ASHLAND POLICE DEPARTMENT RETROFIT

STREAM RESTORATION & PERMEABLE PAVER PARKING LOT

TOWN OF ASHLAND, VA

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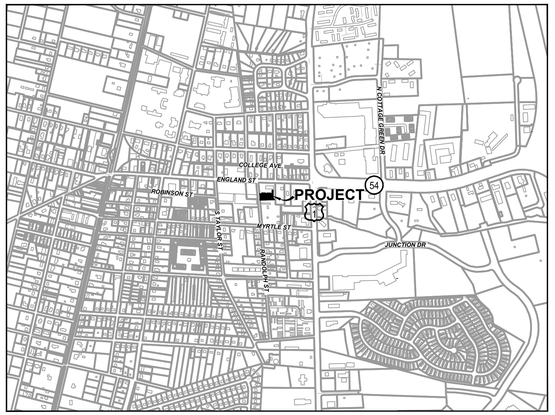

VICINITY MAP

SCALE: 1" = 1,000'

TOWN OF ASHLAND
DEPARTMENT OF PUBLIC WORKS
101 THOMPSON STREET
ASHLAND, VA 23005
CONTACT: INGRID STENBJØRN, PE
PHONE: 804.798.9219
FAX: 804.798.4892

MAY 5, 2015

CHESAPEAKE BAY PROGRAM POLLUTANT REMOVAL SUMMARY
THE PHOSPHOROUS REMOVAL FOR THE PROJECT IS 9.5 LBS/YEAR. 0.5 LBS/YEAR USING PERMEABLE PAVEMENT & 9 LBS/YEAR USING STREAM RESTORATION.

QUALITY ASSURANCE STATEMENT

A Quality Control and Assurance review has been performed on this document in accordance with the Timmons Group Quality Plan. The undersigned states that this document has been checked and reviewed in a manner commensurate with the level of detail for the type of submittal indicated below.

Aislinn T. Creel — Project Manager — 05/05/2015 — Date

FINAL CONSTRUCTION PLANS — Type of Submittal

DISTURBED / PROJECT AREA: 0.70 Acres

FUNDING FOR THIS PROJECT PROVIDED BY VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY STORMWATER LOCAL ASSISTANCE FUNDS (#14-27) & NATIONAL FISH AND WILDLIFE FOUNDATION CHESAPEAKE BAY STEWARDSHIP FUNDS.

DEPARTMENT OF PUBLIC WORKS	
TOWN OF ASHLAND	
NAME OF LOCALITY	
RECOMMENDED FOR APPROVAL FOR CONSTRUCTION	
DATE	TITLE OF POSITION
APPROVED FOR CONSTRUCTION	
DATE	TITLE OF POSITION
APPROVED FOR CONSTRUCTION	
DATE	TITLE OF POSITION

REVISIONS			
DATE	SHEET NUMBERS	DATE	SHEET NUMBERS

COMMONWEALTH OF VIRGINIA
AISLINN T. CREEL
Lic. No. 047761
5/5/2015
PROFESSIONAL ENGINEER

THIS DRAWING PREPARED AT THE
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1001 Boulders Parkway, Suite 300 | Richmond, VA 23225
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REVISION DESCRIPTION	DATE

DATE 05/05/2015
DRAWN BY C.W. / C.S.
DESIGNED BY C.W. / C.S.
CHECKED BY A.C. / R.N.
SCALE NONE

TIMMONS GROUP

ASHLAND POLICE DEPARTMENT RETROFIT
TOWN OF ASHLAND - VIRGINIA
COVER SHEET

JOB NO. 34056.006
SHEET NO. C1.0

GENERAL NOTES

1. THIS PROJECT IS PROPOSED BY: TOWN OF ASHLAND
   DEPARTMENT OF PUBLIC WORKS
   101 THOMPSON STREET
   ASHLAND, VA 23005
   ATTN: INGRID STENBJØRN, PE
   PHONE: 804.798.9219
   FAX: 804.798.4892
2. NUMBER OF LOTS AFFECTED BY THIS PROJECT: 1
3. TAX PARCEL NUMBER: 7870-91-6024
4. EXISTING ZONING OF PROPERTY THROUGH WHICH PROJECT IS PROPOSED: B-1
5. EXISTING USE OF PROPERTY THROUGH WHICH PROJECT IS PROPOSED: TOWN POLICE DEPARTMENT
6. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM WITH THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS DATED 2007, AND ROAD AND BRIDGE STANDARDS DATED 2008, AS AMENDED BY CONTRACT PROVISIONS AND THESE PLANS. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM WITH THE TOWN OF ASHLAND STANDARDS AND SPECIFICATIONS, IF MORE STRINGENT.
7. ALL DRIVEWAYS, SIDEWALKS, STREET SIGNS, YARD LIGHTS, MAIL BOXES, SIGNS AND FENCES SO SPECIFIED ARE TO BE PRESERVED OR RESTORED TO ORIGINAL CONDITION PER PLAN SHEETS OR AS DIRECTED BY THE TOWN OF ASHLAND.
8. MAILBOXES AND STREET SIGNS SHALL BE REPLACED IMMEDIATELY AFTER AREA IS BACKFILLED AND NO LATER THAN THE CLOSE OF EACH WORK DAY, EVEN IF REPLACEMENT IS ONLY TEMPORARY.
9. **SAFE PEDESTRIAN AND VEHICULAR ACCESS TO HOMES AND BUSINESSES ARE TO BE PROVIDED DURING CONSTRUCTION**.

PROJECT NARRATIVE

PROJECT CONSTRUCTION WILL CONSIST OF THE REMOVAL AND REGRADING OF THE EXISTING ASHLAND POLICE DEPARTMENT PARKING LOT AND ITS REPLACEMENT WITH PERMEABLE PAVERS INCLUDING AN UNDERDRAIN SYSTEM TO COLLECT AND TREAT STORMWATER RUNOFF. THE EXISTING, DEGRADED STREAM CHANNEL ADJACENT TO THE PARKING LOT WILL BE RESTORED BY REGRADING AND VEGETATION TO REDUCE STREAMBANK EROSION AND CREATE A FLOOD PRONE ZONE. IN ADDITION, THE LAYOUT OF THE EXISTING GRAVEL PARKING LOT SERVING PUFFERBELLY PARK WILL BE RECONFIGURED TO ALLOW FOR ADDITIONAL RIPARIAN AREA ASSOCIATED WITH THE STREAM RESTORATION.

EXISTING SITE CONDITIONS

THE EXISTING SITE IS BISECTED BY AN EXISTING DEGRADED WATERS OF THE UNITED STATES [W.O.U.S.] CHANNEL. THERE ARE NO EXISTING WETLANDS WITHIN THE PROPOSED LIMITS OF CONSTRUCTION. THE PORTION OF THE SITE NORTH OF THE CHANNEL IS FULLY DEVELOPED AND CONTAINS A BUILDING, SIDEWALKS, ASPHALT, AND A SMALL OUTBUILDING. THE PORTION OF THE SITE SOUTH OF THE CHANNEL IS AN EXISTING PARK AND CONTAINS A GRAVEL PARKING LOT, PLAYGROUND EQUIPMENT, AND VARIOUS BENCHES. THERE ARE ADDITIONAL STRUCTURES IN THE SOUTHERN MOST PORTION OF THE SITE WHICH WILL NOT BE AFFECTED BY CONSTRUCTION. THE SITE IS BORDERED ON THREE SIDES BY CURB AND GUTTER AND ASPHALT ROAD, AND BY ADJACENT LOTS ON THE REMAINING SIDE.

TOWN OF ASHLAND

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM WITH THE LATEST EDITION OF STANDARDS AND SPECIFICATIONS OF THE VIRGINIA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION, EXCEPT WHERE TOWN OF ASHLAND OR HANOVER COUNTY STANDARDS ARE APPLICABLE.
2. THE CONTRACTOR SHALL FOLLOW ALL LOCAL, STATE AND FEDERAL SAFETY REGULATIONS AND PROCEDURES THAT ARE APPLICABLE IN THE CONSTRUCTION OF THE PROPOSED WORK.
3. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY LOCAL, STATE AND FEDERAL PERMITS REQUIRED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
4. A TOWN OF ASHLAND RIGHT-OF WAY PERMIT IS REQUIRED PRIOR TO ANY WORK BEING PERFORMED IN WITHIN THE RIGHT-OF WAY.
5. APPROVAL OF A DETAILED CONSTRUCTION SEQUENCING AND MAINTENANCE OF TRAFFIC NARRATIVE FOR THE WORK ZONE IS A PREREQUISITE FOR ISSUANCE OF A TOWN OF ASHLAND RIGHT-OF WAY PERMIT ALLOWING ACCESS TO AND CONSTRUCTION WITHIN A TOWN MAINTAINED RIGHT-OF-WAY.
6. THE CONTRACTOR SHALL NOTIFY THE TOWN AT LEAST 48 HOURS PRIOR TO STARTING WORK ON THE PROJECT.
7. THE CONTRACTOR SHALL CALL MISS UTILITY OF CENTRAL VIRGINIA AT (804) 552-7001 PRIOR TO STARTING WORK.
8. CONTACT THE TOWN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON PLANS, WHICH APPEARS TO BE IN CONFLICT WITH PROPOSED WORK.
9. THE CONTRACTOR SHALL NOTIFY THE HANOVER COUNTY DEPARTMENT OF PUBLIC UTILITIES PRIOR TO MAKING ANY ADJUSTMENTS TO THE WATER OR SEWERAGE SYSTEMS.
10. DAMAGE TO UTILITIES (INCLUDING UNDERGROUND) OR PROPERTY OF OTHERS BY CONTRACTOR DURING CONSTRUCTION, SHALL BE REPAIRED TO PRE-CONSTRUCTION CONDITION BY CONTRACTOR AT NO COST TO OWNER.
11. EXISTING PAVEMENT AND OTHER SURFACES DISTURBED BY CONTRACTOR, WHICH ARE NOT TO BE REMOVED, SHALL BE REPAIRED TO LIKE NEW CONDITION.

TOWN OF ASHLAND

TRAFFIC NOTES

1. CONTRACTOR PROVIDES ALL NECESSARY SIGNAGE PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2. PLACEMENT AND REMOVAL OF ALL TRAFFIC CONTROL SIGNS AND DEVICES ARE TO BE COORDINATED WITH TOWN ENGINEER.
3. LANE CLOSURES AND/OR TRAFFIC STOPPAGES SHALL NOT BE PERMITTED ON WEEKENDS, UNLESS OTHERWISE APPROVED BY TOWN ENGINEER.
4. TRAFFIC STOPPAGES SHALL BE LIMITED TO FIVE MINUTES, UNLESS OTHERWISE DIRECTED BY TOWN ENGINEER.

TOWN OF ASHLAND

EROSION CONTROL NOTES

1. TOWN OF ASHLAND SHALL BE GIVEN 48 HOURS NOTIFICATION FOR SCHEDULING A PRE-CONSTRUCTION MEETING.
2. PROVIDE TOWN OF ASHLAND DEPARTMENT OF PUBLIC WORKS NOTIFICATION 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY LAND DISTURBING ACTIVITIES.
3. INSTALL WETLAND AND TREE PROTECTION TAPE PRIOR TO PRE-CONSTRUCTION MEETING.
4. EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP OF THE LAND DISTURBING ACTIVITIES.
5. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED TO A PUBLIC ROAD SURFACE, THE ROAD 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 DISPOSAL AREA.
6. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES.
7. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
8. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
   - 8.A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
   - 8.B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
   - 8.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.
   - 8.D. RE-STABILIZATION SHALL BE IN ACCORDANCE WITH THE ABOVE NOTES.
9. PERMANENT OR TEMPORARY SOIL STABILIZATIONS SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE, EXCEPT IN AREAS TO BE COVERED WITH ASPHALT OR CONCRETE.
10. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN THIRTY (30) DAYS.
11. PERMANENT SEEDING AND MULCHING IS TO BE IN ACCORDANCE WITH SEEDING SCHEDULES PRESCRIBED IN THE CURRENT VERSION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
12. THE TOWN ENGINEER MAY REQUIRE ADDITIONAL DRAINAGE AND EROSION CONTROL, IF MEASURES WARRANT.
13. EROSION AND SEDIMENT CONTROL SHALL BE MAINTAINED SO THAT SEDIMENT CARRYING RUNOFF FROM THE SITE WILL NOT ENTER STORM DRAINAGE FACILITIES.
14. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL DITCHES, PIPES AND OTHER DRAINAGE STRUCTURES FREE FROM OBSTRUCTION UNTIL THE OWNER ACCEPTS WORK. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED BY FAILURE TO MAINTAIN DRAINAGE STRUCTURE IN OPERABLE CONDITION.
15. EROSION AND SEDIMENT CONTROL SHALL BE MAINTAINED UNTIL THE DISTURBED AREA IS STABILIZED. FINAL REMOVAL OF EROSION CONTROL DEVICES SHALL NOT OCCUR UNTIL THE TOWN ENGINEER DEEMS THE SITE STABILIZED.
16. IT SHALL BE THE OWNER'S RESPONSIBILITY TO INSPECT EROSION CONTROL DEVICES PERIODICALLY AND AFTER EVERY ERODIBLE RAINFALL ANY NECESSARY REPAIRS OR CLEAN UP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
17. ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING A LIVE WATERCOURSE SHALL BE MET.

PROPOSED EROSION CONTROL

- LOD — LIMITS OF DISTURBANCE
- SAF — SAFETY FENCE
- TP — TREE PROTECTION FENCE
- SILT FENCE
- SUPER SILT FENCE
- WET — WETLAND TAPE
- CHECK DAM
- 700g COIR FABRIC
- 900g COIR FABRIC
- CURLEX® III BLANKET
- SUBSTRATE MIX
- VEHICULAR STREAM CROSSING
- CONSTRUCTION ENTRANCE

PROPOSED IMPROVEMENTS

- CONSERVATION AREA
- DESIGN STREAM CENTERLINE
- LIMITS OF GRADING
- MAJOR CONTOUR
- MINOR CONTOUR
- CROSS VANE
- ROCK VANE
- ROCK WEIR
- ROCK J-HOOK
- ROCK SILL
- LOG VANE
- LOG SILL
- J-HOOK COMBO
- ROOT WAD
- BRUSH MATTRESS
- TOE WOOD
- REINFORCED SOIL LIFT
- PROPOSED WETLAND
- FENCELINE

PROPOSED PAVING

- PERMEABLE PAVERS
- ASPHALT
- CONCRETE

PROPOSED SEEDING

- WETLAND SEEDING
- BUFFER SEEDING

PROPOSED STREAM PLANTING

- STREAMBANK LIVE STAKING
- STREAM BUFFER PLANTING

PROPOSED WETLAND PLANTING

- GRASSLANDS
- SHRUB SCRUB
- HIGH MARSH
- LOW MARSH
- DEEP POOL

EXISTING CONDITIONS

- PROPERTY LINE
- RIGHT-OF-WAY
- EASEMENT
- MAJOR CONTOUR
- MINOR CONTOUR
- TREELINE
- GRAVEL ROAD
- RAILROAD
- X — FENCELINE
- OHP — OVERHEAD POWER SUPPLY
- POWER POLE
- WETLANDS
- STREAM CENTERLINE
- DITCH CENTERLINE
- POND
- RPA — RPA
- FLOODPLAIN
- STORM PIPE
- STORM MANHOLE
- RIPRAP
- SAN — SANITARY SEWER PIPE
- SANITARY SEWER MANHOLE

DRAINAGE & SOILS

- MAJOR DRAINAGE AREA
- MINOR DRAINAGE AREA
- TIME OF CONCENTRATION
- SOIL GROUP BOUNDARY
- 1A — SOIL GROUP IDENTIFIER
- SOIL BORING

PROFILES

- EXISTING GRADE (AERIAL TOPO)
- EXISTING GRADE (FIELD TOPO)
- PROPOSED GRADE
- DESIGN BANKFULL
- SUBSTRATE MIX
- FILL
- CLAY PLUG
- CROSS VANE
- ROCK VANE
- ROCK SILL
- LOG VANE
- TRIPLE LOG SILL
- SINGLE LOG SILL
- EXISTING STORM PIPE
- EXISTING STORM PIPE (CROSSING)
- EXISTING SANITARY SEWER PIPE
- EXISTING SANITARY SEWER PIPE (CROSSING)

CROSS-SECTIONS

- EXISTING GRADE (AERIAL TOPO)
- EXISTING GRADE (FIELD TOPO)
- PROPOSED GRADE

COMMONWEALTH OF VIRGINIA
AISLINN T. CREEL
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5/5/2015
PROFESSIONAL ENGINEER

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DATE	REVISION DESCRIPTION

DATE: 05/05/2015
DRAWN BY: C.W. / C.S.
DESIGNED BY: C.W. / C.S.
CHECKED BY: A.C. / R.N.
SCALE: NONE

TIMMONS GROUP

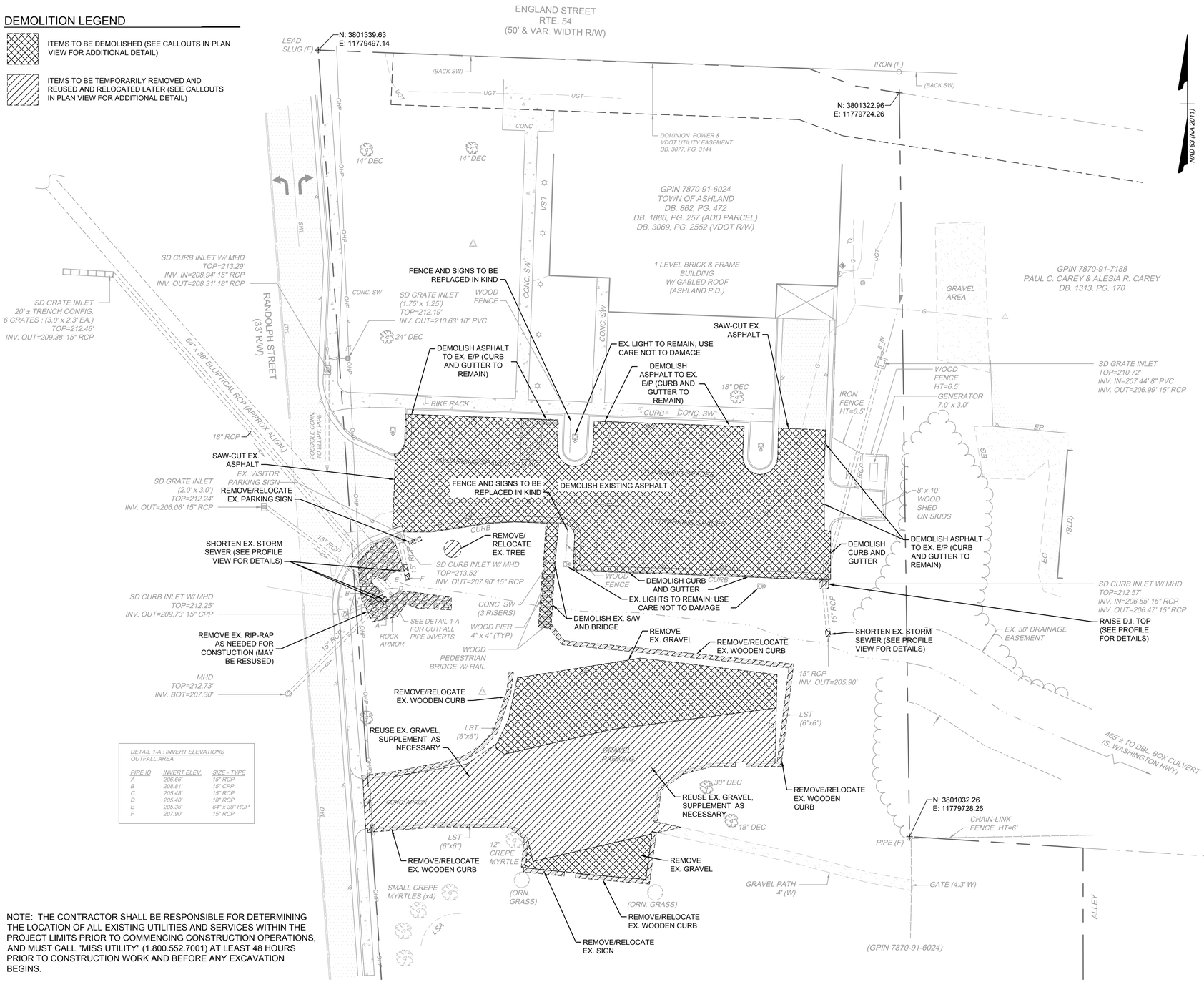
ASHLAND POLICE DEPARTMENT RETROFIT
TOWN OF ASHLAND - VIRGINIA
PROJECT NARRATIVE AND LEGEND

JOB NO. 34056.006
SHEET NO. C1.1

DEMOLITION LEGEND

ITEMS TO BE DEMOLISHED (SEE CALLOUTS IN PLAN VIEW FOR ADDITIONAL DETAIL)

ITEMS TO BE TEMPORARILY REMOVED AND REUSED AND RELOCATED LATER (SEE CALLOUTS IN PLAN VIEW FOR ADDITIONAL DETAIL)



DETAIL 1-A : INVERT ELEVATIONS
OUTFALL AREA

PIPE ID	INVERT ELEV.	SIZE - TYPE
A	206.66'	15" RCP
B	208.81'	15" CPP
C	205.48'	15" RCP
D	205.40'	18" RCP
E	205.36'	64" x 38" RCP
F	207.90'	15" RCP

NOTE: THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL EXISTING UTILITIES AND SERVICES WITHIN THE PROJECT LIMITS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS, AND MUST CALL "MISS UTILITY" (1.800.552.7001) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WORK AND BEFORE ANY EXCAVATION BEGINS.

PER THE HANOVER COUNTY DEPARTMENT OF PUBLIC UTILITIES, THE EXISTING WATER AND SANITARY SEWER UTILITIES ARE LOCATED IN FRONT OF THE EXISTING BUILDING ALONG ENGLAND STREET. NO CONFLICTS WITH EXISTING WATER AND SANITARY SEWER UTILITIES ARE EXPECTED TO OCCUR WITH THIS PROJECT.

VIRGINIA NATURAL GAS CONTACT INFORMATION:
KEVIN D. STARKE
SR. ENGINEERING TECHNICIAN
ENGINEERING SERVICES
757.616.7529 (OFFICE)
757.449.0825 (MOBILE)
KSTARKE@AGLRESOURCES.COM
544 S. INDEPENDENCE BLVD.
VIRGINIA BEACH, VA 23452

NOTES :

1. HORIZONTAL DATUM IS BASED ON NAD83 (NA2011), VIRGINIA STATE GRID, SOUTH ZONE. VERTICAL DATUM IS BASED ON NAVD 88. DATUM ESTABLISHED THROUGH LEICA SmartNet.

2. TOPOGRAPHIC DATA DEPICTED BASED ON A CURRENT FIELD SURVEY BY THIS FIRM.

3. THIS IS NOT A BOUNDARY SURVEY . BOUNDARY DELINEATION SHOWN IS BASED ON MONUMENTS RECOVERED IN FIELD AND DEEDS & PLATS OF RECORD. NO TITLE REPORT FURNISHED. EASEMENTS MAY EXIST WHICH ARE NOT SHOWN HEREON.

4. MISS UTILITY CONTACTED, TICKET NO. B428201112. UTILITIES SHOWN AS MARKED; NO ADDITIONAL SUB-SURFACE UTILITY INVESTIGATION HAS BEEN PERFORMED BY THIS FIRM.

5. SURVEY AREA DEPICTED HEREON IS A PORTION OF HANOVER COUNTY PARCEL ID NO. 7870-91-6024 IN THE NAME OF TOWN OF ASHLAND. PROPERTY ADDRESS IS 601 ENGLAND STREET, ASHLAND, VA.

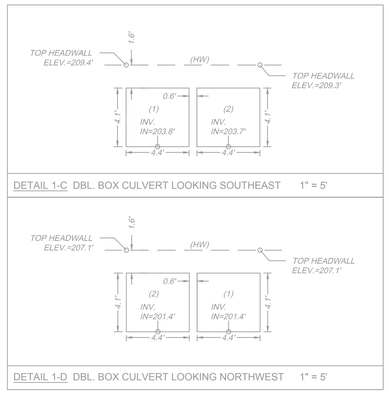
6. BASED ON FEMA FLOOD INSURANCE RATE MAP (FIRM), MAP NO. 51085C0190B, PANEL 190, EFFECTIVE DECEMBER 2, 2008, THE PROPERTY LIES IN UNSHADED ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% CHANCE FLOODPLAIN.

SCALE 1"=20'
0 20' 40'

THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF M. DWAYNE DUNEVANT FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE ORIGINAL DATA WAS OBTAINED ON THE FOLLOWING DATES: NOVEMBER 5-6, 2014. THIS BASE- MAP AND DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

LEGEND

	GAS METER
	STORM DRAINAGE MANHOLE (MHD)
	STORM DRAINAGE GRATED INLET
SD	STORM DRAINAGE
RCP	REINFORCED CONCRETE PIPE
PVC	POLY-VINYL CHLORIDE PIPE
CPP	CORRUGATED PLASTIC PIPE
	DRAINAGE DIRECTION ARROW
	CLEAN-OUT (CO)
	UTILITY POLE
	LIGHT POLE
	BOLLARD LIGHT
	ELECTRIC METER
	GUY ANCHOR
	SIGN
UGT	UNDERGROUND TELECOM UTILITY
UGP	UNDERGROUND ELECTRIC UTILITY
G	UNDERGROUND GAS UTILITY
OHP	OVERHEAD POWER UTILITY
	EDGE OF PAVEMENT (EP)
	DRAINAGE SWALE
	DECIDUOUS TREE (DEC)
	SHRUB
SW	SIDEWALK
EP	EDGE OF PAVEMENT
EG	EDGE OF GRAVEL
SWL	DOUBLE YELLOW LINE
DYL	SINGLE WHITE LINE
CONC.	CONCRETE
LST	LANDSCAPE TIMBER
LSA	LANDSCAPE AREA
	TREE-LINE / WOODED AREA
	ROCK ARMOR



EXISTING CONDITIONS TOPOGRAPHIC SURVEY

ON THE LANDS OF

TOWN OF ASHLAND (ASHLAND POLICE DEPT.)

A PORTION OF

PARCEL ID NO. 7870-91-6024

TOWN OF ASHLAND

HANOVER COUNTY, VIRGINIA

Hanover County	Town of Ashland, VA
Date: NOV. 19, 2014	Scale: AS SHOWN
Sheet 1 of 1	J.N.: 34056.006
Drawn by: JCM	Checked by:-

COMMONWEALTH OF VIRGINIA
AISLINN T. CREEL
Lic. No. 047761
5/5/2015
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SCALE 1' = 20'

TIMMONS GROUP

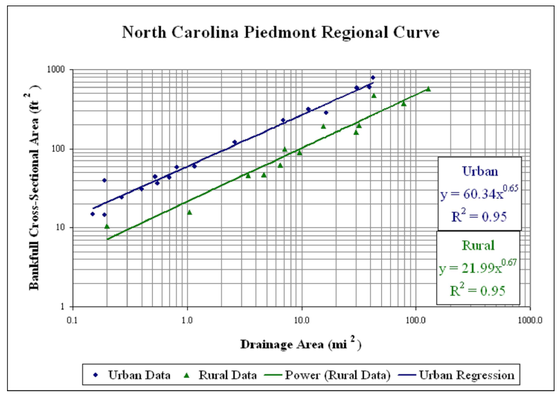
ASHLAND POLICE DEPARTMENT RETROFIT
TOWN OF ASHLAND - VIRGINIA
EXISTING CONDITIONS AND DEMOLITION

JOB NO. 34056.006
SHEET NO. C1.2

STREAM DESIGN PARAMETER SUMMARY

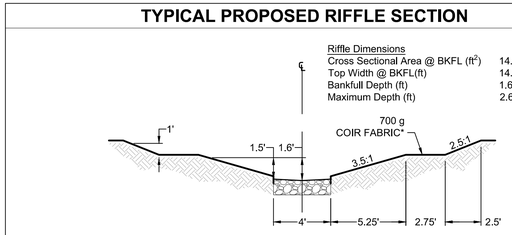
THE STREAM CHANNEL BANKFULL CROSS-SECTIONAL AREA WAS BASED UPON A SIMILAR URBAN STREAM IN THE NORTH CAROLINA PIEDMONT REGION. A BANKFULL AREA OF 14.1 SQ FT WAS CHOSEN TO CORRESPOND TO THE STREAM DRAINAGE AREA OF 0.13 SQ MI (TYPICAL SECTIONS PROVIDED THIS SHEET). THE PROPOSED PATTERN WAS CHOSEN TO BETTER MIMIC A NATURAL CHANNEL AND TO PROVIDE FURTHER ENERGY DISSIPATION VIA DEFINED POOLS AND RIFFLE, AS WELL AS, PREDICTABLE ACCESS TO THE FLOOD-PRONE AREA.

STREAM DESIGN REGIONAL CURVE DATA



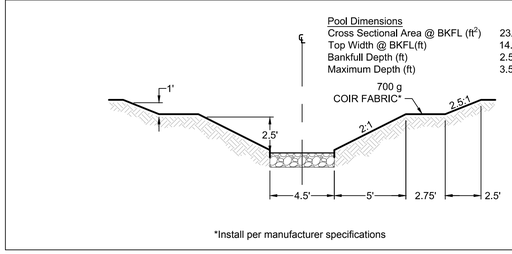
TYPICAL CHANNEL CROSS-SECTIONS (SCALE: 1" = 5')

TYPICAL PROPOSED RIFFLE SECTION



*Install per manufacturer specifications

TYPICAL PROPOSED POOL SECTION



*Install per manufacturer specifications

VIRGINIA RUNOFF REDUCTION SITE DATA TABULATION

Virginia Runoff Reduction Method ReDevelopment Worksheet v2.7 Revised April 2013

Update Summary Sheet

Print

Site Data Summary

Total Rainfall = 43 inches

Site Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest (acres)	0.00	0.00	0.00	0.00	0.00	*0.00*
Turf (acres)	0.00	0.40	0.64	1.62	2.66	*79.88*
Impervious (acres)	0.00	0.01	0.01	0.65	0.67	*20.12*
					3.33	*100.00*

Site Rv	0.38
Post Development Treatment Volume (ft³)	4582
Post Development TP Load (lb/yr)	2.88
Post Development TN Load (lb/yr)	20.60
Total TP Load Reduction Required (lb/yr)	0.29

Total Runoff Volume Reduction (ft³)	590
Total TP Load Reduction Achieved (lb/yr)	0.48
Total TN Load Reduction Achieved (lb/yr)	3.46
Adjusted Post Development TP Load (lb/yr)	2.40
Remaining Phosphorous Load Reduction (Lb/yr) Required	0.00

Drainage Area Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
Forest (acres)	0.00	0.00	0.00	0.00	0.00	*0.00*
Turf (acres)	0.08	0.00	0.00	0.00	0.00	*0.08*
Impervious (acres)	0.30	0.00	0.00	0.00	0.00	*0.30*
						0.38

Drainage Area Compliance Summary

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
TP Load Red. (lb/yr)	0.48	0.00	0.00	0.00	0.00	*0.48*
TN Load Red. (lb/yr)	3.46	0.00	0.00	0.00	0.00	*3.46*

Drainage Area A Summary

Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest (acres)	0.00	0.00	0.00	0.00	0.00	*0.00*
Turf (acres)	0.00	0.00	0.00	0.08	0.08	*21.19*
Impervious (acres)	0.00	0.00	0.00	0.30	0.30	*78.81*
					0.38	

BMP Selections

Practice	Credit Area (acres)		Downstream Practice
3.a. Permeable Pavement #1 (Spec #7)	acres of permeable pavement + acres of "external" (upgradient) impervious pavement	0.38	

Total Impervious Cover Treated (acres)	0.38
Total Turf Area Treated (acres)	0.00
Total TP Load Reduction Achieved in D.A. A (lb/yr)	0.48
Total TN Load Reduction Achieved in D.A. A (lb/yr)	3.46

WATER QUALITY COMPLIANCE SUMMARY (VA RRM SPREADSHEET)

Phosphorous

TOTAL PHOSPHOROUS LOAD REDUCTION REQUIRED (LB/YEAR)	0.29
RUNOFF REDUCTION (cf)	590
PHOSPHOROUS LOAD REDUCTION ACHIEVED (LB/YR)	0.48
ADJUSTED POST-DEVELOPMENT PHOSPHOROUS LOAD (TP) (lb/yr)	2.40
REMAINING PHOSPHOROUS LOAD REDUCTION (LB/YR) NEEDED	CONGRATULATIONS!! YOU EXCEEDED THE TARGET REDUCTION BY 0.2 LB/YEAR

PERMEABLE PAVEMENT DESIGN CRITERIA SUMMARY

2013 Draft Virginia BMP Clearinghouse Design Specifications: Level 1 Permeable Pavement		
Permeable Pavement Design Criteria	**Required**	**Provided**
Tv = (1)(Rv)(A)/12 - the volume reduced by an upstream BMP	1313 ft.[3]	3318 ft.[3]
Soil Infiltration	< 0.5 in./hr.	Assumed < 0.5 in./hr.[1]
Underdrain	Required	Underdrain Provided
CDA	Ratio of CDA to Permeable Pavement is ≤ 2.5	2.07
[1]No soil testing was performed. Infiltration assumed to be < 0.5 in./hr.		

COMMONWEALTH OF VIRGINIA
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5/5/2015
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REVISION DESCRIPTION	DATE

DATE 05/05/2015
DRAWN BY C.W. / C.S.
DESIGNED BY C.W. / C.S.
CHECKED BY A.C. / R.N.
SCALE 1" = 200'

TIMMONS GROUP

ASHLAND POLICE DEPARTMENT RETROFIT
TOWN OF ASHLAND - VIRGINIA
HYDROLOGY AND DESIGN PARAMETERS

JOB NO. 34056.006
SHEET NO. C2.0

Project Description

Project construction will consist of the removal and regrading of the existing Ashland Police Department parking lot and its replacement with permeable pavers including an underdrain system to collect and treat stormwater runoff. The existing, degraded stream channel adjacent to the parking lot will be restored by regrading and vegetation to reduce streambank erosion and create a flood prone zone. In addition, the layout of the existing gravel parking lot serving Pufferbelly Park will be reconfigured to allow for additional Riparian area associated with the stream restoration.

Existing Site Conditions

The existing site is bisected by an existing degraded Waters of the United States [W.O.U.S.] channel. There are no existing wetlands within the proposed limits of construction. The portion of the site north of the channel is fully developed and contains a building, sidewalks, asphalt, and a small outbuilding. The portion of the site south of the channel is an existing park and contains a gravel parking lot, playground equipment, and various benches. There are additional structures in the southern most portion of the site which will not be affected by construction. The site is bordered on three sides by curb and gutter and asphalt road, and by adjacent lots on the remaining side.

Erosion & Sediment Control Narrative

Adjacent Areas:
The Town-owned parcel containing the Police Department and Pufferbelly Park is bordered to the south, west, and east by Myrtle, Randolph, and England streets, respectively, and by privately owned commercial lots to the east.

Off-site Areas:
There will be minimal disturbance to the adjacent privately owned parcel which the channel crosses through, to tie off grades. The majority of construction maintenance activities for this project are within the Town-owned parcel. Demolition materials will be disposed of properly at an approved off-site location.

Soils:
According to the Web Soil Survey provided by the United States Department of Agriculture (USDA), the site is aproximately 60% Coxville loam and 40% Dunbar fine sandy loam. The Coxville loam soils are classified as poorly drained with an erodability (K) factor of .37. The Dunbar fine sandy loam soils are classified as somewhat poorly drained with an erodability (K) factor of .24.

Critical Areas:
Anticipated critical areas are the W.O.U.S. (the channel itself) which will be impacted under Nationwide Permit 27 from the U.S. Army Corps of Engineers (USACE). Adjacent properties not owned by the Town are not to be impacted without written permission from the owner(s).

Erosion and Sediment Control Measures:
Unless otherwise indicated, all vegetative and structural erosion and sediment control practices shall be constructed and maintained according to minimum standards and specifications of the *Virginia Erosion and Sediment Control Handbook*. the minimum standards of the *VESCH* shall be adhered to unless otherwise waived or approved by a variance.

The following measures shall be installed and maintained as shown sheet C3.1:

Safety Fence - 3.01:
Safety Fence is to be installed around the limits of the project to keep the public out of the construction zone.

Tree Protection Tape 3.38:
Tree Protection tape is to be installed around existing trees not to be impacted by construction.

Construction Entrance - 3.02:
A rock Construction Entrance should be installed wherever it is anticipated that construction traffic will exit the project site onto any roadway, public or private. Access to the site should be limited to the stabilized Construction Entrance(s).

Inlet Protection - 3.07:
Inlet protection is to be installed on existing storm sewer inlets which will collect construction runoff to prevent sediment from entering the inlet.

Silt Fence - 3.05:
A Silt Fence shall be installed around any construction lay down area and/or stockpile in order to limit sediment-laden runoff from sheet flow off the lay down area.

Dewatering/Pump Around - 3.26:
A Pump Around is to be used as necessary to allow channel baseflow to bypass the construction area.

Temporary Seeding - 3.38 :
Per specification if not within window of time for permanent stabilization.

Permanent Stabilization:
All areas disturbed by construction shall be stabilized with permanent seeding immediately following final grading, per the Vegetation Plan and Schedule (sheet C6.01).

Stormwater Runoff Consideration:
1. Existing drainage outfall patterns will be maintained.
2. Predevelopment conditions will be maintained.
3. Silt fence will be used around construction laydown area in order to limit runoff.

Maintenance:
In general, all erosion and sedimentation control measures shall be checked after each rainfall or weekly, whichever is most frequent, and should be cleaned and repaired according to the following schedule:

1. E&S control will be checked regularly for undermining or deterioration and buildup or clogging with sediment. corrective action will be taken immediately.
2. All seeded areas will be checked regularly to see that a good stand is maintained. Areas should be fertilized and reseeded as needed.
3. All temporary E & S measures shall be disposed of within thirty (30) days after final site stabilization is established.

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 Virginia regulations 4VAC50-30 Erosion and Sediment Control regulations.
ES-2: The plan approving authority must be notified one week prior to the pre-construction conference, one week prior to the commencement of land disturbance activity, and one week prior to the final inspection.
ES-3: All erosion and sediment control measures are to be placed prior to or as the first step in clearing, grading, or land disturbance.
ES-4: A copy of the approved erosion and sediment control plan shall be maintained on the site at all times.
ES-5: Prior to commencing land-disturbing activities in areas other than indicated on these plans (including, but not limited to, offsite borrow or waste area), the contractor shall submit a supplementary erosion control plan to the owner for review and approval by the plan approving authority.
ES-6: The contractor is responsible for installation of any additional erosion control measures necessary to prevent erosion and sedimentation as determined by the plan reviewing authority.
ES-7: All disturbed areas are to drain to approved sediment control measures at all times during land-disturbing activities and during site development until final stabilization is achieved.
ES-8: During dewatering operations, water will be pumped into an approved filtering device.
ES-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.

Minimum Standards

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.

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 diversions immediately after installation.

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 protection 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 vehicles 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 regulations 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 these regulations.
F. Applicable safety regulations 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 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.

MS-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 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 in accordance with the following standards and criteria:

A. 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.

B. 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

2a. 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 or banks.

2b. 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

2c. Pipes and storm sewer systems shall be analyzed by the use of a ten-year storm to verify 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 channels to a condition where a ten-year frequency storm will not overtop the banks and a two-year frequency 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 frequency storm is contained within the appurtenances; or

3. Develop a site design that will not cause the pre-development peak runoff rate from a two-year storm to increase when runoff outfalls into a natural channel 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 the existing watershed characteristics and the ultimate development of the subject project.

F. 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.

G. Outfall from a detention facility shall be discharged to a receiving channel, and energy dissipators shall be placed at the outfall of all detention facilities as necessary to provide a stabilized transition from the facility to the receiving channel.

H. All on-site channels must be verified to be adequate.

I. Increased volumes of sheet flows that may cause erosion or sedimentation on adjacent property shall be diverted to a stable outlet, adequate channel, pipe or pipe system, or to a detention facility.

J. In applying these stormwater management criteria, individual lots or parcels in a residential, commercial or industrial development shall not be considered to be separate development projects. Instead, the development, as a whole, shall be considered to be a single development project. Hydrologic parameters that reflect the ultimate development condition shall be used in all engineering calculations.

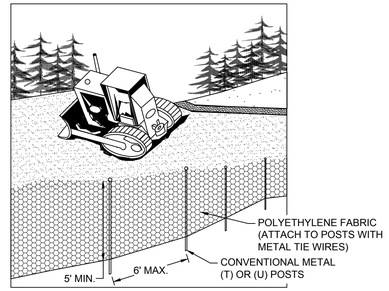
K. All measures used to protect properties and waterways shall be employed in a manner which minimizes impacts on the physical, chemical and biological integrity of rivers, streams and other waters of the state.

1992 3.01

TABLE 3.01-A

PHYSICAL PROPERTIES OF PLASTIC SAFETY FENCE

Physical Property	*Test*	*Requirements*
Recommended color	*N/A*	*"International"orange*
Tensile yield	*ASTM D638*	*Average 2000 lbs. per 4ft. width*
Ultimate tensile strength	*ASTM D638*	*Average 2000 lbs. per 4ft. width*
Elongation at break (%)	*ASTM D638*	*Greater than 1000%*
Chemical resistance	*N/A*	*Inert to most chemicals and acids*

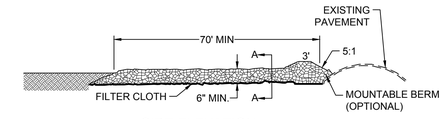


SOURCE: ADAPTED FROM CONWED PLASTICS AND VDOT ROAD AND BRIDGE STANDARDS

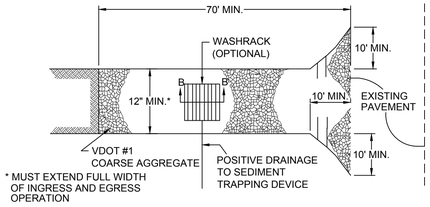
PLATE 3.01-1

SAF SAFETY FENCE
NO SCALE

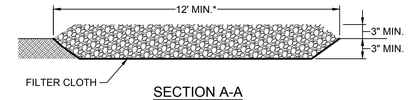
1992 3.02



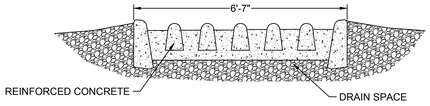
SIDE ELEVATION



PLAN VIEW



SECTION A-A



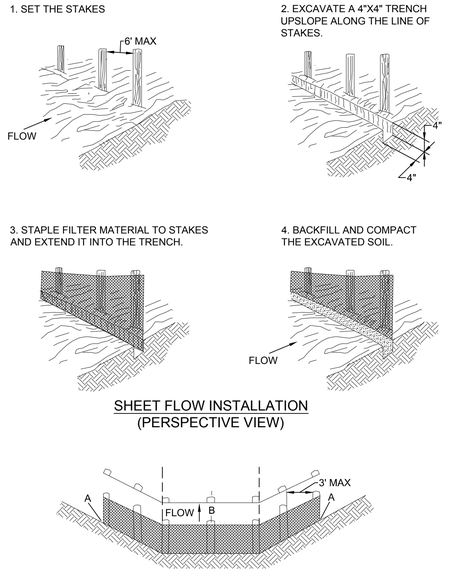
SECTION B-B

SOURCE: VA. DSWC

PLATE 3.02-1

CE CONSTRUCTION ENTRANCE
NO SCALE

1992 3.05



SHEET FLOW INSTALLATION
(PERSPECTIVE VIEW)

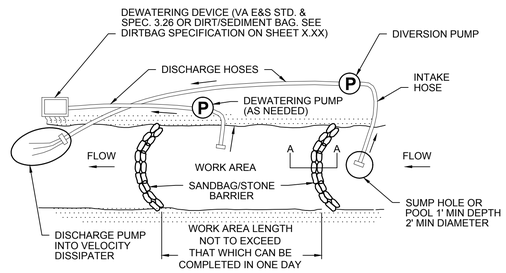
POINT 'A' SHOULD BE HIGHER THAN POINT 'B'

DRAINAGEWAY INSTALLATION
(FRONT INSTALLATION)

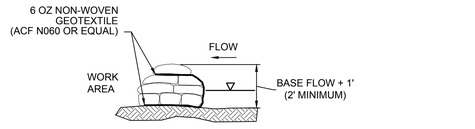
SOURCE: ADAPTED FROM INSTALLATION OF STRAW AND FABRIC FILTER BARRIERS FOR SEDIMENT CONTROL, SHERWOOD AND WYANT

PLATE 3.05-2

SF SILT FENCE (WITHOUT WIRE SUPPORT)
NO SCALE



PLAN VIEW



CROSS SECTION OF SANDBAG/STONE DIVERSION

SECTION A-A

PUMP AROUND
NO SCALE

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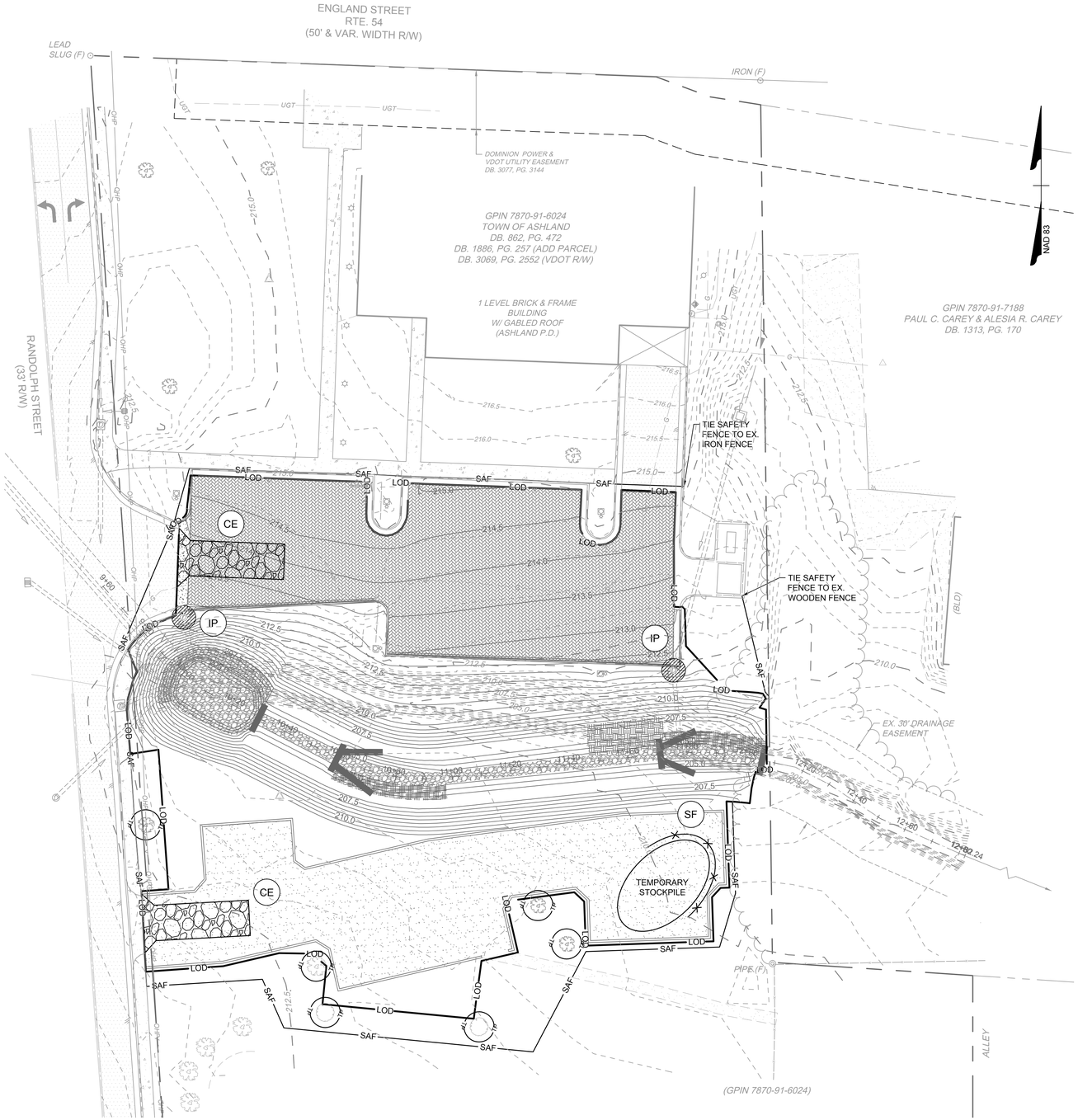
CHECKED BY A.C. / R.N.
SCALE NONE

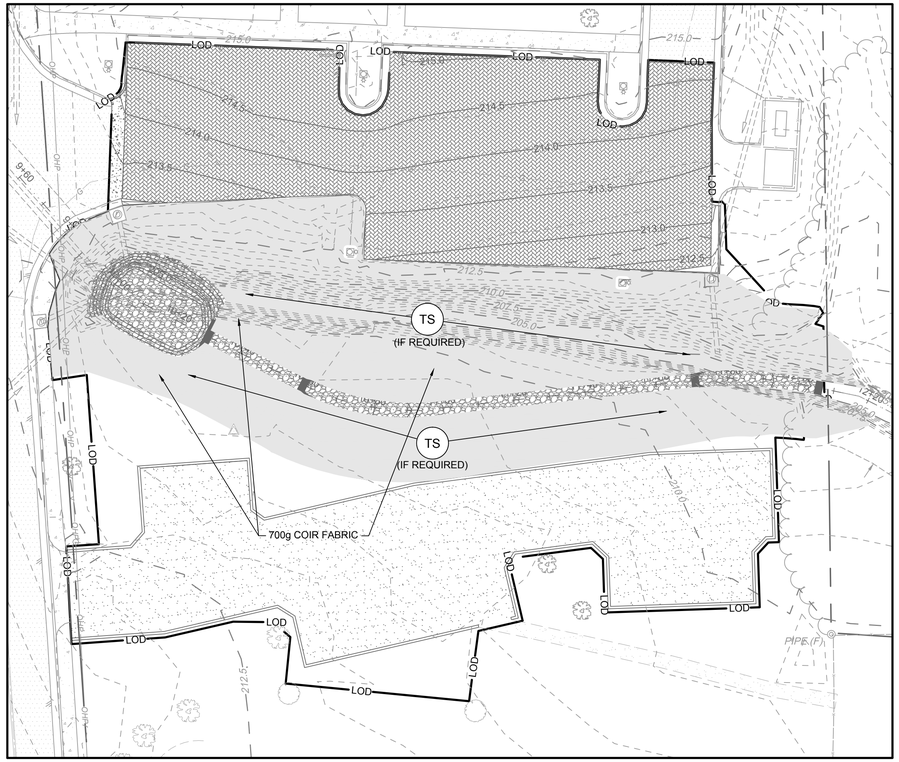
TIMMONS GROUP

ASHLAND POLICE DEPARTMENT RETROFIT
TOWN OF ASHLAND - VIRGINIA
EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

JOB NO. 34056.006
SHEET NO. C3.0



EROSION AND SEDIMENT CONTROL MATTING PLAN



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DESIGNED BY C.W. / C. S.
CHECKED BY A.C. / R.N.
SCALE 1" = 20'

TIMMONS GROUP

ASHLAND POLICE DEPARTMENT RETROFIT

TOWN OF ASHLAND - VIRGINIA

EROSION CONTROL PLAN

JOB NO. 34056.006
SHEET NO. C3.1

CONSTRUCTION NOTES

1. PRE-CONSTRUCTION PREPARATION & NOTIFICATION

1.1. The Town shall provide Notice-to-Proceed and schedule a pre-construction meeting once all appropriate permits have been received.

1.2. The Contractor shall be responsible for determining the locations of all existing utilities and services within the project limits prior to commencing construction operations, and must contact “Miss Utility” a minimum of 48 hours prior to any construction work. All utilities shall be clearly identified prior to construction. the location of existing utilities within the project area is not necessarily shown on the construction drawings and where shown is only approximately correct. The Contractor shall be responsible for any damage to existing utilities whether above grade or underground facilities.

1.3. The Contractor shall install tree protection fence and safety fence and then notify the Town Engineer, or designee, of the completed installation. The Town Engineer, or designee, shall then provide the Town inspector 48-hour notification to schedule an onsite pre-construction meeting to inspect the install of these erosion and sediment control measures, prior to issuance of the land disturbance permit. The Contractor shall ensure their certified responsible land disturber is available to attend this pre-construction meeting as well.

1.4. Alternatives or deviations to construction access specified on the construction drawings shall be approved by the Town Engineer, or designee, prior to commencement of construction. Contractor proposed alternatives with delineation of entrance locations and access paths shall be included in the proposed workflow plan.

1.5. Prior to the pre-construction meeting, non-impact wetlands shall be flagged and no disturbance shall occur within these areas.

2. SUBMITTALS

2.1. Contractor shall develop a workflow plan and construction schedule for submittal to the Town Engineer, or designee, for review and approval a minimum of one (1) week prior to the pre-construction meeting. The proposed workflow plan shall describe/delineate the Contractor's proposed construction access paths, alternate temporary stockpile locations, estimated daily channel segments, and alternative means & methods. The proposed construction schedule shall include submittal review time, key construction and critical path tasks, phasing of work flow, weather contingency, as-built survey coordination, planting period and substantial and/or final completion goals.

2.2. Contractor shall provide experience qualifications to the Town Engineer, or designee, identifying the key personnel to be working on the project, including their project manager and superintendent. Contractor shall also specify the minimum number of daily crew/staff and equipment to be expected onsite during construction.

2.3. Contractor shall be responsible to submit three (3) copies of the material certifications to the Town Engineer, or designee, for review on any construction materials used on the project site. The certification shall state that the product is manufactured in accordance with the project specifications and the approved shop drawing or detail, as applicable. Any materials ordered or work performed with said materials by the Contractor before the project engineer has reviewed the respective material certifications shall be at the risk of the Contractor.

2.4. Review time for the specified submittals shall be clearly noted in the construction schedule. Allow a minimum of one (1) week review time for submittal package.

3. SURVEYING

3.1. The Contractor's surveyor will stake out the new stream alignment. PC and PT points shall be staked along the centerline and at 50-foot offsets, identified by corresponding centerline station. The center of each curve shall be staked and marked with the corresponding radius of curvature. Three vertical control benchmarks shall be clearly marked along the proposed stream channel.

3.2. If during construction, the existing elevations (especially stream inverts) shown on these construction drawings are found to differ significantly from the elevations in the field, the Contractor must notify the Town Engineer, or designee, immediately for an adjustment in elevations.

3.3. The Contractor's surveyor will schedule and perform the as-built survey following written notification, from the Contractor to the Town Engineer, or designee, stating that design grade has been achieved. This coordination shall be performed prior to disking, final seeding and planting.

3.4. The Contractor is expected to perform survey verification prior to providing written notification for as-built survey coordination. The Contractor shall be responsible for any costs associated with additional as-built survey resulting from project areas discovered to not be in substantial accordance with the specified design.

4. MINIMIZING IMPACTS

4.1. All necessary erosion and sediment control measures shall be installed in accordance with the attached erosion and sediment control notes prior to the commencement of land disturbing activities. Alternative and/or additional measures shall be approved by the Town Engineer, or designee, prior to installation.

4.2. Disturbance of existing mature trees shall be minimized to the greatest extent possible. Tree protection measures shall be installed in accordance with the construction drawings to preserve trees not utilized for structures or disturbed by grading. Contractor shall only remove vegetation necessary to perform grading operations depicted on the construction drawings. Tree and root damage shall be avoided to the maximum extent practicable within the project boundary and temporary construction access areas.

4.3. Materials, supplies or equipment shall be stockpiled and/or stored outside of non-impact wetland limits. Contractor shall not travel across, store spoils on or otherwise impact the non-impact wetlands and flagged buffer areas. All temporary impacts to wetlands shall be re-vegetated.

4.4. Material storage and staging areas shall be located and protected as shown on the attached erosion and sediment control plan sheets. Any deviation from the erosion and sediment control plan shall be approved by the Town Engineer, or designee, prior to implementation. All equipment and supplies shall be stored within the construction staging area while construction activities have ceased for the day.

4.5. Excess excavation material shall be disposed of in a suitable location approved by the Town Engineer or designee. Suitable locations for spreading and/or stockpiling excess material will be discussed at the pre-construction meeting. Contractor shall obtain approval from the Town Engineer or designee prior to permanently placing excess material. The Contractor shall be responsible for cost associated with removing and relocating any excess material placed without prior approvals. Contractor shall endeavor to separate suitable and unsuitable materials during excavation operations to allow for separate means of disposal for excess materials.

4.6. The Contractor shall remove all trash and debris from the site on a daily basis and dispose of offsite in accordance with all local, state and federal regulations. Any necessary permits required for such disposal shall be obtained by the Contractor at their expense.

4.7. The Contractor shall provide all measures and devices necessary to protect the project limits, adjacent property, employees, and the general public for the duration of the project construction.

4.8. Strip and stockpile topsoil in designated material storage areas.

4.9. The Contractor shall remove all trees, stumps, shrubs, brush and other organic material within the grading limits necessary to facilitate earthwork activities. Other debris shall also be removed.

4.10. Woody materials removed to facilitate project grading will be stockpiled for the construction of wildlife habitat brush/debris piles. The specific locations and number of wildlife habitat piles will be evaluated and resolved based on the nature/amount of the materials available and evolving site conditions during construction. Any additional surplus woody material and additional vegetative clearing debris will be chipped and stockpiled on-site for subsequent use by the Contractor for organic matter (or mulch) within the project limits.

4.11. All vegetation removed within the project limits that cannot be chipped or used for structures shall be hauled off-site and disposed of by the Contractor.

5. CONSTRUCTION GUIDELINES

5.1. All references to "left" and "right" in the construction drawings are in reference to looking downstream.

5.2. Construction shall proceed from upstream to downstream, working and completing one segment of the proposed channel at a time. If needed, pump any base stream flow from upstream of the active work area to downstream of the active work area.

5.3. As stated in section 2.1 in these construction notes, the Contractor is responsible for describing their proposed construction means and methods in their workflow plan.

5.4. Contractor is responsible to monitor weather forecasts and prepare site conditions, including erosion control measures, for pending storms capable of producing significant rainfall.

5.5. The Contractor shall perform all rough and fine grading earthwork operations in accordance with proposed grades and technical specifications, as shown herein.

5.6. On benches and slopes above bankfull elevation, the Contractor shall strip, stockpile, and replace 6 inches of topsoil prior to achieving final design elevation. Each section shall be rough graded first along the specified segment, then install structures and bring proposed stream bed and banks to final grade as work proceeds downstream.

5.7. Final grade of the proposed channel shall utilize the specified bed substrate material as the final layer in the proposed channel. Stones shall be rounded and placed to create a dense mass with a minimum of voids.

5.8. Coir fabric along the banks shall be installed along with installation of rock and wood structures so that fabric can be placed first with sills on top to pin fabric in place. Sills shall be embedded so that tops are at final proposed grade.

5.9. Each stream segment shall be brought to final grade and stabilized daily before continuing to the next segment, allowing diverted (pump around) stream flow to be redirected back into the existing channel.

5.10. As final grade and stabilization of the banks progresses downstream, the banks and other graded surfaces shall be seeded and lined with matting as shown on the erosion and sediment control plan. The Contractor shall be responsible to maintain all denuded and disturbed areas until which time they have been stabilized with the specified vegetative cover. The Town inspector and Town Engineer, or designee, shall determine when the site has been completely stabilized.

5.11. Specified plantings and reforestation shall occur in accordance with the Landscape & Vegetation Plan (C6.1) following final grading, matting, seeding and as-built survey coordination. Contractor shall only use ATV scale vehicles and small equipment to complete planting work to avoid track rutting and disruption of final grade.

5.12. Upon completion of construction and vegetative stabilization, the Contractor shall remove temporary erosion and sediment control measures in accordance with the attached erosion and sediment control notes. This work includes permanent seeding of any remaining disturbance to temporary material storage areas and access easements.

GEOTECHNICAL NOTES

1. EXCAVATION

1.1. Excavation consists of soil material removal from any location within the project limits. All excavation shall be in accordance with the construction drawings.

1.2. Unauthorized excavation consists of removal of soil materials beyond specified subgrade elevations, dimensions or locations without specific direction from the Town Engineer or designee approval.

1.3. Unsuitable material shall be identified and removed, if necessary, to the limits determined by the construction inspector and suitable replacement material shall be backfilled in accordance with the geotechnical specifications contained herein.

1.4. All work shall be performed in a safe manner in accordance with 29CFR1926 OSHA standards, latest edition.

1.5. Dewatering, if necessary, shall be performed in accordance with the erosion and sediment control notes and the Virginia Erosion and Sediment Control Handbook.

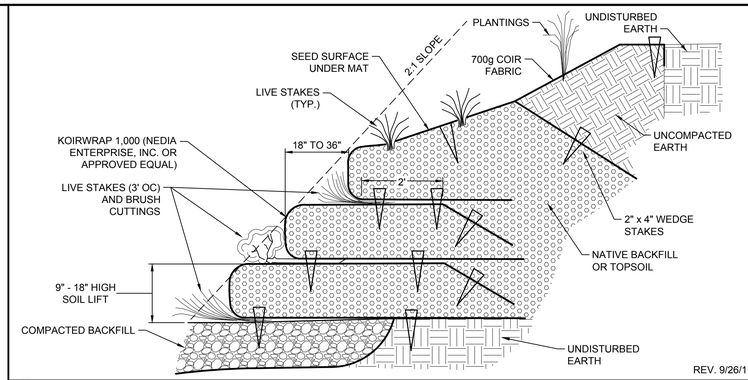
2. BACKFILLING & FILL PLACEMENT

2.1. Vegetative debris and deleterious organic matter shall be removed from the channel (fill area) prior to the placement of fill.

2.2. Material used for fill shall be suitable material as previously defined, free from rocks larger than 4 inches in any dimension, debris, root mass, clods or deleterious matter. Fill shall be placed in lifts not to exceed 8 inches and each lift shall be compacted to a minimum 95% of standard proctor.

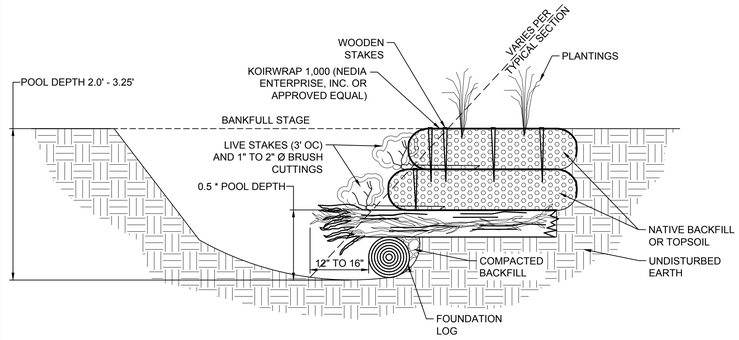
2.3. Streambed substrate mix shall be placed in lifts not to exceed 8 inches and each lift shall be thoroughly compacted with heavy equipment.

2.4. Reference the attached erosion and sediment control notes and planting specifications for direction on topsoil stripping, stockpiling, testing, amendment and reapplication.



REV. 9/26/11

REINFORCED SOIL LIFTS
NO SCALE



REV. 10/24/13

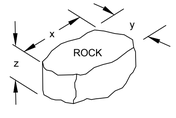
TOE WOOD
NO SCALE

PARTICLE DIAMETER	SIZE
D50	0.6"

1. SUBSTRATE DEPTH SHALL BE 12".
2. ALL MATERIAL USED FOR SECTIONS OF THE STREAM CHANNEL THAT ARE RAISED ABOVE EXISTING GRADE SHALL BE REVIEWED AND APPROVED BY THE PROJECT ENGINEER PRIOR TO PLACEMENT IN THE STREAM CHANNEL.
3. COBBLE AND GRAVEL MATERIALS SHALL BE SIMILAR IN NATURE TO COMMON STREAM AND RIVERBED FORMATIONS IN THIS VICINITY.
4. FILL CONSISTS OF MATERIAL EXCAVATED AND RELOCATED FROM THE PROJECT SITE OR ASSOCIATED AREAS ON THE PROPERTY. PROPOSED FILL SOURCES SHALL BE APPROVED BY THE TOWN ENGINEER, OR DESIGNEE, PRIOR TO USE.
5. MATERIALS IMPORTED TO THE SITE SHALL BE MIXED TO THE SPECIFIED PERCENTAGES WITHIN THE LIMITS OF THE STOCKPILE AND STAGING AREAS PRIOR TO FINAL PLACEMENT.

REV. 9/26/11

SUBSTRATE MIX SPECS
NO SCALE

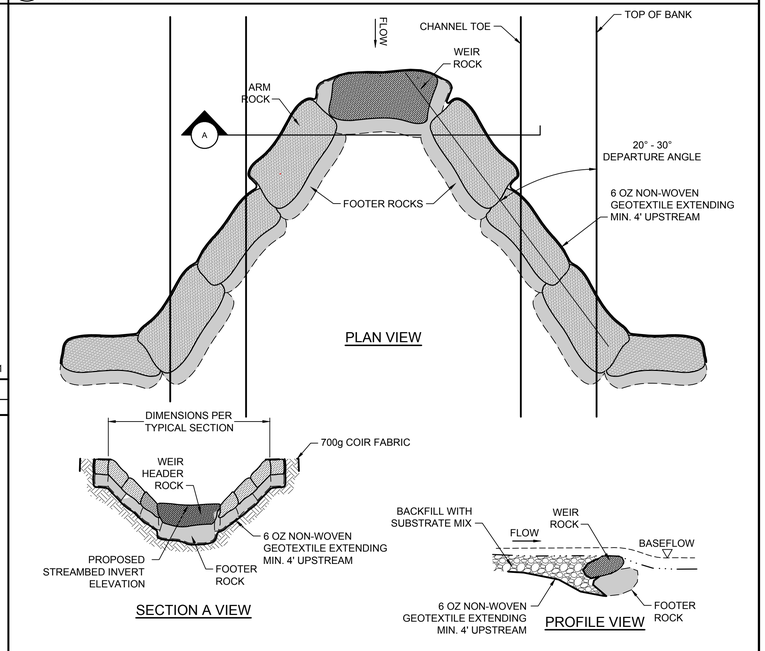


SUITABLE ROCKS WILL HAVE THE FOLLOWING THREE PRIMARY DIMENSIONS (±2"):

x = LONGEST DIMENSION
y = INTERMEDIATE DIMENSION (21")
z = SHORTEST DIMENSION

REV. 9/26/11

SUITABLE ROCK SIZE DIAGRAM
NO SCALE



NOTES:
1. REFER TO SUITABLE ROCK SIZE DIAGRAM FOR HEADER AND FOOTER ROCK DIMENSIONS.
2. THE ROCK WEIR IS TO BE CENTERED IN THE CHANNEL WITH ALL HEADER ROCKS FLUSH WITH THE PROPOSED GRADE. ALL ROCKS PLACED TIGHTLY TO EACH OTHER WITH SUBSTRATE MIX COMPACTED AROUND EACH.
3. REFER TO STRUCTURE TABLE ON C5.1 FOR ADDITIONAL SPECIFICATIONS.

REV. 1/31/13

ROCK WEIR
NO SCALE

COMMONWEALTH OF VIRGINIA
AISLINN T. CREEL
Lic. No. 047761
5/5/2015
PROFESSIONAL ENGINEER

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DATE	REVISION DESCRIPTION

DATE: 05/05/2015
DRAWN BY: C.W. / C.S.
DESIGNED BY: C.W. / C.S.
CHECKED BY: A.C. / R.N.
SCALE: AS SHOWN

TIMMONS GROUP

ASHLAND POLICE DEPARTMENT RETROFIT

TOWN OF ASHLAND - VIRGINIA

CONSTRUCTION NOTES AND DETAILS

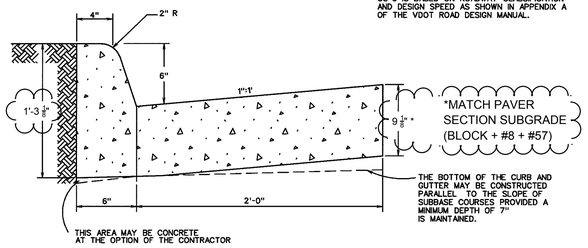
JOB NO. 34056.006

SHEET NO. C4.0

(MODIFIED) CG-6

NOTES:

1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
3. COMBINATION CURB & GUTTER HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) SHALL BE PAID FOR AS RADIAL COMBINATION CURB & GUTTER.
4. FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER, THE BOTTOM OF THE CURB AND GUTTER SHALL BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUBBASE COURSES AND TO THE DEPTH OF THE PAVEMENT.
5. ALLOWABLE CRITERIA FOR THE USE OF CG-6 IS BASED ON ROADWAY CLASSIFICATION AND DESIGN SPEED AS SHOWN IN APPENDIX A OF THE VDOT ROAD DESIGN MANUAL.



SPECIFICATION REFERENCE
105
502

COMBINATION 6" CURB & GUTTER

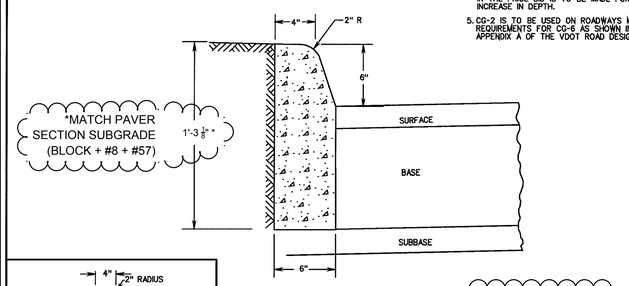
VIRGINIA DEPARTMENT OF TRANSPORTATION

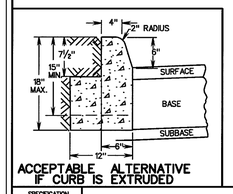
REV. 9/06
201.03

(MODIFIED) CG-2

NOTES:

1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
3. CURB HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) WILL BE PAID FOR AS RADIAL CURB.
4. THE DEPTH OF CURB MAY BE REDUCED AS MUCH AS 3" (15" DEPTH) OR INCREASED AS MUCH AS 3" (21" DEPTH) IN ORDER THAT THE BOTTOM OF CURB WILL COINCIDE WITH THE TOP OF A COURSE OF THE PAVEMENT SUBSTRUCTURE. OTHERWISE THE DEPTH IS TO BE 18" AS SHOWN. NO ADJUSTMENT IN THE PRICE BID IS TO BE MADE FOR A DECREASE OR AN INCREASE IN DEPTH.
5. CG-2 IS TO BE USED ON ROADWAYS MEETING THE REQUIREMENTS FOR CG-6 AS SHOWN IN APPENDIX A OF THE VDOT ROAD DESIGN MANUAL.





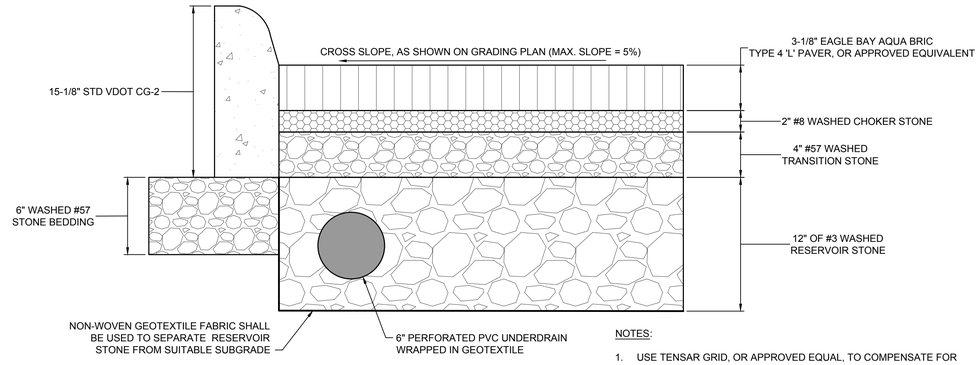
ACCEPTABLE ALTERNATIVE IF CURB IS EXTRUDED

SPECIFICATION REFERENCE
105
502

STANDARD 6" CURB

VIRGINIA DEPARTMENT OF TRANSPORTATION

REV. 9/06
201.01

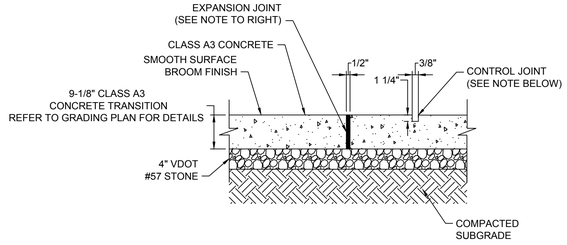


NOTES:

1. USE TENSAR GRID, OR APPROVED EQUAL, TO COMPENSATE FOR UNSUITABLE SUB-GRADE, IF ENCOUNTERED.
2. SUB-GRADE SUITABILITY TO BE DETERMINED BY CONTRACTOR.
3. SET PAVERS AT LEAST 1/4" BUT NO GREATER THAN 3/8" HIGHER THAN SURROUNDING CONCRETE STRUCTURES TO ACCOUNT FOR FUTURE SETTLING.

TYPICAL SECTION VIEW: PERMEABLE PAVEMENT

NTS



NOTES:

1/2" EXP. JOINTS SHALL BE PLACED AT 30' INTERVALS AND AT ALL AREAS WHERE PAVING ABUTS OTHER WALKS AND STRUCTURES (TYP.) JOINT MATERIAL SHALL BE SEALED WATERTIGHT ON TOP (GRAY SIKA FLEX-227 OR APPROVED EQUAL).

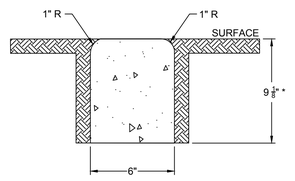
CONTROL JOINTS SHALL BE PLACED AT 5' INTERVALS BOTH DIRECTIONS, UNLESS NOTED OTHERWISE.

CONCRETE TRANSITION DETAIL

NTS

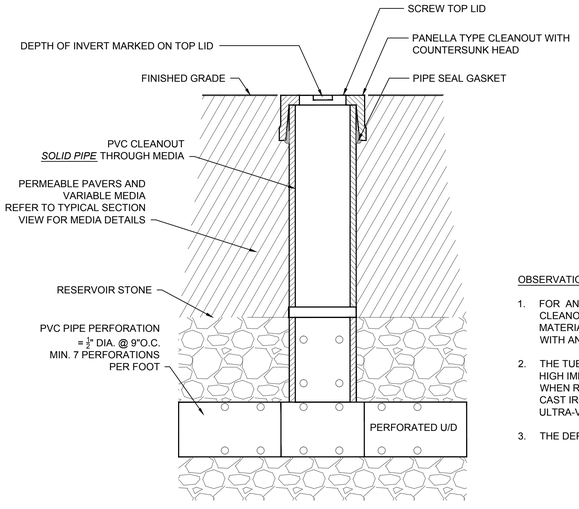
NOTES:

1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
3. CURB HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) WILL BE PAID FOR AS RADIAL CURB.



FLUSH CURB DETAIL

NTS



OBSERVATION WELLS TO INCLUDE THE FOLLOWING :

1. FOR AN UNDERGROUND FLUSH MOUNTED OBSERVATION WELL / CLEANOUT, PROVIDE A TUBE MADE OF NON-CORROSIVE MATERIAL, SCHEDULE 40 OR EQUAL, AT LEAST THREE FEET LONG WITH AN INSIDE DIAMETER OF AT LEAST 6 INCHES.
2. THE TUBE SHALL HAVE A FACTORY ATTACHED CAST IRON OR HIGH IMPACT PLASTIC COLLAR WITH RIBS TO PREVENT ROTATION WHEN REMOVING SCREW TOP LID. THE SCREW TOP LID SHALL BE CAST IRON OR HIGH IMPACT PLASTIC THAT WILL WITHSTAND ULTRA-VIOLET RAYS.
3. THE DEPTH OF INVERT SHALL BE MARKED ON CAP.

UNDERDRAIN CLEANOUT DETAIL

NTS

COMMONWEALTH OF VIRGINIA
AISLINN T. CREEL
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5/5/2015
PROFESSIONAL ENGINEER

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REVISION DESCRIPTION	DATE

DATE 05/05/2015
DRAWN BY C.W. / C.S.
DESIGNED BY C.W. / C.S.
CHECKED BY A.C. / R.N.
SCALE AS SHOWN

TIMMONS GROUP

ASHLAND POLICE DEPARTMENT RETROFIT
TOWN OF ASHLAND - VIRGINIA
CONSTRUCTION NOTES AND DETAILS

JOB NO. 34056.006
SHEET NO. C4.1

ENGLAND STREET
RTE. 54
(50' & VAR. WIDTH R/W)

LEAD SLUG (F)

IRON (F)

UGT

OHP

DOMINION POWER & VDOT UTILITY EASEMENT DB. 3077, PG. 3144

GPIN 7870-91-6024
TOWN OF ASHLAND
DB. 862, PG. 472
DB. 1886, PG. 257 (ADD PARCEL)
DB. 3069, PG. 2552 (VDOT R/W)

1 LEVEL BRICK & FRAME BUILDING W/ GABLED ROOF (ASHLAND P.D.)

GPIN 7870-91-7188
PAUL C. CAREY & ALESIA R. CAREY
DB. 1313, PG. 170

RANDOLPH STREET
(33' R/W)

SAW-CUT EX. ASPHALT

EX. CURB AND GUTTER TO REMAIN

FENCE AND SIGNS TO BE REPLACED IN KIND

FLUSH CURB

LIGHT TO REMAIN

CG-2

SAW-CUT EX. ASPHALT

VARIABLE WIDTH 9-¼" CLASS A3 CONCRETE TRANSITION

TIE U.D. TO D.I.

6" PVC U.D.

MOD. CG-2

PAVER PARKING AREA

C.O. (TYP.)

6" PVC U.D.

MOD. CG-6

FENCE AND SIGNS TO BE REPLACED IN KIND

LIGHT TO REMAIN

MOD. CG-2

TIE U.D. TO D.I.

RAISE EX. D.I. TOP TO EL. 212.72 (REFER TO PROFILE SHEET C5.1)

EX. 30' DRAINAGE EASEMENT

GRAVEL PARKING AREA (6" #26 CRUSHER RUN AGGREGATE)

TIMBER CURB

TIMBER CURB

PIPE (F)

ALLEY

(GPIN 7870-91-6024)

NAD 83

SCALE 1"=20'
0 20' 40'

GRADING SPOT SHOTS

GRADE PAVERS FLUSH WITH EXISTING CG-6

215.27
214.26
214.81
R5'
213.72 EP
213.15 EP (CORNER OF CONCRETE TRANSITION)
213.07 EP
212.81 F.L.
6" PVC 45° BEND INV: 211.19
212.95
6" PVC @1.37%
213.31
212.96 EP (BEGIN GUTTER TRANSITION)
TIE U.D. TO D.I. INV: 210.5
214.93 EP
214.64 EP
214.69 EP
6" PVC INV: 212.02
213.78
214.27
214.04
R4.5'
6" PVC INV: 211.28
214.86 EP
215.00 EP
214.11 EP
6" PVC @0.80%
213.52
212.33 EP (BEGIN GUTTER TRANSITION)
6" PVC 45° BEND INV: 210.53
213.47
212.29
TIE U.D. TO D.I. INV: 209.75
212.72
D.I. TOP EL: 212.72
214.79 EP
214.71 EP

NOTE: ALL SHOTS TOP OF CURB UNLESS OTHERWISE NOTED

SCALE 1"=20'
0 20' 40'

COMMONWEALTH OF VIRGINIA
AISLINN T. CREEL
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5/5/2015
PROFESSIONAL ENGINEER

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DATE: 05/05/2015
DRAWN BY: C.W. / C. S.
DESIGNED BY: C.W. / C. S.
CHECKED BY: A.C. / R.N.
SCALE: 1" = 20'

TIMMONS GROUP

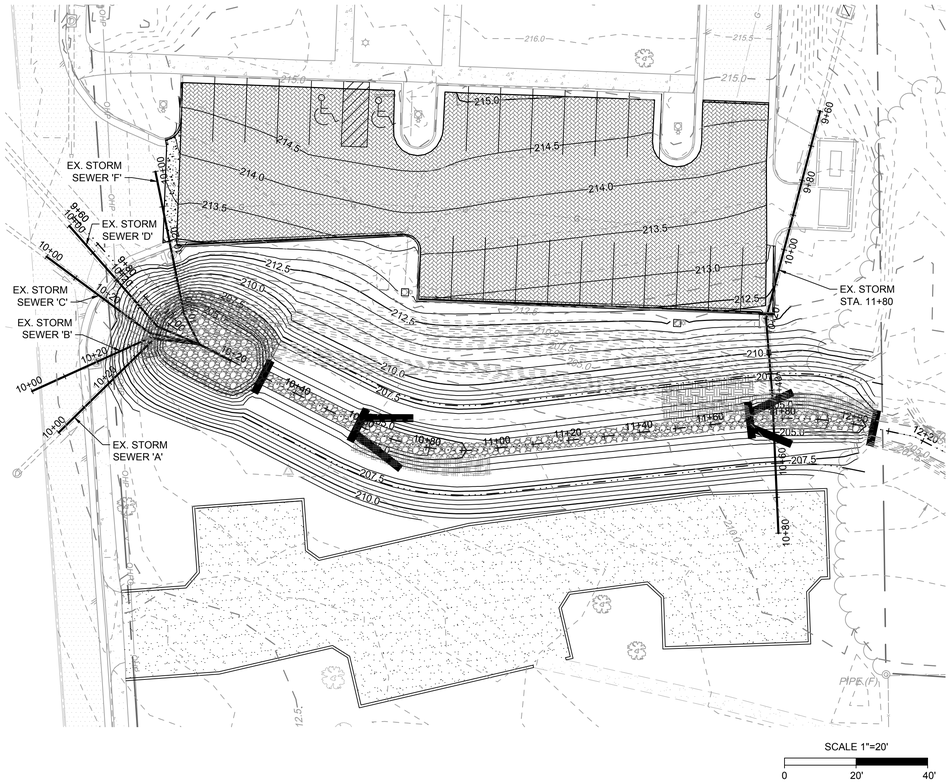
ASHLAND POLICE DEPARTMENT RETROFIT

TOWN OF ASHLAND - VIRGINIA

GRADING PLAN

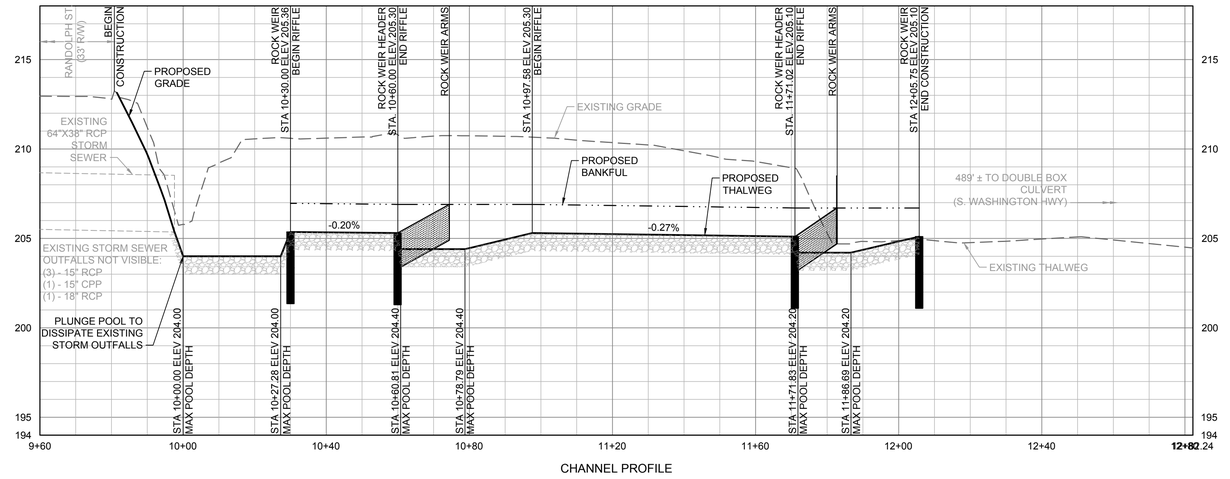
JOB NO. 34056.006

SHEET NO. C5.0

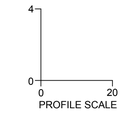


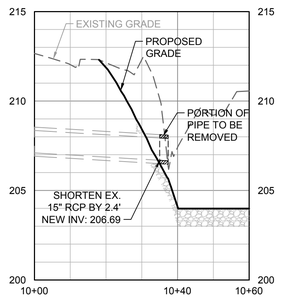
ROCK WEIR HEADER TABLE		
Structure Name	Station	Elevation
ROCK WEIR HEADER	10+30.00	205.36
ROCK WEIR HEADER	10+60.00	205.30
ROCK WEIR HEADER	11+71.02	205.10
ROCK WEIR HEADER	12+05.75	205.10

ROCK WEIR ARM TABLE				
Structure Name	Start Station	Start Top Elevation (FT)	End Station	End Top Elevation (FT)
ROCK WEIR ARM	10+60.00	205.30	10+74.42	206.90
ROCK WEIR ARM	10+60.00	205.30	10+74.42	206.90
ROCK WEIR ARM	11+71.02	205.10	11+82.59	206.70
ROCK WEIR ARM	11+71.02	205.10	11+82.82	206.70

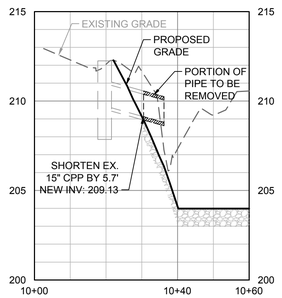


CHANNEL PROFILE

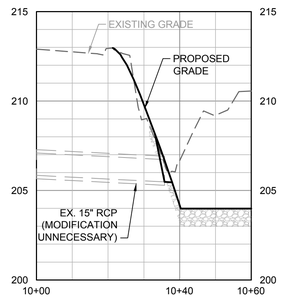




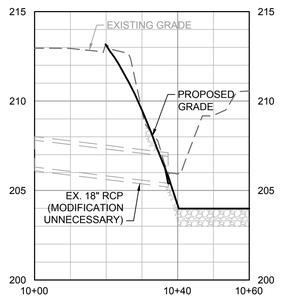
EX. STORM SEWER 'A'



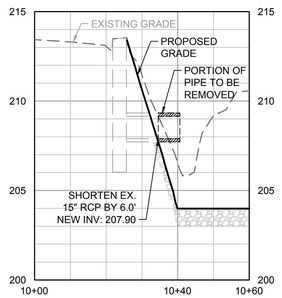
EX. STORM SEWER 'B'



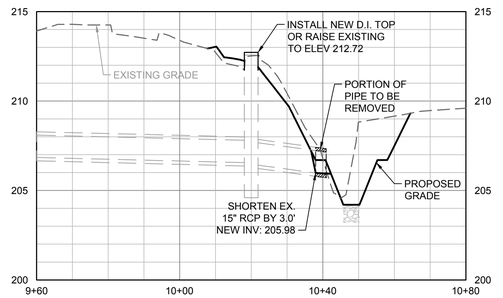
EX. STORM SEWER 'C'



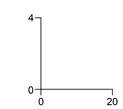
EX. STORM SEWER 'D'



EX. STORM SEWER 'F'



EX. STORM SEWER STA. 11+80



COMMONWEALTH OF VIRGINIA
AISLINN T. CREEL
Lic. No. 047761
05/5/2015
PROFESSIONAL ENGINEER

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Site Development | Residential | Infrastructure | Technology

REVISION DESCRIPTION	DATE

DATE 05/05/2015
DRAWN BY C.W. / C. S.
DESIGNED BY C.W. / C. S.
CHECKED BY A.C. / R.N.
SCALE AS SHOWN

TIMMONS GROUP

ASHLAND POLICE DEPARTMENT RETROFIT

TOWN OF ASHLAND - VIRGINIA

PROFILES

JOB NO. 34056.006
SHEET NO. C5.1

VEGETATION SPECIFICATIONS

A. General:

1. Plant details are incorporated into this specification by reference.

2. Submittals
   - 2.1. Installers Qualifications: provide a list, with references, of the past three projects of similar scope.
   - 2.2. Product Data: for each type of product indicated.
   - 2.3. Plant Material Certifications: Contractor shall be required to submit the material certifications to the Town Engineer, or designee, for review and approval prior to material purchase.
   - **2.4. Topsoil Analysis and Soil Amendments: Contractor shall be responsible to submit certified soil test results and soil amendment recommendations prior to commencement of construction.**
   - 2.5. Contractor should schedule a minimum of one week for Town Engineer, or designee, review time of the specified submittal.

3. Quality Assurance
   - 3.1. Supplier Certification: the supplier of all seeds and/or vegetation shall certify that origin of the seeds from which the plants or seeds were produced is from hardiness zone 5, from the eastern or central portions of the U.S., prior to planting.
   - 3.2. Installer Qualifications: engage an experienced installer, who has successfully completed planting projects similar in size and complexity to this project.
   - 3.3. Installer's Field Supervision: Installer to maintain an experienced full-time supervisor on the project site when planting is in progress.

4. Plant Materials
   - 4.1. Provide plant materials of quantity, size, genus, species and variety indicated on the construction drawings.

5. All plant materials and work shall comply with recommendations and requirements of ANSI z60.1 2004 American Standard for Nursery Stock. All seed must meet applicable state and federal regulations and must include labeling indicating supplier, formulation, germination rates and seed date.

6. Do not make substitutions unless approved by the Town Engineer or designee. If specified landscape material is not obtainable, submit proof of non-availability to the Town Engineer or designee together with proposal for use of equivalent material.

7. The Town Engineer or designee may inspect plant materials either at place of growth or on site during planting activities, for compliance with requirements for genus, species, variety, size and quality. Additionally, the Town Engineer or designee retains the right to further inspect plant material. Material found to be unacceptable will be rejected and the Contractor will be required to supply replacement material within a reasonable time frame (i.e., 1 week). Rejected material shall be immediately removed from project site. Unacceptable material is defined as the following:
   - 7.1. Plants with bent trunks or multiple leaders, unless characteristic for the species;
   - 7.2. Plants with diseased trunks, stems or leaves;
   - 7.3. Plants with pest-infested trunks, stems or leaves;
   - 7.4. Plants of insufficient size;
   - 7.5. Plants of wrong species/sub-species; and
   - 7.6. Plants having root girdling in the container.

8. Delivery, Storage and Handling
   - 8.1. Protect bark, branches and root systems from sun scald, drying, sweating, whipping and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during delivery. Do not drop plants during delivery.
   - 8.2. Deliver plant materials after preparations for planting have been completed and plant immediately. If planting is delayed more than 6 hours after delivery, set plant materials in shade, protect from weather and mechanical damage, and keep roots moist and free from frost. Prevent plug, tubelings and bareroot material from drying.
   - 8.3. Do not remove container-grown stock from containers until planting time.
   - 8.4. Balled and burlapped material shall be dug so as to retain as many fibrous roots as practicable and shall come from soil which will form a firm ball. The soil in the ball shall be the original and undisturbed soil in which the plant has been grown. The plant shall be dug, wrapped, transported and handled in such a manner that the soil ball will not be loosened to cause stripping of the small and fine feeding roots or cause the soil to drop away from such roots.
   - 8.5. Balled and burlapped material shall be freshly dug. If trees are stored, untie and set vertically.
   - 8.6. Handle planting stock by root ball.
   - 8.7. Prevent live staking material from drying out and store according to supplier's recommendations.

9. Project Conditions
   - 9.1. Examine the sub-grade and topsoil, verify the elevations and observe the conditions under which work is to be performed. All soil amendments and conditioning shall be completed prior to seeding and plant material installation. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the installer.

10. Planting and Seeding Restrictions
    - 10.1. Plants shall be planted during unfrozen soil conditions (October 15 - April 30). Plant installation outside of this time period shall not occur unless approved by the Town Engineer or designee and may require additions to the scope of work, such as watering regimes and additional plant quantities.
    - 10.2. Seeding shall be completed during March - May or September - November. Grading operations needing stabilization outside of this time period shall be seeded with an alternative warm season or cool season grass mix that is approved by the Town Engineer or designee until such time as the specified seeding can occur.
    - 10.3. These limits may not be modified unless approved by the Town Engineer or designee, in advance, with the risk of survival borne solely by the Contractor.

11. Warranty
    - 11.1. Warranty period is for one (1) year after date of Final Acceptance and covers defects including death and unsatisfactory growth, except for defects resulting from neglect by the Town, abuse or damage by others, or unusual phenomena or incidents which are beyond Contractor's control.
    - 11.2. Contractor shall guarantee a minimum survival rate for the warranty period of 85% for balled and burlapped, container grown, and tubelings, and 75% for bare root and live stakes.
    - 11.3. If survival rates are less than the above warranty rates, then Contractor shall replace the quantity of defective or dead plants up to the original construction drawing specified plant quantity. Warranty plantings shall occur within the next planting window (October 15th - April 30th, excluding frozen soil conditions) following the end of the applicable warranty period.
    - 11.4. It shall be the Contractor's responsibility during the warranty period to provide written notice of any maintenance practice to the Town, which in their opinion will affect the guarantee if not remedied promptly. The Town Engineer or designee will render an opinion of any conflict if necessary.

12. Maintenance
    - 12.1. The Contractor is responsible for maintaining all plant material until Final Acceptance. The Town is responsible for maintaining all plant material throughout the warranty period according to the Town Engineer or designee approved Maintenance Schedule.

B. Products/Materials:

1. Plant Materials
   - 1.1. General: The Contractor is to provide nursery-grown plant materials complying with ANSI z60.1, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock free of disease, insects, eggs, larvae and defects such as knots, sun scald, injuries, abrasions and disfigurement.
   - 1.2. Transplants: Transplants may include live stakes, shrubs, small trees, grass plugs and live mats. When available, the source and location of suitable materials for transplanting will be identified by the Town Engineer or designee. The plant materials to be transplanted will be marked and identified for the Contractor prior to construction.

2. Live Stakes
   - 2.1. Commercially supplied or field harvested live stakes shall be at least one year old and shall be harvested and transported when plants are dormant.
   - 2.2. The size of stakes shall range from ½ inch to 1 inch in caliper and average 24 inches in length with a minimum planted length of 18 inches. Side branches shall be removed with the remaining bark intact. The bottom (basal) end shall be cleanly cut at a 45 degree or sharper angle and the top end should be cut square (flat), protruding no more than 4 inches.

3. Branch Cutting
   - 3.1. Commercially supplied or field harvested branch cuttings shall be approximately ½ inch in diameter and shall not exceed 2 inches in diameter. Cuttings shall be 3 to 6 feet in length.
   - 3.2. Live branch cuttings shall consist of a mix of at least two of the approved plants species as specified on the Planting Schedule.

4. Seed: Seed should be clean and dry. Do not use seed that has become moist during delivery or storage.

5. Water: Free of substances harmful to plant growth.

6. Tree Mats: Ecodepot Treemat™ or Town Engineer, or designee, approved equal. Tree mat must be composed of 100% biodegradable, machine-compressed coir fiber with 100% biodegradable rubber coating on one side. Tree mat must have a center opening, a radial slit, and must be a minimum of ½ inch thick. Manufacturer's recommended sizing:
   - 12" Treemat - tubelings and bareroot trees/shrubs
   - 16" Treemat - 1 gallon containerized trees/shrubs
   - 24" Treemat - 3 gallon containerized trees/shrubs
   - 30" Treemat - 5 gallon containerized trees/shrubs and 1 inch caliper trees
   - 36" Treemat - 2 inch caliper trees

7. Tree Shelters: Ecodepot Biobark™ tree shelter or Town Engineer, or designee, approved equal. Tree shelter must be composed of 100% biodegradable materials and should be made of hardwood slats woven together with natural roping. The tree shelter must be at least 36 inches tall with at least 3 longer, hardy stakes for insertion into the ground to provide support.

8. Topsoil
   - 8.1. Reuse of surface soil stockpiled on-site: Contractor is responsible to submit soil test results, certifying suitability of stockpiled surface soil for topsoil use, to the Town Engineer, or designee, for approval.
   - 8.2. If stockpiled surface soil is determined to be suitable for reuse as topsoil, then Contractor shall clean soil to remove roots, plants, sod, stones, clay lumps and other extraneous materials harmful to plant growth prior to use as topsoil. Contractor may use sifted stone material as substrate material for the proposed stream as long as it meets the requirements and specifications of substrate material listed on sheet 4.0.
   - 8.3. Imported Topsoil: If on-site soil is determined to be unsuitable then Contractor shall supplement with imported or manufactured topsoil from off-site sources with certified topsoil. Obtain topsoil displaced from naturally well-drained sites where topsoil occurs at least 4 inches (100 mm) deep; do not obtain from bogs or marshes. If agricultural land is the source of topsoil the material cannot include manure.
     OR
   - 8.4. Amended Surface Soil: If on-site soil is determined to be unsuitable then Contractor shall amend existing in-place surface soil to produce topsoil. Contractor is responsible to submit certified surface soil test results and recommended amendments to the Town Engineer, or designee, for approval prior to purchasing amendments. Contractor shall clean surface soil to remove roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth prior to mixing in approved amendments.

9. Organic Soil Amendments
   - 9.1. Organic backfill shall be added as a soil amendment and shall consist of composted yard waste or other approved recycled organic materials. Prior to delivery, the Contractor shall submit to the Town Engineer, or designee, for approval a sample of the organic backfill that will be used by the Contractor.
   - 9.2. Organic backfill shall be aged not less than one year and must be free of viable weed seed. The Town Engineer, or designee, reserves the right at any time to test and reject compost material that fails to meet these specifications. Composted waste products shall exclude sewer sludge or bio-solids, plastics or metals.

10. Straw Mulch: Cereal grain straw shall be harvested from dry stalks, properly stored and clean of weed seeds. Straw shall come in baled form to be spread by hand or machine-blown.

11. Herbicide Spray Application: Existing areas with substantial coverage of undesirable grass species shall be sprayed with an aquatic safe glyphosate (AquaPro®) or approved equal). Apply at a rate of 8 ounces of AquaPro and 4 ounces of non-ionic surfactant (Cide-Kick® or equivalent) with 2 gallons of water per 50' x 50' area, spraying directly onto target plants. Cool season grass eradication requires one application in the fall and one in the spring. Grass should be allowed to grow 6 inches, either after mowing or from spring growth, to weaken the plant and provide maximum surface area for application. See product label for complete use directions. Glyphosate is a non-selective chemical which will control any vegetation on which it is sprayed, care should be taken to avoid contact with non-target species. Preferably, application should be applied by a certified pesticide applicator.

12. Tree Tags: Tree Tags shall be 5 inch x ½ inch wrap-around tags constructed of fade resistant plastic. Tag color shall be proposed with product submittal to Town Engineer or designee. Recommend Enviroflex® Wrap-Around Tag distributed by Western Tag & Label or equivalent.

C. Execution:

The Contractor is encouraged to engage students from Randolph-Macon College in execution of the Landscape & Vegetation Plan. Contact may be coordinated through the Town Engineer. Install plant materials in accordance with the specifications and details of the construction drawings following the addition of soil amendments, seeding, and installation of applicable erosion control fabric.

1. Container Grown Material
   - 1.1. Planting of container grown material shall occur in accordance with locations and/or patterns specific to the construction drawings.
   - 1.2. Planting holes shall be twice the diameter and 1 foot deeper than the container in which they are grown. Scarify planting hole bottom a minimum of 6 inches and mix ½ cubic foot of organic blend with hole backfill prior to setting plant. Do not remove plant material from container until immediately before installation. Examine the roots to see if they are pot bound. Carefully separate any pot bound or cramped roots and spread them out when placing the plant within the hole so that the roots can grow without further constriction of the root ball.
   - 1.3. Set plant materials plumb and centered within hole, ensuring that the top of the root ball is elevated 2 to 3 inches above the surrounding soil elevations. Backfill around root ball with suitable native soil, maintaining plumb and gently tamping backfill layers to eliminate voids. Water in backfill layers to the point of soil saturation.
   - 1.4. Following the backfilling, add existing soil to bring the final grade in the planting hole to the surrounding soil surface. Rake the unused existing soil outside the planting house, taking care not to mound the soil or to significantly alter the existing grades.
   - 1.5. Install tree mat around plant and secure with 8 inch sod staples in accordance with manufacturer's recommendations. If approved by the Town Engineer, or designee, as an alternate, the Contractor may apply 2 to 3 inch average thickness of approved organic mulch layer in lieu of installing Treemats across the entire planting hole extending a minimum of 9 inches radially. Do not place mulch within 3 inches of plant trunk or stem.
   - 1.6. Install approved tree tag in accordance with manufacturer's recommendations.

2. Bareroot and Tubeling Material
   - 2.1. Planting of tubeling and bare root material shall occur in a random pattern across the site and in accordance with the schedule and details provided.
   - 2.2. It should be anticipated that the soil may be compacted more than optimal for planting and it shall be the Contractor's responsibility to disk and rake soil to assure optimal planting condition.
   - 2.3. Bareroot material shall be treated with root dip according to the manufacturers recommendation prior to planting. Materials shall be planted immediately or otherwise stored per the manufacturer's recommendations.
   - 2.4. Install 12" tree mat around plant and secure with 8 inch sod staples in accordance with manufacturer's recommendations. If approved by the Town Engineer or designee as an alternate, the Contractor may apply 2 to 3 inch average thickness of approved organic mulch layer, in lieu of installing Treemats across the entire planting hole extending a minimum of 9 inches radially. Do not place mulch within 3 inches of plant trunk or stem.
   - 2.5. Install approved tree tag in accordance with manufacturer's recommendations.

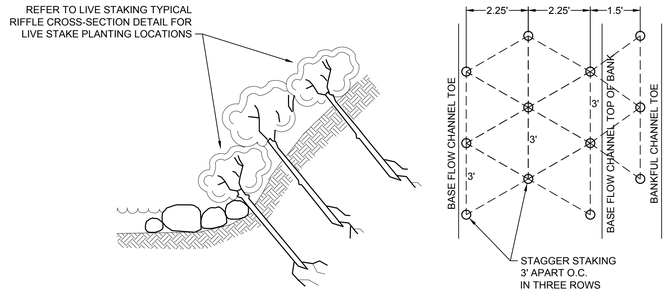
3. Live Stake Material
   - 3.1. Live stake material shall be soaked with growth hormone 48 hours prior to installation and shall be kept moist according to manufacturer's recommendations. Do not allow the live stakes to dry out prior to installation.
   - 3.2. Material shall be planted according to the detail provided on sheet 6.01. The use of a punch/planting bar, auger, rebar or water-jet may be used to predrill hole if necessary. Tamp soil around stake following install.
   - 3.3. Install approved tree tag in accordance with manufacturer's recommendations.

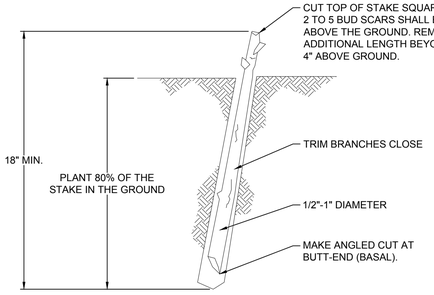
4. Seeding
   - 4.1. Seeding in areas graded or otherwise denuded shall occur in accordance with the current version of the Virginia Erosion and Sediment Control Handbook. Seed shall be applied prior to installation of any erosion control fabric. Areas applied with herbicide in the spring may be seeded 7 days after application.
   - 4.2. Sow seed with a spreader or a hydroseed machine with manufacturer recommended binding agent. Do not broadcast or drop seed when wind velocity exceeds 5 mph. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
   - 4.3. Do not use wet seed or seed that is moldy or otherwise damaged in transit or storage.
   - 4.4. Sow seed prior to installation of erosion control fabric where applicable.
   - 4.5. Rake seed lightly into the top ½ to ½ inch of topsoil, roll lightly, and water with a fine spray.
   - 4.6. Protect seeded areas against erosion by spreading straw mulch immediately following completion of seeding operations if other erosion control measures are not otherwise specified. Spread uniformly at a rate of 2 tons per acre (90 lb. per 1,000 S.F.) to form a continuous blanket over seeded areas. Spread by hand, blower or other suitable equipment. Anchor straw mulch by crimping into topsoil by suitable mechanical equipment.

5. Transplants
   - 5.1. Live Mat Transplanting
     - 5.1.1 Unless otherwise directed by the Town Engineer or designee, the Contractor shall stage transplanting of live mats such that they can be immediately re-planted on the prepared surface. Double handling of the mats shall be avoided when possible.
     - 5.1.2 The surface that will receive the mats shall be graded and loose. Mats will not be placed over compacted or currently vegetated soils without cultivating the surface.
     - 5.1.3 The Contractor shall use suitable equipment so as to obtain a thick mat of vegetation with the root mass intact. Mats shall be a minimum of one foot (1') thick, and three foot (3') by four foot (4') size.
     - 5.1.4 After placement on the prepared slope, the Contractor shall tamp the mat to ensure it is in full and stable contact with the underlying soil surface. Handwork with sharp shovels may be needed to trim mats such that the joints between mats are tight, with minimal exposed soil.

   5.2 Grass, Shrub, and Tree Transplanting
   - 5.2.1 Unless otherwise directed by the Town Engineer or designee, the Contractor shall stage transplanting of grass/shrubs/trees such that materials can be immediately re-planted. Double handling of the shrubs/trees shall be avoided when possible.
   - 5.2.2 The Contractor shall use suitable equipment to harvest the grass/shrubs/trees with an adequate root-mass for the plants survival. Grasses shall be harvested using a hand trowel and transported in vessels capable of maintaining moisture and adequate soil around the roots.
   - 5.2.3 The Contractor shall avoid excessive damage to the materials during the harvesting and planting process. Large shrubs shall be bundled and tied prior to digging to reduce damage to the bark. Tree limbs may be trimmed as is reasonable to avoid damage from the equipment.
   - 5.2.4 Transplanted shrubs/trees shall be replanted such that the plants are set into the ground at the same depth they were growing at the harvest location. The shrubs/trees shall be placed in a hole of an adequate size and shall be backfilled and tamped to remove voids in the soil. Water may be used to wash fill material around the root mass.
   - 5.1. Larger trees may require staking. When specified by the Town Engineer or designee, trees shall be staked on two sides with wooden stakes, heavy wire and protective collars shall be used where the wire makes contact with the tree bark.

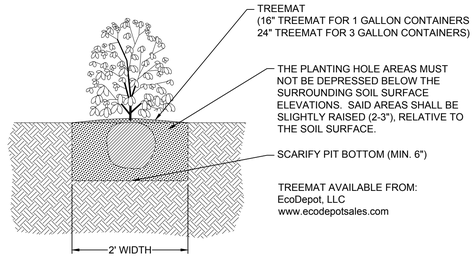
6. Ball and Burlap Material
   - 6.1. Planting of ball and burlap material shall occur in accordance with locations and/or patterns specific to the construction drawings.
   - 6.2. Planting holes shall be triple the diameter. Do not remove plant material from container until immediately before installation.
   - 6.3. If field grown, cut away all balling ropes. Remove burlap or wire basket from top ⅓ of ball. Prune suckers.
   - 6.4. Set plant materials on unexcavated or tampered soil, plumb and centered within hole, ensuring that the top of the root ball is elevated 2 to 3 inches above the surrounding soil elevations. Remove burlap around root ball and allow roots to extend into pit Backfill around root ball with suitable native soil, maintaining plumb and gently tamping backfill layers to eliminate voids. Water in backfill layers to the point of soil saturation.
   - 6.5. Following the backfilling, add existing soil to bring the final grade in the planting hole to the surrounding soil surface. Rake the unused existing soil outside the planting house, taking care not to mound the soil or to significantly alter the existing grades.
   - 6.6. Install tree mat around plant and secure with 8 inch sod staples in accordance with manufacturer's recommendations. If approved by the Town Engineer or designee as an alternate, the Contractor may apply 2 to 3 inch average thickness of organic mulch layer in lieu of installing tree mats across the entire planting hole. Do not place mulch within 3 inches of plant trunk or stem.
   - 6.7. Install Tree Shelter around plant in accordance with manufacturer's recommendations.





REV. 9/26/11

LIVE STAKING (TRIPLE ROW)
NO SCALE



REV. 9/26/11

CONTAINER SHRUB PLANTING (1 to 3 GALLON)
NO SCALE

COMMONWEALTH OF VIRGINIA
AISLINN T. CREEL
Lic. No. 047761
5/5/2015
PROFESSIONAL ENGINEER

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DATE	REVISION DESCRIPTION

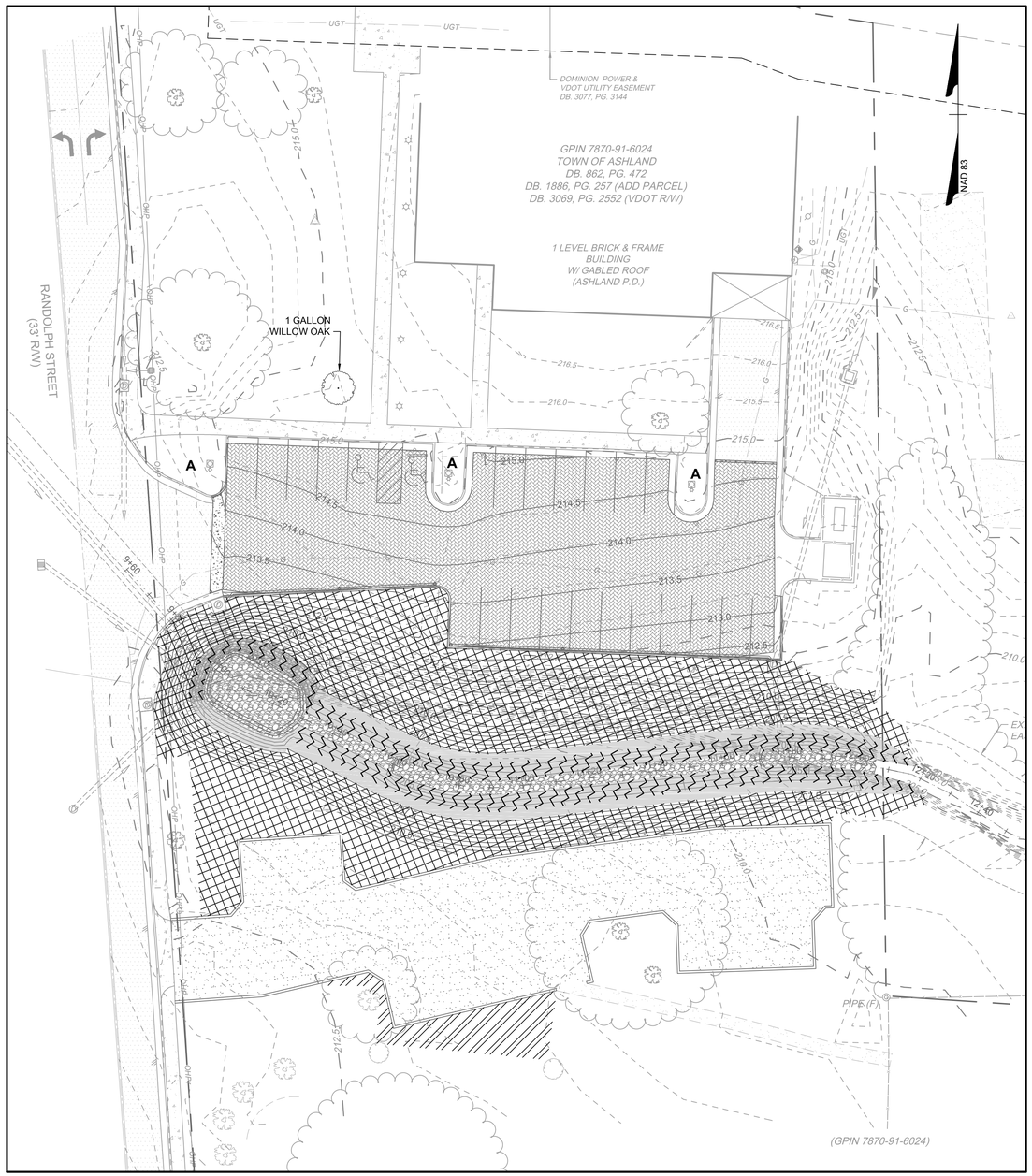
DATE 05/05/2015
DRAWN BY C.W./C.S.
DESIGNED BY C.W./C.S.
CHECKED BY A.C./R.N.
SCALE NONE

TIMMONS GROUP

ASHLAND POLICE DEPARTMENT RETROFIT
TOWN OF ASHLAND - VIRGINIA
VEGETATION SPECIFICATIONS AND DETAILS

JOB NO. 34056.006
SHEET NO. C6.0

LANDSCAPE VEGETATION PLAN



SCALE 1"=20'
0 20' 40'

PERMANENT SEEDING SCHEDULE

	BOTANICAL NAME	COMMON NAME	INDICATOR STATUS	MIX DENSITY	SEEDING RATE (lbs/acre)	TOTAL QUANTITY (lbs)	AREA: (acres)
SHOWY NORTHEAST NATIVE WILDFLOWER & GRASS MIX (ERNMX-153)	*Bouteloua Curtipendula*	Sideoats Grama	NI	38%		1.6	0.08
	Elymus Virginicus	Virginia Wildrye	FACW-	15%		0.6	0.03
	Sorghastrum Nutans	Indiangrass	UPL	10%		0.4	0.02
	Echinacea Purpurea	Purple Coneflower	NI	4%		0.2	0.01
	Agrostis Perennans	Autumn Bentgrass	FACU	4%		0.2	0.01
	Chamaecrista Fasciculata	Partridge Pea	FACU	4%		0.2	0.01
	Liatris Spicata	Marsh Blazing Star	FAC+	3%		0.1	0.01
	Penstemon Laevigatus	Appalachian Beardtongue	FACU	2.5%		0.1	0.01
	Coreopsis Lanceolata	Lanceleaf Coreopsis	FACU	2%		0.1	0.00
	Lespedeza Virginica	Slender Bushclover	NI	2%		0.1	0.00
	Rudbeckia Hirta	Blackeyed Susan	FACU-	2%		0.1	0.00
	Heliopsis Helianthoides	Oxeye Sunflower	NI	2%		0.1	0.00
	Tradescantia Ohiensis	Ohio Spiderwort	FAC	2%		0.1	0.00
	Aster Novae-Angliae	New England Aster	FACW-	2%		0.1	0.00
	Asclepias Tuberosa	Butterfly Milkweed	NI	1.8%		0.1	0.00
	Senna Marilandica	Maryland Senna	FAC+	1.5%		0.1	0.00
	Baptisia Australis	Blue False Indigo	NI	1%		0.0	0.00
	Aster Laevis	Smooth Blue Aster	NI	1%		0.0	0.00
	Rudbeckia Triloba	Browneyed Susan	FACU	1%		0.0	0.00
	Monarda Fistulosa	Wild Bergamot	UPL	0.5%		0.0	0.00
	Senna Hebecarpa	Wild Senna	FAC	0.5%		0.0	0.00
	Pycnanthemum Incanum	Hoary Mountainmint	NI	0.2%		0.0	0.00
	TOTAL QUANTITY			**100%**	**20**	**4.2**	**0.21**
FLOODPLAIN MIX (ERNMX-154)	*Elymus Virginicus*	Virginia Wildrye	FACW-	25%		0.4	0.02
	Andropogon Gerardii	Big Bluestem	FAC	19%		0.3	0.01
	Panicum Virgatum	Switchgrass	FAC	15%		0.2	0.01
	Carex Lurida	Lurid (Shallow) Sedge	OBL	12%		0.2	0.01
	Carex Vulpinoidea	Fox Sedge	OBL	10%		0.2	0.01
	Verbena Hastata	Blue Vervain	FACW+	4%		0.1	0.00
	Juncus Effusus	Soft Rush	FACW+	3%		0.0	0.00
	Eupatorium Perfoliatum	Boneset	FACW+	2%		0.0	0.00
	Desmodium Canadense	Showy Ticktrefoil	FAC	2%		0.0	0.00
	Asclepias Incarnata	Swamp Milkweed	OBL	2%		0.0	0.00
	Heliopsis Helianthoides	Oxeye Sunflower	NI	2%		0.0	0.00
	Eupatorium Fistulosum	Joe Pye Weed	FACW	1.5%		0.0	0.00
	Monarda Fistulosa	Wild Bergamot	UPL	1.5%		0.0	0.00
	Sisyrinchium Angustifolium	Narrowleaf	FACW-	0.5%		0.0	0.00
	Lobelia Siphilitica	Great Blue Lobelia	FACW+	0.5%		0.0	0.00
	TOTAL QUANTITY			**100%**	**20**	**1.5**	**0.08**
NON-NATIVE WOODS MIX (ERNMX-132)	*Festuca rubra*	Creeping Red Fescue	FACU	30%		0.5	0.005
	Phleum pratense	Timothy	FACU	20%		0.3	0.003
	Lolium perenne	Perennial Ryegrass	FACU-	20%		0.3	0.003
	Agrostis scabra	Ticklegrass (Rough Bentgrass)	FAC	18%		0.3	0.003
	Trifolium hybridum	Alsike Clover	FACU-	12%		0.2	0.002
	TOTAL QUANTITY			**100%**	**40**	**0.7**	**0.016**
STARTUP MIX	***Lolium multiflorum***	**Annual Ryegrass****	**NI**	**100%**	**30**	**9.0**	**0.30**

NOTES:
1. ** Annual Ryegrass shall be substituted with German Foxtail Millet (*Setaria italica*) if grading activities are scheduled to be concluded between May 1 and August 31.
2 ERNMX seed mixes are available from Ernst Conservation Seeds, Meadville, PA (814) 336-2404.
3. Quantities are based on estimated areas of grading activity. Additional seeding shall conform to the materials and rates of this
4. Seeding quantities are for convenience only and shall be verified based on specified density (pounds/acre) prior to bidding.
5. Substitutions shall only be made with the approval of the Project Engineer.

PLANTING SCHEDULE

ZONE AND STRATUM	SPECIES: BOTANICAL NAME	SPECIES: COMMON NAME	SPECIES: INDICATOR STATUS	PLANT SPACING	TOTAL QUANTITY: 1-GALLON: PLANTS PER ACRE	TOTAL QUANTITY: 1-GALLON: # OF PLANTS	AREA: (acres)
TREE LAYER	*Celtis occidentalis*	Common Hackberry	FACU	6-10' O.C.	35	**7**	
	Platanus occidentalis	American Beech	FACU	6-10' O.C.	35	**7**	
	Quercus phellos	Willow Oak	FAC	6-10' O.C.	35	**8**	
SHRUB LAYER	*Clethra alnifolia*	Sweet Pepperbush	FAC	6-10' O.C.	25	**5**	
	Hamamelis virginiana	Witch-Hazel	FACU	6-10' O.C.	25	**5**	
	Lindera benzoin	Northern Spicebush	FAC	6-10' O.C.	25	**5**	
	Viburnum dentatum	Arrowwood Viburnum	FAC	6-10' O.C.	25	**5**	
				TOTAL QUANTITY	**205**	**44**	**0.21**
					LIVE STAKES		
LIVE STAKES (STREAM SIDE)	*Cornus obliqua*	Silky Dogwood	FACW	3' O.C.	-	**265**	
	Salix nigra	Black Willow	OBL	3' O.C.	-	**265**	
				TOTAL QUANTITY		**530**	

NOTES:
1. Quantities are based on estimated areas of planting and stream length, including areas of disturbance. Additional plantings shall conform to the materials and rates of this schedule.
2. Planting quantities are for convenience only and shall be verified based on the specified density (plants/acre) prior to bidding.
3. Substitutions shall only be made with the approval of the Project Engineer.
4. Seeding shall occur prior to planting.

LANDSCAPE PLAN REQUIREMENTS

Requirement	Required	Provided	Notes:
1. The tree canopy must be at least 10% of the total disturbed area. Total Disturbed Area = 30,492 SF	3050	13704	The area of the tree canopy is based on the proposed riparian buffer corridor shown on this sheet.
2. The area of the area labeled "A" must be at least 5% of the proposed parking lot. Total Parking Area = 7,693	385	666	The areas labeled "A" are defined as the areas within the parking buffers.
3. Due to considerations of the use of the police department, no parking buffers are proposed immediately adjacent to the lot, as the parking area is sufficiently buffered by the existing vegetation to north along England St., to the south along the proposed riparian buffer along Mechumps Creek, and along the property line to the east.			

COMMONWEALTH OF VIRGINIA
AISLINN T. CREEL
Lic. No. 047761
5/5/2015
PROFESSIONAL ENGINEER

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REVISION DESCRIPTION	DATE

DATE 05/05/2015
DRAWN BY C.W. / C. S.
DESIGNED BY C.W. / C. S.
CHECKED BY A.C. / R.N.
SCALE 1" = 20'

TIMMONS GROUP

ASHLAND POLICE DEPARTMENT RETROFIT

TOWN OF ASHLAND - VIRGINIA

LANDSCAPE & VEGETATION PLAN

JOB NO. 34056.006
SHEET NO. C6.1