LEGEND

VESCH STD.	TITLE	KEY	SYMBOL
3.01	ORANGE SAFETY FENCE	SAF	
3.02	CONSTRUCTION ENTRANCE	CE	
	SUPER SILT FENCE	SSF	
3.07	INLET PROTECTION	IP	
3.18	OUTLET PROTECTION	OP	
3.24	TEMPORARY STREAM CROSSING	SC	
3.26	DEWATERING STRUCTURE (w/ PUMP AS NEEDED)	DS	
3.38	TREE PROTECTION FENCING	TP	
	ROOT PRUNING	RP	
	PROPOSED LIMITS OF DISTURBANCE		LOD
	PROPOSED SANDBAGS		
	FILTER BAG (FOR DEWATERING STRUCTURE)		
	STAGE & STORAGE AREA		

N

VA STATE GRID NORTH
NAD 1983 / NAVD 88

60 0 60 120 FT

wood.

Environment & Infrastructure Solutions, Inc.

4795 Meadow Wood Lane
Suite 310 East
Chantilly, Virginia 20151
Tel. 703-488-3700
Fax. 703-488-3701
www.woodplc.com

SYM	DESCRIPTION	DATE	APPR

TOWN OF LEESBURG
ESTABLISHED 1758
VIRGINIA

TUSCARORA CREEK FLOOD MITIGATION

100% CONSTRUCTION DOCUMENTS

TOWN OF LEESBURG, VIRGINIA

CATOCTIN ELECTION DISTRICT

COMMONWEALTH OF VIRGINIA
MATTHEW TROY BIGGS
Lic. No. 041116
9.18.18
PROFESSIONAL ENGINEER

SEAL

DESIGN BY: MTB	DRAWN BY: MJH
REVIEWED BY: MTB & MB	
PROJECT MANAGER: TWC	
AMEC FOSTER WHEELER PROJECT #: 565500008	
CONTRACT #: 300810-FY15-22	
DATE: 2018-09-17	SHEET SIZE: D
SCALE: AS SHOWN	

SHEET TITLE:

EROSION AND SEDIMENT CONTROL PHASE II - OVERALL

SHEET C-17 OF 91

PLOTTED BY:HEPP, MICHAEL SHEET SET:Tuscarora Creek LAYOUT:C-17 EROSION AND SEDIMENT CONTROL PHASE II - OVERALL September 17, 2018 07:20:14pm Q:\565500008_TUSCARORA CREEK-100%\PLANSHEETS\H - E&S PHASE 2.DWG

LEGEND

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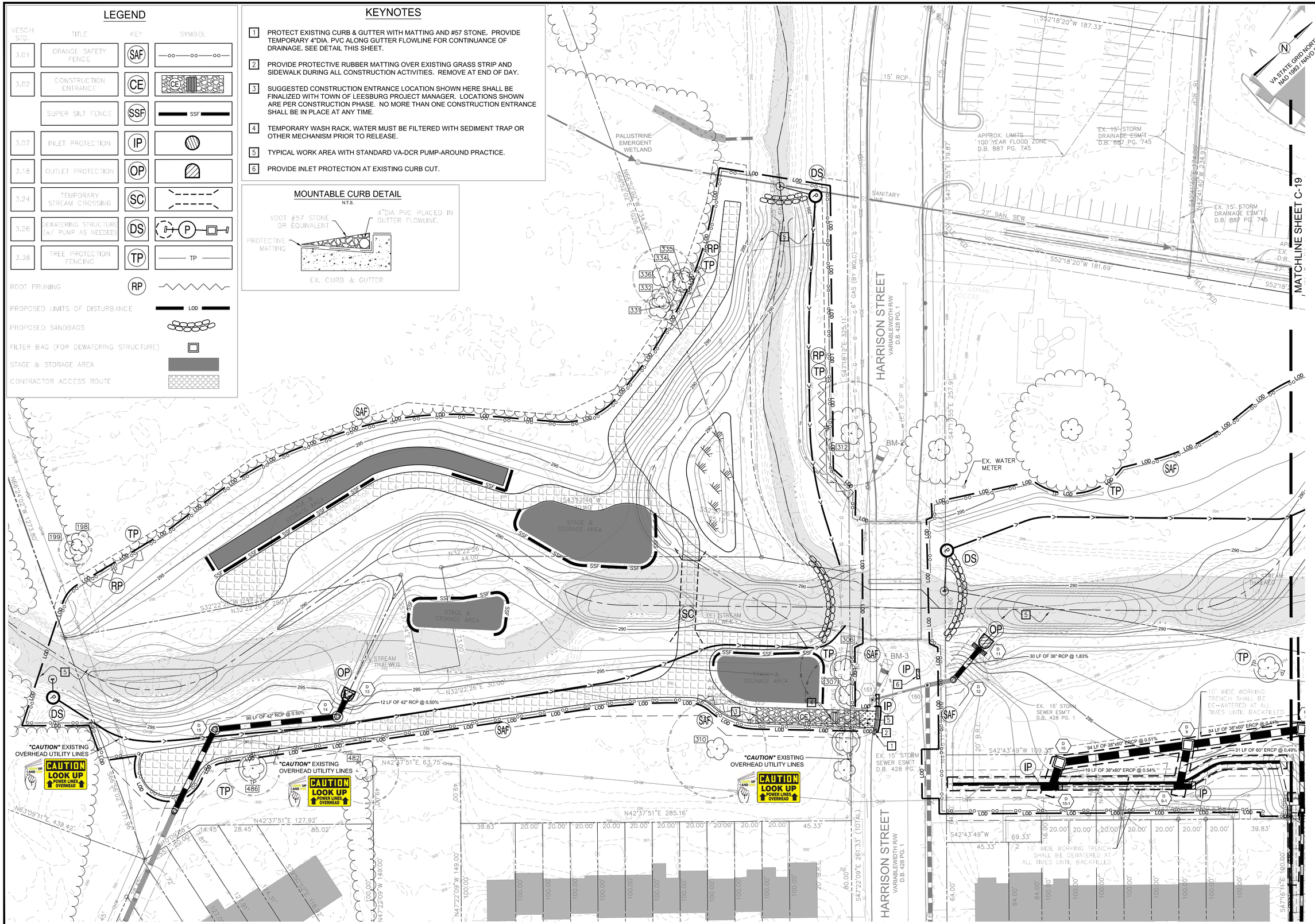
	PROPOSED LIMITS OF DISTURBANCE	LOD	
	PROPOSED SANDBAGS		
	FILTER BAG (FOR DEWATERING STRUCTURE)		
	STAGE & STORAGE AREA		
	CONTRACTOR ACCESS ROUTE		

KEYNOTES

1. PROTECT EXISTING CURB & GUTTER WITH MATTING AND #57 STONE. PROVIDE TEMPORARY 4"DIA. PVC ALONG GUTTER FLOWLINE FOR CONTINUANCE OF DRAINAGE. SEE DETAIL THIS SHEET.
2. PROVIDE PROTECTIVE RUBBER MATTING OVER EXISTING GRASS STRIP AND SIDEWALK DURING ALL CONSTRUCTION ACTIVITIES. REMOVE AT END OF DAY.
3. SUGGESTED CONSTRUCTION ENTRANCE LOCATION SHOWN HERE SHALL BE FINALIZED WITH TOWN OF LEESBURG PROJECT MANAGER. LOCATIONS SHOWN ARE PER CONSTRUCTION PHASE. NO MORE THAN ONE CONSTRUCTION ENTRANCE SHALL BE IN PLACE AT ANY TIME.
4. TEMPORARY WASH RACK. WATER MUST BE FILTERED WITH SEDIMENT TRAP OR OTHER MECHANISM PRIOR TO RELEASE.
5. TYPICAL WORK AREA WITH STANDARD VA-DCR PUMP-AROUND PRACTICE.
6. PROVIDE INLET PROTECTION AT EXISTING CURB CUT.

MOUNTABLE CURB DETAIL

N.T.S.



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DESIGN BY: MTB	DRAWN BY: MJH
REVIEWED BY: MTB & MB	
PROJECT MANAGER: TWC	
AMEC FOSTER WHEELER PROJECT #: 565500008	
CONTRACT #: 300810-FY15-22	
DATE: 2018-09-17	SHEET SIZE: D
SCALE: AS SHOWN	

SHEET TITLE:

EROSION AND SEDIMENT CONTROL PHASE II - SOUTH

SHEET C-18 OF 91

PLOTTED BY:HEPP, MICHAEL SHEET SET:Tuscarora Creek LAYOUT:C-18 EROSION AND SEDIMENT CONTROL PHASE II - SOUTH September 17, 2018 07:21:15pm Q:\565500008_TUSCARORA CREEK-100%\PLANSHEETS\H - E&S PHASE 2.DWG

MATCHLINE SHEET C-18

KEYNOTES

1. PROTECT EXISTING CURB & GUTTER WITH MATTING AND #57 STONE. PROVIDE TEMPORARY 4"DIA. PVC ALONG GUTTER FLOWLINE FOR CONTINUANCE OF DRAINAGE. SEE DETAIL THIS SHEET.
2. PROVIDE PROTECTIVE RUBBER MATTING OVER EXISTING GRASS STRIP AND SIDEWALK DURING ALL CONSTRUCTION ACTIVITIES. REMOVE AT END OF DAY.
3. SUGGESTED CONSTRUCTION ENTRANCE LOCATION SHOWN HERE SHALL BE FINALIZED WITH TOWN OF LEESBURG PROJECT MANAGER. LOCATIONS SHOWN ARE PER CONSTRUCTION PHASE. NO MORE THAN ONE CONSTRUCTION ENTRANCE SHALL BE IN PLACE AT ANY TIME.
4. TEMPORARY WASH RACK. WATER MUST BE FILTERED WITH SEDIMENT TRAP OR OTHER MECHANISM PRIOR TO RELEASE.
5. TYPICAL WORK AREA WITH STANDARD VA-DCR PUMP-AROUND PRACTICE.
6. UPON INSTALLATION OF PROPOSED CURB INLET, PROVIDE INLET PROTECTION.
7. GRADES SHOWN AT CONSTRUCTION ENTRANCE REPRESENT THE FINAL GRADING (4:1) FOR THE EARTHEN BERM WHICH CONNECTS THE FLOODWALLS. THE CONTRACTOR SHALL ENSURE THE CONSTRUCTION ENTRANCE DOES NOT EXCEED A 10% SLOPE DURING USE.

LEGEND

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	PROPOSED SANDBAGS		
	FILTER BAG (FOR DEWATERING STRUCTURE)		
	STAGE & STORAGE AREA		
	CONTRACTOR ACCESS ROUTE		

SHENANDOAH STREET
50' R/W
D.B. 436 PG. 325

OAK VIEW DRIVE SE

STAGE AREA

STAGE & STORAGE AREA

POWER POLE

140 LF OF 48" RCP @ 0.41%
151 LF OF 48" RCP @ 0.40%
41 LF OF 48" RCP @ 0.51%
26 LF OF 48" RCP @ 0.55%
72 LF OF 48" RCP @ 0.40%
162 LF OF 48" RCP @ 0.40%
201 LF OF 48" RCP @ 0.40%
14 LF OF 54" RCP @ 0.40%
64 LF OF 48" RCP @ 0.49%
110 LF OF 24" RCP @ 1.00%

30 0 30 60 FT

PLOTTED BY:HEPP, MICHAEL SHEET SET:Tuscarora Creek LAYOUT:C-19 EROSION AND SEDIMENT CONTROL PHASE II – NORTH September 17, 2018 07:22:03pm Q:\565500008_TUSCARORA CREEK-100%\PLANSHEETS\H – E&S PHASE 2.DWG

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CATOCTIN ELECTION DISTRICT

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SHEET TITLE:
EROSION AND SEDIMENT CONTROL PHASE II - NORTH

SHEET C-19 OF 91

EROSION AND SEDIMENT CONTROL NOTES :

EROSION CONTROL NARRATIVE

PRIOR TO ANY LAND DISTURBING OPERATIONS, THE EROSION CONTROLS, AS SPECIFIED BY THE ENGINEERING PLANS, SHALL BE INSTALLED. ALL MECHANICAL AND VEGETATIVE PRACTICES SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS CONTAINED IN THE LOUDOUN COUNTY STANDARDS AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. THE LOUDOUN COUNTY INSPECTOR SHALL HAVE THE AUTHORITY TO ADD OR DELETE EROSION AND SEDIMENT CONTROLS AS NEEDED IN THE FIELD, AS SITE CONDITIONS WARRANT. SLOPE AREAS THAT CANNOT BE ADEQUATELY STABILIZED BY SEEDING, SHALL BE SODDED AND STAKED. AS DISTURBED AREAS, NOT TO BE CONSTRUCTED UPON, ARE FINAL GRADED, THEY SHALL BE PREPARED, LIME, AND SEED. THE SEED SHALL CONSIST OF NATIVE SEED MIXTURE WITH ANNUAL RYE, IF AFTER OCT. 1ST USE WINTER WHEAT IN PLACE OF RYE IN ACCORDANCE WITH DEPARTMENT OF PUBLIC WORKS AND OF THE TOWN OF LEESBURG APPROVED ALTERNATE SEED FOR AREAS LOCATED WITHIN THE SEDIMENT CONTROLS AND MECHANICAL DEVICES SHALL BE REMOVED FROM CONTRIBUTING AREAS AS THEY BECOME STABILIZED. THIS RESTORATION WORK WILL BE PERFORMED WITHIN 14 DAYS AFTER FINAL GRADING. ALL TEMPORARY SEDIMENT CONTROLS AND MECHANICAL DEVICES SHALL BE REMOVED FROM CONTRIBUTING AREAS AS THEY BECOME STABILIZED. FOR ADDITIONAL DETAILS, REFER TO THE CURRENT EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

THIS PROJECT WHICH WILL ADDRESS FLOODING AND STREAMBANK EROSION ISSUES ALONG A 2,262-FT STREAM REACH OF TUSCARORA CREEK AND TOWN BRANCH THROUGH THE USE OF STREAM RESTORATION PRINCIPLES AND STABILIZATION PRACTICES. THE TOTAL DISTURBED AREA IS 10.61 ACRES. THE DOWNSTREAM EXTENTS OF THE TUSCARORA CREEK PROJECT DRAIN APPROXIMATELY 10 SQUARE MILES OF LAND IN LEESBURG AND LOUDOUN COUNTY. THE EXISTING WATERSHED IS APPROXIMATELY 13% IMPERVIOUS, WITH A HEAVY CONCENTRATION OR URBANIZATION IN THE DOWNSTREAM SECTION OF THE WATERSHED.

EROSION AND SEDIMENT CONTROL MEASURES

ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE STANDARDS AND PRACTICES SET FORTH IN THE CURRENT EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

EROSION, SEDIMENTATION, AND LAND CONSERVATION NOTES

1. MEASURES TO CONTROL EROSION AND SILTATION SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT FEDERAL, STATE, AND LOCAL REGULATIONS. THE INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AN/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 OR ANY ORDINANCE ENACTED BY THE TOWN OF LEESBURG.
2. ALL AREAS, ON AND OFF-SITE, WHICH ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. ALL SLOPES GREATER THAN OR EQUAL TO 2:1 SHALL BE SODDED AND STAKED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE TOWN OF LEESBURG.
3. ANY DISTURBED AREA NOT PAVED, PERMANENTLY SEEDED, SODDED, OR BUILT UPON BY 1 NOVEMBER OR DISTURBED AFTER THAT DATE, IS TO BE SEEDED WITHIN 14 DAYS WITH OATS, ABRUZZI RYE OR APPROVED EQUIVALENT, AND MULCHED WITH HAY OR STRAW MULCH AT THE RATE OF 2 TONS PER ACRE. FOR ADDITIONAL DETAILS, REFER TO THE CURRENT EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE TOWN OF LEESBURG DESIGN & CONSTRUCTION STANDARDS MANUAL.
4. NO AREA SHALL BE LEFT DENUDED FOR ANY PERIOD LONGER THAN 14 DAYS.
5. TEMPORARY DIVERSIONS, SEEDED AND MULCHED OR STAKED STRAW BALE DIVERSIONS AND OTHER CONTROL MEASURES NECESSARY, ARE TO BE PLACED AS INDICATED ON THE DRAWINGS PRIOR TO OR AS THE FIRST STEP IN EXCAVATION.
6. IN ACCORDANCE WITH STATE AND FEDERAL JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL IS TO BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL IS TO BE PLACED IN THE STREAM. ANY STOCKPILED MATERIAL WHERE SPOIL IS PLACED ON DOWN HILL SIDE OF TRENCH; IT IS TO BE BACK-SLOPED TO DRAIN TOWARD TRENCH. WHEN NECESSARY TO DEWATER THE TRENCH, THE PUMP DISCHARGE HOSE MUST OUTLET IN A STABILIZED AREA OF A SEDIMENT BASIN.
7. WHERE STREAM CROSSINGS ARE REQUIRED FOR EQUIPMENT, TEMPORARY STREAM CROSSING BRIDGES SHALL BE PROVIDED.
8. DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY SILT TRAPS, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
9. FOR FURTHER REQUIREMENTS AND DETAILS OF TREE PRESERVATION, PLANTING, EROSION AND SEDIMENT CONTROL, SEE THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

GENERAL EROSION & SEDIMENT CONTROL NOTES

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 VIRGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.
2. UNLESS OTHERWISE INDICATED, ALL REFERENCES TO STANDARD PLATES, TABLES, STANDARDS, AND SPECIFICATIONS REFER TO THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE APPROVED PLAN MUST INSTALLED, INSPECTED, AND APPROVED BY THE LOUDOUN COUNTY SEDIMENT CONTROL INSPECTOR PRIOR TO CLEARING, STRIPPING OF TOPSOIL, OR GRADING.
4. COPIES OF THE APPROVED CONSTRUCTION DRAWINGS (INCLUDING ALL APPROVED REVISIONS), SWPPP, AND GRADING PERMIT SHALL BE MAINTAINED ON-SITE AT ALL TIMES.
5. ADDITIONAL EROSION CONTROL MEASURES MAY BE NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE TOWN OF LEESBURG.
6. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL COMPLETE AND ADEQUATE STABILIZATION IS ACHIEVED.
7. NO UNPROTECTED DISTURBED AREA SHALL DRAIN TO ROADWAY PAVEMENTS SUCH THAT THE SUBBASE, BASE, OR WEARING SURFACE IS CONTAMINATED BY SILT TRAPPED AT LOW POINTS OR INLETS.
8. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
9. THE CONTRACTOR SHALL INSPECT ALL EROSION 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. THE CONTRACTOR/CONTRACTOR'S REPRESENTATIVE SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES DAILY AND AFTER EACH SIGNIFICANT RAINFALL. THE FOLLOWING ITEMS WILL BE CHECKING IN PARTICULAR:
    a. SILT FENCE BARRIERS WILL BE CHECKING REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALF WAY TO THE TOP OF THE BARRIER.
    b. SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED.
    c. STREAM DIVERSION AND STORM CONVEYANCE CHANNELS SHALL BE INSPECTED DAILY AND AFTER EACH RAIN TO ENSURE THEY'RE FUNCTIONING PROPERLY AND THAT THE INTEGRITY OF THE LININGS ARE NOT IMPAIRED. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES MUST BE MADE IMMEDIATELY AFTER THE INSPECTION.
11. SEDIMENT TRAPPING MEASURES SHALL BE INSTALLED PRIOR TO GRADING AND WILL BE STABILIZED IMMEDIATELY FOLLOWING INSTALLATION.
12. FINAL LOCATION OF STOCKPILES SHALL BE DETERMINED IN THE FIELD, WITH THE APPROVAL OF THE LOUDOUN COUNTY SEDIMENT CONTROL INSPECTOR, PRIOR TO THE PLACEMENT OF SOIL OR MATERIAL.
13. PERMANENT SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITH FOURTEEN (14) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN FOURTEEN (14) DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN UNDISTURBED FOR LONGER THAN THIRTY (14) DAYS. SEEDING AND SELECTION OF THE SEED MIXTURE SHALL BE IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK STANDARD AND SPECIFICATION 3.32. ROADS AND PARKING AREAS SHALL BE STABILIZED WITHIN FOURTEEN (14) DAYS AFTER FINAL GRADE IS REACHED.
14. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES WILL BE REMOVED WITHIN 30 DAYS AFTER ADEQUATE SITE STABILIZATION AND AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, AS AUTHORIZED BY THE TOWN OF LEESBURG INSPECTORS.
15. WHEN SEDIMENT IS TRANSPORTED ONTO A PAVED ROAD SURFACE, THE ROAD WILL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT WILL BE REMOVED FROM THE ROAD BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING WILL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.
16. AREAS WHICH ARE NOT TO BE DISTURBED WILL BE CLEARLY MARKED BY FLAGS, SIGNS, ETC.
17. CONTRACTOR TO ENSURE FLOW ENTERS STORM INLETS DURING ALL PHASES OF CONSTRUCTION ONCE INLETS HAVE BEEN INSTALLED.

NOTE:
AN APPLICATION FOR "NATIONWIDE PERMIT 27 - AQUATIC HABITAT RESTORATION, ESTABLISHMENT, AND ENHANCEMENT ACTIVITIES" (NWP 27)HAS BEEN SUBMITTED AND THE PERMIT WAS ISSUED BY THE ARMY CORPS OF ENGINEERS (USACE) ON JANUARY 10, 2017. HOWEVER, NWP 27 EXPIRED ON MARCH 18, 2017. ON MARCH 20, 2017, THE U.S. ARMY CORPS OF ENGINEERS' NORFOLK DIVISION RELEASED THE FINAL NATIONWIDE PERMIT (NWP) REGIONAL CONDITIONS. ON OCTOEBR 4, 2017, A NWP RE-VERIFICATION LETTER FOR THE TUSCARORA CREEK FLOOD MITIGATION PROJECT (PERMIT #2016-0189) WAS ISSUED BY THE USACE NORFOLK DIVISION.

NOTE:
THE LOUDOUN COUNTY INSPECTOR SHALL HAVE THE AUTHORITY TO ADD OR DELETE EROSION AND SEDIMENT CONTROLS AS NEEDED IN THE FIELD, AS SITE CONDITIONS WARRANT.

DUST CONTROL

CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE ENTIRE CONSTRUCTION PHASE BY THE APPLICATION OF WATER AND/OR APPROVED ADHESIVES PER STD. 3.39 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (CURRENT EDITION).

TEMPORARY SEEDING

1. SELECTION OF PLANTS SHALL BE BASED ON THE SPECIFIC SITE AND SEASON AND PER VESCH TABLES 3.31-B&C.
2. LIMING REQUIREMENTS SHALL BE BASED ON TABLE 3.31-A OF VESCH.
3. SEEDS SHALL BE EVENLY APPLIED AND SMALL GRAINS SHALL BE PLANTED NO MORE THAN ONE AND ONE HALF (1.5) INCHES DEEP.
4. SEEDING MADE IN FALL FOR WINTER COVER AND DURING HOT SUMMER MONTHS SHALL BE MULCHED.

MAINTENANCE

IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL. THE CERTIFIED LAND DISTURBER FOR THE SITE IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:

1. THE CONSTRUCTION ENTRANCE AND WASH RACK SHALL BE INSPECTED WEEKLY, IF THE GRAVEL IS CLOGGED WITH SEDIMENT BUILDUP AND IS NO LONGER FUNCTIONAL, THE GRAVEL SHALL BE REMOVED, CLEANED, AND REPLACED.
2. THE SILT FENCE AND SUPER SILT FENCE BARRIERS SHALL BE INSPECTED DAILY FOR TEARS, UNDERMINING, AND FABRIC DETERIORATION. ANY DAMAGE SHALL BE REPAIRED BY THE CLOSE OF THE BUSINESS DAY.
3. THE SILT FENCE SHALL BE INSPECTED WEEKLY FOR DEPTH OF SEDIMENT. SEDIMENT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 18 INCHES. THE SEDIMENT SHALL BE SPREAD ON-SITE IN PROTECTED AREAS.
4. THE SEEDED AREAS SHALL BE INSPECTED DAILY DURING THE ESTABLISHMENT PERIOD TO ENSURE SEED GERMINATION.
5. AFTER ESTABLISHMENT OF THE VEGETATION IN THE SEEDED AREAS, INSPECTIONS SHALL BE CONDUCTED ON A WEEKLY BASIS TO ENSURE THE SEEDED AREAS ARE NOT DAMAGED. ANY AREA WHERE THE VEGETATION IS DEAD, OR IS OTHERWISE DAMAGED, SHALL BE RESEEDED IMMEDIATELY.
6. PROVISION FOR DUST CONTROL SHALL BE MADE IN ACCORDANCE WITH STD. AND SPEC 3.39 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. EROSION AND SEDIMENT CONTROL MEASURES MAY BE REMOVED ONLY WITH THE APPROVAL OF THE TOWN OF LEESBURG INSPECTOR.

PERMANENT SEEDING

1. PERMANENT VEGETATION COVER MUST MEET THE REQUIREMENTS OF MINIMUM STANDARDS #3 (MS #3).
2. THE SELECTION OF PLANT MATERIAL IS SHOWN ON THE PLANTING PLAN.
3. THE PLANTING SOIL MUST HAVE ENOUGH FINE GRAINED SOIL, SUFFICIENT PORE SPACE, SUFFICIENT DEPTH, AND FREE FROM TOXIC OR EXCESSIVE QUANTITIES OF ROOTS AND SHALL BE APPLIED IN ACCORDANCE WITH STD. 3.30.

PHASING OF EROSION AND SEDIMENT CONTROL PLAN

PHASE 1

1. LOUDOUN COUNTY AND THE TOWN OF LEESBURG SHALL BE NOTIFIED 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
2. EROSION AND SEDIMENT CONTROLS NECESSARY FOR THE TEMPORARY CONSTRUCTION ENTRANCE AND STAGING AREAS SHALL BE INSTALLED FIRST.
3. CONSTRUCTION ENTRANCE AND TEMPORARY STAGING AREA MAY BE CLEARED AFTER COMPLETION OF STEP 1 ABOVE.
4. TEMPORARY CONSTRUCTION ENTRANCE WITH WASH RACK AND SOURCE OF WATER SHALL BE INSTALLED NEXT.
5. CLEARING FOR THE PURPOSES OF INSTALLATION OF THE PERIMETER EROSION AND SEDIMENT CONTROLS SHALL BE PERFORMED AS STEP 5.
6. INLET PROTECTION SHALL BE ADDED FOR THE EXISTING INLET HARRISON STREET.
7. UPON COMPLETION OF PHASE I, INSPECTION WILL BE PERFORMED BY THE TOWN OF LEESBURG INSPECTOR AND PHASE II PERMIT WILL THEN BE ISSUED BY THE TOWN OF LEESBURG INSPECTOR.
8. PHASE II EROSION AND SEDIMENT CONTROL PLAN MAY NOT BE IMPLEMENTED UNTIL A PHASE II PERMIT HAS BEEN ISSUED.

PHASE 2

1. CLEARING OF THE SITE MAY PROCEED UPON ISSUANCE OF THE PHASE II PERMIT.
2. MASS GRADING OF THE SITE MAY PROCEED WITH THE CLEARING OPERATIONS.
3. DUE TO THE LINEAR NATURE OF THIS PROJECT, WORK WILL PROGRESS IN STAGES TO MINIMIZE THE AMOUNT OF TRENCHING AND/OR DISTURBANCE. AT ANY ONE TIME, EXCAVATED MATERIAL IS TO BE PLACED ON THE UPHILL SIDE OF THE TRENCH AS FEASIBLE.
4. DURING CONSTRUCTION OF STEEP SLOPES THE DRAINAGE SHALL BE REDIRECTED FROM THE SLOPES USING COIR WATTLES TO REDUCE EROSION.
5. ANY DISTURBED AREA PLANNED TO BE LEFT DORMANT FOR MORE THAN 14 DAYS SHALL BE STABILIZED WITH TEMPORARY VEGETATION.
6. PERMANENT SEEDING AND/OR SODDING AND LANDSCAPING SHALL BE INSTALLED AS ONE OF THE LAST STEPS IN CONSTRUCTION TO PREVENT DAMAGE TO THE PLANTING MATERIAL.
7. AFTER COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED, EROSION AND SEDIMENT CONTROLS MAY BE REMOVED UPON APPROVAL FROM THE LOUDOUN COUNTY SEDIMENT CONTROL INSPECTOR.

STRUCTURAL PRACTICES

1. TEMPORARY CONSTRUCTION ENTRANCE AND WASH RACK:
   A TEMPORARY CONSTRUCTION ENTRANCE AND WASH RACK WILL BE INSTALLED AT THE LOCATION SHOWN ON THE PLANS. REF, SPEC. 3.02. THE CONTRACTOR MUST HAVE WATER PRESENT TO WASH VEHICLES LEAVING SITE. CONTRACTOR TO SUPPLY WATER FOR TRUCK WASHING VIA AN APPROVED METER, TRUCK, TANK OR CONTAINER. COORDINATE WITH LEESBURG DEPARTMENT OF UTILITIES.
2. SILT FENCE BARRIERS:
   SILT FENCE BARRIERS WILL BE INSTALLED AS SHOWN ON THE PLANS TO FILTER SEDIMENT LADEN RUN-OFFS FROM SHEET FLOW. REF LOUDOUN COUNTY FACILITIES STANDARDS MANUAL (FSM).
3. INLET PROTECTION:
   INLET PROTECTION SHALL BE INSTALLED AT THE LOCATION(S) SHOWN ON THE PLANS. REF, STD & SPEC 3.07.
4. DEWATERING/PUMP:
   DEWATERIN/PUMPING SHALL BE PLACED IN ACCORDACE WITH SECQUANCE OF CONSTRUCTION AND WHERE SEDIMENT-LADEN WATER IS TO BE DISCARGED OFF SITE. REF. SPEC. 3.26.
5. TEMPORARY STREAM CROSSING:
   TEMPORARY STREAM CROSSING TO BE INSTALLED AT THE LOCATIONS SHOWN ON THE PLANS. REF, STD. & SPEC 3.24. WHEN THE TEMPORARY BRIDGE(S) IS NO LONGER NEEDED, ALL STRUCTURES INCLUDING ABUTMENT AND OTHER BRIDGING MATERIALS SHOULD BE REMOVED IMMEDIATELY. REMOVAL OF BRIDGE(S) AND CLEAN-UP OF THE AREA SHALL BE ACCOMPLISHED WITHOUT CONSTRUCTION EQUIPMENT WORKING IN THE WATERWAY CHANNEL.
6. TREE PROTECTION:
   TREE PROTECTION TO BE INSTALLED AT THE LOCATIONS SHOWN ON THE PLANS. REF, TOWN OF LEESBURG DESIGN AND CONSTRUCTION STANDARDS MANUAL (DCSM) VS-1, VS-4. CONTRACTOR WILL BE REQUIRED TO HAVE A CERTIFIED ARBORIST ON SITE FOR ALL TREE WORK AT THE BEGINING OF THE PROJECT AND PERIODICALLY THROUGHOUT THE PROJECT WHEN WORK IS TO BE DONE AROUND TREES. DEAD, DYING, OR OTHER TREES AUTHORIZED BY THE TOWN'S DEPARTMENT OF CAPITAL PROJECTS TO BE REMOVED OUTSIDE THE LIMITS OF CLEARING (I.E INSIDE TREE SAVE AREAS) SHALL BE REMOVED USING HAND EQUIPMENT ONLY.

VEGETATIVE PRACTICES

1. STOCKPILING OF TOPSOIL:
   ALL TOPSOIL WILL BE STRIPPED, STOCKPILED, AND AND REUSED DIRECTLY ON-SITE TO PROVIDE A SUITABLE GROWTH MEDIUM FOR FINAL SITE STABILIZATION WITH VEGATATION. REF. SPEC 3.30.
2. TEMPORARY SEEDING:
   ALL AREAS DISTURBED DURING CONSTRUCTION OPERATIONS AND WHICH WILL BE DENUDED FOR MORE THAN 14 CALENDAR DAYS WILL BE SEEDED WITH FAST GERMINATING, TEMPORARY VEGETATIONS. SELECTION OF SEEDING MIXTURE WILL DEPEND ON THE TIME OF YEAR IT IS APPLIED. REF. SPEC. 3.32
3. PERMANENT STABILIZATION:
   ALL AREAS DISTURBED DURING CONSTRUCTION AND WHICH WILL NOT BE BUILT UPON WILL BE STABILIZED WITH PERMANENT VEGETATION IMMEDIATELY FOLLOWING FINISH GRADING. SEEDING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SPEC. 3.32 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. THE SEEDED AREAS WILL BE PROTECTED DURING ESTABLISHMENT WITH THE BIODEGRADABLE "ROLLED EROSION CONTROL PRODUCTS" COIR, ANCHORED WITH WOODEN STAKES ON TOP OF SEED AND STRAW.

EROSION AND SEDIMENT CONTROL MINIMUM STANDARDS NOTES:

✓ MS-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.

✓ MS-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 SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

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

N/A MS-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.

✓ MS-5 STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSION IMMEDIATELY AFTER INSTALLATION.

N/A MS-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 AREA 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 25-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.

✓ MS-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.

✓ MS-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.

✓ MS-9 WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROECTION SHALL BE PROVIDED.

✓ MS-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.

✓ MS-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.

✓ MS-12 WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE 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 THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.

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

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

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

✓ MS-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 THE UPHILL SIDE OF TRENCHES.
  c. 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.
  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 THIS CHAPTER.
  f. APPLICABLE SAFETY CHAPTERS SHALL BE COMPLIED WITH.

✓ MS-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 THE 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.

✓ MS-18 ALL TEMPORARY EROSION 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 VESCP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

✓ MS-19 PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS.

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www.woodplc.com

SYM	DESCRIPTION	DATE	APPR

TUSCARORA CREEK
FLOOD MITIGATION
100% CONSTRUCTION DOCUMENTS
TOWN OF LEESBURG, VIRGINIA
CATOCTIN ELECTION DISTRICT

MATTHEW TROY BIGGS
Lic. No. 041116
9·18·18
SEAL

DESIGN BY: MTB	DRAWN BY: MJH
REVIEWED BY: MTB & MB	
PROJECT MANAGER: TWC	
AMEC FOSTER WHEELER PROJECT #: 565500008	
CONTRACT #: 300810-FY15-22	
DATE: 2018-09-17	SHEET SIZE: D
SCALE: AS SHOWN	

SHEET TITLE:
EROSION & SEDIMENT CONTROL NOTES

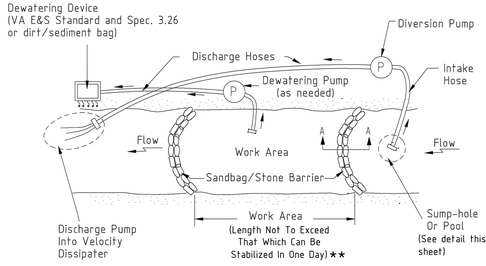
SHEET C-20 OF 91

PLOTTED BY:HEPP, MICHAEL SHEET SET:Tuscarora Creek LAYOUT:C-20 EROSION & SEDIMENT CONTROL NOTES September 17, 2018 07:22:17pm Q:\565500008_TUSCARORA CREEK-100%\PLANSHEETS\ - E&S DETAILS.DWG

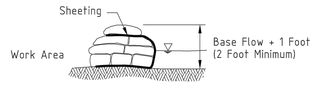
The Virginia Stream Restoration & Stabilization Best Management Practices Guide

DETAIL 5.1: PUMP-AROUND PRACTICE (MODIFIED)

DS



PLAN



Cross Section Of Sandbag/Stone Diversion

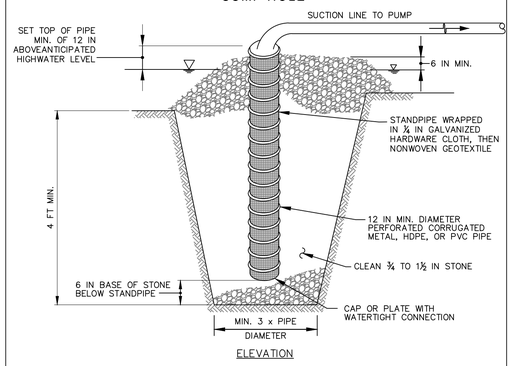
SECTION A-A

** MODIFIED

Adapted From
Maryland's Waterway
Construction Gudielines

TEMPORARY INSTREAM CONSTRUCTION MEASURES	DECEMBER 2003	VIRGINIA DEPARTMENT OF CONSERVATION RECREATION

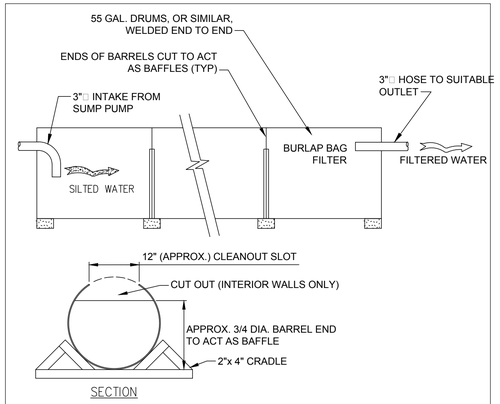
SUMP HOLE



ELEVATION

CONSTRUCTION SPECIFICATIONS

1. USE 12 INCH OR LARGER DIAMETER CORRUGATED METAL, HDPE, OR PVC PIPE WITH 1 INCH DIAMETER PERFORATIONS, 6 INCHES ON CENTER. BOTTOM OF PIPE MUST BE CAPPED WITH WATERTIGHT SEAL.
2. WRAP PIPE WITH ½ INCH GALVANIZED HARDWARE CLOTH AND WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE HARDWARE CLOTH.
3. EXCAVATE PIT TO THREE TIMES THE PIPE DIAMETER AND FOUR FEET IN DEPTH. PLACE ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
4. SET TOP OF PIPE MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
5. BACKFILL HOLE AROUND THE PIPE WITH ¾ TO 1½ INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE AND EXTEND STONE A MINIMUM OF 6 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
6. DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE OR VELOCITY DISSIPATER.
7. A SUMP HOLE REQUIRES FREQUENT MAINTENANCE. IF SYSTEM CLOGS, REMOVE PERFORATED PIPE AND REPLACE GEOTEXTILE AND STONE. KEEP POINT OF DISCHARGE FREE OF EROSION.



SECTION

PORTABLE SEDIMENT TANK

(NO SCALE)

CONSTRUCTION SPECIFICATIONS

1. CLEAN OUT THE SEDIMENT TANK WHEN ONE THIRD (1/3) FILLED WITH SILT.
2. STEEL DRUMS ARE USED AS AN EXAMPLE DUE TO THEIR READY AVAILABILITY.
3. ANY TANKS MAY BE USED, PROVIDED THAT THE VOLUME REQUIREMENTS BELOW ARE MET. ALL SEDIMENT COLLECTED IN THE TANK SHALL BE DISPOSED OF IN A SEDIMENT TRAPPING DEVICE OR AS APPROVED BY THE INSPECTOR.
4. TANK STORAGE VOLUME REQUIRED = 16 CUBIC FOOT OF STORAGE FOR EACH GALLON PER MINUTE OF PUMP DISCHARGE CAPACITY. MULTIPLE TANKS MAY BE USED.

Flexamat®

Motz Enterprises, Inc.
3153 Madison Road
Cincinnati OH 45209
Office: 513-772-6689
Fax: 513-772-6690
www.Flexamat.com

Product Data Sheet

Flexamat® is a tied concrete block mat used to control erosion in swales, slopes, ditches, channels, shorelines and any area where soil sediment may be lost due to water runoff.

Flexamat® should be considered in any application where consideration is being given to poured concrete, riprap, gabions, ACB's and other hard-armor systems.

Flexamat® consists of pyramidal concrete blocks that are interconnected utilizing a rough-service polyester geogrid. The completed mat yields a high strength, ultra-flexible hard armor system of Erosion Control. Flexamat's superior Percentage of Open Area (POA) affords an ideal zone for vegetation growth while remaining a permanent armor against long-term erosional forces.

General Composition of Materials

Blocks	5000 PSI, Wet-cast Portland Cement
Interlocking Geogrid	Fornit 30/30
Underlayment Options	Curlex II TRM

Manufacturing Values

Flexamat Properties	Values
Roll Width	4', 5.5', 8', 10', 12' 16'
Roll Length	30', 40', 50' / custom
Material Weight	10 lbs./sf
Block Size	6.5" x 6.5" x 2.25"

Performance Design Criteria

Percentage Open Area (POA)	30% min.
Geogrid Tensile Strength	2000 lbs./lf min.
Shear Tolerance*	24 lbs./sf
Velocity Tolerance*	19ft./s

*ASTM D 6460

TIED CONCRETE BLOCK MAT

FLEXAMAT PRODUCT DATA SHEET PROVIDED FOR INFORMATION ONLY! CONTRACTOR MAY USE THIS PRODUCT OR AN ALTERNATIVE APPROVED BY THE TOWN OF LEESBURG. ALTERNATIVES SHALL COMPLY WITH THE PERFORMANCE DESIGN CRITERIA ABOVE.

wood.

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SYM	DESCRIPTION	DATE	APPR

TOWN OF LEESBURG ESTABLISHED 1758 VIRGINIA

TUSCARORA CREEK FLOOD MITIGATION

100% CONSTRUCTION DOCUMENTS

TOWN OF LEESBURG, VIRGINIA

CATOCTIN ELECTION DISTRICT

COMMONWEALTH OF VIRGINIA
MATTHEW T. BIGGS
Lic. No. 041116
9.18.18
PROFESSIONAL ENGINEER
SEAL

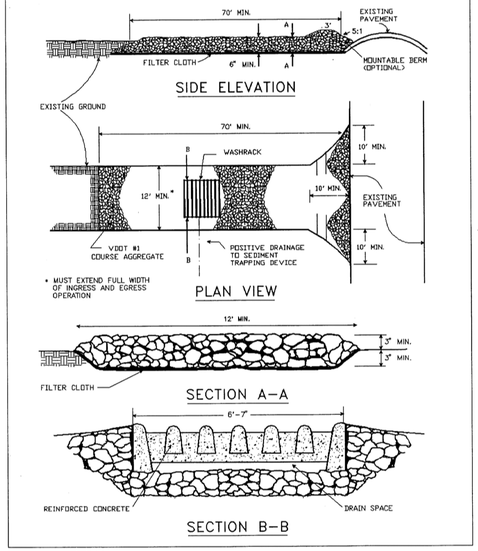
DESIGN BY: MTB	DRAWN BY: MJH
REVIEWED BY: MTB & MB	
PROJECT MANAGER: TWC	
AMEC FOSTER WHEELER PROJECT #: 565500008	
CONTRACT #: 300810-FY15-22	
DATE: 2018-09-17	SHEET SIZE: D
SCALE: AS SHOWN	
SHEET TITLE: EROSION & SEDIMENT CONTROL DETAILS	

SHEET C-21 OF 91

CONSTRUCTION ENTRANCE | CE

1992 | 3.02

STONE CONSTRUCTION ENTRANCE



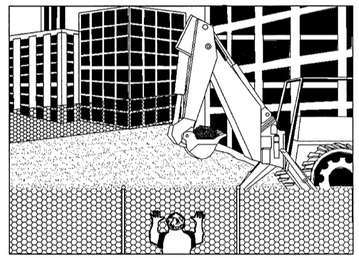
Source: Adapted from 1983 Maryland Standards for Soil Erosion and Sediment Control, and Va. DSWC

Plate 3.02-1

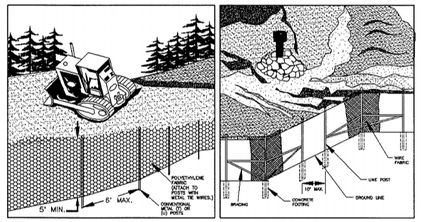
ORANGE SAFETY FENCE | SAF

1992 | 3.01

SAFETY FENCE



PERSPECTIVE VIEW



PERSPECTIVE VIEW PLASTIC FENCE

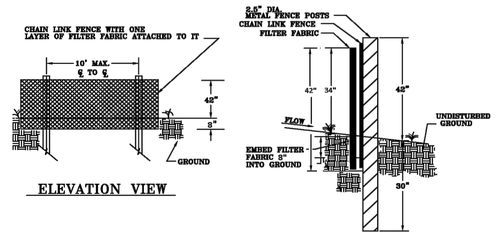
PERSPECTIVE VIEW METAL FENCE

Source: Adapted from Conwed Plastics and VDOT Road and Bridge Standards

Plate 3.01-1

SUPER SILT FENCE | SSF

Super Silt Fence



SUPER SILT FENCE
NO SCALE

FENCING

Chain link fence shall be 34" above grade with 8" embedded for a total fabric width of 42". The post shall be 42" above grade with 30" placed below grade (without concrete) for a total length of 72".

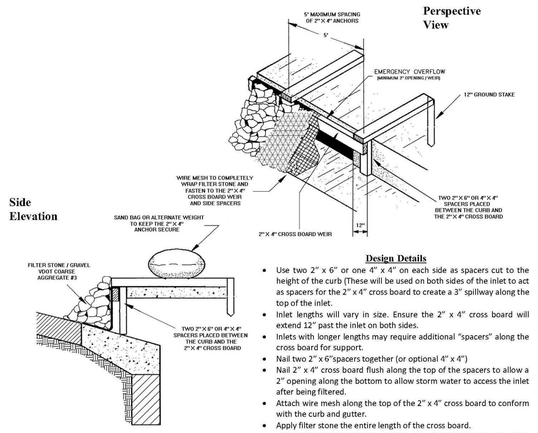
NOTES

1. Chain link fence shall be fastened securely to fence posts with wire ties.
2. Filter fabric shall be fastened securely to chain link fence with ties spaced horizontally 24" at the top and midsection.
3. Physical properties of the filter fabric shall conform to the latest edition of THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK.
4. When two sections of filter fabric adjoin each other, they shall be overlapped by 6" and folded.
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.

NOTE:
SUPER SILT FENCE DETAIL ADAPTED FROM LOUDOUN COUNTY FACILITIES STANDARDS MANUAL, AS AMENDED THROUGH NOVEMBER 1, 2016

INLET PROTECTION | IP

Recommended Curb Inlet Protection



Design Details

- Use two 2" x 6" or one 4" x 4" on each side as spacers cut to the height of the curb (These will be used on both sides of the inlet to act as spacers for the 2" x 4" cross board to create a 3" spillway along the top of the inlet.
- Inlet lengths will vary in size. Ensure the 2" x 4" cross board will extend 12" past the inlet on both sides.
- Inlets with longer lengths may require additional "spacers" along the cross board for support.
- Nail two 2" x 6"spacers together (or optional 4" x 4")
- Nail 2" x 4" cross board flush along the top of the spacers to allow a 2" opening along the bottom to allow storm water to access the inlet after being filtered.
- Attach wire mesh along the top of the 2" x 4" cross board to conform with the curb and gutter.
- Apply filter stone the entire length of the cross board.
- Attach the mesh to the top of the cross board to secure the filter stone.
- Attach 2" x 4" anchors on top of each end of the cross board to anchor the inlet protection.
- Use sand bags on top of the 2" x 4" anchors to secure the inlet protection to the structure or drive stakes into the ground at the rear of the structure to attach the 2" x 4" anchors to.

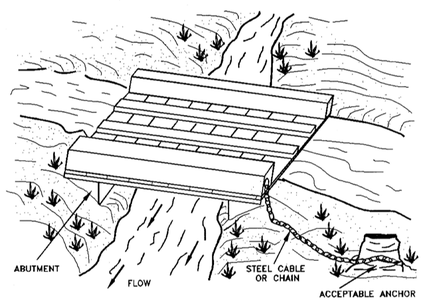
FIGURE 5
Section 7.600

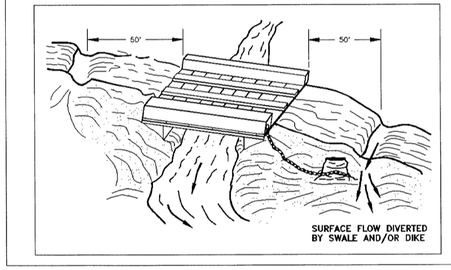
EXAMPLE TEMPORARY STREAM CROSSING BRIDGE
(SHOWN FOR INFORMATION ONLY)

TEMPORARY VEHICULAR STREAM CROSSING | SC

1992 | 3.24

TEMPORARY BRIDGE CROSSING





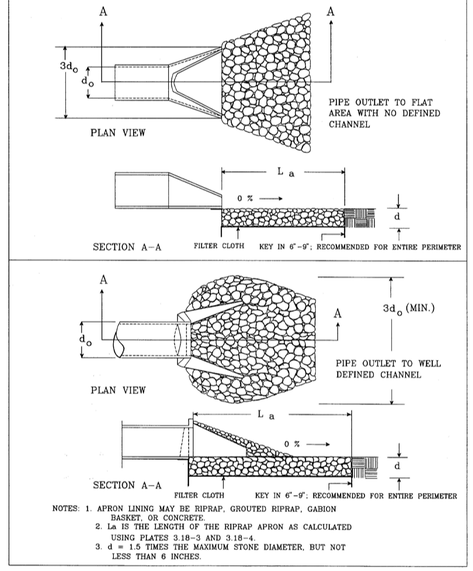
Source: 1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control

Plate 3.24-1

INLET PROTECTION | OP

1992 | 3.18

PIPE OUTLET CONDITIONS



NOTES: 1. APRON LINING MAY BE RIPRAP, GROUTED RIPRAP, GABION BASKET, OR CONCRETE.
2. La IS THE LENGTH OF THE RIPRAP APRON AS CALCULATED USING PLATES 3.18-3 AND 3.18-4.
3. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER, BUT NOT LESS THAN 6 INCHES.

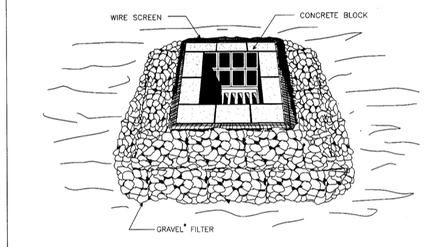
Source: Va. DSWC

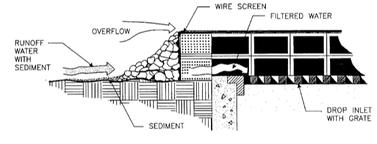
Plate 3.18-1

INLET PROTECTION | IP

1992 | 3.07

BLOCK AND GRAVEL DROP INLET SEDIMENT FILTER





SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.

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

Source: Va. DSWC

Plate 3.07-3

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ESTABLISHED 1758

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PROFESSIONAL ENGINEER
SEAL

DESIGN BY:	MTB
DRAWN BY:	MJH
REVIEWED BY:	MTB & MB
PROJECT MANAGER:	TWC
AMEC FOSTER WHEELER PROJECT #:	565500008
CONTRACT #:	300810-FY15-22
DATE:	2018-09-17
SHEET SIZE:	D
SCALE:	AS SHOWN

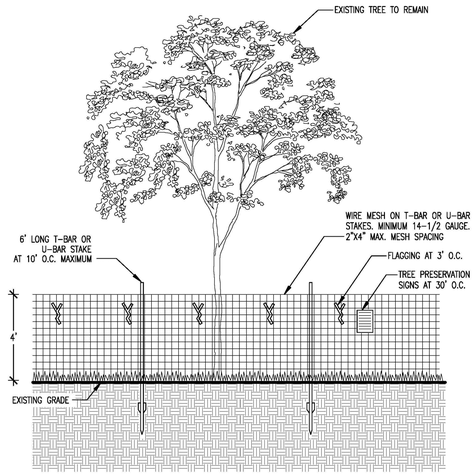
SHEET TITLE:
EROSION & SEDIMENT CONTROL DETAILS

SHEET C-22 OF 91

TREE PROTECTION FENCING | TP | ——— TP ———

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

Article # 8-420.2



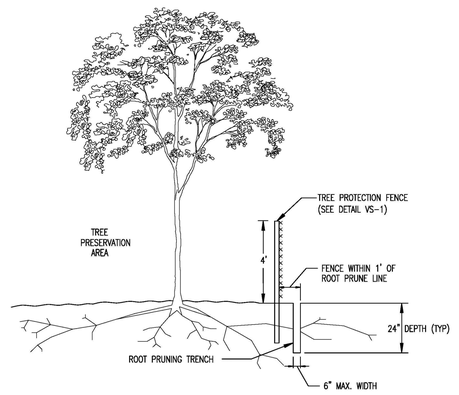
Not To Scale

REVISIONS NO.	DATE:			TREE PROTECTION FENCE WELDED WIRE	DRAWING VS-1 PAGE 100

11/10/2009

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

Article # 8-420.2



NOTE:
1. TREE PRESERVATION AREA WILL BE DETERMINED AS PART OF THE PLAN REVIEW PROCESS. EXACT LOCATION, DEPTH AND METHODS OF ROOT PRUNING TO BE DETERMINED IN THE FIELD BY TOWN URBAN FORESTER.
2. EXACT LOCATION OF TREE PRESERVATION AREAS SHALL BE STAKED OR FLAGGED PRIOR TO TRENCHING.
3. TRENCH SHOULD BE BACKFILLED IMMEDIATELY OR INCORPORATED WITH SILT FENCE INSTALLATION.
4. ROOTS SHOULD BE SEVERED BY TRENCHER, VIBRATORY PLOW OR APPROVED EQUIVALENT. ROOTS OVER 2" DIAMETER SHOULD BE CLEANLY CUT BY HAND. ROOT PRUNING ADJACENT TO SPECIMEN TREES MAY REQUIRE SOIL REMOVAL BY SUPERSONIC AIR TOOL TO MINIMIZE TREE AND ROOT IMPACTS.

Not To Scale

REVISIONS NO.	DATE:			TYPICAL ROOT PRUNING DETAIL	DRAWING VS-2 PAGE 101

11/10/2009

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

Article # 8-420.2

Not To Scale

REVISIONS NO.	DATE:			TYPICAL SIGNAGE FOR TREE PRESERVATION AREA	DRAWING VS-3 PAGE 102

11/10/2009

NOTE: CONTACT PHONE NUMBER HAS BEEN CHANGED AT THE REQUEST OF THE TOWN OF LEESBURG

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

Article # 8-420.2

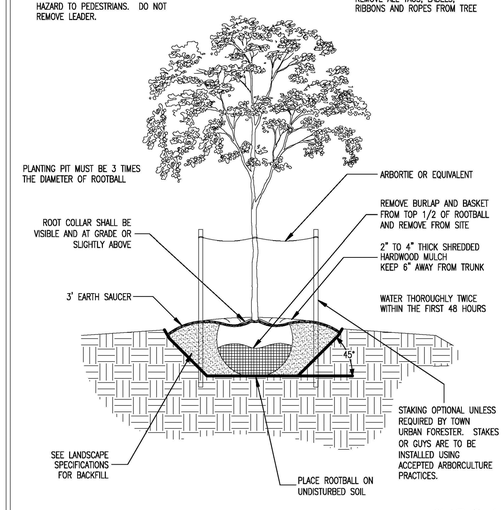
1. All trees to be protected shall be prepared and treated to maximize their potential for survival and improve their health and condition.
2. The location of the tree preservation zone will be flagged for the Town Urban Forester to confirm the clearing limits in relation to those trees identified to be saved.
3. Pursuant to the Town's Design and Construction Standards Manual (DCSM) § 8-410.B, trees being removed shall not be felled, pushed or pulled into trees being retained.
4. Tree protection fencing shall be installed prior to any grading on site and maintained for the duration of the project construction.
5. Tree protection fencing shall be installed in conjunction with root pruning at the limits of clearing. Fencing shall consist of a four-foot (4') high welded wire fence, attached to steel T-bar stakes. Signs prohibiting entrance shall be installed every thirty (30') feet along fencing.
6. Silt fence will be installed wherever potential runoff may cause silt to enter preservation areas. Silt fencing will be coordinated with the erosion and sedimentation control plans for the project.
7. Root pruning shall be to the depth of excavation, or 24 inches, whichever is less. A trencher or vibratory plow shall be used to prune all roots. Roots over two (2") inch diameter shall have a clean cut made on the surface of the root, which is still attached to the tree.
8. A root biostimulant shall be applied according to the manufacturer's recommendations for trees that are root pruned. Biostimulant shall be dispersed using mechanical broadcast equipment.
9. The Town Urban Forester will be contacted 48 hours prior to any grading activity to confirm compliance of the tree preservation measures listed above.
10. All trees with root zones that will be impacted by construction shall be mulched with wood chips from pruning and removal operations on site. Mulch will be four (4") inches in depth. Mulch shall be kept at least six (6") inches from the trunk of all trees.
11. All construction activity within the areas fenced off around the trees shall be prohibited.
12. Contractors and sub-contractors are accountable for observing all tree preservation requirements and for securing permission for any deviation from the approved plans.

REVISIONS NO.	DATE:			TREE PRESERVATION NARRATIVE	DRAWING VS-4 PAGE 103

11/10/2009

The Town of Leesburg in Virginia — DESIGN AND CONSTRUCTION STANDARD

ZO § 12.9.5



Not To Scale

REVISIONS NO.	DATE:			PLANTING TREES IN OPEN AREA OR GRASS STRIP	DRAWING VS-5 PAGE 104
1	11/10/2009				

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Fax. 703-488-3701
www.woodplc.com

NO.	DATE	DESCRIPTION	APPR

TOWN OF LEESBURG VIRGINIA ESTABLISHED 1758

TUSCARORA CREEK FLOOD MITIGATION

100% CONSTRUCTION DOCUMENTS

TOWN OF LEESBURG, VIRGINIA

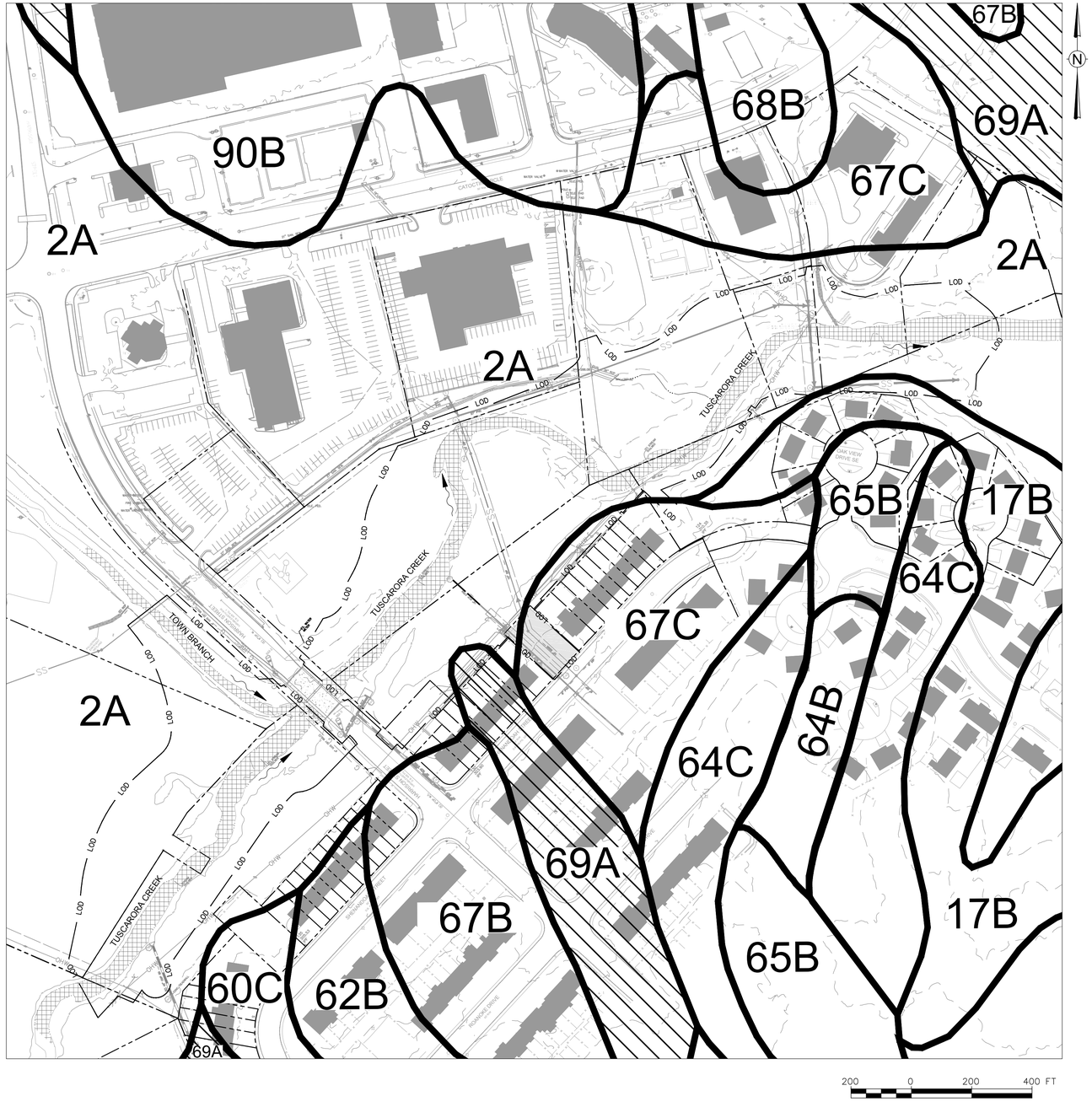
CATOCTIN ELECTION DISTRICT

COMMONWEALTH OF VIRGINIA — MATTHEW TROY BIGGS — Lic. No. 041116 — 9.18.18 — PROFESSIONAL ENGINEER — SEAL

DESIGN BY:	MTB
DRAWN BY:	MJH
REVIEWED BY:	MTB & MB
PROJECT MANAGER:	TWC
AMEC FOSTER WHEELER PROJECT #	565500008
CONTRACT #	300810-FY15-22
DATE:	2018-09-17
SHEET SIZE:	D
SCALE:	AS SHOWN

SHEET TITLE: TREE PROTECTION DETAILS

SHEET C-23 OF 91



SUMMARY OF SOIL CHARACTERISTICS AND USE POTENTIALS

MAPPING UNIT NUMBER NAME, SLOPE, FLOODING POTENTIAL AND HYDROLOGIC GROUP	SOIL CHARACTERISTICS	GENERAL DEVELOPMENT CENTRAL WATER AND SEWER/DEPTH TO BEDROCK	CONVENTIONAL SEPTIC TANK DRAINFIELDS	AGRICULTURAL FORESTRY, AND HORTICULTURAL/USDA LAND USE CAPABILITY CLASS
CODORUS SILT LOAM (0-3%) OCCASIONAL FLOODING (C) **2A**	VERY DEEP MODERATELY WELL DRAINED BROWN AND MOTTLED BROWN AND GREY SILTY SOILS WITH SEASONAL WATER TABLES ON LEVEL TERRACE POSITIONS IN THE FLOOD PLAIN; DEVELOPED IN ALLUVIUM OF MICA-BEARING SOILS DERIVED FROM CRYSTALLINE ROCK	IV - VERY POOR POTENTIAL SUBJECT TO FLOODING DEPTH TO HARD BEDROCK IS GENERALLY GREATER THAN 6'	IV- VERY POOR: FLOODING POTENTIAL	II - SECONDARY CROPLAND 3W
MIDDLEBURG SILT LOAM, (1 - 7%) (B) **17B**	VERY DEEP WELL DRAINED YELLOWISH BROWN TO BROWN LOAMY SOILS WITH INTERMITTENT SEASONAL WATER TABLES IN CONCAVE UPLAND POSITIONS (SWALES); DEVELOPED IN RECENT COLLUVIUM OF SOILS DERIVED FROM MIXED ACID AND BASIC ROCK	III W - POOR POTENTIAL; SHORT DURATION WATER TABLES DEPTH TO HARD BEDROCK IS GENERALLY GREATER THAN 5'	IV - VERY POOR: LANDSCAPE POSITION AND SHORT DURATION WATER TABLES	I - PRIME FARMLAND 2E
HAYMARKET AND JACKLAND SOILS (8 - 15%) (D) **67C**	COMPLEX OF VERY DEEP MODERATELY WELL DRAINED YELLOWISH-BROWN TO OLIVE-BROWN (JACKLAND) AND WELL DRAINED STRONG BROWN (HAYMARKET) CLAYPAN SOILS WITH PERCHED WATER TABLES ON CONVEX SLOPING SIDE SLOPES IN DISSECTED LANDFORMS; DEVELOPED FROM DIABASE	IV P - VERY POOR POTENTIAL; HIGH SHRINK-SWELL CLAYS AND SEASONAL PERCHED WATER TABLE DEPTH TO HARD BEDROCK IS GENERALLY GREATER THAN 5'	IV - VERY POOR POTENTIAL; HIGH WATER TABLES, SHRINK-SWELL CLAYS	IV - GRASSLAND AGRICULTURE 5E, 5W
ELBERT SILTY CLAY LOAM, (0 - 3%) PONDING (D) HYDRIC SOIL **69A**	VERY DEEP POORLY DRAINED SOIL IN DRAINAGEWAYS; DEVELOPED FROM DIABASE AND BASALT	IV PW - VERY POOR POTENTIAL; WETNESS AND HIGH SHRINK - SWELL CLAYS DEPTH TO HARD BEDROCK IS GENERALLY GREATER THAN 6'	IV - VERY POOR POTENTIAL; HIGH WATER TABLE AND SHRINK - SWELL CLAYS	IV - GRASSLAND AGRICULTURE 5W
SYCOLINE-CATLETT COMPLEX (7 - 15%) (C/D) **60C**	COMPLEX OF MODERATELY DEEP, MODERATELY WELL DRAINED YELLOWISH-BROWN SILTY (SYCOLINE) AND SHALLOW, WELL DRAINED GRAYISH-BROWN SKELETAL (CATLETT) SOILS WITH PERCHED SEASONAL WATER TABLES ON CONVEX SIDE SLOPES; DEVELOPED FROM HORNFEL AND GRANULITES	II R - FAIR POTENTIAL; SHALLOW SOILS OVER ROCK DEPTH TO HARD BEDROCK GENERALLY RANGES BETWEEN 20 TO 40" IN SYCOLINE AND 10 TO 30" IN CATLETT	IV - VERY POOR POTENTIAL; SHALLOW TO ROCK	IV - GRASSLAND AGRICULTURE 3E, 6S
KELLY - SYCOLINE COMPLEX, (3 -8%) (D/C) **62B**	COMPLEX OF MODERATELY DEEP MODERATELY WELL TO SOMEWHAT POORLY DRAINED YELOWISH-BROWN SILTY (SYCOLINE) SOILS; AND DEEP, SOMEWHAT POORLY DRAINED GRAY AND GRAYISH-BROWN CLAYEY (KELLY) SOILS WITH SEASONAL PERCHED WATER TABLE ON GENTLY SLOPING TO NEARLY LEVEL RIDGE CRESTS; DEVELOPED FROM HORNFEL AND GRANULITES	III WP - POOR POTENTIAL; HIGH SHRINK-SWELL CLAYS AND MODERATE DURATION PERCHED WATER TABLE DEPTH TO HARD BEDROCK GENERALLY RANGES 40 TO 60" IN KELLY AND 20 TO 40" IN SYCOLINE	III - POOR POTENTIAL; HIGH WATER TABLES	II - SECONDARY CROPLAND 2E, 4W
HAYMARKET AND JACKLAND SOILS (2 - 8%) (D) **67B**	COMPLEX OF VERY DEEP MODERATELY WELL DRAINED YELLOWISH-BROWN TO OLIVE-BROWN (JACKLAND) AND WELL DRAINED STRONG BROWN (HAYMARKET) CLAYPAN SOILS WITH PERCHED WATER TABLES ON CONVEX RIDGETOPS AND SIDE SLOPES OVER DIABASE AND SOME BASALT	IV P - VERY POOR POTENTIAL; HIGH SHRINK-SWELL CLAYS AND SEASONAL PERCHED WATER TABLE DEPTH TO HARD BEDROCK IS GENERALLY GREATER THAN 5'	IV - VERY POOR POTENTIAL; HIGH WATER TABLES, SHRINK-SWELL CLAYS	II - SECONDARY CROPLAND 5E, 5W

LEGEND

SOILS DELINEATION	60C / 2A / 69A
RIGHT OF WAY/ PROPERTY LINE	
STREAM AREA	
LIMITS OF DISTURBANCE	LOD — LOD

SOIL LEGEND

SOIL	CHARACTERISTICS	HYDROLOGIC SOIL GROUPS
69A (Hydric)	CLASS IV, VERY POOR POTENTIAL	= D

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www.woodplc.com

SYM	DESCRIPTION	DATE	APPR

TOWN OF LEESBURG VIRGINIA ESTABLISHED 1758

TUSCARORA CREEK FLOOD MITIGATION

100% CONSTRUCTION DOCUMENTS

TOWN OF LEESBURG, VIRGINIA

CATOCTIN ELECTION DISTRICT

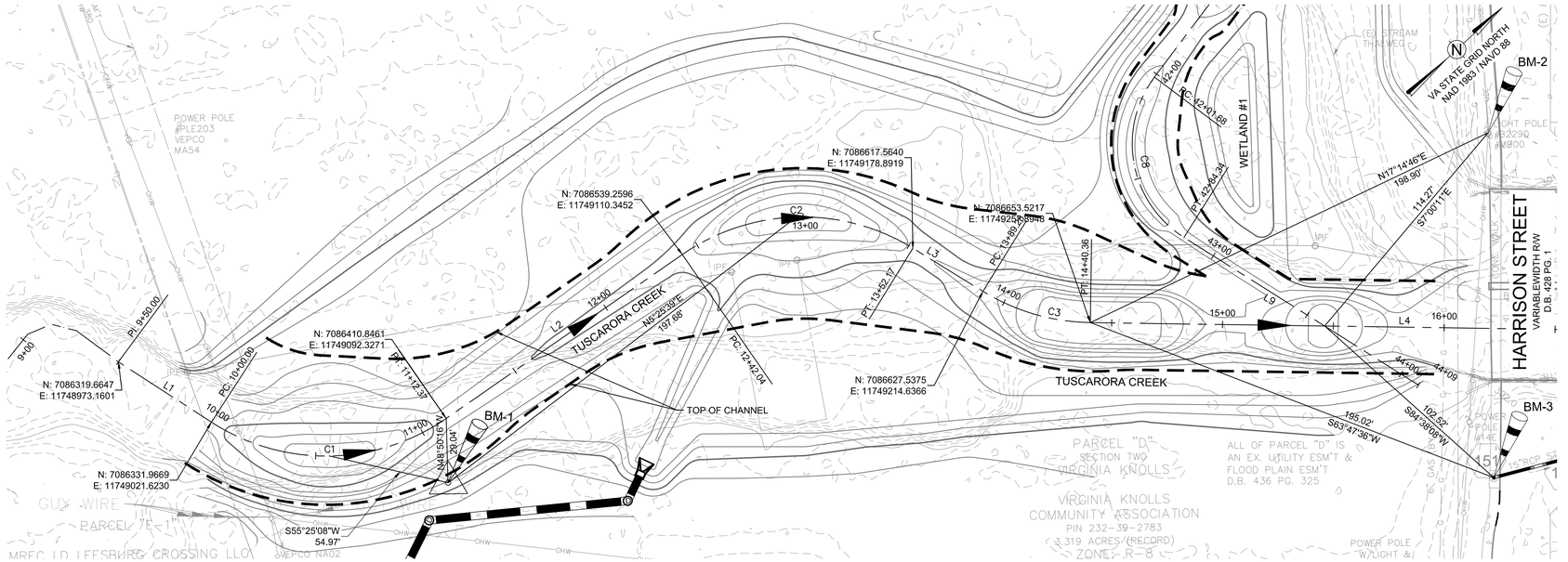
COMMONWEALTH OF VIRGINIA
MATTHEW T. BIGGS
Lic. No. 041116
9.18.18
PROFESSIONAL ENGINEER
SEAL

DESIGN BY: MTB	DRAWN BY: MJH
REVIEWED BY: MTB & MB	
PROJECT MANAGER: TWC	
AMEC FOSTER WHEELER PROJECT #: 565500008	
CONTRACT #: 300810-FY15-22	
DATE: 2018-09-17	SHEET SIZE: D
SCALE: AS SHOWN	

SHEET TITLE: SOILS MAP

SHEET C-24 OF 91

CONTROL POINT TABLE - BENCHMARK (BM)				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM-1	7086391.83	11749114.24	291.50	CMP INVERT (155)
BM-2	7086843.48	11749316.86	301.00	LIGHT POLE
BM-3	7086739.64	11749432.87	301.79	CURB INLET MH LID (151)
BM-4	7086776.23	11749452.35	301.67	STORM DRAIN MH LID (150)
BM-5	7087270.74	11749620.21	293.30	SANITARY MH LID (D)
BM-6	7087318.16	11749776.07	293.11	SANITARY MH LID (F)
BM-7	7087454.63	11749316.86	301.00	SANITARY MH LID (G)
BM-8	7087452.95	11749776.07	293.11	SANITARY MH LID (J)
BM-9	7087317.85	11750210.46	295.15	SANITARY MH LID (K)



TUSCARORA CREEK STA. 9+50 TO HARRISON STREET BRIDGE

TUSCARORA CREEK CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C1	95.00'	112.37'	N41°52'18"E	105.93'	67°46'09"	63.80'
C2	95.00'	110.13'	N41°11'55"E	104.07'	66°25'21"	62.19'
C3	95.00'	51.08'	N59°00'28"E	50.46'	30°48'15"	26.17'
C4	95.00'	91.94'	N15°52'55"E	88.39'	55°26'51"	49.93'
C5	95.00'	137.14'	N29°30'52"E	125.54'	82°42'45"	83.63'
C6	150.00'	52.54'	N80°54'21"E	52.28'	20°04'14"	26.54'

TUSCARORA CREEK LINE TABLE		
LINE	LENGTH	BEARING
L1	50.00	N75°45'23.04"E
L2	129.67	N7°59'13.91"E
L3	37.11	N74°24'35.36"E
L4	403.89	N43°36'20.30"E
L5	80.81	N11°50'30.80"W
L6	563.54	N70°52'14.47"E
L7	263.98	S89°03'31.91"E

TOWN BRANCH CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C7	121.66'	92.08'	S31°58'48"E	89.90'	43°21'56"	48.37'
C8	50.00'	82.66'	S57°39'30"E	73.56'	94°43'20"	54.30'

TOWN BRANCH LINE TABLE		
LINE	LENGTH	BEARING
L8	109.60	S10°17'50.20"E
L9	125.00	N74°58'50.30"E

TOWN BRANCH STA. 39+50 TO TUSCARORA CREEK CONFLUENCE

30 0 30 60 FT

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SYM	DESCRIPTION	DATE	APPR

TOWN OF LEESBURG ESTABLISHED 1758 VIRGINIA

TUSCARORA CREEK FLOOD MITIGATION
100% CONSTRUCTION DOCUMENTS
TOWN OF LEESBURG, VIRGINIA
CATOCTIN ELECTION DISTRICT

COMMONWEALTH OF VIRGINIA
MATTHEW TROY BIGGS
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DESIGN BY:	MTB
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PROJECT MANAGER:	TWC
AMEC FOSTER WHEELER PROJECT #	565500008
CONTRACT #	300810-FY15-22
DATE:	2018-09-17
SHEET SIZE:	D
SCALE:	AS SHOWN

SHEET TITLE:
GEOMETRY PLAN
UPSTREAM

SHEET C-25 OF 91

CONTROL POINT TABLE - BENCHMARK (BM)				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM-1	7086391.83	11749114.24	291.50	CMP INVERT (155)
BM-2	7086843.48	11749316.86	301.00	LIGHT POLE
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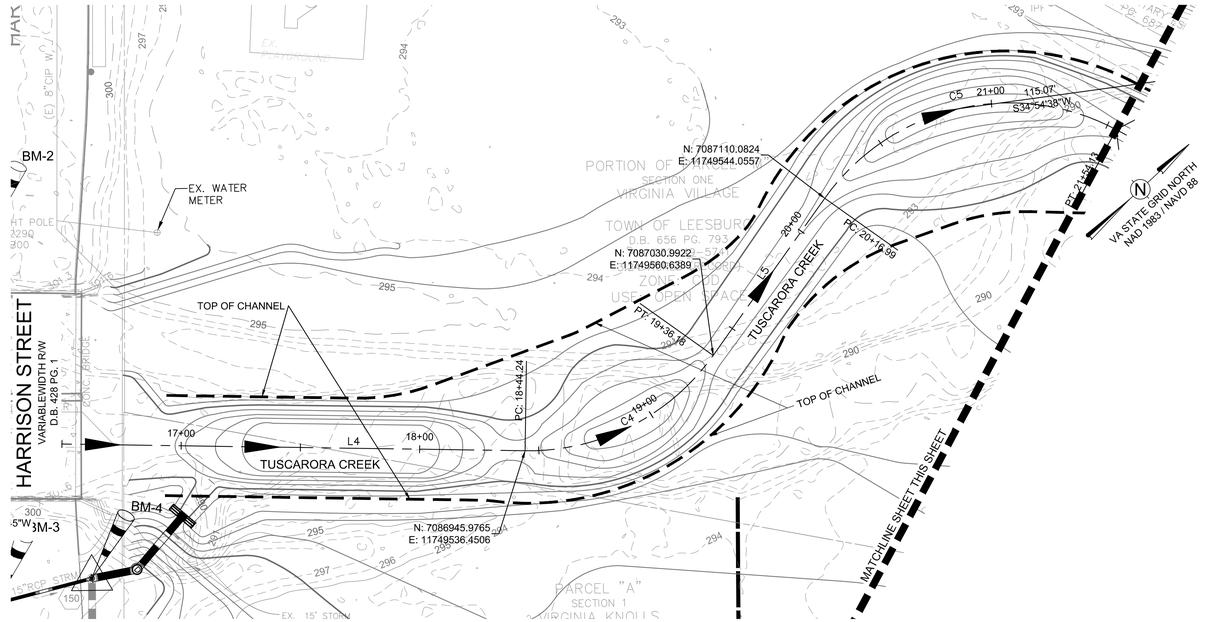
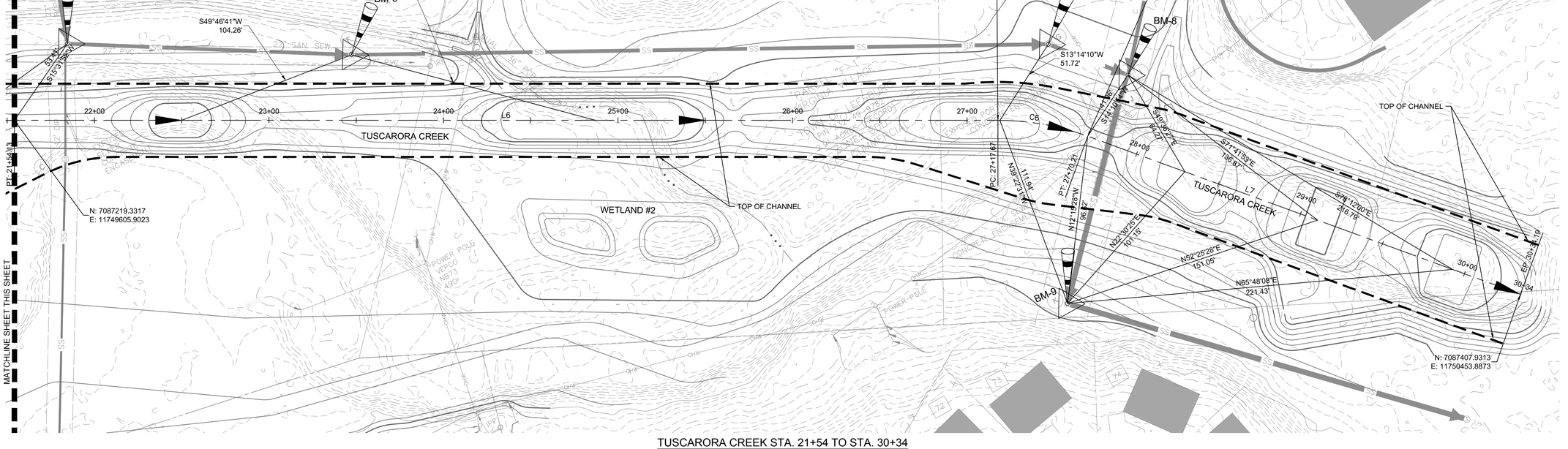


TUSCARORA CREEK HARRISON STREET BRIDGE TO STA. 21+54



TUSCARORA CREEK STA. 21+54 TO STA. 30+34

30 0 30 60 FT

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TOWN OF LEESBURG ESTABLISHED 1758 VIRGINIA

TUSCARORA CREEK FLOOD MITIGATION

100% CONSTRUCTION DOCUMENTS

TOWN OF LEESBURG, VIRGINIA

CATOCTIN ELECTION DISTRICT

COMMONWEALTH OF VIRGINIA
MATTHEW T. BRIGGS
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DESIGN BY: MTB	DRAWN BY: MJH
REVIEWED BY: MTB & MB	
PROJECT MANAGER: TWC	
AMEC FOSTER WHEELER PROJECT #: 565500008	
CONTRACT #: 300810-FY15-22	
DATE: 2018-09-17	SHEET SIZE: D
SCALE: AS SHOWN	
SHEET TITLE: GEOMETRY PLAN DOWNSTREAM	

SHEET C-26 OF 91