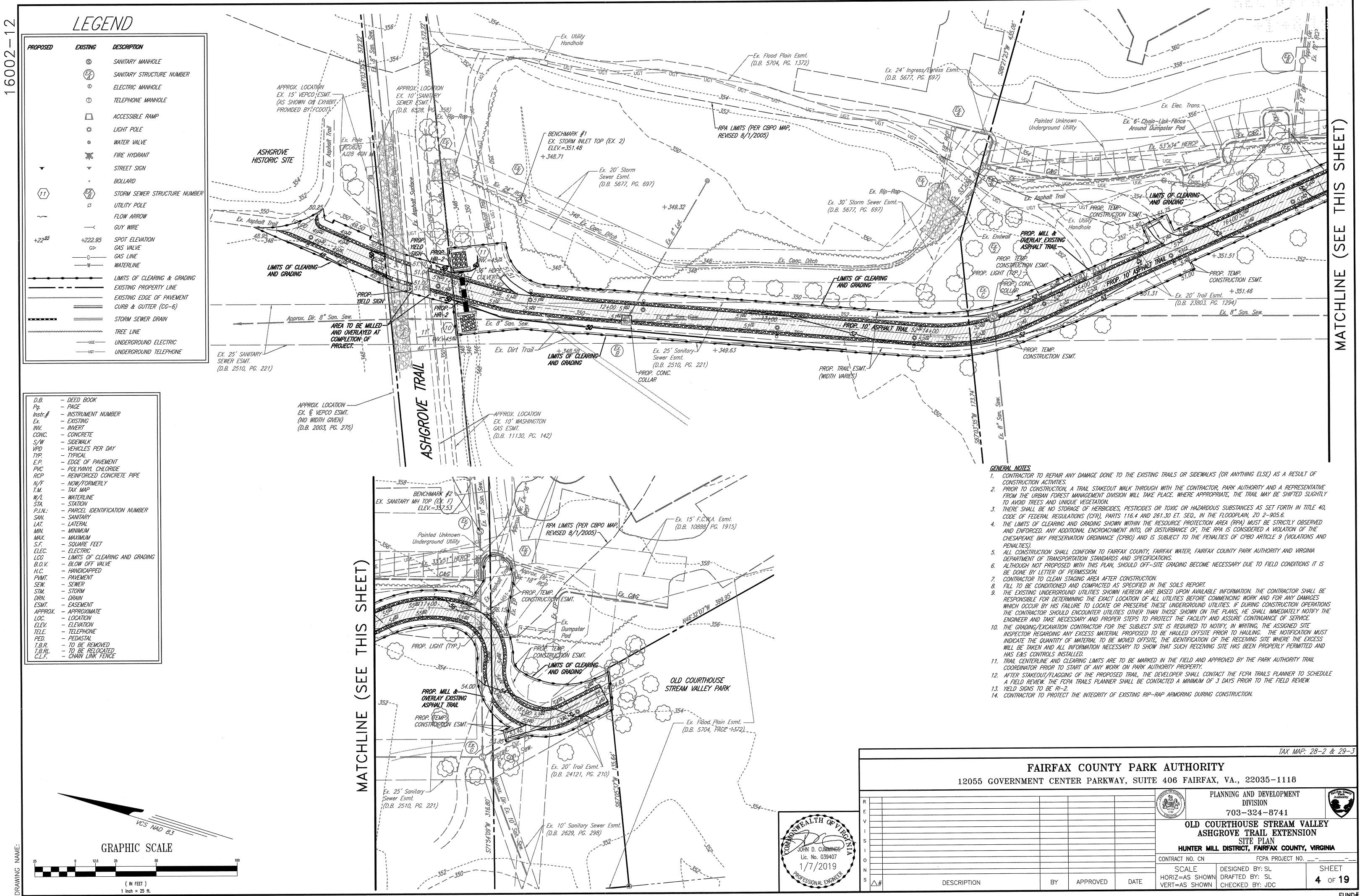
ASHGROVE TRAIL EXTENSION GENERAL NOTES HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

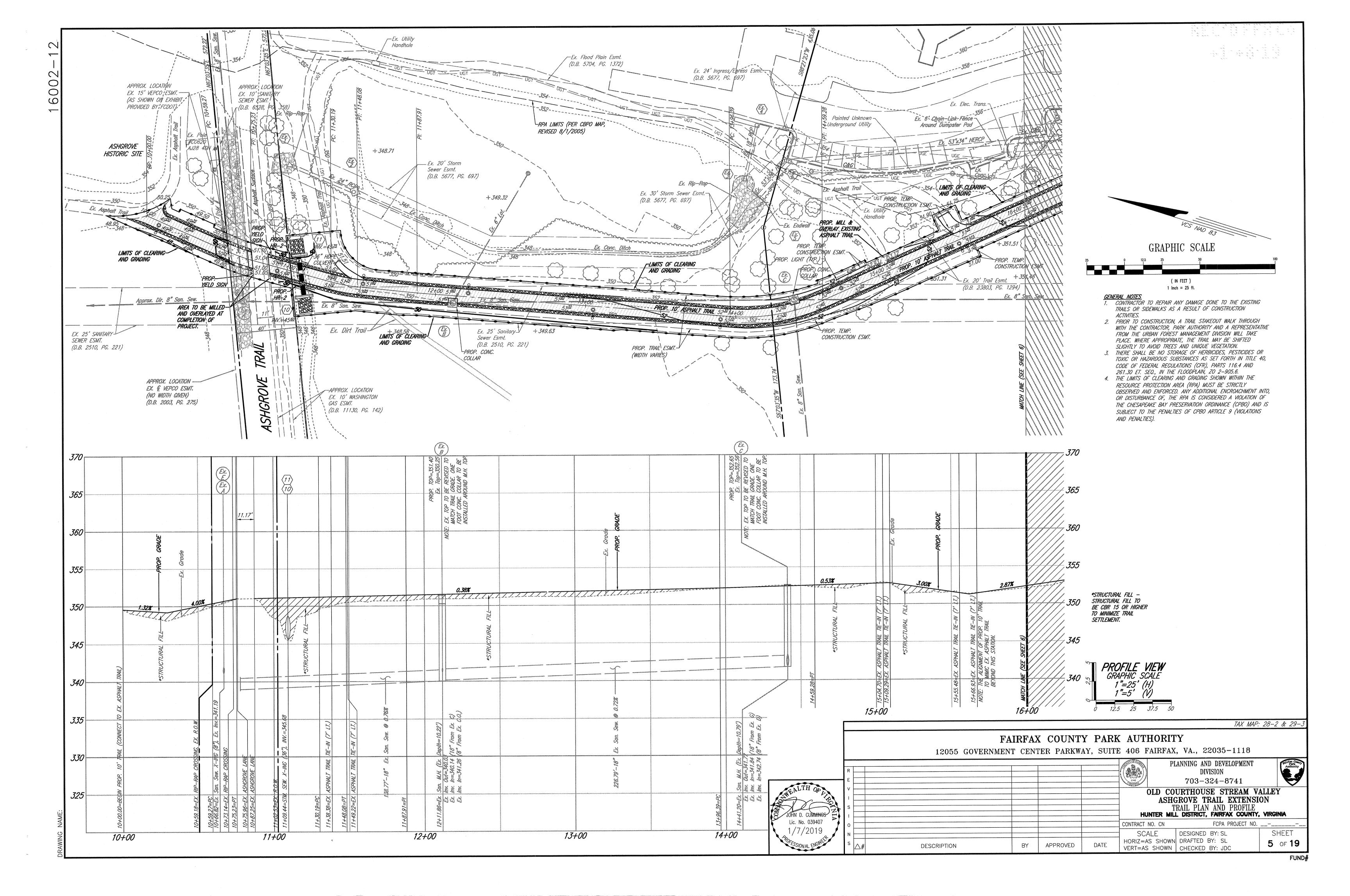
CONTRACT NO. CN FCPA PROJECT NO. _____ SCALE DESIGNED BY: SL HORIZ=AS SHOWN DRAFTED BY: SL VERT=AS SHOWN | CHECKED BY: JDC

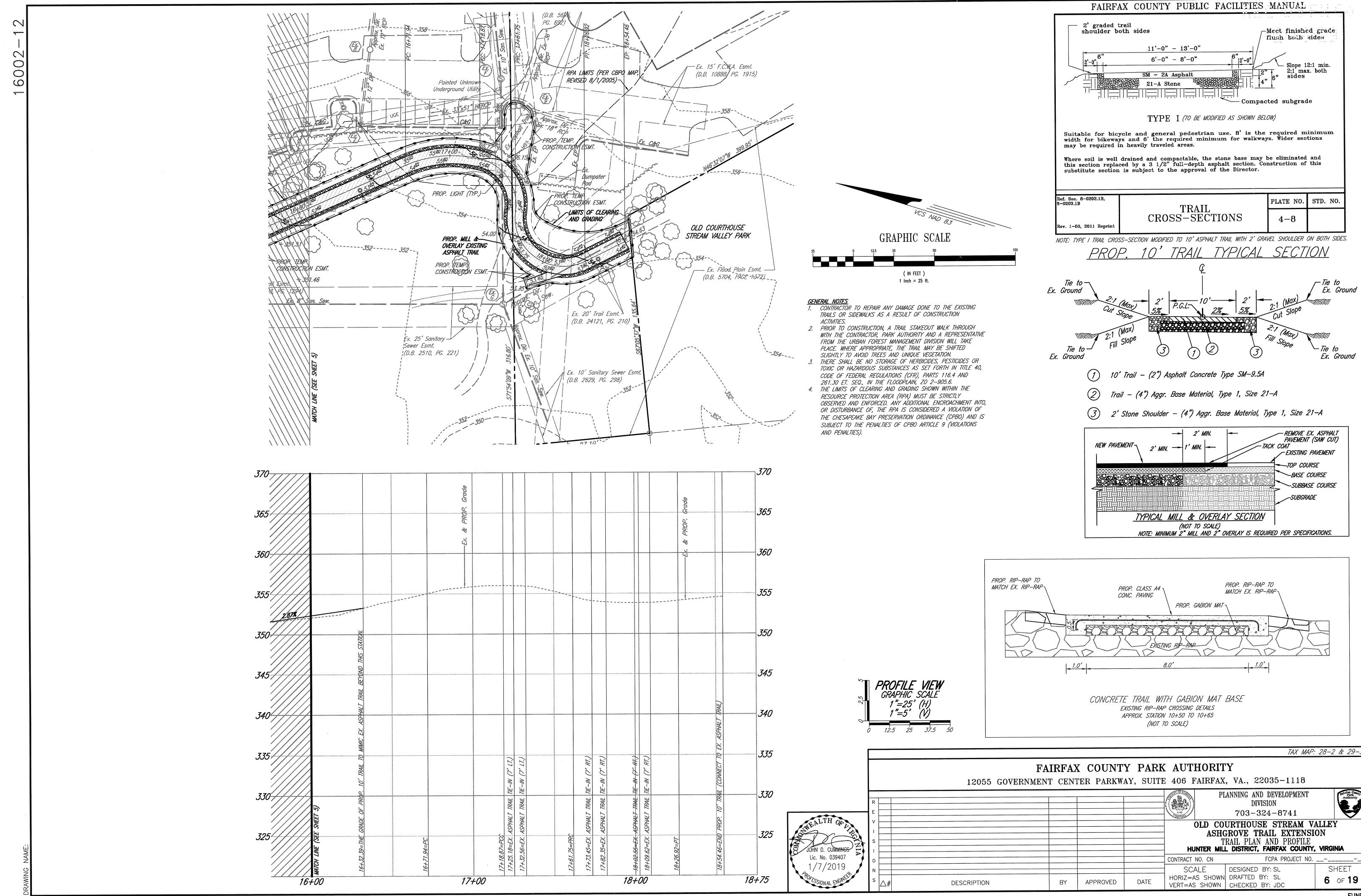
2 of 19 FUND#

SHEET









FUND#

LETTER TO INDUSTRY (LTI) #08-18

High Density Polyethylene Pipe and Inspection Requirements for Storm Drain Pipe: Revises the PFM to incorporate standards related to the use of HDPE for certain storm drainage applications and incorporates standards, including AASHTO's recommendations, pertaining to the field inspection of HDPE, concrete and CMP pipe installations. The amendment includes the following provisions:

- 1. HDPE pipe must conform to the requirements of AASHTO M 294 Type S. The maximum size permitted is 48 inches.
- 2. Joints for HDPE pipe must be watertight meeting a pressure test of 10.8 psi per ASTM D 3212 and use a bell and spigot design with a rubber gasket meeting the requirements of ASTM F 477, "Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe." These joints are designed to prevent infiltration of soil and exfiltration of storm
- 3. Installations and pipe cover for HDPE pipe must be in accordance with ASTM D 2321-"Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications", the manufacturer's recommendations, and VDOT standards, whichever are more stringent. Pipe bedding and backfill must conform to the standards set forth in Plate #93-6 (#93M-6).
- 4. Filter fabric must surround the aggregate fill material for HDPE pipe when there is a high water table or where the movement of groundwater can cause the migration of fines from the soil envelope.
- 5. Flexible waterstops, resilient connections, or other flexible systems to make watertigh connections to manholes and other structures must be provided for HDPE pipe. Grouting between the thermoplastic pipe and the manhole and other structures is not permitted.
- 6. All storm sewer pipes must undergo visual and video inspections, installation deflection testing, and pipe evaluations by the Developer to ensure proper performance.
- 7. Visual Inspection for HDPE: During the installation process, the developer must provide for full-time visual inspection of high density polyethylene (HDPE) storm sewer pipe. Installation and inspection of bedding and backfill materials, as well as their placement and compaction, must meet the PFM requirements and Section 30.5.6.1 (Visual Inspection) of the American Association of State and Highway Transportation Official's (AASHTO's) Load and Resistance Factor Design, Bridge Construction Specifications. Visual inspection must be performed by an independent inspection and testing agency or design professional licensed in the Commonwealth of Virginia.
- 8. Video Inspection for all pipes: No sooner than thirty days after completion of installation and final fill and pavement or alternative section, a video record must be performed by the developer on all storm sewer pipes unless deemed unnecessary by the Environmental and Facilities Inspections Division (County inspector), DPWES.
- 9. HDPE Installation Deflection Testing: No sooner than thirty days after completion of installation and final fill and pavement or alternative pavement section, HDPE pipe must be evaluated for deflection using a mandrel or other device that can physically verify the dimension of the pipe as approved by the Director. The pipe must be evaluated by the developer to determine whether the internal diameter of the barrel has been reduced more than five percent. A minimum of ten percent of the total number of pipe runs representing at least ten percent of the total length of installed pipe must be tested for deflection, in addition to all areas that were identified in the visual inspection as having deflection. Deflection testing must be conducted by the Developer in the presence of a County inspector, or by an independent inspection and testing agency or design professional licensed in the Commonwealth of Virginia. Testing must be conducted in the locations specified by the County inspector.
- 10. Pipe Evaluations for concrete and HDPE: Pipe inspection must be in accordance with Sections 27.6 (Field Inspection) and 30.5.6.2 (Installation Deflection) of AASHTO's Load and Resistance Factor Design, Bridge Construction Specifications as determined by the Director. For instances where cracks are wider than 0.01 inches (0.25 millimeters) for concrete pipe, and where pipe deflection exceeds five percent of the inside diameter of HDPE pipe, an evaluation must be conducted by the developer's design professional licensed in the commonwealth of Virginia and submitted to the County for review and approval considering the severity of the deflection (HDPE), structural integrity, environmental conditions, and the design life of the pipe. Repairs, replacement and remediation must be noted on the inspection report and made in a manner acceptable to the Director. Copies of inspection and mandrel test results, and video record that depict construction and installation of pipes in compliance with PFM standards must be provided to the County inspector for review and record within two weeks of the time the video was taken. The video recording shall be provided in a format acceptable to the Director. The independent inspection and testing agency or design professional licensed in the Commonwealth of Virginia must certify that the required testing and inspections have been completed and construction is in conformance with the approved plans, VDOT specifications and standards of the PFM.

DESIGN OF OUTLET PROTECTION FROM A ROUND PIPE FLOWING FULL MINIMUM TAILWATER CONDITION (Tw < 0.5 DIAMETER) USE L=10' Discharge, ft³/sec. 500 Q=8.45 CFS

RIP RAP OUTLET SPECIFICATIONS

OUTFALL NUMBER	PIPE DIAMETER Do — (ft)	3 x Do	Q (cfs)	V (fps)	D ₅₀ (feet)	RIP RAP DEPTH (ft)	APRON LENGTH L – (ft)	APRON WIDTH W — (ft)	APPROX. AREA (sf), REQ'D	APPRO AREA (sf) PROV.
10	3.00	9.00	8.45	1.39	0.5	2.5'	10'	9′ *	90	90

36" HDPE CULVERT @ STATION 11+00

(IN FEET)

1 inch = 10 ft.

Solve For: Headwater Elevation

DIVE FOI: HEADWAIEF EIEVAIIO					CONTRACTOR SHALL BE RESPONSIBLE
Culvert Summary					FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE
Allowable HW Elevation	348.75 ft	Headwater Depth/Height	0.77		COMMENCING WORK AND FOR ANY
Computed Headwater Eleva	348.05 ft	Discharge	8.45	cfs	DAMAGES WHICH OCCUR BY HIS
Inlet Control HW Elev.	348.00 ft	Tailwater Elevation	348.00	ft	FAILURE TO LOCATE OR PRESERVE.
Outlet Control HW Elev.	348.05 ft	Control Type	Outlet Control		IF DURING CONSTRUCTION OPERATION THE CONTRACTOR SHOULD ENCOUNTE
Grades				······	UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER
Upstream invert	345.75 ft	Downstream Invert	345.60	ft	AND TAKE NECESSARY AND PROPER
Length	27.00 ft	Constructed Slope	0.005556	ft/ft	STEPS TO PROTECT THE FACILITY AND ASSURE CONTINUANCE OF SERVICE.
Hydraulic Profile					NOTE: ALL CONSTRUCTION SHALL CONFORM
Profile	S1	Depth, Downstream	2.40	ft	TO FAIRFAX COUNTY AND VIRGINIA
Slope Type	Steep	Normal Depth	0.80		DEPARTMENT OF TRANSPORTATION
Flow Regime	Subcritical	Critical Depth	0.92		STANDARDS AND SPECIFICATIONS.
Velocity Downstream	1.39 ft/s	Critical Slope	0.003318	ft/ft	
					NOTE:
			***************************************		TEST PITS SHALL BE REQUESTED A MINIMUM OF 48 HOURS`IN ADVANCE
Section					FOR THOSE UTILITIES REQUIRING THE
Section Shape	Circular	Mannings Coefficient	0.012		TON THOSE UTEINES REQUIRING THE
SectionMattedHDPE (Smo	oth Interior)	Span	3.00	ft	NOTE:
Section Size	36 inch	Rise	3.00	ft	ALL CLEARANCES ARE MEASURED
Number Sections	1				FROM OUTSIDE DIAMETER TO OUTSIL DIAMETER.
Outlet Control Properties					NOTE:
Outlet Control HW Elev.	348.05 ft	Upstream Velocity Head	0.03	ft	NOTE: TRENCHING, BEDDING AND BACKFILL
Ke	0.50	Entrance Loss	0.02	ft	FOR STORM SEWER SHALL BE DON. IN ACCORDANCE WITH V.D.O.T. PB-1
Inlet Control Properties					STANDARDS AND SPECIFICATIONS.
	348.00 ft	Flow Control	Unsubmerged		
Inlet Control HW Elev.		Area Full	-	ft ²	PROFILE VIEW
Inlet Type Square edge	wiiesowaii	Area Full	7,8	11	CDADUIC CCALE

HDS 5 Chart

HDS 5 Scale

Equation Form

DESCRIPTION

0.00980

2.00000

0.03980

0.67000

THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE. IF DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE CONTINUANCE OF SERVICE. ALL CONSTRUCTION SHALL CONFORM TO FAIRFAX COUNTY AND VIRGINIA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS. TEST PITS SHALL BE REQUESTED A MINIMUM OF 48 HOURS IN ADVANCE FOR THOSE UTILITIES REQUIRING THEM. 335 ALL CLEARANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.

FOR STORM SEWER SHALL BE DONE IN ACCORDANCE WITH V.D.O.T. PB-1 STANDARDS AND SPECIFICATIONS. PROFILE VIEW GRAPHIC SCALE 1"=5"

10+00 11+00 TAX MAP: 28-2 & 29-

DIVISION

HORIZ=AS SHOWN DRAFTED BY: SL

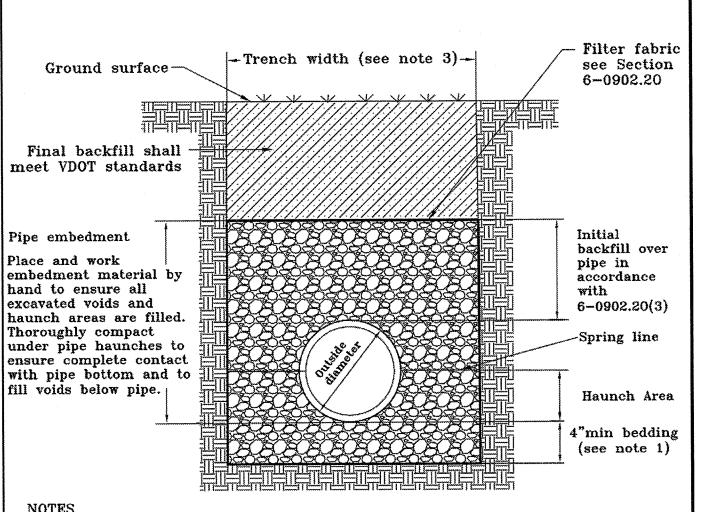
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FAIRFAX COUNTY PARK AUTHORITY 12055 GOVERNMENT CENTER PARKWAY, SUITE 406 FAIRFAX, VA., 22035-1118

APPROVED

PLANNING AND DEVELOPMENT 703-324-8741 OLD COURTHOUSE STREAM VALLEY ASHGROVE TRAIL EXTENSION HDPE CULVERT ANALYSIS HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA Lic. No. 039407 CONTRACT NO. CN 1/7/2019 DESIGNED BY: SL SCALE

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



1. Bedding shall be in accordance with VDOT standards unless specified on the

2. Backfill material shall be placed alongside the pipe in uniform layers in lifts not to exceed 6" in depth. Backfill material shall be VDOT aggregate No. 25 or 26, aggregate base material size 21A or 21B, or flowable fill. Compaction shall meet VDOT standards and be in accordance with PFM Section 4-0503 for minimum required site density testing.

3. Trench width shall be specified by the Engineer and meet VDOT standards. Refer to ASTM D2321 for procedures for trench excavations that are especially important in flexible thermoplastic pipe installations such as support of trench walls and trench boxes. Moveable trench boxes shall not be used below the pipe embedment per ASTM D2321.

NOTE: HDPE PIPE SHALL MEET ALL REQUIREMENTS SET FORTH BY FAIRFAX COUNTY LTI #08-18.

Ref. Sec. 6-0902.20(3)	HDPE PIPE TRENCH	PLATE NO.	STD. NO.
Rev. 1-03, 2011 Reprint		93-6	

SHEET

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FCPA PROJECT NO. _____

345

PROJECT OVERVIEW:

THIS PROJECT PROPOSES AN ADA COMPLIANT TRAIL CONNECTING THE EXISTING TRAIL LOCATED IN THE OLD COURTHOUSE STREAM VALLEY PARK RUNNING PARALLEL TO THE OLD COURTHOUSE SPRING BRANCH TO THE EXISTING TRAIL LOCATED ON THE ASHGROVE HISTORIC SITE. THIS PROJECT WILL INCLUDE A STREAM CROSSING OF AN UNNAMED TRIBUTARY VIA A 36" HDPE CULVERT. THE UNNAMED TRIBUTARY IS THE OUTFALL FROM AN EXISTING DRY POND (DP0186). THE SITE IS LOCATED WITHIN THE DIFFICULT RUN WATERSHED. THE TOTAL DISTURBED AREA ASSOCIATED WITH THIS PROJECT IS 0.550 ACRES. THE SITE IS LOCATED EAST OF THE INTERSECTION OF IRVIN STREET (ROUTE 831) AND ASHGROVE LANE. THE PROJECT PROPOSES ALL NECESSARY TEMPORARY AND PERMANENT EROSION CONTROL MEASURES TO MEET STATE AND LOCAL REGULATIONS.

PRIMARY OUTFALL #1 (0-1)

THE TRAIL WILL DRAIN VIA SHEET FLOW DIRECTLY INTO THE OLD COURTHOUSE SPRING BRANCH. ACCORDING TO USGS DATA, APPROXIMATE DRAINAGE AREA TO OLD COURTHOUSE SPRING BRANCH IS 1.45 SQUARE MILES WHICH IS EQUIVALENT TO 928 ACRES. THE DISTURBED AREA PROPOSED BY THE PROJECT IS 0.550 ACRES WITH INSIGNIFICANT INCREASE IN IMPERVIOUS AREA. THE OUTFALL'S ULTIMATE DRAINAGE AREA IS FAR GREATER THAN 100 TIMES THE PROJECT DISTURBED AREA. THE MAGNITUDE OF THE DISTURBED AREA COMPARED TO THE OUTFALL'S ULTIMATE DRAINAGE AREA IS INSIGNIFICANT, THEREFORE IT IS OUR PROFESSIONAL OPINION THAT OUTFALL #1 (0-1) IS AN ADEQUATE OUTFALL.

OVERLAND RELIEF

COMPLIANCE WITH PFM 6-1502.2, OVERLAND RELIEF EXISTS BASED ON THE PROPOSED GRADING OF THE TRAIL AND THE PROXIMITY OF THIS PROJECT TO OLD COURTHOUSE SPRING BRANCH. IT IS THE PROFESSIONAL OPINION OF THIS FIRM THAT NO EXISTING BUILDINGS OR FACILITIES ARE IN DANGER OF FLOODING CONDITIONS DUE TO THE CREATION OF THIS TRAIL.

SUMMARY

THIS PROJECT WILL CONTINUE TO HONOR ALL EXISTING MAJOR DRAINAGE DIVIDES. NO DIVERSION OF WATER FROM ONE MAJOR WATERSHED TO ANOTHER IS PROPOSED WITH THIS PROJECT. NO DETRIMENTAL EFFECTS TO OLD COURTHOUSE SPRING BRANCH WILL OCCUR FOLLOWING CONSTRUCTION OF THE IMPROVEMENTS PROPOSED WITH THIS PROJECT IN COMPLIANCE WITH PFM 6-1502.2. IT IS THE PROFESSIONAL OPINION OF THIS FIRM THAT OLD COURTHOUSE SPRING BRANCH IS ADEQUATE AND THERE WILL BE NO ADVERSE IMPACTS TO THE DOWNSTREAM DRAINAGE SYSTEM AS A RESULT OF THE PROPOSED IMPROVEMENTS. IN THE EVENT OF THE 100-YEAR STORM EVENT THERE WILL BE NO FLOODING OF EXISTING DOWNSTREAM DWELLINGS OR BUILDINGS DUE TO THE INCREASED IMPERVIOUS AREA PROPOSED WITH THIS PROJECT.

SWM NARRATIVE

A STORMWATER DETENTION EXCEPTION REQUEST WAS SUBMITTED TO FAIRFAX COUNTY WITH THE FIRST SUBMISSION OF THIS PLAN. SEE SHEET 18.

BMP NARRATIVE

BMP FOR THIS PROJECT WILL BE RESOLVED BY THE PURCHASE OF PHOSPHORUS CREDITS. 0.42 LBS. OF CREDITS SHALL BE PURCHASED IN ACCORDANCE WITH THE VRRM SPREADSHEET REQUIREMENTS.

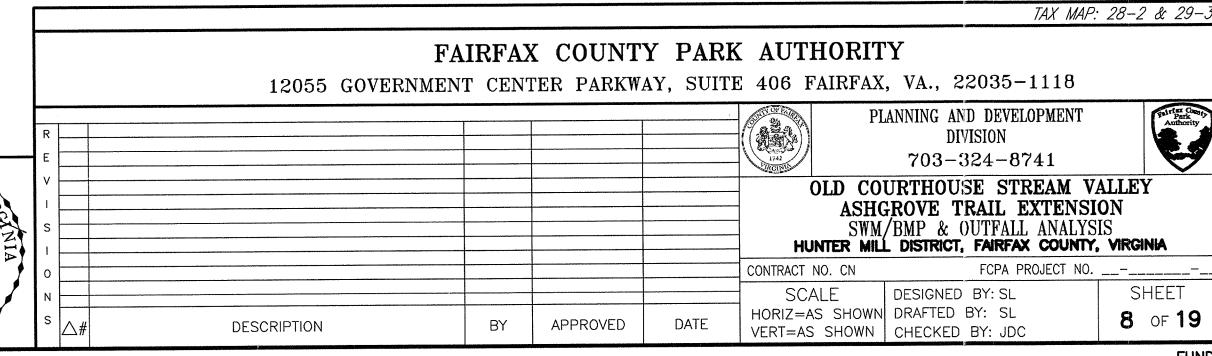
<u>SW-10 CERTIFICATION.</u>

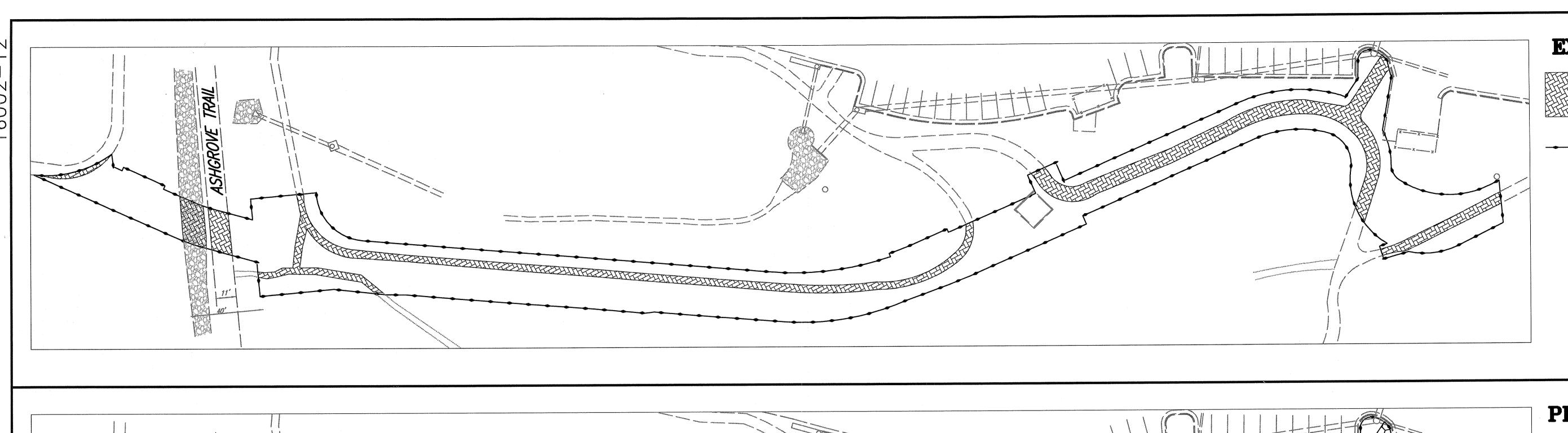
THERE ARE NO WET IMPOUNDMENTS LOCATED WITHIN THE INFLUENCE AREA OF THIS PROJECT.

RPA CERTIFICATION.

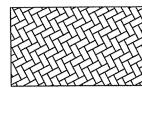
A RESOURCE PROTECTION AREA ENCROACHMENT EXEMPTION REQUEST WAS PREPARED AND SUBMITTED. SEE SHEET 18.

Protect have: Date A Facility A Faci	
Site Information Post-Development Project (Treatment Volume and Loads) Enter Total Disturbed Area (acres) D.555 B.AMP Design Specifications Info 2013 Draft Self & Select D.555 B.AMP Design Specifications Info 2013 Draft Self & Select D.555 B.AMP Design Specifications Info 2013 Draft Self & Select D.555 B.AMP Design Specifications Info 2013 Draft Self & Select D.555 B.AMP Design Specifications Info 2013 Draft Self & Select D.555 B.AMP Design Specifications Info 2013 Draft Self & Select D.555 B.AMP Design Specifications Info 2013 Draft Self & Select D.555 B.AMP Design Specifications Info 2013 Draft Self & Select D.555 B.AMP Design Specifications Info 2013 Draft Self & Select D.555 D	
Enter Total Disturbed Area (acres)	
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Pre-ReDevelopment Land Cover (acres)	
Pre-ReDevelopment Land Cover (acres) Pre-ReDevelopment Land Cover (acres) A Solits B Solits C Solits D Solits Total Pre-Red Development Land Cover (acres) Pre-Red Development Land Cover (acres) Pre-Red Development Land Cover (acres) D Solits D Solits D Solits Total D Solits D Solits	
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Managed Turf Cover (cores) 0.00	
Area Check OK OK OK OK OK OK OK O	
Runoff Coefficients (Rv)	
Annual Rainfall (inches) 43	
September Sept	
Contribution Cont	
Land Cover Summary-Pre Land Cover Summary-Post (Final) Pre-ReDevelopment Listed Adjusted ³ Post-ReDev. & New Impervious Forest/Open Space Cover (acres) Weighted Rv(forest) % Forest Managed Turf Cover (acres) Weighted Rv(turf) Date Cover (acres) Land Cover Summary-Post (Final) Post-ReDevelopment Post-Development Forest/Open Space Cover (acres) O.26 Cover (acres) Weighted Rv(forest) Weighted Rv(forest) Weighted Rv(forest) O.05 Weighted Rv(forest) O.00 Weighted Rv(turf) O.00 Weighted Rv(turf) O.00 Weighted Rv(turf) O.00	
Land Cover Summary-Pre	
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Forest/Open Space Cover (acres)	
Weighted Rv(forest) 0:05 0.05 Weighted Rv(forest) 0.00	
Managed Turf Cover (acres)	
Weighted Rv(turf)	
The state of the s	
Impervious Cover (acres) 0.12 0.12 Impervious Cover (acres) 0.30 ReDev. Impervious Cover (acres) 0.30 Cover (acres) 0.12 New Impervious Cover (acres)	0.18
Rv(impervious) 0,95 0,95 Rv(impervious) 0,95 Rv(impervious) 0,95 Rv(impervious)	0.95
% Impervious 22% 32% % Impervious 54% % Impervious 32%	
Total Site Area (acres) 0.55 0.37 Final Site Area (acres) 0.55 (acres)	
Site Rv 0.24 0.34 Final Post Dev Site Rv 0.53 ReDev Site Rv 0.34	
Treatment Volume and Nutrient Load Treatment Volume and Nutrient Load	
Pre-ReDevelopment Treatment Volume 0.0112 0.0105 Final Post-Development Treatment Volume 0.0244 Treatment Volume 0.0105 Treatment Volume	0.0139
(acre-ft) (acre-ft) (acre-ft)	
Final Post-Development Post-ReDevelopment Post-ReDevelopment Post-Development	
Pre-ReDevelopment Treatment Volume 457 Treatment Volume (cubic feet) Treatment Volume 1,064 Treatment Volume 457 Treatment Volume (cubic feet) Gubic feet)	bic 607
	_
Pre-ReDevelopment TP Load O.31 O.29 Final Post- Development TP Load O.67 Post-ReDevelopment TP Load O.29 Post-Development TP Load O.67 O.29 Post-Development TP Load O.70 Load (Ib/yr)	0.38
(lb/yr) (lb/yr)* (lb/yr)*	
Pre-ReDevelopment TP Load per acre 0.56 9.77 Final Posh-Development TP Load per acre 1.22 Post-ReDevelopment TP Load per acre 0.77	
(ib/acre/yr) (ib/acre/yr) (tb/acre/yr)	
Baseline TP Load (lb/yr) [0.41 lbs/acre/yr applied to pre-redevelopment area excluding pervious (Below Pre- ReDevelopment Load)	
land proposed for new impervious cover)	
TP Load Reduction TP Load Reduction	
Adjusted Land Caver Summary: Required for Redevelopment land cover manus pervious land cover (forest/open space or manuged turf) acreage proposed for new impervious cover. Required for Redevelopment land cover manus pervious land cover (forest/open space or manuged manual land cover manus pervious land cover (forest/open space or manuged manual land cover manus pervious land cover (forest/open space or manuged manual land cover manus pervious land cover (forest/open space or manuged manual land cover manus pervious land cover (forest/open space or manuged manual land cover manus pervious land cover (forest/open space or manuged manual land cover manus pervious land cover (forest/open space or manus pervious land cover manus pervious land cover (forest/open space or manus pervious land cover manus pervious land cove	0.31
Adjusted total acreage is consistent with Post-ReDevelopment acreage (minus acreage)	<u></u>
of new impervious cover).	
Column 1 shows load reduction requirement for new impervious cover (based on new development foad limit, 0.41 lbs/acre/year).	
Post-Development Requirement for Site Area	
TP Load Reduction Required (lb/γr) 0.37	
Linear Project TP Load Reduction Regulred (lb/yr): 0.42	
Nitrogen Loads (Informational Purposes Only)	
Final Post-Development TN Load	
Pre-ReDevelopment TN Load (lb/yr) 2.20 (Past-ReDevelopment & New Impervious) 4.78 (lb/yr)	



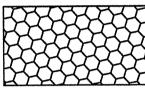


EXISTING CONDITION



EXISTÎNG CONDÎTÎON IMPERVIOUS AREA (0.119 AC.)

PROPOSED CONDITION



PROPOSED CONDITION IMPERVIOUS AREA (0.295 AC.)

IMPERVIOUS AREA SUMMARY PROP. IMP. AREA ADDED IMP. AREA EX. IMP. AREA 0.176 AC. 0.119 AC. 0.295 AC.

FAIRFAX COUNTY PARK AUTHORITY 12055 GOVERNMENT CENTER PARKWAY, SUITE 406 FAIRFAX, VA., 22035-1118 PLANNING AND DEVELOPMENT

DIVISION 703-324-8741 OLD COURTHOUSE STREAM VALLEY ASHGROVE TRAIL EXTENSION
EXISTING & PROPOSED IMPERVIOUS MAP
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

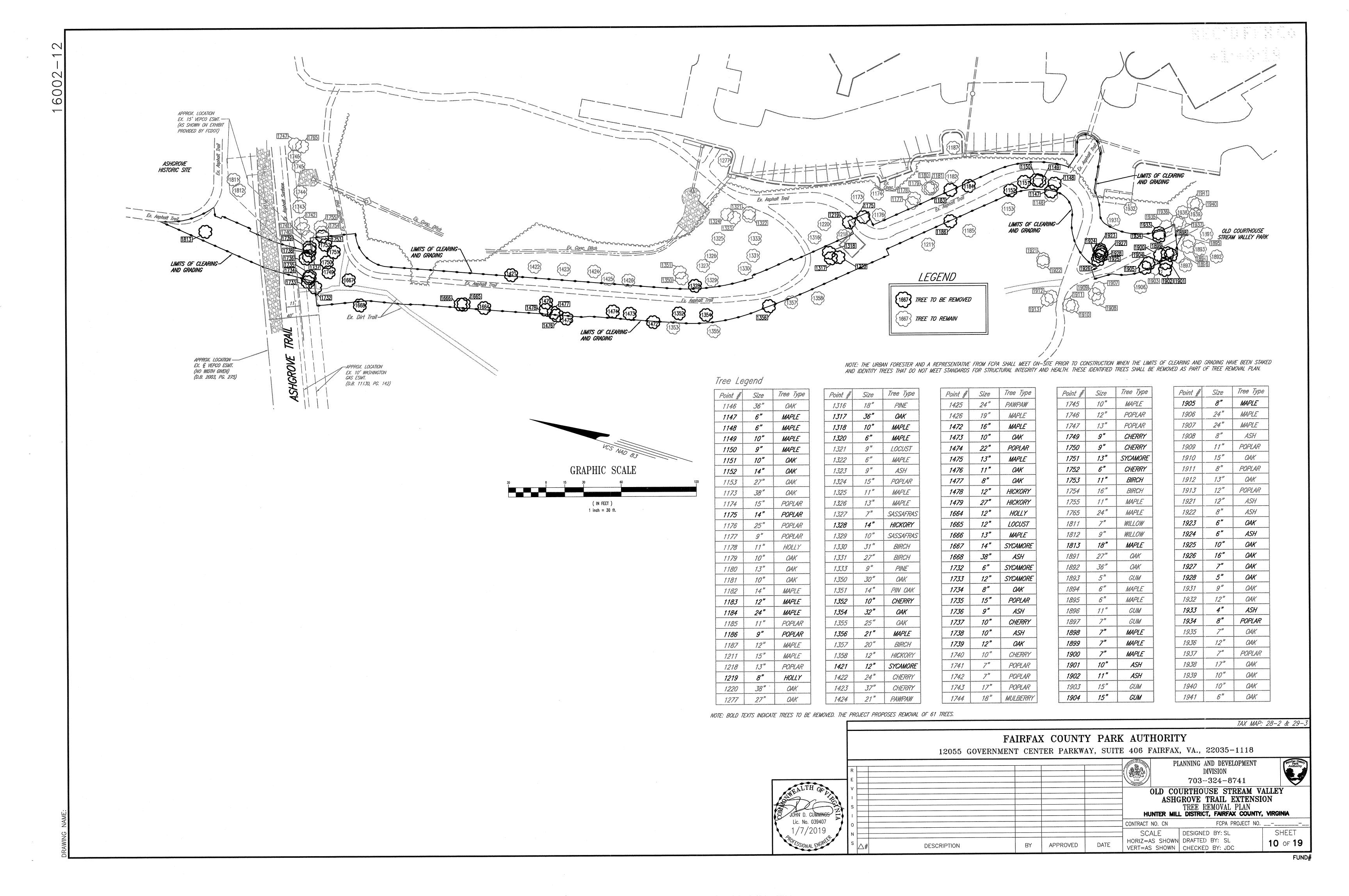
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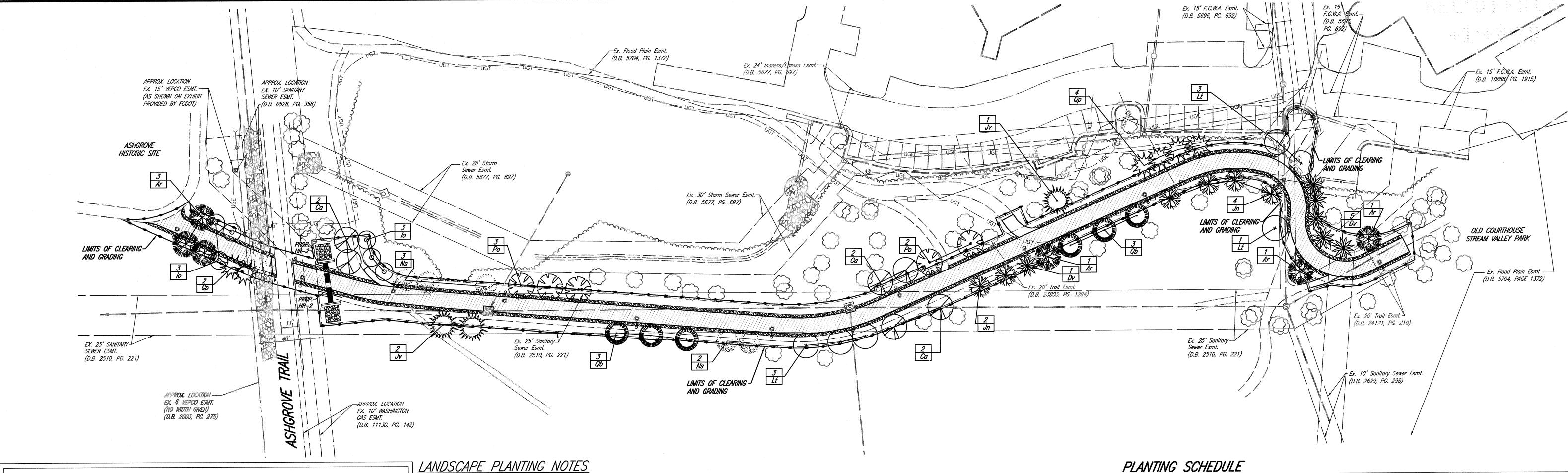
SHEET 9 of 19

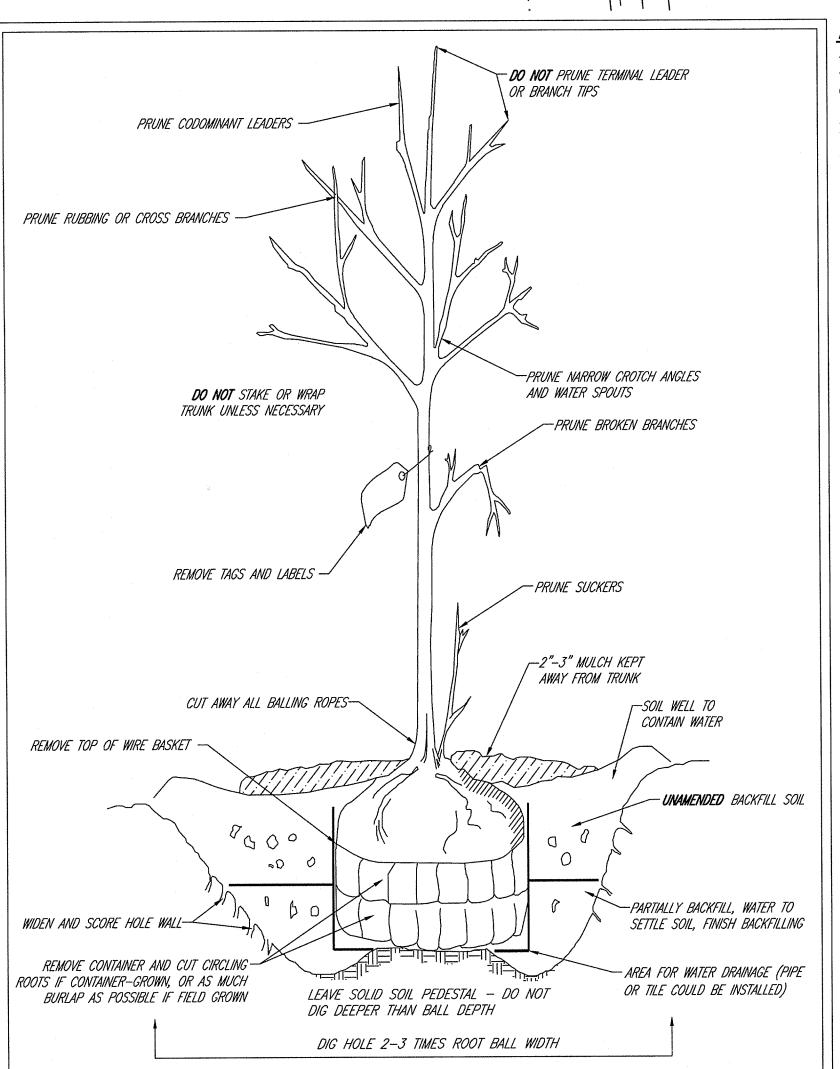
(IN FEET) 1 inch = 30 ft.

SCALE DESIGNED BY: SL HORIZ=AS SHOWN DRAFTED BY: SL VERT=AS SHOWN CHECKED BY: JDC APPROVED DESCRIPTION

TAX MAP: 28-2 & 29-3







<u>TREE PLANTING DETAIL</u>

(NOT TO SCALE)

- PLANT MATERIAL STANDARDS SIZE AND STANDARDS OF PLANT MATERIALS SHALL CONFORM TO CURRENT AMERICAN NURSERY & LANDSCAPE ASSOCIATION (FORMERLY ANN) STANDARDS.
- 2. ALL PLANT MATERIAL SHALL BE TRUE TO FORM, SIZE, AND SHAPE, AND BOTANICAL NOMENCLATURE, SHALL BE VERIFIED BY "HORTUS THIRD", DICTIONARY OF PLANTS CULTIVATED IN THE UNITED STATES AND CANADA, AS COMPILED BY THE BAILEY HORTORIUM CORNELL UNIVERSITY, MACMILLIAN PUBLISHING CO., 1976 EDITION.
- 3. ALL PLANT MATERIAL SUPPLIED BY A CONTRACTOR SHALL BE HEALTHY AND IN VIGOROUS GROWING CONDITION, FREE FROM ALL INSECTS, PESTS AND DISEASES. ALL B & B MATERIAL SHALL BE FRESHLY DUG UNLESS OTHERWISE APPROVED. PRUNING SHALL BE DONE BEFORE PLANTING OR DURING THE PLANTING OPERATION.
- 4. ALL PLANT MATERIAL, SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF INSTALLATION AND ACCEPTANCE BY THE OWNER. SHREDDED HARDWOOD MULCH, OR APPROVED EQUAL, SHALL BE PLACED OVER ALL PLANTING AREAS. STRICT ATTENTION AND ADHERENCE TO THE PLANTING DETAIL ILLUSTRATED BELOW WILL BE REQUIRED FOR ACCEPTANCE BY THE OWNER.
- 5. CONTRACTOR SHALL NOT SUBSTITUTE PLANT SPECIES OR VARIETIES WITHOUT THE OWNER'S AND THE COUNTY URBAN FORESTER'S PRIOR KNOWLEDGE AND PERMISSION. ALL PLANT MATERIAL SHALL BE APPROVED BY THE OWNER PRIOR TO
- 6. BACKFILL MIXTURE SHALL BE TWO PARTS TOPSOIL MIXED EVENLY WITH ONE PART SPHAGNUM PEAT MOSS OR PEAT HUMUS.
- 7. FFRTILIZER SHALL BE COMMERCIAL FERTILIZER FOR BOTH TREES AND SHRUBS. FERTILIZER SHALL BE PROVIDED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SOIL TESTS. AS A BASIS FOR BIDDING, CONTRACTORS SHALL ASSUME A FERTILIZER WITH AN ANALYSIS OF 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM. THIS FERTILIZER SHALL BE GRANULAR WITH A MINIMUM OF 50% OF THE TOTAL NITROGEN IN ORGANIC FORM.
- 8. IF TOPSOIL IS NOT AVAILABLE ON SITE, CONTRACTOR SHALL PROVIDE TOPSOIL THAT IS A FERTILE, FRIABLE NATURAL LOAM UNIFORM IN COMPOSITION, FREE OF STONES, LUMPS, PLANTS, AND THEIR ROOTS, DEBRIS AND OTHER EXTRANEOUS MATTER OVER 1" IN DIAMETER, CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. TOPSOIL SHALL HAVE A PH RANGE OF 6.0 TO 6.5.
- 9. PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES. PLANTS SHALL EITHER BE OBTAINED FROM LOCAL NURSERIES AND/OR OTHERS, WHICH HAVE SOIL (HEAVY CLAY) AND CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT. PLANT MATERIAL GROWN IN SANDY, WELL-DRAINED SOIL WILL NOT BE APPROVED FOR THIS PROJECT.
- 10. ALL GUY WIRES AND STAKES USED FOR TREE PLANTING SHALL BE REMOVED WITHIN 6 TO 12 MONTHS AFTER INSTALLATION.

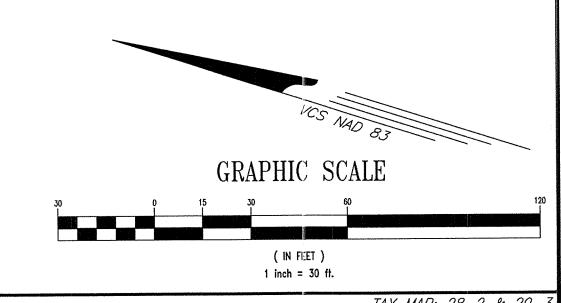
PLANTING INSTALLATION GUIDELINES

1. CONTRACTOR AND OWNER SHALL BE RESPONSIBLE FOR MAKING THEMSELVES FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES, BY CONTACTING "MISS UTILITY" 72 HOURS PRIOR TO DIGGING. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COST INCURRED DUE TO DAMAGE TO SAID UTILITIES.

- 2. DO NOT WILLFULLY PROCEED WITH PLANTING AS DESIGNED WHEN IT IS OBVIOUS THAT CONDITIONS AND/OR OBSTRUCTIONS EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER. THE CONTRACTOR MAY BE RESPONSIBLE FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION TO THE OWNER SO THAT MATERIAL CAN BE RELOCATED OR CONDITIONS CORRECTED PRIOR TO PLANTING.
- 3. SHOULD THE LANDSCAPE CONTRACTOR ENCOUNTER SOIL CONDITIONS WHICH INDICATE POTENTIAL FOR POOR DRAINAGE, PLANTING BEDS AND MATERIAL MAY BE RAISED SLIGHTLY, NO MORE THAN SIX (6) INCHES ABOVE EXISTING GRADES, TO COMPENSATE FOR THESE CONDITIONS. WHERE STANDING WATER, OR AREAS WHICH DO NOT DRAIN AT ALL ARE ENCOUNTERED, THESE AREAS MAY REQUIRE THE INSTALLATION OF UNDERGROUND DRAINAGE. THE CONTRACTOR SHALL BRING THESE CONDITIONS TO THE ATTENTION OF THE OWNER FOR CORRECTIVE DRAINAGE PROCEDURES, OR RELOCATION OF THE PLANT MATERIAL.
- 4. PLANT MATERIAL INSTALLED BY A LANDSCAPE CONTRACTOR, UNLESS OTHERWISE SPECIFIED OR DETAILED ON THESE DRAWINGS, SHALL CONFORM TO THE SECOND EDITION OF "THE LANDSCAPE SPECIFICATIONS GUIDELINES FOR BALTIMORE—WASHINGTON METROPOLITAN AREAS" AS PUBLISHED BY THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS POTOMAC CHAPTER AND THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON. THESE PLANTING STANDARDS HAVE ALSO BEEN SUPPLEMENTED BY THE PLANTING GUIDELINES OF THE AMERICAN FOREST ASSOCIATION.
- 5. ANY DEVIATION FROM THE PLANTING LOCATION SHOWN ON THIS PLAN, SHALL BE APPROVED BY THE URBAN FORESTRY DIVISION. CONTRACTOR SHOULD NOTIFY THE OWNER FOR INSPECTION AFTER LAYOUT OF EACH AREA IS COMPLETE AND BEFORE FINAL INSTALLATION OF THE PLANT MATERIAL.
- 6. ALL TREES SHALL BE PLANTED IN STRICT ACCORDANCE WITH THE PLANTING DETAIL PROVIDED.

					PLANTING SCHEDULE				1
	SYMBOL	KEY	QUAN.	BOTANICAL NAME	COMMON NAME	CALIPER/FEET	ROOT	SQ.FT. EACH	SQ.FT. COVER
ľ		DECID	UOUS C	ANOPY TREES					
r	* (*)	Dv	6	Diospiros virginiana	Persimmon	2" CALIPER	B&B	150	900
	*	Ns	5	Nyssa sylvatica	Black Gum	2" CALIPER	B&B	150	750
′	5.2	Jn	6	Juglans nigra	Black Walnut	2" CALIPER	B&B	150	900
5		Ar	6	Acer rubrum	Red Maple	2" CALIPER	B&B	200	1,200
	TARREST	Ca	6	Carya tomentosa	Mockernut Hickory	2" CALIPER	B&B	200	1,200
		Lt	6	Liriodendron tulipifera	Tulip Poplar	2" CALIPER	B&B	200	1,200
	2007 1 (5)	Ро	5	Platanus occidentalis	Sycamore	2" CALIPER	B&B	200	1,000
	ZWZ	Qb	6	Quercus bicolor	Swamp White Oak	2" CALIPER	B&B	200	1,200
		Qp	6	Quercus phellos	Willow Oak	2" CALIPER	B&B	200	1,200
S.		EVER	GREEN T	REES					
	(o) zuhluz	lo	6	llex opaca	American Holly	2" CALIPER	B&B	100	600
	Samuel Samuel	Jv	3	Juniperus virginiana	Eastern Redcedar	2" CALIPER	B&B	100	300
ł	NOTE: THIS PLAN PROPO	OSES THE	- ADDITION	OF 61 TRFFS				TOTAL COVER	= 10,450

NOTE: THIS PLAN PROPOSES THE ADDITION OF 61 TREES.



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							AUTHORIT		
			12055 GOVERN	MENT CENT	TER PARKWA	AY, SUITI		, VA., 22035-1118	Carrier Com
	R _						PL	ANNING AND DEVELOPMENT DIVISION 703-324-8741	Authority
ALTH OF DIFFE	> -						ASHG	URTHOUSE STREAM VEROVE TRAIL EXTENSION	8
HN D. CUMMINGS III	S						HUNTER MILL	TREE LANDSCAPE PLAN DISTRICT, FAIRFAX COUNTY	
/7/2019	0 N						CONTRACT NO. CN SCALE	FCPA PROJECT NO. DESIGNED BY: SL	SHEET
SSIONAL ENGINEERS	s	\ #	DESCRIPTION	BY	APPROVED	DATE	1	DRAFTED BY: SL CHECKED BY: JDC	11 OF 19

4VAC50-30-40 MINIMUM STANDARDS. (MS-19)

AN EROSION AND SEDIMENT CONTROL PROGRAM ADOPTED BY A DISTRICT OR LOCALITY MUST BE CONSISTENT WITH THE FOLLOWING CRITERIA, TECHNIQUES AND METHODS:

1. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

2. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOILS STOCKPILES ONSITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

3. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.

4. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

5. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

6. SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.

a. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES.

b. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A TWENTY—FIVE YEAR STORM OF 24—HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.

7. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.

8. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.

9. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.

10. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

11. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.

12. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR

13. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.

14. ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.

15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.

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

- a. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
- b. EXCAVATED MATERIAL SHALL BE PLACED ON UPHILL SIDE OF TRENCHES.
- c. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF—SITE PROPERTY.
- d. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
- e. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
- f. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.

17. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.

18. 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, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM AUTHORITY. TRAPPED MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

19. PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITE SHALL BE PROTECTED FROM SEDIMENT DEPOSITION. EROSION AND DAMAGE DUE TO INCREASE IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA:

CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.

ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:

(1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR

(2) (a) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED AND BANKS; AND

(b) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND

(c) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFIY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.

C. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:

(1) IMPROVE THE CHANNEL TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL BED OR BANKS; OR

(2) IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTANENCES; OR

(3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHÁNNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR

(4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE PLAN-APPROVING AUTHORITY TO PREVENT DOWNSTREAM EROSION.

d. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.

e. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT OF THE SUBJECT PROJECT.

IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION HE SHALL OBTAIN APPROVAL FROM THE LOCALITY OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.

EROSION & SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION - THIS PROJECT PROPOSES AN ADA COMPLIANT TRAIL CONNECTING AN EXISTING TRAIL LOCATED IN THE OLD COURTHOUSE STREAM VALLEY PARK RUNNING PARALLEL TO THE OLD COURTHOUSE SPRING BRANCH TO AN EXISTING TRAIL LOCATED ON THE ASHGROVE HISTORIC SITE. THIS PROJECT WILL INCLUDE A STREAM CROSSING OF AN UNNAMED TRIBUTARY VIA A 36" HDPE CULVERT. THE UNNAMED TRIBUTARY IS THE OUTFALL FROM AN EXISTING DRY POND (DP0186). THE SITE IS LOCATED WITHIN THE DIFFICULT RUN WATERSHED. THE TOTAL DISTURBED AREA ASSOCIATED WITH THIS PROJECT IS 0.550 ACRES. THE SITE IS LOCATED EAST OF THE INTERSECTION OF IRVIN STREET (ROUTE 831) AND ASHGROVE LANE. THE PROJECT PROPOSES ALL NECESSARY TEMPORARY AND PERMANENT EROSION CONTROL MEASURES TO MEET STATE AND LOCAL REGULATIONS.

EXISTING SITE CONDITIONS - THE SITE IS LOCATED SOUTH OF ASHGROVE LANE, EAST OF WESTWOOD CENTER DRIVE, AND EAST OF PALM SPRING DRIVE. THERE ARE TWO EXISTING TRAILS, ONE NORTH OF ASHGROVE LANE (ASHGROVE TRAIL) AND OTHER ADJACENT TO WESTWOOD CENTER DRIVE (WESTWOOD CENTER DRIVE TRAIL).

ADJACENT PROPERTIES - THE SURROUNDING USES ARE RESIDENTIAL TO NORTH, SOUTH, AND EAST, AND COMMERCIAL TO

OFF-SITE AREAS - NO IMPROVEMENTS ARE PROPOSED TO ADJACENT PROPERTIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROL MEASURES TO LIMIT DISTURBANCE TO DOWNSTREAM PROPERTIES. CARE SHALL BE TAKEN FOR THE DURATION OF CONSTRUCTION ACTIVITIES TO LIMIT IMPACTS TO ADJACENT PROPERTIES.

SOILS - SEE THE SOILS MAP ON THE COVER SHEET.

CRITICAL AREAS - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING CONSTRUCTION ACTIVITIES ARE WITHIN THE LIMITS OF CLEARING AND GRADING. CARE SHALL BE TAKEN WHILE GRADING NEAR THE PROPERTY LINES NEAR THE EXISTING CONCRETE CHANNEL LOCATED TO THE EAST OF THE SITE.

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

STRUCTURAL PRACTICES

1. <u>TEMPORARY CONSTRUCTION ENTRANCE—3.02</u>

A TEMPORARY CONSTRUCTION ENTRANCE WITH A WASH RACK SHALL BE INSTALLED ALONG THE FIRE LANE/POND ACCESS ROAD ONLY IF REQUESTED BY THE INSPECTOR. CONTRACTOR TO ENSURE ALL CONSTRUCTION VEHICLES ARE ADEQUATELY CLEANED USING AN EXISTING HYDRANT OR WATER TRUCK BEFORE ENTERING THE STATE ROAD SYSTEM.

SILT FENCE SEDIMENT BARRIERS WILL BE INSTALLED DOWNSLOPE OF AREAS WITH MINIMAL GRADES TO FILTER SEDIMENT-LADEN RUNOFF FROM SHEET FLOW AS INDICATED ON PHASE I AND PHASE II OF THE EROSION AND SEDIMENT CONTROL PLAN.

3. CULVERT INLET PROTECTION—3.08

CULVERT INLET PROTECTION WILL BE INSTALLED TO PROVIDE EROSION CONTROL AT THE STORM SEWER CULVERT INLETS DURING ELEVATION AND DRAINAGE PATTERNS CHANGE.

4. <u>OUTLET PROTECTION-3.18</u>

OUTLET PROTECTION WILL BE INSTALLED TO PREVENT SCOUR AT STORMWATER OUTLETS AND TO MINIMIZE THE POTENTIAL FOR DOWNSTREAM EROSION BY REDUCING THE VELOCITY AND ENERGY OF CONCENTRATED STORMWATER FLOWS.

VEGETATIVE PRACTICES

1.<u>TOPSOILING (STOCKPILE)—3.30</u>

TOPSOIL WILL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATIONS SHALL 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 TO THE OWNER COVERING THE OFF-SITE STOCKPILE AREA WHICH WOULD HAVE TO BE APPROVED BY THE PLAN APPROVING AUTHORITY BEFORE ANY OFF-SITE ACTIVITY COMMENCES.

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 SEEDED MIXTURE WILL DEPEND ON THE TIME OF THE YEAR IT IS APPLIED AND PER VESCH TABLES 3.31—B&C. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED ARES THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. FOR TEMPORARY VEGETATIVE STABILIZATION OF ALL DENUDED AREAS, SEE TABLE 3.31C FROM THE VA 3&S CONTROL HANDBOOK. LIMING REQUIREMENTS SHOULD BE BASED ON TABLE 3.31A OF VESCH. FERTILIZERS SHALL BE APPLIED AS 600 LBS PER ACRE. FERTILIZER SHOULD BE INCORPORATED INTO 2-4" OF SOIL. SEED SHALL BE EVENLY APPLIED AND SMALL GRAINS SHALL BE PLANTED NO MORE THAN 1.5 INCHES DEEP. SEEDING MADE IN FALL FOR WINTER COVER AND DURING HOT SUMMER MONTHS SHALL BE MULCHED. THESE MIXTURES, FOR BOTH PERMANENT AND TEMPORARY STABILIZATION, REGARDLESS OF THE TIME OF YEAR, SHALL NOT INCLUDE ANY NON-NATIVE OR INVASIVE SPECIES.

MANAGEMENT STRATEGIES

1. CONSTRUCTION SHOULD BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.

2. PERIMETER CONTROLS WILL BE INSTALLED AS A FIRST STEP IN GRADING.

3. TEMPORARY SEEDING OR OTHER STABILIZATION WILL FOLLOW IMMEDIATELY AFTER GRADING.

4. AREAS WHICH ARE NOT TO BE DISTURBED WILL BE CLEARLY MARKED BY FLAGS, SIGNS, ETC. 5. THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATIONS AND MAINTENANCE OF ALL EROSION AND

6. AFTER ACHIEVING ADEQUATE STABILIZATION, THE TEMPORARY E&S CONTROLS WILL BE CLEANED UP AND REMOVED. 7. THE COUNTY SITE INSPECTOR SHALL INSPECT AND APPROVE PERIMETER CONTROLS DEFORE GRADING OPERATIONS ENSUE AND PRIOR TO REMOVAL OF PERIMETER CONTROLS.

PERMANENT STABILIZATION

ALL AREAS DISTURBED BY CONSTRUCTION WILL BE STABILIZED WITH SOD WITHIN 7 DAYS OF FINISHED GRADING. TEMPORARY SEEDING IS REQUIRED WITHIN 7 DAYS OF ROUGH GRADING IF THE DISTURBED AREA IS NOT BROUGHT TO FINISH GRADE WITHIN THE 30 DAYS. SODDING SHALL BE DONE IN ACCORDANCE WITH THE SPEC. 3.33 OF THE VA. E&S CONTROL HANDBOOK. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

STORMWATER MANAGEMENT

SEE STORMWATER MANAGEMENT NARRATIVE ON SHEET 8.

MAINTENANCE

IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL. THE FOLLOWING WILL BE CHECKED IN PARTICULAR:

1. THE SUPER SILT FENCE BARRIER WILL BE CHECKED REGULARLLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF THE SEDIMENT DEPOSITION REACHES HALF WAY TO

THE TOP OF THE BARRIER. 2. THE SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RE-SEEDED AS NEEDED.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

ES-1) UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRIGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.

ES-2) THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRECONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF THE LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL

ES-3) ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP OF

ES-4) A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL

ES-5) PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN 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 CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING

ES-6) THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.

ES-7) ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTÚRBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

ES-8) DURING DE-WATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES-9) THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNÓFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

ES-10) THE FAIRFAX COUNTY INSPECTOR HAS THE AUTHORITY TO ADD, MODIFY OR DELETE EROSION AND SEDIMENT CONTROLS AS NEEDED IN THE FIELD, AS SITE CONDITIONS WARRANT.

SEDIMENT AND EROSION CONTROL MAINTENANCE PROGRAM

1) IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR (REGISTERED LAND DISTURBER) TO INSURE THAT ALL DOWNSTREAM AREAS ARE PROTECTED AGAINST EROSION AND SEDIMENT. IN DOING SO, HE/SHE MUST COORDINATE WITH THE COUNTY INSPECTOR THROUGHOUT THE DURATION OF THIS PROJECT.

2) ALL EROSION AND SEDIMENT CONTROL MECHANICAL FEATURES, SUCH AS SUPER SILT FENCE, SHALL BE MAINTAINED AT ALL TIMES. EACH MUST BE CHECKED FOLLOWING ANY STORM EVENT TO INSURE THAT IT IS FUNCTIONING PROPERLY. 3) THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT ALL CONSTRUCTION VEHICLES ARE CLEANED PRIOR TO ENTERING THE STATE ROAD SYSTEM.

4) ALL NEWLY SEEDED AND MULCHED AREAS SHALL BE INSPECTED AFTER EACH RAINFALL EVENT TO INSURE THAT THE NEW SEED HAS NOT BEEN WASHED AWAY. IF SO, THE AREAS SHALL BE RESEEDED IMMEDIATELY.

5) THE CONTRACTOR <u>DOES</u> HAVE THE AUTHORITY TO ADD ADDITIONAL SEDIMENT—EROSION CONTROL MEASURES SHOULD HE/SHE FEEL IT IS NECESSARY TO PREVENT SILTATION OR EROSION OFFSITE. ADDITIONAL MEASURES SHALL BE AUTHORIZED BY THE PROJECT MANAGER. ANY ADDITIONAL MEASURES ARE SUBJECT TO THE APPROVAL OF THE COUNTY

PHASE ONE SEDIMENT AND EROSION CONTROL PROGRAM

BECAUSE ADJACENT PROPERTIES HAVE ALREADY BEEN DEVELOPED AND OCCUPIED, IT IS EXTREMELY IMPORTANT TO PREVENT SEDIMENT RUN-OFF FROM ENTERING OFF-SITE AREAS. IN ORDER TO ACCOMPLISH THIS THE CONTRACTOR SHOULD FOLLOW THIS EROSION AND SEDIMENT CONTROL PLAN AS CLOSELY AS PHYSICALLY POSSIBLE. THE FIRST PHASE OF THE PROGRAM IS TO INSTALL ALL PERIMETER CONTROLS. IT IS INTENDED THAT THE CONTRACTOR SHALL ATTEMPT TO PHASE THE CLEARING TO ALLOW INSTALLATION OF PERIMETER CONTROLS PRIOR TO MAJOR ON-SITE EARTHWORK ACTIVITIES. IT IS ALSO INTENDED THAT PERIMETER CONTROLS BE RETAINED THROUGHOUT THE EARTHWORK ACTIVITIES.

THE PHASE ONE EROSION CONTROL PROGRAM SHALL:

1. UNLESS DEEMED UNNECESSARY BY INSPECTOR, A STANDARD CONSTRUCTION ENTRANCE WILL BE PLACED AT THE ENTRANCE TO THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL VEHICLES OF EXCESS DIRT AND MUD PRIOR TO EXITING THE SITE AND ENTERING THE STATE ROAD SYSTEM.

2. INSTALL SUPER SILT FENCE AS SHOWN ON THE PHASE ONE PLAN. 3. ONCE ALL OF PHASE ONE CONTROLS ARE PLACED THE CONTRACTOR IS TO CONTACT THE FAIRFAX COUNTY INSPECTOR FOR SIGN-OFF. ONCE SIGN-OFF IS OBTAINED BY FAIRFAX COUNTY THE CONTRACTOR CAN PROCEED WITH GENERAL CLEARING AND EARTHWORK ACTIVITIES.

PHASE TWO SEDIMENT AND EROSION CONTROL PROGRAM

AFTER ROUGH GRADING IS ACHIEVED THE CONTRACTOR SHALL TRANSITION THE PROJECT INTO THE PHASE TWO SEDIMENT FROSION CONTROL PROGRAM. IT IS INTENDED THAT PERIMETER CONTROLS BE MAINTAINED THROUGHOUT THE FARTHWORK PHASE AND/OR UNTIL UPSTREAM AREAS HAVE BEEN STABILIZED.

STABILIZATION SHALL CONSIST OF STONE BASE FOR PAVED AREAS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO STOCKPILE ANY NECESSARY TOPSOIL FOR FINAL GRADING PURPOSES. IT IS UP TO THE CONTRACTOR AS TO HOW AND WHERE TO STORE THE STOCKPILE ON-SITE WHERE IT DOES NOT CONFLICT WITH GRADING OPERATIONS. ALL EXCESS TOPSOIL IS TO BE DISPOSED OF BY THE CONTRACTOR IN AN APPROPRIATE MANNER. THE PHASE TWO EROSION SEDIMENT CONTROL PROGRAM SHALL PROGRESS AS FOLLOWS:

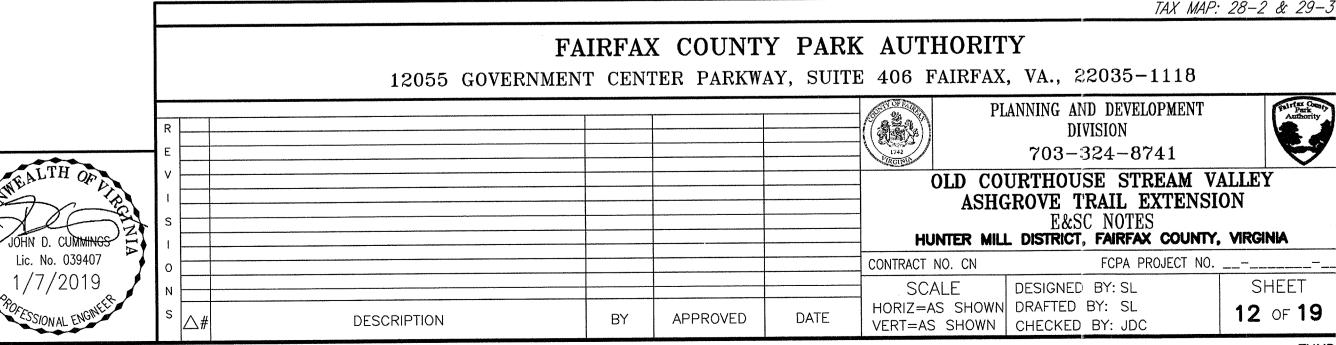
1. ONCE ENTIRE SITE IS GRADED THE CONTRACTOR SHALL INSTALL BASE STONE FOR PAVED AREA.

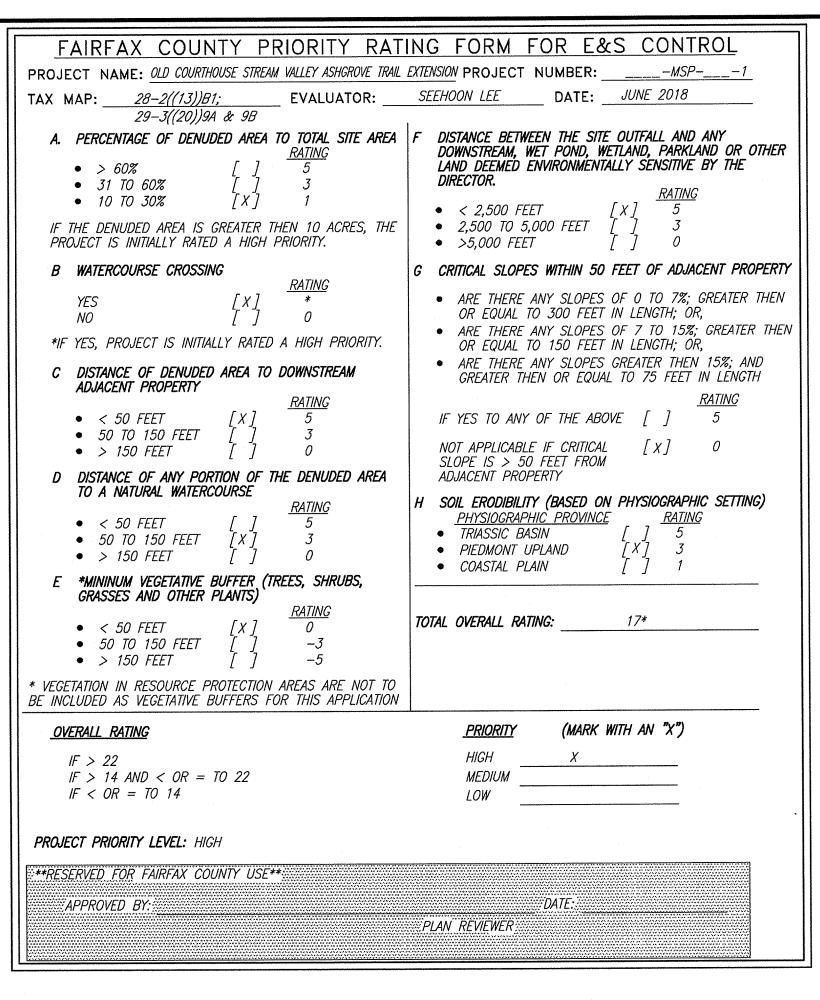
2. FINE GRADE THE SITE.

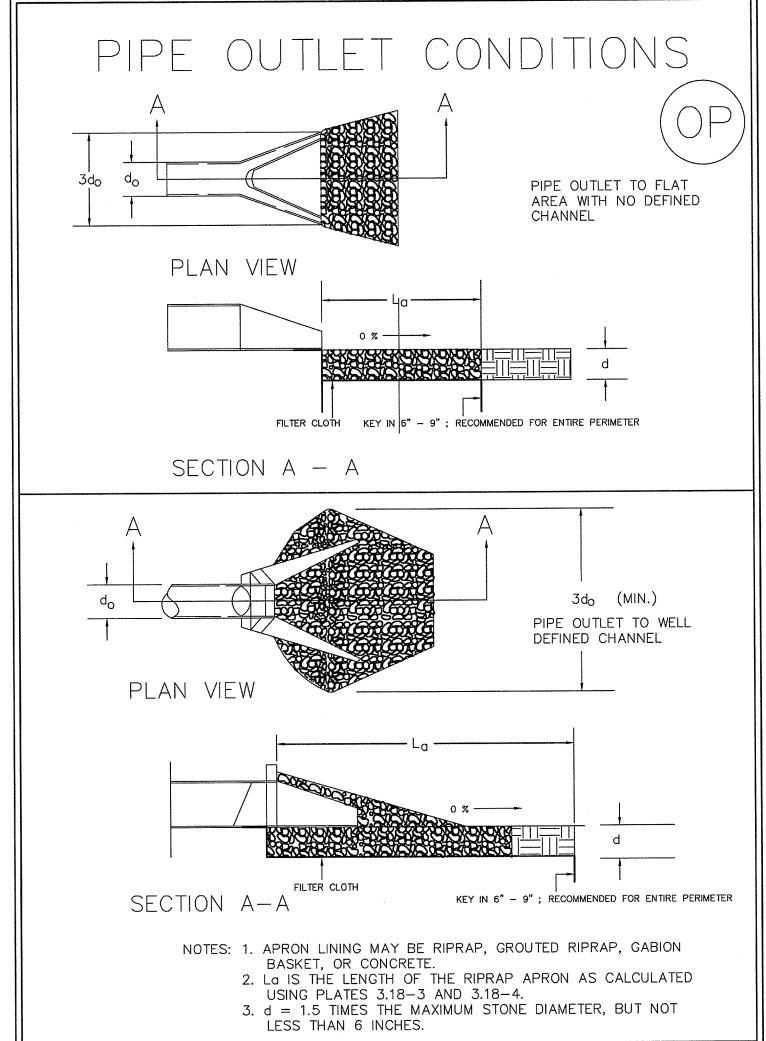
3. PROVIDE SURFACE ROUGHING OF ALL SLOPE AREAS AT 6:1 AND STEEPER. 4. LIME FERTILIZE AND SOD AND MULCH ALL AREAS THAT WILL NOT RECEIVE PERMANENT COVER.

5. ONCE ALL AREAS ARE STABILIZED TO THE SATISFACTION OF THE FAIRFAX COUNTY INSPECTOR THE CONTRACTOR SHALL REMOVE PERIMETER CONTROLS.

6. CLEAN SITE OF ALL TRASH AND DEBRIS.







SEEDING NOTES:

AUTHORITY.

DISKING OR RAKING.

NATIVE SEED MIXES).

AFTER OCTOBER 1ST.

TO BE APPLIED.

• THE NATIVE SEED MIX FOR THIS PROJECT MUST BE OBTAINED FROM ERNST

ALTERNATE VENDOR. BAG TAGS MUST BE PROVIDED TO THE PARK

• PRIOR TO SEEDING THE CONTRACTOR SHALL PREPARE THE SITE USING

FOR BROADCAST APPLICATION, THE SEED SHOULD BE MIXED WITH

THE NATIVE SEED MIX SHOULD BE SEEDED AT A RATE OF 0.5

RYE (LOLIUM MULTIFLORUM) AT 1.5 LBS/1,000 SF.

CONSERVATION SEEDS OF MEADVILLE, PA OR A PARK AUTHORITY APPROVED

POUNDS/1,000 SF (ABOUT 20 LBS/AC.) WITH A COVER CROP OF ANNUAL

WEED-FREE COMPOST (SOILMATE OR EQUIVALENT) OR CLEAN MOIST SAND

SEED CAN BE SOWN DIRECTLY ONTO THE COMPOST AND NO ADDITIONAL

MULCHING IS REQUIRED. SEED MAY ALSO BE DRILLED OR SHOT BY AN

OPERATOR WHO KNOWS HOW TO APPLY NATIVE SEED AND HAS THE

PROPER EQUIPMENT (E.G., A TRUAX TYPE SEED DRILL INTENDED FOR

FOLLOWING APPLICATION OF THE NATIVE SEED MIX, THE CONTRACTOR

SHOULD IMMEDIATELY OVERSEED (NOTE THAT HYDROSEEDING WITH FIBER

LBS/1,000 SF) IN ORDER TO GET COVERAGE AND STABILIZATION PRIOR TO

MULCH MAY BE BEST ON STEEP SLOPES) WITH ANNUAL RYE (LOLIUM MULTIFLORUM) AT A RATE OF 60 POUNDS PER ACRE (ABOUT 1.5

GERMINATION AND ESTABLISHMENT OF NATIVE WARM SEASON GRASSES.

WINTER WHEAT COULD BE SUBSTITUTED FOR ANNUAL RYE IF SEEDING

OF ABOUT 1 INCH. IF THE SEED IS SOWN INTO A SOILMATE OR

ON PARKLAND BECAUSE IT IS VERY HAZARDOUS TO WILDLIFE.

FOLLOWING APPLICATION OF THE NATIVE SEED MIX AND THE ANNUAL RYE,

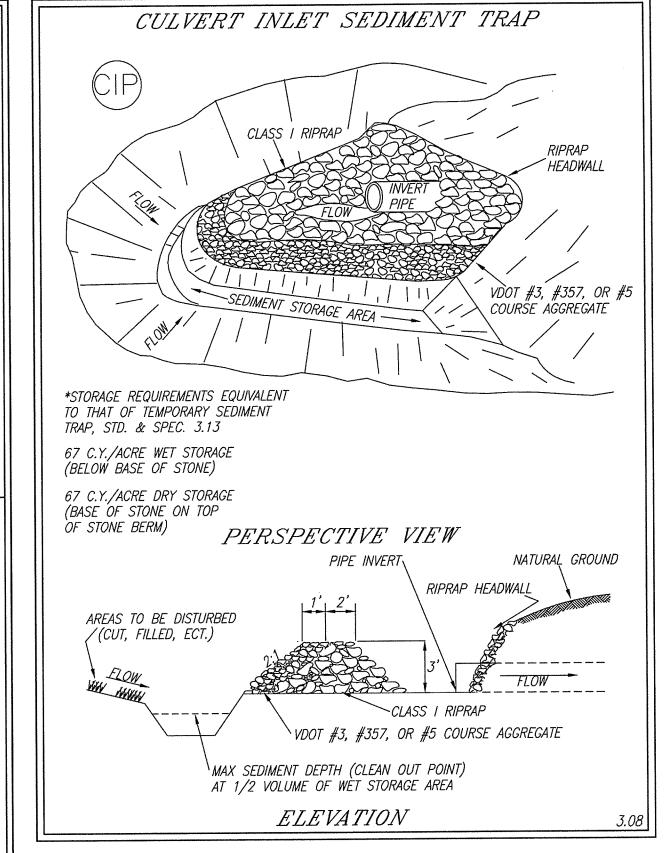
THE AREA SHOULD BE COVERED WITH CLEAN WHEAT STRAW TO A DEPTH

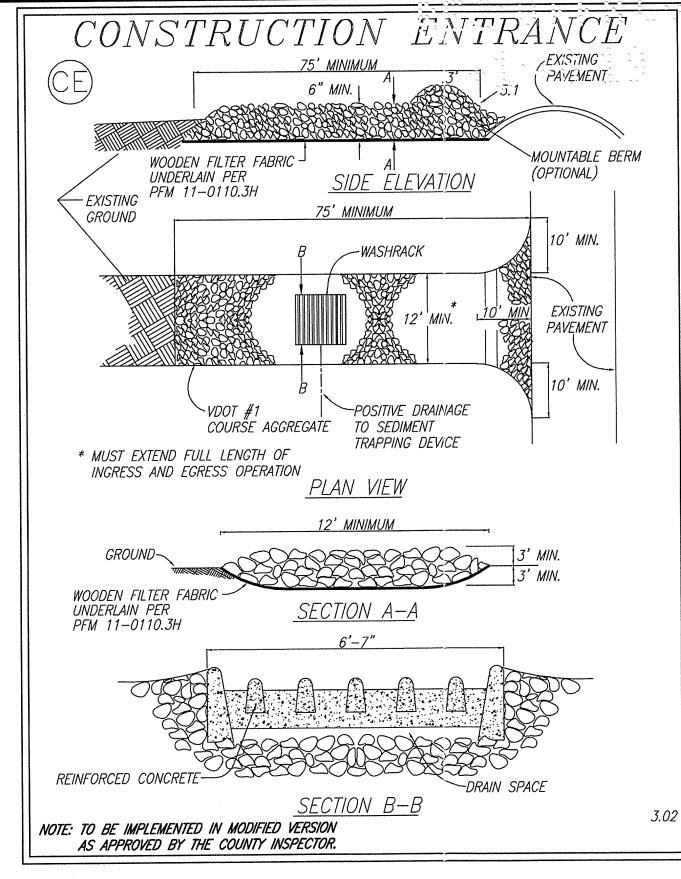
EQUIVALENT COMPOST BLANKET OR HYROSEEDED, THAN NO STRAW NEEDS

THAT NO MATTING CONTAINING PLASTIC MESH SHOULD BE USED ANWHERE

COIR OR STRAW MATS SHOULD BE USED IN STEEP SLOPE AREAS. NOTE

FOR BROADCASTING OVER BARE SOIL. IF ORGANIC COMPOST IS USED, THEN





$\frac{1}{2}$	TEMPORARY SEEDING CHART					
	PLANTING DATES	SPECIES	RATE (LBS/ACRE)			
	MARCH TO OCTOBER	LOLIUM MULTI-FOLIUM (ANNUAL RYE)	50-100			
	NOVEMBER TO FEBRUARY	TRITICUM AESTIVUM (WINTER WHEAT)	60-100			

Invasive Non-Native Species	Alternat	tive Virginia Native		
Common Name	Common Name	Scientific Name		
	Great bulrush	Schoenoplectus tabernaemontan		
Common Reed	Common Cattail	Typha latifolia		
	Roundheaded bushclover	Lespedeza capitata		
	Patridge pea	Chamaecrista fasciculata		
Chinese Lespedeza	Butterflyweed	Asclepias tuberosa		
Birdsfoot Trefoil	Joe-pye weed	Eutrochium dubium		
Orchard Grass Redtop	Black-eyed Susan	Rudbeckia fulgida		
Weeping Lovegrass	Big blue stem	Andropogon gerardii		
artikan merinagan menga	Indian grass	Sorghastrum nutans		
	Side oats grama	Bouteloua curtipendula		
	Roundheaded bushclover	Lespedeza capitata		
	Patridge pea	Chamaecrista fasciculata		
ner su sui	Big blue stem	Andropogon gerardii		
Crownvetch	Little blue stem	Schizachyrium scoparium		
	Indian grass	Sorghastrum nutans		
	Switchgrass	Panicum virgatum		
	Big blue stem	Andropogon gerardii		
	Little blue stem	Schizachyrium scoparium		
	Indian grass	Sorghastrum nutans		
	Switchgrass	Panicum virgatum		
A	Broomsedge	Andropogon virginicus		
Tall Fescue	Deertongue	Dichanthelium clandestinum		
	Side oats grama	Bouteloua curtipendula		
	Canadian wildrye	Elymus canadensis		
	Bottlebrush grass	Elymus hystrix		
	Virginia wildrye	Elymus virginicus		

NOTE: PHALARIS ARUNDINACEA (REED CANARYGRASS) SHOULD BE EXCLUDED FROM SEED MIXES.

PERMANENT SEED	TYO OTIMINT
SEEDING MIXTURE	MIXTURE PERCENTAGE(%)
INDIAN GRASS — SORGHASTRUM NUTANS	15
VIRGINIA WILD RYE — ELYMUS VIRGINICUS	20
DERR TONGUE — DICHANTHELIUM CLANDESTINUM	15
SWEET WOODREED — CINNA ARUNDINACEA	10
PURPLETOP - TRIDENS FLAVUS	5
FOX SEDGE — CAREX VULPINOIDEA	5
LURID SEDGE — CAREX LURIDA	5
FRANK'S SEDGE — CAREX FRANKII	5
COMMON MILKWEED — ASCLEPIAS SYRIACA	3
JOE-PYE WEED — EUPATORIUM FISTULOSUM	3
NEW YORK IRONWEED — VERNONIA NAVEBORACENSIS	2
HEATH ASTER — SYMPHYOTRICHUM PILOSUM	3
CALICO ASTER — SYMPHYOTRICHUM LATERIFLORUM	3
GRASS-LEAVED GOLDENROD - SOLIDAGO GRAMINIFOLIA	3
BLUESTEMMED GOLDENROAD — SULIDAGO CAESIA	3

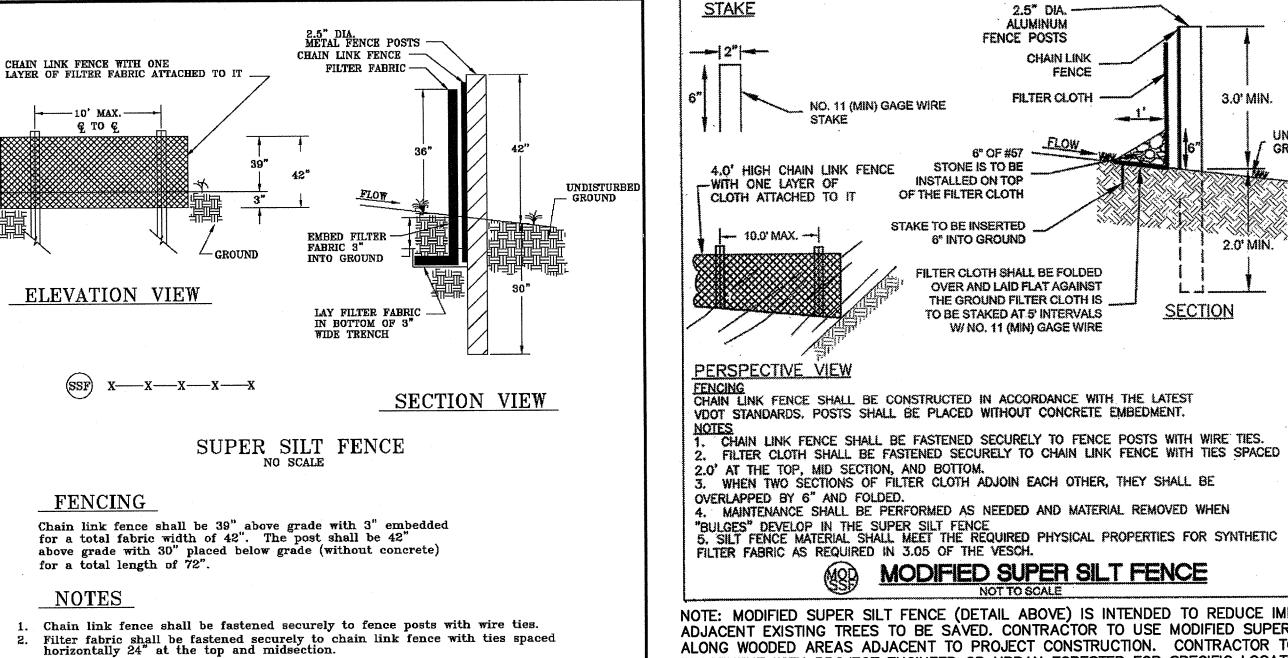


PLATE NO. STD. NO

7-11

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL

Physical properties of the filter fabric shall conform to the latest edition of THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK.

5. Maintenance shall be performed as needed and material shall be removed when sediment build-up reaches 50% of the height of the super silt fence.

4. When two sections of filter fabric adjoin each other, they shall be overlapped by 6".

SUPER SILT FENCE NO SCALE

-----10' MAX.-----

€ TO €

ELEVATION VIEW

FENCING

NOTES

Ref. Sec. 11-0110.3, 11-0110.3J

Rev. 1-00, 2011 Reprin

for a total length of 72".

(SSF) X-X-X-X

NOTE: SSF TO BE UTILIZED AS TREE PROTECTION.

FILTER FABRIC AS REQUIRED IN 3.05 OF THE VESCH. MODIFIED SUPER SILT FENCE NOTE: MODIFIED SUPER SILT FENCE (DETAIL ABOVE) IS INTENDED TO REDUCE IMPACT TO ADJACENT EXISTING TREES TO BE SAVED. CONTRACTOR TO USE MODIFIED SUPER SILT FENCE ALONG WOODED AREAS ADJACENT TO PROJECT CONSTRUCTION. CONTRACTOR TO VERIFY PLACEMENT WITH PROJECT ENGINEER OR URBAN FORESTER FOR SPECIFIC LOCATIONS.

2.5" DIA. --

CHAIN LINK

FILTER CLOTH

STONE IS TO BE

INSTALLED ON TOP

6" INTO GROUND

FILTER CLOTH SHALL BE FOLDED

OVER AND LAID FLAT AGAINST

TO BE STAKED AT 5' INTERVALS W/NO. 11 (MIN) GAGE WIRE

THE GROUND FILTER CLOTH IS ____

FENCE

3.0' MIN.

2.0' MIN.

SECTION

UNDISTURBED

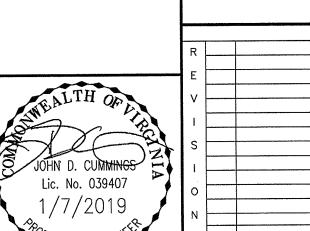
GROUND

ALUMINUM

TREE PROTECTION SIGN

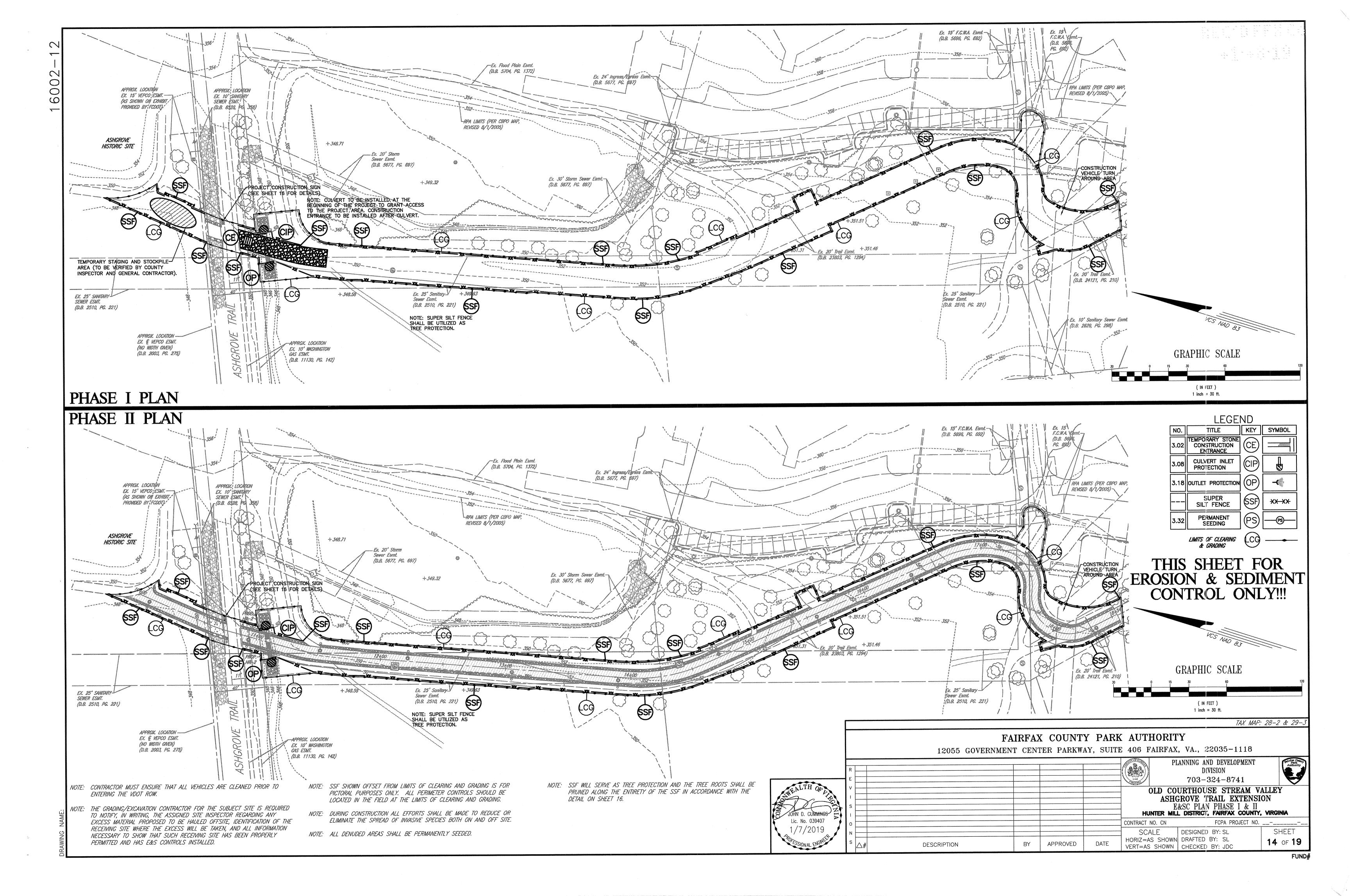
TREE PROTECTION AREA DO NOT ENTER ZONA DE PROTECCION DE ARBOLES NO ENTRE

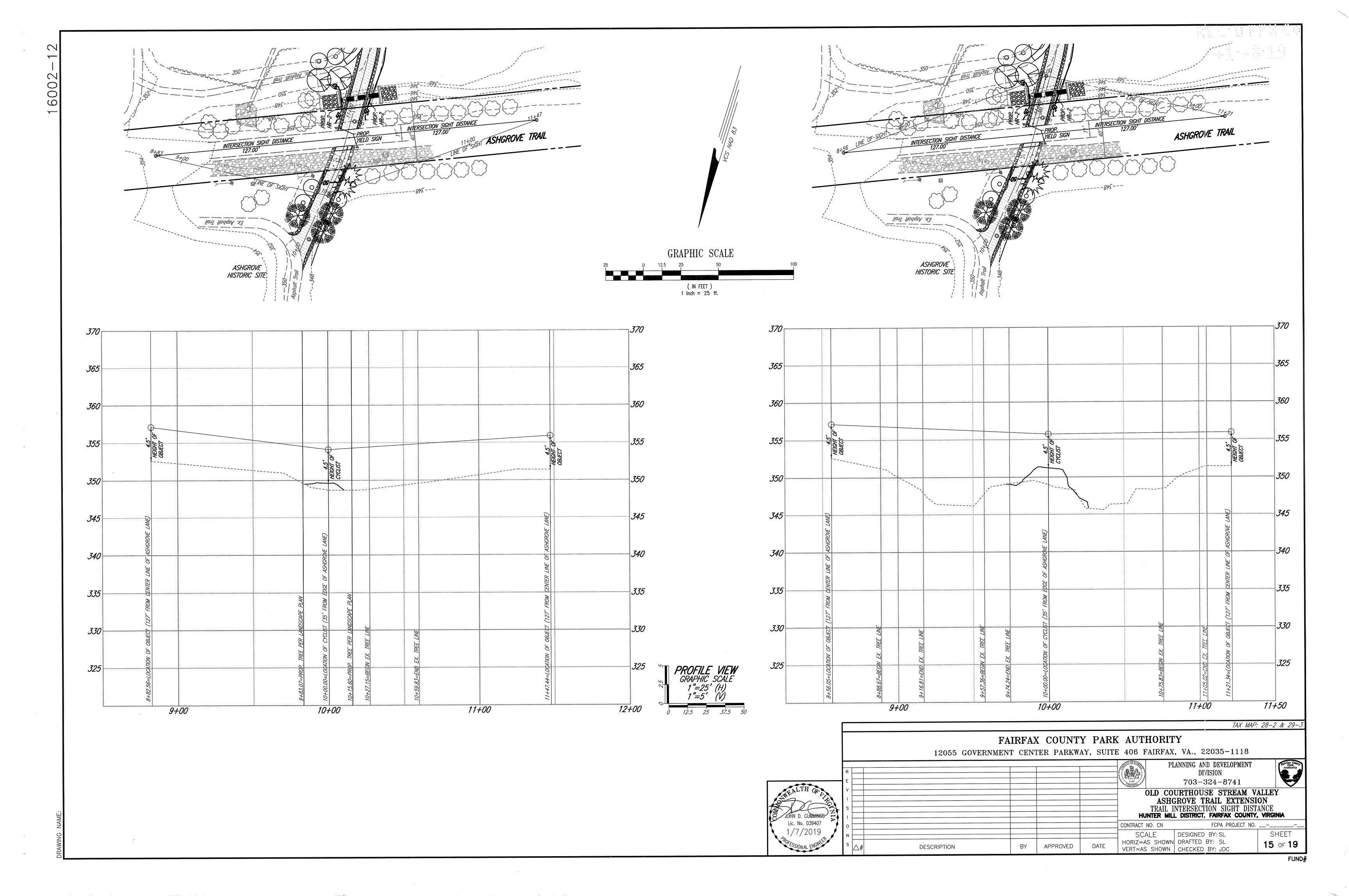
NOTE: TREE PROTECTION SIGNS SHALL BE POSTED AT 50 FOOT INTERVALS ALONG THE LIMITS OF CLEARING AND GRADING.

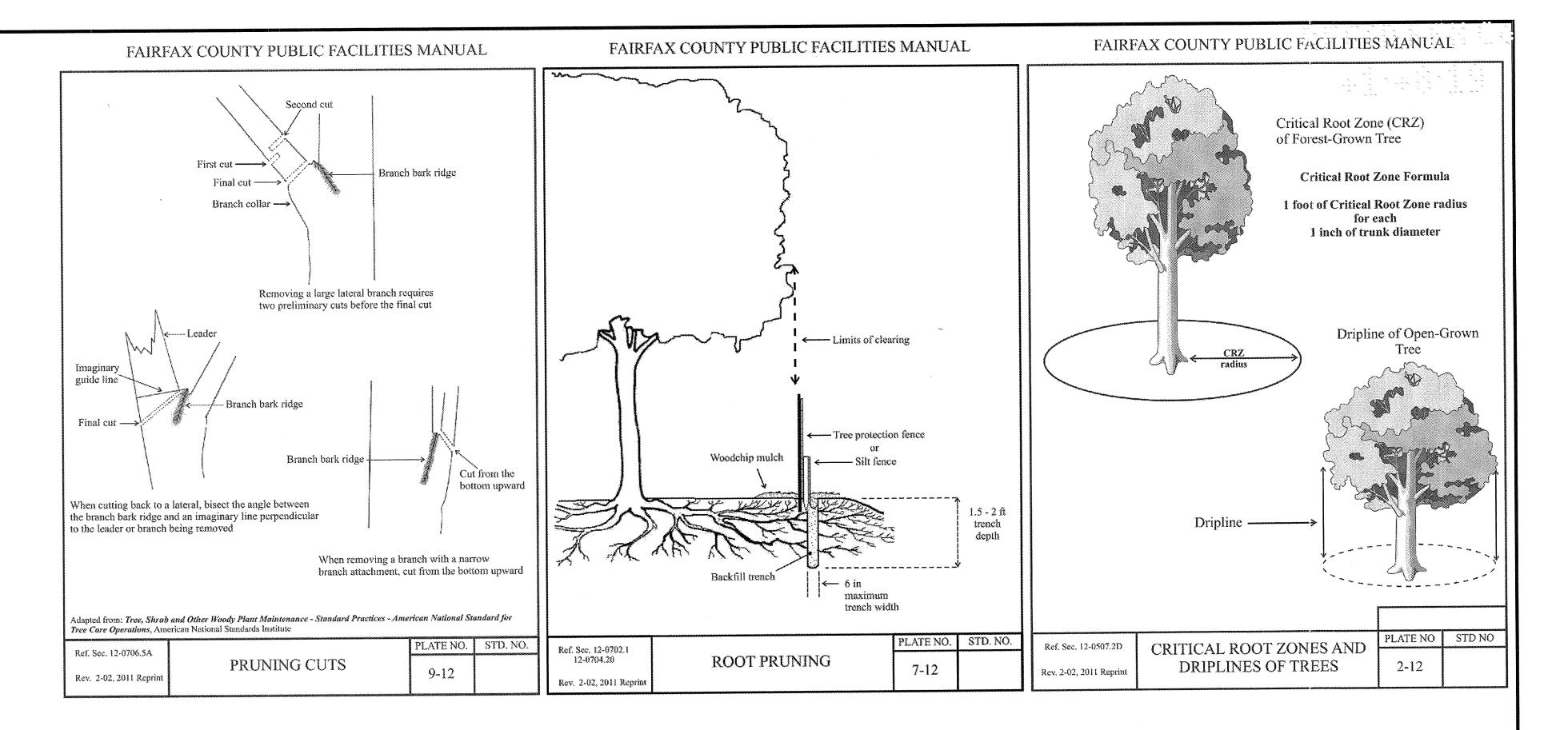


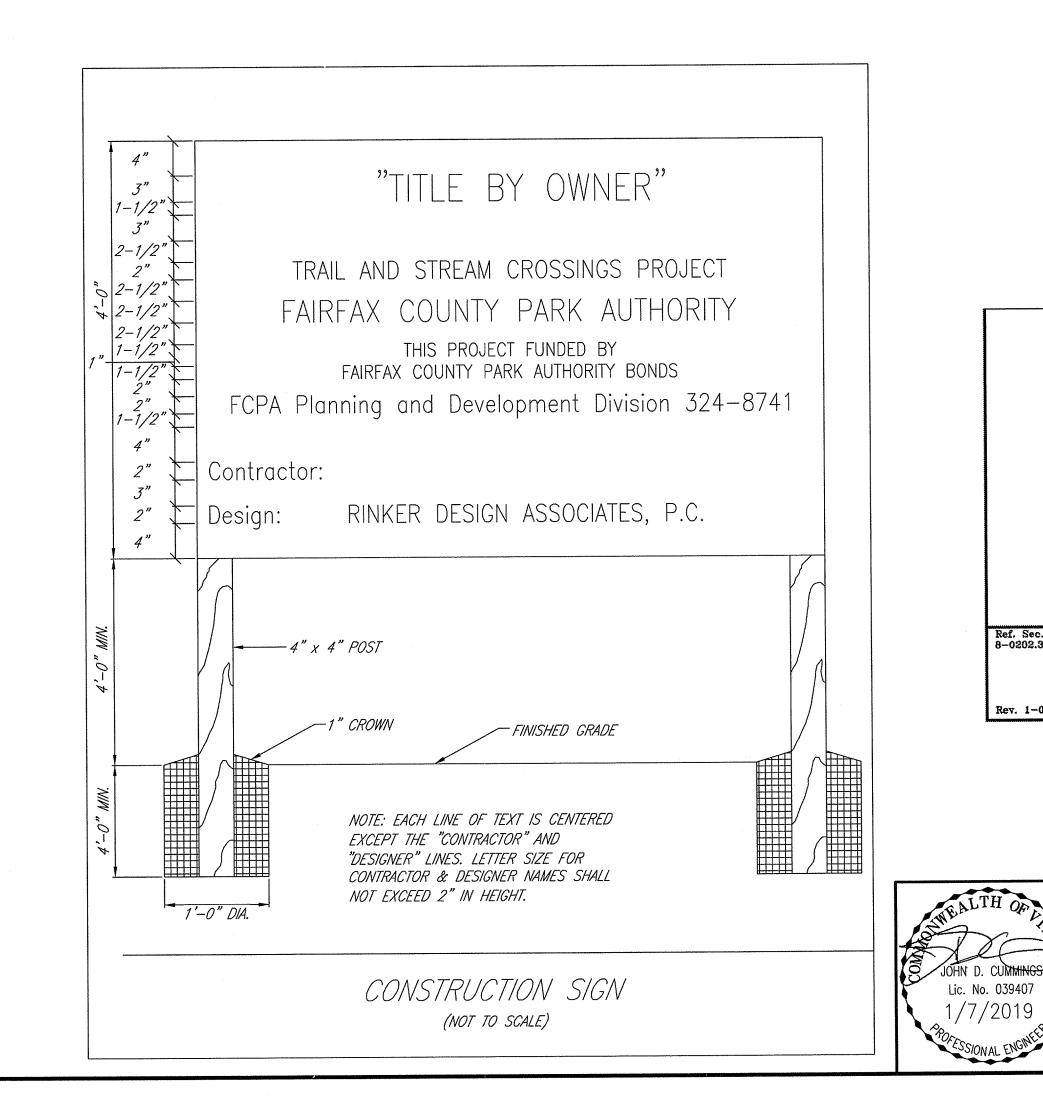
								TAX MAP	: 28-2 & 29-3
							K AUTHORIT		
			12055 GOVERN	MENT CENT	ER PARKW	AY, SUIT		, VA., 22035-1118	
	R E						PI	ANNING AND DEVELOPMENT DIVISION 703-324-8741	Fairfus Comp. Authority
ZILA	V I S						ASHO	URTHOUSE STREAM VEROVE TRAIL EXTENSION E&SC DETAILS L DISTRICT, FAIRFAX COUNTY	ON
	0						CONTRACT NO. CN	FCPA PROJECT NO.	
<i>f</i>	N S	△ #	DESCRIPTION	BY	APPROVED	DATE	SCALE HORIZ=AS SHOWN VERT=AS SHOWN	DESIGNED BY: SL DRAFTED BY: SL CHECKED BY: JDC	SHEET 13 of 19

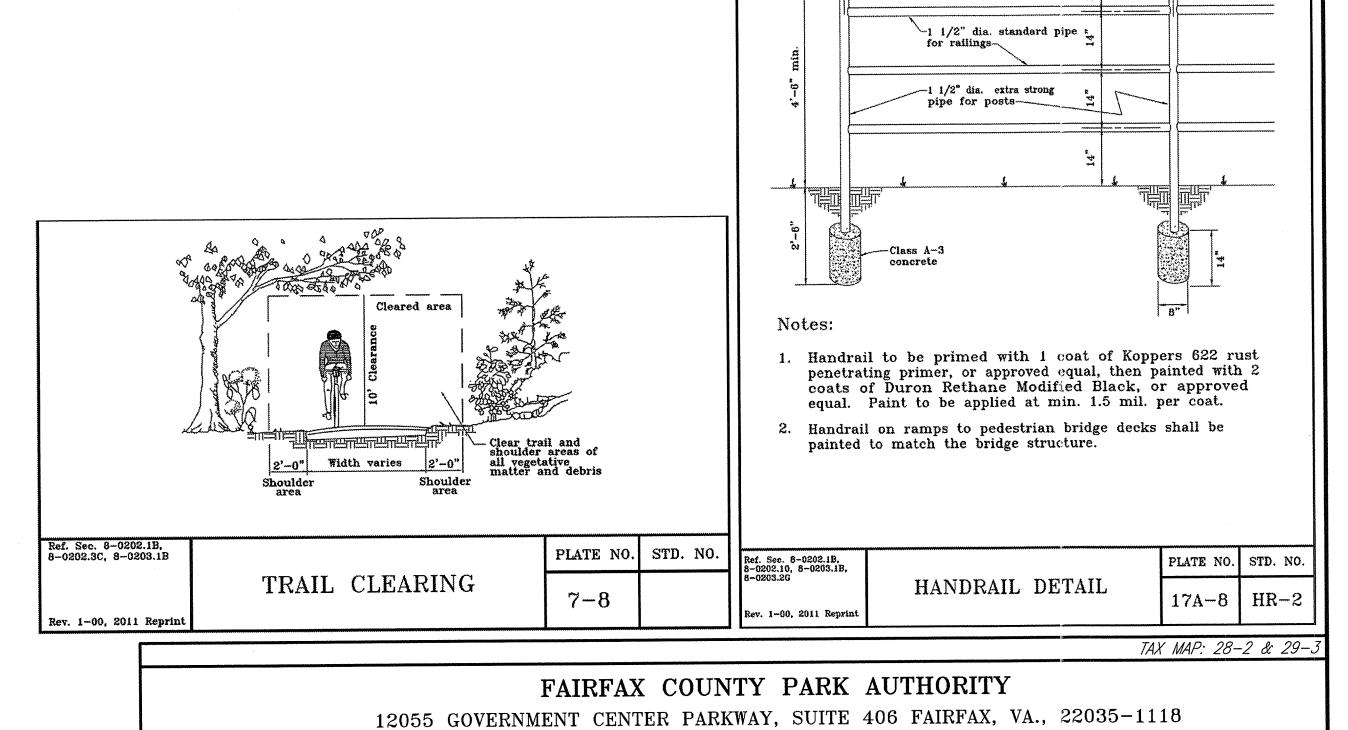
FUND#











APPROVED

DESCRIPTION

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL

7'-0" max.

PLANNING AND DEVELOPMENT

703-324-8741

OLD COURTHOUSE STREAM VALLEY ASHGROVE TRAIL EXTENSION

MISCELLANEOUS DETAILS
HUNTER MILL DISTRICT, FAIRFAX COUNTY, VIRGINIA

DESIGNED BY: SL

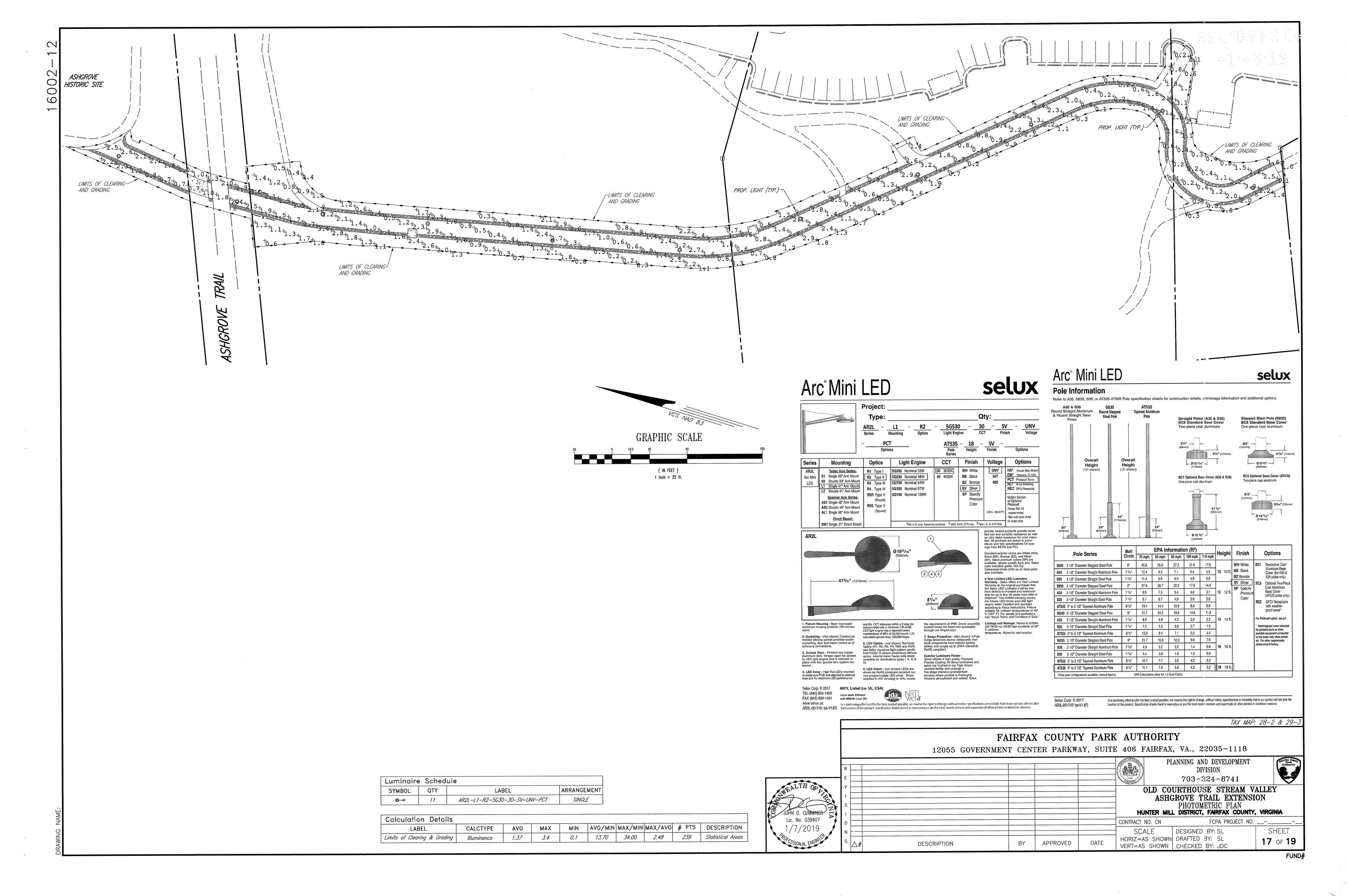
HORIZ=AS SHOWN DRAFTED BY: SL VERT=AS SHOWN CHECKED BY: JDC

CONTRACT NO. CN

FCPA PROJECT NO. ____

SHEET

16 of 19



Bruce McGranahan, Director, Site Development and Inspection Division, LDS

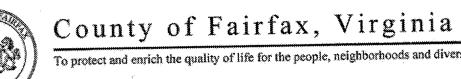
SUBJECT: Public Trails in Floodplain Areas

Zoning Ordinance Section 2-903 states that "... the following uses and topographic improvements, as qualified, may be permitted in a floodplain upon a determination by the Director that such use is permitted in the zoning district in which located, and that the use is in accordance with the provisions of this Part and the standards and criteria set forth in the Public Facilities Manual. Any such approval by the Director shall be in writing and shall specify such conditions deemed necessary to ensure that the proposed construction and resultant use conform to the provisions of this Part." Among the permitted uses listed Section 2-903.7 states that "Public and private utility lines, and all public uses and public improvements performed by or at the direction of the County, or as may be required by County ordinances, to include but not to be limited to channel improvements and erosion control, reservoirs, storm water management and best management practice facilities and similar uses provided the installation of such facilities is accomplished with appropriate easements or agreements and with the minimum disruption necessary to the floodplain."

A trail being constructed by, or at the direction of, a public agency such as the Pairfax County Park Authority is permitted within the regulatory floodplain subject to approval by the Director, and does not require a Special Exception. A Floodplain Use Determination Request must be submitted, allowing the Director to determine if the use is compatible with the floodplain and to attach approval conditions deemed necessary to ensure the purposes of Section 2-901 are protected.



PERMISSION TO WORK IN THE FLOOD PLAIN APPROVAL LETTER



To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

DEC 0 5 2018

John D. Cummings, P.E. LEED Rinker Design Associates, P.C. 9385 Discovery Boulevard, Suite 200 Manassas, VA 20109

> Ashgrove Trail Expansion; Tysons Village, Section 1, Parcel B and Westwood Corporation Circle at Tysons Corner Lot 9, land only; Tax Map #028-2-13-B1,

029-3-20 Lots 0009A and 0009B; Hunter Mill District

Request for an Allowed Use Determination within a Floodplain, dated February 16, 2018; IQ #302334

Dear Mr. Cummings:

In response to your request it has been determined that the proposed expansion of the stream valley trail detailed on the plans submitted with the subject application, located within County (Major) and FEMA floodplains, qualifies as a permitted use under the Floodplain Regulations of the Fairfax County Zoning Ordinance (ZO) § 2-903.7, subject to the following conditions:

- 1. No more land within the floodplain shall be disturbed than is necessary for the proposed trail construction, ZO § 2-905.7B; and no fill, other than that depicted on the plans submitted with this floodplain request, is permitted in the floodplain. Note that the County's Stormwater Planning Division has determined the trail's floodplain impacts to be acceptable.
- 2. To the extent possible, stable vegetation shall be protected and maintained in the floodplain, ZO § 2-905.5.
- 3. There shall be no storage of herbicides, pesticides or toxic or hazardous substances as set forth in Title 40, Code of Federal Regulations (CFR), Parts 116.4 and 261.30 et. seq., in the floodplain, ZO § 2-905.6.
- 4. The proposed use meets the environmental goals and objectives of the adopted Comprehensive Plan for the subject property, ZO § 2-905.7C.
- 5. The proposed use and construction activity shall comply with the provisions of the Chesapeake Bay Preservation Ordinance, ZO § 2-905.11.

This determination is valid as of the date of this letter and does not relieve you of the responsibility of complying with any other applicable County Ordinance or regulation currently in effect or which may be adopted by the Board of Supervisors at a future date.

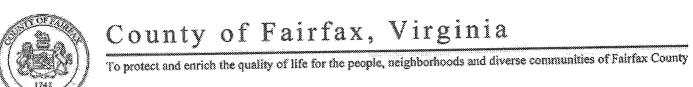
Please ensure that a copy of this letter is made a part of the project's site plan submittal.

If further assistance is desired, please contact Camylyn Lewis, Senior Engineer III, at 703-324-1720 or Camylyn.Lewis@fairfaxcounty.gov.

Shahab Baig, P.E.

Chief. North Branch Site Development and Inspections Division (SDID) Land Development Services (LDS)

STORM WATER DETENTION EXEMPTION APPROVAL LETTER



AUG 0 2 2018

John D. Cummings, P.E. Rinker Design Associates, P.C. 9385 Discovery Boulevard, Suite 200 Manassas, Virginia 20191

AUG 6 2018

RECEIVED

RINKER DESIGN ASSOC., P.C.

Old Courthouse Stream Valley Ashgrove Trail Extension; Plan #3741-MSP-006; Tax Map # 028-2-((13))-000B1, 029-3-((20))-0009A &B; Hunter Mill District

Reference: Stormwater Detention Exception #3741-WSWD-001-1

Dear Mr. Cummings:

The referenced stormwater detention exception request has been received and reviewed for consistency with the Stormwater Management Ordinance (SWMO) Fairfax County Code section 124-6-1. Based on the justifications provided, the Director has determined that:

- i. Stormwater detention is partially provided by the existing dry pond (DP0186) designed and constructed under Plan #3741-PI-05-1 which provide water quantity control for 31.48 acres of drainage area.
- ii. The exception is the minimum necessary to afford relief.
- iii. Granting the exception will not confer any special privileges that are denied in other similar circumstances.
- iv. Exception requests are not based upon conditions or circumstances that are selfimposed or self-created.
- v. Reasonable and appropriate conditions shall be imposed as necessary upon any exception granted so that the intent of the Act and this Chapter are preserved.

Therefore, your request to grant an exception of the stormwater detention requirement of the SWMO (124-4-4-D) is hereby approved on July 17th, 2018, subject to the following condition:

• The alignment of the proposed trail extension shall not encroach within the limits of the existing pand DP0186.

This exception approval in no way relieves you of any other County drainage requirements, including adequacy of outfall and pro-rata share payments. Compliance with the Stormwater Management Ordinance, the Chesapeake Bay Preservation Ordinance, proffers, and development conditions are also required.

This exception shall automatically expire without notice, 24 months after the date of this letter, unless the subject plan has been approved.

Please ensure that a copy of this letter is made a part of the submitted plan.

If further assistance is desired, please contact Yosif Ibrahim Senior Engineer III, Site Development and Inspections Division (SDID) at 703-324-1720 (phone), 703-324-8359 (fax) or yosif.ibrahim@fairfaxcounty.gov.

Sincerely,

Shahabkon Shahab Baig, P.E. Chief, North Branch Site Development and Inspections Division (SDID) Land Development Services (LDS)

cc: Shannon Curtis, Chief, Watershed Planning & Assessment Branch, Stormwater Planning Division, DPWES Yosif Ibrahim, Senior Engineer III (Stormwater), SDID, LDS Waiver File

RPA EXEMPTION APPROVAL LETTER



County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

DEC 0 5 2018

John D. Cummings, P.E. LEED Rinker Design Associates, P.C. 9385 Discovery Boulevard, Suite 200 Manassas, VA 20109

> Ashgrove Trail Expansion; Tysons Village, Section 1, Parcel B and Westwood Corporation Circle at Tysons Corner Lot 9, land only; Tax Map #028-2-13-B1, 029-3-20 Lots 0009A and 0009B; Hunter Mill District

Reference: Resource Protection Area Encroachment Exemption #3741-WRPA-002-1

Dear Mr. Cummings:

Your request for an exemption under Chesapeake Bay Preservation Ordinance (CBPO) Section 118-5-3 to encroach into the Resource Protection Area (RPA) for the expansion of the trail, as shown in your application dated February 16, 2018, is approved, subject to the following conditions:

- 1. Any land disturbance exceeding an area of 2,500 square feet shall comply with Chapter 104 of the Fairfax County Code;
- 2. Any required state or federal permits shall have been issued;
- 3. No more land shall be disturbed than is necessary to provide for the trail;
- 4. All such activities shall be in compliance with all applicable state and federal permits, and shall be conducted in a manner that protects water quality.

This exemption in no way relieves you of any other CBPO requirement or any other County drainage requirement, including adequacy of outfall, pro-rata share payments, etc.

This exemption shall automatically expire, without notice, 24 months after the date of this letter, unless the subject project has been approved.

Please ensure that a copy of this letter is made a part of the subject plan.

If further assistance is desired, please contact Camylyn Lewis at 703-324-1720 or by email at Camylyn.Lewis@fairfaxcounty.gov.

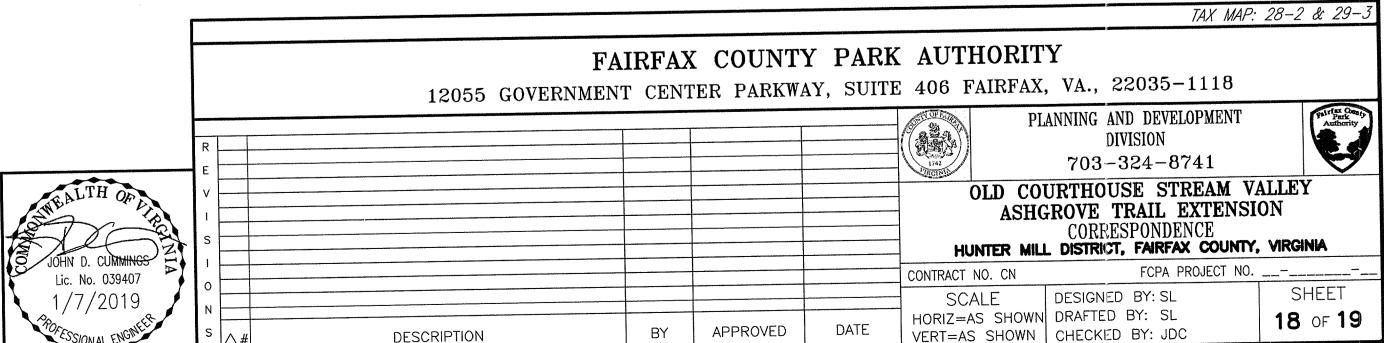
Sincerely.

Cemyly Levis

FOR Shahab Baig, P.E. Chief, North Branch

Site Development and Inspections Division (SDID)

Land Development Services (LDS)



FUND#