

EXHIBIT C

ARLINGTON VIRGINIA



OWNER
DEPARTMENT OF ENVIRONMENTAL SERVICES
Engineering and Capital Projects Division
Engineering Bureau
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OWNER

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

Stormwater Management Division
301 King Street, Room 4100, Alexandria, VA 22314
Phone: 703.746.4057 www.alexandriava.gov

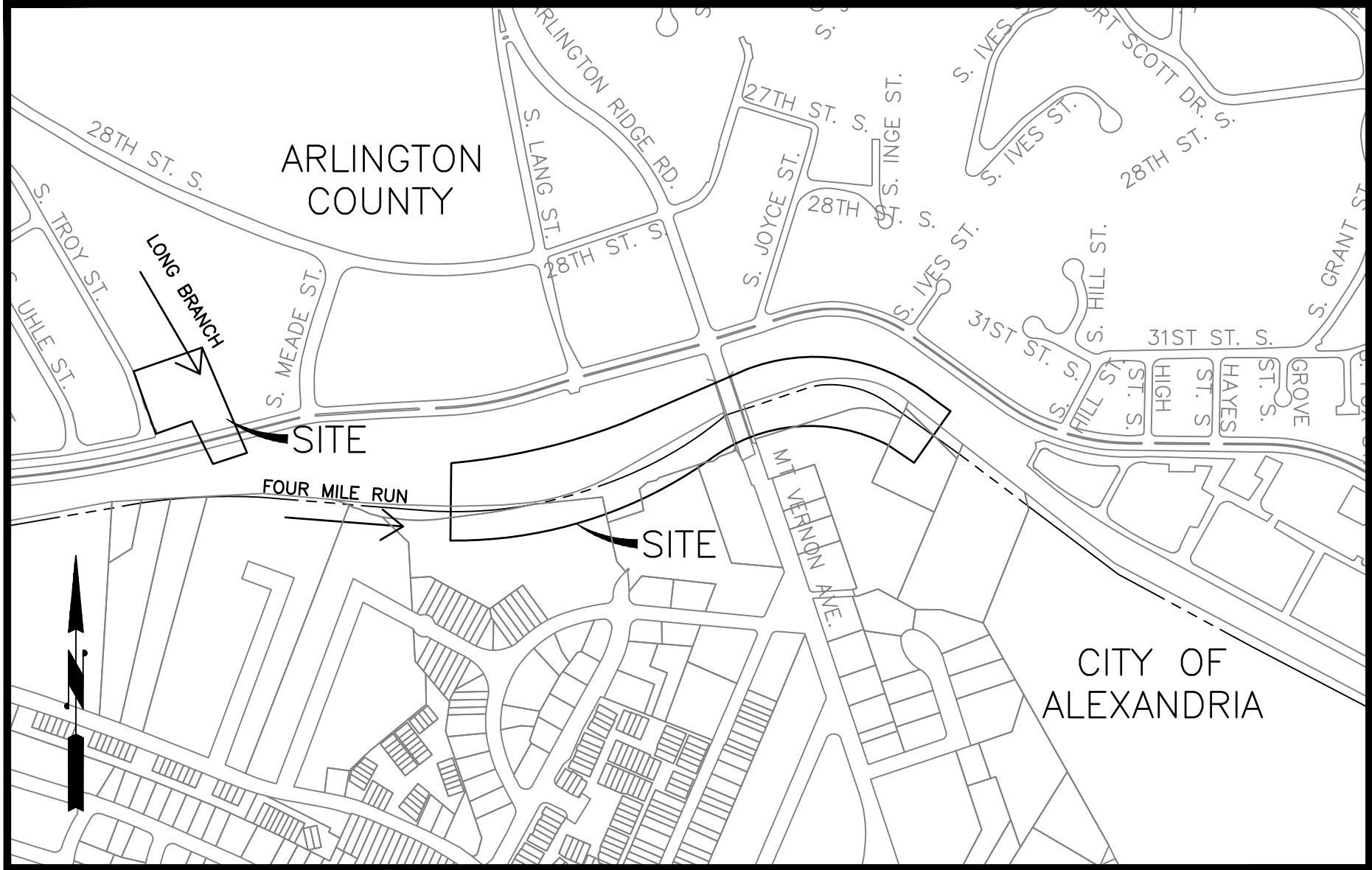
CONSULTANT
RK&K, LLP
12600 FAIR LAKES CIRCLE, SUITE 300
FAIRFAX, VA 22033
PHONE: 703.246.0028

CONTRACTOR
TO BE DETERMINED

Location Map

Scale: 1"=500'

Vicinity



ARLINGTON VIRGINIA

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



APPROVALS	DATE
<i>Ankur Patel</i>	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
<i>Kamal Taktak</i>	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Jeffrey</i>	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	07/21/20
TRANSPORTATION DIRECTOR	
<i>Michael Gallo</i>	07/21/21
PROJECT MANAGER	

REVISIONS	DATE

General Notes for Arlington County Related Works:

GENERAL CONSTRUCTION NOTES

- ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- ALL CONSTRUCTION WORK FOR THIS PROJECT SHALL CONFORM TO THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES, CONSTRUCTION STANDARDS AND SPECIFICATIONS, AND WHERE APPLICABLE THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE SPECIFICATIONS, AND ROAD AND BRIDGE STANDARDS. THE LATEST EDITIONS OF EACH RELEVANT MANUAL SHALL BE USED.
- ALL CONSTRUCTION AND WORK ACTIVITIES SHALL COMPLY WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND ALL OTHER RELEVANT WORK SAFETY REQUIREMENTS, LATEST EDITIONS.
- THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 811 FOR MARKING THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES (i.e. WATER, SEWER, GAS, TELEPHONE, ELECTRIC, AND CABLE TV) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION OR CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO IDENTIFY AND PROTECT ALL OTHER UTILITY LINES FOUND IN THE WORK SITE AREA BELONGING TO OTHER OWNERS THAT ARE NOT MEMBERS OF "MISS UTILITY". PRIVATE WATER AND/OR SEWER LATERALS WILL NOT BE MARKED BY MISS UTILITY OR THE COUNTY. THE CONTRACTOR WILL BE EXPECTED TO LOCATE AND PROTECT THESE SERVICES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT THE WORK AND SHALL RETAIN A PROFESSIONAL LAND SURVEYOR LICENSED IN THE COMMONWEALTH OF VIRGINIA TO PROVIDE ALL NECESSARY CONSTRUCTION LAYOUTS AND ESTABLISH ALL CONTROL LINES, GRADES, AND ELEVATION DURING CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A COPY OF ALL CUT SHEETS FOR REVIEW, PER THE SPECIFICATIONS. THE COST OF ALL NECESSARY SURVEYING SERVICES SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND, UNLESS OTHERWISE SPECIFIED, THE COST SHALL BE INCORPORATED INTO THE COSTS FOR RELEVANT ITEMS.
- THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM BEST AVAILABLE RECORDS AND SHALL BE CONSIDERED TO BE APPROXIMATE. WHEN CONSTRUCTION ACTIVITY REACHES IN PROXIMITY TO EXISTING UTILITIES, THE TRENCH(ES) SHALL BE OPENED A SUFFICIENT DISTANCE AHEAD OF THE WORK OR TEST PITS SHALL BE MADE TO VERIFY THE EXACT LOCATION AND INVERTS OF THE UTILITY TO ALLOW FOR POSSIBLE CHANGES IN THE LINE OR GRADE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING UTILITIES AND THE RELATED STRUCTURES. ALL EXISTING UTILITY SYSTEMS SHALL BE PROTECTED TO PREVENT DAMAGE DURING THE CONTRACTOR'S OPERATIONS. ANY SYSTEM DAMAGED SHALL BE PROMPTLY REPAIRED AT NO COST TO THE OWNER.

THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT OFFICER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS.
- EXISTING MANHOLE FRAMES, COVERS, VALVE BOXES, AND OTHER APPURTENANCES SHALL BE ADJUSTED TO THE FINAL GRADE OR REPLACED, AS NECESSARY. UNLESS OTHERWISE SPECIFIED, THE COST FOR THIS SHALL BE CONSIDERED INCIDENTAL TO THE WORK, AND SHALL BE INCORPORATED INTO THE COSTS FOR RELEVANT ITEMS.

STORMWATER AND ENVIRONMENTAL PROTECTION

- THE CONTRACTOR SHALL CONFINE ALL ACTIVITIES AT THE SITE ASSOCIATED WITH CONSTRUCTION ACTIVITIES, TO INCLUDE STORAGE OF EQUIPMENT AND OR MATERIALS, ACCESS TO THE WORK, FORMWORK, ETC. TO WITHIN THE DESIGNATED LIMITS OF DISTURBANCE (LOD).
- THE CONTRACTOR SHALL PROTECT EXISTING DRAINAGE FACILITIES (TO INCLUDE CURB AND GUTTER) AND WATERWAYS FROM ADVERSE IMPACTS PER SECTION 01500 OF THE ARLINGTON COUNTY STANDARDS & SPECIFICATIONS.
- ANY WORK WITHIN A RESOURCE PROTECTION AREA (RPA) SHALL COMPLY WITH THE REQUIREMENTS OF CHAPTER 61 OF THE COUNTY CODE (THE CHESAPEAKE BAY PRESERVATION ORDINANCE).

TREE PROTECTION

- THE CONTRACTOR SHALL CONFINE ALL ACTIVITIES AT THE SITE ASSOCIATED WITH TREE ACTIVITIES, TO

INCLUDE REMOVAL OF INVASIVE TREES, TO WITHIN THE DESIGNATED LIMITS OF DISTURBANCE (LOD).

- NO TREES SHALL BE REMOVED OR OTHERWISE AFFECTED UNLESS CLEARLY MARKED ON THE APPROVED PLAN.
- TREES SHALL BE PROTECTED PER THE REQUIREMENTS OF SECTION 02100 - CLEARING AND GRUBBING

TRAFFIC CONTROL

- THE CONTRACTOR SHALL NOTIFY THE PROJECT OFFICER AT LEAST 3 WORKING DAYS PRIOR TO DISTURBING ANY EXISTING, OR INSTALLING ANY NEW, TRAFFIC SIGNS, SIGNALS, OR OTHER TRAFFIC CONTROL DEVICES.
- THE CONTRACTOR SHALL PREMARK THE LAYOUT OF ANY PERMANENT TRAFFIC CONTROL STRIPING, INDICATING THE PROPOSED LOCATION AND TYPE OF MARKING TO BE INSTALLED. THE PREMARKING MAY CONSIST OF TYPE D TAPE, CHALK, OR LUMBER CRAYONS. THE CONTRACTOR SHALL ALLOW 3 WORKING DAYS FOR THE INSPECTION AND APPROVAL OF THE PREMARKINGS PRIOR TO PLACING THE PERMANENT MARKINGS.
- THE CONTRACTOR SHALL SUBMIT ANY REQUESTS FOR TEMPORARY "NO PARKING" RESTRICTIONS TO THE PROJECT OFFICER AT LEAST 3 WORKING DAYS PRIOR TO THE DESIRED ONSET OF RESTRICTIONS.
- THE CONTRACTOR SHALL PRESERVE ALL BUS STOPS, INCLUDING MAINTAINING ADEQUATE ACCESS THROUGH AND ADJACENT TO THE CONSTRUCTION FOR BUSES AND THEIR PASSENGERS. THE CONTRACTOR SHALL NOT CLOSE, RELOCATE, OR OTHERWISE MODIFY A BUS STOP WITHOUT PRIOR REQUEST OF THE PROJECT OFFICER. TYPICALLY ANY RELOCATION OR CLOSURE OF A BUS STOP WILL REQUIRE AT LEAST FOUR WEEKS ADVANCE NOTICE FOR COORDINATION WITH THE COUNTY'S BUS STOP COORDINATOR, WHO SHALL BE NOTIFIED AT 703-228-3049.

- WHEN CONDITIONS WARRANT DUE TO TRAFFIC VOLUMES, PATTERNS, OR SPECIAL EVENTS, THE COUNTY MAY SUSPEND OR OTHERWISE DIRECT THE CONTRACTOR'S ACTIVITIES TO PROTECT THE PUBLIC AND OR THE COUNTY'S TRANSPORTATION NETWORK.

WATER DISTRIBUTION, STORM, AND SANITARY SEWER SYSTEMS

- UNLESS OTHERWISE DIRECTED, CONTRACTORS ARE EXPRESSLY PROHIBITED FROM OPERATING ANY WATER VALVES OR APPURTENANCES. CONTRACTORS SHALL SUBMIT ALL REQUESTS FOR VALVE OPERATIONS TO THE PROJECT OFFICER AT LEAST 3 WORKING DAYS IN ADVANCE OF THE REQUIRED OPERATION.
- IN THE EVENT OF A WATER OR SEWER EMERGENCY, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COUNTY'S WATER CONTROL CENTER AT 703-228-5555 AND THE PROJECT OFFICER.
- STORM OR SANITARY SEWERS AND APPURTENANCES TO BE ABANDONED SHALL BE EXCAVATED AND REMOVED, OR ABANDONED AS DETAILED IN THE COUNTY'S STANDARDS AND SPECIFICATIONS.

WORK WITHIN A VDOT RIGHT OF WAY

- WHEN REQUIRED FOR THE WORK, AN APPROVED VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) PERMIT WILL BE PROVIDED BY THE COUNTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO AND IMPLEMENTING ALL PERMIT REQUIREMENTS.
- THE CONTRACTOR SHALL HAVE AT LEAST ONE EMPLOYEE ON-SITE CERTIFIED BY VDOT IN BASIC WORK ZONE TRAFFIC CONTROL AND WILL BE RESPONSIBLE FOR THE PLACEMENT, MAINTENANCE AND REMOVAL OF WORK ZONE TRAFFIC CONTROL DEVICES WITHIN THE PROJECT LIMITS IN COMPLIANCE WITH THE PERMIT REQUIREMENTS AND CONDITIONS, THE APPROVED PLANS, SPECIFICATIONS, THE VIRGINIA WORK AREA PROTECTION MANUAL AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- THE CONTRACTOR SHALL HAVE AT LEAST ONE EMPLOYEE ON-SITE WHO HAS COMPLETED VDOT EROSION AND SEDIMENT CONTROL, CONTRACTOR CERTIFICATION TRAINING AND WILL BE RESPONSIBLE FOR INSURING COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL EROSION AND SEDIMENT CONTROL REGULATIONS DURING ALL LAND DISTURBANCE ACTIVITIES.
- THE CONTRACTOR SHALL NOT ACCESS THE SITE FROM EXISTING LIMITED ACCESS ROADWAYS

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RELEASED
TRANSPORTATION & ENVIRONMENTAL SERVICES
BRIAN DOFFLEMYER
DEVELOPMENT REVIEW MANAGER
DATE: 9/21/2021
STAFF: F.Montoney

As-Built:

I CERTIFY THAT THIS PROJECT WAS BUILT IN SUBSTANTIAL CONFORMANCE WITH THIS PLAN, UNLESS DULY NOTED IN THE ABOVE REVISION BLOCK.

PROJECT MANAGER	DATE
CONSTRUCTION MANAGER	DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES.	
APPROVED	09/21/2021
X <i>[Signature]</i>	DATE:
DIRECTOR	
RECOMMENDED FOR APPROVAL	09/21/2021
X <i>[Signature]</i>	DATE:
DEPUTY DIRECTOR OF OPERATIONS	
RECOMMENDED FOR APPROVAL	09/21/2021
X <i>[Signature]</i>	DATE:
DEPUTY DIRECTOR OF INFRASTRUCTURE & ENVIRONMENTAL QUALITY	
RECOMMENDED FOR APPROVAL	09/21/2021
X <i>[Signature]</i>	DATE:
DEPUTY DIRECTOR OF RIGHT-OF-WAY & DEVELOPMENT SERVICES	
RECOMMENDED FOR APPROVAL	09/21/2021
X <i>[Signature]</i>	DATE:
DEPUTY DIRECTOR OF TRANSPORTATION	
DEPARTMENT OF PROJECT IMPLEMENTATION	
APPROVED	
X <i>[Signature]</i>	DATE: 09/09/21
DIRECTOR	
RECOMMENDED FOR APPROVAL	
X <i>[Signature]</i>	DATE: 9/2/21
DIVISION CHIEF	Matthew V Landes, PLA

COVER SHEET & GENERAL NOTES (ARLINGTON)

FOUR MILE RUN DREDGE PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF
PLOTTED: AUGUST 23 2021

SCALE:

SHEET 01 of 32

FOUR MILE RUN DREDGE PROJECT

General Notes for City of Alexandria Related Works:

EXISTING CONDITIONS SURVEY NOTES

- HORIZONTAL DATUM: NAD 1983
VERTICAL DATUM: NAVD 1988
- UTILITY INFORMATION, AS SHOWN ON THIS PLAN, IS TAKEN FROM THE RECORDS AND/OR FIELD SURVEY PROVIDED BY THE CITY OF ALEXANDRIA (DATED 05/15/2018) OR ARLINGTON COUNTY (DATED 09/26/2019); 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.
- 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.

CITY STANDARD GENERAL NOTES

- "CITY" MEANS THE CITY OF ALEXANDRIA, A MUNICIPAL CORPORATION OF VIRGINIA AND ITS AUTHORIZED REPRESENTATIVES AND EMPLOYEES.
- TOTAL LIMIT OF WORK: 373,959.0 SQUARE FEET OR 8.58 ACRES OF WHICH 373,959.0 SQUARE FEET OR 8.58 ACRES WILL BE DISTURBED WITH THIS PROJECT. 16,444 CUBIC YARDS OF SEDIMENT WILL BE DREDGED FROM FOUR MILE RUN AND 1,538 CY WILL BE DREDGED FROM LONG BRANCH.
- THE NATURAL SOILS AT THE SITE CONSIST OF HYDROLOGIC SOIL GROUP TYPES C AND D.
- THE SITE IS LOCATED IN THE FOUR MILE RUN WATERSHED.
- THE SUBJECT PROPERTY LIES WITHIN A CITY OF ALEXANDRIA RESOURCE PROTECTION AREA.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS FOR CONSTRUCTION.
- ALL NEW CONSTRUCTION WILL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ALEXANDRIA AND/OR THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS.
- ALL IMPROVEMENTS TO THE CITY RIGHT-OF-WAY SUCH AS CURB, GUTTER, SIDEWALK, AND DRIVEWAY APRONS, ETC., SHALL BE CONSTRUCTED PER THE PROJECT TECHNICAL SPECIFICATIONS, PROJECT DETAILS AND THE CITY OF ALEXANDRIA STANDARDS MANUAL.
- ALL STREET CUT AND PATCH WORK LOCATED IN PUBLIC RIGHT-OF-WAYS, REQUIRED FOR ANY UTILITY INSTALLATION SHALL BE PERFORMED 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).
- ALL EROSION AND SEDIMENTATION CONTROL SHALL BE PLACED AND MAINTAINED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CITY OF ALEXANDRIA AND/OR VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH).
- ANY WORK IN THE PUBLIC RIGHT OF WAY SHALL REQUIRE A SEPARATE PERMIT FROM THE CITY.
- COMPACTION OF BACKFILL IN UTILITY TRENCHES SHALL BE IN ACCORDANCE WITH THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS.
- ALL SANITARY SEWERS SHALL BE CONSTRUCTED TO THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS.
- ALL STORM SEWERS SHALL BE CONSTRUCTED TO THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS.
- ALL WATER FACILITY CONSTRUCTION SHALL CONFORM TO VIRGINIA AMERICAN WATER COMPANY STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL CONTACT VIRGINIA AMERICAN WATER COMPANY AT (703) 549-7080 TO COORDINATE CONSTRUCTION AND INSPECTION OF WATER FACILITIES.
- ELECTRIC POWER IS PROVIDED BY DOMINION VIRGINIA POWER.
- THERE IS NO OBSERVABLE EVIDENCE OF CEMETERIES OR BURIAL GROUNDS ON THIS PROJECT.
- A SEPARATE PERMIT IS REQUIRED FOR SIGN CONSTRUCTION.
- SHOULD UTILITY CONSTRUCTION BE PERFORMED AFTER COMPLETING EARTHWORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACHIEVING 98 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1551) COMPACTION IN ALL TRENCH BACKFILL.
- FOR PROJECTS WITH DISTURBED AREAS GREATER THAN 2500 SF, THE CONTRACTOR MUST PROVIDE THE NAME OF THE RESPONSIBLE LAND DISTURBER (RLD) AND A CURRENT CERTIFICATION FOR THE SAME INDIVIDUAL PRIOR TO THE PRE-CONSTRUCTION MEETING. THE CERTIFICATION MUST BE IN EFFECT FOR THE DURATION OF THE PROJECT.
- GAS SERVICE IS PROVIDED BY WASHINGTON GAS.

ARCHAEOLOGY NOTES

- THE APPLICANT SHALL CALL ALEXANDRIA ARCHAEOLOGY IMMEDIATELY (703-746-4399) IF ANY BURIED STRUCTURAL REMAINS (WALL FOUNDATIONS, WELLS, PRIVIES, CISTERNS, ETC.) OR CONCENTRATIONS OF ARTIFACTS ARE DISCOVERED DURING DEVELOPMENT. WORK MUST CEASE IN THE AREA OF THE DISCOVERY UNTIL A CITY ARCHAEOLOGIST COMES TO THE SITE AND RECORDS THE FINDS.
- THE APPLICANT SHALL NOT ALLOW ANY METAL DETECTION AND/OR ARTIFACT COLLECTION TO BE CONDUCTED ON THE PROPERTY, UNLESS AUTHORIZED BY ALEXANDRIA ARCHAEOLOGY. FAILURE TO COMPLY SHALL RESULT IN PROJECT DELAYS.

CODE

C-1 ALL REQUIRED ARCHAEOLOGICAL PRESERVATION MEASURES SHALL BE COMPLETED IN COMPLIANCE WITH SECTION 11-411 OF THE ZONING ORDINANCE.

DEMOLITION NOTES

- 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.
- 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.
- 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.
- 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.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING AND DISPOSING FOR ALL ITEMS AS INDICATED ON THE PLANS AND SPECIFICATIONS.

ENVIRONMENTAL SITE ASSESSMENT

- THERE ARE TIDAL SHORES, TRIBUTARY STREAMS, FLOODPLAINS, HIGHLY ERODIABLE/PERMEABLE SOILS OR BUFFER AREAS ASSOCIATED WITH SHORES, AND STREAMS LOCATED IN THE SITE. HOWEVER, THERE ARE NO WETLAND PERMITS REQUIRED FOR THIS DEVELOPMENT PROJECT. ADDITIONALLY, THERE ARE NO KNOWN UNDERGROUND STORAGE TANKS OR AREAS OF SOIL OR GROUNDWATER CONTAMINATION ON THE SITE.
- THE CITY OF ALEXANDRIA DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, DIVISION OF ENVIRONMENTAL QUALITY MUST BE NOTIFIED IF UNUSUAL OR UNANTICIPATED CONTAMINATION OR UNDERGROUND STORAGE TANKS, DRUMS, AND CONTAINERS ARE ENCOUNTERED AT THE SITE. IF THERE IS ANY DOUBT ABOUT PUBLIC SAFETY OR A RELEASE TO THE ENVIRONMENT, THE ALEXANDRIA FIRE DEPARTMENT MUST BE CONTACTED IMMEDIATELY BY CALLING 911. THE TANK OR CONTAINER'S REMOVAL, ITS CONTENTS, ANY SOIL CONTAMINATION AND RELEASES TO THE ENVIRONMENT WILL BE HANDLED IN ACCORDANCE WITH FEDERAL, STATE, AND CITY REGULATIONS.
- ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE ALEXANDRIA NOISE CONTROL CODE TITLE 11, CHAPTER 5, WHICH PERMITS CONSTRUCTION ACTIVITIES TO OCCUR BETWEEN THE FOLLOWING HOURS:
A. MONDAY THROUGH FRIDAY FROM 7 AM TO 6 PM AND
B. SATURDAYS FROM 9 AM TO 6 PM.
C. NO CONSTRUCTION ACTIVITIES ARE PERMITTED ON SUNDAYS.
D. PILE DRIVING IS FURTHER RESTRICTED TO THE FOLLOWING HOURS:
MONDAY THROUGH FRIDAY FROM 9 AM TO 6 PM AND
SATURDAYS FROM 10 AM TO 4 PM.

NOTES FOR PROPOSED PLANTINGS

- PLANTINGS SHALL BE FURNISHED AND INSTALLED IN COMPLIANCE WITH LANDSCAPE GUIDELINES OF THE CITY OF ALEXANDRIA.
- 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.
- PRIOR TO COMMENCEMENT OF LANDSCAPE INSTALLATION/PLANTING OPERATIONS, A PRE-INSTALLATION/CONSTRUCTION MEETING SHALL BE SCHEDULED WITH THE CITY'S ARBORIST AND LANDSCAPE ARCHITECT TO REVIEW PLANT INSTALLATION PROCEDURES AND PROCESSES.

UTILITY WORKS

- THE FOLLOWING ARE THE APWA COLOR CODES:

COLOR	CODES
RED	CAUTION BURIED ELECTRIC POWER LINES, CABLES, CONDUITS AND LIGHTNING CABLES.
YELLOW	CAUTION GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS.
ORANGE	CAUTION COMMUNICATIONS, ALARM OR SIGNAL LINES, CABLES OR CONDUITS.
BLUE	CAUTION POTABLE WATER
PURPLE	CAUTION RECLAIMED WATER, IRRIGATION AND SLURRY LINES
GREEN	CAUTION, SEWER, DRAIN LINES AND FORCE MAIN

UTILITY CONTACTS

DOMINION VIRGINIA POWER 888-667-3000
VERIZON COMMUNICATIONS 888-826-2355
COMCAST 888-683-1000
WASHINGTON GAS 703-750-1000
PEPO 202-833-7500
VIRGINIA AMERICAN WATER 800-452-6863
SANITARY SEWER - CITY OF ALEX. 703-746-4488

CONTRACTOR SHALL CONFORM TO THE OVERHEAD HIGH VOLTAGE ACT (EFFECTIVE JULY 1, 2003) AND SHALL CONTACT THE NECESSARY AUTHORITIES PRIOR TO START OF CONSTRUCTION.



CONSTRUCTION NOTES

- THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE CITY AND TAKE NECESSARY ACTION AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUATION OF SERVICE.
- THE CONTRACTOR SHALL DIG TEST PITS AS REQUIRED FOLLOWING NOTIFICATION AND MARKING OF ALL EXISTING UTILITIES TO VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES TEST HOLES TO BE PERFORMED AT LEAST 30 DAYS PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES ARE TO BE REPORTED IMMEDIATELY TO THE OWNER AND ENGINEER. REDESIGN AND APPROVAL BY REVIEWING AGENCIES SHALL BE OBTAINED, IF REQUIRED.
- THE CONTRACTOR SHALL VISIT THE SITE AND SHALL VERIFY EXISTING CONDITIONS PRIOR TO STARTING CONSTRUCTION.
- ALL AREAS, ON OR OFF-SITE, WHICH ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON, SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. THE MINIMUM ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS, SEED MIXTURE TO BE AS RECOMMENDED BY THE CITY AGENT. ALL SLOPES 3:1 AND GREATER SHALL BE SODDED AND PEGGED OF OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.
- ALL OVER HEAD POLE LINES SHALL BE RELOCATED AS REQUIRED BY THE OWNING UTILITY COMPANIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL ARRANGEMENTS AND COORDINATING ALL WORK REQUIRED FOR THE NECESSARY RELOCATIONS.
- EXISTING PHYSICAL FEATURES ARE TO BE REMOVED AS REQUIRED BY THE CONTRACTOR.
- EXISTING CONSTRUCTION SHALL BE REMOVED TO NEAREST JOINT. NEW CONSTRUCTION SHALL BE PROVIDED AS SHOWN AND ANY DAMAGED AREA SHALL BE REPAIRED TO MATCH CONDITIONS EXISTING PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO THE ADJACENT CURB, GUTTER, AND RIGHT-OF-WAY, IF DAMAGED DURING CONSTRUCTION ACTIVITY AS DETERMINED BY THE CITY.
- TOPS OF EXISTING STRUCTURES WHICH REMAIN IN USE ARE TO BE ADJUSTED IN ACCORDANCE WITH THE GRADING PLAN. ALL PROPOSED STRUCTURE TOP ELEVATIONS ARE TO BE VERIFIED BY THE CONTRACTOR WITH THE SITE GRADING PLANS. IN CASE OF CONFLICT, THE GRADING PLAN SHALL SUPERSEDE PROFILE ELEVATIONS. ADJUSTMENTS TO STRUCTURE TOPS TO MEET FINISHED GRADE ELEVATIONS MAY BE REQUIRED.
- CONSTRUCTION STAKEOUT SHALL BE UNDER THE DIRECT SUPERVISION OF A LICENSED LAND SURVEYOR IN THE COMMONWEALTH OF VIRGINIA. CUT SHEETS SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO CONSTRUCTION.
- SMOOTH GRADE SHALL BE MAINTAINED ACCORDING TO EXISTING CONDITIONS DURING RECONSTRUCTION OF ANY ENTRANCE AND/OR CURB & GUTTER TO PRECLUDE THE FORMING OF FALSE AND/OR THE PONDING OF WATER ON THE ROADWAY.
- ALL PAVEMENT MARKING TO MEET THE REQUIREMENTS OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS.
- ALL EROSION CONTROLS SHALL CONFORM TO THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCHB) AND MUST BE SUBMITTED AND APPROVED BY THE CITY.
- THE CONTRACTOR MUST ENSURE THAT POSITIVE DRAINAGE OCCURS ON SITE TO PREVENT PONDING OR DRAINAGE PROBLEMS ON ADJACENT PROPERTIES.
- CONTRACTOR MUST ENSURE THAT THERE IS NO DISTURBANCE ON ADJACENT PROPERTIES, UNLESS OTHERWISE NOTED ON PLANS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN UTILITY SERVICES AT ALL TIMES DURING CONNECTION AND/OR CONSTRUCTION.
- ANY CHANGES OR DEVIATIONS FROM DESIGN DOCUMENTS, DRAWINGS, SPECIFICATIONS, OR SHOP DRAWINGS REQUIRE APPROVAL OF THE CITY PRIOR TO IMPLEMENTATION.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL DURING CONSTRUCTION INCLUDING THE DEVELOPMENT OF TRAFFIC CONTROL PLANS. ALL TRAFFIC CONTROL COSTS FOR ALL STAGES SHALL BE INCLUDED IN THE BID PRICE FOR "MAINTENANCE OF TRAFFIC (LSUM)." NO LANES SHALL BE CLOSED DURING CONSTRUCTION. IF LANES NEED TO BE CLOSED TO FACILITATE THE CONSTRUCTION THEN THE CONTRACTOR SHALL PROVIDE A LANE CLOSURE PLAN TO THE SATISFACTION OF THE CITY. TEMPORARY PAVEMENT MARKING AND REMOVAL MAY BE REQUIRED AND SHALL BE INCLUDED IN THE BID PRICE FOR "MAINTENANCE OF TRAFFIC (LSUM)." NO SIDE AND/OR CROSS WALK SHALL BE CLOSED DURING CONSTRUCTION. IF SIDE AND/OR CROSS WALKS NEED TO BE CLOSED TO FACILITATE THE CONSTRUCTION THEN THE CONTRACTOR SHALL PROVIDE A SIDE AND/OR CROSS WALK CLOSURE PLAN TO THE SATISFACTION OF THE CITY.

SIGNING AND PAVEMENT MARKING

- ALL SIGN WORK AND PAVEMENT MARKING SHALL MEET ALL THE LATEST APPLICABLE VDOT, CITY OF ALEXANDRIA STANDARDS, AND MANUAL ON UNIFORM TRAFFIC CONTROL (MUTCD) REQUIREMENTS.
- ALL PAVEMENT MARKINGS ARE THERMOPLASTIC UNLESS OTHERWISE NOTED.
- ALL EXISTING PAVEMENT MARKINGS MAY NOT BE SHOWN. ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS SHALL BE ERADICATED.
- ALL PROPOSED SIGNS SHALL BE HIGH INTENSITY SHEETING MEETING THE REQUIREMENTS OF AASHTO M268.
- NO PORTION OF PROPOSED SIGN PANEL SHALL OVERHANG ADJACENT ROADWAY PAVEMENT. I.E. SHALL NOT HANG IN FRONT OF FACE OF CURB.
- PROPOSED SIGN POSTS SHALL BE LOCATED A MINIMUM OF 2 FEET BEHIND ANY ADJACENT FACE OF CURB (ADDITIONAL REQUIREMENTS APPLY TO ACCOMMODATE SIGN PANEL LATERAL AND VERTICAL CLEARANCE). IF LOCATED ADJACENT TO SIDEWALKS, A 32" MINIMUM CLEAR AND 48" PREFERRED PASSING SPACE ON EXISTING AND PROPOSED SIDEWALKS SHALL BE MAINTAINED.
- PROPOSED SIGN POSTS SHALL BE INSTALLED IN NEW LOCATIONS SUCH THAT THE EXISTING SIGNS OR SIGNALS ARE NOT BLOCKED.
- FOR NEW POST INSTALLATION, THE CONTRACTOR SHALL VERIFY THERE ARE NO CONFLICTING UNDERGROUND OR OVERHEAD UTILITIES.
- SIGNS MOUNTED TO EXISTING LIGHT, SIGNAL OR UTILITY POLES SHALL BE FASTENED WITH A MANUFACTURED STEEL BANDING SYSTEM. POLES SHALL NOT BE DRILLED DIRECTLY, THE CONTRACTOR SHALL SUBMIT MANUFACTURER INFORMATION ON THE BANDING SYSTEM TO THE CITY FOR APPROVAL PRIOR TO INSTALLATION.

ARLINGTON
VIRGINIA

DEPARTMENT OF
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FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
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PHONE: 703.228.3629
FAX: 703.228.3606

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SEAL



APPROVALS DATE

Ankur Patel 07/19/21
DESIGN TEAM ENGINEER SUPERVISOR
Kamal Taktak 8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR
Shafiq 07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF
Dennis M. Leach 07/21/20
TRANSPORTATION DIRECTOR
Michael Gallo 07/21/21
PROJECT MANAGER

REVISIONS DATE

GENERAL NOTES (CITY OF
ALEXANDRIA)

FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

SCALE:

SHEET 01A of 32

ARLINGTON COUNTY LEGEND

	Existing	Proposed
Easement		
Asphalt		
Building		
Cable TV		
Center Line		
Concrete		
Contours	250	250
Curb		
Electric (Underground)		
Fence	X X X X	X X X X X
Fiber Optic	fo	
Floodplain	FP FP FP FP	FP FP FP FP
Guardrail	G G G G G	G G G G G
2" Gas	2" G	
3" Gas	3" G	
6" Gas	6" G	
8" Gas	8" G	
Gas	GAS GAS	
Limits Of Disturbance		LOD LOD
Limits Of Work		LOW LOW
Overhead Wires		
Property Line		
Resource Protection Area	RPA RPA RPA RPA	
8" Sanitary		
12" Sanitary		
Sanitary Sewer		
Sanitary House Con.		
Sidewalk		
Storm (size noted)		
Telephone (Underground)	UGT	
Wall		
6" Water		
8" Water		
20" Water	20" W	
Wetland	W	
Water Main		
Water House Con.	WHC	
Lane Marking		
Tree Line		
PVC (Street Lights)		
Asphalt - Mill & Overlay		
Asphalt - Overlay		
Asphalt - Full Depth		
Water Main (Shown on Profile Only)		
Ex. Esm't. for Public Access & Public Utilities		
Proposed Emergent Marsh		
Proposed Shrub Wetland		
Proposed Forested Wetland		
Proposed Water Surface		
Grasspave2 (Or Equivalent)		

	Prop. Storm Catch Basin		Traffic Sign
	Ex. Storm Catch Basin		Guy Wires
	Prop. Storm Grate		Prop. Gas Valve
	Ex. Storm Grate		Ex. Gas Valve
	Prop. Storm MH		Prop. Handicap Ramp
	Ex. Storm MH		Ex. Handicap Ramp
	Prop. Sanitary MH		Metro Station
	Ex. Sanitary MH		Benchmark
	Prop. Cobra Head Light		Deciduous Tree
	Prop. Carlye Light		Coniferous Tree
	Prop. Light Pole		Shrub
	Ex. Light Pole		Wooded Area
	Prop. Utility Pole		Bridge
	Ex. Utility Pole		North Arrow
	Ex. Utility MH (Type Indicated Elec. Tele. etc)		Telephone Ped.
	Ex. Traffic Control Box		Electric Box
	Prop. Water MH		Cable Ped.
	Ex. Water MH		Gas Marker
	Prop. Water Valve		Construction Notes (Leader to area affected)
	Ex. Water Valve		Curve Number (See Curve Table)
	Prop. Water FH		Line Number (See Line Table)
	Ex. Water FH		Ex. Sanitary Sewer Structure Number (Number obtained from WSE)
	Prop. Water Meter		Ex. Storm Sewer Structure Number (Number obtained from WSE)
	Ex. Water Meter		Prop. Sanitary Sewer Structure Number (Number obtained from WSE)
	P.K. Nail Found		Prop. Storm Sewer Structure Number (Number obtained from WSE)
	P.K. Nail Set		Parking Meter
	Rebar Rod Found		Mailbox
	Rebar Rod Set		Ground Light
	Iron Pipe		Traverse
	Monument (GPS)		Bus Sign
	Monument		Existing Test Hole Test Hole Requested and Data Received
			Prop. Test Hole Test Hole Requested

CITY OF ALEXANDRIA LEGEND

TREE (# - DENOTES SIZE)	
VEGETATION LINE	
WATERLINE	
WATER METER	
WATER VALVE	
FIRE HYDRANT	
ROOF DOWNSPOUT	
STORM SEWER	
STORM SEWER MANHOLE	
SANITARY SEWER	
SANITARY SEWER MANHOLE	
GAS VALVE	
GAS LINE	
UNDERGROUND TELECOMMUNICATIONS LINE	
TELECOMMUNICATIONS MANHOLE	
UNDERGROUND ELECTRIC LINE	
STREET LIGHT W/ ARM	
STREET LIGHT	
AIR CONDITIONING UNIT	
SIGN	
TURF/VEGETATION	
CURB AND GUTTER	
CURB AND GUTTER	
RIGHT-OF-WAY LINE	
INDEX CONTOUR	
INTERMEDIATE CONTOUR	
LIMITS OF WORK	
BENCHMARK LOCATION	

ABBREVIATIONS

APP	-	APPROXIMATE
CO	-	CLEANOUT
COMM	-	COMMUNICATIONS
CONC	-	CONCRETE
CSO	-	COMBINED SEWER OVERFLOW
EL	-	ELEVATION
EX	-	EXISTING
FH	-	FIRE HYDRANT
FLO	-	FLOW LINE
HP	-	HIGH POINT
LT	-	LIGHT
MH	-	MANHOLE
OHE	-	OVERHEAD ELECTRICAL
PC	-	POINT OF CURVATURE
PT	-	POINT OF TANGENCY
PED	-	PEDESTRIAN
PR	-	PROPOSED
PROP	-	PROPOSED
ROW	-	RIGHT OF WAY
SAN	-	SANITARY SEWER
STM	-	STORM SEWER
TRAF	-	TRAFFIC
TC	-	TOP OF CURB
TELE	-	TELECOMMUNICATIONS
U.N.O.	-	UNLESS NOTED OTHERWISE
UP	-	UTILITY POLE
WE	-	WEIR ELEVATION
WM	-	WATER METER
WTR	-	WATERLINE
WV	-	WATER VALVE
X-ING	-	CROSSING

#8926 TOP = 24.06 15" RCP IN = 18.06 18" RCP OUT = 17.81	(8919) (SOUTH)	#19988 TOP = 25.93 15" RCP OUT = 22.28 (19967)
#8919 TOP = 23.59 15" RCP OUT = 19.59	(8926)	#8446 15" RCP OUT = 19.27 (8980)
#20590 TOP = 14.93 18" RCP IN = 8.41 24 RCP IN = 8.33 60" RCP OUT = 8.28	(20550) (20579) (S.E.)	#8980 TOP = 29.00 15" RCP IN = 19.30 15" RCP OUT = 19.28 (8977) (8446)
#20550 TOP = 14.28 15" RCP IN = 10.98 18" RCP OUT = 10.68	(20529) (20590)	#8977 TOP = 29.03 18" RCP OUT = 19.18 (8980)
#20529 TOP = 14.24 15" RCP OUT = 11.19	(20550)	#8474 36" RCP OUT = 25.01 (8953)
#20579 TOP = 14.84 24" RCP OUT = 10.44	(20590)	#8953 TOP = 33.55 12" PVC IN = 26.16 36" RCP IN = 26.16 36" RCP OUT = 26.11 (8974) (8963) (8474)
#3980 24" RCP OUT = 12.69	(8991)	#8963 TOP = 33.58 36" RCP IN = 26.33 36" RCP OUT = 26.28 (8960) (8953)
#8991 24" RCP OUT = 12.77	(3980)	#8960 TOP = 34.82 36" RCP IN = 26.99 (8963)
#4483 15" RCP OUT = 21.40	(2229)	#19706 18" RCP OUT = 26.70 (19712)
#2229 TOP = 24.10 15" RCP OUT = 21.35	(4483)	#19712 TOP = 34.24 15" RCP IN = 28.44 18" RCP OUT = 27.98 (19713) (19706)
#19967 15" RCP IN = 21.27 15" RCP IN = 21.30 21" RCP IN = 21.33	(19950) (19988) (19914)	#19713 TOP = 33.75 15" RCP IN = 29.35 15" RCP OUT = 29.25 (19648) (19712)
		#19648 TOP = 33.69 15" RCP IN = 29.19 15" RCP OUT = 29.14 (19625) (19713)
		#19625 TOP = 33.13 15" RCP OUT = 29.98 (19648)
		#6042 24" RCP OUT = 11.73 (EAST)

ARLINGTON VIRGINIA

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SEAL



APPROVALS DATE

<i>Ankur Patel</i>	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
<i>Kamal Taktak</i>	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Shirley</i>	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	07/21/20
TRANSPORTATION DIRECTOR	
<i>Michael Gallo</i>	07/21/21
PROJECT MANAGER	

REVISIONS DATE

LEGEND

FOUR MILE RUN DREDGE PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

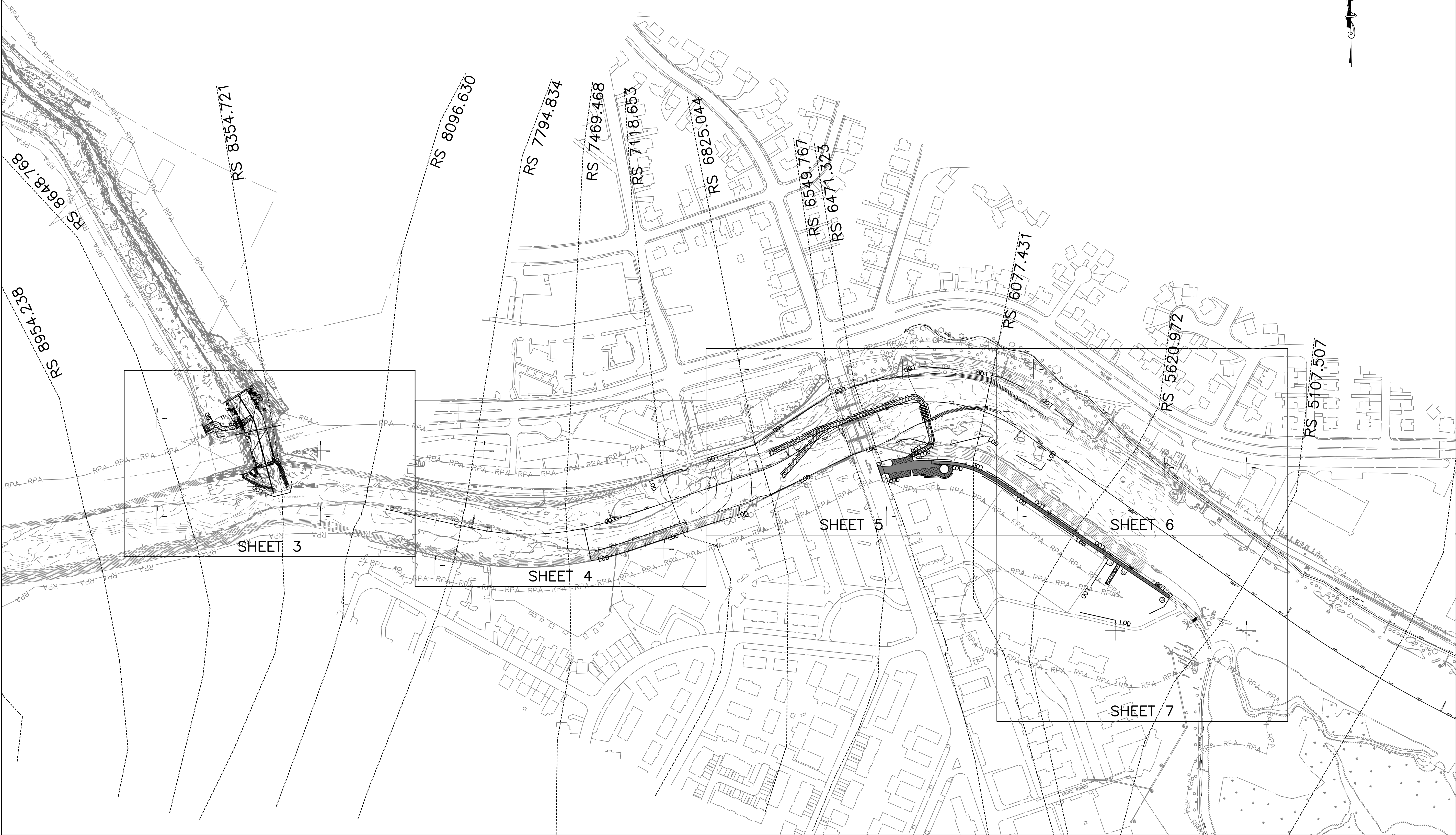
PLOTTED: AUGUST 23 2021

SCALE:

REVISED ON 01/07/2021

FILENAME: PROPOSED GRADING & EROSION CONTROL PLANNING PATH: \\AD.RKK.COM\FSCLOUD\PROJECTS\2019\19160_ARLSTREAM\TASK 2-4HR DREDGE CAD\PLAN PLOTTED BY: HCHEN

NOTE:
RS TRANSECTS ARE HEC-RAS
CROSS SECTION LOCATIONS
RELATED TO FLOOD MODELING



PLAN LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- HEC-RAS CROSS-SECTIONS
- 50' BASELINE CROSS-SECTIONS

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SEAL



APPROVALS	DATE
<i>Ankur Patel</i>	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
<i>Kamal Taktak</i>	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Shirley</i>	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	07/21/20
TRANSPORTATION DIRECTOR	
<i>Michael Gallo</i>	07/21/21
PROJECT MANAGER	

REVISIONS	DATE

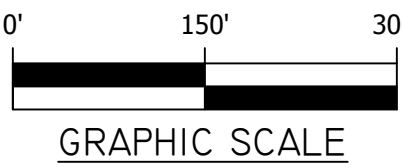
SHEET LAYOUT

FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

SCALE: Hor.: 1"=150'



REVISED ON 01/07/2021

FILENAME: 03 - EXISTING CONDITIONS.DWG PATH: \\VAD.RKX.COM\FSCLOUD\PROJECTS\2019\19160_ARLSTREAM\TASK 2-4HR DREDGE CADD\PLAN PLOTTED BY: HCHEN



MATCH LINE - SEE SHEET 04

TRAVERSE BENCHMARK STATIONS

Point No.	Northing(Y)	Easting(X)	Elev(Z)	Description	Point No.	Northing(Y)	Easting(X)	Elev(Z)	Description
1	6993343.031	11888305	17.5682	TRAV	1779	6993929.358	11891989.01	-0.005	TRAV
2	6993325.083	11888540.88	15.1179	TRAV	1780	6993871.755	11891846.27	1.181	TRAV
99	6993517.507	11888188.39	28.8916	TRAV	2073	6993938.011	11892300.64	12.9143	TRAV
108	6993469.817	11888373.82	25.055	TRAV	2074	6994039.552	11892072.72	14.0179	TRAV
313	6993569.855	11889325.54	19.2664	TRAV	2195	6993810.771	11891893.36	3.2554	TRAV
677	6993653.751	11889971.94	8.3673	TRAV	2196	6993853.26	11891976.56	3.3549	TRAV
678	6993665.858	11890152.44	6.8384	TRAV	2245	6993864.176	11891747.71	5.181	TRAV
978	6993516.073	11890537.71	7.6407	TRAV	2302	6993914.798	11891726.4	3.8158	TRAV
979	6993443.429	11890871.51	3.9933	TRAV	2448	6993728.736	11891264.88	12.7859	TRAV
1622	6993713.095	11891414.22	4.7791	TRAV	2449	6993707.693	11891145.26	13.0773	TRAV
1623	6993771.083	11891583.45	2.8481	TRAV					

△ DENOTES BENCHMARK LOCATION

PLAN LEGEND

PROPOSED DREDGE AREA

ARLINGTON
VIRGINIA

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SEAL



APPROVALS DATE

Arjun Patel	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
Kamal Taktak	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
Michael Gallo	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	07/21/20
TRANSPORTATION DIRECTOR	
Michael Gallo	07/21/21
PROJECT MANAGER	

REVISIONS DATE

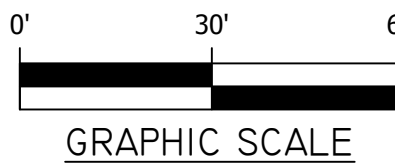
EXISTING CONDITIONS

FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

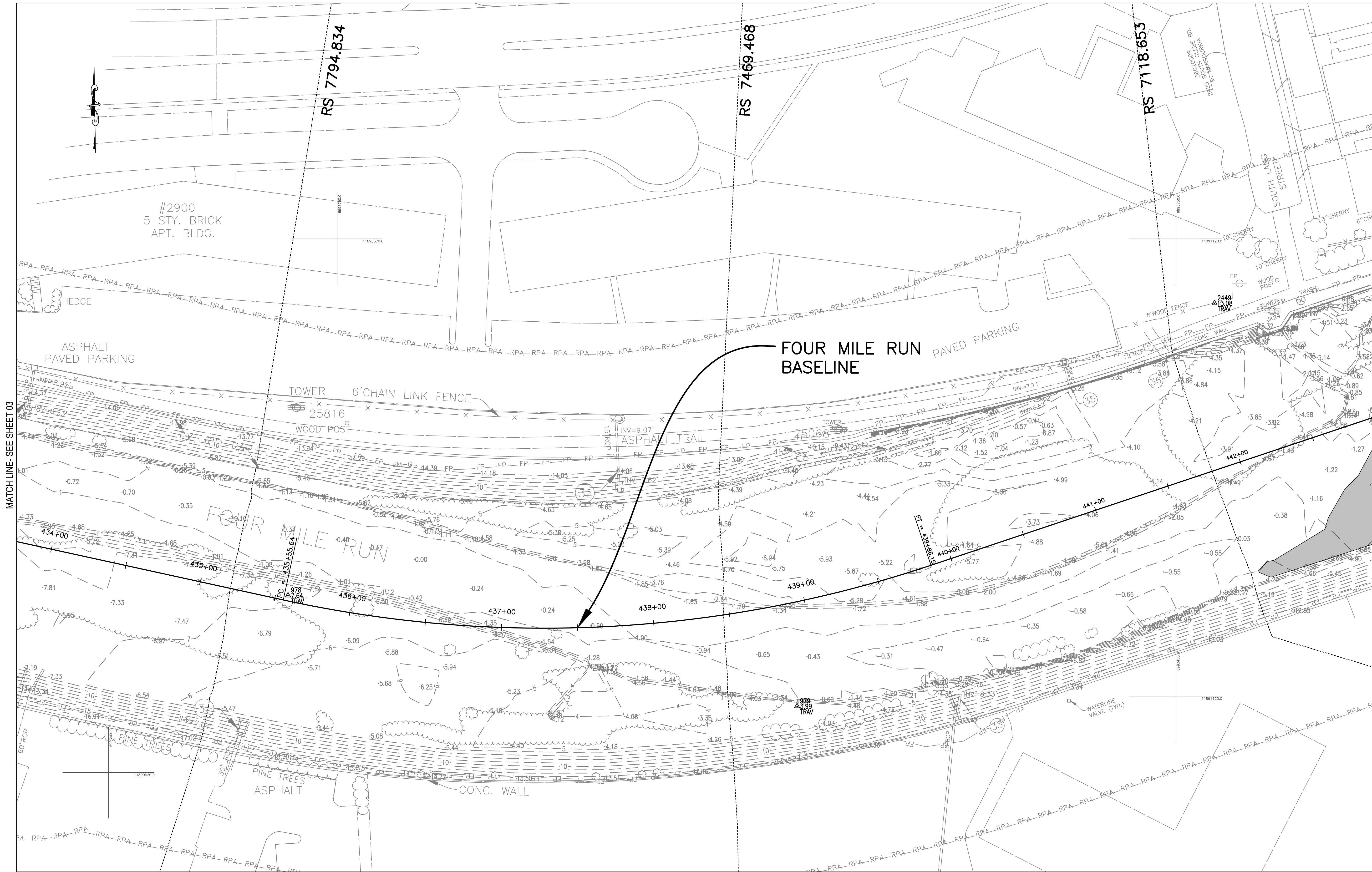
PLOTTED: AUGUST 23 2021

SCALE: Hor.: 1"=30'



SHEET 03 of 32

FOUR MILE RUN DREDGE PROJECT



TRAVERSE BENCHMARK STATIONS									
Point No.	Northing(Y)	Easting(X)	Elev(Z)	Description	Point No.	Northing(Y)	Easting(X)	Elev(Z)	Description
1	6993343.031	11888305	17.5682	TRAV	1779	6993929.358	11891989.01	-0.005	TRAV
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1623	6993771.083	11891583.45	2.8481	TRAV					

△ DENOTES BENCHMARK LOCATION



SEAL



APPROVALS DATE

Ankur Patel	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
Ramal Taktak	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
Michael Leach	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	07/21/20
TRANSPORTATION DIRECTOR	
Michael Gallo	07/21/21
PROJECT MANAGER	

REVISIONS DATE

REVISIONS	DATE

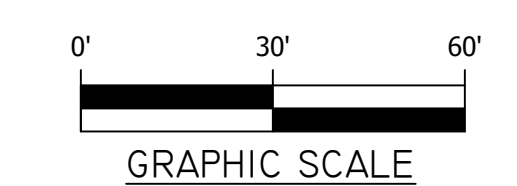
EXISTING CONDITIONS

FOUR MILE RUN DREDGE PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

SCALE: Hor.: 1"=30'





TRAVERSE BENCHMARK STATIONS

Point No.	Northing(Y)	Easting(X)	Elev(Z)	Description	Point No.	Northing(Y)	Easting(X)	Elev(Z)	Description
1	6993343.031	11888305	17.5682	TRAV	1779	6993929.358	11891989.01	-0.005	TRAV
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1623	6993771.083	11891583.45	2.8481	TRAV					

△ DENOTES BENCHMARK LOCATION

PLAN LEGEND

PROPOSED DREDGE AREA

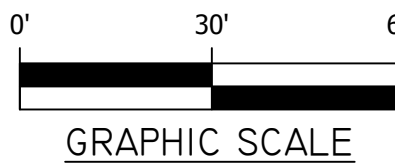
EXISTING CONDITIONS

FOUR MILE RUN DREDGE PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

SCALE: Hor.: 1"=30'



SHEET 05 of 32

FOUR MILE RUN DREDGE PROJECT

ARLINGTON VIRGINIA

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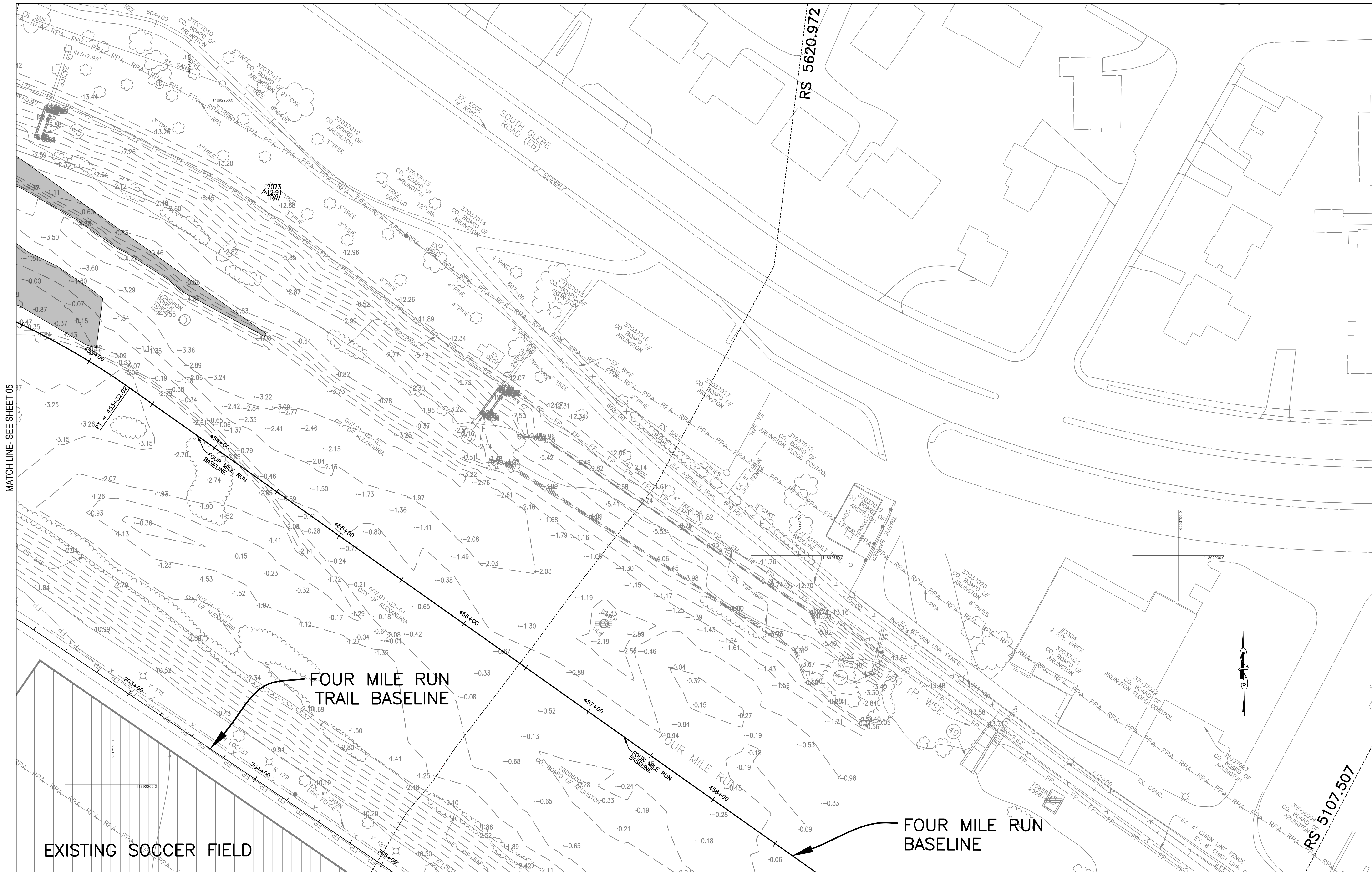
SEAL



APPROVALS DATE

Ankur Patel	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
Ramal Taktak	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
07.23.2021	
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	07/21/20
TRANSPORTATION DIRECTOR	
Michael Gallo	07/21/21
PROJECT MANAGER	

REVISIONS DATE



MATCH LINE - SEE SHEET 07

TRAVERSE BENCHMARK STATIONS

Point No.	Northing(Y)	Easting(X)	Elev(Z)	Description	Point No.	Northing(Y)	Easting(X)	Elev(Z)	Description
1	6993343.031	11888305	17.5682	TRAV	1779	6993929.358	11891989.01	-0.005	TRAV
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1622	6993713.095	11891414.22	4.7791	TRAV	2449	6993707.693	11891145.26	13.0773	TRAV
1623	6993771.083	11891583.45	2.8481	TRAV					

△ DENOTES BENCHMARK LOCATION

PLAN LEGEND

PROPOSED DREDGE AREA

ARLINGTON
VIRGINIA

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

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SEAL



APPROVALS	DATE
<i>Ankur Patel</i> DESIGN TEAM ENGINEER SUPERVISOR	07/19/21
<i>Kamal Taktak</i> CONSTRUCTION MANAGEMENT SUPERVISOR	8.18.21
<i>Shirley</i> WATER, SEWER, STREETS BUREAU CHIEF	07.23.2021
<i>Dennis M. Leach</i> TRANSPORTATION DIRECTOR	07/21/20
<i>Michael Gallo</i> PROJECT MANAGER	07/21/21

REVISIONS

DATE

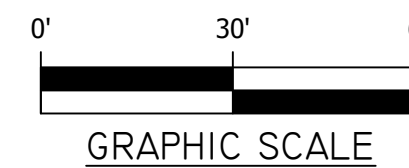
EXISTING CONDITIONS

FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

SCALE: Hor.: 1"=30'

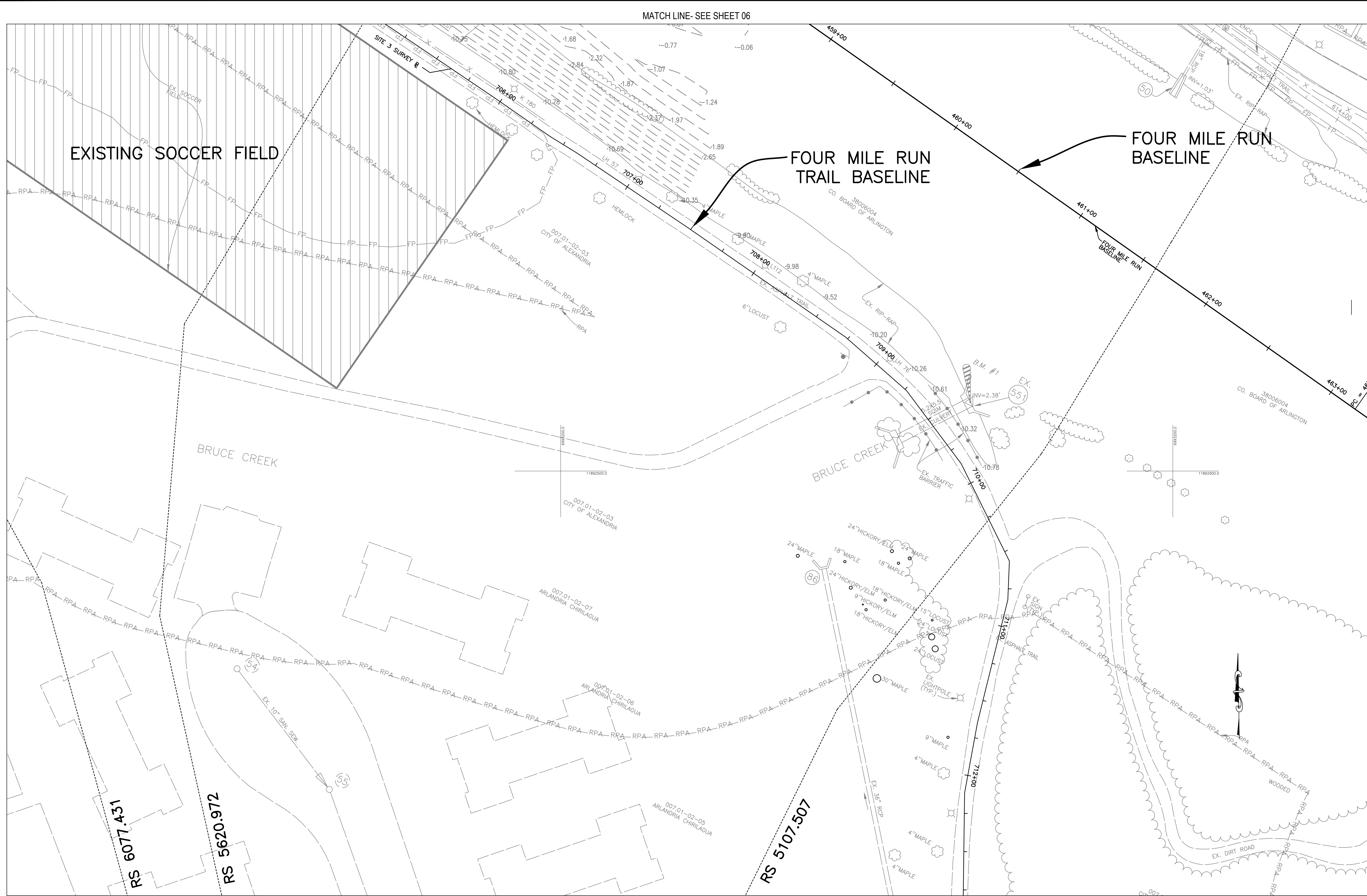


SHEET 06 of 32

FOUR MILE RUN DREDGE PROJECT

REVISED ON 01/07/2021

FILENAME: 03 - EXISTING CONDITIONS.DWG PATH: \\AD.RKX.COM\FSCLOUD\PROJECTS\2019\19160_ARLSTREAM\TASK 2-4MR DREDGE CADD\PLAN PLOTTED BY: HCHEN



TRAVERSE BENCHMARK STATIONS							
Point No.	Northing(Y)	Easting(X)	Elev(Z)	Description	Point No.	Northing(Y)	Easting(X)
1	6993343.031	11888305	17.5682	TRAV	1779	6993929.358	11891989.01
2	6993325.083	11888540.88	15.1179	TRAV	1780	6993871.755	11891846.27
99	6993517.507	11888188.39	28.8916	TRAV	2073	6993938.011	11892300.64
108	6993469.817	11888373.82	25.055	TRAV	2074	6994039.552	11892072.72
313	6993569.855	11889325.54	19.2664	TRAV	2195	6993810.771	11891893.36
677	6993653.751	11889971.94	8.3673	TRAV	2196	6993853.26	11891976.56
678	6993665.858	11890152.44	6.8384	TRAV	2245	6993864.176	11891747.71
978	6993516.073	11890537.71	7.6407	TRAV	2302	6993914.798	11891726.4
979	6993443.429	11890871.51	3.9933	TRAV	2448	6993728.736	11891264.88
1622	6993713.095	11891414.22	4.7791	TRAV	2449	6993707.693	11891145.26
1623	6993771.083	11891583.45	2.8481	TRAV			

△ DENOTES BENCHMARK LOCATION

PLAN LEGEND

PROPOSED DREDGE AREA

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ENGINEERING BUREAU
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SEAL



APPROVALS	DATE
<i>Ankur Patel</i>	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
<i>Kamal Taktak</i>	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Michael J. Gallo</i>	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	07/21/20
TRANSPORTATION DIRECTOR	
<i>Michael Gallo</i>	07/21/21
PROJECT MANAGER	

REVISIONS	DATE

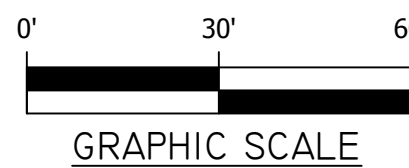
EXISTING CONDITIONS

FOUR MILE RUN DREDGE PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

SCALE: Hor.: 1"=30'



SHEET 07 of 32

EROSION AND SEDIMENT CONTROL LEGEND

SAFETY FENCE	SAF	
CONSTRUCTION ENTRANCE	CE	
COFFER DAM	CD	
TURBIDITY CURTAIN	TC	
SUPER SILT FENCE	SSF	
LIMIT OF DISTURBANCE		
DEWATERING DEVICE	DW	
TEMPORARY TIMBER MATTING	TM	
TREE PROTECTION	TP	
TREE REMOVAL		
TEMPORARY ACCESS ROAD AND CULVERT CROSSING	TA	

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS 4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS.
- THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
- THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
- ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
- ALL STORM AND SANITARY SEWER LINES NOT IN STREETS ARE TO BE MULCHED AND SEEDED WITHIN 5 DAYS AFTER BACKFILL. NO MORE THAN 500 FEET ARE TO BE OPEN AT ANY ONE TIME.
- ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEEDED AND MULCHED WITHIN 5 DAYS OF BACKFILL.
- ANY DISTURBED AREA NOT PAVED, SODDED OR BUILT UPON BY NOVEMBER 1ST, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED WITH HAY OR STRAW AT THE RATE OF 2 TONS PER ACRE AND OVER-SEEDED NO LATER THAN MAY 15TH.
- AT THE COMPLETION OF THE CONSTRUCTION PROJECT AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED. CITY OF ALEXANDRIA/ARLINGTON COUNTY INSPECTOR TO APPROVE REMOVAL OF ALL TEMPORARY SILTATION MEASURES.
- PROTECT TREES DURING CONSTRUCTION OF PROPOSED WORK AS SHOWN. CALL ARLINGTON URBAN FORESTER (703-228-1863) OR ALEXANDRIA CITY ARBORIST (703-838-4999) PRIOR TO BEGINNING WORK ADJACENT TO TREE. PROCEED WITH WORK AS DIRECTED BY THE ENGINEER IF ANY CONFLICT ARISES WITH PROPOSED WORK.

GENERAL LAND CONSERVATION NOTES

- NO DISTURBED AREA WILL REMAIN DENUDED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OR HIS AGENT.
- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING. FIRST AREAS TO BE CLEARED ARE TO BE THOSE REQUIRED FOR THE PERIMETER CONTROLS.
- ALL STORM AND SANITARY SEWER LINES NOT IN STREETS ARE TO BE MULCHED AND SEEDED WITHIN 5 DAYS AFTER BACKFILL. NO MORE THAN 500 FEET ARE TO BE OPEN AT ANY ONE TIME.
- ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES ARE TO BE COMPACTED, SEEDED AND MULCHED WITHIN 5 DAYS OF BACKFILL.
- ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS ARE TO BE MULCHED AND SEEDED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED. THE SAME APPLIES TO ALL SOIL STOCKPILES.
- DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION DEVICES, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
- ANY DISTURBED AREA NOT COVERED BY NOTE # 1 ABOVE AND NOT PAVED, SODDED OR BUILT UPON BY NOVEMBER 1ST, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED WITH HAY OR STRAW AT THE RATE OF 2 TONS PER ACRE AND OVER-SEEDED NO LATER THAN MAY 15TH.
- AT THE COMPLETION OF THE CONSTRUCTION PROJECT AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED. CITY OF ALEXANDRIA/ARLINGTON COUNTY INSPECTOR TO APPROVE REMOVAL OF ALL TEMPORARY SILTATION MEASURES.

POLLUTION PREVENTION NOTES

- ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY CITY OF ALEXANDRIA/ARLINGTON COUNTY'S MS4 PERMIT, UNLESS THE STATE WATER CONTROL BOARD, THE VIRGINIA SOIL AND WATER CONSERVATION BOARD (BOARD), CITY OF ALEXANDRIA, OR ARLINGTON COUNTY DETERMINES THE DISCHARGE TO BE A SIGNIFICANT SOURCE OF POLLUTANTS TO SURFACE WATERS, WATER LINE FLUSHING; LANDSCAPE IRRIGATION; DIVERTED STREAM FLOWS; RISING GROUND WATERS; UNCONTAMINATED GROUND WATER INFILTRATION (AS DEFINED AT 40 CFR 35.2005(20)); UNCONTAMINATED PUMPED GROUND WATER; DISCHARGES FROM POTABLE WATER SOURCES; FOUNDATION DRAINS; AIR CONDITIONING CONDENSATION; IRRIGATION WATER; SPRINGS; WATER FROM CRAWL SPACE PUMPS; FOOTING DRAINS; LAWN WATERING; INDIVIDUAL RESIDENTIAL CAR WASHING; FLOWS FROM RIPARIAN HABITATS AND WETLANDS; DECHLORINATED SWIMMING POOL DISCHARGES; DISCHARGES OR FLOWS FROM FIRE FIGHTING; AND, OTHER ACTIVITIES GENERATING DISCHARGES IDENTIFIED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY AS NOT REQUIRING VPDES AUTHORIZATION.
- APPROPRIATE CONTROLS MUST BE IMPLEMENTED TO PREVENT ANY NON-STORMWATER DISCHARGES NOT INCLUDED ON THE ABOVE LIST (E.G., CONCRETE WASH WATER, PAINT WASH WATER, VEHICLE WASH WATER, DETERGENT WASH WATER, ETC.) FROM BEING DISCHARGED INTO CITY OF ALEXANDRIA/ARLINGTON COUNTY'S MS4 SYSTEM, WHICH INCLUDES THE CURB AND GUTTER SYSTEM, AS WELL AS CATCH BASINS AND OTHER STORM DRAIN INLETS, OR STREAM NETWORK.
- IT SHALL BE UNLAWFUL FOR ANY PERSON TO DISCHARGE DIRECTLY OR INDIRECTLY INTO THE STORM SEWER SYSTEM OR STATE WATERS, ANY SUBSTANCE LIKELY, IN THE OPINION OF THE CITY/COUNTY MANAGER, TO HAVE AN ADVERSE EFFECT ON THE STORM SEWER SYSTEM OR STATE WATERS.

PROJECT DESCRIPTION:

THIS FLOOD CONTROL PROJECT WILL ENTAIL THE REMOVAL OF SEDIMENT (DREDGE) FROM APPROXIMATELY 1200 LF OF THE FOUR MILE RUN CHANNEL (WIDTH VARIABLE FROM 196 FT TO 63 FT), UPSTREAM AND DOWNSTREAM OF THE MOUNT VERNON BRIDGE. PROPOSED DREDGING WILL RESTORE THE AVAILABLE CAPACITY TO PROVIDE THE ORIGINAL DESIGN FREEBOARD SET BY THE U.S. ARMY CORPS OF ENGINEERS. THE PROJECT WILL REMOVE 16,444 CY OF SEDIMENT FROM FOUR MILE RUN. PROPOSED WORK WITHIN LONG BRANCH INCLUDES REMOVAL OF VEGETATION, SEDIMENT, AND DEBRIS ACCUMULATION WITHIN THE EXISTING CULVERT. 1,538 CY WILL BE DREDGED FROM LONG BRANCH. DAMAGED EXISTING GABION BASKETS ALONG THE BANKS OF BOTH LONG BRANCH AND FOUR MILE RUN WILL BE REPAIRED AND RESTORED TO ORIGINAL DESIGN DIMENSIONS, WHERE NECESSARY.

PROJECT WORK WILL BE CONDUCTED IN AN ENVIRONMENTALLY SENSITIVE AREA (IN AN RPA, FEMA FLOODPLAIN, WATERS OF THE U.S., AND U.S. ARMY CORPS OF ENGINEERS FLOOD CONTROL LEVEE AND CHANNEL). TOTAL LAND DISTURBANCE IS 8.58 ACRES (373,959.0 SF).

EXISTING SITE CONDITIONS:

LONG BRANCH IS AN URBANIZED STREAM CHANNEL WITH A CONCRETE WEIR AND GABION BASKET REINFORCED BANKS, PRIOR TO THE SOUTH GLEBE BRIDGE.

THE FOUR MILE RUN CHANNEL CONSISTS OF A BRAIDED CHANNEL WITH CONCRETE SIDE SLOPES, LEVEES, AND CONSTRUCTED BANK STABILIZATION. CURRENTLY, THE CHANNEL BOTTOMS HAVE ACCUMULATED SEDIMENT DEPOSITION SUCH THAT THE CHANNELS DO NOT PROVIDE SUFFICIENT FLOOD CAPACITY.

ADJACENT PROPERTY:

THE ADJACENT PROPERTIES CONSIST OF PUBLIC PARKS, COMMUNITY RESIDENTIAL AND COMMERCIAL, WITH PUBLIC PARK PROPERTY LOCATED DIRECTLY ADJACENT THE ACCESS ROAD, THE LAND COVER WITHIN THE PROJECT IS PRIMARILY PERVIOUS AND ADJACENT TO THE PROJECT IS MIXED PERVIOUS AND IMPERVIOUS.

OFF-SITE AREAS:

SOIL STOCKPILES SHALL BE KEPT IN THE CONSTRUCTION STAGING AREA OR (AS NEEDED) SHALL BE KEPT OFF-SITE TO STAY CLEAR OF ALL CONSTRUCTION ACTIVITY. THE STOCKPILES WILL BE STABILIZED WITH TEMPORARY VEGETATION TO PREVENT SOIL LOSS AND SEDIMENT TRANSPORT FROM THE STOCKPILE ITSELF UNTIL NEEDED. PRIOR TO LAND-DISTURBING ACTIVITIES, THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY E&S PLAN TO THE OWNER COVERING THE OFF-SITE STOCKPILE AREA WHICH MUST BE APPROVED BY THE PLAN APPROVING AUTHORITY BEFORE ANY OFF-SITE ACTIVITY COMMENCES.

CRITICAL EROSION AREAS:

AS THE PROJECT CONSISTS OF IN-STREAM WORK, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CLOSELY MONITORED THROUGHOUT THE PROJECT.

EROSION AND SEDIMENT CONTROL MEASURES:

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

STRUCTURAL PRACTICES:

THE EROSION AND SEDIMENT CONTROL MEASURES FROM THIS PROJECT AREA INCLUDE SUPER SILT FENCE (VESCH ST'D. 3.05), SAFETY FENCE (VESCH ST'D. 3.01), DEWATERING DEVICE (VESCH ST'D. 3.26), CONSTRUCTION ENTRANCE (VESCH ST'D. 3.02), COFFER DAM (VESCH ST'D 3.25), TURBIDITY CURTAIN (VESCH ST'D 3.27), TIMBER MATTING, TREE PROTECTION (ARLINGTON ST'D 311300.1 /ALEXANDRIA ST'D LD 014), AND ROOT PROTECTION MATTING (ARLINGTON ST'D 311300.7NS).

- DEWATERING BASIN - VESCH ST'D. 3.26: A TEMPORARY SEDIMENT AND FILTERING DEVICE FOR WATER WHICH IS DISCHARGED FROM DEWATERING ACTIVITIES. DEWATERING BASIN WILL BE PLACED AS NEEDED AT THE DISCRETION OF THE CONTRACTOR. IN LIEU OF DEWATERING BASIN SHOWN IN DETAILS ON SHEET 09, AN ALTERNATIVE OPTION MAY BE USED, IF APPROVED BY THE CITY OF ALEXANDRIA/ARLINGTON COUNTY.
- CONSTRUCTION ENTRANCE- VESCH ST'D. 3.02: CONSTRUCTION ENTRANCE LOCATION AS SHOWN IN PLANS IS FINAL. CONSTRUCTION ENTRANCE WILL CONFORM TO VDOT STANDARDS. WASH RACK REQUIRED. SEE E&S DETAIL SHEET 08 FOR SPECIFIC DESIGN CRITERIA.
- SUPER SILT FENCE- VESCH ST'D. 3.05: SUPER SILT FENCE SHALL BE USED ON THE DOWN-GRADE SIDE OF THE STAGING AREA, TO PREVENT SEDIMENT FROM LEAVING THE LIMITS OF WORK, AS WELL AS ALONG THE TRAIL TO THE STREAM. MEASURE SHALL BE USED TO PROTECT THE EXISTING ONSITE BMP DURING CONSTRUCTION ACTIVITIES.
- SAFETY FENCE- VESCH ST'D. 3.01: SAFETY FENCE SHALL BE USED AROUND THE STAGING AREA AND CONSTRUCTION ENTRANCE, AS WELL AS ALONG THE TRAIL TO THE STREAM TO HELP SECURE THE PROJECT SITE.
- COFFER DAM - VESCH ST'D 3.25: COFFER DAM WILL BE USED FOR IN-STREAM WORK TO CREATE DRY WORKSPACE. DEWATERING BASINS WILL BE USED IN CONJUNCTION WHERE NECESSARY.
- TURBIDITY CURTAIN - VESCH ST'D 3.27: CURTAIN MAY BE USED ON THE FLOW SIDE OF THE TEMPORARY STREAM CAUSEWAY AND ALONGSIDE ACCESS ROAD TO WORK AREAS.
- TEMPORARY STREAM CAUSEWAY - VESCH ST'D 3.24: TO BE USED WHEN ACCESSING PHASE 1 WORK ZONES FROM STAGING AREA, TO BE REMOVED AS NECESSARY WHEN MOVING THE WORK ZONE DOWNSTREAM.
- TIMBER MATTING: TEMPORARY TIMBER MATTING UNDERLAIN WITH IMPERMEABLE FABRIC SHALL BE USED TO PROTECT EXISTING ONSITE PERMEABLE PAVEMENT DURING CONSTRUCTION ACTIVITIES. TEMPORARY TIMBER MATTING SHALL BE USED ALONG CONSTRUCTION ACCESS PATHS WHERE INDICATED TO REDUCE EQUIPMENT IMPACT ON TREE ROOTS.
- TREE PROTECTION- ARLINGTON ST'D 311300.1 OR ALEXANDRIA ST'D LD 014: TREE PROTECTION SHALL BE USED TO PROTECT PRESERVED TREES FROM CONSTRUCTION DISTURBANCE. REFER TO THE APPLICABLE STANDARD FOR RELATED WORK UNDER THE RESPECTIVE LOCALITY JURISDICTION.
- ROOT PROTECTION MATTING- ARLINGTON ST'D 311300.7NS: ROOT PROTECTION MATTING SHALL BE USED WHERE NECESSARY TO REDUCE CONSTRUCTION EQUIPMENT IMPACT ON TREE ROOTS.

PERMANENT STABILIZATION:

ALL OF THE AREA DISTURBED WITH THIS PLAN SHALL BE PERMANENTLY STABILIZED WITH NATIVE GRASS SEEDING. ALL UNPAVED AREAS WILL BE STABILIZED WITH GRASS OR MULCH.

STORMWATER RUNOFF CONSIDERATIONS:

THE EXISTING STORM SEWER SYSTEM WILL BE USED TO DRAIN THE STORMWATER RUNOFF.

EROSION & SEDIMENT CONTROL PROGRAM:

- THE EROSION CONTROL PLAN IS INTENDED TO ESTABLISH ENTRANCES AND PERIMETER CONTROL MEASURES WHICH INCLUDES SAFETY FENCE, AND OTHER CONTROLS SPECIFIED ON THE PLANS.
- THE SEDIMENT MEASURES ARE INTENDED TO PROVIDE CONTROL DURING ALL STAGES OF IMPROVEMENTS. IT IS ANTICIPATED THAT CONTROLS WILL REMAIN IN PLACE UNTIL THEIR REMOVAL IS REQUIRED TO CONSTRUCT THE PROPOSED IMPROVEMENTS.

- NO DISTURBED AREA WILL REMAIN DENUDED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY CITY OF ALEXANDRIA/ARLINGTON COUNTY.
- WHERE CONSISTENT WITH JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL SHALL BE PLACED IN STREAMBEDS. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 14 DAYS SHALL BE SEEDED AND MULCHED. WHEN SPOIL IS PLACED ON THE DOWNHILL SIDE OF TRENCH, IT SHALL BE BACKSLOPED TO DRAIN TOWARD THE TRENCH. WHEN NECESSARY TO DEWATER THE TRENCH, THE PUMP DISCHARGE HOSE SHALL OUTLET IN A STABILIZED AREA OR A SEDIMENT TRAPPING DEVICE. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING. FIRST AREAS TO BE CLEARED ARE TO BE THOSE REQUIRED FOR THE PERIMETER CONTROLS.
- DURING DEWATERING OPERATIONS, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION DEVICES, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
- THE CONTRACTOR SHALL TAKE THE FOLLOWING STEPS TO MINIMIZE THE VOLUME OF SILT:
 - CONTRACTOR SHALL EVALUATE THE SITE TO DETERMINE EXTENSIVE CUT AND FILL AREAS, AND SHALL WORK THOSE AREAS TO MINIMIZE THE EXTENT OF HEAVY EQUIPMENT WORK. CONTRACTOR SHALL STRIVE TO BRING AREAS TO GRADE (ROUGH OR FINISH) AND TO STABILIZE, BY TEMPORARY OR PERMANENT VEGETATION, THESE DISTURBED AREAS PRIOR TO BEGINNING WORK IN ANOTHER AREA.
 - FILL AREAS SHALL BE COMPACTED COMPLETELY PRIOR TO THE END OF EACH WORK DAY. FILL SLOPE SURFACES SHALL BE LEFT ROUGHENED TO REDUCE SHEET EROSION OF THE SLOPES. CONTRACTOR SHALL RE-DIRECT CONCENTRATED RUNOFF, BY EARTH BERMS OR OTHER DEVICES, AROUND ACTIVELY DISTURBED AREAS TO STABILIZED OUTLETS.
 - CUT SLOPE, AS NECESSARY, SHALL BE PROTECTED FROM CONCENTRATED FLOW BY BERMS ABOVE THE SLOPE AND DIRECTED AROUND THE DISTURBED AREA TO STABILIZED OUTLETS.
 - IN NEW PAVEMENT AREAS, PLACE THE AGGREGATE BASE STONE ON THE FINISH SUBGRADE AT THE EARLIEST POSSIBLE TIME.

MAINTENANCE PROGRAM:

THE FOLLOWING IS A PROGRAM OF MAINTENANCE FOR THE CONTROLS SPECIFIED IN THIS PLAN:

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

TEMPORARY SEEDING - VESCH ST'D. 3.31:

TEMPORARY SEEDING, SEEDING RATES AND DATES SHALL CONFORM TO COASTAL PLAIN REQUIREMENTS DETAILED IN TABLE 3.31-B OF THE VESCH. LIMING SHALL BE BASED ON TABLE 3.31-B OF VESCH. FERTILIZERS SHALL BE APPLIED AS 600 LB/ACRE. THE FERTILIZER SHALL BE INCORPORATED INTO THE TOP 2"-4" OF SOIL. SEED SHALL BE EVENLY APPLIED AND SMALL GRAINS SHALL BE PLANTED NO MORE THAN 1.5" DEEP. SEEDING MADE IN FALL FOR WINTER COVER AND DURING HOT SUMMER MONTHS SHALL BE MULCHED.

PERMANENT SEEDING (TURF) - VESCH ST'D. 3.32:

PERMANENT SEEDING (TURF), SEEDING RATES AND DATES SHALL CONFORM TO COASTAL PLAIN REQUIREMENTS DETAILED IN TABLE 3.32-E OF THE VESCH. IF SOD IS TO BE USED LIEU OF PERMANENT SEEDING (TURF), REFERENCE SODDING NOTE BELOW. FOR SEEDING WITHIN THE RPA USE METHODS AND SPECIES PROVIDED ON NEXT SHEET.

SODDING - VESCH ST'D. 3.33:

SODDED AREAS SHALL BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLANS. SOIL TEST SHOULD BE MADE TO DETERMINE THE EXACT REQUIREMENTS FOR LIME AND FERTILIZER. PRIOR TO LAYING SOD, SOIL SURFACE SHALL BE CLEAR OF TRASH, DEBRIS AND LARGE OBJECTS. QUALITY OF SOD SHALL BE STATE CERTIFIED AND ENSURE GENETIC PURITY. SOD SHALL NOT BE LAID IN EXCESSIVELY WET OR DRY WEATHER OR ON FROZEN GROUND. SOD SHALL BE INSTALLED PER PAGE III-339 OF THE VESCH, WITHIN 36 HOURS OF DELIVERY.

DUST CONTROL - VESCH ST'D. 3.39:

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

UTILITY INSTALLATION:

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

- NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
- EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
- EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
- MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
- RESTALLIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
- APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

ARLINGTON VIRGINIA

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

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SEAL



APPROVALS DATE

<i>Arjun Patel</i>	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
<i>Kamal Taktak</i>	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Shirley</i>	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	07/21/20
TRANSPORTATION DIRECTOR	
<i>Michael Gallo</i>	07/21/21
PROJECT MANAGER	

REVISIONS DATE

EROSION & SEDIMENT CONTROL NARRATIVE AND DETAILS

FOUR MILE RUN DREDGE PROJECT

DESIGNED:	EC
DRAWN:	EC
CHECKED:	BMF

PLOTTED: AUGUST 23 2021

SCALE:

SHEET 08 of 32

Pre-Storm Erosion and Sediment Control Checklist

Per Erosion and Sediment Control General Note 6, the Contractor is responsible for the installation and maintenance of any additional erosion and sediment control (ESC) measures necessary to prevent erosion and sedimentation as determined by the County. These supplementary practices are in addition to those shown in an ESC plan. ESC practices shall be modified as needed to ensure only clear water is discharged from the site.

The following actions shall be taken prior to storm events with predicted heavy and/or large volume rainfall to prevent sediment discharges from a construction site. A typical summer thunderstorm is an example of a storm event with predicted heavy and/or large volume rainfall.

Perimeter controls

- ☐ Silt fence shall be checked for undermining, holes, or deterioration of the fabric. Fencing shall be replaced immediately if the fabric is damaged or worn. Silt fence must be trenched into the ground per state specifications (Std & Spec 3.09).
- ☐ Wooden stakes or steel posts shall be properly secured upright into the ground. Damaged posts or stakes must be replaced.
- ☐ Sediment that has accumulated against the silt fence should be removed. Accumulated sediment must be removed when the level reaches one-half the height of the fencing.
- ☐ Hay bales or a stone berm should be placed across the construction entrance to prevent sediment from leaving the construction site.

Exposed slopes and soil

- ☐ Exposed slopes not at the final stabilization phase shall be covered with tarps, plastic sheeting, or erosion control matting. Covering material shall be properly secured/anchored.
- ☐ Controls shall be installed to prevent concentrated flow down an exposed slope. Berms or diversion dikes shall be installed at the top of cut / exposed slopes to direct storm flow around the disturbed area.
- ☐ Exposed slopes at the final stabilization phase shall be stabilized using slope stabilization practices such as soil stabilization blankets or matting as specified in the Virginia Erosion and Sediment Control Handbook (VESCH) Std & Spec 3.36. Blankets or mats must be properly secured and anchored to the slope using staples, pins, or stakes.
- ☐ Seeded areas shall be checked and reseeded as necessary to cover exposed soil. Recently seeded areas shall be protected by straw or soil stabilization blankets to prevent seeding from being washed away.

Stockpiles

- ☐ Stockpiled soil and other loose materials that can be washed away shall be covered with a tarp, plastic sheeting, or other stabilization matting. The cover must be properly secured / anchored down to prevent it from being blown off and exposing materials to rain. Controls such as hay bales or booms should be placed along the perimeter of the stock pile (downhill side).

Inlet protection

- ☐ Inlet protection controls shall be inspected to ensure they are functioning properly and flooding will not occur. Clogged or damaged controls must be replaced immediately. Ensure controls allow for overflow / bypass of stormwater runoff during significant storm events.

In addition to these pre-storm actions, all erosion and sediment control (ESC) measures must be checked daily and after each significant rainfall.

date

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

Re: Erosion and Sediment Control Permit Application for:

Four Mile Run and Long Branch Dredging
street address

Arlington County and City of Alexandria, VA
lot, block, section subdivision

permit number

Dear Mrs. Li:

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

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

I may be reached at _____ with questions about this plan or my execution of the duties of Responsible Land Disturber.
telephone number

Sincerely,

signed

name printed

professional registration (type and number)

E&S QUANTITIES
(FOR WORK AREA 1 ONLY)
FOUR MILE RUN SECTION

ITEM	UNIT	QUANTITY
TEMPORARY CONSTRUCTION ENTRANCE	EA	2
12' SWING GATE	EA	2
TEMPORARY TOPPING OF VDOT #1/#2 STONE	TON	250
ACCESS PATH VDOT CLASS II DRY RIP RAP	TON	1125
SAFETY FENCE (FENCE FE-CL)	LF	1190
TREE PROTECTION FENCE	LF	120
TURBIDITY CURTAIN, IMPERVIOUS	LF	675
DEWATERING BASIN	EA	1
SUPER SILT FENCE	LF	905
COFFERDAM	LF	395
TEMPORARY 48" HDPE PIPE	LF	180
TEMPORARY TIMBER MATTING	LF	420
TREE REMOVAL (GREATER THAN 6" DBH)	EA	-

- NOTES:
1. ALL QUANTITIES SHOWN ARE FOR INFORMATION ONLY.
 2. QUANTITIES REFLECT WORK ASSOCIATED WITH THE WORK AREA 1 AS SHOWN IN THE PLANS. RESETTling OF MATERIALS WILL BE REQUIRED FOR ADDITIONAL WORK AREAS. CONTRACTOR MAY ADJUST PHASING AND LAYOUT PER FIELD CONDITIONS WITH PRIOR APPROVAL BY THE ENGINEER/PROJECT OFFICER.
 3. THE MOVING, RESETTling, REPLACEMENT, AND REPAIR OF ALL EROSION AND SEDIMENT CONTROL MEASURES ARE CONSIDERED INCIDENTAL TO THE WORK AND SHALL NOT BE PAID FOR SEPARATELY.

E&S QUANTITIES
(FOR PHASE 1 WORK AREA ONLY)
LONG BRANCH SECTION

ITEM	UNIT	QUANTITY
TEMPORARY CONSTRUCTION ENTRANCE	EA	2
12' SWING GATE	EA	1
TEMPORARY TOPPING OF VDOT #1/#2 STONE	TON	15
ACCESS PATH VDOT CLASS II DRY RIP RAP	TON	65
SAFETY FENCE (FENCE FE-CL)	LF	225
TREE PROTECTION FENCE	LF	200
TURBIDITY CURTAIN, IMPERVIOUS	LF	35
DEWATERING BASIN	EA	1
SUPER SILT FENCE	LF	80
COFFERDAM	LF	230
TEMPORARY 48" HDPE PIPE	LF	25
TEMPORARY TIMBER MATTING	LF	110
TREE REMOVAL (GREATER THAN 6" DBH)	EA	26

- NOTES:
1. ALL QUANTITIES SHOWN ARE FOR INFORMATION ONLY.
 2. QUANTITIES REFLECT WORK ASSOCIATED WITH THE PHASE 1 WORK AREA AS SHOWN IN THE PLANS. RESETTling OF MATERIALS WILL BE REQUIRED FOR ADDITIONAL WORK AREAS IN PHASE 1 AND PHASE 2. CONTRACTOR MAY ADJUST PHASING AND LAYOUT PER FIELD CONDITIONS WITH PRIOR APPROVAL BY THE ENGINEER/PROJECT OFFICER.
 3. THE MOVING, RESETTling, REPLACEMENT, AND REPAIR OF ALL EROSION AND SEDIMENT CONTROL MEASURES ARE CONSIDERED INCIDENTAL TO THE WORK AND SHALL NOT BE PAID FOR SEPARATELY.

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
GENERAL VPDES PERMIT FOR DISCHARGES OF STORMWATER FROM
CONSTRUCTION ACTIVITIES (VAR10)
REGISTRATION STATEMENT 2019

PERMIT #:
PLAN/ID #:
TECHNICAL CRITERIA: IIB ☐ IIC ☐

Application type. ☒ NEW PERMIT ISSUANCE
(CHOOSE ONE) ☐ MODIFICATION WITH ACREAGE INCREASE
☐ MODIFICATION WITHOUT ACREAGE INCREASE
☐ EXISTING PERMIT RE-ISSUANCE

Section I. Operator/Permittee Information.

A. Construction Activity Operator (Permittee). The person or entity that is applying for permit coverage and will have operational control over construction activities to ensure compliance with the general permit. A person with signatory authority for this operator must sign the certification in Section V. (per Part III. K. of the VAR10 Permit).

Operator Name: RK&K
Contact person: John M. McDowell, PE
Address: 12600 Fair Lakes Circle, Suite 300
City, State and Zip Code: Fairfax, VA 22033
Phone Number:
Primary and CC Email: jmcowell@rkk.com; CC: mgallo@arlingtonva.us

B. Electronic correspondence. To receive an emailed coverage letter or to pay by credit card, you must choose YES and include a valid email. May we transmit correspondence electronically? YES ☒ NO ☐

Section II. Construction Activity Information.

A. Include a site map showing the location of the existing or proposed land-disturbing activities, the limits of land disturbance, construction entrances and all waterbodies receiving stormwater discharges from the site.

B. Project site location information.

Construction Activity Name: Four Mile Run Dredge Project
Address: 1) Four Mile Run and 2) Long Branch
City and/or County and Zip Code: 1) City of Alexandria, 22305, 2) Arlington County, 22206
Construction Activity Entrance Location (description, street address and/or latitude/longitude in decimal degrees): 1) Four Mile Run: Four Mile Run Park entrance, 4131 Mt Vernon Ave, Alexandria, 22305
2) Long Branch: Troy Park, on S. Troy St at intersection with S. Glebe Rd, Arlington, 22206
Latitude and Longitude (6-digit, decimal degrees format): 1) 38.8448 N, 77.0643 W, 2) 38.8447 N, 77.0712 W

C. Acreage totals for all land-disturbing activities to be included under this permit coverage. Report to the nearest one-hundredth of an acre.

Total land area of development (include entire area to be disturbed as approved in the Stormwater Management Plan): 8.58 ac
Primary estimated area to be disturbed (include portions with Erosion and Sediment Control Plan approval only): 8.58 ac
Off-site estimated area to be disturbed (if applicable): N/A

D. Property Owner Status: FEDERAL ☒ STATE ☐ PUBLIC ☒ PRIVATE ☐

E. Nature of the Construction Activity Description (i.e. commercial, industrial, residential, agricultural, environmental, utility): Environmental

F. Municipal Separate Storm Sewer System (MS4) name(s) (if the site is discharging to a MS4): N/A

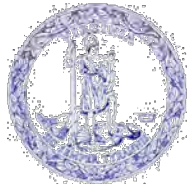
G. Estimated Project Dates (MM/DD/YYYY).

Start Date: TBD
Completion Date:

H. Is this construction activity part of a larger common plan of development or sale? YES ☐ NO ☒

Rev 11/2020

PAGE 1 | 6



Commonwealth of Virginia
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

1111 E. Main Street, Suite 1400, Richmond, Virginia 23219
P.O. Box 1105, Richmond, Virginia 23218
(800) 592-5482 FAX (804) 698-4178
www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural and Historic Resources

David K. Taylor
Director
(804) 698-4000

August 03, 2021

Rummel Klepper and Kahl LLP dba RK and K
12600 Fair Lakes Cir
Fairfax, VA 22033
jmcowell@rkk.com

RE: Coverage under the VPDES Construction General Permit (VAR10)
General Permit Number VAR10P848
CIP2020-00017
Four Mile Run Dredge Project
Environmental - Capacity
Alexandria

Dear Permittee:

DEQ has reviewed your Registration Statement received complete on July 19, 2021 and determined that the proposed 8.58 acre land-disturbing activity is covered under the General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10). The effective date of your coverage under this general permit is July 1, 2019 or the date of this letter, whichever is later. You may obtain a copy of the general permit from <https://law.lis.virginia.gov/admincode/title9/agency25/chapter80/section70/>.

The general permit contains the conditions of coverage and Stormwater Pollution Prevention Plan (SWPPP) requirements. Please print the general permit and read it carefully as you will be responsible for compliance with all permit conditions. Coverage under this construction general permit does not relieve the operator of complying with all other federal, state, or local laws and regulations.

Our records indicate that your site may discharge to waters identified as impaired or exceptional. Please see below for additional requirements:

1. Does this proposed land-disturbing activity discharge to a surface water identified as impaired or for which a TMDL wasteload allocation has been established and approved prior to the term of the general permit for (i) sediment or a sediment-related parameter or (ii) nutrients? Yes. If YES, then the following general permit (Part I B 4 a) and SWPPP requirements (Part I B 5) must be implemented for the land-disturbing activity:

- Permanent or temporary soil stabilization shall be applied to denuded areas within seven (7) days after final grade is reached on any portion of the site;
- Nutrients (e.g., fertilizers) shall be applied in accordance with manufacturer's recommendations or an approved nutrient management plan and shall not be applied during rainfall events;
- Inspections shall be conducted at a frequency of (i) at least once every four (4) business days or (ii) at least once every (5) business days and no later than 24 hours following a measurable storm event. In the

CONSTRUCTION GENERAL PERMIT (VAR10) REGISTRATION STATEMENT 2019

I. 6 th Order Hydrologic Unit Code (HUC) and Receiving Water Name(s). Include additional areas on a separate page.	
HUC PL25	NAME(S) OF RECEIVING WATERBODY Potomac River-Four Mile Run

Section III. Off-site Support Activity Location Information.

List all off-site support activities and excavated material disposal areas being utilized for this project. Include additional areas on a separate page.

Off-site Activity Name:	To be determined and updated by Contractor
Address:	
City or County:	
Off-site Activity Entrance Location (description, street address and/or latitude/longitude in decimal degrees):	
Latitude and Longitude (6-digit, decimal degrees format):	
Is this off-site activity an excavated material disposal area?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
If this off-site activity is an excavated material disposal area, list the contents of the excavated fill material:	Cobbles, gravel, and sand dredged from stream
Will a separate VPDES permit cover this off-site activity?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

Section IV. Other Information.

A. A stormwater pollution prevention plan (SWPPP) must be prepared in accordance with the requirements of the General VPDES Permit for Discharges of Stormwater from Construction Activities prior to submitting the Registration Statement. By signing the Registration Statement, the operator is certifying that the SWPPP has been prepared.

B. Has an Erosion and Sediment Control Plan been submitted to the VESC Authority for review? YES ☒ NO ☐

Erosion and Sediment Control Plan Approval Date (for the estimated area to be disturbed MM/DD/YYYY):

C. Has land-disturbance commenced? YES ☐ NO ☒

D. Annual Standards and Specifications. If this project is utilizing approved Annual Standards and Specifications (AS&S), attached the completed AS&S Entity Form.

AS&S Entity Name (if different from the Operator identified in Section I): N/A

E. Billing information (leave blank if same as the Operator identified in Section I. above). This entity will receive Annual Permit Maintenance and Permit Modification Fee invoices (if applicable).

Billing Name:
Contact Name:
Address:
City, State and Zip Code:
Phone Number:
Primary and CC Email:

Rev 11/2020

PAGE 2 | 6

August 03, 2021
General Permit Number VAR10P848
Page 2

- event that a measurable storm event occurs when there are more than 24 hours between business days, the inspection shall be conducted on the next business day; and
- Representative inspections used by utility line installation, pipeline construction, or other similar linear construction activities shall inspect all outfalls.
2. Does this proposed land-disturbing activity discharge to a surface water identified as impaired or for which a TMDL wasteload allocation has been established and approved prior to the term of the general permit for polychlorinated biphenyl (PCB)? Yes. If YES, then the following general permit (Part I B 4 b) and SWPPP requirements (Part II B 6) must be implemented for the land-disturbing activity if the construction activity involves the demolition of structures (i) equal to or greater than 10,000 square feet and (ii) built or renovated on or before January 1, 1980:

- Implement an approved erosion and sediment control plan;
 - Dispose of PCB-contaminated materials in compliance with applicable state, federal, and local requirements to minimize the exposure of PCB-containing building materials;
 - Inspections shall be conducted at a frequency of (i) at least once every four (4) business days or (ii) at least once every (5) business days and no later than 24 hours following a measurable storm event. In the event that a measurable storm event occurs when there are more than 24 hours between business days, the inspection shall be conducted on the next business day; and
 - Representative inspections used by utility line installation, pipeline construction, or other similar linear construction activities shall inspect all outfalls.
3. Does this proposed land-disturbing activity discharge to an exceptional water as identified in Section 30 of the Water Quality Standards, 9VAC 25-260? No. If YES, then the following general permit (Part I B 5) and SWPPP requirements (Part II B 7) must be implemented for the land-disturbing activity:

- Permanent or temporary soil stabilization shall be applied to denuded areas within seven (7) days after final grade is reached on any portion of the site;
- Nutrients (e.g., fertilizers) shall be applied in accordance with manufacturer's recommendations or an approved nutrient management plan and shall not be applied during rainfall events;
- Inspections shall be conducted at a frequency of (i) at least once every four (4) business days or (ii) at least once every (5) business days and no later than 24 hours following a measurable storm event. In the event that a measurable storm event occurs when there are more than 24 hours between business days, the inspection shall be conducted on the next business day; and
- Representative inspections used by utility line installation, pipeline construction, or other similar linear construction activities shall inspect all outfalls.

The general permit requires that you submit a complete Notice of Termination packet no later than 30 days after meeting one or more of the termination conditions set forth in the general permit (Part I F). In accordance with the Virginia Stormwater Management Program State Permit Fee Regulation (9VAC 25-870-830), you may be required to pay an annual permit maintenance fee until coverage under this general permit has been terminated. If you are required to pay an annual permit maintenance fee, you will receive an invoice from the VSMP Authority.

The general permit will expire on June 30, 2024. The conditions of the general permit require that you submit a new registration statement at least 60 days prior to that date if you wish to continue coverage under the general permit, unless permission for a later date has been granted by the Board. Permission cannot be granted to submit the registration statement after the expiration date of the general permit.

If you have any questions about this permit, please contact the DEQ Office of Stormwater Management at ConstructionGP@deq.virginia.gov.

Sincerely,

Erin Ervin Belt
Erin Ervin Belt, Manager

ARLINGTON
VIRGINIA

DEPARTMENT OF
ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
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SEAL



APPROVALS DATE

Arjun Patel 07/19/21
DESIGN TEAM ENGINEER SUPERVISOR
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REVISIONS DATE

EROSION & SEDIMENT CONTROL
NARRATIVE AND DETAILS
FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

SCALE:

SHEET 08A of 32

REVISED ON 01/07/2021

FILENAME: EROSION & SEDIMENT CONTROL NARRATIVE AND DETAILS.DWG PATH: \\AD.BKK.COM\FILES\CLOUD\PROJECTS\2019\19160_ARL\STREAM\TASK 2-4MR DREDGE\CADD\PLAN PLOTTED BY: HCHEN

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

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

FERTILIZER & LIME

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

NOTE:

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

Restoration Measures for Natural Areas and RPAs

- If streambanks are to be disturbed, contact DES OSEM about bank stabilization alternatives.
- Apply permanent seeding, weed-free straw and matting rather than leaf mulch for stabilization in natural areas.
- Use only regionally native plant seed mixes, weed-free straw and 100% biodegradable natural fiber matting for permanent stabilization. Non-native perennial grasses such as perennial rye, tall fescue, creeping fescue, Kentucky bluegrass, etc. are not appropriate for stabilization of natural areas.
- Permanent seeding: Seed and straw with the following seed mix at a rate of 50 lb per acre (2 lb/1000 sf):
 - 20% Annual rye - Lolium multiflorum
 - 30% Virginia wild rye - Elymus virginicus
 - 25% Deer-tongue grass - Panicum clandestinum
 - 15% Riverbank wild rye - Elymus riparius
 - 5% Bottle-brush grass - Elymus hystrix
 - 2% Partridge pea - Chamaecrista fasciculata
 - 1% Rough-stemmed goldenrod - Solidago rugosa
 - 1% Common milkweed - Asclepias syriaca
 - 1% Grass-leaved goldenrod - Euthamia graminifolia

Seed should be applied to roughened soil (soil surface broken up) via broadcast seeding.

Due to significant demand, particularly for native seed mix, it is recommended that seed be pre-ordered and stored. Seed mixes are best used within 1 year of ordering, but can be kept for up to 2 years if necessary. Potential sources for native seed mix and native plants:

- Earth Sangha - Wild Plant Nursery (seed mix must be pre-ordered) - www.earthsangha.org
- Ernst Conservation Seeds - www.ernstseed.com
- Davey Tree via the County's existing Landscape Contract.

TABLE 3.32-E
(Revised June 2003)
PERMANENT SEEDING SPECIFICATIONS FOR COASTAL PLAIN AREA

SEED ¹		
LAND USE	SPECIES	APPLICATION RATES
Minimum Care Lawn (Commercial or Residential)	Tall Fescue ¹ or Bermudagrass ¹	175 - 200 lbs.
High-Maintenance Lawn	Tall Fescue ¹ or Bermudagrass ¹ (seed) or Bermudagrass ¹ (by other vegetative establishment method, see Std. & Spec. 3.34)	75 lbs. 200-250 lbs. 40 lbs. (unhulled) 30 lbs. (hulled)
General Slope (3:1 or less)	Tall Fescue ¹ Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop ²	128 lbs. 2 lbs. 20 lbs. TOTAL: 150 lbs.
Low-Maintenance Slope (Sleeper than 3:1)	Tall Fescue ¹ Bermudagrass ¹ Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop ² Sericea Lespedeza ³	93-108 lbs. 0-15 lbs. 2 lbs. 20 lbs. 20 lbs. TOTAL: 150 lbs.

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

February, March - April	Annual Rye
May 1 st - August	Foxtail Millet
September, October - November 15 th	Annual Rye
November 16 th - January	Winter Rye
- May through October, use hulled seed. All other seeding periods, use unhulled seed. If Weeping Lovegrass is used, include in any slope or low maintenance mixture during warmer seeding periods, increase to 30 - 40 lbs/acre.

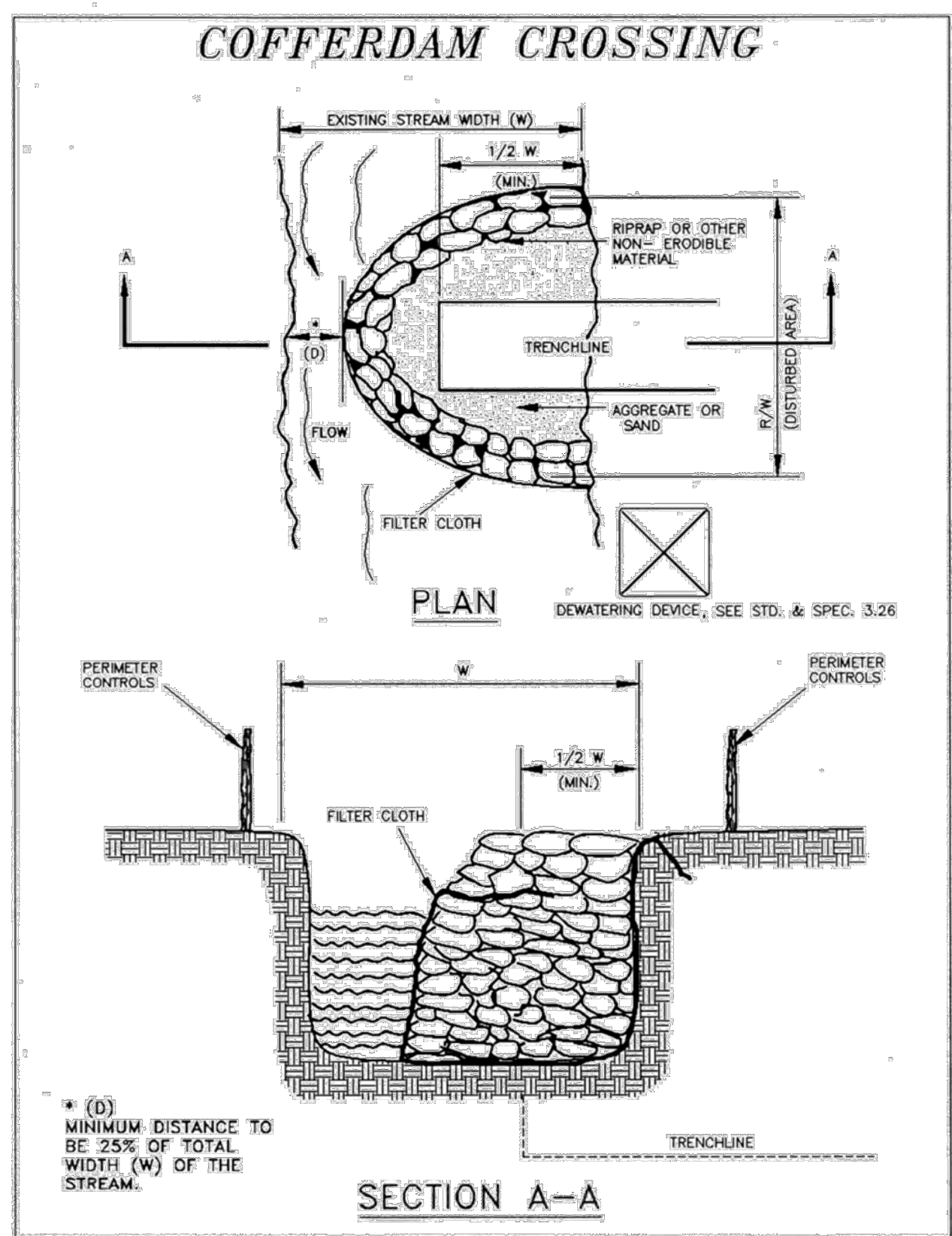
FERTILIZER & LIME

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

NOTE:

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

1992

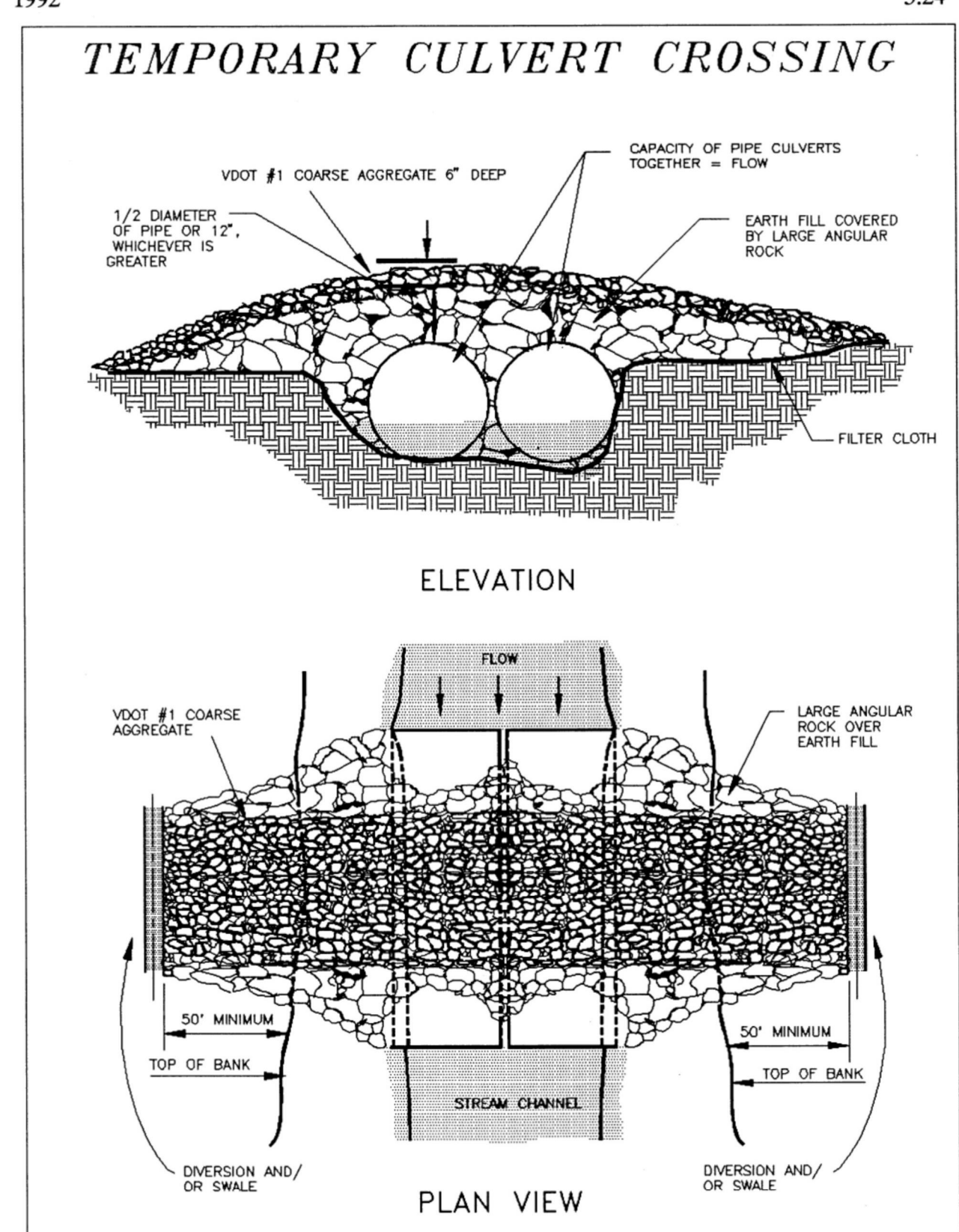


Source: Va. DSWC

Plate 3.25-4

III - 236

1992

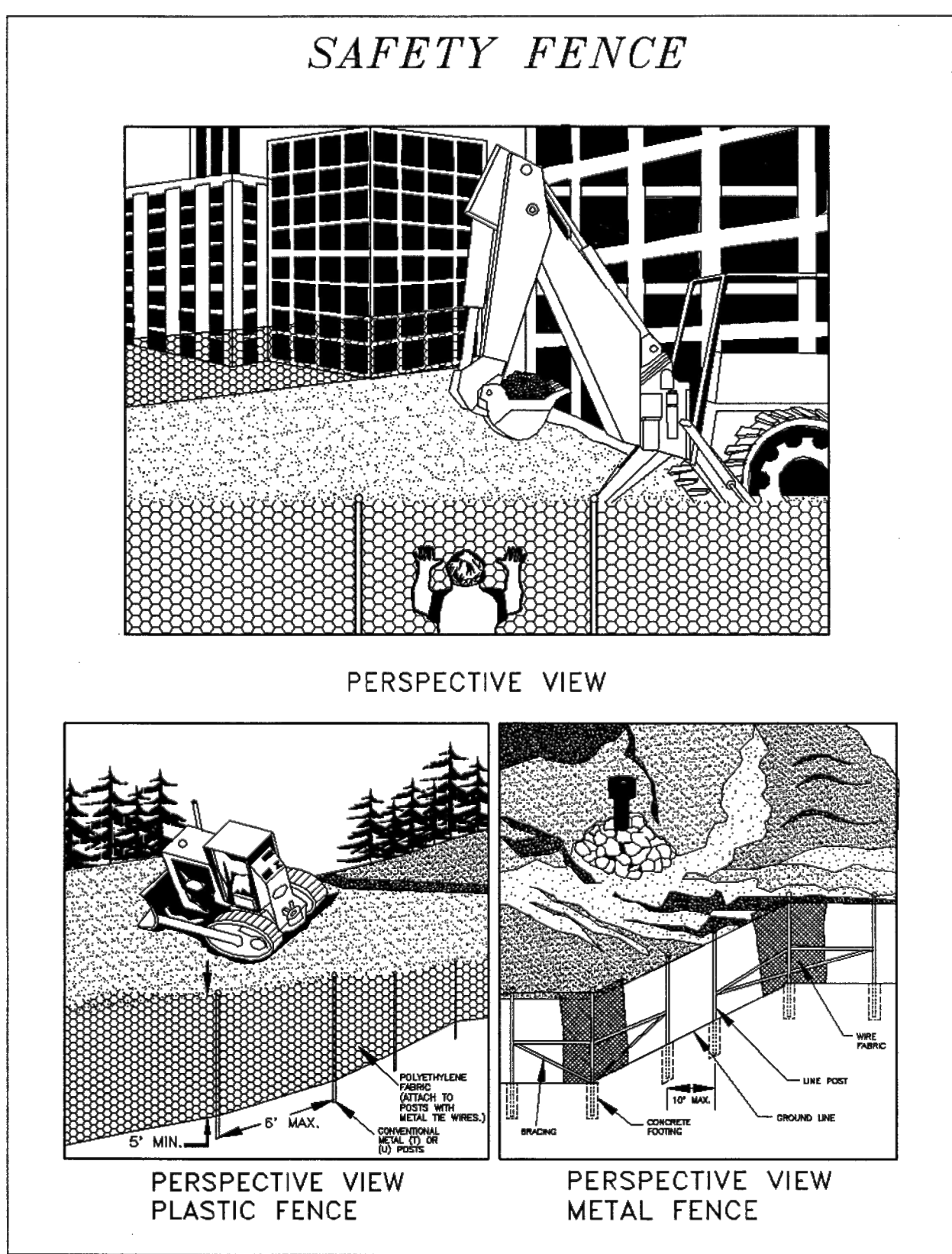


Source: Va. DSWC

Plate 3.24-2

III - 222

1992



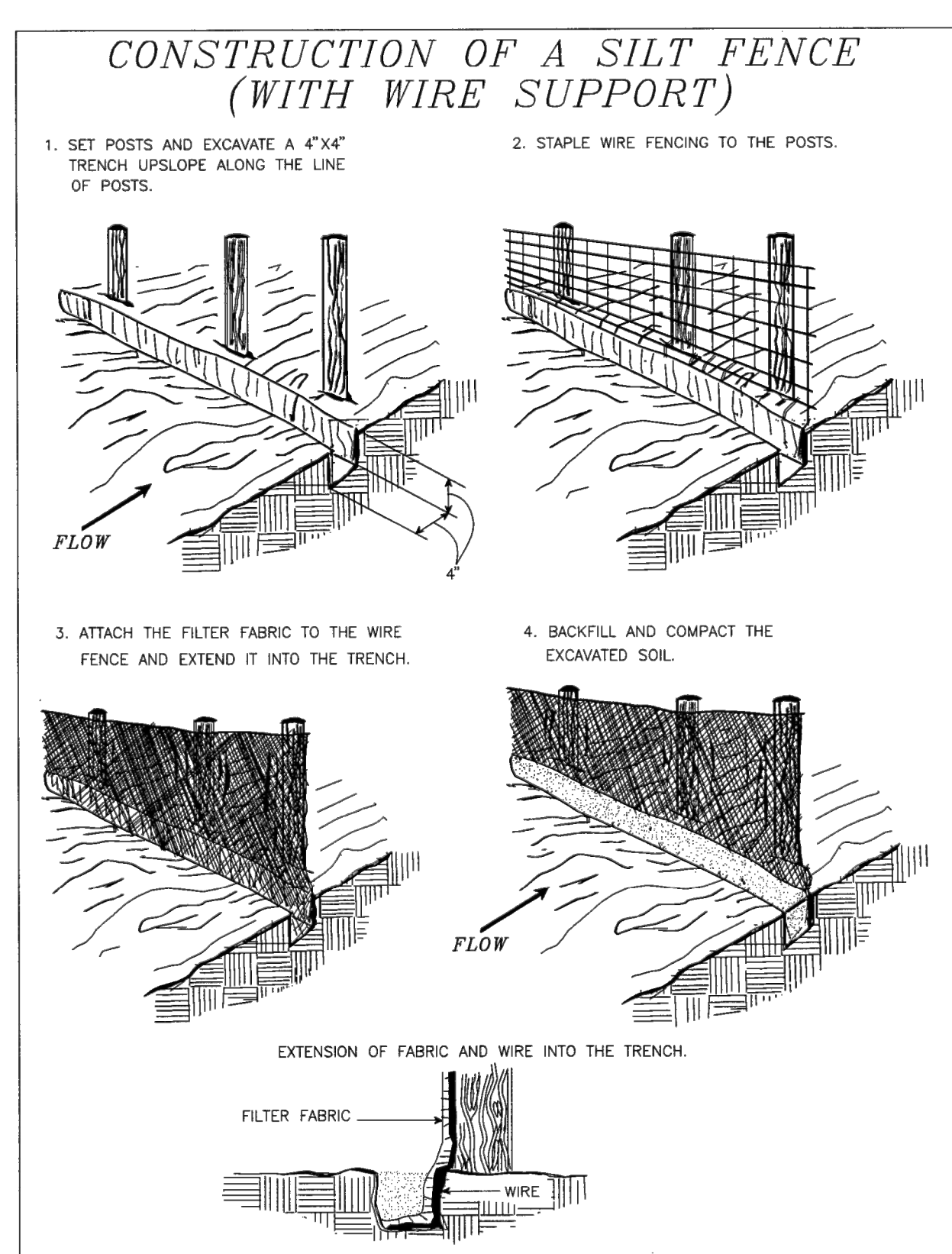
Source: Adapted from Conwed Plastics and VDOT Road and Bridge Standards

Plate 3.01-1

III - 5

3.01

1992



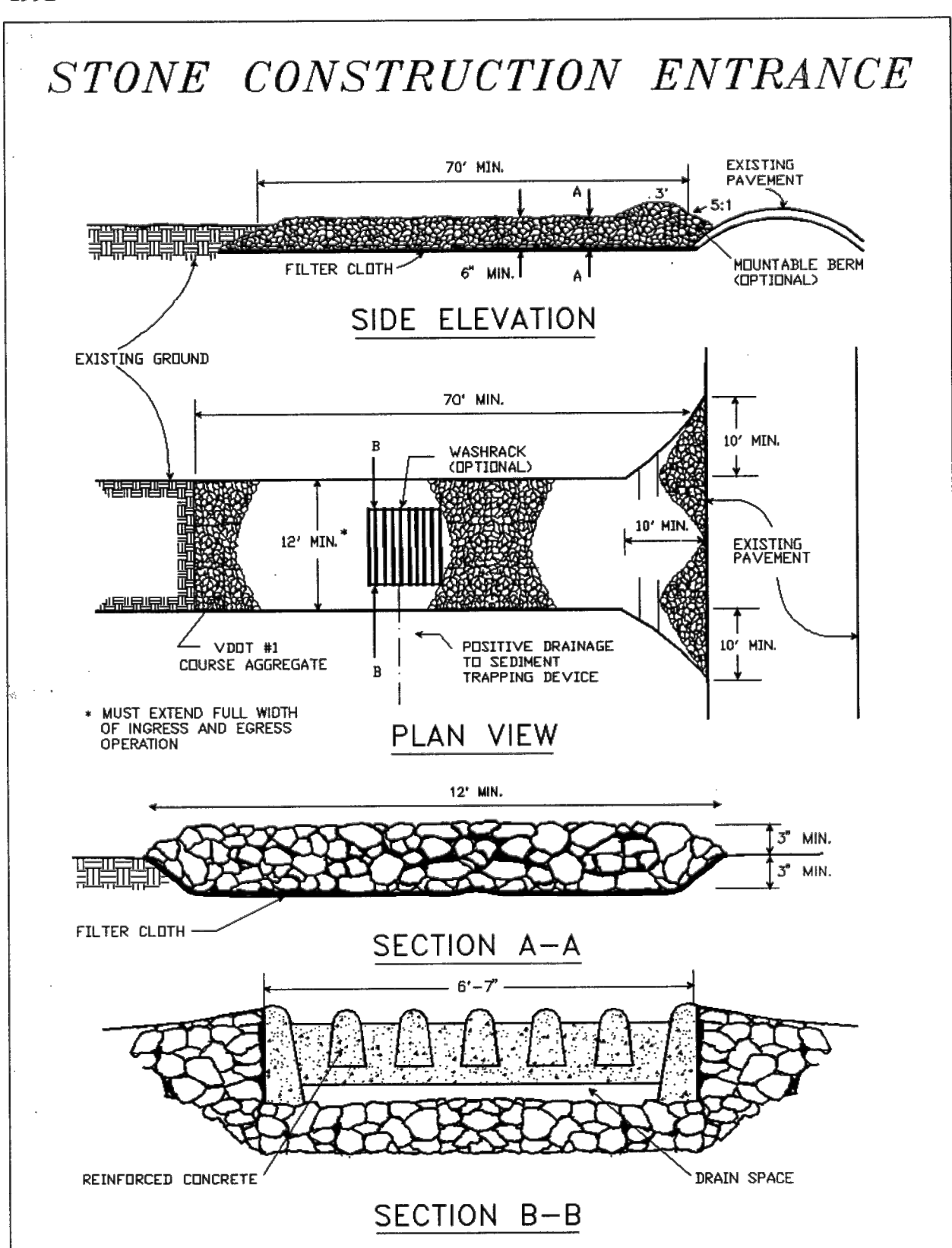
Source: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant

Plate 3.05-1

III - 24

3.05

1992

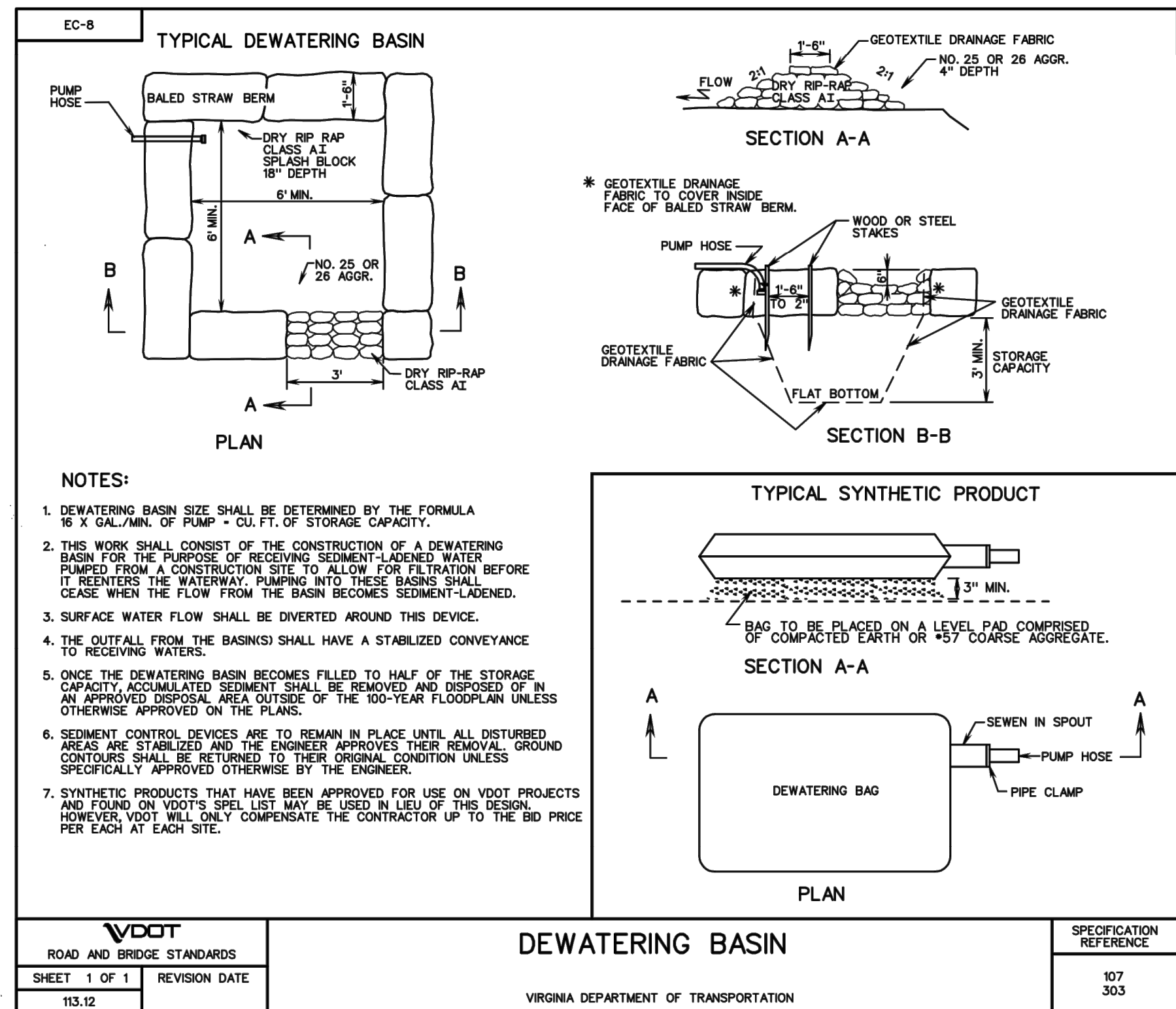


Source: Adapted from 1983 Maryland Standards for Soil Erosion and Sediment Control, and Va. DSWC

Plate 3.02-1

III - 9

3.02



NOTES:

- DEWATERING BASIN SIZE SHALL BE DETERMINED BY THE FORMULA 16 X GAL./MIN. OF PUMP = CU. FT. OF STORAGE CAPACITY.
- THIS WORK SHALL CONSIST OF THE CONSTRUCTION OF A DEWATERING BASIN FOR THE PURPOSE OF RECEIVING SEDIMENT-LOADED WATER PUMPED FROM A CONSTRUCTION SITE TO ALLOW FOR FILTRATION BEFORE IT REENTERS THE WATERWAY. PUMPING INTO THESE BASINS SHALL CEASE WHEN THE FLOW FROM THE BASIN BECOMES SEDIMENT-LOADED.
- SURFACE WATER FLOW SHALL BE DIVERTED AROUND THIS DEVICE.
- THE OUTFALL FROM THE BASINS SHALL HAVE A STABILIZED CONVEYANCE TO RECEIVING WATERS.
- ONCE THE DEWATERING BASIN BECOMES FILLED TO HALF OF THE STORAGE CAPACITY, ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED DISPOSAL AREA OUTSIDE OF THE 100-YEAR FLOODPLAIN UNLESS OTHERWISE APPROVED ON THE PLANS.
- SEDIMENT CONTROL DEVICES ARE TO REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED AND THE ENGINEER APPROVES THEIR REMOVAL. GROUND CONTOURS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION UNLESS SPECIFICALLY APPROVED OTHERWISE BY THE ENGINEER.
- SYNTHETIC PRODUCTS THAT HAVE BEEN APPROVED FOR USE ON VDOT PROJECTS AND FOUND ON VDOT'S SPEL LIST MAY BE USED IN LIEU OF THIS DESIGN. HOWEVER VDOT WILL ONLY COMPENSATE THE CONTRACTOR UP TO THE BID PRICE PER EACH AT EACH SITE.

ARLINGTON
VIRGINIA

DEPARTMENT OF
ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
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APPROVALS DATE

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Kamal Taktak 8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR
07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF
Dennis M. Leach 07/21/20
TRANSPORTATION DIRECTOR
Michael Gallo 07/21/21
PROJECT MANAGER

REVISIONS DATE

EROSION & SEDIMENT CONTROL
NARRATIVE AND DETAILS
FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

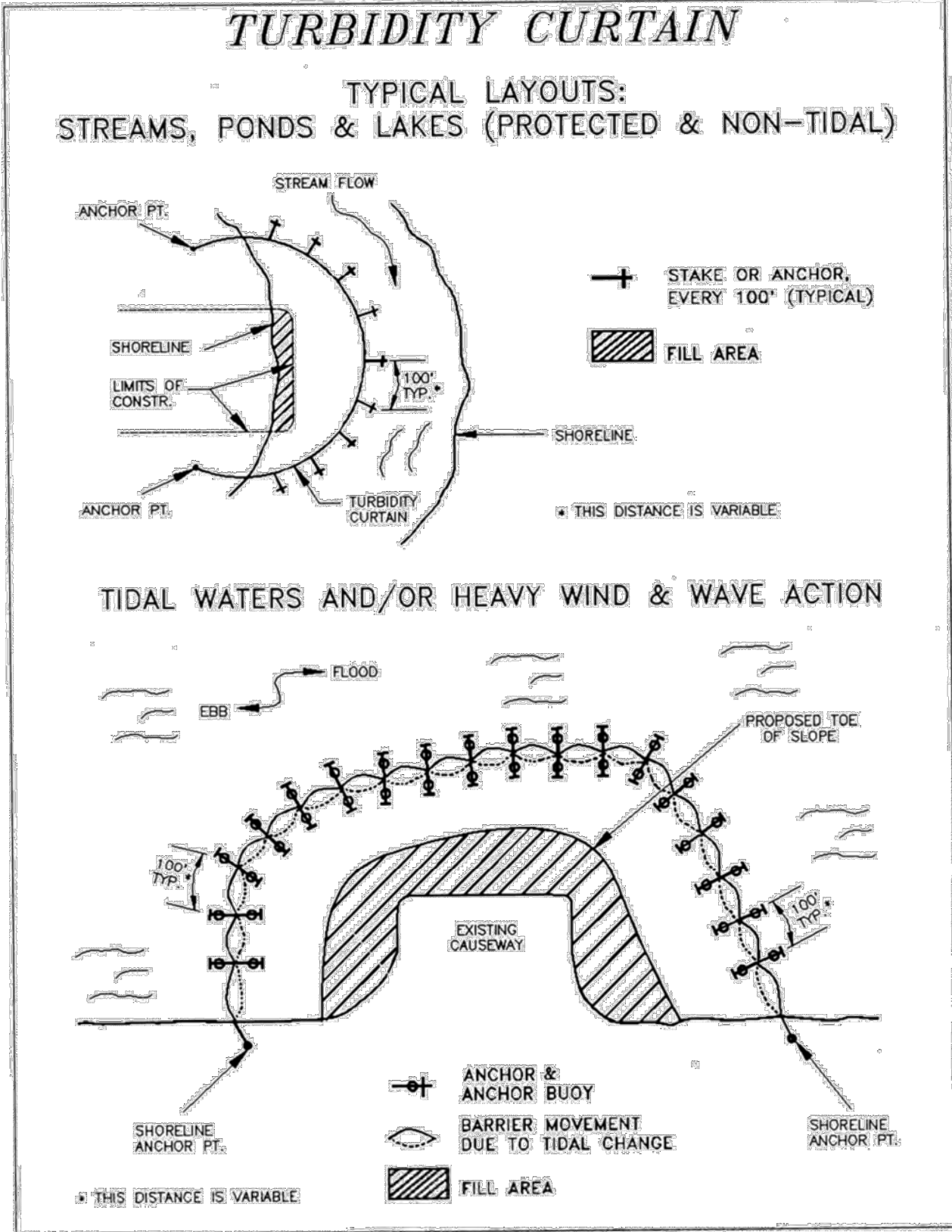
SCALE: As Noted

SHEET 09 of 32

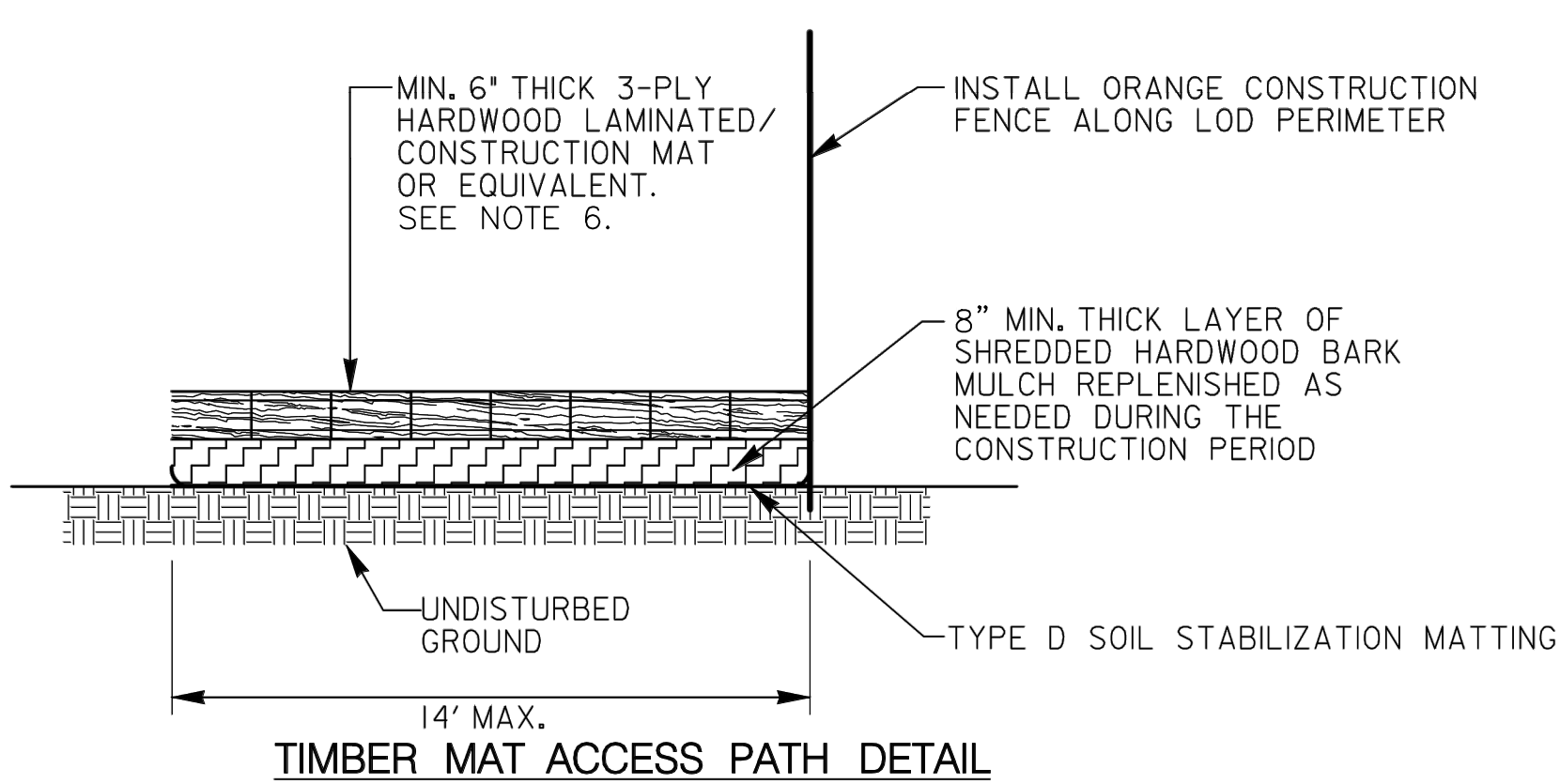
FOUR MILE RUN DREDGE PROJECT

REVISED ON 01/07/2021
FILENAME: EROSION & SEDIMENT CONTROL NARRATIVE AND DETAILS.DWG PATH: \\AD.BKK.COM\FS\CLOUD\PROJECTS\2019\19160_ARL\STREAMSTASK 2-4MR DREDGE\CADD\PLAN PLOTTED BY: HCHEN

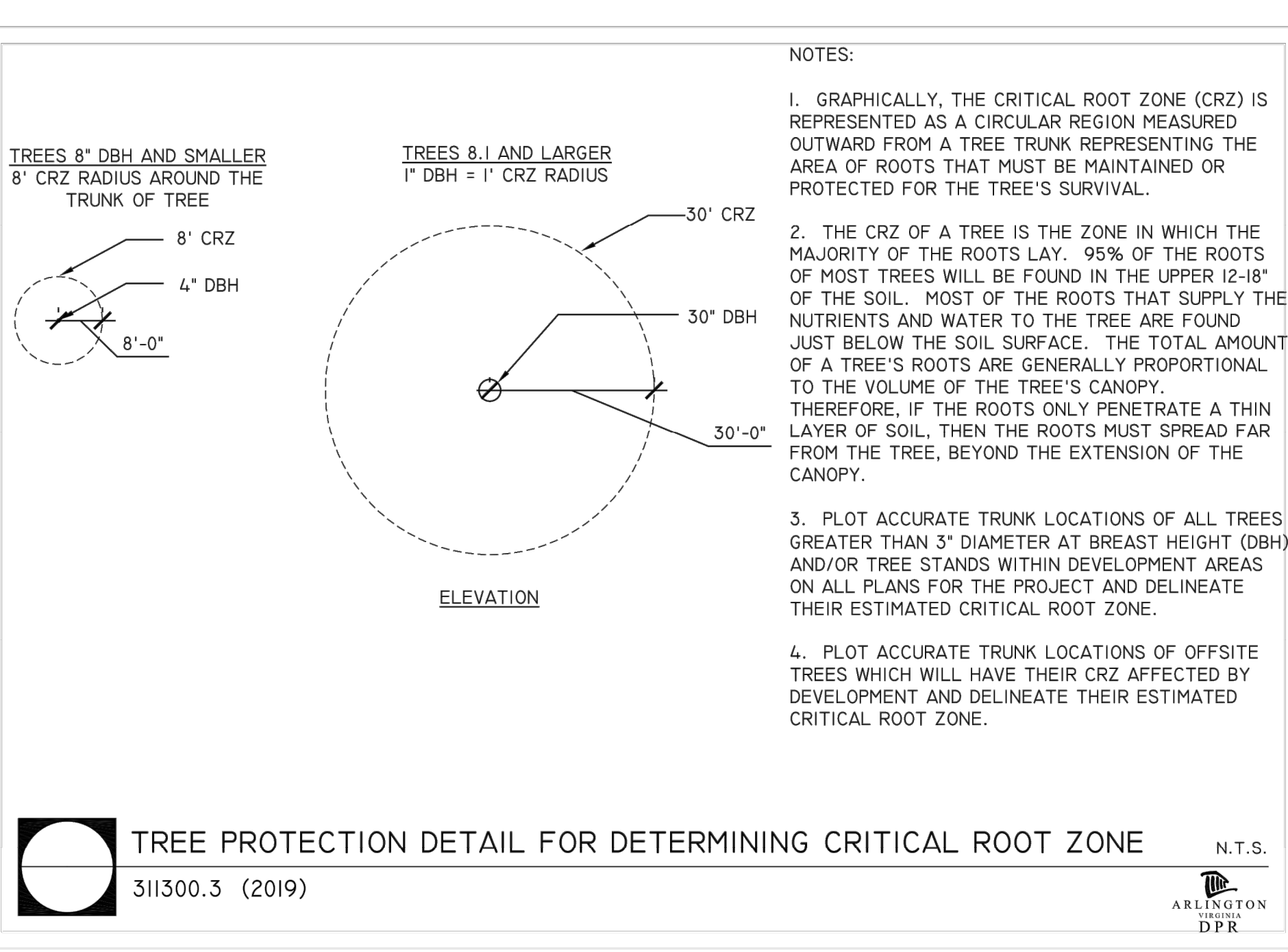
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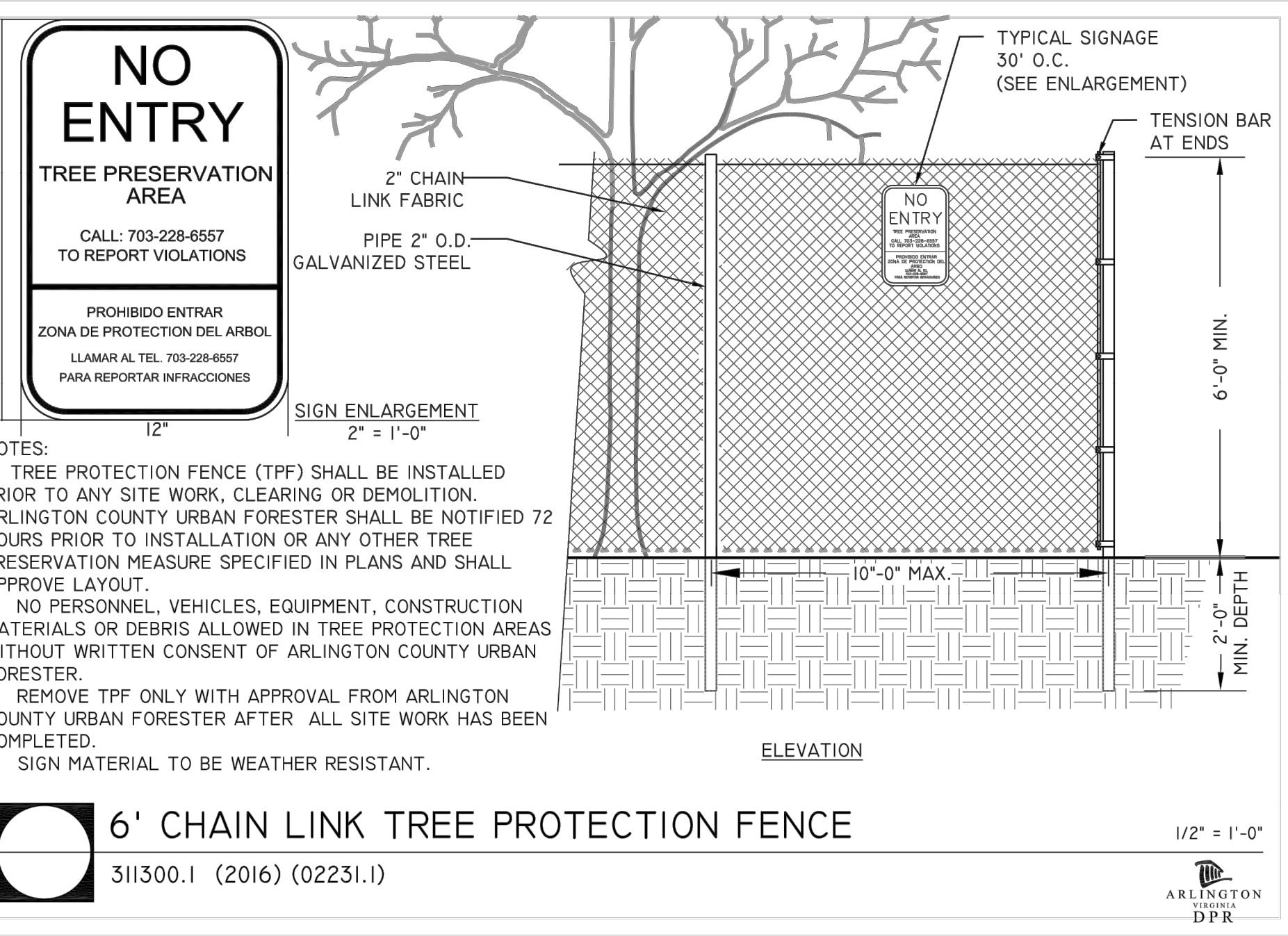
Source: Adapted from Florida Department of Transportation Road and Design Specifications
Plate 3.27-3



- NOTES:
- TIMBER MATS TO BE INSTALLED AS INDICATED ON PLANS IN CRITICAL ROOT ZONES OF TREES 24" AND GREATER, AND WETLANDS.
 - ACCESS ROUTES TO BE VERIFIED BY ENGINEER AT PRE-CONSTRUCTION MEETING. REVISIONS TO THE ALIGNMENT THAT MINIMIZE TREE DISTURBANCE ARE ENCOURAGED, AND REQUIRE REVIEW AND APPROVAL BY THE ENGINEER.
 - TYPE D SOIL STABILIZATION MATTING SHALL BE PLACED WITH SEAMS PARALLEL TO THE FLOW OF TRAFFIC, OVERLAP FABRIC BY 18" MINIMUM AT SEAMS.
 - CONTRACTOR SHALL MAINTAIN TIMBER MAT THROUGHOUT CONSTRUCTION PERIOD. UPON COMPLETION OF THE PROJECT, MATS AND MULCH SHALL BE REMOVED ENTIRELY UPON COMPLETION OF CONSTRUCTION ACTIVITIES.
 - TEMPORARY OCF SHALL BE INSTALLED ALONG THE EDGES OF THE ACCESS PATH ALONG THE LOD PERIMETER. FENCING SHALL BE SUPPORTED BY 6" MINIMUM STEEL POSTS DRIVEN 2' INTO THE GROUND AND SPACED A MAXIMUM OF 8' APART.
 - IF HARDWOOD LAMINATED/CONSTRUCTION MAT IS NOT AVAILABLE, 3/4" EXTERIOR PLYWOOD MAY BE USED.

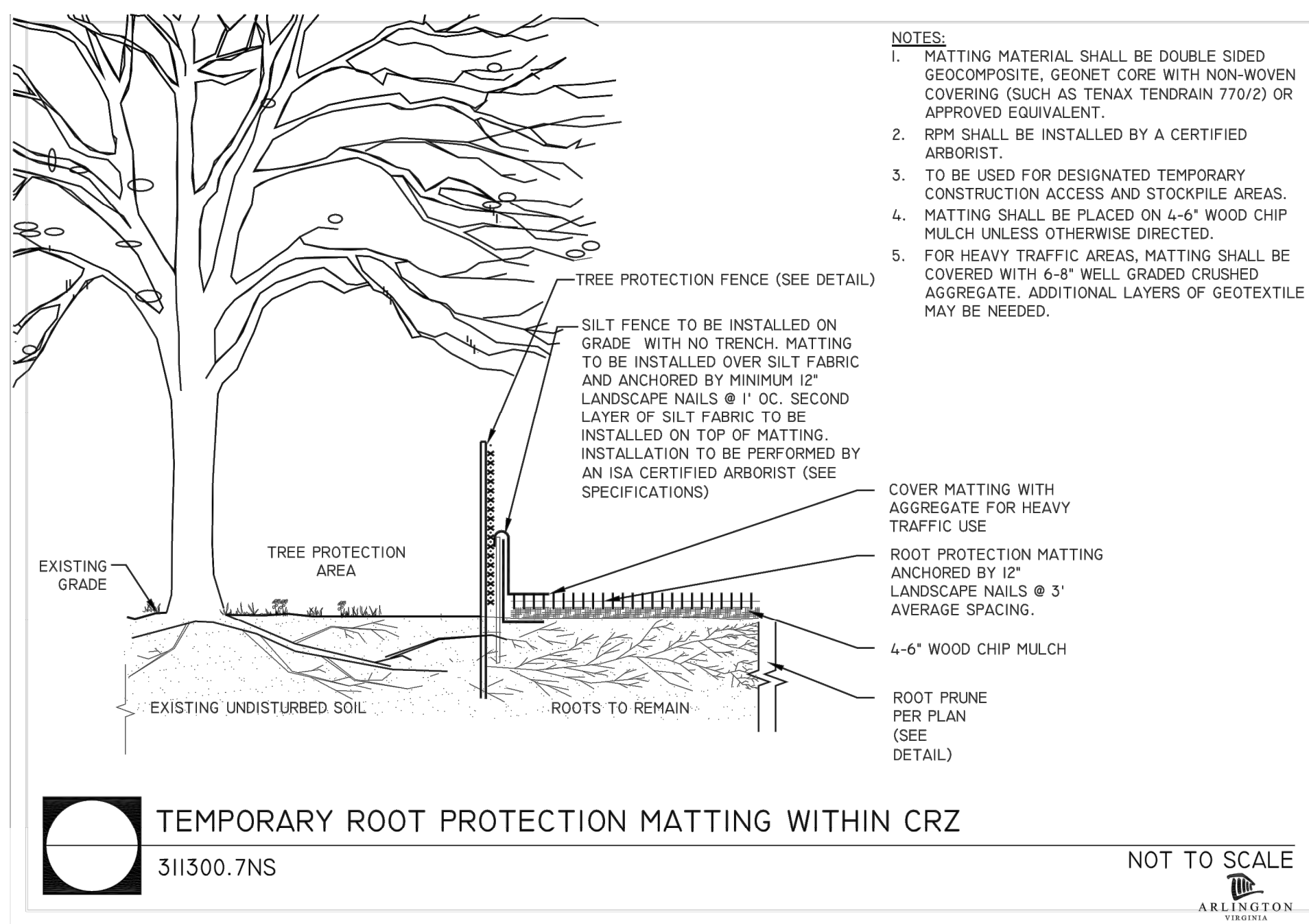


III - 252

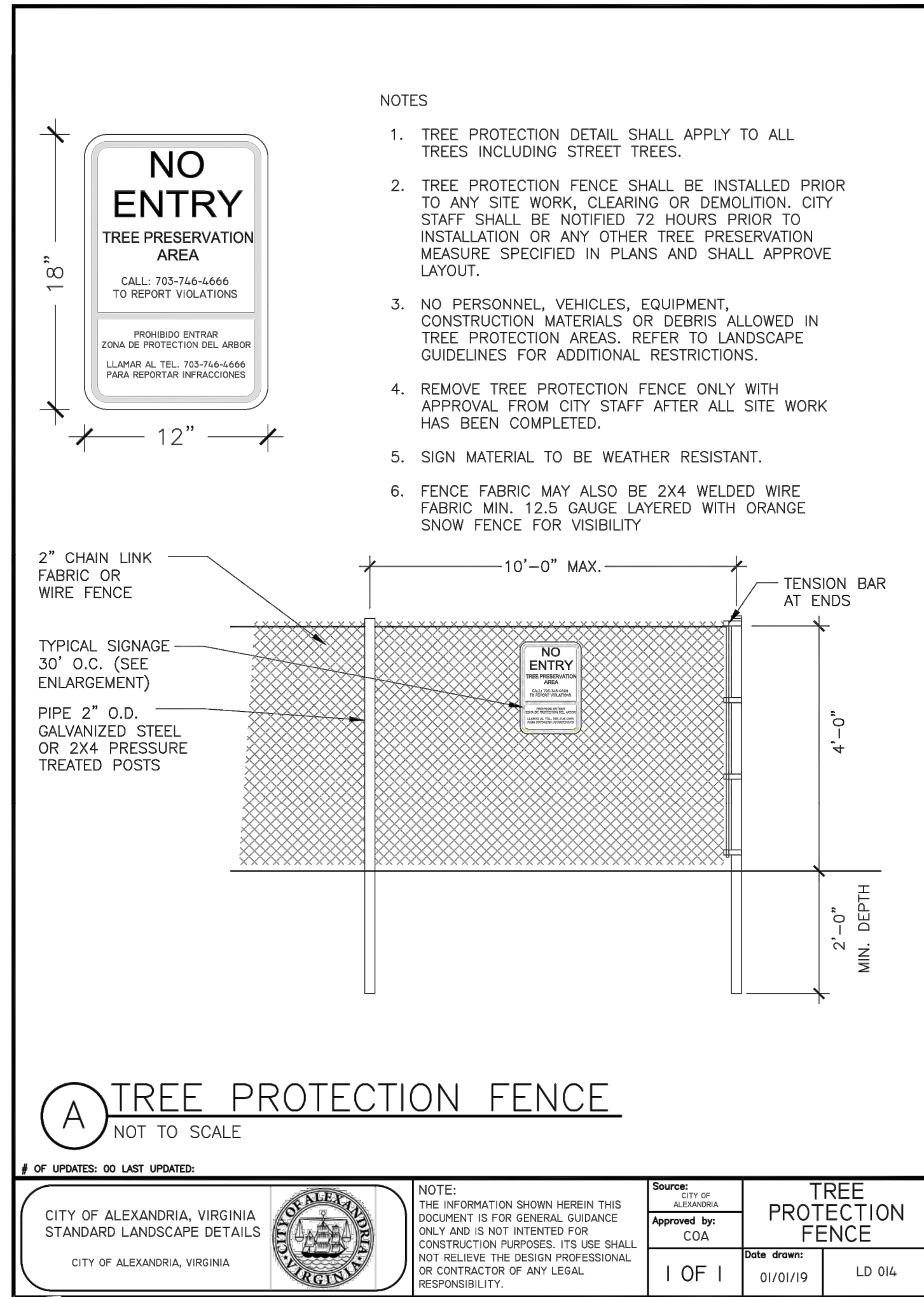


TREE PRESERVATION

- BEFORE ANY GRADING, DEMOLITION, OR OTHER DISTURBANCE, INCLUDING TREE REMOVAL, A PRECONSTRUCTION MEETING SHALL BE HELD WITH AN ARLINGTON COUNTY URBAN FORESTER. CHANGES TO THE PLAN, BASED ON FIELD CONDITIONS, MAY BE REQUESTED BY THE URBAN FORESTER AT THE TIME OF THE PRECONSTRUCTION MEETING.
- TREE PROTECTION SHALL BE INSTALLED PER PLAN, WITH ANY CHANGES REQUESTED AT THE PRECONSTRUCTION MEETING, AND INSPECTED BY AN ARLINGTON COUNTY URBAN FORESTER. EROSION AND SEDIMENT CONTROLS ARE INSPECTED BY THE DEPARTMENT OF ENVIRONMENTAL SERVICES.
- REMOVAL OF TREES, NOTED FOR REMOVAL ON THE PLAN, INSIDE A TREE PRESERVATION AREA SHALL BE PERFORMED, BY HAND, WITHOUT GROUND DISTURBANCE, OR DISTURBANCE TO NEARBY PRESERVED TREES. TREES IN THESE AREAS SHALL BE CUT FLUSH TO THE GROUND, WITHOUT STUMP GRINDING.
- NO CHANGES SHALL BE MADE TO TREE PRESERVATION OR PROPOSED LANDSCAPE UNLESS DIRECTED BY AN ARLINGTON COUNTY URBAN FORESTER.
- FOLLOW ANSI STANDARDS WHEN PRUNING TREES. ANY PRUNING BEYOND 5% OF THE CANOPY SHALL BE COMMUNICATED AND APPROVED TO THE URBAN FORESTER
- DO NOT REMOVE TREES ON OTHER PROPERTIES, OR RIGHTS-OF-WAY, WITHOUT WRITTEN PERMISSION OF THE OWNER.
- TREE PROTECTION AREAS SHALL HAVE ALL NON-NATIVE INVASIVE VINES REMOVED AT THE END OF THE PROJECT. WHERE DEEMED NECESSARY BY THE COUNTY URBAN FORESTER TO ENSURE TREE SURVIVAL, THE PROTECTION AREA SHALL BE COVERED WITH SHREDDED HARDWOOD MULCH, OR OTHER ORGANIC MULCH AS APPROVED BY THE COUNTY URBAN FORESTER.
- AT THE END OF THE PROJECT, PRESERVED AND PLANTED TREES MUST BE INSPECTED AND APPROVED BY AN ARLINGTON COUNTY URBAN FORESTER.



- NOTES:
- MATTING MATERIAL SHALL BE DOUBLE SIDED GEOCOMPOSITE, GEONET CORE WITH NON-WOVEN COVERING (SUCH AS TENAX TENDRAIN 770/2) OR APPROVED EQUIVALENT.
 - RPM SHALL BE INSTALLED BY A CERTIFIED ARBORIST.
 - TO BE USED FOR DESIGNATED TEMPORARY CONSTRUCTION ACCESS AND STOCKPILE AREAS.
 - MATTING SHALL BE PLACED ON 4'-6" WOOD CHIP MULCH UNLESS OTHERWISE DIRECTED.
 - FOR HEAVY TRAFFIC AREAS, MATTING SHALL BE COVERED WITH 6'-8" WELL GRADED CRUSHED AGGREGATE. ADDITIONAL LAYERS OF GEOTEXTILE MAY BE NEEDED.



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APPROVALS	DATE
Ankur Patel DESIGN TEAM ENGINEER SUPERVISOR	07/19/21
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Glenn WATER, SEWER, STREETS BUREAU CHIEF	07.23.2021
Dennis M. Leach TRANSPORTATION DIRECTOR	07/21/20
Michael Gallo PROJECT MANAGER	07/21/21

REVISIONS DATE

EROSION & SEDIMENT CONTROL
NARRATIVE AND DETAILS

FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

SCALE: As Noted

SHEET 10 of 32

FOUR MILE RUN DREDGE PROJECT

REVISED ON 01/07/2021

FILENAME: PERMITS.DWG PATH: \\AD.RKK.COM\FSCLOUD\PROJECTS\2019\19160_ARLSTREAM\TASK 2-4NR DREDGE\CADD\PLAN PLOTTED BY: HCHEN

Appendix C. Water Quality Impact Assessment Data Sheet

Project Address	Four Mile Run and Long Branch Arlington, VA RPC #	Date:	
Applicant Name/Affiliation:	Arlington County Dept. of Environmental Services and City of Alexandria Dept. of Transportation & Environmental Services	Applicant Contact Information (phone and email):	
Owner/Client Name:		Owner/Client Contact Information (phone and email):	

Section 1: Type of activity proposed

Activity type (check all that apply):

☐ New construction (residential, commercial, public, etc.)

☐ Alteration of non-residential structure

☐ Residential addition

☐ Detached residential structure

☐ Deck, patio, or retaining wall

☐ Landscaping (includes tree removal)

☐ Utility work

☐ Fence

☒ Other (please describe): Stream sediment dredging to reestablish flood capacity

Section 2: Key details of the proposed activity

Complete all that apply		Explanation	
Total area of disturbance on parcel (sf)	373,959.0 sf	Includes building footprint plus a 10 foot buffer. Also includes all soil disturbance, ingress/egress areas, stockpiling areas, etc.	
Area of disturbance within RPA (sf)	371,999.9 sf	Includes removal of trees ≥ 3" in diameter	
Area of disturbance on slopes greater than or equal to 15 percent located adjacent to landward RPA boundary (sf)	0	Does not apply to RPA parcels along Chain Bridge Road (15 percent and greater slopes are included as part of RPA)	

Complete all fields		Existing condition	Proposed condition	Explanation
RPA encroachment (ft)	Left third of parcel or site	n/a	n/a	The distance (in feet) from the existing or proposed structure to the designated RPA feature (edge of stream or open channel, wetland, etc.). Encroachments of zero (0) indicate the project will impact the stream or other RPA feature.
	Middle third of parcel or site	n/a	n/a	
	Right third of parcel or site	n/a	n/a	
Total development footprint in RPA (sf)		19,011.7 sf	19,011.7 sf	The existing footprint includes the area of any existing structures, patios, decks, walkways, etc. Proposed footprint is the anticipated post-project area of all structures, additions, decks, walkways, regraded area behind a retaining wall, etc.
Impervious footprint in RPA (sf)		19,011.7 sf	19,011.7 sf	Total area of impervious surfaces within the RPA (rooftops, pavement, etc.)

(OVER)

STAFF USE ONLY

Building/demolition/LDA/Fence permit number(s):

Major WQIA required? ☐ Yes ☐ No

Date WQIA/Exception request information complete:

Date Chesapeake Bay Preservation Ordinance and E/S ordinance (if applicable) approvals issued in Permits Plus:

Section 3: Plan and Narrative

Provide a plan showing the location of the proposed activity, along with the RPA boundary Briefly describe the proposed project, including any potential water quality impacts and mitigation measuresproposed. The narrative must address three impact categories 1. Tree/vegetation impacts, 2. Stormwater and runoff 3. Erosion and sediment control. Please refer to the WQIA plan/narrative checklist for additional information.

The proposed activity is sediment dredging of Four Mile Run near the Mount Vernon Avenue bridge and around the confluence with Long Branch at the South Glebe Road bridge. In-stream maintenance to remove vegetation and debris will be performed within Long Branch at the confluence with Four Mile Run. Repair and restoration of damaged existing gabion baskets along the banks of both streams will be performed where necessary. Within the area of disturbance, existing trees not proposed to be removed as maintenance will be protected with tree protection fencing and other measures as needed.

Four Mile Run is a stream that conveys runoff through Arlington County to the Chesapeake Bay. The stream was originally modified with concrete banks and levees by the Army Corps of Engineers, built in the early 1980's. The work in this project is not changing the location, nor altering the stream width, but improving the flood capacity for the 100-year storm freeboard by restoring the sediment transport capacity at the stream's current location. A total of 16,444 CY will be removed from the Four Mile Run portion of this project. Sections of the stream banks are protected by gabion baskets, which were identified as damaged at certain locations. Work will be performed to repair and restore these gabion baskets to original dimensions.

Long Branch is an urbanized stream in Arlington, VA that conveys water to the Four Mile Run stream near the South Glebe Road bridge. Proposed work within Long Branch includes removal of vegetation, sediment, and debris accumulation within the existing culvert, as well as repair of damaged gabion baskets lining the stream banks and removal of vegetation impacting the gabions. 1,538 CY will be dredged from Long Branch.

A total of 8.58 acres will be disturbed. This project includes work within an environmentally sensitive area (RPA, FEMA floodplain, waters of the U.S., and in a U.S. Army Corps of Engineer's Flood Control Levee and Channel). All permits (i.e. Joint Permit Application, WQIA, and SWPPP) are being secured for this project prior to construction.

Additional Water Quality Impact Assessment Information

The information supplied on this form satisfies the minimum requirements for a Minor Water Quality Impact Assessment. For projects that disturb over 2500 square feet, elements of a Major Water Quality Impact Assessment may also be required, depending on the nature and extent of the proposed RPA encroachment, as outlined in Section 61-12 of the ordinance.

Appendix D. Exception Request Form

Applicant: Arlington County Dept. of Environmental Services and City of Alexandria Dept. of Transportation & Environmental Services	Project address: Four Mile Run and Long Branch Arlington, VA RPC #
--	---

Section 1: Brief description of exception request

Four Mile Run is a stream that conveys runoff through Arlington County to the Chesapeake Bay. The work in this project is not changing the location, nor altering the stream width, but improving the flood capacity for the 100-year storm freeboard by restoring the sediment transport capacity at the stream's current location. Gabion basket work will repair damaged structures, restoring to originally designed dimensions.

Long Branch is stream in Arlington, VA that conveys water to the Four Mile Run stream through the South Glebe Road bridge. Proposed maintenance activities include removal of vegetation, sediment, and debris accumulation within the existing culvert, and repair of damaged gabion baskets.

The project is considered ordinary maintenance activities, addressing Categorical Exclusion Section 3.2 of Arlington County Administration Regulation 4.4. It also meets all criteria defined in Exempted Projects Section 3.3 of Arlington County Administration Regulation 4.4. Therefore, this project is a Categorical Exclusion, and is exempt from the environmental assessment process. Erosion and sediment control requirements shall be observed, details found in the plan documents.

Section 2: Parcel, structure, and ownership information

Date parcel ownership began:_____	Date(s) of construction of any prior work by <u>current</u> owner (alterations, additions, decks, patios, etc.)—list individually: Date Type of prior work
Date existing principal structure built: _____	1. 2. 3. 4.
Will existing principal structure remain intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	

STAFF USE ONLY

☐ Allowable development in RPA (§ 61-7.A)

☐ Allowable modification in RPA (§ 61-7.B)

☐ Allowable encroachment in RPA (§ 61-7.C)

☐ Expansion of nonconforming structure or use in RPA (§ 61-14) (exception request required)

☐ New development in the RPA, redevelopment that increases impervious area in the RPA or encroaches further into the RPA, or any other proposed disturbance of any RPA component (exception request required)

☐ Exempted activity in RPA (§ 61-15)

☐ Proposed development in RMA on 15 percent slopes adjacent to RPA

☐ Other RMA activity_____

CBORC hearing required? ☐ Yes ☐ No

Date public notification sent certified mail:

Hearing date:

CBORC decision: ☐ Approved ☐ Not approved

Date of final approval letter:

ARLINGTON VIRGINIA

DEPARTMENT OF ENVIRONMENTAL SERVICES
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ENGINEERING BUREAU
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APPROVALS DATE

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DESIGN TEAM ENGINEER SUPERVISOR
Kamal Taktak 8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR
Dennis M. Leach 07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF
TRANSPORTATION DIRECTOR
Michael Gallo 07/21/21
PROJECT MANAGER

REVISIONS DATE

WATER QUALITY IMPACT
ASSESSMENT &
CULVERT COMPUTATIONS
FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF
PLOTTED: AUGUST 23 2021

SCALE:

SHEET 11 of 32

FOUR MILE RUN DREDGE PROJECT

TEMPORARY CULVERT CROSSING COMPUTATIONS

HY-8 Analysis Results

Crossing Summary Table

Culvert Crossing: 4 Mile Dredge				
Headwater Elevation (ft)	Total Discharge (cfs)	Culvert 1 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
0.50	6.28 (peak base flow)	6.28	0.00	1
2.67	170.65	170.65	0.00	1
4.10	335.02	335.02	0.00	1
5.58	499.40 (~1-year peak)	499.40	0.00	1
6.55	663.77	602.53	61.12	3
7.07	828.14	656.03	171.94	4
7.61	992.51	711.35	282.37	11
8.35	1156.88	783.96	374.26	5
9.10	1321.26	856.31	468.30	9
9.83	1485.63	924.20	556.39	8
10.55	1650.00 (~2-year peak)	999.26	650.58	8
6.00	544.35	544.35	0.00	Overtopping

Total discharges estimated from StreamStat.
Culvert vs road discharges estimated from HY-8.

HY-8 Analysis Results

Crossing Summary Table

Culvert Crossing: Long Branch				
Headwater Elevation (ft)	Total Discharge (cfs)	Culvert 1 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
500000.00	0.59 (peak base flow)	0.59	0.00	1
3.70	61.73	61.73	0.00	1
6.17	122.87	116.51	6.30	10
6.70	184.01	125.71	58.26	5
7.08	245.16	131.34	113.66	4
7.39	306.30 (~1-year peak)	136.03	170.19	4
7.67	367.44	140.07	227.32	4
7.93	428.58	143.67	284.86	4
8.17	489.72	146.98	342.69	4
8.40	550.86	150.02	400.80	4
8.61	612.00 (~2-year peak)	152.80	458.91	3
6.00	113.56	113.56	0.00	Overtopping

Total discharges estimated from StreamStat.
Culvert vs road discharges estimated from HY-8.



DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

October 23, 2020

Northern Virginia Regulatory Section
NAO-2007-02373 (Alexandria Flood Control Channel Maintenance)

City of Alexandria
and
Arlington County
c/o City of Alexandria - Dept. of Transportation & Env. Services
301 King Street, Room 4100
Alexandria, Virginia 22314

To Whom It May Concern:

This is in reference to your Department of the Army permit application number NAO-2007-02373/ (VMRC #16-V1420, 07-V0235) to perform maintenance dredging of five flood control channels. Approximately 50,000 cubic yards of accumulated material will be removed from the subject waterways to return them to their original design configuration. All work will be performed within Cameron Run, Backlick Run, Holmes Run, Four Mile Run and Hooffs Run, tributaries of the Potomac River located in the City of Alexandria and Arlington County, Virginia. These impacts are detailed on the enclosed drawings entitled "Cameron Run, Backlick Run, Holmes Run, Four Mile Run and Hooffs Run Flood Control Channel Maintenance, City of Alexandria" and dated July and August 2016.

Your proposed work as outlined above satisfies the criteria contained in the Corps Nationwide Permit (31), attached. The Corps Nationwide Permits were published in the January 6, 2017 Federal Register notice (82 FR 1860) and the regulations governing their use can be found in 33 CFR 330 published in Volume 56, Number 226 of the Federal Register dated November 22, 1991.

This nationwide permit verification is contingent upon the following project specific conditions:

1. The dredge material will be transported to and disposed of at an approved upland area and/or disposed of offsite at a local landfill.
2. No in-water work shall occur within Cameron Run and Four Mile Run, between February 15 to June 20 of any year, to protect anadromous fish species.

The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

Provided the project specific conditions (above) and the Nationwide Permit General Conditions (enclosed) are met, an individual Department of the Army Permit will not be required. In addition, the Virginia Department of Environmental Quality has provided an **unconditional** §401 Water Quality Certification for Nationwide Permit Number 31. A permit may be required from the Virginia Marine Resources Commission and/or your local wetlands board, and this verification is not valid until you obtain their approval, if necessary. This authorization does not relieve your responsibility to comply with local requirements pursuant to the Chesapeake Bay Preservation Act (CBPA), nor does it supersede local government authority and responsibilities pursuant to the Act. You should contact your local government before you begin work to find out how the CBPA applies to your project.

Enclosed is a "compliance certification" form, which must be signed and returned within 30 days of completion of the project, including any required mitigation. Your signature on this form certifies that you have completed the work in accordance with the nationwide permit terms and conditions.

This verification is valid until the NWP is modified, reissued, or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2022. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this nationwide permit unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 330.4(e) and 33 CFR 330.5 (c) or (d). Project specific conditions listed in this letter continue to remain in effect after the NWP verification expires, unless the district engineer removes those conditions. Activities completed under the authorization of an NWP which was in effect at the time the activity was completed continue to be authorized by that NWP.

In granting an authorization pursuant to this permit, the Norfolk District has relied on the information and data provided by the permittee. If, subsequent to notification by the Corps that a project qualifies for this permit, such information and data prove to be materially false or materially incomplete, the authorization may be suspended or revoked, in whole or in part, and/or the Government may institute appropriate legal proceedings.

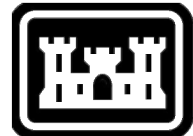
If you have any questions and/or concerns about this permit authorization, please contact Ms. Theresita Crockett-Augustine via telephone at (757) 201-7194 or via email at theresita.m.crockett-augustine@usace.army.mil.

Sincerely,

Theresita Crockett-Augustine
Environmental Scientist
Northern Virginia Regulatory Section

Digitally signed by
Theresita Crockett-
Augustine
Date: 2020.10.23
08:52:42 -04'00'

Enclosures:
Drawings
Nationwide Permit
Certificate of Compliance



U.S. Army Corps
Of Engineers
Norfolk District

CERTIFICATE OF COMPLIANCE
WITH
ARMY CORPS OF ENGINEERS PERMIT

Permit Number: NAO-2007-02373 (Alexandria Flood Control Channel Maintenance)
VMRC Number: 16-V1440, 07-V0235

Corps Contact: Theresita Crockett-Augustine

Name of Permittee: City of Alexandria and Arlington County

Date of Verification: October 23, 2020

Permit Type: NWP #31

Within 30 days of completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

US Army Corps of Engineers - Norfolk District
Northern Virginia Field Office
Attn: Ms. Theresita Crockett-Augustine
18139 Triangle Plaza, Suite 213
Dumfries, Virginia 22026

Or scan and send via email to theresita.m.crockett-augustine@usace.army.mil

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation has been completed in accordance with the permit conditions.

Signature of Permittee

Date

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DEPARTMENT OF
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CONSTRUCTION MANAGEMENT SUPERVISOR	
Michael J. Leach	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	07/21/20
TRANSPORTATION DIRECTOR	
Michael Gallo	07/21/21
PROJECT MANAGER	

REVISIONS DATE

US ARMY CORPS OF ENGINEERS
PERMIT - FOUR MILE RUN
FOUR MILE RUN DREDGE
PROJECT

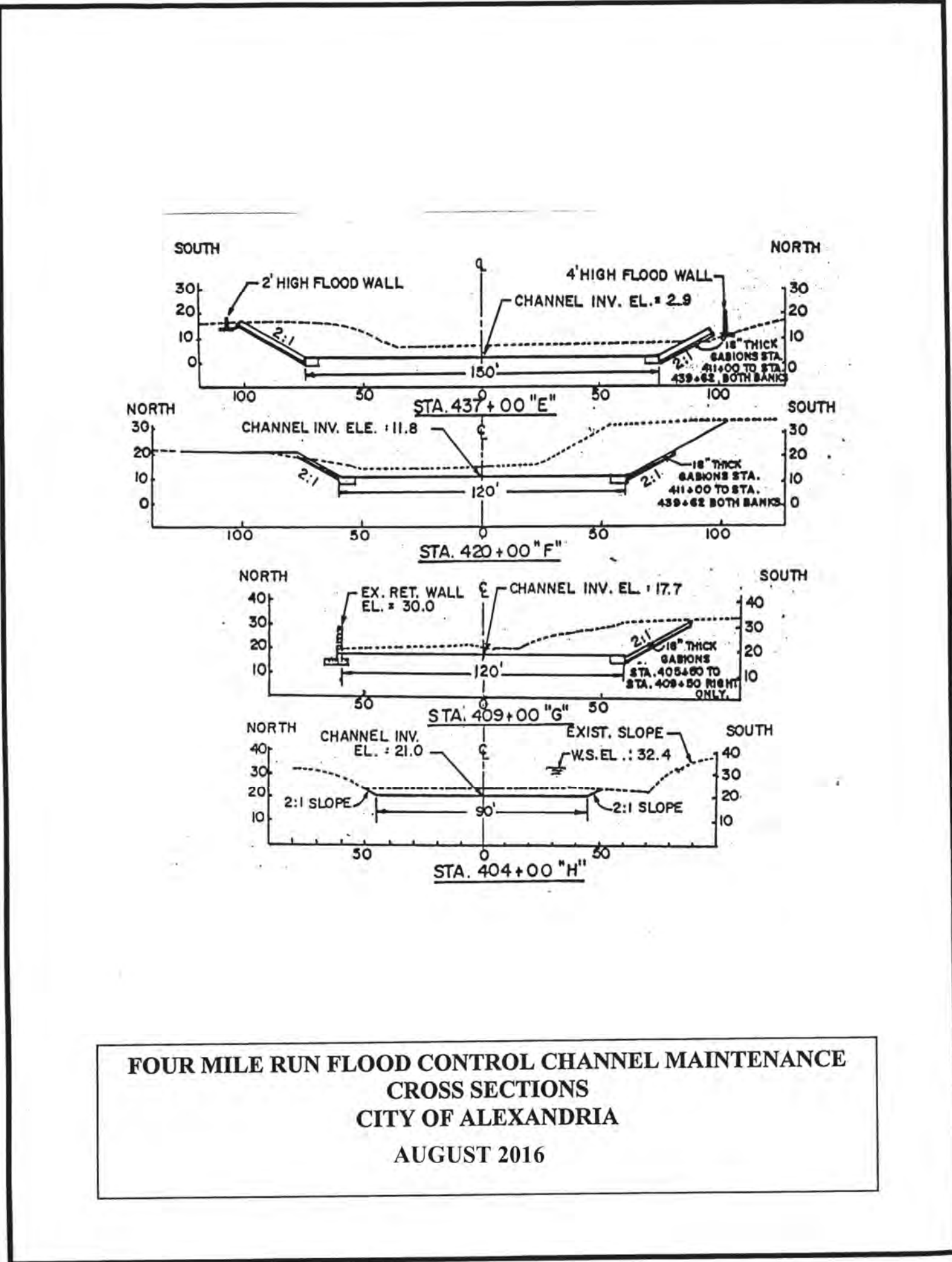
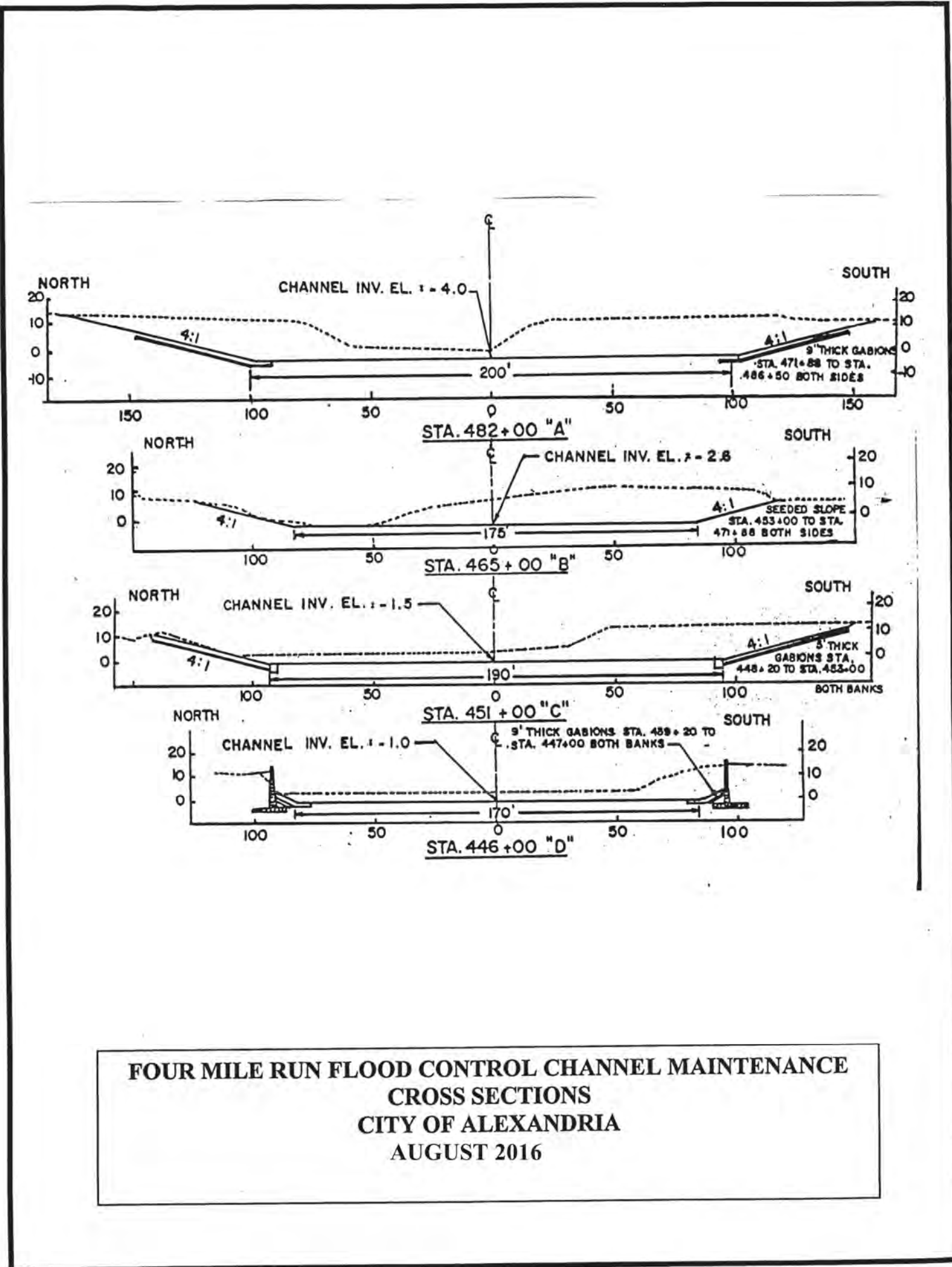
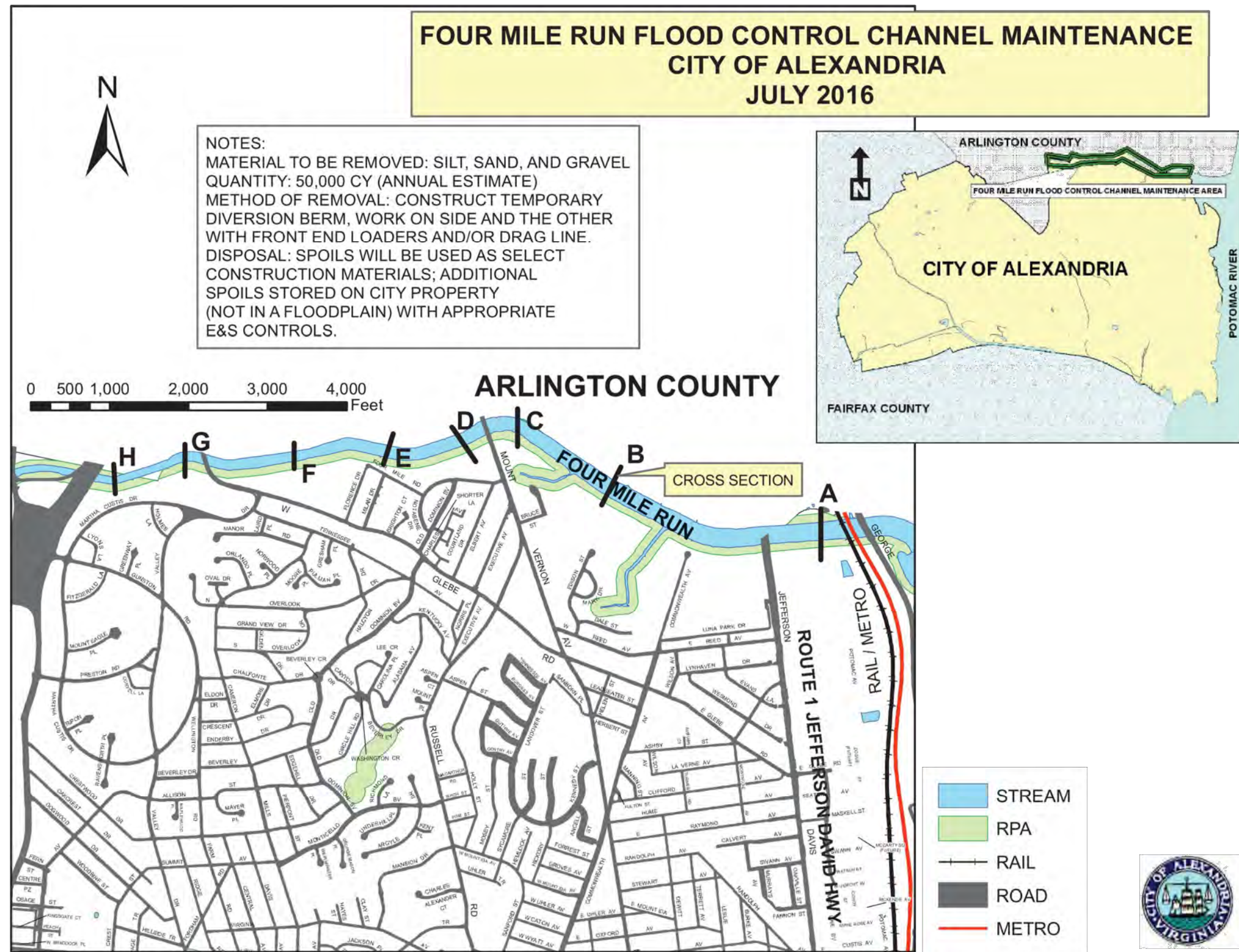
DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

SCALE:

SHEET 12 of 32

FOUR MILE RUN DREDGE PROJECT





DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1911

April 9, 2021

Northern Virginia Regulatory Section
NAO-2020-02464/VMRC#20-V2283 (Long Branch)

Arlington County Dept. of Environmental Services
Attn: Mr. Michael Gallo
2100 Clarendon Blvd., Suite 705
Arlington, Virginia 22201

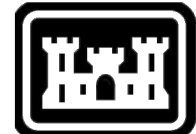
Dear Mr. Gallo:

This is regarding your Department of the Army permit application number NAO-2020-02464 (VMRC#20-V2283) to perform maintenance dredging along a section of Long Branch tributary. Approximately 1,480 cubic yards of accumulated sediment will be removed. The work will occur in the Long Branch tributary near Four Mile Run in Arlington County, Virginia (Latitude: 38.844 and Longitude: -77.071). These impacts are detailed on the enclosed drawings entitled "Four Mile Run Dredge Project," prepared and submitted by the applicant and dated May 15, 2020 and October 15, 2000 (attached).

☐ Your proposed work as outlined above satisfies the criteria contained in the Corps Nationwide Permit(s) (XX), attached. Certain Corps Nationwide Permits were published in the January 13, 2021, Federal Register notice (86 FR 2744) and the regulations governing their use can be found in 33 CFR 330 published in Volume 56, Number 226 of the Federal Register dated November 22, 1991.

☒ Your proposed work as outlined above satisfies the criteria contained in the Corps Nationwide Permit(s) (3), attached. The Corps Nationwide Permits were published in the January 6, 2017, Federal Register notice (82 FR 1860) and the regulations governing their use can be found in 33 CFR 330 published in Volume 56, Number 226 of the Federal Register dated November 22, 1991.

Provided the Regional Conditions, and the Nationwide Permit General Conditions (enclosed) are met, an individual Department of the Army Permit will not be required. To assist in your compliance with NWP General Condition #30, enclosed is a "compliance certification" form, which must be signed and returned within 30 days of completion of the project, including any required mitigation.



U.S. Army Corps
Of Engineers
Norfolk District

CERTIFICATE OF COMPLIANCE
WITH
ARMY CORPS OF ENGINEERS PERMIT

Permit Number: NAO-2020-02464 (Long Branch)
VMRC Number: 20-V2283

Corps Contact: Theresita Crockett-Augustine

Name of Permittee: Arlington County Dept. of Environmental Services

Date of Verification: April 9, 2021

Permit Type: NWP #3

Within 30 days of completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

US Army Corps of Engineers - Norfolk District
Fredericksburg Field Office
Attn: Ms. Theresita Crockett-Augustine
1329 Alum Spring Road, Suite 102
Fredericksburg, Virginia 22401

Or scan and send via email to theresita.m.crockett-augustine@usace.army.mil

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation has been completed in accordance with the permit conditions.

Signature of Permittee

Date

Northern Virginia Regulatory Section
NAO-2020-02464/VMRC#20-V2283 (Long Branch)

Please be aware that a permit may be required from the Virginia Marine Resources Commission and/or your local wetlands board, and this verification may not be valid until you obtain their approval, if necessary. This authorization does not relieve your responsibility to comply with local requirements pursuant to the Chesapeake Bay Preservation Act (CBPA), nor does it supersede local government authority and responsibilities pursuant to the Act. You should contact your local government before you begin work to find out how the CBPA applies to your project.

This verification is valid until the Nationwide Permit is modified, reissued, or revoked.

☐ This Nationwide Permit(s) XX is/are scheduled to be modified, reissued, or revoked prior to March 14, 2026.

☒ This Nationwide Permit(s) 3 is/are scheduled to be modified, reissued, or revoked prior to March 18, 2022.

It is incumbent upon you to remain informed of changes to the Nationwide Permits. We will issue a public notice when the Nationwide Permits are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the Nationwide Permit to complete the activity under the present terms and conditions of this Nationwide Permit unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 330.4(e) and 33 CFR 330.5 (c) or (d). Project specific conditions listed in this letter continue to remain in effect after the Nationwide Permit verification expires unless the district engineer removes those conditions. Activities completed under the authorization of a Nationwide Permit which was in effect at the time the activity was completed continue to be authorized by that Nationwide Permit.

In granting an authorization pursuant to this permit, we relied on the information and data provided by the permittee. If we determine that this information is false or incomplete, we may suspend or revoke, in whole or in part, this authorization and institute appropriate legal proceeding.

Northern Virginia Regulatory Section
NAO-2020-02464/VMRC#20-V2283 (Long Branch)

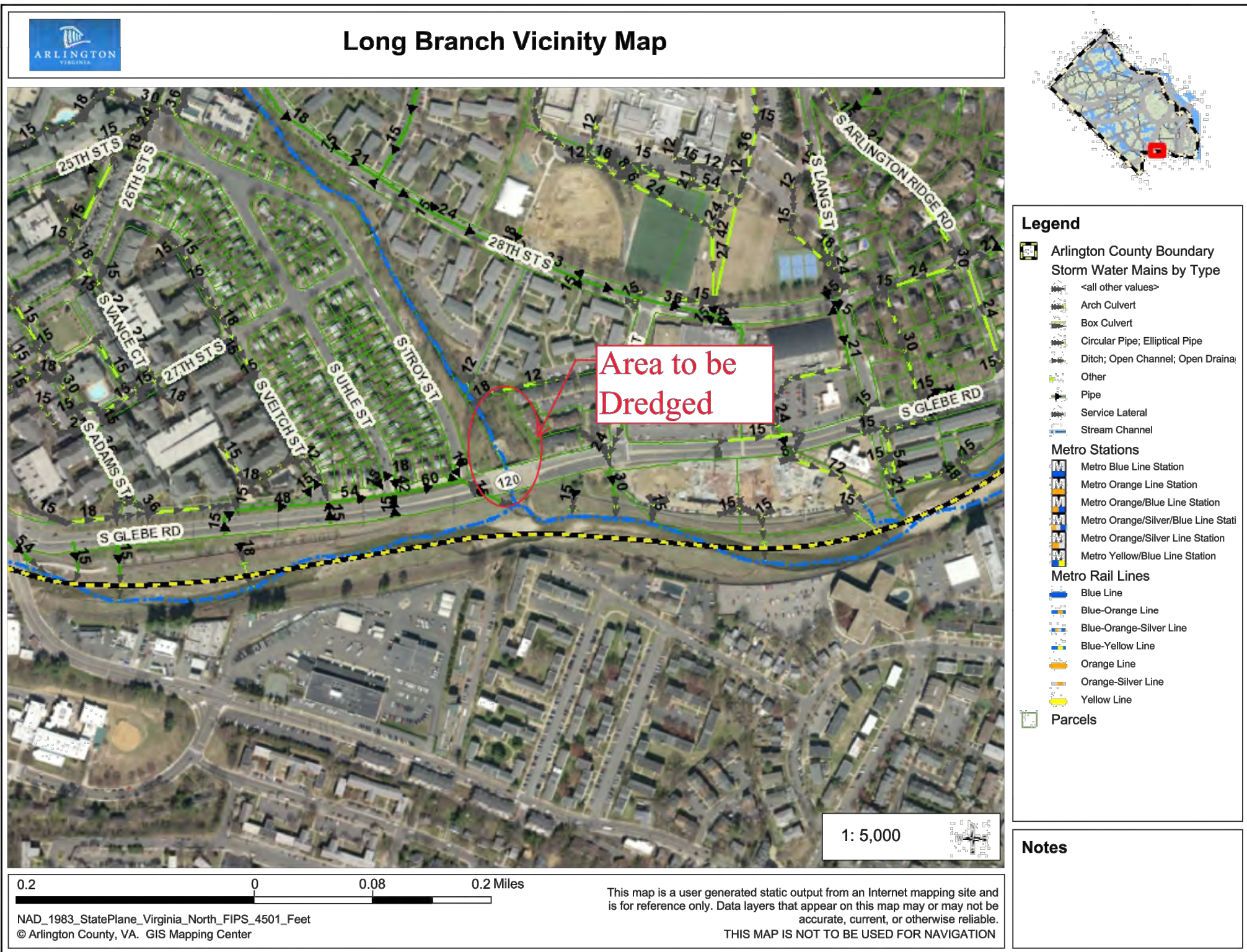
If you have additional questions or concerns about this permit authorization, please contact me at (757) 201-7195 or by email at theresita.m.crockett-augustine@usace.army.mil.

Sincerely,

Theresita Crockett-Augustine
Theresita Crockett-Augustine
Northern Virginia Regulatory Section

Digitally signed by
Theresita Crockett-
Augustine
Date: 2021.04.09
15:23:30 -0400

Enclosures



ARLINGTON
VIRGINIA

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

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SEAL



APPROVALS DATE

<i>Ankur Patel</i>	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
<i>Kamal Taktak</i>	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Shafiq</i>	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	07/21/20
TRANSPORTATION DIRECTOR	
<i>Michael Gallo</i>	07/21/21
PROJECT MANAGER	

REVISIONS DATE

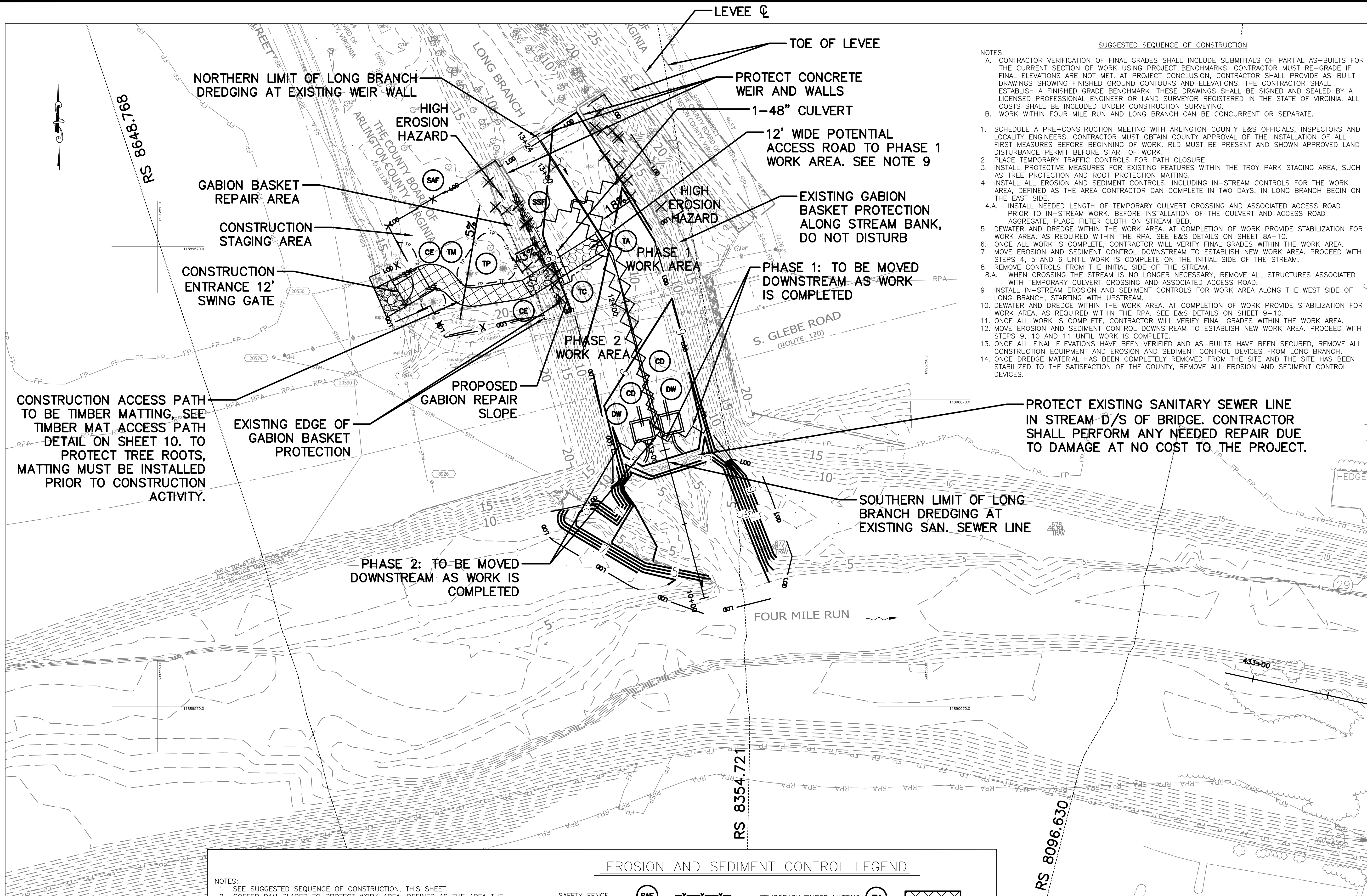
US ARMY CORPS OF ENGINEERS
PERMIT - LONG BRANCH
FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021










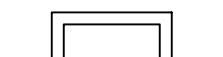








SCALE:

SHEET 12A of 32



PLAN LEGEND	
EXISTING CONTOURS	---
PROPOSED CONTOURS	---
HEC-RAS CROSS-SECTIONS	----
50' BASELINE CROSS-SECTIONS	----
GABION BASKET REPAIR AREA	-----

- NOTES:
- SEE SUGGESTED SEQUENCE OF CONSTRUCTION, THIS SHEET.
 - COFFER DAM PLACED TO PROTECT WORK AREA, DEFINED AS THE AREA THE CONTRACTOR CAN COMPLETE WITHIN 2 DAYS. TIE COFFER DAM INTO EMBANKMENT AND MAINTAIN HALF OF THE STREAM CHANNEL.
 - DEWATERING DEVICE PLACED TO KEEP THE WORK AREA DRY.
 - EROSION AND SEDIMENT CONTROL ELEMENTS ARE SHOWN CONCEPTUALLY. CONTRACTOR SHALL FIELD DETERMINE ACTUAL CONTROL MEASURE PLACEMENT. CONTRACTOR RESPONSIBLE FOR PROTECTING WORK AREA, EQUIPMENT, AND STREAM CROSSINGS FROM FLOODING.
 - GABION BASKET REPAIRS SHALL BE PERFORMED IN AREAS IDENTIFIED WITH EXISTING DAMAGE AND WHERE DAMAGE DUE TO CONSTRUCTION ACTIVITY OCCURS. SEE GABION BASKET REPAIR DETAILS.
 - LONG BRANCH WORK LOCATED IN A NON-TIDAL AREA.
 - NUMEROUS UTILITIES ARE PRESENT IN THE VICINITY OF CONSTRUCTION. CONTRACTOR SHALL PROTECT THESE FACILITIES FROM DAMAGE.
 - ACCESS ROAD AND OTHER MEANS AND METHODS FOR ACCESS TO IN-STREAM WORK AREAS TO BE DETERMINED AS APPROPRIATE BY CONTRACTOR.

EROSION AND SEDIMENT CONTROL LEGEND				
SAFETY FENCE			TEMPORARY TIMBER MATTING	 
CONSTRUCTION ENTRANCE			LIMIT OF DISTURBANCE	
COFFER DAM			DEWATERING DEVICE	
TURBIDITY CURTAIN			SUPER SILT FENCE	
TREE PROTECTION			TREE REMOVAL	
TEMPORARY ACCESS ROAD AND CULVERT CROSSING				

- NOTES:
- A. CONTRACTOR VERIFICATION OF FINAL GRADES SHALL INCLUDE SUBMITTALS OF PARTIAL AS-BUILTS FOR THE CURRENT SECTION OF WORK USING PROJECT BENCHMARKS. CONTRACTOR MUST RE-GRADE IF FINAL ELEVATIONS ARE NOT MET. AT PROJECT CONCLUSION, CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS SHOWING FINISHED GROUND CONTOURS AND ELEVATIONS. THE CONTRACTOR SHALL ESTABLISH A FINISHED GRADE BENCHMARK. THESE DRAWINGS SHALL BE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR REGISTERED IN THE STATE OF VIRGINIA. ALL COSTS SHALL BE INCLUDED UNDER CONSTRUCTION SURVEYING.
- B. WORK WITHIN FOUR MILE RUN AND LONG BRANCH CAN BE CONCURRENT OR SEPARATE.
1. SCHEDULE A PRE-CONSTRUCTION MEETING WITH ARLINGTON COUNTY E&S OFFICIALS, INSPECTORS AND LOCALITY ENGINEERS. CONTRACTOR MUST OBTAIN COUNTY APPROVAL OF THE INSTALLATION OF ALL FIRST MEASURES BEFORE BEGINNING OF WORK. RLD MUST BE PRESENT AND SHOWN APPROVED LAND DISTURBANCE PERMIT BEFORE START OF WORK.
2. PLACE TEMPORARY TRAFFIC CONTROLS FOR PATH CLOSURE.
3. INSTALL PROTECTIVE MEASURES FOR EXISTING FEATURES WITHIN THE TROY PARK STAGING AREA, SUCH AS TREE PROTECTION AND ROOT PROTECTION MATTING.
4. INSTALL ALL EROSION AND SEDIMENT CONTROLS, INCLUDING IN-STREAM CONTROLS FOR THE WORK AREA, DEFINED AS THE AREA CONTRACTOR CAN COMPLETE IN TWO DAYS. IN LONG BRANCH BEGIN ON THE EAST SIDE.
- 4.A. INSTALL NEEDED LENGTH OF TEMPORARY CULVERT CROSSING AND ASSOCIATED ACCESS ROAD PRIOR TO IN-STREAM WORK. BEFORE INSTALLATION OF THE CULVERT AND ACCESS ROAD AGGREGATE, PLACE FILTER CLOTH ON STREAM BED.
5. DEWATER AND DREDGE WITHIN THE WORK AREA. AT COMPLETION OF WORK PROVIDE STABILIZATION FOR WORK AREA, AS REQUIRED WITHIN THE RPA. SEE E&S DETAILS ON SHEET 8A-10.
6. ONCE ALL WORK IS COMPLETE, CONTRACTOR WILL VERIFY FINAL GRADES WITHIN THE WORK AREA.
7. MOVE EROSION AND SEDIMENT CONTROL DOWNSTREAM TO ESTABLISH NEW WORK AREA. PROCEED WITH STEPS 4, 5 AND 6 UNTIL WORK IS COMPLETE ON THE INITIAL SIDE OF THE STREAM.
8. REMOVE CONTROLS FROM THE INITIAL SIDE OF THE STREAM.
- 8.A. WHEN CROSSING THE STREAM IS NO LONGER NECESSARY, REMOVE ALL STRUCTURES ASSOCIATED WITH TEMPORARY CULVERT CROSSING AND ASSOCIATED ACCESS ROAD.
9. INSTALL IN-STREAM EROSION AND SEDIMENT CONTROLS FOR WORK AREA ALONG THE WEST SIDE OF LONG BRANCH, STARTING WITH UPSTREAM.
10. DEWATER AND DREDGE WITHIN THE WORK AREA. AT COMPLETION OF WORK PROVIDE STABILIZATION FOR WORK AREA, AS REQUIRED WITHIN THE RPA. SEE E&S DETAILS ON SHEET 9-10.
11. ONCE ALL WORK IS COMPLETE, CONTRACTOR WILL VERIFY FINAL GRADES WITHIN THE WORK AREA.
12. MOVE EROSION AND SEDIMENT CONTROL DOWNSTREAM TO ESTABLISH NEW WORK AREA. PROCEED WITH STEPS 9, 10 AND 11 UNTIL WORK IS COMPLETE.
13. ONCE ALL FINAL ELEVATIONS HAVE BEEN VERIFIED AND AS-BUILTS HAVE BEEN SECURED, REMOVE ALL CONSTRUCTION EQUIPMENT AND EROSION AND SEDIMENT CONTROL DEVICES FROM LONG BRANCH.
14. ONCE DREDGE MATERIAL HAS BEEN COMPLETELY REMOVED FROM THE SITE AND THE SITE HAS BEEN STABILIZED TO THE SATISFACTION OF THE COUNTY, REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES.

PROTECT EXISTING SANITARY SEWER LINE IN STREAM D/S OF BRIDGE. CONTRACTOR SHALL PERFORM ANY NEEDED REPAIR DUE TO DAMAGE AT NO COST TO THE PROJECT.

MATCH LINE- SEE SHEET 14

ARLINGTON
VIRGINIA

DEPARTMENT OF
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FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
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ARLINGTON, VA 22201
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SEAL



APPROVALS DATE

Arjun Patel	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
Kamal Taktak	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
Michael Gallo	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	07/21/20
TRANSPORTATION DIRECTOR	
Michael Gallo	07/21/21
PROJECT MANAGER	

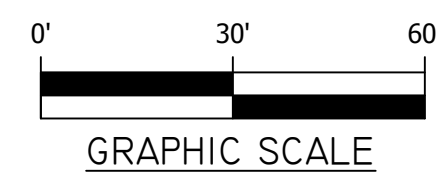
REVISIONS DATE

PROPOSED GRADING &
EROSION CONTROL PLAN -
LONG BRANCH
FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

SCALE: Hor.: 1"=30'



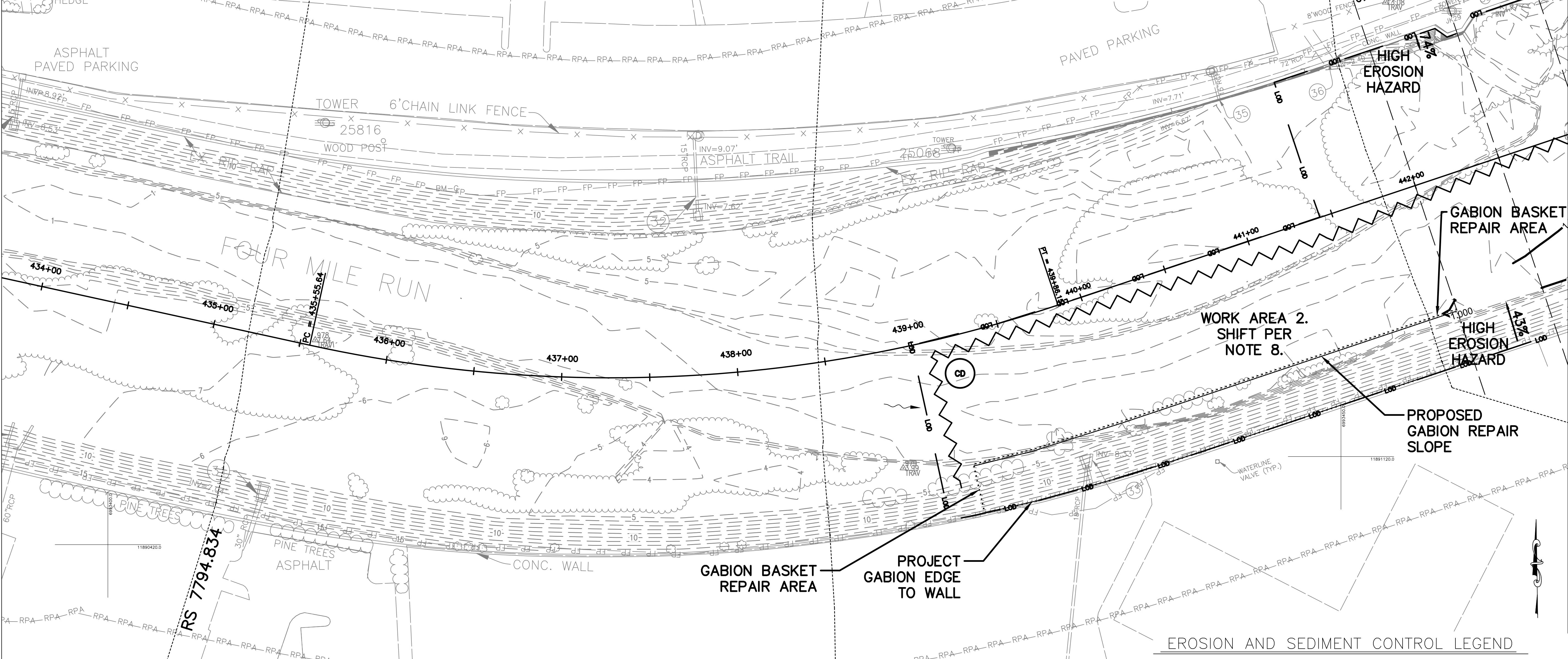
SHEET 13 of 32

FOUR MILE RUN DREDGE PROJECT

REVISED ON 01/07/2021
FILENAME: PROPOSED GRADING & EROSION CONTROL PLAN.DWG PATH: \\VD.RKK.COM\F\PROJECTS\2019\19160_ARLSTREAM\TASK 2-4HR DREDGE\CAD\PLAN PLOTTED BY: HCHEN

- NOTES:
- A. CONTRACTOR VERIFICATION OF FINAL GRADES SHALL INCLUDE SUBMITTALS OF PARTIAL AS-BUILTS FOR THE CURRENT SECTION OF WORK USING PROJECT BENCHMARKS. CONTRACTOR MUST RE-GRADE IF FINAL ELEVATIONS ARE NOT MET. AT PROJECT CONCLUSION, CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS SHOWING FINISHED GROUND CONTOURS AND ELEVATIONS. THE CONTRACTOR SHALL ESTABLISH A FINISHED GRADE BENCHMARK. THESE DRAWINGS SHALL BE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR REGISTERED IN THE STATE OF VIRGINIA. ALL COSTS SHALL BE INCLUDED UNDER CONSTRUCTION SURVEYING.
- B. WORK WITHIN FOUR MILE RUN AND LONG BRANCH CAN BE CONCURRENT OR SEPARATE.
- C. PRIOR TO INSTALLATION OF ANY COFFERDAMS, TEMPORARY CULVERT CROSSING AND TEMPORARY ACCESS ROAD, CONTRACTOR SHALL SUBMIT PROPOSED PHASED ACCESS AND DEWATERING PLAN FOR REVIEW AND APPROVAL BY THE ENGINEER/PROJECT OFFICER. THE PLAN SHALL BE BASED ON FIELD CONDITIONS AND SHOW PHASED ACCESS ROAD LAYOUT; PHASED COFFERDAM LAYOUT AND HEIGHTS, DEWATERING METHOD; NUMBER, SIZE AND LENGTH OF CULVERT PIPES, EMBEDMENT DEPTH OF PIPES; AGGREGATE DEPTH AND AGGREGATE WIDTHS FOR REVIEW AND APPROVAL BY THE ENGINEER/PROJECT OFFICER.
- D. IF E&S CONTROL MATERIALS (I.E. COFFERDAM, TURBIDITY CURTAIN, ACCESS ROAD, DEWATERING EQUIPMENT, ETC.) ARE IN GOOD CONDITION, THEY CAN BE REUSED AND RESET ONSITE AS NEEDED FOR DIFFERENT PHASES OF DREDGING AND ACCESS. THE ENGINEER/PROJECT OFFICER CAN REJECT MATERIAL DEEMS UNSUITABLE FOR REUSE AT ANY TIME. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF UNSUITABLE MATERIAL.

1. SCHEDULE A PRE-CONSTRUCTION MEETING WITH ARLINGTON COUNTY AND CITY OF ALEXANDRIA E&S OFFICIALS, INSPECTORS AND LOCALITY ENGINEERS. CONTRACTOR MUST OBTAIN COUNTY/CITY APPROVAL OF THE INSTALLATION OF ALL FIRST MEASURES BEFORE BEGINNING OF WORK. RLD MUST BE PRESENT AND SHOWN APPROVED LAND DISTURBANCE PERMIT BEFORE START OF WORK.
2. PLACE TEMPORARY TRAFFIC CONTROLS FOR PATH CLOSURE.
3. INSTALL PROTECTIVE MEASURES FOR EXISTING FEATURES WITHIN THE FOUR MILE RUN PARKING AREA, INCLUDING THE TEMPORARY MATTING WITH IMPERVIOUS SHEETING AND SILT FENCE AROUND THE CIRCULAR BIORETENTION AREA.
4. INSTALL ALL EROSION AND SEDIMENT CONTROLS, INCLUDING IN-STREAM CONTROLS FOR THE WORK AREA, DEFINED AS THE AREA CONTRACTOR CAN COMPLETE IN TWO DAYS. IN FOUR MILE RUN BEGIN ALONG THE NORTH SIDE OF FOUR MILE RUN.
- 4.A. INSTALL NEEDED LENGTH OF TEMPORARY CULVERT CROSSING PRIOR TO IN-STREAM WORK. BEFORE INSTALLATION OF THE CULVERT AND ACCESS ROAD AGGREGATE, PLACE FILTER CLOTH ON STREAM BED.
5. DEWATER AND DREDGE WITHIN THE WORK AREA. AT COMPLETION OF WORK PROVIDE STABILIZATION FOR WORK AREA, AS REQUIRED WITHIN THE RPA. SEE E&S DETAILS ON SHEET 9-10.
6. ONCE ALL WORK IS COMPLETE, CONTRACTOR WILL VERIFY FINAL GRADES WITHIN THE WORK AREA.
7. MOVE EROSION AND SEDIMENT CONTROL DOWNSTREAM OR LATERALLY ACROSS THE STREAM TO ESTABLISH NEW WORK AREA. PROCEED WITH STEPS 4, 5 AND 6 UNTIL WORK IS COMPLETE.
8. ONCE ALL FINAL ELEVATIONS HAVE BEEN VERIFIED AND AS-BUILTS HAVE BEEN SECURED, REMOVE ALL CONSTRUCTION EQUIPMENT AND EROSION AND SEDIMENT CONTROL DEVICES FROM FOUR MILE RUN.
- 8.A. WHEN CROSSING THE STREAM IS NO LONGER NECESSARY, REMOVE ALL STRUCTURES ASSOCIATED WITH TEMPORARY CULVERT CROSSING.
9. ONCE DREDGE MATERIAL HAS BEEN COMPLETELY REMOVED FROM THE SITE AND THE SITE HAS BEEN STABILIZED TO THE SATISFACTION OF THE CITY, REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES.



- PLAN LEGEND
- EXISTING CONTOURS
- PROPOSED CONTOURS
- HEC-RAS CROSS-SECTIONS
- 50' BASELINE CROSS-SECTIONS
- GABION BASKET REPAIR AREA
- NOTES:
1. SEE SUGGESTED SEQUENCE OF CONSTRUCTION, THIS SHEET.
2. COFFER DAM PLACED TO PROTECT WORK AREA, DEFINED AS THE AREA THE CONTRACTOR CAN COMPLETE WITHIN 2 DAYS. TIE COFFER DAM INTO EMBANKMENT AND MAINTAIN HALF OF THE STREAM CHANNEL.
3. DEWATERING DEVICE PLACED TO KEEP THE WORK AREA DRY.
4. EROSION AND SEDIMENT CONTROL ELEMENTS ARE SHOWN CONCEPTUALLY. CONTRACTOR SHALL FIELD DETERMINE ACTUAL CONTROL MEASURE PLACEMENT.
5. CONTRACTOR RESPONSIBLE FOR PROTECTING WORK AREA, EQUIPMENT, AND STREAM CROSSINGS FROM FLOODING.
6. GABION BASKET REPAIRS SHALL BE PERFORMED IN AREAS IDENTIFIED WITH EXISTING DAMAGE AND WHERE DAMAGE DUE TO CONSTRUCTION ACTIVITY OCCURS. SEE GABION BASKET REPAIR DETAILS.
7. ACCESS ROAD AND OTHER MEANS AND METHODS FOR ACCESS TO IN-STREAM WORK AREAS TO BE DETERMINED AS APPROPRIATE BY CONTRACTOR.
8. SHIFT WORK AREA AND RESET ASSOCIATED ESC MEASURES (I.E. COFFERDAM, ACCESS ROAD, TURBIDITY CURTAIN, DEWATERING EQUIPMENT, ETC.) ONCE WORK IN THIS AREA IS COMPLETE. WORK AREAS SHOULD CUMULATIVELY COVER ENTIRE DREDGE AREA SHOWN ON SHEETS 21-24. CONTRACTOR SHALL KEEP AT LEAST HALF THE CHANNEL WIDTH OPEN AT ALL TIMES.

- POLLUTION PREVENTION PLAN NOTES:
- THE CONTRACTOR WILL ENSURE THE POLLUTION PREVENTION MEASURES ARE DESIGNED, INSTALLED, IMPLEMENTED AND MAINTAINED TO:
- A. PROHIBIT THE DISCHARGE OF WASTEWATER AND WASH WATER, WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS, AND OTHER CONSTRUCTION MATERIALS;
- B. PROHIBIT DISCHARGE OF FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
- C. PROHIBIT DISCHARGE OF SOAPS OR SOLVENT USED IN VEHICLE AND EQUIPMENT WASHING;
- D. PROHIBIT UNLESS MANAGED BY APPROPRIATE CONTROLS THE DISCHARGES FROM DEWATERING ACTIVITIES, INCLUDING DEWATERING OF TRENCHES OR EXCAVATIONS; MINIMIZE EXPOSURE OF CONSTRUCTION AND LANDSCAPE MATERIALS AND WASTES, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE, AND OTHER MATERIALS ONSITE TO PRECIPITATION AND TO STORMWATER; AND
- F. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM SPILLS AND LEAKS AND IMPLEMENT CHEMICAL SPILL AND LEAK PREVENTION AND RESPONSE PROCEDURES.

- EROSION AND SEDIMENT CONTROL LEGEND
- SAFETY FENCE
- CONSTRUCTION ENTRANCE
- COFFER DAM
- TURBIDITY CURTAIN
- TREE PROTECTION
- TEMPORARY ACCESS ROAD AND CULVERT CROSSING
- TEMPORARY TIMBER MATTING
- LIMIT OF DISTURBANCE
- DEWATERING DEVICE
- SUPER SILT FENCE
- TREE REMOVAL

ARLINGTON
VIRGINIA

DEPARTMENT OF
ENVIRONMENTAL SERVICES
FACILITIES & ENGINEERING DIVISION
ENGINEERING BUREAU
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ARLINGTON, VA 22201
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SEAL



APPROVALS DATE

Arjun Patel 07/19/21
DESIGN TEAM ENGINEER SUPERVISOR
Kamal Taktak 8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR
07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF
Dennis M. Leach 07/21/20
TRANSPORTATION DIRECTOR
Michael Gallo 07/21/21
PROJECT MANAGER

REVISIONS DATE

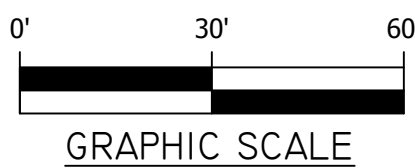
REVISIONS	DATE

PROPOSED GRADING &
EROSION CONTROL PLAN -
FOUR MILE RUN
FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

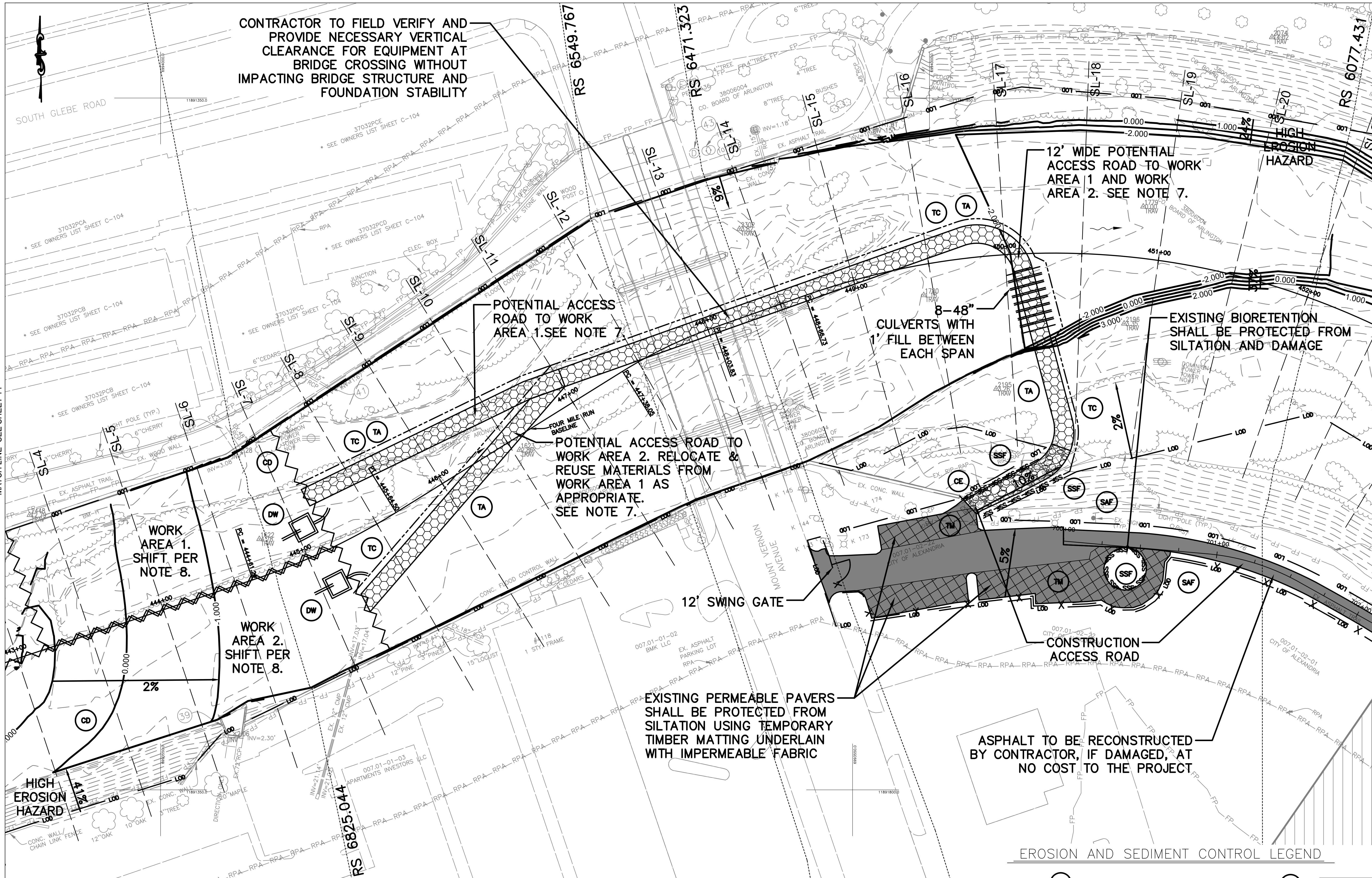
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SHEET 14 of 32

FOUR MILE RUN DREDGE PROJECT

REVISED ON 01/07/2021
FILENAME: PROPOSED GRADING & EROSION CONTROL PLAN.DWG PATH: \\VD.RKK.COM\F\PROJECTS\2019\19160_ARLSTREAM\TASK 2-4HR DREDGE\CAD\PLAN PLOTTED BY: HCHEN
MATCH LINE- SEE SHEET 14
MATCH LINE- SEE SHEET 16

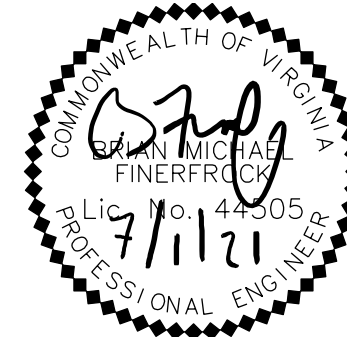


ARLINGTON
VIRGINIA

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

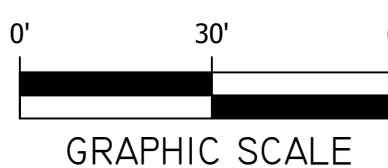
Arjun Patel	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
Ramal Taktak	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
Michael J. Gallo	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	07/21/20
TRANSPORTATION DIRECTOR	
Michael Gallo	07/21/21
PROJECT MANAGER	

REVISIONS DATE

PROPOSED GRADING &
EROSION CONTROL PLAN -
FOUR MILE RUN
FOUR MILE RUN DREDGE
PROJECT

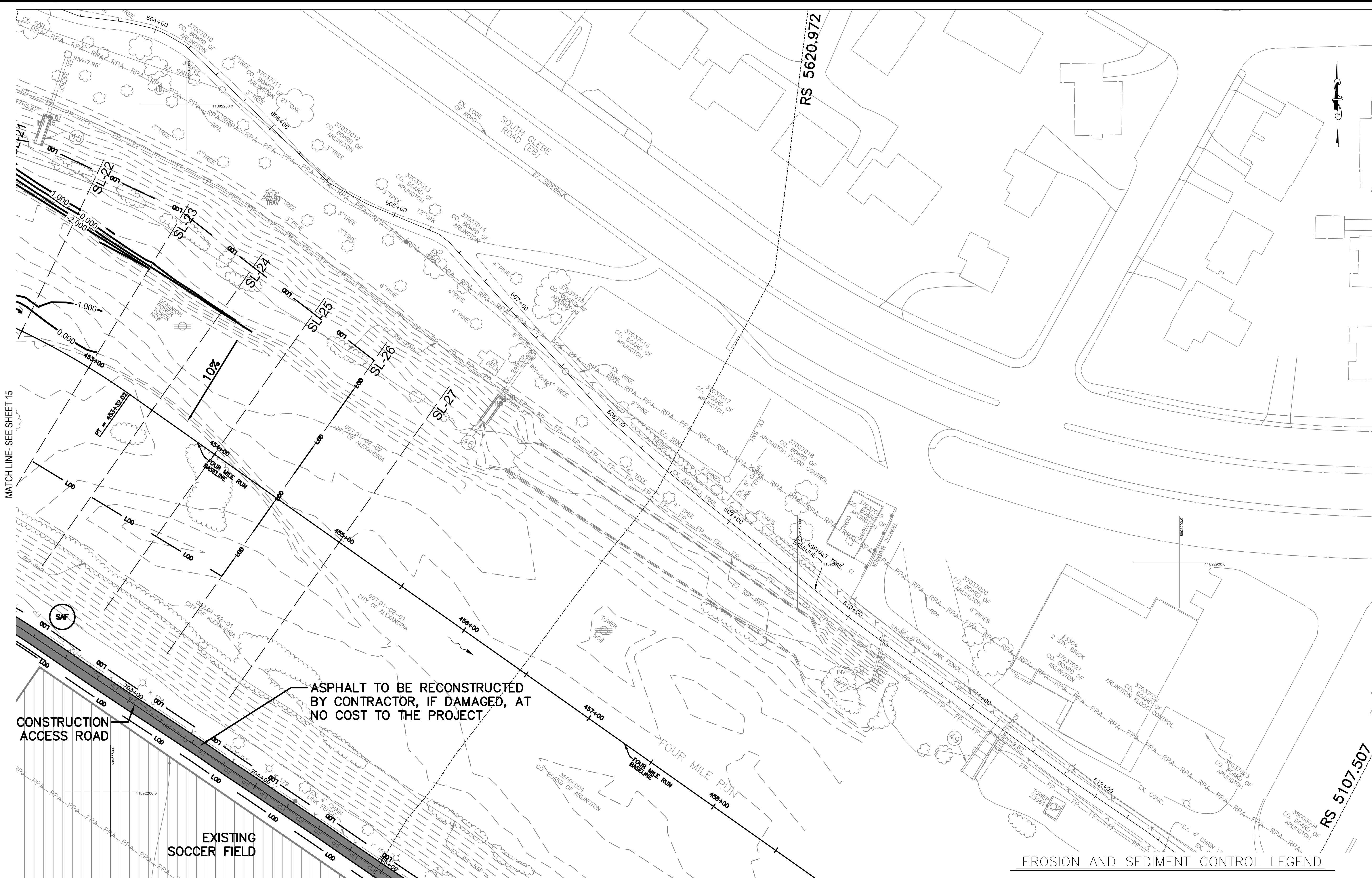
DESIGNED: EC
DRAWN: EC
CHECKED: BMF
PLOTTED: AUGUST 23 2021

SCALE: Hor.: 1"=30'



SHEET 15 of 32

FOUR MILE RUN DREDGE PROJECT



PLAN LEGEND

EXISTING CONTOURS	---
PROPOSED CONTOURS	---
HEC-RAS CROSS-SECTIONS	---
50' BASELINE CROSS-SECTIONS	---
GABION BASKET REPAIR AREA	---

NOTES:

- SEE SUGGESTED SEQUENCE OF CONSTRUCTION, SHEET 14.
- COFFER DAM PLACED TO PROTECT WORK AREA, DEFINED AS THE AREA THE CONTRACTOR CAN COMPLETE WITHIN 2 DAYS. TIE COFFER DAM INTO EMBANKMENT AND MAINTAIN HALF OF THE STREAM CHANNEL.
- DEWATERING DEVICE PLACED TO KEEP THE WORK AREA DRY.
- EROSION AND SEDIMENT CONTROL ELEMENTS ARE SHOWN CONCEPTUALLY. CONTRACTOR SHALL FIELD DETERMINE ACTUAL CONTROL MEASURE PLACEMENT.
- CONTRACTOR RESPONSIBLE FOR PROTECTING WORK AREA, EQUIPMENT, AND STREAM CROSSINGS FROM FLOODING.
- GABION BASKET REPAIRS SHALL BE PERFORMED IN AREAS IDENTIFIED WITH EXISTING DAMAGE AND WHERE DAMAGE DUE TO CONSTRUCTION ACTIVITY OCCURS. SEE GABION BASKET REPAIR DETAILS.
- ACCESS ROAD AND OTHER MEANS AND METHODS FOR ACCESS TO IN-STREAM WORK AREAS TO BE DETERMINED AS APPROPRIATE BY CONTRACTOR.
- SHIFT WORK AREA AND RESET ASSOCIATED ESC MEASURES (I.E. COFFERDAM, ACCESS ROAD, TURBIDITY CURTAIN, DEWATERING EQUIPMENT, ETC.) ONCE WORK IN THIS AREA IS COMPLETE. WORK AREAS SHOULD CUMULATIVELY COVER ENTIRE DREDGE AREA SHOWN ON SHEETS 21-24. CONTRACTOR SHALL KEEP AT LEAST HALF THE CHANNEL WIDTH OPEN AT ALL TIMES.

POLLUTION PREVENTION PLAN NOTES:

THE CONTRACTOR WILL ENSURE THE POLLUTION PREVENTION MEASURES ARE DESIGNED, INSTALLED, IMPLEMENTED AND MAINTAINED TO:

- PROHIBIT THE DISCHARGE OF WASTEWATER AND WASH WATER, WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS, AND OTHER CONSTRUCTION MATERIALS;
- PROHIBIT DISCHARGE OF FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
- PROHIBIT DISCHARGE OF SOAPS OR SOLVENT USED IN VEHICLE AND EQUIPMENT WASHING;
- PROHIBIT UNLESS MANAGED BY APPROPRIATE CONTROLS THE DISCHARGES FROM DEWATERING ACTIVITIES, INCLUDING DEWATERING OF TRENCHES OR EXCAVATIONS;
- MINIMIZE EXPOSURE OF CONSTRUCTION AND LANDSCAPE MATERIALS AND WASTES, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE, AND OTHER MATERIALS ONSITE TO PRECIPITATION AND TO STORMWATER; AND
- MINIMIZE THE DISCHARGE OF POLLUTANTS FROM SPILLS AND LEAKS AND IMPLEMENT CHEMICAL SPILL AND LEAK PREVENTION AND RESPONSE PROCEDURES.

SAFETY FENCE

CONSTRUCTION ENTRANCE

COFFER DAM

TURBIDITY CURTAIN

TREE PROTECTION

TEMPORARY ACCESS ROAD AND CULVERT CROSSING

TEMPORARY TIMBER MATTING

LIMIT OF DISTURBANCE

DEWATERING DEVICE

SUPER SILT FENCE

TREE REMOVAL

APPROVALS	DATE
<i>Ankur Patel</i>	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
<i>Kamal Taktak</i>	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Shirley</i>	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	07/21/20
TRANSPORTATION DIRECTOR	
<i>Michael Gallo</i>	07/21/21
PROJECT MANAGER	
REVISIONS	DATE

PROPOSED GRADING &
EROSION CONTROL PLAN -
FOUR MILE RUN
FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC

DRAWN: EC

CHECKED: BMF

PLOTTED: AUGUST 23 2021

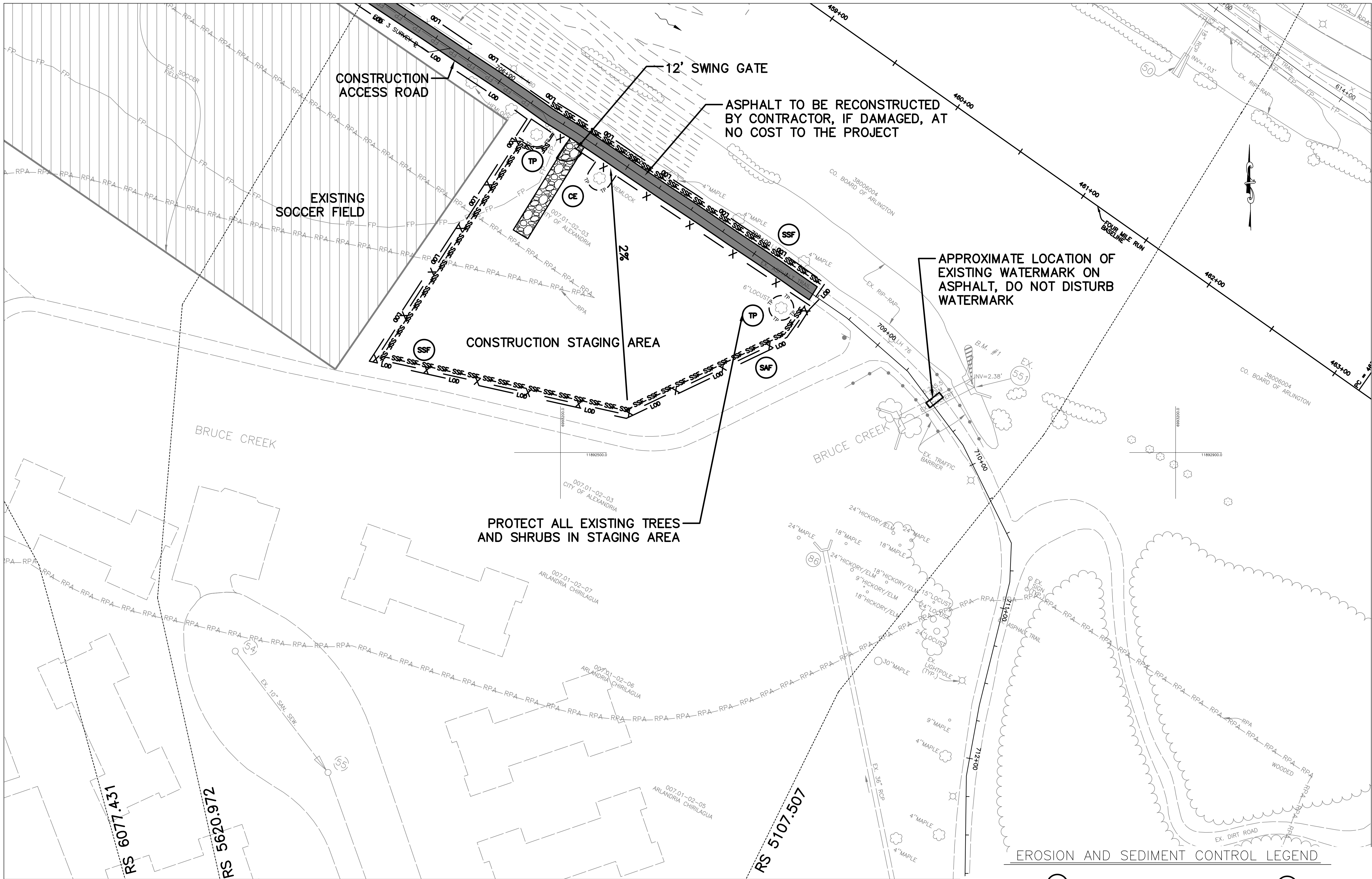
SCALE: Hor.: 1"=30'

GRAPHIC SCALE

0' 30' 60'

SHEET 16 of 32

MATCH LINE- SEE SHEET 16



PLAN LEGEND

EXISTING CONTOURS	---
PROPOSED CONTOURS	---
HEC-RAS CROSS-SECTIONS	---
50' BASELINE CROSS-SECTIONS	---
GABION BASKET REPAIR AREA	-----

NOTES:

- SEE SUGGESTED SEQUENCE OF CONSTRUCTION, SHEET 14.
- COFFER DAM PLACED TO PROTECT WORK AREA, DEFINED AS THE AREA THE CONTRACTOR CAN COMPLETE WITHIN 2 DAYS. TIE COFFER DAM INTO EMBANKMENT AND MAINTAIN HALF OF THE STREAM CHANNEL.
- DEWATERING DEVICE PLACED TO KEEP THE WORK AREA DRY.
- EROSION AND SEDIMENT CONTROL ELEMENTS ARE SHOWN CONCEPTUALLY. CONTRACTOR SHALL FIELD DETERMINE ACTUAL CONTROL MEASURE PLACEMENT.
- CONTRACTOR RESPONSIBLE FOR PROTECTING WORK AREA, EQUIPMENT, AND STREAM CROSSINGS FROM FLOODING.
- GABION BASKET REPAIRS SHALL BE PERFORMED IN AREAS IDENTIFIED WITH EXISTING DAMAGE AND WHERE DAMAGE DUE TO CONSTRUCTION ACTIVITY OCCURS. SEE GABION BASKET REPAIR DETAILS.
- ACCESS ROAD AND OTHER MEANS AND METHODS FOR ACCESS TO IN-STREAM WORK AREAS TO BE DETERMINED AS APPROPRIATE BY CONTRACTOR.
- SHIFT WORK AREA AND RESET ASSOCIATED ESC MEASURES (I.E. COFFERDAM, ACCESS ROAD, TURBIDITY CURTAIN, DEWATERING EQUIPMENT, ETC.) ONCE WORK IN THIS AREA IS COMPLETE. WORK AREAS SHOULD CUMULATIVELY COVER ENTIRE DREDGE AREA SHOWN ON SHEETS 21-24. CONTRACTOR SHALL KEEP AT LEAST HALF THE CHANNEL WIDTH OPEN AT ALL TIMES.

POLLUTION PREVENTION PLAN NOTES:
THE CONTRACTOR WILL ENSURE THE POLLUTION PREVENTION MEASURES ARE DESIGNED, INSTALLED, IMPLEMENTED AND MAINTAINED TO:
A. PROHIBIT THE DISCHARGE OF WASTEWATER AND WASH WATER, WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS, AND OTHER CONSTRUCTION MATERIALS;
B. PROHIBIT DISCHARGE OF FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
C. PROHIBIT DISCHARGE OF SOAPS OR SOLVENT USED IN VEHICLE AND EQUIPMENT WASHING;
D. PROHIBIT UNLESS MANAGED BY APPROPRIATE CONTROLS THE DISCHARGES FROM DEWATERING ACTIVITIES, INCLUDING DEWATERING OF TRENCHES OR EXCAVATIONS;
E. MINIMIZE EXPOSURE OF CONSTRUCTION AND LANDSCAPE MATERIALS AND WASTES, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE, AND OTHER MATERIALS ONSITE TO PRECIPITATION AND TO STORMWATER; AND
F. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM SPILLS AND LEAKS AND IMPLEMENT CHEMICAL SPILL AND LEAK PREVENTION AND RESPONSE PROCEDURES.

SAFETY FENCE

CONSTRUCTION ENTRANCE

COFFER DAM

TURBIDITY CURTAIN

TREE PROTECTION

TEMPORARY ACCESS ROAD AND CULVERT CROSSING

SAF

CE

CD

TC

TP

TA

---X---X---X---

TEMPORARY TIMBER MATTING

LIMIT OF DISTURBANCE

DEWATERING DEVICE

SUPER SILT FENCE

TREE REMOVAL

TM

LOD

DW

SSF

X

ARLINGTON VIRGINIA

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SEAL

COMMONWEALTH OF VIRGINIA
MICHAEL J. FINERFROCK
Professional Engineer
No. 45055
Exp. 7/1/21

APPROVALS	DATE
Ankur Patel	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
Kamal Taktak	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
Michael J. Finerfrock	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	07/21/20
TRANSPORTATION DIRECTOR	
Michael Gallo	07/21/21
PROJECT MANAGER	

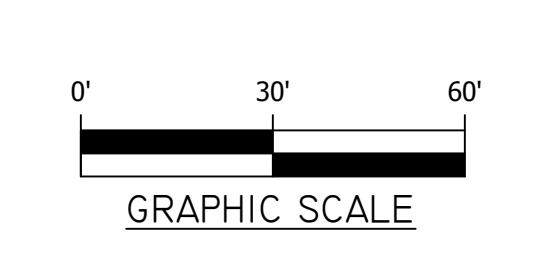
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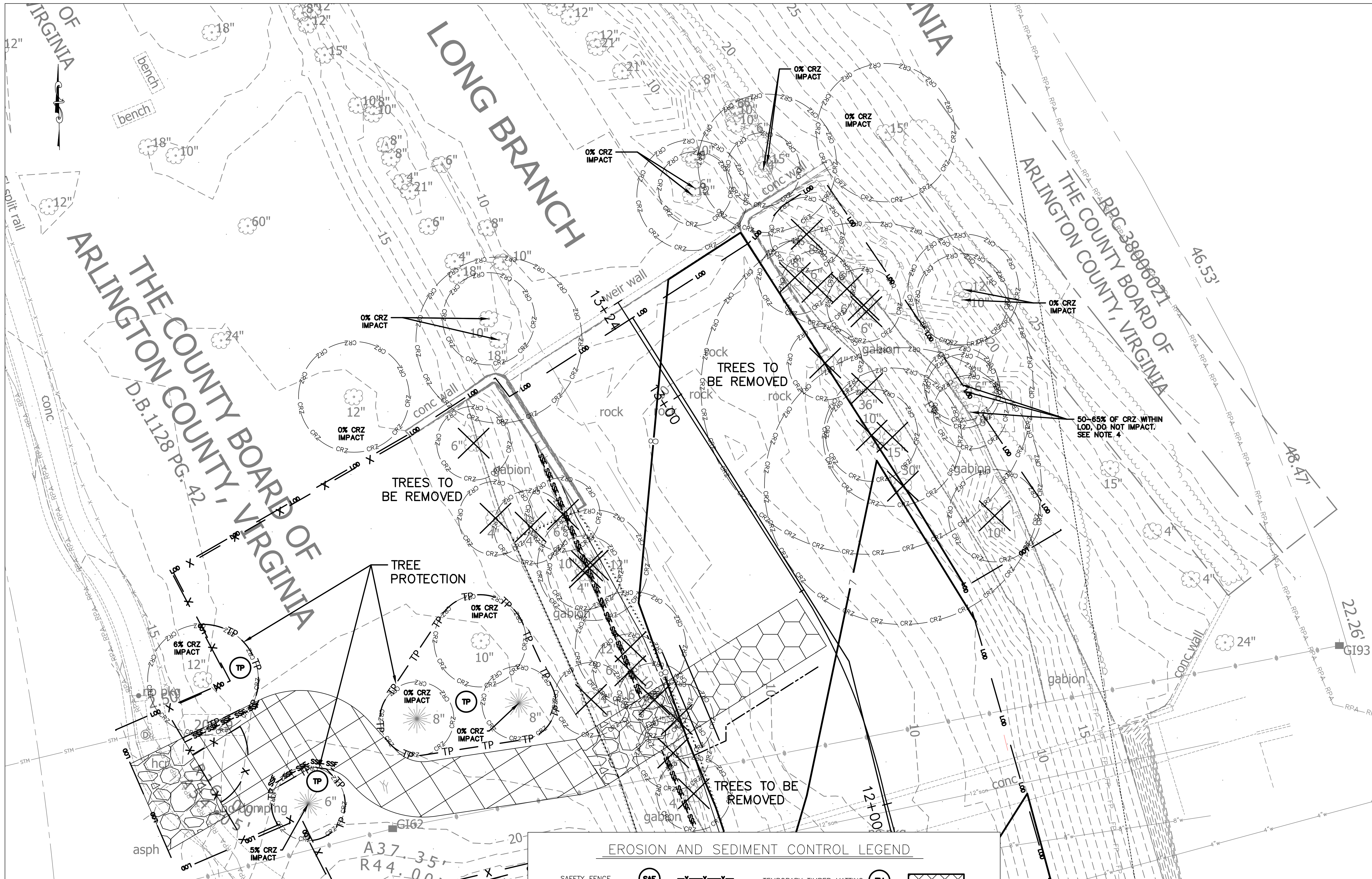
PROPOSED GRADING & EROSION CONTROL PLAN -
FOUR MILE RUN
FOUR MILE RUN DREDGE PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

SCALE: Hor.: 1"=30'





PLAN LEGEND

EXISTING CONTOURS	---
PROPOSED CONTOURS	---
HEC-RAS CROSS-SECTIONS	---
50' BASELINE CROSS-SECTIONS	---
GABION BASKET REPAIR AREA	-----

NOTES:

1. SEE SHEETS 13-17 FOR FULL EROSION AND SEDIMENT CONTROL PLAN.
2. TREE PROTECTION DETAILS ON SHEET 10.
3. 100% IMPACT TO THE CRITICAL ROOT ZONE ASSUMED FOR ALL TREES TO BE REMOVED.
4. CONTRACTOR SHALL ENSURE PROTECTION OF ALL TREES TO REMAIN. ADDITIONAL TREE PROTECTION MAY BE UTILIZED IF NECESSARY.

EROSION AND SEDIMENT CONTROL LEGEND

SAFETY FENCE	SAF	---
CONSTRUCTION ENTRANCE	CE	---
COFFER DAM	CD	---
TURBIDITY CURTAIN	TC	---
TREE PROTECTION	TP	---
TEMPORARY ACCESS ROAD AND CULVERT CROSSING	TA	---
TEMPORARY TIMBER MATTING	TM	---
LIMIT OF DISTURBANCE	LOD	---
DEWATERING DEVICE	DW	---
SUPER SILT FENCE	SSF	---
TREE REMOVAL		X
CRITICAL ROOT ZONE	CRZ	---

SEAL



APPROVALS DATE

Arjun Patel	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	8.18.21
Kamal Taktak	
CONSTRUCTION MANAGEMENT SUPERVISOR	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	07/21/20
TRANSPORTATION DIRECTOR	
Michael Gallo	07/21/21
PROJECT MANAGER	

REVISIONS DATE

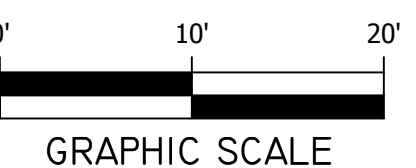
TREE REMOVAL AND PROTECTION
PLAN - LONG BRANCH

FOUR MILE RUN DREDGE
PROJECT

DESIGNED:	EC
DRAWN:	EC
CHECKED:	BMF

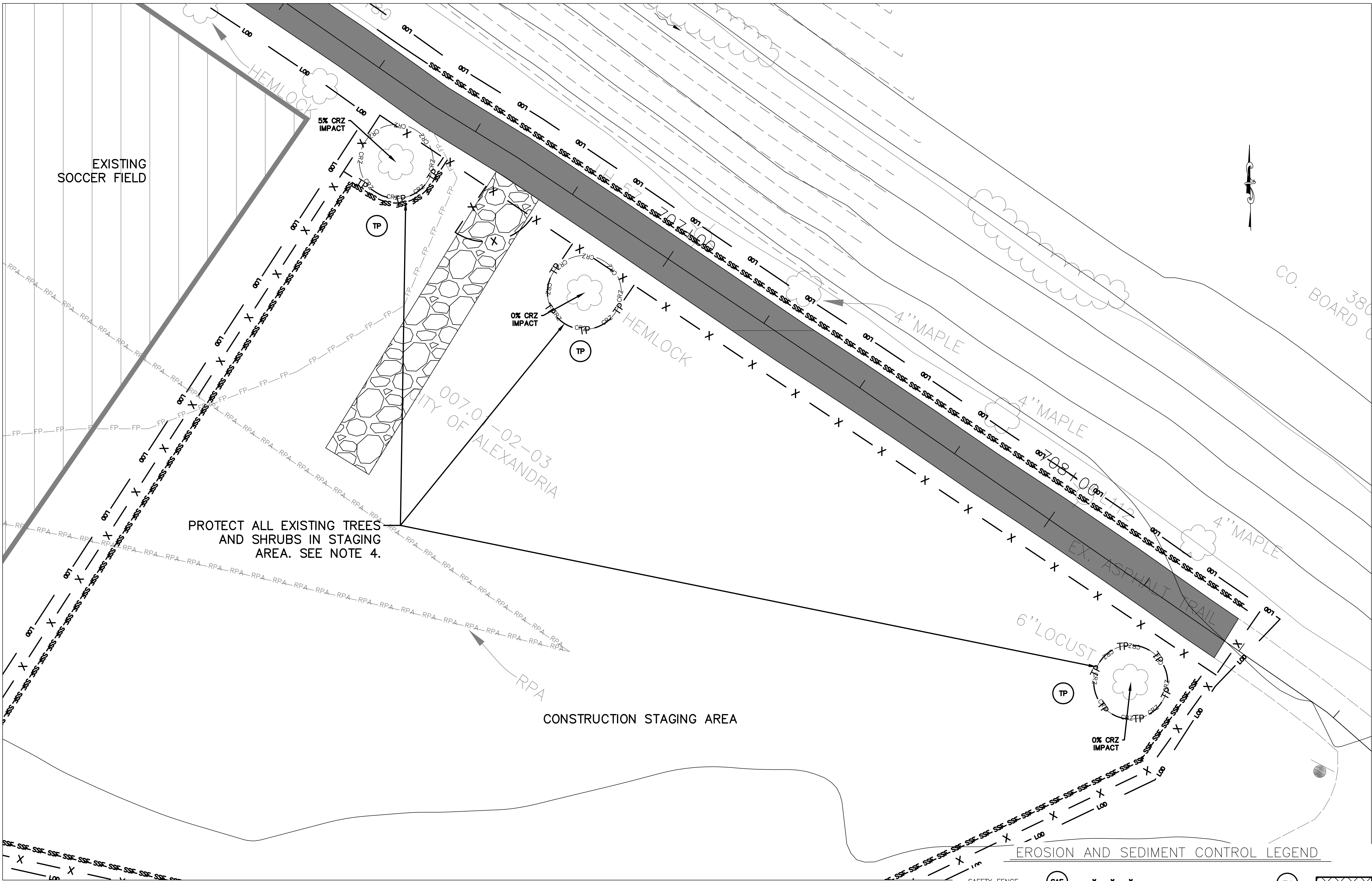
PLOTTED: AUGUST 23 2021

SCALE:Hor.: 1"=10'



REVISED ON 01/07/2021

FILENAME: TREE REMOVAL AND PROTECTION.DWG PATH: \\AD.RKK.COM\FSCLOUD\PROJECTS\2019\19160_ARLSTREAM\TASK 2-4HR DREDGE\CAD\PLAN PLOTTED BY: HCHEN



PLAN LEGEND	
EXISTING CONTOURS	---
PROPOSED CONTOURS	—
HEC-RAS CROSS-SECTIONS	----
50' BASELINE CROSS-SECTIONS	----
GABION BASKET REPAIR AREA	-----

- NOTES:
- SEE SHEETS 13-17 FOR FULL EROSION AND SEDIMENT CONTROL PLAN.
 - TREE PROTECTION DETAILS ON SHEET 10.
 - 100% IMPACT TO THE CRITICAL ROOT ZONE ASSUMED FOR ALL TREES TO BE REMOVED.
 - CONTRACTOR SHALL ENSURE PROTECTION OF ALL TREES TO REMAIN. ADDITIONAL TREE PROTECTION MAY BE UTILIZED IF NECESSARY.

SAFETY FENCE	SAF	—X—X—X—	TEMPORARY TIMBER MATTING	TM	XXXXXX
CONSTRUCTION ENTRANCE	CE	XXXXXX	LIMIT OF DISTURBANCE		LOD
COFFER DAM	CD	~~~~~	DEWATERING DEVICE	DW	□
TURBIDITY CURTAIN	TC	----	SUPER SILT FENCE	SSF	SSS
TREE PROTECTION	TP	—TP—	TREE REMOVAL		X
TEMPORARY ACCESS ROAD AND CULVERT CROSSING	TA	XXXXXX	CRITICAL ROOT ZONE		CRZ

ARLINGTON VIRGINIA

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DESIGN TEAM ENGINEER SUPERVISOR	
Kamal Taktak	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
Water, Sewer, Streets Bureau Chief	
Dennis M. Leach	07/21/20
TRANSPORTATION DIRECTOR	
Michael Gallo	07/21/21
PROJECT MANAGER	

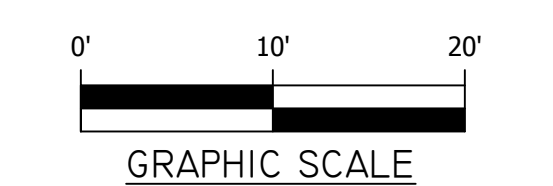
REVISIONS	DATE

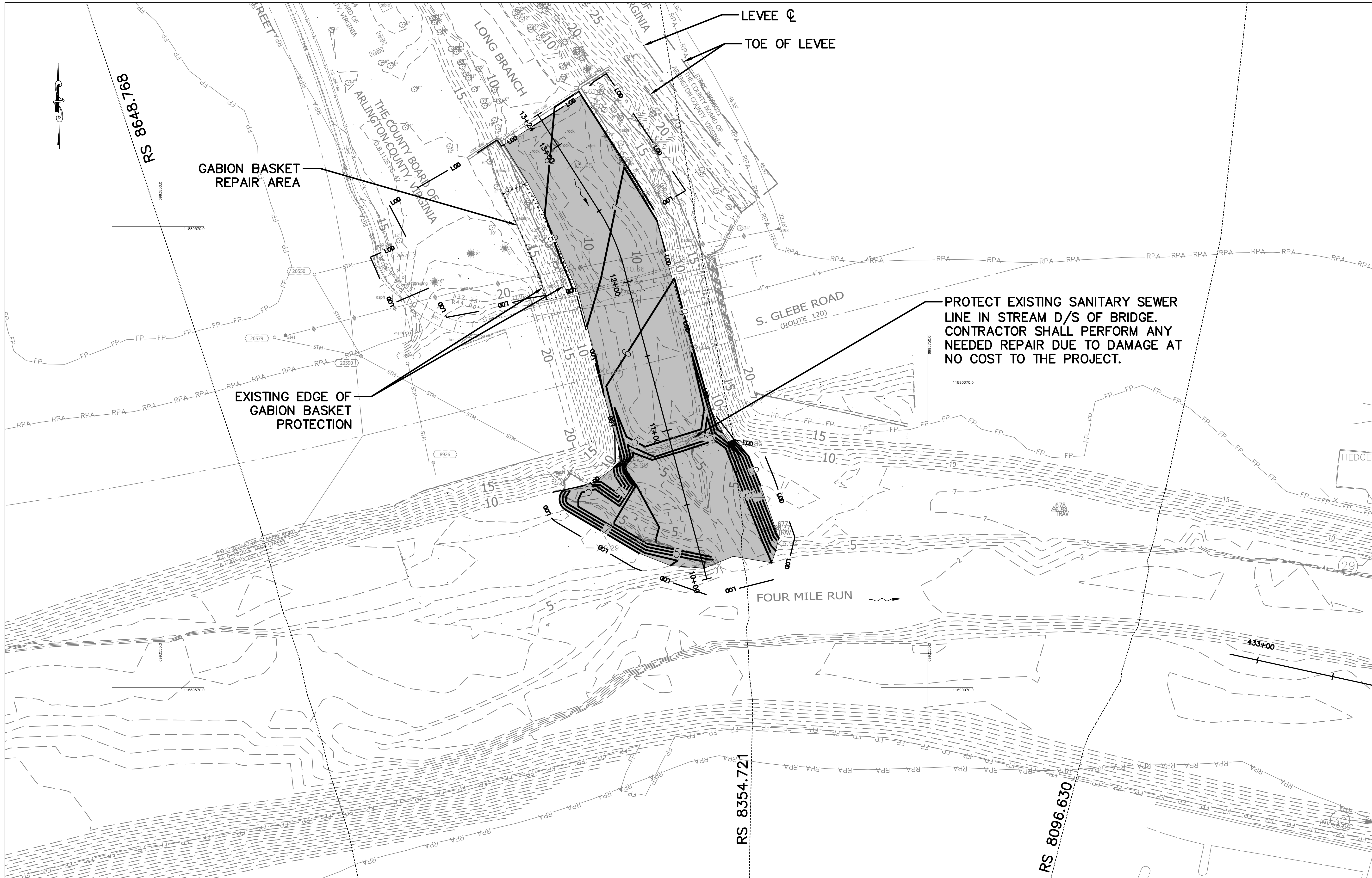
TREE REMOVAL AND PROTECTION
PLAN - FOUR MILE RUN
FOUR MILE RUN DREDGE PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

SCALE:Hor.: 1"=10'





PLAN LEGEND	
EXISTING CONTOURS	---
PROPOSED CONTOURS	—
HEC-RAS CROSS-SECTIONS	----
50' BASELINE CROSS-SECTIONS	----
LIMIT OF DISTURBANCE	---
PROPOSED DREDGE AREA	■
GABION BASKET REPAIR AREA	-----

- NOTES:
- GABION BASKET REPAIRS SHALL BE PERFORMED IN AREAS IDENTIFIED WITH EXISTING DAMAGE AND WHERE DAMAGE DUE TO CONSTRUCTION ACTIVITY OCCURS. SEE GABION BASKET REPAIR DETAILS.
 - LONG BRANCH WORK LOCATED IN A NON-TIDAL AREA.
 - NUMEROUS UTILITIES ARE PRESENT IN THE VICINITY OF CONSTRUCTION. CONTRACTOR SHALL PROTECT THESE FACILITIES FROM DAMAGE.

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VIRGINIA

DEPARTMENT OF
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SEAL



APPROVALS	DATE
<i>Ankur Patel</i>	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
<i>Kamal Taktak</i>	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Michael J. Finerfrucht</i>	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	07/21/20
TRANSPORTATION DIRECTOR	
<i>Michael Gallo</i>	07/21/21
PROJECT MANAGER	

REVISIONS	DATE

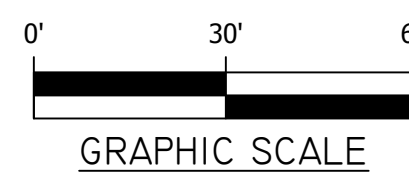
PROPOSED DREDGE AREA -
LONG BRANCH

FOUR MILE RUN DREDGE
PROJECT

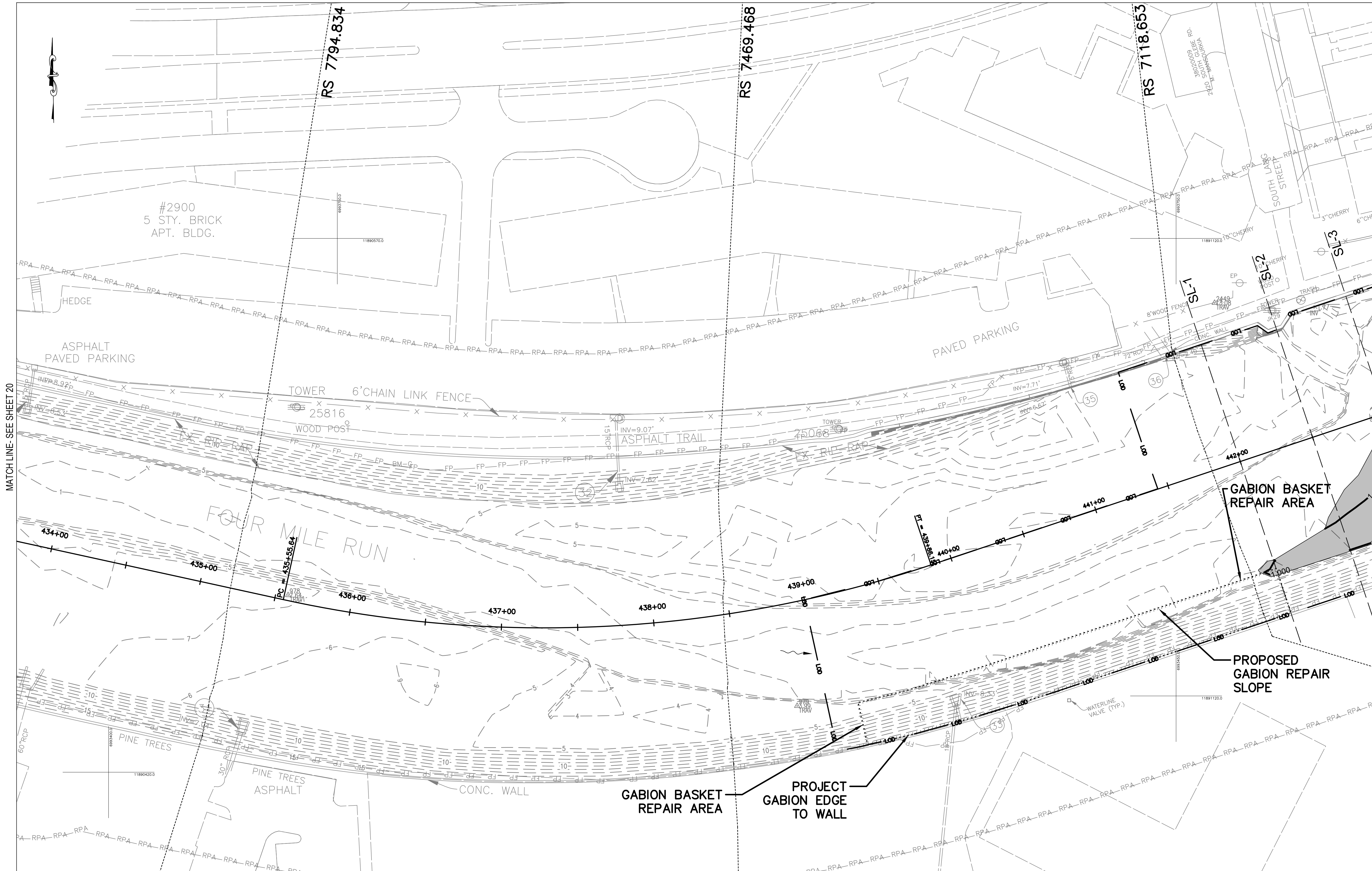
DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

SCALE: Hor.: 1"=30'



SHEET 20 of 32



PLAN LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- HEC-RAS CROSS-SECTIONS
- 50' BASELINE CROSS-SECTIONS
- LIMIT OF DISTURBANCE
- PROPOSED DREDGE AREA
- GABION BASKET REPAIR AREA

NOTES:
1. GABION BASKET REPAIRS SHALL BE PERFORMED IN AREAS IDENTIFIED WITH EXISTING DAMAGE AND WHERE DAMAGE DUE TO CONSTRUCTION ACTIVITY OCCURS. SEE GABION BASKET REPAIR DETAILS.

DEPARTMENT OF ENVIRONMENTAL SERVICES
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SEAL



APPROVALS	DATE
Ankur Patel	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
Ramal Taktak	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
Michael Gallo	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	07/21/20
TRANSPORTATION DIRECTOR	
Michael Gallo	07/21/21
PROJECT MANAGER	

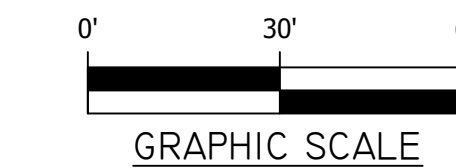
REVISIONS	DATE

PROPOSED DREDGE AREA -
FOUR MILE RUN
FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

SCALE: Hor.: 1"=30'





PLAN LEGEND

EXISTING CONTOURS	---
PROPOSED CONTOURS	---
HEC-RAS CROSS-SECTIONS	----
50' BASELINE CROSS-SECTIONS	----
LIMIT OF DISTURBANCE	---
PROPOSED DREDGE AREA	---
GABION BASKET REPAIR AREA	---

NOTES:
1. GABION BASKET REPAIRS SHALL BE PERFORMED IN AREAS IDENTIFIED WITH EXISTING DAMAGE AND WHERE DAMAGE DUE TO CONSTRUCTION ACTIVITY OCCURS. SEE GABION BASKET REPAIR DETAILS.

SEAL

COMMONWEALTH OF VIRGINIA
JAMES MICHAEL
FINER
Lic. No. 44505
PROFESSIONAL ENGINEER
7/1/21

APPROVALS	DATE
Ankur Patel	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
Kamal Taktak	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
07.23.2021	
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	07/21/20
TRANSPORTATION DIRECTOR	
Michael Gallo	07/21/21
PROJECT MANAGER	

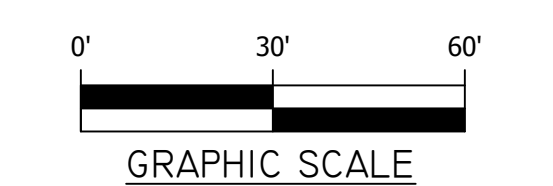
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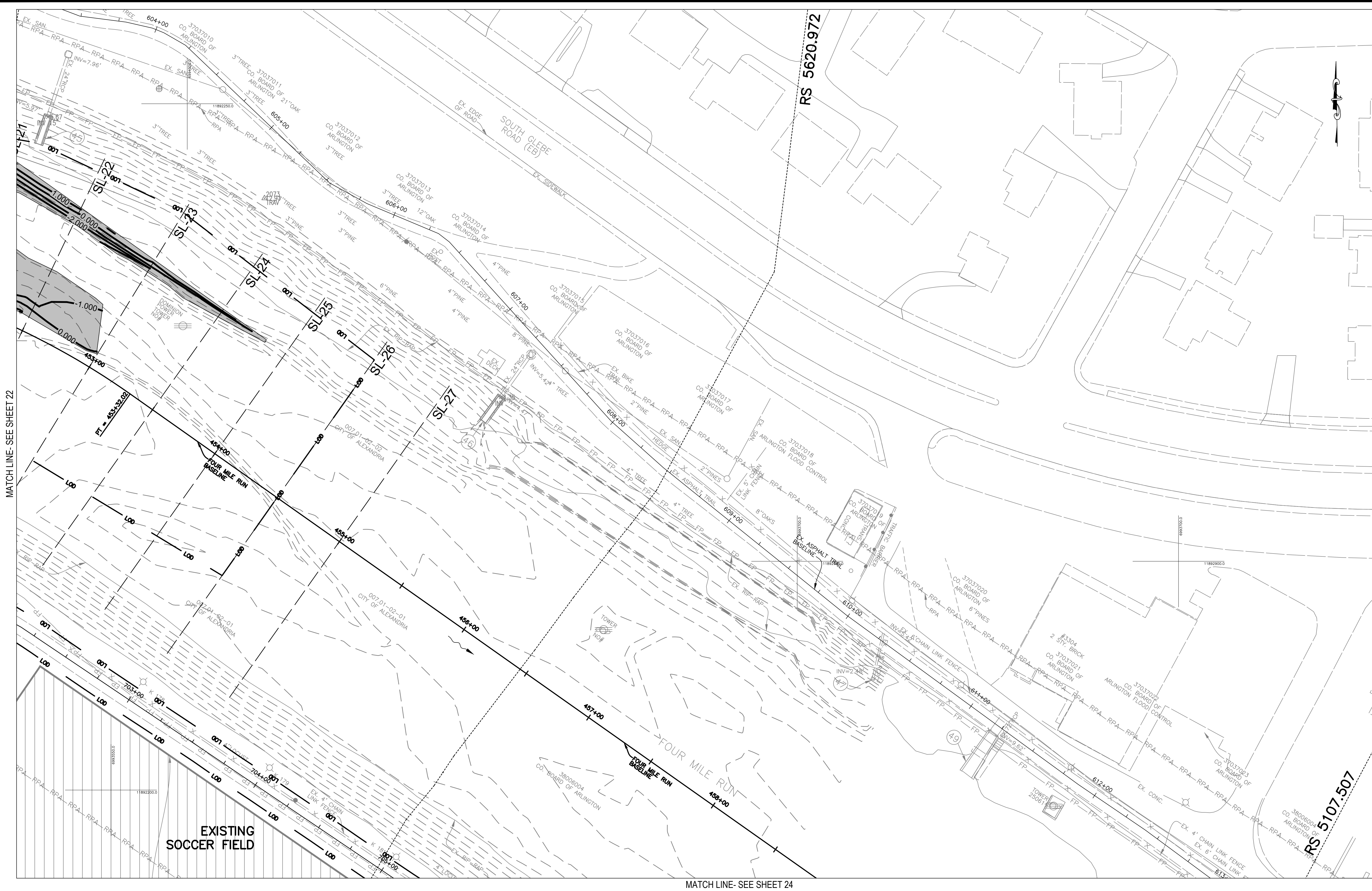
PROPOSED DREDGE AREA -
FOUR MILE RUN
FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

SCALE: Hor.: 1"=30'





PLAN LEGEND

- EXISTING CONTOURS
PROPOSED CONTOURS
HEC-RAS CROSS-SECTIONS
50' BASELINE CROSS-SECTIONS
LIMIT OF DISTURBANCE
PROPOSED DREDGE AREA
GABION BASKET REPAIR AREA

NOTES:
1. GABION BASKET REPAIRS SHALL BE PERFORMED IN AREAS IDENTIFIED WITH EXISTING DAMAGE AND WHERE DAMAGE DUE TO CONSTRUCTION ACTIVITY OCCURS. SEE GABION BASKET REPAIR DETAILS.

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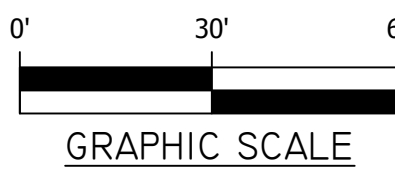
APPROVALS	DATE
<i>Ankur Patel</i>	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
<i>Ramal Taktak</i>	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Shirley</i>	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	07/21/20
TRANSPORTATION DIRECTOR	
<i>Michael Gallo</i>	07/21/21
PROJECT MANAGER	

REVISIONS	DATE

PROPOSED DREDGE AREA -
FOUR MILE RUN
FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF
PLOTTED: AUGUST 23 2021

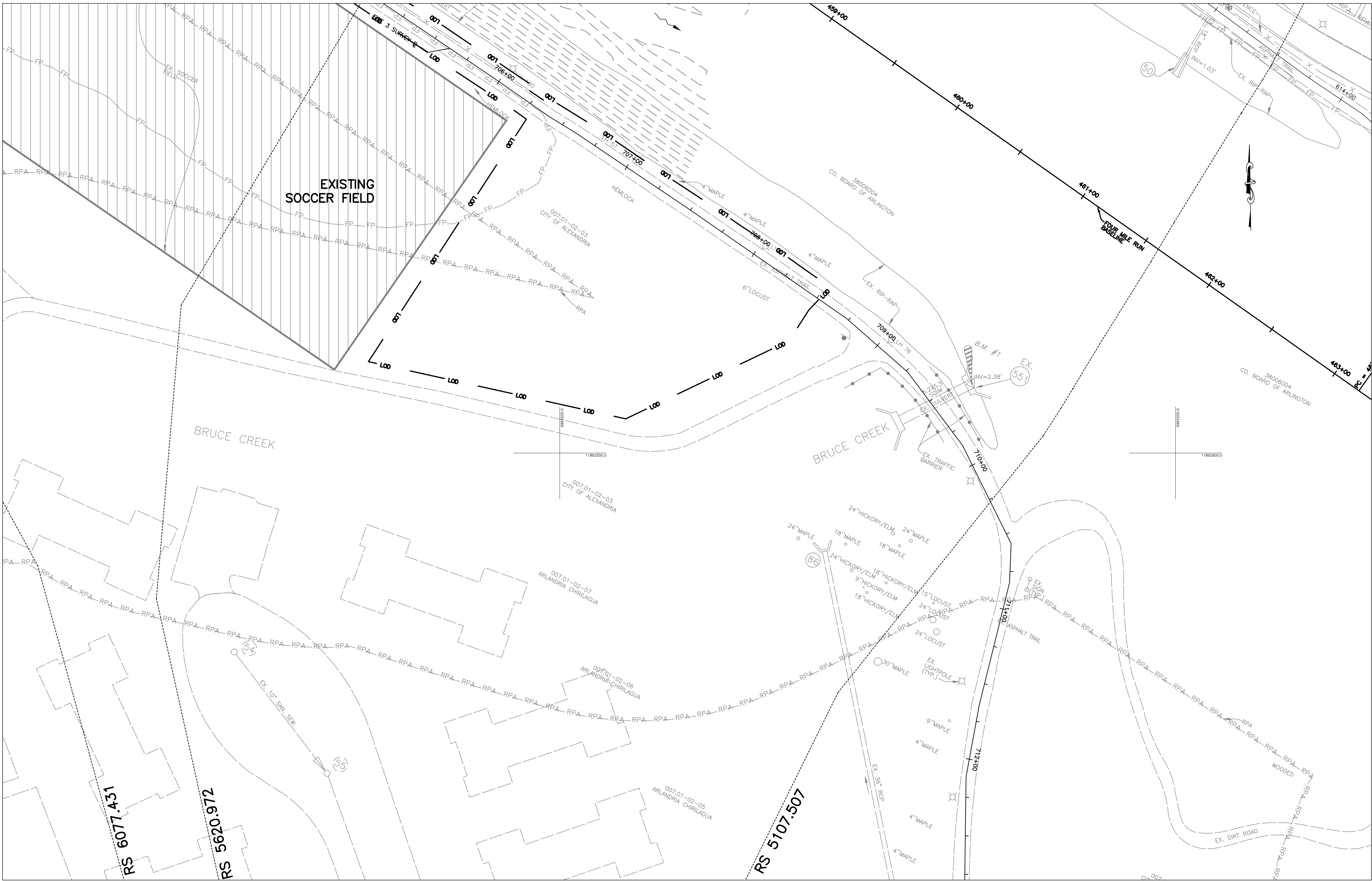
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REVISED ON 01/07/2021

FILENAME: PROPOSED DREDGING PLANNING PATH: \\AD.BKK.COM\FS\CLOUD\PROJECTS\2019\19160_ARLSTREAM\TASK 2-4HR DREDGE CADD\PLAN PLOTTED BY: HCHEN

MATCH LINE- SEE SHEET 23



PLAN LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- HEC-RAS CROSS-SECTIONS
- 50' BASELINE CROSS-SECTIONS
- LIMIT OF DISTURBANCE
- PROPOSED DREDGE AREA
- GABION BASKET REPAIR AREA

- NOTES:
- GABION BASKET REPAIRS SHALL BE PERFORMED IN AREAS IDENTIFIED WITH EXISTING DAMAGE AND WHERE DAMAGE DUE TO CONSTRUCTION ACTIVITY OCCURS. SEE GABION BASKET REPAIR DETAILS.
 - NO DREDGE AREA VISIBLE WITHIN THE LIMITS OF THIS SHEET.

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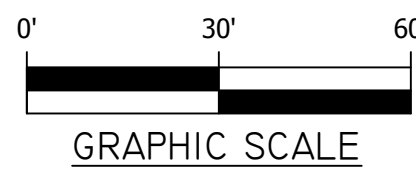
APPROVALS	DATE
<i>Ankur Patel</i>	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
<i>Kamal Taktak</i>	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Shirley</i>	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	07/21/20
TRANSPORTATION DIRECTOR	
<i>Michael Gallo</i>	07/21/21
PROJECT MANAGER	

REVISIONS	DATE

PROPOSED DREDGE AREA -
FOUR MILE RUN
FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF
PLOTTED: AUGUST 23 2021

SCALE: Hor.: 1"=30'

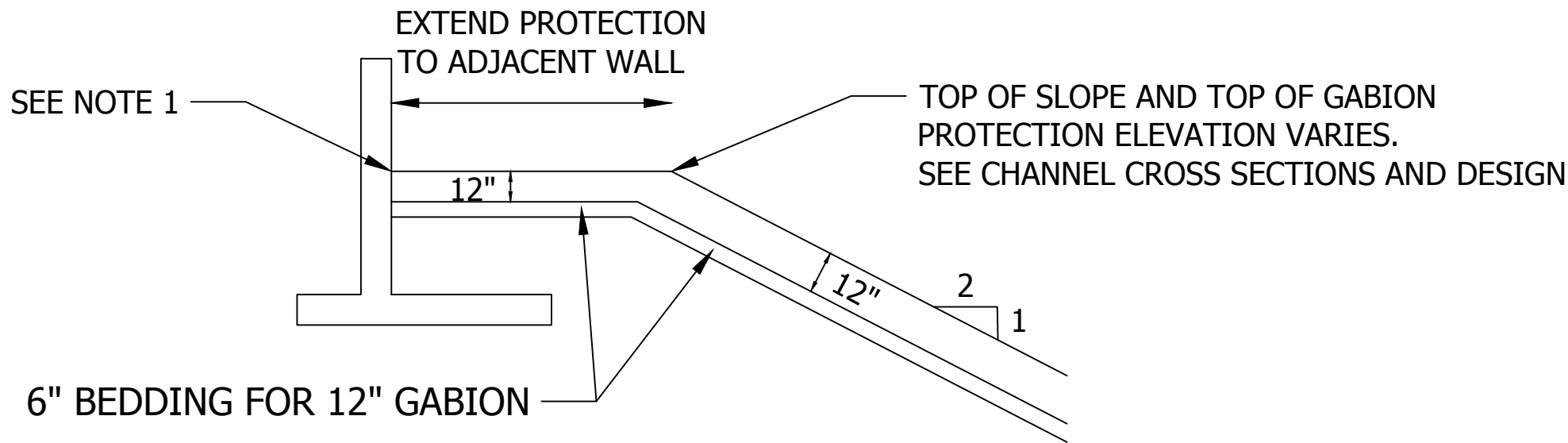


SHEET 24 of 32

FOUR MILE RUN DREDGE PROJECT

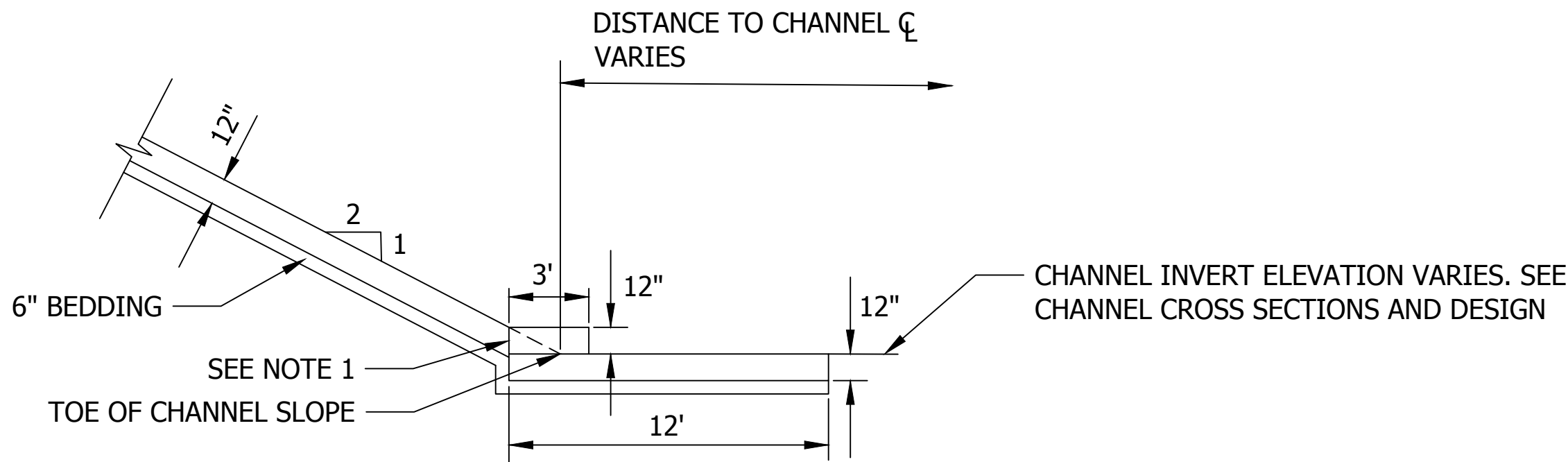
REVISED ON 01/07/2021

FILENAME: GABION BASKET DETAILS.DWG PATH: \\AD.RKK.COM\FSCLOUD\PROJECTS\2019\0160_ARLSTREAMS\TASK 2-4HR DREDGE CADD\PLAN PLOTTED BY: HOHEN



TOP DETAIL AT WALLS

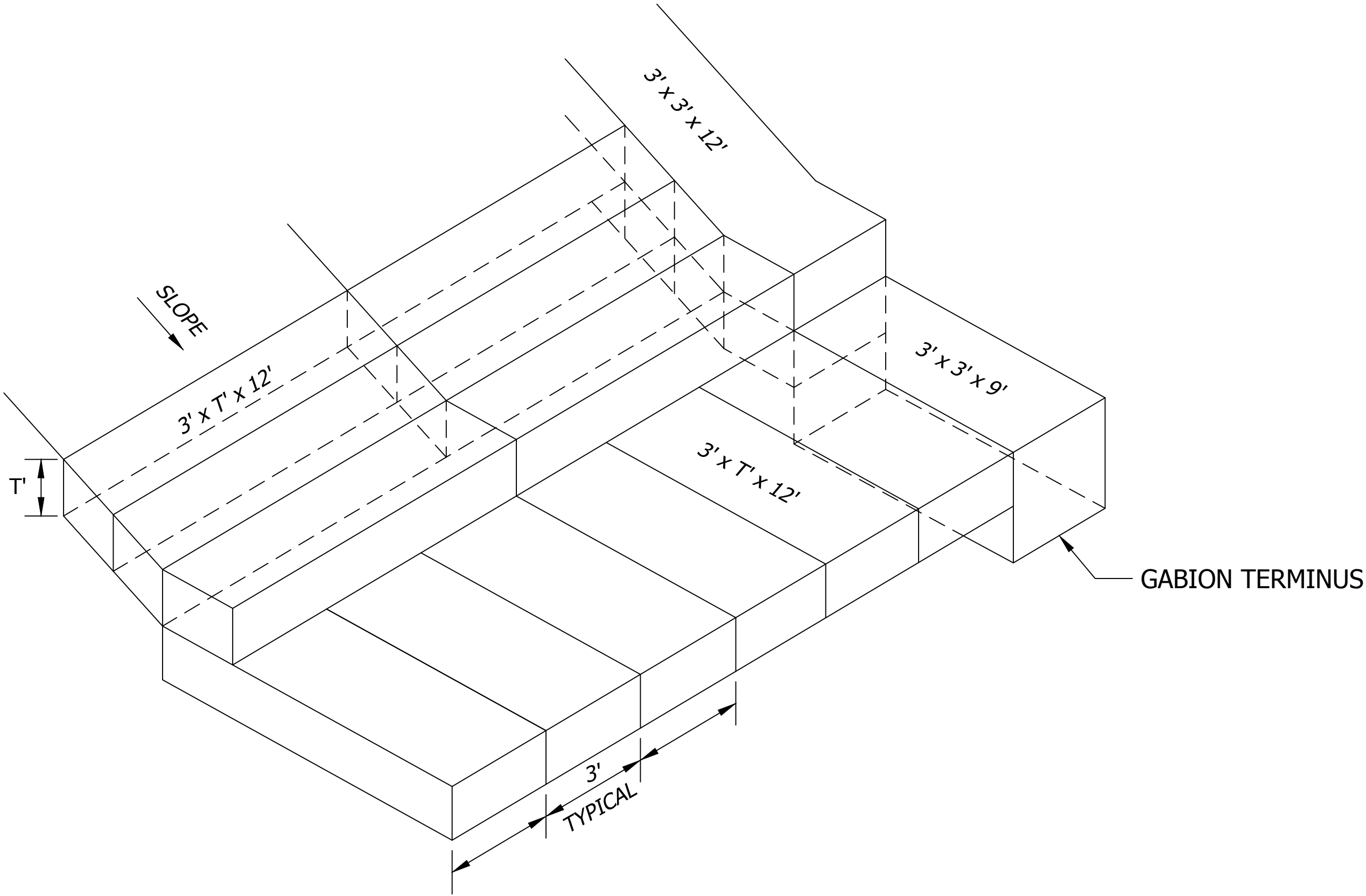
SCALE: 1" = 5'



TOE DETAILS

SCALE: 1" = 5'

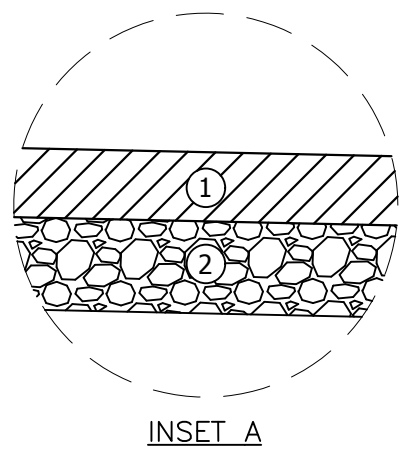
- NOTES:
- CONTRACTOR SHALL CUT AND/OR BIND GABIONS AS REQUIRED TO MEET EXISTING CONDITIONS, STRUCTURES, OR AS DIRECTED BY THE ENGINEER.
 - REPAIRS SHALL BE PERFORMED IN AREAS IDENTIFIED WITH EXISTING DAMAGE AND WHERE DAMAGE DUE TO CONSTRUCTION ACTIVITY OCCURS. SEE PROPOSED PLANS.



TYPICAL BASKET ARRANGEMENT

NOT TO SCALE

GABION BASKET REPAIR DETAILS



- LEGEND:
- 4" VDOT TYPE SM-9.5A ASPHALT CONCRETE.
 - 6" VDOT 21-A AGGREGATE SUBBASE COMPACTED VDOT 21-A STONE. HAVING MINIMUM CBR-30, COMPACTED TO 95% MAXIMUM STD. PROCTOR DENSITY OR 90% OF THE MAXIMUM MODIFIED PROCTOR DENSITY.

NOTE:
REFER TO PROJECT SPECIFICATIONS SPECIAL PROVISIONS SECTION 02601.

TRAIL FULL RECONSTRUCTION
N.T.S.

ARLINGTON
VIRGINIA

DEPARTMENT OF
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ENGINEERING BUREAU
2100 CLARENDON BOULEVARD, SUITE 813
ARLINGTON, VA 22201
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SEAL



APPROVALS	DATE
<i>Arjun Patel</i>	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
<i>Kamal Taktak</i>	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>[Signature]</i>	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	07/21/20
TRANSPORTATION DIRECTOR	
<i>Michael Gallo</i>	07/21/21
PROJECT MANAGER	

REVISIONS	DATE

CIVIL DESIGN DETAILS
FOUR MILE RUN

FOUR MILE RUN DREDGE
PROJECT

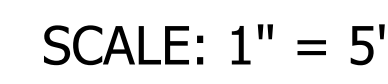
DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

SCALE: As Noted

SHEET 25A of 32

FOUR MILE RUN DREDGE PROJECT



1. CONTRACTOR SHALL CUT AND/OR BIND GABIONS AS REQUIRED TO MEET EXISTING CONDITIONS, STRUCTURES, OR AS DIRECTED BY THE ENGINEER.
2. TOP OF GABION CONFIGURATION TO BE RESTORED TO DETERMINED BY EXISTING CONDITIONS.
2. REPAIRS SHALL BE PERFORMED IN AREAS IDENTIFIED WITH EXISTING DAMAGE AND WHERE DAMAGE DUE TO CONSTRUCTION ACTIVITY OCCURS. SEE PROPOSED PLANS.

GABION BASKET REPAIR DETAILS

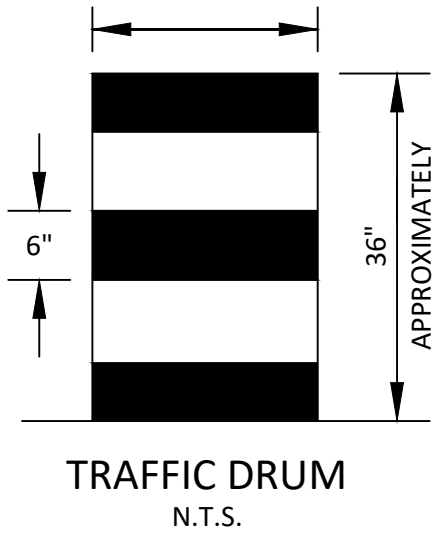
SCALE: As Noted



MAINTENANCE OF TRAFFIC PLAN

MAINTENANCE OF TRAFFIC PLAN
MOT LEGEND

- CROSSWALK ARROW SIGN
- YIELD HERE TO PEDESTRAIN SIGN
- PEDESTRAIN TRAFFIC CROSSING SIGN
- AREA SIDEWALK CLOSED DURING CONSTRUCTION
- CONSTRUCTION ENTRANCE
- TRAFFIC FLOW
- 2" X 36" TUBULAR MARKERS
- SIGN
- TYPE III BARRICADE



NOTES:
THIS FLOOD CONTROL PROJECT WILL ENTAIL THE REMOVAL OF SEDIMENT (DREDGE) FROM APPROXIMATELY 1200 LF OF THE FOUR MILE RUN CHANNEL, UPSTREAM AND DOWNSTREAM OF THE GLEBE ROAD BRIDGE.

- NOTES:**
- 1. CONTRACTOR WILL MAKE THE CALL ABOUT MOT ZONE WORK SEQUENCES.
 - 2. ALL THE ZONE WORK WILL NOT BE CARRIED OUT AT THE SAME TIME.

- ZONE NOTES:**
- 1. THE FOLLOWING ZONES CAN NOT BE BUILT AT THE SAME TIME : (NOT APPLICABLE)
 - 2. WARNING SIGN SPACING : 100' CHANNELIZATION DEVICES SPACING FOR TRANSITION A AREAS = 20' — APPLIED TO ALL ZONES

ZONE TABLE				
ZONE #	TTC#		COMMENTS	MAXIMUM DURATION
	VEHICULAR	PEDESTRIAN		
ZONE A	TTC-63.2	TTC-36.2	LOGGING OPERATIONS, SIDEWALK CLOSURE AND PEDESTRIAN DETOUR OPERATION	ONE MONTH TO THREE MONTH
NOTE: THE DURATIONS SHOWN WERE DEVELOPED FOR PLANNING AND ESTIMATION PURPOSES ONLY. THE DURATIONS IN NO WAY ALTER THE CONTRACT TIME FOR COMPLETION, OR INFRINGERS ON THE CONTRACTORS MEANS AND METHODS. THE CONTRACTOR'S SUBMITTED SCHEDULE SUPERSEDES THE ESTIMATED DURATIONS SHOWN.				

ARLINGTON
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18" MINIMUM

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APPROVALS	DATE
Ankur Patel	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
Kamal Taktak	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
Cliff	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	07/21/20
TRANSPORTATION DIRECTOR	
Michael Gallo	07/21/21
PROJECT MANAGER	

REVISIONS	DATE

DETOUR PLAN LONG BRANCH
S54D

FROM 26TH STREET S. TO S. GLEBE RD.

FOUR MILE RUN DREDGE PROJECT

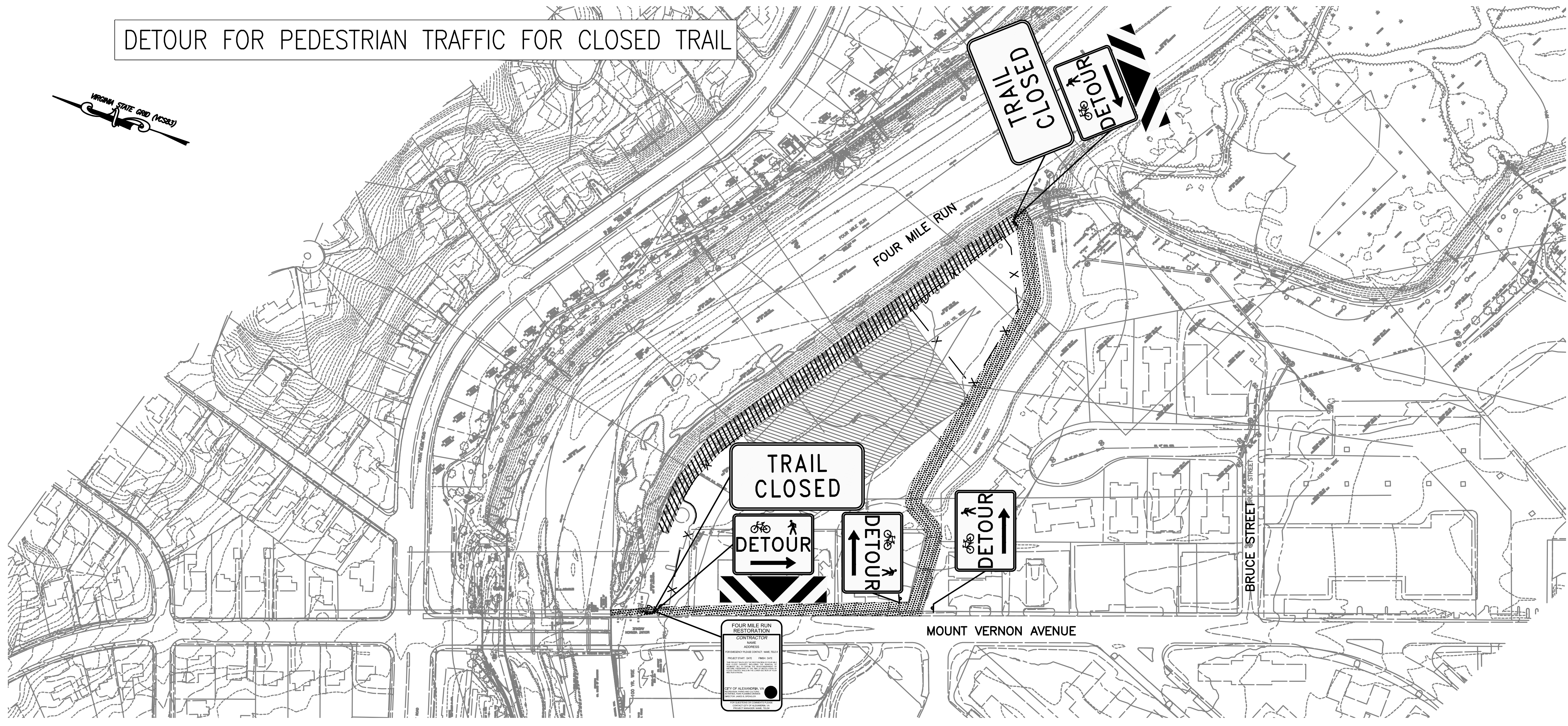
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DRAWN: PB
CHECKED: MG

PLOTTED: AUGUST 20 2021

SCALE:

0 50 100
GRAPHIC SCALE

DETOUR FOR PEDESTRIAN TRAFFIC FOR CLOSED TRAIL



- NOTES:
- 1) CONTRACTOR SHALL COMPLY WITH FIGURE TTC-36.2 CROSSWALK CLOSURE AND PEDESTRIAN DETOUR OPERATION OF THE LATEST EDITION OF THE VIRGINIA WORK AREA PROTECTION MANUAL.
 - 2) TRAIL CLOSED SIGN SHALL BE A MODIFIED R9-9 30"x18" AND THE PEDESTRIAN DETOUR SIGN SHALL BE A STANDARD M4-9AL 30"x24" BOTH TO BE MOUNTED ON TYPE III BARRICADE PLACED AT EXISTING TRAIL HEAD CLOSURE AT THE BRUCE STREET JUNCTION.
 - 3) TRAIL CLOSED SIGN SHALL BE A MODIFIED R9-9 30"x18" AND THE PEDESTRIAN DETOUR SIGN SHALL BE A STANDARD M4-9AR 30"x24" BOTH TO BE MOUNTED ON TYPE III BARRICADE PLACED AT EXISTING PARKING LOT ENTRANCE AT MOUNT VERNON AVENUE.
 - 4) PROJECT INFORMATION SIGN SHALL BE MOUNTED ON SAFETY FENCE AT CONSTRUCTION ENTRANCE AT MOUNT VERNON AVENUE.

FOUR MILE RUN RESTORATION

CONTRACTOR

NAME

ADDRESS

FOR EMEGENCY PLEASE CONTACT: NAME, TELE #

PROJECT START: DATE

FINISH: DATE

THIS PROJECT INVOLVES THE RESTORATION OF FOUR MILE RUN FLOOD CAPACITY, INCLUDING THE REMOVAL OF SEDIMENT FILL TO OBTAIN THE RE-ESTABLISHMENT OF HISTORIC FREEBOARD AT THE TIME OF INSTALLATION OF FLOOD CONTROL WALLS IN THE LOWER SECTION OF FOUR MILE RUN STREAM.

CITY OF ALEXANDRIA, VA

RECREATION, PARKS AND CULTURAL

ACTIVITIES, PARK PLANNING DIVISION

DIRECTOR: JAMES B. SPENGLER

FOR QUESTIONS OR COMMENTS PLEASE

CONTACT CITY OF ALEXANDRIA, VA

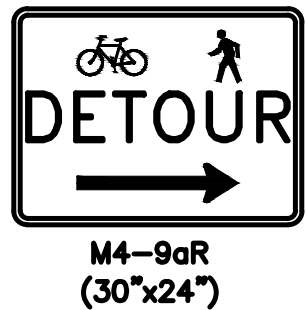
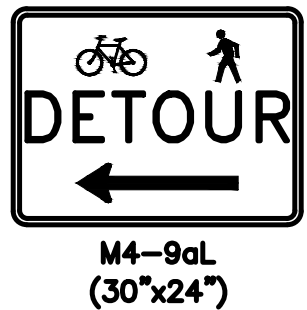
PROJECT MANAGER: NAME, TELE#

(24"x36")

CONTRACTOR SHALL COORDINATE WITH CITY OF ALEXANDRIA

PROJECT MANAGER FOR EMERGENCY CONTACT INFORMATION

(NAME AND TELEPHONE #) AND PROJECT START AND FINISH DATES.



- LEGEND
- TYPE 3 BARRICADE
 - TEMPORARY SIGN
 - SAFETY FENCE
 - TRAIL CLOSED
 - TRAIL DETOUR

- SIGN QUANTITIES
- 1- PROJECT DESCRIPTION SIGN
 - 2- TRAIL CLOSED SIGN
 - 4- PEDESTRIAN DETOUR SIGNS

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SEAL



APPROVALS	DATE
Arjun Patel	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
Kamal Taktak	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
Cliff	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
Dennis M. Leach	07/21/20
TRANSPORTATION DIRECTOR	
Michael Gallo	07/21/21
PROJECT MANAGER	

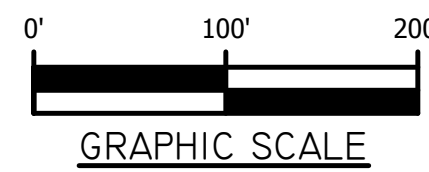
REVISIONS	DATE

DETOUR PLAN -
FOUR MILE RUN
FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

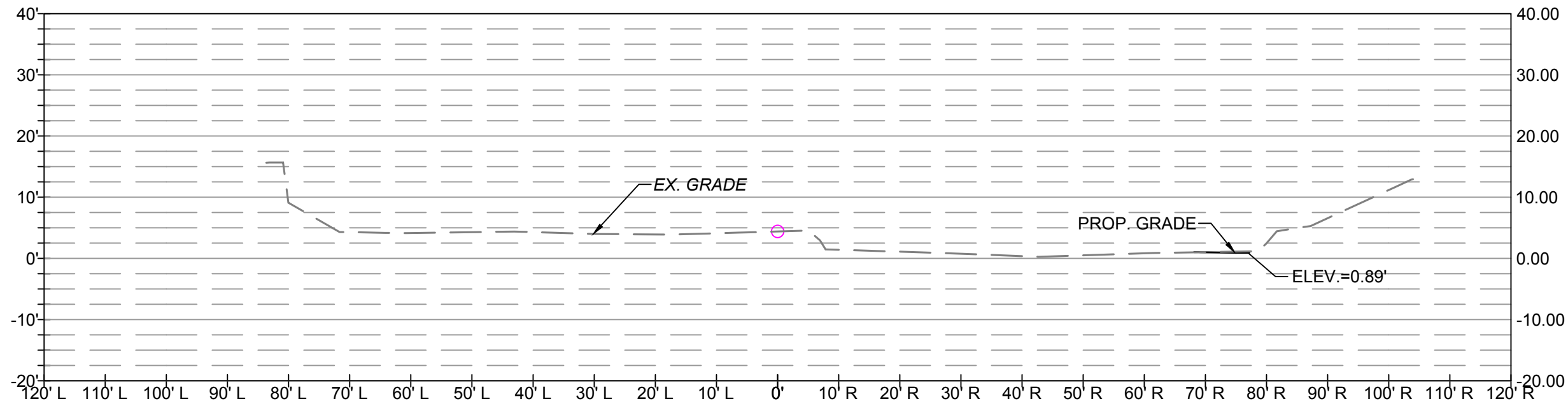
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SCALE:Hor.: 1"=100'

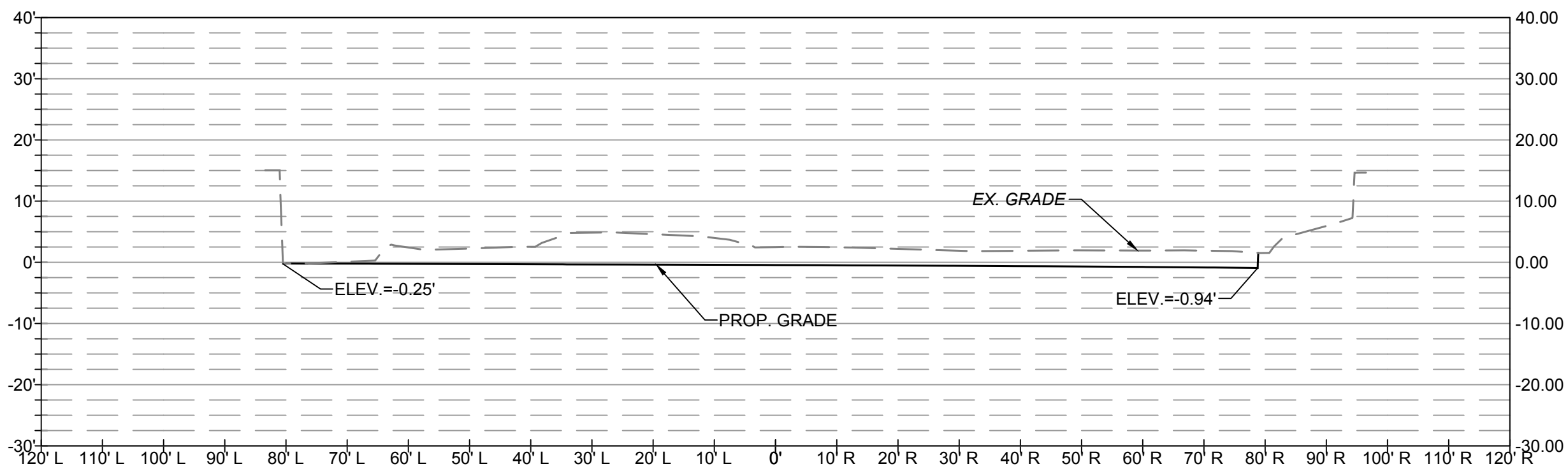


REVISED ON 01/07/2021

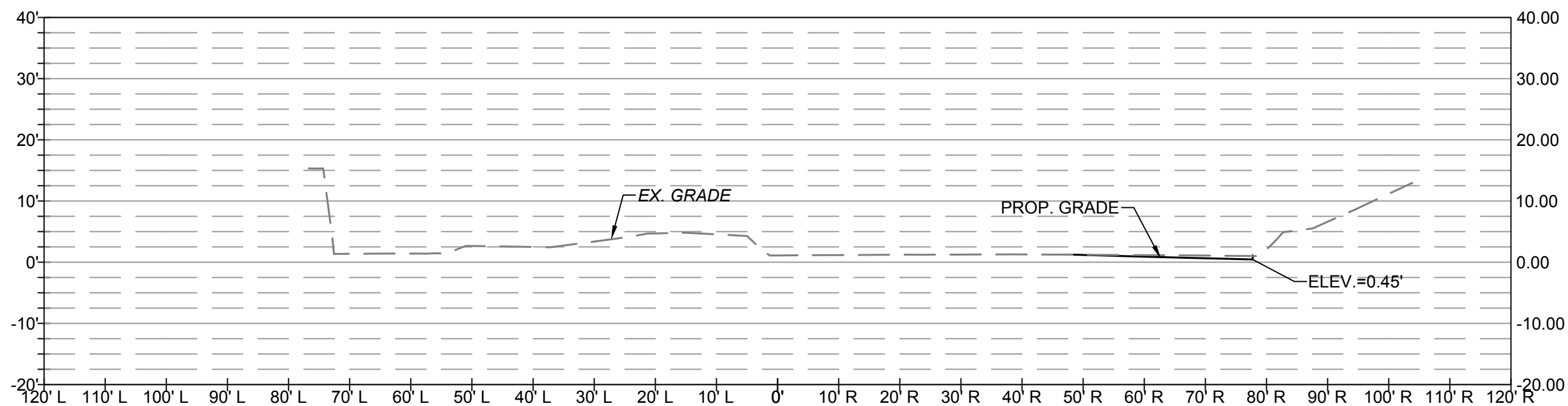
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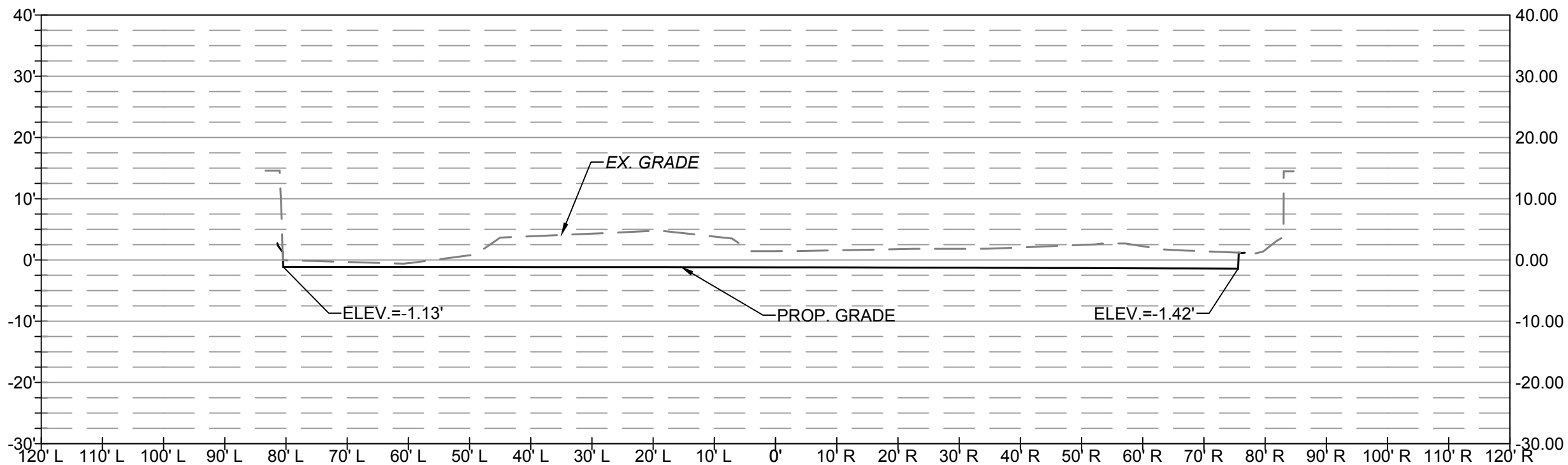
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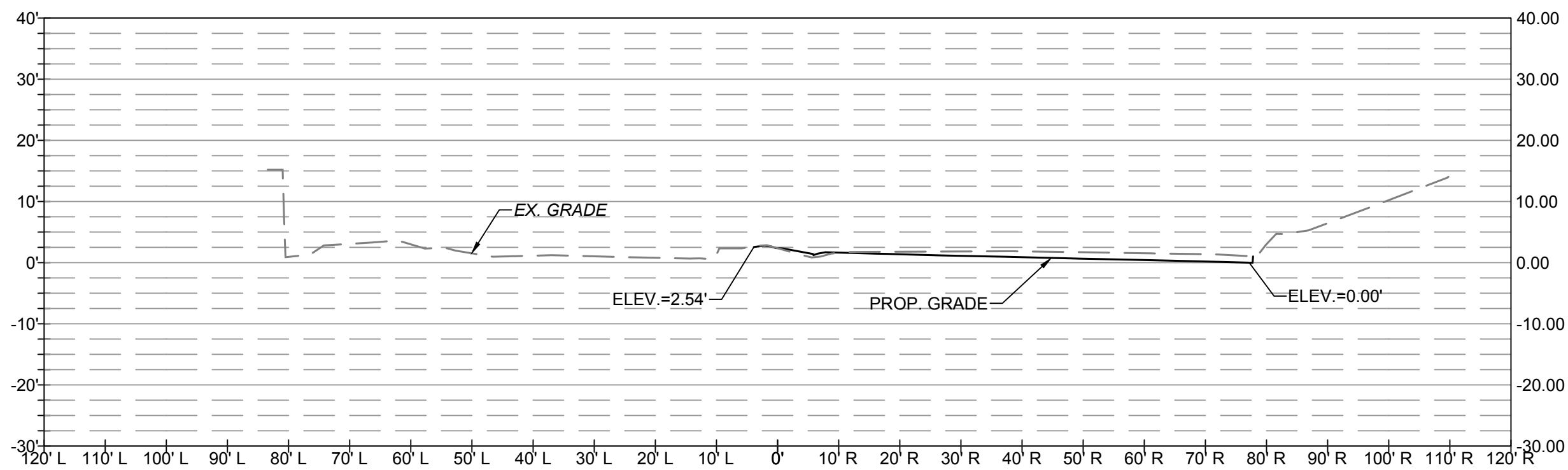
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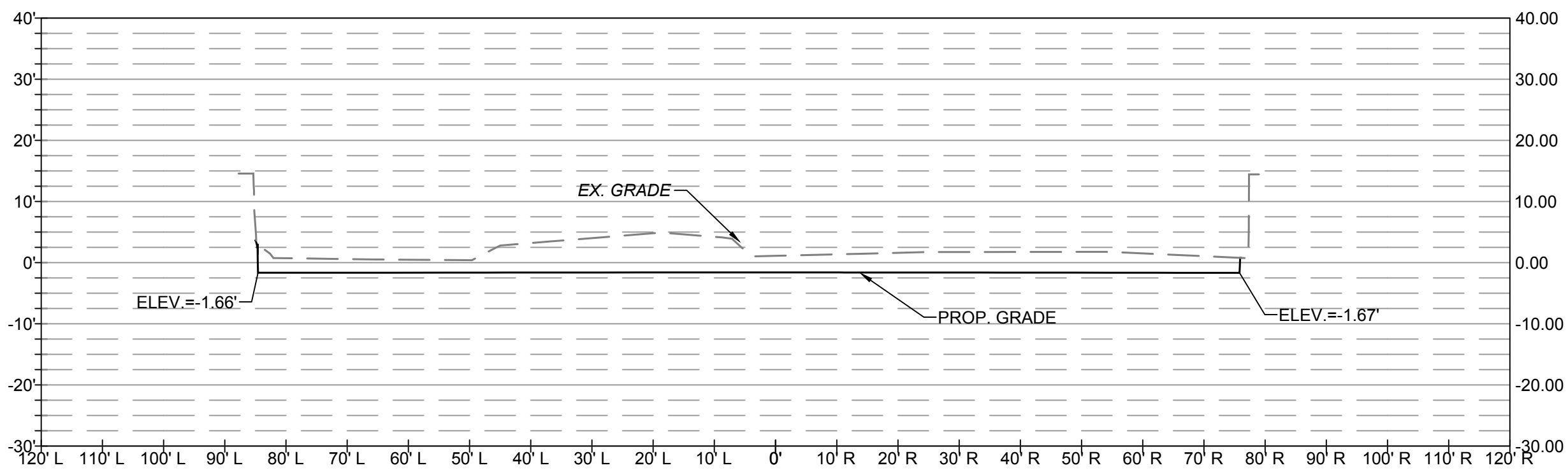
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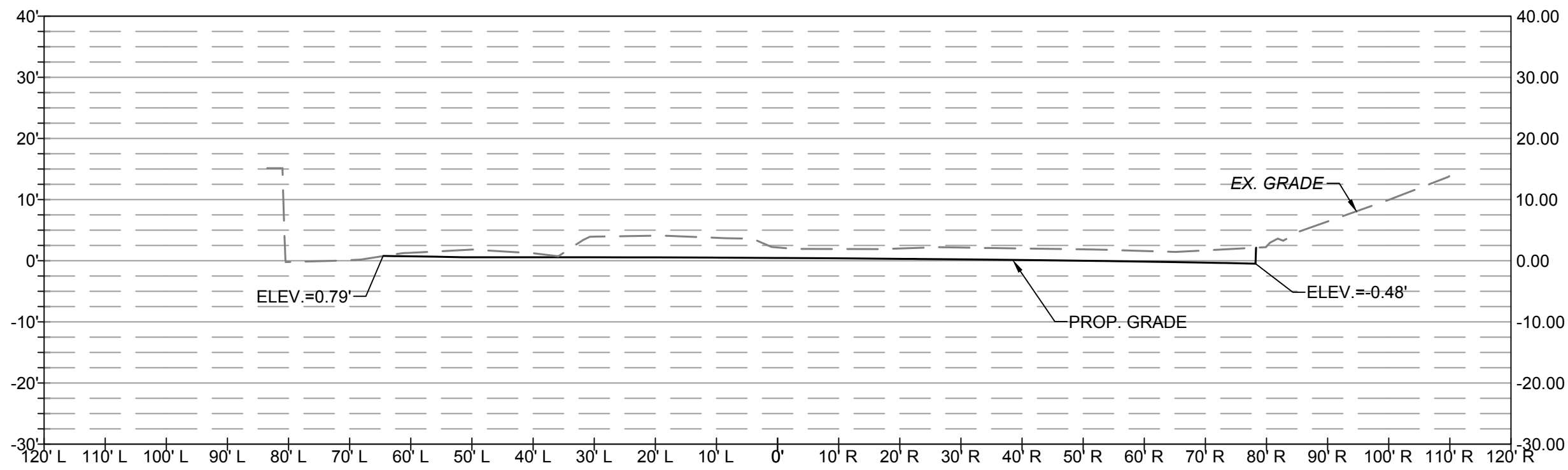
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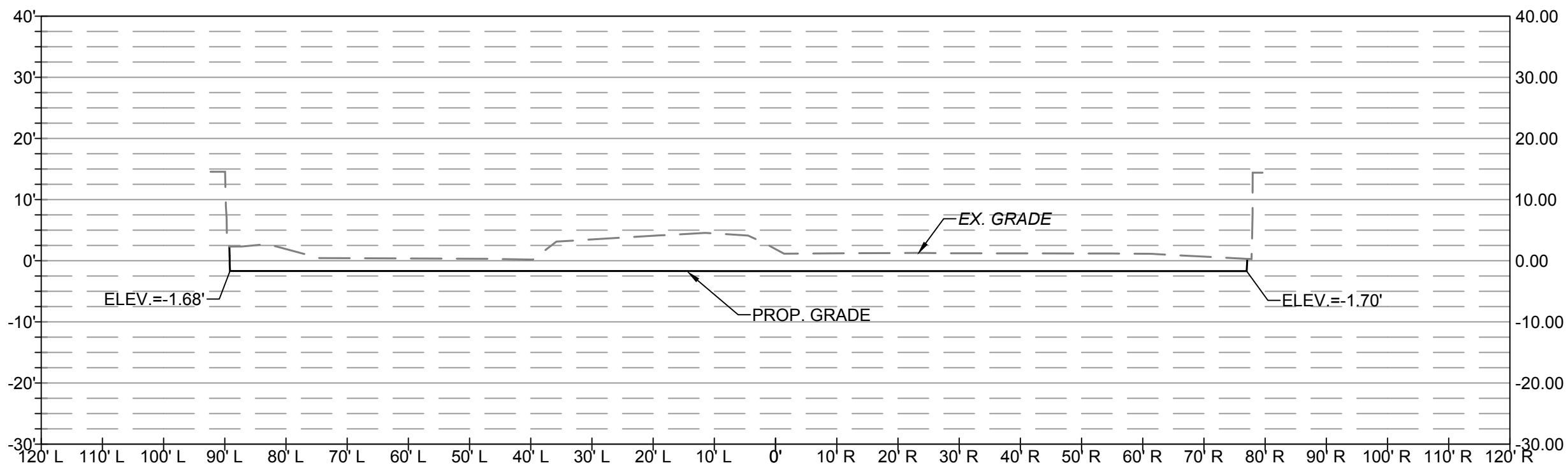
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XS EXCAVATED AREA: 54.8 SF



SECTION @ STA 445+00.00
XS EXCAVATED AREA: 570.8 SF



SECTION @ STA 443+50.00
XS EXCAVATED AREA: 273.9 SF



SECTION @ STA 445+50.00
XS EXCAVATED AREA: 552.9 SF



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SEAL

APPROVALS DATE

<i>Ankur Patel</i>	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
<i>Kamal Taktak</i>	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>[Signature]</i>	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	07/21/20
TRANSPORTATION DIRECTOR	
<i>Michael Gallo</i>	07/21/21
PROJECT MANAGER	

REVISIONS DATE

SITE CROSS-SECTIONS
- FOUR MILE RUN
FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

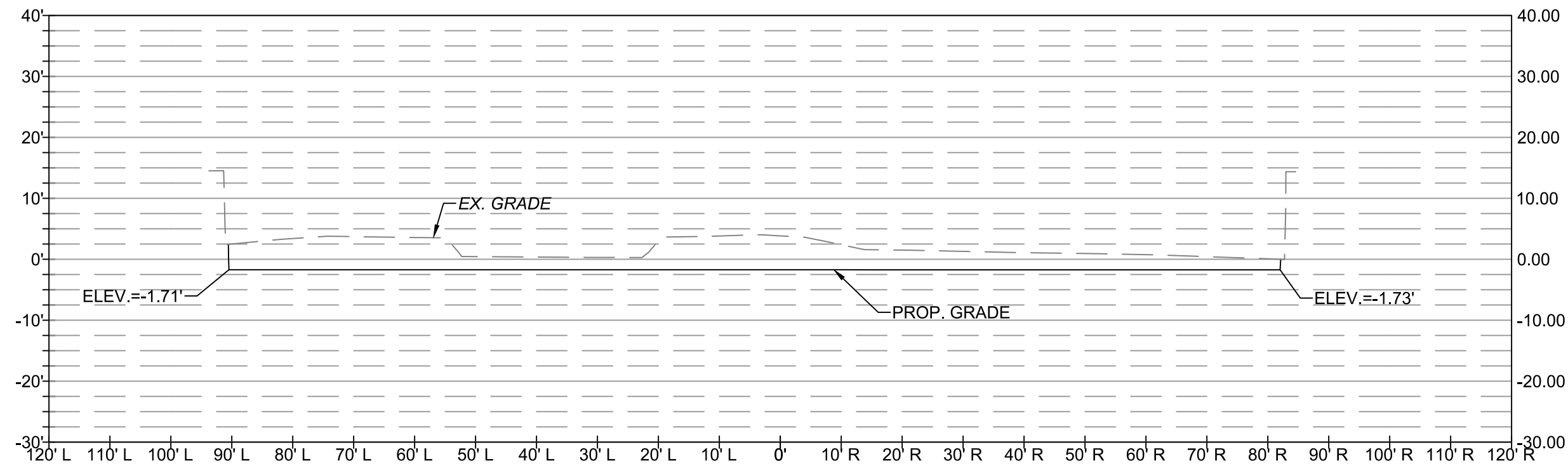
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SHEET 27 of 32

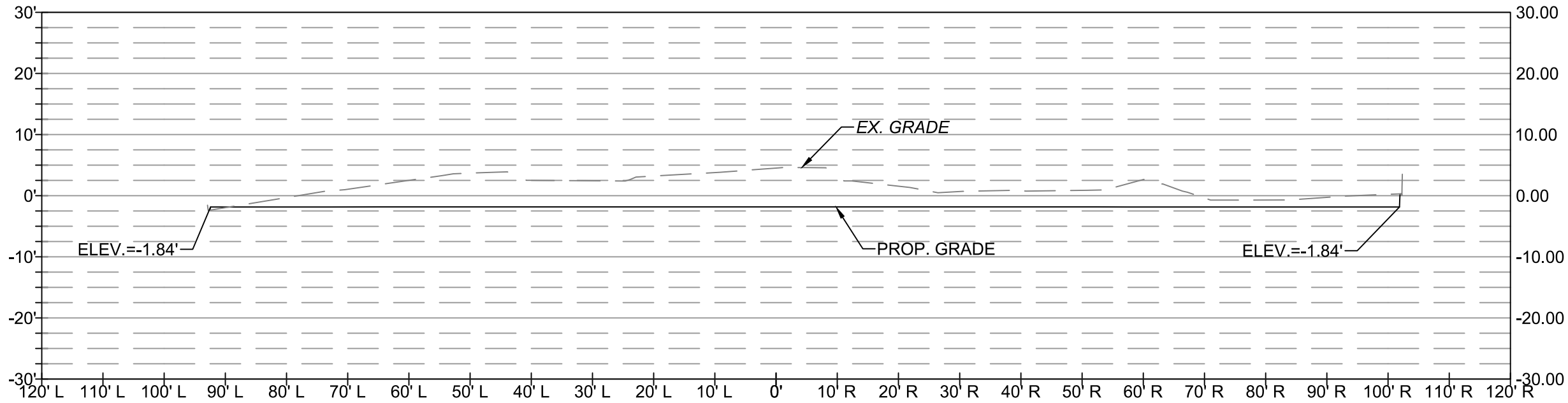
FOUR MILE RUN DREDGE PROJECT

REVISED ON 01/07/2021

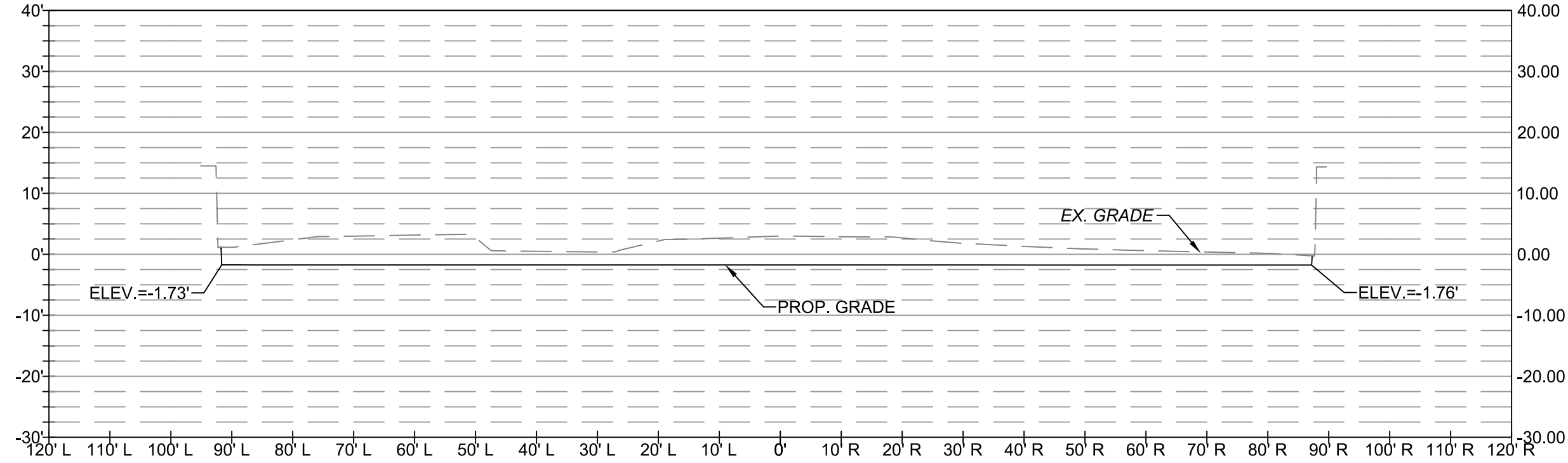
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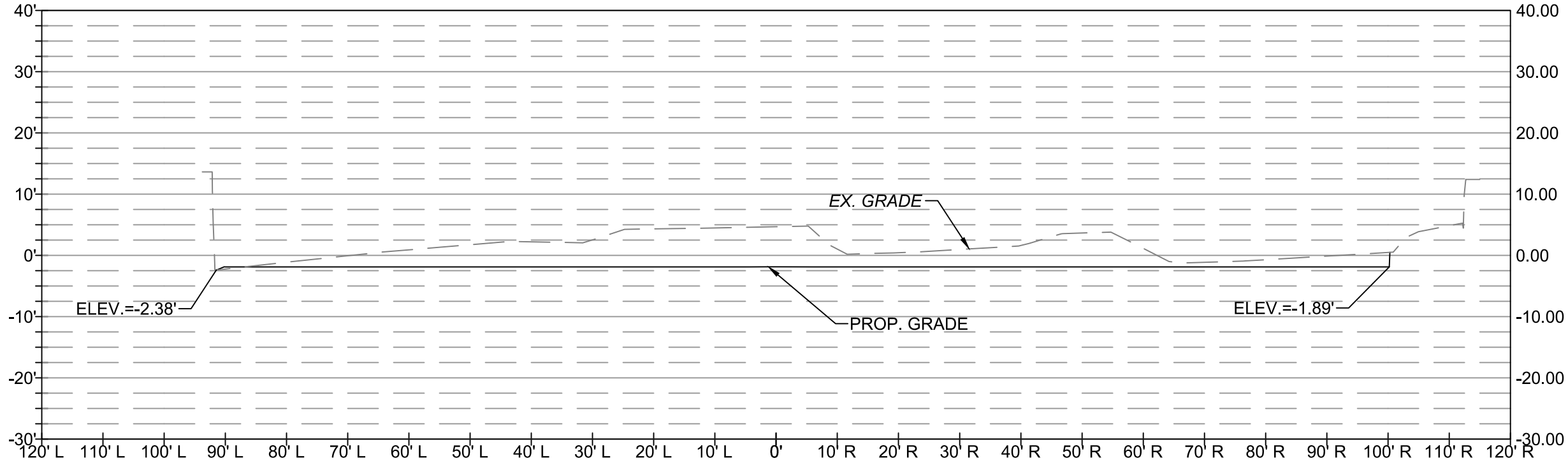
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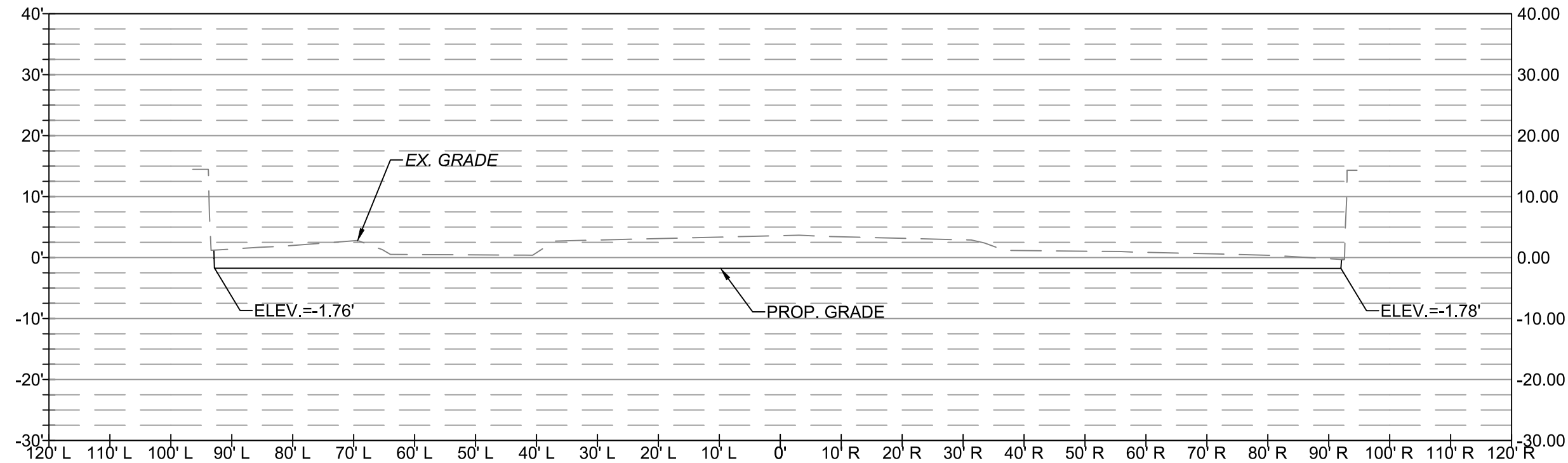
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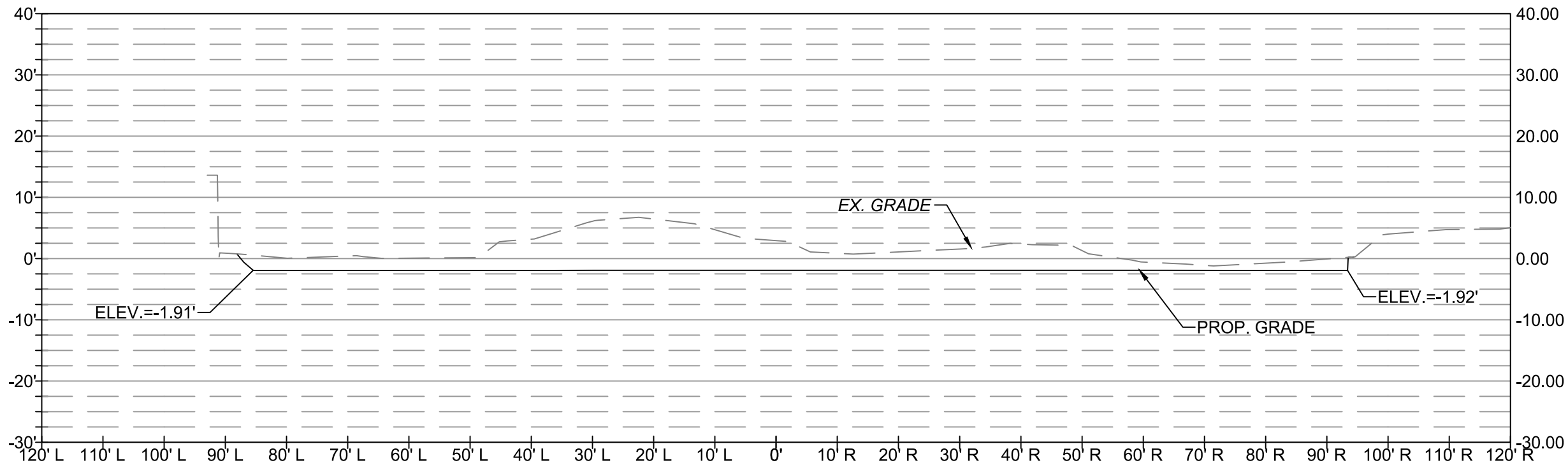
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XS EXCAVATED AREA: 620.6 SF



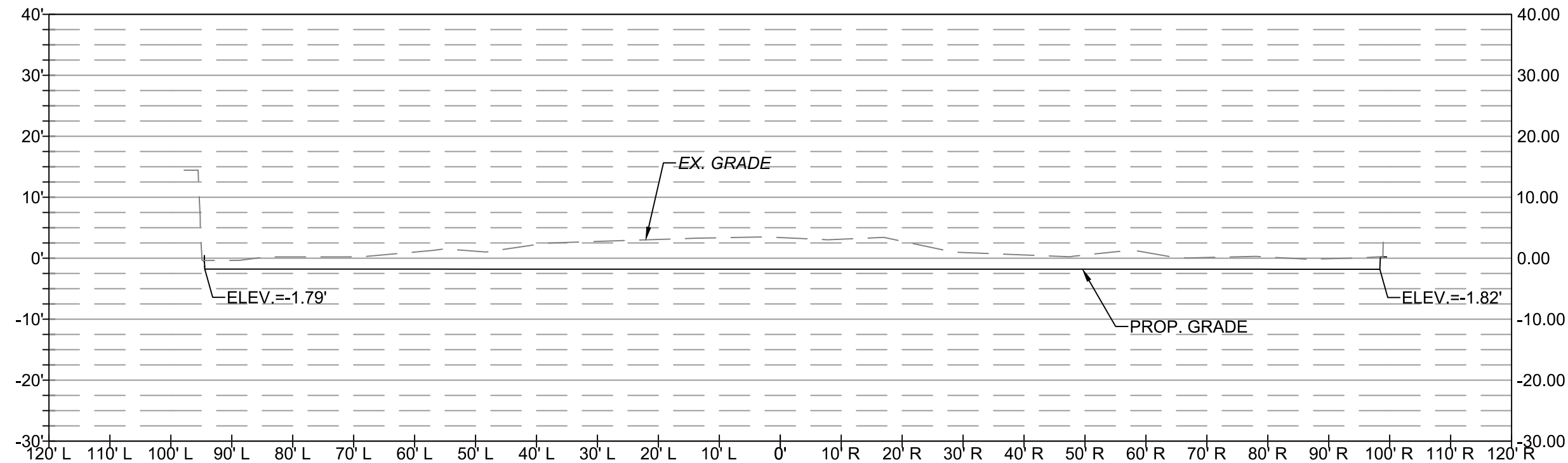
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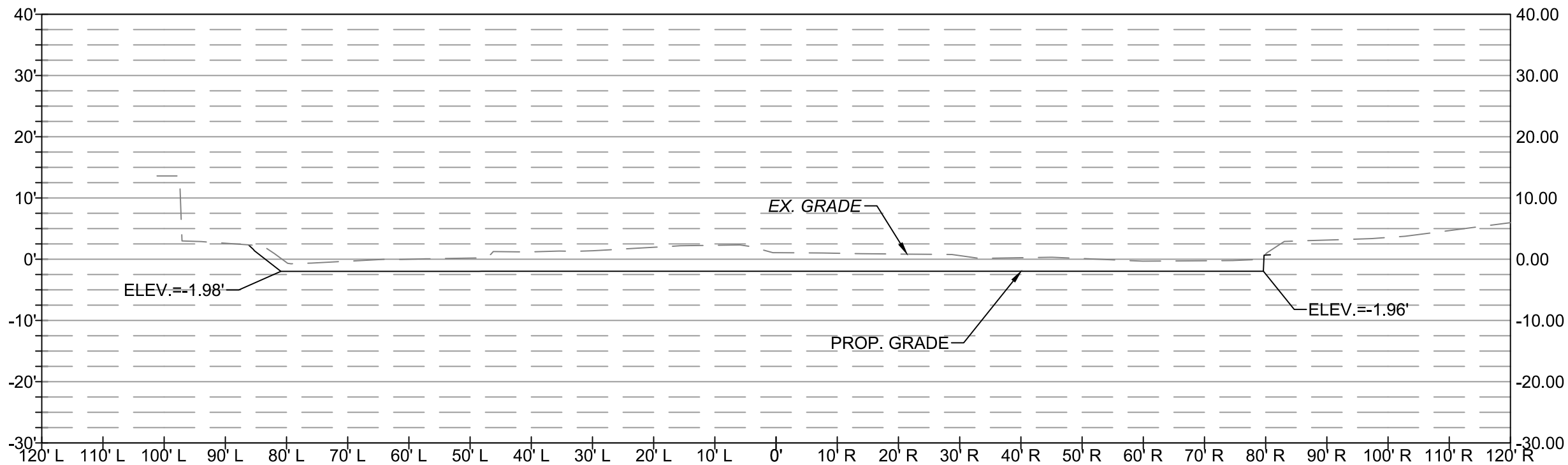
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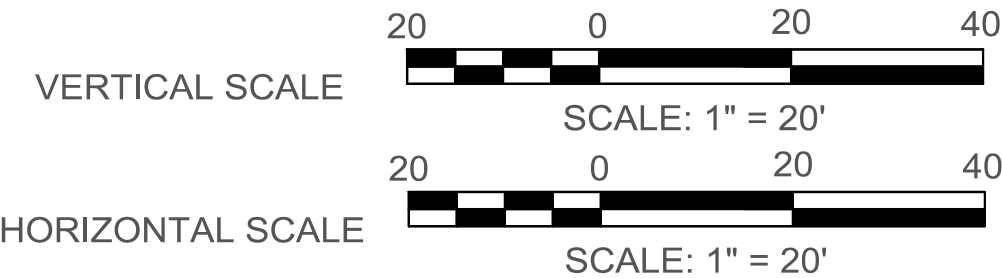
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XS EXCAVATED AREA: 640.9 SF



SECTION @ STA 447+50.00
XS EXCAVATED AREA: 610.2 SF



SECTION @ STA 449+50.00
XS EXCAVATED AREA: 425.2 SF



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APPROVALS DATE

<i>Ankur Patel</i>	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
<i>Kamal Taktak</i>	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Shirley</i>	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	07/21/20
TRANSPORTATION DIRECTOR	
<i>Michael Gallo</i>	07/21/21
PROJECT MANAGER	

REVISIONS DATE

SITE CROSS-SECTIONS
- FOUR MILE RUN

FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

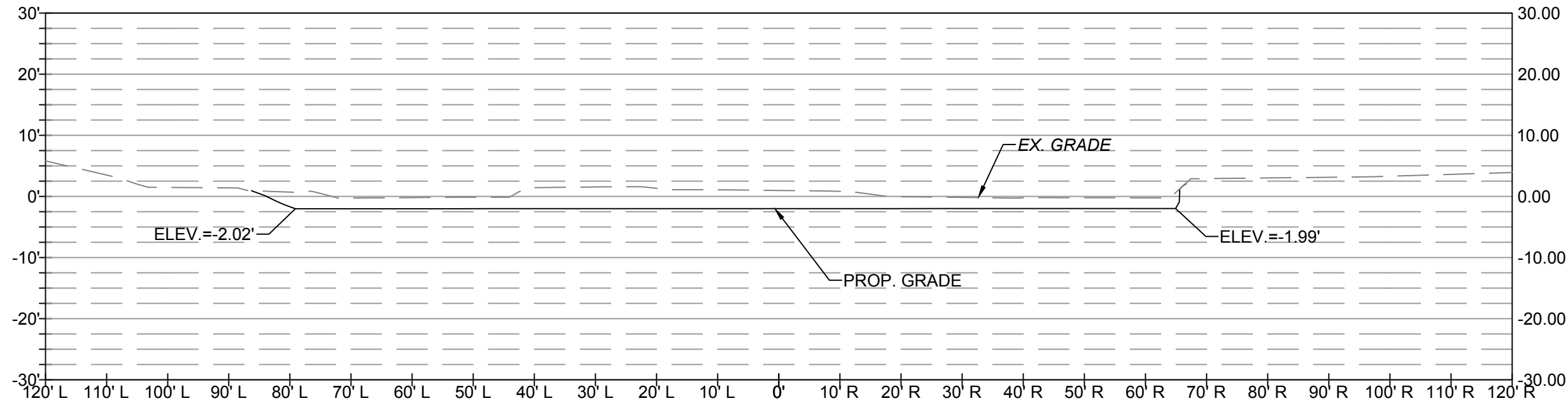
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SHEET 28 of 32

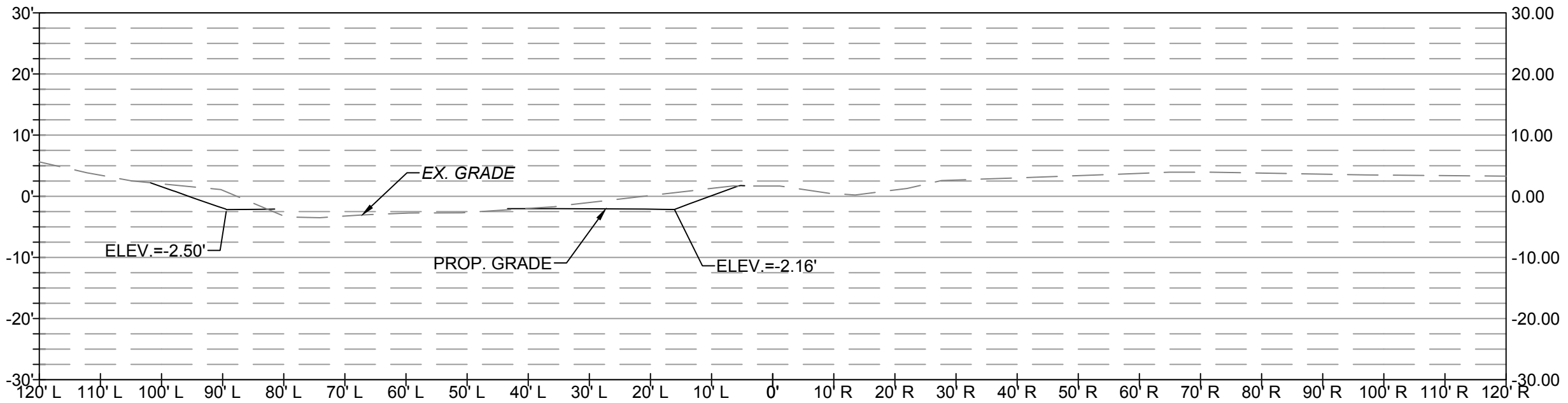
FOUR MILE RUN DREDGE PROJECT

REVISED ON 01/07/2021

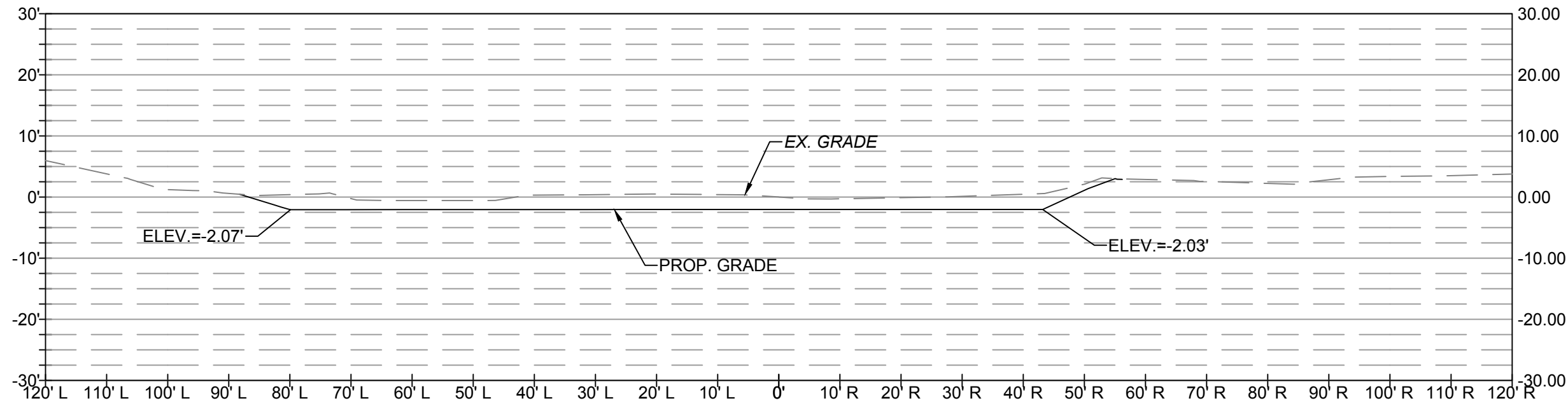
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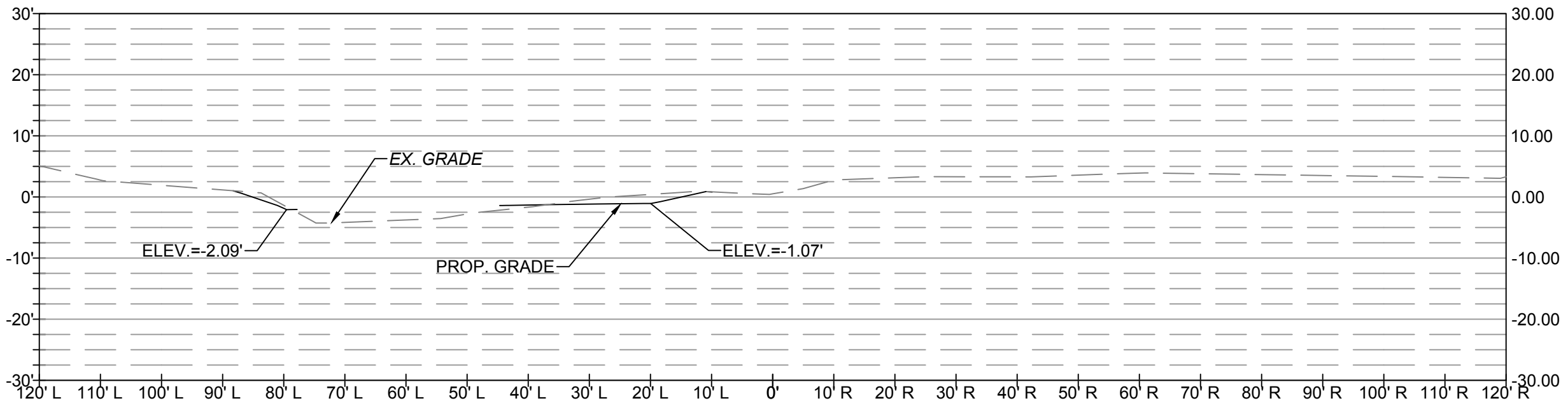
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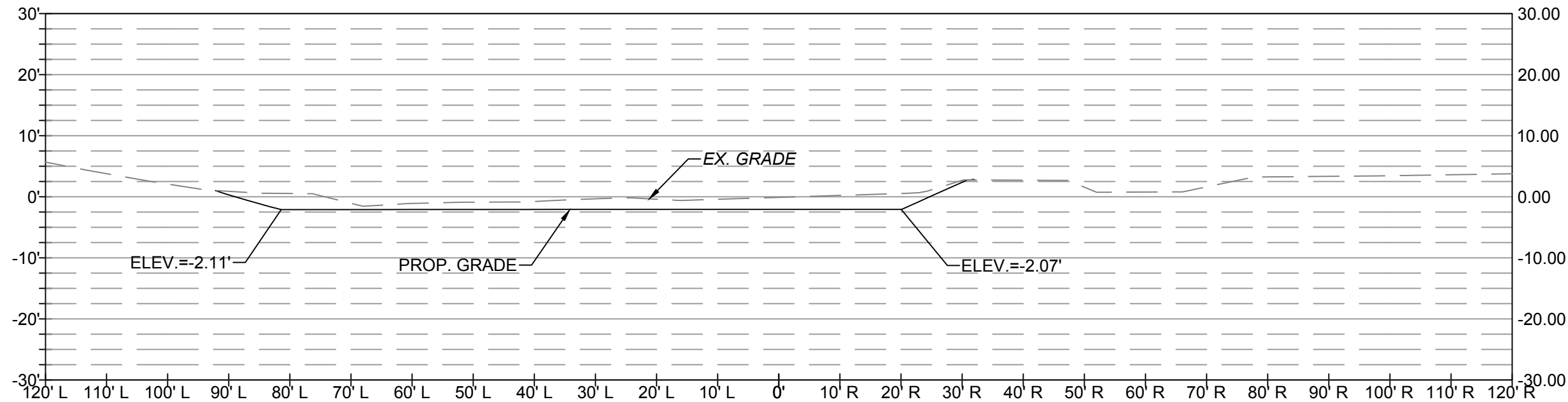
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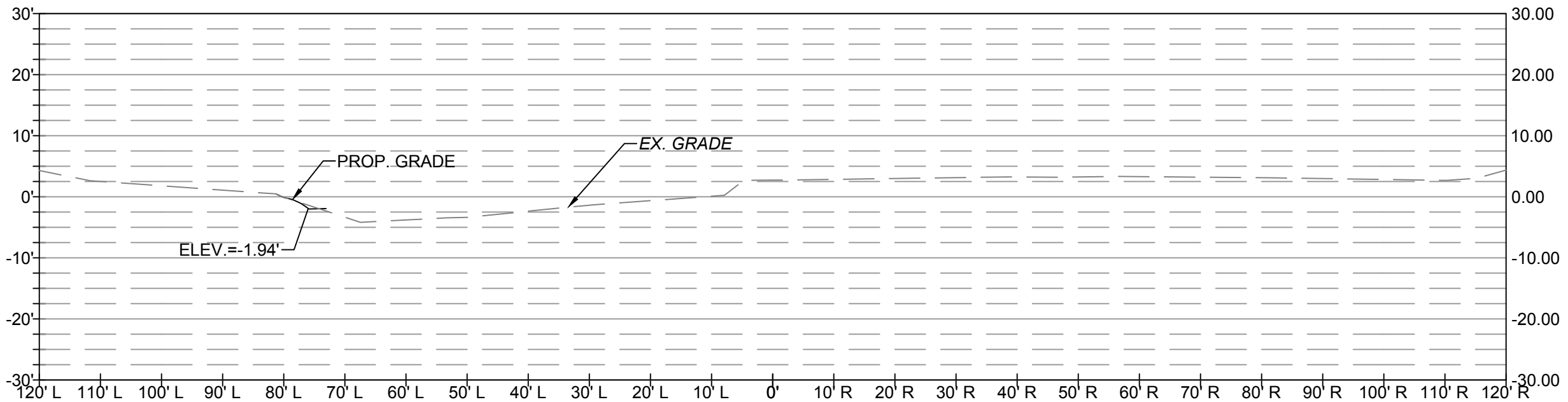
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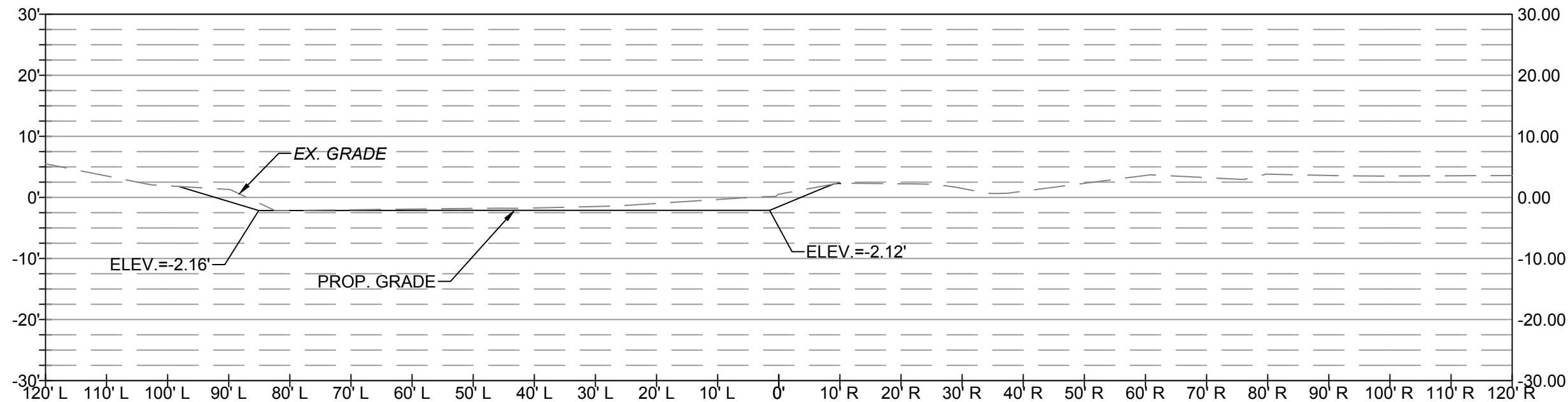
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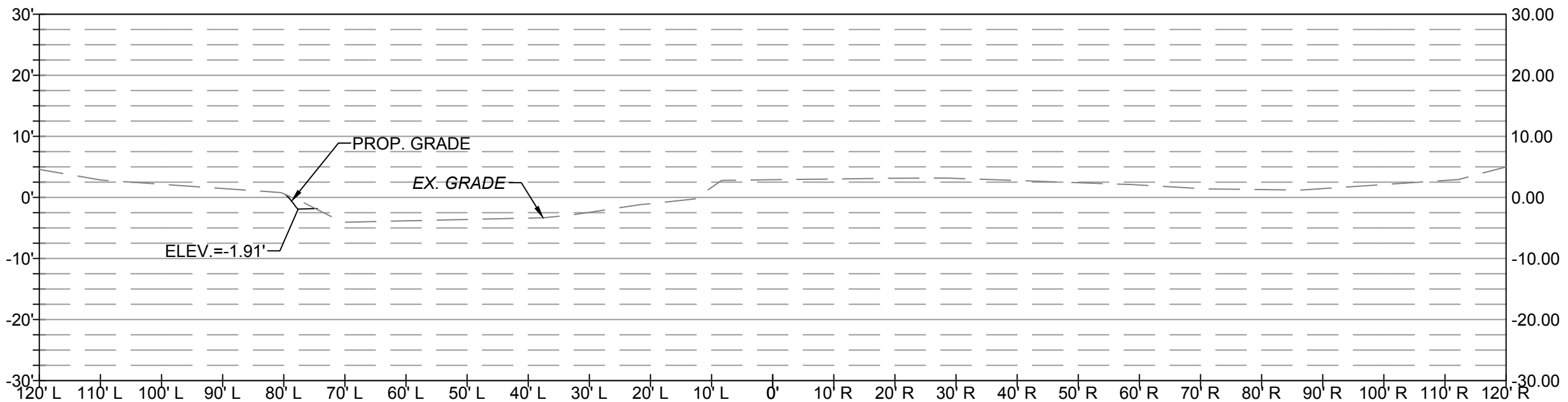
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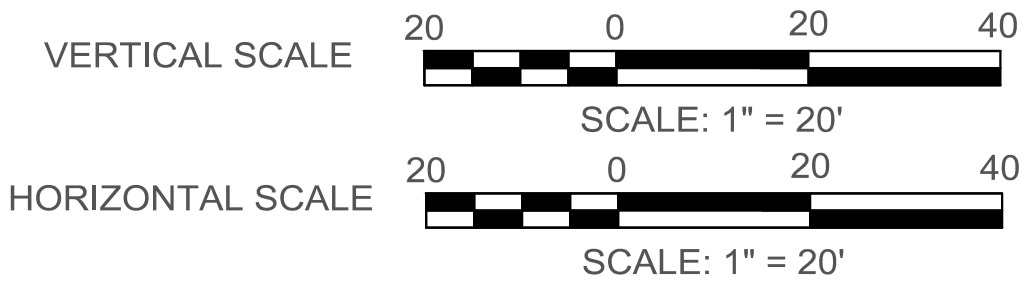
SECTION @ STA 453+00.00
XS EXCAVATED AREA: 1.0 SF



SECTION @ STA 451+50.00
XS EXCAVATED AREA: 84.4 SF



SECTION @ STA 453+50.00
XS EXCAVATED AREA: 3.6 SF



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APPROVALS	DATE
<i>Ankur Patel</i>	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
<i>Kamal Taktak</i>	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Glenn</i>	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	07/21/20
TRANSPORTATION DIRECTOR	
<i>Michael Gallo</i>	07/21/21
PROJECT MANAGER	

REVISIONS	DATE

SITE CROSS-SECTIONS
- FOUR MILE RUN

FOUR MILE RUN DREDGE
PROJECT

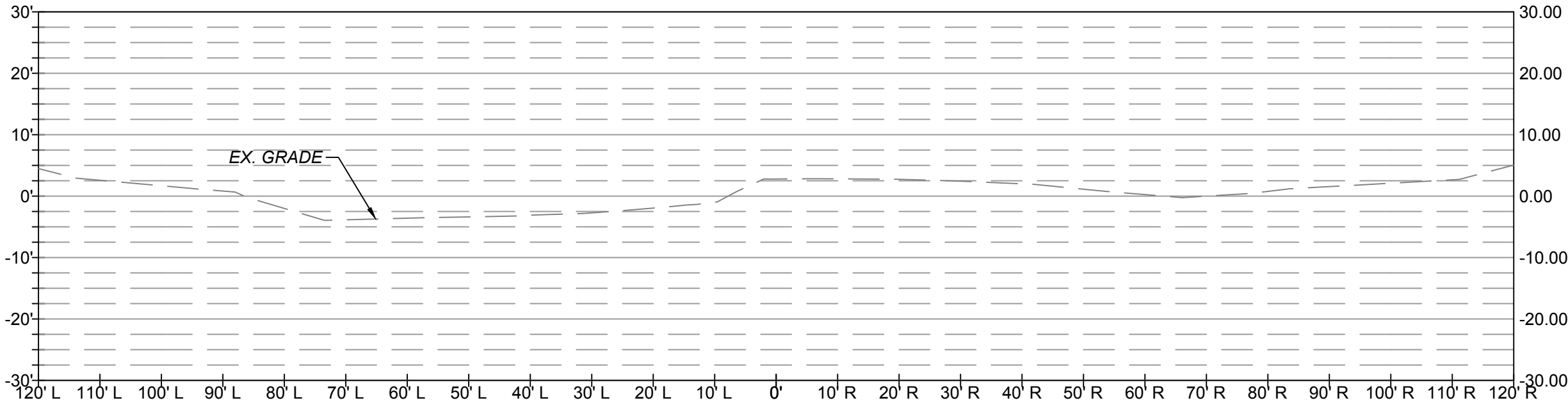
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PLOTTED: AUGUST 23 2021

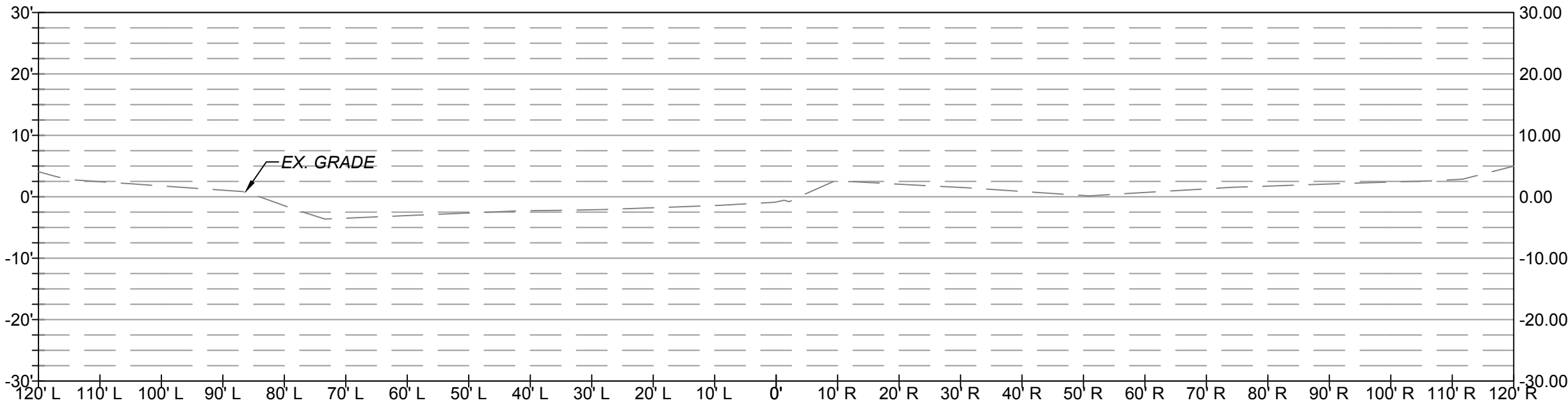
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SHEET 29 of 32

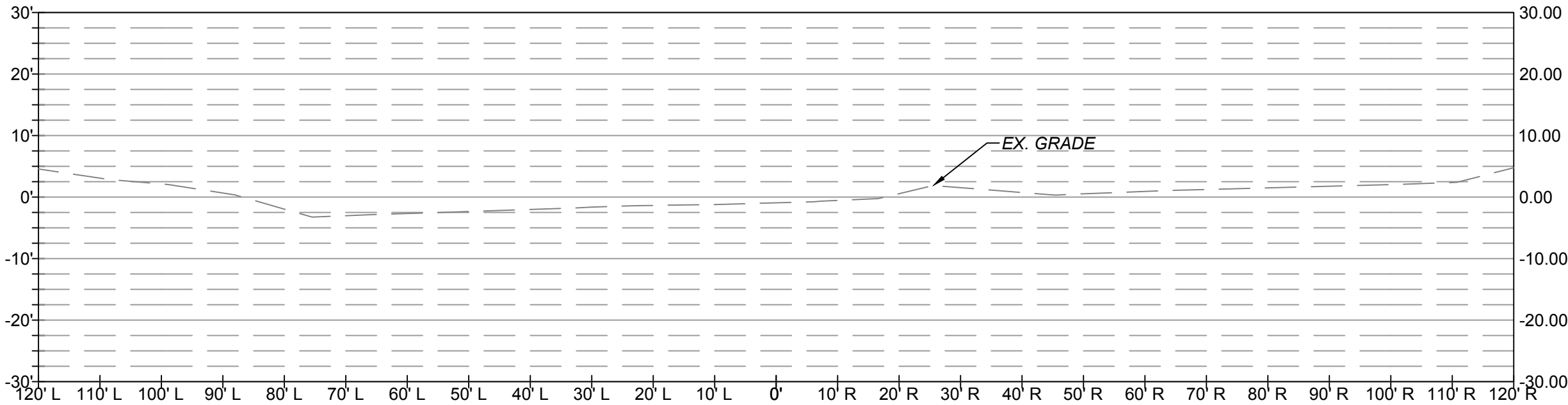
FOUR MILE RUN DREDGE PROJECT



SECTION @ STA 454+00.00
XS EXCAVATED AREA: 0.0 SF



SECTION @ STA 454+50.00
XS EXCAVATED AREA: 0.0 SF



SECTION @ STA 455+00.00
XS EXCAVATED AREA: 0.0 SF



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APPROVALS	DATE
<i>Ankur Patel</i>	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
<i>Kamal Takak</i>	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>[Signature]</i>	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	07/21/20
TRANSPORTATION DIRECTOR	
<i>Michael Gallo</i>	07/21/21
PROJECT MANAGER	

REVISIONS	DATE

SITE CROSS-SECTIONS
- FOUR MILE RUN

FOUR MILE RUN DREDGE
PROJECT

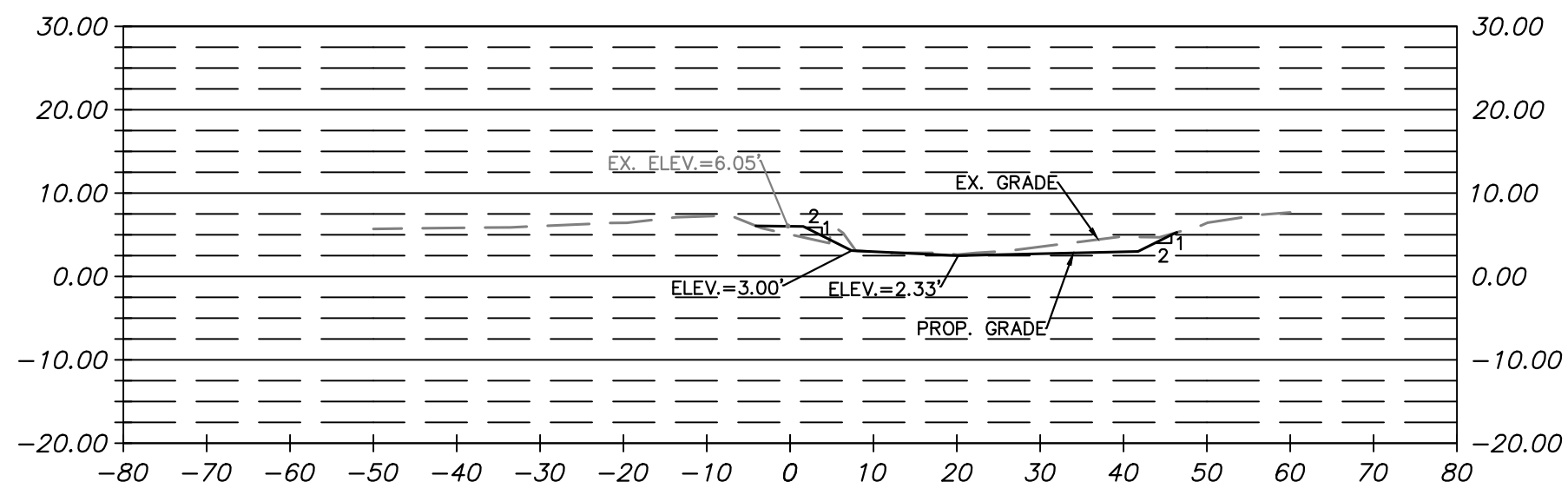
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DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

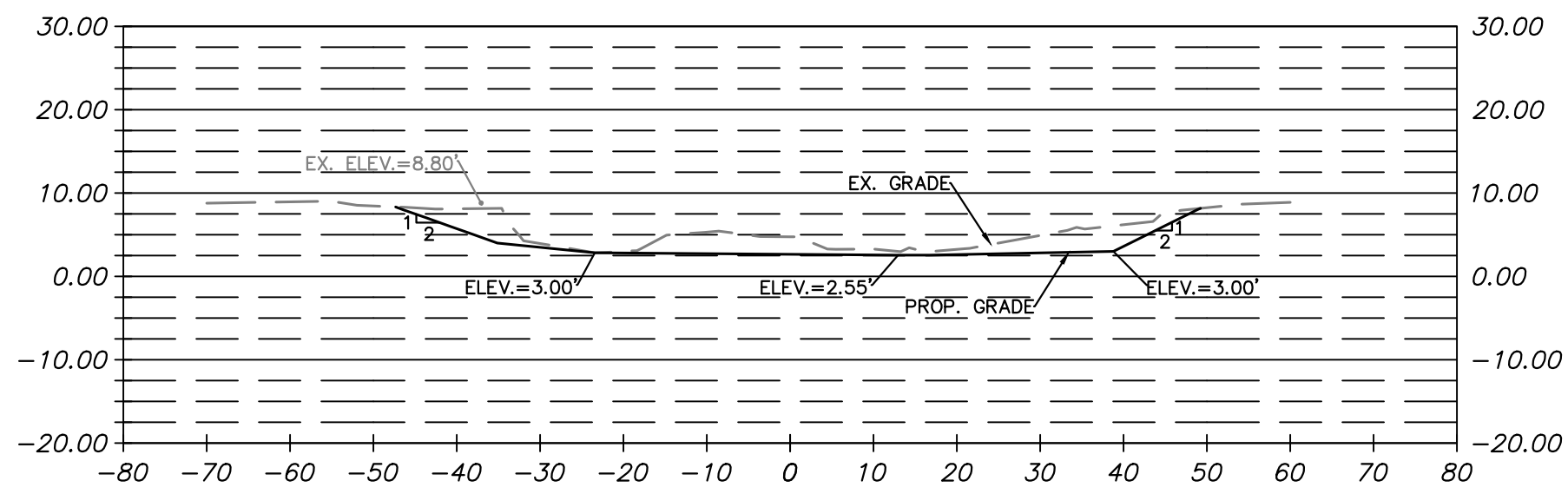
SCALE: As Noted

REVISED ON 01/07/2021

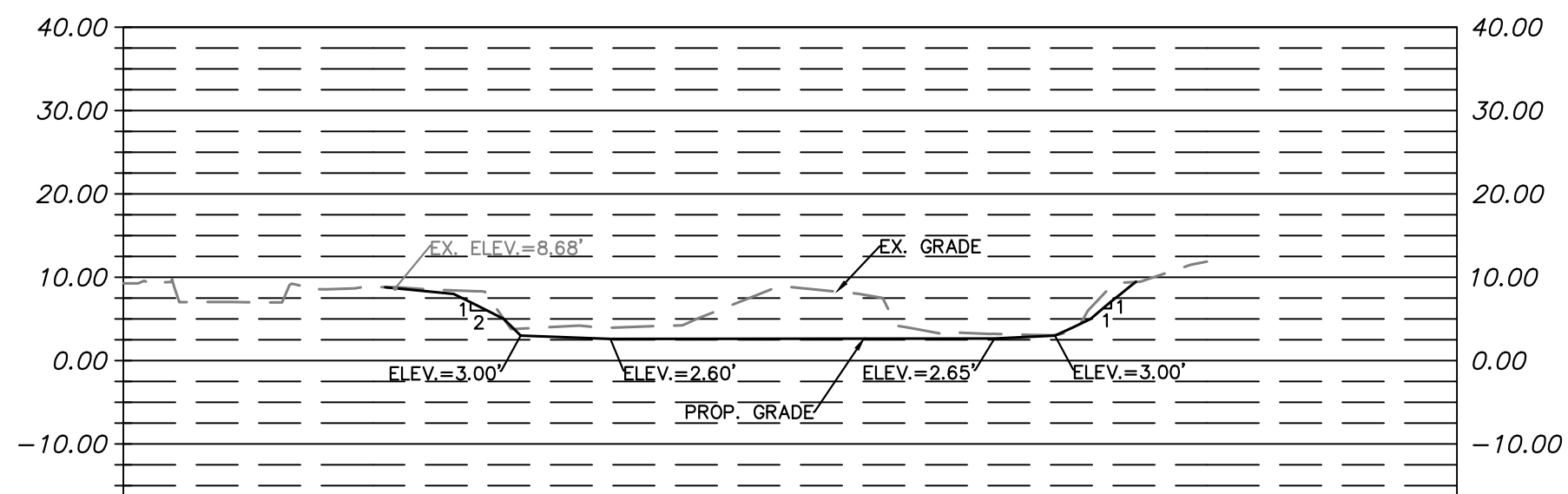
FILENAME: SITE CROSS-SECTIONS_LONG BRANCH.DWG PATH: \\AD.BKK.COM\FS\CLOUD\PROJECTS\2019\19160_ARLSTREAM\TASK 2-4NR DREDGE\CADD\PLAN PLOTTED BY: HCHN



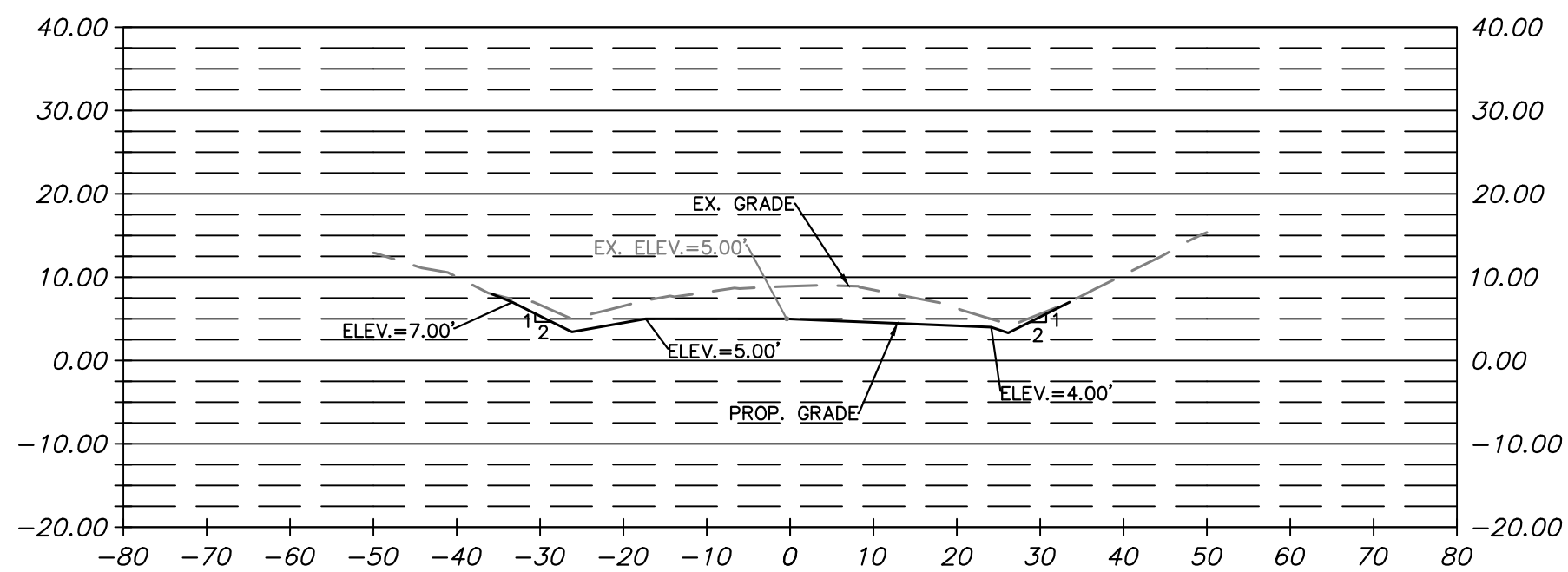
SECTION @ STA 10+11.28
XS EXCAVATED AREA: 21.9 SF



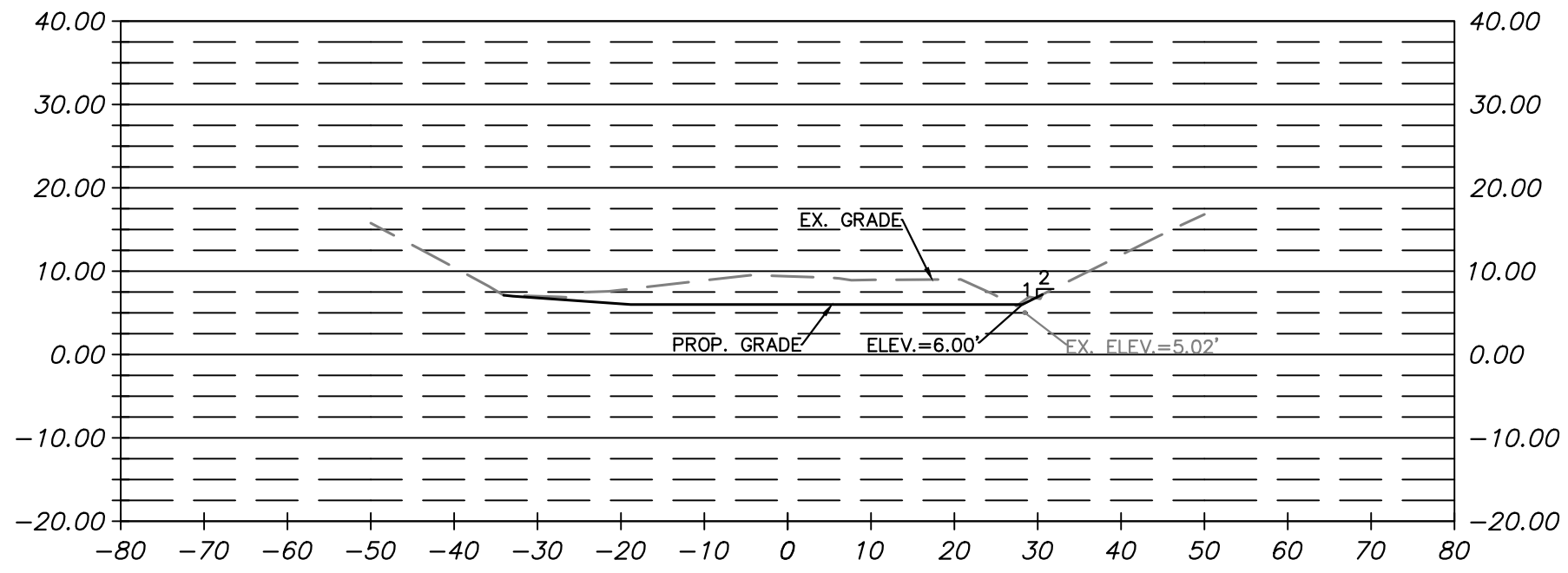
SECTION @ STA 10+35.91
XS EXCAVATED AREA: 143.3 SF



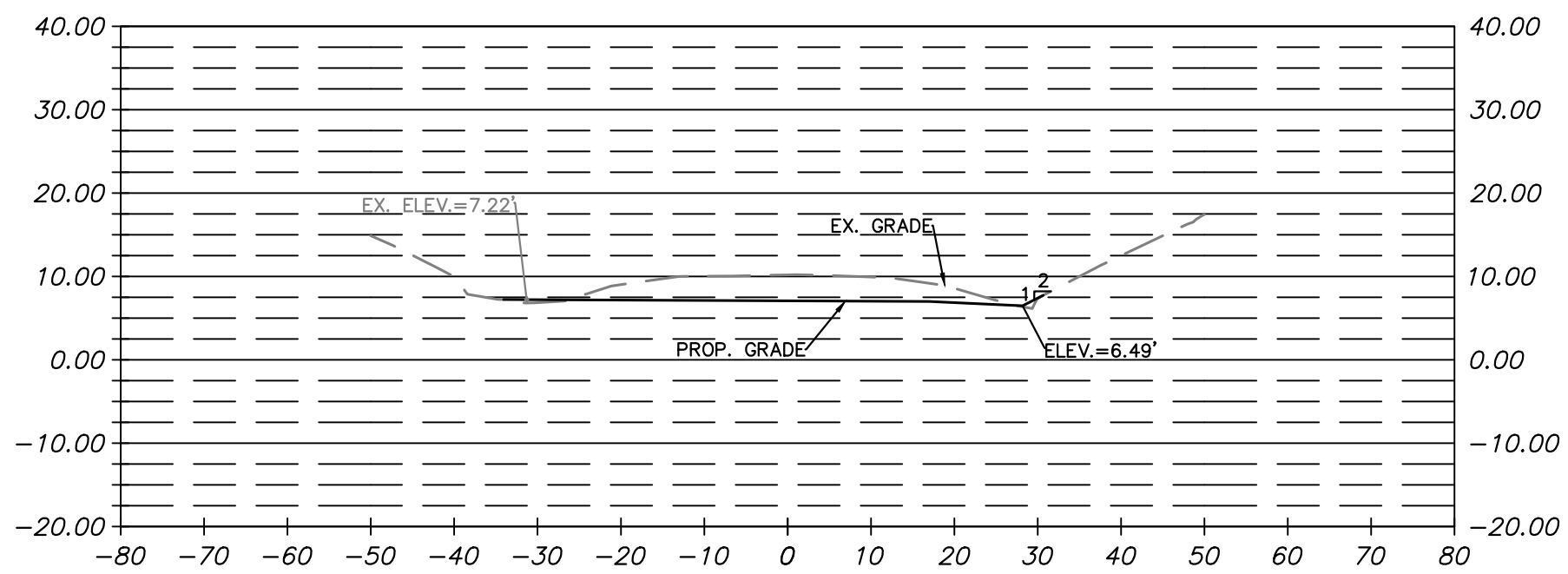
SECTION @ STA 10+81.47
XS EXCAVATED AREA: 176.7 SF



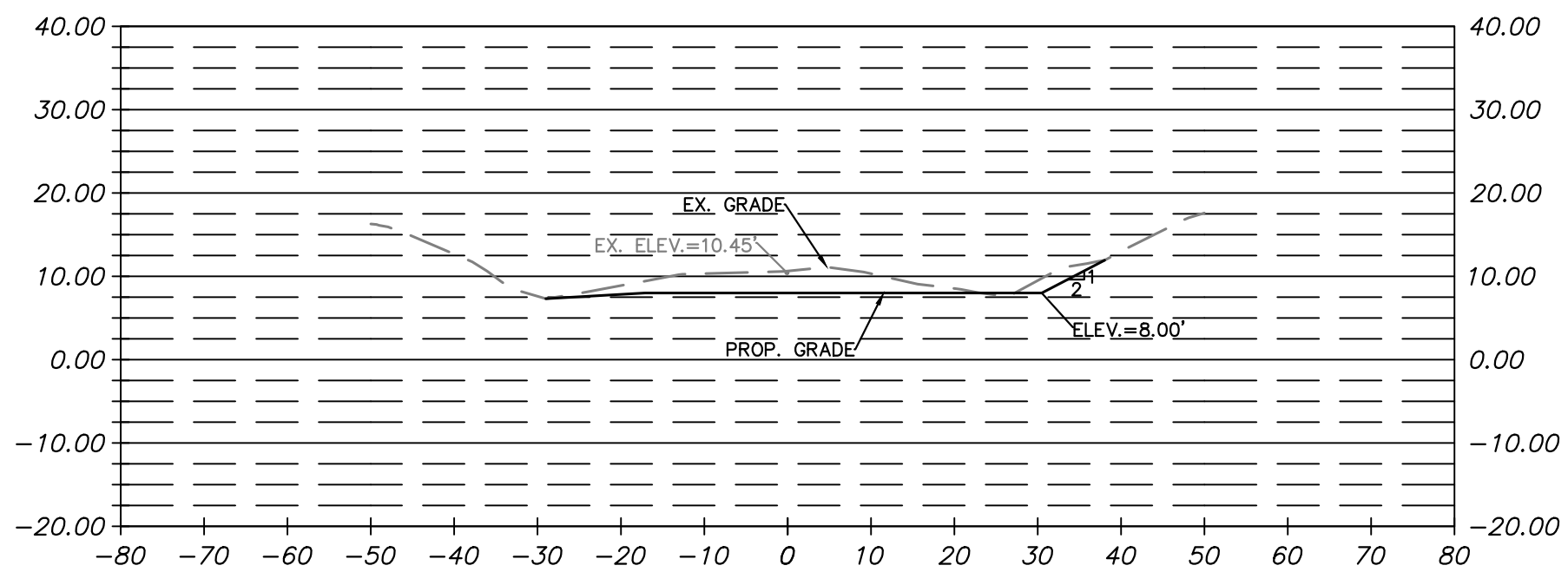
SECTION @ STA 10+94.12
XS EXCAVATED AREA: 166.6 SF



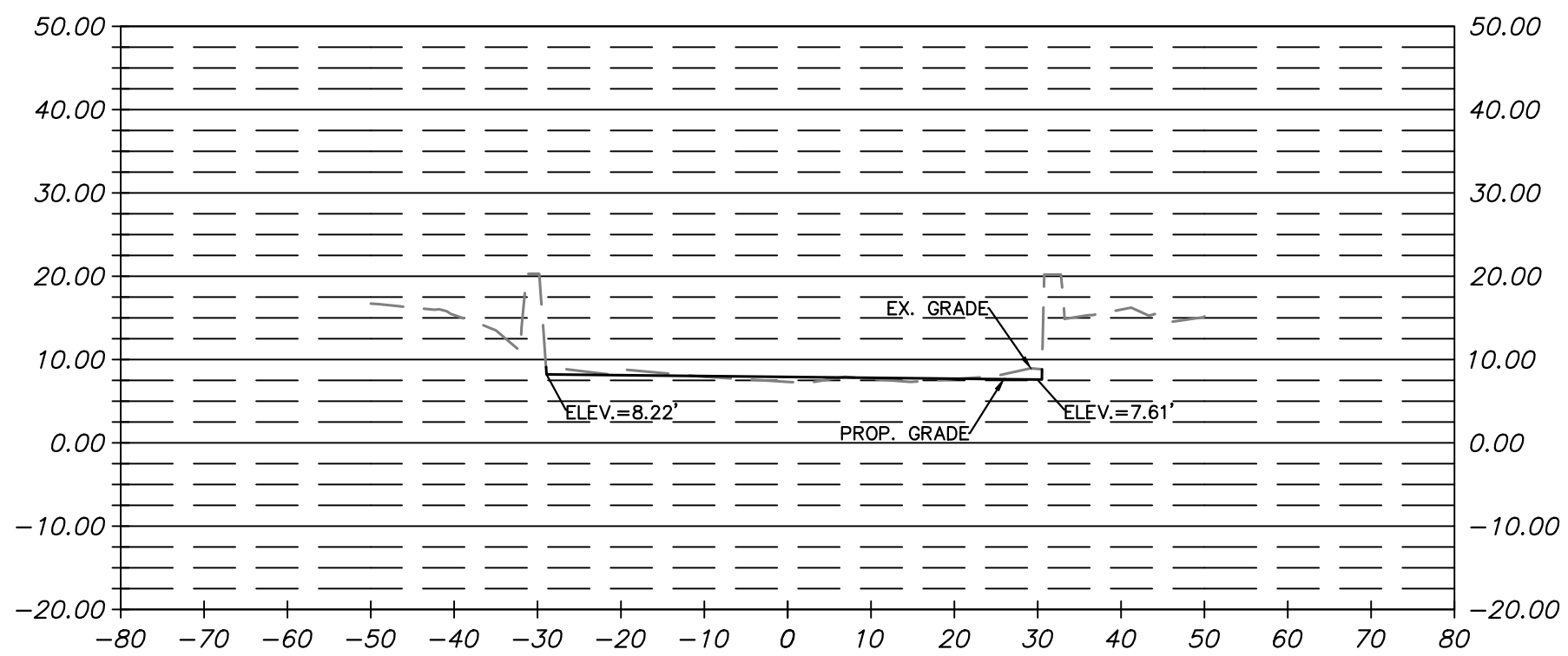
SECTION @ STA 11+49.16
XS EXCAVATED AREA: 139.2 SF



SECTION @ STA 12+05.08
XS EXCAVATED AREA: 119.5 SF



SECTION @ STA 12+85.00
XS EXCAVATED AREA: 99.8 SF



SECTION @ STA 13+19.65
XS EXCAVATED AREA: 3.6 SF



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VIRGINIA

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APPROVALS DATE

<i>Ankur Patel</i>	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
<i>Kamal Taktak</i>	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Michael J. Leach</i>	07.23.2021
WATER, SEWER, STREETS BUREAU CHIEF	
<i>Dennis M. Leach</i>	07/21/20
TRANSPORTATION DIRECTOR	
<i>Michael Gallo</i>	07/21/21
PROJECT MANAGER	

REVISIONS DATE

SITE CROSS-SECTIONS
- LONG BRANCH

FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

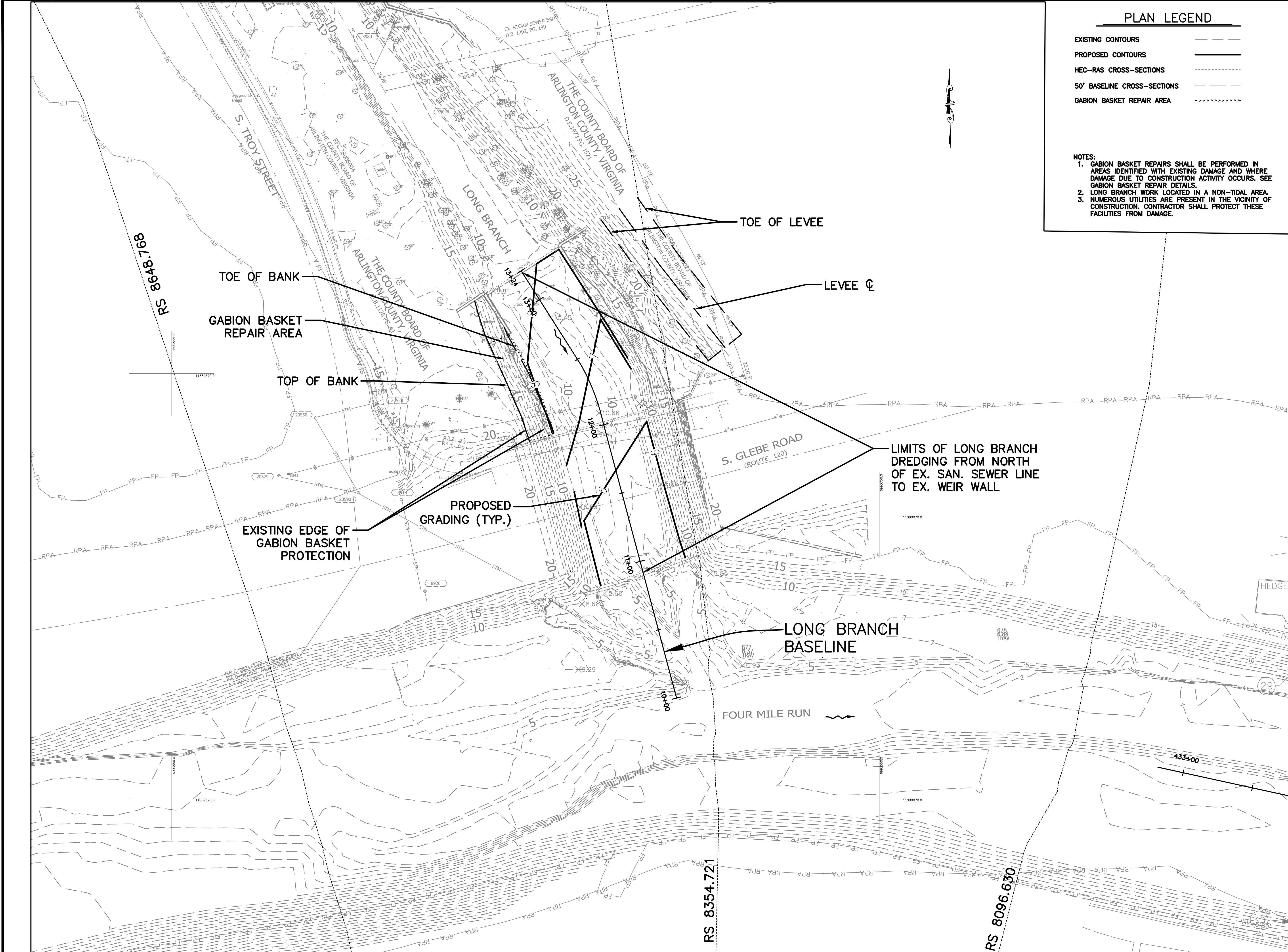
SCALE: As Noted

SHEET 31 of 32

FOUR MILE RUN DREDGE PROJECT

REVISED ON 01/07/2021

FILENAME: LONG BRANCH DREDGING.DWG PATH: \\AD.BKK.COM\SYSTEMS\CLOUD\PROJECTS\2019\19160_ARLSTREAM\TASK 2-4MP DREDGE\CADD\PLAN PLOTTED BY: HCHEN



PLAN LEGEND

- EXISTING CONTOURS - - - - -
- PROPOSED CONTOURS _____
- HEC-RAS CROSS-SECTIONS - - - - -
- 50' BASELINE CROSS-SECTIONS _____
- GABION BASKET REPAIR AREA - - - - -

- NOTES:
1. GABION BASKET REPAIRS SHALL BE PERFORMED IN AREAS IDENTIFIED WITH EXISTING DAMAGE AND WHERE DAMAGE DUE TO CONSTRUCTION ACTIVITY OCCURS. SEE GABION BASKET REPAIR DETAILS.
 2. LONG BRANCH WORK LOCATED IN A NON-TIDAL AREA.
 3. NUMEROUS UTILITIES ARE PRESENT IN THE VICINITY OF CONSTRUCTION. CONTRACTOR SHALL PROTECT THESE FACILITIES FROM DAMAGE.

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SEAL



APPROVALS DATE

<i>Arjun Patel</i>	07/19/21
DESIGN TEAM ENGINEER SUPERVISOR	
<i>Kamal Taktak</i>	8.18.21
CONSTRUCTION MANAGEMENT SUPERVISOR	
<i>Michael Gallo</i>	07.23.2021
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<i>Dennis M. Leach</i>	07/21/20
TRANSPORTATION DIRECTOR	
<i>Michael Gallo</i>	07/21/21
PROJECT MANAGER	

REVISIONS DATE

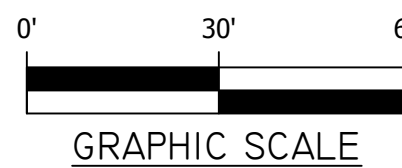
LONG BRANCH DREDGING

FOUR MILE RUN DREDGE
PROJECT

DESIGNED: EC
DRAWN: EC
CHECKED: BMF

PLOTTED: AUGUST 23 2021

SCALE: Hor.: 1"=30'



SHEET 32 of 32

FOUR MILE RUN DREDGE PROJECT