COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET) TOWN OF CULPEPER

FROM: INT. SPERRYVILLE PIKE AND N. WEST ST. TO: 0.77 MI. W. INT. SPERRYVILLE PIKE AND N. WEST ST.

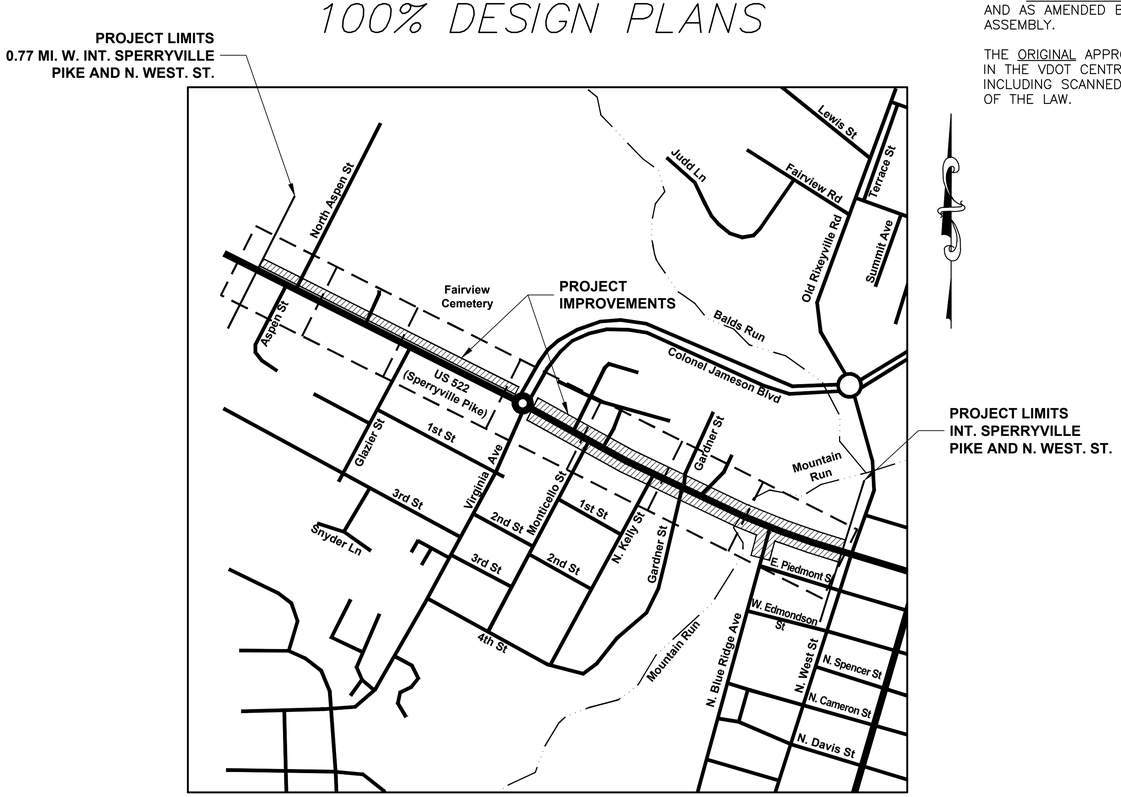
STATE PROJECT #U000-204-176
UPC #109573
FHWA 534 #(24021)

100% DESIGN PLANS

FUNCTIONAL CLASSIFICATION AND TRAFFIC DATA			
	US 522	US 522	N. Blue Ridge Avenue
Functional Classification	Minor Arterial	Minor Arterial	Minor Collector
To:	West of N. Blue Ridge Avenue	East of N. Blue Ridge Avenue	South of US 522
ADT (2018)	10,000	10,000	4,700
ADT (2040)	11,215	11,215	5,160
DHV	860	860	405
D (%) (design hour)	62	62	78
T (%) (design hour)	2.0	2.0	0.0
V (MPH)	30	30	25

SHEET INDEX

DESCRIPTION	SHEET NO.
COVER SHEET	C1.0
GENERAL NOTES	C2.0
EROSION AND SEDIMENT CONTROL NOTES	C2.1
ROADWAY TYPICAL SECTIONS	C2.2
MINI-ROUNDABOUT TYPICAL SECTIONS	C2.3
RIGHT OF WAY DATA SHEET	C2.4
EXISTING CONDITIONS & DEMOLITION PLAN	
BEG. PROJ. TO STA. 16+50	C3.0
STA. 16+50 TO STA. 22+25	C3.1
STA. 22+25 TO STA. 28+00	C3.2
STA. 28+00 TO STA. 33+75	C3.3
STA. 33+75 TO STA. 39+50	C3.4
STA. 39+50 TO STA. 45+00	C3.5
STA. 45+00 TO END PROJ.	C3.6
EROSION & SEDIMENT CONTROL PLAN	
BEG. PROJ. TO STA. 16+50	C4.0
STA. 16+50 TO STA. 22+25	C4.1
STA. 22+25 TO STA. 28+00	C4.2
STA. 28+00 TO STA. 33+75	C4.3
STA. 33+75 TO STA. 39+50	C4.4
STA. 39+50 TO STA. 45+00	C4.5
STA. 45+00 TO END PROJ.	C4.6
ROADWAY PLAN	
BEG. PROJ. TO STA. 16+50	C5.0
STA. 16+50 TO STA. 22+25	C5.1
STA. 22+25 TO STA. 28+00	C5.2
STA. 28+00 TO STA. 33+75	C5.3
STA. 33+75 TO STA. 39+50	C5.4
STA. 39+50 TO STA. 45+00	C5.5
STA. 45+00 TO END PROJ.	C5.6
MINI-ROUNDABOUT PLAN	
HORIZONTAL GEOMETRY PLAN	C6.0
TURNING MOVEMENTS (AUTOTURN)	C6.1-6.2
FASTEST PATH PLAN	C6.3-6.5
STOPPING SIGHT DISTANCE PROFILES	C6.6
INTERSECTION SIGHT DISTANCE PROFILES	C6.7
GRADING & DRAINAGE PLAN	
BEG. PROJ. TO STA. 16+50	C7.0
STA. 16+50 TO STA. 22+25	C7.1
STA. 22+25 TO STA. 28+00	C7.2
STA. 28+00 TO STA. 33+75	C7.3
STA. 33+75 TO STA. 39+50	C7.4
STA. 39+50 TO STA. 45+00	C7.5
STA. 45+00 TO END PROJ.	C7.6
RETAINING WALLS No. 1, 2, 3 & 4	C7.7
RETAINING WALLS No. 5, 6 7, & 8	C7.8
STORM SEWER PROFILES	C8.0-8.1
SIGNAGE & PAVEMENT MARKING PLAN	
BEG. PROJ. TO STA. 16+50	C9.0
STA. 16+50 TO STA. 22+25	C9.1
STA. 22+25 TO STA. 28+00	C9.2
STA. 28+00 TO STA. 33+75	C9.3
STA. 33+75 TO STA. 39+50	C9.4
STA. 39+50 TO STA. 45+00	C9.5
STA. 45+00 TO END PROJ.	C9.6
SIGNING SCHEDULE	C9.7
CIVIL DETAILS	C10.0-10.3
EROSION & SEDIMENT CONTROL DETAILS	C10.4
TRAFFIC MANAGEMENT PLAN	C11.0
DETOUR PLAN (PHASE 3)	C12.0
LIGHTING PLAN	C13.0-13.1
LIGHTING DETAILS	C13.2
SWPPP GENERAL INFORMATION SHEETS	C14.0-14.2
STORMWATER MANAGEMENT PLAN	C15.0
STORMWATER MANAGEMENT NOTES	C15.1
UNDERGROUND DETENTION PLAN	C15.2



PROJECT VICINITY MAP
NOT TO SCALE

THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY AS AWARDED, HAS BEEN SEALED AND SIGNED USING DIGITAL SIGNATURES AND THE OFFICIAL PLAN ASSEMBLY IN ELECTRONIC FORMAT IS STORED IN THE VDOT CENTRAL OFFICE PLAN LIBRARY, INCLUDING ALL SUBSEQUENT REVISIONS, WILL BE THE OFFICIAL CONSTRUCTION PLANS. FOR INFORMATION RELATIVE TO ELECTRONIC FILES AND LAYERED PLANS, SEE THE GENERAL NOTES. DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE CO.

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH VDOT's 2020 ROAD AND BRIDGE SPECIFICATIONS, 2020 ROAD AND BRIDGE STANDARDS, 2011 WORK AREA PROTECTION MANUAL, 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE 2011 VIRGINIA SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC PDF ASSEMBLY.

THE ORIGINAL APPROVED TITLE SHEET(S), INCLUDING ORIGINAL SIGNATURES, ARE FILED IN THE VDOT CENTRAL OFFICE PLAN LIBRARY. ANY MISUSE OF ELECTRONIC FILES, INCLUDING SCANNED SIGNATURES, IS ILLEGAL AND ENFORCED TO THE FULL EXTENT OF THE LAW.

Town of Culpeper Population 18,006

STATE PROJECT NO.	SECTION	FEDERAL AID PROJECT NO.	TYPE CODE	UPC NO.	EQUALITIES	LENGTH INCLUDING BRIDGE(S)		LENGTH EXCLUDING BRIDGE(S)		BRIDGE PROJECT	TYPE PROJECT	DESCRIPTION
					FEET	FEET	MILES	FEET	MILES			
U000-204-176	P101	HSIP-5204(119)		109573		4,069	0.77	4,069	0.77		PRE-ENGR	
	R201	HSIP-5204(122)		109573		2,414	0.46	2,414	0.46		R/W	
	C501	HSIP-5204(127)		109573		4,069	0.77	4,069	0.77		CONSTRUCTION	

MISS UTILITY

CALL "MISS UTILITY" AT 811 or 1-800-552-7001, 48 HOURS PRIOR TO THE START OF WORK. THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDER GROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR COMPLIANCE WITH REQUIREMENTS OF THE TOWN OF CULPEPER.

TIER 1 PROJECT

LOCALLY ADMINISTERED PROJECTS	
TOWN OF CULPEPER	
NAME OF LOCALITY	
SALEM BUSH	
RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION	
1/24/20	PRINCIPAL PLANNER
DATE	TITLE OF POSITION
ANDREW HOPEWELL	
RECOMMENDED FOR APPROVAL FOR CONSTRUCTION	
10/20/2021	DIRECTOR OF PLANNING & COMMUNITY DEVELOPMENT
DATE	TITLE OF POSITION

RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION	
DATE	DISTRICT PLANNING AND INVESTMENT MANAGER
DATE	DISTRICT PROJECT DEVELOPMENT ENGINEER

APPROVED FOR RIGHT OF WAY ACQUISITION	
DATE	DISTRICT ENGINEER / ADMINISTRATOR

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION	
DATE	DISTRICT PLANNING AND INVESTMENT MANAGER
DATE	DISTRICT PROJECT DEVELOPMENT ENGINEER

APPROVED FOR CONSTRUCTION	
DATE	DISTRICT ENGINEER / ADMINISTRATOR

A. MORTON THOMAS AND ASSOCIATES, INC.
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REGISTRATION STAMP

COMMONWEALTH OF VIRGINIA
DONALD J. RISSMEYER
2-21-22
Lic. No. 26104
PROFESSIONAL ENGINEER

OWNER

TOWN OF CULPEPER
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CULPEPER, VIRGINIA 22701
PH: 540-829-8260
FAX: 540-829-8279
Email: ahopewell@culpeperva.gov

PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)
TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	NA
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

COVER SHEET

SHEET

C1.0

SHEET 1 OF 70

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GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM WITH THE LATEST EDITION OF STANDARDS AND SPECIFICATIONS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION, EXCEPT WHERE TOWN OF CULPEPER STANDARDS ARE APPLICABLE.

2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY LOCAL, STATE AND FEDERAL PERMITS REQUIRED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS. COPIES OF ALL APPROVED PERMITS SHALL BE MAINTAINED AT THE JOBSITE.

3. A VDOT RIGHT-OF-WAY PERMIT IS REQUIRED PRIOR TO ANY WORK BEING PERFORMED WITHIN THE RIGHT-OF-WAY.

4. APPROVAL OF A DETAILED CONSTRUCTION SEQUENCE AND MAINTENANCE OF TRAFFIC NARRATIVE FOR THE WORK ZONE IS A PREREQUISITE FOR ISSUANCE OF A RIGHT-OF-WAY PERMIT ALLOWING ACCESS TO AND CONSTRUCTION WITHIN A VDOT OWNED RIGHT-OF-WAY.

5. CARE SHALL BE TAKEN TO PROTECT FROM DAMAGES ALL EXISTING SURFACES, STRUCTURES, AND IMPROVEMENTS ADJACENT TO THE WORK. ANY DAMAGE TO SUCH ITEMS, AS A RESULT OF THE WORK, SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE TOWN OF CULPEPER.

6. THE CONTRACTOR SHALL PERFORM ALL WORK IN A MANNER THAT WILL ENSURE THE LEAST PRACTICABLE OBSTRUCTION TO TRAFFIC AND IS CONSISTENT WITH ESTABLISHED SAFETY PROCEDURES. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE MAINTENANCE OF TRAFFIC THROUGHOUT THE CONSTRUCTION DURATION.

7. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PRIVATE DRIVEWAYS AT ALL TIMES.

8. IN THE EVENT THAT THE CONTRACTOR ENCOUNTERS EXISTING UTILITIES AND/OR STRUCTURES NOT SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR DIRECTIONS PRIOR TO PROCEEDING WITH THE WORK AFFECTING SAID UTILITY AND/OR STRUCTURE.

9. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON ENCOUNTERING ANY HAZARDOUS OR REGULATED MATERIALS DURING THE COURSE OF WORK.

10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO IMMEDIATELY REMOVE, TRANSPORT OFF-SITE, AND LEGALLY DISPOSE OF ANY AND ALL EXCAVATED/DELETERIOUS MATERIALS, WHEN MATERIALS WHICH ARE UNSUITABLE FOR FOUNDATIONS, SUBGRADES, OR ROADWAY PURPOSES ARE ENCOUNTERED WITHIN THE CONSTRUCTION LIMITS, THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE SUCH MATERIAL BELOW THE GRADE SHOWN ON THE PLANS AND BACKFILL THE EXCAVATION WITH APPROVED SUITABLE SELECT FILL MATERIAL.

11. THE CONTRACTOR SHALL OBTAIN A GENERAL VPDES PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES AND FOLLOW ALL CONDITIONS OF THE PERMIT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A RLD AS PART OF THE PERMIT REQUIREMENTS.

12. EXISTING PAVEMENT SHALL BE SAW CUT IN THE GENERAL LOCATIONS SHOWN ON THE PLANS PRIOR TO INSTALLATION OF CURB, STORM DRAINAGE, AND UTILITIES.

13. ALL PAVEMENT MARKINGS AND TRAFFIC FLOW ARROWS SHOWN ON THE ROADWAY CONSTRUCTION PLANS ARE SCHEMATIC ONLY. THE ACTUAL LOCATION AND APPLICATION OF PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH SECTION 704 OF THE APPLICABLE VDOT ROAD AND BRIDGE SPECIFICATIONS, MUTCD, SEQUENCE OF CONSTRUCTION/TRAFFIC CONTROL PLANS, PAVEMENT MARKING PLAN SHEETS 46 THROUGH 52, AND AS DIRECTED BY THE ENGINEER.

14. ANY EXISTING PAVEMENT MARKING THAT WILL CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS SHALL BE ERADICATED.

15. EXISTING TREES ADJACENT TO WORK AREAS SHALL BE PROTECTED AND PRESERVED, UNLESS SPECIFICALLY INDICATED OTHERWISE ON THE PLANS.

16. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN, THROUGHOUT THE PROJECT, ALL EROSION AND SEDIMENT CONTROL MEASURES, AS SHOWN ON THE CONTRACT DRAWINGS. ALL CONTROL METHODS AND DETAILS SHOWN COMPLY WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION AND VDOT ROAD AND BRIDGE STANDARDS, LATEST EDITION..

17. TEMPORARY TRAFFIC CONTROL SHALL SHALL BE IN ACCORDANCE WITH THE MUTCD, THE VIRGINIA WORK AREA PROTECTION MANUAL, AND THE VIRGINIA SUPPLEMENT TO THE MUTCD.

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE SAFETY. THE CONTRACTOR SHALL FOLLOW ALL LOCAL, STATE AND FEDERAL SAFETY REGULATIONS AND PROCEDURES THAT ARE APPLICABLE IN THE CONSTRUCTION OF THE PROPOSED WORK.

19. CONSTRUCTION STAKEOUT AND SURVEYING FOR ALL CONSTRUCTION ON THIS PROJECT SHALL BE PERFORMED BY THE CONTRACTOR.

20. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS. ANY DISCREPANCIES FOUND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK.

UTILITY NOTES

1. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT TELEPHONE 1-800-552-7001 AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITY STRUCTURES. CALL 1-800-552-3120 TO CHECK TICKET STATUS.

2. RELOCATION OF EXISTING FIRE HYDRANTS AND WATER METERS AS SHOWN ON THE PLANS IS TO BE PERFORMED BY THE TOWN OF CULPEPER. CONTRACTOR SHALL COORDINATE SAID WORK WITH THE TOWN OF CULPEPER.

3. THE LOCATION OF SUBSURFACE UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND FOR INFORMATION AND GUIDANCE ONLY. PORTIONS OF THESE UTILITIES ARE BASED UPON MISS UTILITY MARKINGS AND/OR RECORD DRAWINGS AND THEREFORE THERE IS NO GUARANTEE TO THE ACCURACY OF LOCATIONS, AS SHOWN ON THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE ALL UTILITIES PRIOR TO ANY CONSTRUCTION.

4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ANY AND ALL EXISTING UTILITIES NOT DESIGNATED TO BE REMOVED FROM DAMAGE. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-ESTABLISHMENT OF ANY AND ALL UTILITIES DISRUPTED DURING THE EXCAVATION/CONSTRUCTION.

5. THE CONTRACTOR SHALL, AT A MINIMUM, REMOVE OR RELOCATE ANY UTILITY THAT INTERFERES WITH THE CONSTRUCTION SHOWN ON THESE PLANS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY UTILITY THAT NEEDS TO BE RELOCATED, PRIOR TO CONSTRUCTION, SO THAT EXISTING CONDITIONS CAN BE IDENTIFIED. THE CONTRACTOR SHALL COORDINATE ALL UTILITY REMOVALS OR RELOCATIONS WITH THE APPROPRIATE UTILITY OWNER.

6. THE BIDDER IS RESPONSIBLE FOR COORDINATING WITH THE UTILITY PROVIDERS PRIOR TO SUBMITTING A BID. ALL COSTS ASSOCIATED WITH PROVIDING THE REQUIRED MEASURES FOR PROTECTION OF THE EXISTING UTILITY SERVICES DURING CONSTRUCTION WILL NOT BE PAID FOR SEPARATELY BUT ARE TO BE INCLUDED IN OTHER ITEMS OF WORK.

7. ALL SUBCONTRACTORS USED BY THE CONTRACTOR TO RELOCATE UTILITIES SHALL BE PREAPPROVED BY THE UTILITY COMPANY PRIOR TO BEGINNING ANY WORK. THE PREAPPROVAL SHALL BE SUBMITTED A MINIMUM OF THIRTY DAYS PRIOR TO THE COMMENCEMENT OF THE WORK.

8. UTILITY SERVICE INTERRUPTION SHALL REQUIRE 14 DAYS ADVANCED NOTIFICATION TO THE TOWN OF CULPEPER, THE AFFECTED UTILITY OWNER, AND THOSE AFFECTED BY THE INTERRUPTION.

9. THE CONTRACTOR SHALL PERFORM TEST PITS AT LOCATIONS WHERE PROPOSED IMPROVEMENTS CROSS EXISTING UTILITY SERVICES AND WHERE NEW FACILITIES CONNECT TO EXISTING FACILITIES TO OBTAIN THE LOCATION AND ELEVATION OF THE EXISTING UTILITY PRIOR TO INSTALLATION OF THE IMPROVEMENTS. CONTRACTOR SHALL PROVIDE THIS INFORMATION TO THE TOWN OF CULPEPER SO THE ENGINEER CAN MAKE ADJUSTMENTS TO THE PLANS, IF NECESSARY. IF THE TEST PIT RESULTS SHOW A POTENTIAL CONFLICT OR NON-COMPLIANCE WITH THE APPROVED PLAN, REVISIONS TO THE PLANS MUST BE SUBMITTED FOR APPROVAL. IN SUCH INSTANCES, NO WORK SHALL COMMENCE UNTIL CONFLICTS ARE RESOLVED AND REVISIONS APPROVED.

GRADING AND DRAINAGE NOTES

1. ALL BORROW MATERIAL USED FOR THIS PROJECT SHALL BE A MINIMUM CBR 5 OR AS APPROVED BY THE MATERIALS ENGINEER.

2. MATERIAL FROM REGULAR EXCAVATION WHICH IS SUITABLE FOR STABILIZATION WITH HYDRAULIC CEMENT (LIME) SHALL BE PLACED IN THE TOP PORTION OF THE SUBGRADE.

3. THE COST OF REMOVAL OF ALL EXISTING CONCRETE ITEMS LOCATED IN THE AREA TO BE GRADED, INCLUDING BUT NOT LIMITED TO THE FOLLOWING, SHALL BE INCLUDED IN THE BID PRICE FOR REGULAR EXCAVATION:

   * CURB, CURB AND GUTTER
   * SIDEWALKS
   * CONCRETE PADS, SMALL FOOTINGS & SMALL BLOCK OR BRICK ITEMS
   * ENDWALLS, DROP INLETS, PIPES (CONCRETE OR METAL) & END SECTIONS

4. THE CONTRACTOR SHALL ENSURE THE FINAL GRADES PROVIDE POSITIVE DRAINAGE.

5. THE GRADE LINE SHOWN ON TYPICAL SECTIONS AND SPOT ELEVATIONS SHOWN ON THE PLANS DENOTES TOP OF FINISHED PAVEMENT UNLESS INDICATED OTHERWISE.

6. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS OF ALL EXISTING DRAINAGE STRUCTURES TO REMAIN IN PLACE WHICH CONNECT TO THE NEW STORM DRAIN SYSTEM.

7. ALL STORM PIPES AND DROP INLETS SHALL BE CLEANED OF DEBRIS AND ERODED MATERIALS AT ALL STAGES OF CONSTRUCTION AND PRIOR TO FINAL ACCEPTANCE.

8. ALL EXCAVATION FOR UNDERGROUND PIPE INSTALLATION SHALL COMPLY WITH OSHA STANDARDS FOR THE CONSTRUCTION INDUSTRY (29 CFR PART 1926).

9. THE HORIZONTAL LOCATION AND INVERT ELEVATIONS SHOWN FOR PROPOSED STORM SEWER PIPES ARE BASED ON EXISTING SURVEY DATA AND REQUIRED DESIGN CRITERIA. IF, DURING CONSTRUCTION, IT IS FOUND THAT THE HORIZONTAL LOCATION OR INVERT ELEVATIONS SHOWN ON THE PLANS DIFFER SIGNIFICANTLY FROM THE HORIZONTAL LOCATION OR ELEVATIONS OF THE EXISTING DOWNSTREAM CHANNEL OR DRAINAGE STRUCTURE WHERE THE PIPE OUTFALLS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR DIRECTION PRIOR TO PROCEEDING WITH INSTALLATION OF THE STORM SEWER PIPE.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE ACTUAL "H" DIMENSION FOR DROP INLETS AND JUNCTION BOXES AND "L.F." DIMENSIONS FOR MANHOLES FROM FIELD CONDITIONS.

11. ALL STORM PIPE USED FOR THIS PROJECT SHALL BE RCP, UNLESS SPECIFICALLY INDICATED OTHERWISE ON THE PLANS. FOR STRENGTH, SHEET THICKNESS, CLASS DESIGNATION, AVAILABLE SIZES, HEIGHT OF COVER LIMITATIONS AND OTHER RESTRICTIONS FOR A PARTICULAR PIPE TYPE OR HEIGHT OF COVER, SEE THE APPLICABLE SECTIONS OF THE VDOT ROAD AND BRIDGE STANDARDS PC-1.

12. PROPOSED DROP INLETS WITH A HEIGHT (H) LESS THAN THE STANDARD MINIMUM SHOWN ON THE VDOT ROAD AND BRIDGE STANDARDS SHALL BE CONSIDERED AND PAID FOR AS STANDARD DROP INLETS FOR THE TYPE SPECIFIED.

13. WHEN STANDARD CG-6 OR CG-7 IS SPECIFIED ON A RADIUS (SUCH AS AT A STREET INTERSECTION), THE ENGINEER MAY APPROVE A DECREASE IN THE CROSS SLOPE OF THE GUTTER TO FACILITATE PROPER DRAINAGE.

TOWN OF CULPEPER COORDINATION NOTES

1. SUBMITTALS OF MATERIALS FOR THIS PROJECT SHALL BE PROVIDED TO THE TOWN FOR APPROVAL PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.

2. THE CONTRACTOR SHALL SUBMIT A SCHEDULE FOR CONSTRUCTION TO THE TOWN IN ACCORDANCE WITH TOWN REQUIREMENTS.

3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL ARRANGE A MEETING WITH TOWN STAFF TO DISCUSS COORDINATION OF CONSTRUCTION ACTIVITIES AND RELATED PROJECTS. THE CONTRACTOR SHALL PARTICIPATE IN PERIODIC PROGRESS MEETINGS AND SHALL SUBMIT BI-WEEKLY SCHEDULE UPDATES THROUGHOUT CONSTRUCTION.

4. THE CONTRACTOR IS REQUIRED TO NOTIFY THE TOWN FOR ALL WORK ACTIVITIES THREE (3) WORKING DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION AND SPECIFICALLY REQUEST INSPECTIONS BEFORE BEGINNING ANY OF THE FOLLOWING ACTIVITIES:

   (A) INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES.
   (B) CLEARING AND GRUBBING
   (C) EARTHWORK
   (D) BACKFILL OF ANY STORM DRAINAGE PIPE, CULVERTS, INLETS AND OTHER UTILITIES.
   (E) INSTALLATION OF ANY UNDERGROUND UTILITY, INCLUDING STORM PIPES, CULVERTS AND INLETS.
   (F) PLACING SUBBASE, BASE OR PAVEMENT SURFACE.
   (G) INSTALLATION OF ANY FORMS.
   (H) PLACING OF ANY CONCRETE.
   (I) BACKFILL OF ANY FOUNDATIONS OR WALLS.

UTILITY OWNERS

ON OCTOBER 24, 2017 A MISS UTILITY TICKET WAS REGISTERED, A827403729-00A. THE FOLLOWING UTILITIES ARE INDICATED IN THE SURVEY AREA:

- COLUMBIA GAS (CGV131). IN THE EVENT OF DAMAGE TO A FACILITY, CALL (800) 543-8911.
- TOWN OF CULPEPER - ELECTRIC (CUP122). IN THE EVENT OF DAMAGE TO A FACILITY, CALL (540) 825-1295.
- TOWN OF CULPEPER - WATER & SEWER (CUP222). IN THE EVENT OF DAMAGE TO A FACILITY, CALL (540) 825-3039.
- DOM CENTRAL DISTRIBUTION (DOM410). IN THE EVENT OF DAMAGE TO A FACILITY, CALL (888)667-3000
- RAPPAHANNOCK ELECTRIC (REC502). IN THE EVENT OF DAMAGE TO A FACILITY, CALL (540)891-5945.
- WINDSTREAM KDL (WXN456). IN THE EVENT OF DAMAGE TO A FACILITY, CALL (800) 289-1901.
- COMCAST (CMC502). IN THE EVENT OF DAMAGE TO A FACILITY, CALL (800) 441-6917 EXT OPT 1.
- VERIZON (VZN703). IN THE EVENT OF DAMAGE TO A FACILITY, CALL (888) 483-1233.

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REGISTRATION STAMP

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FAX: 540-829-8279
Email: ahopewell@culpeperva.gov

PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	NA
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

GENERAL NOTES

SHEET

C2.0

SHEET 2 OF 70

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EROSION CONTROL NARRATIVE

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF IMPROVEMENTS TO US 522 IN THE TOWN OF CULPEPER, VA. THE PROPOSED IMPROVEMENTS INCLUDE INSTALLATION OF CURB & GUTTER, 5' WIDE CONCRETE SIDEWALK, AND ASSOCIATED APPURTENANCES SUCH AS DRAINAGE INFRASTRUCTURE, RETAINING WALLS, AND HANDRAILS ALONG THE NORTH SIDE OF US 522 FROM APPROXIMATELY 300' WEST OF N. ASPEN STREET TO COLONEL JAMESON BLVD. THIS PROJECT ALSO INCLUDES CONSTRUCTION OF BICYCLE LANES, RAISED MEDIAN ISLANDS, AND A CROSSWALK WITHIN THE EXISTING LIMITS OF US 522 EAST OF COLONEL JAMESON BLVD. AND CONSTRUCTION OF A NEW MINI-ROUNDABOUT AT THE INTERSECTION OF US 522 AND NORTH BLUE RIDGE AVENUE.

LIMITS OF DISTURBANCE

±1.75 ACRES (76,180 SF)

EXISTING CONDITIONS

EXISTING CONDITIONS CONSIST OF IMPROVED PUBLIC RIGHT-OF-WAY. THE IMPROVEMENTS ON THE WEST SIDE OF COLONEL JAMESON BLVD. WILL BE CONSTRUCTED PRIMARILY IN AREAS OF EXISTING PAVED SHOULDER AND GRASSED DRAINAGE SWALES. THE IMPROVEMENTS ON THE EAST SIDE OF COLONEL JAMESON BLVD. WILL BE CONSTRUCTED PRIMARILY IN AREAS OF EXISTING PAVED ROADWAY AND SIDEWALKS.

CRITICAL EROSION AREAS

CARE MUST BE TAKEN TO MINIMIZE SEDIMENT TRACKING FROM DISTURBED AREAS ON TO PUBLIC ROADWAYS. ROADS SHALL BE CLEANED ACCORDING TO VESCH STANDARDS AS NECESSARY.

ADJACENT AREAS

THE AREAS ADJACENT TO THE PROJECT INCLUDE FAIRVIEW CEMETERY, RESIDENTIAL AND COMMERCIAL PROPERTIES, YOWELL MEADOW PARK AND OTHER AREAS OF OPEN SPACE.

OFF-SITE AREAS

THERE ARE NO BORROW, WASTE OR SURPLUS AREAS DESIGNATED FOR THIS PROJECT.

SOILS

THE NRCS WEB SOIL SURVEY CLASSIFICATIONS OF THE SITE'S SOILS ARE LISTED BELOW:

11B – CODORUS SILT LOAM (SOMEWHAT POORLY DRAINED)
14B – CULPEPER SANDY LOAM (WELL DRAINED)
18C – EDGEMONT-CULPEPER COMPLEX (WELL DRAINED)
22C – FAUQUIER SILT LOAM (WELL DRAINED)
48C – RAPIDAN-PENN COMPLEX (WELL DRAINED)

EROSION AND SEDIMENT CONTROL MEASURES

VESCH CONTROLS TO BE USED ARE LISTED BELOW. CORRESPONDING VDOT CONTROLS ARE ALSO LISTED WHERE THOSE STANDARDS WILL BE IMPLEMENTED DURING CONSTRUCTION.

–SAFETY FENCE PER STD. 3.01
–SILT FENCE PER STD. 3.05 AND VDOT EC-5
–INLET PROTECTION PER STD. 3.07 AND VDOT EC-6
–CULVERT INLET PROTECTION PER STD. 3.08 AND VDOT EC-1
–ROCK CHECK DAM PER STD. 3.21 AND VDOT EC-4
–TOPSOILING PER STD. 3.30
–TEMPORARY SEEDING PER STD. 3.31
–PERMANENT SEEDING PER STD. 3.32
–MULCHING PER STD. 3.35
–BLANKETS AND MATTING PER STD. 3.36 AND VDOT EC-2

MANAGEMENT STRATEGIES

SEDIMENT TRAPPING AND DIVERTING MEASURES ARE TO BE INSTALLED AS THE FIRST STEP IN CONSTRUCTION. SEE THIS SHEET FOR THE SEQUENCE OF CONSTRUCTION.

PERMANENT STABILIZATION

ALL DISTURBED AREAS THAT REQUIRE VEGETATION SHALL BE WATERED EVERY DAY BY CONTRACTOR FOR FIRST TWO WEEKS UNTIL GERMINATION AND THEN AS NEEDED THEREAFTER. SEDUM MATS SHALL BE INSTALLED WHERE INDICATED ON THE PLANS. CONTRACTOR WILL BE REQUIRED TO ESTABLISH AND MAINTAIN A "GOOD" STAND OF GRASS/VEGETATION AND OTHER PLANT MATERIALS BEFORE APPROVAL BY THE TOWN. AT THE DISCRETION OF THE TOWN, EROSION CONTROL BLANKETS MAY ALSO BE REQUIRED.

TABLE 6-1
GENERAL EROSION AND SEDIMENT CONTROL NOTES

FROM THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, THIRD EDITION, 1992.

ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS 9VAC25-840.

ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

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

ES-5: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.

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

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

ES-8: DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

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

ADDITIONAL EROSION AND SEDIMENT CONTROL NOTES

1. ANY SEDIMENT TRACKED ONTO PUBLIC ROADWAYS SHALL BE REMOVED BY THE END OF EACH DAY.
2. THE EROSION AND SEDIMENT CONTROL PLAN ALONG WITH THE VIRGINIA ESC HANDBOOK SHALL BE KEPT ON-SITE.
3. INSPECTIONS: SITE MUST BE INSPECTED BY A CERTIFIED RLD OR EQUIVALENT, EVERY 14 CALENDAR DAYS OR WITHIN 48 HOURS OF SIGNIFICANT RAINFALL EVENTS (0.25" OR GREATER).
4. ALL FILL MATERIAL SHALL BE FROM AN APPROVED, PERMITTED, DESIGNATED BORROW AREA.
5. ALL WASTE MATERIALS SHALL BE TAKEN TO AN APPROVED AND PERMITTED WASTE AREA.
6. BORROW, FILL OR WASTE ACTIVITY SHALL BE CONDUCTED IN A SAFE MANNER THAT MAINTAINS LATERAL SUPPORT, OR ORDER TO MINIMIZE ANY HAZARD TO PERSONS, PHYSICAL DAMAGE TO ADJACENT LAND AND IMPROVEMENTS, AND DAMAGE TO ANY PUBLIC STREET BECAUSE OF SLIDES, SINKING OR COLLAPSE.
7. TEMPORARY STABILIZATION SHALL BE IN ACCORDANCE WITH CHAPTER 3.31, TEMPORARY SEEDING, OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. ALTERNATIVES ARE SUBJECT TO APPROVED BY THE TOWN OF CULPEPER, VA.
8. PERMANENT STABILIZATION SHALL BE IN ACCORDANCE WITH CHAPTER 3.32, PERMANENT SEEDING, AND CHAPTER 3.35, MULCHING, OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. ALTERNATIVES ARE SUBJECT TO APPROVAL BY THE TOWN OF CULPEPER, VA.
9. MAINTENANCE: ALL MEASURES ARE TO BE INSPECTED WEEKLY AND AFTER EACH RUNOFF PRODUCING EVENT. ANY DAMAGE OR CLOGGING TO STRUCTURAL MEASURES IS TO BE REPAIRED IMMEDIATELY. ALL SEEDED AREAS ARE TO BE RESEEDED WHEN NECESSARY TO ACHIEVE A GOOD STAND OF GRASS. SILT FENCE AND CHECK DAMS WHICH ARE COLLECTING SEDIMENT TO HALF THEIR HEIGHT MUST BE CLEANED AND REPAIRED.
10. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE REMOVED WITHIN 30 DAYS OF FINAL SITE STABILIZATION, WHEN MEASURES ARE NO LONGER NEEDED, SUBJECT TO APPROVAL BY THE TOWN OF CULPEPER, VA.

STORMWATER MANAGEMENT

1. THE TOWN OF CULPEPER WILL SEEK TO PURCHASE NUTRIENT CREDITS FOR WATER QUALITY THROUGH EXECUTION OF A NUTRIENT CREDIT ASSIGNMENT AGREEMENT.
2. UNDERGROUND DETENTION WILL BE PROVIDED IN ORDER TO MEET WATER QUANTITY REQUIREMENTS. SEE SHEETS C15.0, C15.1 AND C15.2 FOR ADDITIONAL INFORMATION.

9VAC25-840-40 MINIMUM STANDARDS (EFFECTIVE 11/17/16)

A VESCP MUST BE CONSISTENT WITH THE FOLLOWING CRITERIA, TECHNIQUES AND METHODS:

1. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
2. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
3. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.
4. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
5. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
6. SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.
   a. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES.
   b. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.
7. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.
8. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.
9. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
10. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
11. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
12. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.
13. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.
14. ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.
15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.
16. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
   a. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
   b. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
   c. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
   d. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
   e. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER.
   f. APPLICABLE SAFETY REQUIREMENTS SHALL BE COMPLIED WITH.
17. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.
18. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE VESCP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
19. PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS:
   a. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.
   b. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:
      (1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR
      (2) (a) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS.
      (3) (b) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND
      (4) (c) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.
   c. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:
      (1) IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL, THE BED, OR THE BANKS; OR
      (2) IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES;
      (3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR
      (4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESCP AUTHORITY TO PREVENT DOWNSTREAM EROSION.
   d. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.
   e. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT.
   f. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE VESCP OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.
   g. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATERS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.
   h. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.
   i. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY.
   j. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.
   k. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE.
   l. ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO (I) DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; (II) DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24-HOUR STORM; AND (III) REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5, 2, AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN IT WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO § 62.1-44.15:54 OR 62.1-44.15:65 OF THE ACT.
   m. FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 62.1-44.15:52 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (§ 62.1-44.15:24 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES (i) ARE IN ACCORDANCE WITH PROVISIONS FOR TIME LIMITS ON APPLICABILITY OF APPROVED DESIGN CRITERIA IN 9VAC25-870-47 OR GRANDFATHERING IN 9VAC25-870-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATION, IN WHICH CASE THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 62.1-44.15:52 A OF THE ACT SHALL APPLY, OR (ii) ARE EXEMPT PURSUANT TO § 62.1-44.15:34 C 7 OF THE ACT.
   n. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25-870-66 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATION SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF THIS SUBDIVISION 19.

SEQUENCE OF CONSTRUCTION

1. CONTRACTOR SHALL OBTAIN ALL NECESSARY APPROVALS AND PERMITS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND CONDUCTING A PRE-CONSTRUCTION MEETING WITH THE TOWN AND VDOT PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES REGARDING ANY RELOCATIONS OR PROTECTION MEASURES.
4. CONTRACTOR SHALL INSTALL SILT FENCE AND STORMWATER CONVEYANCE CHANNEL AT LOCATIONS SHOWN ON THE PLANS AND IN AREAS WITH SILT LADEN RUNOFF.
5. CONTRACTOR SHALL INSTALL INLET PROTECTION AT EXISTING LINETS AND AROUND PROPOSED INLETS DESIGNATED ON THE EROSION AND SEDIMENT CONTROL PLAN AS WORK PROGRESSES.
6. CONTRACTOR SHALL STRIP TOPSOIL AND STOCKPILE IN A LOCATION THAT WILL NOT INHIBIT CONSTRUCTION OF SITE IMPROVEMENTS AND SHALL IMPLEMENT ESC MEASURES ASSOCIATED WITH TOPSOIL STOCKPILE.
7. CONTRACTOR SHALL PERFORM SITE GRADING AND INSTALLATION OF STORM AND UTILITY INFRASTRUCTURE WHILE MAINTAINING ESC MEASURES.
8. CONTRACTOR SHALL STABILIZE AREAS THAT ARE COMPLETE AS SOON AS POSSIBLE.
9. CONTRACTOR SHALL PROVIDE FINAL STABILIZATION UPON COMPLETION OF SITE IMPROVEMENTS.
10. THE CONTRACTOR SHALL MAINTAIN EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION.
    A) ALL ESC MEASURES WILL BE CHECKED WEEKLY AND AFTER EACH RUNOFF PRODUCING EVENT BY CERTIFIED RLD.
    B) ADDITIONAL ESC MEASURES SHALL BE INSTALLED AS REQUIRED BY THE TOWN AND ENGINEER.
    C) SEDIMENT REMOVED SHALL BE DISPOSED IN ACCORDANCE WITH PERMIT CONDITIONS.
11. NO OFF-SITE LAND DISTURBING ACTIVITIES ARE PLANNED. ANY OFF-SITE LAND DISTURBANCE ACTIVITIES WILL REQUIRE A SEPARATE LAND DISTURBANCE PERMIT BY THE CONTRACTOR.
12. REMAINING ESC MEASURES WILL NOT BE REMOVED UNTIL THE LAST STAGE OF CONSTRUCTION.

EROSION AND SEDIMENT CONTROL MAINTENANCE NOTES

ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BY QUALIFIED PERSONNEL AT LEAST ONCE EVERY FIVE (5) BUSINESS DAYS , OR AT LEAST ONCE EVERY TEN (10) BUSINESS DAYS AND NO LATER THAN 48 HOURS FOLLOWNG A MEASURABLE STORM EVENT, AND SHALL BE CLEANED AND REPAIRED ACCORDING TO THE FOLLOWING SCHEDULE:

1. EROSION AND SEDIMENT CONTROL WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION AND BUILDUP OR CLOGGING WITH SEDIMENT. CORRECTIVE ACTION SHALL BE TAKEN IMMEDIATELY.
2. FREQUENT INSPECTIONS AND CLEANING OF MUD AND DEBRIS FOUND OUTSIDE OF THE LIMITS OF DISTURBANCE IS REQUIRED, ALONG WITH ANY OTHER REMEDIES REQUIRED BY THE TOWN. ANY MUD, SEDIMENT, DEBRIS, ETC. OBSERVED OUTSIDE THE LIMITS OF DISTURBANCE SHALL IMMEDIATELY BE REMOVED AND DISPOSED OF IN AN APPROPRIATE MANNER.
3. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND OF GRASS IS MAINTAINED. AREAS SHALL BE FERTILIZED AND RESEEDED AS NEEDED. TEMPORARY STABILIZATION SHALL BE USED AS REQUIRED BY THE TOWN OF CULPEPER.
4. ALL TEMPORARY EROSION AND SEDIMENT MEASURES SHALL BE DISPOSED OF WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED AND VEGETATION IS ESTABLISHED.

LAND DISTURBANCE SHALL NOT COMMENCE UNTIL AN OPERATOR HAS SUBMITTED A VDPES GENERAL PERMIT FOR DISCHARGES FROM CONSTRUCTION ACTIVITIES (9VAC25-880) REGISTRATION STATEMENT AND RECEIVED PERMIT COVERAGE FROM THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ).

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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	NA
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

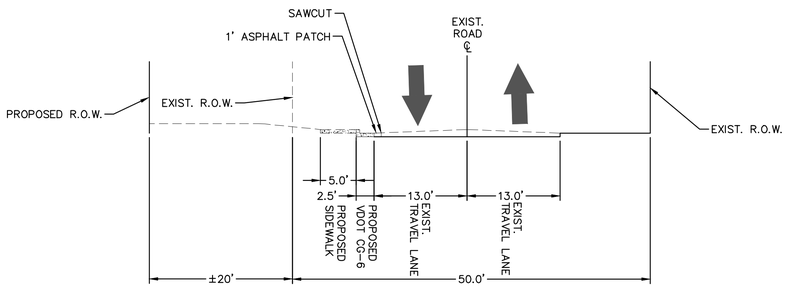
EROSION AND SEDIMENT CONTROL NOTES

SHEET

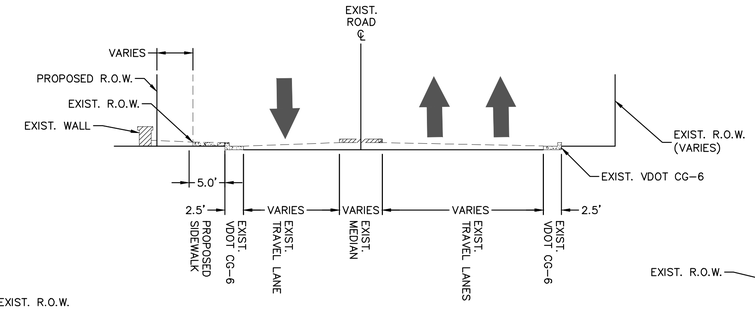
C2.1

SHEET 3 OF 70

X



STA 11+64 to 14+32



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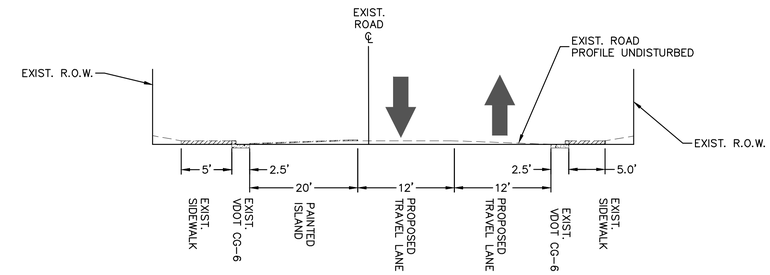
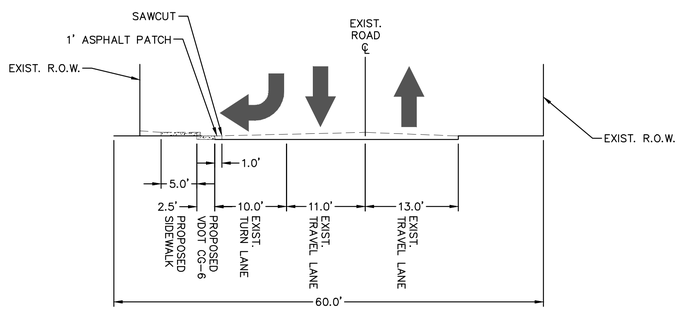
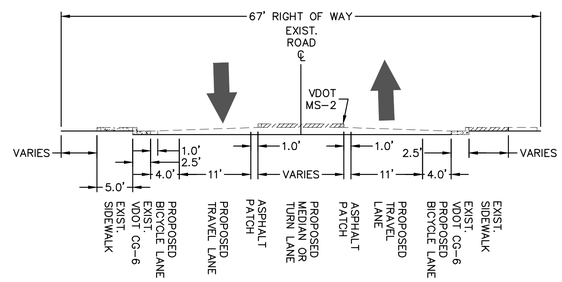


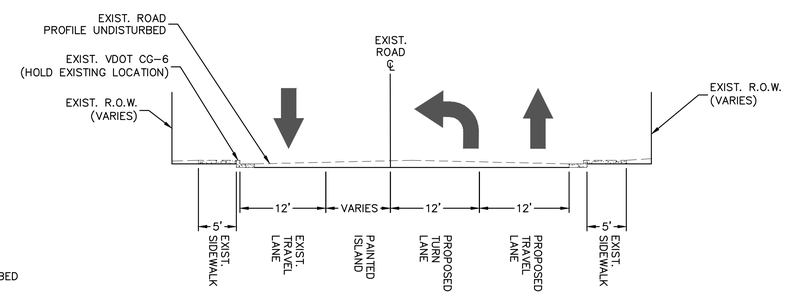
STA 48+46 TO 49+46



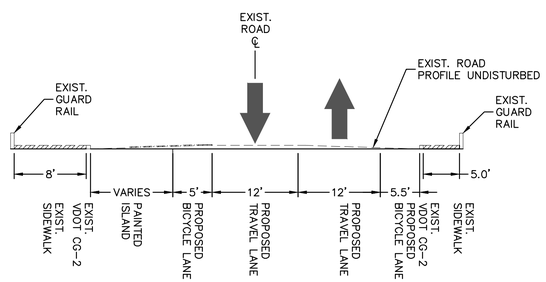
STA 14+96 to 17+05



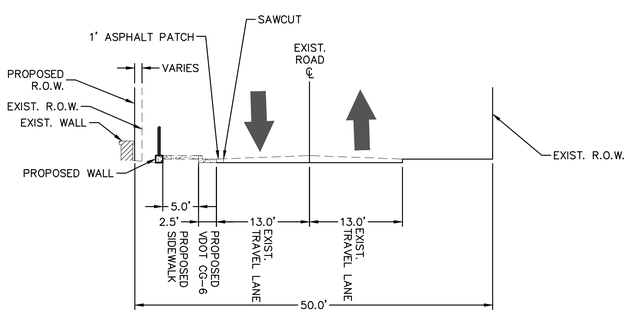
STA 32+00 TO 43+10



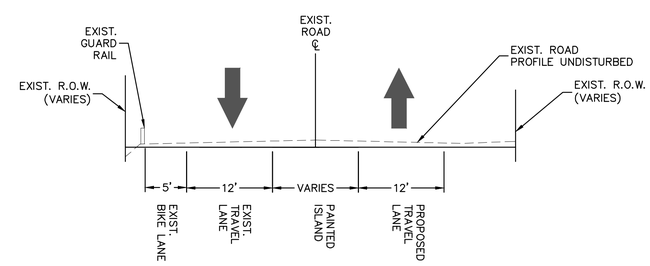
STA 51+50 TO 52+19



STA 44+35 TO 45+85



STA 17+05 to 26+16



N. BLUE RIDGE AVE
STA 20+00 TO 21+23

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
100 GATEWAY CENTRE PARKWAY, SUITE 200
RICHMOND, VIRGINIA 23235
(804) 276-6231 FAX: (804) 276-6233
WWW.AMTENGINEERING.COM

REGISTRATION STAMP

COMMONWEALTH OF VIRGINIA
DONALD J. RISSMEYER
2-21-22
Lic. No. 26104
PROFESSIONAL ENGINEER

OWNER

TOWN OF CULPEPER
400 S. MAIN STREET, SUITE 301
CULPEPER, VIRGINIA 22701
PH: 540-829-8260
FAX: 540-829-8279
Email: ahopewell@culpeperva.gov

PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	NTS
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

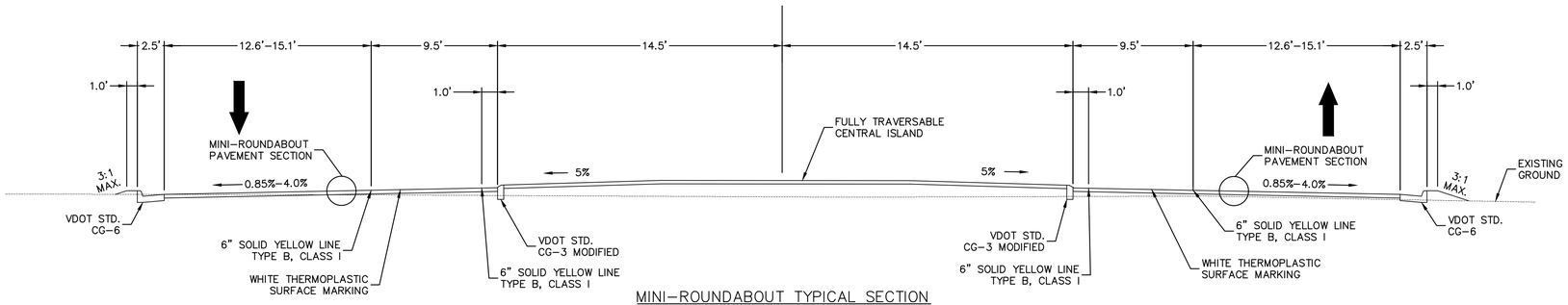
ROADWAY TYPICAL SECTIONS

SHEET

C2.2

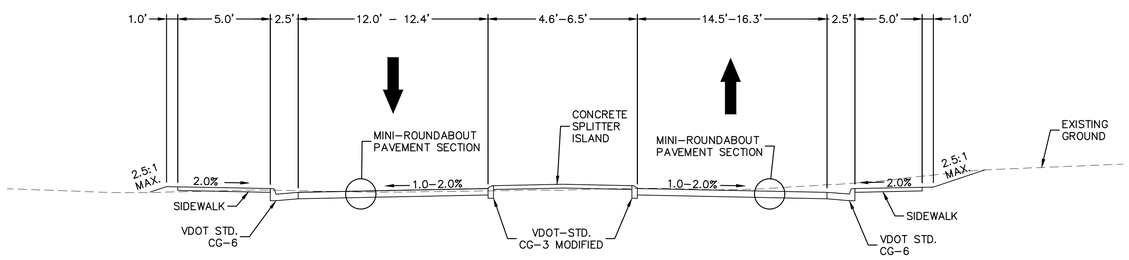
SHEET 4 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-XCI.DWG, 2/22/2022 9:59 AM, CRDBINSON



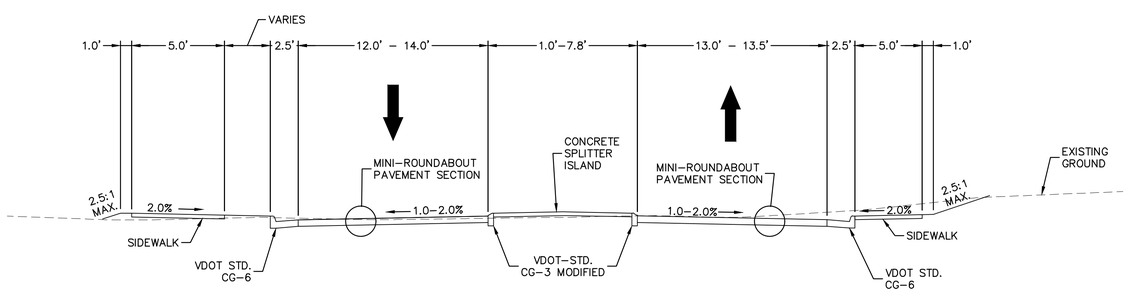
MINI–ROUNDABOUT TYPICAL SECTION

NTS



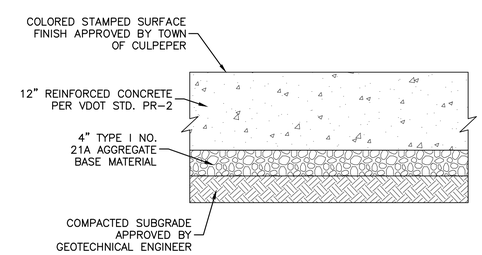
N. BLUE RIDGE AVE. TYPICAL SECTION

NTS



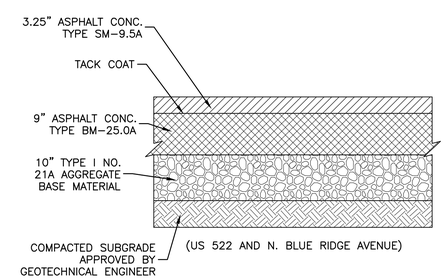
US 522 TYPICAL SECTION

NTS



CONCRETE CENTRAL ISLAND & SPLITTER ISLAND SECTION

NTS



MINI–ROUNDABOUT PAVEMENT SECTION

NTS

A. MORTON THOMAS AND ASSOCIATES, INC.
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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

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AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	NA
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

MINI-ROUNDABOUT TYPICAL SECTIONS

SHEET

C2.3

SHEET 5 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-M-R TYPICALS.DWG, 2/22/2022 9:25 AM, CROBINSON

RIGHT OF WAY DATA SHEET

City/County: Town of Culpeper
UPC No.: 109573

PARCEL NO.	LANDOWNER	SHEET NO.	AREA (Areas greater than or equal to 1 acre will be shown in acres to 3 decimal places (x.xxx). Areas less than 1 acre will be shown to square feet (x,xxx).)																
			TOTAL	FEE TAKING		PRESCRIPTIVE R/W		FEE REMAINDER		EASEMENTS								PROFFERS
										PERMANENT		UTILITY		TEMPORARY		TEMPORARY(ENTRANCES)		
			ACRES OR SQUARE FEET	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	ACRES OR SQ. FEET	HECTARES/ OR SQ. METERS	YES / NO
001	ASPEN STREET PROPERTIES LLC	C5.0	27,021 S.F.	2,726 S.F.				24,295 S.F.						24,295 S.F.				NO
002	ASPEN STREET PROPERTIES LLC	C5.0	27,009 S.F.	2,726 S.F.				24,283 S.F.						24,283 S.F.				NO
003	TOWN OF CULPEPER	C5.1,C5.2,C5.3	33.680 AC.	2,961 S.F.				33.612 AC.						944 S.F.				NO
004	WEST SIDE 600 LLC	C5.4	42,580 S.F.							280 S.F.				448 S.F.				NO

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Email: ahopewell@culpeperva.gov

PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	NA
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

RIGHT OF WAY DATA SHEET

SHEET

C2.4

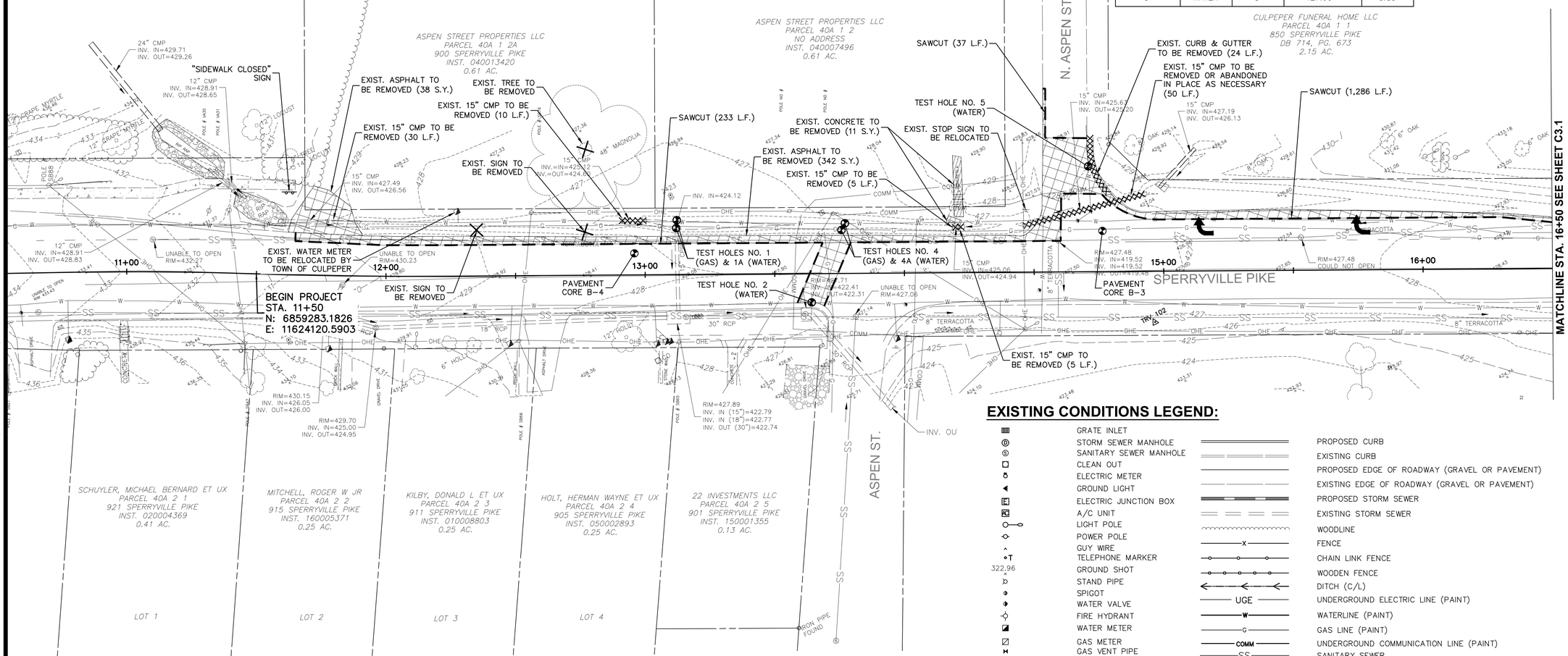
X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-GN.DWG, 2/22/2022 9:21 AM, CROBINSON

PAVEMENT CORE DATA:		
NUMBER	ASPHALT	AGGREGATE
3	8"	16"
4	7.375"	7"

TRAVERSE DATA:				
NO	NORTHING	EASTING	ELEV	DESCRIPTION
101	6859388.4550	11623978.7040	436.44	TRV
102	6859109.2690	11624421.0000	426.87	TRV
103	6858940.4080	11624847.5810	433.67	TRV
104	6858628.4070	11625363.1440	421.28	TRV
105	6858419.4980	11625857.7650	405.29	TRV
106	6858098.3880	11626400.5040	388.62	TRV
107	6857772.6810	11627250.9530	363.55	TRV
108	6857498.5200	11627867.6560	367.89	TRV

TEST HOLE DATA:				
TH NUMBER	UTILITY	SIZE	SURFACE ELEV.	DEPTH
1	GAS	4"	424.20	2.15'
1A	WATER	12"	424.99	3.85'
2	WATER	8"	427.35	4.28'
~~4~~	~~GAS~~	~~4"~~	~~426.11~~	~~2.40'~~
4A	WATER	12"	425.35	3.50'
5	WATER	8"	427.99	3.85'

NOTE:
EXISTING GAS MAIN SHOWN ON THIS PLAN AND LOCATED WITH TEST HOLE 4 HAS BEEN RELOCATED BY COLUMBIA GAS.



EXISTING CONDITIONS LEGEND:

- GRATE INLET
- STORM SEWER MANHOLE
- SANITARY SEWER MANHOLE
- CLEAN OUT
- ELECTRIC METER
- GROUND LIGHT
- ELECTRIC JUNCTION BOX
- A/C UNIT
- LIGHT POLE
- POWER POLE
- GUY WIRE
- TELEPHONE MARKER
- 322.96 GROUND SHOT
- STAND PIPE
- SPIGOT
- WATER VALVE
- FIRE HYDRANT
- WATER METER
- GAS METER
- GAS VENT PIPE
- GAS VALVE
- GASLINE MARKER
- MISCELLANEOUS
- ROOF DRAIN
- SIGN
- POST
- BOLLARD
- FLAG POLE
- MAILBOX
- TELEPHONE MANHOLE
- FLY
- TRAVERSE
- BENCHMARK

- PROPOSED CURB
- EXISTING CURB
- PROPOSED EDGE OF ROADWAY (GRAVEL OR PAVEMENT)
- EXISTING EDGE OF ROADWAY (GRAVEL OR PAVEMENT)
- PROPOSED STORM SEWER
- EXISTING STORM SEWER
- WOODLINE
- FENCE
- CHAIN LINK FENCE
- WOODEN FENCE
- DITCH (C/L)
- UGE — UNDERGROUND ELECTRIC LINE (PAINT)
- W — WATERLINE (PAINT)
- G — GAS LINE (PAINT)
- COMM — UNDERGROUND COMMUNICATION LINE (PAINT)
- SS — SANITARY SEWER
- PROPERTY LINE
- VDOT EASEMENT
- EXISTING GUARDRAIL
- OHE — OVERHEAD ELECTRIC LINE
- RCP — REINFORCED CONCRETE PIPE

DEMOLITION LEGEND:

- APPROX. SAW CUT LINE
- DENOTES EXISTING FEATURE TO BE REMOVED
- EXISTING ASPHALT PAVEMENT TO BE REMOVED
- EXISTING CONCRETE OR GRAVEL TO BE REMOVED
- PAVEMENT CORE / TEST HOLE

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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REGISTRATION STAMP

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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	1"=20'
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

EXISTING CONDITIONS & DEMOLITION PLAN BEG. PROJ. TO STA. 16+50

SHEET

C3.0

SHEET 7 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-XCD.DWG, 2/22/2022 9:43 AM, CRIBINSON

TRAVERSE DATA:				
NO	NORTHING	EASTING	ELEV	DESCRIPTION
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102	6859109.2690	11624421.0000	426.87	TRV
103	6858940.4080	11624847.5810	433.67	TRV
104	6858628.4070	11625363.1440	421.28	TRV
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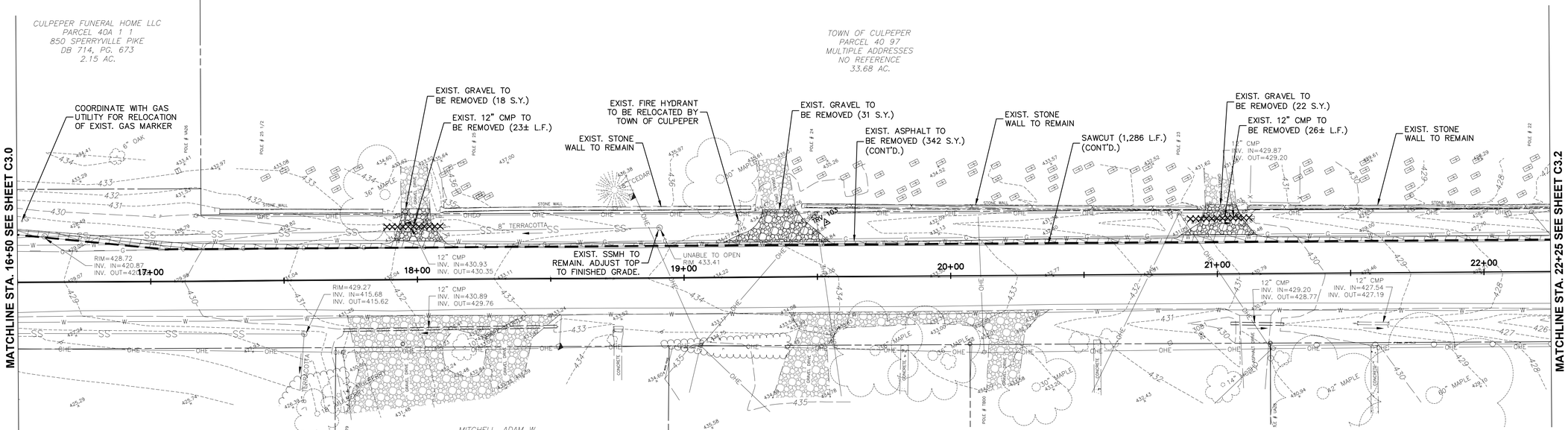

EXISTING CONDITIONS LEGEND:

- GRATE INLET
- STORM SEWER MANHOLE
- SANITARY SEWER MANHOLE
- CLEAN OUT
- ELECTRIC METER
- GROUND LIGHT
- ELECTRIC JUNCTION BOX
- A/C UNIT
- LIGHT POLE
- POWER POLE
- GUY WIRE
- TELEPHONE MARKER
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- EXISTING ASPHALT PAVEMENT TO BE REMOVED
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- PAVEMENT CORE / TEST HOLE

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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REVISIONS

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DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

EXISTING CONDITIONS & DEMOLITION PLAN STA. 16+50 TO STA. 22+25

SHEET

C3.1

SHEET 8 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-XCD.DWG, 2/22/2022 9:44 AM, CROBINSON

TRAVERSE DATA:				
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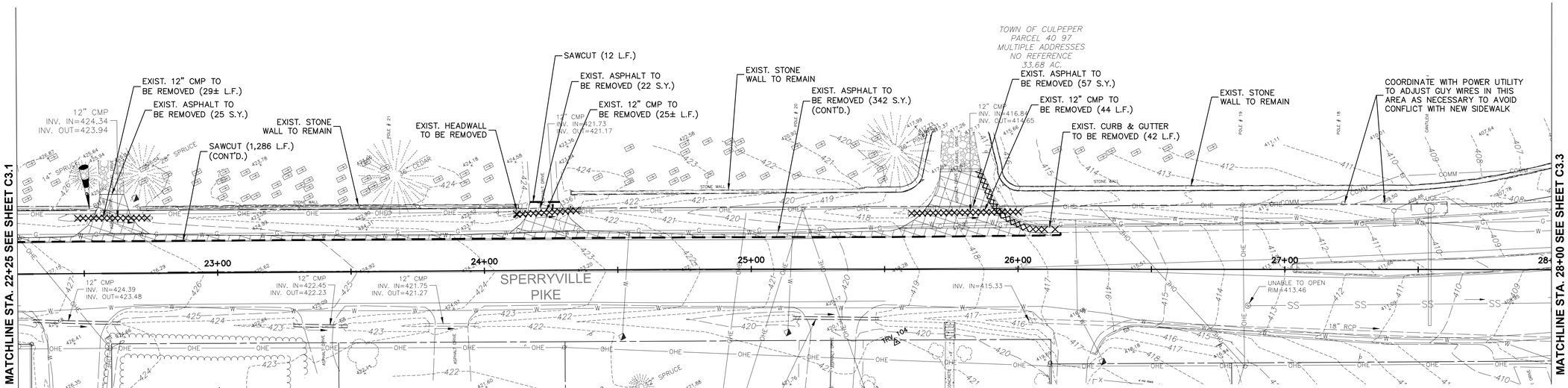

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- CHAIN LINK FENCE
- WOODEN FENCE
- DITCH (C/L)
- UGE — UNDERGROUND ELECTRIC LINE (PAINT)
- W — WATERLINE (PAINT)
- G — GAS LINE (PAINT)
- COMM — UNDERGROUND COMMUNICATION LINE (PAINT)
- SS — SANITARY SEWER
- PROPERTY LINE
- VDOT EASEMENT
- EXISTING GUARDRAIL
- OHE — OVERHEAD ELECTRIC LINE
- RCP — REINFORCED CONCRETE PIPE

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
100 GATEWAY CENTRE PARKWAY, SUITE 200
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(804) 276-6231 FAX: (804) 276-6233
WWW.AMTENGINEERING.COM

TOWN OF CULPEPER, VIRGINIA — THE CULPEPER MINUTE MEN — LIBERTY OR DEATH — DON'T TREAD ON ME

REGISTRATION STAMP

COMMONWEALTH OF VIRGINIA — DONALD J. RISSMEYER — 2-21-22 — Lic. No. 26104 — PROFESSIONAL ENGINEER

OWNER

TOWN OF CULPEPER
400 S. MAIN STREET, SUITE 301
CULPEPER, VIRGINIA 22701
PH: 540-829-8260
FAX: 540-829-8279
Email: ahopewell@culpeperva.gov

PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	1"=20'
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

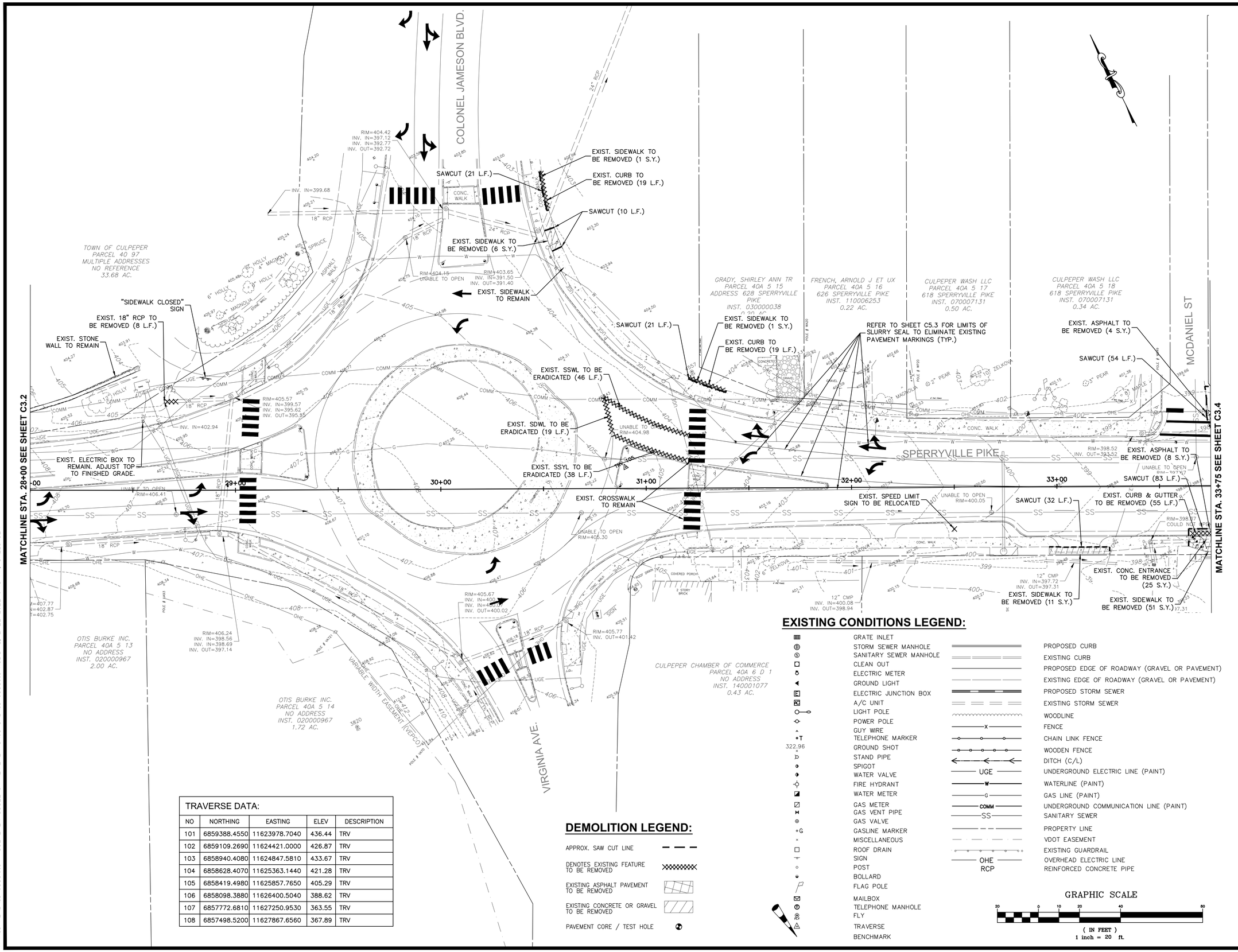
EXISTING CONDITIONS & DEMOLITION PLAN STA. 22+25 TO STA. 28+00

SHEET

C3.2

SHEET 9 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-XCD.DWG, 2/22/2022 9:44 AM, CRDBINSON



EXISTING CONDITIONS LEGEND:

- GRATE INLET
- STORM SEWER MANHOLE
- SANITARY SEWER MANHOLE
- CLEAN OUT
- ELECTRIC METER
- GROUND LIGHT
- ELECTRIC JUNCTION BOX
- A/C UNIT
- LIGHT POLE
- POWER POLE
- GUY WIRE
- TELEPHONE MARKER
- 322.96 GROUND SHOT
- STAND PIPE
- SPIGOT
- WATER VALVE
- FIRE HYDRANT
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- GAS METER
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- FLY
- TRAVERSE
- BENCHMARK

- PROPOSED CURB
- EXISTING CURB
- PROPOSED EDGE OF ROADWAY (GRAVEL OR PAVEMENT)
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DEMOLITION LEGEND:

- APPROX. SAW CUT LINE
- DENOTES EXISTING FEATURE TO BE REMOVED
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- PAVEMENT CORE / TEST HOLE

TRAVERSE DATA:

NO	NORTHING	EASTING	ELEV	DESCRIPTION
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102	6859109.2690	11624421.0000	426.87	TRV
103	6858940.4080	11624847.5810	433.67	TRV
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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

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DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

EXISTING CONDITIONS & DEMOLITION PLAN STA. 28+00 TO STA. 33+75

SHEET

C3.3

SHEET 10 OF 70

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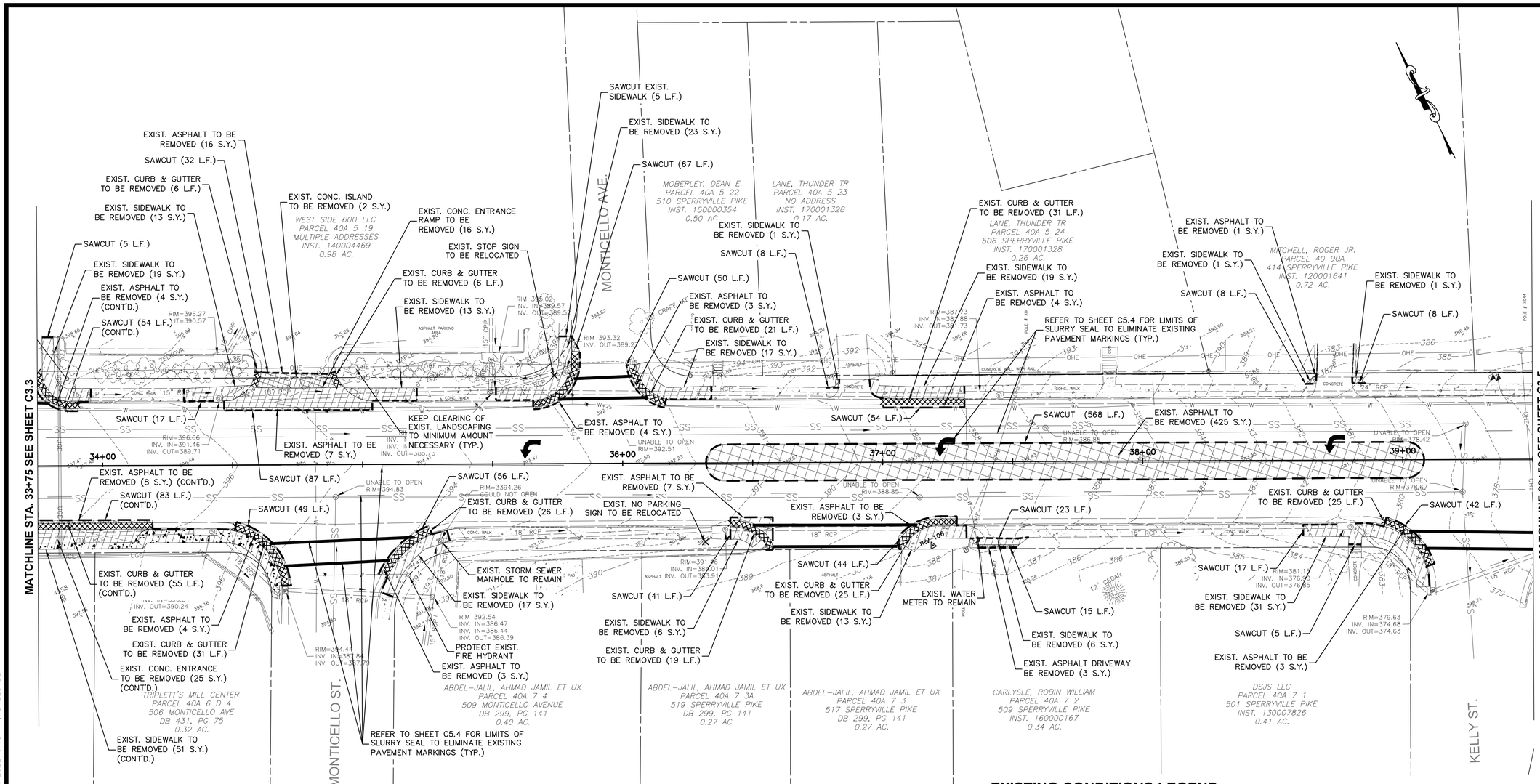

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PROJECT TITLE

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TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	1"=20'
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

EXISTING CONDITIONS & DEMOLITION PLAN STA. 33+75 TO STA. 39+50

SHEET

C3.4

SHEET 11 OF 70

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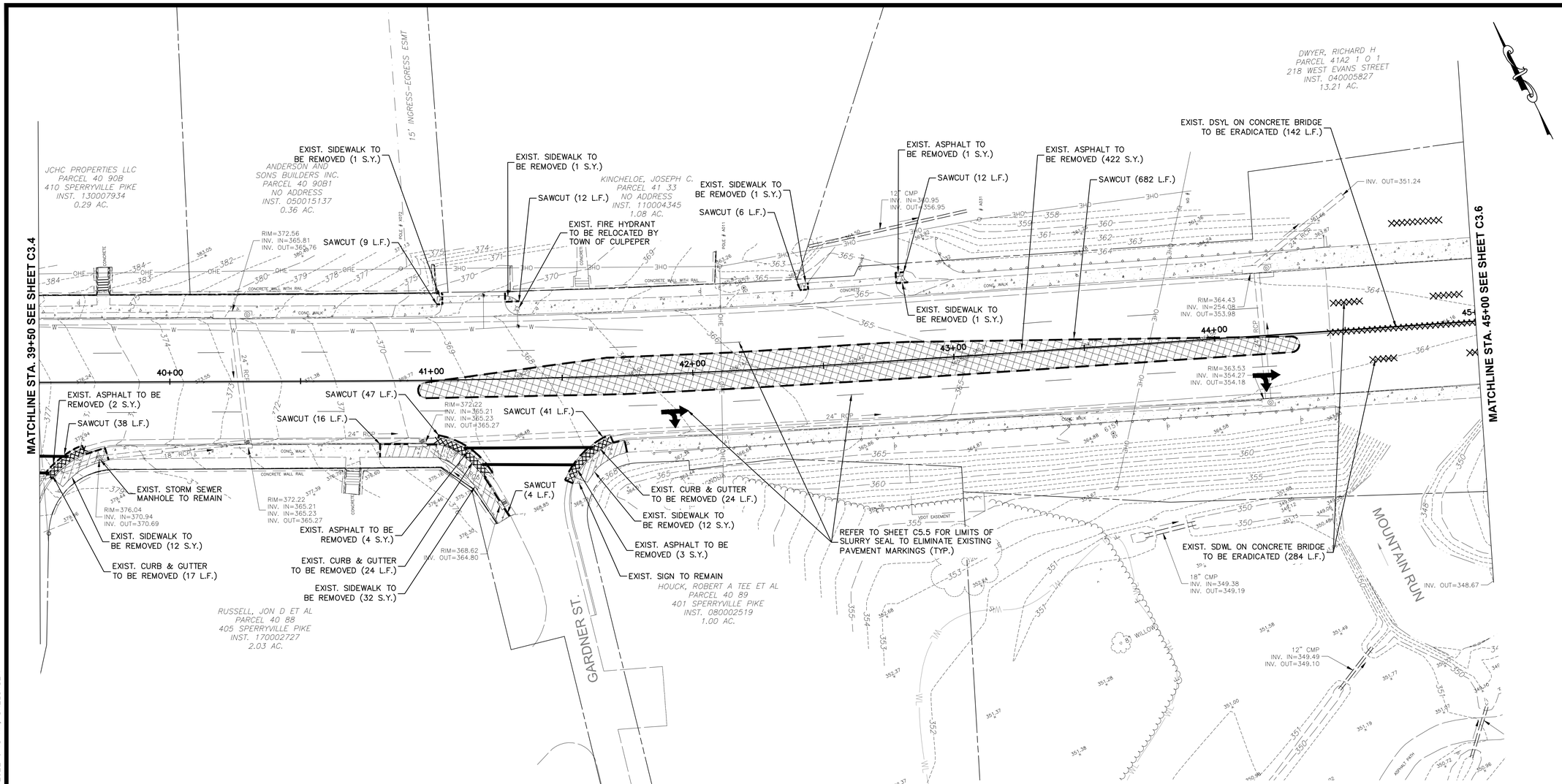

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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	1"=20'
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

EXISTING CONDITIONS & DEMOLITION PLAN STA. 39+50 TO STA. 45+00

SHEET

C3.5

SHEET 12 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-XCD.DWG, 2/22/2022 9:45 AM, CRDBINSON

TRAVERSE DATA:				
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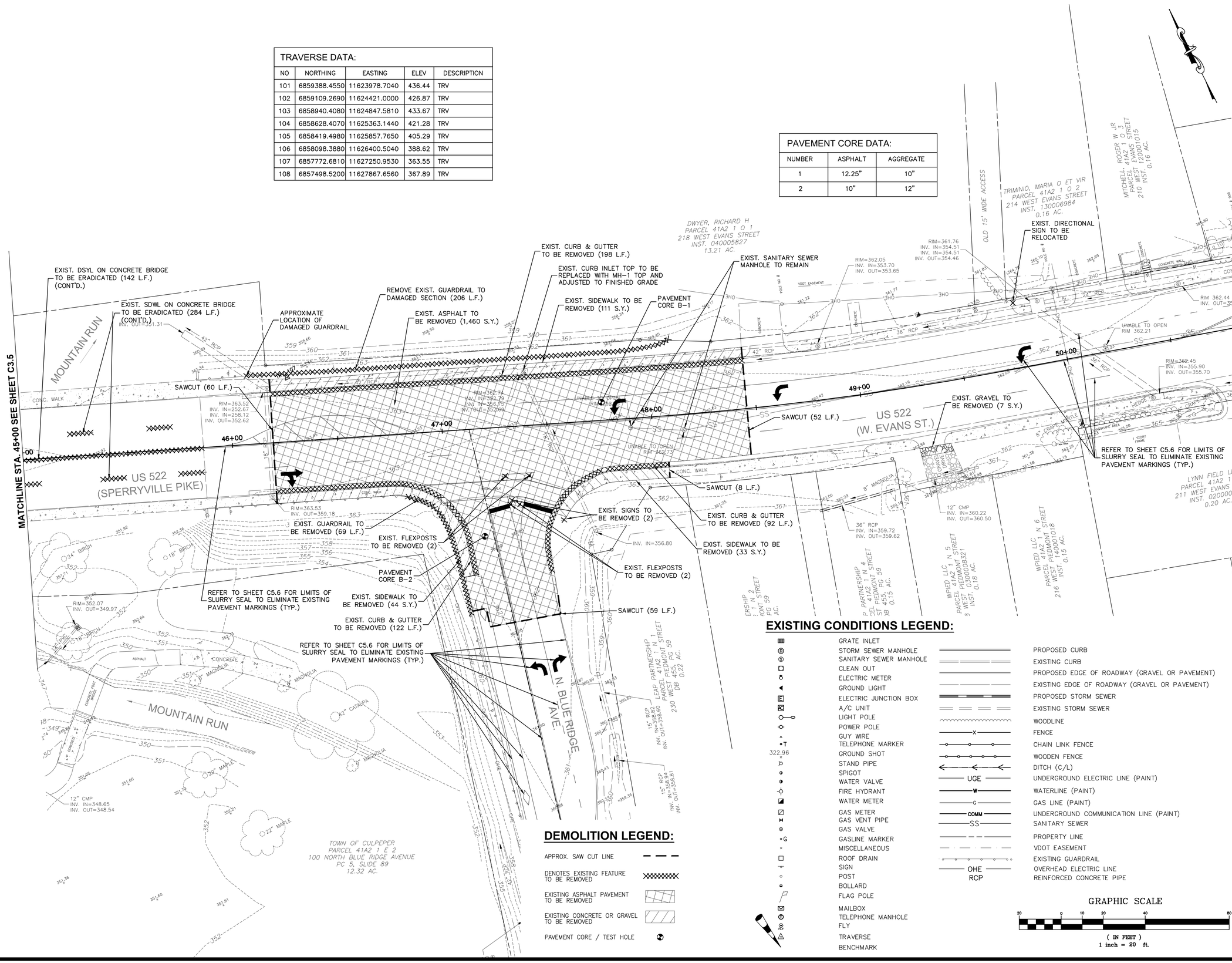
PAVEMENT CORE DATA:		
NUMBER	ASPHALT	AGGREGATE
1	12.25"	10"
2	10"	12"



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1 inch = 20 ft.

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TOWN OF CULPEPER, VA

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CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

EXISTING CONDITIONS & DEMOLITION PLAN STA. 45+00 TO END PROJ.

SHEET

C3.6

SHEET 13 OF 70

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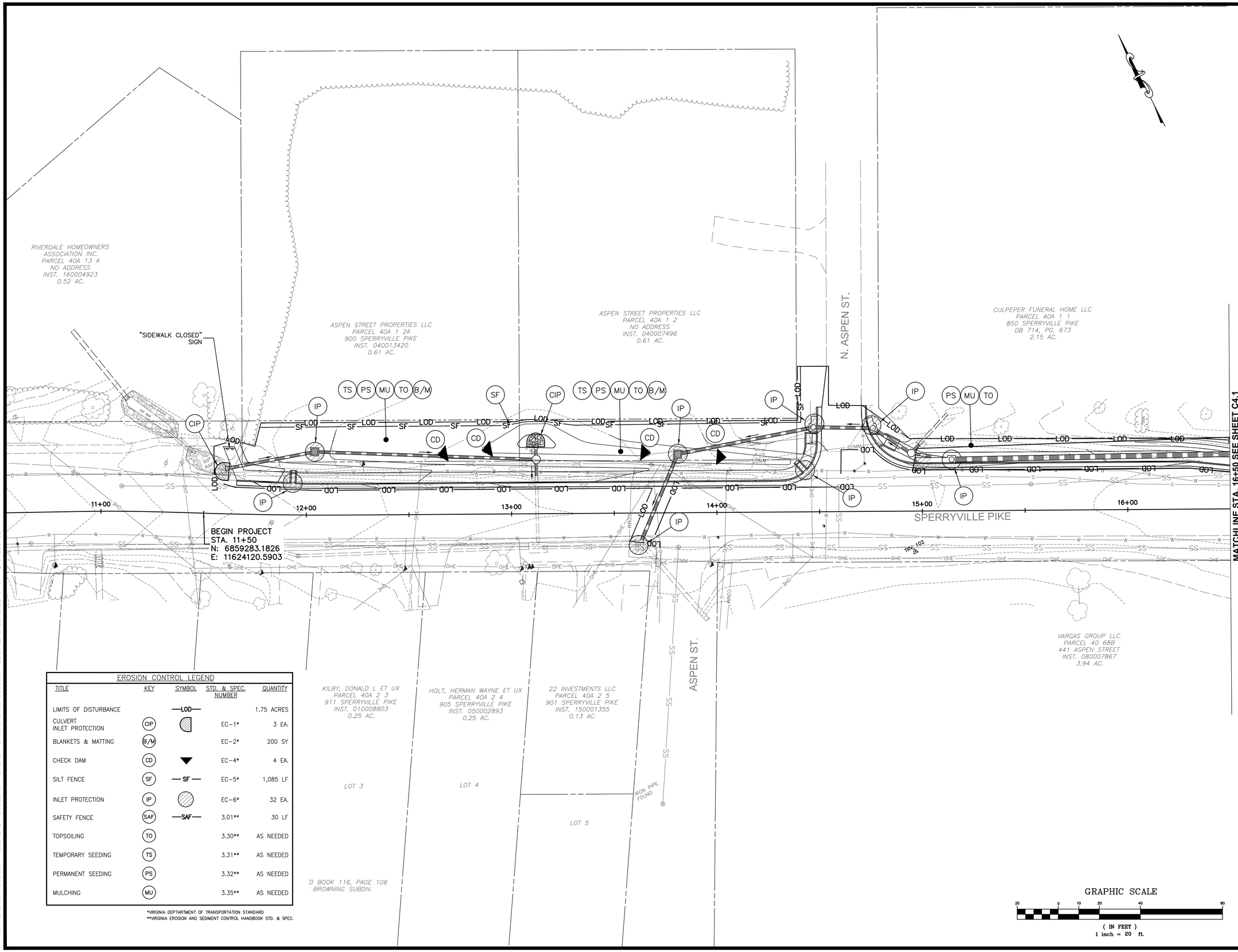

EROSION CONTROL LEGEND

TITLE	KEY	SYMBOL	STD. & SPEC. NUMBER	QUANTITY
LIMITS OF DISTURBANCE		—LOD—		1.75 ACRES
CULVERT INLET PROTECTION	CIP		EC-1*	3 EA.
BLANKETS & MATTING	B/M		EC-2*	200 SY
CHECK DAM	CD		EC-4*	4 EA.
SILT FENCE	SF	— SF —	EC-5*	1,085 LF
INLET PROTECTION	IP		EC-6*	32 EA.
SAFETY FENCE	SAF	—SAF—	3.01**	30 LF
TOPSOILING	TO		3.30**	AS NEEDED
TEMPORARY SEEDING	TS		3.31**	AS NEEDED
PERMANENT SEEDING	PS		3.32**	AS NEEDED
MULCHING	MU		3.35**	AS NEEDED

*VIRGINIA DEPTARTMENT OF TRANSPORTATION STANDARD
**VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK STD. & SPEC.

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EROSION & SEDIMENT CONTROL PLAN BEG. PROJ. TO STA. 16+50

SHEET

C4.0

SHEET 14 OF 70

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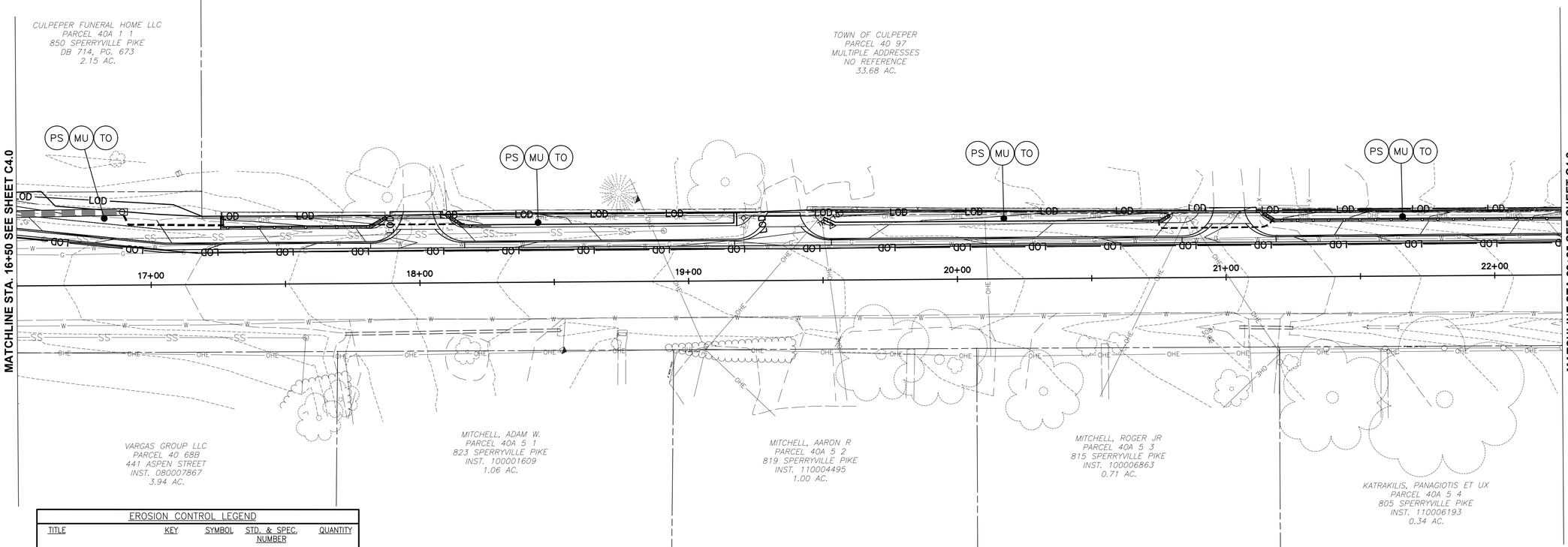

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CHECK DAM	CD	▼	EC-4*	4 EA.
SILT FENCE	SF	— SF —	EC-5*	1,085 LF
INLET PROTECTION	IP		EC-6*	32 EA.
SAFETY FENCE	SAF	—SAF—	3.01**	30 LF
TOPSOILING	TO		3.30**	AS NEEDED
TEMPORARY SEEDING	TS		3.31**	AS NEEDED
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(IN FEET)
1 inch = 20 ft.

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
100 GATEWAY CENTRE PARKWAY, SUITE 200
RICHMOND, VIRGINIA 23235
(804) 276-6231 FAX: (804) 276-6233
WWW.AMTENGINEERING.COM

TOWN OF CULPEPER, VIRGINIA
THE CULPEPER MINUTE MEN
LIBERTY OR DEATH
DON'T TREAD ON ME

REGISTRATION STAMP

COMMONWEALTH OF VIRGINIA
DONALD J. RISSMEYER
2-21-22
Lic. No. 26104
PROFESSIONAL ENGINEER

OWNER

TOWN OF CULPEPER
400 S. MAIN STREET, SUITE 301
CULPEPER, VIRGINIA 22701
PH: 540-829-8260
FAX: 540-829-8279
Email: ahopewell@culpeperva.gov

PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	1"=20'
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

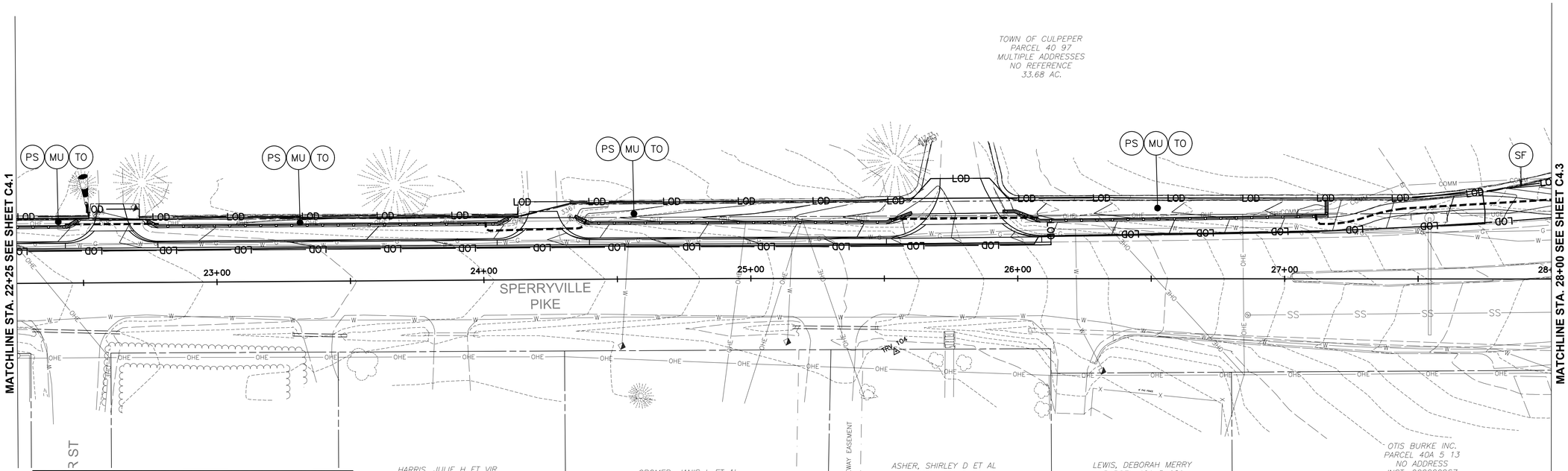
EROSION & SEDIMENT CONTROL PLAN STA. 16+50 TO STA. 22+25

SHEET

C4.1

SHEET 15 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-XCE.DWG, 2/22/2022 9:49 AM, CRIBINSON



EROSION CONTROL LEGEND

TITLE	KEY	SYMBOL	STD. & SPEC. NUMBER	QUANTITY
LIMITS OF DISTURBANCE		—LOD—		1.75 ACRES
CULVERT INLET PROTECTION	CIP		EC-1*	3 EA.
BLANKETS & MATTING	B/M		EC-2*	200 SY
CHECK DAM	CD	▼	EC-4*	4 EA.
SILT FENCE	SF	— SF —	EC-5*	1,085 LF
INLET PROTECTION	IP		EC-6*	32 EA.
SAFETY FENCE	SAF	—SAF—	3.01**	30 LF
TOPSOILING	TO		3.30**	AS NEEDED
TEMPORARY SEEDING	TS		3.31**	AS NEEDED
PERMANENT SEEDING	PS		3.32**	AS NEEDED
MULCHING	MU		3.35**	AS NEEDED

*VIRGINIA DEPTARTMENT OF TRANSPORTATION STANDARD
**VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK STD. & SPEC.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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Email: ahopewell@culpeperva.gov

PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

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DRAWN BY:	LAL
CHECKED BY:	DJR

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SHEET TITLE

EROSION & SEDIMENT CONTROL PLAN STA. 22+25 TO STA. 28+00

SHEET

C4.2

SHEET 16 OF 70

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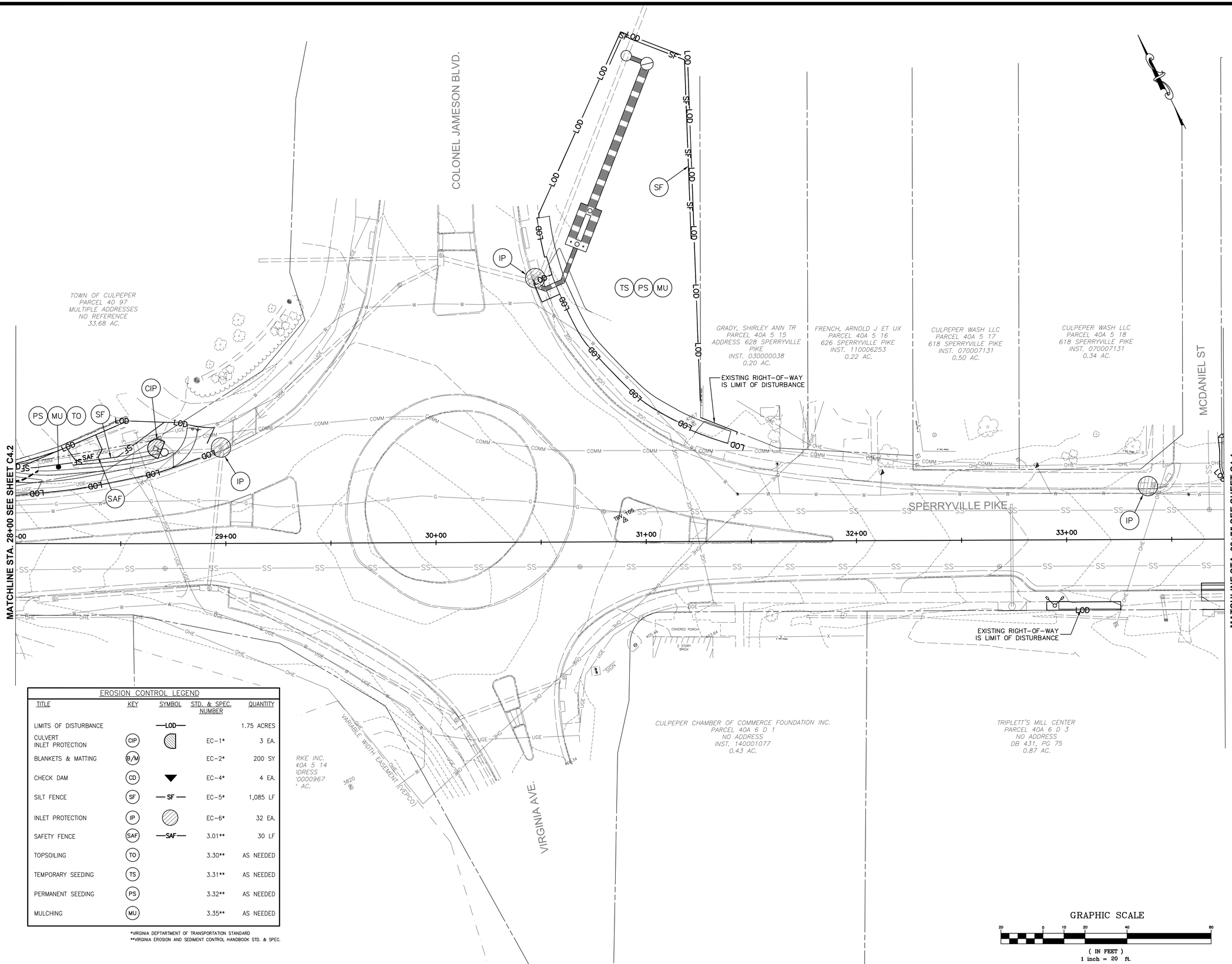

EROSION CONTROL LEGEND

TITLE	KEY	SYMBOL	STD. & SPEC. NUMBER	QUANTITY
LIMITS OF DISTURBANCE		—LOD—		1.75 ACRES
CULVERT INLET PROTECTION	CIP		EC-1*	3 EA.
BLANKETS & MATTING	B/M		EC-2*	200 SY
CHECK DAM	CD	▼	EC-4*	4 EA.
SILT FENCE	SF	— SF —	EC-5*	1,085 LF
INLET PROTECTION	IP		EC-6*	32 EA.
SAFETY FENCE	SAF	—SAF—	3.01**	30 LF
TOPSOILING	TO		3.30**	AS NEEDED
TEMPORARY SEEDING	TS		3.31**	AS NEEDED
PERMANENT SEEDING	PS		3.32**	AS NEEDED
MULCHING	MU		3.35**	AS NEEDED

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**VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK STD. & SPEC.

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TOWN OF CULPEPER, VA

UPC # 109573
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SHEET TITLE

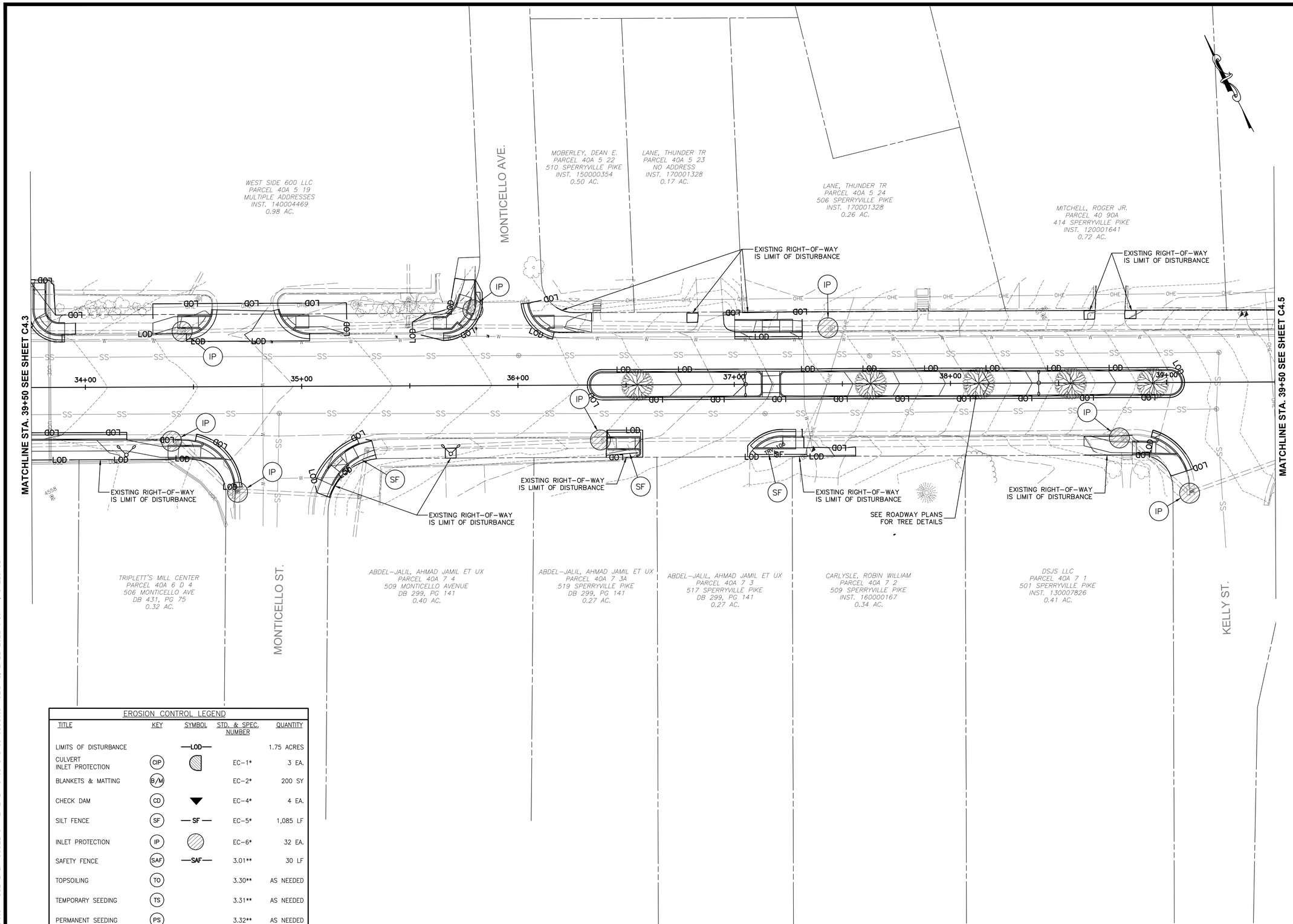
EROSION & SEDIMENT CONTROL PLAN STA. 28+00 TO STA. 33+75

SHEET

C4.3

SHEET 17 OF 70

X:\RICHMND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-XCE.DWG, 2/22/2022 9:49 AM, CROBINSON



EROSION CONTROL LEGEND

TITLE	KEY	SYMBOL	STD. & SPEC. NUMBER	QUANTITY
LIMITS OF DISTURBANCE		—LOD—		1.75 ACRES
CULVERT INLET PROTECTION	CIP		EC-1*	3 EA.
BLANKETS & MATTING	B/M		EC-2*	200 SY
CHECK DAM	CD	▼	EC-4*	4 EA.
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PROJECT TITLE

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TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

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100% DESIGN

SHEET TITLE

EROSION & SEDIMENT CONTROL PLAN STA. 33+75 TO STA. 39+50

SHEET

C4.4

SHEET 18 OF 70

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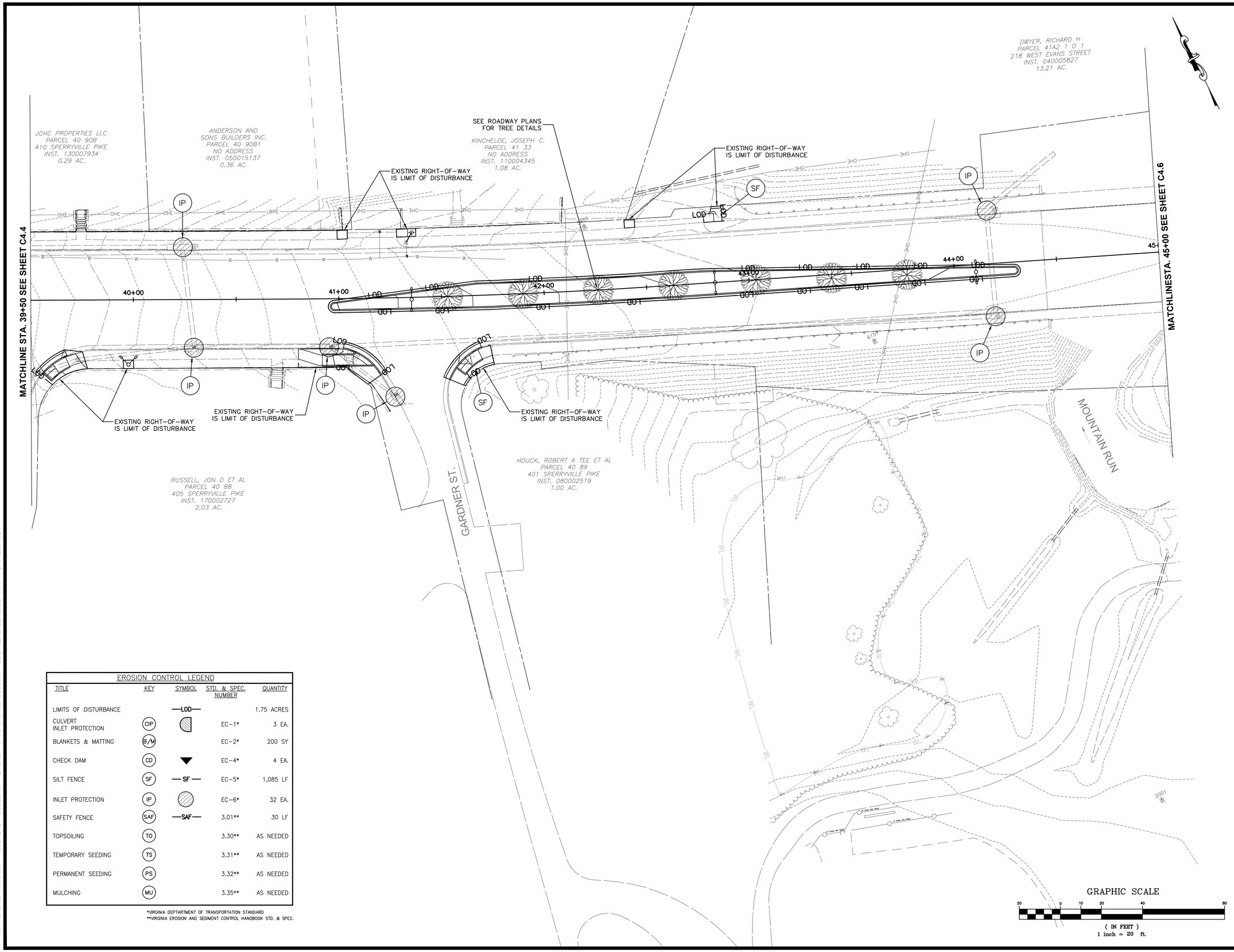

EROSION CONTROL LEGEND

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LIMITS OF DISTURBANCE		—LOD—		1.75 ACRES
CULVERT INLET PROTECTION	CIP		EC-1*	3 EA.
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CHECK DAM	CD		EC-4*	4 EA.
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SAFETY FENCE	SAF	—SAF—	3.01**	30 LF
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TOWN OF CULPEPER, VA

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STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

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100% DESIGN

SHEET TITLE

EROSION & SEDIMENT CONTROL PLAN STA. 39+50 TO STA. 45+00

SHEET

C4.5

SHEET 19 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-XCE.DWG, 2/22/2022 9:50 AM, CRDBINSON

EROSION CONTROL LEGEND

TITLE	KEY	SYMBOL	STD. & SPEC. NUMBER	QUANTITY
LIMITS OF DISTURBANCE		—LOD—		1.75 ACRES
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BLANKETS & MATTING	B/M		EC-2*	200 SY
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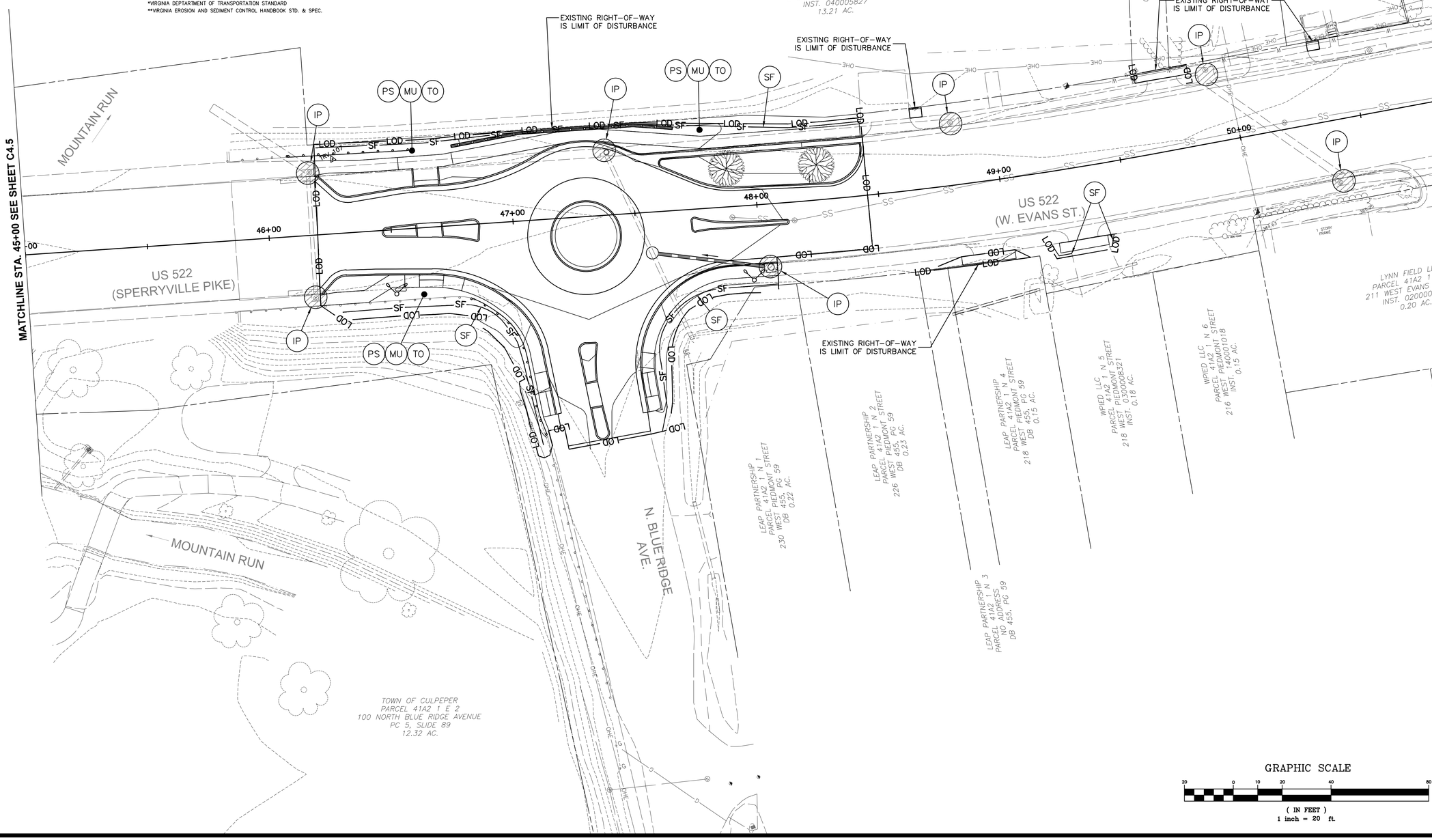

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TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

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SHEET TITLE

EROSION & SEDIMENT CONTROL PLAN STA. 45+00 TO END PROJ.

SHEET

C4.6

SHEET 20 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-XCE.DWG, 2/22/2022 9:50 AM, CRDBINSON

TRAVERSE DATA:				
NO	NORTHING	EASTING	ELEV	DESCRIPTION
101	6859388.4550	11623978.7040	436.44	TRV
102	6859109.2690	11624421.0000	426.87	TRV
103	6858940.4080	11624847.5810	433.67	TRV
104	6858628.4070	11625363.1440	421.28	TRV
105	6858419.4980	11625857.7650	405.29	TRV
106	6858098.3880	11626400.5040	388.62	TRV
107	6857772.6810	11627250.9530	363.55	TRV
108	6857498.5200	11627867.6560	367.89	TRV

RIVERDALE HOMEOWNERS ASSOCIATION INC.
PARCEL 40A 13 A
NO ADDRESS
INST. 160004923
0.52 AC.

TEMPORARY CONSTRUCTION EASEMENT #1 (24,295 S.F.)

TEMPORARY CONSTRUCTION EASEMENT #2 (24,283 S.F.)

GRAVEL DRIVE

001
ASPEN STREET PROPERTIES LLC
PARCEL 40A 1 2A
900 SPERRYVILLE PIKE
INST. 040013420
0.61 AC.

002
ASPEN STREET PROPERTIES LLC
PARCEL 40A 1 2
NO ADDRESS
INST. 040007496
0.61 AC.

CULPEPER FUNERAL HOME LLC
PARCEL 40A 1 1
850 SPERRYVILLE PIKE
DB 714, PG. 673
2.15 AC.

N. ASPEN ST.

CONNECT TO EXIST. SIDEWALK
STA: 11+61
OFFSET: 32.80'
N: 6859306.5386
E: 11624146.2724

ADJUST GRADING & RIP-RAP AS REQ'D.

LIMITS OF PROPOSED FILL

PROPOSED R.O.W. ACQUISITION #1 (2,726 S.F.)

EXIST. WATER METER TO BE RELOCATED BY TOWN OF CULPEPER

PROPOSED R.O.W.

5.0' CONC. SIDEWALK

LIMITS OF PROPOSED CUT

EXISTING R.O.W.

PROPOSED R.O.W.

INSTALL FULL DEPTH ASPHALT-SECTION A (274 S.Y.)

PROPOSED R.O.W. ACQUISITION #2 (2,726 S.F.)

N 6859185.6197
E 11624385.9928

LIMITS OF PROPOSED FILL

23.3'

N 6859169.2075
E 11624452.2798

LIMITS OF PROPOSED FILL

LIMITS OF PROPOSED CUT

EXISTING R.O.W.

5.0' CONC. SIDEWALK

20.19'

13.0'

9.5'

11.2'

11.3'

EXISTING R.O.W.

BEGIN PROJECT FOR RIGHT OF WAY
STA. 11+68.27

SIDEWALK CURB CUT

PAVEMENT CORE B-4

SIDEWALK CURB CUT

PAVEMENT CORE B-3

S63°24'17.39"E
1227.85'

SPERRYVILLE PIKE

11+00 12+00 13+00 14+00 15+00 16+00

CONSTRUCTION CENTERLINE US 522

BEGIN PROJECT
STA. 11+50
N: 6859283.1826
E: 11624120.5903

TRV 102

EXISTING R.O.W.

EXISTING STONE WALL

ASPEN ST.

MATCHLINE STA. 16+50 SEE SHEET C5.1

CURVE C1
PI = 11+13.63
DELTA = 3° 02' 13" (RT)
D = 5° 43' 48"
T = 26.51'
L = 53.00'
R = 1000.00'
PC = 10+87.12
PT = 11+40.12

CURVE C2
PI = 11+82.80
DELTA = 2° 26' 42" (LT)
D = 2° 51' 54"
T = 42.68'
L = 85.34'
R = 2000.00'
PC = 11+40.12
PT = 12+25.47

SCHUYLER, MICHAEL BERNARD ET UX
PARCEL 40A 2 1
921 SPERRYVILLE PIKE
INST. 020004369
0.41 AC.

MITCHELL, ROGER W JR
PARCEL 40A 2 2
915 SPERRYVILLE PIKE
INST. 160005371
0.25 AC.

KILBY, DONALD L ET UX
PARCEL 40A 2 3
911 SPERRYVILLE PIKE
INST. 010008803
0.25 AC.

HOLT, HERMAN WAYNE ET UX
PARCEL 40A 2 4
905 SPERRYVILLE PIKE
INST. 050002893
0.25 AC.

22 INVESTMENTS LLC
PARCEL 40A 2 5
901 SPERRYVILLE PIKE
INST. 150001355
0.13 AC.

VARGAS GROUP LLC
PARCEL 40 68B
441 ASPEN STREET
INST. 080007867
3.94 AC.

LOT 1 LOT 2 LOT 3 LOT 4 LOT 5

DEED BOOK 116, PAGE 106
OLD BROWNING SUBDIV.

ROADWAY DESIGN LEGEND

1. DENOTES ST'D. CG-6 REQ'D.
2. DENOTES ST'D. CG-3 REQ'D.
3. DENOTES MODIFIED CG-3 REQ'D.
4. DENOTES ST'D. CG-12B REQ'D.
5. DENOTES ST'D CG-9D REQ'D.
6. DENOTES ST'D. MS-2 REQ'D.
7. DENOTES RAISED CENTRAL ISLAND
8. DENOTES BICYCLE LANE
9. DENOTES CONC. SIDEWALK
10. DENOTES ST'D. GR-2 GUARDRAIL
11. DENOTES CG-6 WITH 12" GUTTER
12. DENOTES FULL DEPTH PAVEMENT REPLACEMENT
13. DENOTES SLURRY SEAL
14. DENOTES LIGHT POLE WITH TOWN OF CULPEPER STD. FIXTURES
15. DENOTES ST'D. GR-9 NCHRP 350 PARALLEL TERMINAL
16. DENOTES CONCRETE SPLITTER ISLAND
17. TRANSITION TO 5' WIDE SIDEWALK
18. DENOTES RW-2 RETAINING WALL
19. DENOTES HR-1 TYPE II HANDRAIL
20. DENOTES ST'D. CG-12C REQ'D.

DENOTES FULL DEPTH ASPHALT SECTION A
DENOTES FULL DEPTH ASPHALT SECTION B
DENOTES DRIVEWAY ASPHALT
DENOTES SLURRY SEAL

C DENOTES CONSTRUCTION LIMITS IN CUTS
F DENOTES CONSTRUCTION LIMITS IN FILLS

1. RELOCATED FIRE HYDRANT (BY TOWN OF CULPEPER)
2. ADJUST MANHOLE LID
3. ADJUST UTILITY BOX LID
4. AVOID UTILITY POLE
5. CONVERT TO MANHOLE

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

AMT
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SHEET TITLE

ROADWAY PLAN BEG. PROJ. TO STA. 16+50

SHEET

C5.0

SHEET 21 OF 70

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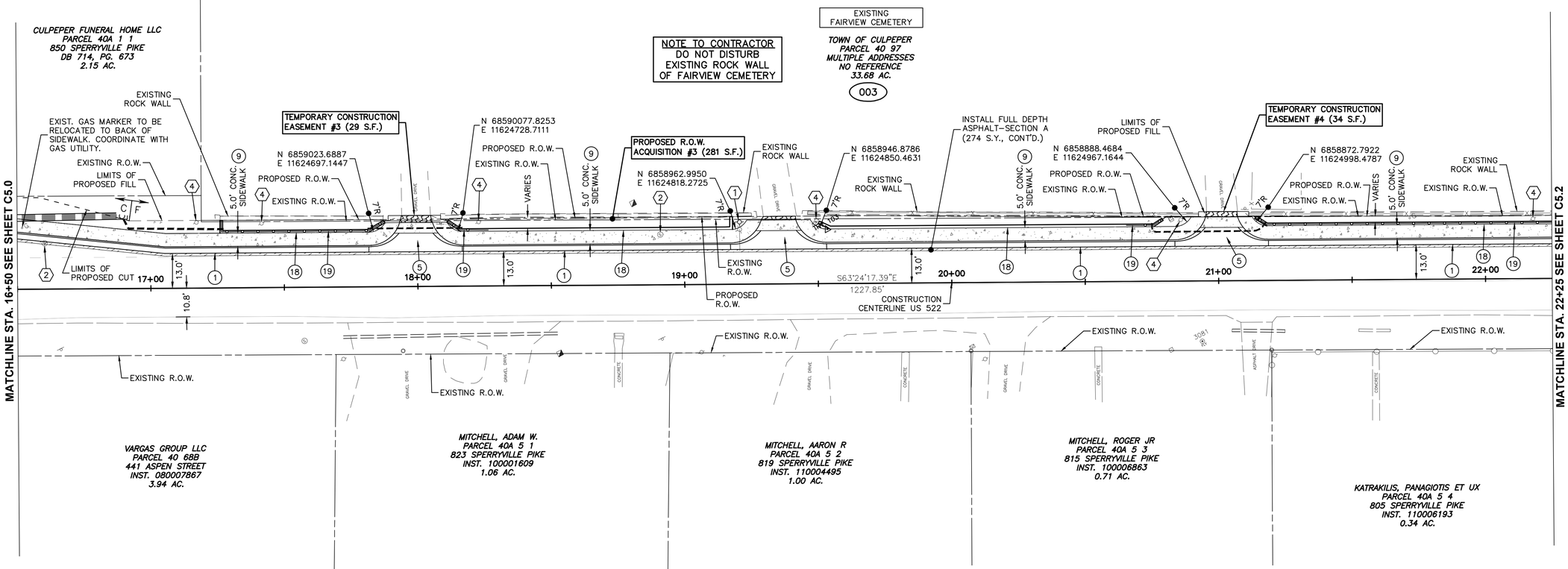
104	6858628.4070	11625363.1440	421.28	TRV
105	6858419.4980	11625857.7650	405.29	TRV
106	6858098.3880	11626400.5040	388.62	TRV
107	6857772.6810	11627250.9530	363.55	TRV
108	6857498.5200	11627867.6560	367.89	TRV



ROADWAY DESIGN LEGEND

1. DENOTES ST'D. CG-6 REQ'D.
2. DENOTES ST'D. CG-3 REQ'D.
3. DENOTES MODIFIED CG-3 REQ'D.
4. DENOTES ST'D. CG-12B REQ'D.
5. DENOTES ST'D CG-9D REQ'D.
6. DENOTES ST'D. MS-2 REQ'D.
7. DENOTES RAISED CENTRAL ISLAND
8. DENOTES BICYCLE LANE
9. DENOTES CONC. SIDEWALK
10. DENOTES ST'D. GR-2 GUARDRAIL
11. DENOTES CG-6 WITH 12" GUTTER
12. DENOTES FULL DEPTH PAVEMENT REPLACEMENT
13. DENOTES SLURRY SEAL
14. DENOTES LIGHT POLE WITH TOWN OF CULPEPER STD. FIXTURES
15. DENOTES ST'D. GR-9 NCHRP 350 PARALLEL TERMINAL
16. DENOTES CONCRETE SPLITTER ISLAND
17. TRANSITION TO 5' WIDE SIDEWALK
18. DENOTES RW-2 RETAINING WALL
19. DENOTES HR-1 TYPE II HANDRAIL
20. DENOTES ST'D. CG-12C REQ'D.

DENOTES FULL DEPTH ASPHALT SECTION A
DENOTES FULL DEPTH ASPHALT SECTION B
DENOTES DRIVEWAY ASPHALT
DENOTES SLURRY SEAL

C — DENOTES CONSTRUCTION LIMITS IN CUTS
F — DENOTES CONSTRUCTION LIMITS IN FILLS

1. RELOCATED FIRE HYDRANT (BY TOWN OF CULPEPER)
2. ADJUST MANHOLE LID
3. ADJUST UTILITY BOX LID
4. AVOID UTILITY POLE
5. CONVERT TO MANHOLE

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

AMT
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TOWN OF CULPEPER, VIRGINIA

REGISTRATION STAMP

COMMONWEALTH OF VIRGINIA
DONALD J. RISSMEYER
2-21-22
Lic. No. 26104
PROFESSIONAL ENGINEER

OWNER

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CULPEPER, VIRGINIA 22701
PH: 540-829-8260
FAX: 540-829-8279
Email: ahopewell@culpeperva.gov

PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	1"=20'
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

ROADWAY PLAN STA. 16+50 TO STA. 22+25

SHEET

C5.1

SHEET 22 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-XCI.DWG, 2/22/2022 10:00 AM, CROBINSON

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102	6859109.2690	11624421.0000	426.87	TRV
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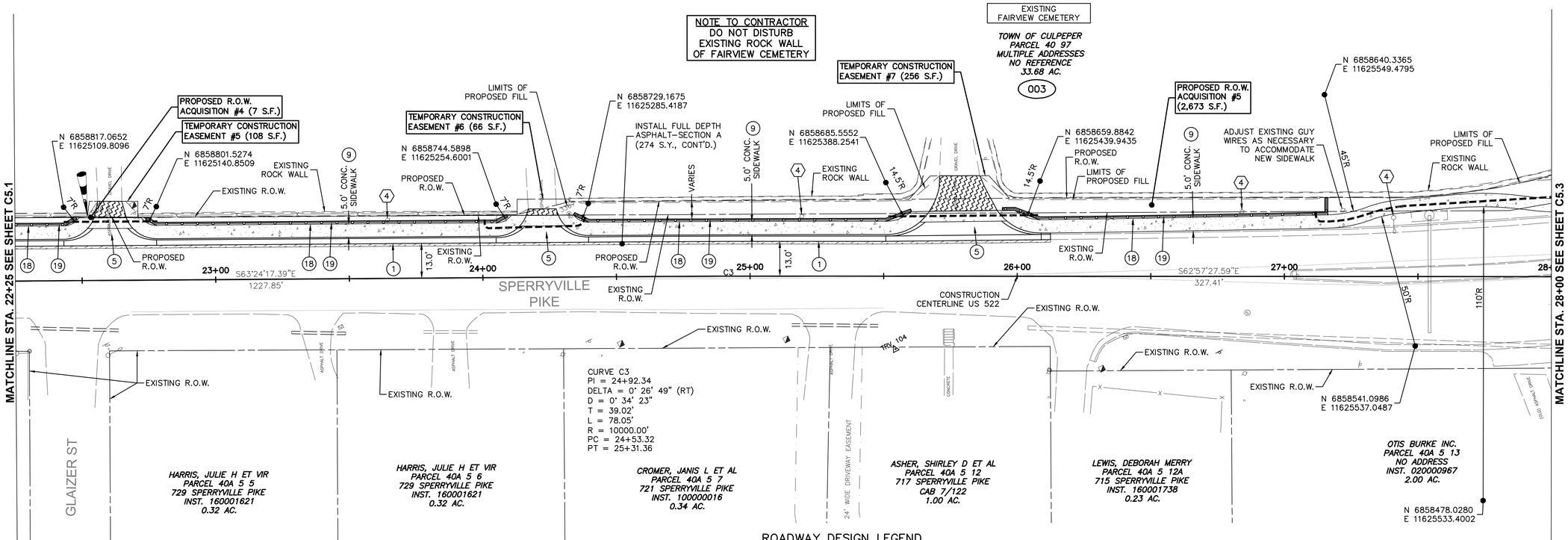
104	6858628.4070	11625363.1440	421.28	TRV
105	6858419.4980	11625857.7650	405.29	TRV
106	6858098.3880	11626400.5040	388.62	TRV
107	6857772.6810	11627250.9530	363.55	TRV
108	6857498.5200	11627867.6560	367.89	TRV



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3. DENOTES MODIFIED CG-3 REQ'D.
4. DENOTES ST'D. CG-12B REQ'D.
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DENOTES DRIVEWAY ASPHALT
DENOTES SLURRY SEAL

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4. AVOID UTILITY POLE
5. CONVERT TO MANHOLE

GRAPHIC SCALE
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1 inch = 20 ft.

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TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

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CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

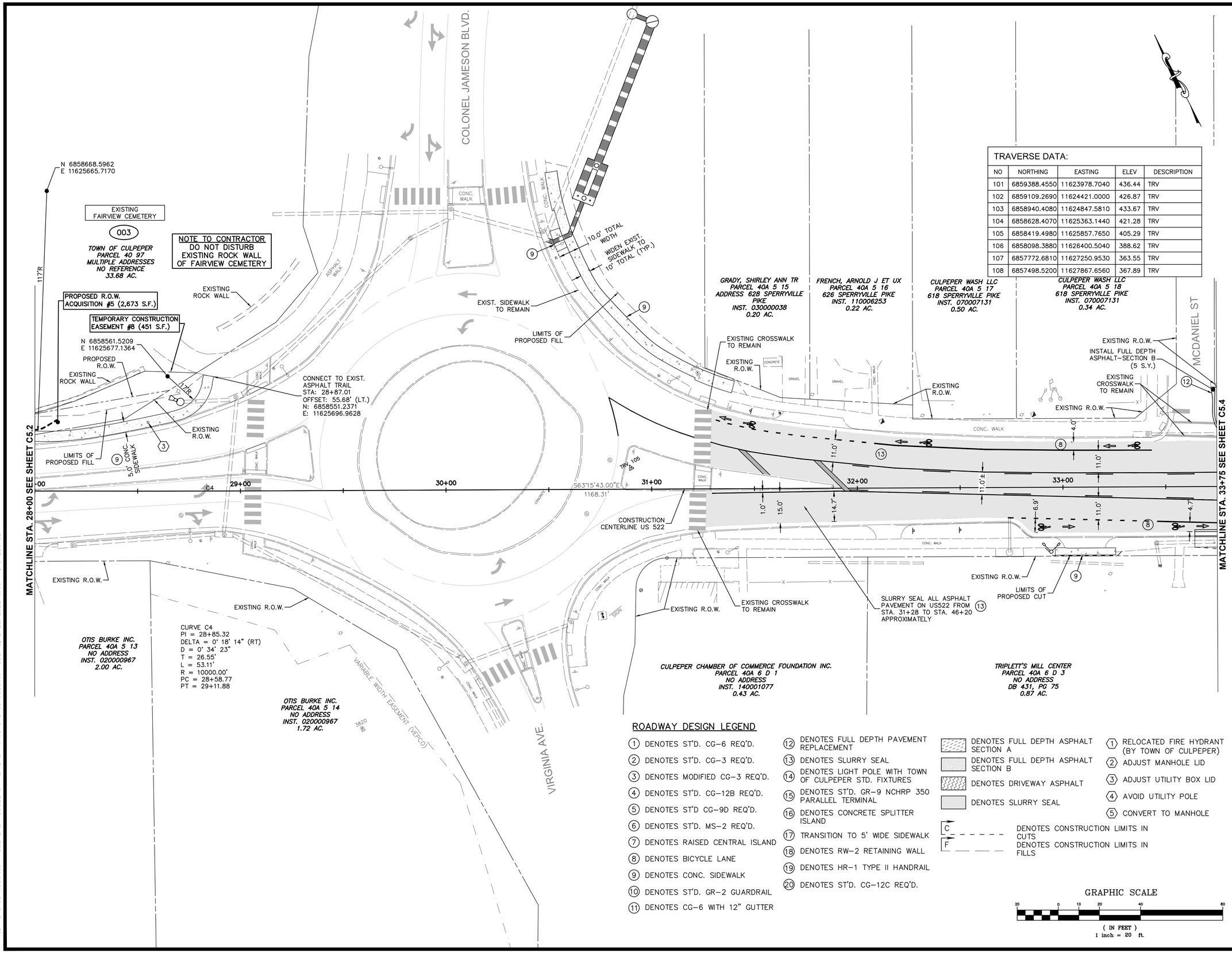
ROADWAY PLAN STA. 22+25 TO STA. 28+00

SHEET

C5.2

SHEET 23 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-XCI.DWG, 2/22/2022 10:01 AM, CRDBINSON



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DENOTES FULL DEPTH ASPHALT SECTION B
DENOTES DRIVEWAY ASPHALT
DENOTES SLURRY SEAL

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F DENOTES CONSTRUCTION LIMITS IN FILLS

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2. ADJUST MANHOLE LID
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4. AVOID UTILITY POLE
5. CONVERT TO MANHOLE

GRAPHIC SCALE
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(IN FEET)
1 inch = 20 ft.

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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

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DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

ROADWAY PLAN STA. 28+00 TO STA. 33+75

SHEET

C5.3

SHEET 24 OF 70

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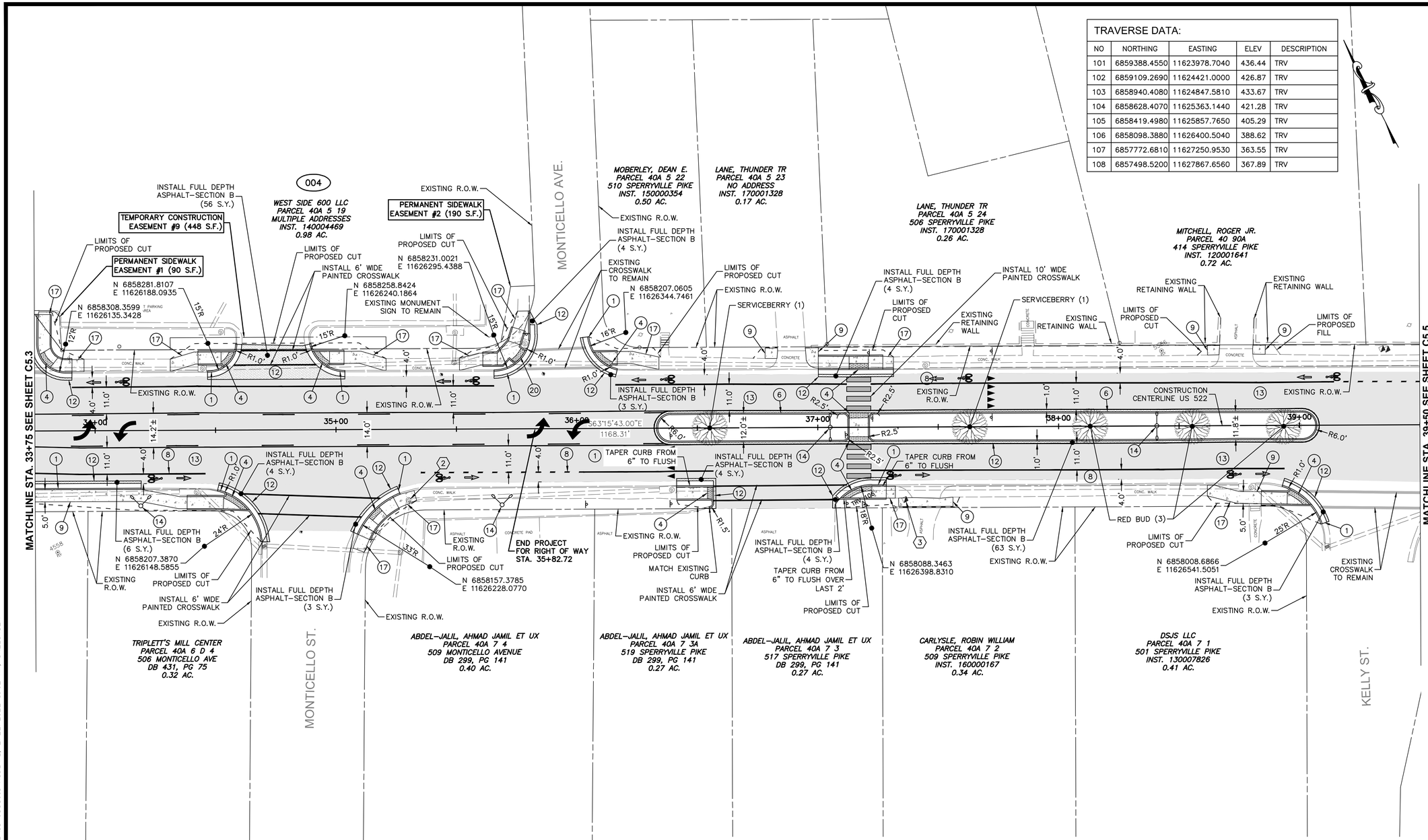

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DENOTES FULL DEPTH ASPHALT SECTION A
DENOTES FULL DEPTH ASPHALT SECTION B
DENOTES DRIVEWAY ASPHALT
DENOTES SLURRY SEAL

C — — — — DENOTES CONSTRUCTION LIMITS IN CUTS
F — — — — DENOTES CONSTRUCTION LIMITS IN FILLS

1. RELOCATED FIRE HYDRANT (BY TOWN OF CULPEPER)
2. ADJUST MANHOLE LID
3. ADJUST UTILITY BOX LID
4. AVOID UTILITY POLE
5. CONVERT TO MANHOLE

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

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DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

ROADWAY PLAN STA. 33+75 TO STA. 39+50

SHEET

C5.4

SHEET 25 OF 70

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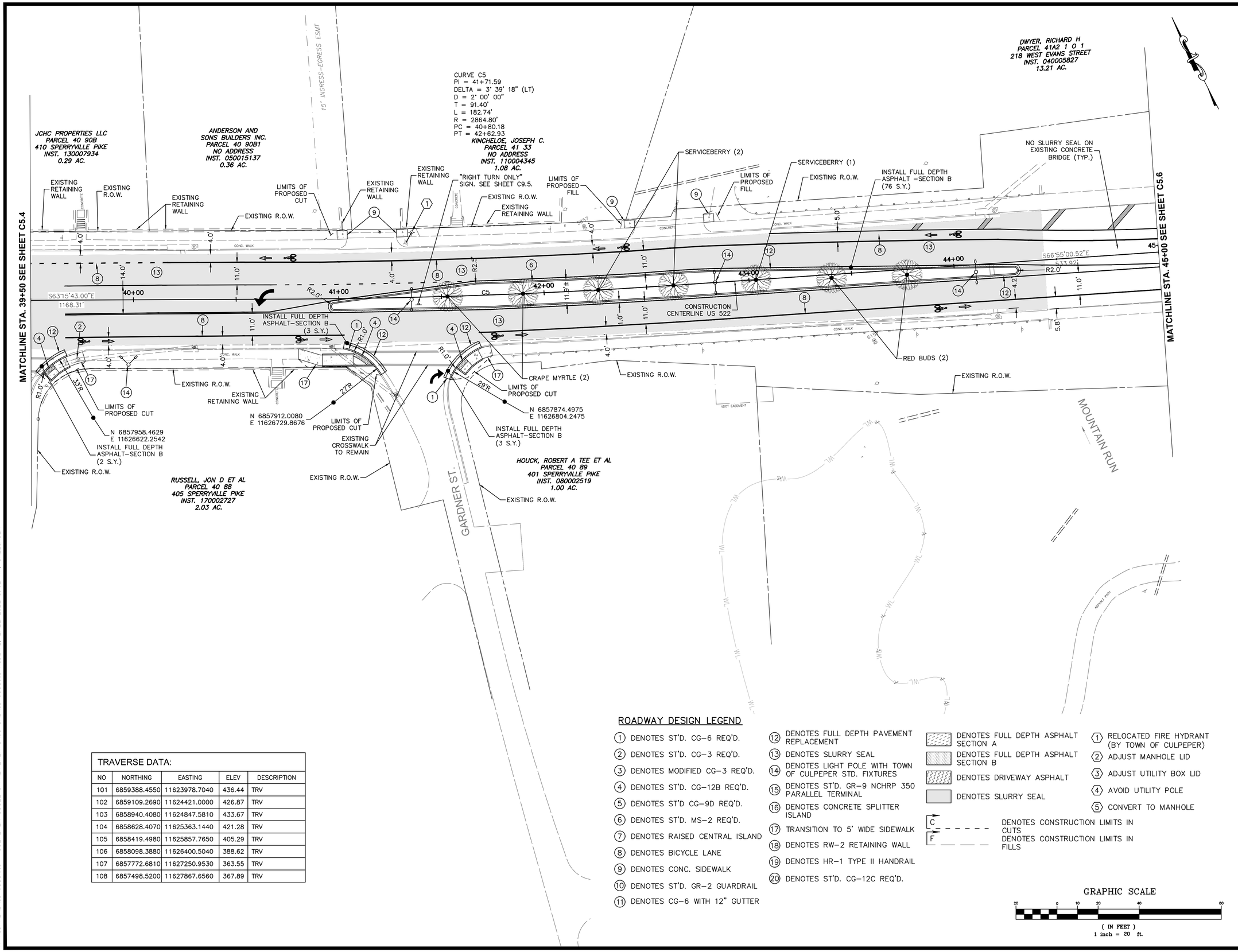

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TOWN OF CULPEPER, VA

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SHEET TITLE

ROADWAY PLAN STA. 39+50 TO STA. 45+00

SHEET

C5.5

SHEET 26 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-XC1.DWG, 2/22/2022 10:02 AM, CRDBINSON

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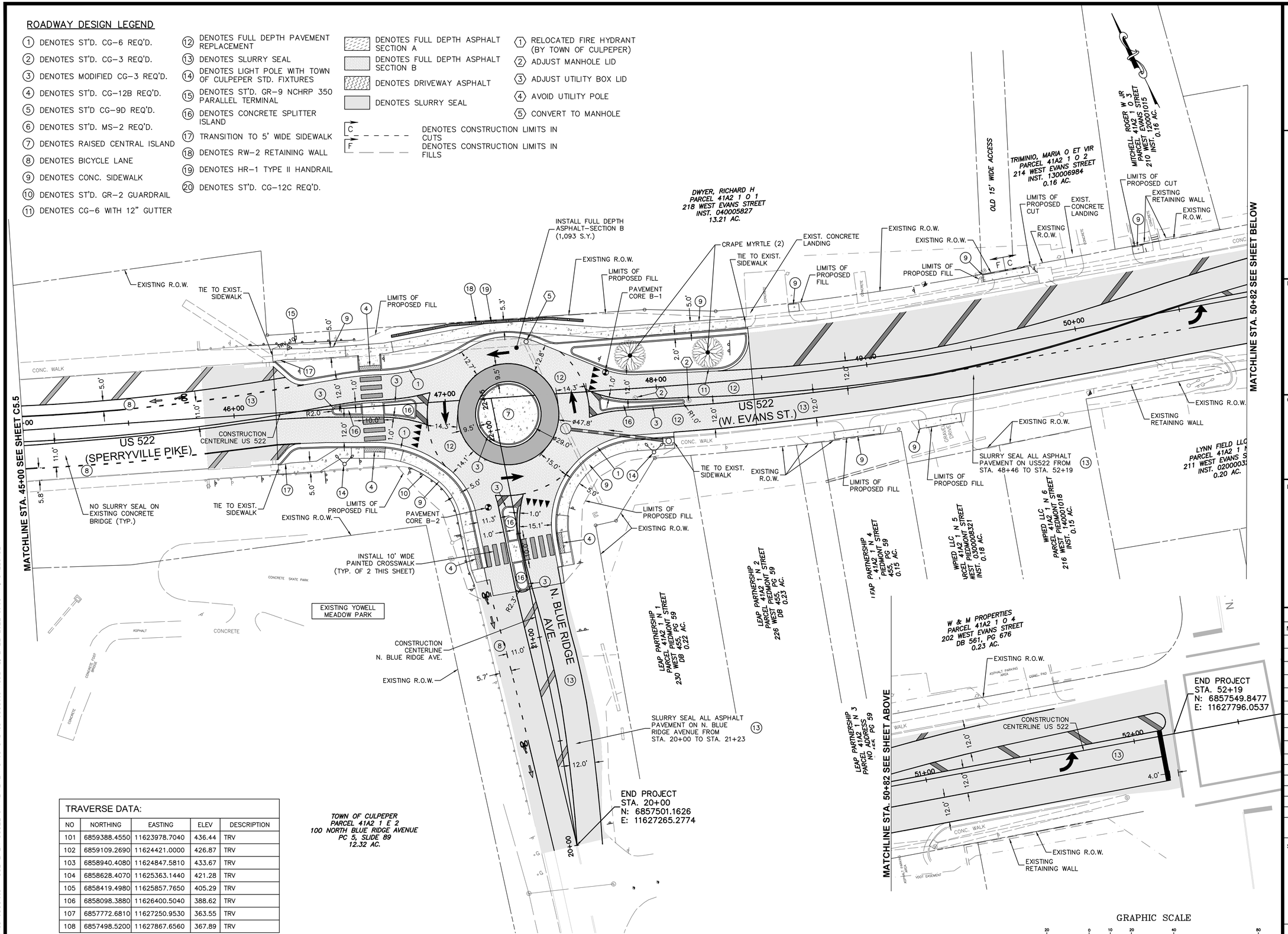

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100% DESIGN

SHEET TITLE

ROADWAY PLAN STA. 45+00 TO END PROJ.

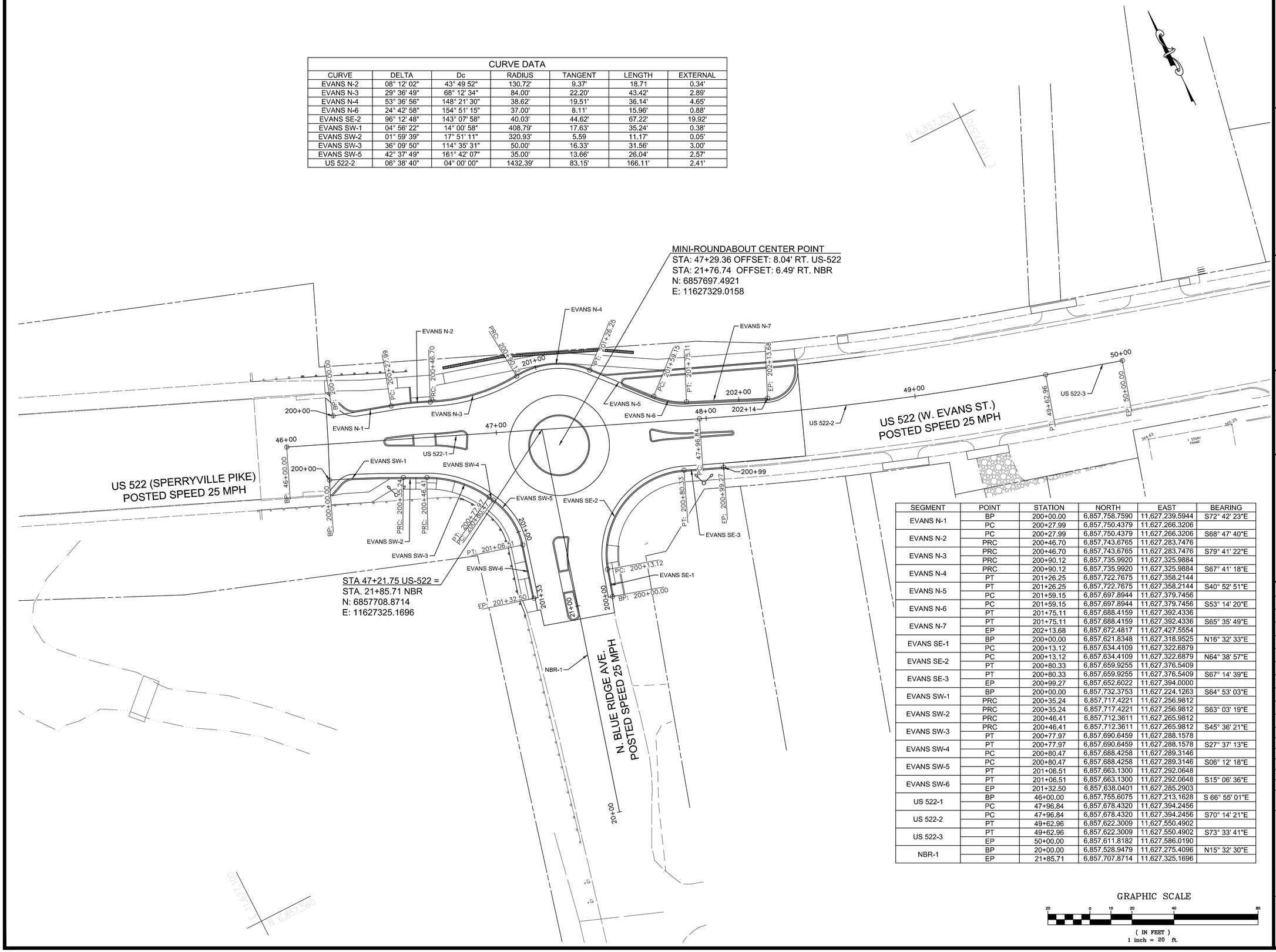
SHEET

C5.6

SHEET 27 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-XCI.DWG, 2/22/2022 10:03 AM, CRDBINSON

CURVE DATA						
CURVE	DELTA	Dc	RADIUS	TANGENT	LENGTH	EXTERNAL
EVANS N-2	08° 12' 02"	43° 49 52"	130.72'	9.37'	18.71	0.34'
EVANS N-3	29° 36' 49"	68° 12' 34"	84.00'	22.20'	43.42'	2.89'
EVANS N-4	53° 36' 56"	148° 21' 30"	38.62'	19.51'	36.14'	4.65'
EVANS N-6	24° 42' 58"	154° 51' 15"	37.00'	8.11'	15.96'	0.88'
EVANS SE-2	96° 12' 48"	143° 07' 58"	40.03'	44.62'	67.22'	19.92'
EVANS SW-1	04° 56' 22"	14° 00' 58"	408.79'	17.63'	35.24'	0.38'
EVANS SW-2	01° 59' 39"	17° 51' 11"	320.93'	5.59	11.17'	0.05'
EVANS SW-3	36° 09' 50"	114° 35' 31"	50.00'	16.33'	31.56'	3.00'
EVANS SW-5	42° 37' 49"	161° 42' 07"	35.00'	13.66'	26.04'	2.57'
US 522-2	06° 38' 40"	04° 00' 00"	1432.39'	83.15'	166.11'	2.41'



SEGMENT	POINT	STATION	NORTH	EAST	BEARING
EVANS N-1	BP	200+00.00	6,857,758.7590	11,627,239.5944	S72° 42' 23"E
	PC	200+27.99	6,857,750.4379	11,627,266.3206	
EVANS N-2	PC	200+27.99	6,857,750.4379	11,627,266.3206	S68° 47' 40"E
	PRC	200+46.70	6,857,743.6765	11,627,283.7476	
EVANS N-3	PRC	200+46.70	6,857,743.6765	11,627,283.7476	S79° 41' 22"E
	PRC	200+90.12	6,857,735.9920	11,627,325.9884	
EVANS N-4	PRC	200+90.12	6,857,735.9920	11,627,325.9884	S67° 41' 18"E
	PT	201+26.25	6,857,722.7675	11,627,358.2144	
EVANS N-5	PT	201+26.25	6,857,722.7675	11,627,358.2144	S40° 52' 51"E
	PC	201+59.15	6,857,697.8944	11,627,379.7456	
EVANS N-6	PC	201+59.15	6,857,697.8944	11,627,379.7456	S53° 14' 20"E
	PT	201+75.11	6,857,688.4159	11,627,392.4336	
EVANS N-7	PT	201+75.11	6,857,688.4159	11,627,392.4336	S65° 35' 49"E
	EP	202+13.68	6,857,672.4817	11,627,427.5554	
EVANS SE-1	BP	200+00.00	6,857,621.8348	11,627,318.9525	N16° 32' 33"E
	PC	200+13.12	6,857,634.4109	11,627,322.6879	
EVANS SE-2	PC	200+13.12	6,857,634.4109	11,627,322.6879	N64° 38' 57"E
	PT	200+80.33	6,857,659.9255	11,627,376.5409	
EVANS SE-3	PT	200+80.33	6,857,659.9255	11,627,376.5409	S67° 14' 39"E
	EP	200+99.27	6,857,652.6022	11,627,394.0000	
EVANS SW-1	BP	200+00.00	6,857,732.3753	11,627,224.1263	S64° 53' 03"E
	PRC	200+35.24	6,857,717.4221	11,627,256.9812	
EVANS SW-2	PRC	200+35.24	6,857,717.4221	11,627,256.9812	S63° 03' 19"E
	PRC	200+46.41	6,857,712.3611	11,627,265.9812	
EVANS SW-3	PRC	200+46.41	6,857,712.3611	11,627,265.9812	S45° 36' 21"E
	PT	200+77.97	6,857,690.6459	11,627,288.1578	
EVANS SW-4	PT	200+77.97	6,857,690.6459	11,627,288.1578	S27° 37' 13"E
	PC	200+80.47	6,857,688.4258	11,627,289.3146	
EVANS SW-5	PC	200+80.47	6,857,688.4258	11,627,289.3146	S06° 12' 18"E
	PT	201+06.51	6,857,663.1300	11,627,292.0648	
EVANS SW-6	PT	201+06.51	6,857,663.1300	11,627,292.0648	S15° 06' 36"E
	EP	201+32.50	6,857,638.0401	11,627,285.2903	
US 522-1	BP	46+00.00	6,857,755.6075	11,627,213.1628	S 66° 55' 01"E
	PC	47+96.84	6,857,678.4320	11,627,394.2456	
US 522-2	PC	47+96.84	6,857,678.4320	11,627,394.2456	S70° 14' 21"E
	PT	49+62.96	6,857,622.3009	11,627,550.4902	
US 522-3	PT	49+62.96	6,857,622.3009	11,627,550.4902	S73° 33' 41"E
	EP	50+00.00	6,857,611.8182	11,627,586.0190	
NBR-1	BP	20+00.00	6,857,528.9479	11,627,275.4096	N15° 32' 30"E
	EP	21+85.71	6,857,707.8714	11,627,325.1696	

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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400 S. MAIN STREET, SUITE 301
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PH: 540-829-8260
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Email: ahopewell@culpeperva.gov

PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	1"=20'
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

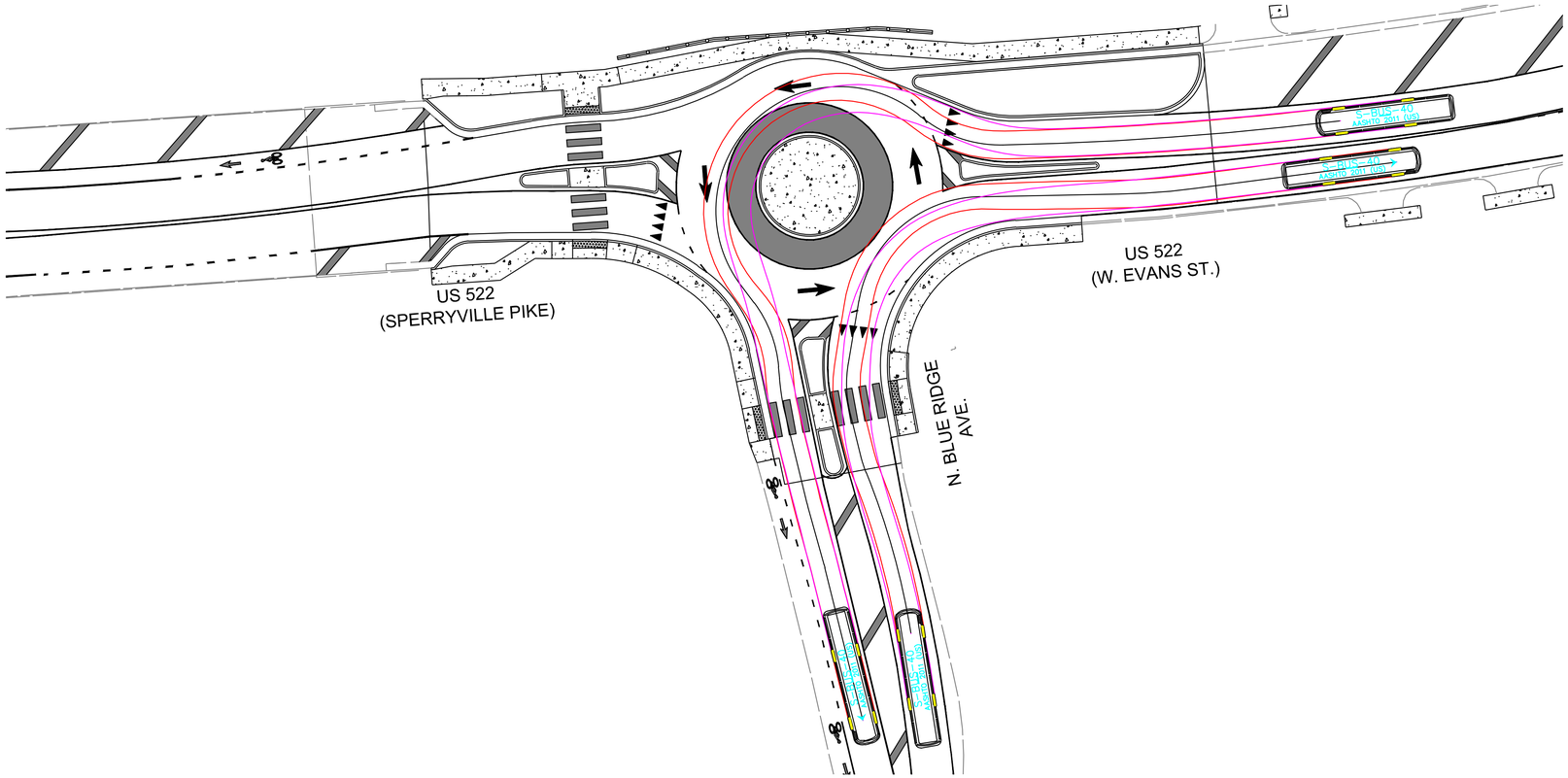
SHEET TITLE

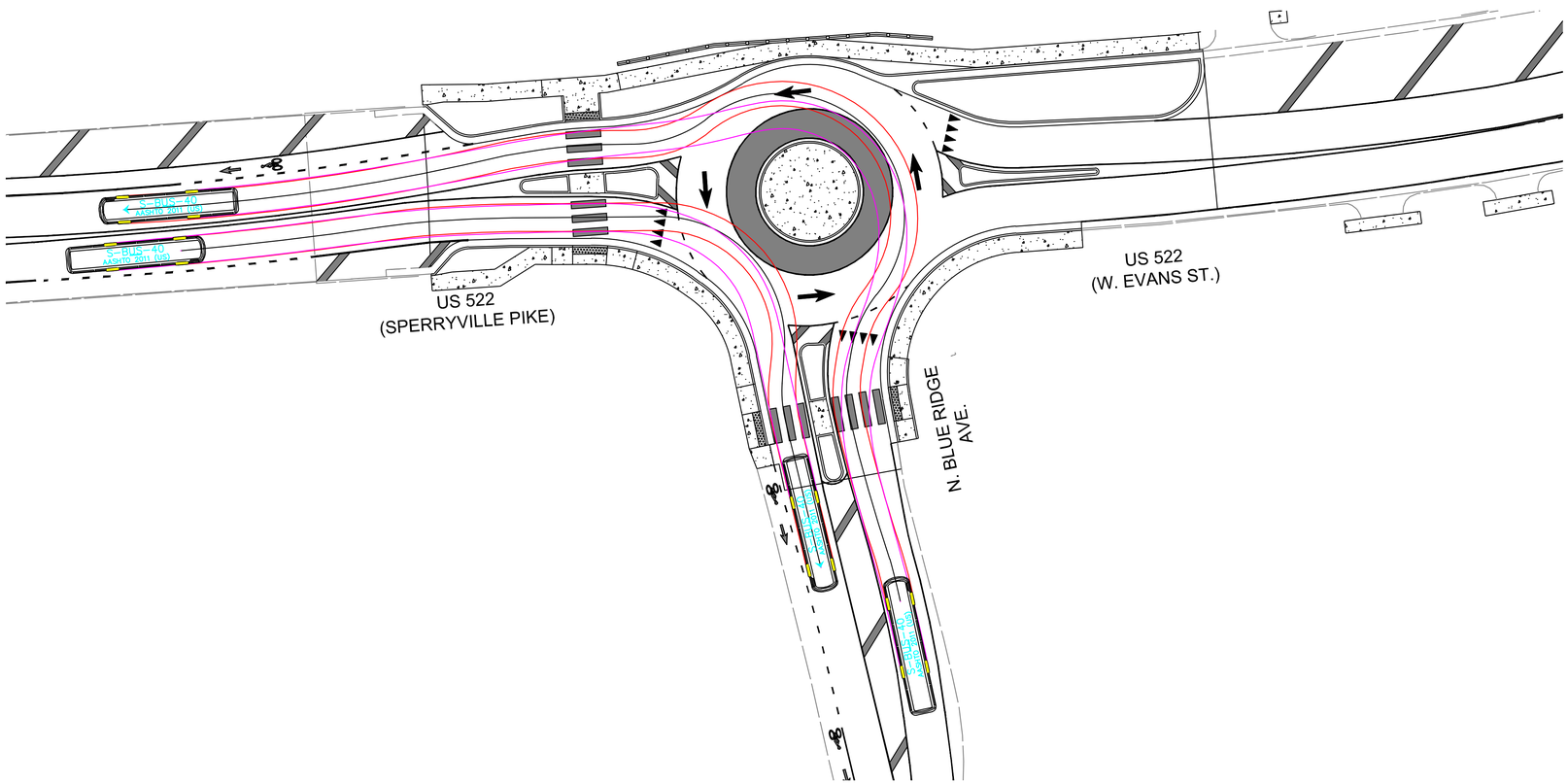
MINI-ROUNDABOUT HORIZONTAL GEOMETRY PLAN

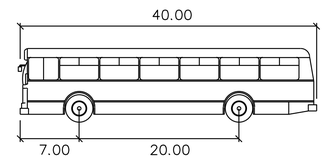
SHEET

C6.0

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-GEOM.DWG, 2/22/2022 9:20 AM, CRDBINSON







S-BUS-40
feet

Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 34.4

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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Email: ahopewell@culpeperva.gov

PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	1"=20'
DESIGNED BY:	CER
DRAWN BY:	LAL
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SHEET TITLE

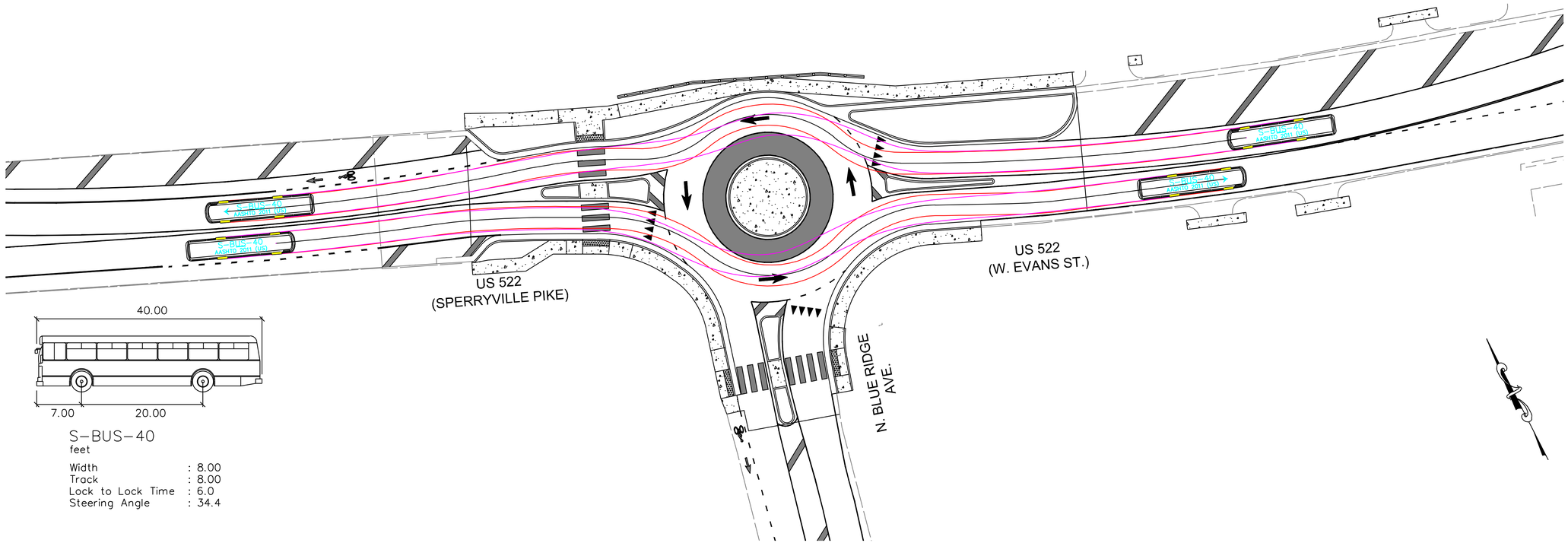
MINI-ROUNDABOUT TURNING MOVEMENTS (AUTOTURN)

SHEET

C6.1

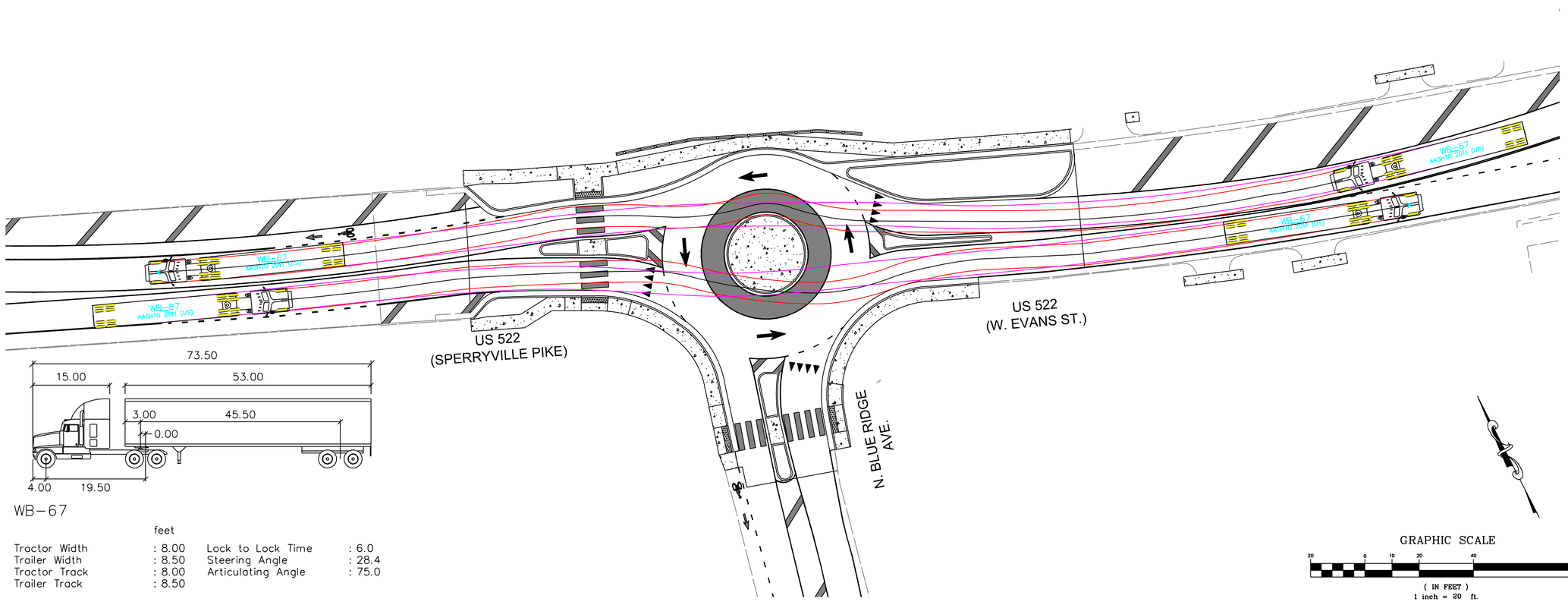
SHEET 29 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-AUTOTURN.DWG, 2/22/2022 9:00 AM, CRDBINSON



S-BUS-40
feet

Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 34.4



WB-67
feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

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Email: ahopewell@culpeperva.gov

PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

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SHEET TITLE

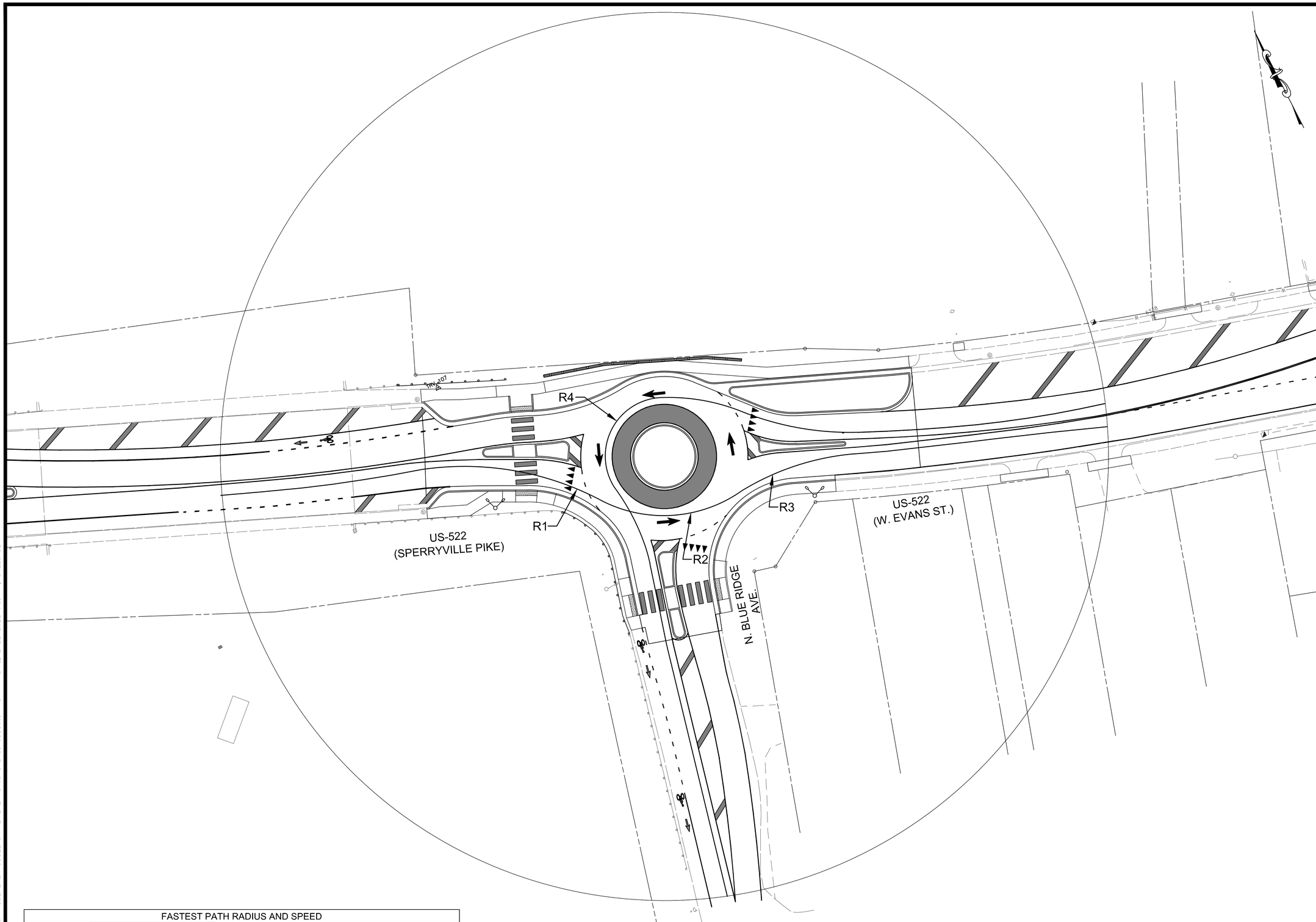
MINI-ROUNDABOUT TURNING MOVEMENTS (AUTOTURN)

SHEET

C6.2

SHEET 30 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-AUTOTURN.DWG, 2/22/2022 9:02 AM, CROBINSON



FASTEST PATH RADIUS AND SPEED

	US 522 EB		US 522 WB		N. BLUE RIDGE AVE.	
	RADIUS (FT)	SPEED (MPH)	RADIUS (FT)	SPEED (MPH)	RADIUS (FT)	SPEED (MPH)
R1	133	20.9	133	20.9	86	17.8
R2	62	15.8	92	18.2	26	11.5
R3	117	19.9	138	21.1	-	-
R4	26	11.5	-	-	-	-
R5	-	-	62	15.8	73	16.7

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

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100% DESIGN

SHEET TITLE

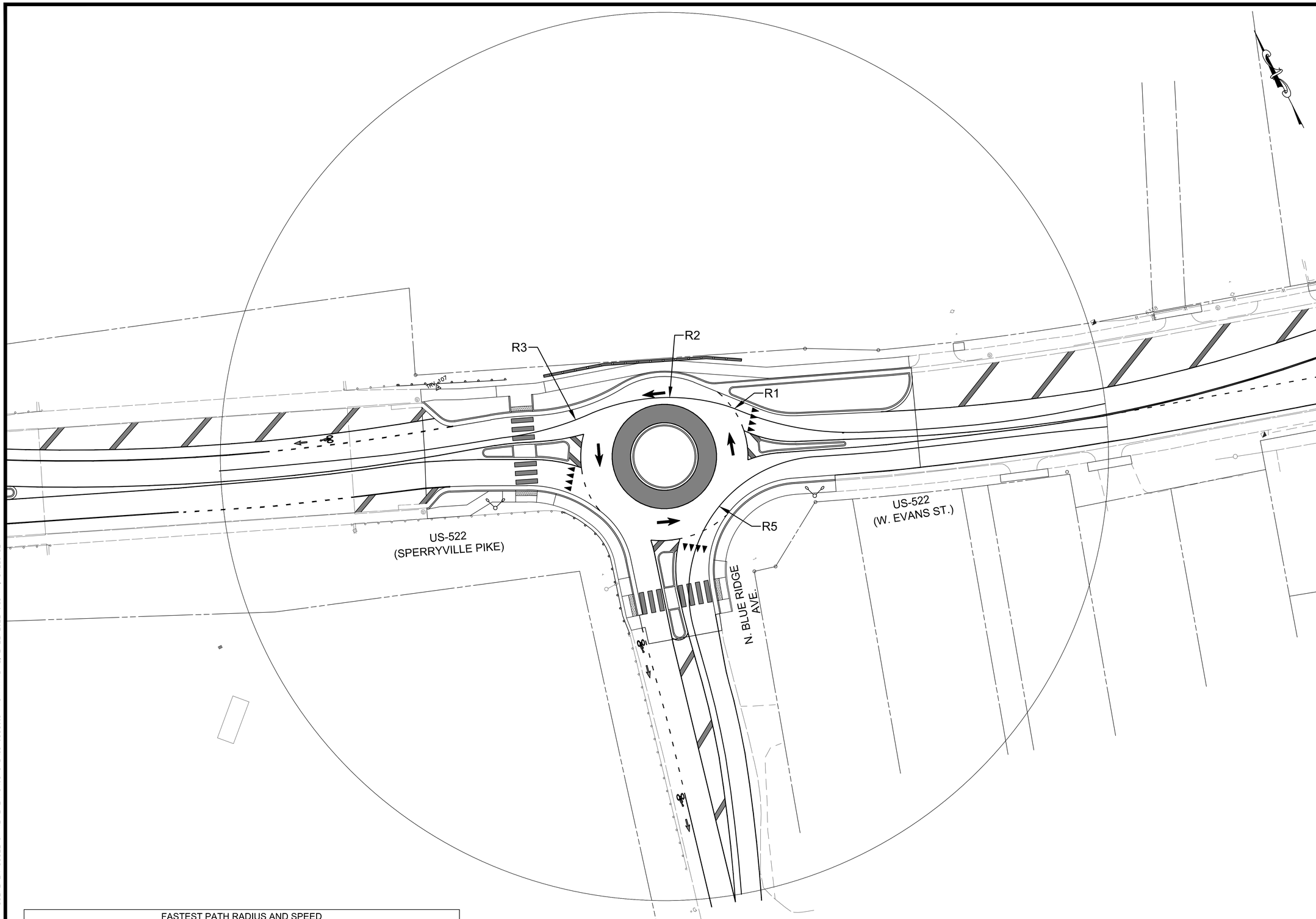
MINI-ROUNDABOUT FASTEST PATH PLAN

SHEET

C6.3

SHEET 31 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-FASTPATH.DWG, 2/22/2022 9:16 AM, CROBINSON



FASTEST PATH RADIUS AND SPEED						
	US 522 EB		US 522 WB		N. BLUE RIDGE AVE.	
	RADIUS (FT)	SPEED (MPH)	RADIUS (FT)	SPEED (MPH)	RADIUS (FT)	SPEED (MPH)
R1	133	20.9	133	20.9	86	17.8
R2	62	15.8	92	18.2	26	11.5
R3	117	19.9	138	21.1	-	-
R4	26	11.5	-	-	-	-
R5	-	-	62	15.8	73	16.7

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
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REVISIONS

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SCALE:	1"=20'
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

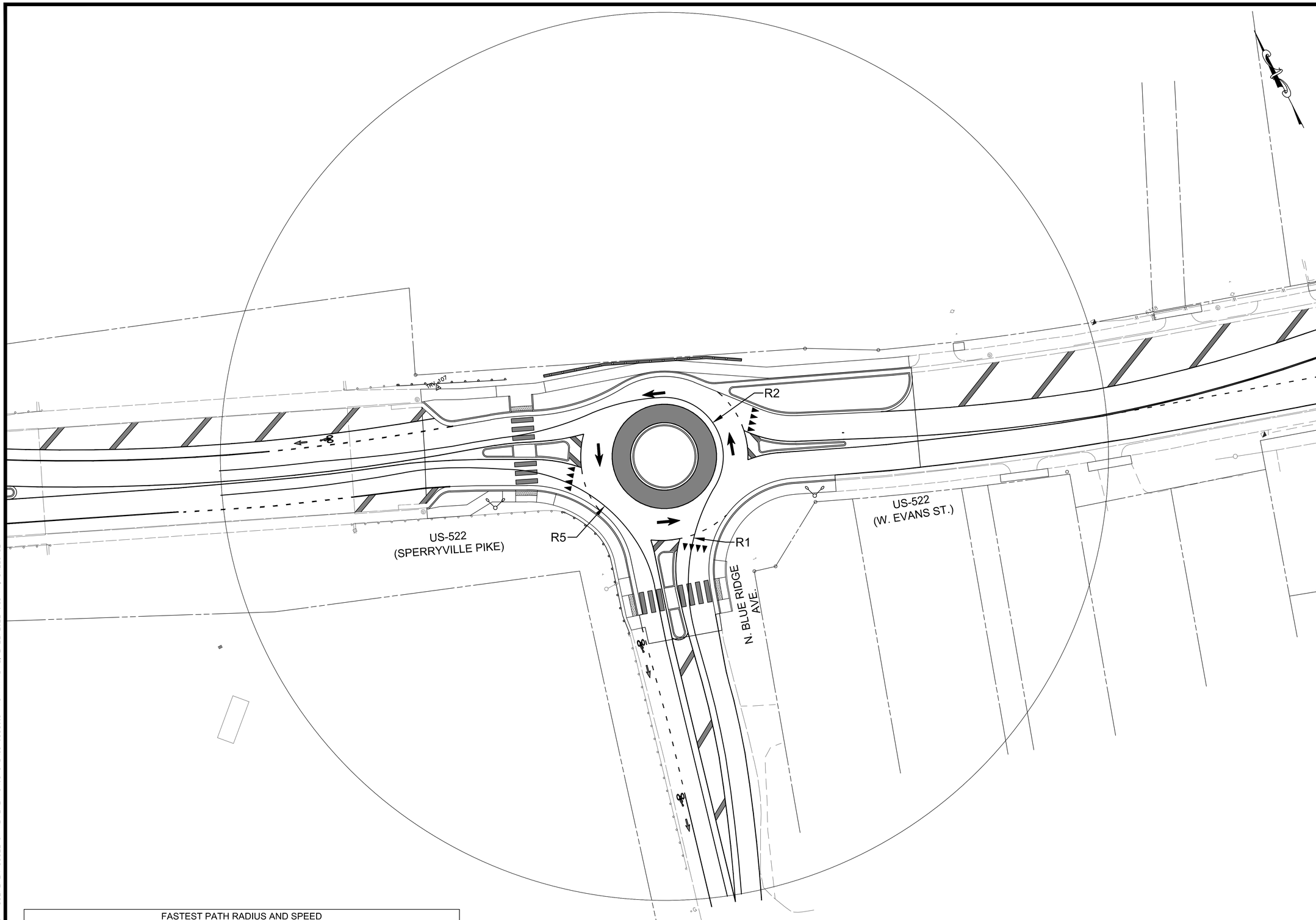
MINI-ROUNDABOUT FASTEST PATH PLAN

SHEET

C6.4

SHEET 32 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-FASTPATH.DWG, 2/22/2022 9:16 AM, CROBINSON



FASTEST PATH RADIUS AND SPEED						
	US 522 EB		US 522 WB		N. BLUE RIDGE AVE.	
	RADIUS (FT)	SPEED (MPH)	RADIUS (FT)	SPEED (MPH)	RADIUS (FT)	SPEED (MPH)
R1	133	20.9	133	20.9	86	17.8
R2	62	15.8	92	18.2	26	11.5
R3	117	19.9	138	21.1	-	-
R4	26	11.5	-	-	-	-
R5	-	-	62	15.8	73	16.7

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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PROJECT TITLE

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UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	1"=20'
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

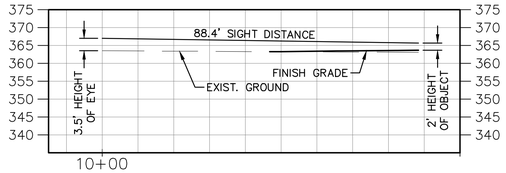
MINI-ROUNDABOUT FASTEST PATH PLAN

SHEET

C6.5

SHEET 33 OF 70

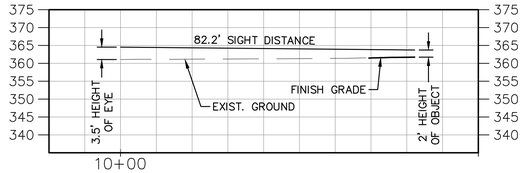
X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-FASTPATH.DWG, 2/22/2022 9:16 AM, CRDBINSON



STOPPING SIGHT DISTANCE #1

SCALE: HORZ 1" = 20'
VERT. 1" = 20'

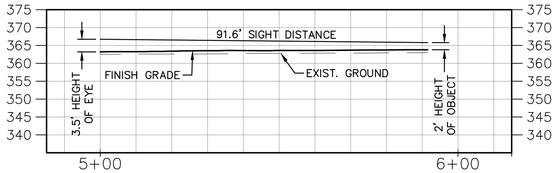
APPROACH SIGHT DISTANCE
REQ'D DISTANCE = 88.4'
AVERAGE R5 = 16.7



STOPPING SIGHT DISTANCE #3

SCALE: HORZ 1" = 20'
VERT. 1" = 20'

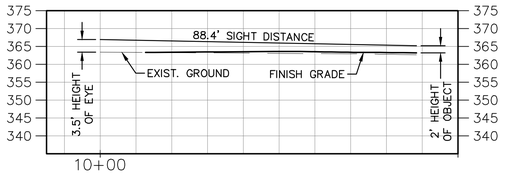
APPROACH SIGHT DISTANCE
REQ'D DISTANCE = 82.2'
AVERAGE R5 = 15.8



STOPPING SIGHT DISTANCE #6

SCALE: HORZ 1" = 20'
VERT. 1" = 20'

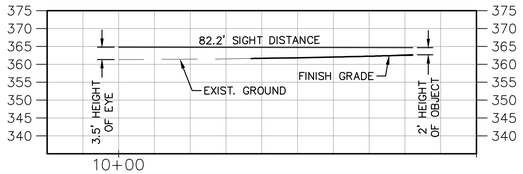
EXIT CROSSWALK SIGHT DISTANCE
DISTANCE = 91.6'
AVERAGE R5 = 19.6



STOPPING SIGHT DISTANCE #2

SCALE: HORZ 1" = 20'
VERT. 1" = 20'

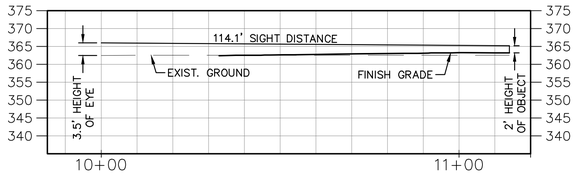
APPROACH CROSSWALK SIGHT DISTANCE
REQ'D DISTANCE = 88.4'
AVERAGE R5 = 16.7



STOPPING SIGHT DISTANCE #4

SCALE: HORZ 1" = 20'
VERT. 1" = 20'

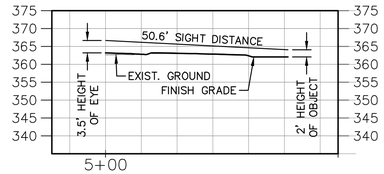
APPROACH CROSSWALK SIGHT DISTANCE
REQ'D DISTANCE = 82.2'
AVERAGE R5 = 15.8



STOPPING SIGHT DISTANCE #5

SCALE: HORZ 1" = 20'
VERT. 1" = 20'

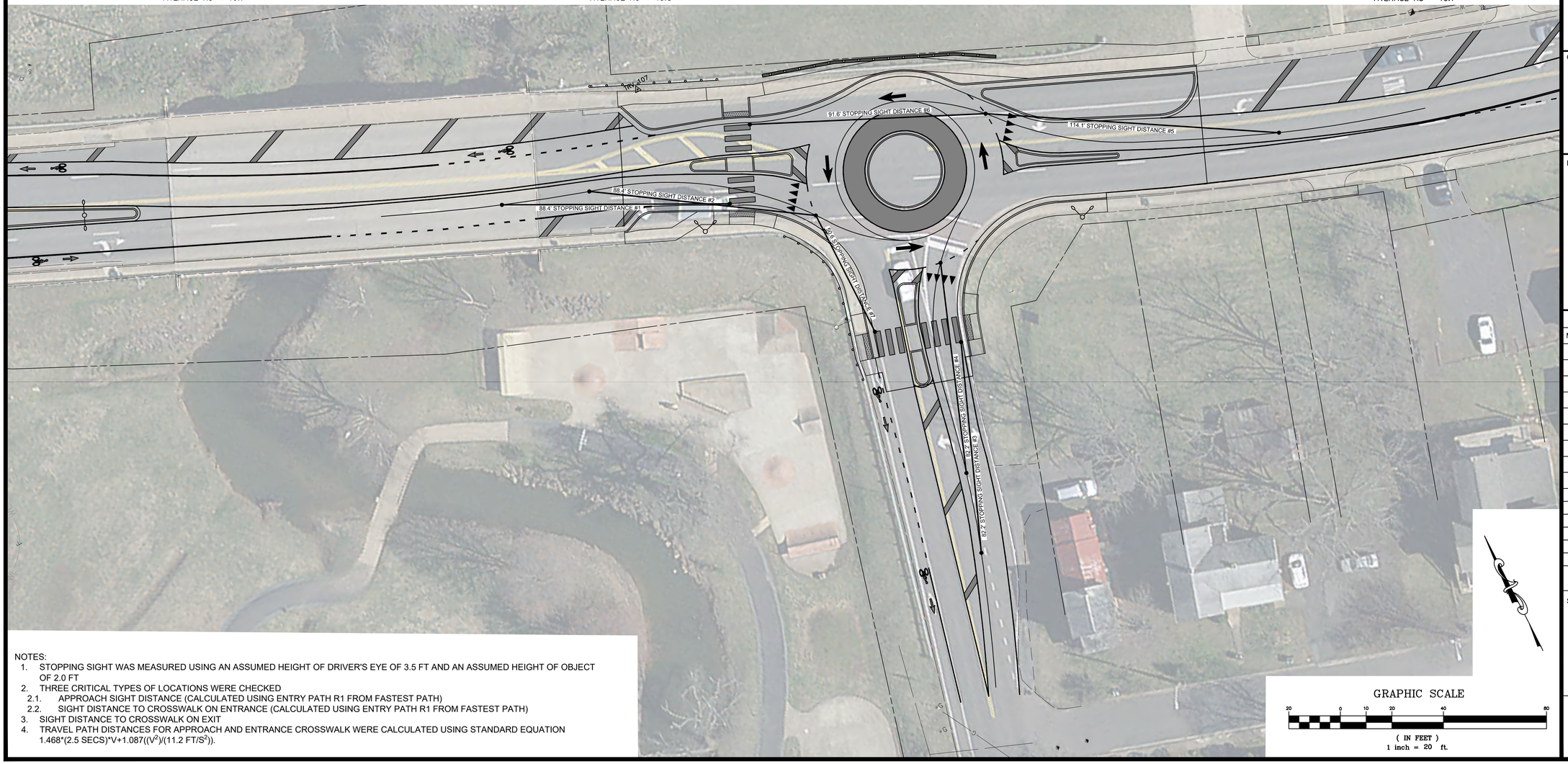
APPROACH SIGHT DISTANCE
REQ'D DISTANCE = 114.1'
AVERAGE R5 = 19.6



STOPPING SIGHT DISTANCE #7

SCALE: HORZ 1" = 20'
VERT. 1" = 20'

EXIT CROSSWALK SIGHT DISTANCE
DISTANCE = 50.6'
AVERAGE R5 = 16.7



NOTES:

1. STOPPING SIGHT WAS MEASURED USING AN ASSUMED HEIGHT OF DRIVER'S EYE OF 3.5 FT AND AN ASSUMED HEIGHT OF OBJECT OF 2.0 FT
2. THREE CRITICAL TYPES OF LOCATIONS WERE CHECKED
   - 2.1. APPROACH SIGHT DISTANCE (CALCULATED USING ENTRY PATH R1 FROM FASTEST PATH)
   - 2.2. SIGHT DISTANCE TO CROSSWALK ON ENTRANCE (CALCULATED USING ENTRY PATH R1 FROM FASTEST PATH)
3. SIGHT DISTANCE TO CROSSWALK ON EXIT
4. TRAVEL PATH DISTANCES FOR APPROACH AND ENTRANCE CROSSWALK WERE CALCULATED USING STANDARD EQUATION $1.468*(2.5\ SECS)*V+1.087((V^2)/(11.2\ FT/S^2))$.

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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	1"=20'
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

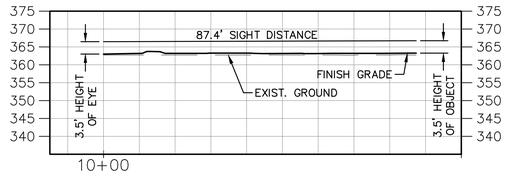
SHEET TITLE

MINI-ROUNDABOUT STOPPING SIGHT DISTANCE PROFILES

SHEET

C6.6

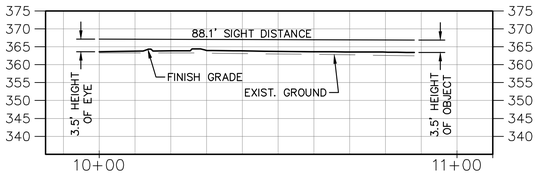
X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-SIGHT-DISTANCE-PRO.DWG, 2/22/2022 9:32 AM, CRDBINSON



CIRCULATING STREAM INTERSECTION S.D. #1

SCALE: HORZ 1" = 20'
VERT. 1" = 20'

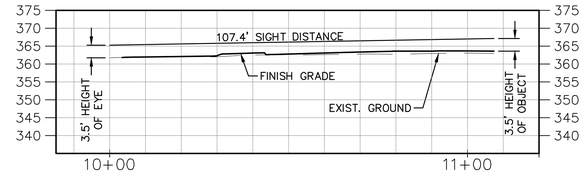
CIRCULATING STREAM
REQ'D TRAVEL PATH DISTANCE = 84.4'
REQ'D SIGHT DISTANCE = 87.4'
AVERAGE R4 = 11.5



CIRCULATING STREAM INTERSECTION S.D. #2

SCALE: HORZ 1" = 20'
VERT. 1" = 20'

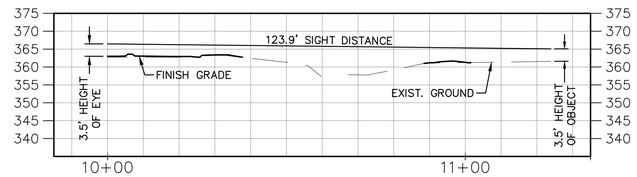
CIRCULATING STREAM
REQ'D TRAVEL PATH DISTANCE = 84.4'
REQ'D SIGHT DISTANCE = 88.1'
AVERAGE R4 = 11.5



CIRCULATING STREAM INTERSECTION S.D. #3

SCALE: HORZ 1" = 20'
VERT. 1" = 20'

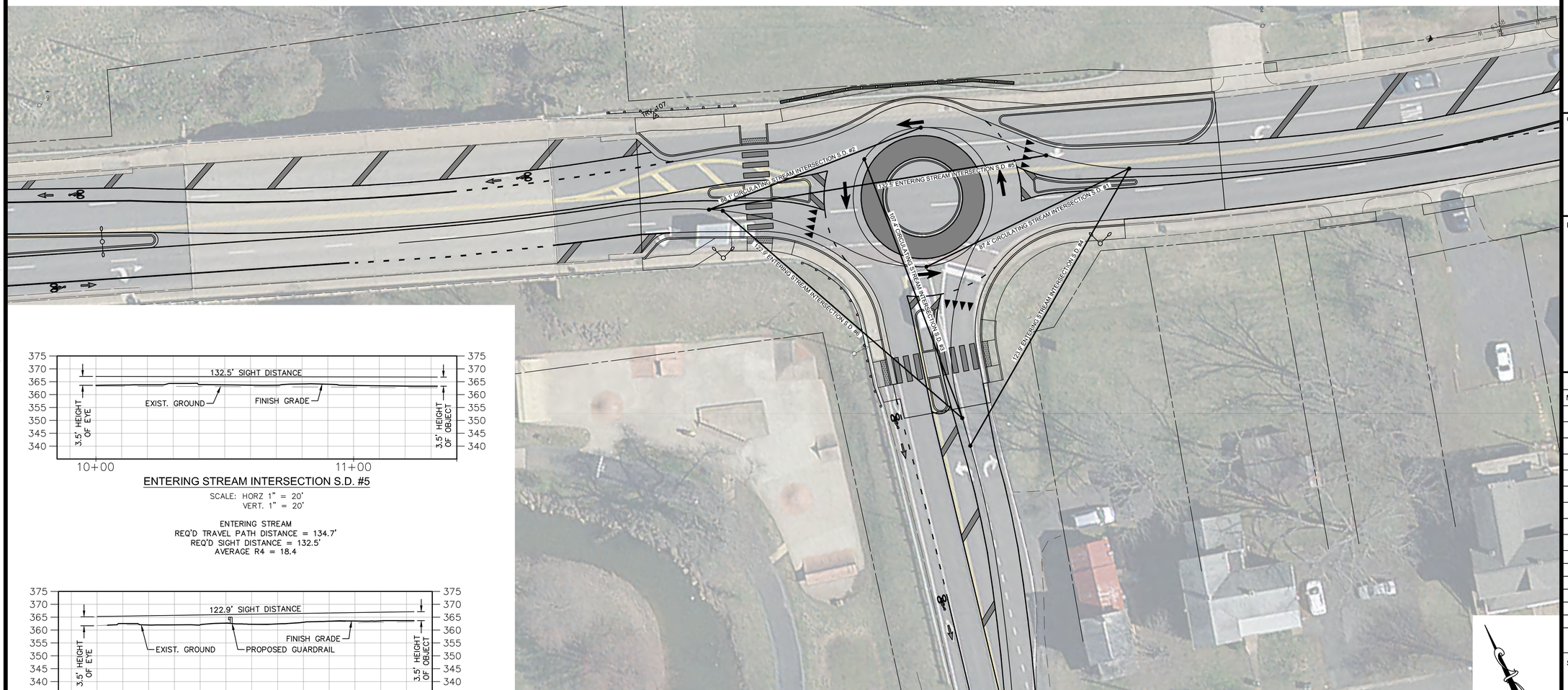
CIRCULATING STREAM
REQ'D TRAVEL PATH DISTANCE = 84.4'
REQ'D SIGHT DISTANCE = 107.4'
AVERAGE R4 = 11.5



ENTERING STREAM INTERSECTION S.D. #4

SCALE: HORZ 1" = 20'
VERT. 1" = 20'

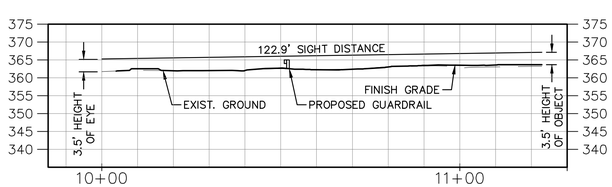
ENTERING STREAM
REQ'D TRAVEL PATH DISTANCE = 143.5'
REQ'D SIGHT DISTANCE = 123.9'
AVERAGE R4 = 19.6



ENTERING STREAM INTERSECTION S.D. #5

SCALE: HORZ 1" = 20'
VERT. 1" = 20'

ENTERING STREAM
REQ'D TRAVEL PATH DISTANCE = 134.7'
REQ'D SIGHT DISTANCE = 132.5'
AVERAGE R4 = 18.4



ENTERING STREAM INTERSECTION S.D. #6

SCALE: HORZ 1" = 20'
VERT. 1" = 20'

CIRCULATING STREAM
REQ'D TRAVEL PATH DISTANCE = 107.5'
REQ'D SIGHT DISTANCE = 122.9'
AVERAGE R4 = 14.7

NOTES:

1. SIGHT LINES ARE MEASURED 50' FROM YIELD LINE
2. TWO CONFLICTING TRAFFIC STREAMS ARE CHECKED AT EACH ENTRY:
   - 2.1. ENTERING STREAM, COMPRISED OF VEHICLES FROM THE IMMEDIATE UPSTREAM ENTRY, THE SPEED FOR THIS MOVEMENT WAS APPROXIMATED BY TAKING THE AVERAGE OF THE ENTRY PATH SPEED (PATH WITH RADIUS R1 FROM ROUNDABOUT FASTEST PATH) AND THE CIRCULATING PATH SPEED (PATH WITH RADIUS R2 FROM ROUNDABOUT FASTEST PATH).
   - 2.2. CIRCULATING STREAM, COMPRISED OF VEHICLES THAT ENTERED THE ROUNDABOUT PRIOR TO THE IMMEDIATE UPSTREAM ENTRY. THIS SPEED WAS APPROXIMATED BY TAKING THE SPEED OF LEFT TURNING VEHICLES (PATH WITH RADIUS R4 FROM ROUNDABOUT FASTEST PATH).
3. DISTANCE FOR BOTH ENTERING AND CIRCULATING STREAMS WERE CALCULATED USING STANDARD EQUATION 1.468*R*(5 SECS).

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
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DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

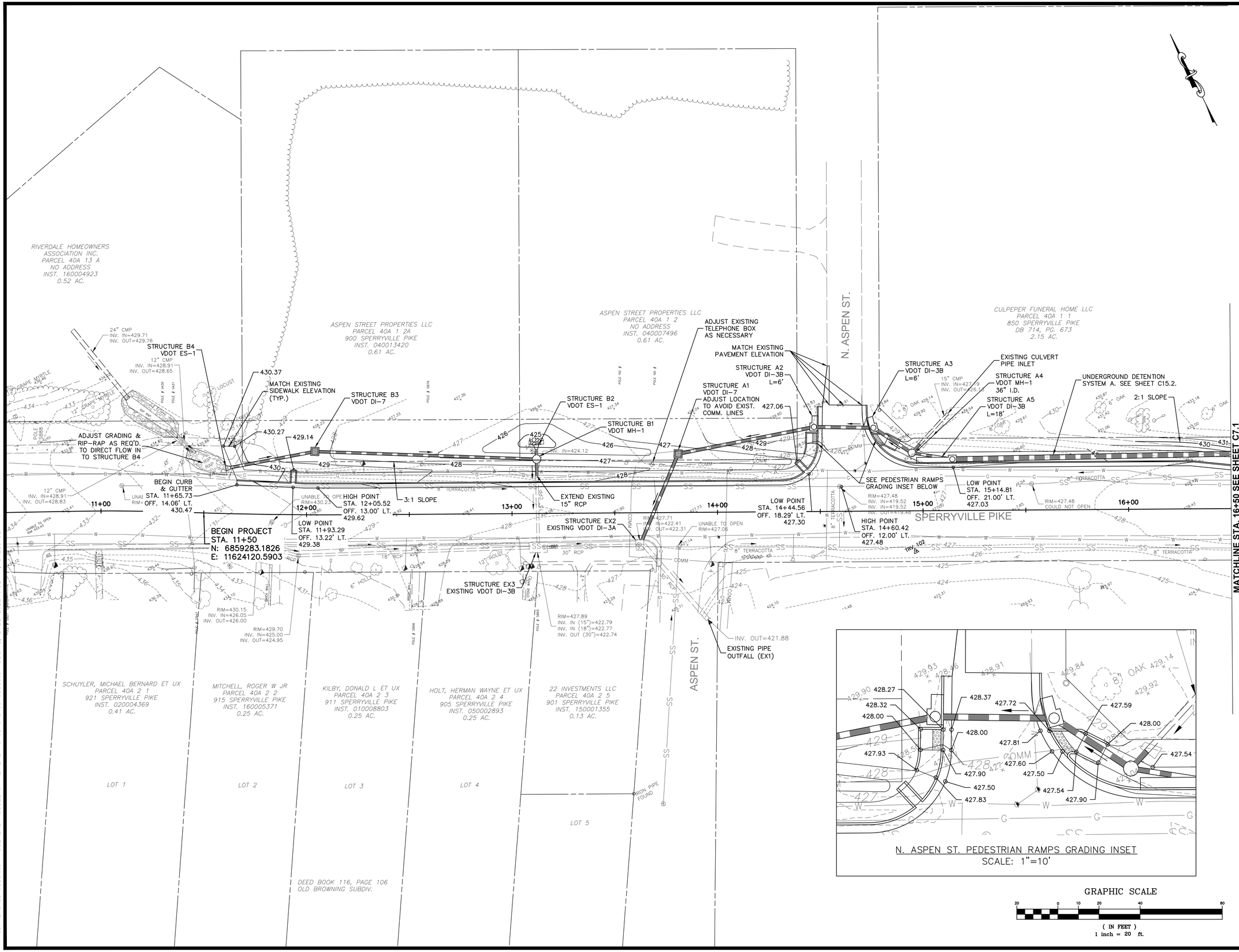
MINI-ROUNDABOUT INTERSECTION SIGHT DISTANCE PROFILES

SHEET

C6.7

SHEET 35 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-SIGHT-DISTANCE-PRO.DWG, 2/22/2022 9:32 AM, CRBINSON



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DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

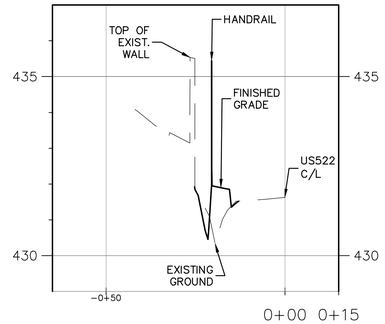
SHEET TITLE

GRADING & DRAINAGE PLAN BEG. PROJ. TO STA. 16+50

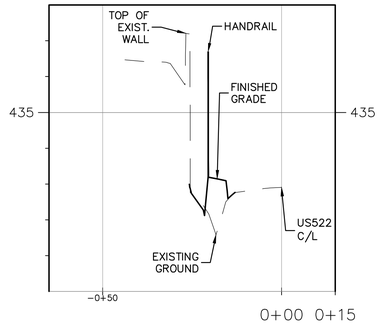
SHEET

C7.0

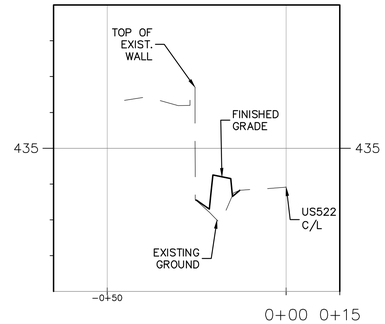
SHEET 36 OF 70



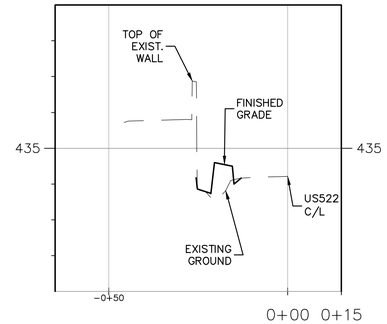
STA. 17+75 PROFILE
SCALE: HORZ 1" = 20'
VERT. 1" = 2'



STA. 18+25 PROFILE
SCALE: HORZ 1" = 20'
VERT. 1" = 2'



STA. 18+75 PROFILE
SCALE: HORZ 1" = 20'
VERT. 1" = 2'



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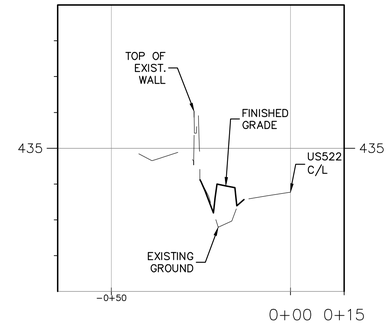
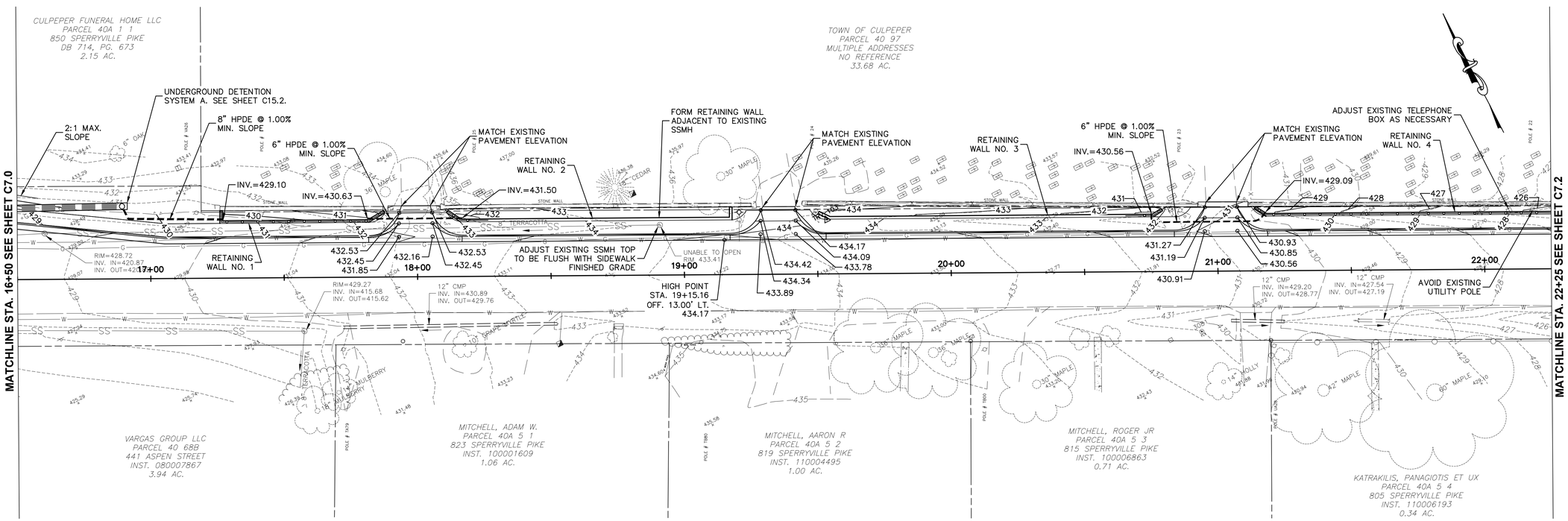
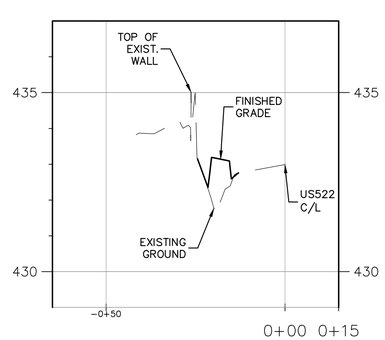
VERT. 1" = 2'

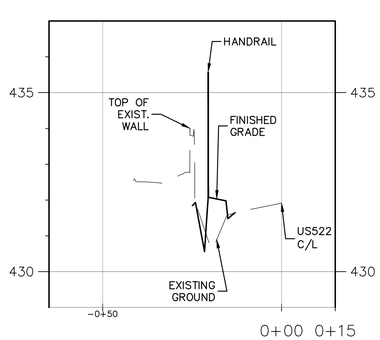


STA. 19+75 PROFILE
SCALE: HORZ 1" = 20'
VERT. 1" = 2'

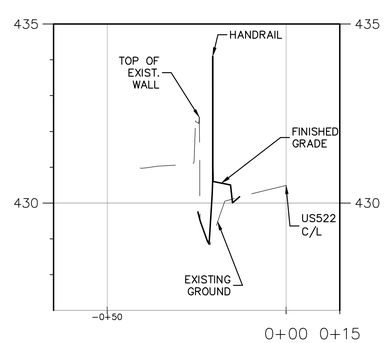




STA. 20+25 PROFILE
SCALE: HORZ 1" = 20'
VERT. 1" = 2'



STA. 20+75 PROFILE
SCALE: HORZ 1" = 20'
VERT. 1" = 2'



STA. 21+25 PROFILE
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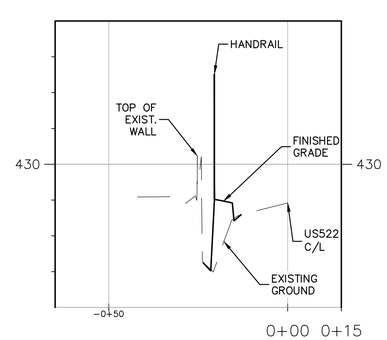
VERT. 1" = 2'



STA. 21+75 PROFILE
SCALE: HORZ 1" = 20'
VERT. 1" = 2'

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

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DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

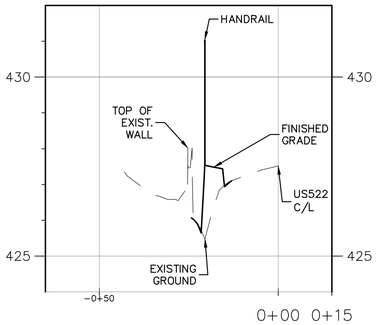
GRADING & DRAINAGE PLAN STA. 16+50 TO STA. 22+25

SHEET

C7.1

SHEET 37 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-XCG.DWG, 2/22/2022 9:52 AM, CRDBINSON



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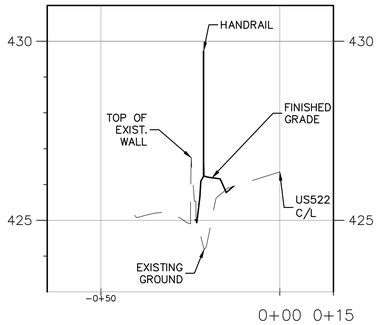
VERT. 1" = 2'



STA. 22+75 PROFILE
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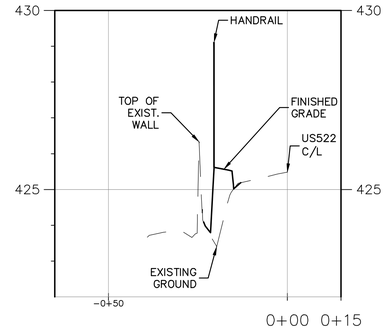
VERT. 1" = 2'



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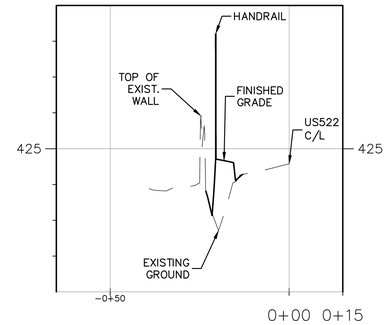

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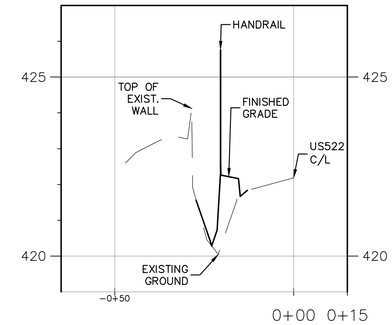
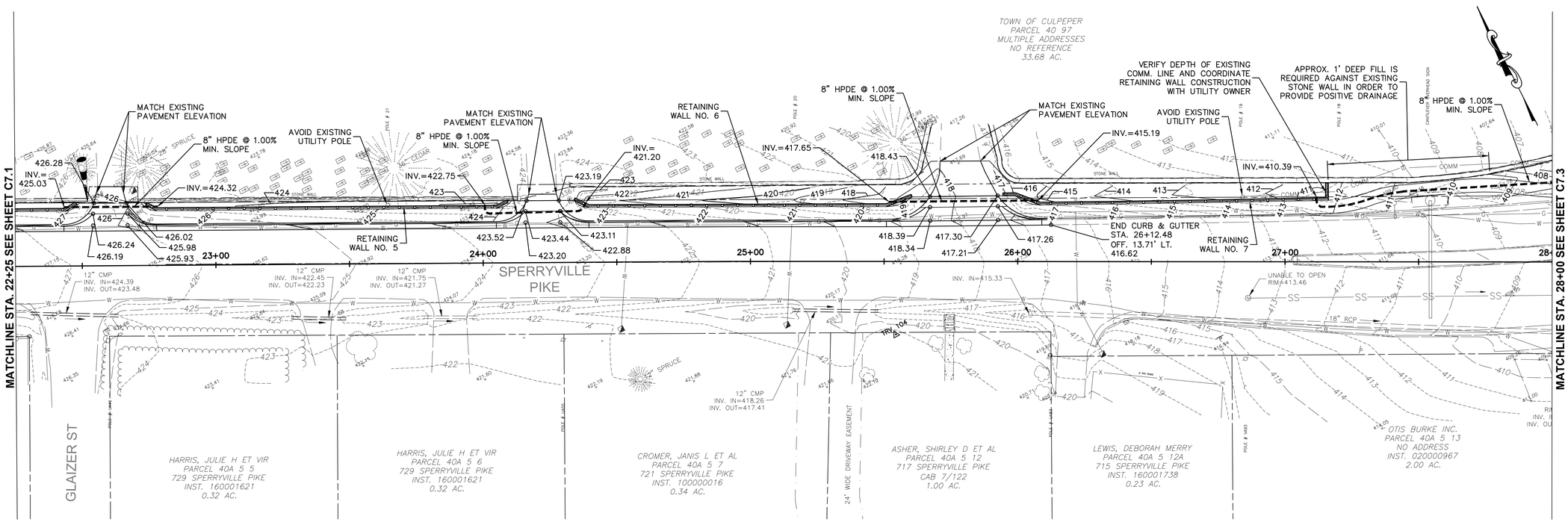
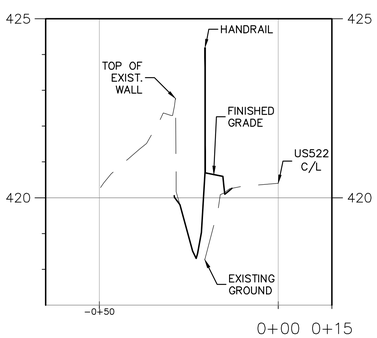
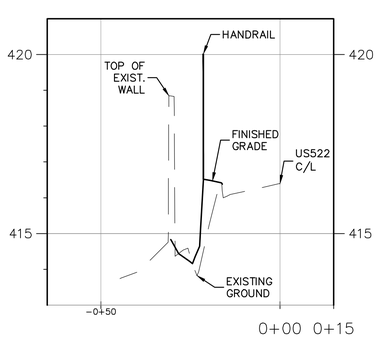


STA. 24+75 PROFILE
SCALE: HORZ 1" = 20'
VERT. 1" = 2'

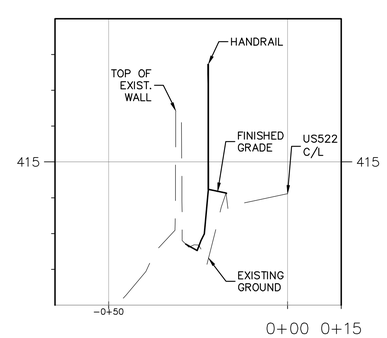




STA. 25+25 PROFILE
SCALE: HORZ 1" = 20'
VERT. 1" = 2'



STA. 26+25 PROFILE
SCALE: HORZ 1" = 20'
VERT. 1" = 2'



STA. 26+75 PROFILE
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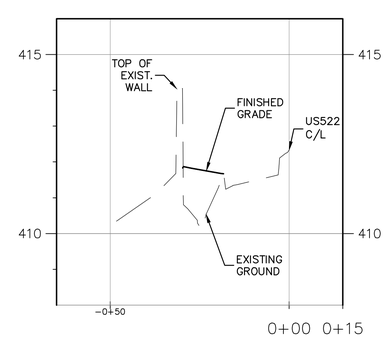
VERT. 1" = 2'



STA. 27+25 PROFILE
SCALE: HORZ 1" = 20'
VERT. 1" = 2'

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

AMT
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CULPEPER, VIRGINIA 22701
PH: 540-829-8260
FAX: 540-829-8279
Email: ahopewell@culpeperva.gov

PROJECT TITLE
US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)
TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
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DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE
GRADING & DRAINAGE PLAN STA. 22+25 TO STA. 28+00

SHEET
C7.2
SHEET 38 OF 70

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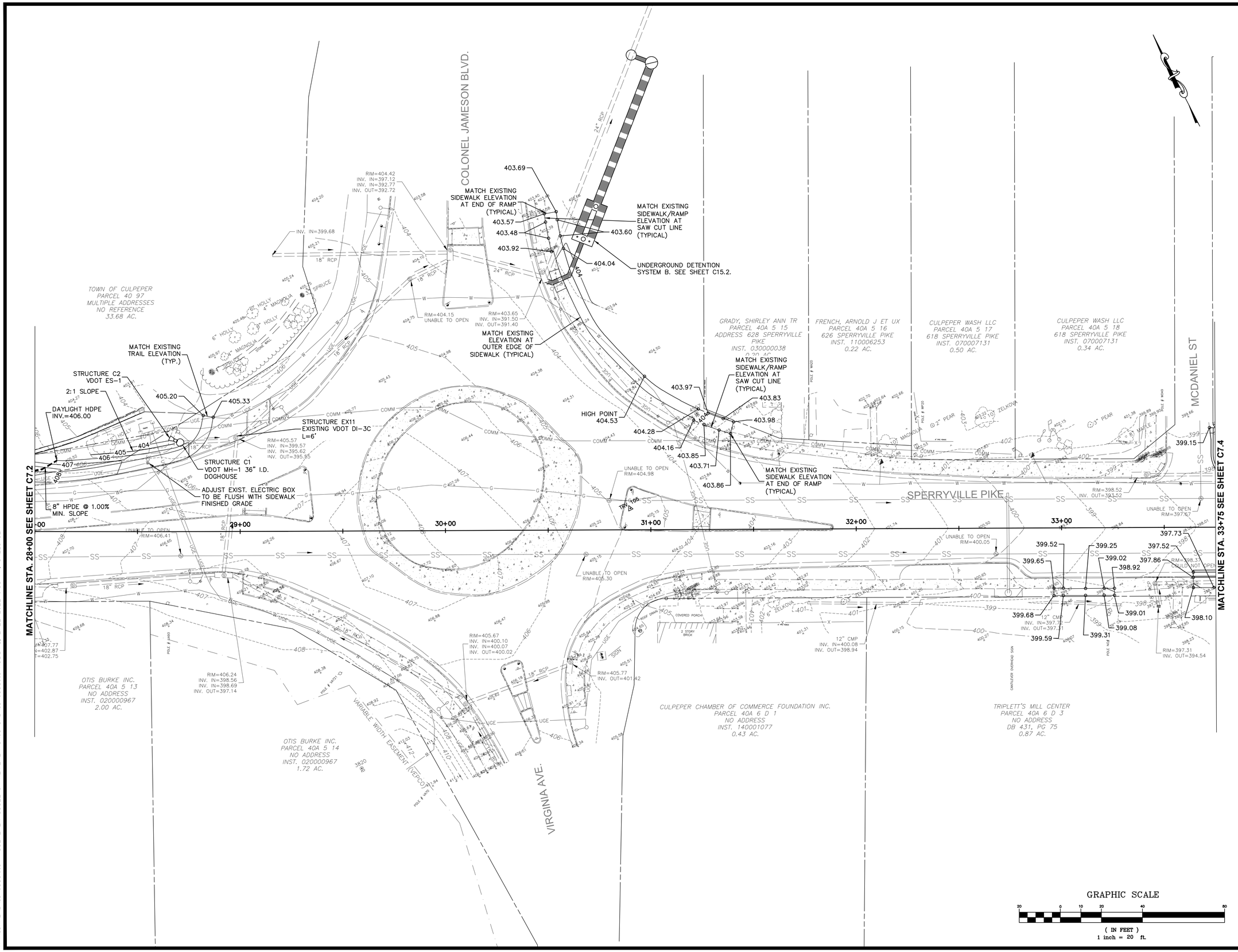

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CHECKED BY:	DJR

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SHEET TITLE

GRADING & DRAINAGE PLAN STA. 28+00 TO STA. 33+75

SHEET

C7.3

SHEET 39 OF 70

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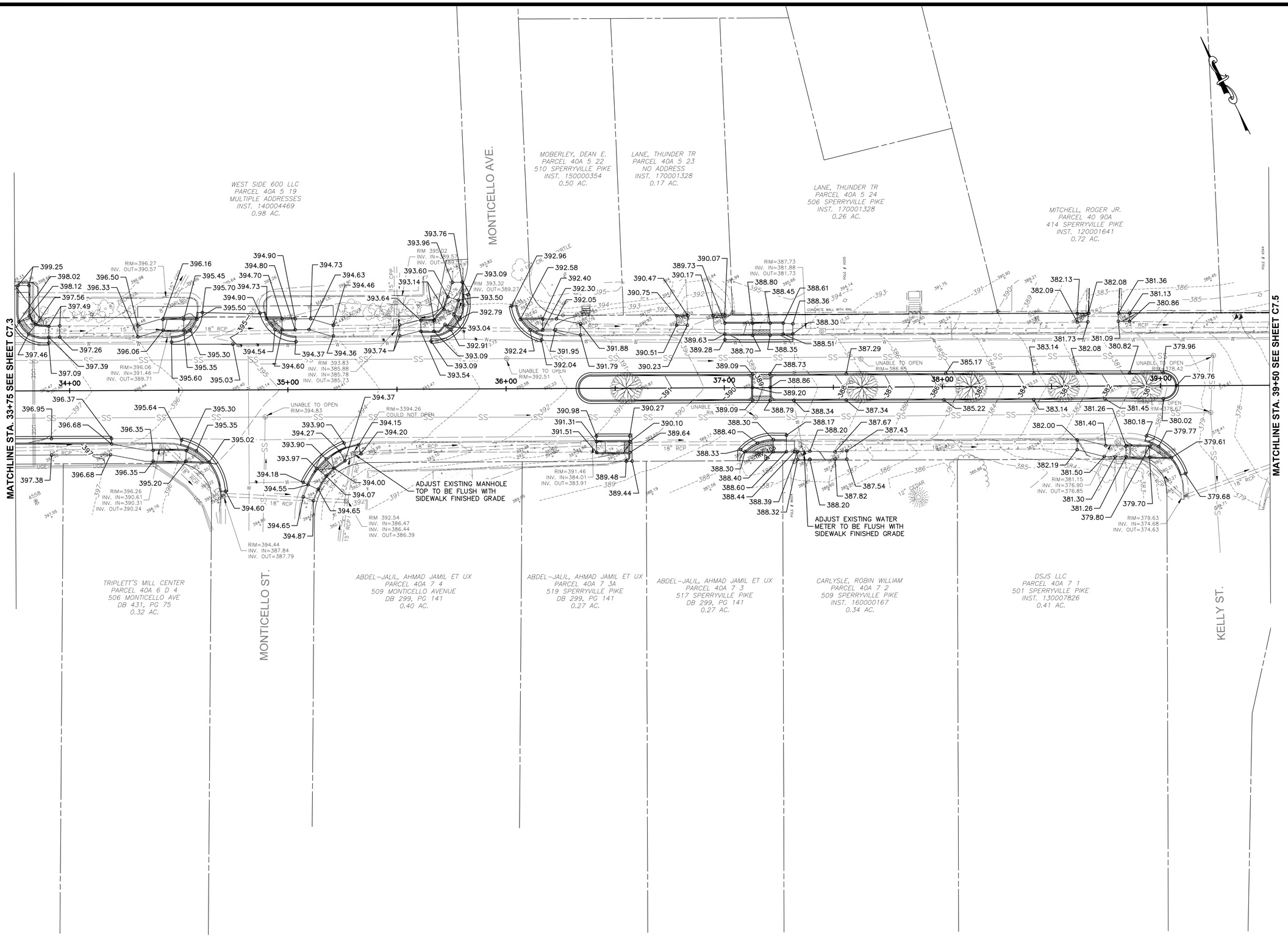

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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PROJECT TITLE

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TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

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SHEET TITLE

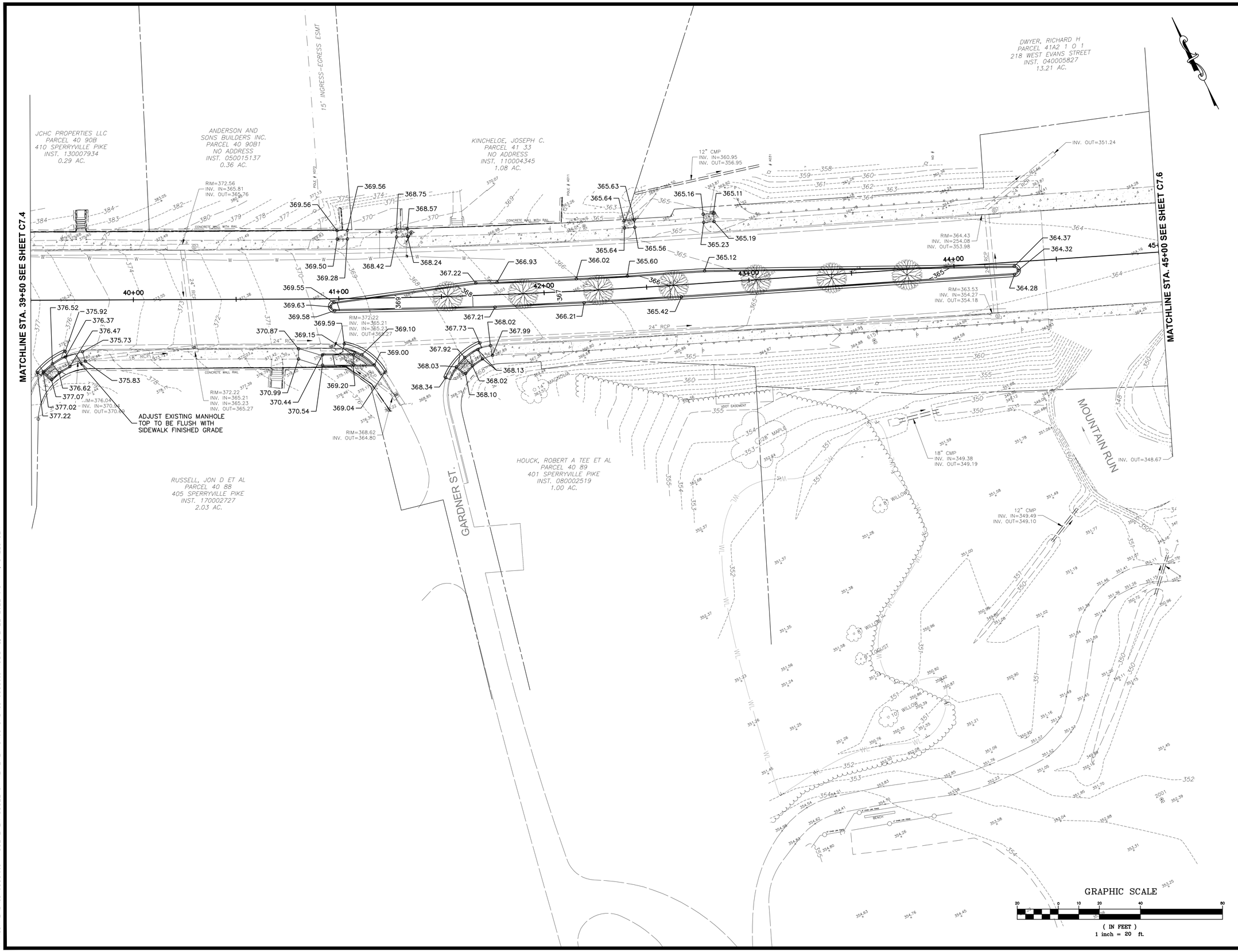
GRADING & DRAINAGE PLAN STA. 33+75 TO STA. 39+50

SHEET

C7.4

SHEET 40 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-XCG.DWG, 2/22/2022 9:54 AM, CRDBINSON



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STATE PROJECT # U000-204-176
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SHEET TITLE

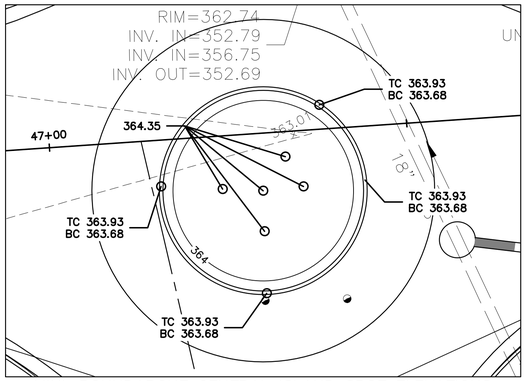
GRADING & DRAINAGE PLAN STA. 39+50 TO STA. 45+00

SHEET

C7.5

SHEET 41 OF 70

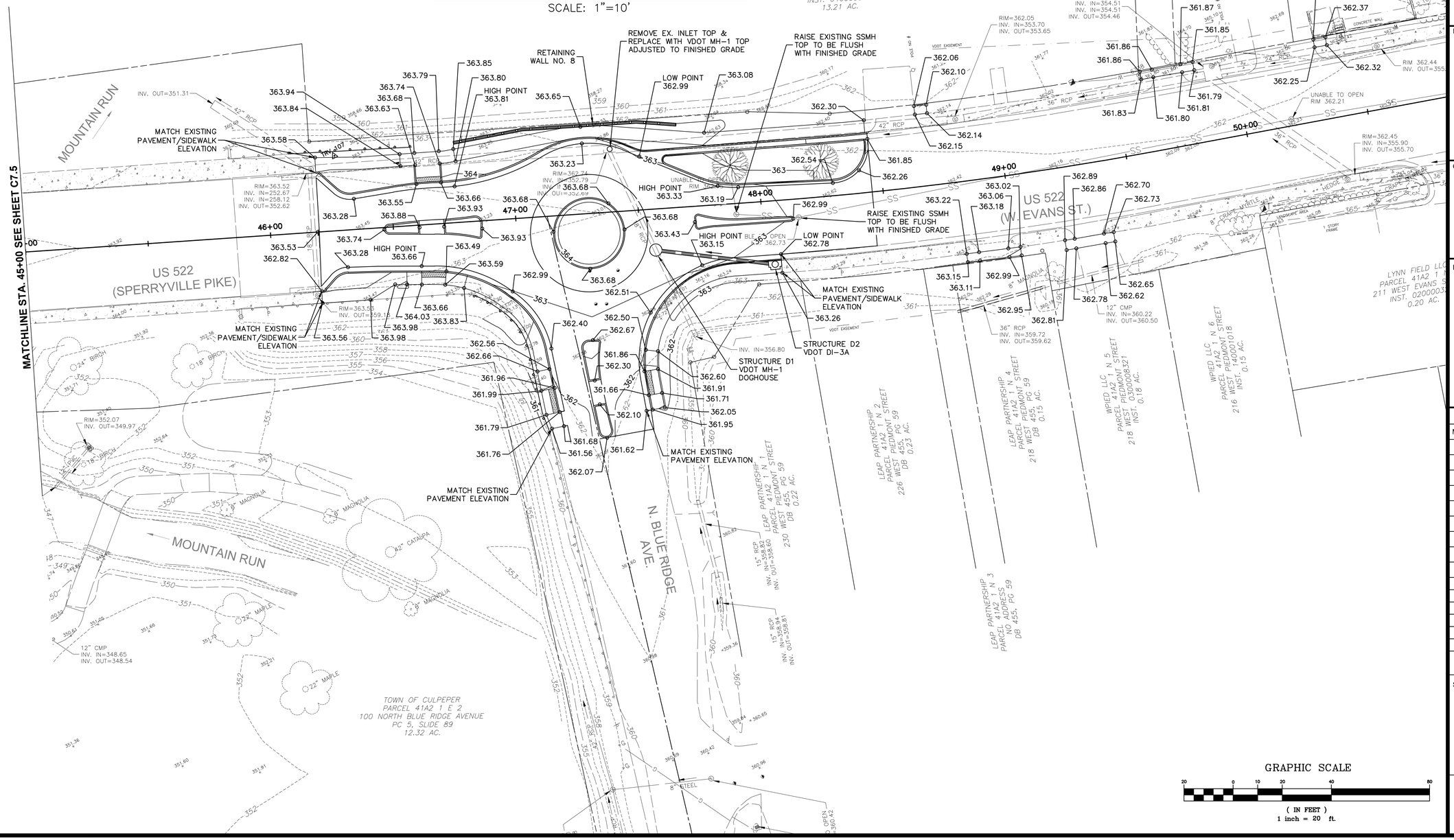
X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-XCG.DWG, 2/22/2022 9:54 AM, CRDBINSON



MINI-ROUNDABOUT CENTRAL ISLAND SPOT ELEVATIONS
SCALE: 1"=10'

TC = FINISHED GRADE ELEVATION AT TOP OF CURB

BC = FINISHED GRADE ELEVATION AT BASE OF CURB



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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

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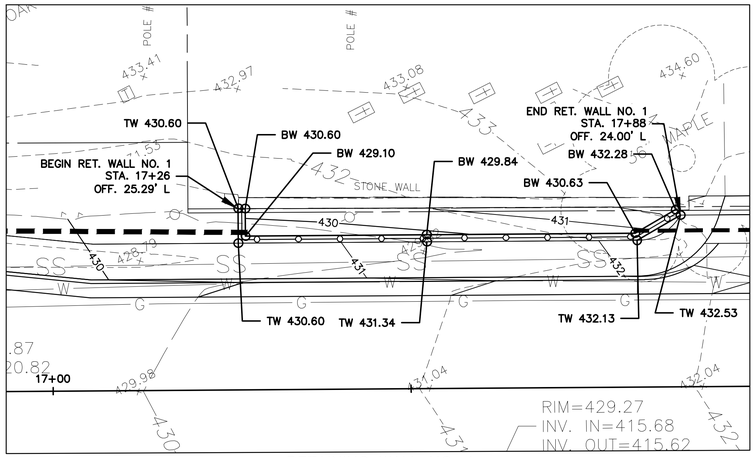
SHEET TITLE

GRADING & DRAINAGE PLAN STA. 45+00 TO END PROJ.

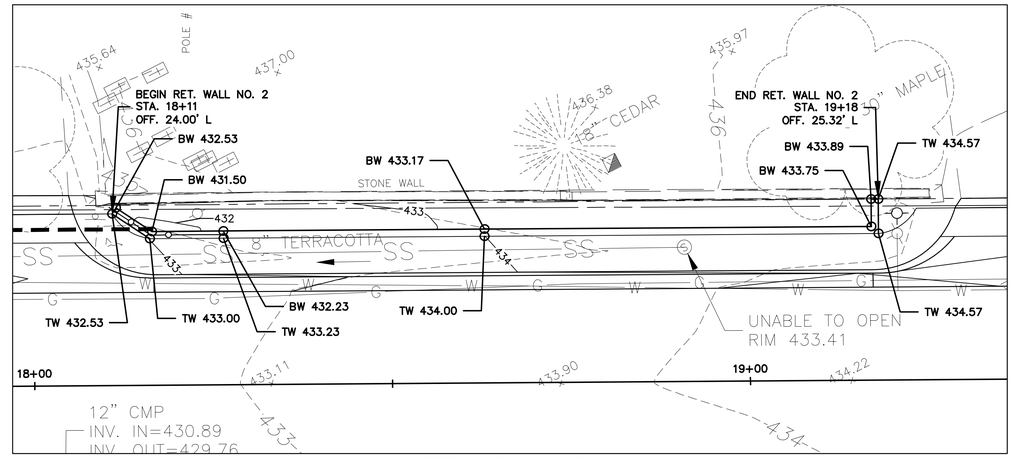
SHEET

C7.6

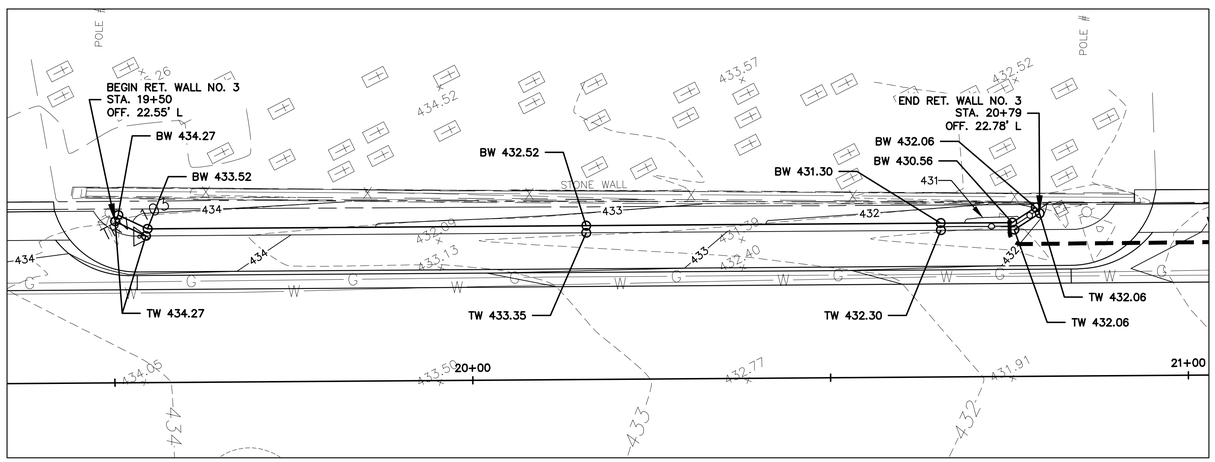
SHEET 42 OF 70



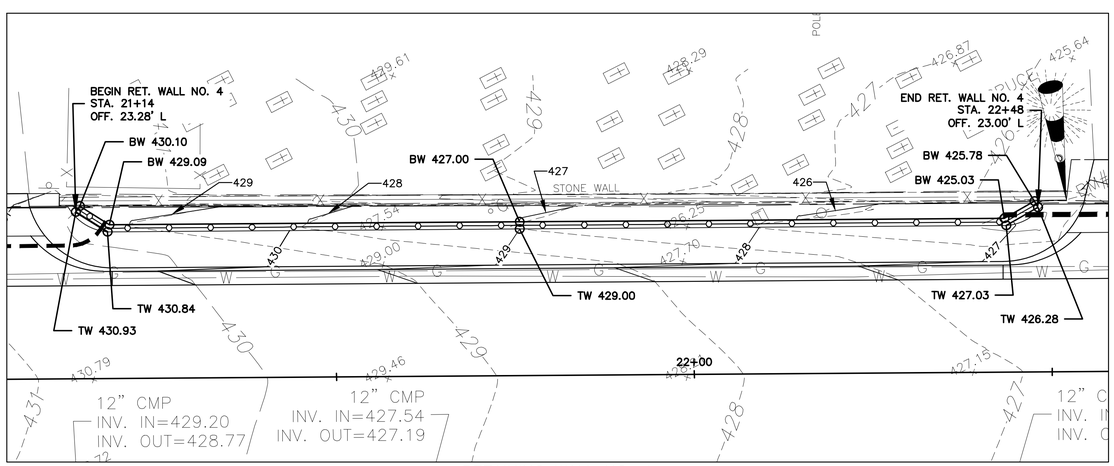
RETAINING WALL NO. 1
SCALE: 1"=10'



RETAINING WALL NO. 2
SCALE: 1"=10'



RETAINING WALL NO. 3
SCALE: 1"=10'



RETAINING WALL NO. 4
SCALE: 1"=10'

TW = FINISHED GRADE ELEVATION AT TOP OF WALL

BW = FINISHED GRADE ELEVATION AT BASE OF WALL

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

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STATE PROJECT # U000-204-176
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SHEET TITLE

GRADING & DRAINAGE PLAN RETAINING WALLS NO. 1, 2, 3 & 4

SHEET

C7.7

SHEET 43 OF 70

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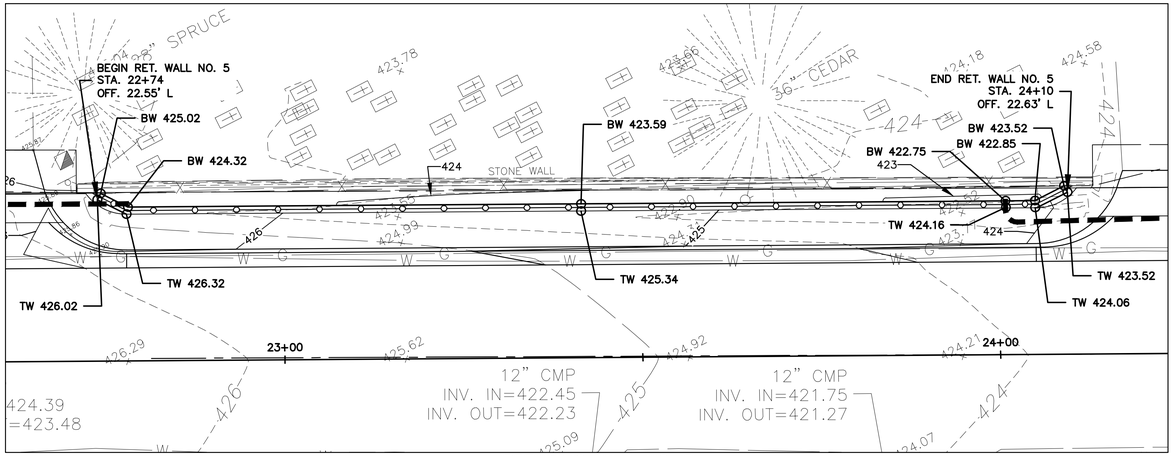
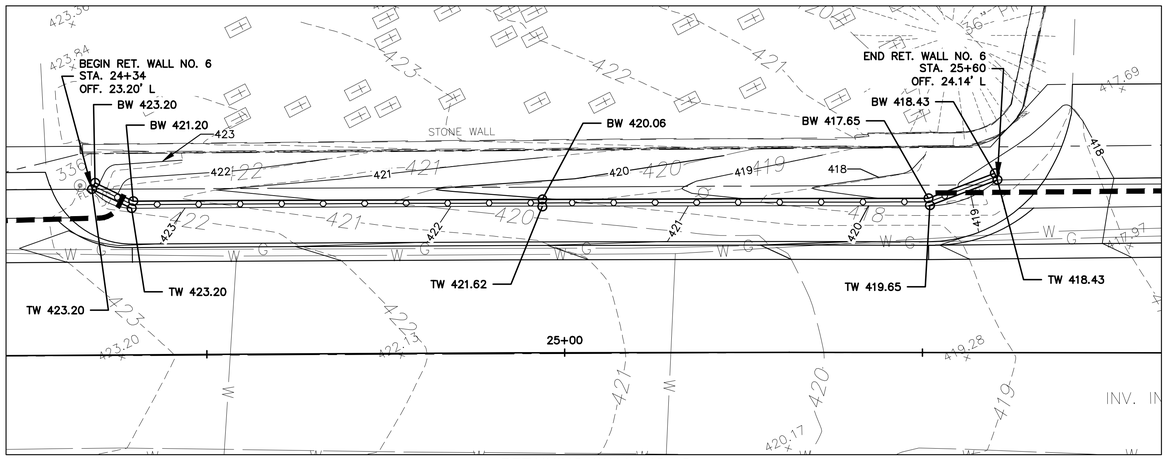
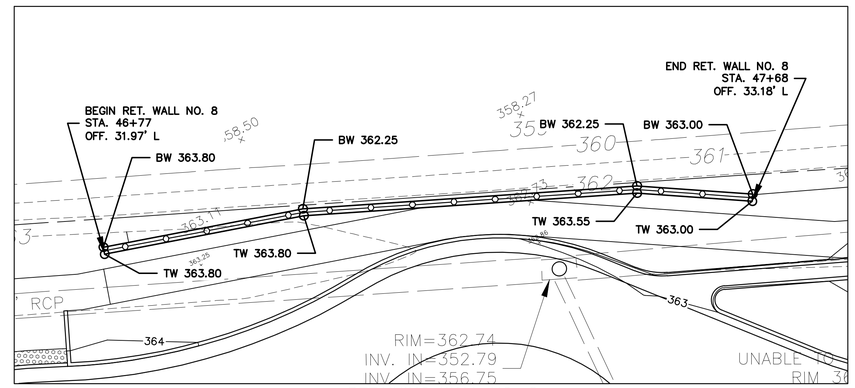


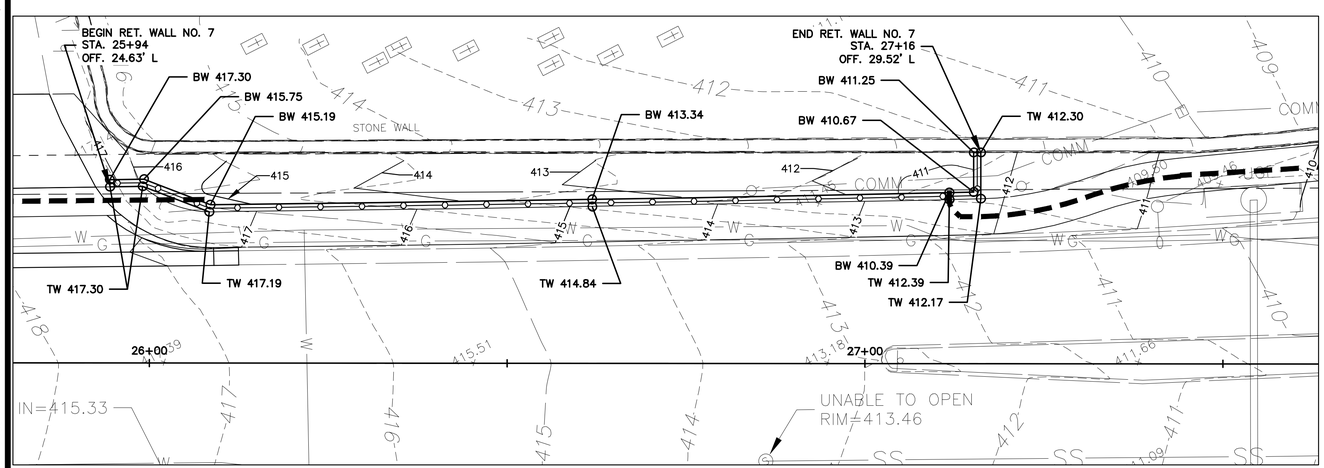
RETAINING WALL NO. 5
SCALE: 1"=10'



RETAINING WALL NO. 6
SCALE: 1"=10'



RETAINING WALL NO. 8
SCALE: 1"=10'



RETAINING WALL NO. 7
SCALE: 1"=10'

TW = FINISHED GRADE ELEVATION AT TOP OF WALL

BW = FINISHED GRADE ELEVATION AT BASE OF WALL

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

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CHECKED BY:	DJR

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SHEET TITLE

GRADING & DRAINAGE PLAN RETAINING WALLS NO. 5, 6, 7 & 8

SHEET

C7.8

SHEET 44 OF 70

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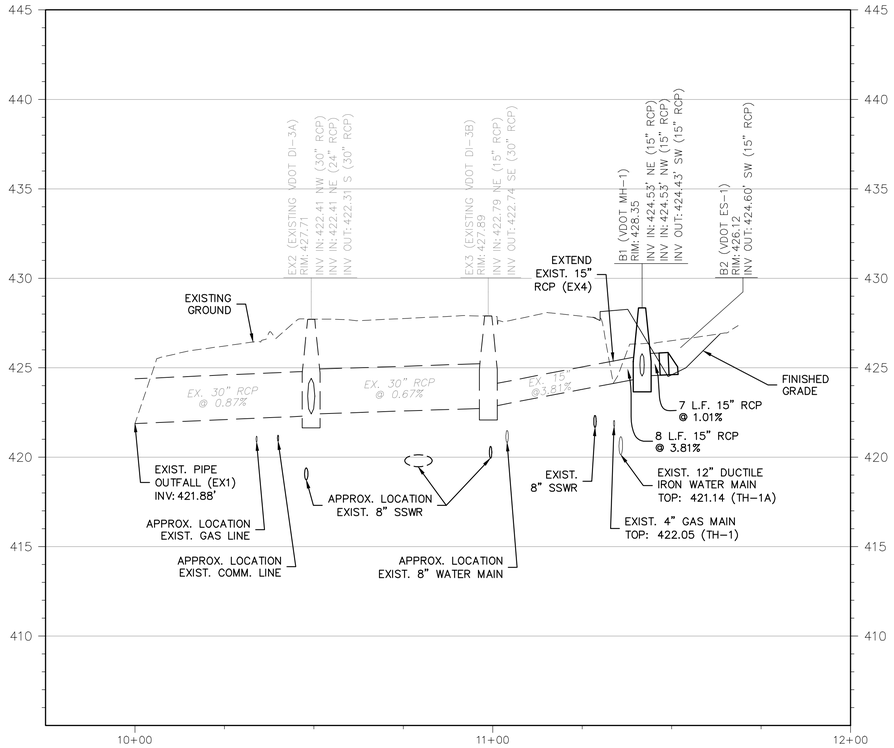
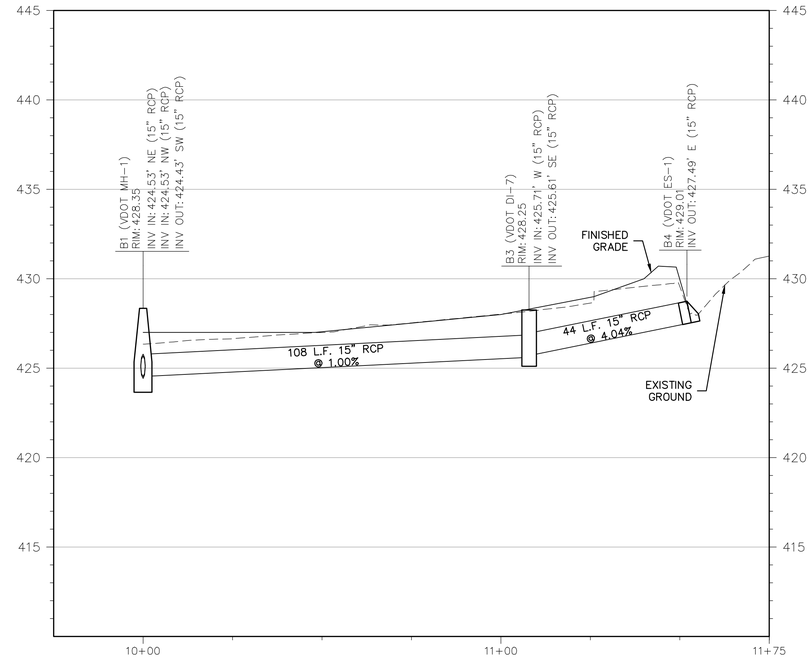


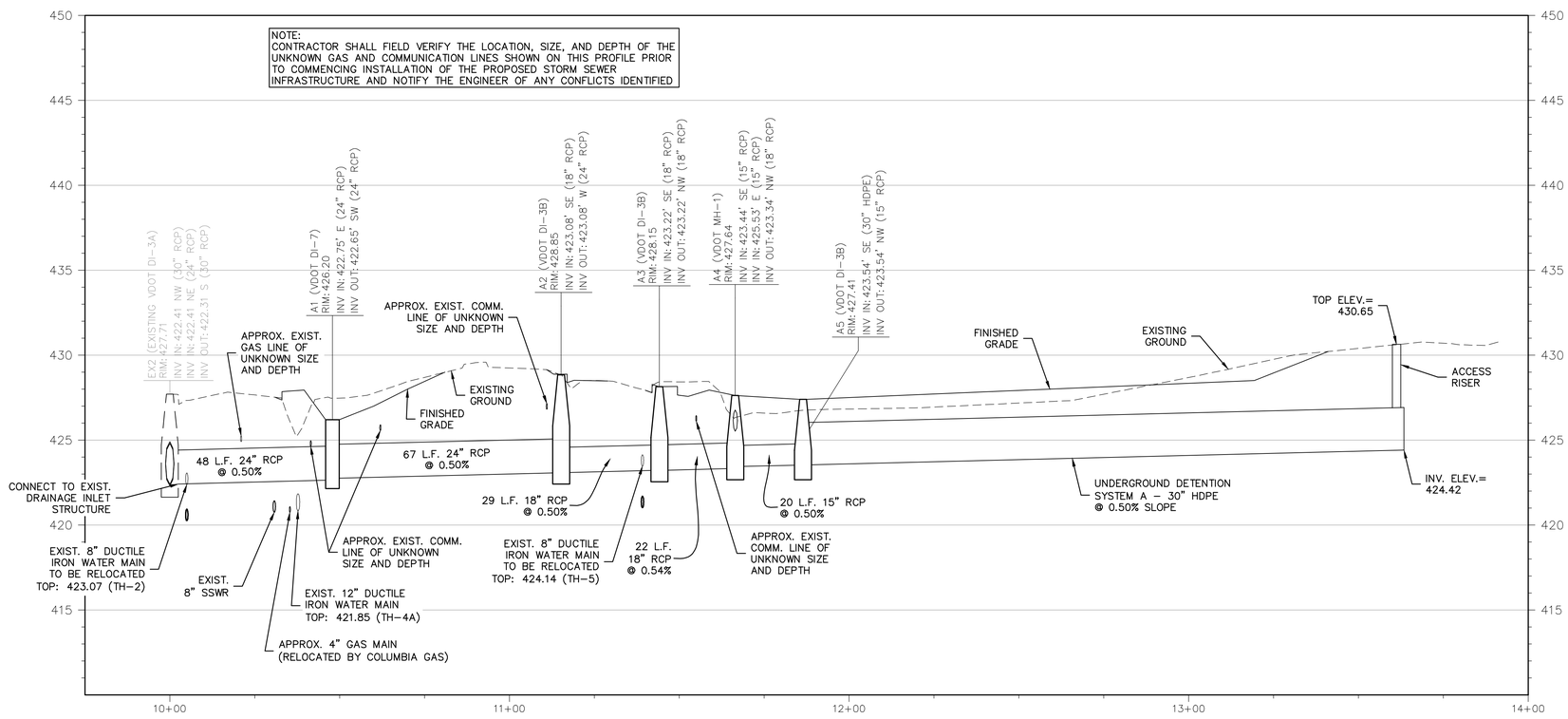
STORM SEWER: EX1 - B2

SCALE: HORZ 1"=20'
VERT 1"=4'



STORM SEWER: B1 - B4

SCALE: HORZ 1"=20'
VERT 1"=4'



STORM SEWER: EX2 - A5

SCALE: HORZ 1"=20'
VERT 1"=4'

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STATE PROJECT # U000-204-176
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SHEET TITLE

STORM SEWER PROFILES

SHEET

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SHEET 45 OF 70

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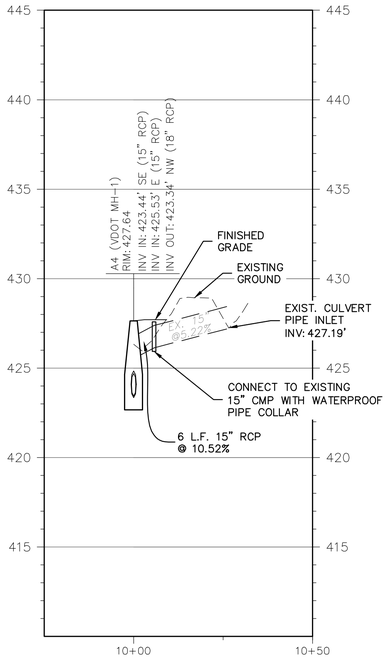
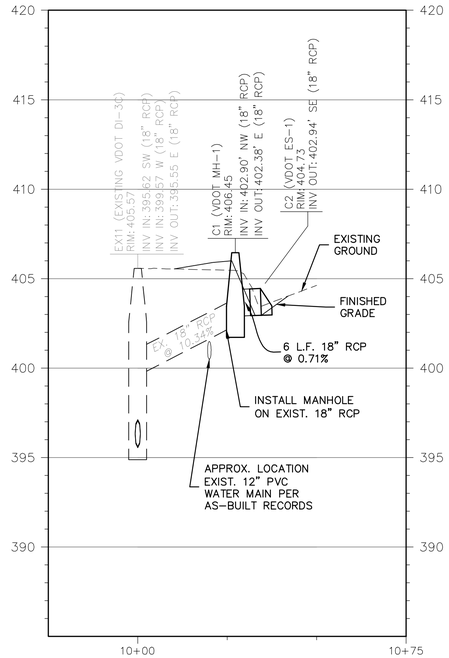


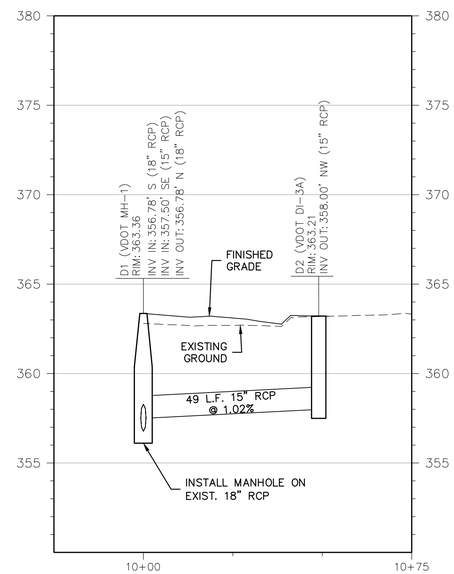
STORM SEWER: A4 - EXISTING CMP CULVERT

SCALE: HORZ 1"=20'
VERT 1"=4'



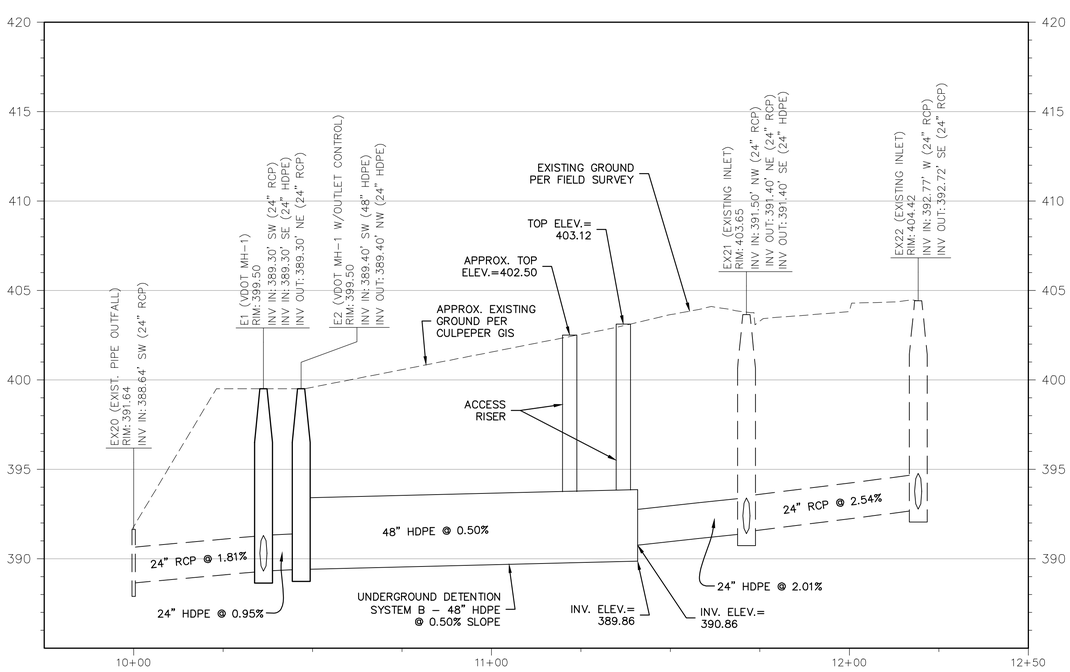
STORM SEWER: EX11 - C2

SCALE: HORZ 1"=20'
VERT 1"=4'



STORM SEWER: D1 - D2

SCALE: HORZ 1"=20'
VERT 1"=4'



STORM SEWER: UNDERGROUND DETENTION SYSTEM B PROFILE

SCALE: HORZ 1"=20'
VERT 1"=4'

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CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

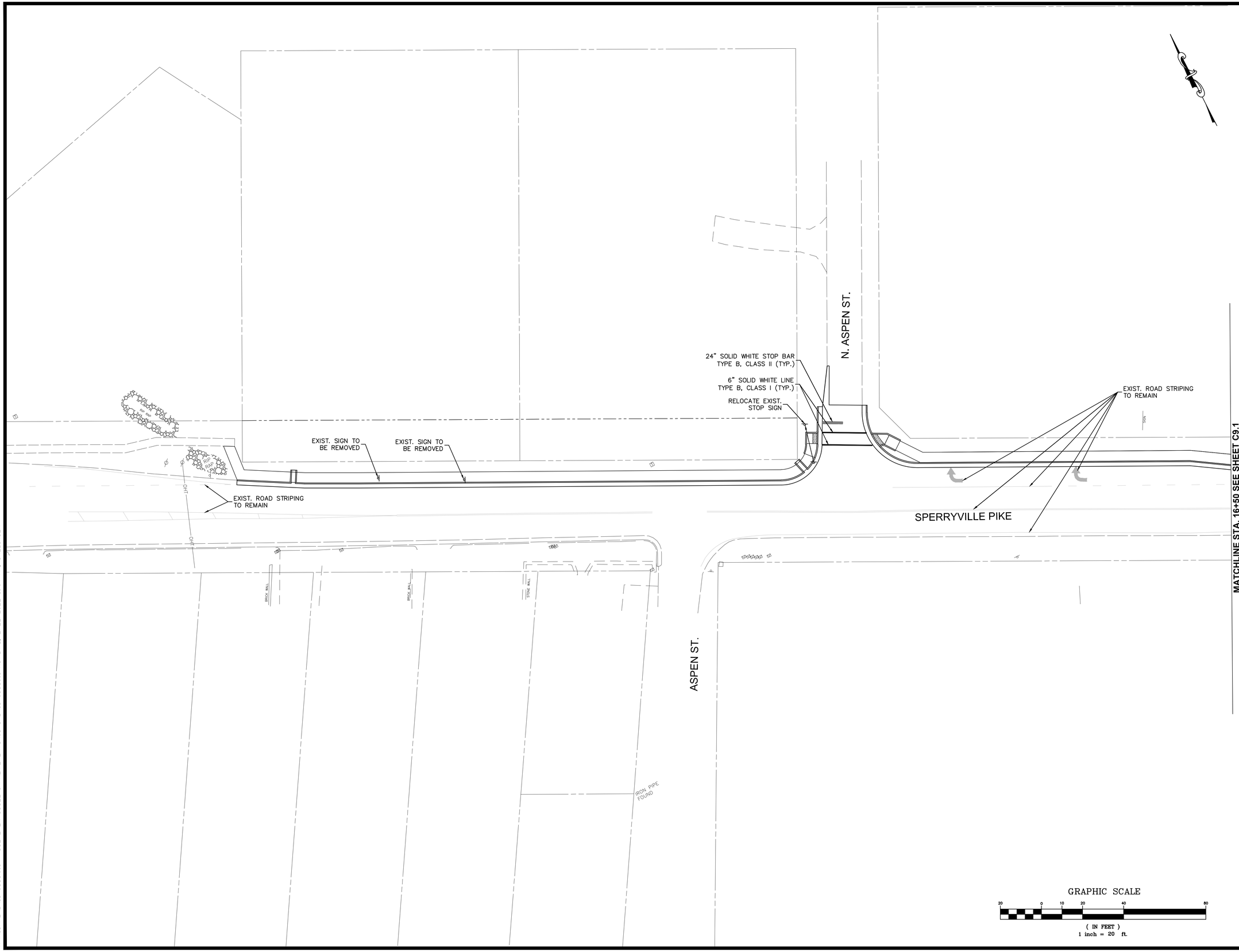
STORM SEWER PROFILES

SHEET

C8.1

SHEET 46 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-STORM PROD.DWG, 2/22/2022 9:34 AM, CRIBINSON



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PROFESSIONAL ENGINEER

OWNER

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PH: 540-829-8260
FAX: 540-829-8279
Email: ahopewell@culpeperva.gov

PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
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DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

SIGNAGE & PAVEMENT MARKING PLAN BEG. PROJ. TO STA. 16+50

SHEET

C9.0

SHEET 47 OF 70

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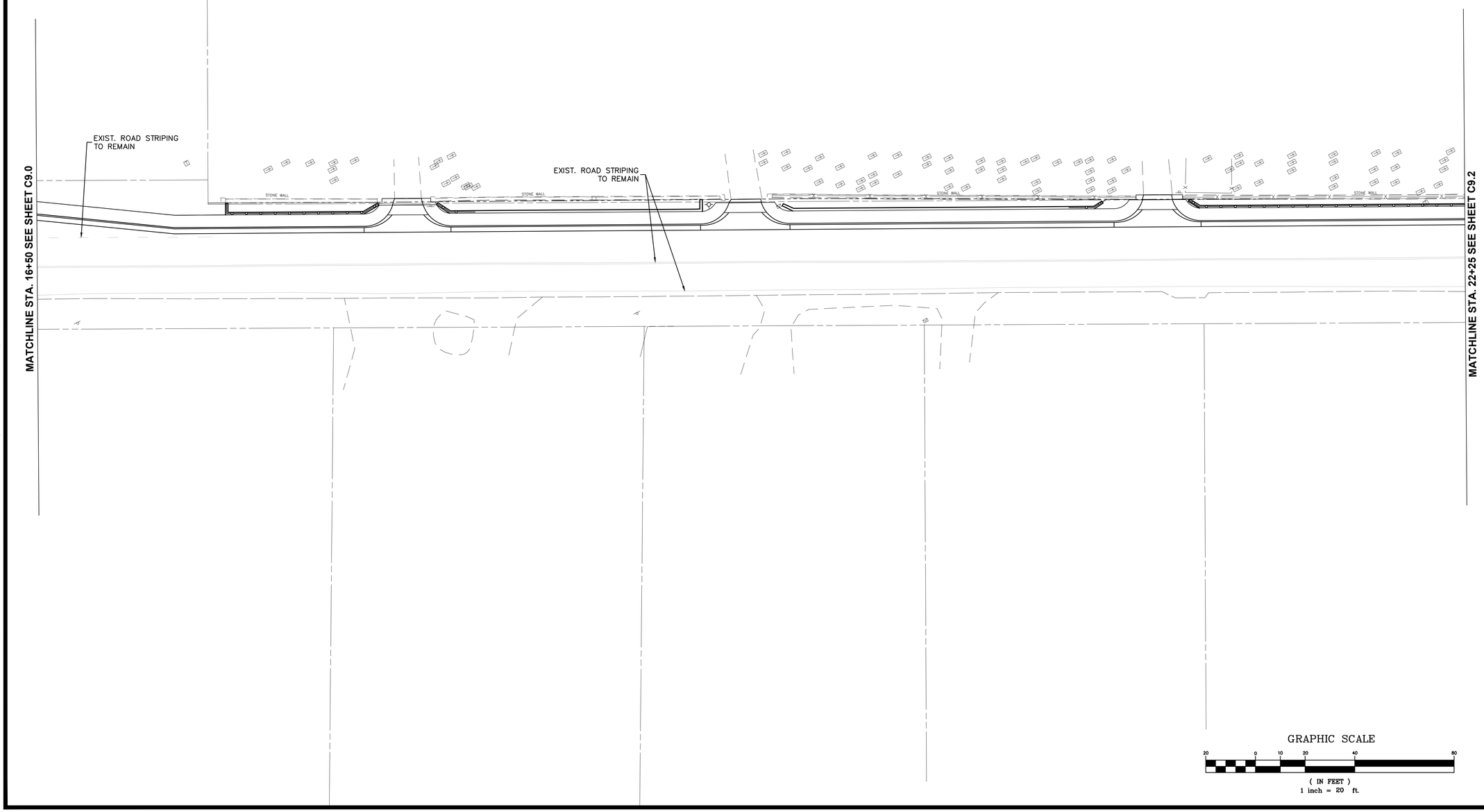

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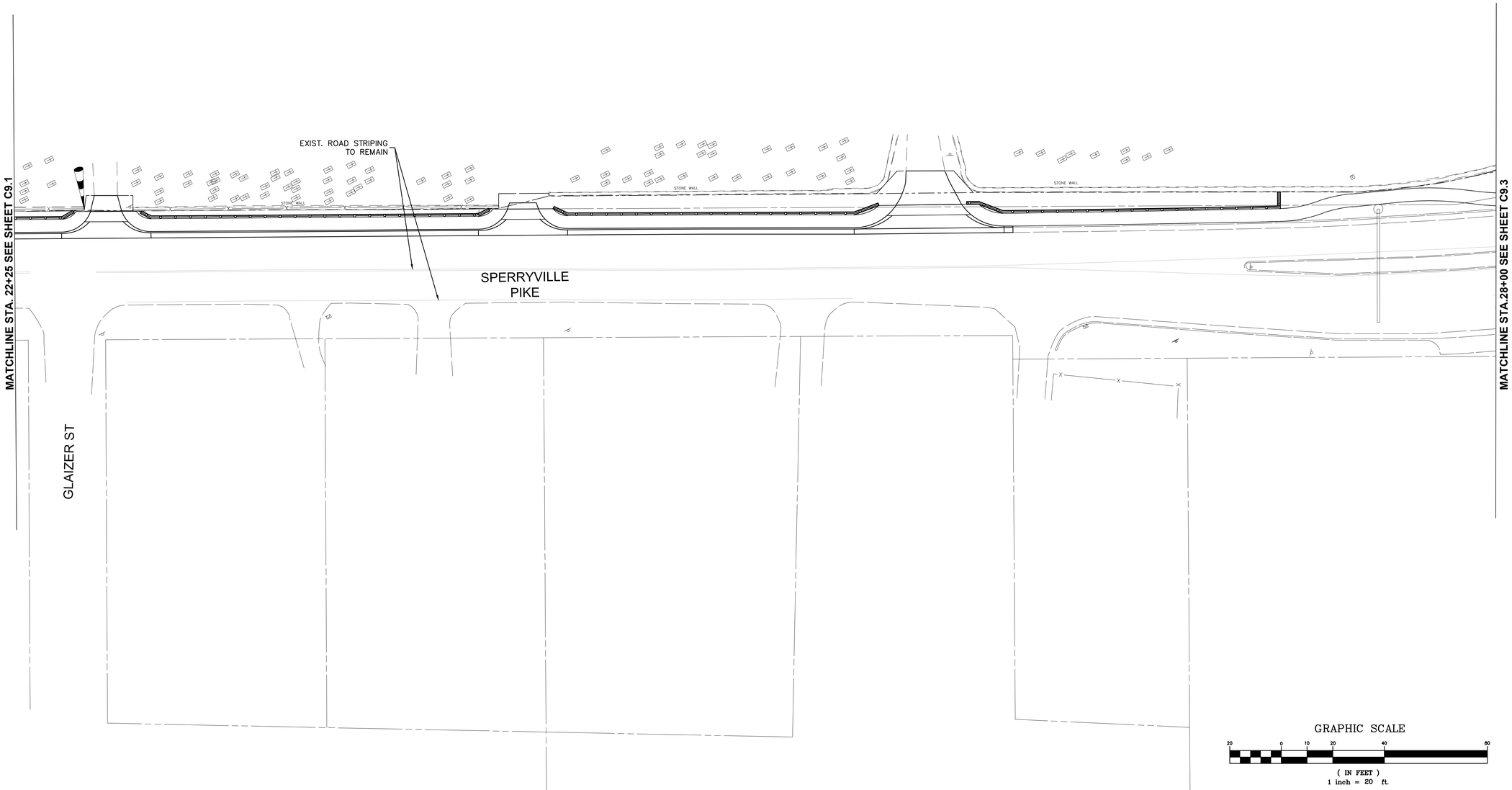
SHEET TITLE

SIGNAGE & PAVEMENT MARKING PLAN STA. 16+50 TO STA. 22+25

SHEET

C9.1

SHEET 48 OF 70



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SHEET TITLE

SIGNAGE & PAVEMENT MARKING PLAN STA. 22+25 TO STA. 28+00

SHEET

C9.2

SHEET 49 OF 70

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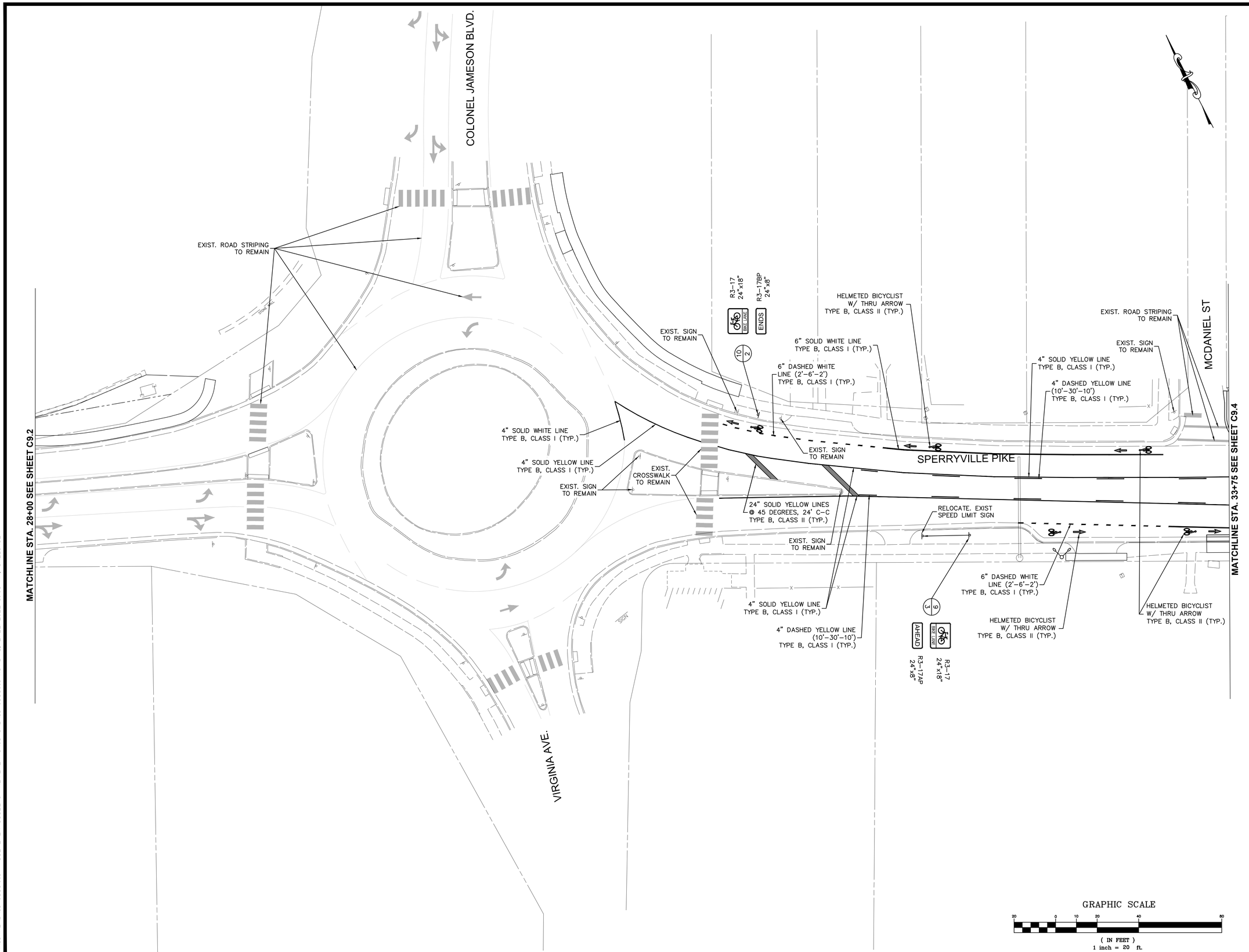

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SHEET TITLE

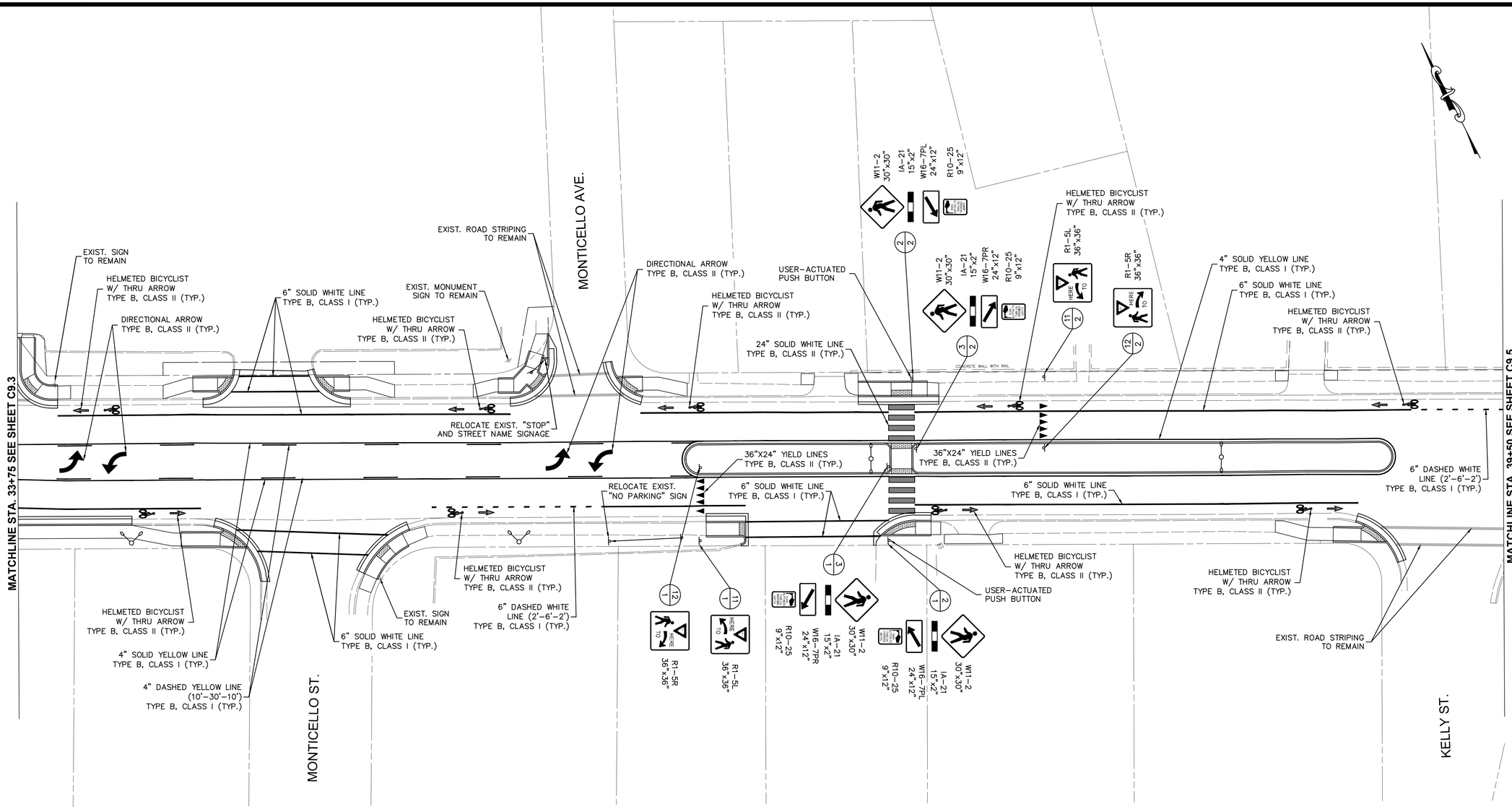
SIGNAGE & PAVEMENT MARKING PLAN STA. 28+00 TO STA. 33+75

SHEET

C9.3

SHEET 50 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-XCT.DWG, 2/22/2022 10:05 AM, CROBINSON



RRFB GENERAL NOTES

1. RECTANGULAR RAPID FLASHING BEACON (RRFB) SHALL BE A RRFB-XL2 AS MANUFACTURED BY TRAFFIC & PARKING CONTROL CO., INC. OR APPROVED EQUAL.
2. RRFB SHALL BE SOLAR POWERED.
3. RRFB SHALL BE INTERIM APPROVAL 21 COMPLIANT.
4. RRFB USER-ACTUATED PUSH BUTTON SHALL BE XAV2-LED.
5. BID ADDITIVE #1 INCLUDES RRFBs AND ALL ASSOCIATED APPURTENANCES LISTED ABOVE. ALL SIGNAGE AND PAVEMENT MARKINGS SHOWN SHALL BE INCLUDED IN THE BASE BID.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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STATE PROJECT # U000-204-176
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SHEET TITLE

SIGNAGE & PAVEMENT MARKING PLAN STA. 33+75 TO STA. 39+50

SHEET

C9.4

SHEET 51 OF 70

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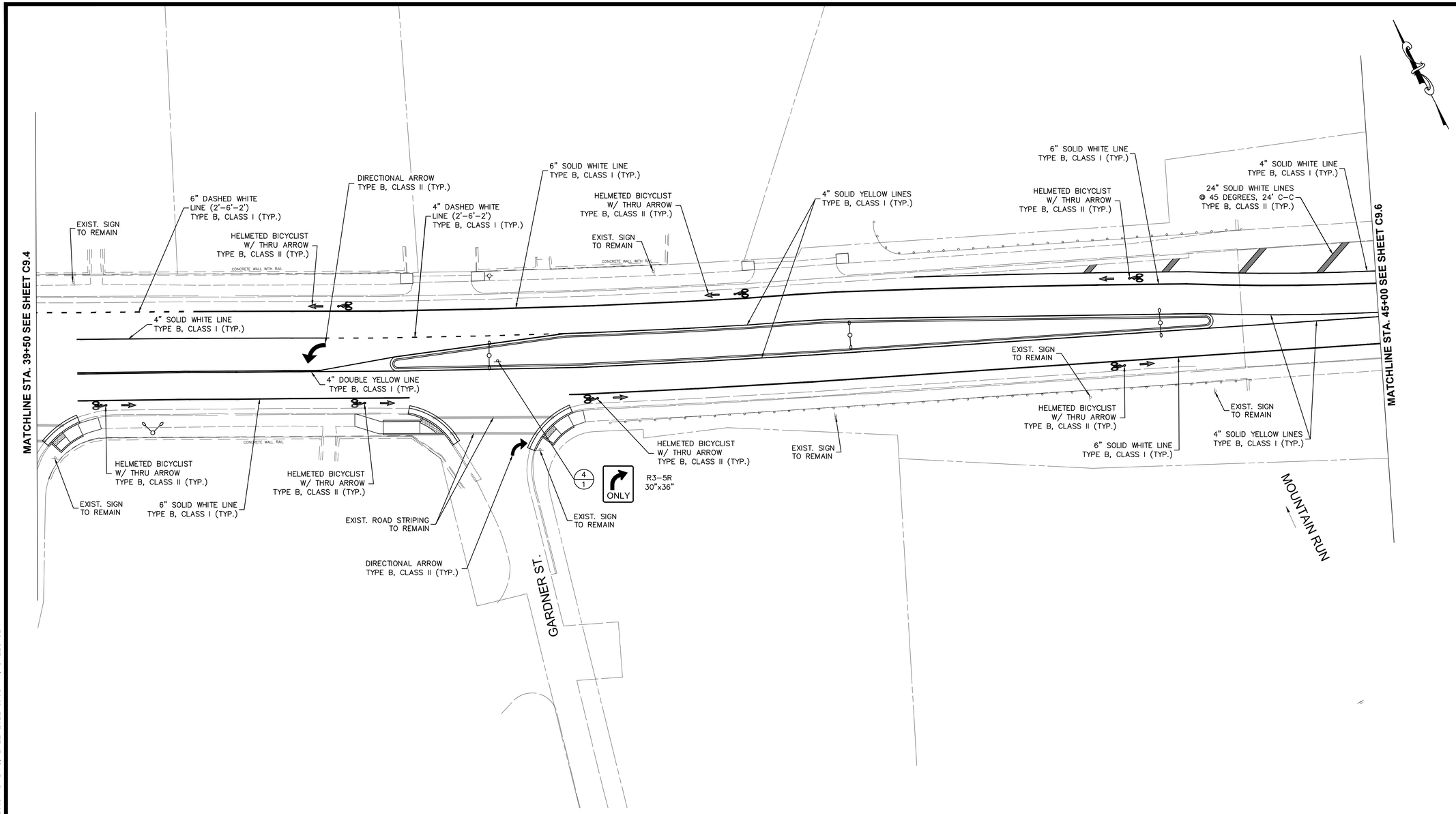

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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SHEET TITLE

SIGNAGE & PAVEMENT MARKING PLAN STA. 39+50 TO STA. 45+00

SHEET

C9.5

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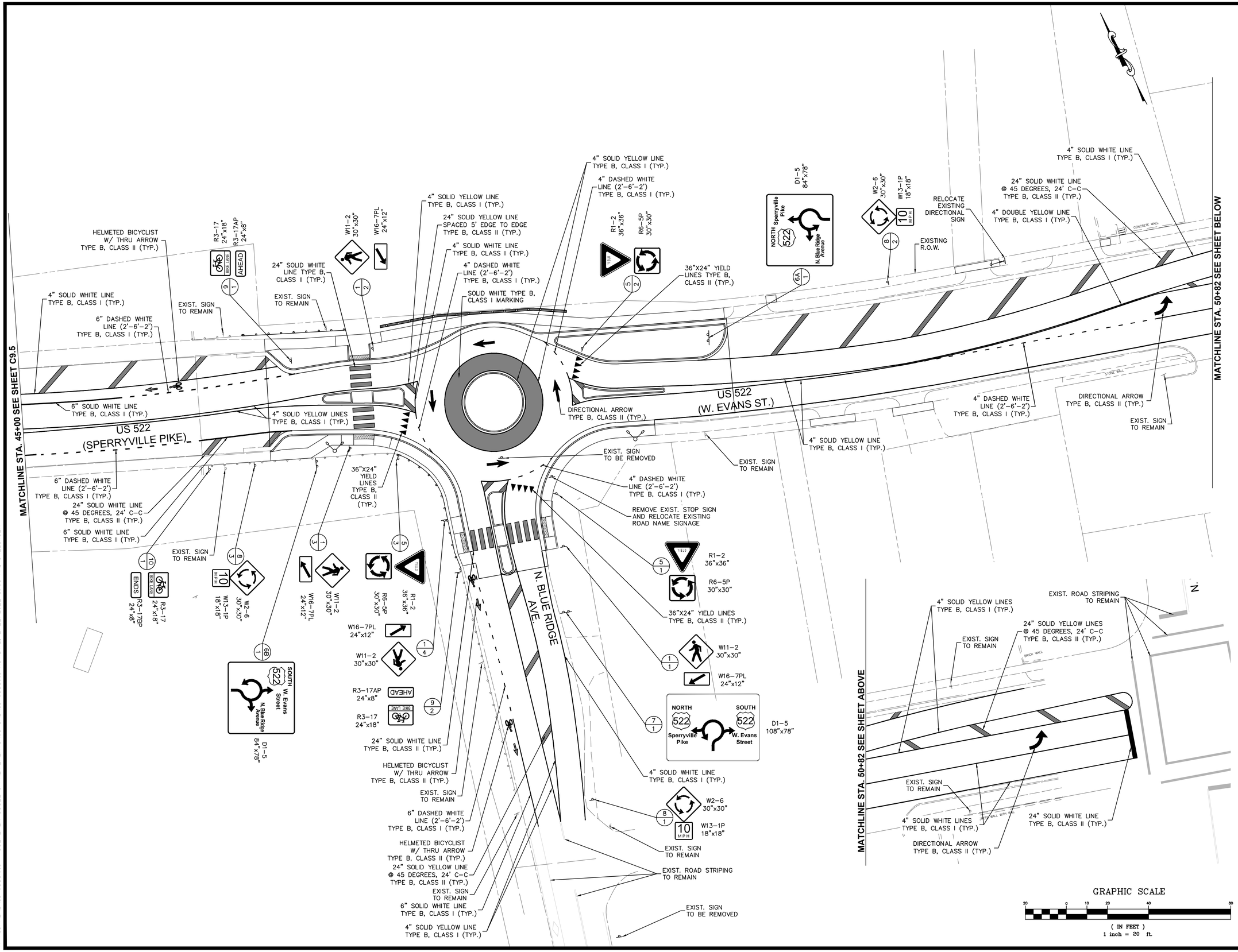

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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SHEET TITLE

SIGNAGE & PAVEMENT MARKING PLAN STA. 45+00 TO END PROJ.

SHEET

C9.6

SHEET 53 OF 70

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(0/0) –DENOTES TEXT NO.
(0/0) –DENOTES SIGN ASSEMBLY NO.

TEXT NO.	SIGN ASSEMBLY NO.	TEXT	SIGN ASSEMBLY COMPONENTS: MUTCD STD.	PANEL SIZE W	PANEL SIZE H	QTY.	SIGN PANEL AREA (SF): PER ASSEMBLY	SIGN PANEL AREA (SF): ALL ASSEMBLIES	PROP. SIGN STRUCTURE STD.
1	1, 2, 3, 4		W11–2	30”	30”	4	6.25	25	STP–1 2”, 14 GA POST
			W16–7PL	24”	12”	4	2	8	
2	1, 2		W11–2	30”	30”	2	6.25	12.5	STP–1 2.5”, 12 GA POST
			IA–21	15”	2”	2	N/A	N/A	
			W16–7PL	24”	12”	2	2	4	
		PUSH BUTTON TO TURN ON WARNING LIGHTS	R10–25	9”	12”	2	0.75	1.5	
3	1, 2		W11–2	30”	30”	2	6.25	12.5	STP–1 2.5”, 12 GA POST
			IA–21	15”	2”	2	N/A	N/A	
			W16–7PR	24”	12”	2	2	4	
		PUSH BUTTON TO TURN ON WARNING LIGHTS	R10–25	9”	12”	2	0.75	1.5	
4	1	ONLY	R3–5R	30”	36”	1	7.5	7.5	STP–1 2”, 14 GA POST
5	1, 2, 3	YIELD	R1–2	36”	36”	3	4.5	13.5	STP–1 2.5”, 12 GA POST
			R6–5P	30”	30”	3	6.25	18.75	
6A	1	SOUTH 522 W. Evans Street N. Blue Ridge Avenue	D1–5	84”	78”	1	45.5	45.5	STP–1 2.5”, 10 GA POSTS (3)
6B	1	NORTH 522 Sperryville Pike N. Blue Ridge Avenue	D1–5	84”	78”	1	45.5	45.5	STP–1 2.5”, 10 GA POSTS (3)
7	1	NORTH 522 Sperryville Pike SOUTH 522 W. Evans Street	D1–5	108”	78”	1	58.5	58.5	STP–1 2.5”, 10 GA POSTS (3)
8	1, 2, 3		W2–6	30”	30”	3	6.25	18.75	STP–1 2”, 14 GA POST
		10 MPH	W13–1P	18”	18”	3	2.25	6.75	
9	1, 2, 3	BIKE LANE	R3–17	24”	18”	3	3	9	STP–1 2”, 14 GA POST
		AHEAD	R3–17AP	24”	8”	3	1.33	3.99	
10	1, 2	BIKE LANE	R3–17	24”	18”	2	3	6	STP–1 2”, 14 GA POST
		ENDS	R3–17BP	24”	8”	2	1.33	2.66	
11	1, 2	HERE TO	R1–5L	36”	36”	2	9	18	STP–1 2”, 14 GA POST
12	1, 2	HERE TO	R1–5R	36”	36”	2	9	18	STP–1 2”, 14 GA POST

NOTE:
ALL W11–2, W16–7P, W2–6, AND W13–1P SIGNS SHALL BE FLUORESCENT YELLOW–GREEN

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SHEET TITLE

SIGNING SCHEDULE

SHEET

C9.7

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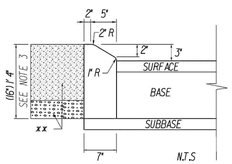
CG-3 MODIFIED

FOR USE ON ROUNDABOUT TRUCK APRONS ONLY

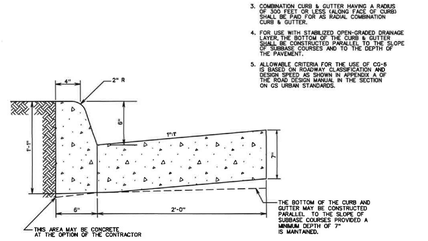


NOTES:

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. THE DEPTH OF CURB MAY BE REDUCED AS MUCH AS 3" (13" DEPTH) OR INCREASED AS MUCH AS 3" (19" DEPTH) IN ORDER THAT THE BOTTOM OF THE CURB WILL COINCIDE WITH THE TOP OF A COURSE OF THE PAVEMENTS SUBSTRUCTURE. OTHERWISE, THE DEPTH IS TO BE 16" AS SHOWN. NO ADJUSTMENT IN THE PRICE BID IS TO BE MADE FOR A DECREASE OR AN INCREASE IN DEPTH.
4. THE MODIFICATION TO THE STANDARD CG-3 IS TO REDUCE THE EXPOSED HEIGHT OF THE CURB AS SHOWN. MODIFIED CURB SHALL BE PAID FOR AS STANDARD CG-3.

xx Contact District Materials Engineer for Truck Apron Pavement Typical Section.

CG-6

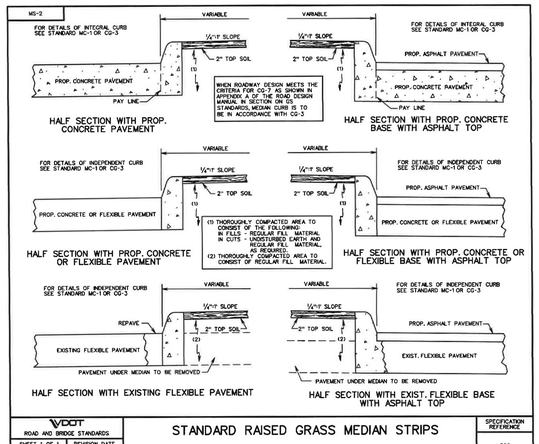


NOTES:

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 2' ON THE FACE OF CURB (ALONG FACE OF CURB) SHALL BE FILLED FOR AS RADIAL COMBINATION CURB & GUTTER.
4. FOR USE WITH STANDARD OPTIONAL DRAINAGE 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 APENDIX A OF THE ROAD DESIGN MANUAL IN THE SECTION ON CG URBAN STANDARDS.

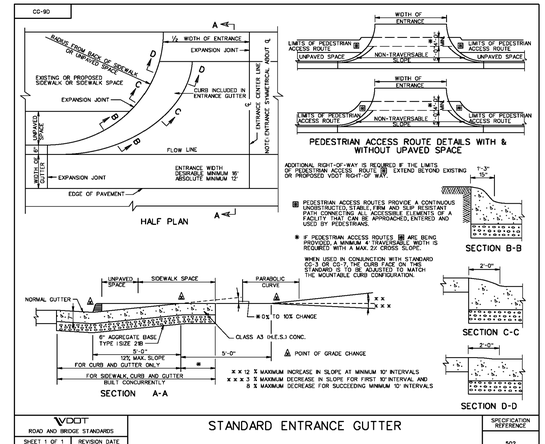
SPECIFICATION REFERENCE	COMBINATION 6" CURB AND GUTTER	VDOT ROAD AND BRIDGE STANDARDS
105 502	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE 203.03 / SHEET 1 OF 1

MS-2



VDOT ROAD AND BRIDGE STANDARDS	STANDARD RAISED GRASS MEDIAN STRIPS	SPECIFICATION REFERENCE
SHEET 1 OF 1 / REVISION DATE 202.04	VIRGINIA DEPARTMENT OF TRANSPORTATION	502

CG-90



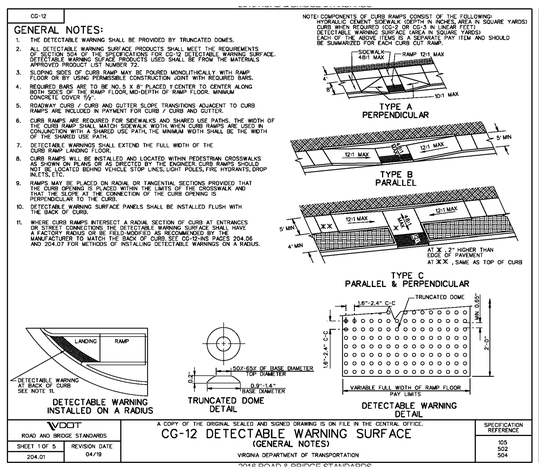
VDOT ROAD AND BRIDGE STANDARDS	STANDARD ENTRANCE GUTTER	SPECIFICATION REFERENCE
SHEET 1 OF 1 / REVISION DATE 203.03 D7/15	VIRGINIA DEPARTMENT OF TRANSPORTATION	502

CG-12

GENERAL NOTES:

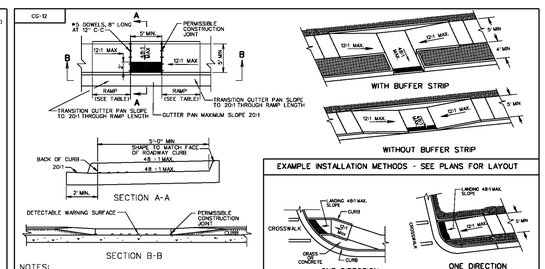
1. THE DETECTABLE WARNING SHALL BE PROVIDED BY TRUNCATED DOMES.
2. ALL DETECTABLE WARNING SURFACE PRODUCTS SHALL MEET THE REQUIREMENTS OF SECTION 504 OF THE SPECIFICATIONS FOR CG-12 DETECTABLE WARNING SURFACE. DETECTABLE WARNING SURFACE PRODUCTS USED SHALL BE FROM THE MATERIALS APPROVED PRODUCT LIST NUMBER 72.
3. SLOPING SIDES OF CURB RAMP MAY BE POURED MONOLITHICALLY WITH RAMP FLOOR OR BY USING PERMISSIBLE CONSTRUCTION JOINT WITH REQUIRED BARS.
4. REQUIRED BARS ARE TO BE NO.5 X 8' PLACED 1' CENTER TO CENTER ALONG CURB RAMP FLOOR AND 1' FROM FACE OF RAMP FLOOR. MINIMUM CONCRETE COVER 3".
5. ROADWAY CURB / CURB AND GUTTER SLOPE TRANSITIONS ADJACENT TO CURB RAMPS ARE INCLUDED IN PAYMENT FOR CURB / CURB AND GUTTER.
6. CURB RAMPS ARE REQUIRED FOR SIDEWALKS AND SHARED USE PATHS. THE WIDTH OF THE CURB RAMP SHALL MATCH SIDEWALK WIDTH. WHEN CURB RAMPS ARE USED IN CONJUNCTION WITH A SHARED USE PATH, THE MINIMUM WIDTH SHALL BE THE WIDTH OF THE SHARED USE PATH.
7. DETECTABLE WARNINGS SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP / LANDING FLOOR.
8. CURB RAMPS WILL BE INSTALLED AND LOCATED WITHIN PEDESTRIAN CROSSWALKS AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER. CURB RAMPS SHOULD NOT BE LOCATED BEHIND VEHICLE STOP LINES, LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC.
9. 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.
10. DETECTABLE WARNING SURFACE PANELS SHALL BE INSTALLED FLUSH WITH THE BACK OF CURB.
11. 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. SEE CG-12-INS PAGES 204.06 AND 204.07 FOR METHODS OF INSTALLING DETECTABLE WARNINGS ON A RADIUS.

NOTE: COMPONENTS OF CURB RAMPS CONSIST OF THE FOLLOWING: CORNER CEMENT SIDEWALK CONTIN 96 INCHES (8 SQUARE YARDS) CURB BREAK REQUIRED (CG-2 OR CG-3 IN LINEAR FEET) DETECTABLE WARNING SURFACE (AREA IN SQUARE YARDS) EACH OF THESE ITEMS HAS A SEPARATE PAY ITEM AND SHOULD BE SUMMARIZED FOR EACH CURB CUT RAMP.



SPECIFICATION REFERENCE	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. CG-12 DETECTABLE WARNING SURFACE (GENERAL NOTES) VIRGINIA DEPARTMENT OF TRANSPORTATION	VDOT ROAD AND BRIDGE STANDARDS
105 502 504		SHEET 1 OF 5 / REVISION DATE 204.01 04/19

CG-12



NOTES:

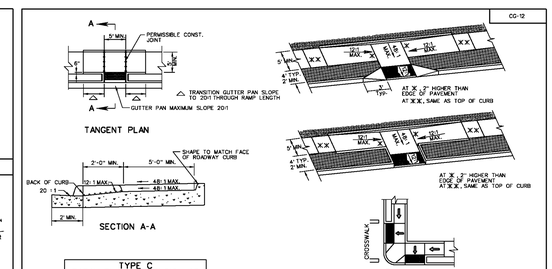
1. FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.
2. THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET, REGARDLESS OF THE SLOPE.
3. GUTTER PAN SHALL BE A MAXIMUM SLOPE OF 20:1 AT THE RAMP OPENING.
4. DIAGONAL PLACEMENT IS NOT PERMITTED.

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	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. CG-12 DETECTABLE WARNING SURFACE TYPE B (PARALLEL) APPLICATION VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 3 OF 5 / REVISION DATE 204.03 04/19		105 502 504

CG-12



TYPE C PARALLEL & PERPENDICULAR APPLICATION

ROADWAY GRADE IN PERCENT	MINIMUM RAMP LENGTH IN FEET 4" CURB	6" CURB
0	2	4
1	2	5
2	3	5
3	3	6
4	4	8
5	5	10
6	7	14
7	13	15
8	15	15

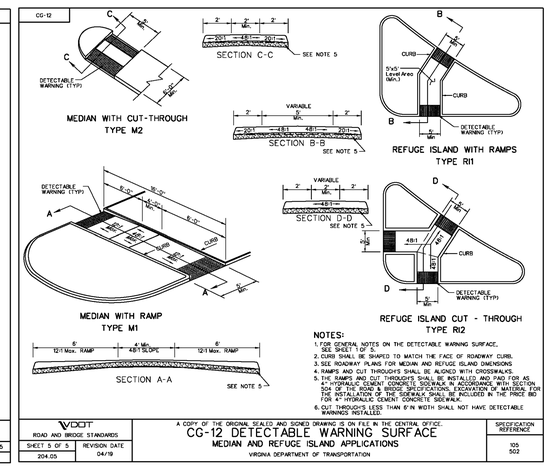
THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET, REGARDLESS OF THE SLOPE.

NOTES:

1. FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.
2. THE SELECTION OF CURB TYPE AND THE CONFIGURATION OF THE BUFFER STRIP MAY VARY TO MEET EXISTING FIELD CONDITIONS AND ROADWAY GEOMETRICS PROVIDING THE DIMENSIONS AND SLOPES ARE AS NOTED.
3. THIS COMBINED (PARALLEL & PERPENDICULAR) DESIGN CAN BE USED WITH ADJOINING BUFFER STRIP, LANDING AT BOTTOM OF TWO SLOPING SIDES WITH 0.4' X 3' MIN. DIMENSIONS. THE SHORT PERPENDICULAR RUN TO THE STREET CAN BE PROTECTED BY A LANDSCAPED SETBACK OR CONNECTED TO THE SIDEWALK WITH A WARPED SURFACE.
4. GUTTER PAN SHALL BE A MAXIMUM SLOPE OF 20:1 AT THE RAMP OPENING.
5. DIAGONAL PLACEMENT IS NOT PERMITTED.

SPECIFICATION REFERENCE	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. CG-12 DETECTABLE WARNING SURFACE TYPE C (PARALLEL & PERPENDICULAR) APPLICATION VIRGINIA DEPARTMENT OF TRANSPORTATION	VDOT ROAD AND BRIDGE STANDARDS
105 502		REVISION DATE 04/19 / SHEET 4 OF 5 204.04

CG-12

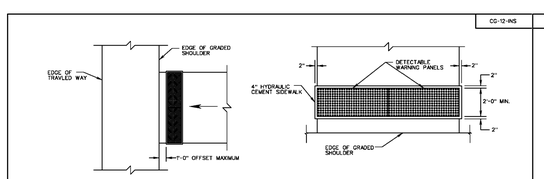


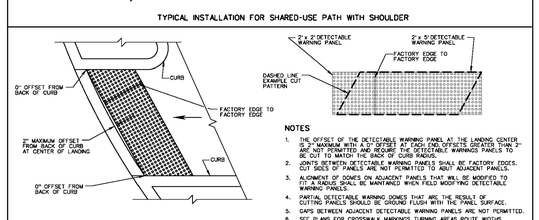
NOTES:

1. FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.
2. CURB SHALL BE SHAPED TO MATCH THE FACE OF ROADWAY CURB.
3. SEE ROADWAY PLANS FOR MEDIAN AND REFUGE ISLAND DIMENSIONS.
4. RAMPS AND CUT THROUGHS SHALL BE ALIGNED WITH CROSSWALKS.
5. 1'-4" RAMPS AND CUT THROUGHS SHALL BE INSTALLED AND PAID FOR AS PER SECTION 504 OF THE ROAD & BRIDGE SPECIFICATIONS. EXCAVATION OF MATERIAL FOR THE INSTALLATION OF THE SIDEWALK SHALL BE INCLUDED IN THE PRICE BID FOR 4" HYDRAULIC CEMENT CONCRETE SIDEWALK.
6. CUT THROUGHS LESS THAN 8' IN WIDTH SHALL NOT HAVE DETECTABLE WARNINGS INSTALLED.

VDOT ROAD AND BRIDGE STANDARDS	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. CG-12 DETECTABLE WARNING SURFACE MEDIAN AND REFUGE ISLAND APPLICATIONS VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 5 OF 5 / REVISION DATE 204.05 04/19		105 502

CG-12-INS



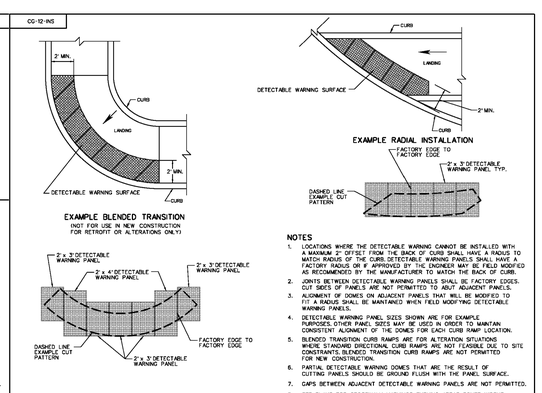


NOTES

1. THE OFFSET OF THE DETECTABLE WARNING PANEL AT THE LANDING CENTER IS 2" MAXIMUM WITH A 0" OFFSET AT EACH END. OFFSETS GREATER THAN 2" MAY BE ADJUSTED TO 2" MAXIMUM. THE DETECTABLE WARNINGS PANELS TO BE CUT TO MATCH THE BACK OF CURB RADIUS.
2. JOINTS BETWEEN DETECTABLE WARNING PANELS SHALL BE FACTORY EDGES. CUT SIDES OF PANELS ARE NOT PERMITTED TO ABUT ADJACENT PANELS.
3. ALIGNMENT OF DOMES ON ADJACENT PANELS THAT WILL BE MODIFIED TO FIT A RADIUS SHALL BE MAINTAINED WHEN FIELD MODIFYING DETECTABLE WARNING PANELS.
4. PARTIAL DETECTABLE WARNING DOMES THAT ARE THE RESULT OF CUTTING PANELS SHOULD BE GROUND FLUSH WITH THE PANEL SURFACE.
5. GAPS BETWEEN ADJACENT DETECTABLE WARNING PANELS ARE NOT PERMITTED.
6. SEE PLANS FOR CROSSWALK, MARKINGS, TURNING AREAS, ROUTE WIDTHS, GRADE CHANGES AND RAMP CONFIGURATIONS.

SPECIFICATION REFERENCE	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. CG-12 DETECTABLE WARNING SURFACE DETECTABLE WARNING INSTALLATION VIRGINIA DEPARTMENT OF TRANSPORTATION	VDOT ROAD AND BRIDGE STANDARDS
105 502 504		REVISION DATE NEW 04/19 / SHEET 1 OF 2 204.06

CG-12-INS

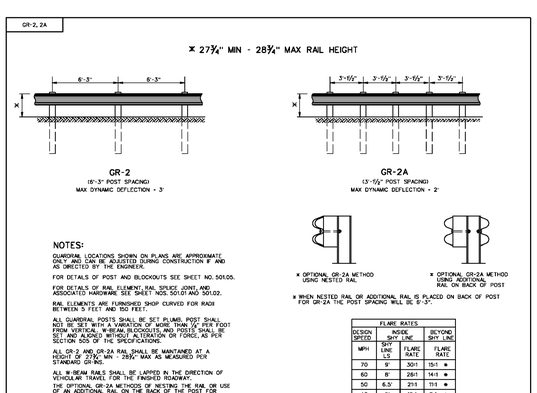


NOTES

1. LOCATIONS WHERE THE DETECTABLE WARNING CANNOT BE INSTALLED WITH A MAXIMUM 2" OFFSET FROM THE BACK OF CURB SHALL HAVE A RADIUS TO MATCH RADIUS OF THE CURB. DETECTABLE WARNING PANELS SHALL HAVE A FACTORY RADIUS OR BE FIELD-MODIFIED AS RECOMMENDED BY THE MANUFACTURER TO MATCH THE BACK OF CURB.
2. JOINTS BETWEEN DETECTABLE WARNING PANELS SHALL BE FACTORY EDGES. CUT SIDES OF PANELS ARE NOT PERMITTED TO ABUT ADJACENT PANELS.
3. ALIGNMENT OF DOMES ON ADJACENT PANELS THAT WILL BE MODIFIED TO FIT A RADIUS SHALL BE MAINTAINED WHEN FIELD MODIFYING DETECTABLE WARNING PANELS.
4. DETECTABLE WARNING PANEL SIZES SHOWN ARE FOR EXAMPLE PURPOSES. OTHER PANEL SIZES MAY BE USED IN ORDER TO MAINTAIN CONSISTENT ALIGNMENT OF THE DOMES FOR EACH CURB RAMP LOCATION.
5. BLENDED TRANSITION CURB RAMPS ARE FOR ALTERATION SITUATIONS WHERE STANDARD DIRECTIONAL CURB RAMPS ARE NOT FEASIBLE DUE TO SITE CONSTRAINTS. BLENDED TRANSITION CURB RAMPS ARE NOT PERMITTED FOR NEW CONSTRUCTION.
6. PARTIAL DETECTABLE WARNING DOMES THAT ARE THE RESULT OF CUTTING PANELS SHOULD BE GROUND FLUSH WITH THE PANEL SURFACE.
7. GAPS BETWEEN ADJACENT DETECTABLE WARNING PANELS ARE NOT PERMITTED.
8. SEE PLANS FOR CROSSWALK, MARKINGS, TURNING AREAS, ROUTE WIDTHS, GRADE CHANGES, AND RAMP CONFIGURATIONS.

VDOT ROAD AND BRIDGE STANDARDS	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. CG-12 DETECTABLE WARNING SURFACE METHOD OF INSTALLING DETECTABLE WARNINGS ON A RADIUS VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 2 OF 2 / REVISION DATE 204.07 NEW 04/19		105 502 504

GR-2, 2A



NOTES:

GUARDRAIL LOCATIONS SHOWN ON PLANS ARE APPROXIMATE ONLY AND CAN BE ADJUSTED DURING CONSTRUCTION IF AND AS DIRECTED BY THE ENGINEER.

FOR DETAILS OF POST AND BLOCKOUTS SEE SHEET NO. 501.05.

FOR DETAILS OF RAIL ELEMENT, RAIL SPLICE JOINT, AND ASSOCIATED HARDWARE SEE SHEET NOS. 501.01 AND 501.02.

RAIL ELEMENTS ARE FURNISHED SHOP CURVED FOR RADII BETWEEN 3 FEET AND 150 FEET.

ALL GUARDRAIL POSTS SHALL BE SCT PLUMB. POST SHALL NOT BE SET WITH A VARIATION OF MORE THAN ¼" PER FOOT FROM VERTICAL. W-BEAM BLOCKOUTS, AND POSTS SHALL BE SET TO MAINTAIN THE SPECIFIED HEIGHT OR FORGE AS PER SECTION 505 OF THE SPECIFICATIONS.

ALL GR-2 AND GR-2A RAIL SHALL BE MAINTAINED AT A HEIGHT OF 27¾" MIN - 28¾" MAX AS MEASURED PER STANDARD GR-90.

ALL W-BEAM RAILS SHALL BE LAPPED IN THE DIRECTION OF VEHICULAR TRAVEL FOR THE FINISHED ROADWAY.

THE OPTIONAL GR-2A METHODS OF NESTING THE RAIL OR USE OF RAIL ON BACK OF POST MAY BE USED ONLY WHEN STANDARD GR-2A SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

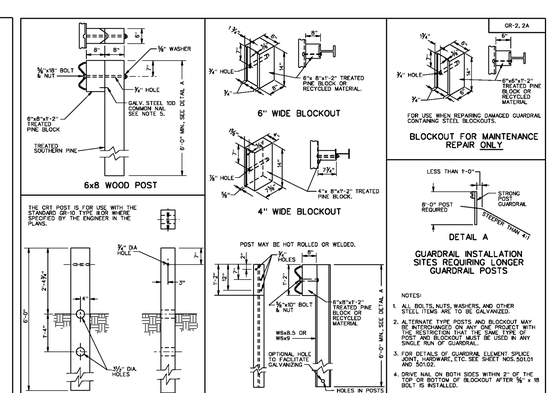
FLARE RATES

DESIGN SPEED MPH	INSIDE SHY LINE LS	FLARE RATE	BEYOND SHY LINE	FLARE RATE
70	9'	30:1	15:1 *	
60	8'	26:1	14:1 *	
50	6.5'	21:1	11:1 *	
40	5'	16:1	8:1 *	
30	4'	13:1	7:1 *	

* SUGGESTED MAXIMUM FLARE RATE FOR SEMI-RIGID BARRIER SYSTEMS.

VDOT ROAD AND BRIDGE STANDARDS	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. STANDARD BLOCKED-OUT W-BEAM GUARDRAIL (STRONG POST SYSTEM) VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 1 OF 2 / REVISION DATE 50.01.01 08/14		222 505

GR-2, 2A



NOTES:

1. ALL BOLTS, NUTS, WASHERS, AND OTHER STEEL ITEMS ARE TO BE GALVANIZED.
2. ALTERNATE TYPE POSTS AND BLOCKOUT MAY BE INTERCHANGED ON ANY ONE PROJECT WITH THE RESTRICTION THAT THE SAME TYPE OF POST AND BLOCKOUT MUST BE USED IN ANY SINGLE RUN OF GUARDRAIL.
3. FOR USE WITH GUARDRAIL ELEMENT SPLICE JOINT, HARDWARE, ETC. SEE SHEET NOS. 501.01 AND 501.02.
4. DRIVE NAIL ON BOTH SIDES WITHIN 2" OF THE TOP OR BOTTOM OF BLOCKOUT AFTER ⅝" x 18 BOLT IS INSTALLED.

SPECIFICATION REFERENCE	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. STANDARD BLOCKED-OUT W-BEAM GUARDRAIL (STRONG POST SYSTEM, POST AND BLOCKOUT DETAILS) VIRGINIA DEPARTMENT OF TRANSPORTATION	VDOT ROAD AND BRIDGE STANDARDS
222 536 505		REVISION DATE 08/14 / SHEET 2 OF 2 501.05

AMT

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WWW.AMTENGINEERING.COM

TOWN OF CULPEPER, VIRGINIA — THE CULPEPER MINUTE MEN — LIBERTY OR DEATH — DON'T TREAD ON ME

REGISTRATION STAMP

COMMONWEALTH OF VIRGINIA — DONALD J. RISSMEYER — 2-21-22 — Lic. No. 26104 — PROFESSIONAL ENGINEER

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400 S. MAIN STREET, SUITE 301
CULPEPER, VIRGINIA 22701
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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	NA
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

CIVIL DETAILS

SHEET

C10.0

SHEET 55 OF 70

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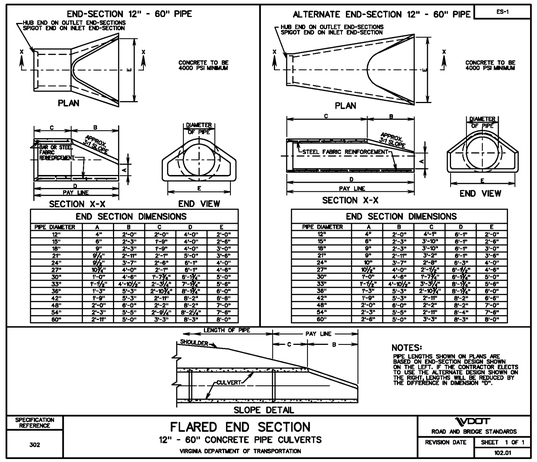
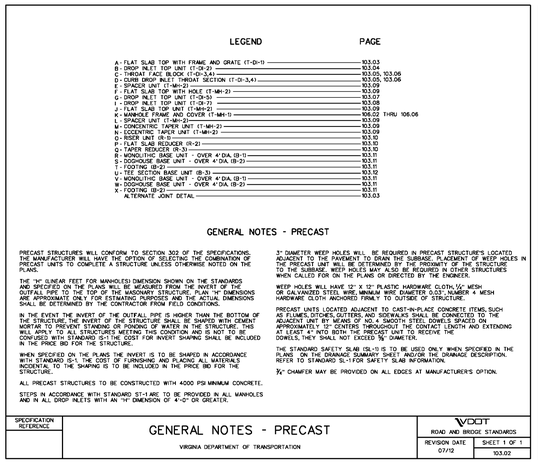
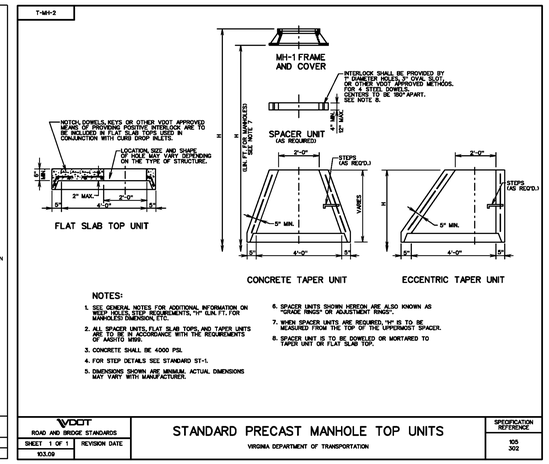
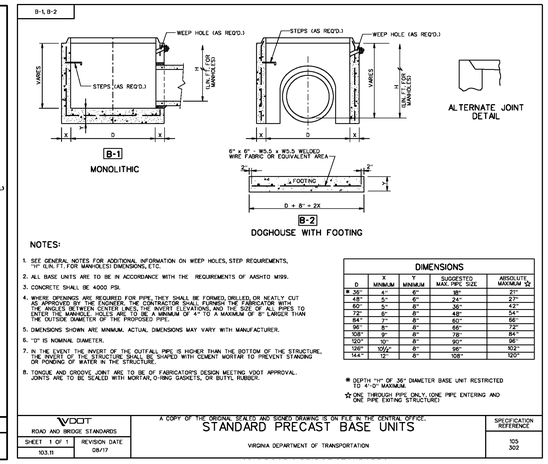


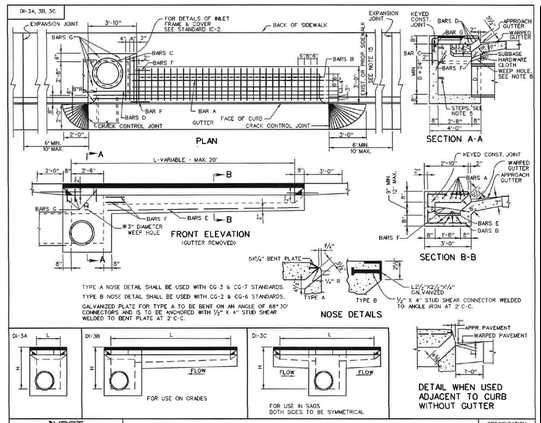
NOTES:

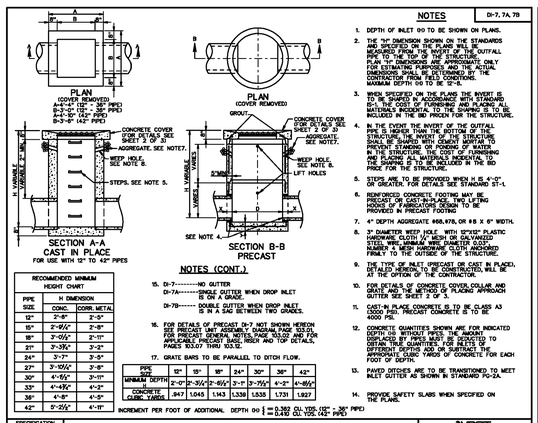
PIPE LENGTHS SHOWN ON PLANS ARE BASED ON END-SECTION DESIGN SHOWN ON THE LEFT. IF THE CONTRACTOR ELECTS TO USE THE ALTERNATE END-SECTION ON THE RIGHT, ADDITIONAL PIPE REQUIRED BY THE DIFFERENCE IN DIMENSION "D".

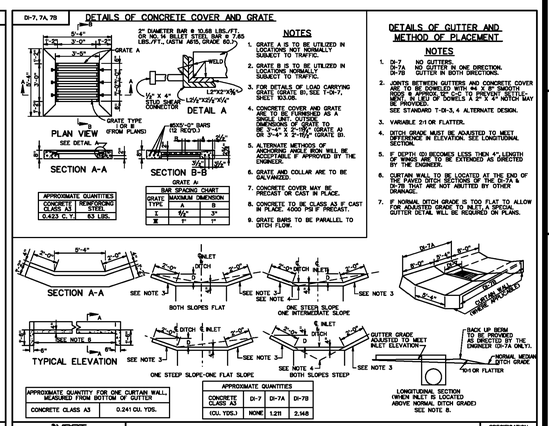


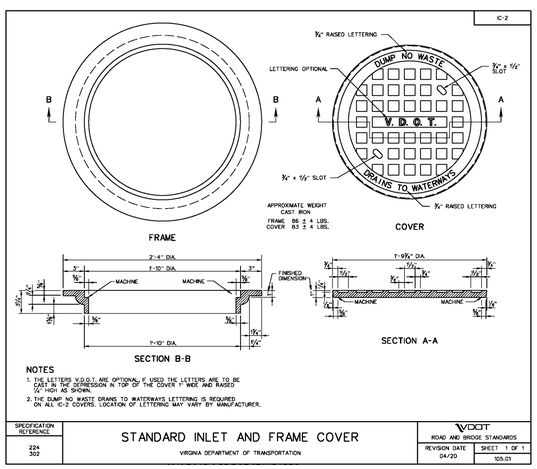


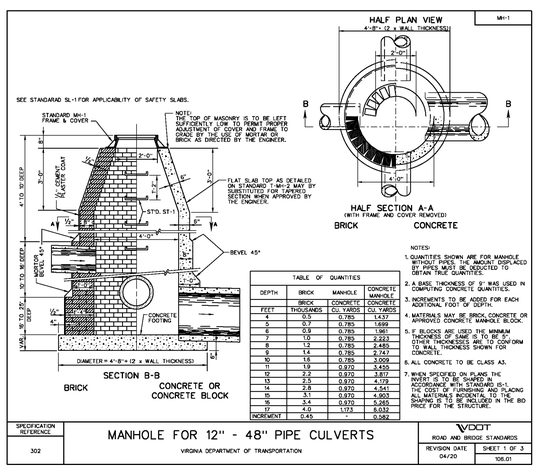


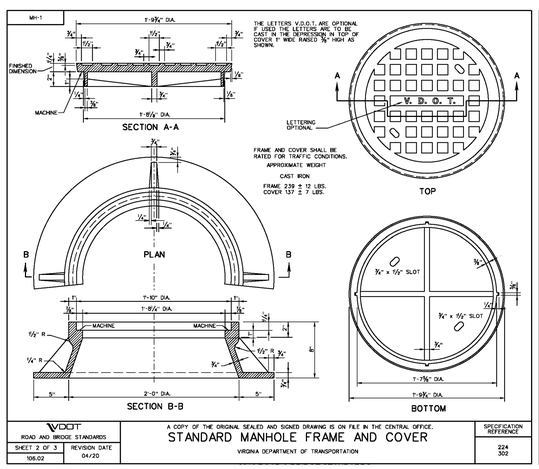


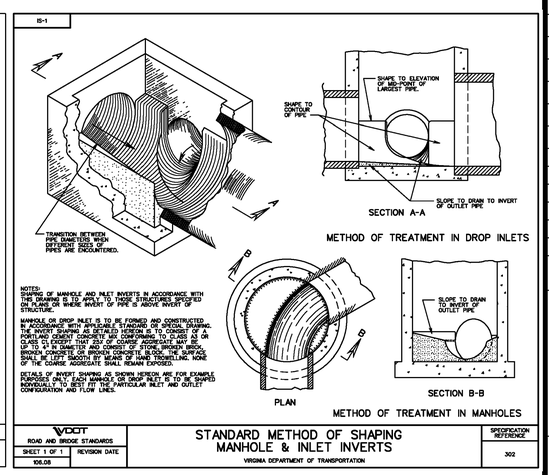












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TOWN OF CULPEPER, VIRGINIA

REGISTRATION STAMP

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US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

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STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	NA
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

CIVIL DETAILS

SHEET

C10.1

SHEET 56 OF 70

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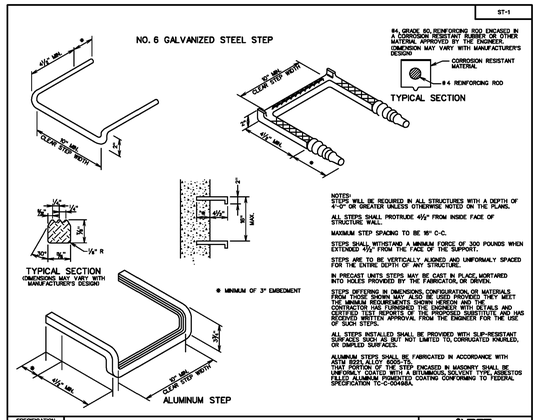

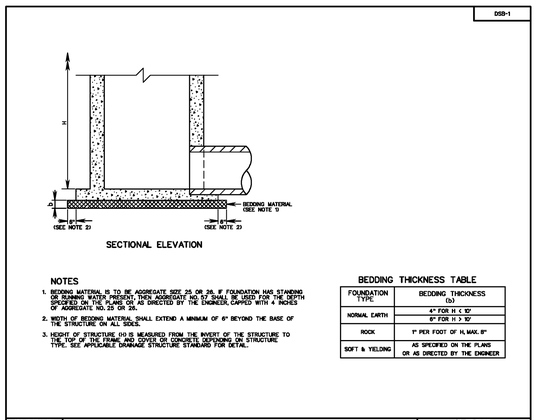

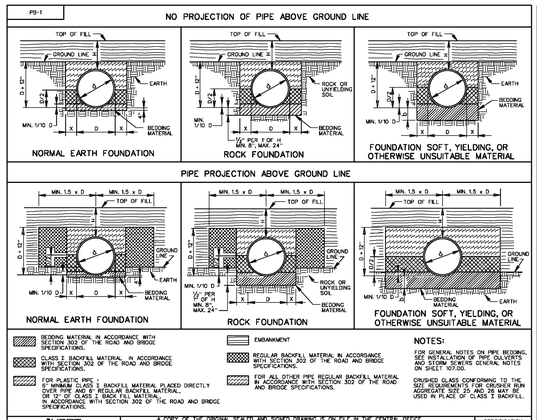

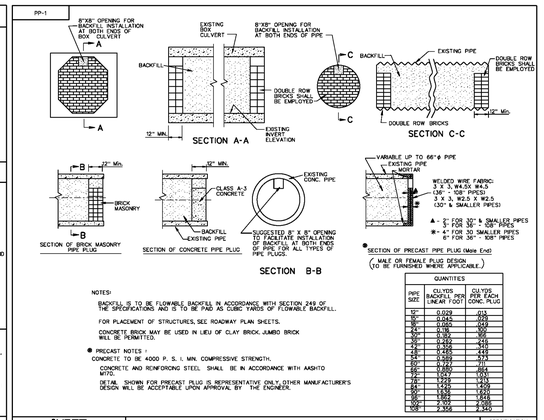

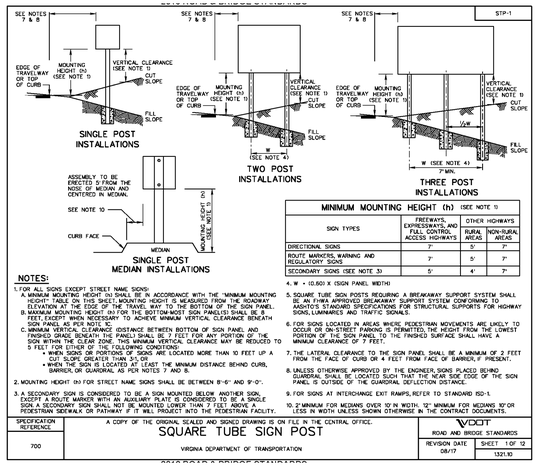

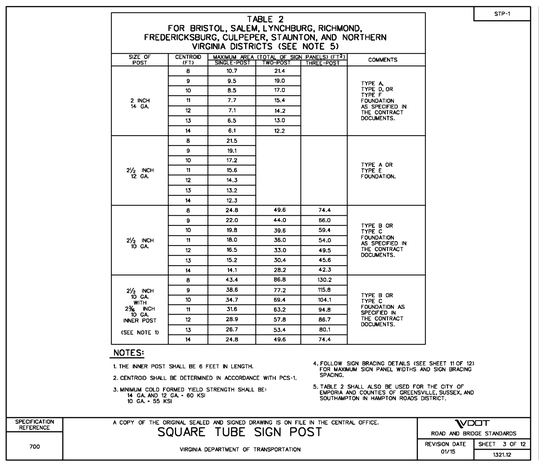

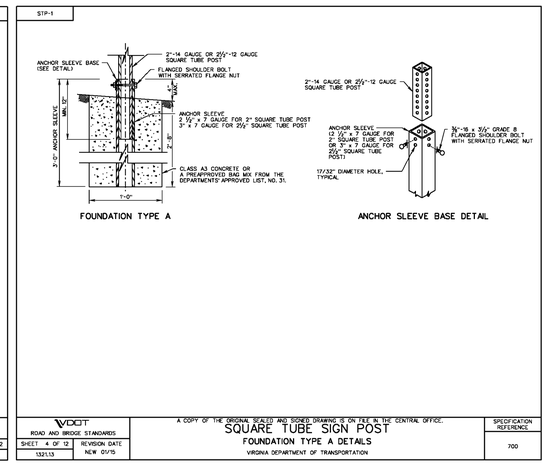

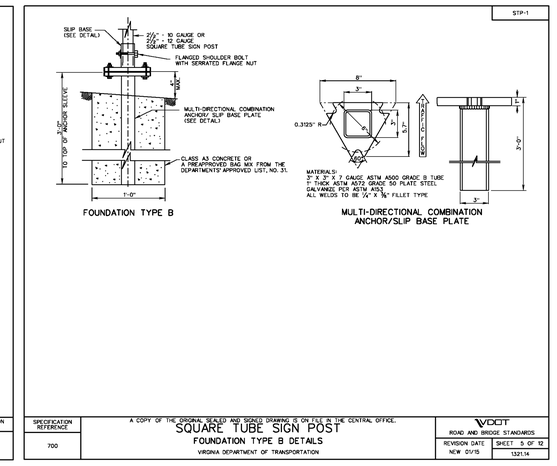

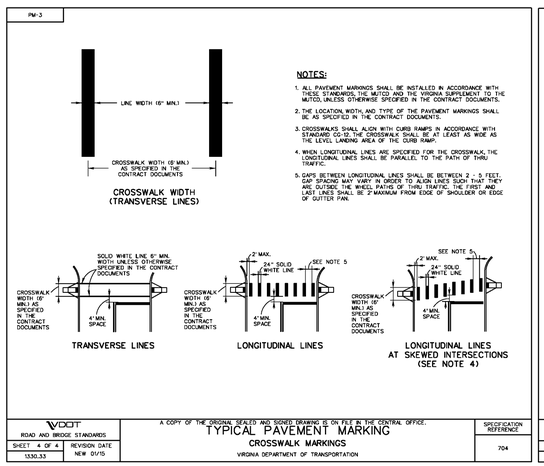

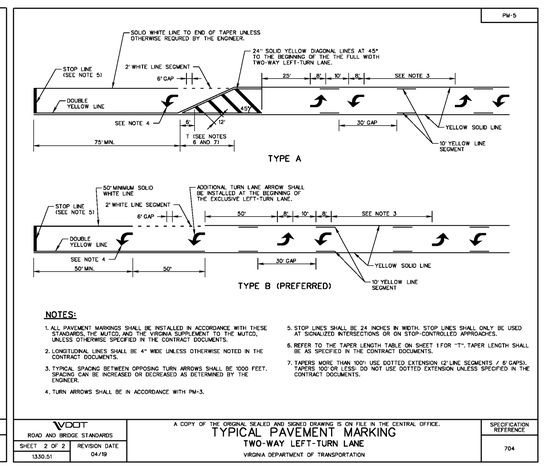

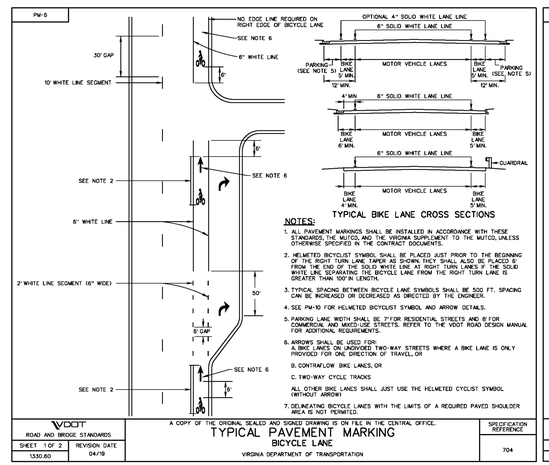

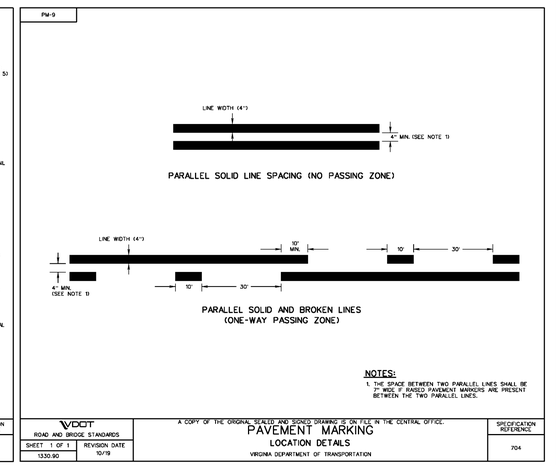

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TOWN OF CULPEPER, VIRGINIA

REGISTRATION STAMP

COMMONWEALTH OF VIRGINIA
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2-21-22
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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	NA
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

CIVIL DETAILS

SHEET

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SHEET 57 OF 70

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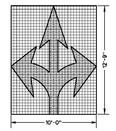
PM-10

SQUARE FOOT AREAS OF SYMBOLS AND ARROWS

SYMBOL	DESCRIPTION	PAINT APPLICATION	ERADICATION
	THRU ARROW	12.0	32.0
OR	SINGLE TURN ARROW (LEFT OR RIGHT)	17.5	51.0
OR	DOUBLE TURN ARROW (LEFT/THROUGH OR RIGHT/THROUGH)	28.5	96.0
OR	TRIPLE TURN ARROW (LEFT/THROUGH/RIGHT)	37.5	127.5
OR	DOUBLE TURN ARROW (LEFT/RIGHT)	27.0	80.0
OR	LANE-REDUCTION ARROW (LEFT OR RIGHT)	44.0	99.0
	WRONG-WAY ARROW	24.0	133.5
	FISH-HOOK LANE-USE ARROW FOR ROUNDABOUTS (LEFT)	20.5	81.0
	FISH-HOOK LANE-USE ARROW FOR ROUNDABOUTS (LEFT/THROUGH)	31.0	114.5
	FISH-HOOK LANE-USE ARROW FOR ROUNDABOUTS (LEFT/THROUGH/RIGHT)	39.5	195.0
	FISH-HOOK LANE-USE ARROW FOR ROUNDABOUTS (THROUGH/RIGHT)	31.5	142.0
	OPTIONAL OVAL FOR FISH-HOOK LANE-USE ARROW FOR ROUNDABOUTS	3.5	4.5
	HOV DIAMOND SYMBOL (ASPHALT SURFACE)	11.5	39.0
	HOV DIAMOND CONTRAST SYMBOL (CONCRETE SURFACE)	35.5	70.0
	YIELD LINE TRIANGLE (9" x 15")	0.75 (EACH)	1.5 (EACH)
	YIELD LINE TRIANGLE (2' x 3')	3.0 (EACH)	6.0 (EACH)

SQUARE FOOT AREAS OF SYMBOLS AND ARROWS

SYMBOL	DESCRIPTION	PAINT APPLICATION	ERADICATION
	BICYCLIST THRU ARROW	5.0	12.0
OR	BICYCLIST TURN ARROW (LEFT OR RIGHT)	9.5	29.0
	HELMETED BICYCLIST SYMBOL	6.5	20.0
	SHARED LANE MARKING SYMBOL	10.0	31.5
	SMALL YIELD AHEAD TRIANGLE	26.0	78.0
	LARGE YIELD AHEAD TRIANGLE	37.0	120.0
	RAILROAD CROSSING SYMBOL	60.0	160.0
	INTERNATIONAL SYMBOL OF ACCESSIBILITY - SPECIAL SIZED	22.0	22.5



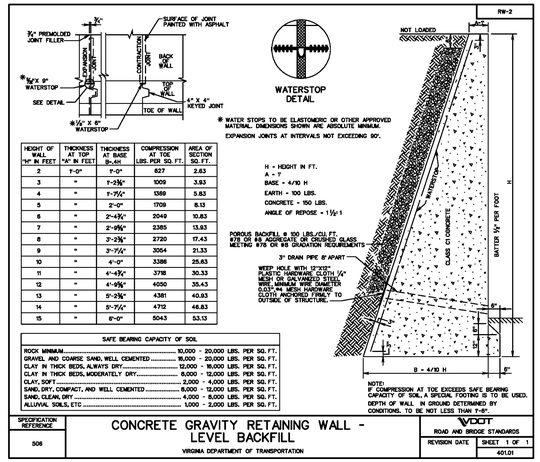
ERADICATION AREA = 12'-9" x 10'-0" = 127.5 SQ.FT.

THEORETICAL BOX
ERADICATION AREA EXAMPLE (TRIPLE TURN ARROW)

SPECIFICATION REFERENCE	PAVEMENT WORD, SYMBOL, AND ARROW MARKINGS	VDOT ROAD AND BRIDGE STANDARDS
704	SQUARE FOOT AREAS OF SYMBOLS AND ARROWS VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE 02/16 · SHEET 3 OF 19 · 1340.12

A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.

RW-2

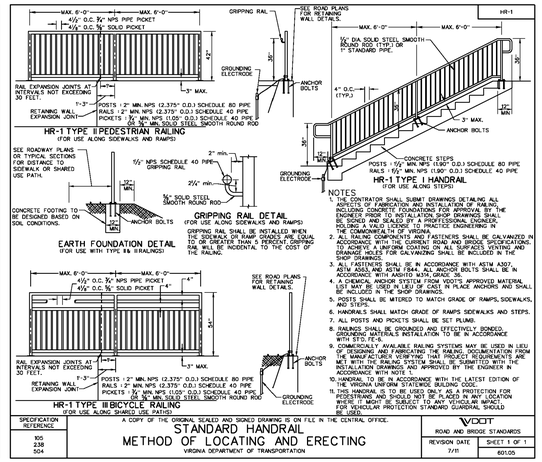


HEIGHT OF WALL "H" IN FEET	THICKNESS AT TOP "A" IN FEET	THICKNESS AT BASE B=.4H	COMPRESSION AT TOE LBS. PER SQ. FT.	AREA OF SECTION SQ. FT.
2	1'-0"	827	2.83	
3	"	1'-2½"	1009	3.93
4	"	1'-7½"	1369	5.83
5	"	2'-0"	1709	8.13
6	"	2'-4½"	2049	10.83
7	"	2'-9½"	2385	13.83
8	"	3'-2½"	2720	17.43
9	"	3'-7½"	3054	21.33
10	"	4'-0"	3388	25.63
11	"	4'-4½"	3718	30.33
12	"	4'-9½"	4050	35.43
13	"	5'-2½"	4381	40.83
14	"	5'-7½"	4712	46.83
15	"	6'-0"	5043	53.13

SAFE BEARING CAPACITY OF SOIL	
ROCK MINIMUM	10,000 - 20,000 LBS. PER SQ. FT.
GRAVEL AND COARSE SAND, WELL CEMENTED	16,000 - 20,000 LBS. PER SQ. FT.
CLAY IN THICK BEDS, ALWAYS DRY	12,000 - 16,000 LBS. PER SQ. FT.
CLAY IN THICK BEDS, MODERATELY DRY	8,000 - 12,000 LBS. PER SQ. FT.
CLAY, SOFT	2,000 - 4,000 LBS. PER SQ. FT.
SAND, DRY, COMPACT, AND WELL CEMENTED	8,000 - 12,000 LBS. PER SQ. FT.
SAND, CLEAN, DRY	4,000 - 8,000 LBS. PER SQ. FT.
ALLUVIAL SOILS, ETC	1,000 - 2,000 LBS. PER SQ. FT.

SPECIFICATION REFERENCE	CONCRETE GRAVITY RETAINING WALL - LEVEL BACKFILL	VDOT ROAD AND BRIDGE STANDARDS
508	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE · SHEET 1 OF 1 · 4GL01

HR-1



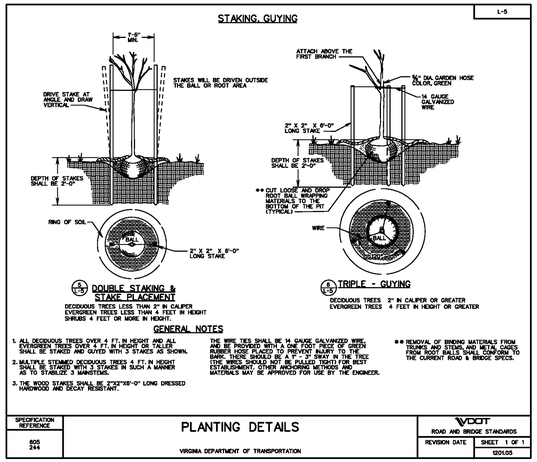
NOTES

1. THE CONTRATOR SHALL SUBMIT DRAWINGS DETAILING ALL ASPECTS OF FABRICATION AND INSTALLATION OF RAILING, INCLUDING ANCHORAGE, TO THE ENGINEER FOR REVIEW. THE ENGINEER PRIOR TO INSTALLATION. SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, HOLDING A VALID LICENSE TO PRACTICE ENGINEERING IN THE COMMONWEALTH OF VIRGINIA.
2. ALL FERROUS METAL 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 DESIGN.
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 INCIDENTAL TO THE COST OF THE RAILING.
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 RODS INSTALLATION TO BE IN ACCORDANCE WITH STD. EC-6.
9. COMMERCIALLY AVAILABLE RAILING SYSTEMS MAY BE USED IN LIEU OF DESIGNING AND FABRICATING THE RAILING. DOCUMENTATION FROM THE MANUFACTURER SHOWING THAT THE PRODUCT REQUIREMENTS ARE MET MUST BE PROVIDED. THE RAILING SHALL BE SHOWN ON 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. GROUNDING RODS 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.

A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.

SPECIFICATION REFERENCE	STANDARD HANDRAIL METHOD OF LOCATING AND ERECTING	VDOT ROAD AND BRIDGE STANDARDS
100 238 504	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE 7/10 · SHEET 1 OF 1 · 6GL05

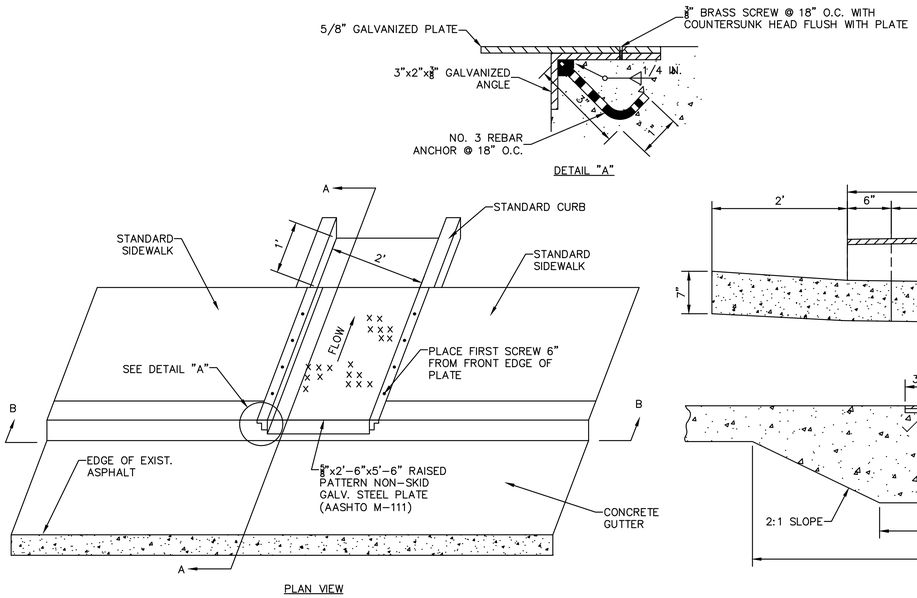
L-5



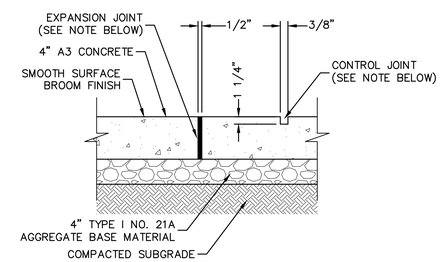
GENERAL NOTES

1. ALL DECIDUOUS TREES OVER 4 FT. IN HEIGHT AND ALL EVERGREEN TREES OVER 4 FT. IN HEIGHT OR TALLER SHALL BE STAKED AND GUYED WITH 3 STAKES AS SHOWN.
2. MULTIPLE STEMMED DECIDUOUS TREES 4 FT. IN HEIGHT SHALL BE STAKED WITH 2 STAKES IN SUCH A MANNER AS TO STABILIZE 3 MAINSTEMS.
3. ALL STAKES SHALL BE 2"X2"X6'-0" LONG DRESSED HARDWOOD AND DECAY RESISTANT.
4. THE WIRE TIES SHALL BE 14 GAUGE GALVANIZED WIRE, AND BE PROVIDED WITH A ONE FOOT PIECE OF GREEN RUBBER HOSE PLACED TO PREVENT INJURY TO THE TREE. WIRE TIES SHALL BE ATTACHED TO THE STAKE. THE WIRE SHALL NOT BE PLACED DIRECTLY ON THE TREE. ATTACHMENT OTHER THAN THE ABOVE METHODS AND MATERIALS MAY BE APPROVED FOR USE BY THE ENGINEER.
5. ** REMOVAL OF BINDING MATERIALS FROM TRUNKS, AND STEMS, AND METAL CAGES FROM ROOT BALLS SHALL CONFORM TO THE CURRENT ROAD & BRIDGE SPECS.

SPECIFICATION REFERENCE	PLANTING DETAILS	VDOT ROAD AND BRIDGE STANDARDS
605 244	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE · SHEET 1 OF 1 · 5GL05



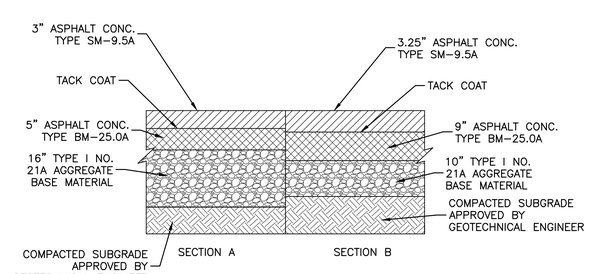
SIDEWALK CURB CUT DETAIL
NTS



NOTES:

1. 1/2" EXP. JOINTS SHALL BE PLACED AT 30' INTERVALS AND AT ALL AREAS WHERE PAVING ABUTS OTHER WALKS AND STRUCTURES (TYP.) JOINT MATERIAL SHALL BE SEALED WATERTIGHT ON TOP (GRAY SIKA FLEX-227 OR APPROVED EQUAL).
2. CONTROL JOINTS SHALL BE PLACED AT 5' INTERVALS BOTH DIRECTIONS, UNLESS NOTED OTHERWISE.
3. JOINTS SHALL BE ALIGNED WITH CURB & GUTTER JOINTS, WHERE POSSIBLE.

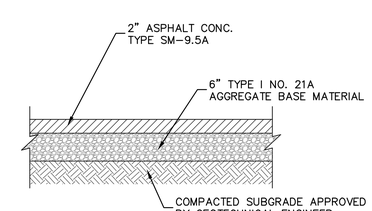
CONCRETE SIDEWALK DETAIL
NTS



NOTES:

1. SECTION A CORRESPONDS TO PAVEMENT CORES B-3 AND B-4.
2. SECTION B CORRESPONDS TO PAVEMENT CORES B-1 AND B-2.

US522 PAVEMENT SECTION
NTS



DRIVEWAY PAVEMENT SECTION
NTS

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Lic. No. 26104
PROFESSIONAL ENGINEER

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Email: ahopewell@culpeperva.gov

PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	NA
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

CIVIL DETAILS

SHEET

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SHEET 58 OF 70

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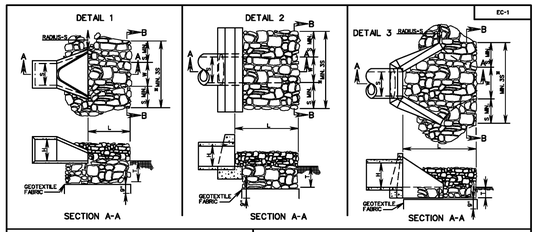
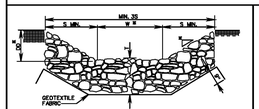




SECTION B-B

TYPE OF OUTLET PROTECTION MATERIAL	MAXIMUM OUTLET VELOCITY (FOR DESIGN STORM)	MINIMUM "T" (INCHES)
CLASS AI	CLASS AI DRY RIPRAP	18
CLASS I	CLASS I DRY RIPRAP	24
CLASS II	CLASS II DRY RIPRAP	36

NOTES:

1. FOR MULTIPLE LINE INSTALLATIONS, DIMENSION S IS TO GOVERN THE PROTECTION OUTSIDE THE CHANNEL WIDTH (W).
2. ON ANY INSTALLATION REQUIRING CULVERT OUTLET PROTECTION WHERE NO ENDWALL OR PROJECTION IS SPECIFIED ON THE PLANS, CONSTRUCTION IS TO BE IN ACCORDANCE WITH DETAIL 3 SHOWN ABOVE.
3. GEOTEXTILE FABRIC TO BE INSTALLED UNDER CLASS AI, I, AND II MATERIALS IN ACCORDANCE WITH THE SPECIFICATIONS.
4. S = DIAMETER OF CIRCULAR CULVERT OR SPAN FOR BOX, ELLIPTICAL OR ARCH CULVERT. H = DIAMETER OF CIRCULAR CULVERT OR RISE/HEIGHT FOR BOX, ELLIPTICAL OR ARCH CULVERT.
5. USE TYPICAL SECTION SHOWN ON PLANS FOR SIDE SLOPE, BOTTOM WIDTH AND DEPTH OF CHANNEL OR MATCH EXISTING DITCH OR NATURAL GROUND.

OUTLET PROTECTION MINIMUM LENGTH (L)	
TYPE A INSTALLATION	3H
TYPE B INSTALLATION	5H

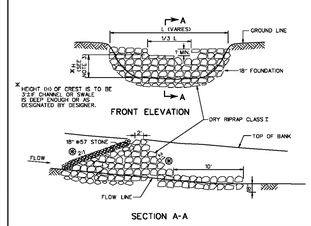
SPECIFICATION REFERENCE	CULVERT OUTLET PROTECTION VIRGINIA DEPARTMENT OF TRANSPORTATION	VDOT ROAD AND BRIDGE STANDARDS	
204 245 303 414		REVISION DATE	SHEET 1 OF 1 113.01

EC-1

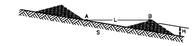
CIP

EC-4

TYPICAL DETAIL FOR ROCK CHECK DAM TYPE I



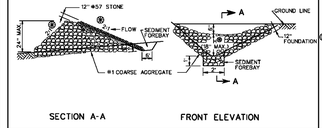
SUGGESTED ROCK CHECK DAM SPACING



L = H/S WHERE:
H = HEIGHT OF DAM CREST IN FEET
S = CHANNEL SLOPE IN FT/FT
L = CHECK DAM SPACING IN FEET; THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION

CHECK DAM SPACING, L TO BE DETERMINED FROM THE EQUATION. IN STEEP SLOPE AREAS THE CHECK DAM SPACING IS NOT TO BE LESS THAN 25'.

TYPICAL DETAIL FOR ROCK CHECK DAM TYPE II



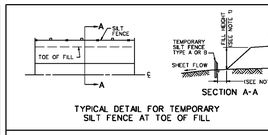
NOTES:

1. ROCK CHECK DAMS THAT ARE DESIGNATED ON THE PLANS AS A STORMWATER MANAGEMENT (SWM) ITEM ARE TO BE LEFT IN PLACE, AS A PERMANENT INSTALLATION.
2. WHERE DRAINAGE AREAS EXCEED 1 ACRE OR DITCH GRADE EXCEEDS 3%, A TEMPORARY SEDIMENT FOREBAY SHALL BE INSTALLED WITH MINIMUM DIMENSIONS OF 12' DEPTH, 2' WIDTH AND 8' LENGTH.
3. IF A CHECK DAM IS LOCATED INSIDE CLEAR ZONE AND ADJACENT TO A TRAVELWAY, SLOPE FACING ON COMING TRAFFIC IS TO BE 6:1 AND MAXIMUM H IS TO BE 12".
4. CHECK DAM SHALL NOT BE USED FOR LOCATIONS IN LIVE STREAM.

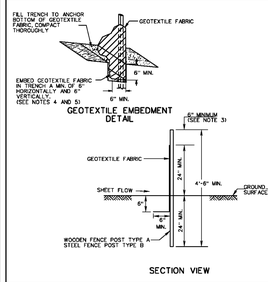
CHECK DAM (ROCK) TY. I, ITEM CODE 27410 EACH
CHECK DAM (ROCK) TY. II, ITEM CODE 27415 EACH

VDOT ROAD AND BRIDGE STANDARDS		A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. ROCK CHECK DAMS TYPE I & II VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 1 OF 1	REVISION DATE		107 303
113.06	04/19		

CD



TYPICAL DETAIL FOR TEMPORARY SILT FENCE AT TOE OF FILL



NOTES

1. TYPE A SILT FENCE WILL HAVE WOODEN POSTS AND IS LIMITED TO FILL HEIGHTS OF 20 FEET OR LESS. TYPE B SILT FENCE WILL HAVE STEEL POSTS AND MUST BE USED WHERE THE FILL HEIGHT EXCEEDS 20 FEET.
2. WOODEN POSTS SHALL BE OAK AND HAVE NOMINAL DIMENSIONS OF 2" BY 2". STEEL POSTS SHALL HAVE A MINIMUM WEIGHT OF 1.25 POUNDS PER LINEAR FOOT.
3. ALL POSTS SHALL BE DRIVEN 24" MIN. INTO THE GROUND AND SHALL EXTEND 6" ABOVE THE FILTER FABRIC.
4. GEOTEXTILE FABRIC SHALL BE EMBEDDED 12" INTO THE GROUND (6" VERTICALLY AND 6" HORIZONTALLY) ALONG THE BOTTOM OF TRENCH AS SHOWN IN DETAILS.
5. SLICING IS AN APPROVED ALTERNATIVE TO TRENCHING FOR ANCHORING THE GEOTEXTILE FABRIC INTO THE GROUND. SLICING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SECTION 303 OF THE ROAD AND BRIDGE SPECIFICATIONS.
6. WHEN TWO SEPARATE SECTIONS OF GEOTEXTILE FABRIC ADJOIN EACH OTHER, THEY SHALL OVERLAP BY 6" AND BE DOUBLE FOLDED.
7. GEOTEXTILE FABRIC SHALL BE FASTENED SECURELY TO THE POSTS AT BOTH THE TOP AND VERTICAL MIDPOINT OF THE GEOTEXTILE FABRIC.
8. WHEN THE DISTANCE FROM THE TOE OF THE FILL TO THE SILT FENCE IS NOT PROVIDED IN THE PLANS A MINIMUM OF 3 FEET WILL BE USED.
9. MATERIALS FOR ALL SILT FENCE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 242 OF THE VDOT ROAD & BRIDGE SPECIFICATIONS.
10. THE GEOTEXTILE FABRIC FOR SILT FENCE SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 123 LBS/FT AND BE FROM THE VDOT MATERIALS APPROVED LIST # 63.

SPECIFICATION REFERENCE	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. TEMPORARY SILT BARRIERS SILT FENCE (TYPE A & B) VIRGINIA DEPARTMENT OF TRANSPORTATION	VDOT ROAD AND BRIDGE STANDARDS	
107 242 243 303		REVISION DATE 04/19	SHEET 1 OF 2 113.07

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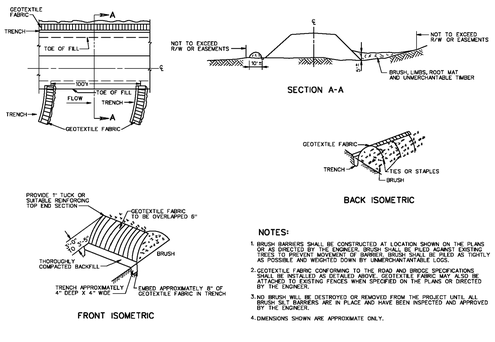
EC-5

SILT BARRIERS
TYPICAL DETAIL FOR BRUSH BARRIER
(TO BE USED AT ALL APPLICABLE LOCATIONS)



NOTES:

1. BRUSH BARRIERS SHALL BE CONSTRUCTED AT LOCATION SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. BRUSH SHALL BE PILED AGAINST EXISTING TREES TO PREVENT MOVEMENT OF BARRIER. BRUSH SHALL BE PILED AS TIGHTLY AS POSSIBLE AND WEIGHTED DOWN BY UNMERCHANTABLE LOGS.
2. GEOTEXTILE FABRIC CONFORMING TO THE ROAD AND BRIDGE SPECIFICATIONS SHALL BE INSTALLED AS DETAILED ABOVE. GEOTEXTILE FABRIC MAY ALSO BE ATTACHED TO EXISTING FENCES WHEN SPECIFIED ON THE PLANS OR DIRECTED BY THE ENGINEER.
3. NO BRUSH WILL BE DESTROYED OR REMOVED FROM THE PROJECT UNTIL ALL BRUSH SILT BARRIERS ARE IN PLACE AND HAVE BEEN INSPECTED AND APPROVED BY THE ENGINEER.
4. DIMENSIONS SHOWN ARE APPROXIMATE ONLY.

VDOT ROAD AND BRIDGE STANDARDS		A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. TEMPORARY SILT BARRIERS BRUSH BARRIER VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 2 OF 2	REVISION DATE		107 303
113.08	04/19		

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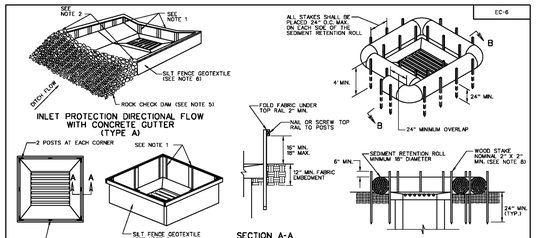
EC-6



NOTES

1. POSTS AND TOP RAIL SHALL BE A MINIMUM 2" X 4" NO. 2 SOUTHERN PINE. POSTS SHALL BE DRIVEN 24" MIN. INTO THE GROUND.
2. END OF FILTER BARRIER TO BE EMBEDDED INTO AGGREGATE.
3. IF A DROP INLET IS LOCATED IN A SAG IN THE DITCH GRADE, A CHECK DAM IS REQUIRED FOR EACH SIDE OF THE INLET THAT RECEIVES DITCH FLOW.
4. WHERE DRAINAGE AREAS EXCEED ONE ACRE OR DITCH GRADE EXCEEDS 3%, A TEMPORARY SEDIMENT FOREBAY SHALL BE INSTALLED IN ACCORDANCE WITH THE EC-4 STANDARD.
5. WHEN REQUIRED SEE STANDARD EC-4 FOR DETAILS OF ROCK CHECK DAM AND SEDIMENT FOREBAY.
6. SILT FENCE GEOTEXTILE IN ACCORDANCE WITH SECTION 245 OF THE ROAD AND BRIDGE SPECIFICATIONS.
7. ONLY SEDIMENT RETENTION ROLL PRODUCTS WITH A MINIMUM 18" DIAMETER LISTED ON THE VDOT APPROVED PRODUCTS LIST MAY BE USED FOR TYPE A INLET PROTECTION.
8. ALL STAKES SHALL BE DRIVEN 24" MIN. INTO THE GROUND AND SHALL EXTEND 6" ABOVE THE SEDIMENT RETENTION ROLL. WOODEN STAKES SHALL BE OAK AND HAVE NOMINAL DIMENSIONS OF 2" BY 2". STEEL STAKES SHALL HAVE A MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT.
9. SEDIMENT SHALL BE REMOVED FROM INLET PROTECTION WHEN IT HAS ACCUMULATED TO ONE-HALF THE EXPOSED HEIGHT OF THE STRUCTURE AND PAD FOR AS SEDIMENT REMOVAL PER CUBIC YARD.
10. STACKING SEDIMENT RETENTION ROLLS TO MEET THE REQUIRED INLET PROTECTION HEIGHT IS NOT PERMITTED.
11. SEDIMENT RETENTION ROLLS SHALL BE EMBEDDED INTO THE DITCH 2" EXCEPT WHEN PLACED OVER STANDARD EC-3 OR EC-3 LINED DITCH.
12. SEDIMENT RETENTION ROLLS AND STAKES USED FOR INLET PROTECTION APPLICATIONS SHALL BE REMOVED AFTER STABILIZATION IS COMPLETE.
13. GEOTEXTILE PRODUCTS DESIGNED TO BE INSERTED INTO OR ANCHORED TO GRATES OR SLOTS OF CURB INLETS, AND ARE FOUND ON VDOT'S EC-6 APPROVED PRODUCT LIST, MAY BE SUBSTITUTED FOR THE DROP INLET PROTECTION DEVICES DETAILED IN THIS STANDARD.

INLET PROTECTION (TYPE A), ITEM CODE 27451 EACH

SPECIFICATION REFERENCE	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. INLET PROTECTION (TYPE A) VIRGINIA DEPARTMENT OF TRANSPORTATION	VDOT ROAD AND BRIDGE STANDARDS	
107 245 242 303 244		REVISION DATE 04/19	SHEET 1 OF 3 113.09

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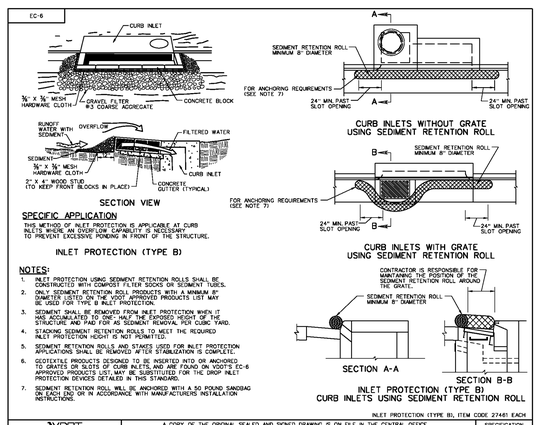
EC-6



NOTES:

1. INLET PROTECTION USING SEDIMENT RETENTION ROLLS SHALL BE CONSTRUCTED WITH COMPOSTED FILTER SOCKS OR SEDIMENT TUBES.
2. ONLY SEDIMENT RETENTION ROLL PRODUCTS WITH A MINIMUM 8" DIAMETER LISTED ON THE VDOT APPROVED PRODUCTS LIST MAY BE USED FOR TYPE B INLET PROTECTION.
3. SEDIMENT SHALL BE REMOVED FROM INLET PROTECTION WHEN IT HAS ACCUMULATED TO ONE-HALF THE EXPOSED HEIGHT OF THE STRUCTURE AND PAD FOR AS SEDIMENT REMOVAL PER CUBIC YARD.
4. STACKING SEDIMENT RETENTION ROLLS TO MEET THE REQUIRED INLET PROTECTION HEIGHT IS NOT PERMITTED.
5. SEDIMENT RETENTION ROLLS AND STAKES USED FOR INLET PROTECTION APPLICATIONS SHALL BE REMOVED AFTER STABILIZATION IS COMPLETE.
6. GEOTEXTILE PRODUCTS DESIGNED TO BE INSERTED INTO OR ANCHORED TO GRATES OR SLOTS OF CURB INLETS, AND ARE FOUND ON VDOT'S EC-6 APPROVED PRODUCTS LIST, MAY BE SUBSTITUTED FOR THE DROP INLET PROTECTION DEVICES DETAILED IN THIS STANDARD.
7. SEDIMENT RETENTION ROLL WILL BE ANCHORED WITH A 30 POUND SANDBAG ON EACH END OR IN ACCORDANCE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS.

INLET PROTECTION (TYPE B), ITEM CODE 27461 EACH

VDOT ROAD AND BRIDGE STANDARDS		A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. INLET PROTECTION (TYPE B) VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 2 OF 3	REVISION DATE		107 242 244 303
113.10	04/19		

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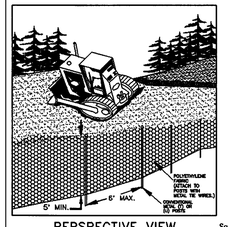
1992 3.01

TABLE 3.01-A

PHYSICAL PROPERTIES OF PLASTIC SAFETY FENCE

Physical Property	Test	Requirements
Recommended color	N/A	"International" orange
Tensile yield	ASTM D638	Average 2000 lbs. per 4 ft. width
Ultimate tensile strength	ASTM D638	Average 2900 lbs. per 4 ft. width
Elongation at break(%)	ASTM D638	Greater than 1000%
Chemical resistance	N/A	Inert to most chemicals and acids

Source: Conwed Plastics



PERSPECTIVE VIEW PLASTIC FENCE

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

SAF

TABLE 3.35-A

ORGANIC MULCH MATERIALS AND APPLICATION RATES

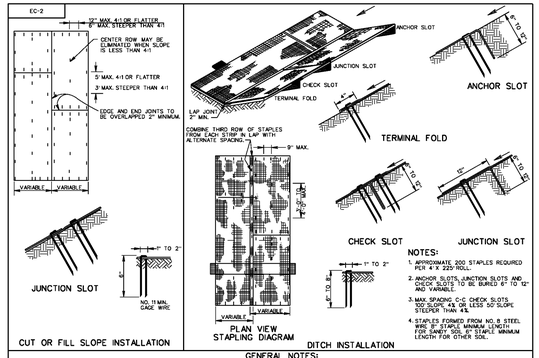
MULCHES:	RATES: Per Acre	RATES: Per 1000 sq. ft.	NOTES:
Straw or Hay	1½ - 2 tons (Minimum 2 tons for winter cover)	70 - 90 lbs.	Free from weeds and coarse matter. Must be anchored. Spread with mulch blower or by hand.
Fiber Mulch	Minimum 1500 lbs.	35 lbs.	Do not use as mulch for winter cover or during hot, dry periods.* Apply as slurry.
Corn Stalks	4 - 6 tons	185 - 275 lbs.	Cut or shredded in 4-6" lengths. Air-dried. Do not use in fine turf areas. Apply with mulch blower or by hand.
Wood Chips	4 - 6 tons	185 - 275 lbs.	Free of coarse matter. Air-dried. Treat with 12 lbs nitrogen per ton. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.
Bark Chips or Shredded Bark	50 - 70 cu. yds.	1-2 cu. yds.	Free of coarse matter. Air-dried. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.

* When fiber mulch is the only available mulch during periods when straw should be used, apply at a minimum rate of 2000 lbs./ac. or 45 lbs./1000 sq. ft.

Source: Va. DSWC

MU

EC-2



NOTES:

1. APPROXIMATE 200 STAPLES REQUIRED PER 4' X 225' ROLL.
2. ANCHOR SLOTS, JUNCTION SLOTS AND CHECK SLOTS TO BE BURIED 6" TO 12" AND VARIABLE.
3. MAX SPACING: C-C CHECK SLOTS 9' MAX. 4:1 OR LESS; 50' OVER STEEPER THAN 4:1.
4. STAPLES FORMED FROM NO. 8 STEEL WIRE; 8" STAPLE MINIMUM LENGTH FOR SANDY SOIL; 6" STAPLE MINIMUM LENGTH FOR OTHER SOIL.

GENERAL NOTES:

1. ROLLED EROSION CONTROL PRODUCT IS TO BE LOCATED AS INDICATED ON THE PLANS IN ACCORDANCE WITH THE DIMENSIONS SPECIFIED ON TYPICAL SECTION.
2. "T-TOP" STAPLES OR OTHER MANUFACTURER'S DESIGN APPROVED BY THE ENGINEER MAY BE SUBSTITUTED FOR THE STAPLES SHOWN.
3. WIDTH OF MATERIAL MAY VARY FROM MINIMUM DIMENSION BY INCREMENTS OF 4' OR 3' FEET.
4. FOR SOURCES OF APPROVED MATERIAL SEE VDOT'S APPROVED PRODUCTS LIST FOR EC-2 MATERIALS TYPES 1, 2, 3, OR 4.

VDOT ROAD AND BRIDGE STANDARDS		A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. ROLLED EROSION CONTROL PRODUCT PROTECTIVE COVERING INSTALLATION CRITERIA (TEMPORARY USE) VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 1 OF 1	REVISION DATE		244 606
113.02	07/16		

B/M

TABLE 3.31-B
(Revised June 2003)
TEMPORARY SEEDING SPECIFICATIONS
QUICK REFERENCE FOR ALL REGIONS

TS

SEED

APPLICATION DATES	SPECIES	APPLICATION RATES
Sept. 1 - Feb. 15	50/50 Mix of Annual Ryegrass (Iolium multi-florum) & Cereal (Winter) Rye (Secale cereale)	50 -100 (lbs/acre)
Feb. 16 - Apr. 30	Annual Ryegrass (Iolium multi-florum)	60 - 100 (lbs/acre)
May 1 - Aug. 31	German Millet	50 (lbs/acre)

FERTILIZER & LIME

- Apply 10-10-10 **fertilizer** at a rate of 450 lbs. / acre (or 10 lbs. / 1,000 sq. ft.)
- Apply **Pulverized Agricultural Limestone** at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)

NOTE:
1 - A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
2 - Incorporate the lime and fertilizer into the top 4 – 6 inches of the soil by disking or by other means.
3 - When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin # 4, 2003 Nutrient Management for Development Sites at http://www.dcr.state.va.us/sw/e&s.htm#pubs

TABLE 3.32-D
(Revised June 2003)
PERMANENT SEEDING SPECIFICATIONS FOR PIEDMONT AREA

PS

SEED[1]

LAND USE	SPECIES	APPLICATION PER ACRE
Minimum Care Lawn (Commercial or Residential)	Tall Fescue[1] Perennial Ryegrass Kentucky Bluegrass[1]	95-100% 0-5% 0-5% TOTAL: 175-200 lbs.
High-Maintenance Lawn	Tall Fescue[1]	TOTAL: 200-250 lbs.
General Slope (3:1 or less)	Tall Fescue[1] Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop[2]	128 lbs. 2 lbs. 20 lbs. TOTAL: 150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	Tall Fescue[1] Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop[2] Crownvetch[3]	108 lbs. 2 lbs. 20 lbs. 20 lbs. TOTAL: 150 lbs.

1 - When selecting varieties of turfgrass, use the Virginia Crop Improvement Association (VCIA) recommended turfgrass variety list. Quality seed will bear a label indicating that they are approved by VCIA. A current turfgrass variety list is available at the local County Extension office or through VCIA at 804-746-4884 or at http://sudan.cses.vt.edu/html/Turf/turf/publications/publications2.html
2 - Use seasonal nurse crop in accordance with seeding dates as stated below:

February 16th - April	Annual Rye
May 1st - August 15th	Foxtail Millet
August 16th - October	Annual Rye
November - February 15th	Winter Rye

3 - Substitute Sericea lespedeza for Crownvetch east of Farmville, VA (May through September use hulled seed, all other periods, use unhulled Sericea). If Flatpea is used, increase rate to 30 lbs./acre. If Weeping Lovegrass is used, include in any slope or low maintenance mixture during warmer seeding periods, increase to 30 -40

FERTILIZER & LIME

- Apply 10-20-10 **fertilizer** at a rate of **500** lbs. / acre (or 12 lbs. / 1,000 sq. ft.)
- Apply **Pulverized Agricultural Limestone** at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)

NOTE:
- A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
- Incorporate the lime and fertilizer into the top 4 – 6 inches of the soil by disking or by other means.
- When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin # 4, 2003 Nutrient Management for Development Sites at http://www.dcr.state.va.us/sw/e&s.htm#pubs

AMT
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CULPEPER, VIRGINIA 22701
PH: 540-829-8260
FAX: 540-829-8279
Email: ahopewell@culpeperva.gov

PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	NA
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

EROSION & SEDIMENT CONTROL DETAILS

SHEET

C10.4

SHEET 59 OF 70

X:\RICHMOND\16-0865.001 - CULPEPER US522 IMPROVEMENTS\05-CAD\16-0865001-DETAILS.DWG, 2/22/2022 9:13 AM, CRDBINSON

GENERAL NOTES

1. THIS PROJECT IS CLASSIFIED AS A "TYPE A" BASED UPON VDOT TED MEMO 351.4.
2. THE PROJECT WILL BE APPROXIMATELY 4,069 FEET ALONG U.S. ROUTE 522 (SPERRYVILLE PIKE/WEST EVANS STREET). THE WIDTH OF THE WORK ZONE VARIES.
3. THE PROJECT IS LOCATED ALONG U.S. ROUTE 522 BETWEEN APPROXIMATELY 300' WEST OF NORTH ASPEN STREET AND NORTH NORTH WEST STREET, AND ALONG A PORTION OF NORTH BLUE RIDGE AVENUE. THE PURPOSE OF THIS PROJECT IS A ROAD DIET, PEDESTRIAN AND BICYCLE IMPROVEMENTS, A MINI-ROUNDABOUT, DRAINAGE, AND LANDSCAPE IMPROVEMENTS.
4. THE EXISTING SPEED LIMIT FOR U.S. ROUTE 522 IS 35 MPH ON THE WEST SIDE OF FAIRVIEW CEMETERY AND 25 MPH ON THE EAST SIDE OF FAIRVIEW CEMETERY. THE EXISTING SPEED LIMITS SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION. AVERAGE DAILY TRAFFIC IS APPROXIMATELY 10,000 VEHICLES.
5. ANY REQUIRED LANE AND/OR ROAD CLOSURES MUST BE APPROVED IN ADVANCE BY THE VDOT ENGINEER.
6. NORMAL WORKING HOURS ARE FROM 7:00 AM TO 7:00 PM, MONDAY THROUGH SATURDAY. LANE CLOSURES AND STOPPING OF TRAFFIC SHALL ONLY BE ALLOWED BETWEEN THE HOURS OF 9:00 AM TO 1:30 PM, ON DAYS WHEN SCHOOL IS IN SESSION. ON NON-SCHOOL DAYS, LANE CLOSURES ARE PERMITTED BETWEEN THE HOURS OF 9:00 AM AND 3:00 PM, MONDAY THROUGH FRIDAY. EXCEPTIONS TO THESE LANE CLOSURE REQUIREMENTS REQUIRE PRIOR APPROVAL FROM VDOT. THERE WILL BE NO WORK WITHOUT THE PERMISSION OF THE ENGINEER ON SUNDAYS AND HOLIDAYS, PER SECTION 108 OF THE ROAD AND BRIDGE SPECIFICATIONS.
7. ALL AREAS EXCAVATED DEEPER THAN 2 INCHES BELOW EXISTING PAVEMENT SURFACE AND WITHIN THE CLEAR ZONE, AT THE CONCLUSION OF EACH WORKDAY, SHALL BE BACKFILLED TO FORM AN APPROXIMATE 6:1 WEDGE AGAINST THE PAVEMENT SURFACE FOR THE SAFETY AND PROTECTION OF VEHICULAR TRAFFIC. ALL COST FOR PLACING, MAINTAINING, AND REMOVING THE 6:1 WEDGE SHALL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS IN THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
8. ANY CONTRACT ITEM(S) NOT SPECIFICALLY NOTED IN THE MAINTENANCE OF TRAFFIC MAY BE SCHEDULED FOR CONSTRUCTION AT THE CONTRACTOR'S OPTIONS, AS APPROVED BY THE ENGINEER AND VDOT.
9. ACCESS TO ALL ADJACENT PROPERTIES AND CONNECTION STREETS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. PEDESTRIAN USE OF THE PROJECT AREA MUST BE CONSIDERED DURING CONSTRUCTION, WHILE NO EXISTING FACILITIES ARE PROVIDED, THE CONTRACTOR SHALL PROVIDE FOR PEDESTRIAN TRAFFIC AS NECESSARY.
10. THE FINAL SURFACE COURSE IS NOT TO BE PLACED UNTIL SUCH TIME THAT CONTINUOUS OPERATIONS ARE POSSIBLE FROM BEGINNING TO END OF THE PROJECT AND PERMANENT PAVEMENT MARKINGS CAN BE PLACED TO PROVIDE A CONTINUOUS FINAL COURSE AS APPLICABLE.
11. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DEPARTMENTS 2020 ROAD AND BRIDGE SPECIFICATIONS, 2020 ROAD AND BRIDGE STANDARDS, 2009 MUTCD, 2011 VIRGINIA SUPPLEMENT TO THE MUTCD, 2011 WORK AREA PROTECTION MANUAL, AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY.
12. THE CONTRACTOR SHALL PROVIDE ADDITIONAL TRAFFIC CONTROL AS DIRECTED BY VDOT, SHOULD FIELD CONDITIONS WARRANT.
13. THE CONTRACTOR IS RESPONSIBLE FOR PLACEMENT AND MAINTENANCE OF ALL TEMPORARY PAVEMENT MARKINGS THAT ARE REQUIRED OR IMPLIED IN THE CONSTRUCTION SEQUENCING. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL TRAFFIC CONTROL DEVICES, SIGNAGE, EQUIPMENT, PERSONNEL, INCLUDING CERTIFIED TRAFFIC-CONTROL PERSONNEL, ETC. TO CONTROL TRAFFIC DURING CONSTRUCTION WITHIN VDOT OWNED RIGHT-OF-WAY. ALL TRAFFIC CONTROL SHALL BE IN STRICT ACCORDANCE WITH THE STANDARDS, GUIDELINES, POLICIES, AND OBJECTIVES OF THE LATEST EDITION OF THE VIRGINIA WORK AREA PROTECTION MANUAL, MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AND ALL VDOT PERMITS. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE COMPLETED ACCORDING TO THE 2008 ROAD AND BRIDGE STANDARDS, SECTION 512.03 (J).
14. AT NO TIME SHALL CONSTRUCTION TAKE PLACE ON BOTH THE RIGHT AND LEFT SIDES OF VEHICLES UNLESS SPECIFIED BY VDOT OR THE ENGINEER.
15. DUE TO THE SURROUNDING RESIDENTIAL PROPERTIES, NIGHT WORK WILL ONLY BE PERMITTED FOR SPECIAL SITUATIONS. APPROVAL FROM VDOT AND THE TOWN OF CULPEPER IS REQUIRED IN WRITING PRIOR TO NIGHT TIME OPERATIONS.
16. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE THROUGHOUT CONSTRUCTION.
17. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE COMPLETED ACCORDING TO SECTION 512.03 (J).

TRANSPORTATION OPERATION PLAN

1. THE CONTRACTOR SHALL NOTIFY THE PUBLIC WHEN A LANE OR ROAD CLOSURE IS PLANNED. THE PROJECT PERSONNEL SHALL NOTIFY THE "REGIONAL TRANSPORTATION OPERATIONS CENTER" (RTOC) 48-HOURS IN ADVANCE OF WHEN THE CLOSURE IS IMPLEMENTED AND AGAIN WHEN IT IS REMOVED. THE RTOC WILL IN TURN PLACE THE INFORMATION INTO THE "511VIRGINIA" TRAFFIC ALERT SYSTEM (A SERVICE OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION).
2. THE FOLLOWING IS A LIST OF LOCAL EMERGENCY NUMBERS. THE PROCESS OF NOTIFICATION OF INCIDENT TO BE FOLLOWED IS:

A.	TRANSPORTATION OPERATIONS CENTER, SHIFT SUPERVISOR:	800-367-7623
B.	PROJECT MAINTENANCE OF TRAFFIC COORDINATORS (INSPECTOR): TBD	XXX-XXX-XXXX
C.	TOWN PROJECT MANAGER (CONSTRUCTION MANAGER): CHARLES RAPP	540-829-8260
D.	RESIDENCY ADMINISTRATOR: D. MARK NESBIT, P.E.	540-347-6441
E.	VDOT DISTRICT WORK ZONE SAFETY COORDINATOR: ADRIAN BLACKSTONE	540-332-7790
F.	DISTRICT TRAFFIC ENGINEER: TROY AUSTIN, P.E.	540-829-7668
G.	DISTRICT COMMUNICATIONS MANAGER: LOU HATTER	540-727-3201
H.	VIRGINIA STATE POLICE	540-829-7401
I.	CULPEPER POLICE DEPARTMENT	540-727-3430
J.	CULPEPER TOWN FIRE DEPARTMENT	540-825-8777

3. ANY TRAFFIC INCIDENT THAT OCCURS DURING THE LIFE OF THIS PROJECT WILL BE DISCUSSED BY THE CONTRACTOR, VDOT PERSONNEL, AND THE TOWN PROJECT PERSONNEL TO DETERMINE WHETHER ANY CHANGES NEED TO BE MADE TO THE TRAFFIC CONTROL OF THE PROJECT.
4. THE CONTRACTOR SHALL MAKE PROVISIONS TO DETOUR TRAFFIC AROUND THE INTERSECTION OF US 522 AND N. BLUE RIDGE AVENUE DURING CONSTRUCTION OF THE MINI-ROUNDABOUT IN ACCORDANCE WITH THE DETOUR PLAN SHOWN ON SHEET C12.0. CONTRACTOR SHALL PERFORM THE WORK ASSOCIATED WITH CONSTRUCTION OF THE MINI-ROUNDABOUT IN A MANNER THAT MINIMIZES THE AMOUNT OF TIME THAT THE DETOUR MUST BE IN EFFECT.

TEMPORARY TRAFFIC CONTROL (TTC) PLAN

1. LANE CLOSURES ARE ANTICIPATED FOR THIS PROJECT AND WILL BE IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL, 2011 EDITION - REVISION 2. AT A MINIMUM, THE FOLLOWING TEMPORARY TRAFFIC MEASURES SHALL BE USED:
   - 1.1. TYPICAL TRAFFIC CONTROL, SHOULDER OPERATION WITH MINOR ENCROACHMENT (FIGURE TTC-5.2)
   - 1.2. TYPICAL TRAFFIC CONTROL, OUTSIDE LANE CLOSURE OPERATION ON A FOUR-LANE ROADWAY (FIGURE TTC-16.2)
   - 1.3. TYPICAL TRAFFIC CONTROL, LANE CLOSURE ON A TWO-LANE ROADWAY USING FLAGGERS (FIGURE TTC-23.2)
   - 1.4. TYPICAL TRAFFIC CONTROL, OUTSIDE LANE CLOSURE OPERATION ON A MULTI-LANE ROUNDABOUT (FIGURE TTC-33.2)
   - 1.5. TYPICAL TRAFFIC CONTROL, STREET CLOSURE OPERATION WITH DETOUR (FIGURE TTC-34.2)
   - 1.6. TYPICAL TRAFFIC CONTROL, SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION (FIGURE TTC-35.1)
   - 1.7. TYPICAL TRAFFIC CONTROL, INTERIOR LANE CLOSURE OPERATION ON A MULTI-LANE ROADWAY (FIGURE TTC-42.2)
   - 1.8. TYPICAL TRAFFIC CONTROL, ROAD CLOSURE OPERATION WITH A DETOUR (FIGURE TTC-48.2)
   - 1.9. TYPICAL TRAFFIC CONTROL, SIGNING FOR PROJECT LIMITS (FIGURE TTC-53.0)
   - 1.10. TYPICAL TRAFFIC CONTROL, ERADICATION OF PAVEMENT MARKINGS IN A WORK ZONE (FIGURE TTC-55.1)
   - 1.11. TYPICAL TRAFFIC CONTROL, END OF DAY SIGNING FOR SURFACE TREATMENT, SLURRY SEAL AND LATEX EMULSION TREATMENT OPERATIONS (FIGURE TTC-64.1)
2. NEGATIVE IMPACTS TO THE TRAVELING PUBLIC SHALL BE MINIMIZED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ONE INTERMEDIATE LEVEL AND ONE BASIC LEVEL DESIGNATED WORK ZONE SAFETY COORDINATOR TO DEVELOP AND MONITOR ALL TRAFFIC CONTROL DEVICES AND ENSURE COMPLIANCE WITH THE CURRENT EDITION OF THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL (WAPM).
4. ALL WARNING SIGNS AND TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE PROMPTLY REMOVED UPON THE COMPLETION OF WORK, AS DIRECTED BY THE ENGINEER.

PUBLIC COMMUNICATION PLAN

1. PROJECT INFORMATION WILL BE GIVEN TO THE VDOT DISTRICT (CULPEPER DISTRICT) PUBLIC AFFAIRS AT LEAST ONE (1) MONTH IN ADVANCE OF THE START OF CONSTRUCTION, WITH WEEKLY UPDATES BY NOON ON THURSDAY FOR THE FOLLOWING WEEK'S WORK, TO ENSURE PROPER, TIMELY AND ACCURATE COMMUNICATION TO THE MEDIA AND GENERAL PUBLIC. THE VDOT TRANSPORTATION OPERATIONS CENTER (TOC) WILL CONTACT THE VDOT DISTRICT COMMUNICATIONS MANAGER.
2. THE CONTRACTOR SHALL COORDINATE WITH THE TOWN OF CULPEPER POLICE, FIRE AND RESCUE, AND CULPEPER COUNTY PUBLIC SCHOOLS SUPERINTENDENT CONCERNING ALL DETOURS AND ROAD CLOSURES OF ANY NATURE.
3. THE CONTRACTOR SHALL PLACE A MINIMUM OF FIVE (5) VARIABLE MESSAGE BOARDS IN ADVANCE OF THE PROJECT LIMITS (ONE FOR EACH APPROACH). THE VARIABLE MESSAGE BOARDS SHALL BE IN OPERATION FOR TWO (2) WEEKS PRIOR TO THE BEGINNING OF CONSTRUCTION ACTIVITIES.
4. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) WILL BE USED TO NOTIFY THE TRAVELING PUBLIC OF ANY SUCH MAJOR TRAFFIC CHANGES 72 HOURS IN ADVANCE OF THE CHANGE. CONTRACTOR SHALL PROVIDE PCMS MESSAGES FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS IN ADVANCE.
5. PROPERTY OWNERS AND BUSINESSES AFFECTED AS A RESULT OF THE PROPOSED CONSTRUCTION ZONES SHALL BE NOTIFIED IN ADVANCE AND THE CONTRACTOR SHALL PROVIDE ADEQUATE ACCESS DURING CONSTRUCTION.

RECOMMENDED SEQUENCE OF CONSTRUCTION

CONSTRUCTION OF THIS PROJECT WILL TAKE PLACE IN THREE DISTINCT PHASES. HOWEVER, BECAUSE OF THE LOCATION AND LIMITED SCOPE OF EACH PHASE OF WORK, IT IS ANTICIPATED THAT EACH PHASE WILL BE CONSTRUCTED INDEPENDENTLY OF THE OTHERS WITH VERY LITTLE OVERLAP.

THE FOLLOWING SEQUENCE OF CONSTRUCTION IS A RECOMMENDATION PROVIDED BY THE ENGINEER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING APPROVAL FOR ANY CHANGES TO THIS TRANSPORTATION MANAGEMENT PLAN RESULTING FROM ADJUSTMENTS TO THIS RECOMMENDED SEQUENCE. ALL PHASES OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLANS PROVIDED.

TRAFFIC SHALL BE MAINTAINED ACCORDING TO THE TTC FIGURES AS PRESCRIBED IN THIS PLAN THROUGH THE USE OF GROUP II CHANNELIZING DEVICES AND PROPER SIGNAGE. THE CONTRACTOR SHALL MINIMIZE LANE CLOSURES TO THE GREATEST EXTENT PRACTICAL.

PHASE 1 – SIDEWALK IMPROVEMENTS WEST OF COLONEL JAMESON BLVD.

1-1 INSTALL ALL SIGNAGE FOR PROJECT LIMITS PER THIS SHEET AND TTC-53.0. COMMENCE CLEARING AND INSTALLATION OF EROSION CONTROL MEASURES IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLANS. REMOVAL, RELOCATION AND/OR SURFACE ADJUSTMENTS OF UTILITY FEATURES SHALL BE COMPLETED PRIOR TO OR DURING THIS PHASE, THEN PERFORM GRADING OPERATIONS FOR THE PROPOSED SIDEWALK.

1-2 CONSTRUCT CURB RAMPS, CURB AND GUTTER, RETAINING WALLS, SIDEWALK, STORM STRUCTURES AND PIPES PER PLANS, TTC-5.1, AND TTC-23.1.

1-3 PERFORM FINAL GRADING OPERATIONS AND PLACE FINAL SEED MIX AND STABILIZE ALL WORK AREAS.

1-4 UPON COMPLETION OF ALL WORK, REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (AS APPROVED BY THE ENVIRONMENTAL INSPECTOR) ASSOCIATED WITH PHASE 1 AND THEN ALL TEMPORARY TRAFFIC CONTROL DEVICES ASSOCIATED WITH PHASE 1. RESTORE ALL REMAINING DISTURBED AREAS ASSOCIATED WITH PHASE 1.

PHASE 2 – ROAD DIET BETWEEN COLONEL JAMESON BLVD. AND BRIDGE OVER MOUNTAIN RUN

2-1 CONSTRUCT NEW CURB RAMPS PER THE PLANS AND TTC-16.1.

2-2 CONSTRUCT NEW MEDIAN LANDSCAPE ISLANDS PER THE PLANS AND TTC-42.1.

2-3 PERFORM SLURRY SEAL AND APPLY NEW ROADWAY PAVEMENT MARKINGS PER THE PLANS AND TTC-23.1. WORK SHALL BE COMPLETED ON THE NORTH SIDE OF THE ROADWAY PRIOR TO COMMENCING WORK ON THE SOUTH SIDE OF THE ROADWAY.

2-4 UPON COMPLETION OF ALL WORK, REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (AS APPROVED BY THE ENVIRONMENTAL INSPECTOR) ASSOCIATED WITH PHASE 2 AND THEN ALL TEMPORARY TRAFFIC CONTROL DEVICES ASSOCIATED WITH PHASE 2. RESTORE ALL REMAINING DISTURBED AREAS ASSOCIATED WITH PHASE 2.

PHASE 3 – MINI-ROUNDABOUT AND ROAD DIET BETWEEN BRIDGE OVER MOUNTAIN RUN AND N. WEST ST.

3-1 REMOVE PROJECT LIMITS SIGNAGE SHOWN ON THIS SHEET AND INSTALL DETOUR SIGNAGE AND TEMPORARY TRAFFIC CONTROL DEVICES PER SHEET C12.0 AND TTC-34.1.

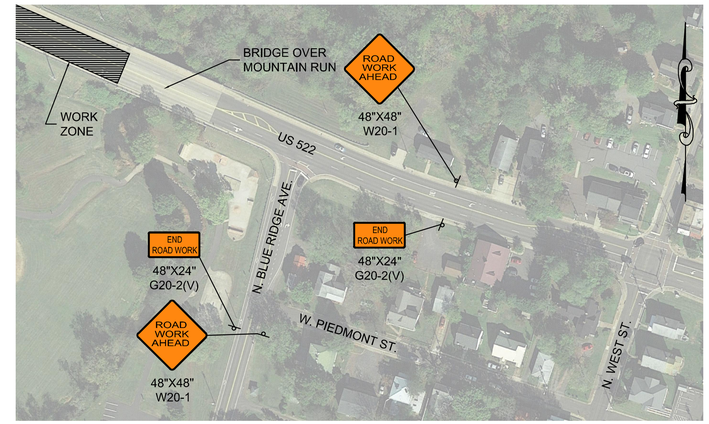
3-2 CONSTRUCT MINI-ROUNDABOUT INCLUDING CURB RAMPS, CURB AND GUTTER, TRUCK APRON, SPLITTER ISLANDS, PAVEMENT MARKINGS, SIDEWALK, STORM STRUCTURES, AND PIPES.

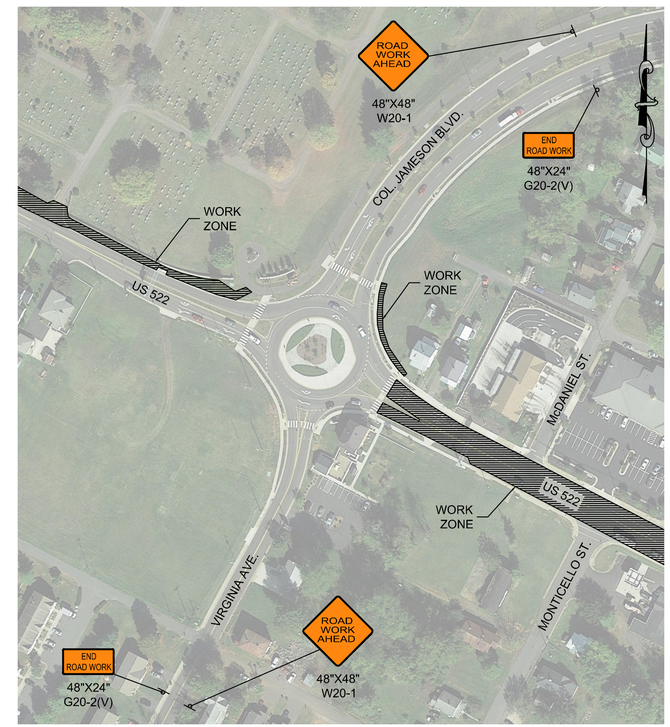
3-3 PERFORM FINAL GRADING AND PLACE FINAL SEED MIX AND STABILIZE ALL WORK AREAS.

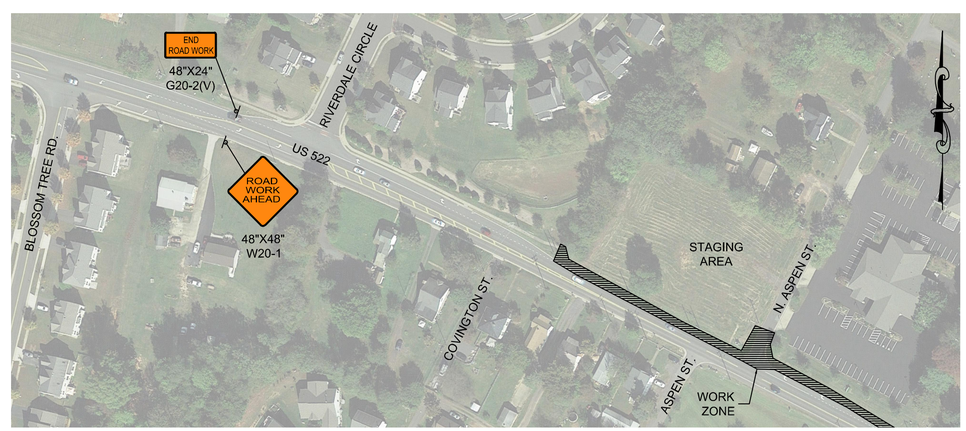
3-4 APPLY SLURRY SEAL AND NEW ROADWAY PAVEMENT MARKINGS AS SHOWN ON THE PLANS FOR N. BLUE RIDGE AVE. AND PORTIONS OF US 522 LOCATED BETWEEN BRIDGE OVER MOUNTAIN RUN AND N. WEST ST.

3-4 UPON COMPLETION OF ALL WORK, REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (AS APPROVED BY THE ENVIRONMENTAL INSPECTOR) AND RESTORE ALL REMAINING AREAS.

3-5 REMOVE ALL PHASE 3 TEMPORARY TRAFFIC CONTROL DEVICES AND REOPEN ROADWAYS. THEN REMOVE ALL DETOUR SIGNAGE.







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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	10/20/21
SCALE:	N.T.S.
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DRAWN BY:	MPH
CHECKED BY:	MCG

100% DESIGN

SHEET TITLE

TRAFFIC MANAGEMENT PLAN

SHEET

C11.0

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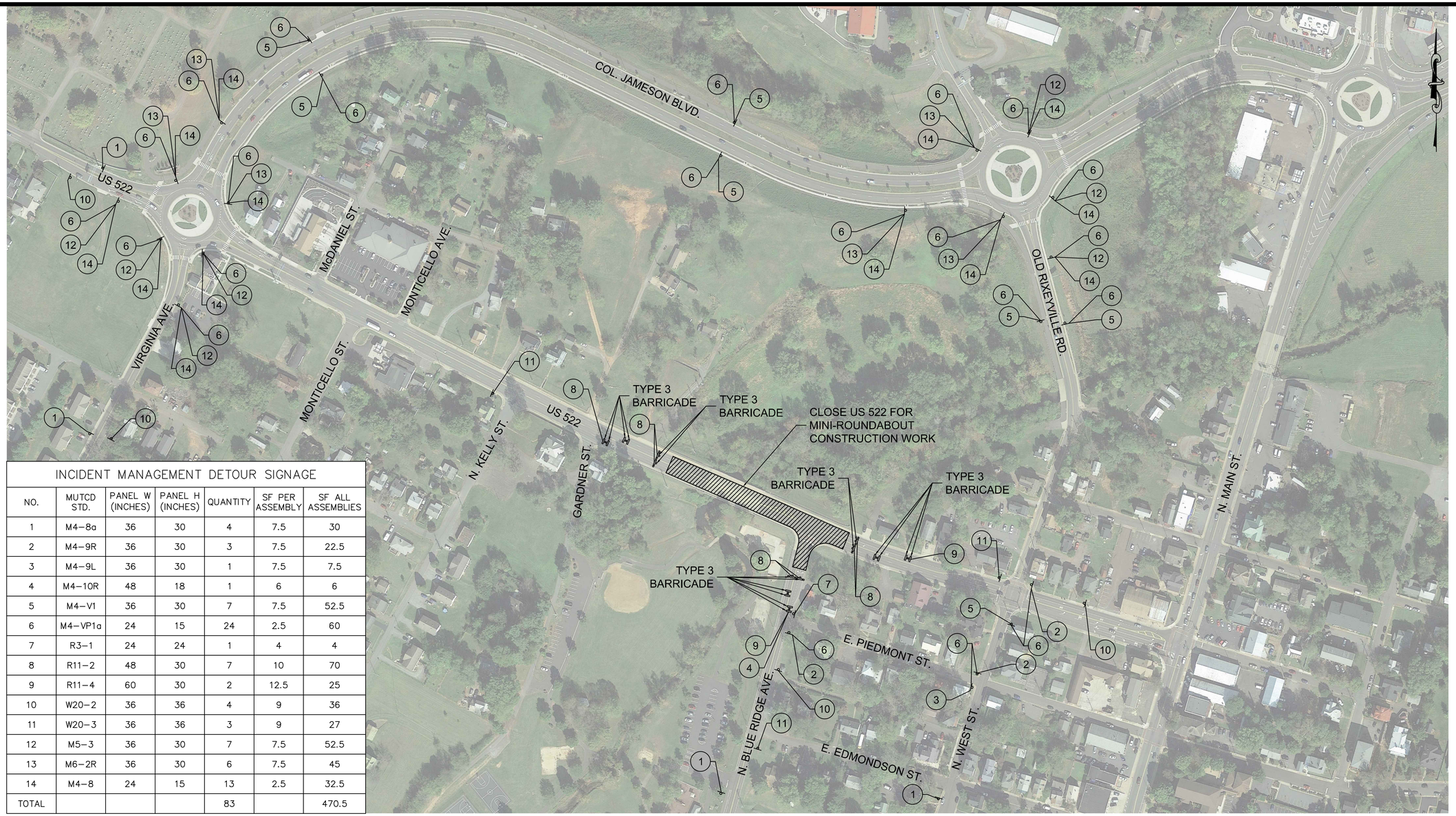


INCIDENT MANAGEMENT DETOUR SIGNAGE						
NO.	MUTCD STD.	PANEL W (INCHES)	PANEL H (INCHES)	QUANTITY	SF PER ASSEMBLY	SF ALL ASSEMBLIES
1	M4-8a	36	30	4	7.5	30
2	M4-9R	36	30	3	7.5	22.5
3	M4-9L	36	30	1	7.5	7.5
4	M4-10R	48	18	1	6	6
5	M4-V1	36	30	7	7.5	52.5
6	M4-VP1a	24	15	24	2.5	60
7	R3-1	24	24	1	4	4
8	R11-2	48	30	7	10	70
9	R11-4	60	30	2	12.5	25
10	W20-2	36	36	4	9	36
11	W20-3	36	36	3	9	27
12	M5-3	36	30	7	7.5	52.5
13	M6-2R	36	30	6	7.5	45
14	M4-8	24	15	13	2.5	32.5
TOTAL				83		470.5

1

M4-8a
N.T.S

2

M4-9R
N.T.S

3

M4-9L
N.T.S

4

M4-10R
N.T.S

5

M4-V1
N.T.S

6

NOTE:
"MAIN ST" SHOWN FOR REFERENCE ONLY. PROJECT SIGNS SHALL READ "US 522".
M4-VP1a
N.T.S

7

R3-1
N.T.S

8

R11-2
N.T.S

9

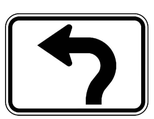
R11-4
N.T.S

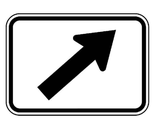
10

W20-2
N.T.S

11

W20-3
N.T.S

12

M5-3
N.T.S

13

M6-2R
N.T.S

NOTE:
TEMPORARY M5-3 AND M6-2R SIGNS SHALL BE PROVIDED WITH AN ORANGE BACKGROUND TO INDICATE WORK ZONE.

14

M4-8
N.T.S

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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

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DRAWN BY:	MPH
CHECKED BY:	MCG

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SHEET TITLE

DETOUR PLAN (PHASE 3)

SHEET

C12.0

SHEET 61 OF 70

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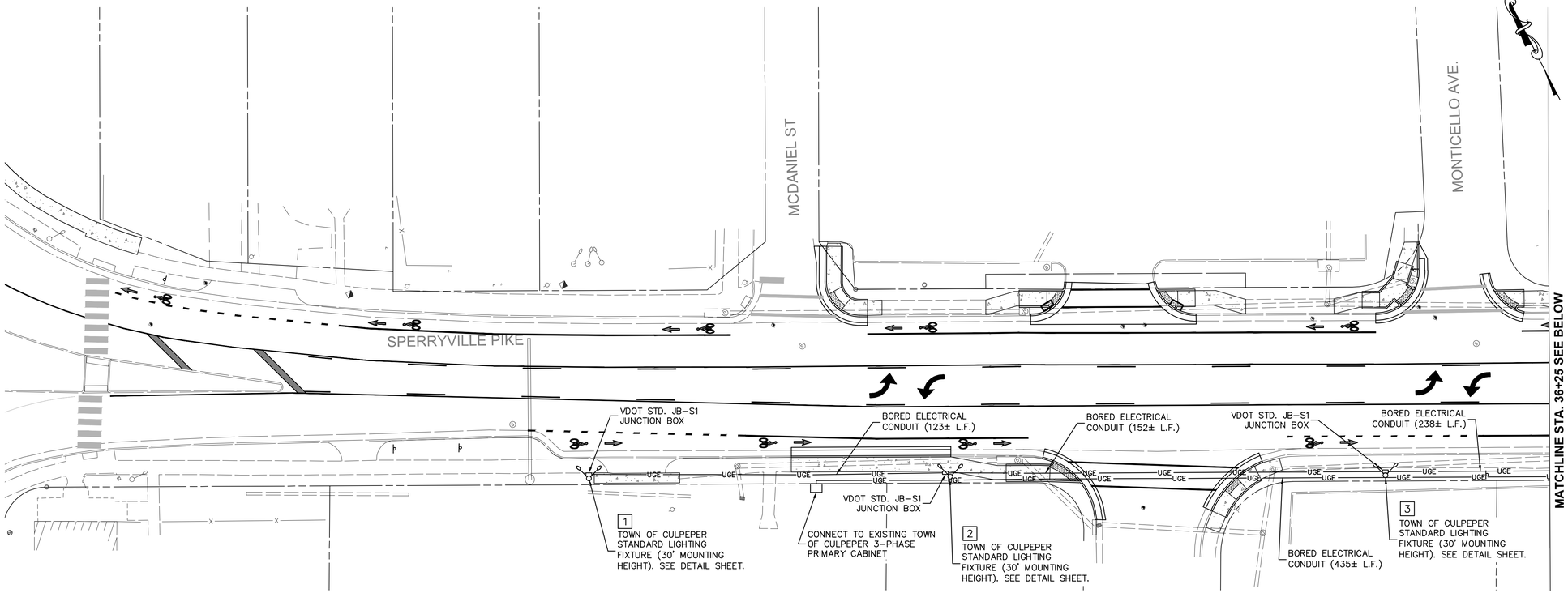

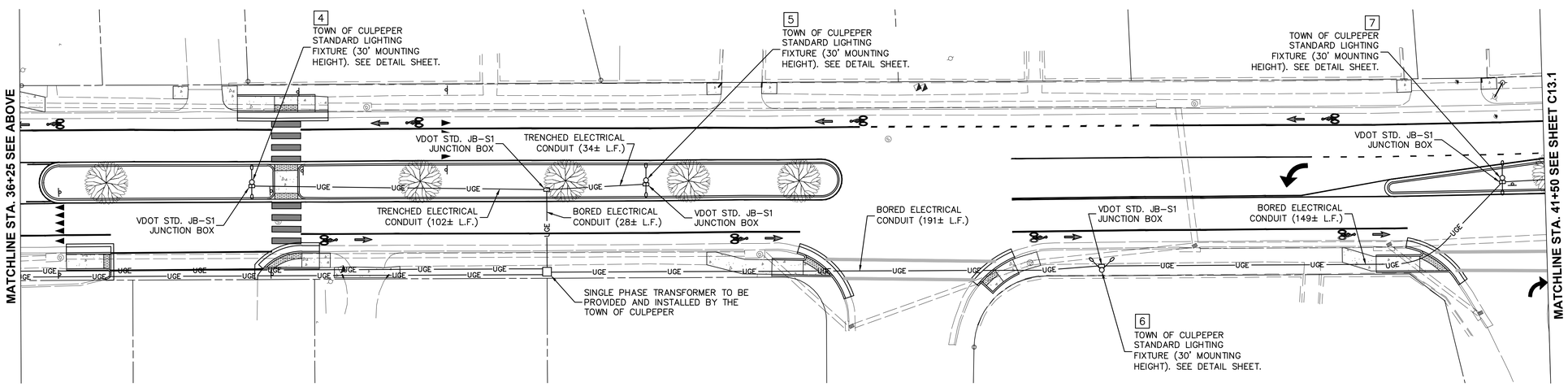

LIGHTING NOTES:

1. BID ADDITIVE #2 INCLUDES ALL WORK ASSOCIATED WITH INSTALLATION OF ROADWAY LIGHTING AS SHOWN ON SHEETS C13.0–13.2.
2. PHOTOMETRICS TO BE PROVIDED BY THE TOWN OF CULPEPER, IF REQUIRED.
3. JUNCTION BOXES AND HAND HOLES TO BE UTILIZED TO PULL CONNECTOR CABLES.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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PROFESSIONAL ENGINEER

OWNER

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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

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LIGHTING PLAN

SHEET

C13.0

SHEET 62 OF 70

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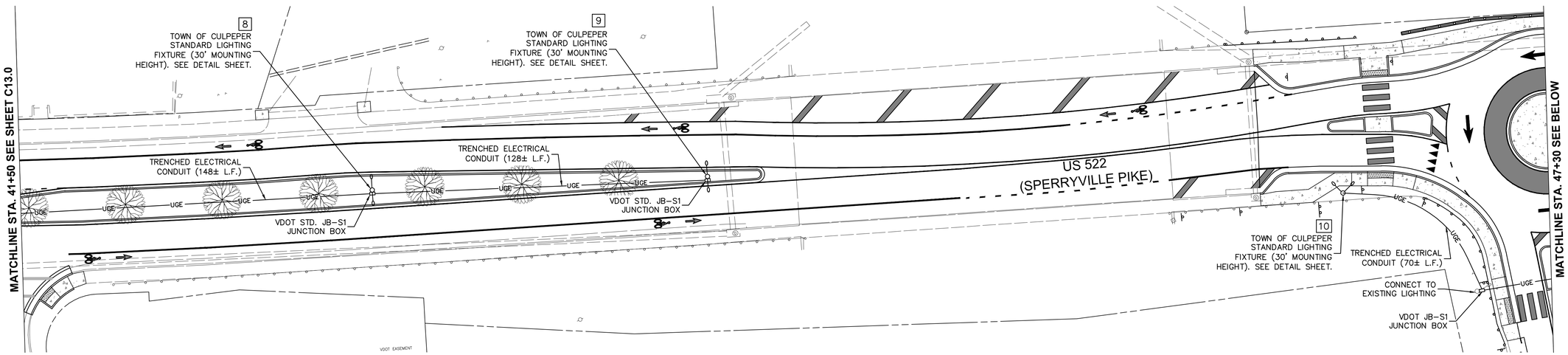

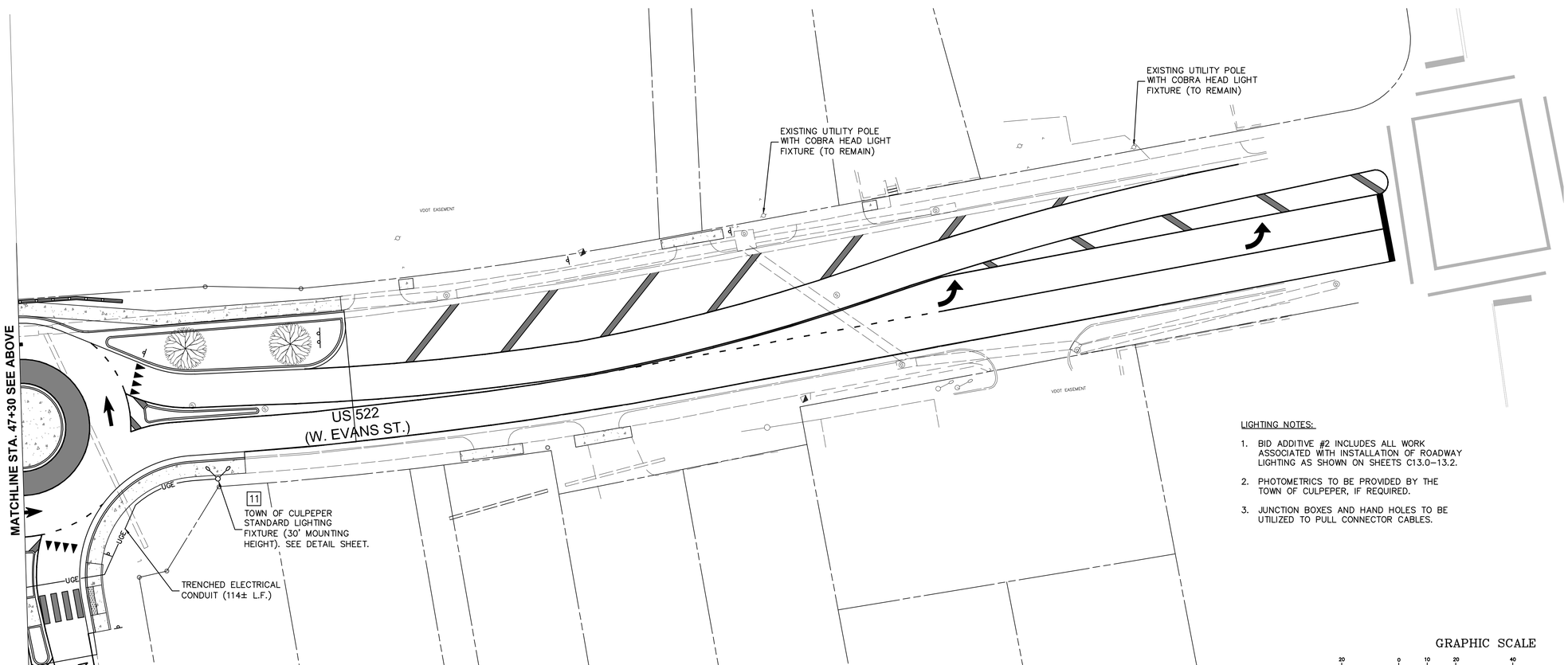

LIGHTING NOTES:

1. BID ADDITIVE #2 INCLUDES ALL WORK ASSOCIATED WITH INSTALLATION OF ROADWAY LIGHTING AS SHOWN ON SHEETS C13.0–13.2.
2. PHOTOMETRICS TO BE PROVIDED BY THE TOWN OF CULPEPER, IF REQUIRED.
3. JUNCTION BOXES AND HAND HOLES TO BE UTILIZED TO PULL CONNECTOR CABLES.

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CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

LIGHTING PLAN

SHEET

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SHEET 63 OF 70

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LEOTEK LITE-ON GROUP

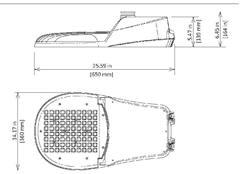
GreenCobra™ LED Street Light

GC1 F-Series Specification Data Sheet

Project
Type
Catalog No.

Luminaire Data

Weight 21 lbs [9.5 kg]
EPA 0.67 ft²



Ordering Information
Sample Catalog No. GC1 60F MV NW 2 GY 350 BSX RPB TDC

Product	No. & Type of LEDs	Voltage[1]	Color Temperature	Distribution	Finish[7]	Drive Current[2]	Options
GC1	20F 30F 40F 60F 80F	MV 120-277V HV 347-480V	WW 3000K NW 4000K CW 5000K	2 Type 2 3 Type 3	GY Gray DB Dark Bronze BK Black	350 350mA 530 530mA 700 700mA 1A[3] 1A	HSS[5] House Side Shield (Factory Installed) FDC[6] Fixed Drive Current FFA[7] Full Field Adjustability LPCR Less Photocontrol Receptacle PCR7 ANSI 7-wire Photocontrol Receptacle PCR7-CR[8] Control Ready 7-wire Photocontrol Receptacle SC PCR Shorting Cap WL Utility Wattage Label

Notes:
1 MV is DLC qualified. HV is DLC qualified on request, consult factory.
2 Gray, Black and Dark Bronze standard, consult factory for other finishes.
3 Specified drive current code is the factory set maximum drive current. Field adjustable current selector enables standard dimming to lower wattage drive currents only. Consult factory if wattage limits require a special drive current.
4 1A drive current only available with 4DF.
5 Flush mounted house side shield factory installed. Shield cuts light off at 1/2 mounting height behind luminaire.
6 Non-field adjustable, fixed drive current.
7 The FFA option enables full field adjustability from the specified drive current code to all drive currents available. This option is not DLC qualified.
8 Control-ready wired at factory for wireless node dimming. Supplied at maximum drive current. If lower drive current is required, consult factory.
9 Flush mounted house side shield. Shield cuts light off at 1/2 mounting height behind luminaire. Specify Model and Color.
10 Specify Color (GY, DB, BK)
11 Specify MV (120-277V) or HV (347V-480V)

Accessories*	
HSSGC1[1]	House Side Shield
SPB[10]	Square Pole Horizontal Arm Bracket
RPB[10]	Round Pole Horizontal Arm Bracket
PTB[10]	Pole Top Tenon Horizontal Arm Bracket
PTB2[10]	Pole Top Tenon Horizontal Arm Bracket (2@180°)
WB[10]	Wall Horizontal Arm Bracket
BSK	Bird Deterrent Spider Kit
LLPC[11]	Long-Life Twist Lock Photocontrol
SC	Twist Lock Shorting Cap

*Accessories are ordered separately and not to be included in the catalog number

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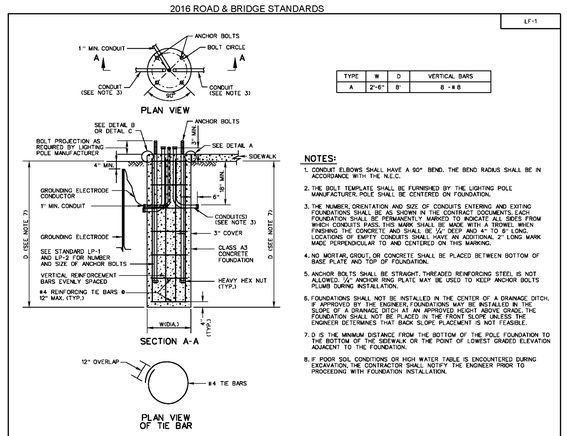
LIGHTING NOTES:

1. BID ADDITIVE #2 INCLUDES ALL WORK ASSOCIATED WITH INSTALLATION OF ROADWAY LIGHTING AS SHOWN ON SHEETS C13.0–13.2.
2. PHOTOMETRICS TO BE PROVIDED BY THE TOWN OF CULPEPER, IF REQUIRED.
3. JUNCTION BOXES AND HAND HOLES TO BE UTILIZED TO PULL CONNECTOR CABLES.
4. TOWN OF CULPEPER STANDARD LIGHT FIXTURE IS LEOTEK GREENCOBRA LED STREET LIGHT GC1–80F–MV–NW–3–GY–530MA.
5. EACH LIGHT POLE SHALL BE INSTALLED WITH 2 TOWN OF CULPEPER STANDARD LIGHT FIXTURES WHICH ARE ORIENTED AS SHOWN ON THE DRAWINGS.
6. LUMINAIRE ARMS SHALL BE 8' LONG AND MADE OF ALUMINUM. EACH LIGHT FIXTURE SHALL BE ATTACHED TO A SEPARATE LUMINAIRE ARM.
7. ALL CONDUIT SHALL BE DIRECTIONAL BORED UNLESS OTHERWISE INDICATED ON THE PLANS OR APPROVED BY THE TOWN OF CULPEPER.
8. A SEPARATE PHOTOCELL SHALL BE PROVIDED FOR EACH LIGHT POLE.

2016 ROAD & BRIDGE STANDARDS



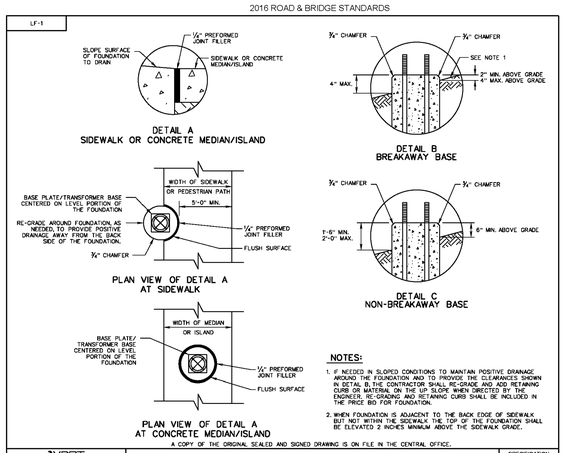
TYPE	W	D	VERTICAL BARS
A	2'-6"	8'	8 - #8

NOTES:
1. CONDUIT ELBOWS SHALL HAVE A 90° BEND. THE BEND RADIUS SHALL BE IN ACCORDANCE WITH THE N.E.C.
2. THE BOLT TEMPLATE SHALL BE FURNISHED BY THE LIGHTING POLE MANUFACTURER. POLE SHALL BE CENTERED ON FOUNDATION.
3. THE NUMBER, ORIENTATION AND SIZE OF CONDUITS ENTERING AND EXITING FOUNDATIONS, AS SHOWN IN THE CONTRACT DOCUMENTS, EACH FOUNDATION SHALL BE PERMANENTLY MARKED TO INDICATE ALL SIDES FROM WHICH CONDUITS PASS. THIS MARK SHALL BE MADE WITH A TROWEL WHEN FINISHING THE CONCRETE AND SHALL BE ½" DEEP AND 4" TO 6" LONG. LOCATIONS OF EMPTY CONDUITS SHALL HAVE AN ADDITIONAL 2" LONG MARK MADE PERPENDICULAR TO AND CENTERED ON THIS MARKING.
4. NO MORTAR, GROUT, OR CONCRETE SHALL BE PLACED BETWEEN BOTTOM OF BASE PLATE AND TOP OF FOUNDATION.
5. ANCHOR BOLTS SHALL BE STRAIGHT. THREADED REINFORCING STEEL IS NOT ALLOWED. ¼" ANCHOR RING PLATE MAY BE USED TO KEEP ANCHOR BOLTS PLUMB DURING INSTALLATION.
6. FOUNDATIONS SHALL NOT BE INSTALLED IN THE CENTER OF A DRAINAGE DITCH. IF APPROVED BY THE ENGINEER, FOUNDATIONS MAY BE INSTALLED IN THE SLOPE OF A DRAINAGE DITCH AT AN APPROVED HEIGHT ABOVE GRADE. THE FOUNDATION SHALL NOT BE PLACED IN THE FRONT SLOPE UNLESS THE ENGINEER DETERMINES THAT BACK SLOPE PLACEMENT IS NOT FEASIBLE.
7. D IS THE MINIMUM DISTANCE FROM THE BOTTOM OF THE POLE FOUNDATION TO THE BOTTOM OF THE SIDEWALK OR THE POINT OF LOWEST GRADED ELEVATION ADJACENT TO THE FOUNDATION.
8. IF POOR SOIL CONDITIONS OR HIGH WATER TABLE IS ENCOUNTERED DURING EXCAVATION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH FOUNDATION INSTALLATION.

SPECIFICATION REFERENCE: 700
A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.
LIGHTING POLE FOUNDATION
INSTALLATION DETAILS
VIRGINIA DEPARTMENT OF TRANSPORTATION
VDOT ROAD AND BRIDGE STANDARDS
REVISION DATE 08/17 | SHEET 1 OF 2 | 1310.20

2016 ROAD & BRIDGE STANDARDS

2016 ROAD & BRIDGE STANDARDS



NOTES:
1. IF NEEDED IN SLOPED CONDITIONS TO MAINTAIN POSITIVE DRAINAGE AROUND THE FOUNDATION, AND TO PROVIDE THE CLEARANCES SHOWN IN DETAIL B, THE CONTRACTOR SHALL RE-GRADE AND ADD RETAINING CURB OR MATERIAL ON THE UP SLOPE WHEN DIRECTED BY THE ENGINEER. RE-GRADING AND RETAINING CURB SHALL BE INCLUDED IN THE PRICE BID FOR FOUNDATION.
2. WHEN FOUNDATION IS ADJACENT TO THE BACK EDGE OF SIDEWALK BUT NOT WITHIN THE SIDEWALK, THE TOP OF THE FOUNDATION SHALL BE ELEVATED 2 INCHES MINIMUM ABOVE THE SIDEWALK GRADE.

VDOT ROAD AND BRIDGE STANDARDS | SHEET 2 OF 2 | REVISION DATE 07/16 | 1310.21
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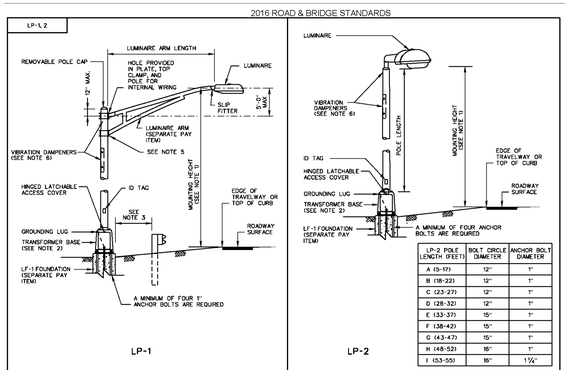
LIGHTING POLE FOUNDATION
INSTALLATION DETAILS
VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIFICATION REFERENCE 700

2016 ROAD & BRIDGE STANDARDS

2016 ROAD & BRIDGE STANDARDS



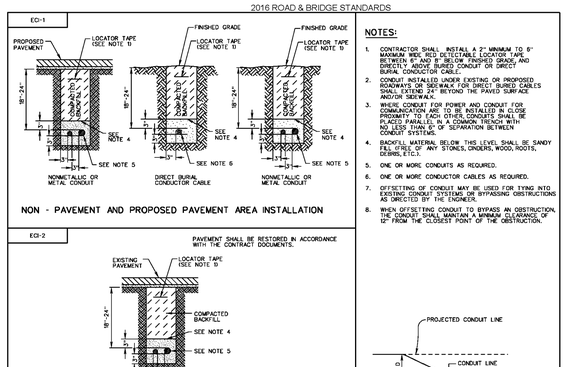
LP-2 POLE LENGTH (FEET)	BOLT CIRCLE DIAMETER	ANCHOR BOLT DIAMETER
A (5-17)	12"	1"
B (18-22)	12"	1"
C (23-27)	12"	1"
D (28-32)	12"	1"
E (33-37)	15"	1"
F (38-42)	15"	1"
G (43-47)	15"	1"
H (48-52)	16"	1"
I (53-55)	18"	1¼"

NOTES:
1. THE MOUNTING HEIGHT SHOWN IN THE CONTRACT DOCUMENTS SHALL BE ADHERED TO WITHIN A TOLERANCE OF 12" AND IN NO CASE LESS THAN THE MOUNTING HEIGHT SHOWN.
2. TIGHTEN TRANSFORMER BASE NUTS WITH A WRENCH USING TURN-OF-THE-NUT METHOD UNLESS SPECIFIED OTHERWISE IN MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. LP-1 AND LP-2 LIGHTING POLES SHALL BE LOCATED SUCH THAT THE NEAR SIDE EDGE OF THE FOUNDATION IS OUTSIDE OF THE GUARDRAIL DEFLECTION DISTANCE.
4. ALL LP-1 AND LP-2 POLES SHALL BE INSTALLED ON BREAKAWAY OR NON-BREAKAWAY TRANSFORMER BASES, AS SPECIFIED ON THE PLANS. IF LEVELING NUTS ARE USED FOR INSTALLATION, A VARMIT SCREEN SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD VS-1.
5. POLE CLAMP SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS WITHOUT THE USE OF SPACERS OR SHIMS.
6. FIRST AND SECOND MODE VIBRATION DAMPENERS SHALL BE DESIGNED AND INSTALLED ON ALL ALUMINUM POLES.

VDOT ROAD AND BRIDGE STANDARDS | SHEET 1 OF 1 | REVISION DATE 09/18 | 1311.10
A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.
LIGHTING POLE
INSTALLATION DETAILS
VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIFICATION REFERENCE 700

2016 ROAD & BRIDGE STANDARDS

2016 ROAD & BRIDGE STANDARDS

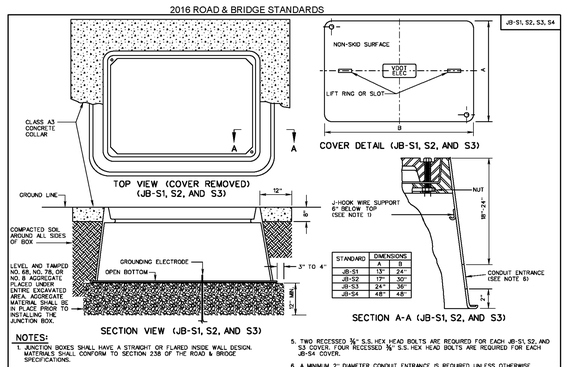


NOTES:
1. CONTRACTOR SHALL INSTALL A 2" MINIMUM TO 6" MAXIMUM WIDE, RED DETECTABLE LOCATOR TAPE BETWEEN 6" AND 8" BELOW FINISHED GRADE, AND DIRECTLY ABOVE BURIED CONDUIT OR DIRECT BURIAL CONDUCTOR CABLE.
2. CONDUIT INSTALLED UNDER EXISTING OR PROPOSED PAVEMENT OR SIDEWALK FOR DIRECT BURIED CABLES SHALL EXTEND 24" BEYOND THE PAVED SURFACE AND/OR SIDEWALK.
3. WHERE CONDUIT FOR POWER AND CONDUIT FOR COMMUNICATION ARE TO BE INSTALLED IN CLOSE PROXIMITY TO EACH OTHER, CONDUITS SHALL BE PLACED PARALLEL IN A COMMON TRENCH WITH A MINIMUM 2" VERTICAL OF SEPARATION BETWEEN CONDUIT SYSTEMS.
4. BACKFILL MATERIAL BELOW THIS LEVEL SHALL BE SANDY FILL (FREE OF ANY STONES, CINDERS, WOOD, ROOTS, DEBRIS, ETC.).
5. ONE OR MORE CONDUITS AS REQUIRED.
6. ONE OR MORE CONDUCTOR CABLES AS REQUIRED.
7. OFFSETTING OF CONDUIT MAY BE USED FOR TYING INTO EXISTING CONDUIT SYSTEMS OR BYPASSING OBSTRUCTIONS AS DIRECTED BY THE ENGINEER.
8. WHEN OFFSETTING CONDUIT TO BYPASS AN OBSTRUCTION, THE CONDUIT SHALL MAINTAIN A MINIMUM CLEARANCE OF 12" FROM THE CLOSEST POINT OF THE OBSTRUCTION.

VDOT ROAD AND BRIDGE STANDARDS | SHEET 1 OF 1 | REVISION DATE 09/18 | 1318.10
A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.
ELECTRICAL CONDUIT AND CONDUCTOR CABLE
UNDERGROUND INSTALLATION
VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIFICATION REFERENCE 700 302

2016 ROAD & BRIDGE STANDARDS

2016 ROAD & BRIDGE STANDARDS



STANDARD	DIMENSIONS A	B
JB-S1	13"	24"
JB-S2	17"	30"
JB-S3	24"	36"
JB-S4	48"	48"

NOTES:
1. JUNCTION BOXES SHALL HAVE A STRAIGHT OR FLARED INSIDE WALL DESIGN. MATERIALS SHALL CONFORM TO SECTION 238 OF THE ROAD & BRIDGE SPECIFICATIONS.
2. CONDUIT ENTRANCES SHALL BE LOCATED AS SHOWN IN THE CONTRACT DOCUMENTS. CONDUITS SHALL EXTEND 2" MIN. TO 3" MAX. INTO THE INSIDE WALL OF THE JUNCTION BOX.
3. EACH COVER SECTION SHALL HAVE A NON-SKID SURFACE WITH LETTERS CAST IN THE DEPRESSION ON TOP OR OTHER PRE-APPROVED METHODS THAT DO NOT REQUIRE THE USE OF ADHESIVES. THE LETTERS "VDOT ELEC", "VDOT TRAF", "VDOT COMM", "VDOT FIBER", OR "UTILITY" AS APPLICABLE ARE TO BE 1" WIDE. COVERS SHALL HAVE A LIFT RING OR SLOT INSTALLED THAT WILL BE MAINTAINED BY LOCALITIES SHALL OWN THE ROAD "VDOT".
4. ALL JUNCTION BOXES SHALL BE INSTALLED WITH A GROUNDING ELECTRODE.
5. TWO RECESSED ⅝"-11 S.S. HEX HEAD BOLTS ARE REQUIRED FOR EACH JB-S1, S2, AND S3 COVER. FOUR RECESSED ⅝"-11 S.S. HEX HEAD BOLTS ARE REQUIRED FOR EACH JB-S4 COVER.
6. A MINIMUM 2" DIAMETER CONDUIT ENTRANCE IS REQUIRED, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.
7. J-HOOK WIRE SUPPORTS SHALL BE SECURELY ATTACHED TO THE JUNCTION BOX WITH A BOLT AND NUT WITH A NEOPRENE WASHER OR AN EXPANSION FITTING. ONE J-HOOK PER WALL SHALL BE INSTALLED FOR JB-S1, S2, AND S3 BOXES. TWO J-HOOKS PER WALL SHALL BE INSTALLED FOR JB-S4 BOXES.
8. VOIDS RESULTING FROM ENTRANCE OF CONDUITS INTO JUNCTION BOXES SHALL BE COMPLETELY FILLED WITH AN APPROVED MATERIAL.
9. CONDUIT STUB-OUTS, WHEN INSTALLED, SHALL EXTEND A MINIMUM OF 6" PAST THE OUTSIDE OF THE JUNCTION BOX.

SPECIFICATION REFERENCE 700 238
A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.
JUNCTION BOX
FOR NON-DELIBERATE TRAFFIC USE
VIRGINIA DEPARTMENT OF TRANSPORTATION
VDOT ROAD AND BRIDGE STANDARDS
REVISION DATE 08/17 | SHEET 1 OF 2 | 1317.20

2016 ROAD & BRIDGE STANDARDS

AMT
A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
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RICHMOND, VIRGINIA 23235
(804) 276-6231 FAX: (804) 276-6233
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TOWN OF CULPEPER, VIRGINIA

REGISTRATION STAMP

COMMONWEALTH OF VIRGINIA
DONALD J. RISSMEYER
2-21-22
Lic. No. 26104
PROFESSIONAL ENGINEER

OWNER

TOWN OF CULPEPER
400 S. MAIN STREET, SUITE 301
CULPEPER, VIRGINIA 22701
PH: 540-829-8260
FAX: 540-829-8279
Email: ahopewell@culpeperva.gov

PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	NA
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

LIGHTING DETAILS

SHEET

C13.2

SHEET 64 OF 70

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STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEET

See Sheet 2 of 3 for Acronyms

U000-204-176, P101, R201, C501

THE INFORMATION CONTAINED IN THE SWPPP GENERAL INFORMATION SHEETS IS INTENDED TO COMPLY WITH THE REQUIREMENTS OF THE VPDES GENERAL PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES (THE VPDES CONSTRUCTION PERMIT) ISSUED JULY 1, 2019 AND VDOT'S APPROVED ESC AND SWM STANDARDS AND SPECIFICATIONS.

THE SWPPP GENERAL INFORMATION SHEETS ARE TO BE COMPLETED AND INCLUDED IN THE CONSTRUCTION PLAN SET (OR OTHER SUCH DOCUMENTS) FOR LAND DISTURBANCE (CONSTRUCTION) ACTIVITIES THAT DISTURB AN AREA EQUAL TO OR GREATER THAN 10,000 SQUARE FEET, OR EQUAL TO OR GREATER THAN 2,500 SQUARE FEET IN THE AREA DEFINED AS TIDEWATER, VIRGINIA IN THE VIRGINIA CHESAPEAKE BAY PRESERVATION ACT.

THE VDOT RLD WILL ENSURE THAT THE INFORMATION SHOWN ON THE SWPPP GENERAL INFORMATION SHEETS IS UPDATED/REVISED AS NECESSARY IN ORDER TO REFLECT CHANGES THAT MAY OCCUR DURING THE CONSTRUCTION PHASE OF THE LAND DISTURBING (CONSTRUCTION) ACTIVITY. THE UPDATED/REVISED SHEETS SHALL BE MAINTAINED WITH THE DESIGNATED RECORD SET OF PLANS (OR OTHER SUCH DOCUMENTS) FOR THE LAND DISTURBANCE (CONSTRUCTION) ACTIVITY.

* DENOTES INFORMATION THAT IS TO BE PROVIDED/COMPLETED BY THE VDOT RLD.
* * DENOTES INFORMATION THAT IS TO BE PROVIDED/COMPLETED BY THE CONTRACTOR.

SECTION I GENERAL INFORMATION

1. ACTIVITY DESCRIPTION – THIS PROJECT CONSISTS OF IMPROVEMENTS TO US 522 IN THE TOWN OF CULPEPER, VA. THE PROPOSED IMPROVEMENTS INCLUDE INSTALLATION OF CURB & GUTTER, 5' WIDE CONCRETE SIDEWALK, AND ASSOCIATED APPURTENANCES SUCH AS DRAINAGE INFRASTRUCTURE, RETAINING WALLS, AND HANDRAILS ALONG THE NORTH SIDE OF US 522 FROM APPROXIMATELY 300' WEST OF N. ASPEN STREET TO COLONEL JAMESON BLVD. THIS PROJECT ALSO INCLUDES CONSTRUCTION OF BICYCLE LANES, RAISED MEDIAN ISLANDS, CURB RAMP REPLACEMENTS, AND A CROSSWALK WITHIN THE EXISTING LIMITS OF US 522 EAST OF COLONEL JAMESON BLVD. AND CONSTRUCTION OF A NEW MINI-ROUNDABOUT AT THE INTERSECTION OF US 522 AND NORTH BLUE RIDGE AVENUE.

2. THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY SITE IS LOCATED IN THE TOWN OF CULPEPER AND APPROXIMATELY 1.75 ACRES WILL BE DISTURBED BY EXCAVATION, GRADING OR OTHER CONSTRUCTION ACTIVITIES.

3. THIS PROPOSED ACTIVITY DISTURBS ONE ACRE OR GREATER AND REQUIRES COVERAGE UNDER THE VPDES GENERAL PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES (THE VPDES CONSTRUCTION PERMIT) AS ISSUED BY THE DEQ. A COPY OF THE VPDES CONSTRUCTION PERMIT (VAR10), THE REGISTRATION INFORMATION (LD-445 FORM) AND THE PERMIT COVERAGE LETTER RECEIVED FROM DEQ SHALL BE MAINTAINED WITH OTHER SWPPP DOCUMENTS FOR THIS LAND DISTURBING (CONSTRUCTION) ACTIVITY.

* * 4. THE LOCATION OF ON-SITE SUPPORT FACILITIES THAT WILL BE COVERED UNDER THE VPDES CONSTRUCTION PERMIT COVERAGE FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY SHALL BE PROVIDED BY THE CONTRACTOR AND IDENTIFIED ON THE RECORD SET OF PLANS OR IN OTHER APPROPRIATE CONTRACT DOCUMENTS. SUPPORT FACILITIES SHALL INCLUDE, BUT NOT BE LIMITED TO, BORROW AND DISPOSAL AREAS, CONSTRUCTION AND WASTE MATERIAL STORAGE AREAS, EQUIPMENT AND VEHICLE WASHING, MAINTENANCE, STORAGE AND FUELING AREAS, STORAGE AREAS FOR FERTILIZERS, FUELS OR CHEMICALS, CONCRETE WASH OUT AREAS, SANITARY WASTE FACILITIES AND ANY OTHER AREAS THAT MAY GENERATE A STORMWATER OR NON-STORMWATER DISCHARGE DIRECTLY RELATED TO THE CONSTRUCTION SITE.

* * 5. WRITTEN EVIDENCE OF PERMIT COVERAGE SHALL BE PROVIDED BY THE CONTRACTOR FOR ALL SUPPORT ACTIVITIES LOCATED OUTSIDE OF VDOT RIGHT OF WAY OR EASEMENT IN THE FORM OF THE CONSTRUCTION GENERAL PERMIT COVERAGE LETTER: (TBD)

6. WATER FROM A PORTION OF THE PROJECT DRAINS TO MOUNTAIN RUN. MOUNTAIN RUN IS LISTED ON THE VIRGINIA DEQ 2016 IMPAIRED WATERS LIST FOR IMPAIRMENT DUE TO ESCHERICHIA COLI (CATEGORY 4A).

7. MOUNTAIN RUN HAS A US EPA APPROVED TMDL FOR ESCHERICHIA COLI. THERE ARE NO TMDL REQUIREMENTS FOR SEDIMENT, TOTAL SUSPENDED SOLIDS, TURBIDITY, NITROGEN, OR PHOSPHORUS THAT APPLY TO MOUNTAIN RUN.

8. THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY DISCHARGES STORMWATER TO THE FOLLOWING SURFACE WATERS THAT HAVE BEEN IDENTIFIED AS EXCEPTIONAL IN SECTION 9VAC25-260-30 A 3 C OF THE VIRGINIA ADMINISTRATIVE CODE: N/A

9. LOCATIONS OF SURFACE WATERS AND LOCATIONS WHERE CONCENTRATED STORMWATER IS DISCHARGED FROM THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY ARE IDENTIFIED IN THE CONSTRUCTION PLAN SET FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY.

10. THE ESC AND SWM PLANS FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY HAVE BEEN DEVELOPED IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK.

11. (a) LIST THE RLD FOR THE LAND DISTURBANCE ACTIVITY: (REQUIRED FOR EROSION AND SEDIMENT CONTROL)
(b) THE FOLLOWING INDIVIDUAL(S) HAS DELEGATED AUTHORITY TO SIGN ALL REPORTS REQUIRED BY THE CONSTRUCTION PERMIT INCLUDING THE SWPPP (LD445E) AND INSPECTION REPORTS. THESE INDIVIDUAL(S) HAS/HAVE OVERALL RESPONSIBILITY FOR ENVIRONMENTAL MATTERS FOR THE PROJECT: (REQUIRED ONLY FOR PERMITTED PROJECTS)

Name	Position
TBD	

* 12. THE NAME OF THE INDIVIDUAL(S) RESPONSIBLE FOR THE INSPECTION OF THE EROSION AND SEDIMENT CONTROL AND POLLUTION PREVENTION MEASURES ON THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY IS IDENTIFIED ON THE LD-445E FORM WHICH WILL BE MAINTAINED WITH THE OTHER SWPPP DOCUMENTS FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY (NOTE: INDIVIDUAL(S) SHALL BE CERTIFIED THROUGH THE DEQ ESC INSPECTOR CERTIFICATION PROGRAM AND SHALL BE KNOWLEDGEABLE IN THE AREA OF POLLUTION PREVENTION AT CONSTRUCTION SITES.)

* 13. THE ESC AND P2 INSPECTIONS FOR THIS LAND DISTURBING (CONSTRUCTION) ACTIVITY SHALL FOLLOW EITHER SCHEDULE 1 OR 2 AS DEFINED IN SECTION 107.16(E) OF THE VDOT ROAD & BRIDGE SPECIFICATIONS SPECIAL PROVISION S107J31. RAIN GAGE NOTES APPLY ONLY TO INSPECTION SCHEDULE 1.

* * 14. THE LOCATION OF THE ON-SITE RAIN GAGE THAT WILL BE USED TO DETERMINE THE OCCURRENCE OF A MEASURABLE STORM EVENT FOR THE PURPOSES OF ESC AND POLLUTION PREVENTION INSPECTIONS WILL BE PROVIDED BY THE CONTRACTOR AND IDENTIFIED ON THE RECORD SET OF PLANS OR IN OTHER APPROPRIATE SWPPP DOCUMENTS FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY: THE JOB TRAILER

THE RAIN GAGE SHALL BE OBSERVED DAILY AT 8:00 A.M. TO DETERMINE THE OCCURRENCE OF A MEASURABLE STORM EVENT (I.E., 0.25 INCHES OF RAINFALL OR GREATER IN A 24 HOUR PERIOD). A LOG BOOK SHALL BE MAINTAINED TO RECORD OBSERVATION INFORMATION WHICH SHALL INCLUDE (1) THE DATE, (2) THE TIME, (3) WHETHER OR NOT RAINFALL IS OCCURRING AT THE TIME OF THE OBSERVATION, (4) THE AMOUNT OF ACCUMULATED RAINFALL IN THE GAGE, IF ANY, AND (5) WHETHER OR NOT AN INSPECTION IS REQUIRED BASED ON THE AMOUNT OF ACCUMULATED RAINFALL IN THE GAGE.

IF THERE IS NO RAINFALL OCCURRING AT THE TIME OF THE OBSERVATION, THE OBSERVATION INFORMATION SHALL BE NOTED IN THE LOG BOOK AND THE RAIN GAGE EMPTIED AND REPLACED. AN INSPECTION IS REQUIRED IF THERE IS 0.25 INCHES OR MORE ACCUMULATION NOTED IN THE RAIN GAGE.

IF THERE IS RAINFALL OCCURRING AT THE TIME OF THE OBSERVATION, THE OBSERVATION INFORMATION IS TO BE NOTED IN THE LOG BOOK. THE RAIN GAGE IS NOT TO BE EMPTIED BUT LEFT TO ACCUMULATE ADDITIONAL RAINFALL UNTIL THE CONCLUSION OF THE RAINFALL EVENT. AT THE CONCLUSION OF THE RAINFALL EVENT, AN OBSERVATION OF THE RAIN GAGE SHALL BE MADE AND THE OBSERVATION INFORMATION SHALL BE NOTED IN THE LOG BOOK AND THE RAIN GAGE EMPTIED AND REPLACED. AN INSPECTION IS REQUIRED IF THERE IS 0.25 INCHES OR MORE ACCUMULATION NOTED IN THE RAIN GAGE.

15. THE FOLLOWING VDOT DOCUMENTS SERVE THE PURPOSE OF A) PERMITTED PROJECTS B) NON-PERMITTED PROJECTS IN CHESAPEAKE BAY PRESERVATION AREAS (CBPA) WITH 2,500 S.F. TO 1.0 ACRE OF LAND DISTURBANCE C) NON-PERMITTED PROJECTS REQUIRING A SWPPP AND D) NON-PERMITTED, NON-CBPA WITH BMP PROJECTS THAT HAVE A WATER QUANTITY BMP:

VDOT LD-445: PERMITTED PROJECTS, CBPA PROJECTS AND NON-PERMITTED, NON-CBPA WITH BMP PROJECTS THAT HAVE A WATER QUANTITY BMP
VDOT LD-445A: PERMITTED PROJECTS ONLY.
VDOT LD-445B: PERMITTED PROJECTS ONLY.
VDOT LD-445C: PROJECTS THAT REQUIRE A PERMIT OR SWPPP.
VDOT LD-445D: PERMITTED PROJECTS, CBPA PROJECTS AND NON-PERMITTED, NON-CBPA WITH BMP PROJECTS THAT HAVE A WATER QUANTITY BMP.
VDOT LD-445E: PERMITTED PROJECTS ONLY.
VDOT LD-445F: EMERGENCY WORK PROJECTS (WHEN APPLICABLE).
VDOT LD-445G: PERMITTED AND CBPA PROJECTS REQUESTING A WATER QUALITY. REQUIREMENT EXCEPTION (WHEN APPLICABLE).
VDOT LD-445H: PERMITTED PROJECTS ONLY.
VDOT C-107 PART I AND PART II: ALL PROJECTS THAT REQUIRE A PERMIT OR SWPPP.

16. IF THERE IS AN EXCESSIVE OF SEDIMENT FROM THE PROJECT (I.E. MORE THAN TO BE EXPECTED FROM THE PROJECT WITH AN IMPLEMENTED ESC PLAN) THAT IS DISCOVERED WITHIN A LOCAL WATERSHED WITH A SEDIMENT TMDL THAT ALLOCATES A WLA TO VDOT'S MS4 (SEE NOTE #7) THE CONTRACTOR SHALL INVESTIGATE THE AREA OF CONCERN AT THE SITE WITHIN 24 HOURS OF DISCOVERY AND ENSURE ALL EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES ARE BEING IMPLEMENTED IN ACCORDANCE WITH THE PERMITS APPROVED STANDARDS AND SPECIFICATIONS REQUIRED BY PART I.B OF THE CURRENT CONSTRUCTION GENERAL PERMIT. IF CORRECTIVE ACTION IS NECESSARY, THE CONTRACTOR SHALL INITIATE CORRECTIVE ACTIONS NO LATER THAN 5 BUSINESS DAYS AFTER THE INITIAL INVESTIGATION.

17. IF EXCESSIVE LOADING OF SEDIMENT FROM A LAND DISTURBING ACTIVITY THAT IS NOT THE RESPONSIBILITY OF THE CONTRACTOR IS DISCOVERED DISCHARGING INTO A MS-4, THE CONTRACTOR SHALL NOTIFY THE MUNICIPALITY WITH JURISDICTION OVER EROSION AND SEDIMENT CONTROL ACTIVITIES.

SECTION II EROSION AND SEDIMENT CONTROL

1. THE FOLLOWING VARIANCES TO THE VIRGINIA ESC REGULATIONS HAVE BEEN APPROVED BY THE DEQ FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY: N/A

* * 2. THE INTENDED SEQUENCE AND TIMING OF ACTIVITIES THAT DISTURB SOILS AT THE SITE (E.G., GRUBBING, EXCAVATION, GRADING, UTILITIES AND INFRASTRUCTURE INSTALLATION, ETC.) SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 108.03 OF THE VDOT R&B SPECIFICATIONS AND SHALL BE INCLUDED WITH THE OTHER SWPPP DOCUMENTS FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY.

3. DIRECTIONS OF STORMWATER FLOW AND APPROXIMATE SLOPES ANTICIPATED AFTER MAJOR GRADING ACTIVITIES ARE IDENTIFIED IN THE CONSTRUCTION PLAN SET (OR OTHER SUCH DOCUMENTS) FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY.

4. AREAS OF SOIL DISTURBANCE AND AREAS OF THE SITE WHICH WILL NOT BE DISTURBED ARE IDENTIFIED IN THE CONSTRUCTION PLAN SET FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY.

5. LOCATIONS OF MAJOR STRUCTURAL AND NONSTRUCTURAL ESC MEASURES INTENDED TO FILTER, SETTLE OR SIMILARLY REMOVE SEDIMENT ARE IDENTIFIED IN THE CONSTRUCTION PLAN SET FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY.

6. LOCATIONS WHERE STABILIZATION PRACTICES ARE EXPECTED TO OCCUR ARE IDENTIFIED IN THE CONSTRUCTION PLAN SET FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY.

7. A DESCRIPTION OF INTERIM AND PERMANENT STABILIZATION PRACTICES FOR THE SITE ARE IDENTIFIED IN THE APPLICABLE SECTIONS OF THE DOCUMENTS IDENTIFIED IN THE NOTE 1 OF SECTION III.

* * 8. A RECORD OF THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR, WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, AND WHEN STABILIZATION MEASURES ARE INITIATED WILL BE PROVIDED BY THE CONTRACTOR AND MAINTAINED WITH THE RECORD SET OF PLANS OR OTHER SWPPP DOCUMENTS FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY: (TBD)

9. A DESCRIPTION AND SCHEDULE OF PROCEDURES TO MAINTAIN VEGETATION, EROSION AND SEDIMENT CONTROL MEASURES AND OTHER PROTECTIVE MEASURES IN GOOD AND EFFECTIVE OPERATING CONDITIONS ARE IDENTIFIED IN SECTIONS 107.16 AND 303.03 OF THE VDOT R&B SPECIFICATIONS.

10. NUTRIENTS SHALL BE APPLIED IN ACCORDANCE WITH SECTIONS 603 AND 604 OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS. NUTRIENTS SHALL NOT BE APPLIED DURING RAINFALL EVENTS. TOP SOIL SHALL BE APPLIED IN ACCORDANCE WITH THE CURRENT EDITION OF SECTION 602 OF THE LATEST ROAD AND BRIDGE SPECIFICATIONS.

11. ALL ENGINEERING CALCULATIONS SUPPORTING THE DESIGN OF EROSION AND SEDIMENT CONTROL MEASURES PROPOSED FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY ARE CONTAINED IN THE PROJECT DRAINAGE FILE LOCATED (TBD) AND WILL BE MADE AVAILABLE FOR REVIEW UPON REQUEST DURING NORMAL BUSINESS HOURS.

12. THE TEMPORARY EROSION AND SILTATION CONTROL ITEMS SHOWN ON THE ESC PLAN FOR THIS LAND DISTURBING (CONSTRUCTION) ACTIVITY ARE INTENDED TO PROVIDE A GENERAL PLAN FOR CONTROLLING EROSION AND SEDIMENT WITHIN THE PROJECT LIMITS. THE ESC PLAN IS BASED ON FIELD CONDITIONS AT THE TIME OF PLAN DEVELOPMENT AND AN ASSUMED SEQUENCE OF CONSTRUCTION FOR THE PROJECT. THE CONTRACTOR, IN CONJUNCTION WITH THE VDOT PROJECT ENGINEER AND/OR ESC INSPECTOR, SHALL ADJUST THE LOCATION, QUANTITY AND TYPE OF EROSION AND SEDIMENT CONTROL ITEMS REQUIRED BASED ON THE ACTUAL FIELD CONDITIONS ENCOUNTERED AT THE TIME OF CONSTRUCTION AND THE ACTUAL SCHEDULING AND SEQUENCING OF THE CONSTRUCTION ACTIVITIES. SIGNIFICANT CHANGES TO THE PROPOSED ESC PLAN (E.G., THOSE THAT REQUIRE AN ENGINEERING ANALYSIS, ELIMINATION OF A PERIMETER CONTROL, CHANGE TO ESC CONCEPT THAT WOULD AFFECT THE QUANTITY OR DIRECTION OF FLOW) SHALL BE SUBMITTED TO THE APPLICABLE DISTRICT HYDRAULICS ENGINEER FOR REVIEW AND APPROVAL. ANY CHANGES TO THE PROPOSED ESC PLAN MUST BE NOTED ON THE DESIGNATED RECORD SET OF PLANS WHICH SHALL BE RETAINED ON THE PROJECT SITE AND MADE AVAILABLE UPON REQUEST DURING NORMAL BUSINESS HOURS.

13. THE AREAS BEYOND THE PROJECT'S CONSTRUCTION AREA ARE TO BE PROTECTED FROM SILTATION. PERIMETER CONTROLS SUCH AS SILT FENCE, DIVERSION DIKES, TURBIDITY CURTAINS, ETC. SHALL BE INSTALLED PRIOR TO ANY GRUBBING OPERATIONS OR OTHER EARTH MOVING ACTIVITIES.

14. TEMPORARY EARTHEN STRUCTURES SUCH AS DIKES AND BERMS ARE TO BE STABILIZED IMMEDIATELY UPON INSTALLATION. STABILIZATION MAY INCLUDE TEMPORARY OR PERMANENT SEEDING, RIPRAP, AGGREGATE, SOD, MULCHING, AND/OR SOIL STABILIZATION BLANKETS AND MATTING IN CONJUNCTION WITH SEEDING.

15. ALL CHANNEL RELOCATIONS ARE TO BE CONSTRUCTED DURING THE EARLIEST STAGE OF CONSTRUCTION AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE PERMIT REQUIREMENTS AND SHALL BE CONSTRUCTED IN THE DRY WHEREVER POSSIBLE. STABILIZATION OR VEGETATION SHALL BE ESTABLISHED BEFORE FLOW IS REDIRECTED THROUGH THE CONSTRUCTED AREA AS DIRECTED BY THE ENGINEER.

16. THE CONTRACTOR SHALL PLAN AND IMPLEMENT HIS LAND DISTURBANCE OPERATIONS IN ORDER TO:
A. CONTROL THE VOLUME AND VELOCITY OF STORMWATER RUNOFF WITHIN THE SITE TO MINIMIZE EROSION.
B. CONTROL THE PEAK FLOW RATES, VOLUME AND VELOCITY OF STORMWATER DISCHARGES TO MINIMIZE EROSION AT OUTLETS AND IN DOWNSTREAM CHANNELS.
C. MINIMIZE THE AMOUNT OF SOIL EXPOSED.
D. MINIMIZE THE DISTURBANCE OF STEEP SLOPES.
E. MINIMIZE SEDIMENT DISCHARGE FROM THE SITE.
F. PROVIDE AND MAINTAIN NATURAL BUFFERS AROUND SURFACE WATERS, DIRECT STORMWATER RUNOFF TO VEGETATED AREAS AND MAXIMIZE STORMWATER INFILTRATION, UNLESS INFEASIBLE.
G. MINIMIZE SOIL COMPACTION (EXCEPT IN THOSE AREAS WHERE COMPACTION IS REQUIRED BY THE CONTRACT DOCUMENTS) AND PRESERVE TOPSOIL WHERE FEASIBLE.

* * 17. THE NAME OF THE INDIVIDUAL(S) OR CONTRACTOR(S) RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF THE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE SUPPLIED BY THE CONTRACTOR AND MAINTAINED WITH THE OTHER SWPPP DOCUMENTS FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY.

18. SOIL STOCKPILES TEMPORARILY PLACED WITHIN THE PROJECT AREA OR ON VDOT RIGHT OF WAY OR EASEMENT SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES.

19. A CONSTRUCTION ENTRANCE OR OTHER APPROVED MEASURE SHALL BE INSTALLED AT ALL LOCATIONS WHERE CONSTRUCTION VEHICULAR TRAFFIC ACCESS ROUTES INTERSECT A PAVED OR A PUBLIC ROAD IN ORDER TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR A PUBLIC ROAD SURFACE, THE ROAD SHALL BE CLEANED THOROUGHLY AT THE END OF EACH WORK DAY BY SHOVELING OR SWEEPING. REMOVED SEDIMENT SHALL BE DISPOSED OF IN ACCORDANCE WITH SECTION 106.04 OF THE R&B SPECIFICATIONS.

20. ANY VARIANCE, EXCEPTION OR DEVIATION APPROVED BY DEQ MUST BE LISTED BELOW AND SUPPORTING DOCUMENTATION (EXCEPTION/VARIANCE/DEVIATION REQUEST AND DEQ APPROVAL) MUST BE MAINTAINED WITH THE SWPPP:

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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	NA
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

SWPPP GENERAL INFORMATION SHEET

SHEET

C14.0

SHEET 65 OF 70

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STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEET

U000-204-176, P101, R201, C501

THE INFORMATION CONTAINED IN THE SWPPP GENERAL INFORMATION SHEETS IS INTENDED TO COMPLY WITH THE REQUIREMENTS OF THE VPDES GENERAL PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES (THE VPDES CONSTRUCTION PERMIT) ISSUED JULY 1, 2019 AND VDOT'S APPROVED ESC AND SWM STANDARDS AND SPECIFICATIONS.

THE SWPPP GENERAL INFORMATION SHEETS ARE TO BE COMPLETED AND INCLUDED IN THE CONSTRUCTION PLAN SET (OR OTHER SUCH DOCUMENTS) FOR LAND DISTURBANCE (CONSTRUCTION) ACTIVITIES THAT DISTURB AN AREA EQUAL TO OR GREATER THAN 10,000 SQUARE FEET, OR EQUAL TO OR GREATER THAN 2,500 SQUARE FEET IN THE AREA DEFINED AS TIDEWATER, VIRGINIA IN THE VIRGINIA CHESAPEAKE BAY PRESERVATION ACT.

THE VDOT RLD WILL ENSURE THAT THE INFORMATION SHOWN ON THE SWPPP GENERAL INFORMATION SHEETS IS UPDATED/REVISED AS NECESSARY IN ORDER TO REFLECT CHANGES THAT MAY OCCUR DURING THE CONSTRUCTION PHASE OF THE LAND DISTURBING (CONSTRUCTION) ACTIVITY. THE UPDATED/REVISED SHEETS SHALL BE MAINTAINED WITH THE DESIGNATED RECORD SET OF PLANS (OR OTHER SUCH DOCUMENTS) FOR THE LAND DISTURBANCE (CONSTRUCTION) ACTIVITY.

* Denotes information that is to be provided/completed by the VDOT RLD.
* * Denotes information that is to be provided/completed by the contractor.

SECTION III SWPPP

1. ALL DOCUMENTS RELATED TO THE SWPPP FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY SHALL BE MAINTAINED AT THE ACTIVITY SITE AND SHALL BE READILY AVAILABLE FOR REVIEW UPON REQUEST DURING NORMAL BUSINESS HOURS. SUCH DOCUMENTS INCLUDE, BUT ARE NOT LIMITED TO, THE CONSTRUCTION PLANS (OR OTHER SUCH DOCUMENTS), THE ESC PLAN, THE POLLUTION PREVENTION PLAN, THE POST CONSTRUCTION SWM PLAN (IF APPLICABLE), THE VDOT R&B STANDARDS AND SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, SPECIAL PROVISIONS AND SPECIAL PROVISION COPIED NOTES. DOCUMENTS RELATED TO STORMWATER POLLUTION PREVENTION WHICH ARE NOT A PART OF THOSE DOCUMENTS REFERENCED ABOVE, SUCH AS A COPIES OF THE VPDES CONSTRUCTION PERMIT COVERAGE LETTER (WHEN APPLICABLE) AND THE VPDES GENERAL PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES (WHEN APPLICABLE) AND THOSE REQUIRED TO BE DEVELOPED BY THE CONTRACTOR FOR POLLUTION PREVENTION ASSOCIATED WITH ANY ON-SITE SUPPORT FACILITIES BEING INCLUDED IN THE VPDES CONSTRUCTION PERMIT COVERAGE FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY ARE TO BE MAINTAINED AT THE ACTIVITY SITE WITH THE OTHER SWPPP DOCUMENTS FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY. WHERE NO FACILITIES ARE AVAILABLE AT THE ACTIVITY SITE TO MAINTAIN THE SWPPP DOCUMENTS, THEY ARE TO BE KEPT BY OR WITH THE DESIGNATED RLD AT A LOCATION CONVENIENT TO THE ACTIVITY SITE WHERE THEY WOULD BE MADE AVAILABLE FOR REVIEW UPON REQUEST DURING NORMAL BUSINESS HOURS.

2. THE SWPPP AND ANY SUBSEQUENT AMENDMENTS, MODIFICATIONS AND UPDATES SHALL BE IMPLEMENTED FROM COMMENCEMENT OF LAND DISTURBANCE UNTIL TERMINATION OF VPDES CONSTRUCTION PERMIT COVERAGE OR COMPLETION OF LAND DISTURBANCE (CONSTRUCTION) ACTIVITIES WHERE NO VPDES CONSTRUCTION PERMIT COVERAGE IS REQUIRED.

* * 3. FOR ALL ON-SITE SUPPORT FACILITIES THAT WILL BE INCLUDED IN THE VPDES CONSTRUCTION PERMIT COVERAGE FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY, THE CONTRACTOR SHALL DEVELOP A SWPPP IN ACCORDANCE WITH, BUT NOT LIMITED TO, SECTION 106.08, 107.02 AND 107.16 OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS. THE SWPPP FOR THE ON-SITE SUPPORT FACILITIES SHALL BE MAINTAINED WITH AND BECOME A COMPONENT OF THE SWPPP FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY. SUPPORT FACILITIES SHALL INCLUDE, BUT NOT BE LIMITED TO, BORROW AND DISPOSAL AREAS, CONSTRUCTION AND WASTE MATERIAL STORAGE AREAS, EQUIPMENT AND VEHICLE WASHING, MAINTENANCE, STORAGE AND FUELING AREAS, STORAGE AREAS FOR FERTILIZERS, FUELS OR CHEMICALS, CONCRETE WASH OUT AREAS, SANITARY WASTE FACILITIES AND ANY OTHER AREAS THAT MAY GENERATE A STORMWATER OR NON-STORMWATER DISCHARGE DIRECTLY RELATED TO THE CONSTRUCTION SITE.

* 4. BY COMPLETING AND SUBMITTING THE SWPPP CERTIFICATION FORM LD-445E, THE RLD, OR HIS AUTHORIZED REPRESENTATIVE, CERTIFIES THAT ALL DOCUMENTS IDENTIFIED HEREIN TO BE SUPPLIED BY THE CONTRACTOR WILL BE REVIEWED, APPROVED (AS APPLICABLE) AND INCLUDED WITH THE OTHER SWPPP DOCUMENTS FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY PRIOR TO START OF WORK IN THOSE AREAS IDENTIFIED BY SUCH INFORMATION.

5. FOR THOSE LAND DISTURBING (CONSTRUCTION) ACTIVITIES REQUIRING COVERAGE UNDER THE VPDES CONSTRUCTION PERMIT, THE SWPPP SHALL BE MADE AVAILABLE FOR REVIEW UPON THE REQUEST OF THE DEQ, THE EPA, THE VSMP AUTHORITY, THE VESCP AUTHORITY, LOCAL GOVERNMENT OFFICIALS OR THE OPERATOR OF A MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) RECEIVING DISCHARGE FROM THE CONSTRUCTION SITE.

* 6. FOR THOSE LAND DISTURBING (CONSTRUCTION) ACTIVITIES REQUIRING COVERAGE UNDER THE VPDES CONSTRUCTION PERMIT, THE VDOT RLD SHALL POST, OR HAVE POSTED, A COPY OF THE GENERAL PERMIT COVERAGE LETTER AND A COPY OF A COMPLETED LD-445A FORM, NOTING THE NAME AND CONTACT INFORMATION FOR THE VDOT PERSON RESPONSIBLE FOR THE LAND DISTURBING (CONSTRUCTION) ACTIVITY AND ITS SWPPP, OUTSIDE THE PROJECT'S CONSTRUCTION OFFICE ALONG WITH OTHER FEDERAL AND STATE MANDATED INFORMATION. WHERE THERE IS NO CONSTRUCTION OFFICE (E.G., A MAINTENANCE ACTIVITY), THE PERMIT COVERAGE LETTER AND THE LD-445A FORM ARE TO BE MAINTAINED WITH THE OTHER SWPPP DOCUMENTS FOR THE LAND DISTURBING (CONSTRUCTION) ACTIVITY.

7. THE SWPPP SHALL BE MADE AVAILABLE FOR REVIEW BY THE PUBLIC UPON REQUEST. SUCH REVIEWS SHALL BE AT A TIME AND PUBLICLY ACCESSIBLE LOCATION CONVENIENT TO THE VDOT AND SHALL BE SCHEDULED DURING NORMAL BUSINESS HOURS AND NO LESS THAN ONCE PER MONTH.

ACRONYMS

BMP – Best Management Practice
DEQ – Department of Environmental Quality
EPA – U.S. Environmental Protection Agency
ESC – Erosion and Sediment Control
IIM – Instructional and Informational Memorandum
R&B – Road and Bridge
RLD – Responsible Land Disturber
SWM – Stormwater Management
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
VDOT – Virginia Department of Transportation
VPDES – Virginia Pollutant Discharge Elimination System
VSMP – Virginia Stormwater Management Program
VESCP – Virginia Erosion and Sediment Control Program
WLA – Waste Load Allocation
CBPA – Chesapeake Bay Preservation Act

SECTION IV POST CONSTRUCTION STORMWATER MANAGEMENT

1. THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY UTILIZES THE PART IIB TECHNICAL CRITERIA (I.E., RUNOFF REDUCTION METHOD, ENERGY BALANCE EQUATION, ETC.) IN SECTION 9VAC25-870-62 ET SEQ. OF THE VSMP REGULATIONS.

2. AN EXCEPTION FOR (NUMBER) POUNDS OF PHOSPHORUS REMOVAL HAS BEEN GRANTED FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY BY THE DEQ IN ITS LETTER DATED (DATE).
N/A

3. THE FOLLOWING EXCEPTIONS TO THE WATER QUANTITY CRITERIA OF THE VSMP REGULATION HAVE BEEN APPROVED BY THE DEQ FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY:
N/A

4. THE PERMANENT ONSITE SWM FACILITIES OR OFFSITE STRATEGIES PROPOSED TO MEET THE WATER QUALITY/QUANTITY REQUIREMENTS FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY ARE LISTED IN SECTION VI.

5. A DESCRIPTION OF ALL POST-CONSTRUCTION STORMWATER MANAGEMENT MEASURES THAT WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORMWATER DISCHARGES AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED IS INCLUDED IN THE CONSTRUCTION PLAN SET FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY.

6. ALL ENGINEERING CALCULATIONS SUPPORTING THE DESIGN OF THE POST-CONSTRUCTION STORMWATER MANAGEMENT MEASURES FOR THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY, INCLUDING AN EXPLANATION OF THE TECHNICAL BASIS USED TO SELECT THE PRACTICES, ARE CONTAINED IN THE PROJECT DRAINAGE FILE LOCATED (TBD) AND WILL BE MADE AVAILABLE FOR REVIEW UPON REQUEST DURING NORMAL WORKING BUSINESS HOURS.

SECTION V – POLLUTION PREVENTION PLAN

1. THE FOLLOWING NON-STORMWATER DISCHARGES FROM THIS LAND DISTURBING (CONSTRUCTION) ACTIVITY AND ANY ON-SITE SUPPORT FACILITIES ARE PROHIBITED:
   - A. WASTEWATER FROM CONCRETE WASHOUTS.
   - B. WASTEWATER FROM THE WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS.
   - C. FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE.
   - D. OILS, TOXIC SUBSTANCES OR HAZARDOUS SUBSTANCES FROM SPILLS OR OTHER RELEASES.
   - E. SOAPS, SOLVENTS OR DETERGENTS USED IN EQUIPMENT AND VEHICLE WASHING.
   - F. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS

2. THE FOLLOWING NON-STORMWATER DISCHARGES FROM THIS LAND DISTURBING (CONSTRUCTION) ACTIVITY AND ANY ON-SITE SUPPORT FACILITIES ARE ALLOWED WHEN DISCHARGED IN COMPLIANCE WITH THE VPDES CONSTRUCTION PERMIT:
   - A. DISCHARGES FROM FIRE FIGHTING ACTIVITIES.
   - B. FIRE HYDRANT FLUSHINGS.
   - C. WATERS USED TO WASH VEHICLES OR EQUIPMENT WHERE SOAPS, SOLVENTS OR DETERGENTS HAVE NOT BEEN USED AND THE WASH WATER HAS BEEN FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE.
   - D. WATER USED TO CONTROL DUST THAT HAS BEEN FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE.
   - E. POTABLE WATER SOURCES INCLUDING UNCONTAMINATED WATERLINE FLUSHINGS MANAGED IN A MANNER TO AVOID STREAM IMPACTS.
   - F. ROUTINE EXTERNAL BUILDING WASH DOWN WHERE SOAPS, SOLVENTS OR DETERGENTS HAVE NOT BEEN USED AND THE WASH WATER HAS BEEN FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE.
   - G. PAVEMENT WASH WATERS WHERE SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED (OR WHERE ALL SPILLED OR LEAKED MATERIAL HAS BEEN REMOVED PRIOR TO WASHING), WHERE SOAPS, SOLVENTS OR DETERGENTS HAVE NOT BEEN USED AND WHERE THE WASH WATER HAS BEEN FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE.
   - H. UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE.
   - I. UNCONTAMINATED GROUND WATER OR SPRING WATER.
   - J. FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS SUCH AS SOLVENTS.
   - K. UNCONTAMINATED EXCAVATION DEWATERING, INCLUDING DEWATERING TRENCHES AND EXCAVATIONS THAT HAVE BEEN FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE.
   - L. LANDSCAPE IRRIGATION.

* * 3. THE CONTRACTOR SHALL DEVELOP A POLLUTION PREVENTION PLAN TO ADDRESS ANY OF HIS ON-SITE OPERATIONS THAT HAVE A POTENTIAL TO GENERATE A POLLUTANT THAT MAY REASONABLY BE EXPECTED TO AFFECT THE QUALITY OF STORMWATER DISCHARGES FROM THIS LAND DISTURBANCE (CONSTRUCTION) ACTIVITY. THE POLLUTION PREVENTION PLAN SHALL BE DEVELOPED IN ACCORDANCE WITH, BUT NOT LIMITED TO, SECTIONS 106.08, 107.02 AND 107.16 OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS AND SHALL INCLUDE A NARRATIVE WITH APPROPRIATE PLAN DETAIL AND SHALL BE PROVIDED ON STANDARD 8.5 X 11 INCH PAPER OR LARGER AND SHALL:
   - A. IDENTIFY THE POTENTIAL POLLUTANT-GENERATING ACTIVITIES AND THE POLLUTANT THAT IS EXPECTED TO BE EXPOSED TO STORMWATER.
   - B. DESCRIBE THE LOCATION WHERE THE POTENTIAL POLLUTANT-GENERATING ACTIVITIES WILL OCCUR, OR IF IDENTIFIED ON THE RECORD SET OF PLANS, REFERENCE THE RECORD SET OF PLANS.
   - C. IDENTIFY ALL NON-STORMWATER DISCHARGES, AS DESCRIBED IN NOTE TWO OF THIS SECTION, THAT ARE OR WILL BE COMMINGLED WITH STORMWATER DISCHARGES FROM THE CONSTRUCTION ACTIVITY, INCLUDING ANY ON-SITE SUPPORT ACTIVITIES.
   - D. IDENTIFY THE PERSON(S) OR CONTRACTOR(S) RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING THE POLLUTION PREVENTION PRACTICE OR PRACTICES FOR EACH POLLUTANT-GENERATING ACTIVITY.
   - E. DESCRIBE THE POLLUTION PREVENTION PRACTICES AND PROCEDURES THAT WILL BE IMPLEMENTED TO:
     - 1) PREVENT AND RESPOND TO LEAKS, SPILLS, AND OTHER RELEASES, INCLUDING PROCEDURES FOR EXPEDITIOUSLY STOPPING, CONTAINING, AND CLEANING UP SPILLS, LEAKS, AND OTHER RELEASES, AND PROCEDURES FOR REPORTING LEAKS, SPILLS, AND OTHER RELEASES IN ACCORDANCE WITH SECTION 107.16 OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS AND THE REQUIREMENTS WITHIN THE VPDES CONSTRUCTION PERMIT.
     - 2) PREVENT THE DISCHARGE OF SPILLED AND LEAKED FUELS AND CHEMICALS FROM VEHICLE FUELING AND MAINTENANCE ACTIVITIES.
     - 3) PREVENT THE DISCHARGE OF SOAPS, SOLVENTS, DETERGENTS, AND WASH WATER FROM CONSTRUCTION MATERIALS, INCLUDING PROCEDURES FOR THE CLEAN-UP OF STUCCO, PAINT, FORM RELEASE OILS, AND CURING COMPOUNDS.
     - 4) MINIMIZE THE DISCHARGE OF POLLUTANTS FROM VEHICLE AND EQUIPMENT WASHING, WHEEL WASH WATER, AND OTHER TYPES OF WASHING.
     - 5) DIRECT CONCRETE WASH WATER INTO A LEAK-PROOF CONTAINER OR LEAK-PROOF SETTLING BASIN. THE CONTAINER OR BASIN SHALL BE DESIGNED SO THAT NO OVERFLOWS CAN OCCUR DUE TO INADEQUATE SIZING OR PRECIPITATION. HARDENED CONCRETE WASTES SHALL BE REMOVED AND DISPOSED OF IN A MANNER CONSISTENT WITH THE HANDLING OF OTHER CONSTRUCTION WASTES. LIQUID CONCRETE WASTES SHALL BE REMOVED AND DISPOSED OF IN A MANNER CONSISTENT WITH THE HANDLING OF OTHER CONSTRUCTION WASH WATERS AND SHALL NOT BE DISCHARGED TO SURFACE WATERS.
     - 6) MINIMIZE THE DISCHARGE OF POLLUTANTS FROM STORAGE, HANDLING, AND DISPOSAL OF CONSTRUCTION PRODUCTS, MATERIALS, AND WASTES INCLUDING BUILDING PRODUCTS (SUCH AS ASPHALT SEALANTS, COPPER FLASHING, ROOFING MATERIALS, ADHESIVES, AND CONCRETE ADMIXTURES), PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, LANDSCAPE MATERIALS, CONSTRUCTION AND DOMESTIC WASTES (SUCH AS PACKAGING MATERIALS), SCRAP CONSTRUCTION MATERIALS, MASONRY PRODUCTS, TIMBER, PIPE AND ELECTRICAL CUTTINGS, PLASTICS, STYROFOAM, CONCRETE, AND OTHER TRASH OR BUILDING MATERIALS.
     - 7) PREVENT THE DISCHARGE OF FUELS, OILS, AND OTHER PETROLEUM PRODUCTS, HAZARDOUS OR TOXIC WASTES, AND SANITARY WASTES.
     - 8) ADDRESS ANY OTHER DISCHARGE FROM ANY POTENTIAL POLLUTANT-GENERATING ACTIVITY NOT LISTED HEREIN.
     - 9) MINIMIZE THE EXPOSURE OF WASTE MATERIALS TO PRECIPITATION BY CLOSING OR COVERING WASTE CONTAINERS DURING PRECIPITATION EVENTS AND AT THE END OF THE BUSINESS DAY, OR IMPLEMENTING OTHER SIMILARLY EFFECTIVE PRACTICES. MINIMIZATION OF EXPOSURE IS NOT REQUIRED IN CASE WHERE THE EXPOSURE TO PRECIPITATION WILL NOT RESULT IN A DISCHARGE OF POLLUTANTS.
     - 10) DESCRIBE AND IMPLEMENT PROCEDURES FOR PROVIDING POLLUTION PREVENTION AWARENESS (INCLUDING BUT NOT LIMITED TO PREVENTION PRACTICES, DISPOSAL PRACTICES AND APPROPRIATE DISPOSAL LOCATIONS) FOR ALL APPLICABLE WASTES (INCLUDING ANY WASH WATER), TO APPROPRIATE PERSONNEL.

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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	NA
DESIGNED BY:	CER
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CHECKED BY:	DJR

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SHEET TITLE

SWPPP GENERAL INFORMATION SHEET

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STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GENERAL INFORMATION SHEET

U000-204-176, P101, R201, C501

The information contained in the SWPPP General Information sheets is intended to comply with the requirements of the VPDES General Permit For Discharges Of Stormwater From Construction Activities (the VPDES Construction Permit) issued July 1, 2019 and VDOT's approved ESC and SWM Standards and Specifications.

The SWPPP General Information sheets are to be completed and included in the construction plan set (or other such documents) for land disturbance (construction) activities that disturb an area equal to or greater than 10,000 square feet, or equal to or greater than 2,500 square feet in the area defined as Tidewater, Virginia in the Virginia Chesapeake Bay Preservation Act.

The VDOT RLD will ensure that the information shown on the SWPPP General Information sheets is updated/revised as necessary in order to reflect changes that may occur during the construction phase of the land disturbing (construction) activity. The updated/revised sheets shall be maintained with the designated record set of plans (or other such documents)for the land disturbance (construction) activity.

SECTION VI – PERMANENT BMP INFORMATION△

*Denotes information that is to be completed by the RLD.
( ) See note referenced by number in parentheses.

INSTALLED BMP INFORMATION

Plan Sheet(s)	Date BMP Made Functional	Type of BMP Installed (See Table A and C)	Geographic Location (County or City)	Latitude/Longitude (1) LAT	Latitude/Longitude (1) LONG	VA 6th Order HUC (7)	Receiving Water (2)	Name of Impaired Water (9)	Acres Treated Per BMP (3) Impervious	Acres Treated Per BMP (3) Pervious	Acres Treated Per BMP (3) TOTAL	* BMP Maintenance ID Number (10)	BMP Maintenance Manual (11) SECTION	BMP Inspection Manual (11) SECTION
C15.2		DETENTION BASIN A (UNDERGROUND)	CULPEPER	38.481305°	-78.008057°	02080103	UNNAMED TRIB. TO MOUNTAIN RUN	N/A	0.18	0.22	0.40		SECTION 7	SECTION 7
C15.2		DETENTION BASIN B (UNDERGROUND)	CULPEPER	38.479776°	-78.002949°	02080103	UNNAMED TRIB. TO BALD'S RUN	N/A	0.20	0.32	0.52		SECTION 7	SECTION 7

ALTERNATIVE BMP INFORMATION

Plan Sheet(s)	Date	Type of BMP Installed (See Table B)	Geographic Location (County or City) (5)	Latitude/Longitude (1) (5) LAT	Latitude/Longitude (1) (5) LONG	VA 6th Order HUC (5) (7)	Receiving Water (2)	Name of Impaired Water (9)
N/A								

Perpetual Nutrient Credits Acquired for Project

Name of Nutrient Credit Generating Entity (6)	Nutrient Credits (lbs./TP./year) Acquired (6) (12)
PRISTINE WATERS NUTRIENT BANK	0.56

△Any changes to the proposed SWM Plan or BMPs necessitated during the construction phase of the project that affects the proposed construction details or potentially affects the informationshown in the BMP Tables A and/or B shall be coordinated by the VDOT RLD with the appropriate VDOT District Hydraulics Engineer. The construction plans and the BMP Tables A and/or B are to be formally revised to reflect any authorized/ approved changes to the proposed SWM Plan and/or the proposed BMP construction details. All plan revisions shall be completed in accordance with the Road Design Manual and the Construction Division IIM-CD-2013-12.01, signed and sealed in accordance with Department's sealing and signing policy IIM-LD-243 and filed with the construction record drawings maintained in the VDOT Central Office Plan File Room (ProjectWise). Prior to submitting for termination of coverage under the VPDES General Permit For The Discharge Of Stormwater From Construction Activities, the RLD shall have the District Maintenance Division review the BMPs installed with the project (BMP Table A) for acceptance of maintenance responsibility and to obtain a Maintenance ID number for each BMP listed in BMP Table A. The RLD shall use the informationin BMP Tables A and B along with the assigned Maintenance ID number and the date that the BMP became functional as a permanent control measure (for BMPs in Table A only) to complete the LD-445D form when certifying the construction of the BMPs and submitting for termination of coverage under theVPDES General Permit For The Discharge Of Stormwater From Construction Activities.

Table A: Permanent BMP Types (1999 Va. SWM Handbook)
Bio-retention Basin
Bio-retention Filter
Constructed Stormwater Wetlands
Extended Detention Basin
Extended Detention Basin Enhanced
Grassed Swale
Infiltration Basin
Infiltration Trench
Manufactured Treatment Device
(MTD) (8)
Retention Basin I
Retention Basin II
Retention Basin III
Sand Filter
Vegetated Filter Strip
Other Approved Types (List Type)
Detention Basin

Table B: Alternative BMP Types
Comprehensive SWM Plan (Regional) Facility
Pollutant Loading Pro Rata Share Program
Other Approved Options (List Type) (4)

Table C: Permanent BMP Types (BMP Clearing House)
Sheet Flow to Vegetated Filter Strip
Grass Channel
Soil Compost Amendment
Permeable Pavement (Level 1)
Permeable Pavement (Level 2)
Infiltration Practice (Level 1)
Infiltration Practice (Level 2)
Bioretention (Level 1)
Bioretention (Level 2)
Dry Swale (Level 1)
Dry Swale (Level 2)
Wet Swale (Level 1)
Wet Swale (Level 2)
Filtering Practice (Level 1)
Filtering Practice (Level 2)
Constructed Wetlands (Level 1)
Constructed Wetlands (Level 2)
Extended Detention Pond (Level 1)
Extended Detention Pond (Level 2)
Wet Pond (Level 1)
Wet Pond (Level 2)
Manufactured Treatment Device (MTD)(8)
Other Approved Types (List Type)

NOTES:
(1) In decimal degrees to the nearest one ten-thousandth of a degree.

(2) For streams with no names, list "(Unnamed Tributary to downstream name)".

(3) Show acres treated to the nearest one hundreths acre.

(4) Include agreements with off-site BMP owners.

(5) Information pertains to the alternative BMP option location, where applicable. Exception – Not required for nutrient credit purchase option.

(6) Applies to the purchase of nutrient credits only.

(7) Virginia 6th Order HUC (VAHU6) Example – YO30.

(8) Final approved shop drawings of Manufactured Treatment Devices (MTDs) are to be included with the BMP information submitted with the LD-445D form.

(9) List the name of any impaired water to which the BMP discharges. The determination of impaired water shall be based on those streams listed as impaired in the DEQ 2012 305(b)/303(d) Water Quality Assessment Integrated Report and shall be the first named waterbody to which the BMP discharges. The impaired waters are those impaired by sediment, total suspended solids, turbidity, nitrogen or phosphorus.

(10) BMP Maintenance ID Number is to be assigned by the District Maintenance Division at permit termination or project completion. This ID number shall be assigned prior to the permit close out process and entered by the area construction engineer under this column, per IIM-LD-95

(11) Provide the section of each Maintenance manual that pertains to the type of BMP. Both manuals can be found at www.vdot.virginia.gov/business/manuals in the Maintenance selections. Example: Section 4 would be noted for both the maintenance and inspection manuals for a Bioretention I infiltration BMP.

(12) Nutrient credits purchased to the nearest one hundredth pound.

U000-204-176

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REGISTRATION STAMP

COMMONWEALTH OF VIRGINIA
DONALD J. RISSMEYER
2-21-22
Lic. No. 26104
PROFESSIONAL ENGINEER

OWNER

TOWN OF CULPEPER
400 S. MAIN STREET, SUITE 301
CULPEPER, VIRGINIA 22701
PH: 540-829-8260
FAX: 540-829-8279
Email: ahopewell@culpeperva.gov

PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)

TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	NA
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

SWPPP GENERAL INFORMATION SHEET

SHEET

C14.2

SHEET 67 OF 70

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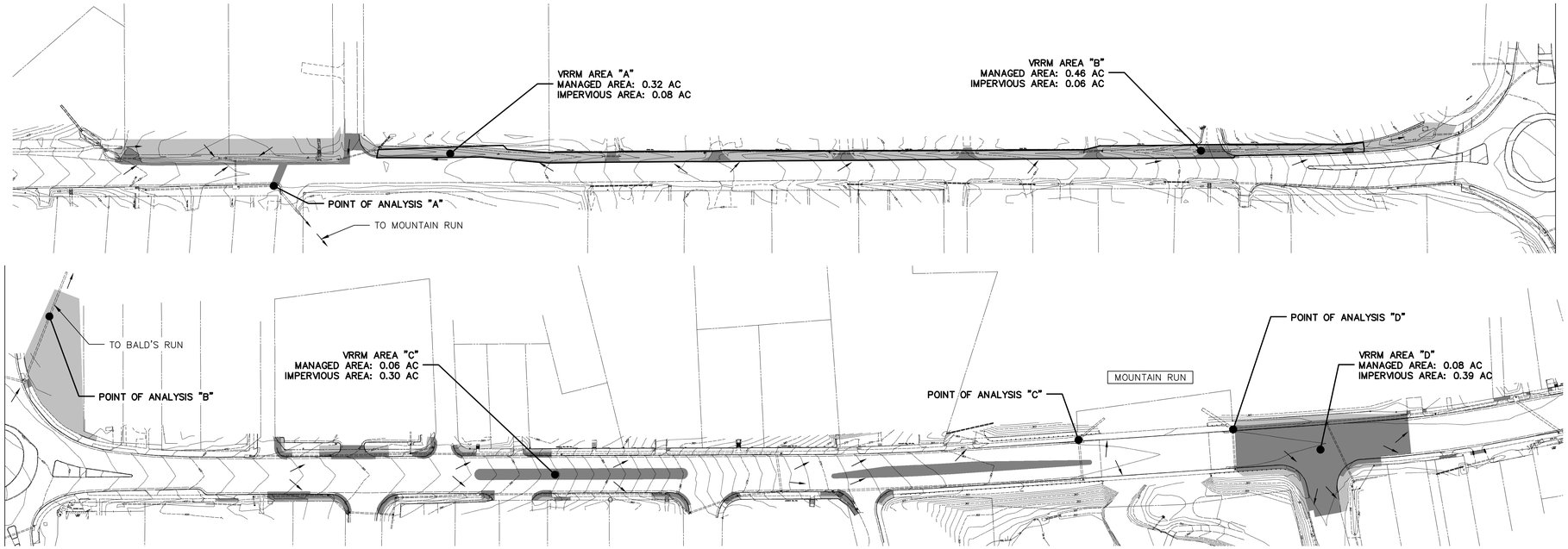


EXISTING CONDITIONS

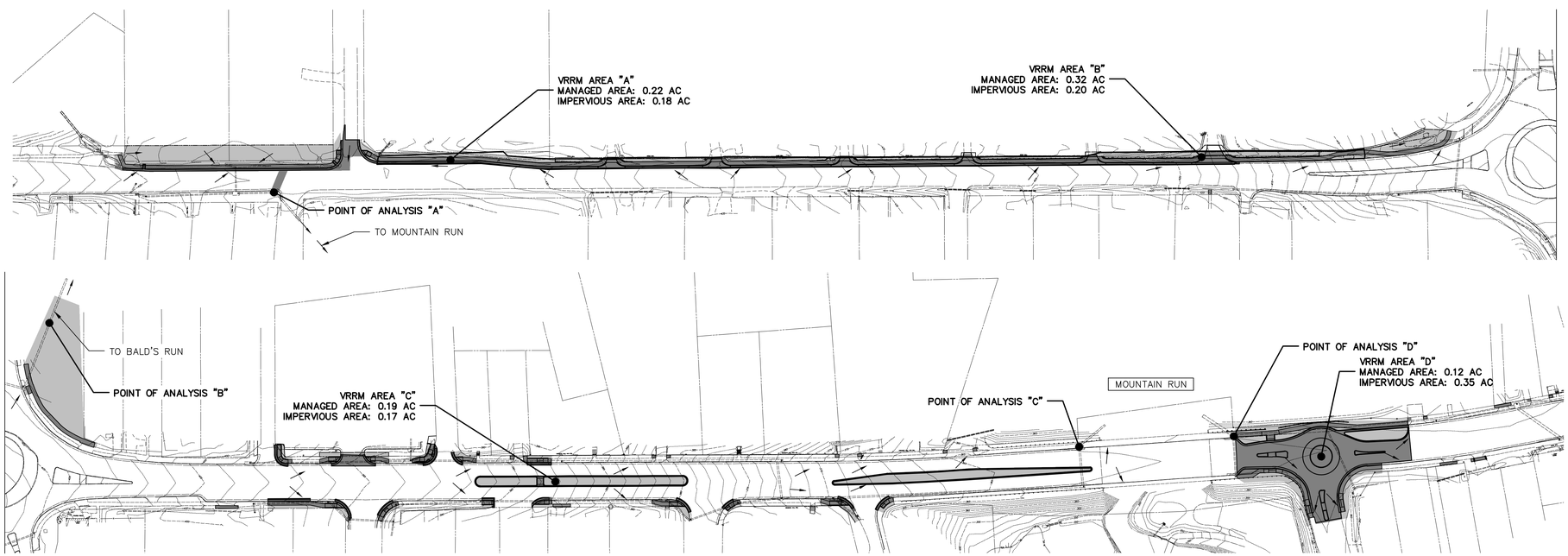
SCALE: 1"=80'

STORMWATER LEGEND

MANAGED TURF AREA

IMPERVIOUS AREA

DIRECTION OF FLOW



PROPOSED CONDITIONS

SCALE: 1"=80'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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TOWN OF CULPEPER, VIRGINIA — THE CULPEPER MINUTE MEN — LIBERTY OR DEATH — DON'T TREAD ON ME

REGISTRATION STAMP

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SHEET TITLE

STORMWATER MANAGEMENT PLAN

SHEET

C15.0

SHEET 68 OF 70

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STORMWATER NARRATIVE

SITE:
- LATITUDE: 38°28'37"N; LONGITUDE: 77°59'47"W
- DISTURBANCE: 1.75–ACRES
- RECEIVING WATER: UPPER RAPPAHANNOCK RIVER
- 4TH ORDER HUC: 02080103 (RAPIDAN–UPPER RAPPAHANNOCK)

EXISTING CONDITIONS:
- THE DISTURBED AREAS ASSOCIATED WITH THIS PROJECT ARE DIVIDED INTO FOUR AREAS THAT DRAIN TO FOUR SEPARATE "POINTS OF ANALYSIS" (POA). POA "A" IS LOCATED AT THE CROSSING OF US 522 NEAR ASPEN STREET, POA "B" IS LOCATED NORTHEAST OF THE COLONEL JAMESON BLVD. ROUNDABOUT, POA "C" IS LOCATED NORTH OF US 522 ON THE WEST SIDE OF THE MOUNTAIN RUN BRIDGE, AND POA "D" IS LOCATED NORTH OF US 522 ON THE EAST SIDE OF THE MOUNTAIN RUN BRIDGE.
- ALL OF THE PROJECT AREAS ARE LOCATED ADJACENT TO AN EXISTING ROADWAY AND DRAIN TO THE EXISTING DRAINAGE PIPE NETWORKS ASSOCIATED WITH THE EXISTING ROADWAY. EACH POA IS LOCATED WITHIN AN EXISTING MAN–MADE STORMWATER CONVEYANCE SYSTEM.
- THE EXISTING MAN–MADE STORMWATER CONVEYANCE SYSTEMS THAT EACH PROJECT AREA DRAINS TO OUTFALL TO NEARBY NATURAL CONVEYANCE SYSTEMS.

PROPOSED CONDITIONS:
- THESE POA WILL REMAIN THE SAME AFTER COMPLETION OF THE PROPOSED IMPROVEMENTS. PROPOSED IMPROVEMENTS WILL NOT CHANGE THE DRAINAGE PATTERNS OF EXISTING CONDITIONS. THE PROPOSED IMPROVEMENTS HAVE BEEN DESIGNED TO MAINTAIN EXISTING DRAINAGE PATTERNS. THERE WILL BE A SMALL NET INCREASE IN THE TOTAL AMOUNT OF IMPERVIOUS AREA (0.07 AC.) AS WELL AS AN INCREASE IN THE TOTAL PHOSPHORUS (TP) LOAD.

STORMWATER MANAGEMENT:
- THE STATE OF VIRGINIA REQUIRES STORMWATER MANAGEMENT (QUANTITY AND QUALITY) FOR ANY PROJECT THAT DISTURBS GREATER THAN 1 ACRE.

WATER QUANTITY – CHANNEL PROTECTION:
- POA "A" IS LOCATED WITHIN A EXISTING MAN–MADE STORMWATER CONVEYANCE SYSTEM THAT DISCHARGES TO A NATURAL CHANNEL (UNNAMED TRIBUTARY OF MOUNTAIN RUN) APPROXIMATELY 50' DOWNSTREAM. ENERGY BALANCE CALCULATIONS SHOW THAT RUNOFF STORAGE IS REQUIRED FOR CHANNEL PROTECTION IN ORDER TO MITIGATE THE IMPACTS OF THE INCREASE IN IMPERVIOUS AREA AT POA "A" FROM THIS PROJECT PER THE REQUIREMENTS OF 9VAC25–870–66 (B). UNDERGROUND DETENTION WILL BE PROVIDED. SEE SHEET C15.2.
- POA "B" IS LOCATED WITHIN AN EXISTING MAN–MADE STORMWATER CONVEYANCE SYSTEM THAT DISCHARGES TO A NATURAL CHANNEL (UNNAMED TRIBUTARY OF BALD'S RUN) APPROXIMATELY 60' DOWNSTREAM. ENERGY BALANCE CALCULATIONS SHOW THAT RUNOFF STORAGE IS REQUIRED FOR CHANNEL PROTECTION IN ORDER TO MITIGATE THE IMPACTS OF THE INCREASE IN IMPERVIOUS AREA AT POA "B" FROM THIS PROJECT PER THE REQUIREMENTS OF 9VAC25–870–66 (B). UNDERGROUND DETENTION WILL BE PROVIDED. SEE SHEET C15.2.
- POA "C" IS LOCATED WITHIN AN EXISTING MAN–MADE STORMWATER CONVEYANCE SYSTEM THAT DISCHARGES TO A NATURAL CHANNEL (MOUNTAIN RUN) APPROXIMATELY 45' DOWNSTREAM. ENERGY BALANCE CALCULATIONS SHOW THAT THE PROPOSED IMPROVEMENTS PROVIDE A SUFFICIENT REDUCTION IN IMPERVIOUS AREA AT POA "C" TO MEET THE REQUIREMENTS OF 9VAC25–870–66 (B) WITHOUT RUNOFF STORAGE.
- POA "D" IS LOCATED WITHIN AN EXISTING MAN–MADE STORMWATER CONVEYANCE SYSTEM THAT DISCHARGES TO A NATURAL CHANNEL (MOUNTAIN RUN) APPROXIMATELY 50' DOWNSTREAM. ENERGY BALANCE CALCULATIONS SHOW THAT THE PROPOSED IMPROVEMENTS PROVIDE A SUFFICIENT REDUCTION IN IMPERVIOUS AREA AT POA "D" TO MEET THE REQUIREMENTS OF 9VAC25–870–66 (B) WITHOUT RUNOFF STORAGE.

WATER QUANTITY – FLOOD PROTECTION:
- THE EXISTING CONVEYANCE SYSTEM DOWNSTREAM FROM POA "A" EXPERIENCES LOCALIZED FLOODING DURING THE 10–YEAR, 24–HOUR STORM EVENT DUE TO THE SIZE AND SLOPE OF THE EXISTING DRAINAGE NETWORK'S OUTFALL PIPE. UNDERGROUND DETENTION SYSTEM A HAS BEEN DESIGNED TO RESTRICT THE POSTDEVELOPMENT PEAK FLOW RATE FROM THE SITE TO BE LESS THAN PREDEVELOPMENT PEAK FLOW RATE FROM THE SITE FOR THE 10–YEAR, 24–HOUR STORM EVENT.
- THE EXISTING CONVEYANCE SYSTEM DOWNSTREAM FROM POA "B" DOES NOT EXPERIENCE LOCALIZED FLOODING BETWEEN THE SITE AND THE MAPPED FLOODPLAIN OF BALD'S RUN FOR THE 10–YEAR, 24–HOUR STORM EVENT UNDER POSTDEVELOPMENT CONDITIONS.
- THE PROPOSED IMPROVEMENTS WILL REDUCE THE POSTDEVELOPMENT 10–YEAR, 24–HOUR PEAK FLOW RATES FOR POA "C" AND POA "D" TO BE LESS THAN THE PREDEVELOPMENT PEAK FLOW RATES.

WATER QUALITY:
- THE STATE'S STORMWATER MANAGEMENT (SWM) REGULATIONS (9VAC25–870–63) REQUIRE THE TOTAL PHOSPHORUS LOAD OF A LINEAR DEVELOPMENT PROJECT ON PRIOR DEVELOPED LANDS TO BE REDUCED 20% BELOW THE PRE–DEVELOPMENT TP LOAD.
- FROM THE VIRGINIA RUNOFF REDUCTION (VRRM) SPREADSHEET THE TOTAL TP LOAD REDUCTION REQUIRED FOR THIS PROJECT IS 0.56 POUNDS PER YEAR.
- SINCE THE SITE HAS LIMITED SPACE AVAILABLE FOR THE INSTALLATION OF STORMWATER MANAGEMENT BMP INFRASTRUCTURE WITHIN THE RIGHT–OF–WAY, THE PURCHASE OF STATE NUTRIENT REMOVAL CREDITS IS REQUIRED.
- NUTRIENT REMOVAL CREDITS TO BE PURCHASED FROM EITHER THE CULPEPER OR PRISTINE WATERS NUTRIENT BANK LOCATED WITHIN THE RAPPAHANNOCK RIVER BASIN.
- NUTRIENT CREDITS SHALL BE PURCHASED BY THE TOWN OF CULPEPER AND ASSIGNED TO VDOT BY AGREEMENT.

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

BMP Design Specifications List: **2013 Draft Stds & Specs**

Update Summary Sheet

Print Preview | Print

Site Summary - Linear Development Project***

Project Title: US 522 Improvements, Culpeper, VA
Date: 44284

Total Rainfall (in):	43
Total Disturbed Acreage:	1.75

Site Land Cover Summary

Pre-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.06	0.86	0.00	0.92	53
Impervious Cover (acres)	0.00	0.30	0.53	0.00	0.83	47
					1.75	100

Post-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.00	0.00	0.00	0.00	0.00	0
Managed Turf (acres)	0.00	0.19	0.66	0.00	0.85	49
Impervious Cover (acres)	0.00	0.17	0.73	0.00	0.90	51
					1.75	100

Site Tv and Land Cover Nutrient Loads

	Final Post-Development (Post-ReDevelopment & New Impervious)	Post-ReDevelopment	Post-Development (New Impervious)	Adjusted Pre-ReDevelopment
Site Rv	0.59	0.58	0.95	0.58
Treatment Volume (ft^3)	3,769	3,527	241	3,527
TP Load (lb/yr)	2.37	2.22	0.15	2.22

Pre-ReDevelopment TP Load per acre (lb/acre/yr)	Final Post-Development TP Load per acre (lb/acre/yr)	Post-ReDevelopment TP Load per acre (lb/acre/yr)
1.32	1.35	1.32

Total TP Load Reduction Required (lb/yr)	0.56	N/A***	N/A***

This is a linear development project

	Final Post-Development Load (Post-ReDevelopment & New Impervious)	Pre-ReDevelopment
TN Load (lb/yr)	16.94	16.15

Site Compliance Summary - ***Linear Development Project

Maximum % Reduction Required Below Pre-ReDevelopment Load	20%

Total Runoff Volume Reduction (ft^3)	0
Total TP Load Reduction Achieved (lb/yr)	0.00
Total TN Load Reduction Achieved (lb/yr)	0.00
Remaining Post Development TP Load (lb/yr)	2.37
Remaining TP Load Reduction (lb/yr) Required	0.56

ECOSYSTEM SERVICES

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Charlottesville, VA 22903
540.578.4296
www.ecosystemservices.us
jon@ecosystemservices.us

February 8, 2021

Don Rissmeyer, PE
A. Morton Thomas Associates
100 Gateway Centre Parkway, #200
Richmond, VA 23235

RE: Nutrient Offset Credit – Credit Availability Letter
US522 Road Diet
VDOT Project Number: U000-204-176, UPC: 109573
Town of Culpeper, VA
HUC: 02080103

Dear Mr. Rissmeyer,

We appreciate the opportunity to provide a credit availability letter for 0.56 pounds of phosphorus for the above referenced project. This letter is to certify that as of today, February 8th, 2021, Pristine Waters Nutrient Bank has 9.71 pounds of phosphorus and 38.27 pounds of nitrogen available for transfer to those entities requiring offsets in accordance with the Chesapeake Bay Watershed Nutrient Credit Exchange Program (VA Code § 62.1-44.19:14 et seq.). Those offsets are also transferable in accordance with the Virginia stormwater offset program (VA Code § 62.1-44.15:35) and the Virginia Soil and Water Conservation Board's Guidance Document on Stormwater Nonpoint Nutrient Offsets approved on July 23, 2009, to those regulated entities qualifying for nutrient credits.

We can certainly accommodate your needs and could offer to fulfil the order of 0.56 pounds of phosphorus.

Please feel free to contact us with any questions. I hope we have the opportunity to work together on this project.

Sincerely,
Ecosystem Services, LLC
By:

Jonathan R. Roller, AOSE PSS CNMP
Manager – Authorized Representative

Ecosystem Services △ 1739 Allied Street, Suite A, Charlottesville, VA 22903 △ 540.578.4296 △ www.ecosystemservices.us
Page 1 of 1

AMT
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PROJECT TITLE

US 522 PEDESTRIAN AND BICYCLE SAFETY IMPROVEMENTS (ROAD DIET)
TOWN OF CULPEPER, VA

UPC # 109573
STATE PROJECT # U000-204-176
FEDERAL # HSIP-5204 (127)

REVISIONS

MARK	DATE	DESCRIPTION

AMT FILE NO.	16-0865.001
DATE:	2/21/22
SCALE:	N/A
DESIGNED BY:	CER
DRAWN BY:	LAL
CHECKED BY:	DJR

100% DESIGN

SHEET TITLE

STORMWATER MANAGEMENT NOTES

SHEET

C15.1

SHEET 69 OF 70

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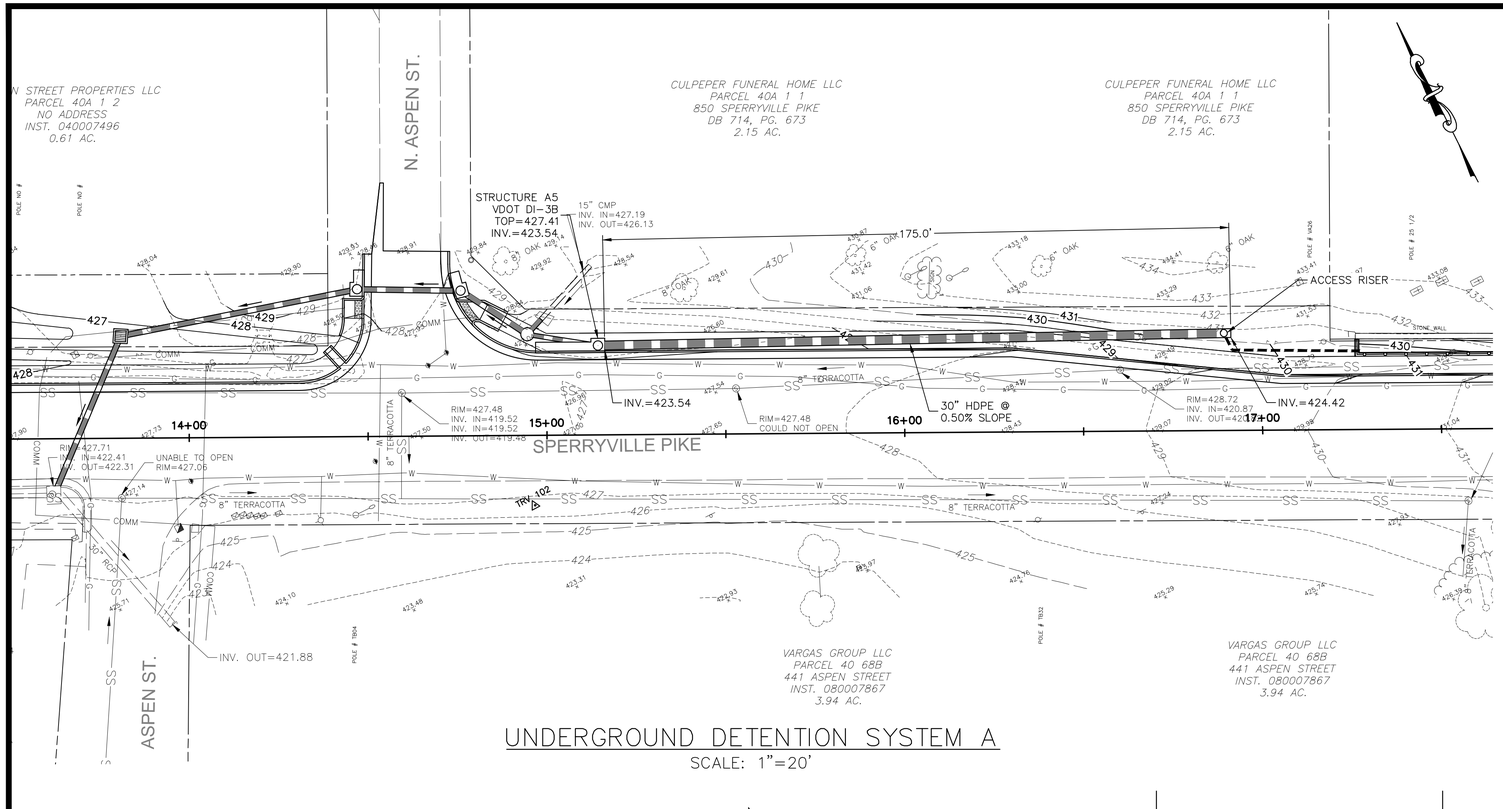
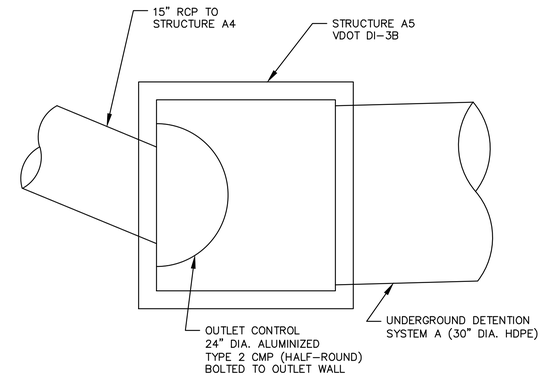


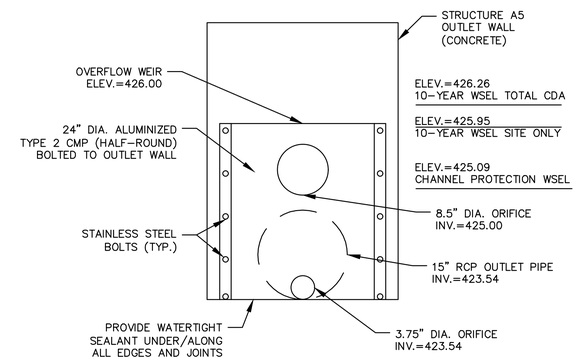
UNDERGROUND DETENTION SYSTEM A

SCALE: 1"=20'



TOP VIEW

NTS

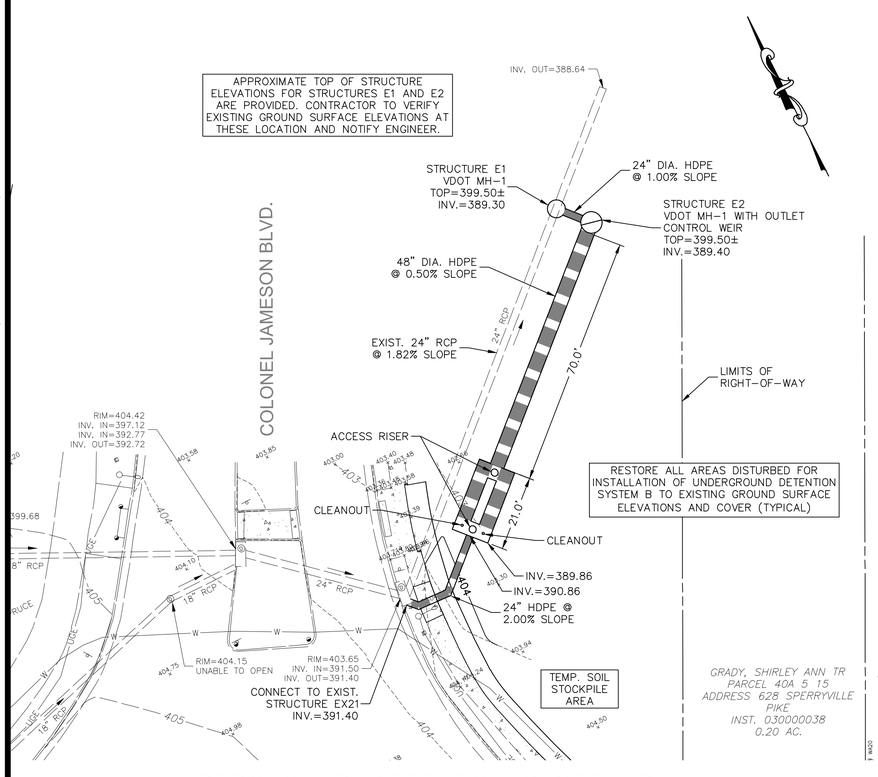


FRONT VIEW

NTS

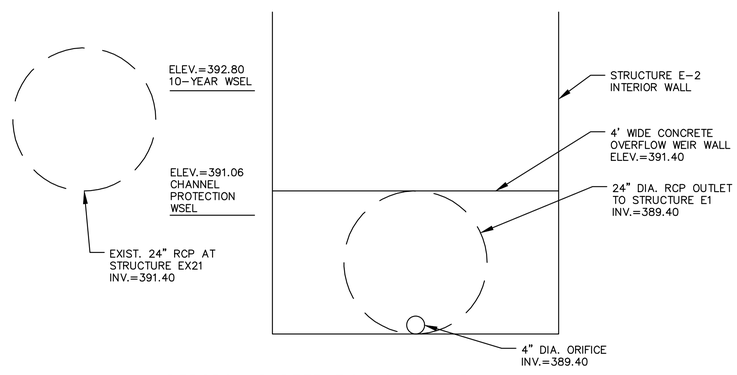
UNDERGROUND DETENTION SYSTEM A OUTLET CONTROL DETAIL

NTS



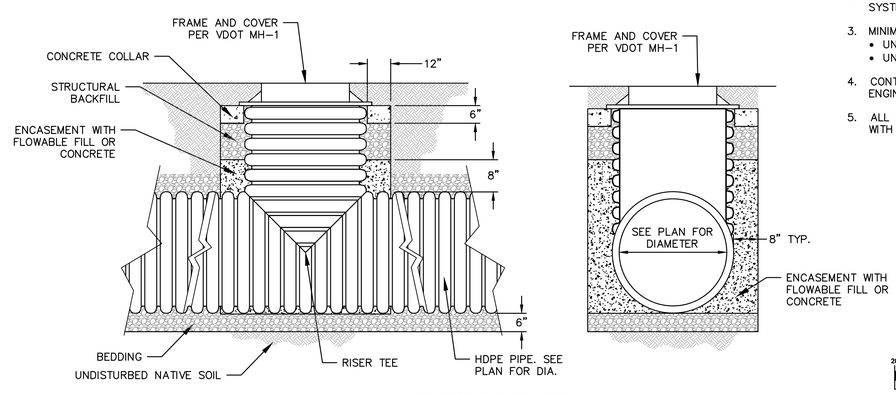
UNDERGROUND DETENTION SYSTEM B

SCALE: 1"=20'



UNDERGROUND DETENTION SYSTEM B OUTLET CONTROL DETAIL

NTS



ACCESS RISER DETAIL

NTS

NOTES:

1. UNDERGROUND DETENTION SYSTEMS SHALL BE CONSTRUCTED WITH HDPE PIPE AND ASSOCIATED COMPONENTS AND INSTALLED IN ACCORDANCE WITH ALL MANUFACTURER REQUIREMENTS.
2. ALL HDPE PIPE AND COMPONENTS FOR UNDERGROUND DETENTION SYSTEMS SHALL MEET THE REQUIREMENTS OF AASHTO M294.
3. MINIMUM REQUIRED PIPE STORAGE VOLUME SHALL BE:
   - UNDERGROUND DETENTION SYSTEM A (30") – 859 CF
   - UNDERGROUND DETENTION SYSTEM B (48") – 1,408 CF
4. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR APPROVAL BY ENGINEER PRIOR TO PLACING ORDER FOR MATERIALS.
5. ALL ACCESS RISERS AND CLEANOUTS SHALL BE INSTALLED FLUSH WITH FINISHED GRADE.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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100% DESIGN

SHEET TITLE

UNDERGROUND DETENTION PLAN

SHEET

C15.2

SHEET 70 OF 70

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