

ARLINGTON
VIRGINIA

ENGINEER
CLARK AZAR & ASSOCIATES, INC.
20440 CENTURY BOULEVARD, SUITE 200
GERMANTOWN, MD 20874
PHONE: 301.528.2010

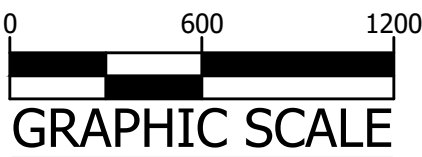
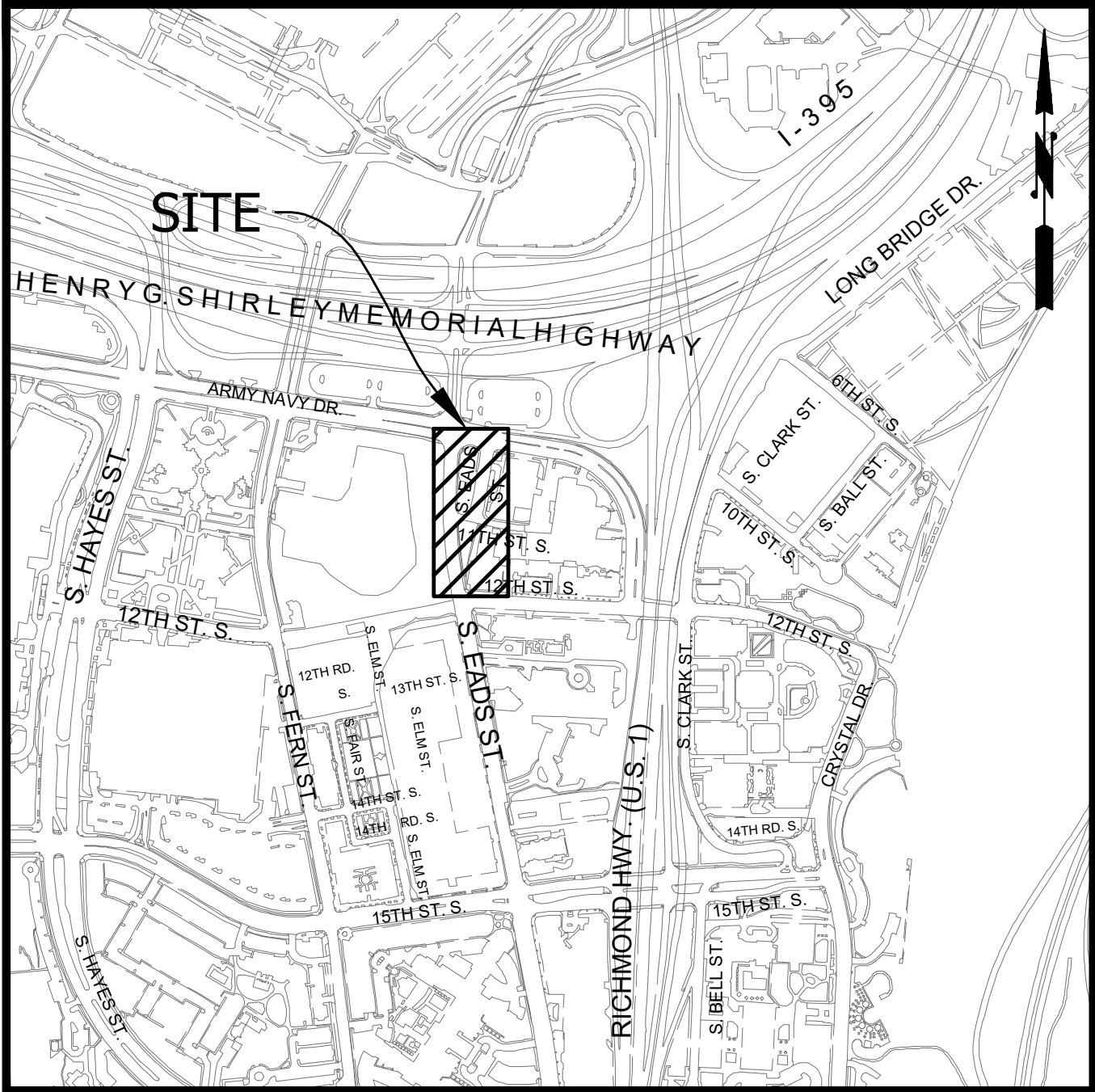
LANDSCAPE ARCHITECT
LSG LANDSCAPE ARCHITECTURE
1775 GREENSBORO STATION PL, SUITE 110
TYSONS, VA 22102
PHONE: 703.821.2045

OWNER
DES/OD/WSS
CONTRACTOR
TO BE DETERMINED



SOUTH EADS STREET (N.E. PERSPECTIVE)

LOCATION MAP



CONSTRUCTION DRAWINGS FOR:
SOUTH EADS ROADWAY IMPROVEMENTS
BETWEEN ARMY NAVY DR. AND 12TH ST. S.

PROJECT NUMBER: CC13

GENERAL NOTES:

GENERAL CONSTRUCTION NOTES

- ALL CONSTRUCTION WORK FOR THIS PROJECT SHALL CONFORM TO THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES, CONSTRUCTION STANDARDS AND SPECIFICATIONS, AND WHERE APPLICABLE THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE SPECIFICATIONS, AND ROAD AND BRIDGE STANDARDS. THE LATEST EDITIONS OF EACH RELEVANT MANUAL SHALL BE USED.
- ALL CONSTRUCTION AND WORK ACTIVITIES SHALL COMPLY WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND ALL OTHER RELEVANT WORK SAFETY REQUIREMENTS, LATEST EDITIONS.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT OFFICER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS.
- THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 811 FOR MARKING THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES (I.E. WATER, SEWER, GAS, TELEPHONE, ELECTRIC, AND CABLE TV) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION OR CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO IDENTIFY AND PROTECT ALL OTHER UTILITY LINES FOUND IN THE WORK SITE AREA BELONGING TO OTHER OWNERS THAT ARE NOT MEMBERS OF "MISS UTILITY". PRIVATE WATER, SEWER AND GAS LATERALS WILL NOT BE MARKED BY MISS UTILITY OR THE COUNTY. THE CONTRACTOR SHALL LOCATE AND PROTECT THESE SERVICES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT THE WORK AND SHALL RETAIN A PROFESSIONAL LAND SURVEYOR LICENSED IN THE COMMONWEALTH OF VIRGINIA TO PROVIDE ALL NECESSARY CONSTRUCTION LAYOUTS AND ESTABLISH ALL CONTROL LINES, GRADES, AND ELEVATION DURING CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A COPY OF ALL CUT SHEETS FOR REVIEW, PER THE SPECIFICATIONS. THE COST OF ALL NECESSARY SURVEYING SERVICES SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND, UNLESS OTHERWISE SPECIFIED, THE COST SHALL BE INCORPORATED INTO THE COSTS FOR RELEVANT ITEMS.
- THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM BEST AVAILABLE RECORDS AND SHALL BE CONSIDERED TO BE APPROXIMATE. WHEN CONSTRUCTION ACTIVITY REACHES IN PROXIMITY TO EXISTING UTILITIES, THE TRENCH(ES) SHALL BE OPENED A SUFFICIENT DISTANCE AHEAD OF THE WORK OR TEST PITS SHALL BE MADE TO VERIFY THE EXACT LOCATION AND INVERTS OF THE UTILITY TO ALLOW FOR POSSIBLE CHANGES IN THE LINE OR GRADE AS DIRECTED BY OFFICER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING UTILITIES AND THE RELATED STRUCTURES. ALL EXISTING UTILITY SYSTEMS SHALL BE PROTECTED TO PREVENT DAMAGE DURING THE CONTRACTOR'S OPERATIONS. ANY SYSTEM DAMAGED SHALL BE PROMPTLY REPAIRED AT NO COST TO THE OWNER.
- EXISTING MANHOLE FRAMES, COVERS, VALVE BOXES, AND OTHER APPURTENANCES SHALL BE ADJUSTED TO THE FINAL GRADE OR REPLACED, AS NECESSARY. UNLESS OTHERWISE SPECIFIED, THE COST FOR THIS SHALL BE CONSIDERED INCIDENTAL TO THE WORK, AND SHALL BE INCORPORATED INTO THE COSTS FOR RELEVANT ITEMS.
- THE CONTRACTOR SHALL PROVIDE ADA COMPLIANT ACCESS THROUGH OR AROUND THE SITE AT ALL TIMES AND SHALL ENSURE THE SAFETY OF ALL THOSE PASSING THROUGH OR ADJACENT TO THE SITE.
- ALL SIDEWALK AND CURB AND GUTTER DEMOLITION SHALL BEGIN AND END AT THE CONSTRUCTION JOINT NEAREST TO THE DEPICTED DEMOLITION EXTENTS WITH A NEAT SAWCUT LINE TO FULL DEPTH OF PAVEMENT SECTION.

STORMWATER AND ENVIRONMENTAL PROTECTION

- THE CONTRACTOR SHALL CONFINE ALL ACTIVITIES AT THE SITE ASSOCIATED WITH CONSTRUCTION ACTIVITIES, TO INCLUDE STORAGE OF EQUIPMENT AND OR MATERIALS, ACCESS TO THE WORK, FORMWORK, ETC. TO WITHIN THE DESIGNATED LIMITS OF DISTURBANCE (LOD).

TREE PROTECTION

- TREES SHALL BE PROTECTED PER THE REQUIREMENTS OF ARLINGTON PARKS & RECREATION STANDARD.

TRAFFIC CONTROL

- CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER AT LEAST 3 WORKING DAYS PRIOR TO DISTURBING ANY EXISTING, OR INSTALLING ANY NEW, TRAFFIC SIGNS, SIGNALS, OR OTHER TRAFFIC CONTROL DEVICES.
- THE CONTRACTOR SHALL PREMARK THE LAYOUT OF ANY PERMANENT TRAFFIC CONTROL STRIPING, INDICATING THE PROPOSED LOCATION AND TYPE OF MARKING TO BE INSTALLED. THE PREMARKING MAY CONSIST OF TYPE D TAPE, CHALK, OR LUMBER CRAYONS. THE CONTRACTOR SHALL ALLOW 3 WORKING DAYS FOR THE INSPECTION AND APPROVAL OF THE PREMARKINGS PRIOR TO PLACING THE PERMANENT MARKINGS.
- THE CONTRACTOR SHALL SUBMIT ANY REQUESTS FOR TEMPORARY "NO PARKING" RESTRICTIONS TO THE PROJECT OFFICER AT LEAST 5 BUSINESS DAYS PRIOR TO THE DESIRED ONSET OF RESTRICTIONS. PRIOR TO A REQUEST FOR THE REMOVAL OF ACCESS TO ANY ADA PARKING SPACE THE CONTRACTOR MUST HAVE MADE PROVISION FOR ALTERNATIVE ADA PARKING AS INDICATED ON THE APPROVED PLAN OR AS DIRECTED BY THE PROJECT OFFICER.
- WHEN THE APPROVED PLAN CALLS FOR THE REMOVAL OF ANY PARKING METER THE CONTRACTOR MUST MAKE A REQUEST TO THE PROJECT OFFICER AT LEAST ONE WEEK IN ADVANCE OF THE DESIRED REMOVAL. THE PROJECT OFFICER WILL THEN COORDINATE THE PARKING METER REMOVAL WITH TRAFFIC ENGINEERING AND OPERATIONS.
- THE CONTRACTOR SHALL PRESERVE ALL BUS STOPS, INCLUDING MAINTAINING ADEQUATE ACCESSIBILITY THROUGH AND ADJACENT TO THE CONSTRUCTION FOR BUSES AND THEIR PASSENGERS. THE CONTRACTOR SHALL NOT CLOSE, RELOCATE, OR OTHERWISE MODIFY A BUS STOP WITHOUT PRIOR REQUEST OF THE PROJECT OFFICER. ANY RELOCATION OR CLOSURE OF A BUS STOP SHALL REQUIRE AT LEAST FOUR WEEKS ADVANCE NOTICE FOR COORDINATION WITH THE COUNTY'S BUS STOP COORDINATOR - 703-228-3049.
- WHEN CONDITIONS WARRANT DUE TO TRAFFIC VOLUMES, PATTERNS, OR SPECIAL EVENTS, THE COUNTY MAY SUSPEND OR OTHERWISE DIRECT THE CONTRACTOR'S ACTIVITIES TO PROTECT THE PUBLIC AND OR THE COUNTY'S TRANSPORTATION NETWORK.

WATER DISTRIBUTION, STORM AND SANITARY SEWER SYSTEMS

- UNLESS OTHERWISE DIRECTED, CONTRACTORS ARE EXPRESSLY PROHIBITED FROM OPERATING ANY WATER VALVES OR APPURTENANCES. CONTRACTORS SHALL SUBMIT ALL REQUESTS FOR VALVE OPERATIONS TO THE PROJECT OFFICER AT LEAST 1 WEEK IN ADVANCE OF THE REQUIRED OPERATION.
- IN THE EVENT OF A WATER OR SEWER EMERGENCY, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COUNTY'S WATER CONTROL CENTER AT 703-228-6555 AND THE PROJECT OFFICER.
- THE CONTRACTOR SHALL COORDINATE ALL UTILITY SHUTOFFS, DISCONNECTS, AND/OR ABANDONMENT WITH UTILITY OWNER AND PROJECT OFFICER AT LEAST 1 WEEK IN ADVANCE OF THE REQUIRED INTERRUPTION.

FIRE DEPARTMENT NOTES:

- ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED UNOBSTRUCTED AND ACCESSIBLE AT ALL TIMES IN ACCORDANCE WITH SECTIONS 508.5.4 AND 508.5.5 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
- ACCESS TO BUILDINGS FOR FIREFIGHTING SHALL BE MAINTAINED AT ALL TIMES. EXISTING FIRE APPARATUS ACCESS ROADS (FIRE LANES) SHALL BE KEPT CLEAR OF OBSTRUCTIONS IN ACCORDANCE WITH SECTION 503.4 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE. ACCESS TO CONSTRUCTION SITES SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH SECTION 1410 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
- IN THE EVENT THAT EXISTING FIRE DEPARTMENT CONNECTIONS OR FIRE APPARATUS ACCESS ROADS (FIRE LANES) MUST BE OBSTRUCTED TO FACILITATE CONSTRUCTION ACTIVITIES, CONTACT THE ARLINGTON COUNTY FIRE DEPARTMENT FIRE PREVENTION OFFICE AT 703-228-4644 TO COORDINATE REVIEW AND APPROVAL OF TEMPORARY FIRE DEPARTMENT CONNECTIONS AND/OR FIRE APPARATUS ACCESS ROADS PRIOR TO CREATING THE OBSTRUCTION.

SHEET LIST

SHEET NUMBER	SHEET TITLE
C000.1	COVER
C002.1	DETAILS
C004.1	TYPICAL SECTIONS
C006.1	LEGEND
C011.1	EXISTING CONDITIONS
C021.1	DEMOLITION PLAN
C031.1	EROSION AND SEDIMENT CONTROL PHASE 1
C031.2	EROSION AND SEDIMENT CONTROL PHASE 2
C032.1	EROSION AND SEDIMENT CONTROL NOTES
C032.2	EROSION AND SEDIMENT CONTROL DETAILS
C032.3	EROSION AND SEDIMENT CONTROL DETAILS
C032.4	SEWERSHED AND SOIL SURVEY
C035.1	STORMWATER POLLUTION PREVENTION PLAN
C035.2	STORMWATER POLLUTION PREVENTION PLAN
C041.1	PLAN
C041.2	PROFILE
C042.1	RAMP DETAILS
C042.2	BOARDWALK DETAILS
C043.1	EDGE OF PAVEMENT PROFILES
C044.1	CROSS SECTIONS EXHIBIT
C044.2	CROSS SECTIONS
C044.3	CROSS SECTIONS
C045.1	GEOMETRIC CONTROL PLAN
C046.1	UTILITY GEOMETRIC CONTROL PLAN
C051.1	WATERMAIN PLAN AND PROFILE
C071.1	STORM SEWER DRAINAGE DIVIDES
C072.1	STORM SEWER PLAN
C073.1	STORM SEWER PROFILES
C075.1	STORM COMPUTATIONS
C081.1	STORMWATER MANAGEMENT DRAINAGE AREA MAP
C085.1	STORMWATER MANAGEMENT CALCULATIONS
C090.1	TREE PROTECTION PLAN
C091.1	LANDSCAPE PLAN
C092.1	LANDSCAPE NOTES & DETAILS
C092.2	LANDSCAPE NOTES & DETAILS
C092.3	LANDSCAPE NOTES & DETAILS
C092.4	LANDSCAPE NOTES & DETAILS
C101.1	SIGNING AND MARKING PLAN
C101.2	VDOT E-ZPASS SIGN RELOCATION PLAN
C111.1	STREETLIGHT PLAN
C111.2	STREETLIGHT PLAN - PHOTOMETRICS

C120.1	MAINTENANCE OF TRAFFIC - TRANSPORTATION MANAGEMENT PLANS
C120.2	MAINTENANCE OF TRAFFIC - TRANSPORTATION MANAGEMENT PLANS
C121.1	MAINTENANCE OF TRAFFIC - TTC PLAN
C124.1	MAINTENANCE OF TRAFFIC - TTC DETAILS
C124.2	MAINTENANCE OF TRAFFIC - TTC DETAILS
C124.3	MAINTENANCE OF TRAFFIC - TTC DETAILS
C124.4	MAINTENANCE OF TRAFFIC - TTC DETAILS
C200.1	TURNING MOVEMENT EXHIBIT
C201.1	SIGHT DISTANCE EXHIBIT
C202.0	ADJACENT PROJECTS IMPROVEMENTS EXHIBIT
S-100	GENERAL NOTES
S-101	BOARDWALK FRAMING PLAN AND DETAILS

SWM # / LDA PERMIT #

SWM 22-0127 / LDA-50721

ADT

5,500 - S. EADS STREET (FROM 20TH STREET TO I-395) - 2019 - VDOT TRAFFIC VOLUME MAP

STREET CLASSIFICATION

S. EADS STREET - MINOR ARTERIAL

POSTED SPEED

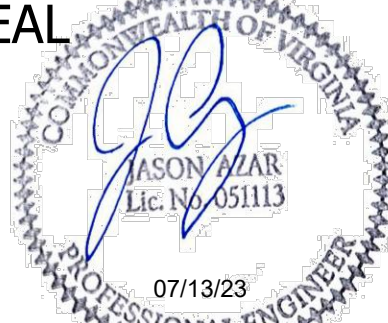
S. EADS STREET - 25 MPH



DEPARTMENT OF
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SEAL



APPROVALS DATE

DESIGN TEAM ENGINEER SUPERVISOR

8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR

8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF

8/29/2023

TRANSPORTATION DIRECTOR

8/30/2023

PROJECT MANAGER

8/14/2023

REVISIONS DATE

LDA #4 SUBMISSION 07/13/2023

100% DESIGN 05/24/2023

LDA#3 SUBMISSION 01/31/2023

LDA#2 SUBMISSION 06/23/2022

100% SUBMISSION 06/21/2022

LDA SUBMISSION 04/19/2022

30% SUBMISSION 12/23/2021

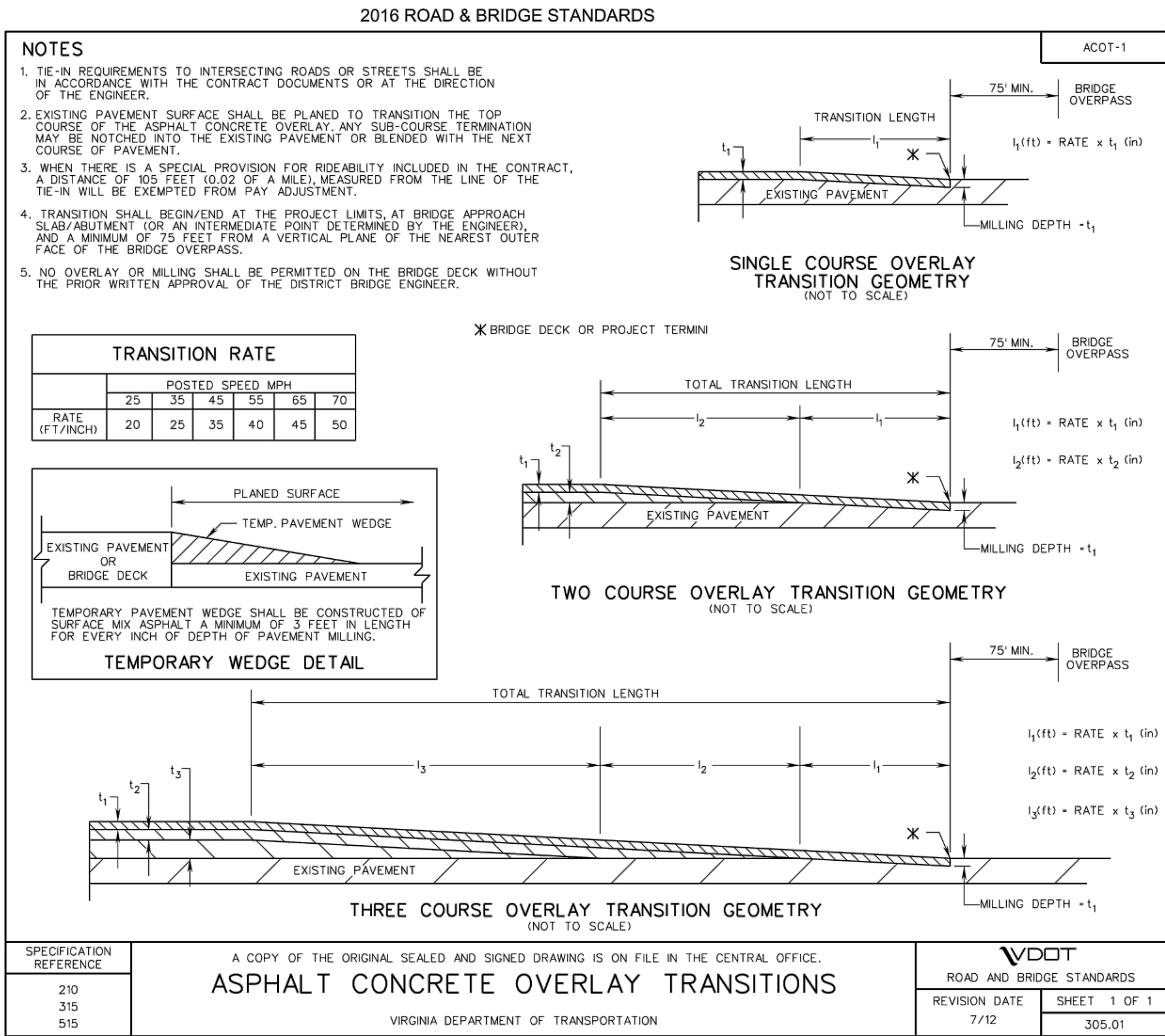
SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.

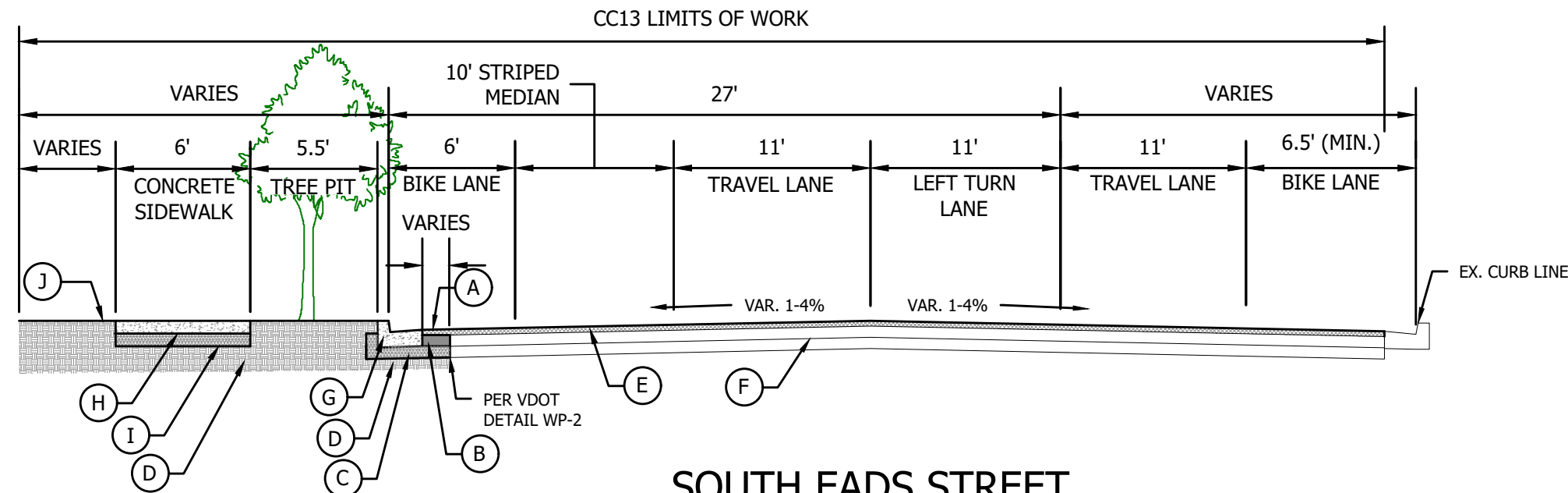
COVER

DESIGNED: ME
DRAWN: MS
CHECKED: JA
PLOTTED: JULY 13 2023

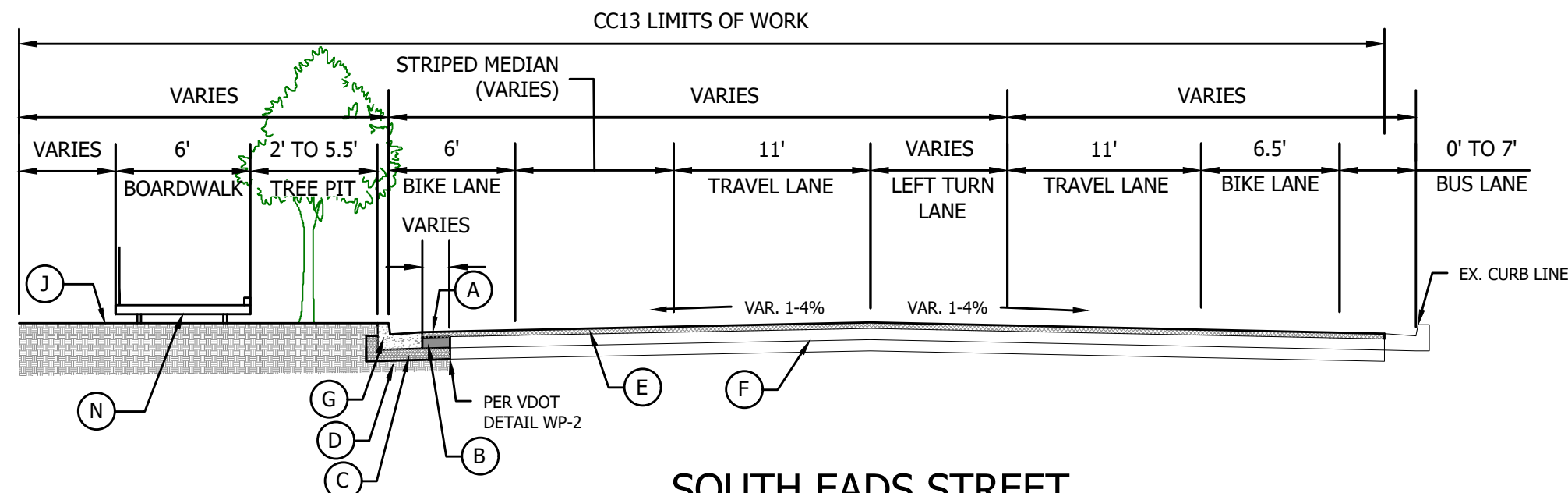
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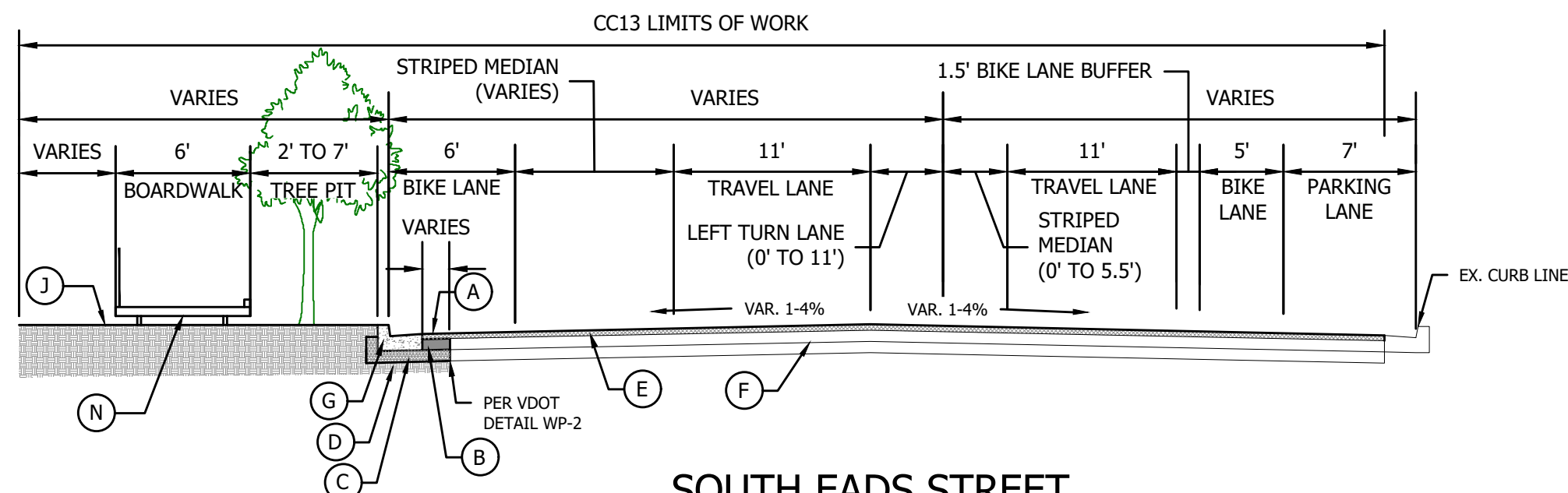




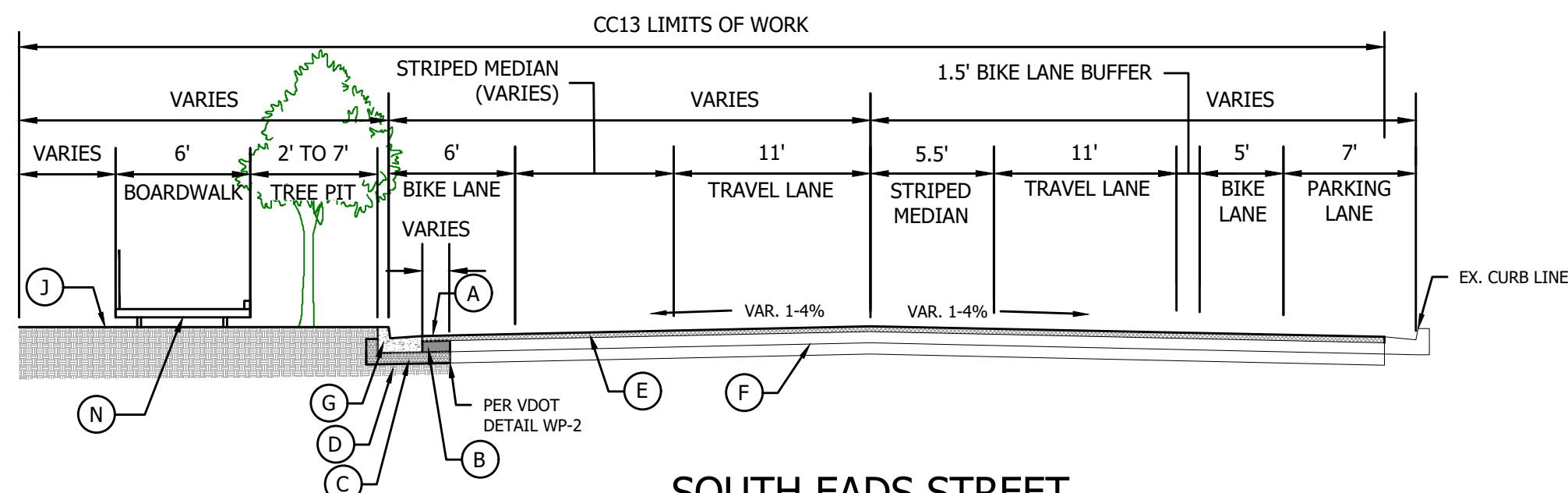
SOUTH EADS STREET
TYPICAL SECTION
STA. 0+52 TO 0+96
SCALE: NTS



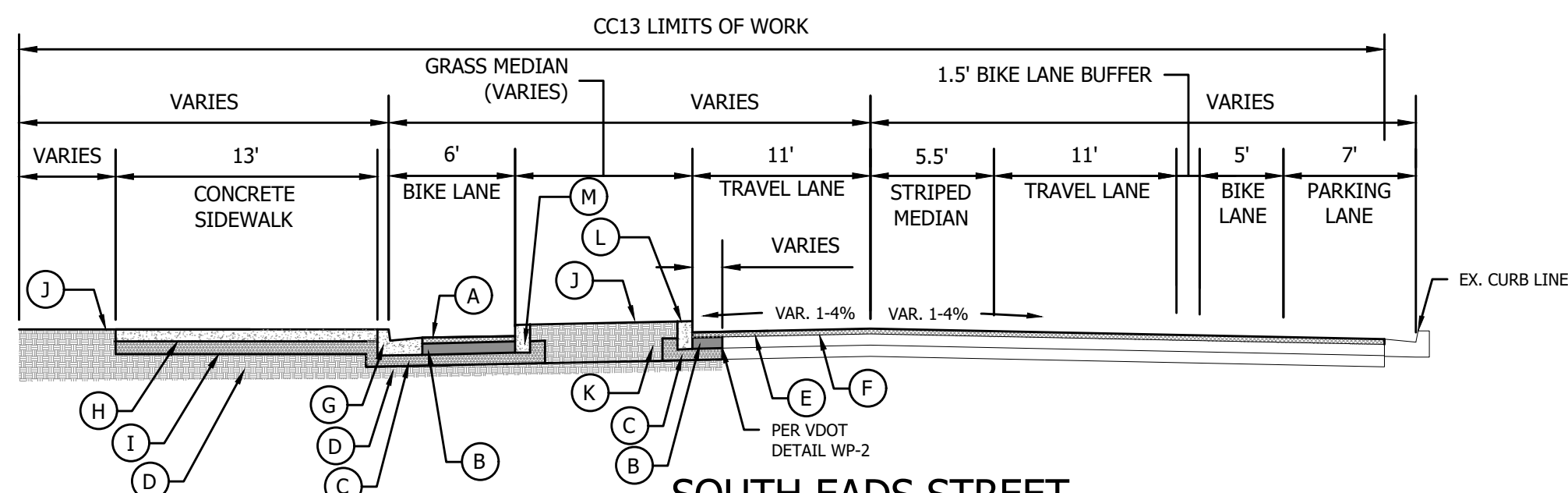
SOUTH EADS STREET
TYPICAL SECTION
STA. 0+92 TO 1+62
SCALE: NTS



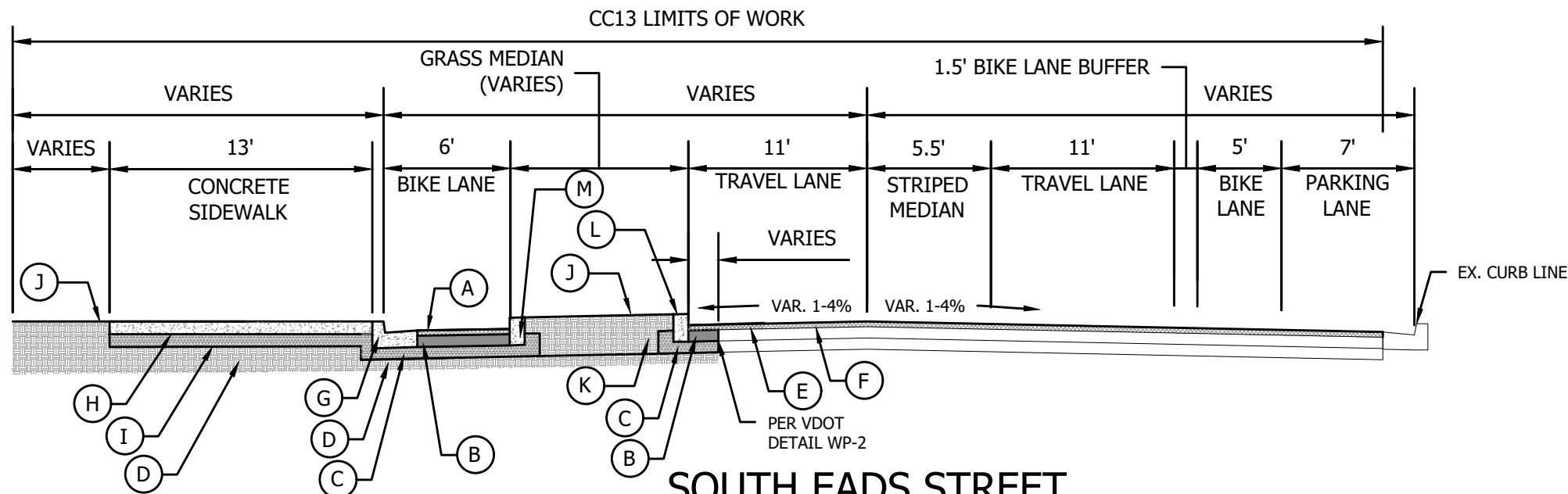
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TYPICAL SECTION
STA. 1+62 TO 2+39
SCALE: NTS



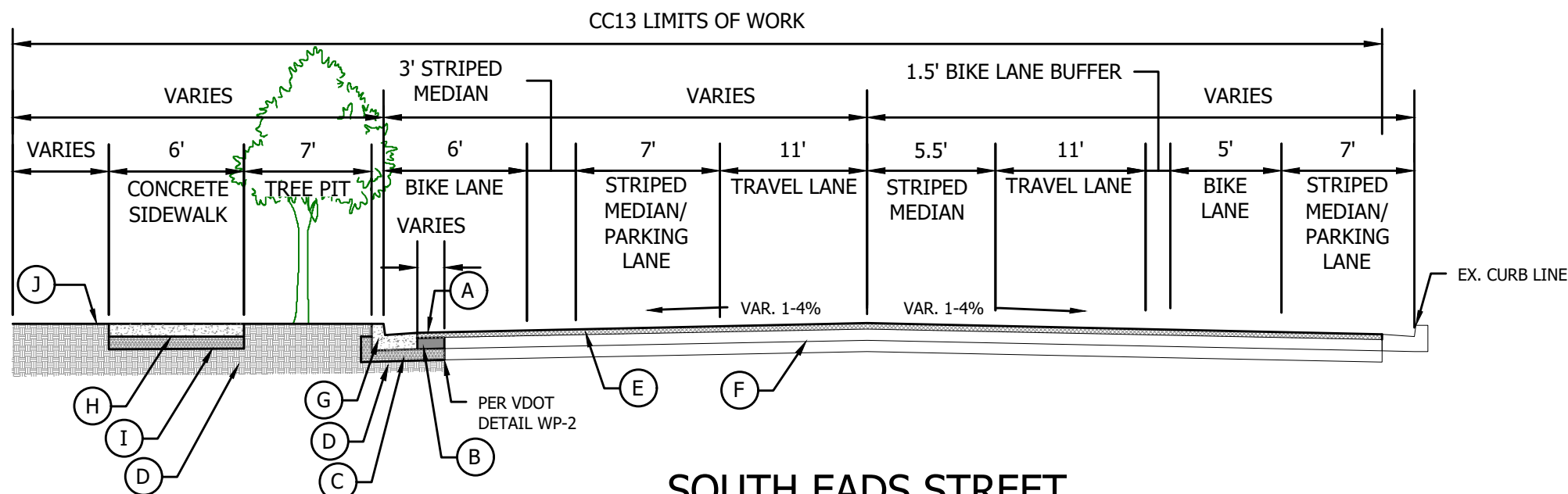
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TYPICAL SECTION
STA. 2+39 TO 2+75
SCALE: NTS



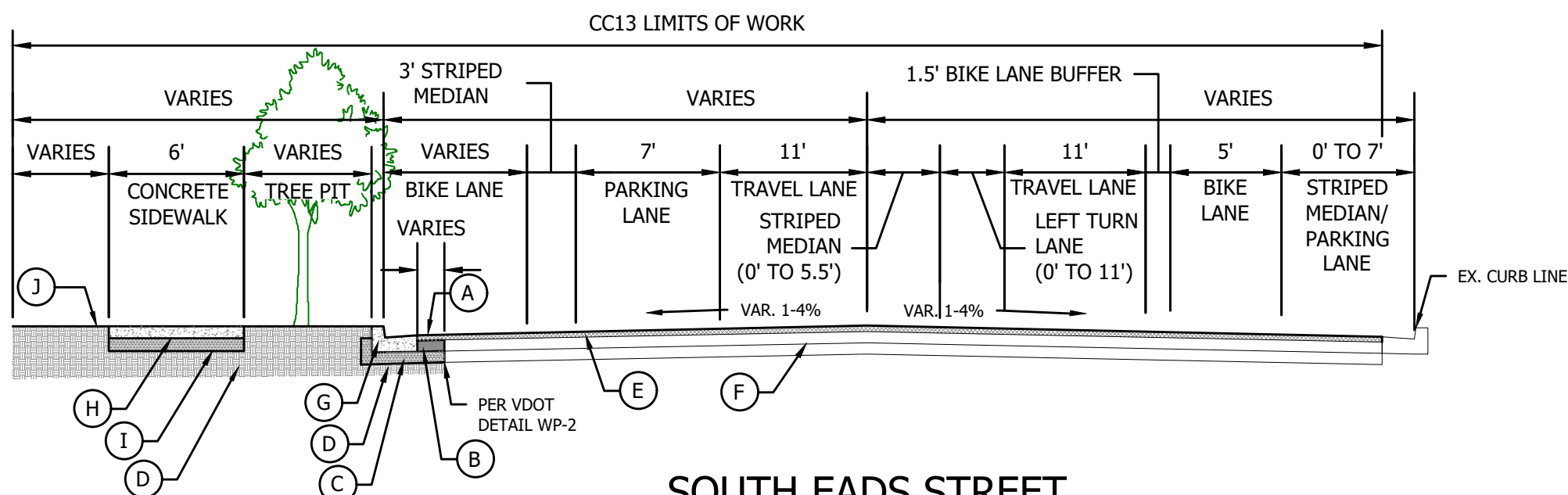
SOUTH EADS STREET
TYPICAL SECTION
STA. 2+75 TO 3+05
SCALE: NTS



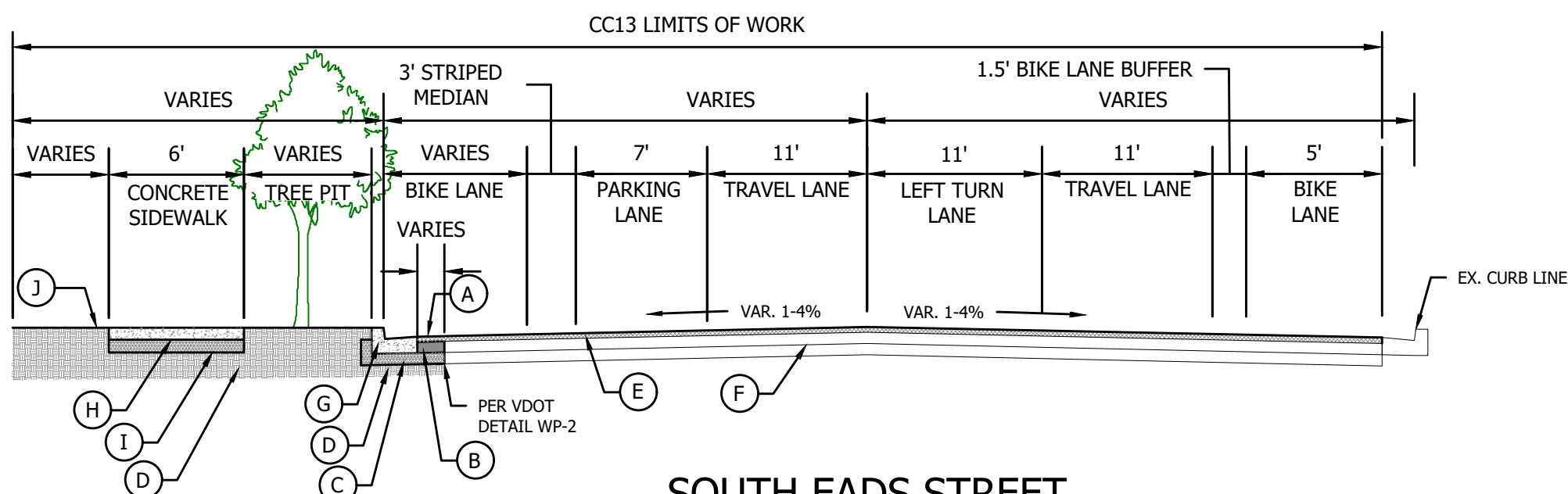
SOUTH EADS STREET
TYPICAL SECTION
STA. 3+49 TO 3+82
SCALE: NTS



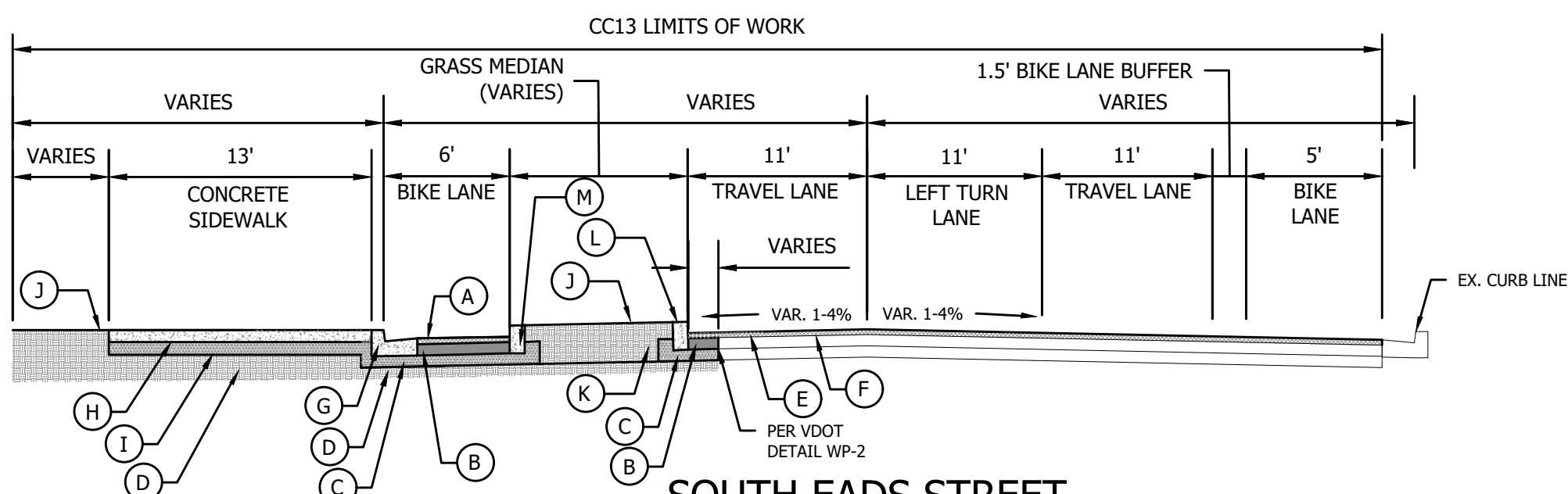
SOUTH EADS STREET
TYPICAL SECTION
STA. 3+82 TO 4+39
SCALE: NTS



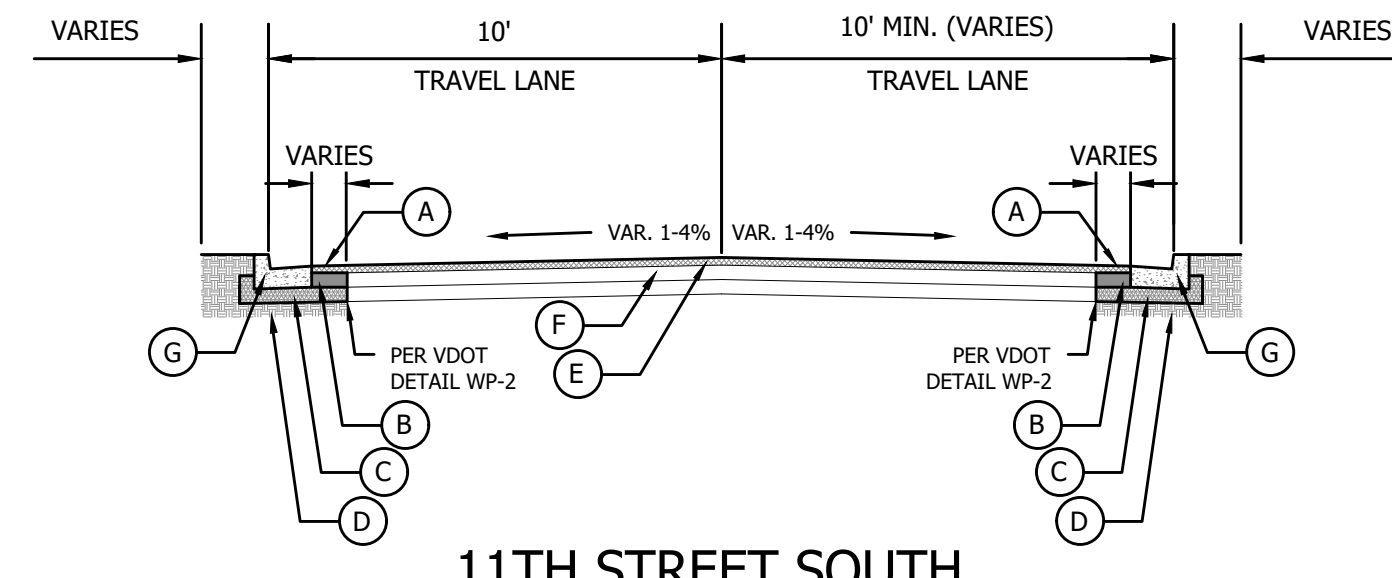
SOUTH EADS STREET
TYPICAL SECTION
STA. 4+39 TO 4+88
SCALE: NTS



SOUTH EADS STREET
TYPICAL SECTION
STA. 4+88 TO 5+58
SCALE: NTS



SOUTH EADS STREET
TYPICAL SECTION
STA. 5+58 TO 5+94
SCALE: NTS



11TH STREET SOUTH
TYPICAL SECTION
STA. 0+31 TO 0+52
SCALE: NTS

LEGEND

- A. PROP. SURFACE - 2" ASPHALT CONCRETE (TYPE SM-9.5A) ESTIMATED AT 236 LBS/SY OVER TACK COAT PER ARL SPECS
- B. PROP. BASE - 6" ASPHALT CONCRETE (TYPE BM-25.0A) PER ARL STD DETAIL R1.4
- C. PROP. COMPACTED SUBBASE - MIN 6" AGGREGATE BASE MATERIAL, TYPE 1, SIZE 21B EXTENDED TO THE BOTTOM OF EXISTING GRAVEL/SUBBASE PER ARL SPECS
- D. UNDISTURBED SUBGRADE OR BACKFILL & STANDARD COMPACTED REQUIRED PER ARL SPECS
- E. EX. PAVEMENT MILL & OVERLAY 2" (MIN.) OVER TACK COAT PER ARL SPECS (TYPE SM-9.5D)
- F. EX. ASPHALT PAVEMENT (BASE/SUBBASE)
- G. PROP. C-2 CURB & GUTTER & AGGREGATE BASE PER ARL STD R-2.0
- H. PROP. 4" STANDARD CONCRETE SIDEWALK PER ARL STD R-2.0
- I. PROP. 3" MIN. AGGREGATE BASE MATERIAL (#21A) PER ARL STD R-2.0 UNDER SIDEWALK
- J. PROP. TYP. 4"-6" TOPSOIL AND SEED OR MULCH PER ARL SPECS
- K. RAISED 6" GRASS MEDIAN WITH HEADER CURB CONSTRUCTED VDOT MS-1A STD. DETAIL
- L. PROP. C-3 HEADER CURB & AGGREGATE BASE PER ARL STD R-2.0
- M. PROP. C-5 ALTERNATE CURB FOR MEDIANS & AGGREGATE BASE PER ARL STD R-2.0
- N. PROP. 6' BOARDWALK (SEE LANDSCAPE AND STRUCTURAL PLANS FOR DETAILS)

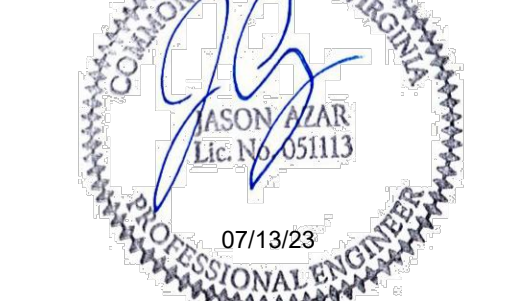
- NOTES:
- SEE PLAN FOR PROPOSED ROAD/SIDEWALK AND PARKING PAVEMENT & LANDSCAPE RESTORATION LAYOUT, SEE CROSS SECTIONS SHEET FOR PROPOSED CROSS SLOPES, ELEVATIONS, AND ROW LIMITS.
 - ALL PAVEMENT WIDENING SHALL BE PERFORMED IN ACCORDANCE WITH STANDARD WP-2.
 - LANE CONFIGURATIONS, STRIPING, AND LAYOUT ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL REFER TO PLANS, PROFILES, AND SECTIONS FOR ACTUAL CC13 CURB ALIGNMENTS AND LANE/STRIPING WIDTHS INCLUDED AS PART OF THIS PROJECT.
 - THE VERTICAL CLEARANCE FROM THE SIDEWALK TO THE BOTTOM OF ANY SIGN OR OVER HANGING VEGETATION (TREES) SHALL BE 7 FEET MINIMUM IN ACCORDANCE WITH THE MUTCD, PART 2 AND AASHTO'S GUIDE FOR THE PLANTING, DESIGN, AND OPERATION OF PEDESTRIAN FACILITIES, RESPECTIVELY.



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SEAL



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30% SUBMISSION 12/23/2021

SOUTH EADS STREET
CC13

BETWEEN ARMY NAVY DR. AND 12TH ST. S.

TYPICAL SECTIONS

DESIGNED: ME

DRAWN: MS

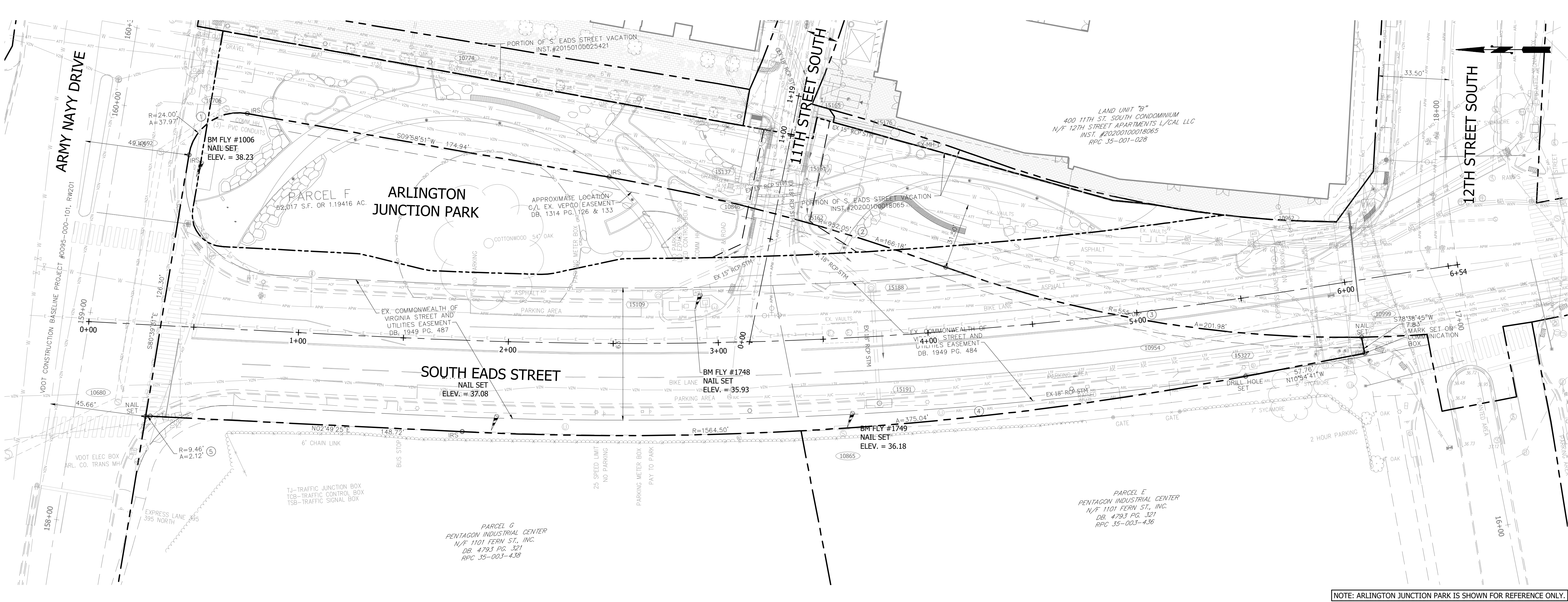
CHECKED: JA

PLOTTED: JULY 13 2023

SCALE:

AS SHOWN

C004.1



BENCHMARK TABLE				
BM #	Northing	Easting	Elevation	TYPE
1006	7001190.3660	11894604.6587	38.23	NAIL SET
1593	7001049.8315	11894483.8268	37.08	NAIL SET
1748	7000952.8368	11894541.5597	35.93	NAIL SET
1749	7000880.2594	11894485.3244	36.18	NAIL SET

STORM STRUCTURE TABLE

Structure #	Data	Structure #	Data
15109	CB-2 TOP = 35.65 INV. OUT = 32.11 (15" RCP) TO 15162	15165	EX MH TOP = 35.43 INV. IN = 31.38 (18" RCP) FROM 15158 INV. IN = 31.41 (8" PVC) FROM 15189 INV. IN = 32.59 (15" RCP) FROM 15176 INV. OUT = 31.02 (18" RCP) TO 15161
15137	VDOT DI-2A TOP = 34.46 INV. OUT = 31.56 (15" RCP) TO 15161	15176	EX MH TOP = 36.90 INV. OUT = 33.18 (15" RCP) TO 15165
15158	CB-2 TOP = 34.99 INV. OUT = 31.05 (18" RCP) TO 15165	15188	STD ARL PCB-2 L-10' TOP = 24.26 INV. IN = 22.05 (18" RCP) FROM 15162 INV. OUT = 22.03 (18" RCP) TO 15191
15161	EX MH TOP = 35.34 INV. IN = 29.82 (15" RCP) FROM 15137 INV. IN = 29.94 (18" RCP) FROM 15165 INV. OUT = 22.45 (18" RCP) TO 15162	15189	EX MH TOP = 36.12 INV. OUT = 32.04 (8" PVC) TO 15165
15162	EX MH TOP = 35.87 INV. IN = 30.87 (15" RCP) FROM 15109 INV. IN = 22.15 (18" RCP) FROM 15161 INV. OUT = 22.15 (18" RCP) TO 15188	15191	VDOT DI-2 L-12' TOP = 35.59 INV. IN = 21.93 (18" RCP) FROM 15188 INV. OUT = 21.77 (18" RCP) TO 15327

SANITARY SEWER STRUCTURE TABLE

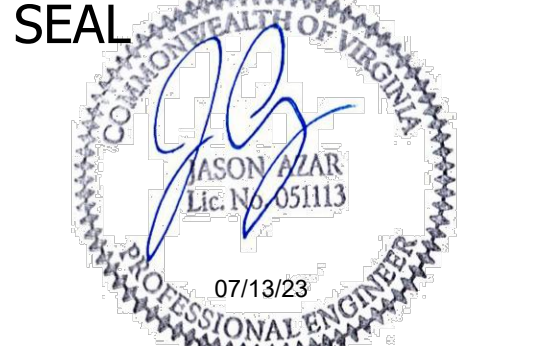
Structure #	Data	Structure #	Data
10680	TOP = 38.77 (UNABLE TO ACCESS)	10846	TOP = UNKNOWN (BURIED) (UNABLE TO ACCESS)
10692	TOP = 38.39 C/L INV. = 31.81 (36") FROM 10680 C/L INV. = 31.81 (36") FROM 10706	10856	TOP = 35.33 C/L INV. = 25.18 (8") FROM 10774 C/L INV. = 26.37 (8") FROM 10706 C/L INV. = 25.16 (8") FROM EX-MH-1
10699	TOP = 38.20 (UNABLE TO ACCESS)	10865	TOP = 36.87 (UNABLE TO ACCESS)
10706	TOP = 37.97 C/L INV. = 31.66 (36") FROM 10692 C/L INV. = 31.66 (36") FROM 10846	10954	TOP = 35.96 (UNABLE TO ACCESS)
10774	TOP = 39.55 (UNABLE TO ACCESS)	10962	TOP = 37.21 C/L INV. = 21.98 (8") FROM EX-MH-1 C/L INV. = 21.72 (8") FROM

GENERAL SURVEY NOTES:

- THIS TOPOGRAPHIC AND BOUNDARY SURVEY WAS COMPLETED BY JEFF WARNER LAND SURVEYING, INC. AS FIELD-RUN GROUND SURVEY; THE IMAGE AND/OR ORIGINAL DATA WAS OBTAINED FROM 10/2021 TO 11/2021; AND THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
- HORIZONTAL DATUM: VIRGINIA COORDINATE SYSTEM 1983.
- VERTICAL DATUM: NORTH AMERICA VERTICAL DATUM 1988.
- CONTOUR INTERVAL: 1'



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APPROVALS DATE

DESIGN TEAM ENGINEER SUPERVISOR 8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR 8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF 8/29/2023

TRANSPORTATION DIRECTOR 8/30/2023

PROJECT MANAGER 04/2020

REVISIONS DATE

LDA #4 SUBMISSION 07/13/2023

100% DESIGN 05/24/2023

LDA#3 SUBMISSION 01/31/2023

LDA#2 SUBMISSION 06/23/2022

100% SUBMISSION 06/21/2022

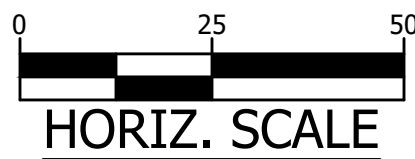
LDA SUBMISSION 04/19/2022

30% SUBMISSION 12/23/2021

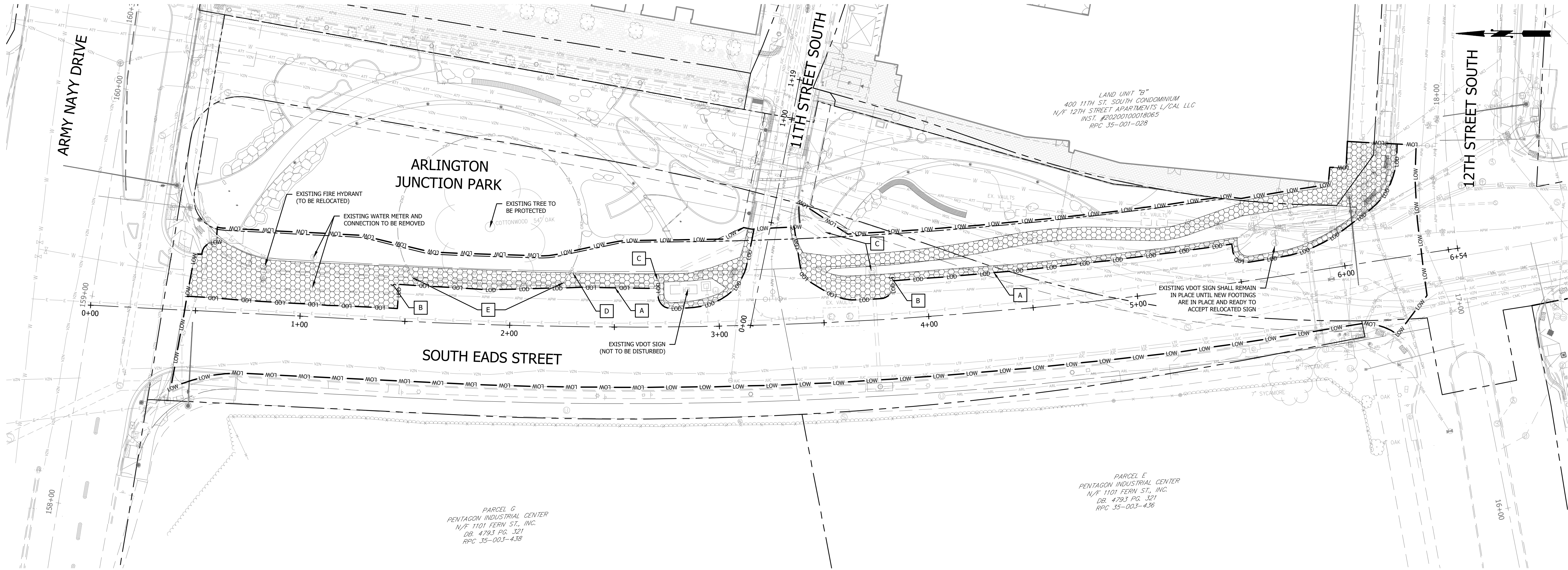
SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.
EXISTING CONDITIONS

DESIGNED: ME
DRAWN: MS
CHECKED: JA
PLOTTED: JULY 13 2023

SCALE:



C011.1



DEMOLITION LEGEND

LIMITS OF WORK	LOW
LIMITS OF DISTURBANCE	LOD
PAVEMENT DEMOLITION AREA	

DEMOLITION KEY NOTES:

CAUTION: POTENTIAL UNDERGROUND UTILITY CONFLICT. THE PROVIDED TEST HOLE DATA IS APPROXIMATE, CONTRACTOR, TO FIELD VERIFY (TEST PIT) EXACT LOCATION AND DEPTH OF EXISTING UTILITY. USE OF LARGE EQUIPMENT (HOE RAMS, VIBRATORY ROLLERS, ETC.) SHALL NOT BE PERMITTED WITHIN 5 FEET OF UNDERGROUND STRUCTURES.

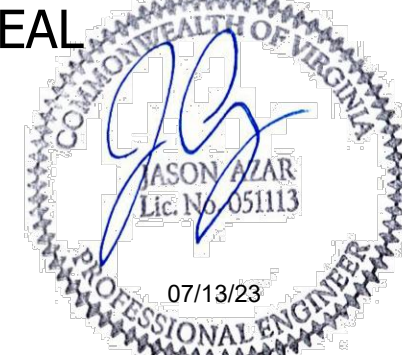
- A. CONTRACTOR SHALL MAKE A NEAT LINE SAWCUT EXISTING PAVEMENT (AT NEAREST JOINT WHERE POSSIBLE).
- B. CONTRACTOR SHALL DEMOLISH/EXCAVATE/REMOVE/DISPOSE EX. PAVEMENT, CURB & GUTTER, DRIVEWAY ENTRANCE AND CLEAR THE AREA.
- C. CONTRACTOR SHALL REMOVE/DEMOLISH/DISPOSE EX. DRAINAGE STRUCTURE & PIPE.
- D. CONTRACTOR TO COORDINATE WITH ARLINGTON COUNTY FOR THE REMOVAL/RELOCATION OF EXISTING PAY STATION. DEMOLISH/DISPOSE OF THE REMAINING FOUNDATION AND ASSOCIATED FIXTURES. REFER TO SHEET C101.1 FOR ADDITIONAL INFORMATION.
- E. CONTRACTOR SHALL TAKE CARE DURING DEMOLITION OF EXISTING CURB AND PAVEMENT WITHIN CRZ OF EXISTING COTTONWOOD TREE TO BE PROTECTED. REFER TO SHEETS C092.1, C092.3 FOR ADDITIONAL INFORMATION.

DEMOLITION GENERAL NOTES:

CONTRACTOR SHALL MAKE A NEAT LINE AND FULL DEPTH WHEN SAWCUTTING EXISTING PAVEMENT.

- CONTRACTOR SHALL PROTECT EXISTING POLES, WET AND DRY UTILITIES, AND SURFACE STRUCTURES FROM DAMAGE DURING DEMOLITION.
- EXISTING FIRE HYDRANT TO REMAIN IN SERVICE THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN UNIMPEDED ACCESS TO THE FIRE HYDRANT DURING CONSTRUCTION. THE CONTRACTOR SHALL ERCT SIGN(S) THAT CLEARLY IDENTIFY THE LOCATION OF THE FIRE HYDRANT. CONTRACTOR SHALL COORDINATE WITH ARLINGTON COUNTY FIRE MARSHAL PRIOR TO TEMPORARY REMOVAL AND RELOCATION CONSTRUCTION ACTIVITIES TAKING PLACE.
- EXISTING UNDERGROUND UTILITIES ARE TO REMAIN UNLESS OTHERWISE NOTED. CONTRACTOR SHALL ADJUST ALL STRUCTURES TOP TO NEW GRADE PER ARLINGTON COUNTY DETAILS & SPECIFICATIONS AND IN COORDINATION WITH UTILITY OWNERS.
- EXISTING TREE PROTECTION SHALL COMPLY WITH EROSION AND SEDIMENT CONTROL PLANS C031.1 - C032.3 AND LANDSCAPING PLANS C092.1 - C092.3.
- TREE AND STUMP REMOVAL SIZE 6" DBH AND BELOW SHALL BE CONSIDER CLEARING AND INCIDENTAL TO THE WORK PER ARLINGTON COUNTY SPECIFICATION SECTION 02100.
- EXISTING TRAFFIC SIGNALS SHALL BE PROTECTED DURING DEMOLITION AND CONSTRUCTION.
- EXISTING STREET LIGHTS TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED AND/OR AFTER THE NEWLY INSTALLED STREETLIGHTS ARE ACTIVATED AND OPERATIONAL. FOR INSTALLING AND/OR REMOVAL OF STREETLIGHT POLES, FOUNDATIONS, CONDUITS AND RELATED FIXTURES, SEE SHEETS C111.1 - C111.2.
- ANY SIGN(S) OR PORTION OF SIGN(S) THAT ARE NOT APPLICABLE TO THE TTC PLAN SHALL BE COVERED SO AS NOT TO BE VISIBLE TO TRAFFIC OR SHALL BE REMOVED FROM THE ROADWAY WHEN NOT IN USE. THE CONTRACTORS SHALL REVIEW AND ENSURE THAT ALL CONFLICTING PAVEMENT MARKINGS AND SIGNS HAVE BEEN ERADICATED OR REMOVED. IF THE SIGNS ARE NOT TO BE UTILIZED IN THE WORK THEN THE SIGNS WILL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.
- EXISTING STREET SIGNS TO BE REMOVED AND INSTALLED AND PAVEMENT MARKING TO BE ERADICATED AND RESTORED SEE SHEETS C101.1 - C101.2.
- ALL CONSTRUCTION AND DEMOLITION DEBRIS WITHIN THE SHOWN LIMITS INCLUDING ASPHALT MILLING/PAVING SHALL BE REMOVED AND HAULED TO WASTE UNLESS OTHERWISE NOTED.

SEAL



APPROVALS DATE

DESIGN TEAM ENGINEER SUPERVISOR 8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR 8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF 8/29/2023

TRANSPORTATION DIRECTOR 8/30/2023

PROJECT MANAGER 04/20/2022

REVISIONS DATE

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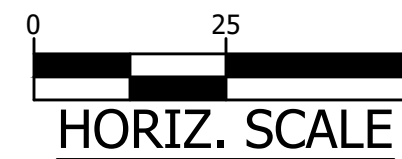
30% SUBMISSION 12/23/2021

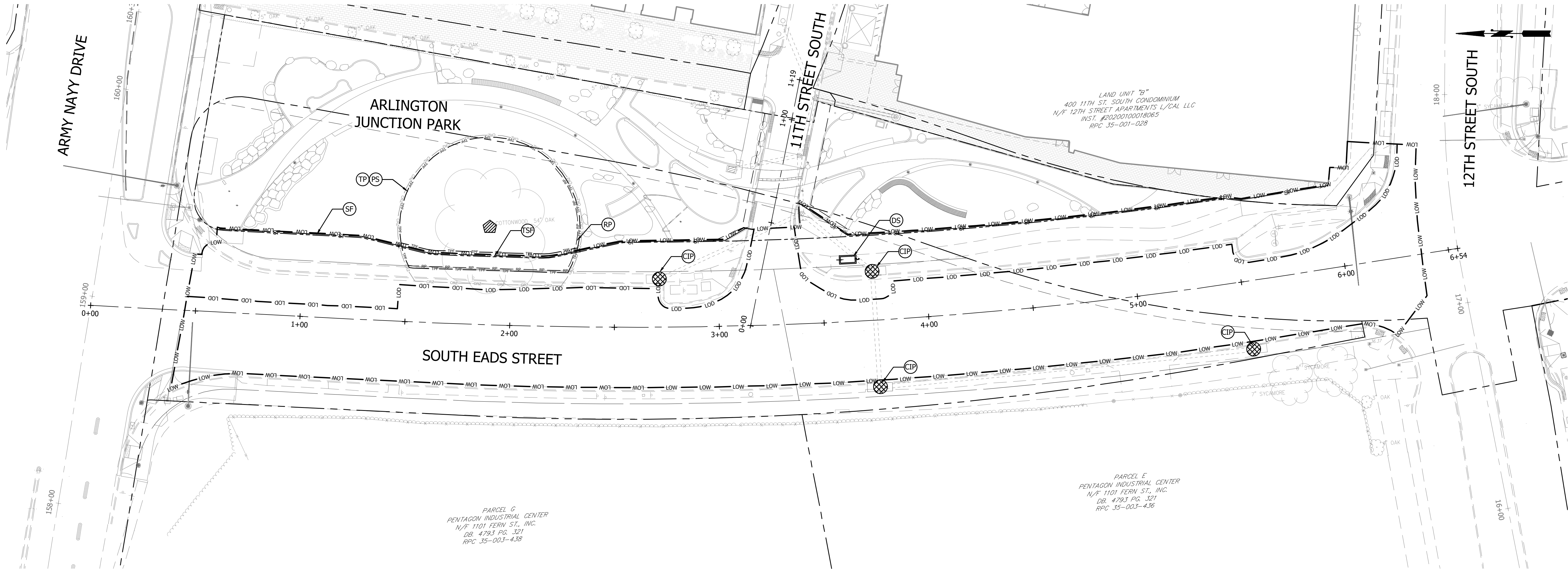
SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.
DEMOLITION PLAN

DESIGNED: ME
DRAWN: MS
CHECKED: JA

PLOTTED: JULY 13 2023

SCALE:





EROSION AND SEDIMENT
CONTROL LEGEND

3.07	CURB INLET PROTECTION	CIP	
3.05	TEMPORARY SILT FENCE	SF	
3.26	DEWATERING STRUCTURE	DS	
3.38	TREE PROTECTION	TP	
3.31	TEMPORARY SEEDING	TS	
3.32	PERMANENT SEEDING	PS	
	TRENCHLESS SILT FENCE	TSF	
	LIMITS OF WORK	LOW	
	LIMITS OF DISTURBANCE	LOD	
	ROOT PRUNING	RP	
	CRITICAL ROOT ZONE	CRZ	

NOTE: ARLINGTON JUNCTION PARK ALONG WITH 12TH ST
CC16 AND ARMY NAVY DRIVE STRIPING AND IMPROVEMENTS
ARE INCLUDED FOR REFERENCE ONLY.



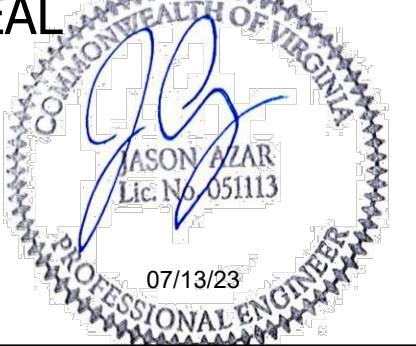
**ARLINGTON
VIRGINIA**

DEPARTMENT OF
ENVIRONMENTAL SERVICES

FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
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SEAL



07/13/23
PROFESSIONAL ENGINEER

APPROVALS	DATE
DESIGN TEAM ENGINEER SUPERVISOR	8/29/2023
CONSTRUCTION MANAGEMENT SUPERVISOR	8/29/2023
WATER, SEWER, STREETS BUREAU CHIEF	8/29/2023
TRANSPORTATION DIRECTOR	8/30/2023
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SOUTH EADS STREET
CC13


BETWEEN ARMY NAVY DR. AND 12TH ST. S.

EROSION AND SEDIMENT CONTROL PLAN
PHASE 1

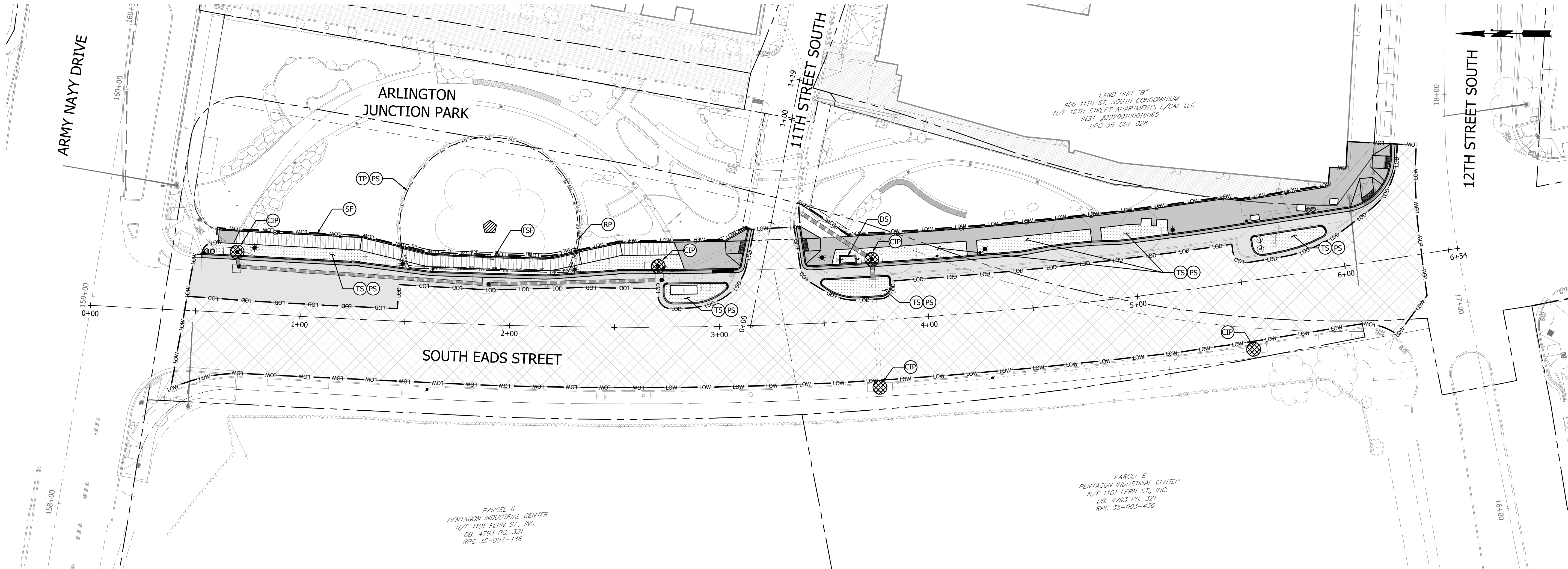
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CHECKED: JA

PLOTTED: JULY 13 2023

SCALE:



HORIZ. SCALE



EROSION AND SEDIMENT
CONTROL LEGEND

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3.05	TEMPORARY SILT FENCE	SF	
3.26	DEWATERING STRUCTURE	DS	
3.38	TREE PROTECTION	TP	
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3.32	PERMANENT SEEDING	PS	
	TRENCHLESS SILT FENCE	TSF	
	LIMITS OF WORK	LOW	
	LIMITS OF DISTURBANCE	LOD	
	ROOT PRUNING	RP	
	CRITICAL ROOT ZONE	CRZ	

NOTE: ARLINGTON JUNCTION PARK ALONG WITH 12TH ST
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SEAL

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SOUTH EADS STREET
CC13

BETWEEN ARMY NAVY DR. AND 12TH ST. S.

EROSION AND SEDIMENT CONTROL PLAN
PHASE 2

DESIGNED: ME
DRAWN: MS
CHECKED: JA

PLOTTED: JULY 13 2023

SCALE:

HORIZ. SCALE

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION:
THE PROJECT SITE IS LOCATED AT SOUTH EADS ST. SOUTH BETWEEN ARMY NAVY DRIVE AND 12TH ST SOUTH, ARLINGTON, VA. THE PURPOSE OF THE LAND DISTURBING ACTIVITY IS TO REMOVE AND REPLACE CURB, GUTTER, AND SIDEWALKS, INSTALL ADA COMPLIANT CURB CUT RAMPS, INSTALL NEW/MODIFY EXISTING STORMDRAIN INFRASTRUCTURE, MODIFY AN EXISTING FIRE HYDRANT, INSTALL PROTECTED BIKE LANE, INSTALL STREETLIGHTS, MILL AND PAVE ASPHALT ROADWAY, AND INSTALL PAVEMENT MARKINGS AND SIGNAGE.

EXISTING SITE CONDITIONS:
THE PROJECT SITE IS AT SOUTH EADS ST. BETWEEN ARMY NAVY DRIVE AND 12TH ST. SOUTH. SOUTH EADS ST. IS A 2 LANE STREET WITH STREET PARKING AND BIKE LANES ON EACH SIDE OF THE ROAD.

ADJACENT PROPERTIES:
THE PROPERTIES LOCATED TO THE EAST ARE CONDOMINIUM/APARTMENT BUILDINGS AND THE PROPERTY TO THE WEST IS A COMMERCIAL PROPERTY UNDER DEVELOPMENT.

OFF-SITE AREAS:
INLET PROTECTION IS REQUIRED OUTSIDE THE PROJECT LIMITS WHEN/WHERE WATER FROM DISTURBED AREA FLOWS.

CRITICAL AREAS:
THERE ARE NO STEEP SLOPES WITHIN THE LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES:
THE EROSION AND SEDIMENT CONTROL MEASURES FOR THIS PROJECT AREA INCLUDE SAFETY FENCE, TEMPORARY SILT FENCE, AND CURB INLET PROTECTION. INLET PROTECTION IS REQUIRED OUTSIDE THE PROJECT LIMITS WHEN/WHERE WATER FROM DISTURBED AREA FLOWS.

PERMANENT STABILIZATION:
ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH GRASS, MULCH OR SOD. SEE THE PROPOSED PLANS FOR ADDITIONAL INFORMATION.

STORMWATER RUNOFF CONSIDERATIONS:
PROJECT TOTAL LIMIT OF WORK (LOW) = 41,432 SQFT (0.951 ACRES)
TOTAL LAND DISTURBANCE.....= 14,331 SQFT (0.329 ACRES)
PRE-IMPROVEMENT IMPERVIOUS AREA.....= 6,969 SQFT (0.160 ACRES)
POST-IMPROVEMENT IMPERVIOUS AREA.....= 10,802 SQFT (0.248 ACRES)
INCREASED IMPERVIOUS AREA.....= 3,833 SQFT (0.088 ACRES)

SOILS INFORMATION:
THE FOLLOWING SOILS ARE FOUND ON SITE

SOIL#/: SOIL NAME: HYDROLOGIC GROUP: ERODABILITY:
12 URBAN LAND-UDOR1HNTS VARIES N/A

FLOODPLAIN AND RESOURCE PROTECTION AREA (RPA):
THERE ARE NO FLOODPLAIN OR RESOURCE PROTECTION AREAS LOCATED WITHIN THIS PROJECT SITE. FLOOD ZONE X PER FIRM MAP 51013C0081C EFF. DATE 8/19/2013.

EROSION & SEDIMENT CONTROL PROJECT PHASING

- PHASE I:
 - PRE-CONSTRUCTION MEETING WITH THE PROJECT OFFICER, CONTRACTOR, AND COUNTY INSPECTOR.
 - INSTALL THE TEMPORARY CONSTRUCTION ENTRANCE (IF NEEDED) IN THE LOCATION SHOWN ON THE E&S PHASE I PLAN. MUD AND DEBRIS SHALL BE WASHED FROM ALL TRUCKS EXISTING THE SITE.
 - INSTALL PERIMETER TREE DEMARCATION FENCING IN THE FORM OF TREE PROTECTION FENCE (TP) AS SHOWN ON E&S PHASE I PLAN.
 - PERFORM INITIAL PERIMETER CLEARING TO INSTALL REMAINDER OF PERIMETER CONTROLS SUCH AS DIVERSION DIKE (DD), SILT FENCE (SF) AND SUPER SILT FENCE (SSF) AS PER THE PHASE I PLAN.
 - SEED AND MULCH ALL EARTHEN CONTROLS.
 - CONTACT ARLINGTON COUNTY PROJECT OFFICER FOR A PERIMETER INSPECTION PRIOR TO CLEARING THE REMAINDER OF THE SITE IN ORDER TO OBTAIN PHASE II GRADING PERMIT.
 - CLEAR THE SITE TO THE LIMITS AS SHOWN ON THE CONSTRUCTION PLANS.
- PHASE II:
 - BEGIN UTILITY CONSTRUCTION, INSTALL ALL UTILITIES UNDERGROUND UTILITIES AND BEGIN SITE GRADING.
 - INLET PROTECTION (IP) SHALL BE PROVIDED AT STORM DRAIN INLETS AS THEY ARE CONSTRUCTED.
 - ONCE THE SITE IS BOUGHT TO NEAR FINAL GRADE, AND THE UTILITY CONSTRUCTION IS COMPLETE, COMMENCE CONSTRUCTION OF CURB & GUTTER, STREET, SIDEWALKS, AND OTHER IMPROVEMENTS
 - THE CONTROL MEASURES MAY NOT BE REMOVED UNTIL ALL OF THE DISTURBED AREAS HAVE BEEN STABILIZED AND ONLY AS APPROVED AND DIRECTED BY THE INSPECTOR.

RUNOFF SHALL BE TREATED WITH SILT FENCE AND INLET PROTECTION PRIOR TO ENTERING MAJOR STORM SEWER SYSTEMS.

EROSION AND SEDIMENT CONTROL MEASURES

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

- STRUCTURAL PRACTICES
 - SILT FENCE - VESCH 3.05
 - SILT FENCE WILL BE INSTALLED WITH THE E&S PLAN TO FILTER RUNOFF FROM DISTURBED AREAS. RUNOFF SHALL NOT BE DIRECTED PARALLEL TO THE INSTALLATION OF SILT FENCE.
 - SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
 - CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM UNDERCUTTING.
 - SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
 - SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
 - ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, THEN PREPARED AND SEEDED.
 - STORM DRAIN INLET PROTECTION - VESCH 3.07
 - ALL EXISTING & PROPOSED STORM SEWER INLETS IN AND AROUND THE PROJECT LIMITS SHALL BE PROTECTED DURING CONSTRUCTION. SEDIMENT-LADEN WATER SHALL BE FILTERED BEFORE ENTERING THE STORM SEWER INLETS.
 - THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT AND REPAIRS SHALL BE MADE AS NECESSARY.
 - STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
 - DEWATERING STRUCTURE - VESCH 3.26
 - SEDIMENT LADEN OR TURBID WATER SHALL BE FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE.
 - THE FILTERING DEVICES MUST BE INSPECTED FREQUENTLY AND REPAIRED OR REPLACED ONCE THE SEDIMENT BUILD-UP PREVENTS THE STRUCTURE FROM FUNCTIONING AS DESIGNED.
 - THE ACCUMULATED SEDIMENT WHICH IS REMOVED FROM A DEWATERING DEVICE MUST BE SPREAD ON-SITE AND STABILIZED OR DISPOSED OF AT AN APPROVED DISPOSAL SITE AS PER THE APPROVED PLAN.
 - TREE PROTECTION - VESCH 3.38
 - ALL TREES ARE TO BE PROTECTED UNLESS OTHERWISE DIRECTED BY THE COUNTY INSPECTOR AND URBAN FORESTER. THE COUNTY'S URBAN FORESTER (703-228-1863) SHALL INSPECT ALL TREES PROTECTION 72 HOURS PRIOR TO THE START OF CONSTRUCTION. IN SPITE OF PRECAUTIONS, SOME DAMAGE TO PROTECTED TREES MAY OCCUR. IN SUCH CASES, THE FOLLOWING MAINTENANCE GUIDELINES SHALL BE FOLLOWED:
 - SOIL AERATION: IF THE SOIL HAS BECOME COMPACTED OVER THE ROOT ZONE OF ANY TREE, THE GROUND SHALL BE AERATED BY PUNCHING HOLES WITH AN IRON BAR. THE BAR SHALL BE DRIVEN 1-FOOT DEEP AND THEN MOVED BACK AND FORTH UNTIL THE SOIL IS LOOSENED. THIS PROCEDURE SHALL BE REPEATED EVERY 18 INCHES UNTIL ALL OF THE COMPACTED SOIL BENEATH THE CROWN OF THE TREE HAS BEEN LOOSENED.
 - REPAIR OF DAMAGE:
 - ANY DAMAGE TO THE CROWN, TRUNK, OR ROOT SYSTEM OF ANY TREE RETAINED ON THE SITE SHALL BE REPAIRED IMMEDIATELY.
 - WHENEVER MAJOR ROOT OR BARK DAMAGE OCCURS, REMOVE SOME FOLIAGE TO REDUCE THE DEMAND FOR WATER AND NUTRIENTS
 - DAMAGED ROOTS SHALL IMMEDIATELY BE CUT OFF CLEARLY INSIDE THE EXPOSED OR DAMAGED AREA. CUT SURFACES SHALL BE PAINTED WITH APPROVED TREE PAINT, AND MOIST PEAT MOSS, BURLAP, OR TOPSOIL SHALL BE SPREAD OVER THE EXPOSED AREA.
 - TO TREAT BARK DAMAGE, CAREFULLY CUT AWAY ALL LOOSENED BARK BACK INTO THE UNDAAMAGED AREA, TAPER THE CUT AT THE TOP AND BOTTOM, AND PROVIDE DRAINAGE AT THE BASE OF THE WOUND.
 - ALL TREE LIMBS DAMAGED DURING CONSTRUCTION OR REMOVED FOR ANY OTHER REASON SHALL BE CUT OFF ABOVE THE COLLAR AT THE PRECEDING BRANCH JUNCTION.
 - CARE FOR SERIOUS INJURIES SHALL BE PRESCRIBED BY A FORESTER OR A TREE SPECIALIST.
 - FERTILIZATION: BROADLEAF TREES THAT HAVE BEEN STRESSED OR DAMAGED SHALL RECEIVE A HEAVY APPLICATION OF FERTILIZER TO AID THEIR RECOVERY.
 - TREES SHALL BE FERTILIZED IN THE LATE FALL (AFTER OCTOBER 1) OR THE EARLY SPRING (FROM THE TIME FROST IS OUT OF THE GROUND UNTIL MAY 1). FALL APPLICATIONS ARE PREFERRED, AS THE NUTRIENTS WILL BE MADE AVAILABLE OVER A LONGER PERIOD OF TIME.
 - FERTILIZER SHALL BE APPLIED TO THE SOIL OVER THE FEEDER ROOTS. IN NO CASE SHALL IT BE APPLIED CLOSER THAN 3 FEET TO THE THE ROOT SYSTEM OF CONIFERS EXTENDS SOME DISTANCE BEYOND THE DRIP LINE. INCREASE THE AREA TO BE FERTILIZED BY ONE FOURTH THE AREA OF THE CROWN.
 - FERTILIZER SHALL BE APPLIED USING APPROVED FERTILIZATION METHODS AND EQUIPMENT.
 - FORMULATIONS AND APPLICATION RATES SHALL CONFORM TO THE GUIDELINES GIVEN IN TABLE 3.38-A OF VESCH.

2. VEGETATIVE PRACTICES

- TOPSOILING (STOCKPILE) - VESCH 3.30
 - TOPSOIL WILL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATIONS MAY HAVE TO BE LOCATED OFF-SITE AND ARE TO BE STABILIZED WITH TEMPORARY VEGETATION. PRIOR TO LAND-DISTURBING ACTIVITIES, THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY E&S PLAN (IF THE STOCKPILE IS LOCATED OFF-SITE). THIS SUPPLEMENTAL PLAN WOULD HAVE TO BE APPROVED BY THE PLAN APPROVING AUTHORITY BEFORE ANY OFF-SITE ACTIVITY COMMENCES.
- TEMPORARY SEEDING - VESCH 3.31
 - ALL DENUDED AREAS, WHICH WILL BE LEFT DORMANT FOR EXTENDED PERIODS OF TIME SHALL BE SEEDDED WITH FAST GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING. SELECTION OF THE SEED MIXTURE WILL DEPEND ON THE TIME OF YEAR IT IS APPLIED.
 - SEE SHEET III-288 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) FOR ALLOWABLE PLANTING MATERIAL, SEEDING RATES, AND DATES. THE PLANTING REQUIREMENTS OF THE "SOUTH" SHALL BE FOLLOWED. LINTING SHALL BE BASED ON TABLE 3.31-A OF VESCH. FERTILIZERS SHALL BE APPLIED AS 600 LB/ACRE. THE FERTILIZER SHALL BE INCORPORATED INTO THE TOP 2-4" OF SOIL. SEED SHALL BE EVENLY APPLIED AND SMALL GRAINS SHALL BE PLANTED NO MORE THAN 1.5" DEEP. SEEDING MADE IN FALL FOR WINTER COVER AND DURING HOT SUMMER MONTHS SHALL BE MULCHED.
- PERMANENT SEEDING - VESCH 3.32
 - SINCE THE SUBJECT SITE IS LOCATED WITHIN THE COASTAL PLAIN AREA OF VIRGINIA, SHEET III-304 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK SHALL BE FOLLOWED FOR FINAL SEEDING MATERIAL, SEEDING RATES, AND DATES OF APPLICATION.
- SODDING - VESCH 3.33
 - SODDED AREAS SHALL BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLANS. SOIL TESTS SHALL BE MADE TO DETERMINE THE EXACT REQUIREMENTS FOR LIME AND FERTILIZER. PRIOR TO LAYING SOD, SOIL SURFACE SHALL BE CLEAR OF TRASH, DEBRIS AND LARGE OBJECTS. QUALITY OF SOD SHALL BE STATE CERTIFIED TO ENSURE GENETIC PURITY AND HIGH QUALITY. SOD SHALL NOT BE LAID ON FROZEN SOIL SURFACE, OR IN EXCESSIVELY WET OR DRY WEATHER. SOD SHALL BE DELIVERED AND INSTALLED WITHIN 36 HOURS, AND SHALL BE INSTALLED PER PAGE III-339 OF VESCH. THE EROSION AND SEDIMENT CONTROL INSPECTOR SHALL HAVE THE AUTHORITY TO ADD OR DELETE EROSION AND SEDIMENT CONTROLS AS NEEDED IN THE FIELD. IN ADDITION, NO SEDIMENT TRAPS OR BASINS MAY BE REMOVED WITHOUT PRIOR APPROVAL OF THE INSPECTOR.

EROSION AND SEDIMENT CONTROL MANAGEMENT MEASURES

LANDSCAPE / TREE PRESERVATION NOTES
PRIOR TO ANY LAND DISTURBING ACTIVITY, THE CONTRACTOR SHALL CONTACT THE ARLINGTON COUNTY ARBORIST TO SCHEDULE AN INSPECTION.

LAND CONSERVATION NOTES:

- NO DISTURBED AREA WILL REMAIN DENUDED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OR HIS AGENT.
 - ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING. FIRST AREAS TO BE CLEARED ARE TO BE THOSE REQUIRED FOR THE PERIMETER CONTROLS.
 - ALL STORM AND SANITARY SEWER LINES NOT IN STREETS ARE TO BE MULCHED AND SEEDED WITHIN 5 DAYS AFTER BACKFILL. NO MORE THAN 100 FEET ARE TO BE OPEN AT ANY ONE TIME.
 - ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEEDED AND MULCHED WITHIN 5 DAYS AFTER BACKFILLING.
 - ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS ARE TO BE MULCHED AND SEEDED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO ALL SOIL STOCKPILES.
 - DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION.
 - ANY DISTURBED AREA NOT COVERED BY NOTE 1 ABOVE AND NOT PAVED, SODDED OR BUILT UPON BY NOV. 1, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED IMMEDIATELY WITH HAY OR STRAW MULCH AT THE RATE OF 2 TONS/ACRE AND OVER-SEEDED BY APRIL 15.
 - AT THE COMPLETION OF ANY PROJECT CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED.
- EROSION & SEDIMENT CONTROL PROGRAM:
- THE EROSION CONTROL PLAN IS INTENDED TO ESTABLISH ENTRANCES AND PERIMETER CONTROL MEASURES WHICH INCLUDES SILT FENCE (SF), INLET PROTECTION (IP), AND OTHER CONTROLS SPECIFIED ON THE PLANS.
 - WHERE CONSISTENT WITH JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL SHALL BE PLACED IN STREAMBEDS. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 7 DAYS SHALL BE SEEDED AND MULCHED. WHEN SPOIL IS PLACED ON THE DOWNHILL SIDE OF TRENCH, IT SHALL BE BACKSLOPED TO DRAIN TOWARD THE TRENCH. WHEN NECESSARY TO DEWATER THE TRENCH, THE PUMP DISCHARGE HOSE SHALL OUTLET IN A STABILIZED AREA OR A SEDIMENT TRAPPING DEVICE.
 - ALL PRACTICES AND CONTROL DEVICES DESCRIBED HEREIN SHALL CONFORM TO THE CURRENT VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH). IN ADDITION, THE CONTRACTOR SHALL TAKE THE FOLLOWING STEPS TO MINIMIZE THE VOLUME OF SILT:
 - CONTRACTOR SHALL EVALUATE THE SITE TO DETERMINE EXTENSIVE CUT AND FILL AREAS, AND SHALL WORK THOSE AREAS TO MINIMIZE THE USE OF HEAVY EQUIPMENT. CONTRACTOR SHALL BRING DISTURBED AREAS TO GRADE (ROUGH OR FINISHED) AND STABILIZE THOSE AREAS WITH TEMPORARY OR PERMANENT VEGETATION. THESE DISTURBED AREAS SHALL BE STABILIZED PRIOR TO BEGINNING WORK IN ANOTHER AREA.
 - FILL AREAS SHALL BE COMPACTED COMPLETELY PRIOR TO THE END OF EACH WORK DAY. FILL SLOPE SURFACES SHALL BE KEPT ROUGH TO REDUCE SHEET EROSION OF THE SLOPES. CONTRACTOR SHALL RE-DIRECT CONCENTRATED RUNOFF, BY EARTH BERMS OR OTHER DEVICES, AROUND ACTIVELY DISTURBED AREAS TO STABILIZED OUTLETS.
 - CUT SLOPES SHALL BE PROTECTED FROM CONCENTRATED FLOW BY BERMS (ABOVE THE SLOPE) AND DIRECTED AROUND THE DISTURBED AREA TO STABILIZED OUTLETS.
 - MEASURES TO CONTROL EROSION AND SILTATION SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT STATE AND LOCAL REGULATIONS. THE INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND/OR THE APPROVAL OF THE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OR HIS AGENT OF ANY LEGAL RESPONSIBILITY WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA AND CHAPTER 57 OF THE ARLINGTON COUNTY CODE.
 - ALL AREAS, ON OR OFF-SITE, THAT ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS SEED MIXTURE OR SOD THAT IS INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. ALL SLOPES 3:1 AND GREATER SHALL BE RECEIVE SOIL STABILIZATION IN ACCORDANCE WITH THE SPECIFICATIONS.
 - WHERE STREAM CROSSINGS ARE REQUIRED FOR EQUIPMENT, TEMPORARY CULVERTS SHALL BE PROVIDED.
 - FOR FURTHER REQUIREMENTS AND DETAILS OF TREE PRESERVATION, PLANTING, EROSION AND SEDIMENT CONTROL, SEE COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS AND/OR THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.
- 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.
- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN THE 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 AND SEDIMENT CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
- THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
- 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.
- DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT 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.
- ALL BIOFILTERS SHALL BE KEPT OFF-LINE UNTIL CONSTRUCTION IS COMPLETED AND ALL AREAS HAVE BEEN PROPERLY STABILIZED. THIS SHALL BE ACHIEVED BY USING INLET PROTECTION AT THE CURB CUTS AND STORMWATER CATCH BASINS LEADING DIRECTLY INTO THE BIOFILTERS.
- 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.

PRE-STORM EROSION & SEDIMENTATION CHECKLIST:

PER GENERAL EROSION AND SEDIMENT CONTROL NOTE 6, THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ANY ADDITIONAL EROSION AND SEDIMENT CONTROL (ESC) MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE COUNTY. THESE SUPPLEMENTARY PRACTICES ARE IN ADDITION TO THOSE SHOWN IN AN EROSION AND SEDIMENT CONTROL PLAN. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE MODIFIED AS NEEDED TO ENSURE ONLY CLEAR WATER IS DISCHARGED FROM THE SITE. THE FOLLOWING ACTIONS SHALL BE TAKEN PRIOR TO STORM EVENTS WITH PREDICTED HEAVY AND/OR LARGE VOLUME RAINFALL TO PREVENT SEDIMENT DISCHARGES FROM A CONSTRUCTION SITE. A TYPICAL SUMMER THUNDERSTORM IS AN EXAMPLE OF A STORM EVENT WITH PREDICTED HEAVY AND/OR LARGE VOLUME RAINFALL.

- PERIMETER CONTROLS
 - SILT FENCE SHALL BE CHECKED FOR UNDERMINING, HOLES, OR DETERIORATION OF THE FABRIC. FENCING SHALL BE REPLACED IMMEDIATELY IF THE FABRIC IS DAMAGED OR WON. SILT FENCE MUST BE TRENCHED INTO THE GROUND PER STATE SPECIFICATIONS (VESCH STD & SPEC 3.09).
 - WOODEN STAKES OR STEEL POSTS SHALL BE PROPERLY SECURED UPRIGHT INTO THE GROUND. DAMAGED POSTS OR STAKES MUST BE REPLACED.
 - SEDIMENT THAT HAS ACCUMULATED AGAINST THE SILT FENCE SHALL BE REMOVED. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE LEVEL REACHES ONE-HALF THE HEIGHT OF THE FENCING.
 - HAY BALES OR A STONE BERM SHALL BE PLACED ACROSS THE CONSTRUCTION ENTRANCE TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE.
- EXPOSED SLOPES AND SOIL
 - EXPOSED SLOPES NOT AT THE FINAL STABILIZATION PHASE SHALL BE COVERED WITH TARPS, PLASTIC SHEETING, OR EROSION CONTROL MATTING. COVERING MATERIAL SHALL BE PROPERLY SECURED/ANCHORED.
 - CONTROLS SHALL BE INSTALLED TO PREVENT CONCENTRATED FLOW DOWN AN EXPOSED SLOPE. BERMS OR DIVERSION DIKES SHALL BE INSTALLED AT THE TOP OF CUT/EXPOSED SLOPES TO DIRECT STORM FLOW AROUND THE DISTURBED AREA.
 - EXPOSED SLOPES AT THE FINAL STABILIZATION PHASE SHALL BE STABILIZED USING SLOPE STABILIZATION PRACTICES SUCH AS SOIL STABILIZATION BLANKETS OR MATTING AS SPECIFIED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH STD & SPEC 3.36). BLANKETS OR MATS MUST BE PROPERLY SECURED AND ANCHORED TO THE SLOPE USING STAPLES, PINS, OR STAKES.

- SEEDING AREAS SHALL BE CHECKED AND RESEEDED AS NECESSARY TO COVER EXPOSED SOIL. RECENTLY SEEDED AREAS SHALL BE PROTECTED BY STRAW OR SOIL STABILIZATION BLANKETS TO PREVENT SEEDING FROM BEING WASHED AWAY.
- STOCKPILES
 - STOCKPILED SOIL AND OTHER LOOSE MATERIALS THAT CAN BE WASHED AWAY SHALL BE COVERED WITH A TARP, PLASTIC SHEETING, OR OTHER STABILIZATION MATTING. THE COVER MUST BE PROPERLY SECURED/ANCHORED DOWN TO PREVENT IT FROM BEING BLOWN OFF AND EXPOSING MATERIALS TO RAIN. CONTROLS SUCH AS HAY BALES OR BOOMS SHALL BE PLACED ALONG THE PERIMETER OF THE STOCKPILE (DOWNHILL SIDE).
- INLET PROTECTION
 - INLET PROTECTION CONTROLS SHALL BE INSPECTED TO ENSURE THEY ARE FUNCTIONING PROPERLY AND FLOODING WILL NOT OCCUR. CLOGGED OR DAMAGED CONTROLS MUST BE REPLACED IMMEDIATELY. ENSURE CONTROLS ALLOW FOR OVERFLOW/BYPASS OF STORMWATER RUNOFF DURING SIGNIFICANT STORM EVENTS. IN ADDITION TO THESE PRE-STORM ACTIONS, ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES MUST BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL.

POLLUTION PREVENTION PLAN NOTES (STORMWATER MANUAL - SECTION 2.4)

- ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY ARLINGTON COUNTY'S M54 PERMIT, UNLESS THE STATE WATER CONTROL BOARD, THE VIRGINIA SOIL AND WATER CONSERVATION BOARD (BOARD), OR ARLINGTON COUNTY DETERMINES THE DISCHARGE TO BE A SIGNIFICANT SOURCE OF POLLUTANTS TO SURFACE WATERS:
 - WATER LINE FLUSHING; LANDSCAPE IRRIGATION; DIVERTED STREAM FLOWS; RISING GROUND WATERS; UNCONTAMINATED GROUND WATER INFILTRATION (AS DEFINED AT 40 CFR 35.2005/2001); UNCONTAMINATED PUMPED GROUND WATER; DISCHARGES FROM POTABLE WATER SOURCES; FOUNDATION DRAINS; AIR CONDITIONING CONDENSATION; IRRIGATION WATER; SPRINGS; WATER FROM CRAWL SPACE PUMPS; FOOTING DRAINS; LAWN WATERING; INDIVIDUAL RESIDENTIAL CAR WASHING; FLOWS FROM RIPARIAN HABITATS AND WETLANDS; DECHLORINATED SWIMMING POOL DISCHARGES; DISCHARGES OR FLOWS FROM FIREFIGHTING; AND, OTHER ACTIVITIES GENERATING DISCHARGES IDENTIFIED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY AS NOT REQUIRING VPDES AUTHORIZATION.
- APPROPRIATE CONTROLS MUST BE IMPLEMENTED TO PREVENT ANY NON-STORMWATER DISCHARGES NOT INCLUDED ON THE ABOVE LIST (E.G., CONCRETE WASH WATER, PAINT WASH WATER, VEHICLE WASH WATER, DETERGENT WASH WATER, ETC.) FROM BEING DISCHARGED INTO ARLINGTON COUNTY'S M54 SYSTEM, WHICH INCLUDES THE CURB AND GUTTER SYSTEM, AS WELL AS CATCH BASINS AND OTHER STORM DRAIN INLETS, OR STREAM NETWORK.
- PER CHAPTER 26 OF THE ARLINGTON COUNTY CODE, IT SHALL BE UNLAWFUL FOR ANY PERSON TO DISCHARGE DIRECTLY OR INDIRECTLY INTO THE STORM SEWER SYSTEM OR STATE WATERS, ANY SUBSTANCE LIKELY, IN THE OPINION OF THE COUNTY MANAGER, TO HAVE AN ADVERSE EFFECT ON THE STORM SEWER SYSTEM OR STATE WATERS.

UTILITY INSTALLATION:

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

- NO MORE THAN 100 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
- EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
- 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.
- MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
- STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
- APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- ANY DISTURBED AREA NOT COVERED BY NOTE #1 ABOVE AND PAVED, SODDED OR BUILT UPON BY NOVEMBER 1ST, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED WITH HAY OR STRAW AT THE RATE OF 2 TONS PER ACRE AND OVER-SEEDED NO LATER THAN MAY 15TH.
- AT THE COMPLETION OF THE CONSTRUCTION PROJECT AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED. ARLINGTON COUNTY INSPECTOR TO APPROVE REMOVAL OF ALL TEMPORARY SILTATION MEASURES.

MAINTENANCE PROGRAM:

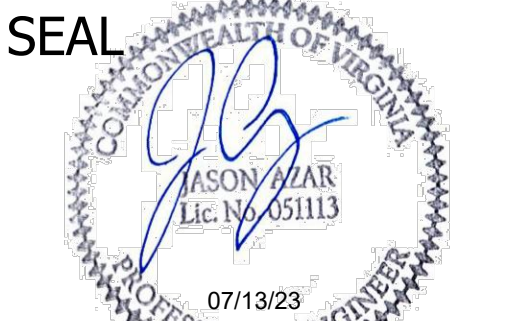
THE FOLLOWING IS A PROGRAM OF MAINTENANCE FOR THE MECHANICAL CONTROLS SPECIFIED IN THIS NARRATIVE AND ON THE PLAN:

- THE SITE SUPERINTENDENT OR HIS/HER REPRESENTATIVE SHALL MAKE A VISUAL INSPECTION OF ALL MECHANICAL CONTROLS AND NEWLY STABILIZED AREA (I.E. SEEDED AND MULCHED AND/OR SODDED AREAS) ON A DAILY BASIS; ESPECIALLY AFTER A HEAVY RAINFALL EVENT TO ENSURE THAT ALL CONTROLS ARE MAINTAINED AND PROPERLY FUNCTIONING. ANY DAMAGED CONTROLS SHALL BE REPAIRED PRIOR TO THE END OF THE WORK DAY INCLUDING RE-SEEDING AND MULCHING OR RE-SODDING IF NECESSARY.
- ALL SEDIMENT TRAPPING DEVICES SHALL BE CLEARED OUT AT 50% TRAP CAPACITY AND THE SEDIMENT SHALL BE DISPOSED OF BY SPREADING ON THE SITE OR IF NOT SUITABLE FOR FILL, HAULING AWAY AND DEPOSITING AT AN ACCEPTABLE DUMP SITE.
- THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PREVENT MUD AND/OR OTHER DEBRIS FROM BEING ENTERED ONTO EXISTING SWM/BMP FACILITIES OR DOWNSTREAM WATER WAYS. SHOULD OFF-SITE AREAS BECOME POLLUTED BY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING THE AFFECTED AREAS TO THE SATISFACTION OF THE INSPECTOR.
- AT THE COMPLETION OF CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ANY REMAINING DENUDED AREAS SHALL BE STABILIZED. CERTAIN DEVICES MAY BE REMOVED PRIOR TO CONSTRUCTION COMPLETION BUT ONLY WITH THE APPROVAL OF THE COUNTY INSPECTOR.
- AFTER CONSTRUCTION OPERATIONS HAVE ENDED, ALL DISTURBED AREAS SHALL BE STABILIZED. UPON APPROVAL OF THE COUNTY INSPECTOR, MECHANICAL SEDIMENT CONTROLS SHALL BE REMOVED AND THE GROUND PERMANENTLY STABILIZED WITH VEGETATION WITHIN 30 DAYS.



ARLINGTON VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
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APPROVALS DATE

DESIGN TEAM ENGINEER SUPERVISOR 8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR 8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF 8/29/2023

TRANSPORTATION DIRECTOR 8/30/2023

PROJECT MANAGER 8/30/2023

REVISIONS DATE

LDA #4 SUBMISSION 07/13/2023

100% DESIGN 05/24/2023

LDA#3 SUBMISSION 01/31/2023

LDA#2 SUBMISSION 06/23/2022

100% SUBMISSION 06/21/2022

LDA SUBMISSION 04/19/2022

30% SUBMISSION 12/23/2021

SOUTH EADS STREET
CC13

BETWEEN ARMY NAVY DR. AND 12TH ST. S.

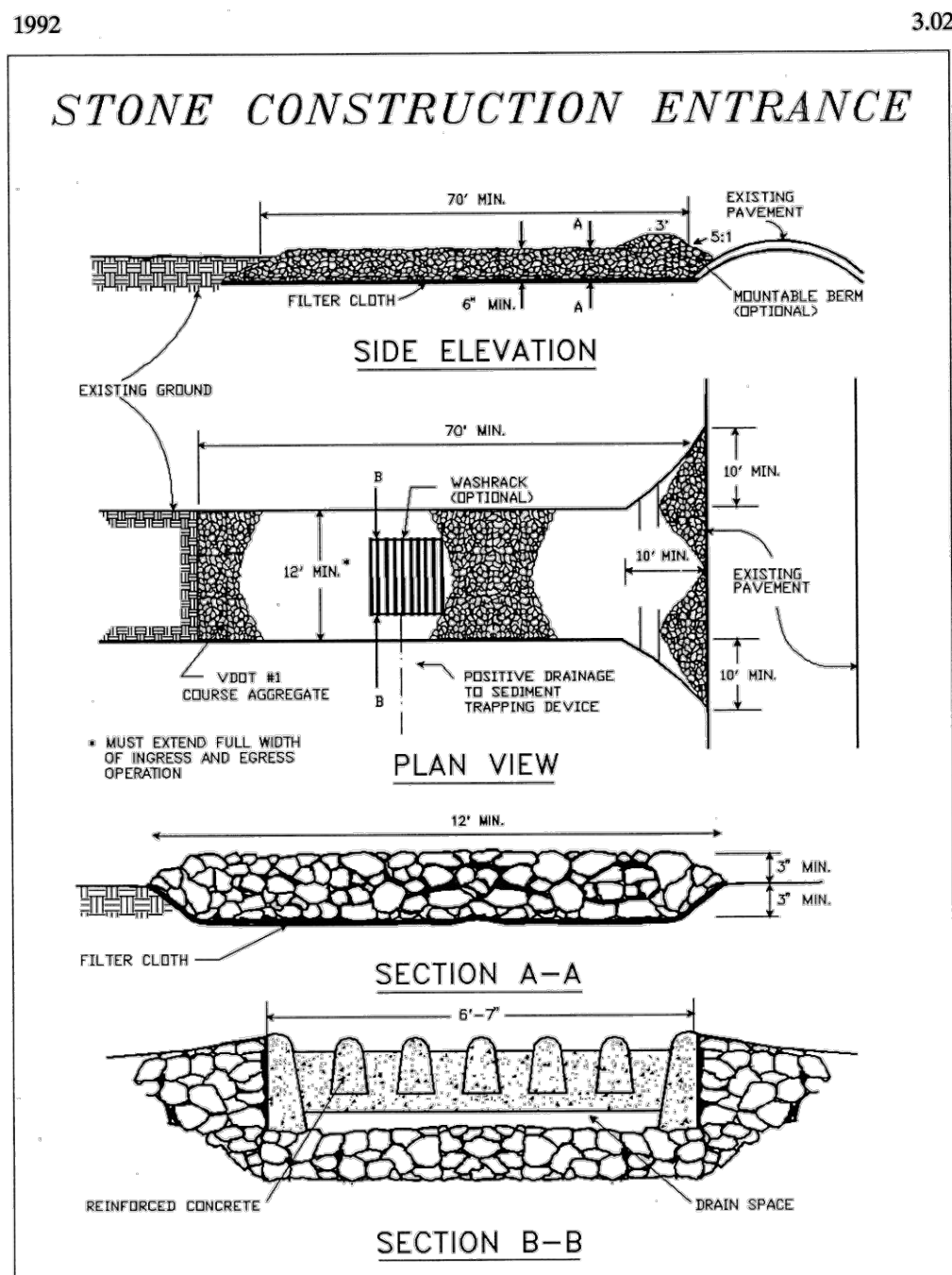
EROSION AND SEDIMENT CONTROL NOTES

DESIGNED: ME
DRAWN: MS
CHECKED: JA
PLOTTED: JULY 13 2023

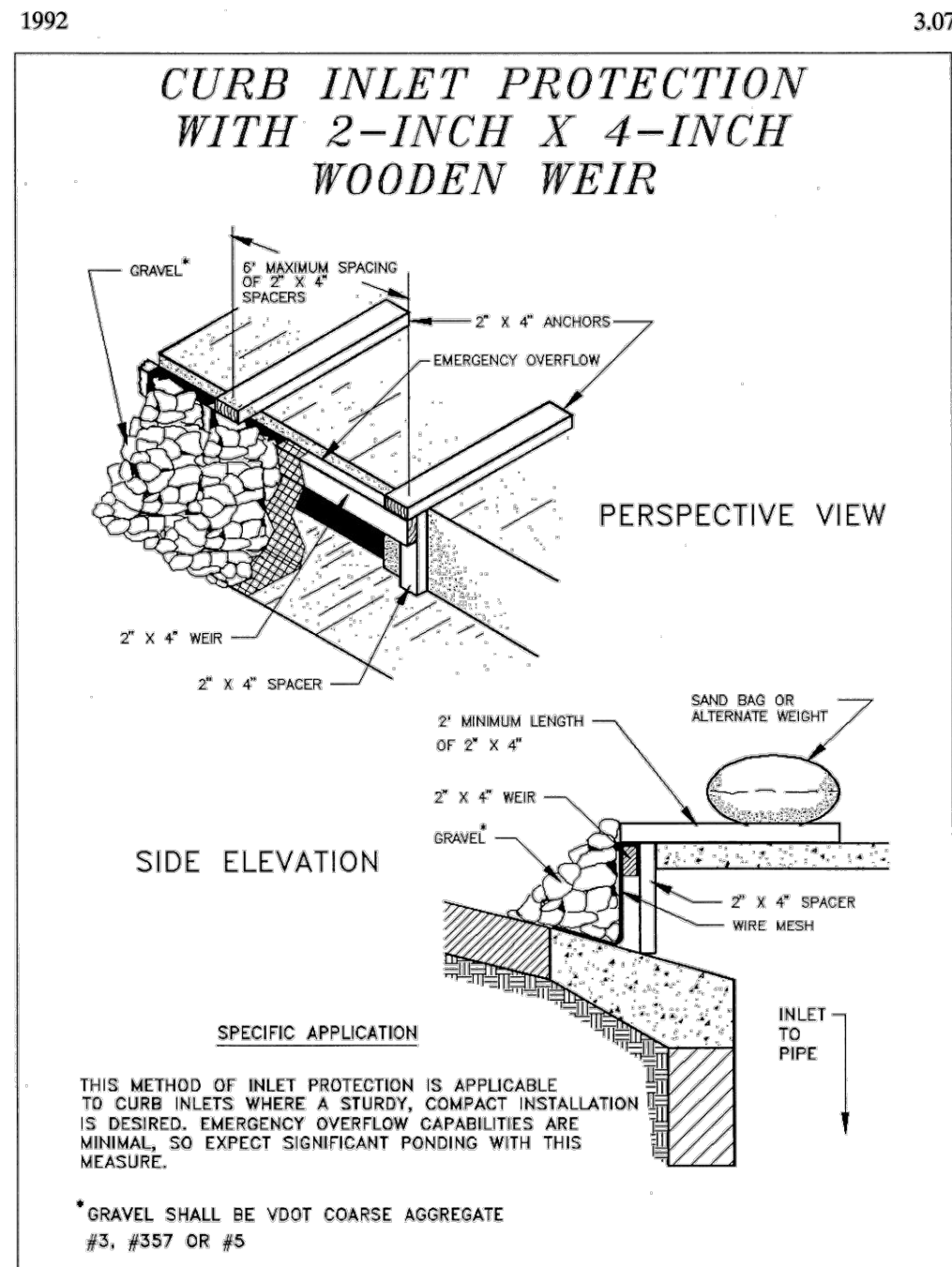
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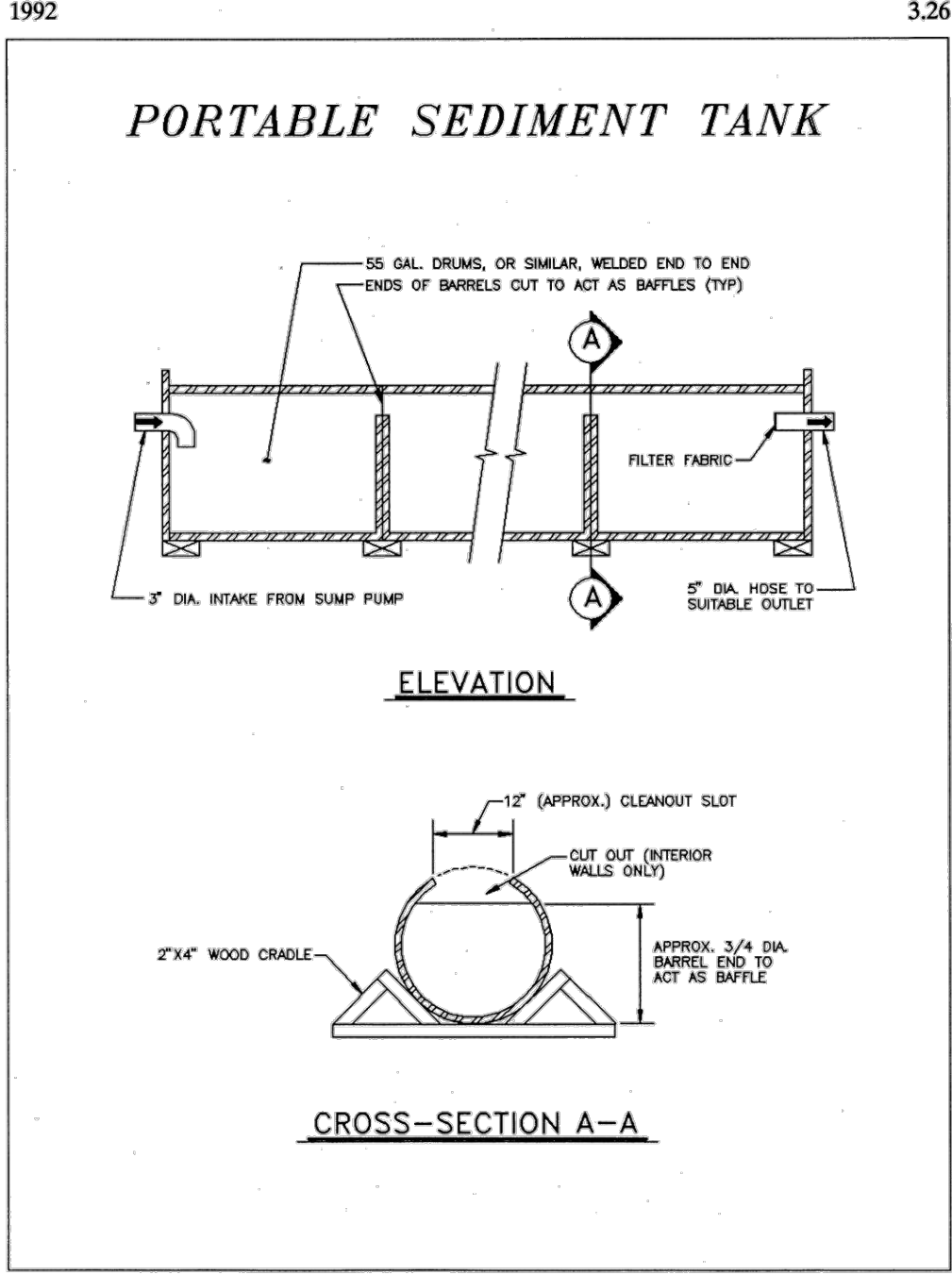
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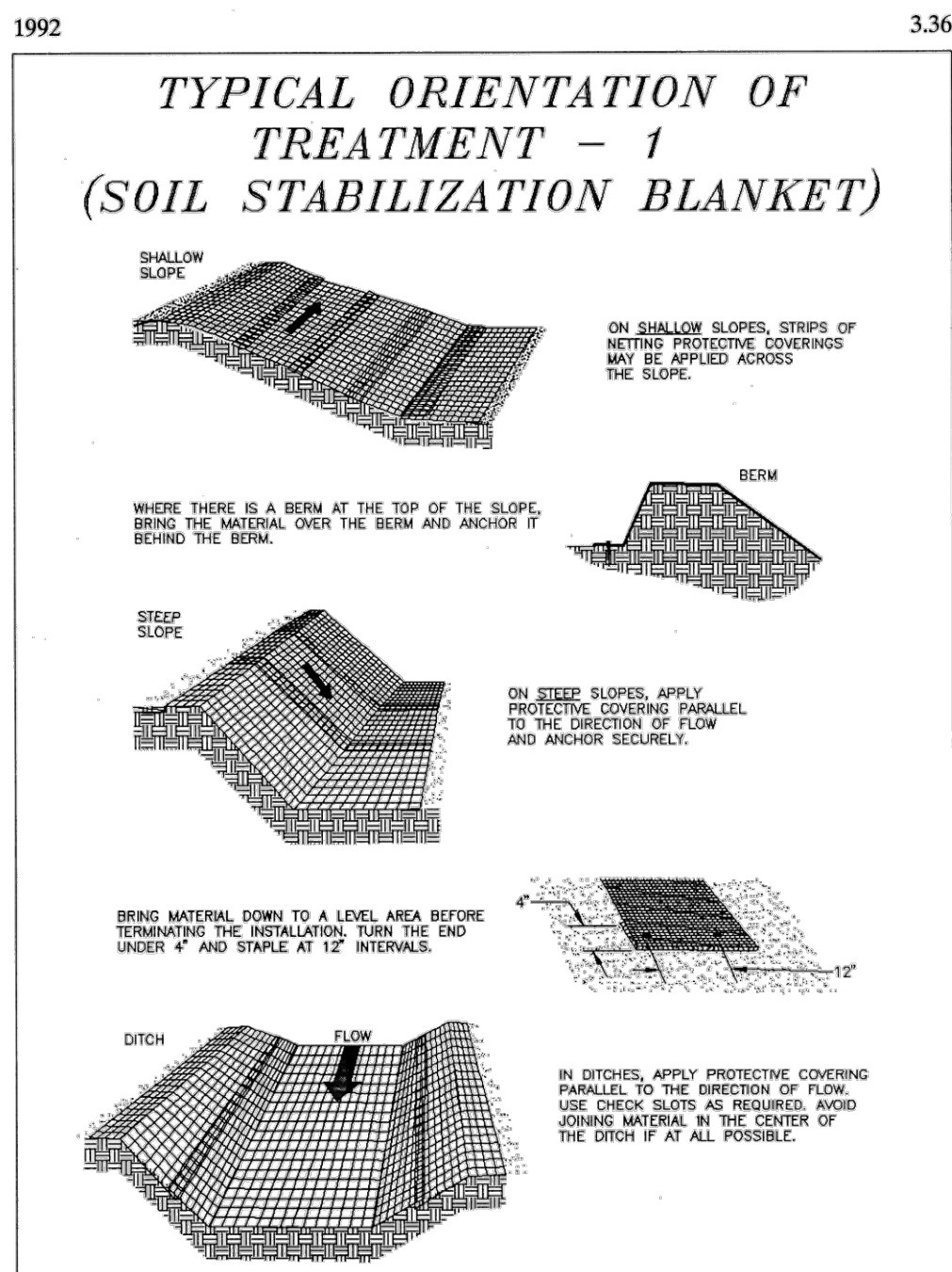
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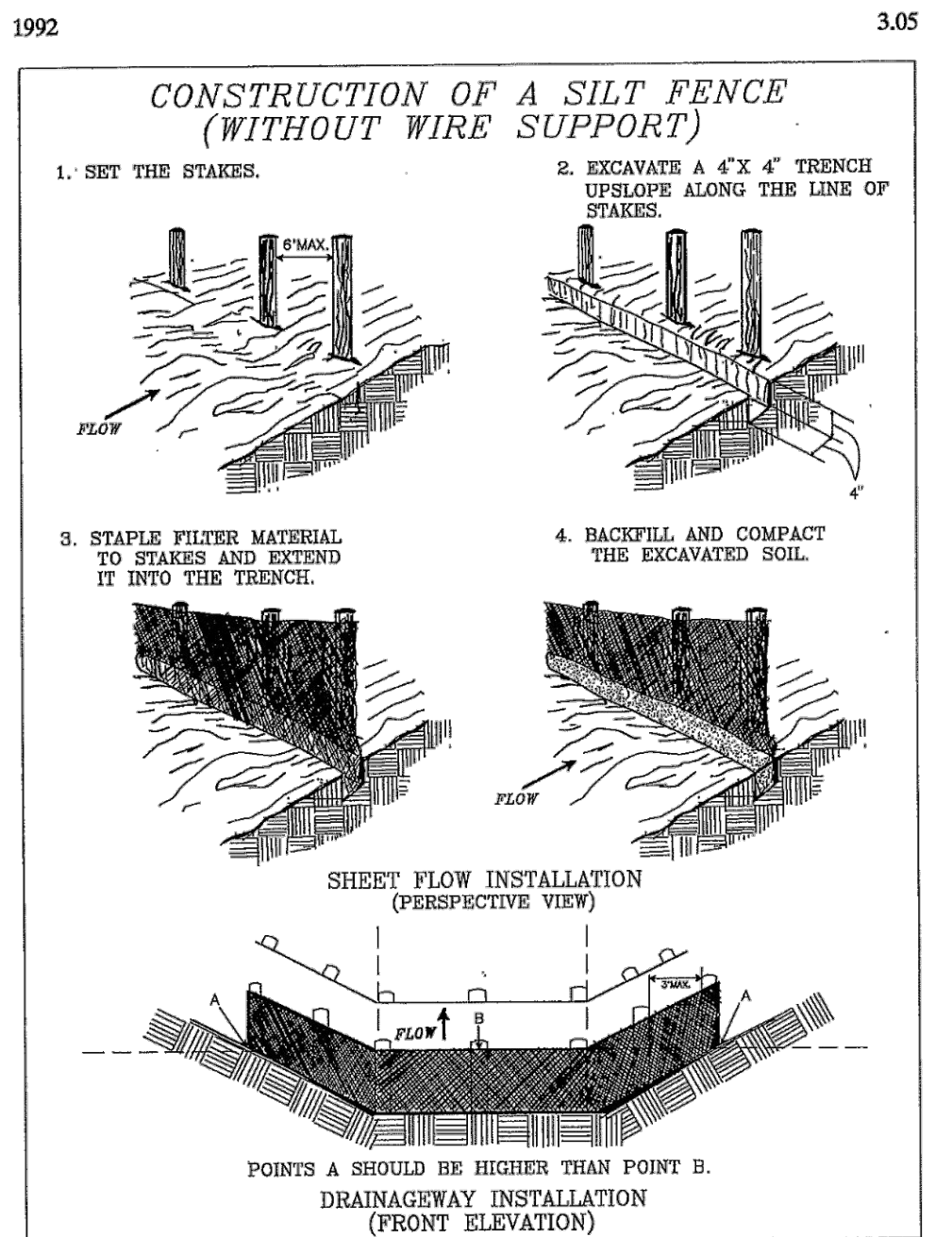
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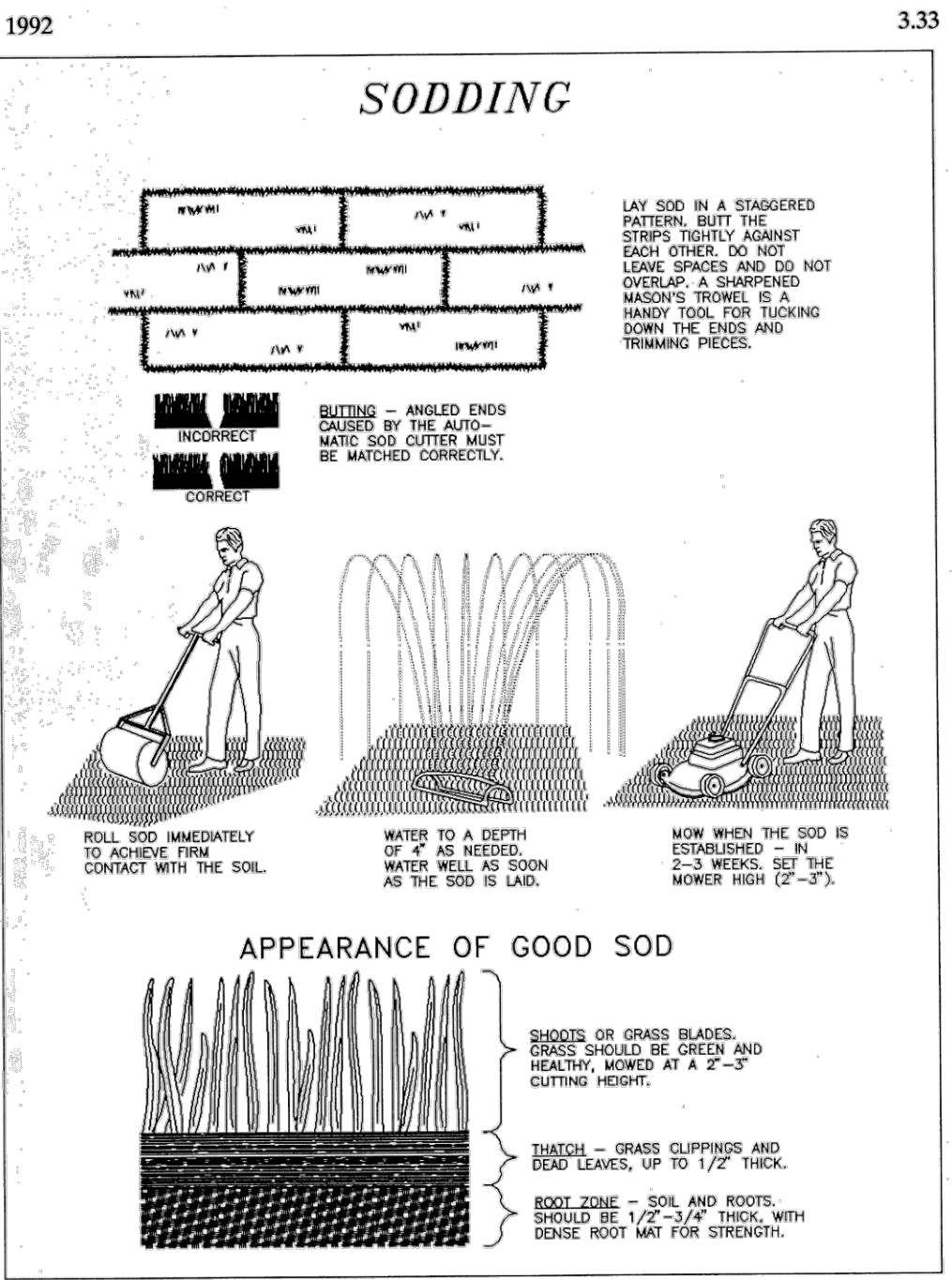
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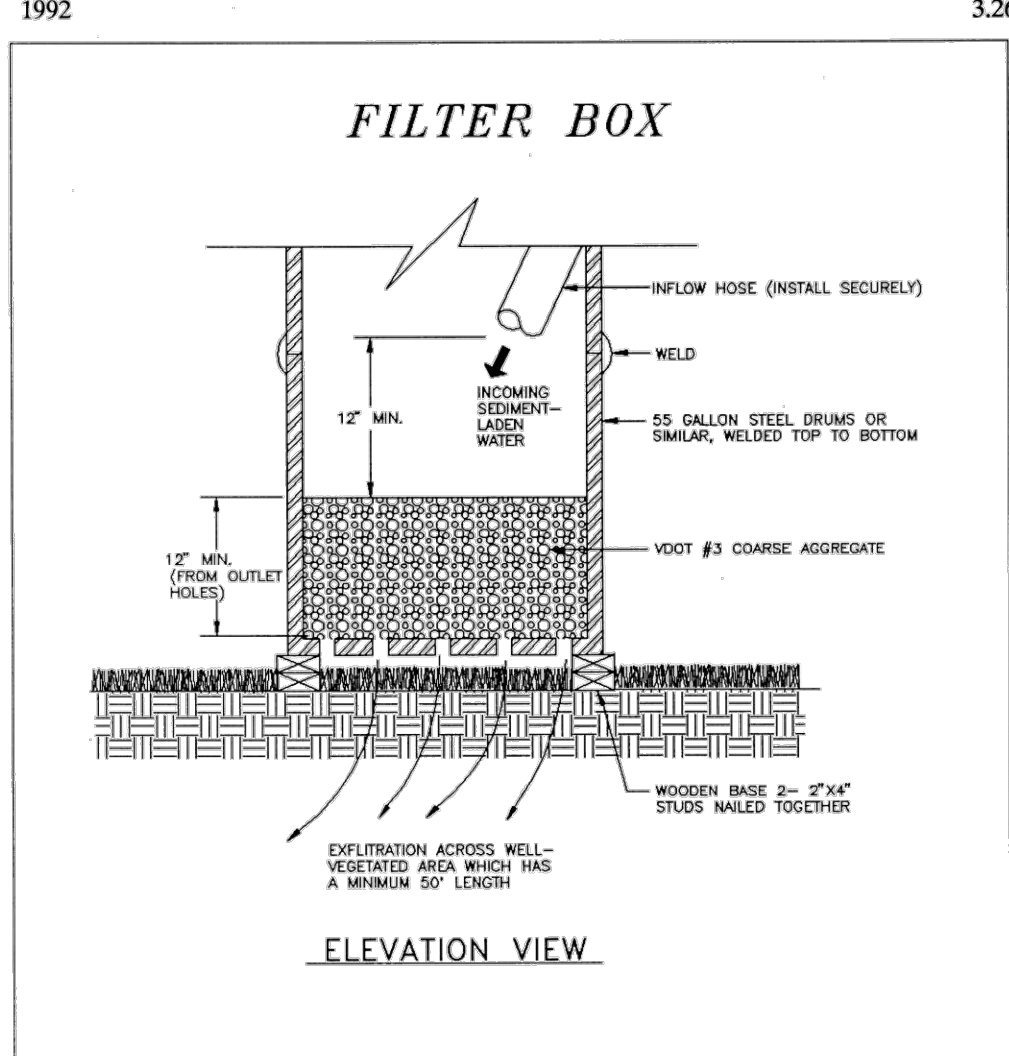
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III - 25

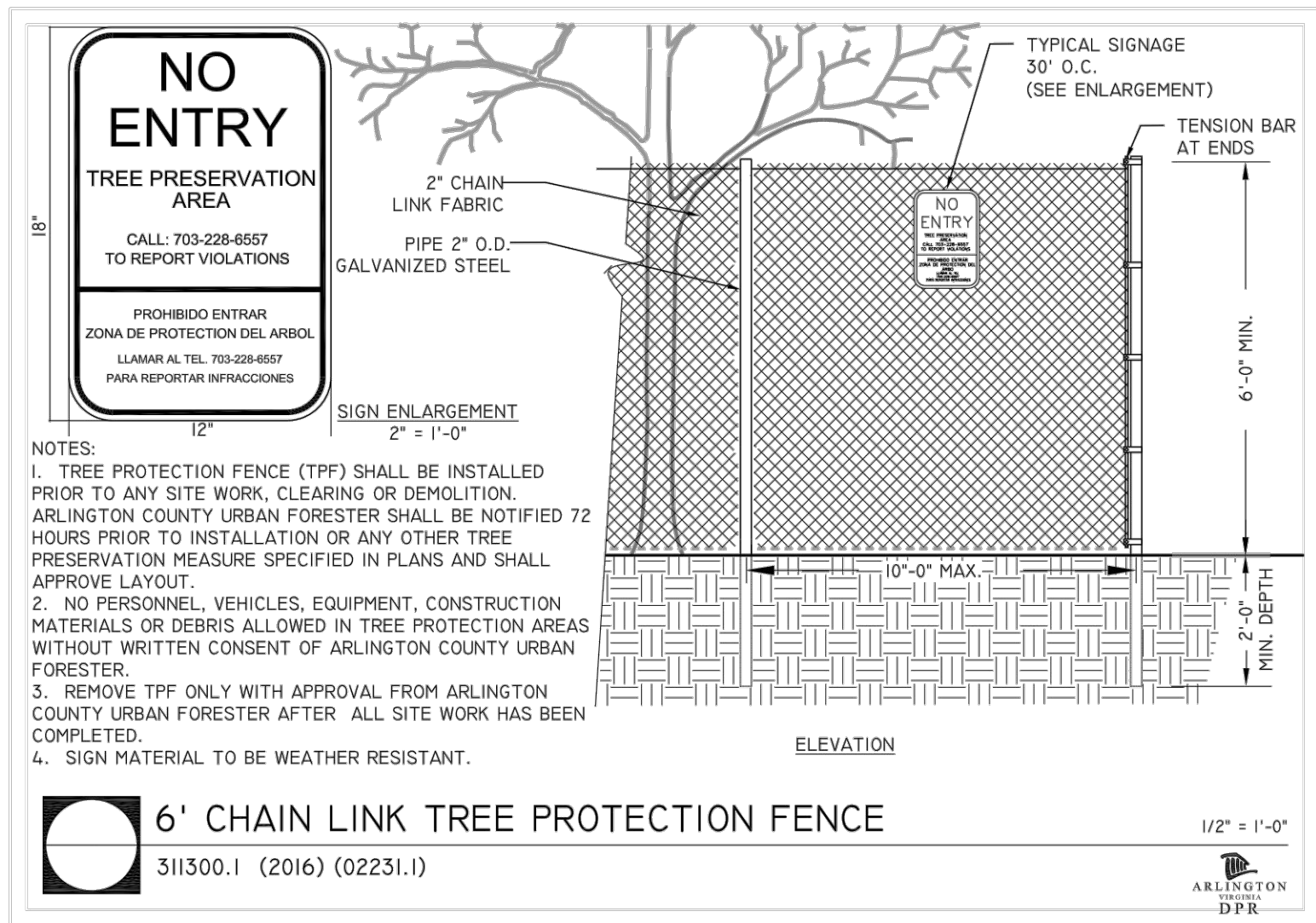
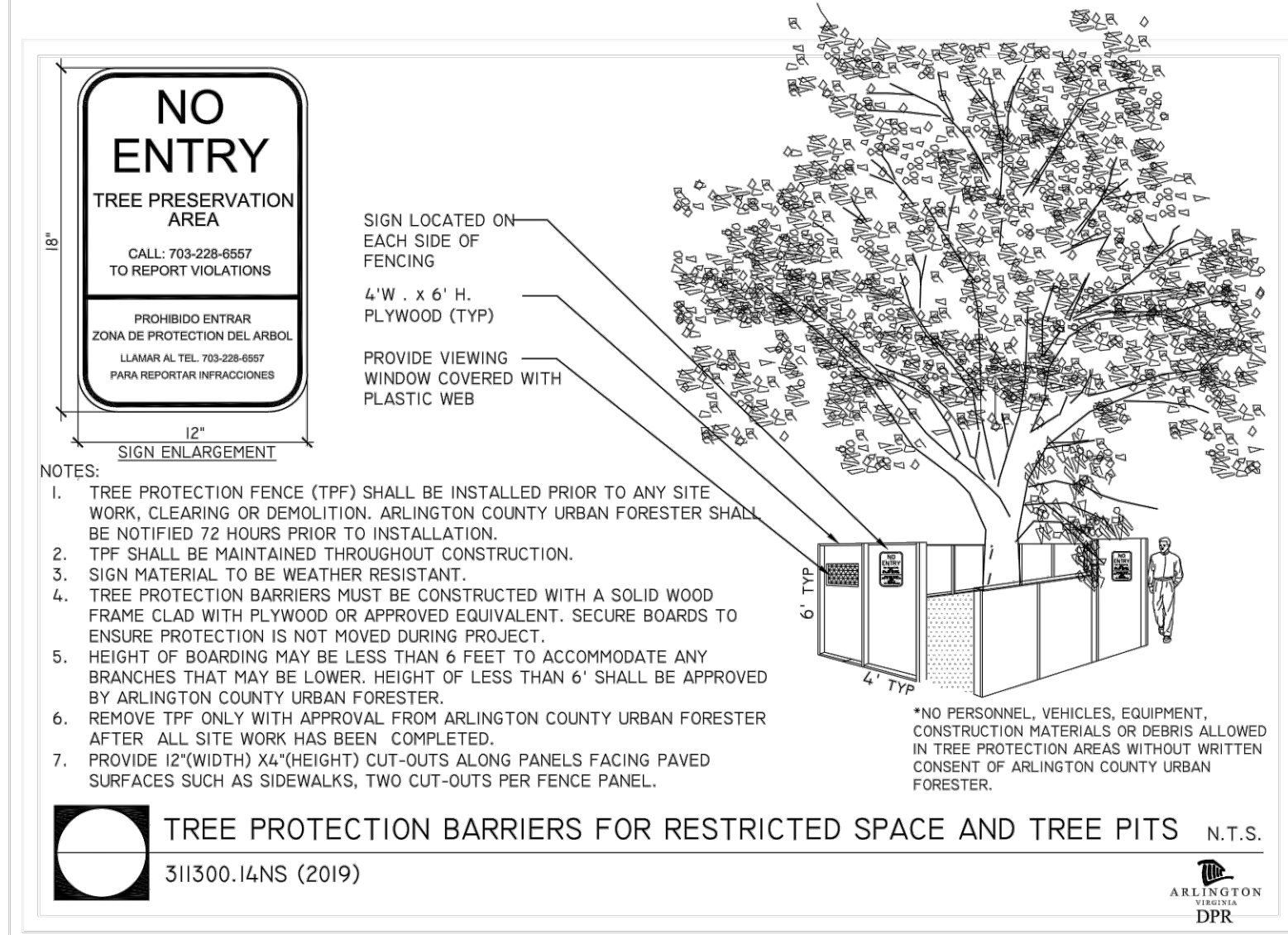
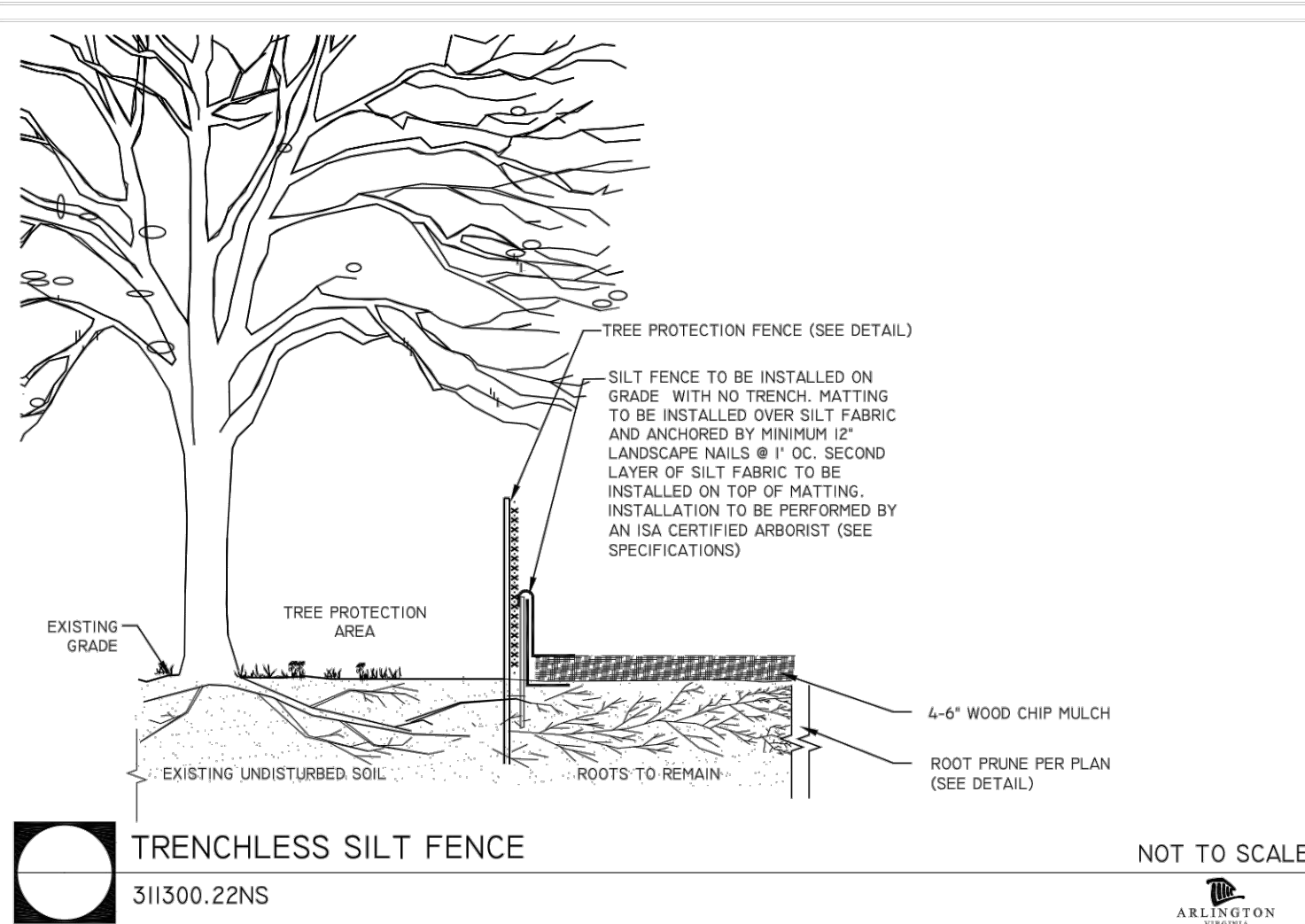
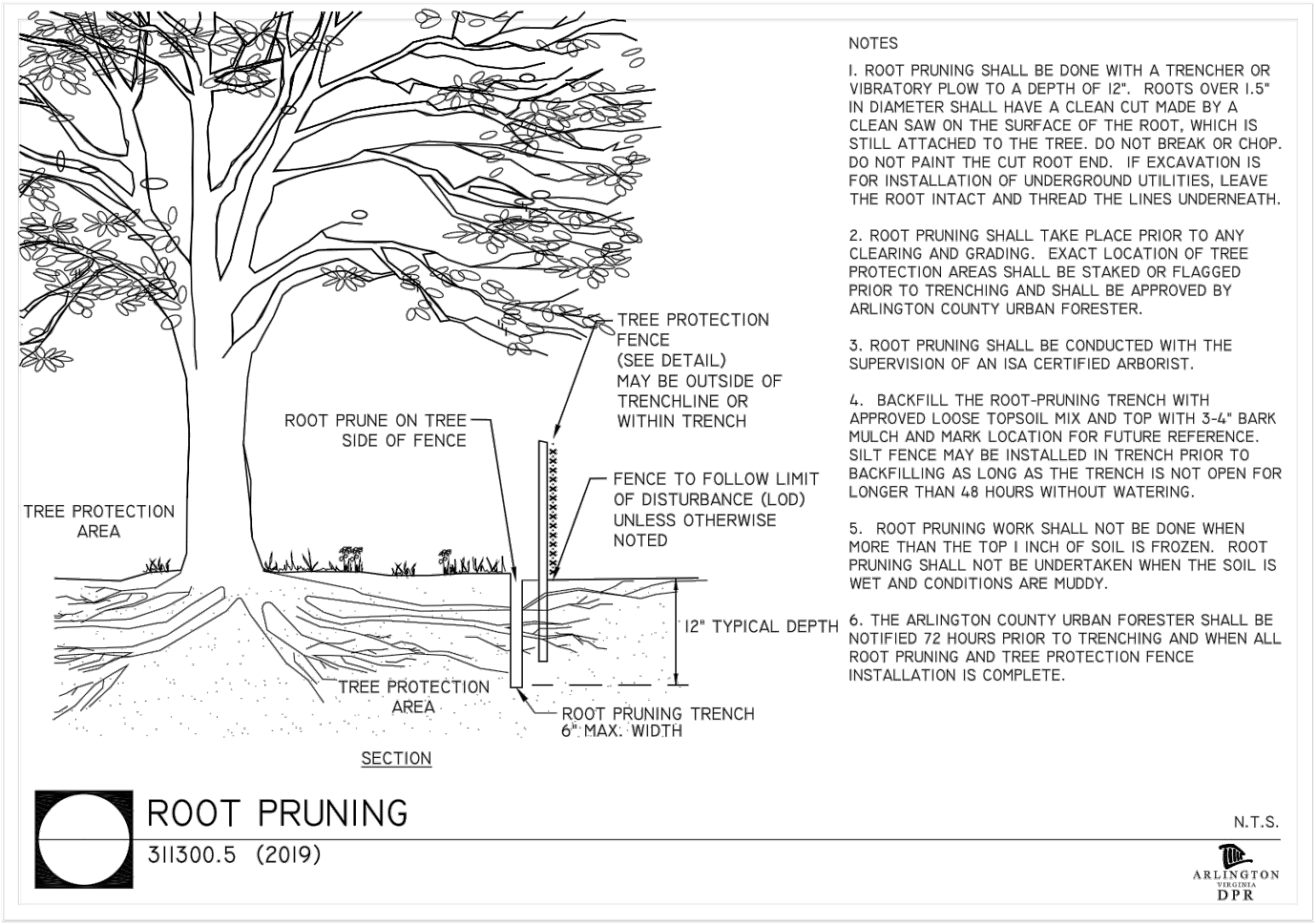


III - 339



- h. Clean-out of the box is required once one-third of the original capacity is depleted due to sediment accumulation. The tank shall be clearly marked showing the clean-out point.
- i. If the stone filter does become clogged with sediment so that it no longer adequately performs its function, the stones must be pulled away from the inlet, cleaned and replaced.

III - 242



SOIL SURVEY AND TYPES



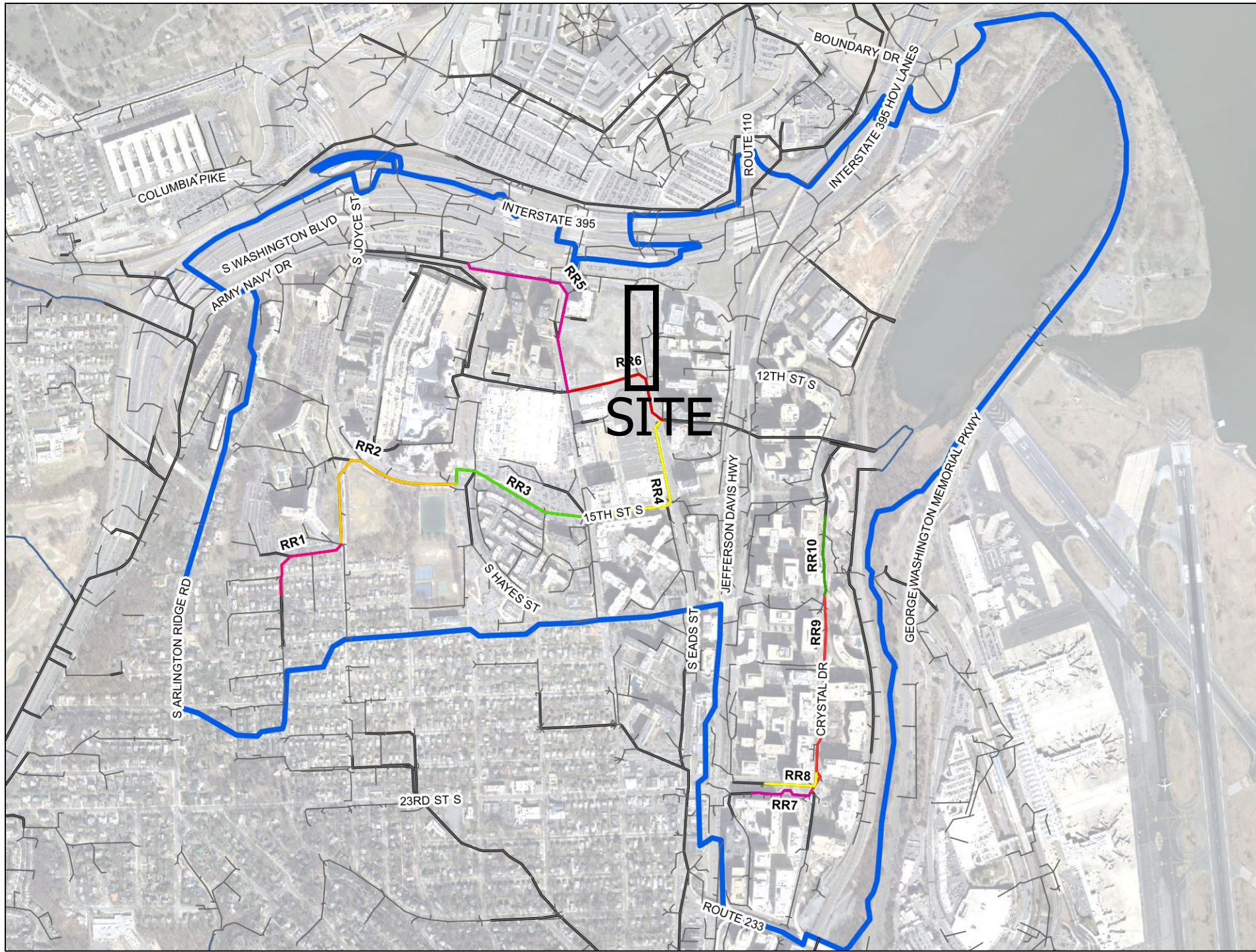
12 Urban land-Udorthents complex, 2 to 15 percent slopes
This mapping unit consists of areas where more than 85 percent of the surface is Urban land, covered by buildings, asphalt, concrete, or other impervious materials. The other 15 percent consists of areas of deep to very deep, nearly level to moderately sloping, well and moderately well drained soils. The Urban land and Udorthents are so intermingled it was not practical to map them separately. This complex occurs throughout the survey area but is largely located in the Rosslyn-Ballston and Crystal City areas. This unit is about 85 percent Urban land, 10 percent Udorthents, and 5 percent other soils.

The Udorthents consist of material that has been graded, cut, filled, or otherwise disturbed during urbanization. The disturbed material is loamy and generally reflects the soils in the adjacent area.

Included in this mapping unit are small areas of soils that have not been disturbed. Also included are moderately steep and steep slopes.

It is not practical to examine nor attempt to identify the soil or soil-like material of this unit.

ROACHES RUN STORM SEWERSHED



APPROVALS _____ DATE _____

DESIGN TEAM ENGINEER SUPERVISOR _____ 8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR _____ 8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF _____ 8/29/2023

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PROJECT MANAGER _____ 04/13/2022

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SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.

SEWERSHED AND SOIL SURVEY

DESIGNED: ME
DRAWN: MS
CHECKED: JA

PLOTTED: JULY 13 2023

SCALE:

N/A

STORMWATER POLLUTION PREVENTION PLAN
CC13 South Eads Street

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) COVER PAGE

For Construction Activities At:
Insert Name
CC13 South Eads Street
South Eads St. between Army Navy Dr. and 12th St. South
Arlington, VA 22202
Latitude: 38.863959 N (decimal degrees)
Longitude: -77.054379 W (decimal degrees)

Construction Activity Operator:
Insert Company/Organization Name
Insert Name
Insert Address
Insert City, State, Zip Code
Insert Telephone Number
Insert Email Address
Insert 24-hour Emergency Contact

SWPPP Preparation Date:
April 20, 2022

CERTIFICATION

"I certify under penalty of law that I have read and understand this document and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Operator Name: _____
Title: _____
Signature: _____
Date: _____

Arlington County – SWPPP 9/2016

STORMWATER POLLUTION PREVENTION PLAN
CC13 South Eads Street

1.0 SWPPP Documents Located Onsite & Available for Review

SWPPP Document Type	Located Onsite & Available for Review?	
Registration Statement	<input type="checkbox"/> Yes	<input type="checkbox"/> NA
Notice of Coverage Letter	<input type="checkbox"/> Yes	<input type="checkbox"/> NA
Construction General Permit	<input type="checkbox"/> Yes	<input type="checkbox"/> NA
Pollution Prevention Plan	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> NA
Erosion & Sediment Control Plan (or agreement in lieu of)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> NA
Stormwater Management Plan	<input type="checkbox"/> Yes	<input type="checkbox"/> NA

2.0 Authorized Non-Stormwater Discharges

Type of Authorized Non-Stormwater Discharge	Likely Present at Your Project Site?	
External buildings wash down	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Uncontaminated foundation or footing drains	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Uncontaminated excavation dewatering	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Landscape irrigation	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Others	<input type="checkbox"/> Yes	<input type="checkbox"/> No

3.0 Pollution Prevention Awareness

Employees will be given a "walk through" of the site identifying areas of possible pollution and will be shown Erosion and Sediment Controls and Pollution Prevention Practices (identified in Sections 4.0 and 5.0 of this SWPPP) that are applicable to their assigned job duties. A refresher meeting and "walk through" will be conducted on an as needed basis.

Arlington County – SWPPP 9/2016

STORMWATER POLLUTION PREVENTION PLAN
CC13 South Eads Street

4.0 Erosion & Sediment Controls

Select all that apply	Erosion & Sediment Control	Estimated Installation Date	Estimated Removal Date	Responsible Party
<input type="checkbox"/>	Construction Entrance (Std. & Spec. 3.02)			Construction Activity Operator (See Cover Page of this SWPPP)
<input checked="" type="checkbox"/>	Silt Fence (Std. & Spec. 3.05)			
<input type="checkbox"/>	Culvert Inlet Protection (Std. & Spec. 3.08)			
<input type="checkbox"/>	Outlet Protection (Std. & Spec. 3.18)		NA	
<input checked="" type="checkbox"/>	Temporary Seeding (Std. & Spec. 3.31)	As required by 3.31	NA	
<input checked="" type="checkbox"/>	Permanent Seeding (Std. & Spec. 3.32)		NA	
<input type="checkbox"/>	Sodding (Std. & Spec. 3.33)		NA	
<input type="checkbox"/>	Mulching (Std. & Spec. 3.35)		NA	
<input type="checkbox"/>	Safety Fence (Std. & Spec 3.01)			
<input checked="" type="checkbox"/>	Storm Drain Inlet Protection (Std. & Spec 3.08)			
<input checked="" type="checkbox"/>	Dewatering (Std. & Spec 3.26)			
<input type="checkbox"/>	Turbidity Curtain (Std. & Spec 3.27)			
<input checked="" type="checkbox"/>	Tree Protection (Arlington County Std. & Spec.)			
<input type="checkbox"/>	Others			

Arlington County – SWPPP 9/2016

STORMWATER POLLUTION PREVENTION PLAN
CC13 SOUTH EADS STREET

5.0 Potential Sources of Pollution & Pollution Prevention Practices

Pollutant-Generating Activity	Likely Present at your Project Site?	Pollutants									Pollution Prevention Practice	Responsible Party
		Sediment	Nutrients	Heavy Metals	pH (acids and bases)	Pesticides & Herbicides	Oil & Grease	Bacteria & Viruses	Trash, Debris, Solids	Other Toxic Chemicals		
Clearing, grading, excavating, and un-stabilized areas	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X							X		(1)	Construction Activity Operator (See Cover Page of this SWPPP)
Paving operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X					X		X		(2)	
Concrete washout and cement waste	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			X	X				X		(3)	
Structure construction, stucco, painting, and cleaning	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			X	X				X	X	(4)	
Dewatering operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X						X		(5)	
Material delivery and storage	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X	X	X		X		X	X	(6)	
Material use during building process	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		X	X	X		X		X	X	(7)	
Solid waste disposal	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								X	X	(8)	
Sanitary waste	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		X		X			X			(9)	
Landscaping operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	X	X			X			X	X	(10)	
Others [describe]	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> X	<input checked="" type="checkbox"/> X	<input checked="" type="checkbox"/> X	<input checked="" type="checkbox"/> X	<input checked="" type="checkbox"/> X	<input checked="" type="checkbox"/> X	<input checked="" type="checkbox"/> X	<input checked="" type="checkbox"/> X	<input checked="" type="checkbox"/> X	(11)	

Arlington County – SWPPP 9/2016

STORMWATER POLLUTION PREVENTION PLAN
CC13 SOUTH EADS STREET

Pollution Prevention Practices:

- Clearing, grading, excavating and un-stabilized areas** – Utilize erosion and sediment controls to prevent sediment laden or turbid runoff from leaving the construction site. Dispose of clearing debris at acceptable disposal sites. Apply permanent or temporary stabilization, sodding and/or mulching to denuded areas in accordance with the erosion and sediment control specifications and the general VPDES permit for discharges of stormwater from construction activities.
- Paving operations** – Cover storm drain inlets during paving operations and utilize pollution prevention materials such as drip pans and absorbent/loil dry for all paving machines to limit leaks and spills of paving materials and fluids.
- Concrete washout and cement waste** – Direct concrete wash water into a leak-proof container or leak-proof settling basin that is 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.
- Structure construction, stucco, painting and cleaning** – Enclose, cover or berm building material storage areas if susceptible to contaminated stormwater runoff. Conduct painting operations consistent with local air quality and OSHA regulations. Mix paint indoors, in a containment area or in a flat unpaved area. Prevent the discharge of soaps, solvents, detergents and wash water from construction materials, including the clean-up of stucco paint, form release oils and curing compounds.
- Dewatering operations** – Construction site dewatering from building footings or other sources may not be discharged without treatment. Sediment laden or turbid water shall be filtered, settled or similarly treated prior to discharge.
- Material delivery and storage** – Designate areas of the construction site for material delivery and storage. Place near construction entrances, away from waterways, and avoid transport near drainage paths or waterways.
- Material use during building process** – Use materials only where and when needed to complete the construction activity. Follow manufacturer's instructions regarding uses, protective equipment, ventilation, flammability and mixing of chemicals.
- Solid waste disposal** – Designate a waste collection area on the construction site that does not receive a substantial amount of runoff from upland areas and does not drain directly to a waterway. Ensure that containers have lids so they can be covered before periods of rain, and keep containers in a covered area whenever possible. Schedule waste collection to prevent the containers from overflowing.
- Sanitary waste** – Prevent the discharge of sanitary waste by providing convenient and well-maintained portable sanitary facilities. Locate sanitary facilities in a convenient location away from waterways.
- Landscaping operations** – Maintain as much existing vegetation as practicable. Apply permanent or temporary stabilization, sodding and/or mulching to denuded areas in accordance with the erosion and sediment control specifications and the general VPDES permit for discharges of stormwater from construction activities. Apply nutrients in accordance with manufacturer's recommendations and not during rainfall events.
- Others** –

Arlington County – SWPPP 9/2016

STORMWATER POLLUTION PREVENTION PLAN
CC13 SOUTH EADS STREET

6.0 Stormwater Management Controls

Select all that apply	Stormwater Management Control	Estimated Installation Date	Responsible Party
<input type="checkbox"/>	Post-development Stormwater Management Controls provided by a Larger Common Plan of Development or Sale	NA	Common Plan Construction Activity Operator
<input type="checkbox"/>	Rooftop Disconnection		Construction Activity Operator (See Cover Page of this SWPPP)
<input type="checkbox"/>	Sheet flow to Vegetated Filter (1 or 2)		
<input type="checkbox"/>	Grass Channel		
<input type="checkbox"/>	Rainwater Harvesting		Construction Activity Operator (See Cover Page of this SWPPP)
<input type="checkbox"/>	Permeable Pavement (1 or 2)		
<input type="checkbox"/>	Infiltration (1 or 2)		
<input type="checkbox"/>	Bioretention (1 or 2)		Construction Activity Operator (See Cover Page of this SWPPP)
<input type="checkbox"/>	Others		
<input type="checkbox"/>	Exempted	NA	NA

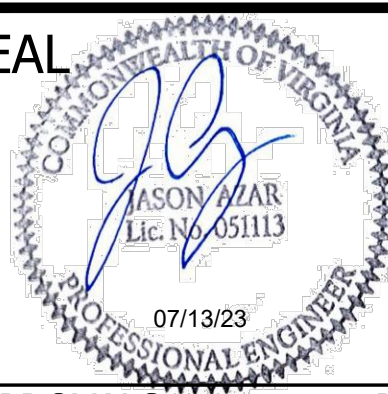
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FAX: 703.228.3606

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APPROVALS DATE

DESIGN TEAM ENGINEER SUPERVISOR

8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR

8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF

8/29/2023

TRANSPORTATION DIRECTOR

8/30/2023

PROJECT MANAGER

8/1/2023

REVISIONS DATE

LDA #4 SUBMISSION 07/13/2023

100% DESIGN 05/24/2023

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LDA#2 SUBMISSION 06/23/2022

100% SUBMISSION 06/21/2022

LDA SUBMISSION 04/19/2022

30% SUBMISSION 12/23/2021

SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.
STORMWATER POLLUTION PREVENTION
PLAN

DESIGNED: ME

DRAWN: MS

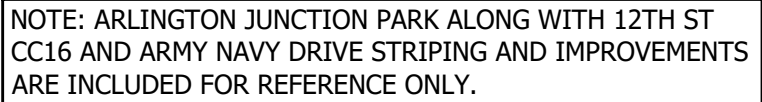
CHECKED: JA

PLOTTED: JULY 13 2023

























SCALE:

N/A

C035.1



1	PROP CURB AND GUTTER (C-2) ARL STD (R-2.0)
1A	PROP HEADER CURB (C-3) ARL STD (R-2.0)
1B	PROP REVERSE PITCH CURB & GUTTER (C2-R) ARL STD (CR-2.0)
1C	PROP ALTERNATE CURB FOR MEDIANS (C-5) ARL STD (R-2.0)
2	PROP SIDEWALK ARL STD (R-2.0)
2A	PROP MODIFIED RAMP (CG-12A) VDOT ROAD & BRIDGE STANDARDS (204-02) SEE CURB RAMP DETAIL SHEET #
2B	PROP MODIFIED RAMP (CG-12B) VDOT ROAD & BRIDGE STANDARDS (204-02) SEE CURB RAMP DETAIL SHEET #
2C	PROP MODIFIED RAMP (CG-12C) VDOT ROAD & BRIDGE STANDARDS (204-04) SEE CURB RAMP DETAIL SHEET #
2D	PROP RAMP (CG-12A) VDOT ROAD & BRIDGE STANDARDS (204-02) SEE CURB RAMP DETAIL SHEET # CO42.1
2E	PROP RAMP (CG-12B) VDOT ROAD & BRIDGE STANDARDS (204-03) SEE CURB RAMP DETAIL SHEET #
2F	PROP RAMP (CG-12C) VDOT ROAD & BRIDGE STANDARDS (204-04) SEE CURB RAMP DETAIL SHEET #
2G	PROP 6" BOARDWALK (SEE LANDSCAPE AND STRUCTURAL DETAILS)
3A	PROP COMMERCIAL CONCRETE DRIVEWAY ENTRANCE (STANDARD) ARL STD (R-2.4A)
6	REPLACE EXISTING ASPHALT WITH 5" BM-25.0A AND 2" SM-9.5A
7B	ADJUST EXISTING CATCH BASIN TOP TO PROPOSED GRADE PER ARL CONSTR SPEC 02500 - 3.4
7C	CONNECT PROPOSED PIPE TO EXISTING STRUCTURE PER ARL CONSTR SPEC 02505 - 3.5
7D	ABANDON EXISTING STRUCTURE PER ARL CONSTR SPEC 02500 - 3.5
7E	REMOVE EXISTING STRUCTURE PER ARL CONSTR SPEC 02500 - 3.5
7F	REMOVE EXISTING PIPE PER ARL CONSTR SPEC 02500 - 3.5
7G	CONNECT TO EXISTING PIPE
8A	PROP STANDARD CATCH BASIN WITH EXTENDED THROATS FOR SACS, CB-2A PER ARL STD (D-1.3)
8B	PROP STANDARD CATCH BASIN WITH EXTENDED THROATS FOR SLOPES, CB-2B PER ARL STD (D-1.4)
8C	PROP PRECAST CATCH BASIN PCB-2 PER ARL STD (D-1.5) (D-1.6)
8D	PROP CATCH BASIN WITH DOUBLE THROAT, CB-4 PER ARL STD (D-1.8)

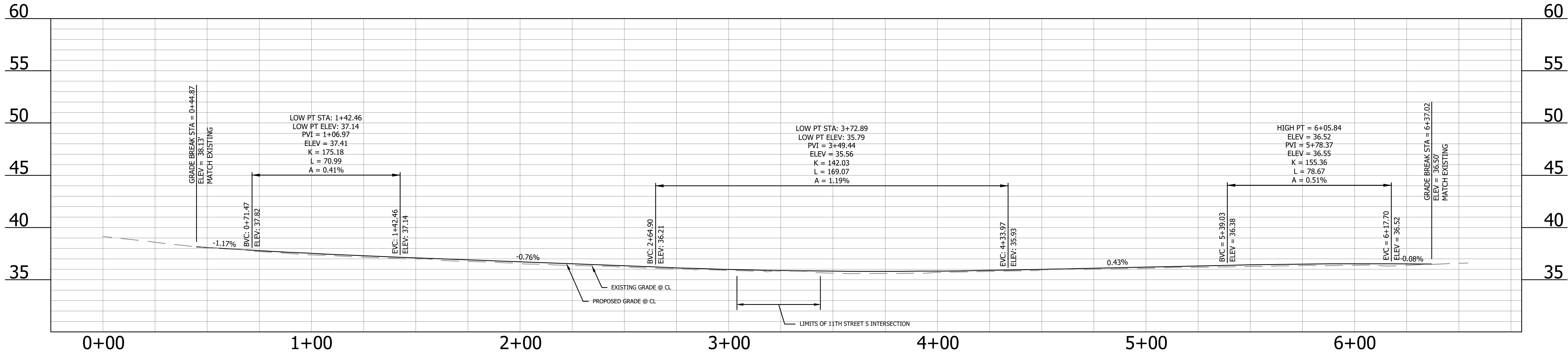
- | | |
|---|--|
|  | PROF NONROADWAY SHALLOW GRATE PER ARL STD (D-1-9) |
|  | PROP YARD INLET PER ARL STD (D-1-10) |
|  | PROP PRECAST YARD INLET PER ARL STD (D-1-11) |
|  | PROP STANDARD MANHOLE FRAME AND COVER MH-1, VDOT ROAD & BRIDGE STANDARDS (106.02) |
|  | PROP PRECAST MANHOLE MH-2, VDOT ROAD & BRIDGE STANDARDS (106.07) |
|  | PROP STANDARD DROP INLET DI-1, VDOT ROAD & BRIDGE STANDARDS (104.01) |
|  | RELOCATE EXISTING WATER METER AND INSTALL FRAME AND COVER PROVIDED BY COUNTY ARL STD (W-8.0 AND V-9.0) |
|  | PROP WATER SERVICE CONNECTION AND METER |
|  | RELOCATION PER ARL STD (W-8.0) |
|  | RELOCATE EXISTING HYDRANT AND EXTEND HYDRANT LEAD |
|  | NEW COUNTY STANDARD OR DECORATIVE LIGHT OR COLONIAL LIGHT (TYP) ARLINGTON COUNTY STANDARD (R-5.3, R-5.4, R-5.6B, R-5.6C) |
|  | RELOCATE EXISTING SIGN |
|  | REMOVE EXISTING SIGN |
|  | PROP SIGN |
|  | WATER METER TO BE REMOVED (SEE SHEET C051.1) |
|  | WATER SERVICE CONNECTION TO BE ABANDONED (SEE SHEET C051.1) |
|  | EX ARLINGTON COUNTY FIBER HAND HOLE TO BE RESET AT PROP GRADE WITH TRAFFIC-RATED BOX AND ADA-COMPLIANT LID |
|  | EX ARLINGTON COUNTY FIBER HAND HOLE TO BE RELOCATED AS SHOWN AND RECONNECTED TO TRAFFIC SIGNALS |
|  | EX ARLINGTON COUNTY FIBER MANHOLE TO BE RESET AT PROP GRADE WITH TRAFFIC-RATED FRAME AND LID |
|  | EX JUNCTION BOX TO BE RESET AT PROP GRADE BEHIND BACK OF CURB WITH MODIFIED CONCRETE COLLAR |
|  | EX UTILITY FRAME AND LID TO BE RESET AT PROP GRADE (PROVIDE ADA-COMPLIANT LID WHERE LOCATED IN PEDESTRIAN AREAS) |
|  | EX UTILITY TO BE RESET AT PROP GRADE WITH TRAFFIC-RATED FRAME AND LID |
|  | PROP TRASH/RECYCLING RECEPTACLES (SEE LANDSCAPE DETAILS) |
|  | EX PAY STATION TO BE REMOVED AND RETURNED TO ARLINGTON COUNTY (CONTRACTOR TO COORDINATE WITH T&E FOR DROP OFF LOCATION) |

30% SUBMISSION 12/23/2021

PLAN

SCALE:

C041.1



CENTERLINE PROFILE
CL - SOUTH - ARMY NAVY DR TO 12TH ST S
HOR. SCALE: 1" = 25'
VER. SCALE: 1" = 5'

ELEVATIONS () INDICATES EXISTING RT LT EOP CENTERLINE EOP 0 0			0		
0			(39.15)		
0			(38.58)		
(37.98)			(38.03)		
37.98			38.28		
(37.34)			(37.68)		
37.34			37.85		
(37.00)			(37.26)		
37.00			37.55		
(36.75)			(37.15)		
36.75			37.20		
(36.51)			(37.00)		
36.51			37.07		
(36.30)			(36.75)		
36.30			36.92		
(36.08)			(36.54)		
36.08			36.70		
(35.96)			(36.36)		
35.96			36.53		
(35.78)			(36.21)		
35.78			36.36		
(35.58)			(36.02)		
35.58			36.18		
(35.43)			(35.89)		
35.43			36.01		
(35.33)			(35.83)		
35.33			35.85		
(35.28)			(35.62)		
35.28			35.76		
(35.03)			(35.59)		
35.03			35.79		
(35.03)			(35.68)		
35.03			35.78		
(35.28)			(35.79)		
35.28			35.83		
(35.37)			(35.93)		
35.37			35.92		
(35.41)			(35.98)		
35.41			36.14		
(35.50)			(36.10)		
35.50			36.26		
(35.60)			(36.18)		
35.60			36.35		
(35.69)			(36.26)		
35.69			36.42		
(35.91)			(36.34)		
35.91			36.33		
(35.90)			(36.38)		
35.90			36.40		
0			(36.37)		
0			36.47		
0			(36.56)		
0			0		
0			0		

RT CENTERLINE LT
EOP EOP
ELEVATIONS
() INDICATES EXISTING

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APPROVALS

DESIGN TEAM ENGINEER SUPERVISOR
[Signature] 8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR
[Signature] 8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF
[Signature] 8/29/2023

TRANSPORTATION DIRECTOR
[Signature] 8/30/2023

PROJECT MANAGER
[Signature] 8/18/2023

REVISIONS	DATE
LDA #4 SUBMISSION	07/13/2023
100% DESIGN	05/24/2023
LDA#3 SUBMISSION	01/31/2023
LDA#2 SUBMISSION	06/23/2022
100% SUBMISSION	06/21/2022
LDA SUBMISSION	04/19/2022
30% SUBMISSION	12/23/2021

SOUTH EADS STREET
CC13

BETWEEN ARMY NAVY DR. AND 12TH ST. S.

PROFILE

DESIGNED: ME
DRAWN: MS
CHECKED: JA

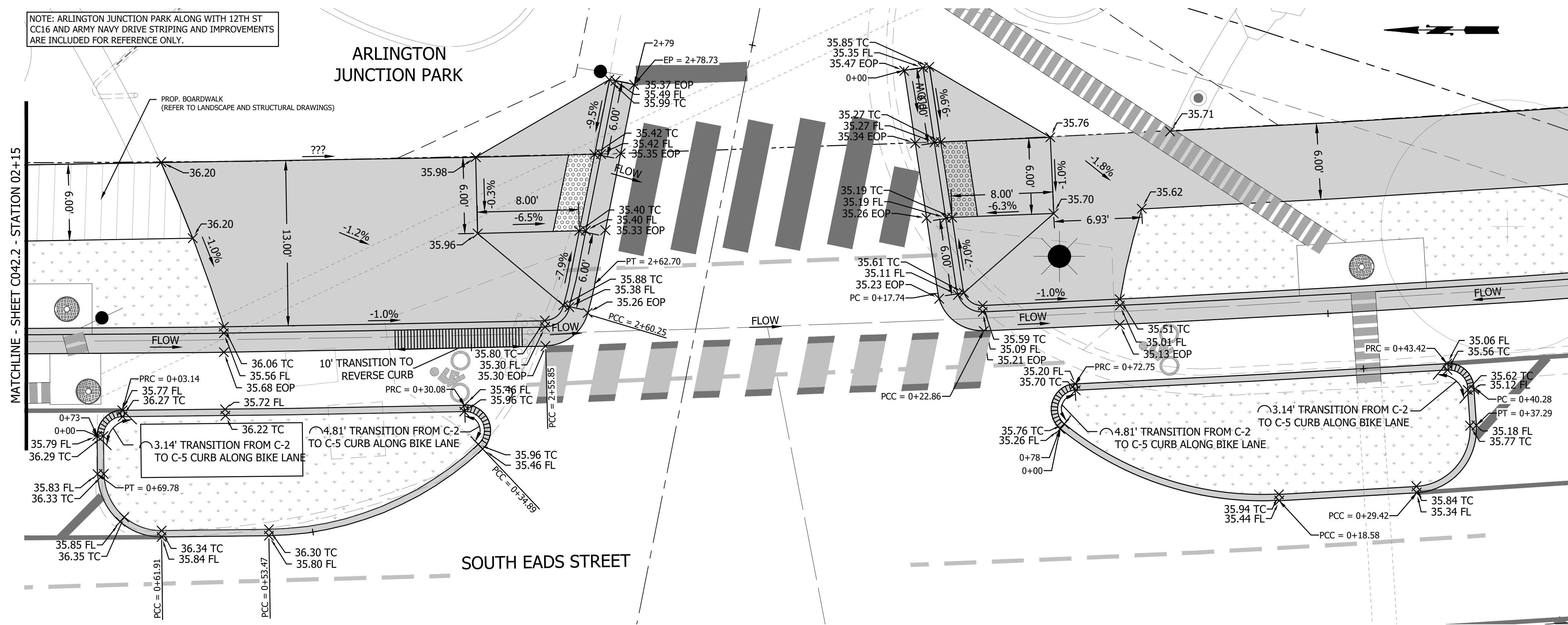
PLOTTED: JULY 13 2023

SCALE:

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VERT. SCALE

0 25 50
HORIZ. SCALE

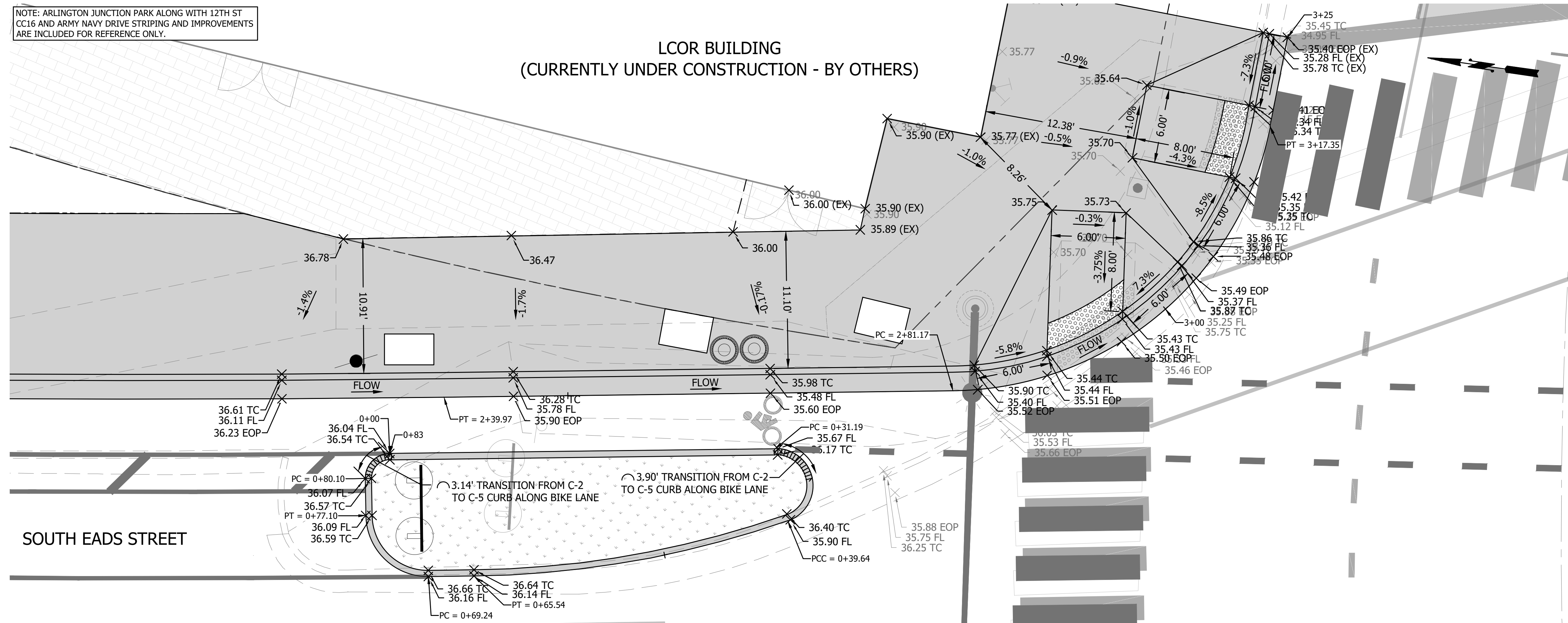
NOTE: ARLINGTON JUNCTION PARK ALONG WITH 12TH ST CC16 AND ARMY NAVY DRIVE STRIPING AND IMPROVEMENTS ARE INCLUDED FOR REFERENCE ONLY.



C1: NE CORNER OF SOUTH EADS STREET & 11TH STREET SOUTH
Baseline: EOP - EAST - ARMY NAVY DRIVE TO 11TH STREET SOUTH
Station: 02+15 to 02+79

C2: SE CORNER OF SOUTH EADS STREET & 11TH STREET SOUTH
Baseline: EOP - EAST - 11TH STREET SOUTH TO 12TH STREET SOUTH
Station: 00+00 to 00+69

NOTE: ARLINGTON JUNCTION PARK ALONG WITH 12TH ST CC16 AND ARMY NAVY DRIVE STRIPING AND IMPROVEMENTS ARE INCLUDED FOR REFERENCE ONLY.

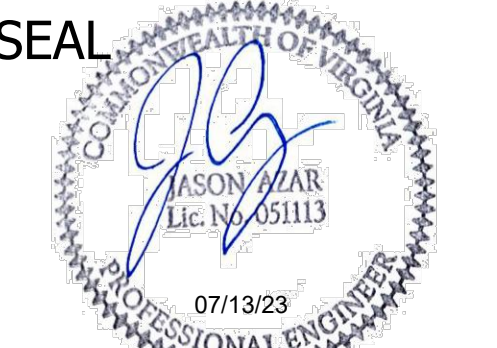


C3: SE CORNER OF SOUTH EADS STREET & 12TH STREET SOUTH
Baseline: EOP - EAST - 11TH STREET SOUTH TO 12TH STREET SOUTH
Station: 02+05 to 03+25



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APPROVALS DATE

DESIGN TEAM ENGINEER SUPERVISOR 8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR 8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF 8/29/2023

TRANSPORTATION DIRECTOR 8/30/2023

PROJECT MANAGER 8/1/2023

REVISIONS DATE

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100% DESIGN 05/24/2023

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100% SUBMISSION 06/21/2022

LDA SUBMISSION 04/19/2022

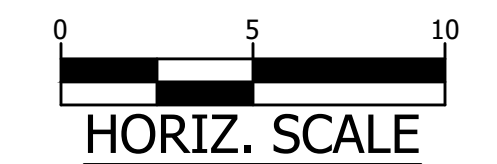
30% SUBMISSION 12/23/2021

SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.
RAMP DETAILS

DESIGNED: ME
DRAWN: MS
CHECKED: JA

PLOTTED: JULY 13 2023

SCALE:

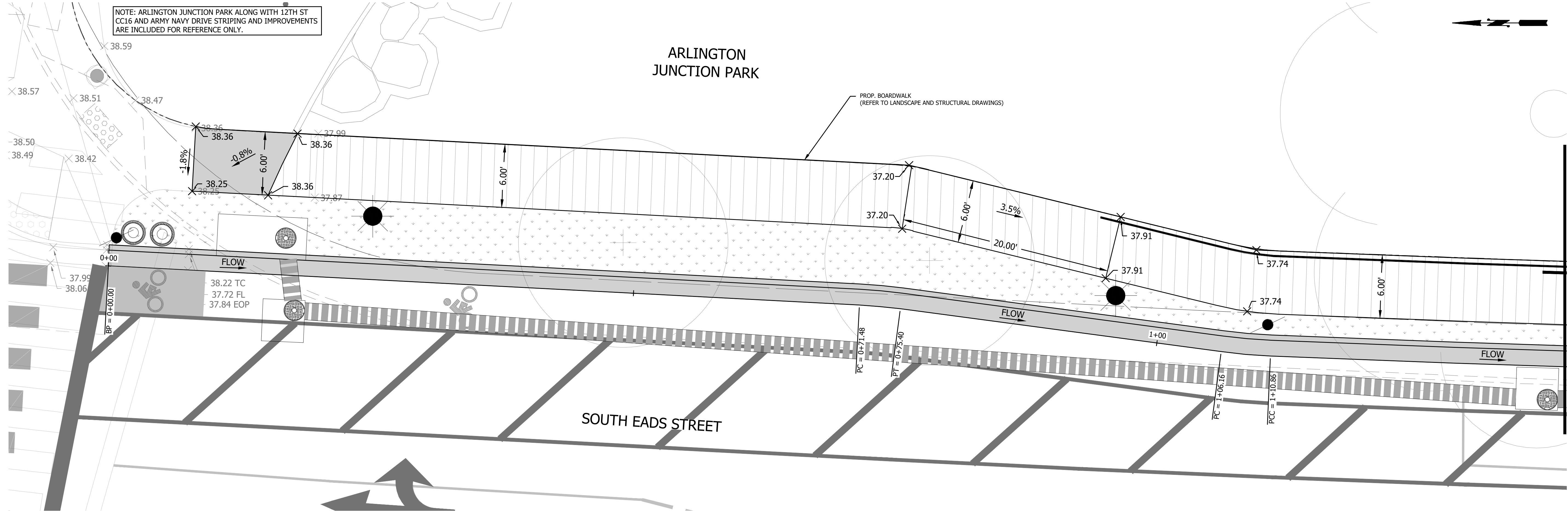


HORIZ. SCALE

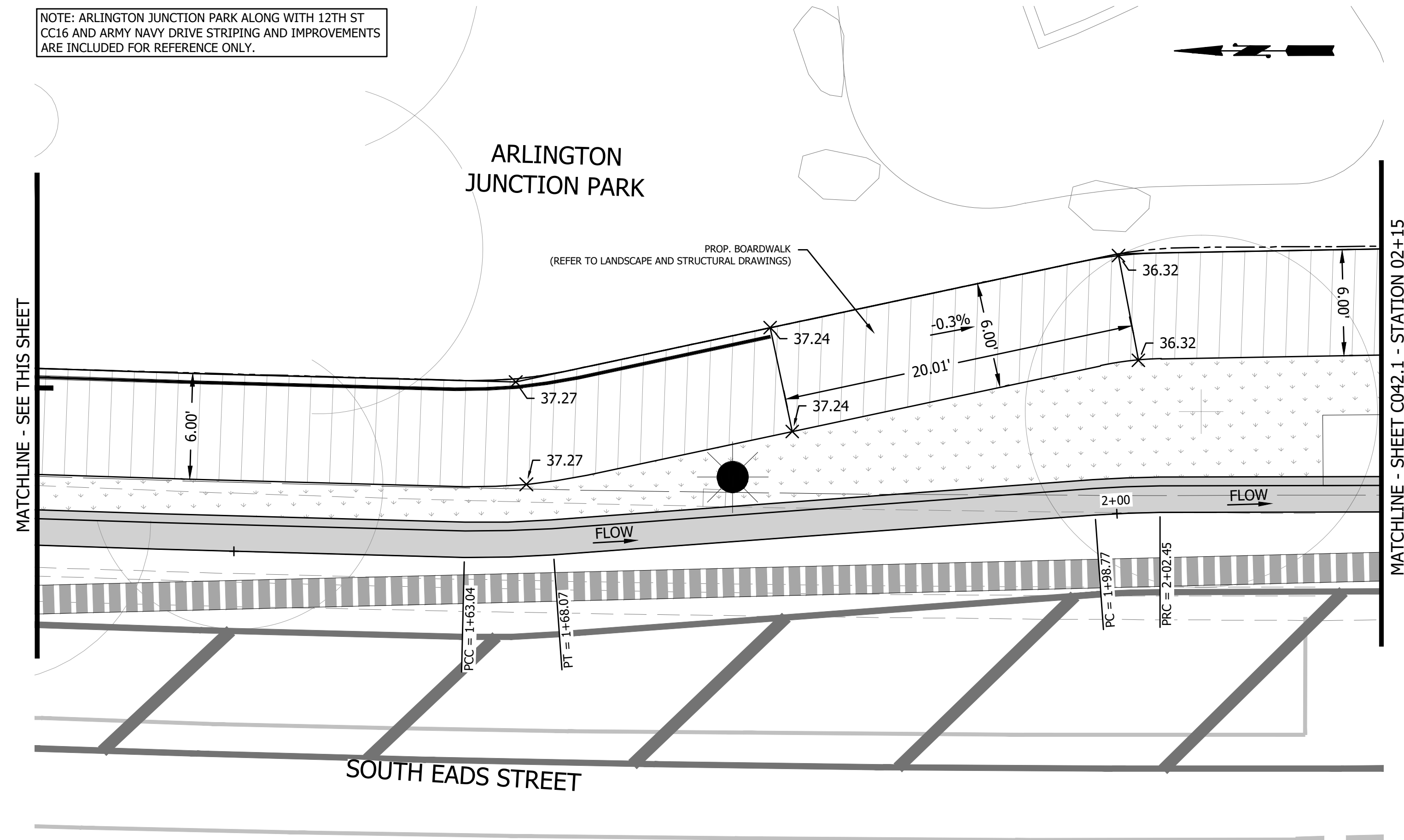
C042.1

REVISED ON 1/24/2022

FILENAME: C042.1 - RAMP DETAILS.DWG PATH: J:\145.006 - S. EADS ST. DES\CADD\DWG PLOTTED BY: MEDELMAN



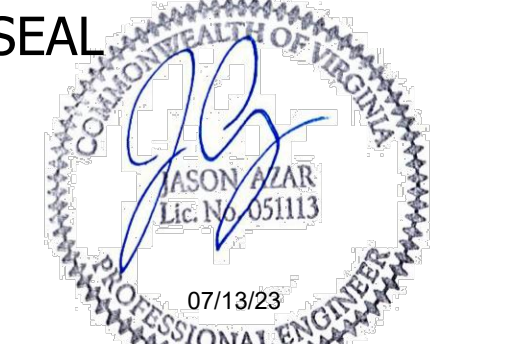
BOARDWALK ALONG SOUTH EADS STREET
Baseline: EOP - EAST - ARMY NAVY DRIVE TO 11TH STREET SOUTH
Station: 0+00 to 01+39



BOARDWALK ALONG SOUTH EADS STREET
Baseline: EOP - EAST - ARMY NAVY DRIVE TO 11TH STREET SOUTH
Station: 1+39 to 02+15

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APPROVALS DATE

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CONSTRUCTION MANAGEMENT SUPERVISOR 8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF 8/29/2023

TRANSPORTATION DIRECTOR 8/30/2023

PROJECT MANAGER 8/1/2022

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LDA SUBMISSION 04/19/2022

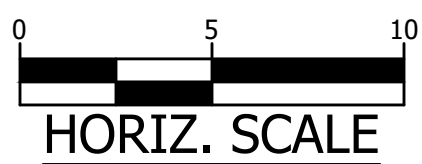
30% SUBMISSION 12/23/2021

SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.
BOARDWALK DETAILS

DESIGNED: ME
DRAWN: MS
CHECKED: JA

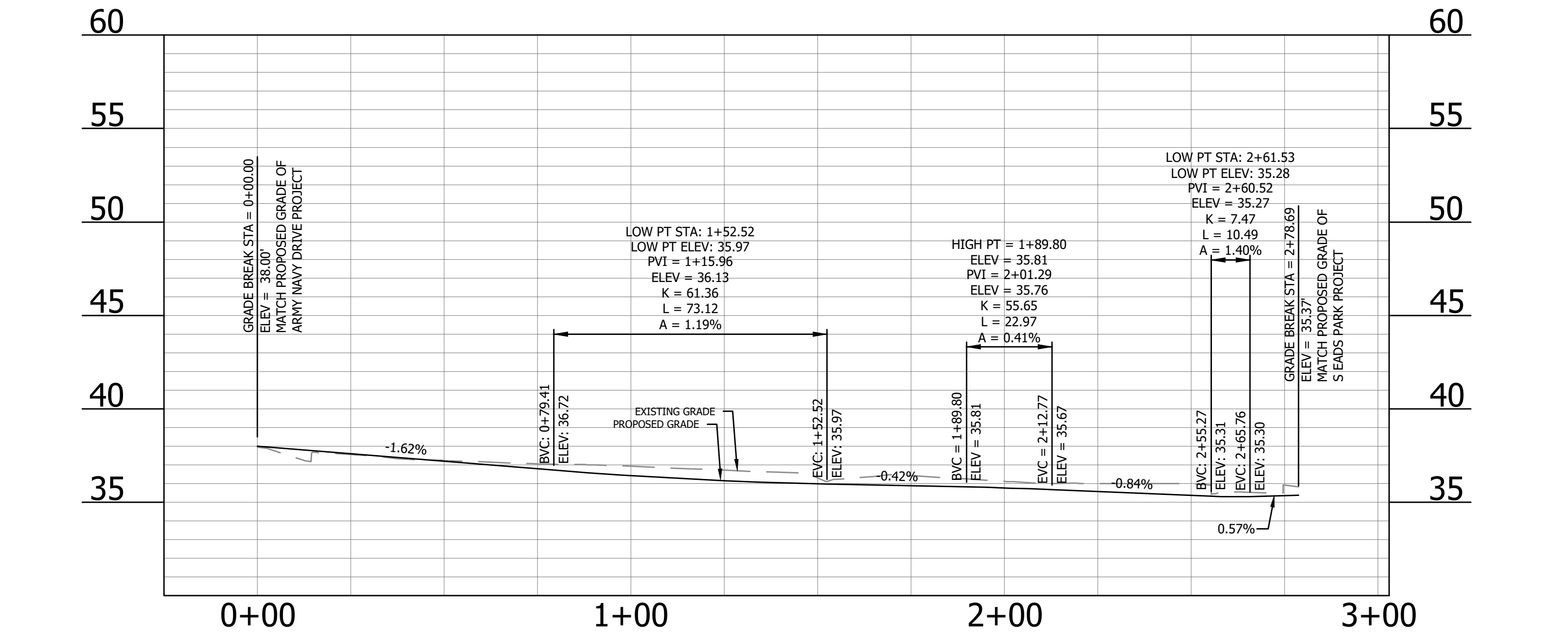
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SCALE:

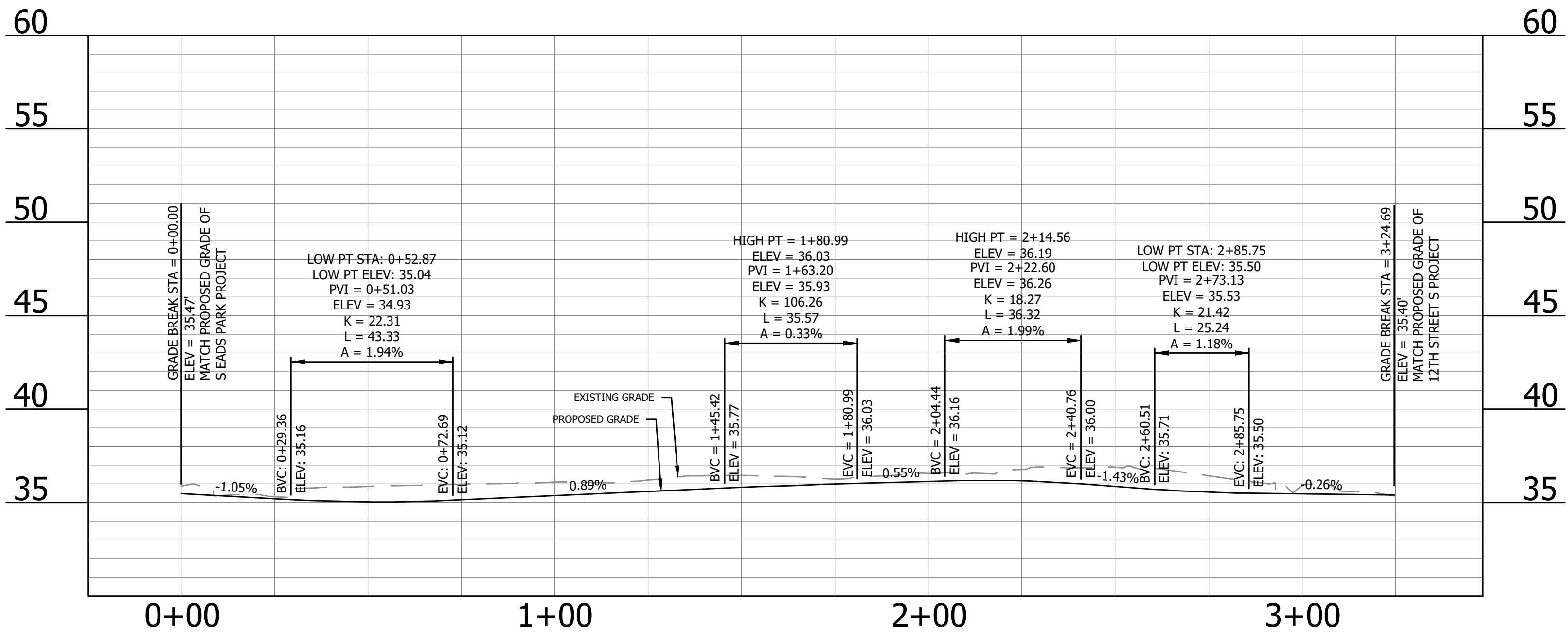


C042.2

SOUTH EADS STREET CC13



EOP-1 PROFILE
EOP - EAST - ARMY NAVY DR TO 11TH ST S
HOR. SCALE: 1" = 25'
VER. SCALE: 1" = 5'



EOP-2 PROFILE
EOP - EAST - 11TH ST S TO 12TH ST S
HOR. SCALE: 1" = 25'
VER. SCALE: 1" = 5'



APPROVALS _____ DATE _____

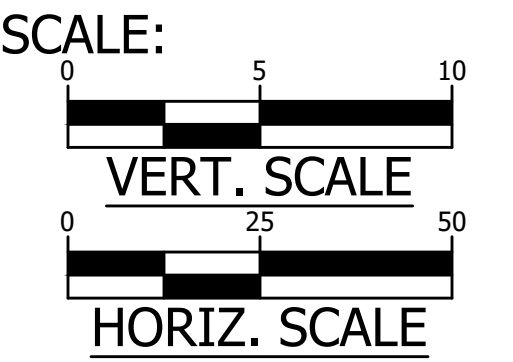
DESIGN TEAM ENGINEER SUPERVISOR _____ 8/29/2023
CONSTRUCTION MANAGEMENT SUPERVISOR _____ 8/29/2023
WATER, SEWER, STREETS BUREAU CHIEF _____ 8/29/2023
TRANSPORTATION DIRECTOR _____ 8/30/2023
PROJECT MANAGER _____ 8/13/2023

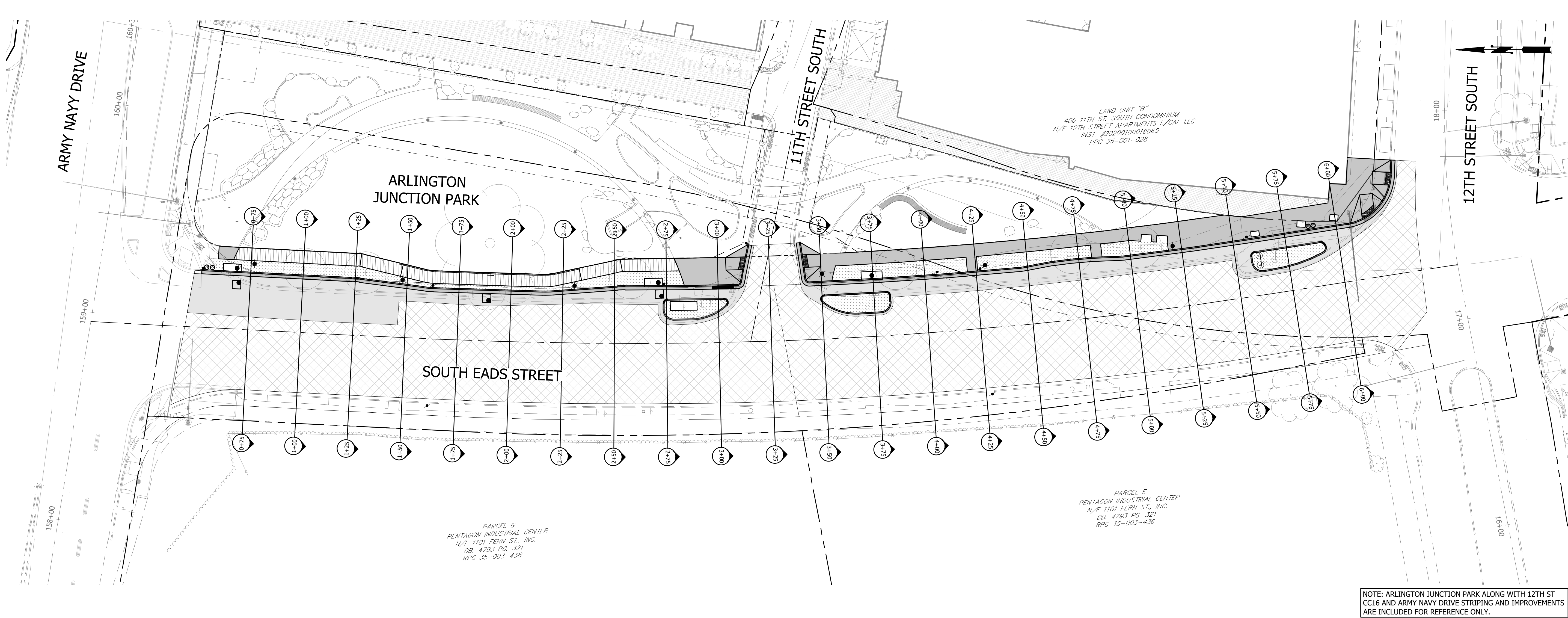
REVISIONS	DATE
LDA #4 SUBMISSION	07/13/2023
100% DESIGN	05/24/2023
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LDA#2 SUBMISSION	06/23/2022
100% SUBMISSION	06/21/2022
LDA SUBMISSION	04/19/2022
30% SUBMISSION	12/23/2021

SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.
EDGE OF PAVEMENT PROFILES

DESIGNED: ME
DRAWN: MS
CHECKED: JA

PLOTTED: JULY 13 2023






NOTE: ARLINGTON JUNCTION PARK ALONG WITH 12TH ST CC16 AND ARMY NAVY DRIVE STRIPING AND IMPROVEMENTS ARE INCLUDED FOR REFERENCE ONLY.



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07/13/23
PROFESSIONAL ENGINEER

APPROVALS	DATE
DESIGN TEAM ENGINEER SUPERVISOR	8/29/2023
CONSTRUCTION MANAGEMENT SUPERVISOR	8/29/2023
WATER, SEWER, STREETS BUREAU CHIEF	8/29/2023
TRANSPORTATION DIRECTOR	8/30/2023
PROJECT MANAGER	8/13/2023

REVISIONS	DATE
LDA #4 SUBMISSION	07/13/2023
100% DESIGN	05/24/2023
LDA#3 SUBMISSION	01/31/2023
LDA#2 SUBMISSION	06/23/2022
100% SUBMISSION	06/21/2022
LDA SUBMISSION	04/19/2022
30% SUBMISSION	12/23/2021

SOUTH EADS STREET
CC13


BETWEEN ARMY NAVY DR. AND 12TH ST. S.

CROSS SECTIONS EXHIBIT

DESIGNED: ME
DRAWN: MS
CHECKED: JA

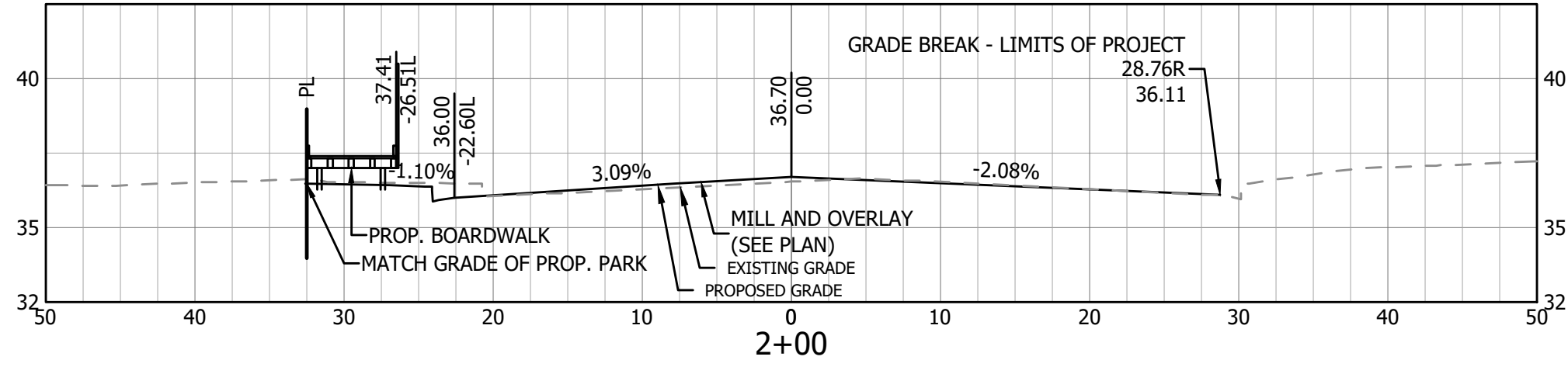
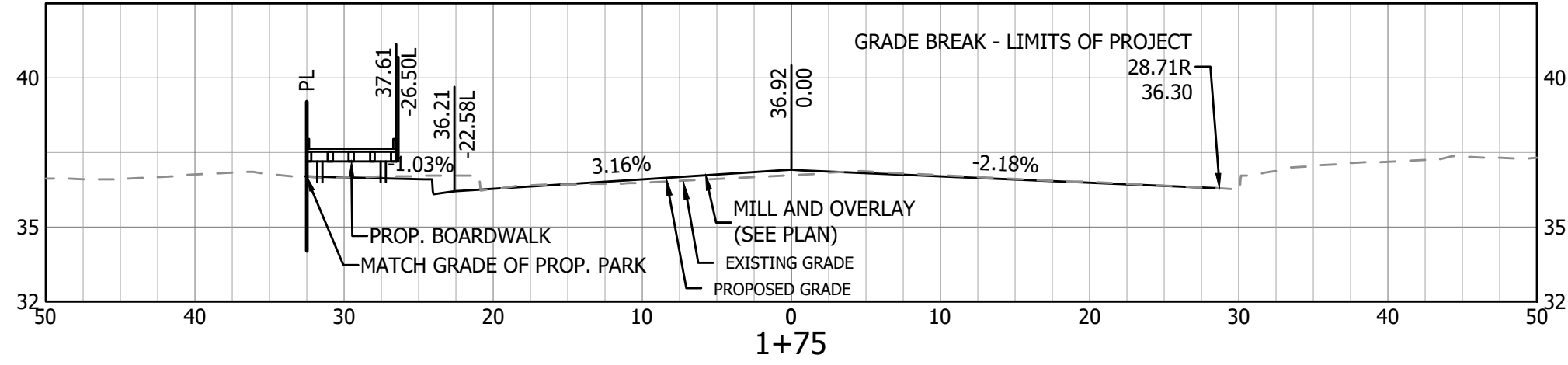
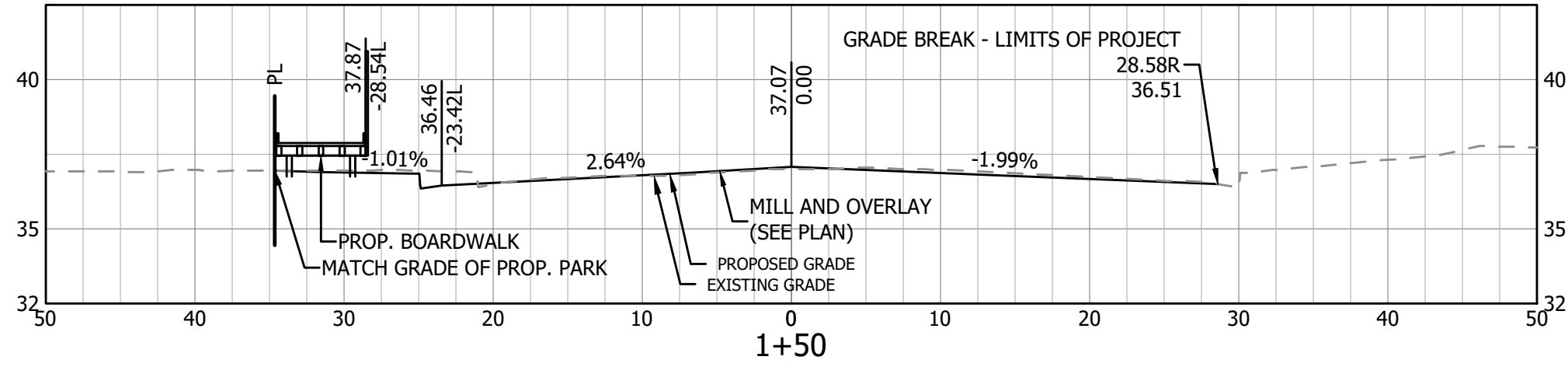
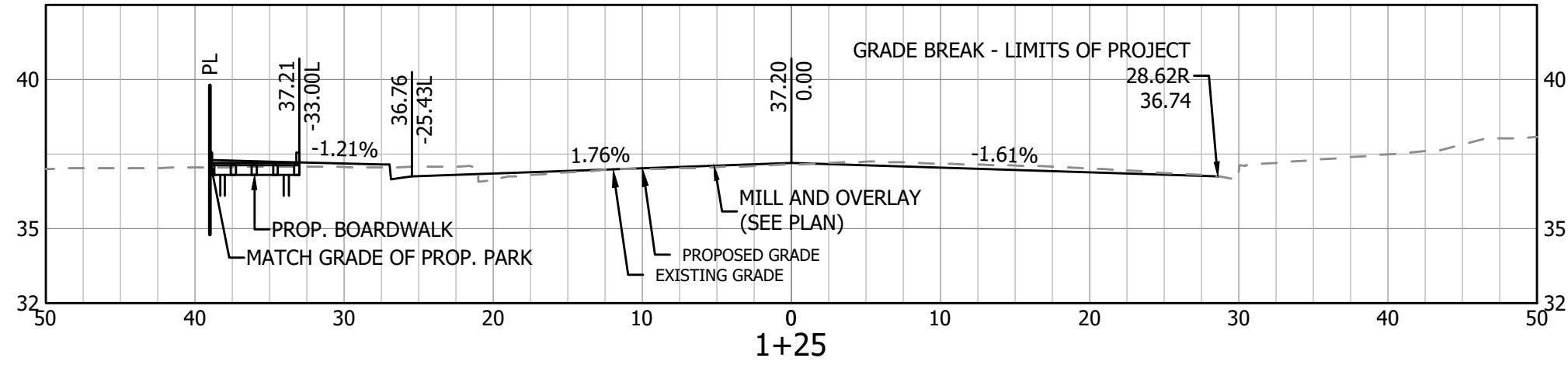
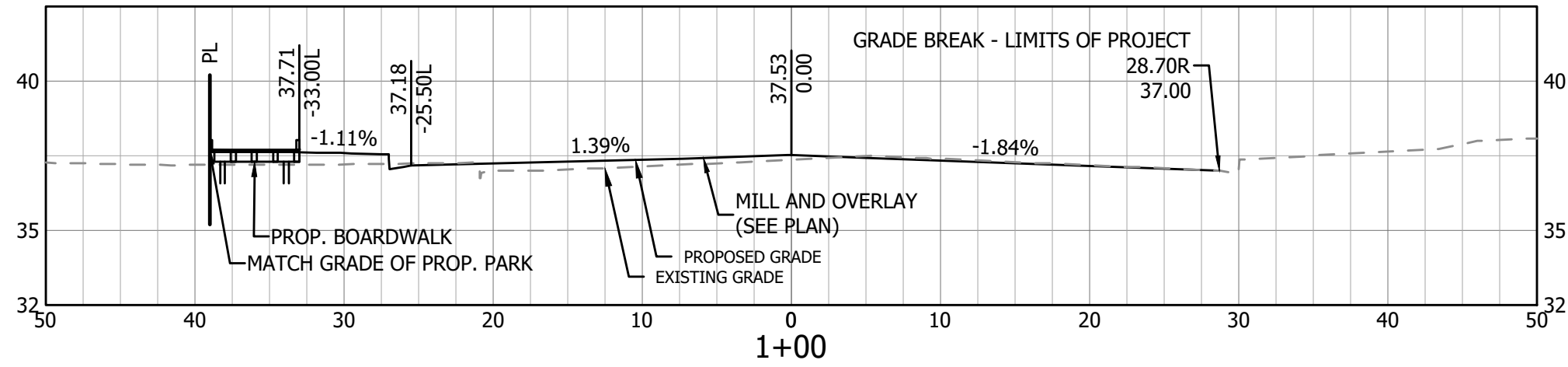
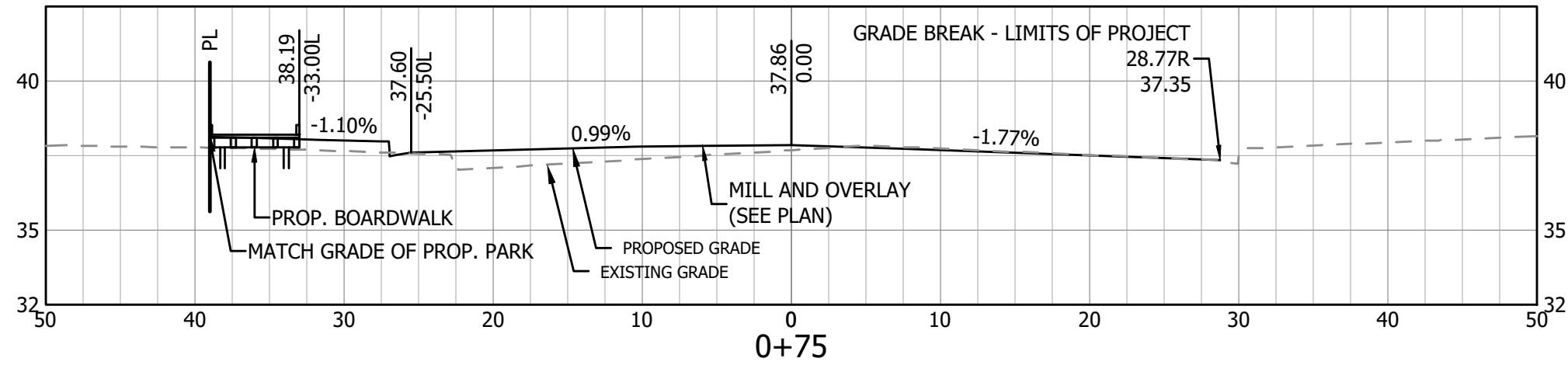
PLOTTED: JULY 13 2023

SCALE:

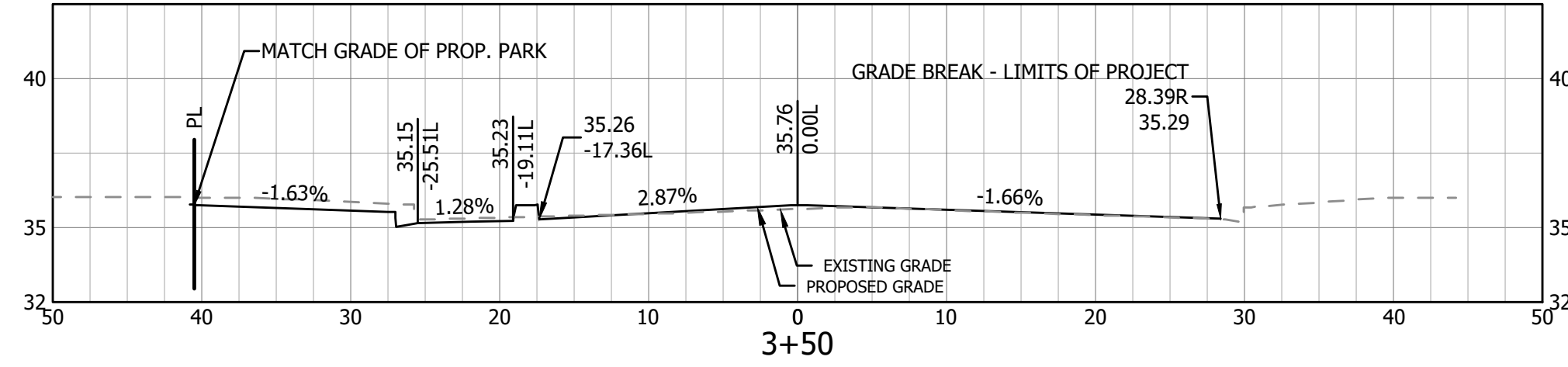
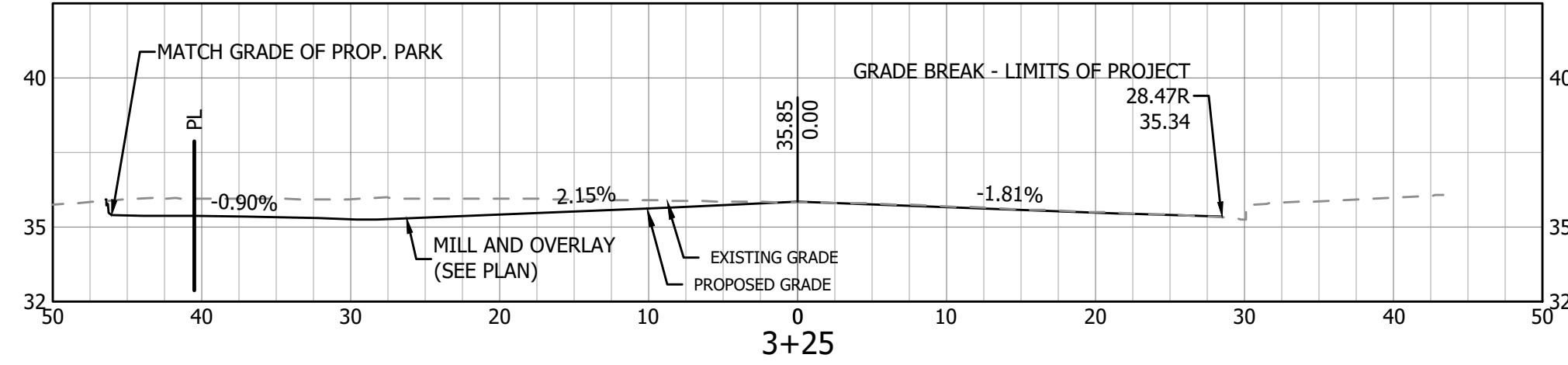
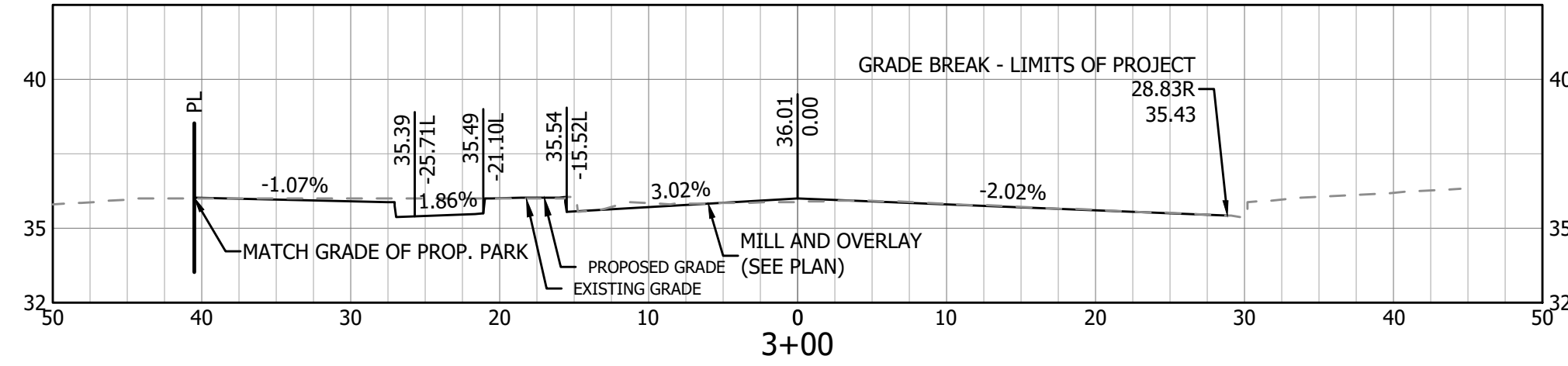
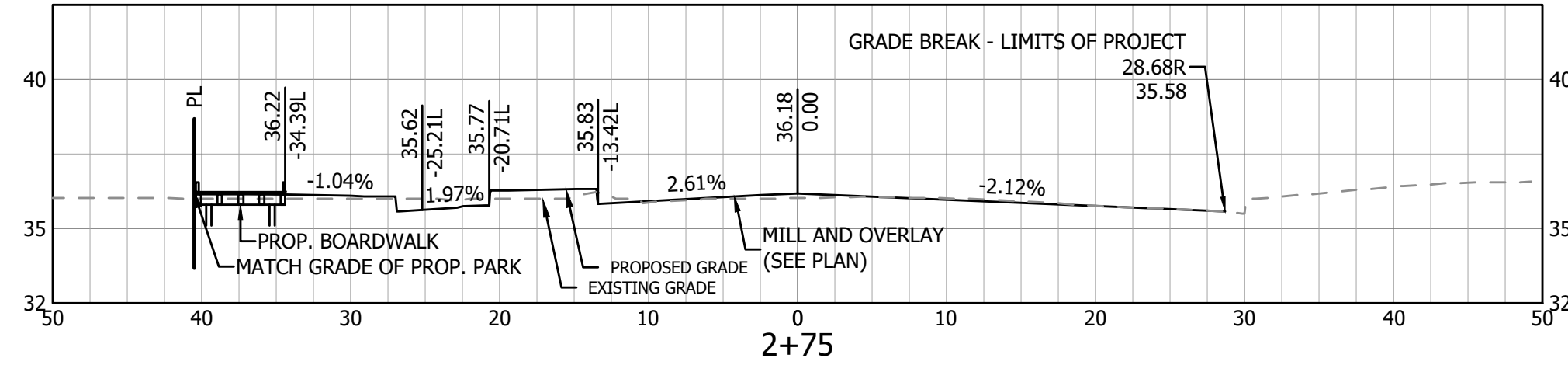
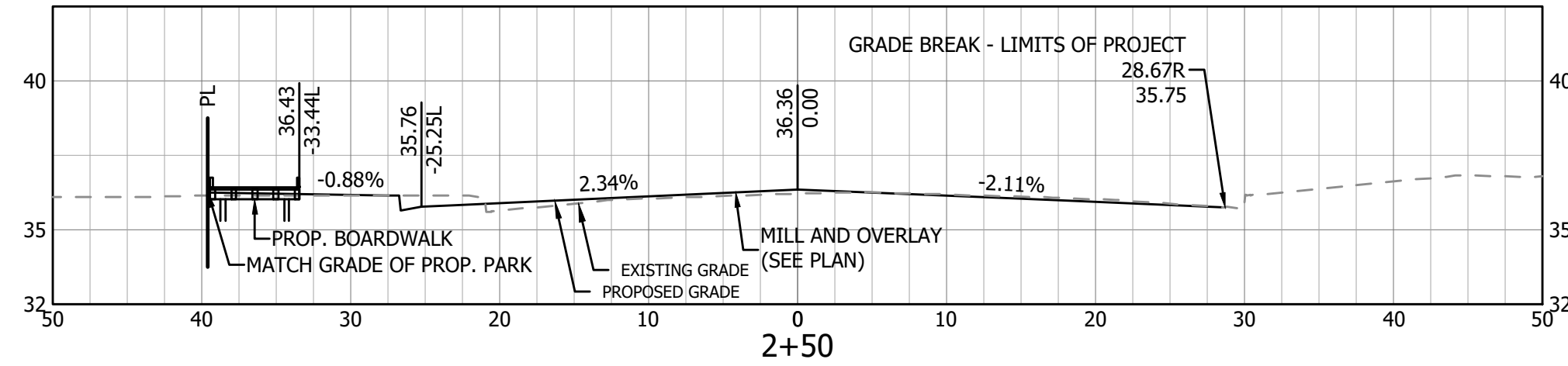
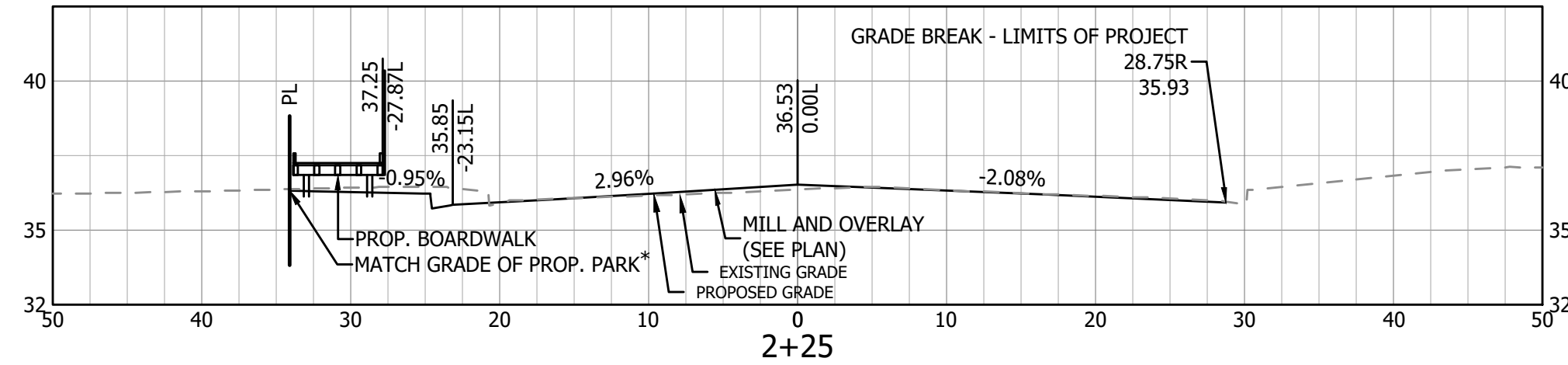


HORIZ. SCALE

SOUTH EADS STREET

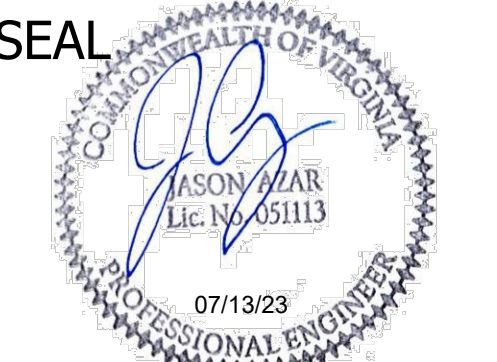


*NOTE: ANY GRADING PERFORMED BEHIND PROPOSED CURB EDGE WITHIN CRZ SHALL BE DONE BY HAND ONLY. NO ROOTS 1" OR GREATER SHALL BE CUT.



DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

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APPROVALS DATE

DESIGN TEAM ENGINEER SUPERVISOR 8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR 8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF 8/29/2023

TRANSPORTATION DIRECTOR 8/30/2023

PROJECT MANAGER 8/1/2023

REVISIONS DATE

LDA #4 SUBMISSION 07/13/2023

100% DESIGN 05/24/2023

LDA#3 SUBMISSION 01/31/2023

LDA#2 SUBMISSION 06/23/2022

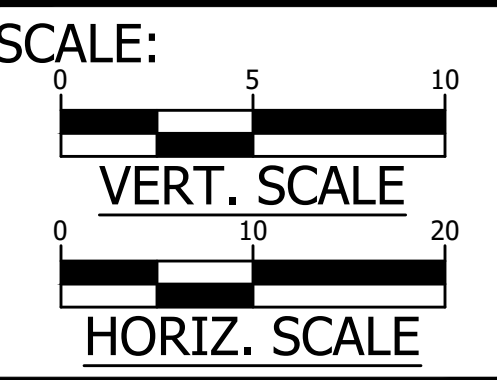
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LDA SUBMISSION 04/19/2022

30% SUBMISSION 12/23/2021

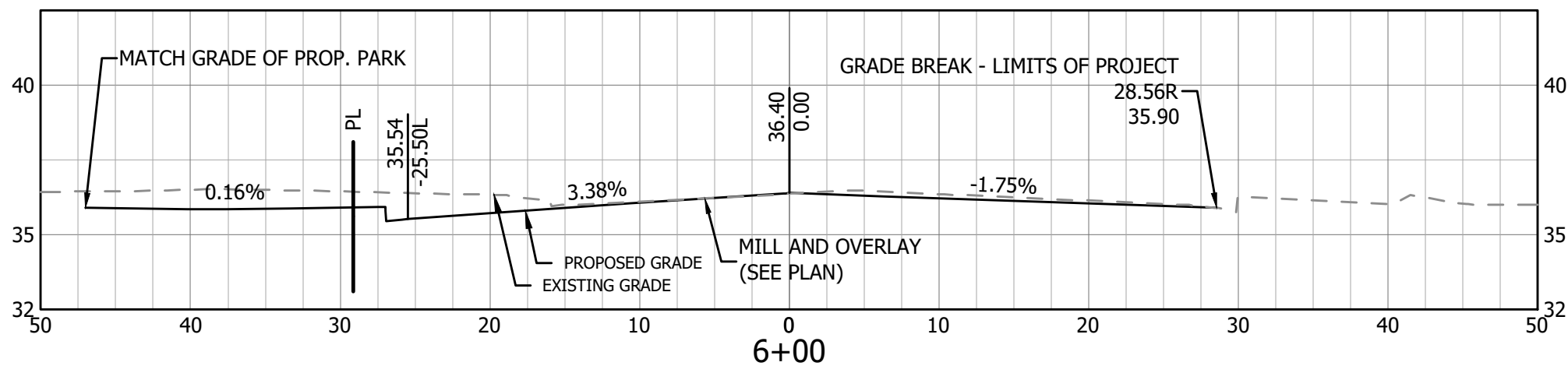
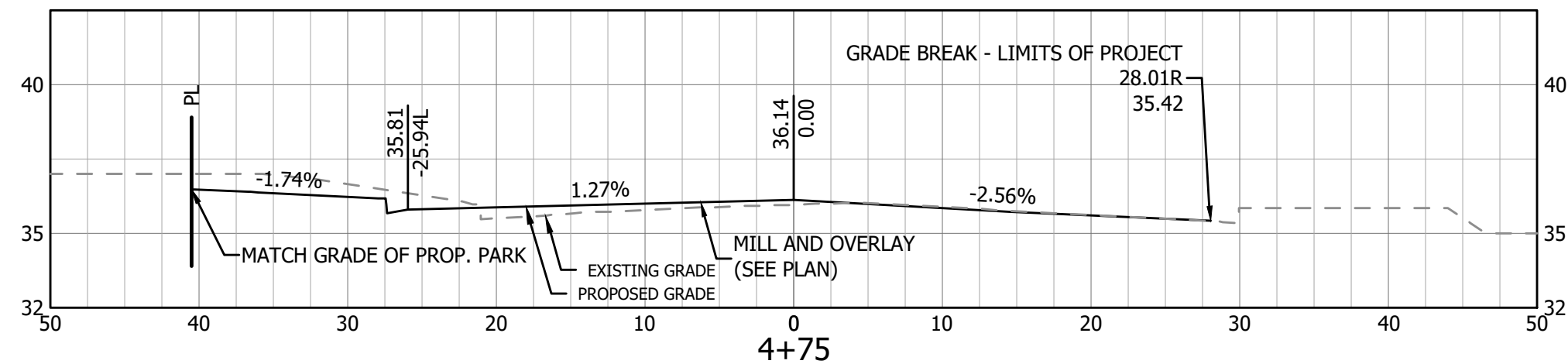
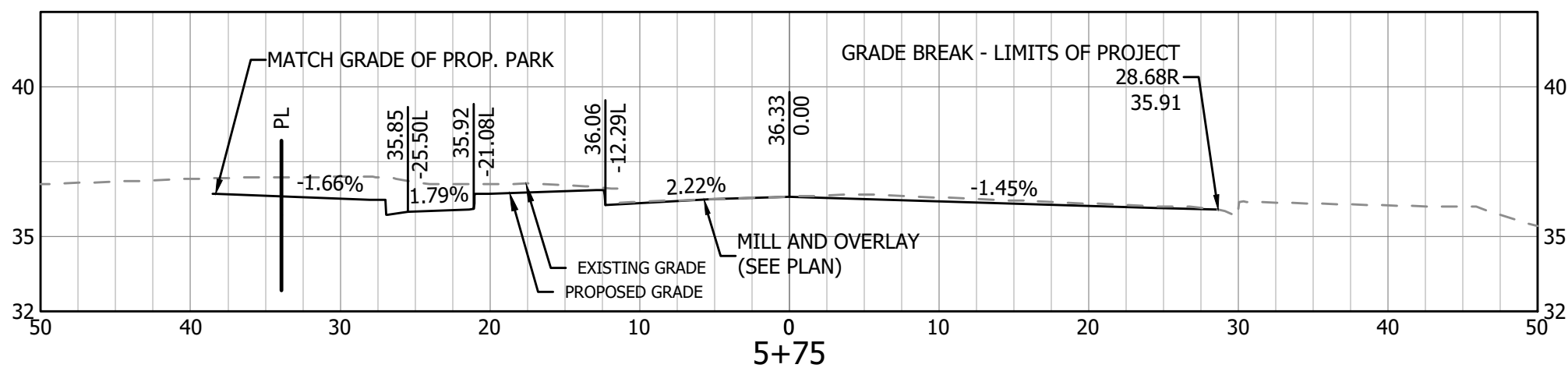
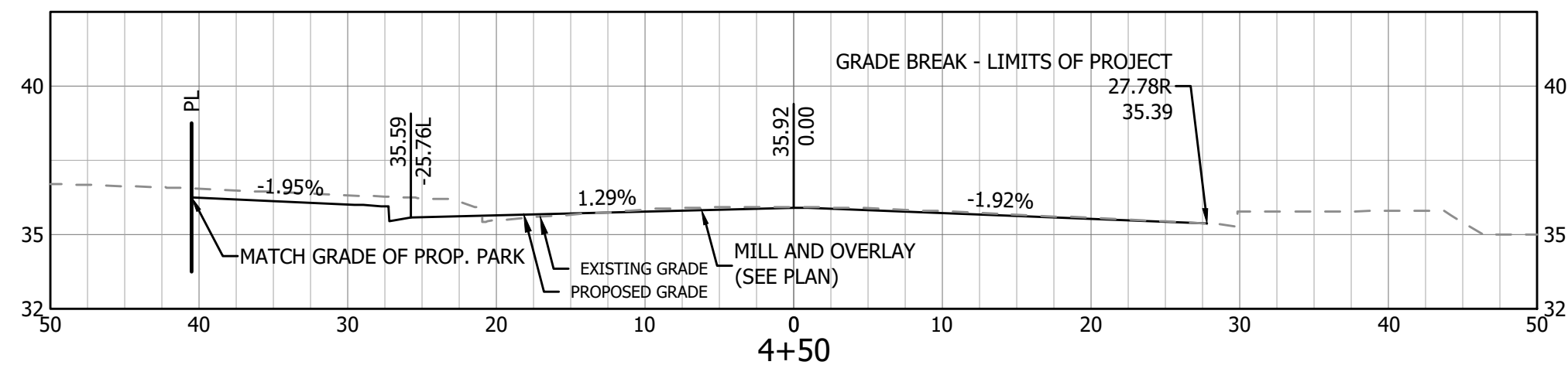
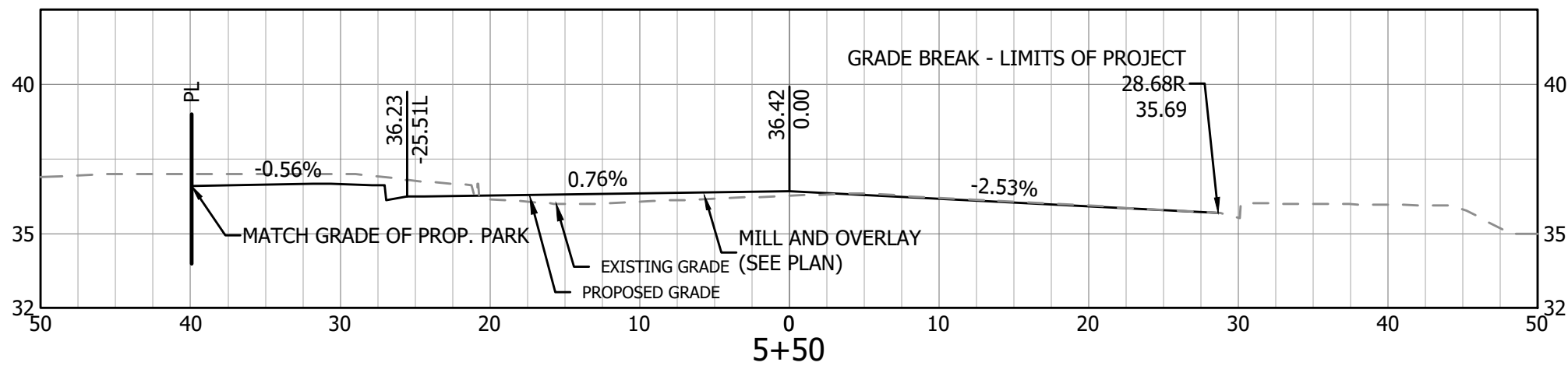
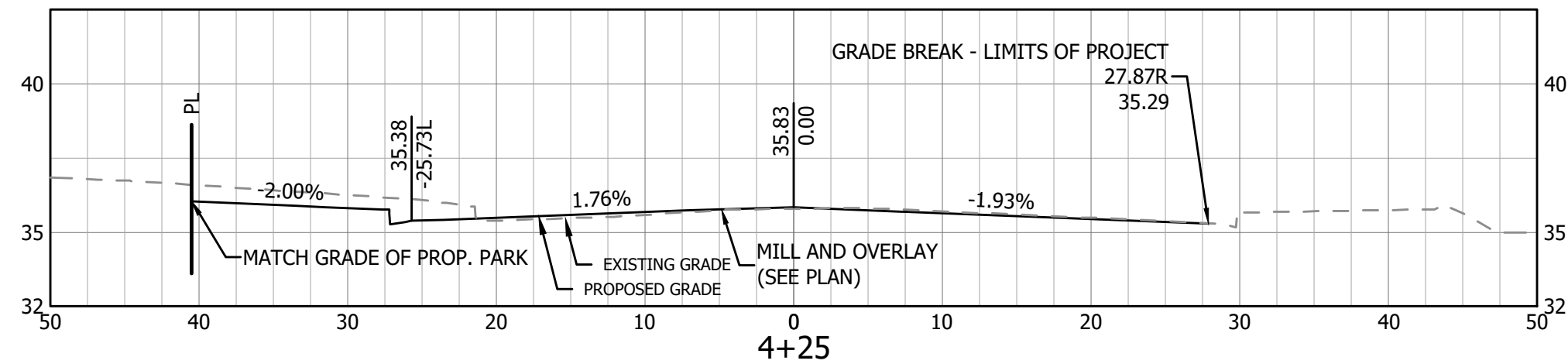
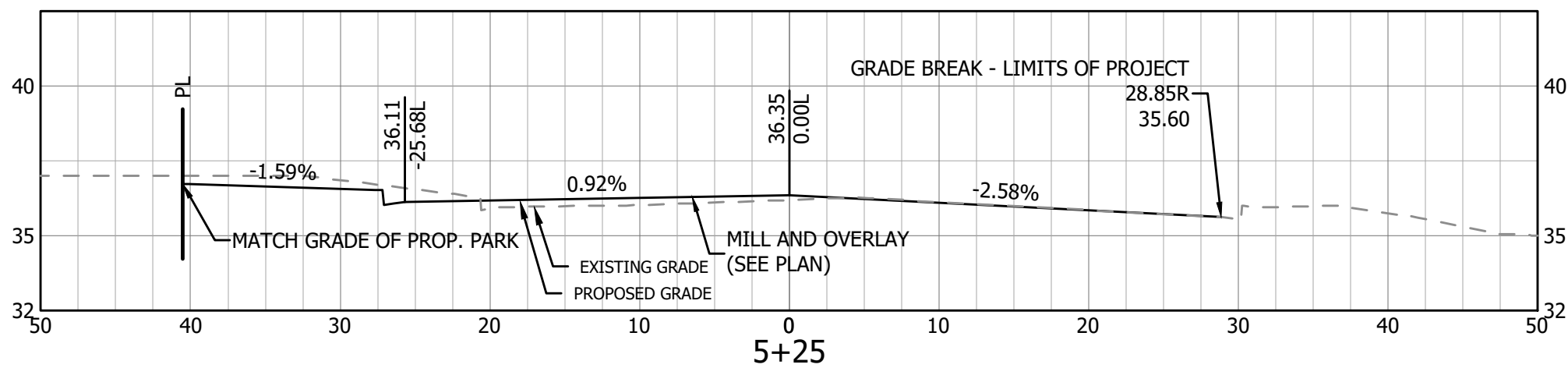
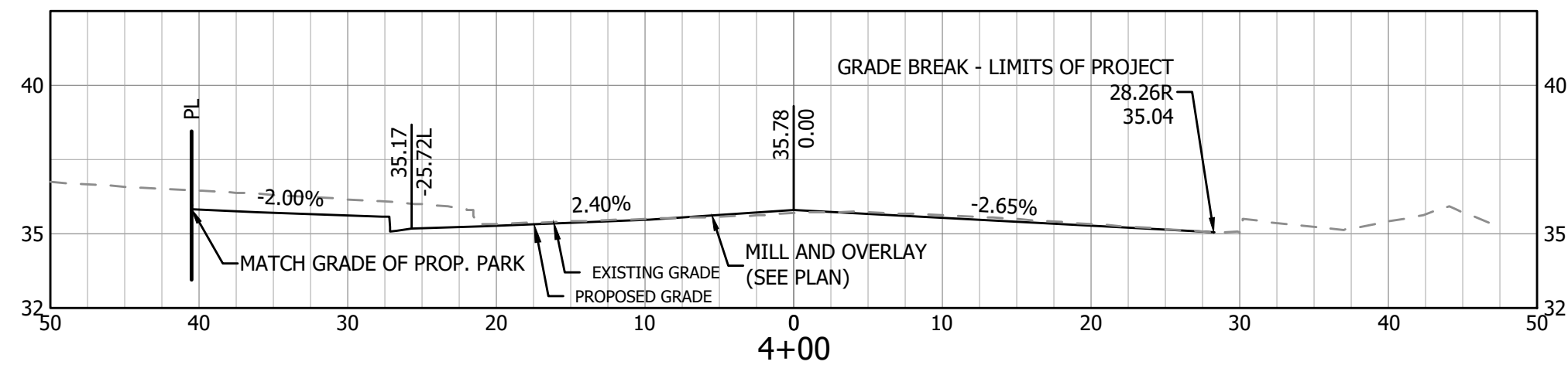
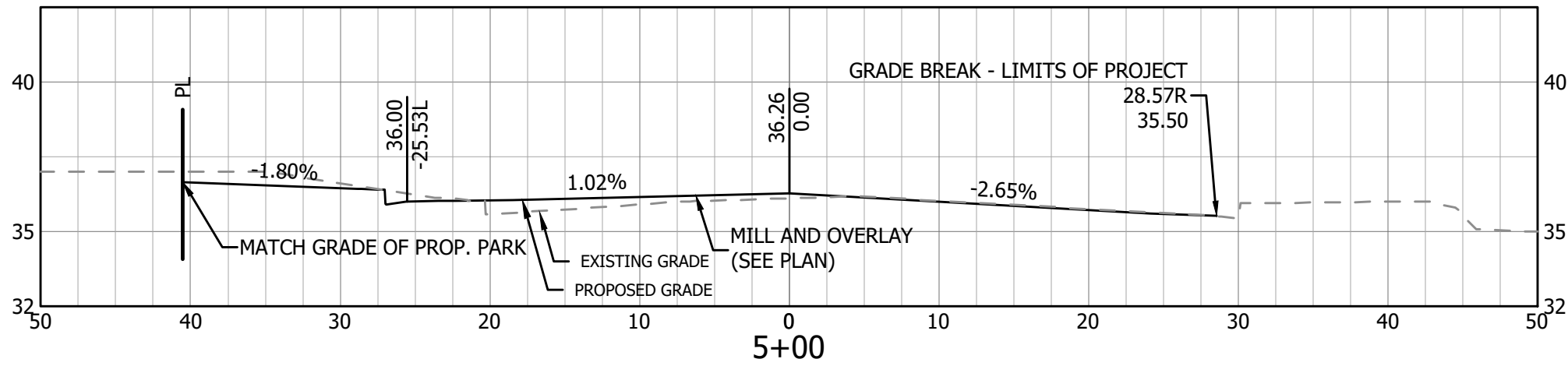
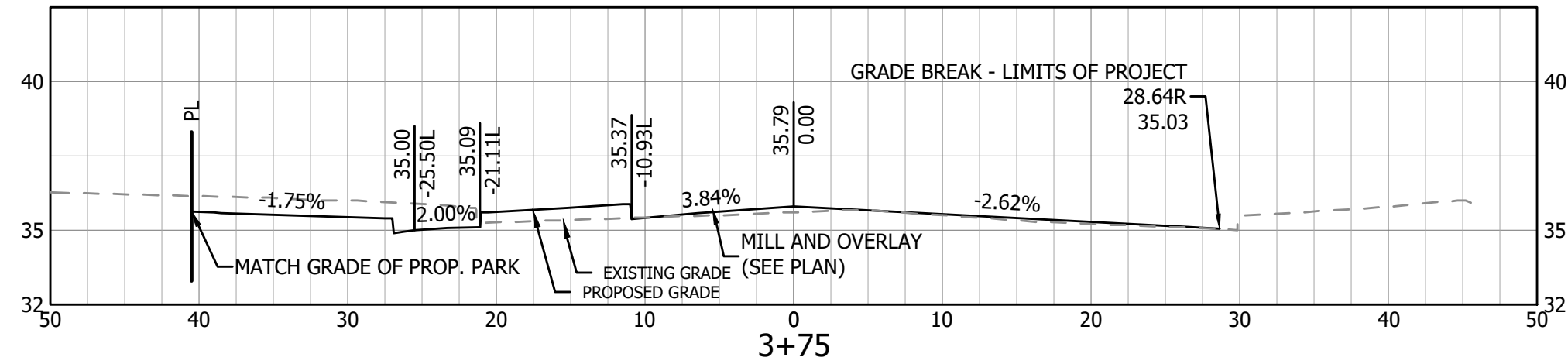
SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.
CROSS SECTIONS

DESIGNED: ME
DRAWN: MS
CHECKED: JA
PLOTTED: JULY 13 2023



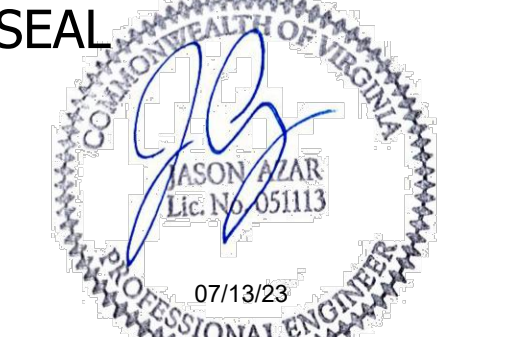
C044.2

SOUTH EADS STREET



DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
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REVISIONS DATE

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LDA#2 SUBMISSION 06/23/2022

100% SUBMISSION 06/21/2022

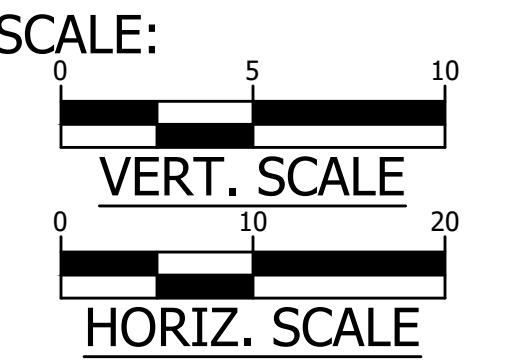
LDA SUBMISSION 04/19/2022

30% SUBMISSION 12/23/2021

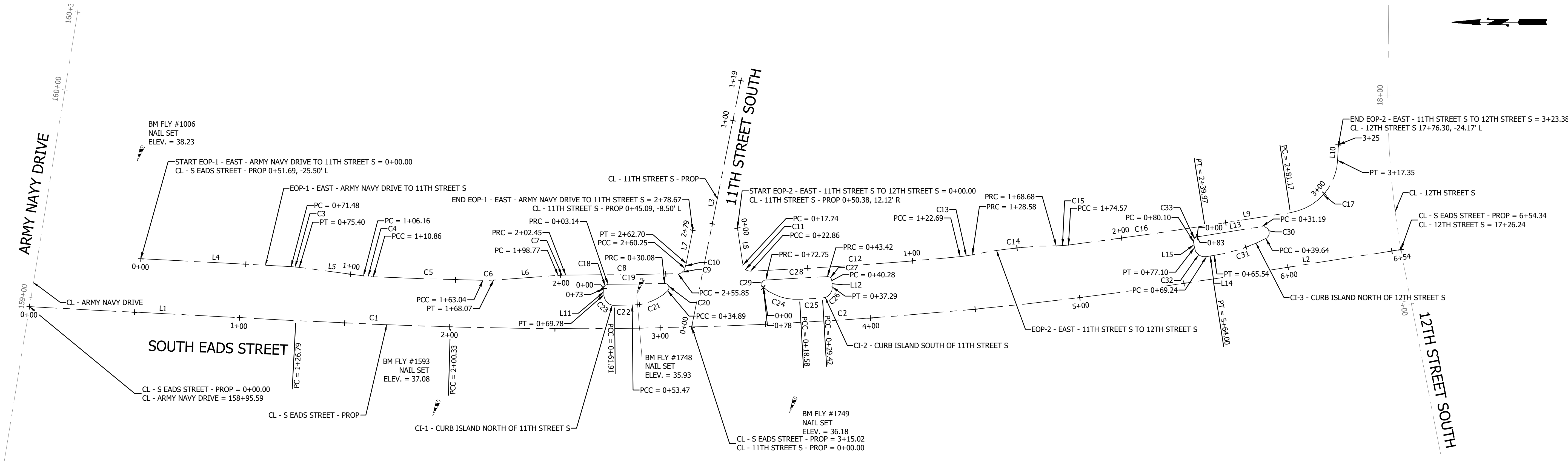
SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.
CROSS SECTIONS

DESIGNED: ME
DRAWN: MS
CHECKED: JA

PLOTTED: JULY 13 2023



C044.3



CL - S EADS STREET - PROP									
LINE OR CURVE #	LINE OR ARC LENGTH (')	RADIUS (')	LINE / CHORD BEARING (°)	CHORD LENGTH (')	DELTA (Δ°)	START STA	END STA	NORTHING, EASTING (START)	NORTHING, EASTING (END)
L1	126.79'		S2° 58' 40.64"W			0+00.00	1+26.79	7001241.49, 11894535.61	7001114.87, 11894529.03
C1	73.55'	3282.00'	S2° 20' 09.59"W	73.54'	1° 17' 02"	1+26.79	2+00.33	7001114.87, 11894529.03	7001041.39, 11894526.03
C2	363.67'	1970.00'	S3° 35' 39.95"E	363.15'	10° 34' 37"	2+00.33	5+64.00	7001041.39, 11894526.03	7000678.95, 11894548.80
L2	90.34'		S8° 52' 58.43"E			5+64.00	6+54.34	7000678.95, 11894548.80	7000589.69, 11894562.75
CL - 11TH STREET S - PROP									
LINE OR CURVE #	LINE OR ARC LENGTH (')	RADIUS (')	LINE / CHORD BEARING (°)	CHORD LENGTH (')	DELTA (Δ°)	START STA	END STA	NORTHING, EASTING (START)	NORTHING, EASTING (END)
L3	119.43'		S78° 43' 20.12"E			0+00.00	1+19.43	7000926.72, 11894525.98	7000903.37, 11894643.09

EOP-1 - EAST - ARMY NAVY DRIVE TO 11TH STREET S									
LINE OR CURVE #	LINE OR ARC LENGTH (')	RADIUS (')	LINE / CHORD BEARING (°)	CHORD LENGTH (')	DELTA (Δ°)	START STA	END STA	NORTHING, EASTING (START)	NORTHING, EASTING (END)
L4	71.48'		S2° 58' 40.64"W			0+00.00	0+71.48	7001188.54, 11894558.39	7001117.16, 11894554.68
C3	3.92'	48.50'	S5° 17' 30.30"W	3.92'	4° 37' 39"	0+71.48	0+75.40	7001117.16, 11894554.68	7001113.26, 11894554.32
L5	30.76'		S7° 36' 19.97"W			0+75.40	1+06.16	7001113.26, 11894554.32	7001082.77, 11894550.25
C4	4.70'	51.50'	S4° 59' 28.21"W	4.70'	5° 13' 44"	1+06.16	1+10.86	7001082.77, 11894550.25	7001078.09, 11894549.84
C5	52.18'	2934.67'	S1° 52' 02.83"W	52.18'	1° 01' 07"	1+10.86	1+63.04	7001078.09, 11894549.84	7001025.94, 11894548.14
C6	5.04'	51.50'	S1° 26' 37.76"E	5.04'	5° 36' 14"	1+63.04	1+68.07	7001025.94, 11894548.14	7001020.90, 11894548.26
L6	30.70'		S4° 14' 44.73"E			1+68.07	1+98.77	7001020.90, 11894548.26	7000990.29, 11894550.54
C7	3.68'	48.50'	S2° 04' 18.71"E	3.68'	4° 20' 52"	1+98.77	2+02.45	7000990.29, 11894550.54	7000986.61, 11894550.67
C8	53.40'	1944.50'	S0° 41' 04.87"E	53.40'	1° 34' 24"	2+02.45	2+55.85	7000986.61, 11894550.67	7000933.22, 11894551.31
C9	4.40'	3.50'	S37° 27' 00.40"E	4.11'	71° 57' 27"	2+55.85	2+60.25	7000933.22, 11894551.31	7000929.95, 11894553.81
C10	2.45'	26.50'	S76° 04' 31.93"E	2.45'	5° 17' 36"	2+60.25	2+62.70	7000929.95, 11894553.81	7000929.37, 11894556.18
L7	16.03'		S78° 43' 20.12"E			2+62.70	2+78.73	7000929.37, 11894556.18	7000926.23, 11894571.91
EOP-2 - EAST - 11TH STREET S TO 12TH STREET S									
LINE OR CURVE #	LINE OR ARC LENGTH (')	RADIUS (')	LINE / CHORD BEARING (°)	CHORD LENGTH (')	DELTA (Δ°)	START STA	END STA	NORTHING, EASTING (START)	NORTHING, EASTING (END)
L8	17.74'		S81° 25' 09.66"W			0+00.00	0+17.74	7000904.99, 11894573.01	7000902.34, 11894555.48
C11	5.13'	3.50'	S39° 27' 55.84"W	4.68'	83° 54' 28"	0+17.74	0+22.86	7000902.34, 11894555.48	7000898.73, 11894552.50
C12	99.83'	1944.50'	S3° 57' 32.73"E	99.82'	2° 56' 29"	0+22.86	1+22.69	7000898.73, 11894552.50	7000799.15, 11894559.39
C13	5.89'	51.50'	S8° 42' 17.77"E	5.88'	6° 33' 01"	1+22.69	1+28.58	7000799.15, 11894559.39	7000793.33, 11894560.28
C14	40.10'	198.50'	S6° 11' 34.29"E	40.03'	11° 34' 28"	1+28.58	1+68.68	7000793.33, 11894560.28	7000753.53, 11894564.60
C15	5.89'	51.50'	S3° 40' 50.82"E	5.88'	6° 33' 01"	1+68.68	1+74.57	7000753.53, 11894564.60	7000747.66, 11894564.98
C16	65.40'	1944.50'	S7° 55' 09.78"E	65.40'	1° 55' 37"	1+74.57	2+39.97	7000747.66, 11894564.98	7000682.89, 11894573.99
L9	41.20'		S8° 52' 58.43"E			2+39.97	2+81.17	7000682.89, 11894573.99	7000642.18, 11894580.35
C17	36.18'	26.50'	S47° 59' 48.53"E	33.44'	78° 13' 40"	2+81.17	3+17.35	7000642.18, 11894580.35	7000619.81, 11894605.20
L10	7.34'		S87° 06' 38.63"E			3+17.35	3+24.69	7000619.81, 11894605.20	7000619.44, 11894612.53

CI-1 - CURB ISLAND NORTH OF 11TH STREET S									
LINE OR CURVE #	LINE OR ARC LENGTH (')	RADIUS (')	LINE / CHORD BEARING (°)	CHORD LENGTH (')	DELTA (Δ°)	START STA	END STA	NORTHING, EASTING (START)	NORTHING, EASTING (END)
C18	3.14'	2.00'	S45° 27' 33.13"E	2.83'	89° 56' 29"	0+00.00	0+03.14	7000968.51, 11894544.22	7000966.53, 11894546.24
C19	26.94'	1949.00'	S0° 53' 04.22"E	26.94'	0° 47' 31"	0+03.14	0+30.08	7000966.53, 11894546.24	7000939.60, 11894546.65
C20	4.81'	2.00'	S67° 39' 44.00"W	3.73'	137° 53' 07"	0+30.08	0+34.89	7000939.60, 11894546.65	7000938.18, 11894543.20
C21	18.58'	25.00'	N22° 06' 33.48"W	18.15'	42° 34' 18"	0+34.89	0+53.47	7000938.18, 11894543.20	7000954.99, 11894536.37
C22	8.45'	1959.00'	N0° 41' 59.88"W	8.45'	0° 14' 49"	0+53.47	0+61.91	7000954.99, 11894536.37	7000963.44, 11894536.27
C23	7.87'	5.00'	N44° 29' 48.76"E	7.08'	90° 08' 48"	0+61.91	0+69.78	7000963.44, 11894536.27	7000968.49, 11894541.23
L11	2.99'		N89° 34' 12.66"E			0+69.78	0+72.78	7000968.49, 11894541.23	7000968.51, 11894544.22

CI-2 - CURB ISLAND SOUTH OF 11TH STREET S									
LINE OR CURVE #	LINE OR ARC LENGTH (')	RADIUS (')	LINE / CHORD BEARING (°)	CHORD LENGTH (')	DELTA (Δ°)	START STA	END STA	NORTHING, EASTING (START)	NORTHING, EASTING (END)
C24	18.58'	25.00'	S18° 08' 05.04"W	18.15'	42° 34' 18"	0+00.00	0+18.58	7000892.72, 11894544.78	7000875.47, 11894539.13
C25	10.85'	1959.00'	S3° 18' 34.80"E	10.85'	0° 19' 02"	0+18.58	0+29.42	7000875.47, 11894539.13	7000864.64, 11894539.76
C26	7.87'	5.00'	S48° 32' 29.68"E	7.08'	90° 08' 48"	0+29.42	0+37.29	7000864.64, 11894539.76	7000859.95, 11894545.06
L12	2.99'		N86° 23' 06.41"E			0+37.29	0+40.28	7000859.95, 11894545.06	7000860.14, 11894548.05
C27	3.14'	2.00'	N41° 24' 52.14"E	2.83'	89° 56' 29"	0+40.28	0+43.42	7000860.14, 11894548.05	7000862.26, 11894549.92
C28	29.32'	1949.00'	N3° 07' 30.47"W	29.32'	0° 51' 43"	0+43.42	0+72.75	7000862.26, 11894549.92	7000891.54, 11894548.32
C29	4.81'	2.00'	N71° 38' 12.45"W	3.73'	137° 53' 07"	0+72.75	0+77.56	7000891.54, 11894548.32	7000892.72, 11894544.78

CI-3 - CURB ISLAND NORTH OF 12TH STREET S									
LINE OR CURVE #	LINE OR ARC LENGTH (')	RADIUS (')	LINE / CHORD BEARING (°)	CHORD LENGTH (')	DELTA (Δ°)	START STA	END STA	NORTHING, EASTING (START)	NORTHING, EASTING (END)
L13	31.19'		S8° 52' 58.43"E			0+00.00	0+31.19	7000686.58, 11894568.86	7000655.77, 11894573.67
C30	8.45'	3.00'	S71° 50' 33.37"W	5.92'	161° 27' 04"	0+31.19	0+39.64	7000655.77, 11894573.67	7000653.92, 11894568.05
C31	25.90'	80.00'	N18° 09' 26.63"W	25.79'	18° 32' 56"	0+39.64	0+65.54	7000653.92, 11894568.05	7000678.42, 11894560.01
L14	3.70'		N8° 52' 58.43"W			0+65.54	0+69.24	7000678.42, 11894560.01	7000682.08, 11894559.44
C32	7.86'	5.00'	N36° 08' 44.34"E	7.07'	90° 03' 26"	0+69.24	0+77.10	7000682.08, 11894559.44	7000687.79, 11894563.61
L15	3.00'		N81° 10' 27.11"E			0+77.10	0+80.10	7000687.79, 11894563.61	7000688.25, 11894566.57
C33	3.14'	2.00'	S53° 51' 15.66"E	2.83'	89° 56' 34"	0+80.10	0+83.24	7000688.25, 11894566.57	7000686.58, 11894568.86

BENCHMARK TABLE				
BM #	Northing	Easting	Elevation	TYPE
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1593	7001049.8315	11894483.8268	37.08	NAIL SET
1748	7000952.8368	11894541.5597	35.93	NAIL SET
1749	7000880.2594	11894485.3244	36.18	NAIL SET



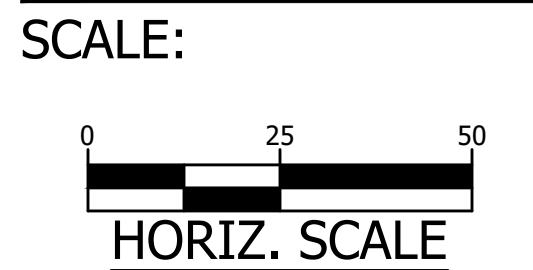
APPROVALS DATE

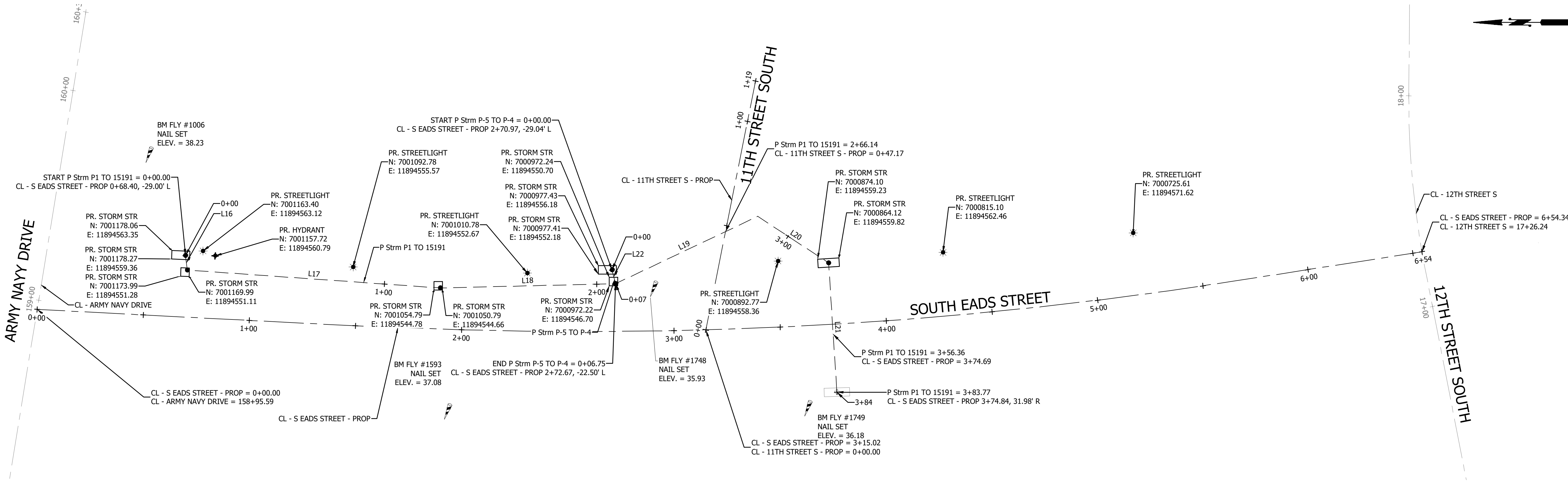
DESIGN TEAM ENGINEER SUPERVISOR	8/29/2023
CONSTRUCTION MANAGEMENT SUPERVISOR	8/29/2023
WATER, SEWER, STREETS BUREAU CHIEF	8/29/2023
TRANSPORTATION DIRECTOR	8/30/2023
PROJECT MANAGER	07/13/2023

REVISIONS	DATE
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SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.
GEOMETRIC CONTROL PLAN

DESIGNED: ME
DRAWN: MS
CHECKED: JA
PLOTTED: JULY 13 2023





P Strm P1 TO 15191									
LINE OR CURVE #	LINE OR ARC LENGTH (')	RADIUS (')	LINE / CHORD BEARING (°)	CHORD LENGTH (')	DELTA (Δ°)	START STA	END STA	NORTHING, EASTING (START)	NORTHING, EASTING (END)
L16	6.93'		S83° 15' 39.59"W			0+00.00	0+06.93	7001171.68, 11894561.02	7001170.87, 11894554.14
L17	119.41'		S4° 03' 23.50"W			0+06.93	1+26.34	7001170.87, 11894554.14	7001051.76, 11894545.69
L18	82.56'		S1° 24' 18.02"E			1+26.34	2+08.90	7001051.76, 11894545.69	7000969.22, 11894547.72
L19	74.00'		S25° 21' 39.91"E			2+08.90	2+82.89	7000969.22, 11894547.72	7000902.36, 11894579.41
L20	39.90'		S33° 15' 45.71"W			2+82.89	3+22.80	7000902.36, 11894579.41	7000868.99, 11894557.53
L21	60.98'		S86° 18' 57.23"W			3+22.80	3+83.77	7000868.99, 11894557.53	7000865.08, 11894496.68
P Strm P-5 TO P-4									
LINE OR CURVE #	LINE OR ARC LENGTH (')	RADIUS (')	LINE / CHORD BEARING (°)	CHORD LENGTH (')	DELTA (Δ°)	START STA	END STA	NORTHING, EASTING (START)	NORTHING, EASTING (END)
L22	6.75'		S75° 17' 11.52"W			0+00.00	0+06.75	7000970.94, 11894554.25	7000969.22, 11894547.72

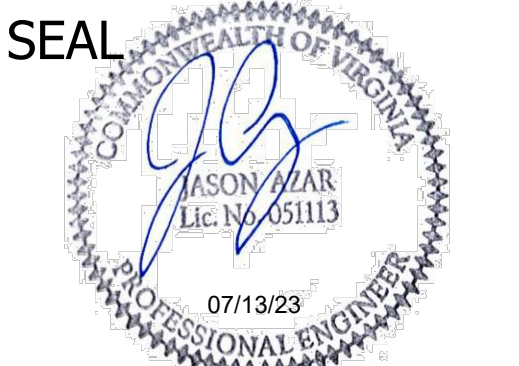
BENCHMARK TABLE				
BM #	Northing	Easting	Elevation	TYPE
1006	7001190.3660	11894604.6587	38.23	NAIL SET
1593	7001049.8315	11894483.8268	37.08	NAIL SET
1748	7000952.8368	11894541.5597	35.93	NAIL SET
1749	7000880.2594	11894485.3244	36.18	NAIL SET

- TREE PRESERVATION AND UTILITY EXCAVATION NOTES:
- CONTRACTOR SHALL USE AIR EXCAVATION FOR DISTURBANCE WITHIN THE CRITICAL ROOT ZONE OF THE COTTONWOOD TREE. A CERTIFIED ARBORIST SHALL PERFORM THIS WORK TO MAKE SURE THE TREE ROOTS ARE PROTECTED AS BEST AS POSSIBLE WHILE CONSTRUCTION COMMENCES. ROOT PRUNING SHALL BE DONE PER ARLINGTON COUNTY DETAIL 311300.5 AND DETAIL SHOWN ON PLANS. PRIOR TO CUTTING ROOTS, CONTACT ARLINGTON COUNTY URBAN FORESTER.
 - ALL CONDUIT SHALL BE DIRECTION BORED WITHIN THE CRITICAL ROOT ZONE OF THE COTTONWOOD TREE. BURROW PITS SHALL BE LOCATED OUTSIDE THE CRITICAL ROOT ZONE.
 - REFER TO TREE PRESERVATION PLANS AND DETAILS FOR ROOT PROTECTION MEASURES AND ROOT BRIDGING DETAILS WITHIN BIKE LANE AND CURB CONSTRUCTION AREA OF THE CRITICAL ROOT ZONE.



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APPROVALS DATE

DESIGN TEAM ENGINEER SUPERVISOR
8/29/2023
CONSTRUCTION MANAGEMENT SUPERVISOR
8/29/2023
WATER, SEWER, STREETS BUREAU CHIEF
8/29/2023
TRANSPORTATION DIRECTOR
8/30/2023
PROJECT MANAGER
8/13/2023

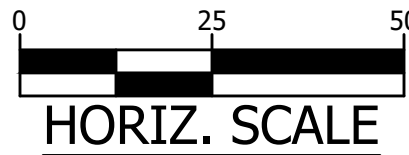
REVISIONS	DATE
LDA #4 SUBMISSION	07/13/2023
100% DESIGN	05/24/2023
LDA#3 SUBMISSION	01/31/2023
LDA#2 SUBMISSION	06/23/2022
100% SUBMISSION	06/21/2022
LDA SUBMISSION	04/19/2022
30% SUBMISSION	12/23/2021

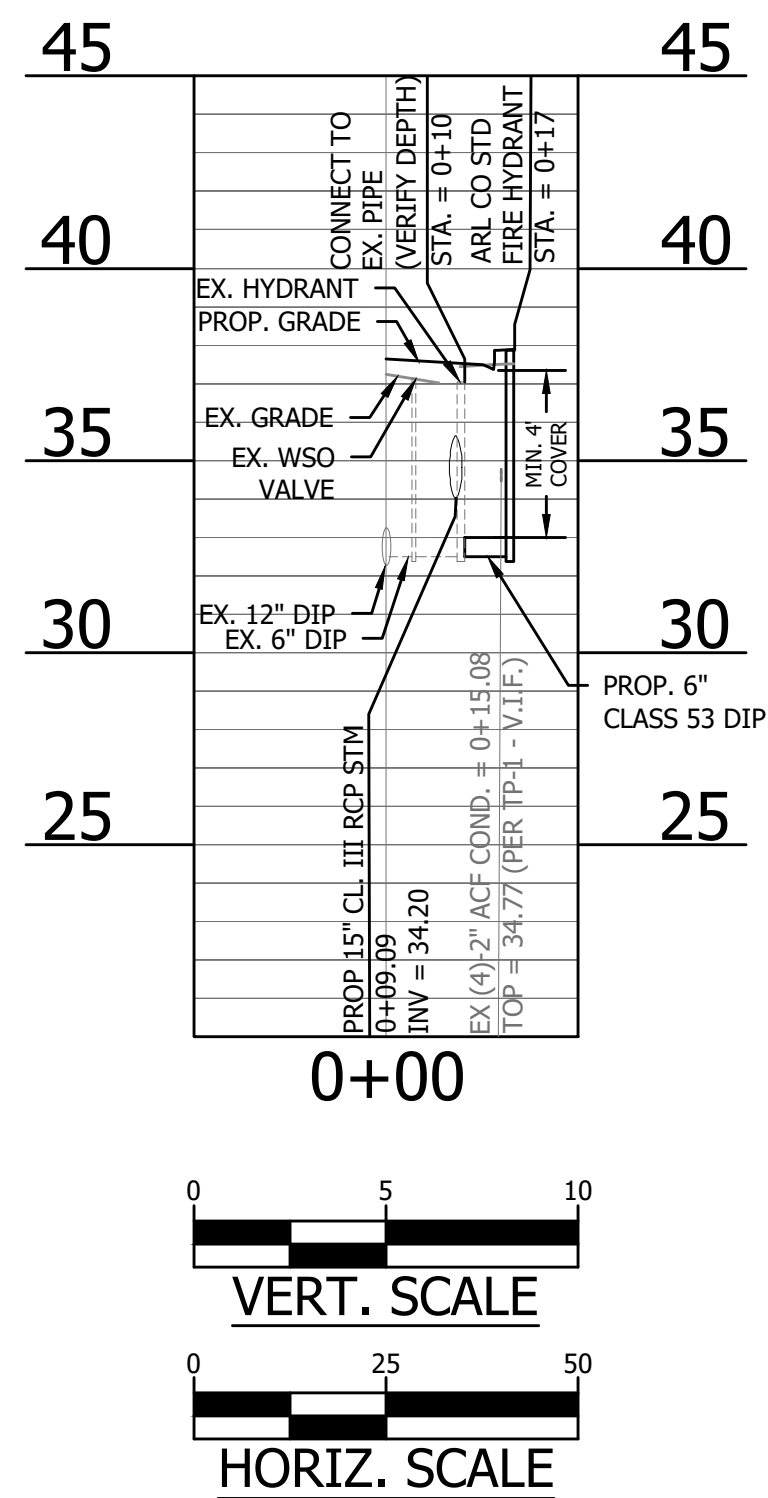
SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.
UTILITY GEOMETRIC CONTROL PLAN

DESIGNED: ME
DRAWN: MS
CHECKED: JA

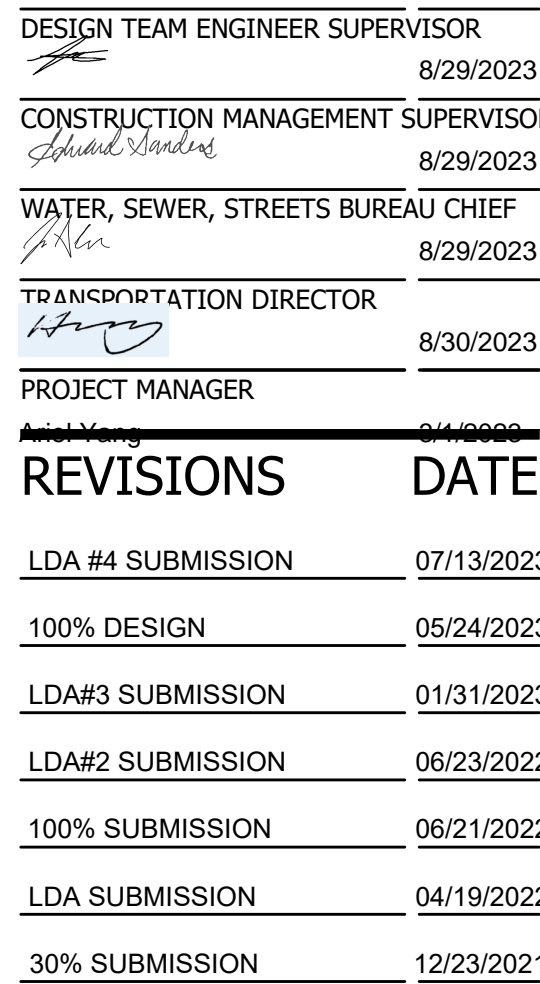
PLOTTED: JULY 13 2023

SCALE:





1. ——— INDICATES EXISTING WATER MAIN TO BE REMOVED FOR THE INSTALLATION OF PROPOSED WATERMAIN, OR ABANDONED IN PLACE FOR PER ARLINGTON COUNTY SPECIFICATIONS AND STANDARDS.
2. SEE ARLINGTON COUNTY DETAIL M-6.0 FOR THE PAVEMENT RESTORATION AFTER COMPLETION OF THE WATERMAIN INSTALLATION AND TESTING.
3. ALL DEMOLISHED CURB AND GUTTER AND SIDEWALK FOR THE INSTALLATION OF PROPOSED WATERMAIN SHALL BE RESTORED AS PER ARLINGTON COUNTY STANDARDS WITHIN THE COUNTY RIGHT OF WAY.
4. DEMOLISHED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED UP TO THE NEAREST JOINT.
5. ALL DISTURBED GRADED LAND AREA SHALL BE RESTORED WITH TOP SOIL AND SOD.
6. TH 4 IN PLAN VIEW DENOTES TEST HOLE CONDUCTED AT EXISTING UTILITY AND PROPOSED WATER MAIN CROSSINGS.
7. REFER PROFILE VIEW FOR ELEVATION INFORMATION.
8. TEST PITS SHALL BE MADE TO VERIFY EXACT LOCATION AND DEPTHS OF EXISTING UTILITIES TO ALLOW FOR POSSIBLE CHANGES IN THE LINE AND GRADE. THESE TEST PITS SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE COUNTY AND ARE INCIDENTAL TO THE WATER MAIN WORK.
9. ALL WATER MAIN JOINTS INCLUDING ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. SHALL BE RESTRAINED USING "RECALL-ON-FR-FR-FR" APPROVED EQUAL OR BETTER CONTRACTOR SHALL SUBMIT JOINT RESTRAINT DETAILS DESIGNED FOR PRESSURE OF 250 PSI NOT TO INSTALLATION OF PIPE. ALL TEES, BENDS, PLUGS, VALVES, FIRE HYDRANTS ETC. IN CONJUNCTION WITH JOINT RESTRAINT SHALL ALSO BE RESTRAINED WITH CONCRETE THRUST BLOCKS AS SHOWN ON THE PLANS.
10. CONTRACTOR SHALL ADJUST EXISTING WATER VALVES TO PROPOSED SURFACE ELEVATION. THIS WORK SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE COUNTY AND IS INCIDENTAL TO THE PAVING AND WATER MAIN WORK.
11. CONTRACTOR WILL PERFORM TEST PITS AT THE EXISTING WATERLINE. IF THE MATERIAL IS NOT 6" DIP, THEN IT SHALL BE REPLACED FROM THE PROPOSED HYDRANT TO THE MAIN.

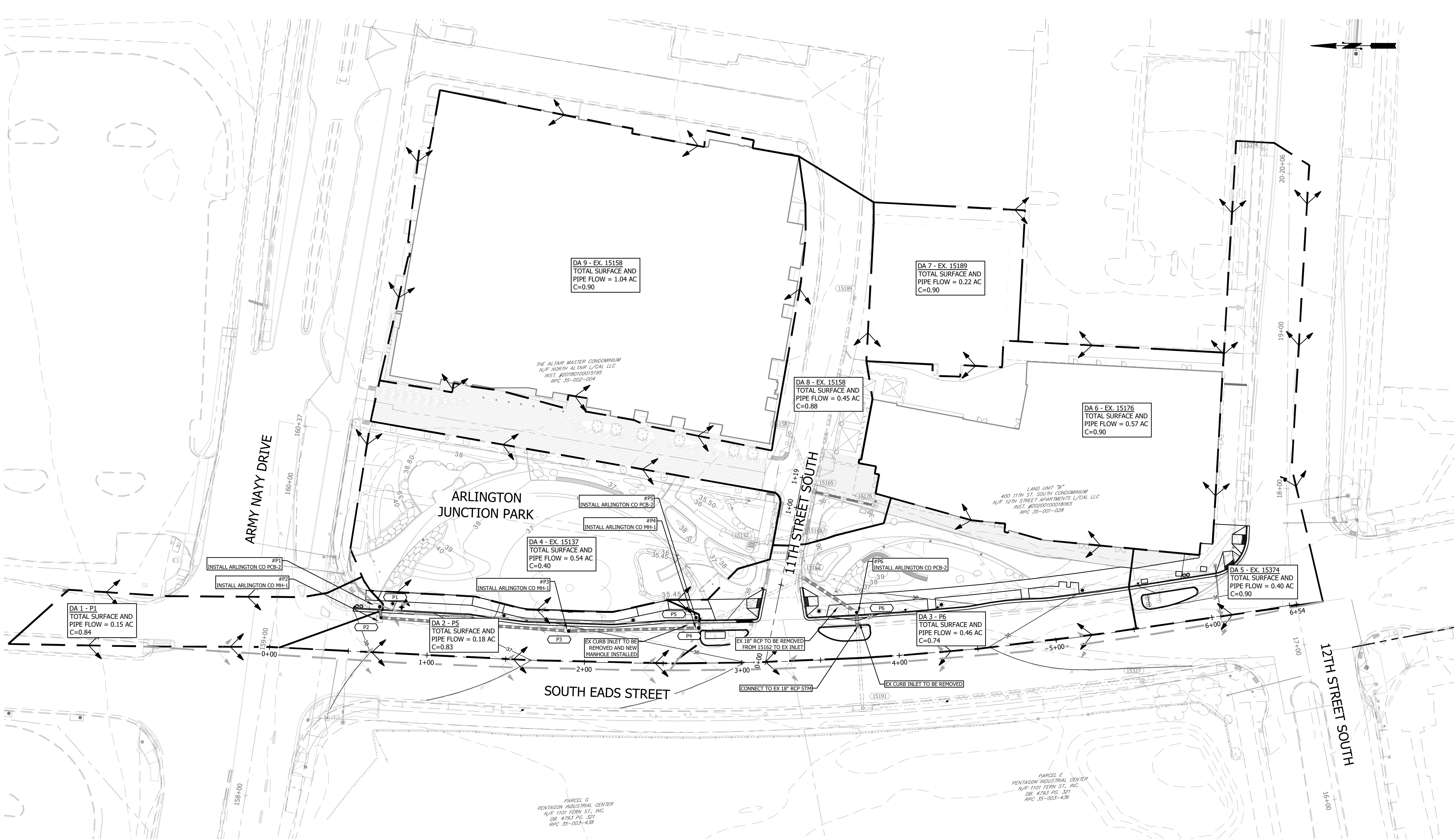


DESIGNED: ME
DRAWN: MS
CHECKED: JA

PLOTTED: JULY 13 2023

SCALE:

AS SHOWN



DRAINAGE AREA	AREA (SF)	AREA (AC)	C VALUE	TO INLET
1	6,591	0.15	0.84	P1
2	7,941	0.18	0.83	P5
3	19,944	0.46	0.74	P6
4	23,595	0.54	0.40	15137
5	17,394	0.40	0.90	15374
6	24,917	0.57	0.90	15176
7	9,581	0.22	0.90	15189
8	19,524	0.45	0.88	15158
9	45,497	1.04	0.90	15158

NOTE: ALL UPSTREAM OFFSITE CONTRIBUTING DRAINAGE AREAS (DA #4, #6 THRU #9) HAVE BEEN COMPUTED TO STRUCTURE 15162 FOR MODELING OF ULTIMATE OUTFALL CONDITIONS AND ADEQUATE CONVEYANCE.

NOTE: ARLINGTON JUNCTION PARK ALONG WITH 12TH ST CC16 AND ARMY NAVY DRIVE STRIPING AND IMPROVEMENTS ARE INCLUDED FOR REFERENCE ONLY.

NOT FOR CONSTRUCTION
THIS SHEET FOR CALCULATION PURPOSES ONLY



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SEAL



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8/29/2023

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8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF

8/29/2023

TRANSPORTATION DIRECTOR

8/30/2023

PROJECT MANAGER

8/1/2023

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100% DESIGN 05/24/2023

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100% SUBMISSION 06/21/2022

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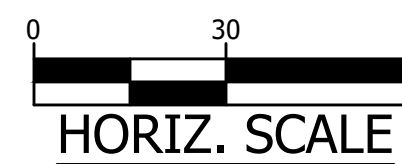
30% SUBMISSION 12/23/2021

SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.
STORM SEWER DRAINAGE DIVIDES

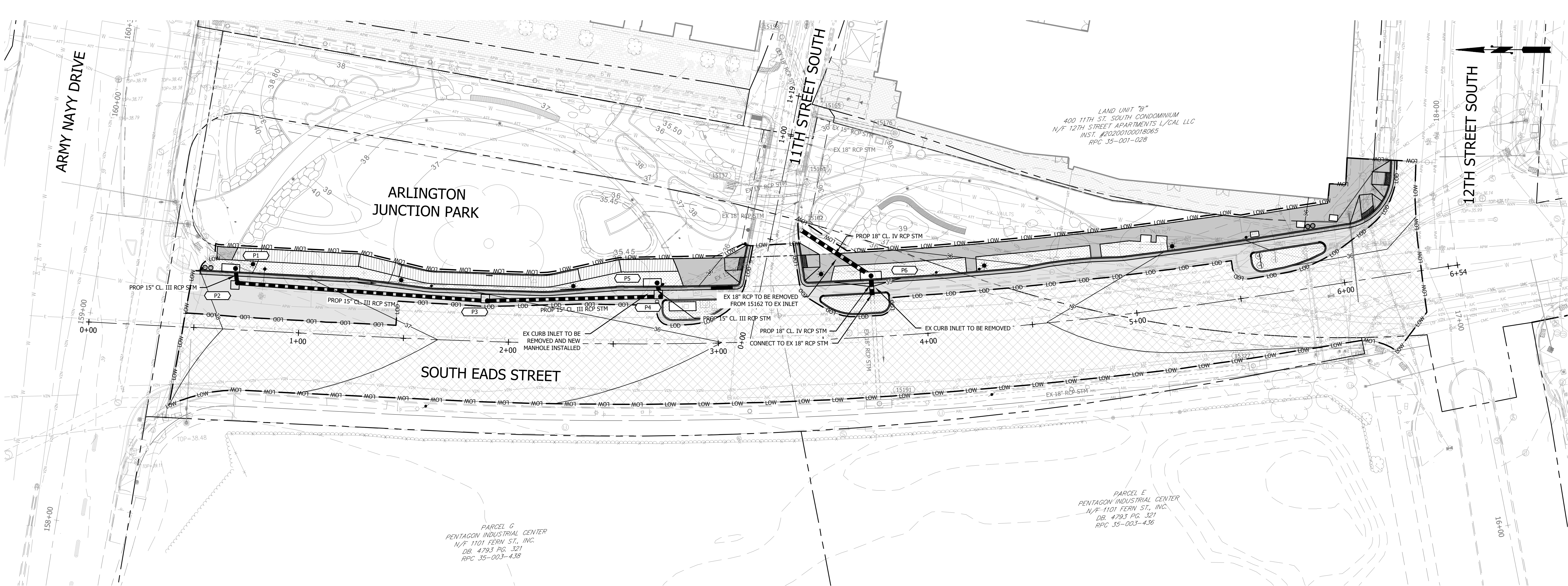
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PLOTTED: JULY 13 2023

SCALE:



C071.1



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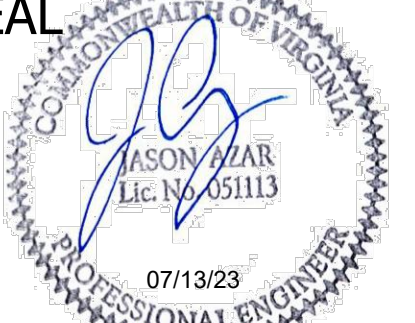
Storm Tabulation		Storm Tabulation		Storm Tabulation	
Structure #	Data	Structure #	Data	Structure #	Data
15137	VDOT DI-2A TOP = 34.46 INV. OUT = 31.56 (15" RCP) TO 15161	15189	EX MH TOP = 36.12 INV. OUT = 32.04 (8" PVC) TO 15165	P3	STD ARL MH-1 TOP = 36.17 INV. IN = 33.13 (15" CL. III RCP) FROM P2 INV. OUT = 33.03 (15" CL. III RCP) TO P4
15158	CB-2 TOP = 34.99 INV. OUT = 31.05 (18" RCP) TO 15165	15191	VDOT DI-2 L-12' TOP = 35.59 INV. IN = 21.93 (18" RCP) FROM 15 INV. OUT = 21.77 (18" RCP) TO 15327	P4	STD ARL MH-1 TOP = 35.74 INV. IN = 32.21 (15" CL. III RCP) FROM P3 INV. IN = 32.21 (15" CL. III RCP) FROM P5 INV. OUT = 32.11 (15" RCP) TO 15162
15161	EX MH TOP = 35.34 INV. IN = 29.82 (15" RCP) FROM 15137 INV. IN = 29.94 (18" RCP) FROM 15165 INV. OUT = 22.45 (18" RCP) TO 15162	15327	VDOT DI-2 L-15' TOP = 36.22 INV. IN = 20.72 (18" RCP) FROM 15191	P5	STD ARL PCB-2 L-8' TOP = 36.09 INV. OUT = 32.24 (15" CL. III RCP) TO P4
15162	EX MH TOP = 35.87 INV. IN = 30.87 (15" RCP) FROM P4 INV. IN = 22.15 (18" RCP) FROM 15161 INV. OUT = 22.15 (18" CL. IV RCP) TO P6	15374	CB-2 TOP = 32.44	P6	STD ARL PCB-2 L-10' TOP = 35.42 INV. IN = 22.05 (18" CL. IV RCP) FROM 15162 INV. OUT = 22.05 (18" CL. IV RCP) TO 15
15165	EX MH TOP = 35.43 INV. IN = 31.38 (18" RCP) FROM 15158 INV. IN = 31.41 (8" PVC) FROM 15189 INV. IN = 32.59 (15" RCP) FROM 15176 INV. OUT = 31.02 (18" RCP) TO 15161	P1	STD ARL PCB-2 L-8' TOP = 38.11 INV. OUT = 34.49 (15" CL. III RCP) TO P2		
15176	EX MH TOP = 36.90 INV. OUT = 33.18 (15" RCP) TO 15165	P2	STD ARL MH-1 TOP = 37.73 INV. IN = 34.42 (15" CL. III RCP) FROM P1 INV. OUT = 34.32 (15" CL. III RCP) TO P3		



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SEAL



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TRANSPORTATION DIRECTOR	8/30/2023
PROJECT MANAGER	8/13/2023

REVISIONS	DATE
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100% DESIGN	05/24/2023
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LDA#2 SUBMISSION	06/23/2022
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30% SUBMISSION	12/23/2021

SOUTH EADS STREET
CC13


BETWEEN ARMY NAVY DR. AND 12TH ST. S.

STORM SEWER PLAN

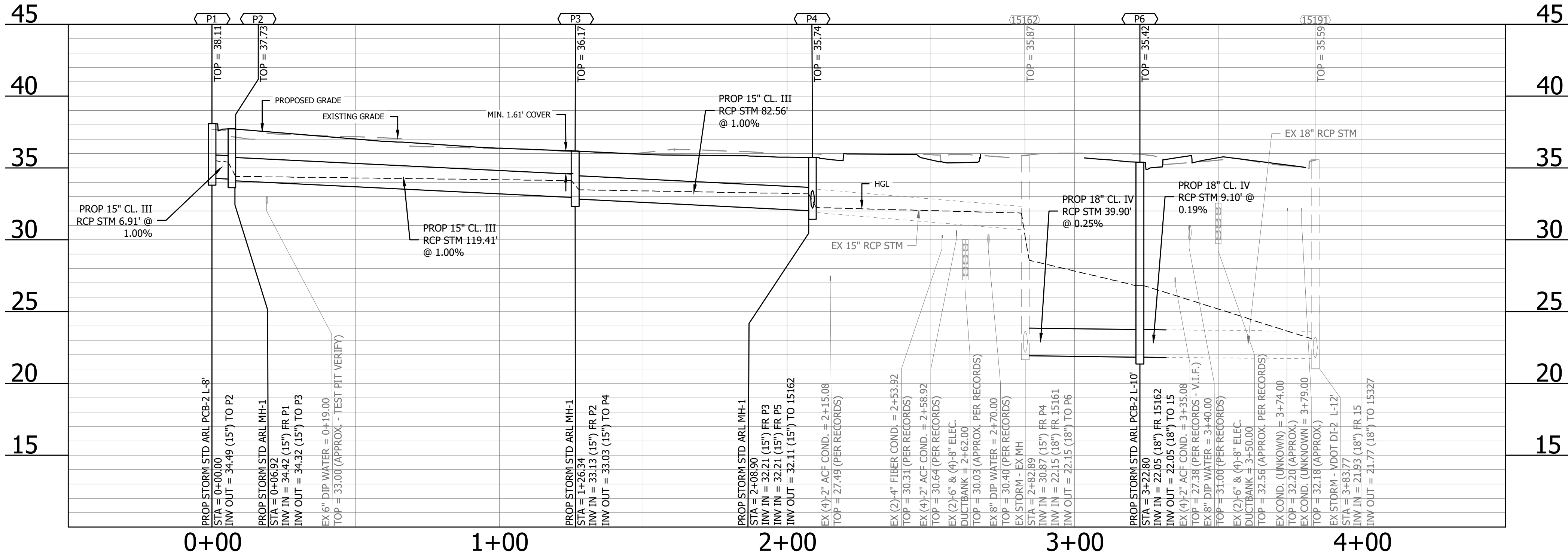
DESIGNED: ME
DRAWN: MS
CHECKED: JA

PLOTTED: JULY 13 2023

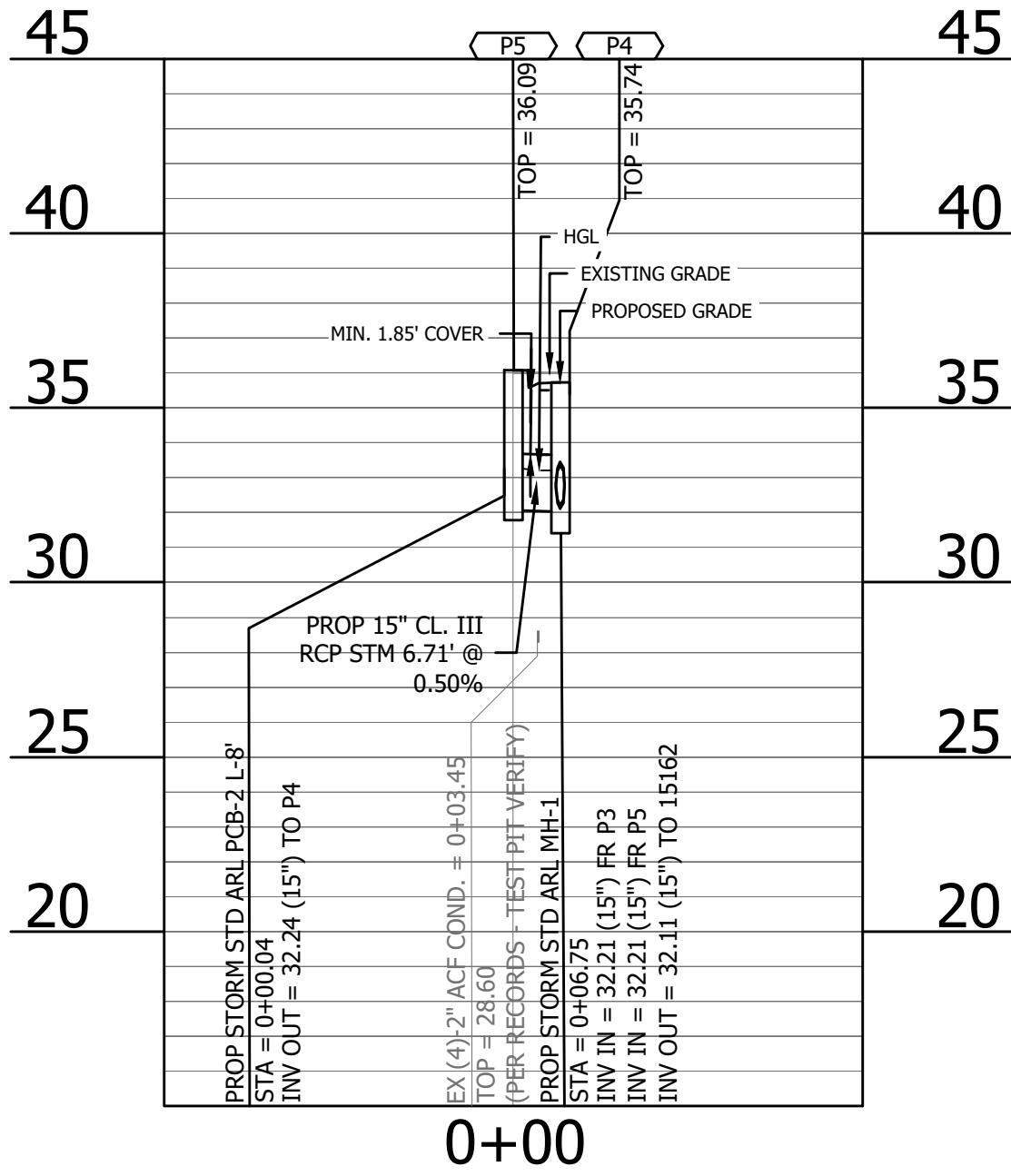
SCALE:



HORIZ. SCALE



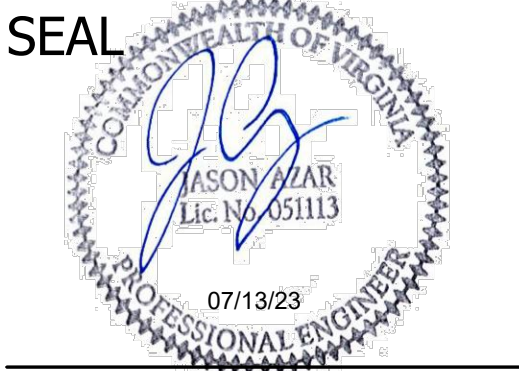
STORM PROFILE 1
PROP STM P1 TO 15191
HOR. SCALE: 1" = 25'
VER. SCALE: 1" = 5'



STORM PROFILE 2
PROP STM P5 TO P4
HOR. SCALE: 1" = 25'
VER. SCALE: 1" = 5'



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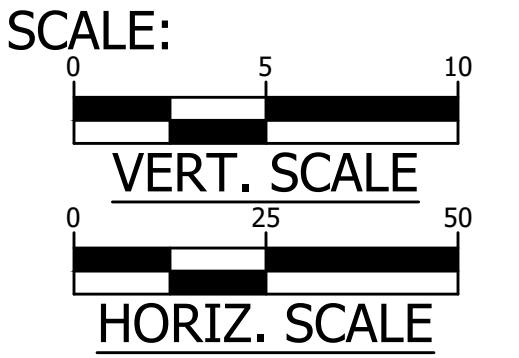
LDA SUBMISSION 04/19/2022

30% SUBMISSION 12/23/2021

SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.
STORM SEWER PROFILES

DESIGNED: ME
DRAWN: MS
CHECKED: JA

PLOTTED: JULY 13 2023



Storm Inlet Computations																															
Inlet				Flow							Curb Inlet													Operation			Sag Inlets Only				
Number	Type	Length (ft)	Station	Drainage Area (acres)	C	CA	i (in/hr)	Q Incr (ft³/s)	Q Carryover (ft³/s)	Q _T (ft³/s)	S Gutter Slope (ft/ft)	S _x Crossslope (ft/ft)	T Spread (ft)	W (ft)	W/T	Sw (ft/ft)	Sw/S _x	E ₀	a (in)	S'w	Se (ft/ft)	L _T Computed Length (ft)	L/L _T	E (%)	Q _i Intercepted (ft³/s)	Q _b Carryover (ft³/s)	d (ft)	h (ft)	d/h	T Spread @ Sag (ft)	
P1	PCB-2	8	0+68.83	0.15	0.84	0.126	4.00	0.50	0.00	0.504	0.01620	0.00790	6.01	1.50	0.25	0.0833	10.55	0.838	4.36	0.24	0.21	4.13	1.94	100%	0.50	0.000					
P5	PCB-2	8	2+71.83	0.18	0.83	0.149	4.00	0.60	0.00	0.598	0.00840	0.02610	4.19	1.50	0.36	0.0833	3.19	0.818	4.03	0.22	0.21	3.66	2.19	100%	0.60	0.000					
P6	PCB-2	10	3+75+75	0.46	0.74	0.340	4.00	1.36	0.00	1.362		0.02000		1.50		0.0833												0.21	0.42	0.00	5.85
15374	CB-2	8	N/A	0.40	0.90	0.360	4.00	1.44	0.00	1.440	0.01240	0.02650	5.85	1.50	0.26	0.0833	3.14	0.660	4.02	0.22	0.17	6.65	1.20	100%	1.44	0.000					

* INLET 15374 IS SHOWN FOR TRACKING OF ADDITIONAL RUNOFF FROM S EADS STREET ROADWAY IMPROVEMENTS PROJECT (CC13) TO OFFSITE CONTRIBUTING DRAINAGE AREA TO ENSURE INLET CAPACITY IS MAINTAINED.

Storm Drain Design Computations																			
From Point	To Point	Drainage Area	Runoff Coefficient	CA			Inlet Time	Time of Conc.	Rainfall	Runoff Q	Invert Elevations		Length	Slope	Diameter	Capacity	Velocity	Flow Time	Remarks
		Acres	C	Incr.	Offsite	Accum.	min	min	in/hr	cfs	Upper End	Lower End	ft	%	in	cfs	fps	min	
P1	P2	0.15	0.84	0.13	0.00	0.13	5.00	5.00	6.79	0.86	34.49	34.42	6.91	1.01%	15	6.50	3.67	0.03	
P2	P3	0.00	0.00	0.00	0.00	0.13	5.00	5.03	6.78	0.85	34.32	33.13	119.41	1.00%	15	6.45	3.65	0.55	
P3	P4	0.00	0.00	0.00	0.00	0.13	5.00	5.58	6.60	0.83	33.03	32.21	82.56	0.99%	15	6.44	3.61	0.38	
P5	P4	0.18	0.83	0.15	0.00	0.15	5.00	5.00	6.79	1.01	32.24	32.21	6.71	0.45%	15	4.32	2.88	0.04	
P4	15162	0.00	0.00	0.00	0.00	0.28	5.00	5.96	6.48	1.78	32.11	30.87	74.00	1.68%	15	8.36	5.42	0.23	Existing Pipe
15162	P6	0.00	0.00	0.00	2.26*	2.54	5.00	6.19	6.41	16.28	22.15	22.05	39.90	0.25%	18	5.26	-	0.00	
P6	15191	0.46	0.74	0.34	0.00	2.88	5.00	6.19	6.41	18.46	22.05	21.93	60.98	0.20%	18	4.66	-	0.00	Existing Pipe (Extended)

* ALL UPSTREAM OFFSITE CONTRIBUTING DRAINAGE AREAS (DA #4, #6 THRU #9 - SEE C071.1 - STORM SEWER DRAINAGE DIVIDES) HAVE BEEN COMPUTED TO STRUCTURE 15162 FOR MODELING OF ULTIMATE OUTFALL CONDITIONS AND ADEQUATE CONVEYANCE.

Hydraulic Grade Line Computations																						
Inlet Structure	Upstream Structure	Outlet Water Surface Elev. (ft)	D ₀ (in)	Q ₀ (cfs)	L ₀ (ft)	S _{f0} (%)	H _f (ft)	Junction Loss										Final H (ft)	Inlet Water Surface Elev. (ft)	Rim Elev. (ft)		
								V ₀ (ft/s)	H ₀ (ft)	Q ₀	V ₁ (ft/s)	Q/V ₁	V ₁ ² /2g (ft)	H ₁ (ft)	Angle (°)	H _s (ft)	H _t (ft)				1.3 H _t (ft)	0.5 H _t (ft)
15191	P6				Outlet Pipe Dia. = 18.00			Outlet Pipe Inv. = 21.93			0.8xDia + Pipe Inv. = 23.13			Outlet WSEL =			Starting WSEL = 23.13					
P6		23.13	18	18.46	60.98	3.0878%	1.88	10.45	0.42					0.46	90	0.92	1.81	0.00	3.69	26.82	35.42	
15162			26.82	18	16.28	39.90	2.4009%	0.96	9.21	0.33	16.28	9.21	149.91	1.32	0.16	90	0.32	0.81	0.00	1.77	28.59	35.87
P4		31.87	15	1.78	74.00	0.0763%	0.06	5.42	0.11	1.78	5.42	9.67	0.46	0.16	90	0.32	0.33	0.00	0.38	32.25	35.74	
	P3									0.83	3.61	3.00	0.20	0.07	90	0.14						
	P5									1.01	2.88	2.92	0.13	0.04	90	0.09						
P3	P2	33.21	15	0.83	82.56	0.0166%	0.01	3.61	0.05	0.85	3.65	3.11	0.21	0.07	90	0.14	0.27	0.00	0.28	33.49	36.17	
P2	P1	34.13	15	0.85	119.41	0.0175%	0.02	3.65	0.05	0.86	3.67	3.11	0.21	0.07	90	0.15	0.27	0.00	0.29	34.42	37.73	
														0.07								
P1		35.42	15	0.86	6.91	0.0175%	0.00	3.67	0.06								0.06	0.08		0.08	35.50	38.11
P5		33.21	15	1.01	6.71	0.0247%	0.00	2.88	0.04								0.04	0.05		0.05	33.26	36.09

STORM DRAIN CALCULATION NOTES:

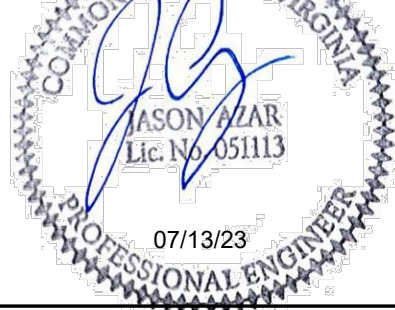
- THIS PROJECT CONSISTS OF THE ROAD IMPROVEMENTS ALONG SOUTH EADS STREET BETWEEN ARMY NAVY DRIVE AND 12TH STREET S. THE PROJECT INCLUDES NEW LANE CONFIGURATION, MILL AND OVERLAY, PAVEMENT REPLACEMENT/WIDENING, PEDESTRIAN IMPROVEMENTS, AND MINOR STORMDRAIN MODIFICATIONS. THE PROJECT IS INCREASING THE IMPERVIOUS AREA WITHIN THE PROJECT AREA BY APPROXIMATELY 0.06 ACRES.
- DUE TO THE MODIFICATIONS TO THE EXISTING ROAD NEW INLETS HAVE BEEN PROPOSED THROUGHOUT THE PROJECT AREA. THE PROPOSED INLETS WILL BE CONNECTED TO THE EXISTING DRAINAGE NETWORK.
- DUE TO THE SCOPE OF THE PROJECT, NO EXISTING PIPES WERE UPSIZED WITH THIS PROJECT. PER COORDINATION WITH THE OFFICE OF SUSTAINABILITY AND ENVIRONMENTAL MANAGEMENT (OSEM), THERE HAVE BEEN NO FLOODING ISSUES REPORTED WITHIN THE PROJECT AREA. THEREFORE, OSEM IS NOT PLANNING TO UPSIZE THE PIPES WITHIN THE PROJECT AREA AT THIS TIME.
- ALTHOUGH THERE IS A NET IMPERVIOUS AREA INCREASE WITH THE PROPOSED IMPROVEMENTS, THE EXISTING STORMDRAIN SYSTEM IMMEDIATELY DOWNSTREAM OF THE CC13 PROJECT HAS BEEN ANALYZED TO THE NEXT DOWNSTREAM STRUCTURE TO ENSURE ADEQUATE CONVEYANCE. THE EXISTING PIPES FROM EXISTING MANHOLE 15162 TO EXISTING INLET 15191 ARE SURCHARGED ABOVE THE CROWN OF THE PIPES IN THE PRE-DEVELOPMENT CONDITION. IN THE POST-DEVELOPMENT CONDITION, THE PIPES REMAIN SURCHARGED, HOWEVER, THE HYDRAULIC GRADIENT REMAINS BELOW THE RIM OF ALL STRUCTURES IN THE NETWORK AND THE PROPOSED ROADWAY IMPROVEMENTS WILL HAVE MINIMAL IMPACT TO THE RUNOFF ENTERING THE SYSTEM.
- ALL PROPOSED PIPES AND INLETS WITHIN THE PROJECT AREA HAVE BEEN DESIGNED IN ORDER TO ADEQUATELY CONVEY THE 10-YEAR STORM EVENT.
- THE MAXIMUM ALLOWABLE SPREAD AND PONDING DEPTH FOR THE TRAVEL LANES IS BASED ON VDM 9.3.1.
- ALL INLETS ADJACENT TO VEHICLE TRAVEL LANES ARE TO BE UNDER 1/2 THE TRAVEL LANE. ALL INLETS ADJACENT TO PARKING FACILITIES ARE TO HAVE THE SPREAD UNDER 1/2 THE TRAVEL LANE. (12' TRAVEL LANES SHALL HAVE <6' OF SPREAD).



DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
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FAX: 703.228.3606

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SEAL



APPROVALS DATE

DESIGN TEAM ENGINEER SUPERVISOR

8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR

8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF

8/29/2023

TRANSPORTATION DIRECTOR

8/30/2023

PROJECT MANAGER

8/14/2023

REVISIONS DATE

LDA #4 SUBMISSION 07/13/2023

100% DESIGN 05/24/2023

LDA#3 SUBMISSION 01/31/2023

LDA#2 SUBMISSION 06/23/2022

100% SUBMISSION 06/21/2022

LDA SUBMISSION 04/19/2022

30% SUBMISSION 12/23/2021

SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.

STORM COMPUTATIONS

DESIGNED: ME
DRAWN: MS
CHECKED: JA

PLOTTED: JULY 13 2023

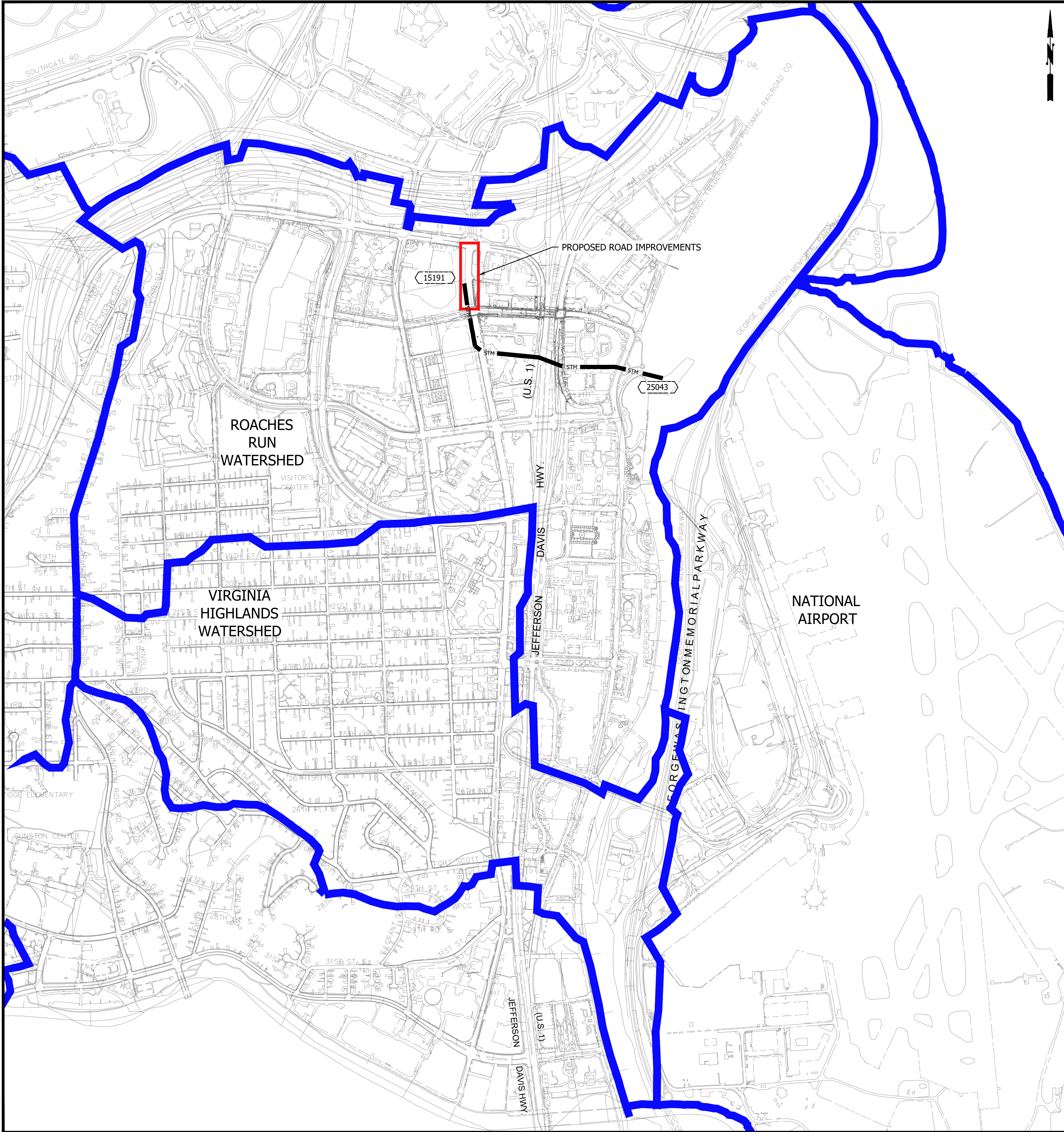
SCALE:

N/A

C075.1

REVISED ON 1/24/2022

FILENAME: C081.1 - SWM DRAINAGE AREA MAP.DWG PATH: 31\45-006 - S. EADS ST DESCENDING PLOTTED BY: HEDELMAN



STORMWATER MANAGEMENT PLAN (CHANNEL AND FLOOD PROTECTION)

OUTFALL #1 (ROACHES RUN WATERSHED)

CHANNEL PROTECTION
THE CHANNEL PROTECTION ANALYSIS FOR THE OUTFALL WAS PERFORMED TO THE 1% BASED ON THE PROPOSED LIMITS OF DISTURBANCE (LOD).

PROPOSED PROJECT LOD (OUTFALL #1) = 0.33 ACRES
TOTAL DRAINAGE AREA TO STR 25043 = 461.00 ACRES

SINCE 0.33 AC / 461.00 AC < 1%, THE ANALYSIS COMPLIES WITH THE 1% RULE.

GIVEN THAT THE 1% POINT IS LOCATED WITHIN A PIPE SYSTEM, NO EROSION WILL OCCUR AT THIS POINT. THEREFORE, THE CHANNEL PROTECTION REQUIREMENT HAS BEEN SATISFIED.

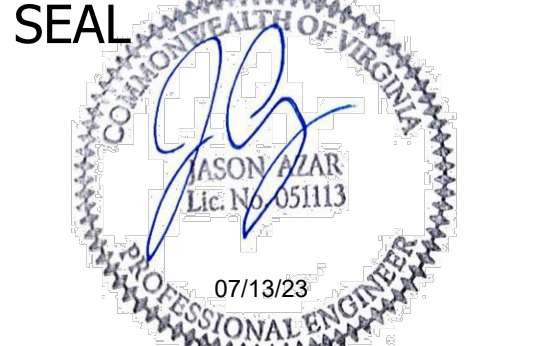
FLOOD PROTECTION
THERE IS CURRENTLY NO DATA TO DETERMINE IF THIS AREA CONTAINS LOCALIZED FLOODING. THEREFORE, LOCALIZED FLOODING IN THIS AREA IS UNKNOWN. BASED ON THIS INFORMATION, THE FLOOD PROTECTION CRITERIA HAS BEEN SATISFIED.

NOT FOR CONSTRUCTION
THIS SHEET FOR CALCULATION PURPOSES ONLY



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APPROVALS DATE

DESIGN TEAM ENGINEER SUPERVISOR

8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR

8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF

8/29/2023

TRANSPORTATION DIRECTOR

8/30/2023

PROJECT MANAGER

8/1/2023

REVISIONS DATE

LDA #4 SUBMISSION 07/13/2023

100% DESIGN 05/24/2023

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100% SUBMISSION 06/21/2022

LDA SUBMISSION 04/19/2022

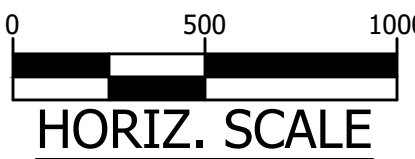
30% SUBMISSION 12/23/2021

SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.
STORMWATER MANAGEMENT
DRAINAGE AREA MAP

DESIGNED: ME
DRAWN: MS
CHECKED: JA

PLOTTED: JULY 13 2023

SCALE:



C081.1

RUNOFF REDUCTION NOTES:

1. THE RUNOFF REDUCTION SPREADSHEET ON THIS PLAN IS FOR DATA TRACKING PURPOSES TO DOCUMENT THE AREA OF LAND DISTURBANCE AND TO CHARACTERIZE PRE- AND POST- DEVELOPMENT LAND USE CONDITIONS.
2. IN ACCORDANCE WITH ARLINGTON COUNTY'S CHESAPEAKE BAY TOTAL MAXIMUM DAILY LOAD (TMDL) ACTION PLAN, APPROVED BY THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) ON SEPTEMBER 1, 2015, LINEAR DEVELOPMENT PROJECTS CONDUCTED BY THE COUNTY ARE ADMINISTERED AND TRACKS AS FOLLOWS CONSISTENT WITH 9VAC25-870-69 A.4, 9VAC25-870-76, AND 9VAC25-870-92:
3. POLLUTANT LOAD CHANGES WILL BE COMPUTED AS DESCRIBED IN SECTION 3.A OF THE ACTION PLAN.
4. RETROFIT OPPORTUNITIES WILL BE EVALUATED FOR EACH PROJECT, USING THE SCREENING AND SELECTION CRITERIA APPLIED AND DESCRIBED IN THE ADOPTED STORMWATER MASTER PLAN.
5. RETROFIT PROJECTS THAT MEET THE SCREENING CRITERIA AND ARE DETERMINED BY ARLINGTON TO BE FEASIBLE AND COST-EFFECTIVE WILL BE IMPLEMENTED WITH SPECIFIED LINEAR DEVELOPMENT PROJECTS. POLLUTANT LOAD REDUCTIONS FROM RETROFIT PROJECTS WILL BE COMPUTED AS DESCRIBED IN SECTION 5 OF THE ACTION PLAN.
6. IN CASES WHERE RETROFIT PROJECTS ARE NOT FEASIBLE AND COST-EFFECTIVE FOR A PARTICULAR LINEAR PROJECT, ANY POC LOAD INCREASES THAT MIGHT OCCUR FOR THAT PROJECT WILL BE ADDRESSED BY LARGER OVERALL POC LOAD REDUCTIONS IN PLACE OR ADDED THROUGH TMDL ACTION PLAN IMPLEMENTATION.
7. IN THE ABOVE MANNER ARLINGTON, AS THE MSA OPERATOR AND THE CONSTRUCTION SITE OPERATOR FOR ITS LINEAR DEVELOPMENT PROJECTS, IMPLEMENTS LINEAR PROJECTS AND RETROFIT PROJECTS IN A MANNER THAT ACHIEVED THE MOST TMDL POC REDUCTION FOR THE LEAST COST, WHILE FULLY ACCOUNTING FOR LOAD CHANGES THAT OCCUR WITH LINEAR DEVELOPMENT PROJECT ACTIVITY CONSISTENT WITH THE DEQ CHESAPEAKE BAY TMDL SPECIAL CONDITION GUIDANCE.

Site Information - Revised 9/19/2017																											
Project SWM #	LDA Permit #	Disturbed Area (acres)	% Pre-Impervious	% Post-Impervious	Pre-Development TP load (lb/yr)	Post-Development TP load (lb/yr)	TP load reduction achieved (lb/yr)	Pre-Development TN load (lb/yr)	Post-Development TN load (lb/yr)	TN load reduction achieved (lb/yr)	Total Site Area (acres)	Pre-Forest Area (acres)	Pre-Turf Area (acres)	Pre-Impervious Area (acres)	Post-Forest Area (acres)	Post-Turf Area (acres)	Post-Impervious Area (acres)	Pre-Runoff Volume	Post-Runoff Volume	Runoff Volume Reduction Achieved	Site Latitude (Decimal Degrees)	Site Longitude (Decimal Degrees)	Anticipated Start Date	Chesapeake Bay Segment	Watershed	HUC6	Soils
22-0127	LDA50721	0.3290	48.6	75.4	0.44	0.58	--	3.17	4.17	0.00	0.3290	0.0000	0.1690	0.1600	0.0000	0.0810	0.2480	705.1275	928.7355	0.0000	38.864415	-77.054166	Fall 2023	POTTF_VA	Roaches Run	PL24	C/D

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

2011 BMP Standards and Specifications

2013 Draft BMP Standards and Specifications

Project Name: CC13 South Eads Street Road Improvements

Date: 5/24/2023

Linear Development Project? Yes

CLEAR ALL (Ctrl+Shift+R)

data input cells

constant values

calculation cells

final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area (acres) → 0.3290

Maximum reduction required: 20%

The site's net increase in impervious cover (acres) is: 0.0880

Post-Development TP Load Reduction for Site (lb/yr): 0.2291

Check: BMP Design Specifications List: 2013 Draft Stds & Specs
Linear project? Yes
Land cover areas entered correctly? ✓
Total disturbed area entered? ✓

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) – undisturbed, forest/open space	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres) – disturbed, graded for yards or other turf to be	0.0000	0.0000	0.0000	0.1690	0.1690
Impervious Cover (acres)	0.0000	0.0000	0.0000	0.1600	0.1600
					0.3290

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) – undisturbed, forest/open space	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres) – disturbed, graded for yards or other turf to be	0.0000	0.0000	0.0000	0.0810	0.0810
Impervious Cover (acres)	0.0000	0.0000	0.0000	0.2480	0.2480
Area Check	OK	OK	OK	OK	0.3290

Constants

Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Total Phosphorus (TP) EMC (mg/L)	0.26
Total Nitrogen (TN) EMC (mg/L)	1.86
Target TP Load (lb/acre/yr)	0.41
TP Loadless correction factor ¹	0.95

Runoff Coefficients (Rv)

	A Soils	B Soils	C Soils	D Soils
Forest/Open Space	0.02	0.03	0.04	0.05
Managed Turf	0.15	0.20	0.22	0.25
Impervious Cover	0.95	0.95	0.95	0.95

LAND COVER SUMMARY -- PRE-REDEVELOPMENT

Land Cover Summary-Pre		
Pre-ReDevelopment	Used	Adjusted ²
Forest/Open Space Cover (acres)	0.0000	0.0000
Weighted Rv(forest)	0.0000	0.0000
% Forest	0%	0%
Managed Turf Cover (acres)	0.1690	0.0810
Weighted Rv(turf)	0.2500	0.2500
% Managed Turf	51%	34%
Impervious Cover (acres)	0.1600	0.1600
Rv(impervious)	0.9500	0.9500
% Impervious	49%	66%
Total Site Area (acres)	0.3290	0.2410
Site Rv	0.5904	0.7147

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.0162	0.0144
Pre-ReDevelopment Treatment Volume (cubic feet)	705.1275	625.2675
Pre-ReDevelopment TP Load (lb/yr)	0.4430	0.3929
Pre-ReDevelopment TP load per acre (lb/acre/yr)	1.3600	1.6300
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment area excluding previous land proposed for new impervious cover)		0.0988

¹Adjusted Land Cover Summary:
Pre-ReDevelopment land cover minus previous land cover (forest/open space or managed turf) acreage proposed for new impervious cover.

Adjusted total acreage is consistent with Post-ReDevelopment acreage (minus acreage of new impervious cover).

Column 1 shows load reduction requirement for new impervious cover (based on new development load limit, 0.41 lbs/acre/year).

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary-Post		
Post-ReDevelopment	Used	Adjusted ²
Forest/Open Space Cover (acres)	0.0000	0.0000
Weighted Rv(forest)	0.0000	0.0000
% Forest	0%	0%
Managed Turf Cover (acres)	0.0810	
Weighted Rv(turf)	0.2500	
% Managed Turf	25%	
Impervious Cover (acres)	0.2480	
Rv(impervious)	0.9500	
% Impervious	75%	
Final Site Area (acres)	0.3290	
Final Post Dev Site Rv	0.7777	

Treatment Volume and Nutrient Load

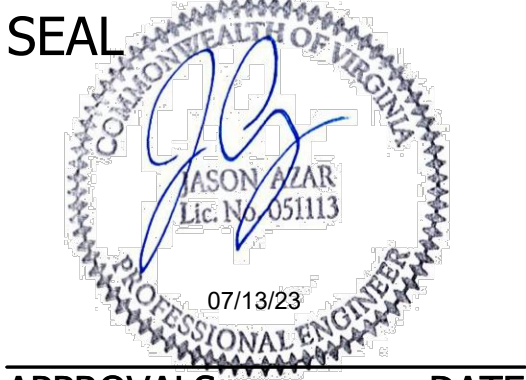
Final Post-Development Treatment Volume (acre-ft)	0.0213	
Final Post-Development Treatment Volume (cubic feet)	928.7355	
Final Post-Development TP Load (lb/yr)	0.5835	
Final Post-Development TP load per acre (lb/acre/yr)	1.7700	
Post-ReDevelopment Treatment Volume (acre-ft)	0.0144	Post-Development Treatment Volume (acre-ft) 0.0070
Post-ReDevelopment Treatment Volume (cubic feet)	625.2675	Post-Development Treatment Volume (cubic feet) 301.4680
Post-ReDevelopment TP Load (lb/yr) ⁴	0.3929	Post-Development TP Load (lb/yr) 0.1907
Post-ReDevelopment TP load per acre (lb/acre/yr)	1.6300	
Max. Reduction Required (Below Pre-Development Load)	20%	
TP Load Reduction Required for Redeveloped Area (lb/yr)	0.0786	TP Load Reduction Required for New Impervious Area (lb/yr) 0.1546

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	0.2332
Linear Project TP Load Reduction Required (lb/yr):	0.2291

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	3.1694	Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	4.1744
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APPROVALS DATE

DESIGN TEAM ENGINEER SUPERVISOR 8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR 8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF 8/29/2023

TRANSPORTATION DIRECTOR 8/30/2023

PROJECT MANAGER 8/1/2022

REVISIONS DATE

LDA #4 SUBMISSION 07/13/2023

100% DESIGN 05/24/2023

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LDA#2 SUBMISSION 06/23/2022

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LDA SUBMISSION 04/19/2022

30% SUBMISSION 12/23/2021

SOUTH EADS STREET
CC13

BETWEEN ARMY NAVY DR. AND 12TH ST. S.

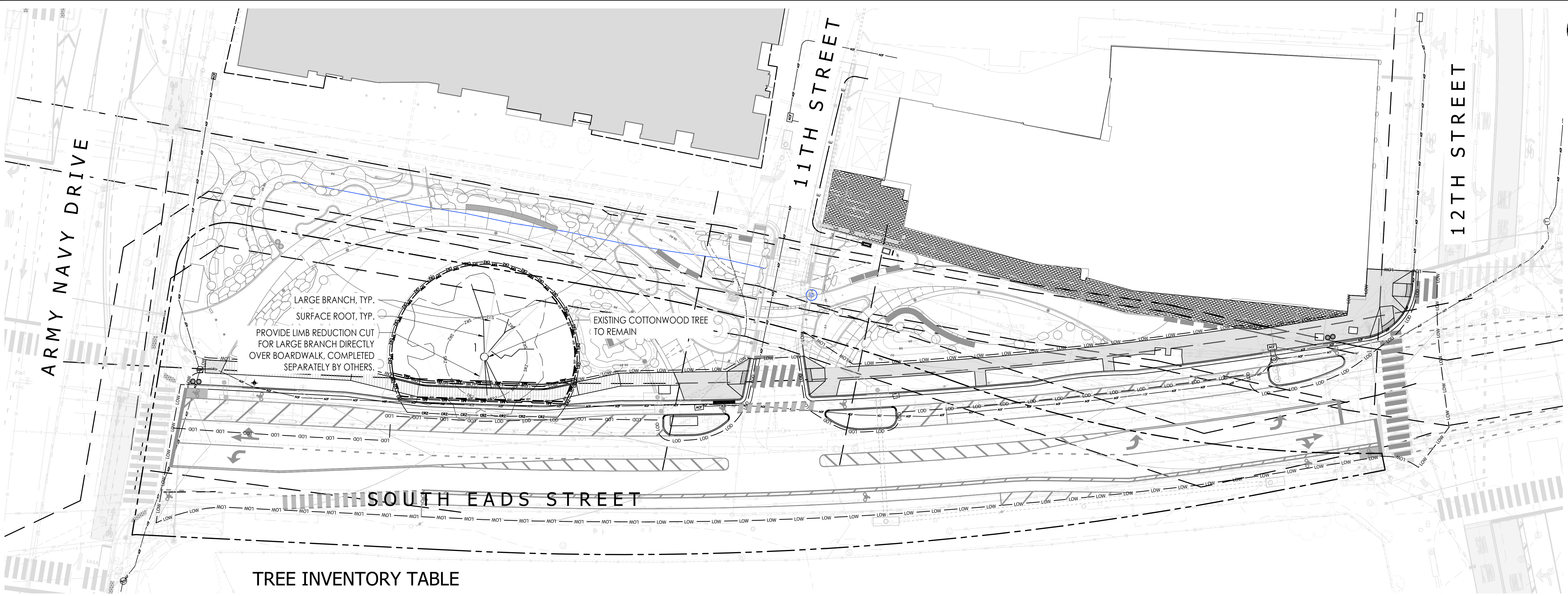
STORMWATER MANAGEMENT
CALCULATIONS

DESIGNED: ME
DRAWN: MS
CHECKED: JA

PLOTTED: JULY 13 2023

SCALE:

N/A



LEGEND

- LOW — LIMIT OF WORK
- PROPERTY LINE
- CRZ — CRITICAL ROOT ZONE
- SRZ — STRUCTURAL ROOT ZONE
- TPF — TREE PROTECTION FENCING
- RP — ROOT PRUNING

TREE INVENTORY TABLE

New Park at South Eads - TREE INVENTORY									TREE PRESERVATION SPECIFICATIONS																	DO NOT PRINT													
ID	Botanic Name	Common Name	DBH (in.)	Critical Root Zone (in ft. radius per Arl. County 311300.3)	0-100 Condition Rating	Condition Rating	Species Rating	Species Impact Toler. (ANSI A300) P=Poor M=Moderate G=Good	Remarks	% CRZ Impact	Removal	Removal by Arborist	Grind Stump	Cut Vines @ Ground	Work in CRZ Oversight by Arborist	Root Prune - Supersonic Air Spade (RP ^{SSA})	Root Prune - Mechanical (RP ^M)	Existing Root Deflection	Tree Protection Fence (TPF) 6CL=6 Ft. Chainlink	Trenchless Silt Fence in CRZ	Mulching in CRZ (MC)	Supplemental Watering (SW) c=during construction a=aftercare for # years	Root Aeration Matting (RAM) LD=Light Duty HD=Heavy Duty	Growth Regulator (TGR)	Prune - To Manage Health (P ^{MH})	Prune - To Provide Clearance (P ^{CL})	Soil Management (SM)	Post-Construction Health Assessment (# of Years)	Use 1.5' /ft radius CRZ?	Ex CRZ Area (Sq. Ft.)	CRZ Area to Remain (Sq. Ft.)	CRZ % Loss	Ex SRZ Area (Sq. Ft.)	SRZ Area to Remain (Sq. Ft.)	SRZ % Loss				
SAMPLE	Quercus phellos	Willow Oak	12.7	12.7	90	Excellent	90	M-G																															
1	Populus deltoides	Eastern Cottonwood	43.4	65.1	77	Good	60	M-G	Ext. surface roots to dripline, all sides exc. north. V. lg. roots w/ hvy. damage. Very hvy. Eng. Ivy on trunk to 20-ft ht. Dripline somewhat asymmetrical further out to south and east. Some lg. wounds from old breaks. Sounded w/ mallet, no decay detected. Little dead wood, has been maintained, two +/- 4" branches tbr. Clearance above ground: SE +/-5" dia. at 7' ht. SE +/-9" dia. at 5' ht. WNW +/-20" dia. at 6.5' ht. Shows good vigor, sprouting on pruned open areas on 20" WNW branch. V. gd. foliage density overall. Foliar shot hole damage, prob. insect caused. Canopy structure: main trunk to 18' ht., then main ldr. narrows to +/-25" and leans north. Lg. branch +/-21" to east slightly subordinate to main. Roots: 68. Trunk: 85. Canopy: 75. Foliage/Vigor: 80.	±30%																													
REMARKS LEGEND									NOTES																														
a. Low vigor									1. CTLA Guide for Plant Appraisal (latest edition) methodology used to determine condition assessment. All observations taken at ground level.																														
b. Dieback in canopy									2. Information about trees on adjacent private property, if indicated, was estimated from the subject parcel or public right-of-way.																														
c. Canopy unbalanced									3. A Tree Risk Assessment was not conducted unless specifically noted otherwise.																														
d. Surface roots									4. Information shown is based solely on conditions at the times of inventory, Month, date 2021																														
e. Watersprouts									5. Inventory performed by Dave Norden except for portions indicated otherwise.																														
f. Measured below trunk branching									CTLA PLANT CONDITION CATEGORIES																														
g. Low live-crown ratio (LCR)									Excellent		81-100%																												
h. Trunk leaning									Good		61-80%																												
i. Vines on trunk									Fair		41-60%																												
j. Codominant leaders									Poor		21-40%																												
k. Girdling roots									Very Poor		6-20%																												
l. Discoloration on trunk									Dead		0-5%																												
m. Voids in the base / large branches																																							
n. Wood decay fruiting found																																							
p. Multistem																																							
q. Excellent specimen																																							

NOTES:

- CALL THE URBAN FORESTER AT 703-228-7980, 72 HOURS BEFORE THE START OF ANY LAND DISTURBANCE, TO DISCUSS AND SCHEDULE INSPECTION OF TREE PROTECTION MEASURES.
- ARLINGTON COUNTY URBAN FORESTER TO BE PRESENT DURING PRUNING WITH 5 DAYS NOTICE MINIMUM.
- WITHIN LOW TREE PROTECTION FENCING REPRESENTS AREAS WHERE WORK MUST BE CONDUCTED UNDER SUPERVISION OF CONTRACTOR'S ARBORIST.
- STAGE EXCAVATOR IN ROADWAY NEXT TO CURB. IF ROAD STAGING NOT AVAILABLE, USE TEMPORARY ROOT PROTECTION MATTING PER ARLINGTON DETAIL (311300.7NS). INSTALLATION TO BE APPROVED BY ARLINGTON URBAN FORESTER.
- SURVEY COMPLETED BY RICE ASSOCIATES UNDER RESPONSIBLE CHARGE OF DARRYL E. FORSYTHE BETWEEN THE DATES OF OCTOBER 15, 2018 AND DECEMBER 5, 2018.
- SURVEYOR PROVIDED LOCATION OF ALL TREES ON PROPERTY AND ADJACENT TO PROPERTY.
- AN INVENTORY OF TREES AFFECTED BY CONSTRUCTION WAS PERFORMED BY DAVE NORDEN, ISA CERTIFIED ARBORIST MA-5513A, ON NOVEMBER 12, 2019.
- CTLA GUIDE FOR PLANT APPRAISAL (LATEST EDITION) METHODOLOGY USED TO DETERMINE CONDITION ASSESSMENT. ALL OBSERVATIONS TAKEN AT GROUND LEVEL.
- A RISK ASSESSMENT WAS NOT CONDUCTED UNLESS SPECIFICALLY NOTED OTHERWISE.
- INFORMATION ABOUT TREES ON ADJACENT PRIVATE PROPERTY WAS ESTIMATED FROM SUBJECT PARCEL OR PUBLIC RIGHT-OF-WAY.
- INFORMATION SHOWN IS BASED SOLELY ON CONDITIONS AT THE TIME OF INVENTORY, AND ARE SUBJECT TO CHANGE AT ANY TIME.
- DO NOT EXCAVATE IN CRITICAL ROOT ZONE WITH AN EXCAVATOR. PLANTS PLANTED WITHIN THE TREE CRZ SHOULD BE PLANTED THROUGH A TOPDRESSING OF COMPOST AND MULCHED. NO SOIL PREPARATION TO BE PERFORMED WITHIN CRZ.

TREE REPLACEMENT TABLE

SOUTH EADS STREET TREE INVENTORY AND REPLACEMENT SCHEDULE									
Tree #	To Be Removed	DBH	Condition	Species	Common name	Species Rating	Replacement Score	Replacement Value	Required Replacements
01		43.4	77	<i>Populus deltoides</i>	Eastern Cottonwood	60	20.0508	6	0
Total:								6	0

ARLINGTON
VIRGINIA

DEPARTMENT OF
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SEAL

YUNHUI FAN
No. 1316
07.13.2023

APPROVALS	DATE
QUALITY CONTROL ENGINEER	8/29/2023
CONSTRUCTION MANAGEMENT SUPERVISOR	8/29/2023
WATER, SEWER, STREETS BUREAU CHIEF	8/29/2023
TRAN, Anel Yang DIRECTOR	8/30/2023
PROJECT MANAGER Anel Yang	3/1/2023

REVISIONS	DATE
LDA #4 SUBMISSION	07/13/2023
100% DESIGN	05/24/2023
LDA#3 SUBMISSION	01/31/2023
LDA#2 SUBMISSION	06/23/2022
100% SUBMISSION	06/21/2022
LDA SUBMISSION	04/19/2022
30% SUBMISSION	12/23/2021

SOUTH EADS STREET
CCL3
BETWEEN ARMY NAVY DR. AND 12TH ST. S.

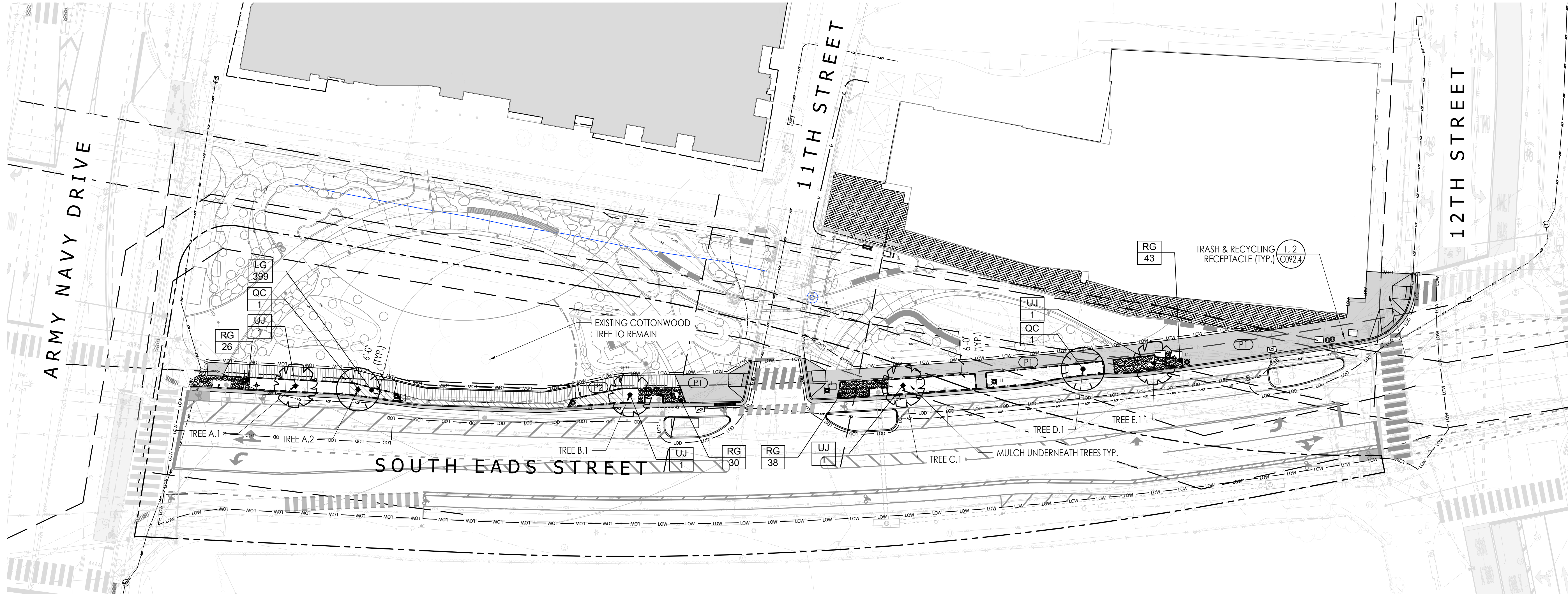
TREE PROTECTION PLAN

DESIGNED: CF
DRAWN: MS
CHECKED: CF

PLOTTED: JULY 13 2023

SCALE:

GRAPHIC SCALE



LEGEND

- CONCRETE PAVING
- BOARDWALK
- PAVING BY OTHERS
- SOIL AREA
- STREET LIGHT ARL STD (14112-01)

STREETSCAPE SOIL VOLUME CALCULATIONS 600-1,200 CU. FT. MIN. PER TREE 60 SQ. FT. MIN. PER TREE					
SOIL VOLUME (SV)	TREE QTY.	MINIMUM DEPTH (IN)	AREA (FT²)	VOLUME (FT³)	COUNT TREE CANOPY
A.1-A.2	2	48	± 435	± 1740	2
B.1	1	48	± 285	± 1140	1
C.1	1	48	± 428	± 1712	1
D.1	1	48	± 347	± 1388	1
E.1	1	48	± 192	± 768	1
				SUBTOTAL TREES RECEIVING CANOPY CREDIT	7

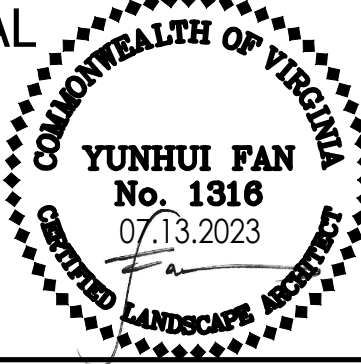
NOTES:

- CONTRACTOR SHALL USE AIR EXCAVATION FOR DISTURBANCE WITHIN THE CRITICAL ROOT ZONE OF THE COTTON WOOD TREE. A CERTIFIED ARBORIST SHALL PERFORM THIS WORK TO MAKE SURE THE TREE ROOTS ARE PROTECTED AS BEST AS POSSIBLE WHILE CONSTRUCTION COMMENCES. ROOT PRUNING SHALL BE DONE PER ARLINGTON COUNTY DETAIL 311300.5 AND DETAIL SHOWN ON PLANS. PRIOR TO CUTTING ROOTS, CONTACT ARLINGTON COUNTY URBAN FORESTOR.

PLANT SCHEDULE

CANOPY TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
QC	2	QUERCUS COCCINEA	SCARLET OAK	2" CAL	B&B	AS SHOWN	MATCHED SPECIMENS, FULL BALANCED CANOPY
UJ	4	ULMUS AMERICANA 'JEFFERSON'	JEFFERSON AMERICAN ELM	2" CAL	B&B	AS SHOWN	MATCHED SPECIMENS, BALANCED CANOPY, AND SINGLE LEADER WITH NO INCLUDED BARK. PROVIDE FROM SELECT TREES.
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
RG	137	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	#1	CONT.	24" O.C.	
ORNAMENTAL GRASSES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
LG	399	LYSIMACHIA LANCEOLATA 'BURGUNDY MIST'	BURGUNDY MIST LANCELEAF LOOSESTRIFE	FLAT	PLUG	12" OC	

SEAL



APPROVALS DATE

QUALITY CONTROL ENGINEER	8/29/2023
CONSTRUCTION MANAGEMENT SUPERVISOR	8/29/2023
WATER, SEWER, STREETS BUREAU CHIEF	8/29/2023
TRANSPORTATION DIRECTOR	8/30/2023
PROJECT MANAGER	07/13/2023

REVISIONS DATE

LDA #4 SUBMISSION	07/13/2023
100% DESIGN	05/24/2023
LDA#3 SUBMISSION	01/31/2023
LDA#2 SUBMISSION	06/23/2022
100% SUBMISSION	06/21/2022
LDA SUBMISSION	04/19/2022
30% SUBMISSION	12/23/2021

SOUTH EADS STREET
CC13

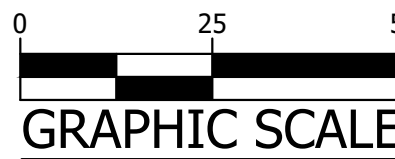
BETWEEN ARMY NAVY DR. AND 12TH ST. S.

LANDSCAPE PLAN

DESIGNED: CF
DRAWN: MS
CHECKED: CF

PLOTTED: JULY 13 2023

SCALE:



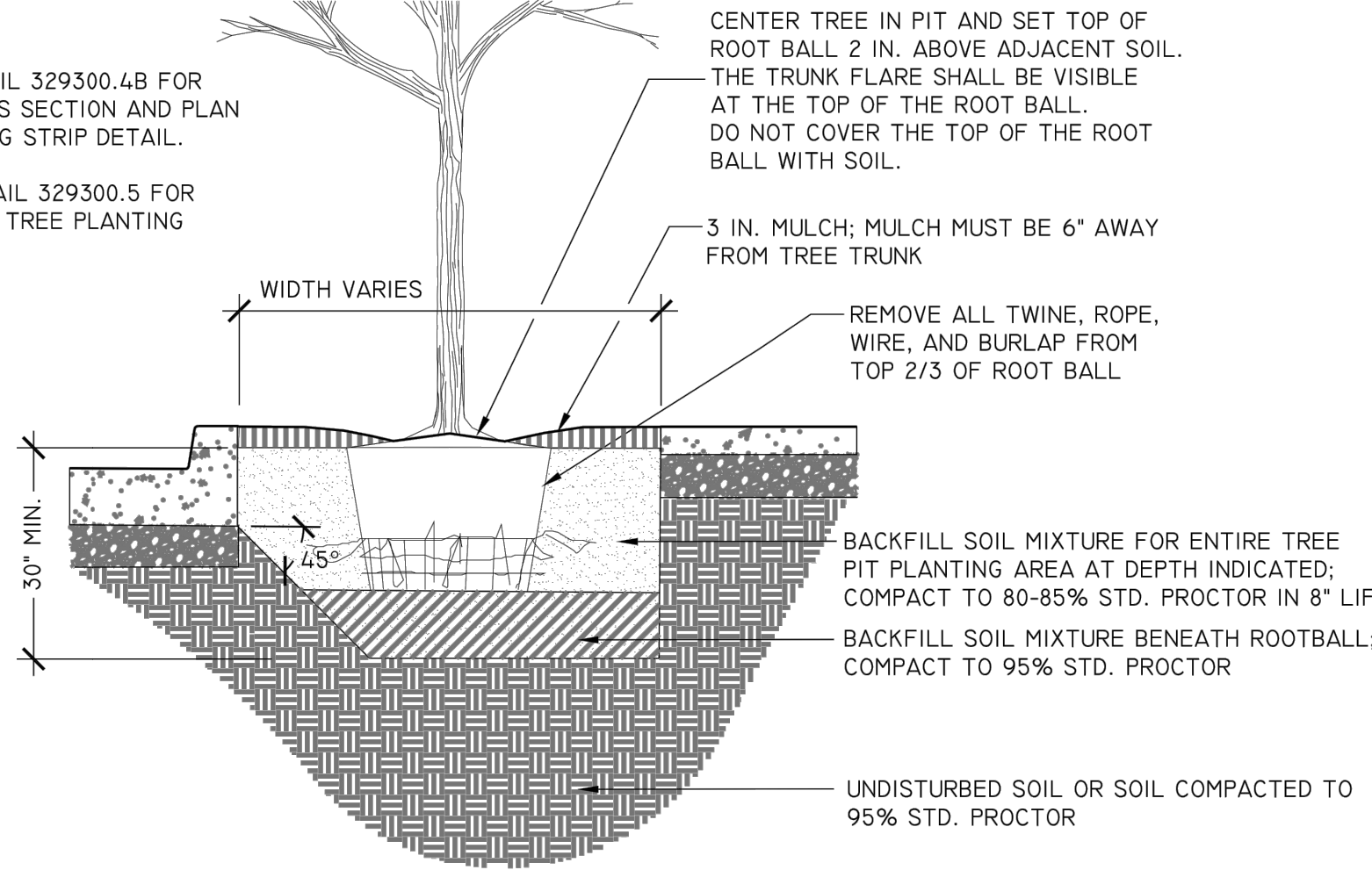
REVISED ON 01/07/2021

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THIS DETAIL SUPERSEDES ALL OTHER TREE STRIP PLANTING DETAILS IN ARLINGTON COUNTY.

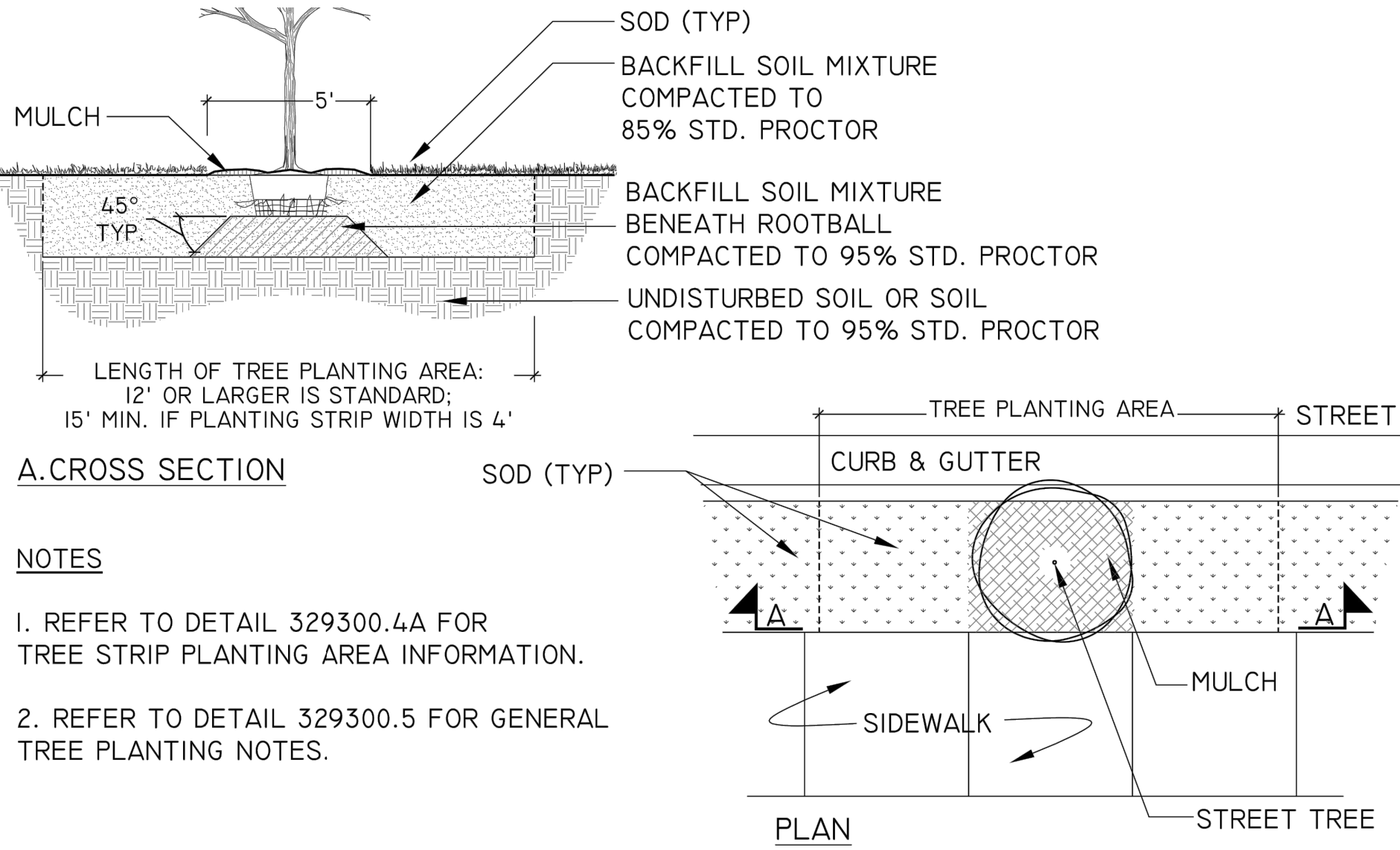
NOTES

1. REFER TO DETAIL 329300.4B FOR ADDITIONAL CROSS SECTION AND PLAN OF TREE PLANTING STRIP DETAIL.
2. REFER TO DETAIL 329300.5 FOR GENERAL STREET TREE PLANTING NOTES.



STREET TREE PLANTING (1 OF 2)

NTS



STREET TREE PLANTING (2 OF 2)

NTS

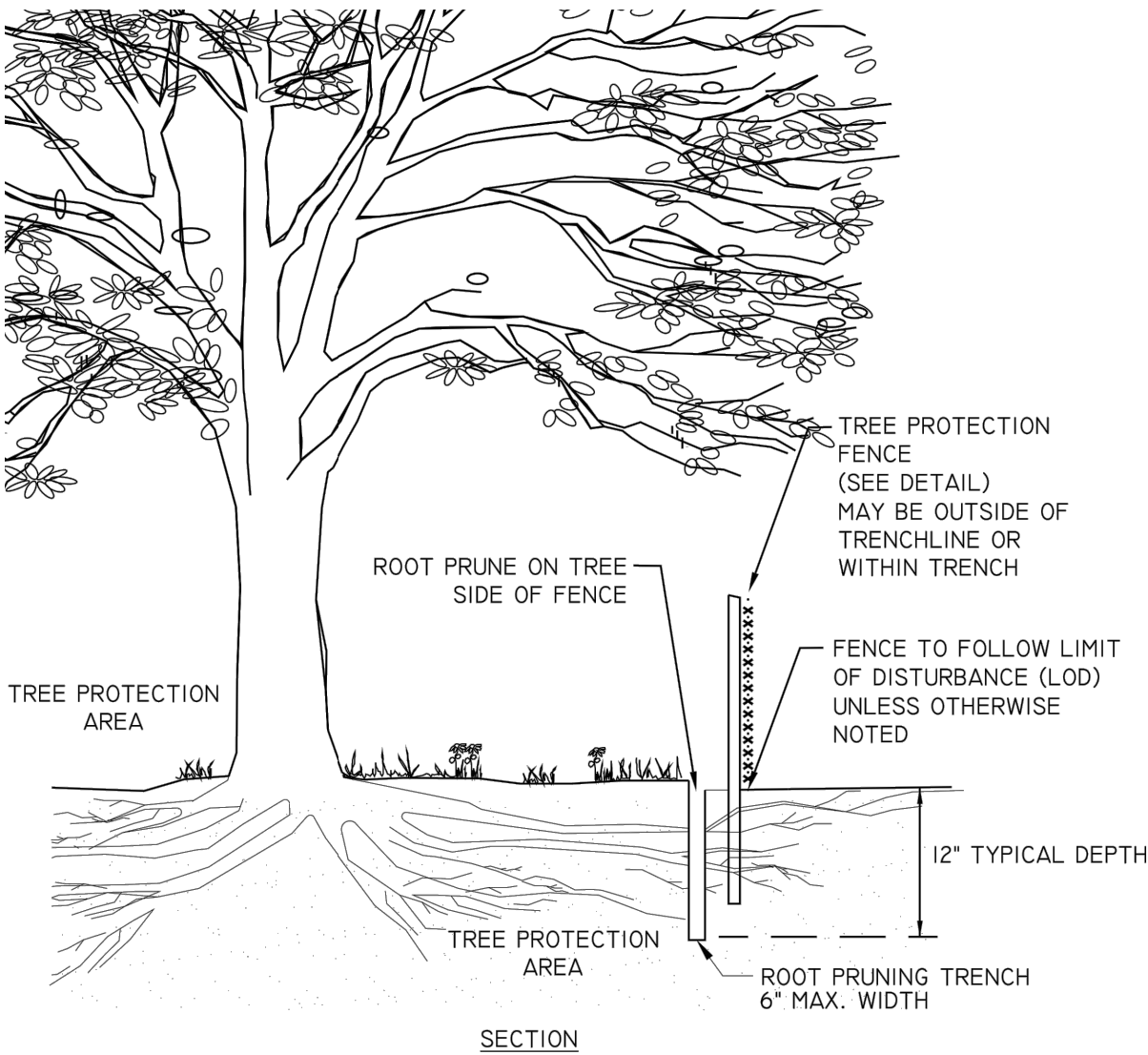
NOTES

1. NOTIFY THE DPR URBAN FORESTER AT LEAST 72 HOURS IN ADVANCE OF THE SCHEDULED INSTALLATION OF TREE PITS AND PLANTING OF ANY STREET TREES FOR INSPECTION.
2. A PERMIT IS REQUIRED WHEN TREES ARE PLANTED IN PUBLIC RIGHT-OF-WAY OR IN A PUBLIC EASEMENT. THE DEPARTMENT OF ENVIRONMENTAL SERVICES SHALL ISSUE THE PERMIT ACCORDING TO THE PROVISIONS OF THE CURRENT ARLINGTON COUNTY ADMINISTRATIVE REGULATION 4.3.
3. TREE SPECIES SHALL BE SELECTED FROM THE "ARLINGTON COUNTY STREET TREE LIST" OR PER SECTOR PLAN REQUIREMENTS.
4. TREES SHALL BE NURSERY GROWN SPECIMENS THAT MEET THE LATEST EDITION OF THE AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60). BALLED AND BURLAPPED TREES SHALL BE SECURELY HELD IN PLACE BY UNTREATED BURLAP AND STOUT ROPE (NYLON ROPE IS NOT ACCEPTABLE). LOOSE, BROKEN OR MANUFACTURED BALLS ARE UNACCEPTABLE.
5. CALL MISS UTILITY AT (800) 552-7001 FOR UTILITY LOCATIONS PRIOR TO EXCAVATION.
6. AT TIME OF PLANTING PRUNE ONLY CROSSING LIMBS, BROKEN OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A HAZARD TO PEDESTRIANS. DO NOT PRUNE INTO OLD WOOD ON EVERGREENS.
7. TREE PIT AND TREE STRIP PLANTING AREA DIMENSIONS: SEE PLAN
8. SPACE TREES 25'-30' APART OR PER SECTOR PLAN REQUIREMENTS OR SITE CONDITIONS.
9. SITE CHARACTERISTICS, SUCH AS OVERHEAD POWER LINES, EXISTING VEGETATION, AND INFRASTRUCTURE ITEMS SUCH AS CURBS, SIDEWALKS AND UTILITIES SHALL BE CONSIDERED. TREES THAT GROW TALLER THAN 25 FEET SHOULD NOT BE PLANTED DIRECTLY UNDER POWER LINES. WHEN POSSIBLE THE TREE LEADER SHALL BE OFFSET FROM POWER LINES.

GENERAL NOTES FOR STREET TREE PLANTING

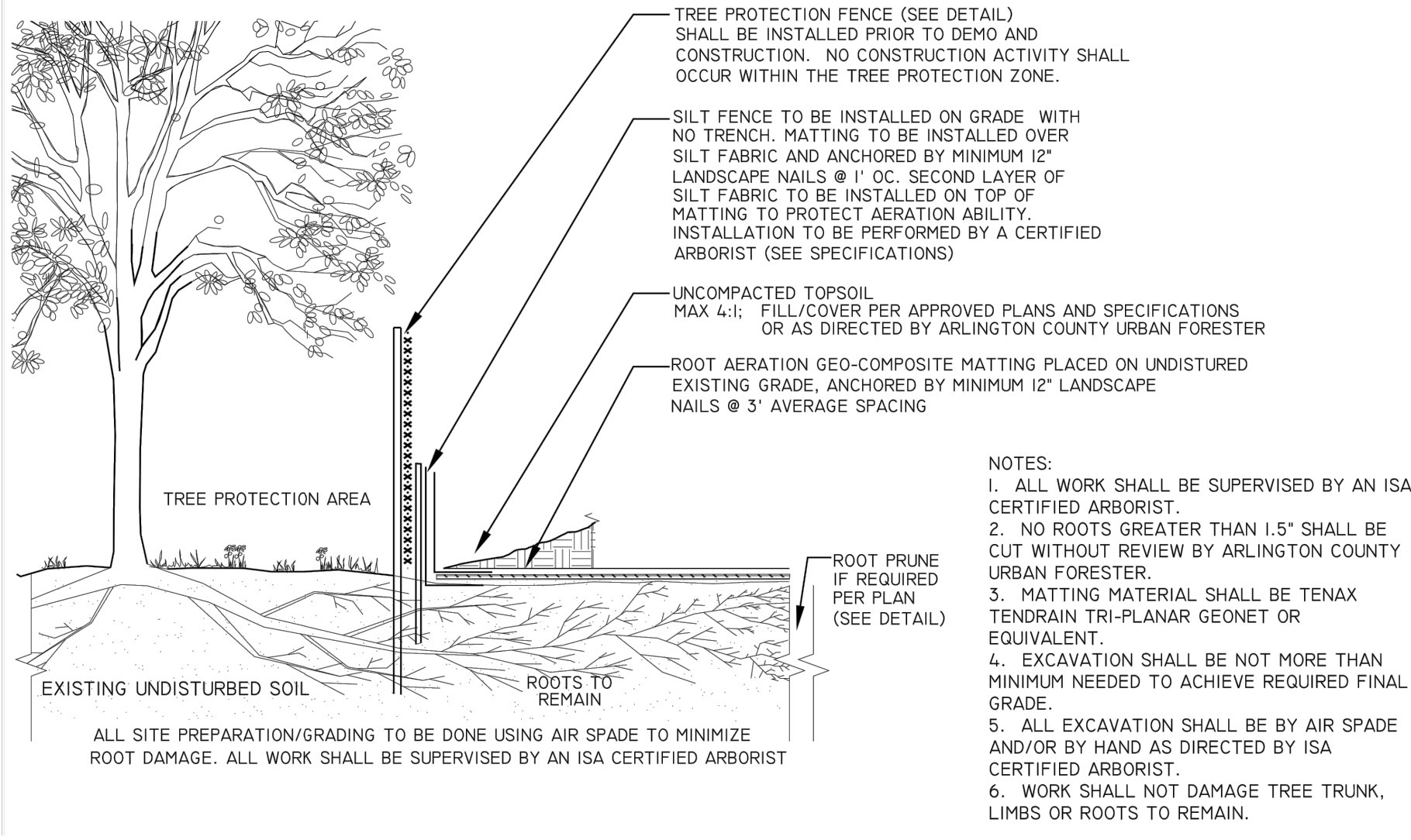
NTS

10. BACKFILL SOIL MIXTURE SHALL BE 3/4 EXISTING SOIL CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL (COMPOSTED BARK, LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY THE COUNTY URBAN FORESTER. PEAT MOSS MAY NOT BE USED.
11. IF THE QUANTITY OF ACCEPTABLE EXISTING SOIL IS INSUFFICIENT FOR THE PLANTING REQUIREMENTS, THE CONTRACTOR MAY USE TOPSOIL. SOIL TEST REPORT RESULTS FOR THE TOPSOIL WILL BE MADE AVAILABLE TO THE COUNTY URBAN FORESTER UPON REQUEST. CONTRACTOR SHALL SUBMIT TOPSOIL FOR APPROVAL TO COUNTY URBAN FORESTER THAT MEETS THE FOLLOWING SPECIFICATIONS:
 - (A.) TOPSOIL CONSISTS OF A SANDY LOAM WITH UNIFORM COMPOSITION AND IS FREE OF STONES, LUMPS, PLANTS, ROOTS, AND OTHER DEBRIS OVER 1/2" IN LENGTH.
 - (B.) TOPSOIL HAS A PH RANGE OF 5.5 TO 6.5 AND A MINIMUM CONTENT OF 1.0% ORGANIC MATTER.
 - (C.) TOPSOIL DOES NOT CONTAIN TOXIC SUBSTANCES HARMFUL TO PLANT GROWTH. SOLUBLE SALT LEVEL SHALL NOT EXCEED 3 MILLIOHMS PER CENTIMETER.
12. TREES PLANTED WITHOUT THE TRUNK FLARE VISIBLE WILL BE REJECTED.
13. TREES MAY ONLY BE STAKED IF REQUIRED BY THE COUNTY URBAN FORESTER. REFER TO ARLINGTON COUNTY STANDARD STAKING DETAILS.
14. MULCH SHALL BE CLEAN, SCREENED, DOUBLE-HAMMERED HARDWOOD BARK MULCH, UNIFORM IN SIZE AND FREE OF STONES, CLODS, NON-ORGANIC DEBRIS AND OTHER FOREIGN MATERIAL.
15. ALL PLANTS SHALL BE WATERED TWICE: ONCE AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION. EACH WATERING WILL CONSIST OF 20 GALLONS PER TREE.
16. CONTRACTOR SHALL LEGALLY REMOVE EXCESS SOIL & DEBRIS FROM SITE.



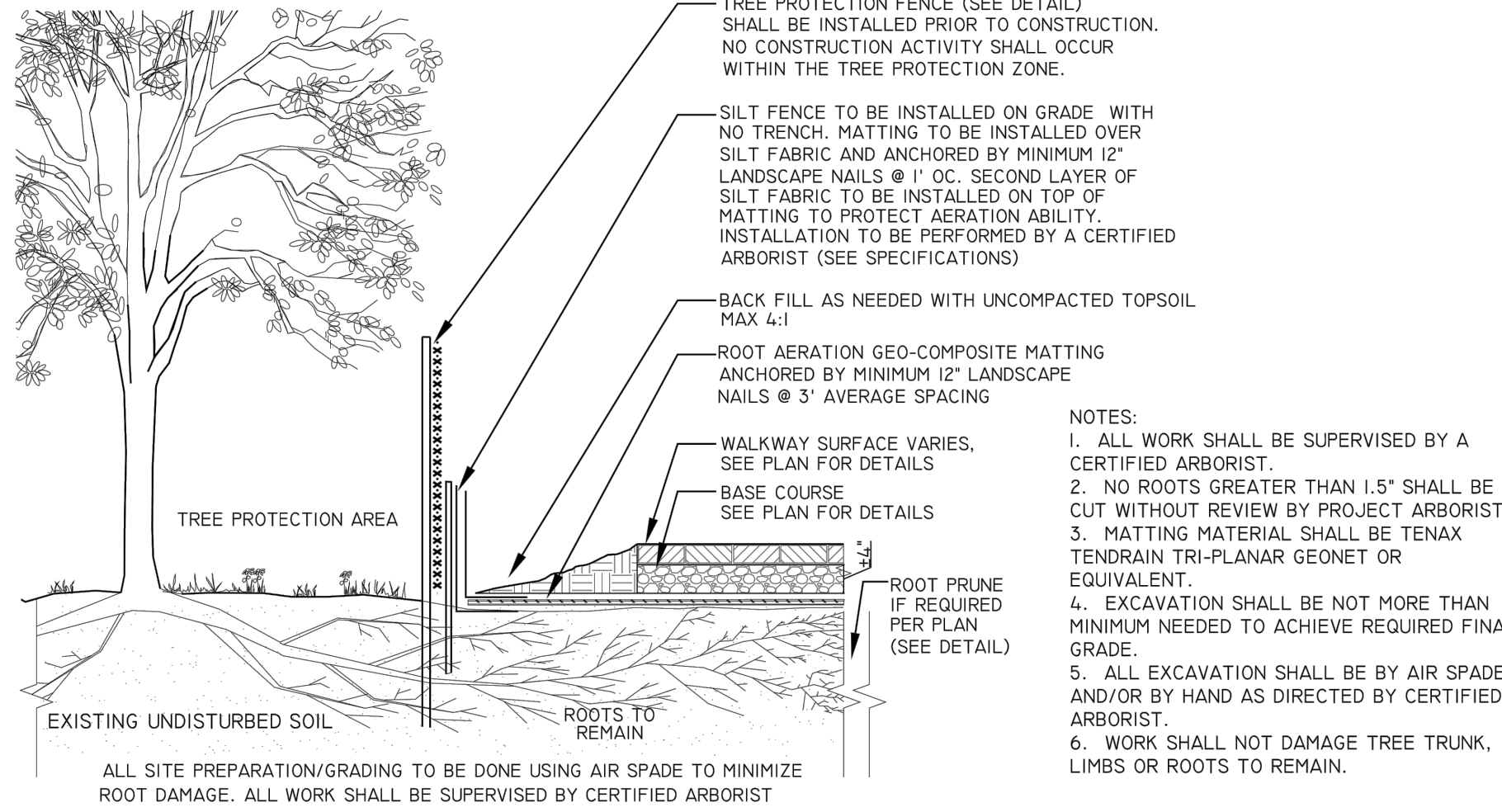
ROOT PRUNING

NTS



FILL WITHIN CRZ WITH ROOT AERATION MATTING

NTS



ABOVE GRADE SIDEWALK WITH ROOT AERATION MATTING

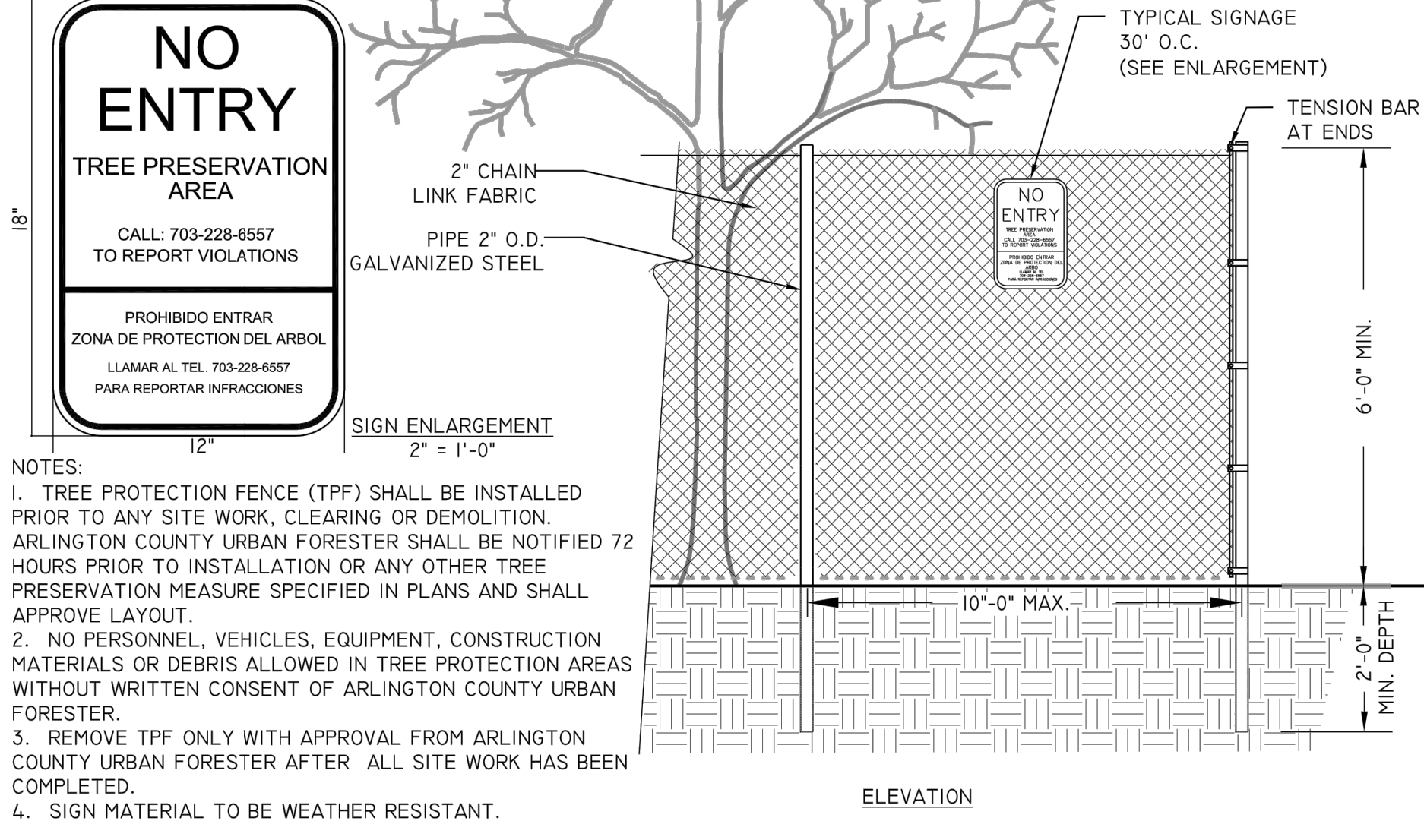
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NOTES:

1. CONTACT URBAN FORESTER FOR PRECONSTRUCTION MEETING, 72 HOURS PRIOR TO CONSTRUCTION STARTING.

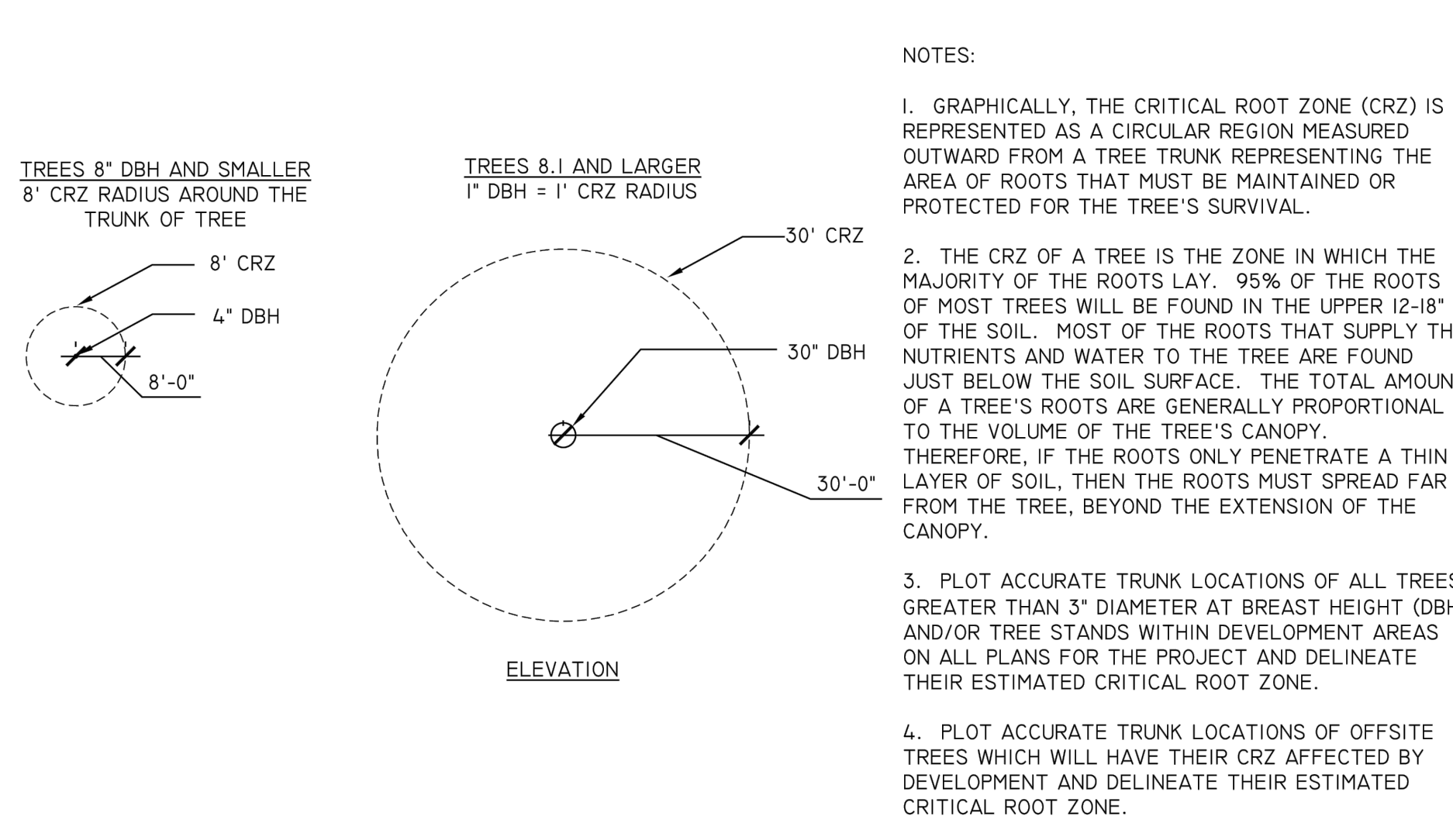
NOTES

1. ROOT PRUNING SHALL BE DONE WITH A TRENCHER OR VIBRATORY FLOW TO A DEPTH OF 12". ROOTS OVER 1.5" IN DIAMETER SHALL HAVE A CLEAN CUT MADE BY A CLEAN SAW ON THE SURFACE OF THE ROOT, WHICH IS STILL ATTACHED TO THE TREE. DO NOT BREAK OR CHOP. DO NOT PAINT THE CUT ROOT END. IF EXCAVATION IS FOR INSTALLATION OF UNDERGROUND UTILITIES, LEAVE THE ROOT INTACT AND THREAD THE LINES UNDERNEATH.
2. ROOT PRUNING SHALL TAKE PLACE PRIOR TO ANY CLEARING AND GRADING. EXACT LOCATION OF TREE PROTECTION AREAS SHALL BE STAKED OR FLAGGED PRIOR TO TRENCHING AND SHALL BE APPROVED BY ARLINGTON COUNTY URBAN FORESTER.
3. ROOT PRUNING SHALL BE CONDUCTED WITH THE SUPERVISION OF AN ISA CERTIFIED ARBORIST.
4. BACKFILL THE ROOT-PRUNING TRENCH WITH APPROVED LOOSE TOPSOIL MIX AND TOP WITH 3-4" BARK MULCH AND MARK LOCATION FOR FUTURE REFERENCE. SILT FENCE MAY BE INSTALLED IN TRENCH PRIOR TO BACKFILLING AS LONG AS THE TRENCH IS NOT OPEN FOR LONGER THAN 48 HOURS WITHOUT WATERING.
5. ROOT PRUNING SHALL NOT BE DONE WHEN MORE THAN THE TOP 1 INCH OF SOIL IS FROZEN. ROOT PRUNING SHALL NOT BE UNDERTAKEN WHEN THE SOIL IS WET AND CONDITIONS ARE MUDDY.
6. THE ARLINGTON COUNTY URBAN FORESTER SHALL BE NOTIFIED 72 HOURS PRIOR TO TRENCHING AND WHEN ALL ROOT PRUNING AND TREE PROTECTION FENCE INSTALLATION IS COMPLETE.



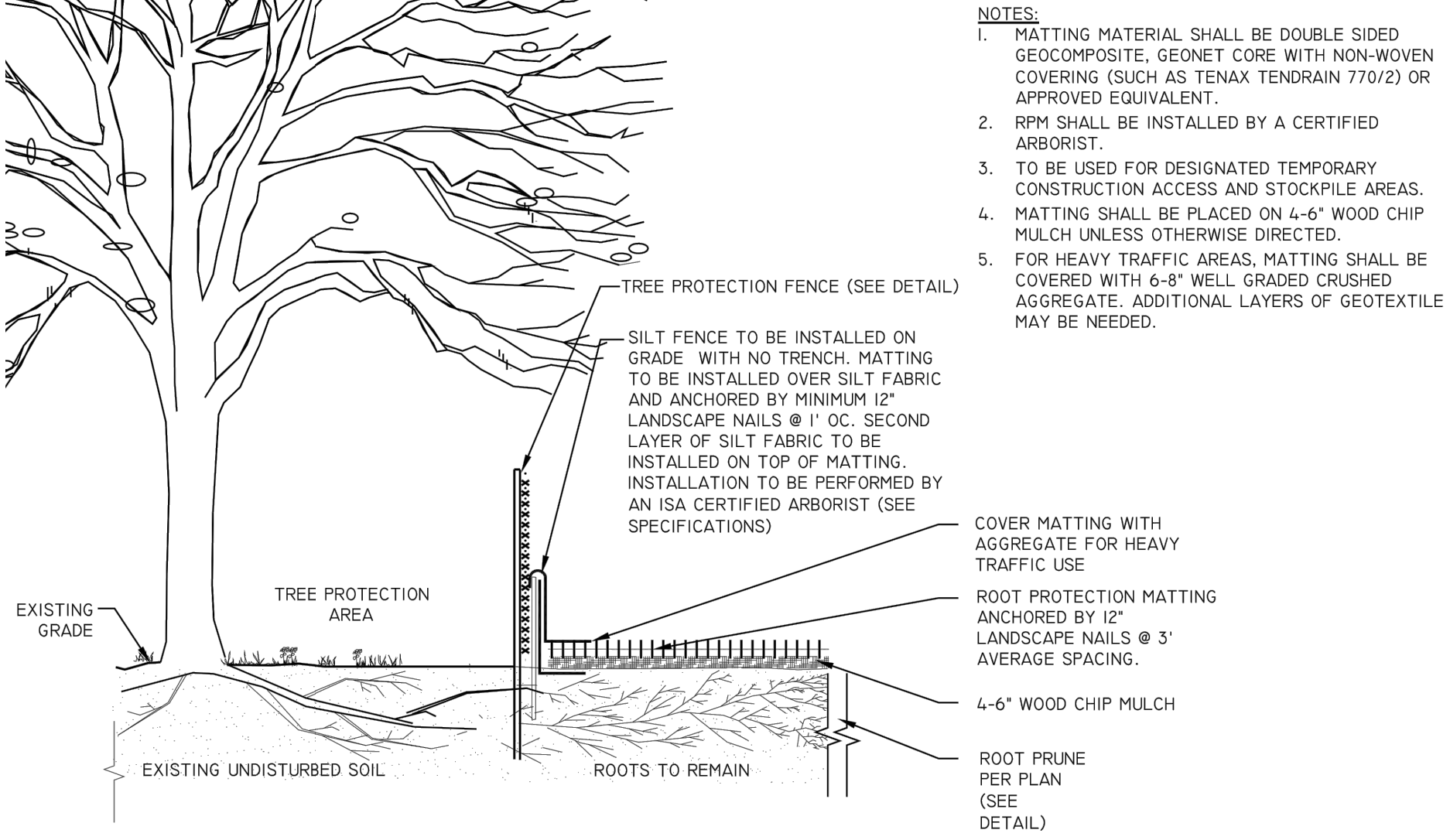
6' CHAIN LINK TREE PROTECTION FENCE

NTS



TREE PROTECTION DETAIL FOR DETERMINING CRZ

NTS



ROOT PROTECTION MATTING WITHIN CRZ

NTS

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629
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SEAL

COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
08.24.2023
REGISTERED LANDSCAPE ARCHITECT

APPROVALS

DATE

QUALITY CONTROL ENGINEER 8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR 8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF 8/29/2023

TRAN DIRECTOR 8/30/2023

PROJECT MANAGER 3/1/2023

REVISIONS

DATE

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100% SUBMISSION 06/21/2022

LDA SUBMISSION 04/19/2022

90% SUBMISSION 03/30/2022

30% SUBMISSION 12/23/2021

SOUTH EADS STREET
CCL3
BETWEEN ARMY NAVY DR. AND 12TH ST. S.

LANDSCAPE NOTES & DETAILS

DESIGNED: CF
DRAWN: MS
CHECKED: CF

PLOTTED: MAY 24 2023

SCALE:

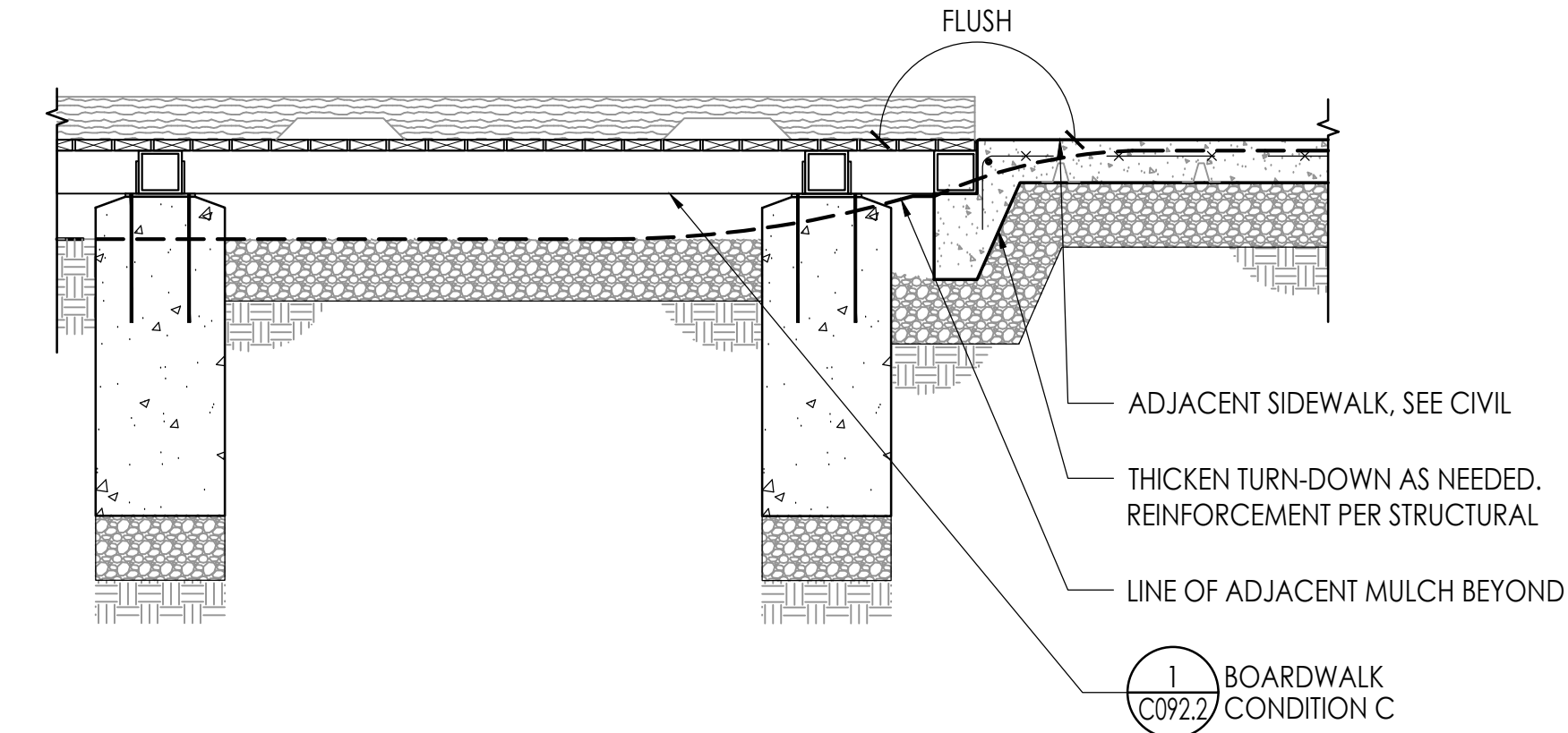
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C092.1

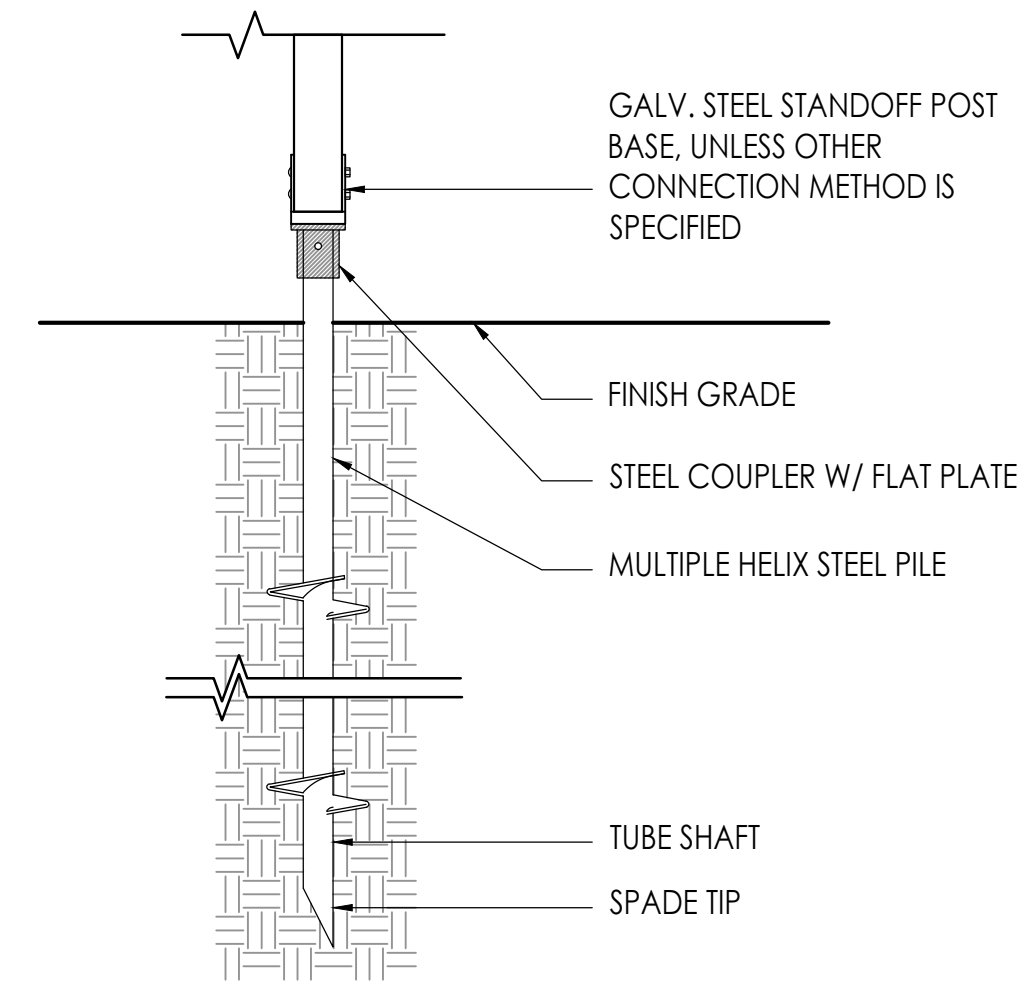
SOUTH EADS STREET CCL3

REVISED ON 01/07/2021

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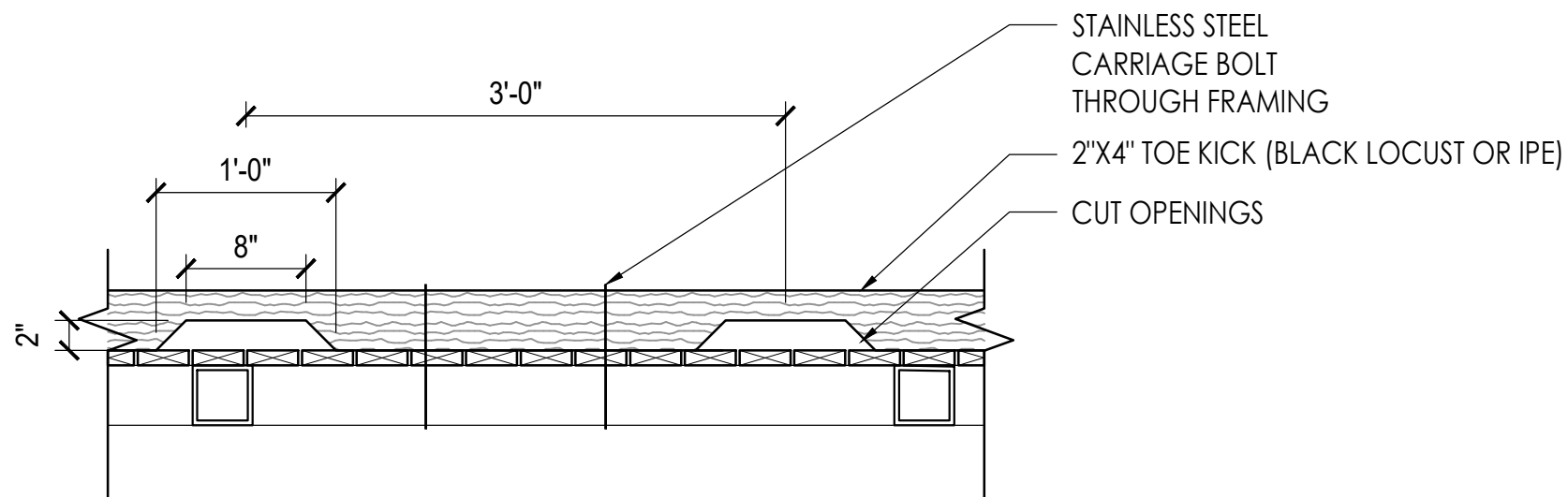


3 BOARDWALK AT SIDEWALK
1/2" = 1'-0"

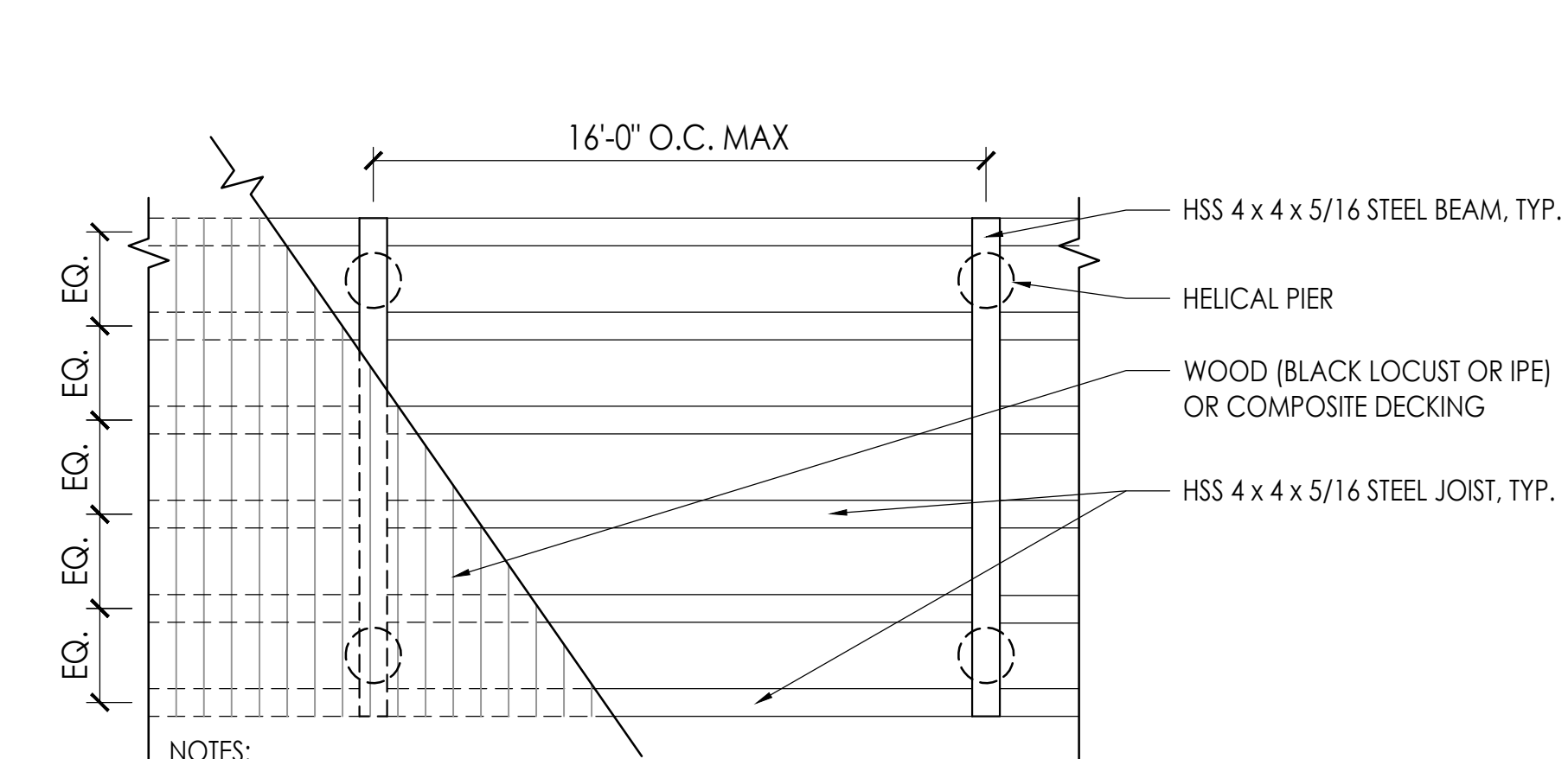


NOTES:
1. NUMBER AND DIAMETER OF HELICES AND SHAFT LENGTH AND DIAMETER VARIES BASED ON PIER LOAD AND SOIL CONDITIONS. REFER TO PLANS SEALED BY VIRGINIA-LICENSED STRUCTURAL ENGINEER.

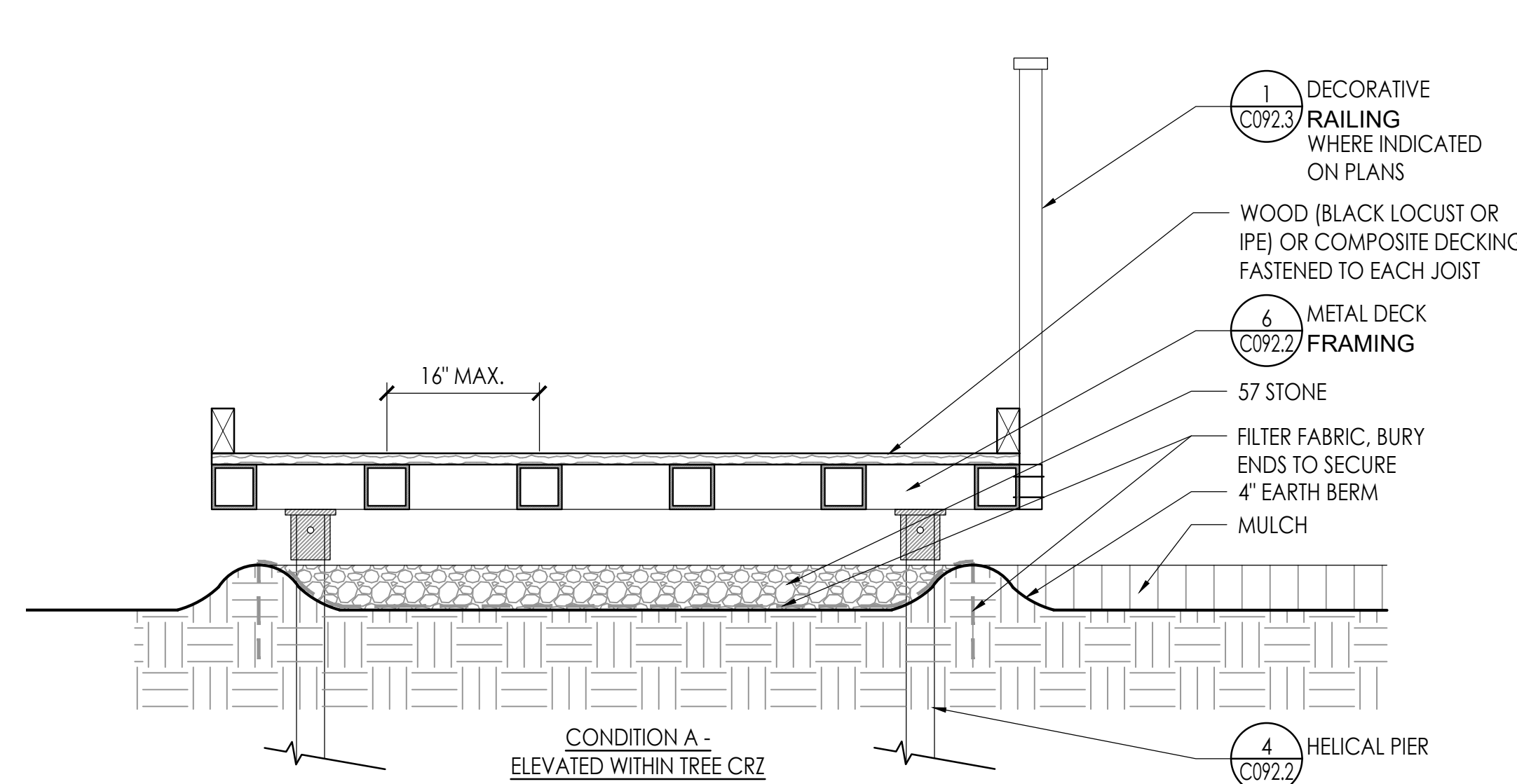
4 HELICAL PIER
3/4" = 1'-0"



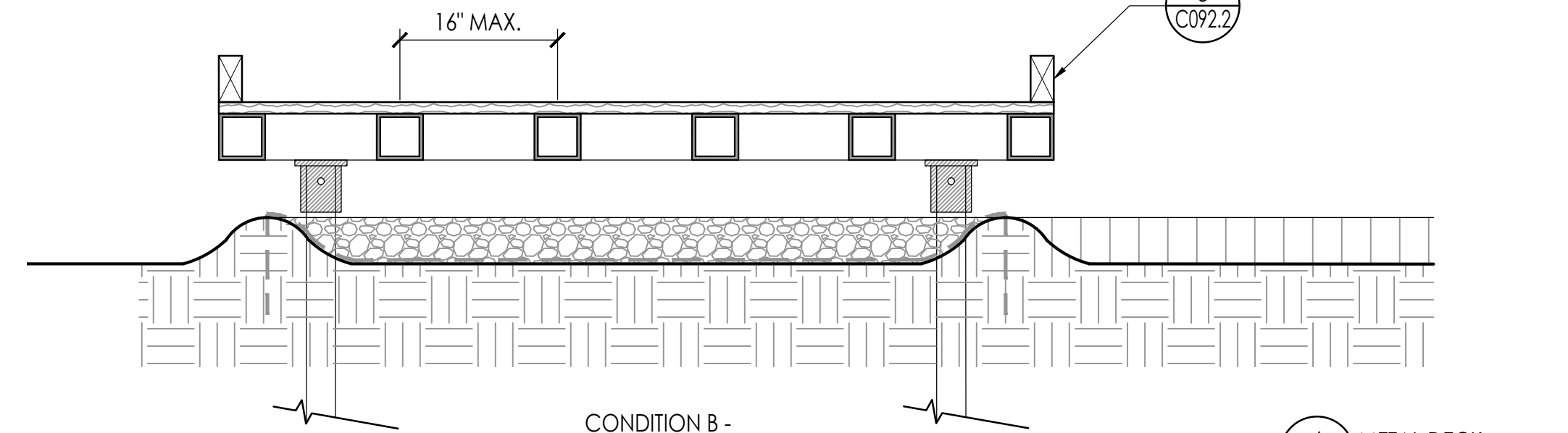
5 TOE KICK
1" = 1'-0"



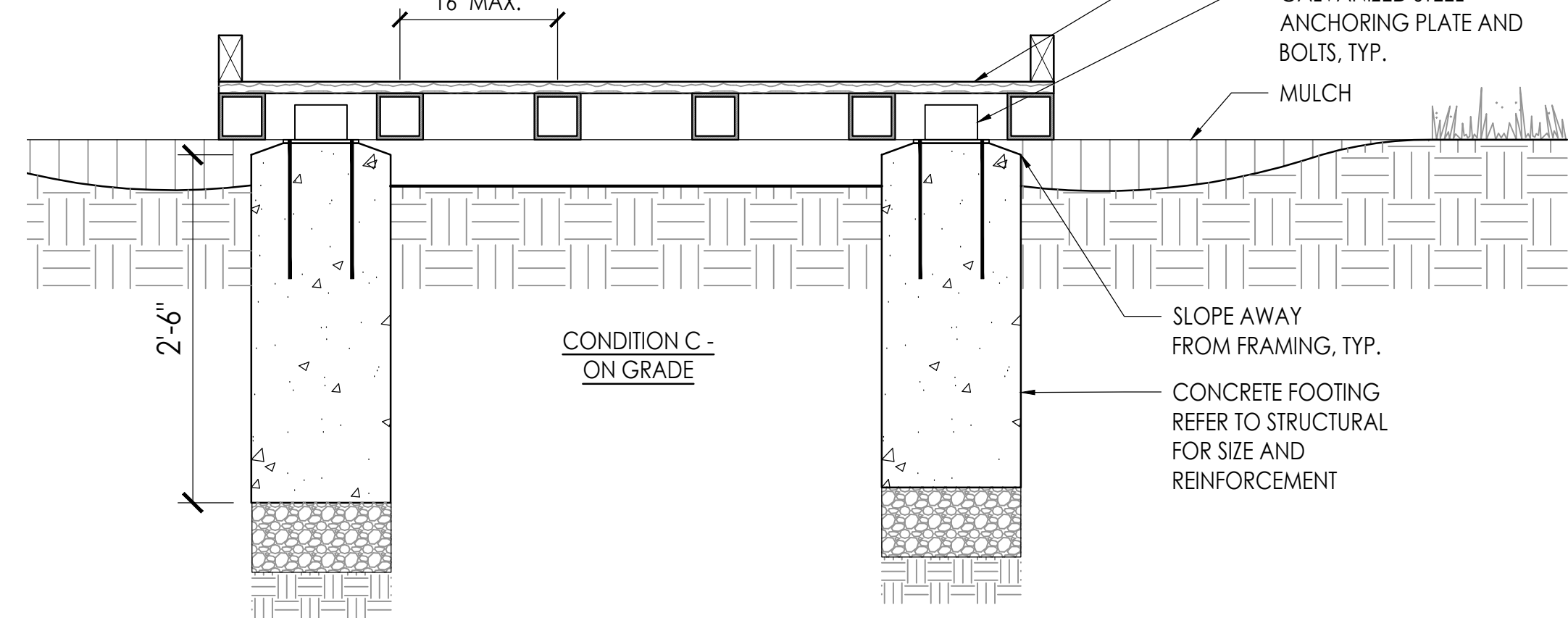
6 METAL DECK FRAMING
1/2" = 1'-0"



CONDITION A - ELEVATED WITHIN TREE CRZ

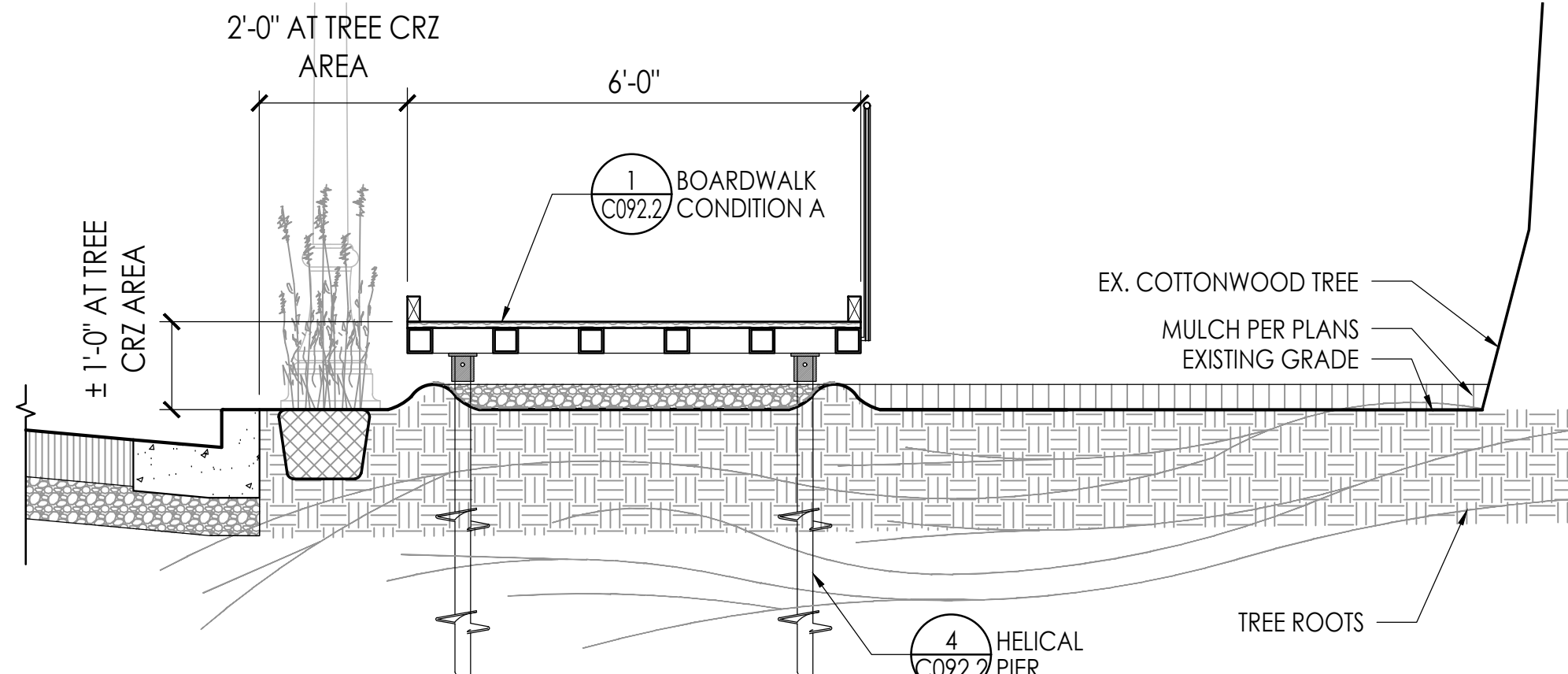


CONDITION B - ELEVATED OUTSIDE OF TREE CRZ



CONDITION C - ON GRADE

1 BOARDWALK
1" = 1'-0"



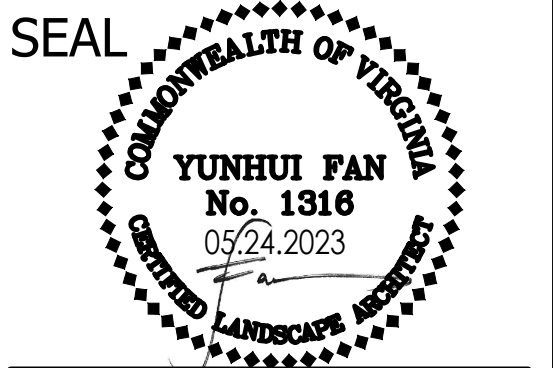
2 BOARDWALK AT COTTONWOOD TREE
1/2" = 1'-0"

- HELICAL PIER NOTES:
1. PREPARE SHOP DRAWINGS FOR STRUCTURAL APPROVAL.
 2. VERIFY CONDITION IN FIELD PRIOR TO INSTALL.
 - A. USE A SUPERSONIC AIR TOOL (SSAT) TO EXPOSE ROOTS FOR EXCAVATION. HAND TRIM OR PUSH ROOTS WHERE NEEDED. CONTACT URBAN FORESTRY BEFORE CUTTING ANY ROOTS LARGER THAN 1" (703-228-7980).
 - B. IF UNDERGROUND OBSTRUCTIONS ARE ENCOUNTERED DURING INSTALLATION, THE CONTRACTOR SHALL RELOCATE THE PILE WITH THE APPROVAL OF DES AND THE URBAN FORESTER.
 3. STAGE EXCAVATOR IN ROADWAY NEXT TO CURB. IF ROAD STAGING NOT AVAILABLE, USE TEMPORARY ROOT PROTECTION MATING PER ARLINGTON DETAIL (311300.7NS). INSTALLATION TO BE APPROVED BY ARLINGTON URBAN FORESTER.
 4. INSTALL PER MANUFACTURER'S SPECIFICATIONS
 5. PROVIDE RECORD DRAWING OF PIER LAYOUT
- BOARDWALK AND DECKING NOTES:
1. PROVIDE SHOP DRAWINGS FOR: BOARDWALK LAYOUT, DIMENSIONS, FASTENERS, TOE KICK, AND RAILING.
 2. PRODUCT AND COLOR TO BE SELECTED BY LANDSCAPE ARCHITECT FROM MANUFACTURER'S FULL RANGE.
 3. LUMBER MANUFACTURER QUALIFICATIONS: A QUALIFIED MANUFACTURER THAT IS CERTIFIED FOR CHAIN OF CUSTODY BY AN FSC-ACCREDITED CERTIFICATION BODY
 4. LUMBER VENDOR QUALIFICATIONS: A VENDOR THAT IS CERTIFIED FOR CHAIN OF CUSTODY BY AN FSC-ACCREDITED CERTIFICATION BODY.
 5. FOLLOW ARLINGTON COUNTY SPECIFICATION STANDARDS FOR STRUCTURAL STEEL, RAILING, AND SIGNAGE.
 6. BOARDWALK JOIST AND BEAM DESIGN BY HOLBERT APPLE ASSOCIATES, INC. (301.570.1460)

7 NOTES



DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
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APPROVALS	DATE
QUALITY CONTROL ENGINEER	8/29/2023
CONSTRUCTION MANAGEMENT SUPERVISOR	8/29/2023
WATER, SEWER, STREETS BUREAU CHIEF	8/29/2023
TRAN, Director	8/30/2023
PROJECT MANAGER Anel Yang	3/1/2023

REVISIONS	DATE
100% DESIGN	05/24/2022
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SOUTH EADS STREET
CCL13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.

LANDSCAPE NOTES & DETAILS

DESIGNED: CF
DRAWN: MS
CHECKED: CF

PLOTTED: MAY 24 2023

SCALE:

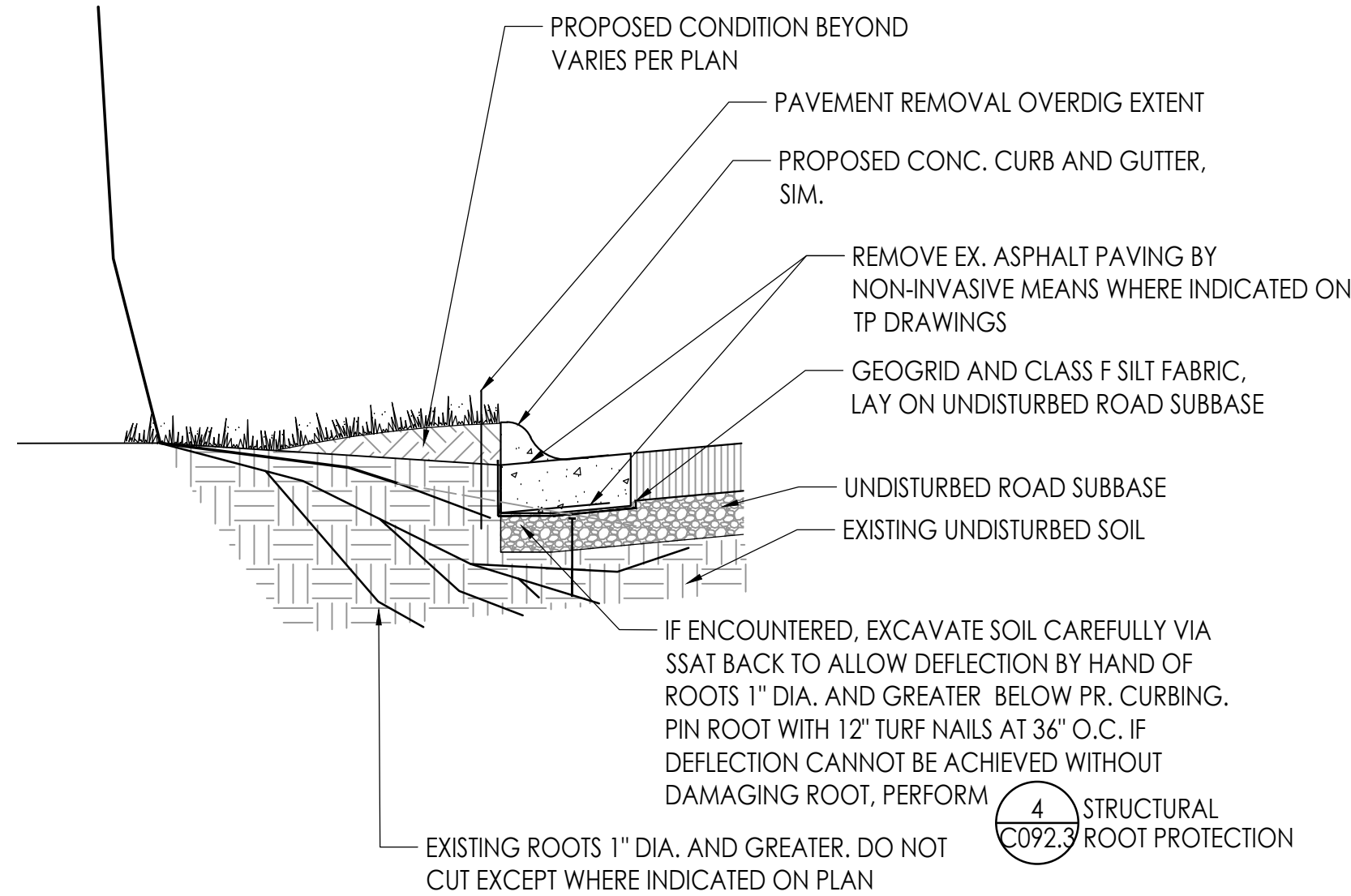
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SOUTH EADS STREET CCL13

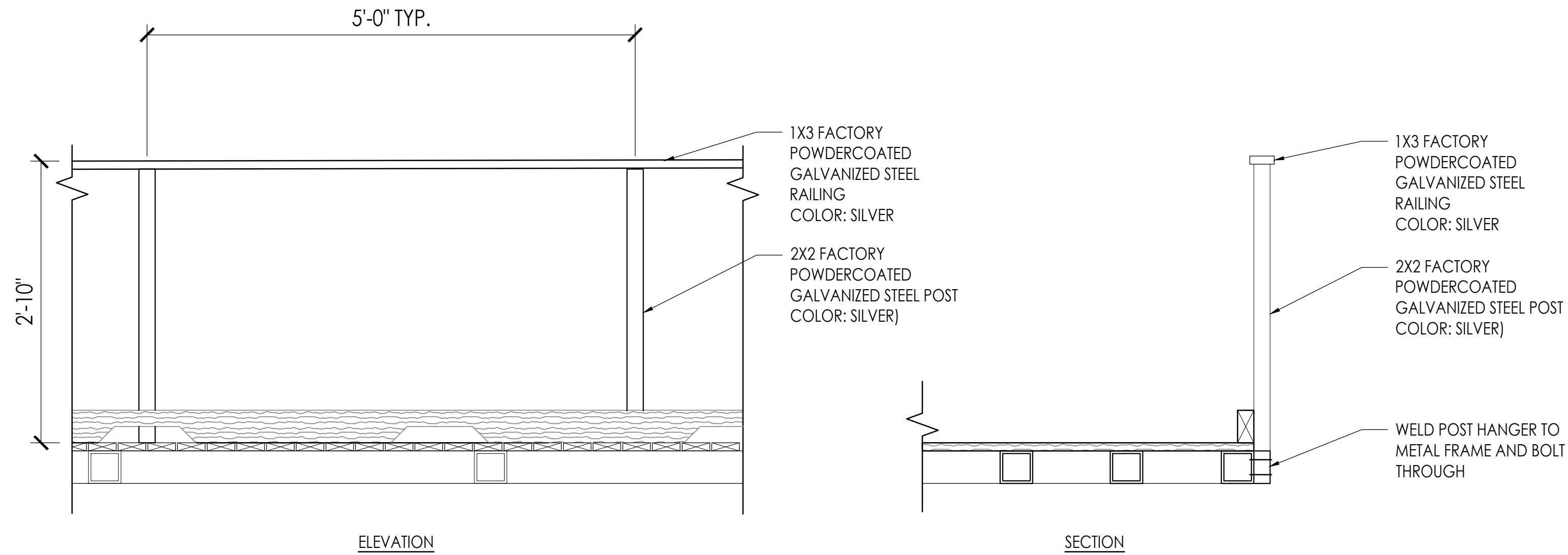
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3 ROOT BRIDGE AT PROPOSED CURB

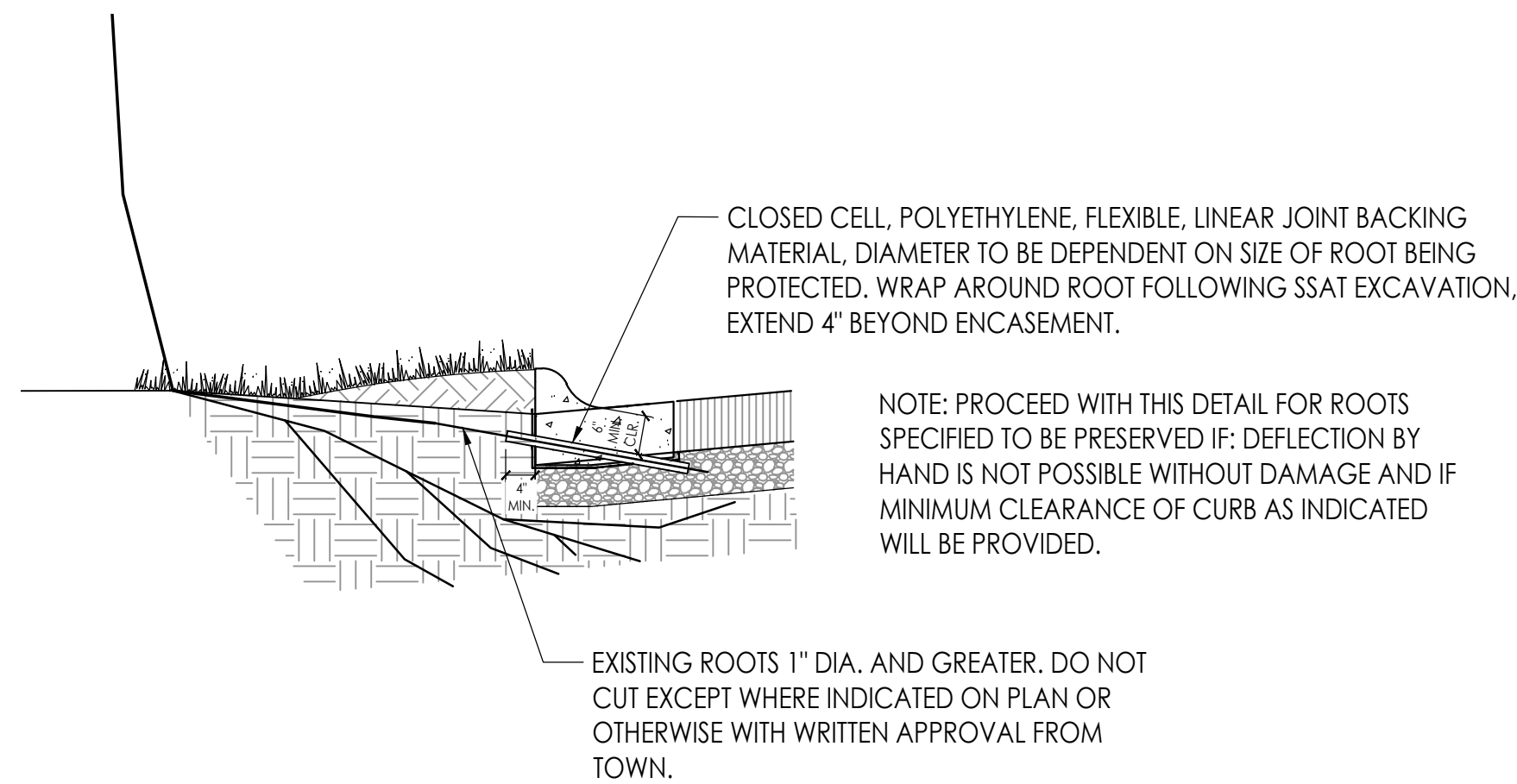
1/2" = 1'-0"



NOTE: FIELD CUTTING AND PAINTING PROHIBITED

1 METAL RAILING

1" = 1'-0"



4 STRUCTURAL ROOT PROTECTION

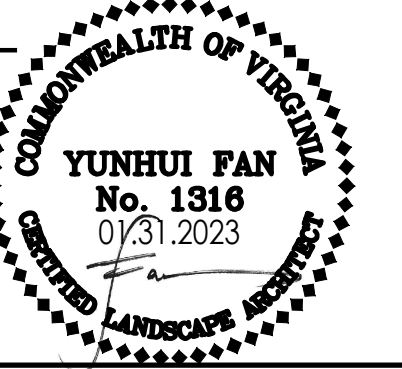
1/2" = 1'-0"



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SEAL



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SOUTH EADS STREET
CC13

BETWEEN ARMY NAVY DR. AND 12TH ST. S.

LANDSCAPE NOTES & DETAILS

DESIGNED: CF
DRAWN: MS
CHECKED: CF

PLOTTED: MAY 24 2023

SCALE:

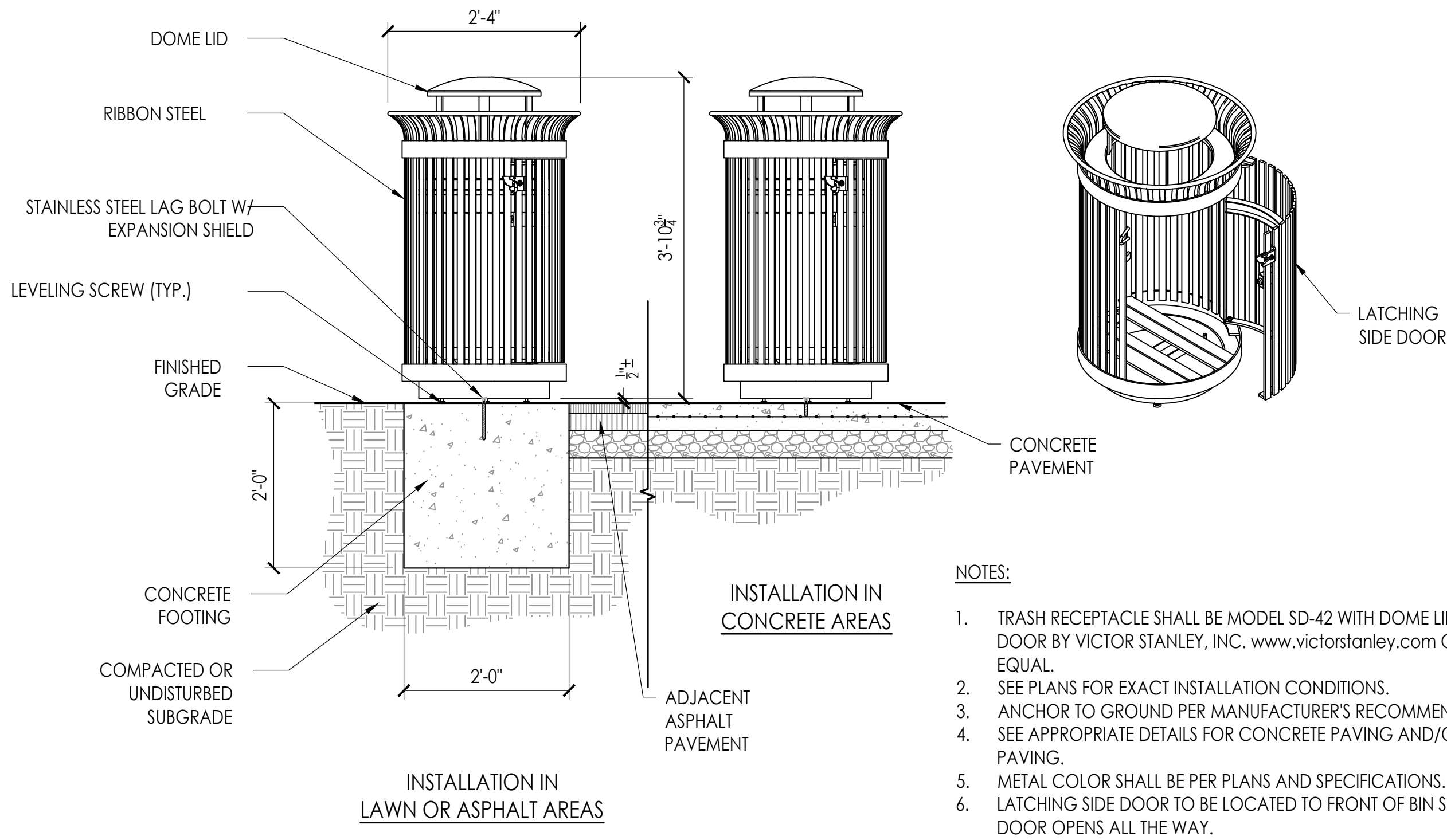
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SOUTH EADS STREET CC13

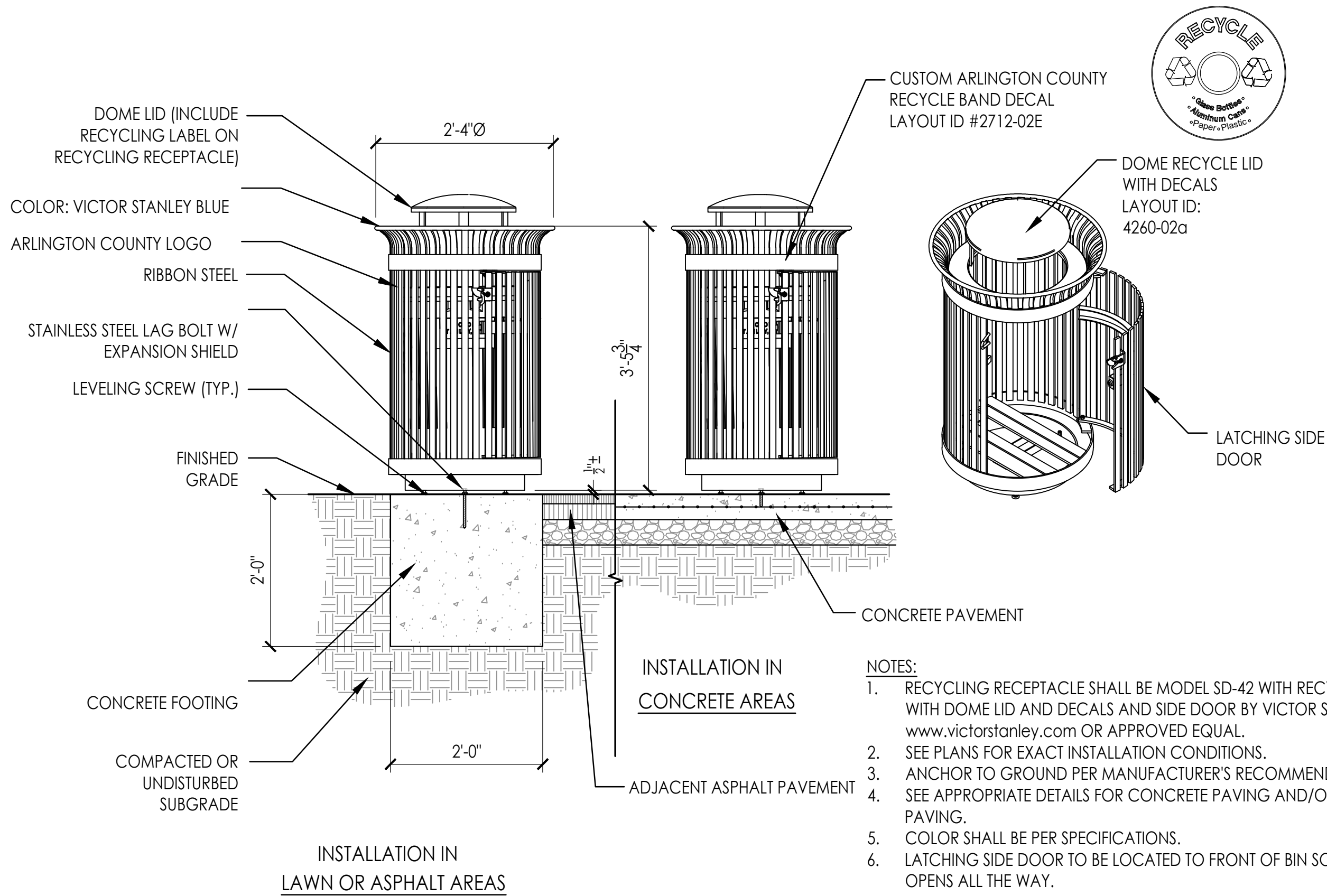
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REVISED ON 01/07/2021



1 TRASH RECEPTACLE

3/4"=1'-0"



2 RECYCLING RECEPTACLE

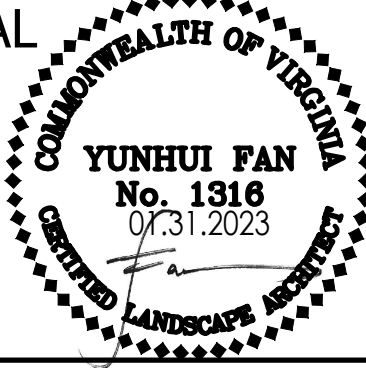
3/4"=1'-0"



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CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.
LANDSCAPE NOTES & DETAILS

DESIGNED: CF
DRAWN: MS
CHECKED: CF

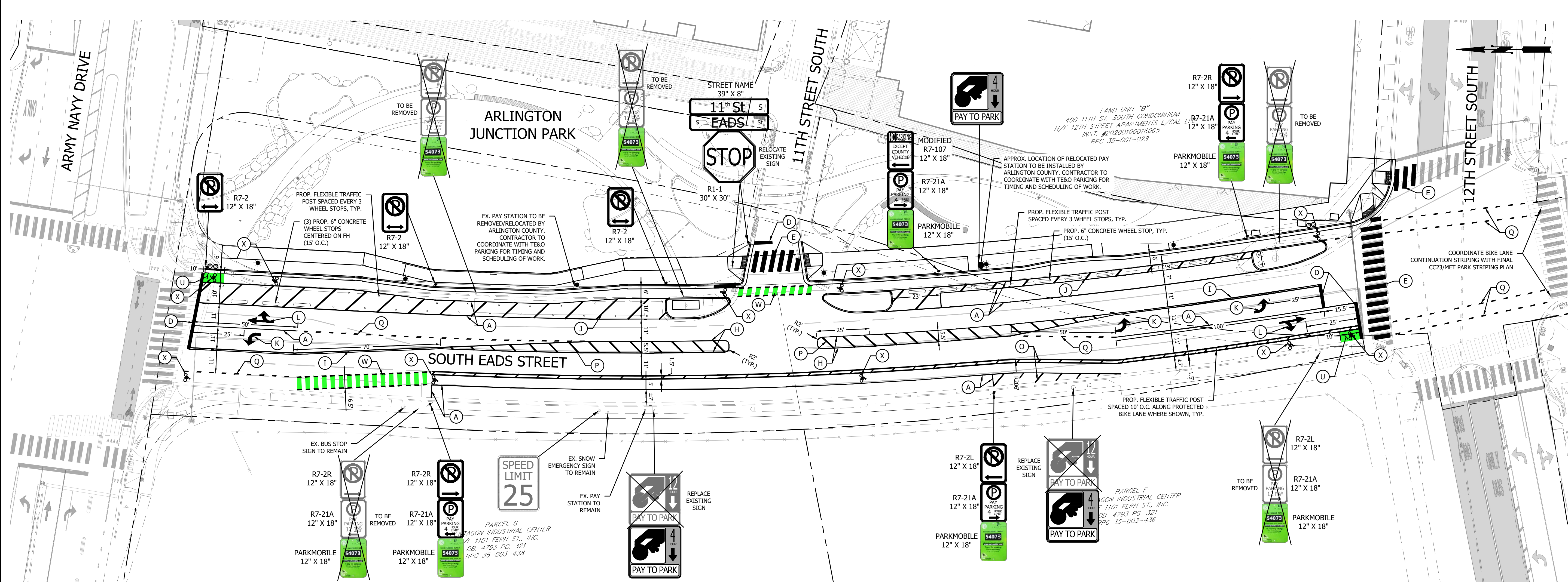
PLOTTED: MAY 24 2023

SCALE:

AS SHOWN

C092.4

SOUTH EADS STREET CC13



NOTE: ARLINGTON JUNCTION PARK ALONG WITH 12TH ST CC16 AND ARMY NAVY DRIVE STRIPING AND IMPROVEMENTS ARE INCLUDED FOR REFERENCE ONLY.

PAVEMENT MARKING NOTES:

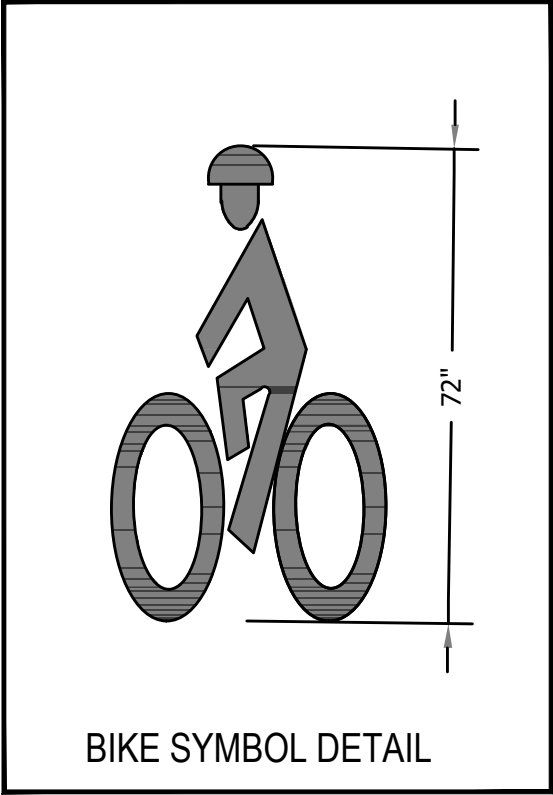
- STREET WIDTH MEASUREMENTS ARE FROM FACE OF CURB TO FACE OF CURB. LANES ARE MEASURED FROM CENTER OF MARKING TO CENTER OF MARKING .
- CONTACT DES-TRANSPORTATION ENGINEERING & OPERATIONS CONSTRUCTION MANAGEMENT SPECIALIST OR HIS DESIGNEE AT 703-228-6598 OR 571-437-1077 TO APPROVE MARKING LAYOUT 48 HOURS PRIOR TO INSTALLATION OF MARKINGS.
- PAVEMENT MARKINGS TO BE IN ACCORDANCE WITH THE FOLLOWING AND ANY REVISIONS HERE TO:
 - THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - ARLINGTON COUNTY MARKING STANDARDS.
- ALL MARKINGS SHALL BE THERMOPLASTIC PER ARLINGTON COUNTY MARKING STANDARDS.
- STOP BARS SHALL BE A MINIMUM OF 4' IN ADVANCE OF A MARKED CROSSWALK. IF THERE IS NO MARKED CROSSWALK, STOP BAR SHALL BE NO MORE THAN 30' FROM THE NEAREST EDGE OF THE INTERSECTED TRAVELED WAY.
- CROSSWALKS SHALL BE 10' WIDE UNLESS OTHERWISE NOTED.
- LEFT TURN ARROWS SHALL BE LOCATED 25' BACK FROM STOP BAR. FOR ADDITIONAL ARROWS FOLLOW COUNTY MARKING STANDARDS.
- ON-STREET PARKING LANE IS 7' WIDE (UNLESS OTHERWISE NOTED) AND MARKED WITH 4" WIDE WHITE LINES. BEGINNING AND END OF PARKING SHALL BE MARKED WITH AN END LINE PERPENDICULAR TO CURB EXCEPT AT NUBS OR WHERE OTHERWISE INDICATED.
- SHARED LANE MARKINGS SHALL BE PLACED IN CENTER OF LANE, 250' APART UNLESS OTHERWISE SPECIFIED.
- BIKE LANE SYMBOLS TO BE PLACED 330' APART UNLESS OTHERWISE SPECIFIED.
- EDGE LINES ARE ONLY REQUIRED WHERE SHOWN ON THE PLANS.
- FOR DETAILS SEE ARLINGTON COUNTY PAVEMENT MARKING SPECIFICATION, DETAILS MK-1 TO MK-12

SIGN NOTES:

- FOR ALL SIGN POSTS PLACED IN CONCRETE USE 7 GAUGE HEAVY DUTY ANCHOR (30"x2.50") WITH HARDWARE FOR 2" POST. USE $\frac{1}{2}$ " CORNER BOLT WITH FLANGED NUT AND $\frac{3}{8}$ " DRIVER RIVET WITH WASHER.
- CONTACT T&O CONSTRUCTION MANAGER OR HIS DESIGNEE AT 703-228-6598 OR 571-437-1077 48 HRS PRIOR TO POURING CONCRETE. ALTERNATIVE CONTACT AT 703-228-3788 OR 571-414-7497.
- EXISTING VDOT E-Z PASS LANE SIGN LOCATED AT 12TH STREET SOUTH AND SOUTH EADS STREET TO BE RELOCATED (SEE PLAN SHEET C101.2 FOR DETAILS) AND INSTALLED PER VDOT STANDARDS AND SPECIFICATIONS, INCLUDING PLAN AND SPECIAL PROVISIONS OF THE ORIGINAL DESIGN PLANS FOR VDOT PROJECT #0395-96A-301.

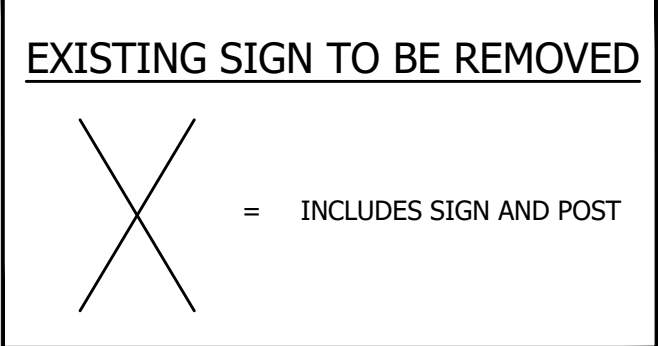
STANDARD PAVEMENT MARKING LEGEND

(A)	TYPE B CLASS 1	WHITE 4" WIDTH	PARKING LANES, EDGE LINES, LANE LINES
(B)	TYPE B CLASS 1	WHITE 4" WIDTH, 10' LONG, 30' SPACING	DASHED LANE LINES
(C)	TYPE B CLASS 1	WHITE 4" WIDTH, 2' LONG 10' SPACING	LANE TRANSITIONS, TURN LANE SKIPS
(D)	TYPE B CLASS 1	WHITE 18" WIDTH	STOP BARS
(E)	TYPE B CLASS 1	WHITE 24" WIDTH	CONTINENTAL CROSS WALKS
(F)	TYPE B CLASS 1	WHITE 6" WIDTH	TURN LANES, TRANSVERSE CROSS WALKS, BIKE LANES
(G)	TYPE B CLASS 1	YELLOW 4" WIDTH, 10' LONG, 30' SPACING	DIVIDED TRAFFIC, TWO WAY TURN LANES
(H)	TYPE B CLASS 1	YELLOW 4" WIDTH	EDGE LINES
(I)	TYPE B CLASS 1	YELLOW 4" WIDTH, DOUBLE LINE, 4" SPACING	CENTERLINES
(J)	TYPE B CLASS 1	WHITE 8" WIDTH, 15' SPACING @45 DEGREE	HATCH LINES, SAFETY ZONES
(K)	TYPE B CLASS 1	WHITE SINGLE ARROW	TURN LANES
(L)	TYPE B CLASS 1	WHITE COMBINATION ARROW	TURN LANES
(M)	TYPE B CLASS 1	WHITE 8" LETTERS	PAVEMENT LETTERS (STOP, YIELD, BUS, ONLY, etc.)
(N)	TYPE B CLASS 1	WHITE 6" WIDTH, 2' LONG, 10' SPACING	LANE TRANSITIONS, TURN LANE SKIPS
(O)	TYPE B CLASS 1	WHITE 6" WIDTH, 10' SPACING @45 DEGREE	GORE MARKINGS
(P)	TYPE B CLASS 1	YELLOW 8" WIDTH, 10' SPACING @45 DEGREE	GORE MARKINGS
(Q)	TYPE B CLASS 1	WHITE 6" WIDTH, 2' LONG, 4' SPACING	LANE TRANSITIONS
(R)	TYPE B CLASS 1	WHITE 4" WIDTH, DOUBLE LINE, 4' SPACING	CURB EXTENSIONS
(S)	TYPE B CLASS 1	WHITE 24" WIDTH	VDOT - STOP BARS
(T)	TYPE B CLASS 1	YELLOW 6" WIDTH, 2' LONG, 4' SPACING	LANE TRANSITIONS
(U)	MMA	GREEN	GREEN BICYCLE CROSSING AREA
(V)	TYPE B CLASS 1	WHITE ARROW	THRU LANES
(W)	MMA	GREEN CROSSWALK	BIKE LANE CROSSWALK (SEE DETAIL, THIS SHEET)
(X)	TYPE B CLASS 1	BIKE SYMBOL	BIKE SYMBOL (SEE DETAIL, THIS SHEET)
(Y)	TYPE B CLASS 1	RED	BUS LANE



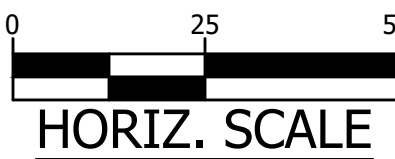
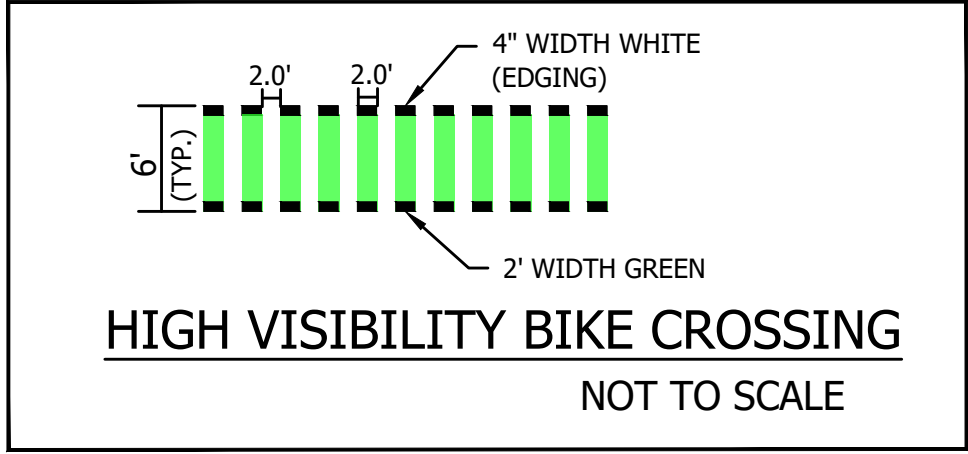
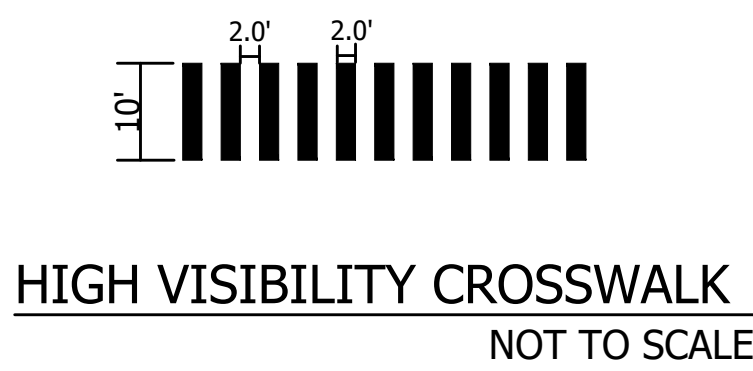
LEGEND

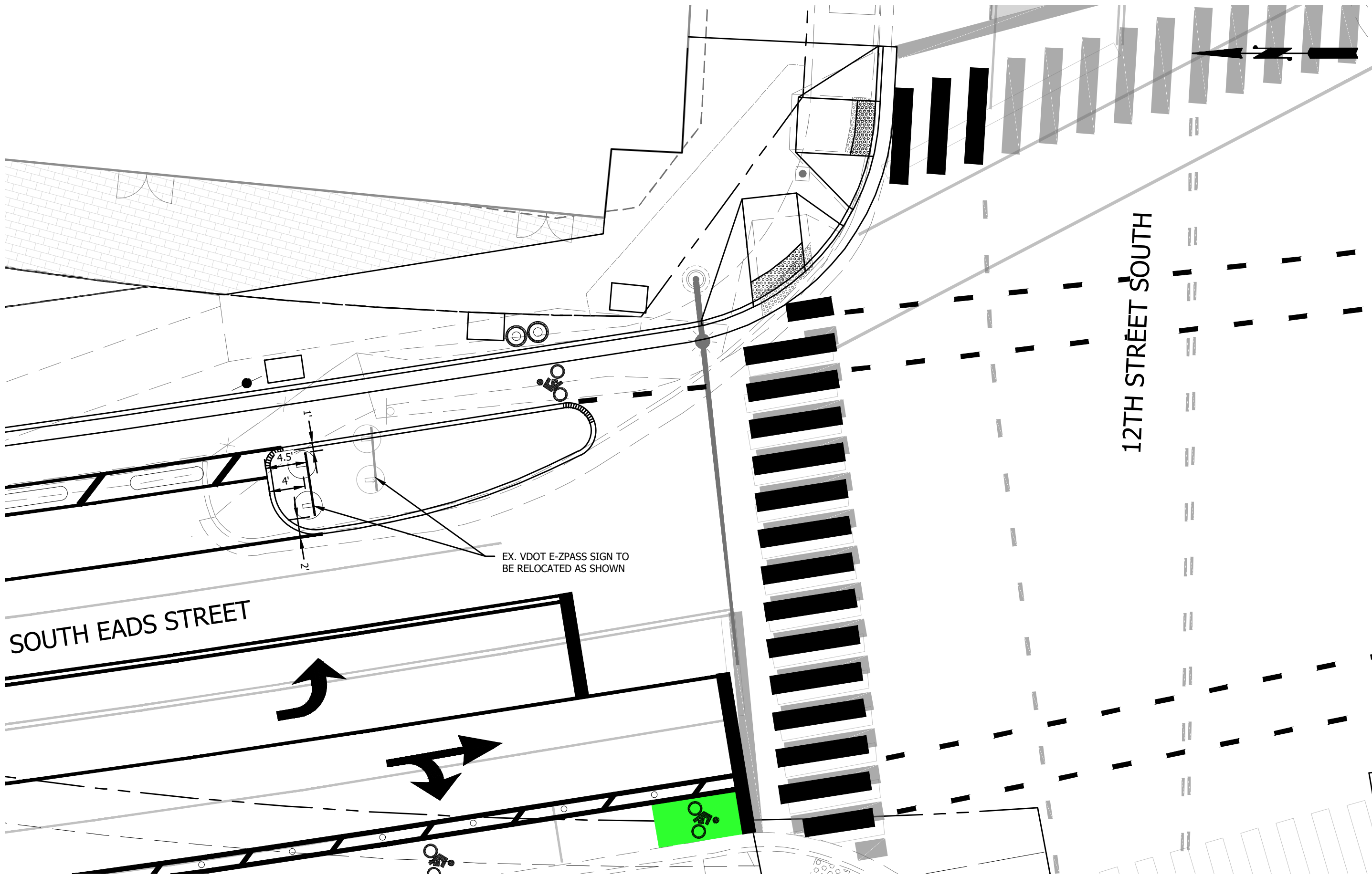
EXISTING		PROPOSED	
	BUS STOP		
	FIRE HYDRANT		
	PARKING METER		
	SIGN		



STRIPING LEGEND

(A)	EXISTING STRIPING
(A)	PROPOSED STRIPING





TEXT NO.	SIGN NO.	TEXT	STD. NO.	SIGN ASSEMBLY COMPONENTS		QUANTITY	SIGN PANEL AREA (SF)		SIGN STRUCT. STD.	REMARKS
				W	H		PER ASSEMBLY	ALL ASSEMBLIES		
29	185		NONE	7'-0"	11'-6"	1	80.5	80.5	SSP-VIA TYPE S MODIFIED	FDN: 3'-0" DIA. x 7'-0" DEPTH STD., VOL. II, PG. 1323.13 (POST SPACING REDUCED TO ACCOMMODATE SIGN WIDTH)

*NOTE: CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SHOP DRAWINGS TO ARLINGTON COUNTY AND VDOT FOR APPROVAL. CONTRACTOR SHALL PROVIDE SIGN POST AND FOUNDATION DESIGN PER LATEST VDOT STANDARDS AND SPECIFICATIONS, AS WELL AS THE SPECIAL PROVISIONS FOR DESIGN AND LAYOUT SHOWN ON THIS PLAN (ABOVE). ALL SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A VIRGINIA LICENSED PROFESSIONAL STRUCTURAL ENGINEER.

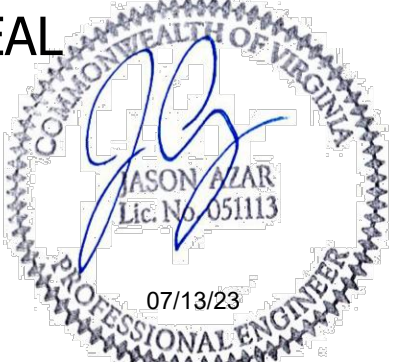


ARLINGTON VIRGINIA

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SEAL



APPROVALS

DATE

DESIGN TEAM ENGINEER SUPERVISOR

8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR

8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF

8/29/2023

TRANSPORTATION DIRECTOR

8/30/2023

PROJECT MANAGER

8/1/2023

REVISIONS	DATE
LDA #4 SUBMISSION	07/13/2023
100% DESIGN	05/24/2023
LDA#3 SUBMISSION	01/31/2023
LDA#2 SUBMISSION	06/23/2022
100% SUBMISSION	06/21/2022
LDA SUBMISSION	04/19/2022
30% SUBMISSION	12/23/2021

SOUTH EADS STREET
CC13

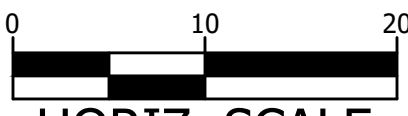
BETWEEN ARMY NAVY DR. AND 12TH ST. S.

VDOT E-ZPASS SIGN RELOCATION PLAN

DESIGNED: ME
DRAWN: MS
CHECKED: JA

PLOTTED: JULY 13 2023

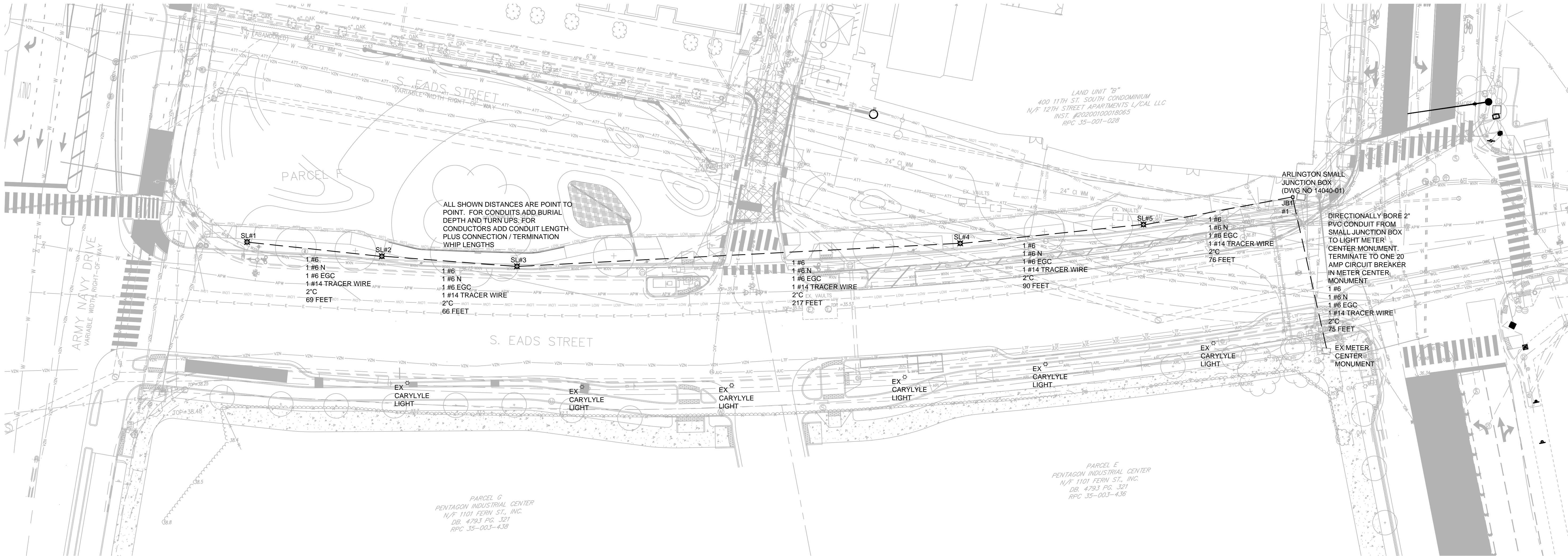
SCALE:



HORIZ. SCALE

REVISED ON 1/24/2022

FILENAME: E5001.DWG PATH: C:\USERS\JOE.DROPOBOX\DIAMONDBACK ENGINEERING\2022_1065\0015 CAA S EADS ROADWAY IMPROVEMENTS\DWG\DWG ARLINGTON STREET LIGHTS PLOTTED BY: [XXXXXXXXXX]



CONSTRUCTION NOTES AND LEGENDS:

- SL #

CONTRACTOR SHALL FURNISH AND INSTALL LED SINGLE POST-TOP LUMINAIRE FIXTURE ON 16\"/>
- JB

CONTRACTOR SHALL INSTALL JUNCTION BOX PER AC LIGHTING SPECIFICATION SECTION: JUNCTION BOXES AND LIGHTING STANDARDS DRAWING
JB1 - SMALL JUNCTION BOX (DRAWING NO. 14040-01)
JB2 - LARGE JUNCTION BOX (DRAWING NO. 14040-02)
- 1C

CONTRACTOR SHALL FURNISH AND INSTALL 1 - 2\"/>

STREETLIGHT CONTROL TABLE

STREETLIGHT CONTROL				
SL #	POLE ID	STATION (12th Street S.)	OFFSET (± POLE)	TYPE
SL#1	-	0+77.04	-36.89'	SINGLE CARLYLE
SL#2	-	1+43.61	-33.01'	SINGLE CARLYLE
SL#3	-	2+10.23	-30.21'	SINGLE CARLYLE
SL#4	-	4+30.63	-34.55'	SINGLE CARLYLE
SL#5	-	5+22.16	-33.87'	SINGLE CARLYLE

STREETLIGHT JUNCTION BOXES CONTROL TABLE

STREETLIGHT CONTROL				
JB #	JUNCTION BOX ID	STATION (12th Street S.)	OFFSET (CENTER JUNCTION BOX)	TYPE
JB1 #1		5+85.49	-35.11'	SMALL JUNCTION BOX

STREET LIGHT VOLTAGE DROP CALCULATION

5% MAXIMUM VOLTAGE DROP AT THE FURTHEST POLE

STREET LIGHT TYPES
5 SINGLE CARLYLE - 69W GX4 TYPE V 4000 LED
0.58 AMPS EACH AT 120V AND 0.9 POWER FACTOR

#6 AWG COPPER CONDUCTOR XHHN / XHHW-2 INSULATION
20 FEET ADDED TO PLAN LENGTHS FOR CONDUIT TURNUPS AND CONNECTION WHIP LENGTHS

VOLTAGE DROP FROM SL#1 TO METER CENTER ON 12TH ST
POLES SL#1, SL#2, SL#3, SL#4, SL#5 TO METER CENTER

FROM	TO	CIRCUIT LENGTH	WIRE	QUANTITY OF LIGHTS	AMPERES THRU CIRCUIT	VOLTAGE DROP %
SL#1	SL#2	89	#6	1	0.58	0.04
SL#2	SL#3	89	#6	2	1.16	0.08
SL#3	SL#4	237	#6	3	1.74	0.32
SL#4	SL#5	110	#6	4	2.32	0.20
SL#5	METER	191	#6	5	2.90	0.43
TOTAL VD % =						1.07
VOLTAGE DROP =						1.3

CC16 - 12TH STREET SOUTH - CONNECT TO EXISTING 200 AMP MONUMENT METER CENTER 20-AMP CIRCUIT BREAKER
CARLYLE STREET LIGHT - 69W EACH, 0.58 AMPS AT 120V

CIRCUIT NUMBER	CONDUCTORS XHHN / XHHW-2	INSULATION COLOR	STREET LIGHTS SERVED	CONNECTED LOAD		VOLTS	POLES	CIRCUIT BREAKER	REMARKS
				WATTS	AMPS				
CKT-1	TWO #6 AWG CU	BLACK OR RED, WHITE	SL#1, SL#2, SL#3, SL#4, SL#5	345	2.88	120	1	20A	CONNECT TO EXISTING MIDWEST ELECTRIC PRODUCT PEDESTAL METER LOAD CENTER 20A CIRCUIT BREAKER
CKT-1 EGC	ONE #6 AWG CU EGC	GREEN	SL#1, SL#2, SL#3, SL#4, SL#5	NA	NA	NA	NA	NA	BOND TO EQUIPMENT GROUND BUS IN PEDESTAL METER CENTER LOAD CENTER

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SEAL

APPROVALS

DATE

DESIGN TEAM ENGINEER SUPERVISOR

8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR

8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF

8/29/2023

TRANSPORTATION DIRECTOR

8/30/2023

PROJECT MANAGER

8/18/2023

REVISIONS

DATE

BUILDING PERMIT

01/20/2023

LDA#2 SUBMISSION

06/23/2022

100% SUBMISSION

06/21/2022

LDA SUBMISSION

04/19/2022

90% SUBMISSION

03/30/2022

30% RESUBMISSION

02/11/2022

30% SUBMISSION

12/23/2021

SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.

STREETLIGHT PLAN

DESIGNED: [CMR]

DRAWN: [CMR]

CHECKED: JA CMR

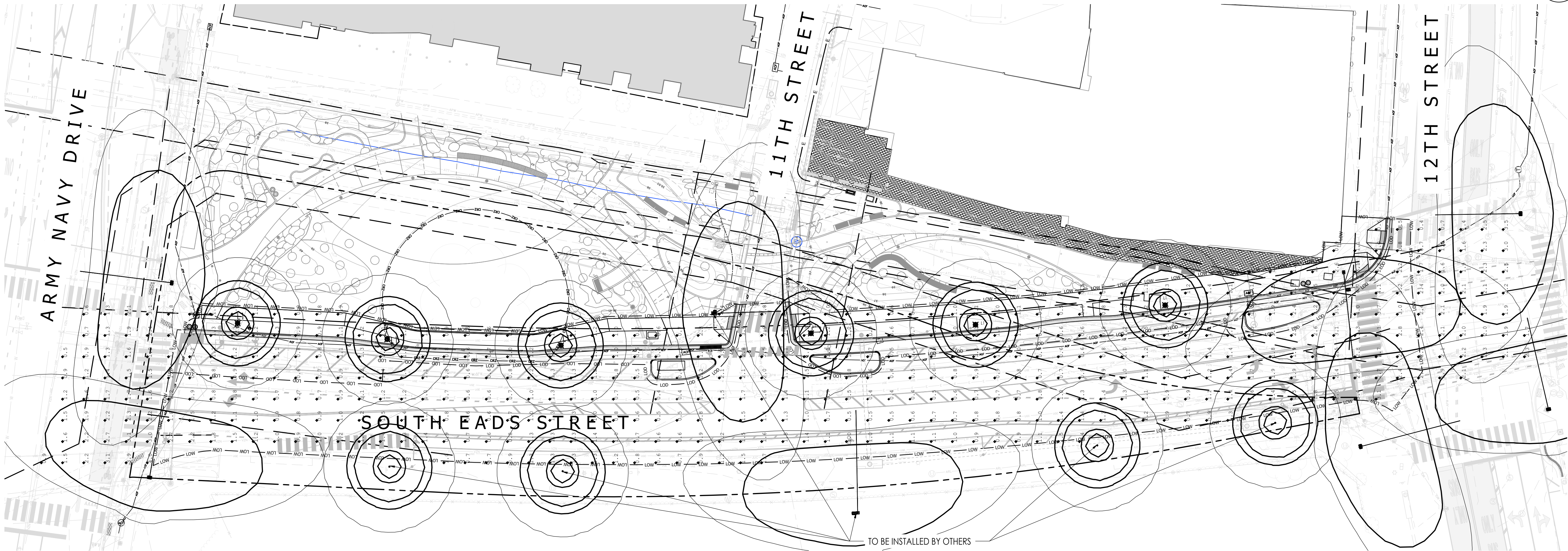
PLOTTED: JANUARY 12 2023

SCALE:

0 25 50

HORIZ. SCALE

FILENAME: C111.2_SES - PHOTOMETRIC 1 WITH PARK LIGHTS OFF.DWG PATH: G:\2016\16128.13 - S. EADS STREET FINAL DESIGN PLANS\01 CADD\DCS PLOTTED BY: JCHEN
REVISED ON 01/07/2021



AREA	ILLUMINANCE LEVEL		MAX FC	MIN FC	RATIO	
	TARGET	AVERAGE			TARGET	AVG/MIN
SOUTH EADS STREET BETWEEN ARMY NAVY DRIVE AND 12TH STREET	0.70	1.39	4.70	0.40	4	3.48

1 ILLUMINANCE CALCULATION SUMMARY TABLE

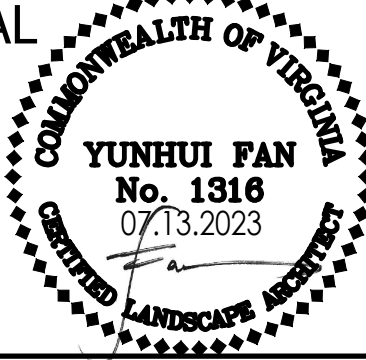
- GENERAL NOTES:
1. SOUTH EADS STREET BETWEEN ARMY NAVY DRIVE AND 12TH STREET IS CLASSIFIED AS AN ARTERIAL RESIDENTIAL (MINOR ARTERIAL) STREET BY THE ARLINGTON COUNTY STREET FUNCTIONAL CLASSIFICATION MAP. AASHTO PHOTOMETRIC STANDARDS WERE MET BASED ON THE ARTERIAL RESIDENTIAL STREET FUNCTIONAL CLASSIFICATION.
 2. LIGHTING ALONG THE PROJECT SITE SHALL BE MAINTAINED AT ALL TIMES. NO DISCONNECT OF EXISTING POWER OR REMOVAL OF EXISTING STREETLIGHTS SHALL TAKE PLACE UNTIL THE PROP. STREETLIGHTS ARE IN PLACE AND OPERATIONAL. USED OF TEMPORARY LIGHTING SHALL BE CONSIDERED AS INCIDENTAL TO THE PROJECT.
 3. THIS STUDY WAS PREPARED BY LSG LANDSCAPE ARCHITECTURE AND IS NOT A SUBSTITUTE FOR AN INDEPENDENT LIGHTING ANALYSIS AND TESTING FOR LIGHTING SAFETY AND SUITABILITY.
 4. LSG LANDSCAPE ARCHITECTURE CANNOT BE HELD RESPONSIBLE FOR VARIATIONS IN ACTUAL SITE CONDITIONS WHICH MAY CAUSE VARIATIONS FROM THE CALCULATED OUTPUT.
 5. CONTRACTOR SHALL USE AIR EXCAVATION FOR DISTURBANCE WITHIN THE CRITICAL ROOT ZONE OF THE COTTON WOOD TREE. A CERTIFIED ARBORIST SHALL PERFORM THIS WORK TO MAKE SURE THE TREE ROOTS ARE PROTECTED AS BEST AS POSSIBLE WHILE CONSTRUCTION COMMENCES. ROOT PRUNING SHALL BE DONE PER ARLINGTON COUNTY DETAIL 311300.5 AND DETAIL SHOWN ON PLANS. PRIOR TO CUTTING ROOTS, CONTACT ARLINGTON COUNTY URBAN FORESTOR.
 6. ALL CONDUIT SHALL BE DIRECTION BORE WITHIN THE CRITICAL ROOT ZONE OF THE COTTONWOOD TREE. BURROW PITS SHALL BE LOCATED OUTSIDE THE CRITICAL ROOT ZONE.



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SEAL



APPROVALS	DATE
QUALITY CONTROL ENGINEER	8/29/2023
CONSTRUCTION MANAGEMENT SUPERVISOR	8/29/2023
WATER, SEWER, STREETS BUREAU CHIEF	8/29/2023
TRAN, DIRECTOR	8/30/2023
PROJECT MANAGER Anel Yang	3/1/2023

REVISIONS	DATE
LDA #4 SUBMISSION	07/13/2023
100% DESIGN	05/24/2023
LDA#3 SUBMISSION	01/31/2023
LDA#2 SUBMISSION	06/23/2022
100% SUBMISSION	06/21/2022
LDA SUBMISSION	04/19/2022
30% SUBMISSION	12/23/2021

SOUTH EADS STREET
CCL3

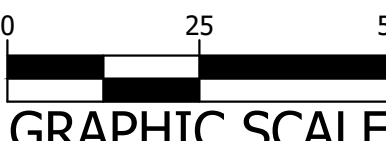
BETWEEN ARMY NAVY DR. AND 12TH ST. S.

STREETLIGHT PLAN - PHOTOMETRICS

DESIGNED: CF
DRAWN: MS
CHECKED: CF

PLOTTED: JULY 13 2023

SCALE:



GRAPHIC SCALE

TRANSPORTATION MANAGEMENT PLAN (TMP)
(TYPE B - CATEGORY IV)
TEMPORARY TRAFFIC CONTROL PLAN

MAINTENANCE OF TRAFFIC GENERAL NOTES

- UNLESS OTHERWISE APPROVED OR DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PLAN AND EXECUTE THE WORK IN ACCORDANCE WITH THE FOLLOWING:
- THE CONTRACTOR SHALL FOLLOW THE MAINTENANCE OF TRAFFIC (M.O.T.) REQUIREMENTS SET FORTH IN THIS PLAN. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH RELEVANT STANDARDS AND GUIDELINES AS SET FORTH IN THE LATEST ADOPTED VERSIONS OF THE FOLLOWING:

2011 VIRGINIA WORK AREA PROTECTION MANUAL (REVISION 2.1 - NOVEMBER 1, 2020)
2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) (REVISION 1 AND 2)
2011 VIRGINIA SUPPLEMENT TO 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) (REVISION 1)
2016 VDOT ROAD AND BRIDGE STANDARDS
2020 VDOT ROAD AND BRIDGE SPECIFICATIONS
2016 VDOT LANE CLOSURE GUIDELINES FOR NORTHERN VIRGINIA (SEPTEMBER 21, 2016)
2016 VDOT WORK ZONE PEDESTRIAN AND BICYCLE GUIDANCE (JANUARY 2016)
2020 ARLINGTON COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS (SEPTEMBER 2020, UPDATE #1 FEBRUARY 2023)
 - ACCESS TO ALL ROADWAYS, DRIVEWAYS AND PROPERTIES SHALL BE MAINTAINED AND PROVIDED AT ALL TIMES.
 - PAVING DURING CONSTRUCTION PHASES SHALL BE CARRIED THROUGH BASE COURSE. FINAL SURFACE COURSE SHALL BE PLACED ONLY AFTER SUBSTANTIAL COMPLETION OF MAJOR PHASES.
 - CONSTRUCTION SIGNS ARE TO BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 512 OF THE 2016 VDOT ROAD AND BRIDGE SPECIFICATIONS.
 - ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE PROMPTLY REMOVED AT THE COMPLETION OF WORK.
 - ALL TEMPORARY CONSTRUCTION PAVEMENT MARKING SHALL BE TYPE D, CLASS II.
 - REMOVAL OF EXISTING PAVEMENT MARKING SHALL BE ACCORDING TO SECTION 512.03 (J) OF THE 2016 VDOT ROAD AND BRIDGE SPECIFICATIONS.
 - THE CONTRACTOR IS REQUIRED TO MEET ALL OF THE DROP-OFF REQUIREMENTS SHOWN IN FIGURE 2 OF APPENDIX A OF THE VIRGINIA WORK AREA PROTECTION MANUAL. COST OF PLACING AND REMOVING THE WEDGE IS CONSIDERED INCIDENTAL.
 - ALL NEW AND TEMPORARY PAVEMENT MARKINGS SHALL TIE INTO THE EXISTING PAVEMENT MARKINGS AT TIE-IN POINTS. ALL OTHER CONFLICTING PAVEMENT MARKINGS SHALL BE ERADICATED.
 - THE ALLOWABLE LANE CLOSURE HOURS SHALL BE IN ACCORDANCE WITH TABLE 1 SHOWN ON SHEET C120.2. THE CONTRACTOR WILL NOT BE ALLOWED TO PERFORM ANY LANE CLOSURES DURING PEAK HOURS. ALL TEMPORARY LANE CLOSURES MUST CONFORM TO THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL STANDARDS.
 - UNLESS PREAPPROVED OR OTHERWISE NOTED, ALLOWABLE HOURS FOR ALL LANE AND SHOULDER CLOSURES SHALL BE IN ACCORDANCE WITH THE INFORMATION SHOWN ON TABLE 1 ON SHEET C120.2, AND THE LANE CLOSURES IN NOVA DISTRICT MEMORANDUM, DATED SEPTEMBER 29, 2016.
 - ANY REQUEST FOR DEVIATION FROM THE ALLOWABLE LANE CLOSURE HOURS MUST BE SUBMITTED TO VDOT AND ARLINGTON COUNTY FOR REVIEW A MINIMUM OF FOURTEEN (14) DAYS IN ADVANCE OF WORK.
 - LANE AND SHOULDER CLOSURE HOURS OF OPERATION MAY BE ADJUSTED BY VDOT AND ARLINGTON COUNTY DURING THE CONTRACT AT ANY TIME, AS NECESSARY, IF HEAVY VOLUME OR SIGNIFICANT QUEUING ROUTINELY DEVELOP AS A RESULT OF THE PROJECT.
 - WHEN SHOULDER CLOSURES WITH BARRIER OPERATIONS ARE PERFORMED THE CONTRACTOR MUST CONFORM TO 2011 VIRGINIA WORK AREA PROTECTION MANUAL TTC-7.1 STANDARD. BARRIER MUST INCLUDE PANELS, DELINEATORS AND LIGHTS IN ACCORDANCE WITH TTC-7.1.
 - TEMPORARY CONNECTIONS AND PHASED CONSTRUCTION SHALL BE CONSTRUCTED AND COMPLETED IN A MANNER WHICH WILL MINIMIZE DISRUPTION OF TRAFFIC.
 - PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE INSTALLED BY THE CONTRACTOR AS NECESSARY FOR EACH PHASE. THE MESSAGES ON THE PCMS SHALL BE DISPLAYED UPON APPROVAL FROM VDOT AND ARLINGTON COUNTY ENGINEER. THE FIRST MESSAGE SHALL BE DISPLAYED THREE (3) WEEKS PRIOR TO THE BEGINNING OF CONSTRUCTION TO NOTIFY THE PUBLIC OF THE DATE CONSTRUCTION WILL BEGIN. ANY CHANGE OF TRAFFIC PATTERNS MUST ALSO BE COMMUNICATED VIA PCMS THREE (3) WEEKS PRIOR TO THE START OF THOSE CHANGES.
 - AS DETAILED IN SECTION 105.14(b) OF THE 2020 ROAD AND BRIDGE SPECIFICATIONS, REMOVAL OF SNOW AND CONTROL OF ICE ON ROADS OPEN TO PUBLIC TRAVEL WILL BE PERFORMED BY VDOT FOR VDOT ROADWAYS. FOR COUNTY ROADS, THE OPERATION WILL BE PERFORMED BY THE ARLINGTON COUNTY.
 - THE CONTRACTOR MUST NOTIFY AND/OR COORDINATE WITH THE VARIOUS LOCAL AREA EMERGENCY SERVICES (AND SCHOOLS, DEPENDING ON TIME OF YEAR) OF ALL CLOSURES, TIMES AND ANY DETOUR ROUTES FOR SITUATIONAL AWARENESS.
 - CONTRACTOR SHALL ONLY REFER TO AND FOLLOW THE SOC SHOWN ON THIS PLAN. ANY DEVIATION FROM THE SOC SHALL BE REVIEWED AND APPROVED BY THE ENGINEER.
 - CONTRACTOR SHALL BE RESPONSIBLE OF INSTALLING APPLICABLE WORK ZONE SIGNS PER VA WAPM TTC 35.1 AND 36.2 FOR ALL SIDEWALK AND CROSSWALK CLOSURES DURING CONSTRUCTION.
 - THE CONTRACTOR SHALL NOT BEGIN ANY LANE AND/OR SHOULDER CLOSURES IF HEAVY TRAFFIC OR SIGNIFICANT QUEUING AND BACKUPS ARE ALREADY PRESENT.
 - THE CONTRACTOR SHALL SUBMIT A DETAILED SCHEDULE WHICH INDICATES START AND FINISH DATES FOR EACH SEGMENT OF THE WORK. THE SCHEDULE SHALL INDICATE THE DURATION OF ALL LANE OR SHOULDER CLOSURES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 3 BUSINESS DAYS IN ADVANCE OF PROCEEDING TO THE NEXT WORK SEGMENT.
 - THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF PARKING RESTRICTION NEEDS A MINIMUM OF 3 BUSINESS DAYS PRIOR TO COMMENCEMENT OF WORK FOR EACH SEGMENT. COUNTY ENGINEER SHALL RESTRICT PARKING BY CONTACTING THE DES-PERMITTING SECTION AT 703-228-4798.
 - DURING CONSTRUCTION, THE CONTRACTOR SHALL EITHER MAINTAIN APPROPRIATE SIGHT DISTANCE TO ALL TRAFFIC SIGNS OR PROVIDE FOR TEMPORARY SIGNAGE OR FLAGGERS TO GUIDE TRAFFIC THROUGH WORK ZONES.
 - THE CONTRACTOR SHALL MINIMIZE THE DURATION OF ANY BLOCKAGE TO PRIVATE ENTRANCES AND DRIVEWAYS. THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF DRIVEWAY CLOSURE FOR APPROVAL BY THE ENGINEER. THE ENGINEER SHALL BE NOTIFIED A MINIMUM OF 3 BUSINESS DAYS IN ADVANCE OF SUCH ACTIVITIES. THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE TEMPORARY CLOSURE OF ACCESS TO THE PROPERTY. THE CONTRACTOR SHALL MAKE ALL PRIVATE ENTRANCES AND DRIVEWAYS ACCESSIBLE AT THE CONCLUSION OF EACH WORKDAY.
 - ANY EXCAVATIONS WHICH ARE SPECIFICALLY APPROVED BY THE ENGINEER TO REMAIN OPEN PAST NORMAL WORKING HOURS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PROTECTED IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL OR AS APPROVED BY THE ENGINEER.
 - PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, INCLUDING ACCESS TO BUS STOP SHELTERS, UNLESS SHOWN OTHERWISE ON THE PLANS.
 - PEDESTRIAN TRAFFIC SHALL BE SEPARATED FROM WORK ZONES WITH APPROPRIATE MEASURES IN ACCORDANCE WITH THE MUTCD.
 - ADEQUATE PROVISIONS FOR PERSONS WITH DISABILITIES SHALL BE PROVIDED AT ALL TIMES PER THE ADA REQUIREMENTS.
 - WHEN NECESSARY, PEDESTRIANS SHALL BE APPROPRIATELY DIRECTED WITH ADVANCED WARNING SIGNS PLACED AT INTERSECTIONS, TO CROSS TO THE OPPOSITE SIDE OF THE ROADWAY IN ORDER TO PREVENT CONFLICT WITH MID-BLOCK WORK SITES.
 - PEDESTRIANS SHALL NOT BE LED INTO CONFLICT WITH WORK SITE EQUIPMENT, OPERATIONS, AND/OR VEHICLES MOVING THROUGH OR AROUND THE WORK SITE.
 - ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED UNOBSTRUCTED AND ACCESSIBLE AT ALL TIMES IN ACCORDANCE WITH SECTIONS 508.5.4 AND 508.5.5 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
 - ACCESS TO BUILDINGS FOR FIREFIGHTING SHALL BE MAINTAINED AT ALL TIMES. EXISTING FIRE APPARATUS ACCESS ROADS (FIRE LANES) SHALL BE KEPT CLEAR OF OBSTRUCTIONS IN ACCORDANCE WITH SECTION 903.4 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE. ACCESS TO CONSTRUCTION SITES SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH SECTION 1410 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.
 - IN THE EVENT THAT EXISTING FIRE DEPARTMENT CONNECTIONS OR FIRE APPARATUS ACCESS ROADS (FIRE LANES) MUST BE OBSTRUCTED TO FACILITATE CONSTRUCTION ACTIVITIES, CONTACT THE ARLINGTON COUNTY FIRE DEPARTMENT, FIRE PREVENTION OFFICE AT 703-228-4644 TO COORDINATE REVIEW AND APPROVAL OF TEMPORARY FIRE DEPARTMENT CONNECTIONS AND/OR FIRE APPARATUS ACCESS ROADS PRIOR TO CREATING THE OBSTRUCTION.
 - THE CONTRACTOR SHALL COORDINATE WITH ARLINGTON COUNTY TRANSIT BUREAU, 703-228-3049, A MINIMUM OF 4 WEEKS PRIOR TO COMMENCEMENT OF WORK IF TRANSIT IS AFFECTED OR IF THERE ARE ANY IMPACTS TO THE TRANSIT STOPS OR ROUTES. ALL TEMPORARY AND FINAL BUS TRAVEL LANES MUST BE A MINIMUM OF 11' WIDE UNLESS SHOWN OTHERWISE ON THE PLANS.
 - AT SIGNALIZED INTERSECTIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING VEHICLE DETECTION AT ALL TIMES DURING THE PROJECT. TRAFFIC SENSORS SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION STATE PRIOR TO THE COMPLETION OF THIS PROJECT. THIS PAY ITEM IS COVERED UNDER THE PROPOSED TRAFFIC SIGNALS WORK.
 - CONTRACTOR SHALL COVER ANY EXISTING TRAFFIC SIGNS WHICH ARE NOT APPLICABLE OR ARE IN CONFLICT WITH THE MOT PLANS.
 - CONTRACTOR SHALL ERADICATE AND RE-STRIPE AS NECESSARY ANY EXISTING PAVEMENT MARKINGS THAT ARE IN CONFLICT WITH OR DO NOT ALIGN WITH THE TEMPORARY PAVEMENT MARKINGS OR NEW TRAFFIC PATTERNS.
 - CONTRACTOR SHALL ERADICATE ALL TEMPORARY PAVEMENT MARKING, INCLUDING TEMPORARY MARKED CROSSWALKS ONCE THE WORK AREA(S) ASSOCIATED WITH THE MARKINGS HAS BEEN COMPLETED.
 - CONTRACTOR SHALL PROVIDE 1 WEEK ADVANCE NOTIFICATION TO THE ARLINGTON COUNTY SIGNAL CONSTRUCTION MANAGER, TRANSPORTATION ENGINEERING AND OPERATION (TE&O) PRIOR TO CHANGING THE MOT PHASES AND/OR STAGES.
 - IF THE CONTRACTOR IS TO DEVIATE FROM THE APPROVED TMP, A NEW OR REVISED TMP MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. MAINTENANCE OF TRAFFIC (MOT) PLAN WHICH INCLUDE THE SEQUENCE OF CONSTRUCTION (SOC) WAS REVIEWED AND APPROVED BY VDOT AND ARLINGTON COUNTY TRANSPORTATION ENGINEERING AND OPERATION (TE&O). THE MOT PLAN CONTAIN TYPES OF SIGNAGES AND BARRICADES USED, AND RECOMMENDED PHASES AND SEQUENCES OF CONSTRUCTION.
 - EACH MOT PHASE AND STAGE OF CONSTRUCTION SHALL BE COMPLETED PRIOR TO THE START OF THE NEXT PHASE/STAGE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

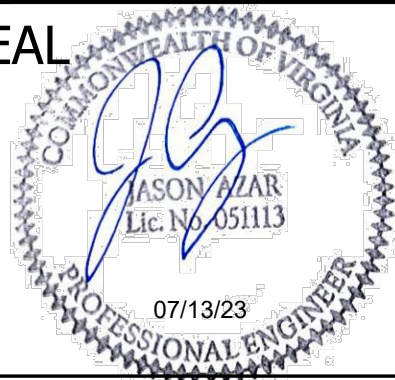
- CONTRACTOR SHALL MAINTAIN A MINIMUM OF SINGLE TRAVEL LANE AT ALL TIMES DURING CONSTRUCTION WITH A MINIMUM CLEAR ROADWAY WIDTH NO LESS THAN THOSE SHOWN ON PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- ALL AREAS EXCAVATED BELOW THE EXISTING PAVEMENT SURFACE AND WITHIN THE CLEAR ZONE AT THE CONCLUSION OF EACH WORKDAY, SHALL BE BACKFILLED UP TO EXISTING PAVEMENT OR NEWLY CONSTRUCTED PAVEMENT SURFACE FOR THE SAFETY AND PROTECTION OF VEHICULAR TRAFFIC. ALL COSTS FOR PLACING, MAINTAINING AND REMOVING BACKFILLED MATERIALS SHALL BE INCLUDED IN THE PRICE BID FOR RELATED ITEMS IN THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FOR THE DURATION OF THE PROJECT. CONTRACTOR SHALL ADD ANY ADDITIONAL TEMPORARY MEASURES NECESSARY TO FACILITATE PROPER, POSITIVE DRAINAGE FOR THE DURATION OF CONSTRUCTION.
- UNLESS SPECIFIED ON THE PLANS, ALL EXISTING TURN LANES SHALL BE MAINTAINED AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION.
- WHERE GROUP 2 CHANNELIZING DEVICES ARE USED TO SEPARATE THE CONSTRUCTION AREA AND TRAFFIC, A MINIMUM CLEAR ZONE AS DEFINED IN THE VA WAPM SHALL BE MAINTAINED.
- ALL WORK AREAS (AND THE LIMITS THEREOF) AND LANE CLOSURES SHALL BE IN ACCORDANCE WITH THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL, (REVISION 2), THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (REVISION 1 AND 2), THE 2016 VDOT ROAD AND BRIDGE SPECIFICATIONS, (REVISION 2), THE 2008 VDOT ROAD AND BRIDGE STANDARDS AND LANE CLOSURES IN NOVA DISTRICT MEMORANDUM (SEPTEMBER 29 2016), AND SHALL BE DIRECTED OR APPROVED BY THE ENGINEER.
- THE FOLLOWING TRAFFIC CONTROL SPECIFICATIONS FROM THE VIRGINIA WORK AREA PROTECTION MANUAL WILL BE USED AS NEEDED: TTCS-4.2, 16.2, 17.2, 28.2, 35.1, 36.2, 53.0, 57.2, 58.1.
- THE STAGING AREA TO STORE EQUIPMENT AND MATERIALS WITHIN THE RIGHT OF WAY ARE NOT IDENTIFIED FOR EACH MOT PHASE. THE CONTRACTOR MUST MAKE ARRANGEMENTS FOR THESE AREAS ACCORDING TO VDOT POLICIES.
- HAULING TRUCKS ENTERING AND EXITING THE WORK ZONE MUST HAVE A "WORK VEHICLE DO NOT FOLLOW" (G20-V1) VEHICLE-MOUNTED SIGN MOUNTED IN A CONSPICUOUS POSITION ON THE REAR OF THE VEHICLE ENTERING THE WORK SPACE TO LOAD/UNLOAD MATERIALS.
- UNLESS OTHERWISE APPROVED OR DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PLAN AND PROSECUTE THE WORK IN ACCORDANCE WITH THE SEQUENCE OF CONSTRUCTION SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS.
- THE TRANSPORTATION MANAGEMENT PLAN AND TEMPORARY TRAFFIC CONTROL / SEQUENCE OF CONSTRUCTION (TMP/TTC) IS INTENDED AS A GUIDE. IT IS NOT TO ENUMERATE EVERY DETAIL WHICH MUST BE CONSIDERED IN THE CONSTRUCTION OF EACH PHASE OR STAGE, BUT ONLY TO SHOW THE GENERAL HANDLING OF EXISTING TRAFFIC. ANY CHANGES TO THE TMP/TTC PLAN MUST BE APPROVED BY THE ENGINEER PRIOR TO ANY CONSTRUCTION THAT MAY AFFECT THE EXISTING TRAFFIC.
- PAVEMENT MARKINGS IN CONFLICT WITH THE LANE CONFIGURATIONS DURING CONSTRUCTION SHALL BE ERADICATED/COVERED IN COMPLIANCE WITH VDOT'S ROAD AND BRIDGE SPECIFICATIONS SECTION 512.03(L).
- THE CONTRACTOR SHALL MAINTAIN ACCESS TO EXISTING ROADWAYS AND COMMERCIAL/RESIDENTIAL ENTRANCES DURING CONSTRUCTION WITH TRAFFIC DRUMS OR OTHER CHANNELIZING DEVICES AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL MAINTAIN ALL SIGNAGE WITHIN THE LIMITS OF CONSTRUCTION SHOWN ON PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. IF SIGNS REMOVAL IS ALLOWED, CONTRACTOR SHALL STORE THE SIGNS PER VDOT STANDARDS. DEPENDING ON THE CONDITION OF THE CONSTRUCTION SIGNS, CONTRACTOR MAY BE REQUIRED TO REPLACE THEM IF DIRECTED BY THE ENGINEER.
- ALL WORK VEHICLES SHALL BE EQUIPPED WITH WARNING LIGHTS WHICH SHALL BE A HIGH INTENSITY AMBER ROTATING, FLASHING, OSCILLATING OR STROBE LIGHT OR IN COMBINATION. THESE WARNING LIGHTS SHALL MEET THE STANDARDS AND REQUIREMENTS OF THE VA WAPM SHOWN IN SECTION 6F.95.
- TEMPORARY LANE WIDTHS SHALL NOT BE LESS THAN 11' FOR TRAVEL LANES UNLESS NOTED OTHERWISE ON PLANS.
- THE CONTRACTOR SHALL STORE ALL EQUIPMENT AND MATERIALS BEHIND BARRIERS/TRAFFIC DRUMS AND NOT WITHIN THE ESTABLISHED CLEAR ZONE OF THE TRAVEL LANES AND/OR THE DEFLECTION ZONE OF PHYSICAL BARRIERS.
- ALL TRAFFIC CONTROL DEVICES AND SIGNS NECESSARY FOR THE MAINTENANCE OF TRAFFIC ARE TO BE INSTALLED, MAINTAINED AND REMOVED BY THE CONTRACTOR.
- THE RECOMMENDED PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) MESSAGES AS ADVANCE NOTIFICATION OR AS PART OF THE LANE CLOSURE/DETOUR DURING CONSTRUCTION ARE SHOWN ON EACH APPLICABLE PLAN SHEET. ALL PCMS UNITS SHOWN ON PLANS SHALL BE PLACED THREE (3) WEEKS PRIOR TO THE START OF EACH MOT SUB-PHASE AS ADVANCE NOTIFICATION. AFTER THE ADVANCE NOTIFICATION, ALL PROPOSED PCMS UNITS SHALL REMAIN AT THE RECOMMENDED LOCATION FOR ONE (1) WEEK AND WILL BE ACTIVATED FOR USE DURING LANE CLOSURE/DETOUR ONLY.
- CERTIFIED FLAGGERS SHALL CARRY VALID CERTIFICATION CARDS AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE WORK AT COMMERCIAL/RESIDENTIAL ENTRANCES WITH AFFECTED PROPERTY AND BUSINESS OWNERS. CONTRACTOR SHALL ADHERE TO THE NOTES PROVIDED ON THIS PLAN SHEET, IN ADDITION TO THE GENERAL NOTES PROVIDED ON TTC PLAN SHEET C120.1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS TO ALL ENTRANCES AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL PERFORM NECESSARY ADJUSTMENT DURING BOTH WORKING AND NON-WORKING HOURS TO ENSURE THE PROTECTION AND SAFETY OF ADJACENT PROPERTY OWNERS, PEDESTRIANS, VEHICULAR TRAFFIC AND THE GENERAL PUBLIC FROM ANY CONSTRUCTION RELATED ACTIVITY, CONSTRUCTION EQUIPMENT AND THE CONSTRUCTION SITE ITSELF.
- THE CONTRACTOR SHALL MAINTAIN CONTINUOUS PEDESTRIAN ACCESS TO ALL ENTRANCES AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL NOT LEAVE ANY PORTION OF THE WORK ZONE WITH ANY OPEN TRENCHES UNATTENDED WHERE BARRIER IS NOT PRESENT. ON AREAS WHERE BARRIER IS NOT PRESENT, THE CONTRACTOR SHALL NOT MAKE PAVEMENT EXCAVATIONS OR OPENINGS TO A GREATER EXTENT THAT CANNOT BE REPLACED AND REPAVED DURING THE SAME WORKING DAY UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE SHADOW VEHICLE PARKED AT 80-120 FEET IN ADVANCE OF THE FIRST WORK CREW WITH TYPE B ARROW BOARD IN CAUTION MODE OR AT LEAST ONE HIGH INTENSITY AMBER ROTATING, FLASHING OR OSCILLATING LIGHT.



DEPARTMENT OF
ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
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SEAL



APPROVALS DATE

DESIGN TEAM ENGINEER SUPERVISOR

8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR

8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF

8/29/2023

TRANSPORTATION DIRECTOR

8/30/2023

PROJECT MANAGER

8/13/2023

REVISIONS DATE

LDA #4 SUBMISSION 07/13/2023

100% DESIGN 05/24/2023

LDA#3 SUBMISSION 01/31/2023

LDA#2 SUBMISSION 06/23/2022

100% SUBMISSION 06/21/2022

LDA SUBMISSION 04/19/2022

30% SUBMISSION 12/23/2021

SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.

MAINTENANCE OF TRAFFIC
TRANSPORTATION MANAGEMENT PLANS

DESIGNED: ME
DRAWN: MS
CHECKED: JA

PLOTTED: JULY 13 2023

SCALE:

TRANSPORTATION MANAGEMENT PLAN (TMP)
(TYPE B - CATEGORY IV)

TEMPORARY TRAFFIC CONTROL PLAN

TEMPORARY TRAFFIC CONTROL PLAN

THIS PROJECT SHALL HAVE A TYPE B, CATEGORY IV TMP IN ACCORDANCE WITH VDOT'S LOCATION AND DESIGN DIVISION IIM-LD 241.7/TE 351.5. THE COMPONENTS OF THE TEMPORARY TRAFFIC CONTROL PLAN (TTCP) INCLUDE DETAILED PLANS, NOTES, TYPICAL SECTIONS AND CROSS SECTIONS.

TMP REQUIREMENTS

DURING THE FIRST DAY OF EACH MOT PHASE AND/OR STAGE, THE ENGINEER AND CONSTRUCTION MANAGER SHALL INSPECT THE WORK ZONE TO ENSURE THE TEMPORARY TRAFFIC CONTROL SETTING IS IN COMPLIANCE WITH THE TMP. ON THE THIRD TO FIFTH DAY OF THE TMP IMPLEMENTATION, THE CONSTRUCTION MANAGER SHALL CONDUCT AN ON-SITE REVIEW OF THE WORK ZONE'S PERFORMANCE IN COORDINATION WITH VDOT AND RECOMMEND TO THE CONTRACTOR ANY REQUIRED CHANGES TO THE TMP TO ENHANCE THE WORK ZONE'S SAFETY AND MOBILITY.

THE FOLLOWING TMP REQUIREMENTS SHALL BE PROVIDED AS INCIDENTAL ITEMS TO THE PROJECT:

1. DESIGNATE A PERSON ASSIGNED TO THE PROJECT WHO WILL HAVE THE PRIMARY RESPONSIBILITY, WITH SUFFICIENT AUTHORITY, FOR IMPLEMENTING THE TMP AND OTHER SAFETY AND MOBILITY ASPECTS OF THE PERMIT WORK. THIS PERSON SHALL COORDINATE WITH THE ARLINGTON COUNTY CONSTRUCTION MANAGER AND VDOT FOR THE DURATION OF CONSTRUCTION.
2. ENSURE THAT PERSONNEL ASSIGNED TO THE PROJECT ARE TRAINED IN TRAFFIC CONTROL TO THE LEVEL COMMENSURATE WITH THEIR RESPONSIBILITIES IN ACCORDANCE WITH VDOT'S WORK ZONE TRAFFIC CONTROL TRAINING GUIDELINES.
3. PERFORM REVIEWS OF THE CONSTRUCTION AREA TO ENSURE COMPLIANCE WITH CONTRACT DOCUMENTS AT REGULARLY SCHEDULED INTERVALS AT THE DIRECTION OF THE ENGINEER. MAINTAIN A COPY OF THE TEMPORARY TRAFFIC CONTROL PLANS AT THE WORK SITE AT ALL TIMES.
4. SCHEDULE ALL PHASES OF CONSTRUCTION IN SUCH A MANNER THAT ALL ABOVE AND UNDER GROUND UTILITIES AND FACILITIES INCLUDING ELECTRIC, GAS, WATER, STORM SEWER, SANITARY SEWER, TRAFFIC SIGNALS, LIGHTING, TELECOMMUNICATION AND OTHER COMMUNICATION WILL NOT BE INTERRUPTED DURING CONSTRUCTION.

SPECIAL DETAILS

1. THE VDOT ENGINEER RESERVES THE RIGHT TO MONITOR TRAFFIC CONDITIONS IMPACTED BY THE WORK AND THE VDOT ENGINEER SHALL HAVE THE AUTHORITY TO IMPOSE ADDITIONAL RESTRICTIONS FOR OTHER HOLIDAYS OR SPECIAL LOCAL EVENTS AS DETERMINED NECESSARY IN THE EVENT THAT SAFETY OR OTHER CONDITIONS WARRANT. VDOT HAS THE AUTHORITY TO CHANGE OR ALTER THE WORK TIME FRAME(S) ACCORDINGLY.
2. FOR TOWING AND TRAFFIC ENFORCEMENT WITHIN THE APPROVED CONSTRUCTION SITE, THE CONTRACTOR SHALL CONTACT THE LOCAL POLICE CONTACTS (AS LISTED IN THE INCIDENT RESPONSE SECTION OF THE TRANSPORTATION OPERATIONS PLAN).

ESTIMATED CONSTRUCTION SCHEDULE

TO BE PROVIDED BY THE CONTRACTOR

DETAIL PLANS / DETAIL DRAWINGS

- SEQUENCE OF CONSTRUCTION
- LOCATION OF WORK ZONES
- TYPE AND LOCATION OF TEMPORARY LANE USAGE AND MARKINGS DURING CONSTRUCTION CLOSURES.
- TYPE AND LOCATION OF TEMPORARY TRAFFIC CONTROL DEVICES.
- REFERENCE TO TTC FIGURES TO BE USED DURING DIFFERENT PHASES OF CONSTRUCTION

DETOUR ROUTE

TEMPORARY PEDESTRIAN AND BICYCLE DETOUR ROUTE SHALL BE PROVIDED AS SHOWN ON SHEET C121.1 AND PER 2011 VIRGINIA WORK AREA PROTECTION MANUAL (REVISION 2.1 - NOVEMBER 1, 2020) STANDARDS AND SPECIFICATIONS INCLUDING TTC-35.1 AND TTC-36.2 AND VIRGINIA DEPARTMENT OF TRANSPORTATION WORK ZONE PEDESTRIAN AND BICYCLE GUIDANCE - JANUARY 2016.

TYPICAL SECTIONS

THE TYPICAL SECTIONS TO BE USED DURING CONSTRUCTION VARY ALONG THE PROJECT CORRIDOR AND ARE SHOWN WITHIN THE PLAN SHEETS. SEE MOT SHEETS. TRAVEL LANES WITH A MINIMUM WIDTH OF 11' ARE TO BE MAINTAINED DURING ALL CONSTRUCTION OPERATIONS ALONG 12TH STREET S. UNLESS NOTED OTHERWISE ON PLANS.

LIMITATIONS OF OPERATION

ALL WORK AREAS (AND THE LIMITS THEREOF) AND LANE CLOSURES SHALL BE IN ACCORDANCE WITH THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL (REVISION 2.1 - NOVEMBER 1, 2020) AND LANE CLOSURES IN NOVA DISTRICT MEMORANDUM (SEPTEMBER 29, 2016), VIRGINIA DEPARTMENT OF TRANSPORTATION WORK ZONE PEDESTRIAN AND BICYCLE GUIDANCE - JANUARY 2016, AND SHALL BE DIRECTED OR APPROVED BY THE ENGINEER. THE DEPARTMENT RESERVES THE RIGHT TO CHANGE WORK WHEN SUCH CHANGES ARE IN THE BEST INTEREST OF THE TRAVELING PUBLIC. THE CONTRACTOR SHALL NOT CONDUCT OPERATIONS WHEN THE WEATHER CAUSES UNSAFE CONDITIONS FOR THE TRAVELING PUBLIC AS DETERMINED BY THE ENGINEER. LANE CLOSURE RESTRICTIONS ARE LISTED IN TABLE 1 ON THIS SHEET.

ADDITIONAL LANE CLOSURES OR WORK THAT RESTRICTS TRAFFIC FLOW WILL NOT BE PERMITTED ON HOLIDAYS FROM THE DAY BEFORE A HOLIDAY UNTIL THE DAY AFTER THE HOLIDAY, UNLESS OTHERWISE APPROVED BY VDOT. WHEN A HOLIDAY FALLS ON A FRIDAY, ADDITIONAL LANE CLOSURES ARE NOT PERMITTED FROM THURSDAY THROUGH MONDAY. WHEN A HOLIDAY FALLS ON A MONDAY, ADDITIONAL LANE CLOSURES ARE NOT PERMITTED FROM FRIDAY THROUGH TUESDAY. FURTHERMORE, AS THE THANKSGIVING DAY HOLIDAY OCCURS ON A THURSDAY, WORK WILL NOT BE PERMITTED FROM WEDNESDAY UNTIL 9:30 A.M. ON THE FOLLOWING MONDAY.

TRANSPORTATION OPERATIONS PLAN

THE TRANSPORTATION OPERATIONS PLAN DOCUMENTS THE PROCESSES USED IN THE EVENT OF AN INCIDENT WITHIN THE WORK ZONE. THIS PLAN INCLUDES:

1. NOTIFICATION PROCESS TO THE TRAFFIC OPERATIONS CENTER
2. EMERGENCY RESPONSE AGENCIES CONTACT LIST
3. PROCEDURES TO RESPOND TO TRAFFIC INCIDENTS IN WORK ZONES
4. PROCEDURES TO CLEAR INCIDENTS

INCIDENT MANAGEMENT PROCEDURES ARE AREA AND SITUATION SPECIFIC; HOWEVER, FOLLOW NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS) GUIDELINES. THE IMPLEMENTATION OF THE PROCESSES IS THE RESPONSIBILITY OF THE FIELD TMP MANAGER.

1. NOTIFICATION PROCESS TO THE TRAFFIC OPERATIONS CENTER

VDOT MUST REVIEW AND APPROVE ALL LANE CLOSURES FOR INTERSTATE HIGHWAYS AND ALL STATE MAINTAINED ROADWAYS.

VDOT HAS A "LIMITATIONS OF OPERATIONS/MAINTENANCE OF TRAFFIC" DOCUMENT THAT GOVERNS ALL WORK ZONES FOR INTERSTATE HIGHWAYS AND ALL STATE MAINTAINED ROADWAYS. THIS DOCUMENT STIPULATES THE ACCEPTABLE LANE CLOSURE TIMES, NUMBER OF REQUIRED LANES TO BE IN OPERATION AS WELL AS OTHER PERTINENT INFORMATION REGARDING WHAT IS EXPECTED WITHIN THE WORK AREA. ALL LANE CLOSURES ARE SUBMITTED BY THE CONTRACTOR VIA VDOT'S "LANE CLOSURE ADVISORY MANAGEMENT SYSTEM" (LCAMS) WEBSITE AT HTTP://VDOT.OPENLCAMS.COM. LCAMS PROVIDES A COLLABORATIVE METHOD TO PLAN AND MONITOR PROJECTS, RESOLVE CONFLICTS, AND EXCHANGE INFORMATION ABOUT EXISTING AND SCHEDULED ACTIVITIES ACROSS THE REGION. EACH USER (THE CONTRACTOR) IS GRANTED ACCESS AFTER TRAINING AND THE WEBSITE IS OPEN TO THE PUBLIC TO VIEW CLOSURES.

ALL LANE AND/OR SHOULDER CLOSURES SHALL BE ENTERED INTO LCAMS AT LEAST TEN (10) DAYS IN ADVANCE AND SHALL NOT BE LATER THAN CLOSE OF BUSINESS WEDNESDAY THE WEEK PRIOR TO THE SCHEDULED LANE CLOSURE(S). WHEN PROPOSED CLOSURES INFORMATION INCLUDING LOCATION, PURPOSE, SPECIFIC LANE(S) TO BE CLOSED, TIME AND DURATION OF CLOSURE ARE ENTERED INTO THE LCAMS, THE PROGRAM WILL ALERT THE CONTRACTOR/USER REGARDING OTHER WORK SCHEDULED AT THAT PROPOSED TIME DURATION AND CLOSURES IN THE VICINITY AREAS. ANY CONFLICTS GENERATED FROM LCAMS SHALL BE RESOLVED BY CONTRACTOR/USER NO LATER THAN CLOSE OF BUSINESS THURSDAY THE WEEK PRIOR TO THE SCHEDULED CLOSURE(S).

ON THE DAY THE CLOSURE IS SCHEDULED, THE INSPECTOR IS RESPONSIBLE FOR CALLING THE ARLINGTON COUNTY TRAFFIC MANAGEMENT CENTER (TMC) AT (703) 228-5000 AND VDOT TRAFFIC OPERATIONS CENTER (TOC) AT (703) 877-3449 TO CONFIRM THE LANE CLOSURE START/END TIMES FOR EACH DAY OF WORK. THE CONTRACTOR MUST CONTACT THE COUNTY AND VDOT NORTHERN REGION TRANSPORTATION OPERATIONS CENTERS (TOC) 15-45 MINUTES PRIOR TO EXECUTING LANE AND/OR SHOULDER CLOSURES AND CONTACT TOC ONCE WORK HAS BEEN COMPLETED AND LANE AND/OR SHOULDER CLOSURES HAVE BEEN REMOVED. IF SCHEDULED WORK IS NO LONGER GOING TO TAKE PLACE, THE INSPECTOR SHALL NOTIFY TOC AS SOON AS POSSIBLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PROJECT LANE CLOSURE INFORMATION ON LCAMS AND VATRAFFIC THROUGHOUT THE DURATION OF THE PROJECT IN ACCORDANCE WITH IIM-OD-16-03, DATED DECEMBER 16, 2016.

2. EMERGENCY RESPONSE AGENCIES CONTACT LIST

VDOT'S NRO (NORTHERN REGION OPERATIONS) TOC - (703) 877-3449
ARLINGTON COUNTY TRAFFIC MANAGEMENT CENTER (TMC) - (703) 228-5000
VIRGINIA STATE POLICE - (703) 845-6300
ARLINGTON COUNTY POLICE - (703) 558-2222
911 EMERGENCY CENTER - 911
PROJECT CONSTRUCTION MANAGER - TBD

ARLINGTON COUNTY
CONSTRUCTION MANAGEMENT SUPERVISOR, DES - KAMAL TAKTAK (703) 228-7527
DES OPERATION MANAGER, T&O - SCOTT SEDWICK (703) 228-0650
ASSISTANT BUREAU CHIEF, ENGINEERING BUREAU, DES - ADIL CHAUHAN (703) 228-7542
DES R-O-W PERMITTING SECTION - (703) 228-4798
TRANSIT BUREAU - (703) 228-3049
WATER, SEWER AND STREET OPERATION - (703) 228-6555

3. NOTIFICATION PROCESS FOR INCIDENTS AND RELATED TRAFFIC DELAYS

THROUGHOUT THE COUNTY AND VDOT NOVA DISTRICT, THE ITS AND TOC CONTROL ROOM OPERATORS MONITOR TRAFFIC FLOW AND ARE ABLE TO QUICKLY DETECT TRAFFIC DELAYS AND INCIDENTS ON THE INTERSTATE, HIGHWAYS, AND BRIDGES. WHEN TRAFFIC DELAYS DUE TO AN INCIDENT, CONTROL ROOM OPERATORS ARE THEN ABLE TO SEND THIS INFORMATION TO VAS11 AND THE HAR AND ACTIVATE ELECTRONIC MESSAGE SIGNS TO IMMEDIATELY NOTIFY COMMUTERS AND TRAVELERS OF CURRENT ROADWAY CONDITIONS. THE TOC OPERATORS ALSO CONTACT EMERGENCY PERSONNEL IF NEEDED AND DISPATCH SAFETY SERVICE PATROL (SSP).

IN CASE OF AN EMERGENCY, 911 SHOULD BE CALLED IMMEDIATELY. ONCE 911 HAS BEEN NOTIFIED, THE CONTRACTOR WILL IMMEDIATELY NOTIFY VDOT OF THE EVENT, WHO WILL THEN DISTRIBUTE THE INFORMATION TO THE APPROPRIATE AGENCIES THROUGH THEIR COMMUNICATIONS NETWORKS.

IN THE CASE OF A NON-EMERGENCY INCIDENT OR AN UNEXPECTED TRAFFIC DISRUPTION THAT DOES NOT REQUIRE EMERGENCY PERSONNEL (I.E. UTILITY BREAK, CONSTRUCTION DELAY, ETC.), THE CONTRACTOR WILL CONTACT VDOT IMMEDIATELY, WHO WILL THEN DISTRIBUTE THE INFORMATION TO THE APPROPRIATE AGENCIES THROUGH THEIR COMMUNICATIONS NETWORKS. IN ADDITION TO EMERGENCY RESPONDERS LISTED IN SECTION 2, PUBLIC SAFETY AND EMERGENCY MANAGEMENT OFFICIALS SHOULD BE NOTIFIED OF IMPACTS ARISING FROM TRAFFIC INCIDENTS AND OTHER CONSTRUCTION ACTIVITIES.

1. PROCEDURES TO CLEAR INCIDENTS

THE FOLLOWING IS A SET OF PROCEDURES AND A LIST OF LOCAL EMERGENCY CONTACT AGENCIES THAT SHALL BE COMMUNICATED WITH IN THE EVENT OF TRAFFIC INCIDENTS THAT OCCUR IN THE WORK ZONE:

- a. CONTRACTOR WILL NOTIFY STATE (OR LOCAL) POLICE AND THE ARLINGTON COUNTY COORDINATOR AND CONSTRUCTION MANAGER IN CHARGE AT NUMBERS LISTED ON THIS PLAN.
- b. DEPENDING UPON THE SEVERITY OF AN INCIDENT, THE CONTRACTOR MAY HAVE TO SHUT DOWN WORK. LANE CLOSURES OR SHOULDER WORK SHOULD NOT BEGIN IF HEAVY TRAFFIC OR SIGNIFICANT QUEUEING AND BACKUPS ARE ALREADY PRESENT.
- c. UPON ARRIVAL ON SCENE, STATE POLICE WILL DETERMINE THE RESPONSE NECESSARY TO GUIDE THE TRAVELING PUBLIC AROUND THE INCIDENT. LOCAL POLICE CAN ASSIST IN CONTROLLING TRAFFIC ON RAMPS OR ALONG SIDE STREETS.
- d. INSPECTOR WILL NOTIFY CONSTRUCTION MANAGER (COUNTY AND CONTRACTOR) AND AREA CONSTRUCTION ENGINEER OF AN INCIDENT AND TAKE PICTURES AS NECESSARY, ESPECIALLY PICTURES OF CONTRACTOR'S WORK ZONE TO VERIFY THE PROPER SETUP.
- e. PROCESS FOR NOTIFICATION OF INCIDENT INCLUDES THE CONTRACTOR CALLING:
 - i. PROJECT/MAINTENANCE OF TRAFFIC COORDINATOR - CONTRACTOR TO PROVIDE
 - ii. CONSTRUCTION MANAGER - CONTRACTOR TO PROVIDE
 - iii. PROJECT CONSTRUCTION MANAGER - (000) XXX-XXXX
 - iv. DISTRICT WORK ZONE SAFETY COORDINATOR - BRIAN FRY (703) 259-2394
 - v. DISTRICT TRAFFIC ENGINEER - IVAN HORODYSKYJ (703) 259-2330
 - vi. DISTRICT PUBLIC AFFAIRS MANAGER - JENNI MCCORD (703) 259-2926
- f. THE STATE (OR LOCAL) POLICE REPORT OF THE INCIDENT WILL BE REVIEWED BY THE AREA CONSTRUCTION ENGINEER TO DETERMINE IF ANY MODIFICATIONS OF THE TEMPORARY TRAFFIC CONTROL PLANS ARE NECESSARY. IF IT IS DETERMINED THAT IT IS NECESSARY TO ALTER THE PLAN, A MEETING WILL BE CALLED WITH THE CONTRACTOR, THE AREA CONSTRUCTION ENGINEER, ARLINGTON COUNTY PERSONNEL, CONSTRUCTION MANAGER, VDOT TRAFFIC SAFETY REPRESENTATIVES AND THE STATE (OR LOCAL) POLICE (IF NECESSARY) TO DISCUSS MODIFICATION AND IMPLEMENTATION OF AN IMPROVED TRAFFIC CONTROL PLAN. THE CONTRACTOR MUST CONTINUALLY MONITOR LANE CLOSURES AND/OR DETOUR ROUTES AND MAKE SPOT ADJUSTMENTS AS NEEDED/AVAILABLE TO EASE UNDUE BACKUPS, DELAYS, OR QUEUEING.

PUBLIC COMMUNICATIONS PLAN

ONCE THIS TMP AND RELATED TTCPs ARE APPROVED BY THE COUNTY AND VDOT, THE CONTRACTOR SHALL SUBMIT FOUR (4) SETS OF ALL RELEVANT INFORMATION NECESSARY FOR THE PROPOSED CLOSURES TO THE DEPARTMENT THIRTY (30) DAYS IN ADVANCE OF ESTABLISHING THE WORK ZONE. THE DEPARTMENT WILL REVIEW AND OFFER COMMENTS. A PRE-ACTIVITY MEETING WITH THE CONTRACTOR WILL BE HELD BY THE PROJECT MANAGEMENT TEAM TO ADDRESS ANY DEFICIENCIES AND FINALIZE THE TIMELINE. AS PART OF THIS PRE-ACTIVITY MEETING, THE PROJECT MANAGEMENT TEAM SHALL ENLIST THE INPUT OF ALL OUTSIDE ENTITIES THAT WILL PARTICIPATE IN OR BE AFFECTED BY THE LANE CLOSURES. THESE PARTIES SHALL INCLUDE: VDOT TO REVIEW TTCPs, VDOT'S TRAFFIC OPERATIONS CENTER (TOC) TO AID IN ALERTING THE PUBLIC AS WELL AS OFFER ALTERNATE ROUTES; VIRGINIA STATE AND LOCAL POLICE; AND VDOT PUBLIC AFFAIRS TO COORDINATE THE DISSEMINATION OF INFORMATION TO THE PUBLIC.

ARLINGTON COUNTY WILL BEGIN THE PUBLIC OUTREACH EFFORT FOLLOWING THE SUCCESSFUL COMPLETION OF THE PRE-ACTIVITY MEETING CONCERNING SEQUENCE OF CONSTRUCTION WORK. THE PUBLIC OUTREACH INFORMATION WILL INCLUDE, BUT NOT LIMITED TO LANE CLOSURES, DETOUR ROUTES AND TRAFFIC DELAYS. SUCH INFORMATION WILL BE PROVIDED BEFORE AND DURING WORK DEPLOYMENT AS REQUIRED. METHODS TO COMMUNICATE WORK ZONE INFORMATION MAY INCLUDE, BUT NOT BE LIMITED TO, DIRECT MAILINGS, PUBLIC MEETINGS, NEWSLETTERS, FLYERS, PORTABLE MESSAGE SIGNS, 511 SYSTEM, PROJECT WEBSITE, AND/OR MEDIA. AS PART OF THE PUBLIC OUTREACH AND COMMUNICATION THE FOLLOWING SHALL OCCUR:

1. THE CONTRACTOR WILL BE REQUIRED TO HAVE WEEKLY COORDINATION MEETINGS WITH THE ARLINGTON COUNTY IN ORDER TO PROVIDE THE COUNTY WITH UPDATES FOR DISTRIBUTION. THIS MEETING WILL COVER ANY POTENTIAL DESIGN CHANGES AND/OR OTHER TYPES OF CHANGES WHICH MAY IMPACT THE TRAFFIC OPERATIONS THROUGH THE PROJECTS.
2. ARLINGTON COUNTY WILL PROVIDE INFORMATION TO ROAD USERS, THE GENERAL PUBLIC, AREA RESIDENTS AND APPROPRIATE PUBLIC ENTITIES REGARDING THE PROJECT, THE IMPACTS EXPECTED FROM THE PROJECT'S WORK ZONES AS WELL AS CHANGING CONDITIONS ON THE PROJECT.

THE FOLLOWING SHALL OCCUR UPON THE IMPLEMENTATION OF LANE CLOSURES:

1. THE PROJECT MANAGEMENT TEAM WILL OBSERVE TRAFFIC MOVEMENT.
2. THE PROJECT MANAGEMENT TEAM WILL MONITOR ANY COMPLAINTS AND OR COMMENTS RECEIVED BY THE PUBLIC AFFAIRS OFFICE.
3. THE PROJECT MANAGEMENT TEAM WILL REVIEW OBSERVATIONS, COMPLAINTS AND COMMENTS TO EXAMINE IF ADDITIONAL MEASURES ARE WARRANTED.

ROLES AND RESPONSIBILITIES

THE COUNTY COMMUNICATION STRATEGY AND PLAN WILL BE DIRECTED BY THE ARLINGTON COUNTY PROJECT MANAGER AND HIS PROJECT TEAM. THE FOLLOWING ARE THE KEY PERSONNEL OF THE S. EADS STREET S. BETWEEN ARMY NAVY DRIVE AND 12TH STREET S. (CC13) PROJECT WHO WILL BE THE POINT OF CONTACT FOR ALL COMMUNICATIONS, ISSUES AND DISPUTES THROUGHOUT CONSTRUCTION:

PROJECT MANAGEMENT AND MEDIA INQUIRIES
PROJECT MANAGER (CC13) - MARK DENNIS (703) 228-3916
MEDIA SPECIALIST (CC13) - ERIC BALLEET (703) 228-3770

PROJECT DESIGN FOR CC13
DESIGN ENGINEER TEAM SUPERVISOR - TREVOR LANTZY (703) 228-0596
DESIGN ENGINEER - NEIL SHARP (703) 228-7542

LOCAL BUSINESS COORDINATOR--THE COUNTY MEDIA SPECIALIST WILL BE RESPONSIBLE FOR REACHING OUT TO LOCAL BUSINESS ORGANIZATIONS AND BUSINESSES PRIOR TO AND THROUGHOUT THE CONSTRUCTION.

TABLE 1: ALLOWABLE LANE CLOSURE HOURS

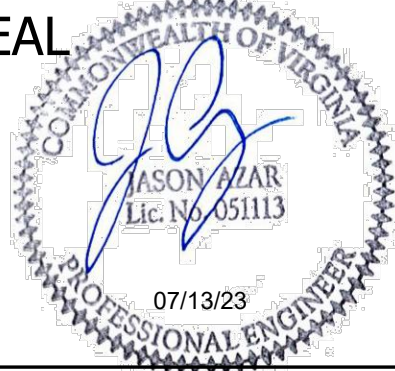
VDOT R-O-W:	LANE CLOSURES (MAJOR ARTERIALS)			
	MON. TO THU.	FRIDAY	SATURDAY	SUNDAY
DAY TIME	9:30 AM TO 3:00 PM	9:30 AM TO 2:00 PM	*Not Allowed	*Not Allowed
NIGHT TIME	*Not Allowed	*Not Allowed	*Not Allowed	*Not Allowed

Arlington County R-O-W:	LANE CLOSURES (MINOR ARTERIAL)		
	MON. TO FRI.	SATURDAY	SUNDAY
DAY TIME	9:00 AM TO 4:00 PM	*Not Allowed	*Not Allowed
NIGHT TIME	*Not Allowed	*Not Allowed	*Not Allowed



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SEAL



APPROVALS DATE

DESIGN TEAM ENGINEER SUPERVISOR 8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR 8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF 8/29/2023

TRANSPORTATION DIRECTOR 8/30/2023

PROJECT MANAGER 8/30/2023

REVISIONS DATE

LDA #4 SUBMISSION 07/13/2023

100% DESIGN 05/24/2023

LDA#3 SUBMISSION 01/31/2023

LDA#2 SUBMISSION 06/23/2022

100% SUBMISSION 06/21/2022

LDA SUBMISSION 04/19/2022

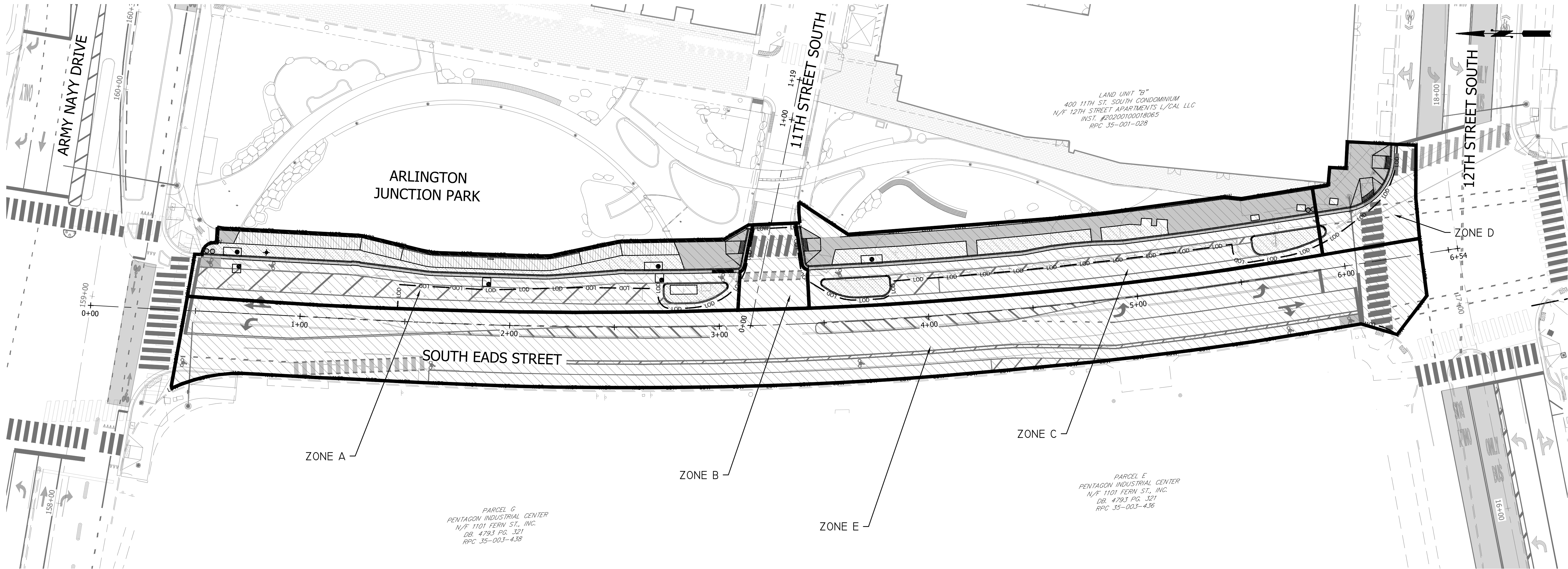
30% SUBMISSION 12/23/2021

SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.
MAINTENANCE OF TRAFFIC
TRANSPORTATION MANAGEMENT PLANS

DESIGNED: ME
DRAWN: MS
CHECKED: JA

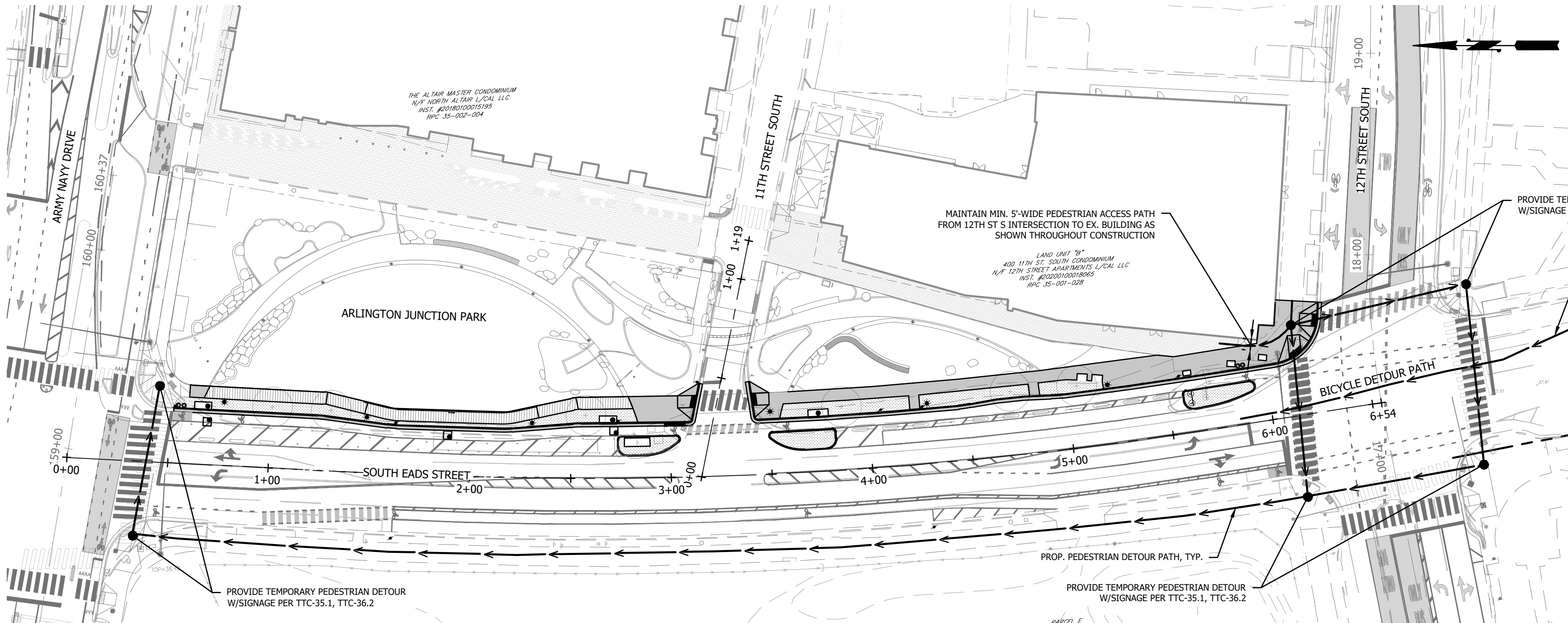
PLOTTED: JULY 13 2023

SCALE:



MAINTENANCE OF TRAFFIC PLAN
SCALE: 1" = 25'

NOTE: ARLINGTON JUNCTION PARK ALONG WITH 12TH ST CC16 AND ARMY NAVY DRIVE STRIPING AND IMPROVEMENTS ARE INCLUDED FOR REFERENCE ONLY.



TEMPORARY PEDESTRIAN DETOUR PLAN
SCALE: 1" = 40'

NOTE: SUGGESTED TEMPORARY PEDESTRIAN AND BICYCLE DETOUR ROUTE SHOWN FOR REFERENCE. CONTRACTOR SHALL VERIFY PEDESTRIAN AND BICYCLE DETOUR ROUTE PROVIDED COMPLIES WITH THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL STANDARDS AND SPECIFICATIONS INCLUDING TTC-35.1 AND TTC-36.2, AS WELL AS THE VDOT WORK ZONE PEDESTRIAN AND BICYCLE GUIDANCE (2016). PEDESTRIAN AND BICYCLE DETOUR BETWEEN 12TH STREET S AND ARMY NAVY DRIVE SHALL BE PROVIDED FOR ALL PHASES OF CONSTRUCTION IN WORK ZONES A-D ALONG S EADS STREET FOR DURATION OF CONSTRUCTION UNTIL NORMAL PEDESTRIAN ACCESS ALONG EAST SIDE OF S EADS STREET CAN BE RESTORED.

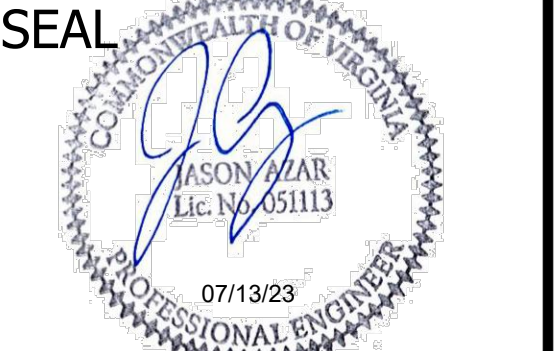
MOT ZONE	TTC#	COMMENTS	DURATION
ZONE A	TTC-1.1 TTC-4.2 TTC-5.2 TTC-6.2 TTC-16.2 TTC-28.2 TTC-35.1 TTC-53.0 TTC-55.1 TTC-57.2 TTC-58.1	BOARDWALK AND BIKE LANE CONSTRUCTION - SHOULDER CLOSURE TEMPORARY BARRIERS AND MINOR ROAD ENCROACHMENT, OUTSIDE LANE CLOSURE, LANE CLOSURE IN INTERSECTION, SIDEWALK CLOSURE, PEDESTRIAN/BICYCLE DETOUR, SIGNING FOR PROJECT LIMITS, TEMPORARY REMOVAL OF PAVEMENTS MARKINGS, END OF DAY SIGNING FOR FULL AND PARTIAL PAVING OPERATIONS.	3-6 MONTHS
ZONE B	TTC-4.2 TTC-28.2	CROSSWALK RAMP CONSTRUCTION AND INTERSECTION IMPROVEMENTS - SHOULDER CLOSURE AND LANE CLOSURE IN INTERSECTION, PEDESTRIAN/BICYCLE DETOUR.	1 MONTH
ZONE C	TTC-1.1 TTC-4.2 TTC-5.2 TTC-6.2 TTC-16.2 TTC-28.2 TTC-35.1 TTC-53.0 TTC-55.1 TTC-57.2 TTC-58.1	SIDEWALK, BIKE LANE, PARKING, AND TRAFFIC ISLAND CONSTRUCTION - SHOULDER CLOSURE TEMPORARY BARRIERS AND MINOR ROAD ENCROACHMENT, OUTSIDE LANE CLOSURE, LANE CLOSURE IN INTERSECTION, SIDEWALK CLOSURE, PEDESTRIAN/BICYCLE DETOUR, SIGNING FOR PROJECT LIMITS, TEMPORARY REMOVAL OF PAVEMENTS MARKINGS, END OF DAY SIGNING FOR FULL AND PARTIAL PAVING OPERATIONS.	3-6 MONTHS
ZONE D	TTC-30.2 TTC-36.2	CROSSWALK RAMP CONSTRUCTION - FLAG OPERATION AT INTERSECTION AND CROSSWALK CLOSURE WITH PEDESTRIAN/BICYCLE DETOUR (ONLY ONE RAMP SHALL BE CLOSED AT ANY GIVEN TIME UNTIL COMPLETION).	2 WEEKS
ZONE E	TTC-17.2 TTC-28.2 TTC-30.2 TTC-35.1 TTC-36.2 TTC-42.2 TTC-53.0 TTC-55.1 TTC-57.2 TTC-58.1	MILL AND OVERLAY, RESTORATION, STRIPING AND SIGNAGE INSTALLATION - INSIDE LANE CLOSURE, LANE CLOSURE IN INTERSECTION, FLAG OPERATION AT INTERSECTION, SIDEWALK CLOSURE, PEDESTRIAN DETOUR, INTERIOR LANE CLOSURE, SIGNING FOR PROJECT LIMITS, TEMPORARY REMOVAL OF PAVEMENT MARKINGS, END OF DAY SIGNING FOR FULL AND PARTIAL PAVING OPERATIONS	1 WEEK

THE DURATIONS SHOWN WERE DEVELOPED FOR PLANNING AND ESTIMATION PURPOSES ONLY. THE DURATIONS IN NO WAY ALTER THE CONTRACT TIME FOR COMPLETION, OR INFRINGES ON THE CONTRACTORS MEANS AND METHODS. THE CONTRACTOR'S SUBMITTED SCHEDULE SUPERSEDES THE ESTIMATED DURATIONS SHOWN.

CONTRACTOR SHALL MAINTAIN 11' TRAVEL LANES AT ALL TIMES THROUGH WORK ZONE FOR DURATION OF PROJECT.

SEE SHEETS 120.1, 120.2 & 124.1 - 124.4 FOR GENERAL MAINTENANCE OF TRAFFIC NOTES & RECOMMENDED TTC.

CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL TTC MEASURES FOR DURATION OF PROJECT WITH ADJACENT CONCURRENT ROADWAY IMPROVEMENTS PROJECTS INCLUDING 12TH STREET S AND ARMY NAVY DRIVE.



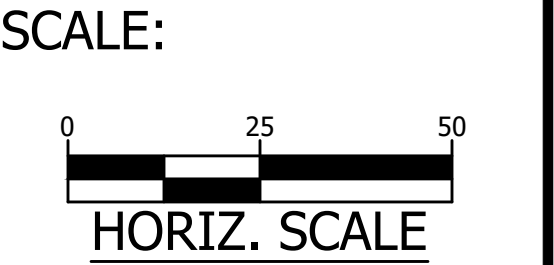
APPROVALS	DATE
DESIGN TEAM ENGINEER SUPERVISOR	8/29/2023
CONSTRUCTION MANAGEMENT SUPERVISOR	8/29/2023
WATER, SEWER, STREETS BUREAU CHIEF	8/29/2023
TRANSPORTATION DIRECTOR	8/30/2023
PROJECT MANAGER	04/20/2023
REVISIONS	DATE
LDA #4 SUBMISSION	07/13/2023
100% DESIGN	05/24/2023
LDA#3 SUBMISSION	01/31/2023
LDA#2 SUBMISSION	06/23/2022
100% SUBMISSION	06/21/2022
LDA SUBMISSION	04/19/2022
30% SUBMISSION	12/23/2021

SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.

MAINTENANCE OF TRAFFIC
TTC PLAN

DESIGNED: ME
DRAWN: MS
CHECKED: JA

PLOTTED: JULY 13 2023



Page 6H-8

September 2019

Typical Traffic Control

Work Beyond the Shoulder Operation

(Figure TTC-1.1)

NOTES

Guidance:

1. The minimum distance between the sign and work vehicle should be 1300'-1500' on Limited Access highways, and on all other roadways 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.

Option:

2. The ROAD WORK AHEAD (W20-1) sign may be replaced with other appropriate signs such as the SHOULDER WORK (W21-5) sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

3. The ROAD WORK AHEAD sign may be omitted where the work space is behind a barrier, more than 4 feet behind vertical curb (Standard CG-2 and CG-6) on urban roadways, or outside of the clear zone for all other roadways. For clear zone values see Page A-4 of Appendix A.

4. For short-term, short duration or mobile operations', all signs and channelizing devices may be eliminated if a vehicle with activated high-intensity amber rotating, flashing, or oscillating lights is used.

Standard:

5. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, or oscillating lights.

6. If the work space is in the median of a divided highway, an advance warning sign shall also be placed on the left side of the directional roadway.

1: Revision 1 - 4/1/2015

Page 6H-14

September 2019

Typical Traffic Control

Stationary Operation on a Shoulder

(Figure TTC-4.2)

NOTES

Standard

1. For long-term stationary work (more than 3 days) on divided highways having a median wider than 8', sign assemblies on both sides of the roadway shall be required as shown (ROAD WORK AHEAD (W20-1), RIGHT SHOULDER CLOSED AHEAD (W21-5aR), RIGHT SHOULDER CLOSED (W21-5aL)), even though only one shoulder is being closed. For operations less than 3 days in duration, sign assemblies will only be required on the side where the shoulder is being closed.

Guidance

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

Option:

3. The SHOULDER WORK (W21-5) sign on an intersecting roadway may be omitted where drivers emerging from that roadway will encounter another advance warning sign prior to this activity area.

4. For short duration operations of 60 minutes or less, all signs and channelizing devices may be eliminated if a vehicle with activated high-intensity amber rotating, flashing, or oscillating lights is used.

Standard:

5. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, or oscillating lights.

6. Taper length (L) shall be at the following:

Lane Width (Feet)		Taper Length L		Lane Width (Feet)		Taper Length L				
Speed Limit (mph)	9	10	11	12	Speed Limit (mph)	9	10	11	12	
25	95	105	115	125	L=SW	50	450	500	550	600
30	135	150	165	180	L=SW	55	495	550	605	660
35	185	205	225	245	L=SW	60	540	600	660	720
40	240	270	295	320	L=SW	65	585	650	715	780
45	405	450	495	540	L=SW	70	630	700	770	840

Limited Access highways shall use a 1000' merging taper regardless of the posted speed, for shifting taper see Table 6H-2

Shoulder Taper = 1/2 L Minimum

7. Channelizing device spacing shall be at the following:

Lane Width (Feet)		Channelizing Device Spacing		Lane Width (Feet)		Channelizing Device Spacing		
Location Spacing	Speed Limit (mph)	Location Spacing	Speed Limit (mph)	Location Spacing	Speed Limit (mph)	Location Spacing	Speed Limit (mph)	
Transition	0-35	36+	Transition	0-35	36+	Transition	0-35	36+
Travelway	40	80	Travelway	40	80	Travelway	40	80

*Construction access spacing may be increased to this distance, but shall not exceed one access per 1/4 mile.

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

9. The buffer space length shall be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.

10. A truck-mounted attenuator (TMA) shall be used on the shadow vehicle on Limited Access highways and multi-lane roadways with posted speed limit equal to or greater than 45 mph for operations with a duration greater than 60 minutes.

11. When a side road intersects the highway within the temporary traffic control zone, additional traffic control devices shall be placed as needed.

1: Revision 1 - 4/1/2015

2: Revision 2 - 9/1/2019

Page 6H-16

September 2019

Typical Traffic Control

Shoulder Operation with Minor Encroachment

(Figure TTC-5.2)

NOTES

Standard

1. For required sign assemblies for multi-lane roadways see Note 1, TTC-4.1

Guidance

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

3. When work takes up part of a lane on a high volume roadway; vehicular traffic volumes, vehicle mix, speed and capacity should be analyzed to determine whether the affected lane should be closed. Unless the lane encroachment analysis permits a remaining lane width of 10 feet, the lane should be closed. If the closure operation is on a Limited Access highway, the minimum lane width is 11 feet.

Option:

4. The ROAD WORK AHEAD (W20-1) sign on an intersecting roadway may be omitted where drivers emerging from that roadway will encounter another advance warning sign prior to this activity area.

Standard:

5. A shadow vehicle with either an arrow board operating in the caution mode, or at least one high-intensity amber rotating, flashing, or oscillating light shall be parked 80' - 120' in advance of the first work crew.

6. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, or oscillating lights.

7. Taper length (L) and channelizing device spacing shall be at the following:

Lane Width (Feet)		Taper Length L		Lane Width (Feet)		Taper Length L				
Speed Limit (mph)	9	10	11	12	Speed Limit (mph)	9	10	11	12	
25	95	105	115	125	L=SW	50	450	500	550	600
30	135	150	165	180	L=SW	55	495	550	605	660
35	185	205	225	245	L=SW	60	540	600	660	720
40	240	270	295	320	L=SW	65	585	650	715	780
45	405	450	495	540	L=SW	70	630	700	770	840

Limited Access highways shall use a 1000' merging taper regardless of the posted speed, a 750' shifting taper for posted speeds < 65 mph and a 1000' shifting taper for posted speeds ≥ 65 mph.

Shoulder Taper = 1/2 L Minimum

8. Channelizing device spacing shall be at the following:

Lane Width (Feet)		Channelizing Device Spacing		Lane Width (Feet)		Channelizing Device Spacing		
Location Spacing	Speed Limit (mph)	Location Spacing	Speed Limit (mph)	Location Spacing	Speed Limit (mph)	Location Spacing	Speed Limit (mph)	
Transition	0-35	36+	Transition	0-35	36+	Transition	0-35	36+
Travelway	40	80	Travelway	40	80	Travelway	40	80

*Construction access spacing may be increased to this distance, but shall not exceed one access per 1/4 mile.

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

10. The buffer space length The buffer space length shall be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.

11. A truck-mounted attenuator (TMA) shall be used on Limited Access highways and multi-lane roadways with posted speed limit equal to or greater than 45 mph.

12. When a side road intersects the highway within the temporary traffic control zone, additional traffic control devices shall be placed as needed.

1: Revision 1 - 4/1/2015

2: Revision 2 - 9/1/2019

Page 6H-18

September 2019

Typical Traffic Control

Shoulder Closure with Barrier Operation

(Figure TTC-6.2)

NOTES

Guidance:

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

Standard:

2. On divided highways having a median wider than 8', right and left sign assemblies shall be required.

3. Group 2 Channelizing device spacing shall be at the following:

Lane Width (Feet)		Group 2 Channelizing Device Spacing		Lane Width (Feet)		Group 2 Channelizing Device Spacing		
Location Spacing	Speed Limit (mph)	Location Spacing	Speed Limit (mph)	Location Spacing	Speed Limit (mph)	Location Spacing	Speed Limit (mph)	
Transition	0-35	36+	Transition	0-35	36+	Transition	0-35	36+
Travelway	40	80	Travelway	40	80	Travelway	40	80

*Construction access spacing may be increased to this distance, but shall not exceed one access per 1/4 mile.

4. The minimum length for a shoulder taper shall be 360' on Limited Access highways, and 1/2 L for all other roadways (see Note 7 of TTC-5 for values of L).

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

6. End treatment of a barrier in order of preference:

a. Where guardrail exists, attach to barrier with appropriate fixed object attachment.

b. Where cut slope exists, bury barrier into cut slope and provide for drainage as needed.

c. Extend end of barrier until it is beyond the established clear zone (see Figure 2 on Page A-4 in Appendix A for clear zone values).

d. When barrier end is inside the established clear zone, attenuator service Type I or Type II shall be used. Contact L&D Standards/Special Design Section for approved attenuators.

7. Barrier panels 8 inches in width and 12 inches in height shall be placed on top of the concrete barrier and spaced on 40' centers along the transition or taper sections and spaced on 80' centers along the parallel or tangent sections. Reflectorized surface shall be fluorescent orange prismatic lens sheeting. The light at the beginning of the barrier run and at the breakpoint where the barrier becomes parallel to the roadway shall be a Type B flashing light. Barrier delineators shall be installed along the traffic side of the concrete barriers. Barrier delineators shall be spaced on 20' centers along the transition or taper sections and spaced on 80' centers in-between the barrier panels approximately 24 inches up from the roadway surface.

Option:

8. The barrier shown in this typical application is an example of one method that may be used to close a shoulder of a long-term project.

9. The RIGHT SHOULDER CLOSED (W21-5aR) sign may be eliminated from all roadways except Limited Access highways.

Guidance:

10. If drivers cannot see a pull-off area beyond the closed shoulder, information regarding the length of the shoulder closure shall be provided in feet or miles, as appropriate.

11. An emergency pull-off area should be provided per Section 6G.18 and Temporary Traffic Control Figure TTC-8.

1: Revision 1 - 4/1/2015

2: Revision 2 - 9/1/2019

Page 6H-19

September 2019

Shoulder Closure with Barrier Operation

(Figure TTC-6.2)

NOTES

1: Revision 1 - 4/1/2015

2: Revision 2 - 9/1/2019

September 2019

Page 6H-9

Work Beyond the Shoulder Operation

(Figure TTC-1.1)

NOTES

1: Revision 1 - 4/1/2015

September 2019

Page 6H-15

Stationary Operation on a Shoulder

(Figure TTC-4.2)

NOTES

1: Revision 1 - 4/1/2015

2: Revision 2 - 9/1/2019

September 2019

Page 6H-17

Shoulder Operation with Minor Encroachment

(Figure TTC-5.2)

NOTES

1: Revision 1 - 4/1/2015

2: Revision 2 - 9/1/2019

September 2019

Page 6H-19

Shoulder Closure with Barrier Operation

(Figure TTC-6.2)

NOTES

2: Revision 2 - 9/1/2019

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES

FACILITIES & ENGINEERING DIVISION

ENGINEERING BUREAU

2100 CLARENDON BOULEVARD, SUITE 813

ARLINGTON, VA 22201

PHONE: 703.228.3629

FAX: 703.228.3606

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SEAL

07/13/23

PROFESSIONAL ENGINEER

JASON AR

Lic. No. 65113

APPROVALS

DATE

DESIGN TEAM ENGINEER SUPERVISOR

8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR

8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF

8/29/2023

TRANSPORTATION DIRECTOR

8/30/2023

PROJECT MANAGER

8/1/2023

REVISIONS

DATE

LDA #4 SUBMISSION

07/13/2023

100% DESIGN

05/24/2023

LDA#3 SUBMISSION

01/31/2023

LDA#2 SUBMISSION

06/23/2022

100% SUBMISSION

06/21/2022

LDA SUBMISSION

04/19/2022

30% SUBMISSION

12/23/2021

SOUTH EADS STREET

CC13

BETWEEN ARMY NAVY DR. AND 12TH ST. S.

MAINTENANCE OF TRAFFIC

TTC DETAILS

DESIGNED: ME

DRAWN: MS

CHECKED: JA

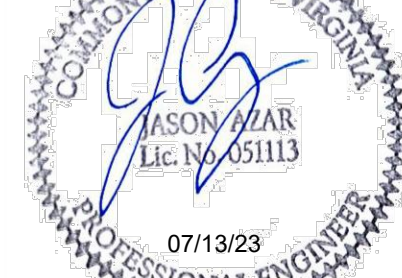
PLOTTED: JULY 13 2023

SCALE:

C124.1

SOUTH EADS STREET

CC13



APPROVALS _____ DATE _____

DESIGN TEAM ENGINEER SUPERVISOR

8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR
Liquid 3/1/2015

8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF
8/20/2023

TRANSPORTATION DIRECTOR

8/30/2023

PROJECT MANAGER

~~Aniel Yang~~ ~~3/4/2020~~

REVISIONS	DATE
-----------	------

LBA #1 SUBMISSION 07/10/2008

LDA #4 SUBMISSION 07/13/202

100% DESIGN 05/24/202

LDA#3 SUBMISSION 01/31/202

LEA#0 SUBMISSION	00/00/000
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LDA#2 SUBMISSION 06/23/2022

100% SUBMISSION 06/21/202

LDA SUBMISSION 04/19/202

22% SUBMISSION 10/22/2020

30% SUBMISSION 12/23/202

SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.

MAINTENANCE OF TRAFFIC

TTC DETAILS

DESIGNED: ME
DRAWN: MS
CHECKED: JA

PLOTTED: JULY 13 2023

SCALE:

C124.2

SOUTH EADS STREET CC13

Page 6H-40

September 2019

**Typical Traffic Control
Outside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-16.2)**

NOTES

Standard:

- On divided highways having a median wider than 8', right and left sign assemblies shall be required.
- Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.
- When closing a lane, a PCMS should be used in advance of the first warning sign if all of the left side signs cannot be installed.¹
- Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.
- All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.

Standard:

- Taper length (L) and channelizing device spacing shall be at the following:

Taper Length L												
Speed Limit (mph)	9	10	11	12	Remarks	Speed Limit (mph)	9	10	11	12	Remarks	
25	95	105	115	125	L-S/W60	50	450	500	550	600	L-SW	
30	135	150	165	180	L-S/W60	55	495	550	605	660	L-SW	
35	185	205	225	245	L-S/W60	60	540	600	660	720	L-SW	
40	240	270	295	320	L-S/W60	65	585	650	715	780	L-SW	
45	405	450	495	540	L-SW	70	630	700	770	840	L-SW	

Limited Access highways shall use a 1000' merging taper regardless of the posted speed.

Shifting Tapers see Table 6H-2.² Shoulder Taper = ½ L Minimum

Channelizing device spacing shall be at the following:

Channelizing Device Spacing												
Location	Speed Limit (mph)	Location	Speed Limit (mph)	Location	Speed Limit (mph)	Location	Speed Limit (mph)	Location	Speed Limit (mph)	Location	Speed Limit (mph)	Location
Transition	0-35	Traveway	0-35	Construction Access	0-35	Transition	36+	Traveway	36+	Construction Access	36+	Transition
	140'		140'		120'		140'		140'		120'	

- An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18).
- The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
- A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.
- Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights but can be used to supplement the amber rotating, flashing, or oscillating lights.
- When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.

Option:

- PTRS and their supporting signs may be used, see Sections 6F-99 and 6G-25. Long-term transverse rumble strips may be used in long-term situations, see Section 6F-99 and TTC-20.
- The supplemental PTRS may be eliminated.²

1: Revision 1 - 4/1/2015
2: Revision 2 - 9/1/2019

Page 6H-42

September 2019

**Typical Traffic Control
Inside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-17.2)**

NOTES

Standard:

- On divided highways having a median wider than 8', right and left sign assemblies shall be required.
- Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.
- When closing a lane, a PCMS should be used in advance of the first warning sign if all of the left side signs cannot be installed.¹
- Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.
- All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.

Standard:

- Taper length (L) and channelizing device spacing shall be at the following:

Taper Length L												
Speed Limit (mph)	9	10	11	12	Remarks	Speed Limit (mph)	9	10	11	12	Remarks	
25	95	105	115	125	L-S/W60	50	450	500	550	600	L-SW	
30	135	150	165	180	L-S/W60	55	495	550	605	660	L-SW	
35	185	205	225	245	L-S/W60	60	540	600	660	720	L-SW	
40	240	270	295	320	L-S/W60	65	585	650	715	780	L-SW	
45	405	450	495	540	L-SW	70	630	700	770	840	L-SW	

Limited Access highways shall use a 1000' merging taper regardless of the posted speed.

Shifting Tapers see Table 6H-2.² Shoulder Taper = ½ L Minimum

Channelizing device spacing shall be at the following:

Channelizing Device Spacing

Page 6H-78September 2019

Typical Traffic Control

Sidewalk Closure and Bypass Sidewalk Operation

(Figure TTC-35.1)

NOTES

Standard:

1. When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.

Guidance:

2. Where high speeds are anticipated, a temporary traffic barrier and, if necessary, a crash cushion should be used to separate the temporary sidewalks from vehicular traffic.

3. Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.

4. Temporary markings should be considered for operations exceeding three days in duration.

Option:

5. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic.

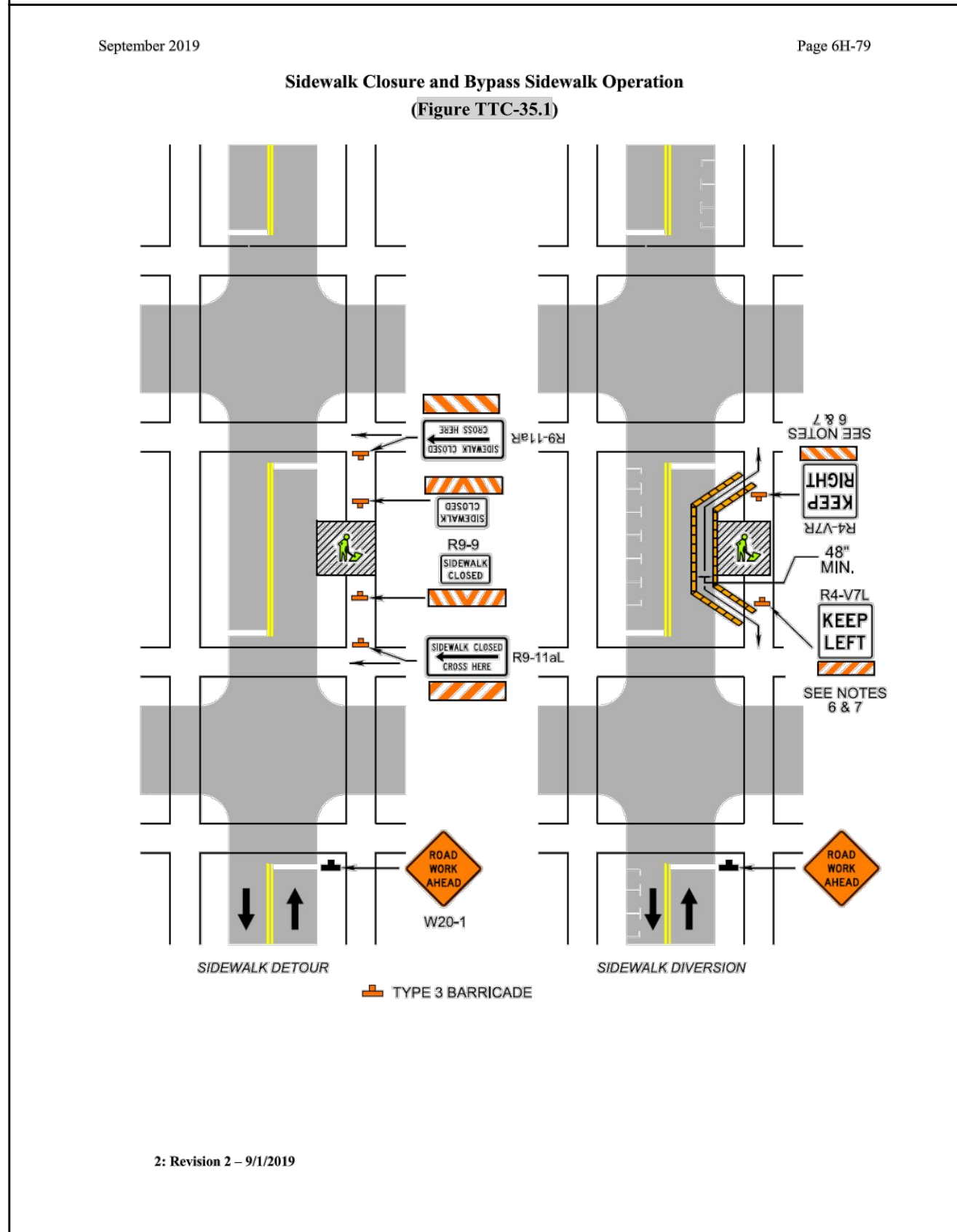
6. For nighttime closures, Type A Flashing warning lights may be used on barricades that support signs and close sidewalks.

7. Signs, such as KEEP RIGHT (R4-V7R) and KEEP LEFT (R4-V7L), may be placed along a temporary sidewalk to guide or direct pedestrians.

Standard:

8. All sidewalk closures shall be closed with Type 3 Barricades. The SIDEWALK CLOSED (R9-9) sign and the SIDEWALK CROSS HERE (R9-11) sign shall be installed above the Type 3 barricade. The KEEP RIGHT sign can cover the top rail of the Type 3 Barricade.

2: Revision 2 - 9/1/2019



Page 6H-80September 2019

Typical Traffic Control

Crosswalk Closure and Pedestrian Detour Operation

(Figure TTC-36.2)

NOTES

Standard:

1. When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.

2. Curb parking shall be prohibited for at least 50 feet in advance of the midblock crosswalk.

Guidance:

3. Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.

4. Pedestrian traffic signal displays controlling closed crosswalks should be covered or deactivated.

5. Temporary markings should be considered for operations exceeding three days in duration.

Option:

6. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic.

7. For nighttime closures, Type A Flashing warning lights may be used on barricades supporting signs and closing sidewalks.

Standard:

8. In order to maintain the systematic use of the fluorescent yellow-green background for school warning signs in a jurisdiction, the fluorescent yellow-green background for school warning signs shall be used in TTC zones.

9. All sidewalk closures shall be closed with Type 3 Barricades. The SIDEWALK CLOSED (R9-9) sign and the SIDEWALK CROSS HERE (R9-11) sign shall be installed above the Type 3 Barricade. The KEEP RIGHT sign can cover the top rail of the Type 3 Barricade.

Support:

10. Refer to Sections 3B-16 through 3B-18 of the 2009 MUTCD and the Virginia Supplement to the MUTCD¹ for crosswalk lines, yield lines and other related TTC devices that may be used to control vehicular traffic at midblock crosswalks.

Standard:

11. The YIELD HERE TO PEDESTRIANS (R1-5) sign shall be placed at the Yield Line.

12. Fluorescent yellow-green PEDESTRIAN TRAFFIC (W11-2) symbol sign, AHEAD (W16-9p) plaque and ARROW (W16-7p) plaque shall be used to identify the work zone crosswalk.

1: Revision 1 - 4/1/2015

2: Revision 2 - 9/1/2019

September 2019Page 6H-81

Crosswalk Closure and Pedestrian Detour Operation

(Figure TTC-36.2)

1: Revision 1 - 4/1/2015

2: Revision 2 - 7/1/2018

Page 6H-92September 2019

Typical Traffic Control

Interior Lane Closure Operation on a Multi-Lane Roadway

(Figure TTC-42.2)

NOTES

Guidance:

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

2. Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.

Standard:

3. On divided highways having a median wider than 8', right and left sign assemblies shall be required.

4. Taper length (L) shall be at the following:

5. Channelizing device spacing shall be at the following:

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

7. The buffer space length shall be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.

8. A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, oscillating, or flashing light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.

9. For long-term work zones existing conflicting pavement markings and markers shall be removed and temporary pavement markings and markers shall be installed per Figure TTC-60.

Option:

10. For short-term stationary work (less than 3 days duration), lanes may be delineated by channelizing devices or removable pavement markings instead of temporary pavement markings.

11. PTRS may be used on undivided roadways, see section 6E-99 for proper spacing of PTRS and Figures TTC-17.

Guidance:

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

13. For locations with a high volume of left turning movements, the graphic NO LEFT TURN (R3-2) signs should be used.¹

1: Revision 1 - 4/1/2015

2: Revision 2 - 9/1/2019

September 2019Page 6H-93

Interior Lane Closure Operation on a Multi-Lane Roadway

(Figure TTC-42.2)

Page 6H-118

September 2019

Typical Traffic Control

Eradication of Pavement Markings in a Work Zone

(Figure TTC-55.1)

NOTES

Support:
1. This figure depicts requirements for pavement marking removal for long-term (over 3 days continuous duration) work zones. These are minimum removal requirements for existing pavement markings.

Standard:
2. All skip lines shall be removed a minimum of 200' in advance of the beginning of a lane closure transition in the lane being closed to the point where the new edge line covers the skips.
3. The existing edge line shall be removed a minimum of 200' past the beginning point where the new edge line is transitioned over.
4. In lane shift situations, all pavement markings and markers¹ not behind temporary¹ traffic barriers and within 6' of the new edge line shall be removed.

Option:
5. In lane shift situations, if Group 2 channelizing devices are placed between the barrier service or work area and the travel lanes, removal of skip lines in excess of 6' away from the new edge line is not required and may remain.

Guidance:
6. All existing pavement markers in conflict with the new construction pavement markings shall have the reflective element removed.
7. Work zones shall be reviewed the first night period after changes have been made to the pavement markings to ensure all conflicting markings and markers have been adequately removed, and the new markings and markers properly delineate the intended travel path.

Guidance:
8. Removal of additional pavement markings and pavement markers should be removed based on roadway geometrics and specific site conditions so that traffic will be guided safely if additional traffic control devices such as drums become displaced.¹

1: Revision 1 - 4/1/2015

Page 6H-119

September 2019

Eradication of Pavement Markings in a Work Zone

(Figure TTC-55.1)

Page 6H-122

July 2019

Typical Traffic Control

End of Day Signing for Partial Paving Operations on a Multi-Lane Roadway

(Figure TTC-57.2)

NOTES

Standard:
1. On divided highways having a median wider than 8', right and left sign assemblies shall be used. Median barrier is considered to be part of the shoulder and its measurement shall be used to determine the total width of the shoulder.
2. The maximum pavement edge drop-off between traffic lanes shall be 2 inches or less.
3. Open travel lane(s) shall not be exposed to more than 2 to 3 mile sections of milled or uneven surface.
4. A portable changeable message sign with "ROUGH ROAD AHEAD" and other appropriate messages shall be used.
5. A BUMP (W8-1) sign shall be placed in advance of the end of the pavement drop-off.
6. The District Traffic Engineer shall determine speed reductions.
7. The UNEVEN LANES (W8-11), STAY IN LANE (R4-9), and BUMP signs shall be adjusted daily with the work operation and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand¹. Additional UNEVEN LANES signs shall be installed every 2 miles and on entrance ramps.
8. Where conditions warrant, ROUGH ROAD (W8-8) and BUMP signs shall be installed 500' ± in advance of the affected roadway surface on entrance ramps, and BUMP signs shall be installed 500' ± in advance of unaffected roadway surface on exit ramps.
9. All signs shall be post-mounted at locations after 72 consecutive hours of non-work activities.

Guidance:
10. Sign spacing distance should be 1300'-1500' for Limited Access highways, and on all other roadways 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.

Option:
11. Only traffic control signing for partial pavement resurfacing is shown. Other devices may be used for the control of traffic through the work area.
12. Temporary pavement markers spaced at 10 foot centers for two-way traffic centerlines or three per skip line for lane division lines may be added as directed by the engineer.
13. The LOW SHOULDER (W8-9) sign may be used to warn of a shoulder condition where there is an elevation difference of less than 2 inches between the shoulder and the travel lane.

Standard:
14. If used, the LOW SHOULDER sign shall be repeated at 1 mile intervals if the condition extends over a distance in excess of 1 mile.
15. The SHOULDER DROP OFF (W8-V5) sign shall be used when an unprotected shoulder drop-off, adjacent to the travel lane, exceeds 2 inches depth between the shoulder and the travel lane. Where the condition extends over a distance in excess of 1 mile, the sign shall be repeated at 1 mile intervals.

Option:
16. The SHOULDER DROP OFF sign may be eliminated if a 6:1 (desirable) to 4:1 (minimum) wedge is used between the travel lane and the shoulder.

Standard:
17. A temporary pavement wedge shall be constructed of surface mix asphalt a minimum of three (3) feet in length for every inch of depth of pavement milling on the approach and departure end of the milled travel lane(s). Refer to Standard ACOT-1 of the Road and Bridge Standards for details.
18. A minimum of four (4) drum channelizing devices shall be placed on the shoulder in advance of the PCMS in a taper for delineation (see Figure 6F-6).

1: Revision 1 - 4/1/2015; 2: Revision 2 - 9/1/2019

1: Revision 1 - 4/1/2015; 2: Revision 2 - 9/1/2019

Page 6H-123

July 2019

End of Day Signing for Partial Paving Operations on a Multi-Lane Roadway

(Figure TTC-57.2)

Page 6H-124

July 2019

Typical Traffic Control

End of Day Signing for Full Paving Operations on a Multi-Lane Roadway

(Figure TTC-58.1)

NOTES

Standard:
1. On divided highways having a median wider than 8', right and left sign assemblies shall be used. Median barrier is considered to be part of the shoulder and its measurement shall be used to determine the total width of the shoulder.
2. The maximum pavement edge drop-off shall be 2 inches or less.
3. Open travel lane(s) shall not be exposed to more than 2 to 3 mile sections of milled or uneven surface.
4. A portable changeable message sign with "ROUGH ROAD AHEAD" and other appropriate messages shall be used.
5. A BUMP (W8-1) sign shall be placed in advance of the end of the pavement drop-off.
6. The District Traffic Engineer shall determine speed reductions.
7. The ROUGH ROAD (W8-8), UNMARKED PAVEMENT AHEAD (W8-V4) and BUMP signs shall be adjusted daily with the work operation and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand¹. Additional ROUGH ROAD and UNMARKED PAVEMENT AHEAD signs shall be installed every 2 miles.
8. PAVEMENT AHEAD (W8-V4) and BUMP signs shall be adjusted daily with the work operation and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand¹. Additional ROUGH ROAD and UNMARKED PAVEMENT AHEAD signs shall be installed every 2 miles.
9. Where conditions warrant, ROUGH ROAD and BUMP signs shall be installed 350' ± in advance of the affected roadway surface on entrance ramps, and BUMP signs shall be installed 500' ± in advance of unaffected roadway surface on exit ramps.
10. All signs shall be post-mounted at locations after 72 consecutive hours of non-work activities.

Guidance:
11. For sign spacing distances see Table 6H-5.

Option:
12. Only traffic control signing for partial pavement resurfacing is shown. Other devices may be used for the control of traffic through the work area.
13. Temporary pavement markers spaced at 10 foot centers for two-way traffic centerlines or three per skip line for lane division lines may be added as directed by the engineer.
14. The LOW SHOULDER (W8-9) sign may be used to warn of a shoulder condition where there is an elevation difference of less than 2 inches between the shoulder and the travel lane.

Standard:
15. If used, the LOW SHOULDER sign shall be repeated at 1 mile intervals if the condition extends over a distance in excess of 1 mile.
16. The SHOULDER DROP OFF (W8-V5) sign shall be used when an unprotected shoulder drop-off, adjacent to the travel lane, exceeds 2 inches depth between the shoulder and the travel lane. Where the condition extends over a distance in excess of 1 mile, the sign shall be repeated at 1 mile intervals.

Option:
17. The SHOULDER DROP OFF sign may be eliminated if a 6:1 (desirable) to 4:1 (minimum) wedge is used between the travel lane and the shoulder.

Standard:
18. A temporary pavement wedge shall be constructed of surface mix asphalt a minimum of three (3) feet in length for every inch of depth of pavement milling on the approach and departure end of the milled travel lane(s). Refer to Standard ACOT-1 of the Road and Bridge Standards for details.
19. A minimum of four (4) drum channelizing devices shall be placed on the shoulder in advance of the PCMS in a taper for delineation (see Figure 6F-6).

1: Revision 1 - 4/1/2015; 2: Revision 2 - 9/1/2019

1: Revision 1 - 4/1/2015; 2: Revision 2 - 9/1/2019

Page 6H-125

July 2019

End of Day Signing for Full Paving Operations on a Multi-Lane Roadway

(Figure TTC-58.1)

VDOT Work Zone Pedestrian and Bicycle Guidance (2016)

Bicycle Lane Closure

EXAMPLE OF A BICYCLE LANE CLOSURE

21

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES

FACILITIES & ENGINEERING DIVISION

ENGINEERING BUREAU

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SEAL

ARLINGTON COUNTY VIRGINIA

JASON HARR

Professional Engineer

07/13/23

License No. 55113

APPROVALS

DATE

DESIGN TEAM ENGINEER SUPERVISOR

8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR

8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF

8/29/2023

TRANSPORTATION DIRECTOR

8/30/2023

PROJECT MANAGER

8/1/2024

REVISIONS

DATE

LDA #4 SUBMISSION

07/13/2023

100% DESIGN

05/24/2023

LDA#3 SUBMISSION

01/31/2023

LDA#2 SUBMISSION

06/23/2022

100% SUBMISSION

06/21/2022

LDA SUBMISSION

04/19/2022

30% SUBMISSION

12/23/2021

SOUTH EADS STREET

CC13

BETWEEN ARMY NAVY DR. AND 12TH ST. S.

MAINTENANCE OF TRAFFIC

TTC DETAILS

DESIGNED: ME

DRAWN: MS

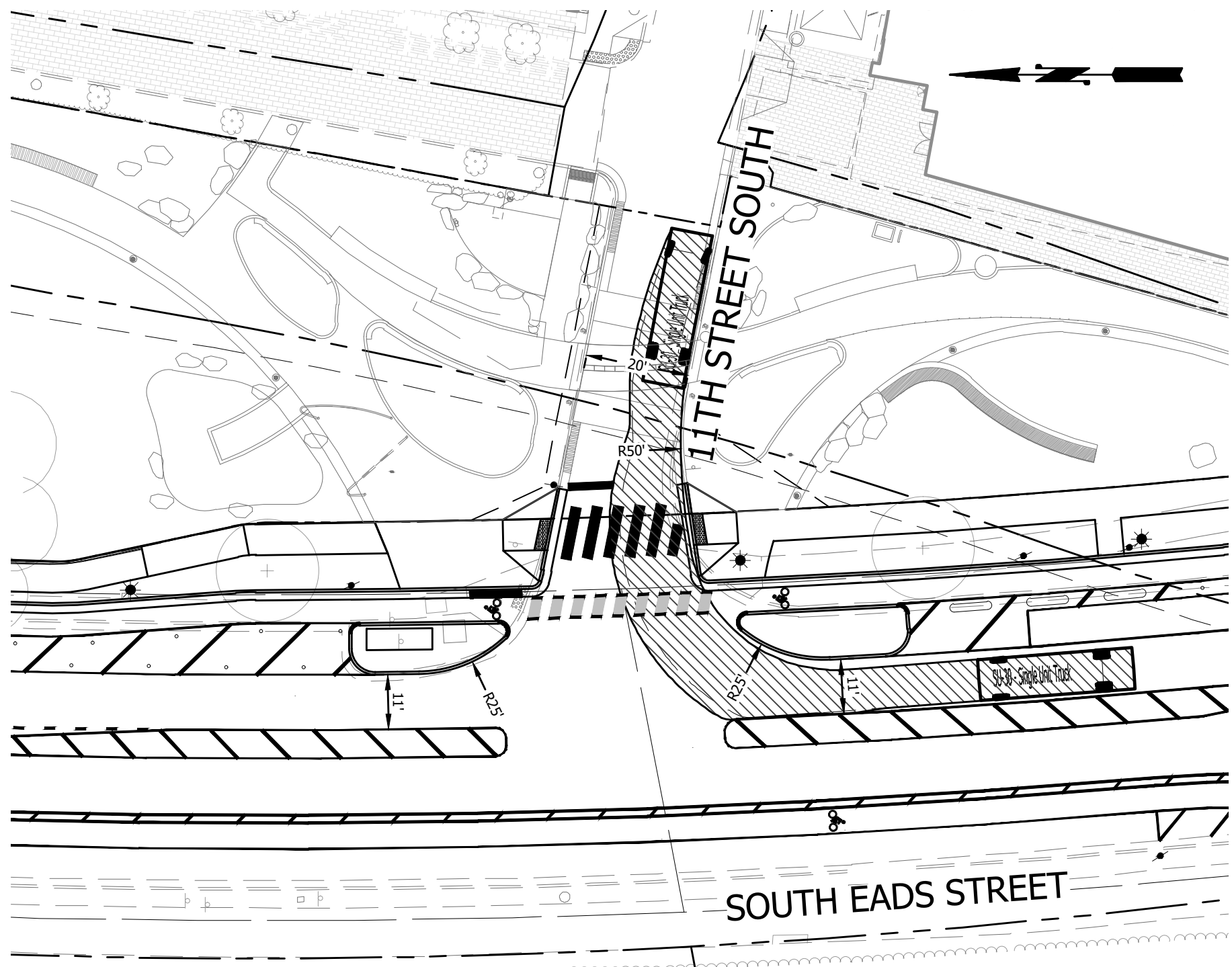
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PLOTTED: JULY 13 2023

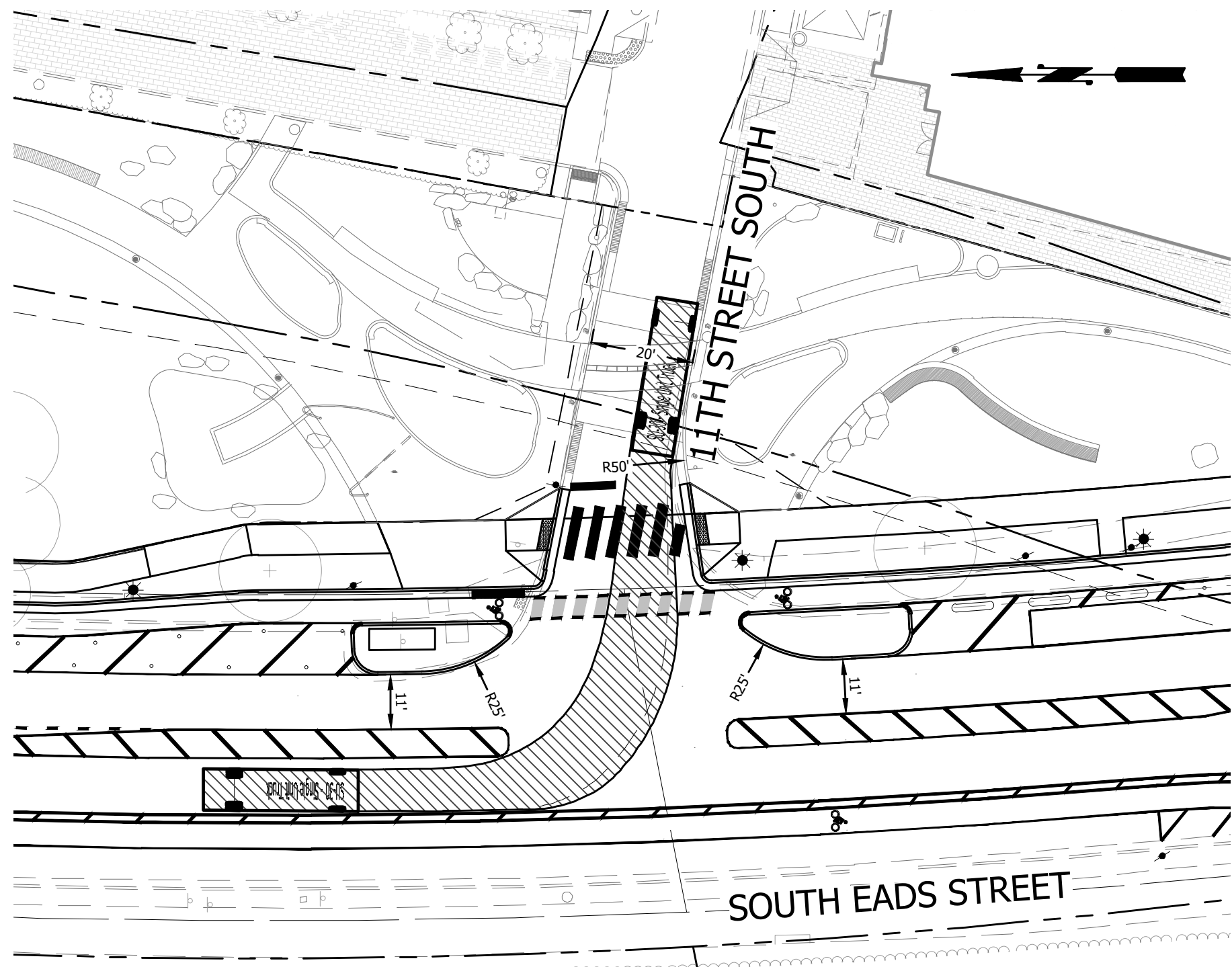
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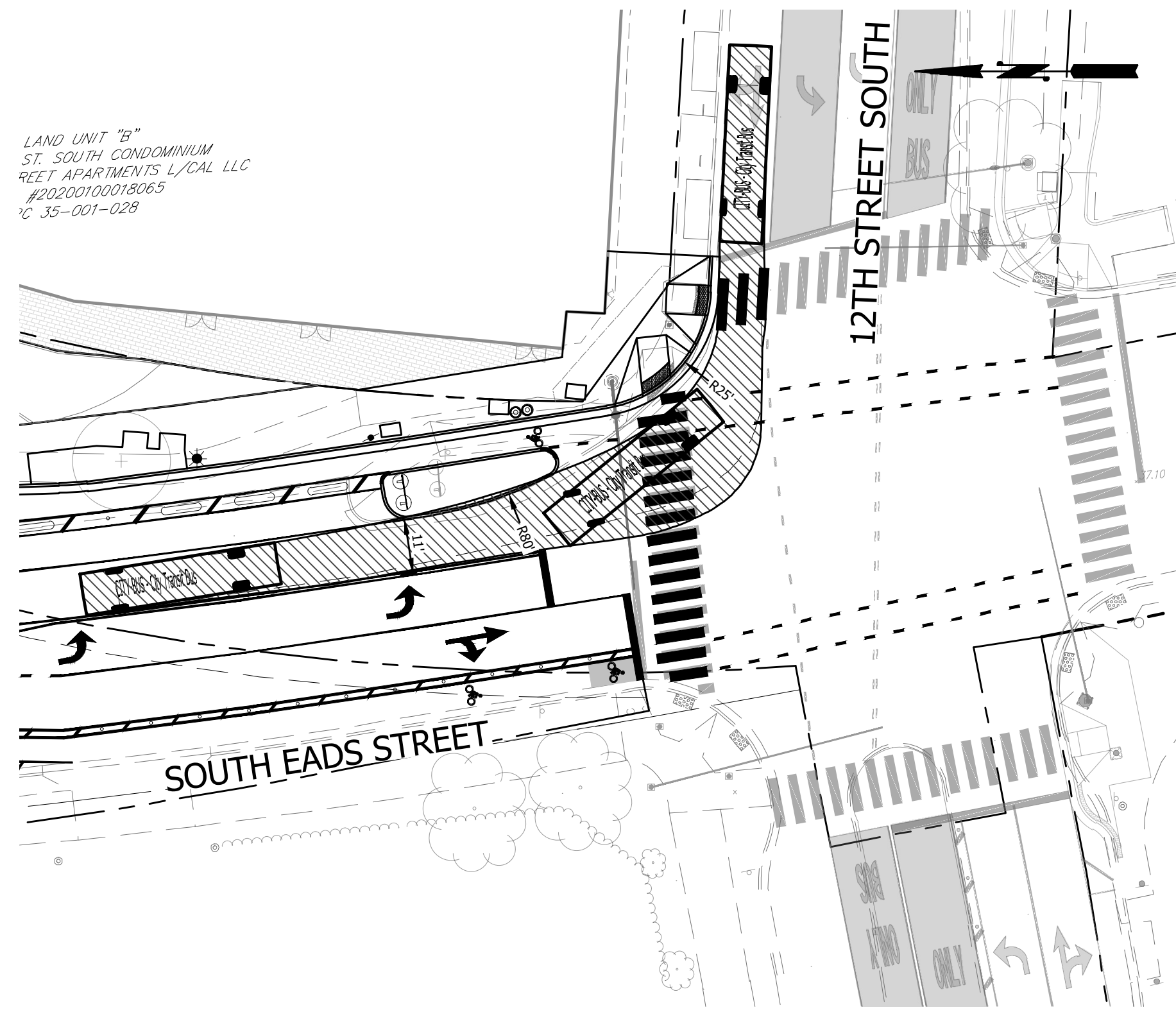
SOUTH EADS STREET CC13



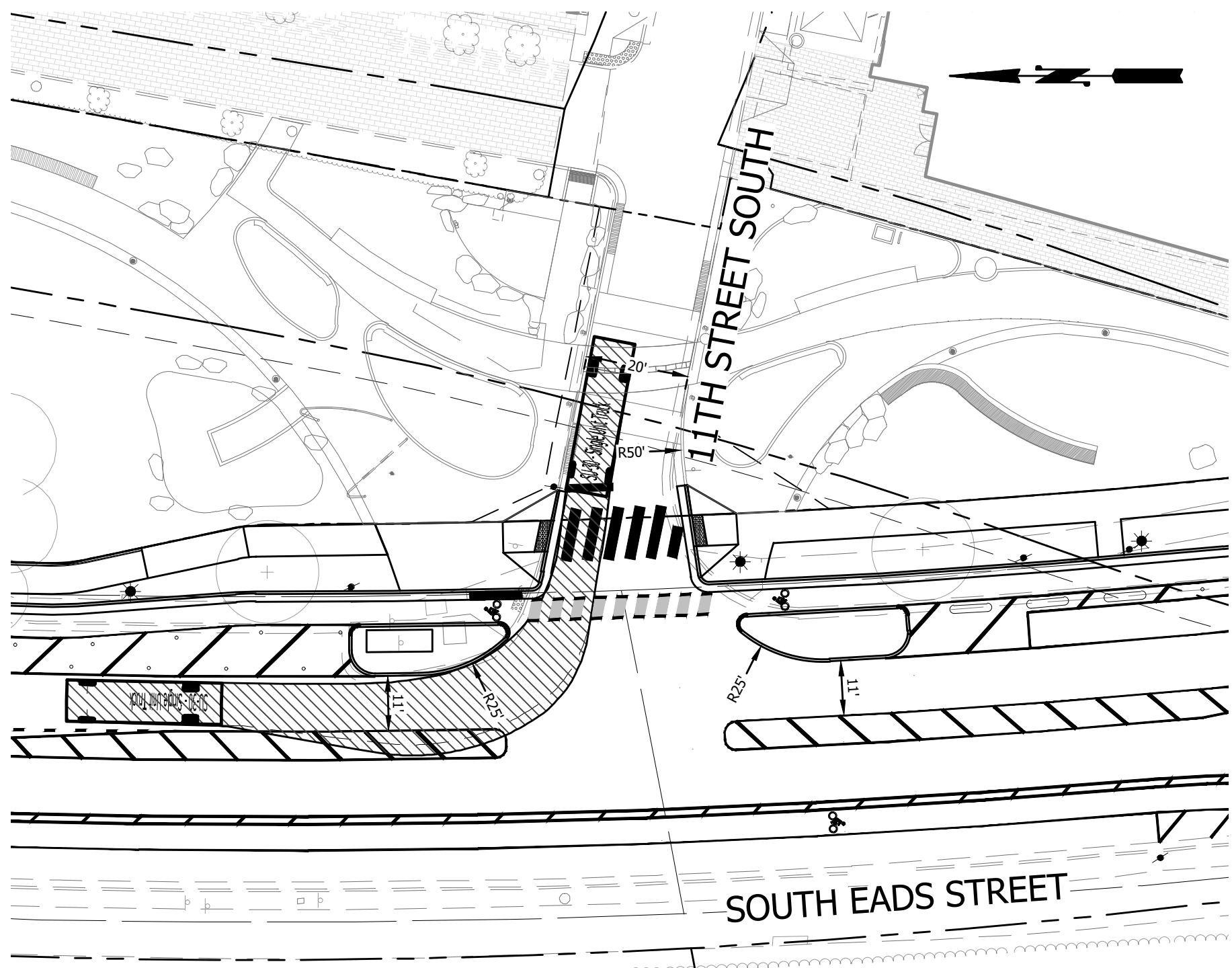
RT SOUTH EADS TO 11TH STREET SOUTH



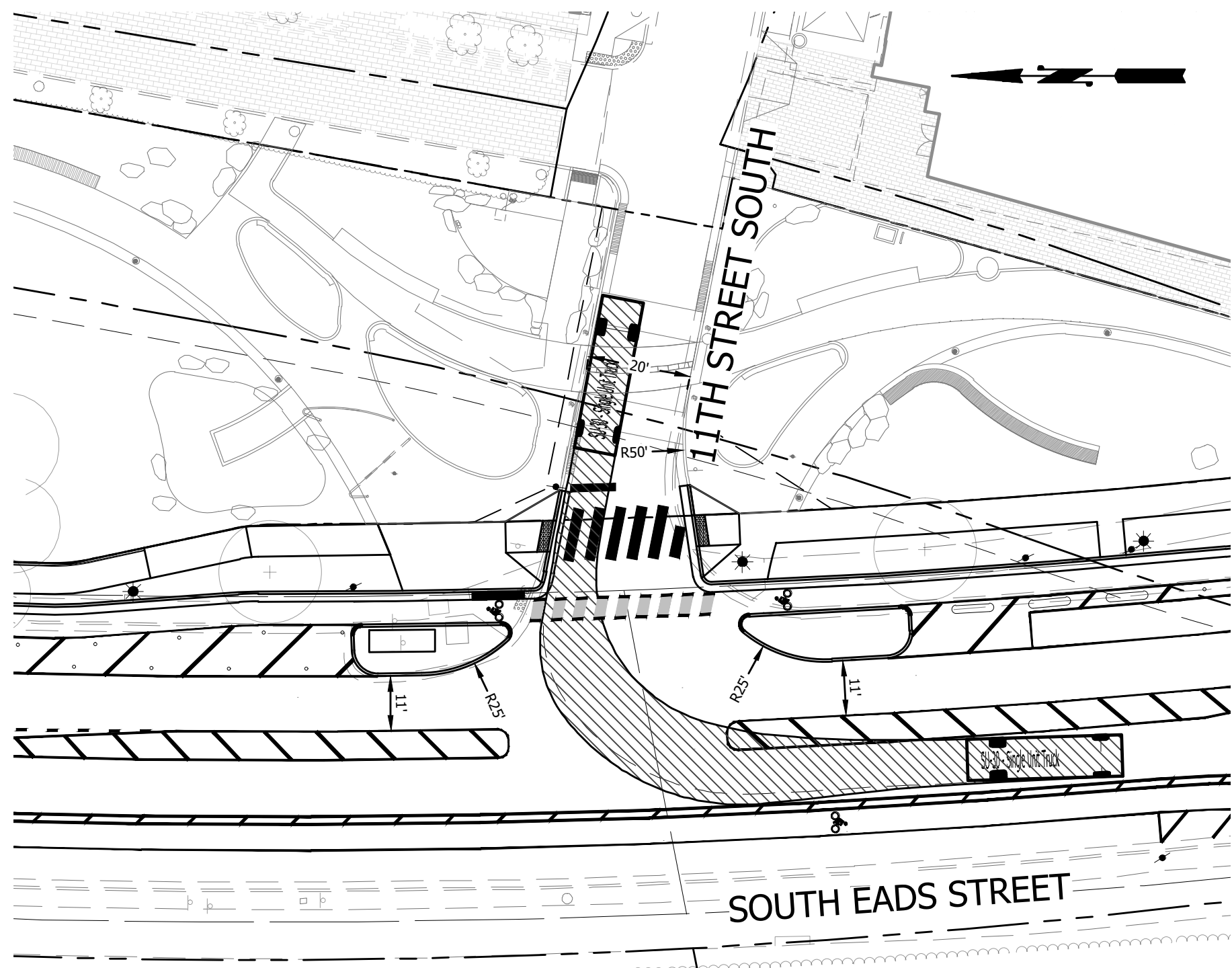
LT SOUTH EADS TO 11TH STREET SOUTH



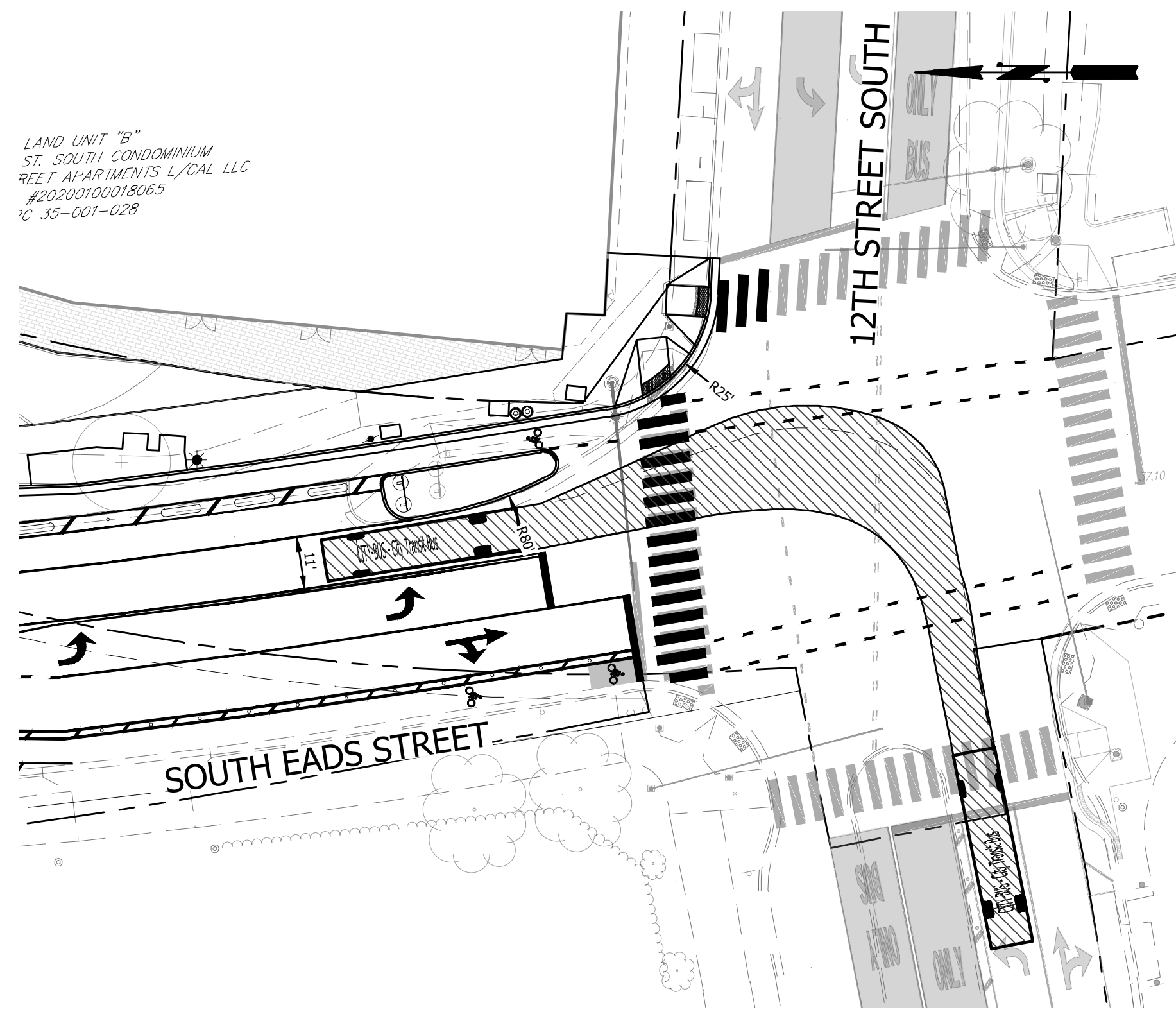
RT 12TH STREET SOUTH TO SOUTH EADS STREET



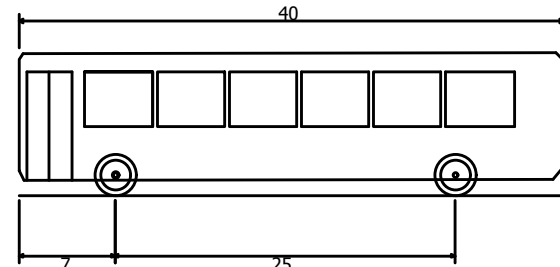
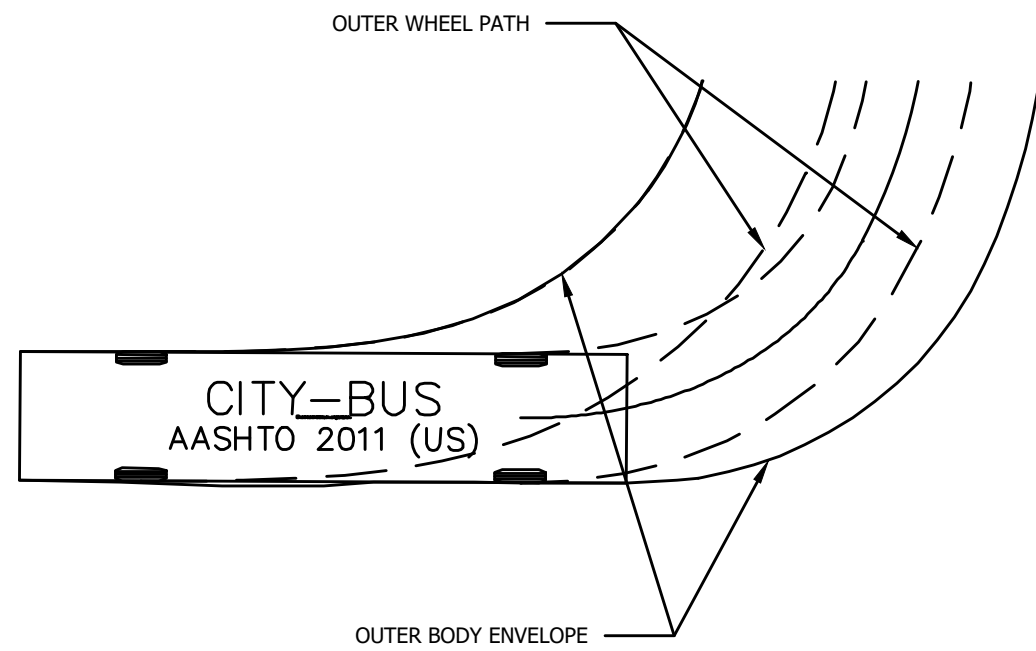
RT 11TH STREET SOUTH TO SOUTH EADS



LT 11TH STREET TO SOUTH SOUTH EADS

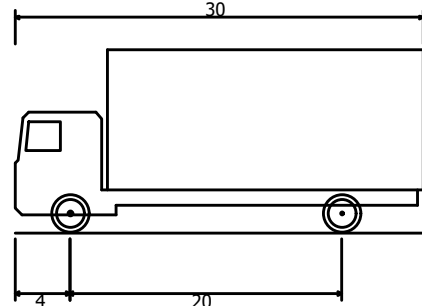


LT 12TH STREET SOUTH TO SOUTH EADS STREET



CITY-BUS - City Transit Bus
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock-to-lock time
Max Steering Angle (Virtual)

40.00ft
10.50ft
1.15ft
8.50ft
5.00ft
41.40°



SU-30 - Single Unit Truck
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock-to-lock time
Max Steering Angle (Virtual)

30.00ft
13.50ft
1.36ft
8.00ft
5.00ft
31.80°

NOTE: ARLINGTON JUNCTION PARK ALONG WITH 12TH ST CC16 AND ARMY NAVY DRIVE STRIPING AND IMPROVEMENTS ARE INCLUDED FOR REFERENCE ONLY.

TURNING MOVEMENT ANALYSIS NARRATIVE

SOUTH EADS STREET & 11TH STREET SOUTH

- THE DESIGN VEHICLE FOR THE ANALYSIS IS A SU-30 SINGLE UNIT TRUCK.
- AT SOUTH EADS STREET THE DESIGN SPEED IS 30 MPH.
- AT 11TH STREET SOUTH ALL TURNING MOVEMENTS TO AND FROM SOUTH EADS STREET CAN BE ACCOMPLISHED WITH THE PROPOSED LANE CONFIGURATION.

12TH STREET SOUTH & SOUTH EADS STREET

- THE DESIGN VEHICLE FOR THE ANALYSIS IS A CITY BUS - CITY TRANSIT BUS.
- AT 12TH STREET SOUTH THE DESIGN SPEED IS 25 MPH.
- AT SOUTH EADS STREET ALL TURNING MOVEMENTS TO AND FROM 12TH STREET SOUTH CAN BE ACCOMPLISHED WITH THE PROPOSED LANE CONFIGURATION.

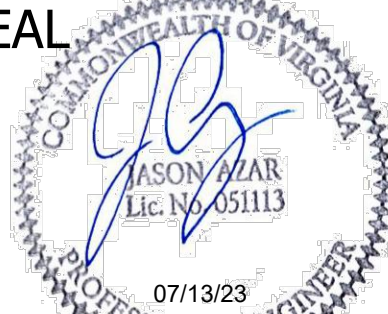
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DEPARTMENT OF
ENVIRONMENTAL SERVICES
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SEAL



APPROVALS DATE

DESIGN TEAM ENGINEER SUPERVISOR 8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR 8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF 8/29/2023

TRANSPORTATION DIRECTOR 8/30/2023

PROJECT MANAGER 8/14/2023

REVISIONS DATE

LDA #4 SUBMISSION 07/13/2023

100% DESIGN 05/24/2023

LDA#3 SUBMISSION 01/31/2023

LDA#2 SUBMISSION 06/23/2022

100% SUBMISSION 06/21/2022

LDA SUBMISSION 04/19/2022

30% SUBMISSION 12/23/2021

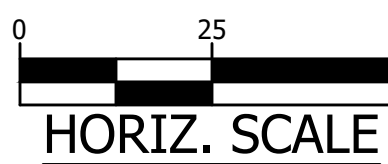
SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.

TURNING MOVEMENT EXHIBIT

DESIGNED: ME
DRAWN: MS
CHECKED: JA

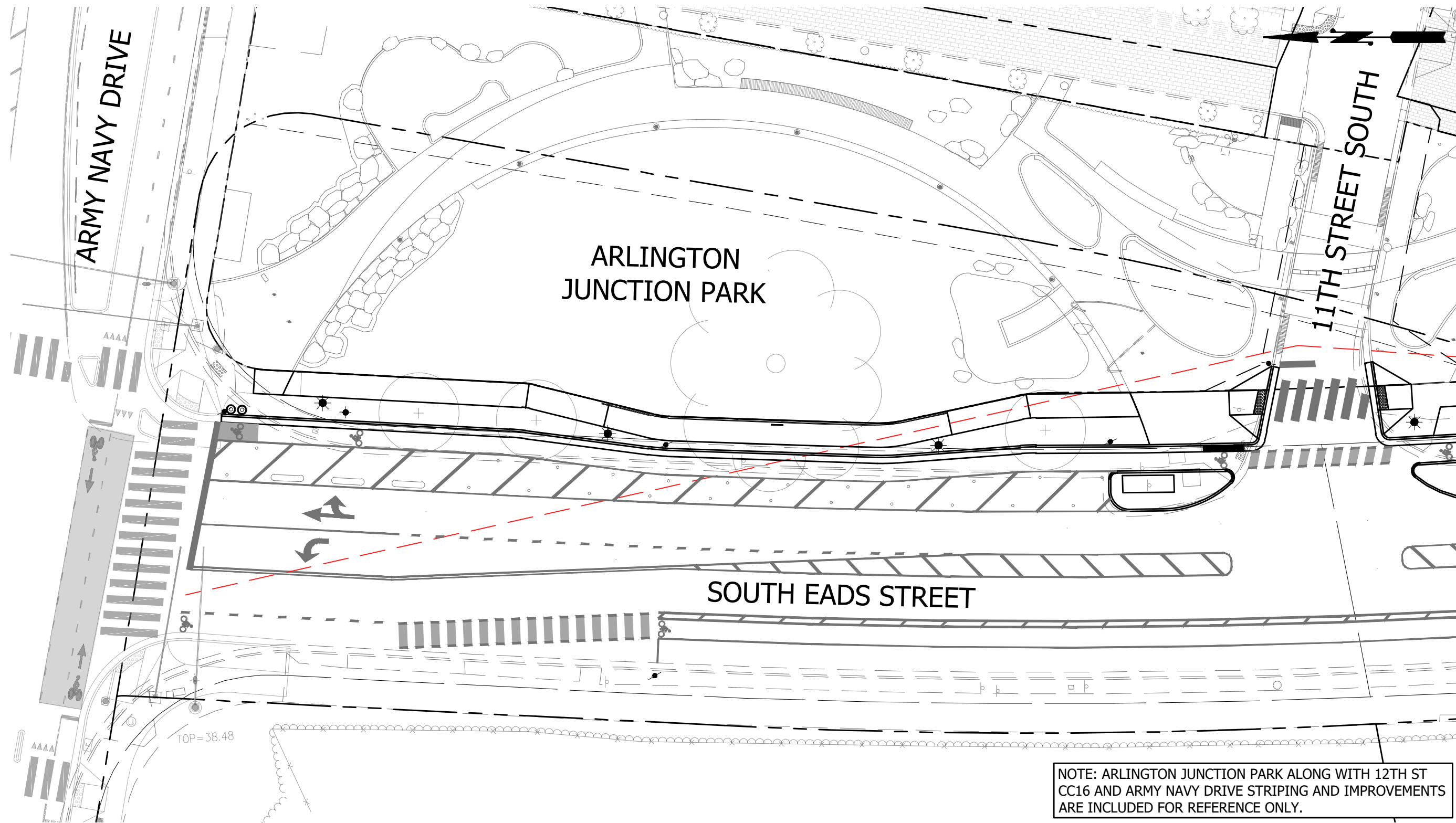
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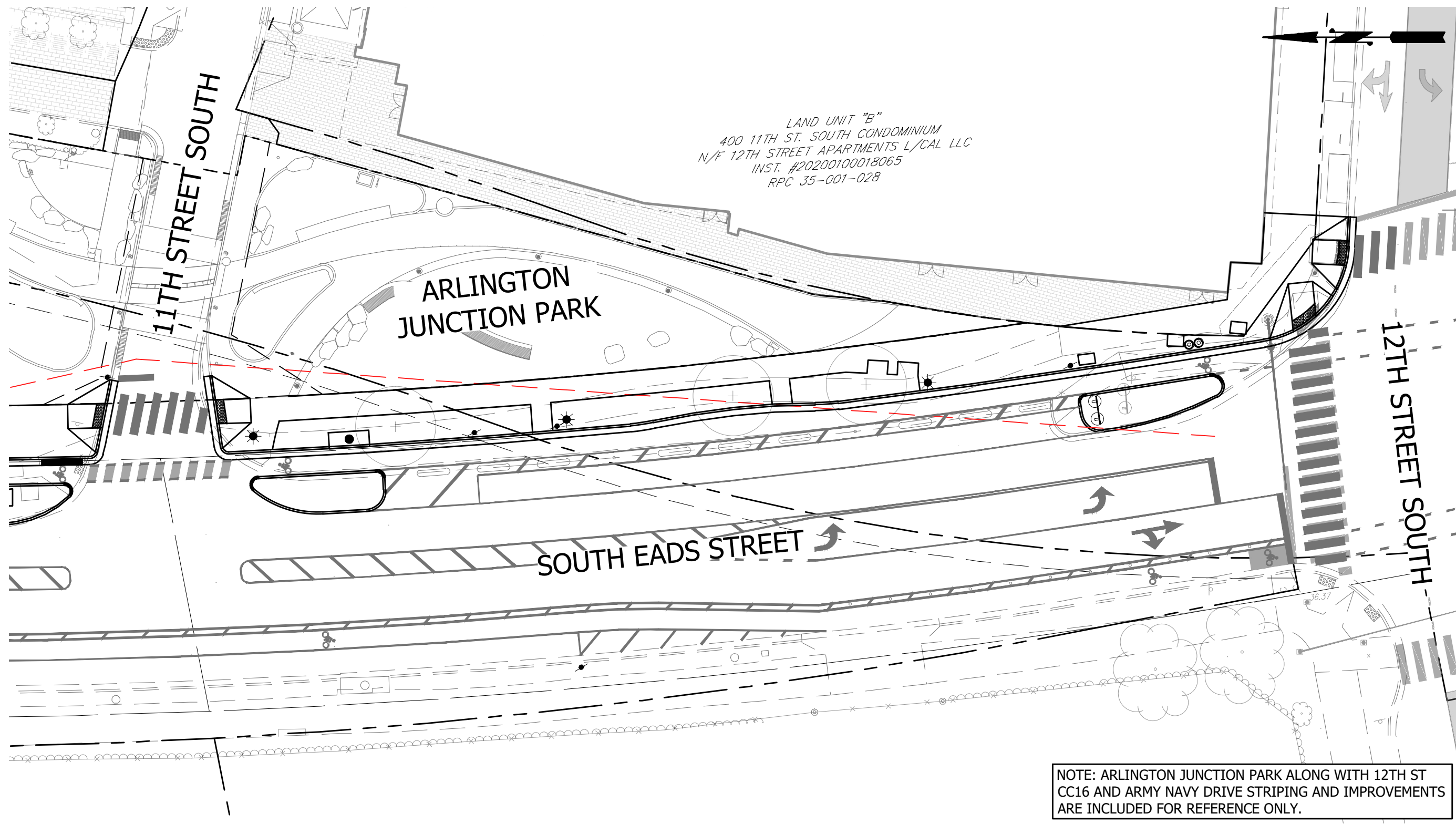


HORIZ. SCALE

C200.1



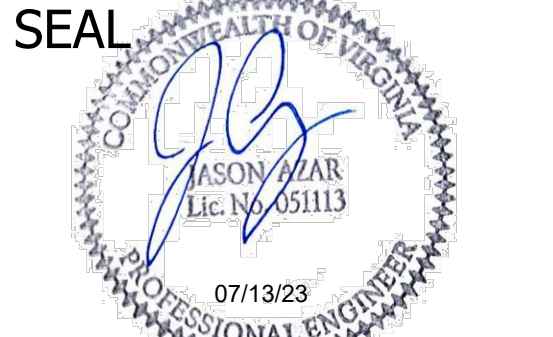
11TH STREET SOUTH TO SOUTH EADS STREET (RT)



11TH STREET SOUTH TO SOUTH EADS STREET (LT)



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APPROVALS DATE

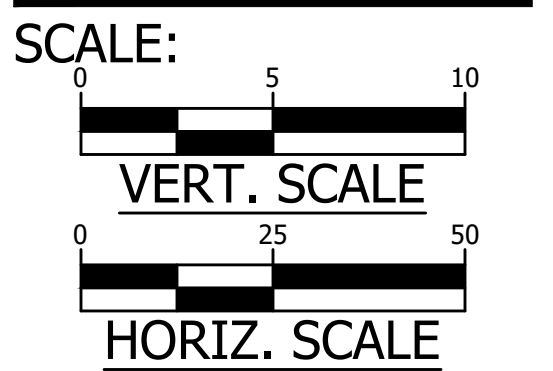
DESIGN TEAM ENGINEER SUPERVISOR	8/29/2023
CONSTRUCTION MANAGEMENT SUPERVISOR	8/29/2023
WATER, SEWER, STREETS BUREAU CHIEF	8/29/2023
TRANSPORTATION DIRECTOR	8/30/2023
PROJECT MANAGER	8/13/2023

REVISIONS	DATE
LDA #4 SUBMISSION	07/13/2023
100% DESIGN	05/24/2023
LDA#3 SUBMISSION	01/31/2023
LDA#2 SUBMISSION	06/23/2022
100% SUBMISSION	06/21/2022
LDA SUBMISSION	04/19/2022
30% SUBMISSION	12/23/2021

SOUTH EADS STREET
CC13
BETWEEN ARMY NAVY DR. AND 12TH ST. S.
SIGHT DISTANCE EXHIBIT

DESIGNED: ME
DRAWN: MS
CHECKED: JA

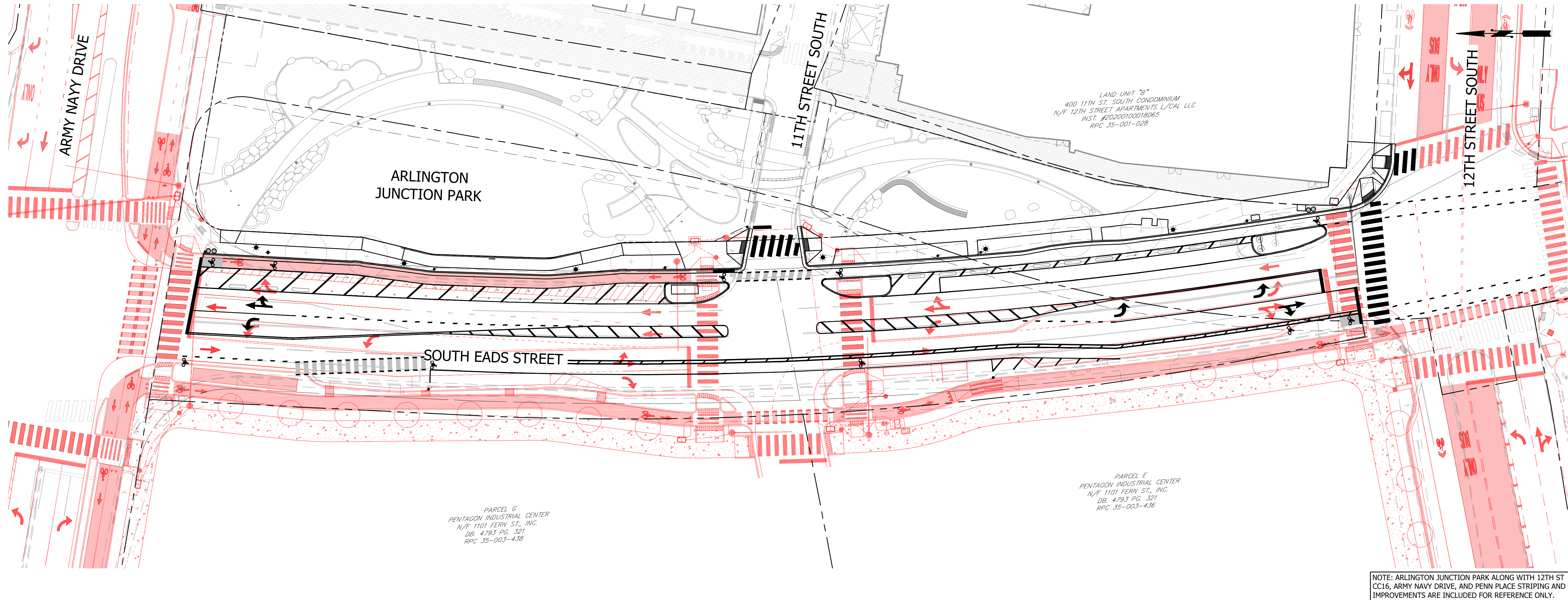
PLOTTED: JULY 13 2023



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REVISED ON 1/24/2022

FILENAME: C202.0 - ADJACENT PROJECTS IMPROVEMENTS EXHIBIT.DWG PATH: J:\145.006 - S. EADS ST DES\DWG PLOTTED BY: MEDELMAN



DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
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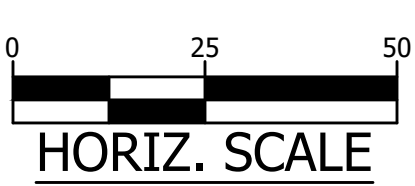
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SCALE:



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STRUCTURAL GENERAL NOTES

THESE NOTES APPLY TO CONTRACTORS, SUBCONTRACTORS, MANUFACTURERS, SUPPLIERS, FABRICATORS, ERECTORS, ETC. ENGAGED IN THE EXECUTION OF WORK INDICATED ON THESE DRAWINGS.

A. CODES AND STANDARDS

THE FOLLOWING CODES AND STANDARDS, INCLUDING ALL SPECIFICATIONS REFERENCED WITHIN, SHALL APPLY TO THE DESIGN, CONSTRUCTION, AND QUALITY CONTROL OF ALL WORK PERFORMED ON THE PROJECT. USE THE LATEST EDITION UNLESS NOTED OTHERWISE.

1. BUILDING CODES:

a. "INTERNATIONAL BUILDING CODE", IBC 2018.

b. "VIRGINIA UNIFORM STATEWIDE BUILDING CODE", 2018 EDITION.

c. "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES", ASCE 7-16.
2. AMERICAN CONCRETE INSTITUTE (ACI)

a. "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", ACI 318-14.

b. "ACI MANUAL OF CONCRETE PRACTICE - PARTS 1 THROUGH 5".
3. CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
- a. "MANUAL OF STANDARD PRACTICE".
4. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

a. "STEEL CONSTRUCTION MANUAL", FIFTEENTH EDITION, 2017.

b. "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", AISC 360-16.

c. "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", AISC 303-16.
5. RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC)

a. "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS".
6. AMERICAN WELDING SOCIETY (AWS)

a. "STRUCTURAL WELDING CODE - STEEL", ANSI/AWS D1.1:2015.

B. DESIGN DATA

1. SUPERIMPOSED DEAD LOADS (IN ADDITION TO STRUCTURE SELF-WEIGHT)

AREA	PSF
a. BOARDWALK	10

2. LIVE LOADS

AREA	PSF
a. BOARDWALK	100

3. SNOW LOAD:

- a. GROUND SNOW LOAD (P_g): 25

b. SNOW EXPOSURE FACTOR (C_e): 1.0

c. SNOW LOAD IMPORTANCE FACTOR (I_s): 1.0

d. ROOF THERMAL FACTOR (C_t): 1.0

e. FLAT-ROOF SNOW LOAD: P_f = 0.7 C_eC_tI_sP_g (BUT NOT LESS THAN 20xIs)
= 20 PLUS UNBALANCED, DRIFTING AND SLIDING SNOW WHERE APPLICABLE

C. FOUNDATIONS / GEOTECHNICAL REPORT

1. FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS INCLUDED IN THE GEOTECHNICAL REPORT PREPARED BY DMY ENGINEERING CONSULTANTS, INC. DATED 04/22/22, REPORT NO. 01.05716.01. REFER TO THAT REPORT FOR ADDITIONAL REQUIREMENTS.
2. FOUNDATIONS PLACED ON UNDISTURBED SOIL AT ELEVATIONS INDICATED HAVE BEEN DESIGNED FOR A NET ALLOWABLE BEARING PRESSURE OF 1500 PSF.
3. STRUCTURAL STEEL HELICAL-PILES 3 TON MINIMUM CAPACITY

D. MATERIALS

THE FOLLOWING ASTM STANDARDS AND DESIGN STRESSES SHALL BE USED FOR THE APPROPRIATE MATERIALS USED IN THE CONSTRUCTION OF THIS PROJECT.

1. CEMENT: ASTM C150, TYPE I, II, OR III
2. BLENDED HYDRAULIC CEMENT: ASTM C595, TYPE IS (LIMIT SLAG TO 35% MAX. CONTENT BY WEIGHT)
3. AGGREGATES: ASTM C33 (NORMAL WEIGHT); ¾" NOMINAL MAXIMUM AGGREGATE SIZE.
4. ADMIXTURES: AIR ENTRAINING ADMIXTURES ASTM C260
CHEMICAL ADMIXTURES ASTM C494
5. CONCRETE: AIR ENTRAIN CONCRETE AS INDICATED BELOW, AND CONCRETE EXPOSED TO EARTH AND WEATHER, 6% ± 1% BY VOLUME UNLESS OTHERWISE NOTED. "HARD TROWEL FINISH NOT RECOMMENDED FOR AIR-ENTRAINED SLABS. "EXTERIOR" MEMBERS ARE THOSE FULLY OR PARTIALLY OUTSIDE OF THE CONDITIONED BUILDING ENVELOPE AND FULLY OR PARTIALLY ABOVE THE FROST DEPTH.

APPLICATION	f _c @ 28 DAYS (PSI)	ACI WT (PCF)	EXP. CLASS	W/C RATIO (MAX)	AIR- ENTRAIN
a. FOOTINGS	3000	145	F0	0.55	Y

6. REINFORCEMENT:

- a. DEFORMED REINFORCING BARS ASTM A615, GRADE 60
- b. HOT-DIP GALVANIZING ASTM A767

7. STEEL:

- a. HOLLOW STRUCTURAL SECTIONS ASTM A500, GRADE C:
(HSS) F_y = 50 KSI
- b. OTHER STRUCTURAL SHAPES AND PLATES ASTM A36, F_y = 36 KSI
- c. HIGH-STRENGTH BOLTS ASTM F3125, GRADE A325 / F1852
- d. WELDING ELECTRODES AWS A5.1 OR A5.5, E70XX (STRUCTURAL STEEL)
- e. HOT-DIPPED GALVANIZING ASTM A123 / ASTM A153 / ASTM F2329

E. CONSTRUCTION

1. GENERAL:

a. THESE DRAWINGS REPRESENT THE COMPLETED PROJECT WHICH HAS BEEN DESIGNED FOR THE LOADS INDICATED IN THE DESIGN DATA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE PROPER ERECTION PROCEDURES, ALLOWABLE CONSTRUCTION LOADS AND PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, BRACING, SHEETING AND SHORING, ETC.
- b. IMPLEMENTING JOB SITE SAFETY AND CONSTRUCTION PROCEDURES ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

- c. THE STRUCTURAL DRAWINGS ARE INTENDED TO INDICATE THE MAIN STRUCTURAL FEATURES FOR THE PROJECT. ANY NON-STRUCTURAL DETAILS SHOWN ARE SCHEMATIC IN NATURE AND MAY NOT REFLECT THE COMPLETE CONSTRUCTION. THE PROJECT CIVIL DRAWINGS MUST BE USED IN CONJUNCTION WITH THE PROJECT STRUCTURAL DRAWINGS DURING ALL PHASES OF CONSTRUCTION. ANY DISCREPANCIES BETWEEN THE PROJECT STRUCTURAL DRAWINGS AND THE SPECIFICATIONS AND DRAWINGS OF THE OTHER DISCIPLINES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO COMMENCING THE WORK.
- d. REFER TO CIVIL AND LANDSCAPE DRAWINGS FOR DIMENSIONS NOT SHOWN.
- e. DO NOT SCALE THE STRUCTURAL DRAWINGS.
- f. IN CASE OF CONFLICT BETWEEN THE GENERAL NOTES, AND DRAWINGS, THE MOST RIGID REQUIREMENTS GOVERN.
- g. STORE AND HANDLE STRUCTURAL CONSTRUCTION MATERIALS TO PREVENT ANY ADVERSE EFFECTS ON THE PHYSICAL PROPERTIES OF THE MATERIAL.
- h. PAY ALL COSTS, INCLUDING INVESTIGATION AND/OR REDESIGN, DUE TO CONTRACTOR MISLOCATION OF STRUCTURAL ELEMENTS OR OTHER LACK OF CONFORMANCE WITH THE CONTRACT DOCUMENTS TO BRING WORK IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.

2. SHOP DRAWINGS AND SUBMITTALS:

- a. REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONTRACT DRAWINGS FOR RESUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED WITHOUT REVIEW AND RETURNED.
- b. SUBMIT SHOP DRAWINGS AT LEAST 15 BUSINESS DAYS BEFORE DATE REVIEWED SUBMITTALS WILL BE NEEDED. SHOP DRAWINGS SHALL BEAR THE CONTRACTOR'S STAMP OF APPROVAL WHICH SHALL CONSTITUTE CERTIFICATION THAT THE CONTRACTOR HAS VERIFIED ALL FIELD MEASUREMENTS, CONSTRUCTION CRITERIA, MATERIALS AND SIMILAR DATA AND HAS CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION AND COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- 1) THE DETAILS, MATERIALS AND PRODUCTS SPECIFIED OR REFERENCED IN THESE DRAWINGS CONSTITUTE THE ENGINEERED DESIGN FOR THIS PROJECT. PROPOSED SUBSTITUTION OF ALTERNATE DETAILS, MATERIALS OR PRODUCTS (I.E., CONTRACTOR REDESIGN) WILL ONLY BE CONSIDERED IF REQUESTED IN WRITING TO THE SER AT LEAST 14 DAYS IN ADVANCE OF ANY SUBMITTAL THAT IS AFFECTED BY THE PROPOSED SUBSTITUTION. **SUBSTITUTIONS WHICH APPEAR ON ANY SHOP DRAWING SUBMITTAL WHICH HAVE NOT BEEN PREVIOUSLY ACCEPTED BY THE SER WILL BE DISAPPROVED AND RETURNED FOR CORRECTION.** THE WRITTEN REQUEST MUST INCLUDE THE FOLLOWING:

a) SPECIFICALLY IDENTIFY THE PROPOSED SUBSTITUTION AND CLEARLY INDICATE IF IT WILL INCLUDE STRUCTURAL ENGINEERING ANALYSIS TO SUBSTANTIATE ITS ADEQUACY. SUBSTITUTIONS WHICH REQUIRE ADDITIONAL ANALYSIS ON THE PART OF THE SER WILL BE SUBJECT TO A FEE FOR SUCH SERVICES.

b) PROVIDE PRELIMINARY APPROVAL OF SUBSTITUTION BY OWNER, GC, AND ARCHITECT.

c) PROVIDE CERTIFICATION THAT EFFECTS ON OTHER TRADES HAVE BEEN CONSIDERED AND RESOLVED.

d) PROVIDE COST REDUCTION TO BE CREDITED TO OWNER.
- c. SUBMIT CALCULATIONS AND DRAWINGS CONCURRENTLY FOR EACH OF THE FOLLOWING ASSEMBLIES. DESIGN EACH ASSEMBLY UNDER THE DIRECT SUPERVISION OF AN ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION. ALL PORTIONS OF SUBMITTALS SHALL BEAR THIS ENGINEER'S SEAL AND SIGNATURE. UNSEALED SUBMITTALS WILL BE RETURNED AND REJECTED WITHOUT REVIEW. REVIEW SHALL BE FOR GENERAL CONFORMANCE WITH THE PROJECT PARAMETERS AS INDICATED ON THE DRAWINGS AND IN THE GENERAL NOTES, AND FOR IMPACTS ON THE SUPPORTING STRUCTURAL SYSTEM. DESIGN FOR ALL GRAVITY AND LATERAL LOADS AND OTHER EFFECTS (INCLUDING CREEP, SHRINKAGE, THERMAL, ETC.) REQUIRED BY APPLICABLE CODES AND STANDARDS AS WELL AS THOSE INDICATED ON THE DRAWINGS.

- 1) METAL RAILINGS

- a) WHERE REQUIRED, DESIGN CONNECTIONS FROM THE RAILINGS SO THAT NO ECCENTRIC OR TORSIONAL FORCES ARE INDUCED INTO STRUCTURAL SUPPORTING MEMBERS DESIGNATED BY THE SER.
- b) FURNISH AND INSTALL EMBEDS AND HARDWARE AS REQUIRED BY THE RAILING DESIGN.

- 2) HELICAL PILES

- a) REFER TO PROJECT DRAWINGS AND GEOTECHNICAL REPORT FOR CRITERIA AND REQUIREMENTS.
- b) SPECIALTY ENGINEERING CALCULATIONS SHALL JUSTIFY REQUIRED FOUNDATION CAPACITY FOR STRENGTH AND SERVICEABILITY (SETTLEMENT).
- c) ALONG WITH DESIGN SUBMITTAL, INCLUDE PROPOSED PROCEDURES AND ACCEPTANCE CRITERIA, PREPARED BY THE SPECIALTY ENGINEER, FOR COMPRESSION AND TENSION MODULUS TESTING.

- d. SUBMITTALS AND CERTIFICATIONS, IN ADDITION TO STANDARD INDUSTRY PRACTICE

- 1) CAST-IN-PLACE CONCRETE

- a) CONCRETE MIX DESIGNS, INCLUDING DOCUMENTATION USED TO DETERMINE STANDARD DEVIATION IN ACCORDANCE WITH ACI 301. IF CEMENTITIOUS SUBSTITUTES OR ADMIXTURES ARE TO BE USED, PROVIDE DOCUMENTATION IN THE MIX DESIGN THAT INDICATES CONFORMANCE TO THE MAXIMUM PERCENTAGE OF SUBSTITUTE.
- b) CERTIFICATIONS OF REINFORCING STEEL COMPLIANCE WITH REFERENCED STANDARDS.

- 2) STRUCTURAL STEEL

- a) CERTIFIED COPIES OF MILL TEST REPORTS FOR RECORD PURPOSES ONLY
- b) ALL WELD PROCEDURE SPECIFICATIONS THAT ARE QUALIFIED BY TEST (IN ACCORDANCE WITH AWS D1.1), ACCOMPANIED BY PROCEDURE QUALIFICATION RECORDS AND ELECTRODE DATA SHEETS.

3. INSPECTION AND TESTING:

- a. SPECIAL INSPECTIONS, IN ACCORDANCE WITH IBC CHAPTER 17, ARE REQUIRED. THE OWNER WILL ENGAGE A SPECIAL INSPECTIONS ENGINEER OF RECORD (SIER) TO PERFORM THE SERVICES INDICATED.

1) REQUIRED INSPECTIONS ARE SHOWN ON DRAWING

2) CONTRACTOR SHALL REGULARLY PROVIDE SIER WITH A CURRENT CONSTRUCTION SCHEDULE SO THAT THE REQUIRED INSPECTIONS CAN BE PROVIDED IN A TIMELY MANNER.
- b. THE OWNER WILL ENGAGE AN APPROVED, QUALIFIED, TESTING AGENCY TO PROVIDE TESTING AND INSPECTION SERVICES, IN ADDITION TO THE SPECIAL INSPECTION REQUIREMENTS, AS INDICATED BELOW. SUBMIT REPORTS TO THE SER AND CODE OFFICIAL (AS APPLICABLE).
- c. SOILS TESTING

- 1) TEST ALL DIFFERING FOUNDATION SUBGRADE SOIL STRATA OBSERVED IN A MINIMUM OF ONE LOCATION FOR EACH FOR MINIMUM REQUIRED BEARING CAPACITY (INDICATED EARLIER IN THESE NOTES). SUBSEQUENT VERIFICATION OF BEARING CAPACITY AT OTHER LOCATIONS MAY BE BY VISUAL COMPARISON WITH TESTED LOCATIONS.
- 2) TESTING AGENCY WILL TEST COMPACTION OF STRUCTURAL FILL PER ASTM D1556, ASTM D2167, ASTM D2922, AND ASTM D2937, AS APPLICABLE. TEST A MINIMUM OF THREE LOCATIONS RANDOMLY LOCATED ACROSS THE BUILDING PAD. TEST ADDITIONAL AREAS IF POOR CONDITIONS ARE OBSERVED.
- 3) NOTIFY CONTRACTOR AND A/E OF AREAS FAILING TO MEET DESIGN REQUIREMENTS AND WHICH REQUIRE RECOMPACTIONS AND REINSPECTION.

- d. CAST-IN-PLACE CONCRETE:

- 1) THE AGENCY SHALL INSPECT THE FORMWORK, AND REINFORCING STEEL PLACEMENT FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS AND SHOP DRAWINGS. THE AGENCY SHALL MONITOR ALL STRUCTURAL CONCRETE PLACEMENTS FOR CONFORMANCE WITH APPLICABLE ACI REQUIREMENTS.

- 2) SAMPLE FRESH CONCRETE IN ACCORDANCE WITH ASTM C172. MOLD TEST CYLINDERS IN ACCORDANCE WITH ASTM C31.

a) UNLESS OTHERWISE NOTED AND/OR APPROVED IN WRITING BY THE SER, SAMPLING FOR TESTING AND INSPECTION OF CONCRETE SHALL BE AT THE POINT OF PLACEMENT.
- 3) THE FOLLOWING NUMBER OF 6"x12"™ TEST CYLINDERS SHALL BE CAST FOR EACH DAY'S POUR OR EACH 50 CUBIC YARDS, WHICHEVER RESULTS IN MORE TEST CYLINDERS:

FOR FOOTINGS
AND OTHER
STRUCTURAL CONCRETE
2 @ 7 DAYS, LAB CURED
2 @ 28 DAYS, LAB CURED
- 4) THE AGENCY SHALL OBTAIN AND TEST FIELD-CORED SAMPLES OF IN-PLACE CONCRETE AT THE CONTRACTOR'S EXPENSE WHEN TEST RESULTS INDICATED SPECIFIED CONCRETE STRENGTHS HAVE NOT BEEN ATTAINED. CORING LOCATIONS AND QUANTITIES SHALL BE DIRECTED BY THE SER.
- 5) INSPECTION BY AN APPROVED TESTING AGENCY IS REQUIRED FOR ALL POST-TENSIONED WORK.

- e. STRUCTURAL STEEL:

- 1) THE AGENCY SHALL REVIEW PREQUALIFIED WELD PROCEDURE SPECIFICATIONS IN ACCORDANCE WITH AWS D1.1, SECTION 6.3.1.
- 2) THE AGENCY SHALL VISUALLY INSPECT ALL FILLET WELDS, SHEAR STUDS, AND BOLTED CONNECTIONS.
- 3) THE AGENCY SHALL PERFORM WELDING INSPECTION AND TESTING PROCEDURES IN ACCORDANCE WITH THE AWS CODE.
- 4) TEST 10% OF ALL FIELD FILLET WELDS IN PRIMARY CONNECTIONS AND MULTI-PASS WELDS BY THE MAGNETIC PARTICLE METHOD ASTM E709.
- 5) TEST ANY WELD FOR WHICH VISUAL EXAMINATION INDICATES AN UNUSUAL CONDITION AND/OR POOR QUALITY.

F. FOUNDATIONS AND STRUCTURAL EARTHWORK

1. GENERAL:

- a. REFER TO PROJECT SPECIFICATION AND GEOTECHNICAL REPORT REQUIREMENTS FOR EXCAVATION AND PREPARATION OF THE FOUNDATION AND SLAB ON-GRADE SUBGRADES, INCLUDING COMPACTION PROCEDURES. **REQUIREMENTS CONTAINED IN THE GEOTECHNICAL REPORT ARE PART OF THIS WORK.**
- b. VERIFY ALL EXISTING FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FOUNDATION SYSTEM AS SHOWN PRIOR TO STARTING WORK. COMPACTED STRUCTURAL FILL SHALL BE PROVIDED WHERE NATURAL SOILS ARE FOUND TO BE INSUFFICIENT TO SUPPORT THE NEW FOUNDATIONS.
- c. WHERE REQUIRED, SCARIFY AND RECOMPACT TOP 12" OF EXISTING SUBGRADE UNDER FOOTINGS TO 95% OF MAXIMUM DRY UNIT WEIGHT PER ASTM D698 (STANDARD PROCTOR).
- d. WHERE REQUIRED, COMPACT ALL NEW STRUCTURAL FILL TO 95% OF MAXIMUM DRY UNIT WEIGHT PER ASTM D698 AT 2% OF OPTIMUM MOISTURE CONTENT. PLACE FILL IN 8" LIFTS IF USING HEAVY EQUIPMENT FOR COMPACTION. FOR LIGHT, HAND-OPERATED EQUIPMENT, PLACE FILL IN 4" LIFTS. STRUCTURAL FILL IS ONLY REQUIRED AT BEARING OF NEW FOOTINGS.
- e. WHERE REQUIRED, STRUCTURAL FILL AND BACKFILL SHALL CONSIST OF SOIL MEETING CLASSIFICATIONS GW, GP, GM, SW, AND SP ACCORDING TO ASTM D2497. SOILS SHALL BE WITHIN 2% OF OPTIMUM MOISTURE CONTENT AT TIME OF COMPACTION. IF SUITABLE QUANTITIES OF ONSITE SOILS MEETING THESE CLASSIFICATIONS ARE NOTE AVAILABLE, PROVIDE OFF-SITE BORROW MATERIAL.
- f. LOCATE AND PROTECT ALL EXISTING UTILITIES, WHETHER INDICATED OR NOT, WHICH MAY BE AFFECTED BY THE CONSTRUCTION PROCESS.
- g. INSTALL, MAINTAIN, MONITOR AND REMOVE EARTH RETENTION SYSTEMS IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS PREPARED UNDER THE DIRECT SUPERVISION OF THE SPECIALTY ENGINEER FOR EARTH RETENTION SYSTEM DESIGN. COORDINATE ELEMENTS OF EARTH RETENTION SYSTEM SO AS TO NOT INTERFERE WITH PERMANENT BUILDING ELEMENTS.

- h. PROTECT EXISTING AND NEW STRUCTURES FROM DAMAGE BY CONSTRUCTION EQUIPMENT. REPAIR DAMAGE OF EXISTING AND NEW CONSTRUCTION CAUSED BY CONSTRUCTION TECHNIQUES OR MOVEMENT OF EARTH RETENTION SYSTEM.
- i. REFER TO PLUMBING DRAWINGS FOR PERIMETER DRAIN AND UNDERFLOOR DRAINAGE SYSTEM.
- j. DO NOT PLACE UTILITY LINES THROUGH OR BELOW FOUNDATIONS WITHOUT THE APPROVAL OF THE SER.
- k. BEAR ALL FOUNDATIONS ON UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL. DETERMINATION OF FINAL BEARING ELEVATIONS AND FIELD VERIFICATION OF ALLOWABLE BEARING PRESSURE SHALL BE MADE BY A LICENSED GEOTECHNICAL ENGINEER PRIOR TO PLACING FOUNDATIONS. NOTIFY THE SER WHEN ADDITIONAL EXCAVATION IS REQUIRED TO REACH SUITABLE BEARING MATERIAL.
- l. BEAR FOUNDATIONS A MINIMUM OF 2'-6" BELOW GRADE UNLESS OTHERWISE INDICATED. IN CASE OF CONFLICT, NOTIFY THE ARCHITECT AND SER IN ADVANCE OF ANY CONSTRUCTION TO ALLOW FOR ADJUSTMENT.
- m. THE SLOPE BETWEEN THE LOWER EDGES OF ADJACENT FOOTINGS NOT TO EXCEED 1.5H:1.0V, UNLESS INDICATED OTHERWISE IN THE GEOTECHNICAL REPORT. PROTECT SUBGRADES, SLOPES AND FOOTINGS FROM DAMAGE CAUSED BY LATERAL MOVEMENT, UNDERMINING, SETTLEMENT AND OTHER HAZARDS CREATED BY EXCAVATION.

- n. DO NOT USE EARTH CUTS AS FORMS FOR VERTICAL SURFACES UNLESS APPROVED IN ADVANCE BY THE SER.
- o. PLACE CONCRETE FOR FOUNDATIONS OR MUD SLABS ON THE SAME DAY SUBGRADE APPROVAL IS GIVEN BY THE GEOTECHNICAL ENGINEER.
- p. PROTECT CONCRETE FOUNDATIONS FROM FREEZING DURING PLACING AND FOR A PERIOD OF NOT LESS THAN 5 DAYS THEREAFTER.
- q. PROVIDE CONTINUOUS WATERSTOP AT ALL HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS IN BASEMENT WALLS AND ALL PIT WALLS.

G. CAST-IN-PLACE CONCRETE

1. GENERAL:

- c. COMPLY WITH REQUIREMENTS OF "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE" (ACI 301), EXCEPT AS MODIFIED BY THESE NOTES. KEEP COPY OF "ACI FIELD REFERENCE MANUAL, MIN-15" IN FIELD OFFICE.
- d. PROVIDE MINIMUM CLEAR COVER FOR REINFORCING AS FOLLOWS, UNLESS OTHERWISE NOTED IN THE DRAWINGS:

1) NON-POST-TENSIONED CONCRETE:

a) CONCRETE CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND: 3"
- c. SPLICE REINFORCEMENT AS DETAILED OR AUTHORIZED BY THE SER. MAKE BARS CONTINUOUS AROUND CORNERS. SPLICES SHALL BE MADE BY CONTACT TENSION LAP SPLICES, UNLESS OTHERWISE NOTED.
- d. WELDING OF REINFORCING IS NOT PERMITTED.
- e. FIELD BENDING OF REINFORCING PARTIALLY EMBEDDED IN CONCRETE IS NOT PERMITTED UNLESS OTHERWISE SHOWN OR APPROVED BY THE SER.

- f. FURNISH ALL ACCESSORIES, CHAIRS, SPACE BARS, SUPPORTS, ETC. NECESSARY TO SECURE REINFORCING.
- g. PROVIDE PLASTIC TIPPED BOLSTERS AND CHAIRS AT ALL LOCATIONS WHERE THE CONCRETE SURFACE IN CONTACT WITH THE BOLSTERS OR CHAIRS IS EXPOSED.
- h. ERECT AND REMOVE FORMWORK, SHORES AND RESHORES IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS PREPARED, SIGNED AND SEALED BY THE ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION.
- i. ANY STOP IN CONCRETE WORK MUST BE MADE WITH VERTICAL BULKHEADS AND KEYS, UNLESS OTHERWISE SHOWN.
- j. HORIZONTAL JOINTS ARE NOT PERMITTED IN FOUNDATIONS, PILE CAPS, SLABS, BEAMS, GIRDERS AND JOISTS.
- k. CORE DRILLING, CHIPPING, OR TRENCHING OF ANY CONCRETE ELEMENT IS NOT PERMITTED UNLESS AUTHORIZED IN WRITING BY THE SER.

H. STRUCTURAL STEEL

1. PREPARE WRITTEN WELD PROCEDURE SPECIFICATIONS (WPS), IN ACCORDANCE WITH AWS D1.1, FOR ALL WELDING PROCEDURES TO BE USED ON PROJECT. A COPY OF ALL WPS SHALL BE MAINTAINED ON SITE AT ALL TIMES.
2. OBTAIN CURRENT EVIDENCE OF WELDERS PASSING THE APPROPRIATE AWS QUALIFICATION TESTS. SUCH EVIDENCE MAY BE REQUESTED AT ANY TIME DURING THE PROJECT.
3. PROVIDE ACCESS FOR INSPECTION OF ALL SHOP AND FIELD CONNECTIONS FOR PROPER MATERIALS AND WORKMANSHIP.
4. **ALTERNATE CONNECTION DESIGNS SHALL ONLY BE ALLOWED WITH PRIOR APPROVAL OF THE SER.** IF SUCH APPROVAL IS GRANTED, DESIGN ALL CONNECTIONS, SPLICES, AND ERECTION PIECES NOT IN ACCORDANCE WITH CONTRACT DRAWINGS (FABRICATOR REDESIGN) UNDER THE DIRECT SUPERVISION OF THE ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION. SUBMIT CALCULATIONS AND SHOP DRAWINGS BEARING THE ENGINEER'S SEAL AND SIGNATURE.
5. USE HIGH STRENGTH BOLTS AND NUTS WITH CLEAR MARKINGS AS REQUIRED BY AISC SPECIFICATIONS. CONNECTIONS MADE WITH UNMARKED BOLTS AND NUTS WILL BE REJECTED.
6. TIGHTEN ALL HIGH-STRENGTH BOLTS TO THE "SNUG TIGHT" CONDITION (DEFINED AS ALL PLIES OF THE CONNECTED MATERIAL HAVE BEEN BROUGHT INTO TIGHT CONTACT).
7. WELDS INDICATED AS FIELD WELDS MAY BE MADE IN THE FIELD OR SHOP AT THE CONTRACTOR'S DISCRETION. WELDS INDICATED AS SHOP WELDS SHALL BE MADE IN THE SHOP UNLESS SPECIFICALLY APPROVED OTHERWISE BY THE STRUCTURAL ENGINEER.
8. HOT-DIP GALVANIZE ALL STRUCTURAL STEEL FRAMING.
9. NOTIFY THE SER OF ANY FABRICATION OR ERECTION ERRORS OR DEVIATIONS AND RECEIVE WRITTEN APPROVAL BEFORE ANY FIELD CORRECTIONS ARE MADE.
10. REPLACE OR REINFORCE ANY STRUCTURAL STEEL DAMAGED DURING CONSTRUCTION AS ACCEPTABLE TO THE SER.
11. FIELD CUTTING WITH GAS TORCH IS NOT PERMITTED.



ARLINGTON
VIRGINIA

DEPARTMENT OF
ENVIRONMENTAL SERVICES

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SEAL

04/20/23

APPROVALS

DATE



8/29/2023

DESIGN TEAM ENGINEER SUPERVISOR



8/29/2023

CONSTRUCTION MANAGEMENT SUPERVISOR



8/29/2023

WATER, SEWER, STREETS BUREAU CHIEF



8/30/2023

TRANSPORTATION DIRECTOR



3/1/2023

Ariel Yang
PROJECT MANAGER

REVISIONS

DATE

100% DESIGN

05/24/2023

REVISED BUILDING PERMIT

04/20/2023

BUILDING PERMIT

02/15/2023

LDA#2 SUBMISSION

06/23/2022

100% SUBMISSION

06/21/2022

LDA SUBMISSION

04/19/2022

90% SUBMISSION

03/30/2022

30% RESUBMISSION

02/11/2022

SOUTH EADS STREET
CC13

BETWEEN ARMY NAVY DR. AND 12TH ST. S.

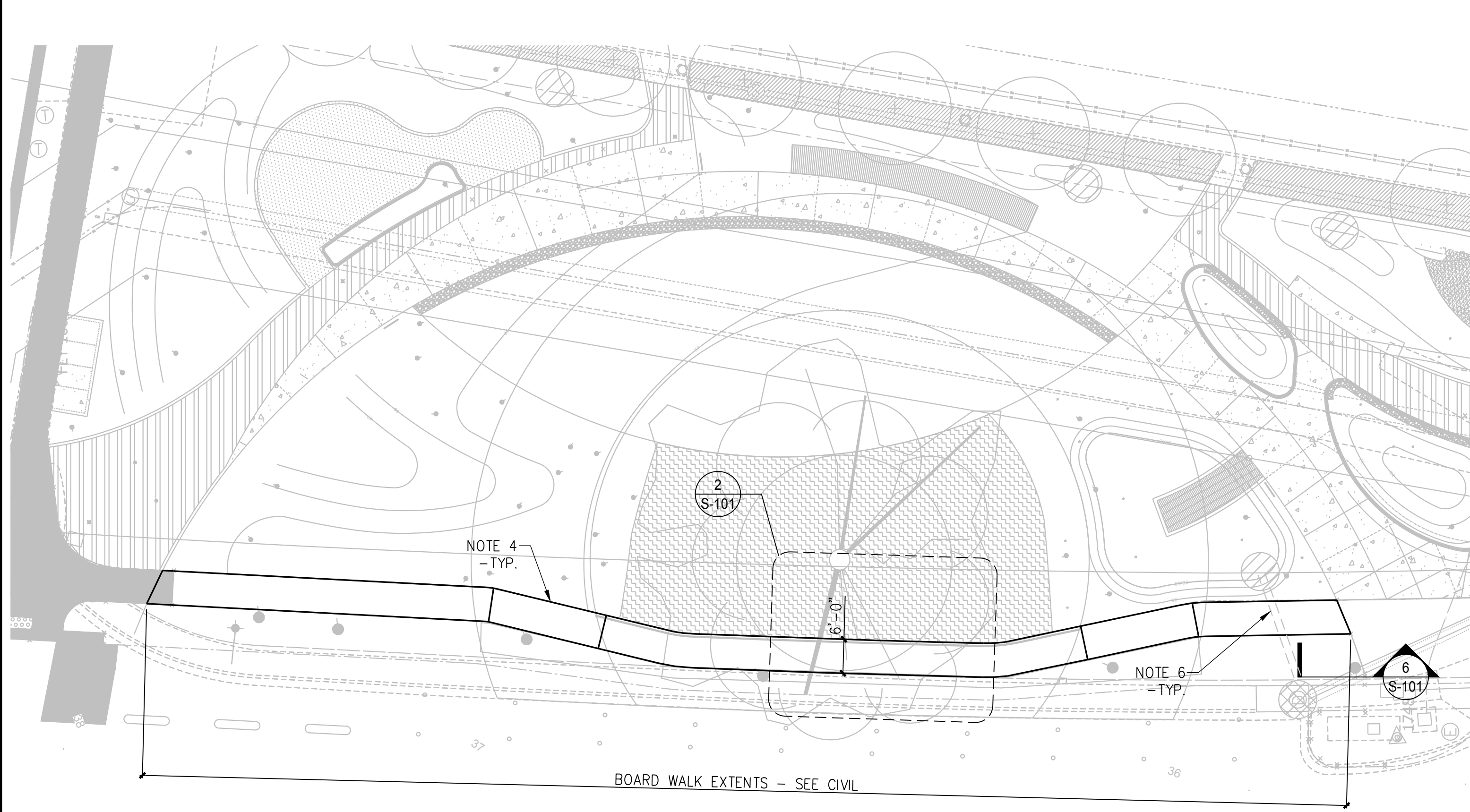
GENERAL NOTES

DESIGNED: HA
DRAWN: HA
CHECKED: DBS

PLOTTED: MAY 24, 2023

SCALE:

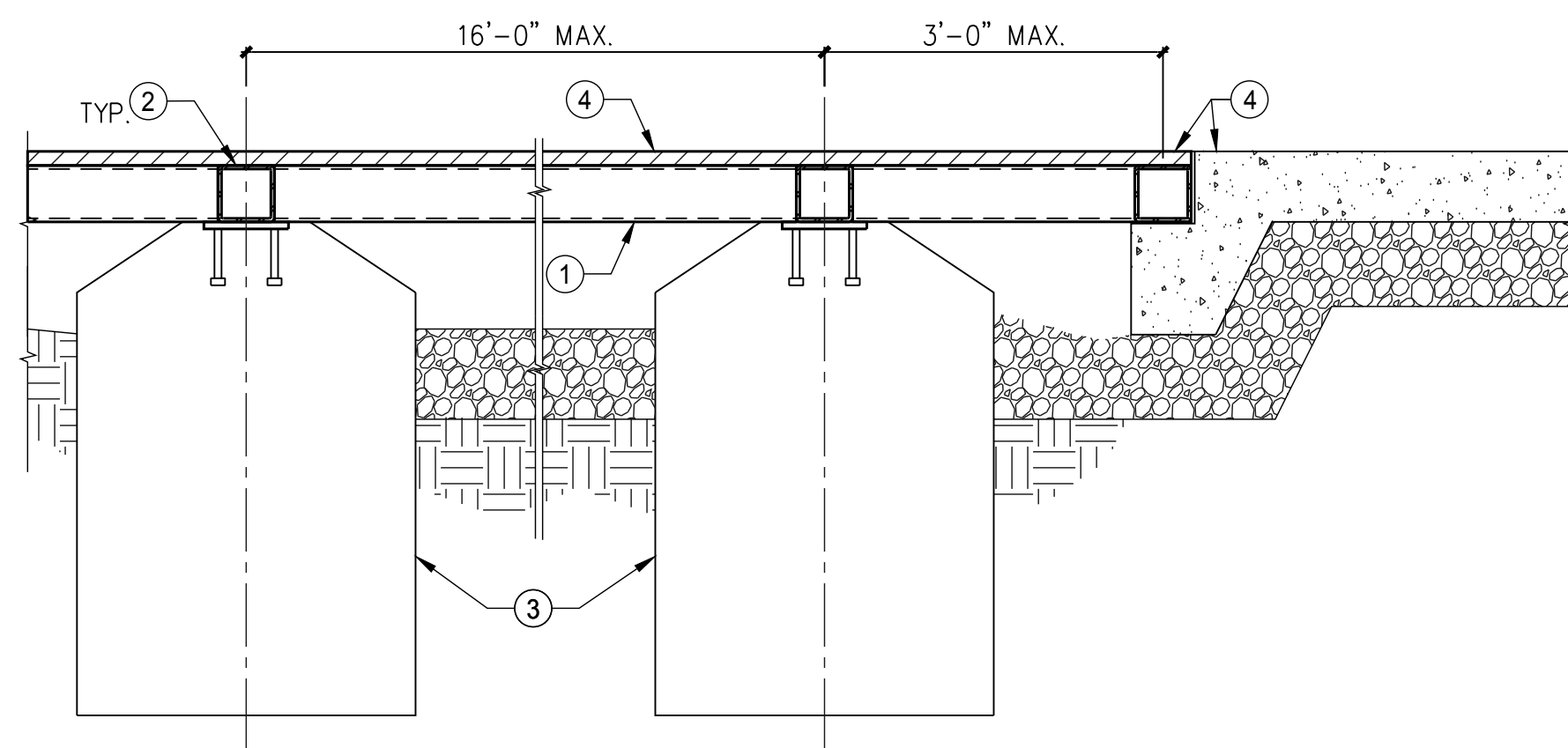
AS SHOWN



1 BOARDWALK KEY PLAN
1/16"=1'-0"

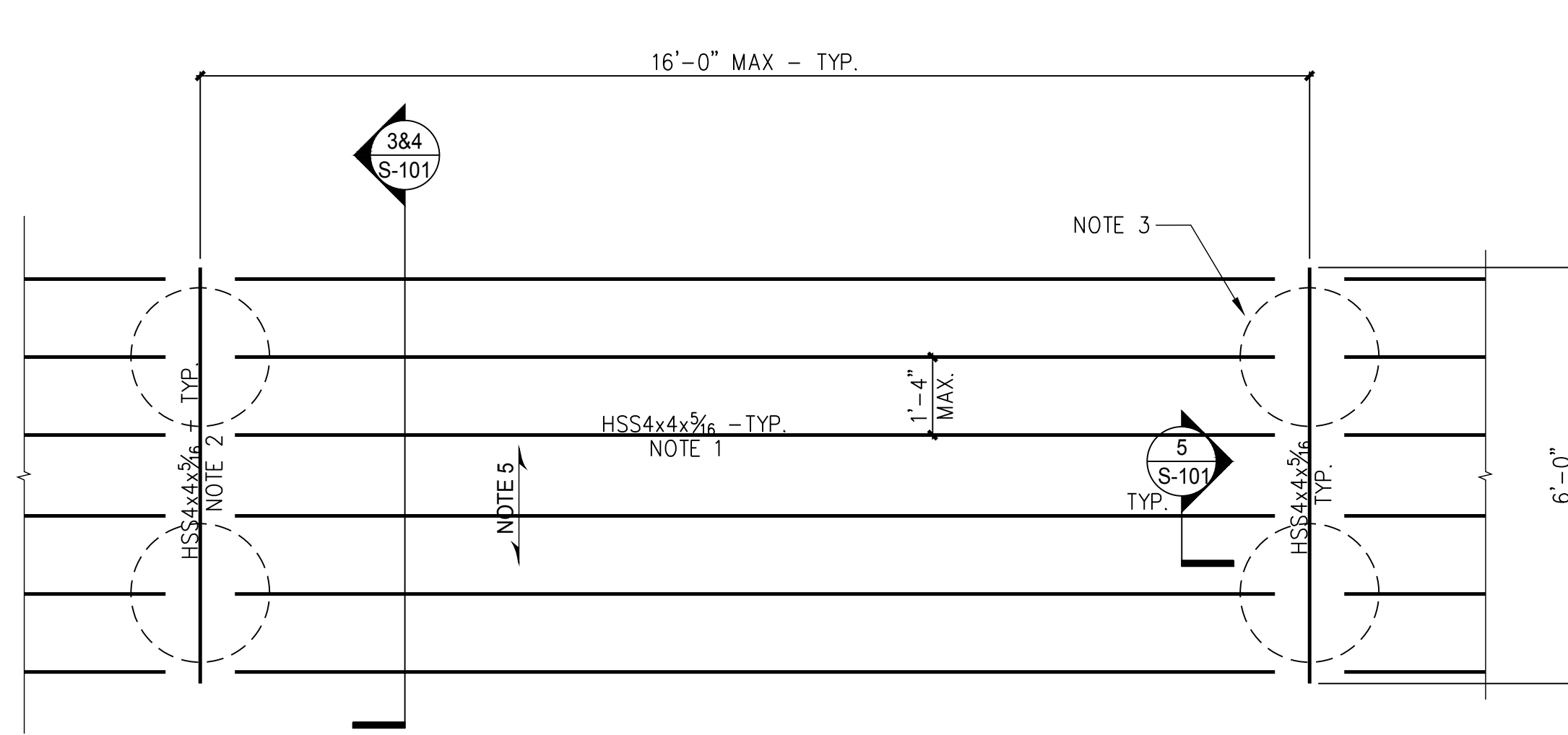
PLAN NOTES

- SEE S-100 FOR GENERAL NOTES
- CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, ETC. AFFECTING THE NEW WORK SHOWN.
- BACKGROUND SITE PLAN INFORMATION SHOWN HALF TONE IS SHOWN FOR REFERENCE ONLY. SEE CIVIL DRAWINGS FOR SITE PLAN INFORMATION INCLUDING PROPERTY LINES, LIMITS OF DISTURBANCE, GRADING INFO, ETC.
- NEW BOARDWALK. SEE 2/S-101 FOR TYPICAL FRAMING AND 4/S-101 FOR TYPICAL DETAILS. FOUNDATION LOCATIONS TO BE SPECIFIED IN FIELD TO AVOID TREE ROOTS. MAXIMUM SUPPORTS SPACING AT 16'-0" O.C. COORDINATE FOUNDATION REQUIREMENTS AND ZONES WITH LANDSCAPE DRAWINGS.
- ALL STRUCTURAL STEEL BE HOT-DIPPED GALVANIZED.
- PROPOSED 15" STM CROSSING - CENTER BETWEEN FOUNDATIONS WHERE POSSIBLE AND PROVIDE MIN. 5' CLEARANCE BETWEEN FOUNDATION AND PROPOSED PIPE.
- SEE S-100 FOR GENERAL NOTES.
- CONTRACTOR SHALL USE AIR EXCAVATION FOR DISTURBANCE WITHIN THE CRITICAL ROOT ZONE OF THE COTTON WOOD TREE. A CERTIFIED ARBORIST SHALL PERFORM THIS WORK TO MAKE SURE THE TREE ROOTS ARE PROTECTED AS BEST AS POSSIBLE WHILE CONSTRUCTION COMMENCES. ROOT PRUNING SHALL BE DONE PER ARLINGTON COUNTY DETAIL 311300.5 AND DETAIL SHOWN ON PLANS. PRIOR TO CUTTING ROOTS, CONTACT ARLINGTON COUNTY URBAN FORESTER.



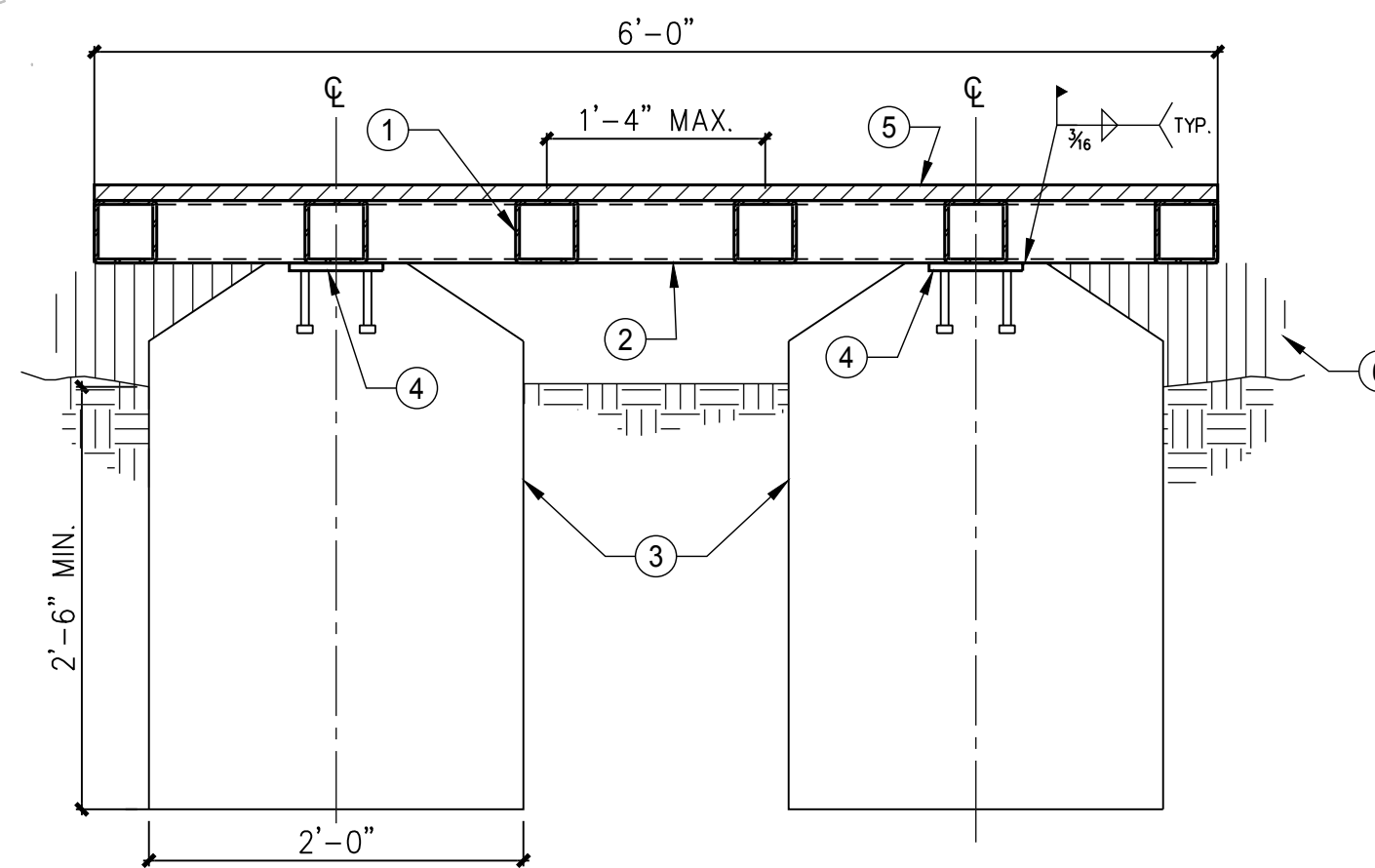
- HSS4x4 JOISTS @ 1'-4" MAX. O.C. - SEE PLAN.
- HSS4x4 BEAM - SEE PLAN AND DETAILS
- SEE 3/S-101 AND 4/S-101 FOR FOOTING ALTERNATIVES AND DETAILS.
- COMPOSITE DECKING TO BE FLUSHED WITH ADJACENT CONCRETE SIDE WALK SURFACE.

6 BOARDWALK FRAMING SUPPORT ADJACENT OT SIDEWALK
N.T.S.



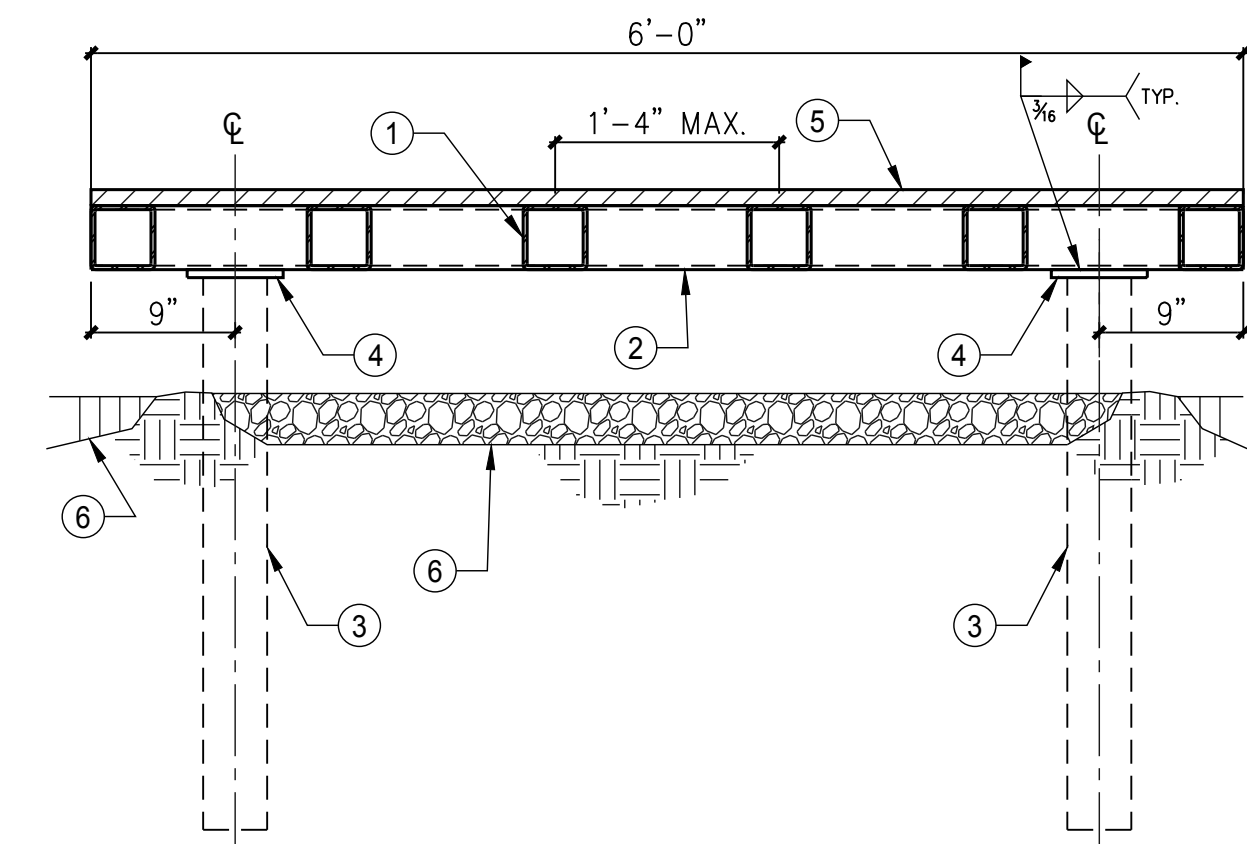
- NEW HSS4x4x5/16 JOIST - TYP.
- NEW HSS4x4x5/16 BEAM - TYP.
- NEW FOUNDATION SUPPORT - SEE 3/S-101 & 4/S-101 FOR ALTERNATIVES.
- SEE 6/S-101 FOR BOARDWALK TO ADJACENT SIDEWALK CONNECTION.
- COMPOSITE DECKING - SEE LANDSCAPE DRAWINGS.
- ALL STRUCTURAL STEEL TO BE GALVANIZED.

2 BORADWALK TYPICAL FRAMING PLAN
1/2"=1'-0"



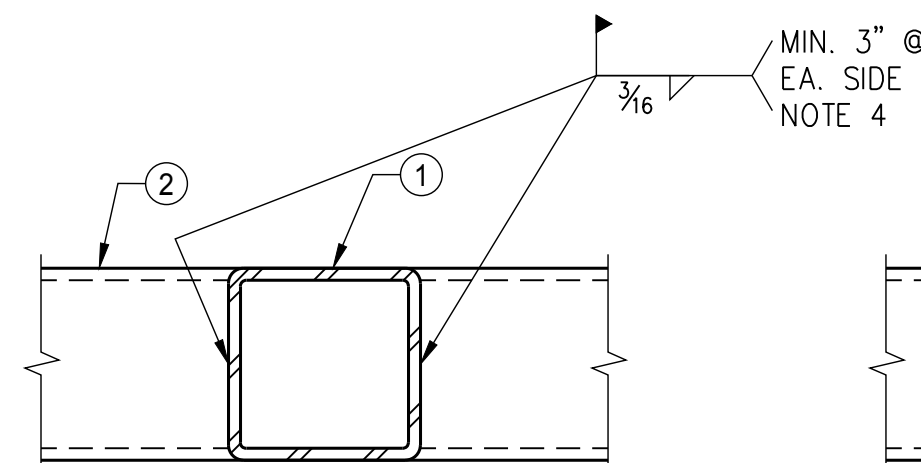
- HSS4x4 JOISTS @ 1'-4" MAX. O.C. - SEE PLAN.
- HSS4x4 BEAM - SEE 5/S-101 FOR JOIST-BEAM CONNECTION ALTERNATIVES.
- 2'-0"Ø CONCRETE FOOTING @ 16'-0" MAX. O.C. CONTRACTOR TO LOCATE THE FOUNDATIONS TO AVOID TREE ROOTS - SEE 4/S-101 FOR ALTERNATIVE.
- PL6x6x1/2 EMBED PLATE W/ (4) 1/2"Ø W/ MIN. 4" EMBEDMENT SHEAR STUDS.
- COMPOSITE DECKING - SEE LANDSCAPE DRAWINGS.
- SEE LANDSCAPE DRAWINGS FOR ELEVATIONS AND DETAILS.
- SEE 7/S-101 FOR DECORATIVE RAILING TO FRAMING CONNECTION.
- PROVIDE MIN. 5' CLEARANCE ON EACH SIDE OF NEW 15" STM. COORD. UTILITY LOCATIONS w/CIVIL.

3 TYPICAL BOARDWALK FRAMING SUPPORT - SONOTUBE
N.T.S.



- HSS4x4 JOISTS @ 1'-4" MAX. O.C. - SEE PLAN.
- HSS4x4 BEAM - SEE 5/S-101 FOR JOIST-BEAM CONNECTION ALTERNATIVES.
- HELICAL PILE W/ MIN. 6 KIPS BEARING CAPACITY BY OTHERS. REFER TO GEOTECH REPORT FOR ADDITIONAL CRITERIA.
- PL6x6x1/2 CAP PLATE.
- COMPOSITE DECKING - SEE LANDSCAPE DRAWINGS.
- SEE LANDSCAPE DRAWINGS FOR ELEVATIONS AND DETAILS.
- SEE 7/S-101 FOR DECORATIVE RAILING TO FRAMING CONNECTION.
- PROVIDE MIN. 5' CLEARANCE ON EACH SIDE OF NEW 15" STM. COORD. UTILITY LOCATIONS w/CIVIL.

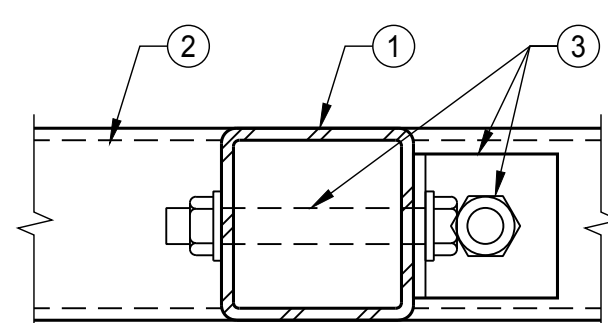
4 TYPICAL BOARDWALK FRAMING SUPPORT - HELICAL PILES
N.T.S.



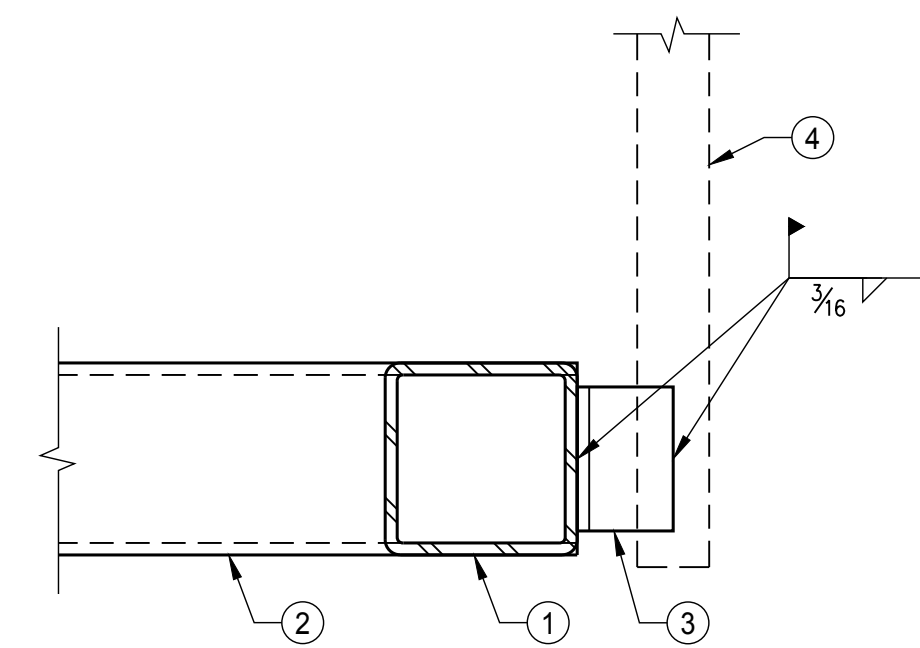
A WELDED CONNECTION

- HSS BEAM.
- HSS GIRDER.
- L3x3x1/4 x 0'-3" W/ (1) 3/4"Ø THROUGH-BOLT AT EA SIDE.
- REPAIR GALVANIZING AT WELDS.
- CONTRACTOR MAY SELECT EITHER OPTION FOR EACH CONNECTION.

5 TYPICAL HSS BEAM TO HSS GIRDER CONNECTION
N.T.S.



B THRU-BOLT CONNECTION



- HSS BEAM.
- HSS GIRDER.
- L3x2x1/4 x 0'-3".
- DECORATIVE RAILING BY OTHERS.
- REPAIR GALVANIZING AT WELDS.

7 TYPICAL RAILING TO HSS BEAM CONNECTION
N.T.S.

SEAL

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