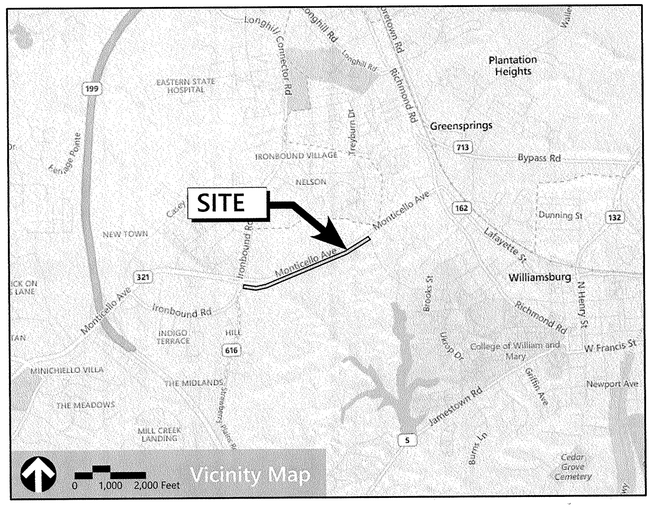
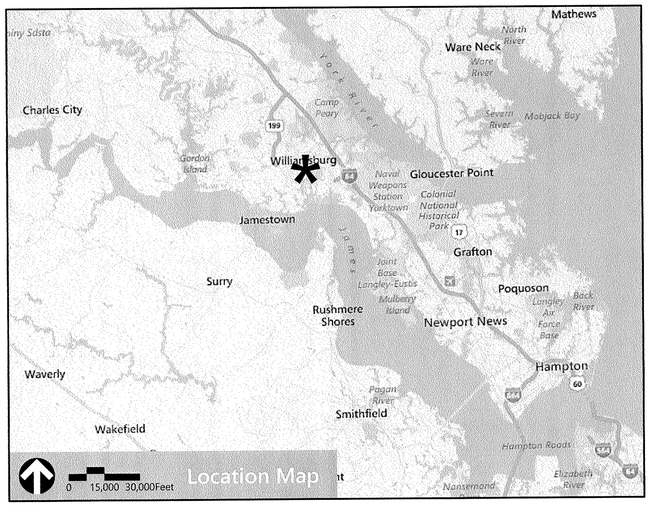
Site Plans

Issued for	For Bid
Date Issued	May 1, 2019
Latest Issue	May 1, 2019

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia





CITY OF WILLIAMSBURG
MONTICELLO AVENUE
MULTI-USE TRAIL
Project Length 0.80 Miles
VDOT #EN16-137-101
UPC 109074
Williamsburg, Virginia

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GENERAL NOTES:

1. THERE ARE RESOURCE PROTECTION AREAS WITHIN THE LIMITS OF DISTURBANCE.
2. THERE ARE RESOURCE MANAGEMENT AREAS WITHIN THE LIMITS OF DISTURBANCE.
3. A LAND DISTURBING PERMIT WITH SURETY WILL BE REQUIRED FROM CITY OF WILLIAMSBURG. THE APPLICATION SHALL BE COORDINATED WITH THE CODES COMPLIANCE OFFICE AT THE TIME OF BUILDING PERMIT APPLICATION.
4. ALL SITE PLANS ARE DRAWN AT A SCALE OF 1"=25'-0" UNLESS OTHERWISE NOTED.
5. NON-TIDAL WETLANDS ARE PRESENT WITHIN THE PROJECT LIMITS.
6. THE AREA SHOWN HEREIN LIES IN ZONE 'X' (AREA DETERMINED TO BE OUTSIDE THE 100 YEAR FLOODPLAIN) PER F.I.R.M. 51095C0138D DATED 12/16/2015.
7. WORK AND PLACEMENT OF THE FACILITY OUTSIDE THE RIGHT OF WAY SHALL OCCUR UNDER AN AGREEMENT WITH THE COLLEGE OF WILLIAM AND MARY AND THE CITY OF WILLIAMSBURG.
8. A LAND USE PERMIT FROM VDOT WILLIAMSBURG RESIDENCY WILL BE REQUIRED FOR THIS PROJECT. CONTRACTOR SHALL APPLY AS AN AGENT OF THE CITY AND BE RESPONSIBLE FOR ALL FEES AND SURETIES REQUIRED BY VDOT.
9. THE CONTRACTOR IS REQUIRED TO REGISTER FOR COVERAGE UNDER THE VSMP GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES AND PREPARE A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN COMPLIANCE WITH THE STORMWATER MANAGEMENT ORDINANCE. FEES AND BONDING WILL BE WAIVED (Or Paid Directly By The City) SINCE THIS IS A CITY PROJECT.
10. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DEPARTMENT'S 2016 ROAD AND BRIDGE SPECIFICATIONS, 2016 ROAD AND BRIDGE STANDARDS, 2009 MUTCD, 2011 VIRGINIA SUPPLEMENT TO THE MUTCD, 2011 VIRGINIA WORK AREA PROTECTION MANUAL AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY.

GENERAL SITE PLAN INFORMATION:

ZONING: WM (WILLIAM & MARY DISTRICT)
LOCATION: THIS PROJECT IS ALONG MONTICELLO AVENUE (ROUTE 321)

STORMWATER DATA:

1. **SITE LATITUDE/ LONGITUDE:** BEGIN TRAIL N 37.275522 W 76.738292; END TRAIL N 37.279633 W 76.725178
2. **TOTAL DISTURBED AREA:** 3.96 ACRES / 172,730 SF
3. **TOTAL SITE AREA:** 4.11 ACRES (INCLUDES STAGING AREA)
4. **PRE-DEVELOPMENT IMPERVIOUS COVER:** 0.185 ACRES
5. **POST-DEVELOPMENT IMPERVIOUS COVER:** 1.077 ACRES
6. **RECEIVING WATERSHED**: COLLEGE CREEK - HUC JL34
7. **MS4:** THE SITE DOES NOT DISCHARGE INTO AN MS4
8. **DISCHARGE:** THIS PROJECT SITE DISCHARGES INTO WATERS WITH A TMDL (CHESAPEAKE BAY) FOR SEDIMENT, NITROGEN AND PHOSPHOROUS AND MAY BE SUBJECT TO SPECIAL CONDITIONS BY THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
9. THE AMOUNT OF PHOSPHORUS TO BE CREDITED FROM THE CITY OF WILLIAMSBURG IS 2.34 LB/YR.

Route Label	Route Alias	Link Length	Start Label	End Label	AADT	AADT Quality	Percent 2 and 4 Tire Vehicles	Percent Buses	Percent Single Unit Trucks 2 Axle	Percent Single Unit Trucks 3+ Axle	Percent Combination Trucks 1 Trailer	Percent Combination Trucks 2+ Trailer	Vehicle Classification Quality	K Factor	K Factor Quality	Direction Factor	AAWDT	AAWDT Quality	Data Date
321	Monticello	0.92	SR 199	47-615 Ironbound RD	33000	G	97%	0%	1%	0%	0%	0%	F	0.0890		0.5760	35000	G	2017
321	Monticello	0.77	47-615 Ironbound Rd	Compton Dr	16000	G	99%	0%	1%	0%	0%	0%	C	0.0890		0.5360	17000	G	2017
321	Monticello	0.35	Compton Dr	Richmond Rd	15000	G	100%	0%	0%	0%	0%	0%		0.0831		0.5410	16000	G	2017
47-615	Ironbound Rd	0.64	SR 321 Monticello	47-616 Strawberry Plains	4400	G	98%	0%	1%	0%	0%	0%	F	0.0976		0.7159	4600	G	2017
47-615	Ironbound Rd	0.13	47-616 Strawberry Plains	SR 321 Monticello Ave	11000	G	98%	0%	1%	0%	0%	0%	F	0.0974		0.5226	12000	G	2017
47-615	Ironbound Rd	0.76	SR 321 Monticello	WCL Williamsburg; Gap	12000	G	98%	0%	1%	0%	0%	0%	F	0.0862		0.5137	12000	G	2017

EXISTING TRAFFIC DATA (2017)
James City County, Virginia - Jurisdiction 047 Williamsburg, Virginia - Jurisdiction 137

Owner/ Developer

CITY OF WILLIAMSBURG, VIRGINIA
C/O DAN CLAYTON
DIRECTOR OF PUBLIC WORKS AND UTILITIES
401 LAFAYETTE STREET
WILLIAMSBURG, VIRGINIA 23185
PHONE: 757-220-6140

Sub-Consultants:

Electrical Engineering
Advanced Engineering Consultants
4456 Corporation Lane
Suite 320
Virginia Beach, VA 23462
(757) 502-8882

Traffic Analysis
McPherson Consulting, LLC
317 Office Square Lane
Suite 102A
Virginia Beach, VA 23462
(757) 580-5279

Subsurface Utility Mapping
InfraMap Corp.
10365 Cedar Lane
Glenn Allen, VA 23059
(804) 250-6230

Geotechnical Engineering
GET Solutions, Inc.
1592-E Penniman Road
Williamsburg, VA 23185
(757) 564-6452

vhb
351 McLaws Circle
Suite 3
Williamsburg, VA 23185
757.220.0500

LOCALLY ADMINISTERED PROJECTS
LOCATION: CITY OF WILLIAMSBURG
LOCALITY PM: AARON B. SMALL, P.E.

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION

5/6/19 DATE	CITY ENGINEER
5/6/19 DATE	Daniel T Clayton III DIRECTOR OF PUBLIC WORKS AND UTILITIES

COMMONWEALTH OF VIRGINIA
PIOTR SWITUSZOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

\\VHB\GBL\PROJ\WILLIAMSBURG\134319.00 CITYOFWMSB_MONTICELLO\CAD\LDT\PLANSET\134319.00-COV 6 May 2019

Legend

Exist.	Prop.	
		PROPERTY LINE
		PROJECT LIMIT LINE
		RIGHT-OF-WAY/PROPERTY LINE
		EASEMENT
		BUILDING SETBACK
		PARKING SETBACK
10+00	10+00	BASELINE
		CONSTRUCTION LAYOUT
		ZONING LINE
		TOWN LINE
		LIMIT OF DISTURBANCE
		WETLAND LINE WITH FLAG
		FLOODPLAIN
BLSF	BLSF	BORDERING LAND SUBJECT TO FLOODING
BZ	BZ	WETLAND BUFFER ZONE
NDZ	NDZ	NO DISTURB ZONE
200'RA	200'RA	200' RIVERFRONT AREA
		GRAVEL ROAD
EOP	EOP	EDGE OF PAVEMENT
BB	BB	BITUMINOUS BERM
BC	BC	BITUMINOUS CURB
CC	CC	CONCRETE CURB
CG	CG	CURB AND GUTTER
CC	ECC	EXTRUDED CONCRETE CURB
CC	MCC	MONOLITHIC CONCRETE CURB
CC	PCC	PRECAST CONC. CURB
SGE	SGE	SLOPED GRAN. EDGING
VGC	VGC	VERT. GRAN. CURB
		LIMIT OF CURB TYPE
		SAWCUT
		BUILDING
	EN	BUILDING ENTRANCE
	LD	LOADING DOCK
		BOLLARD
D	D	DUMPSTER PAD
		SIGN
		DOUBLE SIGN
		STEEL GUARDRAIL
		WOOD GUARDRAIL
		PATH
		TREE LINE
		WIRE FENCE
		FENCE
		STOCKADE FENCE
		STONE WALL
		RETAINING WALL
		STREAM / POND / WATER COURSE
		DETENTION BASIN
		HAY BALES
		SILT FENCE
		SILT SOCK / STRAW WATTLE
4	4	MINOR CONTOUR
20	20	MAJOR CONTOUR
10	10	PARKING COUNT
	C10	COMPACT PARKING STALLS
DYL	DYL	DOUBLE YELLOW LINE
SL	SL	STOP LINE
		CROSSWALK
		ACCESSIBLE CURB RAMP
		ACCESSIBLE PARKING
VAN	VAN	VAN-ACCESSIBLE PARKING

Exist.	Prop.	
		CONCRETE
		HEAVY DUTY PAVEMENT
		BUILDINGS
		RIPRAP
		CONSTRUCTION EXIT
27.35 TC×	27.35 TC×	TOP OF CURB ELEVATION
26.85 BC×	26.85 BC×	BOTTOM OF CURB ELEVATION
132.75 ×	132.75 ×	SPOT ELEVATION
45.0 TW× 38.5 BW	45.0 TW× 38.5 BW	TOP & BOTTOM OF WALL ELEVATION
		BORING LOCATION
		TEST PIT LOCATION
MW	MW	MONITORING WELL
UD	UD	UNDERDRAIN
12"D	12"D	DRAIN
6"RD	6"RD	ROOF DRAIN
12"S	12"S	SEWER
FM	FM	FORCE MAIN
OHW	OHW	OVERHEAD WIRE
6"W	6"W	WATER
4"FP	4"FP	FIRE PROTECTION
	2"DW	DOMESTIC WATER
3"G	G	GAS
E	E	ELECTRIC
STM	STM	STEAM
T	T	TELEPHONE
FA	FA	FIRE ALARM
CATV	CATV	CABLE TV
		CATCH BASIN
		DOUBLE CATCH BASIN
		GUTTER INLET
		DRAIN MANHOLE
		TRENCH DRAIN
		PLUG OR CAP
		CLEANOUT
		FLARED END SECTION
		HEADWALL
S		SEWER MANHOLE
CS	CS	CURB STOP & BOX
WV	WV	WATER VALVE & BOX
TSV	TSV	TAPPING SLEEVE, VALVE & BOX
		SIAMESE CONNECTION
HYD	HYD	FIRE HYDRANT
WM	WM	WATER METER
PIV	PIV	POST INDICATOR VALVE
W	W	WATER WELL
GG	GG	GAS GATE
GM	GM	GAS METER
E	EMH	ELECTRIC MANHOLE
EM	EM	ELECTRIC METER
		LIGHT POLE
T	TMH	TELEPHONE MANHOLE
T	T	TRANSFORMER PAD
		UTILITY POLE
		GUY POLE
		GUY WIRE & ANCHOR
HH	HH	HAND HOLE
PB	PB	PULL BOX
Matchline	Matchline	MATCHLINE

Abbreviations

General

ABAN	ABANDON
ACR	ACCESSIBLE CURB RAMP
ADJ	ADJUST
APPROX	APPROXIMATE
BIT	BITUMINOUS
BS	BOTTOM OF SLOPE
BWLL	BROKEN WHITE LANE LINE
CONC	CONCRETE
DYCL	DOUBLE YELLOW CENTER LINE
EL	ELEVATION
ELEV	ELEVATION
EX	EXISTING
FDN	FOUNDATION
FFE	FIRST FLOOR ELEVATION
GRAN	GRANITE
GTD	GRADE TO DRAIN
LA	LANDSCAPE AREA
LOD	LIMIT OF DISTURBANCE
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PERF	PERFORATED
PROP	PROPOSED
REM	REMOVE
RET	RETAIN
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
SWEL	SOLID WHITE EDGE LINE
SWLL	SOLID WHITE LANE LINE
TS	TOP OF SLOPE
TYP	TYPICAL

Utility

CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
DCB	DOUBLE CATCH BASIN
DMH	DRAIN MANHOLE
CIP	CAST IRON PIPE
COND	CONDUIT
DIP	DUCTILE IRON PIPE
FES	FLARED END SECTION
FM	FORCE MAIN
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
GI	GUTTER INLET
GT	GREASE TRAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HW	HEADWALL
HYD	HYDRANT
INV	INVERT ELEVATION
I=	INVERT ELEVATION
LP	LIGHT POLE
MES	METAL END SECTION
PIV	POST INDICATOR VALVE
PWW	PAVED WATER WAY
PVC	POLYVINYLCHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
R=	RIM ELEVATION
SMH	SEWER MANHOLE
TSV	TAPPING SLEEVE, VALVE AND BOX
UG	UNDERGROUND
UP	UTILITY POLE

Sequence of Construction

PHASE 1:

1. OBTAIN NECESSARY PERMITS.
2. THE CONTRACTOR SHALL CONTACT THE CITY OF WILLIAMSBURG CODES COMPLIANCE OFFICE AT LEAST 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY (INCLUDING DEMOLITION) SO THAT A PRE-CONSTRUCTION CONFERENCE CAN BE SCHEDULED.
3. ESTABLISH PERIMETER PROTECTION AND MAINTAIN THROUGHOUT CONSTRUCTION.
4. INSTALL CONSTRUCTION ENTRANCE AND TRAFFIC SIGNAGE INDICATING CONSTRUCTION ENTRANCE AND EXIT, AND PRESENCE OF CONSTRUCTION TRAFFIC.
5. INSTALL EROSION AND SEDIMENT CONTROL MEASURES PER SHEETS C3.1-C3.7.
6. BEGIN SITE DEMOLITION.

PHASE 2:

7. INSTALL EROSION AND SEDIMENT CONTROL MEASURES PER SHEETS C4.1-C4.7.
8. INSTALL STM-4D AND STM-5A DURING A DRY WEATHER PERIOD IMMEDIATELY AFTER THE INSTALLATION OF PHASE 2 E&SC MEASURES.
9. BEGIN ROUGH GRADING OPERATIONS.
10. IF TEMPORARY STOCKPILES ARE USED, THE CONTRACTOR SHALL INSTALL DOUBLE SILT FENCE AT THE BASE TO PREVENT SEDIMENT RUNOFF.
11. INSTALL UNDERGROUND UTILITIES AND STILLING BASINS CONCURRENTLY.
12. INSTALL TRAIL AND HARDSCAPE ITEMS PER THESE PLANS.
13. FINALIZE SITE GRADING AND STABILIZATION.
14. REMOVE CONSTRUCTION EQUIPMENT AND PREPARE SITE FOR OCCUPANCY.
15. REMOVE TEMPORARY EROSION AND CONTROL MEASURES WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION.
16. REMOVE ALL TEMPORARY EQUIPMENT, CONSTRUCTION MATERIALS, AND DEBRIS FROM SITE.

Notes

General

1. CONTRACTOR SHALL NOTIFY "MISS-UTILITY" (1-800-592-7001) AT LEAST 72 HOURS BEFORE EXCAVATING.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
3. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).
4. AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE 4 INCHES LOAM AND SEED.
5. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
6. TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
7. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
8. IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
9. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
10. DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
11. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.

Utilities

1. THE LOCATIONS, SIZES, AND TYPES OF EXISTING UTILITIES ARE SHOWN AS AN APPROXIMATE REPRESENTATION ONLY. THE OWNER OR IT'S REPRESENTATIVE(S) HAVE NOT INDEPENDENTLY VERIFIED THIS INFORMATION AS SHOWN ON THE PLANS. THE UTILITY INFORMATION SHOWN DOES NOT GUARANTEE THE ACTUAL EXISTENCE, SERVICEABILITY, OR OTHER DATA CONCERNING THE UTILITIES, NOR DOES IT GUARANTEE AGAINST THE POSSIBILITY THAT ADDITIONAL UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THE PLANS. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND DETERMINE THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES AND, SHALL CONFIRM THAT THERE ARE NO INTERFERENCES WITH EXISTING UTILITIES AND THE PROPOSED UTILITY ROUTES, INCLUDING ROUTES WITHIN THE PUBLIC RIGHTS OF WAY.
2. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, OR EXISTING CONDITIONS DIFFER FROM THOSE SHOWN SUCH THAT THE WORK CANNOT BE COMPLETED AS INTENDED, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR THE RESOLUTION OF THE CONFLICT AND CONTRACTOR'S FAILURE TO NOTIFY PRIOR TO PERFORMING ADDITIONAL WORK RELEASES OWNER FROM OBLIGATIONS FOR ADDITIONAL PAYMENTS WHICH OTHERWISE MAY BE WARRANTED TO RESOLVE THE CONFLICT.
3. SET CATCH BASIN RIMS, AND INVERTS OF SEWERS, DRAINS, AND DITCHES IN ACCORDANCE WITH ELEVATIONS ON THE GRADING AND UTILITY PLANS.
4. RIM ELEVATIONS FOR DRAIN AND SEWER MANHOLES, WATER VALVE COVERS, GAS GATES, ELECTRIC AND TELEPHONE PULL BOXES, AND MANHOLES, AND OTHER SUCH ITEMS, ARE APPROXIMATE AND SHALL BE SET/RESET AS FOLLOWS:
   A. PAVEMENTS AND CONCRETE SURFACES: FLUSH
   B. ALL SURFACES ALONG ACCESSIBLE ROUTES: FLUSH
   C. LANDSCAPE, LOAM AND SEED, AND OTHER EARTH SURFACE AREAS: ONE INCH ABOVE SURROUNDING AREA AND TAPER EARTH TO THE RIM ELEVATION.
5. THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY, THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE, ELECTRIC, FIRE ALARM, ETC.). FINAL DESIGN LOADS AND LOCATIONS TO BE COORDINATED WITH OWNER AND ARCHITECT.
6. CONTRACTOR SHALL MAKE ARRANGEMENTS FOR AND SHALL BE RESPONSIBLE FOR PAYING FEES FOR POLE RELOCATION AND FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, FIRE ALARM, AND ANY OTHER PRIVATE UTILITIES, WHETHER WORK IS PERFORMED BY CONTRACTOR OR BY THE UTILITIES COMPANY.
7. UTILITY PIPE MATERIALS SHALL BE AS NOTED ON THE PLANS.

Layout and Materials

1. DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
2. PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LICENSED SURVEYOR.
3. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.

Demolition

1. CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING MANMADE SURFACE FEATURES WITHIN THE LIMIT OF WORK INCLUDING STRUCTURES, PAVEMENTS, SLABS, CURBING, FENCES, UTILITY POLES, SIGNS, ETC. UNLESS INDICATED OTHERWISE ON THE DRAWINGS. REMOVE AND DISPOSE OF EXISTING UTILITIES, FOUNDATIONS AND UNSUITABLE MATERIAL BENEATH AND FOR A DISTANCE OF 10 FEET BEYOND THE PROPOSED IMPROVEMENTS .
2. EXISTING UTILITIES SHALL BE TERMINATED, UNLESS OTHERWISE NOTED, IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. THE CONTRACTOR SHALL COORDINATE UTILITY SERVICE DISCONNECTS WITH THE UTILITY REPRESENTATIVES.
3. CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
4 THE DEMOLITION LIMITS DEPICTED IN THE PLANS IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION BEFORE SUBMITTING ITS BID/PROPOSAL TO PERFORM THE WORK AND SHALL MAKE NO CLAIMS AND SEEK NO ADDITIONAL COMPENSATION FOR CHANGED CONDITIONS OR UNFORESEEN OR LATENT SITE CONDITIONS RELATED TO ANY CONDITIONS DISCOVERED DURING EXECUTION OF THE WORK.
5. UNLESS OTHERWISE SPECIFICALLY PROVIDED ON THE PLANS OR IN THE SPECIFICATIONS, THE ENGINEER HAS NOT PREPARED DESIGNS FOR AND SHALL HAVE NO RESPONSIBILITY FOR THE PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF HAZARDOUS MATERIALS, TOXIC WASTES OR POLLUTANTS AT THE PROJECT SITE. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CLAIMS OF LOSS, DAMAGE, EXPENSE, DELAY, INJURY OR DEATH ARISING FROM THE PRESENCE OF HAZARDOUS MATERIAL AND CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ANY CLAIMS MADE IN CONNECTION THEREWITH. MOREOVER, THE ENGINEER SHALL HAVE NO ADMINISTRATIVE OBLIGATIONS OF ANY TYPE WITH REGARD TO ANY CONTRACTOR AMENDMENT INVOLVING THE ISSUES OF PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF ASBESTOS OR OTHER HAZARDOUS MATERIALS.

Erosion Control

1. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
2. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS (MINIMUM) OR AS REQUIRED PER THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL ADDRESS DEFICIENCIES AND MAINTENANCE ITEMS WITHIN TWENTY-FOUR HOURS OF INSPECTION. CONTRACTOR SHALL PROPERLY DISPOSE OF SEDIMENT SUCH THAT IT DOES NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
3. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.
4. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED TO PREVENT EROSION.
5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.

Existing Conditions Information

1. BASE PLAN: THE TOPOGRAPHY AND PHYSICAL FEATURES ARE BASED ON AN ACTUAL FIELD SURVEY PERFORMED ON THE GROUND BY VHB, DURING MAY - AUGUST 2017.
   A. DELINEATION OF THE WETLANDS AND PLACEMENT OF THE FLAGS WAS PERFORMED BY: VHB.
   B. FLAGS MARKING THE WETLANDS WERE LOCATED BY: VHB.
2. TOPOGRAPHY: ELEVATIONS ARE BASED ON NAVD 88 NORTH AMERICAN VERTICAL DATUM.
3. GEOTECHNICAL DATA INCLUDING TEST PIT AND BORING LOCATIONS AND ELEVATIONS WERE OBTAINED FROM GET SOLUTION, INC.

Document Use

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2. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.

Supplementary Notes

1. EXISTING UTILITIES LOCATIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. CONTACT MISS UTILITY (1-800-552-7001) FOR EXISTING UTILITY LOCATIONS 72 HOURS PRIOR TO COMMENCING WORK.
2. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITIES WHETHER OR NOT SAID UTILITIES ARE SHOWN ON THE PLANS AND SHALL REPAIR AT THE CONTRACTOR'S OWN EXPENSE ALL UTILITIES DAMAGED BY CONSTRUCTION.
3. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS PRIOR TO COMMENCEMENT OF WORK.
4. ANY ERRORS OR DISCREPANCIES WITH THE PLANS OR EXISTING FIELD CONDITIONS SHALL BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF CONSTRUCTION EFFORTS WITH ALL UTILITY SERVICE PROVIDERS, CITY OF WILLIAMSBURG, HRSD, VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) AND OTHERS THAT MAY BE REQUIRED.
6. THE CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF THE VIRGINIA UNDERGROUND UTILITY DAMAGE PREVENTION ACT (SECTION 56-265.14 ET. SEQ. CODE OF VIRGINIA, 1950, AS AMENDED,) AND HEREBY AGREES TO HOLD THE DEVELOPER AND THE ENGINEER HARMLESS AGAINST ANY LOSS, DAMAGE, OR CLAIMS OF ANY NATURE WHATSOEVER ARISING OUT OF THE CONTRACTOR'S FAILURE TO COMPLY WITH THE REQUIREMENTS OF SAID ACT.
7. THE CONTRACTOR IS REQUIRED TO COMPLY WITH THE VIRGINIA OVERHEAD HIGH VOLTAGE LINE SAFETY ACT (SECTIONS 59.1-406 THROUGH 59.1-414, CODE OF VIRGINIA, 1950, AS AMENDED.) THE CONTRACTOR IS ENCOURAGED TO VISIT THE SITE AND NOTE THE POSITION OF ANY OVERHEAD CABLES PRIOR TO SUBMITTING HIS BID.
8. THE CONTRACTOR SHALL REESTABLISH ALL PROPERTY PINS, MONUMENTS, WATER METERS, DRAINAGE CULVERTS, FENCES, DRAINAGE CULVERTS, FENCES, UTILITY POLES, DRIVEWAYS, CURBS, GUTTERS, ETC. DISTURBED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE CITY.
9. ANY SUBSEQUENT REVISIONS, ADDITIONS, AND/OR DELETIONS SHALL REQUIRE SPECIFIC WRITTEN APPROVAL OF THE CITY.
10. THE ABSENCE OF THE CITY ENGINEER AT THE JOB SITE DOES NOT, IN ANY WAY, RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM THE WORK IN ACCORDANCE WITH THE DRAWINGS, CONTRACT DOCUMENTS, ADDENDA, AND WRITTEN AUTHORIZED PLAN REVISION.
11. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS, AND ORDERS OF ANY BODY HAVING JURISDICTION. THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY THE CONDITIONS OF AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR SAFETY AND PROTECTION.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAIN ALL LINES AND GRADES REQUIRED.
13. HORIZONTAL DATUM - NAD83 (1993) VIRGINIA STATE PLANE COORDINATE SYSTEM SOUTH ZONE
VERTICAL DATUM - NAVD 88 (1988) NORTH AMERICAN VERTICAL DATUM
HORIZONTAL AND VERTICAL DATUM TIED TO CITY OF WILLIAMSBURG GEODETIC MONUMENTS

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vhb
351 McLaws Circle
Suite 3
Williamsburg, VA 23185
757.220.0500

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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For Bid — May 1, 2019

Drawing Title

Legend, Abbreviations & General Notes

Drawing Number

C1.0

COMMONWEALTH OF VIRGINIA
PIOTR SWIETUCHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

Sheet 2 of 46

Project Number
34319.00

Saved Tuesday, May 7, 2019 4:43:56 PM RWATT Plotted Wednesday, May 8, 2019 4:05:23 PM Watt, Richard

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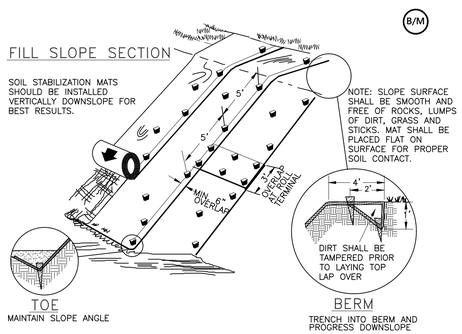
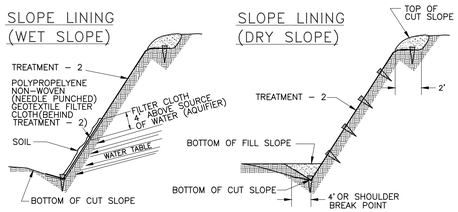
STANDARD EROSION AND SEDIMENT CONTROL NOTES FOR THE CITY OF WILLIAMSBURG, VIRGINIA REVISED JULY 1, 2014

THE PURPOSE OF THE EROSION CONTROL MEASURES SHOWN ON THESE PLANS SHALL BE TO PRECLUDE THE TRANSPORT OF ALL WATERBORNE SEDIMENTS RESULTING FROM CONSTRUCTION ACTIVITIES FROM ENTERING ONTO ADJACENT PROPERTIES OR STATE WATERS. IF FIELD INSPECTION REVEALS THE INADEQUACY OF THE PLAN TO CONFINE SEDIMENT TO THE PROJECT SITE, APPROPRIATE MODIFICATIONS WILL BE MADE TO CORRECT ANY PLAN DEFICIENCIES. IN ADDITION TO THESE NOTES, ALL PROVISIONS OF THE EROSION AND SEDIMENT CONTROL ORDINANCE OF THE CITY OF WILLIAMSBURG (CHAPTER 7, ARTICLE II OF CODE OF THE CITY OF WILLIAMSBURG) AND THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS (9VAC25-840 ET. SEQ.) SHALL APPLY TO THIS PROJECT.

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK," (VESCH) LATEST EDITION. THE CONTRACTOR SHALL BE THOROUGHLY FAMILIAR WITH ALL APPLICABLE MINIMUM STANDARDS & SPECS (MSS) AND MINIMUM STANDARDS (MS) CONTAINED THEREIN THAT MAY BE PERTINENT TO THIS PROJECT.
2. FOR DISTURBANCES GREATER THAN 1 AC, AND WHERE REQUIRED BY CITY ORDINANCES OR STATE REGULATIONS, CONTRACTOR SHALL REGISTER FOR COVERAGE UNDER THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) GENERAL PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES. THE CONSTRUCTION GENERAL PERMIT REQUIRES THE CONSTRUCTION SITE OPERATOR TO DEVELOP AND IMPLEMENT A SITE SPECIFIC STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP MUST BE PREPARED PRIOR TO SUBMITTING A REGISTRATION STATEMENT FOR PERMIT COVERAGE. THE SWPPP IS TO BE RETAINED AT THE CONSTRUCTION SITE ALONG WITH A COPY OF THE PERMIT AND PERMIT COVERAGE LETTER.
3. THE CONTRACTOR SHALL SUPPLY THE CITY WITH THE NAME OF THE INDIVIDUAL WHO WILL BE RESPONSIBLE FOR ENSURING MAINTENANCE OF INSTALLED MEASURES ON A DAILY BASIS. IF REQUIRED, THIS INDIVIDUAL SHALL BE THE LEAD IN DEVELOPING, IMPLEMENTING AND MAINTAINING THE SWPPP AND COMMITTING THE RESOURCES NECESSARY TO PREVENT POLLUTION. MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE SCHEDULED ON A WEEKLY BASIS AND AFTER EACH RUNOFF PRODUCING RAINFALL EVENT PER THE VESCH.
4. EROSION AND SEDIMENT CONTROL MEASURES MAY REQUIRE MINOR FIELD ADJUSTMENTS AT TIME OF CONSTRUCTION TO INSURE THEIR INTENDED PURPOSE IS ACCOMPLISHED. CITY APPROVAL WILL BE REQUIRED FOR ANY DEVIATIONS FROM THE APPROVED PLANS.
5. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
6. THE CONTRACTOR SHALL PLACE SOIL STOCKPILES AT THE LOCATIONS SHOWN ON THIS PLAN OR AS APPROVED BY THE CITY. SOIL STOCKPILES SHALL BE STABILIZED AND PROTECTED WITH SEDIMENT TRAPPING MEASURES AT THE TOE OF SLOPES. OFFSITE WASTE OR BORROW AREAS SHALL BE APPROVED BY THE CITY PRIOR TO THE IMPORT OF ANY BORROW OR EXPORT OF ANY WASTE TO OR FROM THE PROJECT SITE.
7. TEMPORARY SOIL STABILIZATION MEASURES INCLUDE VEGETATIVE ESTABLISHMENT, MULCHING, AND THE EARLY APPLICATION OF CRUSHED STONE BASE MATERIAL ON AREAS TO BE PAVED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE, AND WILL INHIBIT EROSION. PERMANENT VEGETATIVE COVER (STABILIZATION) SHALL CONSIST OF PLACING TOP SOIL, INCORPORATING LIME, FERTILIZING, SEEDING, AND MULCHING TO ASSURE A FIRM STAND OF VEGETATION. IRRIGATION MAY BE REQUIRED TO ENSURE ESTABLISHMENT OF VEGETATIVE COVER.
8. ALL TEMPORARY OR PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES NECESSARY FOR RETAINING SEDIMENTS ON THE CONSTRUCTION SITE SHALL BE INSTALLED AND TREE PROTECTION FENCING SHALL BE ERECTED AT THE LOCATIONS AS SPECIFIED ON THE APPROVED PLANS PRIOR TO ANY LAND CLEARING, GRUBBING, GRADING OR EARTH MOVING ACTIVITIES.
9. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT ONSITE MUST BE CONSTRUCTED AS A FIRST STEP IN GRADING AND BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE. EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS MUST BE SEEDED AND MULCHED IMMEDIATELY AFTER INSTALLATION. THE BASIN(S) ARE TO BE KEPT CLEAR OF DEBRIS AND SEDIMENTS SHALL BE CLEANED OUT PERIODICALLY DURING AND AFTER CONSTRUCTION ACTIVITIES.
10. ALL SLOPES STEEPER THAN 3:1 SHALL REQUIRE THE USE OF EROSION CONTROL MATTING (EC-2 OR EC-3) TO AID IN THE ESTABLISHMENT OF A VEGETATIVE COVER. NO SLOPES SHALL BE CREATED STEEPER THAN 2:1 WITHOUT PRIOR APPROVAL FROM THE CITY.
11. SURFACE FLOWS OVER CUT AND FILL SLOPES SHALL BE CONTROLLED BY REDIRECTING FLOWS FROM TRAVERSING THE SLOPES OR BY INSTALLING STRUCTURAL DEVICES (PAVED FLUMES, CHANNELS, OR SLOPE DRAINS) TO SAFELY CONVEY WATER DOWN-SLOPE WITHOUT CAUSING EROSION. ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED TO MINIMIZE THE POTENTIAL FOR WATER SEEPS FROM SLOPE FACES. ADDITIONAL SLOPE STABILIZATION MEASURES SHALL BE NECESSARY FOR SLOPES FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION.
12. INLET PROTECTION IN ACCORDANCE WITH MSS 3.07 SHALL BE PROVIDED FOR ALL STORM DRAIN INLETS AS SOON AS PRACTICAL FOLLOWING CONSTRUCTION. STORM DRAIN AND CULVERT INLET PROTECTIONS, IN ACCORDANCE WITH MSS 3.07 AND 3.08, MAY BE REMOVED AT THE DISCRETION OF THE CITY ON A CASE-BY-CASE BASIS SHOULD PLACEMENT OF THE MEASURE RESULT IN EXCESSIVE STREET FLOODING OR TRAFFIC HAZARD OR RESULT IN THE REDIRECTION OF DRAINAGE ONTO OR TOWARD EXISTING LOTS, DRIVEWAYS OR STRUCTURES.
13. PAVED DITCHES SHALL BE REQUIRED WHEREVER EROSION IS EVIDENT. PARTICULAR ATTENTION SHALL BE PAID TO THOSE AREAS WHERE GRADES EXCEED 3 PERCENT. TEMPORARY LINERS, SUCH AS POLYETHYLENE SHEETS, SHALL BE PROVIDED FOR ALL PAVED DITCHES UNTIL THE PERMANENT CONCRETE LINER IS INSTALLED.
14. CONTRACTOR SHALL COMPLETE DRAINAGE FACILITIES WITHIN 30 DAYS FOLLOWING COMPLETION OF ROUGH GRADING AT ANY POINT WITHIN THE PROJECT. THE INSTALLATION OF DRAINAGE FACILITIES SHALL TAKE PRECEDENCE OVER ALL UNDERGROUND UTILITIES. OUTFALL DITCHES FROM DRAINAGE STRUCTURES SHALL BE STABILIZED IMMEDIATELY AFTER CONSTRUCTION OF THE STRUCTURES. THIS INCLUDES INSTALLATION OF OUTLET PROTECTION, EROSION CONTROL STONE, OR PAVED DITCHES WHERE REQUIRED. ANY DRAINAGE OUTFALLS REQUIRED FOR A STREET MUST BE COMPLETED BEFORE STREET GRADING OR UTILITY INSTALLATION BEGINS.
15. CONSTRUCTION WITHIN STREAMS SHALL BE SUCH THAT DAMAGE TO THE EXISTING STREAM IS MINIMIZED. WHERE APPLICABLE, TEMPORARY STREAM CROSSINGS SHALL BE CONSTRUCTED USING NON-ERODIBLE MATERIALS. CONTRACTOR SHALL STABILIZE BED AND BANKS OF A WATERCOURSE IMMEDIATELY AFTER THE WORK WITHIN THE WATERCOURSE IS COMPLETE. ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE ADDRESSED.
16. ALL AREAS DESIGNATED FOR UNDERGROUND UTILITIES SHALL BE STABILIZED AS SOON AS PRACTICAL BUT NOT EXCEEDING 14 DAYS FOLLOWING THEIR INSTALLATION AND BACKFILLING. TRENCH LENGTH TO BE OPENED AT ANY ONE TIME IS NOT TO EXCEED 300 FEET. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
17. ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS SHALL BE PROTECTED BY A TEMPORARY CONSTRUCTION ENTRANCE TO PREVENT TRACKING OF MUD ONTO PUBLIC RIGHTS-OF-WAY. A RIGHT-OF-WAY PERMIT FROM THE CITY OF WILLIAMSBURG IS REQUIRED PRIOR TO ANY CONSTRUCTION ACTIVITY WITHIN CITY RIGHTS-OF-WAY. WHERE SEDIMENT IS TRANSPORTED ONTO A PUBLIC STREET, THE ROAD SHALL BE THOROUGHLY CLEANED AT THE END OF EACH DAY.
18. TEMPORARY EROSION CONTROL MEASURES ARE NOT TO BE REMOVED UNTIL ALL DISTURBED AREAS ARE STABILIZED. AFTER STABILIZATION IS COMPLETE, AND UPON APPROVAL BY THE CITY, ALL MEASURES SHALL BE REMOVED WITHIN 30 DAYS. TRAPPED SEDIMENT SHALL BE SPREAD AND SEEDED.
19. CONCENTRATED RUNOFF LEAVING THE DEVELOPMENT SITE SHALL DISCHARGE TO AN ADEQUATE CHANNEL, PIPE, OR STORM SEWER SYSTEM. OUTFALLS FROM A DETENTION FACILITY DISCHARGING TO A RECEIVING CHANNEL SHALL HAVE ADEQUATE ENERGY DISSIPATERS PROVIDED. INCREASED VOLUMES OF SHEET FLOWS SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR STORM SEWER SYSTEM, OR DETENTION FACILITY. ALL MEASURES SHALL BE EMPLOYED IN A MANNER THAT MINIMIZES IMPACTS TO STATE WATERS AND DOWNSTREAM PROPERTIES.
20. RECORD DRAWINGS (AS-BUILTS) ARE REQUIRED FOR ALL STORMWATER MANAGEMENT/BMP FACILITIES. ALSO UPON COMPLETION, THE CONSTRUCTION OF ALL STORMWATER MANAGEMENT/BMP FACILITIES SHALL BE CERTIFIED BY A PROFESSIONAL ENGINEER WHO INSPECTED THE STRUCTURE DURING CONSTRUCTION. THE CERTIFICATION SHALL STATE THAT TO THE BEST OF THEIR JUDGMENT, KNOWLEDGE, AND BELIEF, THE STRUCTURE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.





Soil Stabilization Matting Slope Installation 6/08

N.T.S. Source: Virginia Erosion and Sediment Control Handbook PL 3.36.5

PS

TABLE 3.32-D

SITE SPECIFIC SEEDING MIXTURES FOR COASTAL PLAIN AREA

	Total Lbs. Per Acre
Minimum Care Lawn	
– Comercial or Residential	
– Kentucky 31 or Turf-Type Tall Fescue	175–200 lbs
or	
– Common Bermudagrass**	75 lbs.
High-Maintenance Lawn	
– Kentucky 31 or Turf-Type Tall Fescue	200–250 lbs.
or	
– Hybrid Bermudagrass (seed) **	40 lbs. (unhulled)
or	30 lbs. (hulled)
– Hybrid Bermudagrass (by other vegetative establishment method, see Std. & Spec. 3.34	
General Slope (3:1 or less)	
– Kentucky 31 Fescue	128 lbs.
– Red Top Grass	2 lbs.
– Seasonal Nurse Crop *	20 lbs.
	150 lbs.
Low Maintenance Slope (Steeper than 3:1)	
– Kentucky 31 Tall Fescue	93–108 lbs.
– Common Bermudagrass **	0–15 lbs.
– Red Top Grass	2 lbs.
– Seasonal Nurse Crop *	20 lbs.
– Sericea Lespedeza **	20 lbs.
	150 lbs.

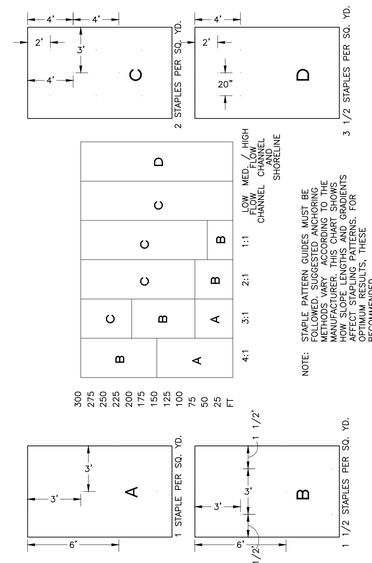
* Use seasonal nurse crop in accordance with seeding dates as stated below:

February, March through April	Annual Rye
May 1st through August	Foxtail Millet
September, October through November 15th	Annual Rye
November 16th through January	Winter Rye

** May through October, use hulled seed. All other seeding periods, use unhulled seed. Weeping Lovegrass may be added to any slope or low-maintenance mix during warmer seeding periods; add 10–20 lbs./acre in mixes.

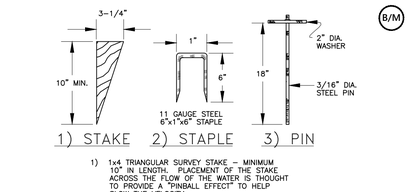
Permanent Seeding

N.T.S. Source: Virginia Erosion and Sediment Control Handbook Table 3.32-D



General Staple Pattern Guide and Recommendations 6/08

N.T.S. Source: Virginia Erosion and Sediment Control Handbook PL 3.36.6



1) 1x4 TRIANGULAR SURVEY STAKE – MINIMUM 10" IN LENGTH. PLACEMENT OF THE STAKE ACROSS THE FLOW OF THE WATER IS THOUGHT TO PROVIDE A "PINBALL EFFECT" TO HELP SLOW THE VELOCITY.
2) 11 GAUGE STEEL – MINIMUM 1" WIDE BY 6" IN LENGTH STEEL STAPLE – 2"x8" STAPLE MAY BE REQUIRED IN CERTAIN SOIL CONDITIONS.
3) STEEL PINS – 3/16 DIAMETER STEEL PIN BY 18" IN LENGTH WITH A 2" DIAMETER WASHER ON TOP. (SEE ILLUSTRATION)

Stakes, Staples, & Pins for Installation of Treatment 6/08

N.T.S. Source: Virginia Erosion and Sediment Control Handbook 3.36.3

TS

TABLE 3.31-B

ACCEPTABLE TEMPORARY SEEDING PLANT MATERIALS

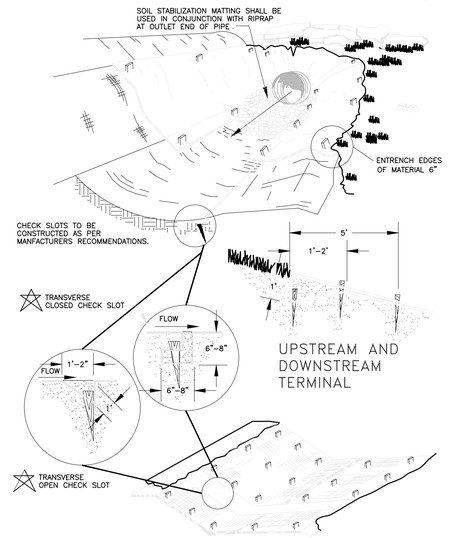
"QUICK REFERENCE FOR ALL REGIONS"

Planting Dates	Species	Rate (lbs./acre)
Sept. 1 – Feb. 15	50/50 Mix of Annual Ryegrass (Lolium muti-florum) & Cereal (Winter) Rye (Secale cereale)	50 – 100
Feb. 16 – Apr. 30	Annual Ryegrass (Lolium muti-florum)	60 – 100
May 1 – Aug. 31	German Millet (Setaria italica)	50

Note: Contractor shall coordinate all temporary seeding with owner's representative.

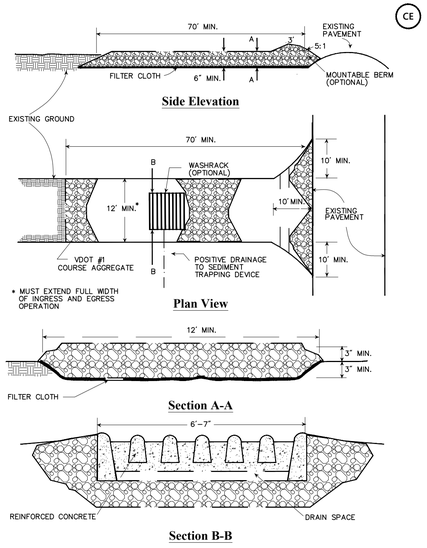
Temporary Seeding Specifications 6/08

N.T.S. Source: Virginia Erosion and Sediment Control Handbook PL 3.31-B



Typical Treatment Soil Stabilization Matting Installation 6/08

N.T.S. Source: Virginia Erosion and Sediment Control Handbook PL 3.36.4



Stone Construction Entrance 6/08

N.T.S. Source: Virginia Erosion and Sediment Control Handbook Plate 3.02-1

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vhb
351 McLaws Circle
Suite 3
Williamsburg, VA 23185
757.220.0500

NOTE:
1. REFER TO PLAN SHEETS C3.1 - C3.7 AND C4.1 - C4.7 FOR PLAN LOCATION OF E&SC MEASURES.

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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Date: May 1, 2019

Drawing Title: Erosion & Sediment Control Notes & Details

Drawing Number: C1.1

Sheet 3 of 46

Project Number: 34319.00

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PIOTR SWIETUCHOWSKI
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5-1-19
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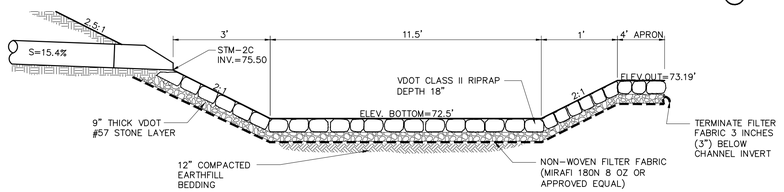
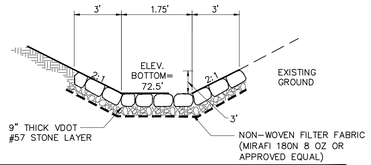


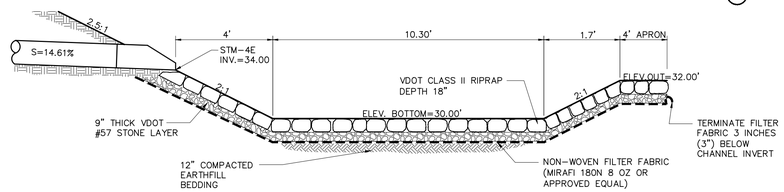
Stilling Basin Profile: Outfall 2

Source: VHB N.T.S.



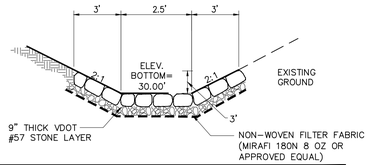
Stilling Basin Cross Section: Outfall 2

Source: VHB N.T.S.



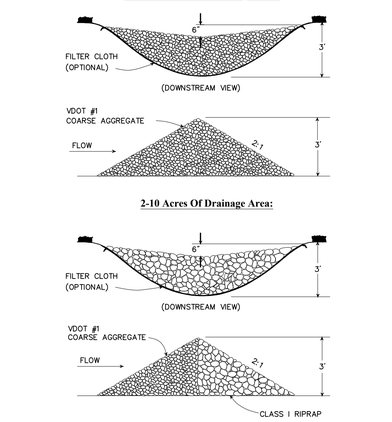
Stilling Basin Profile: Outfall 4

Source: VHB N.T.S.



Stilling Basin Cross Section: Outfall 4

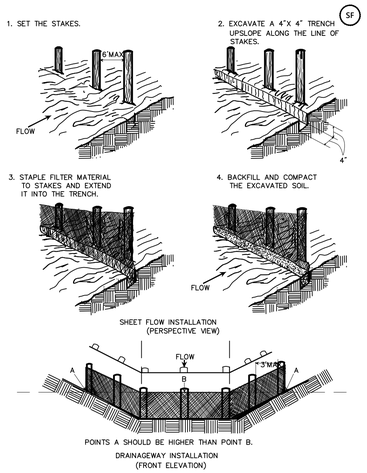
Source: VHB N.T.S.



Rock Check Dam

6/08

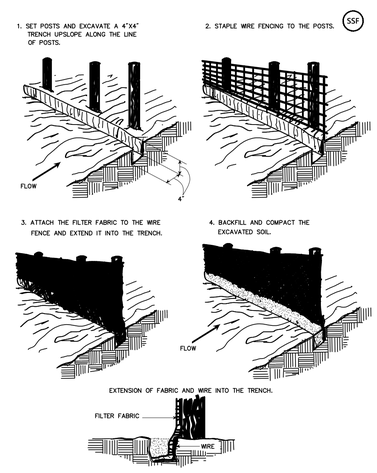
N.T.S. Source: Virginia Erosion and Sediment Control Handbook Plate 3.20-1



Construction of a Silt Fence (Without Wire Support)

6/08

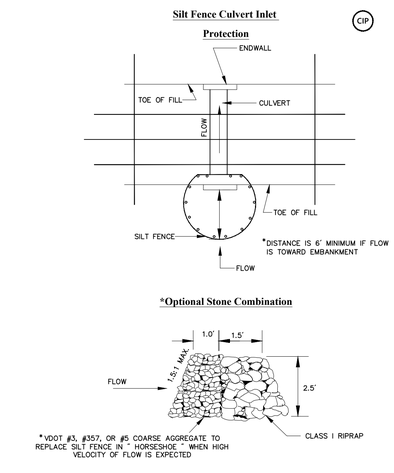
N.T.S. Source: Virginia Erosion and Sediment Control Handbook Plate 3.05-2



Construction of a Silt Fence (With Wire Support)

6/08

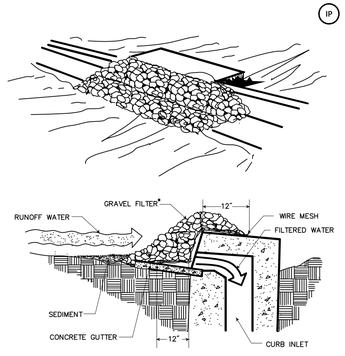
N.T.S. Source: Virginia Erosion and Sediment Control Handbook Plate 3.05-1



Silt Fence Culvert Inlet Protection

6/08

N.T.S. Source: Virginia Erosion and Sediment Control Handbook Plate 3.08-1



Specific Application

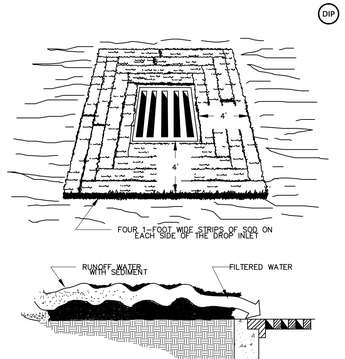
THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

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

Gravel Curb Inlet Sediment Filter

6/08

N.T.S. Source: Virginia Erosion and Sediment Control Handbook Plate 3.07-6



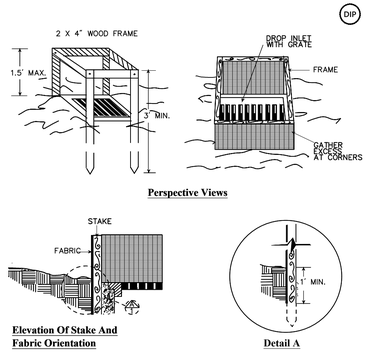
Specific Apllication

THIS METHOD OF INLET PROTECTION IS APPPLICABLE ONLY AT THE TIME OF PERMANENT SEEDING, TO PROTECT THE INLET FROM SEDIMENT AND MULCH MATERIAL UNTIL PERMANENT VEGETATION HAS BECOME ESTABLISHED.

Sod Drop Inlet Sediment Trap

6/08

N.T.S. Source: Virginia Erosion and Sediment Control Handbook Plate 3.07-5



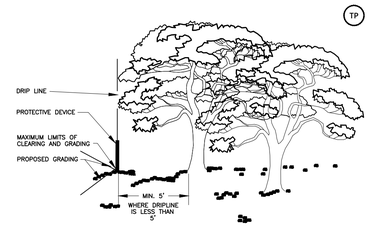
Specific Application

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPE NO GREATER THAN 5%) WHERE THE INLET SHEET OR OVERLAND FLOWS (NOT EXCEEDING 1 C.F.S.) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

Silt Fence Drop Inlet Protection

6/08

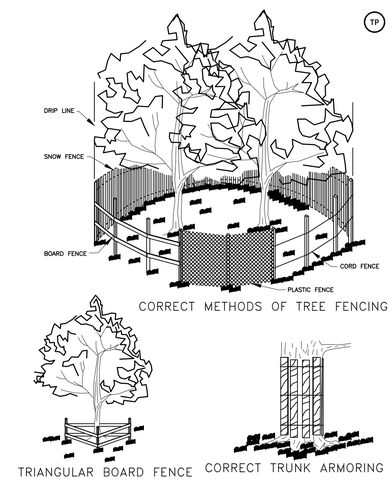
N.T.S. Source: Virginia Erosion and Sediment Control Handbook Plate 3.07-1



Construction Operations for Locating Protected Trees

6/08

N.T.S. Source: Virginia Erosion and Sediment Control Handbook PL 3.38.1



Fencing and Armoring

6/08

N.T.S. Source: Virginia Erosion and Sediment Control Handbook PL 3.38.2

NOTE:
1. REFER TO PLAN SHEETS C3.1 - C3.7 AND C4.1 - C4.7 FOR PLAN LOCATION OF E&SC MEASURES.

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Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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For Bid | May 1, 2019

Drawing Title

Erosion & Sediment Control Details

Drawing Number

C1.2

Sheet 4 of 46

Project Number 34319.00

COMMONWEALTH OF VIRGINIA
PIOTR SWIETLICHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

Saved Tuesday, May 7, 2019 4:43:56 PM RWATT Plotted Wednesday, May 8, 2019 4:05:47 PM Watt, Richard

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351 McLaws Circle
Suite 3
Williamsburg, VA 23185
757.220.0500

UTILITY RESOURCE LIST

Engineering Design Consultant

Doug Mettler, PLA
VHB
351 McLaws Circle, Suite 3
Williamsburg, VA 23185
(757) 220-0500 office
(757) 870-2079 mobile
dmettler@vhb.com

Virginia Natural Gas

Kevin D. Starke
Intermediate Engineer
Engineering Services
Virginia Natural Gas
544 S. Independence Blvd
Virginia Beach, VA 23452
757-616-7529 office
757-449-0825 mobile
kstarke@southernco.com

Verizon

Pierre E. Blanquart
Outside Plant Engineering
52 Richneck Rd
Newport News, VA 23608
(757) 875-2656 Office
pierre.e.blanquart@verizon.com

College of William and Mary (fiber optic)

Don Hensley, PM
Information Technology
College of William and Mary
Hugh Jones Hall 5
200 Ukrop Way
Williamsburg, VA 23185
P.O. Box 8795
Williamsburg, VA 23187-8795
(757) 221-4008 Office
dghens@wm.edu

City of Williamsburg (Water and Sewer)

Aaron B. Small, P.E.
City Engineer
Department of Public Works and Utilities
401 Lafayette Street
Williamsburg, VA 23185
757-220-6140 office
757-810-1755 mobile
asmall@williamsburgva.gov

Dominion Energy

Joe Pincus
Regional Design
Dominion Virginia Power
1600 Hamilton Ave.
Portsmouth, VA, 23707
(757) 262-6107 (mobile)
Joseph.R.Pincus@dominionenergy.com

Metro Fiber Networks, Inc.

James Maynard
Project Manager
Cable Associates Inc./Metro Fiber Networks Inc.
P.O. Box 1516
Yorktown, VA 23692
Office 757-890-0143
Fax: 757-890-0355
jmaynard@CableAssociatesInc.com

VDOT (Storm Sewer)

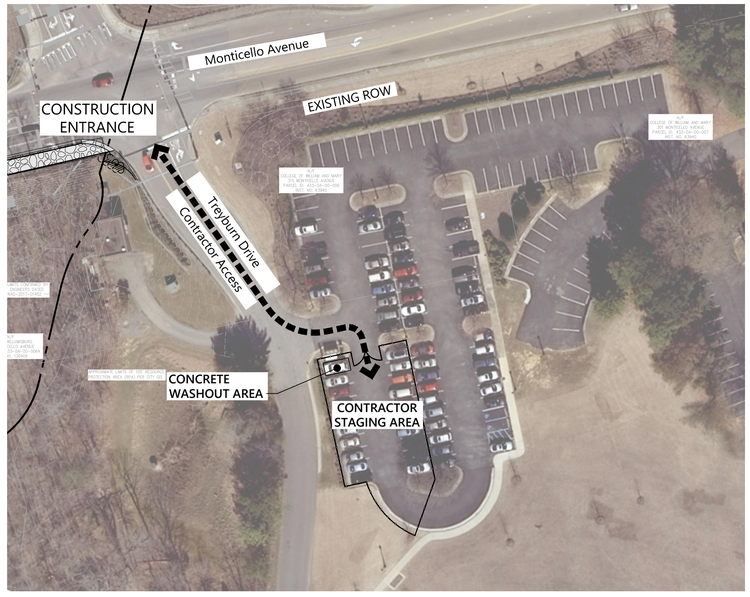
Ken Shannon, AICP
Williamsburg Residency Administrator Assistant
Virginia Department of Transportation
4451 Ironbound Road
Williamsburg, VA 23188
Office 757-253-5144
kenneth.shannon@vdot.virginia.gov

Cox Communications

Charlie Hardy
Cox Communications Inc.-Virginia
179 Louise Drive
Newport News, VA 23601
757-675-2162
Charlie.Hardy@cox.com

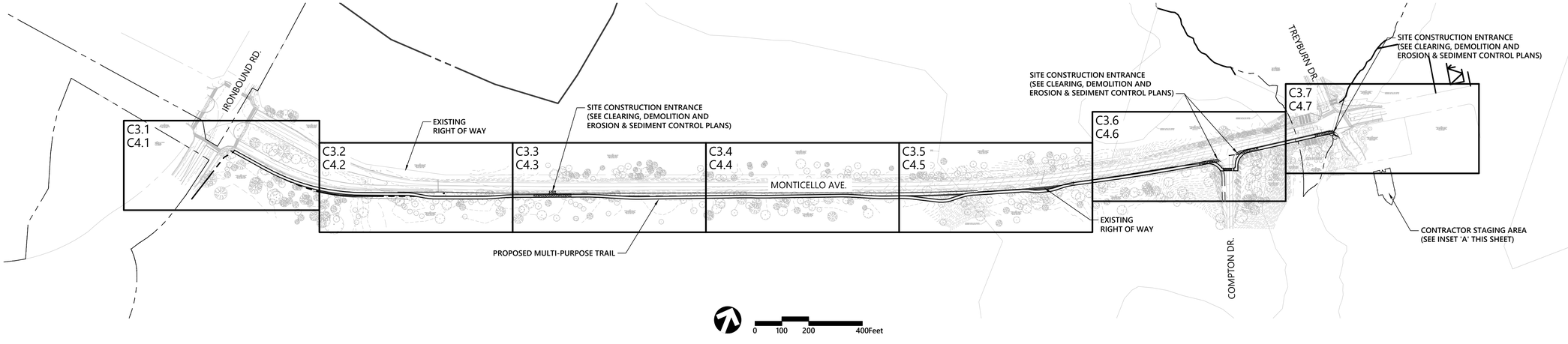
James City County IFM (fiber optic) Carrier for Williamsburg-James City County Schools

Patrick Page
Director - Information Resources Management
James City County
101-F Mounts Bay Road
IT, Suite 400
Williamsburg, VA 23185
P: 757-253-6667
patrick.page@jamescitycountyva.gov



INSET 'A' STAGING PLAN

NOTES:
1. **CONTRACTOR SHALL SECURE STAGING AREA AS NECESSARY TO PREVENT PEDESTRIAN ACCESS.**
2. **COORDINATE STAGING AREA WITH COLLEGE OF WILLIAM & MARY 14 DAYS PRIOR TO MOBILIZING.**
   BILL HORACIO III
   DIRECTOR, PARKING & TRANSPORTATION
   (757) 221-2434
   WXHORA@WM.EDU



OVERALL PLAN

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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Issued for: For Bid
Date: May 1, 2019

Drawing Title: Overall Plan and Staging Plan

Drawing Number: C2.0

COMMONWEALTH OF VIRGINIA
PIOTR SWIETLICHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

Sheet 5 of 46

Project Number: 34319.00

Saved Tuesday, April 30, 2019 4:32:32 PM RWATT Plotted Tuesday, May 7, 2019 4:28:16 PM Watt, Richard

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NOTE:
1. SIDEWALKS SHALL BE SAW CUT AT EXISTING JOINTS AND REPLACED WITH FULL WIDTH SECTIONS.
2. CONTRACTOR SHALL LIMIT THE AMOUNT OF SOIL DISTURBANCE AT ANY ONE TIME TO AVOID LARGE QUANTITIES OF DUST EMISSIONS BY PHASING CLEARING AND GRADING OPERATIONS AND UTILIZING TEMPORARY STABILIZATION IN ACCORDANCE WITH VESCH SECTION 3.39 AND MS #1.
3. CONTRACTOR SHALL LOCATE DEWATERING STRUCTURES, AS NECESSARY, IN ACCORDANCE WITH VESCH SECTION 3.26.
4. SILT FENCE (SF) SHALL ALSO ACT AS TREE PROTECTION (TP) AND SHALL BE INTERNATIONAL ORANGE IN COLOR.

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Demolition Legend

- DENOTES TREE REMOVAL
- DENOTES REMOVAL OF ABOVE AND BELOW GROUND FEATURES
- DENOTES LIMITS OF CLEARING AND GRUBBING AND REMOVAL OF ALL SURFACE FEATURES WITHIN SHADED AREA
- DENOTES REMOVAL OF ASPHALT, CONCRETE AND CURB & GUTTER
- DENOTES REMOVAL AND COMPLETE ERADICATION OF BAMBOO
- DENOTES LIMITS OF WORK

E & S Control Legend

- (DIP) DROP INLET PROTECTION (TYPE A) QTY: 1
- (IP) CURB INLET PROTECTION (TYPE B) QTY: 4
- (SF) SILT FENCE (EC-5 TYPE A) QTY: 370 LF
- (TS) TEMPORARY SEEDING

0 12.5 25 50 Feet

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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For Bid | May 1, 2019

Drawing Title

Clearing, Demolition and Phase 1 Erosion & Sediment Control Plan

Drawing Number

C3.1

Sheet 6 of 46

Project Number
34319.00

COMMONWEALTH OF VIRGINIA
PIOTR SWIETUCHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

Saved Tuesday, May 7, 2019 3:25:58 PM RWATT Plotted Wednesday, May 8, 2019 3:51:50 PM Watt, Richard

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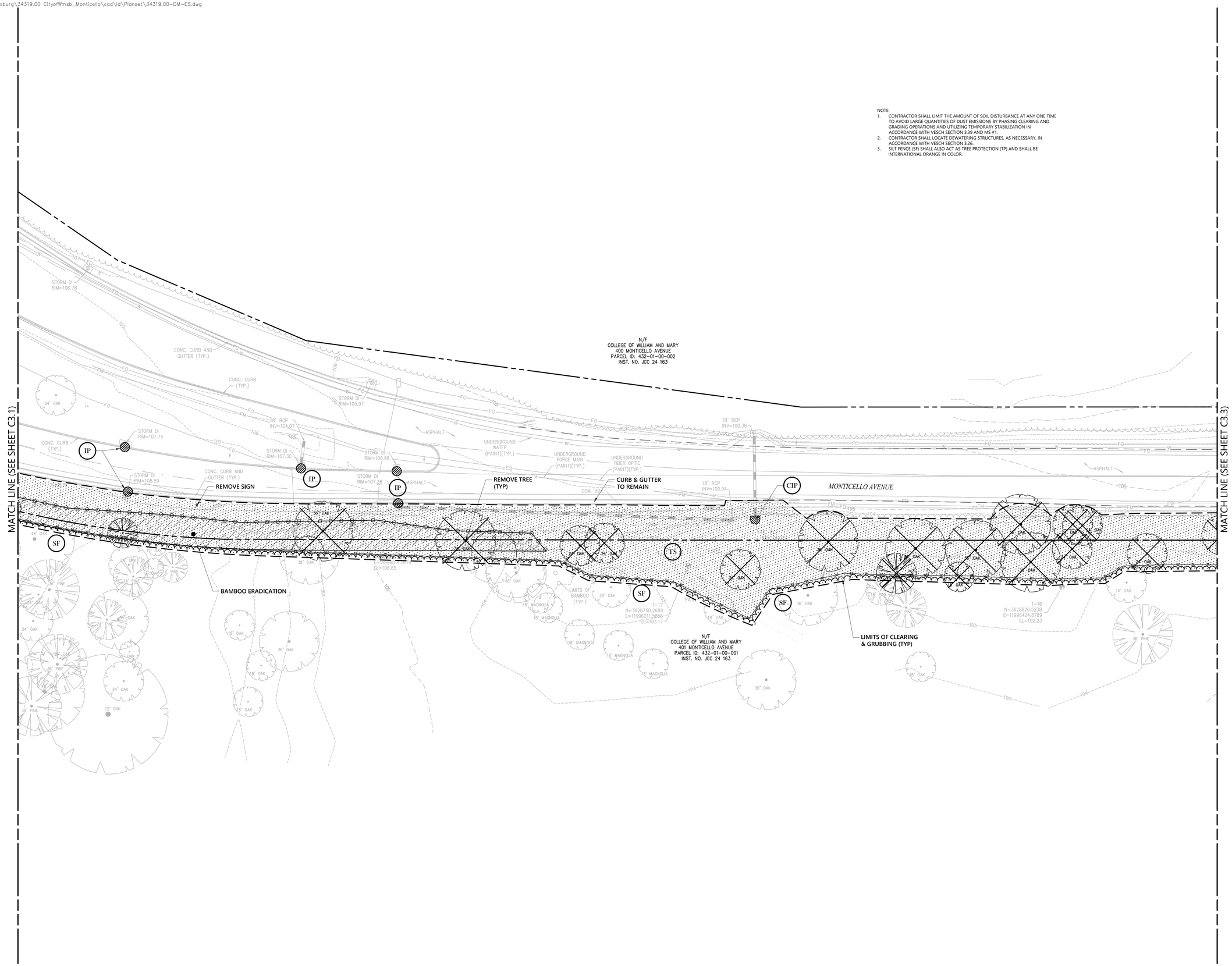
NOTE:
1. CONTRACTOR SHALL LIMIT THE AMOUNT OF SOIL DISTURBANCE AT ANY ONE TIME TO AVOID LARGE QUANTITIES OF DUST EMISSIONS BY PHASING CLEARING AND GRADING OPERATIONS AND UTILIZING TEMPORARY STABILIZATION IN ACCORDANCE WITH VESCH SECTION 3.39 AND MS #1.
2. CONTRACTOR SHALL LOCATE DEWATERING STRUCTURES, AS NECESSARY, IN ACCORDANCE WITH VESCH SECTION 3.26.
3. SILT FENCE (SF) SHALL ALSO ACT AS TREE PROTECTION (TP) AND SHALL BE INTERNATIONAL ORANGE IN COLOR.



Demolition Legend

- DENOTES TREE REMOVAL
- DENOTES REMOVAL OF ABOVE AND BELOW GROUND FEATURES
- DENOTES LIMITS OF CLEARING AND GRUBBING AND REMOVAL OF ALL SURFACE FEATURES WITHIN SHADED AREA
- DENOTES REMOVAL OF ASPHALT, CONCRETE AND CURB & GUTTER
- DENOTES REMOVAL AND COMPLETE ERADICATION OF BAMBOO
- DENOTES LIMITS OF WORK

E & S Control Legend

- IP — CURB INLET PROTECTION (TYPE B) QTY: 5
- CIP — CULVERT INLET PROTECTION (TYPE C) QTY: 1
- SF — SILT FENCE (EC-5 TYPE A) QTY: 740 LF
- TS — TEMPORARY SEEDING

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0 12.5 25 50 Feet

Monticello Avenue Multi-Use Trail

Monticello Avenue
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Drawing Title
Clearing, Demolition and Phase 1 Erosion & Sediment Control Plan

Drawing Number
C3.2

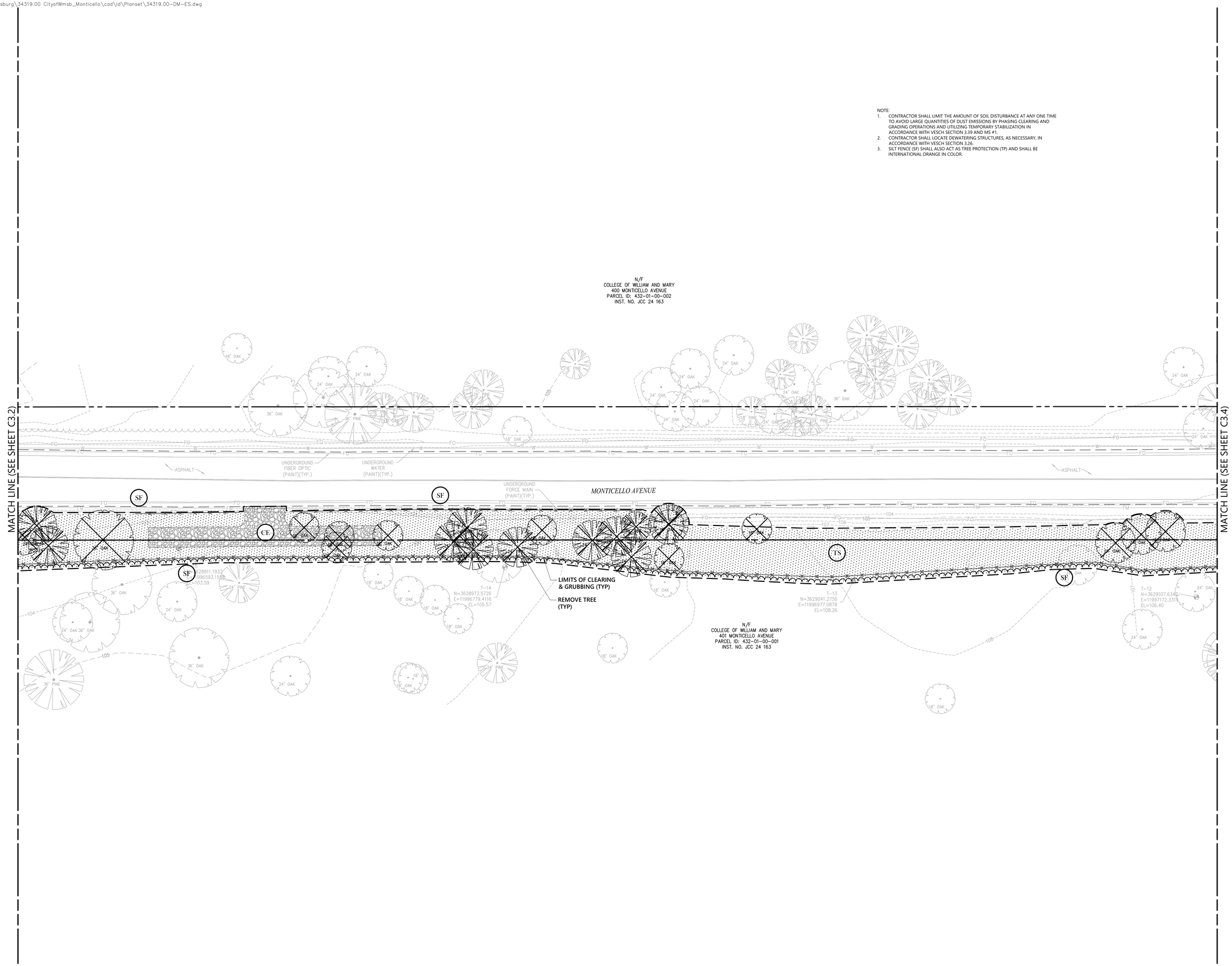
COMMONWEALTH OF VIRGINIA
PIOTR SWIETUCHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

Sheet 7 of 46

Project Number
34319.00

Saved Tuesday, May 7, 2019 3:25:58 PM RWATT Plotted Wednesday, May 8, 2019 3:52:04 PM Watt, Richard

NOTE:
1. CONTRACTOR SHALL LIMIT THE AMOUNT OF SOIL DISTURBANCE AT ANY ONE TIME TO AVOID LARGE QUANTITIES OF DUST EMISSIONS BY PHASING CLEARING AND GRADING OPERATIONS AND UTILIZING TEMPORARY STABILIZATION IN ACCORDANCE WITH VESCH SECTION 3.39 AND MS #1.
2. CONTRACTOR SHALL LOCATE DEWATERING STRUCTURES, AS NECESSARY, IN ACCORDANCE WITH VESCH SECTION 3.26.
3. SILT FENCE (SF) SHALL ALSO ACT AS TREE PROTECTION (TP) AND SHALL BE INTERNATIONAL ORANGE IN COLOR.



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Demolition Legend

- DENOTES TREE REMOVAL
- DENOTES REMOVAL OF ABOVE AND BELOW GROUND FEATURES
- DENOTES LIMITS OF CLEARING AND GRUBBING AND REMOVAL OF ALL SURFACE FEATURES WITHIN SHADED AREA
- DENOTES REMOVAL OF ASPHALT, CONCRETE AND CURB & GUTTER
- DENOTES LIMITS OF WORK

E & S Control Legend

- SF — SILT FENCE (EC-5 TYPE A) QTY: 981 LF
- CE — CONSTRUCTION ENTRANCE
- TS — TEMPORARY SEEDING

0 12.5 25 50 Feet

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

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Drawing Title

Clearing, Demolition and Phase 1 Erosion & Sediment Control Plan

Drawing Number

C3.3

Sheet 8 of 46

Project Number
34319.00

COMMONWEALTH OF VIRGINIA
PIOTR SWIETUCHOWSKI
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5-1-19
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Saved: Tuesday, May 7, 2019 3:25:58 PM RWATT Plotted: Wednesday, May 8, 2019 3:52:18 PM Watt, Richard

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NOTE:
1. CONTRACTOR SHALL LIMIT THE AMOUNT OF SOIL DISTURBANCE AT ANY ONE TIME TO AVOID LARGE QUANTITIES OF DUST EMISSIONS BY PHASING CLEARING AND GRADING OPERATIONS AND UTILIZING TEMPORARY STABILIZATION IN ACCORDANCE WITH VESCH SECTION 3.39 AND MS #1.
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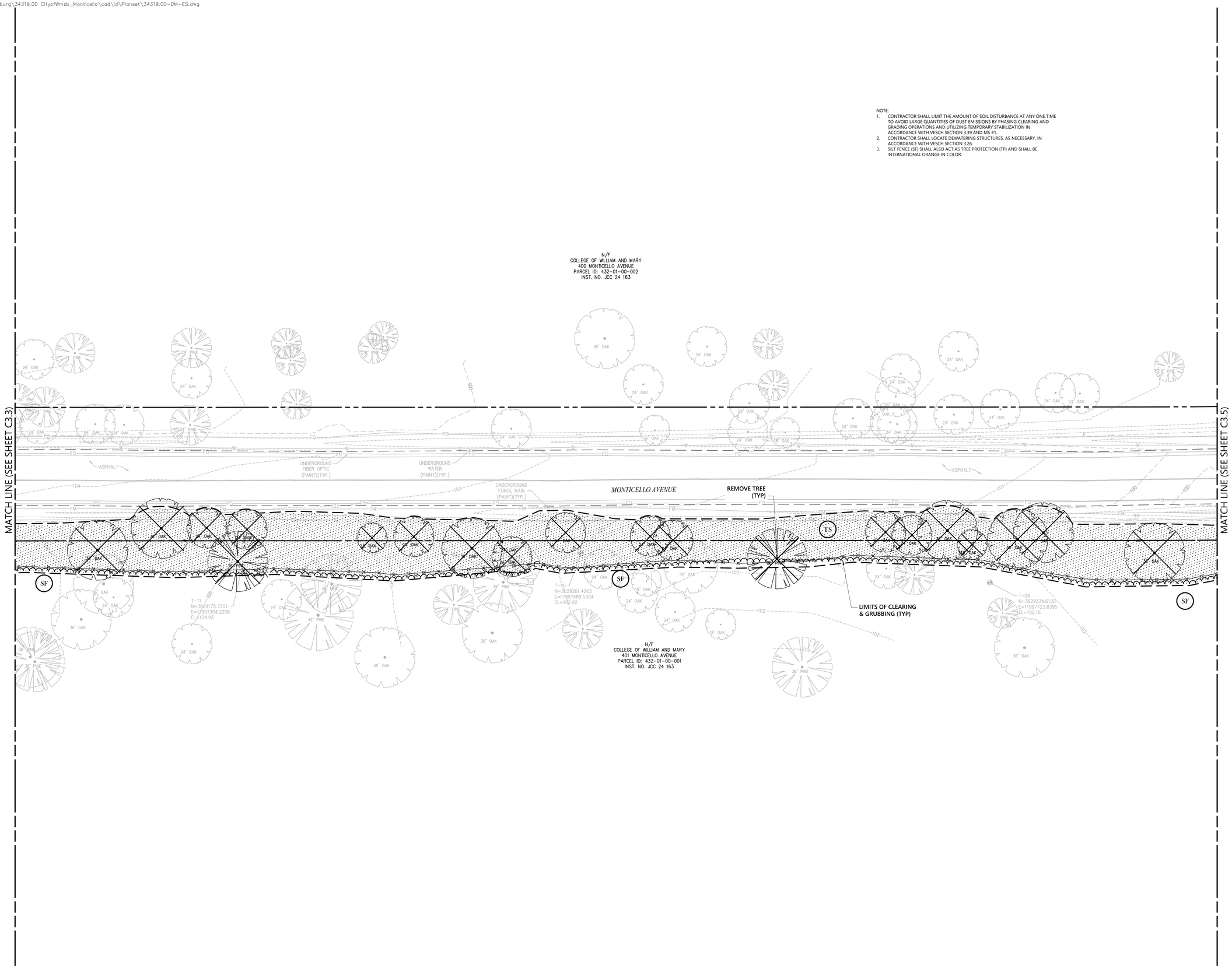
3. SILT FENCE (SF) SHALL ALSO ACT AS TREE PROTECTION (TP) AND SHALL BE INTERNATIONAL ORANGE IN COLOR.



Demolition Legend

- DENOTES TREE REMOVAL
- DENOTES REMOVAL OF ABOVE AND BELOW GROUND FEATURES
- DENOTES LIMITS OF CLEARING AND GRUBBING AND REMOVAL OF ALL SURFACE FEATURES WITHIN SHADED AREA
- DENOTES REMOVAL OF ASPHALT, CONCRETE AND CURB & GUTTER
- DENOTES LIMITS OF WORK

E & S Control Legend

- SF — SILT FENCE (EC-5 TYPE A) QTY: 721 LF
- TS — TEMPORARY SEEDING

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0 12.5 25 50 Feet

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

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Drawing Title
Clearing, Demolition and Phase 1 Erosion & Sediment Control Plan

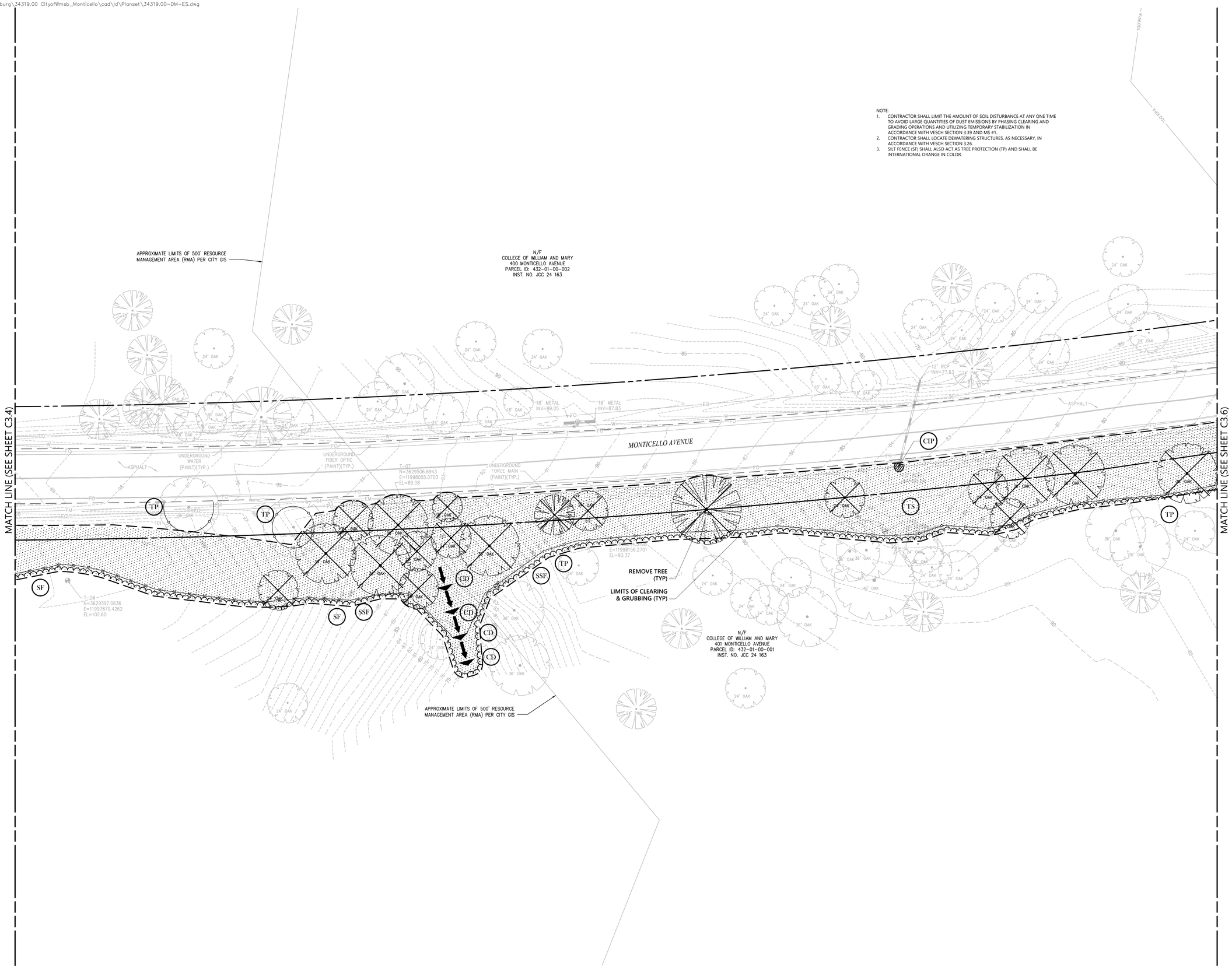
Drawing Number
C3.4

Sheet 9 of 46

Project Number
34319.00

COMMONWEALTH OF VIRGINIA
PIOTR SWIETUCHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

Saved: Tuesday, May 7, 2019 3:25:58 PM RWATT Plotted: Wednesday, May 8, 2019 3:52:28 PM Watt, Richard



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Demolition Legend

- DENOTES TREE REMOVAL
- DENOTES REMOVAL OF ABOVE AND BELOW GROUND FEATURES
- DENOTES LIMITS OF CLEARING AND GRUBBING AND REMOVAL OF ALL SURFACE FEATURES WITHIN SHADED AREA
- DENOTES REMOVAL OF ASPHALT, CONCRETE AND CURB & GUTTER
- DENOTES LIMITS OF WORK

E & S Control Legend

- CIP — CULVERT INLET PROTECTION (TYPE C) QTY:1
- SSF — WIRE REINFORCED SILT FENCE (EC-5 TYPE B) QTY: 141 LF
- SF — SILT FENCE (EC-5 TYPE A) QTY: 204 LF
- TP — TREE PROTECTION QTY: 410 LF
- CD — ROCK CHECK DAM QTY: 4
- TS — TEMPORARY SEEDING

0 12.5 25 50 Feet

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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Drawing Title
Clearing, Demolition and Phase 1 Erosion & Sediment Control Plan

Drawing Number
C3.5

COMMONWEALTH OF VIRGINIA
PIOTR SWIETLICHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

Sheet 10 of 46

Project Number
34319.00

Saved: Tuesday, May 7, 2019 3:25:58 PM RWATT Plotted: Wednesday, May 8, 2019 3:52:43 PM Watt, Richard

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NOTE:
1. SIDEWALKS SHALL BE SAW CUT AT EXISTING JOINTS AND REPLACED WITH FULL WIDTH SECTIONS.
2. CONTRACTOR SHALL LIMIT THE AMOUNT OF SOIL DISTURBANCE AT ANY ONE TIME TO AVOID LARGE QUANTITIES OF DUST EMISSIONS BY PHASING CLEARING AND GRADING OPERATIONS AND UTILIZING TEMPORARY STABILIZATION IN ACCORDANCE WITH VESCH SECTION 3.39 AND MS #1.
3. CONTRACTOR SHALL LOCATE DEWATERING STRUCTURES, AS NECESSARY, IN ACCORDANCE WITH VESCH SECTION 3.26.
4. SILT FENCE (SF) SHALL ALSO ACT AS TREE PROTECTION (TP) AND SHALL BE INTERNATIONAL ORANGE IN COLOR.

MATCH LINE (SEE SHEET C3.5)

MATCH LINE (SEE SHEET C3.7)

APPROXIMATE LIMITS OF 100' RESOURCE PROTECTION AREA (RPA) PER CITY GIS

N/F
COLLEGE OF WILLIAM AND MARY
370 MONTICELLO AVENUE
PARCEL ID: 432-0A-00-001
INST. NO. N/A

SALVAGE & RELOCATE R2-1 SIGN (SPEED LIMIT 25 MPH)

SALVAGE & RELOCATE WILLIAM & MARY SIGN

SALVAGE & RELOCATE R1-1 SIGN (STOP SIGN)

SAW-CUT ASPHALT (TYP)

MONTICELLO AVENUE

SALVAGE & REINSTALL WAYFINDING SIGN

SALVAGE & REINSTALL W3-5 SIGN (REDUCED SPEED LIMIT AHEAD)

REMOVE TREE (TYP)

LIMITS OF CLEARING & GRUBBING (TYP)

COMPTON DRIVE

N/F
COLLEGE OF WILLIAM AND MARY
401 MONTICELLO AVENUE
PARCEL ID: 432-01-00-001
INST. NO. JCC 24 163

N/F
COLLEGE OF WILLIAM AND MARY
371 MONTICELLO AVENUE
PARCEL ID: 433-12-00-001
INST. NO. JCC 24 163

T-04
N=3629698.8872
E=11998511.8986
EL=84.38

T-02
N=3629919.7706
E=11998867.5713
EL=80.63

Demolition Legend

- DENOTES TREE REMOVAL
- DENOTES REMOVAL OF ABOVE AND BELOW GROUND FEATURES
- DENOTES LIMITS OF CLEARING AND GRUBBING AND REMOVAL OF ALL SURFACE FEATURES WITHIN SHADED AREA
- DENOTES REMOVAL OF ASPHALT, CONCRETE AND CURB & GUTTER
- DENOTES LIMITS OF WORK

E & S Control Legend

- TP — TREE PROTECTION QTY: 228 LF
- SF — SILT FENCE (EC-5 TYPE A) QTY: 408 LF
- SSF — WIRE REINFORCED SILT FENCE (EC-5 TYPE B) QTY: 155 LF
- CE — CONSTRUCTION ENTRANCE QTY: 2
- TS — TEMPORARY SEEDING

0 12.5 25 50 Feet

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Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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Date: May 1, 2019

Drawing Title
Clearing, Demolition and Phase 1 Erosion & Sediment Control Plan

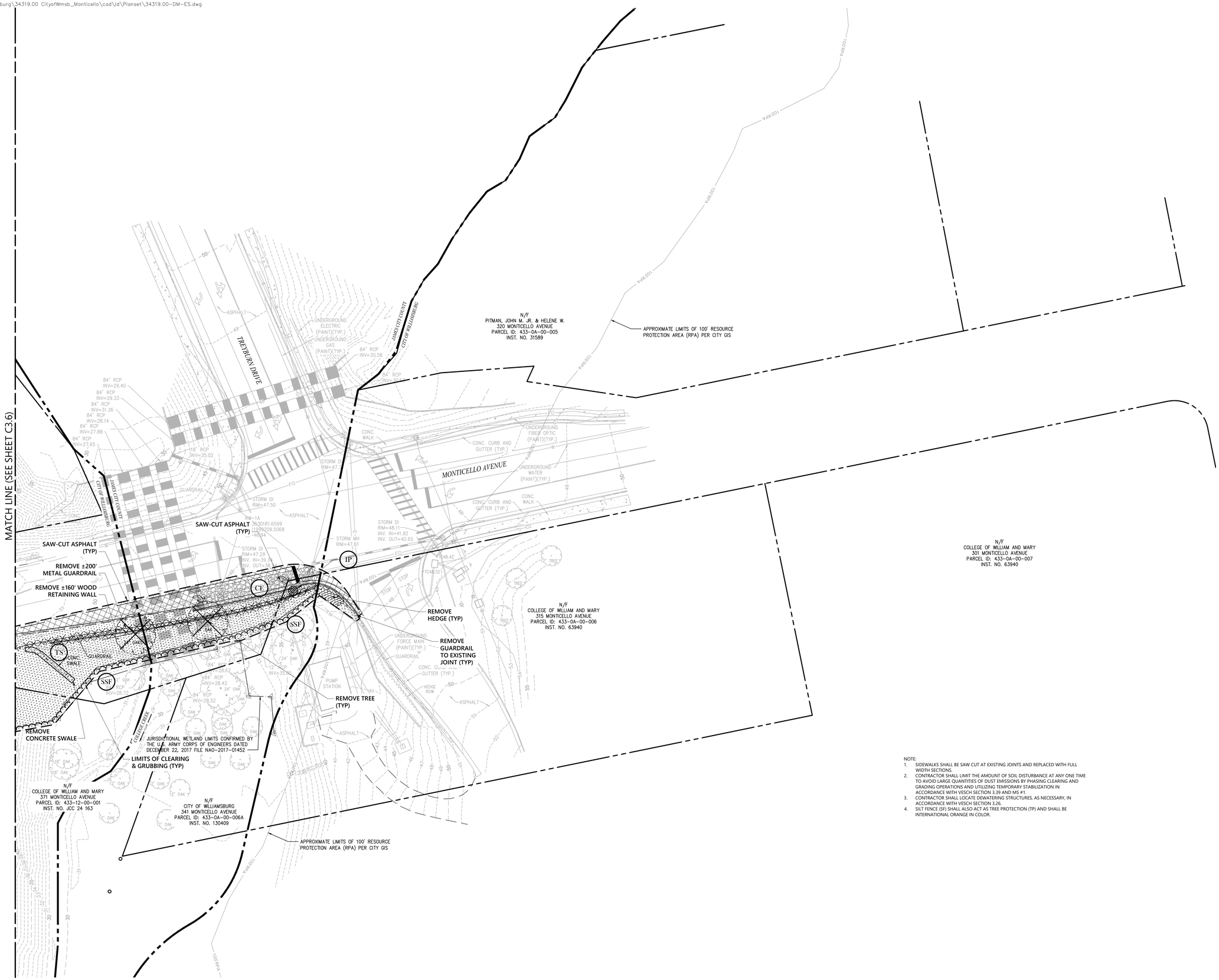
Drawing Number
C3.6

Sheet 11 of 46

Project Number
34319.00

COMMONWEALTH OF VIRGINIA
PIOTR SWIETUCHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

Saved Tuesday, May 7, 2019 3:25:58 PM RWATT Plotted Wednesday, May 8, 2019 3:52:59 PM Watt, Richard



NOTE:
1. SIDEWALKS SHALL BE SAW CUT AT EXISTING JOINTS AND REPLACED WITH FULL WIDTH SECTIONS.
2. CONTRACTOR SHALL LIMIT THE AMOUNT OF SOIL DISTURBANCE AT ANY ONE TIME TO AVOID LARGE QUANTITIES OF DUST EMISSIONS BY PHASING CLEARING AND GRADING OPERATIONS AND UTILIZING TEMPORARY STABILIZATION IN ACCORDANCE WITH VESCH SECTION 3.39 AND MS #1.
3. CONTRACTOR SHALL LOCATE DEWATERING STRUCTURES, AS NECESSARY, IN ACCORDANCE WITH VESCH SECTION 3.26.
4. SILT FENCE (SF) SHALL ALSO ACT AS TREE PROTECTION (TP) AND SHALL BE INTERNATIONAL ORANGE IN COLOR.

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Demolition Legend

- DENOTES TREE REMOVAL
- DENOTES REMOVAL OF ABOVE AND BELOW GROUND FEATURES
- DENOTES LIMITS OF CLEARING AND GRUBBING AND REMOVAL OF ALL SURFACE FEATURES WITHIN SHADED AREA
- DENOTES REMOVAL OF ASPHALT, CONCRETE AND CURB & GUTTER
- DENOTES LIMITS OF WORK

E & S Control Legend

- IP — CURB INLET PROTECTION (TYPE B) QTY: 1
- SSF — WIRE REINFORCED SILT FENCE (EC-3 TYPE B) QTY: 200 LF
- CE — CONSTRUCTION ENTRANCE QTY: 1
- TS — TEMPORARY SEEDING

0 12.5 25 50 Feet

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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For Bid — May 1, 2019

Drawing Title

Clearing, Demolition and Phase 1 Erosion & Sediment Control Plan

Drawing Number

C3.7

Sheet 12 of 46

Project Number
34319.00

COMMONWEALTH OF VIRGINIA
PIOTR SWIETLICHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

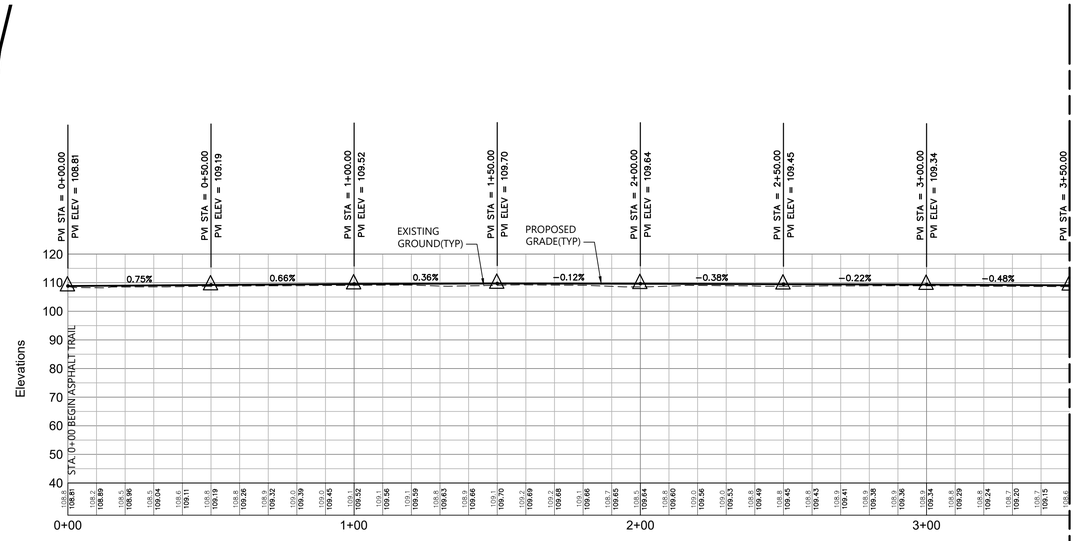
Saved: Tuesday, May 7, 2019 3:25:58 PM RWATT Plotted: Wednesday, May 8, 2019 3:53:13 PM Watt, Richard

Storm Sewer Structure Schedule

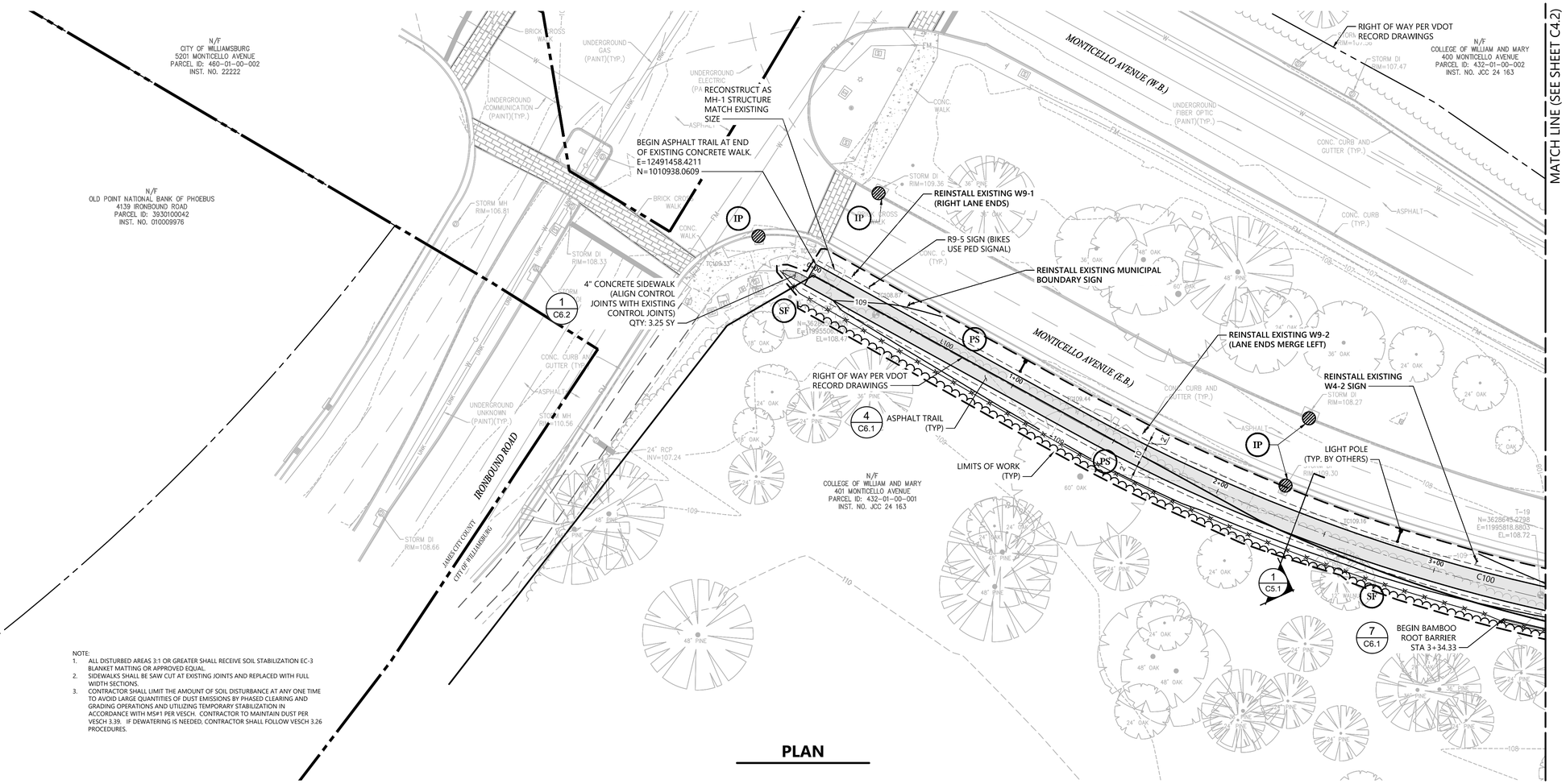
Number	Type	Top	Height	Northing	Easting
STM-1A	ES-1	103.94		3628797.48	11996260.37
STM-1B	ES-1	104.02		3628756.29	11996252.26
STM-2	DI-7	105.57	4.70	3628789.80	11996239.09
STM-2A	DI-7	91.25	3.25	3629501.79	11998036.96
STM-2B	MH-2	92.12	4.57	3629513.70	11998063.68
STM-2C	ES-1	77.29		3629451.21	11998110.75
STM-3A	ES-1	84.75		3629607.54	11998332.95
STM-3B	DI-7	85.45	4.00	3629634.50	11998319.07
STM-4A	ES-1	57.52		3629965.26	11998883.26
STM-4B	DI-2A	57.77	7.49	3629982.97	11998950.27
STM-4C	DI-2A	57.54	7.54	3630036.58	11998969.19
STM-4D	DI-2A	51.76	10.00	3630127.37	11999102.44
STM-4E	EW-1	36.75		3630103.78	11999130.53

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
STM-1A	STM-2	18	RCP	22.623	4.95%	102.42	101.30
STM-1B	STM-2	15	RCP	36.000	3.33%	102.50	101.30
EX. PIPE	STM-2	18	RCP	13.348	0.52%	100.94	100.87
STM-2A	STM-2B	18	RCP	29.252	0.51%	88.00	87.85
STM-2B	STM-2C	18	RCP	78.231	15.40%	87.55	75.50
STM-3A	STM-3B	12	RCP	30.314	6.76%	83.50	81.45
STM-4A	STM-4B	15	RCP	69.310	3.61%	56.00	53.50
STM-4B	STM-4C	18	RCP	56.846	0.32%	50.28	50.10
STM-4C	STM-4D	18	RCP	161.252	1.71%	50.00	47.25
STM-4D	STM-4E	24	RCP	36.680	14.34%	39.26	34.00
STM-5A	Structure - (6)	12	RCP	15.091	1.99%	42.37	42.07
Structure - (6)	Structure - (7)	12	RCP	32.515	11.96%	38.94	35.05



PROFILE



PLAN

NOTE:
1. ALL DISTURBED AREAS 3:1 OR GREATER SHALL RECEIVE SOIL STABILIZATION EC-3 BLANKET MATTING OR APPROVED EQUAL.
2. SIDEWALKS SHALL BE SAW CUT AT EXISTING JOINTS AND REPLACED WITH FULL WIDTH SECTIONS.
3. CONTRACTOR SHALL LIMIT THE AMOUNT OF SOIL DISTURBANCE AT ANY ONE TIME TO AVOID LARGE QUANTITIES OF DUST EMISSIONS BY PHASED CLEARING AND GRADING OPERATIONS AND UTILIZING TEMPORARY STABILIZATION IN ACCORDANCE WITH MS#1 PER VESCH. CONTRACTOR TO MAINTAIN DUST PER VESCH 3.39. IF DEWATERING IS NEEDED, CONTRACTOR SHALL FOLLOW VESCH 3.26 PROCEDURES.

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351 McLaws Circle
Suite 3
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757.220.0500

Pavement Legend

- 4" CONCRETE WALK
- 7" CONCRETE WALK
- ASPHALT TRAIL
- ADA DETECTABLE WARNING SURFACE (CG-12)

Legend

- DIP — DROP INLET PROTECTION
- IP — CURB INLET PROTECTION
- CIP — CULVERT INLET PROTECTION
- PS — PERMANENT SEEDING
- B/M — EROSION CONTROL BLANKET MATTING
- OP — OUTFALL PROTECTION
- SSF — SUPER SILT FENCE
- SF — SILT FENCE

Vert. 0 12.5 25 50 Feet
Horiz. 0 12.5 25 50 Feet

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

Designed by | Checked by

Issued for | Date

For Bid — May 1, 2019

Drawing Title

Grading, Drainage, Utility Layout & Materials and Phase 2 Erosion and Sediment Control Plan & Profile

Drawing Number

C4.1

Sheet 13 of 46

Project Number 34319.00

COMMONWEALTH OF VIRGINIA
PIOTR SWIETUCHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

Saved Wednesday, July 24, 2019 9:39:14 AM BGREENE Plotted Wednesday, July 24, 2019 9:42:00 AM Greene, Scott

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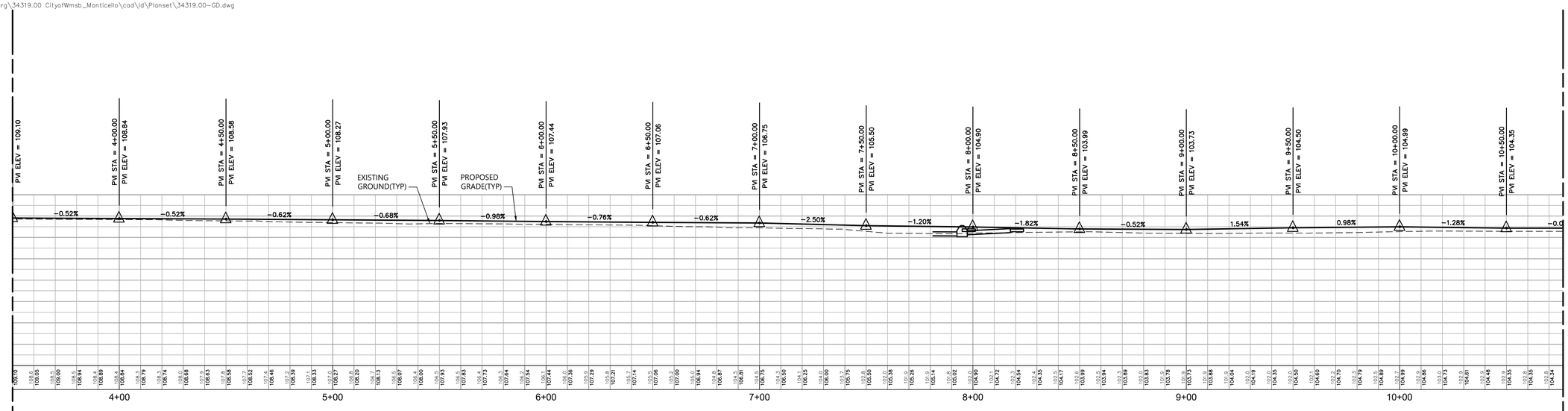
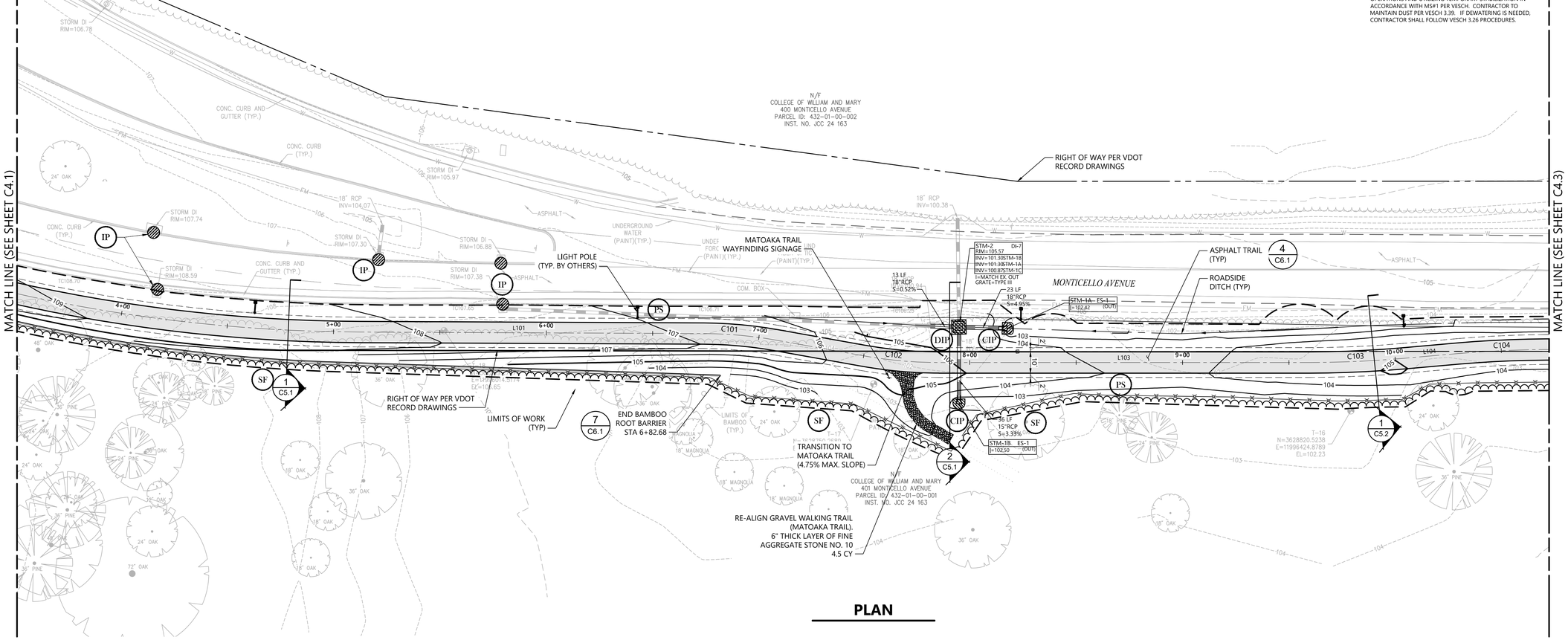


PROFILE



PLAN

NOTE:
1. ALL DISTURBED AREAS 3:1 OR GREATER SHALL RECEIVE SOIL STABILIZATION EC-3 BLANKET MATTING OR APPROVED EQUAL.
2. SIDEWALKS SHALL BE SAW CUT AT EXISTING JOINTS AND REPLACED WITH FULL WIDTH SECTIONS.
3. CONTRACTOR SHALL LIMIT THE AMOUNT OF SOIL DISTURBANCE AT ANY ONE TIME TO AVOID LARGE QUANTITIES OF DUST EMISSIONS BY PHASED CLEARING AND GRADING OPERATIONS AND UTILIZING TEMPORARY STABILIZATION IN ACCORDANCE WITH MS#1 PER VESCH. CONTRACTOR TO MAINTAIN DUST PER VESCH 3.39. IF DEWATERING IS NEEDED, CONTRACTOR SHALL FOLLOW VESCH 3.26 PROCEDURES.

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Pavement Legend

- 4" CONCRETE WALK
- 7" CONCRETE WALK
- ASPHALT TRAIL
- ADA DETECTABLE WARNING SURFACE (CG-12)

Legend

- DIP — DROP INLET PROTECTION
- IP — CURB INLET PROTECTION
- CIP — CULVERT INLET PROTECTION
- PS — PERMANENT SEEDING
- B/M — EROSION CONTROL BLANKET MATTING
- OP — OUTFALL PROTECTION
- SSF — SUPER SILT FENCE
- SF — SILT FENCE

Vert. 0 12.5 25 50 Feet
Horiz. 0 12.5 25 50 Feet

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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Issued for: For Bid
Date: May 1, 2019

Drawing Title
Grading, Drainage, Utility Layout & Materials and Phase 2 Erosion and Sediment Control Plan & Profile

Drawing Number
C4.2

Sheet 14 of 46

Project Number
34319.00

COMMONWEALTH OF VIRGINIA
PIOTR SWIETUCHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

Saved Wednesday, July 24, 2019 9:39:14 AM BGREENE Plotted Wednesday, July 24, 2019 9:44:22 AM Greene, Scott

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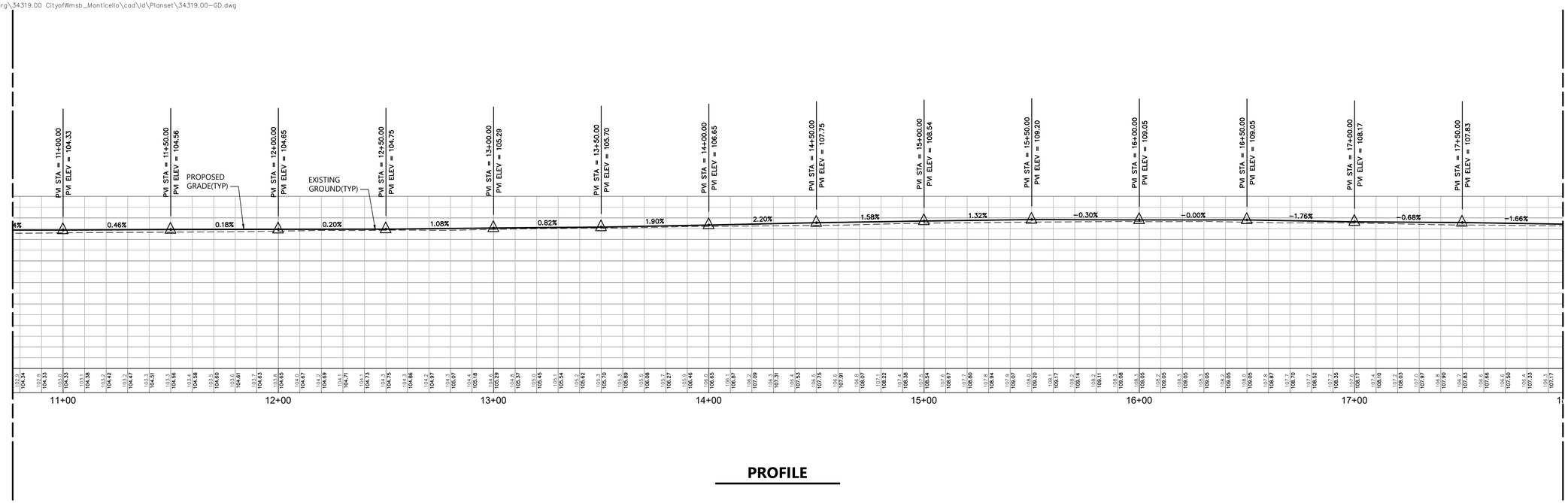

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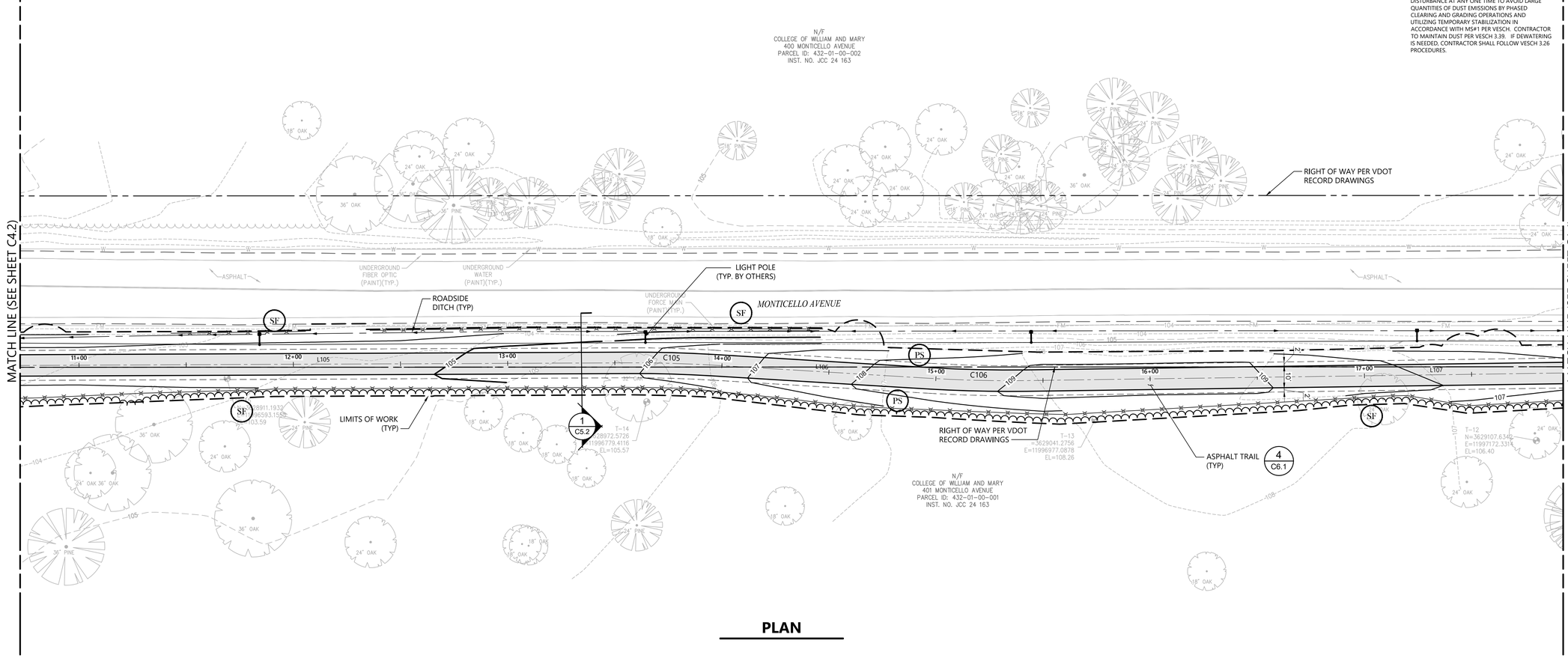

PLAN

NOTE:
1. ALL DISTURBED AREAS 3:1 OR GREATER SHALL RECEIVE SOIL STABILIZATION EC-3 BLANKET MATTING OR APPROVED EQUAL.
2. SIDEWALKS SHALL BE SAW CUT AT EXISTING JOINTS AND REPLACED WITH FULL WIDTH SECTIONS.
3. CONTRACTOR SHALL LIMIT THE AMOUNT OF SOIL DISTURBANCE AT ANY ONE TIME TO AVOID LARGE QUANTITIES OF DUST EMISSIONS BY PHASED CLEARING AND GRADING OPERATIONS AND UTILIZING TEMPORARY STABILIZATION IN ACCORDANCE WITH MS#1 PER VESCH. CONTRACTOR TO MAINTAIN DUST PER VESCH 3.39. IF DEWATERING IS NEEDED, CONTRACTOR SHALL FOLLOW VESCH 3.26 PROCEDURES.

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Pavement Legend

- 4" CONCRETE WALK
- 7" CONCRETE WALK
- ASPHALT TRAIL
- ADA DETECTABLE WARNING SURFACE (CG-12)

Legend

- DIP — DROP INLET PROTECTION
- IP — CURB INLET PROTECTION
- CIP — CULVERT INLET PROTECTION
- PS — PERMANENT SEEDING
- B/M — EROSION CONTROL BLANKET MATTING
- OP — OUTFALL PROTECTION
- SSF — SUPER SILT FENCE
- SF — SILT FENCE

Vert. 0 12.5 25 50 Feet
Horiz. 0 12.5 25 50 Feet

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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For Bid — May 1, 2019

Drawing Title

Grading, Drainage, Utility Layout & Materials and Phase 2 Erosion and Sediment Control Plan & Profile

Drawing Number

C4.3

Sheet 15 of 46

Project Number
34319.00

COMMONWEALTH OF VIRGINIA
PIOTR SWIETUCHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

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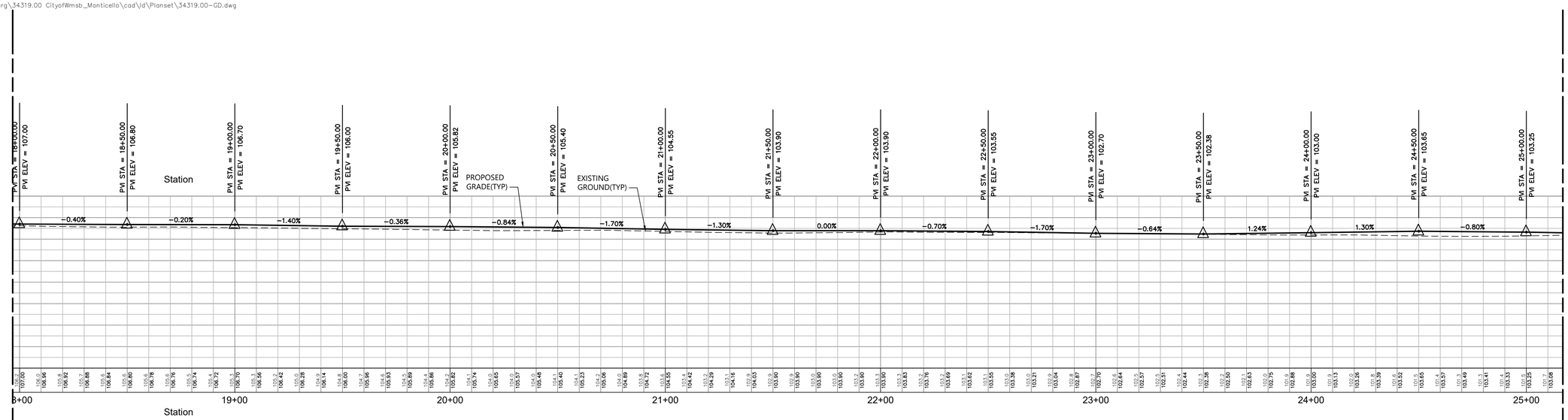
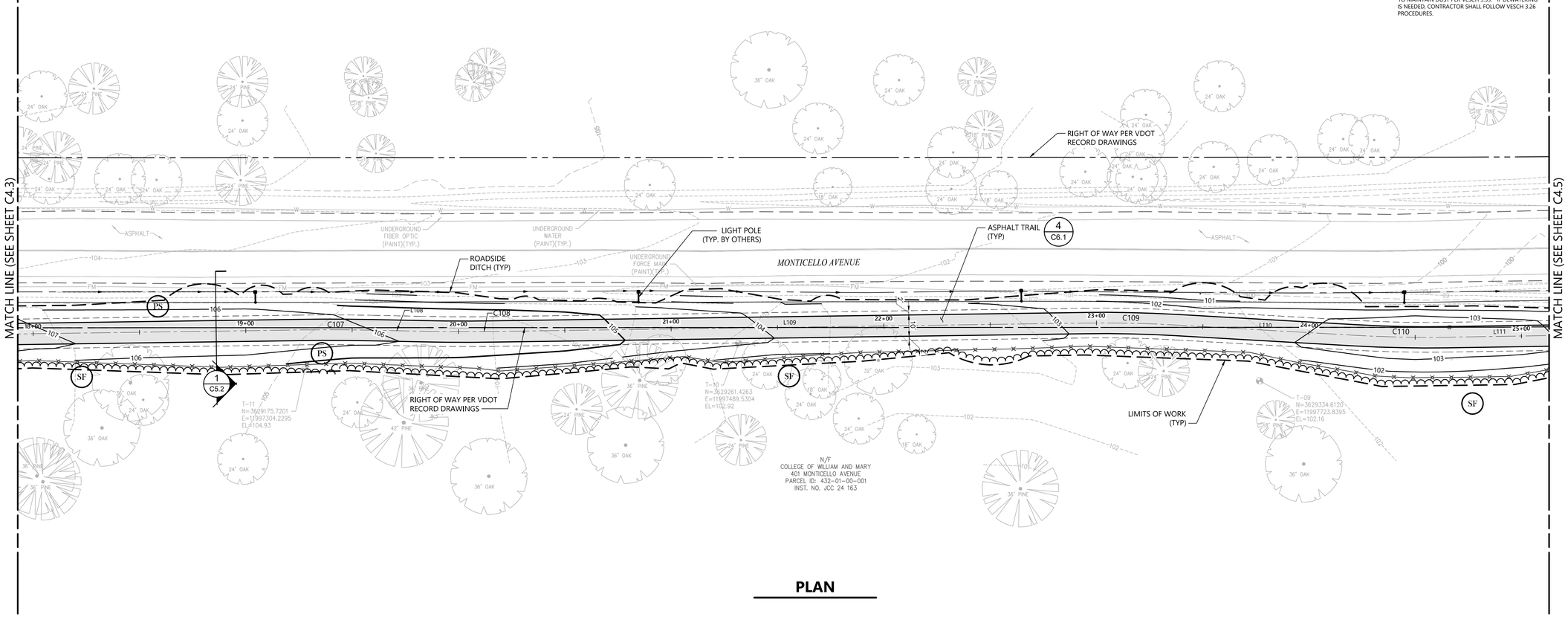


Proposed Multi-Use Trail 1

PROFILE



PLAN

NOTE:
1. ALL DISTURBED AREAS 3:1 OR GREATER SHALL RECEIVE SOIL STABILIZATION EC-3 BLANKET MATTING OR APPROVED EQUAL.
2. SIDEWALKS SHALL BE SAW CUT AT EXISTING JOINTS AND REPLACED WITH FULL WIDTH SECTIONS.
3. CONTRACTOR SHALL LIMIT THE AMOUNT OF SOIL DISTURBANCE AT ANY ONE TIME TO AVOID LARGE QUANTITIES OF DUST EMISSIONS BY PHASED CLEARING AND GRADING OPERATIONS AND UTILIZING TEMPORARY STABILIZATION IN ACCORDANCE WITH MS#1 PER VESCH. CONTRACTOR TO MAINTAIN DUST PER VESCH 3.39. IF DEWATERING IS NEEDED, CONTRACTOR SHALL FOLLOW VESCH 3.26 PROCEDURES.

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Pavement Legend

- 4" CONCRETE WALK
- 7" CONCRETE WALK
- ASPHALT TRAIL
- ADA DETECTABLE WARNING SURFACE (CG-12)

Legend

- DIP — DROP INLET PROTECTION
- IP — CURB INLET PROTECTION
- CIP — CULVERT INLET PROTECTION
- PS — PERMANENT SEEDING
- B/M — EROSION CONTROL BLANKET MATTING
- OP — OUTFALL PROTECTION
- SSF — SUPER SILT FENCE
- SF — SILT FENCE

Vert. 0 12.5 25 50 Feet
Horiz. 0 12.5 25 50 Feet

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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Issued for: For Bid
Date: May 1, 2019

Drawing Title
Grading, Drainage, Utility Layout & Materials and Phase 2 Erosion and Sediment Control Plan & Profile

Drawing Number
C4.4

Sheet 16 of 46

Project Number
34319.00

COMMONWEALTH OF VIRGINIA
PIOTR SWIETLICHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

Saved Wednesday, July 24, 2019 9:39:14 AM BGREENE Plotted Wednesday, July 24, 2019 9:45:36 AM Greene, Scott

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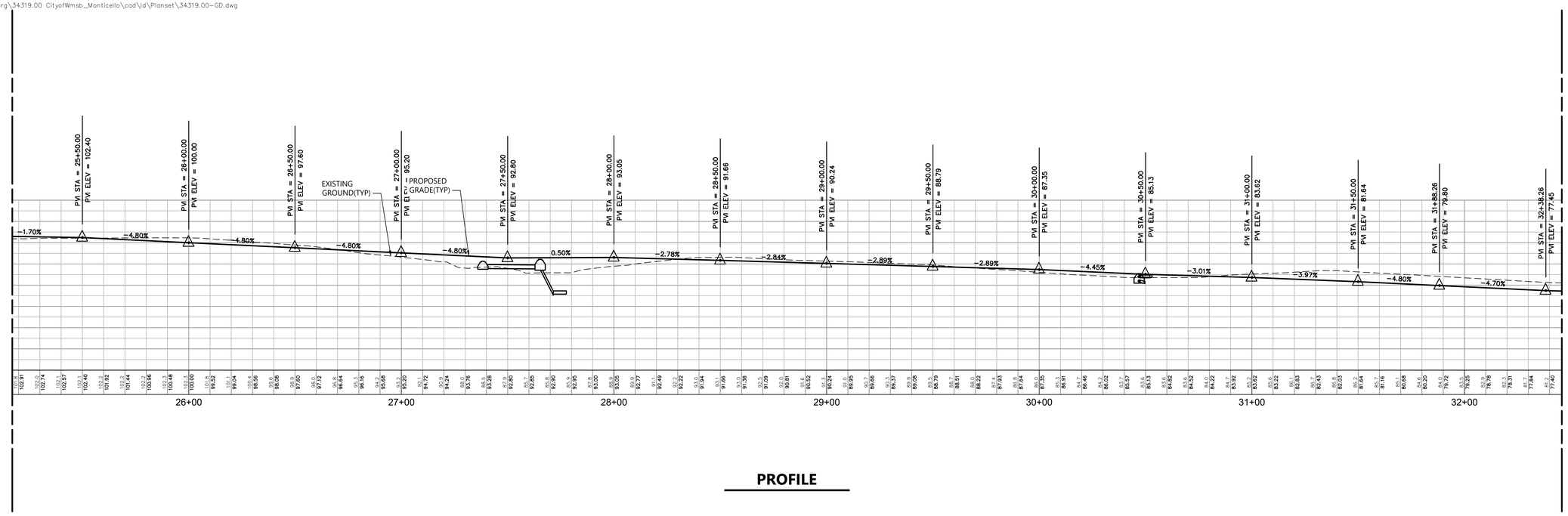

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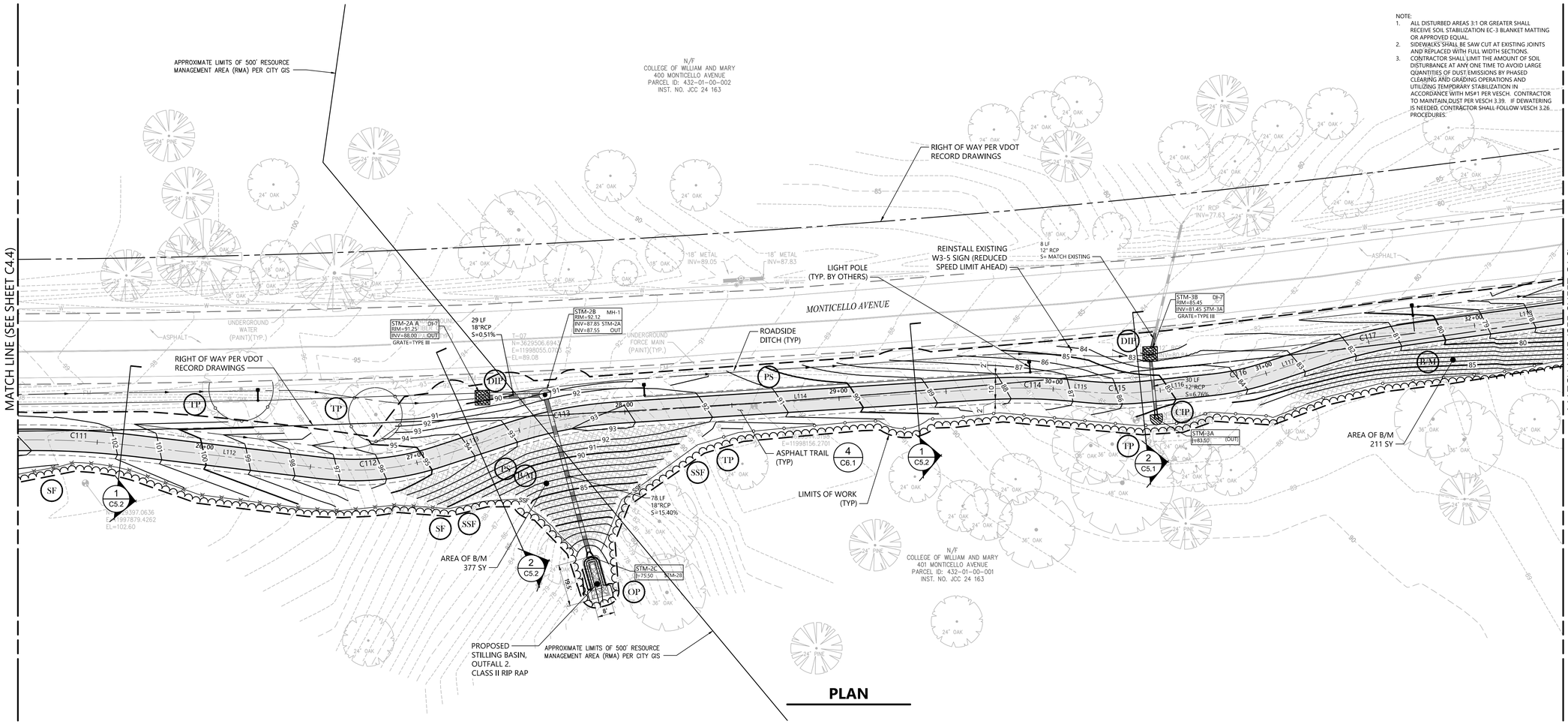

PLAN

NOTE:
1. ALL DISTURBED AREAS 3:1 OR GREATER SHALL RECEIVE SOIL STABILIZATION EC-3 BLANKET MATTING OR APPROVED EQUAL.
2. SIDEWALKS SHALL BE SAW CUT AT EXISTING JOINTS AND REPLACED WITH FULL WIDTH SECTIONS.
3. CONTRACTOR SHALL LIMIT THE AMOUNT OF SOIL DISTURBANCE AT ANY ONE TIME TO AVOID LARGE QUANTITIES OF DUST EMISSIONS BY PHASED CLEARING AND GRADING OPERATIONS AND UTILIZING TEMPORARY STABILIZATION IN ACCORDANCE WITH MS#1 PER VESCH. CONTRACTOR TO MAINTAIN DUST PER VESCH 3.39. IF DEWATERING IS NEEDED, CONTRACTOR SHALL FOLLOW VESCH 3.26 PROCEDURES.

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Pavement Legend

- 4" CONCRETE WALK
- 7" CONCRETE WALK
- ASPHALT TRAIL
- ADA DETECTABLE WARNING SURFACE (CG-12)

Legend

- DIP — DROP INLET PROTECTION
- IP — CURB INLET PROTECTION
- CIP — CULVERT INLET PROTECTION
- PS — PERMANENT SEEDING
- B/M — EROSION CONTROL BLANKET MATTING (EC-3 TYPE III) QTY: 588 SY
- OP — OUTFALL PROTECTION
- SSF — SUPER SILT FENCE
- SF — SILT FENCE

Vert. 0 12.5 25 50 Feet
Horiz. 0 12.5 25 50 Feet

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Apprvd.

Designed by | Checked by

Issued for: For Bid
Date: May 1, 2019

Drawing Title
Grading, Drainage, Utility Layout & Materials and Phase 2 Erosion and Sediment Control Plan & Profile

Drawing Number
C4.5

Sheet 17 of 46

Project Number
34319.00

COMMONWEALTH OF VIRGINIA
PIOTR SWIETUCHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

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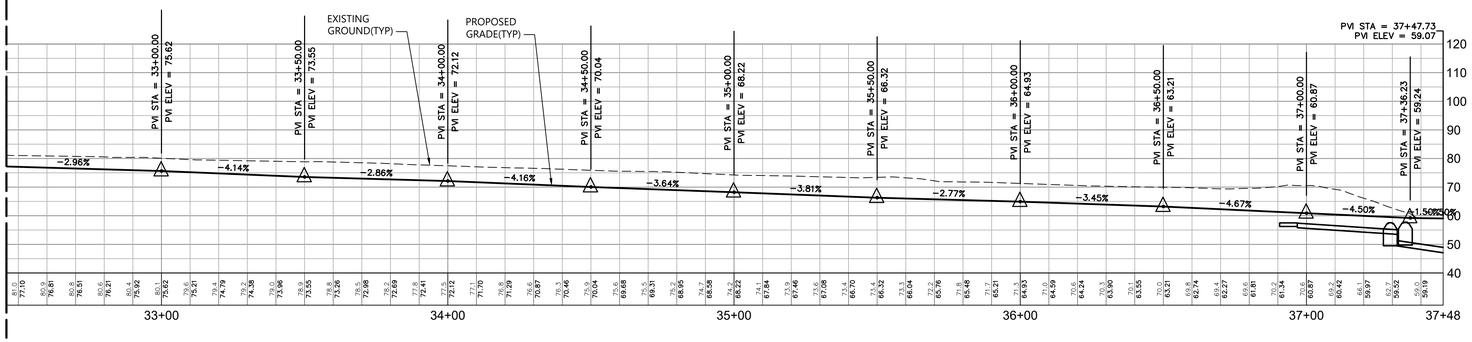
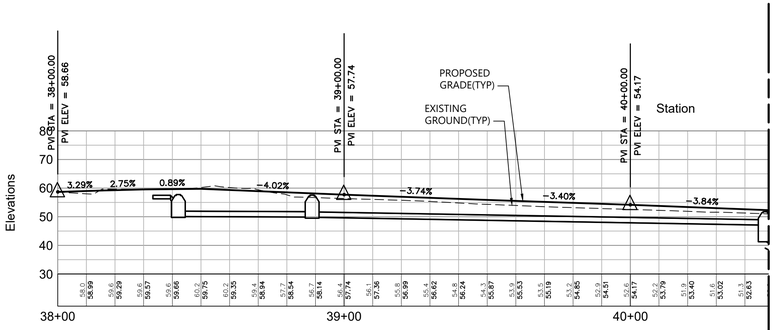
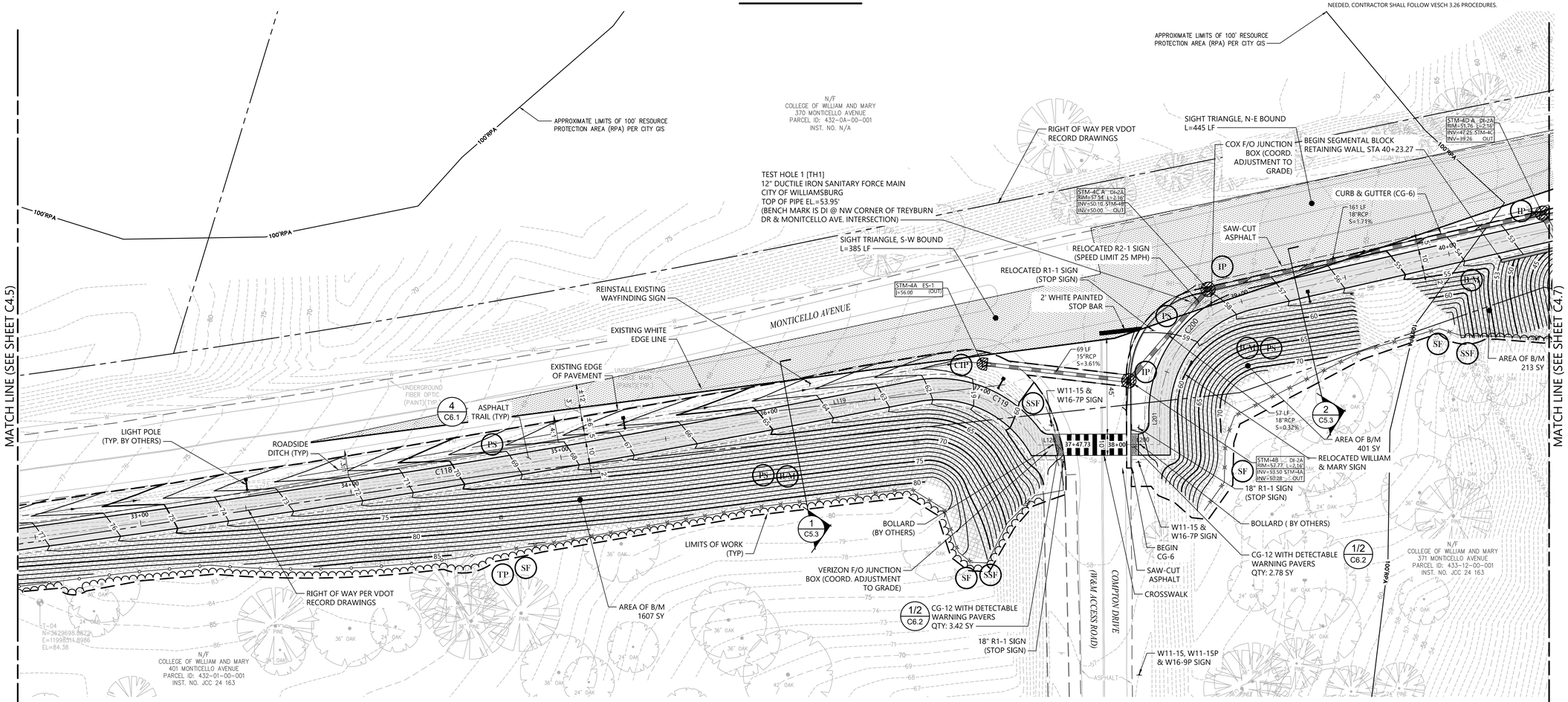




NOTE:
1. ALL DISTURBED AREAS 3:1 OR GREATER SHALL RECEIVE SOIL STABILIZATION EC-3 BLANKET MATTING OR APPROVED EQUAL.
2. SIDEWALKS SHALL BE SAW CUT AT EXISTING JOINTS AND REPLACED WITH FULL WIDTH SECTIONS.
3. CONTRACTOR SHALL LIMIT THE AMOUNT OF SOIL DISTURBANCE AT ANY ONE TIME TO AVOID LARGE QUANTITIES OF DUST EMISSIONS BY PHASED CLEARING AND GRADING OPERATIONS AND UTILIZING TEMPORARY STABILIZATION IN ACCORDANCE WITH MS#1 PER VESCH. CONTRACTOR TO MAINTAIN DUST PER VESCH 3.39. IF DEWATERING IS NEEDED, CONTRACTOR SHALL FOLLOW VESCH 3.26 PROCEDURES.

PLAN



Pavement Legend

- 4" CONCRETE WALK
- 7" CONCRETE WALK
- ASPHALT TRAIL
- ADA DETECTABLE WARNING SURFACE (CG-12)

Legend

- IP — CURB INLET PROTECTION
- CIP — CULVERT INLET PROTECTION
- PS — PERMANENT SEEDING
- B/M — EROSION CONTROL BLANKET MATTING (EC-3 TYPE III) QTY: 2,221 SY
- OP — OUTFALL PROTECTION
- SSF — SUPER SILT FENCE
- SF — SILT FENCE

Vert. 0 12.5 25 50 Feet
Horiz. 0 12.5 25 50 Feet

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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Issued for | Date

For Bid | May 1, 2019

Drawing Title

Grading, Drainage, Utility Layout & Materials and Phase 2 Erosion and Sediment Control Plan & Profile

Drawing Number

C4.6

Sheet 18 of 46

Project Number
34319.00

COMMONWEALTH OF VIRGINIA
PIOTR SWIETUCHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

Saved Wednesday, July 24, 2019 9:39:14 AM BGREENE Plotted Wednesday, July 24, 2019 9:46:27 AM Greene, Scott

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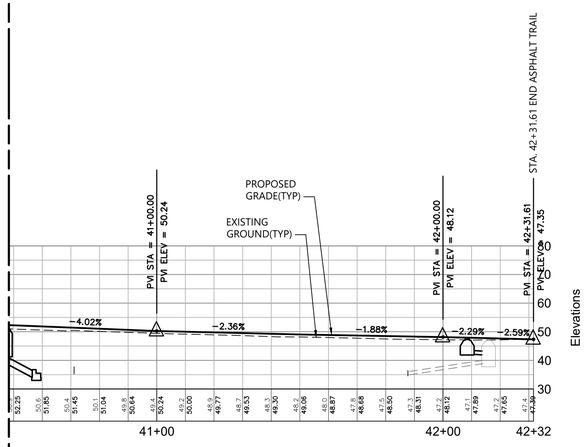
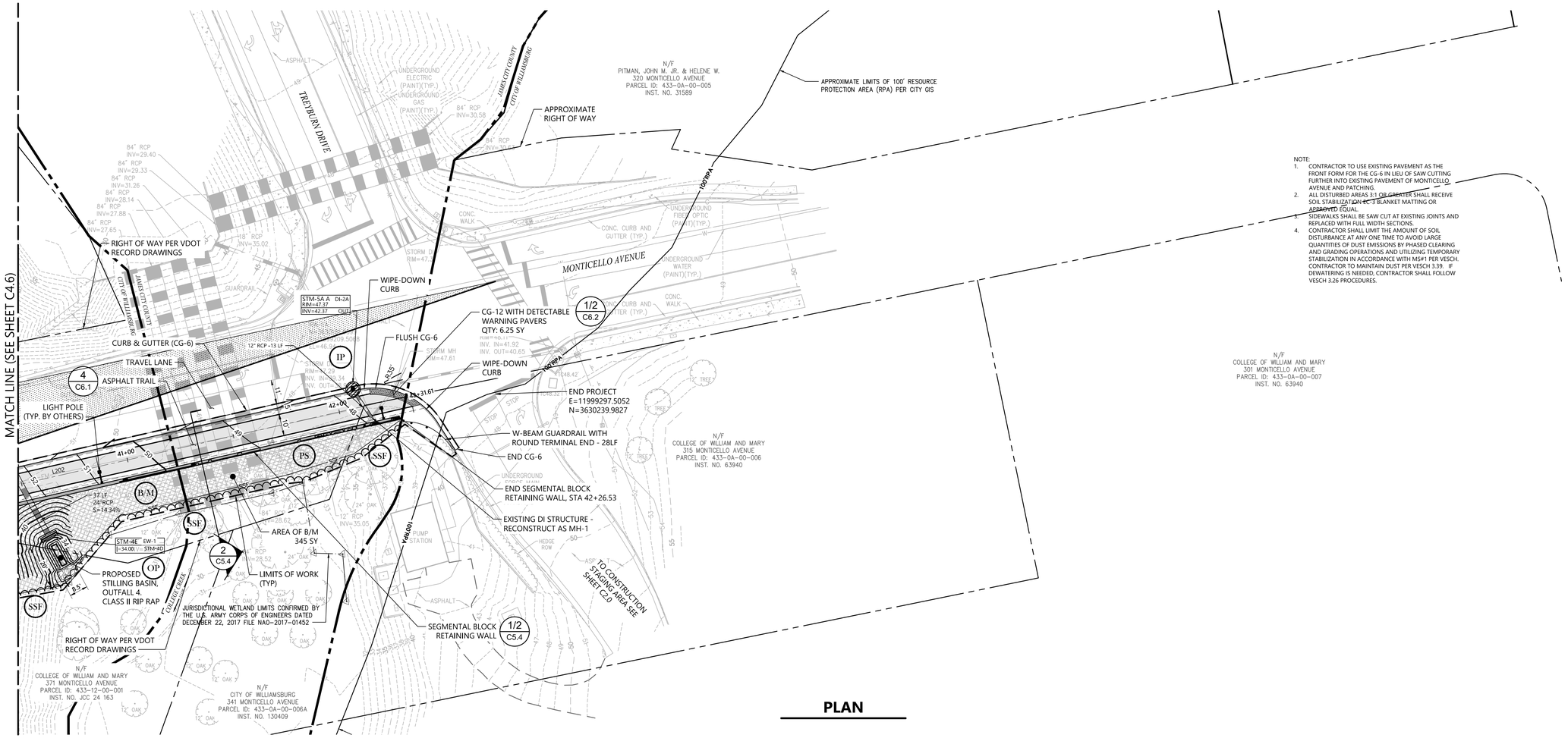


PROFILE



PLAN

NOTE:
1. CONTRACTOR TO USE EXISTING PAVEMENT AS THE FRONT FORM FOR THE CG-6 IN LIEU OF SAW CUTTING FURTHER INTO EXISTING PAVEMENT OF MONTICELLO AVENUE AND PATCHING.
2. ALL DISTURBED AREAS 3:1 OR GREATER SHALL RECEIVE SOIL STABILIZATION RC-3 BLANKET MATTING OR APPROVED EQUAL.
3. SIDEWALKS SHALL BE SAW CUT AT EXISTING JOINTS AND REPLACED WITH FULL WIDTH SECTIONS.
4. CONTRACTOR SHALL LIMIT THE AMOUNT OF SOIL DISTURBANCE AT ANY ONE TIME TO AVOID LARGE QUANTITIES OF DUST EMISSIONS BY PHASED CLEARING AND GRADING OPERATIONS AND UTILIZING TEMPORARY STABILIZATION IN ACCORDANCE WITH MS#1 PER VESCH. CONTRACTOR TO MAINTAIN DUST PER VESCH 3.39. IF DEWATERING IS NEEDED, CONTRACTOR SHALL FOLLOW VESCH 3.26 PROCEDURES.

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Suite 3
Williamsburg, VA 23185
757.220.0500

Pavement Legend

- 4" CONCRETE WALK
- 7" CONCRETE WALK
- ASPHALT TRAIL
- ADA DETECTABLE WARNING SURFACE (CG-12)

Legend

- DIP — DROP INLET PROTECTION
- IP — CURB INLET PROTECTION
- CIP — CULVERT INLET PROTECTION
- PS — PERMANENT SEEDING
- B/M — EROSION CONTROL BLANKET MATTING (EC-3 TYPE III) QTY: 345 SY
- OP — OUTFALL PROTECTION
- SSF — SUPER SILT FENCE
- SF — SILT FENCE

0 12.5 25 50 Feet

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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Issued for | Date

For Bid — May 1, 2019

Drawing Title

Grading, Drainage, Utility Layout & Materials and Phase 2 Erosion and Sediment Control Plan & Profile

Drawing Number

C4.7

COMMONWEALTH OF VIRGINIA
PIOTR SWIETUCHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

Sheet 19 of 46

Project Number
34319.00

Saved Wednesday, July 24, 2019 9:39:14 AM BGREENE Plotted Wednesday, July 24, 2019 9:46:51 AM Greene, Scott

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Alignment Line and Curve Data

No.	Delta	Radius	Length	Bearing	Ch. Dist.	Start Northing	Start Easting	End Northing	End Easting
L100			132.79'	S82°34'47"E		3628656.76	11995473.29	3628639.61	11995604.97
C100	028°37'17"	760.00'	379.65'	N83°06'35"E	375.71'	3628639.61	11995604.97	3628684.68	11995977.97
L101			161.49'	N68°47'56"E		3628684.68	11995977.97	3628743.08	11996128.52
C101	009°55'11"	200.00'	34.63'	N73°45'31"E	34.58'	3628743.08	11996128.52	3628752.76	11996161.73
L102			41.40'	N78°43'07"E		3628752.76	11996161.73	3628760.86	11996202.33
C102	010°10'38"	200.00'	35.53'	N73°37'48"E	35.48'	3628760.86	11996202.33	3628770.85	11996236.37
L103			174.10'	N68°32'29"E		3628770.85	11996236.37	3628834.55	11996398.40
C103	005°00'00"	500.35'	43.66'	N66°02'29"E	43.65'	3628834.55	11996398.40	3628852.27	11996438.29
L104			26.40'	N63°32'29"E		3628852.27	11996438.29	3628864.03	11996461.93
C104	004°45'14"	500.00'	41.48'	N65°55'05"E	41.47'	3628864.03	11996461.93	3628880.96	11996499.79
L105			285.85'	N68°17'42"E		3628880.96	11996499.79	3628986.67	11996765.37
C105	003°43'18"	598.00'	38.84'	N70°09'21"E	38.84'	3628986.67	11996765.37	3628999.86	11996801.90
L106			101.71'	N72°01'00"E		3628999.86	11996801.90	3629031.26	11996898.65
C106	004°17'14"	600.00'	44.90'	N69°52'23"E	44.89'	3629031.26	11996898.65	3629046.70	11996940.79
L107			382.45'	N67°43'46"E		3629046.70	11996940.79	3629191.64	11997294.71
C107	002°00'00"	1000.00'	34.91'	N68°43'46"E	34.90'	3629191.64	11997294.71	3629204.31	11997327.23
L108			22.40'	N69°43'46"E		3629204.31	11997327.23	3629212.06	11997348.24
C108	002°00'00"	1000.00'	34.91'	N68°43'46"E	34.90'	3629212.06	11997348.24	3629224.73	11997380.77
L109			277.61'	N67°43'46"E		3629224.73	11997380.77	3629329.94	11997637.67
C109	004°05'53"	600.00'	42.92'	N69°46'43"E	42.91'	3629329.94	11997637.67	3629344.77	11997677.93
L110			83.70'	N71°49'39"E		3629344.77	11997677.93	3629370.87	11997757.46
C110	004°11'31"	600.00'	43.90'	N69°43'54"E	43.89'	3629370.87	11997757.46	3629386.07	11997798.63
L111			48.86'	N67°38'08"E		3629386.07	11997798.63	3629404.67	11997843.82
C111	007°42'59"	400.00'	53.87'	N71°29'38"E	53.83'	3629404.67	11997843.82	3629421.75	11997894.86
L112			87.80'	N75°21'07"E		3629421.75	11997894.86	3629443.95	11997979.80

Alignment Line and Curve Data

No.	Delta	Radius	Length	Bearing	Ch. Dist.	Start Northing	Start Easting	End Northing	End Easting
L200			15.50'	N68°18'52"E		3629954.69	11998960.26	3629960.41	11998974.66
L201			14.52'	N21°41'08"W		3629960.41	11998974.66	3629973.91	11998969.30
C200	077°24'58"	55.00'	74.31'	N17°01'21"E	68.79'	3629973.91	11998969.30	3630039.68	11998989.43
L202			327.27'	N55°43'50"E		3630039.68	11998989.43	3630223.96	11999259.89

Alignment Line and Curve Data

No.	Delta	Radius	Length	Bearing	Ch. Dist.	Start Northing	Start Easting	End Northing	End Easting
C112	024°54'52"	125.00'	54.35'	N62°53'41"E	53.93'	3629443.95	11997979.80	3629468.52	11998027.81
L113			35.59'	N50°26'15"E		3629468.52	11998027.81	3629491.19	11998055.24
C113	014°26'23"	200.00'	50.40'	N57°39'27"E	50.27'	3629491.19	11998055.24	3629518.08	11998097.72
L114			172.26'	N64°52'38"E		3629518.08	11998097.72	3629591.22	11998253.69
C114	009°00'00"	250.78'	39.39'	N69°22'38"E	39.35'	3629591.22	11998253.69	3629605.08	11998290.52
L115			9.79'	N73°52'38"E		3629605.08	11998290.52	3629607.80	11998299.92
C115	011°15'59"	125.00'	24.58'	N68°14'39"E	24.54'	3629607.80	11998299.92	3629616.89	11998322.71
L116			31.69'	N62°36'40"E		3629616.89	11998322.71	3629631.47	11998350.85
C116	012°15'59"	125.00'	26.76'	N56°28'41"E	26.71'	3629631.47	11998350.85	3629646.22	11998373.12
L117			26.76'	N50°20'41"E		3629646.22	11998373.12	3629663.30	11998393.71
C117	010°32'06"	250.00'	45.97'	N55°36'44"E	45.90'	3629663.30	11998393.71	3629689.22	11998431.60
L118			102.52'	N60°52'47"E		3629689.22	11998431.60	3629739.12	11998521.16
C118	003°19'33"	6000.00'	348.29'	N59°13'01"E	348.24'	3629739.12	11998521.16	3629917.34	11998820.34
L119			45.42'	N57°33'14"E		3629917.34	11998820.34	3629941.71	11998858.67
C119	069°29'31"	55.00'	66.71'	S87°42'01"E	62.69'	3629941.71	11998858.67	3629939.20	11998921.32
L120			11.50'	N68°18'52"E		3629939.20	11998921.32	3629943.45	11998932.00

0 12.5 25 50 Feet

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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Drawing Title
Line and Curve Tables

Drawing Number
C4.8

COMMONWEALTH OF VIRGINIA
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Project Number
34319.00

Saved: Tuesday, May 7, 2019 4:44:28 PM RWATT Plotted: Wednesday, May 8, 2019 11:46:45 AM Watt, Richard

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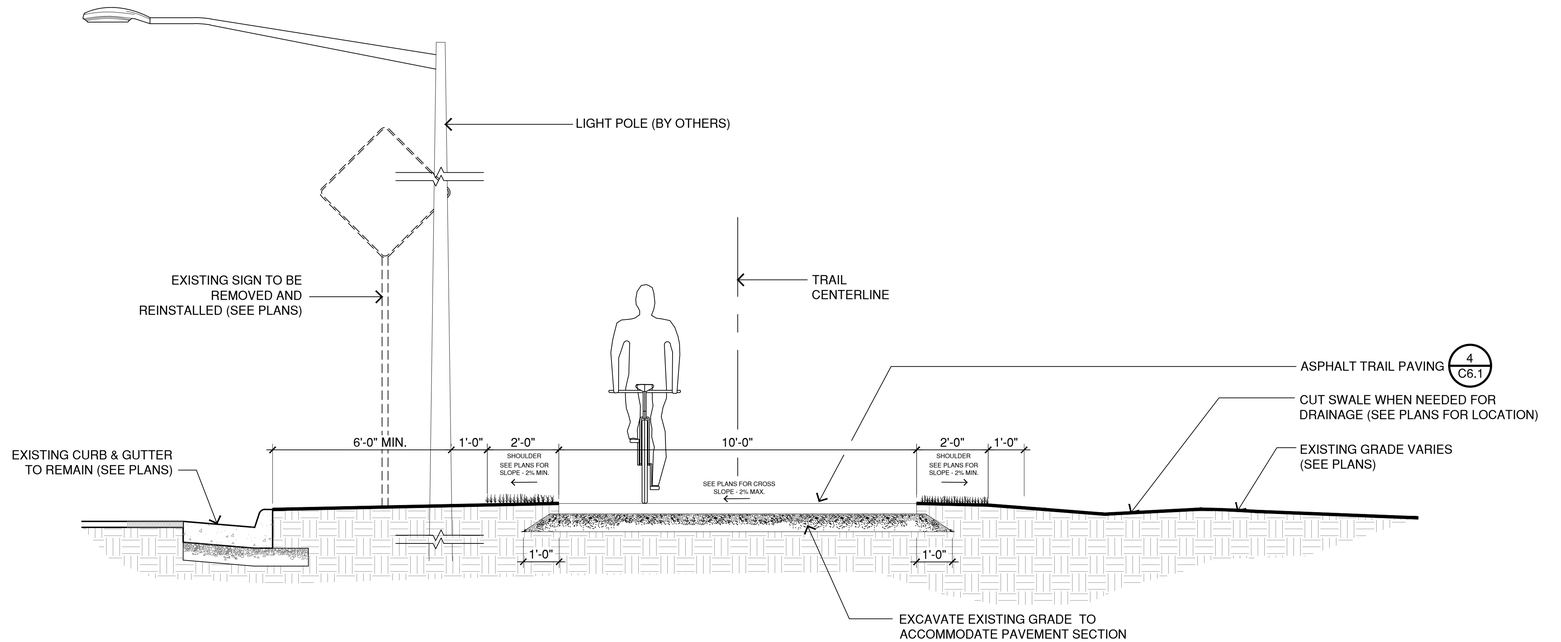
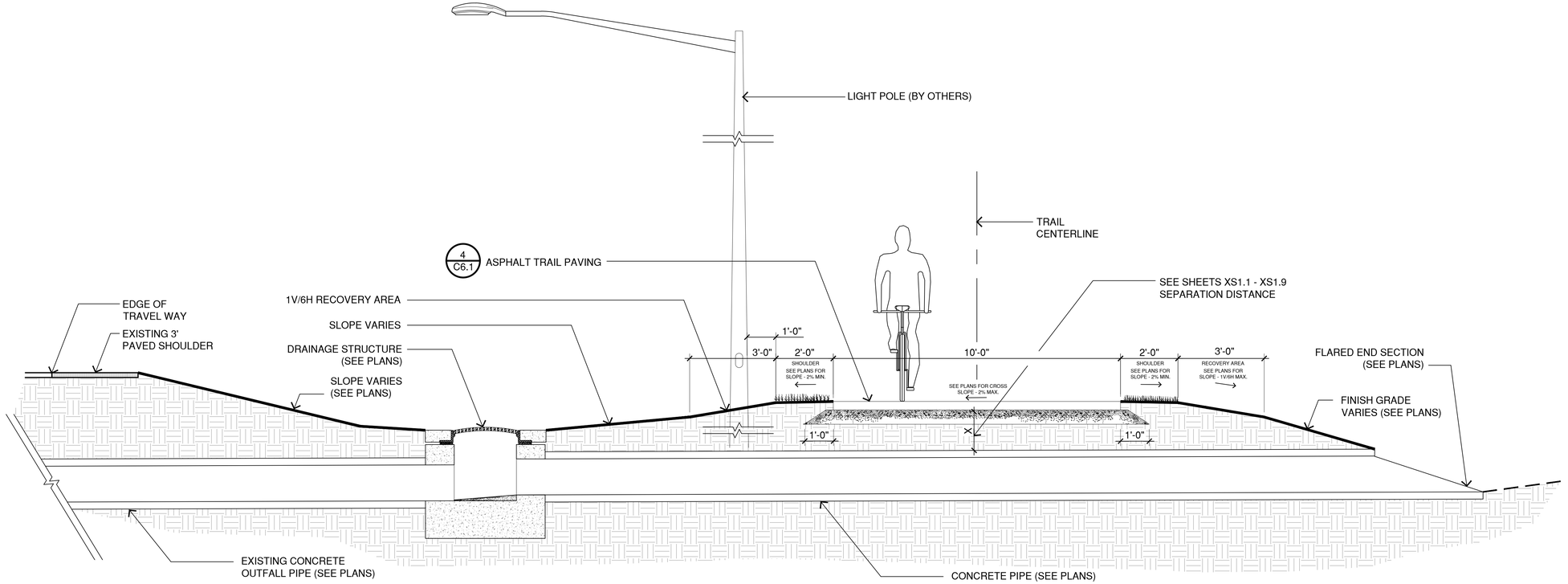


MULTI-USE TRAIL SECTION - Adjacent to Existing Curb & Gutter (Station 0+00 to 7+00)

Scale: 1/2" = 1'-0"

Source: VHB

1
C5.1



MULTI-USE TRAIL SECTION - Catchment Area Adjacent to Roadway (Station +/-8+00 and +/- 30+00)

Scale: 1/2" = 1'-0"

Source: VHB

2
C5.1

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Monticello Avenue Multi-Use Trail

Monticello Avenue
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Drawing Title: Typical Sections

Drawing Number: C5.1

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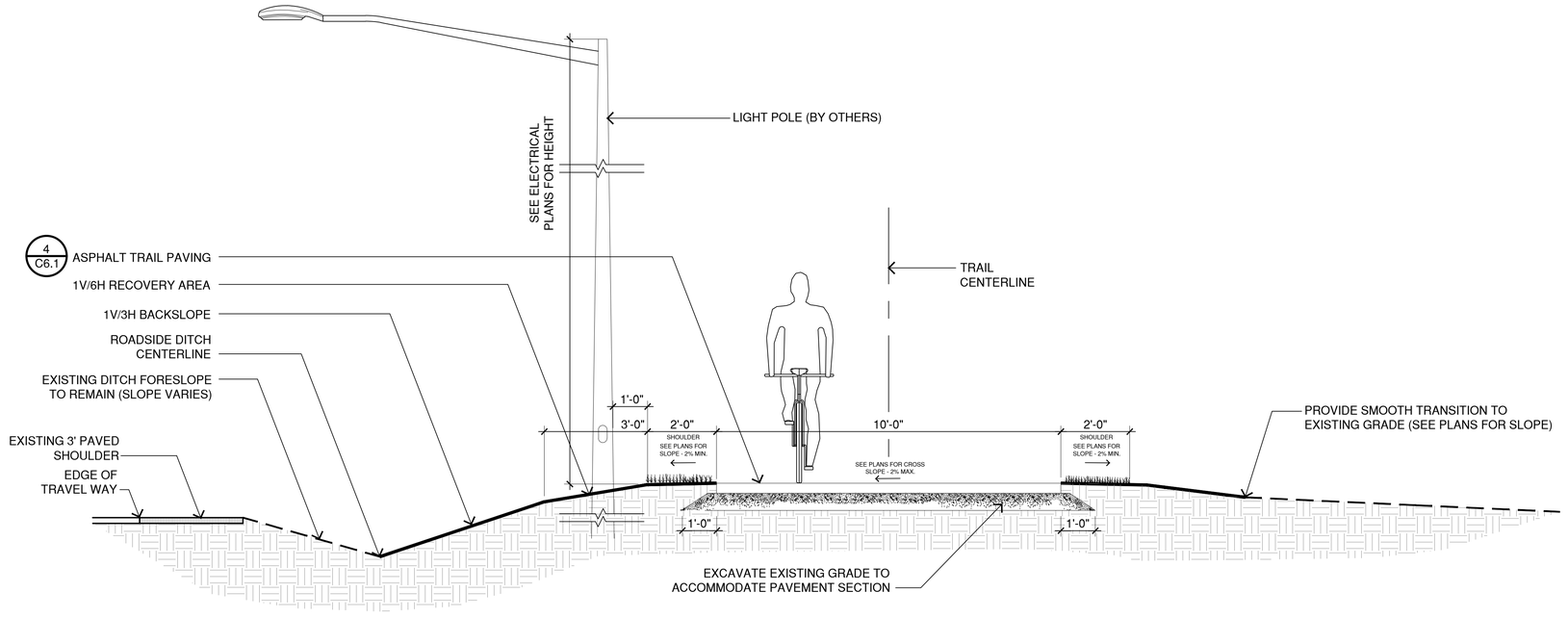
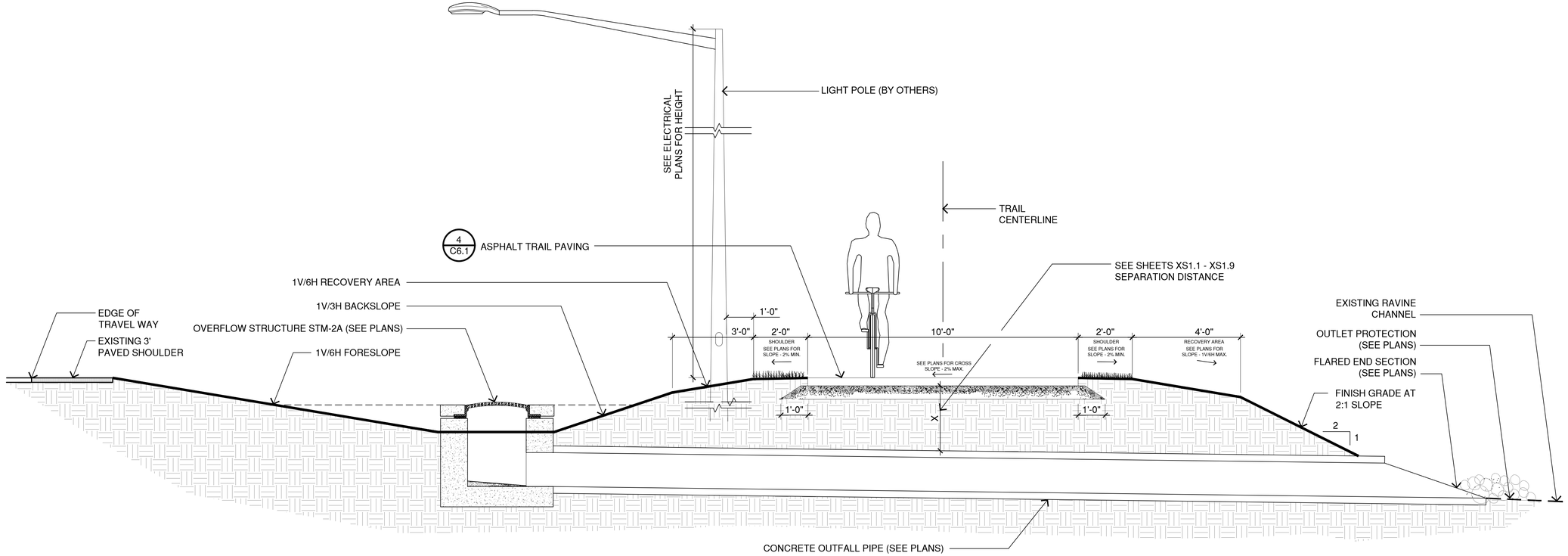


MULTI-USE TRAIL SECTION - Typical Condition Adjacent to Existing Roadside Ditch (Station 8+50 to 26+50 and 28+50 to 30+00)

Scale: 1/2" = 1'-0"

Source: VHB

1 C5.2



MULTI-USE TRAIL SECTION - Detention Area Adjacent to Roadway (Station 27+25)

Scale: 1/2" = 1'-0"

Source: VHB

2 C5.2

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Drawing Number: C5.2

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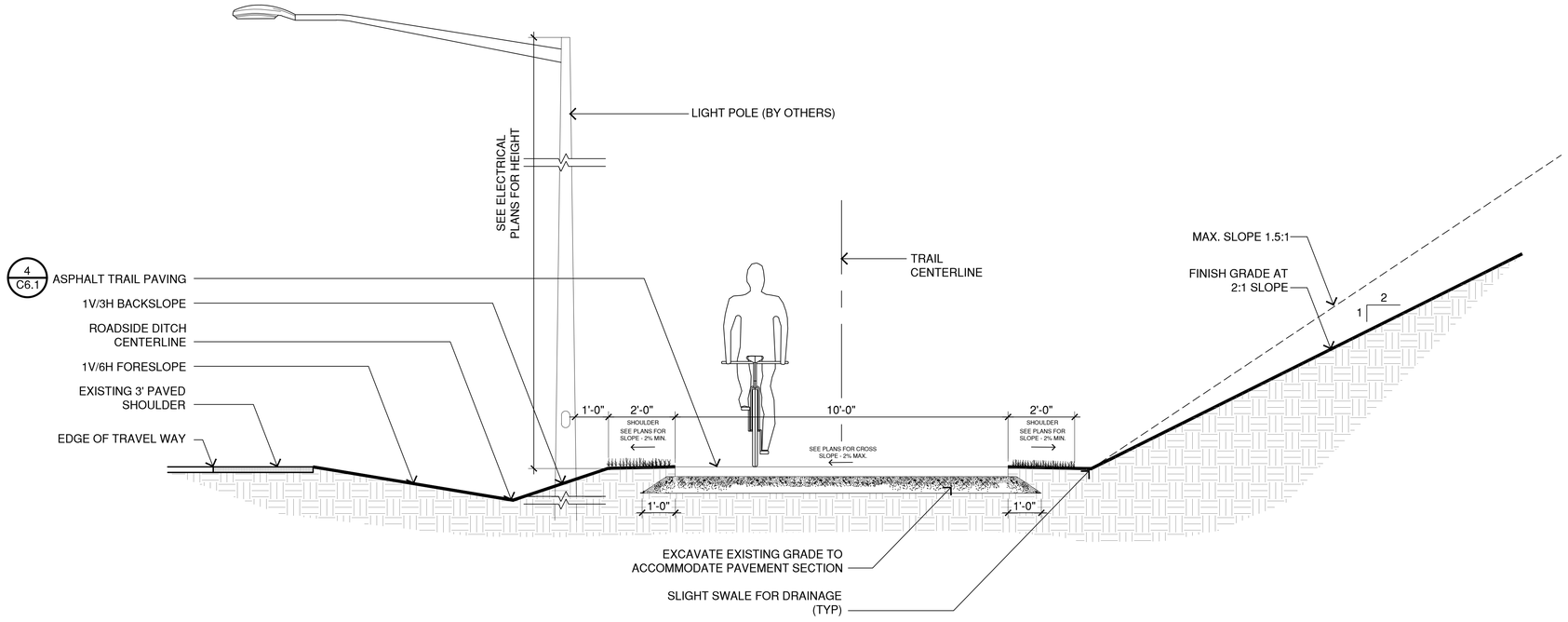
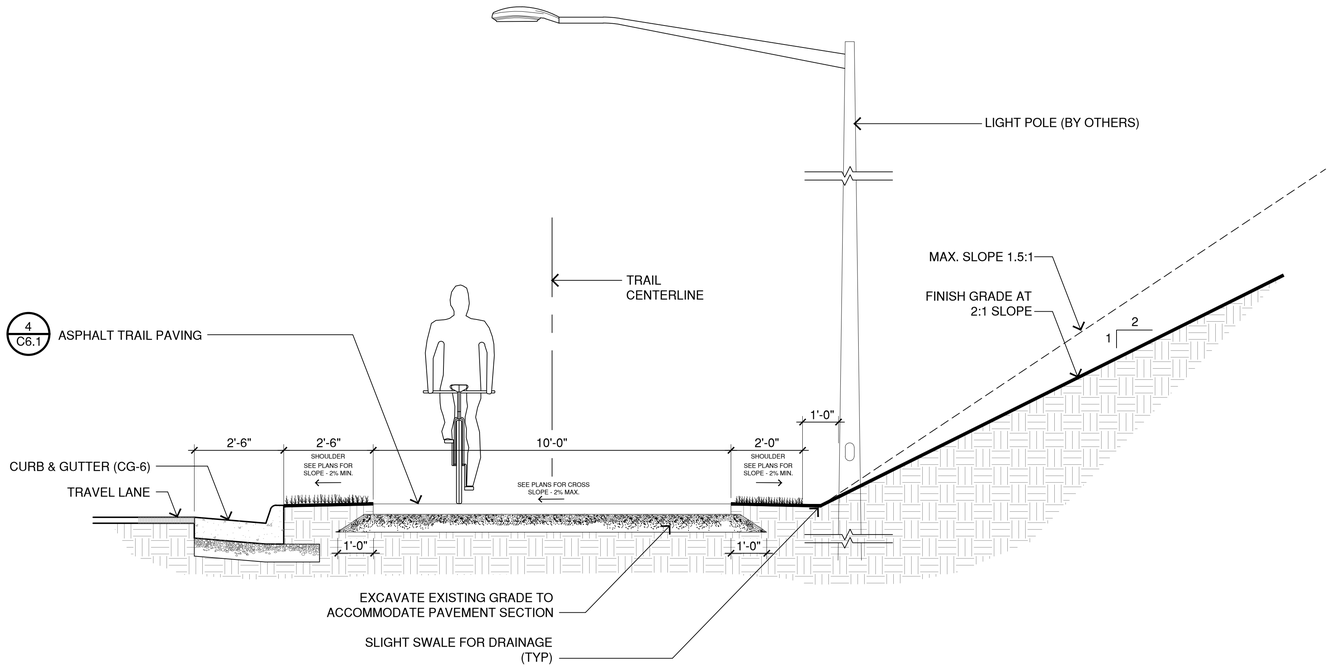


MULTI-USE TRAIL SECTION - Roadside Ditch Adjacent to Steep Cut Slopes (Station +/- 32+00 to 37+00)

Scale: 1/2" = 1'-0"

Source: VHB

1
C5.3



MULTI-USE TRAIL SECTION - East of Compton Drive - Curb & Gutter Adjacent to Steep Cut Slopes (Station 38+50 to 40+25)

Scale: 1/2" = 1'-0"

Source: VHB

2
C5.3

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Drawing Title: Typical Sections

Drawing Number: C5.3

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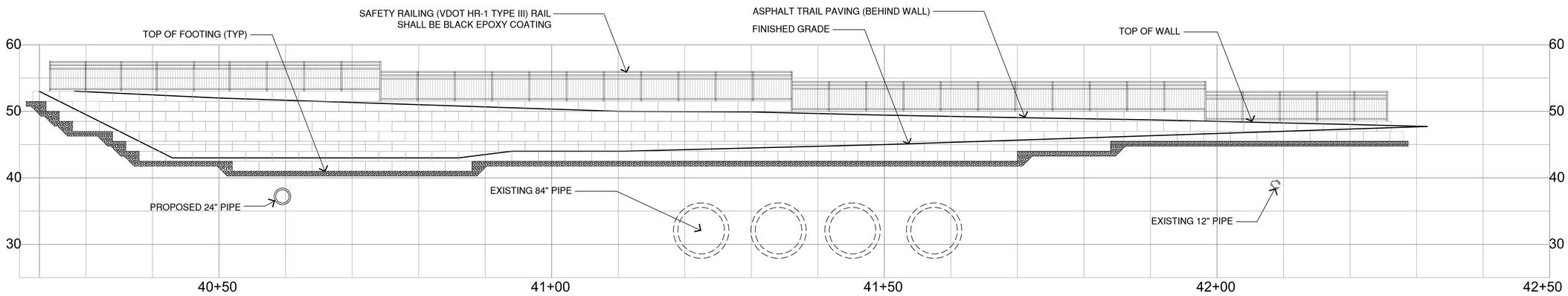
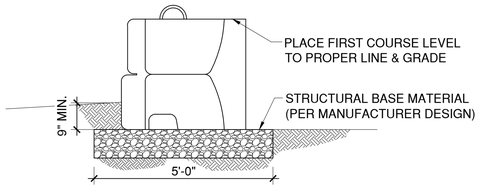


RETAINING WALL ELEVATION

Scale: 1/8" = 1'-0"

Source: VHB

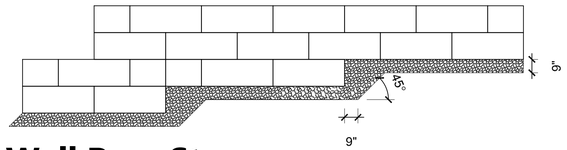
1 / C5.4



NOTE: BEARING CONDITIONS SHALL BE OBSERVED BY THE SITE GEOTECHNICAL ENGINEER. BASE DIMENSIONS MAY BE INCREASED TO ADDRESS DEFICIENT SOIL BEARING CONDITIONS.

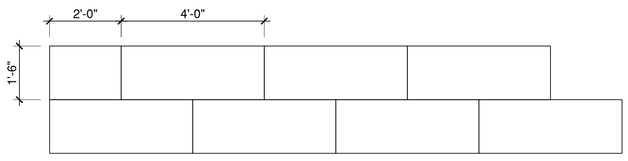
Wall Base

N.T.S. Source: VHB



Wall Base Step

N.T.S. Source: VHB



NOTE:
BLOCK PATTERN : RUNNING BOND; AVOID MULTIPLE VERTICAL JOINTS, ACTUAL OR SIMULATED, WHEREVER POSSIBLE.
BLOCK APPEARANCE: CONTRACTOR SHALL SUBMIT OPTIONS TO THE CITY FOR APPROVAL.
BLOCK COLOR: CONTRACTOR SHALL SUBMIT OPTIONS TO THE CITY FOR APPROVAL.
BLOCK DIMENSION: ±18" HIGH BY ±48" WIDE AND ±18" HIGH BY ±24" WIDE

Typical Block Pattern

N.T.S. Source: VHB

MULTI-USE TRAIL SECTION - East of Compton Drive - Curb & Gutter Adjacent to College Creek (Station 40+25 to 42+25)

Scale: 1/2" = 1'-0"

Source: VHB

2 / C5.4

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Drawing Number: C5.4

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Project Number: 34319.00

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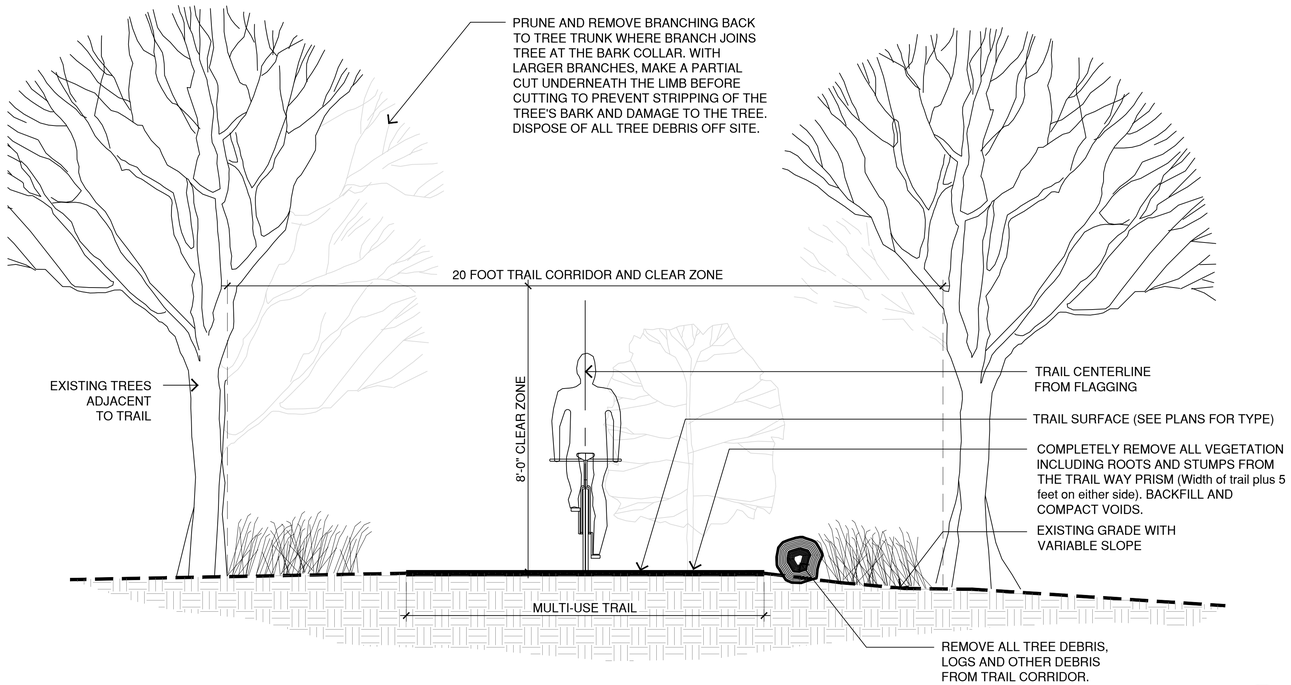
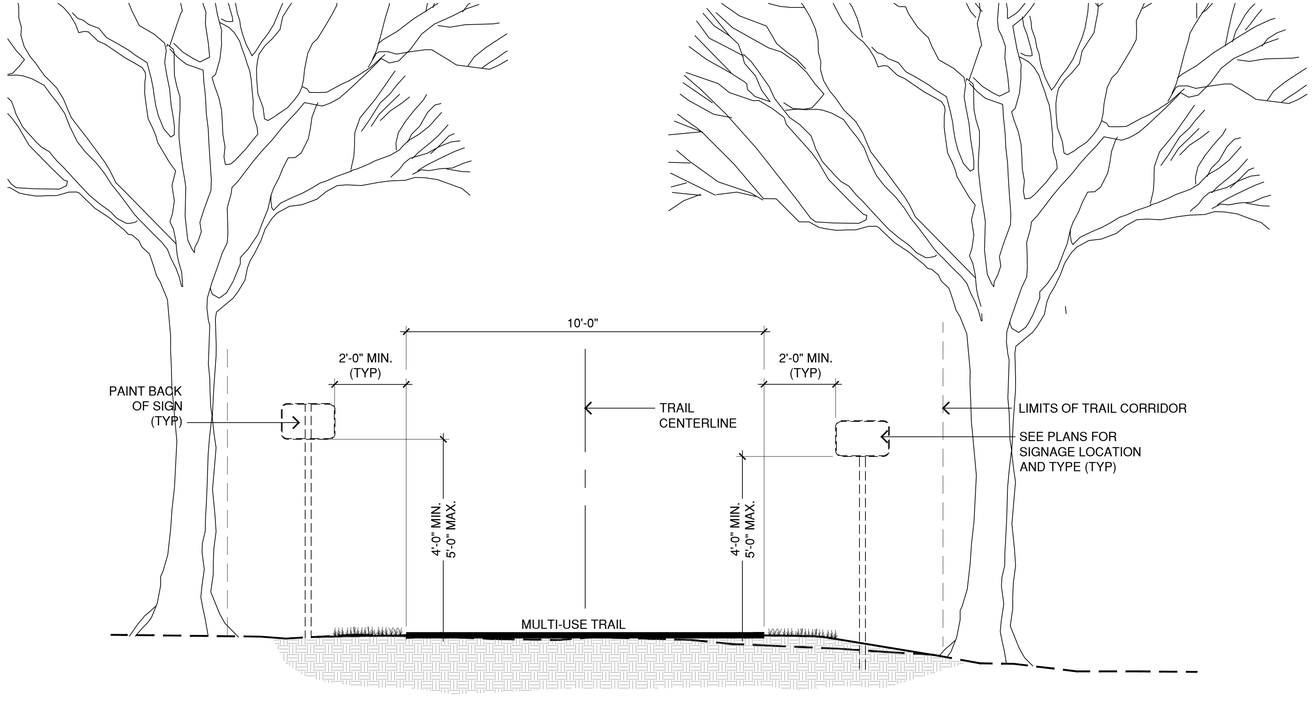


MULTI-USE TRAIL CLEAR ZONE REQUIREMENTS

Scale: 1/2" = 1'-0" Source: VHB

1
C5.5



TRAIL SIGNAGE AND TRAIL MARKER SETBACKS

Scale: 1/2" = 1'-0" Source: VHB

2
C5.5

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Typical Sections

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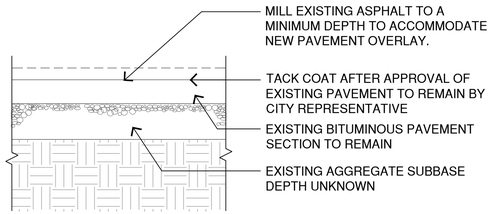
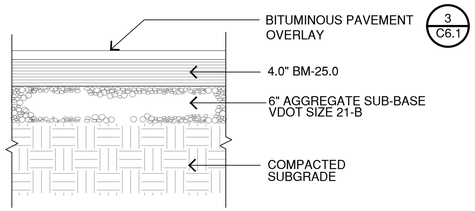
Project Number
34319.00



MILLED BITUMINOUS PAVEMENT

Scale: 1" = 1'-0" Source: VHB

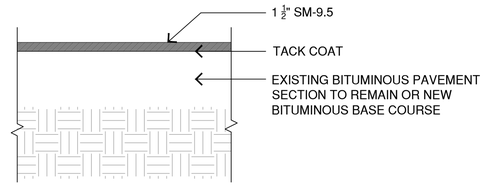
1 / C6.1



ROADWAY BITUMINOUS PAVING

Scale: 1" = 1'-0" Source: VHB

2 / C6.1



BITUMINOUS PAVEMENT OVERLAY

Scale: 1" = 1'-0" Source: VHB

3 / C6.1

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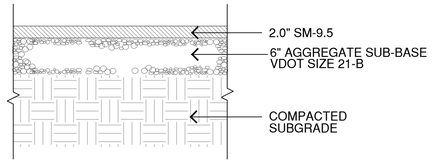
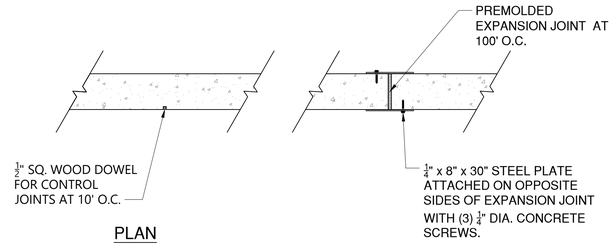
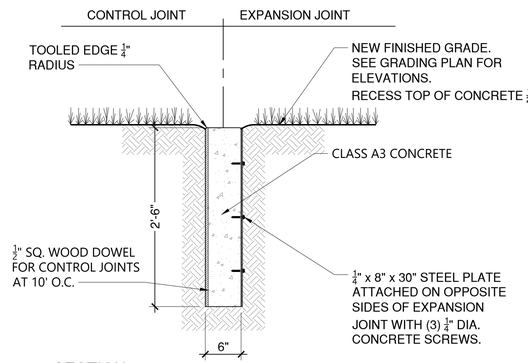


TRAIL BITUMINOUS PAVING

Scale: 1" = 1'-0" Source: VHB

4 / C6.1





Sign Summary

Quantity	M.U.T.C.D. Number	Specification Width	Specification Height	Desc.
2	R1-1	18"	18"	STOP
3	W11-15	30"	30"	
3	W11-15P	18"	12"	TRAIL X-ING
2	W16-7P	24"	12"	
1	W16-9P	24"	12"	AHEAD
1	R9-5	12"	18"	USE PED SIGNAL
1	NS "MATOAKA TRAIL"	16"	20"	MATOAKA TRAIL

SIGNAGE NOTES

1. SUBMIT FINAL ARTWORK FOR EACH SIGN FOR APPROVAL PRIOR TO INSTALLATION.
2. ALL SIGNAGE SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) LATEST EDITION.
3. ALL SIGNAGE LOCATIONS SHALL BE APPROVED PRIOR TO INSTALLATION.
4. MATOAKA TRAIL SIGN:
   - 4.1. FONT - 2" BASKERVILLE
   - 4.1. SHALL BE 3M DIAMOND GRADE REFLECTIVE SHEETING MOUNTED ON 0.080 GAUGE ANODIZED ALUMINUM
   - 4.2. COLORS:
     - WHITE LETTERS & BORDER
     - "WILLIAMSBURG GREEN" BACKGROUND
       - 20oz 3M 888 GREEN
       - 5.5oz 3M 885 BLACK

SIGN SUMMARY

N.T.S. Source: VHB

5 / C6.1

NOT USED

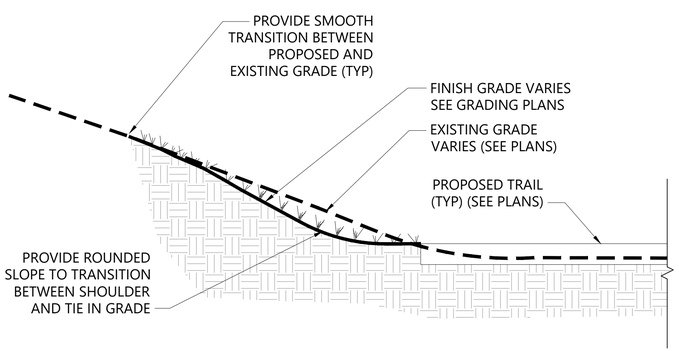
Scale: 1" = 1'-0" Source: VHB

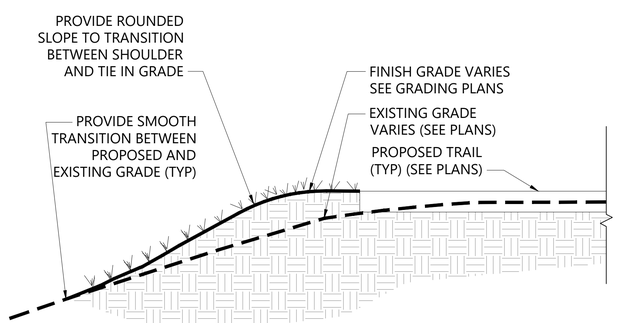
6 / C6.1

BAMBOO ROOT BARRIER

Scale: 1" = 1'-0" Source: VHB

7 / C6.1





SLOPE ROUNDING DETAIL

Scale: N.T.S. Source: VHB

8 / C6.1

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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Drawing Title
Site Details

Drawing Number
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Project Number
34319.00

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Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

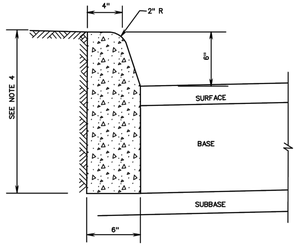
Saved Tuesday, May 7, 2019 4:15:31 PM RWATT Plotted Tuesday, May 7, 2019 4:16:55 PM Watt, Richard

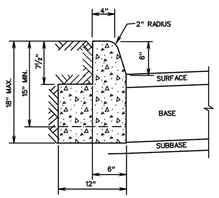
\\vhb\gbl\proj\Williamsburg\34319.00 CityofWmsb_Monticello\cad\ld\Planset\34319.00-DT.dwg

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" (5" DEPTH) OR INCREASED AS MUCH AS 3" (2" 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, IN THE SECTION ON GS URBAN STANDARDS.





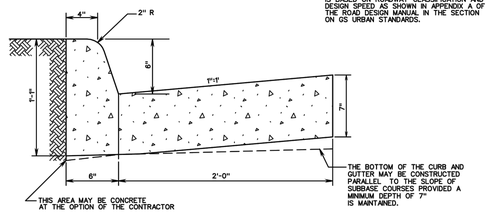
ACCEPTABLE ALTERNATIVE IF CURB IS EXTRUDED

SPECIFICATION REFERENCE	STANDARD 6" CURB	VDOT ROAD AND BRIDGE STANDARDS
105 502	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE: — SHEET 1 OF 1 201.01

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 & 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 ROAD DESIGN MANUAL IN THE SECTION ON GS URBAN STANDARDS.



SPECIFICATION REFERENCE	COMBINATION 6" CURB AND GUTTER	VDOT ROAD AND BRIDGE STANDARDS
105 502	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE: — SHEET 1 OF 1 201.03

CG-12

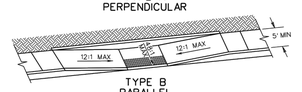
GENERAL NOTES:

1. THE DETECTABLE WARNING SHALL BE PROVIDED BY TRUNCATED DOMES.
2. DETECTABLE WARNING SHALL BE FROM THE MATERIALS APPROVED LIST FOR DETECTABLE WARNING SURFACES. PRODUCTS NOT LISTED SHALL MEET THE REQUIREMENTS OF THE SPECIAL PROVISION FOR CG-12 DETECTABLE WARNING SURFACE AND SHALL BE SUBMITTED TO THE STANDARDS AND SPECIAL DESIGN SECTION FOR APPROVAL.
3. SLOPING SIDES OF CURB RAMP MAY BE POURED MONOLITHICALLY WITH RAMP FLOOR OR BY USING PERMISSIBLE CONSTRUCTION JOINT WITH REQUIRED BARS.
4. IF RAMP FLOOR IS PRECAST, HOLES MUST BE PROVIDED FOR DOWEL BARS SO THAT ADJOINING FLARED SIDES CAN BE CAST IN PLACE AFTER PLACEMENT OF PRECAST RAMP FLOOR. PRECAST CONCRETE SHALL BE CLASS A-4.
5. REQUIRED BARS ARE TO BE NO. 5 X 8'- PLACED 1' CENTER TO CENTER ALONG BOTH SIDES OF THE RAMP FLOOR, MID-DEPTH OF RAMP FLOOR. MINIMUM CONCRETE COVER 1½".
6. CURB / CURB AND GUTTER SLOPE TRANSITIONS ADJACENT TO CURB RAMPS ARE INCLUDED IN PAYMENT FOR CURB / CURB AND GUTTER.
7. CURB RAMPS ARE TO BE LOCATED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THEY ARE TO BE PROVIDED AT INTERSECTIONS WHEREVER AN ACCESSIBLE ROUTE WITHIN THE RIGHT OF WAY OF A HIGHWAY FACILITY CROSSES A CURB REGARDLESS OF WHETHER SIDEWALK IS EXISTING, PROPOSED, OR NONEXISTENT. THEY MUST BE LOCATED WITHIN PEDESTRIAN CROSSWALKS AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER, AND SHOULD NOT BE LOCATED BEHIND VEHICLE STOP LINES, EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. ACCESSIBLE ROUTES PROVIDE A CONTINUOUS UNOBSTRUCTED, STABLE, FIRM AND SLIP RESISTANT PATH CONNECTING ALL ACCESSIBLE ELEMENTS OF A FACILITY THAT CAN BE APPROACHED, ENTERED AND USED BY PEDESTRIANS.
8. RAMPS MAY BE PLACED ON RADIAL OR TANGENTIAL SECTIONS PROVIDED THAT THE CURB OPENING IS PLACED WITHIN THE LIMITS OF THE CROSSWALK AND THAT THE SLOPE AT THE CONNECTION OF THE CURB OPENING IS PERPENDICULAR TO THE CURB.
9. TYPICAL CONCRETE SIDEWALK IS 4" THICK. WHEN THE ENTRANCE RADII CANNOT ACCOMMODATE THE TURNING REQUIREMENTS OF ANTICIPATED HEAVY TRUCK TRAFFIC, REFER TO STANDARD CG-13, COMMERCIAL ENTRANCE (HEAVY TRUCK TRAFFIC) FOR CONCRETE DEPTH.
10. WHEN CURB RAMPS ARE USED IN CONJUNCTION WITH A SHARED USE PATH, THE MINIMUM WIDTH SHALL BE THE WIDTH OF THE SHARED USE PATH.
11. WHEN ONLY ONE CURB RAMP IS PROVIDED FOR TWO CROSSINGS (DIAGONAL), A 4'x 4' LANDING AREA SHALL BE PROVIDED TO MANEUVER A WHEELCHAIR INTO THE CROSSWALK WITHOUT GOING INTO THE TRAVELWAY. THIS 4' x 4' LANDING AREA MAY INCLUDE THE GUTTER PAN.
12. ALL CASES WHERE CURB RAMPS INTERSECT A RADIAL SECTION OF CURB AT ENTRANCES OR STREET CONNECTIONS THE DETECTABLE WARNING SURFACE SHALL HAVE A FACTORY RADIUS OR BE FIELD -MODIFIED AS RECOMMENDED BY THE MANUFACTURER TO MATCH THE BACK OF CURB.

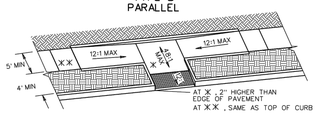
NOTE: COMPONENTS OF CURB RAMPS CONSIST OF THE FOLLOWING: HYDRAULIC CEMENT SIDEWALK (DEPTH IN INCHES, AREA IN SQUARE YARDS) CURB WHEN REQUIRED (CG-2 OR CG-3 IN LINEAR FEET) DETECTABLE WARNING SURFACE (AREA IN SQUARE YARDS) EACH OF THE ABOVE ITEMS IS A SEPARATE PAY ITEM AND SHOULD BE SUMMARIZED FOR EACH CURB CUT RAMP.



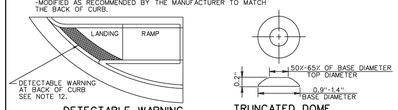
TYPE A PERPENDICULAR



TYPE B PARALLEL

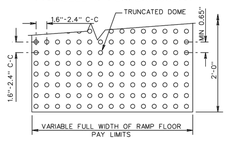


TYPE C PARALLEL & PERPENDICULAR



DETECTABLE WARNING INSTALLED ON A RADIUS

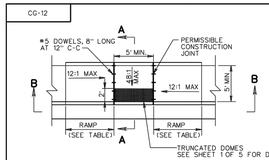
TRUNCATED DOME DETAIL



DETECTABLE WARNING DETAIL

VDOT ROAD AND BRIDGE STANDARDS	CG-12 DETECTABLE WARNING SURFACE (GENERAL NOTES)	SPECIFICATION REFERENCE
SHEET 1 OF 5 203.05	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE: 07/15 105 502

CG-12



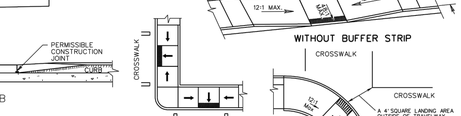
SECTION A-A

SECTION B-B

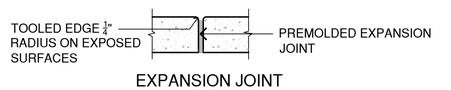
NOTES: FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.

THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET, REGARDLESS OF THE SLOPE.

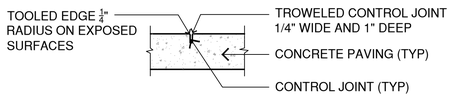
TYPE B PARALLEL APPLICATION		
ROADWAY GRADE IN PERCENT	MINIMUM RAMP LENGTH IN FEET	
	4" CURB	6" CURB
0	4	6
1	5	7
2	5	8
3	6	9
4	8	12
5	10	15
6	14	15



VDOT ROAD AND BRIDGE STANDARDS	CG-12 DETECTABLE WARNING SURFACE TYPE B (PARALLEL) APPLICATION	SPECIFICATION REFERENCE
SHEET 3 OF 5 203.07	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE: 07/15 105 502



EXPANSION JOINT



CONTROL JOINT

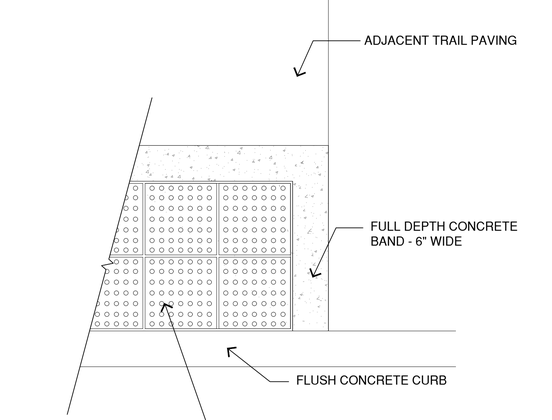
NOTES:

1. PROVIDE CONTROL JOINTS AT INTERVALS EQUAL TO THE WIDTH OF THE WALKWAY UNLESS OTHERWISE NOTED. SAW CUTTING IS NOT PERMITTED.
2. EXPANSION JOINTS SHALL BE PROVIDED AT INTERVALS NOT EXCEEDING 3 TIMES THE WIDTH OF THE WALK, AND AT JUNCTION POINTS OF CURBS AND ENTRANCES, AND ON BOTH SIDES OF ALL WALKWAY SECTIONS CONTAINING UTILITIES, ADJACENT TO WALLS OR OTHER FIXED OBJECTS. PREMOLDED, ½" JOINT FILLER SHALL BE USED EXTENDING FOR THE BOTTOM OF THE SLAB TO ¼" OF ITS TOP SURFACE.
3. AS SOON AS CONCRETE WILL NOT SLUMP, FACE FORMS ARE TO BE REMOVED, IRREGULARITIES REMOVED, APPLY INDICATED FINISH AND LIQUID MEMBRANE SEAL OR OTHER APPROVED CURING MEDIUM APPLIED.
4. THE CONTRACTOR SHALL PREVENT THE TEMPERATURE AT THE SURFACE OF THE CONCRETE FORM FALLING BELOW 40 F DURING THE FIRST 72 HOURS IMMEDIATELY FOLLOWING CONCRETE PLACEMENT. PROTECTIVE MATERIAL SHALL BE LEFT IN PLACE FOR ADDITIONAL 48 HOURS IF FREEZING AIR TEMPERATURES ARE EXPECTED TO CONTINUE.
5. CONCRETE PLACED WITHIN THE RIGHT OF WAY (CURB & GUTTER, SIDEWALKS, ENTRANCES, ETC.) THAT ABUT WEATHERED CONCRETE SHALL USE EITHER CLEAR CURING COMPOUND (NOT WHITE) OR BE CURED WITH PLASTIC COVERING AND NO CURING COMPOUND.
6. CONCRETE PAVING FOR WALKWAYS ACROSS ENTRANCES OR ACCESSIBLE RAMPS SHALL HAVE A DEPTH OF 7 INCHES UNLESS OTHERWISE NOTED.
7. COORDINATE CONTROL JOINTS WITH ADJACENT CONCRETE PAVING.
8. EDGING TOOL SHALL BE SUBMITTED AND APPROVED BY OWNER'S REPRESENTATIVE.

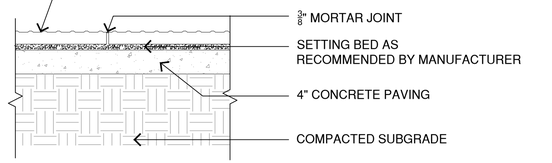
CONCRETE PAVING DETAILS & NOTES

Scale: 1" = 1'-0" Source: VHB

1 / C6.2



PLAN



SECTION

DETECTABLE WARNING PAVERS

Scale: 1" = 1'-0" Source: VHB

2 / C6.2

vhb.com
vhb
351 McLaws Circle
Suite 3
Williamsburg, VA 23185
757.220.0500

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

Designed by — Checked by

Issued for — Date

For Bid — May 1, 2019

Drawing Title: Site Details

Drawing Number: C6.2

Sheet 27 of 46

Project Number: 34319.00

COMMONWEALTH OF VIRGINIA
PIOTR SWIETLICHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

Saved Tuesday, May 7, 2019 4:15:31 PM RWATT Plotted Tuesday, May 7, 2019 4:17:06 PM Watt, Richard

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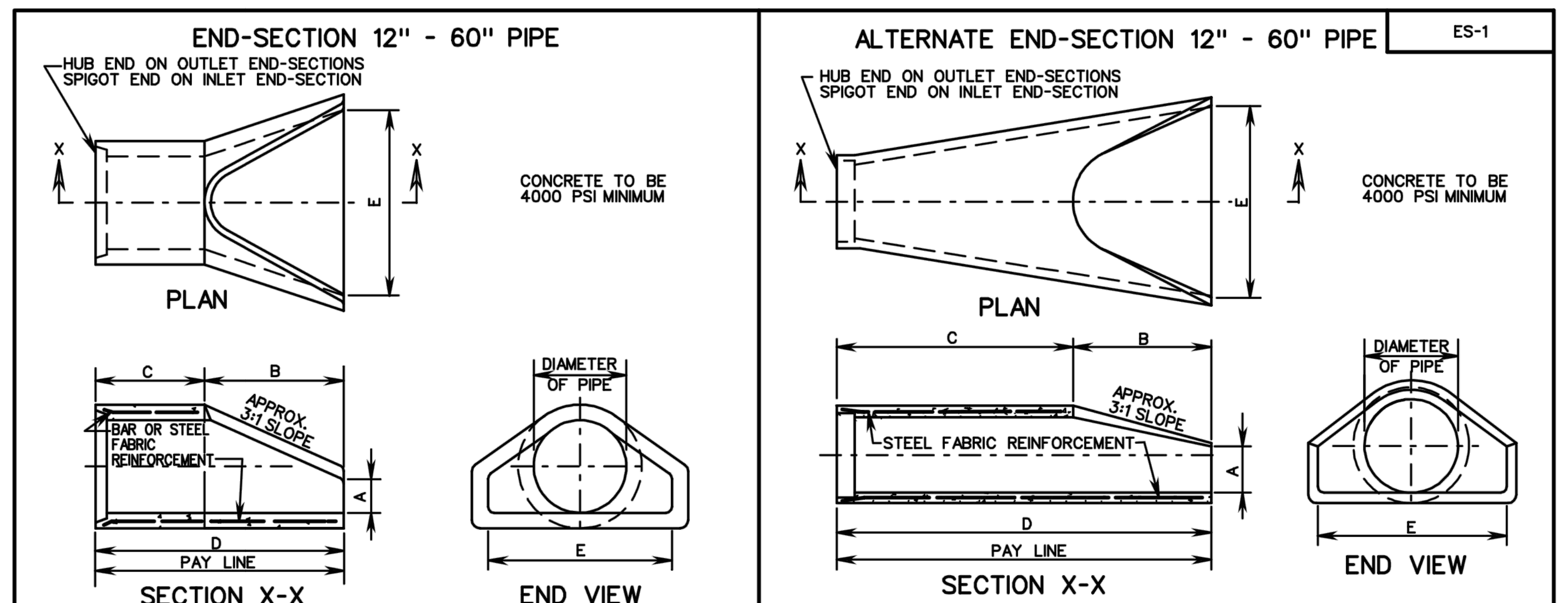
351 McLaws Circle
Suite 3
Williamsburg, VA 23185
757.220.0500

ES-1

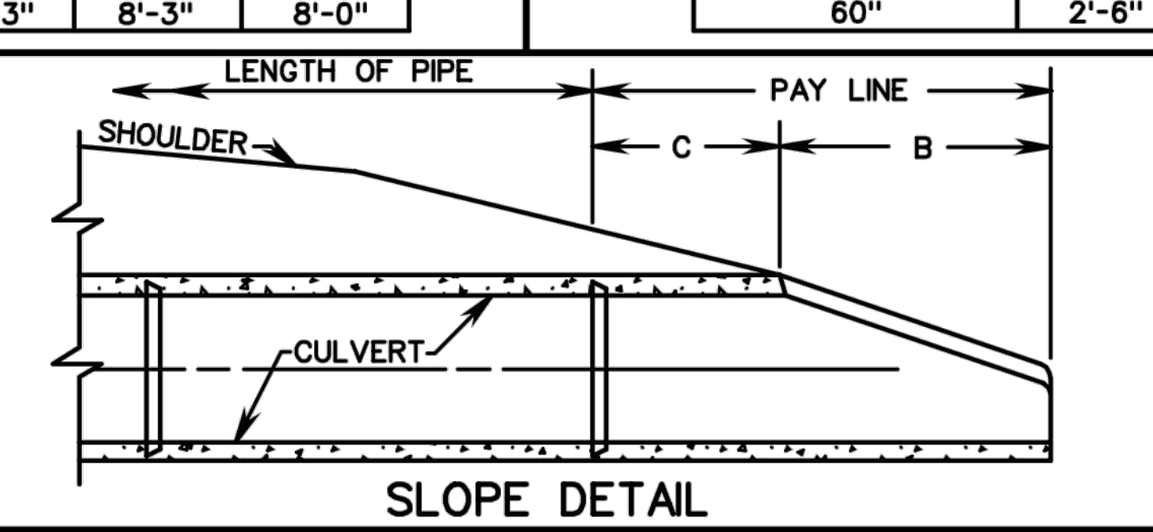


END SECTION DIMENSIONS

PIPE DIAMETER	A	B	C	D	E
12"	4"	2'-0"	2'-0"	4'-0"	2'-0"
15"	6"	2'-3"	1'-9"	4'-0"	2'-6"
18"	9"	2'-3"	1'-9"	4'-0"	3'-0"
21"	9¼"	2'-11"	2'-1"	5'-0"	3'-6"
24"	9½"	3'-7"	2'-6"	6'-1"	4'-0"
27"	10¾"	4'-0"	2'-1"	6'-1"	4'-6"
30"	1'-0"	4'-6"	1'-7¾"	6'-1¾"	5'-0"
33"	1'-1½"	4'-10½"	2'-3¼"	7'-1¾"	5'-6"
36"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	6'-0"
42"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"
48"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"
54"	2'-3"	5'-5"	2'-9¼"	8'-2¼"	7'-6"
60"	2'-11"	5'-0"	3'-3"	8'-3"	8'-0"

END SECTION DIMENSIONS (Alternate)

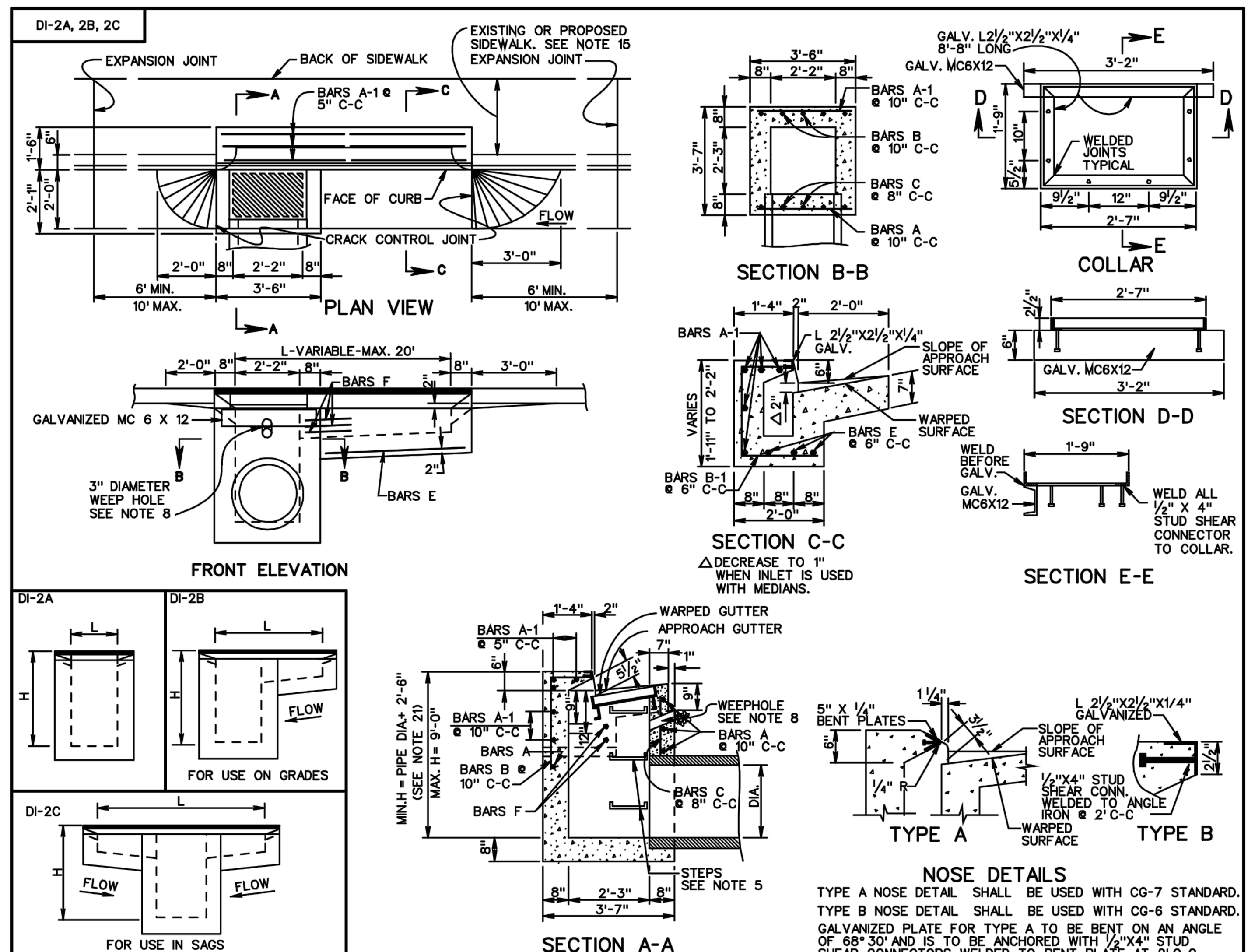
PIPE DIAMETER	A	B	C	D	E
12"	4"	2'-0"	4'-1"	6'-1"	2'-0"
15"	6"	2'-3"	3'-10"	6'-1"	2'-6"
18"	9"	2'-3"	3'-10"	6'-1"	3'-0"
21"	9"	2'-11"	3'-2"	6'-1"	3'-6"
24"	10"	3'-7"	2'-8"	6'-3"	4'-0"
27"	10½"	4'-0"	2'-1½"	6'-1½"	4'-6"
30"	1'-0"	4'-6"	1'-7¾"	6'-1¾"	5'-0"
33"	1'-1½"	4'-10½"	3'-3¼"	8'-1¾"	5'-6"
36"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	6'-0"
42"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"
48"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"
54"	2'-3"	5'-5"	2'-11"	8'-4"	7'-6"
60"	2'-6"	5'-0"	3'-3"	8'-3"	8'-0"



NOTES:
PIPE LENGTHS SHOWN ON PLANS ARE BASED ON END-SECTION DESIGN SHOWN ON THE LEFT. IF THE CONTRACTOR ELECTS TO USE THE ALTERNATE DESIGN SHOWN ON THE RIGHT, LENGTHS WILL BE REDUCED BY THE DIFFERENCE IN DIMENSION "D".

SPECIFICATION REFERENCE		VDOT ROAD AND BRIDGE STANDARDS	
302	**FLARED END SECTION** 12" - 60" CONCRETE PIPE CULVERTS VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE	SHEET 1 OF 1 102.01

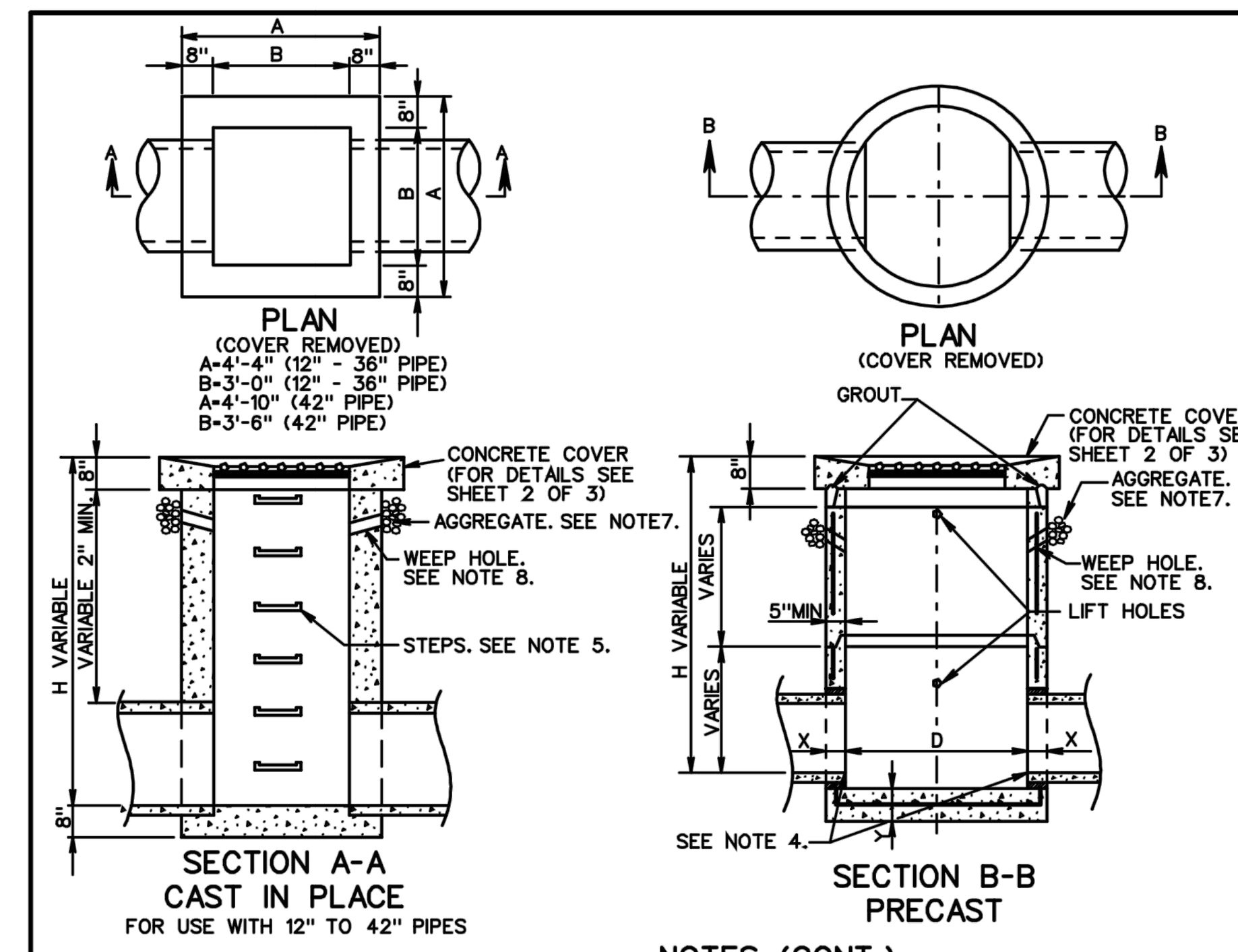
DI-2A, 2B, 2C



TYPE A NOSE DETAIL SHALL BE USED WITH CG-7 STANDARD.
TYPE B NOSE DETAIL SHALL BE USED WITH CG-6 STANDARD.
GALVANIZED PLATE FOR TYPE A TO BE BENT ON AN ANGLE OF 68° 30' AND IS TO BE ANCHORED WITH ½"X4" STUD SHEAR CONNECTORS WELDED TO BENT PLATE AT 2' C-C.

VDOT ROAD AND BRIDGE STANDARDS			SPECIFICATION REFERENCE
SHEET 1 OF 2 104.03	REVISION DATE	**STANDARD CURB DROP INLET** 12" - 24" PIPE: MAXIMUM DEPTH (H) = 9' VIRGINIA DEPARTMENT OF TRANSPORTATION	233 302

DI-7, 7A, 7B



RECOMMENDED MINIMUM HEIGHT CHART

PIPE SIZE	H DIMENSION CONC.	H DIMENSION CORR. METAL
12"	2'-6"	2'-5"
15"	2'-9¼"	2'-8"
18"	3'-0½"	2'-11"
21"	3'-3¾"	3'-2"
24"	3'-7"	3'-5"
27"	3'-10¼"	3'-8"
30"	4'-1½"	3'-11"
33"	4'-4¾"	4'-2"
36"	4'-8"	4'-5"
42"	5'-2½"	4'-11"

NOTES (CONT.)

15. DI-7--------NO GUTTER
DI-7A-------SINGLE GUTTER WHEN DROP INLET IS ON A GRADE.
DI-7B------ DOUBLE GUTTER WHEN DROP INLET IS IN A SAG BETWEEN TWO GRADES.
16. FOR DETAILS OF PRECAST DI-7 NOT SHOWN HEREON SEE PRECAST UNIT ASSEMBLY DIAGRAM, PAGE 103.01, FOR PRECAST GENERAL NOTES, PAGE 103.02 AND FOR APPLICABLE PRECAST BASE, RISER AND TOP DETAILS, PAGES 103.07 THRU 103.12.
17. GRATE BARS TO BE PARALLEL TO DITCH FLOW.

PIPE SIZE	12"	15"	18"	24"	30"	36"	42"
MINIMUM DEPTH H	2'-0"	2'-3¼"	2'-6½"	3'-1"	3'-7½"	4'-2"	4'-8½"
CONCRETE CUBIC YARDS	.947	1.045	1.143	1.339	1.535	1.731	1.927

INCREMENT PER FOOT OF ADDITIONAL DEPTH (H) = 0.362 CU. YDS. (12" - 36" PIPE); = 0.410 CU. YDS. (42" PIPE)

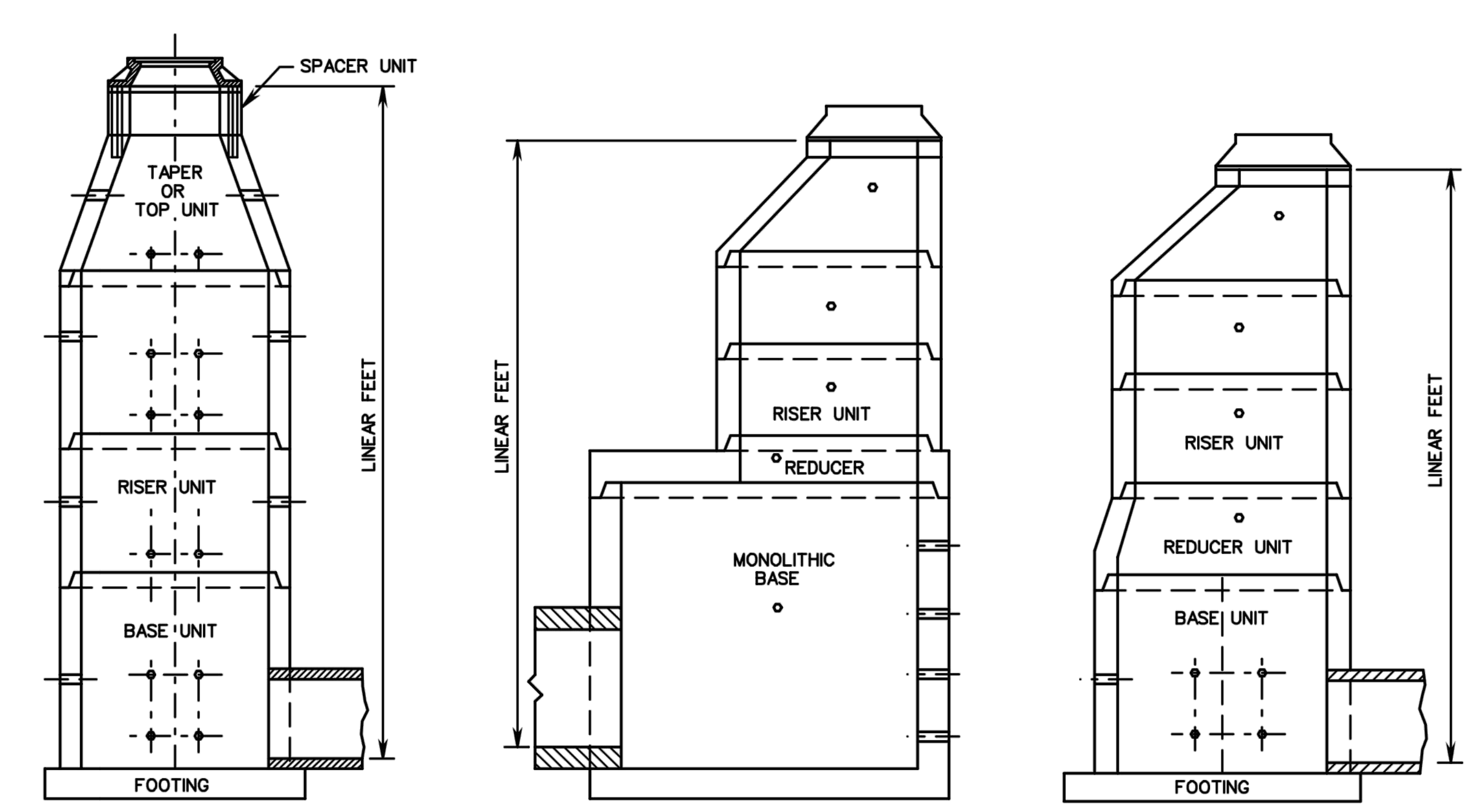
NOTES

1. DEPTH OF INLET (H) TO BE SHOWN ON PLANS.
2. THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS. MAXIMUM DEPTH (H) TO BE 12'-8.
3. WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICEN FOR THE STRUCTURE.
4. IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
5. STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
6. REINFORCED CONCRETE FOOTING MAY BE PRECAST OR CAST-IN-PLACE. TWO LIFTING HOOKS OF FABRICATORS DESIGN TO BE PROVIDED IN PRECAST FOOTING
7. 4" DEPTH AGGREGATE #68, #78, OR #8 X 6" WIDTH.
8. 3" DIAMETER WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH ¼" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
9. THE TYPE OF INLET (PRECAST OR CAST IN PLACE), DETAILED HEREON, TO BE CONSTRUCTED, WILL BE AT THE OPTION OF THE CONTRACTOR.
10. FOR DETAILS OF CONCRETE COVER, COLLAR AND GRATE AND THE METHOD OF PLACING APPROACH GUTTER SEE SHEET 2 OF 3.
11. CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
12. CONCRETE QUANTITIES SHOWN ARE FOR INDICATED DEPTH (H) WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. FOR INLETS OF DIFFERENT DEPTHS ADD OR SUBTRACT THE APPROPIATE CUBIC YARDS OF CONCRETE FOR EACH FOOT OF DEPTH.
13. PAVED DITCHES ARE TO BE TRANSITIONED TO MEET INLET GUTTER AS SHOWN IN STANDARD PG-2A.
14. PROVIDE SAFETY SLABS WHEN SPECIFIED ON THE PLANS.

SPECIFICATION REFERENCE		VDOT ROAD AND BRIDGE STANDARDS	
241 503	**STANDARD MEDIAN DROP INLET** 12" TO 42" PIPE VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE	SHEET 1 OF 3 104.22

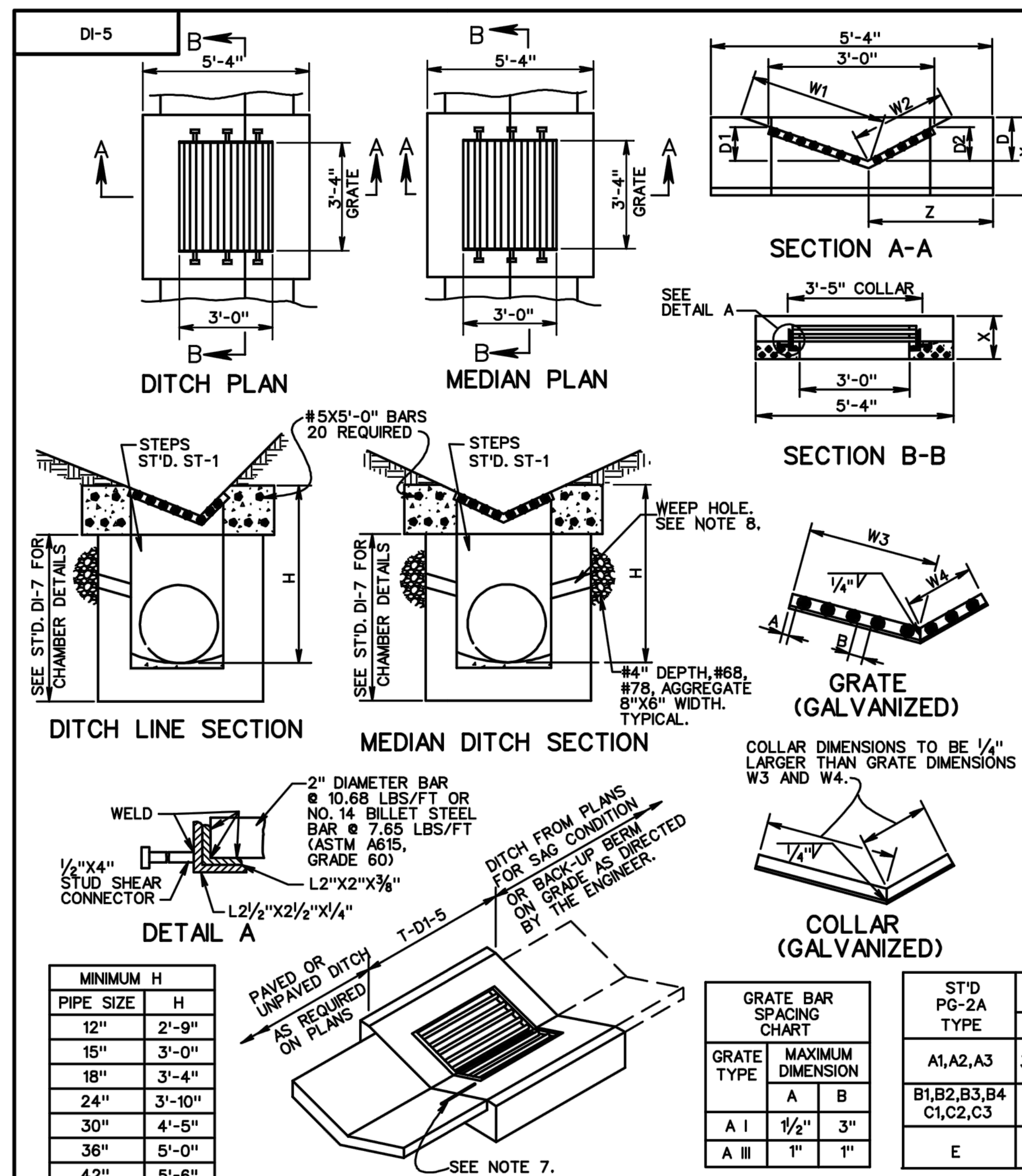
MH-2

FOR DETAILS OF ALL COMPONENT PARTS AND "GENERAL NOTES- PRECAST" SEE SHEETS 103.01-103.11



SPECIFICATION REFERENCE		VDOT ROAD AND BRIDGE STANDARDS	
105 302	**PRECAST MANHOLE** VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE	SHEET 1 OF 1 106.07

DI-5



NOTES

1. DEPTH OF INLET (H) TO BE SHOWN ON PLANS.
2. THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROX. ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
3. WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
4. IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
5. STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
6. CHAMBER MAY BE CAST IN PLACE, PRECAST, BRICK OR CONCRETE BLOCK. SEE DI-7 FOR DETAILS.
7. WHERE PAVED DITCHES ARE REQUIRED, JOINTS ARE TO BE DOWELED WITH #4 X 8" SMOOTH RODS AT APPROXIMATELY 12" C-C IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 2" X 4" NOTCH MAY BE PROVIDED. SEE ST'D T-DI-3, 4 FOR ALTERNATE DESIGN.
8. 3" DIAMETER WEEP HOLE TO BE LOCATED TO DRAIN SUBBASE MATERIAL. WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH ¼" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
9. ALL REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 2" AND BE CUT CLEAR OF ALL OPENINGS BY 2".
10. CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
11. PROVIDED SAFETY SLABS WHEN SPECIFIED ON THE PLANS.
12. DI-5 IS TO BE UTILIZED IN LOCATIONS NOT NORMALLY SUBJECT TO TRAFFIC.

MINIMUM H

PIPE SIZE	H
12"	2'-9"
15"	3'-0"
18"	3'-4"
24"	3'-10"
30"	4'-5"
36"	5'-0"
42"	5'-6"

GRATE BAR SPACING CHART

GRATE TYPE	MAXIMUM DIMENSION A	MAXIMUM DIMENSION B
A I	½"	3"
A III	1"	1"

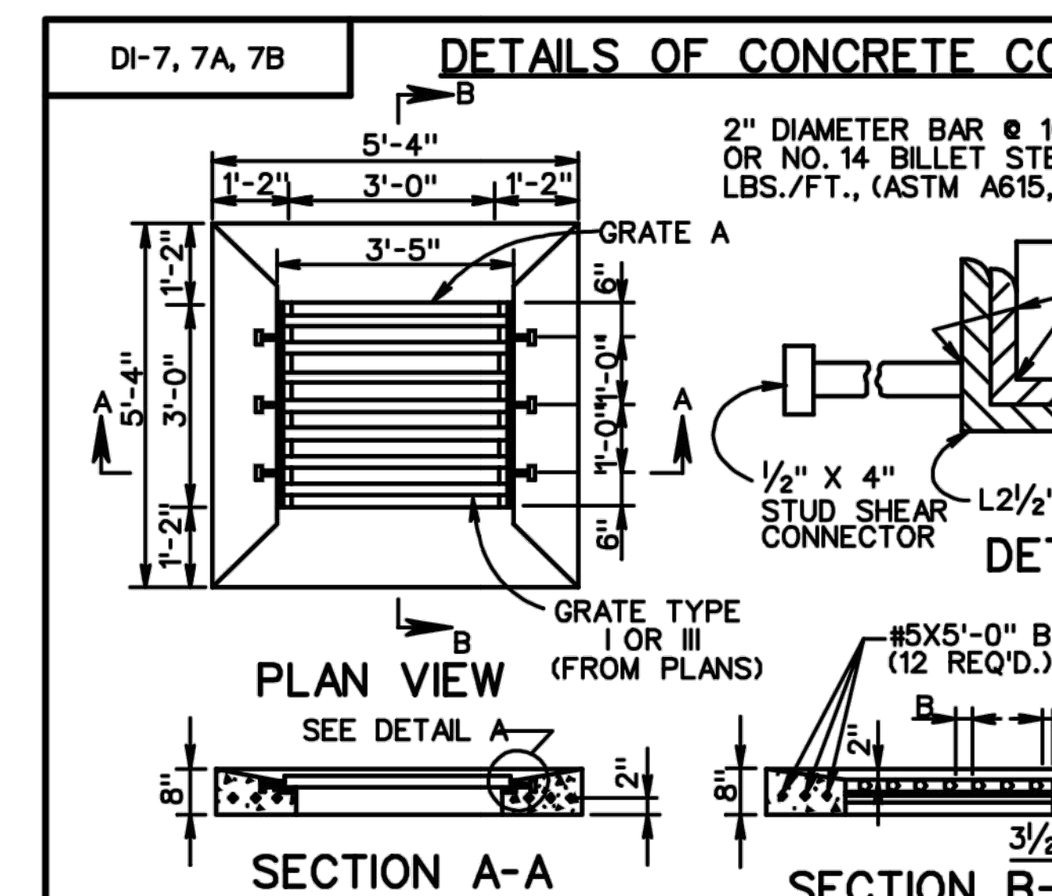
ST'D PG-2A TYPE	W1	W2	W3	W4	* D	D1	D2	X	Z
	COVER DIMENSIONS AND QUANTITIES								
A1,A2,A3	3'-0½"	2'-0¾"	2'-0 5/16"	1'-0 3/8"	6"	4"	3"	14"	2'-2"
B1,B2,B3,B4 C1,C2,C3	2'-9"	2'-9"	1'-6 9/16"	1'-6 9/16"	8"	4½"	4½"	16"	2'-8"
E	2'-3"	2'-3"	1'-8 1/16"	1'-8 1/16"	12"	9"	9"	19"	2'-8"

* TOLERANCE ± ½"

VDOT ROAD AND BRIDGE STANDARDS			SPECIFICATION REFERENCE
SHEET 1 OF 1 104.21	REVISION DATE	**STANDARD DITCH DROP INLET** VIRGINIA DEPARTMENT OF TRANSPORTATION	233 302

DI-7, 7A, 7B

DETAILS OF CONCRETE COVER AND GRATE



APPROXIMATE QUANTITIES

CONCRETE CLASS A3	REINFORCING STEEL
0.423 C. Y.	63 LBS.

BAR SPACING CHART

GRATE TYPE	MAXIMUM DIMENSION A	MAXIMUM DIMENSION B
I	½"	3"
III	1"	1"

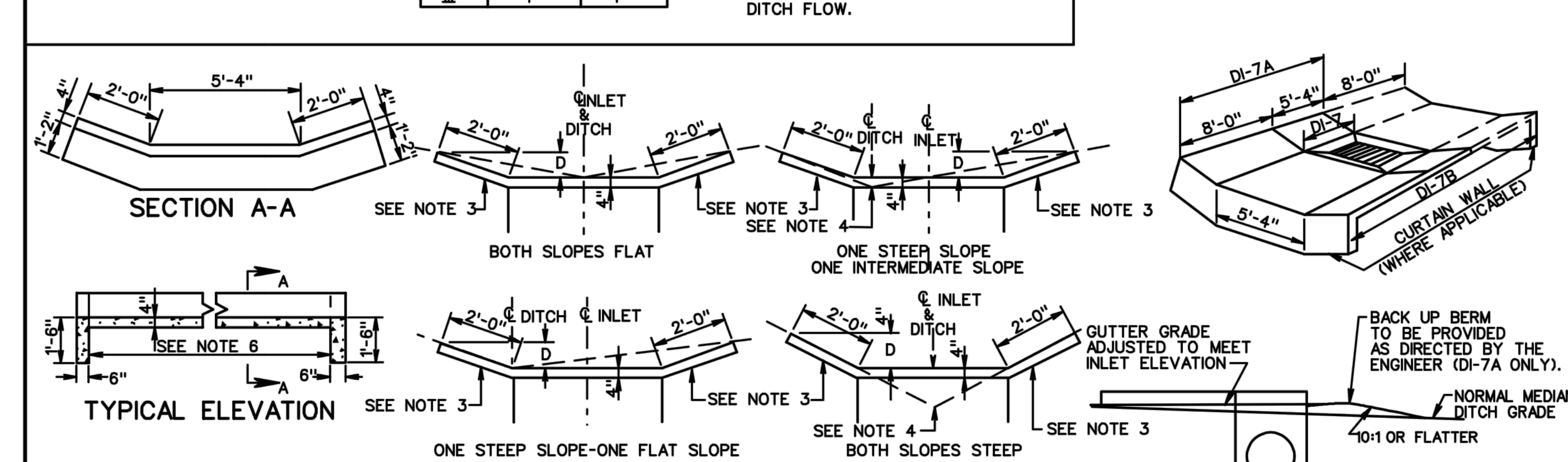
NOTES

1. GRATE A IS TO BE UTILIZED IN LOCATIONS NOT NORMALLY SUBJECT TO TRAFFIC.
2. GRATE B IS TO BE UTILIZED IN LOCATIONS NORMALLY SUBJECT TO TRAFFIC.
3. FOR DETAILS OF LOAD CARRYING GRATE (GRATE B), SEE T-DI-7, SHEET 103.08.
4. CONCRETE COVER AND GRATE ARE TO BE FURNISHED AS A SINGLE UNIT. OUTSIDE DIMENSIONS OF GRATE TO BE 3'-4" X 2'-11⅞" (GRATE A) OR 3'-4" X 2'-11½" (GRATE B).
5. ALTERNATE METHODS OF ANCHORING ANGLE IRON WILL BE ACCEPTABLE IF APPROVED BY THE ENGINEER.
6. GRATE AND COLLAR ARE TO BE GALVANIZED.
7. CONCRETE COVER MAY BE PRECAST OR CAST IN PLACE.
8. CONCRETE TO BE CLASS A3 IF CAST IN PLACE. 4000 PSI IF PRECAST.
9. GRATE BARS TO BE PARALLEL TO DITCH FLOW.

DETAILS OF GUTTER AND METHOD OF PLACEMENT

NOTES

1. DI-7 NO GUTTERS.
DI-7A NO GUTTER IN ONE DIRECTION.
DI-7B GUTTER IN BOTH DIRECTIONS.
2. JOINTS BETWEEN GUTTERS AND CONCRETE COVER ARE TO BE DOWELED WITH #4 X 8" SMOOTH RODS @ APPROX. 12" C-C TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 2" X 4" NOTCH MAY BE PROVIDED.
SEE STANDARD T-DI-3, 4 ALTERNATE DESIGN.
3. VARIABLE 2:1 OR FLATTER.
4. DITCH GRADE MUST BE ADJUSTED TO MEET DIFFERENCE IN ELEVATION. SEE LONGITUDINAL SECTION.
5. IF DEPTH (D) BECOMES LESS THEN 4", LENGTH OF WINGS ARE TO BE EXTENDED AS DIRECTED BY THE ENGINEER.
6. CURTAIN WALL TO BE LOCATED AT THE END OF THE PAVED DITCH SECTIONS OF THE DI-7A & DI-7B THAT ARE NOT ABUTTED BY OTHER DRAINAGE.
7. IF NORMAL DITCH GRADE IS TOO FLAT TO ALLOW FOR ADJUSTED GRADE TO INLET, A SPECIAL GUTTER DETAIL WILL BE REQUIRED ON PLANS.



APPROXIMATE QUANTITY FOR ONE CURTAIN WALL, MEASURED FROM BOTTOM OF GUTTER

CONCRETE CLASS A3	0.241 CU. YDS.

APPROXIMATE QUANTITIES

	DI-7	DI-7A	DI-7B
CONCRETE CLASS A3 (CU. YDS.)	NONE	1.211	2.148

VDOT ROAD AND BRIDGE STANDARDS			SPECIFICATION REFERENCE
SHEET 2 OF 3 104.23	REVISION DATE	**STANDARD MEDIAN DROP INLET** 12" TO 42" PIPE VIRGINIA DEPARTMENT OF TRANSPORTATION	241 503

Monticello Avenue Multi-Use Trail

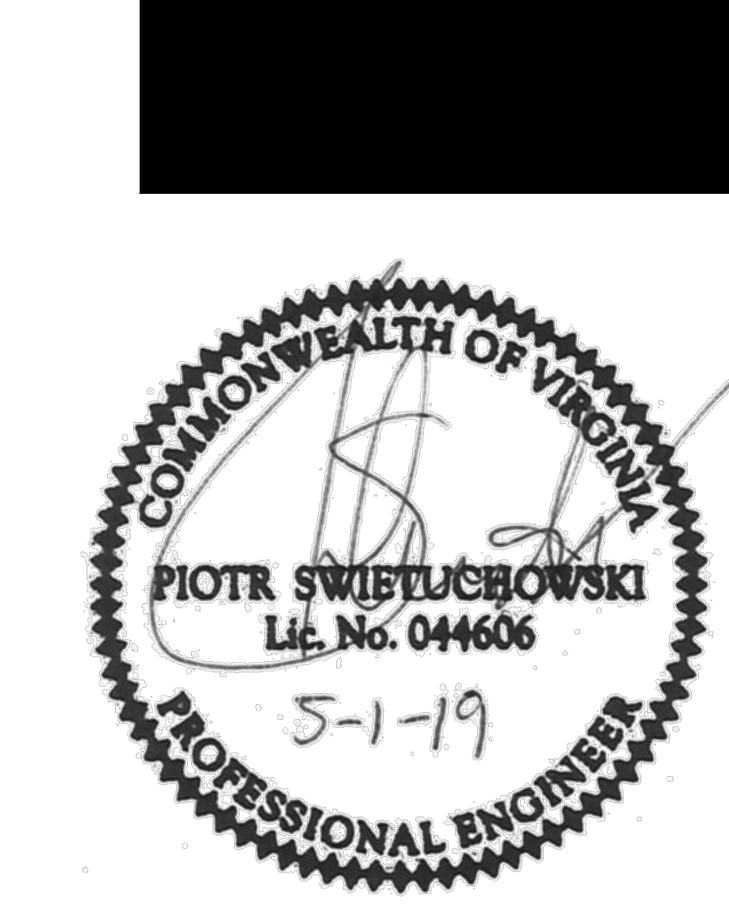
Monticello Avenue Williamsburg, Virginia

No.	Revision	Date	Appvd.

Designed by | Checked by

Issued for: For Bid
Date: May 1, 2019

Drawing Title
Site Details



Drawing Number: C6.3

Sheet 28 of 46

Project Number 34319.00

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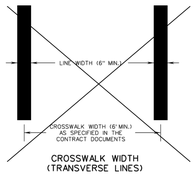
vhb.com
vhb
351 McLaws Circle
Suite 3
Williamsburg, VA 23185
757.220.0500

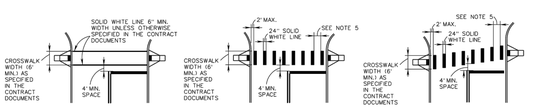
PM-3



CROSSWALK WIDTH (TRANSVERSE LINES)

NOTES:

1. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THESE STANDARDS, THE MUTCD AND THE VIRGINIA SUPPLEMENT TO THE MUTCD, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.
2. THE LOCATION, WIDTH, AND TYPE OF THE PAVEMENT MARKINGS SHALL BE AS SPECIFIED IN THE CONTRACT DOCUMENTS.
3. CROSSWALKS SHALL ALIGN WITH CURB RAMPS IN ACCORDANCE WITH STANDARD CG-12. THE CROSSWALK SHALL BE AT LEAST AS WIDE AS THE LEVEL LANDING AREA OF THE CURB RAMP.
4. WHEN LONGITUDINAL LINES ARE SPECIFIED FOR THE CROSSWALK, THE LONGITUDINAL LINES SHALL BE PARALLEL TO THE PATH OF THRU TRAFFIC.
5. GAPS BETWEEN LONGITUDINAL LINES SHALL BE BETWEEN 2 - 5 FEET. GAP SPACING MAY VARY IN ORDER TO ALIGN LINES SUCH THAT THEY ARE OUTSIDE THE WHEEL PATHS OF THRU TRAFFIC. THE FIRST AND LAST LINES SHALL BE 2' MAXIMUM FROM EDGE OF SHOULDER OR EDGE OF GUTTER PAN.
6. CROSSWALKS SHALL BE 10 FEET WIDE AND GAPS BETWEEN LONGITUDINAL LINES SHALL BE 24 INCHES. TRANSVERSE LINES SHALL BE DELETED.



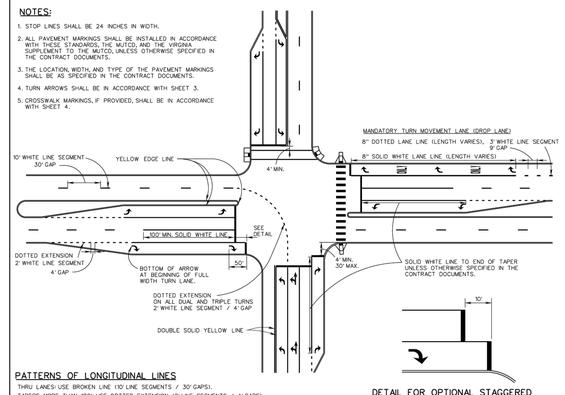
TRANSVERSE LINES | LONGITUDINAL LINES | LONGITUDINAL LINES AT SKEWED INTERSECTIONS (SEE NOTE 4)

VDOT ROAD AND BRIDGE STANDARDS	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.	SPECIFICATION REFERENCE
SHEET 4 OF 4 / 1330.33	TYPICAL PAVEMENT MARKING CROSSWALK MARKINGS VIRGINIA DEPARTMENT OF TRANSPORTATION	704
REVISION DATE: NEW 01/15		

PM-3

NOTES:

1. STOP LINES SHALL BE 24 INCHES IN WIDTH.
2. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THESE STANDARDS, THE MUTCD, AND THE VIRGINIA SUPPLEMENT TO THE MUTCD, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.
3. THE LOCATION, WIDTH, AND TYPE OF THE PAVEMENT MARKINGS SHALL BE AS SPECIFIED IN THE CONTRACT DOCUMENTS.
4. TURN ARROWS SHALL BE IN ACCORDANCE WITH SHEET 3.
5. CROSSWALK MARKINGS, IF PROVIDED, SHALL BE IN ACCORDANCE WITH SHEET 4.



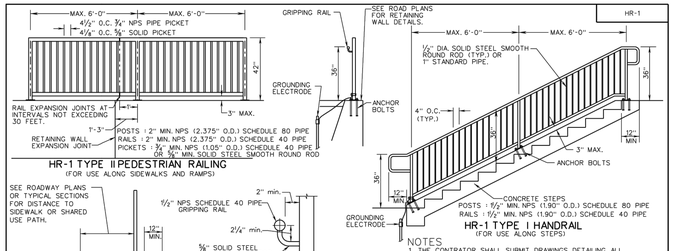
PATTERNS OF LONGITUDINAL LINES

THRU LANES: USE BROKEN LINE (10' LINE SEGMENTS / 30' GAPS).
TAPERS MORE THAN 100': USE DOTTED EXTENSION (2' LINE SEGMENTS / 4' GAPS).
TAPERS 100' OR LESS: DO NOT USE DOTTED EXTENSION UNLESS SPECIFIED IN THE CONTRACT DOCUMENTS.

DETAIL FOR OPTIONAL STAGGERED STOP LINES (ON A LANE-BY-LANE BASIS)

VDOT ROAD AND BRIDGE STANDARDS	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.	SPECIFICATION REFERENCE
SHEET 2 OF 4 / 1330. 31	TYPICAL PAVEMENT MARKING SIGNALIZED INTERSECTIONS VIRGINIA DEPARTMENT OF TRANSPORTATION	704
REVISION DATE: NEW 01/15		

HR-1

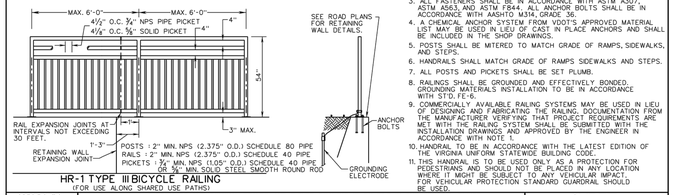


HR-1 TYPE II PEDESTRIAN RAILING
(FOR USE ALONG SIDEWALKS AND RAMPS)

EARTH FOUNDATION DETAIL
(FOR USE WITH TYPE II & III RAILINGS)

GRIPPING RAIL DETAIL
(FOR USE ALONG SIDEWALKS AND RAMPS)

GRIPPING RAIL SHALL BE INSTALLED WHEN THE SIDEWALK OR RAMP GRADES ARE EQUAL TO OR GREATER THAN 5 PERCENT. GRIPPING RAIL WILL BE INCIDENTAL TO THE COST OF THE RAILING.



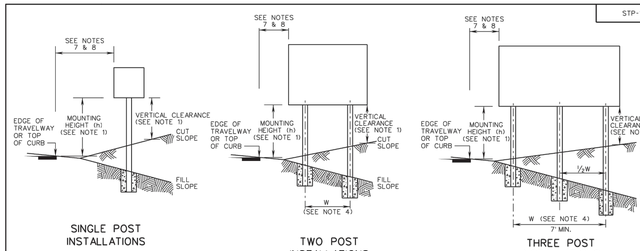
HR-1 TYPE III BICYCLE RAILING
(FOR USE ALONG SHARED USE PATHS)

NOTES

1. THE CONTRATOR SHALL SUBMIT DRAWINGS DETAILING ALL ASPECTS OF FABRICATION AND INSTALLATION OF RAILING, INCLUDING CONCRETE FOUNDATIONS FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION. SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFFESSIONAL ENGINEER, HOLDING A VALID LICENSE TO PRACTICE ENGINEERING IN THE COMMONWEALTH OF VIRGINIA.
2. ALL RAILING COMPONENTS AND FASTENERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE CURRENT ROAD AND BRIDGE SPECIFICATIONS. TO ACHIEVE A UNIFORM COATING ON ALL SURFACES VENTING AND DRAINAGE HOLES FOR GALVANIZING SHALL BE INCLUDED IN THE SHOP DRAWINGS.
3. ALL FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A307, ASTM A563, AND ASTM F844. ALL ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH AASHTO M314, GRADE 36.
4. A CHEMICAL ANCHOR SYSTEM FROM VDOT'S APPROVED MATERIAL LIST MAY BE USED IN LIEU OF CAST IN PLACE ANCHORS AND SHALL BE INCLUDED IN THE SHOP DRAWINGS.
5. POSTS SHALL BE MITERED TO MATCH GRADE OF RAMPS, SIDEWALKS, AND STEPS.
6. HANDRAILS SHALL MATCH GRADE OF RAMPS SIDEWALKS AND STEPS.
7. ALL POSTS AND PICKETS SHALL BE SET PLUMB.
8. RAILINGS SHALL BE GROUNDED AND EFFECTIVELY BONDED. GROUNDING MATERIALS INSTALLATION TO BE IN ACCORDANCE WITH STD. EL-6.
9. COMMERCIALLY AVAILABLE RAILING SYSTEMS MAY BE USED IN LIEU OF DESIGNING AND FABRICATING THE RAILING. DOCUMENTATION FROM THE MANUFACTURER VERIFYING THAT PROJECT REQUIREMENTS ARE MET WITH THE RAILING SYSTEM SHALL BE SUBMITTED WITH THE INSTALLATION DRAWINGS AND APPROVED BY THE ENGINEER IN ACCORDANCE WITH NOTE 1.
10. HANDRAIL TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
11. THIS HANDRAIL IS TO BE USED ONLY AS A PROTECTION FOR PEDESTRIANS AND SHOULD NOT BE PLACED IN ANY LOCATION WHERE IT MIGHT BE SUBJECT TO ANY VEHICULAR IMPACT. FOR VEHICULAR PROTECTION STANDARD GUARDRAIL SHOULD BE USED.

SPECIFICATION REFERENCE	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.	VDOT ROAD AND BRIDGE STANDARDS
105 238 504	STANDARD HANDRAIL METHOD OF LOCATING AND ERECTING VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE: 7/11 SHEET 1 OF 1 601.05

STP-1



SINGLE POST INSTALLATIONS | TWO POST INSTALLATIONS | THREE POST INSTALLATIONS

NOTES:

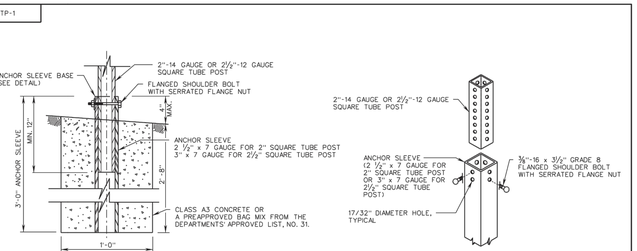
1. FOR ALL SIGNS EXCEPT STREET NAME SIGNS:
   A. MINIMUM MOUNTING HEIGHT (h) SHALL BE IN ACCORDANCE WITH THE "MINIMUM MOUNTING HEIGHT" TABLE ON THIS SHEET.
   B. MAXIMUM MOUNTING HEIGHT (h) FOR THE BOTTOM-MOST SIGN PANEL(S) SHALL BE 8 FEET, EXCEPT WHEN NECESSARY TO ACHIEVE MINIMUM VERTICAL CLEARANCE BENEATH SIGN PANEL AS PER NOTE 1C.
   C. MINIMUM VERTICAL CLEARANCE (DISTANCE BETWEEN BOTTOM OF SIGN PANEL AND FINISHED GRADE BENEATH THE PANEL) SHALL BE 7 FEET FOR ANY PORTION OF THE SIGN WITHIN THE CLEAR ZONE. THIS MINIMUM VERTICAL CLEARANCE MAY BE REDUCED TO 5 FEET FOR EITHER OF THE FOLLOWING CONDITIONS:
      - WHEN SIGNS OR PORTIONS OF SIGNS ARE LOCATED MORE THAN 10 FEET UP A CUT SLOPE GREATER THAN 3:1, OR
      - WHEN THE SIGN IS LOCATED AT LEAST THE MINIMUM DISTANCE BEHIND CURB, BARRIER, OR GUARDRAIL AS PER NOTES 7 AND 8.
2. MOUNTING HEIGHT (h) FOR STREET NAME SIGNS SHALL BE BETWEEN 8'-6" AND 9'-0".
3. A SECONDARY SIGN IS CONSIDERED TO BE A SIGN MOUNTED BELOW ANOTHER SIGN, EXCEPT A ROUTE MARKER WITH AN AUXILIARY PLATE IS CONSIDERED TO BE A SINGLE SIGN. A SECONDARY SIGN SHALL NOT BE MOUNTED LOWER THAN 7 FEET ABOVE A PEDESTRIAN SIDEWALK OR PATHWAY IF IT WILL PROJECT INTO THE PEDESTRIAN FACILITY.
4. W = (0.60) X (SIGN PANEL WIDTH)
5. SQUARE TUBE SIGN POSTS REQUIRING A BREAKAWAY SUPPORT SYSTEM SHALL BE AN FHWA APPROVED BREAKAWAY SUPPORT SYSTEM CONFORMING TO AASHTO'S STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS.
6. FOR SIGNS LOCATED IN AREAS WHERE PEDESTRIAN MOVEMENTS ARE LIKELY TO OCCUR OR ON-STREET PARKING IS PERMITTED, THE HEIGHT FROM THE LOWEST PORTION OF THE SIGN PANEL TO THE FINISHED SURFACE SHALL HAVE A MINIMUM CLEARANCE OF 7 FEET.
7. THE LATERAL CLEARANCE TO THE SIGN PANEL SHALL BE A MINIMUM OF 2 FEET FROM THE FACE OF CURB OR 4 FEET FROM FACE OF BARRIER, IF PRESENT.
8. UNLESS OTHERWISE APPROVED BY THE ENGINEER, SIGNS PLACED BEHIND GUARDRAIL SHALL BE LOCATED SUCH THAT THE NEAR SIDE EDGE OF THE SIGN PANEL IS OUTSIDE OF THE GUARDRAIL DEFLECTION DISTANCE.

MINIMUM MOUNTING HEIGHT (h)
(SEE NOTE 1)

SIGN TYPES	FREEWAYS, EXPRESSWAYS, AND FULL CONTROL ACCESS HIGHWAYS	OTHER HIGHWAYS: RURAL AREAS	OTHER HIGHWAYS: NON-RURAL AREAS
DIRECTIONAL SIGNS	7'	5'	7'
ROUTE MARKERS, WARNING AND REGULATORY SIGNS	7'	5'	7'
SECONDARY SIGNS (SEE NOTE 3)	5'	4'	7'

SPECIFICATION REFERENCE	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.	VDOT ROAD AND BRIDGE STANDARDS
700	SQUARE TUBE SIGN POST VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE: 01/15 SHEET 1 OF 12 1321.10

STP-1



FOUNDATION TYPE A | ANCHOR SLEEVE BASE DETAIL

VDOT ROAD AND BRIDGE STANDARDS	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.	SPECIFICATION REFERENCE
SHEET 4 OF 12 / 1321.13	SQUARE TUBE SIGN POST FOUNDATION TYPE A DETAILS VIRGINIA DEPARTMENT OF TRANSPORTATION	700
REVISION DATE: NEW 01/15		

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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Issued for: For Bid | Date: May 1, 2019

Drawing Title: Site Details

Drawing Number: C6.4

Sheet 29 of 46

Project Number: 34319.00

COMMONWEALTH OF VIRGINIA
PIOTR SWIETUCHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

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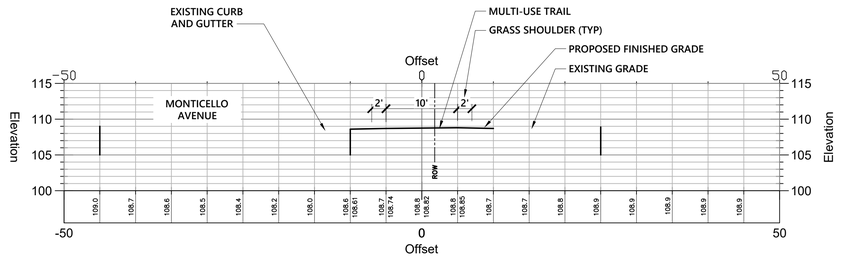

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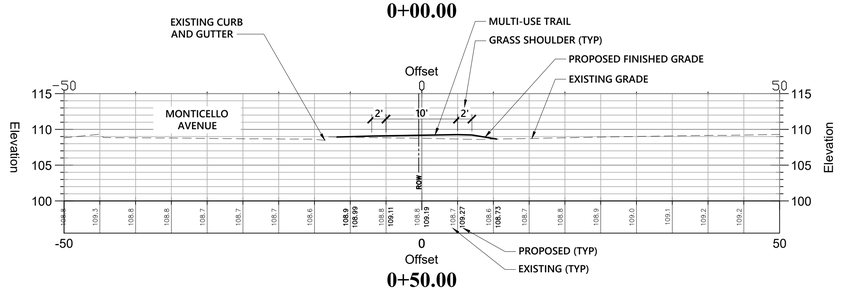

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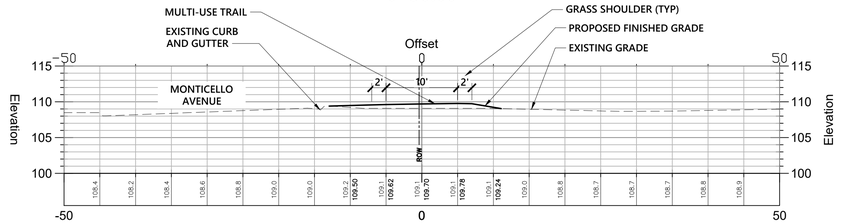

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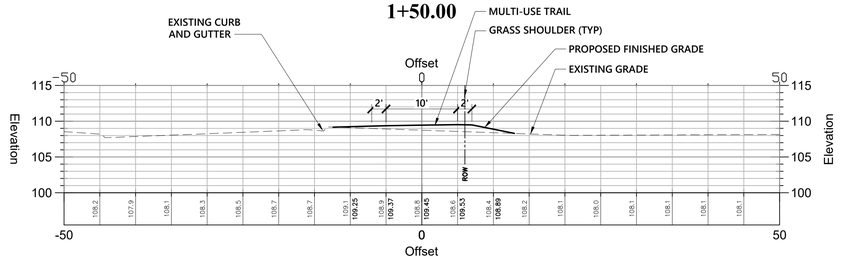

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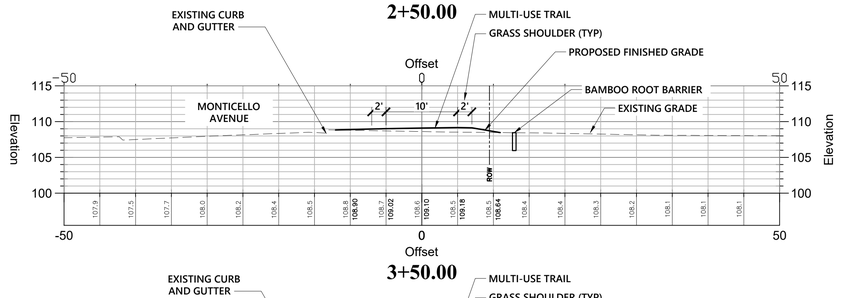

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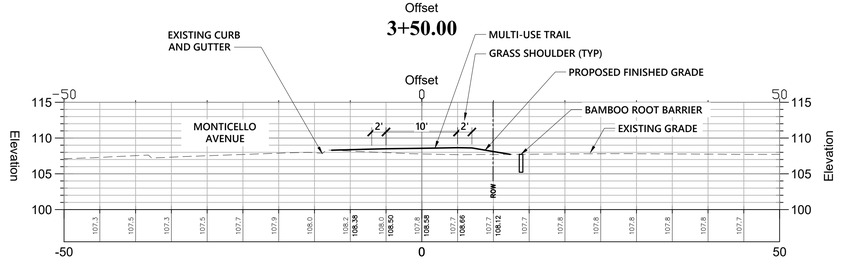

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Suite 3
Williamsburg, VA 23185
757.220.0500

Vert. 0 5 10 20 Feet

Horiz. 0 5 10 20 Feet

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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For Bid | May 1, 2019

Drawing Title

Cross Sections

Drawing Number

XS1.1

Sheet 30 of 46

Project Number
34319.00

COMMONWEALTH OF VIRGINIA
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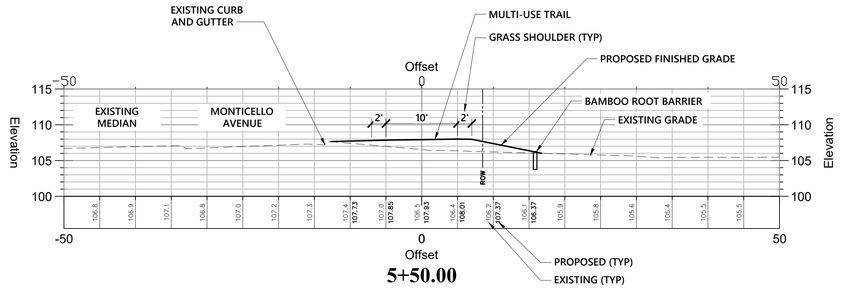
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

Saved Friday, April 19, 2019 4:21:31 PM RWATT Plotted Wednesday, May 8, 2019 11:55:15 AM Watt, Richard



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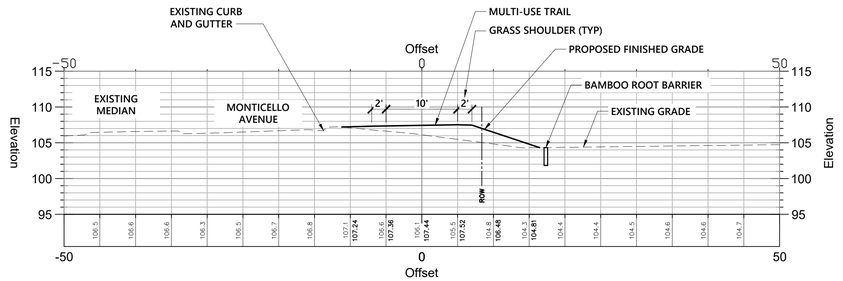

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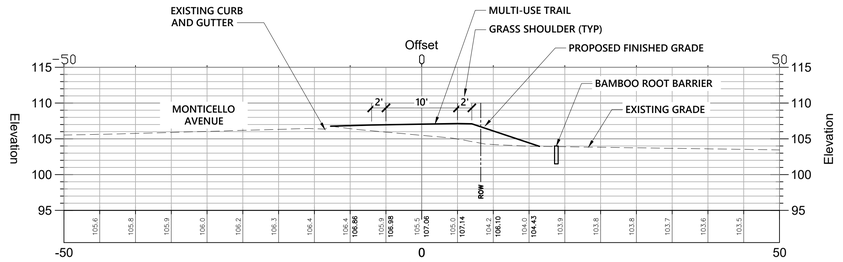

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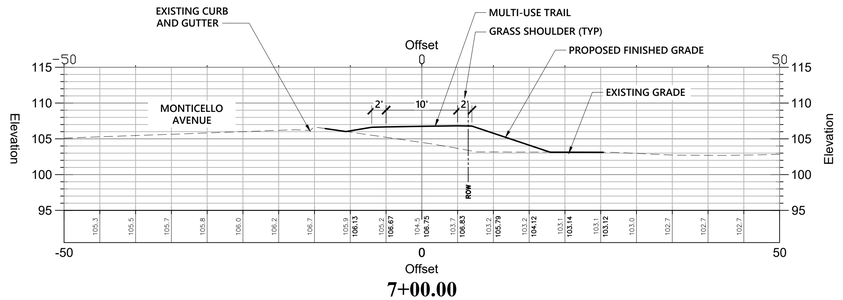

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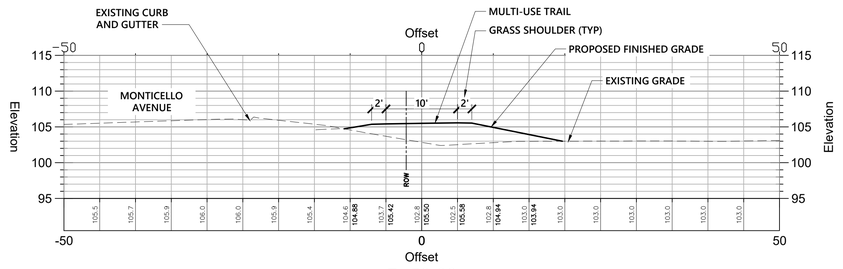

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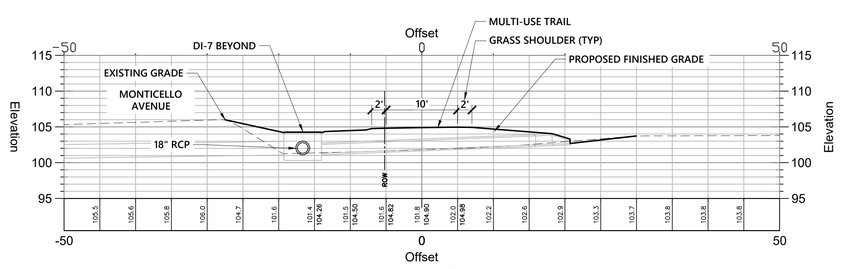

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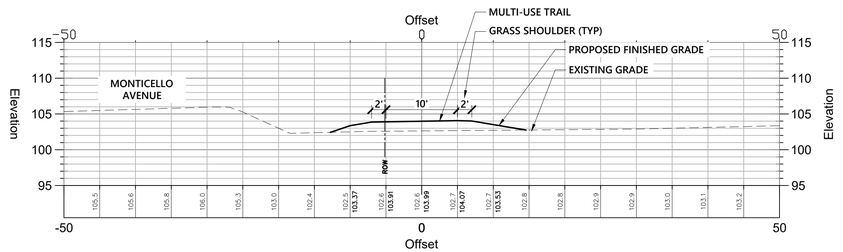

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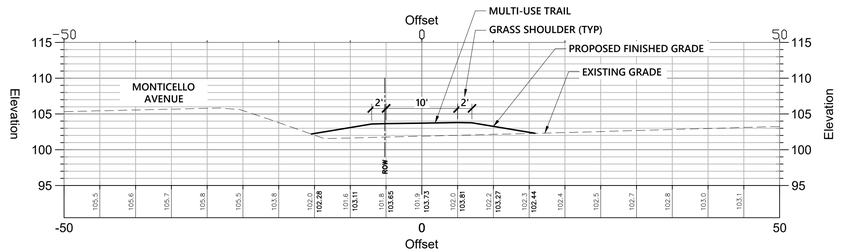

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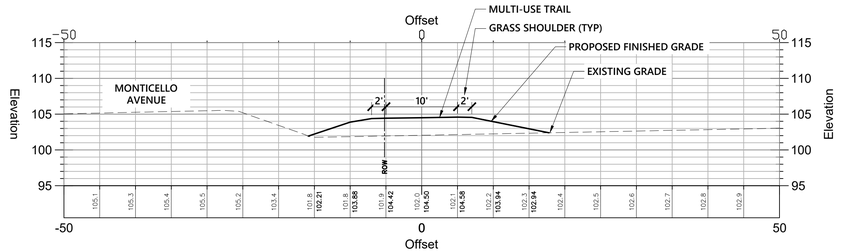

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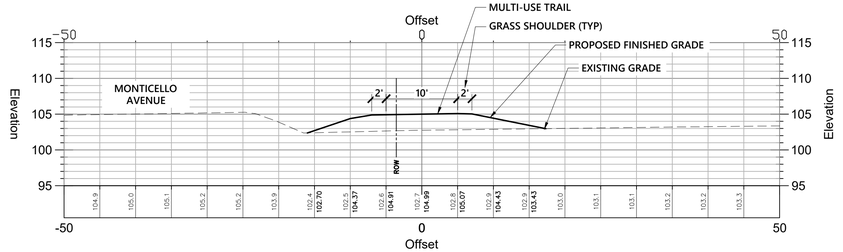

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Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

Designed by | Checked by

Issued for: For Bid
Date: May 1, 2019

Drawing Title: Cross Sections

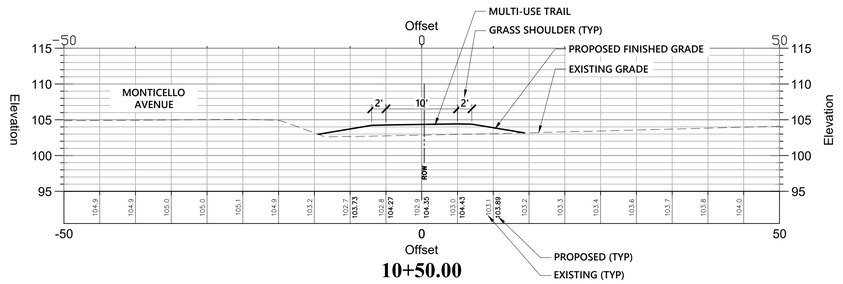
Drawing Number: XS1.2

Sheet 31 of 46

Project Number: 34319.00

COMMONWEALTH OF VIRGINIA
PIOTR SWIETUCHOWSKI
Lic. No. 044606
5-1-19
PROFESSIONAL ENGINEER

Saved Friday, April 19, 2019 4:21:31 PM RMATT Plotted Wednesday, May 8, 2019 11:55:34 AM Watt, Richard



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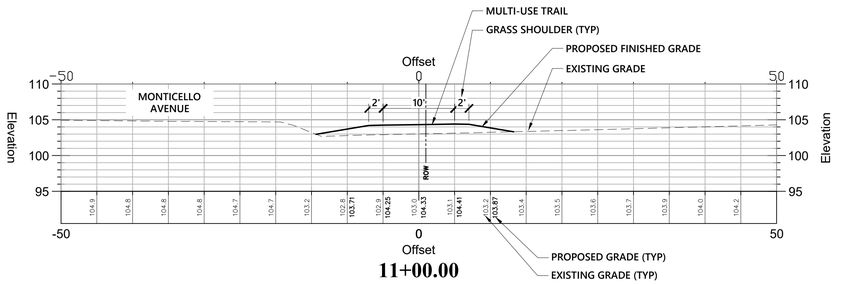

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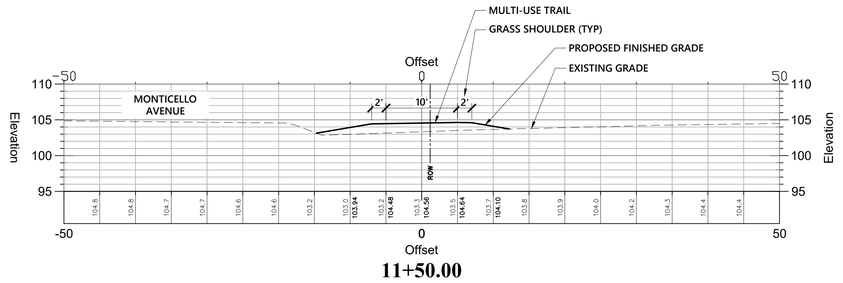

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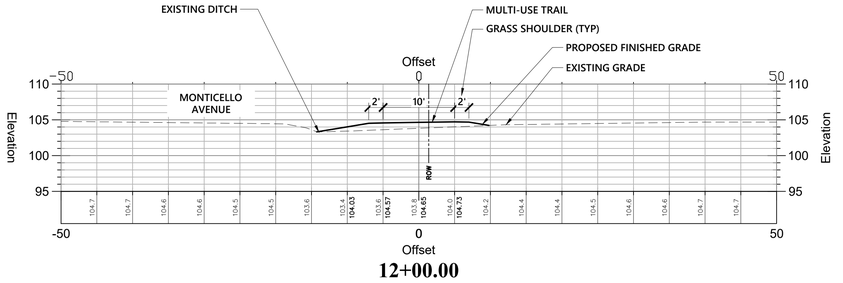

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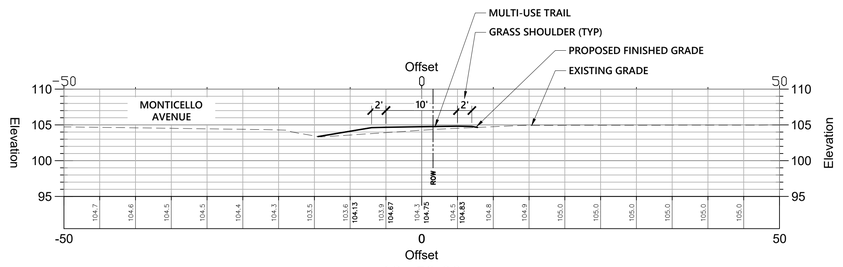

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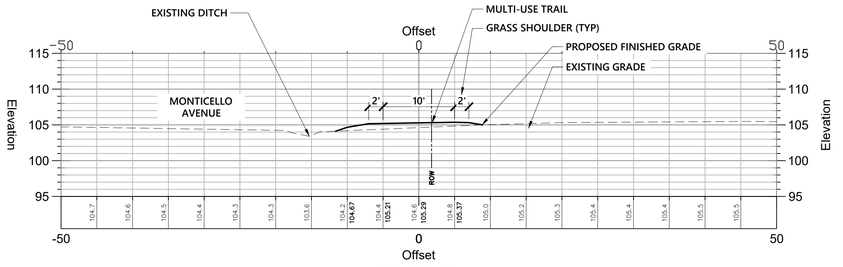

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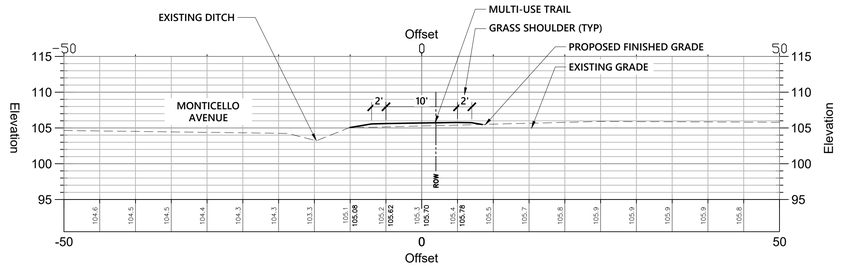

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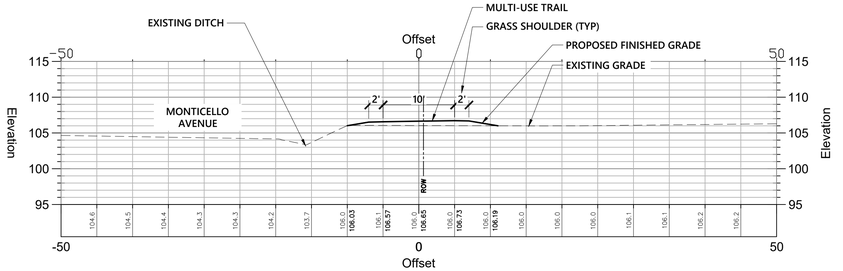

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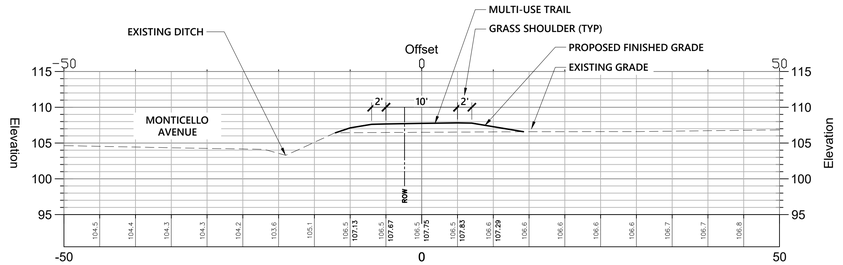

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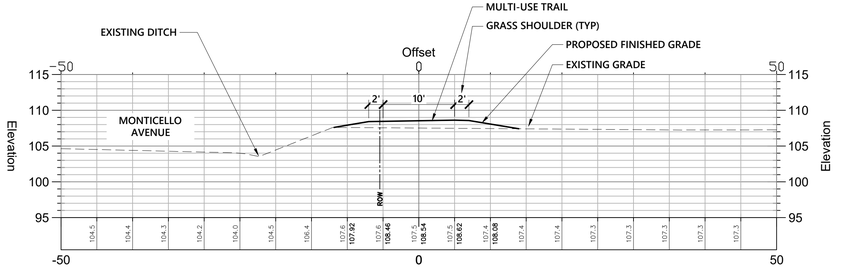

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Designed by | Checked by

Issued for: For Bid — Date: May 1, 2019

Drawing Title: Cross Sections

Drawing Number: XS1.3

COMMONWEALTH OF VIRGINIA
PIOTR SWIETUCHOWSKI
Lic. No. 044606
5-1-19
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Sheet 32 of 46

Project Number: 34319.00

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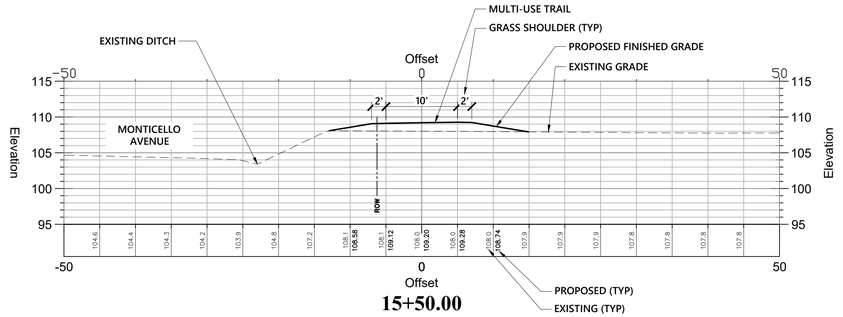

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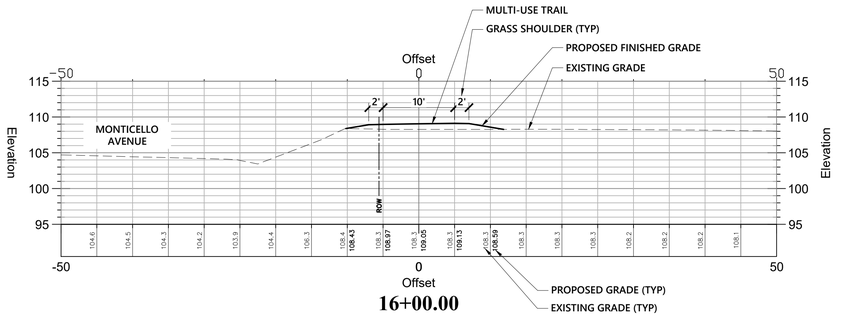

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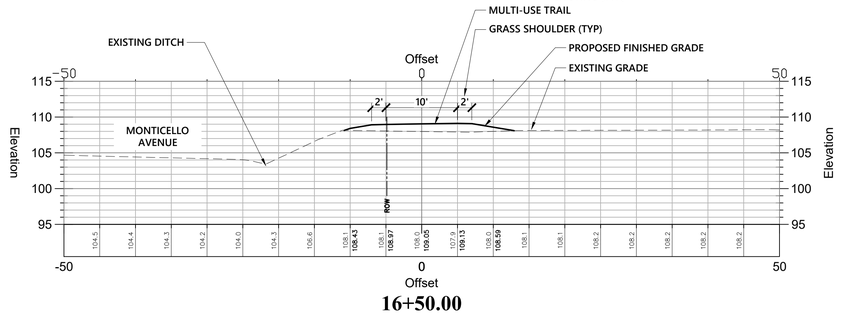

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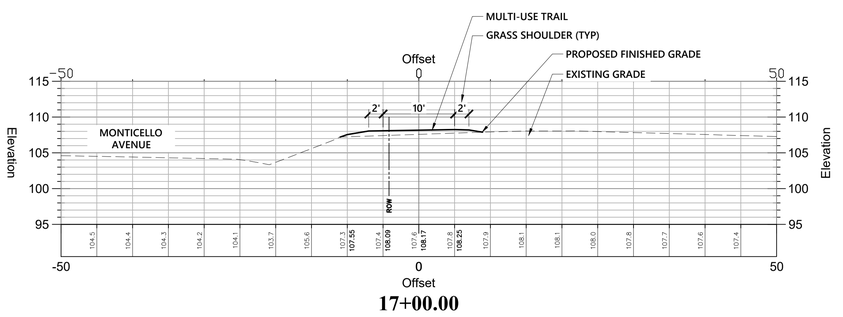

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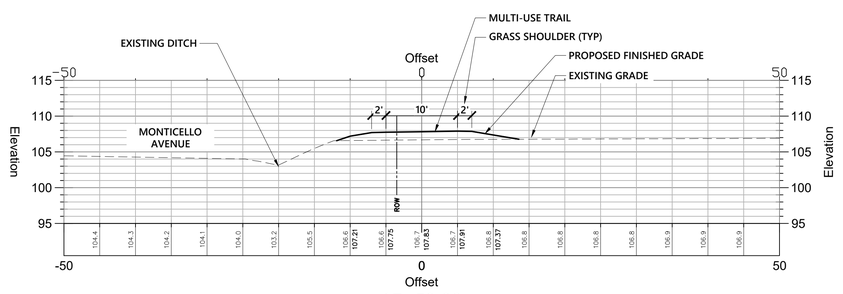

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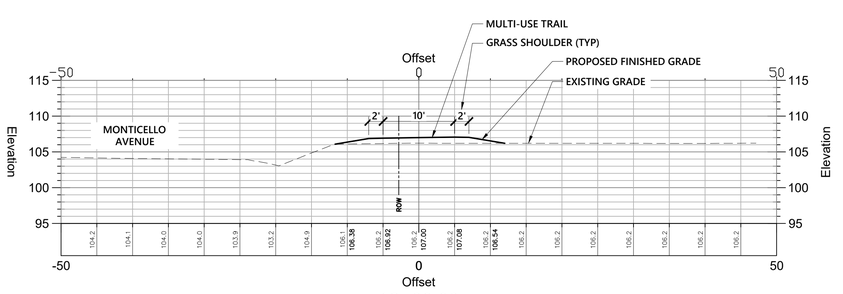

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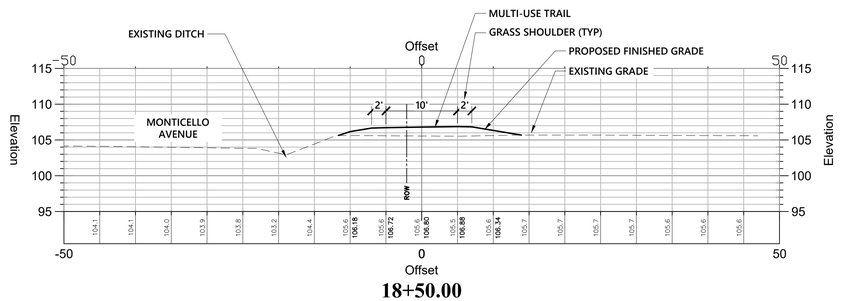

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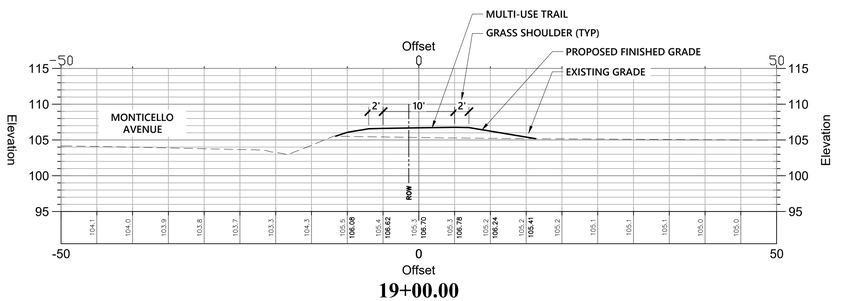

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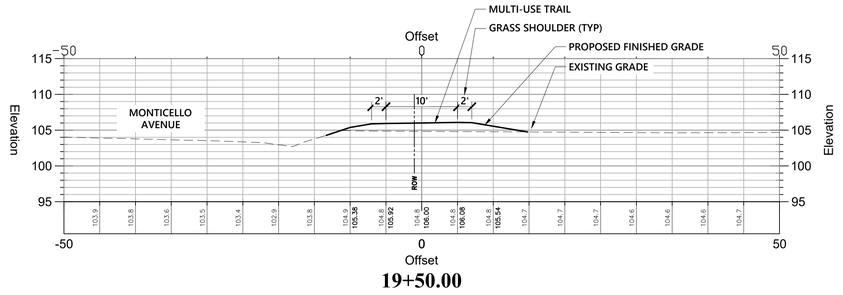

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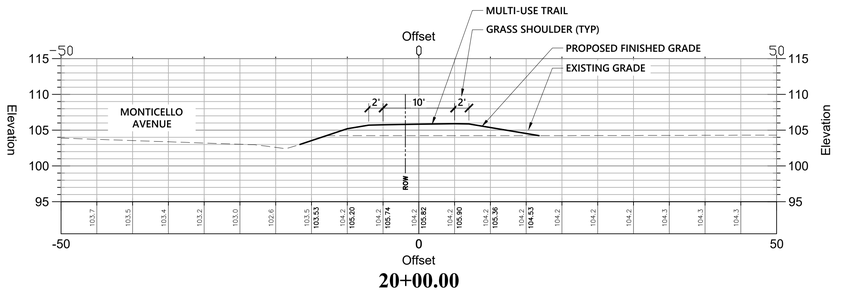

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Date: May 1, 2019

Drawing Title: Cross Sections

Drawing Number: XS1.4

Sheet 33 of 46

Project Number: 34319.00

COMMONWEALTH OF VIRGINIA
PIOTR SWIETUCHOWSKI
Lic. No. 044606
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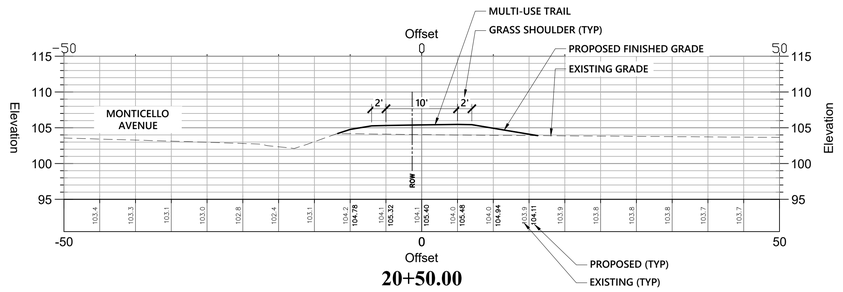

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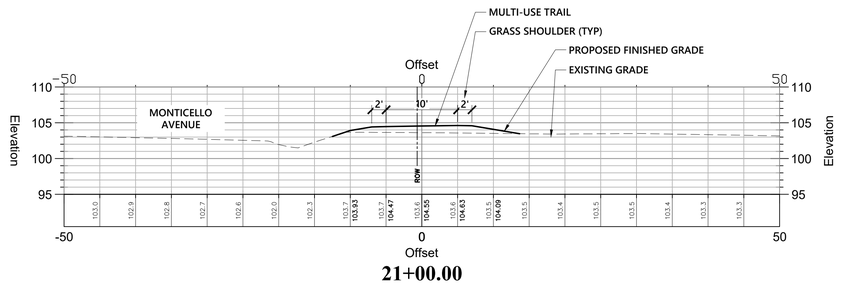

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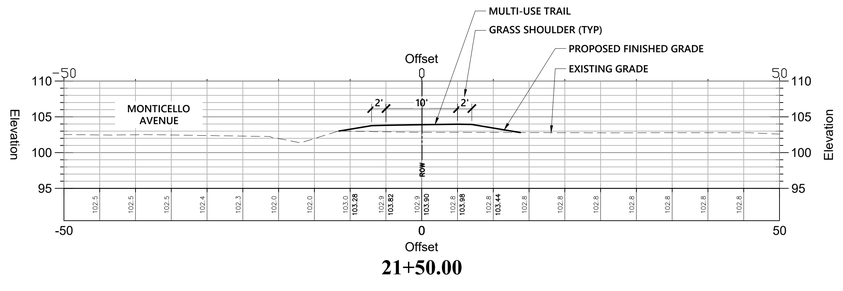

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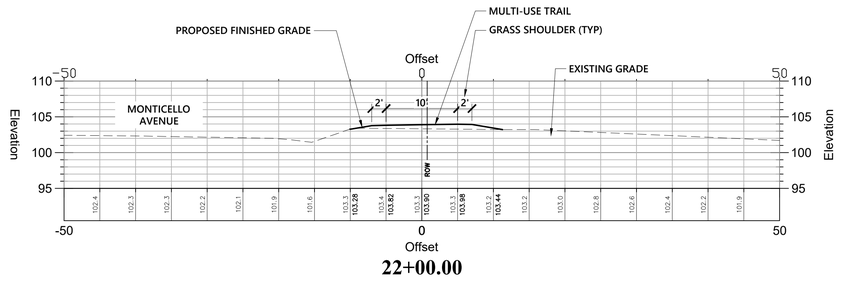

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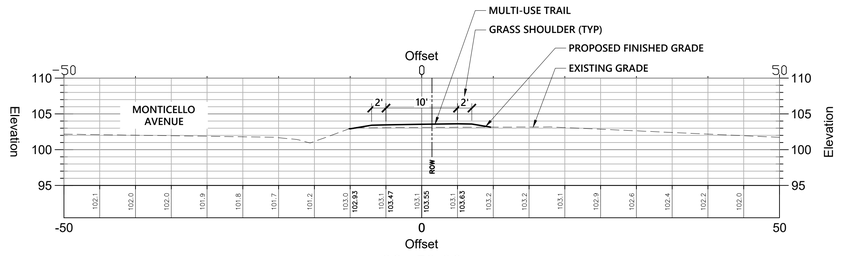

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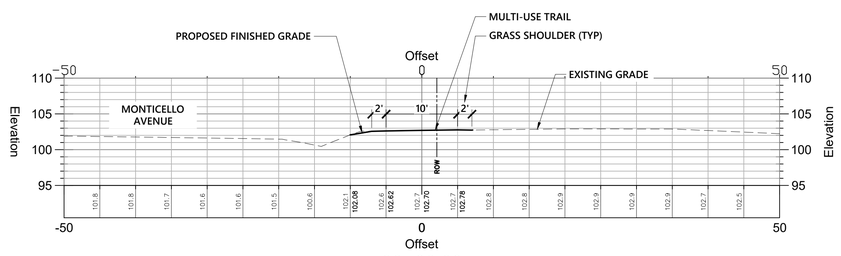

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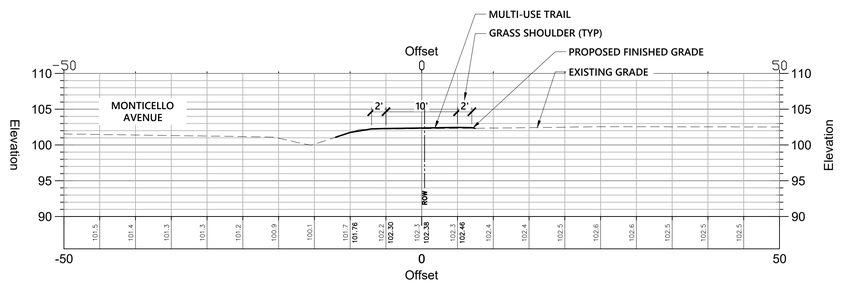

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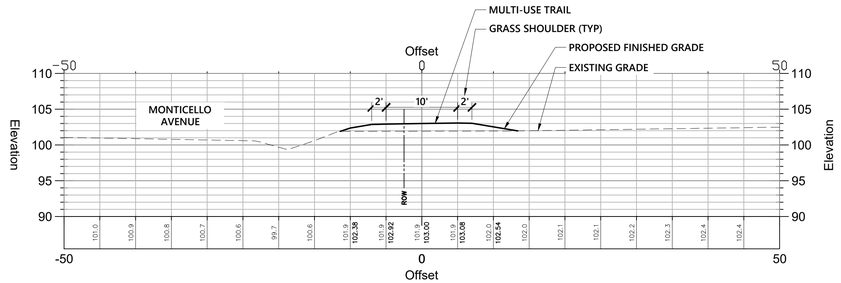

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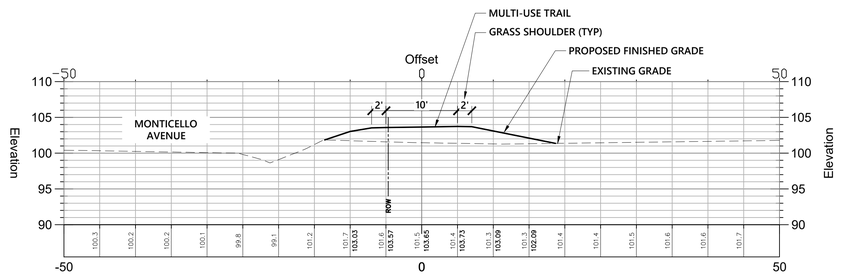

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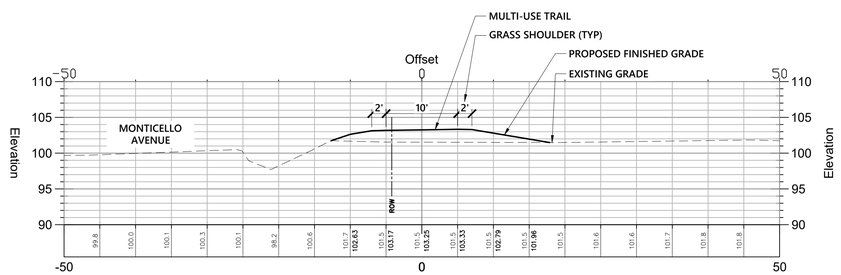

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Drawing Title: Cross Sections

Drawing Number: XS1.5

Sheet 34 of 46

Project Number: 34319.00

COMMONWEALTH OF VIRGINIA
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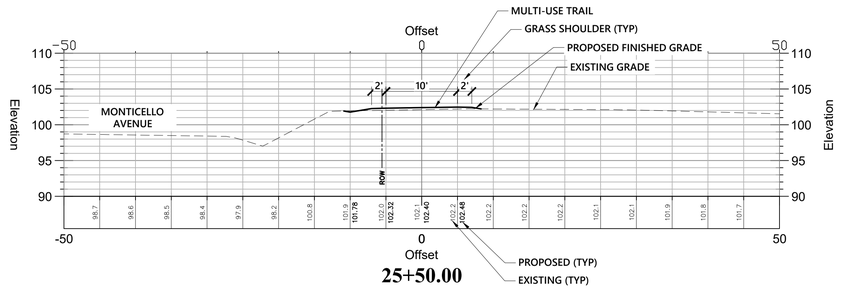

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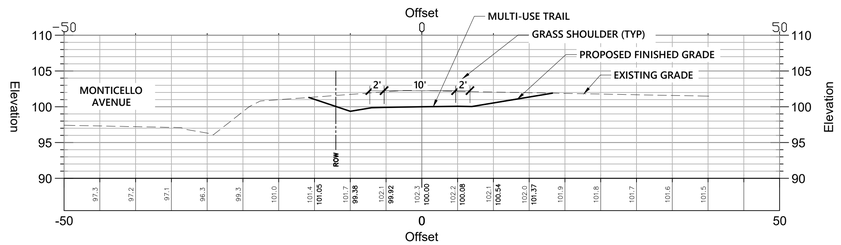

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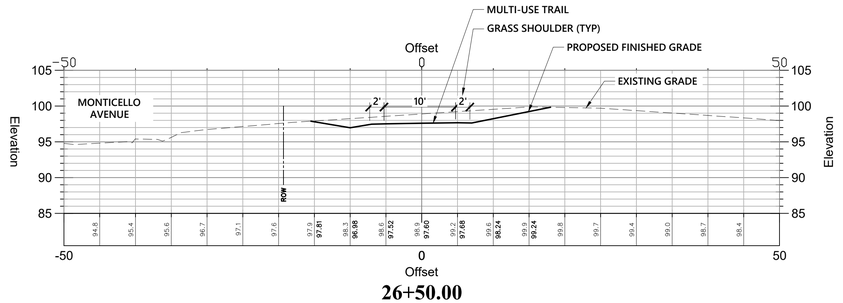

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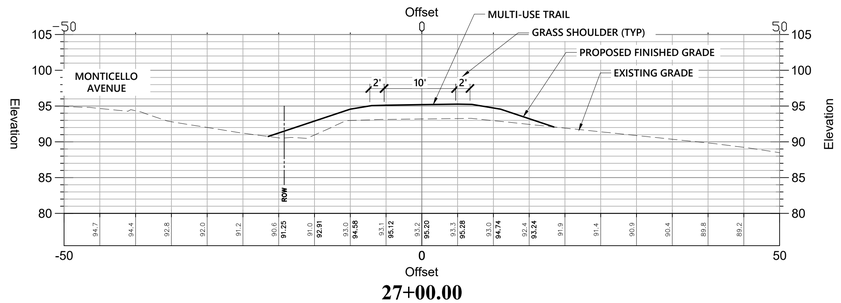

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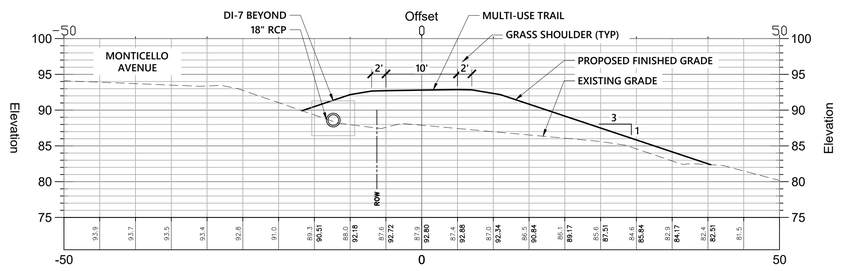

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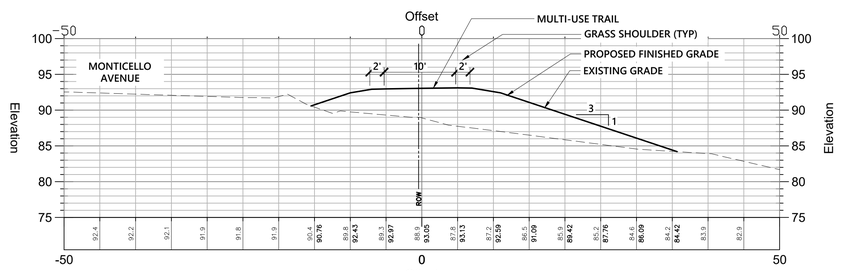

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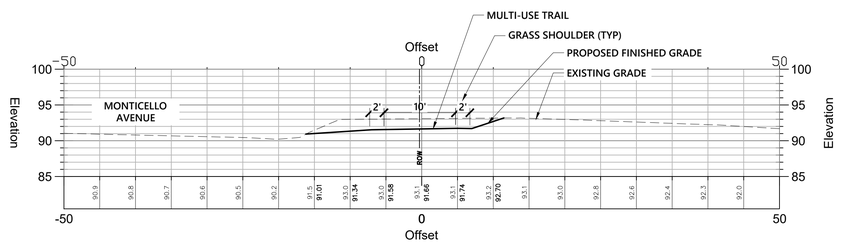

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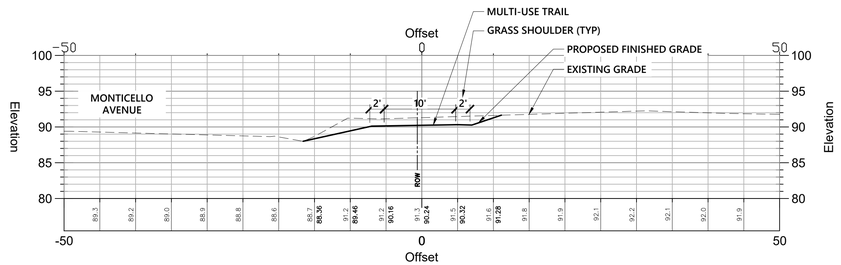

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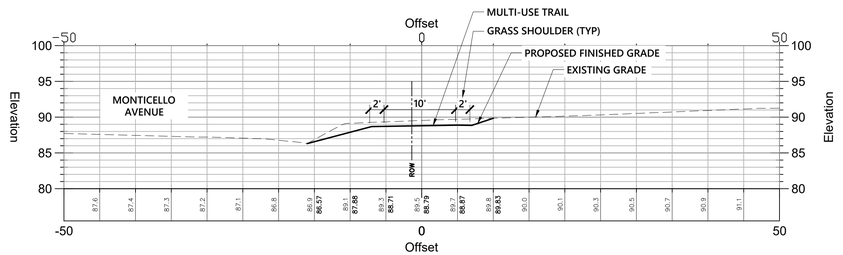

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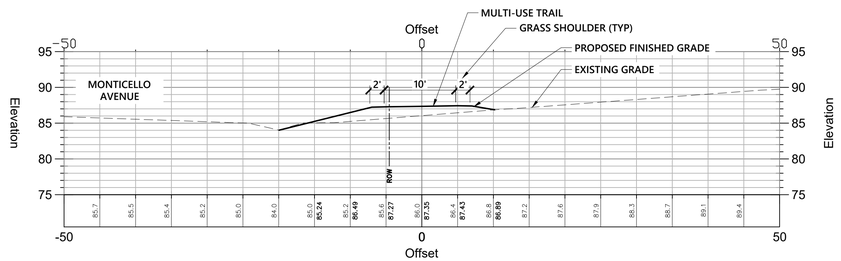

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Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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For Bid | May 1, 2019

Drawing Title
Cross Sections

Drawing Number
XS1.6

COMMONWEALTH OF VIRGINIA
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5-1-19
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Sheet 35 of 46

Project Number
34319.00

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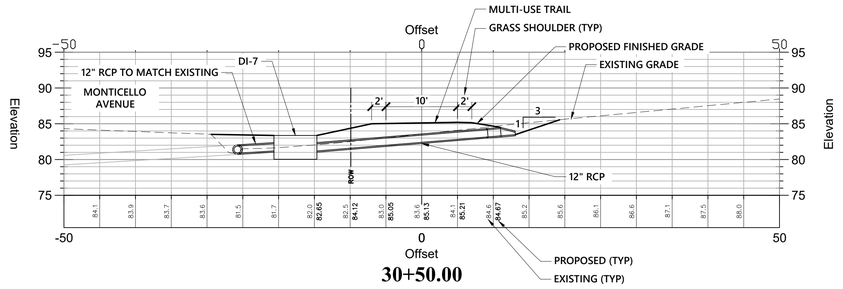

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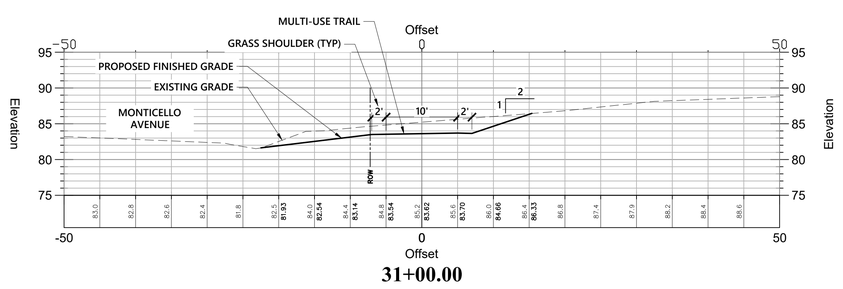

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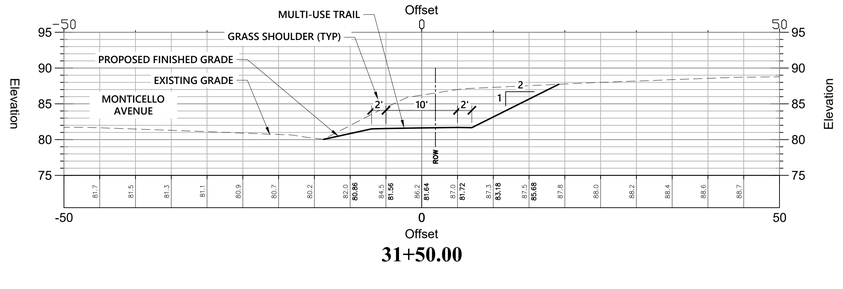

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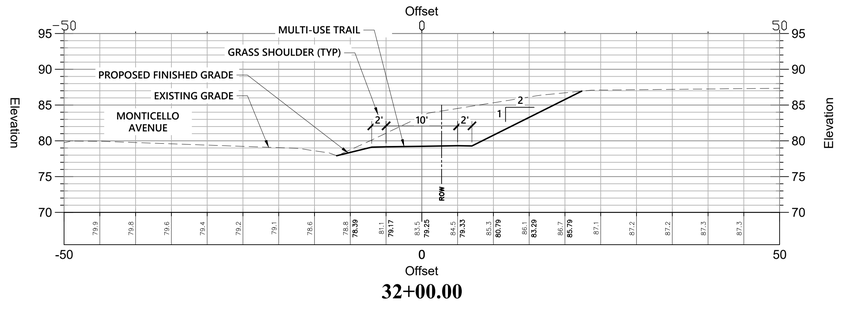

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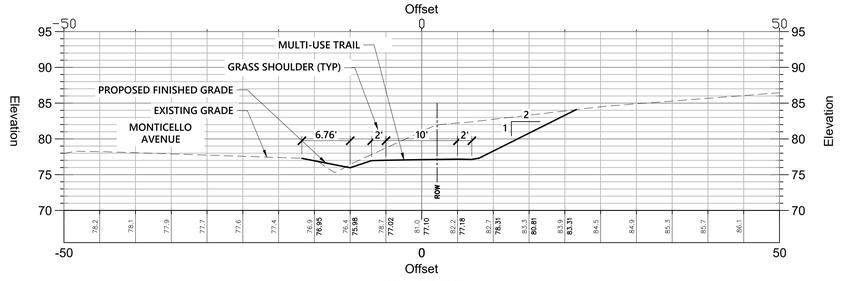

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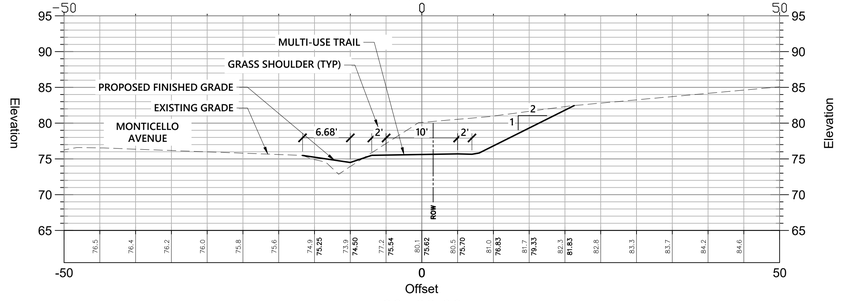

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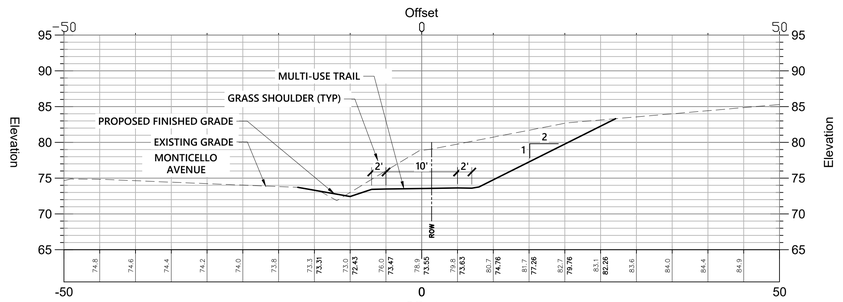

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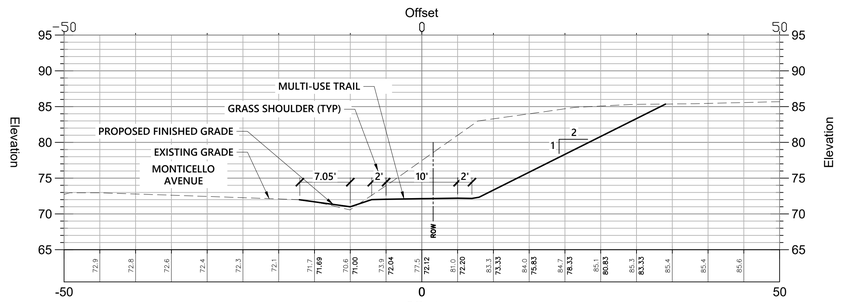

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Monticello Avenue Multi-Use Trail

Monticello Avenue
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Drawing Title
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Drawing Number
XS1.7

COMMONWEALTH OF VIRGINIA
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Sheet 36 of 46

Project Number
34319.00

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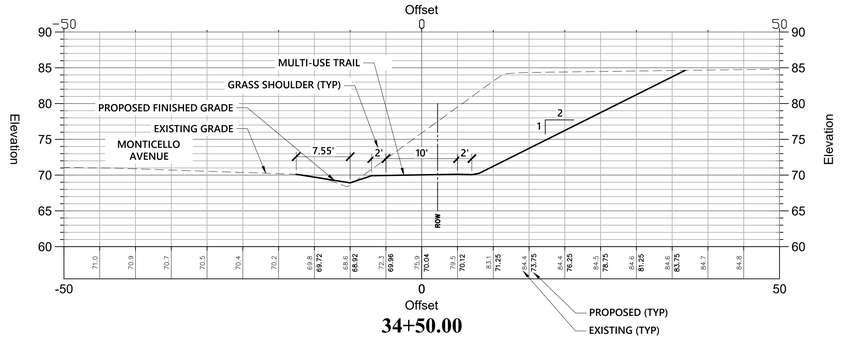

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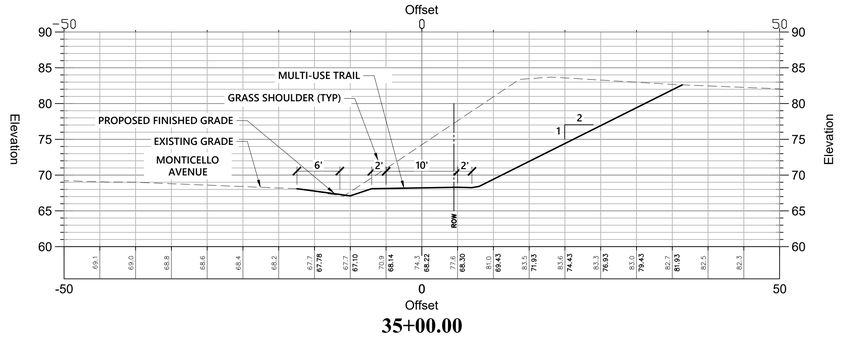

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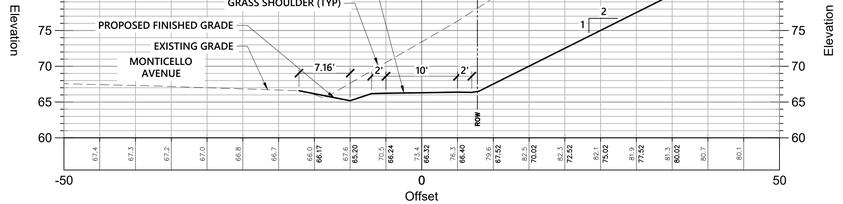

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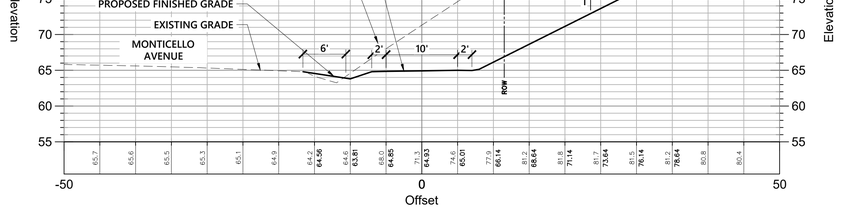

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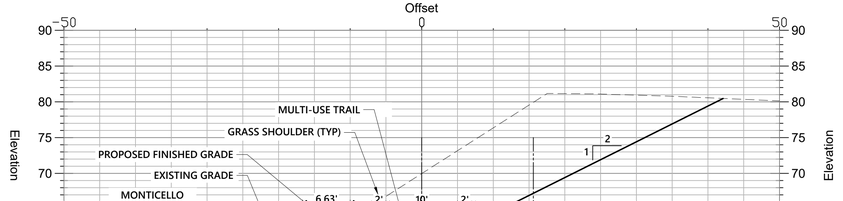

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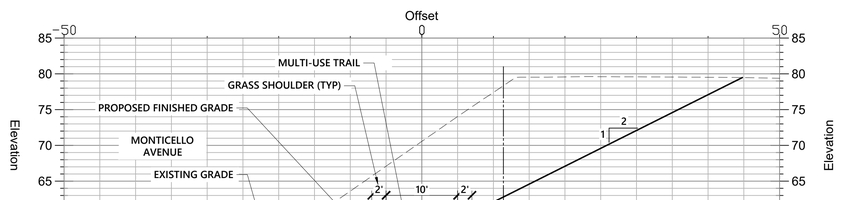

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Monticello Avenue Multi-Use Trail

Monticello Avenue
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No.	Revision	Date	Appvd.

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Drawing Title
Cross Sections

Drawing Number
XS1.8

COMMONWEALTH OF VIRGINIA
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Sheet 37 of 46

Project Number
34319.00

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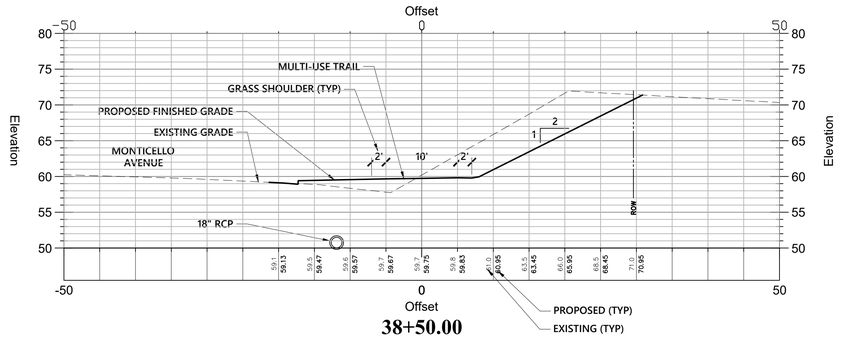

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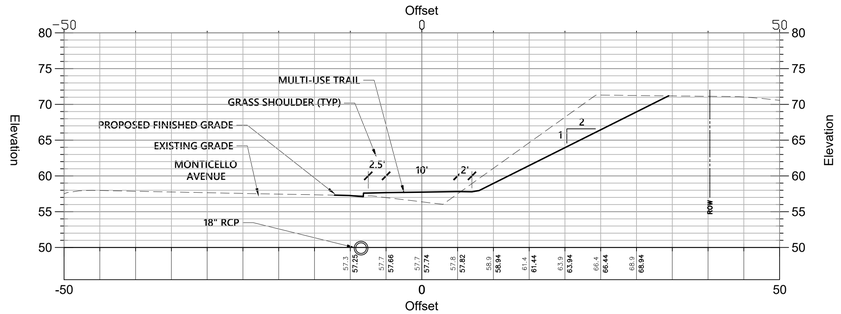

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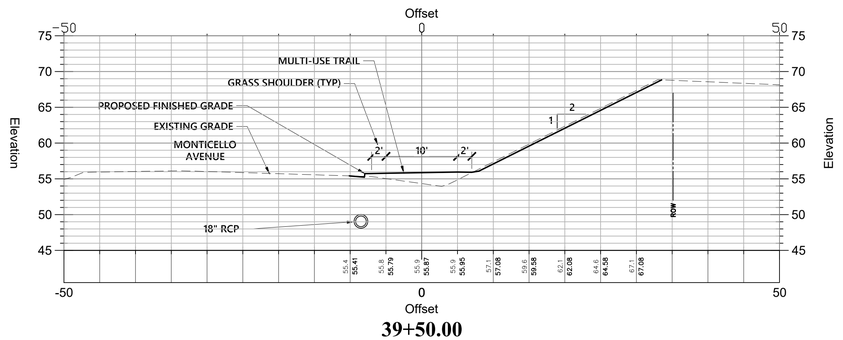

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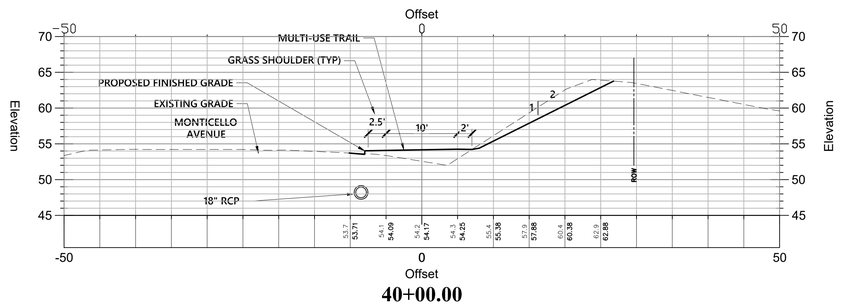

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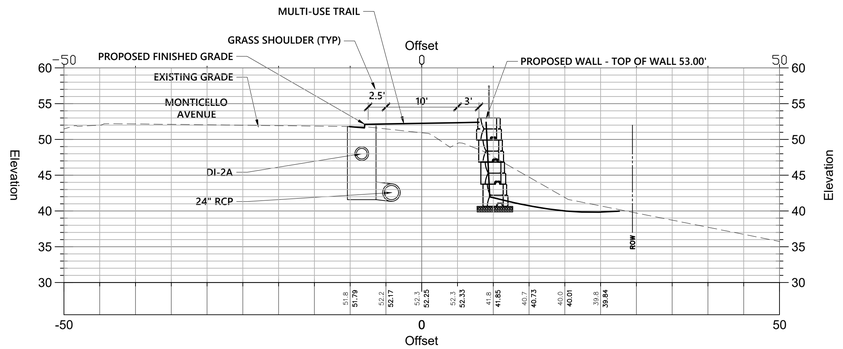

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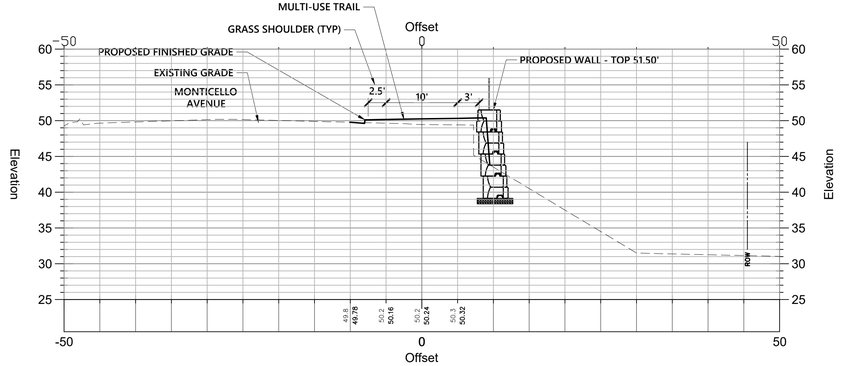

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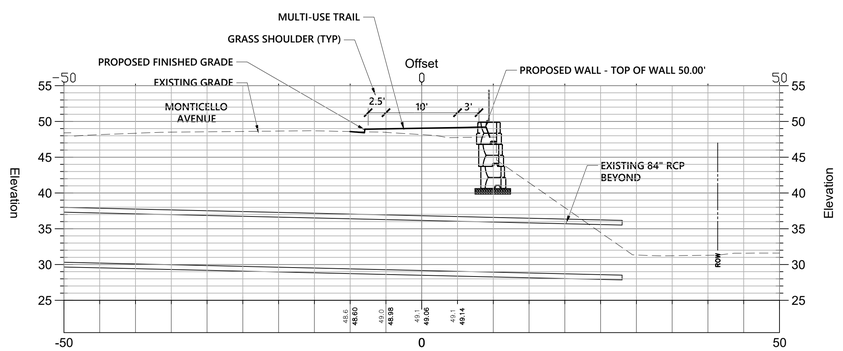

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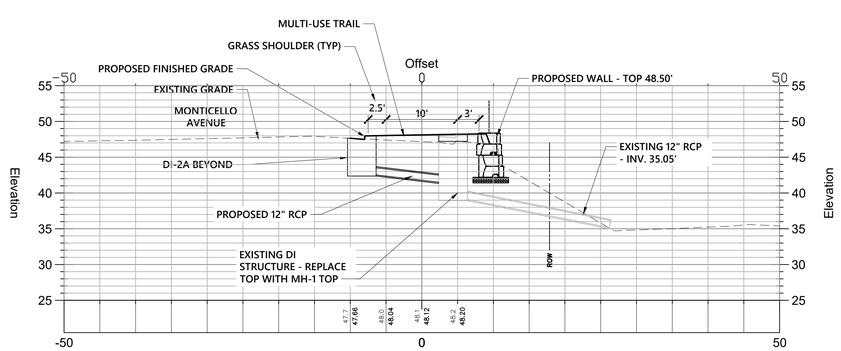

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Monticello Avenue Multi-Use Trail

Monticello Avenue
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Drawing Title
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Project Number
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GENERAL TRAFFIC NOTES

A. General

A1. The contractor shall submit all maintenance of traffic control plans, sequence of construction plans, & any plans essential to complete this project to the Engineering Division of Public Works and Utilities Department for review and approval. Plans must be submitted at least one week (7 days) prior to construction.

A2. The contractor shall be responsible for all work zone signing, delineation, pavement markings, & any other traffic control devices necessary to perform all work. Upon completion of the work, the contractor shall immediately remove all such temporary devices.

A3. Work hours in roadway open to traffic shall be completed Monday through Friday and work will be completed between the hours of 9:00 a.m. and 3:00 p.m. only. No work will be allowed in the roadway on Saturdays and Sundays and holidays unless otherwise noted or approved in writing by the project engineer. Additional restrictions may apply based on traffic conditions. Extended work hours and work days may be requested with a written request to the project engineer. This request must be submitted at least five (5) working days prior to the extended work period.

A4. The contractor shall contact Miss Utility at (800-522-7001) for utility locations and must follow Miss Utilities laws and rules for protecting other utilities before any excavation. The contractor shall also contact HRSD separately, since their lines are not marked by Miss Utility. The Contractor shall be responsible for repairing or replacing, at his own expense, any utilities, pavement, concrete items, pipes, etc., that are damaged during construction.

A5. The contractor shall be responsible for cleaning and clearing all project debris at the end of each workday. The contractor shall haul and dispose of all waste as required by section 106 of the VDOT standard specifications.

A6 . All signage and flagging operations within the right-of-way shall adhere to the Virginia Work Area Protection Manual, 2011 Edition Revision 1 dated April 1, 2015, and the VDOT Safety Manual.

A7. No objects, equipment, or stored materials may interfere with sight distance and access to entrances and intersections within the project limits.

A8. Contractor shall maintain access to private entrances during operations.

A9. All areas excavated below existing pavement surfaces at the conclusion of each workday shall be backfilled to form a 6:1 wedge against pavement surface for the safety and protection of vehicular traffic.

A10. The contractor shall provide temporary drainage as required to prevent ponding of water on the roadway and adjacent properties at no additional cost to the project.

A11. Contractor may not flag traffic at signalized intersections while signal is operational.

A12. The City of Williamsburg will not assist contractor in securing staging area for equipment and materials within the City (i.e CIty, VDOT, and William Merry). All materials and equipment shall be stored outside of the right-of-way. All equipment & materials shall be removed prior to restoring the original traffic pattern.

A13. It is anticipated that the following WAPM 2011 Edition Revision 1 - April 1, 2015 will be used as the typical traffic control applications to perform the contract work TTC-6.1(Page 6H-19), TTC-22.1(Page 6H-51), TTC-23.1(Page 6H-53), and TTC-63.1(Page 6H-133). During periods that operations are performed under traffic, the speed limit shall be, as posted. In addition, "ROAD WORK AHEAD" signs shall be placed in advance of the work zone.

A14. Group 2 channelizing devices are to be placed as directed by the WAPM 2011 Edition Revision 1 - April 1, 2015, Appendix page A-7.

A15. Temporary lane widths are not to be less than 11' unless specifically noted per construction area. (desirable existing lane width when possible).

A16. For the purposes of the maintenance of traffic plans, Monticello Avenue is referenced as an east and west roadway.

A17 The contractor shall maintain the existing shoulder during construction to the extent possible.

B. Signs & Pavement Marking

B1. See site plan sheets for pavement markings

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351 McLaws Circle
Suite 3
Williamsburg, VA 23185
757.220.0500

McPherson CONSULTING
317 Office Square Lane | Suite 102A
Virginia Beach, Virginia 23462 (757) 580 - 5279

COMMONWEALTH OF VIRGINIA
KAREN C. McPHERSON
Lic. No. 025738
PROFESSIONAL ENGINEER

Digitally signed by: Karen McPherson
Date: 2019.05.01 12:44:08 -05'00'

Karen C. McPherson, PE
McPherson Consulting, LLC

MOT Legend

- Type II Channelizing Device
- Travel Lanes
- Proposed Work Zone
- Type 3 Barricade
- Truck Mounted Attenuator
- Type A Concrete Barrier
- Type B Warning Light

Monticello Avenue Multi-Use Trail
Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

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Date: May 1, 2019

Drawing Title:
Maintenance of Traffic Plans

General Traffic Notes

Drawing Number:
MOT 1.00

Sheet 39 of 46

Project Number:
34319.00

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Traffic Control Details

TTC 6.1

Typical Traffic Control
Shoulder Closure with Barrier Operation
(Figure TTC-6.1)

NOTES

Guidance:

1. *Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*

Standard:

2. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**
3. **Group 2 channelizing device spacing shall be at the following:**

Location	Posted Speed Limit (mph)	
	0 - 35	36 +
Transition Spacing	20'	40'
Travelway Spacing	40'	80'

4. **The minimum length for a shoulder taper shall be 360' on Limited Access highways, and ½ L for all other roadways (see Note 7 of TTC-5 for values of L).**
5. **Barrier transition slope ratio shall be as follows:**

Speed Limit (mph)	Slope Ratio	Speed Limit (mph)	Slope Ratio	Speed Limit (mph)	Slope Ratio
70	22:1	55	17:1	40	13:1
65	20:1	50	16:1	35	11:1
60	19:1	45	14:1	≤30	10:1

When the barrier transition slope is on a horizontal alignment, the total offset shall be prorated around the curve in lieu of a straight-line slope.

6. **End treatment of a barrier in order of preference:**
   a. **Where guardrail exists, attach to barrier with appropriate fixed object attachment.**
   b. **Where cut slope exists, bury barrier into cut slope and provide for drainage as needed.**
   c. **Extend end of barrier until it is beyond the established clear zone (see Figure 2 on Page A-4 in Appendix A for clear zone values).**
   d. **When barrier end is inside the established clear zone, attenuator service Type I or Type II shall be used. Contact L&D Standards/Special Design Section for approved attenuators.**
7. **Barrier panels 8 inches in width and 12 inches in height shall be placed on top of the concrete barrier and spaced 80' on centers along the parallel or tangent sections and 40' on centers along the transition or taper sections. Reflectorized surface shall be fluorescent orange prismatic lens sheeting. The light at the beginning of the barrier run and at the breakpoint where the barrier becomes parallel to the roadway shall be a Type B flashing light. Barrier delineators shall be installed along the traffic side of the concrete barriers in-between and at the same spacing as the barrier panels approximately 24 inches up from the roadway surface.**

Option:

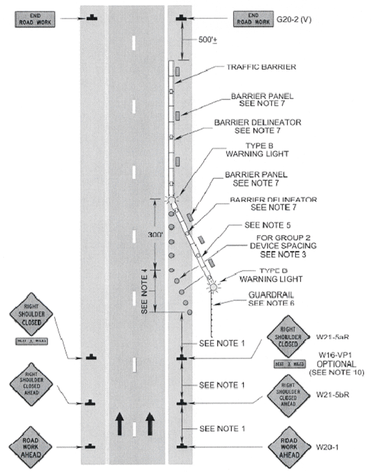
8. The barrier shown in this typical application is an example of one method that may be used to close a shoulder of a long-term project.
9. The RIGHT SHOULDER CLOSED (W21-5aR) sign may be eliminated from all roadways except Limited Access highways.

Guidance:

10. *If drivers cannot see a pull-off area beyond the closed shoulder, information regarding the length of the shoulder closure shall be provided in feet or miles, as appropriate.*
11. *An emergency pull-off area should be provided per Section 6G.18 and Temporary Traffic Control Figure TTC-8.*

1: Revision 1 – 4/1/2015

Shoulder Closure with Barrier Operation
(Figure TTC-6.1)



TTC 22.1

Typical Traffic Control
Right Lane Closure Operation on a Three-Lane Roadway
(Figure TTC-22.1)

NOTES

Guidance:

1. *The distance between signs and beginning of channelizing device transition should be a minimum of 500' and a maximum of 800'.*
2. *The buffer space length should be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.*
3. *For locations with a high volume of left turning movements, the graphic NO LEFT TURN (R3-2) signs should be used within the closed lane.*

Option:

4. Where Right-of-Way or geometric conditions prevent use of 48" x 48" signs, 36" x 36" signs may be used.

Standard:

5. **Taper length (L) and channelizing device spacing shall be :**

Speed Limit (mph)	Taper Length (L) Lane Width (Feet) 9	10	11[1]	12
25	95	105	115	125
30	135	150	165	180
35	185	205	225	245
40	240	270	295	320
45	405	450	495	540
50	450	500	550	600
55	495	550	605	660
60	540	600	660	720
65	585	650	715	780
70	630	700	770	840
Minimum taper lengths for Limited Access highways shall be 1000 feet.				
Shoulder Taper = ½ L Minimum				

Channelizing Device Spacing		
Location	Speed Limit (mph) 0 - 35	36 +
Transition Spacing	20'	40'
Travelway Spacing	40'	80'
Construction Access*	80'	120'

* Spacing may be increased to this distance, but shall not exceed one access per ¼ mile.

On roadways with paved shoulders having a width of 8 feet or more, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.

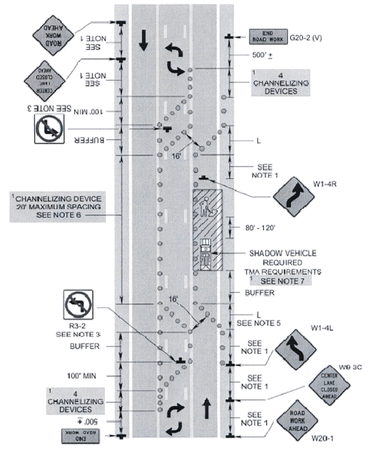
6. **To prevent vehicles from entering into the buffer and activity areas', channelizing device spacing shall be a maximum of 20' on center.**
7. **A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one rotating amber light or high intensity amber flashing or oscillating[1] light shall be parked 80'-120' in advance of the work crew in both directions of travel. If multiple lanes are present (four or more lanes, excluding the center turn lane) and the posted speed limit is 45 mph or greater, the vehicles shall be equipped with a truck-mounted attenuator (TMA).**
8. **When a side road intersects the highway within the temporary traffic control zone, additional traffic control devices shall be placed as needed.**
9. **For long-term work zones existing conflicting pavement markings and markers shall be removed and temporary pavement markings and markers shall be installed per Figure TTC-60.**

Guidance:

10. *When channelizing devices have the potential of leading vehicular traffic out of the intended traffic space, the channelizing devices should be extended a distance with 4 additional channelizing devices beyond the downstream end of the transition area as depicted.*

1: Revision 1 – 4/1/2015

Right Lane Closure Operation on a Three-Lane Roadway
(Figure TTC-22.1)



TTC 23.1

Typical Traffic Control
Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.1)

NOTES

Guidance:

1. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.*
2. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the flagger station and transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. Generally speaking, motorists should have a clear line of sight from the graphic flagger symbol sign to the flagger.*

Option:

3. Where Right-of-Way or geometric conditions prevent the use of 48" x 48" signs, 36" x 36" signs may be used.

Standard:

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

Option:

8. A supplemental flagger may be required in this area to give advance warning of the operation ahead by slowing approaching traffic prior to reaching the flagger station or queued traffic.

Guidance:

9. *If the queue of traffic reaches the BE PREPARED TO STOP (W3-4) sign then the signs, and if used the portable temporary rumble strips (PTRS), should be readjusted at greater distances.*
10. *When a highway-rail crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the highway-rail grade crossing, the temporary traffic control zone should be extended so that the transition area precedes the highway-rail crossing (see Figure TTC-56 for additional information on highway-rail crossings).*

Standard:

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

Option:

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

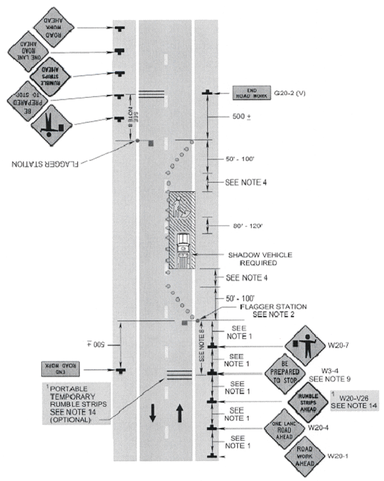
Standard:

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

Posted Speed	0 – 35 mph	36 – 55 mph
PTRS Spacing (Center to Center)	5 Feet	8 Feet

1: Revision 1 – 4/1/2015

Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.1)



TTC 63.1

Typical Traffic Control
Logging Operations
(Figure TTC-63.1)

NOTES

Standard:

1. **Prior to the installation of the entrance and placement of any traffic control devices, the appropriate state/local agencies shall be notified.**

Guidance:

2. *Care should be exercised when establishing the location of the permitted temporary entrance to insure maximum possible sight distance in advance of the entrance, and should be based on the posted speed limit and at least equal to or greater than the values in the Intersection Sight Distance (ISD) table.*

Intersection Sight Distance (ISD)

Posted Speed Limit (mph)	20	25	30	35	40	45	50	55	60	65	70
Minimum ISD	195	240	290	335	385	430	480	530	575	625	670

3. *Sign spacing distance should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*

Standard:

4. **TRUCKS ENTERING HIGHWAY (W11-V4) sign shall be used to warn of logging trucks entering roadways. LOG TRUCKS ENTERING HIGHWAY sign is not allowed for use.**
5. **On divided highways having a median wider than 8', right and left sign assemblies shall be used. Median barrier is considered to be part of the shoulder and its measurement shall be used to determine the total width of the shoulder.**

Guidance:

6. *For operations that disrupt (stop) traffic on the travelway, Typical Traffic Control Figure TTC-23, Lane Closure on a Two-Lane Roadway Using Flaggers, or Typical Traffic Control Figure TTC-16 or 17, Outside or Inside Lane Closure Operation on Four-Lane Roadway, should be used.*

Standard:

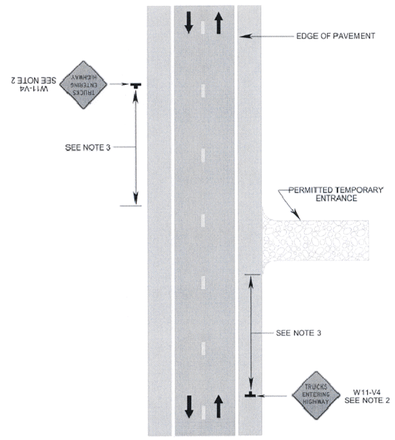
7. **Flaggers shall be state certified and have their certification card in their possession when performing flagging duties (see Section 6E.01, Qualifications for Flaggers).**
8. **The organization receiving the entrance permit shall be responsible for the removal of all debris (gravel, mud, dust, hauled materials, etc.), obstructions and irregularities caused by the operation in accordance with Section 105 of the Road and Bridge Specifications.**

Guidance:

9. *For the removal of debris on the roadway, Typical Traffic Control Figure TTC-14, Moving/Mobile Operation on a Two-Lane Roadway, or Typical Traffic Control Figure TTC-13, Moving/Mobile Operation on a Multi-Lane Roadway, should be used.*

1: Revision 1 – 4/1/2015

Logging Operations
(Figure TTC-63.1)



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351 McLaws Circle
Suite 3
Williamsburg, VA 23185
757.220.0500

McPherson CONSULTING
317 Office Square Lane | Suite 102A
Virginia Beach, Virginia 23462 (757) 580 - 5279

COMMONWEALTH OF VIRGINIA
KAREN C. McPHERSON
Lic. No. 025738
PROFESSIONAL ENGINEER

Digitally signed by: Karen McPherson
Date: 2019.05.01 12:44:52 -05'00'

Karen C. McPherson, PE
McPherson Consulting, LLC

MOT Legend

- Type II Channelizing Device
- Travel Lanes
- Proposed Work Zone
- Type 3 Barricade
- Truck Mounted Attenuator
- Type A Concrete Barrier
- Type B Warning Light

Monticello Avenue Multi-Use Trail
Monticello Avenue
Williamsburg, Virginia

No.	Revision	Date	Appvd.

Designed by HPV Checked by KCM
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Date: May 1, 2019

Drawing Title: Maintenance of Traffic Plans
Traffic Control Details

Drawing Number: MOT 1.01
Sheet 40 of 46

Project Number: 34319.00

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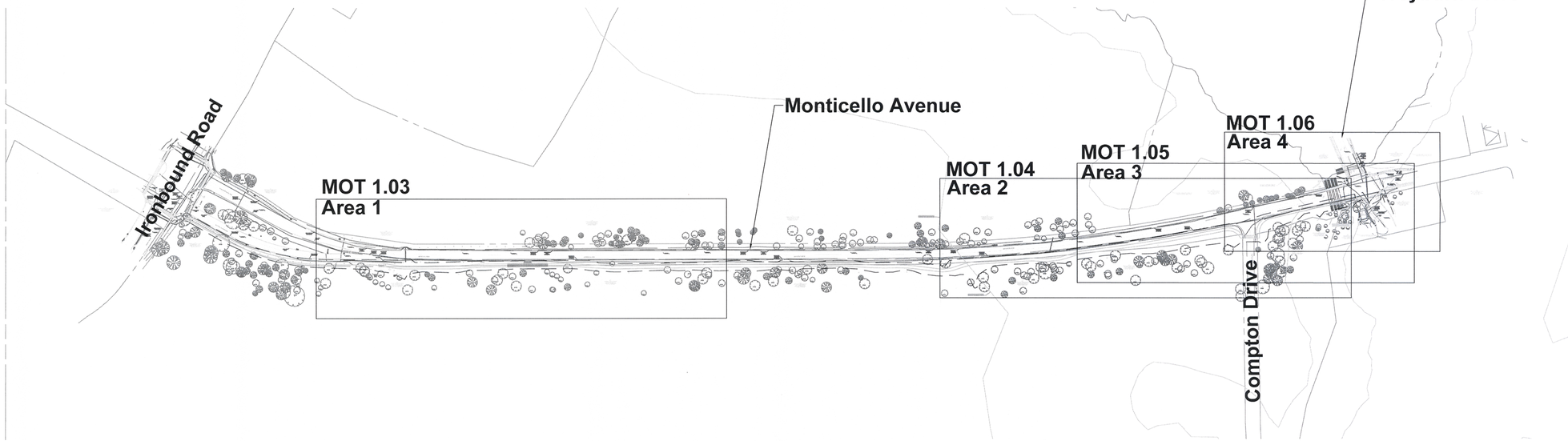
Construction Area Layout Limits



GRAPHIC SCALE
1"=200' 0' 200' 400' 600' 800' 1000'

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Suite 3
Williamsburg, VA 23185
757.220.0500

McPherson CONSULTING
317 Office Square Lane | Suite 102A
Virginia Beach, Virginia 23462 (757) 580 - 5279

COMMONWEALTH OF VIRGINIA
KAREN C. McPHERSON
Lic. No. 025738
PROFESSIONAL ENGINEER

Digitally signed by: Karen McPherson
Date: 2019.05.01 12:45:32 -05'00'

Karen C. McPherson, PE
McPherson Consulting, LLC

MOT Legend

- Type II Channelizing Device
- Travel Lanes
- Proposed Work Zone
- Type 3 Barricade
- Truck Mounted Attenuator
- Type A Concrete Barrier
- Type B Warning Light

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

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Drawing Title
Maintenance of Traffic Plans

Construction Area Layout Limits

Drawing Number
MOT 1.02

Sheet 41 of 46

Project Number
34319.00

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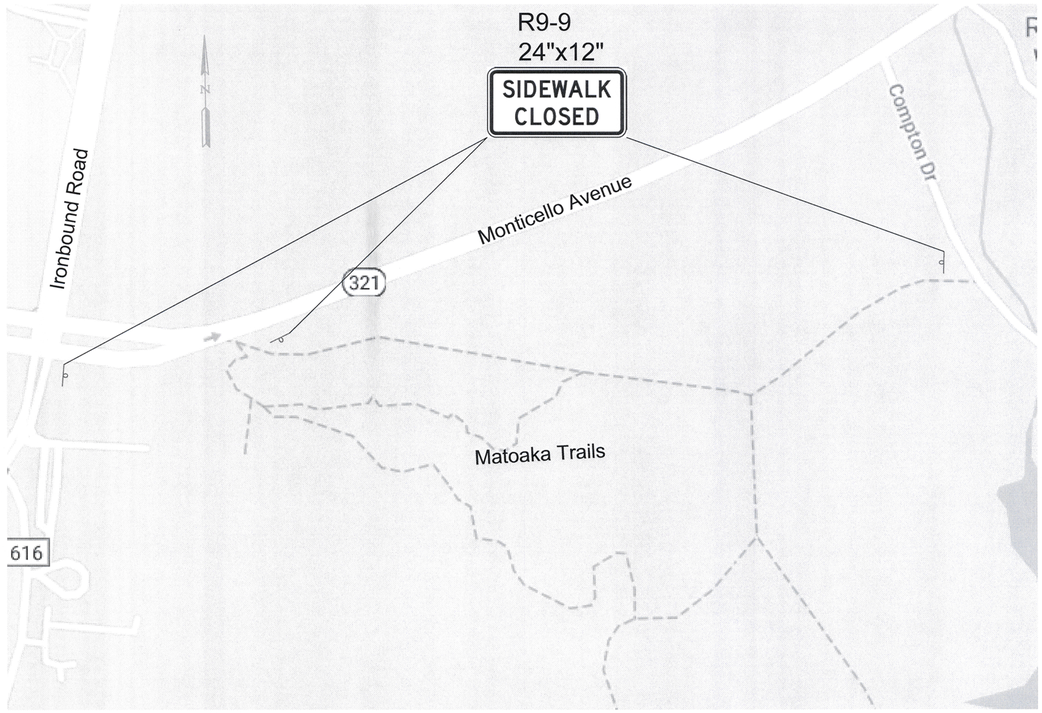
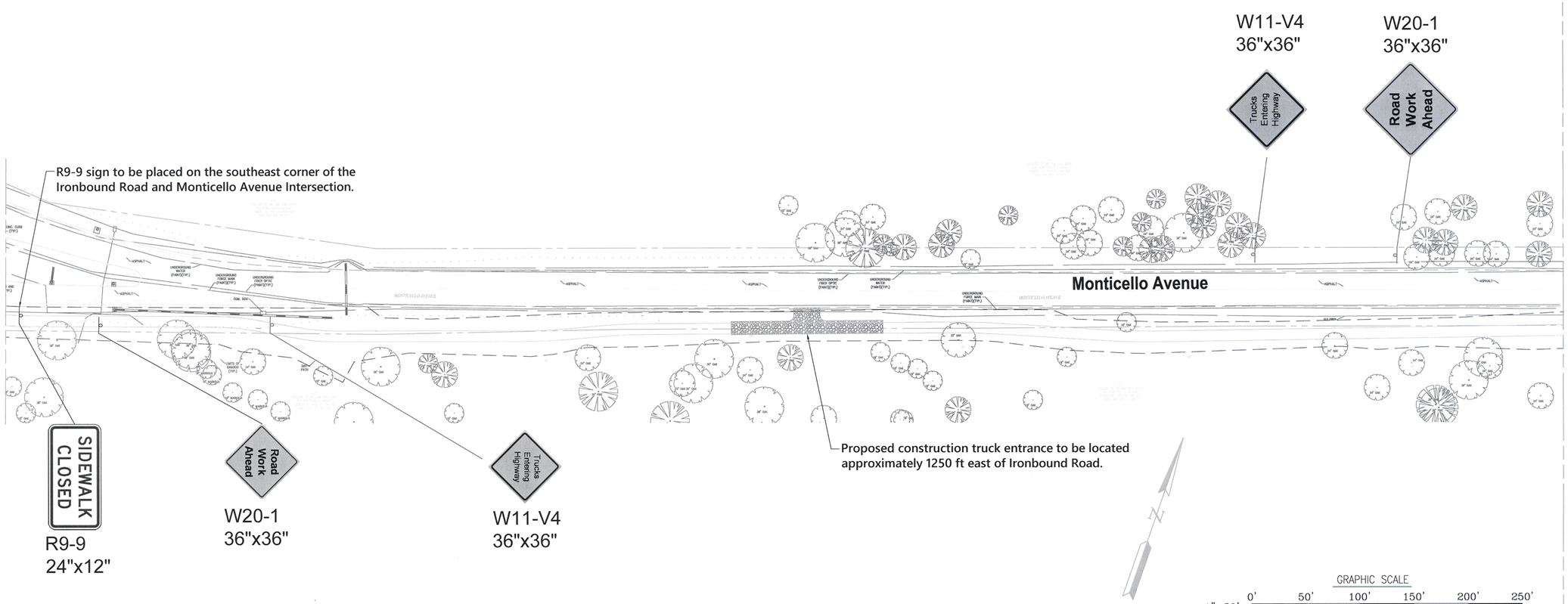
Area 1 Construction

Construction Truck Entrance

1. W11-V4 "Trucks Entering Highway" sign will be placed approximately 500' west of the construction truck entrance and 500' east of the construction truck entrance.
2. Maintain existing laneage.
3. Construction activities shall not impact the existing lanes. All construction shall take place south of Monticello Avenue, behind the existing edge of pavement.
4. Signing for Area 1 is anticipated to remain in place for the project duration.
5. For the duration of construction, the sidewalk/trail will remain closed. Place sign R9-9 at the southeast corner of the Ironbound Road and Monticello Avenue intersection. The contractor shall place two (2) additional R9-9 signs along Matoaka Trail. One (1) sign will be placed at the entrance to Matoaka Trails along Compton Drive (approximately 1100 ft south of Monticello Avenue). The second sign should be placed along the internal trail at the location where the trail meets prior to entering Monticello Avenue to allow pedestrians to be rerouted to an alternate trail.
6. See TTC 63.1 for detailed sign placement located on sheet MOT 1.01.





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Williamsburg, VA 23185
757.220.0500

McPherson CONSULTING
317 Office Square Lane | Suite 102A
Virginia Beach, Virginia 23462 (757) 580 - 5279

COMMONWEALTH OF VIRGINIA
KAREN C. McPHERSON
Lic. No. 025738
PROFESSIONAL ENGINEER

Digitally signed by: Karen McPherson
Date: 2019.05.01 12:46:14 -05'00'

Karen C. McPherson, PE
McPherson Consulting, LLC

MOT Legend

- Type II Channelizing Device
- Travel Lanes
- Proposed Work Zone
- Type 3 Barricade
- Truck Mounted Attenuator
- Type A Concrete Barrier
- Type B Warning Light

Monticello Avenue Multi-Use Trail

Monticello Avenue
Williamsburg, Virginia

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Drawing Title
Maintenance of Traffic Plans

Area 1 Construction

Drawing Number
MOT 1.03
Sheet 42 of 46

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Area 2 Construction

Construction Activities West of Compton Drive

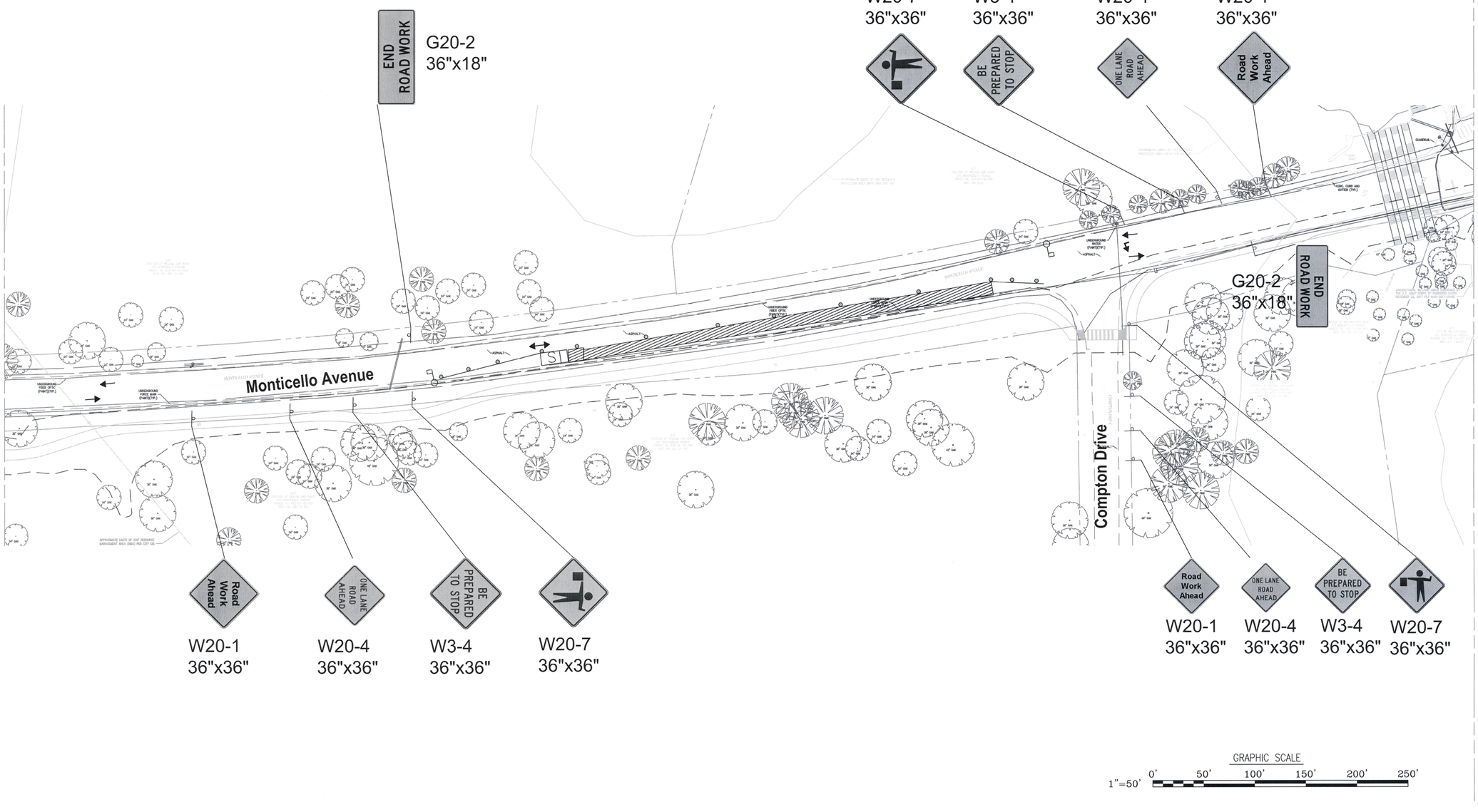
1. Construction activities require the work zone to extend within the limits of the Monticello Avenue eastbound lane. For the duration of work activity in Area 2, a one lane two-way flagging operation will be required. Area 2 will extend from approximately 500' west of Compton Drive and east for approximately 400'.

2. Site preparation will include tree trimming and hill excavation south of the eastbound edge of pavement to a grade that is suitable for construction activity to occur outside of the roadway.

3. Once the site preparation is complete, the construction work zone will take place south of Monticello Avenue's existing edge of pavement. Monticello Avenue can be returned to a two-way traffic operation.

4. For the duration of construction, the sidewalk/trail will remain closed. See sheet MOT 1.03 for R9-9 sign locations.

5. See TTC 23.1 for detailed sign placement located on sheet MOT 1.01.



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Williamsburg, VA 23185
757.220.0500

McPherson CONSULTING
317 Office Square Lane | Suite 102A
Virginia Beach, Virginia 23462 (757) 580 - 5279

COMMONWEALTH OF VIRGINIA
KAREN C. McPHERSON
Lic. No. 025738
PROFESSIONAL ENGINEER

Digitally signed by: Karen McPherson
Date: 2019.05.01 12:46:51 -05'00'

Karen C. McPherson, PE
McPherson Consulting, LLC

MOT Legend

- Type II Channelizing Device
- Travel Lanes
- Proposed Work Zone
- Type 3 Barricade
- Truck Mounted Attenuator
- Type A Concrete Barrier
- Type B Warning Light

Monticello Avenue Multi-Use Trail
Monticello Avenue
Williamsburg, Virginia

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Drawing Title: Maintenance of Traffic Plans
Area 2 Construction

Drawing Number: MOT 1.04
Sheet 43 of 46

Project Number: 34319.00

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Area 3 Construction

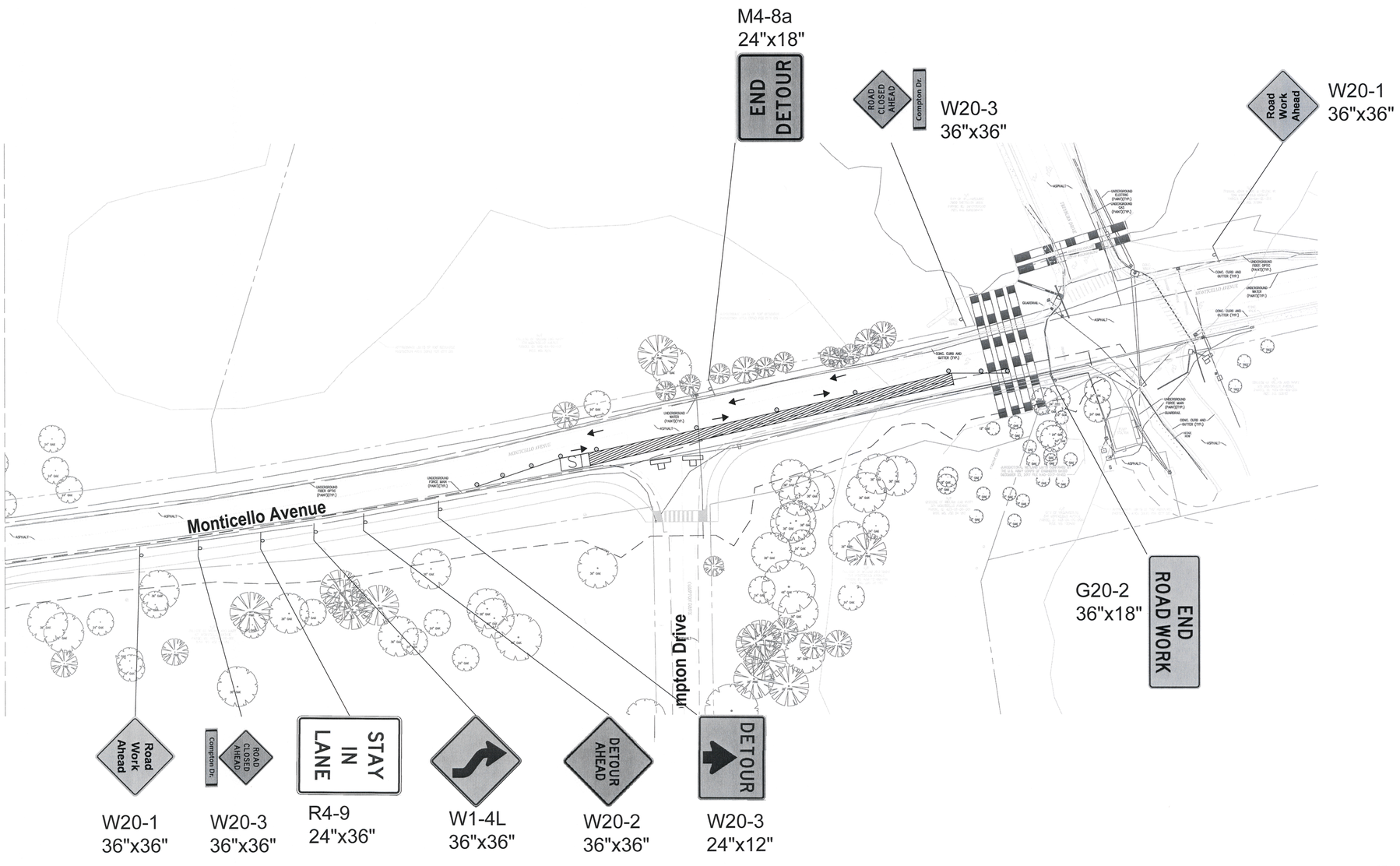
Construction Notes during Compton Drive Closure

1. Area 3 construction activiy will occur from approximately 70' west of Compton Drive through the intersection to approximately 250' east of Compton Drive.

2. During the duration of this construction in Area 3, Compton Drive will be closed and a temporary detour will be provided as illustrated on MOT 1.07.

4. For the duration of construction, the sidewalk/trail will remain closed. See sheet MOT 1.03 for R9-9 sign locations.

5. See TTC-22.1 for construction sign placements for the eastbound right turn located on sheet MOT 1.01.



GRAPHIC SCALE
1"=50' 0' 50' 100' 150' 200' 250'

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317 Office Square Lane | Suite 102A
Virginia Beach, Virginia 23462 (757) 580 - 5279

COMMONWEALTH OF VIRGINIA
KAREN C. McPHERSON
Lic. No. 025738
PROFESSIONAL ENGINEER

Digitally signed by: Karen McPherson
Date: 2019.05.01 12:47:25 -05'00'

Karen C. McPherson, PE
McPherson Consulting, LLC

MOT Legend

- Type II Channelizing Device
- Travel Lanes
- Proposed Work Zone
- Type 3 Barricade
- Truck Mounted Attenuator
- Type A Concrete Barrier
- Type B Warning Light

Monticello Avenue Multi-Use Trail
Monticello Avenue
Williamsburg, Virginia

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Area 3 Constrution

Drawing Number
MOT 1.05
Sheet 44 of 46

Project Number
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Area 4 Construction

Construction Notes East of Compton Drive

1. Construction activities for Area 4, eliminate the exclusive right-turn lane eastbound on Monticello Avenue where the existing lane will serve as a work zone area to the Treyburn Drive and Monticello Avenue intersection.

2. The existing eastbound right turn lane will be permanently closed after all construction improvements are finished. The existing eastbound through lane will be re-striped as a through-right turn lane.

3. Prior to the beginning of construction for Area 4, the contractor shall install type A concrete barriers.

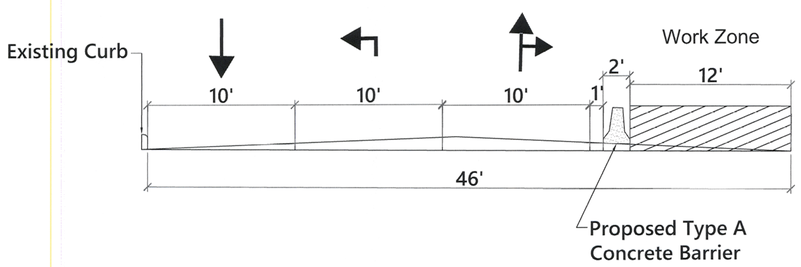
4. Existing 12 foot lanes will be reduced to 10 foot lanes for duration of Area 4 construction.

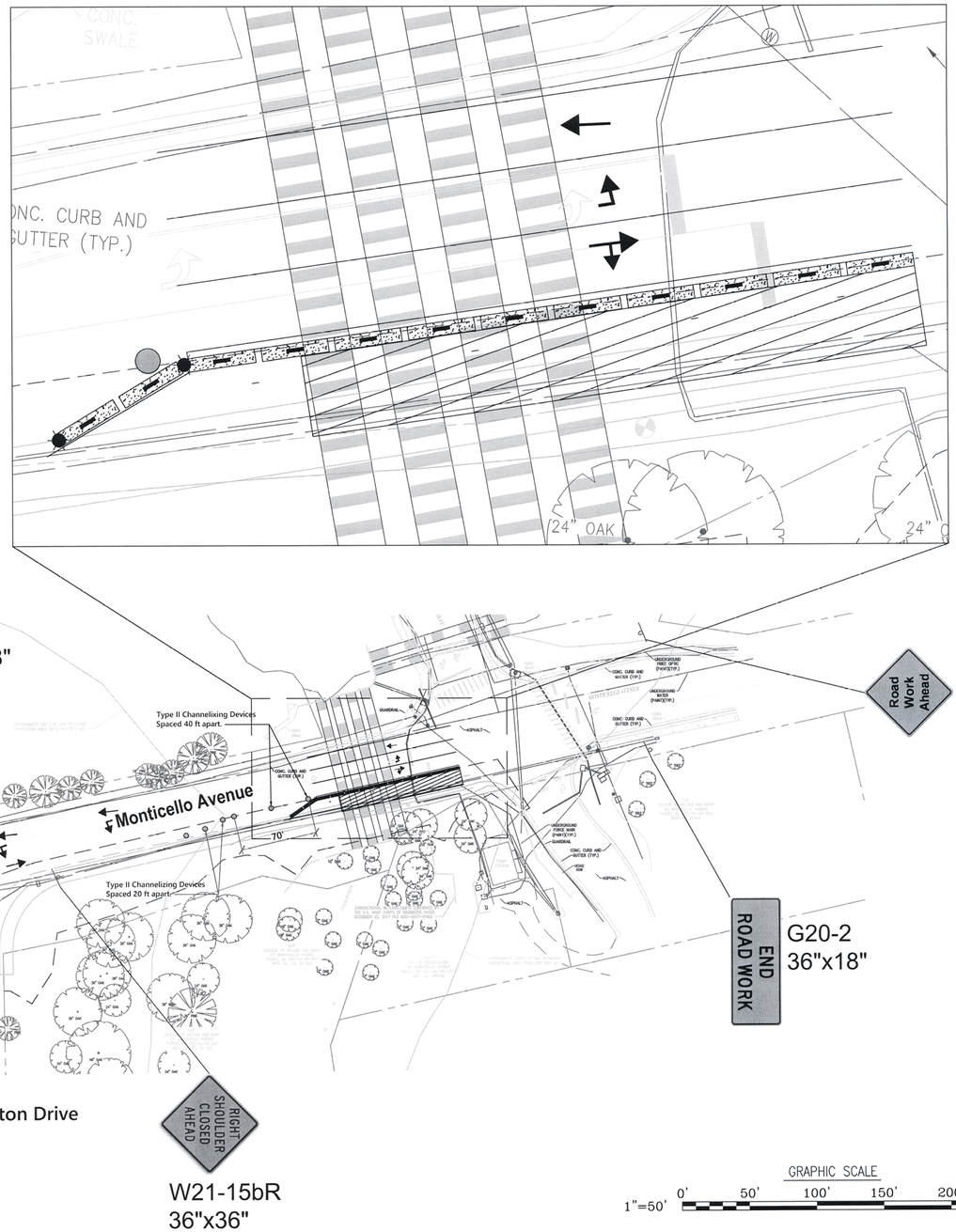
5. Temporary pavement markings will be placed for the duration of area 4 construction.

6. See TTC 6.1 for detailed sign placement located on sheet MOT 1.01.

Area 4 Construction Cross Section

Not to Scale





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317 Office Square Lane | Suite 102A
Virginia Beach, Virginia 23462 (757) 580 - 5279

COMMONWEALTH OF VIRGINIA
KAREN C. McPHERSON
Lic. No. 025738
PROFESSIONAL ENGINEER

Digitally signed by: Karen McPherson
Date: 2019.05.01 12:48:08 -05'00'

Karen C. McPherson, PE
McPherson Consulting, LLC

MOT Legend

- Type II Channelizing Device
- Travel Lanes
- Proposed Work Zone
- Type 3 Barricade
- Truck Mounted Attenuator
- Type A Concrete Barrier
- Type B Warning Light

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Monticello Avenue
Williamsburg, Virginia

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Drawing Title
Maintenance of Traffic Plans
Area 4 Construction

Drawing Number
MOT 1.06
Sheet 45 of 46

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Detour Sign Placement



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351 McLaws Circle
Suite 3
Williamsburg, VA 23185
757.220.0500

McPherson CONSULTING

317 Office Square Lane | Suite 102A
Virginia Beach, Virginia 23462 (757) 580 - 5279

COMMONWEALTH OF VIRGINIA
KAREN C. McPHERSON
Lic. No. 025738
PROFESSIONAL ENGINEER

Digitally signed by: Karen McPherson
Date: 2019.05.01 12:49:05 -05'00'

Karen C. McPherson, PE
McPherson Consulting, LLC

MOT Legend

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- Type A Concrete Barrier
- Type B Warning Light

Monticello Avenue Multi-Use Trail

Monticello Avenue
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Drawing Title
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Detour Sign Placement

Drawing Number
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