ARLINGTON
VIRGINIA

ENGINEER
DEPARTMENT OF
ENVIRONMENTAL SERVICES

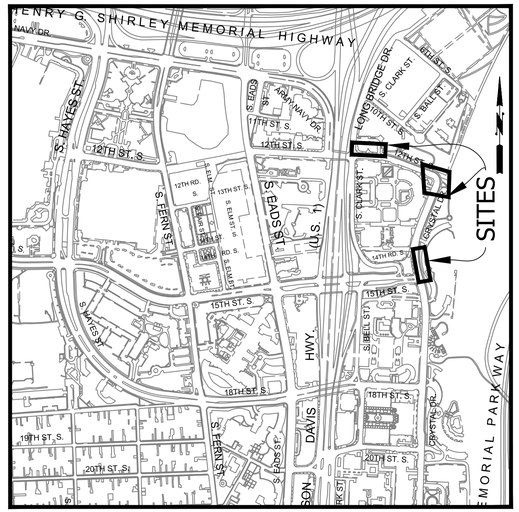
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
PHONE: 703.228.3629 FAX: 703.228.3606
WWW.ARLINGTONVA.US

OWNER
ARLINGTON COUNTY
DES - TRANSIT BUREAU
2100 CLARENDON BOULEVARD,
SUITE 900 ARLINGTON, VA 22201

CONSULTANT
TO BE DETERMINED

CONTRACTOR
TO BE DETERMINED

LOCATION MAP



CONSTRUCTION DRAWINGS FOR:

TRANSITWAY EXTENSION TO PENTAGON CITY
CRYSTAL DR & 12TH ST S (CIVIL SITE WORK)

PROJECT CODE: MA13 - SEGMENT I

GENERAL NOTES:

GENERAL CONSTRUCTION NOTES

1. 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.
2. ALL CONSTRUCTION AND WORK ACTIVITIES SHALL COMPLY WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND ALL OTHER RELEVANT WORK SAFETY REQUIREMENTS, LATEST EDITIONS.
3. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT OFFICER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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

10. 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

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

TRAFFIC CONTROL

12. 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.
13. 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.
14. 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.
15. 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.
16. 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.
17. 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

18. 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.
19. 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.
20. 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:

21. 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.
22. 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.
23. 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.

REVISED ON 11/08/2016

Sheet List Table

SWM18-0167

ADT

15,000 VPD - 15TH ST S BETWEEN US ROUTE 1 AND CRYSTAL DR - 2018 - VDOT
5,200 VPD - CRYSTAL DR BETWEEN 26TH ST S AND 12TH ST S - 2018 - VDOT
5,300 VPD - 12TH ST S BETWEEN CRYSTAL DR AND S EADS ST- 2018 - VDOT

STREET CLASSIFICATION

MINOR ARTERIAL - CRYSTAL DR AND 15TH ST S AND 12TH ST S

POSTED SPEED

30 MPH - CRYSTAL DR (OBTAINED FROM GIS DATA)
25 MPH - 12TH ST S (OBTAINED FROM GIS DATA)

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VIRGINIA

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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050308
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER Kamal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
PROJECT MANAGER Diana Ueze	3/2/21

REVISIONS	DATE

PROJECT NAME AND LOCATION
TRANSITWAY EXTENSION TO PENTAGON CITY

COVER SHEET
CRYSTAL DR & 12TH ST S
MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-200-COVER.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE: H: 1" = 600'

SHEET 01 OF 35

PROJECT NARRATIVE

THE CRYSTAL CITY POTOMAC YARD TRANSITWAY (TRANSITWAY) IS A 4.5-MILE CORRIDOR DEDICATED TO HIGH-FREQUENCY, PREMIUM TRANSIT SERVICE FROM THE CRYSTAL CITY METRORAIL STATION IN ARLINGTON COUNTY TO THE BRADDOCK ROAD METRORAIL STATION IN THE CITY OF ALEXANDRIA. THE TRANSITWAY HAS BEEN CONSTRUCTED IN MULTIPLE PHASES (SEGMENTS).

THE PROPOSED TRANSITWAY ROUTE ALONG THIS SEGMENT WILL HAVE A DESIGNATED BUS ONLY LANE, WHICH WILL BE PROVIDED BY REMOVING THE ON-STREET PARKING CURRENTLY LOCATED ALONG CRYSTAL DRIVE AND 12TH STREET SOUTH.

THE TRANSITWAY IS CURRENTLY BEING OPERATED IN AN INTERIM ROUTING CONDITION. THE TRANSITWAY STATIONS AT CRYSTAL DRIVE NORTH BOUND AND 15TH STREET SOUTH INTERSECTION (STA 61+18) & 12TH STREET SOUTH WEST BOUND AND LONG BRIDGE DRIVE INTERSECTION (STA 74+54) ARE INCLUDED IN THESE PLANS BASED ON THE ADOPTED ROUTING ALIGNMENT FOR THE TRANSITWAY EXTENSION TO PENTAGON CITY.

THE TRANSITWAY STATION AT CRYSTAL DRIVE NORTH BOUND AND 15TH STREET SOUTH INTERSECTION (STA 61+18)

PROPOSED CURBSIDE 9.5" HIGH PLATFORM WILL BE LOCATED ON THE FAR SIDE OF THE INTERSECTION. TWO RAMPS WILL BE PROVIDED IN ORDER TO TRANSITION FROM 6" CURB TO 9.5" CURB. THE RAMPS AND THE CURBS WILL BE CONSTRUCTED TO COMPLY WITH ADA REQUIREMENTS.

ONE BUS SHELTER IS PROPOSED TO BE CONSTRUCTED FOR THIS BUS STATION. THIS WILL BE A PREFABRICATED BUS SHELTER PROVIDED BY BRASCO. BUS SHELTERS WILL BE CONSTRUCTED PER BRASCO REQUIREMENTS ON 6" THICK AND 28'X6' CONCRETE FOUNDATION.

ADDITIONAL AMENITIES SUCH AS BENCHES, BIKE RACKS AND TRASH RECEPTACLES EXPECTED TO BE INSTALLED AT THIS TRANSIT STATION.

A CONCRETE BUS PAD WILL REPLACE EXISTING ASPHALT PAVEMENT IN FRONT OF BUS STATION TO ACCOMMODATE THE ADDITIONAL LOADING IN THIS AREA.

DESIGN OF ARCHITECTURAL ELEMENTS, INCLUDING BUS SHELTERS AND STANCHIONS TO BE DESIGNED BY A CERTIFIED ARCHITECT (CONSULTANT).

BUS SHELTER FOUNDATIONS TO BE DESIGNED BY A PROFESSIONAL STRUCTURAL ENGINEER (CONSULTANT).

SPECIFICATIONS FOR THE STATION'S SIGN AND LCD MONITOR WITH REAL-TIME INFORMATION FOR THE TRANSITWAY BUS OPERATIONS WILL BE PROVIDED TO THE CONSULTANT BY THE TRANSIT BUREAU.

ELECTRICAL METER AND FIBER HANDHOLE FOR THE BUS STATION WILL BE PROVIDED TO THE STATION WITH THESE PLANS. THE ELECTRICAL AND FIBER DESIGN WITHIN THE BUS STATION PLATFORM AREA WILL BE DESIGNED BY A CONSULTANT.

ILLUMINATION FOR THE CUSTOM BUS STATIONS WILL BE PROVIDED USING THE BRASCO LIGHTING PACKAGE. SEE BRASCO DETAILS ON SHEETS 6-9.

PROPERTY ACQUISITION AND EASEMENT ANALYSIS

THE TRANSITWAY STATION PLATFORM IS PROPOSED WITHIN THE ARLINGTON COUNTY PUBLIC STREET AND UTILITY EASEMENTS. THE COUNTY WILL OBTAIN A TEMPORARY CONSTRUCTION EASEMENT ON THE EAST SIDE OF THE PROPOSED PLATFORM FOR STAGING AND LANDSCAPE RESTORATION IN THE IMPACTED AREA.

UTILITY ANALYSIS

WITHIN THE 4' LANDSCAPING STRIP, ONE EXISTING ELECTRICAL CONDUIT FOR STREET LIGHTS WAS IDENTIFIED AND SHOULD REMAIN IN PLACE. ONE EXISTING ELECTRICAL CONDUIT WAS IDENTIFIED WITHIN THE PROPOSED CONCRETE BUS PAD AREA. TEST HOLES ARE TO BE REQUESTED TO IDENTIFY THE CONDUITS DEPTH AND SIZE.

AN ELECTRICAL SERVICE CONNECTION POINT HAS BEEN IDENTIFIED AT THE CRYSTAL DRIVE NORTHBOUND AND 15TH STREET SOUTH INTERSECTION. ELECTRICAL CONNECTION AND METER LOCATION HAVE BEEN COORDINATED WITH DOMINION POWER.

COMMUNICATION CONNECTION POINT AT THE CRYSTAL DRIVE NORTHBOUND AND 15TH STREET SOUTH INTERSECTION HAS BEEN IDENTIFIED BY ARLINGTON COUNTY DTS.

PERMIT ANALYSIS

THIS PROJECT WILL HAVE GREATER THAN 2500 SF OF LAND DISTURBANCE ASSOCIATED WITH BUS PLATFORM CONSTRUCTION AND STREET REPAVING. THEREFORE, LDA PERMIT IS REQUIRED BY ARLINGTON COUNTY AND THE STATE OF VIRGINIA.

SEVERAL TREES WERE IDENTIFIED IN THE AREA, THREE OF WHICH WILL BE REMOVED TO ACCOMMODATE THE CURBSIDE PLATFORM LAYOUT AND THREE WILL BE PROTECTED.

BUILDING PERMIT IS ALSO REQUIRED FOR THE FLAG STATION SIGN AND ASSOCIATED FOUNDATIONS. PLANS WILL BE PREPARED AND SUBMITTED BY A CONSULTANT.

THE TRANSITWAY STATION AT 12TH STREET SOUTH NORTH BOUND AND LONG BRIDGE DRIVE INTERSECTION (STA 74+54)

PROPOSED CURBSIDE 9.5" HIGH PLATFORM WILL BE LOCATED ON THE FAR SIDE OF THE INTERSECTION. TWO RAMPS WILL BE PROVIDED IN ORDER TO TRANSITION FROM 6" CURB TO 9.5" CURB. THE RAMPS AND THE CURBS WILL BE CONSTRUCTED TO COMPLY WITH ADA REQUIREMENTS.

TWO BUS SHELTER ARE PROPOSED TO INSTALLED AT THIS TRANSIT STATION. THESE WILL BE A PREFABRICATED BUS SHELTER PROVIDED BY BRASCO. BUS SHELTERS WILL BE CONSTRUCTED PER BRASCO REQUIREMENTS ON 6" THICK AND 28'X6' CONCRETE FOUNDATION.

ADDITIONAL AMENITIES SUCH AS BENCHES, BIKE RACKS AND TRASH RECEPTACLES EXPECTED TO BE INSTALLED AT THIS TRANSIT STATION.

A CONCRETE BUS PAD WILL REPLACE EXISTING ASPHALT PAVEMENT IN FRONT OF BUS STATION TO ACCOMMODATE THE ADDITIONAL LOADING IN THIS AREA.

ELECTRICAL METER AND FIBER HANDHOLE FOR THE BUS STATION WILL BE PROVIDED TO THE STATION WITH THESE PLANS. THE ELECTRICAL AND FIBER DESIGN WITHIN THE TRANSIT STATION PLATFORM AREA WILL BE DESIGNED BY A CONSULTANT.

ILLUMINATION FOR THE CUSTOM BUS STATIONS WILL BE PROVIDED USING THE BRASCO LIGHTING PACKAGE. SEE BRASCO DETAILS ON SHEETS 6-9.

PROPERTY ACQUISITION AND EASEMENT ANALYSIS - SEE EX. CONDITIONS & EASEMENTS PLAN

THE TRANSITWAY STATION PLATFORM IS PROPOSED PARTIALLY WITHIN THE ARLINGTON COUNTY PUBLIC STREET AND UTILITY EASEMENTS, AND PARTIALLY WITHIN PRIVATE PROPERTY. ARLINGTON COUNTY WILL ACQUIRE THE PERMANENT EASEMENT FOR PUBLIC STREET AND UTILITY PURPOSES ON THE PRIVATE PROPERTY AND THE TEMPORARY CONSTRUCTION EASEMENT FOR THE CONSTRUCTION OF THE PROPOSED PLATFORM, GRADING PURPOSES, AND FOR LANDSCAPE RESTORATION.

UTILITY ANALYSIS

THE PROPOSED PLATFORM AREA CONSISTS OF SEVERAL UNDERGROUND DRY UTILITIES. TEST HOLES ARE TO BE REQUESTED TO IDENTIFY THE SIZE, DEPTH AND HORIZONTAL LOCATIONS OF THE UTILITIES.

EXISTING OLD STYLE COBRA STREET LIGHT (STA. 73+86) WILL BE REPLACED WITH 16'H DOUBLE GLOBE CARLYLE STREET LIGHT TO ACCOMMODATE THE NEW ELEVATED GRADE ON THE EXISTING SIDEWALK TRANSITION FROM 6" CURB TO 9.5" CURB. REMOVAL OF THE COBRA LIGHT TO BE COORDINATED WITH DOMINION ENERGY VIRGINIA (DEV).

EXISTING 6'H & 8'L CURB (SAG) INLET (STA.74+35) WILL BE REPLACED. NEW CUSTOMIZE CURB INLET SHALL BE INSTALLED TO ACCOMMODATE PROPOSED 9.5" HIGHT BUS PLATFORM.

AN ELECTRICAL SERVICE CONNECTION POINT HAS BEEN IDENTIFIED AT THE 12TH STREET WESTBOUND AND LONG BRIDGE DRIVE INTERSECTION. ELECTRICAL CONNECTION AND METER LOCATION HAVE BEEN COORDINATED WITH DOMINION POWER.

COMMUNICATION CONNECTION POINT AT THE 12TH STREET WESTBOUND AND LONG BRIDGE DRIVE INTERSECTION HAS BEEN IDENTIFIED BY ARLINGTON COUNTY DTS.

PERMIT ANALYSIS

THIS PROJECT WILL HAVE GREATER THAN 2500 SF OF LAND DISTURBANCE ASSOCIATED WITH TRANSIT STATION CONSTRUCTION AND STREET REPAVING. THEREFORE, AN LDA PERMIT IS REQUIRED BY ARLINGTON COUNTY AND THE STATE OF VIRGINIA.

SOME MATURE TREES WERE IDENTIFIED IN THE AREA AND ARE TO BE REMOVED TO ACCOMMODATE CURBSIDE PLATFORM LAYOUT.

BUILDING PERMIT IS ALSO REQUIRED FOR THE FLAG STATION SIGN AND ASSOCIATED FOUNDATIONS. PLANS WILL BE PREPARED AND SUBMITTED BY A CONSULTANT.

PAVEMENT MARKING & SIGNS

PAVEMENT MARKING, SIGNS, SIGNALIZATION AND OTHER ROAD MODIFICATIONS ASSOCIATED WITH NEW TRANSIT STATION CONSTRUCTION COMPLETED BY ARLINGTON COUNTY TE&O STAFF.

THE TRANSITWAY TRANSITION FROM CRYSTAL DRIVE TO 12TH STREET S

THE TRANSITWAY TRANSITION AT CRYSTAL DRIVE AND 12TH STREET S REQUIRES CURB AND ROAD IMPROVEMENTS IN ORDER TO PROVIDE ADEQUATE ROAD WIDTH FOR BUS MOVEMENTS.

PROPOSED CURB IMPROVEMENTS ARE PROPOSED ON THE WEST SIDE AND EAST SIDE OF THE ROADWAY. THE RAMPS AND THE CURBS WILL BE CONSTRUCTED TO COMPLY WITH ADA REQUIREMENTS.

RAPID FLASHING BEACONS (RFB) ARE PROPOSED AT THE PROPOSED CROSSWALK TO INCREASE VISIBILITY.

PROPERTY ACQUISITION AND EASEMENT ANALYSIS - SEE EX. CONDITIONS & EASEMENTS PLAN

NO ADDITIONAL PROPERTY OR EASEMENTS WILL BE REQUIRED AT THIS LOCATION

UTILITY ANALYSIS

UTILITY WORK IS NOT PROPOSED AT THIS LOCATION.

PERMIT ANALYSIS

THIS PROJECT WILL HAVE GREATER THAN 2500 SF OF LAND DISTURBANCE ASSOCIATED WITH BUS PLATFORM CONSTRUCTION AND STREET REPAVING. THEREFORE, AN LDA PERMIT IS REQUIRED BY ARLINGTON COUNTY AND THE STATE OF VIRGINIA.

PAVEMENT MARKING & SIGNS

PAVEMENT MARKING, SIGNS, SIGNALIZATION AND OTHER ROAD MODIFICATIONS ASSOCIATED WITH THE TRANSITION WILL BE COMPLETED BY ARLINGTON COUNTY TE&O STAFF.

REVISED ON 11/08/2016

Symbols

Existing		Proposed
1001	Storm Str. #	ST1
	Catch Basin	
	Sanitary Manhole	
2001	Sanitary Str. #	SA1
	Fire Hydrant	
	Watermain Reducer	
	Water - Valve	
	Blowoff Valve	
	Water - Cross	
	Water - Tee	
	Water - Typical Bend	
	Water Meter	
	Water Cap	
	Water - Manhole Cover	
	Siamese Connection	
	CableTV Pedestal	
	Electrical Box	
	Telephone Pedestal	
	Cobrahead Light	
	Carlyle Light	
	Ground Light	
	Light Pole	
	Utility Pole	
	Guy Wire	
	Utility Cover	
	Gas Valve	
	Gas Line Marker	
	Test Hole	
	Bollard	
	Mailbox	
	Parking Meter	
	Sign	
	Traffic Mast Arm Pole	
	Traffic Pedestrian Pole	
	Traffic Control Box	
	Traffic Electrical Box	
	Traffic Junction Box	
S	Traffic Service Meter	S
	Coniferous Tree	
	Deciduous Tree	
	Bush/Hedge/Shrub	
	Tree Removal	
	Construction Notes	1
	Benchmark	
	Monument (GPS)	
	Monument	
	Iron Rod Found	
	Iron Pipe Found	
	Rebar Rod Found	
	P.K. Nail Found	
	Traverse	
	North Arrow	
C-2	Curb Transition	C-2R
	Flag Station Sign	

	Existing	Proposed
Easement		
Asphalt		
Building		
Cable TV	CATV	
Center Line		
Concrete		
Contours	250	250
Curb		
Electric (Underground)	UGE	
Fence	X X X X X X X X X	X X X X X X X X X X
Fiber Optic	fo fo fo	
Guardrail		
2" Gas	2" G 2" G 2" G	
3" Gas	3" G 3" G 3" G	
6" Gas	6" G 6" G 6" G	
8" Gas	8" G 8" G 8" G	
Gas	GAS GAS GAS	
Limits Of Disturbance		LOD LOD LOD
Limits Of Work		LOW LOW LOW
Overhead Wires		
Property Line		
8" Sanitary	8" S	
12" Sanitary	12" S	
Sanitary Sewer		
Sanitary House Con.	SHC	
Sidewalk		
Storm (size noted)		
Telephone (Underground)	UGT UGT UGT	
Wall		
6" Water	6" W	
8" Water	8" W	
12" Water	12" W	
Water	W	
Water House Con.	WHC WHC WHC	
Lane Marking		
Tree Line		
PVC (Street Lights)		

Asphalt - Mill & Overlay

Asphalt - Overlay

Asphalt - Full Depth

Concrete

Water Main (Shown on Profile Only)

Demolition Area

Waterproofing over Existing Structures

Disturbed Area, Landscape Restoration

Abbreviations

ACP	Asbestos Cement Pipe
ARV	Air Release Valve
ASPH	Asphalt
C.O.	Cleanout
C/L	Center Line
CATV	Cable Television
CB	Catch Basin
CLF	Chain link Fence
CLR	Clearance
CMP	Corrugated Metal Pipe
CMU	Concrete Masonry Units
Conc.	Concrete
D	Diameter
DI	Drop Inlet
DIP	Ductile Iron Pipe
Elev.	Elevation
EOP	Edge of Pavement
Esmt.	Easement
EX.	Existing
FL	Flowline
F.M.	Force Main
FOC	Face of Curb
G	Gas
H.B.	Horizontal Bend
Inv.	Invert
MH	Manhole
OHE	Overhead Electric
P.I.	Point at Intersection
P.O.C.	Point On Curve
P.O.T.	Point On Tangent
PL	Property Line
PM	Parking Meter
Prop.	Proposed
PVC	Poly-Vinyl Chloride
R	Radius
R/W	Right of Way
RCP	Reinforced Concrete Pipe
RED	Reducer Or Reducing
S.D.	Storm Sewer
S.S.	Sanitary Sewer
S.ST.	Stainless Steel
SDMH	Storm Drain Manhole
SHC	Sanitary Sewer House Connection
SMN	Sanitary Sewer Manhole
STD.	Standard
SW	Sidewalk
T.H.	Test Hole
T/L	Travel Line
TC	Top of Curb
TS&V	Tapping Sleeve & Valve
UGE	Underground Electric
UGT	Underground Telephone
V.B.	Vertical Bend
W.M.	Water Meter
W.V.	Water Valve
WM	Water Main

ARLINGTON
VIRGINIA

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FACILITIES & ENGINEERING DIVISION
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PHONE: 703.228.3629
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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
CONSTRUCTION MANAGEMENT SUPERVISOR	3.24.21
WATER, SEWER, STREETS BUREAU CHIEF	03.04.2021
TRANSPORTATION DIRECTOR	03/17/21
PROJECT MANAGER	3/2/21

REVISIONS	DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

LEGEND

CRYSTAL DR & 12TH ST S

MA13 - SEGMENT 1

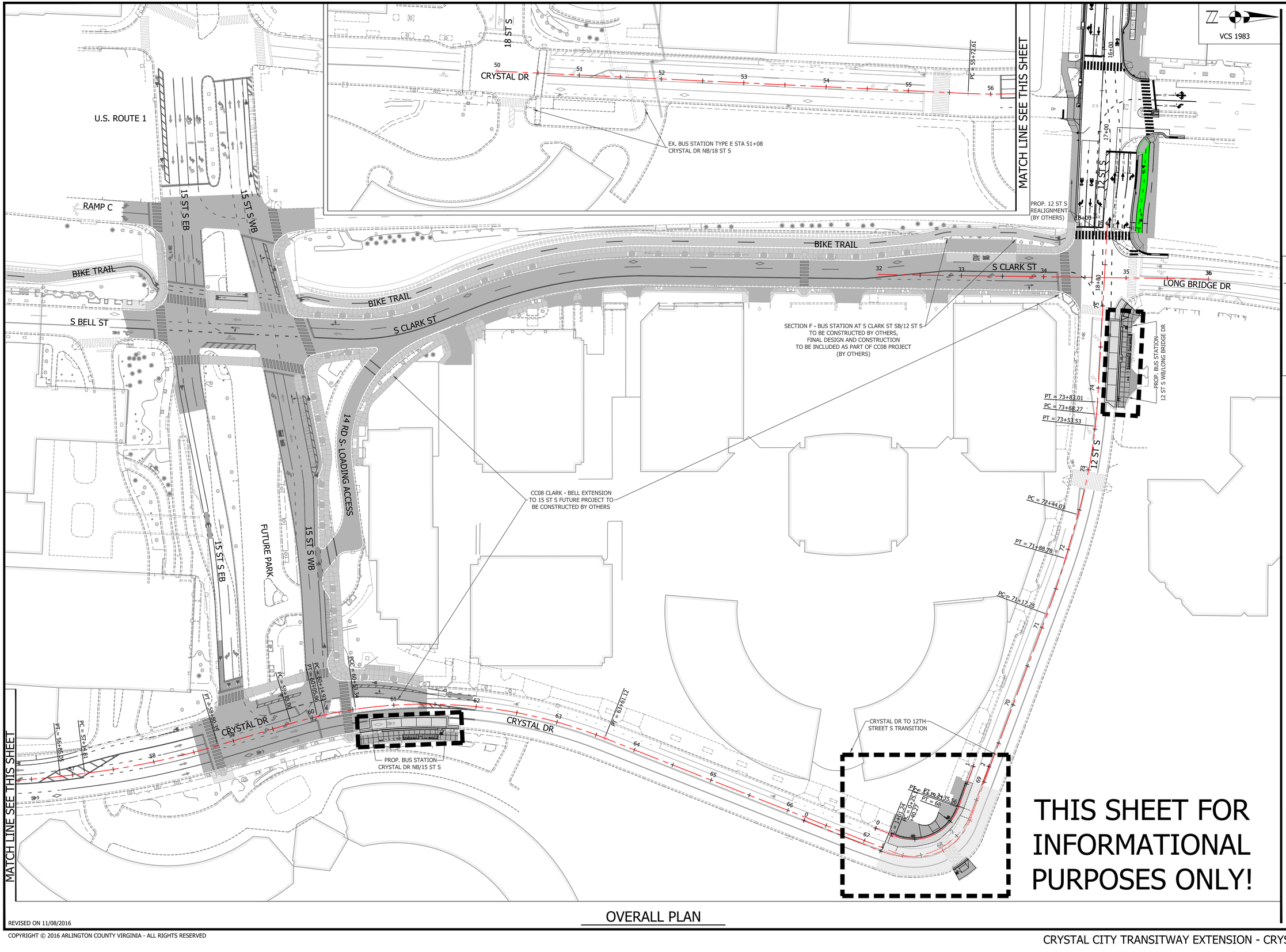
DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-202-LEGEND.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE: N/A

SHEET 02 OF 35



OVERALL PLAN

REVISED ON 11/08/2016

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

SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
Ramal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Haza	3/2/21
PROJECT MANAGER	

REVISIONS DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

OVERALL PLAN
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-203-OVERALLPLAN.DWG
PATH:\\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
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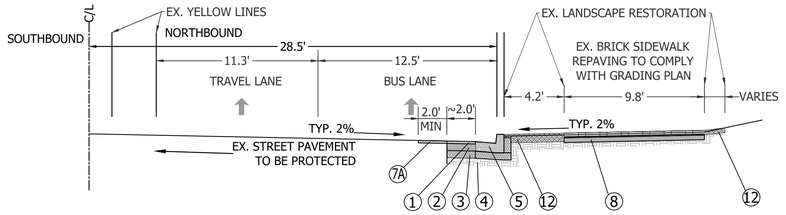
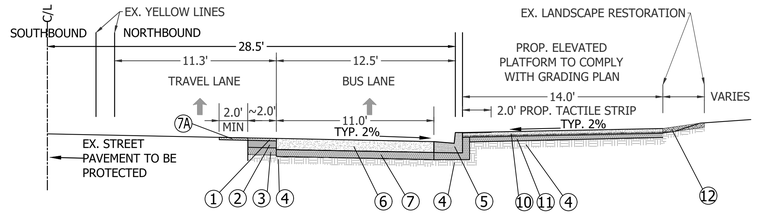
HORIZONTAL: 1" = 50'

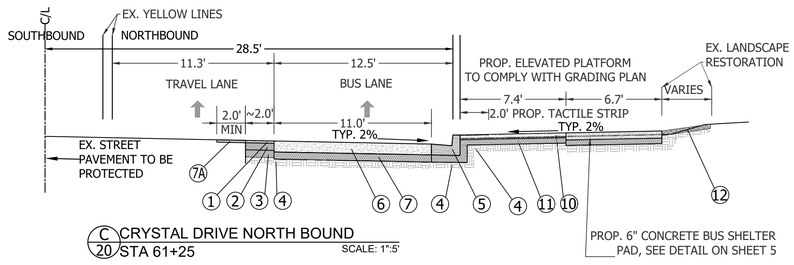
SHEET 03 OF 35



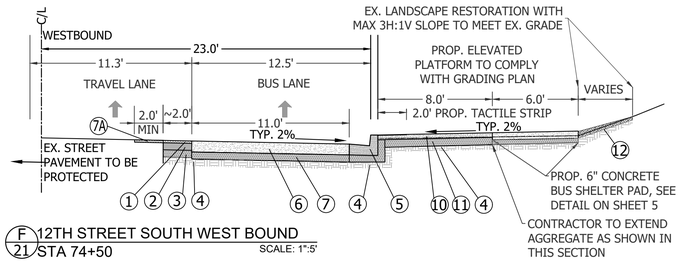
A CRYSTAL DRIVE NORTH BOUND
20 STA 60+60
SCALE: 1":5'



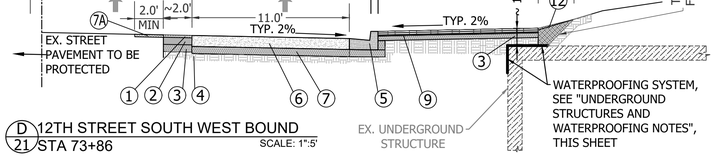
B CRYSTAL DRIVE NORTH BOUND
20 STA 60+87
SCALE: 1":5'



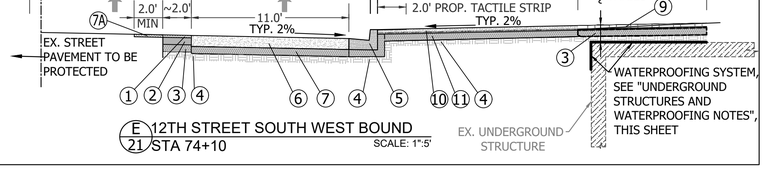
C CRYSTAL DRIVE NORTH BOUND
20 STA 61+25
SCALE: 1":5'



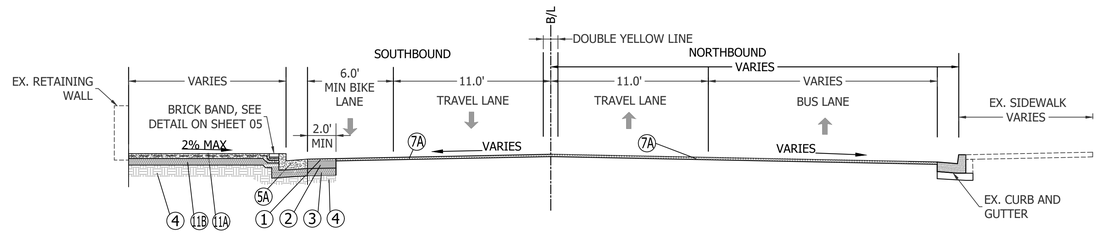
F 12TH STREET SOUTH WEST BOUND
21 STA 74+50
SCALE: 1":5'



D 12TH STREET SOUTH WEST BOUND
21 STA 73+86
SCALE: 1":5'



E 12TH STREET SOUTH WEST BOUND
21 STA 74+10
SCALE: 1":5'



G CRYSTAL DR AND 12TH ST S TRANSITION
21A STA 67+25 TO 68+95
SCALE: 1":5'

NOTES:
1. LANE, SIDEWALK, PLATFORM WIDTH MAY VARY.
2. PLAN CROSS SLOPES MAY VARY, SEE CROSS SECTIONS SHEET .
3. CONTRACTOR TO TIE PROPOSED FULL DEPTH ASPHALT TO EXISTING PAVEMENT USING THE VDOT WP-2 DETAIL.

REVISED ON 11/08/2016

PAVEMENT SCEDULE:

1. PROP. SURFACE - 2" ASPHALT CONCRETE (TYPE SM-9.5D) PER ARLINGTON COUNTY SPECS
2. PROP. BASE - 6" ASPHALT CONCRETE (TYPE BM-25.D) PER ARLINGTON COUNTY SPECS
3. PROP. COMPACTED SUBBASE - 6" AGGREGATE BASE MATERIAL PER ARLINGTON COUNTY SPECS
4. UNDISTURBED SUBGRADE OR BACKFILL & STANDARD COMPACTION REQUIRED PER ARLINGTON COUNTY SPECS
5. PROP. C-2 CURB & GUTTER PER ARL STD R-2.0 WITH MODIFIED 6" TO 9.5" HIGH CURB & 10" THICK GUTTER
5A. PROP. C-2 CURB & GUTTER PER ARL STD R-2.0
6. PROP 10" THICK REINFORCED CONCRETE BUS PAD (SEE DETAIL ON SHEET 5)
7. PROP.6" AGGREGATE BASE MATERIAL PER ARLINGTON COUNTY SPECS (VDOT 21A)
7A. PROP. MILL AND OVERLAY (2' WIDE MINIMUM)
8. SALVAGED BRICKS SHALL BE INSTALLED OVER 1" SAND, AND 4" CONCRETE BASE TO COMPLY WITH ARL STD R-2.1. BRICK SIDEWALK WIDENING/REPAVING SHALL MATCH EX. MATERIAL, COLOR & PATTERN
9. SALVAGED BRICKS SHALL BE INSTALLED OVER 1" SAND, AND 6" MIN AGGREGATE BASE TO COMPLY WITH ARL STD R-2.1. BRICK SIDEWALK WIDENING/REPAVING SHALL MATCH EX. MATERIAL, COLOR & PATTERN
10. PROP. BROOM FINISHED 4" CONCRETE SIDEWALK PER ARL STD R-2.0, TYP. SCORED IN 6' X 6' MODULE
11. PROP. 3" MIN. AGGREGATE BASE MATERIAL PER ARL STD R-2.0 UNDER SIDEWALK
11A. PROP. BROOM FINISHED 4" REINFORCED CONCRETE SIDEWALK, SCORED IN 6' X 6' MODULE. SEE DETAIL ON SHEET 05
11B. PROP. 4" MIN. AGGREGATE BASE MATERIAL PER ARL STD R-2.0 UNDER SIDEWALK
12. PROP. TYP. 4"-6" TOPSOIL AND SEED OR MULCH PER ARLINGTON COUNTY SPECS

UNDERGROUND STRUCTURES AND WATERPROOFING NOTES:

1. THERE IS AN EXISTING UNDERGROUND ("UG") STRUCTURE (PARKING GARAGE) AT THE 12TH STREET S AND CLARK BELL STREET STATION. AS PER TEST HOLE INFORMATION, THE TOP OF UG STRUCTURE RANGES APPROXIMATELY 1' BELOW THE SIDEWALK SURFACE. CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION TO ENSURE THAT NO DAMAGE WILL OCCUR TO THE UG STRUCTURE.
2. IT IS ANTICIPATED THAT THERE WILL BE EXISTING WATERPROOFING ON TOP OF THE UG STRUCTURE WHICH MAY BE DISTURBED DURING THE EXCAVATION. CONTRACTOR SHALL RESTORE OR INSTALL NEW WATERPROOFING ON AREAS DISTURBED DURING EXCAVATION PRIOR TO INSTALLING ANY CONCRETE OR OTHER MATERIALS. CONTRACTOR SHALL USE HOT FLUID - APPLIED RUBBERIZED ASPHALT WATERPROOFING OR AN APPROVED EQUAL .
3. CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION DOCUMENTATIONS/INVENTORIES OF EXISTING UNDERGROUND & ABOVE STRUCTURES AND ANY OTHER FEATURES THAT MAY BE IMPACTED DURING CONSTRUCTION. EXISTING DAMAGES, DEFECTS, OR CRACKS DISCOVERED DURING THE PRE-CONSTRUCTION INVENTORY SHALL BE DOCUMENTED (USING PHOTOS, VIDEOS, ETC.) AND SHALL BE MONITORED DURING AND AFTER CONSTRUCTION.

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PROJECT MANAGER	

REVISIONS	DATE

PROJECT NAME AND LOCATION
TRANSITWAY EXTENSION TO PENTAGON CITY

SECTION DETAILS
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-210-TYPICAL_SECTIONS.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
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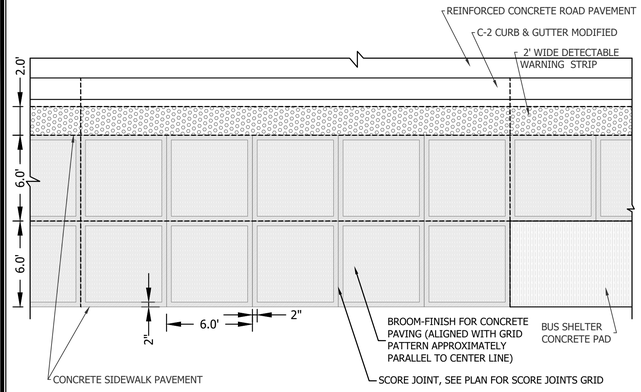
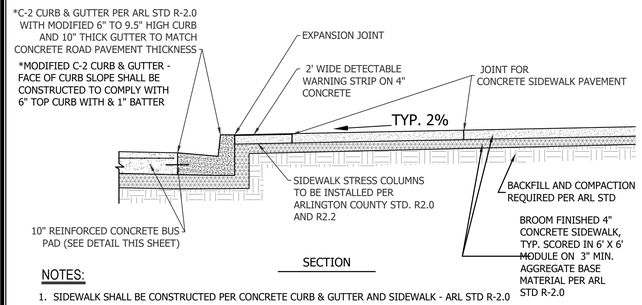
HORIZONTAL: 1" = 5'
5' 0 5'
VERTICAL: 1" = 5'

SHEET 04 OF 35



PLAN

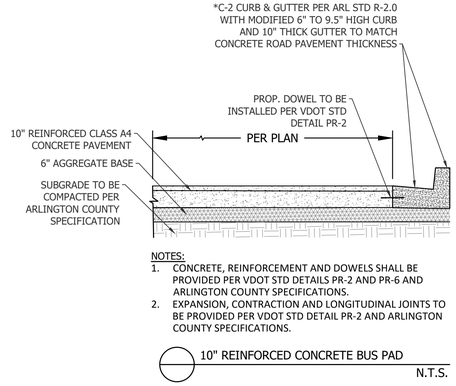


SECTION

NOTES:

1. SIDEWALK SHALL BE CONSTRUCTED PER CONCRETE CURB & GUTTER AND SIDEWALK - ARL STD R-2.0
2. CONCRETE SIDEWALK TYPICAL SCORING PATTERN SHALL BE ~6.0' GRID, AS SHOWN ON THE PLANS.
3. 2' WIDE CAST IN PLACE DETECTABLE WARNING STRIP (COLOR VARIES) - DETECTABLE WARNING SURFACE SHALL BE INSTALLED PER VDOT STD CG-12 AND ARLINGTON COUNTY SPECIFICATIONS.

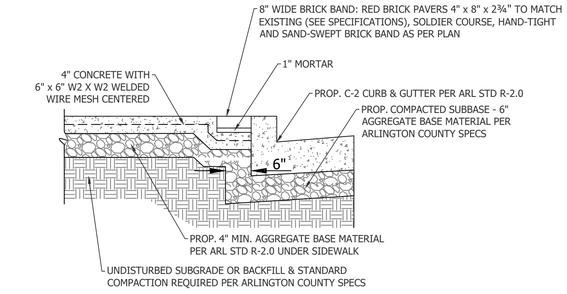
BROOM FINISHED CONCRETE SIDEWALK
N.T.S.



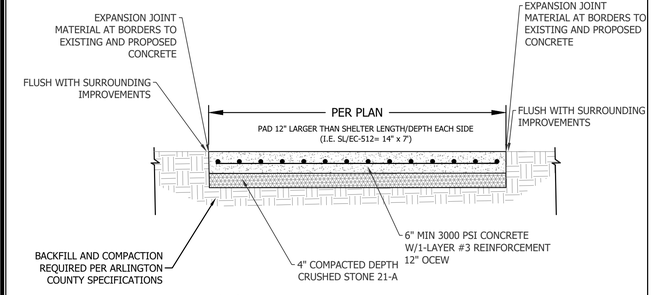
NOTES:

1. CONCRETE, REINFORCEMENT AND DOWELS SHALL BE PROVIDED PER VDOT STD DETAILS PR-2 AND PR-6 AND ARLINGTON COUNTY SPECIFICATIONS.
2. EXPANSION, CONTRACTION AND LONGITUDINAL JOINTS TO BE PROVIDED PER VDOT STD DETAIL PR-2 AND ARLINGTON COUNTY SPECIFICATIONS.

10" REINFORCED CONCRETE BUS PAD
N.T.S.



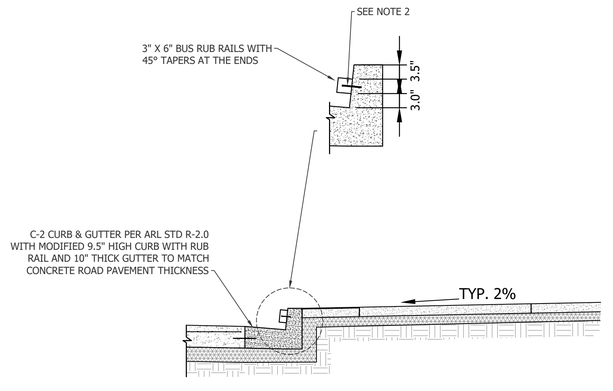
REINFORCED CONCRETE SIDEWALK AND BRICK PAVER BAND DETAIL
N.T.S.



NOTES:

1. CONCRETE SHALL BE PROVIDED PER THE ARLINGTON COUNTY SPECIFICATIONS.
2. EXPANSION, CONTRACTION AND LONGITUDINAL JOINTS TO BE PROVIDED PER ARLINGTON COUNTY SPECIFICATIONS
3. REFER TO ARLINGTON COUNTY DETAIL R-2.10

6" CONCRETE BUS SHELTER PAD
N.T.S.



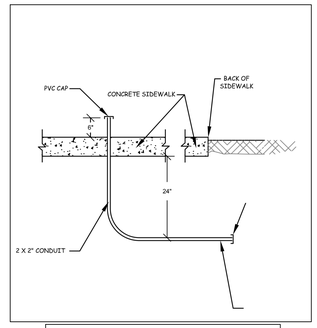
SECTION

NOTES:

1. RUB RAILS WILL BE PROVIDED BY ARLINGTON COUNTY FOR THE CONTRACTOR TO INSTALL. AT THAT TIME ADDITIONAL PLACEMENT INFORMATION WILL BE PROVIDED.
2. CONTRACTOR TO COORDINATE WITH FASTENER SUPPLIER FOR APPROPRIATE CONNECTION TO CONCRETE. SHOP DRAWINGS SHALL BE SUBMITTED TO THE PROJECT MANAGER.

9.5" CONCRETE CURB WITH RUB RAIL
N.T.S.

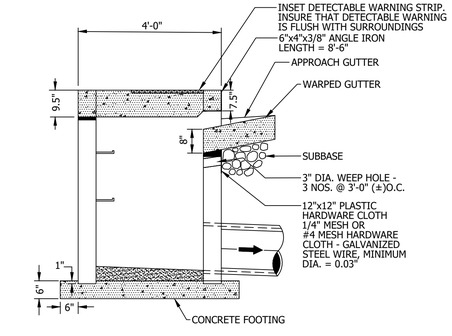
REVISED ON 11/08/2016



NOTES:

1. ALL CONDUIT SHALL BE 2" GALVANIZED STEEL OR PVC
2. ALL CONDUIT RADII ARE 90° 24" SWEEPS.
3. CONDUIT SHALL BE EXTENDED 6" ON THE BACK OF SIDEWALK

FARE MACHINE CONDUIT STUB OUTS
N.T.S.



NOTES:

1. CONTRACTOR TO SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF VIRGINIA.

MODIFIED 9.5"ARLINGTON COUNTY CB-2A CATCH BASIN
N.T.S.

ARLINGTON
VIRGINIA

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

SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
CONSTRUCTION MANAGEMENT SUPERVISOR (Ramal Taktak)	3.24.21
WATER, SEWER, STREETS BUREAU CHIEF	03.04.2021
TRANSPORTATION DIRECTOR (Dennis M. Leach)	03/17/21
PROJECT MANAGER (Diana Izaza)	3/2/21

REVISIONS DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

SITE DETAILS
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

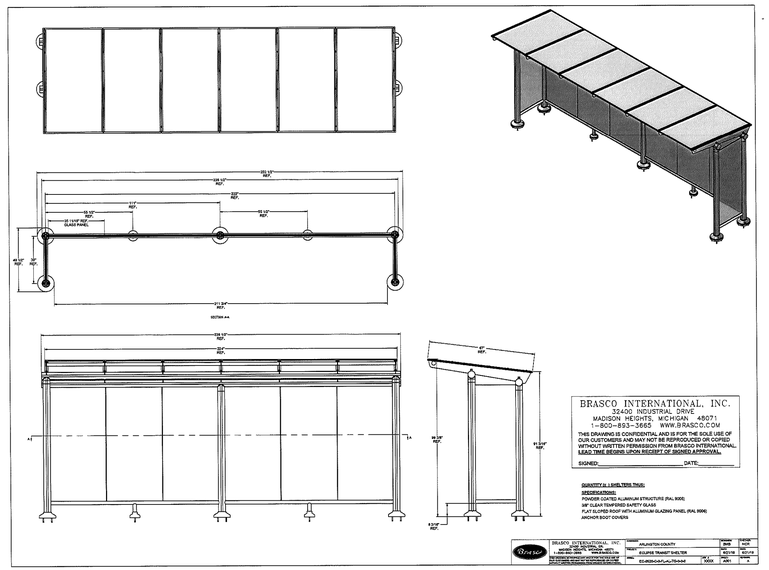
DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-204-DETAILS.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

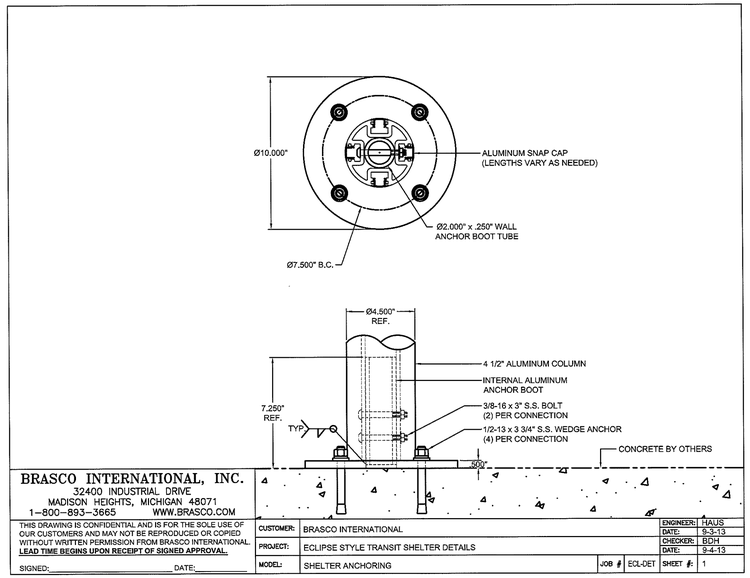
PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE: N/A

SHEET 05 OF 35

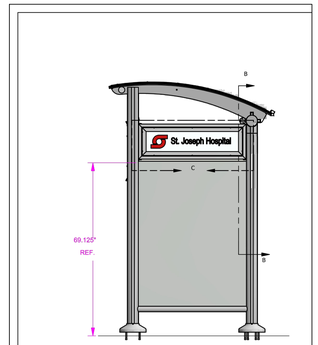


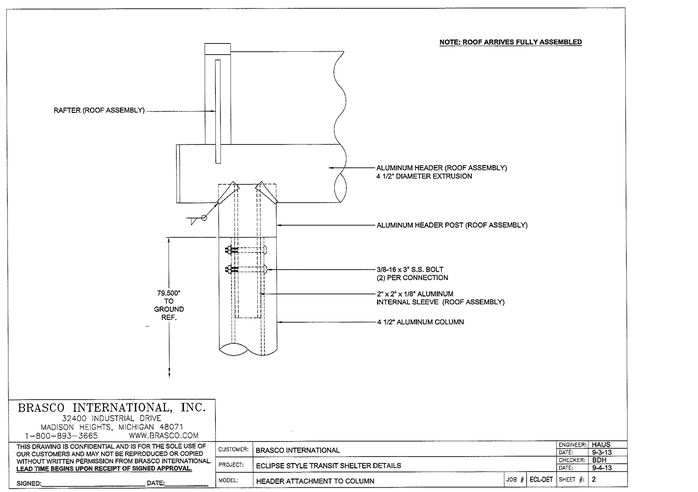
BRASCO SHELTER
N.T.S.



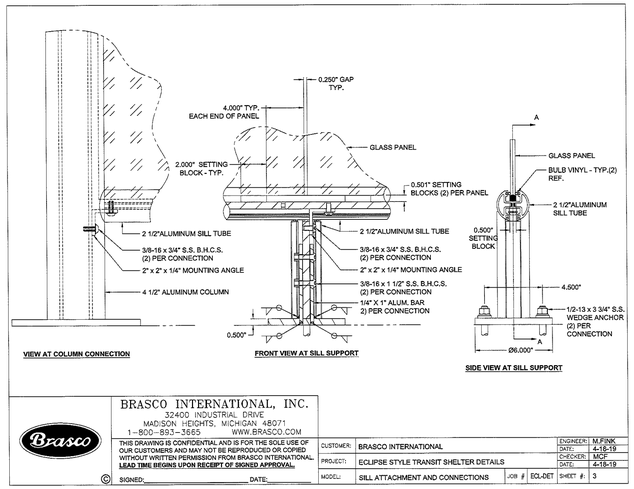
SHELTER ANCHORING
N.T.S.

NOTE:
1. CONTRACTOR TO UTILIZE THESE DETAILS
2. SHELTER LOCATION SHALL BE INSTALLED PER SHEET 21
3. CONTRACTOR TO REFER TO BRASCO INSTALLATION GUIDE FOR INSTALLATION INFORMATION





HEADER ATTACHMENT TO COLUMN
N.T.S.



SILL ATTACHMENT AND CONNECTION
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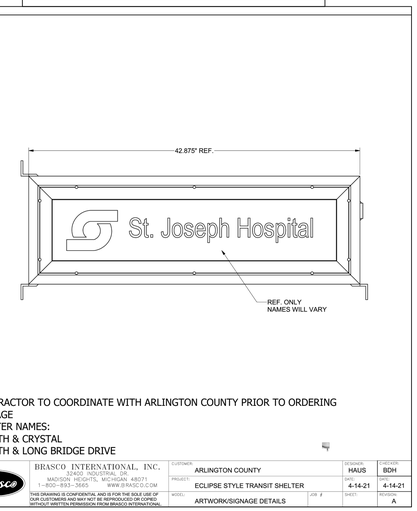

SHELTER NAME SIGNAGE
N.T.S.

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WATER, SEWER, STREETS BUREAU CHIEF	03/17/21
TRANSPORTATION DIRECTOR	3/2/21
PROJECT MANAGER	

REVISIONS DATE

PROJECT NAME AND LOCATION
TRANSITWAY EXTENSION TO PENTAGON CITY
STATION DETAILS
CRYSTAL DR & 12TH ST S
MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-204-DETAILS.DWG
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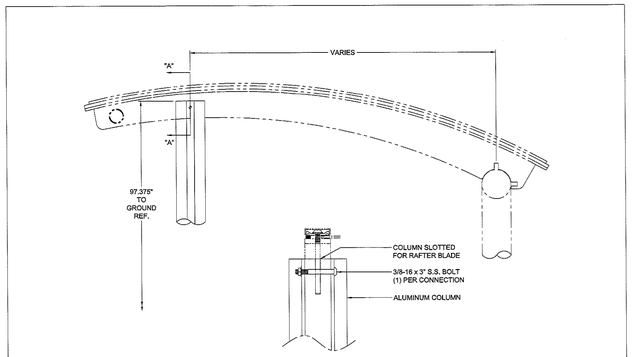
PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE: N/A

SHEET 06 OF 35

REVISED ON 11/08/2016



SECTION "A-A"

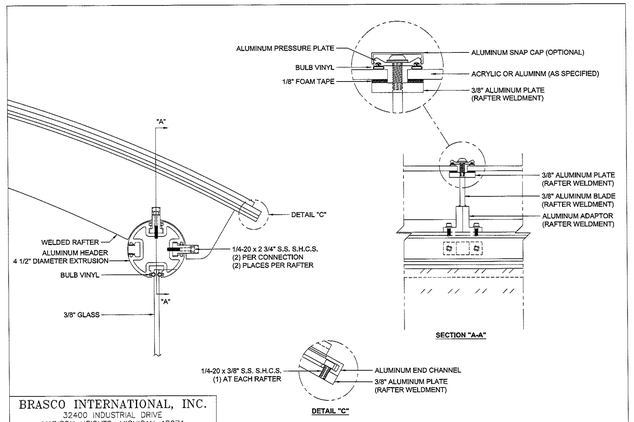
BRASCO INTERNATIONAL, INC.
32400 INDUSTRIAL DRIVE
MADISON HEIGHTS, MICHIGAN 48071
1-800-893-3665 WWW.BRASCO.COM

THIS DRAWING IS CONFIDENTIAL AND IS FOR THE SOLE USE OF OUR CUSTOMERS AND MAY NOT BE REPRODUCED OR COPIED WITHOUT WRITTEN PERMISSION FROM BRASCO INTERNATIONAL. **LEAD TIME BEGINS UPON RECEIPT OF SIGNED APPROVAL.**

SIGNED:_____ DATE:_____

CUSTOMER:	BRASCO INTERNATIONAL	ENGINEER:	HAUS
		DATE:	9-3-13
PROJECT:	ECLIPSE STYLE TRANSIT SHELTER DETAILS	CHECKER:	BDH
		DATE:	9-4-13
MODEL:	FRONT COLUMN TO RAFTER ATTACHMENT	JOB #: ECL-DET	SHEET #: 5

FRONT COLUMN TO RAFTER ATTACHMENT
N.T.S.



DETAIL "C"

BRASCO INTERNATIONAL, INC.
32400 INDUSTRIAL DRIVE
MADISON HEIGHTS, MICHIGAN 48071
1-800-893-3665 WWW.BRASCO.COM

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SIGNED:_____ DATE:_____

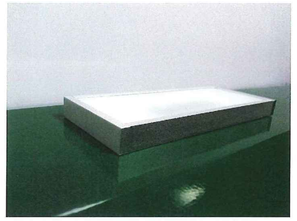
CUSTOMER:	BRASCO INTERNATIONAL	ENGINEER:	HAUS
		DATE:	9-3-13
PROJECT:	ECLIPSE STYLE TRANSIT SHELTER DETAILS	CHECKER:	BDH
		DATE:	9-4-13
MODEL:	RAFTER AND ROOF ATTACHMENTS	JOB #: ECL-DET	SHEET #: 4

RAFTER AND ROOF ATTACHMENTS
N.T.S.

LED Illumination

UL Listed Outdoor Rated LED Light

The PLS-Series' UL Listed, outdoor rated LED light outperforms most any other single solar powered light on the market. It is both rated as one of the safest LED lights for outdoor / damp locations as well as one of the highest luminaire outputs.



Highlights:

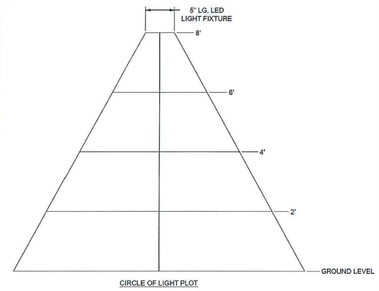
- 3.60 foot candles at 2 ft.
- 8.00 foot candles at 4 ft.
- 30.1 foot candles at 6 ft.

PLS-SERIES PV PANEL HIGHLIGHTS	
Qualifications	UL Listed
Wattage	5W LED Light
Manufacturer's Warranty	5 Years

CIRCLE OF LIGHT TABULATION

READING HEIGHT (FEET)	FOOTCANDLES AT NADIR	FOOTCANDLES AT DIAMETER	DIAMETER (FEET)
GROUND LEVEL	2.0	0.9	10.0
2	3.6	1.4	8.0
4	8.0	2.6	6.0
6	30.1	6.3	4.0

Figure 1. Performance Metrics



CIRCLE OF LIGHT PLOT

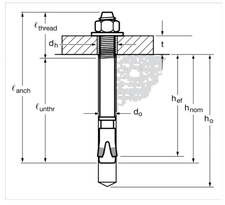
Figure 2. Ft. candle performance spread

Brasco INTERNATIONAL 1-800-893-3665 | www.brasco.com

SHELTER ILLUMINATION DETAIL

Installing Expansion Anchors

Expansion Anchor Installed

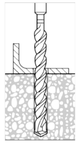


Setting information	Symbol	Units	Nominal anchor diameter d_a											
			3/8			1/2			5/8			3/4		
Nominal bit diameter	d_{bit}	in.	3/8			1/2			5/8			3/4		
Minimum nominal embedment	h_{nom}	in. (mm)	2-5/16 (59)			2-3/8 (60)	3-5/8 (91)		3-9/16 (91)	4-7/16 (113)		4-5/16 (110)	5-9/16 (142)	
Effective minimum embedment	h_{ef}	in. (mm)	2 (51)			2 (51)	3-1/4 (83)		3-1/8 (79)	4 (102)		3-3/4 (95)	4-3/4 (121)	
Min. hole depth	h_o	in. (mm)	2-5/8 (67)			2-5/8 (67)	4 (102)		3-3/4 (95)	4-3/4 (121)		4-5/8 (117)	5-3/4 (146)	
Min. thickness of fixture[1]	t_{min}	in. (mm)	1/8 (3)			1/8 (3)	n/a		1/8 (3)	n/a		1/8 (3)	n/a	
Max. thickness of fixture	t_{max}	in. (mm)	2-1/4 (57)			4 (101)	2-3/4 (70)		5-5/8 (143)	4-3/4 (121)		4-5/8 (117)	5-5/8 (92)	
Installation torque	T_{inst}	ft-lb (Nm)	25 (34)			40 (54)			60 (81)			110 (149)		
Fixture hole diameter	d_h	in. (mm)	7/16 (11.1)			9/16 (14.3)			11/16 (17.5)			13/16 (20.6)		
Available anchor lengths	ℓ_{anch}	in. (mm)	3 (76)	3-3/4 (95)	5 (127)	3-3/4 (95)	4-1/2 (114)	5-1/2 (140)	7 (178)	4-3/4 (121)	6 (152)	8-1/2 (216)	10 (254)	5-1/2 (140)	8 (203)	10 (254)
Threaded length including dog point	ℓ_{thread}	in. (mm)	7/8 (22)	1-5/8 (41)	2-7/8 (73)	1-5/8 (41)	2-3/8 (60)	3-3/8 (86)	4-7/8 (178)	1-1/2 (38)	2-3/4 (70)	5-1/4 (133)	6-3/4 (171)	1-1/2 (38)	4 (102)	6 (152)
Unthreaded length	ℓ_{unthr}	in. (mm)	2-1/8 (54)			2-1/8 (54)			3-1/4 (83)			4 (102)		

Expansion Anchor Technical Chart Minimum thickness of fixture is a concern only when the anchor is installed at the minimum nominal embedment. When KWIK Bolt TZ anchors are installed at this embedment, the anchor threading ends near the surface of the concrete. If the fixture is sufficiently thin, it could be possible to run the nut to the bottom of the threading during application of the installation torque. If fixtures are thin, it is recommended that embedment be increased accordingly.

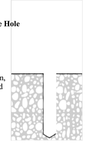
Step 1.
Prepping the Concrete

Using anchor boot as a template, mark hole locations and move anchor boot out of the way. Drill a hole the same diameter as the expansion anchor to a minimum depth of ½" deeper than the anchor will penetrate to allow debris to fall during installation



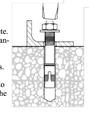
Step 2.
Prepping the Hole

Clean debris from holes using a wire brush, vacuum, or compressed air.



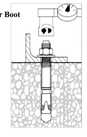
Step 3.
Anchor Installation

Replace the anchor boot and align with holes in the concrete. Make sure the nut on the expansion anchor is threaded to the top of the threaded rod to prevent damage to the threads. Insert the expansion anchor through the base plate and into the hole in the concrete. Hit the expansion anchor with sharp blows until the washers are snug against the base plates.



Step 4.
Securing the Anchor Bolt

Tighten the nut to the recommended installation torque.



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INSTALLING EXPANSION ANCHORS
N.T.S.

Standard Brasco Anchoring Guidelines

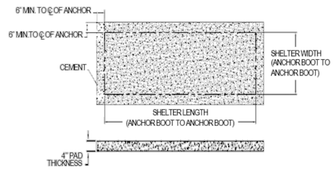
Expansion Anchor Installed

1. Locating proper column locations is critical. Care must be taken to keep columns plumb and walls square to each other.
2. Shelter should be sloped slightly to the rear for proper drainage. Approximately 1/4 inch slope per ft. from front to rear of shelter is recommended. Columns should be shimmed as necessary.
3. Anchors to be installed in conjunction with manufacturers recommendations only. (See Expansion Anchor Technical Chart on previous page.)
4. Anchors need to be installed a minimum of 6 inches from the edge of the concrete pad. See below for reference.

Standard Concrete Pad Overview

NOTE: This visual is for reference only. Brasco is not liable for concrete installation instructions unless structural concrete calculations are included with an order. Consult your local building codes for specific concrete pad requirements.

RECOMMENDED: Brasco recommends a minimum 4 inch thick, 3000 PSI concrete pad for areas with wind speeds lower than 110 MPH. The concrete pad should allow a minimum of 6 inches around the shelter's perimeter to prevent concrete breakage when anchoring. Concrete may or may not require additional reinforcement.



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ANCHORING GUIDELINES
N.T.S.

Storage

1. Products stored outside must be fully tarped. Wooden crates, cardboard boxes and identifying labels are not weatherproof and will deteriorate in the elements.
2. If your order includes solar lighting, be cautious when handling batteries as they are capable of generating hazardous short-circuit currents. Remove all jewelry (bracelets, metal watches, rings) before attempting to handle or disassemble batteries.
3. Batteries should be stored indoors at a recommended 68 degrees Fahrenheit for max shelf life.
4. Batteries should be installed no later than 3 months from delivery or battery warranties will be void.

TOOLS NEEDED		
☐ Drill Motor / Impact Driver	☐ Cordless Drill	☐ Chalk Line
☐ 3/8" Drill Bit (min. 6" lg.)	☐ Air Compressor	☐ Tape Measure
☐ Pry Bar (Leveling)	☐ Steel Hammer	☐ Torque Wrench
☐ 8" Long Masonry Drill Bits	☐ Dead Blow Hammer or Mallet	☐ Hex Key Set
☐ 5/8" and 3/4" Socket and Wrench	☐ Bubble Level, Line / String Level	☐ Generator or Other Power Source
☐ HD Drill Motor or Hammer Drill	☐ Min. 6ft. Step Ladder	☐ Shop Vac or Broom for Clean Up

STORAGE AND TOOLS
N.T.S.

REVISED ON 11/08/2016

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ARLINGTON, VA 22201
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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
Ramal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis W. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Isaza	3/2/21
PROJECT MANAGER	

REVISIONS	DATE

PROJECT NAME AND LOCATION
TRANSITWAY EXTENSION TO PENTAGON CITY

STATION DETAILS
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-204-DETAILS.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

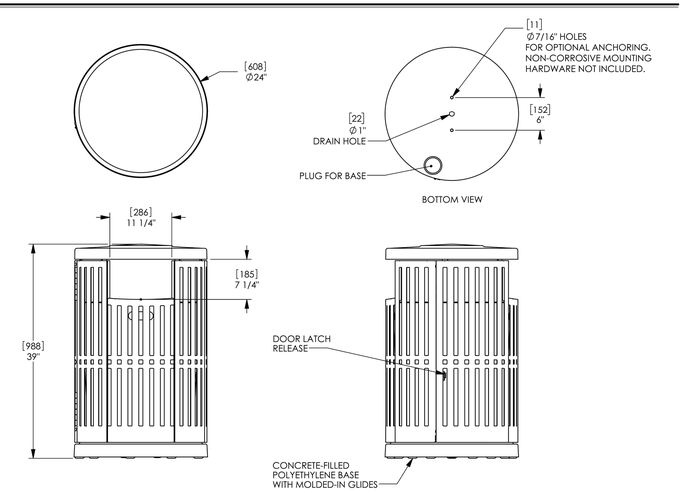
PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE: N/A

SHEET 07 OF 35

Chase Park® Side Opening Litter Receptacle

Product Drawing — www.landscapeforms.com — Ph: 800.521.2546 — Date: 8/22/2019



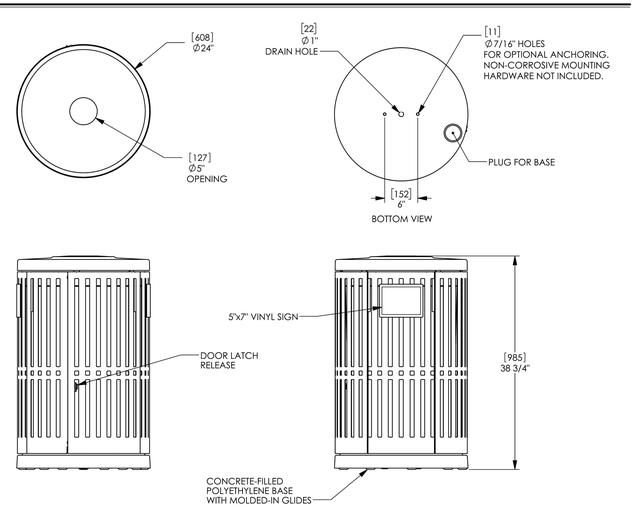
landscapeforms® Drawing: CP362-01 Dimensions are in inches [mm]

NOTE:
1. CONTRACTOR TO UTILIZE THESE DETAILS OR APPROVED EQUAL
2. POWDER COATED METAL: BLACK
3. AMENITIES SHALL BE INSTALLED PER SHEET 21

LITTER RECEPTACLE, 36 GALLON, SIDE OPENING — N.T.S.

Chase Park® Receptacle, 40 Gallon, Top Opening, Single 5in. Diameter Opening

Product Drawing — www.landscapeforms.com — Ph: 800.521.2546 — Date: 8/22/2019



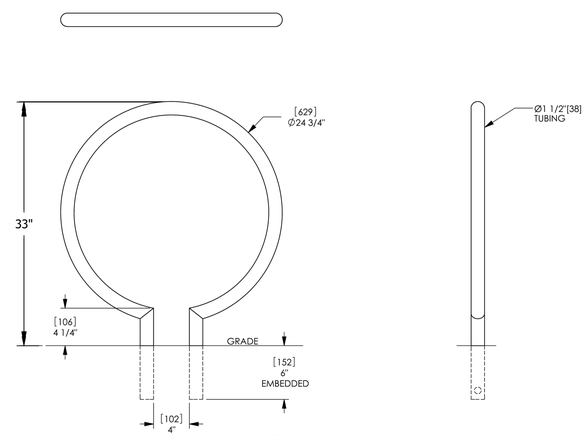
landscapeforms® Drawing: CP363-01-HOL Dimensions are in inches [mm]

NOTE:
1. CONTRACTOR TO UTILIZE THESE DETAILS OR APPROVED EQUAL
2. POWDER COATED METAL: BLUE
3. AMENITIES SHALL BE INSTALLED PER SHEET 21

RECYCLING STATION, 40 GALLON, TOP OPENING — N.T.S.

Ring® Bike Rack, Embedded

Product Drawing — www.landscapeforms.com — Ph: 800.521.2546 — Date: 8/6/2010



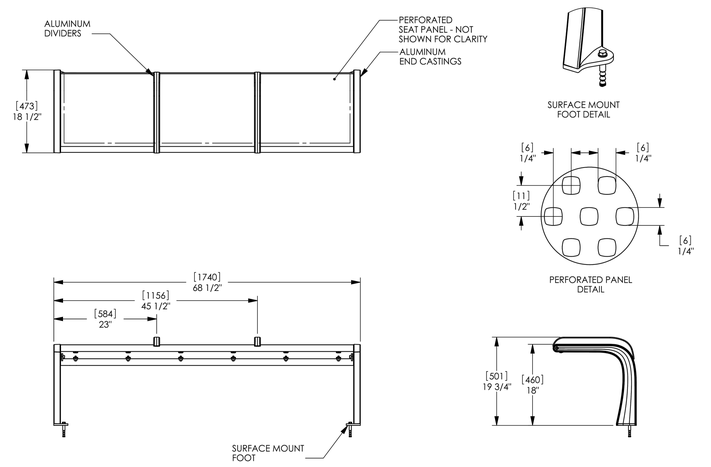
landscapeforms® Drawing: RG663-01 Dimensions are in inches [mm]

NOTE:
1. CONTRACTOR TO UTILIZE THESE DETAILS OR APPROVED EQUAL
2. POWDER COATED METAL: SILVER
3. AMENITIES SHALL BE INSTALLED PER SHEET 21
4. CONTRACTOR SHALL SPECIAL ORDER BIKE RACKS TO ENSURE THE INSTALLED HEIGHT OF 33"

BIKE RACK, EMBEDDED — N.T.S.

Stay™ Bench, Backless, Surface Mount, with 2 Dividers

Product Drawing — www.landscapeforms.com — Ph: 800.521.2546 — Date: 4/23/2019



landscapeforms® Drawing: SA476-03 Dimensions are in inches [mm] U.S. Patent No.: D507,420

NOTE:
1. CONTRACTOR TO UTILIZE THESE DETAILS OR APPROVED EQUAL
2. POWDER COATED METAL: SILVER
3. AMENITIES SHALL BE INSTALLED PER SHEET 21
4. CONTRACTOR SHALL SPECIAL ORDER BENCHES TO ENSURE THE INSTALLED WIDTH OF 4 FEET OR 6 FEET

BENCH, STRAIGHT, BACKLESS, DIVIDERS, SURFACE MOUNTED — N.T.S.

REVISED ON 11/08/2016

ARLINGTON
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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
Kamal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Izaza	3/2/21
PROJECT MANAGER	

REVISIONS — DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

STATION DETAILS
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT 1

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-204-DETAILS.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE: N/A

SHEET 08 OF 35

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TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
CONSTRUCTION MANAGEMENT SUPERVISOR (Kamal Taktak)	3.24.21
WATER, SEWER, STREETS BUREAU CHIEF	03.04.2021
TRANSPORTATION DIRECTOR (Dennis M. Leach)	03/17/21
PROJECT MANAGER (Diana Isaza)	3/2/21

REVISIONS	DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

STATION DETAILS
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-204-DETAILS.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE: N/A

SHEET 09 OF 35

CRYSTAL DR/
15 ST S
INTERSECTION
SANITARY SEWER
TABLE:

#10755
TOP = 35.85
C/L INV. = 27.17

#13011
TOP = 35.36
C/L INV. = 16.71

#13724
TOP = 35.91
C/L INV. = 17.71

#14923
TOP = 36.61
C/L INV. = 17.31

15 ST S WB

RPC 34020248
CESC SQUARE, LLC
PARCEL 2
D.B. 3016 PG. 1017
ZONE: C-0

SURFACE EASEMENT FOR
PUBLIC STREET PURPOSES
AND UTILITIES PURPOSES
(D.B. 1991 PG. 1845)

PC = 59+73.00

PT = 60+05.96

PC = 60+14.93

PCC = 60+53.74

RPC 34024341
AT AND ABOVE ELEV. 36.8
ARLINGTON HOSPITALITY CORP.

SURFACE EASEMENT FOR
PUBLIC STREET PURPOSES
AND UTILITIES PURPOSES
(D.B. 1668 PG. 346)

CRYSTAL DR

SURFACE EASEMENT FOR
PUBLIC STREET PURPOSES
AND UTILITIES PURPOSES
(D.B. 1902 PG. 791)

parking pay station

bike rack

brick

RPC 34026033
PARCEL X-10-A
SMITH PROPERTY HOLDINGS
D.B. 2932 PG. 381
ZONE: C-0-1.5/C-0

SURFACE EASEMENT FOR
PUBLIC STREET PURPOSES
AND UTILITIES PURPOSES
(D.B. 2177 PG. 1181)

RPC 34020238
PARCEL 9
SMITH PROPERTY HOLDINGS
D.B. 2932 PG. 381
ZONE: C-0-1.5/C-0

SURFACE EASEMENT FOR
PUBLIC STREET PURPOSES
AND UTILITIES PURPOSES
(D.B. 2177 PG. 1181)

VCS 1983

GENERAL NOTES

1. CRYSTAL DRIVE - THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF JOSHUA M. BROCK, L.S. FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED FROM IN OCTOBER 2017; AND THAT THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

2. 12 STREET SOUTH - THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF NATHAN A. ORR, L.S. FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED FROM 01/29/2015 TO 03/10/2015; AND THAT THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

3. HORIZONTAL DATUM: VIRGINIA COORDINATE SYSTEM 1983.

4. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988.

5. CONTOUR INTERVAL: 1'

6. BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM EXISTING LAND RECORDS AND DOES NOT REPRESENT A FIELD RUN BOUNDARY SURVEY.

PROP C/L PROVIDED FOR REFERENCE ONLY.

12 ST S/LONG BRIDGE
DRIVE INTERSECTION
STORM SEWER TABLE:

#15391
TOP = 27.98
15" RCP INV. OUT =
24.79 (15417)

#15417
TOP = 27.97
15" RCP INV. IN = NO
ACCESS (15429)
15" RCP INV. IN = NO
ACCESS (15391)
15" RCP INV. OUT = NO
ACCESS (15413)

#15429
TOP = 27.91
15" RCP INV. OUT =
24.41 (15417)

12 ST S/LONG BRIDGE
DRIVE INTERSECTION
SANITARY SEWER
TABLE:

#11648
TOP = 28.62
C/L INV. = 16.57

#13005
TOP = 27.99
C/L INV. = 12.91

#14034
TOP = 28.37
INV. IN = 13.96
(SOUTH)
C/L INV. = 13.06

COMMONWEALTH OF VIRGINIA
NATHAN A. ORR
Lic. No. 3178
LAND SURVEYOR

COMMONWEALTH OF VIRGINIA
JOSHUA M. BROCK
Lic. No. 3122
LAND SURVEYOR

REVISED ON 11/08/2016

CRYSTAL DR NB & 15TH ST S INTERSECTION

SANITARY SEWER EASEMENT
D.B. 2045, PG. 454

EASEMENT FOR PUBLIC STREET
AND UTILITIES PURPOSES
D.B. 2045, PG. 454

EASEMENT FOR PUBLIC STREET
AND UTILITIES PURPOSES
D.B. 1724, PG. 252, AMENDED
D.B. 2045, P.G. 454

PT = 73+53.83

PC = 73+68.27

PT = 73+83.01

12 ST S

ex. 15" storm

RPC# 34024269 - PARCEL A-1
CESC GATEWAY SQUARE LLC
D.B. 3016 PG. 1618
ZONE C-0

VCS 1983

EASEMENT FOR PUBLIC
STREET & UTILITIES PURPOSES
D.B. 2263, PG. 1356

RPC 34024007
LOT 1-D
CESC CRYSTAL/ROSSLYN L.L.C.

underground structure

elevator

RPC 34024270 - PARCEL 1-A
CESC CRYSTAL/ROSSLYN L.L.C.

LONG BRIDGE DR

SANITARY
SEWER EASEMENT
D.B. 1213, PG. 212

10' SANITARY
SEWER EASEMENT
D.B. 2045, PG. 454

12TH ST S WB & LONG BRIDGE DR INTERSECTION

ARLINGTON
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TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER Kamal Taktak	3/29/21 3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
WATER, SEWER, STREETS BUREAU CHIEF	03.04.2021
TRANSPORTATION DIRECTOR Dennis M. Leach	03/17/21
PROJECT MANAGER Diana Ioza	3/2/21

REVISIONS	DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

EXISTING CONDITIONS
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

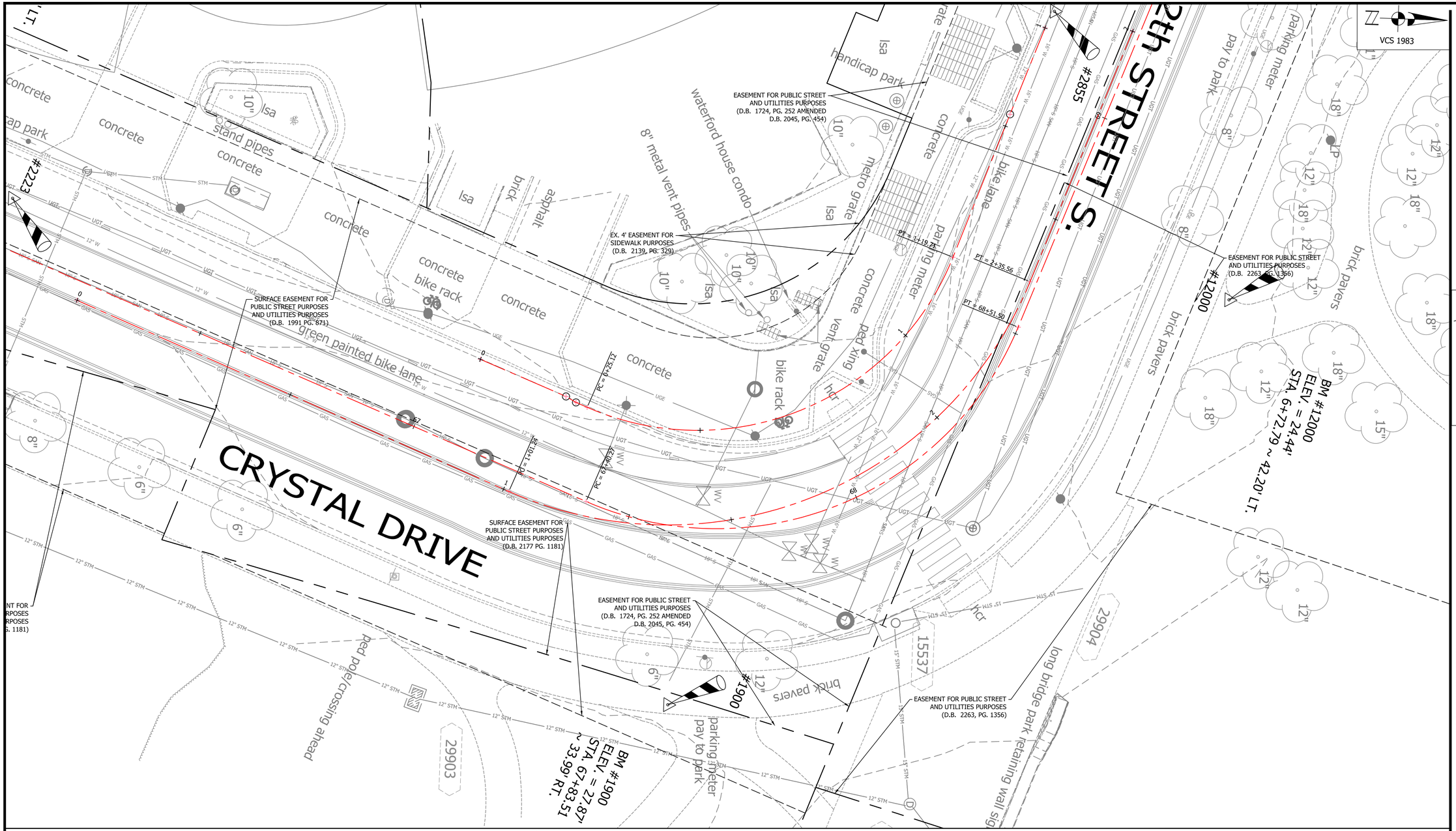
DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-214-EXCONDITIONS.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY: NSHARP

SCALE:
10' 0 10'
HORIZONTAL: 1" = 10'

SHEET 10 OF 35



CRYSTAL DR & 12TH STREET S INTERSECTION TRANSITION

SANITARY TABULATION

#13007
TOP = 29.63
C/L INV. = 13.85

#13008
TOP = 27.12
C/L INV. = 15.11

#13009
TOP = 27.44
C/L INV. = 15.29

#13010
TOP = 29.24
C/L INV. = 15.80

#14064
TOP = 29.00
C/L INV. = 14.05

#41516
TOP = 27.51
C/L INV. = 15.31

STORM TABULATION

#15476
TOP = 27.27
12" RCP INV. IN = 20.57 (15436)
15" RCP INV. OUT= 20.42 (15537)

#15531
TOP = 26.64
15" RCP INV. IN = 18.18 (15537)
12" HDPE INV. IN = 18.13 (29903)
18" RCP INV. OUT = 12.30 (29905)

#15537
TOP = 27.30
15" RCP INV. IN = 19.60 (29904)
15" RCP INV. OUT = 19.57 (15531)

#15762
TOP = 27.38
18" RCP INV. IN = 20.09 (15691)
18" RCP INV. OUT = UNKNOWN (15866)

#15664
TOP = 26.21
15" RCP INV. IN = UNKNOWN (EX. 14927)
18" RCP INV. OUT = 21.02 (15691)

#15691
TOP = 26.26
15" RCP INV. IN = 20.94 (15714)
15" RCP INV. IN = 21.02 (15664)
18" RCP INV. OUT = 20.93 (15762)

#15714
TOP = 26.54
15" RCP OUT = 22.53 (15691)

#22902
12" HDPE INV. OUT = 22.38 (29903)

#22903
12" HDPE INV. IN = 20.69 (29902)
12" HDPE INV. OUT = 20.64 (15531)

#29904
TOP = 27.92
12" RCP INV. = 20.10 (15476)
15" RCP INV. OUT = 19.94 (15537)

#EX. 14927
TOP = 26.54
12" HDPE INV. IN = 21.83 (ROOF DRAIN)
12" HDPE INV. IN = 21.81 (ROOF DRAIN)
15" RCP INV. OUT = 21.50 (15664)

D12S CONTROL POINTS

Point #	Northing	Easting	Elevation	Description
1900	7000331.2346	11896177.7398	27.87	PK NAIL
1901	6999949.3759	11896034.8111	32.69	TRV
1902	6999534.2721	11896027.3892	35.92	TRV

PROJECT CONTROL POINTS

Point #	Northing	Easting	Elevation	Description
2223	7000187.0355	11896074.1141	26.72	PK NAIL
2855	7000408.8949	11896026.2349	28.27	PK NAIL
12000	7000448.4622	11896086.7766	28.44	PK NAIL

NOTE:

1. UNDERGROUND UTILITIES WERE DESIGNATED BY MID-ATLANTIC UTILITY LOCATING ON 10/28/19 & LOCATED BY ARLINGTON COUNTY SURVEYORS ON 11/6/19.
2. WATER LINE & SANITARY SEWER PIPE SIZES ARE PER ARLINGTON COUNTY RECORDS.
3. THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED FROM 09/2019 TO 11/2019; AND THAT THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

CONTROL DATA

1. CONTROL POINTS DATA TAKEN FROM THE CRYSTAL DRIVE PROJECT IN D12S.
2. HORIZONTAL DATUM: VIRGINIA COORDINATE SYSTEM 1983 - NORTH ZONE.
3. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988.
4. BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM EXISTING LAND RECORDS AND DOES NOT REPRESENT A FIELD RUN BOUNDARY SURVEY.

REVISED ON 11/08/2016

ARLINGTON
VIRGINIA

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

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER Kamal Taktak	3/29/21 3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Isaza, PROJECT MANAGER	3/2/21

REVISIONS DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

EXISTING CONDITIONS
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

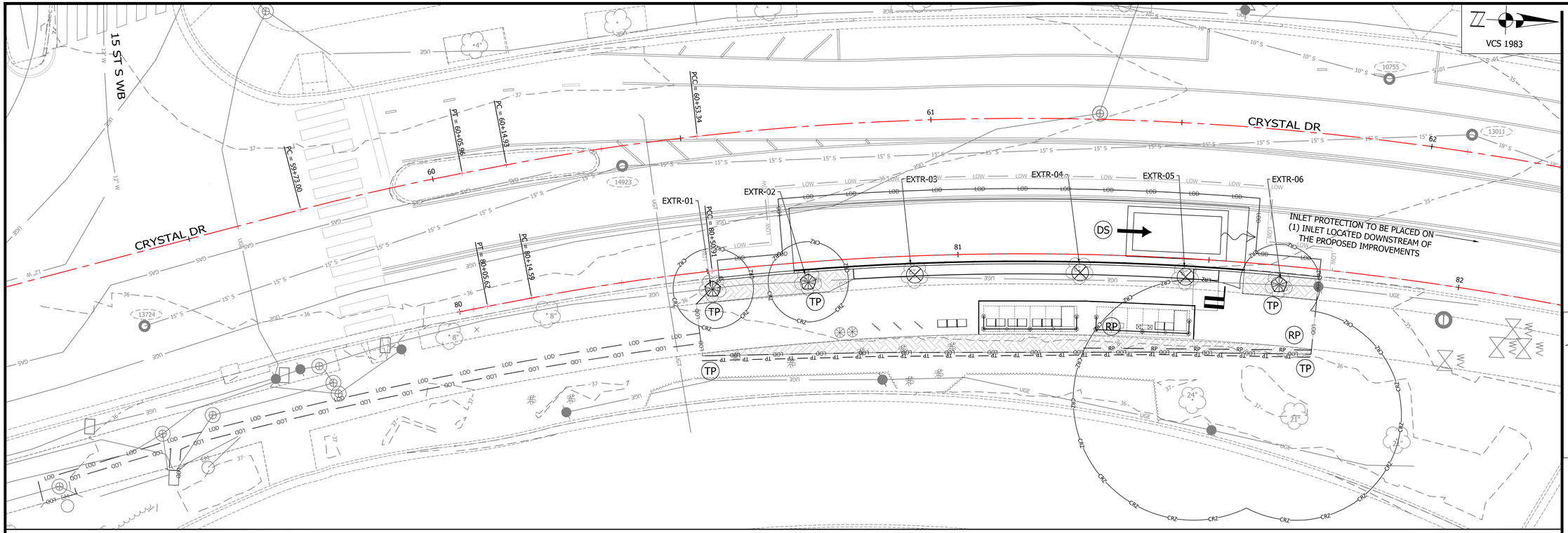
DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-214-EXCONDITIONS.DWG
PATH:Q:\DATA\MA13\CAD\ACTIVE

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
10' 0 10'
HORIZONTAL: 1" = 10'

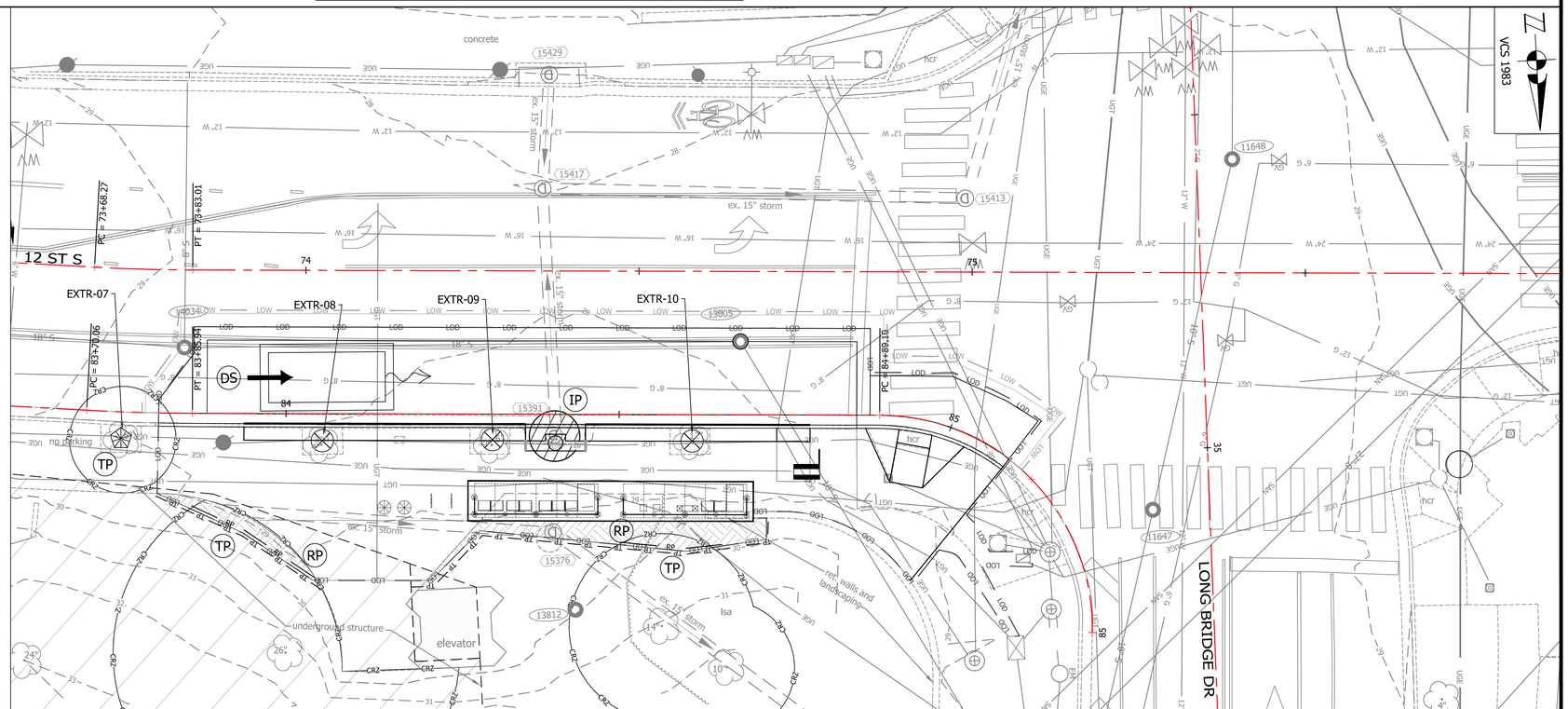
SHEET 10A OF 35



CRYSTAL DR NB & 15TH ST S INTERSECTION

EROSION AND SEDIMENT CONTROL LEGEND

3.07	STORM DRAIN INLET PROTECTION	IP	
3.26	DEWATERING STRUCTURE	DS	
3.38	TREE PROTECTION	TP	TP — TP
	CRITICAL ROOT ZONE		CRZ
	ROOT PRUNING	RP	RP
	TREE TO BE REMOVED		
	EX. TREE NUMBER (SEE SHEET 24 FOR TREE INVENTORY)		EXTR-01
	LIMITS OF DISTURBANCE		LOD
	LIMITS OF WORK		LOW



12TH ST S WB & LONG BRIDGE DR INTERSECTION

THIS SHEET IS FOR EROSION AND SEDIMENT CONTROL USE ONLY FOR ALL DETAILS AND SPECIFICATIONS, SEE THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK

REVISED ON 11/08/2016

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VIRGINIA

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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
Kamal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Haza	3/2/21
PROJECT MANAGER	

REVISIONS DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

E&S CONTROL PLAN
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
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PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
10' 0 10'
HORIZONTAL: 1" = 10'

SHEET 11 OF 35

EROSION AND SEDIMENT CONTROL LEGEND

3.07	STORM DRAIN INLET PROTECTION	IP	
3.26	DEWATERING STRUCTURE	DS	
3.38	TREE PROTECTION	TP	TP — TP
	CRITICAL ROOT ZONE		CRZ
	ROOT PRUNING	RP	RP
	TREE TO BE REMOVED		
	EX. TREE NUMBER (SEE SHEET 24 FOR TREE INVENTORY)		EXTR-01
	LIMITS OF DISTURBANCE		LOD
	LIMITS OF WORK		LOW

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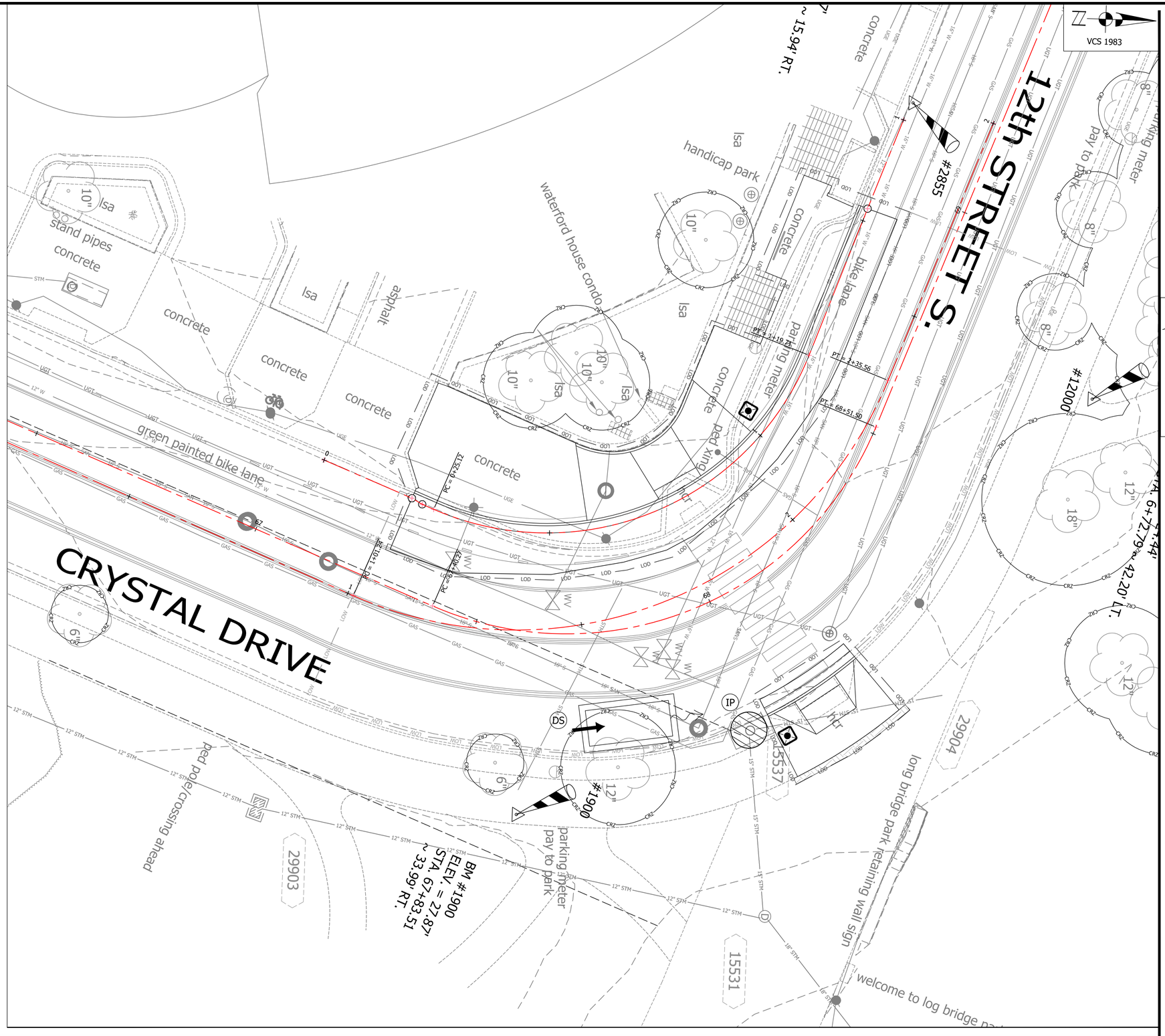
EROSION & SEDIMENT CONTROL HANDBOOK

REVISED ON 11/08/2016



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REVISIONS	DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

E&S CONTROL PLAN
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
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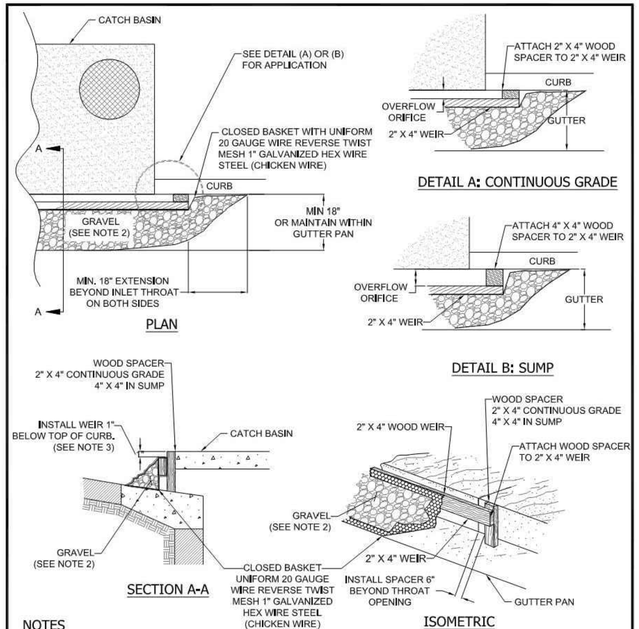
PATH:Q:\DATA\MA13\CAD\ACTIVE

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
10' 0 10'
HORIZONTAL: 1" = 10'

CRYSTAL DR & 12TH STREET S TRANSITION

SHEET 11A OF 35



NOTES

1. DIMENSIONAL LUMBER SIZES SHOW.
2. GRAVEL SHALL BE VDOT COARSE AGGREGATE #3, # 357 OR #5.
3. WEIR HEIGHT MAY BE ADJUSTED BY PROJECT OFFICER OR INSPECTOR IN FLOOD PRONE AREAS.
4. PAINT 2"X4" WEIR, CLOSED BASKET, AND GUTTER WITH HIGH VISIBILITY INCANDESCENT ORANGE PAINT.
5. REMOVE SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE THE PROTECTION.

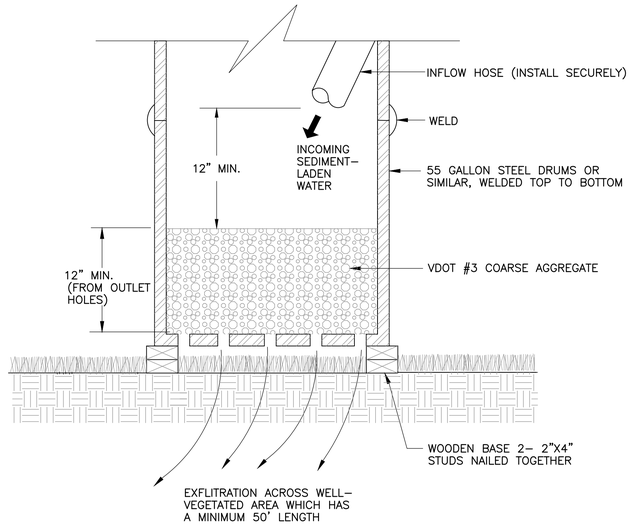
ES1 11 **CURB INLET PROTECTION**

REVISION & DATE

ARLINGTON VIRGINIA — **ARLINGTON COUNTY, VIRGINIA**
DEPARTMENT OF ENVIRONMENTAL SERVICES

DRAWING NO. **3.07-7 (ACG)**

FILTER BOX

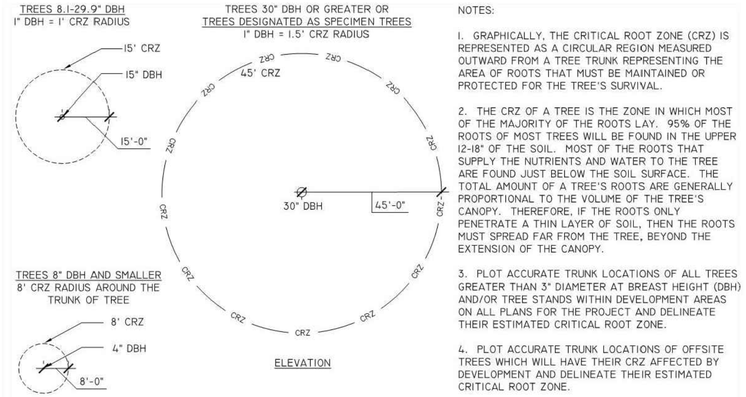


ELEVATION VIEW

ES2 11 *DEWATERING DEVICE*

SOURCE: VA. DSWC

PLATE: 3.26-2



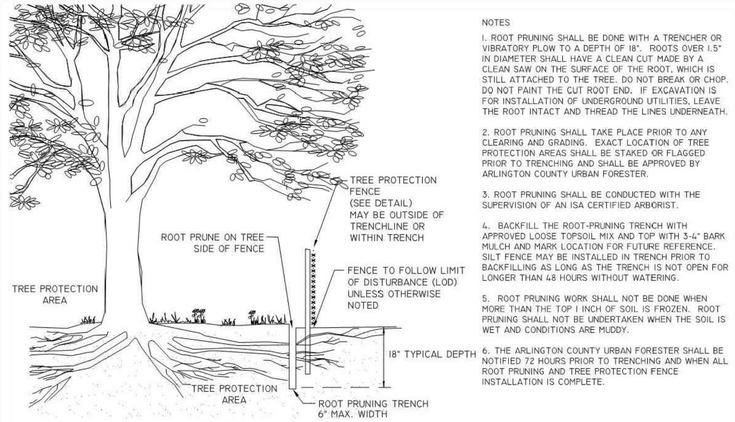
NOTES:

1. GRAPHICALLY, THE CRITICAL ROOT ZONE (CRZ) IS REPRESENTED AS A CIRCULAR REGION MEASURED OUTWARD FROM A TREE TRUNK REPRESENTING THE AREA OF ROOTS THAT MUST BE MAINTAINED OR PROTECTED FOR THE TREE'S SURVIVAL.
2. THE CRZ OF A TREE IS THE ZONE IN WHICH MOST OF THE MAJORITY OF THE ROOTS LAY. 95% OF THE ROOTS OF MOST TREES WILL BE FOUND IN THE UPPER 12-18" OF THE SOIL. MOST OF THE ROOTS THAT SUPPLY THE NUTRIENTS AND WATER TO THE TREE ARE FOUND JUST BELOW THE SOIL SURFACE. THE TOTAL AMOUNT OF A TREE'S ROOTS ARE GENERALLY PROPORTIONAL TO THE VOLUME OF THE TREE'S CANOPY. THEREFORE, IF THE ROOTS ONLY PENETRATE A THIN LAYER OF SOIL, THEN THE ROOTS MUST SPREAD FAR FROM THE TREE, BEYOND THE EXTENSION OF THE CANOPY.
3. PLOT ACCURATE TRUNK LOCATIONS OF ALL TREES GREATER THAN 3" DIAMETER AT BREAST HEIGHT (DBH) AND/OR TREE STANDS WITHIN DEVELOPMENT AREAS ON ALL PLANS FOR THE PROJECT AND DELINEATE THEIR ESTIMATED CRITICAL ROOT ZONE.
4. PLOT ACCURATE TRUNK LOCATIONS OF OFFSITE TREES WHICH WILL HAVE THEIR CRZ AFFECTED BY DEVELOPMENT AND DELINEATE THEIR ESTIMATED CRITICAL ROOT ZONE.

ES3 11 TREE PROTECTION DETAIL FOR DETERMINING CRITICAL ROOT ZONE — N.T.S.

311300.3 (2016) (02231.3)

ARLINGTON VIRGINIA DPR



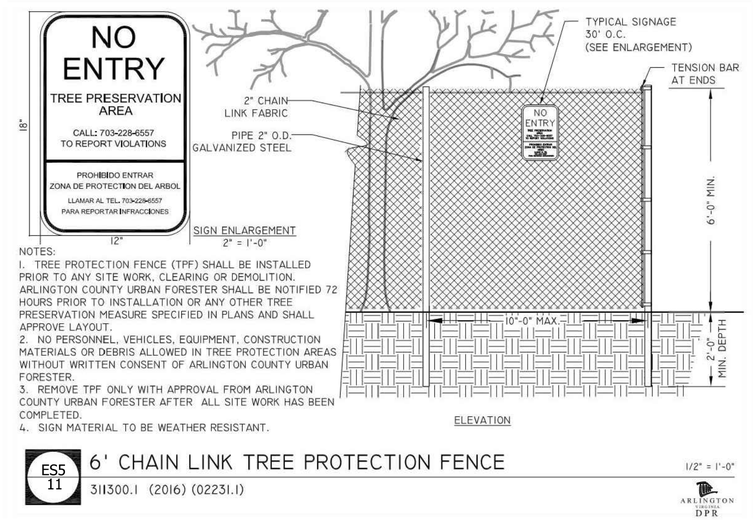
NOTES

1. ROOT PRUNING SHALL BE DONE WITH A TRENCHER OR VIBRATORY PLOW TO A DEPTH OF 18". 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 WORK 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.

ES4 11 ROOT PRUNING — N.T.S.

311300.5 (2016) (02231.5)

ARLINGTON VIRGINIA DPR



NOTES:

1. TREE PROTECTION FENCE (TPF) SHALL BE INSTALLED PRIOR TO ANY SITE WORK, CLEARING OR DEMOLITION. ARLINGTON COUNTY URBAN FORESTER SHALL BE NOTIFIED 72 HOURS PRIOR TO INSTALLATION OR ANY OTHER TREE PRESERVATION MEASURE SPECIFIED IN PLANS AND SHALL APPROVE LAYOUT.
2. NO PERSONNEL, VEHICLES, EQUIPMENT, CONSTRUCTION MATERIALS OR DEBRIS ALLOWED IN TREE PROTECTION AREAS WITHOUT WRITTEN CONSENT OF ARLINGTON COUNTY URBAN FORESTER.
3. REMOVE TPF ONLY WITH APPROVAL FROM ARLINGTON COUNTY URBAN FORESTER AFTER ALL SITE WORK HAS BEEN COMPLETED.
4. SIGN MATERIAL TO BE WEATHER RESISTANT.

ES5 11 6' CHAIN LINK TREE PROTECTION FENCE — 1/2" = 1'-0"

311300.1 (2016) (02231.1)

ARLINGTON VIRGINIA DPR

CBPO / BMP NARRATIVE:

THIS PROJECT IS A PUBLIC ROAD PROJECT AND IS THEREFORE EXEMPT FROM THE REQUIREMENTS OF THE CHESAPEAKE BAY PRESERVATION ORDINANCE UNDER 61-15 OF THE ARLINGTON COUNTY CODE.

SWM / ADEQUATE OUTFALL NARRATIVE:

THE SUBJECT SITE IS LOCATED IN ZONE X ON FEMA FIRM # 51013C0081C AND IS NOT LOCATED IN THE RPA. THE PROJECT SITE (CRYSTAL DRIVE AND 12TH STREET SOUTH) HAS NO HISTORY OF RECORDED FLOODING AND/OR PONDING ON THE STREETS DURING HEAVY RAIN EVENTS.

THE REHABILITATION SITE HAS 2 (TWO) OUTFALL AREAS. STORM COMPUTATIONS HAS BEEN PROVIDED TO DEMONSTRATE THE ADEQUATE CAPACITY OF THE EXISTING STORM SYSTEMS. THE RESULTS SHOWED EXISTING STORM DRAINAGE SYSTEMS AND PROPOSED INLETS RELOCATION ARE ADEQUATE. SEE SHEETS XX - XX.

STORM WATER RUNOFF CONSIDERATIONS:

EXISTING STORMWATER SYSTEM WILL BE USED TO DRAIN OUT THE STORMWATER RUNOFF DURING CONSTRUCTION. RUNOFF SHALL BE TREATED WITH INLET PROTECTION PRIOR TO ENTERING MAJOR STORM SEWER SYSTEMS. THERE IS NO ANTICIPATED CHANGE IN STORM WATER RUNOFF AFTER COMPLETION OF THE PROJECT.

STORM DRAIN INLET PROTECTION:

INLET PROTECTION WILL BE INSTALLED AS SHOWN. ALL STORM SEWER INLETS SHALL BE PROTECTED DURING CONSTRUCTION. SEDIMENT-LADEN WATER SHALL BE FILTERED BEFORE ENTERING THE STORM SEWER INLETS.

STORM DRAIN INLET PROTECTION: 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.

DEWATERING STRUCTURE: SEDIMENT LADEN OR TURBID WATER SHALL BE FILTERED, SETTLED OR SIMILARLY TREATED PRIOR TO DISCHARGE.

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) NOTE:

ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY ARLINGTON COUNTY'S MS4 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(20)); UNCONTAMINATED PUMPED GROUND WATER; DISCHARGES FROM POTABLE WATER SOURCES; FOUNDATION DRAINS; AIR CONDITIONING CONDENSATION; IRRIGATION WATER; SPRINGS; WATER FROM CRAWLSPACE PUMPS; FOOTING DRAINS; LAWN WATERING; INDIVIDUAL RESIDENTIAL CAR WASHING; FLOWS FROM RIPARIAN HABITATS AND WETLANDS; DECHLORINATED SWIMMING POOL DISCHARGES; DISCHARGES OR FLOWS FROM FIRE FIGHTING; 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 MS4 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.

TREE PROTECTION:

I. CONTRACTOR TO CONTACT THE ARLINGTON FORESTER TO SCHEDULE A PRE-CONSTRUCTION INSPECTION OF TREE PROTECTION MEASURES BEFORE ANY WORK NEAR THE CRITICAL ROOT ZONES OF TREES. TO SCHEDULE THE PRE-CONSTRUCTION MEETING CALL 703-228-1863.

II. CONTRACTOR TO PROTECT TREES PER THE PLAN ACCORDING TO THE ARLINGTON COUNTY DPR DESIGN STANDARD DETAIL 02231.1.

III. CONTRACTOR TO ROOT PRUNE TREES PER THE PLAN ACCORDING TO THE ARLINGTON COUNTY DPR DESIGN STANDARD DETAIL 02231.5, WHERE CALLED OUT ON THE PLAN.

IV. CONTRACTOR TO CALL THE URBAN FORESTER AT 703-228-1863, 72 HOURS BEFORE PLANTING, TO SCHEDULE INSPECTION OF THE TREES TO BE PLANTED. WARRANTY FOR 1 YEAR AFTER PLANTING SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE URBAN FORESTER AND DPR IS RESPONSIBLE FOR INSPECTION.

V. CONTRACTOR TO PREPARE TREE PLANTING STRIPS FOR THE REPLACEMENT TREES ACCORDING TO ARLINGTON COUNTY DPR DESIGN STANDARD DETAIL 02930.4A AND 02930.4B.

VI. CONTRACTOR TO PREPARE STREET TREE PLANTING PITS ACCORDING TO THE ARLINGTON COUNTY DPR DESIGN STANDARD DETAIL 02930.3A, 02930.3B, AND 02930.11C.

VII. CONTRACTOR TO PLANT THE TREES ACCORDING TO ARLINGTON COUNTY DPR DESIGN STANDARD DETAIL 02930.1 (ON FLAT LAND) OR 02930.2 (ON SLOPES).

THIS SHEET IS FOR EROSION AND SEDIMENT CONTROL USE ONLY FOR ALL DETAILS AND SPECIFICATIONS, SEE THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK

REVISED ON 11/08/2016

ARLINGTON VIRGINIA

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ENGINEERING BUREAU
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ARLINGTON, VA 22201
PHONE: 703.228.3629
FAX: 703.228.3606

SEAL

COMMONWEALTH OF VIRGINIA — TREVOR M. LANTZY — Lic. No. 0402050308 — 8/4/2021 — PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
Kamal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Iraza	3/2/21
PROJECT MANAGER	

REVISIONS	DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

E&S CONTROL DETAILS
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-224-E_AND_S_PLAN.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE: N/A

SHEET 12 OF 35

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION

TWO STATIONS ARE PROPOSED TO BE CONSTRUCTED FOR THE SEGMENT F OF THE CRYSTAL CITY POTOMAC YARD TRANSITWAY (TRANSITWAY). PROPOSED IMPROVEMENTS ARE ALSO PROPOSED AT THE TRANSITION FROM CRYSTAL DRIVE TO 12TH STREET S.

THE TRANSITWAY STATION AT CRYSTAL DRIVE NORTH BOUND AND 15TH STREET SOUTH INTERSECTION (STA 61+18) CONSIST OF CURBSIDE 9.5" HIGH PLATFORM AND TWO CUSTOM BUS SHELTERS SIMILAR TO THE BUS SHELTERS INSTALLED AT CRYSTAL DRIVE NORTH BOUND AND 18TH STREET SOUTH INTERSECTION.

THE TRANSITWAY STATION AT 12TH STREET SOUTH NORTH BOUND AND LONG BRIDGE DRIVE INTERSECTION (STA 74+54) CONSIST OF CURBSIDE 9.5" HIGH PLATFORM AND ONE BUS SHELTER PREFABRICATED AND PROVIDED BY BRASCO.

THE CRYSTAL DRIVE TO 12TH STREET S TRANSITION IMPROVEMENTS WILL INCLUDE THE INSTALLATION OF TWO CURB RAMPS, CURB AND GUTTER, SIDEWALK AND ASPHALT.

THE TRANSITWAY STATION AT CRYSTAL DRIVE NORTH BOUND AND 15TH STREET SOUTH INTERSECTION (STA 61+18) INCLUDES:

- ROAD ASPHALT DEMOLITION AND REPAVING WITH 10" REINFORCED CONCRETE BUS PAD;
- CURB & GUTTER DEMOLITION AND CONSTRUCTION OF NEW MODIFIED CURB & GUTTER WITH 9.5" CURB HIGH AND TWO TRANSITIONS FROM 6" TO 9.5";
- SIDEWALK BRICK PAVEMENT DEMOLITION AND CONSTRUCTION OF NEW ELEVATED CONCRETE BUS PLATFORM, FOUNDATION FOR BUS SHELTERS AND TWO RAMPS WITH BRICK PAVEMENT;
- TREE/LANDSCAPING STRIP AND TREE REMOVAL ASSOCIATED WITH CONCRETE BUS PLATFORM CONSTRUCTION;
- EXISTING STREET LANDSCAPING SHALL BE RESTORED AND EXISTING TREES SHALL BE PROTECTED.

THE TRANSITWAY STATION AT 12TH STREET SOUTH NORTH BOUND AND LONG BRIDGE DRIVE INTERSECTION (STA 74+54) INCLUDES:

- ROAD ASPHALT DEMOLITION AND REPAVING WITH 10" REINFORCED CONCRETE BUS PAD;
- CURB & GUTTER DEMOLITION AND CONSTRUCTION OF NEW MODIFIED CURB & GUTTER WITH 9.5" CURB HIGH AND TWO TRANSITIONS FROM 6" TO 9.5";
- SIDEWALK BRICK PAVEMENT DEMOLITION AND CONSTRUCTION OF NEW ELEVATED CONCRETE BUS PLATFORM, FOUNDATION FOR BUS SHELTERS AND TWO RAMPS WITH BRICK PAVEMENT;
- TREE REMOVAL ASSOCIATED WITH CONCRETE BUS PLATFORM CONSTRUCTION;
- EXISTING STREET LANDSCAPING SHALL BE RESTORED;
- CATCH BASIN SHALL BE REPLACED WITH MODIFIED CATCH BASIN TO ACCOMMODATE ELEVATED PLATFORM 9.5" HIGH.

THE CRYSTAL DRIVE TO 12TH STREET SOUTH TRANSITION (STA 67+00 TO STA 69+00) INCLUDES:

- ROAD ASPHALT DEMOLITION AND REPAVING;
- CURB & GUTTER DEMOLITION AND CONSTRUCTION OF NEW CURB & GUTTER;
- SIDEWALK DEMOLITION AND CONSTRUCTION OF NEW SIDEWALK WITH BRICK BAND;
- RAMP DEMOLITION AND CONSTRUCTION OF TWO NEW RAMPS;
- EXISTING STREET LANDSCAPING AND/OR GRASS AREAS SHALL BE RESTORED;

DISTURBED AREA, PRE DEVELOPED AND POST DEVELOPED IMPERVIOUS CONDITIONS PROVIDED IN THE TABLE - SEE THIS SHEET.

THIS PROJECT DOES NOT IMPACT VDOT RIGHT-OF-WAY.

EXISTING SITE CONDITIONS

THE PROJECT SITES ARE LOCATED IN BUSINESS AREAS AND CONSIST ENTIRELY OF IMPERVIOUS AREA (ASPHALT ROADWAY AND CONCRETE/BRICK PAVER SIDEWALK). SUFFICIENT STORM DRAINAGE SYSTEM IS IN PLACE AND THERE IS NO KNOWN RECORD OF FLOODING IN THE AREA.

WATERSHED

THE PROJECT LIMITS ARE LOCATED WITHIN THE ROACHES RUN WATERSHED.

ADJACENT PROPERTIES

COMMERCIAL PROPERTIES ARE LOCATED BEHIND PROPOSED TRANSITWAY STATIONS, AND THE PROPOSED TRANSITION IMPROVEMENTS.

OFF-SITE AREAS

THE EXTENT OF OFFSITE CONSTRUCTION IS LIMITED TO CONNECTING TO EXISTING STREETS ADJACENT TO THIS PARCELS, AND CONNECTING PROPOSED UTILITIES TO EXISTING UTILITIES.

CRITICAL AREAS

AS THE PROJECT AREA IS WITHIN THE EXISTING ROADWAY, THERE ARE NO EXISTING EROSION PROBLEMS IDENTIFIED.

SOILS

COMPLEX: URBAN LAND-UDORTHENTS COMPLEX
SLOPE: 2 TO 15 PERCENT
URBAN: 85-100
SOIL HYDRAULIC GROUP: D

THE SOILS IN CONSTRUCTION AREA ARE DISTURBED BY URBANIZATION DEVELOPMENT WITH ROAD/SIDEWALK PAVEMENT OVER SAND/GRAVEL BASE. SOIL HYDRAULIC GROUP FOR THE PROJECT AREA IS D.

PERMANENT STABILIZATION

ALL OF THE AREA DISTURBED WITH THIS PLAN WILL BE RESTORED TO A SIMILAR EXISTING CONDITION. ALL AREA NOT STABILIZED WITH PAVEMENT WILL BE STABILIZED WITH GRASS, MULCH, OR SOD.

VEGETATIVE PRACTICES

THE EROSION AND SEDIMENT CONTROL INSPECTOR SHALL HAVE THE AUTHORITY TO ADD OR DELETE EROSION AND SEDIMENT CONTROLS AS NEEDED IN THE FIELD OR AS SITE CONDITIONS WARRANT. IN ADDITION, NO SEDIMENT TRAPS OR BASINS MAY BE REMOVED WITHOUT PRIOR APPROVAL OF THE INSPECTOR.

LANDSCAPE / TREE PRESERVATION NOTES

PRIOR TO ANY LAND DISTURBING ACTIVITY THE CONTRACTOR SHALL CONTACT THE ARLINGTON COUNTY ARBORIST TO SCHEDULE AN INSPECTION.

STORMWATER RUNOFF CONSIDERATIONS:

EXISTING STORMWATER SYSTEM WILL BE USED TO DRAIN THE STORMWATER RUNOFF. THE IMPERVIOUS AREA WITHIN THE PROJECT LIMIT IS INCREASED BY 420 SF (0.0096 AC), THEREFORE THERE IS NO SIGNIFICANT CHANGE IN STORM WATER QUANTITY RESULTING FROM THIS PROJECT.

EROSION AND SEDIMENT CONTROL MEASURES

THE EROSION AND SEDIMENT CONTROL MEASURES FOR THIS PROJECT AREA INCLUDES INLET PROTECTION. INLET PROTECTION MAY BE REQUIRED OUTSIDE THE PROJECT LIMITS WHEN WATER FROM DISTURBED AREA WILL FLOW OFFSITE.

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

RUNOFF REDUCTION SPREADSHEET INFORMATION:

THE RUNOFF REDUCTION SPREADSHEET INFORMATION 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.

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 TRACKED AS FOLLOWS CONSISTENT WITH 9VAC25-870-69.A.4, 9VAC25-870-76, AND 9VAC25-870-92:

- POLLUTANT LOAD CHANGES WILL BE COMPUTED AS DESCRIBED IN SECTION 3.A OF THE ACTION PLAN.
- RETROFIT OPPORTUNITIES WILL BE EVALUATED FOR EACH PROJECT, USING THE SCREENING AND SELECTION CRITERIA APPLIED AND DESCRIBED IN THE ADOPTED STORMWATER MASTER PLAN.
- RETROFIT PROJECTS THAT MEET THE SCREENING CRITERIA AND ARE DETERMINED BY ARLINGTON TO BE FEASIBLE AND COST-EFFECTIVE WILL BE IMPLEMENTED WITH SPECIFIC LINEAR DEVELOPMENT PROJECTS. POLLUTANT LOAD REDUCTIONS FROM RETROFIT PROJECTS WILL BE COMPUTED AS DESCRIBED IN SECTION 5 OF THE ACTION PLAN.
- IN CASES WHERE RETROFIT PROJECTS ARE NOT FEASIBLE AND COST-EFFECTIVE FOR A PARTICULAR LINEAR PROJECT, ANY POLLUTANT OF CONCERN (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.

IN THE ABOVE MANNER ARLINGTON, AS THE MS4 OPERATOR AND THE CONSTRUCTION SITE OPERATOR FOR ITS LINEAR DEVELOPMENT PROJECTS, IMPLEMENTS LINEAR PROJECTS AND RETROFIT PROJECTS IN A MANNER THAT ACHIEVES 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 REGULATIONS AND ORDINANCE.

REVISED ON 11/04/2016

GENERAL EROSION & SEDIMENT CONTROL NOTES

1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE LATEST EDITIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) AND THE ARLINGTON COUNTY EROSION AND SEDIMENT CONTROL ORDINANCE.
2. THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-SCONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS A FIRST STEP IN CLEARING.
4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLANS SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
5. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING BUT NOT LIMITED TO OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
6. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
7. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
8. DURING DENATURING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

GENERAL LAND CONSERVATION NOTES

1. NO DISTURBED AREA WHICH IS NOT ACTIVELY BEING WORKED SHALL REMAIN DENUDED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OR HIS AGENT.
2. ALL E&S CONTROL MEASURES APPROVED WITH THE E&S CONTROL PLAN SHALL BE PLACED AS THE FIRST STEP IN GRADING.
3. ALL STORM AND SANITARY SEWER LINES NOT IN STREETS SHALL BE SEEDED AND MULCHED WITHIN 5 DAYS AFTER BACKFILL. NO MORE THAN 500' (150M) SHALL BE OPEN AT ANY TIME.
4. ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES SHALL BE COMPACTED, SEEDED AND MULCHED WITHIN 5 DAYS AFTER BACKFILL.
5. ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS SHALL BE SEEDED AND MULCHED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY AFTER. STRAW OR HAY MULCH IS REQUIRED. ALL SOIL STOCKPILES SHALL BE SEEDED AND MULCHED IMMEDIATELY AFTER GRADING.
6. DURING CONSTRUCTION, ALL STORM SEWER INLETS SHALL BE PROTECTED BY SEDIMENT TRAPS, MAINTAINED AND MODIFIED DURING CONSTRUCTION PROGRESS AS REQUIRED.
7. 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.
8. 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.

UTILITY INSTALLATION

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

1. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
2. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
3. 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.
4. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
5. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
6. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

TEMPORARY SEEDING:

SEE SHEET III-288 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) FOR ALLOWABLE PLANTING MATERIAL, SEEDING RATES, AND DATES. THE REQUIREMENTS OF THE "SOUTH" PLANTING REQUIREMENTS SHALL BE FOLLOWED. LIMING 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:

THE SUBJECT SITE IS LOCATED IN THE COASTAL PLAIN AREA OF VIRGINIA, SO 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:

SODDED AREAS SHALL BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLANS. SOIL TEST SHOULD 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 AND ENSURE GENETIC PURITY AND HIGH QUALITY. SOD SHALL NOT BE LAID IN EXCESSIVELY WET OR DRY WEATHER AND BE DELIVERED AND INSTALLED WITHIN 36 HOURS. SOD SHOULD NOT BE LAID ON FROZEN SOIL SURFACE AND SHALL BE INSTALLED PER PAGE III-339 OF VESCH.

DUST CONTROL:

DUST SHALL BE CONTROLLED USING A VARIETY OF METHODS TO INCLUDE VEGETATIVE COVER, MULCH, TILLAGE, IRRIGATION, SPRAY-ON ADHESIVES, STONE, BARRIERS, AND CALCIUM CHLORIDE. THE IMPLEMENTATION OF THE DUST CONTROL METHODS SHALL BE INSTALLED PER SECTION 3.39 OF VESCH.

MAINTENANCE PROGRAM:

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

1. 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 INSURE 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.
2. 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.
3. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PREVENT MUD AND/OR OTHER DEBRIS FROM BEING ENTERED ONTO EXISTING SWM/BMP FACILITIES OR DOWN STREAM WATER WAYS. SHOULD OFF SITE AREAS BECOME POLLUTED BY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING THE EFFECTED AREAS TO THE SATISFACTION OF THE INSPECTOR.
4. 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.
5. 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.

THIS SHEET IS FOR EROSION AND SEDIMENT CONTROL USE ONLY FOR ALL DETAILS AND SPECIFICATIONS, SEE THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK

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

SEED

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

FERTILIZER & LIME

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

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

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

SEED[1]

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

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

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

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

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

FERTILIZER & LIME

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

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

Pre-Storm Erosion and Sediment Control Checklist

Per Erosion and Sediment Control General 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 ESC plan. ESC 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 worn. Silt fence must be trenched into the ground per state specifications (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 should be removed. Accumulated sediment must be removed when the level reaches one-half the height of the fencing.
- ☐ Hay bales or a stone berm should 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.
- ☐ Seeded 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 should be placed along the perimeter of the stock pile (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.

MA13 SEGMENT (PRE AND POST DEVELOPMENT LAND COVER CALCULATIONS

TOTAL PROJECT AREA

LIMITS OF WORK (LOW)				0.4798	20900	AC/SF
LIMITS OF DISTURBANCE (LOD)				0.3076	13400	AC/SF
	PRE DEV [AC/SF]		**POST DEV** [AC/SF]		**NET CHANGE** [AC/SF]	
(LOD) IMPERVIOUS AREA	0.2801	12200	0.2897	12620	0.0096	420
(LOD) PERVIOUS AREA	0.0275	1200	0.0179	780	-0.0096	-420

ARLINGTON
VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050308
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
CONSTRUCTION MANAGEMENT SUPERVISOR	3.24.21
WATER, SEWER, STREETS BUREAU CHIEF	03.04.2021
TRANSPORTATION DIRECTOR	03/17/21
PROJECT MANAGER	3/2/21

REVISIONS DATE

PROJECT NAME AND LOCATION
TRANSITWAY EXTENSION TO PENTAGON CITY

E&S CONTROL NOTES
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-224-E_AND_S_PLAN.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY: NSHARP

SCALE: N/A

SHEET 13 OF 35

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

○ 2011 BMP Standards and Specifications ◉ 2013 Draft BMP Standards and Spec

Project Name: MA13 - Crystal City Transitway Extension
Date: 11/7/2019
Linear Development Project? Yes

CLEAR ALL

data input cells
constant values
calculation cells
final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area *(acres)* → 0.3076

Maximum reduction required:	20%
The site's net increase in impervious cover (acres) is:	0.0096
Post-Development TP Load Reduction for Site (lb/yr):	0.1398

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
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed				0.0275	0.0275
Impervious Cover (acres)				0.2801	0.2801
					0.3076

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land					0.0000
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed				0.0179	0.0179
Impervious Cover (acres)				0.2897	0.2897
Area Check	OK.	OK.	OK.	OK.	0.3076

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
Pj (unitless correction factor)	0.90

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	Listed	Adjusted[1]
Forest/Open Space Cover (acres)	0.0000	0.0000
Weighted Rv(forest)	0.0000	0.0000
% Forest	0%	0%
Managed Turf Cover (acres)	0.0275	0.0179
Weighted Rv(turf)	0.2500	0.2500
% Managed Turf	9%	6%
Impervious Cover (acres)	0.2801	0.2801
Rv(impervious)	0.9500	0.9500
% Impervious	91%	94%
Total Site Area (acres)	**0.3076**	**0.2980**
Site Rv	**0.8874**	**0.9080**

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary-Post (Final)

Post ReDev. & New Impervious	
Forest/Open Space Cover (acres)	0.0000
Weighted Rv(forest)	0.0000
% Forest	0%
Managed Turf Cover (acres)	0.0179
Weighted Rv (turf)	0.2500
% Managed Turf	6%
Impervious Cover (acres)	0.2897
Rv(impervious)	0.9500
% Impervious	94%
Final Site Area (acres)	**0.3076**
Final Post Dev Site Rv	**0.9093**

Land Cover Summary-Post

Post-ReDevelopment	
Forest/Open Space Cover (acres)	0.0000
Weighted Rv(forest)	0.0000
% Forest	0%
Managed Turf Cover (acres)	0.0179
Weighted Rv (turf)	0.2500
% Managed Turf	6%
ReDev. Impervious Cover (acres)	0.2801
Rv(impervious)	0.9500
% Impervious	94%
Total ReDev. Site Area (acres)	**0.2980**
ReDev Site Rv	**0.9080**

Land Cover Summary-Post

Post-Development New Impervious	
New Impervious Cover (acres)	0.0096
Rv(impervious)	0.9500

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.0227	0.0225	**Final Post-Development Treatment Volume (acre-ft)**	0.0233	**Post-ReDevelopment Treatment Volume (acre-ft)**	0.0225	**Post-Development Treatment Volume (acre-ft)**	0.0008
Pre-ReDevelopment Treatment Volume (cubic feet)	990.8811	982.1691	**Final Post-Development Treatment Volume (cubic feet)**	1,015.2747	**Post-ReDevelopment Treatment Volume (cubic feet)**	982.1691	**Post-Development Treatment Volume (cubic feet)**	33.1056
Pre-ReDevelopment TP Load (lb/yr)	**0.6226**	**0.6171**	**Final Post-Development TP Load (lb/yr)**	**0.6379**	**Post-ReDevelopment Load (TP) (lb/yr)***	**0.6171**	**Post-Development TP Load (lb/yr)**	**0.0208**
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	2.0200	2.0700	Final Post-Development TP Load per acre (lb/acre/yr)	2.0700	Post-ReDevelopment TP Load per acre (lb/acre/yr)	2.0700		
Baseline TP Load (lb/yr) (**0.41 lbs/acre/yr** applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)	*0.1222*				**Max. Reduction Required (Below Pre-ReDevelopment Load)**	**20%**		
					TP Load Reduction Required for Redeveloped Area (lb/yr)	**0.1234**	**TP Load Reduction Required for New Impervious Area (lb/yr)**	**0.0169**

[1] *Adjusted Land Cover Summary:*
Pre ReDevelopment land cover minus pervious 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 I shows load reduction requriement for new impervious cover (based on new development load limit, 0.41 lbs/acre/year).

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	**0.1403**
Linear Project TP Load Reduction Required (lb/yr):	**0.1398**

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	4.4538
Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	4.5634

REVISED ON 11/08/2016

08/01/2018
date

Qianqian Li, P.E.
ESC Program Administrator
Department of Environmental Sevices
2100 Clarendon Boulevard, Suite 813
Arlington, Virginia 22201

Re: Erosion and Sediment Control Permit Application for:
MA13 - Crystal City Transitway Extension
street address
Crystal Dr/18 St S & 12 St S/Long Bridge Dr
lot, block, section subdivision
permit number

Dear Mrs. Li:

I hereby certify that I accept the responsibilities of Responsible Land Disturber for the above referenced project. I understand that these responsibilities include:

1. Reviewing the erosion and sedimentation (E&S) plan for the project.
2. Walking the site prior to construction to identify critical areas.
3. Conducting a pre-construction briefing with earth moving and site contractors to present the E&S plan and highlight the presence of critical areas, the limits of clearing and the required E&S controls and tree protection measures to be installed. Call 703-228-0760 to schedule pre-construction meeting.
4. Regularily inspecting the site during construction to ensure that all E&S controls are functioning and are adequate to address erosion and sedimentation. Inspect the site 48 hours after a runoff-generating storm, and provide a copy of the inspection findings to the county.
5. Reporting to the owner the presence inadequate or non functioning E&S controls when they are observed.
6. Ensuring that temporary soil stabilization is applied within 7 days to areas denuded that will remain undisturbed for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.
7. Calling (703) 228-0760 at least 80 hours before demolishing any structure.

I may be reached at 703-228-0596 *telephone number* with questions about this plan or my execution of the duties of Responsible Land Disturber.

Sincerely,

signed
TREVOR LANTZY
name printed
PE, 0402050508
professional registration (type and number)

RESPONSIBLE LAND DISTURBER (RLD) NOTE

UPON AWARD OF COUNTY'S CONSTRUCTION CONTRACT, CONTRACTOR IS RESPONSIBLE FOR APPLYING AND TRANSFERRING THE OWNERSHIP OF RESPONSIBLE LAND DISTURBER PRIOR TO STARTING ANY LAND DISTURBANCE WITHIN THE PROJECT SITE. FOR THIS PERMIT APPLICATION, A SIGNED COPY OF THE RESPONSIBLE LAND DISTURBER WILL BE SUBMITTED SEPARATELY.

POLLUTION PREVENTION PLAN NOTES

ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY ARLINGTON COUNTY'S MS4 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(20)); 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 FIRE FIGHTING; 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 MS4 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.

STORMWATER POLLUTION PREVENTION PLAN
MA13 – Crystal City Transitway Extension

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
Arlington County Projects
(Roadway Improvement)

For Construction Activities At:

MA13 – Crystal City Transitway Extension
Crystal Dr/18 St S and 12th St S/Long Bridge Dr Intersections
Arlington, VA 22202

Crystal Dr
Latitude: 38.8607 N (decimal degrees)
Longitude: 77.0493 W (decimal degrees)
12th St S
Latitude: 38.8630 N (decimal degrees)
Longitude: 77.0509 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:

August 01, 2018

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 12/2016

STORMWATER POLLUTION PREVENTION PLAN
MA13 – Crystal City Transitway Extension

1.0 SWPPP Documents Located Onsite & Available for Review

SWPPP Document Type	Located Onsite & Available for Review?	
Registration Statement	☐ Yes	☐ NA
Notice of Coverage Letter	☐ Yes	☐ NA
Construction General Permit	☐ Yes	☐ NA
Pollution Prevention Plan	☒ Yes	☐ NA
Erosion & Sediment Control Plan	☐ Yes	☐ NA
Stormwater Management Plan	☐ Yes	☐ NA
LDA Permit	☐ Yes	☐ NA

Required documents must be kept at a centralized location on the project site (i.e. in a mail box or other container)

2.0 Authorized Non-Stormwater Discharges

Type of Authorized Non-Stormwater Discharges	Likely Present at Your Project Site?	
Uncontaminated excavation dewatering	☒ Yes	☐ No
Landscape irrigation	☐ Yes	☒ No
Others [describe]	☐ Yes	☐ 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.

4.0 Erosion & Sediment Controls

Select all that apply	Erosion & Sediment Control	Estimated Installation Date	Estimated Removal Date	Responsible Party (Name, Contact Phone Number)
☐	Construction Entrance (Std. & Spec. 3.02)			
☐	Silt Fence (Std. & Spec. 3.05)			
☐	Culvert Inlet Protection (Std. & Spec. 3.08)			
☐	Outlet Protection (Std. & Spec. 3.18)		NA	
☒	Temporary Seeding (Std. & Spec. 3.31)	As required	NA	
☒	Permanent Seeding (Std. & Spec. 3.32)		NA	
☐	Sodding (Std. & Spec. 3.33)		NA	
☐	Mulching (Std. & Spec. 3.35)		NA	
☐	Safety Fence (Std. & Spec 3.01)			
☒	Storm Drain Inlet Protection			

Arlington County SWPPP 12/2016

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

SEAL
COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
Ramal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Haza	3/2/21
PROJECT MANAGER	

REVISIONS DATE

PROJECT NAME AND LOCATION
TRANSITWAY EXTENSION TO PENTAGON CITY
SW POLLUTION PREVENTION PLAN
CRYSTAL DR & 12TH ST S
MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-224-E_AND_S_PLAN.DWG
PATH:\\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE: N/A

SHEET 14 OF 35

	(Std. & Spec 3.08 and/or Arlington County Std. & Spec from approved ESC plan)			
☒	Dewatering (Std. & Spec 3.26 and/or Arlington County Std. & Spec from approved ESC plan)			
☐	Turbidity Curtain (Std. & Spec 3.27 and/or Arlington County Std. & Spec from approved ESC plan)			
☒	Tree Protection (Arlington County Std. & Spec from approved ESC plan)			
☐	Stream Crossing / Cofferdams (Std. & Spec 3.25 or on plan)			
☐	Pump Around System (detail on approved plan)			
☐	Rip Rap (Std. & Spec. 3-19)			
☐	Other(s) [describe]			

Pre-Storm Erosion and Sediment Control Checklist

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, hay bales, stone berms) used to prevent sediment from leaving the site shall be checked for undermining, holes, or deterioration and repaired/replaced if needed.

☒ Sediment that has accumulated against perimeter controls shall be removed if the depth exceeds more than 1/2 of the silt fence height.

☒ Exposed soil or slopes shall be covered with straw, tarps, plastic sheeting, or erosion control matting. Covering material shall be properly secured/anchored.

☒ 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 should be placed along the perimeter of the stock pile (downhill side). Stockpiled materials should not obstruct flow along the curb line.

☒ Inlet protection controls shall be inspected to ensure they are installed per approved ESC plan, are functioning properly, and maintained as needed.

5.0 Potential Sources of Pollution & Pollution Prevention Practices

Pollutant-Generating Activity	Likely Present at your Project Site?	Pollutants: Sediment	Nutrients	Heavy Metals	pH (acids and bases)	Pesticides & Herbicides	Oil & Grease	Bacteria & Viruses	Trash, Debris, Solids	Other Toxic Chemicals	Pollution Prevention Practice	Responsible Party (Name, Contact Phone Number)
Clearing, grading, excavating, and un-stabilized areas	☒ Yes ☐ No	X	X						X		(1)	
Paving and saw cutting operations	☒ Yes ☐ No	X					X		X		(2)	
Concrete operations, washout, and cement waste	☒ Yes ☐ No			X	X				X		(3)	
Washing / cleaning	☒ Yes ☐ No	X	X	X	X		X		X	X	(4)	
Dewatering operations	☒ Yes ☐ No	X	X						X		(5)	
Material / chemical use and storage	☒ Yes ☐ No	X	X	X	X	X	X		X	X	(6)	
Equipment and vehicle maintenance	☒ Yes ☐ No				X		X		X	X	(7)	
Waste management / disposal	☐ Yes ☒ No								X	X	(8)	
Sanitary waste	☒ Yes ☐ No		X		X			X			(9)	
Nutrient management	☐ Yes ☒ No	X	X						X	X	(10)	

Pollution Prevention Practices:

(1) **Clearing, grading, excavating, and un-stabilized areas** – Maintain as much existing vegetation as practicable. Utilize erosion and sediment controls to prevent sediment 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. Plastic sheeting, tarps, 2" deep straw cover, and/or erosion matting can be used for temporary slope stabilization.

(2) **Paving and saw cutting operations** – Cover storm drain inlets during paving and saw cutting operations. Use pollution prevention materials such as drip pans and absorbent/oil dry for all paving machines to limit leaks and spills of paving materials and fluids. Slurry from saw cutting operations may not enter a storm drain; it must be captured and disposed of properly.

Temporary controls (i.e. tarp and block, sand berms, booms, and/or filter fabric) shall be used to cover storm drains during paving and saw cutting operations to prevent any discharges from entering the storm drain. These temporary controls SHALL BE REMOVED AT THE END OF EACH DAY. Inlet protection specified in the approved ESC plan shall be installed or reinstalled following the completion of paving or saw cutting work.

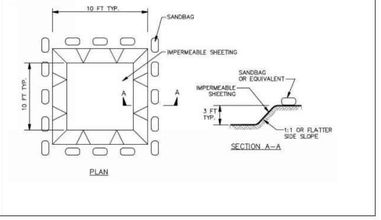
☒	Method of covering / protecting storm drains:
☒	Method for containment, collection, disposal of saw cut slurry:

(3) **Concrete operations, 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.

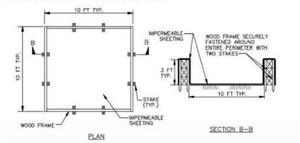
☒ Washouts must be sized appropriately for the needs of the project.
☒ Do not locate washouts near storm drains. Concrete wash water is not allowed to enter a storm drain.
☒ Concrete washout areas cannot be used for the purpose of dewatering.
☒ Set up and operate small mixers on top of plywood that is covered by tarps or heavy plastic drop cloths.
☒ Wash out mixers and truck chutes in designated contained washout areas
☒ No tracking from washout areas may occur.
☒ Place plastic sheeting, boards, or tarps under concrete truck chutes during pouring

The selected concrete wash out facility will be used:

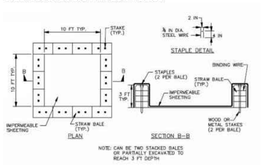
☒ Excavated Washout Structure



☐ Washout Structure with Wood Planks



☐ Washout Structure with Straw Bales



☐ Prefabricated Containment System
Type: _____

☐ Other:

(4) **Washing / cleaning** – Prevent the discharge of wash water to the storm drain system or surface waters.

☒ Wash water or liquid wastes may not enter a storm drain or surface waters.

☒ Provide a suitable containment system for cleaning equipment such as a drum, prefabricated system, lined container, or portable wash pad.

☒ The wash / containment area must be sized appropriately for the needs of the project.

☒ Locate wash / containment areas away from storm drains.

(5) **Dewatering operations** – Construction site dewatering may not be discharged without treatment. Sediment laden or turbid water shall be filtered, settled or similarly treated prior to discharge.

☒ Dewatering detail on approved ESC plan will be used.

☒ Dewatering option from Planning & Field Guide for Pollution Prevention (P2):
☒ Filter Box
☐ Straw Bale/Silt Fence Pit
☐ Portable Sediment Tank
☐ Filter Bag

☐ Pump from Settling Pit
☐ Manufactured System: _____

☐ Other: _____

(6) **Material / chemical use and storage** –Designate areas of the construction site for material delivery and storage. Locate these areas near construction entrances and away from waterways and storm drains. Enclose, cover or berm construction material storage areas if susceptible to stormwater.

☒ 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 should be placed along the perimeter of the stock pile (downhill side).

Stockpiled materials located on the edge of roadways should not obstruct flow along the curb line (gutter). Leave at least a one (1) foot space away from the curb to allow stormwater to flow along the curb line. Boards with cinder blocks and/or bricks may be used to create the flow through space.

☐	Method used to ensure flow through:

☐ Provide secondary containment for paint, pesticides, cleaners, solvents, and/or other chemicals and keep these items secured and covered when not in use

☐ Regularly inspect containers.

(7) **Equipment and vehicle maintenance –** Use a designated area, away from storm drains and surface waters, to refuel vehicle or equipment or perform maintenance.

☒ Regularly inspect vehicles and equipment for leaks. Clean up all spills and leaks upon discovery.

☒ Use containment measures when conducting fueling (e.g. place spill pad, board, plastic sheeting on ground)

☒ Regularly inspect fuel containers.

☒ Provide secondary containment and secure storage for fuel, oil, and/or lubricants

☒ Keep drip pans, sheeting, and/or absorbent pads under heavy equipment when not in use (i.e. overnight) to capture leaks.

(8) **Waste management / 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 waste containers have lids so they can be covered before periods of rain. Schedule waste collection to prevent the containers from overfilling.

☐ A sufficient number of waste containers must be kept on a site to handle the quantity of waste produced.

☐ Keep roll off containers covered and/or dumpster / trash lids closed.

☐ Check waste containers frequently for damage / leaks and clean using DRY methods when necessary. Never clean out a dumpster by power washing or hosing it out.

☐ Replace containers that are leaking, cracked, corroded, or otherwise deteriorating.

☐ Do not bury waste material. Dispose of excess dry concrete, grout and mortar in the trash.

(9) **Sanitary waste** – Prevent the discharge of sanitary waste by providing convenient and well-maintained portable sanitary facilities.

☒ Locate portable lavatories away from storm drains and surface waters.

☒ Keep portable lavatories level and provide secondary containment (i.e. trays)

☒ Regularly inspect facilities for leaks

☒ Schedule routine maintenance

(10) **Nutrient management** – Apply nutrients in accordance with manufacturer's recommendations. Do not apply during rainfall events or windy conditions. Provide secondary containment and keep fertilizer properly secured when not being used.

Additional information and details can be found in the Arlington County Planning & Field Guide for Pollution Prevention (P2).

6.0 Stormwater Management Controls

Select all that apply	Stormwater Management Control	Estimated Installation Date	Responsible Party
☐	Exempted – stormwater management retrofit facility or stream restoration project	NA	NA
☐	Linear development project per Arlington County Chesapeake Bay Total Maximum Daily Load (TMDL) Action Plan[1]	NA	NA
☐	Post-development Stormwater Management Controls provided by a Larger Common Plan of Development or Sale	NA	Common Plan Construction Activity Operator
☐	Rooftop Disconnection		Construction Activity Operator

[1] *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 tracked as follows consistent with 9VAC25-870-69.A.4, 9VAC25-870-76, and 9VAC25-870-92:*

- *Pollutant load changes will be computed as described in Section 3.A of the Action Plan.*
- *Retrofit opportunities will be evaluated for each project, using the screening and selection criteria applied and described in the adopted Stormwater Master Plan.*
- *Retrofit projects that meet the screening criteria and are determined by Arlington to be feasible and cost-effective will be implemented with specific linear development projects. Pollutant load reductions from retrofit projects will be computed as described in Section 5 of the Action Plan.*
- *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.*

In the above manner Arlington, as the MS4 operator and the construction site operator for its linear development projects, implements linear projects and retrofit projects in a manner that achieves 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.

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

SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050308
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
Ramal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Haza	3/2/21
PROJECT MANAGER	

REVISIONS DATE

PROJECT NAME AND LOCATION
TRANSITWAY EXTENSION TO PENTAGON CITY
SW POLLUTION PREVENTION PLAN
CRYSTAL DR & 12TH ST S
MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-224-E_AND_S_PLAN.DWG
PATH:\\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE: N/A

SHEET 15 OF 35

REVISED ON 11/08/2016

☐	Sheet flow to Vegetated Filter (1 or 2)		(See Cover Page of this SWPPP)
☐	Grass Channel		
☐	Rainwater Harvesting		
☐	Permeable Pavement (1 or 2)		
☐	Infiltration (1 or 2)		
☐	Bio-retention (1 or 2)		
☐	Others [describe]		

7.0 Spill Prevention & Response

Most spills can be cleaned up using a spill kit. Absorbent/oil dry, sealable containers, plastic bags, and shovels/brooms are suggested minimum spill response items that should be available at the project site.

1st Priority: Protect all people
2nd Priority: Protect equipment and property
3rd Priority: Protect the environment

1. Check for hazards (flammable material, noxious fumes, cause of spill) – if flammable liquid, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911. LARGE SPILLS ARE LIKELY TO PRESENT A HAZARD.
2. Ensure the spill area is safe to enter and that it does not pose an immediate threat to health or safety of any person.
3. Stop the spill source.
4. Call co-workers and supervisor for assistance and to make them aware of the spill and potential dangers.
5. If possible, stop spill from spreading and/or entering storm drains (use absorbent or other materials as necessary).
6. If spilled material has entered a storm drain; contact Arlington County Fire Department and project manager.
7. Clean up spilled material according to manufacturer specifications, for liquid spills use absorbent materials and do not flush area with water.
8. Properly dispose of cleanup materials and used absorbent material according to manufacturer specifications.

Emergency Contacts:

Local Contacts

Arlington County Fire & Police	703-558-2222
DES Water, Sewer, Streets 24-Hour Emergency	703-228-6555
Washington Gas Emergency	703-750-1400

Nights, Holidays & Weekends

VA Dept. of Emergency Management	804-674-2400
24 Hour Reporting Service	

Spill kit on site: ☐ Yes ☐ No

Location(s) of spill kit: _____

8.0 Self Inspection Report & Corrective Action Log (make additional copies as necessary)

Company/Organization:
Name of Inspector:
Telephone Number:
Qualifications:

Inspection Schedule

Discharges to impaired waters, surface waters within a TMDL watershed, or exceptional waters:

☒ Once every 4 business days

Inspection Date: _____

Describe phase of construction: _____

Is a copy of the SWPPP available on site? ☐ Yes ☐ No Is the SWPPP complete? ☐ Yes ☐ No

Erosion & Sediment Controls/ Pollution Prevention Practices	In Compliance?	Corrective Action Needed & Notes	Date Corrective Action Taken
Are controls in place to prevent sediment from being tracked off site or onto the street?	☐ Yes ☐ No ☐ NA		
Are perimeter controls adequately installed and properly maintained?	☐ Yes ☐ No ☐ NA		
Are storm drains properly protected / approved inlet protection is in place?	☐ Yes ☐ No ☐ NA		
Are all slopes and disturbed areas, including stockpiles, not actively being worked properly stabilized?	☐ Yes ☐ No ☐ NA		
Are dewatering operations working properly?	☐ Yes ☐ No ☐ NA		
Is construction dust properly controlled?	☐ Yes ☐ No ☐ NA		
Are mature trees and/or natural areas properly protected?	☐ Yes ☐ No ☐ NA		

Are washout facilities (concrete, paint) available, labeled, and properly maintained?	☐ Yes ☐ No ☐ NA		
Are trash and waste materials properly managed and disposed of?	☐ Yes ☐ No ☐ NA		
Are trash receptacles covered and not leaking?	☐ Yes ☐ No ☐ NA		
Are non-stormwater discharges (i.e. wash water, saw cut slurry) properly managed?	☐ Yes ☐ No ☐ NA		
Are vehicle and equipment fueling, maintenance, and/or staging areas free of spills and leaks?	☐ Yes ☐ No ☐ NA		
Are materials that are potential stormwater contaminants stored properly (covered / have secondary containment)?	☐ Yes ☐ No ☐ NA		
Are portable lavatories level, in good condition, and located away from storm drains?	☐ Yes ☐ No ☐ NA		
Is a spill kit accessible onsite?	☐ Yes ☐ No ☐ NA		

Are there any unauthorized discharges at the time of this inspection? ☐ Yes ☐ No
If yes, describe:

Has any unauthorized discharge occurred since the last inspection? ☐ Yes ☐ No
If yes, describe:

Non – Compliance Issues
Describe any incidents of non-compliance not described above (use another page if necessary)

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 or Assigned Qualified Personnel Name: _____

Signature: _____

Date: _____

9.0 Grading & Stabilization Activities Log

Date Grading Activity Initiated	Description of the Grading Activity (including location)	Date Grading Activity Ceased	Date Stabilization Measures Initiated	Description of the Stabilization Measure (including location)

10.0 SWPPP Modification & Update Log

Modification Date	Description of the Modification / Update	Modification Prepared By (name & title)

INSTRUCTIONS for COMPLETING the SINGLE FAMILY RESIDENCE, COMMON PLAN of DEVELOPMENT or SALE STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

General
A Stormwater Pollution Prevention Plan (SWPPP) must be developed prior to obtaining locality (e.g., City, County, Town) authorization to commence land disturbance.

SWPPP Cover Page
For a construction activity, enter the project/site name and physical address (if available), including city (or town), state and zip code. Enter the latitude and longitude in decimal degrees of the construction activity.

Enter the Construction Activity Operator's company/organization name, the Operator's name and mailing address, including city (or town), state, and zip code, telephone number, email address (if available), and a 24-hour emergency contact.

Enter the SWPPP preparation date.

The Construction Activity Operator identified on the cover page of the SWPPP is responsible for certifying the information contained therein. Please sign the certification in INK. Please note that state statutes require the SWPPP to be signed as follows:
(1) For a corporation: by a responsible corporate officer;
(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;
(3) For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official.

Section 1.0 SWPPP Documents Located Onsite & Available for Review
Utilize the provided checklist to ensure that the required SWPPP documents are located onsite and are available for review, if applicable.

Section 2.0 Authorized Non-Stormwater Discharges
Identify the authorized non-stormwater discharges likely to be present at the project site. If an unlisted authorized non-stormwater discharge is likely to be present at the project site, provide it here.

Section 3.0 Pollution Prevention Awareness
Provide employees with a "walk through" of the project site and identify areas of possible pollution, erosion and sediment controls, and pollution prevention practices which are applicable to their assigned job duties. Conduct refresher meetings and perform additional "walk throughs" on an as needed basis.

Section 4.0 Erosion & Sediment Controls
Identify the erosion and sediment controls to be implemented at the project site. For each erosion and sediment control, enter the estimated installation date and estimated removal date. If an unlisted erosion and sediment control will be implemented at the project site, provide the applicable information here.

Section 5.0 Potential Sources of Pollution & Pollution Prevention Practices
Identify the pollutant-generating activities likely to be present at the project site; implement and maintain the corresponding pollution prevention practices. If an unlisted pollutant-generating activity is likely to be present at the project site, describe it, identify the associated pollutant(s), and provide the corresponding pollution prevention practice(s) to be implemented and maintained.

Section 6.0 Stormwater Management Controls
Identify the stormwater management controls to be implemented at the project site, if applicable. For each stormwater management control, enter the estimated installation date. If an unlisted stormwater management control will be implemented at the project site, provide the applicable information here.

Section 7.0 Spill Prevention & Response
Most spills can be cleaned up following manufacturer specifications. The priority should be to protect all people, equipment, property, and the environment. Enter the telephone number of your local fire and police departments.

Section 8.0 Inspections & Corrective Action Log
Enter the qualified inspector's company/organization name, the inspector's name, telephone number, and qualifications. Select the applicable inspection schedule, enter the construction activity inspection date, and enter the date and rainfall amount of the last measurable storm event (if applicable). Identify if the implemented best management practices are in compliance with the SWPPP. Enter corrective actions needed; the party responsible for implementing the corrective actions, and the date corrective actions were taken, if applicable. Make additional copies of the inspection and corrective action log as necessary.

Section 9.0 Grading & Stabilization Activities Log
Enter the date grading activities were initiated, a description of the grading activities including location, the date grading activities ceased, the date stabilization measures were initiated, and a description of the stabilization measures including location.

Section 10.0 SWPPP Modification & Update Log
Enter the SWPPP modification date, description of the SWPPP modification/update, and the name and title of the SWPPP modification preparer, if applicable.

ARLINGTON
VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050308
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
CONSTRUCTION MANAGEMENT SUPERVISOR	3.24.21
WATER, SEWER, STREETS BUREAU CHIEF	03.04.2021
TRANSPORTATION DIRECTOR	03/17/21
PROJECT MANAGER	3/2/21

REVISIONS DATE

PROJECT NAME AND LOCATION
TRANSITWAY EXTENSION TO PENTAGON CITY
SW POLLUTION PREVENTION PLAN
CRYSTAL DR & 12TH ST S
MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

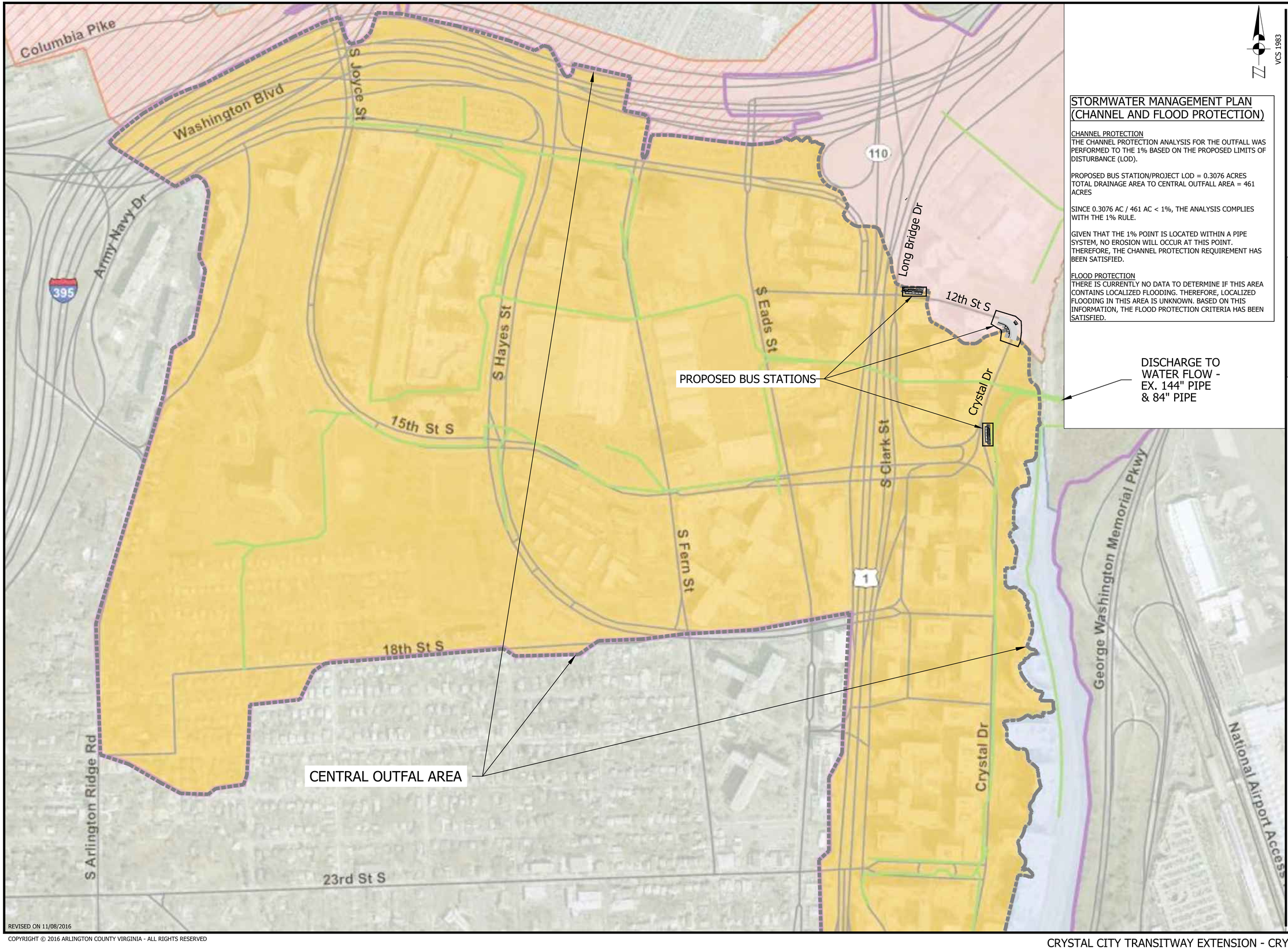
FILENAME:
MA13-224-E_AND_S_PLAN.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE: N/A

SHEET 16 OF 35

REVISED ON 11/08/2016



STORMWATER MANAGEMENT PLAN (CHANNEL AND FLOOD PROTECTION)

CHANNEL PROTECTION

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

PROPOSED BUS STATION/PROJECT LOD = 0.3076 ACRES
TOTAL DRAINAGE AREA TO CENTRAL OUTFALL AREA = 461 ACRES

SINCE 0.3076 AC / 461 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.

NAD 1983 VCS

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APPROVALS	DATE
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CONSTRUCTION MANAGEMENT SUPERVISOR Kamal Taktak	3.24.21
WATER, SEWER, STREETS BUREAU CHIEF	03.04.2021
TRANSPORTATION DIRECTOR Dennis M. Leach	03/17/21
PROJECT MANAGER Diana Isaza	3/2/21

REVISIONS	DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

STORMWATER MANAGEMENT PLAN
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

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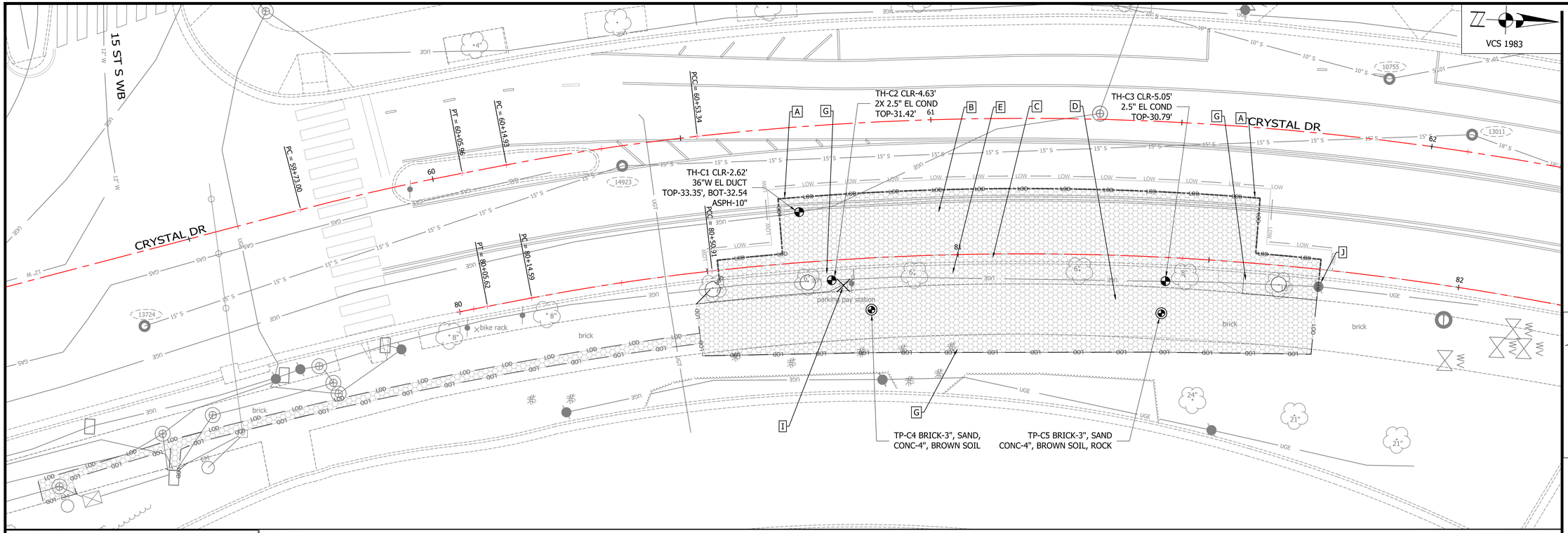
PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
250' 0 250'
HORIZONTAL: 1" = 250'

SHEET 17 OF 35

REVISED ON 11/08/2016

CRYSTAL DR NB & 15TH ST S INTERSECTION



DEMOLITION KEY NOTES:

CAUTION: POTENTIAL UNDERGROUND UTILITY CONFLICT. THE PROVIDED TEST HOLE/PIT DATA IS APPROXIMATE. THE CONTRACTOR, IF NECESSARY, SHALL FIELD VERIFY (TEST PIT) EXACT LOCATIONS AND DEPTHS OF EXISTING UTILITY.

USE OF LARGE EQUIPMENT (HOE RAMS, VIBRATORY ROLLERS, ETC.) SHALL NOT BE PERMITTED WITHIN 5 FEET OF UNDERGROUND STRUCTURES.

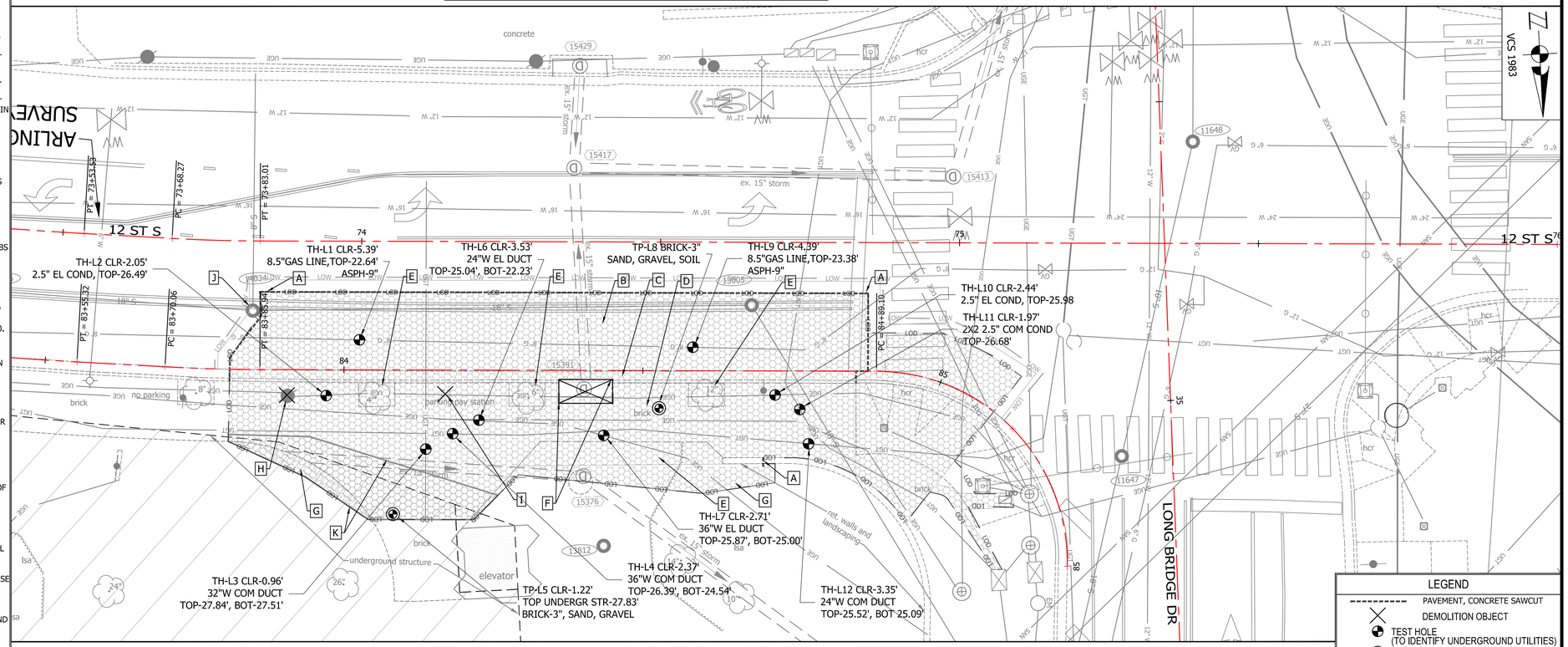
- A CONTRACTOR SHALL MAKE A NEAT LINE SAWCUT EXISTING PAVEMENT (AT NEAREST JOINT WHERE POSSIBLE).
- B CONTRACTOR SHALL REMOVE/DEMOLISH/DISPOSE STREET PAVEMENT.
- C CONTRACTOR SHALL REMOVE/DEMOLISH/DISPOSE CURB AND GUTTER.
- D CONTRACTOR SHALL REMOVE EXISTING BRICK PAVER WITH CAUTION IN ORDER TO RESTORE BRICK SIDEWALK PAVEMENT WITH SALVAGED BRICKS. REST OF SALVAGED BRICKS SHALL BE RETURNED TO ARLINGTON COUNTY. CONTACT ARLINGTON COUNTY DIVISION OF TRANSPORTATION AT 703-228-6570. CONTRACTOR SHALL EXCAVATE/ REMOVE AGGREGATES/DIRT UNDER BRICK SIDEWALK IN ORDER TO COMPLY WITH NEW PROPOSED PAVEMENT.
- E CONTRACTOR SHALL REMOVE/EXCAVATE/DISPOSE OF EXISTING TREES AND DIRT IN ORDER TO COMPLY WITH NEW PROPOSED PAVEMENT.
- F CONTRACTOR SHALL REMOVE/DEMOLISH/DISPOSE EXISTING CATCH BASIN AND MAKE AN EXCAVATION IN ORDER TO COMPLY WITH NEW PROPOSED CATCH BASIN INSTALLATION. EXISTING 15" RCP & UTILITY CONDUITS SHALL BE PROTECTED.
- G CONTRACTOR SHALL REMOVE/EXCAVATE/DISPOSE OF EXISTING SHRUBS AND DIRT IN ORDER TO COMPLY WITH PROPOSED LANDSCAPING RESTORATION.
- H CONTRACTOR SHALL COORDINATE STREETLIGHT REMOVAL WITH DOMINION ENERGY. CONTRACTOR TO REMOVE THE EXISTING FOUNDATION IN ORDER TO COMPLY WITH NEW PROPOSED STREET LIGHT INSTALLATION. EXISTING ELECTRICAL POWER CONNECTION TO THE REMAINING STREET LIGHTS TO REMAIN IN SERVICE. CONTACT ARLINGTON COUNTY DIVISION OF TRANSPORTATION AT 703-228-6570.
- I CONTRACTOR SHALL REMOVE EXISTING PARKING PAY STATIONS, INCLUDING FOUNDATION AND TRAFFIC SIGNS. CONTRACTOR SHALL RETURN REMOVED PARKING PAY STATIONS AND SIGNS TO ARLINGTON COUNTY. PARKING PAY STATIONS AND SIGNS REMOVAL SHALL BE COORDINATED WITH TE&O (TEL. 703-228-7952).
- J CONTRACTOR SHALL PROTECT EXISTING POLE, UTILITY, STRUCTURE, FROM DAMAGE.
- K CONTRACTOR SHALL PROVIDE A WATERPROOFING RESTORATION OVER EXISTING UNDERGROUND STRUCTURES PER SPECIFICATIONS. SEE DETAILS AND NOTES - SHEET 04.
- L EXISTING RETAINING WALL TO REMAIN

DEMOLITION GENERAL NOTES:

1. TEMPORARY EDGE RESTRAINTS SHALL BE PLACED AT THE PERIMETER OF THE EXPOSED AREA TO MINIMIZE CREEPING OF THE EX. BRICK PAVEMENT. VEHICULAR TRAFFIC SHOULD KEPT AT LEAST 6' FROM THE WORK EDGES.
2. EXISTING STAND PIPE/FIRE HYDRANT TO REMAIN IN SERVICE. THE CONTRACTOR SHALL MAINTAIN UNIMPEDED ACCESS TO THE STAND PIPE/FIRE HYDRANT DURING CONSTRUCTION. THE CONTRACTOR SHALL ERECT SIGN(S) THAT CLEARLY IDENTIFY THE LOCATION OF THE STAND PIPE/FIRE HYDRANT.
3. EXISTING UNDERGROUND UTILITIES ARE TO REMAIN UNLESS OTHERWISE NOTED. CONTRACTOR SHALL ADJUST ALL STRUCTURES TOP TO NEW GRADES PER ARL STD S-2.3.
4. ALL EXISTING SIDEWALK, PAVEMENT, DAMAGED BRICKS, ASPHALT, AND/OR SIDEWALK WITHIN THE LIMITS SHOWN SHALL BE REMOVED AND HAULED TO WASTE.
5. EXISTING TREE REMOVAL AND PROTECTION SHALL COMPLY WITH E&S CONTROL PLAN.
6. ALL EXISTING STRUCTURES TO REMAIN WITHIN THE PROJECT AREA SHALL BE BROUGHT TO PROPOSED GRADE DURING CONSTRUCTION.

REVISED ON 11/08/2016

12TH ST S WB & LONG BRIDGE DR INTERSECTION



LEGEND

- PAVEMENT, CONCRETE SAWCUT
- DEMOLITION OBJECT
- TEST HOLE (TO IDENTIFY UNDERGROUND UTILITIES)
- TEST PIT (TO IDENTIFY PAVEMENT LAYERS)

NOTE: SEE SHEETS 33-35 FOR TEST HOLE/PIT LOGS

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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER Kamal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
PROJECT MANAGER Diana Haza	3/2/21

REVISIONS DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

DEMOLITION PLAN
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-228-DEMOLITION_PLAN.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
10' 0 10'
HORIZONTAL: 1" = 10'

SHEET 18 OF 35

DEMOLITION KEY NOTES:

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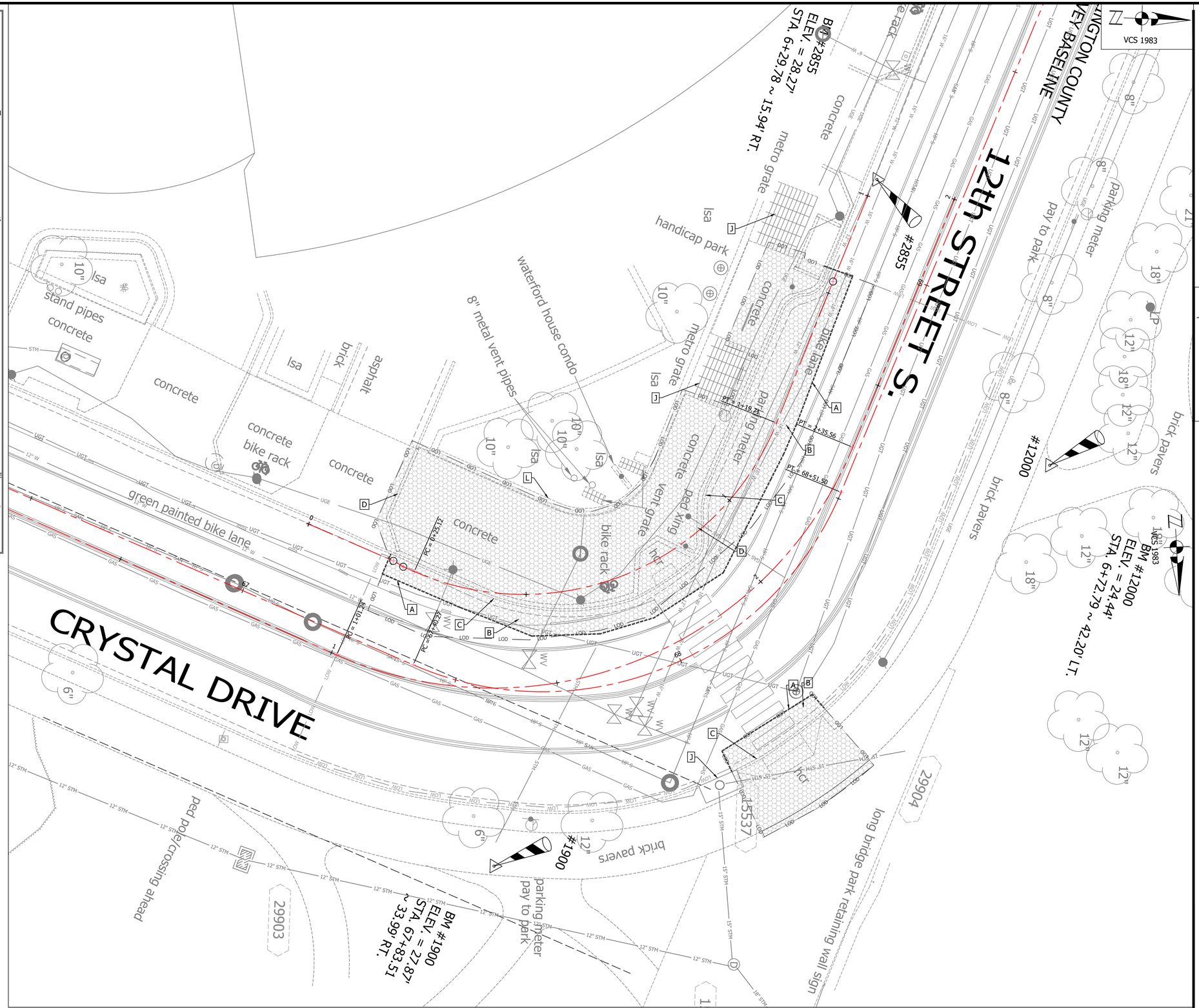
LEGEND

- PAVEMENT, CONCRETE SAWCUT
- DEMOLITION OBJECT
- TEST HOLE (TO IDENTIFY UNDERGROUND UTILITIES)
- TEST PIT (TO IDENTIFY PAVEMENT LAYERS)

NOTE: SEE SHEETS 33-35 FOR TEST HOLE/PIT LOGS



CRYSTAL DR NB & 12TH STREET S TRANSITION

REVISED ON 11/08/2016

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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
Kamal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Haze	3/2/21
PROJECT MANAGER	

REVISIONS DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

DEMOLITION PLAN
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

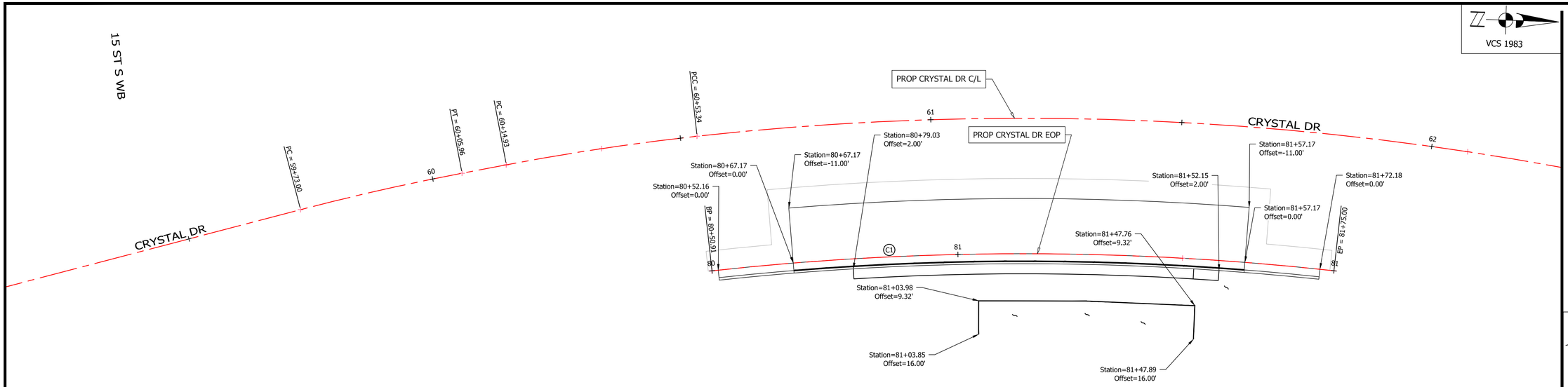
DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-228-DEMOLITION_PLAN.DWG
PATH:Q:\DATA\MA13\CAD\ACTIVE

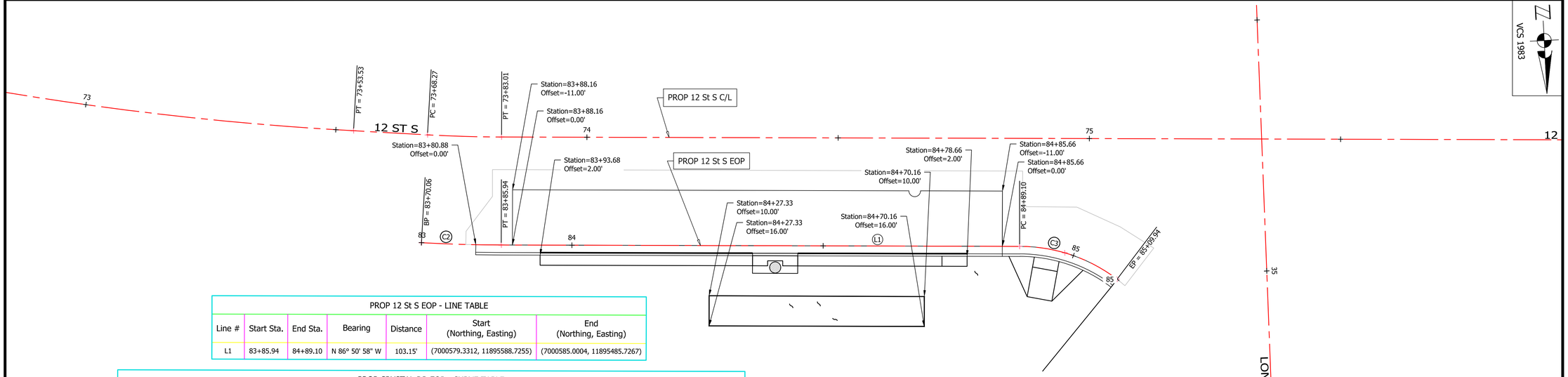
PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
10' 0 10'
HORIZONTAL: 1" = 10'

SHEET 18A OF 35



CRYSTAL DR NB & 15TH ST S INTERSECTION



PROP 12 St S EOP - LINE TABLE

Line #	Start Sta.	End Sta.	Bearing	Distance	Start (Northing, Easting)	End (Northing, Easting)
L1	83+85.94	84+89.10	N 86° 50' 58" W	103.15'	(7000579.3312, 11895588.7255)	(7000585.0004, 11895485.7267)

PROP CRYSTAL DR EOP - CURVE TABLE

Curve #	Radius	Chord Bearing	Chord Length	Delta (Δ)	Arc Length	Tangent	Start Sta.	End Sta.	Start (Northing, Easting)	End (Northing, Easting)
C1	563.66°	N 2° 00' 13" W	123.84'	12° 36' 50"	124.09'	62.30	80+50.91	81+75.00	(6999661.1836, 11895987.2125)	(6999784.9494, 11895982.8829)

PROP 12TH ST S EOP - CURVE TABLE

Curve #	Radius	Chord Bearing	Chord Length	Delta (Δ)	Arc Length	Tangent	Start Sta.	End Sta.	Start (Northing, Easting)	End (Northing, Easting)
C2	300.00°	N 85° 19' 58" W	15.88'	3° 02' 01"	15.88'	7.94	83+70.06	83+85.94	(7000578.0388, 11895604.5552)	(7000579.3312, 11895588.7255)
C3	32.08°	N 68° 24' 04" W	20.48'	37° 13' 14"	20.84'	10.80	84+89.10	85+09.94	(7000585.0004, 11895485.7267)	(7000592.5379, 11895466.6881)

12TH ST S WB & LONG BRIDGE DR INTERSECTION

REVISED ON 11/08/2016

VCS 1983

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VIRGINIA

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CONSTRUCTION MANAGEMENT SUPERVISOR	
	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Iraza	3/2/21
PROJECT MANAGER	

REVISIONS DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

GEOMETRIC CONTROL PLAN
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-216-GEOMETRIC_CONTROL_PLAN.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

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PLOTTED BY:NSHARP

SCALE:
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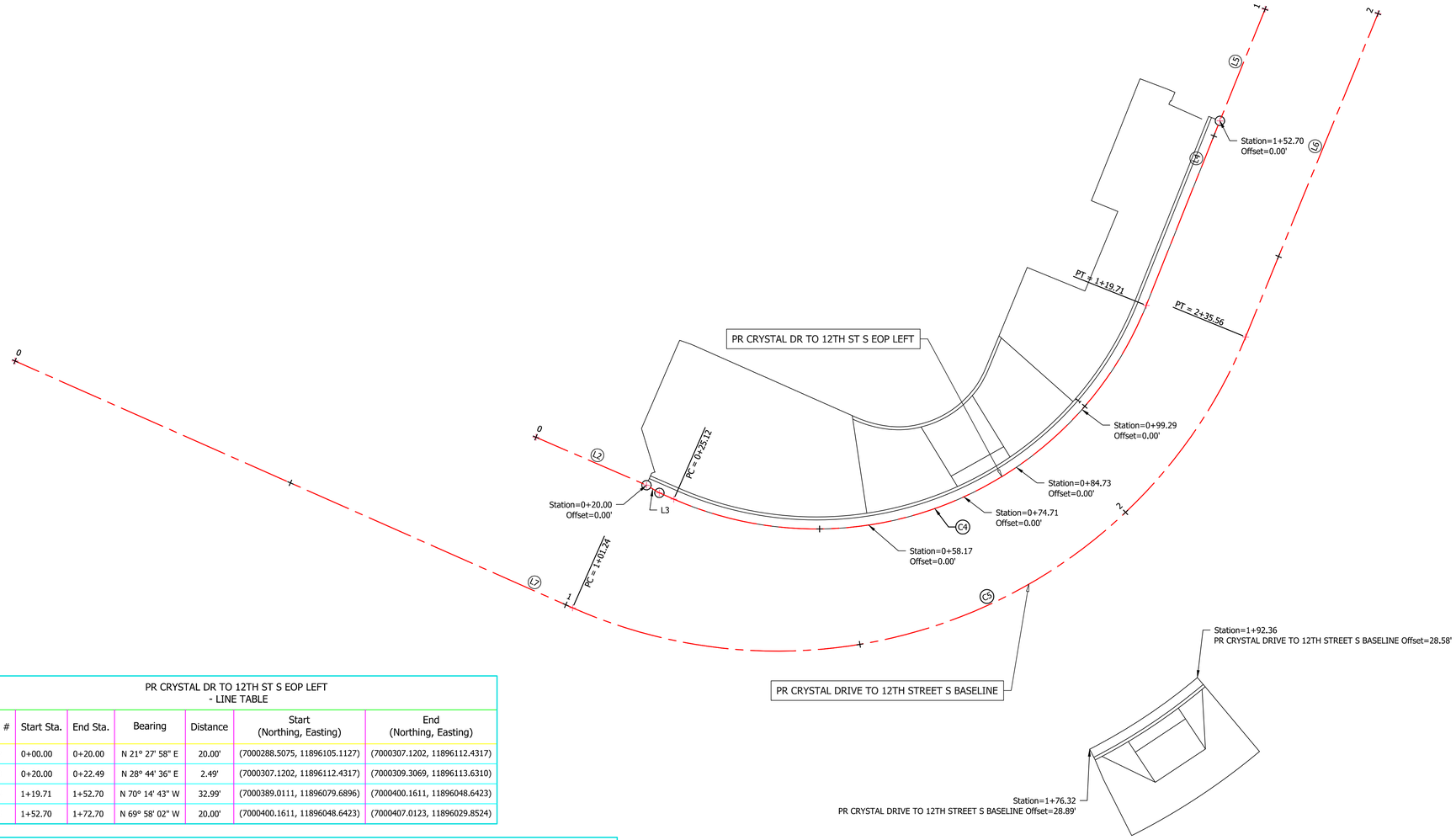
HORIZONTAL: 1" = 10'

SHEET 19 OF 35



PR CRYSTAL DR TO 12TH ST S EOP LEFT
- LINE TABLE

Line #	Start Sta.	End Sta.	Bearing	Distance	Start (Northing, Easting)	End (Northing, Easting)
L2	0+00.00	0+20.00	N 21° 27' 58" E	20.00'	(7000288.5075, 11896105.1127)	(7000307.1202, 11896112.4317)
L3	0+20.00	0+22.49	N 28° 44' 36" E	2.49'	(7000307.1202, 11896112.4317)	(7000309.3069, 11896113.6310)
L4	1+19.71	1+52.70	N 70° 14' 43" W	32.99'	(7000389.0111, 11896079.6896)	(7000400.1611, 11896048.6423)
L5	1+52.70	1+72.70	N 69° 58' 02" W	20.00'	(7000400.1611, 11896048.6423)	(7000407.0123, 11896029.8524)

PR CRYSTAL DR TO 12TH ST S EOP LEFT
- CURVE TABLE

Curve #	Radius	Chord Bearing	Chord Length	Delta (Δ)	Arc Length	Tangent	Start Sta.	End Sta.	Start (Northing, Easting)	End (Northing, Easting)
C4	59.00°	N 24° 18' 49" W	84.78'	91° 51' 47"	94.60'	60.95	0+25.12	1+19.71	(7000311.7468, 11896114.5979)	(7000389.0111, 11896079.6896)

PR CRYSTAL DRIVE TO 12TH STREET S BASELINE- LINE TABLE

Line #	Start Sta.	End Sta.	Bearing	Distance	Start (Northing, Easting)	End (Northing, Easting)
L6	2+35.56	2+93.57	N 69° 44' 00" W	58.02'	(7000405.6858, 11896084.3605)	(7000425.7832, 11896029.9330)
L7	0+00.00	1+01.24	N 21° 52' 48" E	101.24'	(7000201.6323, 11896095.4833)	(7000295.5824, 11896133.2129)

PR CRYSTAL DRIVE TO 12TH STREET S BASELINE - CURVE TABLE

Curve #	Radius	Chord Bearing	Chord Length	Delta (Δ)	Arc Length	Tangent	Start Sta.	End Sta.	Start (Northing, Easting)	End (Northing, Easting)
C5	84.00°	N 23° 55' 36" W	120.45'	91° 36' 48"	134.31'	86.40	1+01.24	2+35.56	(7000295.5824, 11896133.2129)	(7000405.6858, 11896084.3605)

CRYSTAL DR & 12TH ST S TRANSITION

REVISED ON 11/08/2016

VCS 1983

ARLINGTON
VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
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SEAL
COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
Kamal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Isaza	3/2/21
PROJECT MANAGER	

REVISIONS	DATE

PROJECT NAME AND LOCATION
TRANSITWAY EXTENSION TO PENTAGON CITY
GEOMETRIC CONTROL PLAN
CRYSTAL DR & 12TH ST S
MA13 - SEGMENT I

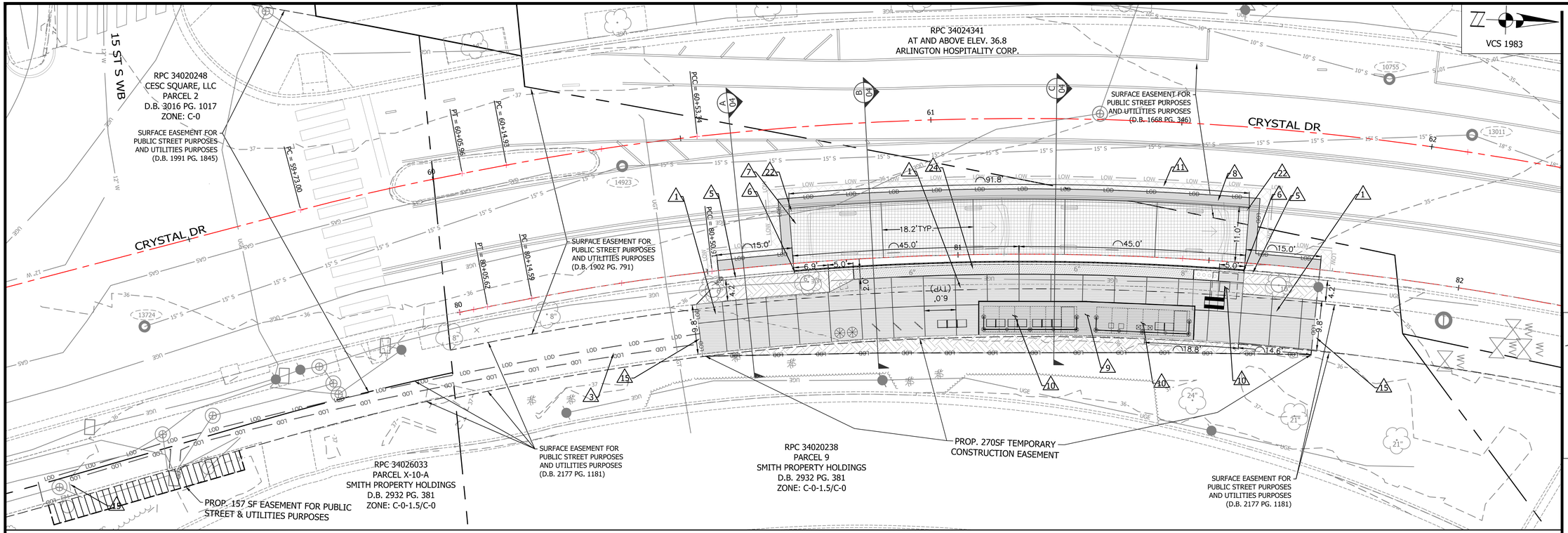
DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-216-GEOMETRIC_CONTROL_PLAN.DWG
PATH:Q:\DATA\MA13\CAD\ACTIVE

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
10' 0 10'
HORIZONTAL: 1" = 10'

SHEET 19A OF 35



CRYSTAL DR NB & 15TH ST S INTERSECTION - STATION PLAN

CONSTRUCTION NOTES:

CAUTION: POTENTIAL UTILITY CONFLICT. CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND DEPTH OF EXISTING UTILITY, SEE DEMOLITION PLAN FOR EX. TEST HOLES/PITS.

USE OF LARGE EQUIPMENT (HOE RAMS, VIBRATORY ROLLERS, ETC.) SHALL NOT BE PERMITTED WITHIN 5 FEET OF UNDERGROUND STRUCTURES. ALL COMPACTION OPERATIONS OVER EXISTING UNDERGROUND STRUCTURE SHALL BE PERFORMED WITH APPROPRIATE SMALL VIBRATORY PLATES TO ELIMINATE ANY DAMAGES TO THE STRUCTURE.

1. CONTRACTOR SHALL CONSTRUCT NEW BROOM FINISHED 4" THICK CONCRETE SIDEWALK, SCORED IN 6' X6' MODULE. SIDEWALK PAVEMENT SHALL COMPLY WITH ARL STD R-2.0 & R-2.1.
2. CONTRACTOR TO INSTALL CG-12 TYPE A PER VDOT ROAD AND BRIDGE STANDARDS
3. CONTRACTOR SHALL RESTORE FULL DEPTH SIDEWALK PAVEMENT WITH SALVAGED BRICKS ON FLEXIBLE AGGREGATE BASE AND MATCH EXISTING MATERIAL, COLOR, PATTERN AND PROPOSED GRADE . SEE PROPOSED RAMP DETAILS & STREET CROSS SECTIONS SHEET. SIDEWALK PAVEMENT RESTORATION SHALL COMPLY WITH ARL STD R-2.1.
4. CONTRACTOR SHALL INSTALL NEW 2' WIDE DETECTABLE WARNING SURFACE ON TOP OF RIGID CONCRETE BASE TO COMPLY WITH STANDARD CONCRETE SIDEWALK RAMP CG-12 TYPE A PER VDOT ROAD AND BRIDGE STANDARDS DRAWING.
5. CONTRACTOR SHALL CONSTRUCT NEW C-2 CURB & GUTTER PER ARL STD R-2.0 WITH MODIFIED 6" TO 9.5" HIGH CURB TRANSITION AND 10" THICK GUTTER. SEE EOP PROFILE AND DETAILS ON SHEET 05.
6. CONTRACTOR SHALL CONSTRUCT NEW C-2 CURB & GUTTER PER ARL STD R-2.0 WITH MODIFIED 9.5" HIGH CURB, 10" THICK GUTTER AND RUB RAIL. SEE EOP PROFILE AND DETAILS ON SHEET 5.
7. CONTRACTOR SHALL CONSTRUCT 10" REINFORCED CONCRETE BUS PAD PER DETAIL ON SHEET 5 AND VDOT DETAIL PR-2.
8. CONTRACTOR SHALL INSTALL FULL DEPTH ASPHALT ROAD PAVEMENT. PER ARLINGTON COUNTY NOTES ON DETAIL R-1.4. FOR ASPHALT PAVEMENT LAYERS SEE TYPICAL STREET CROSS SECTIONS SHEET.
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12. CONTRACTOR SHALL CONSTRUCT NEW C-2 CURB & GUTTER PER ARL STD R-2.0
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14. CONTRACTOR SHALL FURNISH AND INSTALL STREETLIGHT FOUNDATION AND LED TWIN CARLYLE FIXTURE ON 16' POLE PER ARLINGTON COUNTY LIGHTING STANDARDS. SERVICE DISCONNECTS AND CONNECTIONS TO BE COORDINATED WITH UTILITY PROVIDER. CONTACT ARLINGTON COUNTY DIVISION OF TRANSPORTATION AT 703-228-6570.
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19. EXISTING FIRE HYDRANT TO REMAIN
20. RELOCATE EXISTING BIKE RACK
21. CONTRACTOR SHALL FURNISH AND INSTALL 1-2" DIAMETER ELECTRICAL CONDUIT, AND ELECTRICAL CONNECTION PER ARLINGTON COUNTY STREETLIGHT STANDARDS
22. CONCRETE BUS PAD SHALL HAVE 2' 45° CORNERS
23. ADJUST WATER METER ACCORDINGLY
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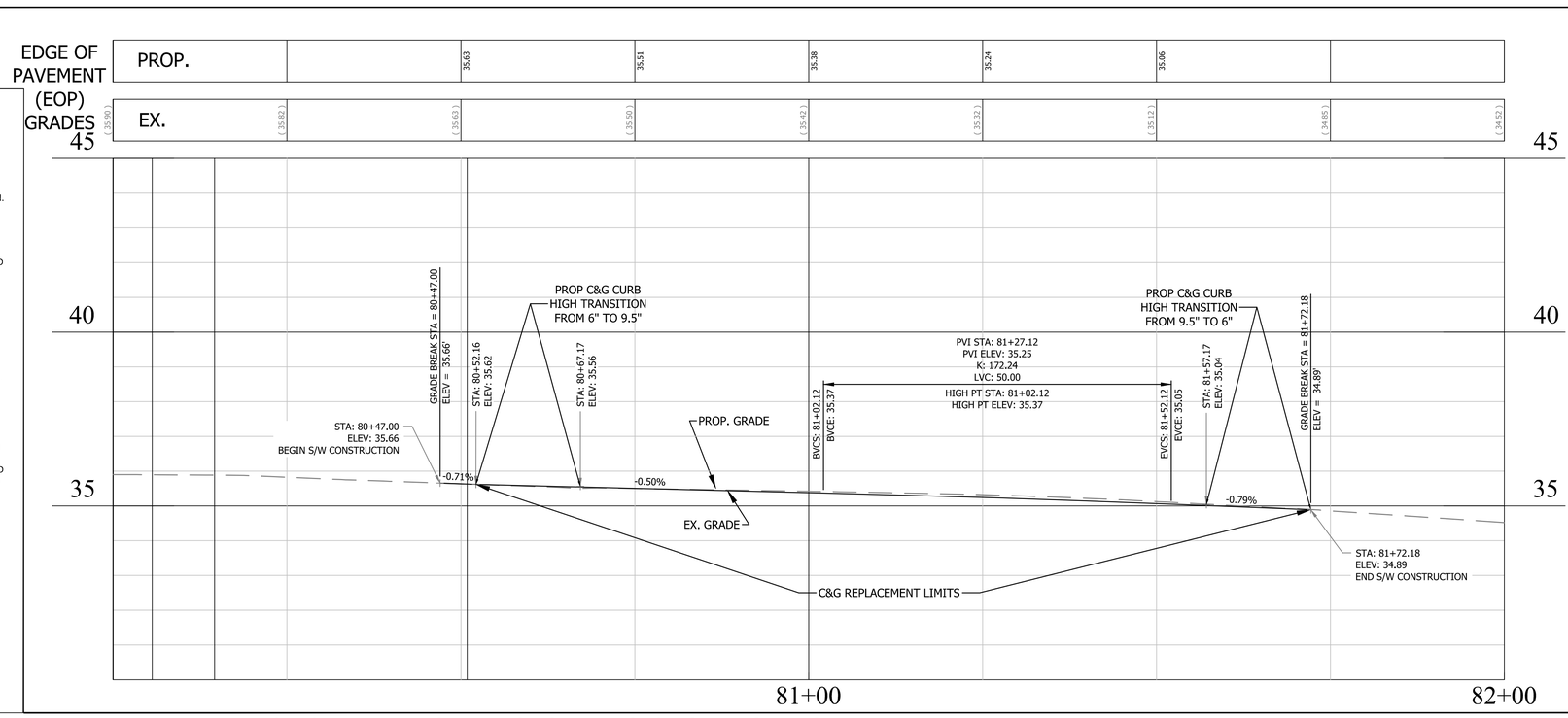

CRYSTAL DR NB & 15TH ST S INTERSECTION - EOP PROFILE

REVISED ON 11/08/2016

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PROJECT MANAGER	

REVISIONS	DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

SITE PLAN & PROFILE
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-230-PLAN_PROFILE.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
10' 0 10'
HORIZONTAL: 1" = 10'
2' 0 2'
VERTICAL: 1" = 2'

SHEET 20A OF 35

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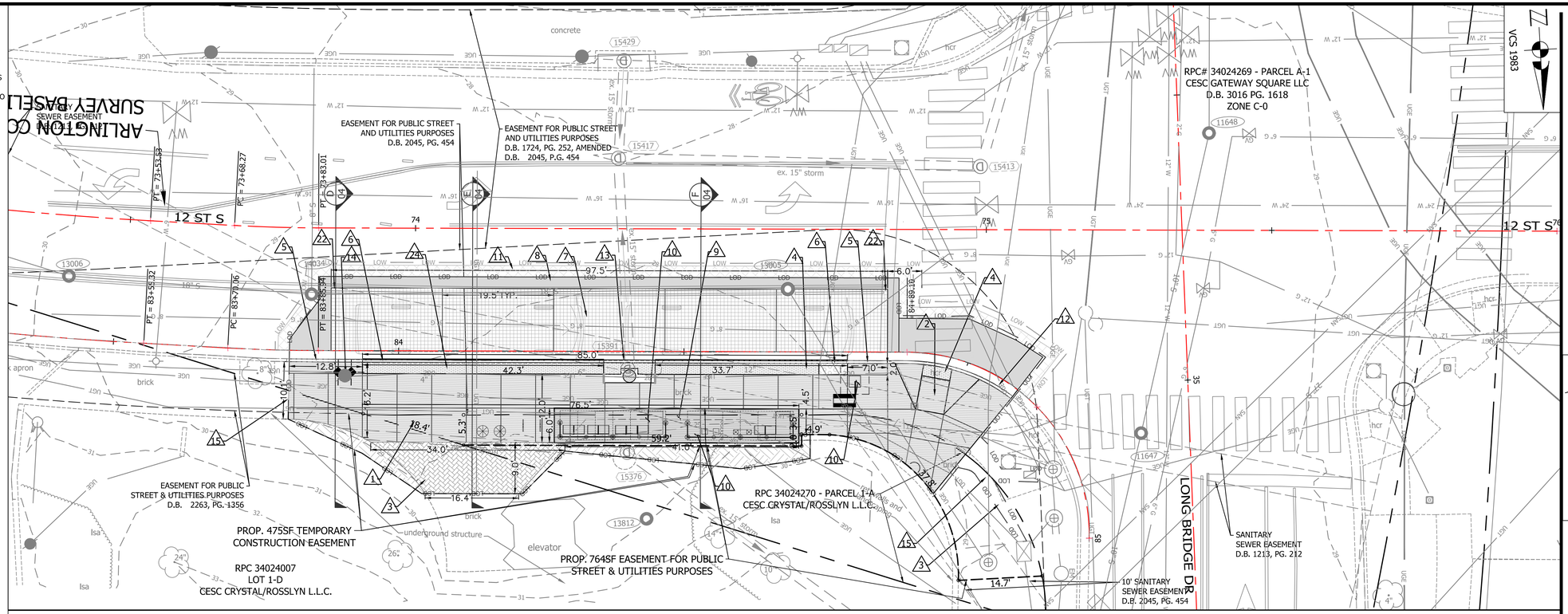
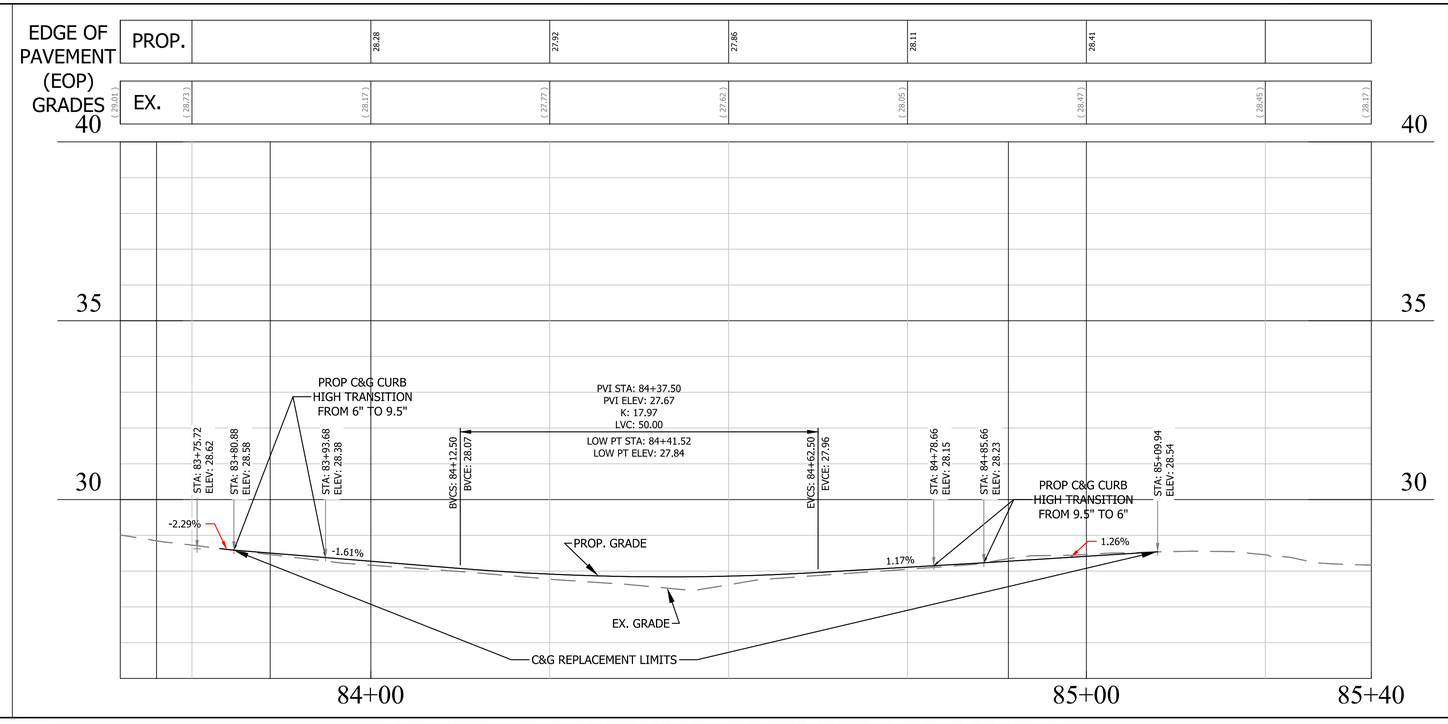


12TH ST S WB & LONG BRIDGE DR INTERSECTION - STATION PLAN



12TH ST S WB & LONG BRIDGE DR INTERSECTION - EOP PROFILE

REVISED ON 11/08/2016

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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050308
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER Kamal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
PROJECT MANAGER Diana Izaza	3/2/21

REVISIONS DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

SITE PLAN & PROFILE
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
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PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
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SHEET 20B OF 35

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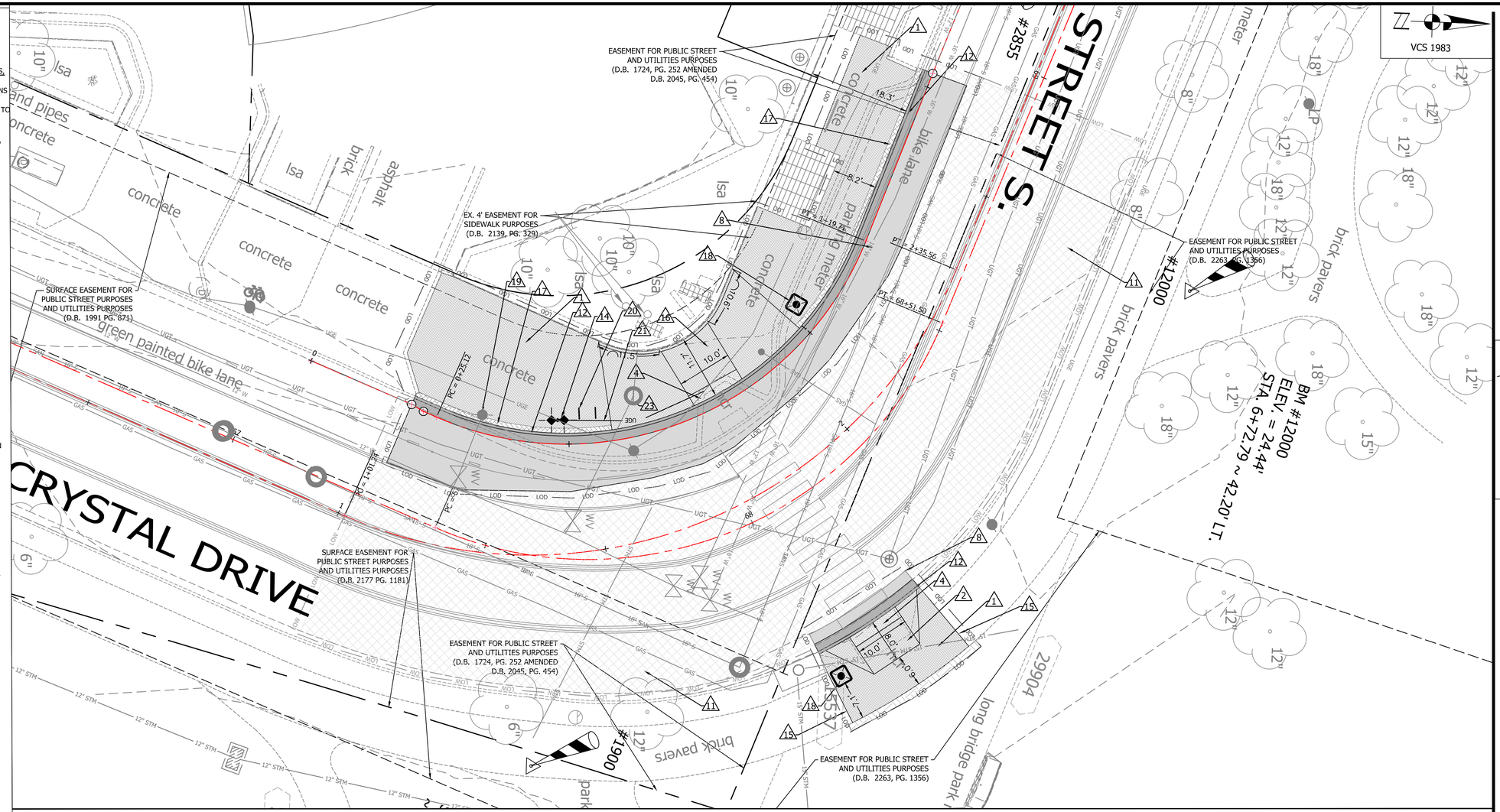
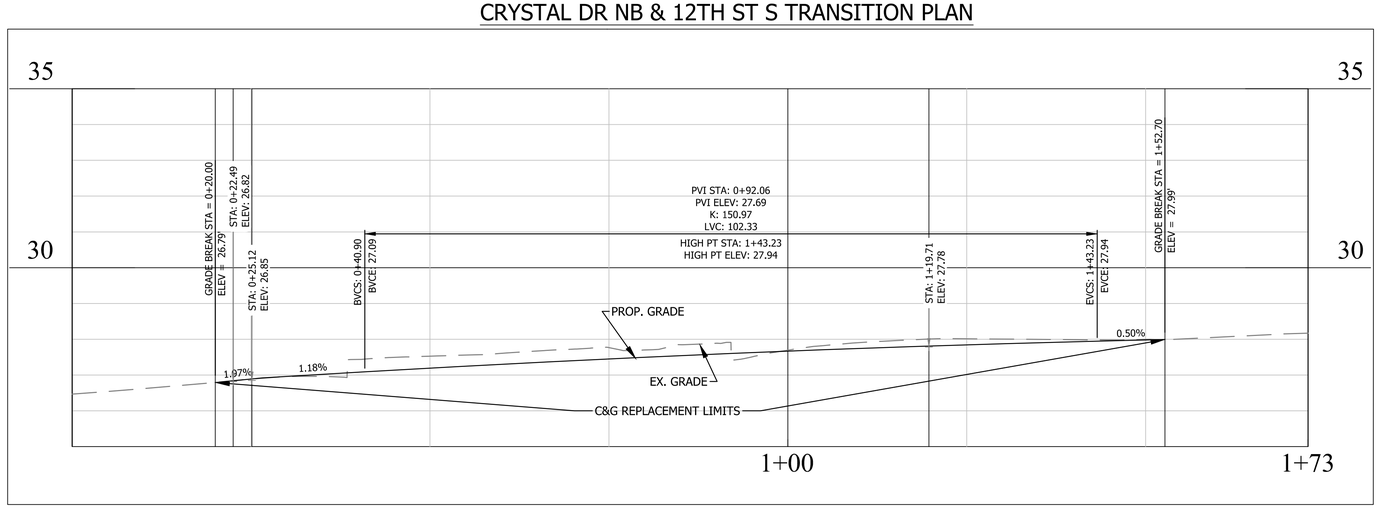


CRYSTAL DR NB & 12TH ST S TRANSITION PLAN



CRYSTAL DR NB & 12TH ST S TRANSITION PLAN - EOP LEFT PROFILE

REVISED ON 11/08/2016

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PROJECT MANAGER	

REVISIONS	DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

SITE PLAN & PROFILE
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
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MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
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PATH:Q:\DATA\MA13\CAD\ACTIVE

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
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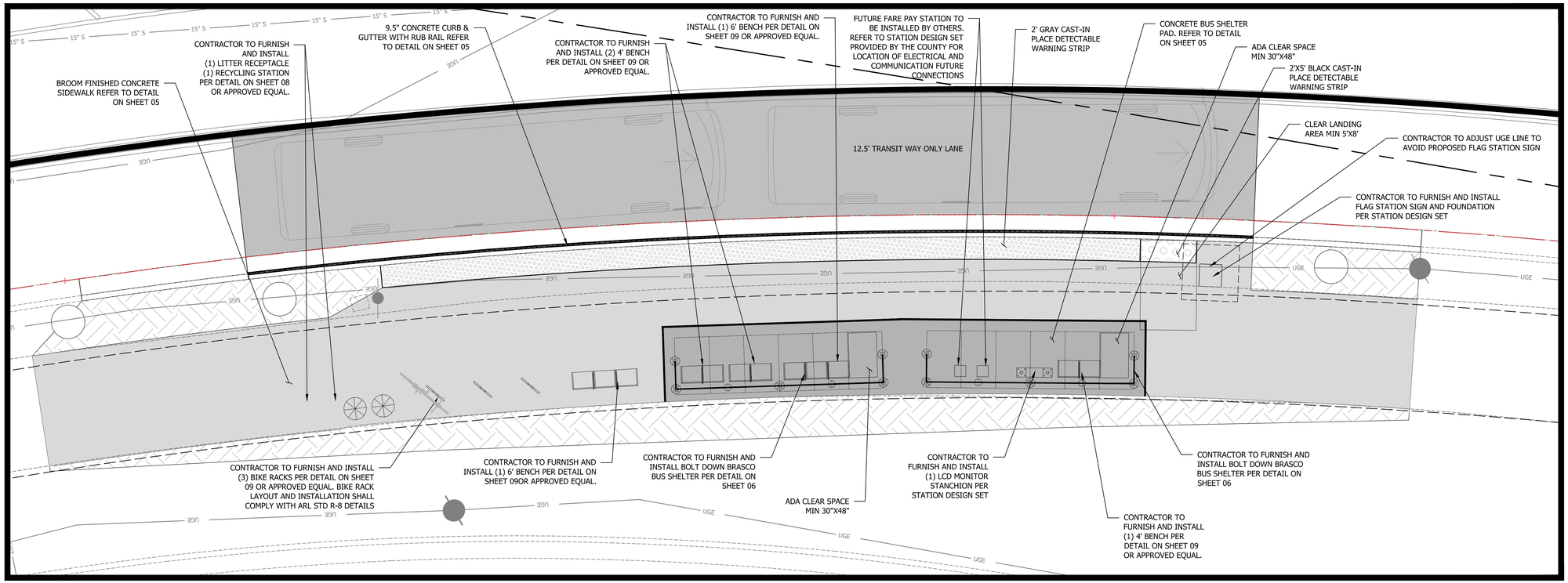
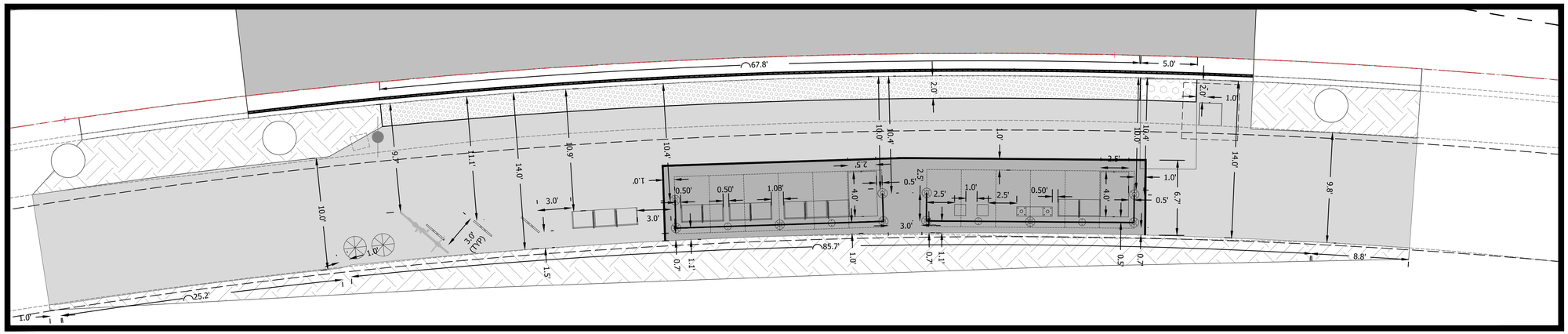
SHEET 20C OF 35



NOTES VIEW



GEOMETRIC VIEW

NOTES:
1. FLAG STATION SIGN AND LCD MONITOR DETAILS WILL NOT BE INCLUDED ON THESE PLANS. ARLINGTON COUNTY SHALL PROVIDE SIGNED AND SEALED BUILDING PLANS TO THE CONTRACTOR FOR CONSTRUCTION.
2. CONTRACTOR TO CONFIRM LOCATION OF ALL STATION FURNISHINGS WITH ARLINGTON COUNTY PRIOR TO INSTALLATION.

CRYSTAL DR & 15TH ST STATION LAYOUT

1485 CRTSTAL DRIVE 1"=5'

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CONSTRUCTION MANAGEMENT SUPERVISOR	
	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Izaza	3/2/21
PROJECT MANAGER	

REVISIONS DATE

PROJECT NAME AND LOCATION
TRANSITWAY EXTENSION TO PENTAGON CITY

STATION DETAIL
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

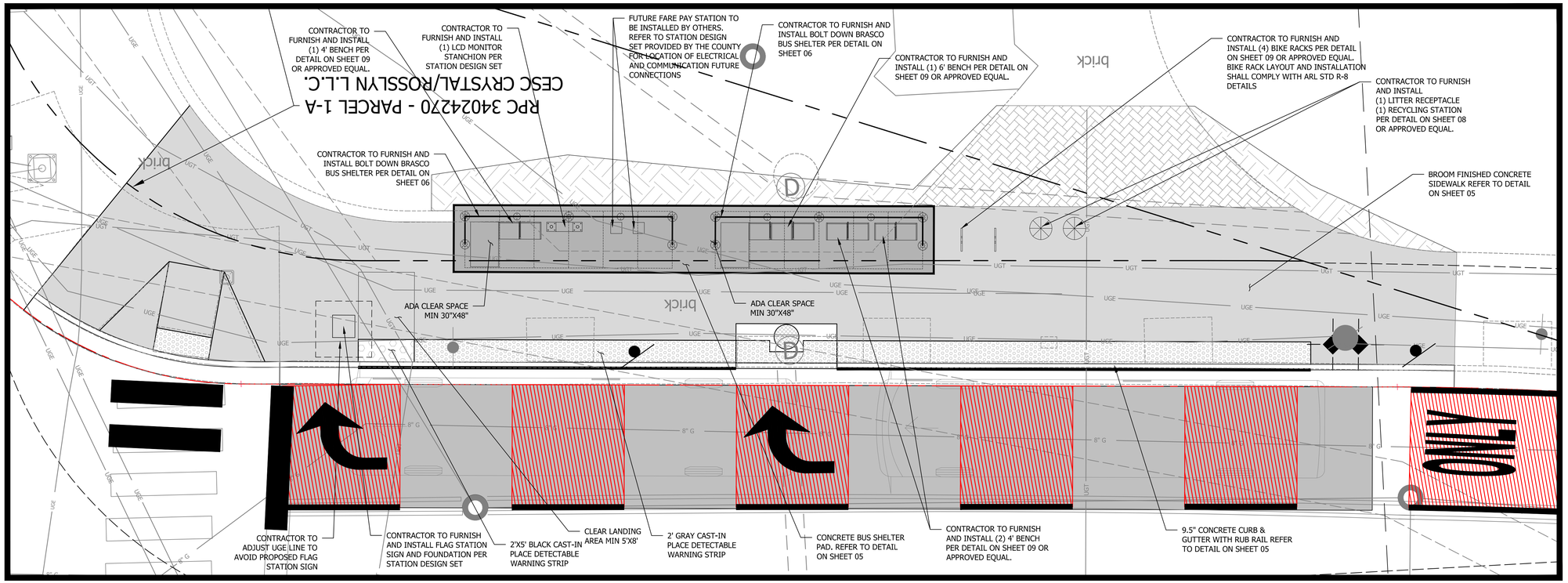
FILENAME:
MA13-204-STATION_DETAIL.DWG
PATH:Q:\DATA\MA13\CAD\ACTIVE

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

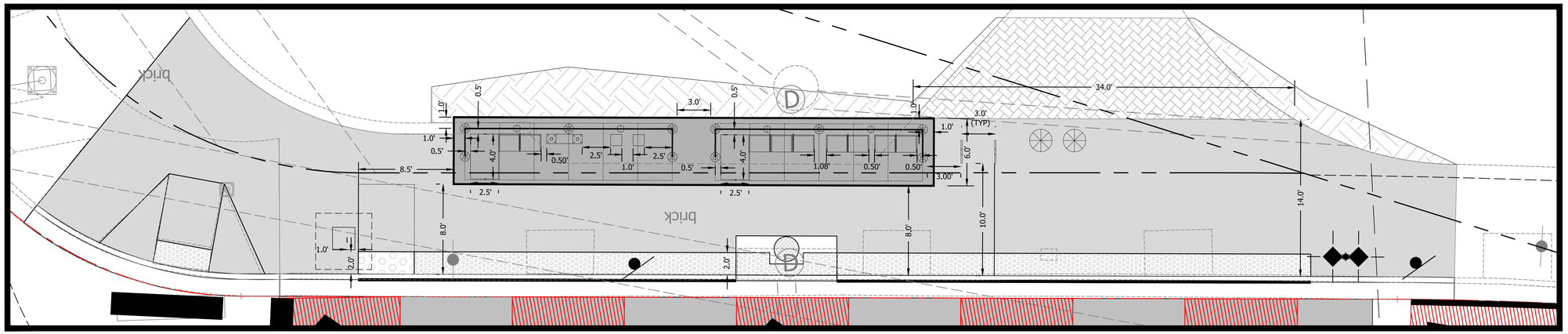
SCALE:

AS SHOWN

SHEET 21A OF 35



NOTES VIEW



GEOMETRIC VIEW

NOTES:
1. FLAG STATION SIGN AND LCD MONITOR DETAILS WILL NOT BE INCLUDED ON THESE PLANS. ARLINGTON COUNTY SHALL PROVIDE SIGNED AND SEALED BUILDING PLANS TO THE CONTRACTOR FOR CONSTRUCTION.
2. CONTRACTOR TO CONFIRM LOCATION OF ALL STATION FURNISHINGS WITH ARLINGTON COUNTY PRIOR TO INSTALLATION.

12TH ST & LONG BRIDGE DR STATION LAYOUT

215 12TH ST S — 1"=5'

REVISED ON 11/08/2016

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

SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
Kamal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
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PROJECT MANAGER	

REVISIONS — DATE

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STATION DETAIL
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

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SCALE:

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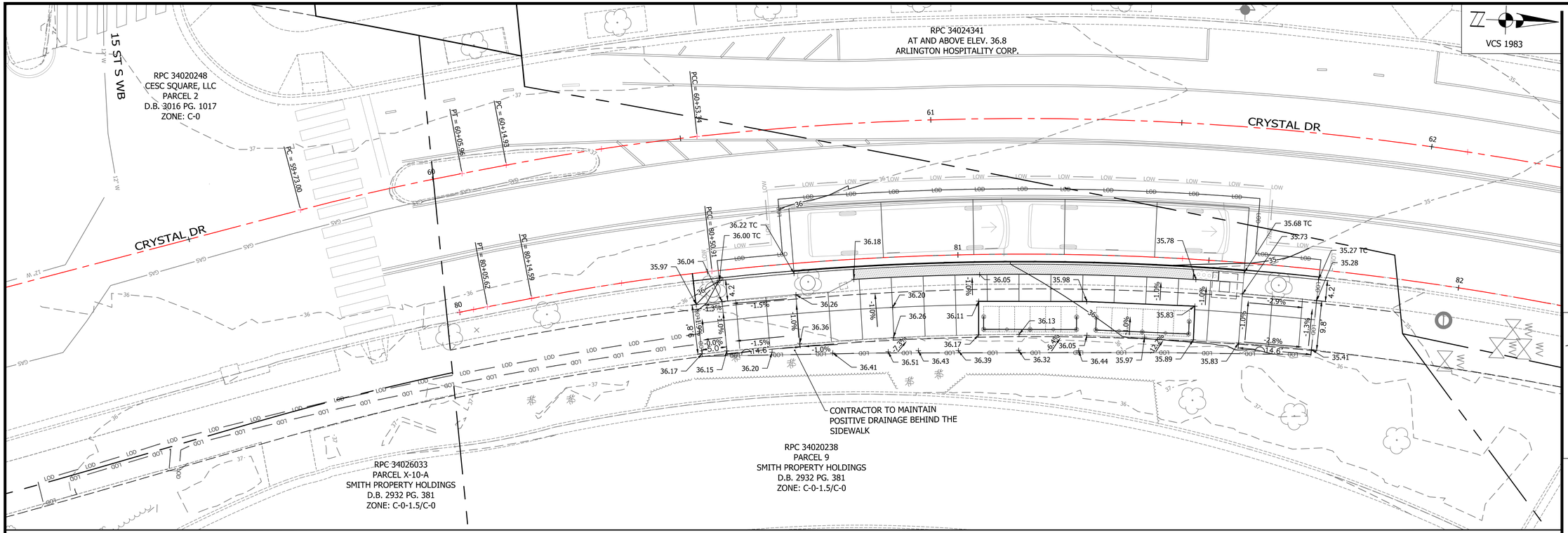
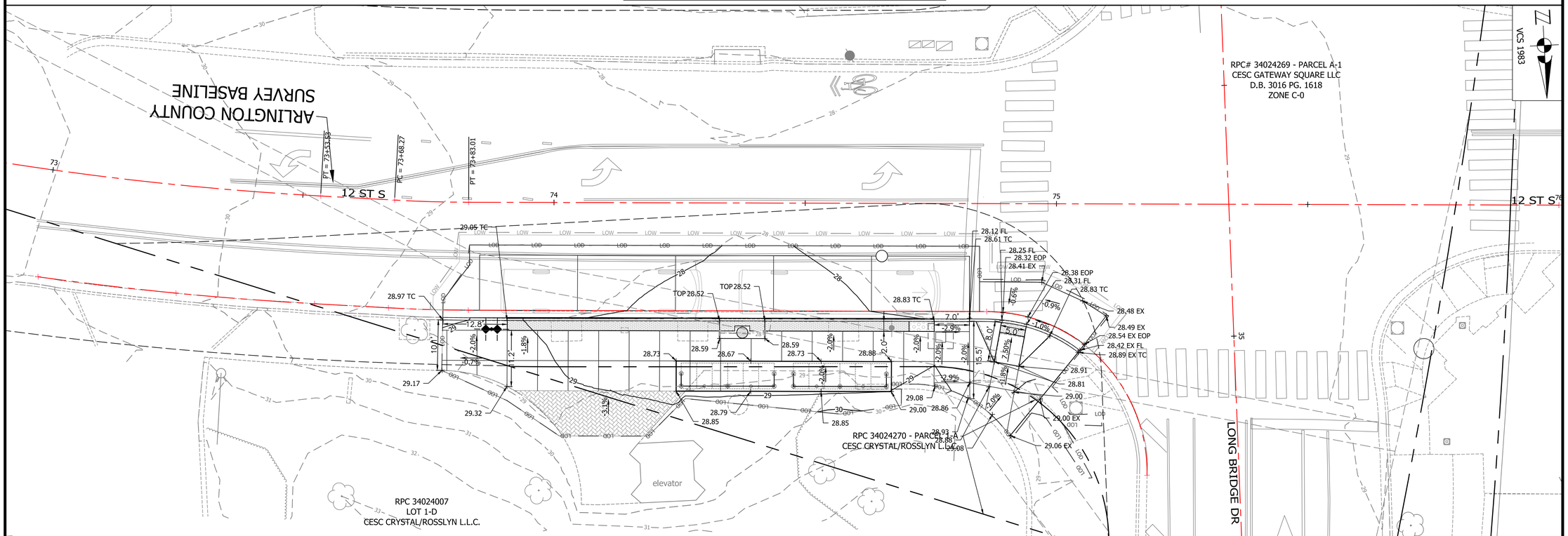
SHEET 21B OF 35



CRYSTAL DR NB & 15TH ST S INTERSECTION



12TH ST S WB & LONG BRIDGE DR INTERSECTION

NOTE: SEE SHEETS 20 & 21 FOR EOP PROFILE, SEE SHEETS 26 - 29 FOR CROSS SECTIONS

REVISED ON 11/08/2016

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REVISIONS	DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

RAMP DETAILS - GRADING PLAN
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
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PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
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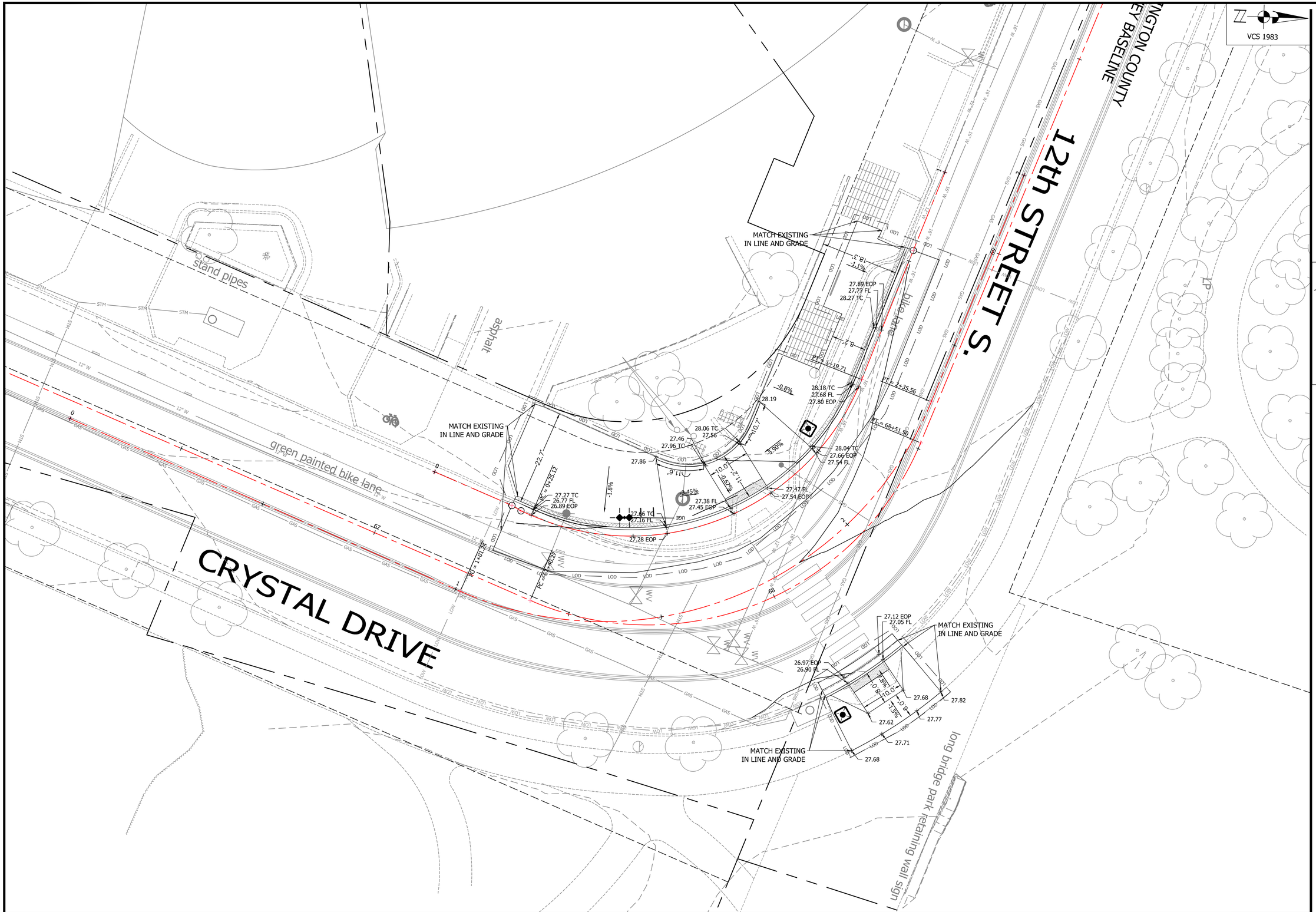
HORIZONTAL: 1" = 10'

SHEET 22 OF 35



CRYSTAL DR & 12TH STREET S TRANSITION

NOTE: SEE SHEETS 20 & 21A FOR EOP PROFILE, SEE SHEETS 26 - 29A FOR CROSS SECTIONS

REVISED ON 11/08/2016

CRYSTAL CITY TRANSITWAY EXTENSION - CRYSTAL DR & 12TH ST S

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TRANSPORTATION DIRECTOR	
Diana Isaza	3/2/21
PROJECT MANAGER	

REVISIONS	DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

RAMP DETAILS - GRADING PLAN
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT 1

DESIGNED: PB
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CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

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SCALE:
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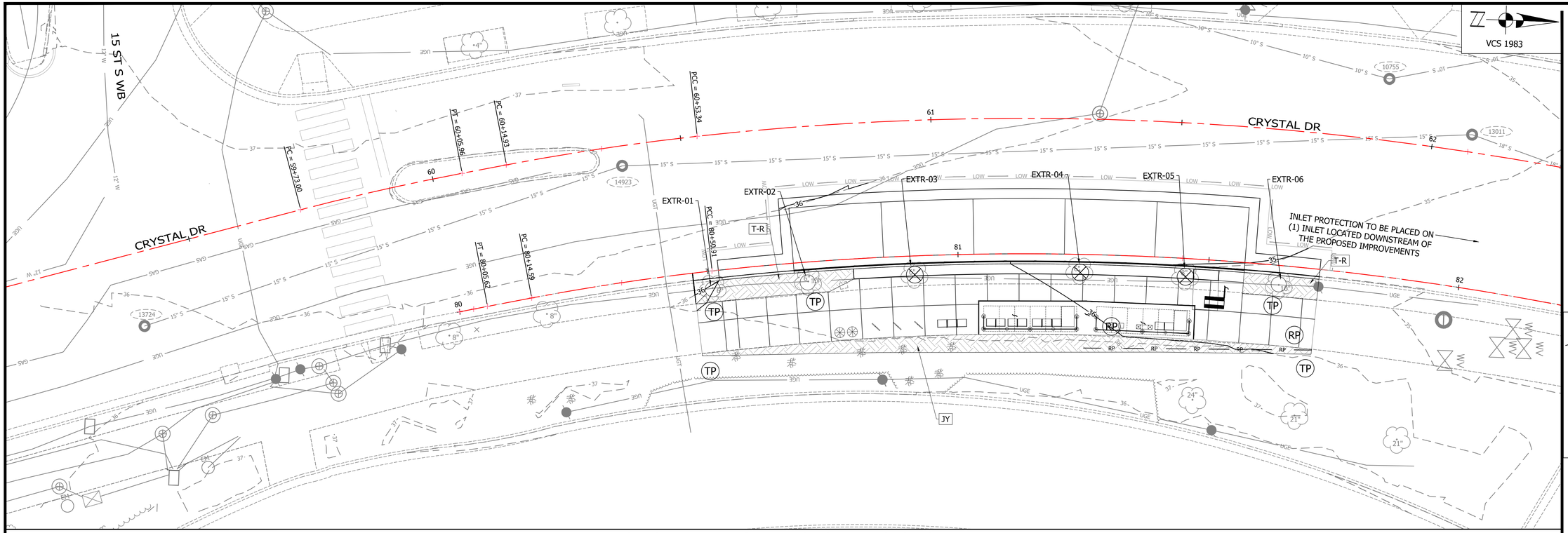
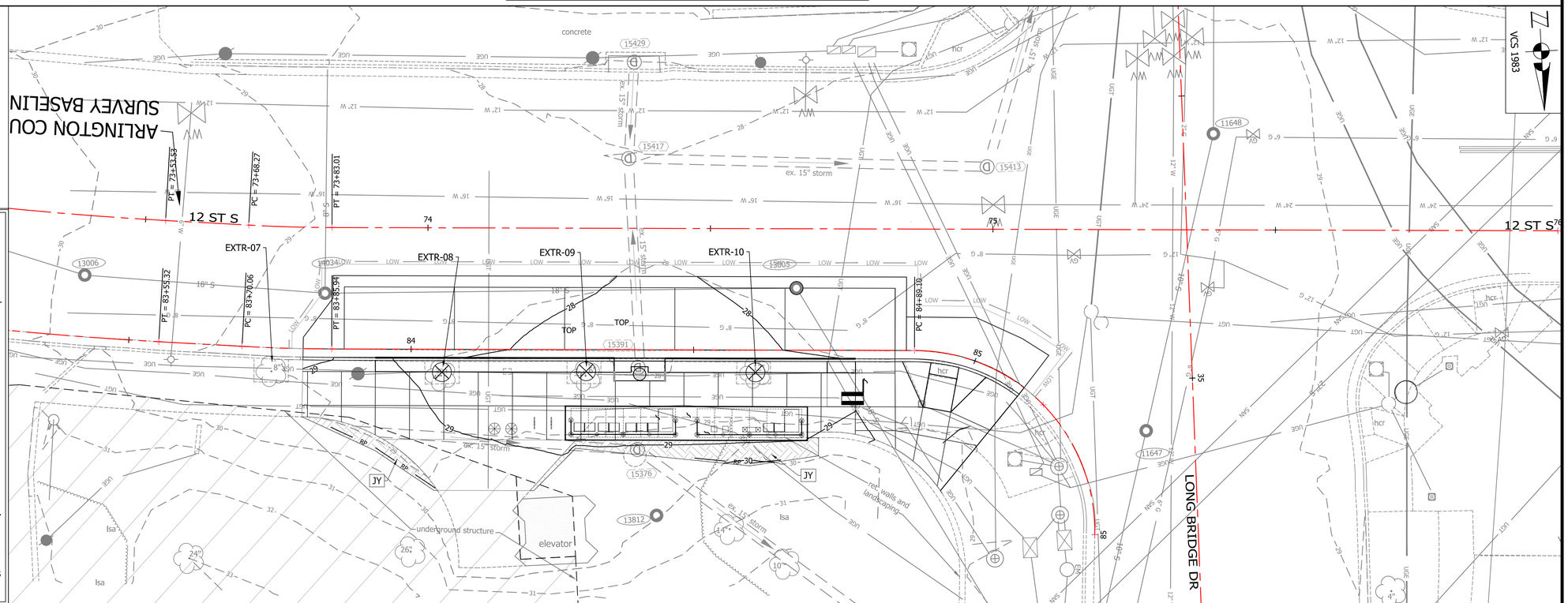
SHEET 22A OF 35



CRYSTAL DR NB & 15TH ST S INTERSECTION



12TH ST S WB & LONG BRIDGE DR INTERSECTION

LANDSCAPE NOTES:

1. CONTRACTOR SHALL FOLLOW LANDSCAPE REQUIREMENTS & GENERAL NOTES FOR STREET TREE PLANTING (DETAIL L1), SEE NEXT SHEET
2. ALL LANDSCAPING SHALL COMPLY WITH ARLINGTON COUNTY LANDSCAPE STANDARDS.
3. CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
4. CONTRACTOR TO CALL THE URBAN FORESTER AT 703-228-1863, 72 HOURS BEFORE PLANTING, TO SCHEDULE INSPECTION OF THE TREES TO BE PLANTED. WARRANTY FOR 1 YEAR AFTER PLANTING SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE URBAN FORESTER AND DPR IS RESPONSIBLE FOR INSPECTION.

LANDSCAPE LEGEND

JY — CONTRACTOR SHALL PLANT SHRUB AND RESTORE GROUND COVER, INCLUDING TOPSOIL, SEEDING OR MULCHING. SEE NEXT SHEET FOR PLANT SCHEDULE AND DETAIL L2.

T-R — CONTRACTOR SHALL RESTORE GROUNDCOVER AROUND EXISTING TREES. EXPOSED EARTH SHALL BE BACKFILLED WITH TOPSOIL, 3" OF MULCH ON THE TOP AND PLANTED WITH PLUGS OF THE SWITCHGRASS SPACED 1'X1'.

REVISED ON 11/08/2016

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WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
PROJECT MANAGER Diana Ueza	3/2/21

REVISIONS	DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

LANDSCAPE PLAN
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
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CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
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PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
10' 0 10'
HORIZONTAL: 1" = 10'

SHEET 23 OF 35

LANDSCAPE NOTES:

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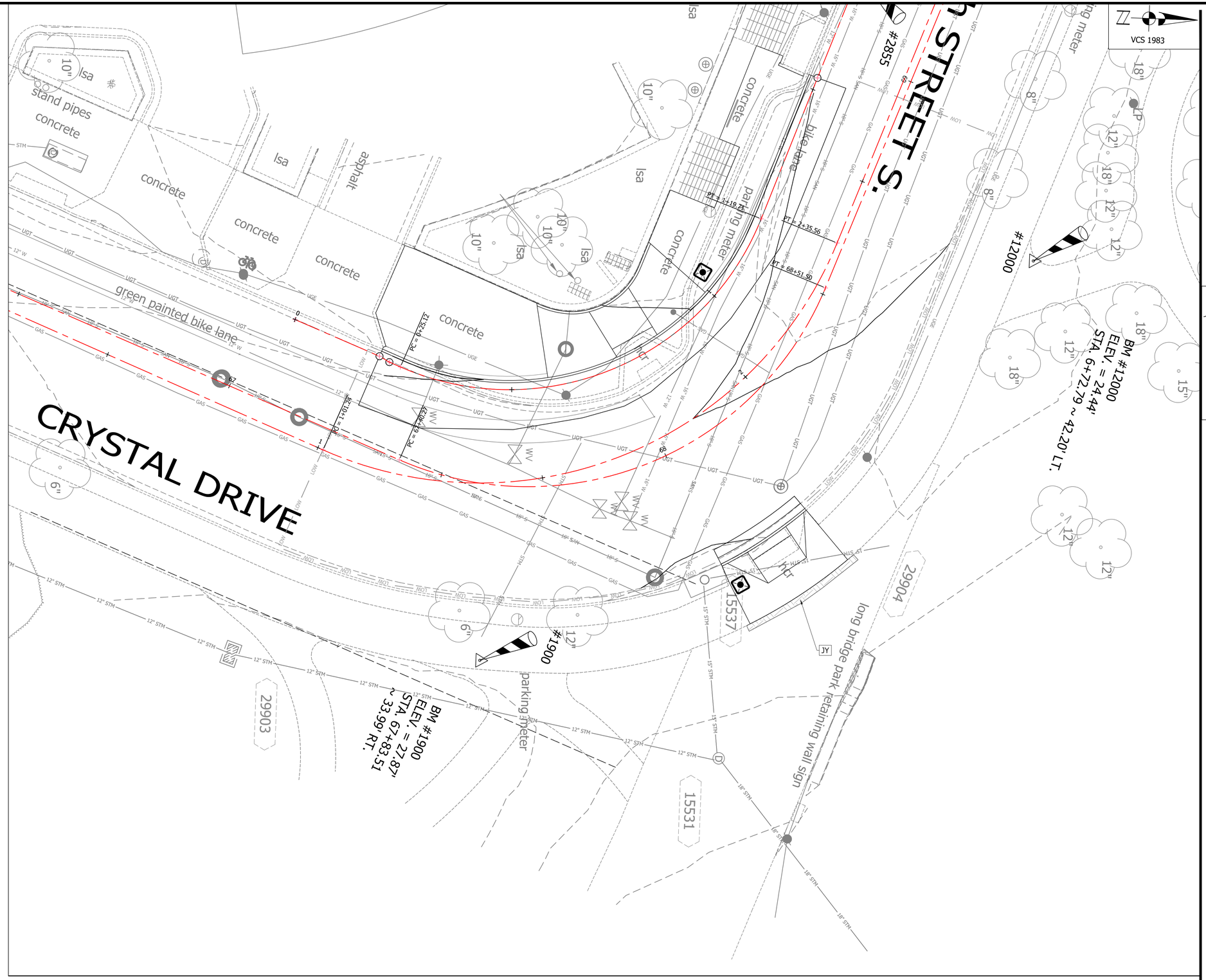

CRYSTAL DR NB & 12TH ST S TRANSITION

REVISED ON 11/08/2016

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PROJECT MANAGER	

REVISIONS	DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

LANDSCAPE PLAN
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
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PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
10' 0 10'
HORIZONTAL: 1" = 10'

LANDSCAPE REQUIREMENTS:

1. **BEFORE ANY GRADING, DEMOLITION, OR OTHER DISTURBANCE, TREE PROTECTION NEEDS TO BE INSTALLED PER PLAN, AND INSPECTED BY AN ARLINGTON COUNTY PARKS AND RECREATION URBAN FORESTER. EROSION AND SEDIMENT CONTROLS ARE INSPECTED BY THE DEPARTMENT OF ENVIRONMENTAL SERVICES.**
2. **PLANTS SHALL BE FURNISHED AND INSTALLED AS INDICATED, INCLUDING ALL PLANTS, MATERIALS, AND EQUIPMENT.**
3. **PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY; HAVE NORMAL GROWTH HABITS, WELL-DEVELOPED DENSELY FOLIATED BRANCHES, AND VIGOROUS ROOT SYSTEMS; AND BE FREE FROM DEFECTS AND INJURIES.**
4. **PLANTS SHALL BE PLANTED ON THE DAY OF DELIVERY IF/WHEN PRACTICAL. IN THE EVENT THAT THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT STOCK NOT PLANTED. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE-DAY PERIOD AFTER DELIVERY. ANY PLANTS NOT INSTALLED DURING THIS PERIOD SHALL BE REJECTED, UNLESS OWNER AND CONTRACTOR PROVIDE OTHERWISE BY WRITTEN AGREEMENT. ALL PLANTS KEPT ON SITE FOR ANY PERIOD OF TIME SHOULD BE WATERED AND CARED FOR USING ANSI A300 STANDARDS.**
5. **PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES. PLANTS SHALL BE HANDLED FROM THE BOTTOM OF THE ROOT BALL ONLY.**
6. **PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOP SOIL THAT IS IN MUDDY OR FROZEN CONDITION. LAWNS, TREES AND SHRUBS SHALL BE INSTALLED BETWEEN 03/15 AND 06/15 OR BETWEEN 09/15 AND 12/01. IF A PROJECT COMPLETION IS OUTSIDE OF THIS PLANTING PERIOD, CONTACT THE ARLINGTON COUNTY URBAN FORESTER TO OBTAIN A DEFERRAL OR APPROVAL FOR PLANTING OUT OF SEASON.**
7. **NO PLANT, EXCEPT GROUNDCOVERS, SHALL BE PLANTED WITHIN TWO FEET OF A SIDEWALK.**
8. **TREES AND SHRUBS SHALL BE PLANTED IN HOLES TWO TO THREE TIMES AS WIDE AND TO THE DEPTH OF THE ROOT BALL.**
9. **PLANTS SHALL BE PLANTED IN IN SITU SOIL THAT IS THOROUGHLY WATERED.**
10. **SET ALL PLANTS PLUMB AND STRAIGHT SET AT SUCH LEVEL THAT NORMAL OR NATURAL RELATIONSHIP BETWEEN THE PLANT AND THE GROUND SURFACE WILL BE ESTABLISHED. LOCATE THE PLANT IN THE CENTER OF THE PIT.**
11. **INJURED ROOTS SHALL BE PRUNED TO CLEAN ENDS BEFORE PLANTING WITH CLEAN, SHARP TOOLS. THE LEADER OF TREES SHALL NOT BE CUT BACK.**
12. **PRESERVED AND PLANTED TREES MUST BE INSPECTED AND APPROVED BY A DEPARTMENT OF PARKS AND RECREATION URBAN FORESTER.**
13. **ALL DISTURBED AREAS SHALL BE TREATED WITH 4" TOP SOIL OR COMPOST AND SEEDED IN ACCORDANCE WTH PERMANENT STABILIZATION METHODS INDICATED ON SOIL EROSION AND SEDIMENT CONTROL SHEET AND/OR LANDSCAPE PLAN.**

NOTES

1. 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.

2. TREE SPECIES SHALL BE SELECTED FROM THE "ARLINGTON COUNTY STREET TREE LIST" OR PER SECTOR PLAN REQUIREMENTS.

3. 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.

4. CALL MISS UTILITY AT (800) 552-7001 FOR UTILITY LOCATIONS PRIOR TO EXCAVATION.

5. 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.

6. TREE PIT AND TREE STRIP PLANTING AREA DIMENSIONS:
   (A) 5' X 12' OR LARGER IS STANDARD
   (B) 4' X 15' MINIMUM IS ALLOWED PER SITE CONDITIONS AND COUNTY URBAN FORESTER'S APPROVAL.

7. SPACE TREES 25'-30' APART OR PER SECTOR PLAN REQUIREMENTS OR SITE CONDITIONS.

8. 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.

9. 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.

10. 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.

11. TREES PLANTED WITHOUT THE TRUNK FLARE VISIBLE WILL BE REJECTED.

12. TREES MAY ONLY BE STAKED IF REQUIRED BY THE COUNTY URBAN FORESTER. REFER TO ARLINGTON COUNTY STANDARD STAKING DETAILS.

13. 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.

14. 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.

15. CONTRACTOR SHALL LEGALLY REMOVE EXCESS SOIL & DEBRIS FROM SITE.

GENERAL NOTES FOR STREET TREE PLANTINGS

FOR TREES PLANTED IN RIGHT-OF-WAY
329300.5 (2016) (02930.5)

ARLINGTON VIRGINIA DPR

NOTES

1. AT PLANTING PRUNE ONLY BROKEN OR DEAD BRANCHES PER ANSI 300 STANDARD.

2. PLANTING PIT/TRENCH SHALL BE DUG DEEP ENOUGH TO ALLOW AT LEAST 1/8TH OF ROOT BALL TO SET ABOVE EXISTING GRADE.

3. SET PLANTS IN ERECT, STABLE, AND UNIFORM POSITIONS IN THE CENTER OF THE PLANTING PIT. ORIENT BEST FACE OF PLANT TO BE THE MOST VISIBLE.

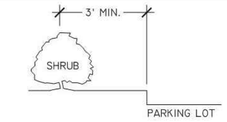
4. UNLESS OTHERWISE DIRECTED BY COUNTY URBAN FORESTER, BACKFILL SOIL MIXTURE WILL BE 3/4 EXISTING SOIL CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL(COMPOSTED BARK, LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY THE COUNTY URBAN FORESTER. **PEAT MOSS MAY NOT BE USE**D).

5. CONTRACTOR SHALL REMOVE EXCESS SOIL & DEBRIS FROM SITE.

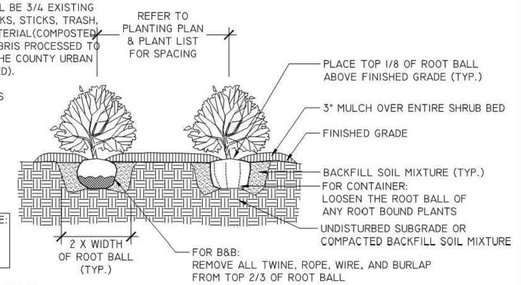
6. DO NOT PLACE MULCH IN CONTACT WITH STEM OF SHRUBS

THIS DETAIL SUPERSEDES ALL OTHER SHRUB PLANTING DETAILS IN ARLINGTON COUNTY.

ALL PLANTS MUST BE WATERED TWICE: ONCE AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION, PER THE SPECIFICATIONS.



TYPICAL SHRUB PLACEMENT NEAR PARKING LOTS
NOT TO SCALE



SHRUB PLANTING

ELEVATION
329300.8 (2016) (02930.8)

NOT TO SCALE

ARLINGTON VIRGINIA DPR

MA13 - Crystal City Transitway Extension
PLANT SCHEDULE

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
SHRUBS						
60	JY	SHENANDOAH SWITCHGRASS	PANICUM VIRGATUM	12"-18" Tall	3.0' O.C.	CONTAINER

MA13 - Crystal City Transitway Extension
TREE INVENTORY AND REPLACEMENT SCHEDULE

Ex Tree #	To Be Removed	DBH	Condition	Species	Common name	Species Rating	Replacement value	Replacements	Comments
01		6"	70	*Zelkova serrata*	Japanese Zelkova	75			Protect
02		6"	70	*Zelkova serrata*	Japanese Zelkova	75			Protect
03	X	8"	70	*Zelkova serrata*	Japanese Zelkova	75	1	1	
04	X	8"	70	*Zelkova serrata*	Japanese Zelkova	75	1	1	
05	X	8"	70	*Zelkova serrata*	Japanese Zelkova	75	1	1	
06		10"	60	*Zelkova serrata*	Japanese Zelkova	75			Protect
07		7"	30	*Zelkova serrata*	Japanese Zelkova	75			Protect
08	X	5"	80	*Zelkova serrata*	Japanese Zelkova	75	1	1	
09	X	7"	40	*Zelkova serrata*	Japanese Zelkova	75	1	1	
10	X	12"	70	*Zelkova serrata*	Japanese Zelkova	75	6.3	2	
							Total:	**7***	

***TREES REPLACEMENT TO BE INCLUDED IN CC08 CLARK-BELL EXTENSION TO 15TH STREET SOUTH PROJECT**

REVISED ON 11/08/2016

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PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
Kamal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Haza	3/2/21
PROJECT MANAGER	

REVISIONS DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

LANDSCAPE DETAILS
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

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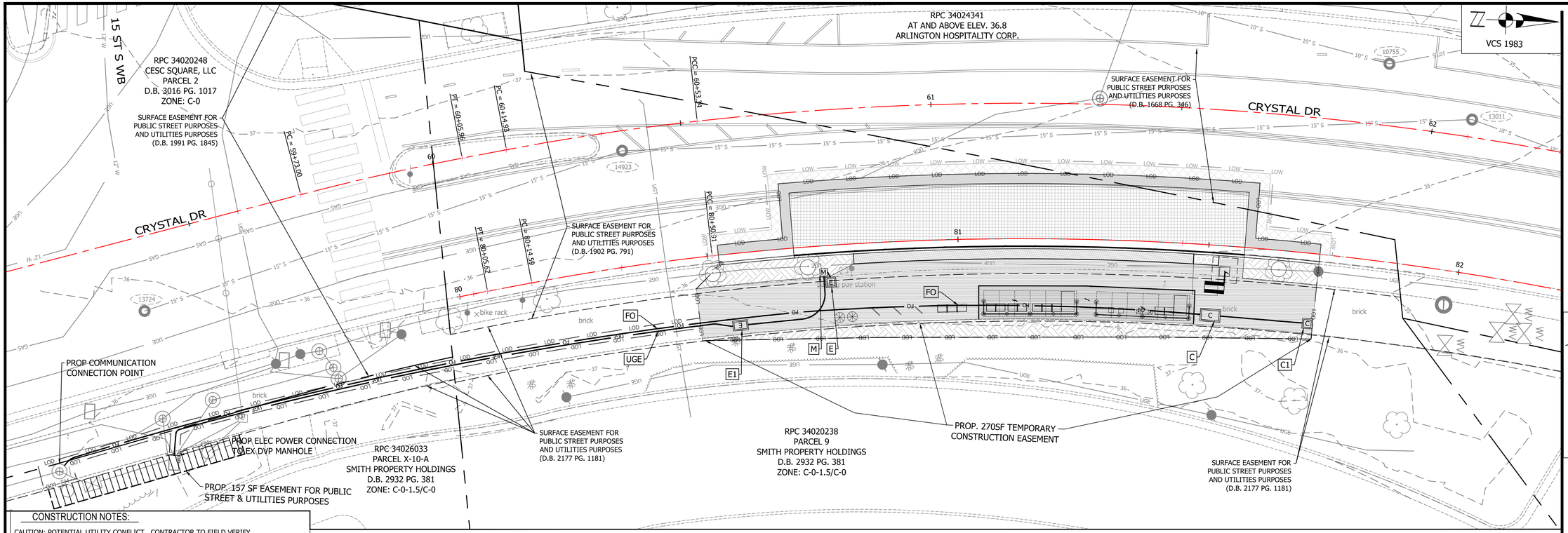
PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE: N/A

SHEET 24 OF 35



CONSTRUCTION NOTES:

CAUTION: POTENTIAL UTILITY CONFLICT. CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND DEPTH OF EXISTING UTILITY, SEE DEMOLITION PLAN FOR EXISTING TEST HOLES/PITS.

- UGE — CONTRACTOR SHALL FURNISH AND INSTALL 1-2" DIAMETER PVC OR HDPE ELECTRICAL CONDUIT PER ARLINGTON COUNTY TRAFFIC SIGNAL SPECIFICATIONS.
- FO — CONTRACTOR SHALL FURNISH AND INSTALL 4-2" DIAMETER PVC OR HDPE COMMUNICATION CONDUIT PER ARLINGTON COUNTY TRAFFIC SIGNAL SPECIFICATIONS
- E — CONTRACTOR SHALL INSTALL ELECTRICAL JUNCTION BOX - SMALL PER ARL STD 14040-01.
- E1 — CONTRACTOR SHALL INSTALL ELECTRICAL JUNCTION BOX - TYPE 3 PER ARL STD 61-04.
- C — CONTRACTOR SHALL INSTALL COMMUNICATION JUNCTION BOX - TYPE 4 PER ARL STD 61-04.
- C1 — CONTRACTOR SHALL INSTALL COMMUNICATION JUNCTION BOX PER ARL STD 61-01. TO BE INSTALLED IN BRICK SECTION WITH CONDUIT ENDS TO BE TURNED UP AND CAPPED
- M — METERED SERVICE PEDESTAL (METER TO BE PROVIDED BY DEV)

GENERAL NOTES:

1. SERVICE CONDUIT MUST BE INSTALLED WITH AT LEAST A 24" COVER BELOW FINAL GRADE. PRIMARY CONDUIT MUST BE INSTALLED WITH AT LEAST A 30" COVER BELOW FINAL GRADE (MAXIMUM 48" DEPTH). ALL CONDUITS, INCLUDING SPARES TERMINATING NEAR POLES OR AT BUILDINGS OR OTHER STRUCTURES SHALL BE PLUGGED TO PREVENT ENTRANCE OF FOREIGN MATERIAL. ALL CONDUITS SHALL BE SEALED TO PREVENT WATER FROM ENTERING.
2. WHEN USING PLASTIC CONDUIT, CONTRACTOR TO FOLLOW ARLINGTON COUNT SPECIFICATIONS.
3. CONDUIT INSTALLATION MUST BE INSPECTED BY DOMINION ENERGY AND ARLINGTON COUNTY DTS PERSONNEL PRIOR TO BACKFILLING. NOTIFICATION FORTY-EIGHT (48) HOURS PRIOR TO CONSTRUCTION IS REQUIRED.
4. PROPOSED CONDUIT RUNS, METER AND JUNCTION BOX LOCATIONS SHOWN AS APPROXIMATE. CONTRACTOR SHALL FIELD LOCATE CONDUIT ALIGNMENT, AND PLACE METER AND JUNCTION BOXES ACCORDINGLY.
5. CONTRACTOR SHALL RESTORE SIDEWALK PAVEMENT ASSOCIATED WITH UTILITY CUTS TO COMPLY WITH ARL STD M-6.0 AND PLAN CONSTRUCTION NOTES 2 OR 3 FOR BRICK PAVEMENT - SHEET 20.

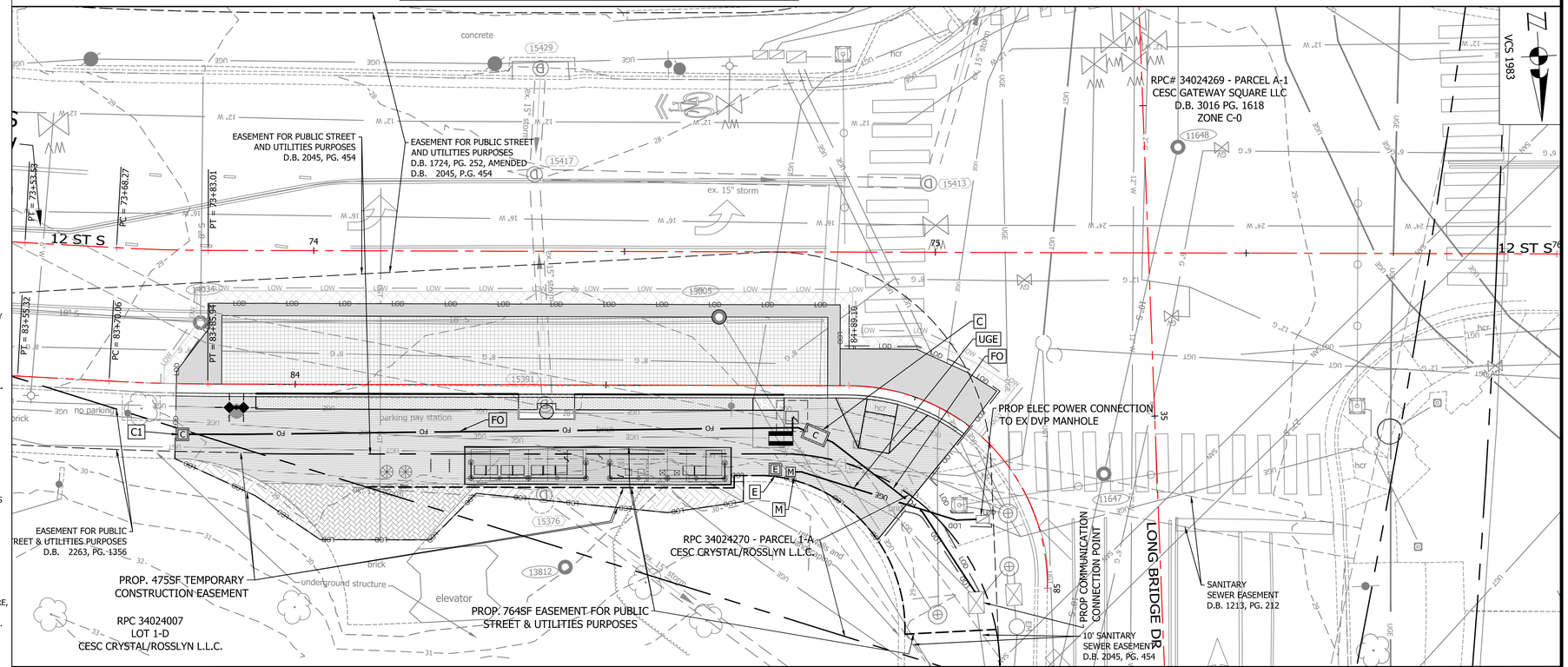
COMMUNICATIONS/FIBER NOTES:

1. ANY WORK TOUCHING EXISTING COUNTY FIBER INFRASTRUCTURE, INCLUDING CONDUIT RELOCATION AND OPENING OR ENTERING HANDHOLES SHALL BE PERFORMED BY ANY ONE OF THREE (3) COUNTY FIBER CONTRACTORS.
2. CONTRACTOR TO CONTACT THE ConnectArlington TEAM AT 703-228-7726 FOR A LIST OF AUTHORIZED CONTRACTORS, AND TO SCHEDULE FIBER CONSTRUCTION AND RELATED INSPECTION OF HANDHOLES FOR CONDUIT INSTALLATION. CONTACT ARLINGTON COUNTY PROJECT OFFICER FOR FIBER OPTIC CABLE REMOVAL OR INSTALLATION AT LEAST 10 BUSINESS DAYS IN ADVANCE.
3. ALL FIBER-OPTIC CABLE INSTALLATION, REMOVAL, SPLICING, AND TESTING SHALL BE PERFORMED BY ARLINGTON COUNTY'S FIBER-OPTIC CONTRACTOR.
4. CONTRACTOR SHALL FURNISH FIBER PATCH PANEL FOR INSTALLATION BY THE COUNTY. FIBER PIGTAIL SHALL BE APPROPRIATE LENGTH TO ALLOW FOR 50' SLACK IN EACH INTERMEDIATE JUNCTION BOX. CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PATCH PANEL (INDICATING THE TAIL LENGTH) TO THE PROJECT OFFICER FOR COUNTY REVIEW PRIOR TO ORDERING.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF PROPOSED JUNCTION BOXES AND CONDUITS INCLUDING ALL APPURTENANCES SUCH AS GROUND RODS, TRACER WIRE, PULL TAPE, ETC.
6. FIBER OPTIC CONDUIT MUST BE INSTALLED WITH AT LEAST A 36" COVER BELOW FINAL GRADE.
7. ALL NEW CONDUITS SHALL HAVE PULL TAPE INSTALLED BETWEEN JUNCTION BOXES AND TRACER WIRE INSTALLED WITHIN OR BESIDE AT LEAST ONE OF THE CONDUITS. TRACER WIRE SHALL BE CONNECTED TO THE GROUND RODS INSTALLED IN THE ADJACENT JUNCTION BOXES.
8. DO NOT SPLICE TRACER WIRE.

REFER TO THE APPROVED BUILDING PLANS FOR ELECTRICAL CONDUIT TO THE STATION AND ITS FURNISHINGS

REVISED ON 11/08/2016

CRYSTAL DR NB & 15TH ST S INTERSECTION



12TH ST S WB & LONG BRIDGE DR INTERSECTION

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

SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER — Kamal Taktak	3.24.21
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WATER, SEWER, STREETS BUREAU CHIEF — Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
PROJECT MANAGER — Diana Ueza	3/2/21

REVISIONS	DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

UTILITY PLAN
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

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PLOTTED BY:NSHARP

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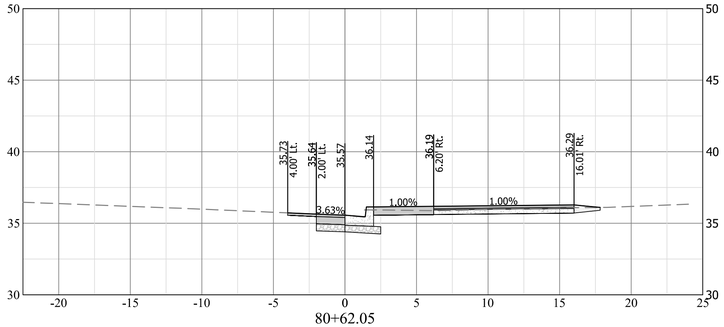
HORIZONTAL: 1" = 10'

SHEET 25 OF 35



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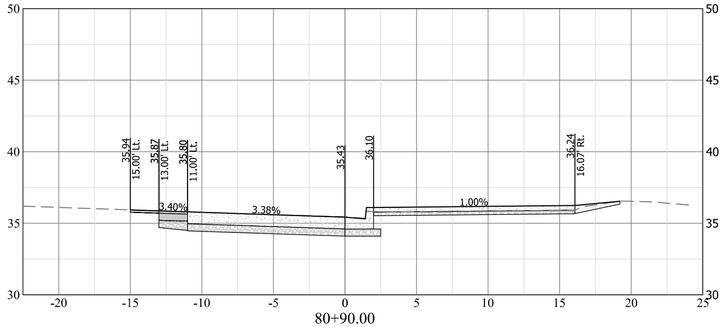

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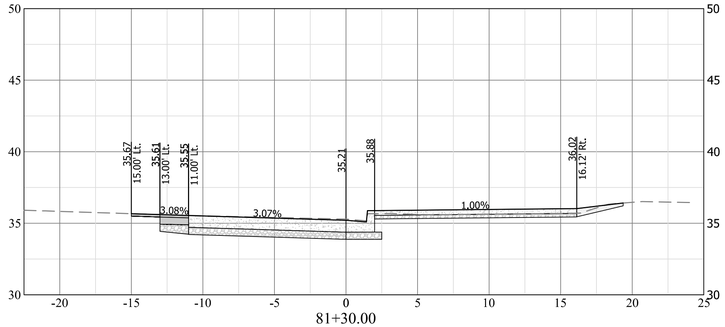

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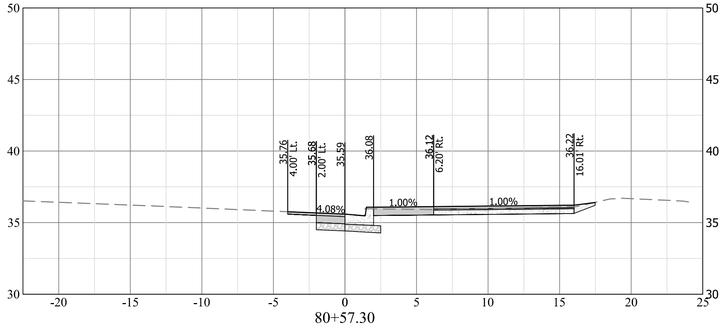

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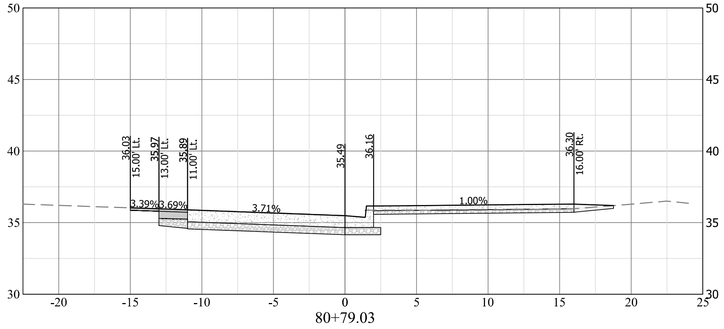

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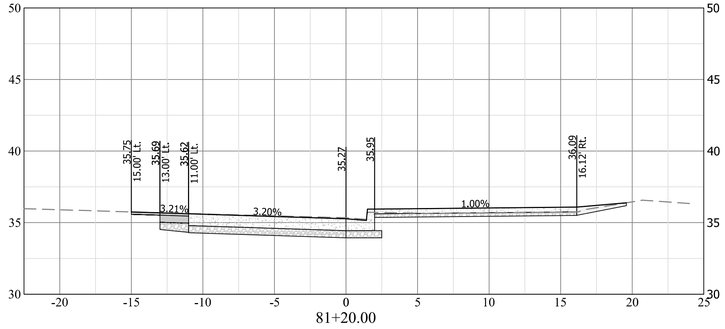

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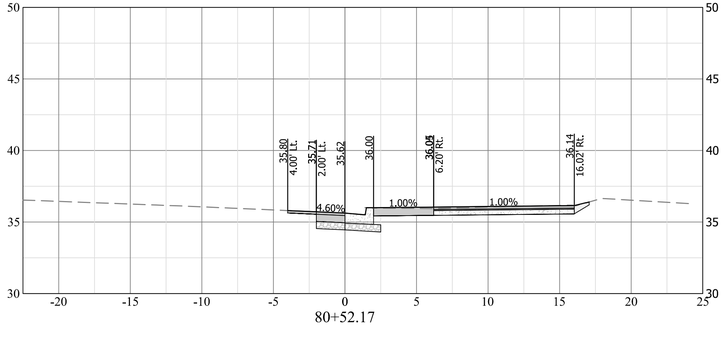

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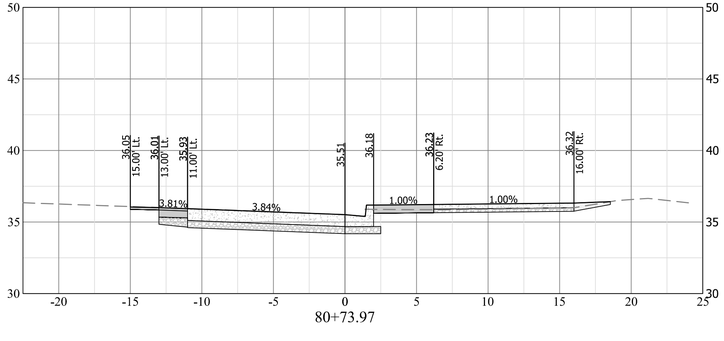

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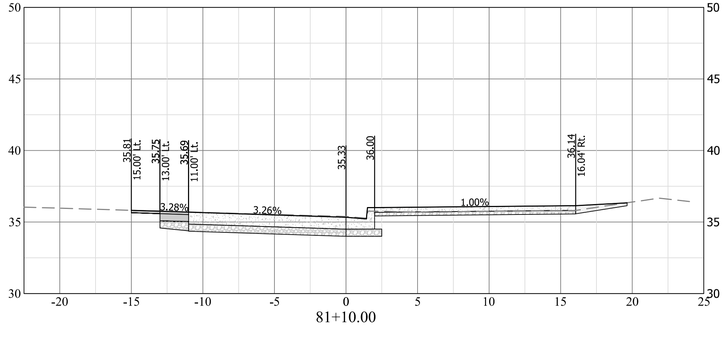

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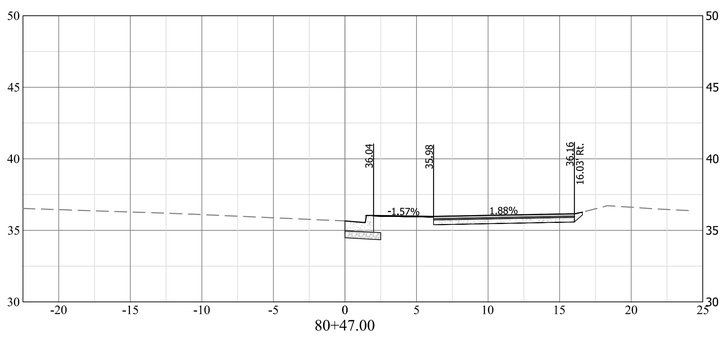

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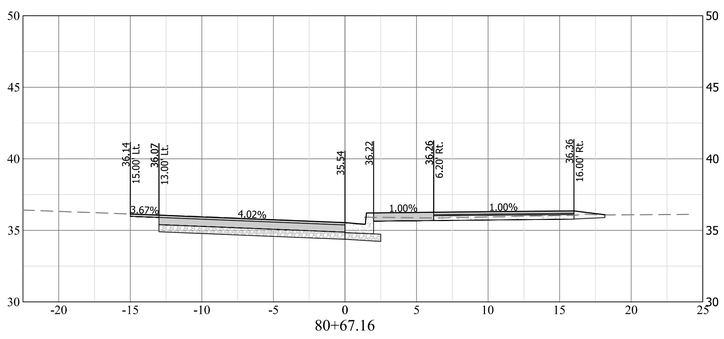

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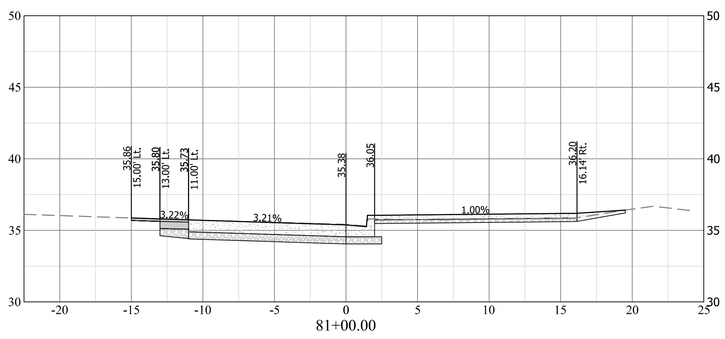

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CRYSTAL DR NB & 15TH ST S INTERSECTION

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REVISED ON 11/08/2016

ARLINGTON
VIRGINIA

DEPARTMENT OF
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ENGINEERING BUREAU
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ARLINGTON, VA 22201
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FAX: 703.228.3606

SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
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	03.04.2021
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Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Ikaza	3/2/21
PROJECT MANAGER	

REVISIONS DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

CROSS SECTIONS
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
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PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
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HORIZONTAL: 1" = 5'
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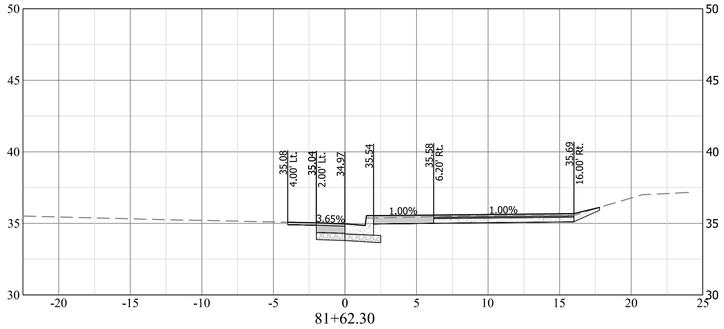
VERTICAL: 1" = 5'

SHEET 26 OF 35



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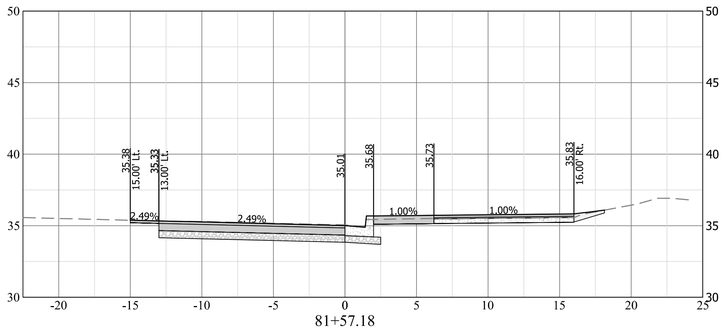

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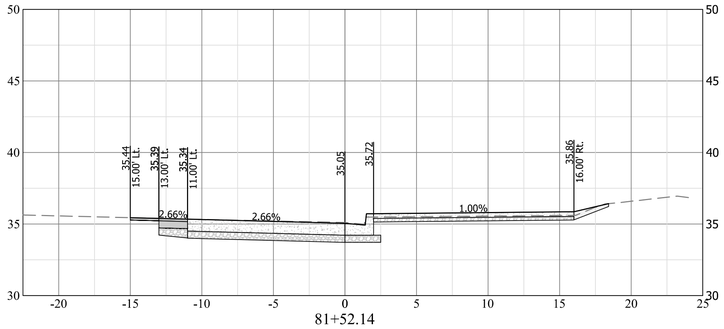

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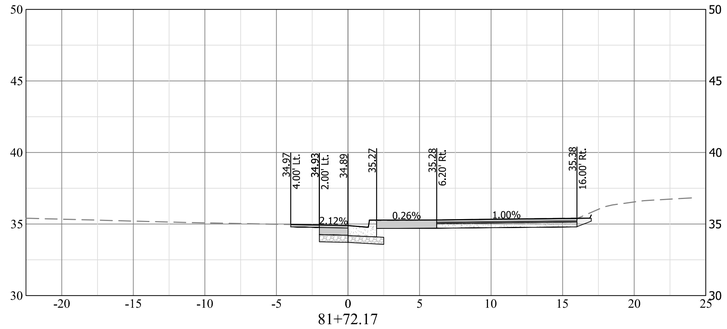

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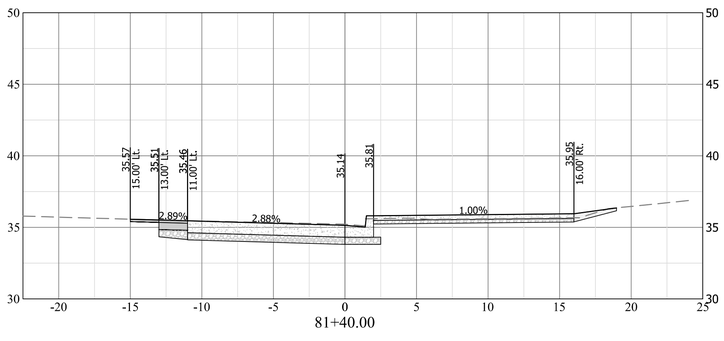

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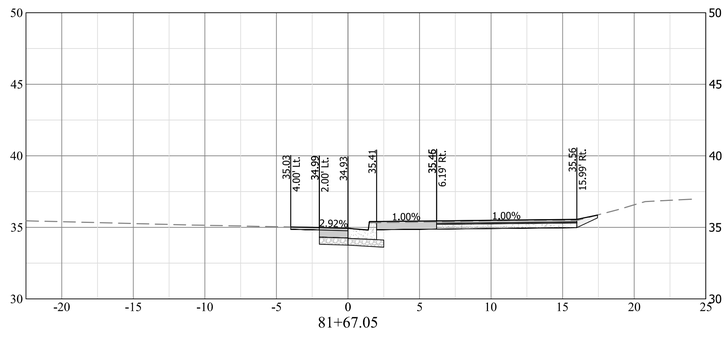

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CRYSTAL DR NB & 15TH ST S INTERSECTION

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REVISED ON 11/08/2016

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SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
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8/4/2021
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TRANSPORTATION DIRECTOR	
Diana Ueza PROJECT MANAGER	3/2/21

REVISIONS DATE

PROJECT NAME AND LOCATION
TRANSITWAY EXTENSION TO PENTAGON CITY

CROSS SECTIONS
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

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PLOTTED BY:NSHARP

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HORIZONTAL: 1" = 5'
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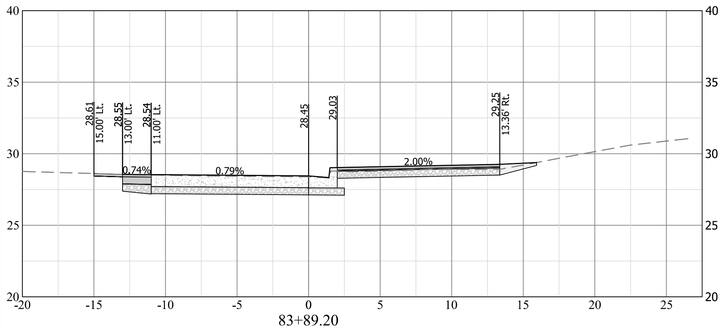
VERTICAL: 1" = 5'

SHEET 27 OF 35



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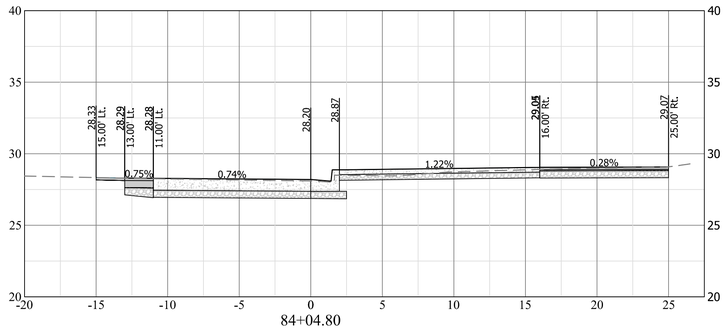

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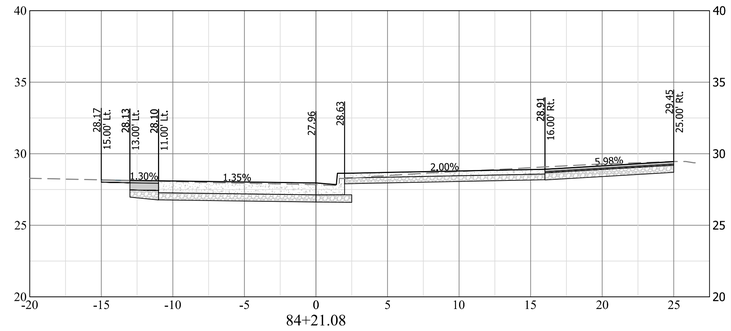

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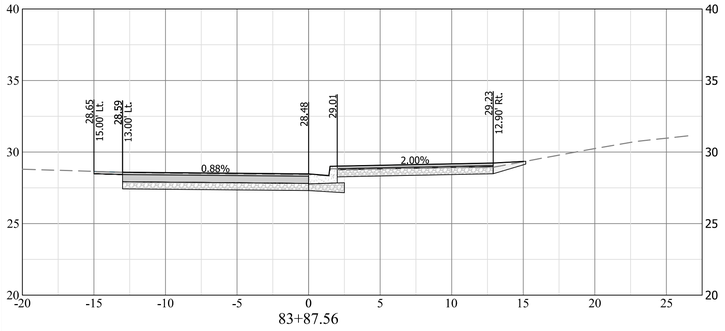

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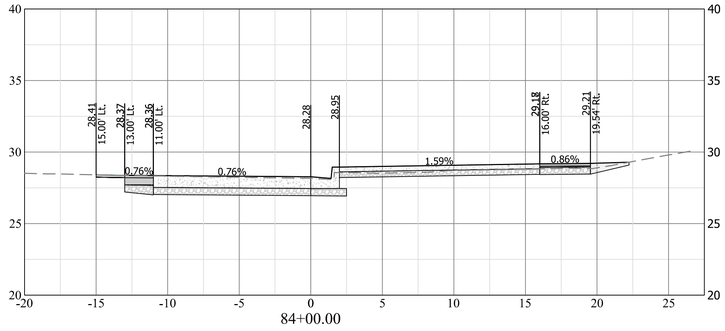

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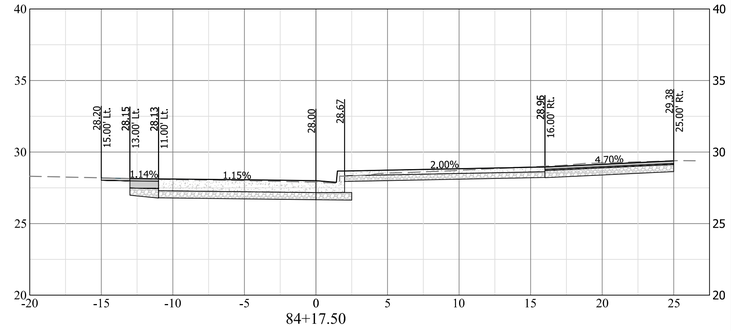

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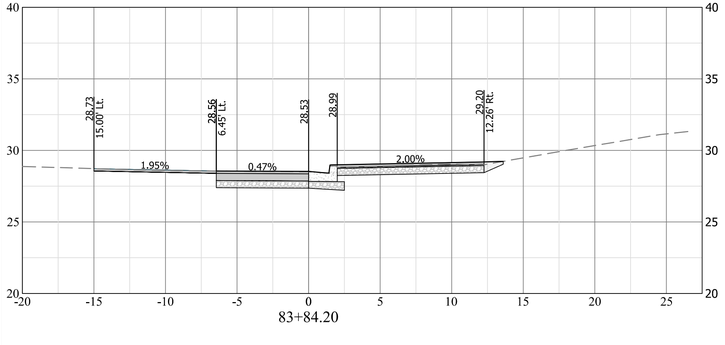

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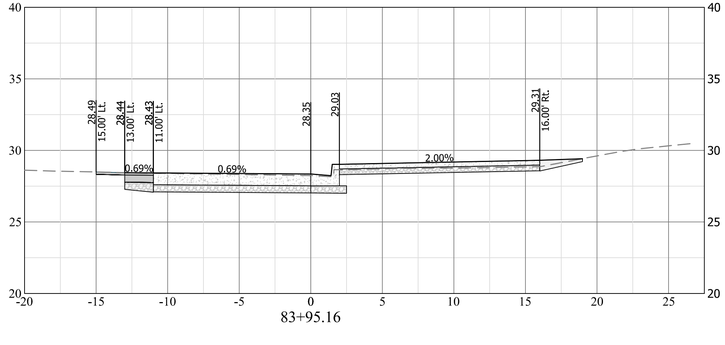

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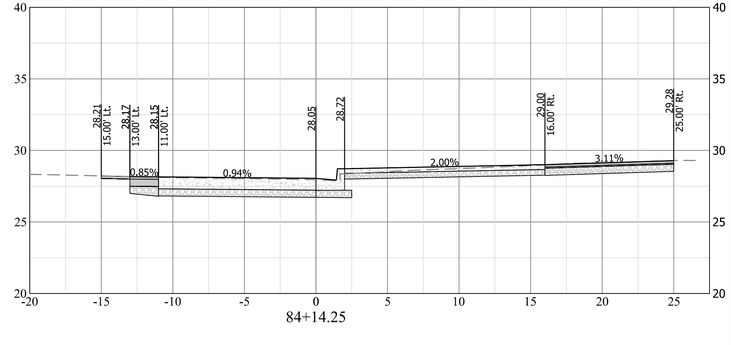

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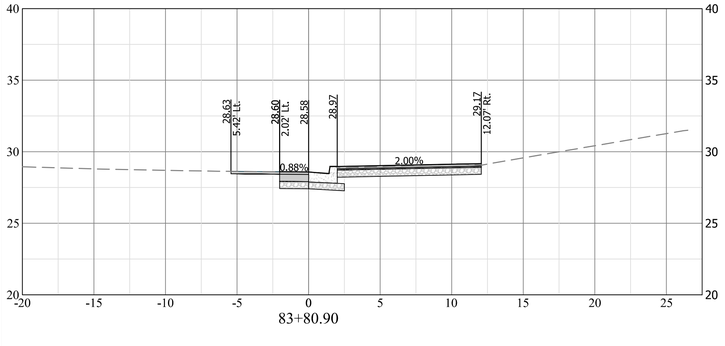

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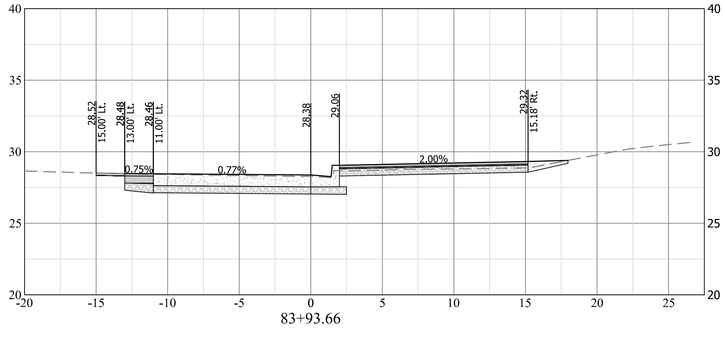

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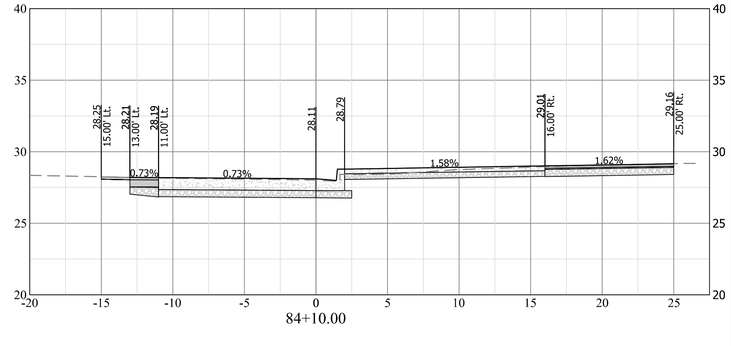

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12TH ST S WB & LONG BRIDGE DR INTERSECTION

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CROSS SECTIONS
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
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PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
5' 0 5'
HORIZONTAL: 1" = 5'
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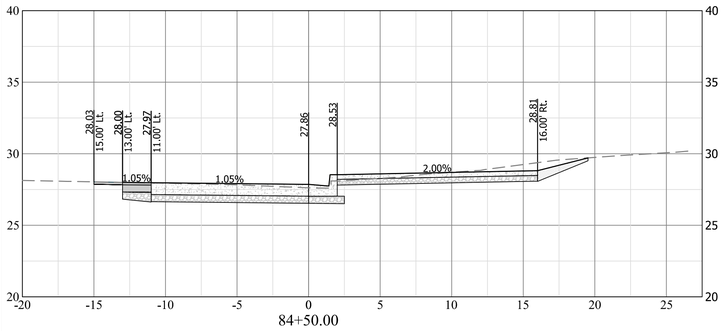
VERTICAL: 1" = 5'

SHEET 28 OF 35

CRYSTAL CITY TRANSITWAY EXTENSION - CRYSTAL DR & 12TH ST S



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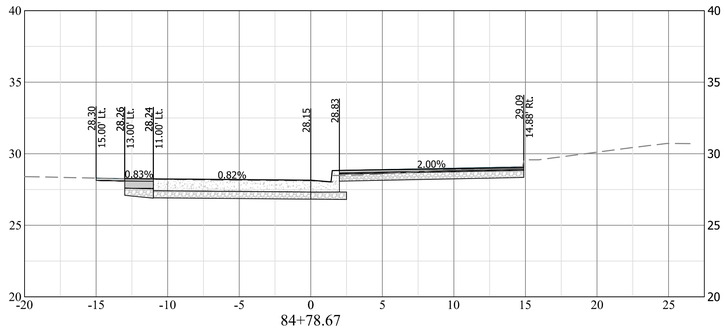

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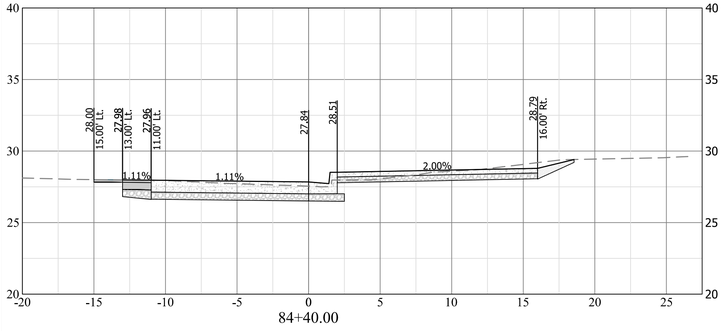

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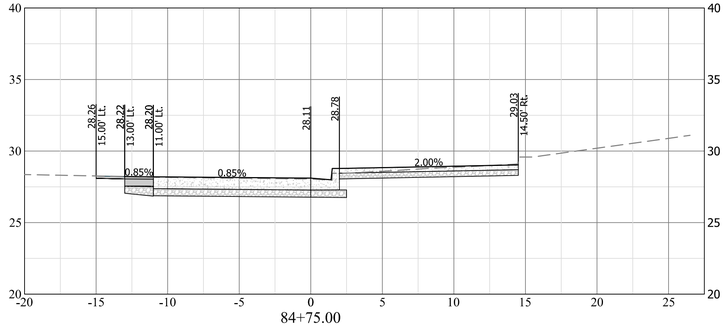

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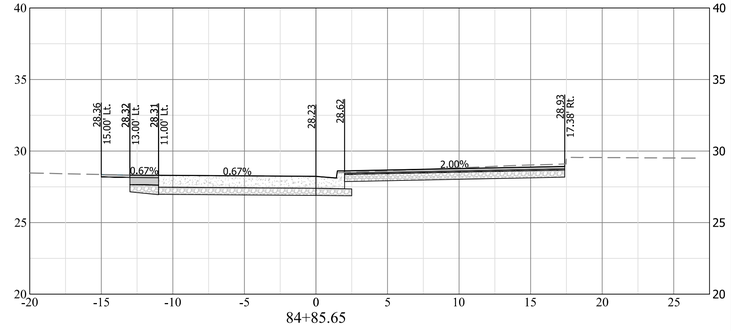

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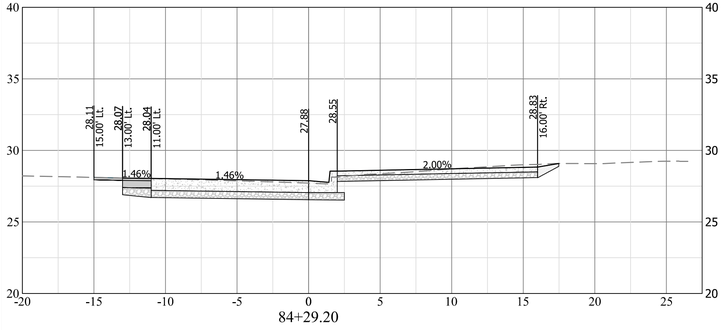

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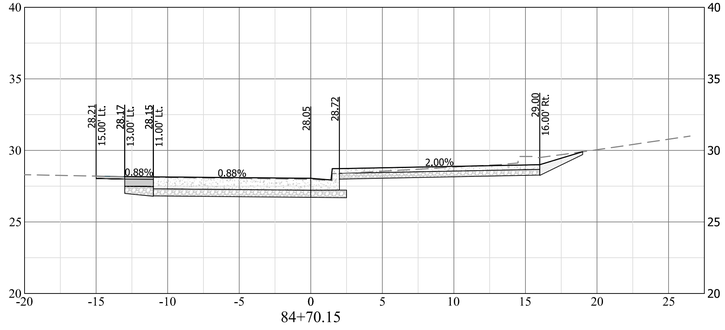

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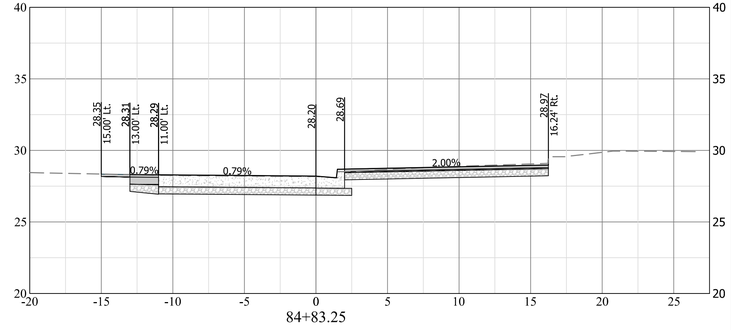

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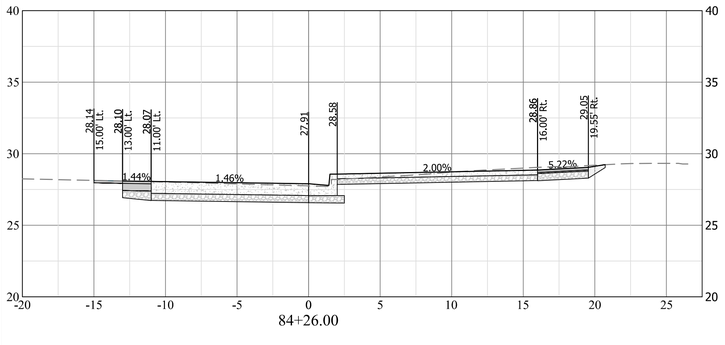

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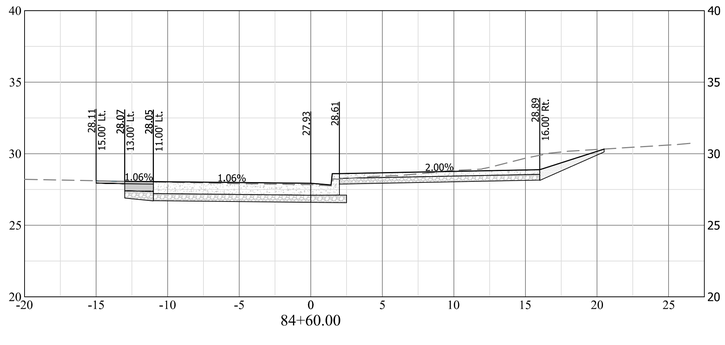

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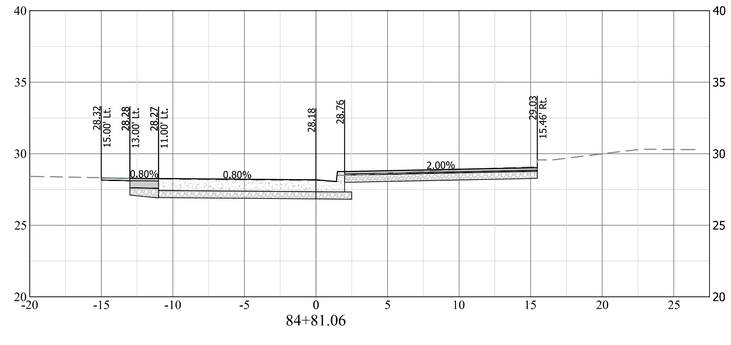

84+81.06

12TH ST S WB & LONG BRIDGE DR INTERSECTION

NOTE: PAVEMENT AND SIDEWALK SECTIONS ARE SHOWN ON THIS SHEET FOR INFORMATIONAL PURPOSES ONLY. SEE SHEET 04 FOR PAVEMENT AND SIDEWALK TYPICAL SECTIONS. SEE PLAN AND PROFILE SHEETS FOR EXTENTS OF PROPOSED PAVEMENT AND SIDEWALK.

REVISED ON 11/08/2016

ARLINGTON
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COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
Ramal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Ueza	3/2/21
PROJECT MANAGER	

REVISIONS DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

CROSS SECTIONS
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

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CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

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PLOTTED BY:NSHARP

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HORIZONTAL: 1" = 5'
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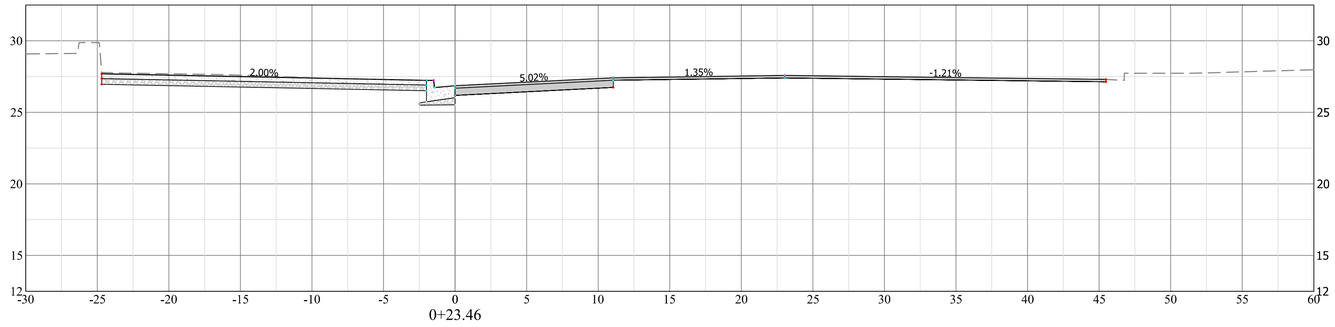
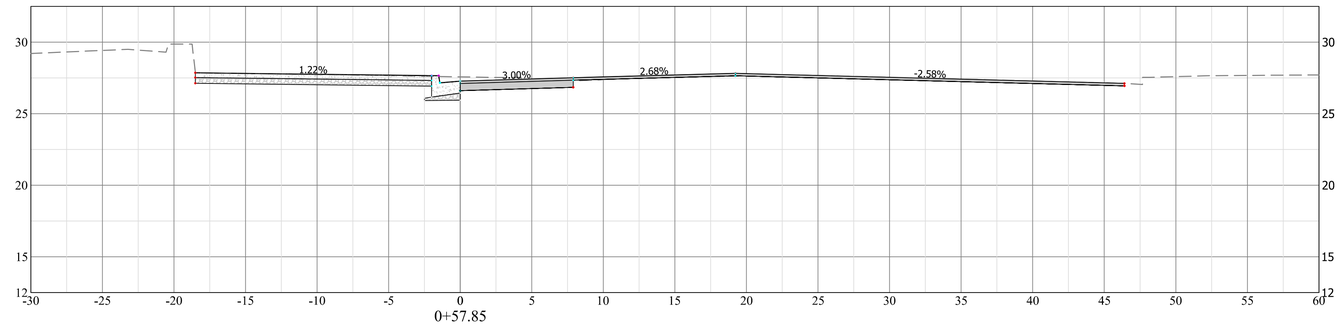
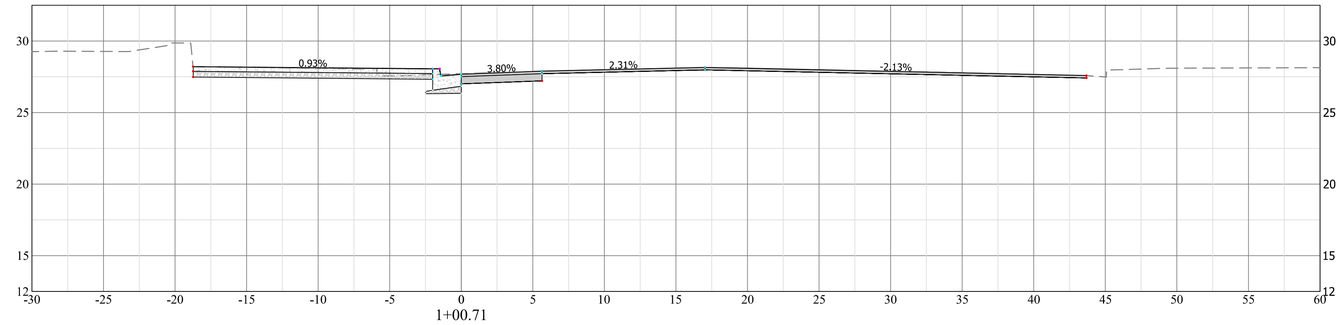
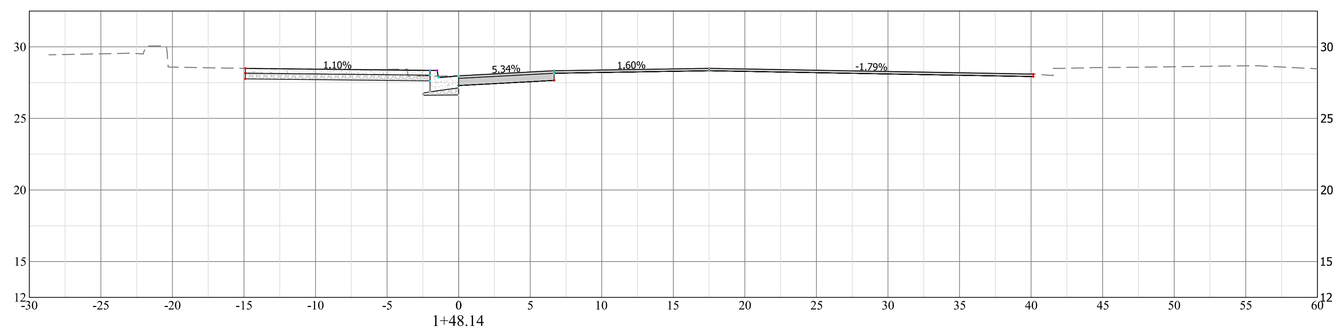
VERTICAL: 1" = 5'

SHEET 29 OF 35









12TH ST S & CRYSTAL DRIVE TRANSITION

NOTE: PAVEMENT AND SIDEWALK SECTIONS ARE SHOWN ON THIS SHEET FOR INFORMATIONAL PURPOSES ONLY. SEE SHEET 04 FOR PAVEMENT AND SIDEWALK TYPICAL SECTIONS. SEE PLAN AND PROFILE SHEETS FOR EXTENTS OF PROPOSED PAVEMENT AND SIDEWALK.

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COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
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8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
Kamal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Ueza	3/2/21
PROJECT MANAGER	

REVISIONS	DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

CROSS SECTIONS
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT 1

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DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

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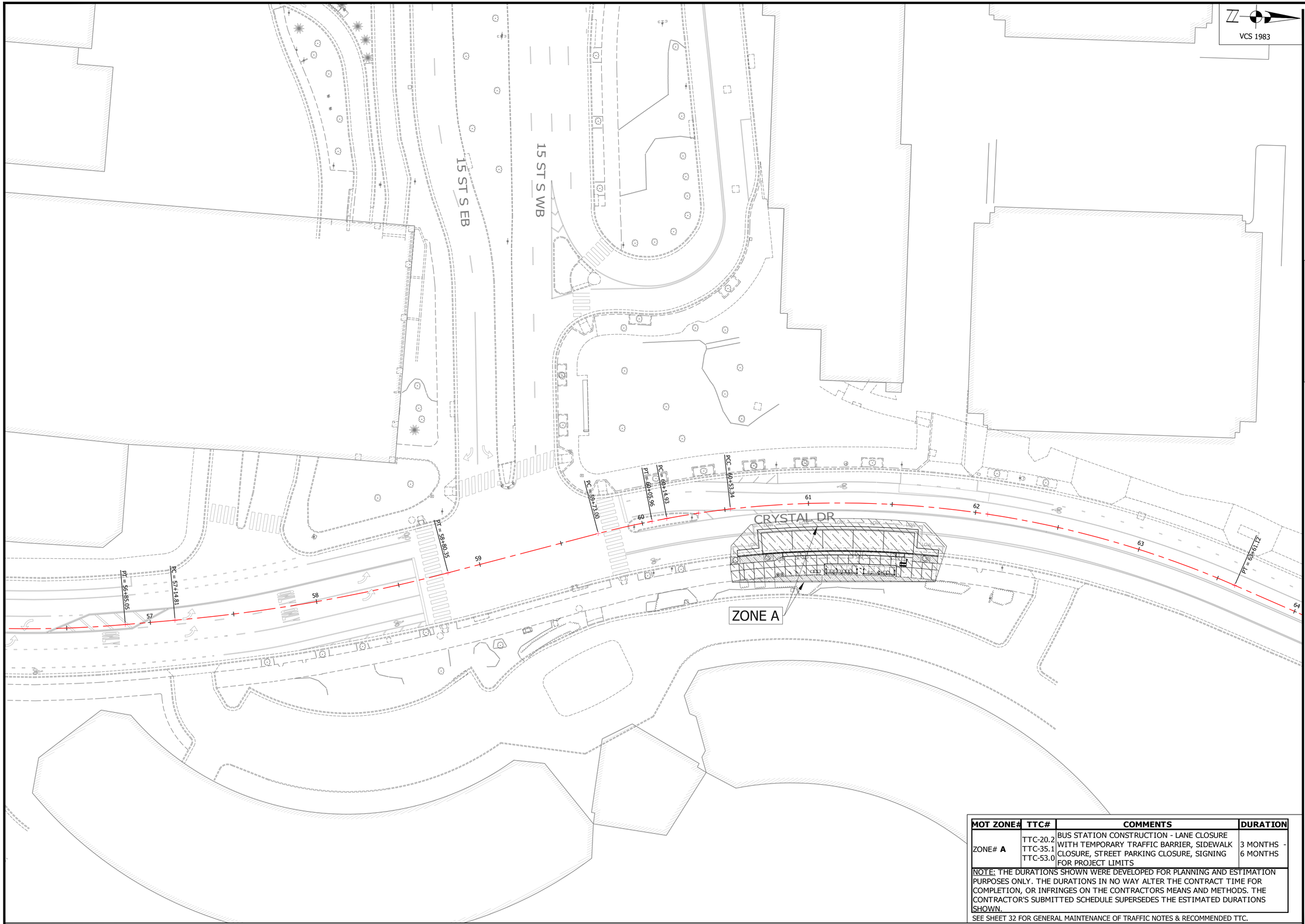

VCS 1983

MOT ZONE#	TTC#	COMMENTS	DURATION
ZONE# **A**	TTC-20.2 TTC-35.1 TTC-53.0	BUS STATION CONSTRUCTION - LANE CLOSURE WITH TEMPORARY TRAFFIC BARRIER, SIDEWALK CLOSURE, STREET PARKING CLOSURE, SIGNING FOR PROJECT LIMITS	3 MONTHS - 6 MONTHS

NOTE: 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.

SEE SHEET 32 FOR GENERAL MAINTENANCE OF TRAFFIC NOTES & RECOMMENDED TTC.

CRYSTAL DR NB & 15TH ST S INTERSECTION

REVISED ON 11/08/2016

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PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER Ramal Taktak	3/29/21 3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Ueza PROJECT MANAGER	3/2/21

REVISIONS	DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

MOT PLAN
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
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CHECKED: TL
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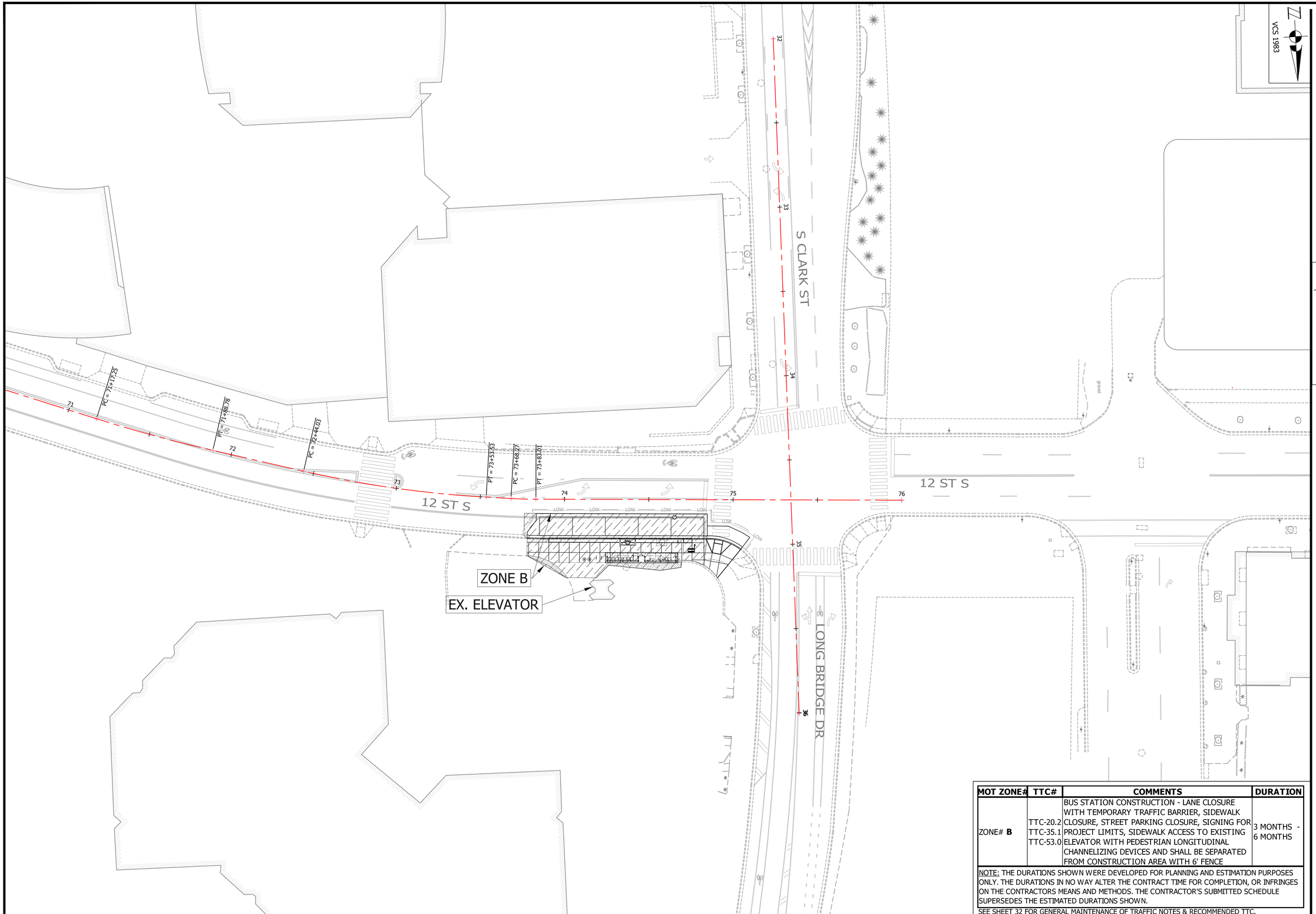
SHEET 30 OF 35



MOT ZONE#	TTC#	COMMENTS	DURATION
ZONE# **B**	TTC-20.2 TTC-35.1 TTC-53.0	BUS STATION CONSTRUCTION - LANE CLOSURE WITH TEMPORARY TRAFFIC BARRIER, SIDEWALK CLOSURE, STREET PARKING CLOSURE, SIGNING FOR PROJECT LIMITS, SIDEWALK ACCESS TO EXISTING ELEVATOR WITH PEDESTRIAN LONGITUDINAL CHANNELIZING DEVICES AND SHALL BE SEPARATED FROM CONSTRUCTION AREA WITH 6' FENCE	3 MONTHS - 6 MONTHS

NOTE: 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.

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12TH ST S WB & LONG BRIDGE DR INTERSECTION

REVISED ON 11/08/2016

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APPROVALS	DATE
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Kamal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Haza	3/2/21
PROJECT MANAGER	

REVISIONS DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

MOT PLAN
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

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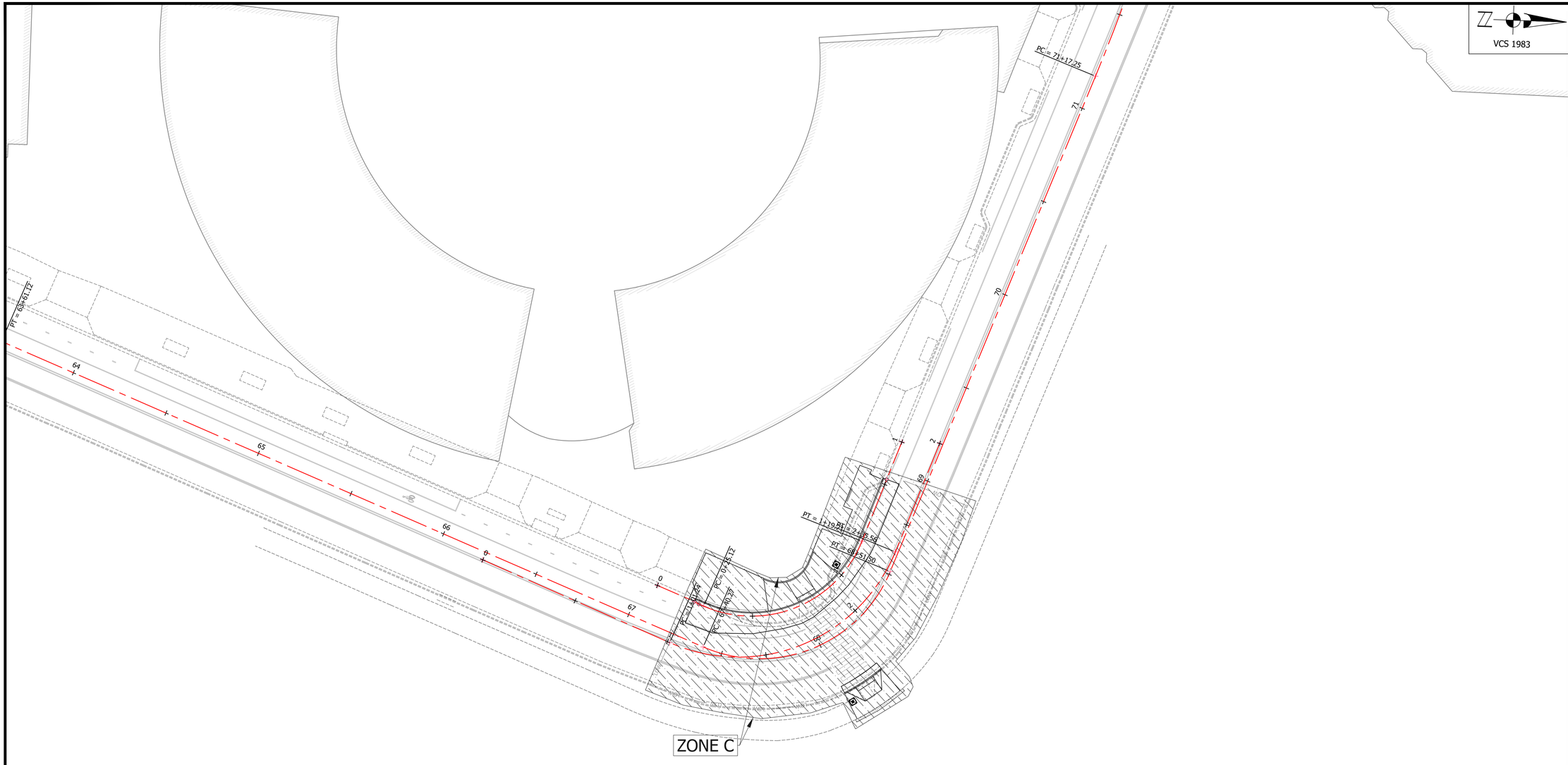
SHEET 31 OF 35



MOT ZONE#	TTC#	COMMENTS	DURATION
ZONE# **B**	TTC-20.2 TTC-35.1 TTC-53.0	BUS STATION CONSTRUCTION - LANE CLOSURE WITH TEMPORARY TRAFFIC BARRIER, SIDEWALK CLOSURE, STREET PARKING CLOSURE, SIGNING FOR PROJECT LIMITS, SIDEWALK ACCESS TO EXISTING ELEVATOR WITH PEDESTRIAN LONGITUDINAL CHANNELIZING DEVICES AND SHALL BE SEPARATED FROM CONSTRUCTION AREA WITH 6' FENCE	3 MONTHS - 6 MONTHS

NOTE: 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.

SEE SHEET 32 FOR GENERAL MAINTENANCE OF TRAFFIC NOTES & RECOMMENDED TTC.

REVISED ON 11/08/2016

CRYSTAL DR & 12TH ST S TRANSITION

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QUALITY CONTROL ENGINEER — Kamal Taktak	3/29/21 3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF — Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
PROJECT MANAGER — Diana Ueza	3/2/21

REVISIONS DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

MOT PLAN
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

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PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE:
25' 0 25'
HORIZONTAL: 1" = 25'

GENERAL MAINTENANCE OF TRAFFIC NOTES:

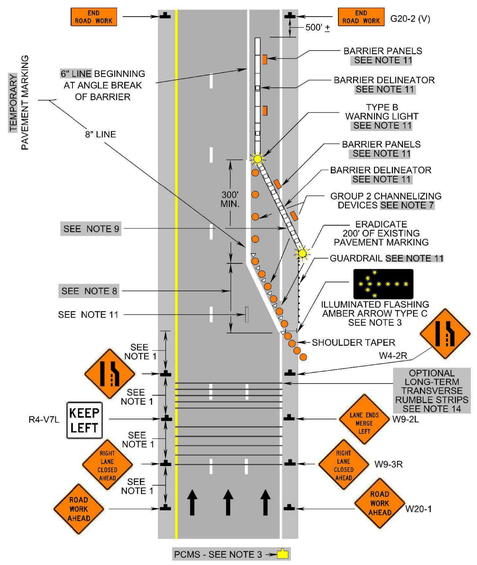
1. TRAFFIC CONTROL DEVICES AND SAFETY MEASURES SHALL COMPLY WITH THE VIRGINIA WORK AREA PROTECTION MANUAL, VDOT's GUIDELINES FOR TEMPORARY TRAFFIC CONTROL, FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, ARLINGTON COUNTY STANDARDS, THE TRAFFIC CONTROL PLANS INCLUDED IN THE CONSTRUCTION DRAWINGS, AND/OR AS DIRECTED BY THE PROJECT OFFICER.
2. 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 PROJECT OFFICER A MINIMUM OF 3 BUSINESS DAYS IN ADVANCE OF PROCEEDING TO THE NEXT WORK SEGMENT.
3. THE CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER OF PARKING RESTRICTION NEEDS A MINIMUM OF 3 BUSINESS DAYS PRIOR TO COMMENCEMENT OF WORK FOR EACH SEGMENT. COUNTY PROJECT OFFICER SHALL RESTRICT PARKING BY CONTACTING DES - PERMITTING SECTION, 703-228-4798.
4. 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.
5. 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 PROJECT OFFICER. THE PROJECT OFFICER 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.
6. ANY EXCAVATIONS WHICH ARE SPECIFICALLY APPROVED BY THE PROJECT OFFICER 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 AND AS APPROVED BY THE PROJECT OFFICER.
7. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, INCLUDING ACCESS TO BUS STOP SHELTERS, UNLESS OTHERWISE APPROVED IN THE PLANS.
8. PEDESTRIAN TRAFFIC SHALL BE SEPARATED FROM WORK ZONES WITH APPROPRIATE MEASURES IN ACCORDANCE WITH MUTCD.
9. ADEQUATE PROVISIONS FOR PERSONS WITH DISABILITIES SHALL BE PROVIDED AT ALL TIMES PER ADA REQUIREMENTS.
10. 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 MIDBLOCK WORK SITES.
11. PEDESTRIANS SHALL NOT BE LED INTO CONFLICT WITH WORK SITE EQUIPMENT, OPERATIONS, AND/OR VEHICLES MOVING THROUGH OR AROUND THE WORK SITE.
12. 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.
13. 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.
14. 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 FIRED 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.
15. THE CONTRACTOR SHALL NOTIFY ARLINGTON COUNTY TRANSIT BUREAU, 703-228-3049, A MINIMUM OF 4 WEEKS PRIOR TO COMMENCEMENT OF WORK, IF TRANSIT IS AFFECTED.
16. 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.
17. IN ARLINGTON COUNTY RIGHT-OF-WAY, WORK HOURS ARE RESTRICTED TO 9 AM TO 4 PM (MON-FRI).
18. IN VDOT RIGHT-OF-WAY, WORK HOURS ARE RESTRICTED TO 9:30 AM TO 3 PM (MON-THUR.) AND 9:30 AM TO 2 PM (FRI.).
19. ALL LANES SHALL BE FULLY OPEN TO TRAFFIC OUTSIDE THE ABOVE HOURS UNLESS SPECIFIED OTHERWISE IN THE MAINTENANCE OF TRAFFIC PLANS.
20. CONTRACTOR SHALL COVER ANY EXISTING SIGNS WHICH ARE NOT APPLICABLE OR ARE IN CONFLICT WITH THIS MOT PLAN.
21. 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.
22. CONTRACTOR SHALL ERADICATE ALL TEMPORARY PAVEMENT MARKING, INCLUDING TEMPORARY MARKED CROSSWALKS ONCE THE WORK AREA(S) ASSOCIATED WITH THE MARKINGS HAS BEEN COMPLETED.
23. TEMPORARY SIGNS AND BARRIERS ARE NOT TO BE PLACED WHERE THEY WOULD OBSTRUCT PEDESTRIAN PASSAGE ON SIDEWALKS, UNLESS SUCH SIGNAGE OR BARRIER IS INTENDED TO CLOSE THE SIDEWALK SEGMENT.
24. SIDEWALK AND BIKE LANE CLOSURES ARE TO BE COORDINATED WITH THE CONSTRUCTION MANAGER AND TE&O PRIOR TO IMPLEMENTATION.
25. ACCESS TO LONG BRIDGE PARK ESPLANADE IS TO BE MAINTAINED AT ALL TIMES.

ALL AND ANY TEMPORARY STRIPING DUE TO MAINTENANCE OF TRAFFIC OPERATIONS PART OF THIS PROJECT SHALL BE INCLUDED AS PART OF THE PROJECT COST.

SEE SHEET 30-31A FOR CONSTRUCTION ZONES.

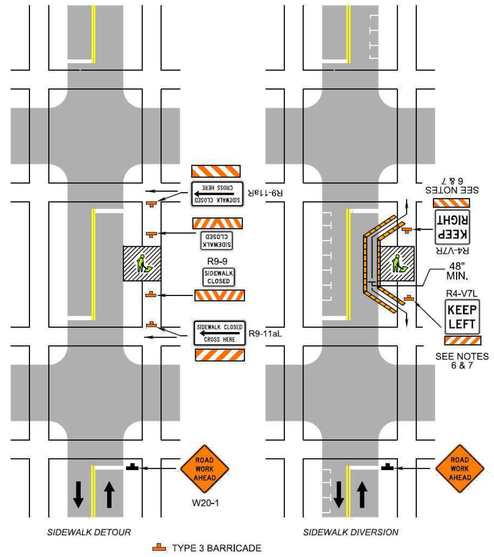
REVISED ON 11/08/2016

Lane Closure Operation with Temporary Traffic Barrier [1]
(Figure TTC-20.2)



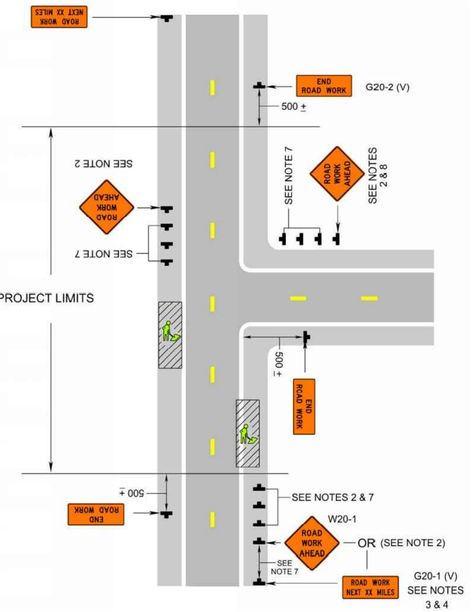
1: Revision 1 – 4/1/2015
2: Revision 2 – 7/1/2018

Sidewalk Closure and Bypass Sidewalk Operation
(Figure TTC-35.1)



2: Revision 2 – 9/1/2019

Signing for Project Limits
(Figure TTC-53.0)



Typical Traffic Control
Lane Closure Operation with Temporary Traffic Barrier [1]
(Figure TTC-20.2)
NOTES

Guidance:

1. *See Table 6H-5, page 6H-6, for recommended spacing of advance warning signs.*
2. *SHOULDER CLOSED (W21-5a) signs should be used on Limited-Access Highways where there is no opportunity for disabled vehicles to pull off the roadway (see Figure TTC-6).*
3. *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.[2]*
4. *If drivers cannot see a pull-off area beyond the closed shoulder, information regarding the length of the shoulder closure should be provided in feet or miles, as appropriate.*
5. *An emergency pull-off area should be provided per Section 6G.18 and Temporary Traffic Control Figure TTC-8.*

Standard:

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

Group 2 Channelizing Device Spacing								
Location Spacing	Speed Limit (mph)		Location Spacing	Speed Limit (mph)		Location Spacing	Speed Limit (mph)	
	0 -35	36 +		0 -35	36 +		0 -35	36 +
Transition	20'	40'	Travelway	40'	80'	Construction Access	80'	120'
Construction access spacing may be increased to this distance, but shall not exceed one access per ¼ mile.								

8. **For taper lengths, see TTC-19.[2]**
9. **See Table 6H-6 for barrier transition flare rate.[2] When the barrier transition flare[1] is on a horizontal alignment, the total offset shall be prorated around the curve in lieu of a straight-line flare.**
10. **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 of 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. Refer to L&D special design drawings.**
11. **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 delinators shall be spaced on 20' centers along the transition or taper sections and spaced on 80' centers and centered[2] in-between the barrier panels along the parallel or tangent sections[2] approximately 24 inches up from the roadway surface.**

Guidance:

12. *Eradication of existing pavement markings should be as shown in Figure TTC-55.*

Option:

13. The barrier shown in this typical application is an example of one method that may be used to close a shoulder and lane[2] on a long-term project.
14. Long-term transvere rumble strips may be installed to enhance the work zone see Chapter 6F, Section 6F-99 paragraph 12 and 13 for installation guidance and spacing.[2]

1: Revision 1 – 4/1/2015
2: Revision 2 – 7/1/2018

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]**

2: Revision 2 – 9/1/2019

Typical Traffic Control
Signing for Project Limits
(Figure TTC-53.0)
NOTES

Support:

1. This layout depicts signing requirements for notifying motorist when they are entering and exiting a potential construction/maintenance area with a duration equal to or greater than 60 days.

Standard:

2. **The ROAD WORK AHEAD (W20-1) sign or the ROAD WORK NEXT XX MILES (G20-1 (V)) sign shall be placed far enough in advance of the project limits so that other warning signs in a series may be adequately placed prior to the condition they are warning about.**
3. **The ROAD WORK NEXT XX MILES sign shall be used for projects with activity areas greater than 2 miles in length, or when multiple work activities (such as pavement patching, guardrail installations, shoulder restoration, etc.) occur along a highway.**
4. **The distance displayed on the ROAD WORK NEXT XX MILES sign shall be stated to the nearest whole mile from the point of installation to the END ROAD WORK (G20-2 (V)) sign.**
5. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**

Guidance:

6. *For projects with activity areas 2 miles or less in length, the ROAD WORK AHEAD sign should be the first sign motorist encounter.*
7. *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.*
8. *All connections within the project limits should be identified with signs indicating to motorist they are entering or exiting a potential construction/maintenance area.*

ARLINGTON
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SEAL
COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050308
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER Kamal Taktak	3/29/21
CONSTRUCTION MANAGEMENT SUPERVISOR	3.24.21
WATER, SEWER, STREETS BUREAU CHIEF	03.04.2021
TRANSPORTATION DIRECTOR Dennis M. Leach	03/17/21
PROJECT MANAGER Diana Haza	3/2/21

REVISIONS DATE

PROJECT NAME AND LOCATION
TRANSITWAY EXTENSION TO PENTAGON CITY

MOT DETAILS
CRYSTAL DR & 12TH ST S
MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-286-MOT.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE: N/A

SHEET 32 OF 35

TEST HOLE FORM

MID-ATLANTIC UTILITY LOCATING, LLC

rover — MID-ATLANTIC UTILITY LOCATING'S MOBILE FIELD DATA APPLICATION

4501 DALY DRIVE | CHANTILLY, VA 20151 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-5323 (Crystal City Trans.) | **Prepared By:** Stephen Russell | **Date:** 2018-02-05

City: Arlington | **State:** VA | **Test Hole:** TH C1 of

General Location: 1501 Crystal Dr.

UTILITY INFORMATION

Utility Size: 36" | **Material:** Concrete Cover | **Good Condition:** YES

Utility Type: Electric Ductbank | **Utility Owner:** Dominion

ADDITIONAL UTILITY INFORMATION

Utility Size: | **Material:** | **See Test Hole No.:**

Utility Type: None | **Utility Owner:**

SITE CONDITIONS

Field Condition: Asphalt Road | **Pavement thickness:** 10"

Ground Condition: Brown Soil/ Rock

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation: | **1st Benchmark Description:**

BM Check:

2nd Elevation: | **2nd Benchmark Description:**

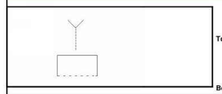
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail | **Elevation:** 35.97'

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

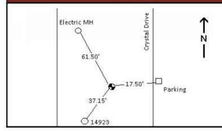


Top of utility field measurement: 2.62' **Elevation:** 33.35'

Bottom of utility field measurement: 3.43' **Elevation:** 32.54'

Facing: North **Utility Width/Spacing:**

PLAN VIEW



COORDINATES

Northing: **Easting:**

COMMENTS/NOTES

TEST HOLE FORM

MID-ATLANTIC UTILITY LOCATING, LLC

rover — MID-ATLANTIC UTILITY LOCATING'S MOBILE FIELD DATA APPLICATION

4501 DALY DRIVE | CHANTILLY, VA 20151 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-5323 (Crystal City Trans.) | **Prepared By:** Stephen Russell | **Date:** 2018-02-02

City: Arlington | **State:** VA | **Test Hole:** TH C2 of

General Location: 1501 Crystal Drive.

UTILITY INFORMATION

Utility Size: (2) 2 1/2" | **Material:** Steel | **Good Condition:** YES

Utility Type: Electric Conduits | **Utility Owner:**

ADDITIONAL UTILITY INFORMATION

Utility Size: | **Material:** | **See Test Hole No.:**

Utility Type: None | **Utility Owner:**

SITE CONDITIONS

Field Condition: Grass | **Pavement thickness:**

Ground Condition: Brown Soil/ Rock

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation: | **1st Benchmark Description:**

BM Check:

2nd Elevation: | **2nd Benchmark Description:**

Elevation Datum:

FIELD MARKER INFORMATION

Type set: Wooden Hub | **Elevation:** 36.05'

Offset/Direction: Hub is set C/L of the Utility.

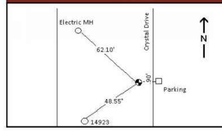
PROFILE VIEW

Top of utility field measurement: 4.63' **Elevation:** 31.42'

Bottom of utility field measurement: None **Elevation:** None

Facing: North **Utility Width/Spacing:** 6"

PLAN VIEW



COORDINATES

Northing: **Easting:**

COMMENTS/NOTES

TEST HOLE FORM

MID-ATLANTIC UTILITY LOCATING, LLC

rover — MID-ATLANTIC UTILITY LOCATING'S MOBILE FIELD DATA APPLICATION

4501 DALY DRIVE | CHANTILLY, VA 20151 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-5323 (Crystal City Trans.) | **Prepared By:** Stephen Russell | **Date:** 2018-02-02

City: Arlington | **State:** VA | **Test Hole:** TH C3 of

General Location: 1501 Crystal Drive

UTILITY INFORMATION

Utility Size: 2 1/2" | **Material:** Metal | **Good Condition:** YES

Utility Type: Electric Conduits | **Utility Owner:**

ADDITIONAL UTILITY INFORMATION

Utility Size: | **Material:** | **See Test Hole No.:**

Utility Type: None | **Utility Owner:**

SITE CONDITIONS

Field Condition: Grass | **Pavement thickness:**

Ground Condition: Brown Soil/ Rock/ Roots

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation: | **1st Benchmark Description:**

BM Check:

2nd Elevation: | **2nd Benchmark Description:**

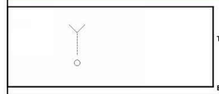
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Wooden Hub | **Elevation:** 35.84'

Offset/Direction: Hub is set C/L of the Utility.

PROFILE VIEW

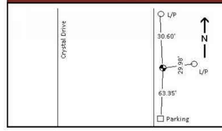


Top of utility field measurement: 5.05' **Elevation:** 30.79'

Bottom of utility field measurement: None **Elevation:** None

Facing: North **Utility Width/Spacing:**

PLAN VIEW



COORDINATES

Northing: **Easting:**

COMMENTS/NOTES

TEST HOLE FORM

MID-ATLANTIC UTILITY LOCATING, LLC

rover — MID-ATLANTIC UTILITY LOCATING'S MOBILE FIELD DATA APPLICATION

4501 DALY DRIVE | CHANTILLY, VA 20151 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-5323 (Crystal City Trans.) | **Prepared By:** Stephen Russell | **Date:** 2018-02-02

City: Arlington | **State:** VA | **Test Hole:** TH C4 of

General Location: 1501 Crystal Drive

UTILITY INFORMATION

Utility Size: Clear Hole | **Material:** | **Good Condition:** YES

Utility Type: None | **Utility Owner:**

ADDITIONAL UTILITY INFORMATION

Utility Size: | **Material:** | **See Test Hole No.:**

Utility Type: None | **Utility Owner:**

SITE CONDITIONS

Field Condition: Brick Sidewalk | **Pavement thickness:** 4"/ 4" Concrete

Ground Condition: Sand/ Concrete/ Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation: | **1st Benchmark Description:**

BM Check:

2nd Elevation: | **2nd Benchmark Description:**

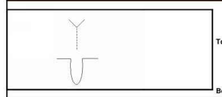
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Chiseled "X" | **Elevation:** 35.93'

Offset/Direction: Chiseled "X" is set C/L of the Utility.

PROFILE VIEW

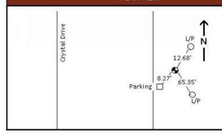


Top of utility field measurement: 3.00' **Elevation:** 32.93'

Bottom of utility field measurement: None **Elevation:** None

Facing: North **Utility Width/Spacing:**

PLAN VIEW



COORDINATES

Northing: **Easting:**

COMMENTS/NOTES

TEST HOLE FORM

MID-ATLANTIC UTILITY LOCATING, LLC

rover — MID-ATLANTIC UTILITY LOCATING'S MOBILE FIELD DATA APPLICATION

4501 DALY DRIVE | CHANTILLY, VA 20151 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-5323 (Crystal City Trans.) | **Prepared By:** Stephen Russell | **Date:** 2018-02-05

City: Arlington | **State:** VA | **Test Hole:** TH C5 of

General Location: 1501 Crystal Dr

UTILITY INFORMATION

Utility Size: Clear Hole | **Material:** | **Good Condition:** YES

Utility Type: None | **Utility Owner:**

ADDITIONAL UTILITY INFORMATION

Utility Size: | **Material:** | **See Test Hole No.:**

Utility Type: None | **Utility Owner:**

SITE CONDITIONS

Field Condition: Brick Sidewalk | **Pavement thickness:** 4" Brick/ 4" Concrete

Ground Condition: Sand/ Concrete/ Brown Soil/ Rock

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation: | **1st Benchmark Description:**

BM Check:

2nd Elevation: | **2nd Benchmark Description:**

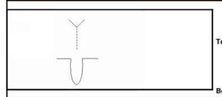
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Chiseled "X" | **Elevation:** 35.72'

Offset/Direction: Chiseled "X" is set C/L of the Utility.

PROFILE VIEW

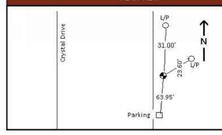


Top of utility field measurement: 3.00' **Elevation:** 32.72'

Bottom of utility field measurement: None **Elevation:** None

Facing: North **Utility Width/Spacing:**

PLAN VIEW



COORDINATES

Northing: **Easting:**

COMMENTS/NOTES

NOTE: SEE SHEET 18 FOR TEST HOLE/PIT LOCATIONS

REVISED ON 11/08/2016

ARLINGTON
VIRGINIA

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PHONE: 703.228.3629
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COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER	3/29/21
Kamal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Haza	3/2/21
PROJECT MANAGER	

REVISIONS DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

TEST HOLE PIT LOGS
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-229-TESTHOLES.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE: N/A

TEST HOLE FORM

MID-ATLANTIC UTILITY LOCATING, LLC

rover — MID-ATLANTIC UTILITY LOCATING'S MOBILE FIELD DATA APPLICATION

4501 DALY DRIVE | CHANTILLY, VA 20151 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-5323 (Crystal City Trans.) | **Prepared By:** Stephen Russell | **Date:** 2018-01-15

City: Arlington | **State:** VA | **Test Hole:** TH L1 of

General Location: 201 12th St. S.

UTILITY INFORMATION

Utility Size: 8 1/2" | **Material:** Epoxy Coated Steel | **Good Condition:** YES

Utility Type: Gas Line | **Utility Owner:** WGL

ADDITIONAL UTILITY INFORMATION

Utility Size: | **Material:** | **See Test Hole No.:**

Utility Type: None | **Utility Owner:**

SITE CONDITIONS

Field Condition: Asphalt Road | **Pavement thickness:** 9"

Ground Condition: 21A/ Brown Soil/ Rock/ Clay

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation: 28.37' | **1st Benchmark Description:** 14034

BM Check: +-0.04'

2nd Elevation: 27.99' | **2nd Benchmark Description:** 13005

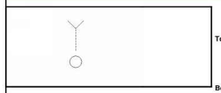
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail | **Elevation:** 28.03'

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

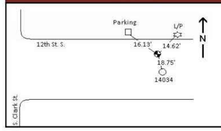


Top of utility field measurement: 5.39' **Elevation:** 22.64'

Bottom of utility field measurement: None **Elevation:** None

Facing: East | **Utility Width/Spacing:**

PLAN VIEW



COORDINATES

Northing: **Easting:**

COMMENTS/NOTES

TEST HOLE FORM

MID-ATLANTIC UTILITY LOCATING, LLC

rover — MID-ATLANTIC UTILITY LOCATING'S MOBILE FIELD DATA APPLICATION

4501 DALY DRIVE | CHANTILLY, VA 20151 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-5323 (Crystal City Trans.) | **Prepared By:** Yassin Aloumouati | **Date:** 2018-02-06

City: Crystal City | **State:** VA | **Test Hole:** TH L2 of

General Location: 12 St S. & S Clark St

UTILITY INFORMATION

Utility Size: 2 1/2" | **Material:** Steel | **Good Condition:** YES

Utility Type: Electric Conduit | **Utility Owner:**

ADDITIONAL UTILITY INFORMATION

Utility Size: | **Material:** | **See Test Hole No.:**

Utility Type: None | **Utility Owner:**

SITE CONDITIONS

Field Condition: Brick | **Pavement thickness:** 3"

Ground Condition: Sand Gravel Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation: 28.37' | **1st Benchmark Description:** 14034

BM Check: +-0.04'

2nd Elevation: 27.99' | **2nd Benchmark Description:** 13005

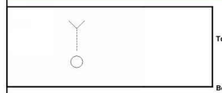
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail | **Elevation:** 28.54'

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

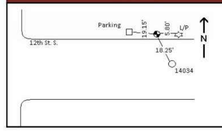


Top of utility field measurement: 2.05' **Elevation:** 26.49'

Bottom of utility field measurement: None **Elevation:** None

Facing: East | **Utility Width/Spacing:**

PLAN VIEW



COORDINATES

Northing: **Easting:**

COMMENTS/NOTES

TEST HOLE FORM

MID-ATLANTIC UTILITY LOCATING, LLC

rover — MID-ATLANTIC UTILITY LOCATING'S MOBILE FIELD DATA APPLICATION

4501 DALY DRIVE | CHANTILLY, VA 20151 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-5323 (Crystal City Trans.) | **Prepared By:** Yassin Aloumouati | **Date:** 2018-02-09

City: Crystal City | **State:** VA | **Test Hole:** TH L3 of

General Location: 12 St. S. & S. Clark St.

UTILITY INFORMATION

Utility Size: 32" | **Material:** Smooth Pour Concrete | **Good Condition:** YES

Utility Type: Communication Ductbank | **Utility Owner:**

ADDITIONAL UTILITY INFORMATION

Utility Size: Notes | **Material:** | **See Test Hole No.:**

Utility Type: None | **Utility Owner:**

SITE CONDITIONS

Field Condition: Brick | **Pavement thickness:** 3"

Ground Condition: Sand, Gravel, Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation: 28.37' | **1st Benchmark Description:** 14034

BM Check: +-0.04'

2nd Elevation: 27.99' | **2nd Benchmark Description:** 13005

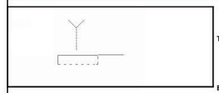
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail | **Elevation:** 28.80'

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

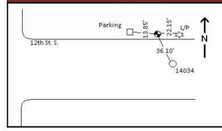


Top of utility field measurement: 0.96' **Elevation:** 27.84'

Bottom of utility field measurement: 1.29' **Elevation:** 27.51'

Facing: Northwest | **Utility Width/Spacing:**

PLAN VIEW



COORDINATES

Northing: **Easting:**

COMMENTS/NOTES

Parking garage = 1.00' to the top and carries an elevation of 27.80' Nail is set C/L of concrete duct. Nail is set 1.33' east of west most edge of parking garage.

TEST HOLE FORM

MID-ATLANTIC UTILITY LOCATING, LLC

rover — MID-ATLANTIC UTILITY LOCATING'S MOBILE FIELD DATA APPLICATION

4501 DALY DRIVE | CHANTILLY, VA 20151 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-5323 (Crystal City Trans.) | **Prepared By:** Yassin Aloumouati | **Date:** 2018-02-09

City: Crystal City | **State:** VA | **Test Hole:** TH L4 of

General Location: 12 St. S. & S. Clark St.

UTILITY INFORMATION

Utility Size: 36" | **Material:** Rough Pour Concrete | **Good Condition:** YES

Utility Type: Communication Ductbank | **Utility Owner:**

ADDITIONAL UTILITY INFORMATION

Utility Size: | **Material:** | **See Test Hole No.:**

Utility Type: None | **Utility Owner:**

SITE CONDITIONS

Field Condition: Brick | **Pavement thickness:** 3"

Ground Condition: Sand, Gravel, and Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation: 28.37' | **1st Benchmark Description:** 14034

BM Check: +-0.04'

2nd Elevation: 27.99' | **2nd Benchmark Description:** 13005

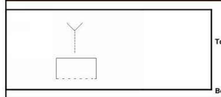
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail | **Elevation:** 28.76'

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

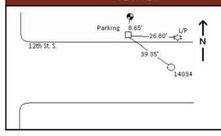


Top of utility field measurement: 2.37' **Elevation:** 26.39'

Bottom of utility field measurement: 4.22' **Elevation:** 24.54'

Facing: East | **Utility Width/Spacing:**

PLAN VIEW



COORDINATES

Northing: **Easting:**

COMMENTS/NOTES

TEST HOLE FORM

MID-ATLANTIC UTILITY LOCATING, LLC

rover — MID-ATLANTIC UTILITY LOCATING'S MOBILE FIELD DATA APPLICATION

4501 DALY DRIVE | CHANTILLY, VA 20151 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-5323 (Crystal City Trans.) | **Prepared By:** Yassin Aloumouati | **Date:** 2018-02-12

City: Crystal City | **State:** VA | **Test Hole:** TP-L5

General Location: 12 St. S. & S. Clark St.

UTILITY INFORMATION

Utility Size: N/A | **Material:** Tar Coated Concrete | **Good Condition:** YES

Utility Type: Top of Parking Garage | **Utility Owner:**

ADDITIONAL UTILITY INFORMATION

Utility Size: | **Material:** | **See Test Hole No.:**

Utility Type: None | **Utility Owner:**

SITE CONDITIONS

Field Condition: Brick | **Pavement thickness:** 3"

Ground Condition: Sand, Gravel

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation: 28.37' | **1st Benchmark Description:** 14034

BM Check: +-0.04'

2nd Elevation: 27.99' | **2nd Benchmark Description:** 13005

Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail | **Elevation:** 29.05'

Offset/Direction: Nail is set C/L of the Test Hole.

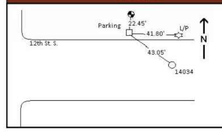
PROFILE VIEW

Top of utility field measurement: 1.22' **Elevation:** 27.83'

Bottom of utility field measurement: None **Elevation:** None

Facing: West | **Utility Width/Spacing:**

PLAN VIEW



COORDINATES

Northing: **Easting:**

COMMENTS/NOTES

TEST HOLE FORM

MID-ATLANTIC UTILITY LOCATING, LLC

rover — MID-ATLANTIC UTILITY LOCATING'S MOBILE FIELD DATA APPLICATION

4501 DALY DRIVE | CHANTILLY, VA 20151 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-5323 (Crystal City Trans.) | **Prepared By:** Yassin Aloumouati | **Date:** 2018-02-06

City: Crystal City | **State:** VA | **Test Hole:** TH L6 of

General Location: 12 St. S. & S Clark St.

UTILITY INFORMATION

Utility Size: 24" | **Material:** Rough Pour Concrete | **Good Condition:** YES

Utility Type: Electric Ductbank | **Utility Owner:**

ADDITIONAL UTILITY INFORMATION

Utility Size: | **Material:** | **See Test Hole No.:**

Utility Type: None | **Utility Owner:**

SITE CONDITIONS

Field Condition: Brick | **Pavement thickness:** 3"

Ground Condition: Gravel, Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation: 28.37' | **1st Benchmark Description:** 14034

BM Check: +-0.04

2nd Elevation: 27.99' | **2nd Benchmark Description:** 13005

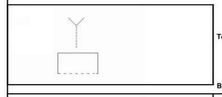
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail | **Elevation:** 28.57'

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

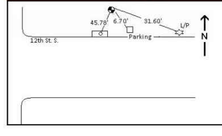


Top of utility field measurement: 3.53' **Elevation:** 25.04'

Bottom of utility field measurement: 6.34' **Elevation:** 22.23'

Facing: East | **Utility Width/Spacing:**

PLAN VIEW



COORDINATES

Northing: **Easting:**

COMMENTS/NOTES

NOTE: SEE SHEET 18 FOR TEST HOLE/PIT LOCATIONS

REVISED ON 11/08/2016

CRYSTAL CITY TRANSITWAY EXTENSION - CRYSTAL DR & 12TH ST S

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

SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER Kamal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Haza — PROJECT MANAGER	3/2/21

REVISIONS DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

TEST HOLE PIT LOGS

CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-229-TESTHOLES.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE: N/A

SHEET 34 OF 35

TEST HOLE FORM

MID-ATLANTIC UTILITY LOCATING, LLC

rover — MID-ATLANTIC UTILITY LOCATING PIPES MOBILE FIELD DATA REPORTING

4501 DALY DRIVE | CHANTILLY, VA 20151 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-5323 (Crystal City Trans.) | **Prepared By:** Yassin Aloumouati | **Date:** 2018-02-13

City: Crystal City | **State:** VA | **Test Hole:** TH L7 of

General Location: 12 St. S. & S. Clark St.

UTILITY INFORMATION

Utility Size: 36" | **Material:** RCP | **Good Condition:** YES

Utility Type: Electric Ductbank | **Utility Owner:**

ADDITIONAL UTILITY INFORMATION

Utility Size: | **Material:** | **See Test Hole No.:**

Utility Type: None | **Utility Owner:**

SITE CONDITIONS

Field Condition: Brick | **Pavement thickness:** 3"

Ground Condition: Sand, Gravel, Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation: 28.37' | **1st Benchmark Description:** 14034

BM Check: +-0.04

2nd Elevation: 27.99' | **2nd Benchmark Description:** 13005

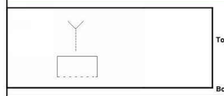
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail | **Elevation:** 28.58'

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

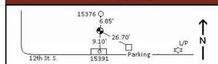


Top of utility field measurement: 2.71' **Elevation:** 25.87'

Bottom of utility field measurement: 3.58' **Elevation:** 25.00'

Facing: West **Utility Width/Spacing:**

PLAN VIEW



COORDINATES

Northing: **Easting:**

COMMENTS/NOTES

TEST HOLE FORM

MID-ATLANTIC UTILITY LOCATING, LLC

rover — MID-ATLANTIC UTILITY LOCATING PIPES MOBILE FIELD DATA REPORTING

4501 DALY DRIVE | CHANTILLY, VA 20151 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-5323 (Crystal City Trans.) | **Prepared By:** Tommy Lockhart | **Date:** 2018-02-06

City: Crystal City | **State:** VA | **Test Hole:** TP-L8

General Location: 12 St. S. & S Clark St.

UTILITY INFORMATION

Utility Size: Clear Hole | **Material:** | **Good Condition:** YES

Utility Type: None | **Utility Owner:**

ADDITIONAL UTILITY INFORMATION

Utility Size: | **Material:** | **See Test Hole No.:**

Utility Type: None | **Utility Owner:**

SITE CONDITIONS

Field Condition: Brick | **Pavement thickness:** 3"

Ground Condition: Sand, Gravel, Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation: 28.37' | **1st Benchmark Description:** 14034

BM Check: +-0.04

2nd Elevation: 27.99' | **2nd Benchmark Description:** 13005

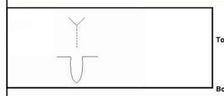
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Chiseled "X" | **Elevation:** 28.33'

Offset/Direction: Nail is set C/L of the Hole.

PROFILE VIEW

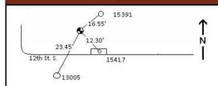


Top of utility field measurement: 3.00' **Elevation:** 25.33'

Bottom of utility field measurement: None **Elevation:** None

Facing: East **Utility Width/Spacing:**

PLAN VIEW



COORDINATES

Northing: **Easting:**

COMMENTS/NOTES

TEST HOLE FORM

MID-ATLANTIC UTILITY LOCATING, LLC

rover — MID-ATLANTIC UTILITY LOCATING PIPES MOBILE FIELD DATA REPORTING

4501 DALY DRIVE | CHANTILLY, VA 20151 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-5323 (Crystal City Trans.) | **Prepared By:** Stephen Russell | **Date:** 2018-02-05

City: Arlington | **State:** VA | **Test Hole:** TH L9 of

General Location: 12th St. and Long Bridge Drive

UTILITY INFORMATION

Utility Size: 8 1/2" | **Material:** Epoxy Coated Steel | **Good Condition:** YES

Utility Type: Gas Line | **Utility Owner:** WGL

ADDITIONAL UTILITY INFORMATION

Utility Size: | **Material:** | **See Test Hole No.:**

Utility Type: None | **Utility Owner:**

SITE CONDITIONS

Field Condition: Asphalt Road | **Pavement thickness:** 9"

Ground Condition: Brown Soil/ Rock

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation: 14034 | **1st Benchmark Description:** 28.37'

BM Check: +-0.04'

2nd Elevation: 27.99' | **2nd Benchmark Description:** 13005

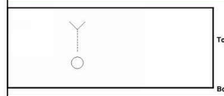
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Mag Nail | **Elevation:** 27.77'

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW

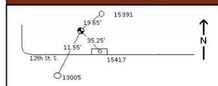


Top of utility field measurement: 4.39' **Elevation:** 23.38'

Bottom of utility field measurement: None **Elevation:** None

Facing: East **Utility Width/Spacing:**

PLAN VIEW



COORDINATES

Northing: **Easting:**

COMMENTS/NOTES

TEST HOLE FORM

MID-ATLANTIC UTILITY LOCATING, LLC

rover — MID-ATLANTIC UTILITY LOCATING PIPES MOBILE FIELD DATA REPORTING

4501 DALY DRIVE | CHANTILLY, VA 20151 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-5323 (Crystal City Trans.) | **Prepared By:** Tommy Lockhart | **Date:** 2018-02-06

City: Crystal City | **State:** VA | **Test Hole:** TH L10 of

General Location: 12 St. S. & S Clark St.

UTILITY INFORMATION

Utility Size: 2 1/2" | **Material:** Steel | **Good Condition:** YES

Utility Type: Electric Conduit | **Utility Owner:**

ADDITIONAL UTILITY INFORMATION

Utility Size: | **Material:** | **See Test Hole No.:**

Utility Type: None | **Utility Owner:**

SITE CONDITIONS

Field Condition: Brick | **Pavement thickness:** 3"

Ground Condition: Sand, Gravel, Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation: 28.37' | **1st Benchmark Description:** 14034

BM Check: +-0.04'

2nd Elevation: 27.99' | **2nd Benchmark Description:** 13005

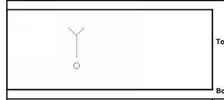
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Chiseled "X" | **Elevation:** 28.42'

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW



Top of utility field measurement: 2.44' **Elevation:** 25.98'

Bottom of utility field measurement: None **Elevation:** None

Facing: East **Utility Width/Spacing:**

PLAN VIEW

COORDINATES

Northing: **Easting:**

COMMENTS/NOTES

TEST HOLE FORM

MID-ATLANTIC UTILITY LOCATING, LLC

rover — MID-ATLANTIC UTILITY LOCATING PIPES MOBILE FIELD DATA REPORTING

4501 DALY DRIVE | CHANTILLY, VA 20151 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-5323 (Crystal City Trans.) | **Prepared By:** Tommy Lockhart | **Date:** 2018-02-06

City: Crystal City | **State:** VA | **Test Hole:** TH L11 of

General Location: 12 St. S. & S Clark St.

UTILITY INFORMATION

Utility Size: (4) 2 1/2" | **Material:** P.E. | **Good Condition:** YES

Utility Type: Communication Conduit | **Utility Owner:**

ADDITIONAL UTILITY INFORMATION

Utility Size: | **Material:** | **See Test Hole No.:**

Utility Type: None | **Utility Owner:**

SITE CONDITIONS

Field Condition: Brick | **Pavement thickness:** 3"

Ground Condition: Sand, Gravel, Brown Soil, Rocks

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation: 28.37' | **1st Benchmark Description:** 14034

BM Check: +-0.04

2nd Elevation: 27.99' | **2nd Benchmark Description:** 13005

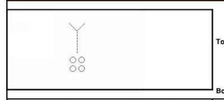
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Chiseled "X" | **Elevation:** 28.65'

Offset/Direction: Nail is set C/L of the Utility.

PROFILE VIEW



Top of utility field measurement: 1.97' **Elevation:** 26.68'

Bottom of utility field measurement: None **Elevation:** None

Facing: Northwest **Utility Width/Spacing:** 7"

PLAN VIEW

COORDINATES

Northing: **Easting:**

COMMENTS/NOTES

TEST HOLE FORM

MID-ATLANTIC UTILITY LOCATING, LLC

rover — MID-ATLANTIC UTILITY LOCATING PIPES MOBILE FIELD DATA REPORTING

4501 DALY DRIVE | CHANTILLY, VA 20151 | 703.378.0100 | WWW.MIDATLANTICLOCATING.COM

Project: M-0618-0201-5323 (Crystal City Trans.) | **Prepared By:** Yassin Aloumouati | **Date:** 2018-02-08

City: Arlington | **State:** VA | **Test Hole:** TH L12 of

General Location: 12th St S. and S Clark St.

UTILITY INFORMATION

Utility Size: 24" | **Material:** Rough Pour Concrete | **Good Condition:** YES

Utility Type: Communication Ductbank | **Utility Owner:**

ADDITIONAL UTILITY INFORMATION

Utility Size: | **Material:** | **See Test Hole No.:**

Utility Type: None | **Utility Owner:**

SITE CONDITIONS

Field Condition: Brick Sidewalk | **Pavement thickness:** 3"

Ground Condition: Sand, Gravel, Brown Soil

FIRST & SECOND BENCHMARK INFORMATION

1st Elevation: 28.37' | **1st Benchmark Description:** 14034

BM Check: +-0.04'

2nd Elevation: 27.99' | **2nd Benchmark Description:** 13005

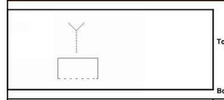
Elevation Datum:

FIELD MARKER INFORMATION

Type set: Chiseled "X" | **Elevation:** 28.87'

Offset/Direction: Chiseled "X" is set C/L of the Utility.

PROFILE VIEW



Top of utility field measurement: 3.35' **Elevation:** 25.52'

Bottom of utility field measurement: 3.78' **Elevation:** 25.09'

Facing: West **Utility Width/Spacing:**

PLAN VIEW

COORDINATES

Northing: **Easting:**

COMMENTS/NOTES

NOTE: SEE SHEET 18 FOR TEST HOLE/PIT LOCATIONS

REVISED ON 11/08/2016

CRYSTAL CITY TRANSITWAY EXTENSION - CRYSTAL DR & 12TH ST S

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

SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
QUALITY CONTROL ENGINEER Kamal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR Diana Haza	3/2/21
PROJECT MANAGER	

REVISIONS DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

TEST HOLE PIT LOGS
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

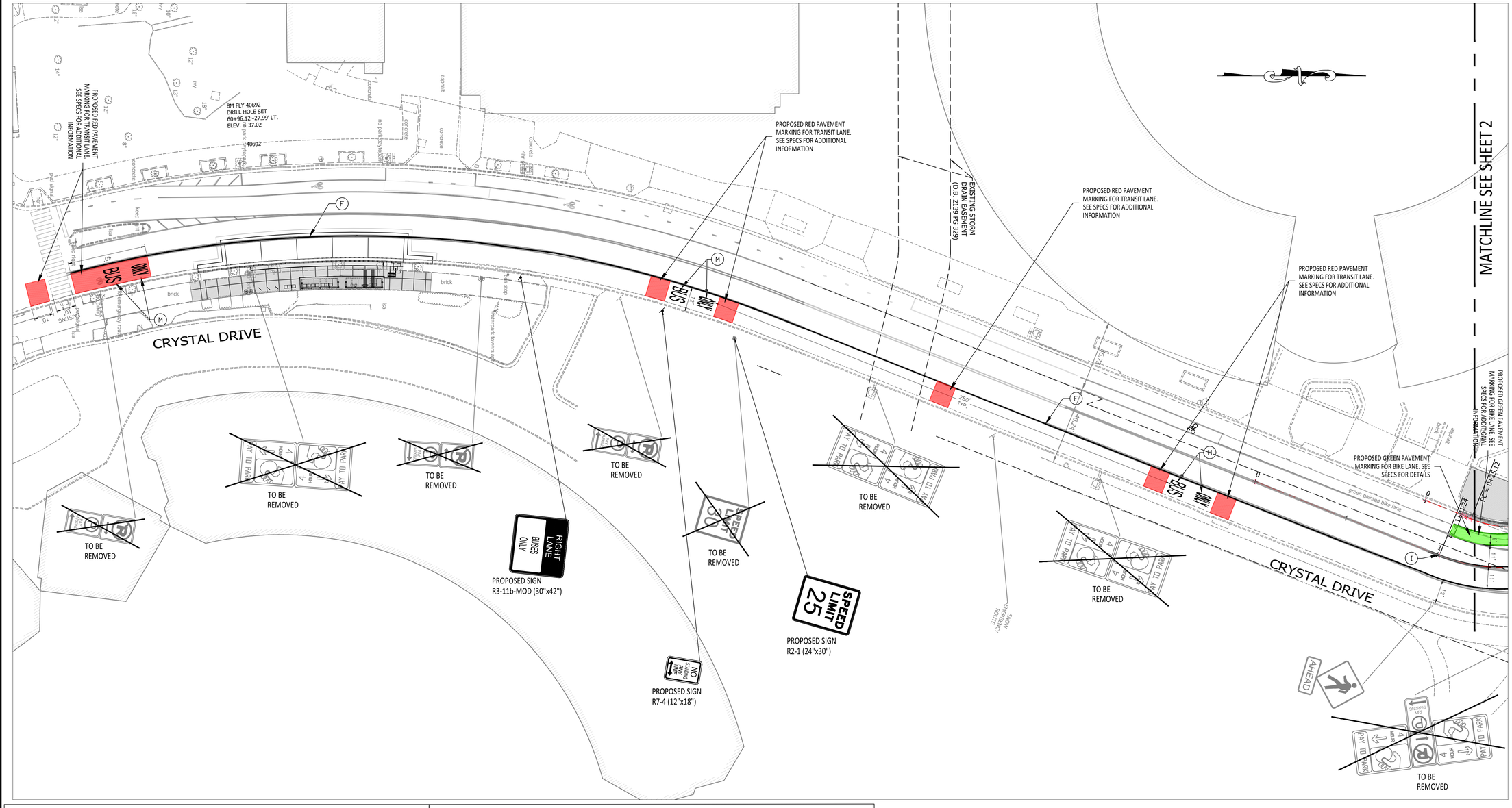
DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
MA13-229-TESTHOLES.DWG
PATH: \\DES-CAD-S2\ENGINEERING_DATA\DATA\MA13

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE: N/A

SHEET 35 OF 35



STANDARD PAVEMENT MARKING LEGEND

Ⓐ	TYPE B CLASS 1	WHITE 4" WIDTH	PARKING LANES, EDGE LINES, LANE LINES
Ⓑ	TYPE B CLASS 1	WHITE 4" WIDTH, 10' LONG, 30' SPACING	DASHED LANE LINES
Ⓒ	TYPE B CLASS 1	WHITE 4" WIDTH, 2' LONG 10' SPACING	LANE TRANSITIONS, TURN LANE SKIPS
Ⓓ	TYPE B CLASS 1	WHITE 18" WIDTH	STOP BARS
Ⓔ	TYPE B CLASS 1	WHITE 24" WIDTH	CONTINENTAL CROSS WALKS
Ⓕ	TYPE B CLASS 1	WHITE 6" WIDTH	TURN LANES, TRANSVERSE CROSS WALKS, BIKE LANES
Ⓖ	TYPE B CLASS 1	YELLOW 4" WIDTH, 10' LONG, 30' SPACING	DIVIDED TRAFFIC, TWO WAY TURN LANES
Ⓗ	TYPE B CLASS 1	YELLOW 4" WIDTH	EDGE LINES
Ⓘ	TYPE B CLASS 1	YELLOW 4" WIDTH, DOUBLE LINE, 4" SPACING	CENTERLINES
Ⓙ	TYPE B CLASS 1	WHITE 6" WIDTH, 10' SPACING @45 DEGREE	HATCH LINES, SAFETY ZONES
Ⓚ	TYPE B CLASS 1	WHITE SINGLE ARROW	TURN LANES
Ⓛ	TYPE B CLASS 1	WHITE COMBINATION ARROW	TURN LANES
Ⓜ	TYPE B CLASS 1	WHITE 8' LETTERS	PAVEMENT LETTERS (STOP, YIELD, BUS, ONLY, etc.)
Ⓝ	TYPE B CLASS 1	WHITE 6" WIDTH, 2' LONG, 10' SPACING	LANE TRANSITIONS, TURN LANE SKIPS
Ⓞ	TYPE B CLASS 1	WHITE 12" WIDTH, 20' SPACING @45 DEGREE	GORE MARKINGS
Ⓟ	TYPE B CLASS 1	YELLOW 8" WIDTH @45 DEGREE	GORE MARKINGS
Ⓠ	TYPE B CLASS 1	WHITE 6" WIDTH, 2' LONG, 4' SPACING	LANE TRANSITIONS
Ⓡ	TYPE B CLASS 1	WHITE 4" WIDTH, DOUBLE LINE, 4' SPACING	CURB EXTENSIONS
Ⓢ	TYPE B CLASS 1	WHITE 24" WIDTH	VDOT - STOP BARS
Ⓣ	TYPE B CLASS 1	YELLOW 6" WIDTH, 2' LONG, 4' SPACING	LANE TRANSITIONS

REVISED ON 11/08/2016

PAVEMENT MARKING NOTES:

1. STREET WIDTH MEASUREMENTS ARE FROM FACE OF CURB TO FACE OF CURB. LANES ARE MEASURED FROM CENTER OF MARKING TO CENTER OF MARKING .
2. CONTACT TE&O CONSTRUCTION MANAGER OR HIS DESIGNEE AT 703-228-6598 OR (571) 437-1077 TO APPROVE MARKING LAYOUT 48 HRS. PRIOR TO INSTALLATION OF MARKING.
3. PAVEMENT MARKINGS TO BE IN ACCORDANCE WITH THE FOLLOWING:
   A.) THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
   B) ARLINGTON COUNTY PAVEMENT MARKING SPECIFICATIONS.
4. ALL MARKINGS SHALL BE THERMOPLASTIC PER ARLINGTON COUNTY MARKING STANDARDS UNLESS NOTED OTHERWISE.
5. SHARED LANE MARKINGS SHALL BE PLACED IN CENTER OF TRAVEL LANE.
6. FOR DETAILS SEE ARLINGTON COUNTY PAVEMENT MARKING SPECIFICATIONS.

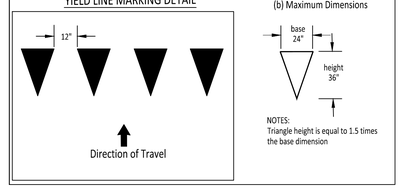
SIGN NOTES:

1. FOR ALL SIGN POSTS PLACED IN CONCRETE USE 7 GAUGE HEAVY DUTY ANCHOR (30"X2.50") WITH HARDWARE FOR 2" POST. USE $\frac{5}{16}$" CORNER BOLT WITH FLANGED NUT AND $\frac{3}{8}$" DRIVER RIVET WITH WASHER.
2. CONTACT TE&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.

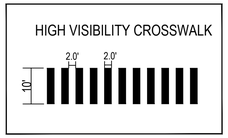
LEGEND

EXISTING		PROPOSED
	BUS STOP	
	FIRE HYDRANT	
	PARKING METER	
	PAY TO PARK BOX	
	SIGN	
Ⓐ	STRIPING	Ⓐ

YIELD LINE MARKING DETAIL



HIGH VISIBILITY CROSSWALK



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

SEAL

COMMONWEALTH OF VIRGINIA
TREVOR M. LANTZY
Lic. No. 0402050508
8/4/2021
PROFESSIONAL ENGINEER

APPROVALS	DATE
	3/29/21
QUALITY CONTROL ENGINEER Kamal Taktak	3.24.21
CONSTRUCTION MANAGEMENT SUPERVISOR	03.04.2021
WATER, SEWER, STREETS BUREAU CHIEF Dennis M. Leach	03/17/21
TRANSPORTATION DIRECTOR	
Diana Haza, PROJECT MANAGER	3/2/21

REVISIONS	DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

SIGNAGE AND STRIPING PLAN
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

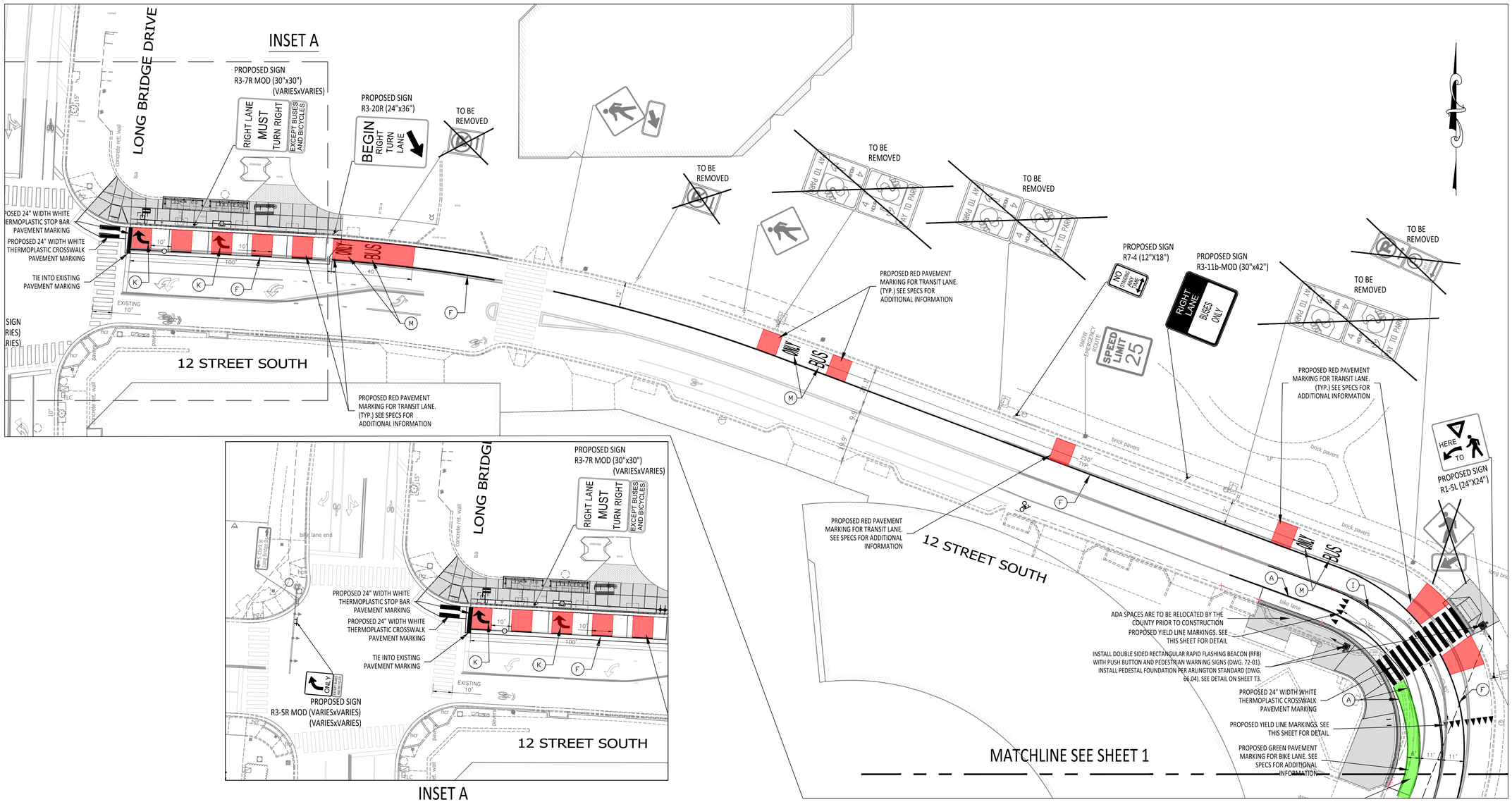
DESIGNED: PB
DRAWN: NS
CHECKED: TL
MISS UTILITY TRANSMITTAL #: N/A

FILENAME:
CC08-281-SIGNAGE_AND_STRIPING-CRYSTALDRIVE.D
PATH:Q:\DATA\MA13\CAD\ACTIVE\MA13-PAV\MARKING

PLOTTED: AUGUST 4 2021
PLOTTED BY:NSHARP

SCALE: Hor: 1" = 25'
25' 0 25'
SCALE: 1" = 25'

SHEET T1 OF 35



STANDARD PAVEMENT MARKING LEGEND

Ⓐ	TYPE B CLASS 1	WHITE 4" WIDTH	PARKING LANES, EDGE LINES, LANE LINES
Ⓑ	TYPE B CLASS 1	WHITE 4" WIDTH, 10' LONG, 30' SPACING	DASHED LANE LINES
Ⓒ	TYPE B CLASS 1	WHITE 4" WIDTH, 2' LONG 10' SPACING	LANE TRANSITIONS, TURN LANE SKIPS
Ⓓ	TYPE B CLASS 1	WHITE 18" WIDTH	STOP BARS
Ⓔ	TYPE B CLASS 1	WHITE 24" WIDTH	CONTINENTAL CROSS WALKS
Ⓕ	TYPE B CLASS 1	WHITE 6" WIDTH	TURN LANES, TRANSVERSE CROSS WALKS, BIKE LANES
Ⓖ	TYPE B CLASS 1	YELLOW 4" WIDTH, 10' LONG, 30' SPACING	DIVIDED TRAFFIC, TWO WAY TURN LANES
Ⓗ	TYPE B CLASS 1	YELLOW 4" WIDTH	EDGE LINES
Ⓘ	TYPE B CLASS 1	YELLOW 4" WIDTH, DOUBLE LINE, 4" SPACING	CENTERLINES
Ⓙ	TYPE B CLASS 1	WHITE 6" WIDTH, 10' SPACING @45 DEGREE	HATCH LINES, SAFETY ZONES
Ⓚ	TYPE B CLASS 1	WHITE SINGLE ARROW	TURN LANES
Ⓛ	TYPE B CLASS 1	WHITE COMBINATION ARROW	TURN LANES
Ⓜ	TYPE B CLASS 1	WHITE 8' LETTERS	PAVEMENT LETTERS (STOP, YIELD, BUS, ONLY, etc.)
Ⓝ	TYPE B CLASS 1	WHITE 6" WIDTH, 2' LONG, 10' SPACING	LANE TRANSITIONS, TURN LANE SKIPS
Ⓞ	TYPE B CLASS 1	WHITE 12" WIDTH, 20' SPACING @45 DEGREE	GORE MARKINGS
Ⓟ	TYPE B CLASS 1	YELLOW 8" WIDTH @45 DEGREE	GORE MARKINGS
Ⓠ	TYPE B CLASS 1	WHITE 6" WIDTH, 2' LONG, 4' SPACING	LANE TRANSITIONS
Ⓡ	TYPE B CLASS 1	WHITE 4" WIDTH, DOUBLE LINE, 4' SPACING	CURB EXTENSIONS
Ⓢ	TYPE B CLASS 1	WHITE 24" WIDTH	VDOT - STOP BARS
Ⓣ	TYPE B CLASS 1	YELLOW 6" WIDTH, 2' LONG, 4' SPACING	LANE TRANSITIONS

PAVEMENT MARKING NOTES:

1. STREET WIDTH MEASUREMENTS ARE FROM FACE OF CURB TO FACE OF CURB. LANES ARE MEASURED FROM CENTER OF MARKING TO CENTER OF MARKING .
2. CONTACT TE&O CONSTRUCTION MANAGER OR HIS DESIGNEE AT 703-228-6598 OR (571) 437-1077 TO APPROVE MARKING LAYOUT 48 HRS. PRIOR TO INSTALLATION OF MARKING.
3. PAVEMENT MARKINGS TO BE IN ACCORDANCE WITH THE FOLLOWING:
   A.) THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
   B) ARLINGTON COUNTY PAVEMENT MARKING SPECIFICATIONS.
4. ALL MARKINGS SHALL BE THERMOPLASTIC PER ARLINGTON COUNTY MARKING STANDARDS UNLESS OTHERWISE NOTED.
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SIGN NOTES:

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LEGEND

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	BUS STOP	
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	PARKING METER	
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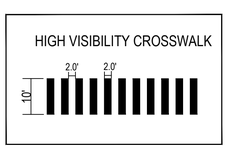
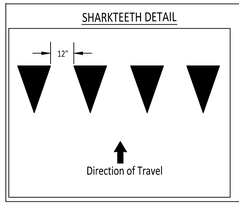
	SIGN	
Ⓐ	STRIPING	Ⓐ

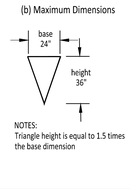
HIGH VISIBILITY CROSSWALK



SHARKTEETH DETAIL



(b) Maximum Dimensions



NOTES:
Triangle height is equal to 1.5 times the base dimension

REVISED ON 11/08/2016

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TRANSPORTATION DIRECTOR Diana Haze	3/2/21
PROJECT MANAGER	

REVISIONS	DATE

PROJECT NAME AND LOCATION

TRANSITWAY EXTENSION TO PENTAGON CITY

SIGNAGE AND STRIPING PLAN
CRYSTAL DR & 12TH ST S

MA13 - SEGMENT I

DESIGNED: PB
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MISS UTILITY TRANSMITTAL #: N/A

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SCALE: Hor: 1" = 25'
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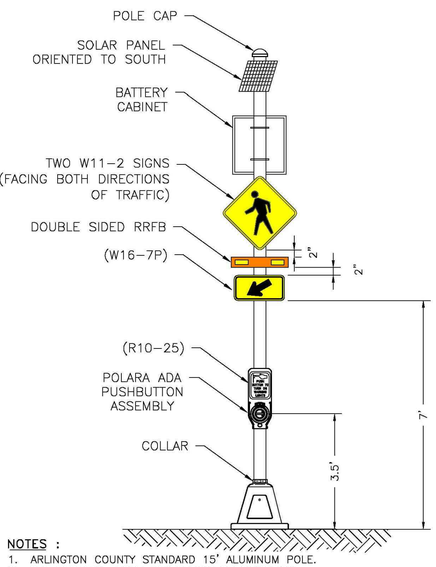
SCALE: 1" = 25'

SHEET T2 OF 35



NOTES :

1. ARLINGTON COUNTY STANDARD 15' ALUMINUM POLE.
2. SEE PEDESTAL POLE FOUNDATION SPECIFICATION.
3. VERIFY SOLAR PANEL IS UNOBSTRUCTED AND PROPERLY CHARGING THE BATTERY.
4. CONTRACTOR TO PROVIDE 2" CONDUIT STUB OUT FOR ALL INSTALLATIONS (SOLAR AND AC) TO ALLOW FOR POTENTIAL FUTURE AC POWER CONVERSION.

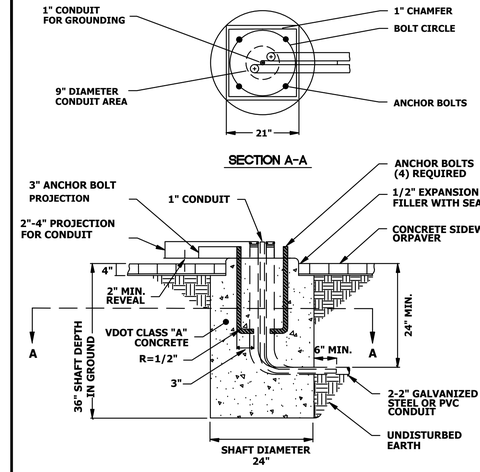
RECTANGULAR RAPID FLASHING BEACON

1	01/31/2019
REVISION & DATE	

ARLINGTON VIRGINIA

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

DRAWING NO.
72-01



NOTES:

1. **FOUNDATION TOP SHALL BE FINISHED AND LEVEL.**
2. **ANCHOR BOLTS SHALL BE 3/4"X18".**
3. **BOLT PATTERN SHALL BE PARALLEL TO THE CURB.**
4. **ALL CONDUIT RADII ARE 90 (R) 24" SWEEPS.**
5. **THIS DETAIL DOES NOT APPLY TO CARLYLE STREETLIGHT POLES.**

PEDESTAL POLE FOUNDATION

REVISION & DATE	

ARLINGTON VIRGINIA

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

DRAWING NO.
66-04
FORMERLY TS4-3

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