UPC 109469

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JOANN TRACH TONGSON,CLA 667-206-2277
PROJECT MANAGER

BRIAN P. FLETCHER, L.S., 9/14/2017
SURVEYED BY, DATE

A. MORTON THOMAS & ASSOCIATES, INC.
DESIGN BY

FRANK R. RICHARDSON, II, L.S., 9/14/2017
SUBSURFACE UTILITY BY, DATE

FHWA-534 DATA 37028

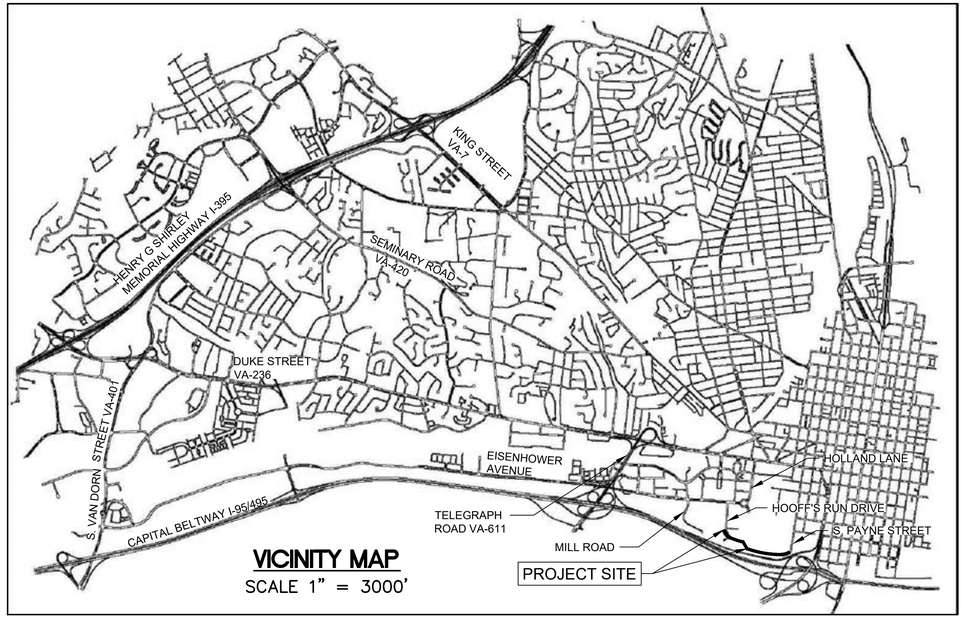
STATE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.	CM-5A01 (784) SEE TABULATIONS BELOW FOR SECTION NUMBERS		U000-100-850 SEE TABULATIONS BELOW FOR SECTION NUMBERS	GI-001 01

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

CITY OF ALEXANDRIA, VIRGINIA

OLD CAMERON RUN SHARED USE TRAIL
FROM: HOOFF'S RUN DRIVE, 0.154 MI SOUTH OF EISENHOWER AVE
TO: S. PAYNE ST, 0.133 MI SOUTH OF JEFFERSON ST

UPC #109469
VDOT PROJECT #U000-100-850
90% PLANS – DECEMBER 2022



VICINITY MAP
SCALE 1" = 3000'

FUNCTIONAL CLASSIFICATION AND TRAFFIC DATA	
Functional Classification	Shared Use Path
To:	
ADT (2018)	N/A
ADT (2040)	N/A
DHV	N/A
D (%) (design hour)	N/A
T (%) (design hour)	N/A
V (MPH)	18 MPH

THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY AS AWARDED, INCLUDING ALL SUBSEQUENT REVISIONS, WILL BE THE OFFICIAL CONSTRUCTION PLANS. FOR INFORMATION RELATIVE TO ELECTRONIC FILES AND LAYERED PLANS, SEE GENERAL NOTES.

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT.

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH VDOT'S 2020 ROAD AND BRIDGE SPECIFICATIONS, 2020 ROAD AND BRIDGE STANDARDS, 2009 MUTCD, 2011 VIRGINIA SUPPLEMENT TO THE MUTCD, 2011 VIRGINIA WORK AREA PROTECTION MANUAL AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY.

MAINTENANCE FOR SHARE USE PATH AND IMPROVEMENTS TO BE PROVIDED BY CITY OF ALEXANDRIA.

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

CONVENTIONAL SIGNS: SEE SHEET GI-003 FOR EXISTING CONDITIONS/SURVEY LEGEND.

GENERAL NOTES

1. ALL NEW CONSTRUCTION WILL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ALEXANDRIA AND/OR THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) STANDARDS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL USE NEW MATERIALS, PARTS AND PRODUCTS. ALL MATERIALS SHALL BE STORED AS TO ASSURE THE PRESERVATION OF THEIR QUALITY AND FITNESS FOR THE WORK.
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL MATERIALS AND RECEIVE CITY OF ALEXANDRIA APPROVAL PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. THIS PROJECT IS LOCATED WITHIN THE HOOFFS RUN AND CAMERON RUN (SOUTHEAST) WATERSHEDS (HUC12 020700100302, VAHU6 PL26).
5. TOTAL DISTURBED AREA =~1.61 ACRES
   PRE-DEVELOPMENT IMPERVIOUS = 0.10 ACRES
   POST DEVELOPMENT IMPERVIOUS = 0.35 ACRES

va811.com Dig With Care
KNOW WHAT'S BELOW. CALL BEFORE YOU DIG. DIAL 811 IN VIRGINIA OR 1-800-552-7001

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

CITY OF ALEXANDRIA POPULATION 159,467 (2020 CENSUS)

STATE PROJECT NO.	SECTION	FEDERAL AID PROJECT NO.	TYPE CODE	UPC NO.	EQUALITIES	LENGTH INCLUDING BRIDGE(S)		LENGTH EXCLUDING BRIDGE(S)		BRIDGE PROJECT	TYPE PROJECT	DESCRIPTION
					FEET	FEET	MILES	FEET	MILES			
U000-100-850	P101	CM-5A01 (784)	PENG	109469	N/A	2,575	0.49	2,262	0.43	BXXX	PRELIM. ENG.	SEE SHEET GI-002 FOR PROJECT DESCRIPTION.
	R201	–	ROWA	109469	N/A	2,616	0.50	2,303	0.44	BXXX	RIGHT OF WAY	
	C501	–	1000	109469	N/A	2,575	0.49	2,262	0.43	BXXX	CONSTRUCTION	
	BXXX	–		109469	N/A	313	0.06	–	–		BRIDGE	

NOTE: PROJECT LENGTH BASED ON CONSTRUCTION BASELINE

LOCALLY ADMINISTERED PROJECTS

CITY OF ALEXANDRIA
NAME OF LOCALITY

TERRY A. SUEHR, DIRECTOR, DEPT. OF PROJECT IMPLEMENTATION
RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION
DATE — ASSISTANT STORMWATER DIRECTOR, TITLE OF POSITION

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION
DATE — ASSISTANT STORMWATER DIRECTOR, TITLE OF POSITION

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PROJECT NARRATIVE

THIS PROJECT INCLUDES A 10'-WIDE SHARED USE PATH BETWEEN EISENHOWER AVENUE AND HOOFF'S RUN DRIVE TO SOUTH PAYNE STREET. THIS NEW TRAIL ADDRESSES A MAJOR GAP IN THE CITY'S APPROVED "GREEN CRESCENT" TRAIL SYSTEM AND ULTIMATELY PROVIDES A KEY LINK IN THE BICYCLE AND PEDESTRIAN TRANSPORTATION SYSTEM. THE PROJECT INCLUDES A PREFABRICATED PEDESTRIAN/BICYCLE BRIDGE AND BRIDGE SUPPORTS, LANDSCAPING, TRAIL LIGHTING, EROSION AND SEDIMENT CONTROL, STORMWATER MANAGEMENT, TRAIL SIGNAGE, ROADWAY CONNECTIONS AT TRAIL HEADS, HAZARDOUS SOIL MITIGATION, GEOTECHNICAL INVESTIGATION, HYDRAULIC AND HYDROLOGY ANALYSIS, AND UTILITY RELOCATION.

EXISTING CONDITIONS SURVEY NOTES

1. HORIZONTAL DATUM: NAD 83
   VERTICAL DATUM: NAVD 1988
2. UTILITY INFORMATION, AS SHOWN ON THIS PLAN, IS TAKEN FROM THE RECORDS AND/OR FIELD SURVEY COMPLETED BY BRIAN P. FLETCHER, L.S., DATED 09/14/2017; AND CANNOT BE GUARANTEED. FOR EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES, NOTIFY "MISS UTILITY" AT 1-800-257-7777, 72 HOURS BEFORE THE START OF ANY EXCAVATION OR CONSTRUCTION.
3. LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHOULD DIG TEST PITS BY HAND AT ALL UTILITY CROSSINGS TO VERIFY EXACT LOCATION.
4. SEE G-003 & G-004 FOR ADDITIONAL SURVEY INFORMATION.

CITY STANDARD GENERAL NOTES

1. "CITY" MEANS THE CITY OF ALEXANDRIA, A MUNICIPAL CORPORATION OF VIRGINIA AND ITS AUTHORIZED REPRESENTATIVES AND EMPLOYEES.
2. TOTAL LIMIT OF WORK: 70,242 SQUARE FEET OR 1.61 ACRES OF WHICH 14,879 SQUARE FEET OR 0.34 ACRES WILL BE DISTURBED (FULL DEPTH) WITH THIS PROJECT.
3. THE NATURAL SOILS AT THE SITE CONSIST OF: □□□□

STORM SEWER DRAINAGE INFORMATION

001
IN PL. CONC. DI
IN PL. SSMH
TOP = 13.36'
INV. OUT = 8.32'
IN PL. 18" CONCRETE PIPE

002
IN PL. SSMH
TOP = 12.83'
INV. IN = 7.81' (18" FROM STR. #001)
INV. IN = 7.88' (18" FROM SW)
INV. OUT = 7.58'
IN PL. 18" CONCRETE PIPE

003
IN PL. CONC. DI
TOP = 13.03'
INV. IN = 7.45'
INV. OUT = 7.35'
IN PL. 24" CONCRETE PIPE

004
IN PL. SSMH
TOP = 14.43'
INV. IN = 4.24' (18" RCP)
INV. IN = 4.29' (24" RCP)
INV. OUT = 4.14'
IN PL. 24" CONCRETE PIPE
DIRECTION ONLY

005
IN PL. CONC. HEADWALL W/METAL RAILING
(3) 84" WIDTH X 48" HEIGHT CONC. BOX CULVERTS
INV. A = 3.38'
INV. B = 3.28'
INV. C = (ORIGIN INDETERMINATE)

006
IN PL. CONC. HEADWALL W/METAL RAILING
(3) 84" WIDTH X 48" HEIGHT CONC. BOX CULVERTS
INV. A = 2.74'
INV. B = 2.86'
INV. C = 3.04'

007
IN PL. CONC. DI
TOP = 14.43'
INV. OUT = 12.43'
IN PL. 12" DIP PIPE (TERMINUS INDETERMINATE)

008
IN PL. CONC. DI
IN PL. SSMH
TOP = 15.45'
INV. OUT = 9.34'
IN PL. 18" CM PIPE

009
IN PL. CONC. ENDWALL
INV. = 7.43'

010
IN PL. CONC. DI
IN PL. SSMH
TOP = 14.08'
INV. OUT = 9.73'
IN PL. 15" CONCRETE PIPE

011
IN PL. CONC. DI
IN PL. SSMH
TOP = 14.15'
INV. IN = 9.37'
INV. OUT = 9.31'
IN PL. 15" CONCRETE PIPE

012
IN PL. CONC. DI
IN PL. SSMH
TOP = 15.26'
INV. IN = 8.44'
INV. OUT = 8.34'
IN PL. 18" CONCRETE PIPE

013
IN PL. SSMH
TOP = 14.97'
INV. IN = 7.80' (18" FROM STR. #012)
INV. IN = 7.87' (15" FROM SW)
INV. IN = 7.62' (6" DIP TO STR. #014)
INV. OUT = 6.18'
IN PL. 18" CONCRETE PIPE

014
IN PL. SSMH (BMP)
TOP = 15.71'
UNABLE TO ACCESS
IN PL. 6" DIP

015
IN PL. SSMH (BMP)
TOP = 15.96'
UNABLE TO ACCESS

016
IN PL. SSMH (BMP)
TOP =15.66'
UNABLE TO ACCESS
IN PL. 12" CONCRETE PIPE

017
IN PL. SSMH
TOP = 15.80'
INV. IN = 5.16' (18" FROM STR. #013)
INV. IN = 5.49' (15" FROM SW)
INV. IN = 5.37' (12" FROM STR. #016)
INV. OUT = 5.26'
IN PL. 24" CONCRETE PIPE

018
IN PL. SSMH
TOP = 17.07'
INV. IN = 4.38' (24" FROM STR. #017)
INV. IN = 3.87' (30" FROM SW)
INV. OUT = 3.71'
IN PL. 30" CONCRETE PIPE

019
IN PL. SSMH
TOP = 17.00'
INV. IN = 3.45' (30" FROM STR. #018)
INV. IN = 5.03' (18" FROM STR. #021)
INV. OUT = 3.29'
IN PL. 30" CONCRETE PIPE

020
IN PL. SSMH
TOP = 13.76'
INV. IN = 7.33' (6" FROM SW)
INV. OUT = 6.34'
IN PL. 15" CONCRETE PIPE

021
IN PL. SSMH
TOP = 16.02'
INV. IN = 5.71' (15" FROM STR. #020)
INV. IN = 7.33' (6" FROM SW)
INV. OUT = 6.09'
IN PL. 18" CONCRETE PIPE

022
IN PL. CONC. ENDWALL
W/CONC. SLUICE
INV. IN = 3.18' (30" FROM STR. #019)
INV. = 3.18' (30" FROM SW)

023
IN PL. SSMH
TOP = 20.49'
INV. OUT = 2.45'
IN PL. 60" CONCRETE PIPE

024
IN PL. CONC. ENDWALL
INV. = 1.38'

025
IN PL. CONC. DI
IN PL. SSMH
TOP = 20.65'
INV. OUT = 15.95'
IN PL. 18" CONCRETE PIPE

026
IN PL. CONC. DI
IN PL. SSMH
TOP = 20.48'
INV. IN = 15.44'
INV. OUT = 15.38'
IN PL. 18" CONCRETE PIPE

027
IN PL. CONC. DI
IN PL. SSMH
TOP = 20.77'
INV. IN = 11.12' (15" FROM NE)
INV. IN = 14.24' (18" FROM STR. #026)
INV. OUT = 9.51'
IN PL. 30" CONCRETE PIPE

028
IN PL. CONC. ENDWALL
INV. = 8.24'

029
IN PL. CONC. ENDWALL
(APPROX. LOCATION BASED ON PREVIOUS SURVEY)
INV. = 9.00' (APPROX. BASED ON CURRENT TERRAIN MODEL)

030
IN PL. CONC. DI
TOP = 22.11'
INV. OUT = 8.01'
IN PL. 18" CONCRETE PIPE

031
IN PL. CONC. ENDWALL
INV. = 4.07'

032
IN PL. SSMH
TOP = 25.95'
INV. OUT = 18.75'
IN PL. 21" CONCRETE PIPE

033
IN PL. CONC. DI
IN PL. SSMH
TOP = 25.82'
INV. IN = 18.49'
INV. OUT = 18.21'
IN PL. 21" CONCRETE PIPE

034
IN PL. CONC. DI
IN PL. SSMH
TOP = 25.40'
INV. IN = 17.56'
INV. OUT = 17.32'
IN PL. 21" CONCRETE PIPE

035
IN PL. CONC. DI
IN PL. SSMH
TOP = 24.78'
INV. IN = 16.03'
INV. OUT = 15.88'
IN PL. 21" CONCRETE PIPE

036
IN PL. CONC. DI
IN PL. SSMH
TOP = 24.37'
INV. IN = 14.77'
INV. OUT = 14.59'
IN PL. 21" CONCRETE PIPE

037
IN PL. SSMH
TOP = 19.28'
INV. IN = 11.89' (21" FROM STR. #036)
INV. IN = 5.85' (30" FROM STR. #040)
INV. OUT = 5.16'
IN PL. 30" CONCRETE PIPE

038
IN PL. CONC. DI
IN PL. SSMH
TOP = 24.94'
INV. OUT = 20.26'
IN PL. 15" CONCRETE PIPE

039
IN PL. CONC. DI
IN PL. SSMH
TOP = 24.72'
INV. IN = 19.76' (24" FROM NE)
INV. IN = 20.23' (15" FROM STR. #038)
INV. OUT = 18.72'
IN PL. 30" CONCRETE PIPE

040
IN PL. CONC. DI
IN PL. SSMH
TOP = 22.63'
INV. IN = 17.09' (30" FROM STR. #039)
INV. IN = 17.29' (24" FROM STR. #045)
INV. OUT = 7.10'
IN PL. 30" CONCRETE PIPE

041
IN PL. CONC. DI
IN PL. SSMH
TOP = 24.02'
INV. IN = 20.00' (18" RCP TO STR. #042)
INV. OUT = 19.87' (18")
INV. IN = 19.87' (18")
IN PL. 18" CONCRETE PIPE

042
IN PL. SSMH (BMP)
TOP = 24.56'
UNABLE TO ACCESS
IN PL. 15" CONCRETE PIPE

043
IN PL. SSMH
TOP = 24.49'
INV. IN = 19.33' (18" FROM STR. #041)
INV. IN = 19.39' (15" FROM STR. #042)
INV. OUT = 19.09'
IN PL. 18" CONCRETE PIPE

044
IN PL. CONC. DI
IN PL. SSMH
TOP = 23.13'
INV. IN = 18.43'
INV. OUT = 18.23'
IN PL. 18" CONCRETE PIPE

045
IN PL. CONC. DI
IN PL. SSMH
TOP = 23.47'
INV. IN = 17.57' (18" FROM STR. #044)
INV. IN = 9.04' (24" FROM STR. #053)
INV. OUT = 8.20'
IN PL. 24" CONCRETE PIPE

046
IN PL. SSMH
TOP = 25.20'
INV. OUT = 17.20'
IN PL. 24" CONCRETE PIPE

047
IN PL. SSMH
TOP = 24.97'
INV. IN = 20.97' (12" FROM STR. #048)
INV. IN = 16.37' (24" FROM STR. #046)
INV. OUT = 16.20'
IN PL. 24" CONCRETE PIPE

048
IN PL. CONC. DI
IN PL. SSMH
TOP = 25.04'
INV. OUT = 21.24'
IN PL. 12" DIP PIPE

049
IN PL. SSMH
TOP = 25.42'
INV. OUT = 12.92'
INV. OUT = 12.22'
IN PL. 18" CONCRETE PIPE

050
IN PL. CONC. DI
IN PL. SSMH
TOP = 25.10'
INV. IN = 16.10' (24" FROM STR. #047)
INV. IN = 12.20' (18" FROM STR. #049)
INV. OUT = 12.10' (18" RCP TO STR. #051)
INV. OUT = 12.60'
IN PL. 24" CONCRETE PIPE

051
IN PL. SSMH (BMP)
TOP = 25.06'
UNABLE TO ACCESS
IN PL. 15" CONCRETE PIPE

052
IN PL. SSMH
TOP = 24.93'
INV. IN = 11.83' (24" FROM STR. #050)
INV. IN = 11.43' (15" FROM STR. #051)
INV. OUT = 11.35'
IN PL. 24" CONCRETE PIPE

053
IN PL. CONC. DI
IN PL. SSMH
TOP = 23.68'
INV. IN = 10.76' (24" FROM STR. #052)
INV. IN = 15.42' (18" FROM SW)
INV. OUT = 10.56'
IN PL. 24" CONCRETE PIPE

054
IN PL. CONC. ENDWALL
INV. = 4.12'

055
IN PL. CONC. ENDWALL
INV. = 3.70'

056
IN PL. METAL GRATE
TOP = 21.80'
INV. OUT = 14.41'
IN PL. 21" CONCRETE PIPE

057
IN PL. SSMH
TOP = 22.84'
INV. IN = 13.80' (FROM METAL GRATE)
INV. IN = 13.77' (15" RCP - ORIGIN INDETERMINATE)
INV. OUT = 12.65'
IN PL. 21" CONCRETE PIPE

058
IN PL. CONC. ENDWALL
INV. = 12.50'

059
(3) 80" WIDTH X 48" HEIGHT ELIPTICAL CMP'S
INV. = 0.17' (A)
INV. = 0.13' (B)
INV. = -0.45' (C)
INV. = 0.01' (D)

060
(3) 80" WIDTH X 48" HEIGHT ELIPTICAL CMP'S
INV. = 0.41' (A)
INV. = 0.15' (B)
INV. = 0.23' (C)
INV. NOT FOUND (D)

061
IN PL. CONC. DI
IN PL. SSMH
TOP = 21.96'
INV. OUT = 3.80'
IN PL. 21" CONCRETE PIPE

062
IN PL. CONC. DI
IN PL. SSMH
TOP = 20.47'
INV. IN = 3.99' (15" FROM NW)
INV. IN = 3.97' (15" FROM STR. #061)
INV. IN = 3.47' (18" FROM SW)
INV. OUT = 3.26'
IN PL. 21" CONCRETE PIPE

063
IN PL. SSMH
TOP = 16.11'
INV. IN = 1.69'
INV. OUT = 1.57'
IN PL. 24" CONCRETE PIPE

064
END OF PIPE
INV. = 2.50'

065
IN PL. SSMH
TOP = 14.76'
INV. OUT = 5.36'
IN PL. 15" CONCRETE PIPE

066
END OF PIPE
INV. = 5.07'

067
IN PL. SSMH
TOP =13.98'
INV. OUT = 9.07'
IN PL. 15" CONCRETE PIPE

068
END OF PIPE
INV. = 8.70'

069
IN PL. SSMH
TOP =14.48'
INV. OUT = 10.18'
IN PL. 15" CONCRETE PIPE

070
END OF PIPE
INV. = 9.28'

071
COMBINED SEWER STRUCTURE
W/MECHANIZED GATES
IN PL. SSMH
TOP = 7.05'
UNABLE TO ACCESS
INV. IN (INDETERMINATE)

072
IN PL. CONC. HEADWALL W/WINGWALLS
TOP OF HEADWALL = 14.20'
APPROX. INV. = -0.01'
IN PL. PRECAST ARCHED CONC. CULVERT
(SEE PROFILE FOR CULVERT DIMENTIONS)

073
IN PL. CONC. ENDWALL W/WINGWALLS
TOP OF HEADWALL = 14.16'
APPROX. INV. = -0.13'

074
IN PL. CONC. DI
IN PL. SSMH
TOP = 14.62'
INV. OUT = 9.05'
IN PL. 15" CONCRETE PIPE

075
IN PL. SSMH
TOP =15.16'
INV. IN = 6.72'
INV. OUT = 6.50'
IN PL. 30" CONCRETE PIPE

076
IN PL. CONC. DI
IN PL. SSMH
TOP =15.00'
INV. OUT = 10.98'
IN PL. 15" CONCRETE PIPE

077
IN PL. SSMH
TOP =14.08'
INV. IN = 5.70' (30" FROM NE)
INV. IN = 5.70' (15" FROM NE)
INV. OUT = 5.61'
IN PL. 30" CONCRETE PIPE

078
IN PL. CONC. ENDWALL
INV. = 5.21'

079
COMBINED SEWER STRUCTURE
W/GRATED TOP AND MECHANIZED GATES
CONC. SLUICE W/CONC. WALLS
UNABLE TO ACCESS
INV. IN (INDETERMINATE)

080
IN PL. CONC. DI
IN PL. SSMH
TOP = 11.59'
INV. OUT = 8.82'
IN PL. 12" CONCRETE PIPE

081
END OF PIPE
INV. = 3.67'
IN PL. 18" CM PIPE
(ORIGIN INDETERMINATE)

082
IN PL. CONC. DI
IN PL. SSMH
TOP = 12.19'
INV. IN = 8.98'
INV. OUT = 8.16'
IN PL. 12" CONCRETE PIPE

083
IN PL. CONC. DI
IN PL. SSMH
TOP = 10.52'
INV. IN = 8.03'
IN PL. 15" CONCRETE PIPE

084
IN PL. CONC. DI
IN PL. SSMH
TOP = 10.98'
INV. IN = 8.14' (12" FROM STR. #082)
INV. IN = 7.54' (15" FROM STR. #083)
INV. OUT = 7.82'
IN PL. 15" CONCRETE PIPE

085
IN PL. CONC. DI
IN PL. SSMH
TOP = 11.06'
INV. IN = 8.39'
IN PL. 15" CONCRETE PIPE

086
IN PL. CONC. DI
IN PL. SSMH
TOP = 10.84'
INV. OUT = 8.20'
IN PL. 15" CONCRETE PIPE

087
IN PL. CONC. DI
IN PL. SSMH
TOP = 11.06'
INV. IN = 7.92' (15" FROM STR. #086)
INV. IN = 7.61' (15" FROM STR. #085)
INV. OUT = 7.50'
IN PL. 18" CONCRETE PIPE

088
IN PL. SSMH
TOP = 10.91'
INV. IN = 8.86' (15" FROM STR. #084)
INV. IN = 8.87' (18" FROM STR. #087)
INV. OUT = 8.06'
IN PL. 24" CONCRETE PIPE

089
IN PL. CONC. ENDWALL
INV. = 2.34'

090
IN PL. CONC. DI
IN PL. SSMH
TOP = 11.39'
INV. OUT = 8.33'
IN PL. 24" CONCRETE PIPE

091
IN PL. CONC. ENDWALL
INV. = 8.30'

092
INV. = 7.86'
IN PL. 24" CORRUGATED PLASTIC PIPE

093
END OF PIPE
INV. = 7.62'

094
IN PL. SSMH
TOP = 25.77'
INV. OUT = 17.73'
IN PL. 42" CONCRETE PIPE

095
IN PL. SSMH
TOP = 12.17'
INV. IN = 4.19'
INV. OUT = 4.07'
IN PL. 42" CONCRETE PIPE

096
IN PL. METAL GRATE
TOP = 10.73'
INV. IN = 2.57' (42" FROM STR. #095)
INV. IN = 2.58' (48" FROM NE)
INV. OUT = 2.48'
IN PL. 48" CONCRETE PIPE

097
IN PL. CONC. HEADWALL
INV. = 6.30'
IN PL. 15" CONCRETE PIPE

098
IN PL. SSMH
TOP = 10.37'
INV. IN = 3.07' (15" FROM STR. #097)
INV. IN = 0.78'
INV. OUT = 0.61'
IN PL. 48" CONCRETE PIPE

099
IN PL. SSMH (APPROX. LOCATION)
INV. IN = 0.46' (APPROX.)
(PER PLAN 0095-96A-106, C-501)

SURVEY LEGEND

- ELECTRIC MANHOLE
- ELECTRIC PED
- ELECTRIC BOX
- ELEC HAND BOX
- ELEC METER
- TRANSFORMER
- UG/ TRANSFORMER
- SWITCHGEAR
- GENERATOR
- LIGHT POLE
- SECURITY CAMERA POLE
- GROUND LIGHT
- LIGHTED BOLLARD
- UTILITY POLE
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- TELEPHONE CABINET
- TELEPHONE HAND BOX
- PHONE BOOTH
- TV PEDESTAL
- TV CABINET/ BOX
- TV HAND BOX
- GAS MANHOLE
- GAS VALVE
- GAS METER
- GAS TEST STATION
- GAS VENT
- GAS REGULATOR
- FIBER OPTIC MANHOLE
- FO PEDESTAL
- FO BOX
- FO HANDBOX
- WATER MANHOLE
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- SIAMESE CONNECTION
- WATER SPIGOT
- WATER WELL
- POST INDICATOR VALVE
- WATER VALVE PIT
- WATER VAULT
- TRAFFIC SIGNAL POLE
- PED SIGNAL POLE
- TRAFFIC HAND BOX
- TC SIGNAL CONTROLLER
- SANITARY MANHOLE
- SANITARY LAMPHOLE
- SANITARY CLEANOUT
- SANITARY VENT
- OIL WATER SEPARATOR
- B-14 — *GEOTECHNICAL BORING (STRUCTURAL, INFILTRATION, CONTAMINATED SOILS)*

SURVEY LINETYPES

- E / E-Duct — ELECTRIC / ELECTRIC DUCT
- CABLE TV
- FIBER OPTIC
- TELEPHONE
- T-Duct — TELEPHONE DUCT
- GAS
- S (QLC) — SANITARY
- WATER
- TC — TRAFFIC CONTROL
- OVERHEAD TRANSMISSION LINE
- OVERHEAD DISTRIBUTION LINE
- FW — FEMA FLOODWAY AREAS IN ZONE AE (APPROXIMATE). SEE FEMA MAPS 5155190037E & 5155190041E
- FP — FEMA FLOODPLAIN ZONE X (APPROXIMATE). SEE FEMA MAPS 5155190037E & 5155190041E

PLANIMETRIC LEGEND

- SIGN
- BORE HOLE
- BM — BENCH MARK
- BOLLARD POST
- PHOTO CP — PHOTO CONTROL POINT
- CONTROL STATION
- DRAINAGE FLOW ARROW (STORM DRAINAGE)
- FILLER CAP (GAS STATIONS)
- FLOW ARROW (STREAMS & RIVERS)
- FLAG POLE
- SECONDARY CONTROL POINT
- FP — FILLER PIPE (GAS STATIONS)
- GA — GAS TANK ACCESS MANHOLE (GAS STATIONS)
- GRAVESITE MARKER
- GUARD POST
- GAS VENT PIPE (GAS STATIONS)
- MAIL BOX
- MINE ENTRANCE
- NODE POINT
- PROPERTY LINE SYMBOL
- FOUND MONUMENTATION
- PROPERTY MONUMENT
- METAL OR WOODEN POST
- MONITORING WELL
- ROAD ARROW
- REFERENCE
- RIGHT OF WAY MONUMENT
- VDOT COMMISSION MONUMENT
- IRON RIGHT OF WAY PIN
- RAILROAD MILE MARKER
- RAILROAD RIGHT OF WAY MONUMENT
- RAILROAD SIGNAL POLE OR GATE
- RAILROAD TELEGRAPH POLE
- RAILROAD TELEPHONE POLE
- RAILROAD SWITCH
- SHRUB
- STORM SEWER MANHOLE
- PHOTOGRAMMETRIC TARGET
- TREE
- TRAFFIC LEFT TURN ARROW
- TRAFFIC LEFT-RIGHT ARROW
- TRAFFIC LEFT-THRU ARROW
- TRAFFIC LEFT-THRU-RIGHT ARROW
- TRAFFIC RIGHT TURN ARROW
- TRAFFIC THRU ARROW
- TRAFFIC THRU-RIGHT ARROW
- TRAFFIC SPRINGBACK MARKER
- WETLAND FLAG AUTOMATIC
- WETLAND FLAG MANUAL
- BRIDGE ELEVATION
- PLAN ELEVATION
- WATER ELEVATION
- ELEVATION TICK MARK
- CONNECTED PLAT SYMBOL

PROFESSIONAL LAND SURVEYOR NOTE:

THIS SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF BRIAN P. FLETCHER, L.S., FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION. THE ORIGINAL DATA WAS OBTAINED IN THE MIDDLE PART OF THE CALENDAR YEAR 2017. THIS DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS THE MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT; THEREFORE NOT ALL ENCUMBRANCES TO THE PROPERTY ARE NECESSARILY SHOWN HERE ON. THE PROPERTY INFORMATION SHOWN ON THIS ROUTE SURVEY WAS COMPILED FROM EXISTING LAND RECORDS AND PHYSICAL EVIDENCE FOUND IN THE FIELD, AND DOES NOT REPRESENT A FIELD RUN BOUNDARY SURVEY.

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CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS	DESCRIPTION	DATE	BY

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920

DESIGNED BY:	AMT	DATE:	-
DRAWN BY:	AMT	DATE:	-
CHECKED BY:	AMT	DATE:	-
APPROVED BY:	AMT	DATE:	-

PROJECT NAME: OLD CAMERON RUN TRAIL

UPC109469

GI-003

SURVEY INFORMATION

SHEET
03 OF 75

SCALE: N/A

PROPERTY BOUNDARY LINE & CURVE TABLES

Curve Table						
Curve	Radius	Length	Delta	Bearing	Distance	Tangent
C1	60.00'	126.31'	120° 37' 07"	N 3° 39' 41" W	104.25'	105.23'
C1A	60.00'	114.18'	109° 01' 54"	N 2° 07' 45" E	97.71'	84.17'
C1B	60.00'	12.13'	11° 34' 59"	N 58° 09' 58" W	12.11'	6.09'
C2	250.00'	392.70'	90° 00' 00"	N 18° 57' 25" W	353.55'	250.00'
C3	350.00'	39.70'	6° 29' 56"	N 22° 47' 23" E	39.68'	19.87'
C4	82.99'	18.14'	12° 31' 35"	S 2° 06' 41" E	18.11'	9.11'
C5	473.00'	156.53'	18° 57' 37"	N 19° 56' 13" W	155.81'	78.98'
C6	302.70'	23.31'	4° 24' 43"	N 6° 35' 34" E	23.30'	11.66'
C7	258.86'	85.36'	18° 53' 38"	N 30° 23' 54" W	84.98'	43.07'
C8	36.00'	14.16'	22° 32' 36"	N 57° 12' 27" E	14.07'	7.17'
C9	578.75'	336.91'	33° 21' 15"	N 85° 09' 11" E	332.18'	173.38'
C10	589.75'	343.32'	33° 21' 15"	N 85° 09' 11" E	338.49'	176.68'
C11	36.00'	50.60'	80° 32' 07"	S 37° 40' 33" E	46.54'	30.50'
C12	233.00'	18.74'	4° 36' 25"	S 26° 41' 16" W	18.73'	9.37'
C13	290.00'	71.48'	14° 07' 23"	N 1° 26' 52" W	71.30'	35.92'
C14	189.00'	101.82'	30° 51' 57"	N 10° 43' 33" E	100.59'	52.18'

Line Table		
Line	Bearing	Distance
L1	S 22° 36' 24" E'	10.63'
L2	S 38° 45' 07" E'	10.84'
L3	S 46° 46' 52" E'	16.65'
L4	S 62° 23' 40" E'	13.43'
L5	S 8° 36' 12" W'	9.54'
L6	N 8° 32' 21" E'	10.00'
L7	S 81° 27' 39" E'	10.00'
L8	N 8° 32' 21" E'	10.00'
L9	N 81° 27' 39" W'	5.37'
L10	N 8° 32' 21" E'	40.00'
L11	S 81° 27' 39" E'	5.37'
L12	N 8° 32' 21" E'	10.00'
L13	S 81° 27' 39" E'	10.00'
L14	S 8° 32' 21" W'	10.00'
L15	S 85° 50' 45" E'	2.36'
L16	N 4° 13' 39" E'	0.99'
L17	S 29° 44' 47" W'	5.44'
L18	N 4° 42' 27" W'	7.22'
L19	N 86° 49' 07" W'	1.16'

SURVEY CONTROL TABLE

Survey Control				
Point	Northing	Easting	Elevation	Description
100	6977887.06'	11890540.86'	15.60'	Iron Rod w/Cap
101	6977944.70'	11891228.45'	15.03'	Iron Rod w/Cap
102	6977686.77'	11891384.03'	16.80'	P. K. Nail
103	6977502.76'	11891692.83'	21.85'	P. K. Nail
104	6977329.68'	11892080.44'	22.42'	P. K. Nail
105	6976919.72'	11892488.43'	23.83'	P. K. Nail
106	6976559.01'	11892580.35'	18.70'	Iron Rod w/Cap
107	6976399.76'	11892957.21'	20.21'	Iron Rod w/Cap
108	6976100.56'	11893327.07'	11.33'	P. K. Nail
109	6976002.39'	11893756.61'	11.27'	P. K. Nail
110	6975944.52'	11894148.49'	9.46'	P. K. Nail
111	6976151.87'	11894524.17'	12.22'	Iron Rod w/Cap

NOTE: Project Coordinates are VA State Plane North

ROW DATA TABLE

PARCEL NO.	LANDOWNER	SHEET NO.	AREA								
			TOTAL	FEE TAKING	PRESCRIPTIVE R/W	FEE REMAINDER	EASEMENTS				PROFFERS
							PERMANENT	UTILITY	TEMPORARY	TEMPORARY (ENTRANCES)	
			ACRES OR SQUARE FEET	ACRES OR SQUARE FEET	ACRES OR SQUARE FEET	ACRES OR SQUARE FEET	ACRES OR SQUARE FEET	ACRES OR SQUARE FEET	ACRES OR SQUARE FEET	ACRES OR SQUARE FEET	YES / NO
001	CITY OF ALEXANDRIA SANITATION AUTHORITY	VF-101 – VF-103B	10.517 AC	–	–	10.517 AC	23,170 SF	–	1.441 AC	2,529 SF	NO
002	CITY OF ALEXANDRIA SANITATION AUTHORITY	VF-103 – VF-105	35.796 AC	–	–	35.796 AC	13,010 SF	–	3,266 SF	1.52 AC	NO
003	VDOT ROW	VF-103 – VF-105	–	–	–	–	14,744 SF	–	3,342 SF	–	NO

SUBSURFACE UTILITY ENGINEERING NOTES

SUE GENERAL NOTES

1. DATE OF FINAL SUBMITTAL: 09/14/2017
2. ACCUMARK, INC. PERFORMED AN UNDERGROUND UTILITY DESIGNATION EFFORT IN 08/2017 WITHIN THE PROJECT LIMITS SPECIFIED BY THE CLIENT.
3. ACCUMARK, INC. DOES NOT GUARANTEE THAT UTILITIES SHOWN COMPRISE ALL UTILITIES WITHIN THE PROJECT LIMITS PROVIDED BY THE CLIENT.
4. FIELD DESIGNATING AND MARKING PERFORMED BY ACCUMARK, INC. IN ACCORDANCE WITH QUALITY LEVEL B STANDARDS UNLESS OTHERWISE NOTED HEREON AS QUALITY LEVELS C OR D.
5. QUALITY CONTROL / QUALITY ASSURANCE REVIEW PERFORMED BY FRANK R. RICHARDSON, II, L.S.
6. THE UTILITY SIZES SHOWN HEREIN ARE BASED ON INFORMATION PROVIDED BY THE UTILITY COMPANY'S OWNER, BY WRITTEN RECORDS, BY VERBAL INFORMATION OR BY OBSERVED VISUAL EVIDENCE.
7. AT THE TIME OF SUBMITTAL GAS RECORDS FOR THE AREA OF UTILITY DESIGNATION HAVE NOT BEEN RECEIVED.
8. ALL SANITARY SEWER SHOWN ON THE V-SSWR-GIS~ LAYER ARE DEPICTED AT QLC.

UTILITY FIELD LOCATION REFERENCE NOTES

ALL HORIZONTAL AND VERTICAL SURVEY DATA CONTAINED HEREIN ARE REFERENCED TO TRAVERSE STATIONS / CONTROL POINTS PROVIDED BY VDOT IN A FILE ENTITLED "VDOT-116 ACCUMARK_CONTROL.TXT"

UNDERGROUND UTILITY ABBREVIATIONS

(QLC) QUALITY LEVEL C (RECORDS PLOTTING)
(QLD) QUALITY LEVEL D (RECORDS DRAFTING)
TC TERRA COTTA
VCP VITRIFIED CLAY PIPE
VCPX VITRIFIED CLAY PIPE, EXTRA STRENGTH
RCP REINFORCED CONCRETE PIPE
PCCP PRESTRESSED CONCRETE CYLINDER PIPE
CMP CORRUGATED METAL PIPE
PL PLASTIC (PVC, HDPE, ETC.)
LOOP TRAFFIC LOOP DETECTOR
CPP CORRUGATED PLASTIC PIPE

NOTE:
ALL GRAVITY SANITARY AND STORM LINES ON UTILITY DESIGNATING DRAWINGS SUBMITTED ARE SHOWN AT QUALITY LEVEL B UNLESS OTHERWISE LABELED QLC OR QLD BASED UPON BEST AVAILABLE FIELD INFORMATION.

ALL NON GRAVITY LINES ARE SHOWN AT QUALITY LEVEL B UNLESS OTHERWISE NOTED QLC OR QLD BASED ON AVAILABLE INFORMATION. ALL SERVICES REPRESENTED QLC OR QLD REPRESENTS POSSIBLE SERVICE CONNECTIONS BASED ON RECORDS OR FIELD INFORMATION.

SUE QUALITY LEVELS OF SERVICE (ACCURACY)

QL A = QUALITY LEVEL A (TEST HOLES)
DATA TYPICALLY ACQUIRED AT ONE POINT ON AN UNDERGROUND UTILITY FEATURE EXPOSED BY AIR VACUUM EXCAVATION OR OTHER MEANS. THE HORIZONTAL AND VERTICAL LOCATION OF THIS REFERENCE POINT IS ACQUIRED AND REPORTED TO ACCEPTABLE SURVEY TOLERANCES. THE ACQUIRED DATA FULFILLS SECTION 5.4.5 ON PAGE 6 OF ASCE STANDARD 38-02.

QL B = QUALITY LEVEL B (UTILITY DESIGNATION)
DEPICTION OF AN UNDERGROUND UTILITY LINE ESTABLISHED BY SENSING THE LOCATION WITH ELECTRONIC INSTRUMENTATION. LINEWORK AND UTILITY SURFACE FEATURES ARE ACQUIRED BY SURVEYING POINTS ALONG ALIGNMENT TO ACCEPTABLE SURVEY TOLERANCES.

QL C = QUALITY LEVEL C (RECORDS PLOTTING)
UTILITY INFORMATION OBTAINED FROM RECORD INFORMATION AND PLOTTED TO CORRELATE WITH SURFACE UTILITY FEATURES WHICH HAVE BEEN SURVEY LOCATED AND ACCURATELY REDUCED ONTO DESIGN/ CONSTRUCTION DOCUMENTS.

QL D = QUALITY LEVEL D (RECORDS DRAFTING)
DEPICTION OF UNDERGROUND UTILITY LINES BY TRANSPOSITION FROM UTILITY RECORDS OR PLACED FROM VERBAL RECOLLECTIONS WITHOUT BENEFIT OF SURVEYED SURFACE FEATURES. ACCURACY OF INFORMATION IS QUESTIONABLE.

EOI
END OF INFORMATION PERTAINS TO THE LOSS OF SIGNAL THAT HAS BEEN APPLIED TO AN UNDERGROUND UTILITY AND THEN DETECTED TO ELECTRONICALLY LOCATE THE UTILITY. COMMONLY FOUND WHERE UTILITIES CHANGE TO NON-CONDUCTIVE MATERIALS, ARE CUT OR AT END OF UTILITY.

UTILITY STRUCTURE NOTES:

(S1) STRUCTURES LOCATED INSIDE ALEXRENEW. CANNOT ACCESS SITE TO AS-BUILT.
(S2) STRUCTURE COULD NOT BE FOUND.
(W1) WATER NOT ON RECORDS.

UTILITY OWNERS

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HERNDON VA 20170
KARL STROOTMAN
410-979-0384

SANITARY INFORMATION

1 IN PL. SMH
TOP = 14.62'
UNABLE TO OBTAIN DEPTH DUE TO
HIGH RATE OF FLOW
BOTTOM PER GIS = 3.68'
SIZE PER GIS: 60" RCP

2 IN PL. SMH
TOP = 13.80'
DIRECT INVERT = -4.20' 60" RCP PER GIS
DUE TO RATE OF FLOW AND LARGE DIAMETER OF
PIPES INVERT IN AND OUT COULD NOT BE OBTAINED

3 IN PL. SMH
TOP = 13.06'
INVERT IN (A) = (RATE OF FLOW TOO HIGH COULD NOT OBTAIN INVERT)
INVERT IN (B) = -1.93'
INVERT OUT (C) = (RATE OF FLOW TOO HIGH COULD NOT OBTAIN INVERT)
INVERT (D) = 8.97' (OVERFLOW)
INVERT (E) = 8.97' (OVERFLOW)
INVERT IN (F) = -0.59'
BOTTOM OF STRUCTURE = -4.94'

3A IN PL. SMH
TOP = 14.62'
INVERT OUT = -0.18'

4 IN PL. SMH
TOP = 13.40'
INVERT IN (A) = 4.88'
INVERT IN (B) = 4.76'
INVERT OUT (C) = 4.83'

5 IN PL. SMH
TOP = 13.73'
INVERT IN (A) = 4.50'
INVERT OUT (B) = 4.35'
INVERT IN (C) = 4.43'

6 IN PL. SMH
TOP = 14.02'
INVERT IN = 4.29'
INVERT OUT = 3.96'
INVERT IN = 4.04'

7 IN PL. SMH
TOP = 14.92'
INVERT IN = 3.67'
INVERT OUT = 3.35'

8 IN PL. SMH
TOP = 14.79'
INVERT IN = 2.52'
INVERT OUT = -0.06'

9 IN PL. SMH
TOP = 14.40'
INVERT IN (A) = -0.27'
INVERT IN (B) = 0.22"
INVERT IN (C) = 0.27'
INVERT OUT (D) = -0.30'

10 IN PL. SMH
TOP = 14.84'
INVERT IN = 4.34'
INVERT OUT = 4.11'

11 IN PL. SMH
TOP = 14.69'
INVERT OUT (A) = 5.75'
INVERT IN (B) = 6.68'
INVERT IN (C) = 6.58'

12 IN PL. SMH
TOP = 16.76'
INVERT OUT (A) = 7.58'
INVERT IN (B) = 7.86'
INVERT IN (C) = 7.77'

13 IN PL. SMH
TOP = 16.92'
INVERT IN = 8.39'
INVET OUT = 8.37'

13A IN PL. SMH
TOP = 17.05'
INVERT OUT (A) = 9.35'
INVERT IN (B) = 9.46'
INVERT IN (C) = 9.47'

14 IN PL. SMH
TOP = 15.46'
BOTTOM (PER GIS) = 0.96'
(COULD NOT OPEN STRUCTURE TO OBTAIN INVERTS)

15 IN PL. SMH
TOP = 19.26'
BOTTOM (PER GIS) = -0.65'
(COULD NOT OPEN STRUCTURE TO OBTAIN INVERTS)

16 IN PL. SMH
TOP = 15.68'
INVERT OUT = 3.05'
INVERT IN = 3.17'

17 IN PL. SMH
TOP = 5.78' (PER GIS)
(STRUCTURE BOLTED AND PADLOCKED CANNOT ACCESS)

18 IN PL. SMH
TOP = 3.23' (PER GIS)
(STRUCTURE COULD NOT BE FOUND)

19 IN PL. SMH
TOP = 3.10 (PER GIS)
BOTTOM = -5.90' (PER GIS)
(STRUCTURE COULD NOT BE FOUND)

20 IN PL. SMH
TOP = 4.90 (PER GIS)
BOTTOM = -6.40 (PER GIS)
(STRUCTURE COULD NOT BE FOUND)

20A IN PL. SMH
TOP = 4.86'
INVERT OUT = -0.06'
INVERT IN = 0.26'

21 IN PL. SMH
TOP = 25.96'
(DEPTH GREATER THAN 25' CANNOT OBTAIN INVERTS)

22 IN PL. SMH
TOP = 23.28'
INVERT IN = 6.57'
INVERT OUT = 6.95'

23 IN PL. SMH
TOP = 24.16'
INVERT IN =7.57'
INVERT OUT = 7.12'

24 IN PL. SMH
INVERT IN = 15.35'
INVERT OUT = 15.86'

25 IN PL. SMH
TOP = 23.28'
INVERT IN = 13.81'
INVVERT OUT = 13.19'

26 IN PL. SMH
TOP = 24.08'
INVERT IN = 15.32'
INVERT OUT = 15.14'

27 (STRUCTURE NOT FOUND)

28 IN PL. SMH
TOP = 20.07'
INVERT IN = 7.94'
INVERT OUT = 7.91'

29 IN PL. SMH
TOP = 16.16'
INVERT IN = 6.78'
INVERT OUT = 6.19'

30 IN PL. SMH
TOP = 15.25'
(STRUCTURE IS DAMAGED COLLAR
AND CONCRETE BROKEN. COULD
NOT AS-BUILT DUE TO CONDITION
OF STRUCTURE)

31 IN PL. SMH
TOP = 26.88'
INVERT IN (A) = 6.35'
INVERT OUT (B) = 6.33'
INVERT IN (C) = 20.28'

32 IN PL. SMH
TOP = 8.99'
INVERT IN = -0.51'
INVERT OUT = -0.89'

33 IN PL. SMH
TOP = 13.50'
INVERT IN =-4.35'
INVERT OUT = -8.36'

34 IN PL. SMH
TOP = 35.25'
BOTTOM = 14.00'
(PIPES ARE RECESSED IN STRUCTURE INVERTS
COULD NOT BE OBTAINED)

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CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS
DESCRIPTION | DATE | BY

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: –
DRAWN BY: AMT DATE: –
CHECKED BY: AMT DATE: –
APPROVED BY: AMT DATE: –

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

GI-004
SURVEY INFORMATION
& ROW DATA TABLE

SHEET
04 OF 75
SCALE: N/A

ALEXRENEW SITE ACCESS NOTES

1. CONSTRUCTION ACTIVITIES MAY ONLY OCCUR MONDAY THROUGH FRIDAY, FROM 7:00AM THROUGH 6:00PM.
2. COORDINATE WITH MISS UTILITY TO IDENTIFY ALL EXISTING UNDERGROUND INFRASTRUCTURE PRIOR TO ANY SITE WORK.
3. THE RELOCATION OF THE STORM DRAIN SHALL BE COORDINATED WITH ALEXRENEW.
4. ALL ACCESS VIA NORTH BRIDGE (FOR CONSTRUCTION ACTIVITIES EAST OF LIMERICK SOCCER FIELD) OR VIA HOOFFS RUN DRIVE (FOR CONSTRUCTION ACTIVITIES WEST OF LIMERICK SOCCER FIELD).
5. FOLLOW ACCESS ROUTES AND ENTRY POINTS SHOWN ON SHEETS VF-101 THROUGH VF-105.
6. CITY SHALL ACQUIRE ACCESS AGREEMENT FROM DOMINION ENERGY.
7. CONTRACTOR SHALL PROVIDE ALL INFORMATION OF PERSONNEL REQUIRING ACCESS TO ALEXRENEW TEN (10) BUSINESS DAYS PRIOR TO ACTUAL WORK OCCURRING.
8. SHOW PERSONAL IDENTIFICATION EACH DAY AT NORTH BRIDGE GUARD BOOTH UPON ARRIVAL.
9. ALL ALEXRENEW ROADWAYS (INCLUDING THE PERIMETER ROAD) AND ALEXRENEW CONSTRUCTION AREAS SHALL REMAIN UNIMPEDED DURING CONSTRUCTION ACTIVITIES.
10. ALEXRENEW'S FACILITY MUST BE KEPT SECURE AT ALL TIMES. NO BREAKS OR OPENINGS IN THE FENCE SHALL BE LEFT UNATTENDED AROUND ALEXRENEW PROPERTY AT ANY TIME.

CITY OF ALEXANDRIA DEMOLITION NOTES

1. NO DEMOLITION CAN BEGIN UNTIL ALL EROSION AND SEDIMENT CONTROLS ARE IN PLACE, AND IS APPROVED BY AN EROSION AND SEDIMENT CONTROL INSPECTOR OF THE CITY.
2. ALL WORK SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE MOST CURRENT APPLICABLE FEDERAL, STATE , AND LOCAL LAWS AND REGULATIONS, INCLUDING BUT NOT LIMITED, TO ENVIRONMENTAL PROTECTION AGENCY (EPA), OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), VIRGINIA OCCUPATIONAL AND SAFETY HELATH COMPLIANCE PROGRAM (VOSH ENFORCEMENT), VIRGINIA OVERHEAD HIGH VOLTAGE LINE SAFETY ACT, NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS), AND NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH (NIOSH).
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK WITH REPRESENTATIVE UTILITY COMPANIES AND FOR THE IMPLEMENTATION OF REQUIRED UTILITY-RELATED WORK.
4. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY UPON ENCOUNTERING ANY HAZARDOUS MATERIALS DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL DOCUMENT SAME TO THE CITY AND OBTAIN DIRECTION AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.
5. DISCONNECTION OF SERVICES AND SYSTEMS SUPPLYING UTILITIES TO BE ABANDONED OR DEMOLISHED SHALL BE COMPLETED PRIOR TO OTHER SITE DEMOLITION IN FULL COMPLIANCE WITH APPLICABLE CODES, REGULATIONS, AND THE REQUIREMENTS OF UTILITY PURVEYORS HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE UTILITY PURVEYORS, PAYMENT OF ASSOCIATED FEES AND PROCUREMENT OF ALL NECESSARY PERMITS.
6. PRIOR TO REMOVAL OF MATERIALS OVER EXISTING UTILITY SYSTEMS, THE CONTRACTOR SHALL DOCUMENT EXISTING CONDITIONS AND, IF AT VARIANCE WITH CONDITIONS AS REPRESENTED ON THE PLANS, NOTIFY THE CITY AND OBTAIN DIRECTION(S) TO THE APPROPRIATE ACTION(S) TO BE TAKEN.
7. PRIOR TO COMMENCING NEW WORK, THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING ADJACENT AREAS. ALL ADJACENT AREAS DAMAGED DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE CITY.
8. THE CONTRACTOR SHALL BACKFILL EXCAVATED AREAS WITH APPROVED MATERIALS AS PER THE REQUIREMENTS OF OF THE CITY.
9. THE CONTRACTOR SHALL PROTECT AND PREVENT DAMAGE TO EXISTING ON-SITE UTILITY DISTRIBUTION FACILITIES. ACTIVE UTILITY DISTRIBUTION FACILITIES ENCOUNTERED DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES SHALL BE SHUT OFF AT THE SERVICE MAIN WITH THE APPROVAL OF THE CITY.
10. DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY UPON ENCOUNTERING ANY EXISTING UTILITIES AND/OR UTILITY SYSTEM STRUCTURES NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL DOCUMENT SAME TO THE OWNER'S REPRESENTATIVE AND OBTAIN DIRECTION AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.
11. CONTRACTOR SHALL EXERCISE CAUTION WHILE DEMOLISHING NEXT TO EXISTING UTILITIES AND STRUCTURES. ANY DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE CITY.
12. CONTRACTOR IS RESPONSIBLE FOR REMOVING AND DISPOSING FOR ALL ITEMS AS INDICATED ON THE PLANS AND SPECIFICATIONS.
13. CONTRACTOR SHALL REMOVE SIDEWALK TO THE NEAREST JOINT, UNLESS NOTED OTHERWISE ON THE PLANS.

DEMOLITION NOTES:

1. LOCATION OF ALL UTILITIES SHOWN ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY AND DETERMINE THE EXACT LOCATION AND DEPTH OF ALL UTILITIES WITHIN THE LIMIT OF DISTURBANCE PRIOR TO COMMENCING WORK. REPORT ANY DISCREPANCY TO THE CITY OF ALEXANDRIA CONSTRUCTION MANAGER. THE CONTRACTOR SHALL CONTACT MISS UTILITY AT 811 A MINIMUM OF 72 HOURS PRIOR TO ANY EXCAVATION TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES.
2. THE DEMOLITION PLAN IS A GENERAL GUIDE OF WHAT ITEMS NEED TO DEMOLISHED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY ALL ITEMS THAT REQUIRED DEMOLITION TO COMPLETE THE PROPOSED CONSTRUCTION.
3. CONTRACTOR SHALL PROTECT AND PRESERVE ALL EXISTING SITE STRUCTURES AND FEATURES NOT SCHEDULED FOR DEMOLITION AND/ OR CONSTRUCTION FROM DAMAGE DUE TO DEMOLITION PROCEDURES. ANY RESULTING DAMAGE SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE CITY OF ALEXANDRIA CONSTRUCTION MANAGER.
4. TREE PROTECTION AND CONSTRUCTION FENCE SHALL BE THE SAME WHEREVER THEY OVERLAP.
5. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR SAFETY AND SECURITY AT THE PROJECT SITE FOR THE DURATION OF THE CONTRACT.
6. CONTRACTOR SHALL COORDINATE WITH THE CITY OF ALEXANDRIA CONSTRUCTION MANAGER TO IDENTIFY ANY NECESSARY STAGING/STORAGE AREAS. PROPOSED STAGING AND STORAGE AREAS SHALL BE REVIEWED AND APPROVED BY THE CONSTRUCTION MANAGER, AND THE LIMITS OF WORK WILL BE ADJUSTED ACCORDINGLY.
7. ANY STOCKPILING, REGARDLESS OF LOCATION ON SITE, SHALL BE STABILIZED IMMEDIATELY AFTER ITS ESTABLISHMENT AND FOR THE DURATION OF THE PROJECT. STOCKPILES SHALL BE CONTAINED BY STRAW BALES OR EROSION CONTROL FENCING AND COVERED WITH PLASTIC OR CANVAS AT THE END OF EACH WORK DAY FOR THE DURATION OF THE PROJECT.
8. TEMPORARY CONSTRUCTION FENCING SHALL BE ERECTED AS SHOWN ON THE PLANS PRIOR TO BEGINNING CONSTRUCTION OPERATIONS AND MAINTAINED UNTIL COMPLETION OF PROJECT.
9. WHERE ITEMS TO BE REMOVED OCCUR WITHIN TREE PROTECTION ZONES, THE CONTRACTOR SHALL REMOVE THE ITEMS WORKING WITH A CITY ARBORIST (PROVIDED BY CITY) ON-SITE TO OBSERVE AND MINIMIZE TREE DAMAGE. CONTRACTOR SHALL NOTIFY THE CITY OF ALEXANDRIA CONSTRUCTION MANAGER FIVE BUSINESS DAYS PRIOR TO THESE REMOVALS.
10. CARE SHALL BE TAKEN TO PRESERVE EXISTING TREES AND THEIR ROOT SYSTEMS. TREES INCURRING ROOT DAMAGE DUE TO CONSTRUCTION SHALL BE PRUNED AND FERTILIZED PER THE CITY OF ALEXANDRIA'S LANDSCAPE GUIDELINES MOST CURRENT EDITION.
11. NO MATERIALS OR EQUIPMENT SHALL BE PERMITTED WITHIN THE TREE PROTECTION AREA. ANY VIOLATION OF THIS REQUIREMENT WILL RESULT IN A FINE OF $500 PER DAY OF VIOLATION.
12. UNAUTHORIZED TREE REMOVALS, TREE DEATH OR SEVERE DAMAGE DUE TO THE CONTRACTOR'S FAILURE TO EXERCISE PROPER CARE WHEN WORKING NEAR TREES, SHALL RESULT IN A FINE EQUAL TO THE LANDSCAPE VALUE OF THE TREE AS PUBLISHED IN THE LATEST EDITION OF THE COUNCIL OF TREE AND LANDSCAPE APPRAISERS GUIDE FOR PLANT APPRAISALS PUBLISHED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE.
13. CITY ARBORIST INSPECTION IS REQUIRED PRIOR TO ANY SITE LAND DISTURBANCE ACTIVITY.
14. DEMOLITION STAGE EROSION AND SEDIMENT CONTROLS AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO DEMOLITION.
15. REFER TO TREE PRESERVATION DETAILS AND EROSION AND SEDIMENT CONTROL DRAWINGS FOR TREE PROTECTION AND OTHER REQUIRED TREE CARE.
16. ALL MATERIAL FROM DEMOLITION NOT IDENTIFIED FOR REUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPROPRIATE REGULATIONS.
17. ALL PAVEMENT REMOVED SHALL BE DONE SUCH THAT REMAINING PAVEMENT IS LEFT WITH CLEAN STRAIGHT EDGE. CONCRETE PAVEMENT/ CURBING SHALL BE REMOVED TO THE NEAREST JOINT.
18. EXISTING PAVEMENT SHALL BE SAW CUT WHEN NEXT TO REMAINING PAVEMENT BEFORE REMOVAL. ALL SAW CUTS SHALL BE STRAIGHT, EVEN CUTS; JAGGED CUTS WILL NOT BE PERMITTED.
19. CHAIN LINK FENCE REMOVED: INCLUDES ALL FENCE POSTS AND CONCRETE FOOTINGS.
20. CONCRETE REMOVAL: SHALL INCLUDE CONCRETE, STEEL REINFORCEMENT, AND GRAVEL BASE WHERE NO PROPOSED CONCRETE WILL BE INSTALLED.
21. ASPHALT REMOVAL: SHALL INCLUDE SURFACE, BASE AND SUBBASE MATERIALS.
22. CONTRACTOR SHALL REMOVE AND DISPOSE OF ANY SITE FURNISHINGS WITHIN THE LIMITS OF DISTURBANCE NOT REMOVED FROM SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION (IE SIGNAGE, BENCHES, TRASH RECEPTACLES, ETC).
23. CONTRACTOR SHALL PROVIDE EXISTING DAMAGE PHOTOS PRIOR TO MOBILIZING OR PERFORMING ANY WORK. LOCATIONS OF PICTURES TO BE RECORDED ON THIS SHEET.
24. TO PREVENT DAMAGES OUTSIDE THE LIMITS OF DISTURBANCE, NO PARK AREAS OUTSIDE THE LOD SHALL BE USED FOR STAGING OR STORAGE.
25. UPON COMPLETION OF THE PROJECT, ALL EXCESS SOIL, SAND, MULCH, TEMPORARY FENCING, EROSION CONTROL MEASURES, STABILIZATION MATERIALS, AND OTHER DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY. ALL PAVED AREAS, WALLS, ETC. SHALL BE THOROUGHLY WASHED AND CLEANED UPON COMPLETION OF THE PROJECT.
26. REFER TO SITE CLEARING, DEMOLITION, & REMOVALS SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
27. CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES FOR SHUTOFF, CAPPING, AND CONTINUATION OF UTILITY SERVICES AS REQUIRED.
28. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE THAT OCCURS TO ANY EXISTING SITE ELEMENT THAT IS NOT MARKED FOR DEMOLITION DURING CONSTRUCTION AND MUST REPLACE AT NO COST TO CITY OF ALEXANDRIA IF DAMAGED.
29. CONTRACTOR SHALL INFORM CITY OF ALEXANDRIA CONSTRUCTION MANAGER IF ANY ITEMS/INFORMATION IS NOT LISTED OR CALLED OUT, SO AN APPROPRIATE SOLUTION CAN BE DISCUSSED. CONTRACTOR SHALL HAVE WRITTEN APPROVAL FROM CITY OF ALEXANDRIA CONSTRUCTION MANAGER PRIOR TO ANY FURTHER SITE WORK.

GRADING AND ADA COMPLIANCE NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL ELEMENTS ARE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN DOCUMENTS AND CONTRACT CONDITIONS INCLUDING THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN (ADA) AND THE VIRGINIA ACCESSIBILITY CODE AND ANY UPDATES. IF THE CONTRACTOR OBSERVES THAT PORTIONS OF THE PROJECT ARE NON-COMPLIANT WITH THE ADA, HE SHALL NOTIFY CITY OF ALEXANDRIA CONSTRUCTION MANAGER SO THAT A FIELD ADJUSTMENT CAN BE MADE TO ENSURE COMPLIANCE. GRADE TOLERANCES SHALL BE MEASURED WITH A 2 FOOT DIGITAL LEVEL.
2. VERIFY ALL EXISTING AND PROPOSED GRADES PRIOR TO FINAL CONSTRUCTION. CONTRACTOR SHALL STAKE OUT GRADES IN THE FIELD FOR REVIEW BY CITY OF ALEXANDRIA CONSTRUCTION MANAGER PRIOR TO FINAL CONSTRUCTION.
3. PROPOSED GRADING SHALL MEET EXISTING GRADE UNIFORMLY TO ENSURE A SMOOTH TRANSITION. NOTIFY CITY OF ALEXANDRIA CONSTRUCTION MANAGER IMMEDIATELY IF THERE ARE ANY EDGE CONDITIONS THAT CREATE AREAS WITHOUT POSITIVE DRAINAGE.
4. ALL LONGITUDINAL SLOPES ALONG THE WALKS SHALL BE NO STEEPER THAN 4.8% WITHOUT RAILING AND 7.8% WITH RAILING. THE CROSS SLOPE SHALL BE MINIMUM 1% AND MAXIMUM 1.8% OR AS NOTED ON THE DRAWINGS. ALL LANDING AND TRANSITION AREAS SHALL BE LESS THAN 1.8% IN ALL DIRECTIONS. THESE LIMITS PROVIDE A 0.2% MARGIN FROM THE D.O.J. ADA REQUIREMENTS TO ALLOW FOR CONSTRUCTION TOLERANCES.
5. ANY HARDSCAPE SURFACE AREAS THAT ARE BUILT WITHOUT COMPLYING WITH THE ABOVE CODE MUST BE CORRECTED BY CONTRACTOR AT NO ADDITIONAL EXPENSE.
6. THE MAXIMUM VERTICAL CHANGE BETWEEN THE FINISH GRADES OF ADJACENT HARDSCAPE SURFACES IS ¼". THE MAXIMUM HORIZONTAL GAP BETWEEN THE EDGES OF ADJACENT HARDSCAPE SURFACES IS ½".
7. GRADING IS NOT COMPLETE UNTIL CONTRACTOR ACQUIRES APPROVAL FROM THE CITY OF ALEXANDRIA CONSTRUCTION MANAGER. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE CONSTRUCTION MANAGER.
8. SEE GRADING PLANS FOR SPOT ELEVATIONS AND NOTES.
9. ADA COMPLIANCE NOTE: THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL ELEMENTS ARE CONSTRUCTED IN ACCORDANCE WITH THE LATEST VERSION OF ADA STANDARDS FOR ACCESSIBLE DESIGN, BY THE DEPARTMENT OF JUSTICE. SHOULD ANY QUESTIONS ARISE DURING CONSTRUCTION, INSTALLATION, OR IF ANY CLARIFICATIONS ARE NEEDED, THE CONTRACTOR SHALL CONTACT THE CITY OF ALEXANDRIA CONSTRUCTION MANAGER.

HORIZONTAL CONTROL STANDARDS	
DESIGN SPEED (MPH)	18
MINIMUM RADIUS (FT)	60
DATA FROM "GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES" FROM AASHTO (2012, FOURTH EDITION)	

LAYOUT NOTES:

1. ON-SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALE, LARGER SCALE OVER SMALLER SCALE, ADDENDA AND CLARIFICATIONS OVER PREVIOUS DOCUMENTS.
2. CONTRACTOR TO LAY OUT HARDSCAPE ELEMENTS AND VERIFY LAYOUT WITH CITY OF ALEXANDRIA CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
3. ANY DISCREPANCIES OR CONFLICTS WITH EXISTING CONDITIONS OR OTHER DRAWINGS SHALL BE REPORTED TO THE PROJECT OFFICER IMMEDIATELY FOR PROPER CLARIFICATION OR ADJUSTMENT.
4. WHERE DIMENSIONS ARE CALLED AS "EQUAL," SPACE REFERENCED ITEMS EQUALLY, MEASURED TO THEIR CENTER LINES.
5. MEASUREMENTS ARE TO FACE OF BUILDING, WALL OR FIXED SITE IMPROVEMENT. DIMENSIONS TO CENTER LINES IS AS INDICATED.
6. INSTALL INTERSECTING ELEMENTS AT 90° ANGLES TO EACH OTHER UNLESS OTHERWISE NOTED.
7. PROVIDE EXPANSION JOINTS WHERE CONCRETE FLATWORK MEETS VERTICAL STRUCTURES SUCH AS WALLS, CURBS, STEPS AND BUILDING ELEMENTS.
8. NEW WORK SHALL MEET AND MATCH ALIGNMENT OF EXISTING FEATURES AND FINISHED GRADES AT LIMITS OF WORK AND AT EXISTING PAVEMENT OR OTHER FACILITIES TO REMAIN.
9. CONTRACTOR SHALL VERIFY THE CORRECT LOCATION OF ALL UTILITIES AND EXISTING TREES TO REMAIN IN THE FIELD PRIOR TO CONSTRUCTION.
10. CONTRACTOR SHALL STAKE ALIGNMENT FOR ALL WALLS, CURBS, BOULDERS, SIGNS, FURNISHINGS, COURTS, PATHS, HARDSCAPE, BENCHES, TABLES, TRASH RECEPTACLES, RECYCLING RECEPTACLES, LIGHT POLES, STORMWATER MANAGEMENT FACILITIES, MANHOLES AND UTILITY STATIONS FOR CITY OF ALEXANDRIA CONSTRUCTION MANAGER'S APPROVAL PRIOR TO INSTALLATION.
11. FOR LAYOUT, ALL ANGLES ARE 90° UNLESS OTHERWISE NOTED. WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE FROM THE PLAN.
12. MINOR ADJUSTMENTS IN HORIZONTAL LAYOUT AND TOP OF WALL ELEVATIONS SHALL NOT RESULT IN AN INCREASE IN PRICE BY THE CONTRACTOR.
13. CONTRACTOR SHALL STAKE-OUT THE LOCATIONS OF BENCHES, BENCH PADS, LIGHT POLES, AND ALL OTHER FURNISHINGS AND FIXUTRES FOR REVIEW AND APPROVAL BY CITY OF ALEXANDRIA CONSTRUCTION MANAGER PRIOR TO INSTALLATION.

LAYOUT ABBREVIATIONS:

STA	–	STATION	OFF	–	OFFSET
BL	–	BASELINE	L#	–	LINE #
R	–	RADIUS	C#	–	CURVE #
POB	–	POINT OF BEGINNING	EQ	–	EQUAL
UON	–	UNLESS OTHERWISE NOTED	EP	–	END POINT
PRC	–	POINT OF REVERSE CURVE	PCC	–	POINT OF COMPOUND CURVE
PT	–	POINT OF TANGENCY			

AS-BUILT NOTES:

1. AS-BUILT DRAWINGS FOR THIS PLAN SET WILL BE PROVIDED IN STRICT ACCORDANCE WITH THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS AND TO THE SATISFACTION OF THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES).
2. AS-BUILT DRAWINGS SHALL INCLUDE CLEAR IDENTIFICATION OF ALL VARIATION(S) AND CHANGES FROM APPROVED DRAWINGS INCLUDING LOCATION, QUANTITY AND SPECIFICATION OF ALL PROJECT ELEMENTS.

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

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CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

DATE	DESCRIPTION	BY

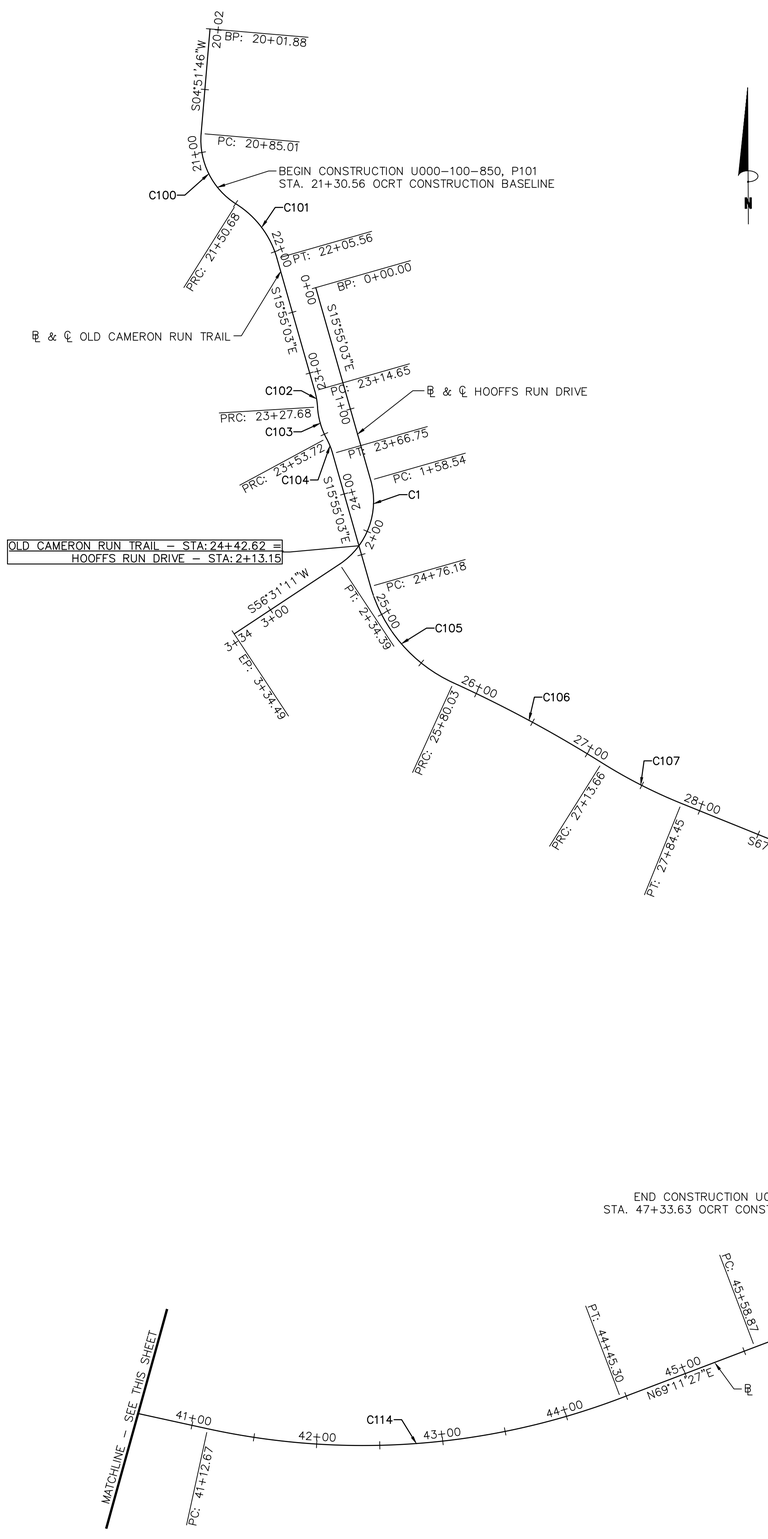
ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920

DESIGNED BY:	AMT	DATE:	–
DRAWN BY:	AMT	DATE:	–
CHECKED BY:	AMT	DATE:	–
APPROVED BY:	AMT	DATE:	–

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

GI-005
ADDITIONAL CONSTRUCTION NOTES

SHEET
05 OF 75
SCALE: N/A



CURVE TABLE – HOOFFS RUN										
CURVE #	PI	DELTA	D	TANGENT	LENGTH	RADIUS	START STATION		END STATION	
C100	21+21.57	62°42'20"	95° 29' 35"	36.56'	65.67'	60.00'	PC	20+85.01	PRC	21+50.68
C101	21+79.41	41°55'32"	76° 23' 40"	28.73'	54.88'	75.00'	PRC	21+50.68	PT	22+05.56
C102	23+21.19	12°26'13"	95° 29' 35"	6.54'	13.02'	60.00'	PC	23+14.65	PRC	23+27.68
C103	23+40.91	24°52'26"	95° 29' 35"	13.23'	26.05'	60.00'	PRC	23+27.68	PRC	23+53.72
C104	23+60.26	12°26'13"	95° 29' 35"	6.54'	13.02'	60.00'	PRC	23+53.72	PT	23+66.75
C105	25+31.61	49°34'50"	47° 44' 47"	55.42'	103.84'	120.00'	PC	24+76.18	PRC	25+80.03
C106	26+46.94	7°36'12"	5° 41' 23"	66.91'	133.63'	1007.00'	PRC	25+80.03	PRC	27+13.66
C107	27+49.15	10°05'26"	14° 15' 10"	35.49'	70.80'	402.00'	PRC	27+13.66	PT	27+84.45
C108	29+68.16	12°43'24"	28° 21' 51"	22.52'	44.86'	202.00'	PC	29+45.64	PRC	29+90.50
C109	30+12.14	39°39'35"	95° 29' 40"	21.64'	41.53'	60.00'	PRC	29+90.50	PT	30+32.03
C110	33+58.46	38°00'00"	212° 12' 24"	9.30'	17.91'	27.00'	PC	33+49.16	PT	33+67.07
C111	35+30.53	3°22'42"	2° 17' 31"	73.72'	147.41'	2500.00'	PC	34+56.80	PRC	36+04.21
C112	36+94.40	2°35'00"	1° 25' 57"	90.19'	180.35'	4000.00'	PRC	36+04.21	PRT	37+84.56
C113	38+10.29	0°35'23"	1° 08' 45"	25.73'	51.46'	5000.00'	PRC	37+84.56	PT	38+36.02
C114	42+83.79	33°08'42"	9° 57' 52"	171.12'	332.63'	575.00'	PC	41+12.67	PT	44+45.30
C115	45+93.74	1°59'52"	2° 51' 53"	34.87'	69.73'	2000.00'	PC	45+58.87	PRC	46+28.61
C116	46+78.06	60°23'08"	67° 24' 24"	49.46'	89.58'	85.00'	PRC	46+28.61	PT	47+18.19

CURVE TABLE – HOOFFS RUN										
CURVE #	PI	DELTA	D	TANGENT	LENGTH	RADIUS	START STATION		END STATION	
C1	2+02.48	72°26'14"	95° 29' 35"	43.94'	75.86'	60.00'	PC	1+58.54	PT	2+34.39

POINTS						
POINT #	BASELINE	STATION	ITEM	NORTHING	EASTING	BEARING
1	OCRT	20+01.88	POB	6977067.9710	11892422.1924	S04°51'46"W
2	OCRT	20+85.01	PC	6976985.1340	11892415.1451	
3	OCRT	21+21.57	PI–Curve 100	6976948.7092	11892412.0462	
4	OCRT	21+50.68	PRC	6976929.2523	11892442.9945	S57°50'34"E
5	OCRT	21+79.41	PI–Curve 101	6976913.9590	11892467.3204	
6	OCRT	22+05.56	PT	6976886.3268	11892475.2007	S15°55'03"E
7	OCRT	23+14.65	PC	6976781.4159	11892505.1198	
8	OCRT	23+21.19	PI–Curve 102	6976775.1289	11892506.9128	
9	OCRT	23+27.68	PRC	6976768.6033	11892507.3097	S03°28'50"E
10	OCRT	23+40.91	PI–Curve 103	6976755.3954	11892508.1130	
11	OCRT	23+53.72	PRC	6976743.7505	11892514.3974	S28°21'16"E
12	OCRT	23+60.26	PI–Curve 104	6976737.9972	11892517.5022	
13	OCRT	23+66.75	PT	6976731.7103	11892519.2952	S15°55'03"E
14	OCRT	24+76.18	PC	6976626.4690	11892549.3085	
15	OCRT	25+31.61	PI–Curve 105	6976573.1709	11892564.5084	
16	OCRT	25+80.03	PRC	6976550.1856	11892614.9405	S65°29'53"E
17	OCRT	26+46.94	PI–Curve 106	6976522.4346	11892675.8290	
18	OCRT	27+13.66	PRC	6976486.8711	11892732.5103	S57°53'41"E
19	OCRT	27+49.15	PI–Curve 107	6976468.0088	11892762.5732	
20	OCRT	27+84.45	PT	6976454.7054	11892795.4759	S67°59'07"E
21	OCRT	29+45.64	PC	6976394.2845	11892944.9114	
22	OCRT	29+68.16	PI–Curve 108	6976385.8426	11892965.7904	
23	OCRT	29+90.50	PRC	6976382.2064	11892988.0159	S80°42'31"E
24	OCRT	30+12.14	PI–Curve 109	6976378.7130	11893009.3685	
25	OCRT	30+32.03	PT	6976362.3959	11893023.5771	S41°02'55"E
26	OCRT	33+49.16	PC	6976123.2327	11893231.8356	
27	OCRT	33+58.46	PI–Curve 110	6976116.2215	11893237.9408	
28	OCRT	33+67.07	PT	6976114.4553	11893247.0683	S79°02'55"E
29	OCRT	34+56.80	PC	6976097.4073	11893335.1718	
30	OCRT	35+30.53	PI–Curve 111	6976083.4014	11893407.5537	
31	OCRT	36+04.21	PRC	6976065.1545	11893478.9845	S75°40'13"E
32	OCRT	36+94.40	PI–Curve 112	6976042.8324	11893566.3682	
33	OCRT	37+84.56	PRC	6976024.4716	11893654.6693	S78°15'13"E
34	OCRT	38+10.29	PI–Curve 113	6976019.2334	11893679.8610	
35	OCRT	38+36.02	PT	6976013.7362	11893704.9974	S77°39'50"E
36	OCRT	41+12.67	PC	6975954.6308	11893975.2615	
37	OCRT	42+83.79	PI–Curve 114	6975918.0728	11894142.4258	
38	OCRT	44+45.30	PT	6975978.8622	11894302.3790	N69°11'27"E
39	OCRT	45+58.87	PC	6976019.2081	11894408.5400	
40	OCRT	45+93.74	PI–Curve 115	6976031.5958	11894441.1353	
41	OCRT	46+28.61	PRC	6976042.8397	11894474.1426	N71°11'19"E
42	OCRT	46+78.06	PI–Curve 116	6976058.7872	11894520.9577	
43	OCRT	47+18.19	PT	6976107.3675	11894530.2276	N10°48'11"E
44	OCRT	48+00.00	EOB	6976187.7274	11894545.5616	

POINTS						
POINT #	BASELINE	STATION	ITEM	NORTHING	EASTING	BEARING
101	HOOFF'S RUN DR	0+00	POB	6976863.1181	11892505.9267	S15°55'03"E
102	HOOFF'S RUN DR	1+58.54	PC	6976710.6604	11892549.4056	
103	HOOFF'S RUN DR	1+96.46	PI – Curve 01	6976668.4020	11892561.4571	
104	HOOFF'S RUN DR	2+34.39	PT	6976644.1607	11892524.8051	
105	HOOFF'S RUN DR	3+34.49	EOB	6976588.9391	11892441.3120	S56°31'11"W

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DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

DESCRIPTION	DATE	BY

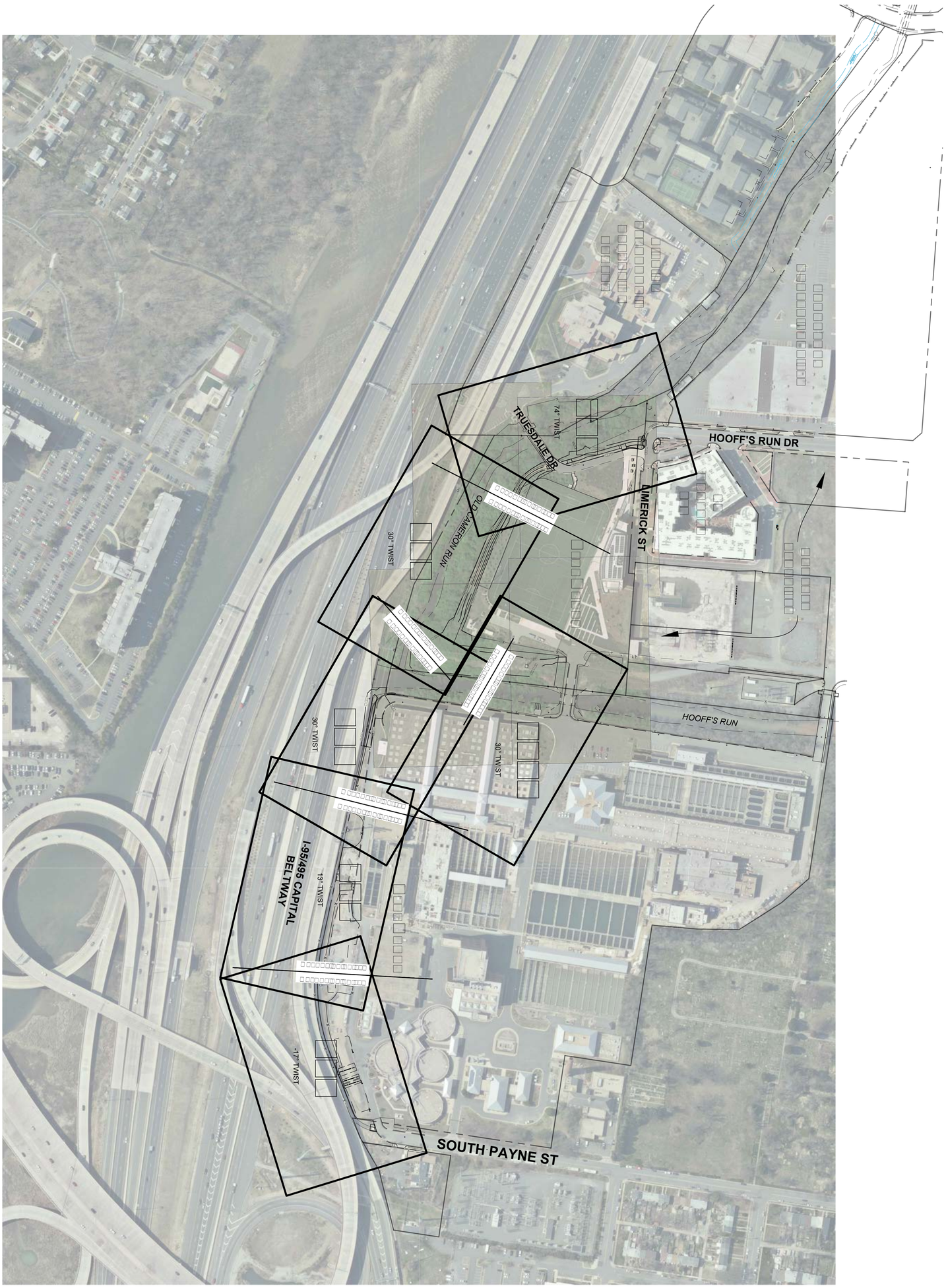
ALEXANDRIA PROJECT NO.: I6-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920

DESIGNED BY:	AMT	DATE:	–
DRAWN BY:	AMT	DATE:	–
CHECKED BY:	AMT	DATE:	–
APPROVED BY:	AMT	DATE:	–

PROJECT NAME: OLD CAMERON RUN TRAIL
UPC109469

GI-006
PROJECT GEOMETRY

SHEET
06 OF 75
SCALE:1" = 60'



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PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469 90% DESIGN SUBMITTAL

SHEET 07 OF 75

SCALE: 1"=150'

GI-007

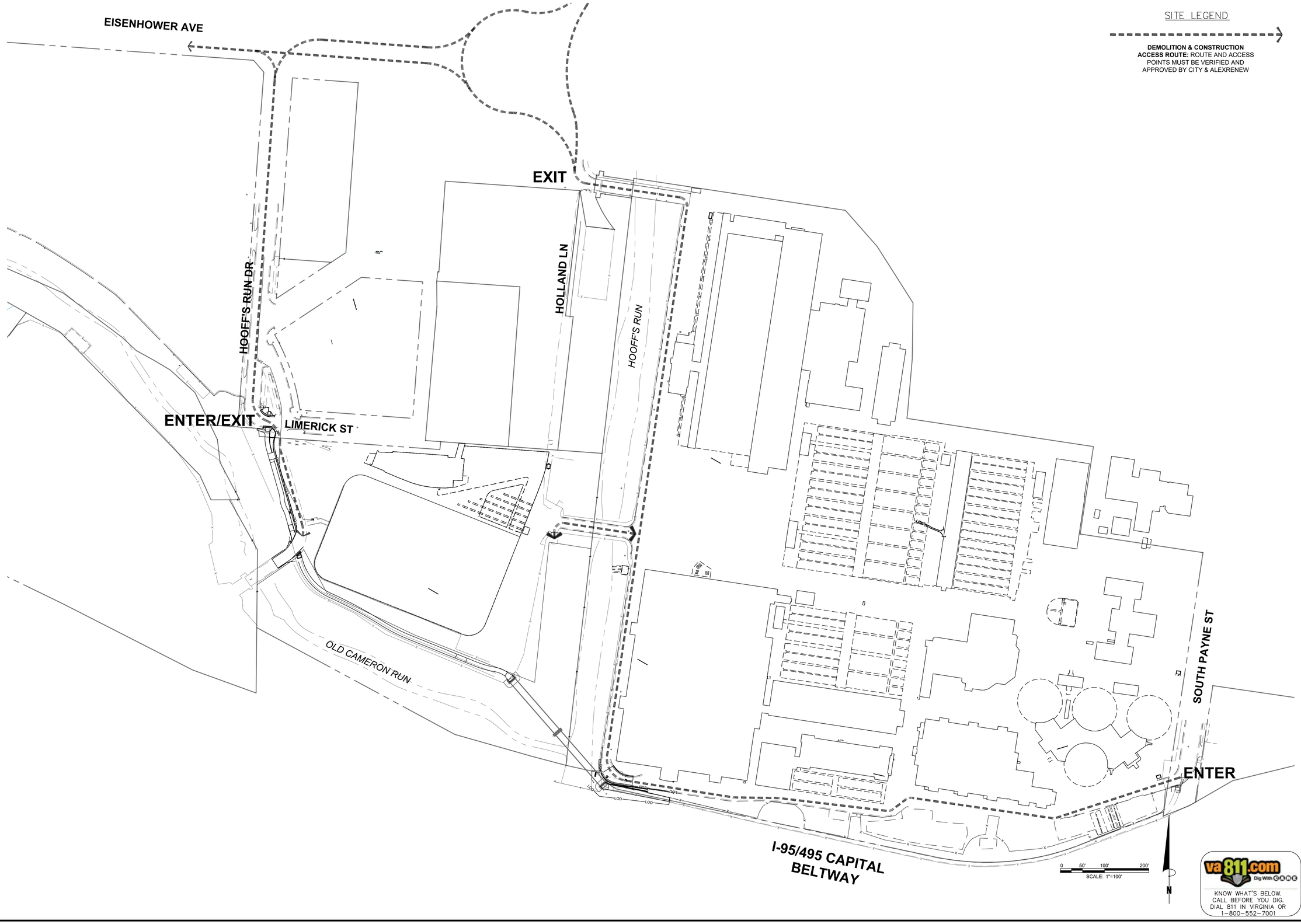
SHEET LAYOUT

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: –
DRAWN BY: AMT DATE: –
CHECKED BY: AMT DATE: –
APPROVED BY: AMT DATE: –

REVISIONS

DATE	BY	DESCRIPTION

CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313



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CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

DATE	BY	DESCRIPTION

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: –
DRAWN BY: AMT DATE: –
CHECKED BY: AMT DATE: –
APPROVED BY: AMT DATE: –

PROJECT NAME: OLD CAMERON RUN TRAIL
UPC109469

GI-008
CONSTRUCTION ACCESS

SHEET
08 OF 75
SCALE: 1"=100'

SITE LEGEND

- LOD — LIMITS OF DISTURBANCE
- LOD/TP — LIMITS OF DISTURBANCE/ TREE PROTECTION FENCE
- PROPOSED TEMPORARY EASEMENT
- PROPOSED PERMANENT EASEMENT
- **DEMOLITION & CONSTRUCTION ACCESS ROUTE:** ROUTE AND ACCESS POINTS MUST BE VERIFIED AND APPROVED BY CITY & ALEXRENEW
- EXISTING TREE WITH CRITICAL ROOT ZONE

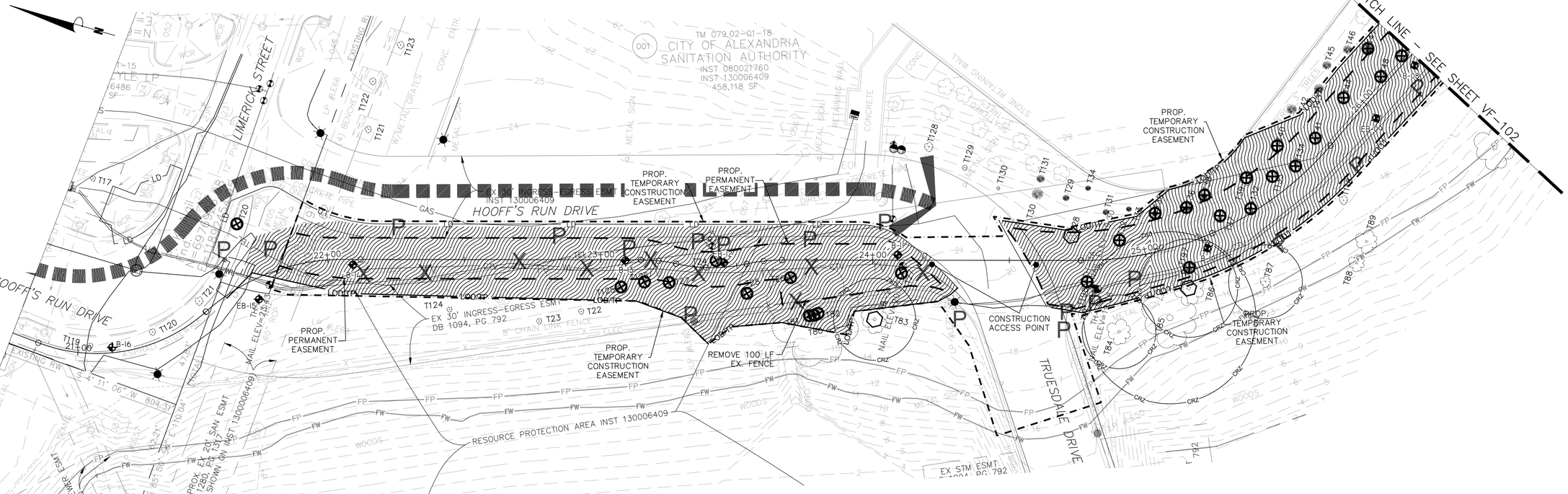
DEMOLITION SCHEDULE (VF-101)

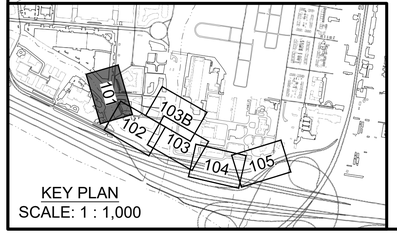
SYMBOL	DEMOLITION DESCRIPTION
X	DEMOLISH (TO FULL DEPTH), REMOVE AND LEGALLY DISPOSE EXISTING ITEM
P	PRESERVE EXISTING ITEM
⊗	DEMOLISH TREE AND GRIND STUMP
⬡	PRESERVE EXISTING TREE

SYMBOL	DEMOLITION DESCRIPTION
	CLEAR AND GRUB
LOD/TP	PLACE TREE PROTECTION FENCING ALONG LOD
RP	ROOT PRUNING ALONG LOD

DEMOLITION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GI-003 AND GI-004 FOR SURVEY INFORMATION, NOTES, LEGEND AND INVERT TABLES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.

ANY TREE NOT EXPLICITLY SHOWN AS DEMOLISH SHOULD BE PRESERVED.





KEY PLAN
SCALE: 1 : 1,000

0 10' 20' 40'
SCALE: 1"=20'

DEMOLITION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GE-003 AND GE-004 FOR SURVEY INFORMATION, NOTES, LEGEND AND INVERT TABLES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.

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301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

DATE	DESCRIPTION	BY

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: --
DRAWN BY: AMT DATE: --
CHECKED BY: AMT DATE: --
APPROVED BY: AMT DATE: --

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

VF-101
EXISTING CONDITIONS & DEMOLITION PLAN

SHEET
09 OF 75
SCALE: 1"=20'

SITE LEGEND

LOD	LIMITS OF DISTURBANCE
LOD/TP	LIMITS OF DISTURBANCE/ TREE PROTECTION FENCE
	PROPOSED TEMPORARY EASEMENT
	PROPOSED PERMANENT EASEMENT
	DEMOLITION & CONSTRUCTION ACCESS ROUTE: ROUTE AND ACCESS POINTS MUST BE VERIFIED AND APPROVED BY CITY & ALEXRENEW
CRZ	EXISTING TREE WITH CRITICAL ROOT ZONE

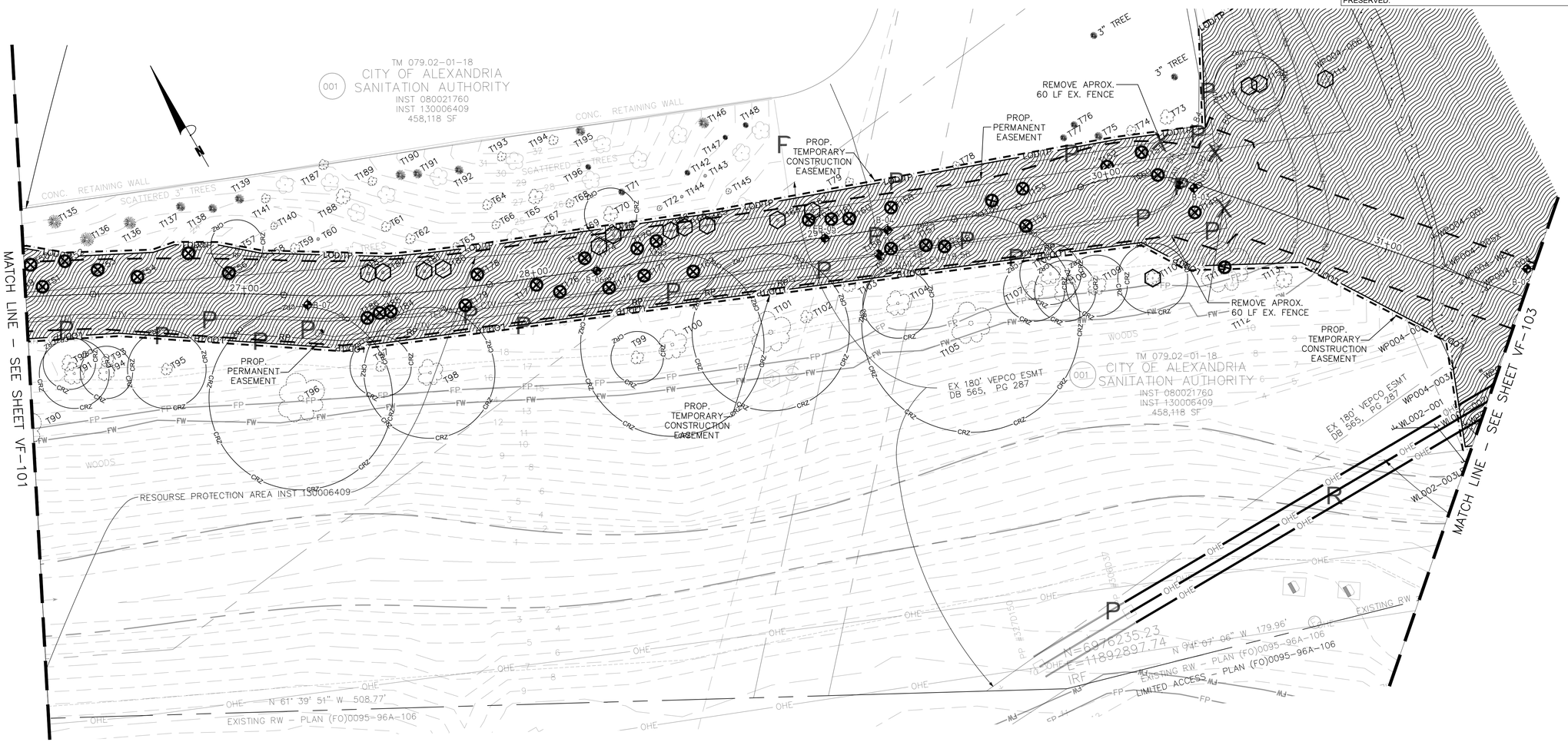
DEMOLITION SCHEDULE (VF-102)

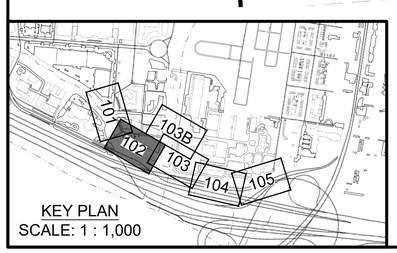
SYMBOL	DEMOLITION DESCRIPTION
P	PRESERVE EXISTING ITEM
⊗	DEMOLISH TREE AND GRIND STUMP
⬡	PRESERVE EXISTING TREE

SYMBOL	DEMOLITION DESCRIPTION
	CLEAR AND GRUB
LOD/TP	PLACE TREE PROTECTION FENCING ALONG LOD
RP	ROOT PRUNING AT LOD

DEMOLITION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GI-003 AND GI-004 FOR SURVEY INFORMATION, NOTES, LEGEND AND INVERT TABLES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.

ANY TREE NOT EXPLICITLY SHOWN AS DEMOLISH SHOULD BE PRESERVED.





KEY PLAN
SCALE: 1 : 1,000

SCALE: 1"=20'

DEMOLITION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GE-003 AND GE-004 FOR SURVEY INFORMATION, NOTES, LEGEND AND INVERT TABLES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.

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301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

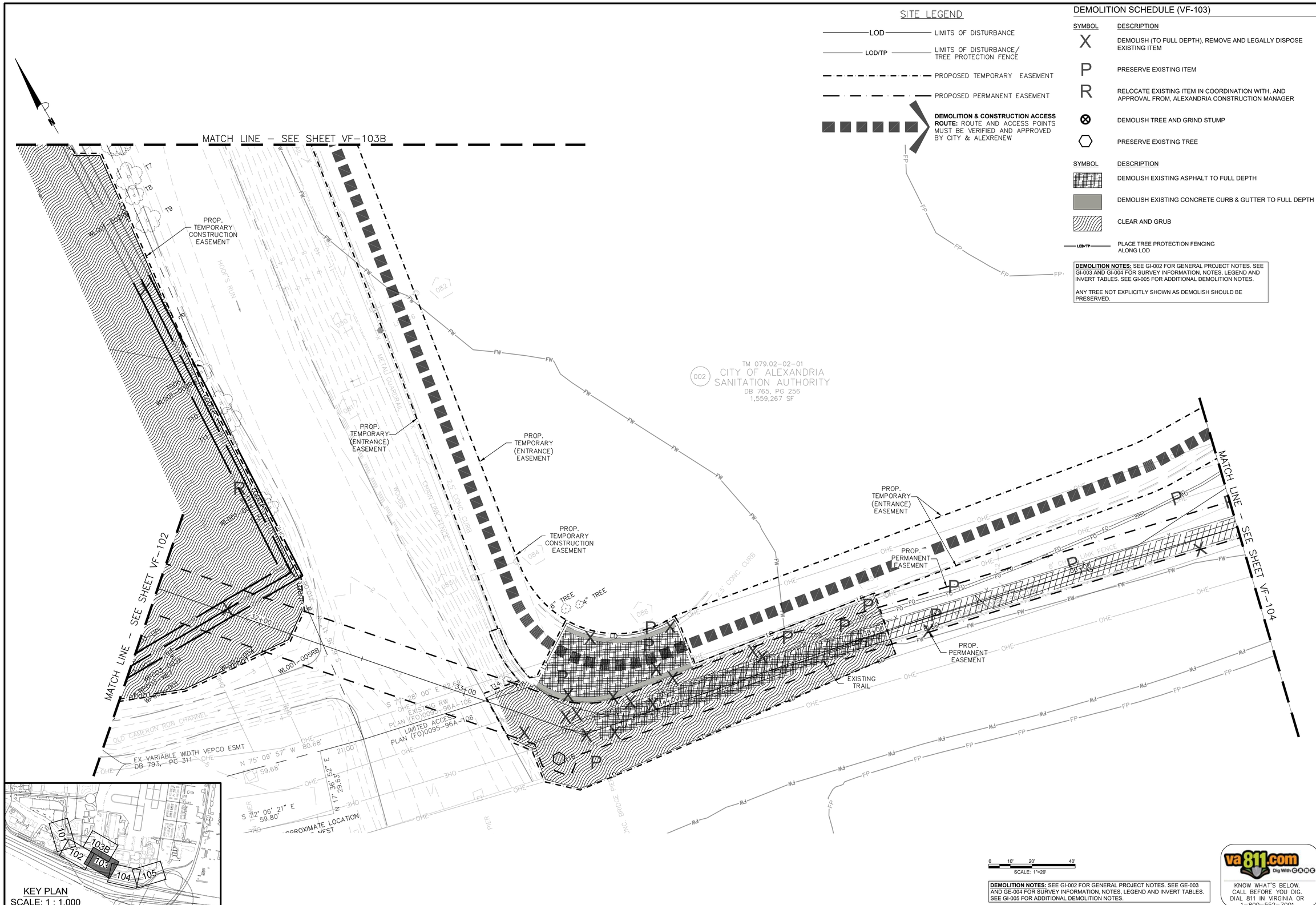
DESCRIPTION	DATE	BY

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: --
DRAWN BY: AMT DATE: --
CHECKED BY: AMT DATE: --
APPROVED BY: AMT DATE: --

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

VF-102
EXISTING CONDITIONS & DEMOLITION PLAN

SHEET
10 OF 75
SCALE: 1"=20'



SITE LEGEND

LOD	LIMITS OF DISTURBANCE
LOD/TP	LIMITS OF DISTURBANCE/ TREE PROTECTION FENCE
	PROPOSED TEMPORARY EASEMENT
	PROPOSED PERMANENT EASEMENT
	DEMOLITION & CONSTRUCTION ACCESS ROUTE: ROUTE AND ACCESS POINTS MUST BE VERIFIED AND APPROVED BY CITY & ALEXRENEW

DEMOLITION SCHEDULE (VF-103)

SYMBOL	DESCRIPTION
X	DEMOLISH (TO FULL DEPTH), REMOVE AND LEGALLY DISPOSE EXISTING ITEM
P	PRESERVE EXISTING ITEM
R	RELOCATE EXISTING ITEM IN COORDINATION WITH, AND APPROVAL FROM, ALEXANDRIA CONSTRUCTION MANAGER
⊗	DEMOLISH TREE AND GRIND STUMP
⬡	PRESERVE EXISTING TREE

SYMBOL	DESCRIPTION
	DEMOLISH EXISTING ASPHALT TO FULL DEPTH
	DEMOLISH EXISTING CONCRETE CURB & GUTTER TO FULL DEPTH
	CLEAR AND GRUB
LOD/TP	PLACE TREE PROTECTION FENCING ALONG LOD

DEMOLITION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GI-003 AND GI-004 FOR SURVEY INFORMATION, NOTES, LEGEND AND INVERT TABLES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.

ANY TREE NOT EXPLICITLY SHOWN AS DEMOLISH SHOULD BE PRESERVED.

DEMOLITION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GE-003 AND GE-004 FOR SURVEY INFORMATION, NOTES, LEGEND AND INVERT TABLES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.

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301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

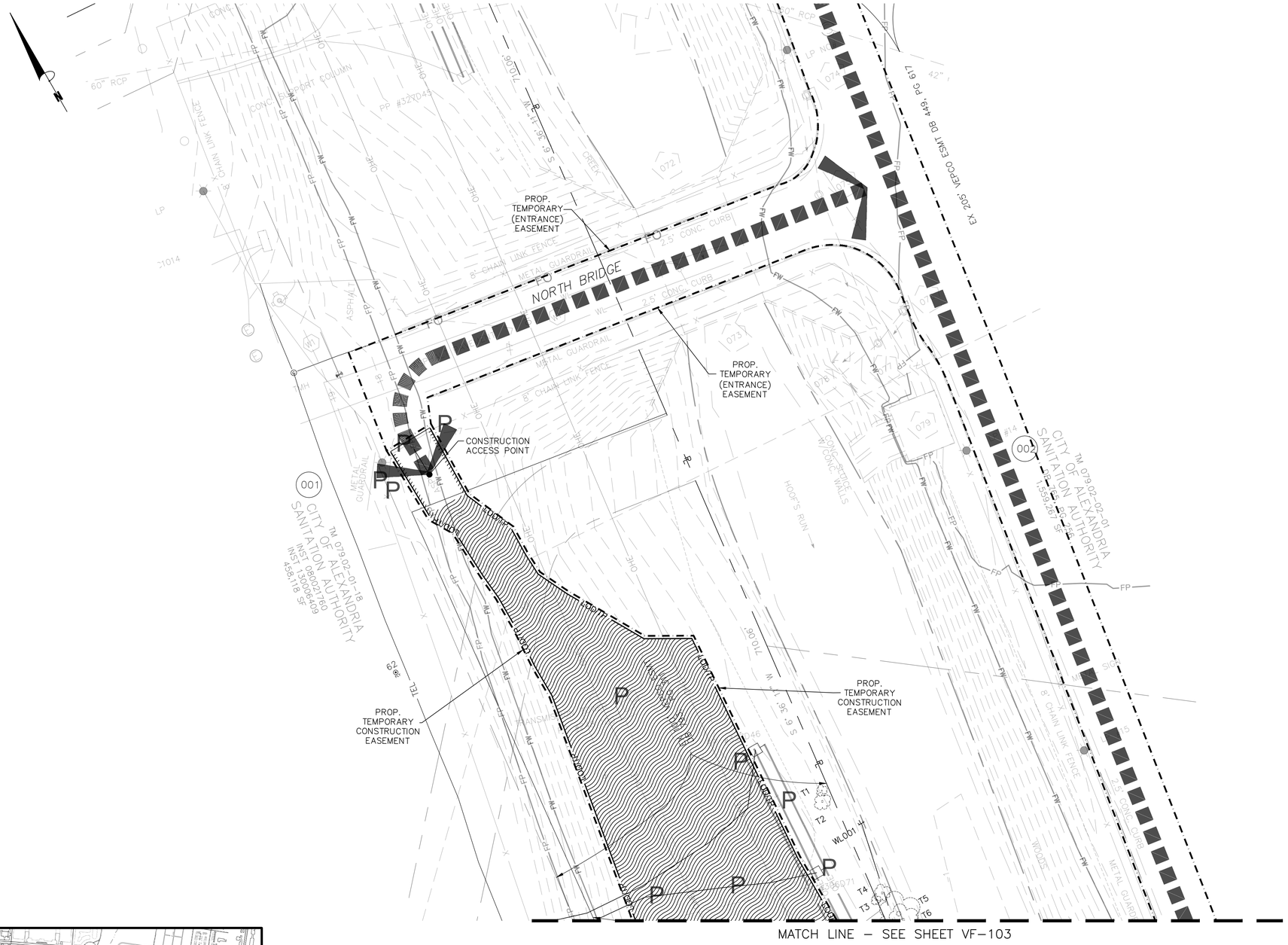
DATE	BY	DESCRIPTION

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: -
DRAWN BY: AMT DATE: -
CHECKED BY: AMT DATE: -
APPROVED BY: AMT DATE: -

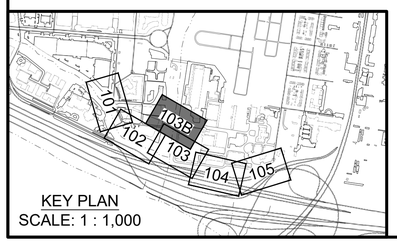
PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

VF-103
EXISTING CONDITIONS & DEMOLITION PLAN

SHEET
11 OF 75
SCALE: 1"=20'



MATCH LINE – SEE SHEET VF-103



KEY PLAN
SCALE: 1 : 1,000

SITE LEGEND

- LOD — LIMITS OF DISTURBANCE
- LOD/TP — LIMITS OF DISTURBANCE / TREE PROTECTION FENCE
- PROPOSED TEMPORARY EASEMENT
- PROPOSED PERMANENT EASEMENT
- **DEMOLITION & CONSTRUCTION ACCESS ROUTE:** ROUTE AND ACCESS POINTS MUST BE VERIFIED AND APPROVED BY CITY & ALEXRENEW

DEMOLITION SCHEDULE (VF-103B)

SYMBOL	DEMOLITION DESCRIPTION
P	PRESERVE EXISTING ITEM

SYMBOL	DESCRIPTION
	SHARED USE PATH VDOT STANDARD ASPHALT MILL/OVERLAY OR OVERLAY (NO MILL) ATOP EXISTING ASPHALT

SYMBOL	DEMOLITION DESCRIPTION
	CLEAR AND GRUB
LOD/TP	PLACE TREE PROTECTION FENCING ALONG LOD

DEMOLITION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GI-003 AND GI-004 FOR SURVEY INFORMATION, NOTES, LEGEND AND INVERT TABLES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.

ANY TREE NOT EXPLICITLY SHOWN AS DEMOLISH SHOULD BE PRESERVED.

0 10' 20' 40'
SCALE: 1"=20'

DEMOLITION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GE-003 AND GE-004 FOR SURVEY INFORMATION, NOTES, LEGEND AND INVERT TABLES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.

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DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

DATE	DESCRIPTION	BY

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: –
DRAWN BY: AMT DATE: –
CHECKED BY: AMT DATE: –
APPROVED BY: AMT DATE: –

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

VF-103B
EXISTING CONDITIONS & DEMOLITION PLAN

SHEET
12 OF 75
SCALE: 1"=20'

SITE LEGEND

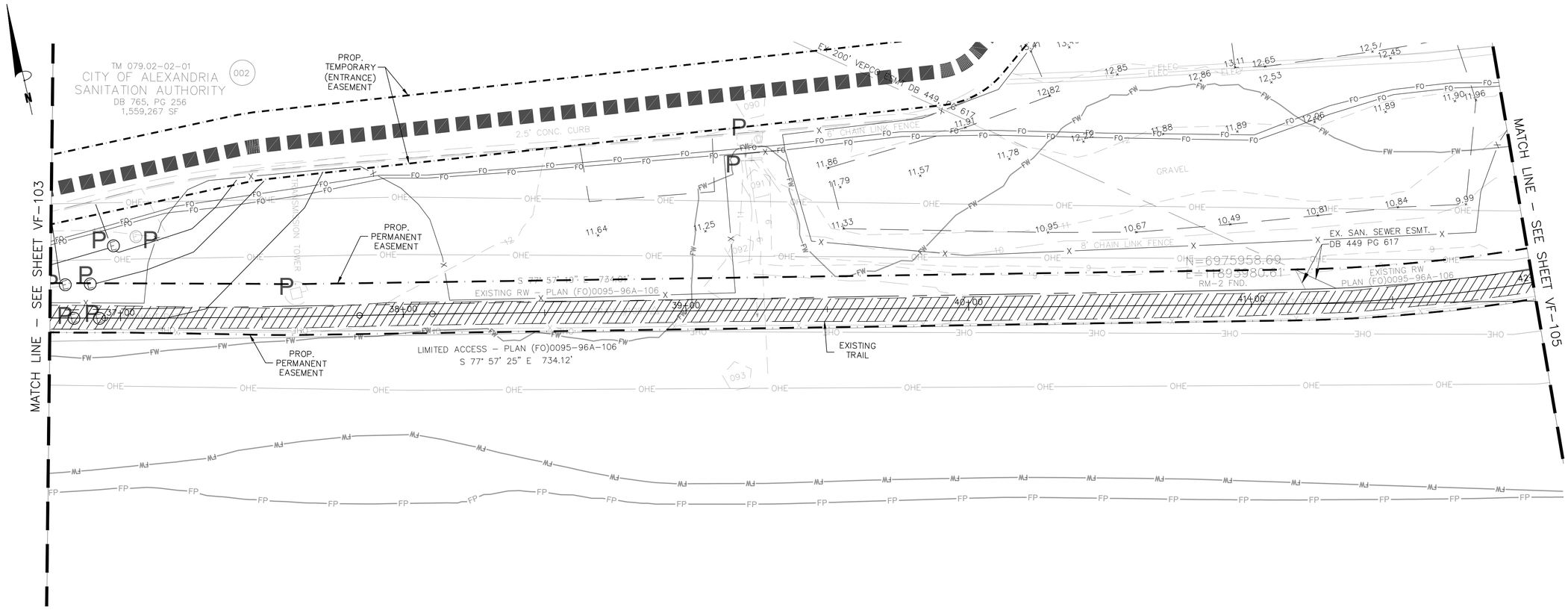
- LOD — LIMITS OF DISTURBANCE
- LOD/TP — LIMITS OF DISTURBANCE/ TREE PROTECTION FENCE
- PROPOSED TEMPORARY EASEMENT
- PROPOSED PERMANENT EASEMENT
- **DEMOLITION & CONSTRUCTION ACCESS ROUTE:** ROUTE AND ACCESS POINTS MUST BE VERIFIED AND APPROVED BY CITY & ALEXRENEW

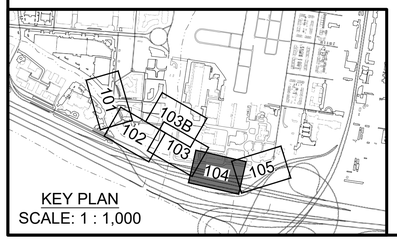
DEMOLITION SCHEDULE (VF-104)

SYMBOL	DEMOLITION DESCRIPTION
X	DEMOLISH (TO FULL DEPTH), REMOVE AND LEGALLY DISPOSE EXISTING ITEM
P	PRESERVE EXISTING ITEM
LOD/TP	PLACE TREE PROTECTION FENCING ALONG LOD

DEMOLITION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GI-003 AND GI-004 FOR SURVEY INFORMATION, NOTES, LEGEND AND INVERT TABLES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.

ANY TREE NOT EXPLICITLY SHOWN AS DEMOLISH SHOULD BE PRESERVED.





KEY PLAN
SCALE: 1 : 1,000

SCALE: 1"=20'

DEMOLITION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GE-003 AND GE-004 FOR SURVEY INFORMATION, NOTES, LEGEND AND INVERT TABLES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.

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ALEXANDRIA, VIRGINIA 22313

REVISIONS

DESCRIPTION	BY	DATE

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-092

DESIGNED BY:	AMT	DATE:
DRAWN BY:	AMT	DATE:
CHECKED BY:	AMT	DATE:
APPROVED BY:	AMT	DATE:

PROJECT NAME: OLD CAMERON RUN TRAIL

UPC109469

VF-104
EXISTING CONDITIONS & DEMOLITION PLAN

SHEET
13 OF 75
SCALE: 1"=20'

SITE LEGEND

- LOD — LIMITS OF DISTURBANCE
- LOD/TP — LIMITS OF DISTURBANCE/ TREE PROTECTION FENCE
- PROPOSED TEMPORARY EASEMENT
- PROPOSED PERMANENT EASEMENT
- **DEMOLITION & CONSTRUCTION ACCESS ROUTE:** ROUTE AND ACCESS POINTS MUST BE VERIFIED AND APPROVED BY CITY & ALEXRENEW

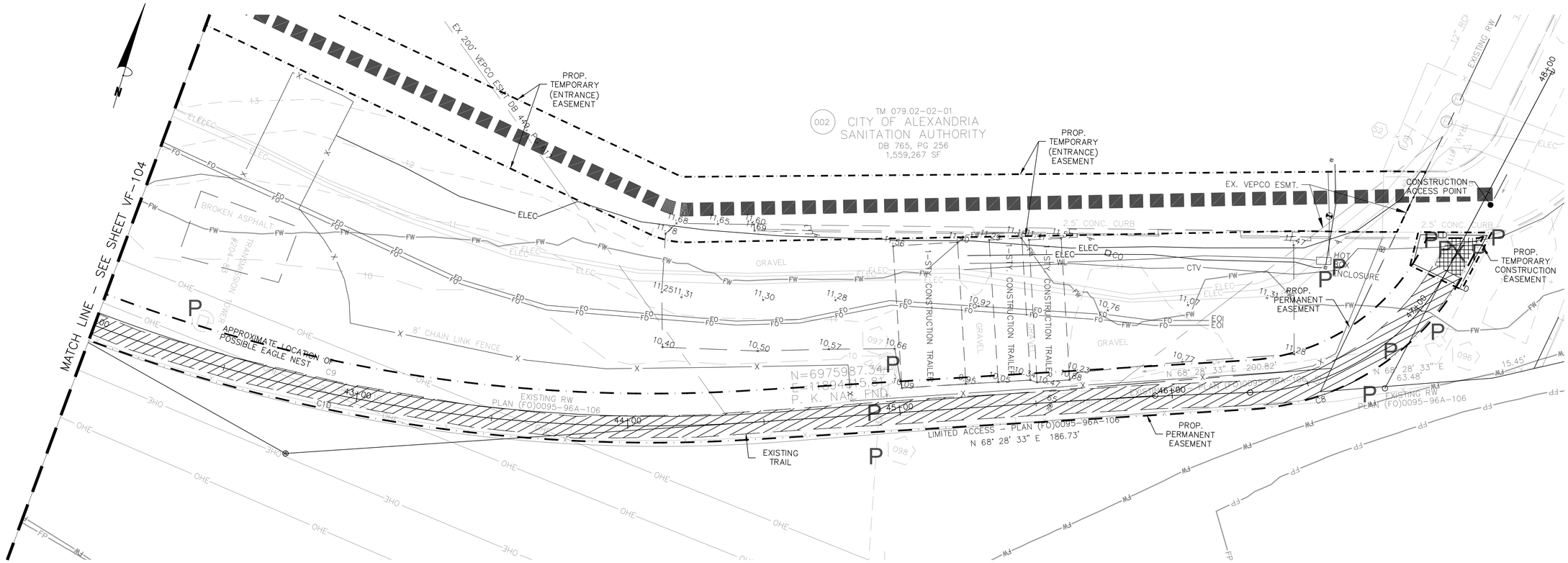
DEMOLITION SCHEDULE (VF-105)

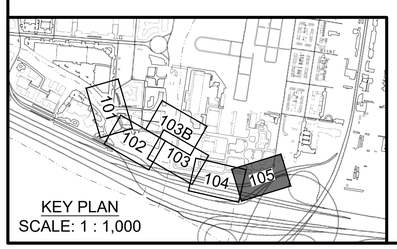
SYMBOL	DEMOLITION DESCRIPTION
X	DEMOLISH (TO FULL DEPTH), REMOVE AND LEGALLY DISPOSE EXISTING ITEM
P	PRESERVE EXISTING ITEM

SYMBOL	DEMOLITION DESCRIPTION
	DEMOLISH EXISTING CONCRETE TO FULL DEPTH
LOD/TP	PLACE TREE PROTECTION FENCING ALONG LOD

DEMOLITION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GI-003 AND GI-004 FOR SURVEY INFORMATION, NOTES, LEGEND AND INVERT TABLES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.

ANY TREE NOT EXPLICITLY SHOWN AS DEMOLISH SHOULD BE PRESERVED.





0 10' 20' 40'
SCALE: 1"=20'

DEMOLITION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GE-003 AND GE-004 FOR SURVEY INFORMATION, NOTES, LEGEND AND INVERT TABLES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.

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CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

DATE	DESCRIPTION	BY

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: –
DRAWN BY: AMT DATE: –
CHECKED BY: AMT DATE: –
APPROVED BY: AMT DATE: –

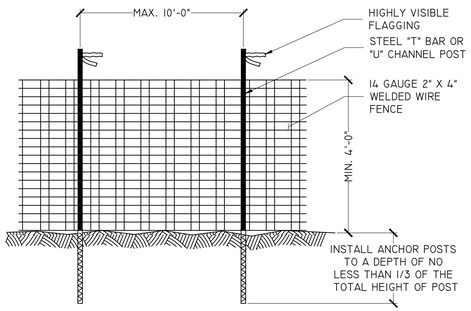
PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

VF-105
EXISTING CONDITIONS & DEMOLITION PLAN

SHEET 14 OF 75
SCALE: 1"=20'

EXISTING TREE TABLE

Tree I.D.	Scientific Name	Common Name	D.B.H.
1	Atlantis altissima	Tree of heaven	4.0
2	Tilia cordata	Little leaf linden	6.0
3	Prunus serotina	Black cherry	3.5
4	Ulmus americana	American elm	11.0, 6.0
5	Ulmus americana	American elm	15.3, 13.0, 9.0
6	Catalpa speciosa	Northern catalpa	10.5
6	Ulmus americana	American elm	11.0
7	Ulmus americana	American elm	12.7, 7.0
8	Catalpa speciosa	Northern catalpa	9.0
9	Catalpa speciosa	Northern catalpa	4.5, 9.0
10	Catalpa speciosa	Northern catalpa	11.0
11	Catalpa speciosa	Northern catalpa	10.5, 11.5, 9.5
12	Zelkova sp.	Zelkova	6.5
13	Zelkova sp.	Zelkova	5.0
14	Ulmus americana	American elm	4.0
15	Ulmus americana	American elm	3.0
16	Ulmus sp.	Elm sp.	4.0
17	Ulmus americana	American elm ('Valley Forge')	2
18	Syringa reticulata	Ivory silk lilac	1.5
19	Syringa reticulata	Ivory silk lilac	1.5
20	Quercus phellos	Willow oak	3.5
21	Quercus phellos	Willow oak	2.1
22	Acer rubrum	Red maple	2.1
23	Acer rubrum	Red maple	2.1
24	Acer saccharum	Sugar maple	2.5
25	Acer saccharum	Sugar maple	3.0
26	Acer saccharum	Sugar maple	3
27	Cercis canadensis	Eastern redbud	1.9
28	Quercus phellos	Willow oak	3.7
29	Tsuga canadensis	Eastern hemlock	3
30	Quercus phellos	Willow oak	5.1
31	Tsuga canadensis	Eastern hemlock	3
32	Quercus phellos	Willow oak	4.5
33	Tsuga canadensis	Eastern hemlock	2.5, 2.5
34	Tsuga canadensis	Eastern hemlock	2.5, 2.0
35	Tsuga canadensis	Eastern hemlock	3.0, 2.0
36	Tsuga canadensis	Eastern hemlock	3.5, 2.0
37	Acer rubrum	Red maple	4.5
38	Tsuga canadensis	Eastern hemlock	3.5, 1.5, 2.0
39	Acer rubrum	Red maple	5.5
40	Acer rubrum	Red maple	4.2
41	Nyssa sylvatica	Black gum	3.7
42	Juniperus virginiana	Eastern red cedar	4.5
43	Juniperus virginiana	Eastern red cedar	4.3
44	Nyssa sylvatica	Black gum	4.3
45	Juniperus virginiana	Eastern red cedar	4.0
46	Juniperus virginiana	Eastern red cedar	4.0
47	Juniperus virginiana	Eastern red cedar	4.5
48	Nyssa sylvatica	Black gum	2.3
49	Cercis canadensis	Eastern redbud	2.0, 2.0
50	Quercus rubra	Red oak	5
51	Cersis canadensis	Eastern redbud	1.5, 1.5, 1.5
52	Cercis canadensis	Eastern redbud	6 x 1-2 in
53	Cercis canadensis	Eastern redbud	4 x 2-3 in
54	Liquidambar styraciflua	Sweetgum cultivar	4.7
55	Liquidambar styraciflua	Sweetgum cultivar	5.7
56	Quercus palustris	Pin oak	2.0
57	Cercis canadensis	Eastern redbud	6 x 1.5-2.5 in
58	Cercis canadensis	Eastern redbud	6 x 2-3 in
59	Cercis canadensis	Eastern redbud	3.5
60	Liquidambar styraciflua	Sweetgum cultivar	1.0
61	Cercis canadensis	Eastern redbud	3.5
62	Cercis canadensis	Eastern redbud	3.5
63	Acer rubrum	Red maple	2.5
64	Acer rubrum	Red maple	3.5
65	Acer rubrum	Red maple	5.1
66	Cercis canadensis	Eastern redbud	3.0
67	Cercis canadensis	Eastern redbud	5.0
68	Tsuga canadensis	Eastern hemlock	3.0 ,2.0
69	Cercis canadensis	Eastern redbud	3x 2-3 in
70	Cercis canadensis	Eastern redbud	5.2
71	Tsuga canadensis	Eastern hemlock	2.0, 3.0
72	Platanus occidentalis	Sycamore	1.8
73	Pinus stroba	White pine	5.0
74	Acer rubrum	Red maple	3.5
75	Chamaecyparis sp.	False Cypress	3.5, 2.0
76	Chamaecyparis sp.	False Cypress	3.0
77	Chamaecyparis sp.	False Cypress	3.0, 1.0, 1.5
78	Acer rubrum	Red maple	2.5
79	Acer rubrum	Red maple	3
80	Ulmus sp.	Elm sp.	35.5
81	Acer negundo	Boxelder	6.5
82	Ailanthus altissima	Tree of heaven	5.0
83	Ulmus sp.	Elm sp.	10.0
84	Robina psuedoacacia	Black locust	9.0
85	Ulmus sp.	Elm sp.	21.0
86	Robina psuedoacacia	Black locust	12.0
87	Lonicera sp.	Exotic bush honeysuckle	7 x 3-4 in
88	Fraxinus americana	White ash	6.0, 3.5
89	Fraxinus americana	White ash	8.3
90	Ulmus sp.	Elm sp.	15.4
91	Ulmus sp.	Elm sp.	7.5
92	Ulmus sp.	Elm sp.	5.5
93	Pyrus calleryana	Callery pear	4.4, 3.0
94	Robinia pseudoacacia	Black locust	5.9
95	Acer negundo	Boxelder	6 x 3-4 in
96	Ulmus americana	American elm	16.7, 10.0, 7.4
97	Acer negundo	Boxelder	4 x 3-5 in
98	Pyrus calleryana	Callery pear	10.9, 8.9, 3.5, 4.5
99	Prunus serotina	Black cherry	4.1, 4.5
100	Populus deltoides	Eastern cottonwood	12.1, 6.0, 10.0, 8.8, 8.5
101	Populus deltoides	Eastern cottonwood	14.0, 11.9
102	Robinia pseudoacacia	Black locust	5.3
103	Robinia pseudoacacia	Black locust	4.6
104	Robinia pseudoacacia	Black locust	8.4
105	Populus deltoides	Eastern cottonwood	14.2, 15.0, 11.5, 6.0
106	Pyrus calleryana	Callery pear	7.0
107	Robinia pseudoacacia	Black locust	6.5
108	Robinia pseudoacacia	Black locust	7.0
109	Robinia pseudoacacia	Black locust	6.5
110	Robinia pseudoacacia	Black locust	4.7, 4.0
111	Populus deltoides	Eastern cottonwood	17.4
112	Robinia pseudoacacia	Black locust	6.3
113	Robinia pseudoacacia	Black locust	5.8, 5.7
114	Lonicera sp.	Exotic bush honeysuckle	3 x 10 in
115	Robinia pseudoacacia	Black locust	5.3, 3.2
116	Robinia pseudoacacia	Black locust	6.0, 5.0, 2.7
117	Robinia pseudoacacia	Black locust	4.1
118	Ulmus sp.	Elm sp.	3.9, 3.7
119	Quercus phellos	Willow oak	2.5
120	Quercus phellos	Willow oak	2.5
121	Liquidambar styraciflua	Sweetgum	2.5
122	Liquidambar styraciflua	Sweetgum goo	2.6
123	Liquidambar styraciflua	Sweetgum	2.7
124	Amalanchier sp.	Serviceberry sp.	5x1-2
125	Amalanchier sp.	Serviceberry sp.	4 x 1-2 in
126	Amalanchier sp.	Serviceberry sp.	3 x 1 in
127	Amalanchier sp.	Serviceberry sp.	4 x 1 in
128	Quercus phellos	Willow oak	3.9
129	Amalanchier sp	Serviceberry sp	4 x 1-2 in
130	Amalanchier sp	Serviceberry sp	6 x 1-2 in
131	Ilex opaca	American holly	3.7
132	Amalanchier sp	Serviceberry sp	4 x 1-2 in
133	Amalanchier sp	Serviceberry sp	4 x 1-2 in
134	Amalanchier sp	Serviceberry sp	5 x 1-2 in
135	Pinus strobus	White pine	5.9
136	Pinus strobus	White pine	6.0
136	Pinus strobus	White pine	5.4
137	Juniperus virginiana	Eastern red cedar	4.0
138	Juniperus virginiana	Eastern red cedar	3.8
139	Juniperus virginiana	Eastern red cedar	4.0
140	Cercis canadensis	Eastern redbud	4 x 1.5-2.5 in
141	Cercis canadensis	Eastern redbud	3.2
142	Pinus strobus	White pine	2.5
143	Nyssa sylvatica	Blackgum	1.0
144	Nyssa sylvatica	Blackgum	1.0
145	Nyssa sylvatica	Blackgum	2.0
146	Pinus strobus	White pine	4.6
147	Chamaecyparis sp.	False Cypress	2.2, 1.0
148	Chamaecyparis sp.	False Cypress	2.5, 1.9
149	Clethra alnifolia	Sweet pepperbush	shrub
150	Rhus typhina	Staghorn sumac	shrub
151	Hamamelis virginiana	Witch-hazel	shrub
152	Rhus aromatica	Fragrant sumac	shrub
153	Cornus sp.	Dogwood sp.	shrub
154	Ilex opaca	American holly	1.0
155	Asimina triloba	Pawpaw	0.5
156	Rhus aromatica	Fragrant sumac	shrub
157	Lindera benzoin	Northern spicebush	shrub
158	Prunus sp.	Prunus sp.	shrub
159	Lindera benzoin	Northern spicebush	shrub
160	Asimina triloba	Pawpaw	0.5
161	Prunus sp.	Cherry sp.	shrub
162	Cornus sp	Dogwood sp.	shrub
163	Rhus typhina	Staghorn sumac	0.5
164	Kalmia latifolia	Mountain laurel	shrub
165	Ilex sp.	Holly sp.	shrub
166	Ilex sp.	Holly sp.	shrub
167	Lindera benzoin	Northern spicebush	shrub
168	Ilex sp.	Holly sp.	shrub
169	Kalmia latifolia	Mountain laurel	shrub
170	Kalmia latifolia	Mountain laurel	shrub
171	Lindera benzoin	Northern spicebush	shrub
172	Prunus sp.	Cherry sp.	shrub
173	Prunus sp.	Cherry sp.	shrub
174	Viburnum sp.	Viburnum sp.	shrub
175	Prunus sp.	Cherry sp.	shrub
176	Rhus typhina	Staghorn sumac	5 x 1-2 in
177	Sambucus sp.	Elderberry sp.	shrub
178	Cornus sp.	Dogwood sp.	shrub
179	Cornus florida	Flowering dogwood	1.0
180	Viburnum sp.	Viburnum sp.	shrub
181	Cornus sp.	Dogwood sp.	shrub
182	Rhus aromatica	Fragrant sumac	shrub
183	Viburnum sp.	Viburnum sp.	shrub
184	Rhus aromatica	Fragrant sumac	shrub
185	Viburnum prunifolium	Blackhaw	shrub
186	Cornus florida	Flowering dogwood	1.5
187	Cercis canadensis	Eastern redbud	3.5
188	Cercis canadensis	Eastern redbud	5.2
189	Cercis canadensis	Eastern redbud	3.2
190	Juniperus virginiana	Eastern red cedar	4.3
191	Juniperus virginiana	Eastern red cedar	4.0
192	Juniperus virginiana	Eastern red cedar	3.8
193	Tilia americana	Basswood	3.2
194	Tilia americana	Basswood	3.4
195	Pinus strobus	White pine	4.2
196	Tsuga canadensis	Eastern hemlock	2.5, 1.5
197	Viburnum sp.	Viburnum sp.	shrub
198	Viburnum sp.	Viburnum sp.	shrub
	Tree to be Removed		



NOTES:
1. FOREST PROTECTION DEVICE ONLY
2. SET TREE RETENTION AREA AS PART OF THE PRE-CONSTRUCTION REVIEW PROCESS
3. STAKE & FLAG THE BOUNDARIES OF RETENTION AREA PRIOR TO INSTALLATION OF DEVICE
4. AVOID INJURY TO ROOTS WHEN PLACING POSTS FOR THE SIGNS.
5. PROTECTIVE SIGNAGE IS REQUIRED
6. MAINTAIN THE DEVICE THROUGHOUT CONSTRUCTION.
7. ALTERNATIVE TREE PROTECTION DEVICES (IN LIEU OF WIRE MESH): SUPER SILT FENCE (SSF) OR 3 STRANDS OF SMOOTH 12 GAUGE WIRE. ATTACH HIGHLY VISIBLE FLAGGING TO WIRES @ 12" O.C.

1 WIRE MESH TREE PROTECTION FENCING

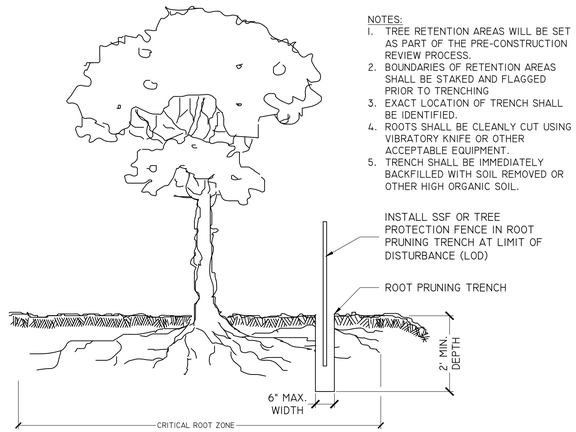
NOT TO SCALE 0203-02

NOTE: TREE PROTECTION TO FOLLOW ALL REQUIREMENTS PER THE LANDSCAPE GUIDELINES OF THE CITY OF ALEXANDRIA CURRENT EDITION.

NOTES:
1. COMPLETE ALL INSTALLATION UNDER THE DIRECTION OF A CERTIFIED ARBORIST
2. TIE BOARDS WITH WITH 1/2" DIAMETER ROPE OR STRAPS SUFFICIENT TO PROTECT ALL AREAS OF THE TREE EXPOSED TO CONSTRUCTION.
3. PROTECT THE TRUNK FROM DAMAGE DUE TO THE STRAPS WITH ADDITIONAL FOAM AND BOARDS AS NEEDED

2 TRUNK PROTECTION

NOT TO SCALE 0203-03



NOTES:
1. TREE RETENTION AREAS WILL BE SET AS PART OF THE PRE-CONSTRUCTION REVIEW PROCESS.
2. BOUNDARIES OF RETENTION AREAS SHALL BE STAKED AND FLAGGED PRIOR TO TRENCHING
3. EXACT LOCATION OF TRENCH SHALL BE IDENTIFIED.
4. ROOTS SHALL BE CLEANLY CUT USING VIBRATORY KNIFE OR OTHER ACCEPTABLE EQUIPMENT.
5. TRENCH SHALL BE IMMEDIATELY BACKFILLED WITH SOIL REMOVED OR OTHER HIGH ORGANIC SOIL.

3 ROOT PRUNING

NOT TO SCALE 0203-11

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

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DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

DESCRIPTION	DATE	BY

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920

DESIGNED BY:	AMT	DATE:	-
DRAWN BY:	AMT	DATE:	-
CHECKED BY:	AMT	DATE:	-
APPROVED BY:	AMT	DATE:	-

PROJECT NAME: OLD CAMERON RUN TRAIL

UPC109469

VF-501
EXISTING TREE TABLE & TREE PROTECTION

SHEET 15 OF 75

SCALE: N/A

A. MORTON THOMAS AND ASSOCIATES, INC.
800 KING FARM BLVD 4TH FLOOR, ROCKVILLE MD 20850
WWW.AMTENGINEERING.COM OFFICE: 301-881-2545

TEST HOLE INFORMATION:

JOB NUMBER: 17-0920.001	**DATE:** 12/11/2020
TEST HOLE NUMBER: TH-1	**TECHNICIANS (FIRST NAME AND LAST INITIAL) :** Mike T, Jorge M, Shawn W
PROJECT NAME: Cameron Run Shared Use Path	**JOB LOCATION:** 400 Hooff's Run Dr Alexandria, VA 22314 United States
REQUESTED BY (CLIENT NAME AND COMPANY): AMT And Straughan Environmental, Inc.	**CONDITION OF UTILITY:** FAIR
GPS	**PAVEMENT TYPE:** GRASS
UTILITY REQUESTED: COMMUNICATION/ TV	**PAVEMENT THICKNESS:** N/A
UTILITY FOUND: COMMUNICATION/ TV	**SUB-PAVEMENT TYPE:** N/A
SOIL CONDITIONS: DIRT/ROCK	**SUB-PAVEMENT THICKNESS:** N/A

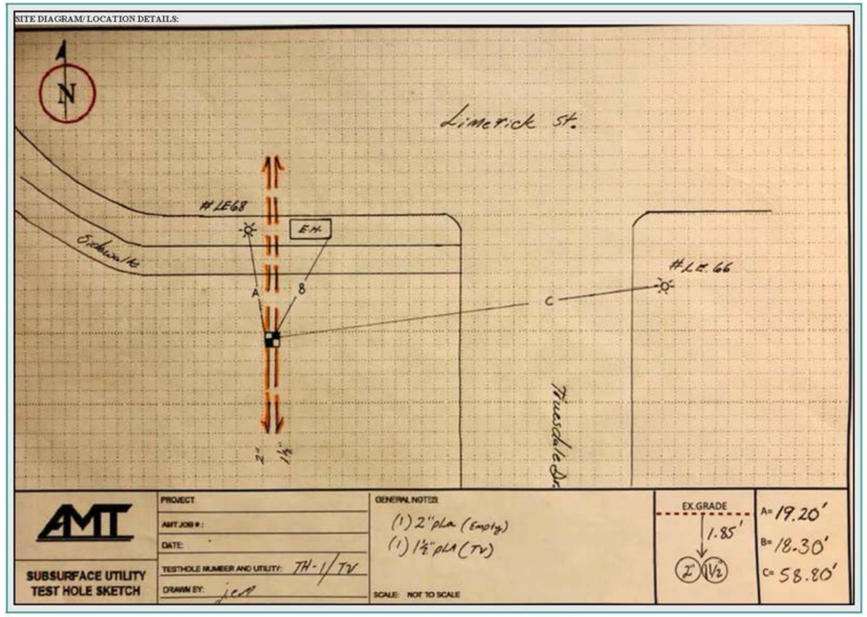
ELEVATION AND SURVEY INFORMATION:

ELEVATION AT EXISTING GRADE: N/A	**HORIZONTAL:** NAD 83
EXISTING DEPTH OF UTILITY TOP: 1.85'	**VERTICAL:** NAVD 88
ELEVATION AT TOP OF UTILITY: N/A	**NORTHING:** N/A
ELEVATION AT BOTTOM OF UTILITY: N/A	**EASTING:** N/A
EXISTING DEPTH OF UTILITY BOTTOM: N/A	**ELEVATION:** N/A
MATERIAL COMPOSITION: PLASTIC	**TYPE OF SURVEY MARKER:** PK NAIL
UTILITY DIAMETER/ WIDTH: (1) 2" and (1) 1-1/2"	**TYPE OF RIBBON COLOR:** ORANGE
DRAWING FACE: NORTH	**LOCATION OF MARKER:** CENTER
	ELEVATION REFERENCED TO: PROJECT CONTROL

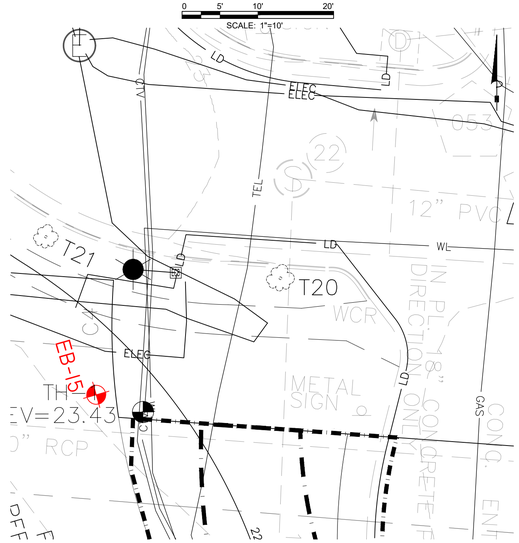
GENERAL NOTES:

NOTES:

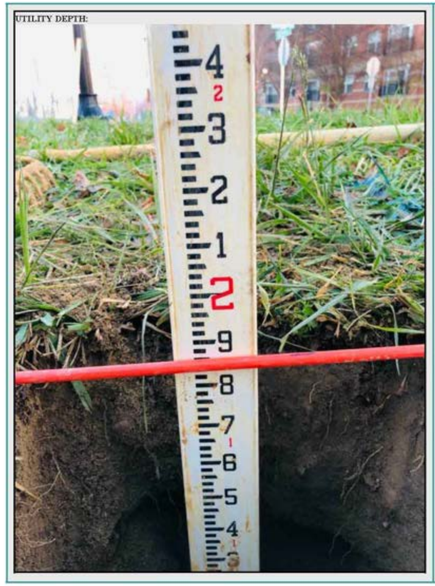
SITE DIAGRAM/LOCATION DETAILS:



TEST PIT LOCATION **#1 (TH-1)**



UTILITY DEPTH:



UTILITY PICTURE:



PRE- DIGGING PICTURE:



POST-DIG PICTURE:



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PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

VF-701
TEST HOLE #1

SHEET
16 OF 75
SCALE: 1"=10'

A. MORTON THOMAS AND ASSOCIATES, INC.
800 KING FARM BLVD 4TH FLOOR, ROCKVILLE MD 20850
WWW.AMTENGINEERING.COM OFFICE: 301-881-2545

TEST HOLE INFORMATION:

JOB NUMBER: 17-0920.001	**DATE:** 12/11/2020
TEST HOLE NUMBER: TH-2	**TECHNICIANS (FIRST NAME AND LAST INITIAL) :** Mike T, Jorge M, Shawn W
PROJECT NAME: Cameron Run Shared Use Path	**JOB LOCATION:** 400 Hooffs Run Dr Alexandria, VA 22314 United States
REQUESTED BY (CLIENT NAME AND COMPANY): AMT And Straughan Environmental, Inc.	**CONDITION OF UTILITY:** FAIR
GPS	**PAVEMENT TYPE:** GRASS
UTILITY REQUESTED: COMMUNICATION/ TV	**PAVEMENT THICKNESS:** N/A
UTILITY FOUND: COMMUNICATION/ TV	**SUB-PAVEMENT TYPE:** N/A
SOIL CONDITIONS: DIRT/ROCK	**SUB-PAVEMENT THICKNESS:** N/A

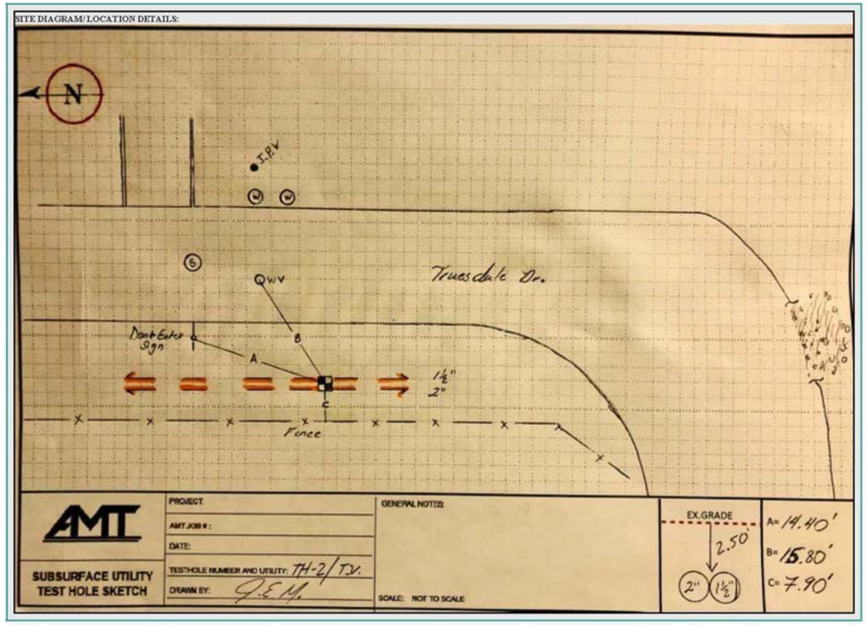
ELEVATION AND SURVEY INFORMATION:

ELEVATION AT EXISTING GRADE: N/A	**HORIZONTAL:** NAD 83
EXISTING DEPTH OF UTILITY TOP: 2.50'	**VERTICAL:** NAVD 88
ELEVATION AT TOP OF UTILITY: N/A	**NORTHING:** N/A
ELEVATION AT BOTTOM OF UTILITY: N/A	**EASTING:** N/A
EXISTING DEPTH OF UTILITY BOTTOM: N/A	**ELEVATION:** N/A
MATERIAL COMPOSITION: PLASTIC	**TYPE OF SURVEY MARKER:** PK NAIL
UTILITY DIAMETER/ WIDTH: (1) 2" and (1) 1-1/2"	**TYPE OF RIBBON COLOR:** ORANGE
DRAWING FACE: NORTH	**LOCATION OF MARKER:** CENTER
	ELEVATION REFERENCED TO: PROJECT CONTROL

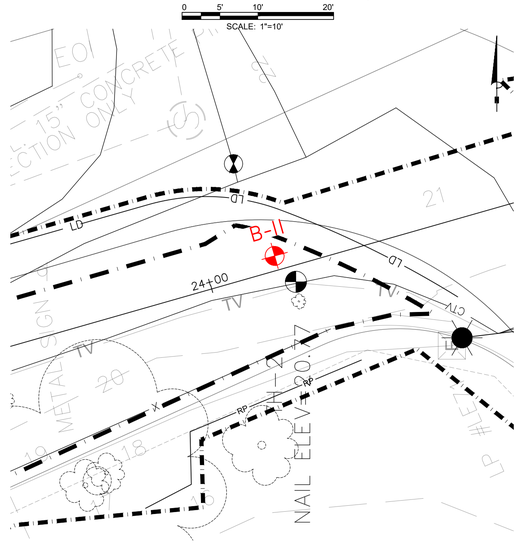
GENERAL NOTES:

NOTES:

SITE DIAGRAM/LOCATION DETAILS:



TEST PIT LOCATION **#2 (TH-2)**



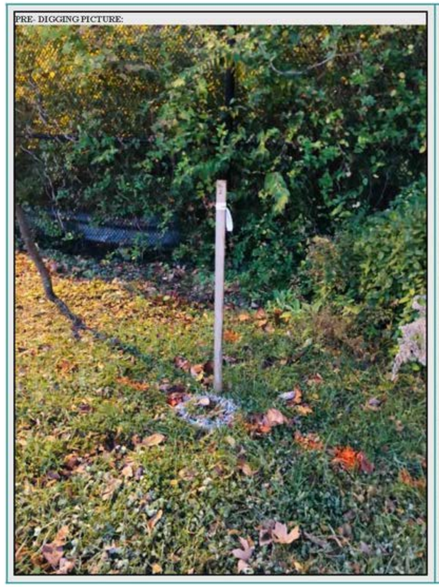
UTILITY DEPTH:



UTILITY PICTURE:



PRE- DIGGING PICTURE:



POST-DIG PICTURE:



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ALEXANDRIA, VIRGINIA 22313

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PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

VF-702
TEST HOLE #2

SHEET
17 OF 75
SCALE: 1"=10'

A. MORTON THOMAS AND ASSOCIATES, INC.
800 KING FARM BLVD 4TH FLOOR, ROCKVILLE MD 20850
WWW.AMTENGINEERING.COM OFFICE: 301-881-2545

TEST HOLE INFORMATION:

JOB NUMBER: 17-0920.001	**DATE:** 12/11/2020
TEST HOLE NUMBER: TH-3	**TECHNICIANS (FIRST NAME AND LAST INITIAL) :** Mike T, Jorge M, Shawn W
PROJECT NAME: Cameron Run Shared Use Path	**JOB LOCATION:** 400 Hooff's Run Dr Alexandria, VA 22314 United States
REQUESTED BY (CLIENT NAME AND COMPANY): AMT And Straughan Environmental, Inc.	**CONDITION OF UTILITY:** FAIR
GPS	**PAVEMENT TYPE:** GRASS
UTILITY REQUESTED: COMMUNICATION/ TV	**PAVEMENT THICKNESS:** N/A
UTILITY FOUND: COMMUNICATION/ TV	**SUB-PAVEMENT TYPE:** N/A
SOIL CONDITIONS: DIRT/ROCK	**SUB-PAVEMENT THICKNESS:** N/A

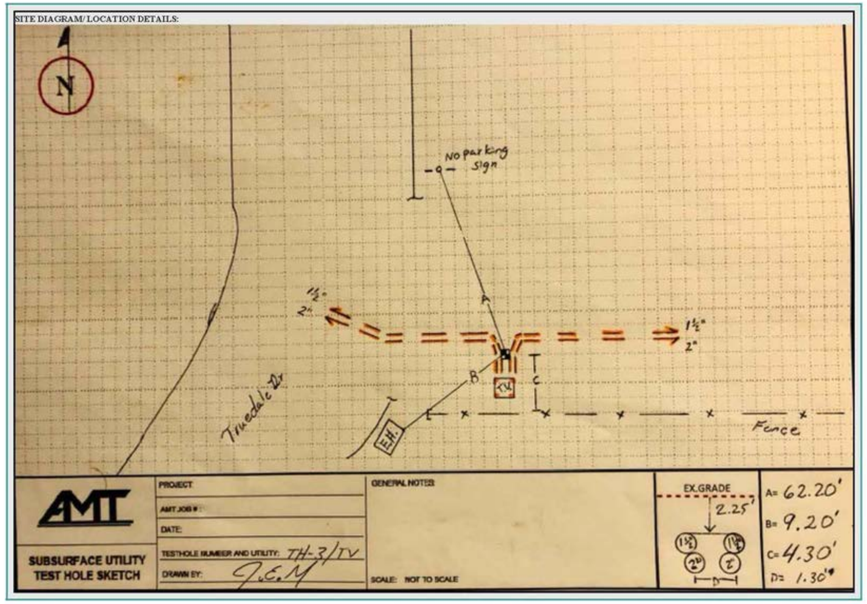
ELEVATION AND SURVEY INFORMATION:

ELEVATION AT EXISTING GRADE: N/A	**HORIZONTAL:** NAD 83
EXISTING DEPTH OF UTILITY TOP: 2.25'	**VERTICAL:** NAVD 88
ELEVATION AT TOP OF UTILITY: N/A	**NORTHING:** N/A
ELEVATION AT BOTTOM OF UTILITY: N/A	**EASTING:** N/A
EXISTING DEPTH OF UTILITY BOTTOM: N/A	**ELEVATION:** N/A
MATERIAL COMPOSITION: PLASTIC	**TYPE OF SURVEY MARKER:** PK NAIL
UTILITY DIAMETER/ WIDTH: (2) 2" and (2) 1-1/2"	**TYPE OF RIBBON COLOR:** ORANGE
DRAWING FACE: NORTH	**LOCATION OF MARKER:** CENTER
	ELEVATION REFERENCED TO: PROJECT CONTROL

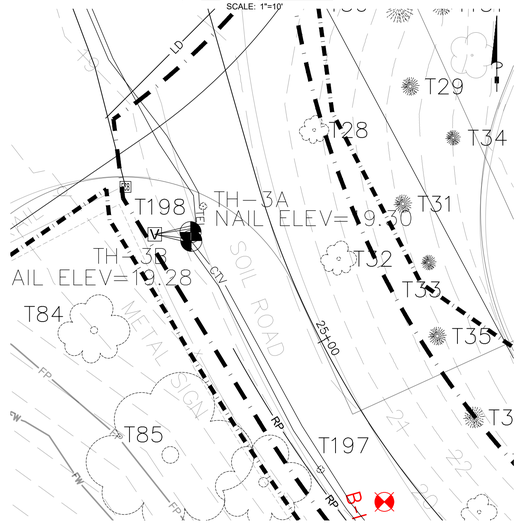
GENERAL NOTES:

NOTES:

SITE DIAGRAM/LOCATION DETAILS:



TEST PIT LOCATION **#3 (TH-3)**



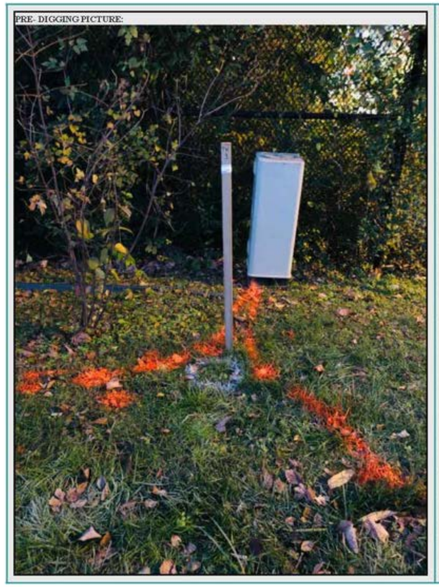
UTILITY DEPTH:



UTILITY PICTURE:



PRE- DIGGING PICTURE:



POST-DIG PICTURE:



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301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS
DATE | BY | DESCRIPTION

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: —
DRAWN BY: AMT DATE: —
CHECKED BY: AMT DATE: —
APPROVED BY: AMT DATE: —

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

VF-703
TEST HOLE #3

SHEET
18 OF 75
SCALE: 1"=10'

A. MORTON THOMAS AND ASSOCIATES, INC.
800 KING FARM BLVD 4TH FLOOR, ROCKVILLE MD 20850
WWW.AMTENGINEERING.COM OFFICE: 301-881-2545

TEST HOLE INFORMATION:

JOB NUMBER: 17-0920.001	**DATE:** 12/11/2020
TEST HOLE NUMBER: TH-4	**TECHNICIANS (FIRST NAME AND LAST INITIAL) :** Mike T, Jorge M, Shawn W
PROJECT NAME: Cameron Run Shared Use Path	**JOB LOCATION:** 400 Hoofs Run Dr Alexandria, VA 22314 United States
REQUESTED BY (CLIENT NAME AND COMPANY): AMT And Straughan Environmental, Inc.	**CONDITION OF UTILITY:** FAIR
GPS	**PAVEMENT TYPE:** GRASS
UTILITY REQUESTED: COMMUNICATION/ TV	**PAVEMENT THICKNESS:** N/A
UTILITY FOUND: COMMUNICATION/ TV	**SUB-PAVEMENT TYPE:** N/A
SOIL CONDITIONS: DIRT/ROCK	**SUB-PAVEMENT THICKNESS:** N/A

ELEVATION AND SURVEY INFORMATION:

ELEVATION AT EXISTING GRADE: N/A	**HORIZONTAL:** NAD 83
EXISTING DEPTH OF UTILITY TOP: 1.55' (the camera line is directly under the two tv lines)	**VERTICAL:** NAVD 88
ELEVATION AT TOP OF UTILITY: N/A	**NORTHING:** N/A
ELEVATION AT BOTTOM OF UTILITY: N/A	**EASTING:** N/A
EXISTING DEPTH OF UTILITY BOTTOM: N/A	**ELEVATION:** N/A
MATERIAL COMPOSITION: PLASTIC	**TYPE OF SURVEY MARKER:** PK NAIL
UTILITY DIAMETER/ WIDTH: (1) 2" , (1) 1-1/2", and (1) 1"	**TYPE OF RIBBON COLOR:** ORANGE
DRAWING FACE: NORTH	**LOCATION OF MARKER:** CENTER
	ELEVATION REFERENCED TO: PROJECT CONTROL

GENERAL NOTES:

NOTES:

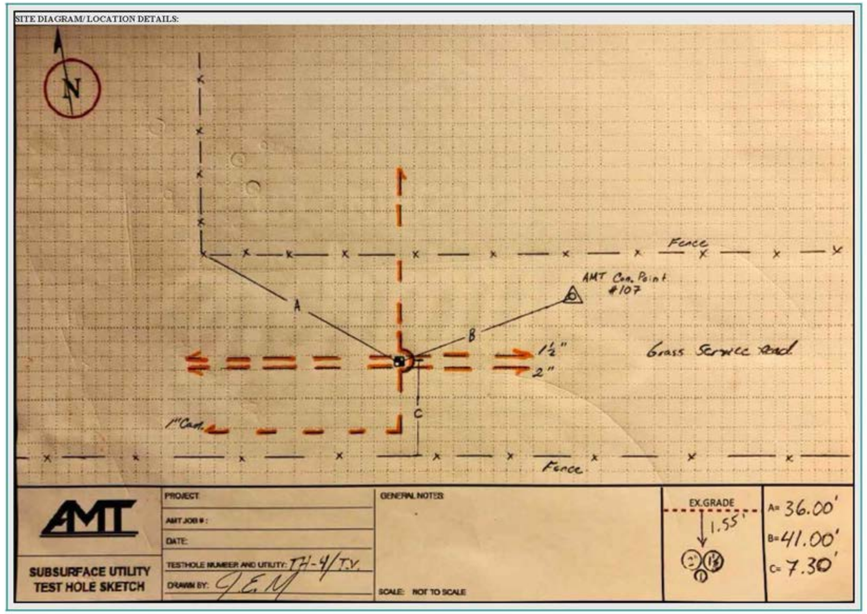
UTILITY DEPTH:



UTILITY PICTURE:



SITE DIAGRAM/LOCATION DETAILS:



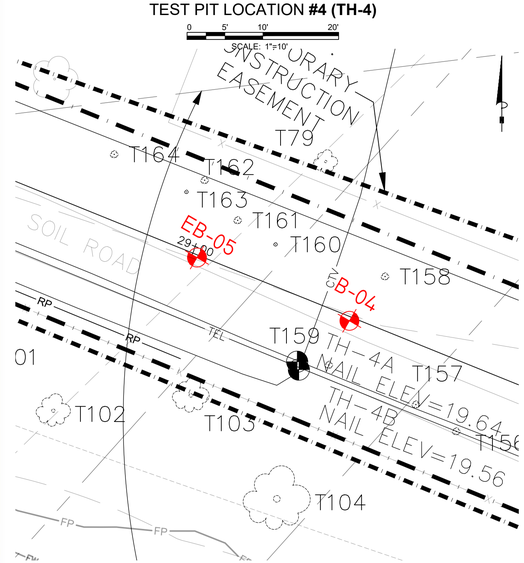
PRE- DIGGING PICTURE:



POST-DIG PICTURE:



TEST PIT LOCATION **#4 (TH-4)**



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REVISIONS
DATE | DESCRIPTION | BY

ALEXANDRIA PROJECT NO.: 16-019
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CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: _____ -
DRAWN BY: AMT DATE: _____ -
CHECKED BY: AMT DATE: _____ -
APPROVED BY: AMT DATE: _____ -

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

VF-704
TEST HOLE #4

SHEET
19 OF 75
SCALE: 1"=10'

A. MORTON THOMAS AND ASSOCIATES, INC.
800 KING FARM BLVD 4TH FLOOR, ROCKVILLE MD 20850
WWW.AMTENGINEERING.COM OFFICE: 301-881-2545

TEST HOLE INFORMATION:

JOB NUMBER: 17-0920.001	**DATE:** 12/11/2020
TEST HOLE NUMBER: TH-5	**TECHNICIANS (FIRST NAME AND LAST INITIAL) :** Mike T, Jorge M, Shawn W
PROJECT NAME: Cameron Run Shared Use Path	**JOB LOCATION:** 400 Hooff's Run Dr Alexandria, VA 22314 United States
REQUESTED BY (CLIENT NAME AND COMPANY): AMT And Straughan Environmental, Inc.	**CONDITION OF UTILITY:** FAIR
GPS	**PAVEMENT TYPE:** GRASS
UTILITY REQUESTED: COMMUNICATION/ TV	**PAVEMENT THICKNESS:** N/A
UTILITY FOUND: COMMUNICATION/ TV	**SUB-PAVEMENT TYPE:** N/A
SOIL CONDITIONS: DIRT/ROCK	**SUB-PAVEMENT THICKNESS:** N/A

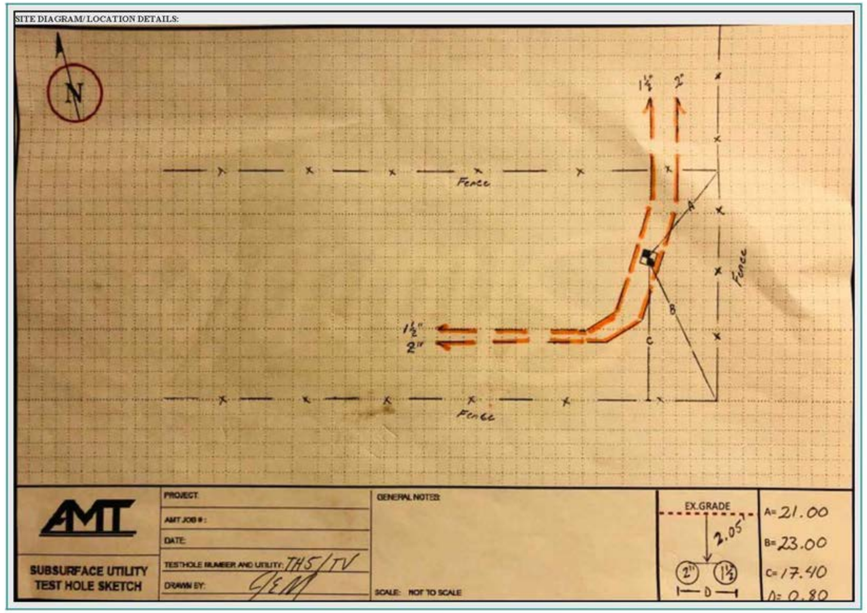
ELEVATION AND SURVEY INFORMATION:

ELEVATION AT EXISTING GRADE: N/A	**HORIZONTAL:** NAD 83
EXISTING DEPTH OF UTILITY TOP: 2.05'	**VERTICAL:** NAVD 88
ELEVATION AT TOP OF UTILITY: N/A	**NORTHING:** N/A
ELEVATION AT BOTTOM OF UTILITY: N/A	**EASTING:** N/A
EXISTING DEPTH OF UTILITY BOTTOM: N/A	**ELEVATION:** N/A
MATERIAL COMPOSITION: PLASTIC	**TYPE OF SURVEY MARKER:** PK NAIL
UTILITY DIAMETER/ WIDTH: (1) 2" and (1) 1-1/2"	**TYPE OF RIBBON COLOR:** ORANGE
DRAWING FACE: NORTH	**LOCATION OF MARKER:** CENTER
	ELEVATION REFERENCED TO: PROJECT CONTROL

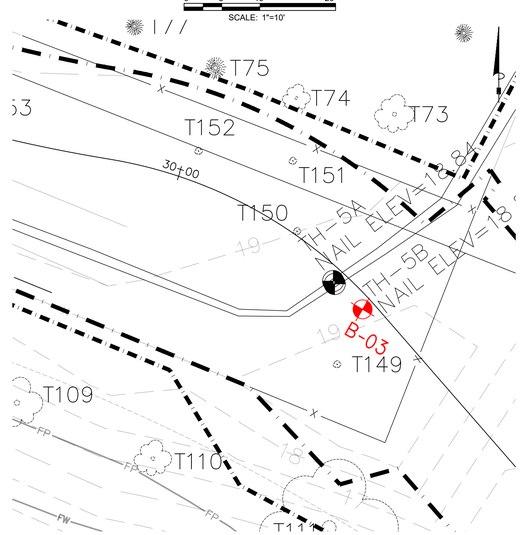
GENERAL NOTES:

NOTES:

SITE DIAGRAM/LOCATION DETAILS:



TEST PIT LOCATION **#5 (TH-5)**



UTILITY DEPTH:



UTILITY PICTURE:



PRE- DIGGING PICTURE:



POST-DIG PICTURE:



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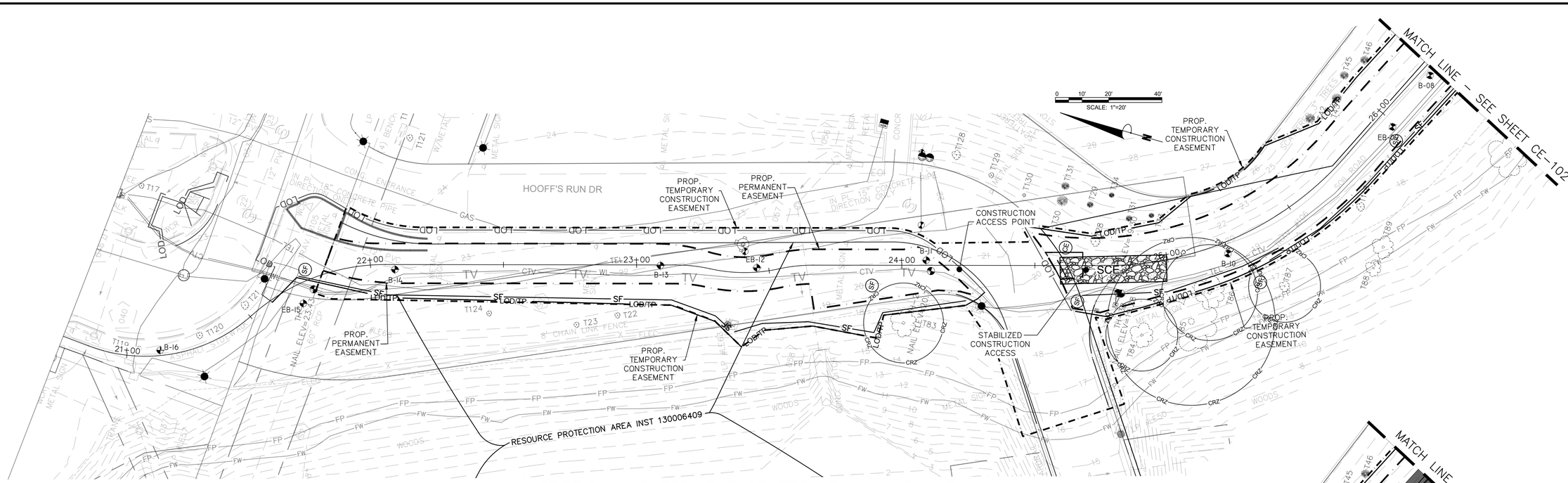
APPROVED BY: AMT DATE: —

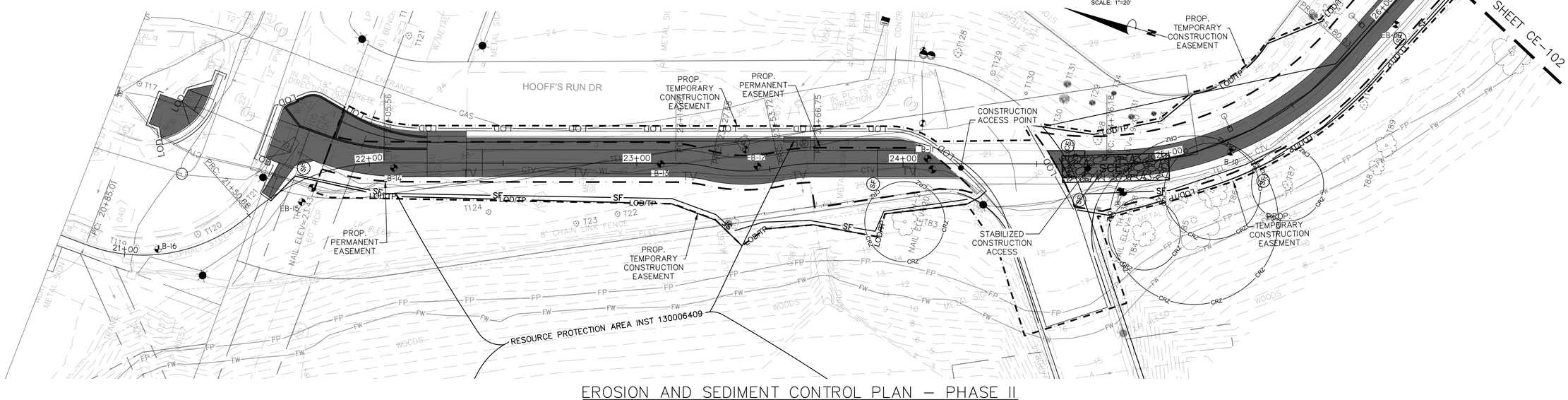
PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

VF-705
TEST HOLE #5

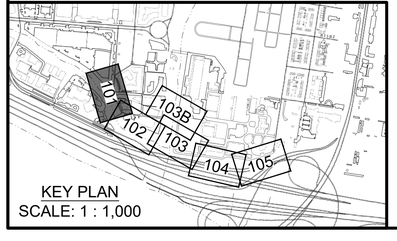
SHEET
20 OF 75
SCALE: 1"=10'



EROSION AND SEDIMENT CONTROL PLAN – PHASE I



EROSION AND SEDIMENT CONTROL PLAN – PHASE II



KEY PLAN
SCALE: 1 : 1,000

RIGHT-OF-WAY/EASEMENT/PROPERTY LINE NOTE:
LABELS FOR THESE LINES ARE NOT SHOWN ON THIS SHEET FOR GRAPHIC CLARITY. SEE VF-101 FOR LINE LABELS.

SITE LEGEND

- LOD — LIMITS OF DISTURBANCE
- LOD/TP — LIMITS OF DISTURBANCE/ TREE PROTECTION FENCE
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED PERMANENT EASEMENT
- PROPOSED TRAIL
- PROPOSED CONCRETE RAMP, DETECTABLE WARNING SURFACE
- PROPOSED BRIDGE ABUTMENTS & PIER
- PROPOSED RETAINING WALL
- PROPOSED FENCE
- PROPOSED BARRIER RAILING, VDOT HR-1 TYPE III
- EXISTING PAVING TO BE REPLACED

EROSION CONTROL LEGEND

TITLE	KEY	SYMBOL	STD. & SPEC. NUMBER*
CONSTRUCTION ENTRANCE W/ WASH RACK	CE	SCE	3.02
SILT FENCE	SF	SF	3.05
CURB INLET PROTECTION	CIP		3.07
LIMITS OF DISTURBANCE		LOD	
LIMITS OF DISTURBANCE/ TREE PROTECTION		LOD/TP	

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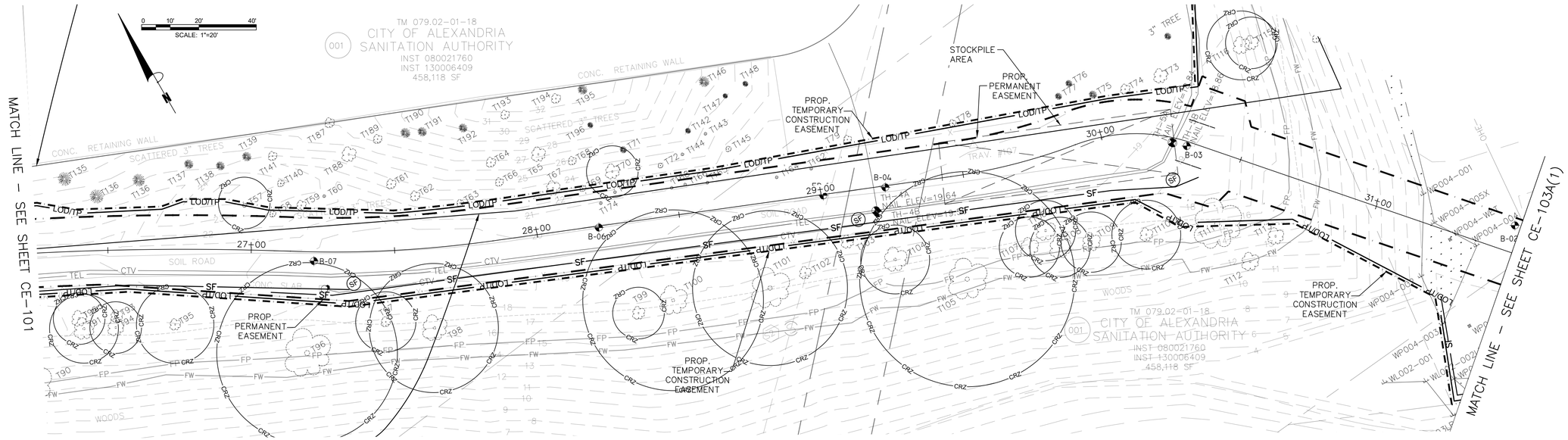
APPROVED BY: AMT DATE: --

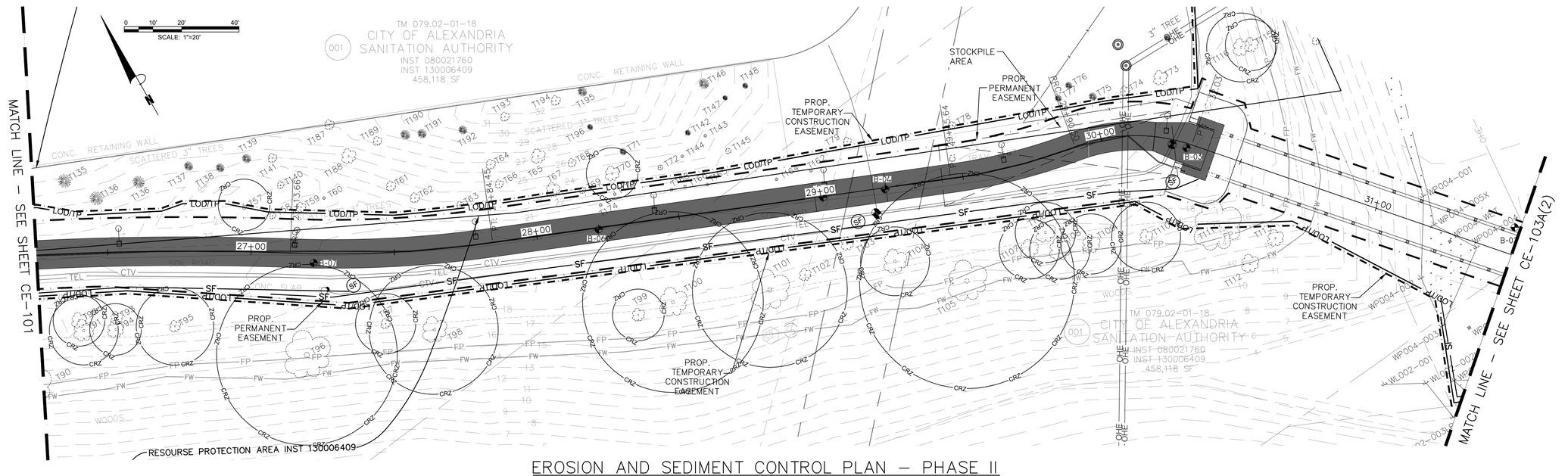
PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CE-101
EROSION & SEDIMENT CONTROL PLAN (PHASE I & II)

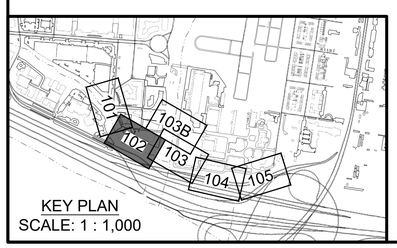
SHEET 21 OF 75
SCALE: 1"=20'



EROSION AND SEDIMENT CONTROL PLAN – PHASE I



EROSION AND SEDIMENT CONTROL PLAN – PHASE II



KEY PLAN
SCALE: 1 : 1,000

RIGHT-OF-WAY/EASEMENT/PROPERTY LINE NOTE:
LABELS FOR THESE LINES ARE NOT SHOWN ON THIS SHEET FOR GRAPHIC CLARITY. SEE VF-102 FOR LINE LABELS.

SITE LEGEND

- LOD — LIMITS OF DISTURBANCE
- LOD/TP — LIMITS OF DISTURBANCE/ TREE PROTECTION FENCE
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED PERMANENT EASEMENT
- PROPOSED TRAIL
- PROPOSED CONCRETE RAMP, DETECTABLE WARNING SURFACE
- PROPOSED BRIDGE ABUTMENTS & PIER
- PROPOSED RETAINING WALL
- PROPOSED FENCE
- PROPOSED BARRIER RAILING, VDOT HR-1 TYPE III
- EXISTING PAVING TO BE REPLACED

EROSION CONTROL LEGEND

TITLE	KEY	SYMBOL	STD. & SPEC. NUMBER*
CONSTRUCTION ENTRANCE W/ WASH RACK	CE	SCE	3.02
SILT FENCE	SF	SF	3.05
CURB INLET PROTECTION	CIP		3.07
LIMITS OF DISTURBANCE		LOD	
LIMITS OF DISTURBANCE/ TREE PROTECTION		LOD/TP	

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DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920

DESIGNED BY:	AMT	DATE:	–
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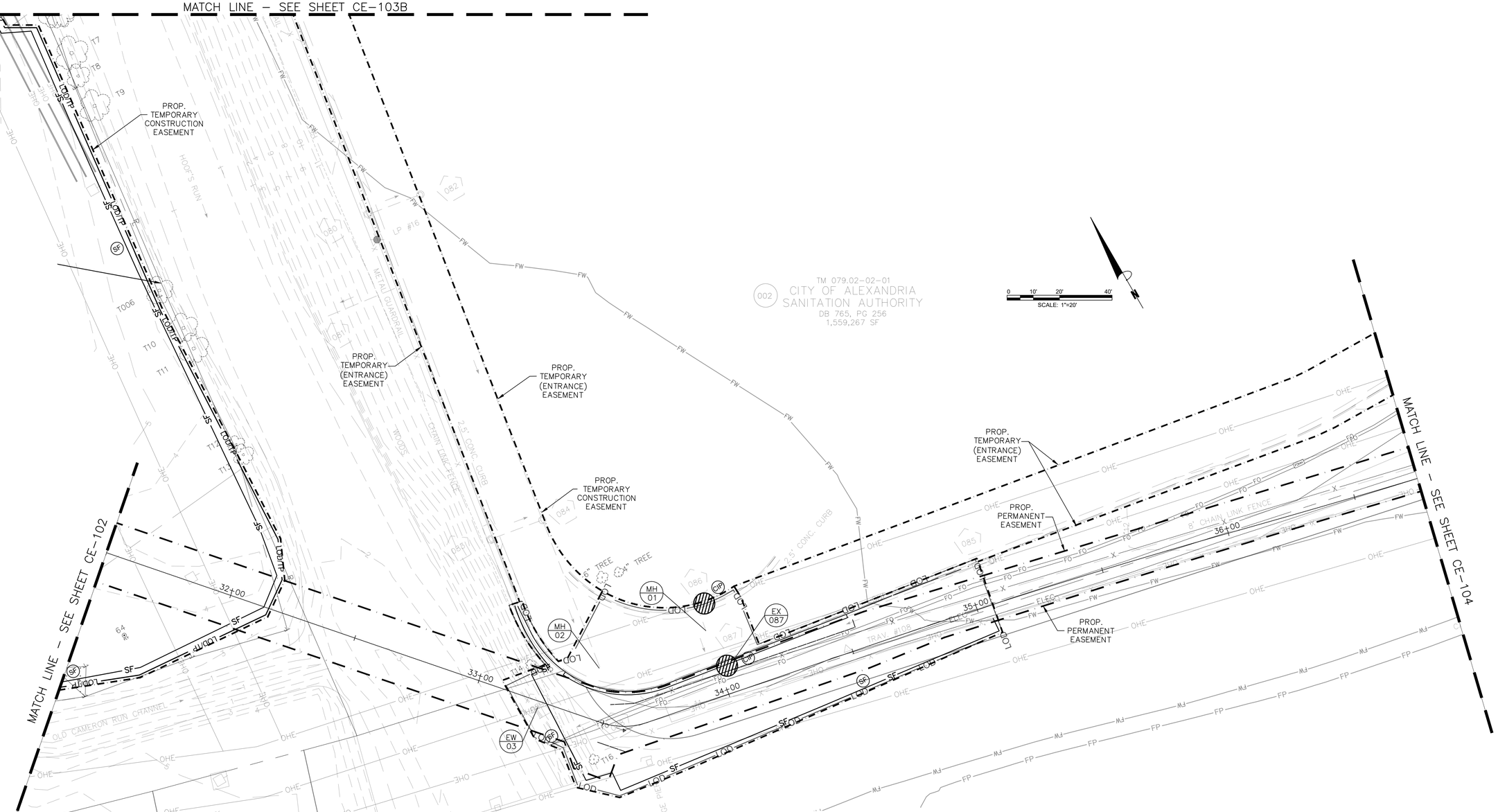
CHECKED BY:	AMT	DATE:	–
APPROVED BY:	AMT	DATE:	–

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

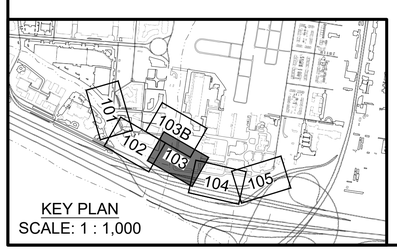
CE-102
EROSION & SEDIMENT CONTROL PLAN (PHASE I & II)

SHEET 22 OF 75

SCALE: 1"=20'



EROSION AND SEDIMENT CONTROL PLAN – PHASE I



KEY PLAN
SCALE: 1 : 1,000

RIGHT-OF-WAY/EASEMENT/PROPERTY LINE NOTE:
LABELS FOR THESE LINES ARE NOT SHOWN ON THIS SHEET FOR GRAPHIC CLARITY. SEE VF-103 FOR LINE LABELS.

EROSION CONTROL LEGEND

TITLE	KEY	SYMBOL	STD. & SPEC. NUMBER*
CONSTRUCTION ENTRANCE W/ WASH RACK	CE	SCE	3.02
SILT FENCE	SF	SF	3.05
CURB INLET PROTECTION	CIP		3.07
LIMITS OF DISTURBANCE		LOD	
LIMITS OF DISTURBANCE/ TREE PROTECTION		LOD/TP	

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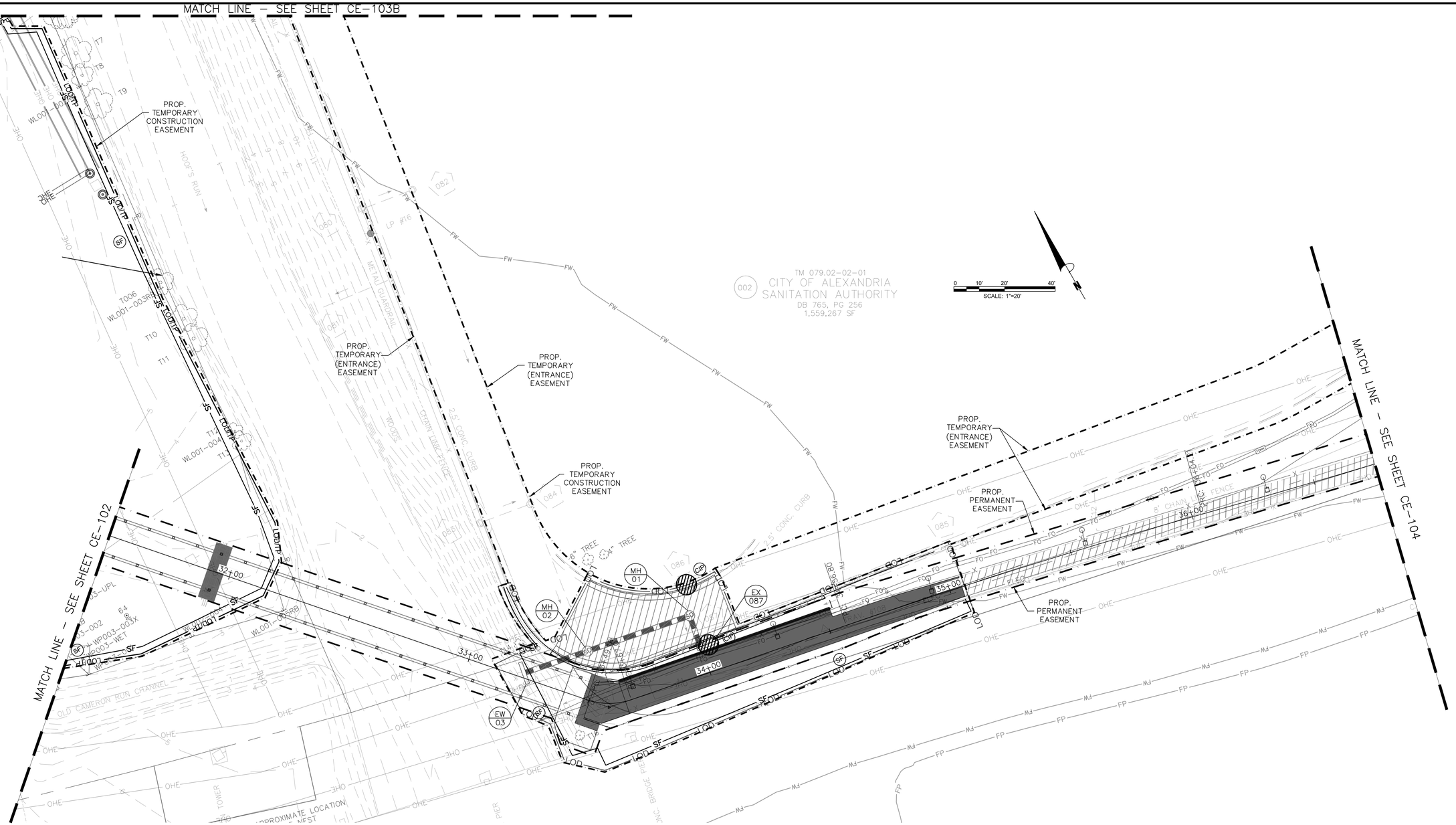
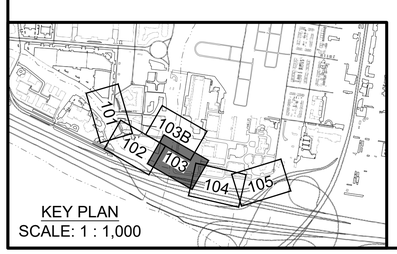
PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CE-103A(1)
EROSION & SEDIMENT CONTROL
PLAN (PHASE I)

SHEET
23 OF 75
SCALE: 1"=20'



EROSION AND SEDIMENT CONTROL PLAN – PHASE II



KEY PLAN
SCALE: 1 : 1,000

RIGHT-OF-WAY/EASEMENT/PROPERTY LINE NOTE:
LABELS FOR THESE LINES ARE NOT SHOWN ON THIS SHEET FOR GRAPHIC CLARITY. SEE VF-103 FOR LINE LABELS.

SITE LEGEND

- LOD — LIMITS OF DISTURBANCE
- LOD/TP — LIMITS OF DISTURBANCE/ TREE PROTECTION FENCE
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED PERMANENT EASEMENT
- PROPOSED TRAIL
- PROPOSED CONCRETE RAMP, DETECTABLE WARNING SURFACE
- PROPOSED BRIDGE ABUTMENTS & PIER
- PROPOSED RETAINING WALL
- PROPOSED FENCE
- PROPOSED BARRIER RAILING, VDOT HR-1 TYPE III
- EXISTING PAVING TO BE REPLACED

EROSION CONTROL LEGEND

TITLE	KEY	SYMBOL	STD. & SPEC. NUMBER*
CONSTRUCTION ENTRANCE W/ WASH RACK	CE	SCE	3.02
SILT FENCE	SF	SF	3.05
CURB INLET PROTECTION	CIP		3.07
LIMITS OF DISTURBANCE		LOD	
LIMITS OF DISTURBANCE/ TREE PROTECTION		LOD/TP	

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CONSULTANT PROJECT ID.: 17-0920
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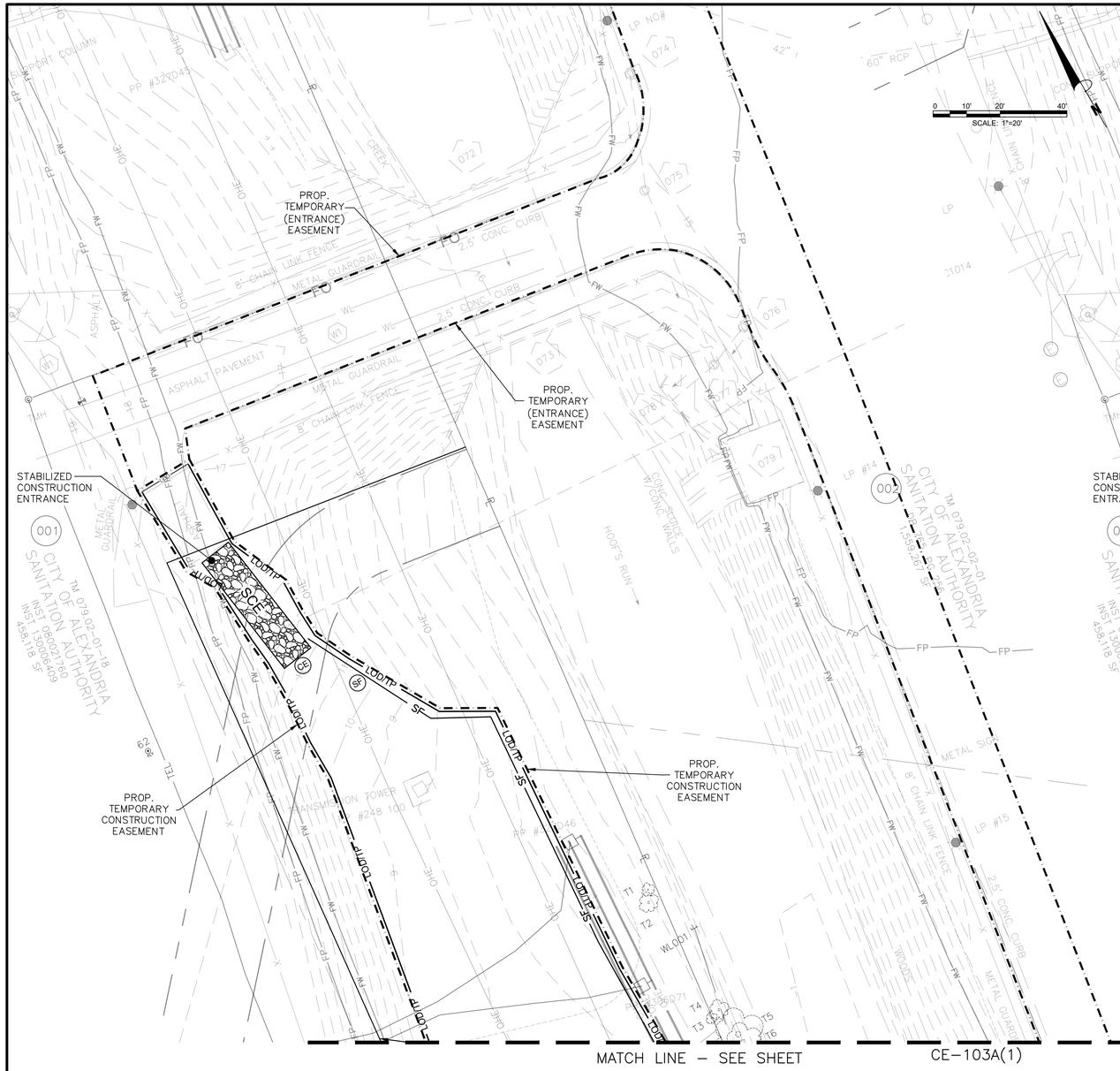
APPROVED BY: AMT DATE: –

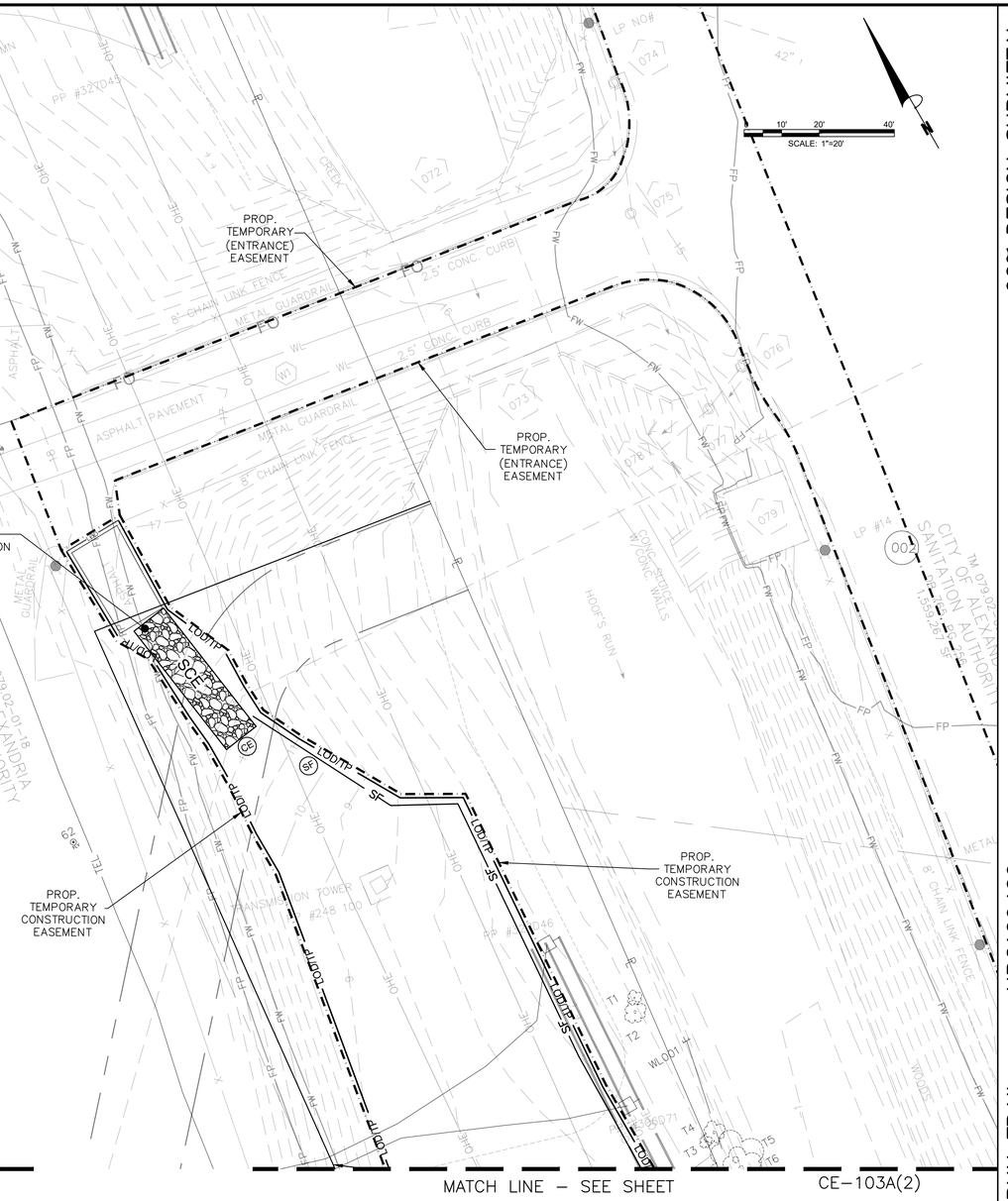
PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CE-103A(2)
EROSION & SEDIMENT CONTROL PLAN (PHASE II)

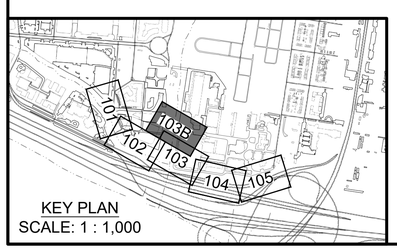
SHEET 24 OF 75
SCALE: 1"=20'



EROSION AND SEDIMENT CONTROL PLAN – PHASE I



EROSION AND SEDIMENT CONTROL PLAN – PHASE II



SITE LEGEND

- LOD — LIMITS OF DISTURBANCE
- LOD/TP — LIMITS OF DISTURBANCE/ TREE PROTECTION FENCE
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED PERMANENT EASEMENT
- PROPOSED TRAIL
- PROPOSED CONCRETE RAMP, DETECTABLE WARNING SURFACE
- PROPOSED BRIDGE ABUTMENTS & PIER
- PROPOSED RETAINING WALL
- PROPOSED FENCE
- PROPOSED BARRIER RAILING, VDOT HR-1 TYPE III
- EXISTING PAVING TO BE REPLACED

RIGHT-OF-WAY/EASEMENT/PROPERTY LINE NOTE:
LABELS FOR THESE LINES ARE NOT SHOWN ON THIS SHEET FOR GRAPHIC CLARITY. SEE VF-103B FOR LINE LABELS.

EROSION CONTROL LEGEND

TITLE	KEY	SYMBOL	STD. & SPEC. NUMBER*
CONSTRUCTION ENTRANCE W/ WASH RACK	CE	SCE	3.02
SILT FENCE	SF	SF	3.05
CURB INLET PROTECTION	CIP		3.07
LIMITS OF DISTURBANCE		LOD	
LIMITS OF DISTURBANCE/ TREE PROTECTION		LOD/TP	

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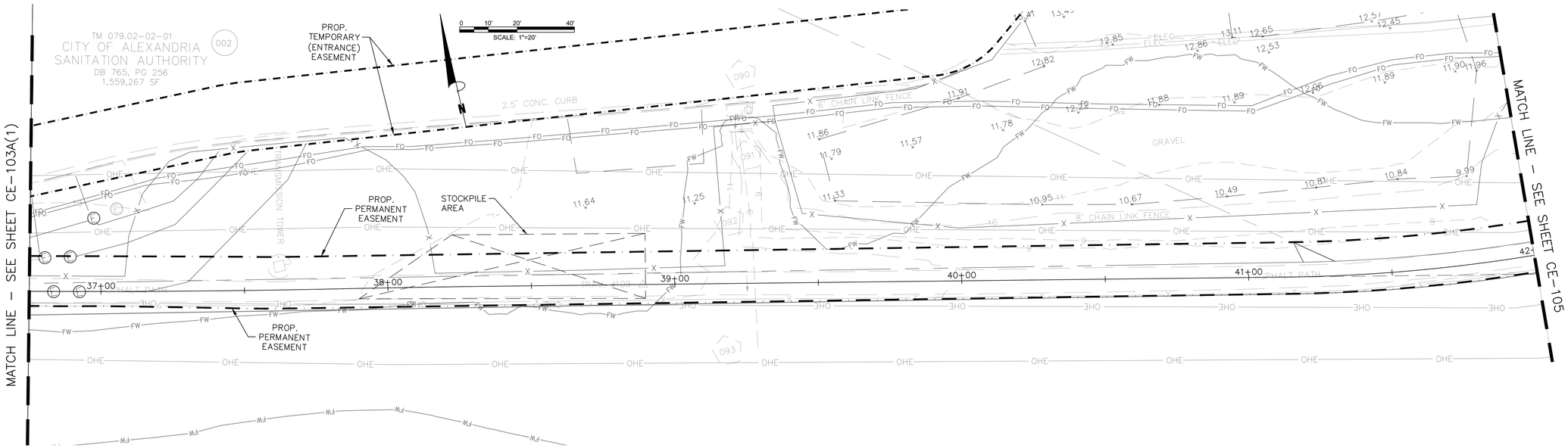
ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: –
DRAWN BY: AMT DATE: –
CHECKED BY: AMT DATE: –
APPROVED BY: AMT DATE: –

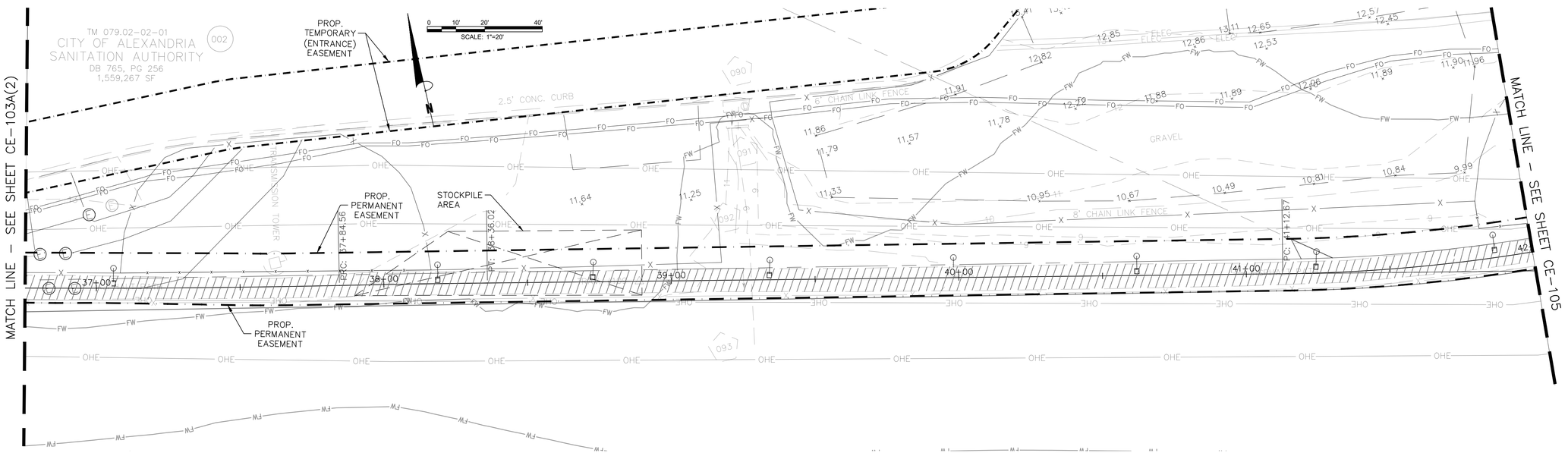
PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CE-103B
EROSION & SEDIMENT CONTROL PLAN (PHASE I & II)

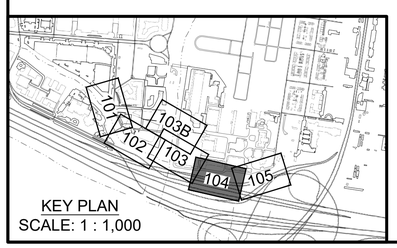
SHEET 25 OF 75
SCALE: 1"=20'



EROSION AND SEDIMENT CONTROL PLAN – PHASE I



EROSION AND SEDIMENT CONTROL PLAN – PHASE II



RIGHT-OF-WAY/EASEMENT/PROPERTY LINE NOTE:
LABELS FOR THESE LINES ARE NOT SHOWN ON THIS SHEET FOR GRAPHIC CLARITY. SEE VF-104 FOR LINE LABELS.

SITE LEGEND

- LOD — LIMITS OF DISTURBANCE
- LOD/TP — LIMITS OF DISTURBANCE/ TREE PROTECTION FENCE
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED PERMANENT EASEMENT
- PROPOSED TRAIL
- PROPOSED CONCRETE RAMP, DETECTABLE WARNING SURFACE
- PROPOSED BRIDGE ABUTMENTS & PIER
- PROPOSED RETAINING WALL
- PROPOSED FENCE
- PROPOSED BARRIER RAILING, VDOT HR-1 TYPE III
- EXISTING PAVING TO BE REPLACED

EROSION CONTROL LEGEND

TITLE	KEY	SYMBOL	STD. & SPEC. NUMBER*
CONSTRUCTION ENTRANCE W/ WASH RACK	CE	SCE	3.02
SILT FENCE	SF	SF	3.05
CURB INLET PROTECTION	CIP		3.07
LIMITS OF DISTURBANCE		LOD	
LIMITS OF DISTURBANCE/ TREE PROTECTION		LOD/TP	

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

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CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

DESCRIPTION	DATE	BY

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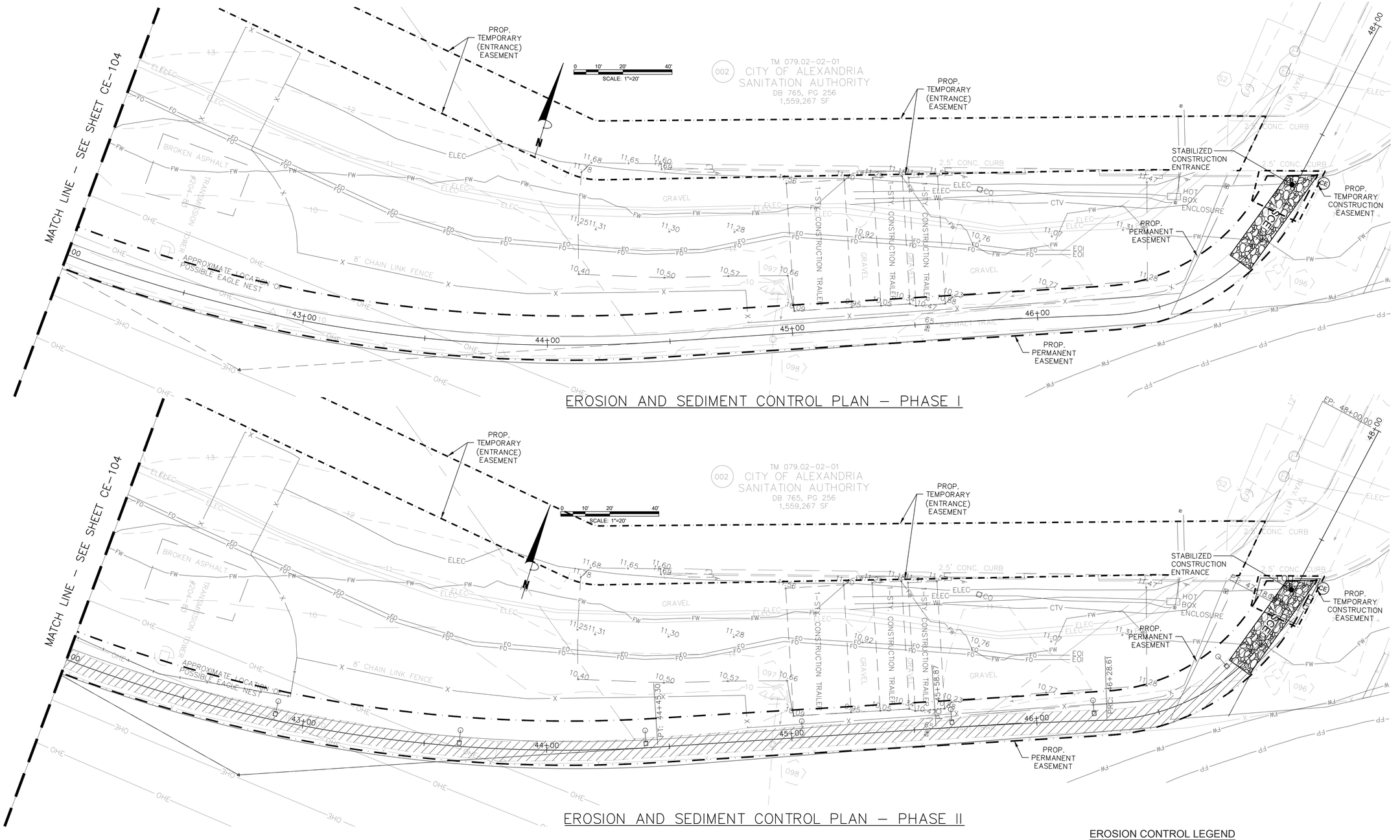
CE-104
EROSION & SEDIMENT CONTROL PLAN (PHASE I & II)

SHEET 26 OF 75
SCALE: 1"=20'



KEY PLAN
SCALE: 1 : 1,000

RIGHT-OF-WAY/EASEMENT/PROPERTY LINE NOTE:
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- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
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- PROPOSED TRAIL
- PROPOSED CONCRETE RAMP, DETECTABLE WARNING SURFACE
- PROPOSED BRIDGE ABUTMENTS & PIER
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CE-105
EROSION & SEDIMENT CONTROL PLAN (PHASE I & II)

SHEET 27 OF 75
SCALE: 1"=20'

PRESERVATION OF EXISTING TREES AND VEGETATION

1. VEGETATION TO BE REMOVED SHALL BE APPROVED BY THE CITY ARBORIST.
2. PROVIDE, IMPLEMENT AND FOLLOW A TREE CONSERVATION AND PROTECTION PROGRAM THAT IS DEVELOPED AND INSTALLED TO THE SATISFACTION OF THE CITY ARBORIST. TREE PROTECTION ZONE INDICATED ON THE EXISTING CONDITIONS AND SITE DEMOLITION PLANS.
3. PROVIDE PROTECTION OF EXISTING VEGETATION IN COMPLIANCE WITH LANDSCAPE GUIDELINES OF THE CITY OF ALEXANDRIA.
4. LOCATION AND METHOD FOR PROTECTION AND PRESERVATION OF EXISTING TREES SHALL BE APPROVED IN-FIELD BY THE CITY ARBORIST OR LANDSCAPE ARCHITECT PRIOR TO COMMENCEMENT OF GROUND DISTURBING ACTIVITY.
5. TREE PROTECTION SHALL BE PROVIDED WHERE SILT FENCE IS NOT ADEQUATE. PROTECTION SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE DRIP LINE OF THE TREES TO BE SAVED OR AS OTHERWISE INDICATED ON THE EROSION AND SEDIMENTATION CONTROL PLAN AND/OR TREE PRESERVATION PLAN. THE CONTRACTOR WILL CONSULT THE SITE INSPECTOR BEFORE THE CONSTRUCTION STARTS. TREE PROTECTION FENCING MUST BE ESTABLISHED AND APPROVED BY THE CITY ARBORIST BEFORE ANY CLEARING OR CONSTRUCTION CAN BE STARTED.
6. PRESERVE AND PROTECT GROUPS OF TREES, PLANTING, OR OTHER FEATURES IDENTIFIED IN THE EXISTING CONDITIONS PLAN AND INDICATED TO REMAIN AND ANY ADJACENT TREES LOCATED OUTSIDE OF THE LIMITS OF DISTURBANCE AND AT RISK OF DAMAGE DUE TO CONSTRUCTION ACTIVITIES.
7. PROTECT TREE(S) TO BE RETAINED (INCLUDING TREES OUTSIDE LIMITS OF DISTURBANCE) USING THE FOLLOWING METHODS:
   - 7.1. FENCE: ERECT TEMPORARY 4 FT HIGH CHAIN LINK FENCE, WITH POSTS 8 FT (MAX) APART AROUND THE SELECTED FEATURES. PLACE FENCE AS INDICATED ON THE TREE PRESERVATION PLANS AND AS DIRECTED BY THE CITY. INCLUDE ONE GATE PER ENCLOSURE, MIN. OTHER FENCING MAY BE USED WITH PRIOR WRITTEN APPROVAL BY THE CITY.
   - 7.2. SIGNS: POST SIGNS IDENTIFYING TREE PROTECTION AREA(S) FOR SELECTED FEATURES ON FENCE A MAXIMUM OF 15 FT APART. PRINT "TREE PROTECTION ZONE – ENTRY PROHIBITED" OR SIMILAR WARNING IN BOTH ENGLISH AND SPANISH ON THE SIGNS.
   - 7.3. NO CONSTRUCTION ACTIVITIES, INCLUDING UTILITY TRENCHING OR MATERIAL STORAGE, SHALL BE ALLOWED IN THE TREE PRESERVATION AREA(S). ALSO PROHIBITED ARE ANY STORED OR PARKED VEHICLES, OR OTHER USES THAT WILL COMPACT THE GROUND AND/OR OTHERWISE DAMAGE ROOTS. THE CONTRACTOR SHALL ERECT TREE PROTECTION FENCE, MAINTAIN TREES DURING CONSTRUCTION, POLICE THE TREE PROTECTION AREAS, REMOVE FENCES AT CONCLUSION OF CONTRACT AND LANDSCAPE OR OTHERWISE REPAIR THE PROTECTED AREA AS PER LANDSCAPE PLANTING PLANS (OR EXISTING CONDITIONS, AS DIRECTED).
   - 7.4. ANY PLANTS LOCATED WITHIN THE TREE PRESERVATION AREA(S) THAT ARE DAMAGED, REMOVED, OR ALTERED IN ANY WAY SHALL BE REPLACED WITH THREE TREES OF SIMILAR SPECIES AND SIZE AT THE DIRECTION OF THE CITY PER THE CITY OF ALEXANDRIA LANDSCAPE STANDARDS.
   - 7.5. SHALLOW ROOTS:
     - 7.5.1. CONTRACTOR SHALL NOTIFY THE CITY OF ANY SHALLOW ROOTS WHICH SHALL BE IMPACTED OR OTHERWISE REMOVED DURING CONSTRUCTION.
     - 7.5.2. CONTRACTOR SHALL PROTECT AND PRESERVE ROOTS, AS DIRECTED BY THE CITY.
     - 7.5.3. WHERE ROOT REMOVAL IS REQUIRED AND APPROVED BY THE CITY, OR WHERE DAMAGE TO UNDOCUMENTED ROOTS OCCUR, ROOT PRUNING SHALL BE REQUIRED IN ACCORDANCE WITH THE FOLLOWING:
       - 7.5.3.1. AS DIRECTED, MAKE A VERTICAL CUT WITHIN TWO (2) FEET OF THE LIMIT OF GRADING USING A ROCK SAW, CHAIN TRENCHER, OR SIMILAR TRENCHING DEVICE.
       - 7.5.3.2. AFTER COMPLETION OF THE CUT, MAKE CLEAN CUTS WITH A LOPPER, SAW, OR PRUNER TO REMOVE ALL TORN ENDS ON THE TREE SIDE OF THE EXCAVATION AND BACKFILL TRENCH IMMEDIATELY WITH EXISTING SOIL, FILLING ALL VOIDS.
       - 7.5.3.3. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REFERENCE STANDARDS.
8. CONTRACTOR MUST PROVIDE DOCUMENTATION OF COMMUNICATION WITH THE ADJACENT PROPERTY OWNER(S) VERIFYING NOTIFICATION OF CONSTRUCTION IMPACT, POTENTIAL FOR LOSS, AND AGREED UPON REMEDIAL MEASURES PERTAINING TO THE EXISTING TREE(S) ON ADJACENT PROPERTIES THAT WILL BE EFFECTED BY PROJECT WORK.

CITY TREE PRESERVATION NOTES

1. VEGETATION DESIGNATED FOR PROTECTION AND/OR PRESERVATION SHALL CONTINUOUSLY RECEIVE AN ENHANCED LEVEL OF MAINTENANCE THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD.
2. MAINTENANCE SHALL BE PRO-ACTIVE.
3. MAINTENANCE OPERATIONS SHALL AGGRESSIVELY MONITOR THE HEALTH, GROWTH AND VIGOR OF VEGETATION AND PRESCRIBE SELECTIVE PRUNING, REMOVAL OF VOLUNTEER AND/OR INVASIVE SPECIES, WATERING, FERTILIZATION AND INSTALLATION OF MULCH/TOP DRESSING.
4. WHEN PRESERVED VEGETATION IS LOCATED ON CITY PROPERTY, MAINTENANCE SHALL BE PERFORMED TO THE SATISFACTION OF THE CITY.
5. AREAS DESIGNATED FOR PROTECTION AND/OR PRESERVATION OF VEGETATION SHALL NOT BE ENTERED OR UTILIZED (APPROVED MAINTENANCE PROCEDURES AND WATERING EXCEPTED) THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD. PROHIBITED ITEMS/ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO:
   - 5.1. MODIFYING SITE TOPOGRAPHY IN A MANNER THAT DIRECTLY OR INDIRECTLY ALTERS EXISTING SITE DRAINAGE WITHIN PROTECTION ZONE INCLUDING TRENCHING OR GRADING OPERATIONS AND PLACING, STORING OR STOCKPILING SOIL OR CONSTRUCTION RELATED SUPPLIES.
   - 5.2. FELLING AND STORING VEGETATION.
   - 5.3. INCINERATING MATERIALS WITHIN OR IN CLOSE PROXIMITY.
   - 5.4. OPERATING MACHINERY OR EQUIPMENT, INCLUDING VEHICLE/EQUIPMENT PARKING OR STORAGE.
   - 5.5. TEMPORARY OR PERMANENT UTILITY CONSTRUCTION, PAVING OR IMPERVIOUS SURFACE INSTALLATION.
   - 5.6. DISPOSAL OF DEBRIS OR CHEMICALS.
   - 5.7. TEMPORARY FACILITIES OR OCCUPATION BY WORK FORCE.
   - 5.8. STORAGE OF CONSTRUCTION MATERIALS OR WASTE.

POLLUTION PREVENTION NOTES

1. ALL SAW CUTTING AND DEMOLITION MUST INCLUDE WATER FOR DUST SUPPRESSION. INLETS MUST BE PROTECTED AND SLURRY MUST NOT ENTER THE STORM INLET. WASTE MATERIALS MUST BE COLLECTED USING DRY TECHNIQUES (SHOVEL, BROOM, ETC.) AND NOT WASHED DOWN THE INLETS.
2. ENSURE THE STAGING/STORAGE/APPLICATION/CLEAN-UP OF GAS, CHEMICALS, AND OILS (INCLUDING FORM RELEASE OIL) IS SUCH AS TO PREVENT BEING WASHED DOWN THE INLETS.
3. ENSURE DISCHARGE OF SOAPS, SOLVENTS, DETERGENTS, WASH WATER AND CONSTRUCTION MATERIALS, INCLUDING THE CLEAN-UP OF STUCCO, VEHICLE AND EQUIPMENT WASH WATER, PAINT, FORM RELEASE OILS AND CURING COMPOUNDS (COVER, PLASTIC SHEETING OR TEMPORARY ROOFS) AND PROVIDE COLLECTION AND PROPER DISPOSAL TO PREVENT CONTACT WITH STORMWATER.
4. CONTRACTOR SHALL EXERCISE EFFORT TO PREVENT THE DISCHARGE OF FUELS, OILS AND OTHER PETROLEUM PRODUCTS, HAZARDOUS OR TOXIC WASTES, SANITARY WASTES, SPILLED AND LEAKED FUELS/CHEMICALS FROM VEHICLES AND EQUIPMENT (I.E. SPILL KITS, SPILL CONTAINMENT, ETC.).
5. CONTRACTOR TO MINIMIZE THE DISCHARGE OF POLLUTANTS FROM STORAGE, HANDLING AND DISPOSAL OF CONSTRUCTION PRODUCTS; BUILDING PRODUCTS; PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS AND LANDSCAPE MATERIAL; AND DOMESTIC WASTES.
6. CONTRACTOR TO PROVIDE PROPOSED LOCATION OF CONCRETE MIXING TO BE APPROVED BY THE CITY.
7. CONTRACTOR TO DIRECT CONCRETE WASH WATER INTO A LEAK-PROOF CONTAINER OR LEAK-PROOF SETTLING BASIN, WITH HARDENED CONCRETE WASTES AND LIQUID CONCRETE WASTES PROPERLY DISPOSED OF AS CONSTRUCTION WASTES.
8. TO REPORT LEAKS, SPILLS AND OTHER RELEASES, CONTACT:

FIRE DEPARTMENT T&ES	703-838-4660 703-746-4065	FOR HAZARDOUS DISCHARGES FOR DISCHARGES TO STORM SEWER
DEQ NORTHERN VIRGINIA REGIONAL OFFICE	703-583-3870	FOR PETROLEUM THAT REACHES SURFACE WATER DURING NORMAL HOURS
VIRGINIA DEPARTMENT OF EMERGENCY MANAGEMENT	1-800-468-8892	FOR PETROLEUM THAT REACHES SURFACE WATER 24 HOUR

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. AN EROSION AND SEDIMENT CONTROL PLAN MUST BE APPROVED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES PRIOR TO ANY LAND DISTURBING ACTIVITY GREATER THAN 2,500 SQUARE FEET.
2. THE CONTRACTORS ARE TO KEEP DENUDED AREAS TO A MINIMUM. AN EROSION AND SEDIMENT CONTROL PLAN IS INCLUDED WITH THESE FINAL PLANS FOR APPROVAL BY T&ES FOR REFERENCE BY THE EROSION AND SEDIMENT CONTROL PERMIT. ALL EROSION / SEDIMENT CONTROL MEASURES WILL CONFORM TO THE CURRENT STANDARDS OF THE CITY OF ALEXANDRIA AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH).
3. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) AND VIRGINIA REGULATIONS §4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS.
4. T&ES MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENTS OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION. CERTIFIED RESPONSIBLE LAND DISTURBER (CRLD) IS REQUIRED TO ATTEND PRE-CONSTRUCTION MEETING.
5. ALL EROSION AND SEDIMENT CONTROL MEASURE ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING. AN INSPECTION BY THE CITY OF ALEXANDRIA IS REQUIRED AFTER INITIAL INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND BEFORE ANY CLEARING OR GRADING CAN BEGIN.
6. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
7. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN THOSE 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 CITY OF ALEXANDRIA.
8. ALL DISTURBED AREAS OF THE SITE NOT TO BE WORKED FOR SEVEN OR MORE CALENDAR DAYS MUST BE STABILIZED.
9. ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED AS SOON AS POSSIBLE BUT NO LATER THAN 48 HOURS AFTER GRADING.
10. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
11. DURING DEWATERING OPERATION, WATER WILL BE PUMPED THROUGH AND APPROVED FILTERING DEVICE.
12. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES DAILY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
13. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
14. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 10 DAYS IS TO BE SEEDED FOR TEMPORARY VEGETATION AND MULCHED WITH STRAW MULCH OR OTHERWISE STABILIZED.
15. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES AS NECESSARY TO PREVENT EROSION AND SEDIMENTATION AND AS DETERMINED BY THE CITY OF ALEXANDRIA.
16. ANY DENUDED SLOPES, EITHER DISTURBED OR CREATED BY THIS PLAN THAT EXCEED 2500 SQUARE FEET SHALL BE SODDED AND PEGGED FOR STABILITY AND EROSION CONTROL. AT THE COMPLETION OF THE PROJECT AND PRIOR TO THE RELEASE OF THE BOND ALL DISTURBED AREAS SHALL BE STABILIZED PERMANENTLY AND ALL TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED.
17. CONTRACTOR TO INSTALL ALL NECESSARY EROSION AND SEDIMENT CONTROL MEASURES.
18. SEE POLLUTION PREVENTION NOTES FOR ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES.

SEQUENCE OF CONSTRUCTION

1. INSTALL PERIMETER EROSION AND SEDIMENT CONTROLS.
2. CONDUCT DEMOLITION AND CONSTRUCTION ACTIVITIES ACCORDING TO THE APPLICABLE PLANS. INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL PRACTICES AS NECESSARY AND AS DIRECTED BY THE EROSION AND SEDIMENT CONTROL INSPECTOR.
3. AS CONTRIBUTORY DRAINAGE AREAS ARE STABILIZED AND WITH THE PERMISSION OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, REMOVE INDIVIDUAL EROSION AND SEDIMENT CONTROL PRACTICES. UPON COMPLETION OF DEMOLITION, CONSTRUCTION AND LAND DISTURBING ACTIVITIES AND WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR; REMOVE ALL REMAINING EROSION AND SEDIMENT CONTROL PRACTICES AND PROVIDE PERMANENT STABILIZATION ACCORDING TO APPROVED METHODS.
4. CONSTRUCTION DEBRIS MUST BE REMOVED TO AN APPROVED LANDFILL WITH ADEQUATE FREQUENCY IN ACCORDANCE WITH THE VIRGINIA STATE LITTER CONTROL ACT.

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION
THIS PROJECT INCLUDES THE INSTALLATION OF A 10' WIDE SHARED USE PATH BETWEEN EISENHOWER AVENUE NEAR TELEGRAPH ROAD TO SOUTH PAYNE STREET. A PEDESTRIAN/BICYCLE BRIDGE WILL BE INSTALLED AS A PART OF THIS PROJECT. THE TOTAL AREA OF DISTURBANCE FOR THE PROJECT IS 65,300 SF (1.50 ACRES).

EXISTING SITE CONDITIONS
EXISTING SLOPES: 0-33%

IN PRE-DEVELOPMENT CONDITIONS, THE MAJORITY OF RUNOFF FROM THE DISTURBED AREA SHEET FLOWS DOWN THE HILL AND INTO OLD CAMERON RUN CHANNEL OR HOOFF'S RUN. A SMALL PORTION OF THE RUNOFF FROM THE ACCESS ROAD ON SANITATION AUTHORITY PROPERTY IS CAUGHT IN STORMDRAIN AND PIPED INTO HOOFF'S RUN.

ADJACENT PROPERTIES
FROM STATION 20+00 TO 24+25 THE PROPOSED TRAIL IS BORDERED BY HOOFF'S RUN DRIVE TO THE NORTH AND BY OLD CAMERON RUN CHANNEL TO THE SOUTH. FROM STATION 24+50 TO 30+25 THE TRAIL IS BORDERED BY A PUBLIC SOCCER FIELD TO THE NORTH AND BY OLD CAMERON RUN CHANNEL TO THE SOUTH. FROM STATION 33+00 TO 47+50 THE TRAIL IS BORDERED BY CITY OF ALEXANDRIA SANITATION AUTHORITY PROPERTY AND BY A RAMP TO I-95/495 TO THE SOUTH.

OFF-SITE AREAS
THERE IS NO OFF-SITE WORK.

SOILS
CODORUS AND HATBORO WITH SLOPES BETWEEN 0 AND 2%, GRIST MILL SANDY LOAM WITH SLOPES BETWEEN 0 AND 25%, & URBAN LAND.

CRITICAL EROSION AREAS
THERE ARE NO CRITICAL EROSION AREAS WITHIN THE LIMITS OF DISTURBANCE.

EROSION AND SEDIMENT CONTROL MEASURES
PERMANENT OR TEMPORARY SOIL STABILIZATION MUST BE APPLIED TO DENUDED AREAS WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. SOIL STABILIZATION MUST BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS WHICH MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 30 DAYS. ANY STOCKPILES MUST BE MULCHED AND SEEDED IMMEDIATELY AS DIRECTED BY THE COUNTY INSPECTOR. THERE ARE NO CRITICAL AREAS WITHIN THE LIMITS OF DISTURBANCE.

SEDIMENT CONTROL WILL BE EXECUTED THROUGH THE INSTALLATION OF A STONE CONSTRUCTION ENTRANCE, SILT FENCE, TREE PROTECTION AND INLET PROTECTION WITHIN THE DRAINAGE AREAS OF THE LIMITS OF DISTURBANCE.

ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER TEMPORARY MEASURES ARE NO LONGER NECESSARY.

STRUCTURAL PRACTICES

SILT FENCE – 3.05
INSTALL SILT FENCE DOWNSLOPE OF AREAS WITH MINIMAL GRADES TO FILTER SEDIMENT-LADEN RUNOFF FROM SHEET FLOW.

INLET PROTECTION – 3.07
INSTALL AN ACF GUTTERBUDDY CURB INLET SEDIMENT FILTER AROUND A STORM DRAIN CURB INLET.

TREE PRESERVATION & PROTECTION – 3.38
INSTALL TREE PROTECTION FENCING TO PROTECT TREES FROM MECHANICAL AND OTHER INJURY DURING LAND DISTURBING AND CONSTRUCTION ACTIVITY.

VEGETATIVE MEASURES

1. TOPSOILING (STOCKPILE)
TOPSOIL WILL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATIONS ARE TO BE STABILIZED WITH TEMPORARY VEGETATION WITHIN 14 DAYS.

2. TEMPORARY SEEDING
DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE WITHIN A PERIOD OF 30 DAYS WILL HAVE TEMPORARY VEGETATION ESTABLISHED. TEMPORARY VEGETATION WILL REDUCE DAMAGE FROM SEDIMENT AND RUNOFF TO DOWNSTREAM AND OFF-SITE AREAS. TEMPORARY SEEDING PLANT MATERIAL SHALL BE RAPIDLY GROWING PLANTS SELECTED FROM VESCH STANDARD AND SPEC. 3.31 AND TABLE 3.31-A&B. AREAS WHICH FAIL TO ESTABLISH VEGETATIVE COVER ADEQUATE TO PREVENT RILL EROSION ARE TO BE RESEEDED AS SOON AS POSSIBLE. FERTILIZER SHALL BE APPLIED AT A RATE OF 600 LBS. PER ACRE. FERTILIZER SHALL BE INCORPORATED INTO TOP 51-102mm OF SOIL. SEED SHALL BE BE EVENLY APPLIED AND SMALL GRAINS SHALL BE PLANTED NO MORE THAN 38mm DEEP. SEEDING MADE IN FALL FOR WINTER COVER AND DURING SUMMER MONTHS SHALL BE MULCHED.

3. PERMANENT SEEDING
ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISHED GRADING. SEEDING SHALL BE DONE WITH KENTUCKY 31 TALL FESCUE ACCORDING TO MINIMUM STANDARD #3, VESCH SPEC. 3.32-A&B. EROSION CONTROL BLANKETS ARE TO BE INSTALLED OVER FILL SLOPES, WHICH HAVE BEEN BROUGHT TO FINAL GRADE AND HAVE BEEN SEEDED. THIS WILL PROTECT THE SLOPES FROM RILL AND GULLY EROSION AND ALLOW THE SEED TO GERMINATE PROPERLY. MULCH (STRAW OR FIBER) WILL BE USED ON RELATIVELY FLAT AREAS. IN ALL SEEDING OPERATIONS, SEED, FERTILIZER AND LIME WILL BE APPLIED PRIOR TO MULCHING. THE PLANTING SOIL MUST HAVE ENOUGH FINE GRAINED SOIL, SUFFICIENT PORE SPACE, SUFFICIENT DEPTH AND BE FROM FROM TOXIC OR EXCESSIVE QUANTITIES OF ROOTS AND SHALL BE APPLIED IN ACCORDANCE WITH STD. 3.30.

5. SODDING
AREAS THAT ARE TO BE SODDED SHALL BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE PLANS. SOIL TESTS SHOULD BE 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 PLATE 3.33-1 OF THE VESCH.

6. DUST CONTROL
DUST SHALL ME MINIMIZED AS MUCH AS POSSIBLE.

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DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS		
DESCRIPTION	BY	DATE

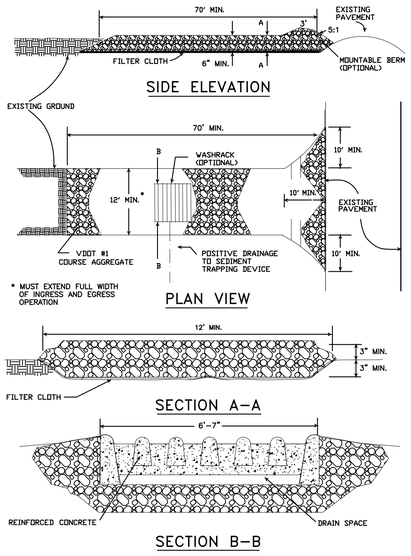
ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: --
DRAWN BY: AMT DATE: --
CHECKED BY: AMT DATE: --
APPROVED BY: AMT DATE: --

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CE-106
EROSION & SEDIMENT CONTROL NOTES

SHEET
28 OF 75
SCALE: N/A

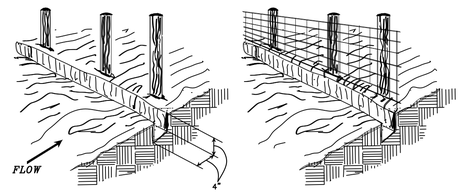
STONE CONSTRUCTION ENTRANCE



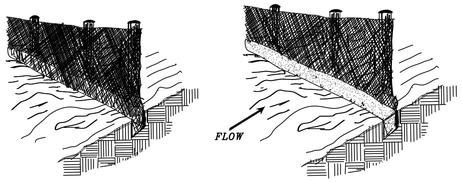
SOURCE: ADAPTED from 1983 Maryland Standards for Soil erosion and Sediment Control, and Va. DSWC — Plate 3.02-1

CONSTRUCTION OF A SILT FENCE (WITH WIRE SUPPORT)

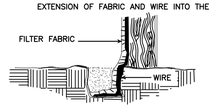
1. SET POSTS AND EXCAVATE A 4"X4" TRENCH UPSLOPE ALONG THE LINE OF POSTS.
2. STAPLE WIRE FENCING TO THE POSTS.



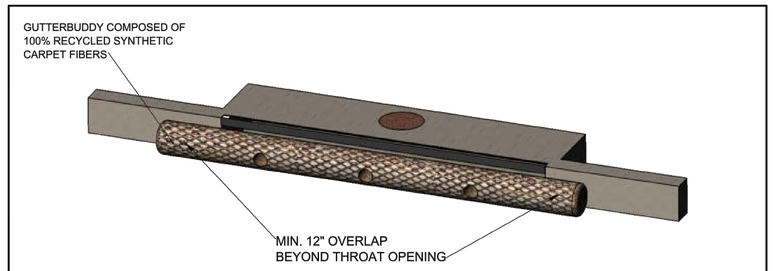
3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



EXTENSION OF FABRIC AND WIRE INTO THE TRENCH.



SOURCE: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood & Wyant — PLATE 3.05-1



ACF GUTTERBUDDY SIZES	
ACF ITEM CODE	LENGTH
4GUTTER04	4'
4GUTTER06	6'
4GUTTER08	8'
4GUTTER10	10'
4GUTTER12	12'
4GUTTER14	14'
4GUTTER16	16'

ACF ENVIRONMENTAL — LET'S SET IT RIGHT

ACF GUTTERBUDDY

FOR ADDITIONAL INFORMATION PLEASE CONTACT: ACF ENVIRONMENTAL, 800-448-3636, WWW.ACFENVIRONMENTAL.COM

DATE 9/7/16

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REVISIONS

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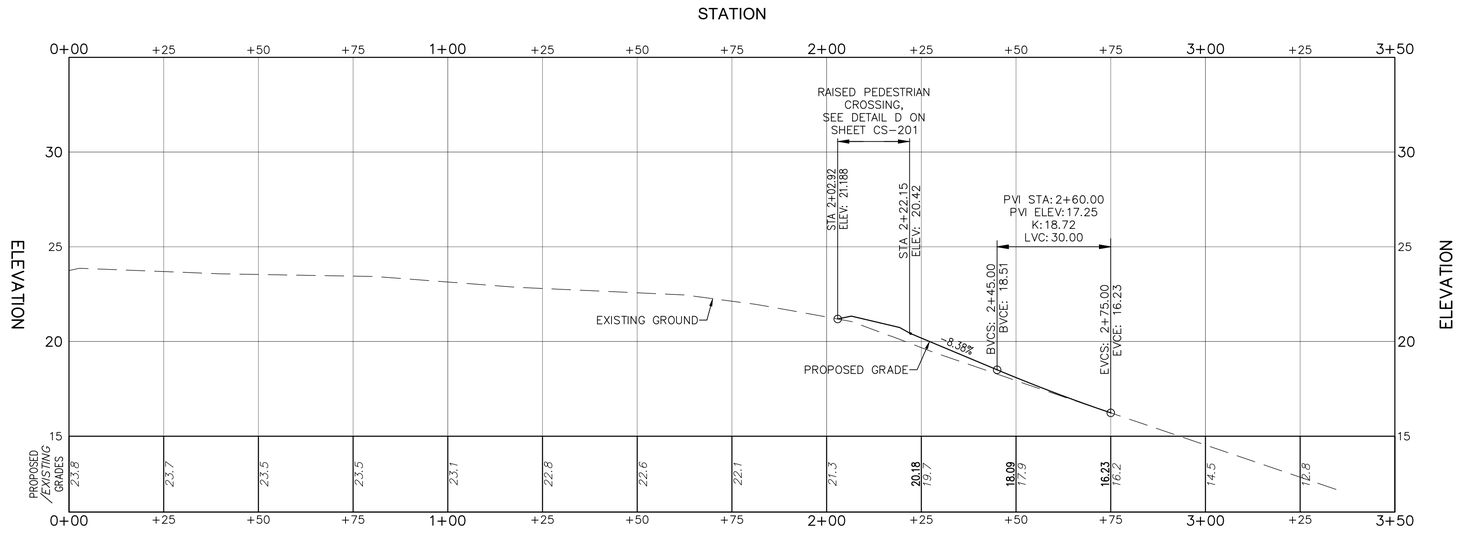
PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CE–107
EROSION & SEDIMENT CONTROL DETAILS

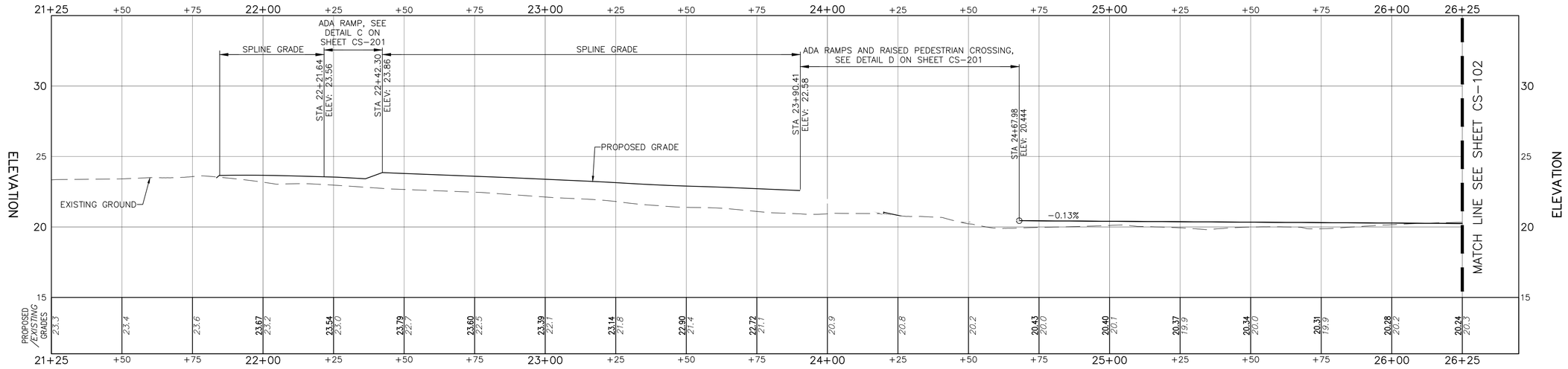
SHEET 29 OF 75

SCALE: N/A



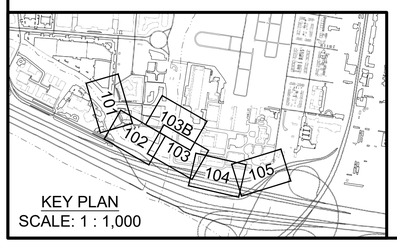
PROFILE – HOOFFS RUN DRIVE

HORIZ. 1"=20'
VERT. 1"=4'



OLD CAMERON RUN TRAIL

HORIZ. 1"=20'
VERT. 1"=4'



RIGHT-OF-WAY/EASEMENT/PROPERTY LINE NOTE:
LABELS FOR THESE LINES ARE NOT SHOWN ON THIS SHEET FOR GRAPHIC CLARITY. SEE VF-101 FOR LINE LABELS.

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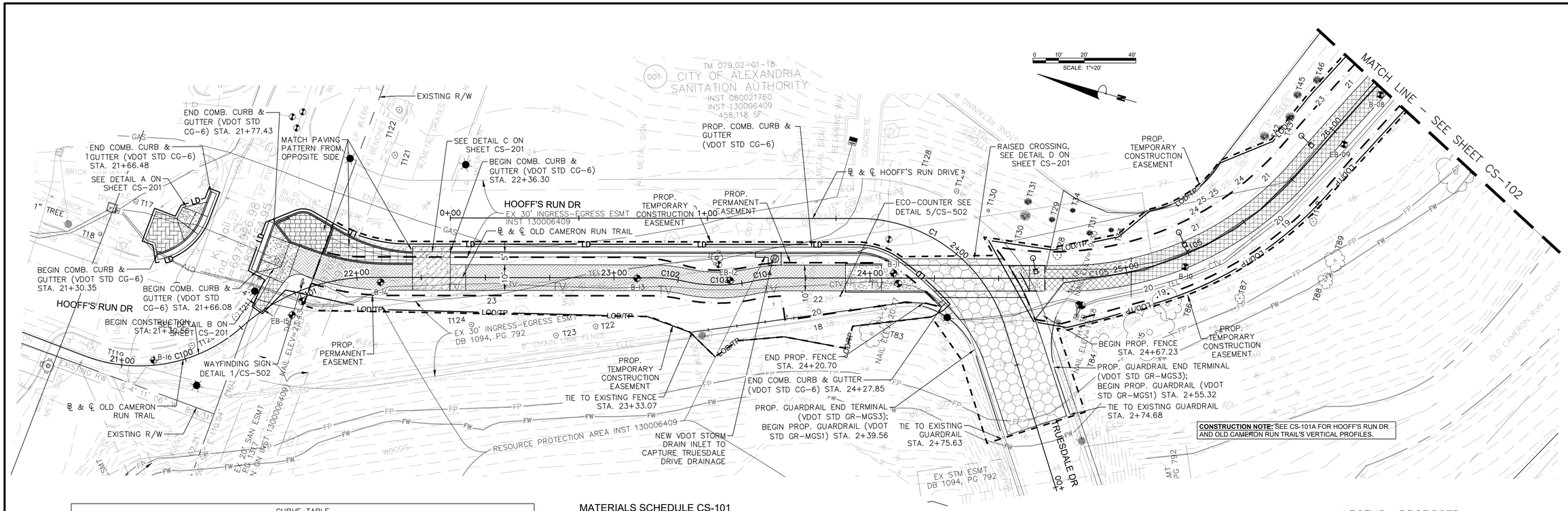
PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CS-101A
SITE, GRADING & LAYOUT PLAN

SHEET
30 OF 75
SCALE: 1"=20'



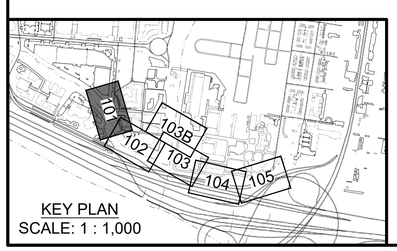
CURVE TABLE								
CURVE #	PI	DELTA	D	TANGENT	LENGTH	RADIUS	START STATION	END STATION
C100	21+21.57	62°42'20"	95° 29' 35"	36.56'	65.67'	60.00'	PC 20+85.01	PRC 21+50.68
C101	21+79.41	41°55'32"	76° 23' 40"	28.73'	54.88'	75.00'	PRC 21+50.68	PT 22+05.56
C102	23+21.19	12°26'13"	95° 29' 35"	6.54'	13.02'	60.00'	PC 23+14.65	PRC 23+27.68
C103	23+40.91	24°52'26"	95° 29' 35"	13.23'	26.05'	60.00'	PRC 23+27.68	PRC 23+53.72
C104	23+60.26	12°26'13"	95° 29' 35"	6.54'	13.02'	60.00'	PRC 23+53.72	PT 23+66.75
C105	25+31.61	49°34'50"	47° 44' 47"	55.42'	103.84'	120.00'	PC 24+76.18	PRC 25+80.03
C1	2+02.48	72°26'14"	95° 29' 35"	43.94'	75.86'	60.00'	PC 1+58.54	PT 2+34.39

MATERIALS SCHEDULE CS-101

SYMBOL	DESCRIPTION
	LIGHT POLE. SEE LIGHTING DETAILS FOR TYPICAL PHOTOMETRIC STUDIES, CUT SHEETS, CONTROL OPTIONS, & SECTIONS.
	ECO-COUNTER
	WAYFINDING SIGN

SYMBOL	DESCRIPTION
	SHARED USE PATH PRECAST POROUS CONCRETE PANEL
	VDOT STANDARD CONCRETE RAMP
	VDOT STANDARD DETECTABLE WARNING SURFACE
	SHARED USE PATH FULL DEPTH ASPHALT
	BRICK PAVER SIDEWALK IN COMPLIANCE WITH VDOT STANDARDS. PAVING PATTERN SHALL MATCH PATTERN OF EXISTING BRICK PAVER SIDEWALK TO REMAIN.
	VDOT STANDARD CONCRETE SIDEWALK. JOINT PATTERN AND CONCRETE COLOR SHALL MATCH EXISTING ADJACENT CONCRETE.
	MULTI-COLORED TAN PAVERS TO MATCH MAKE, MANUFACTUER, PATTERN OPPOSITE SIDE OF HOOFF'S RUN DRIVE.
	GRAY PAVERS TO MATCH MAKE, MANUFACTURER, PATTERN OPPOSITE SIDE OF HOOFF'S RUN DRIVE.

CONSTRUCTION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.



LEGEND: PROPOSED RELOCATED/REALIGNED UTILITIES

CTV	UNDERGROUND TELEVISION LINE
UGT	UNDERGROUND TELEPHONE LINE
W	UNDERGROUND WATER LINE
E	UNDERGROUND ELECTRIC LINE
OHE / OHT	RELOCATED OVERHEAD ELECTRIC (DISTRIBUTION) AND COMMUNICATION LINES WITH NEW UTILITY POLES
FO	UNDERGROUND FIBER OPTIC LINE

SITE LEGEND

LD	LIMITS OF DISTURBANCE
LOD/TP	LIMITS OF DISTURBANCE/ TREE PROTECTION FENCE
	PROPOSED TEMPORARY CONSTRUCTION EASEMENT
	PROPOSED PERMANENT EASEMENT
	PROPOSED TRAIL
	PROPOSED CONCRETE RAMP, DETECTABLE WARNING SURFACE
	PROPOSED BRIDGE ABUTMENTS & PIER
	PROPOSED RETAINING WALL
	PROPOSED FENCE
	PROPOSED BARRIER RAILING, VDOT HR-1 TYPE III

RIGHT-OF-WAY/EASEMENT/PROPERTY LINE NOTE: LABELS FOR THESE LINES ARE NOT SHOWN ON THIS SHEET FOR GRAPHIC CLARITY. SEE VF-101 FOR LINE LABELS.

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301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS
DATE | DESCRIPTION | BY

ALEXANDRIA PROJECT NO.: 16-019
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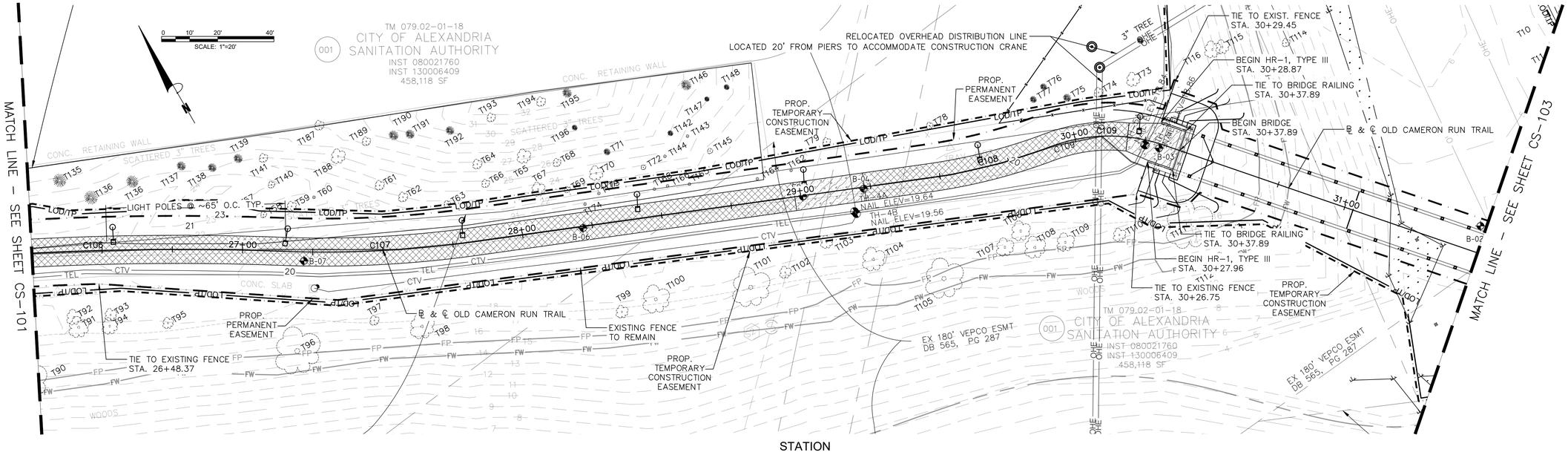
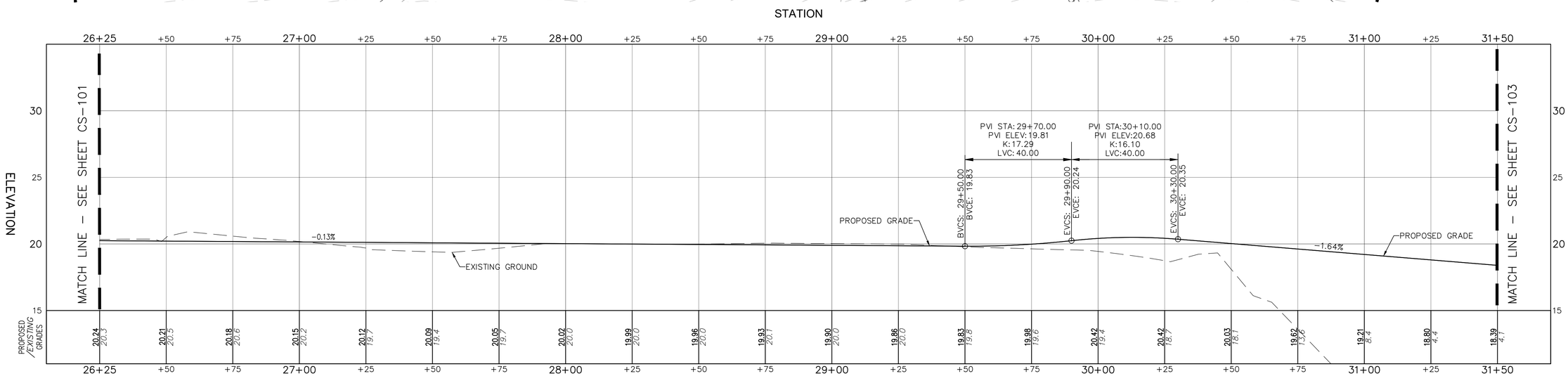
DESIGNED BY: AMT DATE: --
DRAWN BY: AMT DATE: --
CHECKED BY: AMT DATE: --
APPROVED BY: AMT DATE: --

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CS-101
SITE, GRADING & LAYOUT PLAN

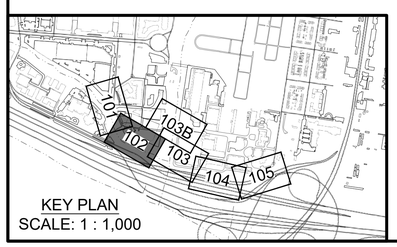
SHEET 31 OF 75
SCALE: 1"=20'





OLD CAMERON RUN TRAIL

HORIZ. 1"=20'
VERT. 1"=4'



LEGEND: PROPOSED RELOCATED/REALIGNED UTILITIES

- CTV — UNDERGROUND TELEVISION LINE
- UGT — UNDERGROUND TELEPHONE LINE
- W — W — UNDERGROUND WATER LINE
- E — E — UNDERGROUND ELECTRIC LINE

SITE LEGEND

- LD — LIMITS OF DISTURBANCE
- LOD/TP — LIMITS OF DISTURBANCE/ TREE PROTECTION FENCE
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED PERMANENT EASEMENT
- PROPOSED TRAIL
- PROPOSED CONCRETE RAMP, DETECTABLE WARNING SURFACE
- PROPOSED BRIDGE ABUTMENTS & PIER
- PROPOSED RETAINING WALL
- PROPOSED FENCE
- PROPOSED BARRIER RAILING, VDOT HR-1 TYPE III

MATERIALS SCHEDULE CS-102

SYMBOL	DESCRIPTION
⊶	LIGHT POLE. SEE LIGHTING DETAILS FOR TYPICAL PHOTOMETRIC STUDIES, CUT SHEETS, CONTROL OPTIONS, & SECTIONS.

SYMBOL	DESCRIPTION
	SHARED USE PATH PRECAST POROUS CONCRETE PANEL
	VDOT STANDARD CONCRETE SIDEWALK. JOINT PATTERN AND CONCRETE COLOR SHALL MATCH EXISTING ADJACENT CONCRETE.

CONSTRUCTION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.

CURVE TABLE								
CURVE #	PI	DELTA	D	TANGENT	LENGTH	RADIUS	START STATION	END STATION
C105	25+31.61	49°34'50"	47° 44' 47"	55.42'	103.84'	120.00'	PC 24+76.18	PRC 25+80.03
C106	26+46.94	7°36'12"	5° 41' 23"	66.91'	133.63'	1007.00'	PRC 25+80.03	PRC 27+13.66
C107	27+49.15	10°05'26"	14° 15' 10"	35.49'	70.80'	402.00'	PRC 27+13.66	PT 27+84.45
C108	29+68.16	12°43'24"	28° 21' 51"	22.52'	44.86'	202.00'	PC 29+45.64	PRC 29+90.50
C109	30+12.14	39°39'35"	95° 29' 40"	21.64'	41.53'	60.00'	PRC 29+90.50	PT 30+32.03

RIGHT-OF-WAY/EASEMENT/PROPERTY LINE NOTE:
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DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

DESCRIPTION	BY	DATE

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920

DESIGNED BY:	AMT	DATE:	–
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CHECKED BY:	AMT	DATE:	–
APPROVED BY:	AMT	DATE:	–

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CS-102
SITE, GRADING & LAYOUT PLAN

SHEET
32 OF 75
SCALE: 1"=20'

MATCH LINE – SEE SHEET CS-103B

CURVE TABLE								
CURVE #	PI	DELTA	D	TANGENT	LENGTH	RADIUS	START STATION	END STATION
C109	30+12.14	39°39'35"	95° 29' 40"	21.64'	41.53'	60.00'	PRC 29+90.50	PT 30+32.03
C110	33+58.46	38°00'00"	212° 12' 24"	9.30'	17.91'	27.00'	PC 33+49.16	PT 33+67.07
C111	35+30.53	3°22'42"	2° 17' 31"	73.72'	147.41'	2500.00'	PC 34+56.80	PRC 36+04.21

CONSTRUCTION NOTE: SEE CS-103B FOR VERTICAL PROFILE.

SCALE: 1"=20'

CONSTRUCTION NOTE: STORM DRAIN RELOCATION SHOULD BE COORDINATED WITH ALEXRENEW.

TM 079.02-02-01
002 CITY OF ALEXANDRIA SANITATION AUTHORITY
DB 765, PG 256
1,559,267 SF

PROP. TEMPORARY CONSTRUCTION EASEMENT

PROP. TEMPORARY (ENTRANCE) EASEMENT

PROP. TEMPORARY (ENTRANCE) EASEMENT

BEGIN PROP. COMB. CURB & GUTTER (VDOT STD CG-6) STA. 33+30.22

BEGIN PROP. CONC. BARRIER (VDOT STD MB-7F) STA. 33+29.96

END PROP. GUARDRAIL (VDOT STD GR-MGS1); PROP. W-BEAM GUARDRAIL FIXED OBJECT ATTACHMENT (VDOT GR-FOA-2, TYPE I) STA. 33+23.55

TIE TO EXISTING GUARDRAIL STA. 33+04.86

END PROP. CONC. BARRIER; PROP. W-BEAM GUARDRAIL FIXED OBJECT ATTACHMENT (VDOT GR-FOA-2, TYPE I) STA. 34+52.26

END PROP. COMB. CURB & GUTTER STA. 34+15.32

END PROP. COMB. CURB & GUTTER STA. 34+14.14

BEGIN PROP. COMB. CURB & GUTTER (VDOT STD CG-6) STA. 33+34.99

TIE TO BRIDGE RAILING STA. 33+50.88

END BRIDGE STA. 33+50.39

TIE TO BRIDGE RAILING STA. 33+50.71

BEGIN PRECAST RETAINING WALL STA. 33+63.73, 7.44' LT

END HR-1, TYPE III BEGIN FENCE STA. 33+58.68

EXISTING R/W, LIMITED ACCESS LIMIT

BEGIN PROP. GUARDRAIL (VDOT STD GR-MGS1) STA. 34+71.23

END PROP. GUARDRAIL; PROP. GUARDRAIL END TERMINAL (VDOT STD GR-MGS2) STA. 34+89.86

PROP. TEMPORARY (ENTRANCE) EASEMENT

PROP. PERMANENT EASEMENT

LIGHT POLES @ ~65' O.C. TYP. CONFIRM SPACING PER PLAN

EXISTING R/W, LIMITED ACCESS LIMIT

EXISTING FENCE TO REMAIN

PROP. PERMANENT EASEMENT

TIE TO EXISTING FENCE STA. 35+04.35

END HR-1 TYPE III STA. 34+53.85

END PRECAST RETAINING WALL STA. 34+52.85, 8.00' LT

MATCH LINE – SEE SHEET CS-104

MATCH LINE – SEE SHEET CS-102

SEE SD-501 THROUGH SD-505 FOR BRIDGE DESIGN AND INFORMATION.

EX VARIABLE WIDTH VEPCO ESMT DB 793, PG 311

EXISTING R/W, LIMITED ACCESS PLAN (FO)0095-96A-106

OLD CAMERON RUN CHANNEL

LEGEND: PROPOSED RELOCATED/REALIGNED UTILITIES

CTV	UNDERGROUND TELEVISION LINE
UGT	UNDERGROUND TELEPHONE LINE
W W	UNDERGROUND WATER LINE
E E	UNDERGROUND ELECTRIC LINE
OHE OHT OHE	RELOCATED OVERHEAD ELECTRIC (DISTRIBUTION) AND COMMUNICATION LINES WITH NEW UTILITY POLES
FO	UNDERGROUND FIBER OPTIC LINE

SITE LEGEND

LD	LIMITS OF DISTURBANCE
LOD/TP	LIMITS OF DISTURBANCE/ TREE PROTECTION FENCE
	PROPOSED TEMPORARY CONSTRUCTION EASEMENT
	PROPOSED PERMANENT EASEMENT
	PROPOSED TRAIL
	PROPOSED CONCRETE RAMP, DETECTABLE WARNING SURFACE
	PROPOSED BRIDGE ABUTMENTS & PIER
	PROPOSED RETAINING WALL
	PROPOSED FENCE
	PROPOSED BARRIER RAILING, VDOT HR-1 TYPE III

MATERIALS SCHEDULE CS-103

SYMBOL	DESCRIPTION
	LIGHT POLE. SEE LIGHTING DETAILS FOR TYPICAL PHOTOMETRIC STUDIES, CUT SHEETS, CONTROL OPTIONS, & SECTIONS.
	PROPOSED DISTRIBUTION POWER POLE (CONCEPT LAYOUT - FINAL DESIGN BY VIRGINIA DOMINION POWER)
	INTEGRATED LIGHT ON BRIDGE

SYMBOL	DESCRIPTION
	SHARED USE PATH PRECAST POROUS CONCRETE PANEL
	SHARED USE PATH VDOT STANDARD ASPHALT MILL/OVERLAY OF OVERLAY (NO MILL) ATOP EXISTING ASPHALT
	VDOT STANDARD CONCRETE CURB/GUTTER
	SHARED USE PATH FULL DEPTH ASPHALT
	VDOT STANDARD CONCRETE SIDEWALK. JOINT PATTERN AND CONCRETE COLOR SHALL MATCH EXISTING ADJACENT CONCRETE.

CONSTRUCTION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.

RIGHT-OF-WAY/EASEMENT/PROPERTY LINE NOTE: LABELS FOR THESE LINES ARE NOT SHOWN ON THIS SHEET FOR GRAPHIC CLARITY. SEE VF-103 FOR LINE LABELS.

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KEY PLAN
SCALE: 1 : 1,000

90% DESIGN SUBMITTAL

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301 KING STREET
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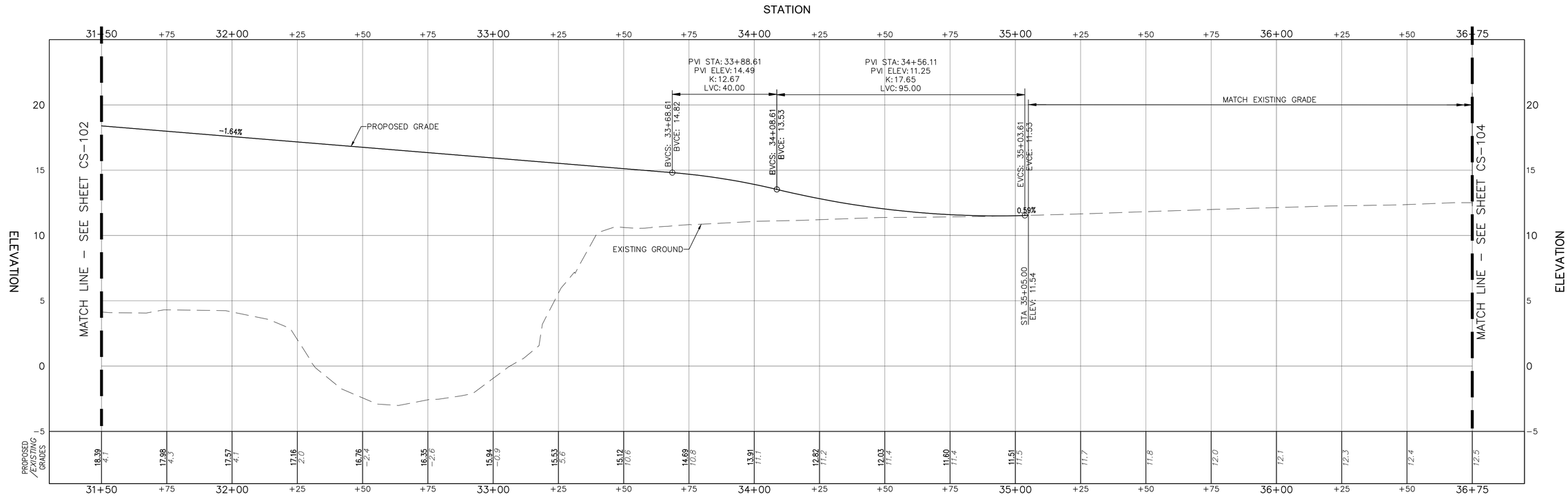
PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

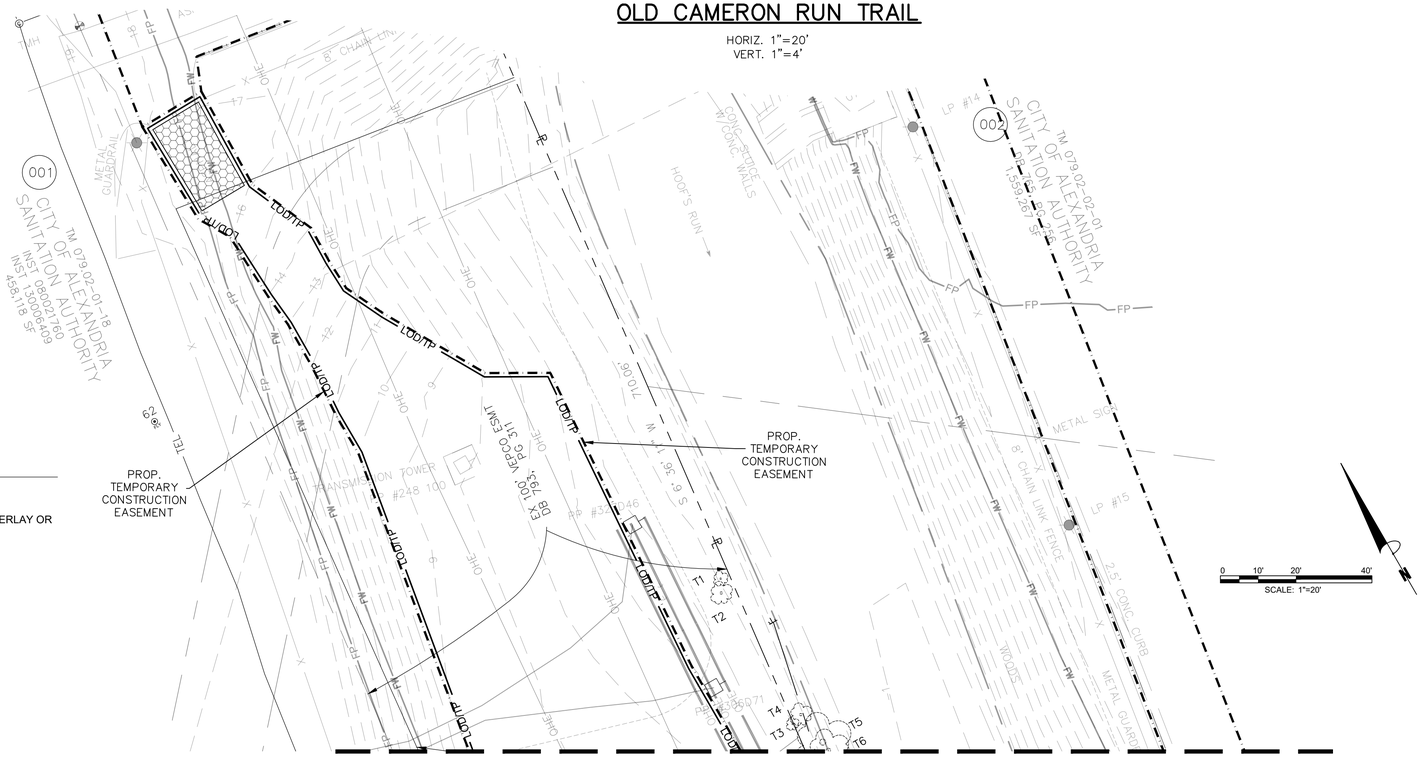
CS-103
SITE, GRADING & LAYOUT PLAN

SHEET 33 OF 75
SCALE: 1"=20'



OLD CAMERON RUN TRAIL

HORIZ. 1"=20'
VERT. 1"=4'



0 10' 20' 40'
SCALE: 1"=20'

LEGEND: PROPOSED RELOCATED/REALIGNED UTILITIES

- CTV — UNDERGROUND TELEVISION LINE
- UGT — UNDERGROUND TELEPHONE LINE
- W — W — UNDERGROUND WATER LINE
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SITE LEGEND

- LD — LIMITS OF DISTURBANCE
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- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED PERMANENT EASEMENT
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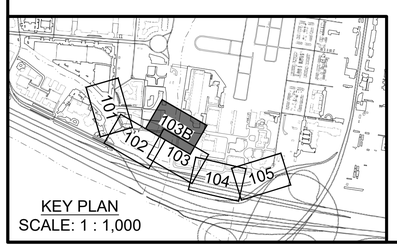
- PROPOSED BRIDGE ABUTMENTS & PIER
- PROPOSED RETAINING WALL
- PROPOSED FENCE
- PROPOSED BARRIER RAILING, VDOT HR-1 TYPE III

MATERIALS SCHEDULE CS-103B

SYMBOL	DESCRIPTION
	SHARED USE PATH VDOT STANDARD ASPHALT MILL/OVERLAY OR OVERLAY (NO MILL) ATOP EXISTING ASPHALT

CONSTRUCTION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.



KEY PLAN
SCALE: 1 : 1,000

RIGHT-OF-WAY/EASEMENT/PROPERTY LINE NOTE: LABELS FOR THESE LINES ARE NOT SHOWN ON THIS SHEET FOR GRAPHIC CLARITY. SEE VF-103B FOR LINE LABELS.

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301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

DATE	DESCRIPTION	BY

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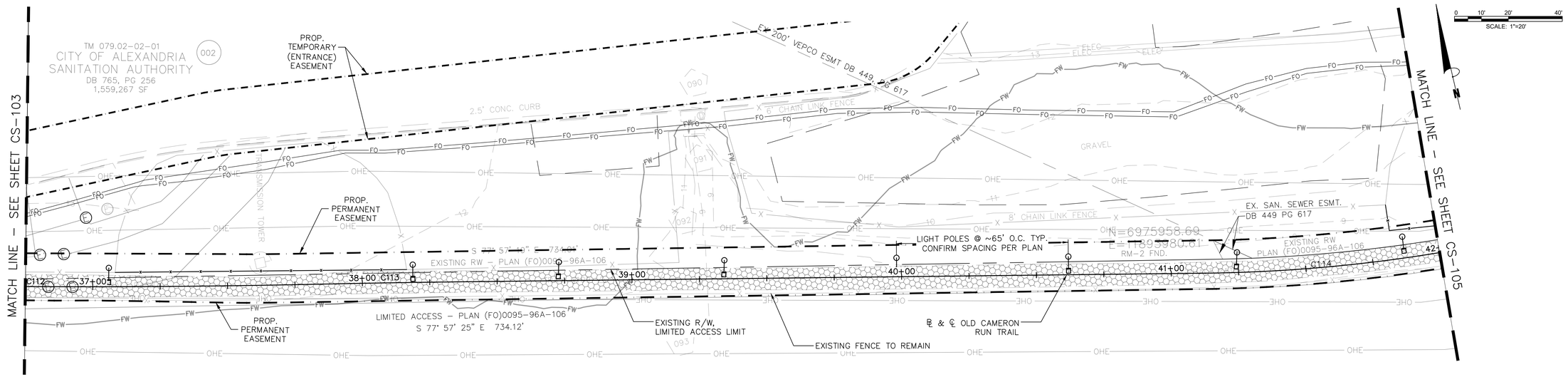
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: -
DRAWN BY: AMT DATE: -
CHECKED BY: AMT DATE: -
APPROVED BY: AMT DATE: -

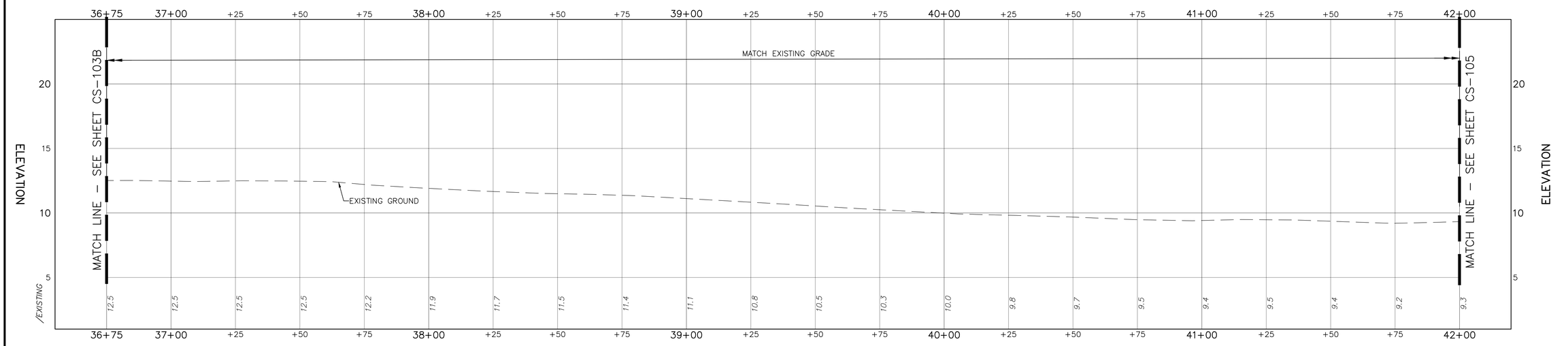
PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CS-103B
SITE, GRADING & LAYOUT PLAN

SHEET
34 OF 75
SCALE: 1"=20'



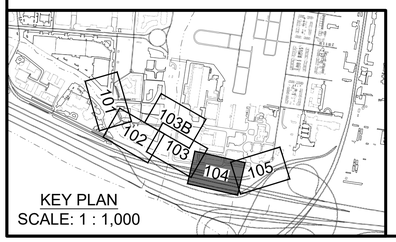
STATION



OLD CAMERON RUN TRAIL

HORIZ. 1"=20'
VERT. 1"=4'

CURVE TABLE								
CURVE #	PI	DELTA	D	TANGENT	LENGTH	RADIUS	START STATION	END STATION
C111	35+30.53	3°22'42"	2° 17' 31"	73.72'	147.41'	2500.00'	PC 34+56.80	PRC 36+04.21
C112	36+94.40	2°35'00"	1° 25' 57"	90.19'	180.35'	4000.00'	PRC 36+04.21	PRT 37+84.56
C113	38+10.29	0°35'23"	1° 08' 45"	25.73'	51.46'	5000.00'	PRC 37+84.56	PT 38+36.02
C114	42+83.79	33°08'42"	9° 57' 52"	171.12'	332.63'	575.00'	PC 41+12.67	PT 44+45.30



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- FO — UNDERGROUND FIBER OPTIC LINE

MATERIALS SCHEDULE CS-104

SYMBOL	DESCRIPTION
	LIGHT POLE. SEE LIGHTING DETAILS FOR TYPICAL PHOTOMETRIC STUDIES, CUT SHEETS, CONTROL OPTIONS, & SECTIONS.

SYMBOL	DESCRIPTION
	SHARED USE PATH VDOT STANDARD ASPHALT MILL/OVERLAY OR OVERLAY (NO MILL) ATOP EXISTING ASPHALT

CONSTRUCTION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.

RIGHT-OF-WAY/EASEMENT/PROPERTY LINE NOTE: LABELS FOR THESE LINES ARE NOT SHOWN ON THIS SHEET FOR GRAPHIC CLARITY. SEE VF-104 FOR LINE LABELS.

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ALEXANDRIA, VIRGINIA 22313

REVISIONS
DESCRIPTION | BY | DATE

ALEXANDRIA PROJECT NO.: I6-019
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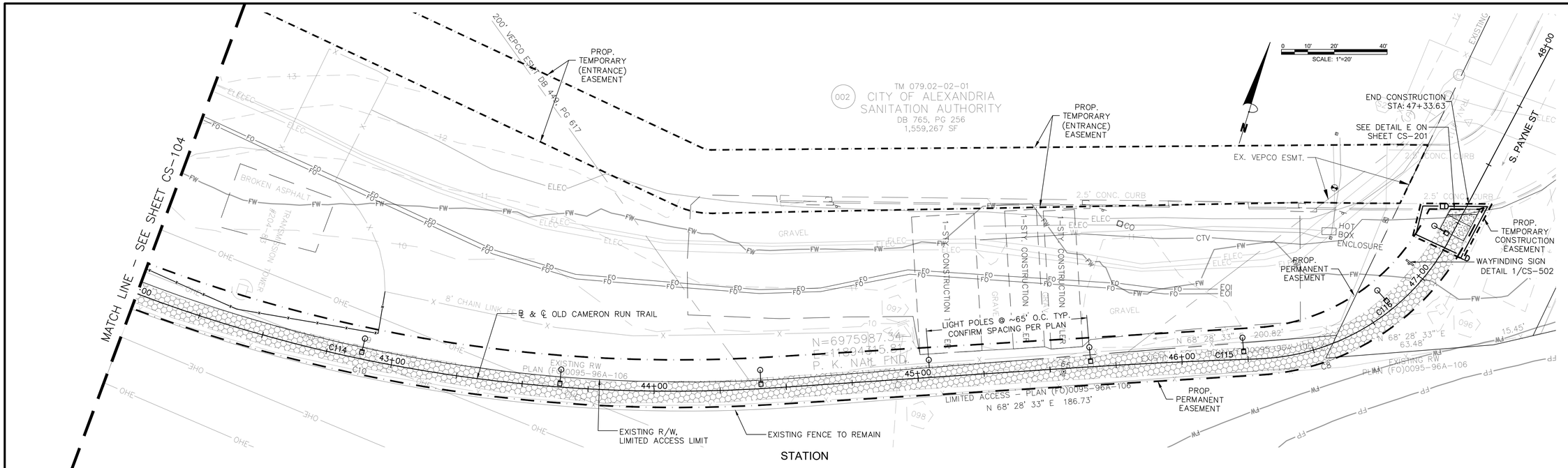
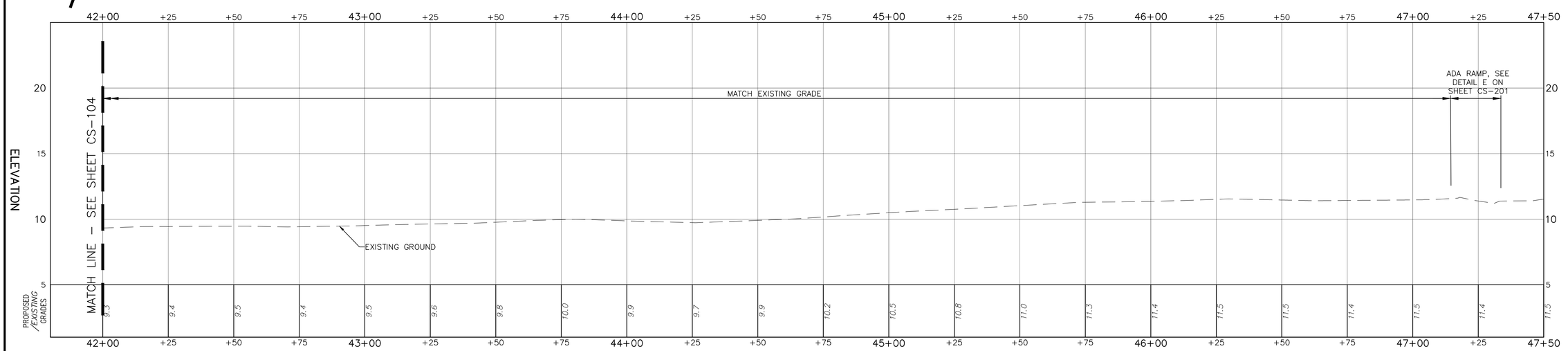
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: --
DRAWN BY: AMT DATE: --
CHECKED BY: AMT DATE: --
APPROVED BY: AMT DATE: --

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

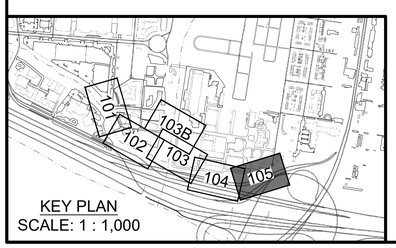
CS-104
SITE, GRADING & LAYOUT PLAN

SHEET
35 OF 75
SCALE: 1"=20'





CURVE TABLE								
CURVE #	PI	DELTA	D	TANGENT	LENGTH	RADIUS	START STATION	END STATION
C114	42+83.79	33°08'42"	9° 57' 52"	171.12'	332.63'	575.00'	PC 41+12.67	PT 44+45.30
C115	45+93.74	1°59'52"	2° 51' 53"	34.87'	69.73'	2000.00'	PC 45+58.87	PRC 46+28.61
C116	46+78.06	60°23'08"	67° 24' 24"	49.46'	89.58'	85.00'	PRC 46+28.61	PT 47+18.19



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- FO — UNDERGROUND FIBER OPTIC LINE

OLD CAMERON RUN TRAIL

HORIZ. 1"=20'
VERT. 1"=4'

MATERIALS SCHEDULE CS-105

SYMBOL	DESCRIPTION
	LIGHT POLE. SEE LIGHTING DETAILS FOR TYPICAL PHOTOMETRIC STUDIES, CUT SHEETS, CONTROL OPTIONS, & SECTIONS.
	WAYFINDING SIGN

SYMBOL	DESCRIPTION
	SHARED USE PATH VDOT STANDARD ASPHALT MILL/OVERLAY OR OVERLAY (NO MILL) ATOP EXISTING ASPHALT
	VDOT STANDARD CONCRETE RAMP
	VDOT STANDARD DETECTABLE WARNING SURFACE

CONSTRUCTION NOTES: SEE GI-002 FOR GENERAL PROJECT NOTES. SEE GI-005 FOR ADDITIONAL DEMOLITION NOTES.

SITE LEGEND

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- PROPOSED PERMANENT EASEMENT
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- PROPOSED RETAINING WALL
- PROPOSED FENCE
- PROPOSED BARRIER RAILING, VDOT HR-1 TYPE III

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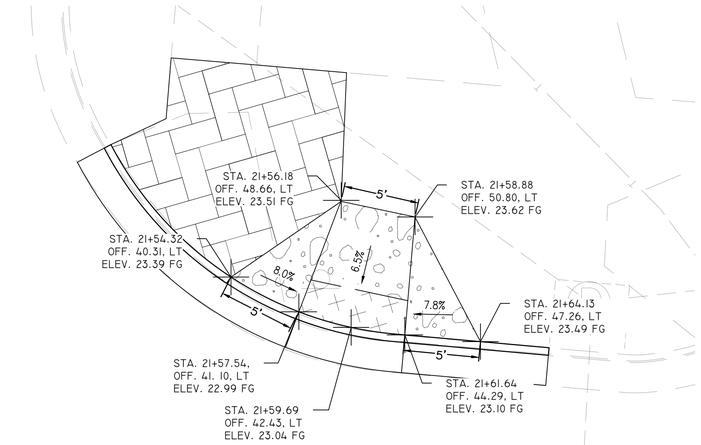
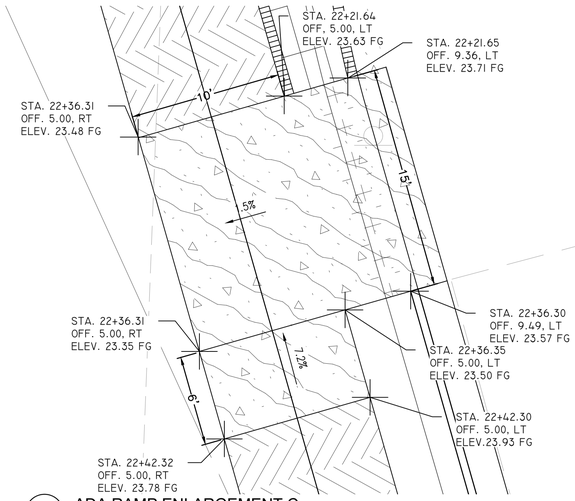
PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CS-105
SITE, GRADING & LAYOUT PLAN

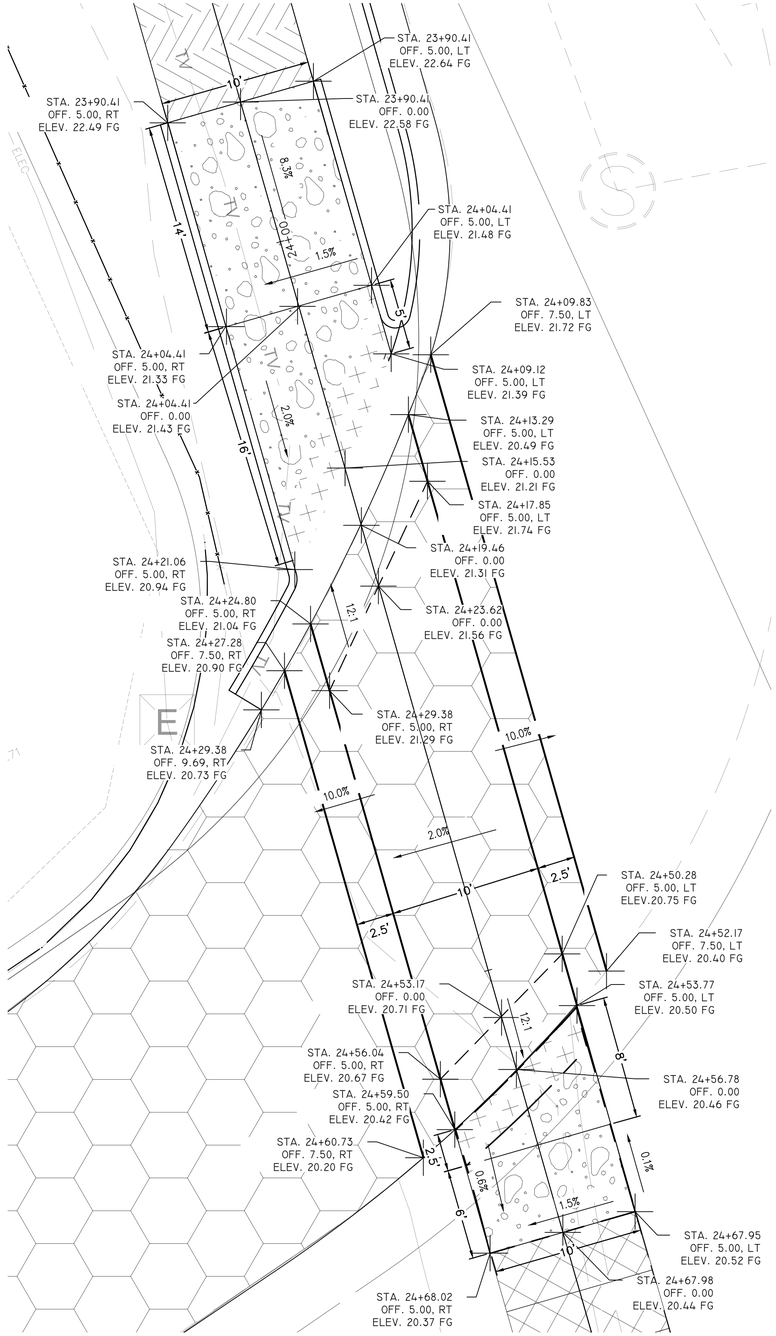
SHEET
36 OF 75
SCALE: 1"=20'



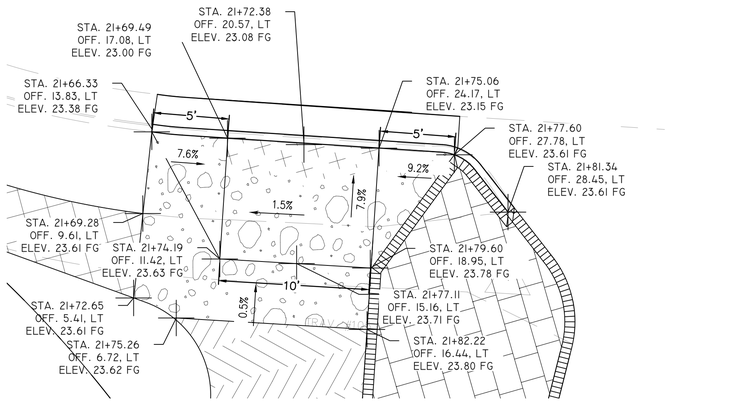
A ADA RAMP ENLARGEMENT A (VDOT STD CG-12 TYPE A)
SCALE: 1"=5'



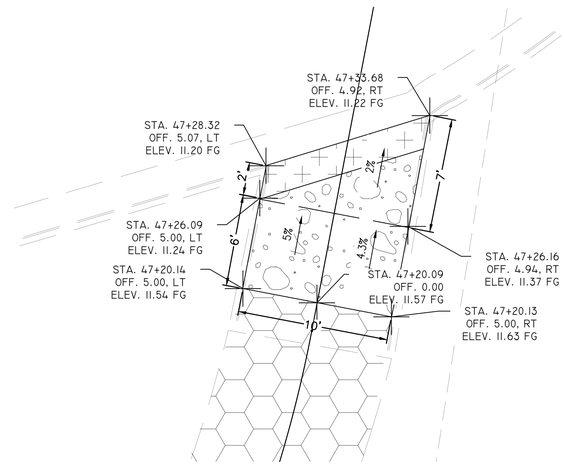
C ADA RAMP ENLARGEMENT C
SCALE: 1"=5'



D ADA RAMPS AND RAISED CROSSING ENLARGEMENT D
SCALE: 1"=5'



B ADA RAMP ENLARGEMENT B (VDOT STD CG-12 TYPE A)
SCALE: 1"=5'



E ADA RAMP ENLARGEMENT E
SCALE: 1"=5'



KEY PLAN
SCALE: 1 : 500

NOTE:
REFER TO SITE, GRADING & LAYOUT PLANS FOR SHADING LEGENDS

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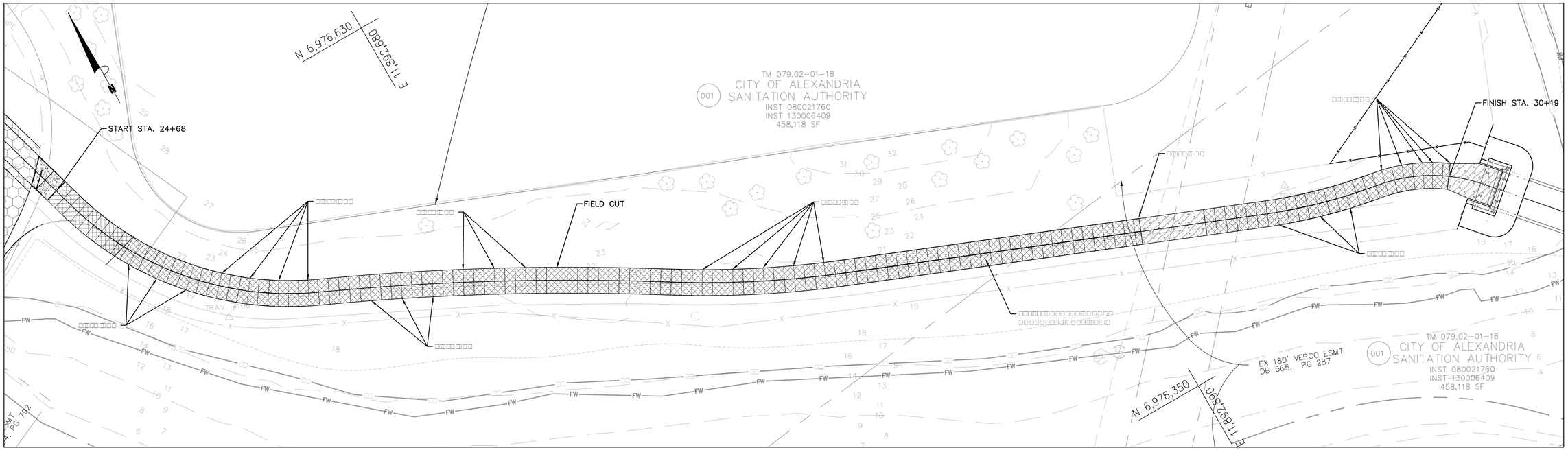
CHECKED BY:	AMT	DATE: –
APPROVED BY:	AMT	DATE: –

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CS-201
ADA RAMP ENLARGEMENTS

SHEET
37 OF 75
SCALE: 1"=5'



REQUIRED PANEL QUANTITIES
(FOR AREAS SHOWN ABOVE)

□ □□□□□□□□□□□□ □□□□□

□□ □□□□□□□□□□□□

WATER QUALITY NARRATIVE

THE SITE IS DEFINED BY THE TOTAL APPLICABLE AREA WITHIN THE LIMITS OF DISTURBANCE (LOD) OF 1.61 ACRES. THE IMPERVIOUS AREA FOR THE EXISTING CONDITION IS 0.10 ACRES (6%) AND 0.35 ACRES (22%) FOR THE PROPOSED CONDITION. THE AREA PROTECTED BY RPA WAS COUNTED AS FOREST/OPEN SPACE FOR THIS PROJECT. IN EXISTING CONDITIONS THERE ARE 1.20 ACRES OF FOREST/OPEN SPACE, AND IN PROPOSED CONDITIONS IT IS REDUCED TO 1.08 ACRES. DUE TO THE INCREASE IN IMPERVIOUS AREA AND THE DECREASE IN OPEN SPACE, THERE IS A 0.35 LB/YR PHOSPHOROUS LOAD REDUCTION REQUIRED. THERE WILL BE PERMEABLE PAVEMENT (LEVEL 2) THAT WILL PROVIDE 0.21 LB/YR PHOSPHOROUS LOAD REDUCTION. WATER QUALITY WAS PROVIDED TO THE MAXIMUM EXTENT POSSIBLE BASED ON SITE CONSTRAINTS AND EXISTING UTILITIES. THE REMAINING PHOSPHOROUS LOAD REDUCTION REQUIRED IS 0.14 LB/YR, AND THE REMAINING BALANCE WILL BE MET THROUGH PURCHASE OF NUTRIENT CREDITS.

Project Name: Cameron Run Park
Date: 12/6/2020
Linear Development Project? Yes

CLEAR ALL (Ctrl+Shift+R)

data input cells
constant values
calculation cells
final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area *(acres)* → 1.61

Maximum reduction required:	20%
The site's net increase in impervious cover (acres) is:	0.25
Post-Development TP Load Reduction for Site (lb/yr):	0.35

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				1.20	1.20
Managed Turf (acres) -- disturbed, graded for yards or other turf to be				0.31	0.31
Impervious Cover (acres)				0.10	0.10
					1.61

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	
Forest/Open Space (acres) -- undisturbed, protected fore st/open space or reforested				1.03	1.03	*
Managed Turf (acres) -- disturbed, graded for yards or other turf to be				0.23	0.23	
Impervious Cover (acres)				0.35	0.35	
Area Check	OK.	OK.	OK.	OK.	1.61	

** Forest/Open Space areas must be protected in accordance with the Virginia Runoff Reduction Method*

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)	1.20	1.03
Weighted Rv(forest)	0.05	0.05
% Forest	75%	76%
Managed Turf Cover (acres)	0.31	0.23
Weighted Rv(turf)	0.25	0.25
% Managed Turf	19%	17%
Impervious Cover (acres)	0.10	0.10
Rv(impervious)	0.95	0.95
% Impervious	6%	7%
Total Site Area (acres)	**1.61**	**1.36**
Site Rv	**0.14**	**0.15**

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary-Post (Final)	
Post ReDev. & New Impervious	
Forest/Open Space Cover (acres)	1.03
Weighted Rv(forest)	0.05
% Forest	64%
Managed Turf Cover (acres)	0.23
Weighted Rv (turf)	0.25
% Managed Turf	14%
Impervious Cover (acres)	0.35
Rv(impervious)	0.95
% Impervious	22%
Final Site Area (acres)	**1.61**
Final Post Dev Site Rv	**0.27**

Land Cover Summary-Post	
Post-ReDevelopment	
Forest/Open Space Cover (acres)	1.03
Weighted Rv(forest)	0.05
% Forest	76%
Managed Turf Cover (acres)	0.23
Weighted Rv (turf)	0.25
% Managed Turf	17%
ReDev. Impervious Cover (acres)	0.10
Rv(impervious)	0.95
% Impervious	7%
Total ReDev. Site Area (acres)	**1.36**
ReDev Site Rv	**0.15**

Land Cover Summary-Post	
Post-Development New Impervious	
New Impervious Cover (acres)	0.25
Rv(impervious)	0.95

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.0194	0.0170	
Pre-ReDevelopment Treatment Volume (cubic feet)	844	741	
Pre-ReDevelopment TP Load (lb/yr)	**0.53**	**0.47**	*
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	0.33	0.34	*
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		0.56	

Treatment Volume and Nutrient Load

Final Post-Development Treatment Volume (acre-ft)	0.0368	**Post-ReDevelopment Treatment Volume (acre-ft)**	0.0170	**Post-Development Treatment Volume (acre-ft)**	0.0198
Final Post-Development Treatment Volume (cubic feet)	1,603	**Post-Development Treatment Volume (cubic feet)**	741	**Post-Development Treatment Volume (cubic feet)**	862
Final Post-Development TP Load (lb/yr)	**1.01**	* **Post-ReDevelopment TP Load (TP) (lb/yr)***	**0.47**	**Post-Development TP Load (lb/yr)**	**0.54**
Final Post-Development TP Load per acre (lb/acre/yr)	0.63	Post-ReDevelopment TP Load per acre (lb/acre/yr)	0.34		
		Max. Reduction Required (Below Pre-ReDevelopment Load)	**20%**		
		* **TP Load Reduction Required for Redeveloped Area (lb/yr)**	**-0.09**	**TP Load Reduction Required for New Impervious Area (lb/yr)**	**0.44**

** Reduction below new development load limitation not required*

[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 requirement for new impervious cover (based on new development load limit, 0.41 lb/acre/year).

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	**0.35**
Linear Project TP Load Reduction Required (lb/yr):	**0.35**

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	3.79
Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	7.20

Drainage Area A

Drainage Area A Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)				1.03	1.03	0.05
Managed Turf (acres)				0.23	0.23	0.25
Impervious Cover (acres)				0.35	0.35	0.95
				Total	1.61	

CLEAR BMP AREAS

Total Phosphorus Available for Removal in D.A. A (lb/yr)	0.89
Post Development Treatment Volume in D.A. A (ft³)	1,416

Stormwater Best Management Practices (RR = Runoff Reduction)

--Select from dropdown lists--

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft³)	Runoff Reduction (ft³)	Remaining Runoff Volume (ft³)	Total BMP Treatment Volume (ft³)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
3. Permeable Pavement (RR)													
3.b. Permeable Pavement #2 (Spec #7)	75		0.12		306	102	407	25		0.26	0.21	0.05	
5. Dry Swale (RR)													
5.a. Dry Swale #1 (Spec #10)	40			0	0	0	0	20	0.00	0.00	0.00	0.00	
14. Manufactured Treatment Devices (no RR)													
14.b. Manufactured Treatment Device-Filtering	0			0	0	0	0	50	0.00	0.00	0.00	0.00	

Runoff Volume and Curve Number Calculations

Enter design storm rainfall depths (in):

1-year storm	2-year storm	10-year storm
2.56	3.10	4.77

Use NOAA Atlas 14 (http://hdsc.nws.noaa.gov/hdsc/pfds/)

***Notes (see below):**

[1] The curve numbers and runoff volumes computed in this spreadsheet for each drainage area are limited in their applicability for determining and demonstrating compliance with water quantity requirements. See VRRM User's Guide and Documentation for additional information.

[2] Runoff Volume (RV) for pre- and post-development drainage areas must be in volumetric units (e.g., acre-feet or cubic feet) when using the Energy Balance Equation. Runoff measured in watershed-inches and shown in the spreadsheet as RV(watershed-inch) can only be used in the Energy Balance Equation when the pre- and post-development drainage areas are equal. Otherwise RV(watershed-inch) must be multiplied by the drainage area.

[3] Adjusted CNs are based on runoff reduction volumes as calculated in D.A. tabs. An alternative CN adjustment calculation for Vegetated Roofs is included in BMP specification No. 5.

Drainage Area Curve Numbers and Runoff Depths*

Curve numbers (CN, CNadj) and runoff depths ($RV_{Developed}$) are computed with and without reduction practices.

Drainage Area A		A Soils	B Soils	C Soils	D Soils
Forest/Open Space -- undisturbed, protected forest/open space or reforested land	Area (acres)	0.00	0.00	0.00	1.03
	CN	30	55	70	77
Managed Turf -- disturbed, graded for yards or other turf to be mowed/managed	Area (acres)	0.00	0.00	0.00	0.23
	CN	39	61	74	80
Impervious Cover	Area (acres)	0.00	0.00	0.00	0.35
	CN	98	98	98	98

Total Area (acres):	1.61
Runoff Reduction Volume (ft³):	306

$CN_{(D.A. A)}$ = 82

	1-year storm	2-year storm	10-year storm
$RV_{Developed}$ *(watershed-inch)* with no Runoff Reduction*	1.04	1.46	2.87
$RV_{Developed}$ *(watershed-inch)* with Runoff Reduction*	0.99	1.41	2.82
Adjusted CN*	81	81	81

**See Notes above*

Site Results (Water Quality Compliance)

Area Checks	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
FOREST/OPEN SPACE (ac)	1.03	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER (ac)	0.35	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER TREATED (ac)	0.12	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA (ac)	0.23	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA TREATED (ac)	0.00	0.00	0.00	0.00	0.00	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft³) 1,603

Runoff Reduction Volume and TP By Drainage Area

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
RUNOFF REDUCTION VOLUME ACHIEVED (ft³)	306	0	0	0	0	306
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	0.89	0.00	0.00	0.00	0.00	0.89
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.21	0.00	0.00	0.00	0.00	0.21
TP LOAD REMAINING (lb/yr)	0.68	0.00	0.00	0.00	0.00	0.68
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	1.49	0.00	0.00	0.00	0.00	1.49

Total Phosphorus

		LINEAR PROJECT:
FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	--	1.01
TP LOAD REDUCTION REQUIRED (lb/yr)	--	0.35
TP LOAD REDUCTION ACHIEVED (lb/yr)	--	0.21
TP LOAD REMAINING (lb/yr)	--	0.80
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	–	0.14

Total Nitrogen (For Information Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	7.20
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	1.49
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	5.72

[redacted]

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ALEXANDRIA, VIRGINIA 22313

REVISIONS

DESCRIPTION	DATE	BY
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ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: –
DRAWN BY: AMT DATE: –
CHECKED BY: AMT DATE: –
APPROVED BY: AMT DATE: –

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CW-701
WATER QUALITY COMPUTATIONS

SHEET 39 OF 75
SCALE: AS SHOWN

WATER QUANTITY NARRATIVE

WATER QUANTITY COMPLIANCE FOR THE SITE IMPROVEMENTS IS BEING ACCOMPLISHED BY THE REDUCED CURVE NUMBER GENERATED BY THE INSTALLATION OF PERMEABLE PAVEMENTS. THE SITE SHALL PROVIDE STORMWATER DETENTION CAPACITY SUFFICIENT TO PASS THE CITY OF ALEXANDRIA'S WATER QUALITY DEFAULT VOLUME (WQVD) BUT NOT THE ALLOWABLE 1-YEAR AND 10-YEAR PEAK FLOW RATES FOLLOWING THE LAND-DISTURBING ACTIVITIES BY UTILIZING THE ENERGY BALANCE METHODOLOGY.

UTILIZING THE ENERGY BALANCE WORKSHEET ON THIS SHEET, PRE- AND POST-DEVELOPMENT RUNOFF COMPUTATIONS FOR THE SITE WERE DETERMINED TO ESTABLISH ALLOWABLE RELEASE RATES FOR THE 1-YEAR AND 10-YEAR, 24-HOUR STORMS, WHICH ARE SHOWN BELOW:

1-YEAR = 1.33 CFS
10-YEAR = 5.19 CFS

THIS SPREADSHEET UTILIZES THE VIRGINIA RUNOFF REDUCTION METHOD ADJUSTED CURVE NUMBERS FROM THE CHANNEL AND FLOOD PROTECTION TAB, SHOWN ON THIS SHEET. FOR THE 1-YEAR AND 10-YEAR EVENTS, THE POST-DEVELOPED PEAK FLOWS ARE MORE THAN THE ALLOWABLE RELEASE RATE.

THE CITY OF ALEXANDRIA'S WQVD IS COMPUTED BELOW:

POST-DEVELOPED IMPERVIOUS AREA WITHIN LOD = 15,246 SF
WQVD = 1/2" x 15,246 SF = 635 CF = 0.0146 ACRE-FT

TOTAL STORAGE VOLUME IN PERMEABLE PAVEMENT:
2" LAYER OF #6 CRUSHED STONE – 5,175 SF x 0.17 FT x 0.4 = 352 CF
8" LAYER OF #57 CRUSHED STONE – 5,175 SF x 0.67 SF x 0.4 = 1,387 CF
2" LAYER OF SAND FILTER – 5,175 SF x 0.17 x 0.3 = 264 CF

TOTAL STORAGE IN PERMEABLE = 352 + 1387 + 264 = 1,903 CF

THE TOTAL STORAGE PROVIDED IS 1,903 CF. THEREFORE, THE WATER QUANTITY REQUIREMENT FOR CITY OF ALEXANDRIA IS SATISFIED.

PER FEMA FLOODPLAIN MAP 5155190041E, DATED JUNE 16, 2011, THIS SITE IS OUTSIDE THE FLOODPLAIN IN ZONE X.

THERE IS A RESOURCE PROTECTION AREA LOCATED ON THE SUBJECT PROPERTY PER THE CITY OF ALEXANDRIA RPA AND NATURAL INTERMITTENT STREAM MAPS.

SWM Water Quantity Energy Balance Worksheet

SITE AREA (acre) 1.6100

	1-year		10-year	
	PRE	POST (adjusted)	PRE	POST (adjusted)
P	2.56	2.56	4.77	4.77
CN	79	81	79	81
S=1000/CN-10	2.66	2.35	2.66	2.35
0.2S	0.53	0.47	0.53	0.47
RV=(P-0.2S)^2/(P-0.2S)+S	0.88	0.99	2.60	2.78

QPost Development <= I.F.* (Qpre-development* RVpre-development)/RVDeveloped)

I.F 0.8

CHANNEL PROTECTION (1-YEAR)		
Qpre-development	1.88	From TR55
QPost Development	2.13	From TR55
RVPost Development (with runoff reduction)	0.990	From RRM
Qallowable	1.33	
Qallowable/QPost Development	0.63	
Vs/Vr	0.23	Fig 11.7 of DEQ Manual
Vs	0.23	
Storage required (cf)	1340	

FLOOD CONTROL (10-YEAR)	
Qpre-development	5.62
QPost Development	5.97
RVPost Development (with runoff reduction)	2.82
Qallowable	5.19
Qallowable/QPost Development	0.87
Vs/Vr	0.16
Vs	0.44
Storage required (cf)	2595

FLOOD PROTECTION NARRATIVE

HYDRAFLOW STORM SEWERS EXTENSION WAS USED TO ANALYZE THE PIPE SYSTEMS FOR CAPACITY DURING A 10-YR STORM. CITY OF ALEXANDRIA IDF CURVES WERE USED IN MODELING THE SEWER SYSTEM. BELOW ARE SUMMARY TABLES FOR EACH OUTFALL DEMONSTRATING THAT BOTH HAVE ENOUGH CAPACITY TO SAFELY CONVEY THE PEAK 10-YR 24-HOUR STORM WITHOUT CAUSING EROSION TO THE SYSTEM.

Storm Sewer Tabulation OUTFALL 1

Station Line	Station To Line	Len (ft)	Drng Area Incr (ac)	Drng Area Total (ac)	Rnoff coeff (C)	Area x C Incr	Area x C Total	Tc Inlet (min)	Tc Syst (min)	Rain (I) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe Size (in)	Pipe Slope (%)	Invert Elev Dn (ft)	Invert Elev Up (ft)	HGL Elev Dn (ft)	HGL Elev Up (ft)	Grnd / Rim Elev Dn (ft)	Grnd / Rim Elev Up (ft)
1	End	40.671	0.10	0.46	0.72	0.07	0.22	6.0	7.5	5.9	1.32	4.97	0.69	21	0.10	12.50	12.54	13.82	13.82	-3.20	22.50
2	1	14.058	0.00	0.36	0.00	0.00	0.15	0.0	6.9	6.1	0.92	4.22	0.49	21	0.07	12.54	12.55	13.83	13.83	22.50	22.84
3	2	22.039	0.36	0.36	0.42	0.15	0.15	6.0	6.0	6.3	0.96	0.00	3.99	21	2.77	13.80	14.41	14.03	14.76	22.84	21.86

Storm Sewer Tabulation OUTFALL 2

Station Line	Station To Line	Len (ft)	Drng Area Incr (ac)	Drng Area Total (ac)	Rnoff coeff (C)	Area x C Incr	Area x C Total	Tc Inlet (min)	Tc Syst (min)	Rain (I) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe Size (in)	Pipe Slope (%)	Invert Elev Dn (ft)	Invert Elev Up (ft)	HGL Elev Dn (ft)	HGL Elev Up (ft)	Grnd / Rim Elev Dn (ft)	Grnd / Rim Elev Up (ft)
1	End	27.000	0.00	0.38	0.00	0.00	0.34	0.0	7.8	6.5	9.40	53.31	9.04	24	5.56	5.00	6.50	5.57	7.59	7.42	11.73
2	1	42.577	0.00	0.38	0.00	0.00	0.34	0.0	7.4	6.6	2.26	7.98	3.02	15	1.53	6.60	7.25	7.59	7.85	11.73	13.33
3	2	11.228	0.07	0.07	0.90	0.06	0.06	6.0	6.0	7.0	0.44	8.18	2.98	15	1.60	8.02	8.20	8.22	8.46	13.33	10.81
4	2	11.204	0.05	0.31	0.90	0.05	0.28	6.0	7.3	6.6	1.85	7.95	3.84	15	1.52	7.35	7.52	7.85	8.06	13.33	11.00
5	4	100.909	0.26	0.26	0.90	0.23	0.23	6.0	6.0	7.0	1.63	5.68	3.75	15	0.77	7.61	8.39	8.07	8.90	11.00	11.09
6	1	62.397	0.00	0.00	0.00	0.00	0.00	6.0	6.0	0.0	7.17	7.17	6.54	15	1.23	7.10	7.87	8.12	8.94	11.73	12.37

OUTFALL NARRATIVE

DRAINAGE FOR THIS PROJECT WAS ANALYZED IN THREE DIFFERENT AREAS. OUTFALL 1 RECEIVES RUNOFF FROM HOOFF'S RUN DRIVE COLLECTED BY PROPOSED INLET 04. THE SECOND AREA RECEIVES RUNOFF FROM THE PERMEABLE PAVEMENT TRAL ADJACENT TO HOOFF'S RUN DRIVE. A PORTION OF THE RUNOFF WILL INFILTRATE INTO THE GROUND AT RATES GREATER THAN 1.50 IN/HR AND THE REMAINING RUNOFF WILL CONTINUE TO SHEET FLOW OVER THE TRAIL AND DOWN THE SLOPE TO OLD CAMERON RUN CHANNEL AS PER EXISTING CONDITIONS. OUTFALL 2 RECEIVES RUNOFF FROM DISTURBED AREAS ADJACENT TO THE WATER TREATMENT FACILITY THAT IS COLLECTED BY PROPOSED STORM DRAIN. CHANNEL PROTECTION REQUIREMENTS ARE BEING MET ON-SITE, AS DESCRIBED BELOW.

CHANNEL PROTECTION ANALYSIS FOR HOOFF'S RUN DRIVE OUTFALL 1:
PER THE CITY OF ALEXANDRIA ZONING ORDINANCE SECTION 13-109(F)(1)(a), THIS OUTFALL DISCHARGES INTO A MANMADE STORMWATER CONVEYANCE SYSTEM, THERFORE THE STORMWATER CONVEYANCE SHALL CONVEY THE 2-YEAR 24-HOUR STORM WITHOUT CAUSING EROSION TO THE SYSTEM.

DRAINAGE AREA FLOW:
RATIONAL METHOD
Q=CiA, WHERE C=0.9, i=3.13 IN/HR, A=0.40 AC
Q=1.13 CFS

OUTFALL PIPE CAPACITY:
Q=(1.49/N)*A*R^(⅔)*S^(½) [MANNING'S EQUATION]
Q=27.16 CFS

CAPACITY CHECK:

MAXIMUM OUTFALL VELOCITY:
V=Q/A = 27.16/(π*0.875^2)
V=11.29 FPS

CONTRIBUTING VELOCITY AT OUTFALL:
V= 1.13/(π*0.875^2) =0.47 FPS

CHANNEL PROTECTION ANALYSIS FOR TREATMENT FACILITY OUTFALL 2:
PER THE CITY OF ALEXANDRIA ZONING ORDINANCE SECTION 13-109(F)(1)(a), THIS OUTFALL DISCHARGES INTO A MANMADE STORMWATER CONVEYANCE SYSTEM, THERFORE THE STORMWATER CONVEYANCE SHALL CONVEY THE 2-YEAR 24-HOUR STORM WITHOUT CAUSING EROSION TO THE SYSTEM.

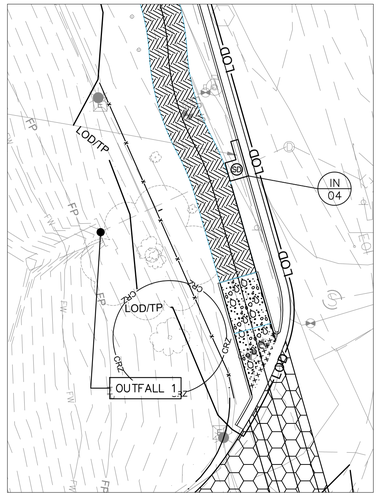
CONTRIBUTING DRAINAGE AREA FLOW:
(FROM STORM SEWER COMPS)
Q=11.63 CFS

OUTFALL PIPE CAPACITY:
(FROM STORM SEWER COMPS)
Q=22.99

CAPACITY CHECK:

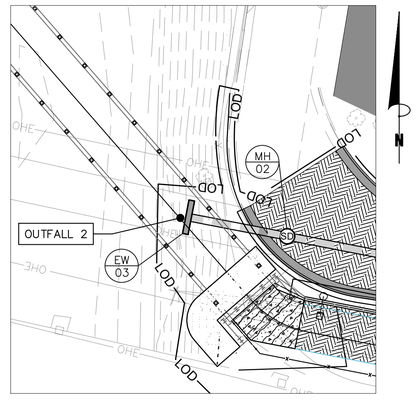
MAXIMUM OUTFALL VELOCITY:
V=Q/A
V=22.99/1.23= 18.69 FPS

CONTRIBUTING VELOCITY AT OUTFALL:
V=Q/A
V=11.63/1.23= 9.46 FPS



OUTFALL 1 - HOOFF'S RUN DR

0 10' 20' 40'
SCALE: 1"=20'



OUTFALL 2 - TREATMENT FACILITY

0 10' 20' 40'
SCALE: 1"=20'

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DESCRIPTION | BY | DATE

ALEXANDRIA PROJECT NO.: 16-019
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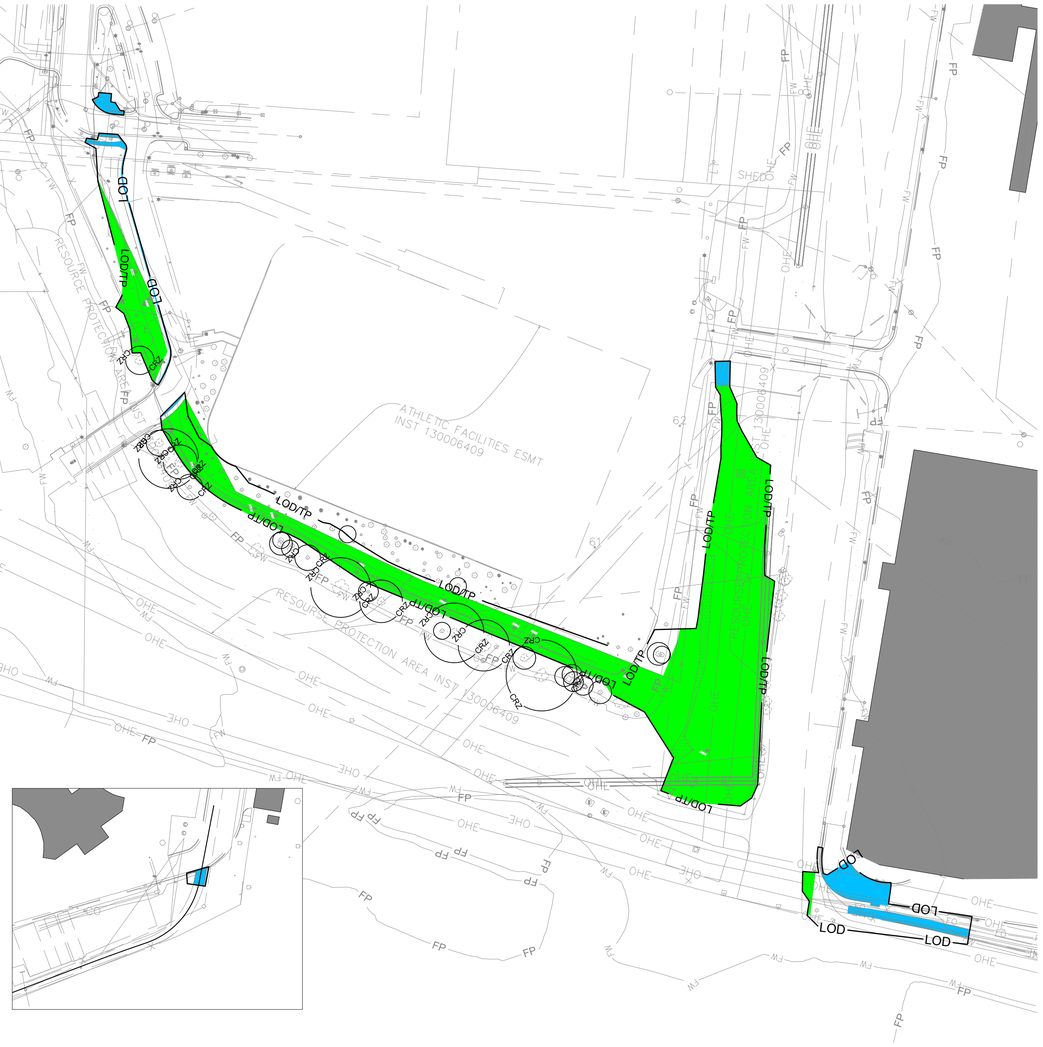
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: –
DRAWN BY: AMT DATE: –
CHECKED BY: AMT DATE: –
APPROVED BY: AMT DATE: –

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CW-702
WATER QUANTITY & OUTFALL COMPUTATIONS

SHEET
40 OF 75
SCALE: AS SHOWN



EXISTING IMPERVIOUS AREA MAP

0 80' 160'
SCALE: 1"=80'



PROPOSED IMPERVIOUS AREA MAP

0 80' 160'
SCALE: 1"=80'

EXISTING LAND USE LEGEND

EXISTING IMPERVIOUS
0.10 ACRES

EXISTING FOREST/OPEN SPACE
1.20 ACRES

EXISTING MANAGED TURF
0.31 ACRES

PROPOSED LAND USE LEGEND

PROPOSED IMPERVIOUS
0.35 ACRES

PROPOSED FOREST/OPEN SPACE
1.03 ACRES

PROPOSED MANAGED TURF
0.23 ACRES



Table 7.8. Recommended Maintenance Tasks for Permeable Pavement Practices

Maintenance Task	Frequency[1]
• For the first 6 months following construction, the practice and contributing drainage area should be inspected at least twice after storm events that exceed 1/2 inch of rainfall. Conduct any needed repairs or stabilization.	After installation
• Mow grass in grid paver applications	At least 1 time every 1-2 months during the growing season
• Stabilize the CDA to prevent erosion • Remove any soil or sediment deposited on pavement. • Replace or repair any necessary pavement surface areas that are degenerating or spalling	As needed
• Vacuum pavement with a standard street sweeper to prevent clogging	2-4 times per year (depending on use)
• Conduct a maintenance inspection • Spot weeding of grass applications	Annually
• Remove any accumulated sediment in pre-treatment cells and inflow points	Once every 2 to 3 years
• Conduct maintenance using a regenerative street sweeper • Replace any necessary joint material	If clogged

[1] Required frequency of maintenance will depend on pavement use, traffic loads, and surrounding land use.

Table 7.6. Material Specifications for Underneath the Pavement Surface

Material	Specification	Notes
Bedding Layer	PC: None PA: 2 in. of No. 57 stone IP: 2 in. of No. 8 stone over 4 inches of No. 57 stone	ASTM D448 size No. 8 stone (e.g. 3/8 to 3/16 inch in size). Should be washed and clean and free of all fines.
Reservoir Layer	PC: No. 57 stone PA: No. 2 stone IP: No. 2, 3, or 4 stone	ASTM D448 size No. 57 stone (e.g. 1 1/2 to 1/2 inch in size); No. 2 Stone (e.g. 3 inch to 3/4 inch in size). Depth is based on the pavement structural and hydraulic requirements. Should be washed and clean and free of all fines.
Underdrain	Use 4 to 6 inch diameter perforated PVC (AASHTO M 252) pipe, with 3/8-inch perforations at 6 inches on center; each underdrain installed at a minimum 0.5% slope located 20 feet or less from the next pipe (or equivalent corrugated HDPE may be used for smaller load-bearing applications). Perforated pipe installed for the full length of the permeable pavement cell, and non-perforated pipe, as needed, is used to connect with the storm drain system. T's and Y's installed as needed, depending on the underdrain configuration. Extend cleanout pipes to the surface with vented caps at the Ts and Ys.	
Filter Layer	The underlying native soils should be separated from the stone reservoir by a thin, 2 to 4 inch layer of choker stone (e.g. No. 8) covered by a 6 to 8 inch layer of coarse sand (e.g. ASTM C 33, gradation).	The sand should be placed between the stone reservoir and the choker stone, which should be placed on top of the underlying native soils.
Filter Fabric (optional)	Use an appropriate filter fabric for the particular application based on AASHTO M288-06 Filter Fabric should have a Flow Rate greater than 125 gpm/sq. ft. (ASTM D4491), and an Apparent Opening Size (AOS) equivalent to a US # 70 or # 80 sieve (ASTM D4751). The geotextile AOS selection is based on the percent passing the No. 200 sieve in "A" Soil subgrade, using FHWA or AASHTO selection criteria.	
Impermeable Liner	Use a thirty mil (minimum) PVC Geomembrane liner covered by 8 to 12 oz./sq. yd. non-woven geotextile. NOTE: THIS IS USED ONLY FOR KARST REGIONS.	
Observation Well	Use a perforated 4 to 6 inch vertical PVC pipe (AASHTO M 252) with a lockable cap, installed flush with the surface.	

BMP DATA TABLE

	PROP. SWM #1
TYPE OF FACILITY	PERMEABLE PAVEMENT
TOTAL AREA TREATED, AC	0.21
PERVOUS AREA TO FACILITY, AC	0
IMPERVIOUS AREA TO FACILITY, AC	0.21
PHOSPOROUS REMOVAL EFFICIENCY, %	25
PHOSPOROUS REMOVED BY PRACTICE, LB/YR	0.36
FACILITY LATITUDE (DECIMAL DEGREES)	38.796945
FACILITY LONGITUDE (DECIMAL DEGREES)	77.062033

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REVISIONS

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12/13/2022	AMT	90% DESIGN SUBMITTAL
12/20/2020	AMT	60% DESIGN SUBMITTAL

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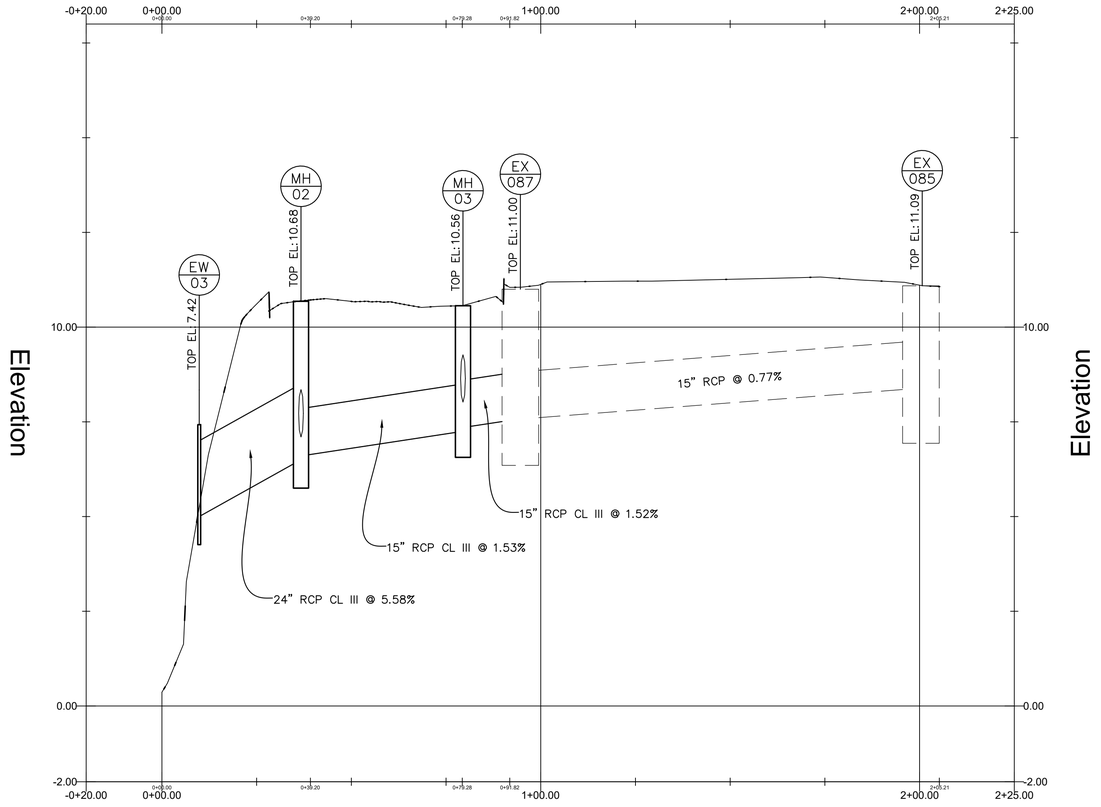
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: –
DRAWN BY: AMT DATE: –
CHECKED BY: AMT DATE: –
APPROVED BY: AMT DATE: –

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CW-703
STORMWATER MAPS & BMP DATA

SHEET
41 OF 75
SCALE: AS SHOWN



Structure Table	
Structure Name	Structure Details
MH–01	RIM = 10.564 VDOT STANDARD = MH–1 Pipe – (4) INV IN = 8.020 Pipe – (6) INV IN = 7.350 Pipe – (1) INV OUT = 7.250
MH–02	RIM = 10.682 VDOT STANDARD = MH–1 Pipe – (1) INV IN = 6.600 Pipe – (5) INV IN = 7.100 Pipe – (2) INV OUT = 6.500
IN–04	RIM = 22.500 VDOT STANDARD = DI–2B Pipe – (10) INV IN = 12.537 Pipe – (8) INV OUT = 12.537
EW–03	RIM = 7.425 VDOT STANDARD = EW–1 Pipe – (2) INV IN = 5.000

* **USE VDOT B–2 DOGHOUSE BASE WITH FOOTING WHERE NEEDED**

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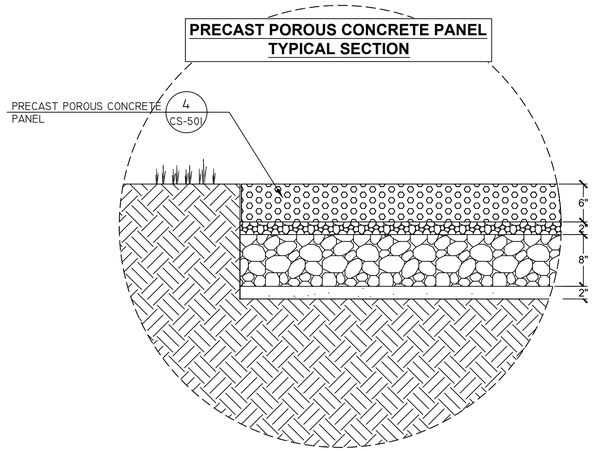
APPROVED BY: AMT DATE: –

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

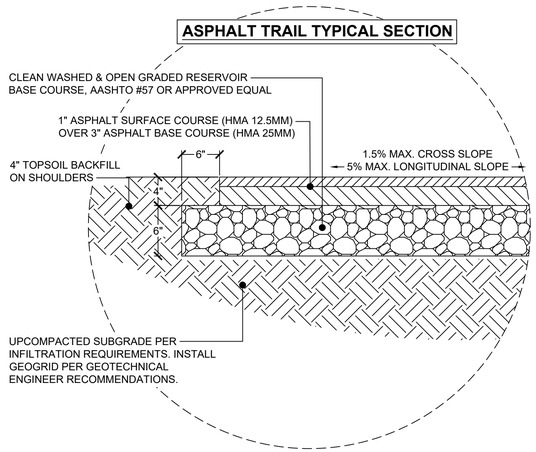
CW–704
STORM SEWER PROFILE

SHEET
42 OF 75
SCALE: AS SHOWN

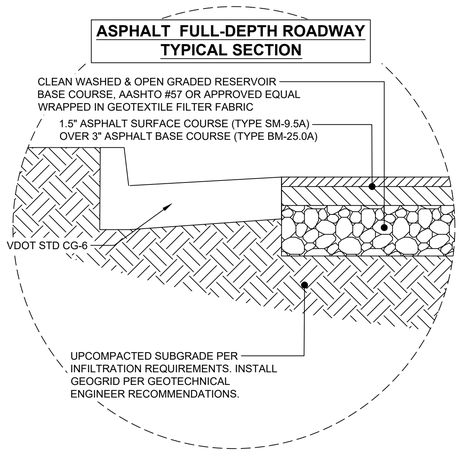
PRECAST POROUS CONCRETE PANEL TYPICAL SECTION



ASPHALT TRAIL TYPICAL SECTION



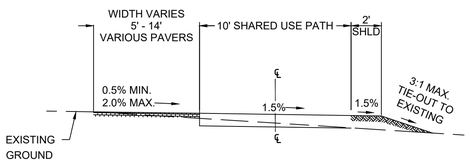
ASPHALT FULL-DEPTH ROADWAY TYPICAL SECTION



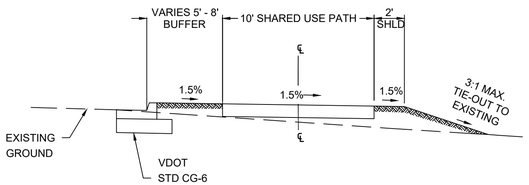
NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH VDOT'S LATEST STANDARDS FOR POROUS PORTLAND CEMENT CONCRETE/POROUS ASPHALT PAVEMENT.
2. AGGREGATE LAYERS SHALL MEET CURRENT APPROVED VDOT SPECIFICATION FOR AGGREGATES FOR PERMEABLE PAVEMENT.
3. WHERE IN-SITU SOILS ARE NOT CONDUCIVE TO INFILTRATON OF 1.2" RETENTION VOLUME WTHIN 72 HOURS, UNDERDRAIN SHALL BE USED.
4. AGGREGATE DEPTH SHALL BE EQUAL TO OR GREATER THAN STORAGE VOLUMES REQUIRED ON CW SHEETS.
5. BOTTOM OF PERMEABLE PAVEMENT SHALL BE AT LEAST 2' ABOVE THE SEASONAL HIGH WATER TABLE OR BEDROCK.
6. TOP OF PAVEMENT SHALL PROVDE 1% MINIMUM SLOPE IN ANY DIRECTION.
7. PROVIDE CONTROL AND EXPANSION JOINTS IN ACCORDANCE WITH VDOT STANDARDS.
8. REFER TO SD-501 THROUGH SD-505 FOR BRIDGE DETAILS AND SECTION

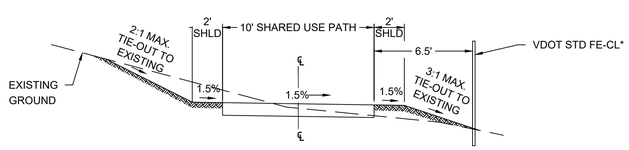
TYPICAL SECTION A:
STA. 21+72.14 TO STA. 22+21.64



TYPICAL SECTION B:
STA. 22+21.64 TO STA. 24+15.25

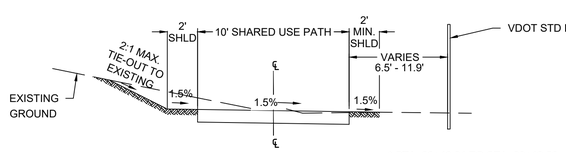


TYPICAL SECTION C:
STA. 24+56.82 TO STA. 26+46.84
STA. 27+13.66 TO STA. 27+29.15
STA. 27+65.36 TO STA. 27+84.45
STA. 29+00.90 TO STA. 29+45.65



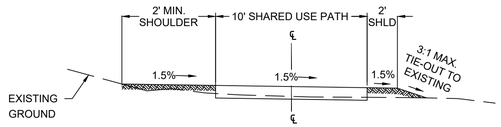
* STA. 24+77.18 TO STA. 26+46.84

TYPICAL SECTION D:
STA. 26+46.84 TO STA. 27+13.66
STA. 27+84.45 TO STA. 29+00.90

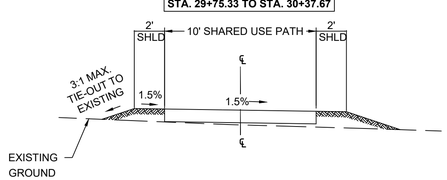


* STA. 26+46.84 TO STA. 26+48.56

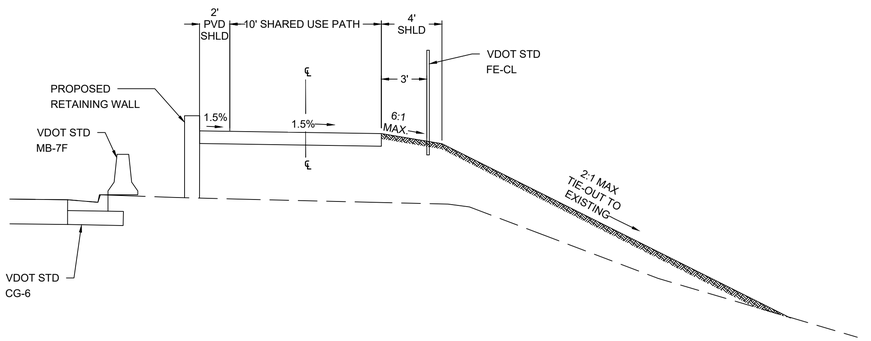
TYPICAL SECTION E:
STA. 27+29.15 TO STA. 27+65.36
STA. 29+45.65 TO STA. 29+75.33



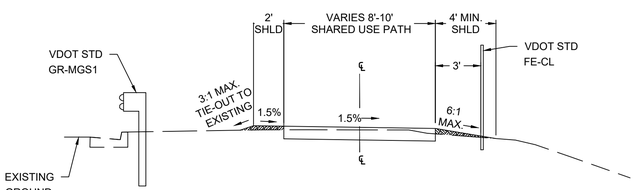
TYPICAL SECTION F:
STA. 29+75.33 TO STA. 30+37.67



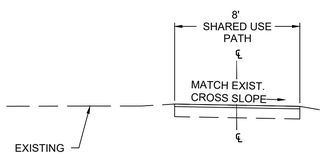
TYPICAL SECTION G:
STA. 33+50.52 TO STA. 34+52.85



TYPICAL SECTION H:
STA.34+52.85 TO STA. 35+05.00



TYPICAL SECTION I:
STA. 35+05.00 TO STA. 47+33.63



NOTES:

1. SHARED-USE PATH SHALL COMPLY WITH **AASHTO** *GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES* (LATEST EDITION).
2. TRAIL CONSTRUCTION BASELINE SHALL MATCH PROPOSED PROFILE GRADE.
3. REFER TO PLANS FOR DEVIATIONS IN TRAIL ASSEMBLY.
4. PROVIDE A 10' TALL VERTICAL CLEARANCE FROM ANY OVERHEAD OBSTRUCTIONS (I.E., TREE LIMBS).
5. PROVIDE A 3' MINIMUM HORIZONTAL CLEARANCE BETWEEN EDGE OF TRAIL AND PROPOSED SIGNS AND LIGHT POSTS.

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CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

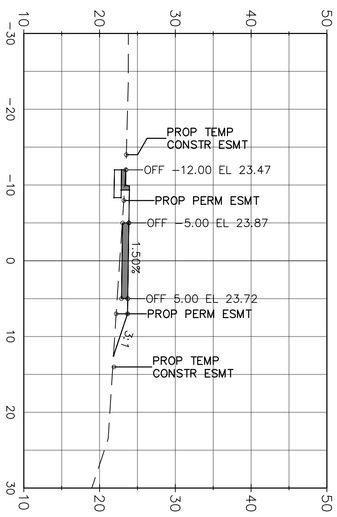
DESCRIPTION	DATE	BY

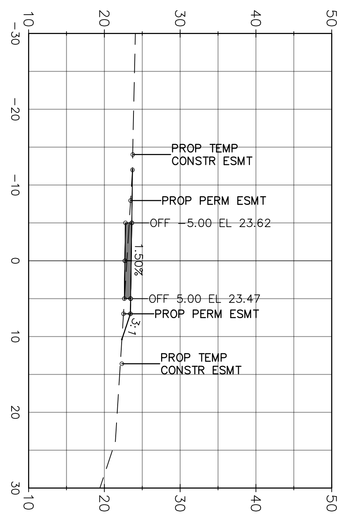
ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: —
DRAWN BY: AMT DATE: —
CHECKED BY: AMT DATE: —
APPROVED BY: AMT DATE: —

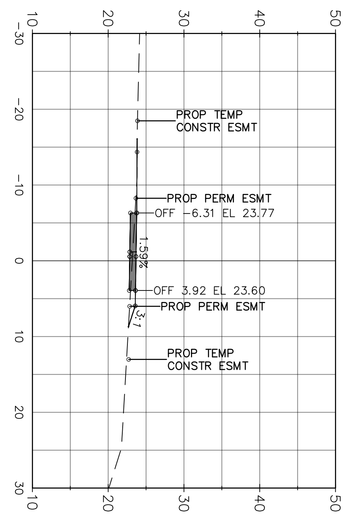
PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

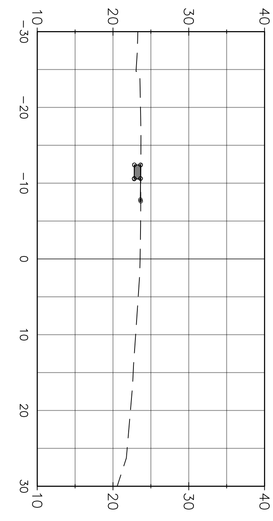
CS-301
TYPICAL SECTIONS

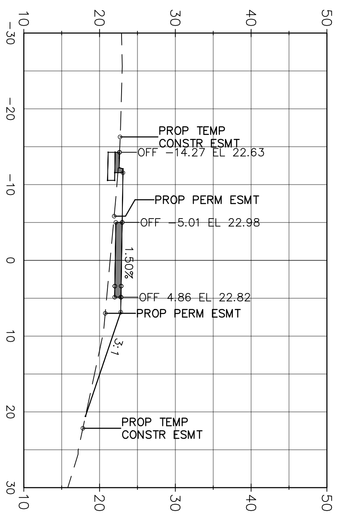
SHEET
43 OF 75
SCALE: 1"=5'

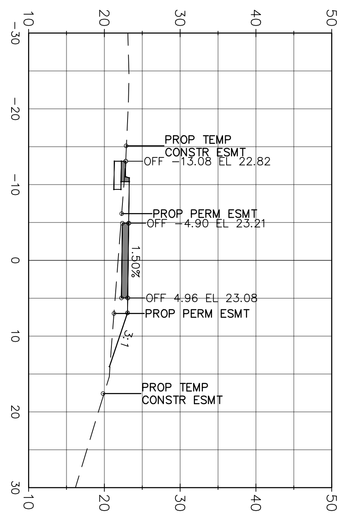


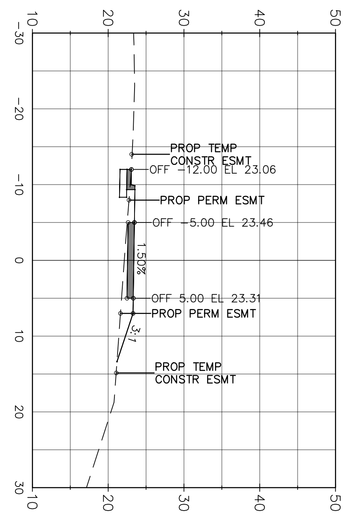


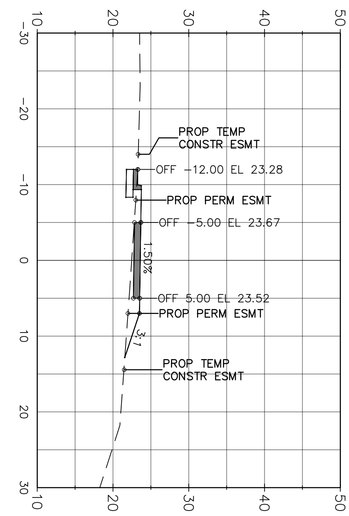


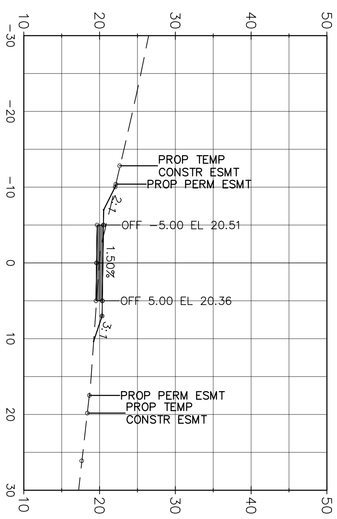




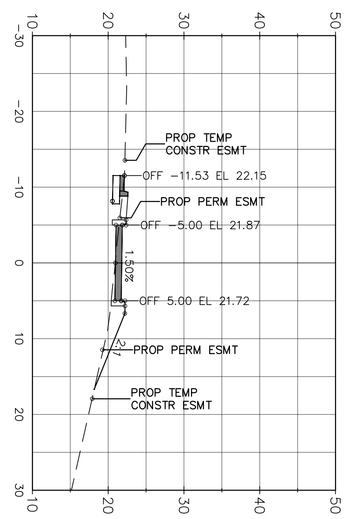


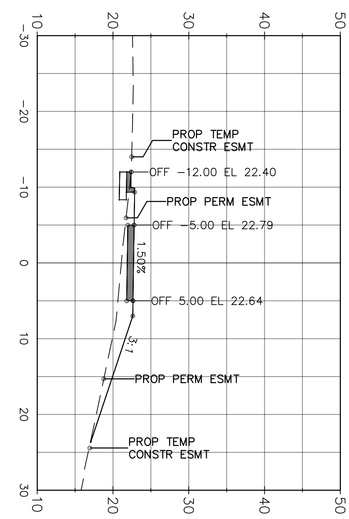






REFER TO CS-201 FOR RAISED CROSSING DETAIL





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PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469 90% DESIGN SUBMITTAL

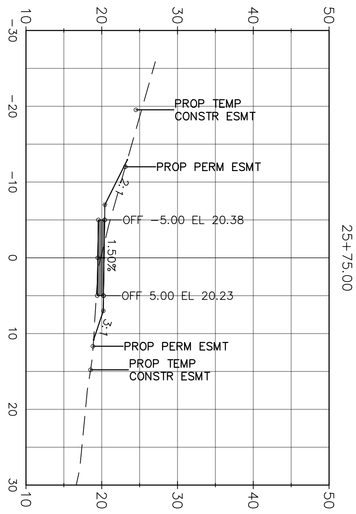
SHEET 44 OF 75
SCALE: 1"=10'

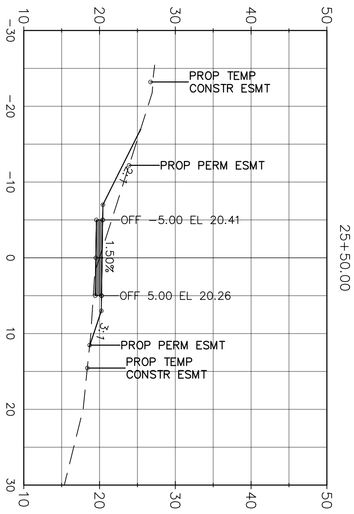
CS-302
CROSS SECTIONS

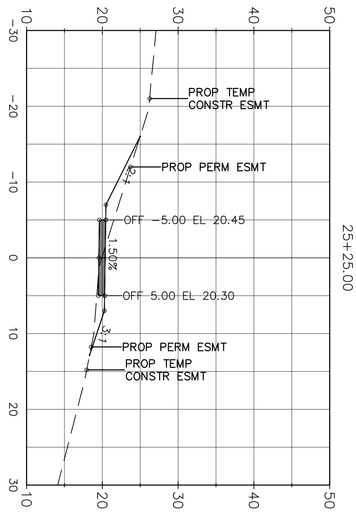
ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: -
DRAWN BY: AMT DATE: -
CHECKED BY: AMT DATE: -
APPROVED BY: AMT DATE: -

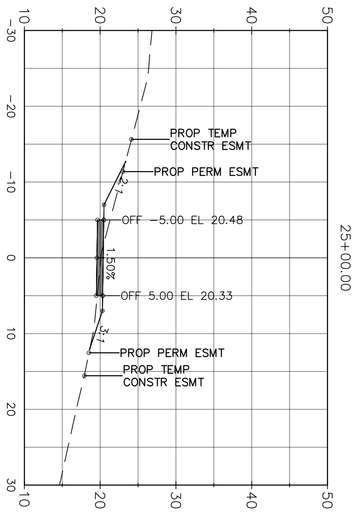
REVISIONS
DATE BY DESCRIPTION

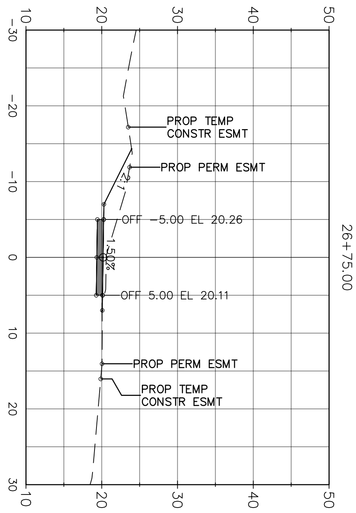
CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

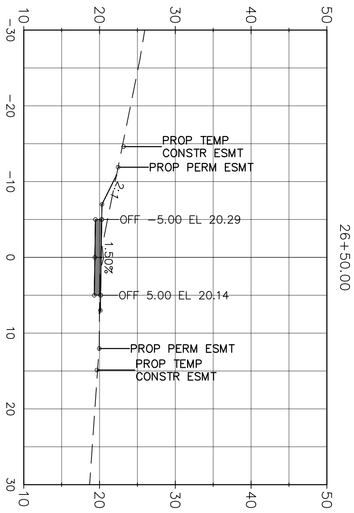


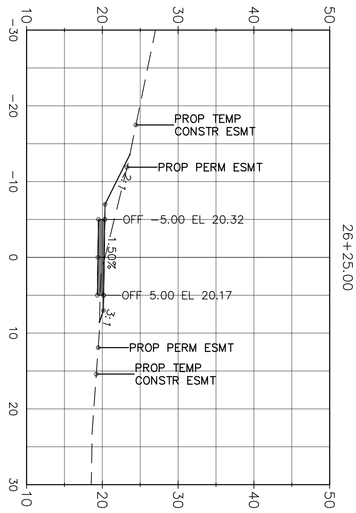


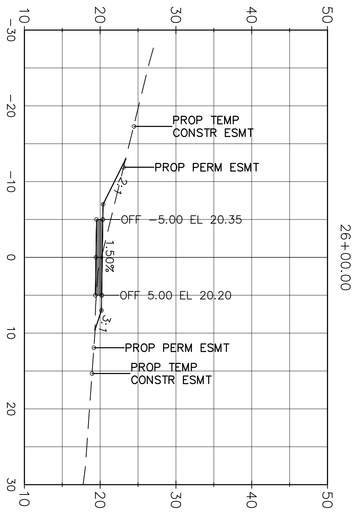


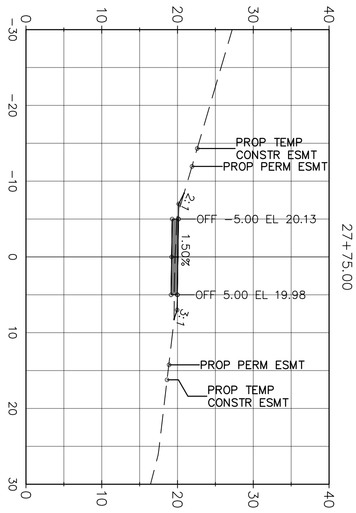


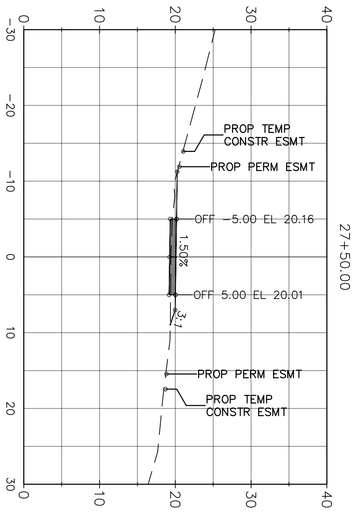


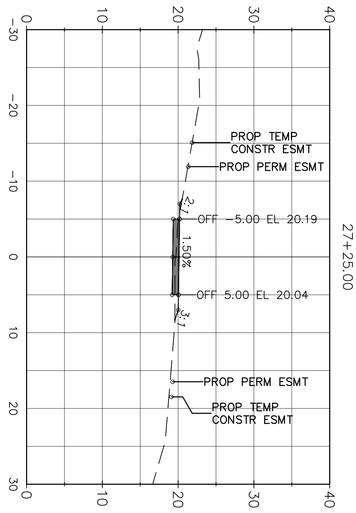


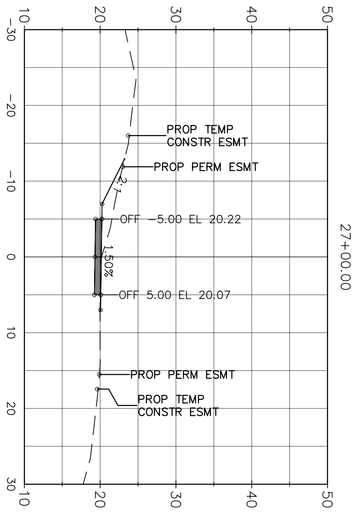












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PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469 90% DESIGN SUBMITTAL

SHEET 45 OF 75

SCALE: 1"=10'

CS-303

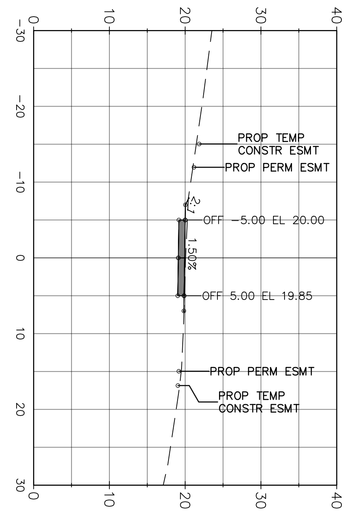
CROSS SECTIONS

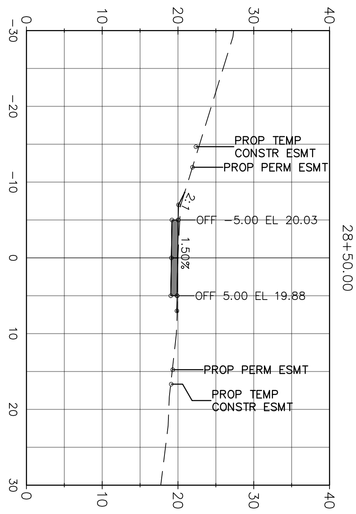
ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: –
DRAWN BY: AMT DATE: –
CHECKED BY: AMT DATE: –
APPROVED BY: AMT DATE: –

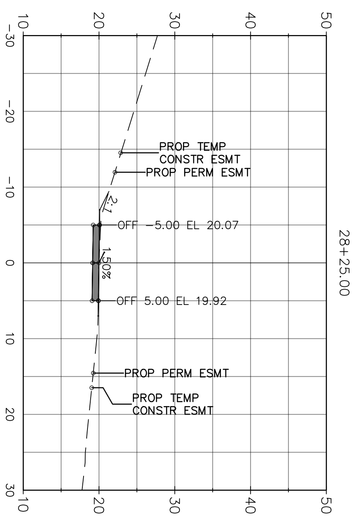
REVISIONS

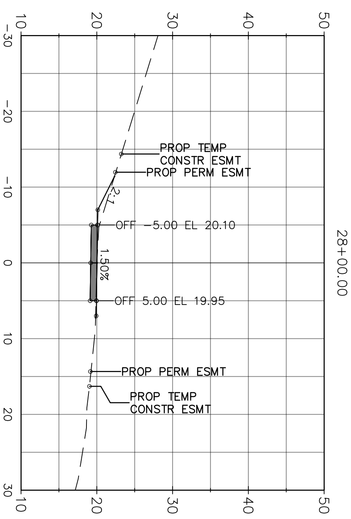
DATE	BY	DESCRIPTION

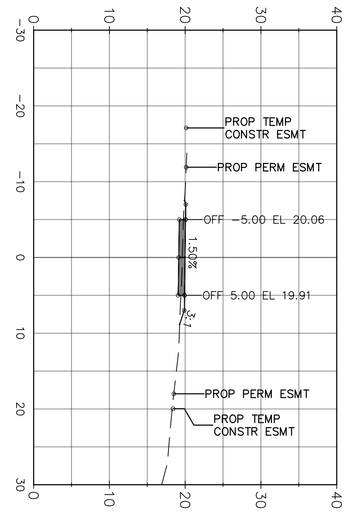
CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

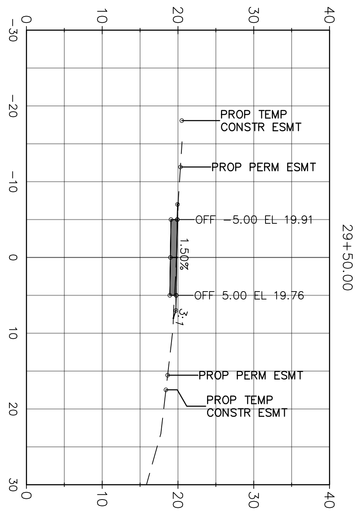


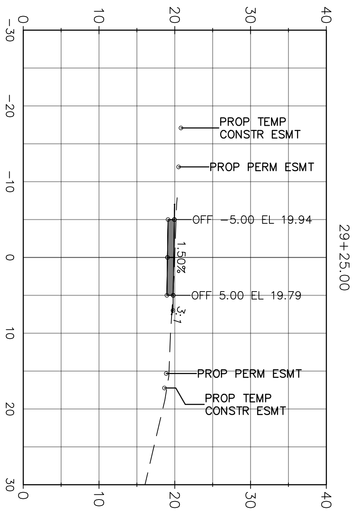


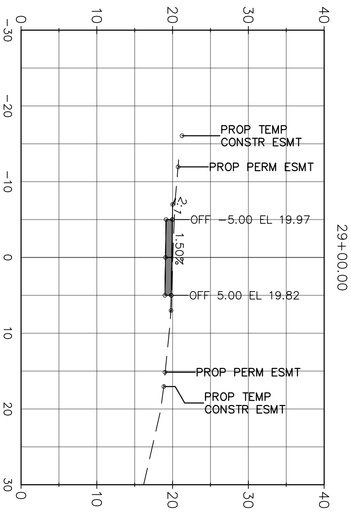


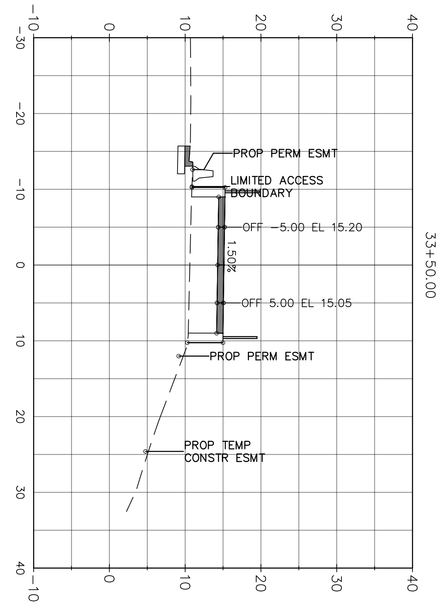




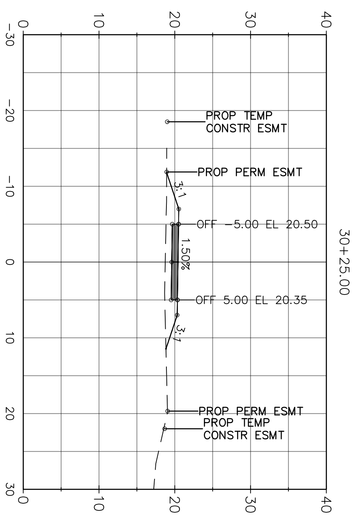


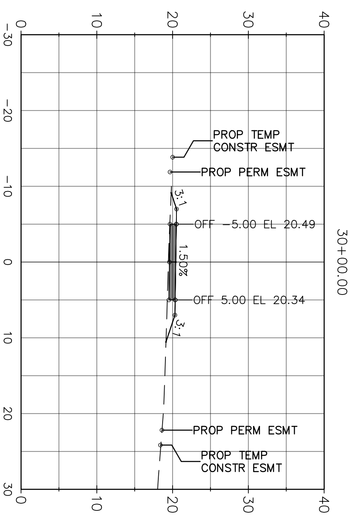






REFER TO SD-501 THROUGH SD-505 FOR BRIDGE DETAILS





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PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469 90% DESIGN SUBMITTAL

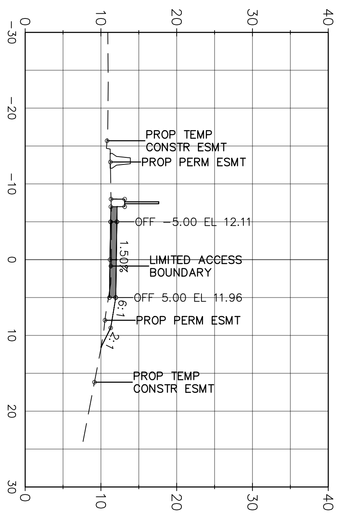
SHEET 46 OF 75
SCALE: 1"=10'

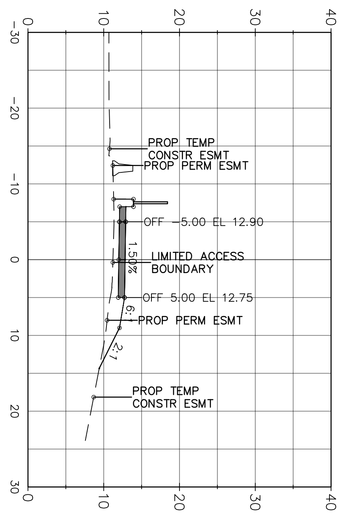
CS-304
CROSS SECTIONS

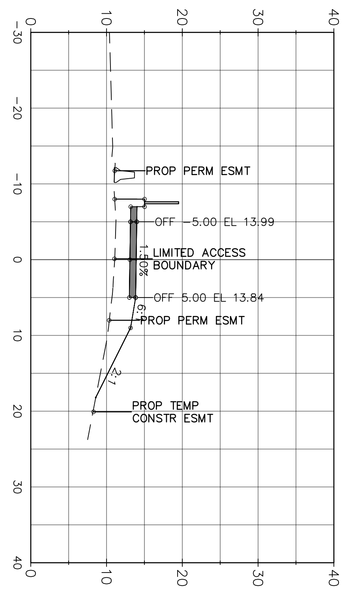
ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: -
DRAWN BY: AMT DATE: -
CHECKED BY: AMT DATE: -
APPROVED BY: AMT DATE: -

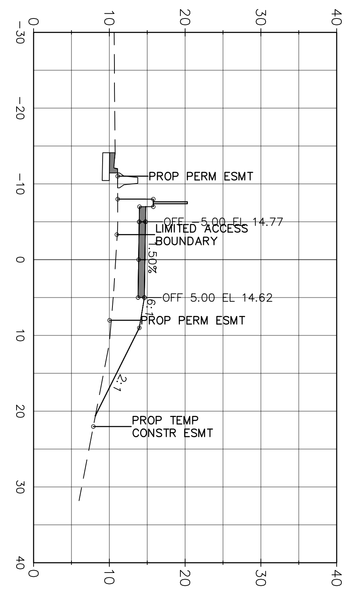
REVISIONS
DATE BY DESCRIPTION

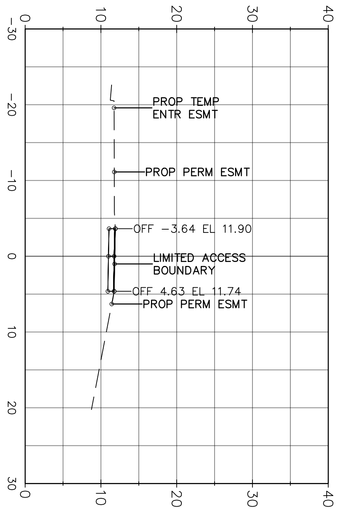
CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

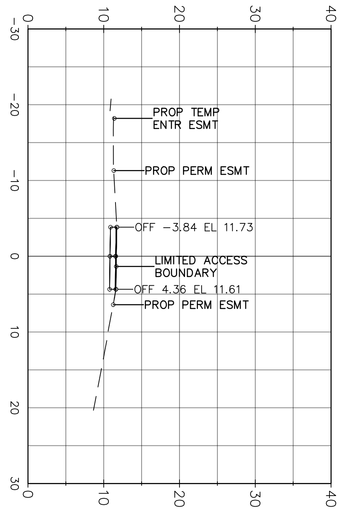


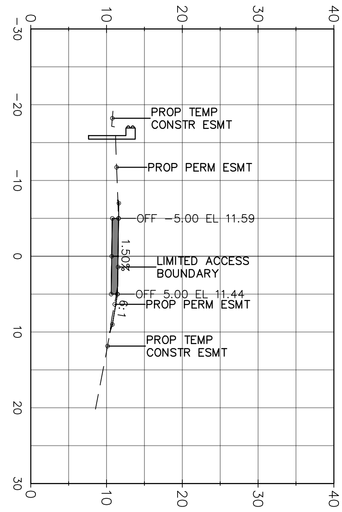


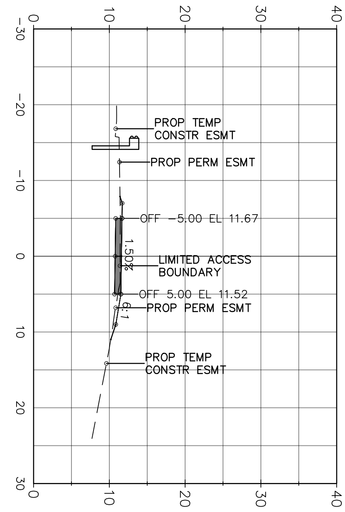


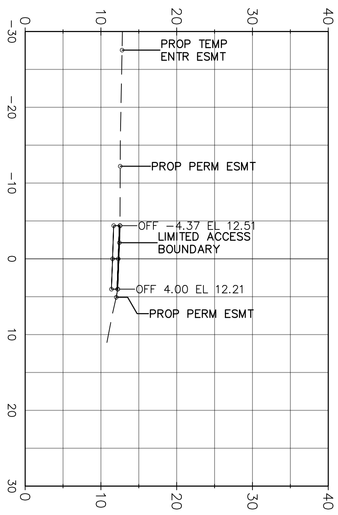


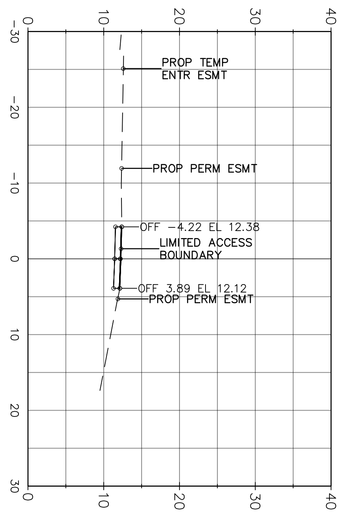


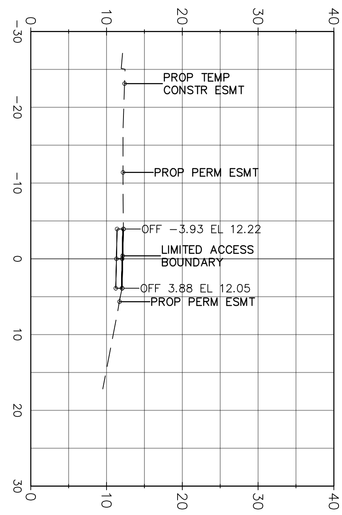


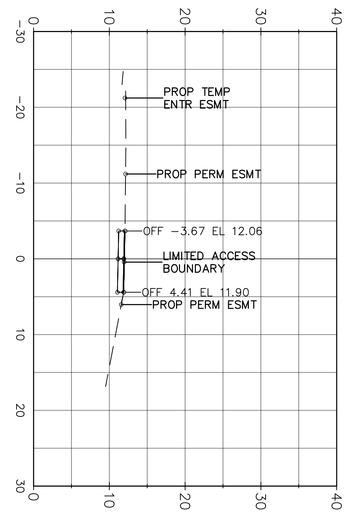












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PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469 90% DESIGN SUBMITTAL

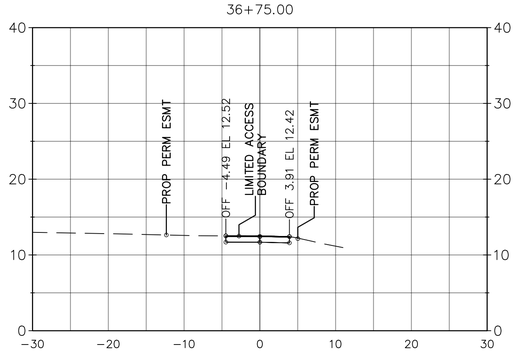
SHEET 47 OF 75
SCALE: 1"=10'

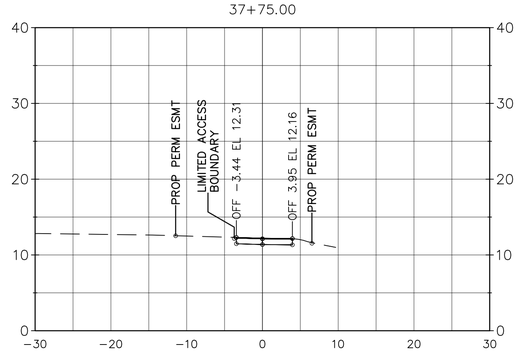
CS-305
CROSS SECTIONS

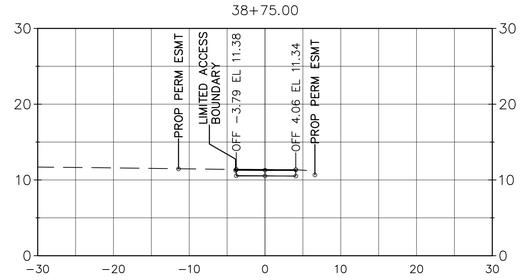
ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: -
DRAWN BY: AMT DATE: -
CHECKED BY: AMT DATE: -
APPROVED BY: AMT DATE: -

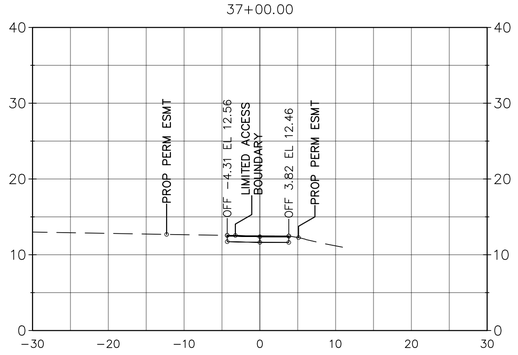
REVISIONS
DATE BY DESCRIPTION

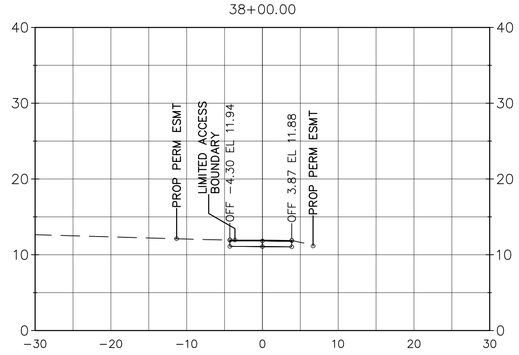
CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

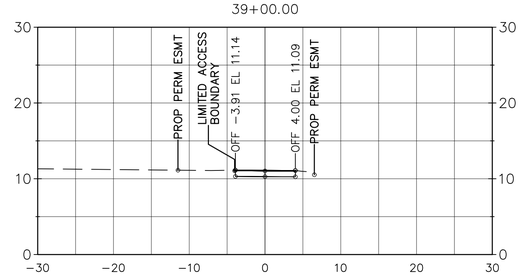


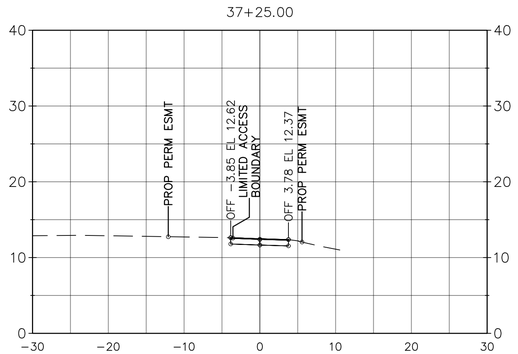


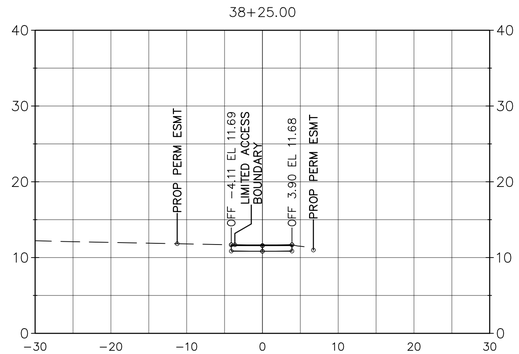


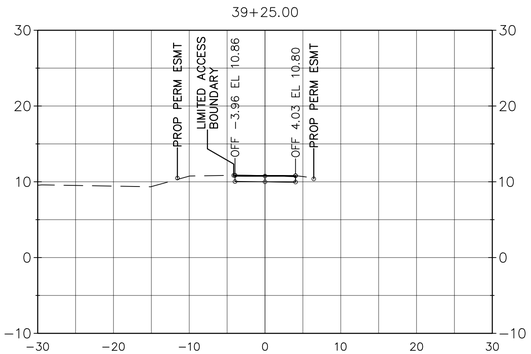


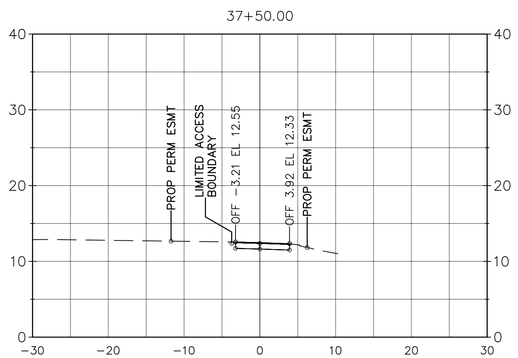


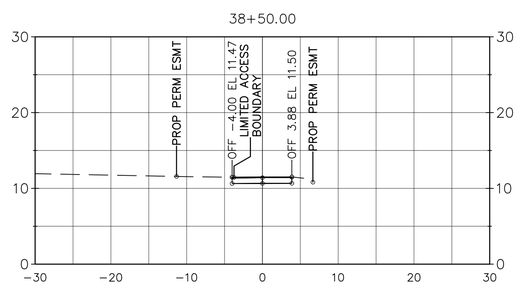


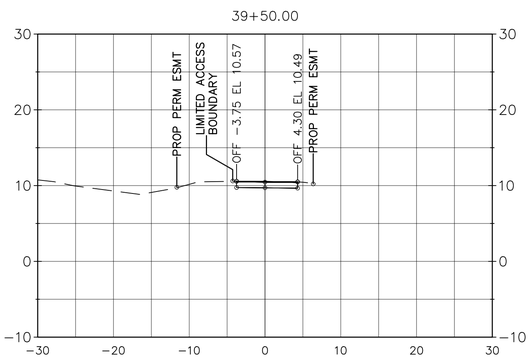












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DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

DATE	DESCRIPTION	BY

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: –
DRAWN BY: AMT DATE: –
CHECKED BY: AMT DATE: –
APPROVED BY: AMT DATE: –

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CS-306
CROSS SECTIONS

SHEET
48 OF 75
SCALE: 1"=10'

39+75.00

40+75.00

41+75.00

40+00.00

41+00.00

42+00.00

40+25.00

41+25.00

42+25.00

40+50.00

41+50.00

42+50.00

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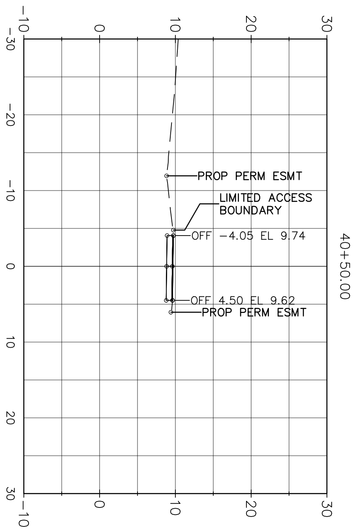
CHECKED BY:	AMT	DATE:	-
APPROVED BY:	AMT	DATE:	-

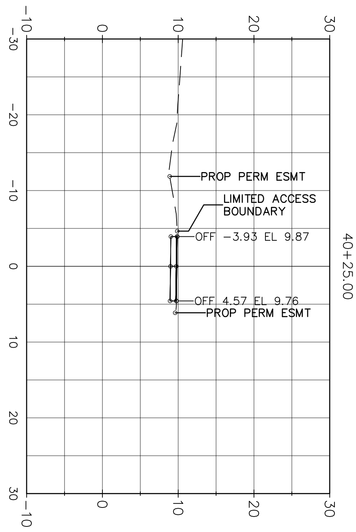
PROJECT NAME: OLD CAMERON RUN TRAIL

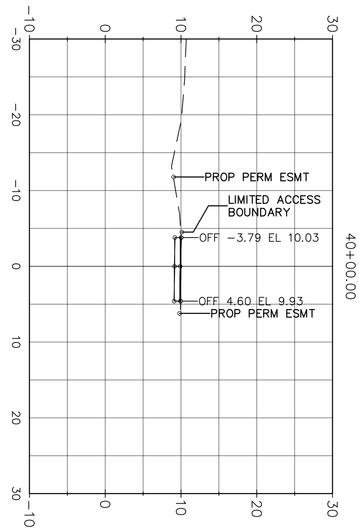
UPC109469

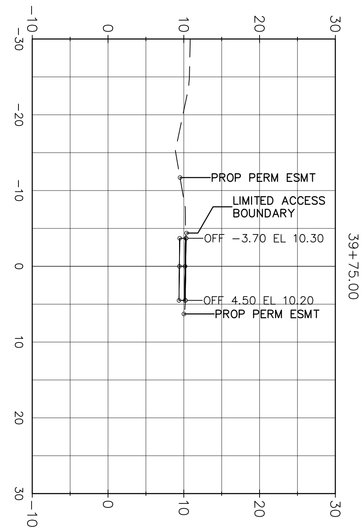
CS-307
CROSS SECTIONS

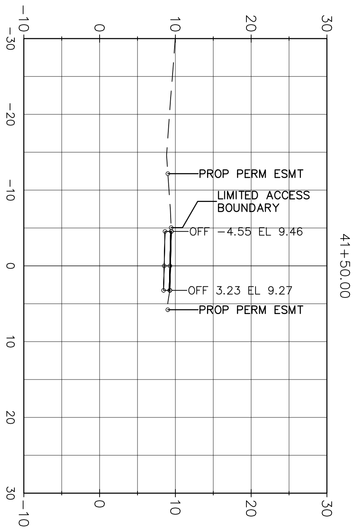
SHEET
49 OF 75
SCALE: 1"=10'

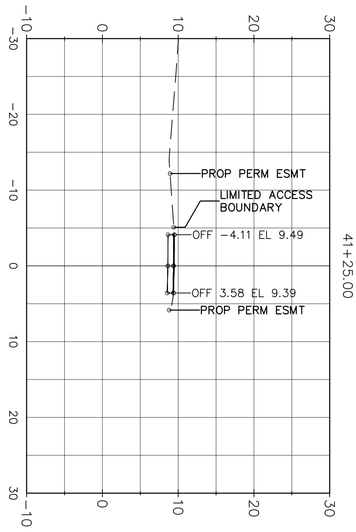


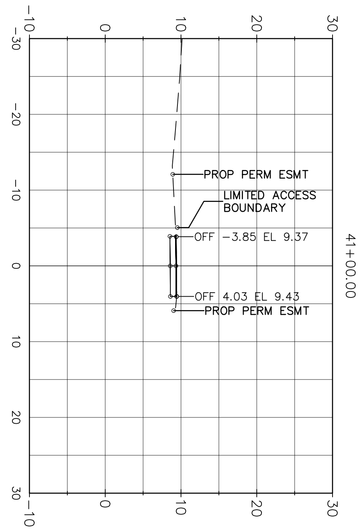


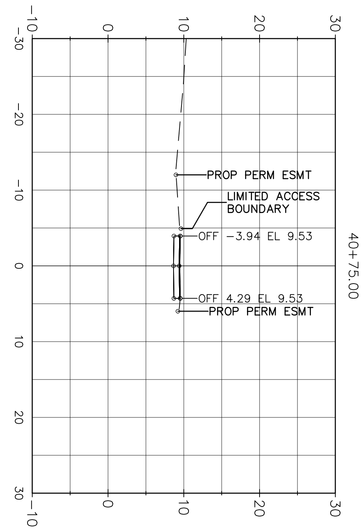


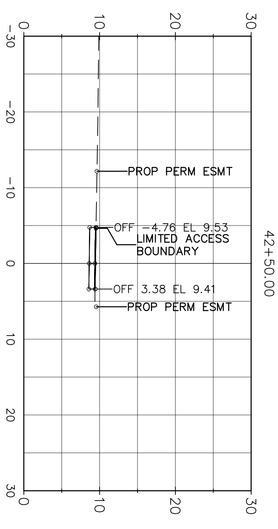


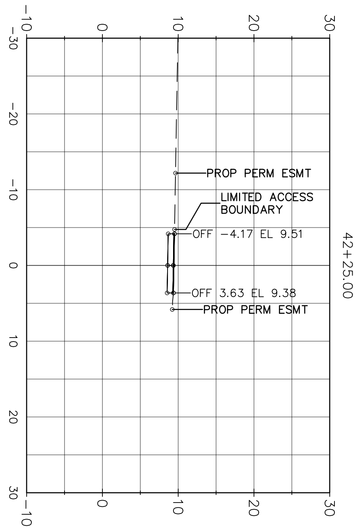


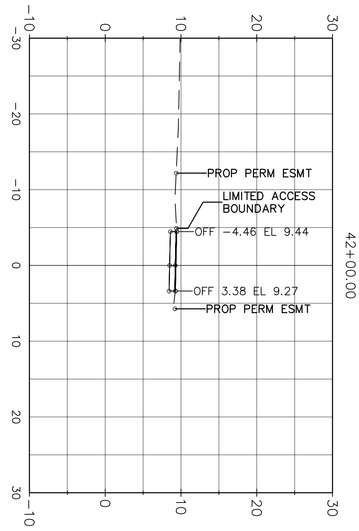


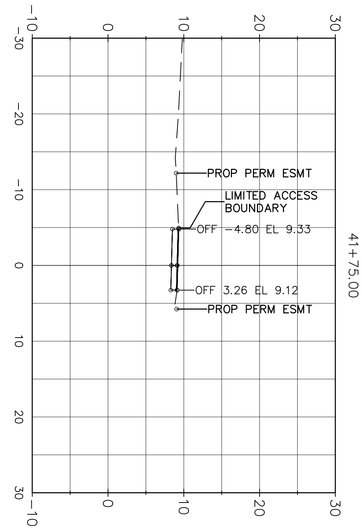












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PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469 90% DESIGN SUBMITTAL

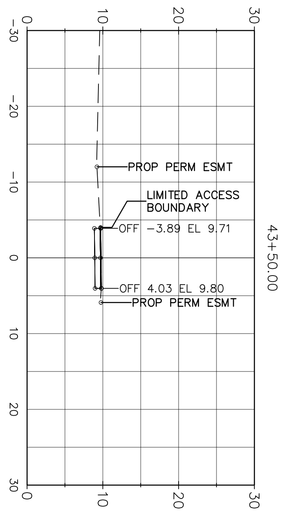
SHEET 50 OF 75
SCALE: 1"=10'

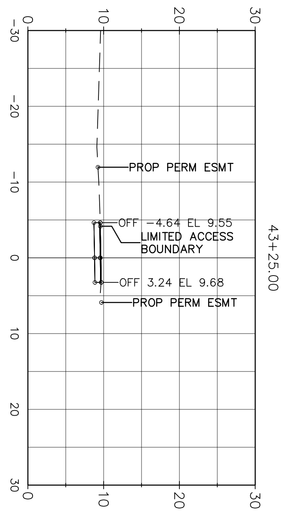
CS-308
CROSS SECTIONS

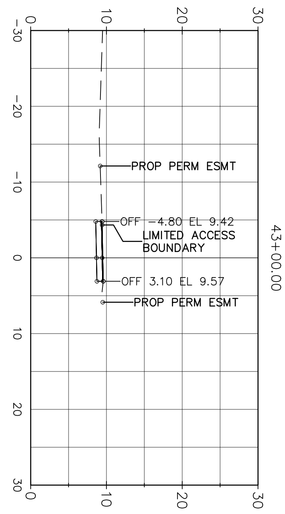
ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: -
DRAWN BY: AMT DATE: -
CHECKED BY: AMT DATE: -
APPROVED BY: AMT DATE: -

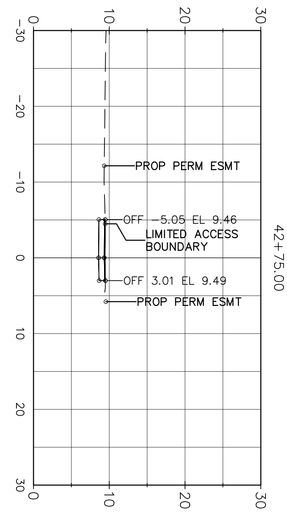
REVISIONS
DATE BY DESCRIPTION

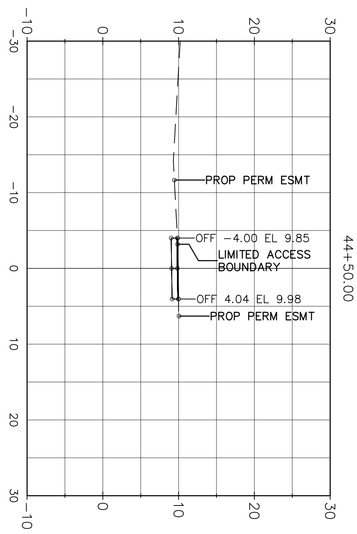
CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

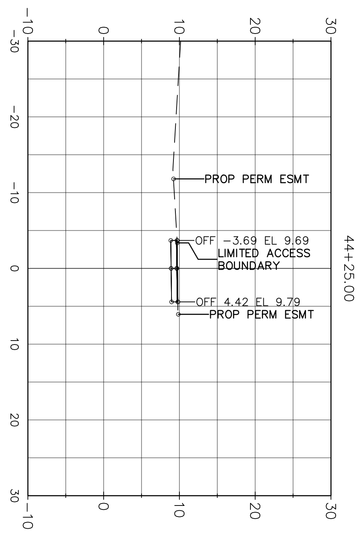


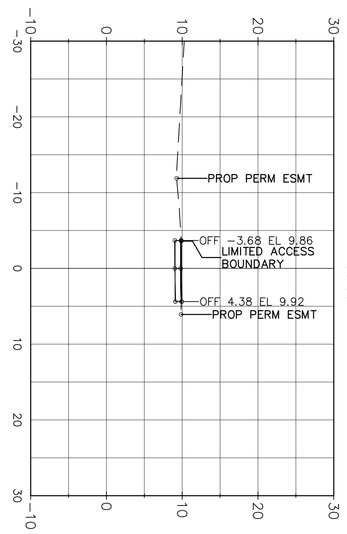


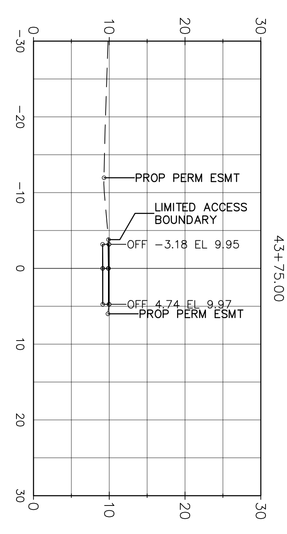


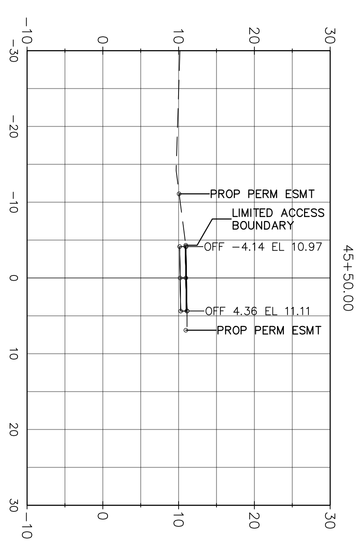


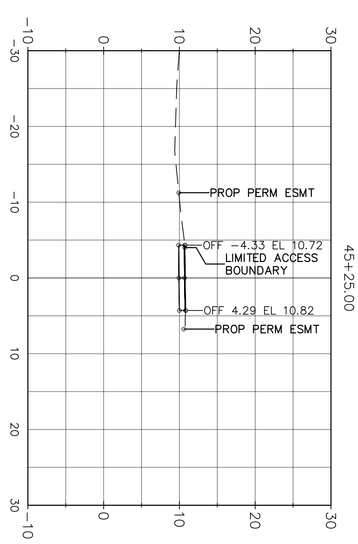


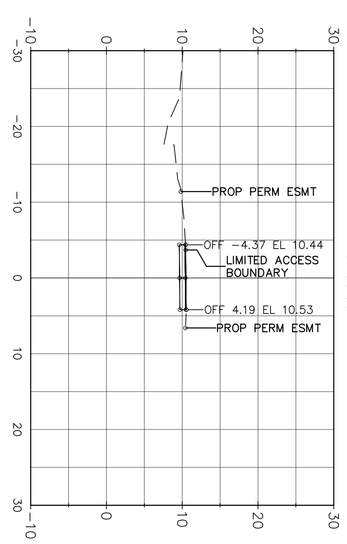


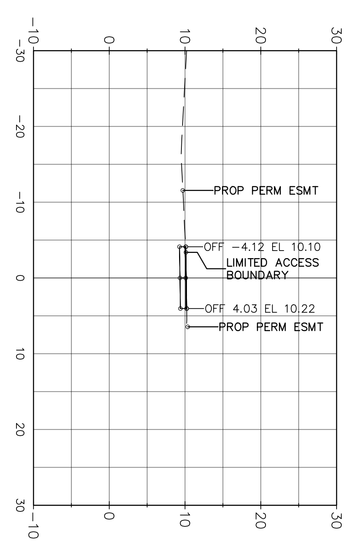












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PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469 90% DESIGN SUBMITTAL

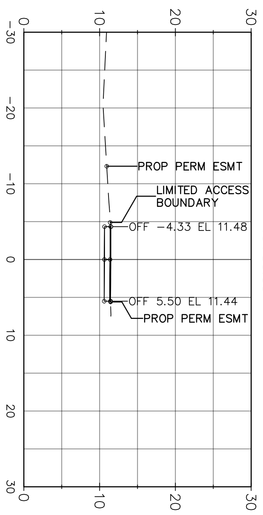
SHEET 51 OF 75
SCALE: 1"=10'

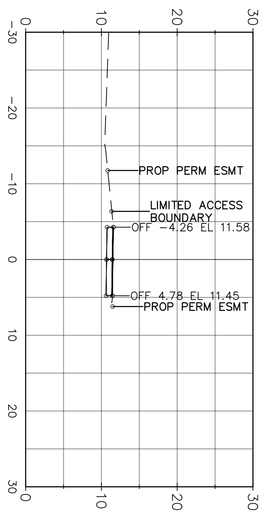
CS-309
CROSS SECTIONS

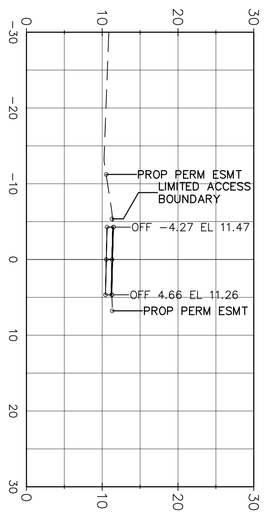
ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: -
DRAWN BY: AMT DATE: -
CHECKED BY: AMT DATE: -
APPROVED BY: AMT DATE: -

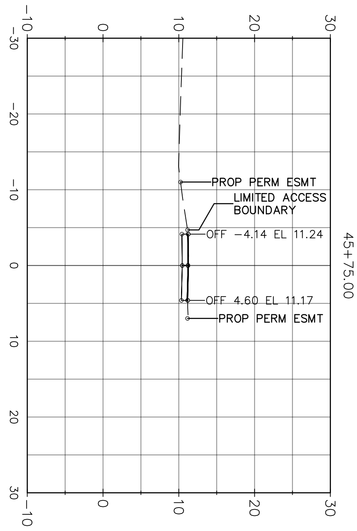
REVISIONS
DATE BY DESCRIPTION

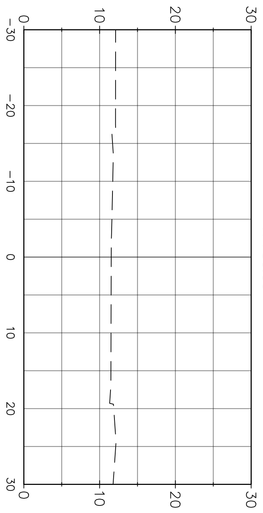
CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

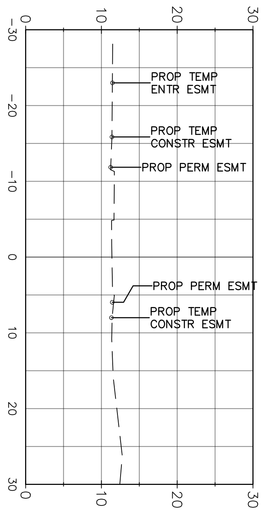


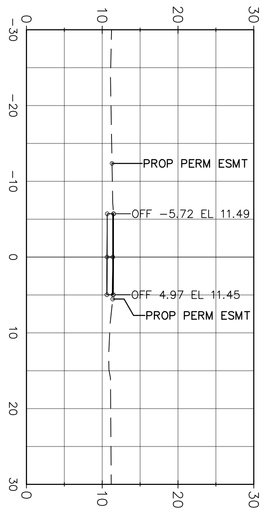


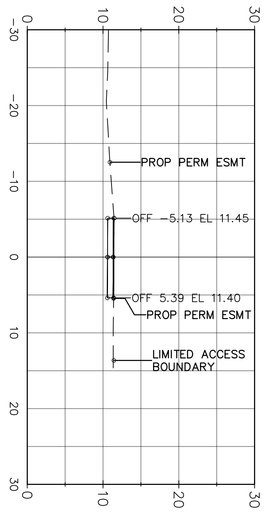












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PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469 90% DESIGN SUBMITTAL

SHEET 52 OF 75

SCALE: 1"=10'

CS-310

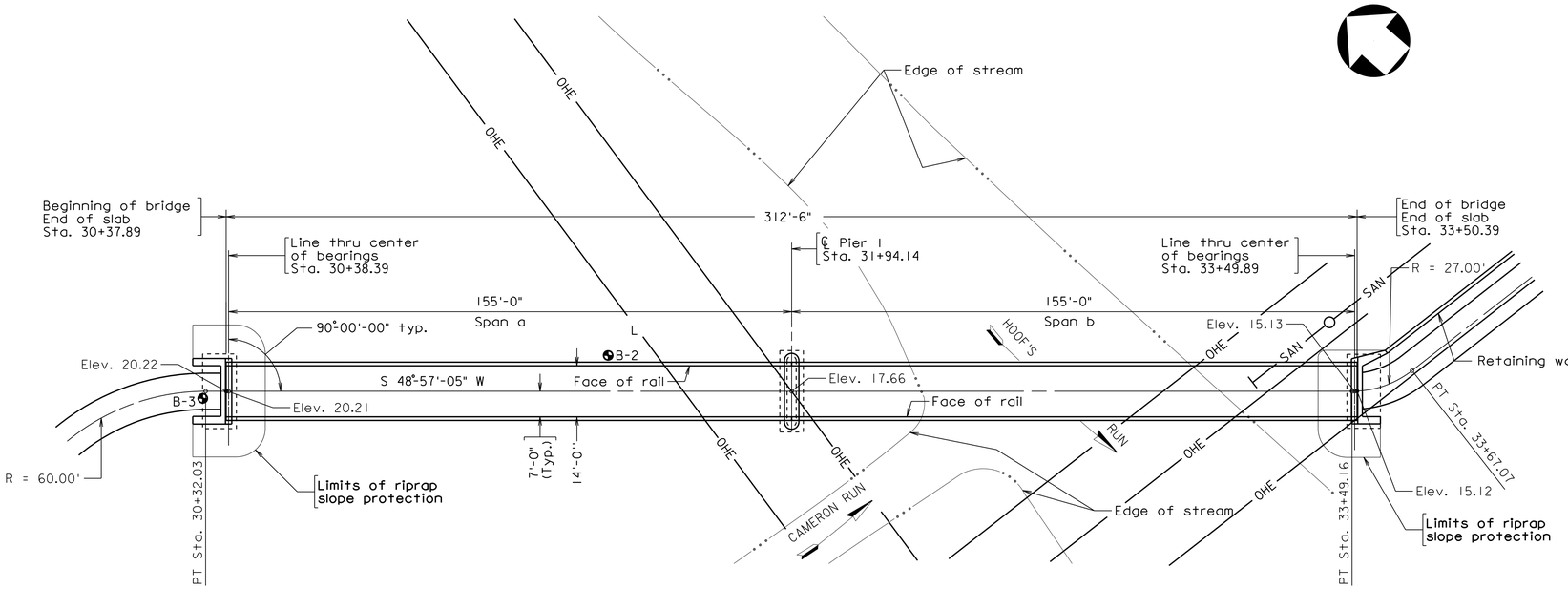
CROSS SECTIONS

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: –
DRAWN BY: AMT DATE: –
CHECKED BY: AMT DATE: –
APPROVED BY: AMT DATE: –

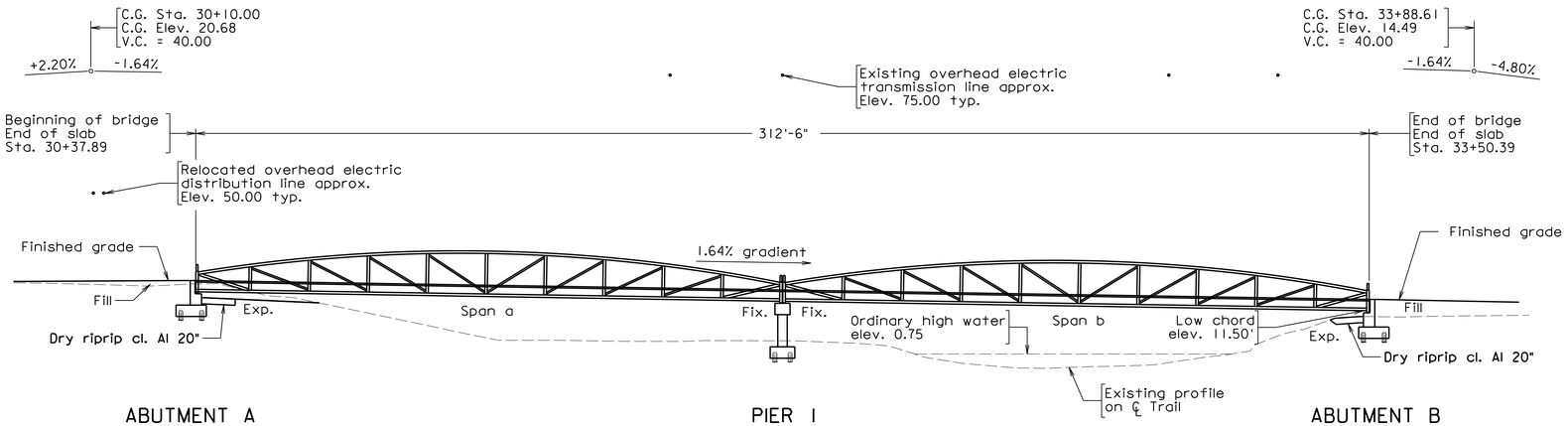
REVISIONS

DATE	BY	DESCRIPTION

CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313



PLAN



DEVELOPED SECTION ALONG ℄

GENERAL NOTES:

Width: 14'-0" face-to-face of rails.

Span layout: 155'-155' two simple spans

Capacity: H-10, and pedestrian loading.

Drainage Area: 2.80 sq. mi.

Specifications:

Construction: Virginia Department of Transportation Road and Bridge Specifications, 2020.

Design: AASHTO LRFD Bridge Design Specifications, 8th edition, 2017; and VDOT modifications.

LRFD Guide Specifications for Design of Pedestrian Bridges, 2nd edition, 2009; and VDOT modifications.

Standards: Virginia Department of Transportation Road and Bridge Standards, 2016; including all current revisions.

These plans are incomplete unless accompanied by the supplemental specifications and special provisions included in the contract documents.

The prefabricated pedestrian truss is a fracture critical structure and the requriements of AASHTO/AWS Fracture Control Plan (FCP) for Nonredundant Members as noted in the AASHTO/AWS Bridge Welding Code shall apply.

For structural steel requirements, see Sheet 51.

Finish paint color shall be green, 595-24227.

Concrete in deck slab shall be Low Shrinkage Class A4 Modified in accordance with Section 217.12(a); substructure: pier, abutments, and wingwalls shall be class A3.

All reinforcing steel shall be deformed and shall conform to ASTM A615, Grade 60 except for steels noted as Corrosion Resistant Reinforcing (CRR) which shall conform to Section 223 of the Specifications. All reinforcing bar dimensions on the detailed drawings are to centers of bars except where otherwise noted and are subject to fabrication and construction tolerances.

The Class I CRR steel shall be required on this project for the deck slab, abutment neat, pier cap, and pier wall. Class III may be substituted for Class I.

All H-piles shall be ASTM A709 Grade 50 steel. All piles shall be driven to the required nominal axial resistance. For axial resistance requirements, see the Pile Data Table on sheets SD-503 to SD-505. All piles shall be driven to or below the minimum tip elevations shown in the Pile Data Table, unless otherwise directed or authorized by the Engineer. Nominal axial resistance shall be determined by Dynamic Pile Testing.

The Geotechnical Engineer of Record shall verify acceptable foundation conditions in the field prior to the placement of concrete.

B.M.: see site plans.

RECOMMENDED CONSTRUCTION PROCEDURE

1. Place environmental remediation measures.
2. Excavate to the bottom of the footing elevation at each substructure unit.
3. Dewater excavated locations (repeat as necessary).
4. Install H-piles at the locations indicated on the plans.
5. Place footing reinforcement as indicated on the plans and place formwork.
6. Pour the concrete for the footing.
7. Place abutment/pier stem reinforcement as indicated on the plans and place formwork.
8. Pour the concrete for the abutment/pier stems.
9. Backfill at all substructure units.
10 Set the truss bearings per the specifications of the fabricator.
11. Install truss segments per the specifications of the fabricator.
12. Place deck reinforcement and pour the concrete for the deck.
14. Construct the approach pathway.
15. Stabilize the site and remove environmental remediation measures.

At all steps in the process, all personnel, equipment and materials must maintain the required clearance from the overhead utility lines that cross the site.

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REVISIONS		
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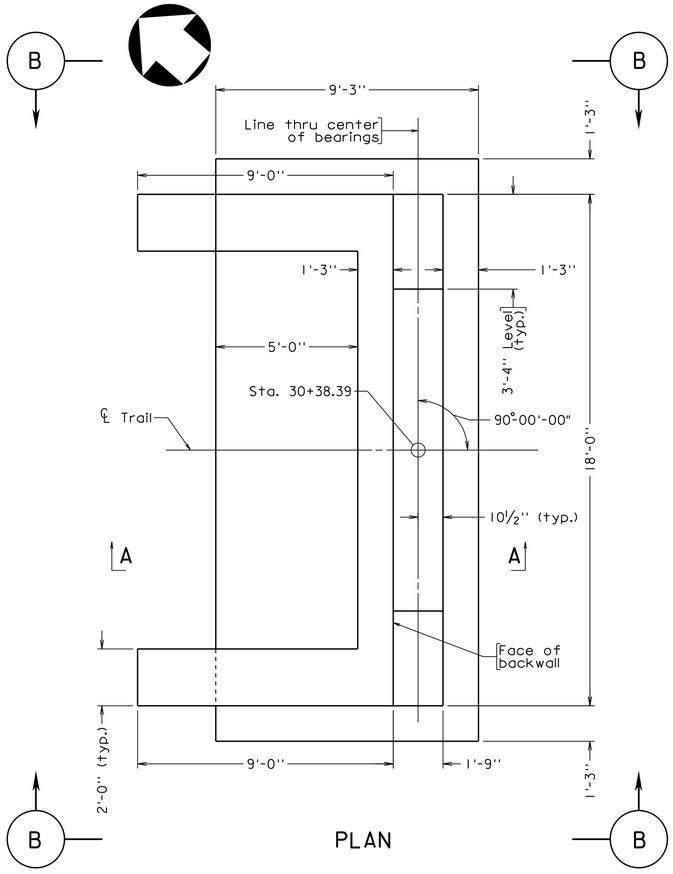
APPROVED BY: AMT DATE:

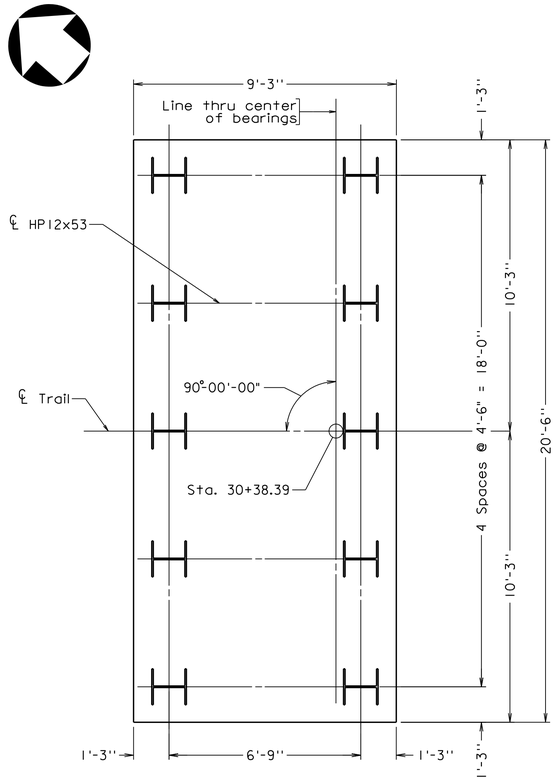
PROJECT NAME: OLD CAMERON RUN TRAIL

SD-501
GENERAL PLAN
& ELEVATION

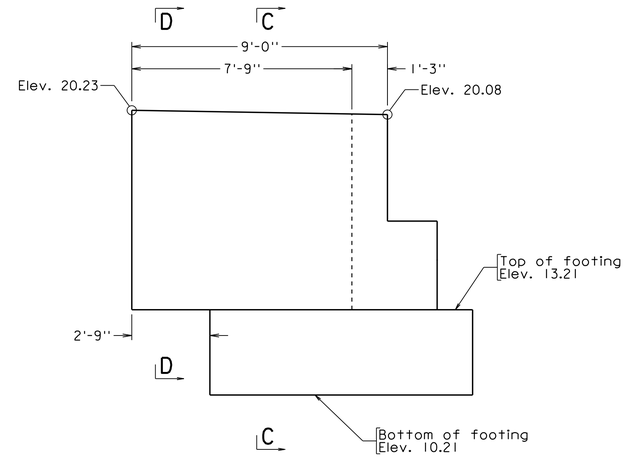
SHEET
53 OF 75
SCALE: 1"=20'



PLAN

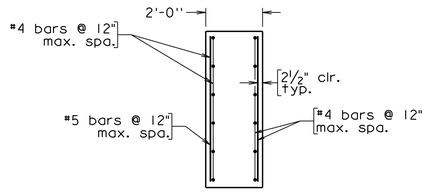


PILE PLAN

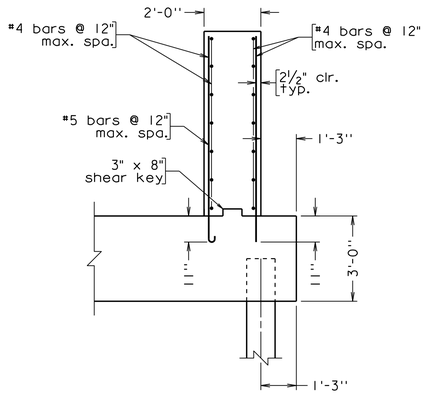


VIEW B-B

Piles not shown for clarity

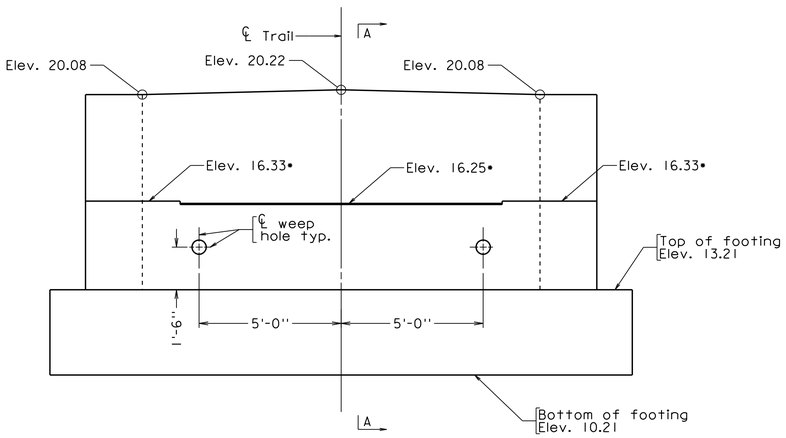


SECTION D-D



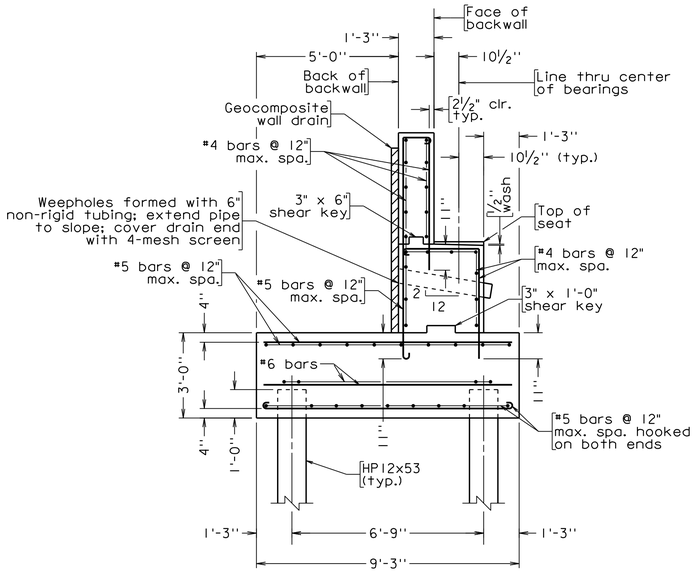
SECTION C-C

Footing reinforcement not shown for clarity

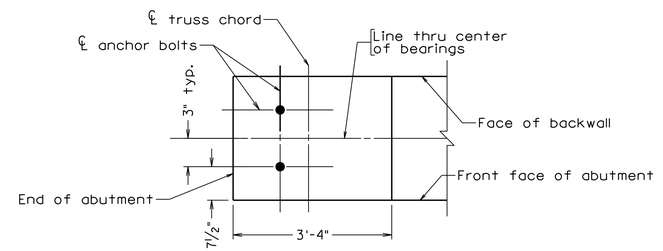


ELEVATION

Piles not shown for clarity



SECTION A-A



TYPICAL ANCHOR BOLT LAYOUT

N.T.S.

PILE DATA TABLE			
Nominal Axial Resistance Measured During Driving (Tons/Pile)	Factored Axial Resistance (Tons/Pile)	Estimated Tip Elevation	Minimum Tip Elevation
	30.00	-36.00	-36.00

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DESIGNED BY: AMT DATE:
DRAWN BY: AMT DATE:
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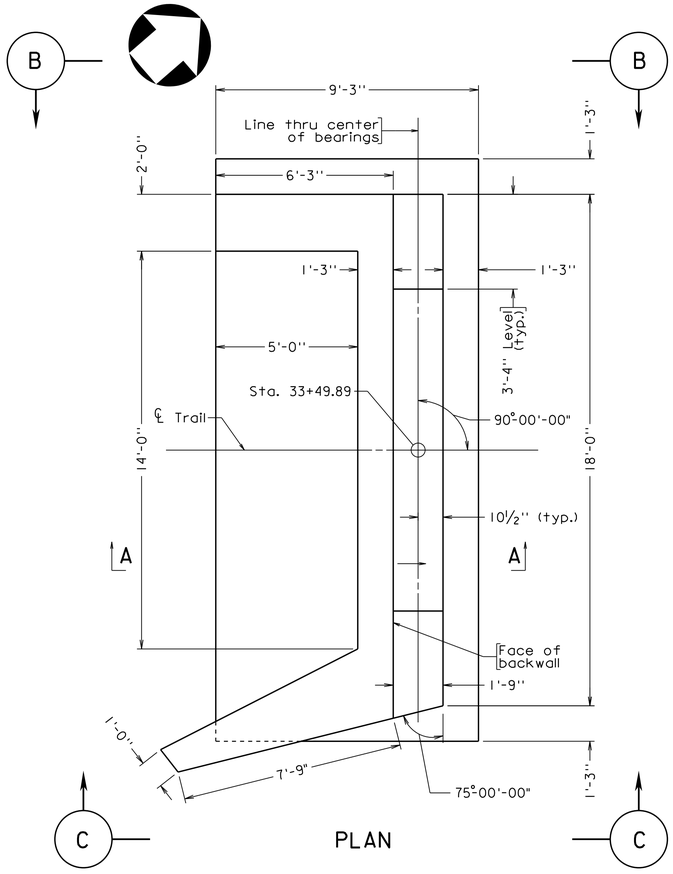
APPROVED BY: AMT DATE:

PROJECT NAME: OLD CAMERON RUN TRAIL

SD-502
ABUTMENT A

SHEET
54 OF 75
SCALE: ⅜"=1'-0"



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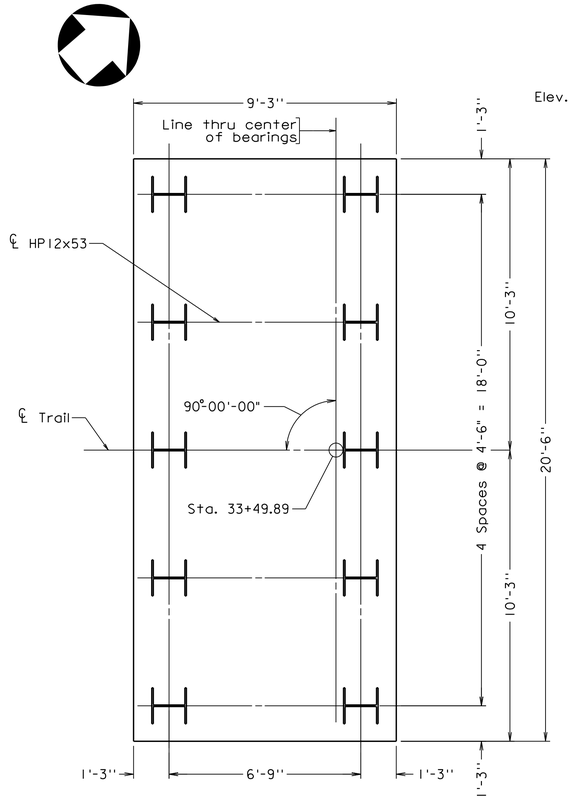
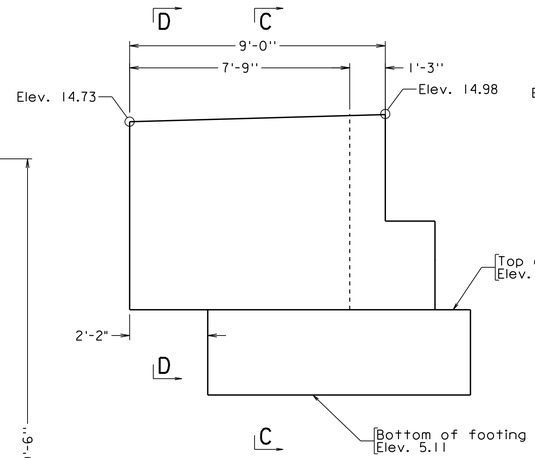
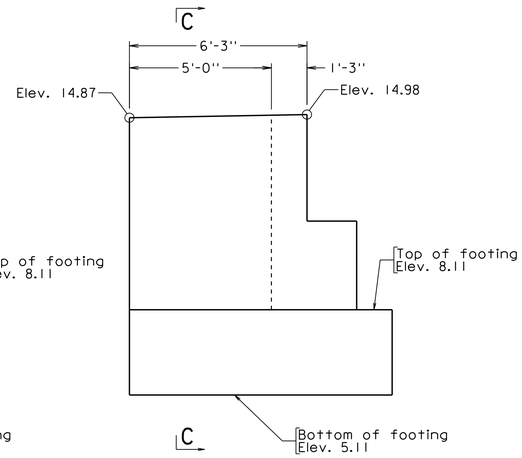


PILE PLAN



VIEW C-C

Piles not shown for clarity



VIEW B-B

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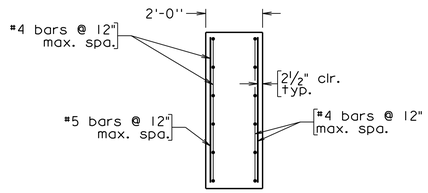
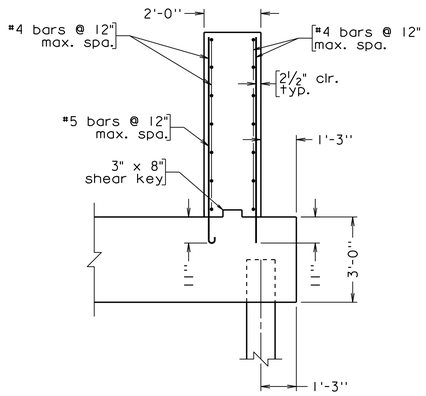


SECTION D-D



SECTION C-C

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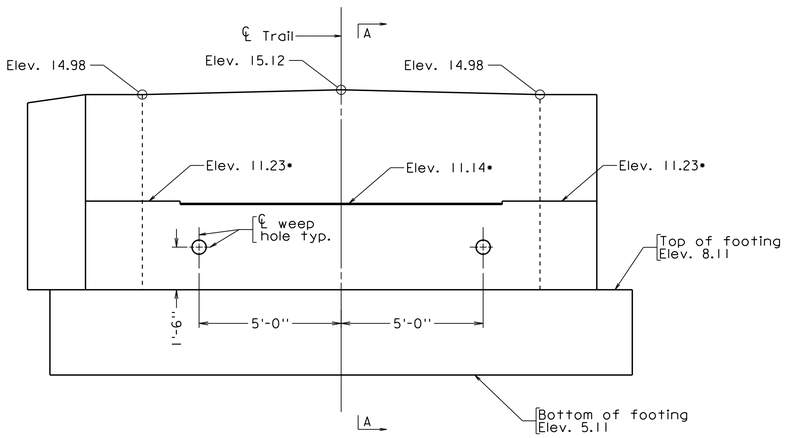
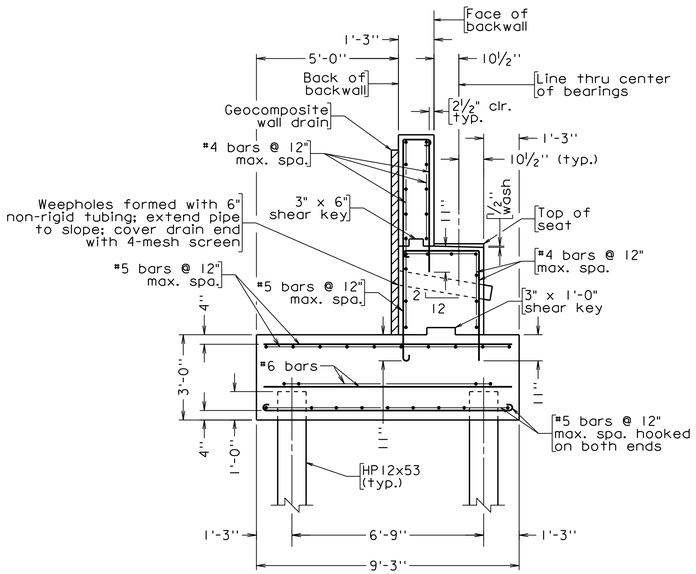
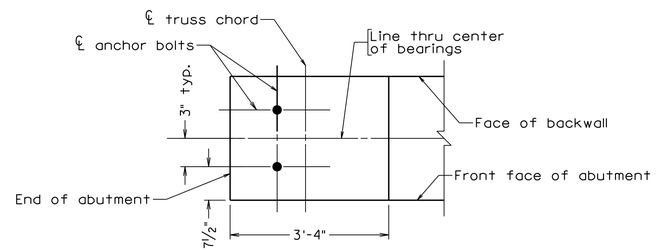


ELEVATION

Piles not shown for clarity



SECTION A-A



TYPICAL ANCHOR BOLT LAYOUT

N.T.S.

PILE DATA TABLE			
Nominal Axial Resistance Measured During Driving (Tons/Pile)	Factored Axial Resistance (Tons/Pile)	Estimated Tip Elevation	Minimum Tip Elevation
	30.00	-45.00	-45.00

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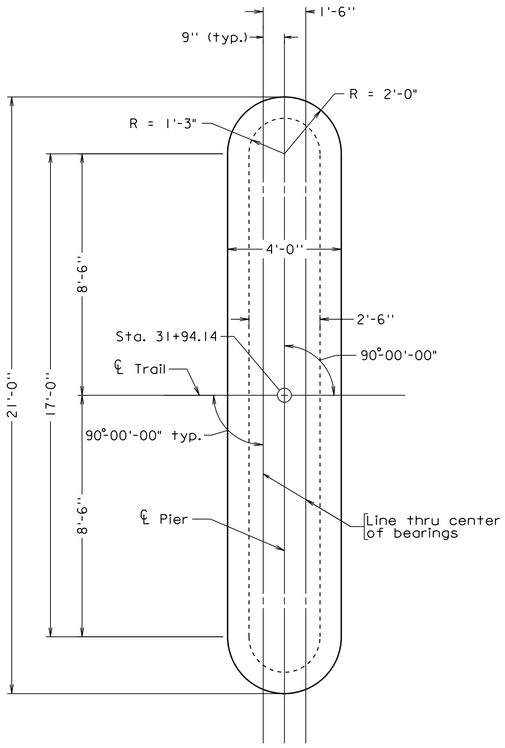
DESIGNED BY: AMT DATE:
DRAWN BY: AMT DATE:
CHECKED BY: AMT DATE:
APPROVED BY: AMT DATE:

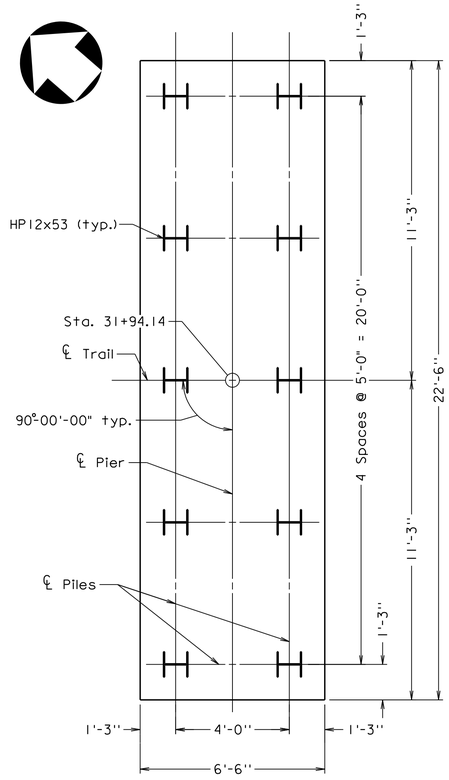
PROJECT NAME: OLD CAMERON RUN TRAIL

SD-503
ABUTMENT B

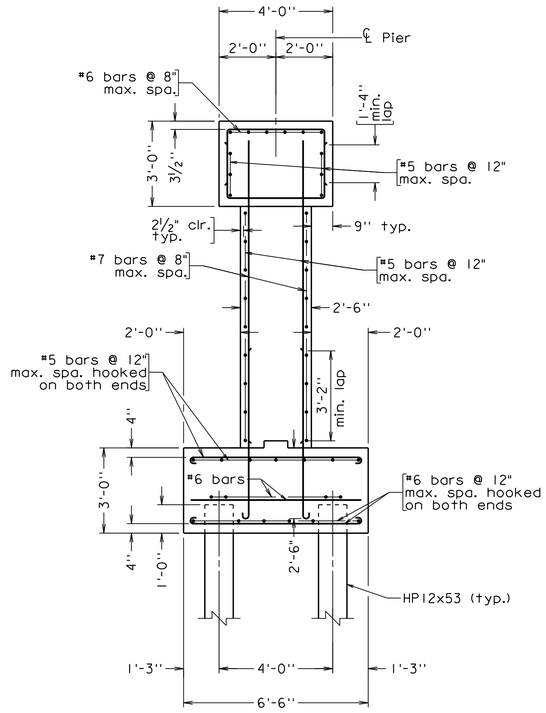
SHEET
55 OF 75
SCALE: ⅜"=1'-0"



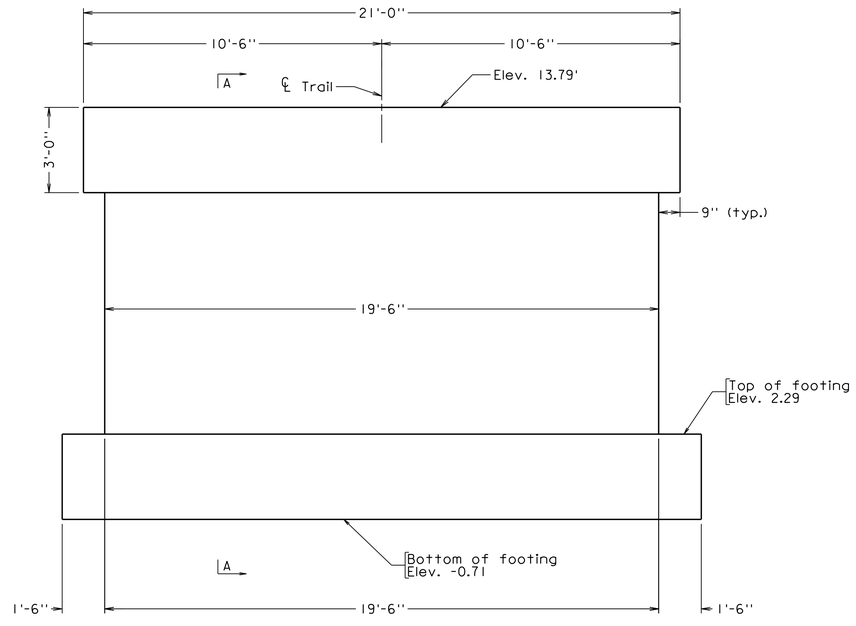
PLAN



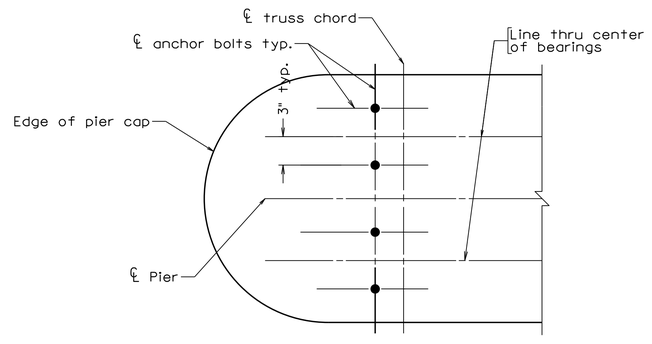
PILE PLAN



SECTION A-A



ELEVATION



TYPICAL ANCHOR BOLT LAYOUT
N.T.S.

PILE DATA TABLE			
Nominal Axial Resistance Measured During Driving (Tons/Pile)	Factored Axial Resistance (Tons/Pile)	Estimated Tip Elevation	Minimum Tip Elevation
	50.00	-56.00	-56.00

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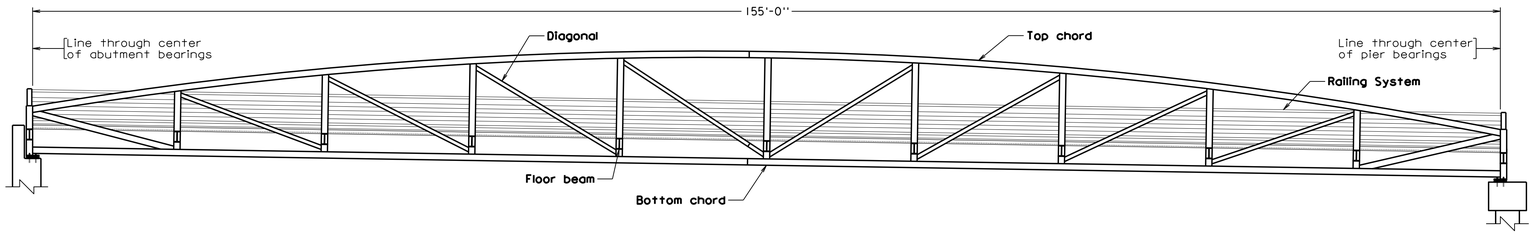
APPROVED BY: AMT DATE:

PROJECT NAME: OLD CAMERON RUN TRAIL

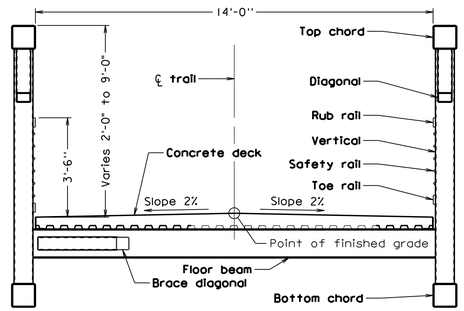
SD-504
PIER 1

SHEET
56 OF 75
SCALE: ⅜"=1'-0"



BRIDGE ELEVATION
Scale: N.T.S.

Note: Span a shown, Span b similar.



BRIDGE SECTION
Scale: N.T.S.

PEDESTRIAN TRUSS DESIGN NOTES

1.0 APPLICABLE CODES AND STANDARDS

1.1 Governing Specifications

Bridge(s) shall be designed in compliance with the AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges, 2009 (AASHTO Ped). Calculations shall be in accordance with this document, and formulas shall reference the appropriate sections.

1.2 Other Reference Codes, Specifications and Standards

AASHTO LRFD Bridge Design Specifications, 8th Edition, 2017 (AASHTO LRFD)
AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, First Edition, 2005 (AASHTO Signs)
American Welding Society, Structural Welding Code, D1.1, 2015 (AWS D1.1)
VDOT Manual of the Structure and Bridge Division

The AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges shall control if any conflicting requirements occur with the Other Reference Documents and/or other local Codes.

2.0 BRIDGE SYSTEM TYPE

2.1 Truss Elevation

The vertical trusses shall be designed such that the bottom chord members are tangent and the top chord are arched over the entire length of bridge. The interior verticals of the trusses shall be perpendicular to the top face of the bottom chord and the end verticals of the trusses shall be sloped to meet the top of the first interior verticals. The end verticals and diagonals are of varying length and have varying connection angles to accommodate the arched top chord.

2.2 Diagonal Style

The vertical truss shall use a single-diagonal, where all the diagonals are in tension for gravity loads.

2.3 Floor Beam Location

The bridge(s) shall utilize a floor beam where the end face of the floor beam shall be welded to the interior face of the truss verticals. The distance from the top of deck to the bottom of the floor beam shall be determined by the Bridge Manufacturer.

3.0 STRUCTURAL DESIGN LOADS

3.1 Dead Load

The bridge structure shall be designed for the total bridge weight including the final deck system.

3.2 Pedestrian Loading (PL)

The bridge structure shall be designed for a uniform pedestrian loading of 90 psf. This loading shall be patterned to produce the maximum load effects. Consideration of dynamic load allowance is not required with this loading.

3.3 Vehicle Load (VL)

When vehicular access is not prevented by permanent physical methods, the superstructure and deck system shall be designed for each of the following concentrated/vehicular loads: A single truck shall be placed to produce the maximum load effects and shall not be placed in combination with the pedestrian load. The dynamic load allowance need not be considered for this loading. The truck shall be the H10 vehicle (20,000 pound two-axle vehicle with 80% to rear axle).

3.4 Wind Load (WS)

Pedestrian bridges shall be designed for wind loads as specified in AASHTO Signs, Articles 3.8 and 3.9. The loading shall be applied over the exposed area in front elevations of both trusses including all enclosures.

In addition to the wind load specified above, a vertical uplift line load as specified in AASHTO LRFD Article 3.8.2 and determined as the force caused by a pressure of 20 psf over the full deck width, shall be applied concurrently. This loading shall be applied at the windward quarter point of the deck width.

3.5 Combination of Loads

The load combinations and load factors to be used shall be as specified in AASHTO LRFDTable 3.4.1-1, with the following exceptions:
Load combinations Strength II, Strength IV, and Strength V need not be considered.

4.0 MATERIALS OF CONSTRUCTION

4.1 Structural Steel

All members of the truss and deck support system shall be fabricated from square or rectangular hollow structural shapes (HSS), with the exception that floor beams may be wide flange shapes. All open ends of end posts and floor support beams shall be capped. Drain holes shall be provided for all sections at the low point of the member that may become filled with water.

All bridges shall be fabricated using A847 for HSS sections and A588 for structural shapes and plates.

Minimum nominal thickness of primary hollow structural shapes shall be 1/4". Rolled shapes shall have a minimum thickness of 1/4".

4.2 Fasteners

Structural bolts used to field splice or connect all main members shall be ASTM F3125 Grade A325. The nuts for these structural bolts shall be ASTM A563. The Bridge Manufacturer shall determine the finish of the structural bolts. They will be either Type 3 (Weathering) or Type 1 (Hot-Dipped or Mechanically Galvanized) as specified by the Bridge Manufacturer. Bolts used for the connection of a rub rail shall be ASTM A307 or SAE J429 Grade 2, 57"64 9"32 diameter, carriage bolts, zinc plated.

Self-drilling fasteners for attachment of the form decking shall be #14 x 19"32 zinc plated hex washer head Tek screws.

Power Actuated fasteners shall be Hilti sheet metal nail X-ENP-19 fastener.

Other miscellaneous fasteners shall be ASTM A307 zinc plated or galvanized, as determined by the Bridge Manufacturer.

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DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

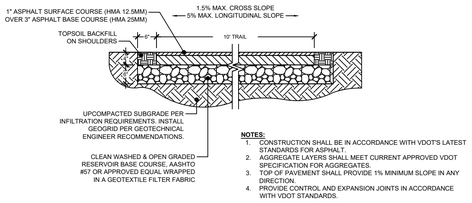
REVISIONS
DATE | BY | DESCRIPTION

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC. 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE:
DRAWN BY: AMT DATE:
CHECKED BY: AMT DATE:
APPROVED BY: AMT DATE:

PROJECT NAME: OLD CAMERON RUN TRAIL

SD-505
PEDESTRIAN TRUSS DETAILS

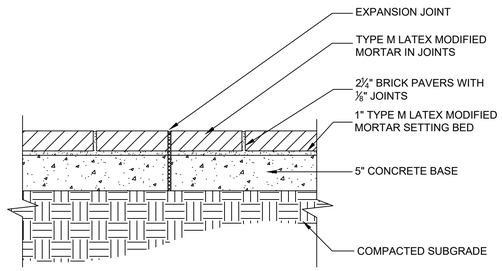
SHEET
57 OF 75
SCALE: 3/8"=1'-0"



NOTES:
1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH VDOT'S LATEST STANDARDS FOR ASPHALT.
2. AGGREGATE LAYERS SHALL MEET CURRENT APPROVED VDOT SPECIFICATION FOR AGGREGATES.
3. TOP OF PAVEMENT SHALL PROVIDE 1% MINIMUM SLOPE IN ANY DIRECTION.
4. PROVIDE CONTROL AND EXPANSION JOINTS IN ACCORDANCE WITH VDOT STANDARDS.

1 TYPICAL ASPHALT TRAIL

1/2" = 1'-0" 3402-50

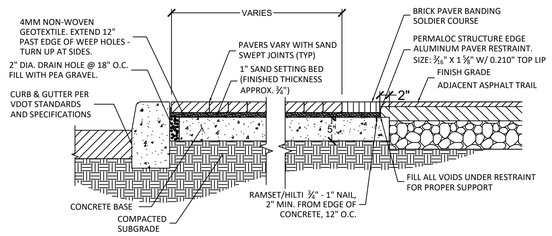


NOTE:

1. SUBMIT PAVER SAMPLES TO MATCH EXISTING WALK FOR OWNER APPROVAL.
2. SUBMIT MORTAR COLOR SAMPLES TO OWNER FOR APPROVAL.
3. PROVIDE EXPANSION JOINTS 40' O.C.
4. INSTALL EDGE RESTRAINT PER MANUFACTURER'S SPECIFICATIONS.

2 BRICK PAVERS ON CONCRETE

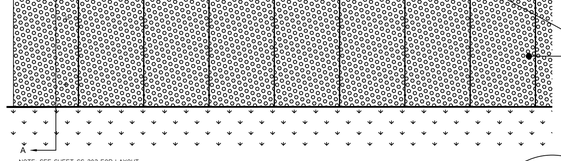
NOT TO SCALE 040101-05



NOTES:
1. COMPACT PAVERS INTO SHARP SAND SETTING BED WITH VIBRATORY PLATE COMPACTOR, WITH A HIGH FREQUENCY/LOW AMPLITUDE PLATE, EQUIPPED WITH A RUBBER MAT, FORCING SAND UP INTO JOINTS. SWEEP SAND INTO JOINTS AND REPEAT UNTIL JOINTS ARE COMPLETELY FILLED.

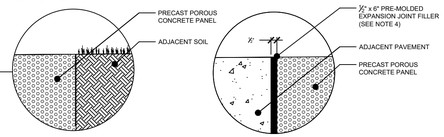
3 SPECIALTY PAVER WITH BRICK BANDING

1/16" = 1'-0" 0401-04

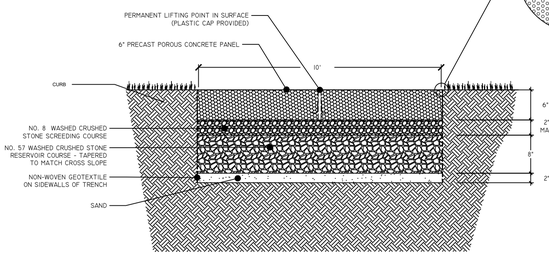


NOTE: SEE SHEET CS-202 FOR LAYOUT.

TRAIL PLAN VIEW



ADJACENT PAVEMENT

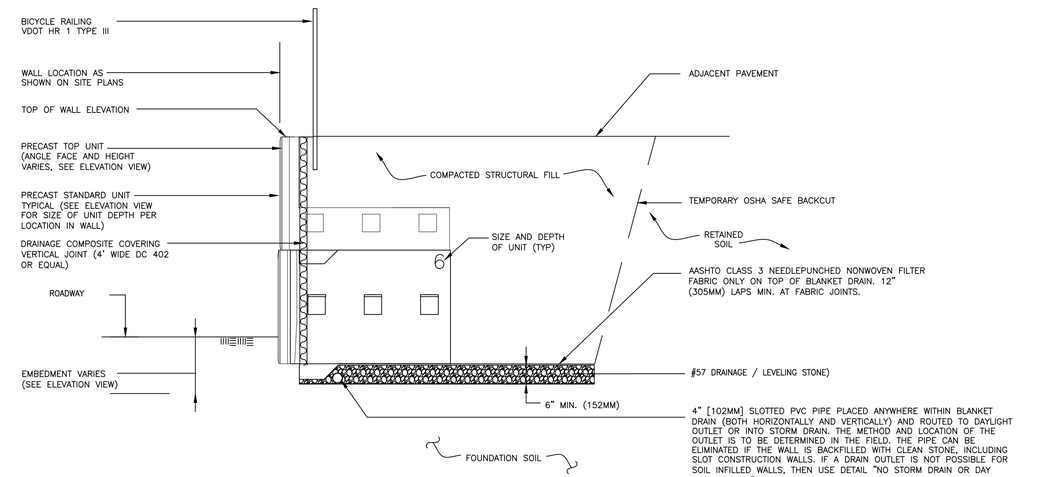


TRAIL SECTION A-A

NOTES:
1. BASIS OF DESIGN: PRECAST POROUS CONCRETE PANELS SHALL BE THE STORMCRETE® SYSTEM AS MANUFACTURED BY POROUS TECHNOLOGIES, LLC. OR APPROVED EQUAL.
2. STORMCRETE® PRECAST POROUS CONCRETE PANELS SHALL HAVE A CONCRETE AVERAGE UNIT WEIGHT OF 125 LB/CF (+/- 4%) AND A VOID RATIO OF 15-25% WHEN TESTED IN CONFORMANCE WITH *ASTM D7561/7561M-12 STANDARD TEST METHOD FOR DENSITY AND VOID CONTENT OF HARDENED PERVIOUS CONCRETE.*
3. WASHED CRUSHED STONE RESERVOIR AND SCREEDING COURSE GRADATIONS AND THICKNESS SHALL BE BASED ON SUBSURFACE CONDITIONS, DEPTH OF FREEZING, TRAFFIC LOADINGS, AND STORM WATER DETENTION/RETENTION REQUIREMENTS AS SPECIFIED BY DESIGN PROFESSIONAL.
4. ADJACENT MATERIAL SHALL NOT BE ALLOWED TO COME INTO DIRECT CONTACT WITH SIDES OF PANEL. PLACE ½ MOLDED BITUMINOUS EXPANSION JOINT MATERIAL IN CONFORMANCE WITH *ASTM D1751, STANDARD SPECIFICATION FOR PREFORMED EXPANSION JOINT FILLER FOR CONCRETE PAVING AND STRUCTURAL CONSTRUCTION (NONEXTRUDING AND RESILIENT BITUMINOUS TYPES).*
5. PRECAST POROUS CONCRETE PANELS SHALL BE REINFORCED WITH ULTRA-THIN MONOFILAMENT HOMOPOLYMER POLYPROPYLENE FIBERS EQUIVALENT TO MASTERFIBER 100 MANUFACTURED BY BASF CORPORATION., OR APPROVED EQUAL.
6. ½" GALV. COIL THREAD LIFTING INSERT SHALL BE MANUFACTURED BY A.L.P. SUPPLY PART NUMBER CM2650AP, OR EQUAL.
7. PANELS MAY BE CONFIGURED OR FIELD CUT AS SPECIFIC SITE CONDITIONS REQUIRE. PANELS SHALL BE CUT WITH A DIAMOND BLADE SAW. CUT UNITS REQUIRE SEALING TO PREVENT RAVELING. CUTTING SHALL OCCUR SO THAT A MINIMUM OF 1" IS MAINTAINED BETWEEN LIFTERS EMBEDDED IN PANELS AND CUT EDGES.
8. PANEL LAYOUTS SHALL BE PLANNED SO AS TO MINIMIZE OR ELIMINATE LOCATIONS WHERE UTILITY STRUCTURES INTERSECT WITH PANEL JOINTS. WHOLE AND HALF PANELS SHALL BE USED IN COMBINATION WITH CAST IN PLACE COLLARS TO SURROUND UTILITIES.
9. STORMCRETE® PRECAST POROUS CONCRETE PANELS SHALL HAVE A MINIMUM INFILTRATION RATE OF 250 IN./HR. WHEN TESTED IN ACCORDANCE WITH ASTM C1701 - INFILTRATION RATE OF IN PLACE PERVIOUS CONCRETE.
10. BIAXIAL GEOGRID SHALL BE INDUSTRIAL FABRICS BasELOKTH/ BL-6 OR APPROVED EQUAL.
11. NO. 57 STONE SHALL BE COMPACTED IN MAXIMUM 10" LIFTS.
12. REFER TO MANUFACTURER'S HANDLING AND INSTALLATION INSTRUCTIONS FOR ADDITIONAL PRODUCT SPECIFIC **INFORMATION.**

4 PRECAST POROUS CONCRETE PANEL

3/4" = 1'-0" 0401-06



5 PRECAST RETAINING WALL SYSTEM

3/8" = 1'-0" 3232-16

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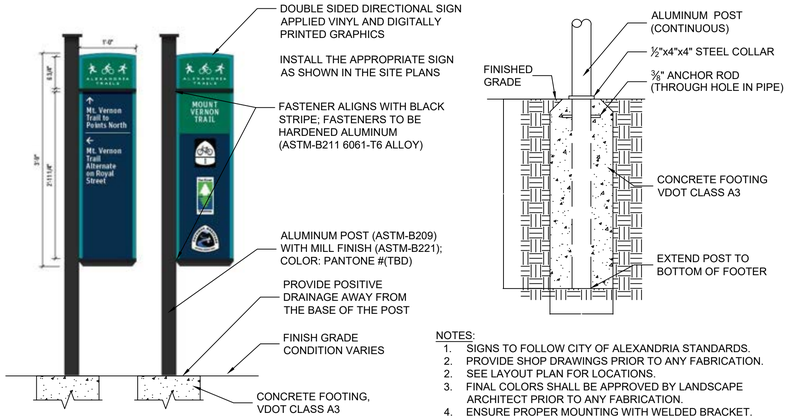
CHECKED BY:	AMT	DATE: -
APPROVED BY:	AMT	DATE: -

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CS-501
SITE DETAILS - PAVEMENT

SHEET 58 OF 75
SCALE: AS SHOWN

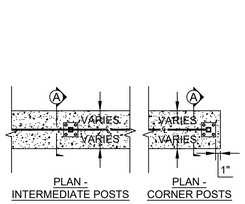


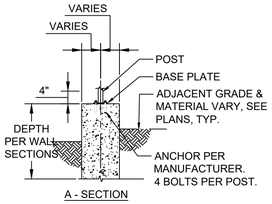
SIGN POST FOOTING

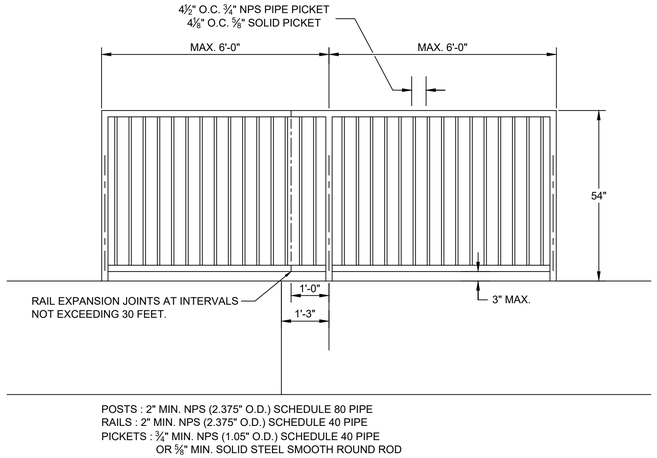
NOTES:
1. SIGNS TO FOLLOW CITY OF ALEXANDRIA STANDARDS.
2. PROVIDE SHOP DRAWINGS PRIOR TO ANY FABRICATION.
2. SEE LAYOUT PLAN FOR LOCATIONS.
3. FINAL COLORS SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO ANY FABRICATION.
4. ENSURE PROPER MOUNTING WITH WELDED BRACKET.
5. MOUNTING HARDWARE TO BE HARDENED ALUMINUM ASTM-B211 6061-T6 ALLOY (PER IAP)

1 SHARED USE PATH WAYFINDING SIGN

3/4" = 1'-0" 3235-18





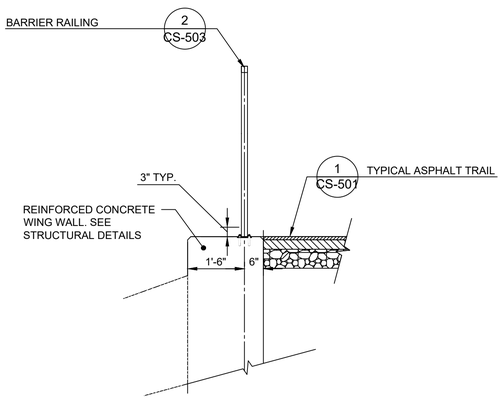


POSTS : 2" MIN. NPS (2.375" O.D.) SCHEDULE 80 PIPE
RAILS : 2" MIN. NPS (2.375" O.D.) SCHEDULE 40 PIPE
PICKETS : ¾" MIN. NPS (1.05" O.D.) SCHEDULE 40 PIPE
OR ⅝" MIN. SOLID STEEL SMOOTH ROUND ROD

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

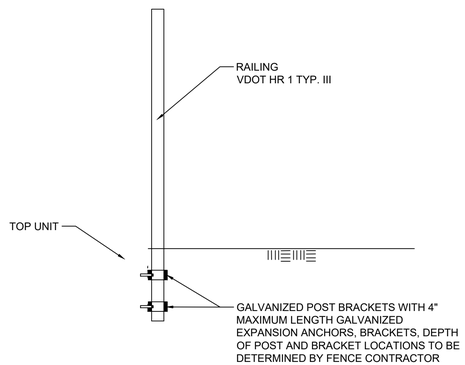
2 BARRIER RAILING

1/2" = 1'-0" 3231-07



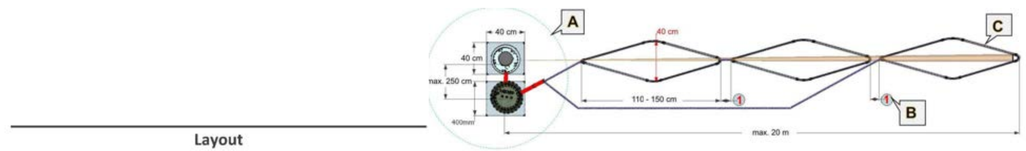
3 BARRIER RAILING AT WING WALL

1/2" = 1'-0" 3231-06



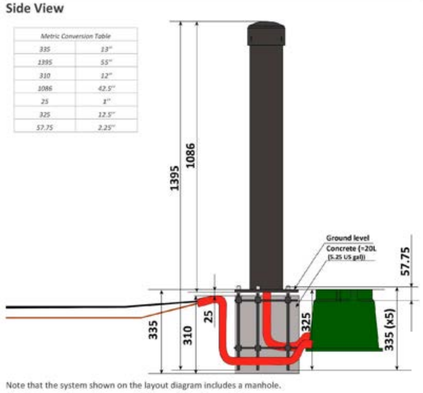
4 BICYCLE RAILING AT PRECAST RETAINING WALL

3/4" = 1'-0" 3402-53

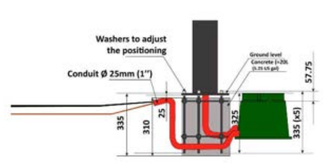


Example on a three-loop system

PLAN



SECTION



ANCHOR BASE SECTION

5 ECO-COUNTER

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APPROVED BY:	AMT	DATE: -

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CS-502
SITE DETAILS - VDOT
STANDARDS & FURNISHINGS

SHEET 59 OF 75
SCALE: AS SHOWN

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DATASHEET

SMART Solar Lighting
AE6 Series

Flexible installation
Sleek & modular design
10+ year battery performance

Leadsun's AE6 series is a sleek looking split system design with a separated solar & battery module that easily connects to a LED light head with built-in motion sensor.

The split unit is the world's first International Dark Sky approved solar lighting product. It's design guarantees perfect PV (photo-voltaic) solar orientation for optimum daytime charging and ensures layered LED light distribution without emitting any upward light pollution.



Features

Options	150W/200W/300W/400W/600W
Design	Modular with Fully Integrated components
Dark-sky Approval	Yes
Solar Module	150W & 200W Mono-crystalline (expandable)
Installation	Plug & Play wiring
Pole	Double hot-dipped galvanised, Hinged easy lowering option
Battery	Dual LiFePO4 with patented battery management system
Control	EDGE wireless (Optional), Programmable, adaptive lighting with PIR dimming
Wind rating	Region A,B,C 240km/h wind speed
Applications	Pathways, streets, small car parks

PIR MOTION SENSOR



The AE6 system is wholly modular with all electronic components integrated within an expandable 150W and 200W sized mono-crystalline solar module which also contains an ingenious and patented dual battery system that provides double the life span compared to traditional solar lights.

A programmable controller and smart-eye motion sensor enables responsive and autonomous dimming of the LED throughout the night delivering high quality illumination where and when you need it the most. Installed with a lowerable pole, the AE6 series becomes a set-and-forget system solution that can be installed in a matter of minutes.

Unlimited Warranty | Lithium-Ion Battery System | Monocrystalline Solar Module | Advanced LED Lighting System | SMART Controller | CE | IP65 | IK08

Applications

Pathways



Reserves



Roads

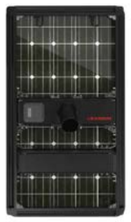


Car Parks



Technical Overview

Solar Panel FRONT



Solar Panel BACK



Luminaire



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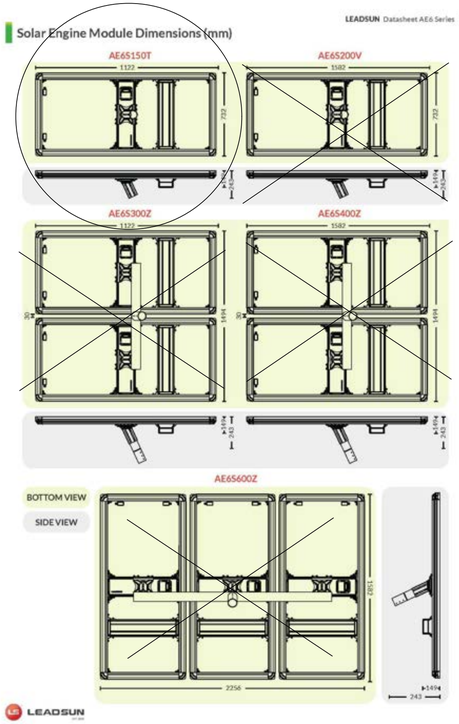
Solar Engine Module Dimensions (mm)



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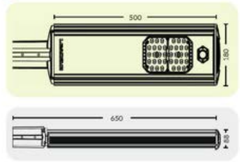
LED Light Dimensions (mm)



Solar Engine Technical Data

Model No.	AE6S150T	AE6S200V	AE6S300Z	AE6S400Z	AE6S600Z
Physical Parameters					
Solar module power output (W)	150	200	300	400	600
Lithium battery capacity (Wh)	820	1139	1640	2278	3397
Net weight of product (kg)	25	29	55	67	101
Product dimension (mm)	1122×732×149	1582×732×149	1122×1494×149	1582×1494×149	1582×2256×149
Pole mounting diameter (mm)			89		
System wind speed rating (km/h)	240	240	--	--	--
Technical & Operating Parameters					
Battery voltage & cycle life	12.8Vdc / 3000 cycles				
Battery charging temperature range	0°C~60°C				
Battery discharging temperature range	-20°C~60°C				
Controller type	PWM (Programmable via USB)				
Wireless control & monitoring option	Optional				
Photoelectric switch on/off level (lx)	30				

LED Light Head Technical Data

Model No.	L3SS10-20	L3SS30-30
Physical Parameters		
Net weight of product (kg)	3.8	3.8
Dimension of product (mm)	680×128×74	680×128×74
Technical & Operating Parameters		
LED output (W)	10	30
LED colour temperature (K)	3000	3000
LED typical luminous flux (lm)	1800	4860
Motion sensor type	Passive Infra Red	Passive Infra Red
LED distribution type	T2 / T3	T3

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Datasheet AE6 Series 221020

Note: IDA certification requires 3000K CCT or lower and the fixture to be mounted at 90°

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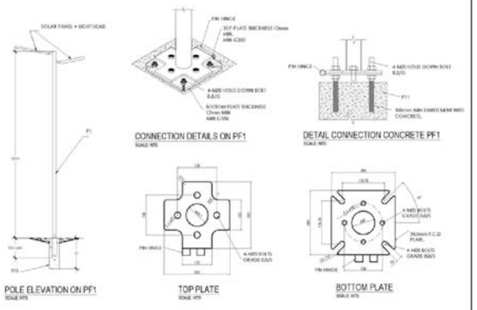
EZYPOLE DATA SHEET/INDICATIVE FOOTING DETAIL
REGION A - TERRAIN CATEGORY 2

1/3

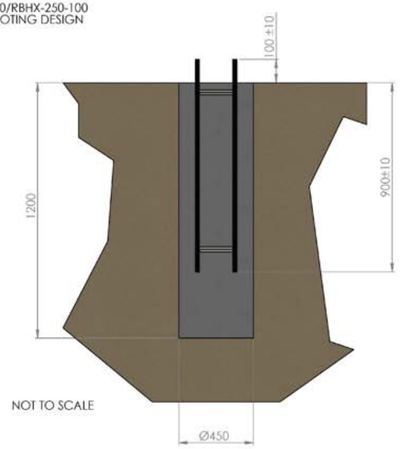


CONCRETE (N20 MIN) FOOTING OPTION

POLE + CONCRETE FOOTING SCHEDULE				
POLE	POLE SECTION	PAD FOOTING (PF1) DIMENSIONS (mm)	FOOTING DEPTH (D) mm	MIN BEARING SOIL PRESSURE (kPa)
EZYLH Pole	1 Section	P1: 80X80.2 Grade C350 MIN	Ø 450	650	50
EZYLH Pole	1 Section	P1: 80X80.2 Grade C350 MIN	Ø 450	700	75
EZYLH Pole	1 Section	P1: 80X80.2 Grade C350 MIN	Ø 450	650	100

NOTES:
1. ALL MATERIALS & WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE SPECIFICATION, CURRENT SAA CODES, BUILDING REGULATIONS AND THE REQUIREMENTS OF ANY RELEVANT REQUIREMENTS.
2. THESE DRAWINGS MUST BE NOT SCALED - ALL DIMENSIONS ARE GIVEN IN MILLIMETERS (mm) U.N.O.
3. THE CONSULTING ENGINEER HAS DESIGNED THE PERMANENT STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR ANY DESIGN, IMPLEMENTATION OR CONSTRUCTION SEQUENCES REQUIRED TO SAFELY CONSTRUCT THE STRUCTURE.
4. DURING CONSTRUCTION THE STRUCTURE IS TO BE KEPT IN A STABLE CONDITION AND NO PART HALL BE OVERSTRESSED.
ALL PROPRIETARY PRODUCTS SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

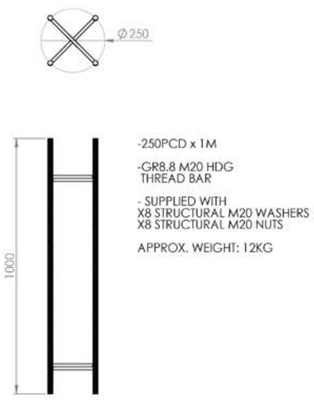
RBC-250-100/RBHX-250-100
TYPICAL FOOTING DESIGN



NOTES
MINIMUM CONCRETE FOOTING DEPTH SHALL BE NO LESS THAN 1200MM.
MINIMUM CONCRETE FOOTING DIAMETER SHALL BE NO LESS THAN Ø450MM.
MINIMUM EMBEDMENT SHALL BE NO LESS THAN 900MM ±10MM.

ALL FOTTING DETAILS ARE INDICATIVE ONLY AND ARE BASED ON MIN. 100kPa SOIL BEARING CAPACITY.
FOOTING SIZES WILL VARY ACCORDING TO A NUMBER OF FACTORS INCLUDING, AND NOT LIMITED TO, SOIL CONDITIONS, WIND LOADING AND TERRAIN CATEGORIES. IN ALL INSTANCES IT IS THE RESPONSIBILITY OF THE INSTALLER TO OBTAIN ENGINEERING COMPUTATIONS TO DETERMINE THE FOOTING DETAIL REQUIRED FOR EACH SITE.

RBC-250-100



SCALE 1:10

EZYpole easier-faster-safer

SUB ASSEMBLY:	REVISION: 19/04/06
TITLE:	RBC-250-100/RBHX-250-100
DWG NO.	TYPICAL FOOTING DESIGN
DWG APPROVED:	DATE:
DRAWED: RLM	SCALE: 1:10 UNITS: MM NTS SHEET 1 OF 1 A3

ETZYPOLE | 2 LAWTON STREET, DANDENONG SOUTH, VICTORIA 3175, AUSTRALIA

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DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

DESCRIPTION	BY	DATE

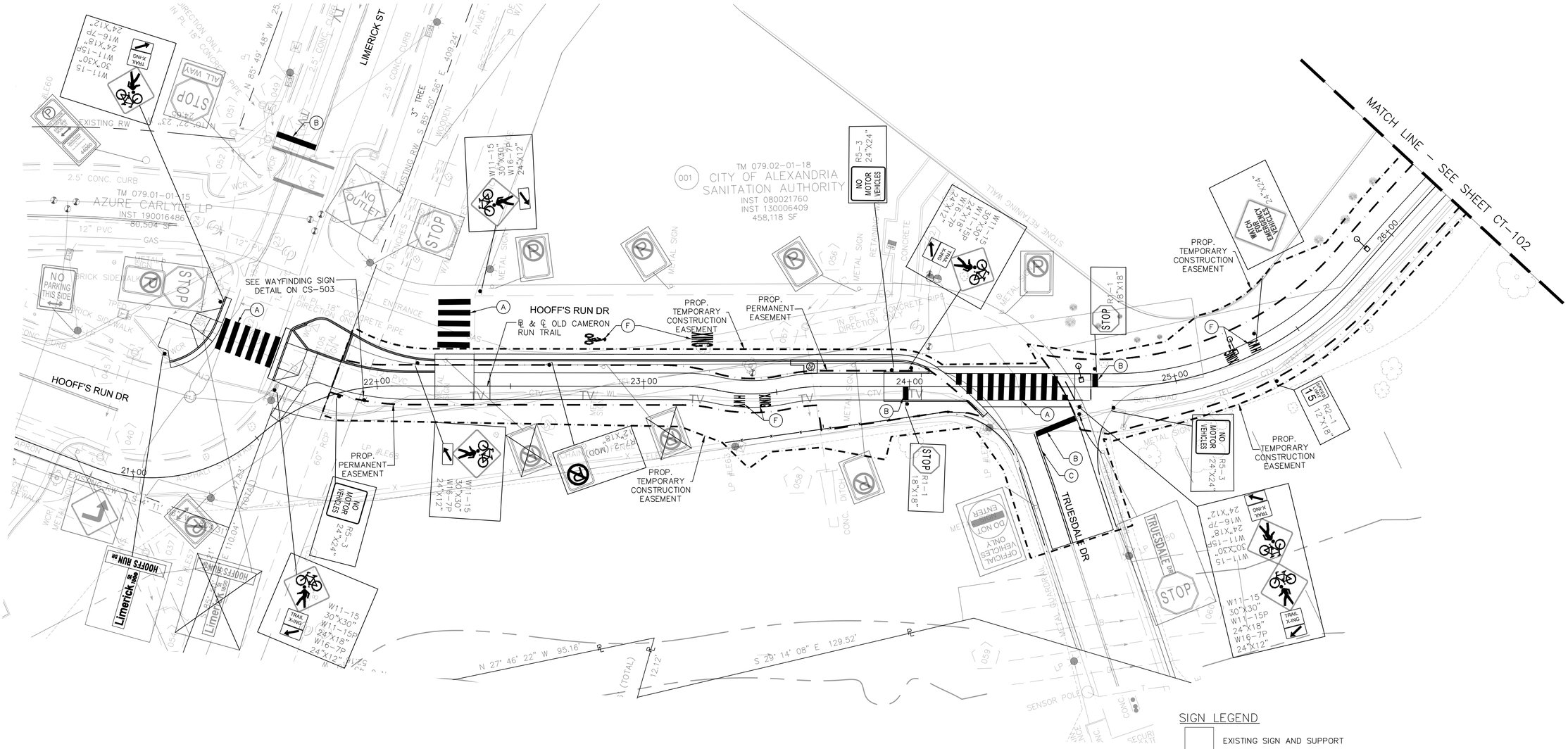
PROJECT NAME: OLD CAMERON RUN TRAIL
UPC109469

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920

DESIGNED BY:	AMT	DATE:	-
DRAWN BY:	AMT	DATE:	-
CHECKED BY:	AMT	DATE:	-
APPROVED BY:	AMT	DATE:	-

CS-503
SITE DETAILS - TRAIL LIGHTING

SHEET 60 OF 75
SCALE: AS SHOWN

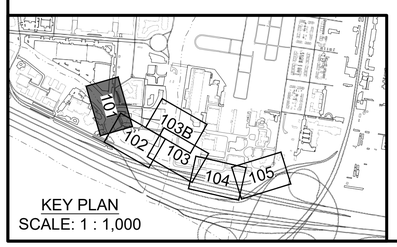


SIGN LEGEND

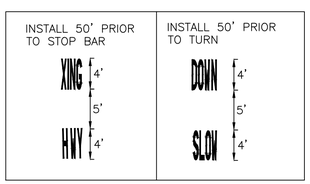
- EXISTING SIGN AND SUPPORT
- EXISTING SIGN AND SUPPORT TO BE REMOVED
- PROPOSED SIGN AND SUPPORT
- EXISTING SIGN TO BE RELOCATED

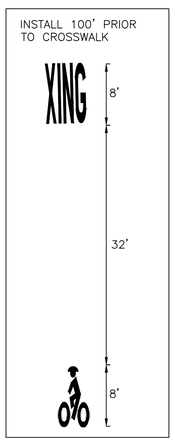
PAVEMENT MARKING LEGEND

- (A) TYPE B, CLASS I, 24" SOLID WHITE LINE PAVEMENT MARKING (12' WIDTH)
- (B) TYPE B, CLASS I, 24" SOLID WHITE STOP BAR
- (C) TYPE B, CLASS I, 4" SOLID DOUBLE YELLOW LINE PAVEMENT MARKING
- (D) TYPE B, CLASS I, 4" SOLID YELLOW LINE PAVEMENT MARKING
- (E) TYPE B, CLASS I, 4" SOLID WHITE LINE PAVEMENT MARKING
- (F) TYPE B, CLASS I, PAVEMENT MARKING LEGEND



KEY PLAN
SCALE: 1 : 1,000





PAVEMENT MARKING SPACING
NOT TO SCALE

0 10' 20' 40'
SCALE: 1"=20'

RIGHT-OF-WAY/EASEMENT/PROPERTY LINE NOTE:
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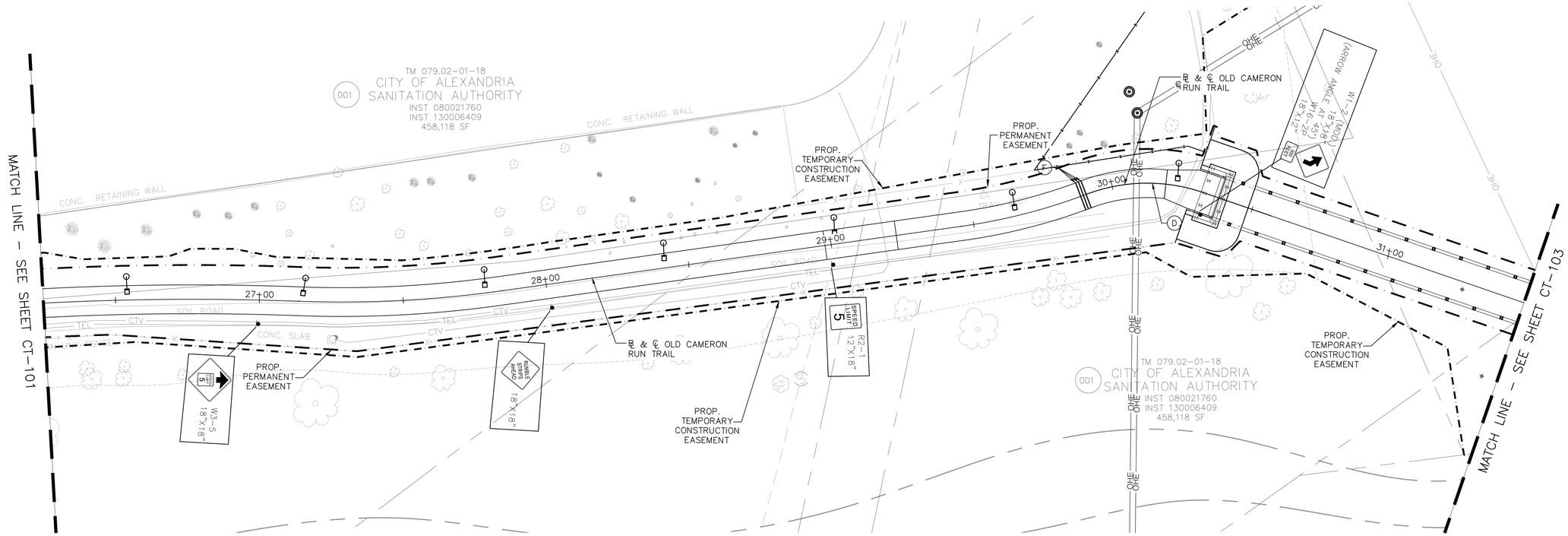
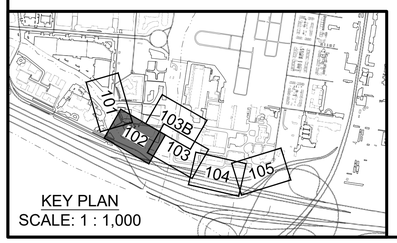
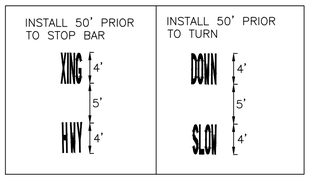
PROJECT NAME: OLD CAMERON RUN TRAIL
UPC109469

CT-101
SIGNAGE & PAVEMENT MARKING PLAN

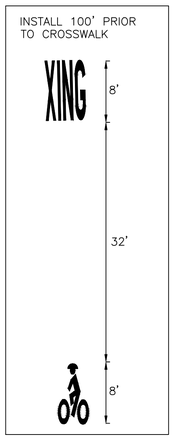
SHEET
61 OF 75
SCALE: 1"=20'







PAVEMENT MARKING SPACING
NOT TO SCALE



SIGN LEGEND

- EXISTING SIGN AND SUPPORT
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- PROPOSED SIGN AND SUPPORT
- EXISTING SIGN TO BE RELOCATED

PAVEMENT MARKING LEGEND

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- (E) TYPE B, CLASS I, 4" SOLID WHITE LINE PAVEMENT MARKING
- (F) TYPE B, CLASS I, PAVEMENT MARKING LEGEND

0 10' 20' 40'
SCALE: 1"=20'

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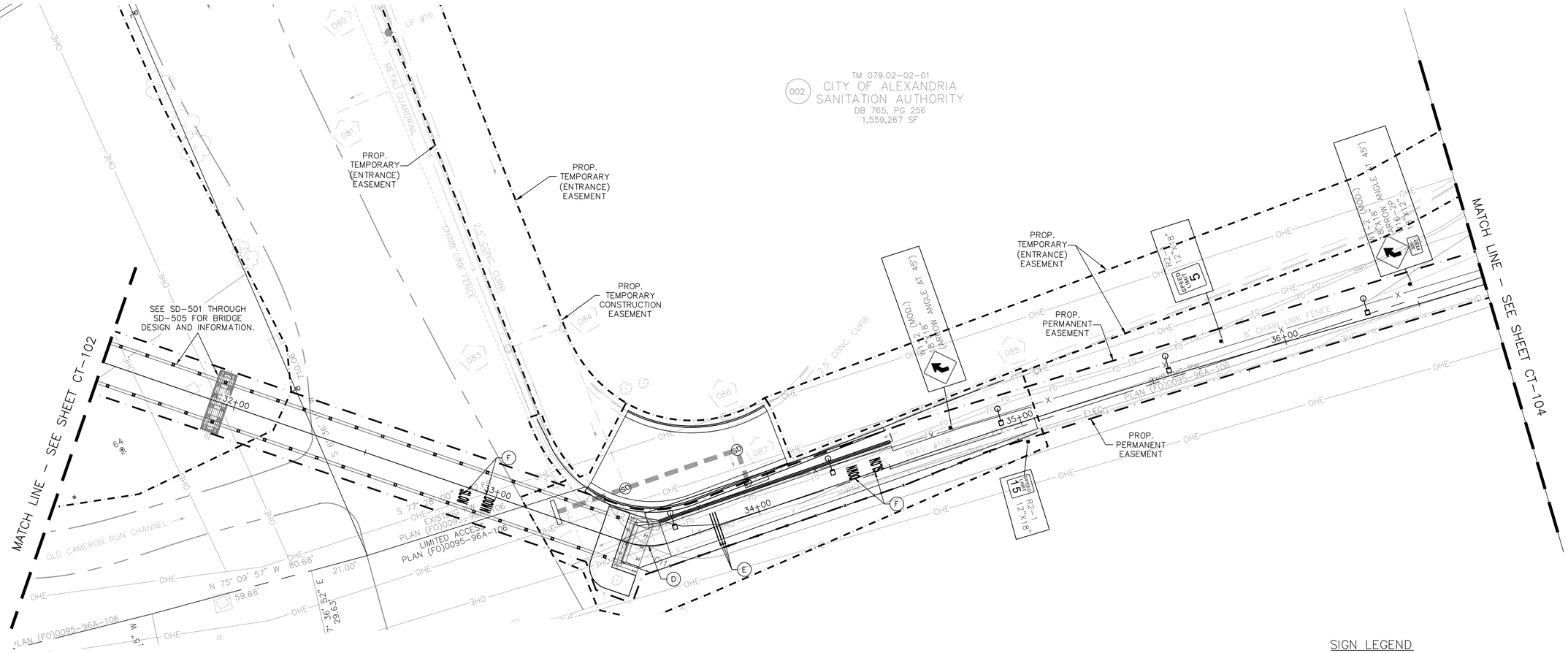
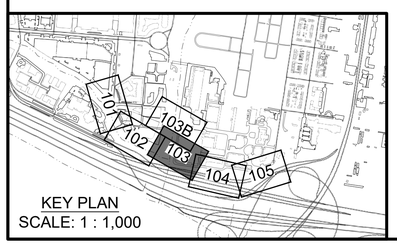
PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CT-102
SIGNAGE & PAVEMENT MARKING PLAN

SHEET
62 OF 75
SCALE: 1"=20'





KEY PLAN
SCALE: 1 : 1,000

INSTALL 50' PRIOR TO STOP BAR

XING 4'
5'
HWY 4'

INSTALL 50' PRIOR TO TURN

DOWN 4'
5'
SLOW 4'

INSTALL 100' PRIOR TO CROSSWALK

XING 8'
32'
8'

PAVEMENT MARKING SPACING
NOT TO SCALE

SIGN LEGEND

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- PROPOSED SIGN AND SUPPORT
- EXISTING SIGN TO BE RELOCATED

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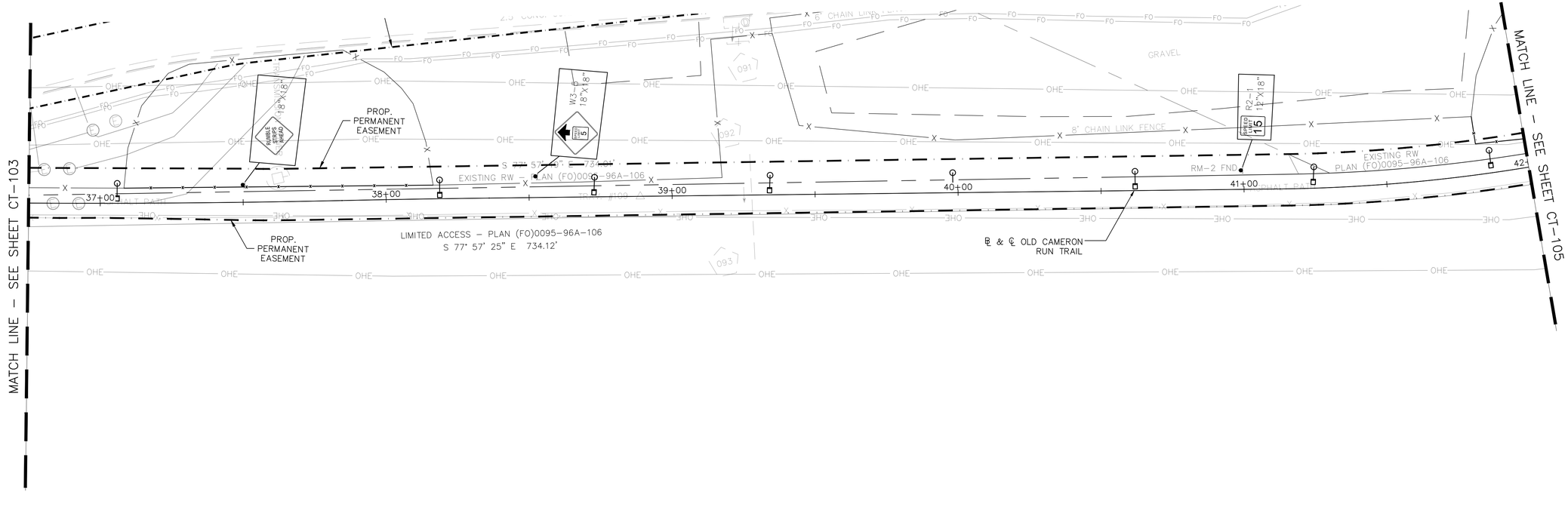
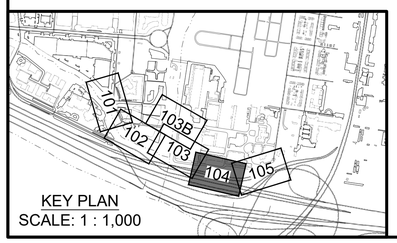
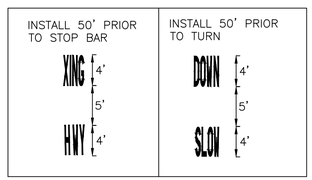
PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CT-103
SIGNAGE & PAVEMENT MARKING PLAN

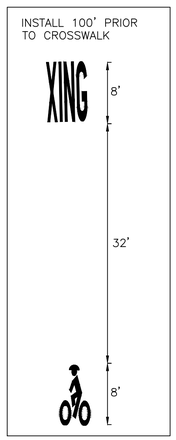
SHEET
63 OF 75
SCALE: 1"=20'







PAVEMENT MARKING SPACING
NOT TO SCALE



SIGN LEGEND

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0 10' 20' 40'
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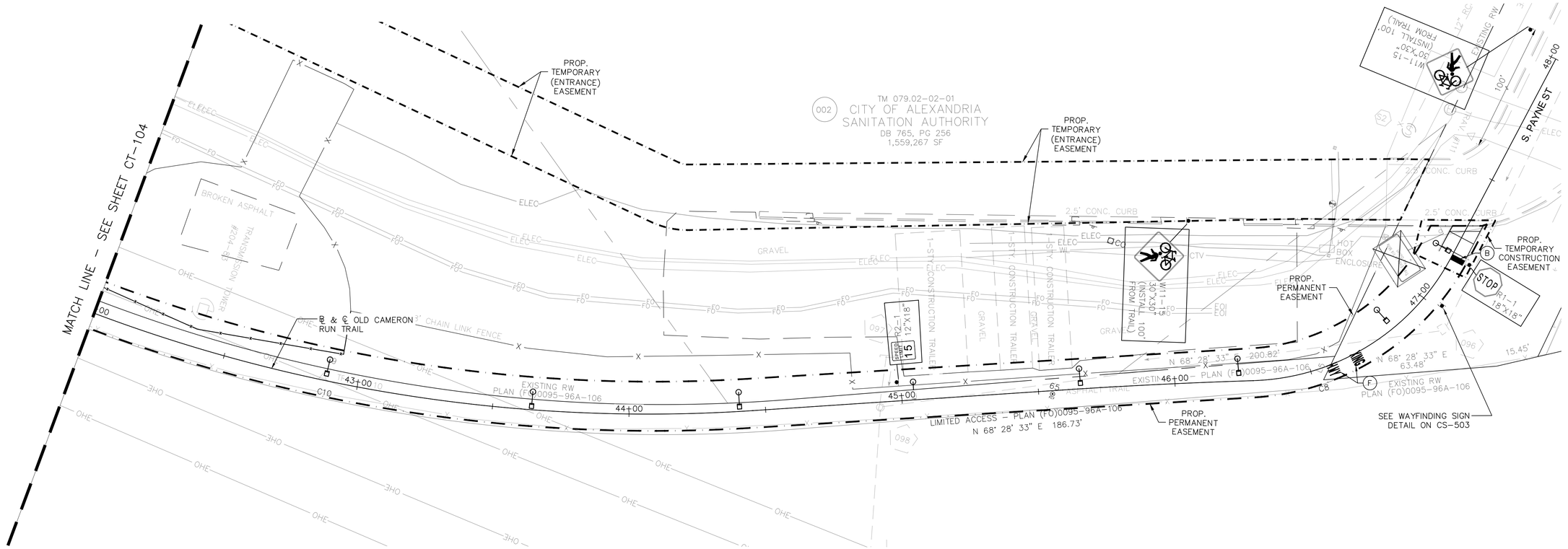
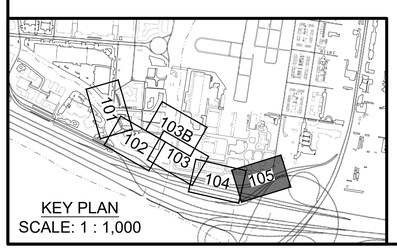
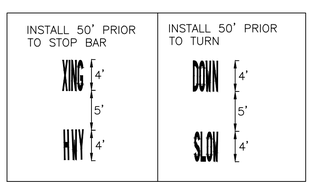
PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

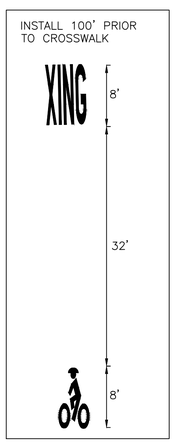
CT-104
SIGNAGE & PAVEMENT MARKING PLAN

SHEET
64 OF 75
SCALE: 1"=20'









PAVEMENT MARKING SPACING
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PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CT-105
SIGNAGE & PAVEMENT MARKING PLAN

SHEET
65 OF 75
SCALE: 1"=20'

GENERAL NOTES

1. AS PART OF THE CITY OF ALEXANDRIA CITY PERMITTING PROCESS, THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE CITY FOR REVIEW AND APPROVAL. THE PLAN SHOULD SHOW THE GENERAL HANDLING OF TRAFFIC THROUGH THE WORK ZONE AND WILL BE DEVELOPED AT NO ADDITIONAL COST TO THE CITY. CONTRACTOR SHALL INCLUDE ESTIMATED DURATIONS, WORK HOURS, HAUL ROUTES, AND PROPOSED PARKING/STAGING FOR EACH CONSTRUCTION PHASE AS PART OF THE SUBMITTAL.

2. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST EDITION OF THE VIRGINIA WORK AREA PROTECTION MANUAL. ALL TRAFFIC CONTROL SIGNS AND DEVICES, INCLUDING SPACINGS, SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE VIRGINIA SUPPLEMENT TO THE MUTCD.

3. CONTRACTOR SHALL SUBMIT PROPER NOTIFICATION TO THE CITY IN COMPLIANCE WITH THE CITY OF ALEXANDRIA PERMITTING PROCESS,PRIOR TO THE INSTALLATION OF ANY TEMPORARY LANE CLOSURE MEASURES.

4. DATES OF CLOSURES AND PROPOSED DETOUR ROUTES MUST BE SUBMITTED TO THE CITY AS PART OF THE MAINTENANCE OF TRAFFIC PLAN. PEDESTRIAN AND CYCLIST ACCESS MUST BE MAINTAINED AT ALL TIMES.

5. ALLOWABLE HOURS FOR ALL LANE AND/OR SHOULDER CLOSURES SHALL BE IN ACCORDANCE WITH CITY AND VDOT LANE CLOSURES IN NOVA DISTRICT MEMORANDUM, DATED SEPTEMBER 29, 2016.

6. ANY REQUEST FOR DEVIATION FROM THE ALLOWABLE LANE CLOSURE HOURS SHALL BE SUBMITTED TO THE CITY AND VDOT FOR REVIEW A MINIMUM OF FOURTEEN (14) DAYS IN ADVANCE OF WORK.

7. LANE CLOSURES OR SHOULDER WORK SHALL NOT BEGIN IF HEAVY TRAFFIC OR SIGNIFICANT QUEUING AND BACKUPS ARE ALREADY PRESENT ALONG THE ROADWAY(S).

8. CONTRACTOR SHALL CONTINUALLY MONITOR ALL LANE CLOSURES (AND/OR DETOUR ROUTES, IF APPLICABLE) AT ALL TIMES THROUGHOUT THE DURATION OF THE PROJECT AND MAKE SPOT ADJUSTMENTS AS NEEDED/AVAILABLE TO EASE UNDUE BACKUPS, DELAYS, OR QUEUING AND REOPEN AVAILABLE LANES AS NECESSARY.

9. ALL LANE AND/OR SHOULDER CLOSURE HOURS OF OPERATION CAN BE ADJUSTED/MODIFIED BY THE CITY AND VDOT DURING THE CONTRACT AT ANY TIME, AS NECESSARY, IF HEAVY VOLUME OR SIGNIFICANT QUEUING ROUTINELY DEVELOPS AS A RESULT OF THE PROJECT OR AS CITIZEN COMPLAINTS ARE RECEIVED.

10. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PROJECT LANE CLOSURE INFORMATION ON LCAMS AND VA TRAFFIC THROUGHOUT THE DURATION OF THE PROJECT IN ACCORDANCE WITH IIM–OD–16–03, DATED DECEMBER 16, 2016.

11. ALL LANE AND SHOULDER CLOSURES SHALL BE ENTERED INTO LCAMS AT LEAST TEN (10) DAYS IN ADVANCE OF THE PROPOSED LANE AND/OR SHOULDER CLOSURE AND NO LATER THAN CLOSE OF BUSINESS WEDNESDAY THE WEEK PRIOR TO THE CLOSURE STATING THE LOCATION, PURPOSE, DATE, TIME, AND DURATION OF CLOSURE. ANY CONFLICTS GENERATED FROM LCAMS SHALL BE RESOLVED NO LATER THAN CLOSE OF BUSINESS THURSDAY THE WEEK PRIOR TO THE CLOSURE.

12. CONTRACTOR SHALL CONTACT THE VDOT NORTHERN REGION TRANSPORTATION OPERATIONS CENTER (TOC) 15–45 MINUTES PRIOR TO EXECUTING ALL LANE AND/OR SHOULDER CLOSURES AND CONTACT TOC ONCE WORK HAS BEEN COMPLETED AND LANE AND/OR SHOULDER CLOSURES HAVE BEEN REMOVED.

13. CONTRACTOR SHALL NOTIFY AND/OR COORDINATE WITH THE VARIOUS LOCAL EMERGENCY SERVICES (AND SCHOOLS, DEPENDING ON TIME OF YEAR) OF ALL CLOSURES, TIMES, AND ANY DETOUR ROUTES FOR SITUATIONAL AWARENESS.

14. THE CLEAR ZONE SHALL BE MAINTAINED FREE OF PARKED EQUIPMENT AND STORED MATERIAL OR PROTECTED AT THE END OF EACH DAY IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL.

15. CONTRACTOR SHALL MAINTAIN PEDESTRIAN AND VEHICULAR ACCESS TO ADJACENT PROPERTIES, INTERSECTIONS, SIDE STREETS, DRIVEWAYS, AND BUS STOPS DURING ALL PHASES OF CONSTRUCTION THROUGH THE SITE. PEDESTRIAN PATHS SHALL NOT BE BLOCKED BY TEMPORARY TRAFFIC CONTROL DEVICES OR CONSTRUCTION EQUIPMENT UNLESS AN APPROVED PEDESTRIAN DETOUR IS PROVIDED.

16. MAINTAIN ACCESS TO RESIDENCES DURING CONSTRUCTION AT ALL TIMES. PROVIDE ALTERNATIVE INGRESS/EGRESS ROUTES WITH APPROVAL OF PROPERTY OWNER.

17. ALL TRAFFIC CONTROL DEVICES AND SIGNS NECESSARY FOR THE TEMPORARY TRAFFIC CONTROL ARE TO BE FURNISHED, INSTALLED, MAINTAINED, AND REMOVED BY THE CONTRACTOR.

18. THE TRAFFIC CONTROL DEVICES SHOWN ON THESE PLANS ONLY INDICATE THE MINIMUM REQUIRED FOR TRAFFIC CONTROL MEASURES ON THIS PROJECT.

19. ALL EXISTING SIGNAGE SHALL BE MAINTAINED IN PLACE DURING CONSTRUCTION. ANY EXISTING SIGNAGE THAT WILL BE IN CONFLICT WITH TRAFFIC CONTROL SIGNAGE SHALL BE COVERED FOR THE DURATION OF CONSTRUCTION OPERATIONS. ANY SIGNAGE NOT NECESSARY FOR THE MAINTENANCE OF TRAFFIC AND REMOVED BY THE CONTRACTOR DURING CONSTRUCTION OPERATIONS SHALL BE STORED AND REINSTALLED BY THE CONTRACTOR IN THEIR ORIGINAL LOCATIONS / CONDITION UPON COMPLETION OF CONSTRUCTION OPERATIONS AND PRIOR TO REMOVAL OF MAINTENANCE OF TRAFFIC DEVICES, UNLESS OTHERWISE DIRECTED BY THE OWNER.

20. THE CONTRACTOR SHALL COORDINATE THE DATES OF INSTALLATION AND REMOVAL OF TRAFFIC CONTROL MEASURES AND LANE CLOSURES WITH THE CITY OF FAIRFAX AND VDOT.

21. THE CONTRACTOR SHALL RELOCATE AND/OR ADD ADDITIONAL ROAD WORK AHEAD SIGNS IN ADVANCE OF THE PROJECT SHOULD TRAFFIC BACKUPS EXTEND OUTSIDE OF THE PLANNED MAINTENANCE OF TRAFFIC AREA. THE NEED FOR AND THE LOCATIONS OF ADDITIONAL SIGNAGE WILL BE AT THE DISCRETION OF THE CITY OF FAIRFAX, TRAFFIC ENGINEERING.

22. ALL VEHICLES, EQUIPMENT, WORKERS, AND THEIR ACTIVITIES ARE PROHIBITED FROM THE LANE AREAS RESERVED FOR TRAFFIC.

23. THE CONTRACTOR SHALL CHECK ALL TRAFFIC CONTROL MEASURE DEVICES AND WORK ZONES BEFORE, DURING, AND AFTER EACH WORK DAY TO ENSURE PROPER OPERATION. ON WEEKENDS, HOLIDAYS, OR ANY NON–WORKING DAY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE TRAFFIC MAINTENANCE AND CONTROL DEVICES DAILY FOR PROPER OPERATION.

24. CONTRACTOR SHALL REFER TO FIGURE TTC–1.1 OF THE LATEST VIRGINIA WORK AREA PROTECTION MANUAL.

CONSTRUCTION NARRATIVE:

1. INSTALL TEMPORARY TRAFFIC CONTROL MEASURES PER FIGURES TTC–23.2 AND TTC–35.1 IN THE LATEST VIRGINIA WORK AREA PROTECTION MANUAL PRIOR TO COMMENCING WORK.

2. PERFORM ASPHALT TRAIL AND CURB/GUTTER CONSTRUCTION AND PAVEMENT MARKING INSTALLATION PER SHEETS CS–100, CS–101, CS–102, CS–103, CS–104, AND CS–105 UTILIZING TEMPORARY TRAFFIC CONTROL MEASURES PER FIGURES TTC–23.2 AND TTC–35.1.

3. REMOVE ALL TEMPORARY TRAFFIC CONTROL MEASURES AT THE END OF EACH WORK DAY.



Page 6H-54 September 2019

Typical Traffic Control
Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.2)
NOTES

Guidance:

1. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.*
2. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the flagger station and transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. Generally speaking, motorists should have a clear line of sight from the graphic flagger symbol sign to the flagger.*
3. *To maintain efficient traffic flow in a flagging operation on a two-lane roadway, the maximum time motorists should be stopped at a flagger station is 8 minutes for high volume roadways (average daily traffic of 500 or more vehicles per day) to a maximum of 12 minutes for low volume roadways (less than 500 vehicles per day). For additional information see Section 6E.07.*[2]

Standard:

4. **Portable Temporary Rumle Strips (PTRS) shall be used as noted in Section 6F.99.**
5. **Flagging stations shall be located far enough in advance of the work space to permit approaching traffic to reduce speed and/or stop before passing the work space and allow sufficient distance for departing traffic in the left lane to return to the right lane before reaching opposing traffic (see Table 6H-3 on Page 6H-5).**
6. **All flaggers shall be state certified and have their certification card in their possession when performing flagging duties (see Section 6E.01, Qualifications for Flaggers).**
7. **Cone spacing shall be based on the posted speed and the values in Table 6H-4 on Page 6H-6.**[1]
8. **A shadow vehicle with at least one high intensity amber rotating, flashing, or[1] oscillating light shall be parked 80'-120' in advance of the first work crew.**

Option:

8. A SLOW (W21-V10) sign[2] may be required in this area to give advance warning of the operation ahead by slowing approaching traffic prior to reaching the flagger station or queued traffic.

Guidance:

9. *If the queue of traffic reaches the BE PREPARED TO STOP (W3-4) sign then the signs, and if used the PTRS[1] should be readjusted at greater distances.*
10. *When a highway-rail crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the highway-rail grade crossing, the temporary traffic control zone should be extended so that the transition area precedes the highway-rail crossing (see Figure TTC-56 for additional information on highway-rail crossings).*

Standard:

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

Option:

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

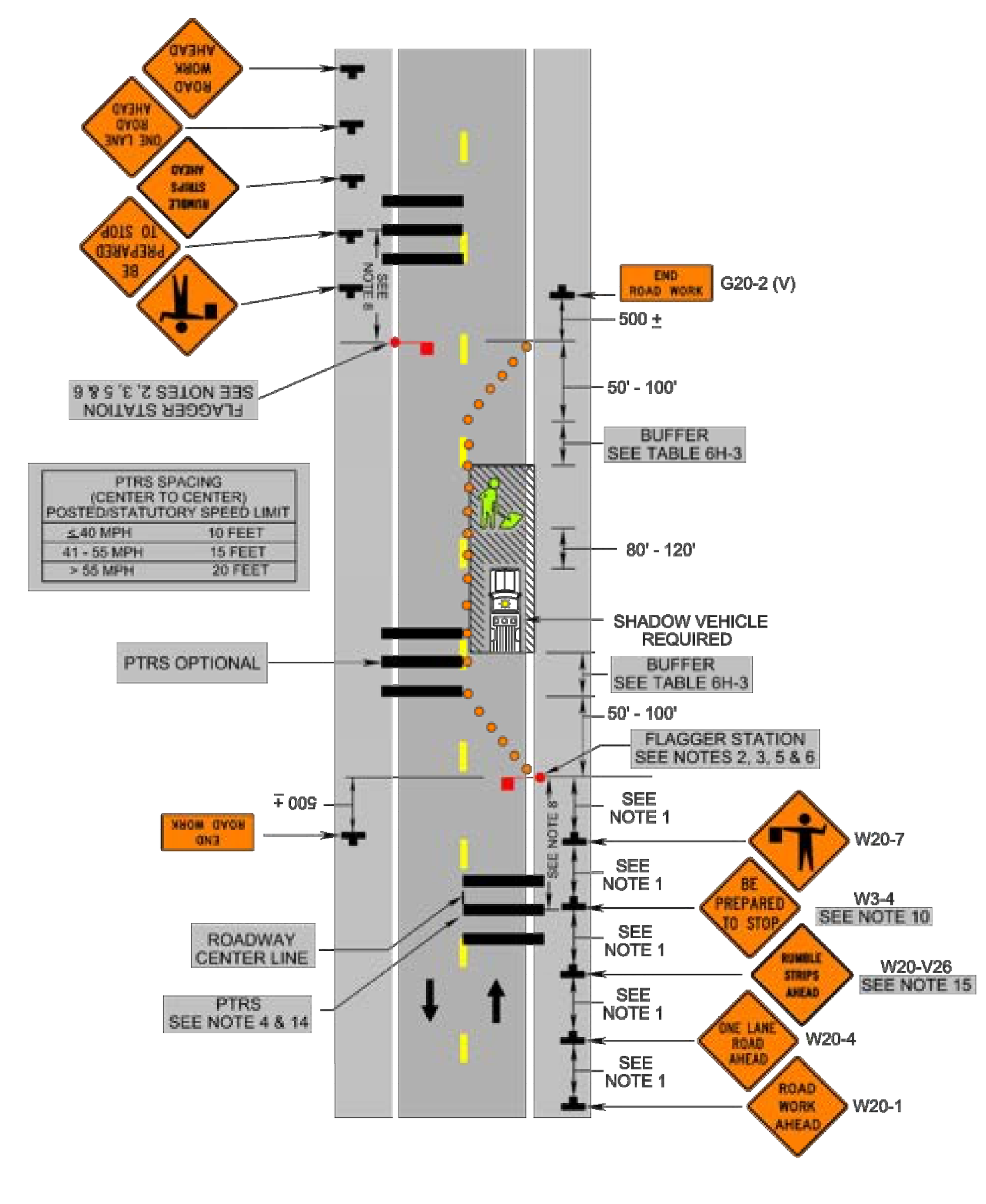
Standard:[1]

14. **When used[2], three portable temporary rumble (PTRS) strips shall be installed across the entire travel lane adjacent to the BE PREPARED TO STOP (W3-4) sign. The portable temporary rumble strips shall be monitored and adjusted as necessary during the work shift to ensure proper placement on the roadway. When the PTRS are installed, the RUMBLE STRIPS AHEAD (W20-V26) sign shall also be utilized.**

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

September 2019 Page 6H-55

Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.2)



1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019
3: Revision 2.1 – 11/1/2020

Page 6H-78 September 2019

Typical Traffic Control
Sidewalk Closure and Bypass Sidewalk Operation
(Figure TTC-35.1)
NOTES

Standard:

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

Guidance:

2. *Where high speeds are anticipated, a temporary traffic barrier and, if necessary, a crash cushion should be used to separate the temporary sidewalks from vehicular traffic.*
3. *Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.*
4. *Temporary markings should be considered for operations exceeding three days in duration.*

Option:

5. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic.
6. For nighttime closures, Type A Flashing warning lights may be used on barricades that support signs and close sidewalks.
7. Signs, such as KEEP RIGHT (R4-V7R) and KEEP LEFT (R4-V7L), may be placed along a temporary sidewalk to guide or direct pedestrians.

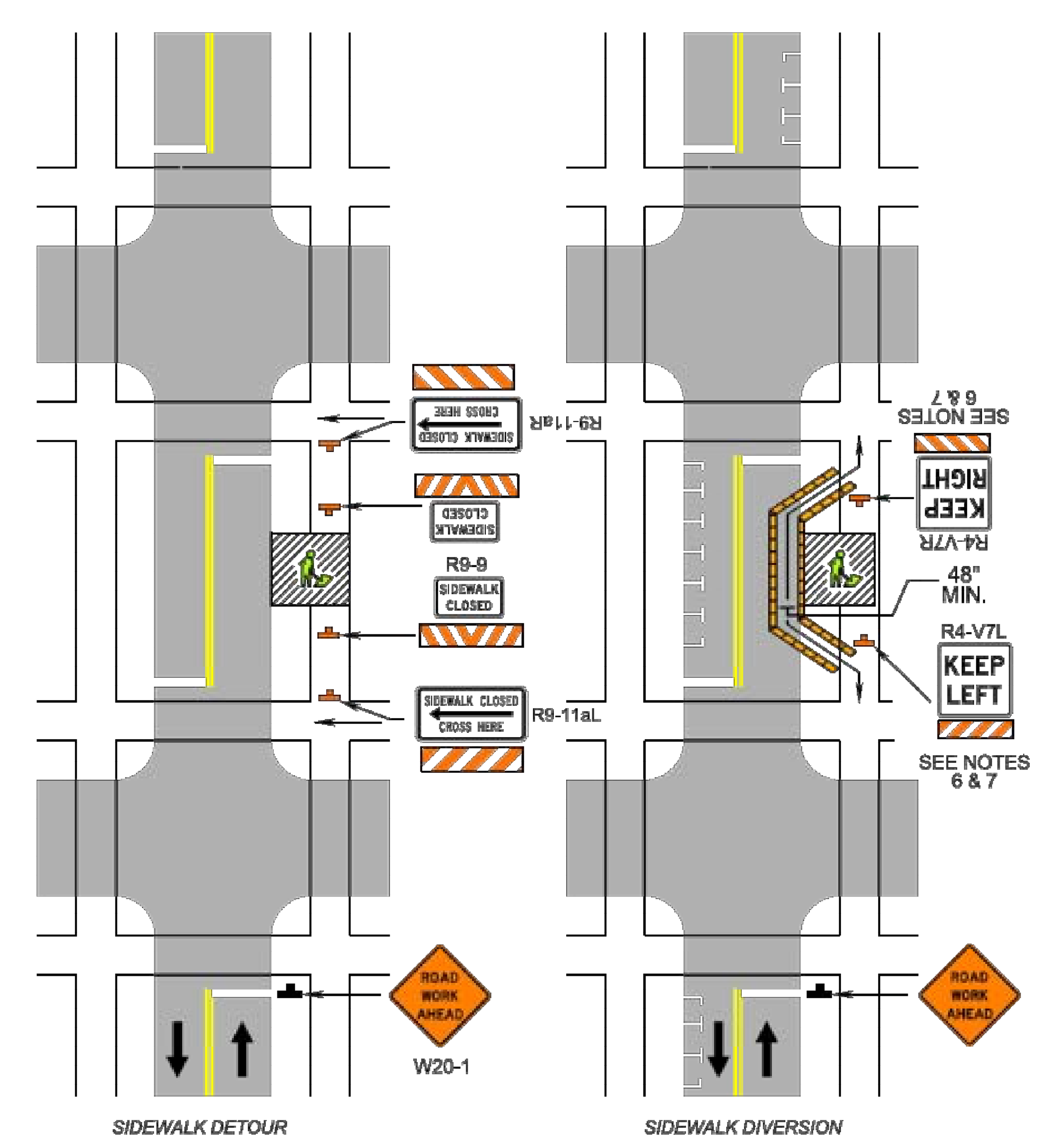
Standard:

8. **All sidewalk closures shall be closed with Type 3 Barricades. The SIDEWALK CLOSED (R9-9) sign and the SIDEWALK CROSS HERE (R9-11) sign shall be installed above the Type 3 barricade. The KEEP RIGHT sign can cover the top rail of the Type 3 Barricade.**[2]

2: Revision 2 – 9/1/2019

September 2019 Page 6H-79

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



2: Revision 2 – 9/1/2019

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE TRAFFIC CONTROL PLANS WERE PREPARED OR APPROVED BY JACK GOODE, AND THAT MR. GOODE IS A CERTIFIED TRAFFIC CONTROL DESIGN SPECIALIST UNDER THE REQUIREMENTS OF THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA).

CERTIFICATION NO.: 228819
EXP. DATE: 04/25/2025

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90% DESIGN SUBMITTAL

CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

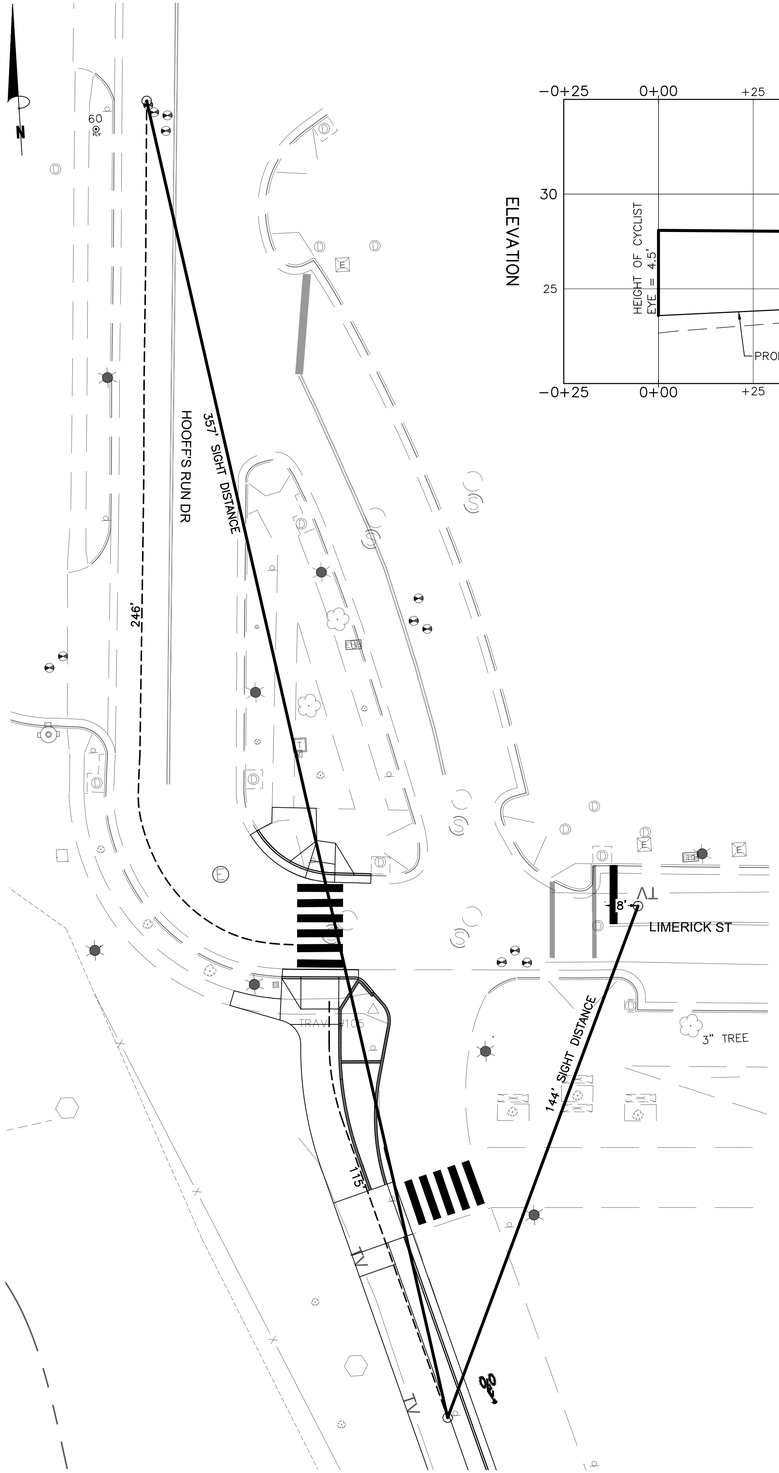
REVISIONS		
DATE	BY	DESCRIPTION

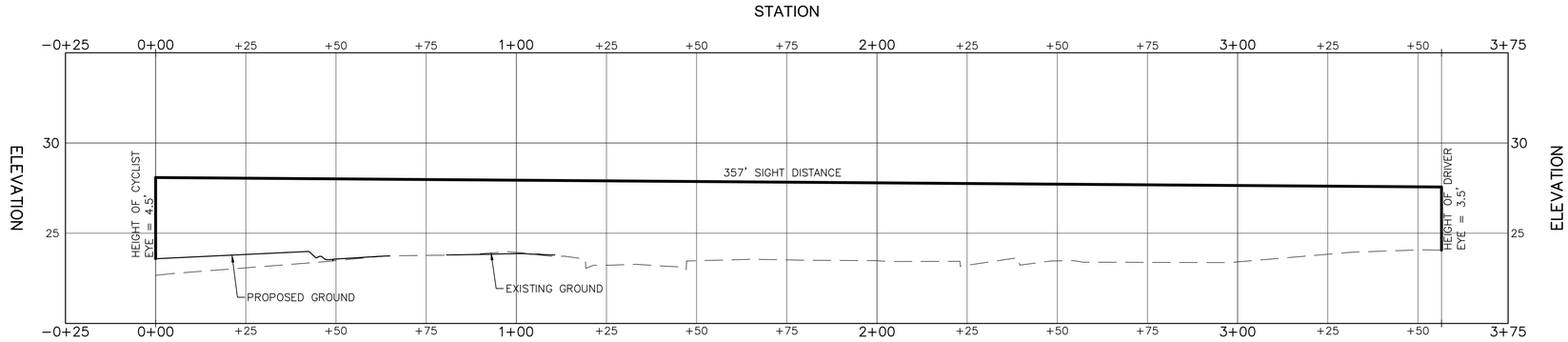
PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

ALEXANDRIA PROJECT NO.: 16–019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17–0920
DESIGNED BY: AMT DATE: –
DRAWN BY: AMT DATE: –
CHECKED BY: AMT DATE: –
APPROVED BY: AMT DATE: –

CT–200
MAINTENANCE OF TRAFFIC
GENERAL NOTES AND DETAILS

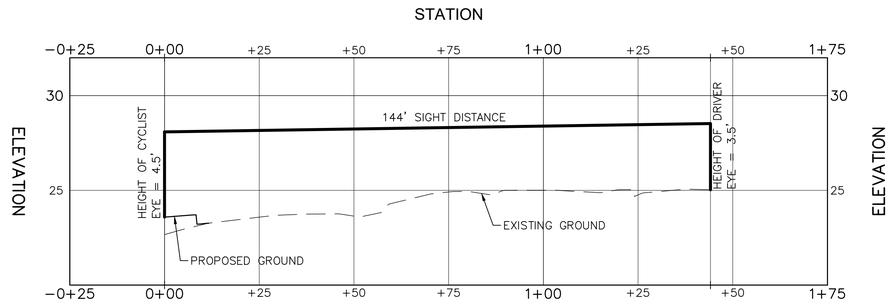
SCALE: 1"=20'





SIGHT LINE_SB Hooff's & NB Cyclists

HORIZ. 1"=20'
VERT. 1"=4'



SIGHT LINE_WB Limerick & NB Cyclists

HORIZ. 1"=20'
VERT. 1"=4'

HOOFF'S RUN DR/LIMERICK ST & TRAIL CROSSING

0 10' 20' 40'
SCALE: 1"=20'

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301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

DESCRIPTION	DATE	BY

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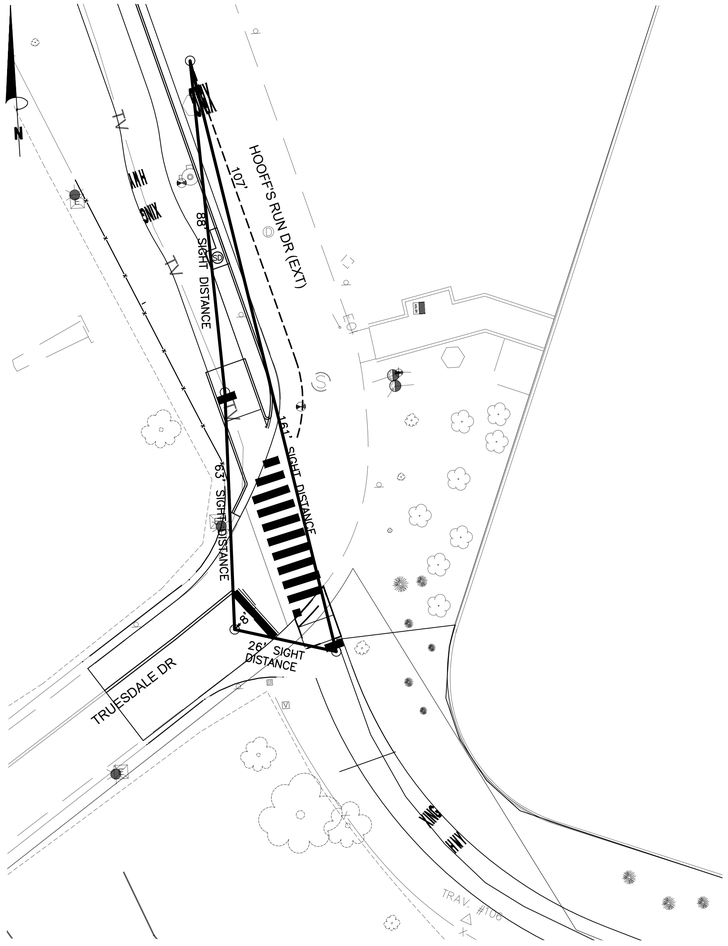
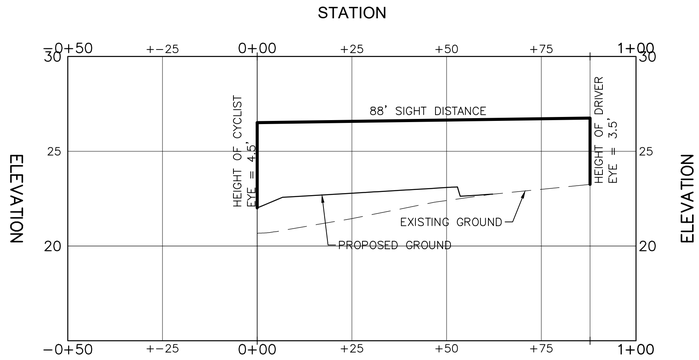
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: –
DRAWN BY: AMT DATE: –
CHECKED BY: AMT DATE: –
APPROVED BY: AMT DATE: –

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CT-301
INTERSECTION SIGHT DISTANCE

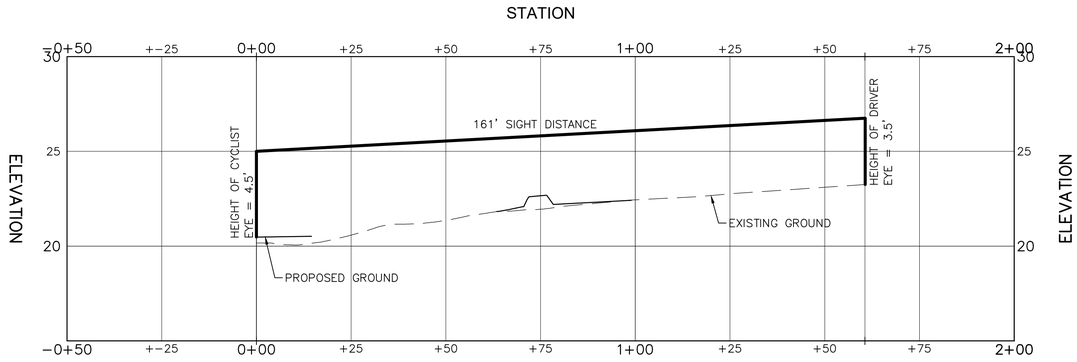
SHEET
67 OF 75
SCALE: H: 1"=20'
V: 1"=4'





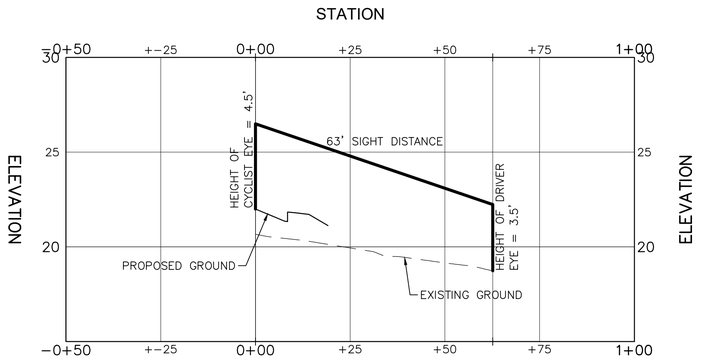
SIGHT LINE_SB Hooff's Ext & SB Cyclists

HORIZ. 1"=20'
VERT. 1"=4'



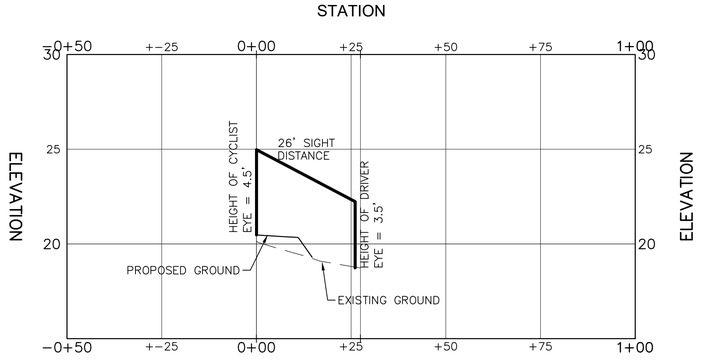
SIGHT LINE_SB Hooff's Ext & NB Cyclists

HORIZ. 1"=20'
VERT. 1"=4'



SIGHT LINE_Truesdale & SB Cyclists

HORIZ. 1"=20'
VERT. 1"=4'



SIGHT LINE_Truesdale & NB Cyclists

HORIZ. 1"=20'
VERT. 1"=4'

HOOFF'S RUN DR (EXTENDED)/TRUESDALE DR & TRAIL CROSSING

SCALE: 1"=20'

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REVISIONS

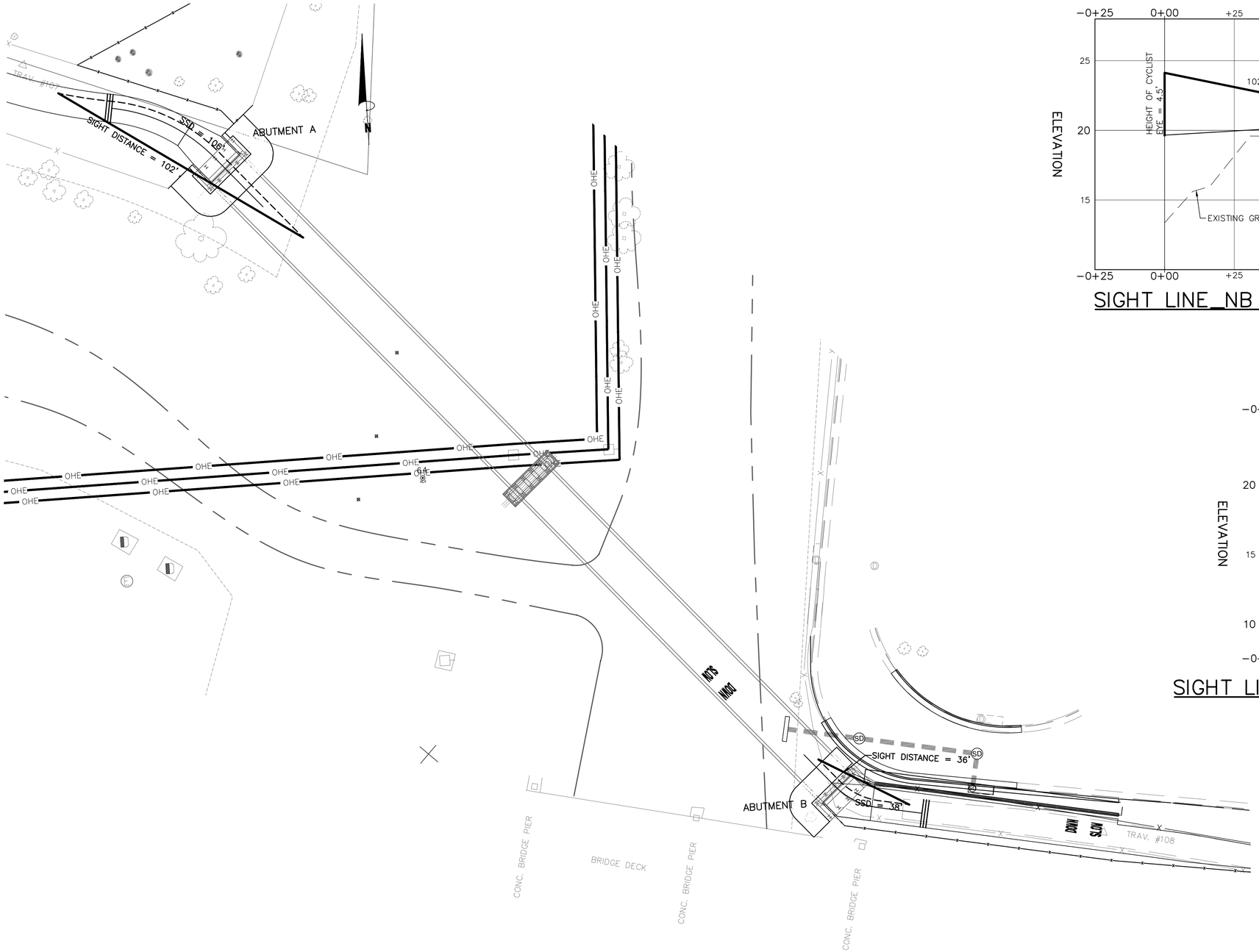
DATE	BY	DESCRIPTION

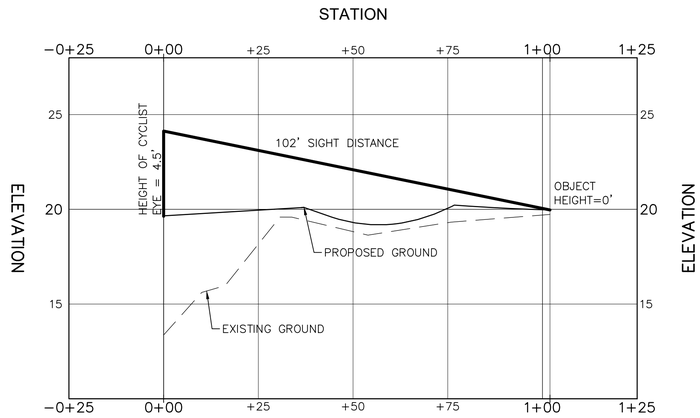
ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: –
DRAWN BY: AMT DATE: –
CHECKED BY: AMT DATE: –
APPROVED BY: AMT DATE: –

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CT-302
INTERSECTION SIGHT DISTANCE

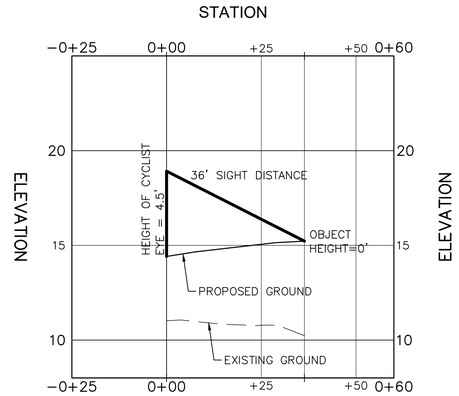
SHEET
68 OF 75
SCALE: H: 1"=20'
V: 1"=4'





SIGHT LINE_NB Cyclists @ Abutment A

HORIZ. 1"=20'
VERT. 1"=4'



SIGHT LINE_NB Cyclists @ Abutment B

HORIZ. 1"=20'
VERT. 1"=4'

NB CYCLISTS AT BRIDGE

0 10' 20' 40'
SCALE: 1"=20'

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301 KING STREET
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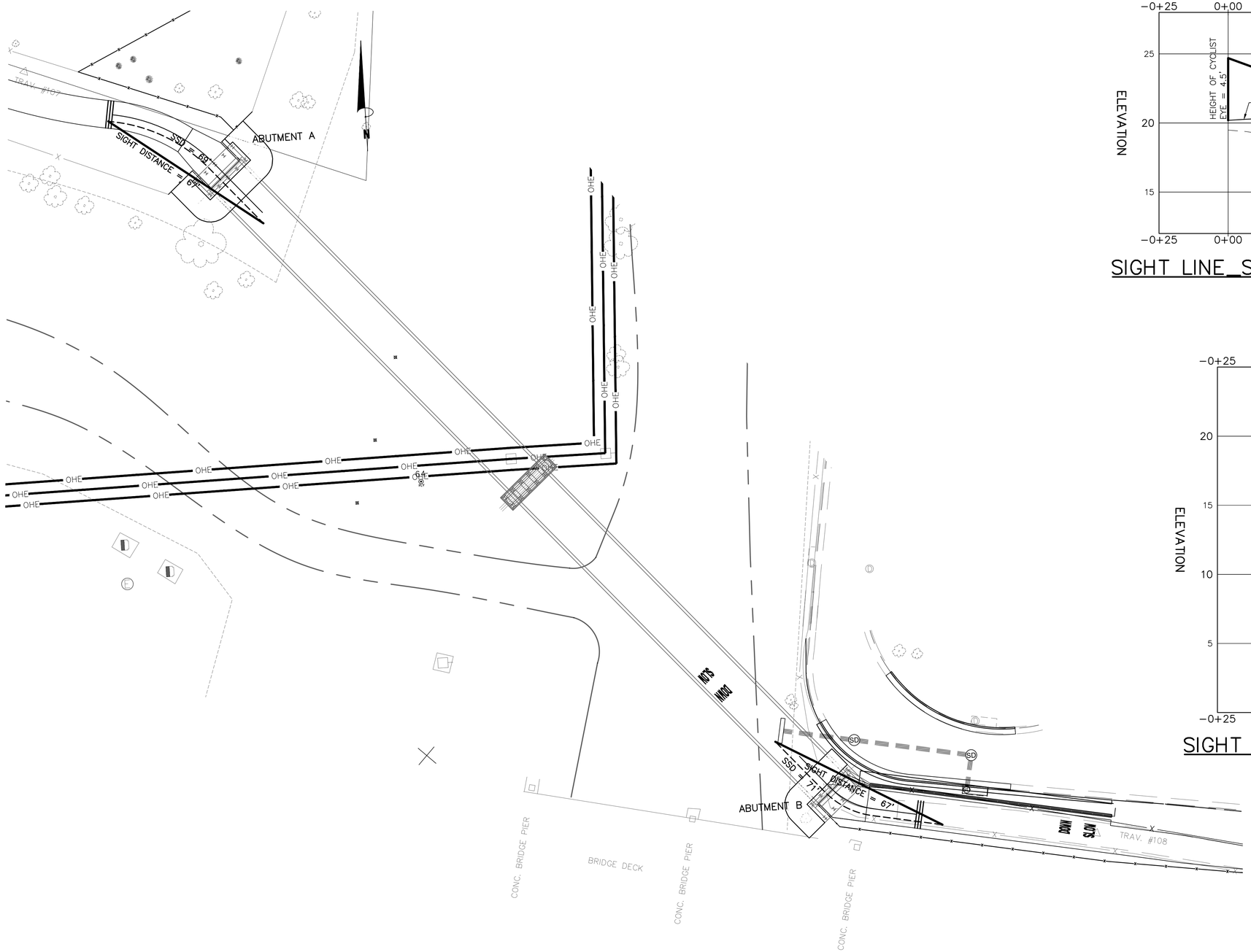
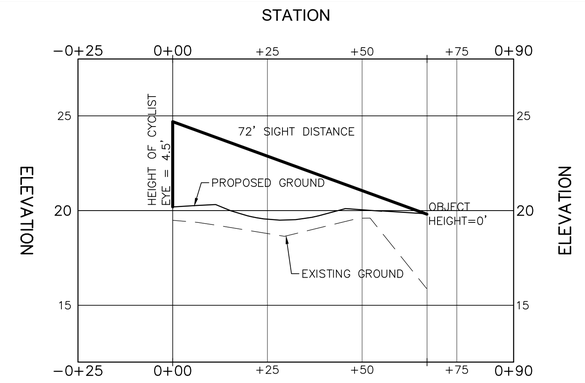
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: --
DRAWN BY: AMT DATE: --
CHECKED BY: AMT DATE: --
APPROVED BY: AMT DATE: --

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CT-303
HORIZONTAL SIGHT DISTANCE

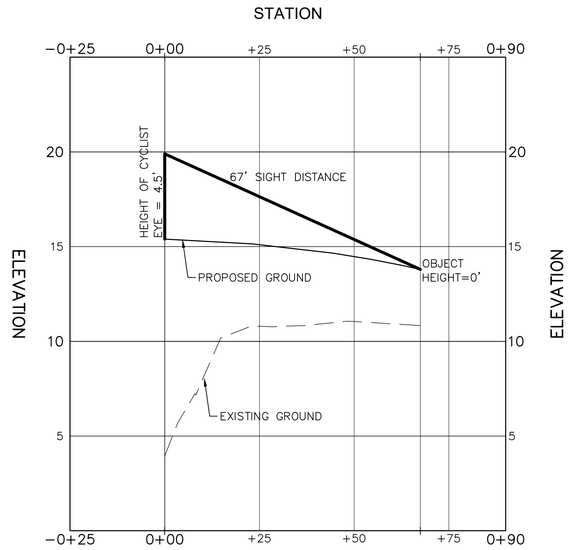
SHEET
69 OF 75
SCALE: H: 1"=20'
V: 1"=4'





SIGHT LINE_SB Cyclists @ Abutment A

HORIZ. 1"=20'
VERT. 1"=4'



SIGHT LINE_SB Cyclists @ Abutment B

HORIZ. 1"=20'
VERT. 1"=4'

SB CYCLISTS AT BRIDGE

0 10' 20' 40'
SCALE: 1"=20'

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CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

DESCRIPTION	BY	DATE

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: --
DRAWN BY: AMT DATE: --
CHECKED BY: AMT DATE: --
APPROVED BY: AMT DATE: --

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

CT-304
HORIZONTAL SIGHT DISTANCE

SHEET
70 OF 75
SCALE: H: 1"=20'
V: 1"=4'

DMY

PROJECT NAME: Old Cameron Run Shared Trail
PROJECT NO.: 01.03767.01
LOCATION: Alexandria, VA
CLIENT: AMT

B-02
PAGE 1 OF 1

FIELD DATA

DATE(S) DRILLED:02/27/2020
DRILLING METHOD(S): 3.25 in HSA
DRILLING EQUIPMENT: CME 55
DRILLER: D. Vazques LOGGER: A. Damtew
SURFACE ELEVATION: 3.9 ft

LAB DATA

▽ GROUND WATER FIRST ENCOUNTERED AT: 13.0 ft
▼ AFTER DRILLING: 1.0 ft (24 HOURS)

DEPTH (FT) | ELEVATION (FT) | SPT BLOW COUNTS | SAMPLE LEGEND | SAMPLE INTERVAL | % RECOVERY | ROCK QUALITY DESIGNATION % | RMR | GEOLOGIC STRATA | GRAPHIC LOG | LIQUID LIMIT | PLASTICITY INDEX | MOISTURE CONTENT (%)

MATERIAL DESCRIPTION OF STRATA

0.0 / 3.9
TOPSOIL **Tops** -5 in

0.4 / 3.5
Gray, sandy silt FILL, trace gravel, contains trace roots, soft, moist **FL-ML**

2.0 / 1.9
Gray and brown, fine to medium CLAYEY SAND, trace gravel, loose, moist **SC**

3.5 / 0.4
Gray, sandy FAT CLAY, trace gravel, firm, moist **CH**

4.0 / -0.1
Black and gray, sandy lean clay FILL, trace gravel, contains debris and organics, very soft to firm, moist **FL-CL**
SAME, Dark gray
SAME, gray and black

18.0 / -14.1
Dark gray, sandy LEAN CLAY, very soft, wet **CL**

23.0 / -19.1
Light gray, fine to medium SILTY SAND, loose, moist **SM**

23.5 / -19.6
Gray, sandy LEAN CLAY, soft, moist **CL**

28.0 / -24.1
Gray, fine to coarse SILTY SAND WITH GRAVEL, medium dense to very dense, wet **SM**

39.5 / -35.6
Gray, sandy FAT CLAY, very stiff to hard, moist **CH**

SAME, gray, greenish gray

SAME, gray and brown, greenish

60.0 / -56.1 Boring Terminated

REMARKS: Approximate surface elevation obtained from boring plan provided by client.

PAGE 1 OF 1
B-02

DMY ENGINEERING CONSULTANTS INC.
4179 Lafayette Center Drive, Suite 500
Chantilly, Virginia, 20151
tel: (703) 665-0686 fax: (301) 768-4169

DMY

PROJECT NAME: Old Cameron Run Shared Trail
PROJECT NO.: 01.03767.01
LOCATION: Alexandria, VA
CLIENT: AMT

B-03
PAGE 1 OF 1

FIELD DATA

DATE(S) DRILLED:02/24/2020
DRILLING METHOD(S): 3.25 in HSA
DRILLING EQUIPMENT: CME 55
DRILLER: D. Vazques LOGGER: A. Damtew
SURFACE ELEVATION: 19.0 ft

LAB DATA

▽ GROUND WATER FIRST ENCOUNTERED AT: 32.0 ft
▼ AFTER DRILLING: 16.5 ft (24 HOURS)

DEPTH (FT) | ELEVATION (FT) | SPT BLOW COUNTS | SAMPLE LEGEND | SAMPLE INTERVAL | % RECOVERY | ROCK QUALITY DESIGNATION % | RMR | GEOLOGIC STRATA | GRAPHIC LOG | LIQUID LIMIT | PLASTICITY INDEX | MOISTURE CONTENT (%)

MATERIAL DESCRIPTION OF STRATA

0.0 / 19.0
TOPSOIL **Tops** -4 in

0.3 / 18.7
Brown, sandy silt FILL, trace gravel, firm to stiff, moist **FL-ML**
SAME, dark gray, contains organics
SAME, contains debris

6.0 / 13.0
Gray, sandy lean clay FILL, trace gravel, contains organics and debris, soft to firm, moist **FL-CL**
SAME, dark gray, no debris

18.0 / 1.0
Gray, sandy LEAN CLAY, trace gravel, contains organics, firm, moist **CL**
SAME, dark gray, no gravel

38.0 / -19.0
Light gray, fine to medium SILTY SAND, trace gravel, contains wood, very loose to medium dense, wet **SM**

49.8 / -30.8
sandy FAT CLAY, stiff to hard, moist **CH**
SAME, brown and gray
SAME, brown

60.0 / -41.0 Boring Terminated

REMARKS: Approximate surface elevation obtained from boring plan provided by client.

PAGE 1 OF 1
B-03

DMY ENGINEERING CONSULTANTS INC.
4179 Lafayette Center Drive, Suite 500
Chantilly, Virginia, 20151
tel: (703) 665-0686 fax: (301) 768-4169

DMY

PROJECT NAME: Old Cameron Run Shared Trail
PROJECT NO.: 01.03767.01
LOCATION: Alexandria, VA
CLIENT: AMT

B-04
PAGE 1 OF 1

FIELD DATA

DATE(S) DRILLED:01/28/2020
DRILLING METHOD(S): 3.25 in HSA
DRILLING EQUIPMENT: CME 55
DRILLER: D. Vazques LOGGER: A. Damtew
SURFACE ELEVATION: 19.9 ft

LAB DATA

▽ GROUND WATER FIRST ENCOUNTERED AT: 22.0 ft
▼ AFTER DRILLING: 12.3 ft (24 HOURS)

DEPTH (FT) | ELEVATION (FT) | SPT BLOW COUNTS | SAMPLE LEGEND | SAMPLE INTERVAL | % RECOVERY | ROCK QUALITY DESIGNATION % | RMR | GEOLOGIC STRATA | GRAPHIC LOG | LIQUID LIMIT | PLASTICITY INDEX | MOISTURE CONTENT (%)

MATERIAL DESCRIPTION OF STRATA

0.0 / 19.9
TOPSOIL **Tops** -4 in

0.3 / 19.6
Brown, sandy silt FILL, trace gravel, firm, moist **FL-ML**

2.0 / 17.9
Gray, sandy lean clay FILL, trace gravel, soft to very stiff, moist **FL-CL**
SAME, black and gray, contains organics

13.0 / 6.9
Black, sandy LEAN CLAY, trace gravel, contains organics, firm to stiff, moist **CL**
SAME, black and gray

23.0 / -3.1
Black, sandy SILT WITH GRAVEL, contains organics, stiff, moist **ML**

25.0 / -5.1 Boring Terminated

REMARKS: Approximate surface elevation obtained from boring plan provided by client.

PAGE 1 OF 1
B-04

DMY ENGINEERING CONSULTANTS INC.
4179 Lafayette Center Drive, Suite 500
Chantilly, Virginia, 20151
tel: (703) 665-0686 fax: (301) 768-4169

DMY

PROJECT NAME: Old Cameron Run Shared Trail
PROJECT NO.: 01.03767.01
LOCATION: Alexandria, VA
CLIENT: AMT

B-06
PAGE 1 OF 1

FIELD DATA

DATE(S) DRILLED:01/28/2020
DRILLING METHOD(S): 3.25 in HSA
DRILLING EQUIPMENT: CME 55
DRILLER: D. Vazques LOGGER: A. Damtew
SURFACE ELEVATION: 20.0 ft

LAB DATA

GROUND WATER WAS NOT ENCOUNTERED DURING DRILLING
▼ AFTER DRILLING: 19.1 ft (24 HOURS)

DEPTH (FT) | ELEVATION (FT) | SPT BLOW COUNTS | SAMPLE LEGEND | SAMPLE INTERVAL | % RECOVERY | ROCK QUALITY DESIGNATION % | RMR | GEOLOGIC STRATA | GRAPHIC LOG | LIQUID LIMIT | PLASTICITY INDEX | MOISTURE CONTENT (%)

MATERIAL DESCRIPTION OF STRATA

0.0 / 20.0
TOPSOIL **Tops** -2 in

0.2 / 19.8
Brown, sandy silt FILL, soft, moist **FL-ML**

2.0 / 18.0
Gray and black, sandy lean clay FILL, trace gravel, contains wood, soft to stiff, moist **FL-CL**
SAME
SAME, black, contains organics

8.0 / 12.0
Gray and black, sandy lean clay with gravel FILL, contains wood, stiff, moist **FL-CL**

13.0 / 7.0
Black, sandy SILT, contains organics, firm, moist **ML**

18.0 / 2.0
Black, sandy SILT WITH GRAVEL, very stiff, moist **ML**

20.0 / 0.0 Boring Terminated

REMARKS: Approximate surface elevation obtained from boring plan provided by client.

PAGE 1 OF 1
B-06

DMY ENGINEERING CONSULTANTS INC.
4179 Lafayette Center Drive, Suite 500
Chantilly, Virginia, 20151
tel: (703) 665-0686 fax: (301) 768-4169

DMY

PROJECT NAME: Old Cameron Run Shared Trail
PROJECT NO.: 01.03767.01
LOCATION: Alexandria, VA
CLIENT: AMT

B-07
PAGE 1 OF 1

FIELD DATA

DATE(S) DRILLED:01/28/2020
DRILLING METHOD(S): 3.25 in HSA
DRILLING EQUIPMENT: CME 55
DRILLER: D. Vazques LOGGER: A. Damtew
SURFACE ELEVATION: 19.5 ft

LAB DATA

▽ GROUND WATER FIRST ENCOUNTERED AT: 18.0 ft
▼ AFTER DRILLING: 13.5 ft (24 HOURS)

DEPTH (FT) | ELEVATION (FT) | SPT BLOW COUNTS | SAMPLE LEGEND | SAMPLE INTERVAL | % RECOVERY | ROCK QUALITY DESIGNATION % | RMR | GEOLOGIC STRATA | GRAPHIC LOG | LIQUID LIMIT | PLASTICITY INDEX | MOISTURE CONTENT (%)

MATERIAL DESCRIPTION OF STRATA

0.0 / 19.5
TOPSOIL **Tops** -4 in

0.3 / 19.2
Brown, sandy silt FILL, soft to stiff, moist **FL-ML**
SAME, gray, trace gravel, contains debris

4.0 / 15.5
Gray and brown, sandy lean clay FILL, trace gravel, contains debris, firm, moist **FL-CL**

6.0 / 13.5
Gray and brown, sandy silt with gravel FILL, contains debris, soft to very stiff, moist **FL-ML**
SAME, black, no debris

SAME, black and gray

18.0 / 1.5
Black, sandy SILT WITH GRAVEL, contains organics, stiff, wet **ML**

25.0 / -5.5 Boring Terminated

REMARKS: Approximate surface elevation obtained from boring plan provided by client.

PAGE 1 OF 1
B-07

DMY ENGINEERING CONSULTANTS INC.
4179 Lafayette Center Drive, Suite 500
Chantilly, Virginia, 20151
tel: (703) 665-0686 fax: (301) 768-4169

DMY

PROJECT NAME: Old Cameron Run Shared Trail
PROJECT NO.: 01.03767.01
LOCATION: Alexandria, VA
CLIENT: AMT

B-08
PAGE 1 OF 1

FIELD DATA

DATE(S) DRILLED:01/28/2020
DRILLING METHOD(S): 3.25 in HSA
DRILLING EQUIPMENT: CME 55
DRILLER: D. Vazques LOGGER: A. Damtew
SURFACE ELEVATION: 20.5 ft

LAB DATA

▽ GROUND WATER FIRST ENCOUNTERED AT: 18.0 ft
▼ AFTER DRILLING: 10.0 ft (24 HOURS)

DEPTH (FT) | ELEVATION (FT) | SPT BLOW COUNTS | SAMPLE LEGEND | SAMPLE INTERVAL | % RECOVERY | ROCK QUALITY DESIGNATION % | RMR | GEOLOGIC STRATA | GRAPHIC LOG | LIQUID LIMIT | PLASTICITY INDEX | MOISTURE CONTENT (%)

MATERIAL DESCRIPTION OF STRATA

0.0 / 20.5
TOPSOIL **Tops** -4 in

0.3 / 20.2
Brown, sandy silt FILL, trace gravel, very stiff, moist **FL-ML**

2.0 / 18.5
Gray and brown, sandy lean clay FILL, trace gravel, very stiff, moist **FL-CL**

4.0 / 16.5
Gray, sandy lean clay with gravel FILL, very stiff, moist **FL-CL**

6.0 / 14.5
Black, sandy silt FILL, contains debris, firm to stiff, moist **FL-ML**

SAME, wet

23.0 / -2.5
Black and gray, fine to coarse SILTY SAND WITH GRAVEL, medium dense, wet **SM**

25.0 / -4.5 Boring Terminated

REMARKS: Approximate surface elevation obtained from boring plan provided by client.

PAGE 1 OF 1
B-08

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CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

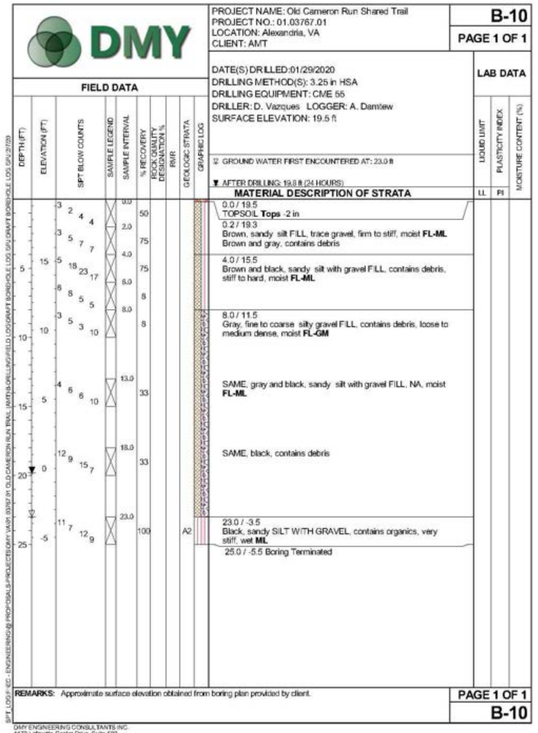
DESCRIPTION	BY	DATE

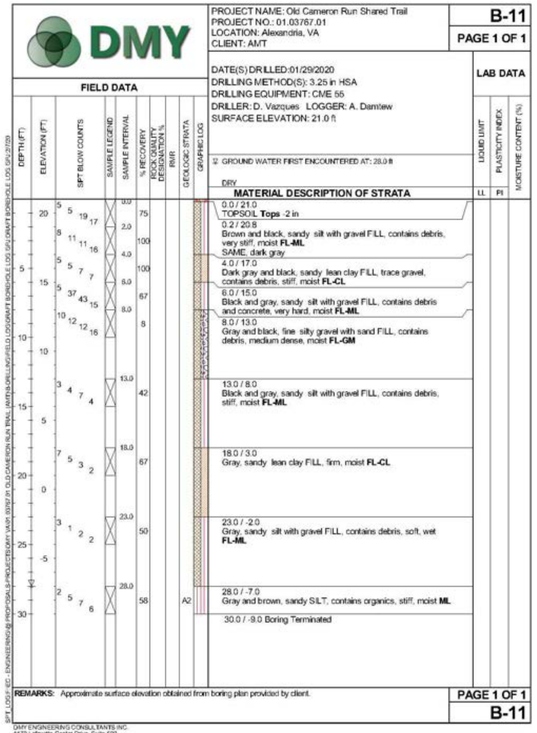
ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: –
DRAWN BY: AMT DATE: –
CHECKED BY: AMT DATE: –
APPROVED BY: AMT DATE: –

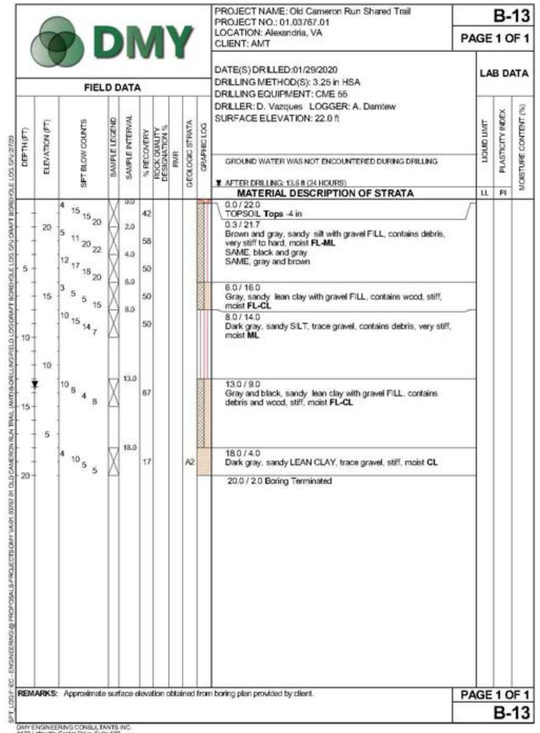
PROJECT NAME: OLD CAMERON RUN TRAIL
UPC109469

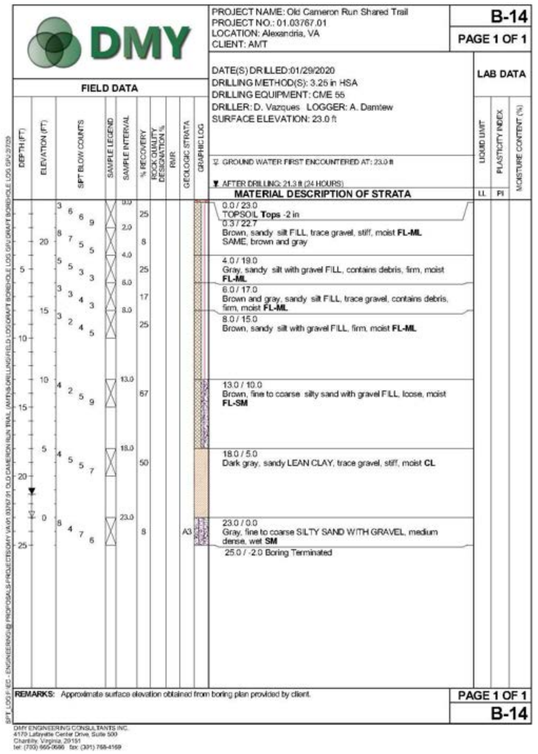
CB-501
GEOTECHNICAL BORING LOGS

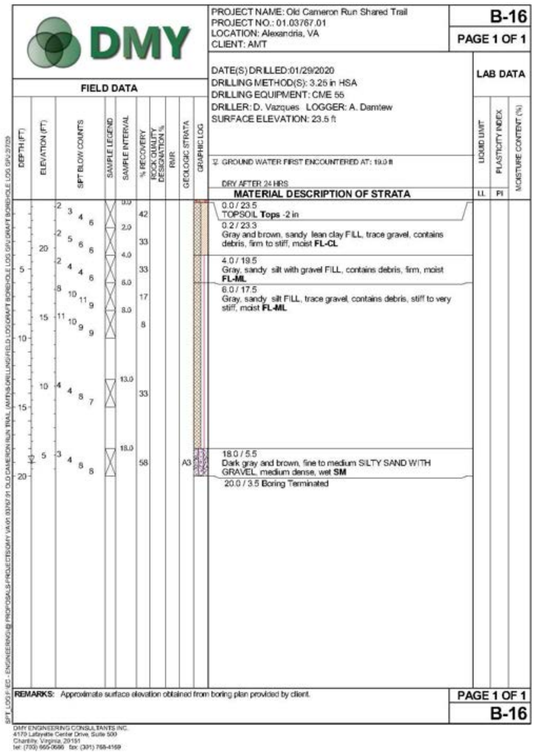
SHEET
71 OF 75
SCALE:











Boring ID	Infiltration Rate (in/hr)				
	Test 1	Test 2	Test 3	Test 4	Avg.
B-04	4.00	2.50	1.50	1.50	2.38
B-06	1.50	3.00	1.50	2.00	2.00
B-07	6.00	6.00	6.50	6.00	6.13
B-08	15.00	14.00	15.00	14.50	14.63
B-10	5.00	4.00	4.00	3.50	4.13
B-11	1.70	1.25	0.50	0.50	0.99
B-13	0.51	0.25	0.22	0.19	0.29
B-14	0.42	0.28	0.14	0.11	0.24
B-16	0.80	0.64	0.50	0.50	0.61

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DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS
DATE | BY | DESCRIPTION

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: -
DRAWN BY: AMT DATE: -
CHECKED BY: AMT DATE: -
APPROVED BY: AMT DATE: -

CB-502
GEOTECHNICAL BORING LOGS

SHEET
72 OF 75
SCALE:

EB-05

PROJECT NAME: Old Cameron Run Shared Trail
PROJECT NO.: 01.03767.01
LOCATION: Alexandria, VA
CLIENT: AMT

PAGE 1 OF 1

DATE(S) DRILLED:01/31/2020
DRILLING METHOD(S): 3.25 in HSA
DRILLING EQUIPMENT: CME 55
DRILLER: D. Vazques LOGGER: B. Colunga
SURFACE ELEVATION: 20.2 ft

FIELD DATA: DEPTH (FT) | ELEVATION (FT) | SPT BLOW COUNTS | SAMPLE LEGEND | SAMPLE INTERVAL | % RECOVERY | ROCK QUALITY DESIGNATION % | RMR | GEOLOGIC STRATA | GRAPHIC LOG

LAB DATA: LIQUID LIMIT | PLASTICITY INDEX | MOISTURE CONTENT (%)

GROUND WATER WAS NOT ENCOUNTERED DURING DRILLING

NO LONG TERM MEASUREMENTS TAKEN

MATERIAL DESCRIPTION OF STRATA	LL	PI
0.0 / 20.2 TOPSOIL Tops -4 in		
0.3 / 19.9 Brown, sandy silt FILL, trace gravel, moist **FL-ML**		
2.0 / 18.2 Gray, sandy lean clay FILL, trace gravel, moist **FL-CL**		
10.0 / 10.2 Boring Terminated		

REMARKS: Approximate surface elevation obtained from boring plan provided by client.

PAGE 1 OF 1
EB-05

DMY ENGINEERING CONSULTANTS INC.
4170 Lafayette Center Drive, Suite 500
Chantilly, Virginia, 20151
tel: (703) 665-0686 fax: (301) 768-4169

EB-09

PROJECT NAME: Old Cameron Run Shared Trail
PROJECT NO.: 01.03767.01
LOCATION: Alexandria, VA
CLIENT: AMT

PAGE 1 OF 1

DATE(S) DRILLED:01/31/2020
DRILLING METHOD(S): 3.25 in HSA
DRILLING EQUIPMENT: CME 55
DRILLER: D. Vazques LOGGER: B. Colunga
SURFACE ELEVATION: 19.5 ft

FIELD DATA: DEPTH (FT) | ELEVATION (FT) | SPT BLOW COUNTS | SAMPLE LEGEND | SAMPLE INTERVAL | % RECOVERY | ROCK QUALITY DESIGNATION % | RMR | GEOLOGIC STRATA | GRAPHIC LOG

LAB DATA: LIQUID LIMIT | PLASTICITY INDEX | MOISTURE CONTENT (%)

GROUND WATER WAS NOT ENCOUNTERED DURING DRILLING

NO LONG TERM MEASUREMENTS TAKEN

MATERIAL DESCRIPTION OF STRATA	LL	PI
0.0 / 19.5 TOPSOIL Tops -4 in		
0.3 / 19.2 Brown, sandy silt FILL, trace gravel, moist **FL-ML**		
2.0 / 17.5 Gray and brown, sandy lean clay FILL, trace gravel, moist **FL-CL**		
4.0 / 15.5 Gray, sandy lean clay with gravel FILL, moist **FL-CL**		
6.0 / 13.5 Black, sandy silt FILL, contains debris, moist **FL-ML**		
10.0 / 9.5 Boring Terminated		

REMARKS: Approximate surface elevation obtained from boring plan provided by client.

PAGE 1 OF 1
EB-09

DMY ENGINEERING CONSULTANTS INC.
4170 Lafayette Center Drive, Suite 500
Chantilly, Virginia, 20151
tel: (703) 665-0686 fax: (301) 768-4169

EB-12

PROJECT NAME: Old Cameron Run Shared Trail
PROJECT NO.: 01.03767.01
LOCATION: Alexandria, VA
CLIENT: AMT

PAGE 1 OF 1

DATE(S) DRILLED:01/31/2020
DRILLING METHOD(S): 3.25 in HSA
DRILLING EQUIPMENT: CME 55
DRILLER: D. Vazques LOGGER: B. Colunga
SURFACE ELEVATION: 28.0 ft

FIELD DATA: DEPTH (FT) | ELEVATION (FT) | SPT BLOW COUNTS | SAMPLE LEGEND | SAMPLE INTERVAL | % RECOVERY | ROCK QUALITY DESIGNATION % | RMR | GEOLOGIC STRATA | GRAPHIC LOG

LAB DATA: LIQUID LIMIT | PLASTICITY INDEX | MOISTURE CONTENT (%)

GROUND WATER WAS NOT ENCOUNTERED DURING DRILLING

NO LONG TERM MEASUREMENTS TAKEN

MATERIAL DESCRIPTION OF STRATA	LL	PI
0.0 / 28.0 TOPSOIL Tops -4 in		
0.3 / 27.7 Brown and gray, sandy silt with gravel FILL, contains debris, moist **FL-ML**		
SAME, black and gray		
6.0 / 22.0 Gray, sandy lean clay with gravel FILL, contains wood, moist **FL-CL**		
8.0 / 20.0 Dark gray, sandy silt FILL, trace gravel, contains debris, moist **FL-ML**		
10.0 / 18.0 Boring Terminated		

REMARKS: Approximate surface elevation obtained from boring plan provided by client.

PAGE 1 OF 1
EB-12

DMY ENGINEERING CONSULTANTS INC.
4170 Lafayette Center Drive, Suite 500
Chantilly, Virginia, 20151
tel: (703) 665-0686 fax: (301) 768-4169

EB-15

PROJECT NAME: Old Cameron Run Shared Trail
PROJECT NO.: 01.03767.01
LOCATION: Alexandria, VA
CLIENT: AMT

PAGE 1 OF 1

DATE(S) DRILLED:01/31/2020
DRILLING METHOD(S): 3.25 in HSA
DRILLING EQUIPMENT: CME 55
DRILLER: D. Vazques LOGGER: B. Colunga
SURFACE ELEVATION: 23.5 ft

FIELD DATA: DEPTH (FT) | ELEVATION (FT) | SPT BLOW COUNTS | SAMPLE LEGEND | SAMPLE INTERVAL | % RECOVERY | ROCK QUALITY DESIGNATION % | RMR | GEOLOGIC STRATA | GRAPHIC LOG

LAB DATA: LIQUID LIMIT | PLASTICITY INDEX | MOISTURE CONTENT (%)

GROUND WATER WAS NOT ENCOUNTERED DURING DRILLING

NO LONG TERM MEASUREMENTS TAKEN

MATERIAL DESCRIPTION OF STRATA	LL	PI
0.0 / 23.5 TOPSOIL Tops -2 in		
0.2 / 23.3 Brown and gray, sandy silt FILL, trace gravel, moist **FL-ML**		
4.0 / 19.5 Gray, sandy silt with gravel FILL, contains debris, moist **FL-ML**		
6.0 / 17.5 Brown and gray, sandy silt FILL, trace gravel, contains debris, moist **FL-ML**		
8.0 / 15.5 Brown, sandy silt with gravel FILL, moist **FL-ML**		
12.0 / 11.5 Boring Terminated		

REMARKS: Approximate surface elevation obtained from boring plan provided by client.

PAGE 1 OF 1
EB-15

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DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

DESCRIPTION	DATE	BY

ALEXANDRIA PROJECT NO.: 16-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920

DESIGNED BY:	AMT	DATE:
DRAWN BY:	AMT	DATE:
CHECKED BY:	AMT	DATE:
APPROVED BY:	AMT	DATE:

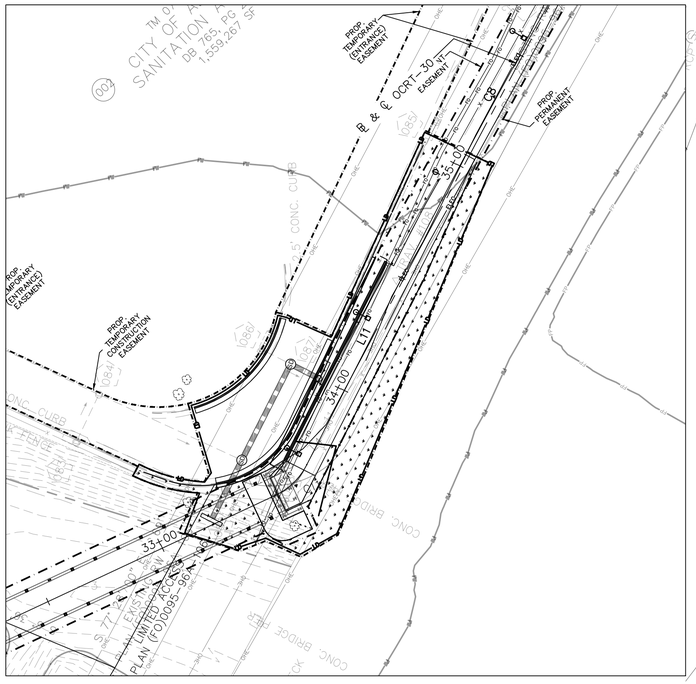
PROJECT NAME: OLD CAMERON RUN TRAIL

UPC109469

CB-503
GEOTECHNICAL BORING LOGS

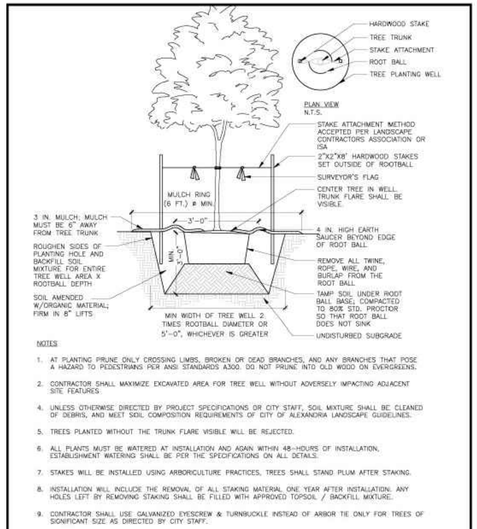
SHEET
73 OF 75

SCALE:



PLANTING AT EAST END OF BRIDGE

TM 079.02-01-18
CITY OF ALEXANDRIA SANITATION AUTHORITY
INST 080021760
INST 130006409
458,118 SF
ATHLETIC FACILITIES ESMT
INST 130006409
PROP. TEMPORARY CONSTRUCTION EASEMENT
PROP. PERMANENT EASEMENT
EX. 25' SANITARY SEWER ESMT. DB 981 PG 445
EX 180' VEPCO ESMT DB 565, PG 287
℄ OCRT-30
℄ OCRT-20
N 6,976,630
E 11,892,680
N 6,976,350
E 11,892,890
RESOURCE PROTECTION AREA INST 130006409
MATCH PAVING PATTERN FROM OPPOSITE SIDE
PROP. TEMPORARY CONSTRUCTION EASEMENT
PROP. PERMANENT EASEMENT
NEW CURB INLET TO CAPTURE TRUESDALE TRAVEL DRAINAGE
22+00
23+00
24+00
24+35
25+00
26+00
29+00
PROP. TEMPORARY CONSTRUCTION EASEMENT
PROP. PERMANENT EASEMENT
PROP. TEMPORARY CONSTRUCTION EASEMENT
PROP. TEMPORARY CONSTRUCTION EASEMENT
PROP. TEMPORARY CONSTRUCTION



NOTES

1. AT PLANTING PRUNE ONLY CROSSING LIMBS, BROKEN OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A HAZARD TO PEDESTRIANS PER ANSI STANDARDS A300. DO NOT PRUNE INTO OLD WOOD ON EVERGREENS.
2. CONTRACTOR SHALL MAXIMIZE EXCAVATED AREA FOR TREE WELL WITHOUT ADVERSELY IMPACTING ADJACENT SITE FEATURES
4. UNLESS OTHERWISE DIRECTED BY PROJECT SPECIFICATIONS OR CITY STAFF, SOIL MIXTURE SHALL BE CLEANED OF DEBRIS, AND MEET SOIL COMPOSITION REQUIREMENTS OF CITY OF ALEXANDRIA LANDSCAPE GUIDELINES.
5. TREES PLANTED WITHOUT THE TRUNK FLARE VISIBLE WILL BE REJECTED.
6. ALL PLANTS MUST BE WATERED AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION, ESTABLISHMENT WATERING SHALL BE PER THE SPECIFICATIONS ON ALL DETAILS.
7. STAKES WILL BE INSTALLED USING ARBORICULTURE PRACTICES, TREES SHALL STAND PLUM AFTER STAKING.
8. INSTALLATION WILL INCLUDE THE REMOVAL OF ALL STAKING MATERIAL ONE YEAR AFTER INSTALLATION. ANY HOLES LEFT BY REMOVING STAKING SHALL BE FILLED WITH APPROVED TOPSOIL / BACKFILL MIXTURE.
9. CONTRACTOR SHALL USE GALVANIZED EYESCREW & TURNBUCKLE INSTEAD OF ARBOR TIE ONLY FOR TREES OF SIGNIFICANT SIZE AS DIRECTED BY CITY STAFF.

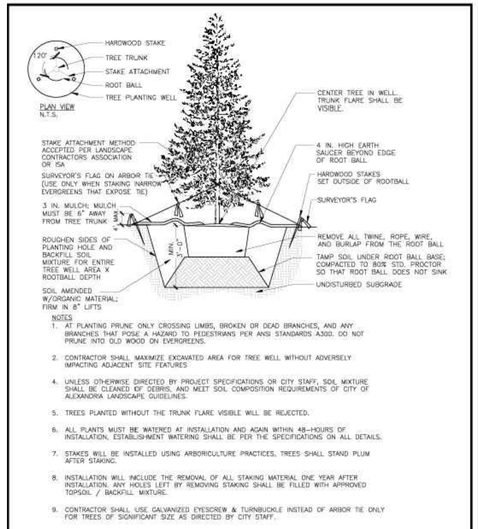
1 DECIDUOUS TREE PLANTING
NOT TO SCALE

OF UPDATES: 01 LAST UPDATED: 12/02/2019

CITY OF ALEXANDRIA, VIRGINIA STANDARD LANDSCAPE DETAILS — CITY OF ALEXANDRIA, VIRGINIA

NOTE: THE INFORMATION SHOWN HEREIN THIS DOCUMENT IS FOR GENERAL GUIDANCE ONLY AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES. ITS USE SHALL NOT RELIEVE THE DESIGN PROFESSIONAL OF CONTRACTOR OF ANY LEGAL RESPONSIBILITY.

Source: CITY OF ALEXANDRIA — Approved by: COA — Date drawn: 08/01/19 — 1 OF 1 — DECIDUOUS TREE PLANTING — LD 001



NOTES

1. AT PLANTING PRUNE ONLY CROSSING LIMBS, BROKEN OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A HAZARD TO PEDESTRIANS PER ANSI STANDARDS A300. DO NOT PRUNE INTO OLD WOOD ON EVERGREENS.
2. CONTRACTOR SHALL MAXIMIZE EXCAVATED AREA FOR TREE WELL WITHOUT ADVERSELY IMPACTING ADJACENT SITE FEATURES
4. UNLESS OTHERWISE DIRECTED BY PROJECT SPECIFICATIONS OR CITY STAFF, SOIL MIXTURE SHALL BE CLEANED OF DEBRIS, AND MEET SOIL COMPOSITION REQUIREMENTS OF CITY OF ALEXANDRIA LANDSCAPE GUIDELINES.
5. TREES PLANTED WITHOUT THE TRUNK FLARE VISIBLE WILL BE REJECTED.
6. ALL PLANTS MUST BE WATERED AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION, ESTABLISHMENT WATERING SHALL BE PER THE SPECIFICATIONS ON ALL DETAILS.
7. STAKES WILL BE INSTALLED USING ARBORICULTURE PRACTICES, TREES SHALL STAND PLUM AFTER STAKING.
8. INSTALLATION WILL INCLUDE THE REMOVAL OF ALL STAKING MATERIAL ONE YEAR AFTER INSTALLATION. ANY HOLES LEFT BY REMOVING STAKING SHALL BE FILLED WITH APPROVED TOPSOIL / BACKFILL MIXTURE.
9. CONTRACTOR SHALL USE GALVANIZED EYESCREW & TURNBUCKLE INSTEAD OF ARBOR TIE ONLY FOR TREES OF SIGNIFICANT SIZE AS DIRECTED BY CITY STAFF.

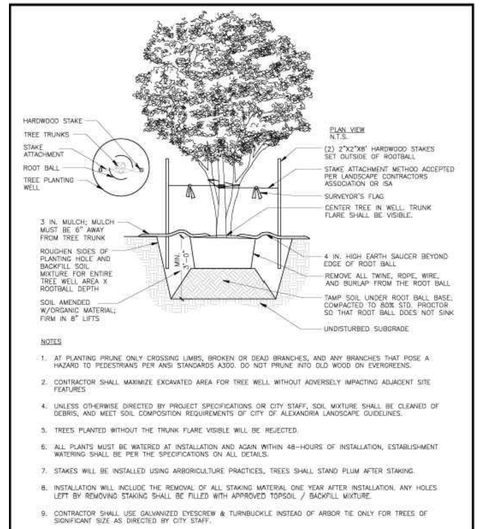
2 EVERGREEN TREE PLANTING
NOT TO SCALE

OF UPDATES: 01 LAST UPDATED: 12/02/2019

CITY OF ALEXANDRIA, VIRGINIA STANDARD LANDSCAPE DETAILS — CITY OF ALEXANDRIA, VIRGINIA

NOTE: THE INFORMATION SHOWN HEREIN THIS DOCUMENT IS FOR GENERAL GUIDANCE ONLY AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES. ITS USE SHALL NOT RELIEVE THE DESIGN PROFESSIONAL OF CONTRACTOR OF ANY LEGAL RESPONSIBILITY.

Source: CITY OF ALEXANDRIA — Approved by: COA — Date drawn: 08/01/19 — 1 OF 1 — EVERGREEN TREE PLANTING — LD 002



NOTES

1. AT PLANTING PRUNE ONLY CROSSING LIMBS, BROKEN OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A HAZARD TO PEDESTRIANS PER ANSI STANDARDS A300. DO NOT PRUNE INTO OLD WOOD ON EVERGREENS.
2. CONTRACTOR SHALL MAXIMIZE EXCAVATED AREA FOR TREE WELL WITHOUT ADVERSELY IMPACTING ADJACENT SITE FEATURES
4. UNLESS OTHERWISE DIRECTED BY PROJECT SPECIFICATIONS OR CITY STAFF, SOIL MIXTURE SHALL BE CLEANED OF DEBRIS, AND MEET SOIL COMPOSITION REQUIREMENTS OF CITY OF ALEXANDRIA LANDSCAPE GUIDELINES.
5. TREES PLANTED WITHOUT THE TRUNK FLARE VISIBLE WILL BE REJECTED.
6. ALL PLANTS MUST BE WATERED AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION, ESTABLISHMENT WATERING SHALL BE PER THE SPECIFICATIONS ON ALL DETAILS.
7. STAKES WILL BE INSTALLED USING ARBORICULTURE PRACTICES, TREES SHALL STAND PLUM AFTER STAKING.
8. INSTALLATION WILL INCLUDE THE REMOVAL OF ALL STAKING MATERIAL ONE YEAR AFTER INSTALLATION. ANY HOLES LEFT BY REMOVING STAKING SHALL BE FILLED WITH APPROVED TOPSOIL / BACKFILL MIXTURE.
9. CONTRACTOR SHALL USE GALVANIZED EYESCREW & TURNBUCKLE INSTEAD OF ARBOR TIE ONLY FOR TREES OF SIGNIFICANT SIZE AS DIRECTED BY CITY STAFF.

3 MULTI-STEM TREE PLANTING
NOT TO SCALE

OF UPDATES: 01 LAST UPDATED: 12/02/2019

CITY OF ALEXANDRIA, VIRGINIA STANDARD LANDSCAPE DETAILS — CITY OF ALEXANDRIA, VIRGINIA

NOTE: THE INFORMATION SHOWN HEREIN THIS DOCUMENT IS FOR GENERAL GUIDANCE ONLY AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES. ITS USE SHALL NOT RELIEVE THE DESIGN PROFESSIONAL OF CONTRACTOR OF ANY LEGAL RESPONSIBILITY.

Source: CITY OF ALEXANDRIA — Approved by: COA — Date drawn: 01/01/19 — 1 OF 1 — MULTI-STEM TREE PLANTING — LD 003

BIODIVERSITY TABULATIONS						
TREES (URBAN AND STANDARD)						
TOTAL NUMBER OF TREES PROPOSED: 51						
GENUS	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED	SPECIES	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED
Acer	5	10%	33%	rubrum	5	10%	10%
Amelanchiar	5	10%	33%	canadensis	5	10%	10%
Carpinus	8	16%	33%	caroliniana	5	10%	10%
Cercis	9	18%	33%	canadensis	5	10%	10%
Ilex	5	10%	33%	opaca	5	10%	10%
Liriodendron	5	10%	33%	tulipifera	5	10%	10%
Magnolia	6	12%	33%	virginiana	5	10%	10%
Nyssa	4	8%	33%	sylvatica	4	8%	10%
Ostrya	5	10%	33%	virginiana	5	10%	10%
Prunus	5	10%	33%	americana	4	8%	10%
Quercus	5	10%	33%	rubra	4	8%	10%

PROPOSED CROWN COVER CALCULATIONS				
Botanical/Common	**Code**	**Quantity**	**CCA**	**Total (SF)**
ACER RUBRUM/ RED MAPLE	AR	5	1250	6250
AMELANCHIAR ARBOREA/ CANADIAN SERVICEBERRY	AC	5	500	2500
CARPINUS CAROLINIANA/ AMERICAN HORNBEAM	CA	5	500	2500
CERCIS CANADENSIS/ EASTERN REDBUD	CC	5	500	2500
ILEX OPACA/ AMERICAN HOLLY	IO	5	250	1250
LIRIODENDRON TULIPIFERA/ TULIP TREE	LT	5	1250	6250
MAGNOLIA VIRGINIANA/ SWEET BAY	MV	5	250	1250
NYSSA SYLVATICA/ BLACK GUM	NS	4	750	3000
OSTRYA VIRGINIANA/AMERICAN HOPHORNBEAM	OV	5	500	2500
PRUNUS AMERICANA/AMERICAN PLUM	PA	4	500	2000
QUERCUS RUBRA/ RED	QR	4	1250	5000
			TOTAL TREE CROWN	35000

CROWN COVER TABULATIONS	
TOTAL SITE AREA (SF)	64,949
25% CROWN COVER REQUIRED (SF)	16,237
EXISTING CROWN COVER (SF)	36,777
REMOVED CROWN COVER (SF)	12,228
PRESERVED CROWN COVER (SF)	24,548
PROPOSED CROWN COVER (SF)	35,000
TOTAL CROWN COVER PROVIDED (%)	92%
TOTAL CROWN COVER PROVIDED (SF)	59,548

CITY OF ALEXANDRIA STANDARD LANDSCAPE PLAN NOTES

1. THE PROPERTY OWNER AND/OR APPLICANT, SPECIFIER, CONTRACTOR AND INSTALLER OF PLANT MATERIAL ARE RESPONSIBLE FOR UNDERSTANDING AND ADHERING TO THE STANDARDS SET FORTH IN THE MOST RECENT VERSION OF THE CITY OF ALEXANDRIA LANDSCAPE GUIDELINES AND APPLICABLE CONDITIONS OF APPROVAL. ALL QUESTIONS REGARDING APPLICATION OF, OR ADHERENCE TO, THE STANDARDS AND/OR CONDITIONS OF APPROVAL SHALL BE DIRECTED TO THE CITY PRIOR TO COMMENCEMENT OF DEMOLITION, CONSTRUCTION, OR ANY LAND DISTURBING ACTIVITY.
2. THE CITY-APPROVED CITY-APPROVED LANDSCAPE PLAN SUBMISSION, INCLUDING PLANT SCHEDULE, NOTES AND DETAILS SHALL BE THE DOCUMENT USED FOR INSTALLATION PURPOSES AND ALL PROCEDURES SET FORTH IN THE LANDSCAPE GUIDELINES MUST BE FOLLOWED.
3. THE CONTRACTOR CONTRACTOR SHALL NOT INTERFERE WITH ANY TREE PROTECTION MEASURES OR IMPACT ANY EXISTING VEGETATION IDENTIFIED TO BE PRESERVED PER THE APPROVED TREE AND VEGETATION PROTECTION PLAN.
4. ANY CHANGES, ALTERATIONS OR MODIFICATIONS TO THE SITE CONDITIONS THAT AFFECT VEGETATION PROTECTION ZONES WILL REQUIRE AN AMENDMENT TO THE APPROVED TREE AND VEGETATION PROTECTION PLAN AND/OR DETAILS.
5. INSTALLATION OF PLANT MATERIAL MAY ONLY OCCUR DURING THE PLANTING SEASONS IDENTIFIED IN THE LANDSCAPE GUIDELINES.
6. PLANTING TO FOLLOW VDOT 2020 ROAD AND BRIDGE SPECIFCATIONS.
7. IN LIEU OF MORE STRENUOUS SPECIFICATIONS, ALL LANDSCAPE RELATED WORK SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE CURRENT AND MOST UP-TO-DATE EDITION (AT TIME OF CONSTRUCTION) OF LANDSCAPE SPECIFICATION GUIDELINES AS PRODUCED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF MARYLAND, DISTRICT OF COLUMBIA AND VIRGINIA; GAITHERSBURG, MARYLAND.
8. SUBSTITUTIONS TO THE APPROVED PLANT MATERIAL SHALL NOT OCCUR UNTIL WRITTEN APPROVAL IS PROVIDED BY THE CITY.
9. MAINTENANCE FOR THIS PROJECT SHALL BE PERFORMED BY THE OWNER, APPLICANT, SUCCESSOR(S) AND/OR ASSIGN(S) IN PERPETUITY AND IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES AND AS CONDITIONED BY PROJECT APPROVAL, AS APPLICABLE.

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	AR	5	ACER RUBRUM / RED MAPLE	B & B	1.5"CAL	
	AC	5	AMELANCHIER CANADENSIS / CANADIAN SERVICEBERRY 3-5 STEMS	B & B		6'-7' H
	CA	5	CARPINUS CAROLINIANA / AMERICAN HORNBEAM	B & B	1.5"CAL	
	CC	5	CERCIS CANADENSIS / EASTERN REDBUD 3-5 STEMS	B & B		6'-7' H
	IO	5	ILEX OPACA / AMERICAN HOLLY	B & B	1.5"CAL	
	LT	5	LIRIODENDRON TULIPIFERA / TULIP TREE	B & B	1.5"CAL	
	MV	5	MAGNOLIA VIRGINIANA / SWEET BAY 3-5 STEMS	B & B		6'-7' H
	NS	4	NYSSA SYLVATICA / BLACK GUM	B & B	1.5"CAL	
	OV	5	OSTRYA VIRGINIANA / AMERICAN HOPHORNBEAM	B & B	1.5"CAL	
	PA	4	PRUNUS AMERICANA / AMERICAN PLUM	B & B	1.5"CAL	
	QR	4	QUERCUS RUBRA / RED OAK	B & B	1.5"CAL	

GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	MM	22,475 SF	MEADOW MIX / ERNST SEED MIX 111 ERNST NATIVE HABITAT FOR STRIP MINES MIX	SEED
	TS	31,917 SF	TURF SOD / DROUGHT TOLERANT FESCUE BLEND	SOD

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90% DESIGN SUBMITTAL

CITY OF ALEXANDRIA, VIRGINIA
DEPARTMENT OF PROJECT IMPLEMENTATION
301 KING STREET
ALEXANDRIA, VIRGINIA 22313

REVISIONS

DATE	DESCRIPTION	BY

ALEXANDRIA PROJECT NO.: I6-019
DATE OF PLAN ISSUANCE: DEC 2022
CONSULTANT PROJECT ID.: 17-0920
DESIGNED BY: AMT DATE: --
DRAWN BY: AMT DATE: --
CHECKED BY: AMT DATE: --
APPROVED BY: AMT DATE: --

PROJECT NAME: OLD CAMERON RUN TRAIL UPC109469

LP-501
PLANTING NOTES & DETAILS

SHEET 75 OF 75
SCALE: AS SHOWN