

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION GROSVENOR IMPROVEMENTS

MD 355 (ROCKVILLE PIKE) FROM
POOKS HILL RD TO STRATHMORE AVE
CIP PROJECT NO. 501532
PS&E SUBMITTAL, NOVEMBER 2022

OWNER'S CERTIFICATION

I HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

DATE: _____
TIM CUPPLES, PE, DBIA
CHIEF, DIVISION OF
TRANSPORTATION ENGINEERING

DESIGN CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES EXECUTIVE REGULATIONS 5-90, 7-02AM AND 36-90, AND MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION "STORM DRAIN DESIGN CRITERIA" DATED AUGUST 1988.

DATE: 10-31-2022
DAVID HATHORNE MARIHUGH III, P.E.
MD. REGISTRATION NO. 46328

CERTIFICATION OF THE QUANTITIES

I HEREBY CERTIFY THAT THE ESTIMATED TOTAL AMOUNT OF EXCAVATION AND FILL AS SHOWN ON THESE PLANS HAS BEEN COMPUTED TO 404 CUBIC YARDS OF EXCAVATION, 1,113 CUBIC YARDS OF FILL AND THE TOTAL AREA TO BE DISTURBED AS SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE 57,735 SQUARE FEET.

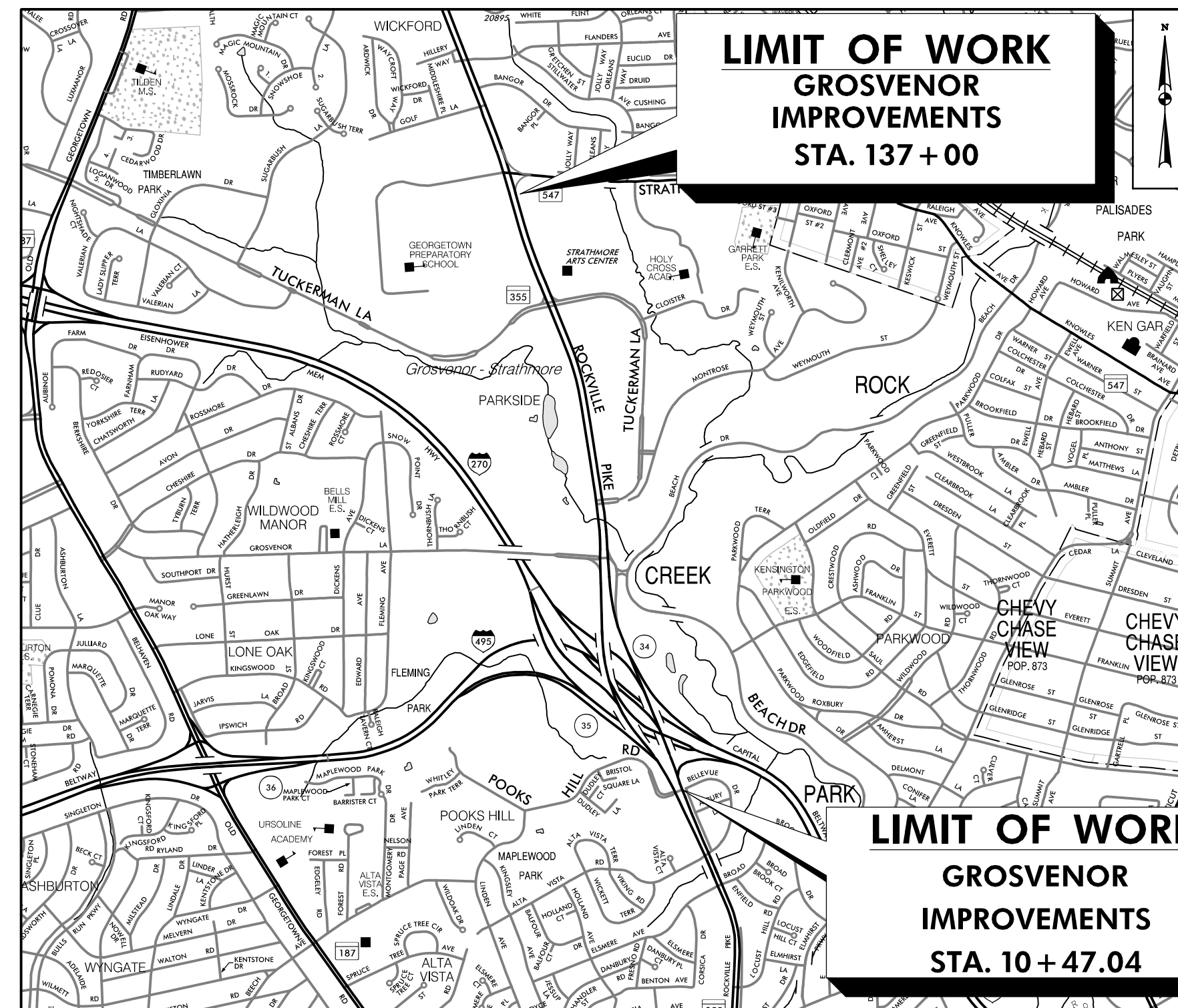
DATE: 10-31-2022
DAVID HATHORNE MARIHUGH III, P.E.
MD. REGISTRATION NO. 46328

The following standards are required for this project:

- MD 374.31 - STANDARD C O G INLETS 5', 10', 15' & 20'
- MD 374.68 - PRECAST OR CAST-IN-PLACE COG / COS OPENING FOR 8' CURB 5' OR 10' ONLY
- MD 381.01 - STANDARD YARD INLET
- MD 605.03 - TYPE C TRAFFIC BARRIER END TREATMENT
- MD 605.10 - TYPE K TRAFFIC BARRIER END TREATMENT OPTION I ANCHORAGE
- MD 620.02 - STANDARD TYPES A & B CONCRETE CURB AND COMBINATION CONCRETE CURB AND GUTTER
- MD 640.02 - STANDARD CURB OPENING DETAILS FOR COMBINATION CURB & GUTTER
- MD 645.01 - STANDARD MONOLITHIC CONCRETE MEDIAN TYPE 'A'
- MD 655.11 - SIDEWALK RAMPS PERPENDICULAR
- MD 655.12 - SIDEWALK RAMPS PARALLEL
- MD 655.13 - SIDEWALK RAMPS COMBINATION
- MD 655.21 - CUT-THROUGH MEDIAN AND ISLAND OPENINGS
- MD 655.40 - DETECTABLE WARNING SURFACES
- MC 100.01 - COMBINATION CONCRETE CURB AND GUTTER TYPE A
- MC 101.01 - COMBINATION CONCRETE CURB AND GUTTER TYPE C

For all standards referred to on the plans the contractor must go to the MDOT SHA Book of Standards or Montgomery County design standards which will have the most current version. The Book of Standards can be accessed at:

<http://apps.roads.maryland.gov/businesswithsha/bizstdsSpecs/desManualStdPub/publicationonline/ghd/bookstd/index.asp>
<https://www.montgomerycountymd.gov/dot-dte/common/standards.html>



VICINITY MAP
SCALE: 1" = 1500'

LENGTH OF PROJECT:
MD 355 = 1.50 miles

MISS UTILITY

THE CONTRACTOR SHALL CALL "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF WORK. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL UNDERGROUND UTILITIES IN THE AREA OF PROPOSED WORK ARE LOCATED PRIOR TO COMMENCING CONSTRUCTION WORK. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH REQUIREMENTS OF CHAPTER 36A OF THE MONTGOMERY COUNTY CODE.

THE CONTRACTOR IS ALSO RESPONSIBLE FOR LOCATING ALL PRIVATE UTILITIES (NOT LOCATED BY MISS UTILITY) WITHIN HOA PROPERTY AT THEIR EXPENSE. ALL UTILITIES SHOWN ON THE PLANS ARE PROVIDED FOR INFORMATION ONLY AND SHALL BE CONSIDERED APPROXIMATE. HOA SHALL NOT BE RESPONSIBLE FOR LOCATING UNDERGROUND UTILITIES. ANY UTILITIES OR OTHER UNDERGROUND FACILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S SOLE EXPENSE.

RELATED REQUIRED PERMITS					
IT IS THE RESPONSIBILITY OF PERMITEE/OWNER OF THIS SITE TO OBTAIN ALL REQUIRED PERMITS PRIOR TO ISSUANCE OF APPROVED SEDIMENT CONTROL PERMIT					
TYPE OF PERMIT	REQD	NOT REQD	PERMIT NO.	EXPIRATION DATE	WORK RESTRICTION DATES
MCDPS SEDIMENT CONTROL	X		286521		
MCDPS Floodplain District	X		382566		
WATERWAY/WETLAND(S)		X			
a. Corps of Engineers		X	202161206		
b. MDE	X				
c. MDE Water Certification		X			
MDE Dam Safety		X			
DNR Roadside Tree Care Permit		X		Approval Date	
BPS Roadside Tree Protection Plan		X		Approval Date	
N.P.D.E.S. NOTICE OF INTENT	X				DATE FILED
FEMA LOMAR (Required Post Construction)		X			
SHA Access Permit	X		19APM0013XX		
M-NCPPC Parks Permit	X				

DESIGN TRAFFIC DATA

ROADWAY	MD 355
CONTROLS / YEARS	2016
AVG. ANN. DAILY TRAFFIC (A.A.D.T.)	55,120
DESIGN HOURLY VOLUME (D.H.V.)	
DIRECTIONAL DISTRIBUTION	
% TRUCKS - A.D.T.	
% TRUCKS - D.H.V.	
DESIGN SPEED M. P. H.	45
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL
CONTROL OF ACCESS	NONE
INTENSITY OF DEVELOPMENT	URBAN
TERRAIN	ROLLING
ANTICIPATED POSTED SPEED	45

OWNER
TIM CUPPLES, PE, DBIA
100 Edison Park Drive, 4th Floor
Gaithersburg, MD 20878
240-777-7214
tim.cupples@montgomerycountymd.gov

PROJECT MANAGER
BOB GONZALES
100 Edison Park Drive, 4th Floor
Gaithersburg, MD 20878
240-777-7296
robert.gonzales@montgomerycountymd.gov

SEE SHEET I-01 FOR
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SC 01 OF 26 TI-01

NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: DHM III DATE: NOVEMBER, 2022
DRAWN BY: DHM III DATE: NOVEMBER, 2022
CHECKED BY: KCW DATE: NOVEMBER, 2022
DRAWING NO.: DATE:

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section _____ Date _____

APPROVED

Chief, Division of Transportation Engineering _____ Date _____

GROSVENOR IMPROVEMENTS
TITLE SHEET

SCALE: N.T.S.

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PROFESSIONAL CERTIFICATION:
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LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



810 Gleneagles Court, Suite 300
Baltimore, MD 21286
www.stantec.com



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11/1/2022 \\US0525-PFSSO\shared_projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\p01-000_Grosvenor.dgn



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LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



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NO.	REVISION	BY	APP'D	DATE

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Chief, Design Section	Date
APPROVED	
Chief, Division of Transportation Engineering	Date

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
INDEX OF SHEETS

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IN-01

GENERAL NOTES

1. THE SPECIFICATIONS FOR THIS CONTRACT WILL BE THOSE OF THE MARYLAND STATE HIGHWAY ADMINISTRATION DATED JULY 2022, ALL ERATA AND ADDENDA THERETO, THE MARYLAND STATE HIGHWAY ADMINISTRATION BOOK OF STANDARDS FOR HIGHWAY AND INCIDENTAL STRUCTURES, THE 2011 MARYLAND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND THE MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND STANDARDS.
2. FOR CONSTRUCTION, HORIZONTAL CONTROL SHALL BE BASED ON NAD 83/91 DATUM AND VERTICAL CONTROL SHALL BE BASED ON NAVD 1988 DATUM.
3. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATIONS AND ELEVATIONS OF THE LINES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SHOWN OR THREE (3) INCHES, WHICHEVER IS LESS, CONTACT MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION'S PROJECT INSPECTOR AND THE APPROPRIATE UTILITY OWNER BEFORE PROCEEDING WITH CONSTRUCTION.
4. REPAIRS TO UTILITIES OR PROPERTY DAMAGE AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE OR METHOD OF OPERATION MUST BE MADE AT THE CONTRACTOR'S EXPENSE BEFORE PROCEEDING WITH CONSTRUCTION.
5. THE CONTRACTOR SHALL NOTIFY MISS UTILITY ONE CALL (811 OR 800-257-7777) 48 HOURS BUT NOT MORE THAN 10 DAYS PRIOR TO ANY EXCAVATION WORK.
6. CLEARING IS TO BE LIMITED TO THE "LIMIT OF DISTURBANCE" AS SHOWN ON THE PLANS.
7. ALL GRADING SHALL BE DONE IN SUCH A MANNER AS TO PROVIDE POSITIVE DRAINAGE.
8. DISTURBED AREAS ADJACENT TO ESTABLISHED LAWNS AND WATER QUALITY SWALES SHALL BE SODED. OTHER DISTURBED AREAS SHALL BE SEEDED AND MULCHED.
9. THE CONTRACTOR SHALL OBTAIN A ROADSIDE TREE PERMIT FOR ANY MAINTENANCE, TREATMENT, PLANTING, REMOVAL, OR ROOT CUTTING ON TREES WITHIN THE PUBLIC RIGHT OF WAY. PERMIT REQUIREMENTS MAY BE OBTAINED FROM THE DEPARTMENT OF NATURAL RESOURCES, MARYLAND FOREST, PARK AND WILDLIFE SERVICE, TELEPHONE 301-854-6060.
10. THE LOCATION OF RIGHT-OF-WAY AND EASEMENT LINES SHOWN ON THE PLANS ARE FOR INFORMATION AND GUIDANCE ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF SAID LOCATIONS. PLEASE REFER TO THE APPROPRIATE RIGHT-OF-WAY PLATS.
11. THE CONTRACTOR SHALL INSTALL PEDESTRIAN DETECTABLE WARNING SURFACES AT ALL SIDEWALK & PEDESTRIAN CROSSINGS. LOCATIONS AS DIRECTED BY THE ENGINEER. THE WARNING SURFACES SHALL BE IN CONFORMANCE WITH ADA REQUIREMENTS AND THE PROJECT SPECIAL PROVISION.
12. THE DESIGN FOR THIS PROJECT HAS INCORPORATED FACILITIES FOR THE ELDERLY AND HANDICAPPED IN COMPLIANCE WITH STATE AND FEDERAL LEGISLATION. ALL LANDING AREAS AT THE TOP OF THE SIDEWALK RAMPS SHALL MEET MDOT SHA REQUIREMENTS WITH A MAX 2% SLOPE IN ALL DIRECTIONS.
13. ALL PROPOSED BUS STOPS SHALL BE ADA COMPLIANT.
14. THE CONTRACTOR SHALL ADJUST ALL UTILITY COVERS TO MEET THE PROPOSED SIDEWALK OR SHARED USE PATH.

GEOTECHNICAL INVESTIGATION

1. GEOTECHNICAL INVESTIGATION DATED SEPTEMBER, 27, 2019 SUPPLEMENTED DATED JUNE, 01, 2021 PREPARED BY:
DMY ENGINEERING CONSULTANTS, INC.
7917 CESSNA AVENUE, UNIT L
GAITHERSBURG, MD 20879
PHONE: (301) 768-4168 FAX (301) 768-4169

TRAFFIC CONTROL NOTES

1. CONTRACTOR SHALL USE TYPICAL APPLICATIONS FROM THE MDSHA BOOK OF STANDARDS CATEGORY 1 AND 2011 MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MDMUTCD).
2. DURING ALL PHASES OF CONSTRUCTION AND THE DURATION OF THE CONTRACT TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH MDSHA POLICIES AND PROCEDURES.
3. CONTRACTOR SHALL COORDINATE ACTIVITIES THROUGHOUT THE PROJECT IN THE MANNER THAT ALLOWS EMERGENCY ACCESS TO ALL AREAS OF THE JOB THAT ARE OCCUPIED BY HIS EMPLOYEES WITHOUT DELAYS TO EMERGENCY RESPONSE VEHICLES.
4. WORK WILL BE PERMITTED BETWEEN MONDAY THRU SATURDAY 7:00 AM AND 7:00 PM OR AS DIRECTED BY THE ENGINEER.

SURVEY

1. HORIZONTAL DATUM: MARYLAND STATE PLANE COORDINATE SYSTEM
NAD 83/91
VERTICAL DATUM: NAVD 1988
SURVEY UNIT: SURVEY FEET
2. DATE OF SURVEY: APRIL 2017, SEPTEMBER 2019
SURVEY PERFORMED BY: MERCADO CONSULTANTS INC.
17830 NEW HAMPSHIRE AVE. SUITE 200
ASHTON, MD 20861
PHONE: 301-260-0090
FAX: 301-260-0018
3. ALL DIMENSIONS, STATIONS, AND ELEVATIONS ARE IN SURVEY FEET UNLESS OTHERWISE SHOWN.

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING TOPOGRAPHIC FEATURES AND ELEVATIONS, ABOVE AND BELOW GROUND, PRIOR TO BEGINNING CONSTRUCTION IN THE FIELD.

THE CONTRACTOR SHALL BRING TO THE NOTICE OF THE ENGINEER ANY DISCREPANCY BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS.

REFER TO THE EXISTING CONDITIONS PLANS FOR LIMITS OF SURVEY.
4. A BOUNDARY SURVEY WAS NOT PERFORMED RIGHT-OF-WAY LINES, PROPERTY LINES, OWNERS, AND ADDRESSES. ARE BASED ON AVAILABLE GIS DATA

UTILITIES

1. DATE OF INVESTIGATION: AUGUST 2017, DECEMBER 2020
UTILITY INVESTIGATION PERFORMED BY: EDWARDS UTILITY MAPPING CORPORATION
11 MARSH RUN RD
FREDERICKSBURG, VA 22406
PHONE: (540) 737-5141 FAX: (540) 737-5145

UTILITY MAPPING (QUALITY LEVEL C) WAS PREPARED BASED ON RECORDS PROVIDED BY UTILITY OWNERS FOR THIS PROJECT.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES PRIOR TO BEGINNING EXCAVATION.
3. THE FOLLOWING UTILITY COMPANIES SHALL ALSO BE SPECIFICALLY NOTIFIED SIX WEEKS PRIOR TO THE BEGINNING OF CONSTRUCTION:

PEPCO, ED KOVAR, 301-548-4340
AT&T, GARY WIGFIELD, 301-865-3877
FIBERLIGHT, ALEX POLAK, 860-995-4954
WASHINGTON GAS LIGHT COMPANY, STEPHEN LINCOLN, 703-750-4793
COMCAST, DWAYNE DOUTY, 301-762-7863
WASHINGTON SUBURBAN SANITARY COMMISSION, DOUGLAS ABLEITER, 301-206-8668
VERIZON, JON BOBEL, 301-282-2942
VERIZON BUSINESS, ADAM RICE, 571-220-8978
4. NO MECHANIZED EQUIPMENT SHALL BE USED FOR EXCAVATION IN CLOSE PROXIMITY TO UTILITIES. CONTRACTOR SHALL HAND DIG ONLY.
5. THE CONTRACTOR IS RESPONSIBLE FOR SUPPORTING AND PROTECTING EXISTING UTILITIES AS DIRECTED BY THE ENGINEER AND UTILITY OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES TO EXISTING UTILITIES DUE TO NEGLIGENCE.

11/1/2022 \\US0525-PPFSSO\shared\projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\06N\000_Grosvenor.dgn



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GN-01

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GENERAL NOTES
GROSVENOR IMPROVEMENTS

SCALE: AS SHOWN

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ABBREVIATIONS

A.A.S.H.T.O. .. American Association of State Highway Transportation Officials	H.D.P. High Density Polyethylene	R Radius
ABUT. Abutment	HDWL. Headwall	REINF. Reinforcement
ADT Average Daily Traffic	H.E.R.C.P. Horizontal Elliptical Reinforced Concrete Pipe	REQ'D Required
AHD Ahead	H.P. High Point	R.F. Rock Fragments
APPROX. Approximate	H.S.D. Headlight Sight Distance	RT. Right
BL or BL Baseline	IN Inch	RW or RW Right of Way
BK Back /Book	I.S.T. Inlet Sediment Trap	R.C.P. Reinforced Cement Pipe
BIT. Bituminous	INV. Invert	R.C.C.P. Reinforced Cement Concrete Pipe
B.C. Bituminous Concrete	J.B. Junction Box	R.Q.D. Rock Quality Designation
B.M. Bench Mark	K K Inlet	R.M. Rootmat
B.O.F. Bottom of Footing	L Length	S South
BOT. Bottom	L.F. Linear Feet	SAN. Sanitary Sewer
BRG. Bearing	L.L. Liquid Limit	SB or SB Southbound
C.C. Center of Curve	LOD Limit of Disturbance	S.D. Storm Drain
CATV Cable Television	LONG. Longitudinal	S.D.D. Surface Drain Ditch
C.B.R. California Bearing Ratio	L.P. Light Pole	SE Super Elevation
C.J. Contraction Joint	LT. Left	SF Silt Fence
CL or CL Centerline	MAC. Macadam	S.F. Square Feet
CL Class or Clear	MC Moisture Content	SHLDR. Shoulder
CLF Chainlink Fence	MAX. Maximum	SHA State Highway Administration
CMP Corrugated Metal Pipe	MDD Maximum Dry Content	SHT. Sheet
C.O. Cleanout	MER ### Survey Point	S.P.P. Structural Plate Pipe
COMB. Combination	MOD. Modified	S.P.T. Standard Penetration Testing
CONC. Concrete	MIN. Minimum	S.S. Stainless Steel
CONSTR. Construction	MN. Managed Roadway	SSD Stopping Sight Distance
COR. Corner	M.S.E. Mechanically Stabilized Earth	SSF Super Silt Fence
CORR. Correction	N North	STD. Standard
C.Y. Cubic Yard	NB Northbound	STA. Station
DC Degree of Curve	NE Northeast	STIFF. Stiffener
D.H.V. Design Hourly Volume	NO. Number	SO. Single Opening
D.I. Drop Inlet	NP Non-Plastic	S.Y. Square Yards
DIA. Diameter	N.T.S. Not To Scale	SWM Stormwater Management
D.O. Double Opening	O.C. On Center	T Tangent
D.S. Design Speed	OH Overhead	T Telephone
DWG. Drawing	OMC Optimum Moisture	TBR To Be Removed
E East	PAV T. Pavement	T.C. Top of Cover
E Electric	PC Point of Curvature	TEMP. Temporary
e External Distance	PCC Point of Compound Curvature	T.G. Top of Grate
EA. Each	PC Point of Crown	T or TL Traverse Line
E.B. Eastbound	PGE Profile Grade Elevation	T.M. Top of Manhole
E.J. Expansion Joint	P.G.L. Profile Grade Line	T.O.F. Top of Footing
EL. or ELEV. Elevation	PGL Profile Ground Line	TRAV. Traverse
E.R.C.C.P. Elliptical Reinforced Cement Concrete Pipe	PL Plate	TS Temporary Swale
ES End Section	PR Point of Rotation	T.S. Top of Slab
EX. or EXIST. Existing	P.I. Plasticity Index	T.S. Topsoil
FT. Feet	P.I Point of Intersection	TYP. Typical
F or FL Flowline	POC Point On Curve	U.D. Under Drain
F.B.D. Flat Bottom Ditch	POT Point On Tangent	U.G. Underground
F.H. Fire Hydrant	PR. Proposed	U.O.N. Unless Otherwise Noted
F.O. Fiber Optic	PR. ROW Proposed Right of Way	U.P. Utility Pole
F.O.C. Face of Curb	PROP. Proposed	USC Unified Soil Classification
F.S. Full Super Elevation	PRC Point of Reverse Curve	USDA United States Department of Agriculture
FWD. Forward	PT. Point	VCL Vertical Clearance
G Gas	PT Point of Tangency	V.C.L. Vertical Curve Length
GL Gutterline	PVC Point of Vertical Curve	W Water
GP General Purpose Roadway	P.V.C. Polyvinyl Chloride	W West
G.V. Gas Valve	PVI Point of Vertical Intersection	W.B. Westbound
H.B. Handbox	PVRC Point of Vertical Reverse Curve	WB Wetland Buffer
	PVT Point of Vertical Tangency	W.M. Water Meter
		W.S. Wrapped Steel

SYMBOLS

EXISTING RIGHT OF WAY LINE		CUT SLOPE	
PROPOSED RIGHT OF WAY LINE		FILL SLOPE	
PROPOSED TRAFFIC BARRIER		LIMIT OF DISTURBANCE	
EXISTING TRAFFIC BARRIER		SILT FENCE	
EXISTING WOOD FENCE LINE		SUPER SILT FENCE	
EXISTING CHAIN LINK FENCE LINE		DIVERSION FENCE	
BASE OR SURVEY LINE		STONE CHECK DAM	
EXISTING FIRE HYDRANT		TEMPORARY STONE OUTLET STRUCTURE	
PROPOSED STORM DRAIN		TEMPORARY GABION OUTLET STRUCTURE	
EXISTING STORM DRAIN		AT-GRADE INLET PROTECTION	
EXISTING INLET		CURB INLET PROTECTION	
EXISTING UTILITY POLE		MEDIAN INLET PROTECTION	
EXISTING TREE		STANDARD INLET PROTECTION	
EXISTING TREE LINE		STABILIZED CONSTRUCTION ENTRANCE	
EXISTING TREE TO BE REMOVED		TEMPORARY ORANGE CONSTRUCTION FENCE	
WETLAND BOUNDARY		PROPOSED TREE	
STREAM BUFFER			
WATERS OF THE US			
100 YEAR FLOOD PLAIN			
EXISTING UNDERGROUND ELECTRIC LINE			
EXISTING UNDERGROUND TELEPHONE LINE			
EXISTING UNDERGROUND FIBER OPTIC LINE			
EXISTING GAS LINE			
EXISTING WATER LINE			
EXISTING UNDERGROUND TV LINE			
EXISTING AERIAL ELECTRIC LINE			
EXISTING PROPOSED WOOD FENCE			

NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: DHM III	DATE: NOVEMBER, 2022
DRAWN BY: DHM III	DATE: NOVEMBER, 2022
CHECKED BY: KCW	DATE: NOVEMBER, 2022
DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL	
Chief, Design Section	Date
APPROVED	
Chief, Division of Transportation Engineering	Date

**DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND**

ABBREVIATIONS AND SYMBOLS
GROSVENOR IMPROVEMENTS



PROFESSIONAL CERTIFICATION:
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LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



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11/1/2022 \\US0525-PPFSS01\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\p05-p001_Grosvenor.dgn

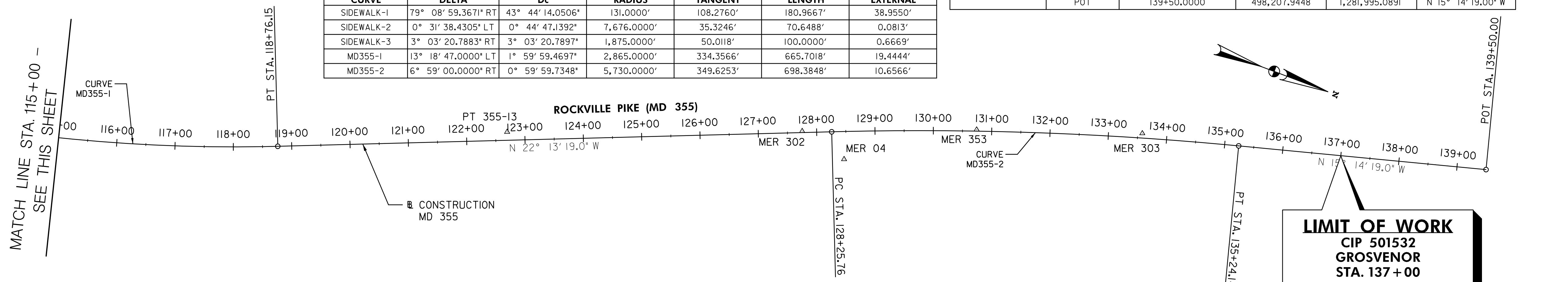
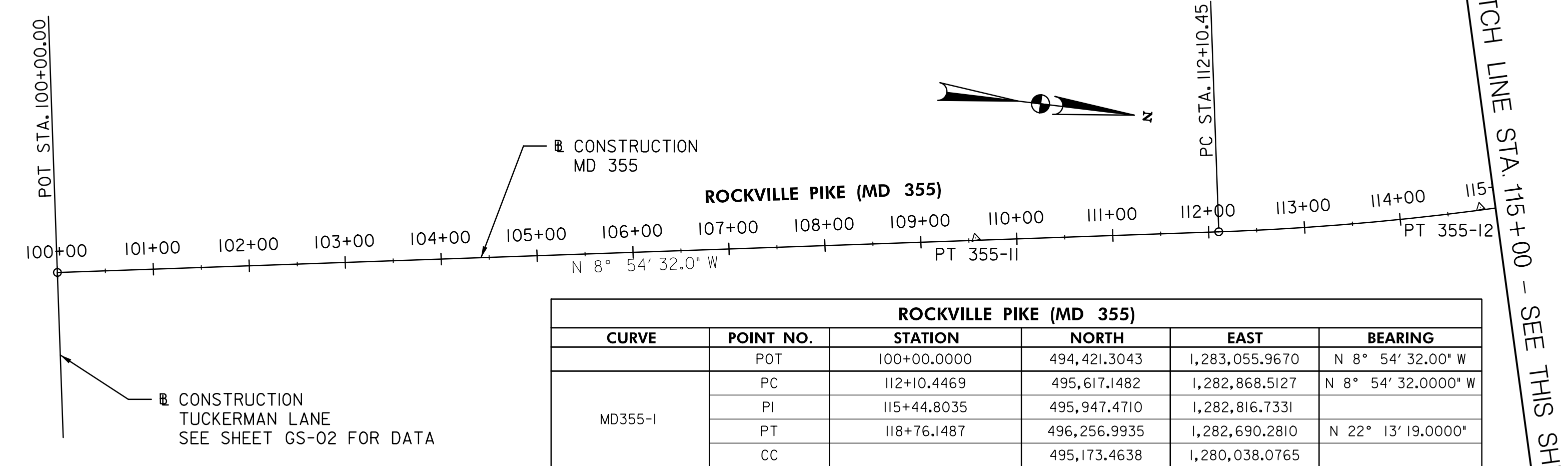
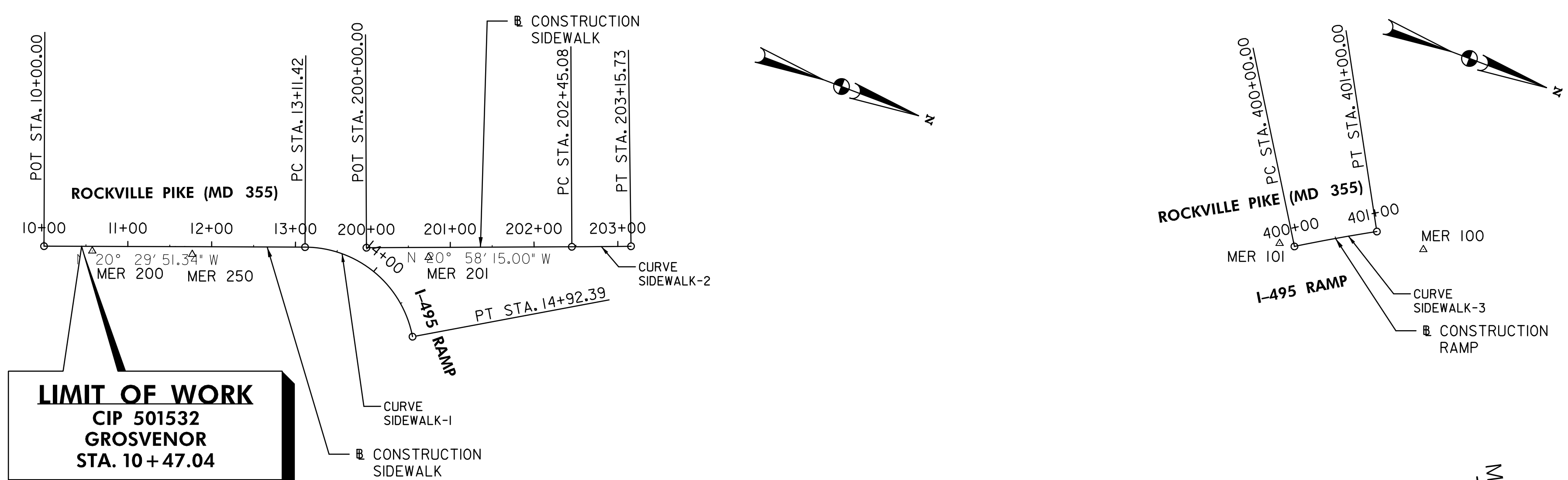
EDGE OF GUTTER PAN, SIDEWALK					
CURVE	POINT NO.	STATION	NORTH	EAST	BEARING
SIDEWALK-1	POT	10+00.0000	490,913.3035	1,284,093.1328	N 20° 29' 51.3393" W
	PC	13+11.4210	491,205.0075	1,283,984.0831	N 20° 29' 51.3394" W
	PI	14+19.6971	491,906.4282	1,283,946.1683	
	PT	14+92.3877	491,362.7568	1,284,038.6388	N 58° 39' 08.0238" E
	CC		491,250.8795	1,284,106.7891	

EDGE OF GUTTER PAN, SIDEWALK					
CURVE	POINT NO.	STATION	NORTH	EAST	BEARING
SIDEWALK-2	POT	200+00.0000	491,273.7664	1,283,958.7775	N 20° 58' 15.0001" W
	PC	202+45.0775	491,502.6106	1,283,871.0661	N 20° 58' 15.0001" W
	PI	202+80.4021	491,535.5954	1,283,858.4237	
	PT	203+15.7263	491,568.4625	1,283,845.4782	N 21° 29' 53.4305" W
	CC		488,755.4265	1,276,703.5033	

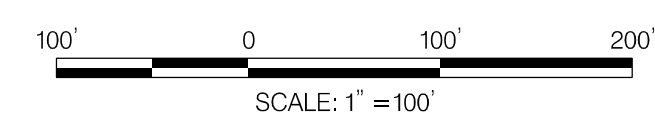
FACE OF CURB, SIDEWALK					
CURVE	POINT NO.	STATION	NORTH	EAST	BEARING
SIDEWALK-3	PC	400+00.0000	492,308.8598	1,283,565.6691	N 32° 29' 46.5251" W
	PI	400+50.0118	492,351.0411	1,283,538.8005	
	PT	401+00.0000	492,394.5948	1,283,514.2187	N 29° 26' 25.7367" W
	CC		493,316.1933	1,285,147.0938	

TRAVERSE POINTS			
POINT NO.	NORTH	EAST	ELEVATION
MER 200	490,969.1715	1,284,078.1509	236.22'
MER 250	491,082.1445	1,284,039.6929	230.85'
MER 201	491,347.2221	1,283,943.2458	235.07'
MER 101	492,290.9953	1,283,568.4239	239.21'
MER 100	492,454.0486	1,283,514.6192	238.18'
MER 300	493,693.6913	1,283,173.5843	237.17'
MER 351	494,107.3208	1,283,137.7612	232.57'
MER 352	494,203.8165	1,282,921.9237	234.78'
MER 350	494,356.5799	1,283,172.4490	233.46'
MER 301	494,339.5830	1,283,060.5012	231.37'
PT 355-11	495,366.514	1,282,905.323	262.46'
PT 355-12	495,884.3780	1,282,810.2870	283.06'
PT 355-13	496,615.8870	1,282,528.1750	308.65'
MER 302	497,088.3591	1,282,348.0296	324.93'
MER 304	497,172.5592	1,282,367.6189	324.45'
MER 353	497,367.1404	1,282,239.7742	323.64'
MER 303	497,634.968	1,282,145.3151	315.49'

CURVE DATA						
CURVE	DELTA	Dc	RADIUS	TANGENT	LENGTH	EXTERNAL
SIDEWALK-1	79° 08' 59.3671" RT	43° 44' 14.0506"	131.0000'	108.2760'	180.9667'	38.9550'
SIDEWALK-2	0° 31' 38.4305" LT	0° 44' 47.1392"	7,676.0000'	35.3246'	70.6488'	0.0813'
SIDEWALK-3	3° 03' 20.7883" RT	3° 03' 20.7897"	1,875.0000'	50.0118'	100.0000'	0.6669'
MD355-1	13° 18' 47.0000" LT	1° 59' 59.4697"	2,865.0000'	334.3566'	665.7018'	19.4444'
MD355-2	6° 59' 00.0000" RT	0° 59' 59.7348"	5,730.0000'	349.6253'	698.3848'	10.6566'



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LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



NO.	REVISION	BY	APP'D	DATE	DESIGNED BY: KL	DATE: JULY, 2022
					DRAWN BY: KL	DATE: JULY, 2022
					CHECKED BY: DHM III	DATE: JULY, 2022
					DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL						
					Chief, Design Section	Date
					APPROVED	
					Chief, Division of Transportation Engineering	Date

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
GEOMETRIC LAYOUT
SCALE: 1"=100' SHEET 005 of 128

GS-01

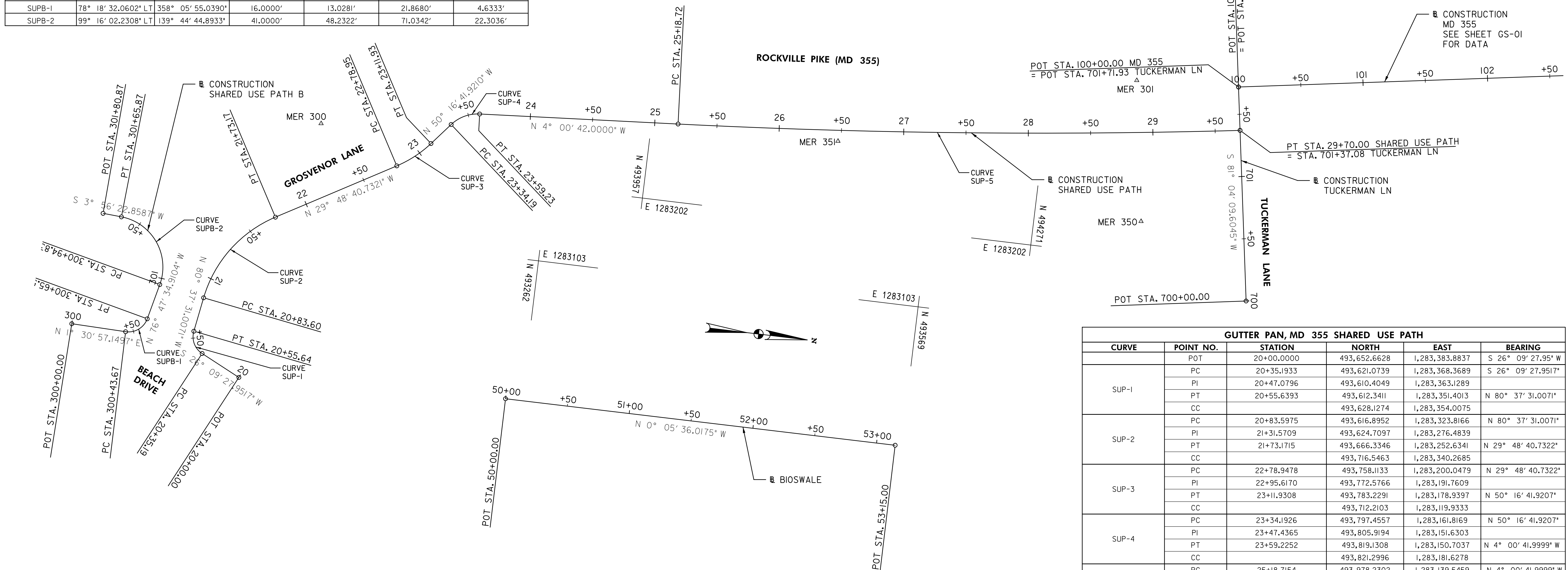
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GUTTER PAN, MD 355 SHARED USE PATH					
CURVE	POINT NO.	STATION	NORTH	EAST	BEARING
SUPB-1	POT	300+00.0000	493,514.3386	1,283,357.2262	N 1° 30' 57.15" E
	PC	300+43.6712	493,557.9946	1,283,358.3815	N 1° 30' 57.1498" E
	PI	300+56.6994	493,571.0182	1,283,358.7262	
	PT	300+65.5392	493,573.9947	1,283,346.0426	N 76° 47' 34.9104"
SUPB-2	CC		493,558.4179	1,283,342.3871	
	PC	300+94.8349	493,580.6878	1,283,317.5218	N 76° 47' 34.9104"
	PI	301+43.0671	493,591.7074	1,283,270.5653	
	PT	301+65.8691	493,543.5892	1,283,267.2514	S 3° 56' 22.8588" W
CC		493,540.7722	1,283,308.1545		
POT		301+80.8691	493,528.6246	1,283,266.2208	S 3° 56' 22.86" W

CURVE DATA						
CURVE	DELTA	Dc	RADIUS	TANGENT	LENGTH	EXTERNAL
SUPB-1	78° 18' 32.0602" LT	358° 05' 55.0390"	16.0000'	13.0281'	21.8680'	4.6333'
SUPB-2	99° 16' 02.2308" LT	139° 44' 44.8933"	41.0000'	48.2322'	71.0342'	22.3036'

TUCKERMAN LANE					
CURVE	POINT NO.	STATION	NORTH	EAST	BEARING
	POT	700+00.0000	494,447.9941	1,283,225.8099	S 81° 04' 09.60" W
	POT	701+71.9272	494,421.3043	1,283,055.9670	S 81° 04' 09.60" W

CURVE DATA MD 355 SHARED USE PATH						
CURVE	DELTA	Dc	RADIUS	TANGENT	LENGTH	EXTERNAL
SUP-1	73° 13' 01.0412" RT	358° 05' 55.0390"	16.0000'	11.8863'	20.4460'	3.9320'
SUP-2	50° 48' 50.2749" RT	56° 43' 42.5804"	101.0000'	47.9734'	89.5740'	10.8143'
SUP-3	20° 28' 01.1885" LT	62° 03' 11.4877"	92.3333'	16.6691'	32.9830'	1.4926'
SUP-4	46° 15' 59.9208" RT	184° 49' 30.3427"	31.0000'	13.2439'	25.0327'	2.7106'
SUP-5	4° 29' 06.4279" LT	0° 59' 37.8804"	5,765.0000'	225.7577'	451.2847'	4.4186'



CENTERLINE BIOSWALE					
CURVE	POINT NO.	STATION	NORTH	EAST	BEARING
	POT	50+00.0000	493,249.0479	1,283,216.0684	N 0° 05' 36.02" W
	POT	53+15.0000	493,564.0474	1,283,215.5553	N 0° 05' 36.02" W

GUTTER PAN, MD 355 SHARED USE PATH					
CURVE	POINT NO.	STATION	NORTH	EAST	BEARING
SUP-1	POT	20+00.0000	493,652.6628	1,283,383.8837	S 26° 09' 27.95" W
	PC	20+35.1933	493,621.0739	1,283,368.3689	S 26° 09' 27.9517"
	PI	20+47.0796	493,610.4049	1,283,363.1289	
	PT	20+55.6393	493,612.3411	1,283,351.4013	N 80° 37' 31.0071"
SUP-2	CC		493,628.1274	1,283,354.0075	
	PC	20+83.5975	493,616.8952	1,283,323.8166	N 80° 37' 31.0071"
	PI	21+31.5709	493,624.7097	1,283,276.4839	
	PT	21+73.1715	493,666.3346	1,283,252.6341	N 29° 48' 40.7322"
SUP-3	CC		493,716.5463	1,283,340.2685	
	PC	22+78.9478	493,758.1133	1,283,200.0479	N 29° 48' 40.7322"
	PI	22+95.6170	493,772.5766	1,283,191.7609	
	PT	23+11.9308	493,783.2291	1,283,178.9397	N 50° 16' 41.9207"
SUP-4	CC		493,712.2103	1,283,119.9333	
	PC	23+34.1926	493,797.4557	1,283,161.8169	N 50° 16' 41.9207"
	PI	23+47.4365	493,805.9194	1,283,151.6303	
	PT	23+59.2252	493,819.1308	1,283,150.7037	N 4° 00' 41.9999" W
SUP-5	CC		493,821.2996	1,283,181.6278	
	PC	25+18.7154	493,978.2302	1,283,139.5459	N 4° 00' 41.9999" W
	PI	27+44.4730	494,203.4347	1,283,123.7519	
	PT	29+70.0001	494,426.7145	1,283,090.3954	N 8° 29' 48.4279" W
CC		493,574.9131	1,277,388.6711		



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 LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: AMA	DATE: NOVEMBER, 2022
DRAWN BY: AMA	DATE: NOVEMBER, 2022
CHECKED BY: DHM III	DATE: NOVEMBER, 2022
DRAWING NO.:	DATE:

RECOMMENDED FOR APPROVAL

Chief, Design Section _____ Date _____

APPROVED

Chief, Division of Transportation Engineering _____ Date _____

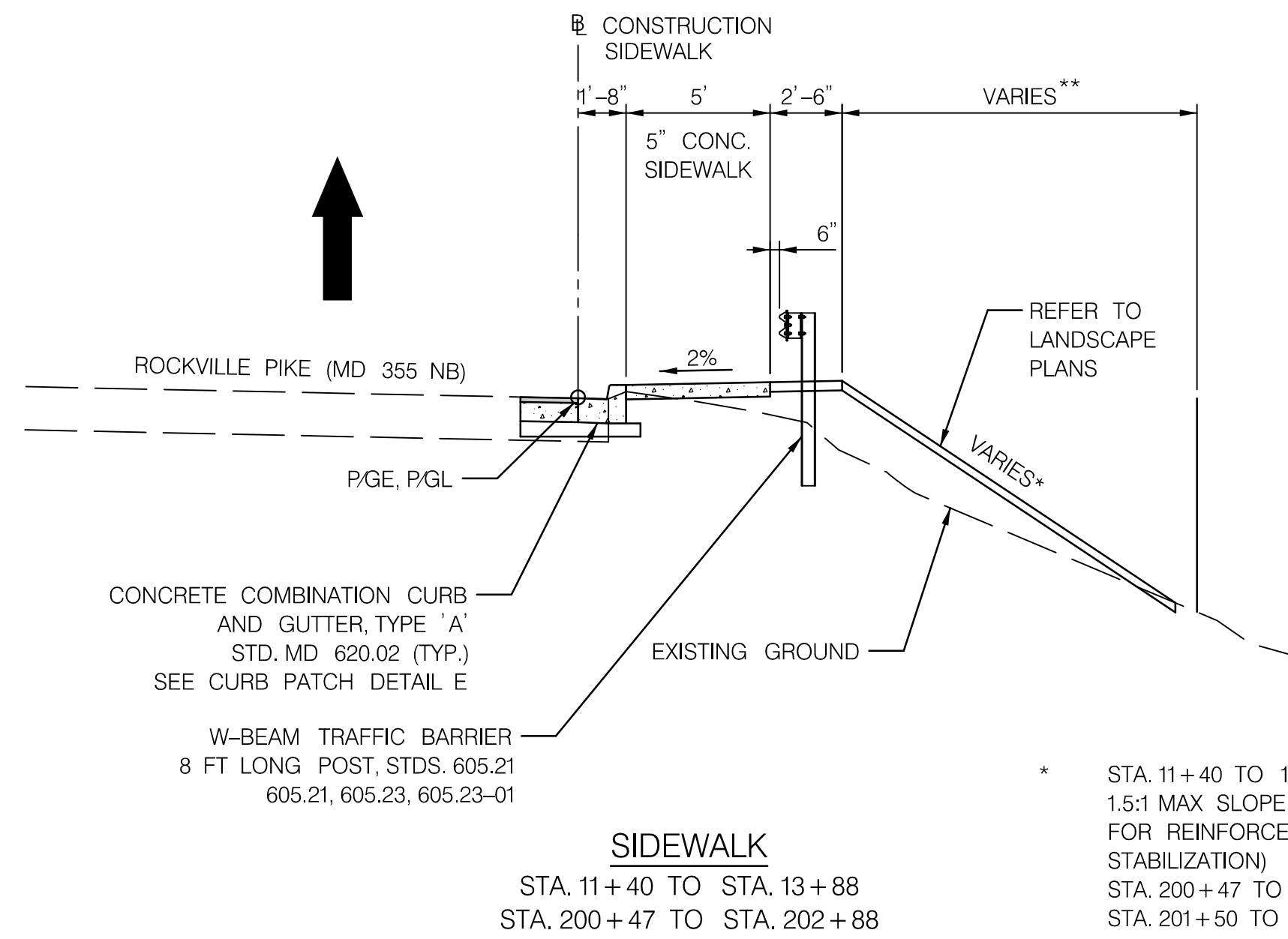
DEPARTMENT OF TRANSPORTATION
 DIVISION OF TRANSPORTATION ENGINEERING
 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 GEOMETRIC LAYOUT

SCALE: 1"=40' SHEET 006 of 128

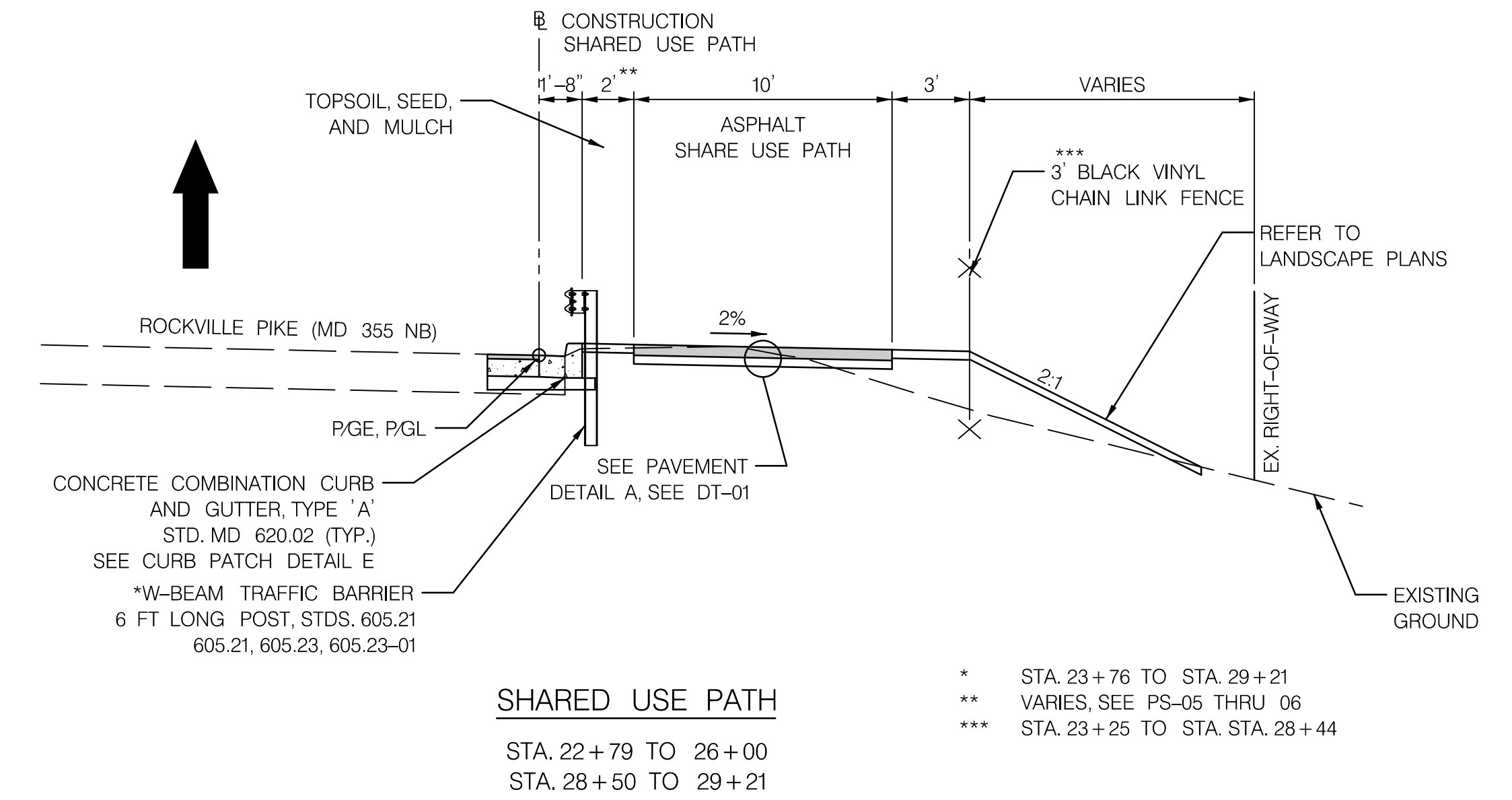
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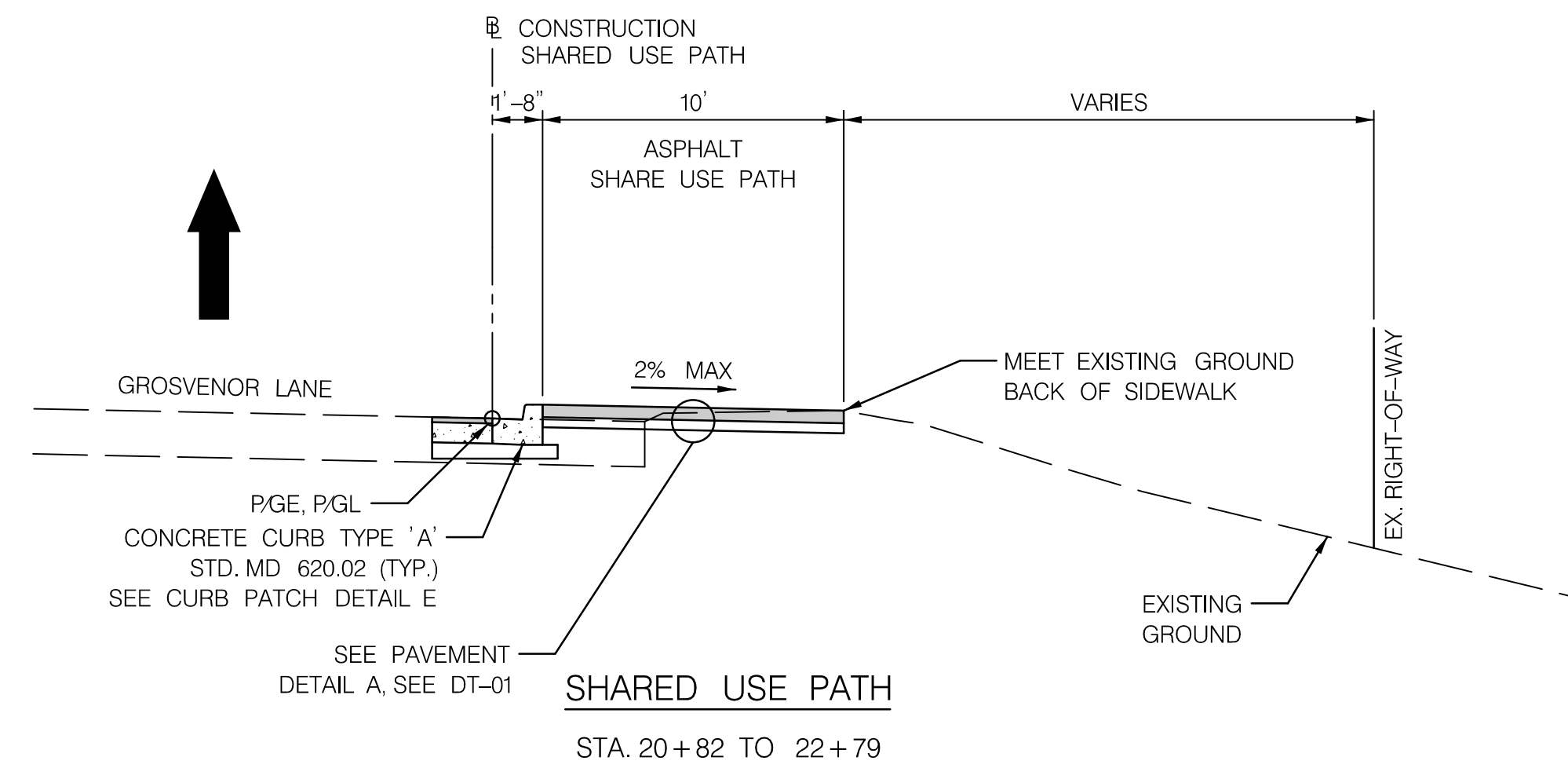
* STA. 11+40 TO 13+88
1.5:1 MAX SLOPE (SEE DT-02 FOR REINFORCED SOIL SLOPE STABILIZATION)
STA. 200+47 TO 201+50: 3:1 SLOPE
STA. 201+50 TO 202+88: 2:1 SLOPE

** STA. 11+40 TO 13+88: SLOPE LIMIT MUST NOT IMPACT EX. WOODEN FENCE

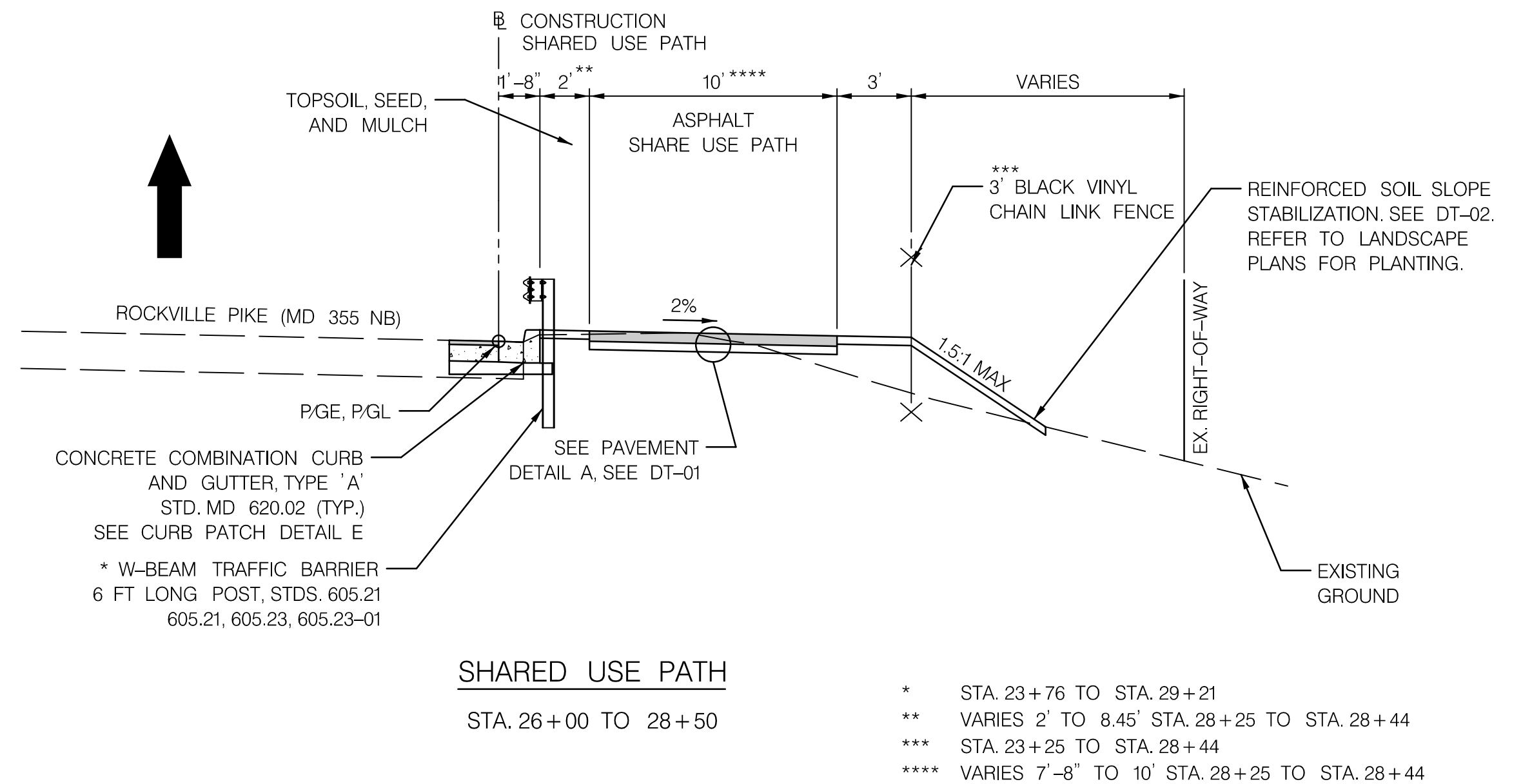


SHARED USE PATH
STA. 22+79 TO 26+00
STA. 28+50 TO 29+21

* STA. 23+76 TO STA. 29+21
** VARIES, SEE PS-05 THRU 06
*** STA. 23+25 TO STA. 28+44



SHARED USE PATH
STA. 20+82 TO 22+79



SHARED USE PATH
STA. 26+00 TO 28+50

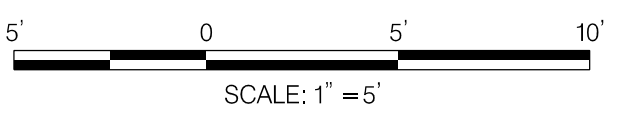
* STA. 23+76 TO STA. 29+21
** VARIES 2' TO 8.45' STA. 28+25 TO STA. 28+44
*** STA. 23+25 TO STA. 28+44
**** VARIES 7'-8" TO 10' STA. 28+25 TO STA. 28+44



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Baltimore, MD 21286
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DRAWN BY: DHM III	DATE: NOVEMBER, 2022
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RECOMMENDED FOR APPROVAL

Chief, Design Section _____ Date _____

APPROVED

Chief, Division of Transportation Engineering _____ Date _____

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

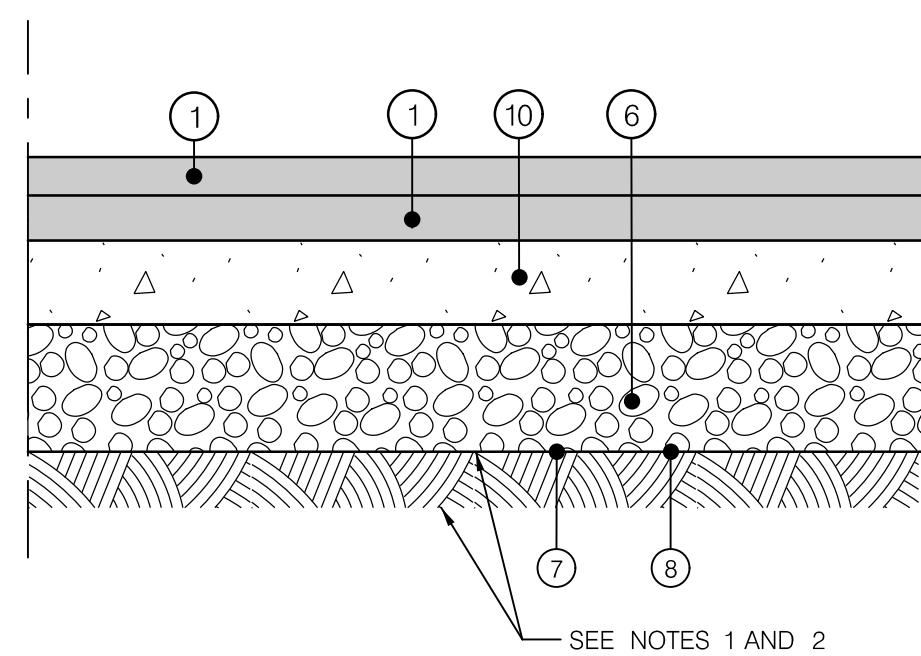
GROSVENOR IMPROVEMENTS
TYPICAL SECTIONS

SCALE: 1" = 5' SHEET 007 of 128

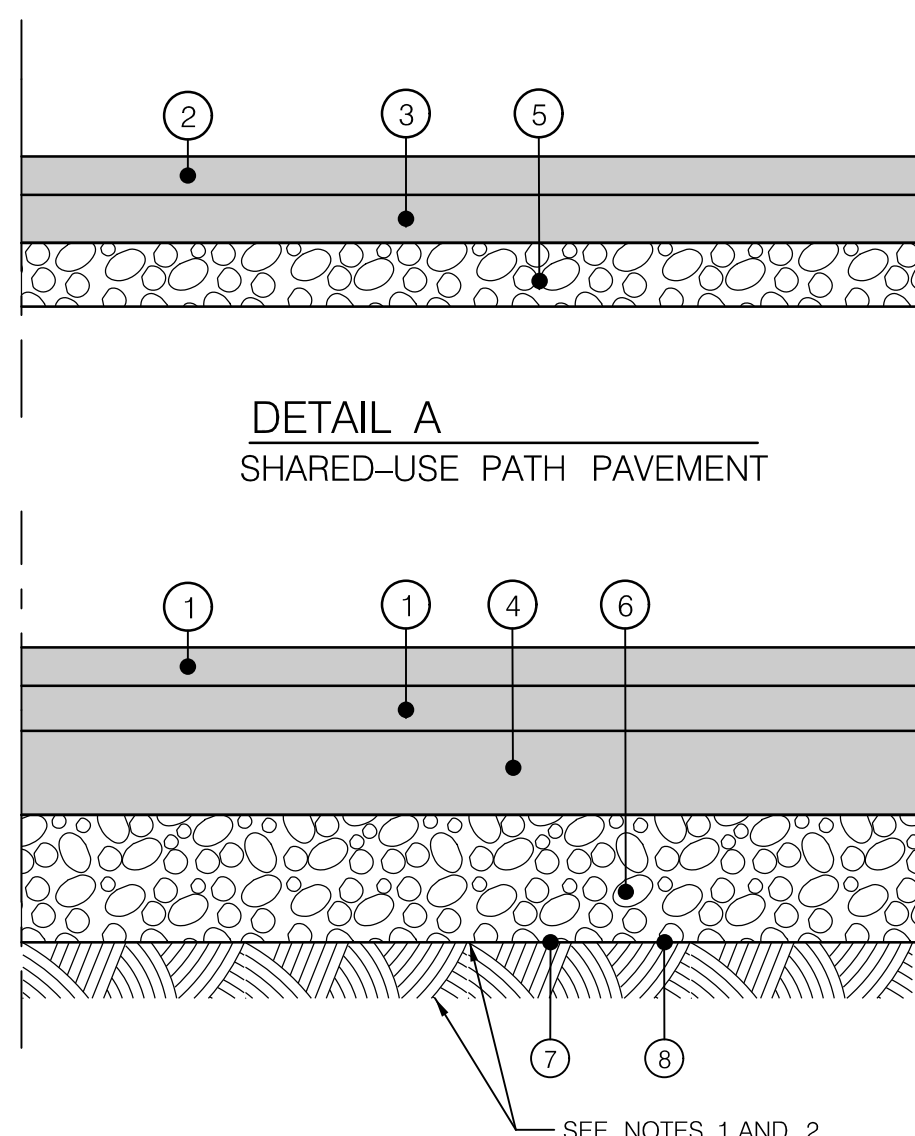
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LEGEND

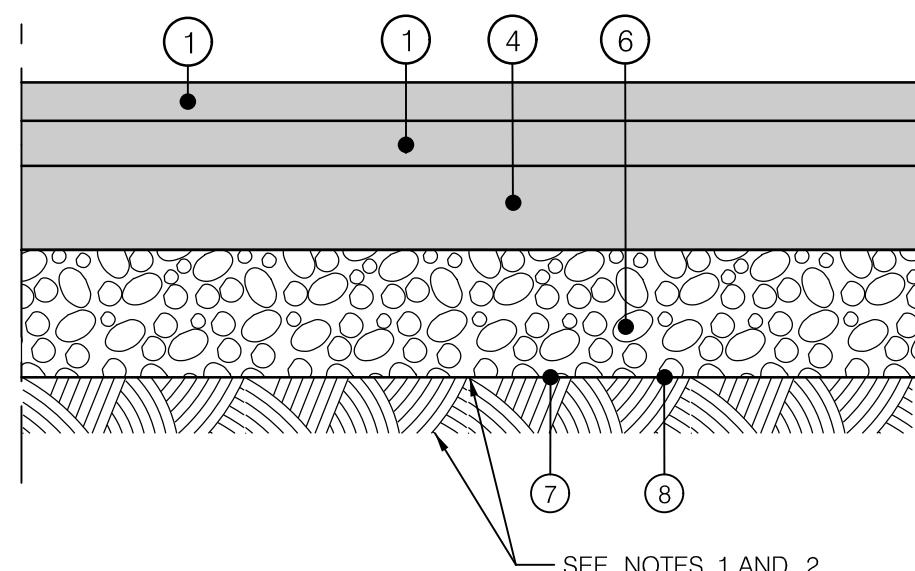
- ① 2" SUPERPAVE ASPHALT MIX, 9.5 mm FOR SURFACE, HDFV PG 64S-22 LEVEL 2
- ② 2" SUPERPAVE ASPHALT MIX, 9.5 mm FOR SURFACE, PG 64S-22, LEVEL 1
- ③ 3" SUPERPAVE ASPHALT MIX, 19 mm FOR BASE, PG 64S-22, LEVEL 1
- ④ 5" SUPERPAVE ASPHALT MIX, 19 mm FOR BASE, PG 64S-22, LEVEL 2
- ⑤ GRADED AGGREGATE BASE COURSE, 4 INCH
- ⑥ GRADED AGGREGATE BASE COURSE, 12 INCH (2-6 INCH LIFTS)
- ⑦ GEOTEXTILE WOVEN CLASS ST
- ⑧ LIMIT OF CLASS I EXCAVATION (ITEM NO. 201030)
- ⑨ MILL EXISTING SURFACE 0 TO 2" DEPTH
- ⑩ 5" PLAIN PORTLAND CEMENT CONCRETE, MIX #9
- ⑪ 5" POROUS CONCRETE SIDEWALK
- ⑫ 2" BEDDING-COURSE (NO. 7 STONE)
- ⑬ 13" OPEN GRADED BASE (NO. 57 STONE)
- ⑭ 4" SAND LAYER (ASTM C-33)



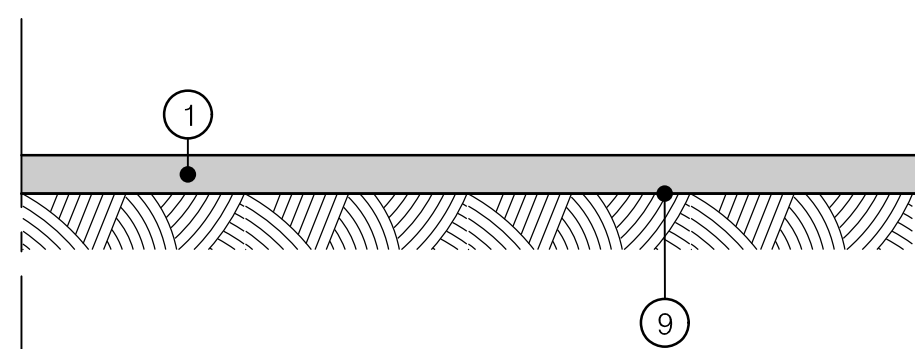
DETAIL B-2
FULL DEPTH ROADWAY PAVEMENT - LESS THAN 4' WIDTH



DETAIL A
SHARED-USE PATH PAVEMENT



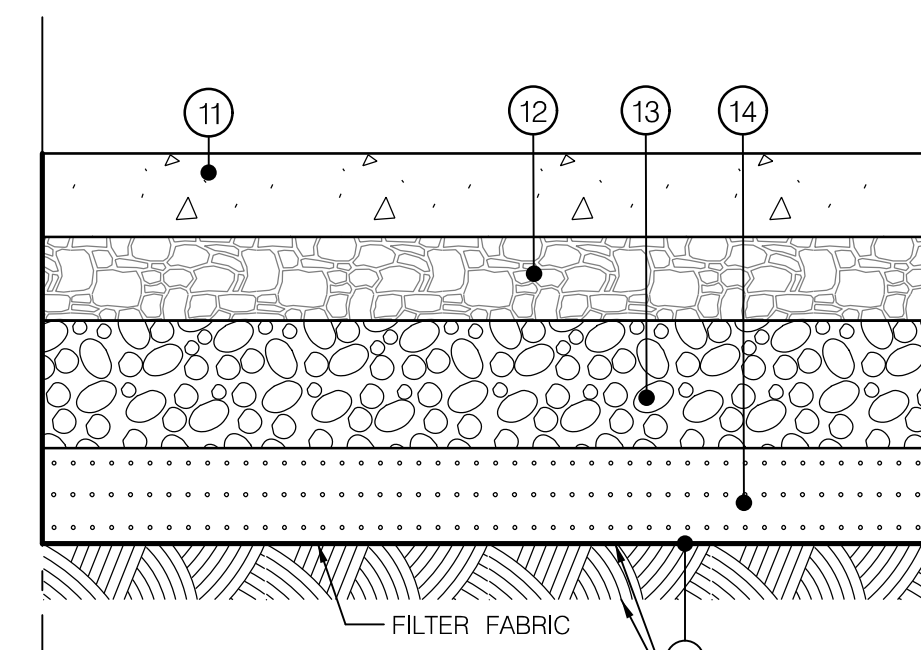
DETAIL B-1
FULL DEPTH ROADWAY PAVEMENT - GREATER THAN 4' WIDTH



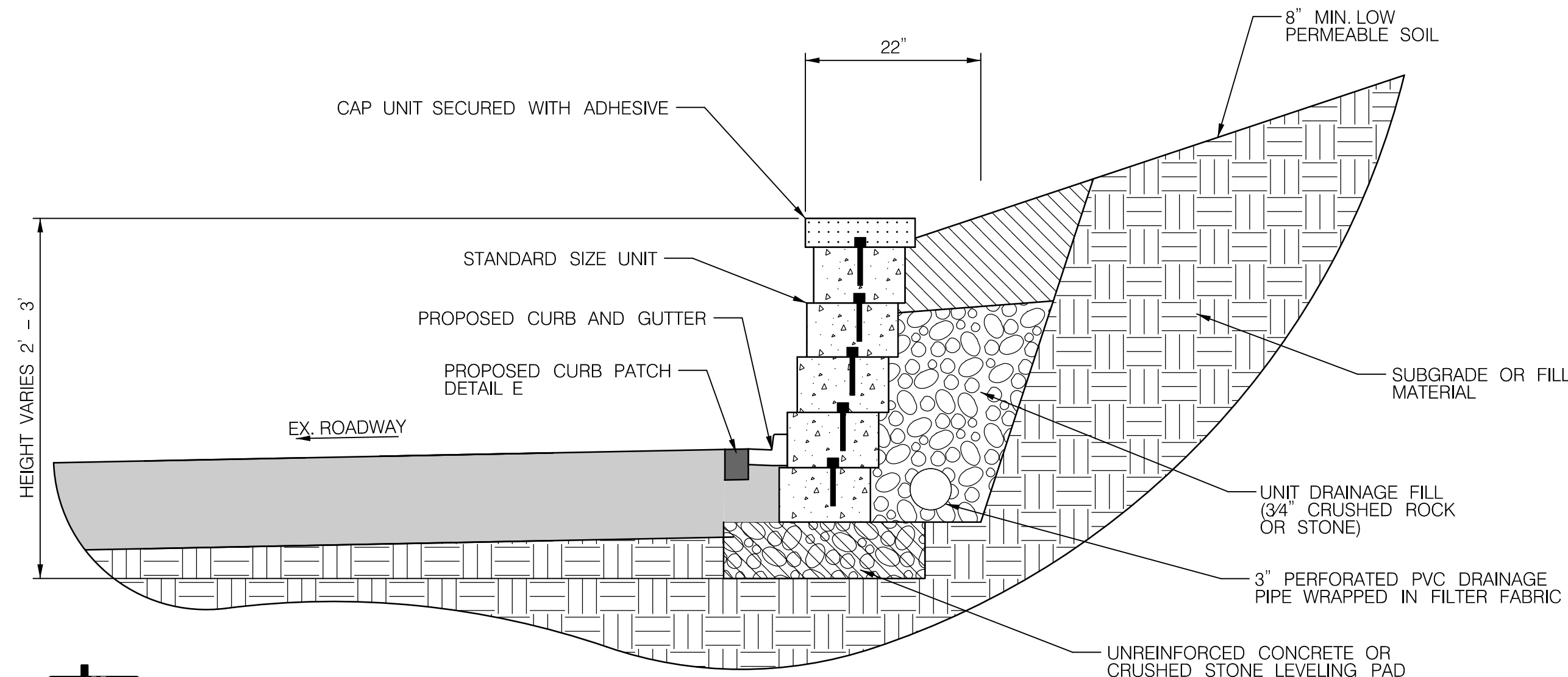
DETAIL C
MILL AND OVERLAY PAVEMENT

NOTES:

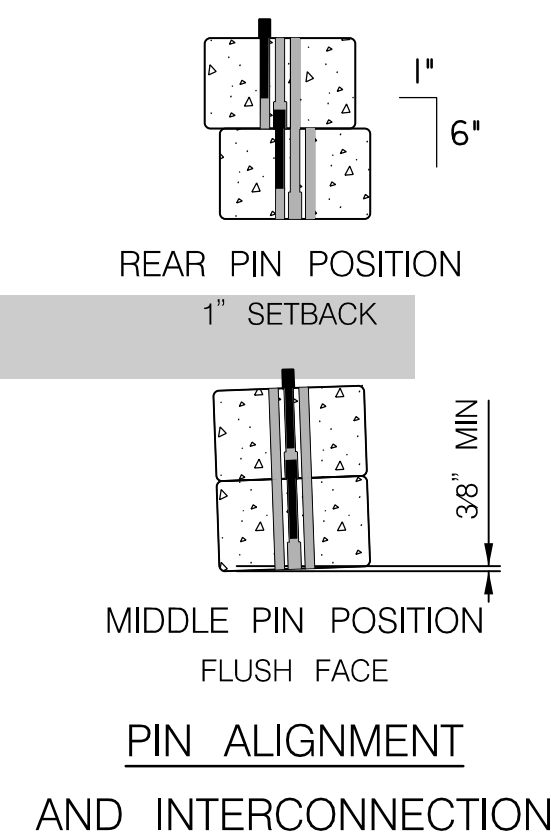
- SUBGRADE PREPARATION SHALL BE AS PER SPECIFICATIONS; PRIOR TO PLACEMENT OF PROPOSED BASE COURSE, SUBGRADE SHALL BE PROOF-ROLLED.
- UNDERCUT FOR REMOVAL OF SOFT AND /OR UNSUITABLE MATERIALS SHALL BE AS DIRECTED BY THE ENGINEER.



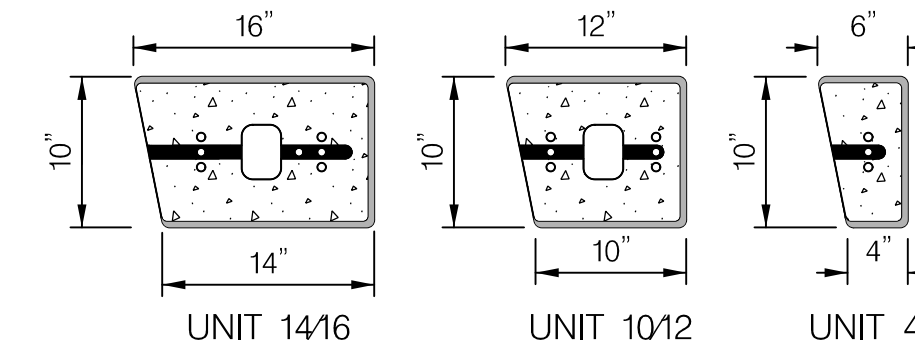
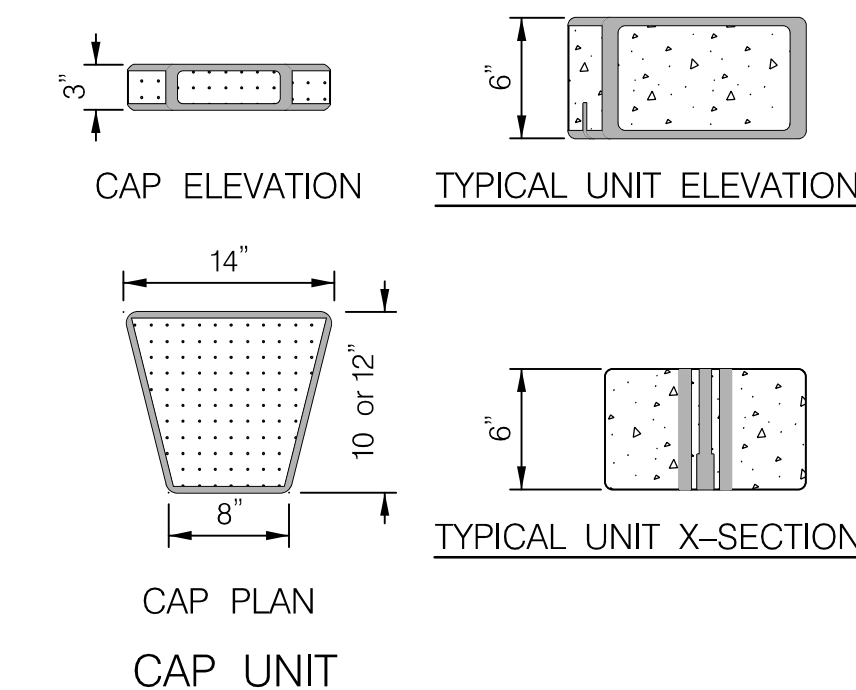
DETAIL G
POROUS CONCRETE SIDEWALK



DETAIL D
BLOCK RETAINING WALL

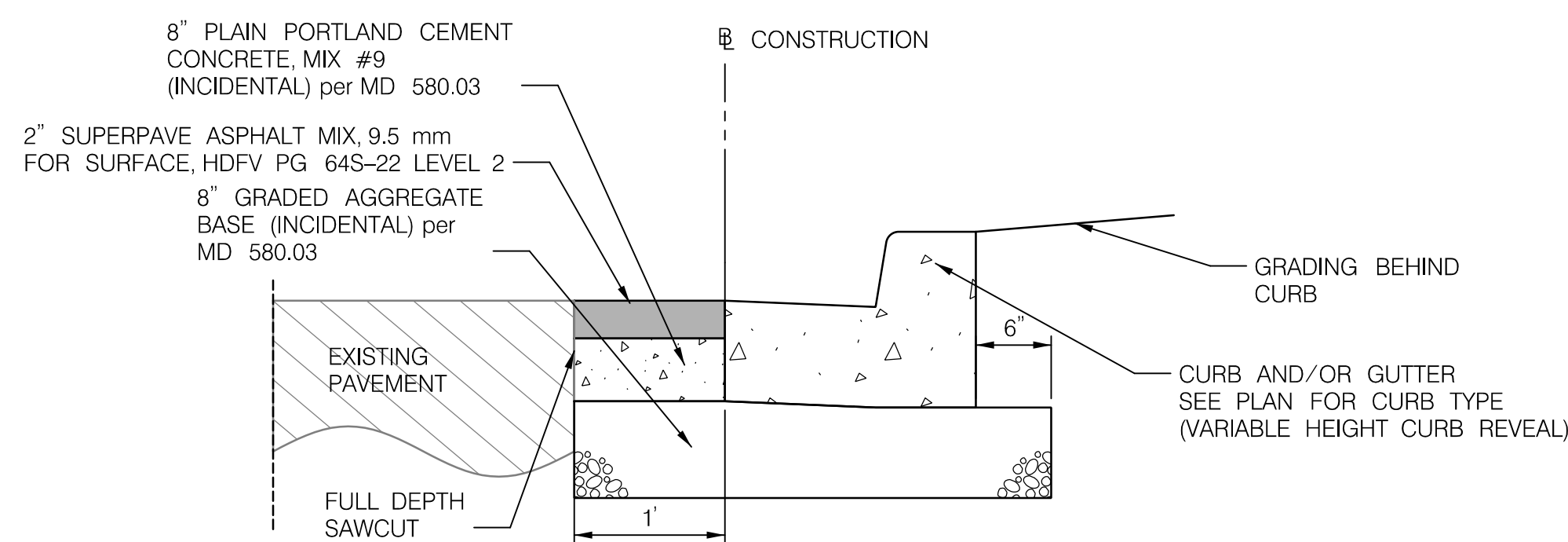


PIN ALIGNMENT AND INTERCONNECTION

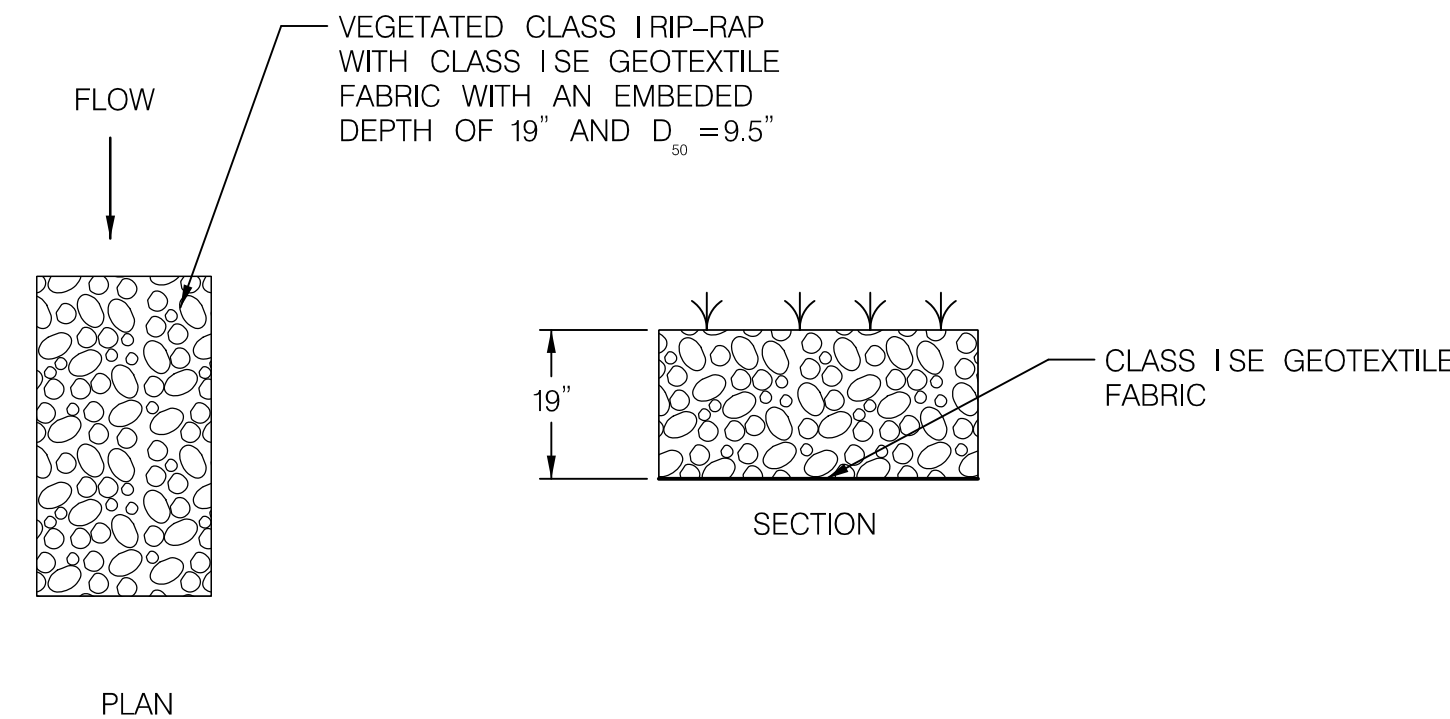


STANDARD UNIT SIZES

- NOTES:**
- CONTRACTOR IS REQUIRED TO FOLLOW THE MANUFACTURES DETAILS FOR THE RETAINING WALL AND MUST BE FROM MDOT SHA'S APPROVED PROPRIETARY LIST: ALLAN BLOCK CORPORATION OR ANCHOR WALL SYSTEM.



DETAIL E
CURB PATCH



- NOTES:**
- GEOTEXTILE SHALL BE EMBEDDED A MINIMUM OF 4" AND SHALL EXTEND AT LEAST 6" BEYOND THE EDGE OF RIP-RAP (TYPICAL).
 - BACKFILL RIP-RAP VOIDS ON WITH TOPSOIL AND/OR MULCH AND SEED TO WITHIN 2" OF ROCK SURFACE TO ENCOURAGE VEGETATIVE GROWTH.

DETAIL F
VEGETATED RIP-RAP

NO.	REVISION	BY	APP'D	DATE	DESIGNED BY: DHM III	DATE: NOVEMBER, 2022
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					CHECKED BY: KCW	DATE: NOVEMBER, 2022
					DRAWING NO.:	DATE:
					RECOMMENDED FOR APPROVAL	
					Chief, Design Section	Date
					APPROVED	
					Chief, Division of Transportation Engineering	Date

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
DETAIL SHEET

SCALE: NTS

SHEET 008 of 128



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LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



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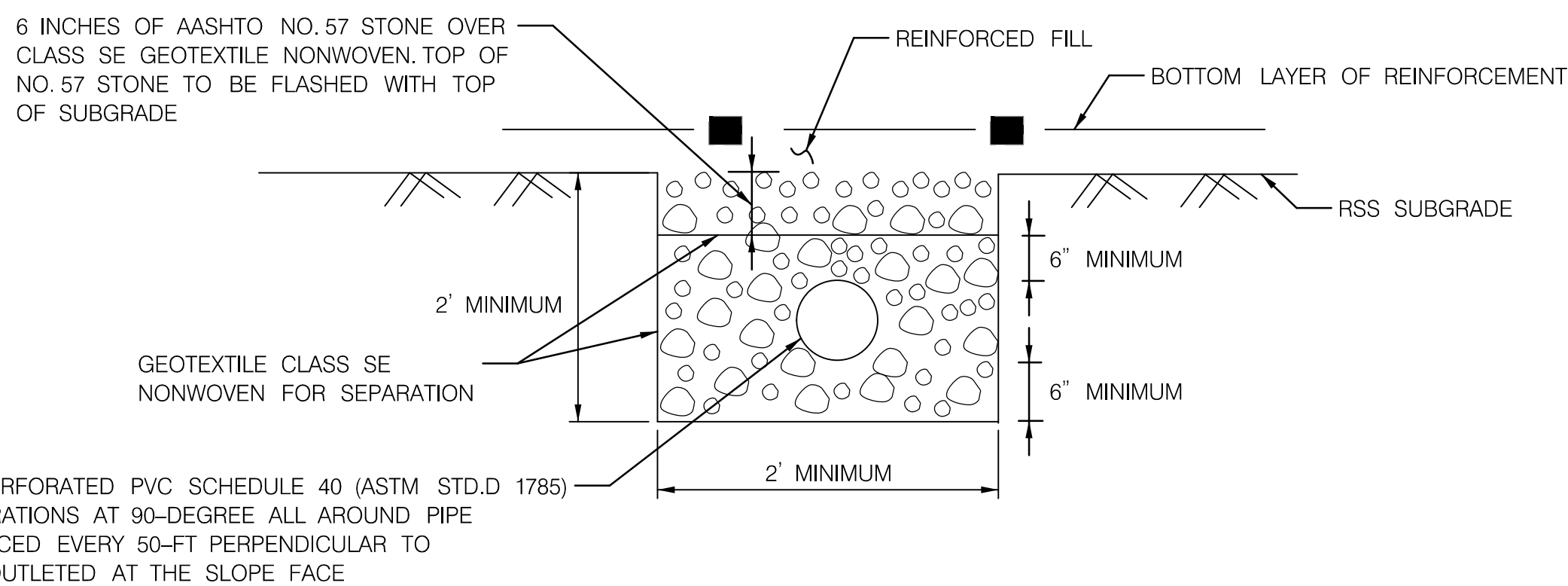
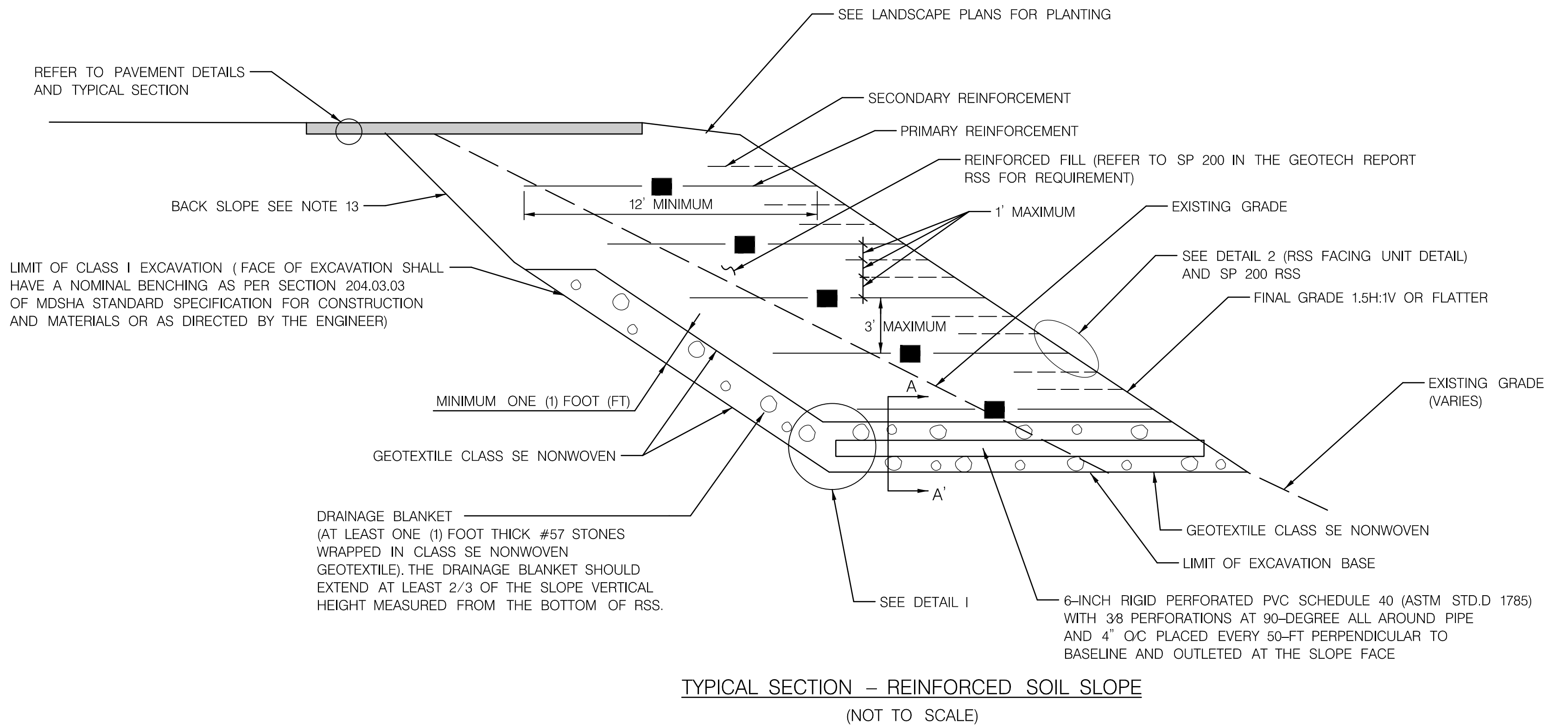
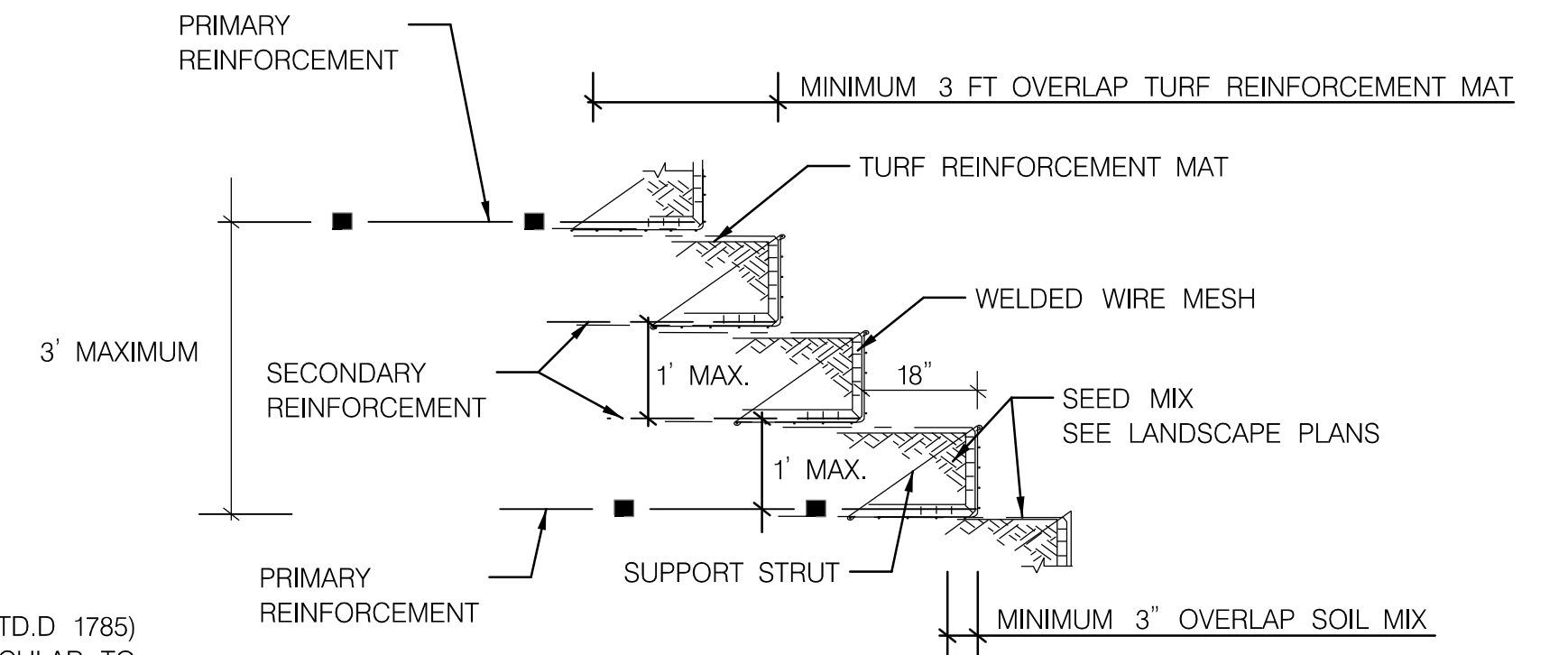
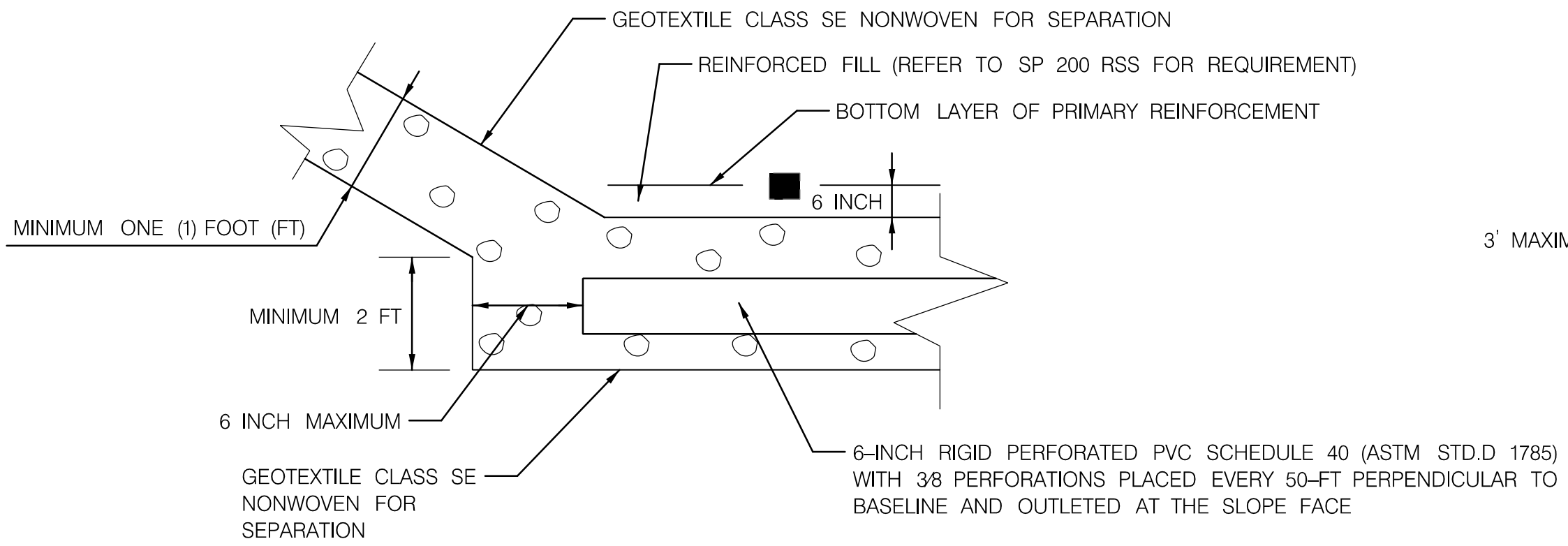


11/1/2022 \\US0525-PPFSSO\shared_projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pHD-D001_Grosvenor.dgn

DT-01

REINFORCED SOIL SLOPE (RSS) GENERAL NOTES

1. THE CONTRACTOR SHALL REFER TO SP 200 REINFORCED SOIL SLOPE AND SP 900 GEOSYNTHETIC REINFORCEMENT FOR REINFORCED SOIL SLOPES FOR CONSTRUCTION PROVISIONS. THE FOLLOWING NOTES SHALL ALSO BE APPLICABLE. REFER TO THE GEOTECH REPORT FOR SP 200 AND 900.
2. PRIOR TO THE CONSTRUCTION OF THE REINFORCED SOIL SLOPE, THE CONTRACTOR SHALL CLEAR UTILITIES, GRUB THE REINFORCED BACKFILL ZONE, AND REMOVE TOP SOILS, BRUSH, SOD OR OTHER ORGANIC AND DELETERIOUS MATERIAL. ANY UNSUITABLE SOILS SHALL BE EXCAVATED, REPLACED WITH SELECT BORROW AND COMPACTED, OR AS DIRECTED BY THE ENGINEER.
3. REINFORCED FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT EXCEEDING EIGHT INCHES IN COMPACTED THICKNESS. FILL MATERIAL SHALL BE PLACED FROM THE FRONT OF THE SLOPE TOWARDS THE ENDS OF THE REINFORCEMENT TO ENSURE FURTHER TENSIONING.
4. REINFORCED FILL SHALL BE COMPACTED AS PER SECTION 204.03.04 OF MDSA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS.
5. REINFORCEMENT SHALL BE INSTALLED ON SURFACES FREE OF PROTRUSIONS INCLUDING ROCKS, STICKS, ROOTS, SHARP OBJECTS OR DEBRIS OF ANY KIND. THE SURFACE SHALL PROVIDE FOR A FIRM, UNYIELDING FOUNDATION.
6. REINFORCEMENT SHALL BE INSTALLED FROM THE TOE ELEVATION OF THE RSS AS PER THE CONSTRUCTION PLAN UP TO THE TOP OF THE PAVEMENT SUBGRADES.
7. PLACE THE REINFORCED FILL OF 6 INCHES IN COMPACTED THICKNESS BEFORE THE INSTALLATION OF THE FIRST REINFORCEMENT.
8. THE MAXIMUM VERTICAL SPACING OF THE PRIMARY REINFORCEMENT SHALL BE 3 FEET. THE MAXIMUM VERTICAL SPACING OF THE SECONDARY REINFORCEMENT SHALL BE 1 FOOT.
9. THE REINFORCEMENT (BOTH PRIMARY AND SECONDARY) SHALL BE EXTENDED UNTIL THE 1.5H:1V SLOPE TIES INTO 2H:1V SLOPE. THE TRANSITION BETWEEN THE SLOPES SHALL BE SMOOTH.
10. THE NUMBER OF REINFORCEMENT SHOWN ON THE TYPICAL DETAILS IS FOR ILLUSTRATION PURPOSE ONLY. THE ACTUAL NUMBER OF THE REINFORCEMENT SHALL BE DETERMINED BASED ON THE SLOPE HEIGHT AND THE VERTICAL SPACING OF THE REINFORCEMENT.
11. CONTRACTOR IS RESPONSIBLE FOR UTILITY CLEARANCE.
12. CONTRACTOR SHALL NOTE EXISTING AND/OR PROPOSED OBSTRUCTION TO REINFORCEMENT SUCH AS UTILITIES AND SIGN STRUCTURE FOUNDATIONS, ETC. REINFORCEMENT SHALL BE CUT AROUND THE OBSTRUCTION.
13. THE CONTRACTOR SHALL MAINTAIN A STABLE EXCAVATION PER OSHA GUIDELINES DURING CONSTRUCTION.
14. REFER TO TYPICAL SECTIONS ON TS-01 FOR LOCATIONS OF REINFORCED SOIL SLOPE LOCATIONS.



SC 09 OF 26 DT-02



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NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: DHM III DATE: NOVEMBER, 2022
 DRAWN BY: DHM III DATE: NOVEMBER, 2022
 CHECKED BY: KCW DATE: NOVEMBER, 2022
 DRAWING NO.: DATE:
 RECOMMENDED FOR APPROVAL
 Chief, Design Section Date
 APPROVED
 Chief, Division of Transportation Engineering Date

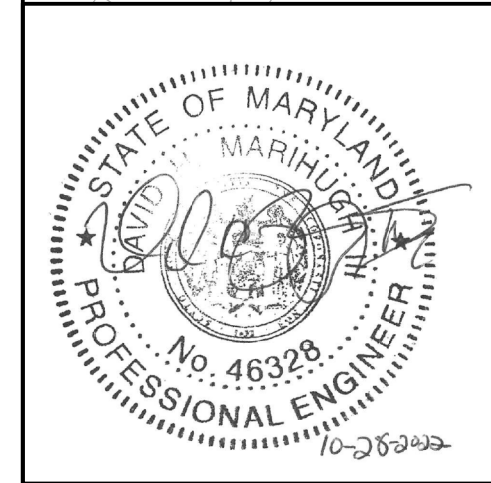
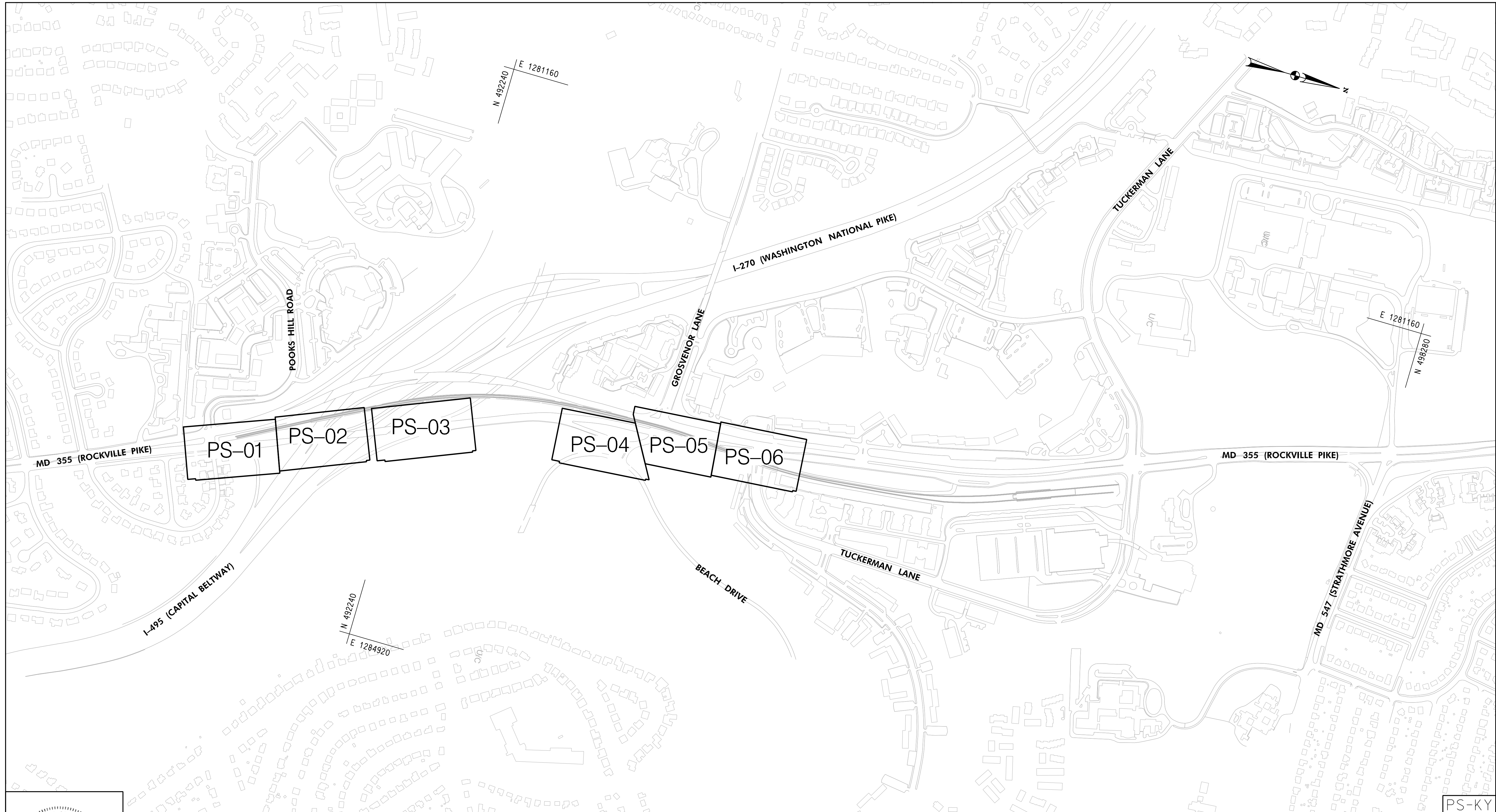
DEPARTMENT OF TRANSPORTATION
 DIVISION OF TRANSPORTATION ENGINEERING
 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 REINFORCED SOIL SLOPE DETAIL SHEET

SCALE: AS SHOWN SHEET 009 of 128

11/1/2022 \\US0525-PFSSOI\shared_projects\202601401\27 BPPA - Grosvenor\Project\700 CADD\700 Sheet\pHD-D002_Grosvenor.dgn

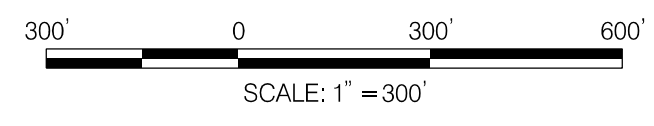
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DEPARTMENT OF TRANSPORTATION
 DIVISION OF TRANSPORTATION ENGINEERING
 MONTGOMERY COUNTY, MARYLAND

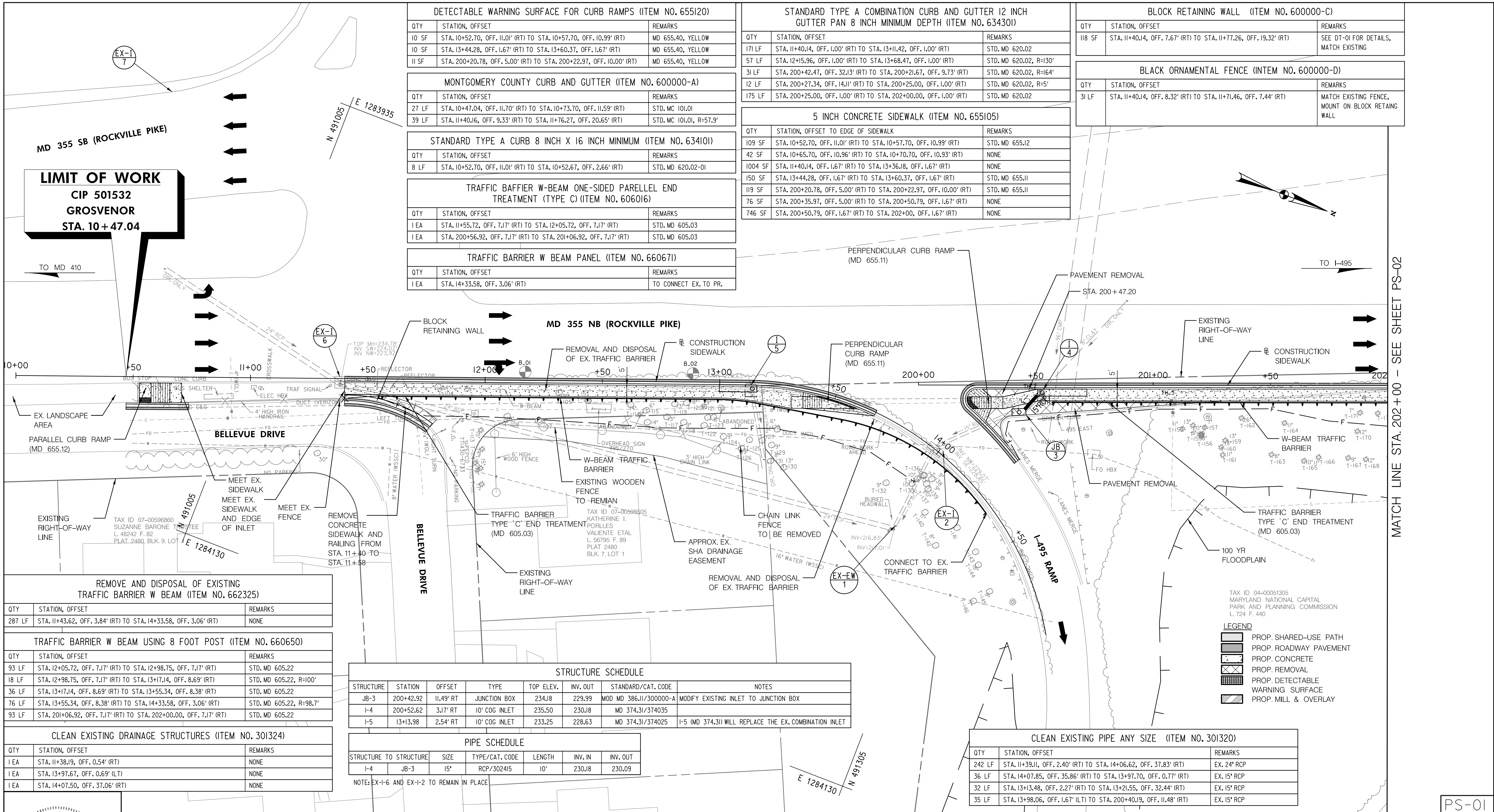
GROSVENOR IMPROVEMENTS
 ROADWAY KEY PLAN

SCALE: 1"=300'

SHEET 010 of 128

PS-KY

11/1/2022 \\US0525-PPFSSO\shared_projects\20260140\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pHD-P001_Grosvenor.dgn



LIMIT OF WORK
 CIP 501532
 GROSVENOR
 STA. 10+47.04

DETECTABLE WARNING SURFACE FOR CURB RAMP (ITEM NO. 655120)		
QTY	STATION, OFFSET	REMARKS
10 SF	STA. 10+52.70, OFF. 11.01' (RT) TO STA. 10+57.70, OFF. 10.99' (RT)	MD 655.40, YELLOW
10 SF	STA. 13+44.28, OFF. 1.67' (RT) TO STA. 13+60.37, OFF. 1.67' (RT)	MD 655.40, YELLOW
11 SF	STA. 200+20.78, OFF. 5.00' (RT) TO STA. 200+22.97, OFF. 10.00' (RT)	MD 655.40, YELLOW

STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH MINIMUM DEPTH (ITEM NO. 634301)		
QTY	STATION, OFFSET	REMARKS
171 LF	STA. 11+40.14, OFF. 1.00' (RT) TO STA. 13+11.42, OFF. 1.00' (RT)	STD. MD 620.02
57 LF	STA. 12+15.96, OFF. 1.00' (RT) TO STA. 13+68.47, OFF. 1.00' (RT)	STD. MD 620.02, R=130'
31 LF	STA. 200+42.47, OFF. 32.13' (RT) TO STA. 200+21.67, OFF. 9.73' (RT)	STD. MD 620.02, R=164'
12 LF	STA. 200+27.34, OFF. 14.11' (RT) TO STA. 200+25.00, OFF. 1.00' (RT)	STD. MD 620.02, R=5'
175 LF	STA. 200+25.00, OFF. 1.00' (RT) TO STA. 202+00.00, OFF. 1.00' (RT)	STD. MD 620.02

BLOCK RETAINING WALL (ITEM NO. 600000-C)		
QTY	STATION, OFFSET	REMARKS
118 SF	STA. 11+40.14, OFF. 7.67' (RT) TO STA. 11+77.26, OFF. 19.32' (RT)	SEE DT-01 FOR DETAILS, MATCH EXISTING

MONTGOMERY COUNTY CURB AND GUTTER (ITEM NO. 600000-A)		
QTY	STATION, OFFSET	REMARKS
27 LF	STA. 10+47.04, OFF. 11.70' (RT) TO STA. 10+73.70, OFF. 11.59' (RT)	STD. MC 101.01
39 LF	STA. 11+40.16, OFF. 9.33' (RT) TO STA. 11+76.27, OFF. 20.65' (RT)	STD. MC 101.01, R=57.9'

5 INCH CONCRETE SIDEWALK (ITEM NO. 655105)		
QTY	STATION, OFFSET TO EDGE OF SIDEWALK	REMARKS
109 SF	STA. 10+52.70, OFF. 11.01' (RT) TO STA. 10+57.70, OFF. 10.99' (RT)	STD. MD 655.12
42 SF	STA. 10+65.70, OFF. 10.96' (RT) TO STA. 10+70.70, OFF. 10.93' (RT)	NONE
1004 SF	STA. 11+40.14, OFF. 1.67' (RT) TO STA. 13+36.18, OFF. 1.67' (RT)	NONE
150 SF	STA. 13+44.28, OFF. 1.67' (RT) TO STA. 13+60.37, OFF. 1.67' (RT)	STD. MD 655.11
119 SF	STA. 200+20.78, OFF. 5.00' (RT) TO STA. 200+22.97, OFF. 10.00' (RT)	STD. MD 655.11
76 SF	STA. 200+35.97, OFF. 5.00' (RT) TO STA. 200+50.79, OFF. 1.67' (RT)	NONE
746 SF	STA. 200+50.79, OFF. 1.67' (RT) TO STA. 202+00.00, OFF. 1.67' (RT)	NONE

BLACK ORNAMENTAL FENCE (ITEM NO. 600000-D)		
QTY	STATION, OFFSET	REMARKS
31 LF	STA. 11+40.14, OFF. 8.32' (RT) TO STA. 11+71.46, OFF. 7.44' (RT)	MATCH EXISTING FENCE, MOUNT ON BLOCK RETAINING WALL

STANDARD TYPE A CURB 8 INCH X 16 INCH MINIMUM (ITEM NO. 634101)		
QTY	STATION, OFFSET	REMARKS
8 LF	STA. 10+52.70, OFF. 11.01' (RT) TO STA. 10+52.67, OFF. 2.66' (RT)	STD. MD 620.02-01

TRAFFIC BARRIER W-BEAM ONE-SIDED PARALLEL END TREATMENT (TYPE C) (ITEM NO. 606016)		
QTY	STATION, OFFSET	REMARKS
1 EA	STA. 11+55.72, OFF. 7.17' (RT) TO STA. 12+05.72, OFF. 7.17' (RT)	STD. MD 605.03
1 EA	STA. 200+56.92, OFF. 7.17' (RT) TO STA. 201+06.92, OFF. 7.17' (RT)	STD. MD 605.03

TRAFFIC BARRIER W BEAM PANEL (ITEM NO. 660671)		
QTY	STATION, OFFSET	REMARKS
1 EA	STA. 14+33.58, OFF. 3.06' (RT)	TO CONNECT EX. TO PR.

REMOVE AND DISPOSAL OF EXISTING TRAFFIC BARRIER W BEAM (ITEM NO. 662325)		
QTY	STATION, OFFSET	REMARKS
287 LF	STA. 11+43.62, OFF. 3.84' (RT) TO STA. 14+33.58, OFF. 3.06' (RT)	NONE

TRAFFIC BARRIER W BEAM USING 8 FOOT POST (ITEM NO. 660650)		
QTY	STATION, OFFSET	REMARKS
93 LF	STA. 12+05.72, OFF. 7.17' (RT) TO STA. 12+98.75, OFF. 7.17' (RT)	STD. MD 605.22
18 LF	STA. 12+98.75, OFF. 7.17' (RT) TO STA. 13+17.14, OFF. 8.69' (RT)	STD. MD 605.22, R=100'
36 LF	STA. 13+17.14, OFF. 8.69' (RT) TO STA. 13+55.34, OFF. 8.38' (RT)	STD. MD 605.22
76 LF	STA. 13+55.34, OFF. 8.38' (RT) TO STA. 14+33.58, OFF. 3.06' (RT)	STD. MD 605.22, R=98.7'
93 LF	STA. 201+06.92, OFF. 7.17' (RT) TO STA. 202+00.00, OFF. 7.17' (RT)	STD. MD 605.22

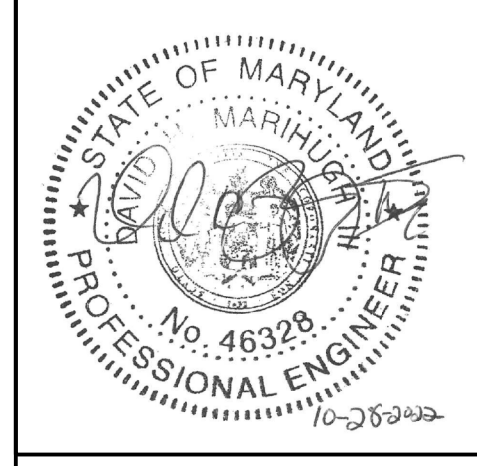
STRUCTURE SCHEDULE							
STRUCTURE	STATION	OFFSET	TYPE	TOP ELEV.	INV. OUT	STANDARD/CAT. CODE	NOTES
JB-3	200+42.92	11.49' RT	JUNCTION BOX	234.18	229.99	MD MD 386.11/300000-A	MODIFY EXISTING INLET TO JUNCTION BOX
I-4	200+52.62	3.17' RT	10' COG INLET	235.50	230.18	MD 374.31/374035	
I-5	13+13.98	2.54' RT	10' COG INLET	233.25	228.63	MD 374.31/374025	I-5 (MD 374.31) WILL REPLACE THE EX. COMBINATION INLET

PIPE SCHEDULE					
STRUCTURE TO STRUCTURE	SIZE	TYPE/CAT. CODE	LENGTH	INV. IN	INV. OUT
I-4 - JB-3	15"	RCP/302415	10'	230.18	230.09

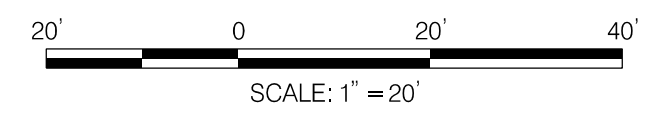
NOTE: EX-I-6 AND EX-I-2 TO REMAIN IN PLACE

CLEAN EXISTING DRAINAGE STRUCTURES (ITEM NO. 301324)		
QTY	STATION, OFFSET	REMARKS
1 EA	STA. 11+38.19, OFF. 0.54' (RT)	NONE
1 EA	STA. 13+97.67, OFF. 0.69' (LT)	NONE
1 EA	STA. 14+07.50, OFF. 37.06' (RT)	NONE

CLEAN EXISTING PIPE ANY SIZE (ITEM NO. 301320)		
QTY	STATION, OFFSET	REMARKS
242 LF	STA. 11+39.11, OFF. 2.40' (RT) TO STA. 14+06.62, OFF. 37.83' (RT)	EX. 24" RCP
36 LF	STA. 14+07.85, OFF. 35.86' (RT) TO STA. 13+97.70, OFF. 0.77' (RT)	EX. 15" RCP
32 LF	STA. 13+13.48, OFF. 2.27' (RT) TO STA. 13+21.55, OFF. 32.44' (RT)	EX. 15" RCP
35 LF	STA. 13+98.06, OFF. 1.67' (LT) TO STA. 200+40.19, OFF. 11.48' (RT)	EX. 15" RCP



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 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 ROADWAY AND DRAINAGE PLAN

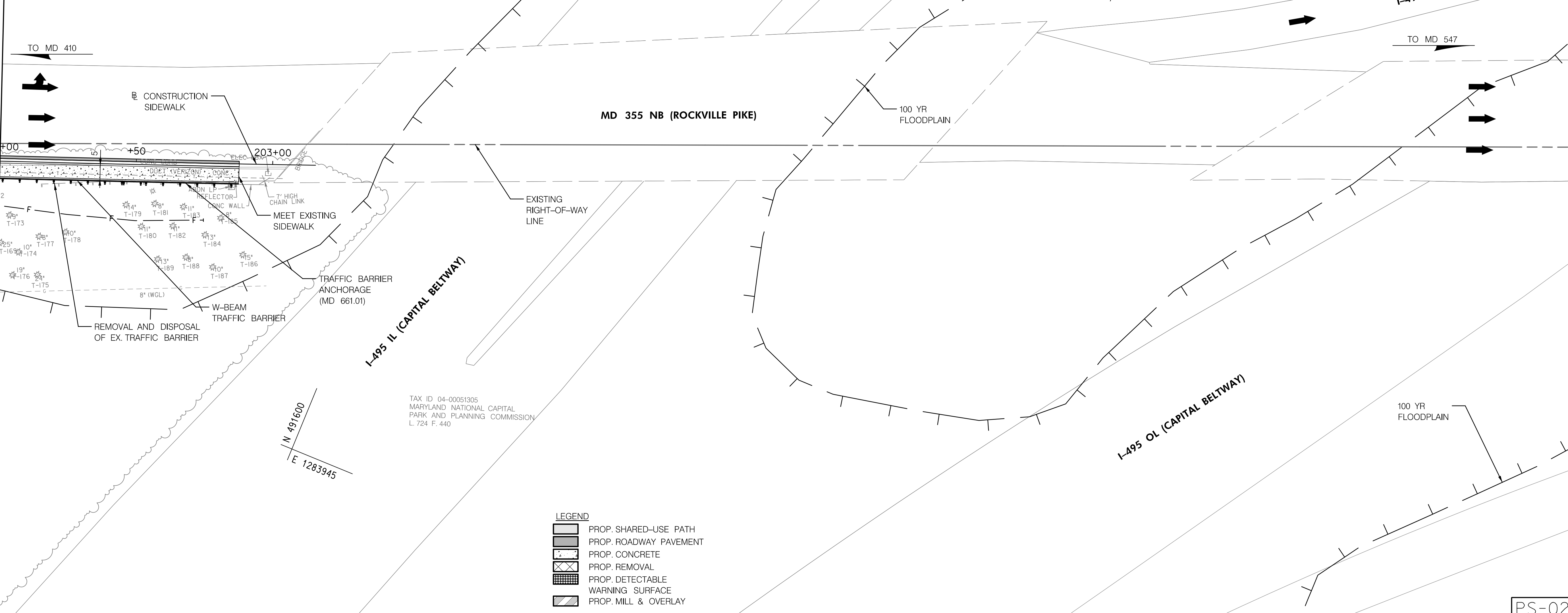
SCALE: 1"=20' SHEET 011 of 128

MATCH LINE STA. 202+00 - SEE SHEET PS-02

PS-01

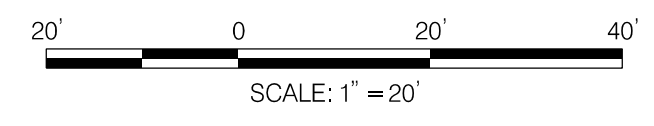
STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH MINIMUM DEPTH (ITEM NO. 634301)		
QTY	STATION, OFFSET	REMARKS
45 LF	STA. 202+00.00, OFF. 1.00' (RT) TO STA. 202+45.08, OFF. 1.00' (RT)	STD. MD 620.02
43 LF	STA. 202+45.08, OFF. 1.00' (RT) TO STA. 202+87.73, OFF. 1.00' (RT)	STD. MD 620.02, R=7677'
TRAFFIC BARRIER THRIE BEAM ANCHORAGE TO VERTICAL FACE (ITEM NO. 661579)		
QTY	STATION, OFFSET	REMARKS
1 EA	STA. 202+53.23, OFF. 7.17' (RT) TO STA. 202+87.60, OFF. 7.44' (RT)	STD. MD 661.01
REMOVE AND DISPOSAL OF EXISTING TRAFFIC BARRIER W BEAM (ITEM NO. 662325)		
QTY	STATION, OFFSET	REMARKS
71 LF	STA. 202+15.27, OFF. 9.04' (RT) TO STA. 202+85.87, OFF. 6.40' (RT)	NONE
TRAFFIC BARRIER W BEAM USING 8 FOOT POST (ITEM NO. 660650)		
QTY	STATION, OFFSET	REMARKS
45 LF	STA. 202+00.00, OFF. 7.17' (RT) TO STA. 202+45.08, OFF. 7.17' (RT)	STD. MD 620.02
8 LF	STA. 202+45.08, OFF. 7.17' (RT) TO STA. 202+53.23, OFF. 7.17' (RT)	STD. MD 620.02, R=7683.2'
5 INCH CONCRETE SIDEWALK (ITEM NO. 65105)		
QTY	STATION, OFFSET TO EDGE OF SIDEWALK	REMARKS
438 SF	STA. 202+00.00, OFF. 1.67' (RT) TO STA. 202+87.73, OFF. 1.67' (RT)	NONE

MATCH LINE STA. 202+00 - SEE SHEET PS-01



LEGEND

	PROP. SHARED-USE PATH
	PROP. ROADWAY PAVEMENT
	PROP. CONCRETE
	PROP. REMOVAL
	PROP. DETECTABLE WARNING SURFACE
	PROP. MILL & OVERLAY



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DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
ROADWAY AND DRAINAGE PLAN



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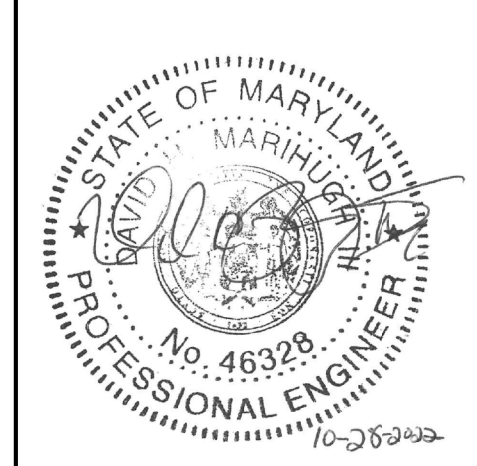
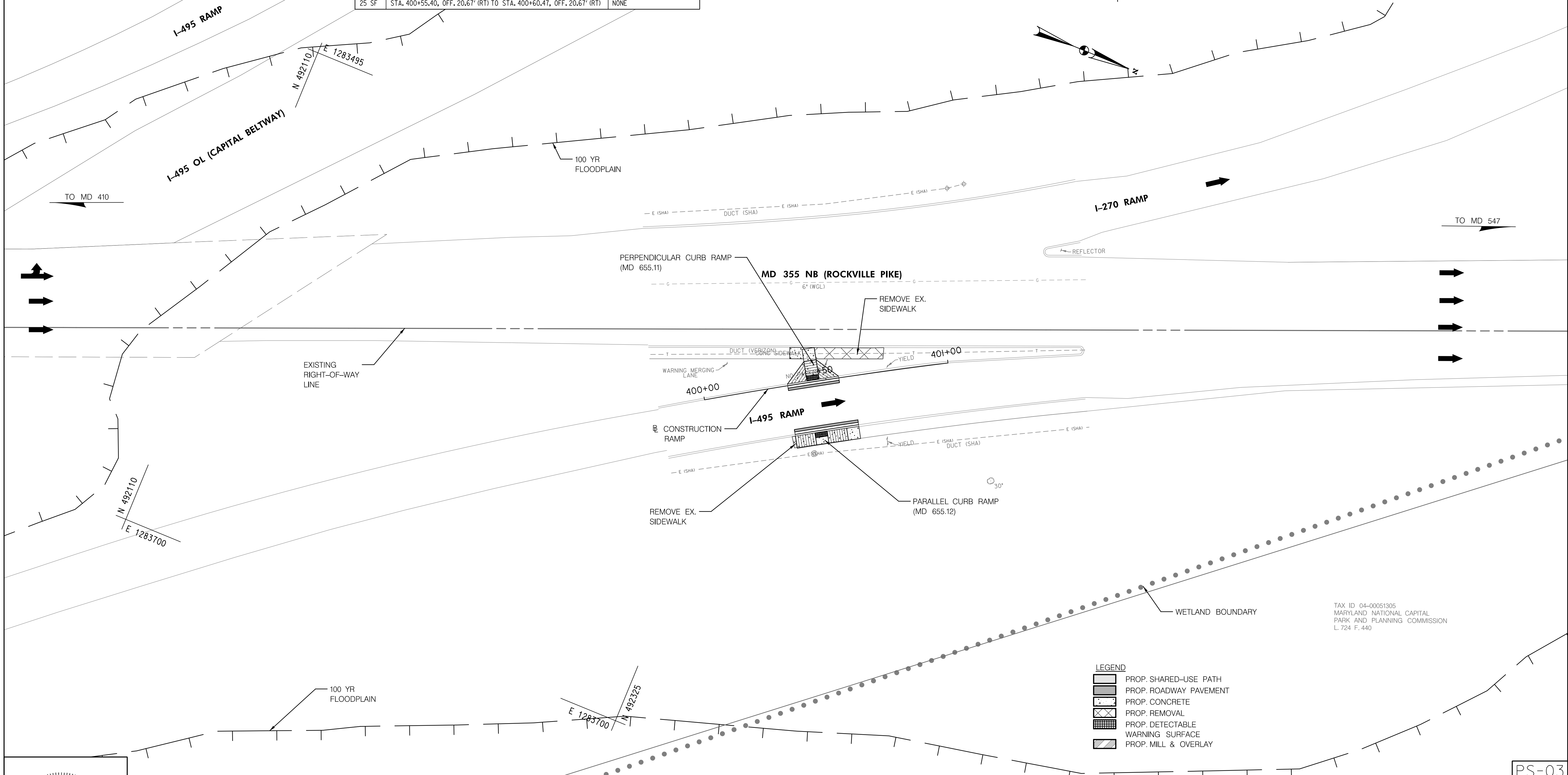
11/1/2022 \\US0525-PPFSSO\shared_projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pHD-P002.Grosvenor.dgn

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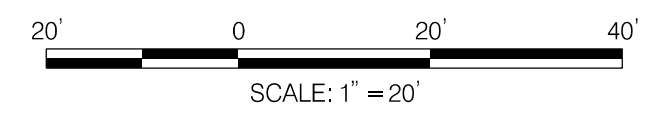
STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH MINIMUM DEPTH (ITEM NO. 63430I)		
QTY	STATION, OFFSET	REMARKS
21 LF	STA. 400+34.26, OFF. 0.00' TO STA. 400+55.25, OFF. 0.00'	STD. MD 620.02, R=1875'
26 EA	STA. 400+34.11, OFF. 20.00' (RT) TO STA. 400+60.47, OFF. 20.00' (RT)	STD. MD 620.02, R=1855'

5 INCH CONCRETE SIDEWALK (ITEM NO. 655105)		
QTY	STATION, OFFSET TO EDGE OF SIDEWALK	REMARKS
129 SF	STA. 400+42.26, OFF. 0.67' (LT) TO STA. 400+47.26, OFF. 0.67' (LT)	STD. MD 655.11
105 SF	STA. 400+42.22, OFF. 20.67' (RT) TO STA. 400+47.29, OFF. 20.67' (RT)	STD. MD 655.12
26 SF	STA. 400+37.50, OFF. 15.26' (LT) TO STA. 400+47.24, OFF. 13.67' (LT)	NONE
25 SF	STA. 400+55.40, OFF. 20.67' (RT) TO STA. 400+60.47, OFF. 20.67' (RT)	NONE

DECTABLE WARNING SURFACE FOR CURB RAMPS (ITEM NO. 655120)		
QTY	STATION, OFFSET	REMARKS
10 SF	STA. 400+42.26, OFF. 0.67' (LT) TO STA. 400+47.26, OFF. 0.67' (LT)	MD 655.40, YELLOW
10 SF	STA. 400+42.22, OFF. 20.67' (RT) TO STA. 400+47.29, OFF. 20.67' (RT)	MD 655.40, YELLOW



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NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: DHM III	DATE: NOVEMBER, 2022
DRAWN BY: DHM III	DATE: NOVEMBER, 2022
CHECKED BY: KCW	DATE: NOVEMBER, 2022
DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL	
Chief, Design Section _____	Date _____
APPROVED	
Chief, Division of Transportation Engineering _____	Date _____

LEGEND

- PROP. SHARED-USE PATH
- PROP. ROADWAY PAVEMENT
- PROP. CONCRETE
- PROP. REMOVAL
- PROP. DETECTABLE WARNING SURFACE
- PROP. MILL & OVERLAY

TAX ID 04-00051305
MARYLAND NATIONAL CAPITAL
PARK AND PLANNING COMMISSION
L. 724 F. 440

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
ROADWAY AND DRAINAGE PLAN

PS-03

STRUCTURE SCHEDULE table with columns: STRUCTURE, STATION, OFFSET, TYPE, TOP ELEV., INV. OUT, STANDARD/CAT. CODE

PIPE SCHEDULE - THIS SHEET ONLY table with columns: STRUCTURE TO STRUCTURE, SIZE, TYPE/CAT. CODE, LENGTH, INV. IN, INV. OUT

CLASS IRIPRAP FOR SLOPE AND CHANNEL PROTECTION (ITEM NO. 390321) table with columns: QTY, STATION, OFFSET, REMARKS

CLEAN EXISTING DRAINAGE STRUCTURES (ITEM NO. 301324) table with columns: QTY, STATION, OFFSET, REMARKS

CLEAN EXISTING PIPE ANY SIZE (ITEM NO. 301320) table with columns: QTY, STATION, OFFSET, REMARKS

DETECTABLE WARNING SURFACE FOR CURB RAMPS (ITEM NO. 655120) table with columns: QTY, STATION, OFFSET, REMARKS

STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH MINIMUM DEPTH (ITEM NO. 634301)

Table for STANDARD TYPE A COMBINATION CURB AND GUTTER with columns: QTY, STATION, OFFSET, REMARKS

5 INCH CONCRETE SIDEWALK (ITEM NO. 655105)

Table for 5 INCH CONCRETE SIDEWALK with columns: QTY, STATION, OFFSET TO EDGE OF SIDEWALK, REMARKS

5 INCH CONCRETE SIDEWALK (ITEM NO. 655105)

Table for 5 INCH CONCRETE SIDEWALK with columns: QTY, STATION, OFFSET TO EDGE OF SIDEWALK, REMARKS

5 INCH POROUS CONCRETE SIDEWALK (ITEM NO. 600000-E)

Table for 5 INCH POROUS CONCRETE SIDEWALK with columns: QTY, STATION, OFFSET TO EDGE OF SIDEWALK, REMARKS

STANDARD TYPE A CURB 8 INCH X 16 INCH MINIMUM (ITEM NO. 634101)

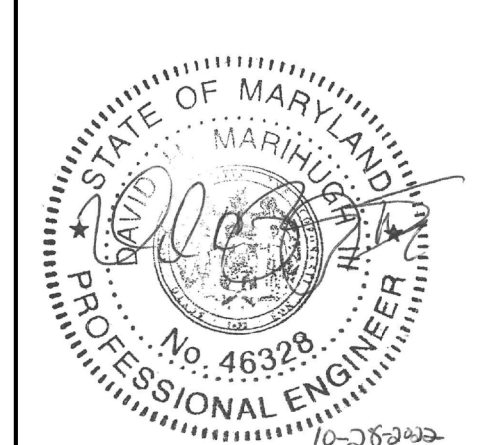
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STANDARD CURB OPENING FOR COMBINATION CONCRETE CURB AND GUTTER (ITEM NO. 634350)

Table for STANDARD CURB OPENING with columns: QTY, STATION, OFFSET, REMARKS

REMOVE AND RESET WOODEN GATE (ITEM NO. 600000-B)

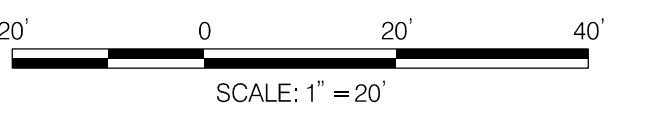
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Revision and approval table with columns: NO., REVISION, BY, APP'D, DATE, DESIGNED BY, DRAWN BY, CHECKED BY, DRAWING NO., RECOMMENDED FOR APPROVAL, APPROVED, Chief, Design Section, APPROVED, Chief, Division of Transportation Engineering

DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS ROADWAY AND DRAINAGE PLAN

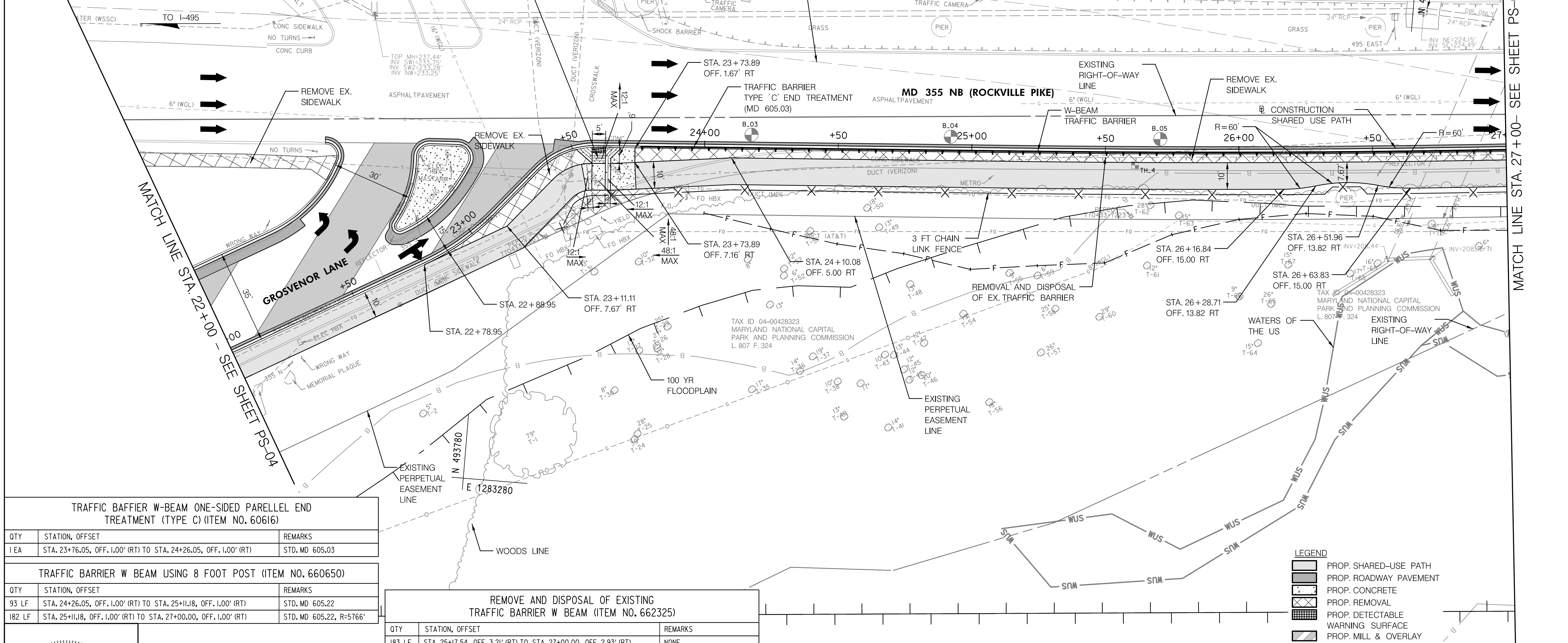
11/1/2022 \\US0525-PPFSSO\shared_projects\202601\401\27 BPPA - Grosvenor P\Project\700 CADD\700 Sheet\PHD-P005-Grosvenor.dgn

QTY	STATION, OFFSET	REMARKS
79 LF	STA. 22+00.00, OFF. 1.00' (RT) TO STA. 22+78.95, OFF. 1.00' (RT)	STD. MD 620.02
33 LF	STA. 22+78.95, OFF. 1.00' (RT) TO STA. 23+11.93, OFF. 1.00' (RT)	STD. MD 620.02, R=93.3'
22 LF	STA. 23+11.93, OFF. 1.00' (RT) TO STA. 23+34.19, OFF. 1.00' (RT)	STD. MD 620.02
24 LF	STA. 23+34.19, OFF. 1.00' (RT) TO STA. 23+59.23, OFF. 1.00' (RT)	STD. MD 620.02, R=30'
159 LF	STA. 23+59.23, OFF. 1.00' (RT) TO STA. 25+18.72, OFF. 1.00' (RT)	STD. MD 620.02
181 LF	STA. 25+18.72, OFF. 1.00' (RT) TO STA. 27+00.00, OFF. 1.00' (RT)	STD. MD 620.02, R=5766'
32 LF	STA. 22+00.00, OFF. 34.00' (LT) TO STA. 22+31.72, OFF. 34.00' (LT)	STD. MD 620.02
38 LF	STA. 22+31.72, OFF. 34.00' (LT) TO STA. 22+66.04, OFF. 47.49' (LT)	STD. MD 620.02, R=50.4'
10 LF	STA. 22+66.04, OFF. 47.49' (LT) TO STA. 22+64.81, OFF. 55.65' (LT)	STD. MD 620.02, R=5'
7 LF	STA. 22+75.66, OFF. 17.07' (LT) TO STA. 22+81.95, OFF. 21.04' (LT)	STD. MD 620.02, R=80.4'
20 LF	STA. 22+81.95, OFF. 21.04' (LT) TO STA. 23+02.17, OFF. 24.35' (LT)	STD. MD 620.02, R=42.3'
8 LF	STA. 23+02.17, OFF. 24.35' (LT) TO STA. 23+12.95, OFF. 34.48' (LT)	STD. MD 620.02, R=5'
10 LF	STA. 23+12.95, OFF. 34.48' (LT) TO STA. 23+19.89, OFF. 27.00' (LT)	STD. MD 620.02
10 LF	STA. 23+19.89, OFF. 27.00' (LT) TO STA. 23+17.69, OFF. 18.82' (LT)	STD. MD 620.02, R=5'
17 LF	STA. 23+17.69, OFF. 18.82' (LT) TO STA. 22+98.81, OFF. 15.17' (LT)	STD. MD 620.02, R=67.1'
19 LF	STA. 22+98.81, OFF. 15.17' (LT) TO STA. 22+76.70, OFF. 13.39' (LT)	STD. MD 620.02, R=45'
5 LF	STA. 22+76.70, OFF. 13.39' (LT) TO STA. 22+75.66, OFF. 17.07' (LT)	STD. MD 620.02, R=2'

QTY	STATION, OFFSET	REMARKS
10 LF	STA. 23+24.89, OFF. 22.80' (RT) TO STA. 23+34.19, OFF. 19.67' (RT)	NONE
9 LF	STA. 23+34.19, OFF. 19.67' (RT) TO STA. 23+59.23, OFF. 19.67' (RT)	NONE, R=11.3'
6 LF	STA. 23+59.23, OFF. 19.67' (RT) TO STA. 23+65.69, OFF. 19.67' (RT)	NONE
45 LF	STA. 23+65.69, OFF. 19.67' (RT) TO STA. 24+10.43, OFF. 17.00' (RT)	NONE
108 LF	STA. 24+10.43, OFF. 17.00' (RT) TO STA. 25+18.72, OFF. 17.00' (RT)	NONE
114 LF	STA. 25+18.72, OFF. 17.00' (RT) TO STA. 26+31.91, OFF. 17.00' (RT)	NONE, R=5782'
4 LF	STA. 26+31.91, OFF. 17.00' (RT) TO STA. 26+34.99, OFF. 14.26' (RT)	NONE
10 LF	STA. 26+34.99, OFF. 14.26' (RT) TO STA. 26+45.40, OFF. 14.28' (RT)	NONE, R=5782'
4 LF	STA. 26+45.40, OFF. 14.28' (RT) TO STA. 26+47.86, OFF. 17.00' (RT)	NONE
52 LF	STA. 26+47.86, OFF. 17.00' (RT) TO STA. 27+00.00, OFF. 17.00' (RT)	NONE, R=5782'

QTY	STATION, OFFSET TO EDGE OF SIDEWALK	REMARKS
168 SF	STA. 23+57.82, OFF. 1.67' (RT) TO STA. 23+62.89, OFF. 1.67' (RT)	STD. MD 655J3
137 SF	STA. 23+62.89, OFF. 7.70' (RT) TO STA. 23+73.89, OFF. 1.67' (RT)	BUS STOP
416 SF	STA. 22+75.47, OFF. 15.03' (LT) TO STA. 23+15.93, OFF. 30.29' (LT)	CONCRETE ISLAND

QTY	STATION, OFFSET	REMARKS
11 SF	STA. 23+57.82, OFF. 1.67' (RT) TO STA. 23+62.89, OFF. 1.67' (RT)	MD 655.40, YELLOW



QTY	STATION, OFFSET	REMARKS
1 EA	STA. 23+76.05, OFF. 1.00' (RT) TO STA. 24+26.05, OFF. 1.00' (RT)	STD. MD 605.03

QTY	STATION, OFFSET	REMARKS
93 LF	STA. 24+26.05, OFF. 1.00' (RT) TO STA. 25+11.18, OFF. 1.00' (RT)	STD. MD 605.22
182 LF	STA. 25+11.18, OFF. 1.00' (RT) TO STA. 27+00.00, OFF. 1.00' (RT)	STD. MD 605.22, R=5766'

QTY	STATION, OFFSET	REMARKS
183 LF	STA. 25+17.54, OFF. 3.21' (RT) TO STA. 27+00.00, OFF. 2.93' (RT)	NONE

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LEGEND

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- PROP. ROADWAY PAVEMENT
- PROP. CONCRETE
- PROP. REMOVAL
- PROP. DETECTABLE WARNING SURFACE
- PROP. MILL & OVERLAY

DEPARTMENT OF TRANSPORTATION
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MONTGOMERY COUNTY, MARYLAND

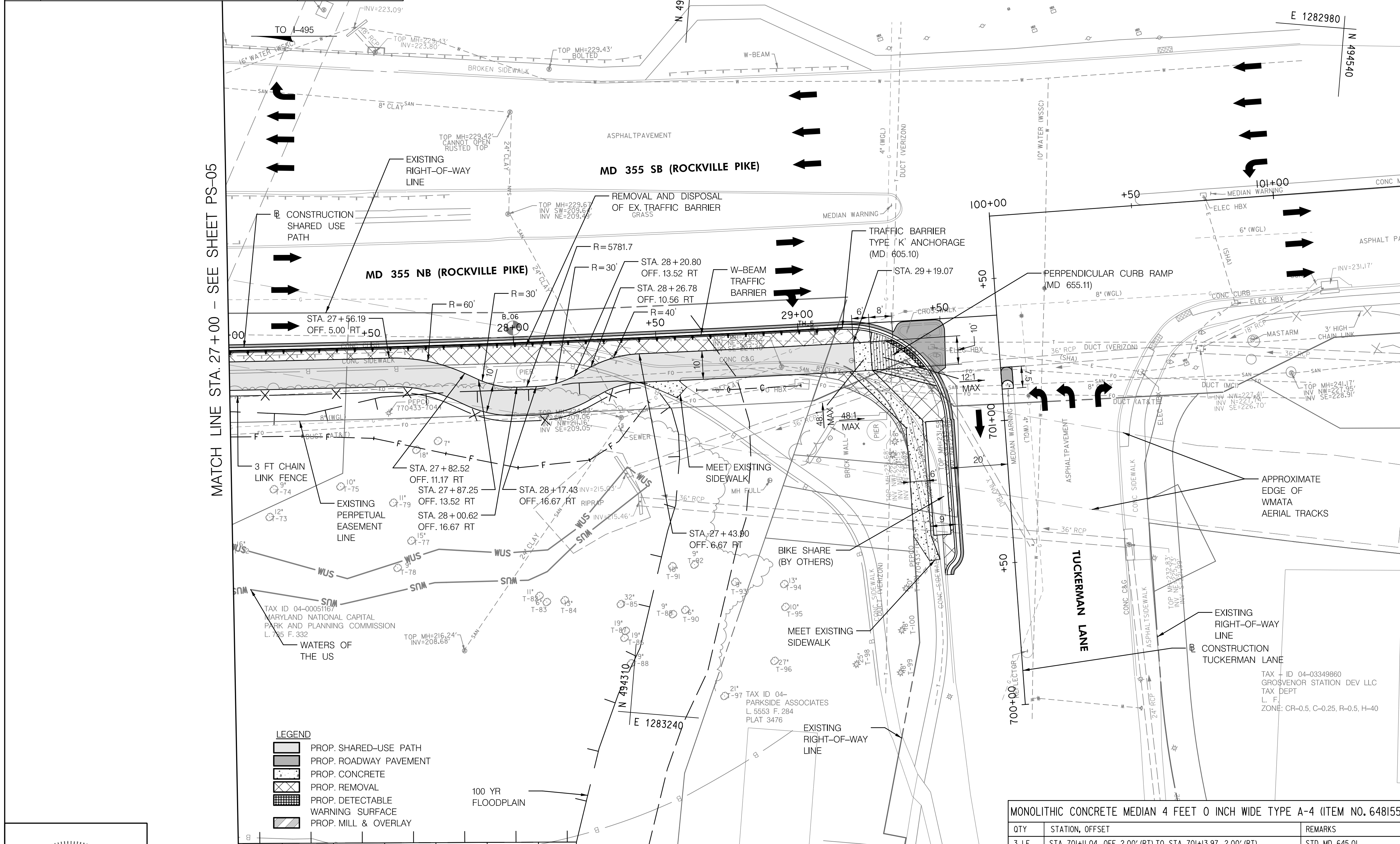
GROSVENOR IMPROVEMENTS
ROADWAY AND DRAINAGE PLAN

PS-05

MONTGOMERY COUNTY CURB AND GUTTER (ITEM NO. 600000-A)		
QTY	STATION, OFFSET	REMARKS
5 LF	STA. 700+47.43, OFF. 24.00' (LT) TO STA. 700+51.43, OFF. 22.00' (LT)	STD. MC 100.0I, R=5'
5 LF	STA. 700+51.43, OFF. 22.00' (LT) TO STA. 700+55.43, OFF. 20.00' (LT)	STD. MC 100.0I, R=5'
46	STA. 700+55.43, OFF. 20.00' (LT) TO STA. 701+01.75, 20.00' (LT)	STD. MC 100.0I

DECTABLE WARNING SURFACE FOR CURB RAMPS (ITEM NO. 655120)		
QTY	STATION, OFFSET	REMARKS
21 SF	STA. 701+20.94, OFF. 26.53' (LT) TO STA. 701+30.96, OFF. 36.96' (LT)	MD 655.40, YELLOW

REMOVE AND DISPOSAL OF EXISTING TRAFFIC BARRIER W BEAM (ITEM NO. 662325)		
QTY	STATION, OFFSET	REMARKS
142 LF	STA. 27+00.00, OFF. 2.93' (RT) TO STA. 28+41.28, OFF. 10.42' (RT)	NONE



MATCH LINE STA. 27+00 - SEE SHEET PS-05

LEGEND

- PROP. SHARED-USE PATH
- PROP. ROADWAY PAVEMENT
- PROP. CONCRETE
- PROP. REMOVAL
- PROP. DETECTABLE WARNING SURFACE
- PROP. MILL & OVERLAY

TRAFFIC BARRIER W BEAM USING 8 FOOT POST (ITEM NO. 660650)		
QTY	STATION, OFFSET	REMARKS
216 LF	STA. 27+00.00, OFF. 1.00' (RT) TO STA. 29+15.61, OFF. 1.00' (RT)	STD. MD 605.22, R=5766'

TRAFFIC BARRIER W-BEAM ONE-SIDED DOWNSTREAM END TREATMENT TYPE K (ITEM NO. 606025)		
QTY	STATION, OFFSET	REMARKS
1 EA	STA. 29+15.61, OFF. 1.00' (RT)	STD. MD 605.10

STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH MINIMUM DEPTH (ITEM NO. 634313)		
QTY	STATION, OFFSET	REMARKS
216 LF	STA. 27+00.00, OFF. 1.00' (RT) TO STA. 29+15.61, OFF. 1.00' (RT)	STD. MD 620.02, R=5766'
54 LF	STA. 29+15.61, OFF. 1.00' (RT) TO STA. 701+01.75, OFF. 20.00' (RT)	STD. MD 620.02, R=35'

5-INCH CONCRETE SIDEWALK (ITEM NO. 655105)		
QTY	STATION, OFFSET EDGE OF SIDEWALK	REMARKS
281 SF	STA. 701+20.94, OFF. 26.53' (LT) TO STA. 701+30.96, OFF. 36.96' (LT)	STD. MD 655.11
438 SF	STA. 700+53.02, OFF. 26.09' (LT) TO STA. 701+20.98, OFF. 44.99' (LT)	NONE
50 SF	STA. 28+43.36, OFF. 16.67' (RT) TO STA. 28+57.80, 16.67' (RT)	NONE

3 FOOT GALVANIZED CHAIN LINK FENCE WITH BLACK BONDED VINYL COATING (ITEM NO. 690130)		
QTY	STATION, OFFSET	REMARKS
56 LF	STA. 27+00.00, OFF. 17.00' (RT) TO STA. 27+56.19, OFF. 17.00' (RT)	NONE, R=5782'
22 LF	STA. 27+56.19, OFF. 17.00' (RT) TO STA. 27+77.22, OFF. 21.93' (RT)	NONE, R=48'
5 LF	STA. 27+77.22, OFF. 21.93' (RT) TO STA. 27+81.94, OFF. 24.27' (RT)	NONE
19 LF	STA. 27+81.94, OFF. 24.27' (RT) TO STA. 28+00.62, OFF. 28.67' (RT)	NONE, R=42'
7 LF	STA. 28+00.62, OFF. 28.67' (RT) TO STA. 28+07.43, OFF. 28.67' (RT)	NONE, R=5793.7'
19 LF	STA. 28+07.43, OFF. 28.67' (RT) TO STA. 28+26.12, OFF. 24.27' (RT)	NONE, R=42'
6 LF	STA. 28+26.12, OFF. 24.27' (RT) TO STA. 28+31.60, OFF. 21.55' (RT)	NONE
13 LF	STA. 28+31.60, OFF. 21.55' (RT) TO STA. 28+43.90, OFF. 18.67' (RT)	NONE, R=28'

MONOLITHIC CONCRETE MEDIAN 4 FEET 0 INCH WIDE TYPE A-4 (ITEM NO. 648155)		
QTY	STATION, OFFSET	REMARKS
3 LF	STA. 701+11.04, OFF. 2.00' (RT) TO STA. 701+13.97, 2.00' (RT)	STD. MD 645.01



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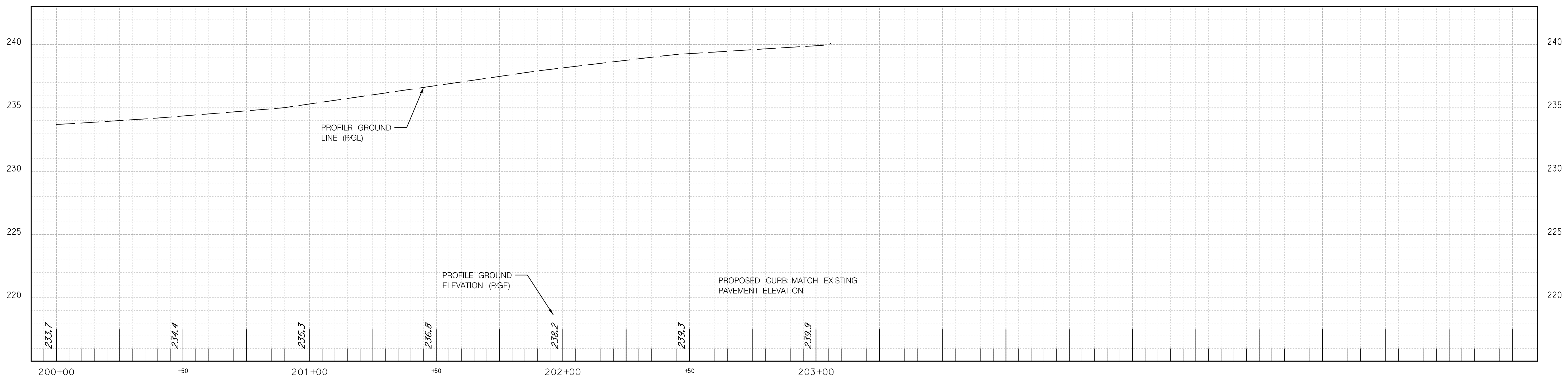
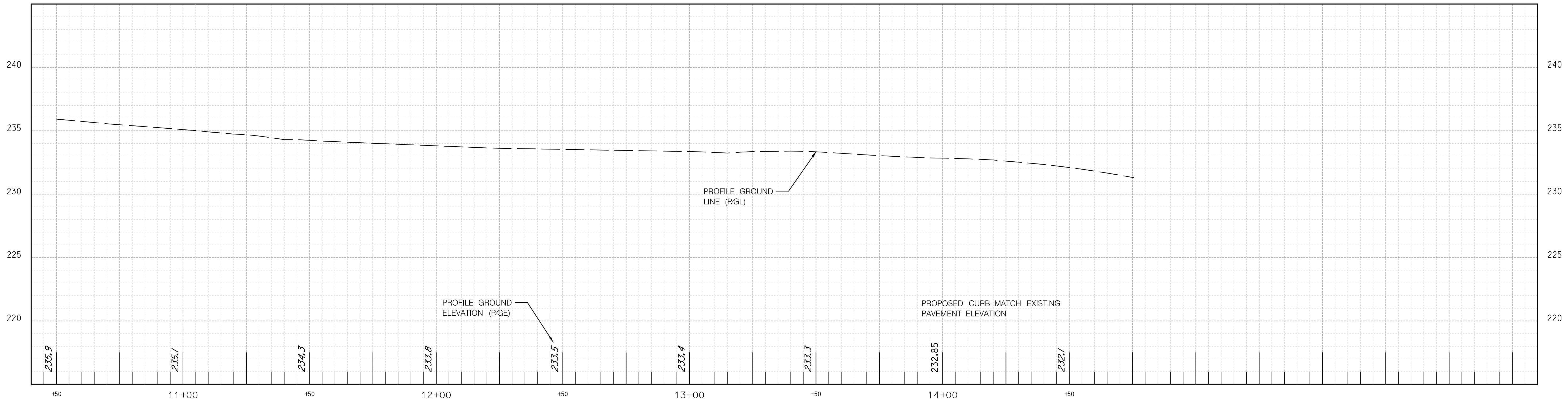
DEPARTMENT OF TRANSPORTATION
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MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 ROADWAY AND DRAINAGE PLAN

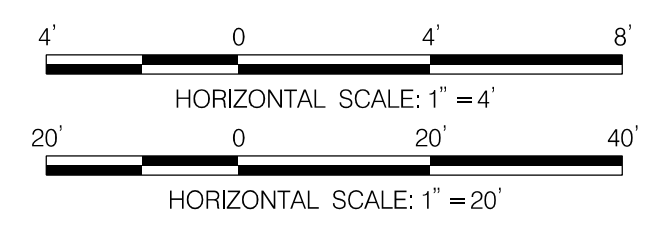
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HP-01

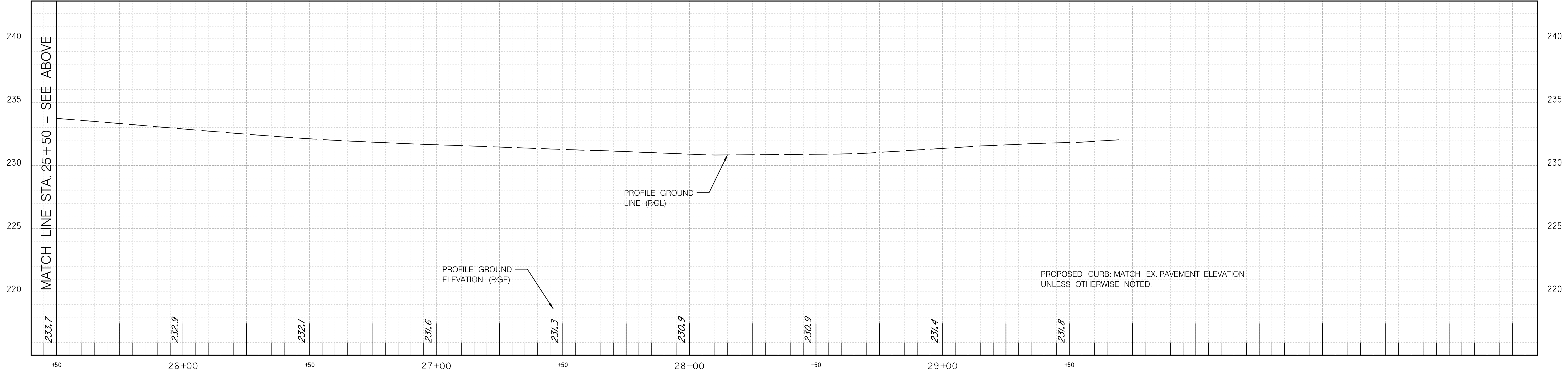
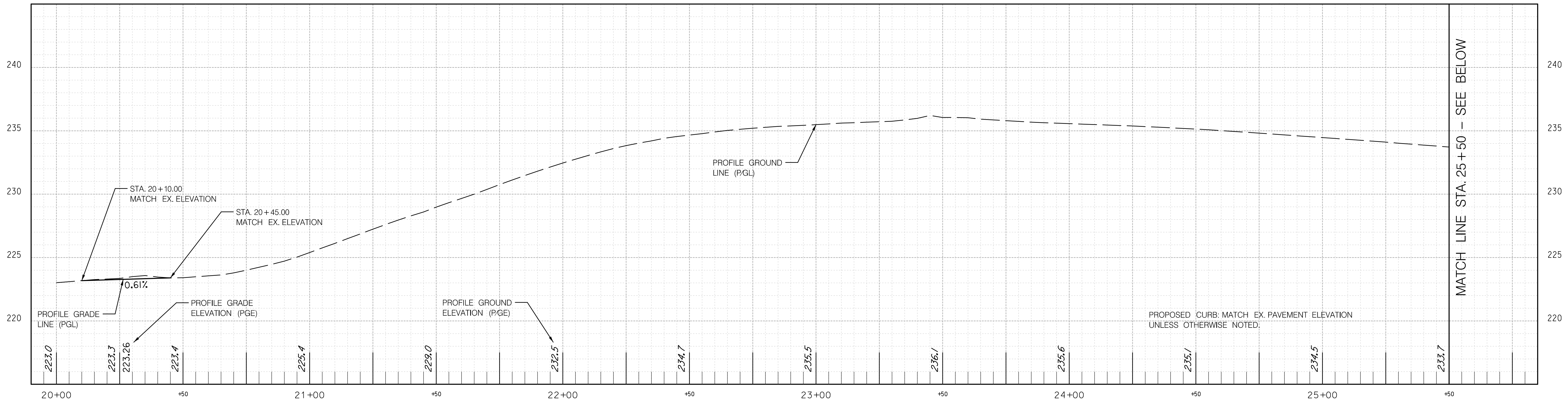
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MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 SIDEWALK PROFILES

SCALE: H 1"=20' : V 1"=4'

SHEET 017 of 128

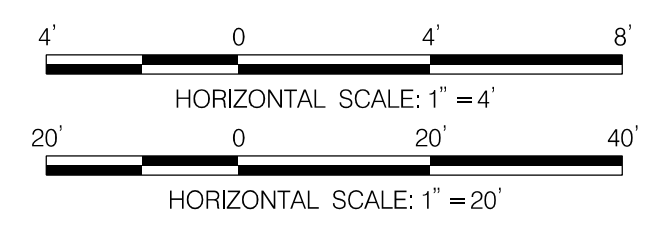
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Chief, Design Section _____ Date _____

APPROVED

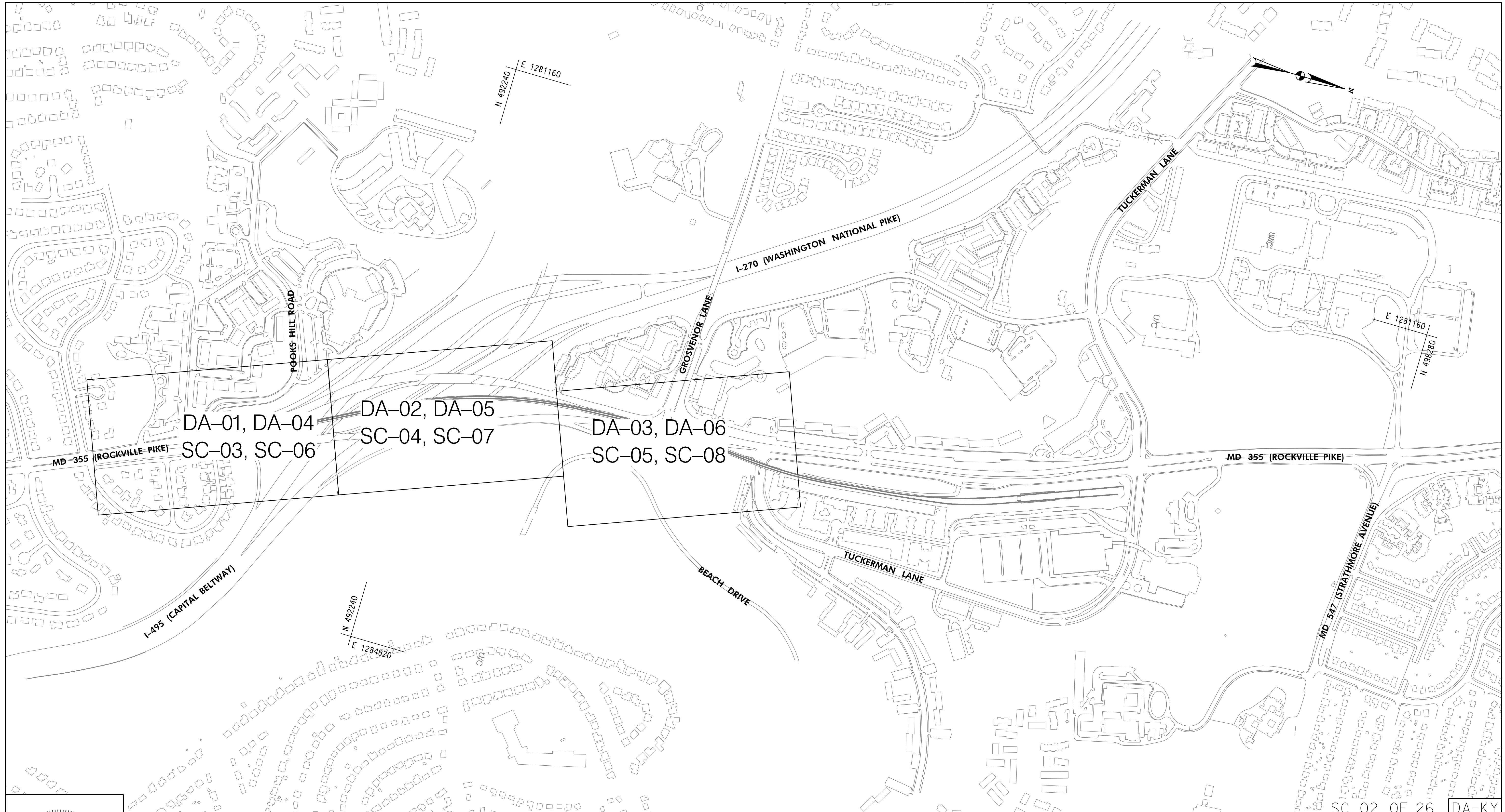
Chief, Division of Transportation Engineering _____ Date _____

DEPARTMENT OF TRANSPORTATION
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 MONTGOMERY COUNTY, MARYLAND

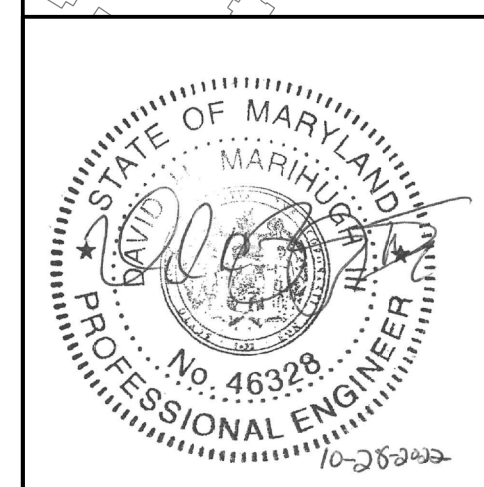
GROSVENOR IMPROVEMENTS
 SHARED-USE PATH PROFILE

HP-02

11/1/2022 \\US0525-PPFSSO\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pDA-KEY_Grosvenor.dgn



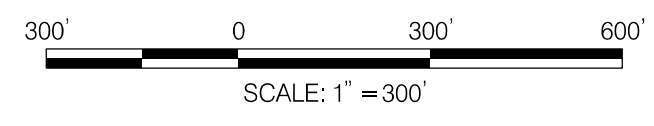
SC 02 OF 26 DA-KY



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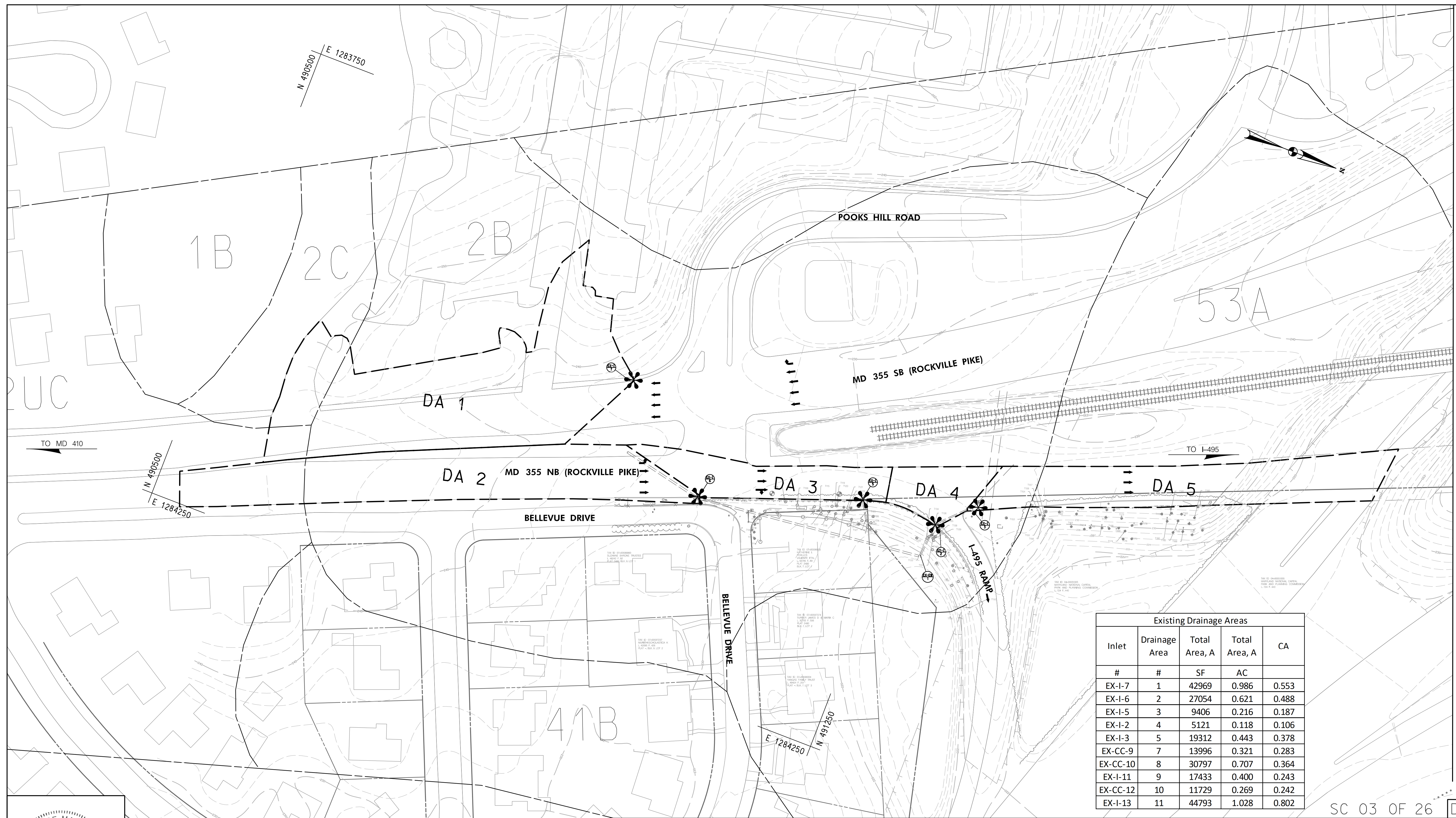
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MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
DRAINAGE AREA MAP
KEY PLAN

11/1/2022 \\US0525-PPFSSO\shared_projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pDA-E001_Grosvenor.dgn



MATCH LINE - SEE SHEET DA-02

Existing Drainage Areas				
Inlet	Drainage Area	Total Area, A	Total Area, A	CA
#	#	SF	AC	
EX-I-7	1	42969	0.986	0.553
EX-I-6	2	27054	0.621	0.488
EX-I-5	3	9406	0.216	0.187
EX-I-2	4	5121	0.118	0.106
EX-I-3	5	19312	0.443	0.378
EX-CC-9	7	13996	0.321	0.283
EX-CC-10	8	30797	0.707	0.364
EX-I-11	9	17433	0.400	0.243
EX-CC-12	10	11729	0.269	0.242
EX-I-13	11	44793	1.028	0.802

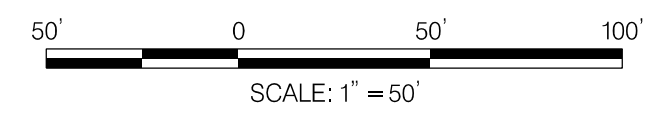
SC 03 OF 26 DA-01



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DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

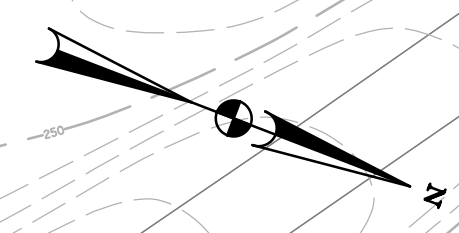
GROSVENOR IMPROVEMENTS
EXISTING DRAINAGE AREA MAP

SCALE: 1"=50' SHEET 020 of 128

Existing Drainage Areas				
Inlet #	Drainage Area #	Total Area, A SF	Total Area, A AC	CA
EX-I-7	1	42969	0.986	0.553
EX-I-6	2	27054	0.621	0.488
EX-I-5	3	9406	0.216	0.187
EX-I-2	4	5121	0.118	0.106
EX-I-3	5	19312	0.443	0.378
EX-CC-9	7	13996	0.321	0.283
EX-CC-10	8	30797	0.707	0.364
EX-I-11	9	17433	0.400	0.243
EX-CC-12	10	11729	0.269	0.242
EX-I-13	11	44793	1.028	0.802

MATCH LINE - SEE SHEET DA-01

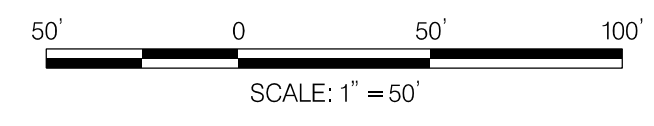
MATCH LINE - SEE SHEET DA-03



N 492060
E 1283810

E 1283310
N 492970

SC 04 OF 26 DA-02



NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: MK	DATE: NOVEMBER, 2022
DRAWN BY: MK	DATE: NOVEMBER, 2022
CHECKED BY: DHM III	DATE: NOVEMBER, 2022
DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL	
Chief, Design Section	Date
APPROVED	
Chief, Division of Transportation Engineering	Date

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
EXISTING DRAINAGE AREA MAP

SCALE: 1"=50' SHEET 021 of 128



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LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



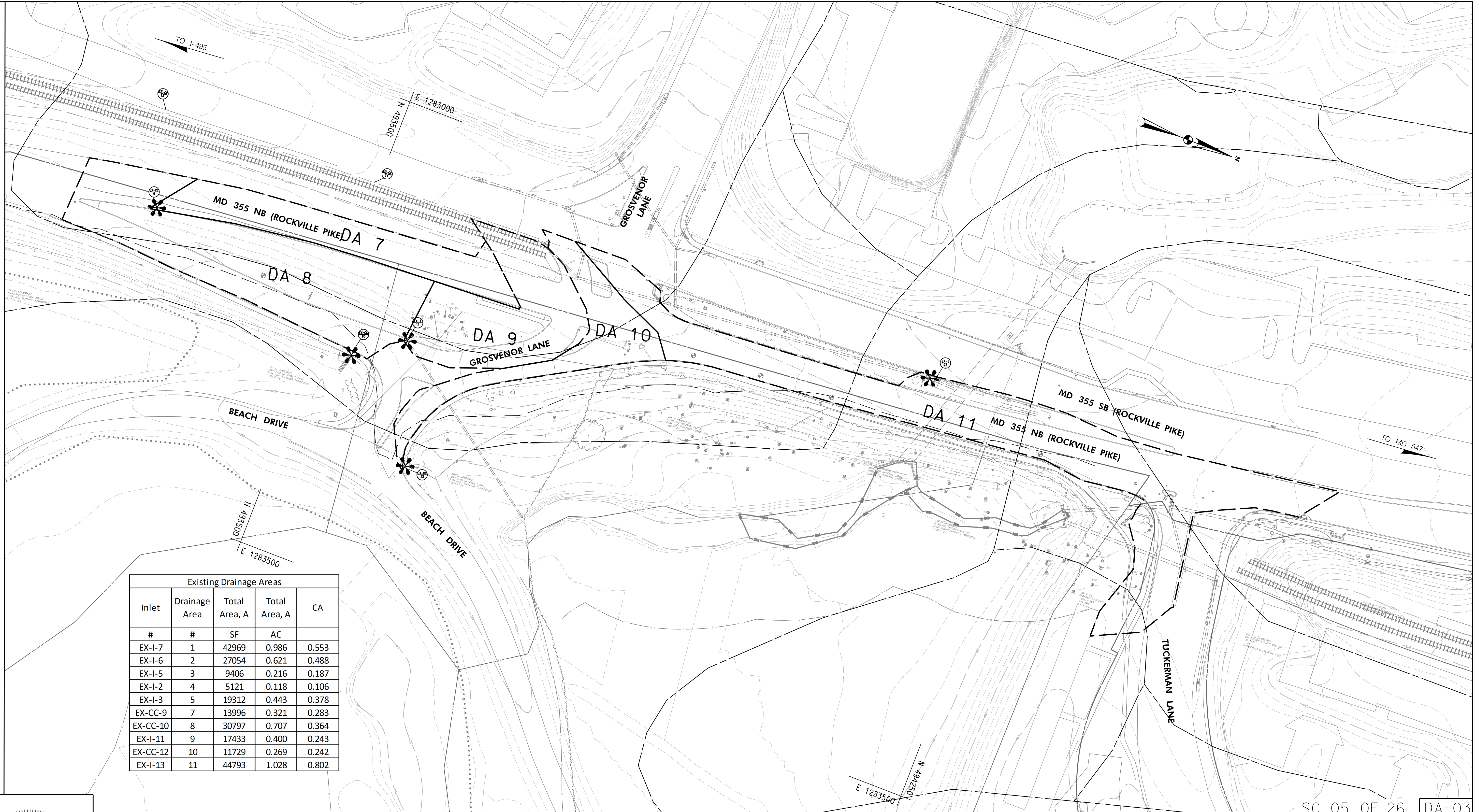
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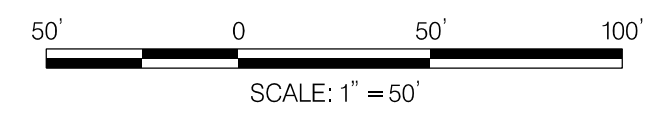
11/1/2022 \\US0525-PFSS01\shared\projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pDA-E002_Grosvenor.dgn

11/1/2022 \\US0525-PPFSSO\shared\projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pDA-E003_Grosvenor.dgn

MATCH LINE - SEE SHEET DA-02



Existing Drainage Areas				
Inlet #	Drainage Area #	Total Area, A SF	Total Area, A AC	CA
EX-I-7	1	42969	0.986	0.553
EX-I-6	2	27054	0.621	0.488
EX-I-5	3	9406	0.216	0.187
EX-I-2	4	5121	0.118	0.106
EX-I-3	5	19312	0.443	0.378
EX-CC-9	7	13996	0.321	0.283
EX-CC-10	8	30797	0.707	0.364
EX-I-11	9	17433	0.400	0.243
EX-CC-12	10	11729	0.269	0.242
EX-I-13	11	44793	1.028	0.802



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Chief, Design Section	Date
APPROVED	
Chief, Division of Transportation Engineering	Date

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DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

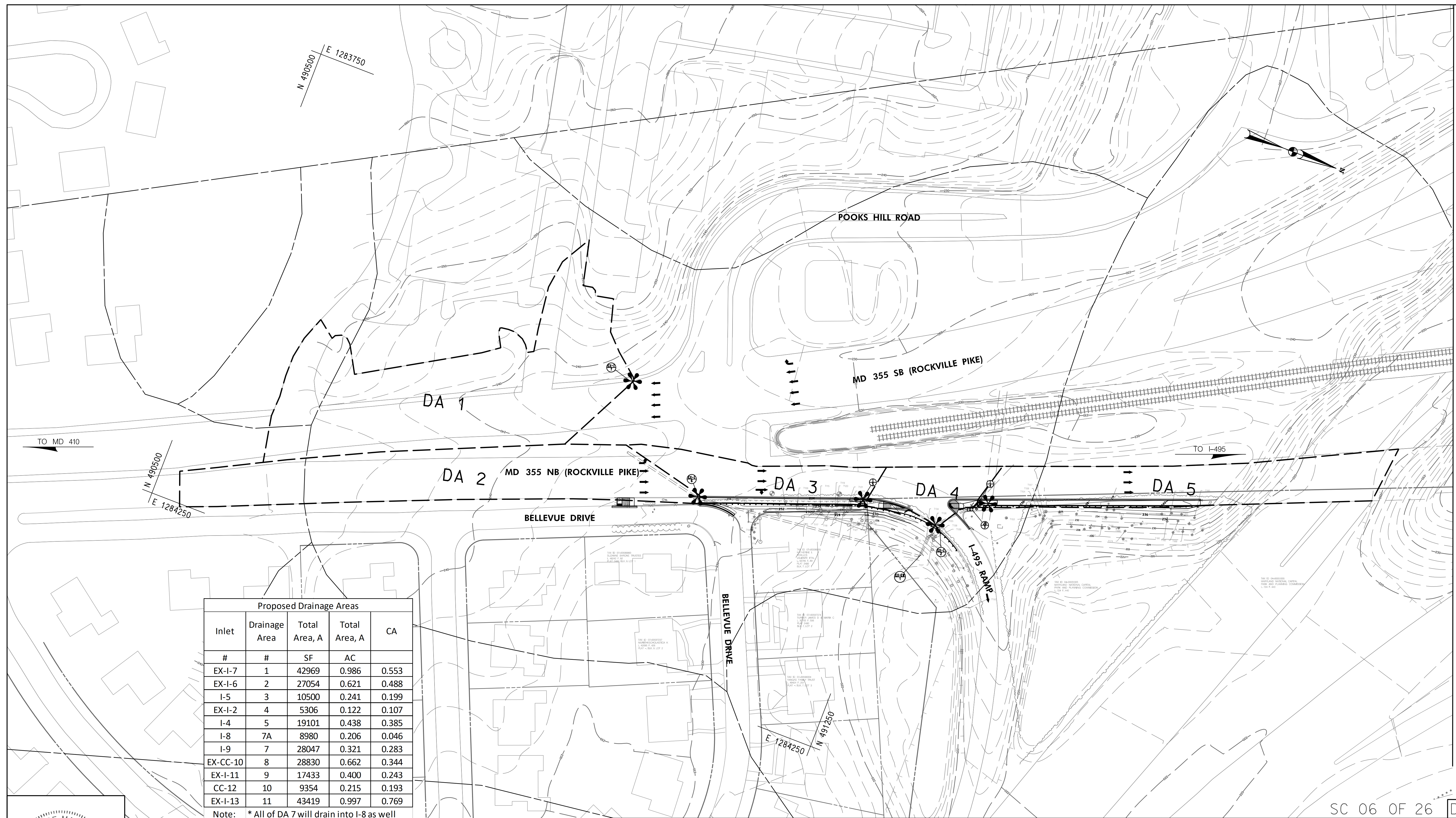
GROSVENOR IMPROVEMENTS
EXISTING DRAINAGE AREA MAP

SCALE: 1"=50'

SHEET 022 of 128

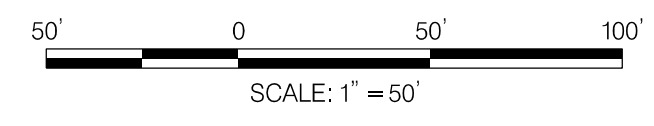
SC 05 OF 26 DA-03

11/1/2022 \\US0525-PPFSSO\shared_projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pDA-Pool_Grosvenor.dgn



Proposed Drainage Areas				
Inlet #	Drainage Area #	Total Area, A SF	Total Area, A AC	CA
EX-I-7	1	42969	0.986	0.553
EX-I-6	2	27054	0.621	0.488
I-5	3	10500	0.241	0.199
EX-I-2	4	5306	0.122	0.107
I-4	5	19101	0.438	0.385
I-8	7A	8980	0.206	0.046
I-9	7	28047	0.321	0.283
EX-CC-10	8	28830	0.662	0.344
EX-I-11	9	17433	0.400	0.243
CC-12	10	9354	0.215	0.193
EX-I-13	11	43419	0.997	0.769

Note: * All of DA 7 will drain into I-8 as well



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LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: KN	DATE: NOVEMBER, 2022
DRAWN BY: KM	DATE: NOVEMBER, 2022
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Chief, Design Section	Date
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Chief, Division of Transportation Engineering	Date

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MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
PROPOSED DRAINAGE AREA MAP

SCALE: 1"=50'

SHEET 023 of 128

MATCH LINE - SEE SHEET DA-05

SC 06 OF 26 DA-04

11/1/2022 \\US0525-PFSSO\shared\projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pDA-P002_Grosvenor.dgn

Proposed Drainage Areas				
Inlet #	Drainage Area #	Total Area, A SF	Total Area, A AC	CA
EX-I-7	1	42969	0.986	0.553
EX-I-6	2	27054	0.621	0.488
I-5	3	10500	0.241	0.199
EX-I-2	4	5306	0.122	0.107
I-4	5	19101	0.438	0.385
I-8	7A	8980	0.206	0.046
I-9	7	28047	0.321	0.283
EX-CC-10	8	28830	0.662	0.344
EX-I-11	9	17433	0.400	0.243
CC-12	10	9354	0.215	0.193
EX-I-13	11	43419	0.997	0.769

Note: * All of DA 7 will drain into I-8 as well

MATCH LINE - SEE SHEET DA-04

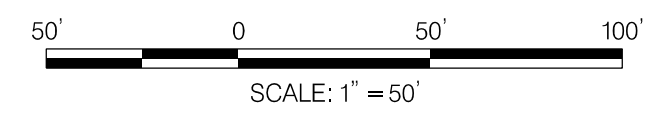
MATCH LINE - SEE SHEET DA-06



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APPROVED	
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DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
PROPOSED DRAINAGE AREA MAP

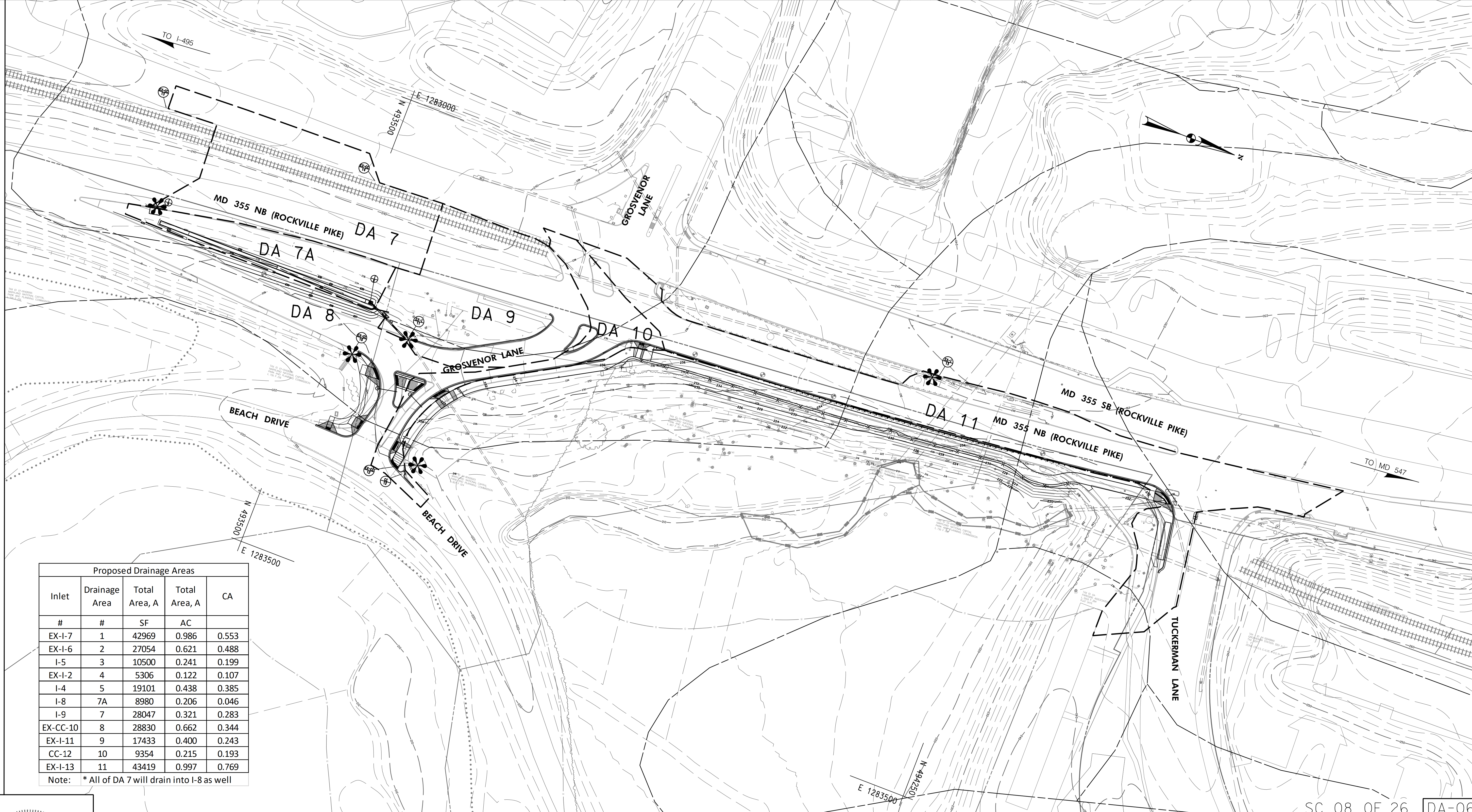
SCALE: 1"=50'

SHEET 024 of 128

SC 07 OF 26 DA-05

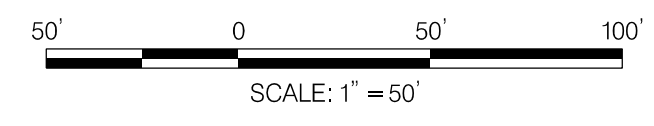
11/1/2022 \\US0525-PPFSSO\shared\projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pDA-P003_Grosvenor.dgn

MATCH LINE - SEE SHEET DA-05



Proposed Drainage Areas				
Inlet	Drainage Area	Total Area, A	Total Area, A	CA
#	#	SF	AC	
EX-I-7	1	42969	0.986	0.553
EX-I-6	2	27054	0.621	0.488
I-5	3	10500	0.241	0.199
EX-I-2	4	5306	0.122	0.107
I-4	5	19101	0.438	0.385
I-8	7A	8980	0.206	0.046
I-9	7	28047	0.321	0.283
EX-CC-10	8	28830	0.662	0.344
EX-I-11	9	17433	0.400	0.243
CC-12	10	9354	0.215	0.193
EX-I-13	11	43419	0.997	0.769

Note: * All of DA 7 will drain into I-8 as well



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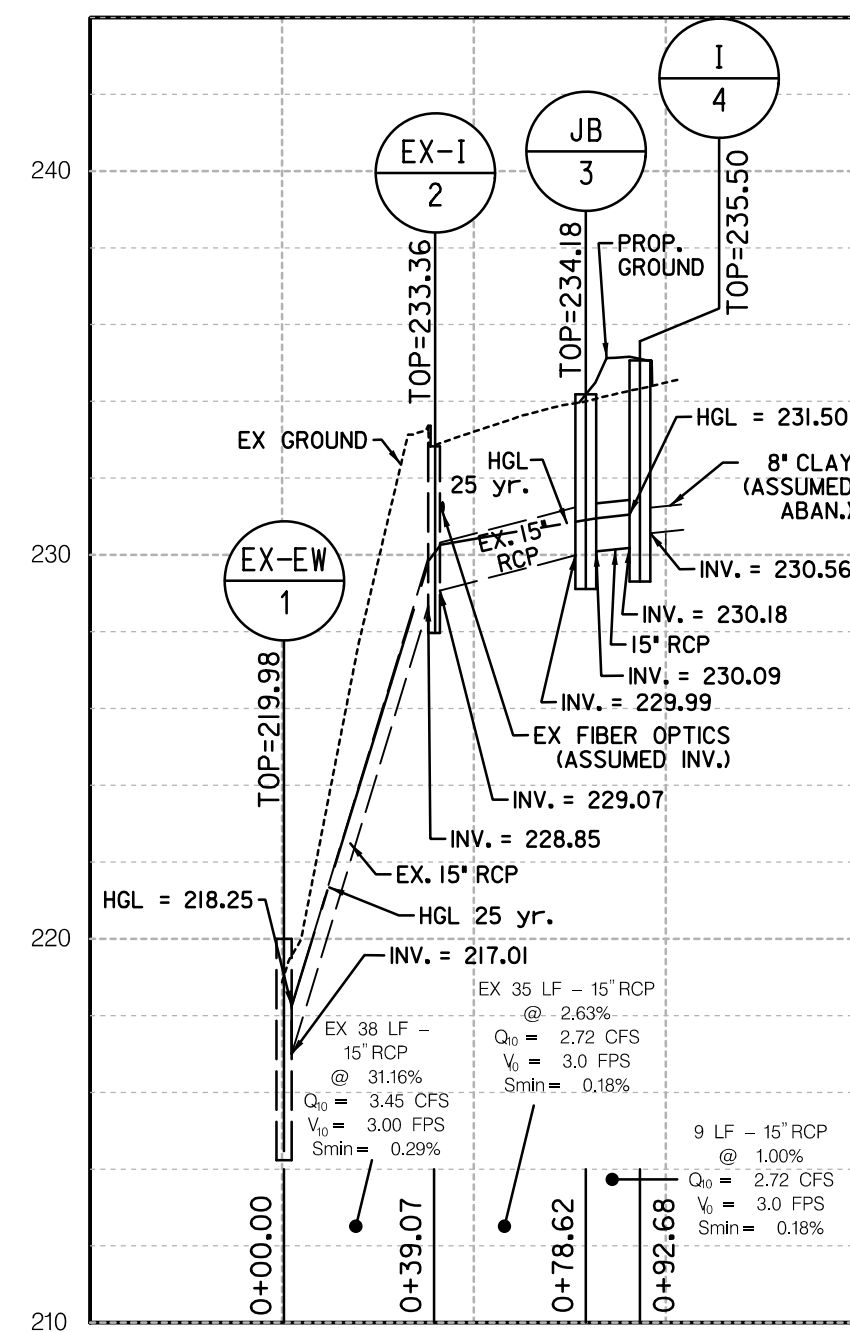
DESIGNED BY: KN	DATE: NOVEMBER, 2022
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APPROVED	
Chief, Division of Transportation Engineering	Date

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DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

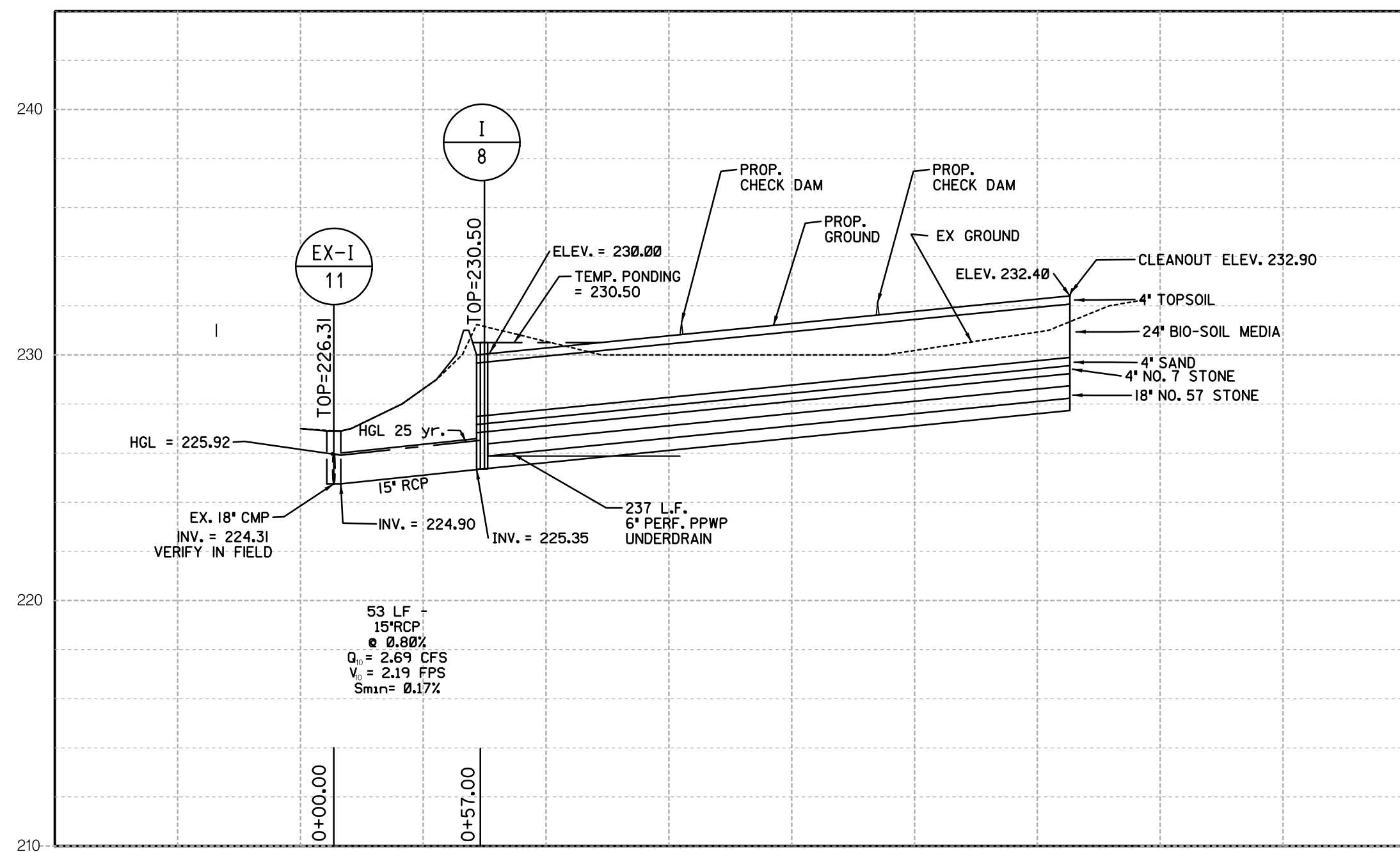
GROSVENOR IMPROVEMENTS
PROPOSED DRAINAGE AREA MAP

SC 08 OF 26 DA-06

11/1/2022 \\US0525-PFSS01\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pDP-POOL_Grosvenor.dgn



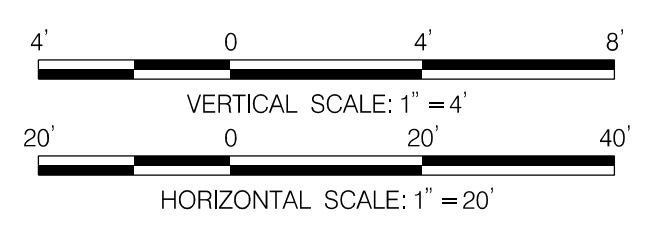
PIPE PROFILE FROM
I-4 TO EX-EW-1



PIPE AND BIO-SWALE PROFILE
FROM I-8 TO EX-I-11



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DEPARTMENT OF TRANSPORTATION
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MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
PIPE PROFILES

DP-01

11/1/2022 \\US0525-PFSSO\shared_projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pDP-P002_Grosvenor.dgn

SEE DRAINAGE REPORT



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					CHECKED BY: DHM III	DATE: NOVEMBER, 2022
					DRAWING NO.:	DATE:
					RECOMMENDED FOR APPROVAL	
					Chief, Design Section	Date
					APPROVED	
					Chief, Division of Transportation Engineering	Date

DP-02

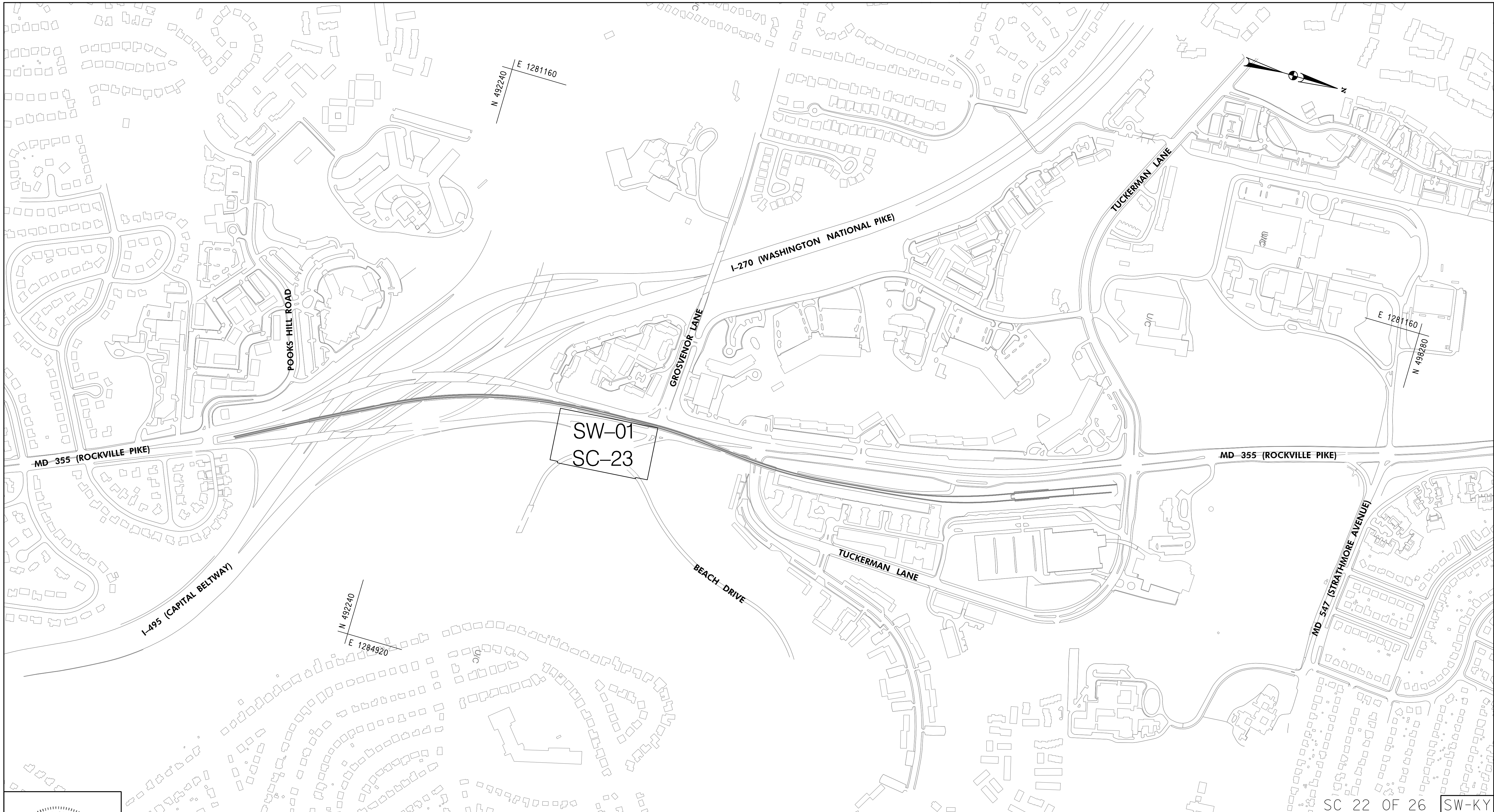
DEPARTMENT OF TRANSPORTATION
 DIVISION OF TRANSPORTATION ENGINEERING
 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 PIPE COMPUTATIONS

SCALE: NONE

SHEET 027 of 128

11/1/2022 \\US0525-PPSS01\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pSW-KEY_Grosvenor.dgn



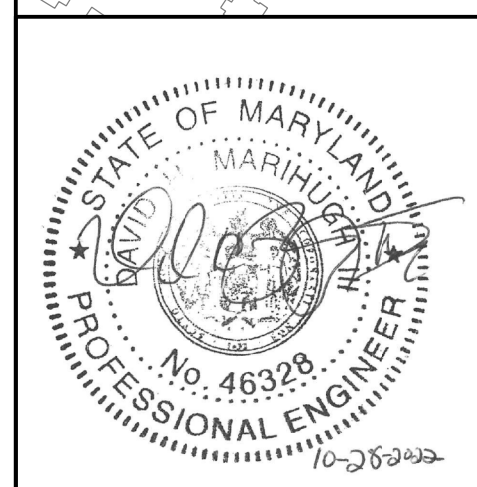
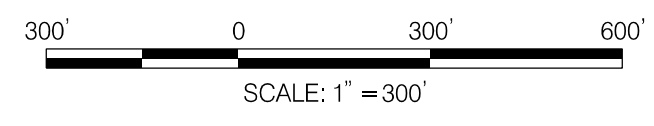
N 492240
E 1281160

E 1281160
N 492240

N 492240
E 1284920

SW-01
SC-23

SC 22 OF 26 SW-KY



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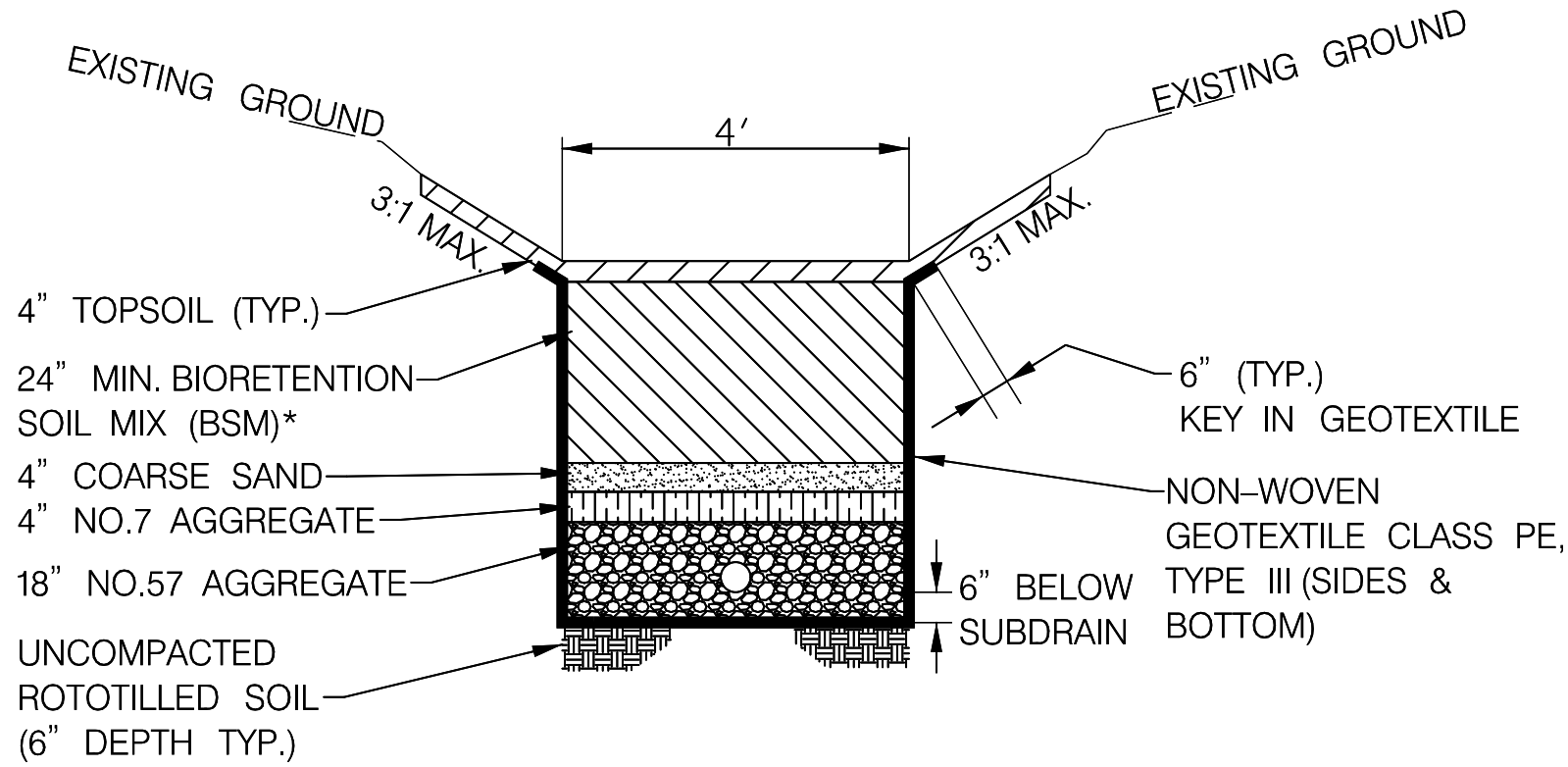
NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: DHM III	DATE: NOVEMBER, 2022
DRAWN BY: DHM III	DATE: NOVEMBER, 2022
CHECKED BY: KCW	DATE: NOVEMBER, 2022
DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL	
Chief, Design Section _____	Date _____
APPROVED	
Chief, Division of Transportation Engineering _____	Date _____

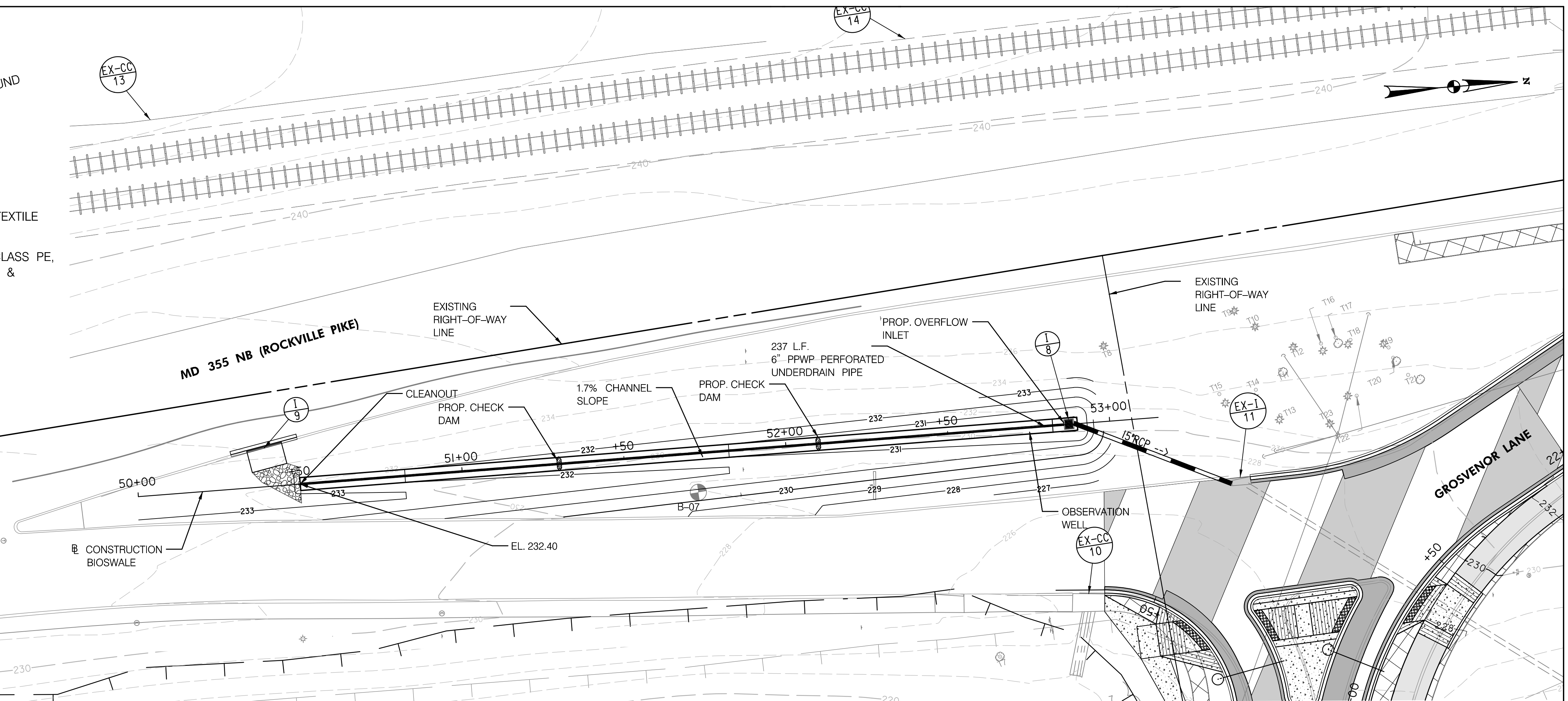
DEPARTMENT OF TRANSPORTATION
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MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
STORMWATER KEY PLAN

SCALE: 1"=300' SHEET 028 of 128



BIO-SWALE TYPICAL SECTION
NOT TO SCALE

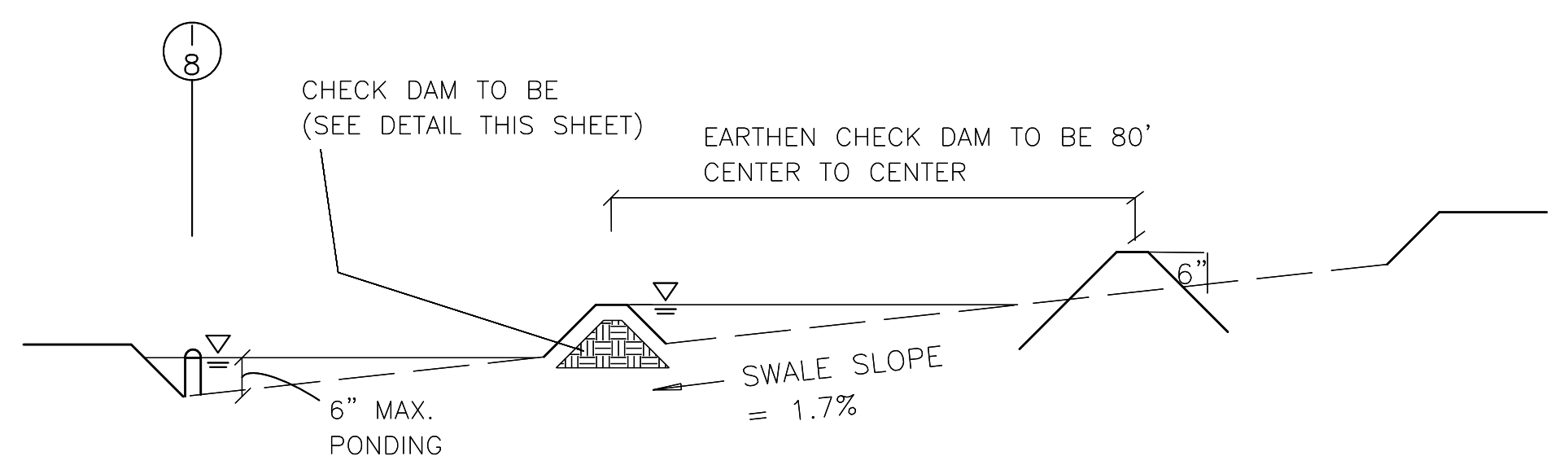


NOTE:
ALL STORWATER MANAGEMENT IS TO BE APPROVED,
INSPECTED, AND MAINTAINED BY MDOT SHA.
MDOT SHA BMP NUMBER: 151584

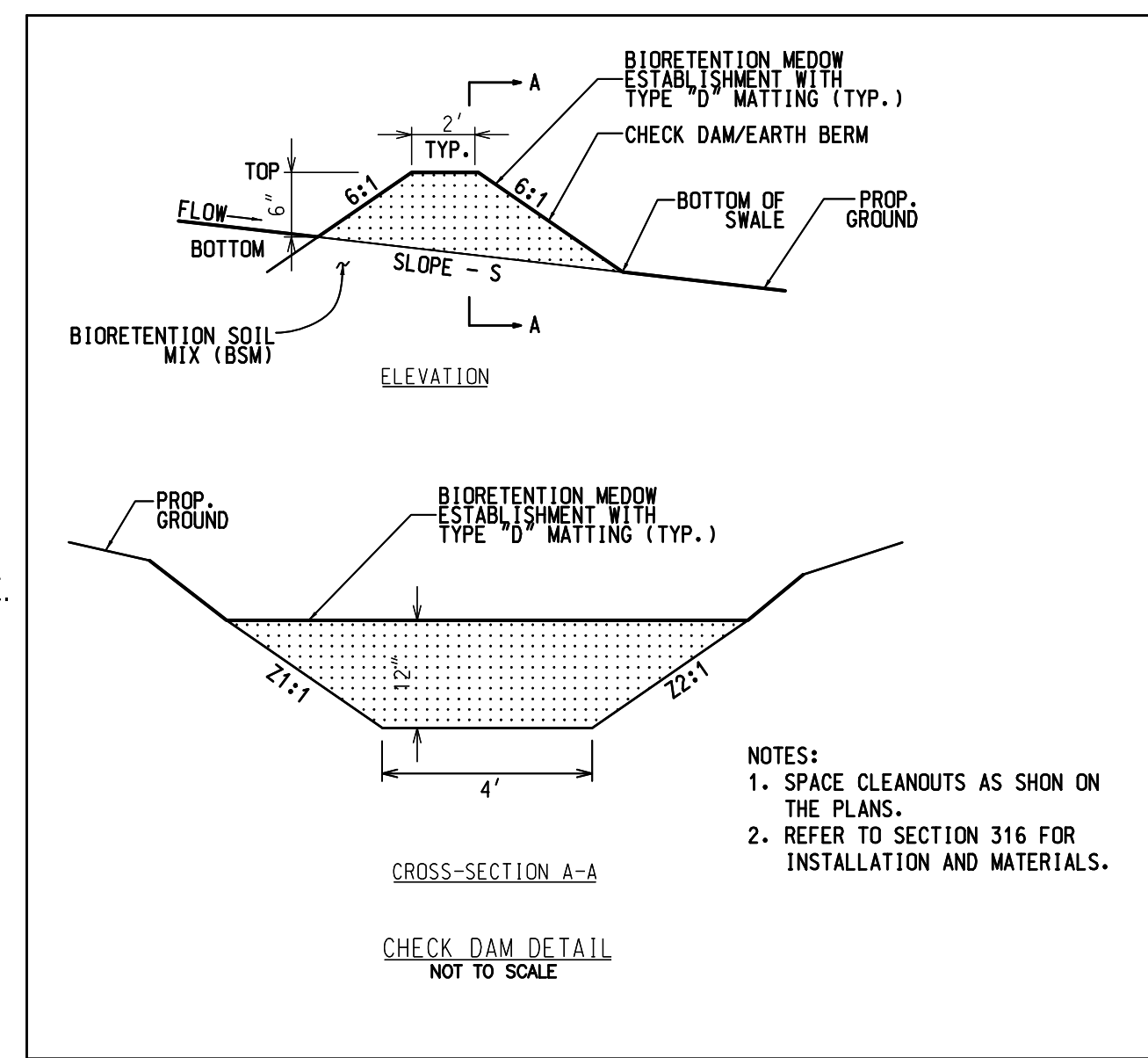
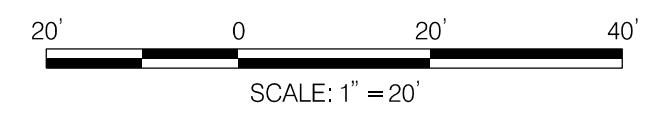
BIOSWALE DESIGN SUMMARY

DRAINAGE AREA (AC)	IMPERVIOUS AREA AC (%)	SOIL TYPE	PE REQUIRED (R.O.W.)	PE TREATED	ESDv PROVIDED (CF)	LENGTH (FT)	WIDTH (FT)
0.88	38.6	C	1.80"	1.0"	1,267	240	4

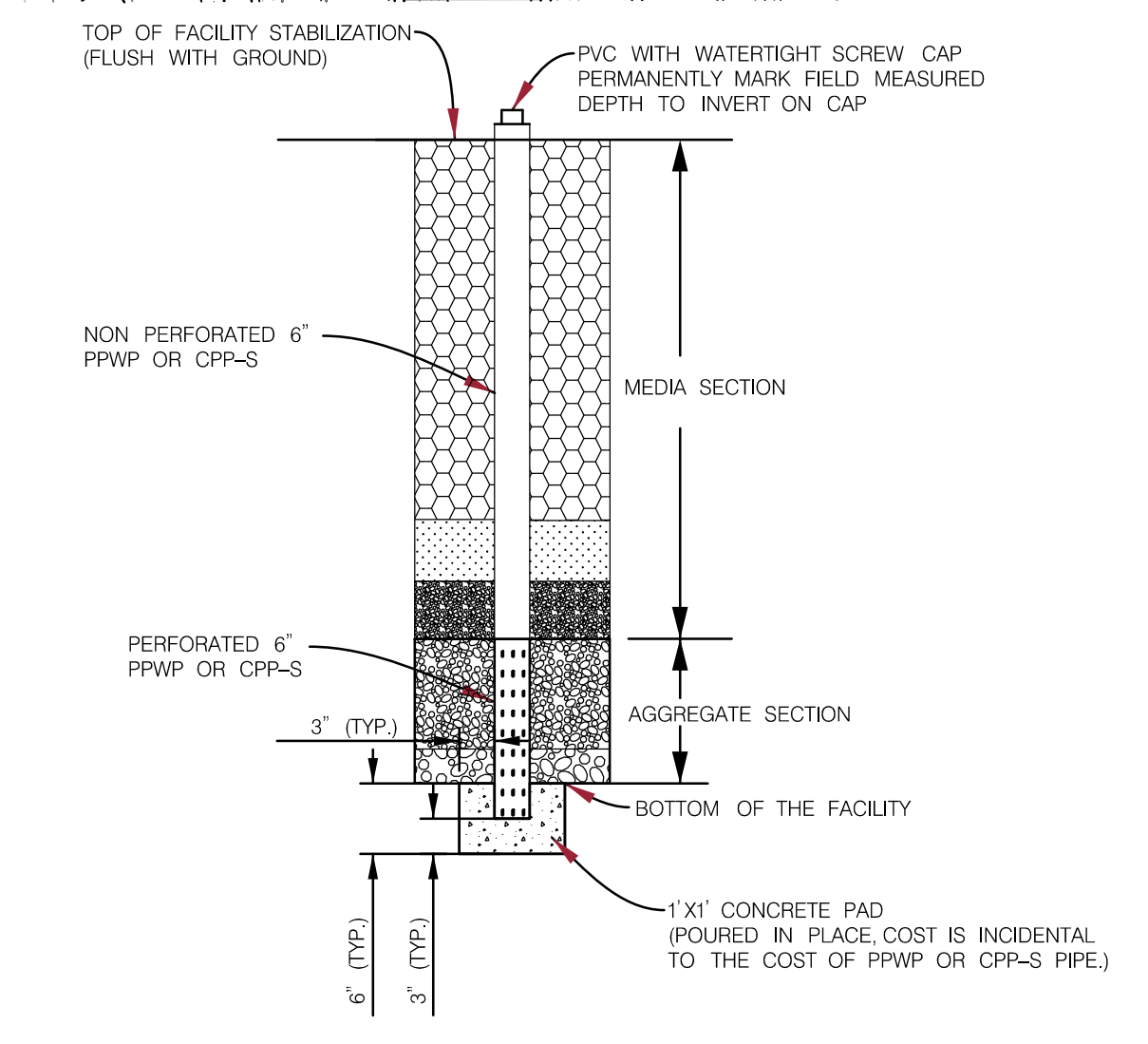
NOTE:
SEE DP-01 FOR PIPE PROFILE.



CHECK DAM SPACING DETAIL
NOT TO SCALE



NOTES:
1. SPACE CLEANOUTS AS SHON ON THE PLANS.
2. REFER TO SECTION 316 FOR INSTALLATION AND MATERIALS.



TYPICAL OBSERVATION WELL DETAIL
N.T.S. SC 23 OF 26 SW-01



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					CHECKED BY: SR	DATE: NOVEMBER, 2022
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RECOMMENDED FOR APPROVAL						
Chief, Design Section					Date	
APPROVED						
Chief, Division of Transportation Engineering					Date	

DEPARTMENT OF TRANSPORTATION
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MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
STORMWATER MANAGEMENT PLAN

SCALE: 1"=20'

SHEET 029 of 128

11/1/2022 \\US0525-PPFSSOI\shared_projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pDE-POOL_Grosvenor.dgn

11/1/2022 \\US0525-PFSSO\shared_projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\BDE-NOOL_Grosvenor.dgn

316 - STORMWATER MANAGEMENT (SWM) FILTRATION FACILITIES 312
CATEGORY 300
DRAINAGE
SECTION 316 - STORMWATER MANAGEMENT (SWM) FILTRATION FACILITIES
316.01 DESCRIPTION
Construct stormwater management (SWM) filtration facilities as specified.
316.02 MATERIALS
No. 57 Aggregate 901.01
No. 7 Aggregate 901.01
No. 2 Aggregate 34.43, 2
Portland Cement Concrete 902.10, Misc. No. 2
Topsoil 920.01.01 and 920.01.02
Biorotation Soil Mix (BSM) 920.01.05
Course Sand 920.01.05(a)(1)

316 - STORMWATER MANAGEMENT (SWM) FILTRATION FACILITIES 316
316.03.11 Biorotation Soil Mix (BSM). Place BSM in horizontal layers not exceeding 12 in.
316.03.12 Topsoil. Place topsoil as specified. Do not blend topsoil into BSM when topsoil is placed on top of BSM.
316.03.13 Check Dams.
316.03.14 Soil Stabilization Matting (SSM). As specified in Section 709.
316.03.15 Vegetation Installation and Establishment. Unless facilities are off-line or flow diversions are in place, install seed, sod, trees, shrubs, perennials, and annuals within SWM filtration facility areas immediately after final grading.

316 - STORMWATER MANAGEMENT (SWM) FILTRATION FACILITIES 311
Fertilizer 920.03.01
Shredded Hardwood Bark (SHB) Mulch 920.04.03
Soil Stabilization Matting (SSM) 920.05
Seed and Turfgrass Sod 920.06
Plant Materials 920.07
Water 920.09.01
Geotextile Section 919, Class PE, Type III
Securing Pins or Staples Section 919
Aggregate. Ensure aggregate has been adequately washed and is free of soil and fines.
316.03 CONSTRUCTION
316.03.01 Site Protection. Prior to constructing SWM filtration facilities, ensure that the SWM facility site areas are protected from vehicular traffic and is not used for storage and sediment control, stockpiles or equipment storage.
316.03.02 Site Preparation. Unless facilities are off-line and will receive no runoff, construct facilities only after all surrounding and adjacent areas are permanently stabilized.

316 - STORMWATER MANAGEMENT (SWM) FILTRATION FACILITIES 317
(b) Trees, Shrubs, and Perennials in BSM. Do not apply compost or other soil amendments to backfill soil or to planting beds.
Apply fertilizer to each planting pit as specified in 710.03.04 when trees, shrubs, perennials, perennial plugs, or other plant materials are installed in BSM as specified in Section 710.
(c) Seeded or Sodded BSM. Do not apply compost or other soil amendments.
Uniformly apply either of the fertilizers in Table 1 at the rate specified over the installed surface of the BSM when BSM will be permanently vegetated with Turfgrass Establishment, Shrub Seeding Establishment, Meadow Establishment, Turfgrass Sod Establishment, or other seeded or sodded vegetation establishment as specified.
TABLE 1. FERTILIZER APPLICATION RATES
FERTILIZER LB PER SY LB PER ACRE
20-16-12 (83% UF with MAP and SOP) 0.052 200
14-14-14 polymer coated or granular 0.062 225
(d) Nutrient Management Reporting. Record the fertilizer analysis, the square yards covered, and the pounds of fertilizer applied on the Nutrient Management Reporting Form. Submit the Form within 24 hours after applying fertilizer.
(e) Fertilizer. Refer to (b). Rake fertilizer that is broadcast over the surface of the BSM for seeding or sodding to a depth of 1/8 in. to 1/2 in. Raking may be performed as part of seeding or sodding operations. Complete raking before soil stabilization matting or soil is installed.
316.03.17 Shredded Hardwood Bark (SHB) Mulch. As specified in 710.03.13.
316.03.18 Inspection and SWM Facility As-Built Certification. Inspect and document each step of construction of SWM filtration facilities and complete the applicable checklists and furnish the SWM facility as-built certification according to the Contract Documents.
316.04 MEASUREMENT AND PAYMENT
Payment will be full compensation for all control of discharge from subdrain pipe, geotextile, watering, sheeting, shoring, dewatering, hauling, storing, re-handling of material, removal and disposal of excess and reusable material, filling, grading and slope adjustments and for all material, labor, equipment, tools, and incidentals necessary to complete the work.
Excavation. Excavation will be measured and paid for as specified in Section 201.
Miscellaneous Structures. Miscellaneous Structures will be measured and paid for per cubic yard of the specified mix concrete.

316 - STORMWATER MANAGEMENT (SWM) FILTRATION FACILITIES 315
(a) Submerged Gravel Wetlands. Rake surface to loosen soil.
(b) All Other SWM Filtration Facilities. Till to a minimum depth of 8 in. to loosen soil.
316.03.06 Geotextile. Place tightly against the vertical sides of the excavation area, pulling tight to eliminate wrinkles and folds and pin securely. Eliminate any voids between the geotextile and the underlying soil and avoid wrinkling and folding the geotextile. Maintain a minimum 12 in. overlap at the geotextile joint ends or breaks. Pin longitudinal joints, overlaps and edges securely with pins spaced no greater than 10 ft on center. Do not place geotextile on the bottom of the excavated area.
316.03.07 Miscellaneous Structures. Furnish and install as specified in Section 305.
316.03.08 Aggregate. Place aggregate in layers as specified. Prevent soil, fines, and other debris from contaminating the aggregate. Remove contaminated aggregate and replace with clean aggregate.
316.03.09 Subdrain Pipe. Cap the ends of all subdrain pipe not terminating in a cleanout, vent, or drainage structure unless otherwise specified. Ensure perforations are placed on the bottom of the horizontal subdrain pipe runs.
(c) Cleanouts. Install solid-wall pipe vertically and connect to horizontal subdrain with approved manufactured connections. Provide a conical-screw cap on the exposed end.
(b) Vents. Install solid-wall pipe vertically and connect to the horizontal subdrain with approved manufactured connections. Provide a vented screw cap on the exposed end. Ventilation holes or slots shall be no larger than 1/4 in. in diameter or width. The sum total area of the openings shall be no less than 1 in². Ensure that the ventilation openings are above the maximum specified water surface elevation.
(c) Observation Wells. Use perforated and solid-wall pipe. Place the geotextile sock over the perforated pipe portion and secure at both ends. Provide a screw cap on the exposed end extending 2 in. above the surface. When a concrete collar is specified, ensure the top of the well is flush with the surface of the concrete collar.
316.03.10 Coarse Sand. Place coarse sand in horizontal layers not exceeding 12 in. After each lift, spread the coarse sand to provide a uniform surface then spray or sprinkle water to saturate the lift until water flows from the subdrain outlet. Use an appropriate sediment control device to capture any discharge sediment-laden water from the subdrain outlet. Place, spread, and water coarse sand to uniform surface true to depth, line, cross section and elevation to ensure the completed work is as specified after settlement. Prevent soil, fines and other debris from contaminating the coarse sand. Remove contaminated coarse sand and replace with clean coarse sand.
316.03.05 Excavation Area Bottom Preparation. Only work with soil that is friable and not in a muddy or frozen condition. When present, remove any standing water from the excavation area. Prepare the bottom of the excavated area as follows.

316 - STORMWATER MANAGEMENT (SWM) FILTRATION FACILITIES 318
Aggregate. Aggregate will be measured and paid for at the Contract unit price for one or more of the following:
(a) No. 2 Aggregate for Stormwater Management Facilities per cubic yard.
(b) No. 7 Aggregate for Stormwater Management Facilities per cubic yard.
(c) No. 57 Aggregate for Stormwater Management Facilities per cubic yard.
Removal of contaminated aggregate and replacement with clean aggregate will be at no additional cost to the Administration.
Geotextile. Geotextile will not be measured but the cost will be incidental to the excavation.
Subdrain Pipe. Perforated and solid-wall subdrain pipe will be measured and paid for at the Contract unit price per linear foot for the specified size of subdrain pipe. Fittings, caps, geotextile sock, cleanouts, vents, observation wells, and other incidentals will not be measured but the cost will be incidental to the subdrain pipe.
Coarse Sand. Coarse Sand will be measured and paid for at the Contract unit price per cubic yard for Coarse Sand for Stormwater Management Facilities.
Removal of contaminated coarse sand and replacement with uncontaminated coarse sand will be at no additional cost to the Administration.
Check Dams. Check dams will be measured and paid for at the Contract unit price for one or more of the following:
(a) Topsoil Check Dams per each.
(b) Concrete Check Dams per each.
Biorotation Soil Mixture (BSM). BSM will be measured and paid for at the Contract unit price per cubic yard.
Removal of contaminated BSM and replacement with clean BSM will be at no additional cost to the Administration.
Water. Water used for saturation of coarse sand and BSM will not be measured but the cost will be incidental to the permanent items.
Shredded Hardwood Bark (SHB) Mulch. SHB Mulch will be measured and paid for at the Contract unit price per square yard for Shredded Hardwood Bark Mulching, 3 in. depth.

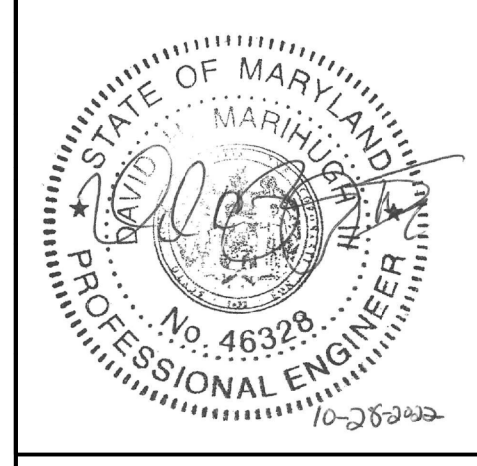
AS- BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE STORMWATER MANAGEMENT FACILITY SHOWN ON THE PLANS AND INDIVIDUALLY IDENTIFIED BELOW HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS INCLUDED UNDER THE STATE HIGHWAY ADMINISTRATIONS PLAN REVIEW DIVISION APPROVAL, NUMBER XX-PR-XXXX EXCEPT AS NOTED IN GREEN "AS-BUILT" DRAWINGS. FURTHERMORE, THE GREEN-NOTED EXCEPTION DO NOT ADVERSELY AFFECT THE DESIGN AND/OR THE INTENDED PERFORMANCE OF THE FACILITY.

BIO-SWALE (BMP NO.: 151584)

NAME (PRINTED) SIGNATURE

MARYLAND RESIGNATION NUMBER DATE



PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



316 - STORMWATER MANAGEMENT (SWM) FILTRATION FACILITIES 319
Sediment Control for Discharge from Subdrain Pipe Outlets. Control for any sediment-laden discharge from subdrain pipe outlets will not be measured but will be incidental to the permanent Erosion and Sediment Control items.
Topsoil. As specified in 701.04.
Vegetation Installation and Establishment. Vegetation installation and establishment will be measured and paid for at the Contract unit price for the pertinent landscaping items as specified in 705.04, 707.04, 708.04, 710.04 and 711.04.
Soil Stabilization Matting. As specified in 709.04.
Stormwater Management (SWM) Facility As-Built Certification. As specified.

SWM FACILITY AS-BUILT CERTIFICATION DATA TABLE FOR M-3 BIO-SWALES

Table with columns: SWM FACILITY NUMBER, MDEPRD NUMBER, SHA CONTRACT NUMBER, ACTIVITY, SUPPORTING DOCUMENTATION AND INFORMATION, DATE(S) OF INSPECTION. Includes rows for excavation, geotextile, aggregate, subdrain pipe, cleanouts, vents, observation wells, coarse sand, final grading, and vegetation.

Table with columns: FEATURE, DESIGN, AS-BUILT, DIFFERENCE. Includes rows for bottom width, total length, maximum channel slope, left side slope, right side slope, total thickness of aggregate, and thickness of aggregate and coarse sand.

Table with columns: FEATURE, DESIGN, AS-BUILT, DIFFERENCE. Includes rows for ESDV water surface elevation, ESDV flow depth, 1-yr flow velocity, 10-yr water surface elevation, 10-yr flow depth, 10-yr flow velocity, 10-yr freeboard, and 10-yr freeboard width.

SWM FACILITY AS-BUILT CERTIFICATION DATA TABLE FOR RELEASE STRUCTURES - INLETS

Table with columns: SWM FACILITY NUMBER, PRD NUMBER, SHA CONTRACT NUMBER, ACTIVITY, SUPPORTING DOCUMENTATION AND INFORMATION, DATE(S) OF INSPECTION. Includes rows for excavation, placement and compaction of bedding, installation of inlet, placement and compaction of bedding, and final grading.

Table with columns: FEATURE, DESIGN, AS-BUILT, DIFFERENCE. Includes rows for top elevation, invert in elevation, invert out elevation, sub-drain invert in elevation, outfall pipe diameter, outfall pipe slope, outfall structure invert, outfall structure cut-off wall depth, outfall structure cut-off wall length, outfall apron length, and outfall apron width.

Table with columns: FEATURE, DESIGN, AS-BUILT, DIFFERENCE. Includes rows for ESDV water surface elevation, 2-yr water surface elevation, 10-yr water surface elevation, 10-yr freeboard, and 100-yr water surface elevation.

Table with columns: FEATURE, DESIGN, AS-BUILT, DIFFERENCE. Includes rows for outfall 2-yr velocity, outfall 2-yr flow rate, outfall 10-yr velocity, outfall 10-yr flow rate, outfall 100-yr velocity, and outfall 100-yr flow rate.

Table with columns: NO., REVISION, BY, APP'D, DATE, DESIGNED BY, DRAWN BY, CHECKED BY, DRAWING NO., RECOMMENDED FOR APPROVAL, Chief, Design Section, APPROVED, Chief, Division of Transportation Engineering.

SC 24 OF 26 SW-02

DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS STORMWATER MANAGEMENT NOTES

SCALE: 1"=20' SHEET 030 of 128

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION GROSVENOR IMPROVEMENTS

MD 355 (ROCKVILLE PIKE) FROM
POOKS HILL RD TO STRATHMORE AVE
CIP PROJECT NO. 501532

EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT PLAN


INDEX OF SHEETS

Sheet No.	Drawing No.	Sheet Name	
SC-01	TI-ES	TITLE SHEET	SC001.pdf
SC-02	DA-KY	DRAINAGE AREA MAP KEY	SC005.pdf
SC-03	DA-01	EXISTING DRAINAGE AREA MAP	SC006.pdf
SC-04	DA-02	EXISTING DRAINAGE AREA MAP	SC007.pdf
SC-05	DA-03	EXISTING DRAINAGE AREA MAP	SC008.pdf
SC-06	DA-04	PROPOSED DRAINAGE AREA MAP	SC009.pdf
SC-07	DA-05	PROPOSED DRAINAGE AREA MAP	SC010.pdf
SC-08	DA-06	PROPOSED DRAINAGE AREA MAP	SC011.pdf
SC-09	DT-02	REINFORCED SOIL SLOPE DETAIL	SC016.pdf
SC-10	ES-01	EROSION AND SEDIMENT CONTROL NOTES	SC018.pdf
SC-11	ES-02	EROSION AND SEDIMENT CONTROL NOTES	SC019.pdf
SC-12	ES-03	EROSION AND SEDIMENT CONTROL DETAILS	SC020.pdf
SC-13	ES-04	EROSION AND SEDIMENT CONTROL DETAILS	SC021.pdf
SC-14	ES-KY	EROSION AND SEDIMENT CONTROL KEY PLAN	SC017.pdf
SC-15	ES-05	EROSION AND SEDIMENT CONTROL PLAN	SC022.pdf
SC-16	ES-06	EROSION AND SEDIMENT CONTROL PLAN	SC023.pdf
SC-17	ES-07	EROSION AND SEDIMENT CONTROL PLAN	SC024.pdf
SC-18	ES-08	EROSION AND SEDIMENT CONTROL PLAN	SC025.pdf
SC-19	ES-09	EROSION AND SEDIMENT CONTROL PLAN	SC026.pdf
SC-20	ES-10	EROSION AND SEDIMENT CONTROL PLAN	SC027.pdf
SC-21	SB-01	SOIL BORING LOGS	SC028.pdf
SC-22	SW-KY	STORMWATER KEY PLAN	SC031.pdf
SC-23	SW-01	STORMWATER MANAGEMENT PLAN	SC032.pdf
SC-24	SW-02	STORMWATER MANAGEMENT NOTES	SC033.pdf
SC-25	LP-03	LANDSCAPE & TREE PROTECTION PLAN	SC029.pdf
SC-26	LP-04	LANDSCAPE & TREE PROTECTION PLAN	SC030.pdf

CERTIFICATION OF THE QUANTITIES

I HEREBY CERTIFY THAT THE ESTIMATED TOTAL AMOUNT OF EXCAVATION AND FILL AS SHOWN ON THESE PLANS HAS BEEN COMPUTED TO 404 CUBIC YARDS OF EXCAVATION, 1,113 CUBIC YARDS OF FILL AND THE TOTAL AREA TO BE DISTURBED AS SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE 57,735 SQUARE FEET.

10 / 31 / 2022
DATE


DAVID HATHORNE MARIUGH III, P.E.
MD. REGISTRATION NO. 46328

DESIGN CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES EXECUTIVE REGULATIONS 5-90, 7-02AM AND 36-90, AND MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION "STORM DRAIN DESIGN CRITERIA" DATED AUGUST 1988.

10 / 31 / 2022
DATE


DAVID HATHORNE MARIUGH III, P.E.
MD. REGISTRATION NO. 46328

MDOT SHA BMP No. 151584



PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022

OWNER
TIM CUPPLES, PE, DBIA
100 Edison Park Drive, 4th Floor
Gaithersburg, MD 20878
240-777-7214
tim.cupples@montgomerycountymd.gov

PROJECT MANAGER
BOB GONZALES
100 Edison Park Drive, 4th Floor
Gaithersburg, MD 20878
240-777-7296
robert.gonzales@montgomerycountymd.gov



DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
SEDIMENT CONTROL
TITLE SHEET

SCALE: N.T.S.

SHEET 031 of 128

RELATED REQUIRED PERMITS

IT IS THE RESPONSIBILITY OF PERMITEE/OWNER OF THIS SITE TO OBTAIN ALL REQUIRED PERMITS PRIOR TO ISSUANCE OF APPROVED SEDIMENT CONTROL PERMIT

TYPE OF PERMIT	REQD	NOT REQD	PERMIT NO.	EXPIRATION DATE	WORK RESTRICTION DATES
MCDFS SEDIMENT CONTROL	X		286521		
MCDFS Floodplain District	X		382566		
WATERWAY/WETLAND(S)		X			
a. Corps of Engineers		X			
b. MDE	X		202161206		
c. MDE Water Certification		X			
MDE Dam Safety		X			
DNR Roadside Tree Care Permit		X		Approval Date	
DPS Roadside Tree Protection Plan		X		Approval Date	
N.P.D.E.S. NOTICE OF INTENT	X				DATE FILED
FEMA LOMAR (Required Post Construction)		X			
SHA Access Permit	X		19APMO013XX		
M-NCPPC Parks Permit	X		2021-041		

TREE CANOPY REQUIREMENTS TABLE

To be completed by the consultant and placed on the first sheet of the Sediment Control / Stormwater Management plan set for all projects.

Exempt: Yes No If exempt under Section 55-5 of the Code, please check the applicable exemption category below.

Total Property Area	Total Disturbed Area
N/A square feet	57735 square feet
Shade Trees Required	Shade Trees Proposed to be Planted
22	34
Fee in Lieu (Trees Required - Trees Planted) x \$250	\$ 0

Required Number of Shade Trees

Area (sq. ft.) of the Limits of Disturbance	Number of Shade Trees Required	
FROM 1	TO 6,000	3
6,001	8,000	6
8,001	12,000	9
12,001	14,000	12
14,001	40,000	15

If the square footage of the limits of disturbance is more than 40,000, then the number of shade trees required must be calculated using the following formula:

$$(\text{Number of Square Feet in Limits of Disturbance} \div 40,000) \times 15$$

EXEMPTION CATEGORIES:

<input checked="" type="checkbox"/> 55-5(a) any activity that is subject to Article II of Chapter 22A;	<input type="checkbox"/> 55-5(n) any stream restoration project if the person performing the work has obtained all necessary permits;
<input type="checkbox"/> 55-5(b) any commercial logging or timber harvesting operation with an approved exemption from Article II of Chapter 22A;	<input type="checkbox"/> 55-5(i) cutting or clearing any tree to comply with applicable provisions of any federal, state, or local law governing safety of dams;
<input type="checkbox"/> 55-5(f) any activity conducted by the County Parks Department;	<input type="checkbox"/> OTHER: Specify per Section 55-5 of the Code.
<input type="checkbox"/> 55-5(g) routine or emergency maintenance of an existing stormwater management facility, including an existing access road, if the person performing the	

MISS UTILITY

THE CONTRACTOR SHALL CALL "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF WORK. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL UNDERGROUND UTILITIES IN THE AREA OF PROPOSED WORK ARE LOCATED PRIOR TO COMMENCING CONSTRUCTION WORK. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH REQUIREMENTS OF CHAPTER 36A OF THE MONTGOMERY COUNTY CODE.

THE CONTRACTOR IS ALSO RESPONSIBLE FOR LOCATING ALL PRIVATE UTILITIES (NOT LOCATED BY MISS UTILITY) WITHIN HOA PROPERTY AT THEIR EXPENSE. ALL UTILITIES SHOWN ON THE PLANS ARE PROVIDED FOR INFORMATION ONLY AND SHALL BE CONSIDERED APPROXIMATE. HOA SHALL NOT BE RESPONSIBLE FOR LOCATING UNDERGROUND UTILITIES. ANY UTILITIES OR OTHER UNDERGROUND FACILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S SOLE EXPENSE.

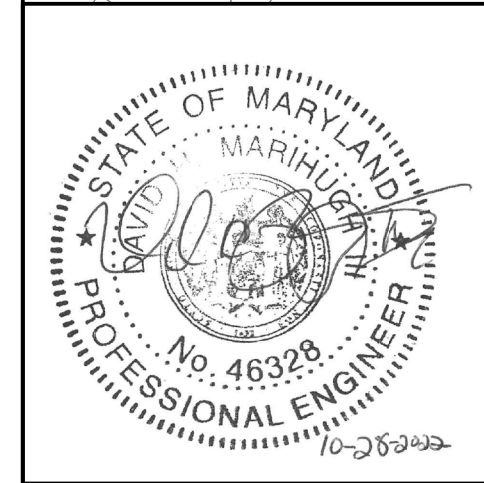
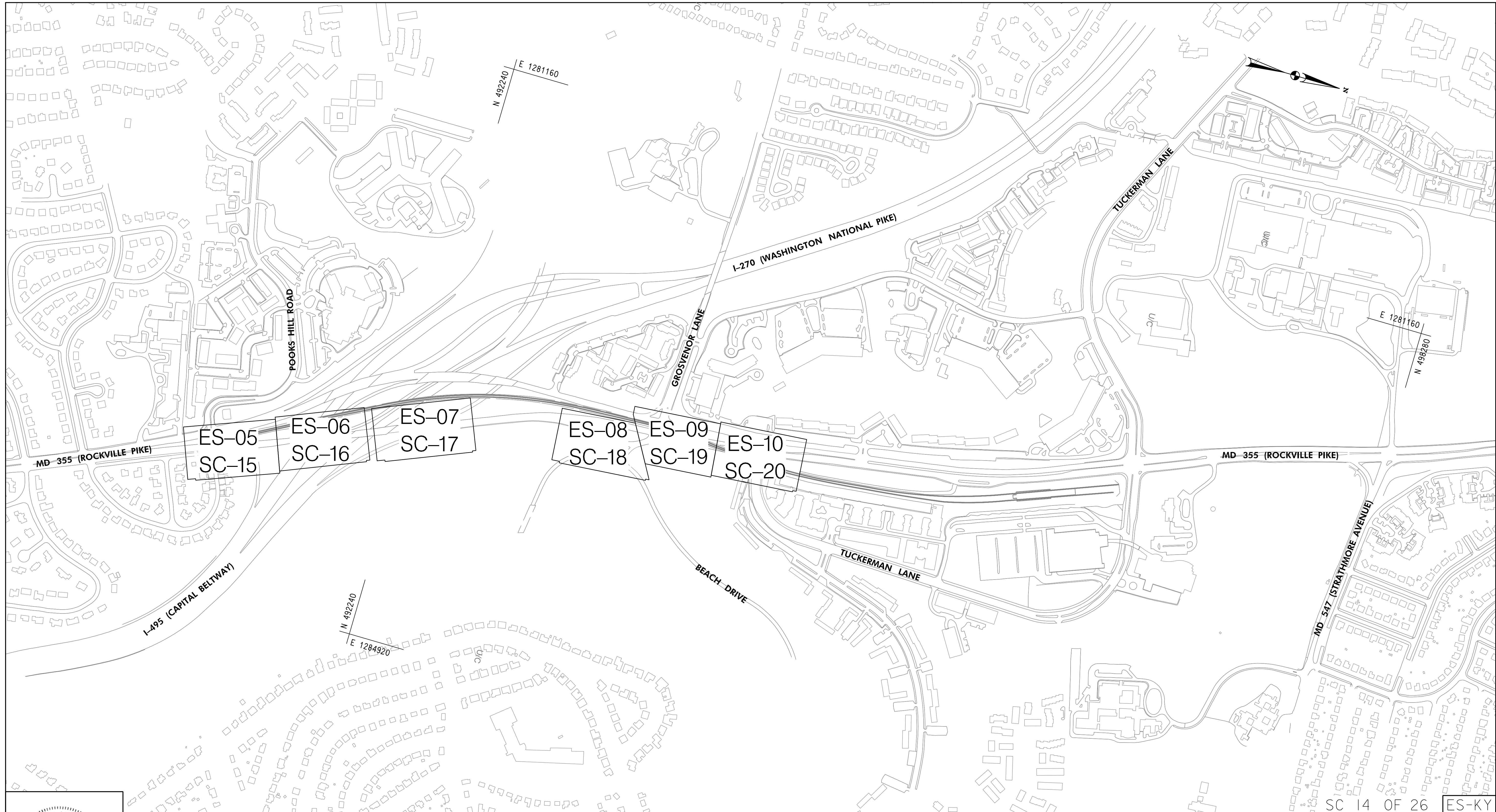
SC 01 OF 26 TI-ES

TECHNICAL REVIEW OF SEDIMENT CONTROL	ADMINISTRATIVE REVIEW
Reviewed Date	Reviewed Date
TECHNICAL REVIEW OF STORMWATER MANAGEMENT	SMALL LOT DRAINAGE APPROVAL
Reviewed Date	N/A: <input type="checkbox"/> OR Reviewed Date
MCDFS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED.	NOTE: MCDFS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDFS ACCESS PERMIT.

SEDIMENT CONTROL PERMIT NO.
286521
SM. FILE NO.
STORMWATER MANAGEMENT:
285833
ESD to MEP: 1 - SWM
Bio-Swale / MDSA: No Waivers

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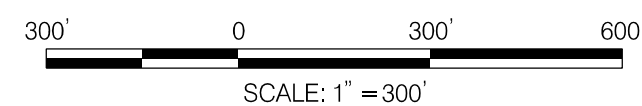
11/1/2022 \\US0525-PPFSSO\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pES-KEY_Grosvenor.dgn



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 OR APPROVED BY ME, AND THAT I AM A DULY LICENSED
 PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE
 OF MARYLAND.
 LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



810 Glenegles Court, Suite 300
 Baltimore, MD 21286
 www.stantec.com



NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: DHM III	DATE: NOVEMBER, 2022
DRAWN BY: DHM III	DATE: NOVEMBER, 2022
CHECKED BY: KCW	DATE: NOVEMBER, 2022
DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL	
Chief, Design Section _____	Date _____
APPROVED	
Chief, Division of Transportation Engineering _____	Date _____

DEPARTMENT OF TRANSPORTATION
 DIVISION OF TRANSPORTATION ENGINEERING
 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 EROSION AND SEDIMENT CONTROL
 KEY PLAN

SC 14 OF 26 ES-KY

STANDARD SYMBOLS

- The permittee shall notify the department of permitting services (dps) forty-eight (48) hours before commencing any land disturbing activity and, unless waived by the department, shall be required to hold a pre-construction meeting between them or their representative, their engineer and an authorized representative of the department.
- The permittee must obtain inspection and approval by dps at the following points:
 - At the required pre-construction meeting.
 - Following installation of sediment control measures and prior to any other land disturbing activity.
 - During the installation of a sediment basin or stormwater management structure at the required inspection points (see inspection checklist on plan). Notification prior to commencing construction is mandatory.
 - Prior to removal or modification of any sediment control structure(s).
 - Prior to final acceptance.
- The permittee shall construct all erosion and sediment control measures per the approved plan and construction sequence, shall have them inspected and approved by the department prior to beginning any other land disturbances, shall ensure that all runoff from disturbed areas is directed to the sediment control devices, and shall not remove any erosion or sediment control measure without prior permission from the department.
- The permittee shall protect all points of construction ingress and egress to prevent the deposition of materials onto traversed public thoroughfare(s). All materials deposited onto public thoroughfare(s) shall be removed immediately.
- The permittee shall inspect periodically and maintain continuously in effective operating condition, all erosion and sediment control measures until such time as they are removed with prior permission from the department. The permittee is responsible for immediately repairing or replacing any sediment control measures which have been damaged or removed by the permittee or any other person.
- Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within:
 - three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes and all slopes steeper than 3 horizontal to 1 vertical (3:1); and
 - seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.

All areas disturbed outside of the perimeter sediment control system must be minimized and stabilized immediately. Maintenance must be performed as necessary to ensure continued stabilization.
- The permittee shall apply sod, seed, and anchored straw mulch, or other approved stabilization measures to all disturbed areas within seven (7) calendar days after stripping and grading activities have ceased on that area. Maintenance shall be performed as necessary to ensure continued stabilization. Active construction areas such as borrow or stockpile areas, roadway improvements, and areas within fifty (50) feet of a building under construction may be exempt from this requirement, provided that erosion and sediment control measures are installed and maintained to protect those areas.
- Prior to removal of sediment control measures, the permittee shall stabilize all contributory disturbed areas with required soil amendments and topsoil, using sod or an approved permanent seed mixture and an approved anchored mulch. Wood fiber mulch may only be used in seeding season when the slope does not exceed 10% and grading has been done to promote sheet flow drainage. Areas brought to finished grade during the seeding season shall be permanently stabilized within seven (7) calendar days of establishment. When property is brought to finished grade during the months of november through february, and permanent stabilization is found to be impractical, an approved temporary seed and straw anchored mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be completed prior to the following april 15.
- The site permit, work, materials, approved sc/sm plans, and test reports shall be available at the site for inspection by duly authorized officials of montgomery county.
- Surface drainage flows over unstabilized cut and fill slopes shall be controlled by either preventing drainage flows from traversing the slopes or by installing mechanical devices to lower the water down slope without causing erosion. Dikes shall be installed and maintained at the top of cut or fill slopes until the slope and drainage area to it are fully stabilized, at which time they must be removed and final grading done to promote sheet flow drainage. Mechanical devices must be provided at points of concentrated flow where erosion is likely to occur.
- Permanent swales or other points of concentrated water flow shall be stabilized within 3 calendar days of establishment with sod or seed with an approved erosion control matting or by other approved stabilization measures.
- Sediment control devices shall be removed, with permission of the department, within thirty (30) calendar days following establishment of permanent stabilization in all contributory drainage areas. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well.

- No permanent cut or fill slope with a gradient steeper than 3:1 will be permitted in lawn maintenance areas or on residential lots. A slope gradient of up to 2:1 will be permitted in non-maintenance areas provided that those areas are indicated on the erosion and sediment control plan with a low-maintenance ground cover specified for permanent stabilization. Slope gradient steeper than 2:1 will not be permitted with vegetative stabilization.
- The permittee shall install a splashblock at the bottom of each downspout unless the downspout is connected by a drain line to an acceptable outlet.
- For finished grading, the permittee shall provide adequate gradients so as to prevent water from standing on the surface of lawns more than twenty-four (24) hours after the end of a rainfall, except in designated drainage courses and swale flow areas, which may drain as long as forty-eight (48) hours after the end of a rainfall.
- Sediment traps or basins are not permitted within 20 feet of a building which is existing or under construction. No building may be constructed within 20 feet of a sediment trap or basin.
- All inlets in non-sump areas shall have asphalt berms installed at the time of base paving establishment.
- The sediment control inspector has the option of requiring additional sediment control measures, as deemed necessary.
- All trap elevations are relative to the outlet elevation, which must be an existing undisturbed ground.
- Vegetative stabilization shall be performed in accordance with the standards and specifications for soil erosion and sediment control.
- Sediment trap(s)/basin(s) shall be cleaned out and restored to the original dimensions when sediment has accumulated to the point of one-half (1/2) the wet storage depth of the trap/basin (1/4 the wet storage depth for st-iii) or when required by the sediment control inspector.
- Sediment removed from traps/basins shall be placed and stabilized in approved areas, but not within a floodplain.
- All sediment basins and traps must be surrounded with a welded wire safety fence. The fence must be at least 42 inches high, have posts spaced no farther apart than 8 feet, have mesh openings no greater than two inches in width and four inches in height, with a minimum of 14 gauge wire. Safety fence must be maintained in good condition at all times.
- No excavation in the areas of existing utilities is permitted unless their location has been determined. Call "Miss utility" at 1-800-257-7777, 48 hours prior to the start of work.
- Off-site spoil or borrow areas must have prior approval by dps.
- Sediment trap/basin dewatering for cleanout or repair may only be done with the dps inspector's permission. The inspector must approve the dewatering method for each application. The following methods may be considered:
 - Pump discharge may be directed to another on-site sediment trap or basin, provided it is of sufficient volume and the pump intake is floated to prevent agitation or suction of deposited sediments; or
 - The pump intake may utilize a removable pumping station and must discharge into an undisturbed area through a non-erosive outlet; or
 - The pump intake may be floated and discharge into a dirt bag (12 oz. Non-woven fabric), or approved equivalent, located in an undisturbed buffer area.

Remember: dewatering operation and method must have prior approval by the dps inspector.
- The permittee must notify the department of all utility construction activities within the permitted limits of disturbance prior to the commencement of those activities.
- Topsoil must be applied to all pervious areas within the limits of disturbance prior to permanent stabilization in accordance with MDE "Standards and Specifications for Soil Preparation, Topsoiling, and Soil Amendments."

AT-GRADE INLET PROTECTION		ROCK OUTLET PROTECTION II	
BAFFLE BOARDS		ROCK OUTLET PROTECTION III	
CATCH BASIN INSERT		SILT FENCE	
CLEAR WATER DIVERSION PIPE		SILT FENCE ON PAVEMENT	
COMBINATION INLET PROTECTION		SOD	
CURB INLET PROTECTION		STABILIZED CONSTRUCTION ENTRANCE	
DIVERSION FENCE		STANDARD INLET PROTECTION	
EARTH DIKE		STOCKPILE AREA	
EMERGENCY SPILLWAY		STONE CHECK DAM	
FILTER BAG		STONE/RIPRAP OUTLET SEDIMENT TRAP ST II	
FILTER BERM		SUBSURFACE DRAINS	
FILTER LOG		SUMP PIT	
GABION INFLOW PROTECTION		SUPER SILT FENCE	
GABION INLET PROTECTION		TEMPORARY ACCESS CULVERT	
LIMIT OF DISTURBANCE		TEMPORARY ASPHALT BERM	
MEDIAN INLET PROTECTION		TEMPORARY BARRIER DIVERSION	
MEDIAN SUMP INLET PROTECTION		TEMPORARY GABION OUTLET STRUCTURE	
MOUNTABLE BERM		TEMPORARY SOIL STABILIZATION MATTING-TYPE A	
PERIMETER DIKE/SWALE		TEMPORARY SOIL STABILIZATION MATTING-TYPE E	
PERMANENT SOIL STABILIZATION MATTING-TYPE B		TEMPORARY SOIL STABILIZATION MATTING-TYPE D	
PERMANENT SOIL STABILIZATION MATTING-TYPE C		TEMPORARY STONE OUTLET STRUCTURE	
PIPE OUTLET SEDIMENT TRAP ST I		TEMPORARY SWALE	
PIPE SLOPE DRAIN		WASH RACK OPTION	
PLUNGE POOL		CHESAPEAKE BAY CRITICAL AREA	
PORTABLE SEDIMENT TANK		DRAINAGE BOUNDARY	
REMOVABLE PUMPING STATION		EXISTING CONTOURS	
RIPRAP INFLOW PROTECTION		PROPOSED CONTOURS	
RIPRAP OUTLET SEDIMENT TRAP ST III		TREE PROTECTION FENCE	
ROCK OUTLET PROTECTION I		WETLAND	
LIMIT OF CUT SLOPE		WETLAND BUFFER	
LIMIT OF FILL SLOPE		100-YEAR FLOODPLAIN	

BEFORE BEGINNING CONSTRUCTION CONTACT
"MISS UTILITY"
AT
1-800-257-7777
AT LEAST 48 HOURS PRIOR TO EXCAVATION

NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: KN	DATE: NOVEMBER, 2022
DRAWN BY: KN	DATE: NOVEMBER, 2022
CHECKED BY: DHM III	DATE: NOVEMBER, 2022
DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL	
Chief, Design Section	Date
APPROVED	
Chief, Division of Transportation Engineering	Date

SC 10 OF 26 ES-01

**DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND**

GROSVENOR IMPROVEMENTS
EROSION AND SEDIMENT
CONTROL NOTES

SCALE: AS SHOWN SHEET 033 of 128

11/1/2022 \\US0525-PPFSS\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\DES-NO01_Grosvenor.dgn



PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



SEQUENCE OF CONSTRUCTION

1. Prior to clearing of trees, installing sediment control measures, or grading a preconstruction meeting must be conducted on-site with the Montgomery County Department of Permitting Services (MCDPS) sediment control inspector (240) 777-0311 (48 hours notice), the Owners representative, and the site Engineer. In order for the meeting to occur, the applicant must provide one paper set of approved sediment control plans to the MCDPS sediment control inspector at the preconstruction meeting. If no plans are provided, the meeting shall not occur and will need to be rescheduled prior to commencing any work.
2. The limits of disturbance must be field marked prior to clearing of trees, installation of sediment control measure, construction or other land disturbing activities.
3. Remove water that pools within any area of excavation with sump pit, pump, and filter bag.
4. Weather should be monitored to ensure construction of proposed drainage facilities are done in a day with no expected rainfall. Proposed drainage facilities should be constructed within one working day.
5. Place Tree Protection Fence. Tree Protection Fencing is shown offset from the Limit of Disturbance (LOD) line for graphic reasons only. Tree protection fence placement is to be executed at the LOD line.
6. Construction can occur coincidentally or any order the contractor chooses as long as approvals are in place.

SITE SPECIFIC SEQUENCE OF CONSTRUCTION

MD 355 Sta. 10+00 to 14+50 and Sta. 200+00 to 203+00:

1. Clear and Grade for Installation of sediment control devices, only disturbing the area needed for installation of the sediment control devices.
2. Install Inlet Protection and Super Silt Fence.
3. Once installed, the permittee must obtain written approval from the MCDPS inspector before proceeding with any additional clearing, grubbing, or grading.
4. Construct roadway, storm drain improvements, curb, sidewalk, and grading.
5. Permanently stabilize disturbed roadside area with topsoil, seed and mulch as indicated on the Typical Sections and Landscape plans.
6. Upon final stabilization and written approval from MCDPS inspector, the permittee shall remove the sediment control devices.

Pedestrian Curb Ramp at I 495 Exit Ramp to NB MD 355, MD 355 Sta. 300+00 to 302+00 and 20+00 to 29+50:

1. Clear and Grade for Installation of sediment control devices, only disturbing the area needed for installation of the sediment control devices.
2. Install Inlet Protection and Super Silt Fence.
3. Once installed, the permittee must obtain written approval from the MCDPS inspector before proceeding with any additional clearing, grubbing, or grading.
4. Construct Bioswale, storm drain improvements, trall, sidewalk, curb, and grading.
5. Permanently stabilize disturbed roadside area with topsoil, seed and mulch as indicated on the Typical Sections and Landscape plans.
6. Upon final stabilization and written approval from MCDPS inspector, the permittee shall remove the sediment control devices.

M-NCPPC CONSTRUCTION NOTES

Removal of Existing Pavement within a Tree's Critical Root Zone:

1. The contractor shall meet with the M-NCPPC Urban Forester and Construction Inspector prior to removal of the pavement to discuss methods to be used to remove pavement. Removal of pavement may be required to be done by hand depending on site conditions.
2. The existing top layer of pavement shall be peeled away without disturbing the ground or material beneath. If a base course of rock is beneath the pavement the rock shall be left in place.
3. During the removal of the pavement layer great care shall be taken to not disturb existing tree roots along or under existing pavement. Existing tree roots greater than 1.5" in diameter encountered during the removal process shall not be cut unless approved by the M-NCPPC Urban Forester.
4. Equipment should remain on existing pavement during the removal process. Equipment shall not traverse over areas where pavement was removed in order to protect exposed tree roots.
5. Ground protection such as a 12" mulch layer will be required if equipment is needed to be operated within the critical root zone.
6. Removal of the existing pavement shall be done under supervision of the M-NCPPC Urban Forester and the Construction Inspector.
7. Stabilize area per approved plan or as directed by Construction Inspector.

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**DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND**

GROSVENOR IMPROVEMENTS
EROSION AND SEDIMENT
CONTROL NOTES



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11/1/2022 \\US0525-PPFSSOI\shared_projects\202601\401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\DES-DOO1_Grosvenor.dgn

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF

ELEVATION

CROSS SECTION

CONSTRUCTION SPECIFICATIONS

- INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
- FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 1/2 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
- FASTEN WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 6 INCHES INTO THE GROUND.
- WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
- EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
- PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-5 FILTER BERM

STANDARD SYMBOL: FB-A, FB-B

CROSS SECTION

PLAN VIEW

CONSTRUCTION SPECIFICATIONS

- PLACE BERM ON THE CONTOUR WITH ENDS TURNED UPSLOPE TO PREVENT BYPASS. DO NOT EXCEED GRADES OF 5 PERCENT ALONG THE BERM FOR A DISTANCE GREATER THAN 50 FEET.
- CONSTRUCT BERM OF CLEAN WOOD CHIPS A MINIMUM SIZE OF 1X2 INCH AND A MAXIMUM OF 3X3 INCH.
- COMPACT AND SHAPE MATERIAL TO CONFORM TO DIMENSIONS SPECIFIED ON THE APPROVED PLAN.
- DO NOT PLACE UN-CHIPPED TREE PIECES, BRUSH, OR STUMPS IN THE BERM. BERM MUST BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES.
- THE BERM MAY CONTAIN UP TO 50% COMPOST MATERIAL IN ACCORDANCE WITH SECTION H-1 MATERIALS.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. ADD WOOD CHIPS OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN SPECIFIED DIMENSIONS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN THEY REACH 25% OF BERM HEIGHT.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SP

TYPE A

TYPE B

ISOMETRIC VIEW

SECTION FOR TYPE A AND B

CONSTRUCTION SPECIFICATIONS

- USE WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
- FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH 3/8 INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.
- FOR TYPE B, USE 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 26 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.
- BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SP

CONSTRUCTION SPECIFICATIONS

- USE WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
- FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH 3/8 INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.
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- BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-2 AT-GRADE INLET PROTECTION

STANDARD SYMBOL: AGIP

MAXIMUM DRAINAGE AREA = 1 ACRE

PLAN / CUT AWAY VIEW

CROSS SECTION

CONSTRUCTION SPECIFICATIONS

- USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
- PLACE CLEAN 3/4 TO 1 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DEPARTMENT OF PERMITTING SERVICES

Marc Elish County Executive

Mitra Pedersen Director

June 22, 2020

Ms. Kathy Walsh, P.E.
 Stantec Consulting Ltd.
 6110 Frost Place
 Laurel, MD 20707-2927

Re: **COMBINED STORMWATER MANAGEMENT CONCEPT/SITE DEVELOPMENT PLAN** for Grosvenor Improvements
 SM File #: 285833
 Tract Size/Zone: 1.1 Ac. / MDSA ROW
 Total Concept Area: 1.1 Ac.
 Watershed: Lower Rock Creek

Dear Ms. Walsh:

Based on a review by the Department of Permitting Services Review Staff, the stormwater management concept for the above-mentioned site is **acceptable**. The stormwater management concept proposes to meet required stormwater management goals via ESD to the MEP.

The following items will need to be addressed during the detailed sediment control/stormwater management plan stage:

- The stormwater management review approval will be done by MDSA. MDSA will inspect and maintain the stormwater management facilities. Since MCDPS is the permitting authority for this project, the approves MDSA plans must be made a part of the DPS sediment control permit set and must be clearly labeled as approved by MDSA.
- An engineered sediment control plan must be submitted for this development.
- You must provide safe non-erosive outfalls from the facilities. This may require the extension of the outfalls to the bottom of the slopes.

This list may not be all-inclusive and may change based on available information at the time.

Payment of a stormwater management contribution in accordance with Section 2 of the Stormwater Management Regulation 4-90 is **not required**.

This letter must appear on the sediment control/stormwater management plan at its initial submittal. The concept approval is based on all stormwater management structures being located outside of the Public Utility Easement, the Public Improvement Easement, and the Public Right of Way unless specifically approved on the concept plan. Any divergence from the information provided to this office, or additional information received during the development process, or a change in an applicable Executive Regulation may constitute grounds to rescind or amend any approval actions taken, and to reevaluate the site for additional or amended stormwater management requirements. If there are subsequent additions or modifications to the development, a separate concept request shall be required.

255 Rockville Pike, 2nd Floor, Rockville, Maryland 20850 | 240-777-0311
www.montgomerycountymd.gov/permitting-services

Kathy Walsh
 June 22, 2020
 Page 2 of 2

If you have any questions regarding these actions, please feel free to contact David Kuykendall at 240-777-6332 or david.kuykendall@montgomerycountymd.gov.

Sincerely,

 Mark C. Etheridge, Manager
 Water Resources Section
 Division of Land Development Services

MCE: CN285833 Grosvenor Improvements DWK
 cc: N. Braunstein
 SM File # 285833

ESD: Required/Provided 2,948 of / 2,972 of
 PE: Target/Reviewed 1,871/887
 STRUCTURAL: 0.0 of
 WAIVED: 0.0 of.

PROFESSIONAL CERTIFICATION:
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 LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022

810 Gleneagles Court, Suite 300
 Baltimore, MD 21286
www.stantec.com

NO.	REVISION	BY	APP'D	DATE

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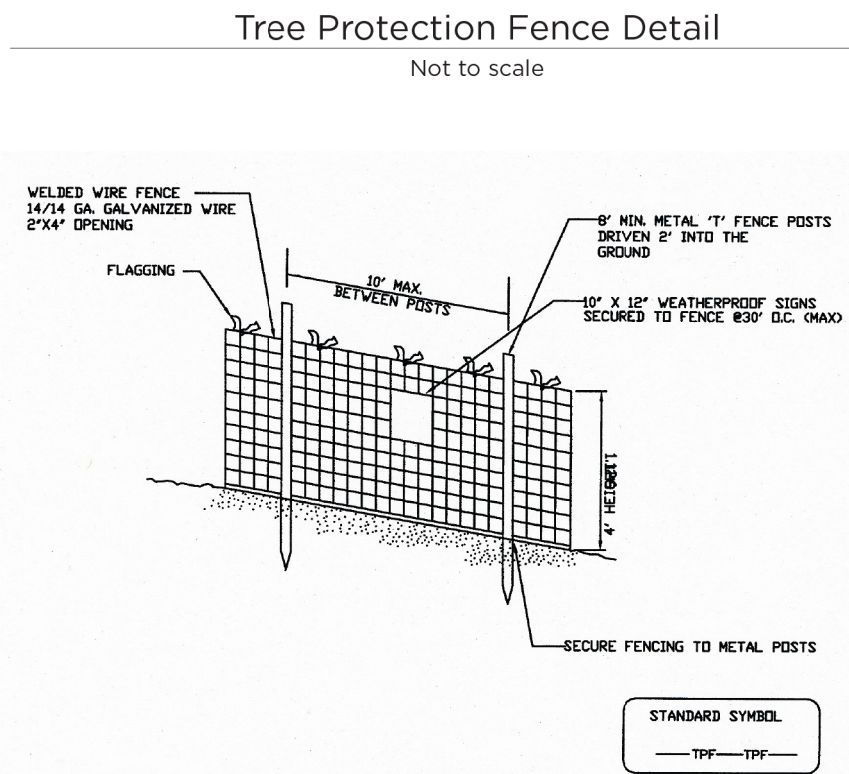
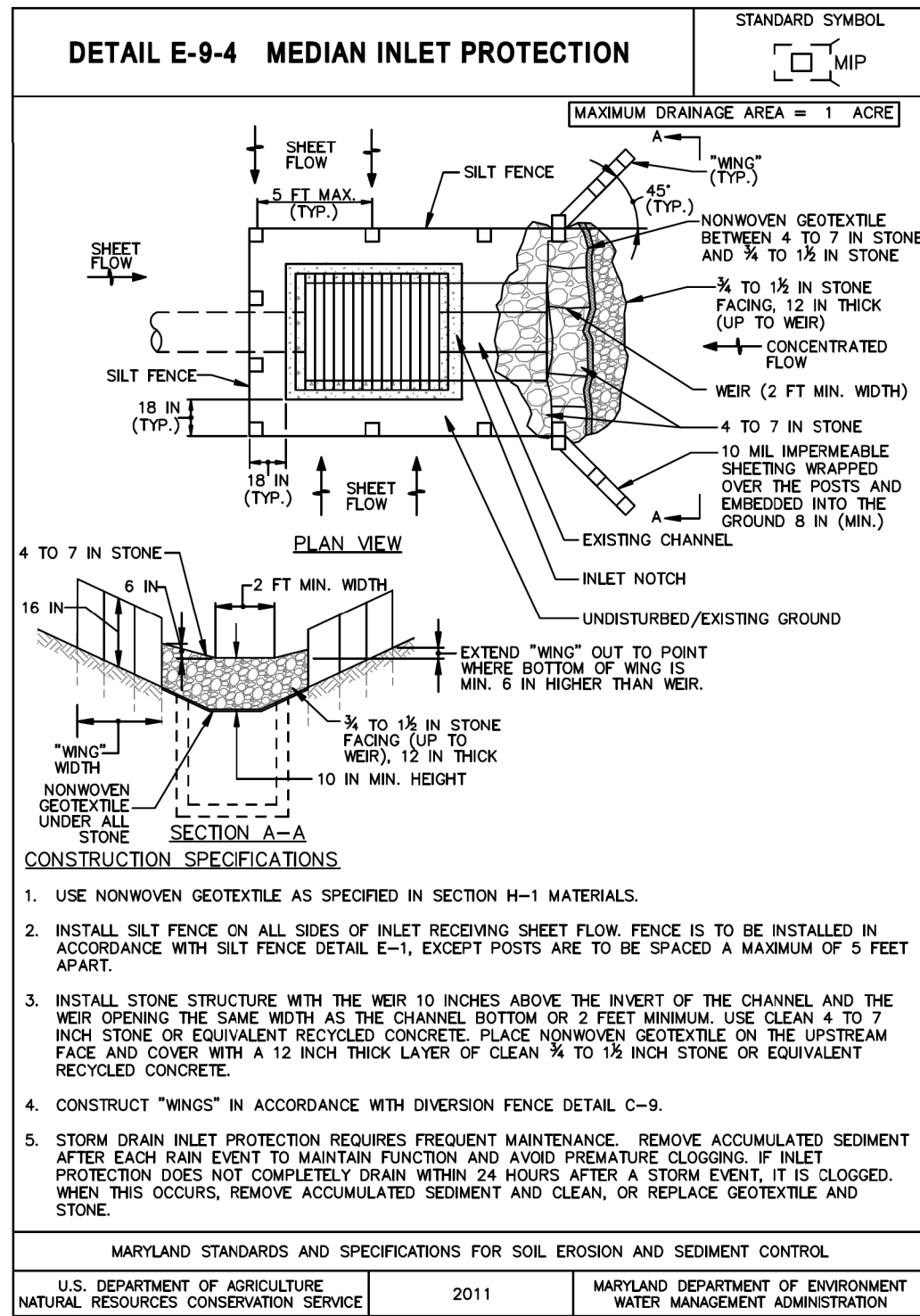
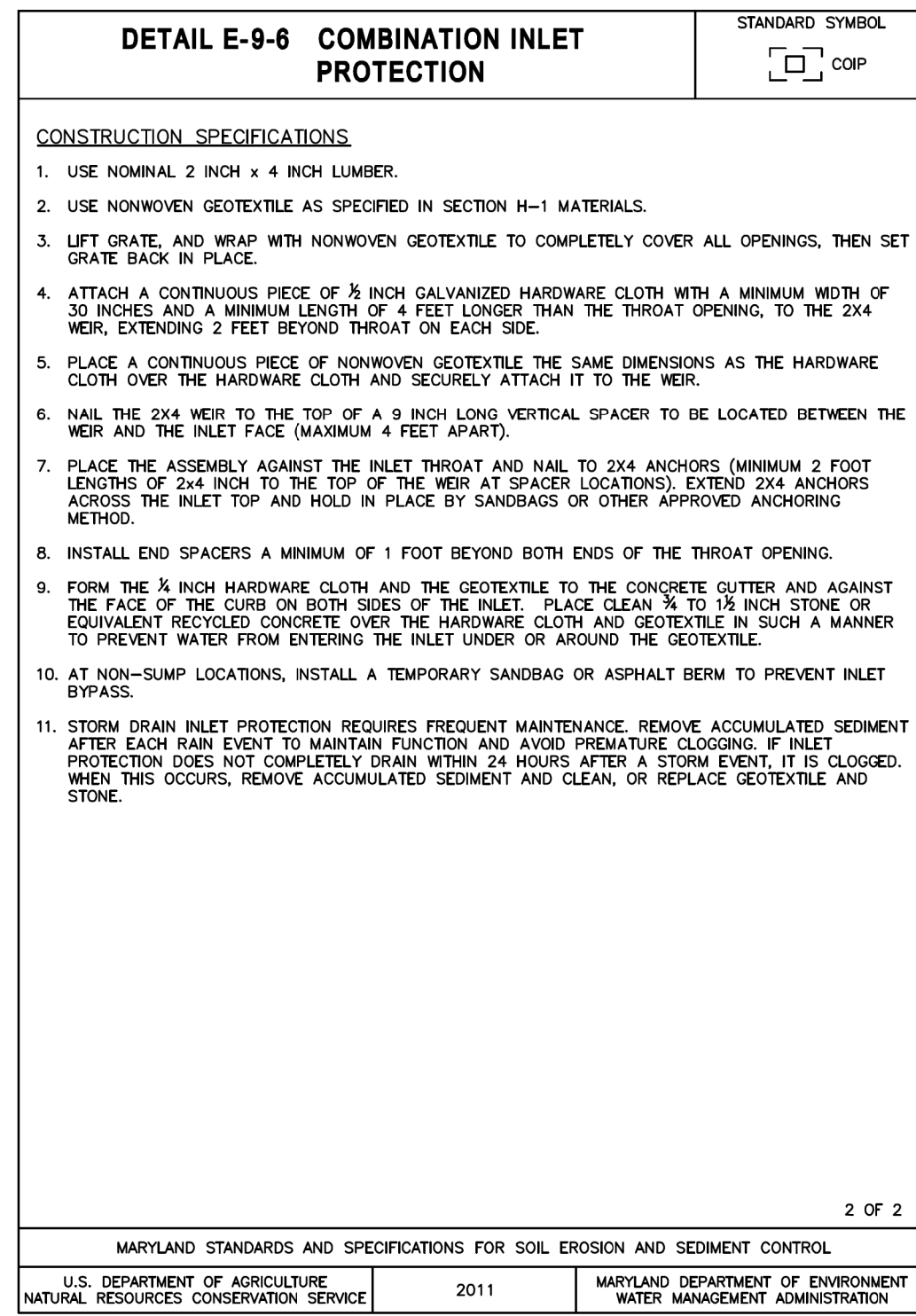
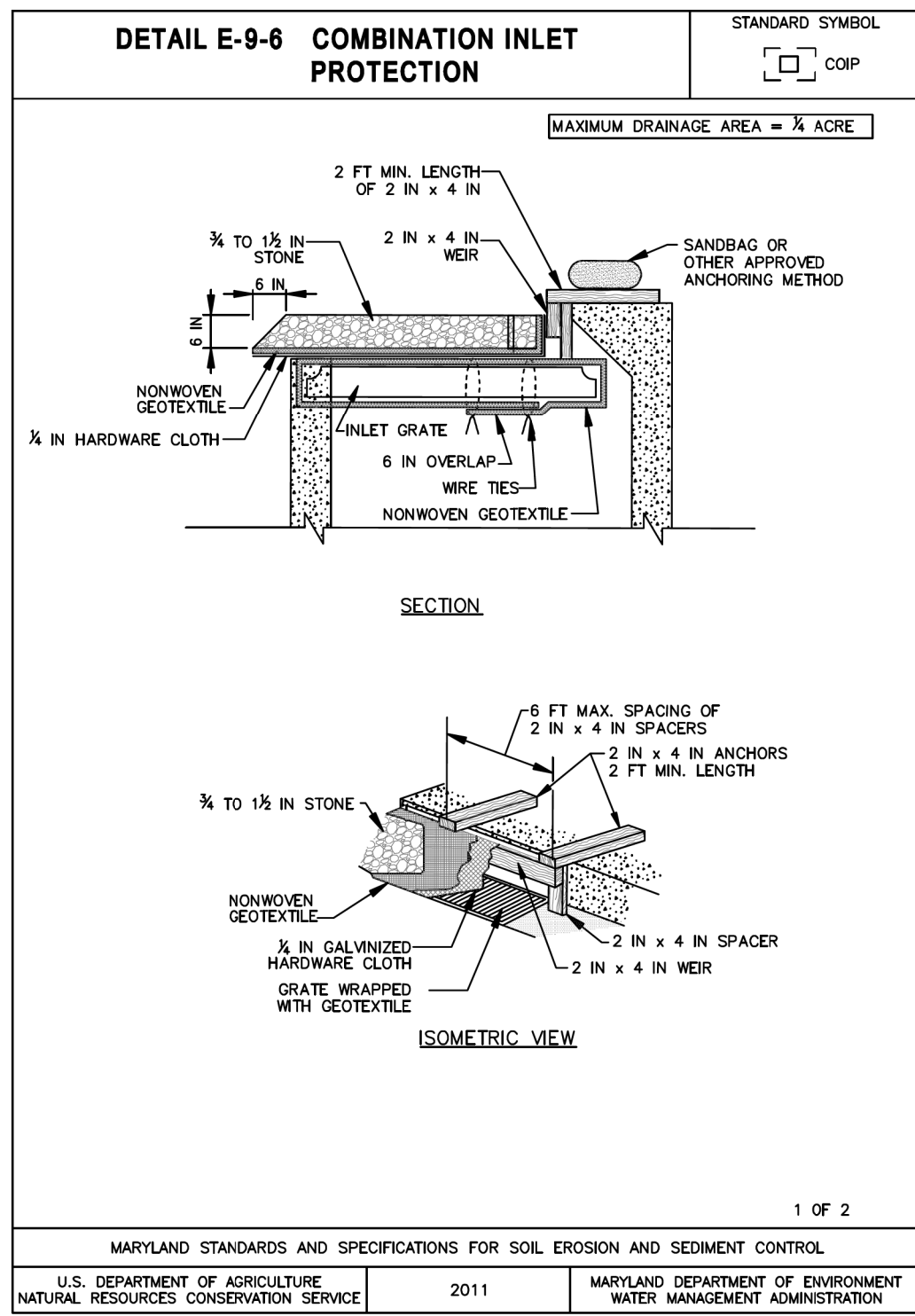
SC 12 OF 26 ES-03

DEPARTMENT OF TRANSPORTATION
 DIVISION OF TRANSPORTATION ENGINEERING
 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 EROSION AND SEDIMENT
 CONTROL DETAILS

SCALE: N.T.S. SHEET 035 of 128

11/1/2022 \\US0525-PPFSSO\shared_projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\DES-D002_Grosvenor.dgn



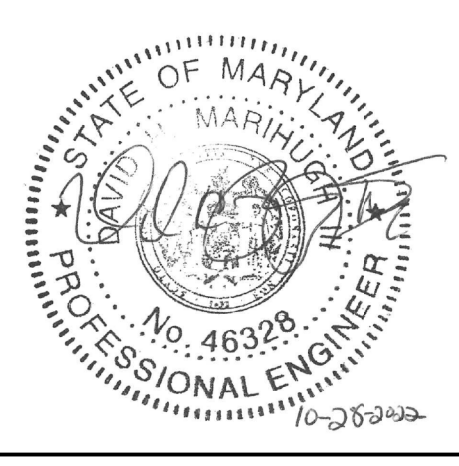
- NOTES**
- Practice may be combined with sediment control fencing.
 - Location and limits of fencing should be coordinated in field with arborist.
 - Boundaries of protection area should be staked prior to installing protective device.
 - Root damage should be avoided.
 - Protection signage is required.
 - Fencing shall be maintained throughout construction.

Montgomery County Planning Department • M-NCPPC
MontgomeryPlanning.org

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DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
EROSION AND SEDIMENT
CONTROL DETAILS



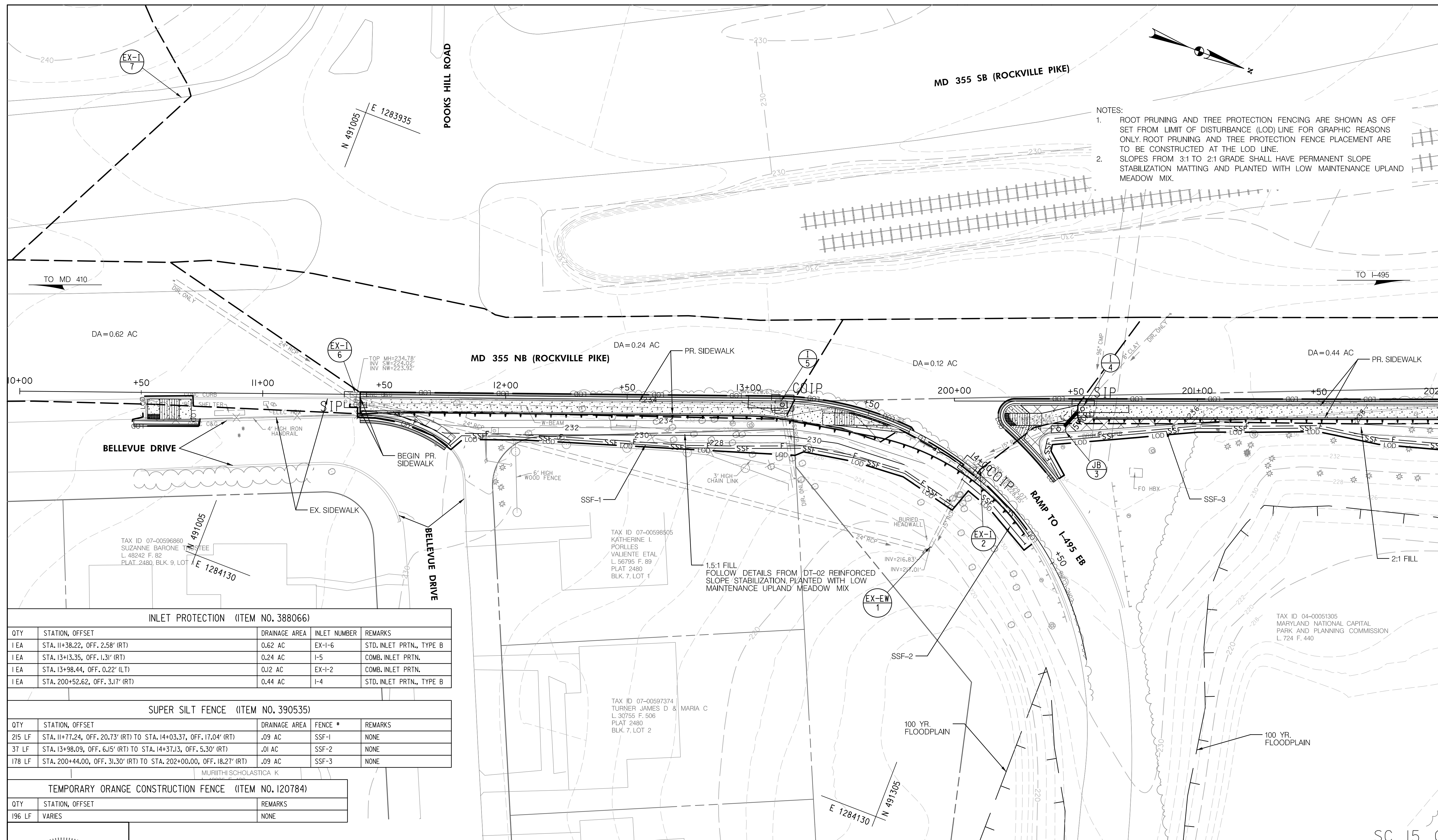
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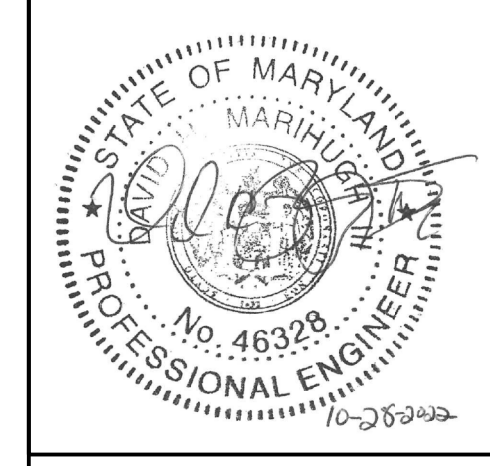
- NOTES:
1. ROOT PRUNING AND TREE PROTECTION FENCING ARE SHOWN AS OFF SET FROM LIMIT OF DISTURBANCE (LOD) LINE FOR GRAPHIC REASONS ONLY. ROOT PRUNING AND TREE PROTECTION FENCE PLACEMENT ARE TO BE CONSTRUCTED AT THE LOD LINE.
 2. SLOPES FROM 3:1 TO 2:1 GRADE SHALL HAVE PERMANENT SLOPE STABILIZATION MATTING AND PLANTED WITH LOW MAINTENANCE UPLAND MEADOW MIX.

MATCH LINE STA. 202+00 - SEE SHEET ES-06

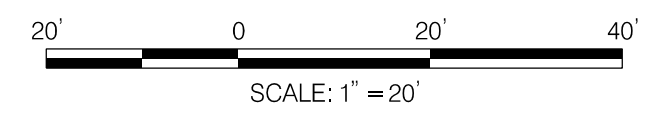
INLET PROTECTION (ITEM NO. 388066)				
QTY	STATION, OFFSET	DRAINAGE AREA	INLET NUMBER	REMARKS
1 EA	STA. 11+38.22, OFF. 2.58' (RT)	0.62 AC	EX-1-6	STD. INLET PRTN., TYPE B
1 EA	STA. 13+13.35, OFF. 1.31' (RT)	0.24 AC	I-5	COMB. INLET PRTN.
1 EA	STA. 13+98.44, OFF. 0.22' (LT)	0.12 AC	EX-1-2	COMB. INLET PRTN.
1 EA	STA. 200+52.62, OFF. 3.17' (RT)	0.44 AC	I-4	STD. INLET PRTN., TYPE B

SUPER SILT FENCE (ITEM NO. 390535)				
QTY	STATION, OFFSET	DRAINAGE AREA	FENCE #	REMARKS
215 LF	STA. 11+77.24, OFF. 20.73' (RT) TO STA. 14+03.37, OFF. 17.04' (RT)	.09 AC	SSF-1	NONE
37 LF	STA. 13+98.09, OFF. 6.15' (RT) TO STA. 14+37.13, OFF. 5.30' (RT)	.01 AC	SSF-2	NONE
178 LF	STA. 200+44.00, OFF. 31.30' (RT) TO STA. 202+00.00, OFF. 18.27' (RT)	.09 AC	SSF-3	NONE

TEMPORARY ORANGE CONSTRUCTION FENCE (ITEM NO. I20784)		
QTY	STATION, OFFSET	REMARKS
196 LF	VARIABLE	NONE



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Chief, Division of Transportation Engineering					Date	

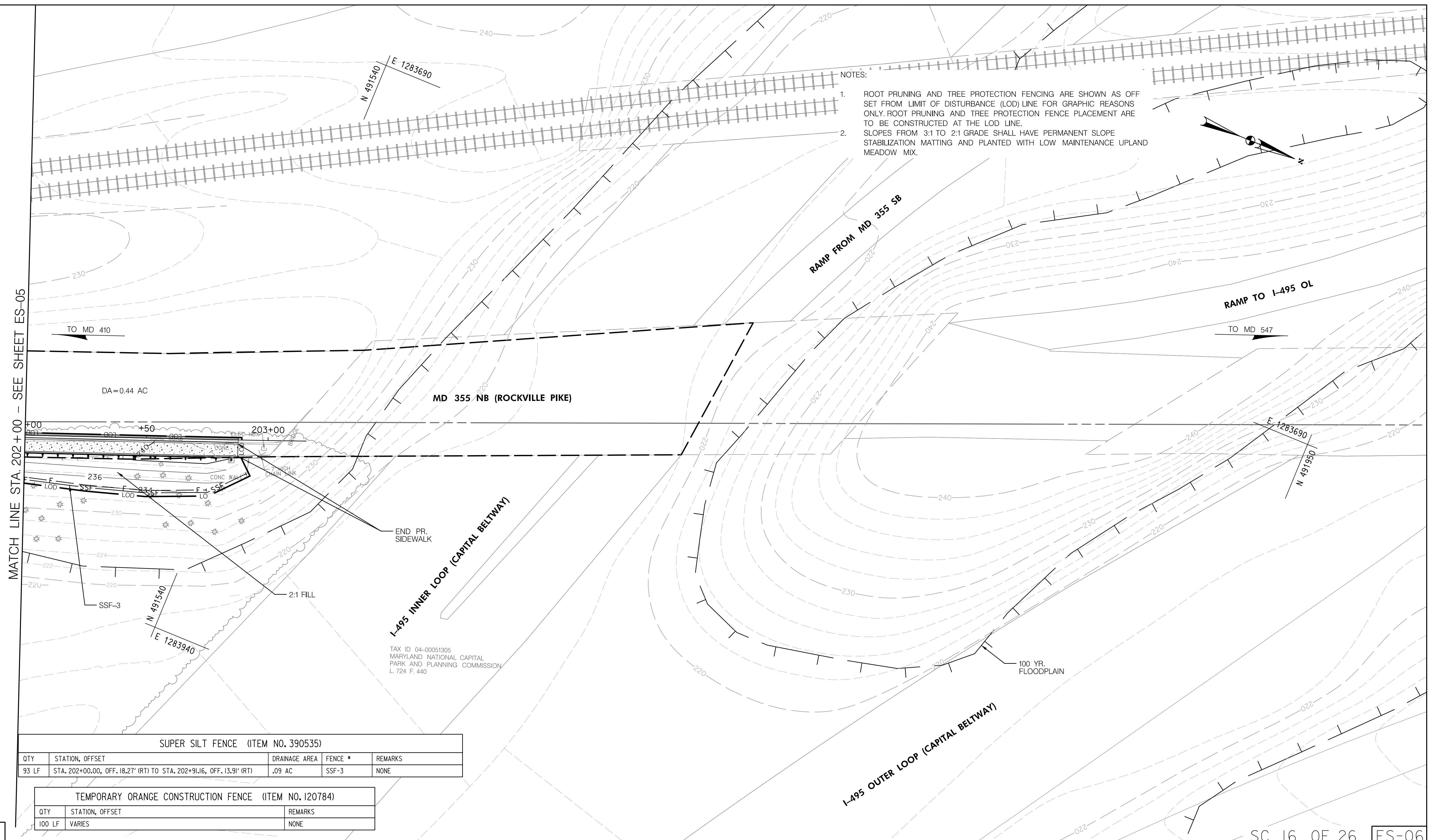
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
EROSION AND SEDIMENT
CONTROL PLAN

SCALE: 1"=20' SHEET_037_ of _128_

SC 15 OF 26 ES-05

11/1/2022 \\US0525-PFSSO\shared\projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pES-P002_Grosvenor.dgn

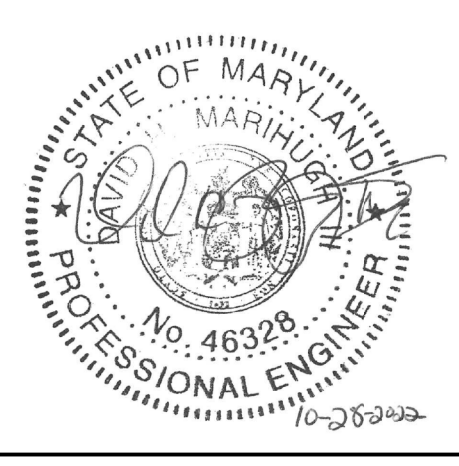
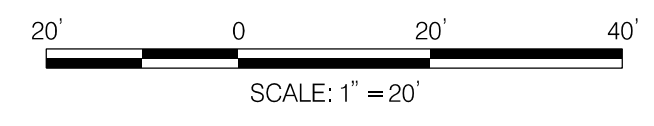


- NOTES:
1. ROOT PRUNING AND TREE PROTECTION FENCING ARE SHOWN AS OFF SET FROM LIMIT OF DISTURBANCE (LOD) LINE FOR GRAPHIC REASONS ONLY. ROOT PRUNING AND TREE PROTECTION FENCE PLACEMENT ARE TO BE CONSTRUCTED AT THE LOD LINE.
 2. SLOPES FROM 3:1 TO 2:1 GRADE SHALL HAVE PERMANENT SLOPE STABILIZATION MATTING AND PLANTED WITH LOW MAINTENANCE UPLAND MEADOW MIX.

MATCH LINE STA. 202+00 - SEE SHEET ES-05

SUPER SILT FENCE (ITEM NO. 390535)				
QTY	STATION, OFFSET	DRAINAGE AREA	FENCE #	REMARKS
93 LF	STA. 202+00.00, OFF. 18.27' (RT) TO STA. 202+91.16, OFF. 13.91' (RT)	.09 AC	SSF-3	NONE

TEMPORARY ORANGE CONSTRUCTION FENCE (ITEM NO. 120784)		
QTY	STATION, OFFSET	REMARKS
100 LF	VARIES	NONE



PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



810 Gleneagles Court, Suite 300
Baltimore, MD 21286
www.stantec.com



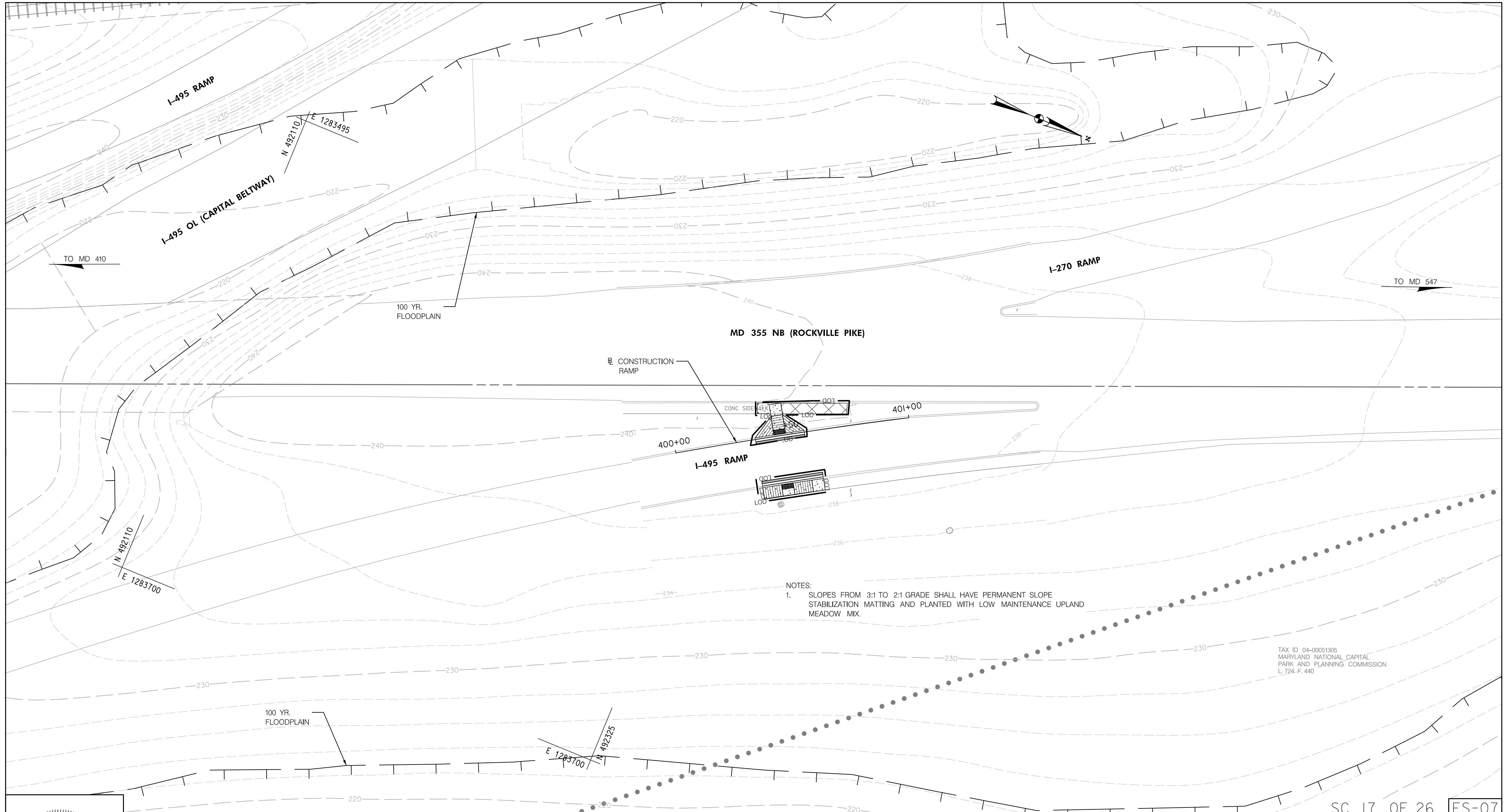
NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: MK	DATE: NOVEMBER, 2022
DRAWN BY: MK	DATE: NOVEMBER, 2022
CHECKED BY: DHM III	DATE: NOVEMBER, 2022
DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL	
Chief, Design Section	Date
APPROVED	
Chief, Division of Transportation Engineering	Date

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
EROSION AND SEDIMENT
CONTROL PLAN

11/1/2022 \\US0525-PPFSSO\shared_projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\ES-P003_Grosvenor.dgn



NOTES:
 1. SLOPES FROM 3:1 TO 2:1 GRADE SHALL HAVE PERMANENT SLOPE STABILIZATION MATTING AND PLANTED WITH LOW MAINTENANCE UPLAND MEADOW MIX.

TAX ID 04-00051305
 MARYLAND NATIONAL CAPITAL
 PARK AND PLANNING COMMISSION
 L. 724-F. 440

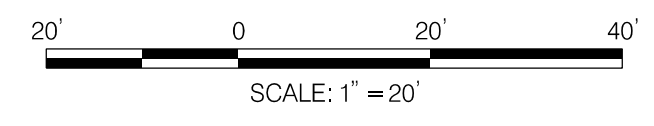
SC 17 OF 26 ES-07



PROFESSIONAL CERTIFICATION:
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
 LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



810 Gleneagles Court, Suite 300
 Baltimore, MD 21286
 www.stantec.com



NO.	REVISION	BY	APP'D	DATE

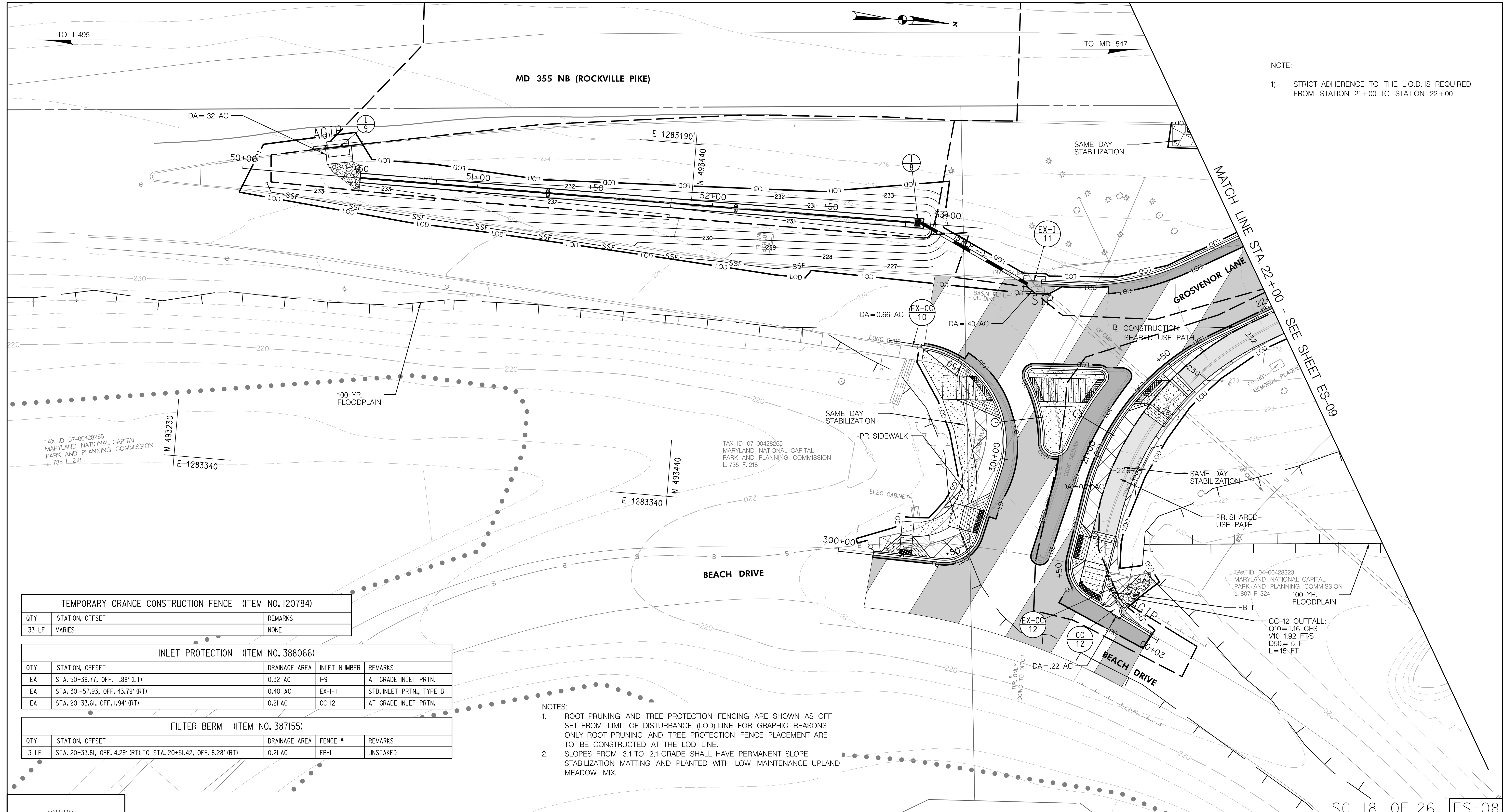
DESIGNED BY: KN	DATE: NOVEMBER, 2022
DRAWN BY: KN	DATE: NOVEMBER, 2022
CHECKED BY: DHM III	DATE: NOVEMBER, 2022
DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL	
Chief, Design Section	Date
APPROVED	
Chief, Division of Transportation Engineering	Date

DEPARTMENT OF TRANSPORTATION
 DIVISION OF TRANSPORTATION ENGINEERING
 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 EROSION AND SEDIMENT
 CONTROL PLAN

SCALE: 1"=20' SHEET 039 of 128

11/1/2022 \\US0525-PPFSS01\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pES-P004_Grosvenor.dgn



NOTE:
1) STRICT ADHERENCE TO THE L.O.D. IS REQUIRED FROM STATION 21+00 TO STATION 22+00

TEMPORARY ORANGE CONSTRUCTION FENCE (ITEM NO. I20784)		
QTY	STATION, OFFSET	REMARKS
133 LF	VARIES	NONE

INLET PROTECTION (ITEM NO. 388066)				
QTY	STATION, OFFSET	DRAINAGE AREA	INLET NUMBER	REMARKS
1 EA	STA. 50+39.77, OFF. 11.88' (LT)	0.32 AC	I-9	AT GRADE INLET PRTN.
1 EA	STA. 301+57.93, OFF. 43.79' (RT)	0.40 AC	EX-I-II	STD. INLET PRTN., TYPE B
1 EA	STA. 20+33.61, OFF. 1.94' (RT)	0.21 AC	CC-12	AT GRADE INLET PRTN.

FILTER BERM (ITEM NO. 387155)				
QTY	STATION, OFFSET	DRAINAGE AREA	FENCE #	REMARKS
13 LF	STA. 20+33.81, OFF. 4.29' (RT) TO STA. 20+51.42, OFF. 8.28' (RT)	0.21 AC	FB-1	UNSTAKED

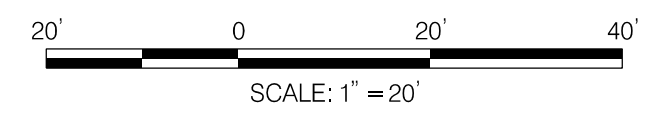
NOTES:
1. ROOT PRUNING AND TREE PROTECTION FENCING ARE SHOWN AS OFF SET FROM LIMIT OF DISTURBANCE (LOD) LINE FOR GRAPHIC REASONS ONLY. ROOT PRUNING AND TREE PROTECTION FENCE PLACEMENT ARE TO BE CONSTRUCTED AT THE LOD LINE.
2. SLOPES FROM 3:1 TO 2:1 GRADE SHALL HAVE PERMANENT SLOPE STABILIZATION MATTING AND PLANTED WITH LOW MAINTENANCE UPLAND MEADOW MIX.



PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



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NO.	REVISION	BY	APP'D	DATE	DESIGNED BY: KN	DATE: NOVEMBER, 2022
					DRAWN BY: KN	DATE: NOVEMBER, 2022
					CHECKED BY: DHM III	DATE: NOVEMBER, 2022
					DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL						
Chief, Design Section					Date	
APPROVED						
Chief, Division of Transportation Engineering					Date	

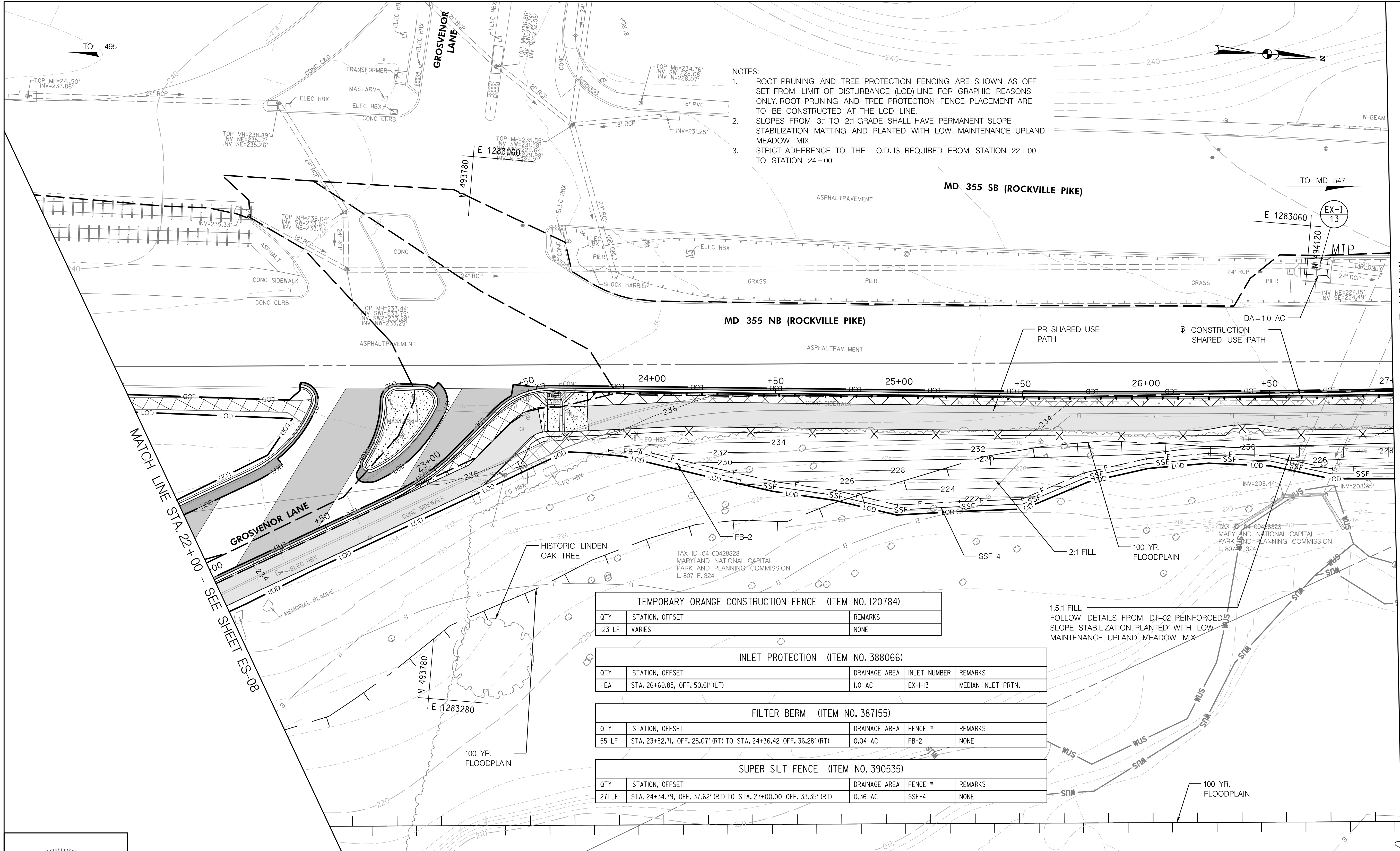
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
EROSION AND SEDIMENT
CONTROL PLAN

SCALE: 1"=20' SHEET 040 of 128

SC 18 OF 26 ES-08

11/1/2022 \\US0525-PPFSSO\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\ES-P005-Grosvenor.dgn



- NOTES:
1. ROOT PRUNING AND TREE PROTECTION FENCING ARE SHOWN AS OFF SET FROM LIMIT OF DISTURBANCE (LOD) LINE FOR GRAPHIC REASONS ONLY. ROOT PRUNING AND TREE PROTECTION FENCE PLACEMENT ARE TO BE CONSTRUCTED AT THE LOD LINE.
 2. SLOPES FROM 3:1 TO 2:1 GRADE SHALL HAVE PERMANENT SLOPE STABILIZATION MATTING AND PLANTED WITH LOW MAINTENANCE UPLAND MEADOW MIX.
 3. STRICT ADHERENCE TO THE L.O.D. IS REQUIRED FROM STATION 22+00 TO STATION 24+00.

MATCH LINE STA. 22+00 - SEE SHEET ES-08

MATCH LINE STA. 27+00 - SEE SHEET ES-10

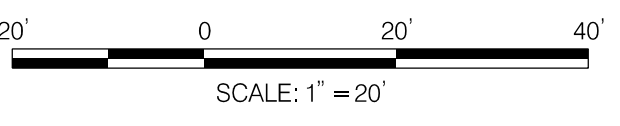
TEMPORARY ORANGE CONSTRUCTION FENCE (ITEM NO. 120784)		
QTY	STATION, OFFSET	REMARKS
123 LF	VARIES	NONE

INLET PROTECTION (ITEM NO. 388066)				
QTY	STATION, OFFSET	DRAINAGE AREA	INLET NUMBER	REMARKS
1 EA	STA. 26+69.85, OFF. 50.61' (LT)	1.0 AC	EX-1-13	MEDIAN INLET PRTN.

FILTER BERM (ITEM NO. 387155)				
QTY	STATION, OFFSET	DRAINAGE AREA	FENCE #	REMARKS
55 LF	STA. 23+82.71, OFF. 25.07' (RT) TO STA. 24+36.42 OFF. 36.28' (RT)	0.04 AC	FB-2	NONE

SUPER SILT FENCE (ITEM NO. 390535)				
QTY	STATION, OFFSET	DRAINAGE AREA	FENCE #	REMARKS
271 LF	STA. 24+34.79, OFF. 37.62' (RT) TO STA. 27+00.00 OFF. 33.35' (RT)	0.36 AC	SSF-4	NONE

1.5:1 FILL FOLLOW DETAILS FROM DT-02 REINFORCED SLOPE STABILIZATION PLANTED WITH LOW MAINTENANCE UPLAND MEADOW MIX



NO.	REVISION	BY	APP'D	DATE	DESIGNED BY: KN	DATE: NOVEMBER, 2022
					DRAWN BY: KN	DATE: NOVEMBER, 2022
					CHECKED BY: DHM III	DATE: NOVEMBER, 2022
					DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL						
					Chief, Design Section	Date
					APPROVED	
					Chief, Division of Transportation Engineering	Date

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
EROSION AND SEDIMENT
CONTROL PLAN

SCALE: 1"=20' SHEET 041 of 128

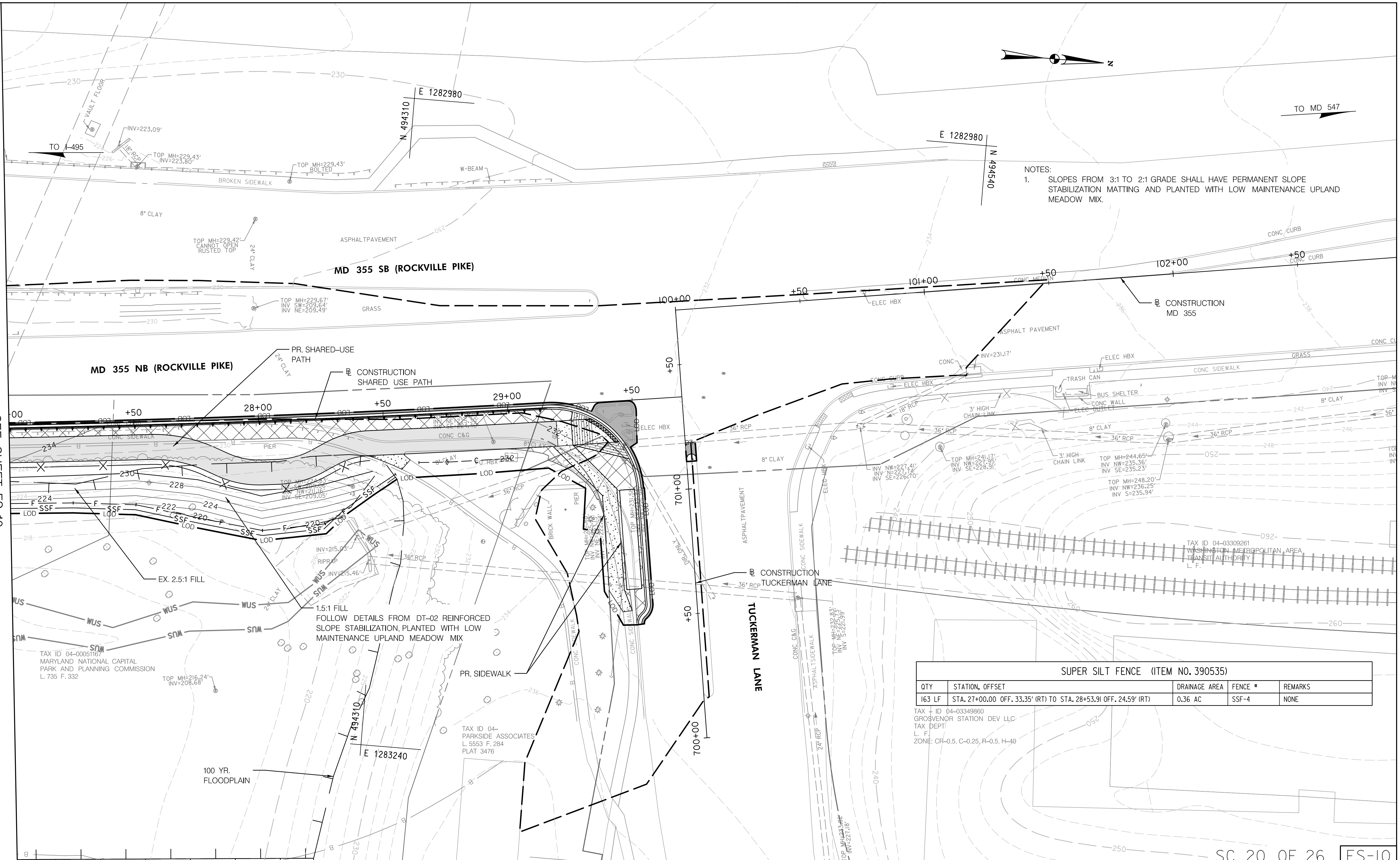


PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



11/1/2022 \\US0525-PPFSSO\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pES-P006_Grosvenor.dgn

MATCH LINE STA. 27+00 - SEE SHEET ES-10



NOTES:
1. SLOPES FROM 3:1 TO 2:1 GRADE SHALL HAVE PERMANENT SLOPE STABILIZATION MATTING AND PLANTED WITH LOW MAINTENANCE UPLAND MEADOW MIX.

SUPER SILT FENCE (ITEM NO. 390535)				
QTY	STATION, OFFSET	DRAINAGE AREA	FENCE #	REMARKS
163 LF	STA. 27+00.00 OFF. 33.35' (RT) TO STA. 28+53.91 OFF. 24.59' (RT)	0.36 AC	SSF-4	NONE

TAX ID 04-03349860
GROSVENOR STATION DEV LLC
TAX DEPT
L F
ZONE: CF-0.5, C-0.25, R-0.5, H-40



PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



SCALE: 1" = 20'

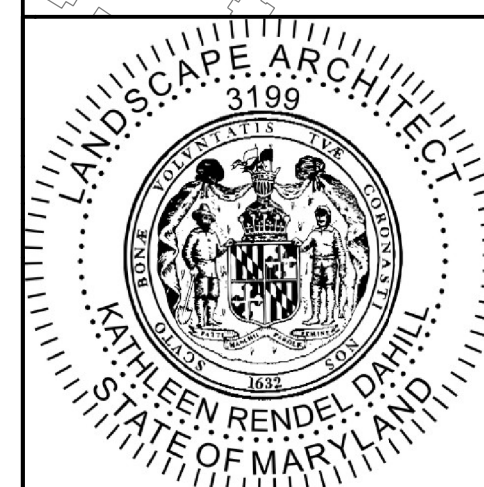
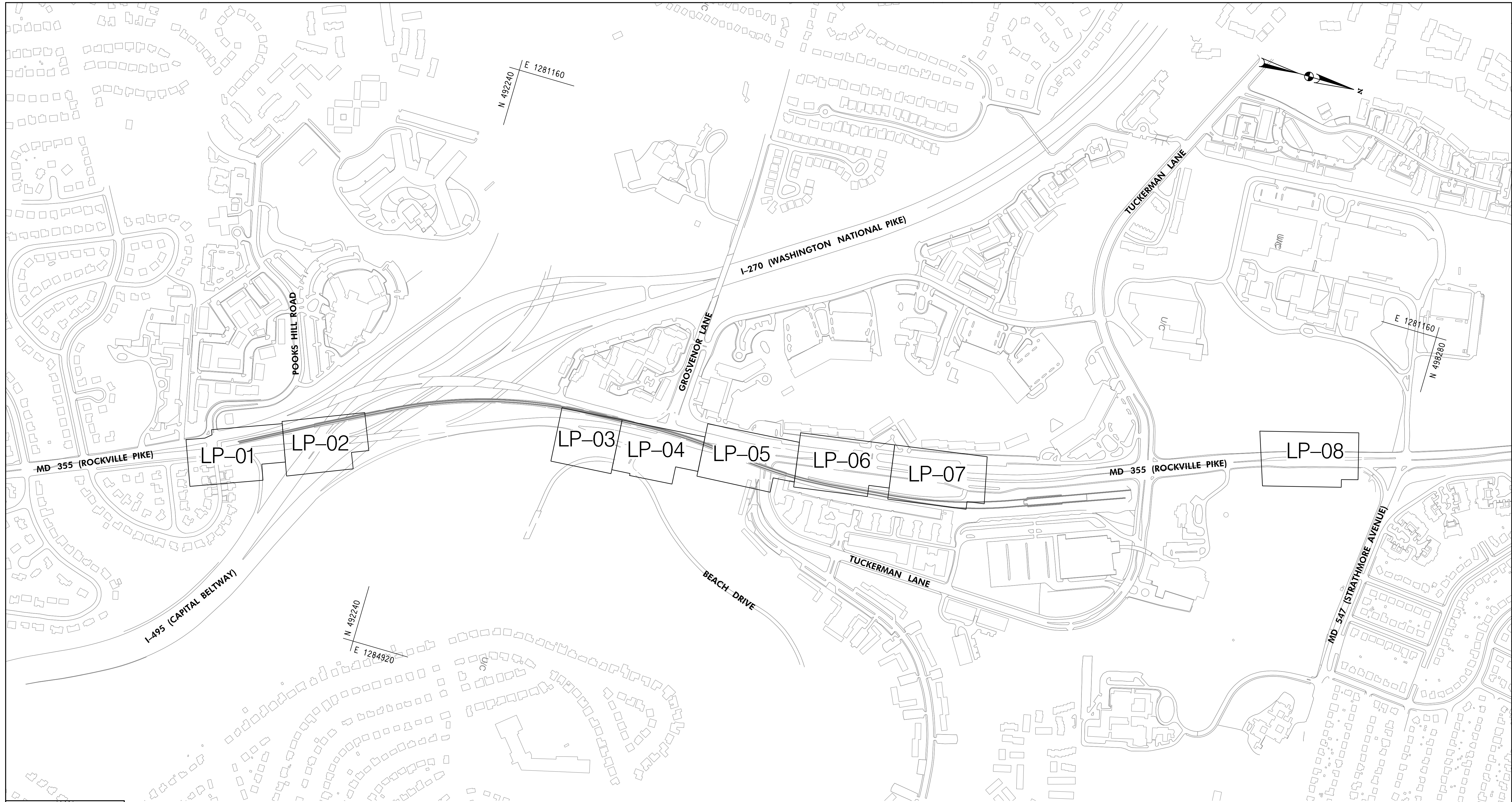
NO.	REVISION	BY	APP'D	DATE	DESIGNED BY: KN	DATE: NOVEMBER, 2022
					DRAWN BY: KN	DATE: NOVEMBER, 2022
					CHECKED BY: DHM III	DATE: NOVEMBER, 2022
					DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL						
Chief, Design Section					Date	
APPROVED						
Chief, Division of Transportation Engineering					Date	

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
EROSION AND SEDIMENT
CONTROL PLAN

SCALE: 1"=20' SHEET 042 of 128

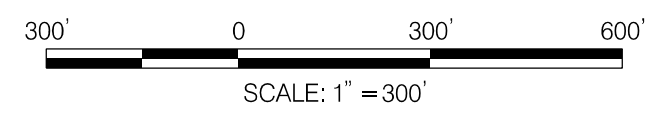
11/1/2022 \\US0525-PPFSSO\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\LP-KEY_LP-KEY_Grosvenor.dgn



PROFESSIONAL CERTIFICATION:
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED
 OR APPROVED BY ME, AND THAT I AM A REGISTERED
 LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE
 OF MARYLAND.
 LICENSE NO: 3199 EXPIRATION DATE: 05/07/2021



810 Glenegles Court, Suite 300
 Baltimore, MD 21286
 www.stantec.com



NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: DHM III	DATE: NOVEMBER, 2022
DRAWN BY: DHM III	DATE: NOVEMBER, 2022
CHECKED BY: KCW	DATE: NOVEMBER, 2022
DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL	
Chief, Design Section _____	Date _____
APPROVED	
Chief, Division of Transportation Engineering _____	Date _____

DEPARTMENT OF TRANSPORTATION
 DIVISION OF TRANSPORTATION ENGINEERING
 MONTGOMERY COUNTY, MARYLAND

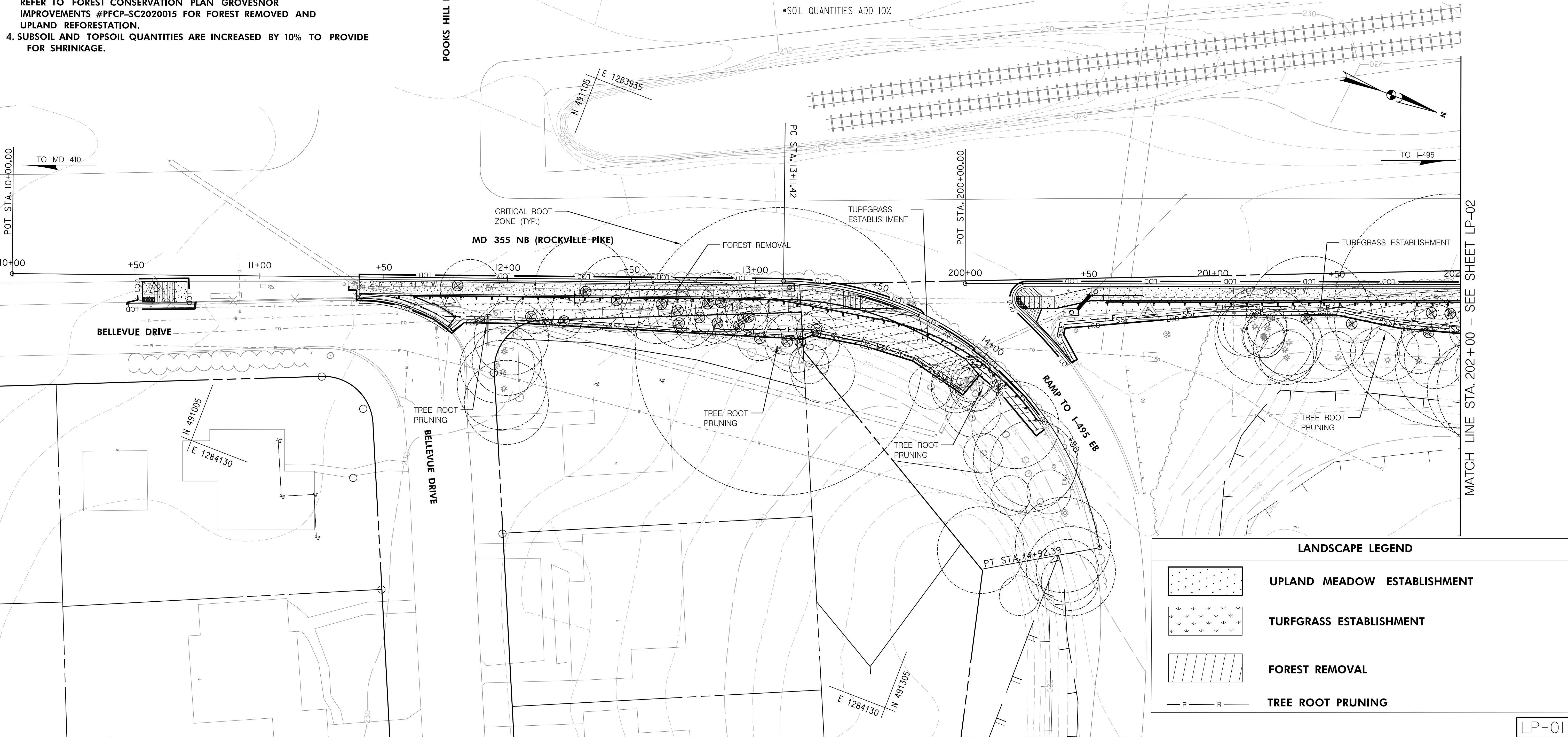
GROSVENOR IMPROVEMENTS
 LANDSCAPE & TREE PROTECTION
 KEY PLAN
 SCALE: 1"=300' SHEET 043 of 128

LP-KY

- NOTES:**
- REFER TO EROSION AND SEDIMENT CONTROL /SWP PLAN FOR TREE PROTECTION FENCE (TPF) & BIORETENTION SOIL MIX ITEMS AND QUANTITIES.
 - LOCATION OF WELDED WIRE TREE PROTECTION FENCE AND ROOT PRUNING ARE SHOWN ON THE PLAN AS AN OFFSET FROM THE LIMIT OF DISTURBANCE (LOD) FOR GRAPHIC PURPOSES ONLY, FENCE AND ROOT PRUNING OPERATIONS SHALL BE LOCATED AT LOD LINE.
 - THIS IS A LINEAR PROJECT LOCATED ON MD 355 AND M-NCPPC PROPERTIES. THE LIMIT OF DISTURBANCE (LOD) IS 1.15 ACRES. REFER TO FOREST CONSERVATION PLAN GROVESNOR IMPROVEMENTS #PFCP-SC2020015 FOR FOREST REMOVED AND UPLAND REFORESTATION.
 - SUBSOIL AND TOPSOIL QUANTITIES ARE INCREASED BY 10% TO PROVIDE FOR SHRINKAGE.

LANDSCAPE 700 ITEMS - THIS SHEET ONLY											
QTY	UNIT	STATION, OFFSET	CAT. CODE	ITEM	SHA SPECS	QTY	UNIT	STATION, OFFSET	CAT. CODE	ITEM	SHA SPECS
+337	SY	STA. 11+60 TO STA. 14+00 R	704345	FURNISHED TOPSOIL 4 INCH DEPTH	701	191	SY	STA. 200+27 R TO STA. 202+00 R	704345	FURNISHED TOPSOIL 4 INCH DEPTH	701
306	SY	STA. 11+60 TO STA. 14+00 R	705405	TEMPORARY SEED	704	173	SY	STA. 200+27 R TO STA. 202+00 R	705405	TEMPORARY SEED	704
306	SY	STA. 11+60 TO STA. 14+00 R	705412	TEMPORARY MULCH	704	173	SY	STA. 200+27 R TO STA. 202+00 R	705412	TEMPORARY MULCH	704
306	SY	STA. 11+60 TO STA. 14+00 R	707400	UPLAND MEADOW ESTABLISHMENT	707	5	SY	STA. 200+27 R TO STA. 202+00 R	705500	TURFGRASS ESTABLISHMENT	705
306	SY	STA. 11+60 TO STA. 14+00 R	709100	TYPE A SOIL STABILIZATION MATTING	709	168	SY	STA. 200+27 R TO STA. 202+00 R	707400	UPLAND MEADOW ESTABLISHMENT	707
103	LF	STA. 13+00 TO STA. 14+20 R	715050	TREE ROOT PRUNING	715	173	SY	STA. 200+27 R TO STA. 202+00 R	709100	TYPE A SOIL STABILIZATION MATTING	709
						129	LF	STA. 200+27 R TO STA. 202+00 R	715050	TREE ROOT PRUNING	715

*SOIL QUANTITIES ADD 10%



LANDSCAPE LEGEND	
	UPLAND MEADOW ESTABLISHMENT
	TURFGRASS ESTABLISHMENT
	FOREST REMOVAL
	TREE ROOT PRUNING

NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: MK	DATE: NOVEMBER, 2022
DRAWN BY: MK	DATE: NOVEMBER, 2022
CHECKED BY: KR D	DATE: NOVEMBER, 2022
DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL	
Chief, Design Section	Date
APPROVED	
Chief, Division of Transportation Engineering	Date

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
LANDSCAPE & TREE PROTECTION PLAN

SCALE: 1"=20' SHEET 044 of 128



11/1/2022 \\US0525-PFSS01\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\LP-P001_Grosvenor.dgn

11/17/2022 \\US0525-PPFSSO\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\LP-002_Grosvenor.dgn

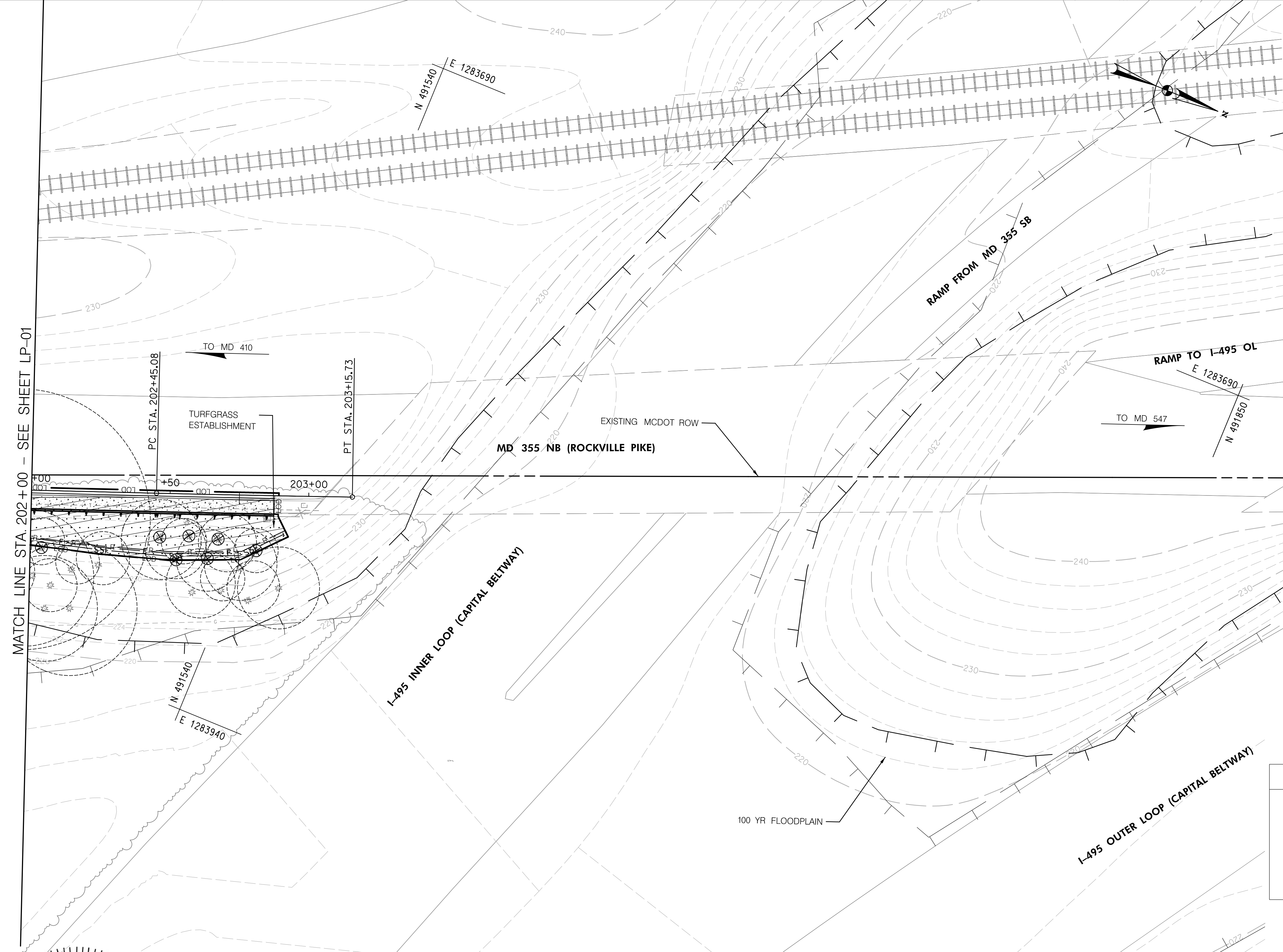
LANDSCAPE 700 ITEMS - THIS SHEET ONLY					
QTY	UNIT	STATION, OFFSET	CAT. CODE	ITEM	SHA SPECS
*130	SY	STA. 202+00 TO STA. 202+80 R	704345	FURNISHED TOPSOIL 4 INCH DEPTH	701
118	SY	STA. 202+00 TO STA. 202+80 R	705405	TEMPORARY SEED	704
118	SY	STA. 202+00 TO STA. 202+80 R	705412	TEMPORARY MULCH	704
118	SY	STA. 202+00 TO STA. 202+80 R	707400	UPLAND MEADOW ESTABLISHMENT	707
118	SY	STA. 202+00 TO STA. 202+80 R	709100	TYPE A SOIL STABILIZATION MATTING	709
93	LF	STA. 202+00 TO STA. 202+80 R	715050	TREE ROOT PRUNING	715

*SOIL QUANTITIES ADD 10%

NOTES:

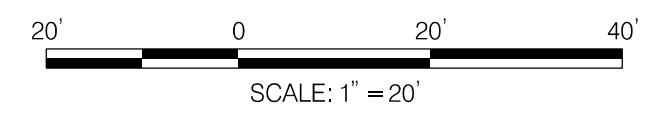
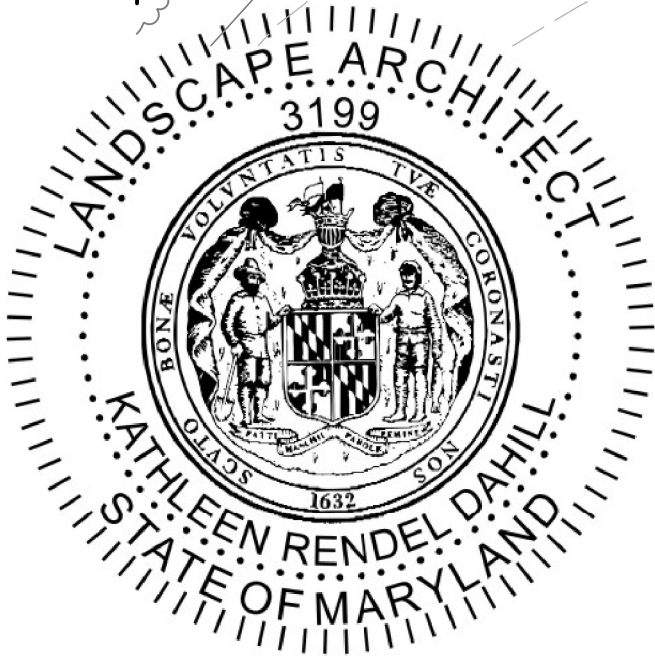
- REFER TO EROSION AND SEDIMENT CONTROL /SWM PLAN FOR TREE PROTECTION FENCE (TPF) & BIORETENTION SOIL MIX ITEMS AND QUANTITIES.
- LOCATION OF WELDED WIRE TREE PROTECTION FENCE AND ROOT PRUNING ARE SHOWN ON THE PLAN AS AN OFFSET FROM THE LIMIT OF DISTURBANCE (LOD) FOR GRAPHIC PURPOSES ONLY, FENCE AND ROOT PRUNING OPERATIONS SHALL BE LOCATED AT LOD LINE.
- THIS IS A LINEAR PROJECT LOCATED ON MD 355 AND M-NCPPC PROPERTIES. THE LIMIT OF DISTURBANCE (LOD) IS 1.15 ACRES. REFER TO FOREST CONSERVATION PLAN GROVESNOR IMPROVEMENTS #PFCP-SC2020015 FOR FOREST REMOVED AND UPLAND REFORESTATION.
- SUBSOIL AND TOPSOIL QUANTITIES ARE INCREASED BY 10% TO PROVIDE FOR SHRINKAGE.

MATCH LINE STA 202+00 - SEE SHEET LP-01



LANDSCAPE LEGEND	
	UPLAND MEADOW ESTABLISHMENT
	FOREST REMOVAL
	TREE ROOT PRUNING

LP-02



NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: MK	DATE: NOVEMBER, 2022
DRAWN BY: MK	DATE: NOVEMBER, 2022
CHECKED BY: KR D	DATE: NOVEMBER, 2022
DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL	
Chief, Design Section	Date
APPROVED	
Chief, Division of Transportation Engineering	Date

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
LANDSCAPE & TREE PROTECTION PLAN

SCALE: 1"=20'

SHEET 045 of 128

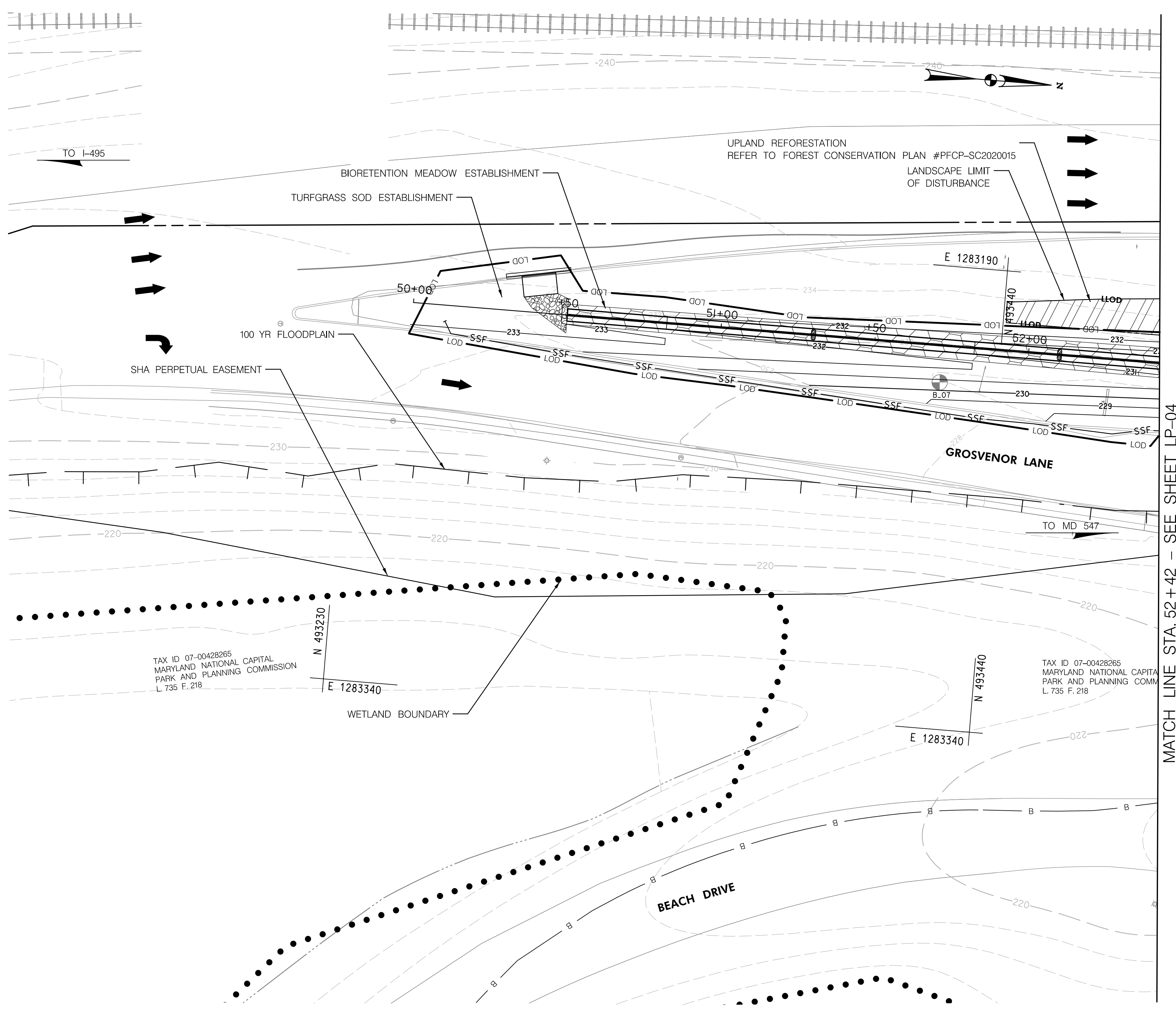
LANDSCAPE 700 ITEMS - THIS SHEET ONLY					
QTY	UNIT	STATION, OFFSET	CAT. CODE	ITEM	SHA SPECS
*516	SY	SWM SWALE LOD AS SHOWN	704345	FURNISHED TOPSOIL 4 INCH DEPTH	701
174	SY	SWM SWALE LOD AS SHOWN	705405	TEMPORARY SEED	704
174	SY	SWM SWALE LOD AS SHOWN	705412	TEMPORARY MULCH	704
469	SY	SWM SWALE LOD AS SHOWN	708220	TURFGRASS SOD ESTABLISHMENT	708
469	SY	SWM SWALE LOD AS SHOWN	705565	REFERTILIZING	705
174	SY	SWM SWALE LOD AS SHOWN	709110	TYPE B SOIL STABILIZATION MATTING	709
174	SY	SWM SWALE LOD AS SHOWN	707415	BIORETENTION MEADOW ESTABLISHMENT	700.02

*SOIL QUANTITIES ADD 10%

NOTES:

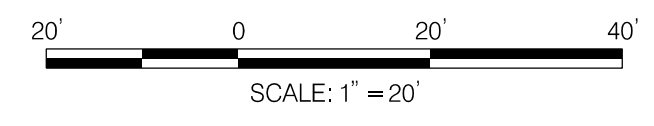
- LANDSCAPE LIMIT OF DISTURBANCE (LLOD) DELINEATED FOR LANDSCAPE ACTIVITIES BEYOND THE LIMIT OF DISTURBANCE (LOD). THE LLOD IS 2,366 SQUARE FEET AS SHOWN. THE LLOD WORK TO INCLUDE INSTALLATION OF TREES AND SHRUBS IN INDIVIDUAL PLANTING PITS. GRADING, CLEARING AND GRUBBING, PLACEMENT OF SOIL LAYERS OR STORAGE OF EQUIPMENT OR MATERIALS ARE PROHIBITED IN THE LLOD.
- ALL STORMWATER MANAGEMENT IS TO BE APPROVED, INSPECTED, AND MAINTAINED BY MDOT SHA.
- REFER TO EROSION AND SEDIMENT CONTROL /SWM PLAN FOR TREE PROTECTION FENCE (TPF) & BIORETENTION SOIL MIX ITEMS AND QUANTITIES.
- LOCATION OF WELDED WIRE TREE PROTECTION FENCE AND ROOT PRUING ARE SHOWN ON THE PLAN AS AN OFFSET FROM THE LIMIT OF DISTURBANCE (LOD) FOR GRAPHIC PURPOSES ONLY, FENCE AND ROOT PRUING OPERATIONS SHALL BE LOCATED AT LOD LINE.
- THIS IS A LINEAR PROJECT LOCATED ON MD 355 AND M-NCPPC PROPERTIES. THE LIMIT OF DISTURBANCE (LOD) IS 1.15 ACRES. REFER TO FOREST CONSERVATION PLAN GROVESNOR IMPROVEMENTS #PFCP-SC2020015 FOR FOREST REMOVED AND UPLAND REFORESTATION.
- SUBSOIL AND TOPSOIL QUANTITIES ARE INCREASED BY 10% TO PROVIDE FOR SHRINKAGE.

LANDSCAPE LEGEND	
	LLOD LANDSCAPE LIMIT OF DISTURBANCE
	UPLAND MEADOW ESTABLISHMENT
	FURNISHED SUBSOIL 6" DEPTH
	TURFGRASS SOD ESTABLISHMENT
	FOREST REMOVAL
	BIORETENTION MEADOW ESTABLISHMENT REFER TO MDOT SHA SPECIAL PROVISION
	UPLAND REFORESTATION PER FCP
	TREE ROOT PRUING



MATCH LINE STA. 52+42 - SEE SHEET LP-04

SC 25 OF 26 LP-03



NO.	REVISION	BY	APP'D	DATE

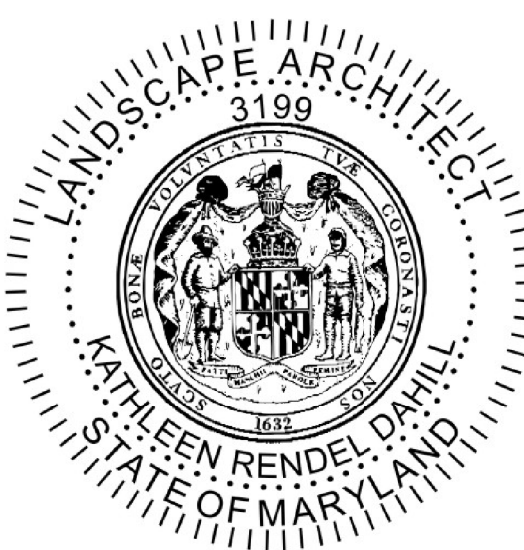
DESIGNED BY: MK	DATE: NOVEMBER, 2022
DRAWN BY: MK	DATE: NOVEMBER, 2022
CHECKED BY: KR D	DATE: NOVEMBER, 2022
DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL	
Chief, Design Section	Date
APPROVED	
Chief, Division of Transportation Engineering	Date

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
LANDSCAPE & TREE PROTECTION PLAN

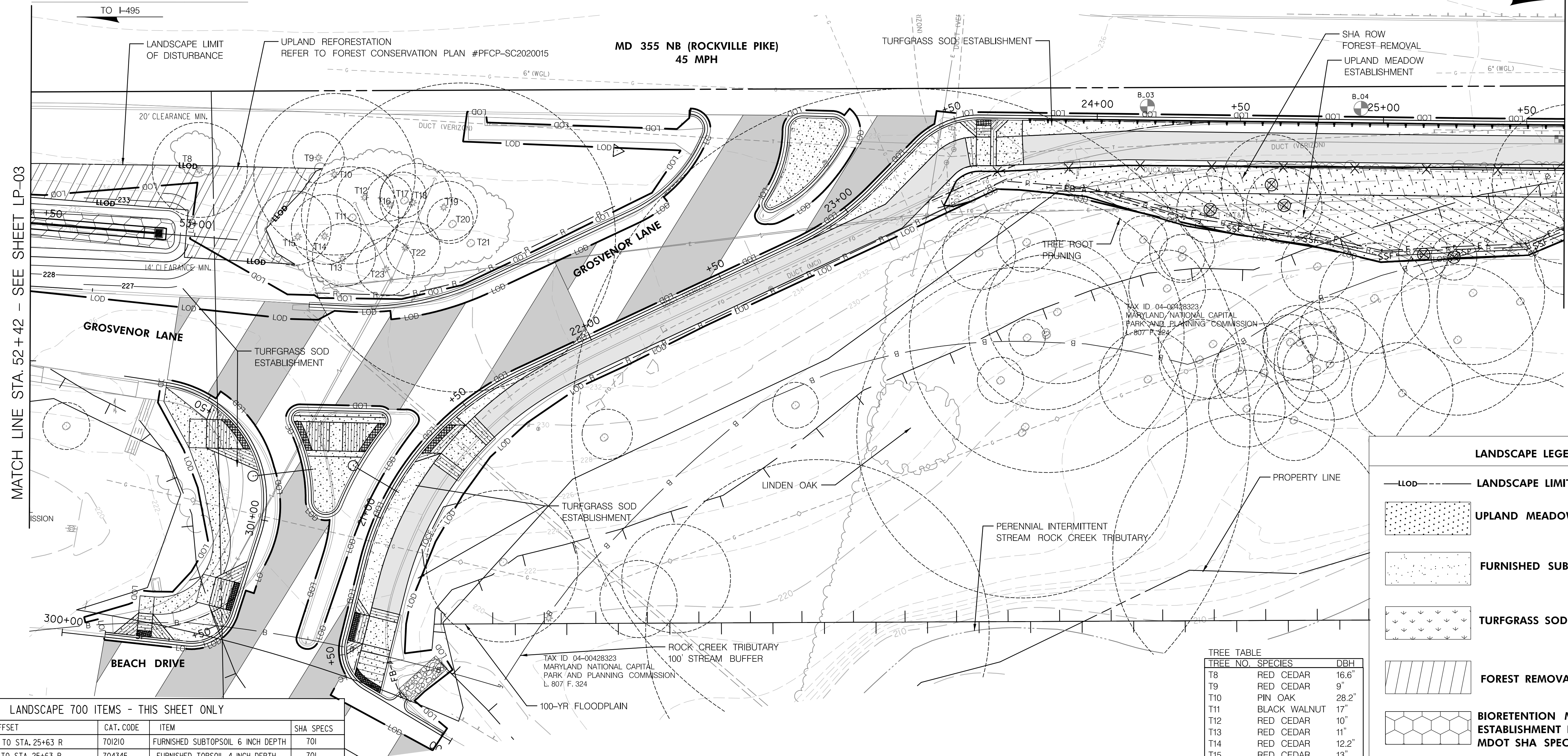
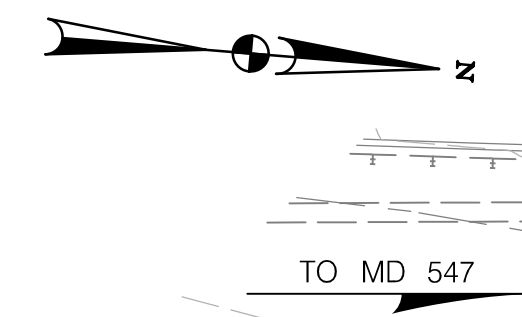
SCALE: 1"=20' SHEET 046 of 128

11/1/2022 \\US0525-PPFSSO\shared\projects\202601\401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\LP-003_Grosvenor.dgn



NOTES:

1. LANDSCAPE LIMIT OF DISTURBANCE (LLOD) DELINEATED FOR LANDSCAPE ACTIVITIES BEYOND THE LIMIT OF DISTURBANCE (LOD). THE LLOD IS 2,366 SQUARE FEET AS SHOWN. THE LOD WORK TO INCLUDE INSTALLATION OF TREES AND SHRUBS IN INDIVIDUAL PLANTING PITS. GRADING, CLEARING AND GRUBBING, PLACEMENT OF SOIL LAYERS OR STORAGE OF EQUIPMENT OR MATERIALS ARE PROHIBITED IN THE LLOD.
2. ALL STORMWATER MANAGEMENT IS TO BE APPROVED, INSPECTED, AND MAINTAINED BY MDOT SHA.
3. REFER TO EROSION AND SEDIMENT CONTROL /SWM PLAN FOR TREE PROTECTION FENCE (TPF) & BIORETENTION SOIL MIX ITEMS AND QUANTITIES.
4. LOCATION OF WELDED WIRE TREE PROTECTION FENCE AND ROOT PRUNING ARE SHOWN ON THE PLAN AS AN OFFSET FROM THE LIMIT OF DISTURBANCE (LOD) FOR GRAPHIC PURPOSES ONLY, FENCE AND ROOT PRUNING OPERATIONS SHALL BE LOCATED AT LOD LINE.
5. THIS IS A LINEAR PROJECT LOCATED ON MD 355 AND M-NCPPC PROPERTIES. THE LIMIT OF DISTURBANCE (LOD) IS 1.15 ACRES. REFER TO FOREST CONSERVATION PLAN GROSVENOR IMPROVEMENTS #PFCP-SC2020015 FOR FOREST REMOVED AND UPLAND REFORESTATION.
6. SUBSOIL AND TOPSOIL QUANTITIES ARE INCREASED BY 10% TO PROVIDE FOR SHRINKAGE.



MATCH LINE STA. 52+42 - SEE SHEET LP-03

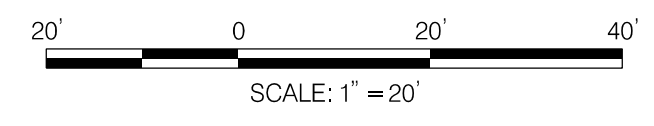
MATCH LINE STA. 25+63 - SEE SHEET LP-05

LANDSCAPE LEGEND	
	LLOD - LANDSCAPE LIMIT OF DISTURBANCE
	UPLAND MEADOW ESTABLISHMENT
	FURNISHED SUBSOIL 6" DEPTH
	TURFGRASS SOD ESTABLISHMENT
	FOREST REMOVAL
	BIORETENTION MEADOW ESTABLISHMENT REFER TO MDOT SHA SPECIAL PROVISION
	UPLAND REFORESTATION PER FCP
	TREE ROOT PRUNING

TREE TABLE		
TREE NO.	SPECIES	DBH
T8	RED CEDAR	16.6"
T9	RED CEDAR	9"
T10	PIN OAK	28.2"
T11	BLACK WALNUT	17"
T12	RED CEDAR	10"
T13	RED CEDAR	11"
T14	RED CEDAR	12.2"
T15	RED CEDAR	13"
T16	RED CEDAR	8"
T17	CHERRY	7.2"
T18	RED CEDAR	12.5"
T19	RED CEDAR	10.4"
T20	AMERICAN ELM	6.2"
T21	WHITE OAK	36"
T22	RED CEDAR	9.4"
T23	RED CEDAR	10.1"

LANDSCAPE 700 ITEMS - THIS SHEET ONLY					
QTY	UNIT	STATION, OFFSET	CAT. CODE	ITEM	SHA SPECS
*169	SY	STA. 20+42 TO STA. 25+63 R	701210	FURNISHED SUBTOPSOIL 6 INCH DEPTH	701
*696	SY	STA. 20+42 TO STA. 25+63 R	704345	FURNISHED TOPSOIL 4 INCH DEPTH	701
534	SY	STA. 20+42 TO STA. 25+63 R	705405	TEMPORARY SEED	704
534	SY	STA. 20+42 TO STA. 25+63 R	705412	TEMPORARY MULCH	704
632	SY	STA. 20+42 TO STA. 25+63 R	708220	TURFGRASS SOD ESTABLISHMENT	708
632	SY	STA. 20+42 TO STA. 25+63 R	705565	REFERTILIZING	705
534	SY	STA. 23+26 TO STA. 25+63 R	709130	TYPE D SOIL STABILIZATION MATTING	709
534	SY	STA. 23+26 TO STA. 25+63 R	707400	UPLAND MEADOW ESTABLISHMENT	707
447	LF	STA. 23+80 TO STA. 25+63 R	715050	TREE ROOT PRUNING	715
56	LF	SWM SWALE LOD AS SHOWN	707415	BIORETENTION MEADOW ESTABLISHMENT	700.02
56	SY	SWM SWALE LOD AS SHOWN	709110	TYPE B SOIL STABILIZATION MATTING	709

*SOIL QUANTITIES ADD 10%



NO.	REVISION	BY	APP'D	DATE

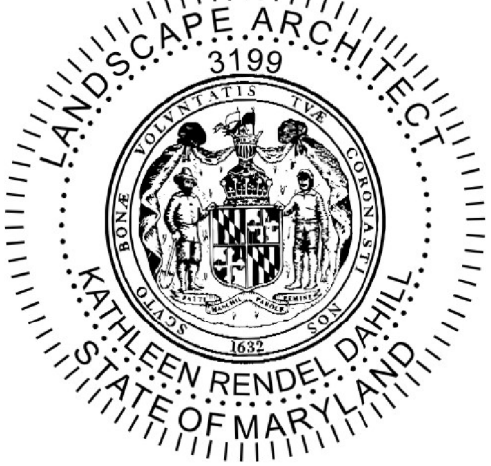
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MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
LANDSCAPE & TREE PROTECTION PLAN

SCALE: 1"=20' SHEET 047 of 128

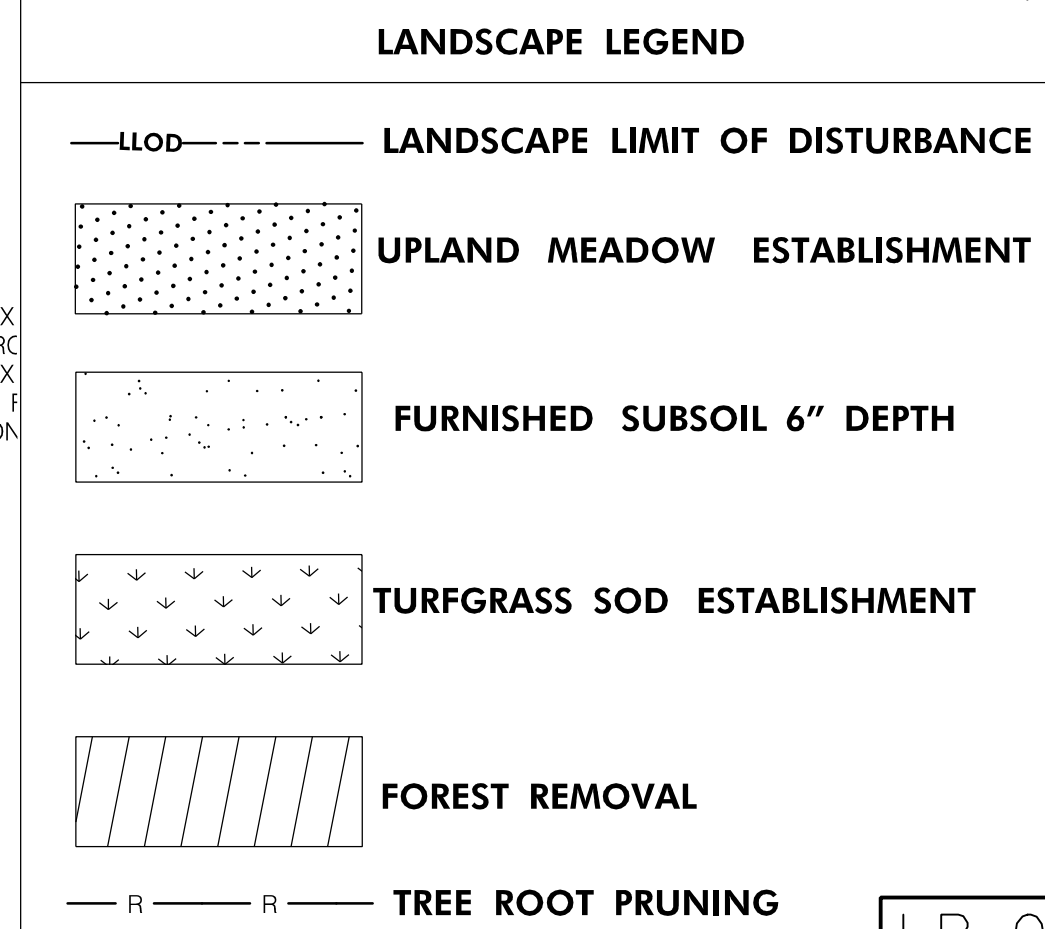
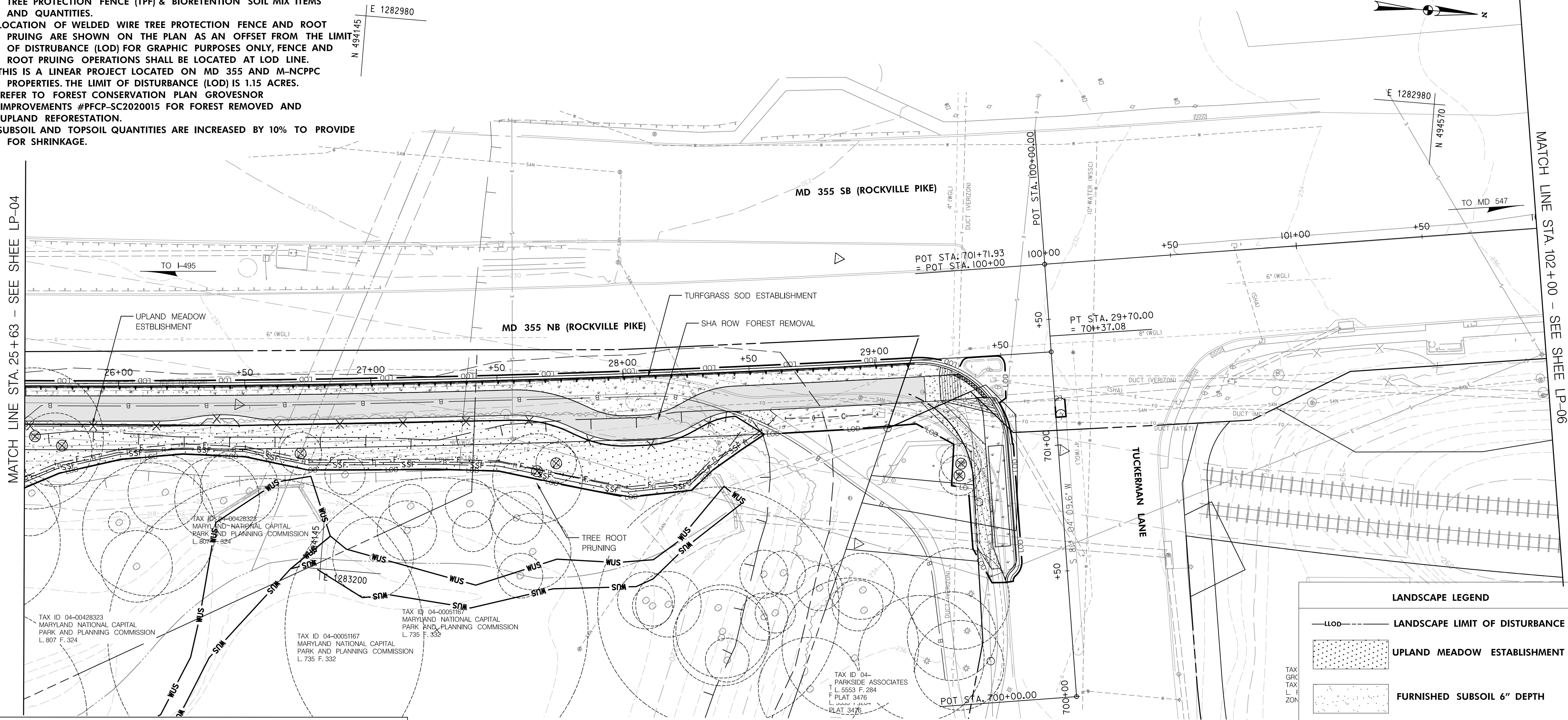
11/1/2022 \\US0525-PPFSSO\shared.projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\LP-P004_Grosvenor.dgn



- NOTES:**
- REFER TO EROSION AND SEDIMENT CONTROL /SWM PLAN FOR TREE PROTECTION FENCE (TPF) & BIORETENTION SOIL MIX ITEMS AND QUANTITIES.
 - LOCATION OF WELDED WIRE TREE PROTECTION FENCE AND ROOT PRUNING ARE SHOWN ON THE PLAN AS AN OFFSET FROM THE LIMIT OF DISTURBANCE (LOD) FOR GRAPHIC PURPOSES ONLY, FENCE AND ROOT PRUNING OPERATIONS SHALL BE LOCATED AT LOD LINE.
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 - SUBSOIL AND TOPSOIL QUANTITIES ARE INCREASED BY 10% TO PROVIDE FOR SHRINKAGE.

MATCH LINE STA. 25+63 - SEE SHEE LP-04

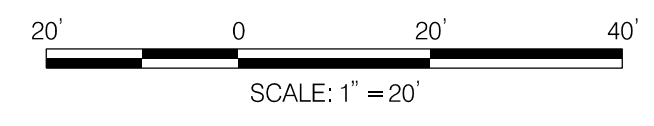
MATCH LINE STA. 102+00 - SEE SHEE LP-06



LANDSCAPE 700 ITEMS - THIS SHEET ONLY

QTY	UNIT	STATION, OFFSET	CAT. CODE	ITEM	SHA SPECS
259	SY	STA. 25+63 TO STA. 29+50 R	701210	FURNISHED SUBTOPSOIL 6 INCH DEPTH	701
945	SY	STA. 25+63 TO STA. 29+50 R	704345	FURNISHED TOPSOIL 4 INCH DEPTH	701
590	SY	STA. 25+63 TO STA. 29+50 R	705405	TEMPORARY SEED	704
590	SY	STA. 25+63 TO STA. 29+50 R	705412	TEMPORARY MULCH	704
269	SY	STA. 25+63 TO STA. 29+50 R	708220	TURFGRASS SOD ESTABLISHMENT	708
269	SY	STA. 25+63 TO STA. 29+50 R	705565	REFERTILIZING	705
590	SY	STA. 25+63 TO STA. 28+50 R	709130	TYPE D SOIL STABILIZATION MATTING	709
590	SY	STA. 25+63 TO STA. 28+50 R	707400	UPLAND MEADOW ESTABLISHMENT	707
205	LF	STA. 25+63 TO STA. 28+50 R	715050	TREE ROOT PRUNING	715

*SOIL QUANTITIES ADD 10%



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MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 LANDSCAPE & TREE PROTECTION PLAN

SCALE: 1"=20' SHEET 048 of 128

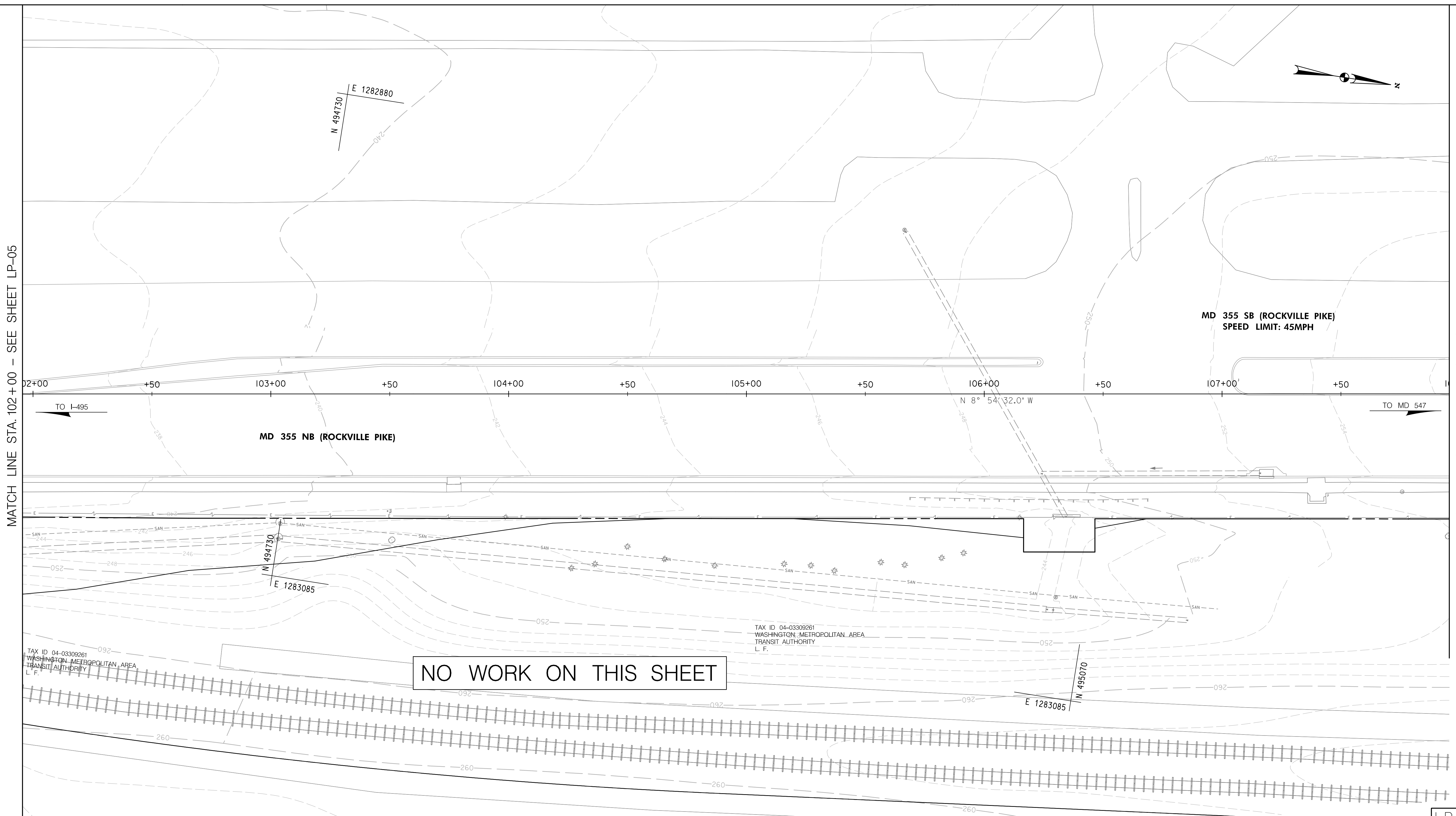
11/1/2022 \\US0525-PPFSSO\shared\projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\LP-005_Grosvenor.dgn



11/1/2022 \\US0525-PPFSSO\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\LP-P006_Grosvenor.dgn

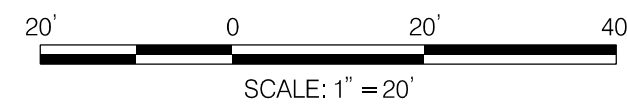
MATCH LINE STA. 102+00 - SEE SHEET LP-05

MATCH LINE STA. 108+00 - SEE SHEET LP-07



NO WORK ON THIS SHEET

NO LANDSCAPE ITEMS THIS SHEET



NO.	REVISION	BY	APP'D	DATE	DESIGNED BY: MK	DATE: NOVEMBER, 2022
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APPROVED						
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DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
LANDSCAPE & TREE PROTECTION PLAN

SCALE: 1"=20'

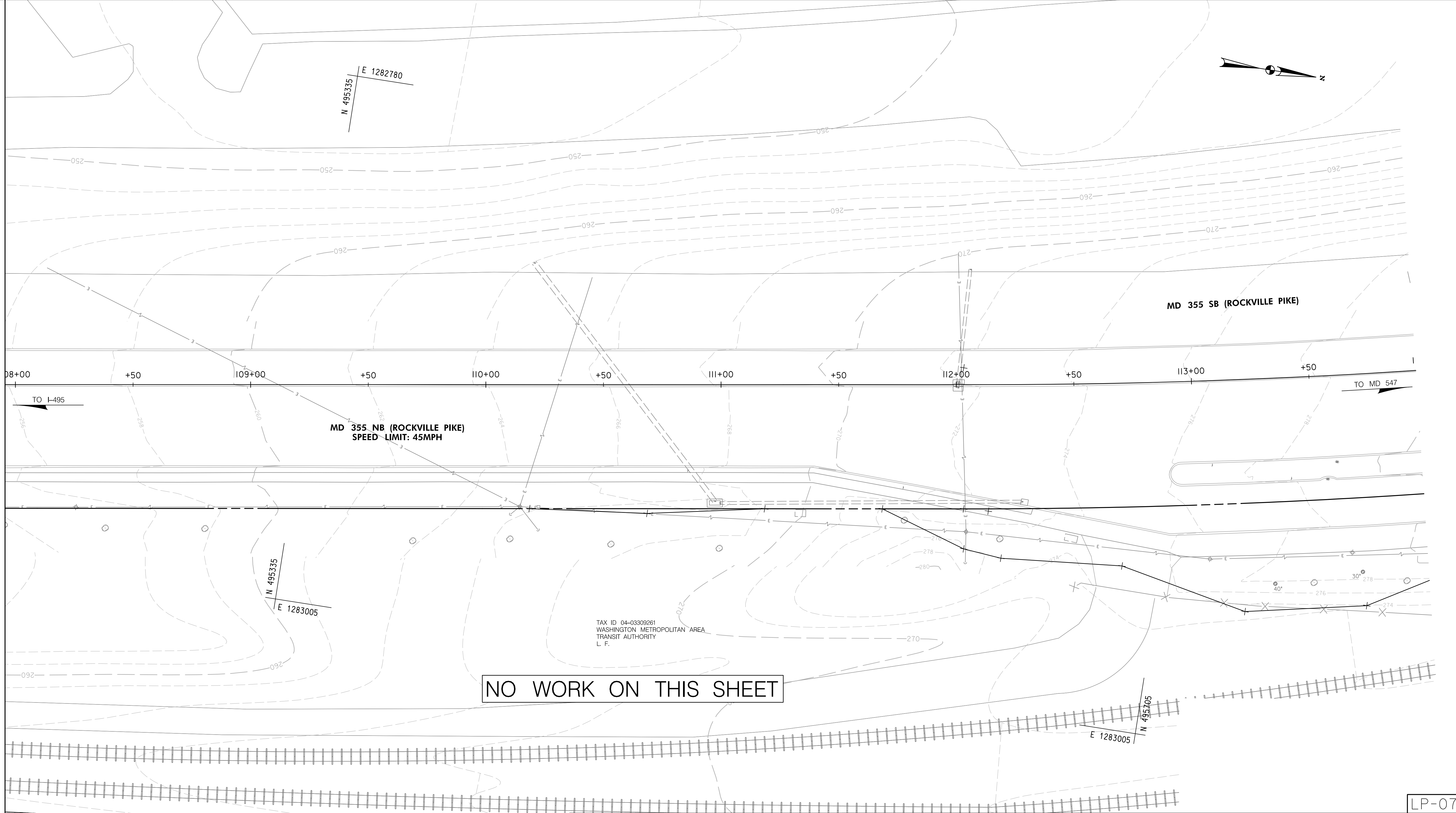
SHEET 049 of 128



LP-06

11/1/2022 \\US0525-PPFSSO\shared\projects\202601\401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\LP-007_Grosvenor.dgn

MATCH LINE STA. 108+00 - SEE SHEET LP-06



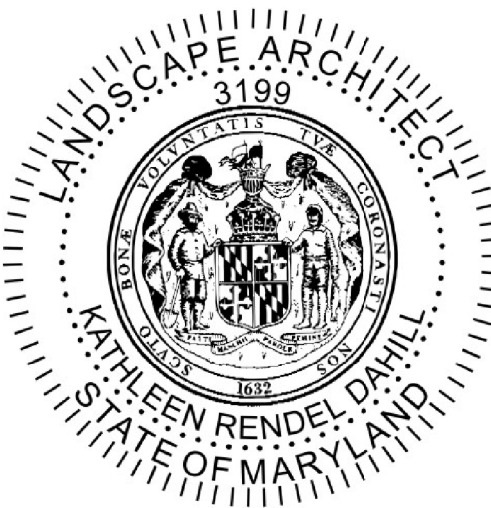
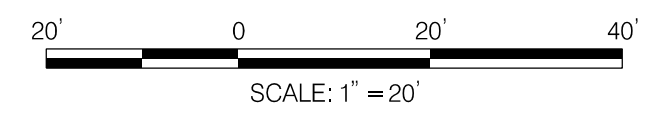
MD 355 NB (ROCKVILLE PIKE)
SPEED LIMIT: 45MPH

MD 355 SB (ROCKVILLE PIKE)

NO WORK ON THIS SHEET

TAX ID 04-03309261
WASHINGTON METROPOLITAN AREA
TRANSIT AUTHORITY
L. F.

NO LANDSCAPE ITEMS THIS SHEET



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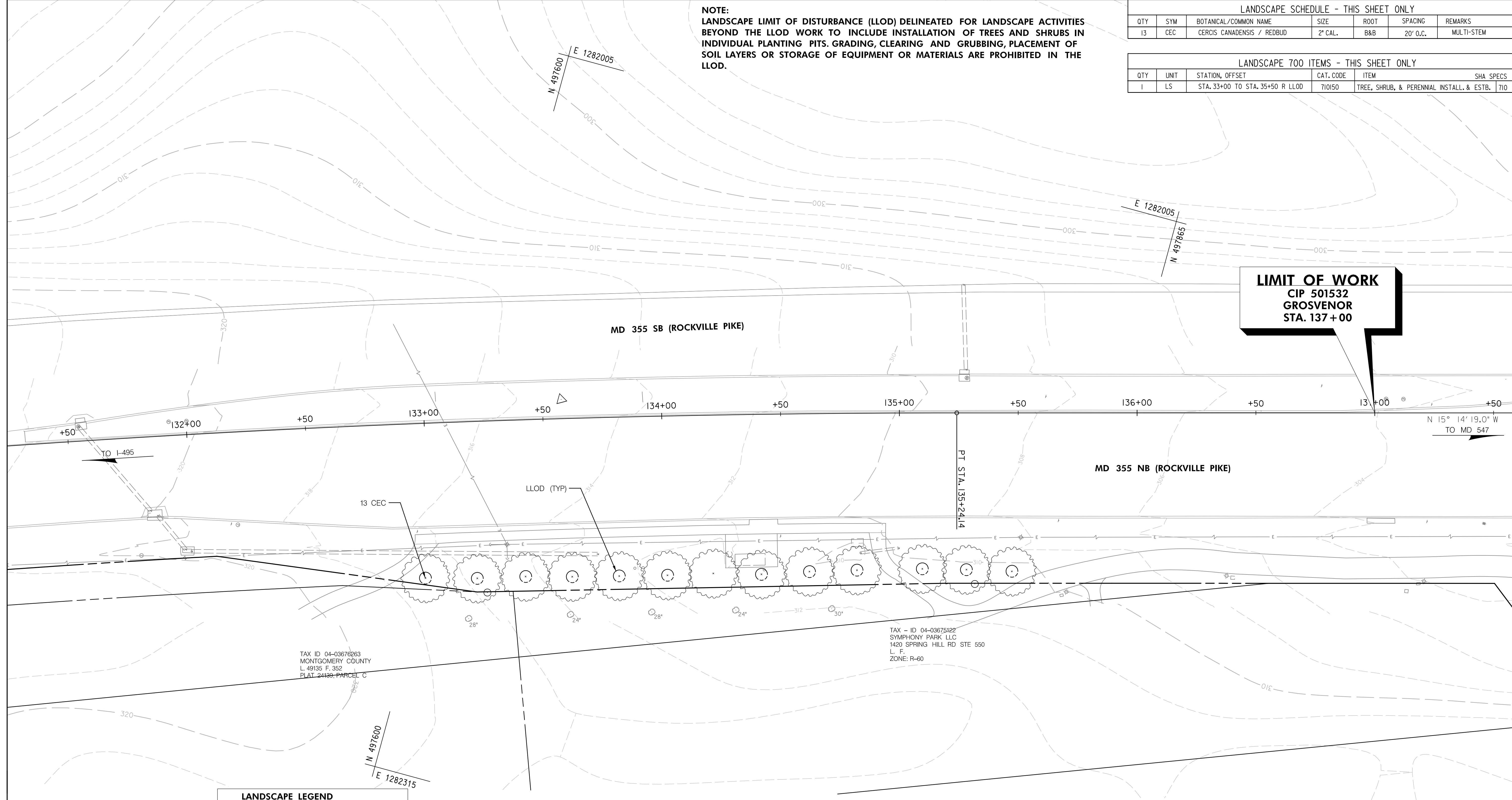
LP-07

11/1/2022 \\US0525-PPFSS01\shared\projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\LP-P008_Grosvenor.dgn

NOTE:
LANDSCAPE LIMIT OF DISTURBANCE (LLOD) DELINEATED FOR LANDSCAPE ACTIVITIES BEYOND THE LLOD WORK TO INCLUDE INSTALLATION OF TREES AND SHRUBS IN INDIVIDUAL PLANTING PITS. GRADING, CLEARING AND GRUBBING, PLACEMENT OF SOIL LAYERS OR STORAGE OF EQUIPMENT OR MATERIALS ARE PROHIBITED IN THE LLOD.

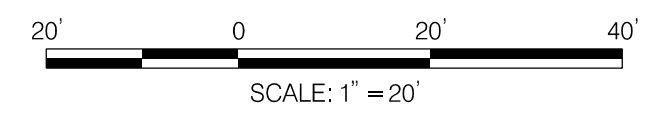
LANDSCAPE SCHEDULE - THIS SHEET ONLY						
QTY	SYM	BOTANICAL/COMMON NAME	SIZE	ROOT	SPACING	REMARKS
13	CEC	CERCIS CANADENSIS / REDBUD	2" CAL.	B&B	20' O.C.	MULTI-STEM

LANDSCAPE 700 ITEMS - THIS SHEET ONLY					
QTY	UNIT	STATION, OFFSET	CAT. CODE	ITEM	SHA SPECS
1	LS	STA. 33+00 TO STA. 35+50 R LLOD	710150	TREE, SHRUB, & PERENNIAL INSTALL. & ESTB.	710



LIMIT OF WORK
CIP 501532
GROSVENOR
STA. 137+00

LANDSCAPE LEGEND	
	ORNAMENTAL TREES



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LANDSCAPE & TREE PROTECTION PLAN

SCALE: 1"=20' SHEET 051 of 128



LP-08

7.1 LANDSCAPE NOTES. LANDSCAPE CONSTRUCTION WITHIN THE RIGHT OF WAY OF THE MARYLAND STATE HIGHWAY ADMINISTRATION (SHA) AND WITHIN SHA PROPERTY, EASEMENT AREAS AND LANDS TO BE CONVEYED TO SHA/MTA SHALL CONFORM TO THESE NOTES. FOR GUIDANCE REGARDING DESIGN MODIFICATIONS DURING CONSTRUCTION, REFER TO SHA LANDSCAPE DESIGN GUIDE, SHA LANDSCAPE ESTIMATING MANUAL, AND SHA ENVIRONMENTAL GUIDE FOR ACCESS AND DISTRICT PERMIT APPLICANTS AT [HTTP://WWW.ROADS.MARYLAND.GOV/INDEX.ASPX?PAGEID=25](http://www.roads.maryland.gov/index.aspx?pageid=25)

7.2 SHA STANDARD SPECIFICATIONS. LANDSCAPE CONSTRUCTION SHALL CONFORM TO SECTIONS 701 THROUGH 716, AND LANDSCAPE MATERIALS SHALL CONFORM TO SECTION 920 OF THE MOST RECENT REVISION OF SHA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, INCLUDING ALL REVISIONS AND SUPPLEMENTS, AND AS SPECIFIED IN THESE NOTES. THESE REQUIREMENTS SHALL SUPERSEDE ALL OTHER SPECIFICATIONS FOR WORK ON SHA PROPERTY. ALL SHA SPECIFICATIONS FOR LANDSCAPING AND LANDSCAPE MATERIALS PUBLISHED IN 2008 HAVE BEEN REPLACED. CURRENT SPECIFICATIONS ARE A [HTTP://WWW.ROADS.MARYLAND.GOV/INDEX.ASPX?PAGEID=44](http://www.roads.maryland.gov/index.aspx?pageid=44)

7.3 EROSION AND SEDIMENT CONTROL MANAGER (ESCM). SOIL DISTURBANCE SUCH AS GRADING, EXCAVATION, SOIL PLACEMENT OR OTHER ACTIVITIES THAT INVOLVE SOIL DISTURBANCE SHALL BE SUPERVISED BY AN ESCM MANAGER WITH A VALID "SHA YELLOW CARD" IN CONFORMANCE WITH SHA STANDARD SPECIFICATIONS AND ANY APPLICABLE EROSION AND SEDIMENT CONTROL PERMIT.

7.4 SHA STANDARD DETAILS FOR TREES, SHRUBS AND PLANTING BEDS. THE INSTALLATION OF TREES, SHRUBS, PLANTING BEDS AND OTHER LANDSCAPE CONSTRUCTION RELATED TO SECTION 710 OF THE SHA STANDARD SPECIFICATIONS SHALL CONFORM TO THE "SHA BOOK OF STANDARDS FOR HIGHWAY & INCIDENTAL STRUCTURES - CATEGORY 7" AT [HTTP://APPS.ROADS.MARYLAND.GOV/BUSINESSWITHSHA/BIZSTDSSPECS/DESMANUALSTDPUB/PUBLICATIONSONLINE/OHD/BOOKSTD/TOCCAT7.ASP](http://apps.roads.maryland.gov/businesswithsha/bizstdsspecs/desmanualstdpub/publicationsonline/ohd/bookstd/toccat7.asp)

7.5 TEMPORARY STABILIZATION SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 704 TO ENSURE THAT AREAS OF SOIL DISTURBANCE ARE PROTECTED FROM WIND, RAINFALL AND FLOWING WATER UNTIL PERMANENT STABILIZATION IS INSTALLED.

7.6 ROADWAY PAVEMENT REMOVAL. AREAS OF ROADWAY REMOVAL SHALL BE EXCAVATED TO REMOVED PAVEMENTS, AGGREGATE BASE, AND COMPACTED SOIL TO A MINIMUM DEPTH OF 10 INCHES BELOW THE PAVEMENT SURFACE OR AS NECESSARY TO REMOVE ALL MATERIAL UNSUITABLE FOR LANDSCAPING. THE EXCAVATION AREAS SHALL BE RESTORED WITH SUBSOIL AND TOPSOIL AS PART OF SOIL RESTORATION.

1. TEMPORARY MULCH, EITHER AS TEMPORARY STRAW MULCH OR TEMPORARY MATTING MULCH, SHALL BE INSTALLED AT THE END OF EACH WORKING DAY TO PROVIDE "SAME DAY STABILIZATION" UNLESS OTHER APPROVED STABILIZATION IS INSTALLED.
2. TEMPORARY STRAW MULCH SHALL BE INSTALLED ON AREAS AND SLOPES FLATTER THAN 4:1 TEMPORARY MATTING MULCH SHALL BE APPLIED ON SLOPES 4:1 AND STEEPER, AND TO AREAS WITHIN CHANNELS.
3. TEMPORARY SEED SHALL BE INSTALLED IN LIEU OF TEMPORARY MULCH WHEN SOIL REDISTURBANCE IS EXPECTED MORE THAN 30 DAYS AFTER SOIL DISTURBANCE. THE REQUIRED APPLICATION RATE SHALL BE 100 LBS PER ACRE OF 37-0-0 (SCU) FERTILIZER.

7.7 EXCAVATION AND DEBRIS REMOVAL. DEBRIS RELATED TO THE DEMOLITION OF SIDEWALKS, DRIVEWAYS, CURBS, TREES, STUMPS, ROOTS, FENCING, PIPES, AND OTHER MATERIALS THAT MAY INTERFERE WITH LANDSCAPE INSTALLATION OR FUTURE MAINTENANCE SHALL BE EXCAVATED AS NECESSARY FOR THEIR COMPLETE REMOVAL AND DISPOSAL.

7.8 SOIL RESTORATION. AREAS OF PAVEMENT REMOVAL, EXCAVATION OR DRILLING IN LANDSCAPED AREAS SHALL REMOVE EXCAVATED DEBRIS AND RESTORE THE SUBGRADE WITH APPROVED SUBSOIL AND TOPSOIL PLACED IN CONFORMANCE WITH SECTION 701 OF THE SHA STANDARD SPECIFICATIONS.

1. A LAYER OF APPROVED TOPSOIL AT LEAST 4 INCH DEPTH SHALL BE PLACED ON ALL DISTURBED AREAS FLATTER THAN 2:1 AND IN ALL CHANNELS PRIOR TO SEEDING, SODDING OR OTHER LANDSCAPING, UNLESS OTHERWISE SPECIFIED.
2. A LAYER OF APPROVED TOPSOIL AT LEAST 2 INCH DEPTH SHALL BE PLACED ON ALL DISTURBED AREAS 2:1 AND STEEPER PRIOR TO SEEDING, SODDING OR OTHER LANDSCAPING, UNLESS OTHERWISE SPECIFIED.
3. BIORETENTION SOIL MIX (BSM) AND OTHER MATERIALS INSTALLED IN CONJUNCTION WITH SPI 316 - STORMWATER FILTRATION FACILITIES AND SHA STORMWATER DETAILS SHALL BE INSTALLED IN CONFORMANCE WITH THE SHA LANDSCAPE NOTES AND LANDSCAPE PLANS. PLANT MATERIALS AND MULCH SHALL BE INSTALLED IN BSM IN CONFORMANCE WITH STORMWATER DETAILS, SECTION 710 OR OTHER SHA SPECIFICATIONS.

7.9 TURFGRASS SOD ESTABLISHMENT SHALL BE PERFORMED IN ALL DISTURBED AREAS, OR WITHIN THE AREAS INDICATED IN THE PLANS, IN CONFORMANCE WITH SECTION 708 OF THE SHA STANDARD SPECIFICATIONS. THE REQUIRED APPLICATION RATE OF 20-16-12 FERTILIZER SHALL BE 200 LBS PER ACRE, AND NO FERTILIZER SHALL BE APPLIED FROM NOVEMBER 15 TO MARCH 1.

7.10 TURFGRASS ESTABLISHMENT SHALL BE PERFORMED IN ALL DISTURBED AREAS, OR WITHIN THE AREAS INDICATED IN THE PLANS, IN CONFORMANCE WITH SECTION 705 OF THE SHA STANDARD SPECIFICATIONS. THE REQUIRED APPLICATION RATE OF 20-16-12 FERTILIZER SHALL BE 200 LBS PER ACRE, AND NO FERTILIZER SHALL BE APPLIED FROM NOVEMBER 15 TO MARCH 1.

7.11 SOIL STABILIZATION MATTING SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 709 OF THE SHA STANDARD SPECIFICATIONS, IN CONJUNCTION WITH TURFGRASS ESTABLISHMENT PER SECTION 705 OR MEADOW ESTABLISHMENT PER SECTION 707 AS FOLLOWS:

1. AREAS FLATTER THAN 6:1. TYPE A OR TYPE E MATTING MAY BE INSTALLED IN LIEU OF STRAW MULCH AND HYDROMULCH BINDER IN CONJUNCTION WITH TURFGRASS ESTABLISHMENT.
2. AREAS STEEPER THAN 6:1 AND FLATTER THAN 4:1. TYPE A OR TYPE E MATTING SHALL BE INSTALLED IN LIEU OF STRAW MULCH AND HYDROMULCH BINDER IN CONJUNCTION WITH TURFGRASS ESTABLISHMENT, UNLESS DELINEATED AND NOTED OTHERWISE.
3. CHANNELS, STORMWATER MANAGEMENT FACILITIES, AND SLOPES 4:1 AND STEEPER TYPE A SOIL STABILIZATION MATTING SHALL BE INSTALLED IN LIEU OF STRAW MULCH AND HYDROMULCH BINDER IN CONJUNCTION WITH TURFGRASS ESTABLISHMENT, UNLESS DELINEATED AND NOTED OTHERWISE.

4. IN AREA OF MEADOW ESTABLISHMENT WITH TYPE D SOIL STABILIZATION MATTING, THE MATTING SHALL BE INSTALLED IN LIEU OF STRAW MULCH AND HYDROMULCH BINDER WITHIN THE DELINEATED AREAS.

5. IN HIGH VELOCITY CHANNELS WITH TURFGRASS ESTABLISHMENT, TYPE B SOIL STABILIZATION MATTING SHALL BE INSTALLED IN LIEU OF STRAW MULCH AND HYDROMULCH BINDER WITHIN THE DELINEATED AREAS.

7.12 MEADOW ESTABLISHMENT OF SHRUB SEEDING ESTABLISHMENT SHALL BE PERFORMED IN AREAS AS INDICATED IN THE PLANS, IN CONFORMANCE WITH SECTIONS 706 AND 707 OF THE SHA STANDARD SPECIFICATIONS. THE REQUIRED APPLICATION RATE OF 20-16-12 FERTILIZER SHALL BE 200 LBS PER ACRES.

7.13 TREE PRESERVATION AREAS. TEMPORARY ORANGE CONSTRUCTION FENCE (TOCF) SHALL BE INSTALLED IN LOCATIONS DELINEATED ON THE PLANS IN CONFORMANCE WITH SECTION 120 OF THE SHA STANDARD SPECIFICATION TO PROTECT EXISTING TREES AND OTHER VEGETATION DURING CONSTRUCTION. AREAS WITHIN TOCF SHALL BE PROTECTED FROM ALL PROHIBITED AND RESTRICTED ACTIVITIES, AS SPECIFIED IN SECTION 120.

7.14 ROADSIDE TREE PERMIT. TREE REMOVAL, TREE INSTALLATION, TREE ROOT AND BRANCH PRUNING, AND OTHER REGULATED IMPACTS TO TREES IN THE SHA RIGHT OF WAY SHALL CONFORM TO THE REQUIREMENTS OF THE ROADSIDE TREE PERMIT (RTP) OF THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, OR THE APPROVED FOREST CONSERVATION ACT PLAN OF THE LOCAL AUTHORITY.

1. A COPY OF THE RTP OR FCP SHALL BE SUBMITTED TO THE SHA OFFICE OF ENVIRONMENTAL DESIGN BEFORE WORK IS PERFORMED, AND A COPY OF THE RTP OR FCP SHALL BE REPRODUCED IN THE PLANS OR BE IN POSSESSION OF THE APPLICANT AT THE PROJECT SITE WHEN THE PERMITTED WORK IS PERFORMED.
2. A MARYLAND LICENSED TREE EXPERT SHALL PERFORM THE SPECIFIED TREE OPERATIONS IN CONFORMANCE WITH THE SHA STANDARD SPECIFICATIONS AND ANSI A300 STANDARDS FOR TREE CARE OPERATIONS.

7.15 TREES AND OTHER PLANT MATERIAL INSTALLATION. TREES, SHRUBS, PERENNIALS, ANNUALS, BULBS, LANDSCAPE BEDS, BARK MULCH AND SIMILAR MATERIALS SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 710 AND 711 OF THE SHA STANDARD SPECIFICATIONS. TREE AND SHRUBS SHALL BE PRUNED AT THE TIME OF INSTALLATION TO ENSURE SIDEWALK CLEARANCE FOR PEDESTRIANS IS MAINTAINED TO A HEIGHT OF 8 FEET. NO TREE OR SHRUB SHALL BE INSTALLED WITHIN 3 FEET OF CURBS, SIDEWALKS, OR PAVEMENT EDGES.

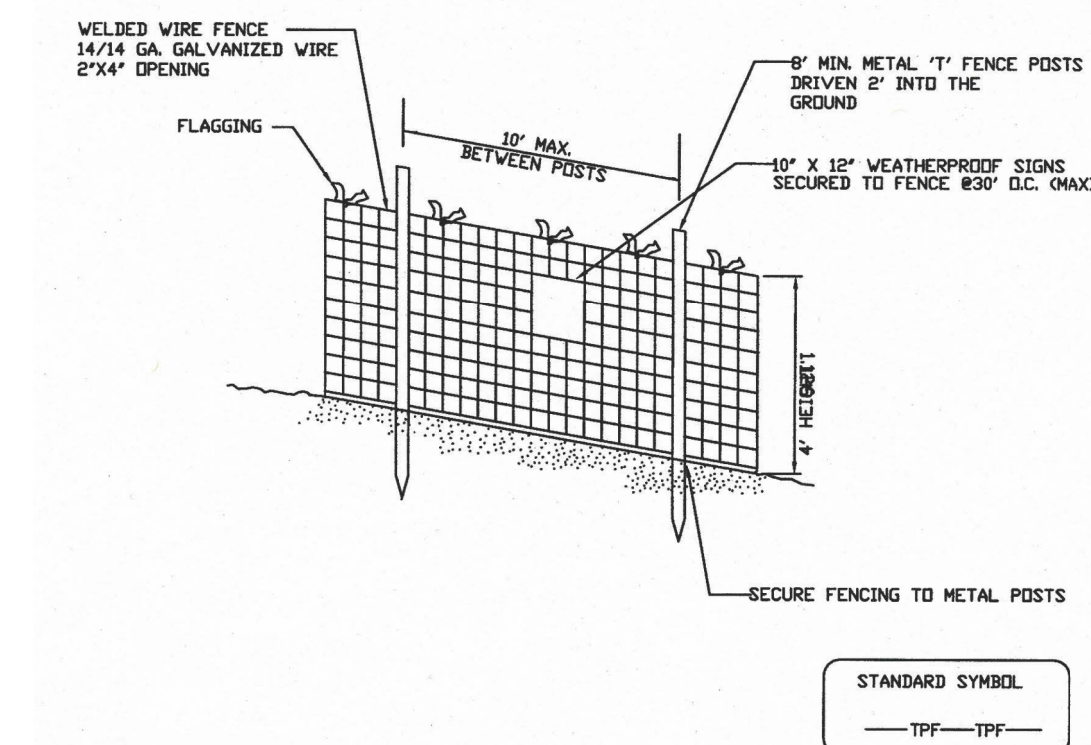
7.22 TREE ROOT PRUNING SHALL BE PERFORMED ALONG THE LINE SHOWN ON THE PLANS IN CONFORMANCE WITH SECTION 715. TREE ROOT PRUNING SHALL BE COMPLETED BEFORE BEGINNING EXCAVATION OR OTHER CONSTRUCTION ADJACENT TO TREES TO BE PRESERVED.

MASTER LANDSCAPE SCHEDULE							
QTY	SYM	BOTANICAL/COMMON NAME	SIZE	ROOT	SPACING	REMARKS	
13	CEC	CERCIS CANADENSIS / REDBUD	2' CAL.	B&B	20' O.C.	MULTI-STEM	

MASTER LANDSCAPE 700 ITEMS				
QTY	UNIT	CAT. CODE	ITEM	SHA SPECS
376	SY	701210	FURNISHED SUBTOPSOIL 6 INCH DEPTH	701
3189	SY	704345	FURNISHED TOPSOIL 4 INCH DEPTH	701
2957	SY	705405	TEMPORARY SEED	704
2957	SY	705412	TEMPORARY MULCH	704
768	SY	708220	TURFGRASS SOD ESTABLISHMENT	708
768	SY	705565	REFERTILIZING	705
1066	SY	705500	TURFGRASS ESTABLISHMENT	705
1066	SY	709100	TYPE A SOIL STABILIZATION MATTING	709
203	SY	709110	TYPE B SOIL STABILIZATION MATTING	709
1124	SY	709130	TYPE D SOIL STABILIZATION MATTING	709
1124	SY	707400	UPLAND MEADOW ESTABLISHMENT	707
230	SY	707415	BIORETENTION MEADOW ESTABLISHMENT	700.02
977	LF	715050	TREE ROOT PRUNING	715
I	LS	710150	TREE, SHRUB, & PERENNIAL INSTALL. & ESTB.	710

Tree Protection Fence Detail

Not to scale



NOTES

1. Practice may be combined with sediment control fencing.
2. Location and limits of fencing should be coordinated in field with arborist.
3. Boundaries of protection area should be staked prior to installing protective device.
4. Root damage should be avoided.
5. Protection signage is required.
6. Fencing shall be maintained throughout construction.

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LP-09

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

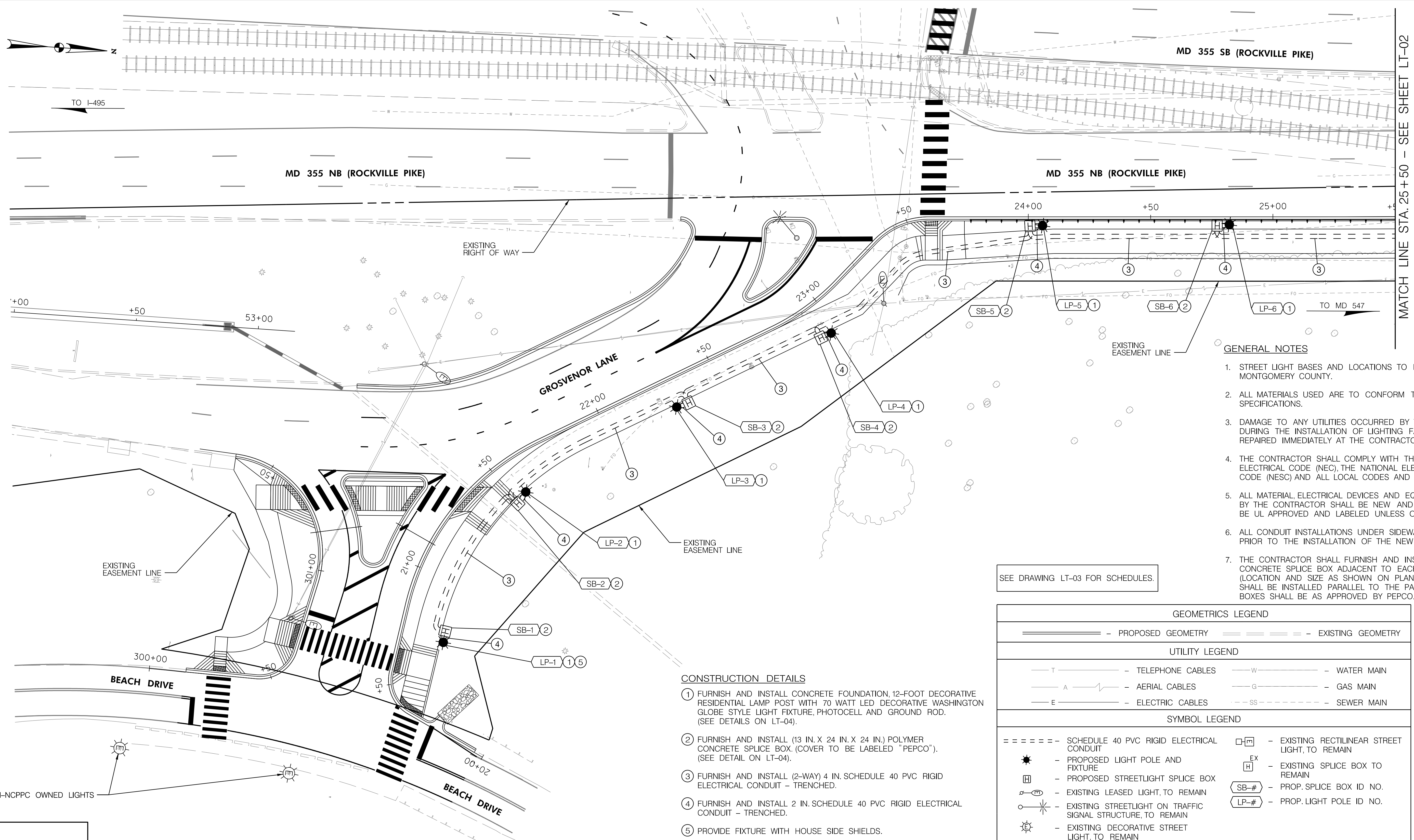
GROSVENOR IMPROVEMENTS
LANDSCAPE & TREE PROTECTION PLAN

SCALE: 1"=20' SHEET 052 of 128

NO.	REVISION	BY	APP'D	DATE	DESIGNED BY: MK	DATE: NOVEMBER, 2022
					DRAWN BY: MK	DATE: NOVEMBER, 2022
					CHECKED BY: KR D	DATE: NOVEMBER, 2022
					DRAWING NO.:	DATE:
					RECOMMENDED FOR APPROVAL	
					Chief, Design Section	Date
					APPROVED	
					Chief, Division of Transportation Engineering	Date



11/1/2022 \\US0525-PFSSO\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\LP-009_Grosvenor.dgn



MATCH LINE STA. 25+50 - SEE SHEET LT-02

GENERAL NOTES

- STREET LIGHT BASES AND LOCATIONS TO BE APPROVED BY MONTGOMERY COUNTY.
- ALL MATERIALS USED ARE TO CONFORM TO PEPCO SPECIFICATIONS.
- DAMAGE TO ANY UTILITIES OCCURRED BY THE CONTRACTOR DURING THE INSTALLATION OF LIGHTING FACILITIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE (NEC), THE NATIONAL ELECTRICAL SAFETY CODE (NESC) AND ALL LOCAL CODES AND REGULATIONS.
- ALL MATERIAL, ELECTRICAL DEVICES AND EQUIPMENT PROVIDED BY THE CONTRACTOR SHALL BE NEW AND UNUSED AND SHALL BE UL APPROVED AND LABELED UNLESS OTHERWISE SPECIFIED.
- ALL CONDUIT INSTALLATIONS UNDER SIDEWALKS SHALL BE DONE PRIOR TO THE INSTALLATION OF THE NEW SIDEWALKS.
- THE CONTRACTOR SHALL FURNISH AND INSTALL A POLYMER CONCRETE SPLICE BOX ADJACENT TO EACH STREETLIGHT (LOCATION AND SIZE AS SHOWN ON PLANS). SPLICE BOXES SHALL BE INSTALLED PARALLEL TO THE PATHWAY. THE SPLICE BOXES SHALL BE AS APPROVED BY PEPCO.

SEE DRAWING LT-03 FOR SCHEDULES.

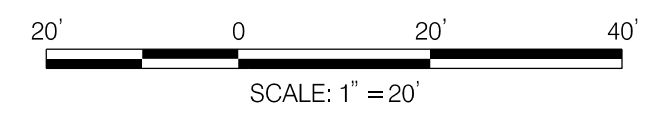
GEOMETRICS LEGEND	
	PROPOSED GEOMETRY
	EXISTING GEOMETRY
UTILITY LEGEND	
	TELEPHONE CABLES
	WATER MAIN
	AERIAL CABLES
	GAS MAIN
	ELECTRIC CABLES
	SEWER MAIN
SYMBOL LEGEND	
	SCHEDULE 40 PVC RIGID ELECTRICAL CONDUIT
	PROPOSED LIGHT POLE AND FIXTURE
	PROPOSED STREETLIGHT SPLICE BOX
	EXISTING LEASED LIGHT, TO REMAIN
	EXISTING STREETLIGHT ON TRAFFIC SIGNAL STRUCTURE, TO REMAIN
	EXISTING DECORATIVE STREET LIGHT, TO REMAIN
	EXISTING RECTILINEAR STREET LIGHT, TO REMAIN
	EXISTING SPLICE BOX TO REMAIN
	PROP. SPLICE BOX ID NO.
	PROP. LIGHT POLE ID NO.

CONSTRUCTION DETAILS

- FURNISH AND INSTALL CONCRETE FOUNDATION, 12-FOOT DECORATIVE RESIDENTIAL LAMP POST WITH 70 WATT LED DECORATIVE WASHINGTON GLOBE STYLE LIGHT FIXTURE, PHOTOCCELL AND GROUND ROD. (SEE DETAILS ON LT-04).
- FURNISH AND INSTALL (13 IN. X 24 IN. X 24 IN.) POLYMER CONCRETE SPLICE BOX (COVER TO BE LABELED "PEPCO"). (SEE DETAIL ON LT-04).
- FURNISH AND INSTALL (2-WAY) 4 IN. SCHEDULE 40 PVC RIGID ELECTRICAL CONDUIT - TRENCHED.
- FURNISH AND INSTALL 2 IN. SCHEDULE 40 PVC RIGID ELECTRICAL CONDUIT - TRENCHED.
- PROVIDE FIXTURE WITH HOUSE SIDE SHIELDS.

SPECIAL NOTES:

- REINFORCE GUARDRAIL ALONG MD 355 NB (ROCKVILLE PIKE) FROM STA. 24+00 TO STA. 29+15.
- LIGHT POLES LOCATED UNDER THE WMATA AERIAL STRUCTURE WILL ALLOW ADEQUATE CLEARANCE (LIGHT POLES 15, 16, AND 18).



NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: WJF	DATE: NOVEMBER 2022
DRAWN BY: WJF	DATE: NOVEMBER 2022
CHECKED BY: JNW	DATE: NOVEMBER 2022
DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL	
SEE TITLE SHEET FOR SIGNATURES Chief, Design Section	Date
APPROVED	
SEE TITLE SHEET FOR SIGNATURES Chief, Division of Transportation Engineering	Date

**DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND**

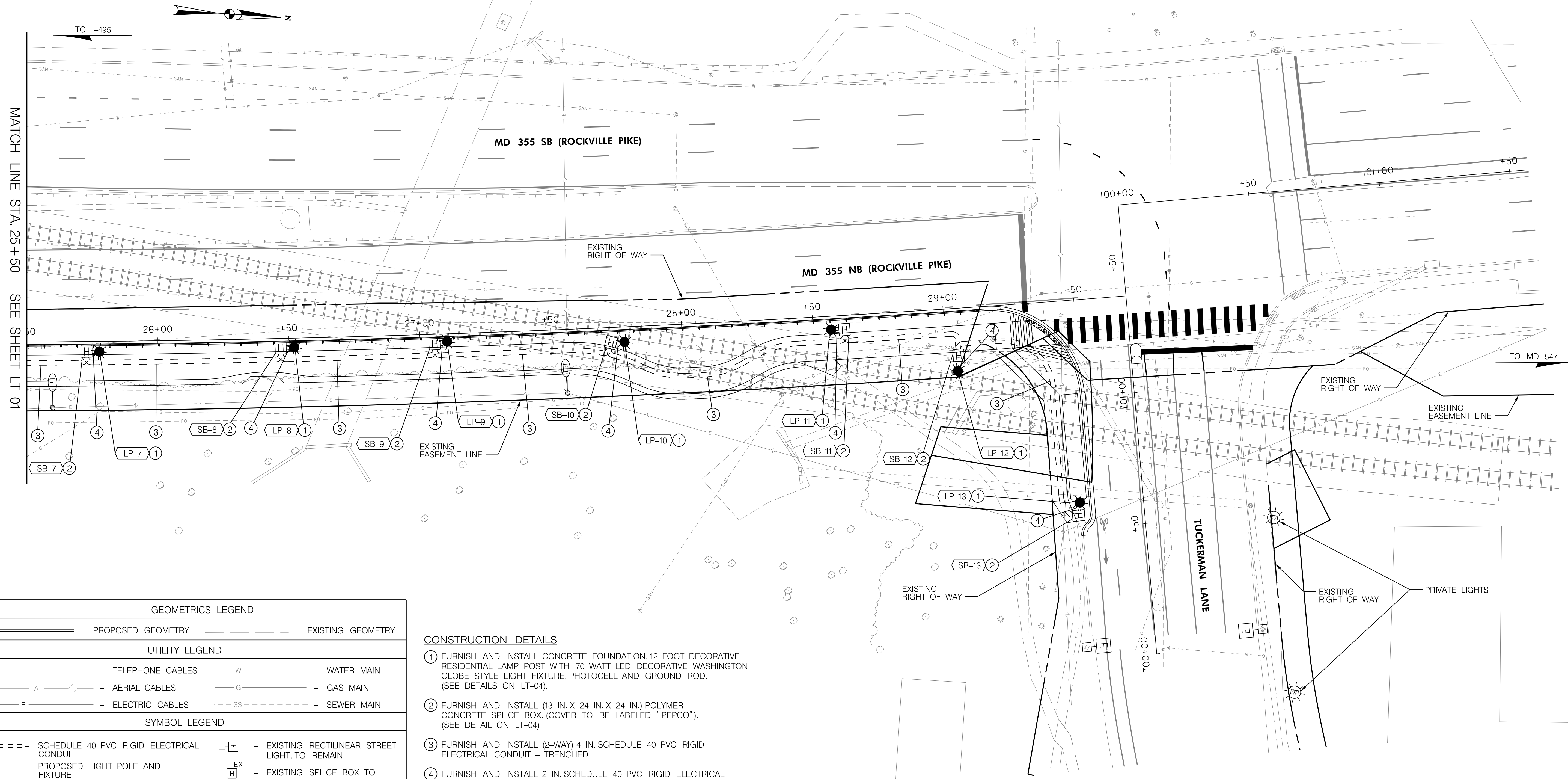
**GROSVENOR IMPROVEMENTS
LIGHTING PLAN**

10/31/2022 R:\2008\80 MCDPW 8504520010-BF-ENG.-SVC.Gn0\Task 27 Grosvenor Lane Ped Lighting\Drawings\LT-01-Grosvenor.dgn

PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
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7055 SAMUEL MORSE DRIVE
SUITE 100
COLUMBIA, MD 21046
(443) 741-3500
WWW.MEADHUNT.COM





MATCH LINE STA. 25+50 - SEE SHEET LT-01

SEE DRAWING LT-03 FOR SCHEDULES.

LT-02

GEOMETRICS LEGEND

— — — — — PROPOSED GEOMETRY - - - - - EXISTING GEOMETRY

UTILITY LEGEND

— T — — — — — TELEPHONE CABLES — W — — — — — WATER MAIN
 — A — — — — — AERIAL CABLES — G — — — — — GAS MAIN
 — E — — — — — ELECTRIC CABLES - - - - - SEWER MAIN

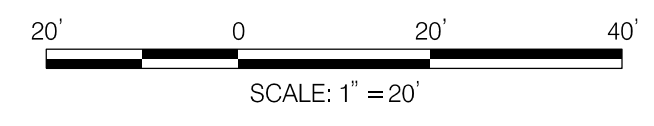
SYMBOL LEGEND

==== SCHEDULE 40 PVC RIGID ELECTRICAL CONDUIT [] - EXISTING RECTILINEAR STREET LIGHT, TO REMAIN
 * - PROPOSED LIGHT POLE AND FIXTURE [H]^{EX} - EXISTING SPLICE BOX TO REMAIN
 [] - PROPOSED STREETLIGHT SPLICE BOX [SB-#] - PROP. SPLICE BOX ID NO.
 [] - EXISTING LEASED LIGHT, TO REMAIN [LP-#] - PROP. LIGHT POLE ID NO.
 [] - EXISTING STREETLIGHT ON TRAFFIC SIGNAL STRUCTURE, TO REMAIN
 [] - EXISTING DECORATIVE STREET LIGHT, TO REMAIN

CONSTRUCTION DETAILS

- ① FURNISH AND INSTALL CONCRETE FOUNDATION, 12-FOOT DECORATIVE RESIDENTIAL LAMP POST WITH 70 WATT LED DECORATIVE WASHINGTON GLOBE STYLE LIGHT FIXTURE, PHOTOCCELL AND GROUND ROD. (SEE DETAILS ON LT-04).
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APPROVED	
SEE TITLE SHEET FOR SIGNATURES Chief, Division of Transportation Engineering	Date

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 LIGHTING PLAN

10/31/2022 R:\2008\80 MCDPW 8504520010-BF-ENG_SVC.Gn0\Task 27 Grosvenor Lane Ped Lighting\Dgn\pl_T-P002_Grosvenor.dgn

10/31/2022 R:\2008\80 MCDPW 8504520010-BF-ENG..SVC.Gn0\Task 27 Grosvenor Lane Ped Lighting\Dgn\pl_T-S003-Grosvenor.dgn

PROPOSED PEDESTRIAN LIGHT POLE SCHEDULE

POLE NO.	MAPGRID	MCPoleID	STREET NAME	WATTAGE	LAMP TYPE	LUMINARE STYLE	POLE STYLE	ARM	FEED TYPE	ADDRESS	STATION AND OFFSET	NORTHING	EASTING
LP-1			GROSVENOR LANE	70	LED	WASHINGTON GLOBE	12' DECORATIVE ALUMINUM	N/A	UG	WB GROSVENOR LANE, 4TH LIGHT SOUTH OF ROCKVILLE PIKE	STA. 20+74, 13' RT.	493633	1283338
LP-2			GROSVENOR LANE	70	LED	WASHINGTON GLOBE	12' DECORATIVE ALUMINUM	N/A	UG	WB GROSVENOR LANE, 3RD LIGHT SOUTH OF ROCKVILLE PIKE	STA. 21+55, 13' RT.	493662	1283274
LP-3			GROSVENOR LANE	70	LED	WASHINGTON GLOBE	12' DECORATIVE ALUMINUM	N/A	UG	WB GROSVENOR LANE, 2ND LIGHT SOUTH OF ROCKVILLE PIKE	STA. 22+30, 13' RT.	493722	1283235
LP-4			GROSVENOR LANE	70	LED	WASHINGTON GLOBE	12' DECORATIVE ALUMINUM	N/A	UG	WB GROSVENOR LANE, 1ST LIGHT SOUTH OF ROCKVILLE PIKE	STA. 22+97, 15' RT.	493783	1283201
LP-5			MD 355 (ROCKVILLE PIKE)	70	LED	WASHINGTON GLOBE	12' DECORATIVE ALUMINUM	N/A	UG	NB ROCKVILLE PIKE, 1ST LIGHT NORTH OF GROSVENOR LANE	STA. 24+06, 4' RT.	493866	1283151
LP-6			MD 355 (ROCKVILLE PIKE)	70	LED	WASHINGTON GLOBE	12' DECORATIVE ALUMINUM	N/A	UG	NB ROCKVILLE PIKE, 2ND LIGHT NORTH OF GROSVENOR LANE	STA. 24+82, 3.5' RT.	493942	1283145
LP-7			MD 355 (ROCKVILLE PIKE)	70	LED	WASHINGTON GLOBE	12' DECORATIVE ALUMINUM	N/A	UG	NB ROCKVILLE PIKE, 3RD LIGHT NORTH OF GROSVENOR LANE	STA. 25+78, 3.5' RT.	494037	1283139
LP-8			MD 355 (ROCKVILLE PIKE)	70	LED	WASHINGTON GLOBE	12' DECORATIVE ALUMINUM	N/A	UG	NB ROCKVILLE PIKE, 4TH LIGHT NORTH OF GROSVENOR LANE	STA. 26+52, 3.5' RT.	494111	1283132
LP-9			MD 355 (ROCKVILLE PIKE)	70	LED	WASHINGTON GLOBE	12' DECORATIVE ALUMINUM	N/A	UG	NB ROCKVILLE PIKE, 5TH LIGHT NORTH OF GROSVENOR LANE	STA. 27+10, 3.5' RT.	494169	1283126
LP-10			MD 355 (ROCKVILLE PIKE)	70	LED	WASHINGTON GLOBE	12' DECORATIVE ALUMINUM	N/A	UG	NB ROCKVILLE PIKE, 6TH LIGHT NORTH OF GROSVENOR LANE	STA. 27+78, 6' RT.	494237	1283121
LP-11			MD 355 (ROCKVILLE PIKE)	70	LED	WASHINGTON GLOBE	12' DECORATIVE ALUMINUM	N/A	UG	NB ROCKVILLE PIKE, 7TH LIGHT NORTH OF GROSVENOR LANE	STA. 28+57, 5' RT.	494315	1283111
LP-12			MD 355 (ROCKVILLE PIKE)	70	LED	WASHINGTON GLOBE	12' DECORATIVE ALUMINUM	N/A	UG	NB ROCKVILLE PIKE, 8TH LIGHT NORTH OF GROSVENOR LANE	STA. 29+04, 24' RT.	494365	1283123
LP-13			TUCKERMAN LANE	70	LED	WASHINGTON GLOBE	12' DECORATIVE ALUMINUM	N/A	UG	EB TUCKERMAN LANE, 1ST LIGHT EAST OF ROCKVILLE PIKE	STA. 700+60, 24' LT.	494415	1283170

PROPOSED SPLICE BOX SCHEDULE

SB NO.	STATION AND OFFSET
SB-1	STA. 20+79, 13' RT.
SB-2	STA. 21+50, 14' RT.
SB-3	STA. 22+35, 13' RT.
SB-4	STA. 22+92, 14' RT.
SB-5	STA. 24+01, 4' RT.
SB-6	STA. 24+77, 3.5' RT.
SB-7	STA. 25+73, 3.5' RT.
SB-8	STA. 26+47, 3.5' RT.
SB-9	STA. 27+05, 3.5' RT.
SB-10	STA. 27+73, 6' RT.
SB-11	STA. 28+62, 5' RT.
SB-12	STA. 29+05, 18' RT.
SB-13	STA. 700+55, 25' LT.

LT-03

NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: WJF	DATE: NOVEMBER 2022
DRAWN BY: WJF	DATE: NOVEMBER 2022
CHECKED BY: JNW	DATE: NOVEMBER 2022
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RECOMMENDED FOR APPROVAL	
SEE TITLE SHEET FOR SIGNATURES Chief, Design Section	Date
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SEE TITLE SHEET FOR SIGNATURES Chief, Division of Transportation Engineering	Date

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
LIGHTING SCHEDULES

SCALE: NONE

SHEET 55 of 128

PROFESSIONAL CERTIFICATION:
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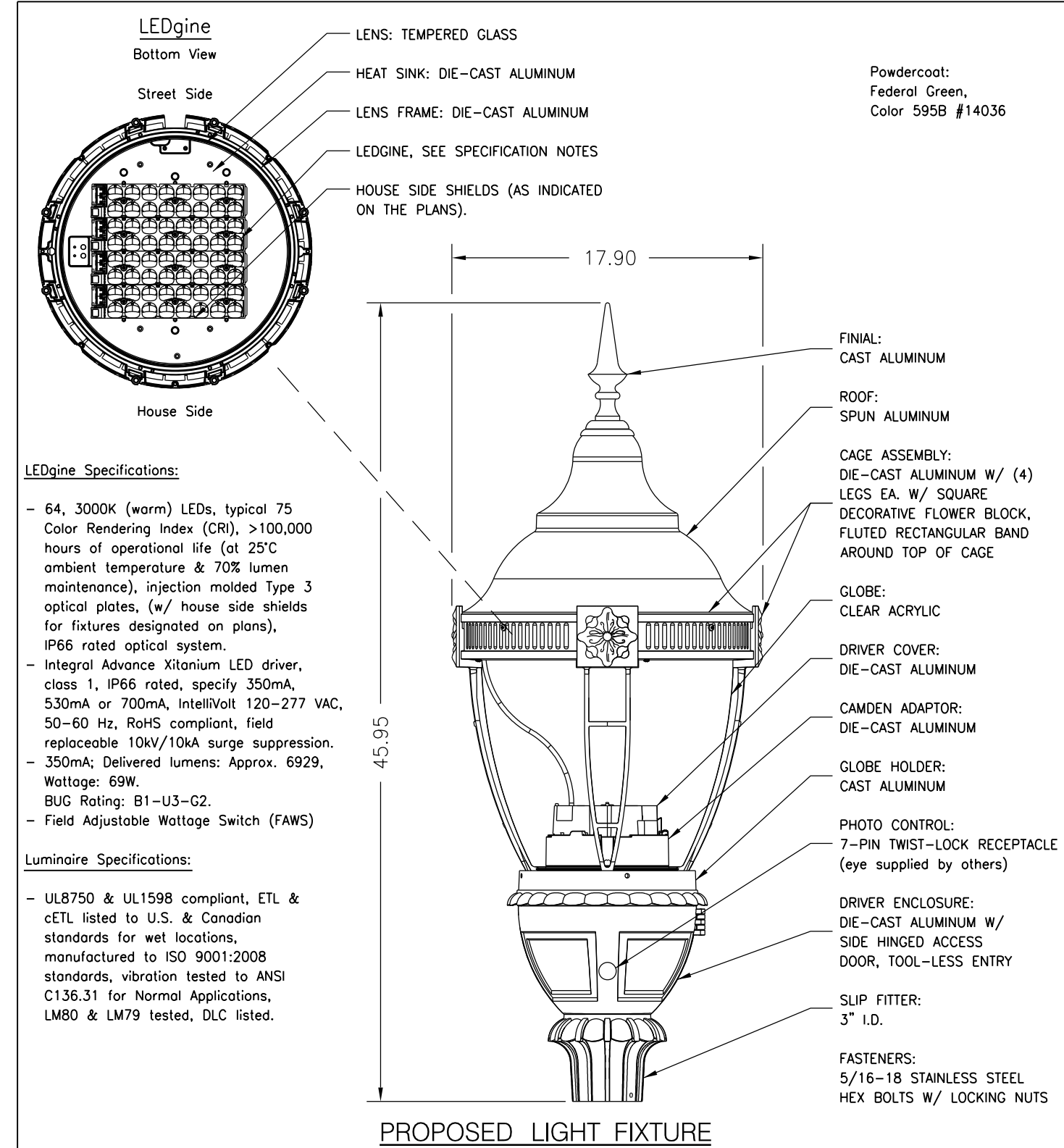
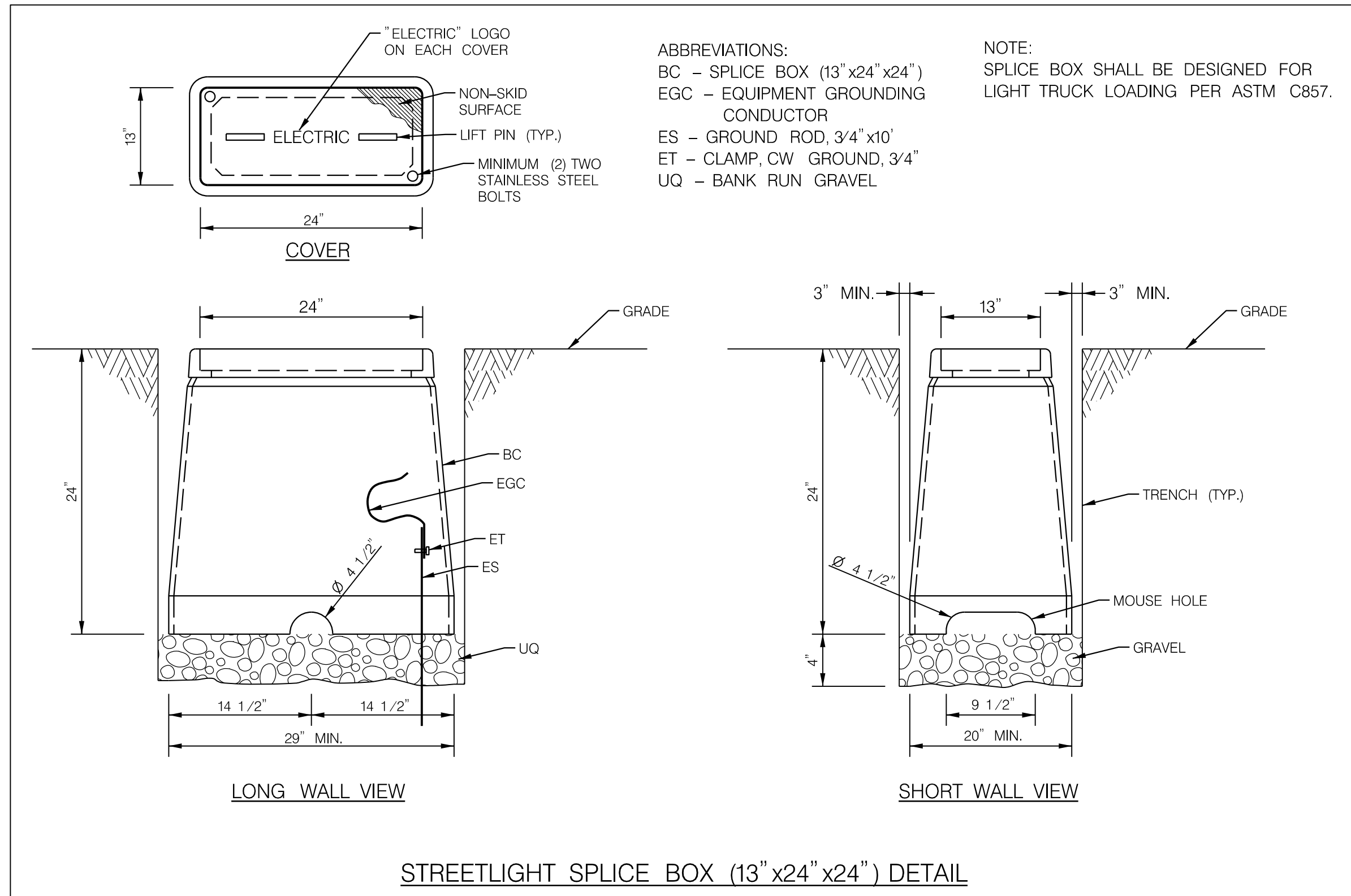
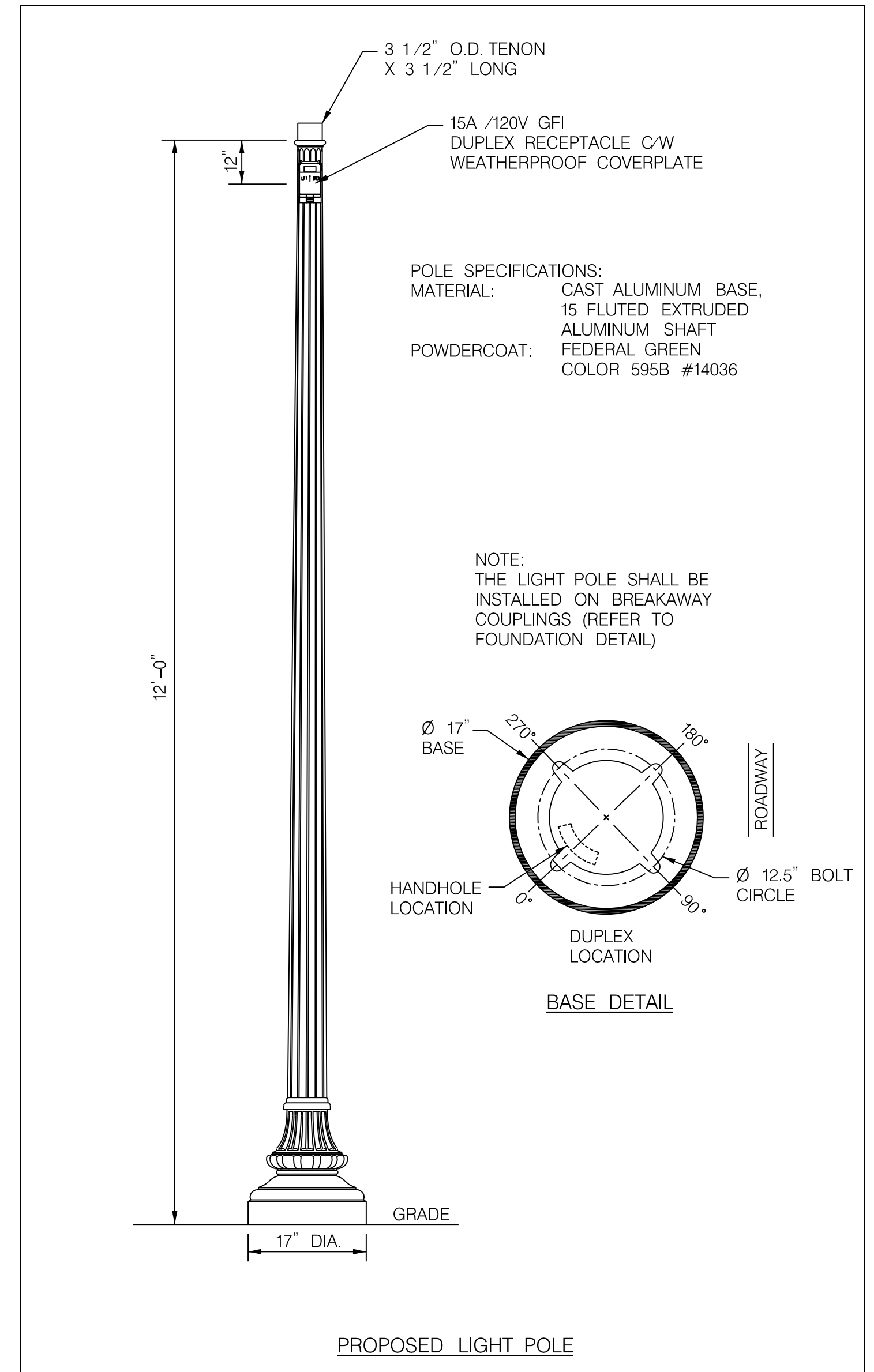
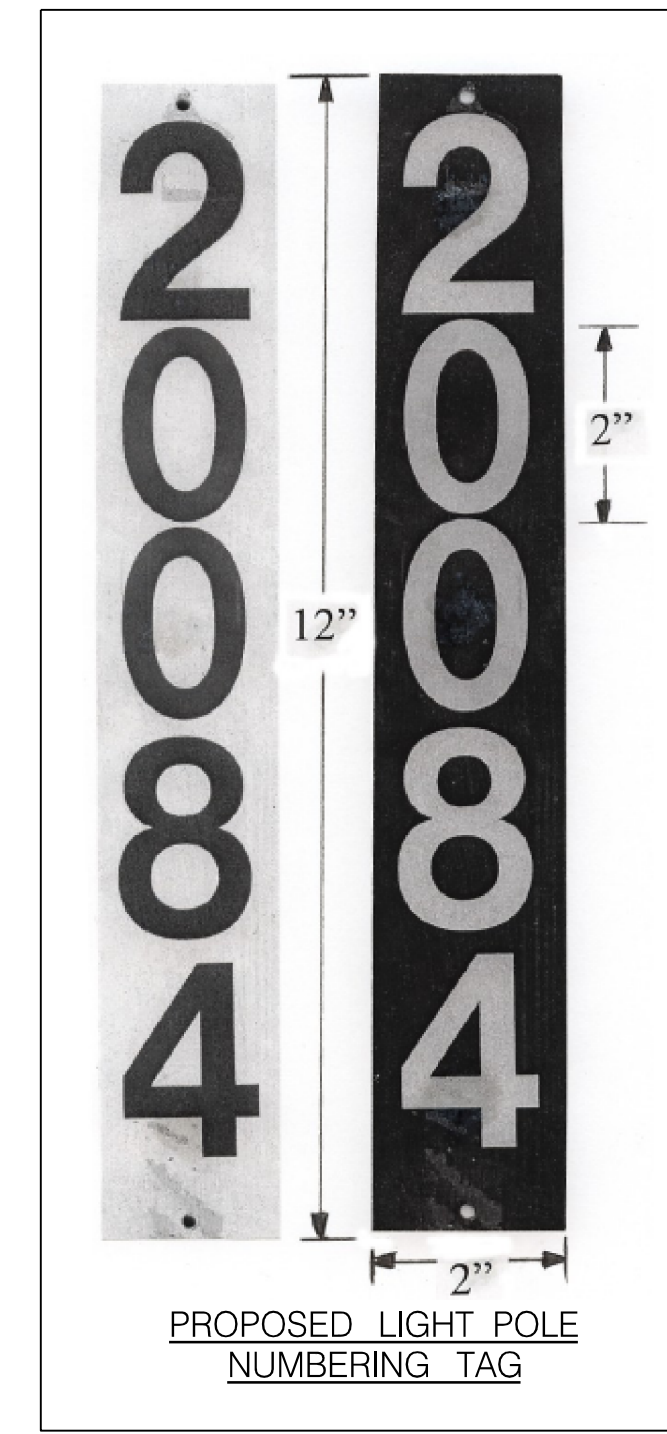
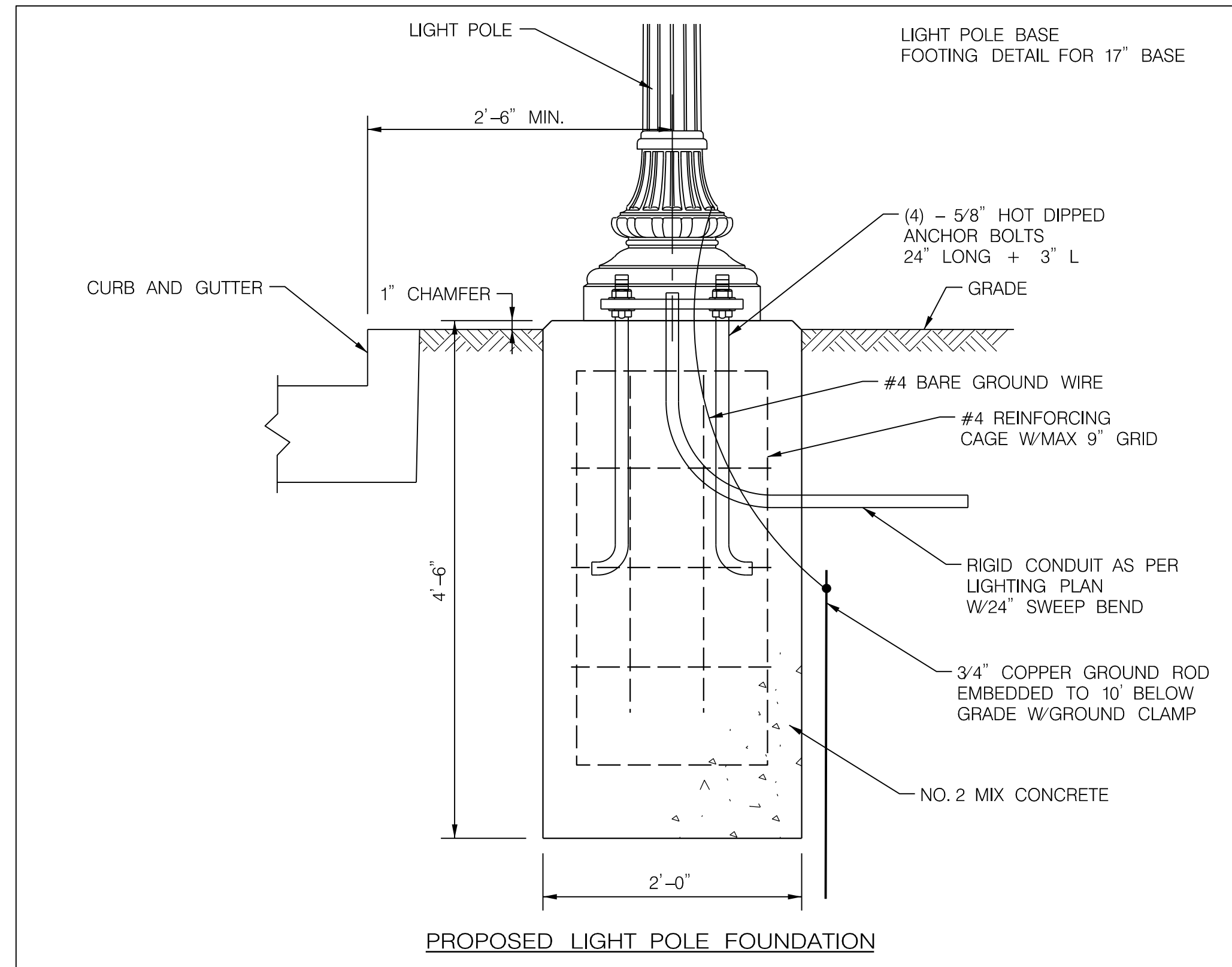


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STREETLIGHT CONDUIT INSTALLATION CHECKLIST

- 2-WAY FOUR INCH (4"), SCHEDULE 40, PVC CONDUIT TO BE INSTALLED BY THE CONTRACTOR CONNECTING EACH SPLICEBOX IN A CONTINUOUS RUN.
- TWO INCH (2"), SCHEDULE 40, PVC CONDUIT TO BE INSTALLED BY THE CONTRACTOR CONNECTING THE SPLICEBOX TO THE STREET LIGHT FOOTING.
- CONTRACTOR TO PROVIDE AND INSTALL PHOTOCELLS FOR EACH STREET LIGHT LUMINAIRE.
- STREETLIGHT AND POST ERECTED BY THE CONTRACTOR ARE TO BE WIRED WITH #10 AWG (MIN.) COPPER WITH A THREE FOOT MINIMUM LOOP OF SLACK IN THE SPLICEBOX FOR ATTACHMENT BY PEPCO.
- STREETLIGHT POSTS ARE TO HAVE A GROUNDING LUG ATTACHED TO THE BASE OF THE POST WITH A MINIMUM THREE FOOT LOOP OF SLACK IN THE SPLICEBOX OF #6 AWG BARE COPPER WIRE ATTACHED.
- ALL SWEEPBENDS TO BE MINIMUM OF 24 INCHES RADIUS.
- 1/4" NYLON PULL-LINES IS TO BE INSTALLED IN EACH CONDUIT DUCT.
- CONTRACTOR TO INSTALL MARKING TAPE ONE FOOT (1") ABOVE EACH CONDUIT RUN.
- NO MORE THAN 180 DEGREES OF BENDS IN A CONDUIT RUN.
- CONDUIT IS TO HAVE THREE (3) FEET (MINIMUM) OF COVER OVER IT.
- INSTALLATION OF ALL UNDERGROUND LIGHTING FACILITIES ARE ALSO SUBJECT TO PEPCO INSPECTION AND WRITTEN APPROVAL BEFORE CONCEALMENT. FAILURE TO OBTAIN SUCH INSPECTION WILL RESULT IN THE UNCOVERING OF FACILITIES AT THE CONTRACTOR'S EXPENSE. CALL (202) 388-2137 7:00 TO 9:00 AM OR 3:00 TO 4:00 PM TWO WORKING DAYS IN ADVANCE TO ARRANGE INSPECTION.
- ALL STREETLIGHT EQUIPMENT AND MATERIALS SHALL BE SUBMITTED TO MONTGOMERY COUNTY FOR APPROVAL PRIOR TO BEING INSTALLED ON THE PROJECT. SEE SPECIAL PROVISIONS FOR STREETLIGHT SPECIFICATIONS.
- ALL STREETLIGHTS SHALL BE INSTALLED 2'-6" BEHIND THE FACE OF THE CURB (EXCEPT AS NOTED ON PLANS).
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS / CATALOG CUTS FOR ALL LIGHTING EQUIPMENT TO MONTGOMERY COUNTY TRAFFIC OPERATIONS DIVISION FOR APPROVAL PRIOR TO INSTALLATION.



10/31/2022 R:\2008\80 MCDPW 8504520010-BF-ENG_SVC.Gn0\Task 27 Grosvenor Lane Ped Lighting\Dgn\pl-T-D004_Grosvenor.dgn

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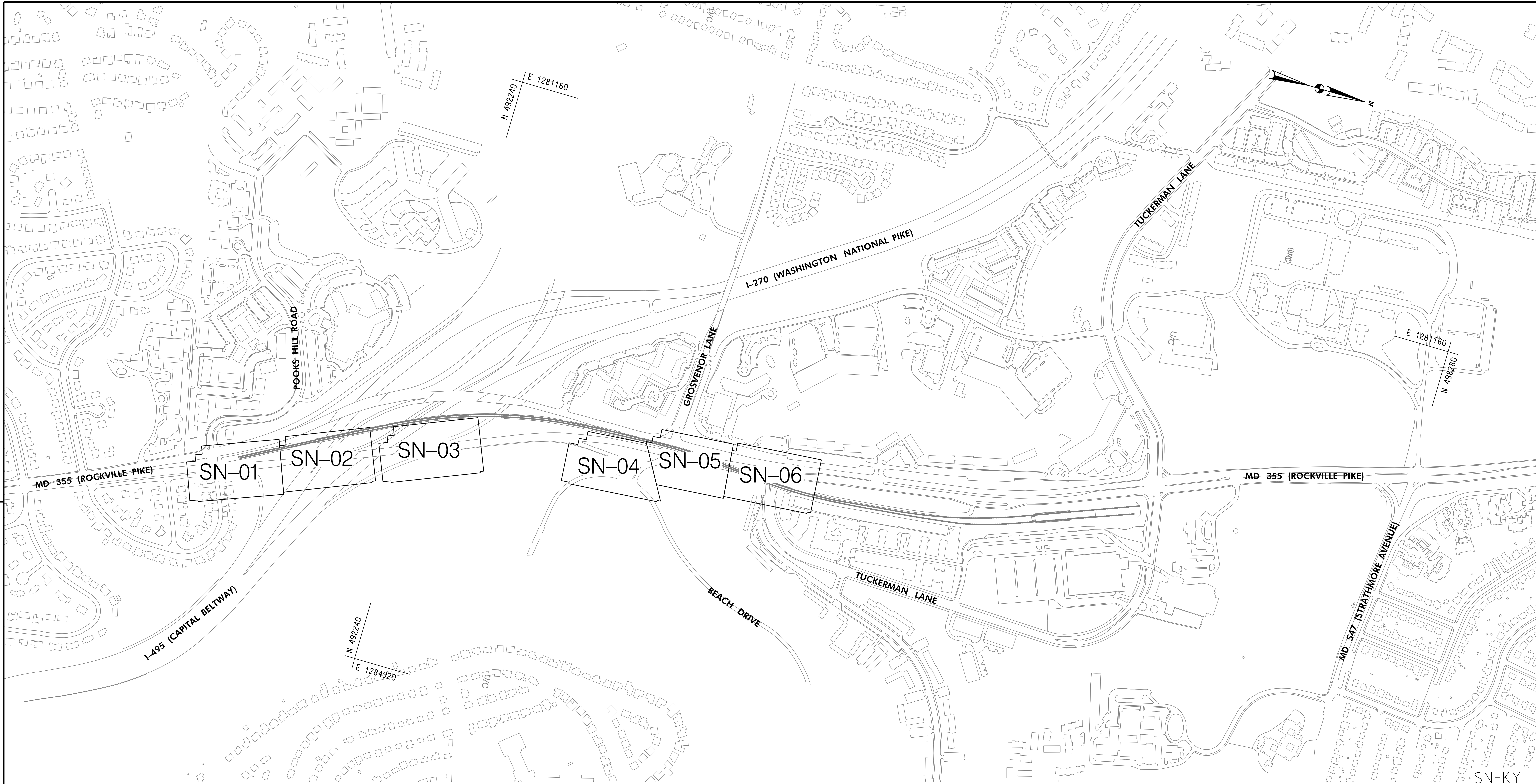
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APPROVED	
SEE TITLE SHEET FOR SIGNATURES Chief, Division of Transportation Engineering	Date _____

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
LIGHTING NOTES & DETAILS

LT-04



SHA #19-AP-MO-013-XX



OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 355 (ROCKVILLE PIKE) FROM
POOKS HILL ROAD TO
STRATHMORE AVENUE
NORTH BETHESDA, MD

SIGNING & PAVEMENT MARKING KEY PLAN

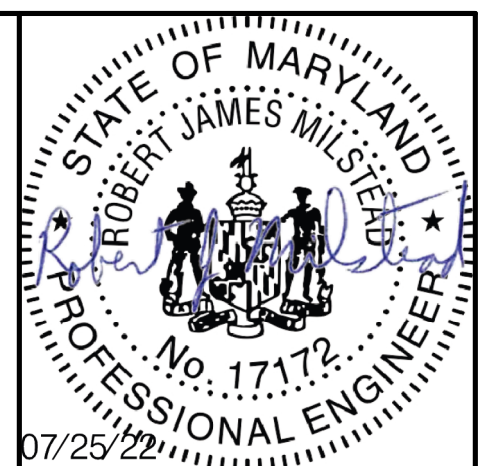
SCALE 1" = 300' ADVERTISED DATE _____ CONTRACT NO. _____

DESIGNED BY DM COUNTY MONTGOMERY
DRAWN BY DM LOGMILE 15035503.83 - 15035504.50
CHECKED BY RJM TMS NO. P341
MDE/PRD TOD NO. _____

DRAWING NO. **SN - KY** OF **KY** SHEET NO. 057 OF 128

REVISIONS

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
17172
MD LICENSE NUMBER
12-12-2022
EXPIRATION DATE



810 Gleneagles Court, Suite 300
Baltimore, MD 21286
www.stantec.com

BY: dmarthugh

CRITERIA

THE CONTRACTOR SHALL BE GOVERNED BY THE STANDARDS AND REQUIREMENTS OF THE FOLLOWING PUBLICATIONS, EXCEPT AS MODIFIED BY THE SPECIAL PROVISIONS OF THIS CONTRACT:

DESIGN

MDOT SHA - "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", 2011 EDITION AND SUBSEQUENT REVISIONS. (MDMUTCD)

A A S H T O - "HIGHWAY SAFETY DESIGN AND OPERATIONS GUIDE" -1997

A A S H T O - "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS LUMINAIRES AND TRAFFIC SIGNALS", 2001 EDITION (CATEGORY II FOR ALL OVERHEAD AND CANTILEVER SIGN STRUCTURES).

MATERIALS AND CONSTRUCTION

MDOT SHA - "STANDARD SPECIFICATIONS FOR CONSTRUCTION & MATERIALS", MOST CURRENT EDITION AND SUBSEQUENT REVISIONS AND SUPPLEMENTS.

MDOT SHA - "BOOK OF STANDARDS FOR HIGHWAY AND INCIDENTAL STRUCTURES", MOST CURRENT EDITION AND SUBSEQUENT REVISIONS AND SUPPLEMENTS.

DESIGN WIND

100 MPH - WOOD SUPPORTS 10 YEAR RECURRENCE INTERVAL	} ALL DISTRICTS
100 MPH - GROUND MOUNT SIGN STEEL SUPPORTS 10 YEAR RECURRENCE INTERVAL	
100 MPH - OVERHEAD AND CANTILEVER STRUCTURES 50 YEAR RECURRENCE INTERVAL	

DESIGN STRESS

SOIL BEARING PRESSURE - S = 3,000 P.S.F. (ASSUMED)
SEE MATERIAL & CONSTRUCTION ABOVE AND SPECIAL PROVISIONS FOR DESIGN STRESSES FOR STRUCTURAL STEEL, ALUMINUM, REINFORCING STEEL AND CONCRETE.

CHAMFER

ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 3/4" X 3/4" CHAMFER.

CLASSIFICATION OF SIGNS

- SIGNS ARE DIVIDED INTO TWO (2) GENERAL CATEGORIES.
- I. GUIDE SIGNS
 - A) STRUCTURAL TYPES
 - OH - OVERHEAD
 - C - CANTILEVER
 - GM - GROUND MOUNT, BREAKAWAY OR NON-BREAKWAY
 - BM - BRIDGE MOUNTED
 - B) PANELS
 - MATERIAL - EXTRUDED ALUMINUM COPY - DIRECT APPLIED
 - I) HIGH INTENSITY (NEW SIGNS AND REVISIONS TO EXISTING SIGNS)
 - 2. STANDARD SIGNS (REGULATORY, WARNING, ETC.)
 - A) STRUCTURAL TYPES
 - WOOD SUPPORTS
 - SQUARE TUBE
 - B) PANELS
 - MATERIAL - SHEET ALUMINUM COPY - DIRECT APPLIED

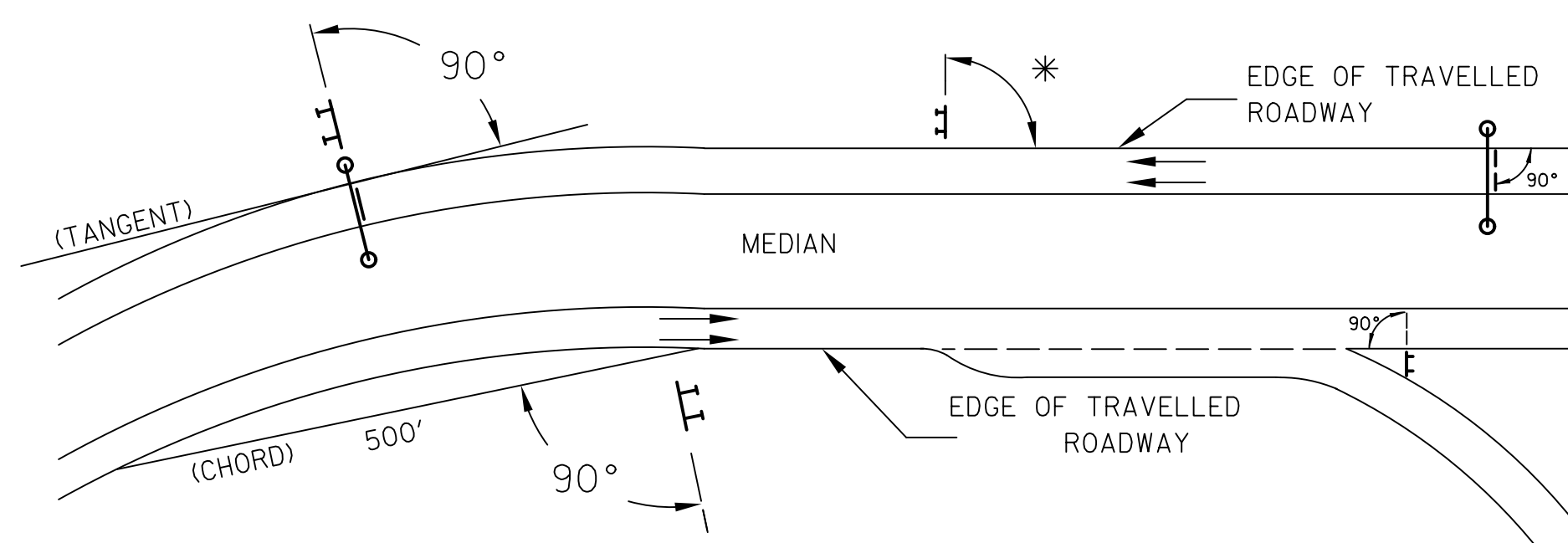
IDENTIFICATION OF SIGNS AND PANELS

- GUIDE SIGNS**
EACH GUIDE SIGN IS IDENTIFIED BY A SIGN NUMBER ON THE PLANS AND IN THE TABULATIONS. (GM-1, GM-2, GM-3, etc)
SIGNS ON STRUCTURES ARE IDENTIFIED WITH A NUMBER AND WHERE VARIATIONS OCCUR, A LOWER CASE LETTER. (OH-1a, OH-1b, OH-1c)
- STANDARD SIGNS**
STANDARD SIGNS ARE IDENTIFIED BY PANEL NUMBERS AND ARE CLASSIFIED AS FOLLOWS
R - REGULATORY
W - WARNING
M - ROUTE MARKERS AND ACCESSORIES
D - DESTINATION AND MILEAGE PANELS
S - SCHOOL
- PANELS SHALL BE DESIGNATED TO AGREE WITH MARYLAND STANDARD SIGN BOOK. EACH STANDARD SIGN IS IDENTIFIED FIRST BY THE SHEET NUMBER, THEN BY THE NUMERICAL ORDER OF THE SIGN AS IT APPEARS ON THE PLAN.
FOR EXAMPLE SHEET SN 2.1-101,102,103, ETC. SHEET SN 2.2-201,202,203,ETC.

PANEL LAYOUT AND ALPHABETS

- GUIDE SIGN PANEL LAYOUTS ARE BASED ON THE A.A.S.H.T.O. MANUALS NOTED ABOVE.
- STANDARD SIGN PANEL LAYOUTS ARE BASED ON THE MDMUTCD WITH SPECIFICATIONS DETAILED IN THE MARYLAND STATE HIGHWAY ADMINISTRATION PUBLICATION, "STANDARD SIGN BOOK", AVAILABLE ONLINE AT http://apps.roads.maryland.gov/businesswithsha/bizstdsspecs/desmanualstdpub/publicationsonline/oofs/internet_signbook.asp

ORIENTATION OF SIGN FACES



* UNDER 30 FEET FROM TRAVELLED ROADWAY TO NEAR EDGE OF SIGN - 93° AWAY FROM THE ROAD TO AVOID SPECULAR REFLECTION AS INDICATED IN 813.03 OF THE MARYLAND STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS.
OVER 30 FEET FROM TRAVELLED ROADWAY TO NEAR EDGE OF SIGN - 90°

REFLECTORIZATION

BACKGROUNDS, BORDERS, TEXTS AND ALL OTHER ELEMENTS OF SIGN PANELS SHALL BE REFLECTORIZED EXCEPT WHERE NOTED. REFER TO PROJECT REQUIREMENTS FOR MORE DETAIL.

SIGN LOCATIONS

- GUIDE SIGNS ARE LOCATED ON THE PLANS BY DIMENSION TO SURVEY STATIONS, OR WHEN NECESSARY, TO IDENTIFIABLE PHYSICAL FEATURES.
- ALL CHANGES IN THE LOCATIONS OF SIGNS AS SHOWN ON THE PLAN SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

EXISTING UTILITIES

THE ENGINEER DOES NOT WARRANT OR GUARANTEE THE ACCURACY OR COMPLETENESS OF UTILITY INFORMATION SHOWN ON THE PLAN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND PROTECT ALL EXISTING FACILITIES WHICH MIGHT BE AFFECTED BY THIS WORK OR HIS OPERATION.

ROADSIDE SIGNS

- VERTICAL ALIGNMENT
POSITION PANEL SO FACE IS PLUMB.
- HORIZONTAL ALIGNMENT (SEE DIAGRAM ABOVE)
 - A) ON STRAIGHT ROADWAY SECTIONS, ANGLE OF SIGN FACE TO ROADWAY VARIES WITH DISTANCE FROM TRAVELLED ROADWAY TO NEAR EDGE OF SIGN - SEE DIAGRAM.
 - B) ON THE INSIDE OF HORIZONTAL CURVES, POSITION SIGN SO FACE OF PANEL MAKES AN ANGLE OF 90° WITH A CHORD BETWEEN A POINT ON NEAR EDGE OF PAVEMENT AT SIGN LOCATION AND A POINT ON EDGE OF PAVEMENT 500' IN ADVANCE OF SIGN.
 - C) ON THE OUTSIDE OF HORIZONTAL CURVES, POSITION SIGN SO FACE OF PANEL IS AT RIGHT ANGLES TO THE TANGENT OF THE CURVE AT THE SIGN LOCATION.
 - D) POSITIONING OF SIGNS AT GORES AND RAMP SEPARATIONS IS REFERRED TO THE NORMAL EDGE OF THE MAINLINE ROADWAY.

OVERHEAD SIGNS

- VERTICAL ALIGNMENT
POSITION PANELS FOR ALL OVERHEAD STRUCTURES SO THAT PANEL FACE IS PLUMB.
- OVERHEAD SIGN STRUCTURES SHALL NOT BE ERECTED WITHOUT ATTACHING LUMINAIRES, SUPPORTS, AND/OR SIGNS.
- HORIZONTAL ALIGNMENT
 - A) POSITION ALL OVERHEAD SIGNS SO THAT THE FACE OF THE PANEL IS AT RIGHT ANGLES TO THE NORMAL EDGE OF ROADWAY, IF ON A STRAIGHT ROADWAY SECTION.
 - B) POSITION ALL OVERHEAD SIGNS SO THAT THE FACE OF THE PANEL IS AT RIGHT ANGLES TO THE TANGENT OF THE CURVE AT SIGN LOCATION, IF ON A HORIZONTAL CURVE.
 - C) POSITIONING OF SIGNS AT GORES AND RAMP SEPARATIONS IS REFERRED TO THE NORMAL EDGE OF THE MAINLINE ROADWAY.
- VERTICAL CLEARANCE
 - A) OVERHEAD SIGNS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 17'-9" FROM ROADWAY TO THE BOTTOM OF LIGHT FIXTURES. ALL LIGHT FIXTURES ARE TO BE AT THE SAME ELEVATION.
 - B) IF THE CONTRACTOR CANNOT OBTAIN 17'-9" (SEE 3A) CLEARANCE, HE IS TO CEASE WORK AND CONTACT THE PROJECT ENGINEER FOR FURTHER INSTRUCTIONS. THE PROJECT ENGINEER MAY CONTACT THE TRAFFIC ENGINEERING DESIGN DIVISION FOR ASSISTANCE.
 - C) ON ALL OVERHEAD SIGNS, THE MINIMUM CLEARANCE TO BOTTOM OF DESIGN SIGN: 20'-9".

PROJECT REQUIREMENTS

ALL NEW SIGNS ON THIS PROJECT SHALL BE FABRICATED FROM SHEETING WHICH MEETS ALL OF THE FOLLOWING REQUIREMENTS, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, OR AS DIRECTED BY THE ENGINEER:

- SHEETING SHALL MEET THE REQUIREMENTS OF SECTIONS 813 AND 950.03 OF MDOT SHA'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS 2017 EDITION AND SUBSEQUENT REVISIONS AND SUPPLEMENTS.
- LISTED ON MDOT SHA OFFICE OF TRAFFIC AND SAFETY'S QUALIFIED PRODUCTS LIST (QPL).

PROJECT REQUIREMENTS CONT'D

3. THE FOLLOWING TYPES OF SHEETING SHALL BE USED FOR THE SPECIFIED SIGN CLASSIFICATIONS:

GENERAL NOTE: ALL COLORS SHALL BE RETROREFLECTIVE EXCEPT BLACK. BLACK TEXT, BORDERS, SYMBOLS OR ANY BLACK ELEMENTS OF ANY SIGN SHALL BE NON-REFLECTIVE. THIS APPLIES TO ALL MDOT SHA SIGNS AS SHOWN BELOW.

A) GUIDE, EXIT GORE, GENERAL INFORMATION, AND SERVICE SIGNS - FALL INTO TWO SUB CATEGORIES:

- (I). GROUND MOUNTED:
ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET OR EXCEED THE REQUIREMENTS FOR ASTM TYPE IX (9).
- (II). OVERHEAD STRUCTURE SIGNS AND OVERHEAD CANTILEVER SIGNS:
ALL RETROREFLECTIVE SHEETING ELEMENTS OF ALL OVERHEAD SIGNS SHALL MEET OR EXCEED THE REQUIREMENTS FOR ASTM TYPE XI(II). (THIS SECTION DOES NOT APPLY TO OVERHEAD SIGNALIZED INTERSECTION SIGNING; MAST ARM OR SPAN WIRE. FOLLOW THE REQUIREMENTS FOR THE RESPECTIVE SIGN CLASSIFICATION FOR SIGNAL SIGNING.)

B) WARNING SIGNS - RETROREFLECTIVE SHEETING FOR WARNING SIGNS (FLUORESCENT YELLOW AND FLUORESCENT ORANGE) SHALL MEET OR EXCEED THE REQUIREMENTS FOR ASTM TYPE IX (9). REGULATORY MESSAGES WITHIN WARNING SIGNS SHALL FOLLOW THE REQUIREMENTS FOR REGULATORY SIGNS.

C) SCHOOL SIGNS - RETROREFLECTIVE SHEETING FOR SCHOOL SIGNS (FLUORESCENT YELLOW AND FLUORESCENT YELLOW-GREEN) SHALL MEET OR EXCEED THE REQUIREMENTS FOR ASTM TYPE IX (9). REGULATORY MESSAGES WITHIN SCHOOL SIGNS SHALL FOLLOW THE REQUIREMENTS FOR REGULATORY SIGNS.

D) REGULATORY SIGNS - FALL INTO THREE SUBCATEGORIES:

- (I). "RED" REGULATORY SIGNS; (SPECIFICALLY - STOP, YIELD, DO NOT ENTER AND WRONG WAY). ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET OR EXCEED THE REQUIREMENTS FOR ASTM TYPE IX (9).
- (II). ALL R7 AND R8 SERIES PARKING RELATED SIGNS AND THEIR SUPPLEMENTAL PANELS, NO TRESPASSING SIGNS, AND SIGNS DIRECTED AT PEDESTRIANS AND BICYCLISTS ONLY. ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET THE REQUIREMENTS FOR ASTM TYPE IV (4).
- (III). ALL OTHER REGULATORY SIGNS - ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET ASTM TYPE IV (4) INCLUDING RED ELEMENTS. WARNING MESSAGES WITHIN REGULATORY SIGNS SHALL FOLLOW THE REQUIREMENTS FOR WARNING SIGNS.

E) ROUTE MARKERS (INDEPENDENT USE AND GUIDE SIGN USE)

INDEPENDENT USE: ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET BUT NOT TO EXCEED THE REQUIREMENTS FOR ASTM TYPE IV (4).

GUIDE SIGN USE: WHEN INCORPORATED IN THE BODY OF A GUIDE SIGN, ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET THE SHEETING REQUIREMENTS OF THE GUIDE SIGNS FOR WHICH THEY ARE TO BE APPLIED; GROUND MOUNT ASTM TYPE IX (9) OR OVERHEAD ASTM TYPE XI(II).

F) LOGOS AND / OR GRAPHICS - WITHIN SIGNS SHALL FOLLOW THE REQUIREMENTS FOR THE RESPECTIVE SIGN CLASSIFICATION UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, OR AS DIRECTED BY THE ENGINEER.

G) SPECIFIC SERVICE (LOGO) SIGNING - ALL COPY, DIVIDER BORDERS, LOGOS AND ARROWS SHALL BE DEMOUNTABLE ALUMINUM OVERLAYS, .032 MINIMUM TO .063 MAXIMUM. ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET OR EXCEED THE REQUIREMENTS FOR ASTM TYPE IX (9). DISTANCES ON DIRECTIONAL ARROWS WHEN SPECIFIED SHALL BE BLACK. THE OVERLAYS ARE TO BE APPLIED WITH .125 ALUMINUM POP RIVETS TO THE BODY OF THE MAIN SIGN.

H) CIVIL DEFENSE SIGNS AND OTHER SIGNS - NOT SPECIFICALLY FALLING INTO ONE OF THE CATEGORIES ABOVE, SHALL FOLLOW THE GUIDELINES FOR THE SIGN CLASSIFICATION THAT MOST CLOSELY MATCHES THE COLOR(S) OF THE PROPOSED SIGN.

4. THE FOLLOWING MINIMUM THICKNESS SHALL BE USED FOR THE APPROPRIATE WIDTH OF SHEET ALUMINUM BLANKS:

LONGEST DIMENSION	MINIMUM THICKNESS
UP TO 12"	0.040"
GREATER THAN 12" TO 24"	0.063"
GREATER THAN 24" TO 36"	0.080"
GREATER THAN 36" TO 48"	0.100"
OVER 48"	0.125"

SHA #19-AP-MO-013-XX

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 355 (ROCKVILLE PIKE) FROM
POOKS HILL ROAD TO
STRATHMORE AVENUE
NORTH BETHESDA, MD

REVISIONS	GENERAL NOTES AND PROPOSALS
	SCALE _____ NTS _____ ADVERTISED DATE _____ CONTRACT NO. _____
	DESIGNED BY _____ DM _____ COUNTY _____ MONTGOMERY _____
	DRAWN BY _____ DM _____ LOGMILE _____ 15035503.83 - 15035504.50
	CHECKED BY _____ RJM _____ TMS NO. _____ P341
	MDE/PRD _____ TOD NO. _____
	DRAWING NO. SNN - 1 OF 1 SHEET NO. 058 OF 128

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

17172
MD LICENSE NUMBER

12-12-2022
EXPIRATION DATE

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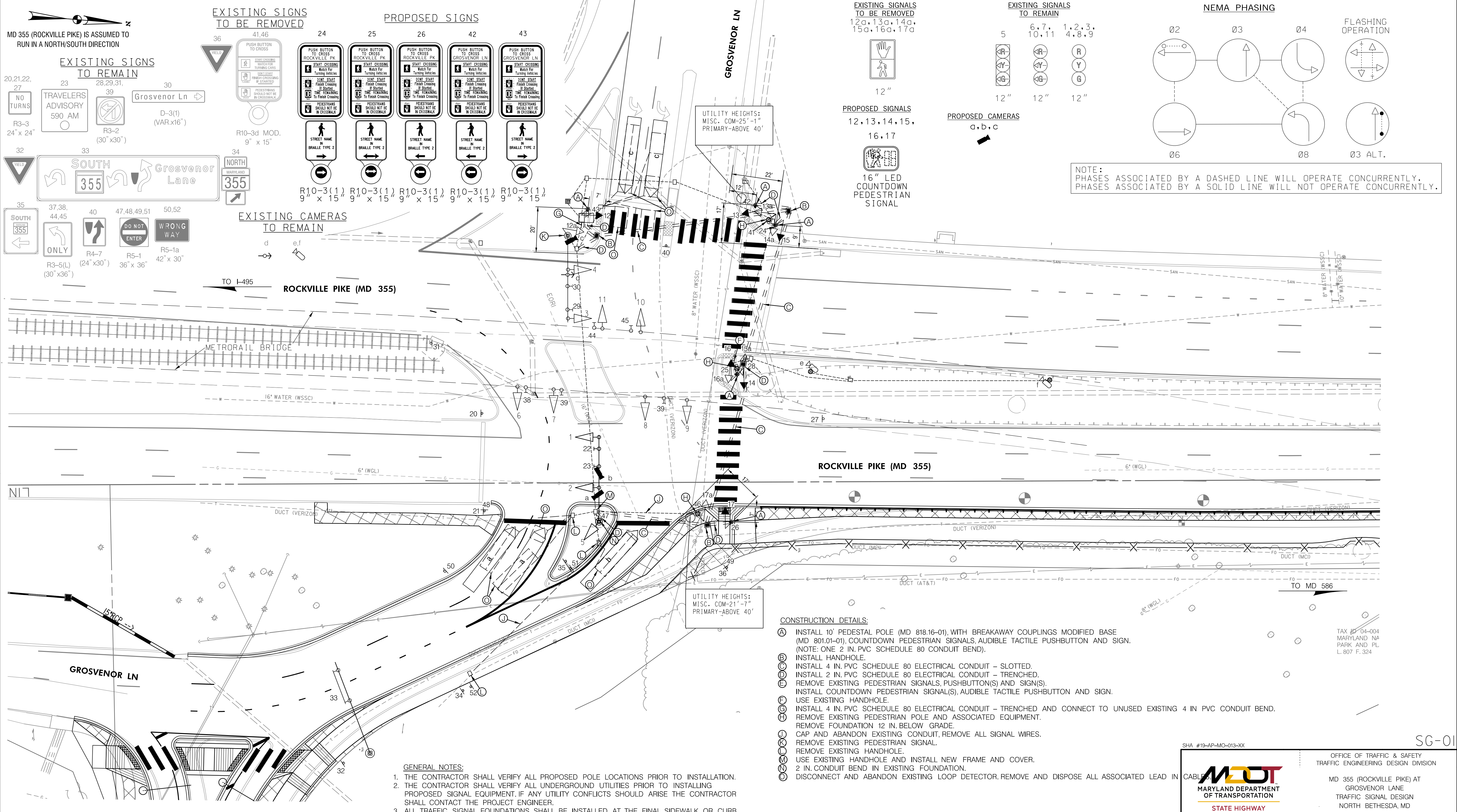
BORDER REV. DATE: June 1, 2004

DRILL HOLES

DRILL HOLES

DRILL HOLES

BY: dmarthugh

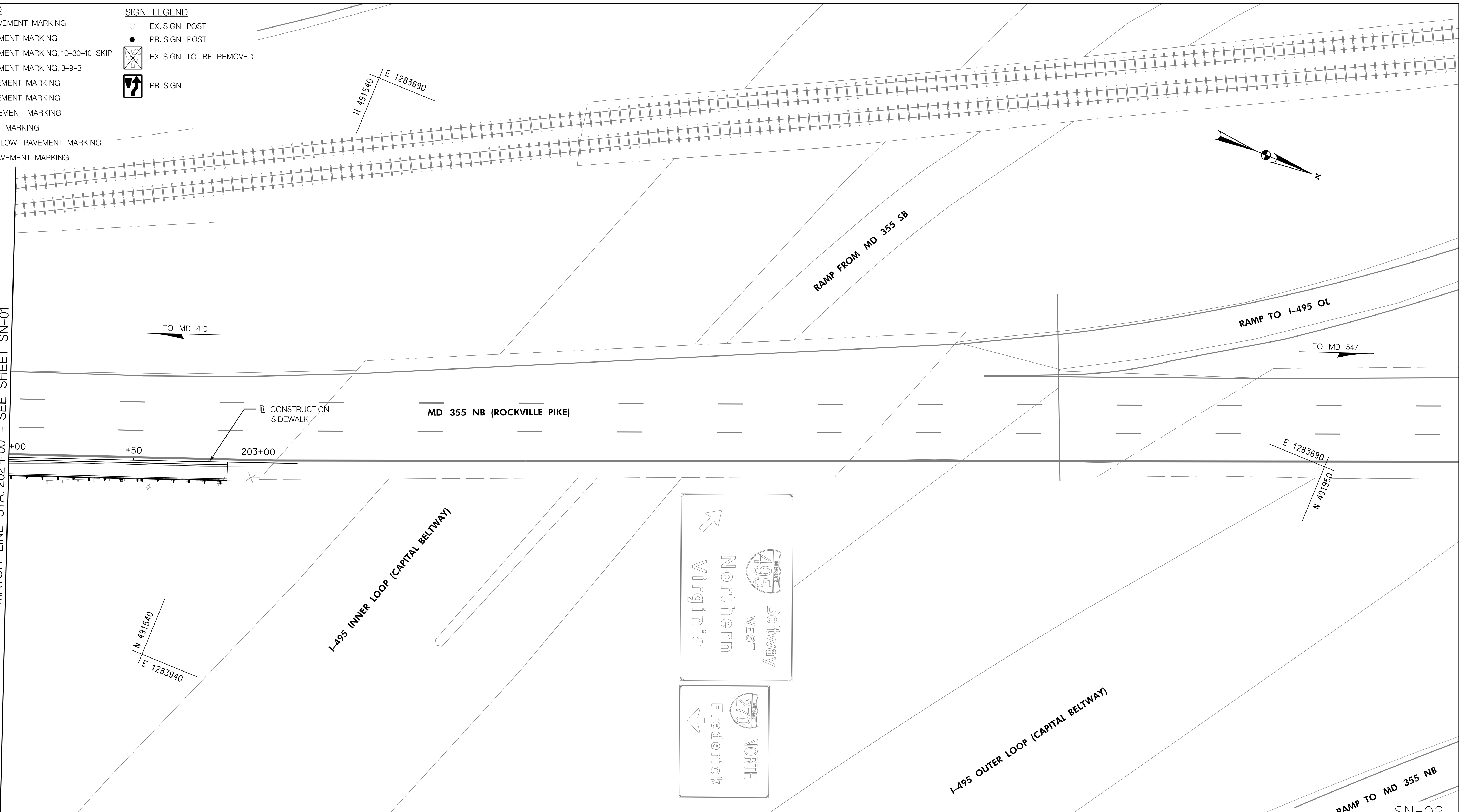


APPROVALS	REVISIONS
TEAM LEADER	(E) MODIFY SIGNAL DUE TO NEW GEOMETRICS FEB. 2022 TMS# P341
ASST. DIV. CHIEF	(F) RED LIGHT CAMERA INSTALLATION TMS L447 JUN. 6, 2012
DIVISION CHIEF	(G) REPLACE EXISTING SIGNALS WITH BLACK FACE SIGNALS TMS P30B NOV. 16, 2004
OFFICE DIRECTOR	

- PAVEMENT MARKING LEGEND**
- (A) INSTALL 5 INCH YELLOW PAVEMENT MARKING
 - (B) INSTALL 5 INCH WHITE PAVEMENT MARKING
 - (C) INSTALL 5 INCH WHITE PAVEMENT MARKING, 10-30-10 SKIP
 - (D) INSTALL 5 INCH WHITE PAVEMENT MARKING, 3-9-3
 - (E) INSTALL 10 INCH WHITE PAVEMENT MARKING
 - (F) INSTALL 16 INCH WHITE PAVEMENT MARKING
 - (G) INSTALL 24 INCH WHITE PAVEMENT MARKING
 - (H) REMOVE EXISTING PAVEMENT MARKING
 - (J) INSTALL 5 INCH DOUBLE YELLOW PAVEMENT MARKING
 - (K) INSTALL 15 INCH YELLOW PAVEMENT MARKING

- SIGN LEGEND**
- EX. SIGN POST
 - PR. SIGN POST
 - EX. SIGN TO BE REMOVED
 - PR. SIGN

MATCH LINE STA. 202+00 - SEE SHEET SN-01



SHA #19-AP-MO-013-XX

MDOT
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

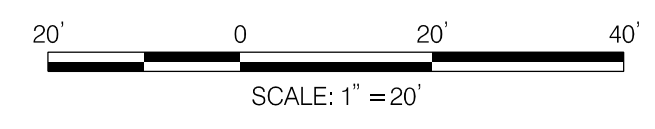
MD 355 (ROCKVILLE PIKE) FROM
POOKS HILL ROAD TO
STRATHMORE AVENUE
NORTH BETHESDA, MD

SIGNING AND PAVEMENT MARKING PLAN	
SCALE: 1" = 20'	ADVERTISED DATE: _____ CONTRACT NO. _____
DESIGNED BY: DM	COUNTY: MONTGOMERY
DRAWN BY: DM	LOGMILE: 15035503.83 - 15035504.50
CHECKED BY: RJM	TMS NO.: P341
MDE/PRD: _____	TOD NO.: _____
DRAWING NO. SN-2.2	OF 2.6 SHEET NO. 060 OF 128

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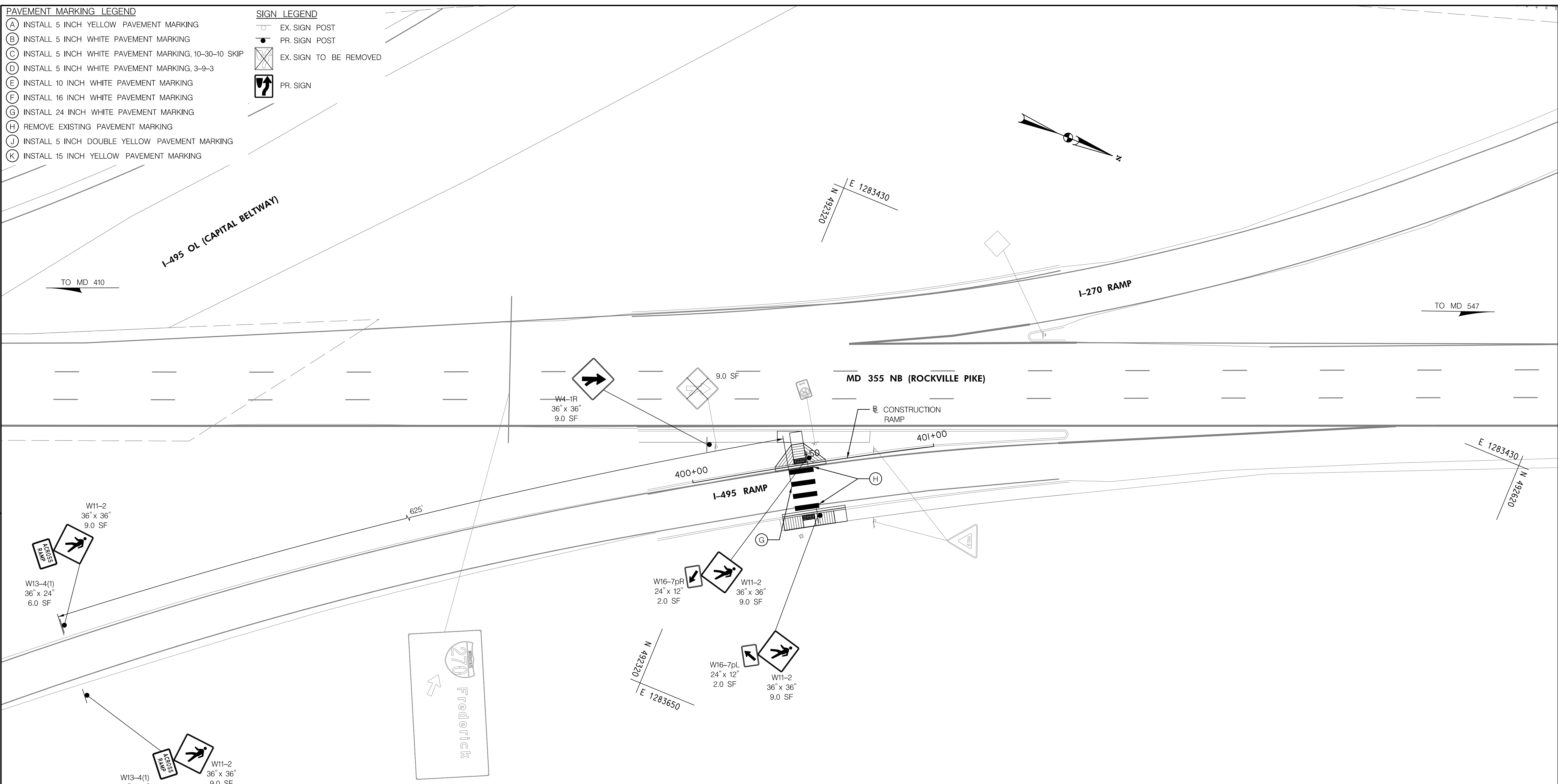


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BY: dmarthugh

- PAVEMENT MARKING LEGEND**
- (A) INSTALL 5 INCH YELLOW PAVEMENT MARKING
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 - (H) REMOVE EXISTING PAVEMENT MARKING
 - (J) INSTALL 5 INCH DOUBLE YELLOW PAVEMENT MARKING
 - (K) INSTALL 15 INCH YELLOW PAVEMENT MARKING

- SIGN LEGEND**
- EX. SIGN POST
 - PR. SIGN POST
 - ⊗ EX. SIGN TO BE REMOVED
 - ⬆ PR. SIGN



SHA #19-AP-MO-013-XX SN-03

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 355 (ROCKVILLE PIKE) FROM
POOKS HILL ROAD TO
STRATHMORE AVENUE
NORTH BETHESDA, MD



REVISIONS		SIGNING AND PAVEMENT MARKING PLAN	
SCALE 1" = 20'		ADVERTISED DATE _____ CONTRACT NO. _____	
DESIGNED BY	DM	COUNTY	MONTGOMERY
DRAWN BY	DM	LOGMILE	15035503.83 - 15035504.50
CHECKED BY	RJM	TMS NO.	P341
MDE/PRD		TOD NO.	
DRAWING NO.	SN - 2.3	OF	2.6
		SHEET NO.	061 OF 128

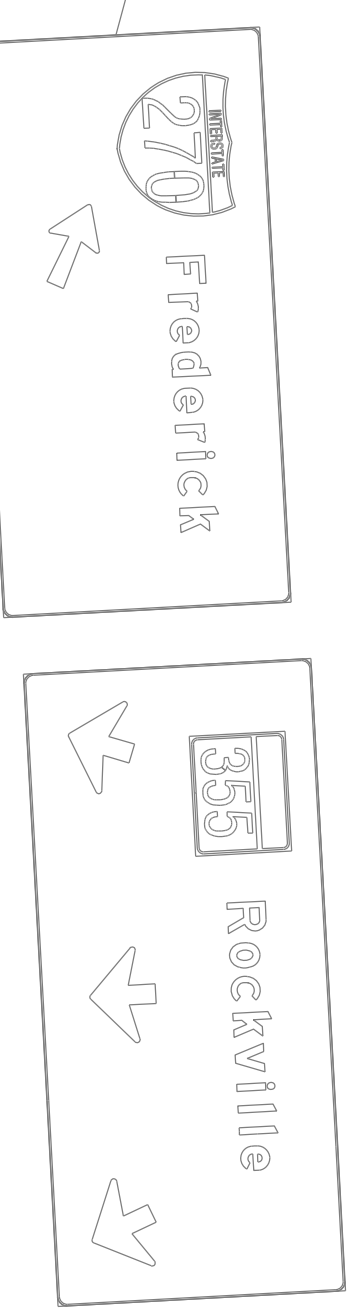
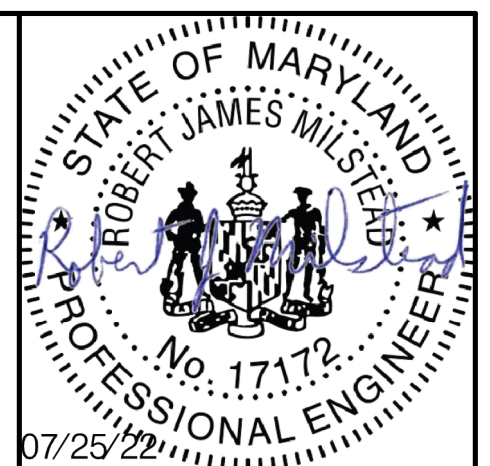
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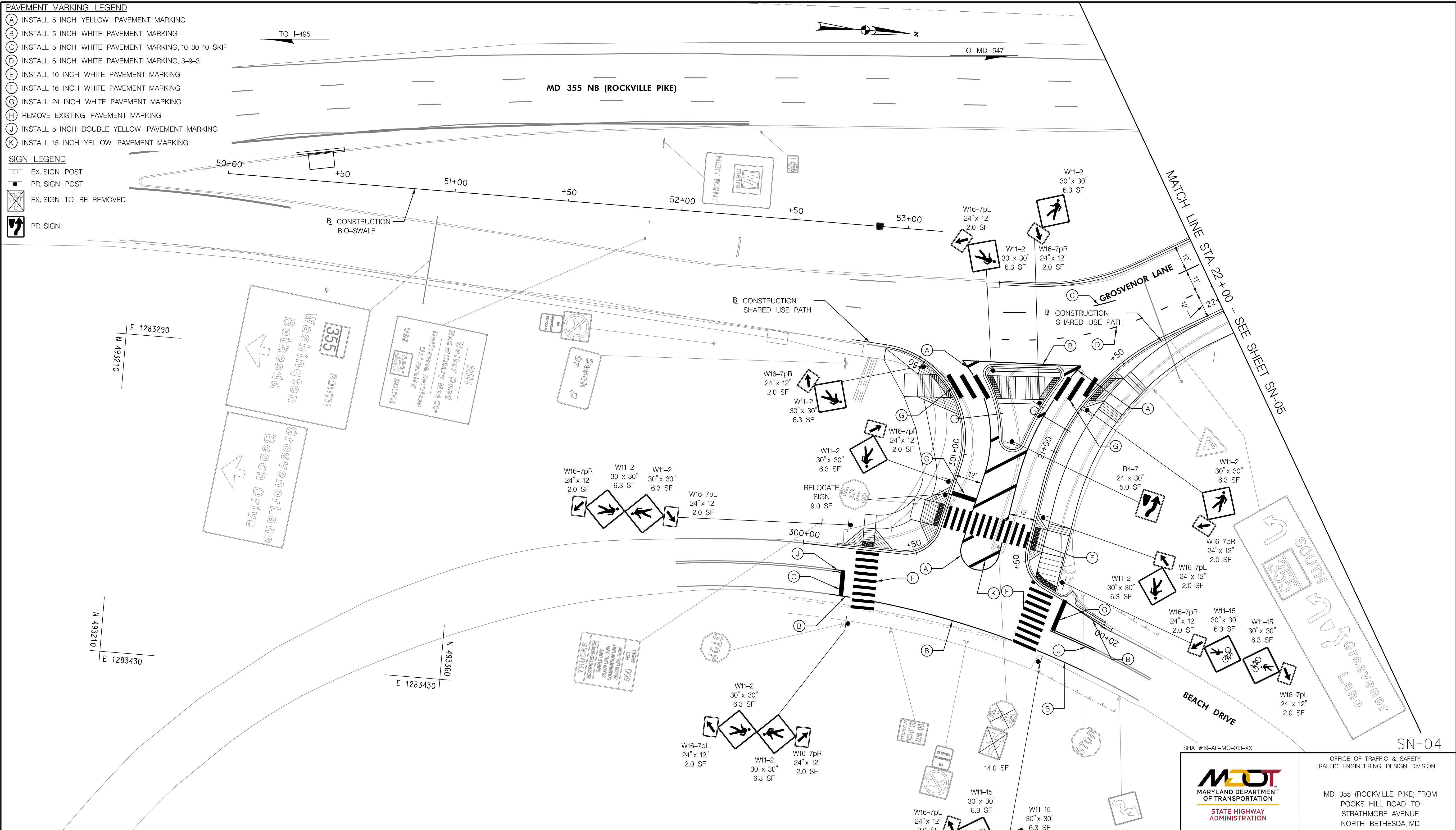
BY: dmarthugh

PAVEMENT MARKING LEGEND

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SIGN LEGEND

- EX. SIGN POST
- PR. SIGN POST
- EX. SIGN TO BE REMOVED
- PR. SIGN



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N 493210

E 1283430
N 493210

E 1283430
N 493360

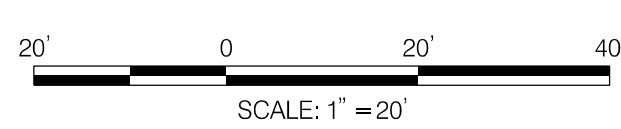
MATCH LINE STA. 22+00 - SEE SHEET SN-05

SN-04

SHA #19-AP-MO-013-XX

<p>MDOT MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION</p>	<p>OFFICE OF TRAFFIC & SAFETY TRAFFIC ENGINEERING DESIGN DIVISION</p>
	<p>MD 355 (ROCKVILLE PIKE) FROM POOKS HILL ROAD TO STRATHMORE AVENUE NORTH BETHESDA, MD</p>

SIGNING AND PAVEMENT MARKING PLAN	
SCALE: 1" = 20'	ADVERTISED DATE: _____ CONTRACT NO. _____
DESIGNED BY: DM	COUNTY: MONTGOMERY
DRAWN BY: DM	LOGMILE: 15035503.83 - 15035504.50
CHECKED BY: RJM	TIMS NO.: P341
MDE/PRD: _____	TOD NO.: _____
DRAWING NO. SN-2.4	OF 2.6 SHEET NO. 062 OF 128

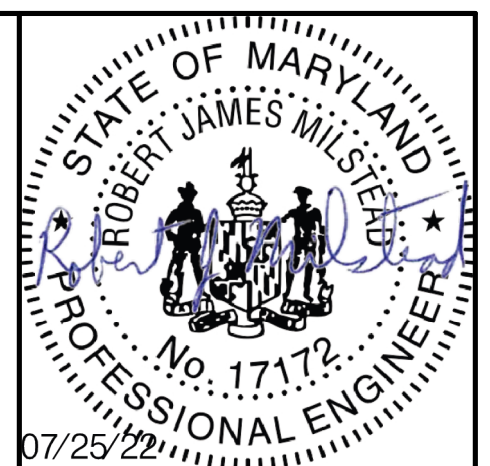


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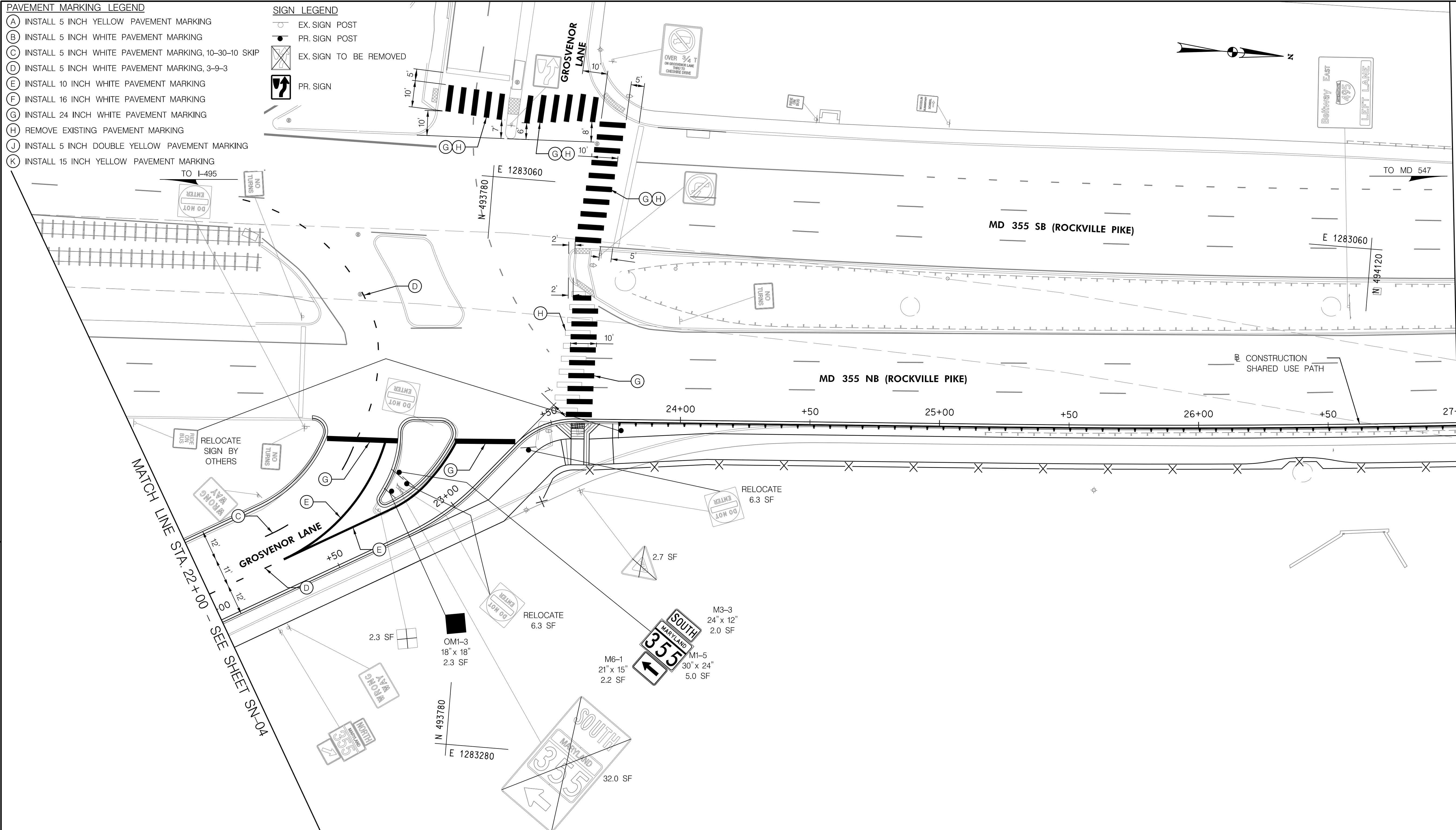
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MD LICENSE NUMBER

12-12-2022
EXPIRATION DATE



- PAVEMENT MARKING LEGEND**
- (A) INSTALL 5 INCH YELLOW PAVEMENT MARKING
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- SIGN LEGEND**
- EX. SIGN POST
 - PR. SIGN POST
 - ⊗ EX. SIGN TO BE REMOVED
 - ⬆ PR. SIGN



MATCH LINE STA. 27+00 - SEE SHEET SN-06

MATCH LINE STA. 22+00 - SEE SHEET SN-04

SN-05

SHA #19-AP-MO-013-XX

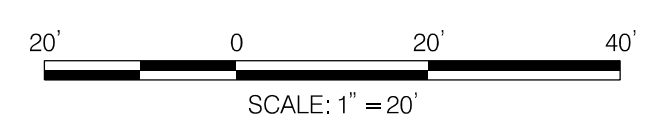


OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 355 (ROCKVILLE PIKE) FROM
POOKS HILL ROAD TO
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NORTH BETHESDA, MD

REVISIONS

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CHECKED BY: RJM	TMS NO.: P341
MDE/PRD: _____	TOD NO.: _____
DRAWING NO. SN-2.5	OF 2.6 SHEET NO. 063 OF 128

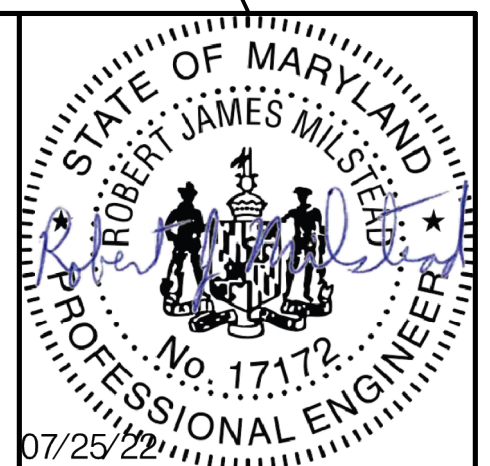


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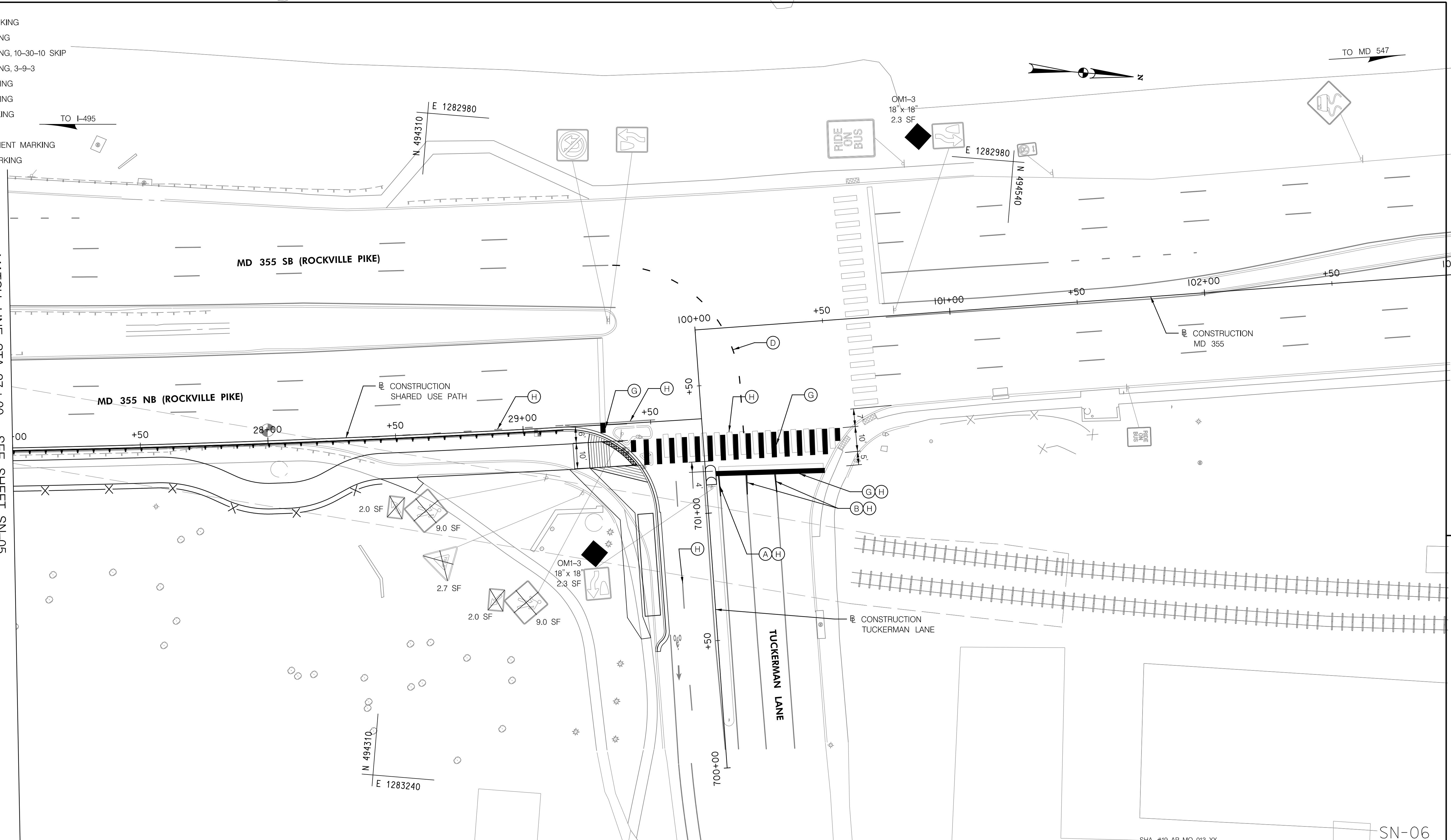
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SIGN LEGEND

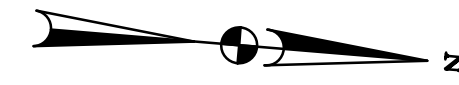
- EX. SIGN POST
- PR. SIGN POST
- ⊗ EX. SIGN TO BE REMOVED
- ➡ PR. SIGN

MATCH LINE STA. 27+00 - SEE SHEET SN-05



TO MD 547

TO I-495



SHA #19-AP-MO-013-XX

SN-06



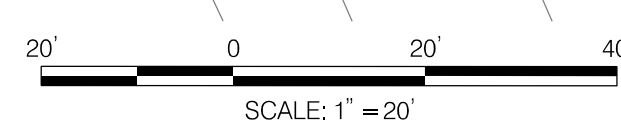
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 355 (ROCKVILLE PIKE) FROM
POOKS HILL ROAD TO
STRATHMORE AVENUE
NORTH BETHESDA, MD

SIGNING AND PAVEMENT MARKING PLAN

SCALE: 1" = 20'	ADVERTISED DATE: _____	CONTRACT NO. _____
DESIGNED BY: DM	COUNTY: MONTGOMERY	
DRAWN BY: DM	LOGMILE: 15035503.83 - 15035504.50	
CHECKED BY: RJM	TIMS NO. P341	
MDE/PRD: _____	TOD NO. _____	
DRAWING NO. SN-2.6	OF 2.6	SHEET NO. 064 OF 128

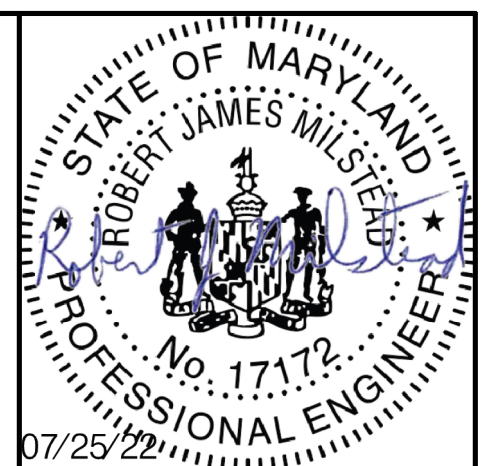
REVISIONS



810 Cleneagles Court, Suite 300
Baltimore, MD 21286
www.stantec.com

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

17172
MD LICENSE NUMBER
12-12-2022
EXPIRATION DATE



BY: dmarthugh

SHEET NO.	REMARKS	CODE NUMBERS •											
		1	2	3	4	5	6	7	8	9	10	11	12
SN-01	(1) W13-4(1), (3) W11-2, (1) W16-7pL, (1) W16-7pR, (1) M6-2R (INTERSTATE), (1) M1-1, (1) M3-2 (INTERSTATE), (2) OMI-3	50.8	6	6	6.8						98	20	
SN-02	NONE												
SN-03	(4) W11-2), (2) W13-4(1), (1) W16-7pL, (1) W16-7pR, (1) W4-1R	61.0	5	5	9.0					44	25		
SN-04	(4) W11-15, (10) W11-2, (7) W16-7pL, (7) W16-7pR, (1) R4-7	121.2	12	12	14.0	9.0	232	232		350	117		94
SN-05	(1) OMI-3, (1) M6-1, (1) M1-5, (1) M3-3	11.5	4	4	34.7	12.6	65		160		390	330	
SN-06	(2) OMI-3	4.6			24.7		43	9			228	330	
	TOTAL	249.1	27	27	89.2	21.6	340	241	160	350	877	705	94

• CODE NUMBER DESCRIPTION & UNIT

CODE NUMBERS	DESCRIPTION	UNIT
1	SHEET ALUMINUM SIGNS	S.F.
2	FURNISH AND INSTALL PERFORATED TUBULAR STEEL SIGN SUPPORTS	EACH
3	FURNISH AND INSTALL ANCHOR BASES FOR SQUARE TUBULAR STEEL POST	EACH
4	REMOVE EXISTING SIGNS	S.F.
5	RELOCATE EXISTING SIGNS	S.F.
6	5' WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	L.F.
7	5' YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	L.F.
8	10' WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	L.F.
9	16' WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	L.F.
10	24' WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	L.F.
11	REMOVAL OF EXISTING PAVEMENT MARKING LINE, ANY WITH, BY GRINDING	L.F.
12	15' YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	L.F.

SHA #19-AP-MO-013-XX

SN-07

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 355 (ROCKVILLE PIKE) FROM
POOKS HILL ROAD TO
STRATHMORE AVENUE
NORTH BETHESDA, MD

REVISIONS

INDEX OF QUANTITIES

SCALE _____ NTS _____ ADVERTISED DATE _____ CONTRACT NO. _____

DESIGNED BY _____ DM _____ COUNTY _____ MONTGOMERY _____

DRAWN BY _____ DM _____ LOGMILE _____ 15035503.83 - 15035504.50

CHECKED BY _____ RJM _____ TMS NO. _____ P341

MDE/PRD _____ TOD NO. _____

DRAWING NO. **SN - 11.1** OF **11.1** SHEET NO. 065 OF 128



810 Gleneagles Court, Suite 300
Baltimore, MD 21286
www.stantec.com

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
17172
MD LICENSE NUMBER
12-12-2022
EXPIRATION DATE



BY: dmarthugh

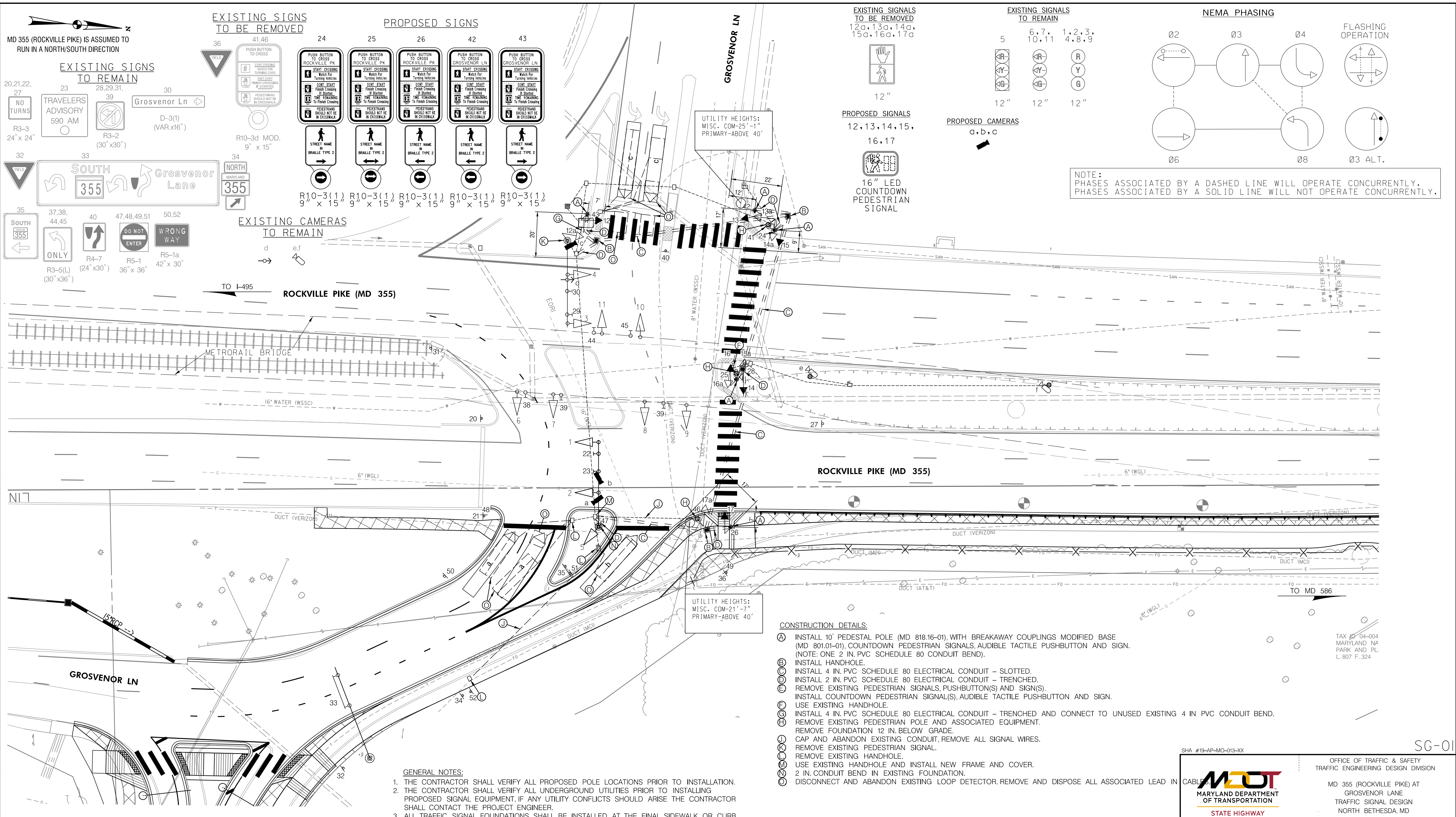
BORDER REV. DATE: June 1, 2004

DRILL HOLES

DRILL HOLES

DRILL HOLES

BY: dmarthugh



810 Glenegles Court, Suite 300
 Baltimore, MD 21286
 www.stantec.com

APPROVALS	REVISIONS
TEAM LEADER	(E) MODIFY SIGNAL DUE TO NEW GEOMETRICS FEB. 2022 TMS# F341
ASST. DIV. CHIEF	(F) RED LIGHT CAMERA INSTALLATION TMS L447 JUN. 6, 2012
DIVISION CHIEF	(G) REPLACE EXISTING SIGNALS WITH BLACK FACE SIGNALS TMS F30B NOV. 16, 2004
OFFICE DIRECTOR	

SIGNALIZATION PLAN SHEET	
SCALE 1" = 20'	ADVERTISED DATE 03-21-1977 CONTRACT NO.
DESIGNED BY	COUNTY MONTGOMERY
DRAWN BY MVR	LOGMILE 15035504.42
CHECKED BY WSW	TMS NO. P341
MDE/PRD	TOD NO.
TS NO. 2365F	DRAWING SG-01 OF 4 SHEET NO. 066 OF 128

PROJECT DESCRIPTION

- I. **GENERAL**
THIS PROJECT INVOLVES CONSTRUCTING A SHARED-USE PATH TO THE EAST OF MD 355 TO INBETWEEN GROSVENOR LANE AND TUCKERMAN LANE. THE MODIFICATION OF THE TRAFFIC SIGNAL AT THE INTERSECTION OF MD 355 (ROCKVILLE PIKE) AT GROSVENOR LANE IN MONTGOMERY COUNTY WILL REQUIRE NEW APS/CPS ON THE EAST, WEST AND SOUTH APPROACHES. MD 355 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.
- II. **INTERSECTION OPERATION**
THIS INTERSECTION OPERATES IN A NEMA FOUR-PHASE SEMI-TRAFFIC-ACTUATED MODE. THE MD 355 APPROACHES OPERATE CONCURRENTLY. THE GROSVENOR LANE APPROACHES OPERATE AS SPLIT PHASES WITH OVERLAP PHASING PROVIDED FOR THE EAST APPROACH LEFT TURN PHASE (SPECIAL GEOMETRICS CHANNELIZE AN "ENGLISH" MOVEMENT). CONCURRENT PEDESTRIAN PHASING IS PROVIDED ACROSS THE WEST LEG OF THE INTERSECTION. ALTERNATE PEDESTRIAN PHASING IS PROVIDED ACROSS THE SOUTHBOUND SIDE OF THE MD 355 (NORTH LEG) UNDER PHASE 3. A SEPARATE ALTERNATE PEDESTRIAN PHASE IS PROVIDED ACROSS THE NORTHBOUND SIDE OF MD 355 (NORTH LEG) PHASE. AN ALTERNATE PEDESTRIAN PHASE IS PROVIDED ACROSS THE NORTH LEG OF THE INTERSECTION.
- III. **PEDESTRIAN OPERATION**
NAVIGATOR AUDIBLE PEDESTRIAN PUSHBUTTONS TO CROSS THE NORTH, AND WEST LEGS OF THE INTERSECTION ARE TO BE PROVIDED. WHEN THE PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE:

NORTH: "WAIT TO CROSS ROCKVILLE AT GROSVENOR, WAIT."
WHEN THE WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

WEST: "WAIT TO CROSS GROSVENOR AT ROCKVILLE, WAIT."
WHEN THE WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

CONTACT PERSONS

THE CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

DISTRICT 3

MR. JOSEPH MOGES
ASSISTANT DISTRICT ENGINEER - TRAFFIC
301-513-7462

MR. MARK LOEFFLER
DISTRICT ENGINEER - UTILITIES
301-513-7350

MR. JOHN GOVER
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
301-513-7336

MR. GREGORY EDWARDS
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
301-513-7304

OUTS CONTACTS:

REBECCA LICHTENSTEIN, P.E.
CHIEF TRAFFIC OPERATION DIVISION
PHONE: (410)-787-7650

VACANT
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410)-787-7625

MR. MIKE BASSO
CHIEF, SIGNAL OPERATIONS
PHONE: (410)-787-7652

MR. MICHAEL BOYLE
SUPPLY OFFICER
PHONE: (410)-787-7673

MONTGOMERY COUNTY

MR. KAMAL HAMUD
MONTGOMERY COUNTY-TRAFFIC ENGINEERING
PHONE NUMBER 301-777-8761

PEPCO

MR. PAUL WILSON
PHONE 202-833-7500

MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE FOLLOWING STANDARD PLATES FOR TRAFFIC CONTROL: MD 104.03-11, MD 104.04-13 THROUGH MD 104.04-16.

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

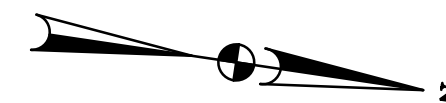
ITEM NO.	QUANTITY	UNIT	DESCRIPTION
NONE			

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

CATEGORY	QUANTITY	UNIT	DESCRIPTION
801605	5	SF	SHEET ALUMINUM SIGNS
802146	1	EA	ADJUST HANDHOLE TO GRADE WITH NEW FRAME AND COVER
802501	392	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805121	280	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED OR SLOTTED
805125	60	LF	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805305	1	EA	CONDUIT BEND IN EXISTING FOUNDATION BASE (ANY SIZE UP TO 4 INCH)
811001	4	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
816003	3	EA	HD IP-BASED VIDEO DETECTION CAMERA & ANY LENGTH LEAD-IN CABLE
818101	5	EA	6 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLING, FOUNDATION AND GROUND ROD
837001	1	EA	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
860285	6	EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
861105	785	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	1025	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
865210	5	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
865300	1	EA	2-WIRE APS CENTRAL CONTROL UNIT
873003	1	EA	REMOVE & DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)

C. EQUIPMENT TO BE RETURNED TO SHA.

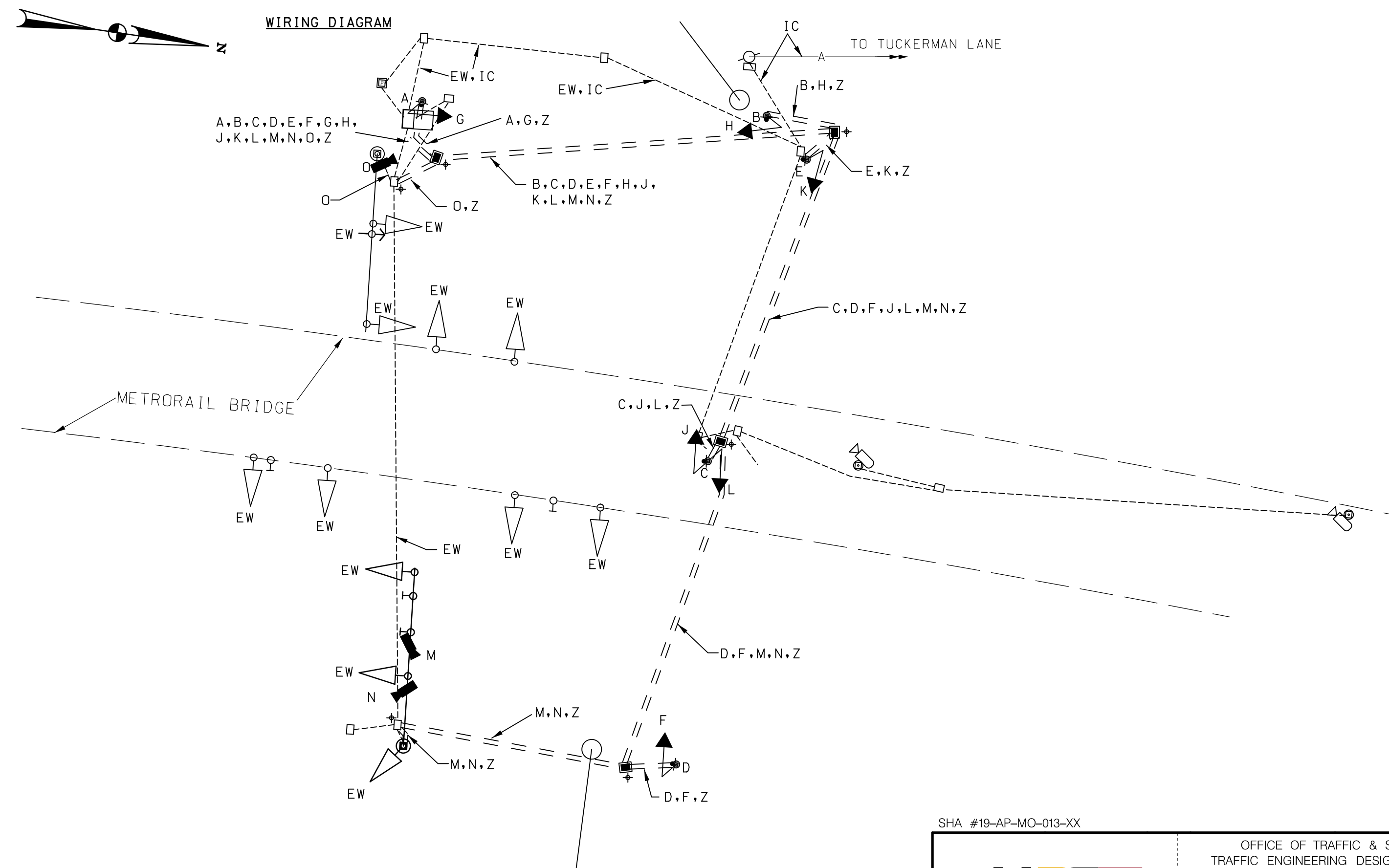
NONE



PHASING CHART

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)
(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)
(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)

PHASE 2 & 6	G	G	G	G	<R-	<R-	R	R	R	<R-	<R-	WK	WK	DW	DW	DW	DW
PED CLEARANCE	G	G	G	G	<R-	<R-	R	R	R	<R-	<R-	FL/DW	FL/DW	DW	DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	<R-	<R-	R	R	R	<R-	<R-	DW	DW	DW	DW	DW	DW
PHASE 3 & 8	R	R	R	R	<G-	<G-	G	G	G	<R-	<R-	DW	DW	DW	DW	DW	DW
3 CHANGE	R	R	R	R	<G-	<G-	G	Y	Y	<R-	<R-	DW	DW	DW	DW	DW	DW
PHASE ALT 3 & 8	R	R	R	R	<G-	<G-	G	Y	Y	<R-	<R-	DW	DW	WK	WK	WK	WK
PED CLEARANCE	R	R	R	R	<G-	<G-	G	G	G	<R-	<R-	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
ALT 3 CHANGE	R	R	R	R	<G-	<G-	G	Y	Y	<R-	<R-	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	<G-	<G-	G	R	R	<G-	<G-	DW	DW	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	<Y-	<Y-	Y	R	R	<Y-	<Y-	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK



- WIRING KEY**
- A, B, C, D, E - ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
 - F, G, H, J, K, L - ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
 - M, N, O - VIDEO DETECTION CONTROL CABLE
 - Z - NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
 - EW - EXISTING WIRE
 - IC - EXISTING INTERCONNECT CABLE
 - + - GROUND ROD

SHA #19-AP-MO-013-XX SG-02

MDOT
MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 355 (ROCKVILLE PIKE) AT
GROSVENOR LANE
TRAFFIC SIGNAL DESIGN
NORTH BETHESDA, MD

REVISIONS		GENERAL INFORMATION SHEET	
SCALE	NTS	ADVERTISED DATE	CONTRACT NO. <CONTRACT NO.>
DESIGNED BY	RJM	COUNTY	MONTGOMERY
DRAWN BY	RJM	LOGMILE	15035504.50
CHECKED BY	DM	TIMS NO.	
MDE/PRD		TOD NO.	
TS NO. 2365F	DRAWING	SG-02 OF 04	SHEET NO. 067 OF 128

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

17172
MD LICENSE NUMBER

12-12-2022
EXPIRATION DATE

810 Cleneagles Court, Suite 300
Baltimore, MD 21286
www.stantec.com

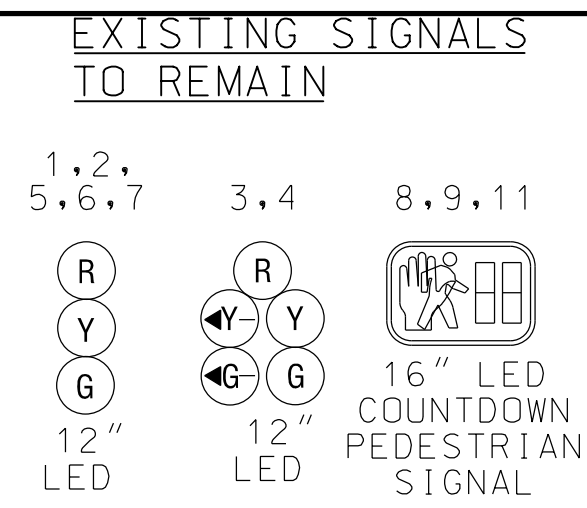
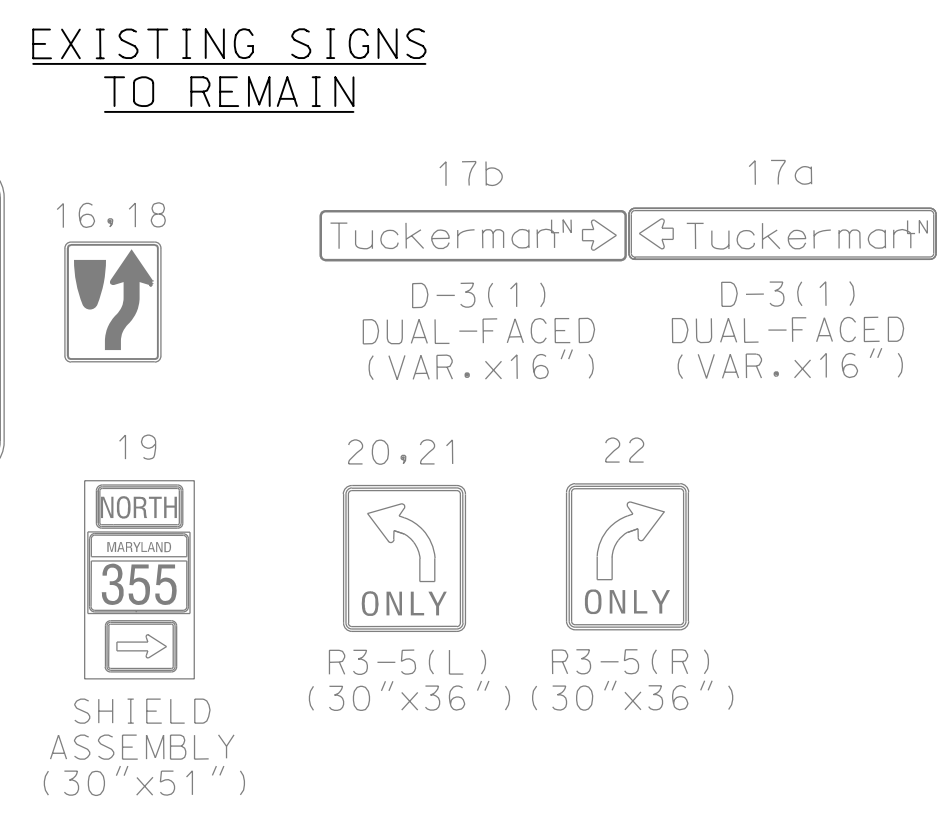
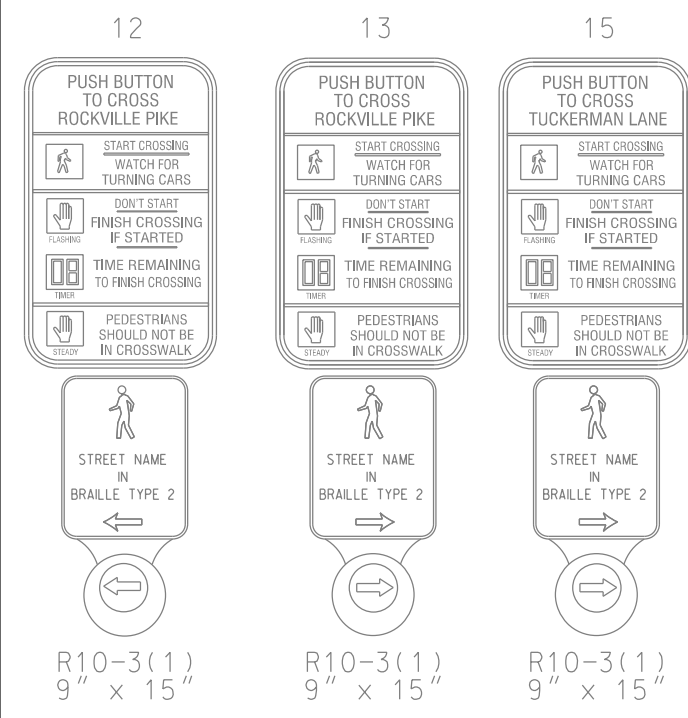
BORDER REV. DATE: June 1, 2004

DRILL HOLES

DRILL HOLES

DRILL HOLES

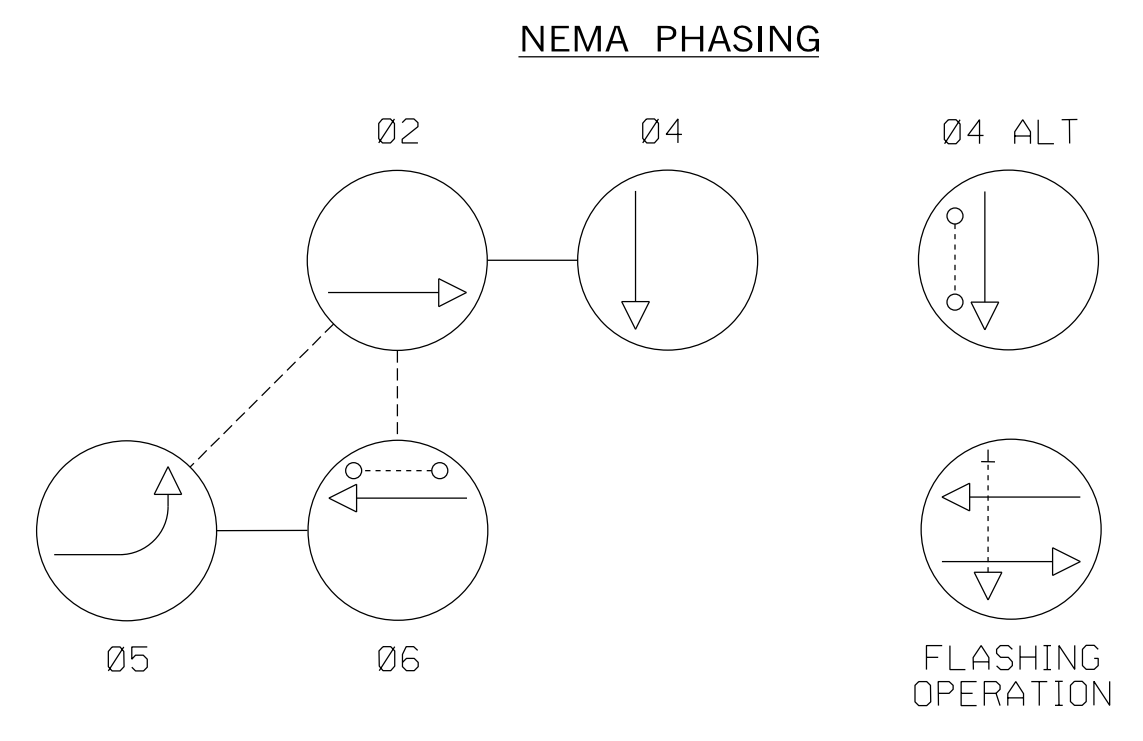
MD 355 (ROCKVILLE PIKE) IS ASSUMED TO RUN IN A NORTH/SOUTH DIRECTION



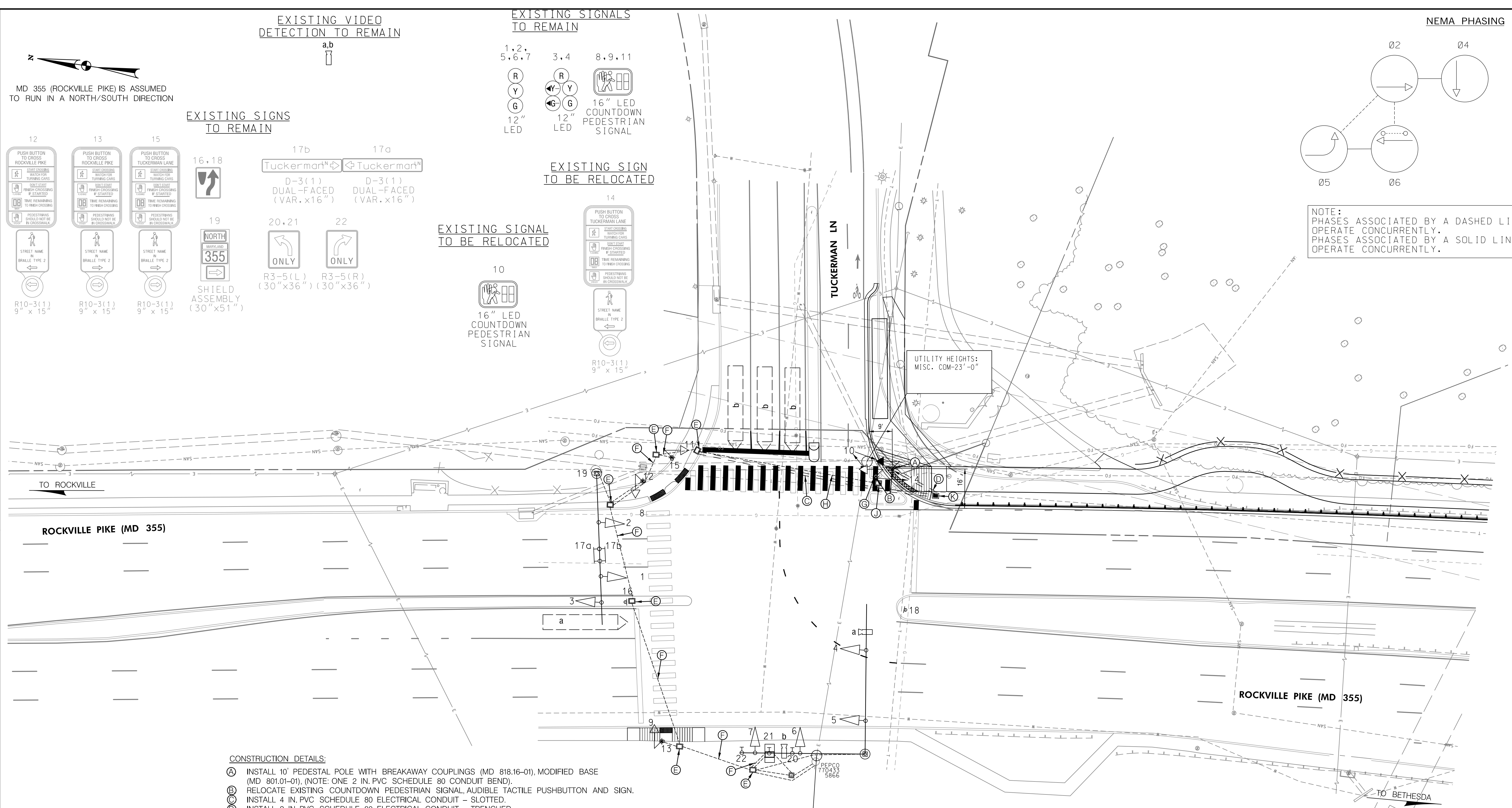
EXISTING SIGN TO BE RELOCATED



EXISTING SIGNAL TO BE RELOCATED



NOTE: PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY. PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.



- CONSTRUCTION DETAILS:**
- (A) INSTALL 10' PEDESTAL POLE WITH BREAKAWAY COUPLINGS (MD 818.16-01), MODIFIED BASE (MD 801.01-01), (NOTE: ONE 2 IN. PVC SCHEDULE 80 CONDUIT BEND).
 - (B) RELOCATE EXISTING COUNTDOWN PEDESTRIAN SIGNAL, AUDIBLE TACTILE PUSHBUTTON AND SIGN.
 - (C) INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - SLOTTED.
 - (D) INSTALL 2 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
 - (E) USE EXISTING HANDHOLE.
 - (F) USE EXISTING CONDUIT.
 - (G) REMOVE FOUNDATION 12' BELOW GRADE.
 - (H) CAP AND ABANDON EXISTING CONDUIT, REMOVE ALL SIGNAL WIRES.
 - (I) REMOVE EXISTING HANDHOLE.
 - (J) INSTALL HANDHOLE.

UTILITY HEIGHTS: MISC. COM-21'-5" MISC. COM-24'-3"

GEOMETRIC LEGEND

--- = EXISTING
--- = PROPOSED

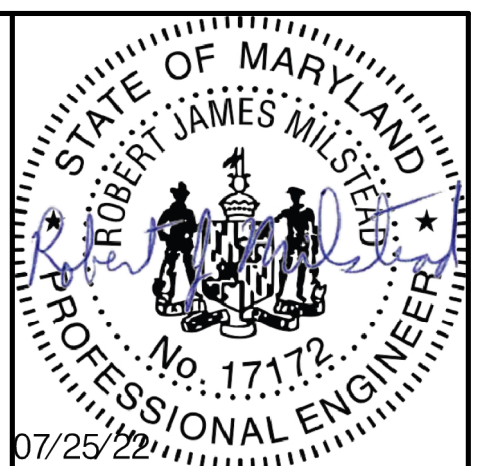
UTILITY LEGEND

SD	SD	STORM DRAIN
G	G	GAS MAIN
W	W	WATER MAIN
S	S	SEWER MAIN
E	E	ELECTRIC CABLES
A	A	AERIAL CABLES
T	T	TELEPHONE CABLES
F	F	FIBER-OPTIC

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

17172
MD LICENSE NUMBER

12-12-2022
EXPIRATION DATE



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www.stantec.com

APPROVALS

TEAM LEADER	
ASST. DIV. CHIEF	
DIVISION CHIEF	
OFFICE DIRECTOR	

REVISIONS

①	MODIFY SIGNAL DUE TO NEW ADA RAMP	FEB 2022	TMS# F341
②	SIGNAL RECONSTRUCTION, APS/CS UPGRADES	04/2014	SHA NO. XY1325185
③	REPLACE LOOP DETECTION WITH VIDEO CAMERAS	6/2005	SHA NO. AT7245185

SIGNALIZATION PLAN SHEET

SCALE 1" = 20' ADVERTISED DATE 08/09/02 CONTRACT NO. BW996M82

DESIGNED BY _____ COUNTY MONTGOMERY
DRAWN BY WT LOGMILE 15035504.50
CHECKED BY CA TIMS NO. P341
MDE/PRD _____ TOD NO. _____

TS NO. 4388C DRAWING SG-03 OF 4 SHEET NO. 068 OF 128

SG-03

SHA #19-AP-MO-013-XX

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 355 (ROCKVILLE PIKE) AT
TUCKERMAN LANE (SOUTH)
TRAFFIC SIGNAL DESIGN
NORTH BETHESDA, MD



PROJECT DESCRIPTION

- I. **GENERAL**
THIS PROJECT INVOLVES THE MODIFICATION OF THE TRAFFIC SIGNAL ON THE EAST LEG OF THE INTERSECTION OF MD 355 (ROCKVILLE PIKE) AT TUCKERMAN LANE (SOUTH) IN MONTGOMERY COUNTY. MD 355 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.
- II. **INTERSECTION OPERATION**
THIS INTERSECTION OPERATES IN A NEMA FOUR-PHASE SEMI-TRAFFIC-ACTUATED MODE. THERE IS AN EXCLUSIVE/PERMISSIVE LEFT-TURN PHASE FOR SOUTHBOUND MD 355. A CONCURRENT PEDESTRIAN PHASE IS PROVIDED ACROSS THE EAST LEG OF THE INTERSECTION. AN ALTERNATE PEDESTRIAN PHASE IS PROVIDED ACROSS THE NORTH LEG OF THE INTERSECTION.
- III. **PEDESTRIAN OPERATION**
NAVIGATOR AUDIBLE PEDESTRIAN PUSHBUTTONS TO CROSS THE NORTH AND EAST LEGS OF THE INTERSECTION ARE TO BE PROVIDED. WHEN THE PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE:

NORTH: "WAIT TO CROSS ROCKVILLE AT TUCKERMAN, WAIT."
EAST: "WAIT TO CROSS TUCKERMAN AT ROCKVILLE, WAIT."

WHEN THE WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

CONTACT PERSONS

THE CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

DISTRICT 3

MR. JOSEPH MOGES
ASSISTANT DISTRICT ENGINEER - TRAFFIC
301-513-7498

MR. MARK LOEFFLER
DISTRICT ENGINEER - UTILITIES
301-513-7350

MR. JOHN COVER
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
301-513-7336

MR. GREGORY EDWARDS
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
301-513-7304

DOTS CONTACTS:

REBECCA LICHTENSTEIN, P.E.
CHIEF TRAFFIC OPERATION DIVISION
PHONE: (410)-787-7650

VACANT
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410)-787-7625

MR. MIKE BASSO
CHIEF, SIGNAL OPERATIONS
PHONE: (410)-787-7652

MR. MICHAEL BOYLE
SUPPLY OFFICER
PHONE: (410)-787-7673

MONTGOMERY COUNTY

MR. KAMAL HAMUD
MONTGOMERY COUNTY-TRAFFIC ENGINEERING
PHONE NUMBER 301-777-8761

PEPCO

MR. PAUL WILSON
PHONE 202-833-7500

MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE FOLLOWING STANDARD PLATES FOR TRAFFIC CONTROL: MD 104.03-11, MD 104.04-13 THROUGH MD 104.04-16.

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION
ITEM NO. QUANTITY UNIT DESCRIPTION

NONE

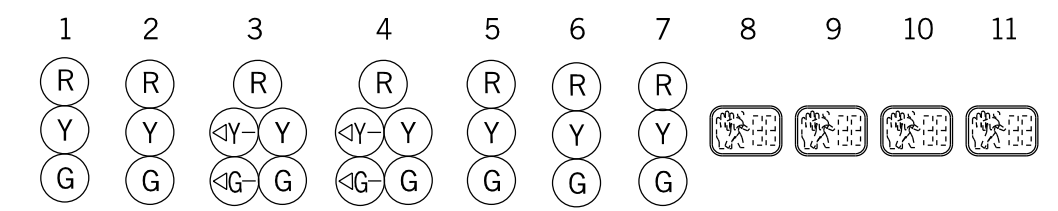
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR
CATEGORY QUANTITY UNIT DESCRIPTION
CODE NO.

800000	1	EA	RELOCATE EXISTING PEDESTRIAN SIGNAL HEAD
800000	1	EA	RELOCATE EXISTING AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGN
802501	135	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805121	100	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED OR SLOTTED
805125	21	LF	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
811001	1	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
818101	1	EA	6 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLING, FOUNDATION AND GROUND ROD
861105	350	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	360	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
873003	1	EA	REMOVE & DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)

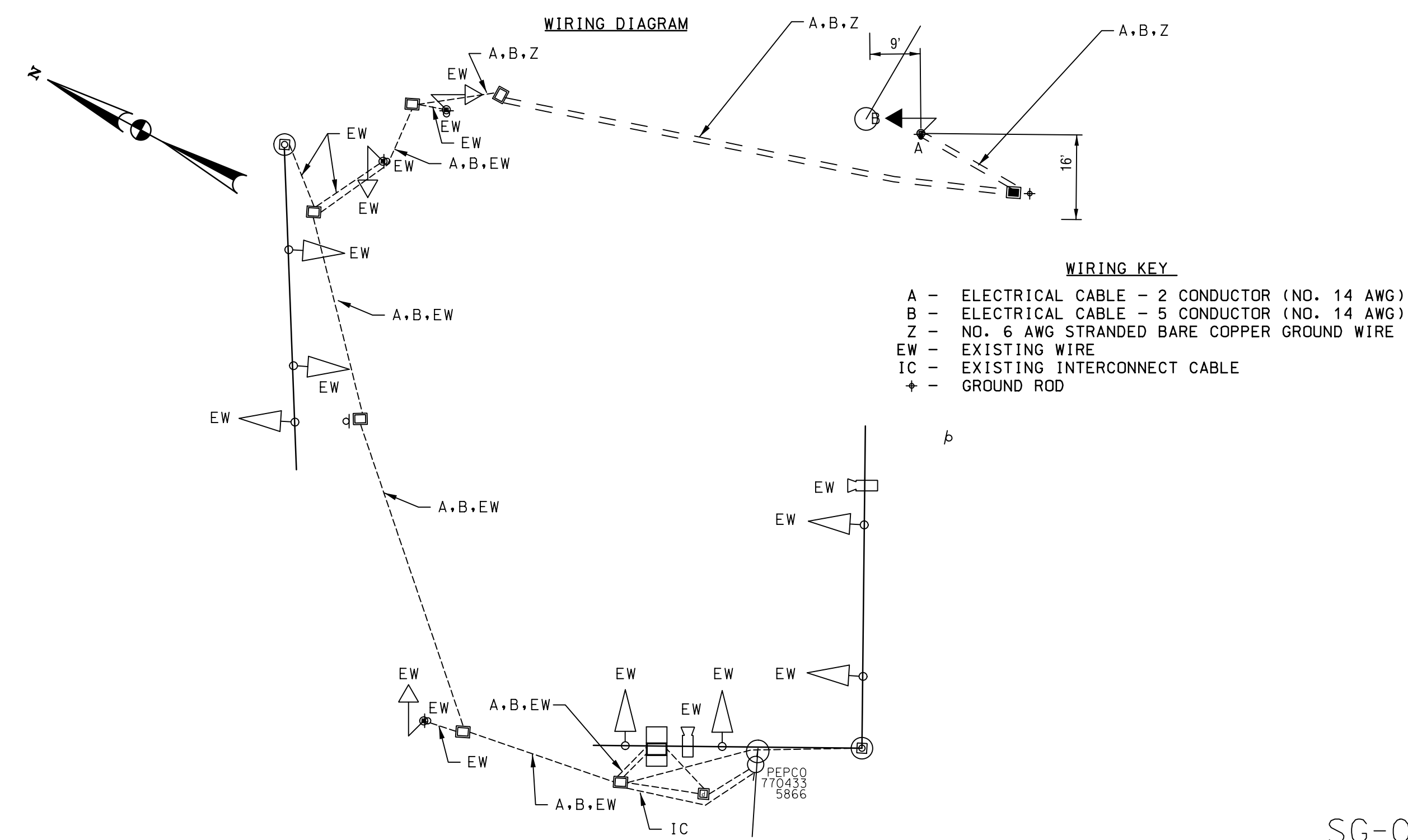
C. EQUIPMENT TO BE RETURNED TO SHA.

NONE

PHASING CHART



PHASE 2 & 5	R	R	←G-/G	←G-/G	G	R	R	DW	DW	DW	DW
2 & 5 CHANGE	R	R	←Y-/G	←Y-/G	G	R	R	DW	DW	DW	DW
PHASE 2 & 6	G	G	G	G	G	R	R	DW	DW	WK	WK
PED CLEARANCE	G	G	G	G	G	R	R	DW	DW	FL/DW	FL/DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	R	R	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	G	G	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	Y	Y	DW	DW	DW	DW
PHASE ALT 4	R	R	R	R	R	G	G	WK	WK	DW	DW
PED CLEARANCE	R	R	R	R	R	G	G	FL/DW	FL/DW	DW	DW
ALT 4 CHANGE	R	R	R	R	R	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK	DARK	DARK



WIRING KEY
A - ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
B - ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
Z - NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
EW - EXISTING WIRE
IC - EXISTING INTERCONNECT CABLE
+ - GROUND ROD

SG-04

SHA #19-AP-MO-013-XX

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 355 (ROCKVILLE PIKE) AT
TUCKERMAN LANE (SOUTH)
TRAFFIC SIGNAL DESIGN
NORTH BETHESDA, MD

REVISIONS		GENERAL INFORMATION SHEET	
		SCALE: NTS	ADVERTISED DATE: _____ CONTRACT NO. _____
		DESIGNED BY: RJM	COUNTY: MONTGOMERY
		DRAWN BY: RJM	LOGMILE: 15035504.50
		CHECKED BY: DM	TIMS NO. _____
		MDE/PRD	TOD NO. _____
TS NO. 4388C	DRAWING SG-04 OF 04	SHEET NO. 069 OF 128	

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

17172
MD LICENSE NUMBER

12-12-2022
EXPIRATION DATE

810 Cleneagles Court, Suite 300
Baltimore, MD 21286
www.stantec.com

BORDER REV. DATE: June 11, 2004
DRILL HOLES
DRILL HOLES
DRILL HOLES

MAINTENANCE OF TRAFFIC GENERAL NOTES:

1. STANDARDS

All work shall be conducted in accordance with the latest versions of the Maryland State Highway Administrations (MDOT SHA) Standard Specifications and Book of Standards for Highway and Incidental Structures. All signs, channelizing devices, and other traffic control devices shall conform with the latest version of the Maryland Manual on Uniform Traffic Control Devices (MUTCD).

2. PRECONSTRUCTION

The contractor shall arrange and host a preconstruction meeting at least two weeks prior to starting construction and establishing the work zone. The following offices shall be notified of this preconstruction meeting:

- * Montgomery County Division of Transportation Engineering at 240-777-7220
- * Montgomery County Division of Traffic Engineering and Operations at 240-777-6000
- * Montgomery County Transit at 240-777-5800
- * Montgomery County Public Schools, Local Depot Manager
- * Montgomery County Fire and Rescue, Local Fire Department Captain
- * Montgomery County Police, Local Traffic Sergeant.
- * Montgomery County Department of Permitting Services, Permit Inspection at 240-777-6300

Maryland State Highway Administration (MDOT SHA) Offices:

- * Derek Gunn
Acting Assistant District Engineer - Traffic (Montgomery County)
(301) 513-7498
- * Gregory Edwards
Assistant District Engineer - Maintenance
(301) 513-7304
- * John Gover
Assistant District Engineer - Construction
(301) 513-7336
- * Mark Loeffler
Assistant District Engineer - Utilities
(301) 513-7350

Contact the MCDOT Transportation Management Center at 240-777-2100 between 5:00 AM and 11:00 PM to inform them of temporary lane closures in the vicinity of any traffic signals.

The permittee shall contact the Transportation Systems Engineering Team at 240-777-2100 at least two weeks in advance to coordinate any minor traffic signal work. Major traffic signal work shall be coordinated a minimum of thirty (30) days in advance of the project. The permittee shall contact the Montgomery County Transportation Management Center at 240-777-2100 a minimum of 72 hours prior to beginning work to have existing traffic signal equipment marked.

The permittee shall contact the Traffic Engineering Design & Operations Section (TEDD) at 240-777-6000 at least ten (10) working days in advance of the final paving operation to schedule the installation of permanent pavement markings and signs.

The permittee shall contact the Director at 301-565-7300 of the Silver Spring Regional Services Center and the Silver Spring Traffic Sergeant at 301-565-7740 of the Montgomery County Police Department, a minimum of one week prior to the beginning of any work activities within the Silver Spring Business District.

The Contractor shall provide an on site Maryland certified traffic control manager at all times during construction activities.

3. SIGNS

a) ROAD WORK AHEAD signs shall be installed on all side streets that intersect roads within the work zone. The signing shall be placed along the intersection approach to the right of the travel lane. Refer to Standard Detail I04.01-02 for guidance on sign placement.

b) Warning signs mounted on wood posts, and those mounted on approved portable supports, shall be mounted in conformance with Standard No. MD I04.01-17.

c) The contractor shall cover temporary signs that are not applicable during non-working hours.

d) The contractor shall cover existing traffic signs in conflict with the work zone traffic control.

4. PORTABLE VARIABLE MESSAGE SIGNS

a) No more than two displays shall be used within any message cycle unless approved by the Engineer.

b) For a list of standard messages/abbreviations, contact the Engineer. All customized messages shall be approved by the Engineer.

c) Refer to Standard Detail MD I04.00-08 and -09 for more info.

d) Refer to Standard Detail MD I04.01-22 for traffic control devices associated with PVMS.

5. CHANNELIZING DEVICES

a) Taper formulas:

$L = WS$ for speeds greater than (>) 40 mph,
 $L = WS^2/60$ for speeds equal to or less than (<) 40 mph.
 Where L = minimum length of taper;
 S = prevailing travel speed or speed limit (MPH), whichever is higher, prior to work starting.
 W = width of offset (ft)

b) Maximum spacing between channelizing devices

Taper channelization - Shall be equal in feet to the posted speed limit for posted speeds eq/less than 40 mph and 40 feet for posted speeds greater than 40 mph.

Tangent channelization - Shall be equal in feet to twice the posted speed limit in the buffer and equal in feet to the posted speed adjacent to the work area for posted speeds eq/less than 40 mph. Spacing shall be 80 feet in the buffer and 40 feet adjacent to the work area for posted speeds greater than 40 mph.

6. PAVEMENT MARKINGS

a) Temporary pavement markings should be installed according to Section I04.02-03(f).

b) Pavement markings that are no longer necessary shall be completely removed or obliterated using grinding method.

7. FLAGGING OPERATIONS

a) Radio communication shall be required between flaggers at the discretion of the County Inspector or under the following conditions
 -If the flaggers cannot see each other
 -If the lane closure exceeds 200 feet.

b) Flaggers shall be Maryland State Highway Administration or AATSA approved flaggers and shall be used at the discretion of the County Inspector. Flaggers shall use STOP/SLOW paddles to direct traffic.

8. VEHICLES

a) Non-essential work vehicles are to be pulled as far off the road as possible or be otherwise parked in a manner that does not inhibit the movement of traffic.

b) All work zone vehicles entering/exiting or operating within the work zone shall display flashing safety lights (amber in color) as specified in Standard MD I04.01-18A & B.

c) Coordinate deliveries of materials with proposed lane/shoulder closures, preferably when traffic volumes are low.

9. WORK HOUR RESTRICTIONS

a) Unless permitted by the Engineer, work within a lane, or within 2 feet of the face of curb (closed section roadway), is prohibited during peak hours 6 am - 9 am and 3 pm - 7 pm, Monday - Friday. Also, such work is not permitted on weekends, National/State holidays, or days preceding and following holidays.

b) Nighttime work will be not be permitted, unless approved by the Engineer.

10. RESIDENTIAL/COMMERCIAL ACCESS

a) Contractor shall maintain access to residences including mail delivery and trash/pick up at all times during construction. For driveways requiring temporary closure to vehicular access due to proposed improvements, the contractor shall notify impacted property owner at least 2 weeks in advance of planned construction dates/times, confirm 24 hours in advance, and coordinate closely for the duration of construction activities. The contractor shall take all reasonable measures to provide access during construction activities.

II. POSTED SPEED LIMITS

MD 355 (Rockville Pike) is classified as an arterial,

Posted speed limit - 45 mph

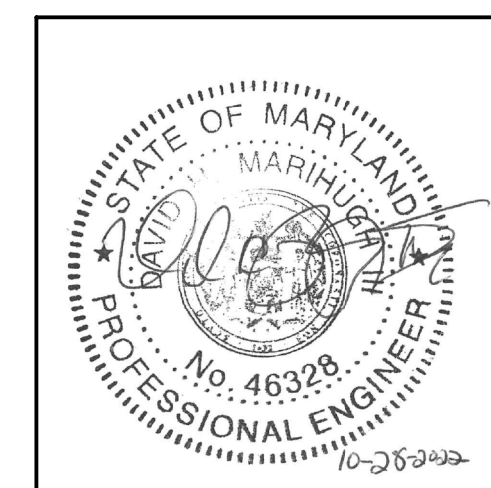
The posted speed limits will be maintained during the construction.

12. TEMPORARY IMPACTS TO TRANSIT SERVICE

The contractor shall coordinate temporary bus stop relocations with Montgomery County Transit Service. Contact Phil McLaughlin (240-777-5800) at least 2 weeks in advance of construction.

Existing bus stop locations:

- MD 355 (Rockville Pike) @ Pooks Hill Road
- MD 355 (Rockville Pike) @ Grosvenor Lane



MT-01

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					Chief, Design Section	Date
					APPROVED	
					Chief, Division of Transportation Engineering	Date

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC NOTES

SCALE: NTS

SHEET 070 of 128



PROFESSIONAL CERTIFICATION:
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 LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022

810 Glenegles Court, Suite 300
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SEQUENCE OF CONSTRUCTION:

Pre-Construction:

1. Install all erosion and sediment control devices.

Stage 1 - 3 weeks

1. Install all Maintenance of Traffic control devices associated with Stage 1.
2. Construct the sidewalk from Sta.10+47 to Sta.202+87
3. Remove Maintenance of Traffic control devices associated with Stage 1.

Stage 2A - 1 week

1. Install all Maintenance of Traffic control devices associated with Stage 2A.
2. Reconstruct the sidewalks curb ramp on the I-495 Ramp to MD 355 NB from Sta. 400+34, LT to Sta. 400+60, LT.
3. Remove Maintenance of Traffic control devices associated with Stage 2A.

Stage 2B - 1 week

1. Install all Maintenance of Traffic control devices associated with Stage 2B.
2. Reconstruct the sidewalks curb ramps on the I-495 Ramp to MD 355 NB from Sta. 400+34, RT to Sta. 400+60, RT.
3. Remove Maintenance of Traffic control devices associated with Stage 2B.

Stage 3a - 2 weeks

1. Install all Maintenance of Traffic control devices associated with Stage 3a.
2. Construct the concrete curb and gutter on the south side of Grosvenor Lane from Sta. 21+41 to 22+57.
3. Remove the concrete island and construct temporary pavement.
4. Remove Maintenance of Traffic control devices associated with Stage 3a.

Stage 3b - 3 weeks

1. Install all Maintenance of Traffic control devices associated with Stage 3b.
2. Construct the sidewalk from Sta. 300+25 to 301+80.
3. Partially reconstruct the concrete island at the intersection of Grosvenor Lane and MD 355.
4. Remove Maintenance of Traffic control devices associated with Stage 3b.

Stage 3c. - 3weeks

1. Install all Maintenance of Traffic control devices associated with Stage 3c.
2. Construct the shared-use path from Sta. 20+23 to 23+28.
3. Remove Maintenance of Traffic control devices associated with Stage 3c.

Stage 3d - 3 weeks

1. Install all Maintenance of Traffic control devices associated with Stage 3d.
3. Construct the concrete island on Grosvenor Lane between Beach Drive and the MD 355 ramp.
4. Remove Maintenance of Traffic control devices associated with Stage 3d.

Stage 3e - 3 weeks

1. Install all Maintenance of Traffic control devices associated with Stage 3e.
2. Complete construction the concrete island at the intersection on Grosvenor Lane and MD 355.
3. Complete construction of the curb and gutter on the South side of Grosvenor Lane.
4. Construct the shared-use path from Sta. 23+28 to 23+71.
5. Remove Maintenance of Traffic control devices associated with Stage 3d

Stage 3f - 5 weeks

1. Install all Maintenance of Traffic control devices associated with Stage 3f.
2. Construct the shared-use path from Sta. 23+71 to Sta. 29+35.
3. Construct the sidewalk from Sta. 700+21 to 700+53.
4. Reconstruct the median nose on Tuckerman Lane.
5. Remove Maintenance of Traffic control devices associated with Stage 3f.

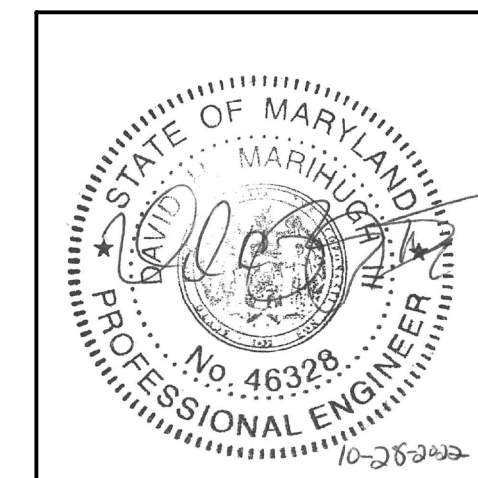
SEQUENCE OF CONSTRUCTION cont:

Stage 3g - 5 weeks

1. Install all Maintenance of Traffic control devices associated with Stage 3g.
2. Construct the bio-swale.
3. Remove the sidewalk at the existing bus stop of South of Grosvenor Lane along MD 355 and relocate the bus stop North of Grosvenor Lane along MD 355.
4. Remove Maintenance of Traffic control devices associated with Stage 3g.

Stage 4 - 1 week (not shown)

1. Install landscape trees in median of MD 355.



MT-02

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					Chief, Design Section	Date
					APPROVED	
					Chief, Division of Transportation Engineering	Date

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
MAINTENANCE OF TRAFFIC NOTES

SCALE: NTS

SHEET 071 of 128



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- LEGEND**
- TOCF — ORANGE CONSTRUCTION FENCE
 - ∞ ARROW PANEL
 - TRAFFIC DRUM
 - TYPE III BARRICADE
 - ▨ PREVIOUS STAGE WORK AREA
 - ▩ CURRENT STAGE WORK AREA
 - ▧ TEMPORARY TURF DECK SIDEWALK
 - TEMPORARY SIGN LOCATION



NOTE:
A MINIMUM OF 7 CHANNELIZING DEVICES SHALL PROCEED AN AROW PANNEL.



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 DRAWING NO.: DATE: _____
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 Chief, Design Section _____ Date _____
 APPROVED
 Chief, Division of Transportation Engineering _____ Date _____

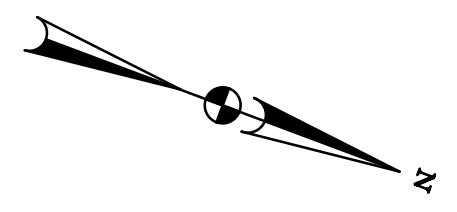
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DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
MAINTENANCE OF TRAFFIC PLAN
STAGE I

SCALE: 1"=20' SHEET 072 of 128

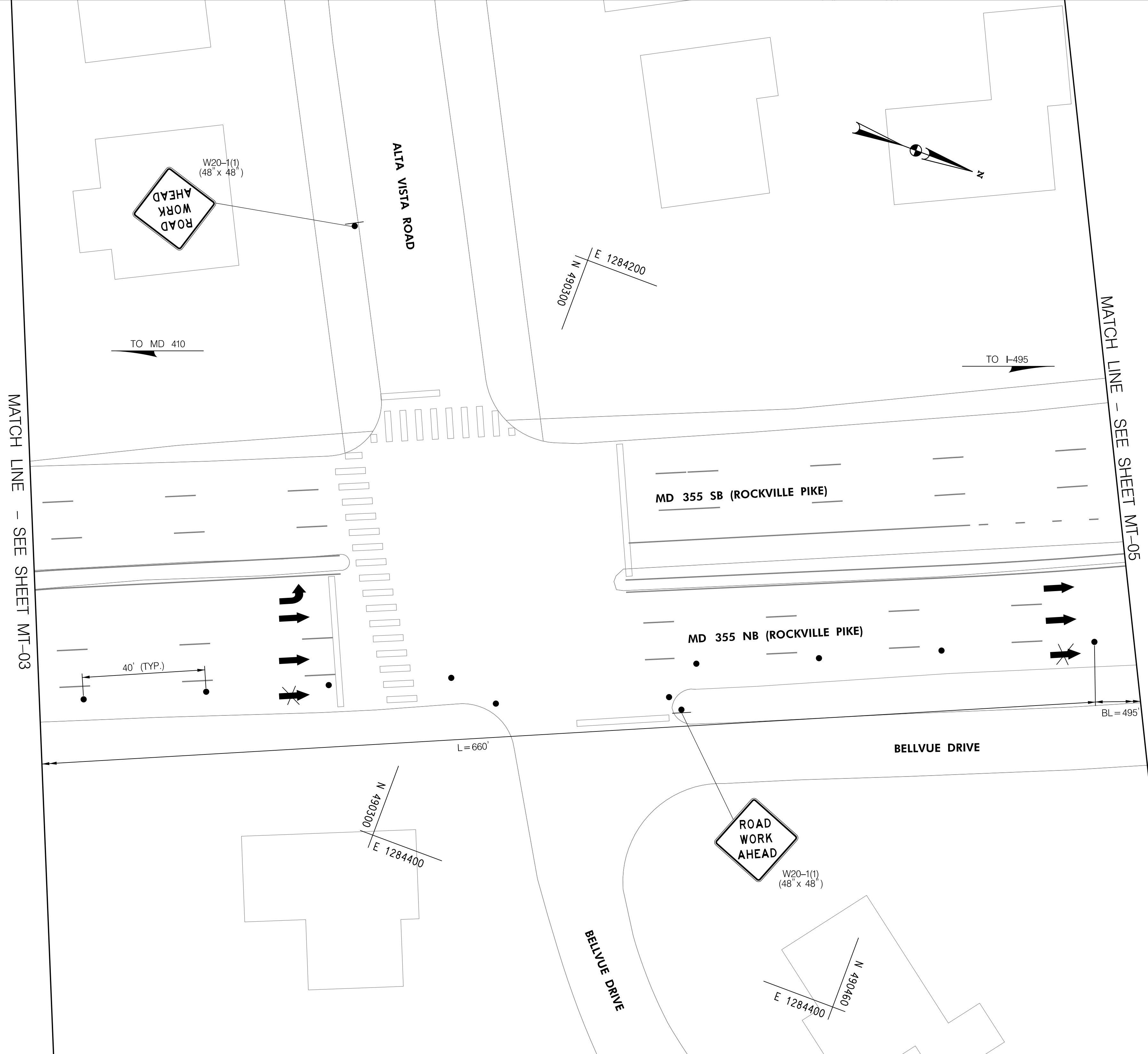
MT-03

MATCH LINE - SEE SHEET MT-04



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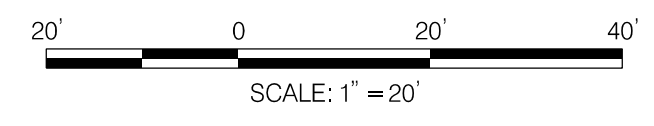
MT-04



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Chief, Division of Transportation Engineering _____	Date _____

DEPARTMENT OF TRANSPORTATION
 DIVISION OF TRANSPORTATION ENGINEERING
 MONTGOMERY COUNTY, MARYLAND

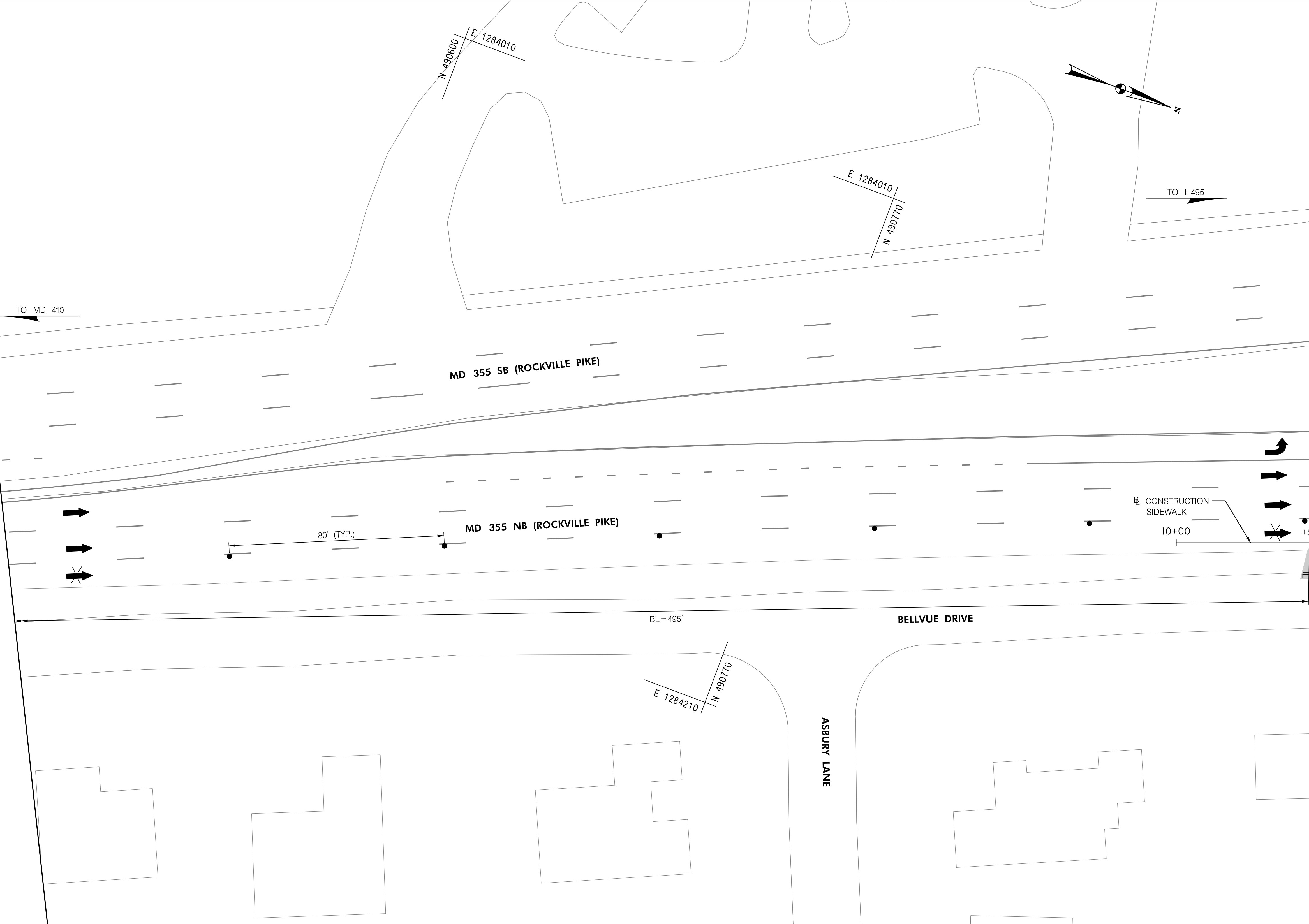
GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE I

SCALE: 1"=20' SHEET 073 of 128

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- LEGEND**
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MATCH LINE - SEE SHEET MT-04



MATCH LINE STA. 10+50 - SEE SHEET MT-06

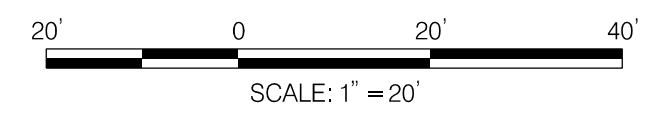
MT-05



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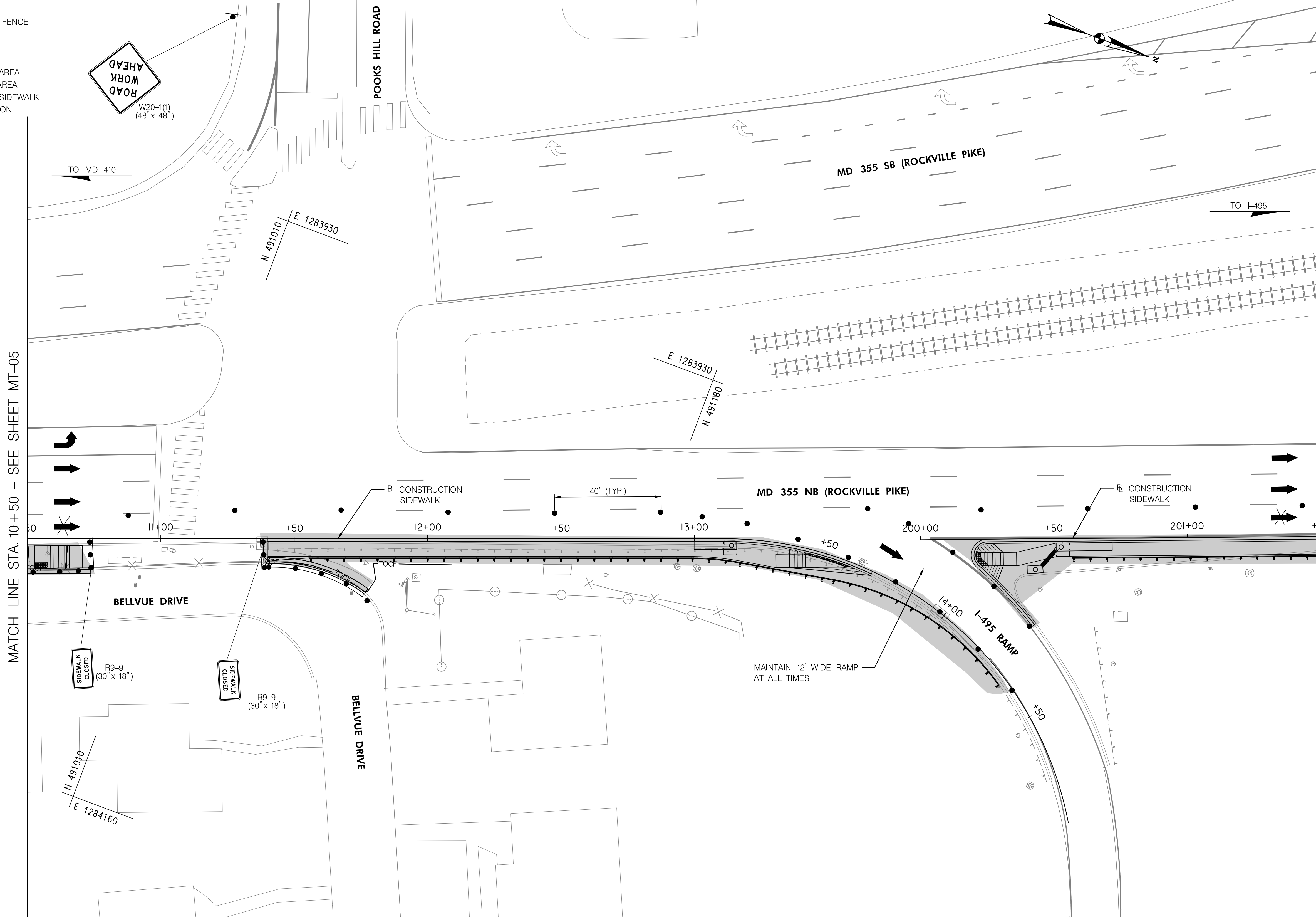
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DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE I

SCALE: 1"=20' SHEET 074 of 128

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- LEGEND**
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MT-06



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 MONTGOMERY COUNTY, MARYLAND

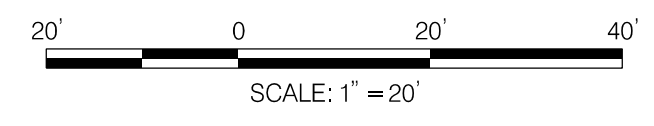
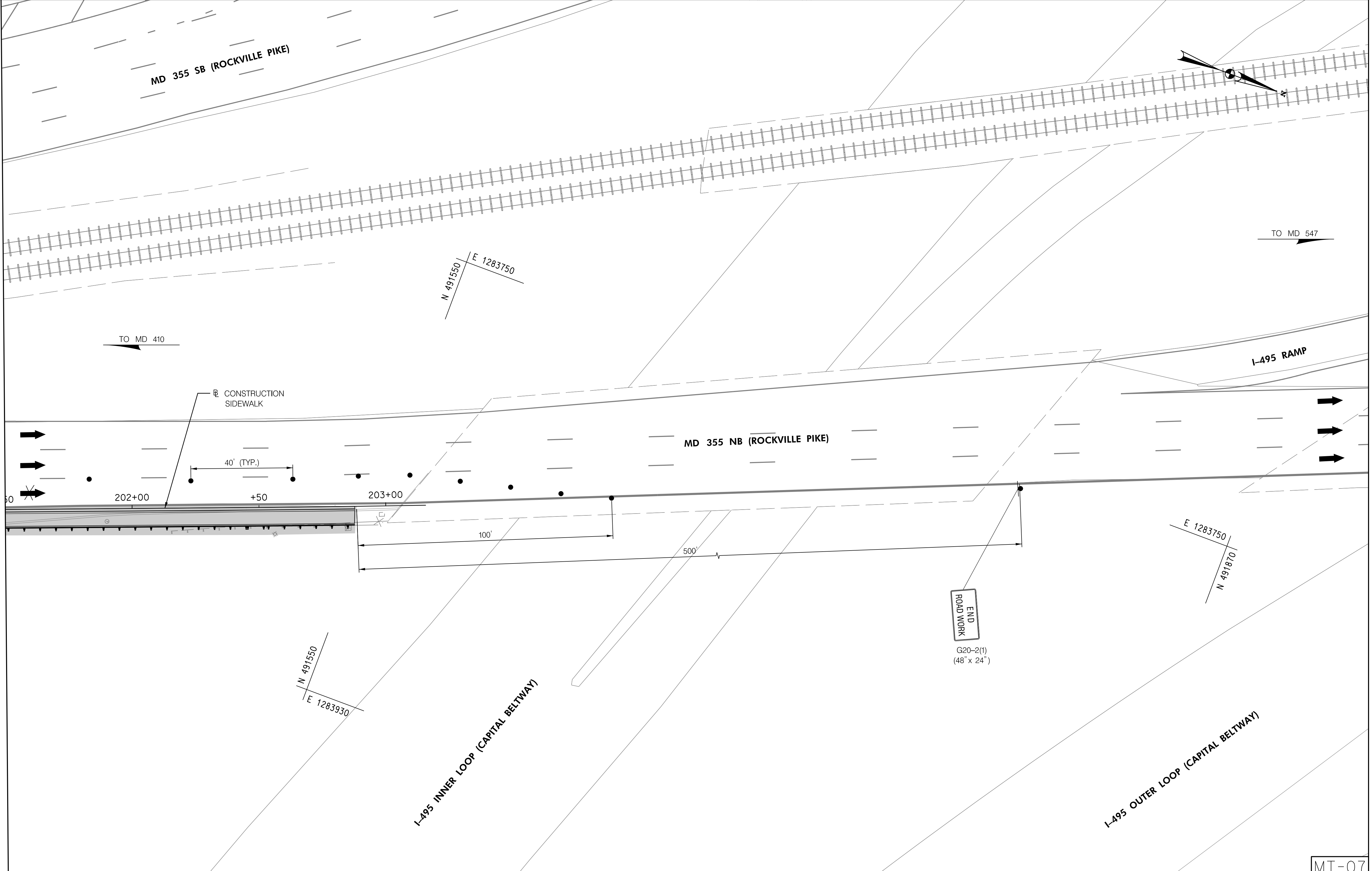
GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE I

SCALE: 1"=20' SHEET 075 of 128

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MATCH LINE STA. 201+50 - SEE SHEET MT-06



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MONTGOMERY COUNTY, MARYLAND

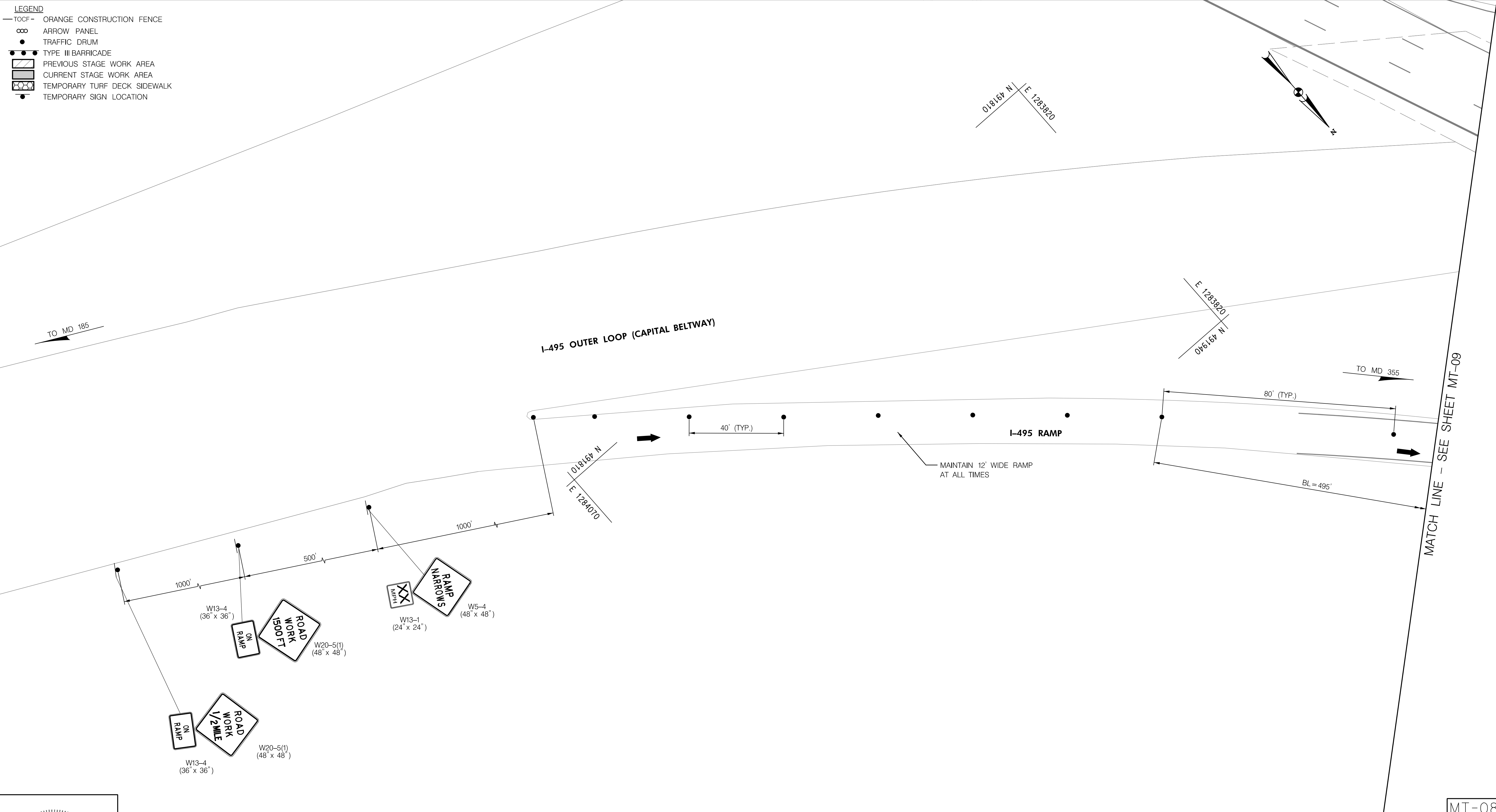
GROSVENOR IMPROVEMENTS
MAINTENANCE OF TRAFFIC PLAN
STAGE I

SCALE: 1"=20' SHEET 076 of 128

MT-07

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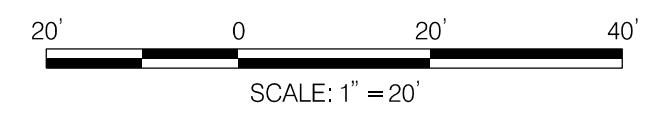


MATCH LINE - SEE SHEET MT-09

MT-08



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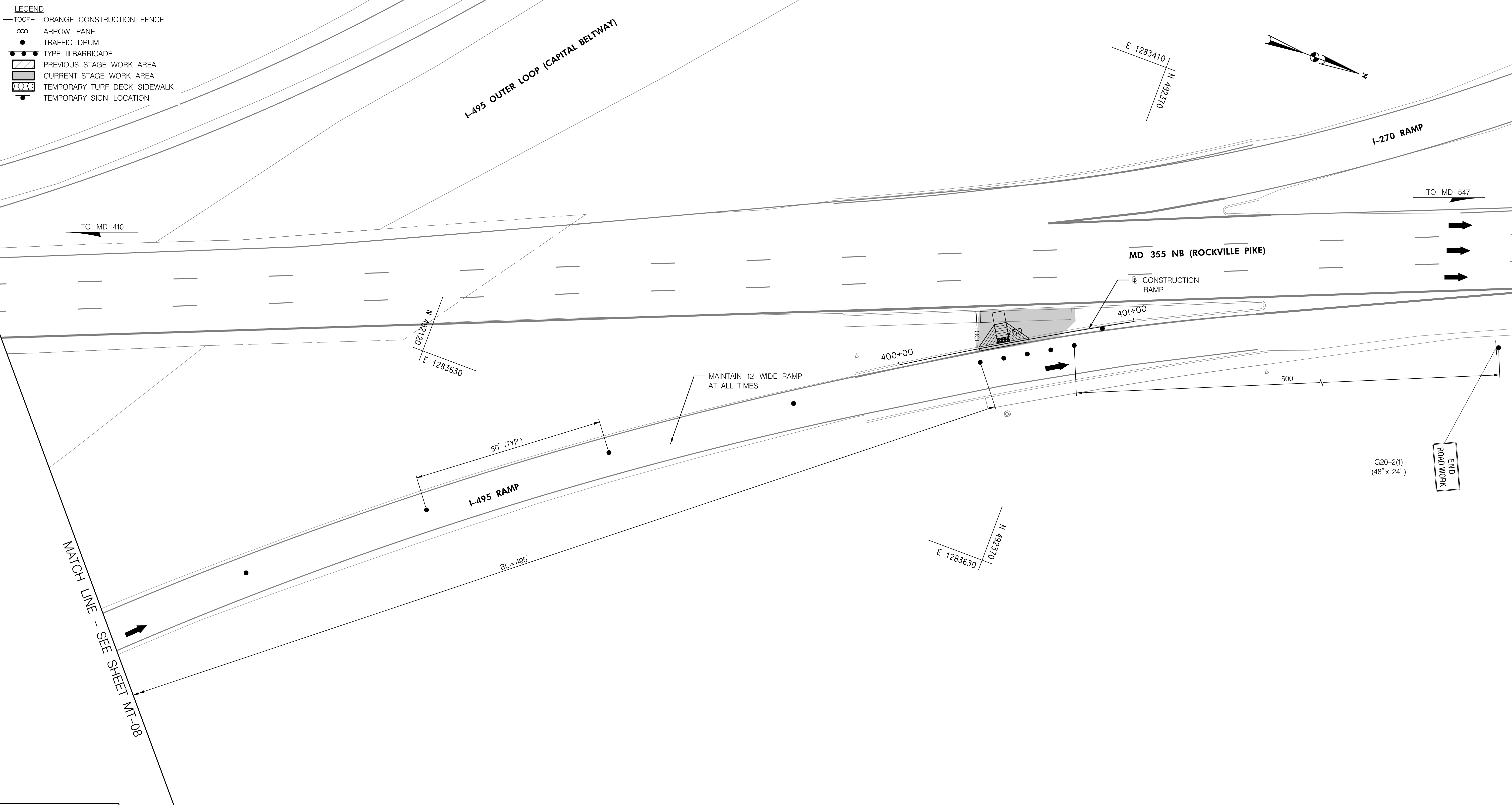
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Chief, Division of Transportation Engineering	Date

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
MAINTENANCE OF TRAFFIC PLAN
STAGE 2A

SCALE: 1"=20' SHEET 077 of 128

- LEGEND**
- TOCF — ORANGE CONSTRUCTION FENCE
 - ∞ ARROW PANEL
 - TRAFFIC DRUM
 - TYPE III BARRICADE
 - ▨ PREVIOUS STAGE WORK AREA
 - ▩ CURRENT STAGE WORK AREA
 - ▨ TEMPORARY TURF DECK SIDEWALK
 - TEMPORARY SIGN LOCATION



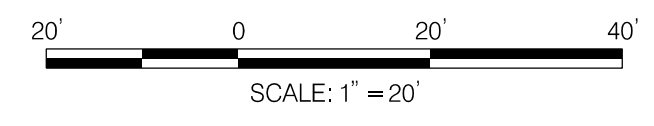
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 LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



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NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: DHM III	DATE: NOVEMBER, 2022
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CHECKED BY: KCW	DATE: NOVEMBER, 2022
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RECOMMENDED FOR APPROVAL	
Chief, Design Section _____	Date _____
APPROVED	
Chief, Division of Transportation Engineering _____	Date _____

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 DIVISION OF TRANSPORTATION ENGINEERING
 MONTGOMERY COUNTY, MARYLAND

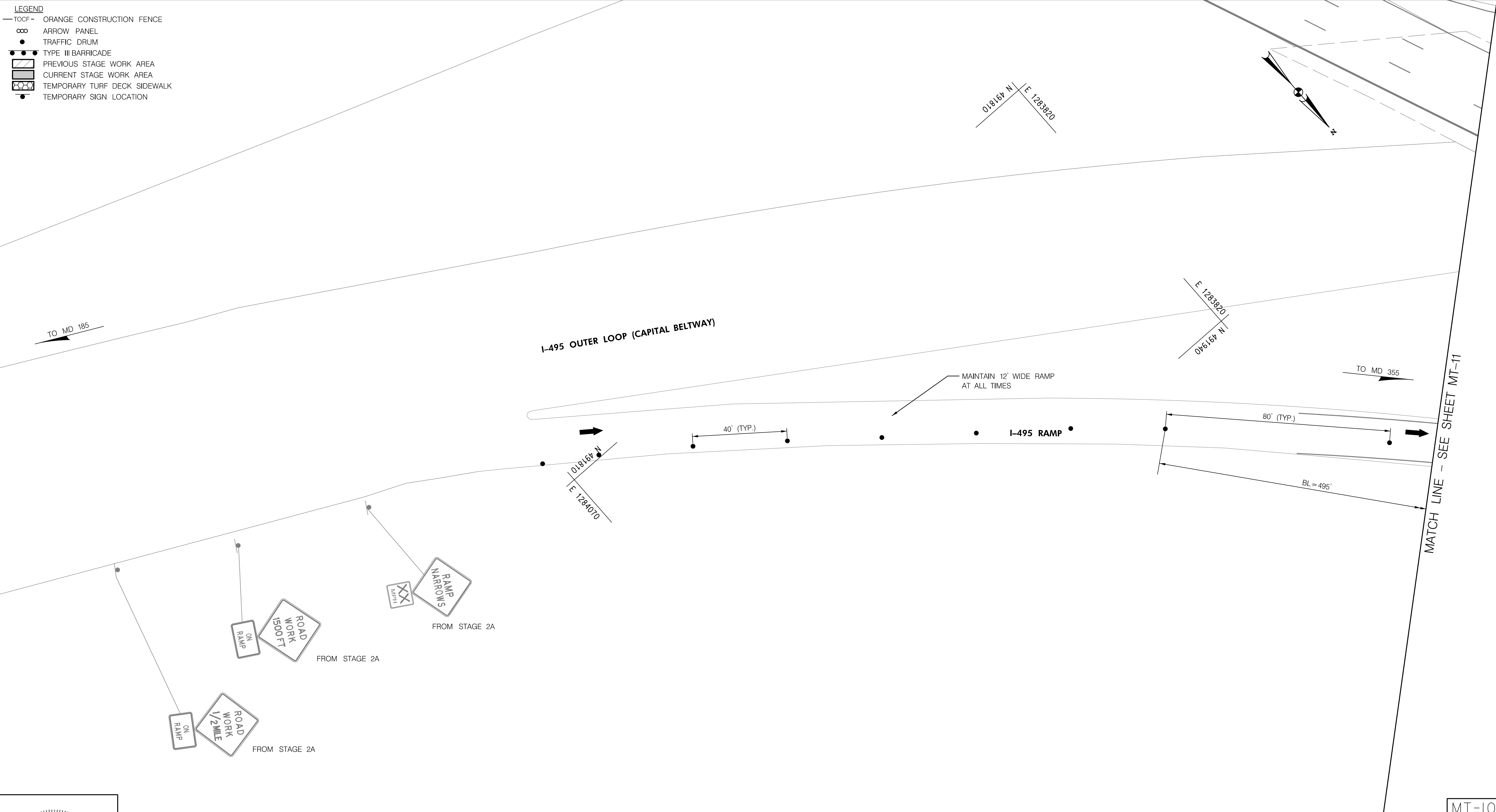
GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 2A

SCALE: 1"=20' SHEET 078 of 128

MT-09

11/1/2022 \\US0525-PPFSSO\shared\projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pMT-P2b01_Grosvenor.dgn

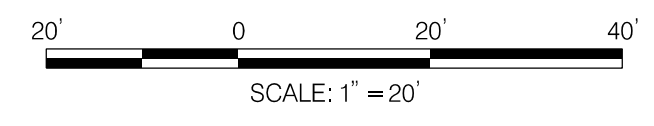
- LEGEND**
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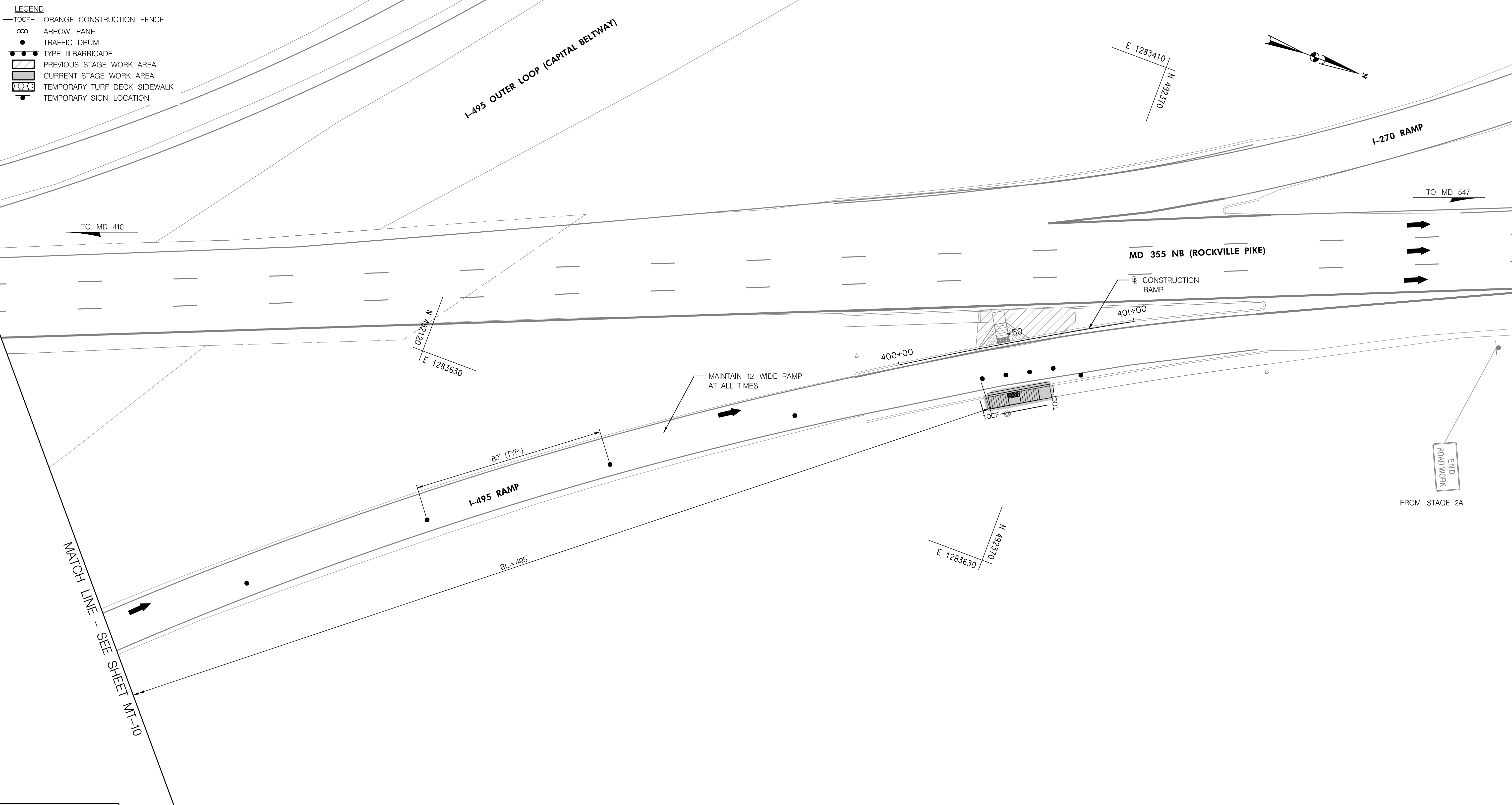
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 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 2B
 SCALE: 1"=20' SHEET 079 of 128

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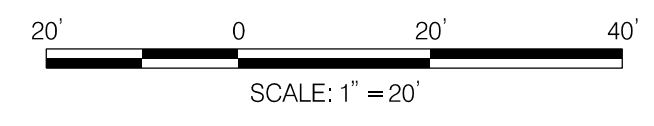
- LEGEND**
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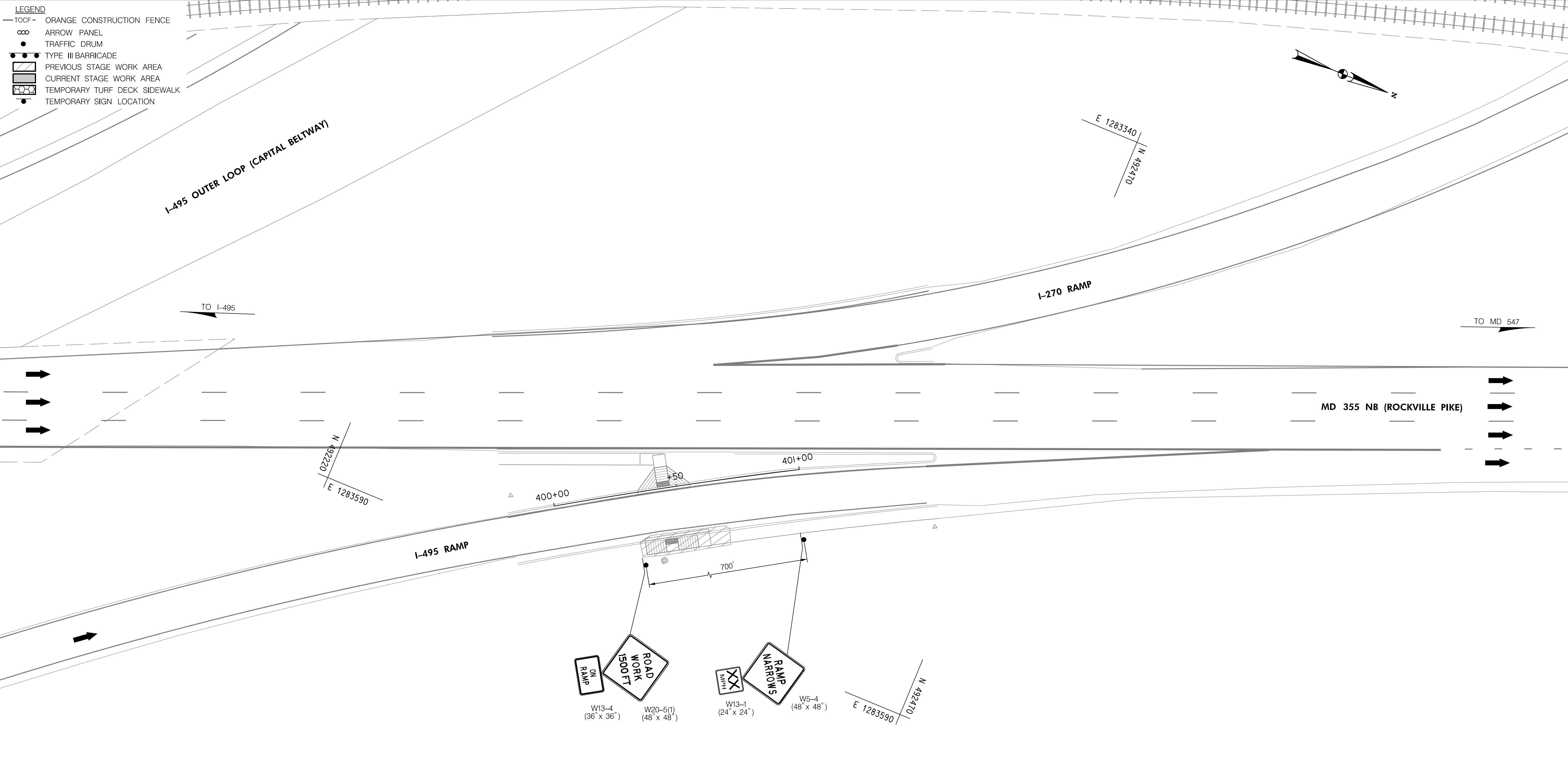
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GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 2B
 SCALE: 1"=20' SHEET 080 of 128

MT-II

11/1/2022 \\US0525-PPFSSO\shared\projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pMT-P3d01_Grosvenor.dgn

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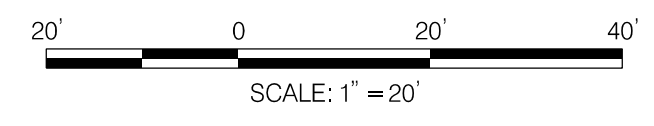
NOTE:
ADVANCED WARNING SIGNS TO
BE PLACED ALONG I-495 RAMP.



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MONTGOMERY COUNTY, MARYLAND

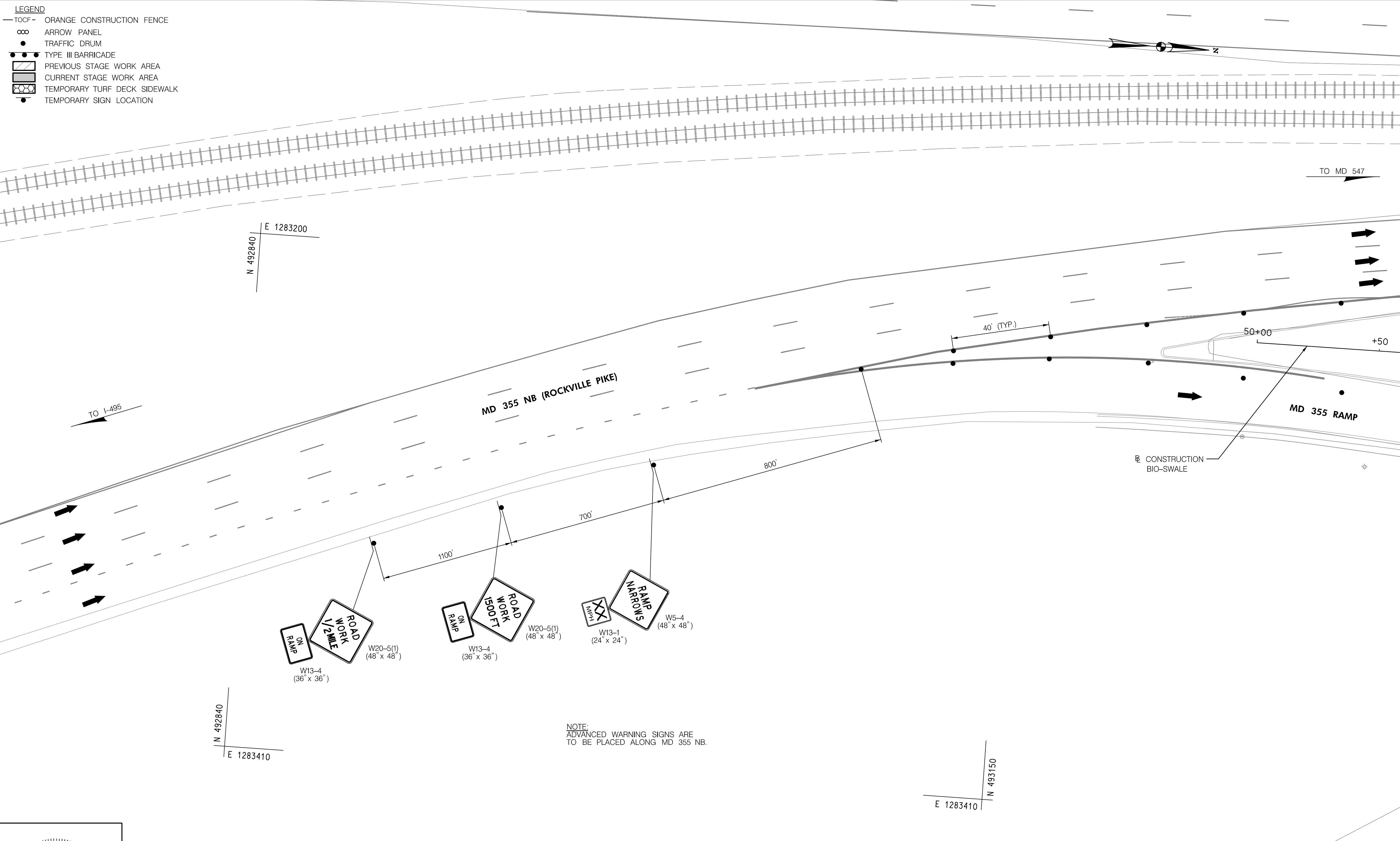
GROSVENOR IMPROVEMENTS
MAINTENANCE OF TRAFFIC PLAN
STAGE 3A

SCALE: 1"=20' SHEET 081 of 128

MT-12

11/1/2022 \\US0525-PPFSSO\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pMT-P3c02_Grosvenor.dgn

- LEGEND**
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MATCH LINE - SEE SHEET MT-14

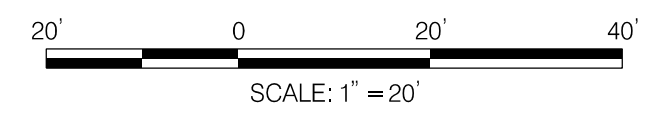
MT-13



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NOTE:
ADVANCED WARNING SIGNS ARE TO BE PLACED ALONG MD 355 NB.

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MONTGOMERY COUNTY, MARYLAND

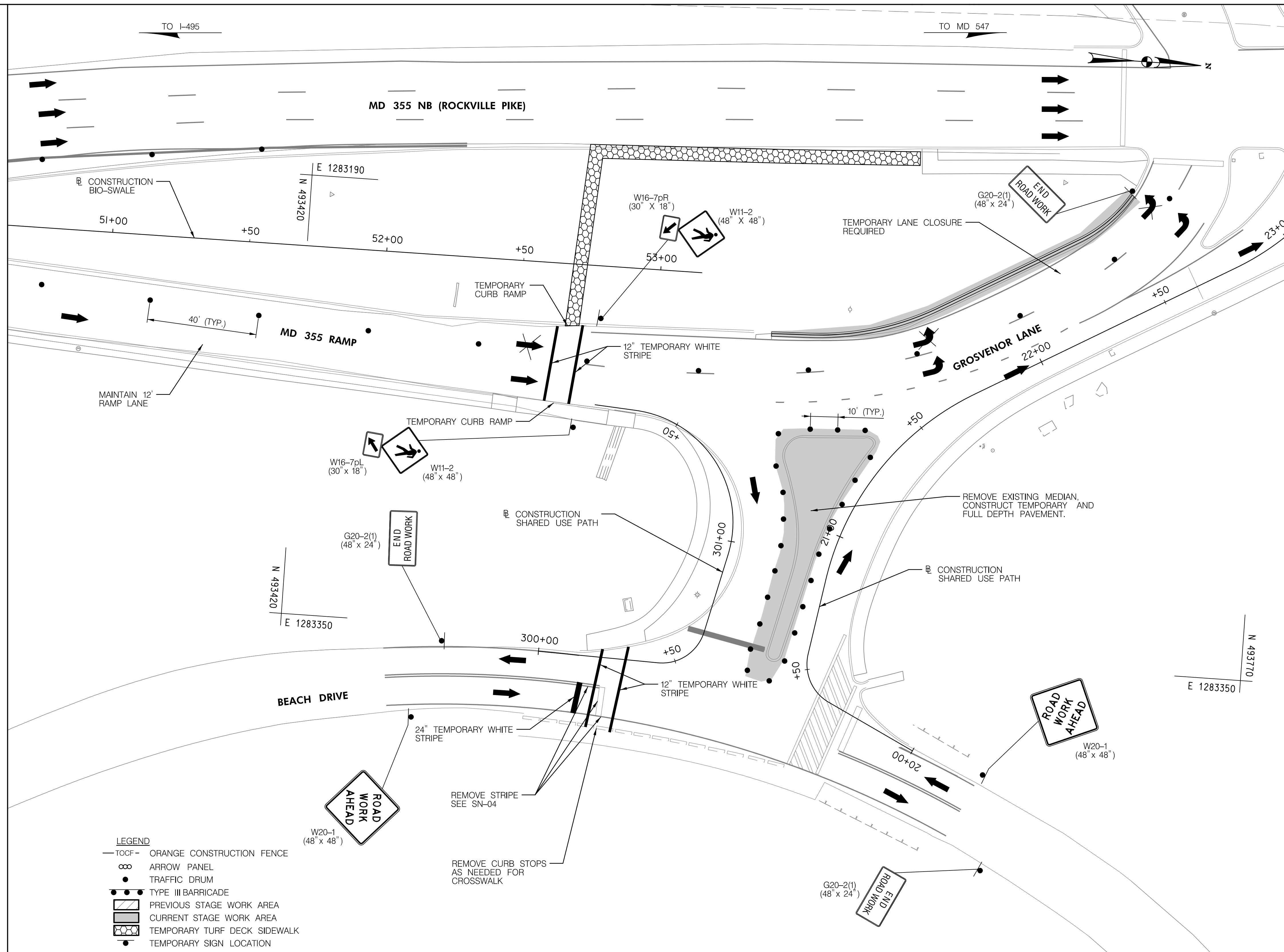
GROSVENOR IMPROVEMENTS
MAINTENANCE OF TRAFFIC PLAN
STAGE 3A

SCALE: 1"=20' SHEET 082 of 128

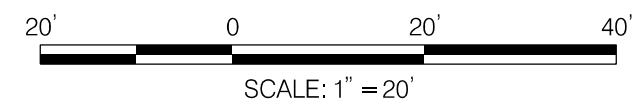
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MATCH LINE - SEE SHEET MT-13

MATCH LINE STA. 23+00 - SEE SHEET MT-15



- LEGEND**
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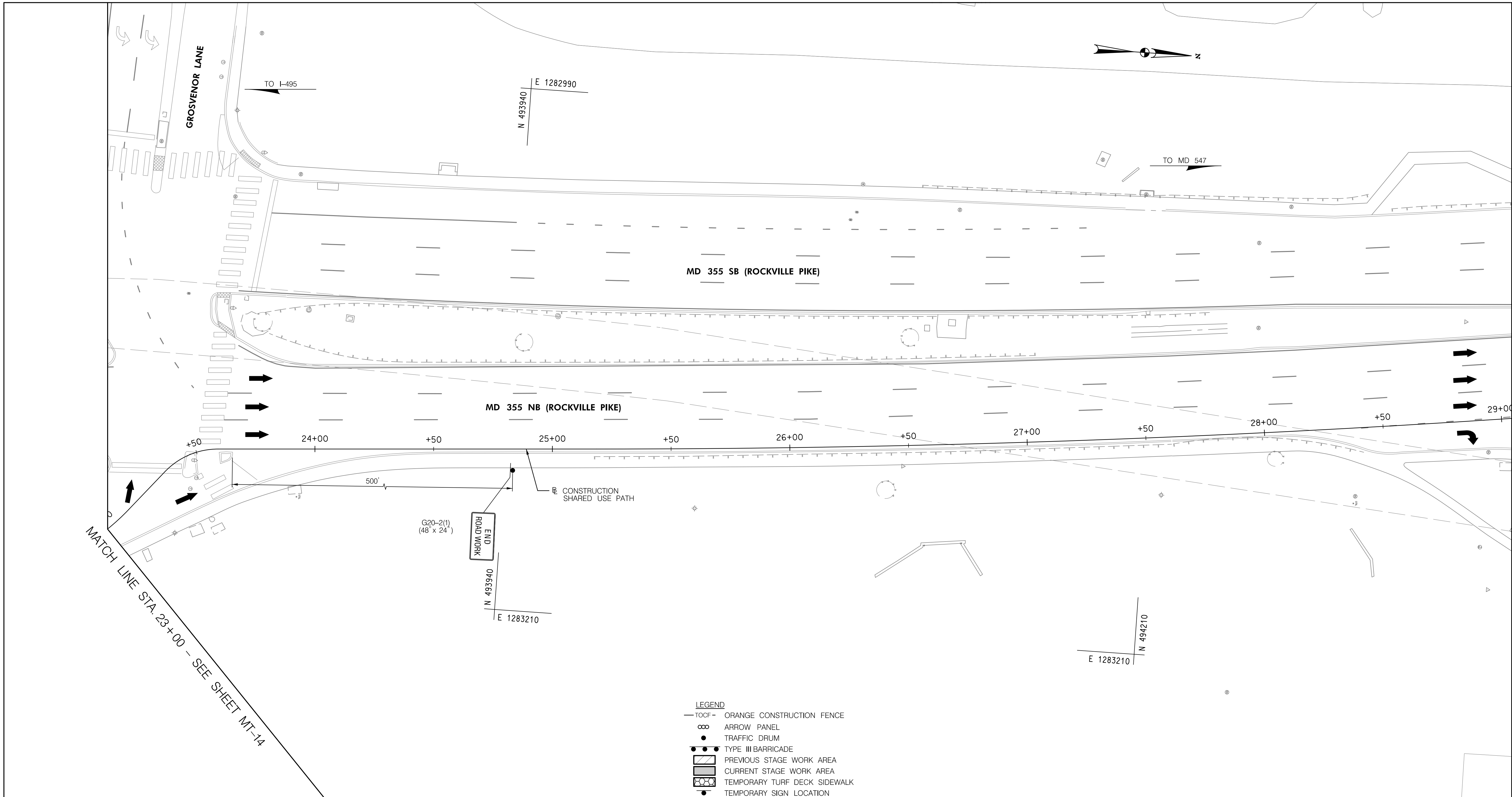
DEPARTMENT OF TRANSPORTATION
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 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 3A

SCALE: 1"=20' SHEET_083_of_128

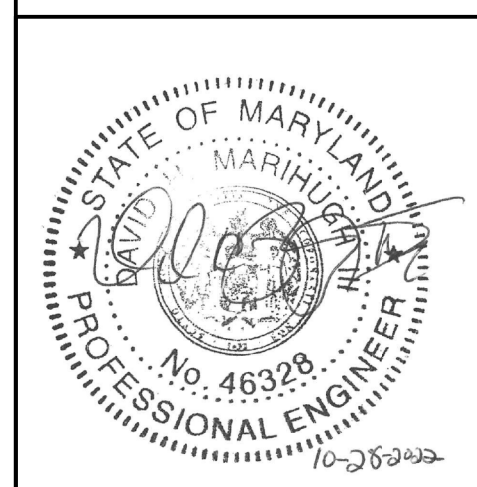
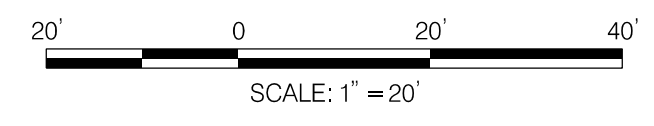
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11/1/2022 \\US0525-PPFSSO\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pMT-P3c04_Grosvenor.dgn



MATCH LINE STA. 23+00 - SEE SHEET MT-14

- LEGEND**
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DEPARTMENT OF TRANSPORTATION
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MONTGOMERY COUNTY, MARYLAND

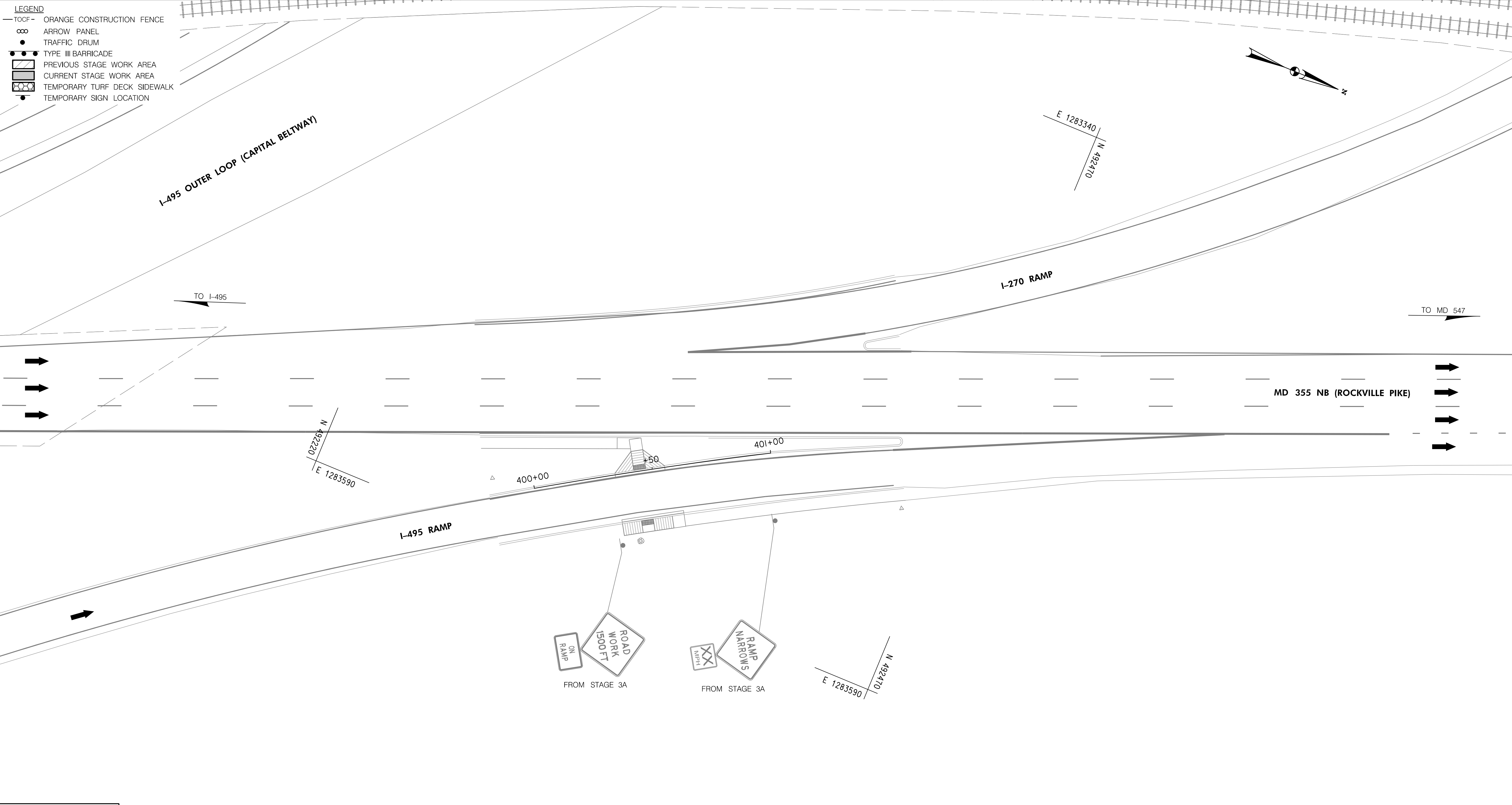
GROSVENOR IMPROVEMENTS
MAINTENANCE OF TRAFFIC PLAN
STAGE 3A

SCALE: 1"=20' SHEET 084 of 128

MT-15

11/1/2022 \\US0525-PPFSS01\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pMT-P3501_Grosvenor.dgn

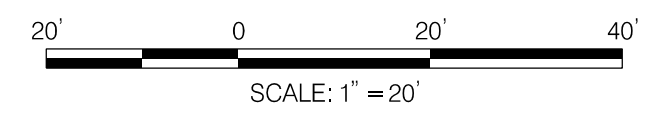
- LEGEND**
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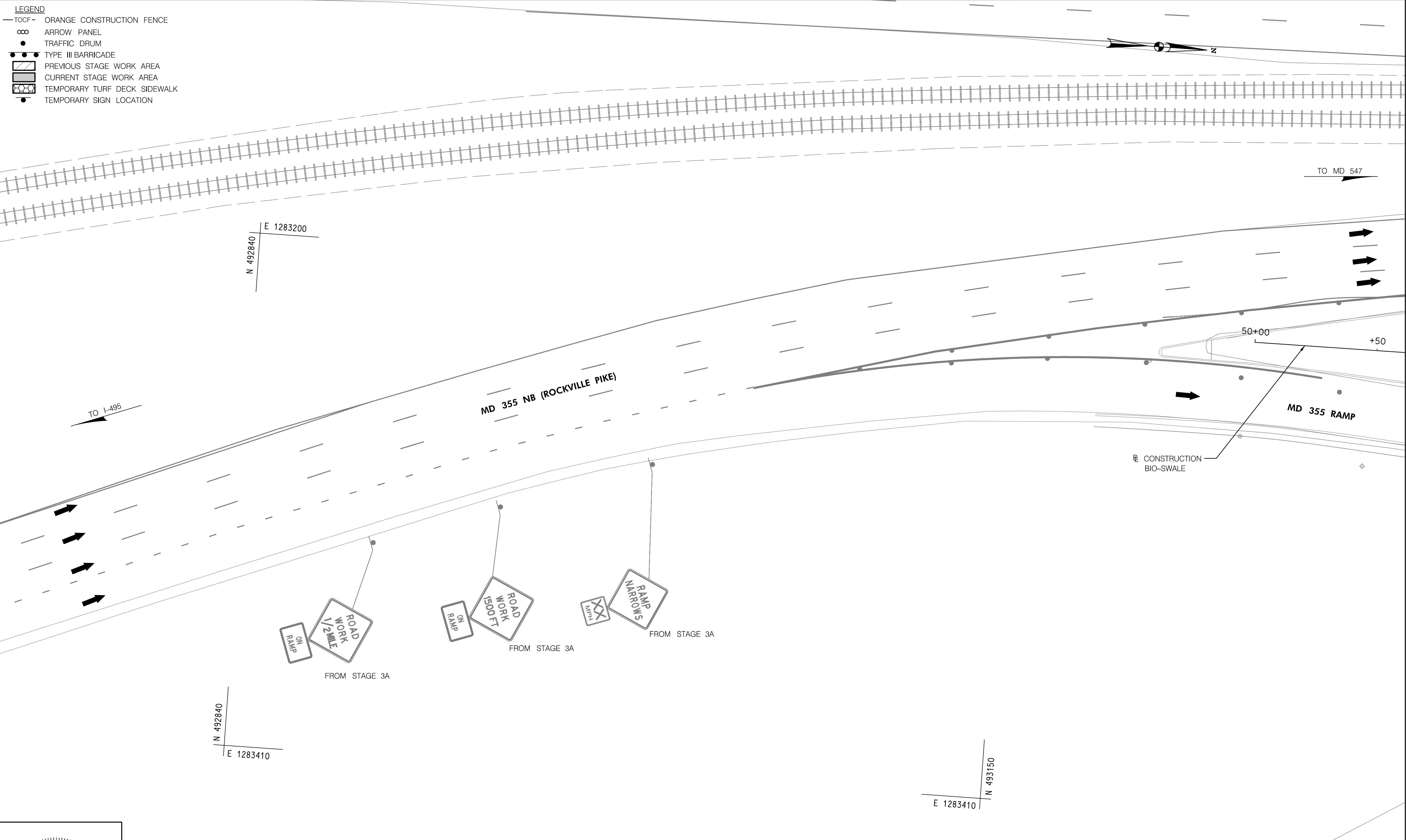
DEPARTMENT OF TRANSPORTATION
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 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 3B

MT-16

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- LEGEND**
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MATCH LINE - SEE SHEET MT-18

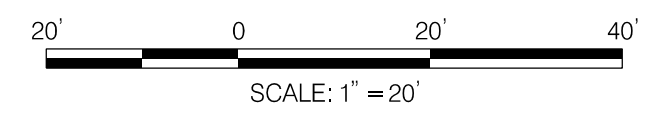
MT-17



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MONTGOMERY COUNTY, MARYLAND

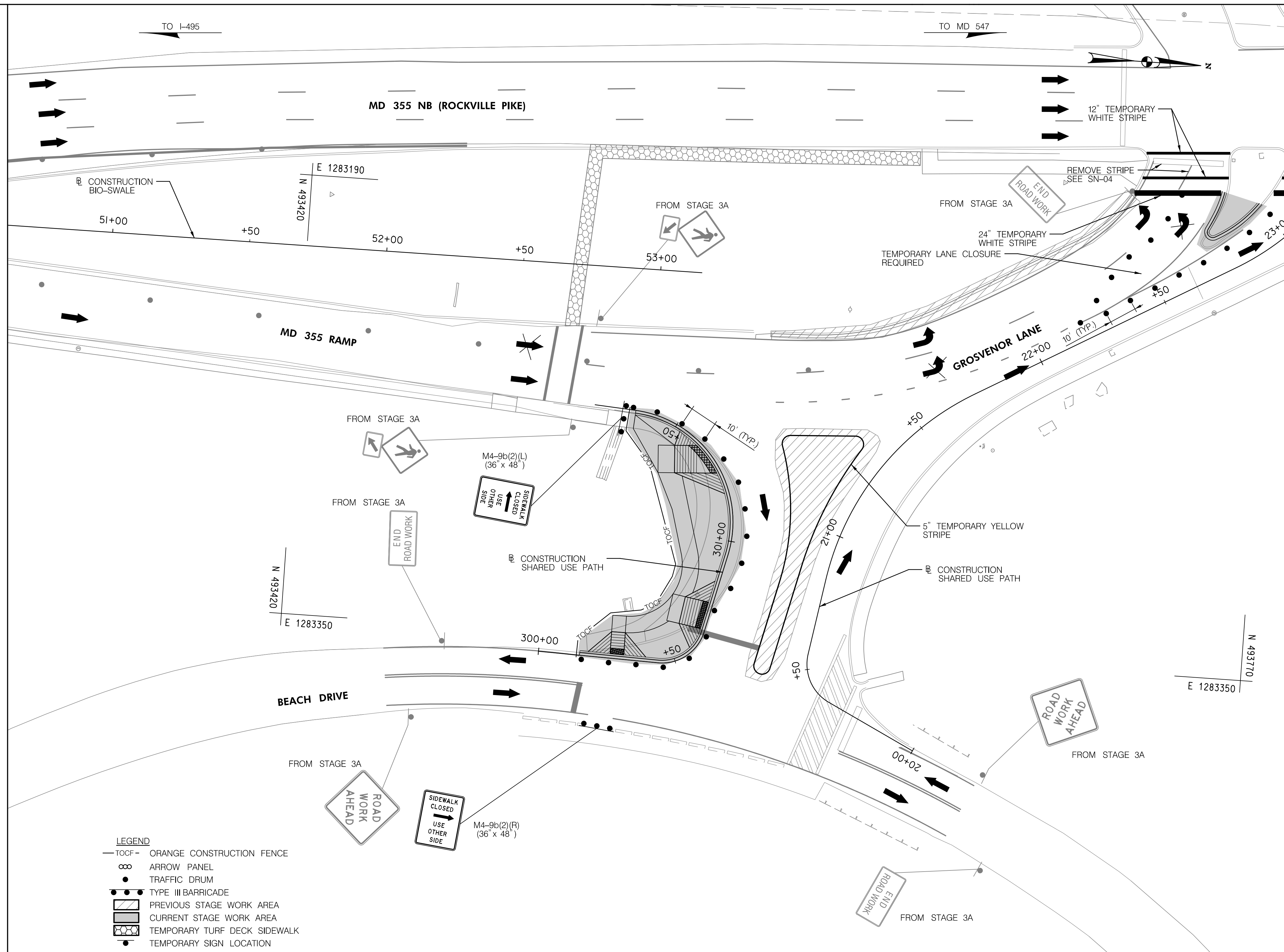
GROSVENOR IMPROVEMENTS
MAINTENANCE OF TRAFFIC PLAN
STAGE 3B

SCALE: 1"=20' SHEET 086 of 128

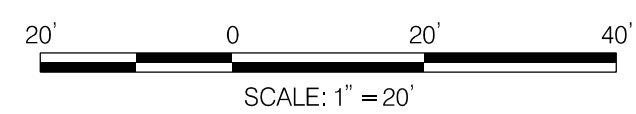
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MATCH LINE - SEE SHEET MT-17

MATCH LINE STA. 23+00 - SEE SHEET MT-19



- LEGEND**
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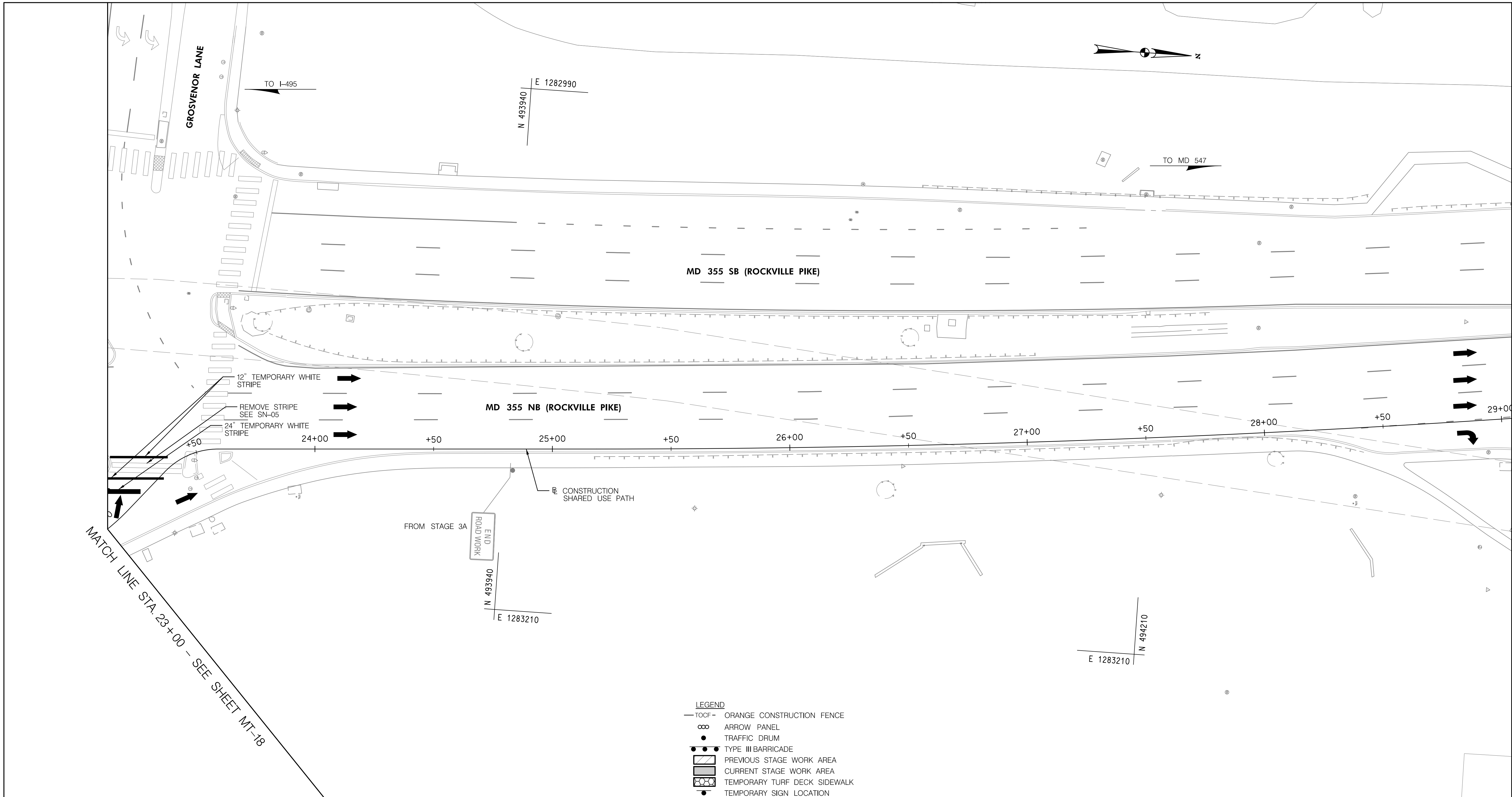
GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 3B

SCALE: 1"=20'

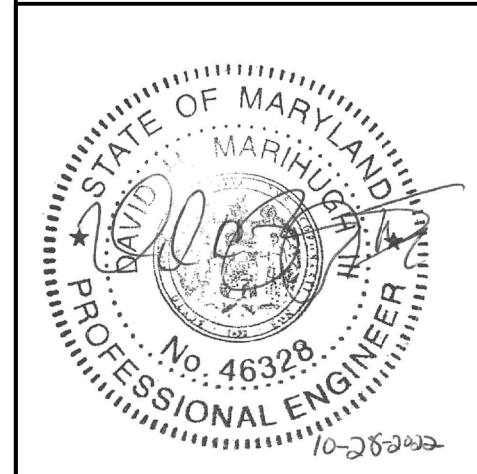
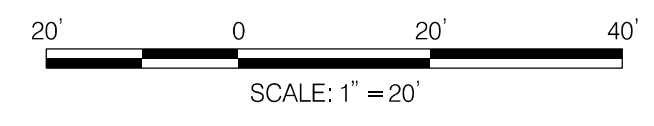
SHEET 087 of 128

MT-18

11/1/2022 \\US0525-PPFSSO\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pMT-P3b04_Grosvenor.dgn



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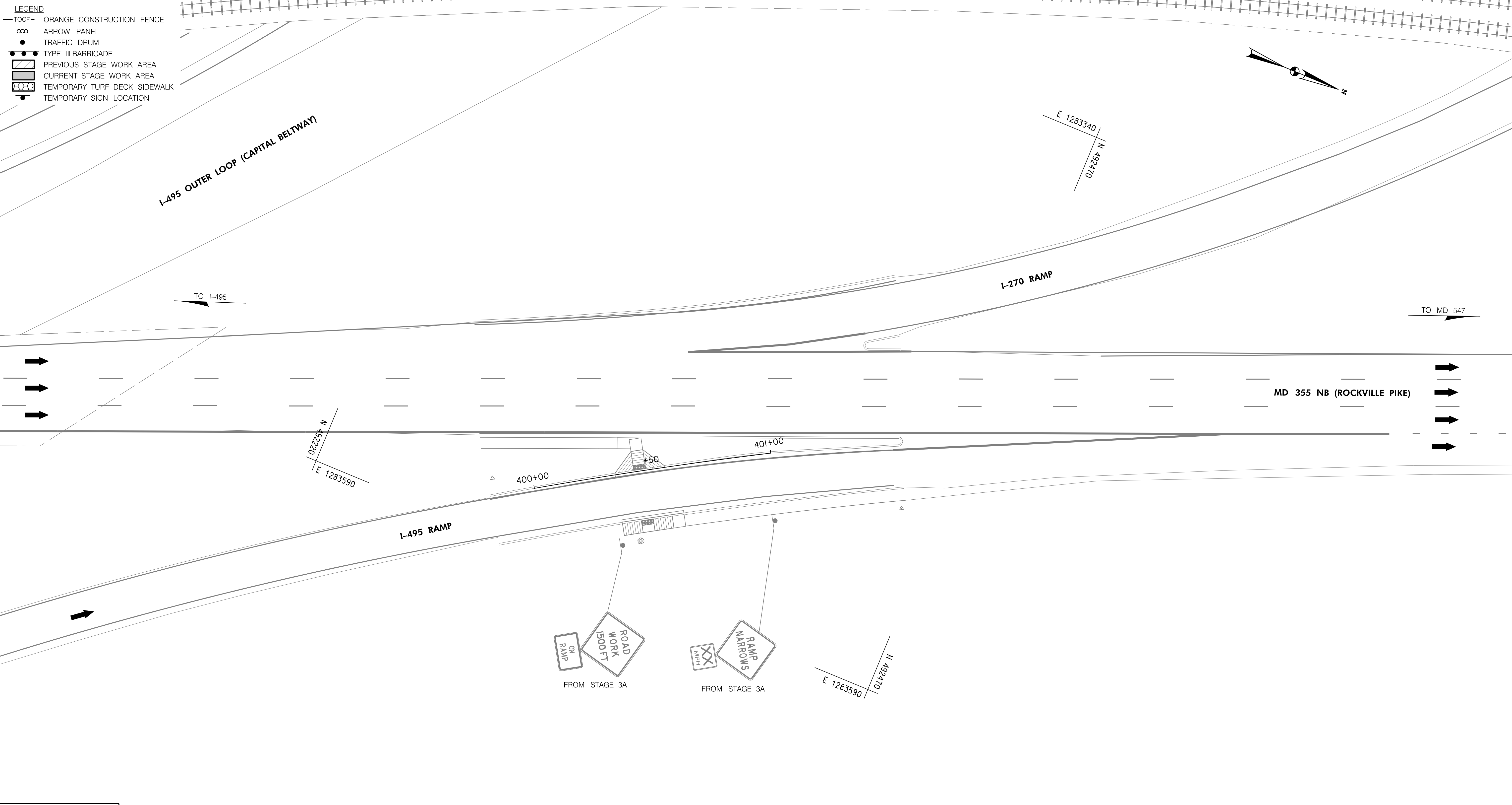
DEPARTMENT OF TRANSPORTATION
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GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 3B

MT-19

11/1/2022 \\US0525-PPFSSO\shared\projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pMT-P3c01_Grosvenor.dgn

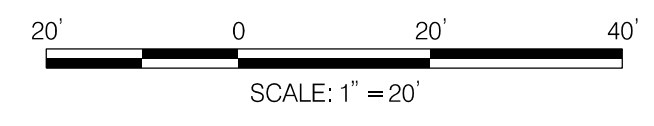
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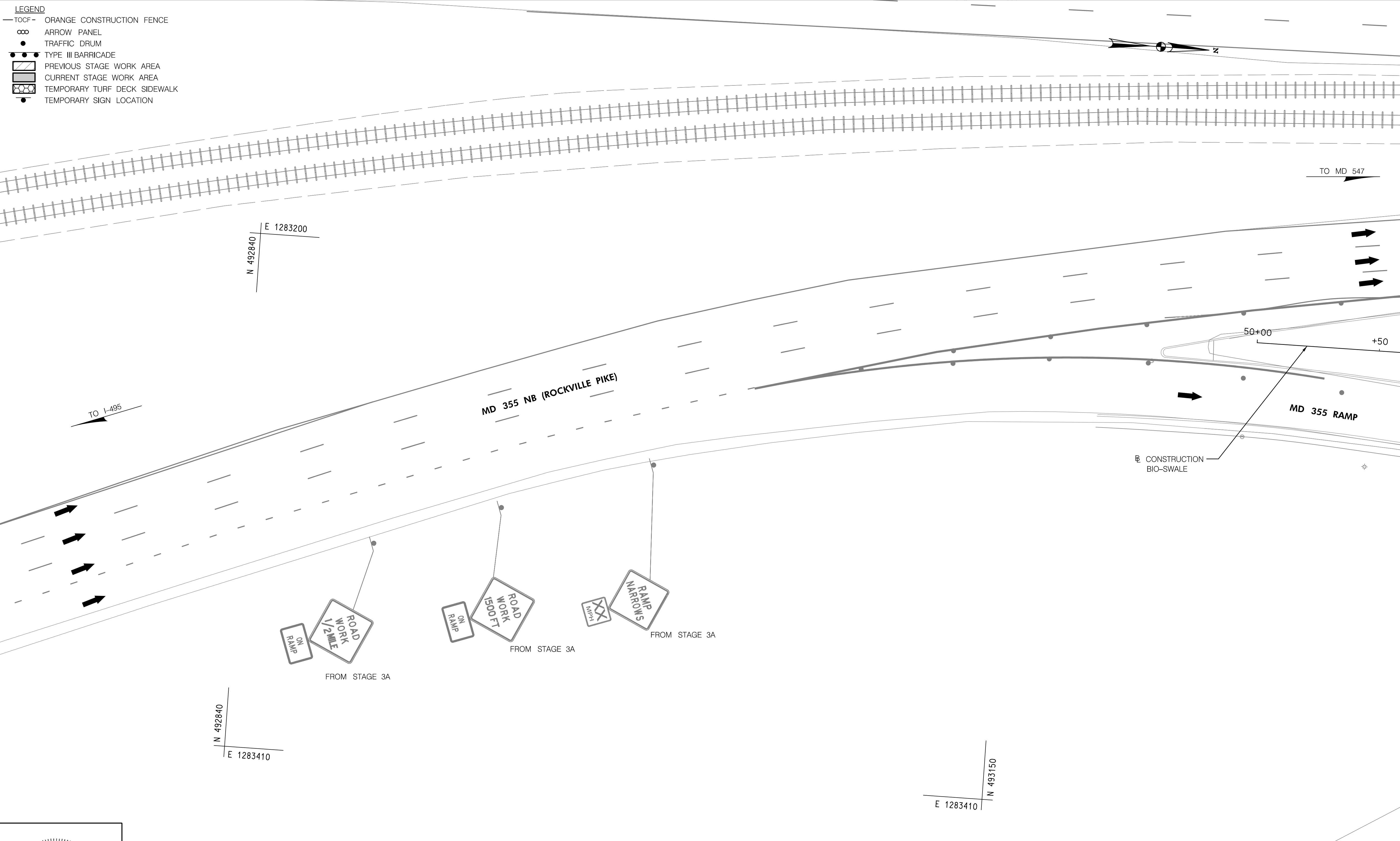
DEPARTMENT OF TRANSPORTATION
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 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
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 STAGE 3C

MT-20

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 - ∞ ARROW PANEL
 - TRAFFIC DRUM
 - TYPE III BARRICADE
 - ▨ PREVIOUS STAGE WORK AREA
 - ▩ CURRENT STAGE WORK AREA
 - ▨ TEMPORARY TURF DECK SIDEWALK
 - TEMPORARY SIGN LOCATION



MATCH LINE - SEE SHEET MT-22

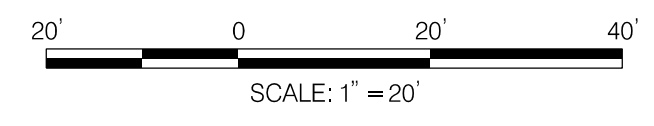
MT-21



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NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: DHM III	DATE: NOVEMBER, 2022
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CHECKED BY: KCW	DATE: NOVEMBER, 2022
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APPROVED	
Chief, Division of Transportation Engineering _____	Date _____

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DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

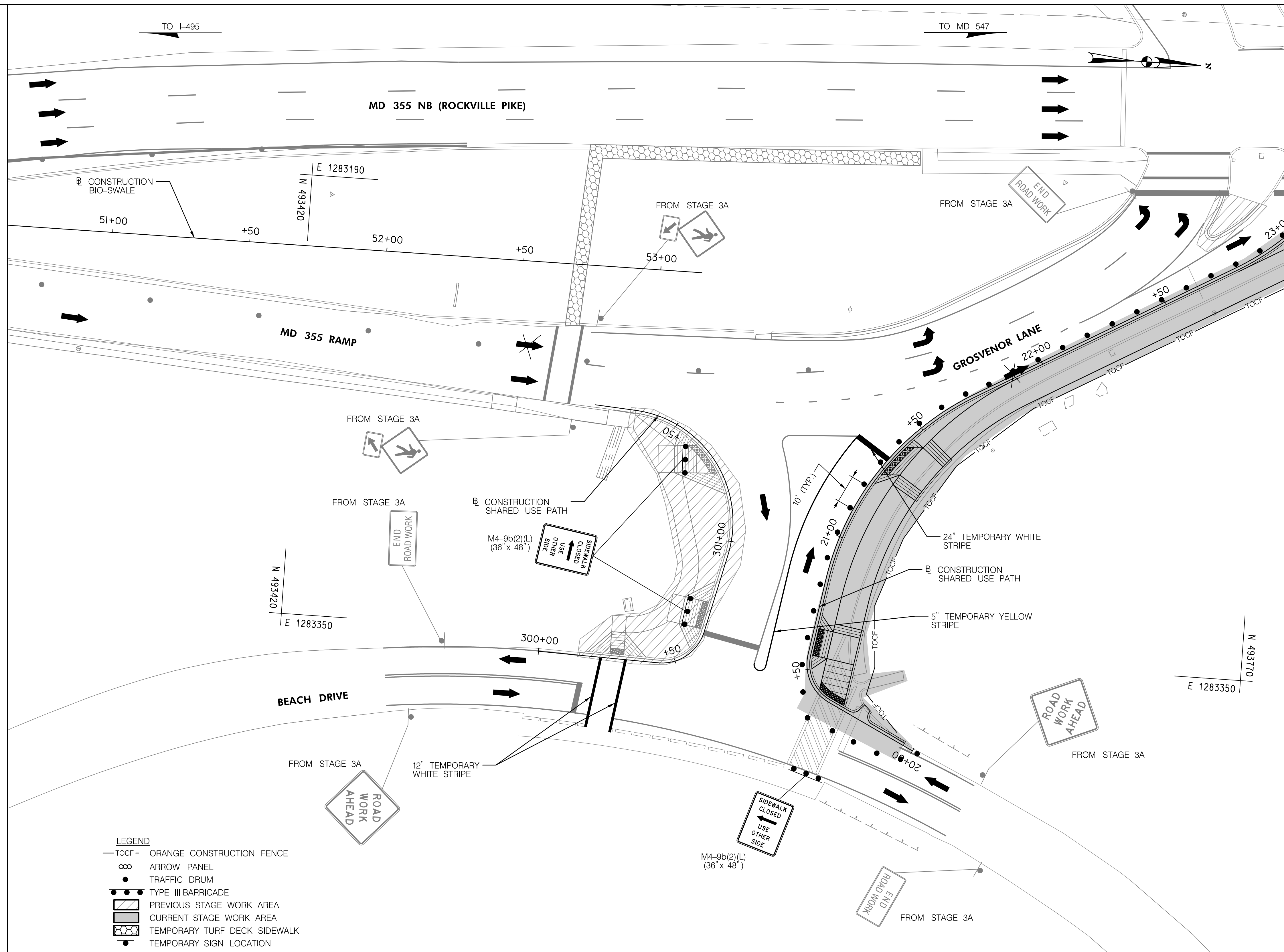
GROSVENOR IMPROVEMENTS
MAINTENANCE OF TRAFFIC PLAN
STAGE 3C

SCALE: 1"=20' SHEET_090_ of _128_

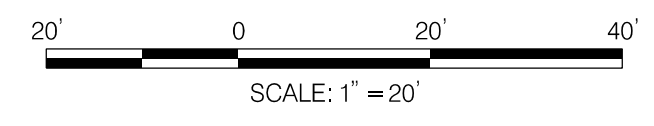
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MATCH LINE - SEE SHEET MT-21

MATCH LINE STA. 23+00 - SEE SHEET MT-23



- LEGEND**
- TOCF — ORANGE CONSTRUCTION FENCE
 - ∞ ARROW PANEL
 - TRAFFIC DRUM
 - TYPE III BARRICADE
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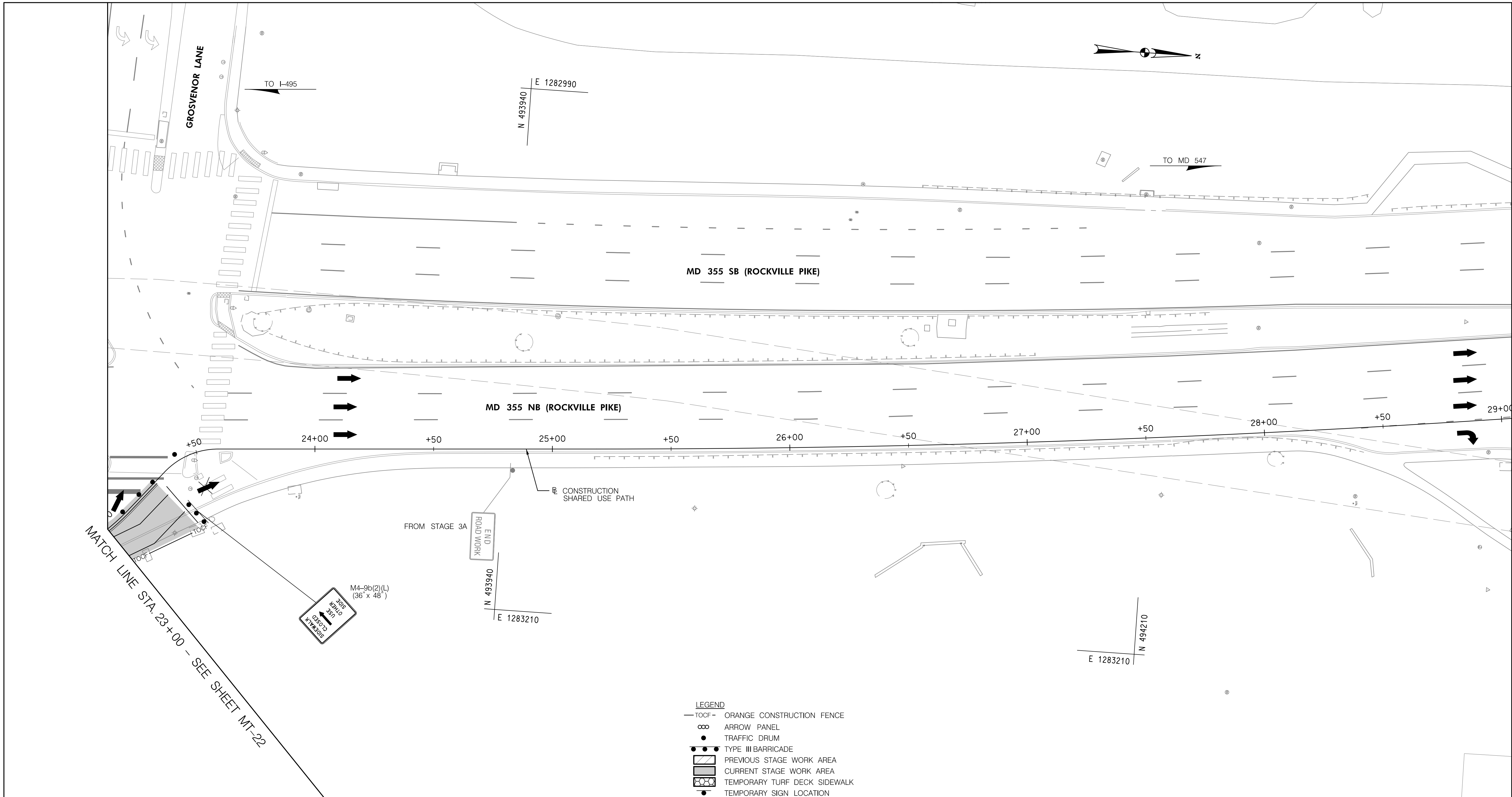
DEPARTMENT OF TRANSPORTATION
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MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
MAINTENANCE OF TRAFFIC PLAN
STAGE 3C

SCALE: 1"=20' SHEET 087 of 128

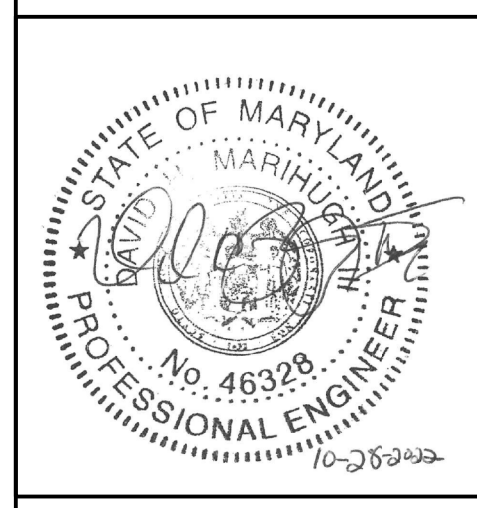
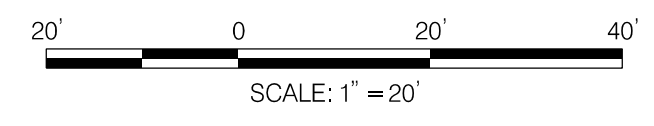
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MATCH LINE STA. 23+00 - SEE SHEET MT-22

- LEGEND**
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 - TRAFFIC DRUM
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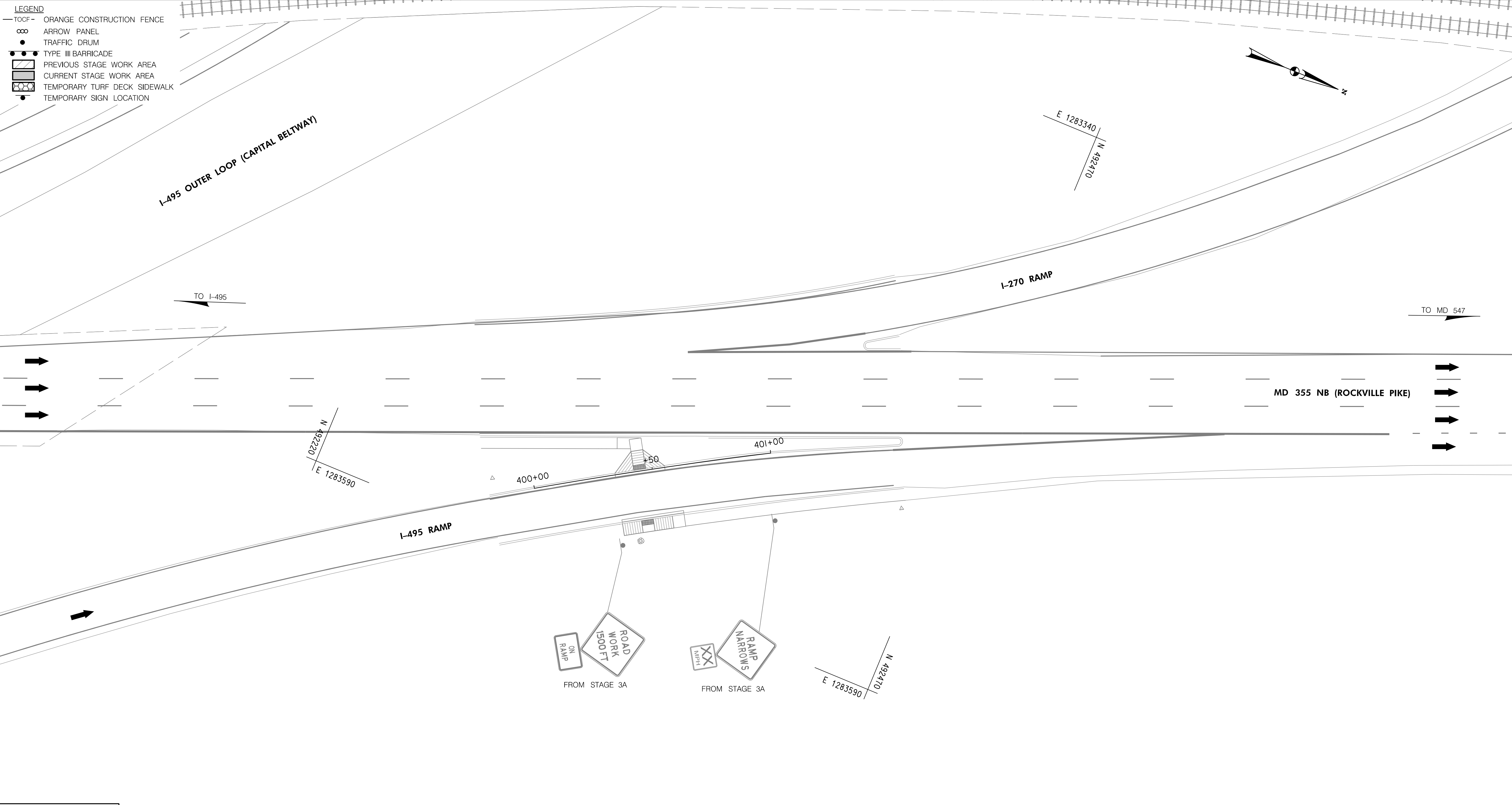
GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 3C

SCALE: 1"=20' SHEET_092_of_128

MT-23

11/1/2022 \\US0525-PFSS01\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pMT-P3d01_Grosvenor.dgn

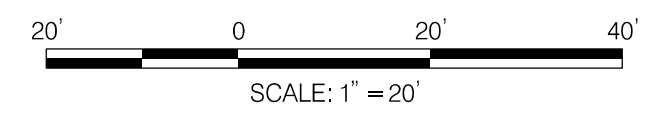
- LEGEND**
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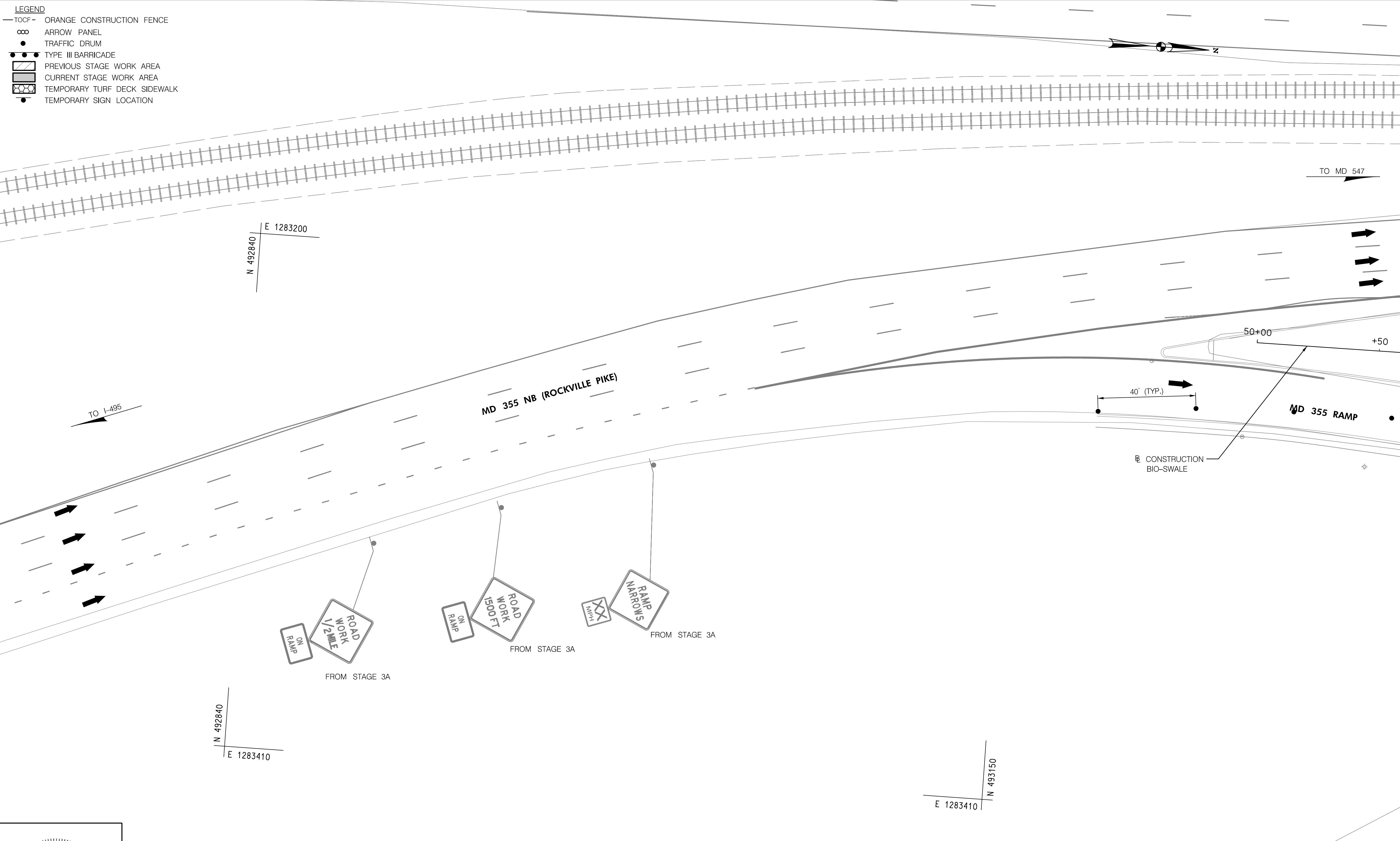
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 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 3D

MT-24

11/1/2022 \\US0525-PPFSSO\shared_projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pMT-P3d02_Grosvenor.dgn

- LEGEND**
- TOCF — ORANGE CONSTRUCTION FENCE
 - ∞ ARROW PANEL
 - TRAFFIC DRUM
 - TYPE III BARRICADE
 - ▨ PREVIOUS STAGE WORK AREA
 - ▩ CURRENT STAGE WORK AREA
 - ▤ TEMPORARY TURF DECK SIDEWALK
 - TEMPORARY SIGN LOCATION



MATCH LINE - SEE SHEET MT-26

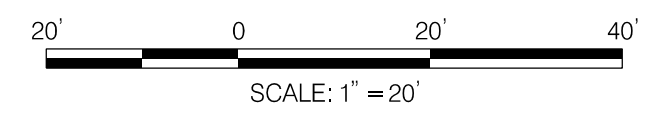
MT-25



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MONTGOMERY COUNTY, MARYLAND

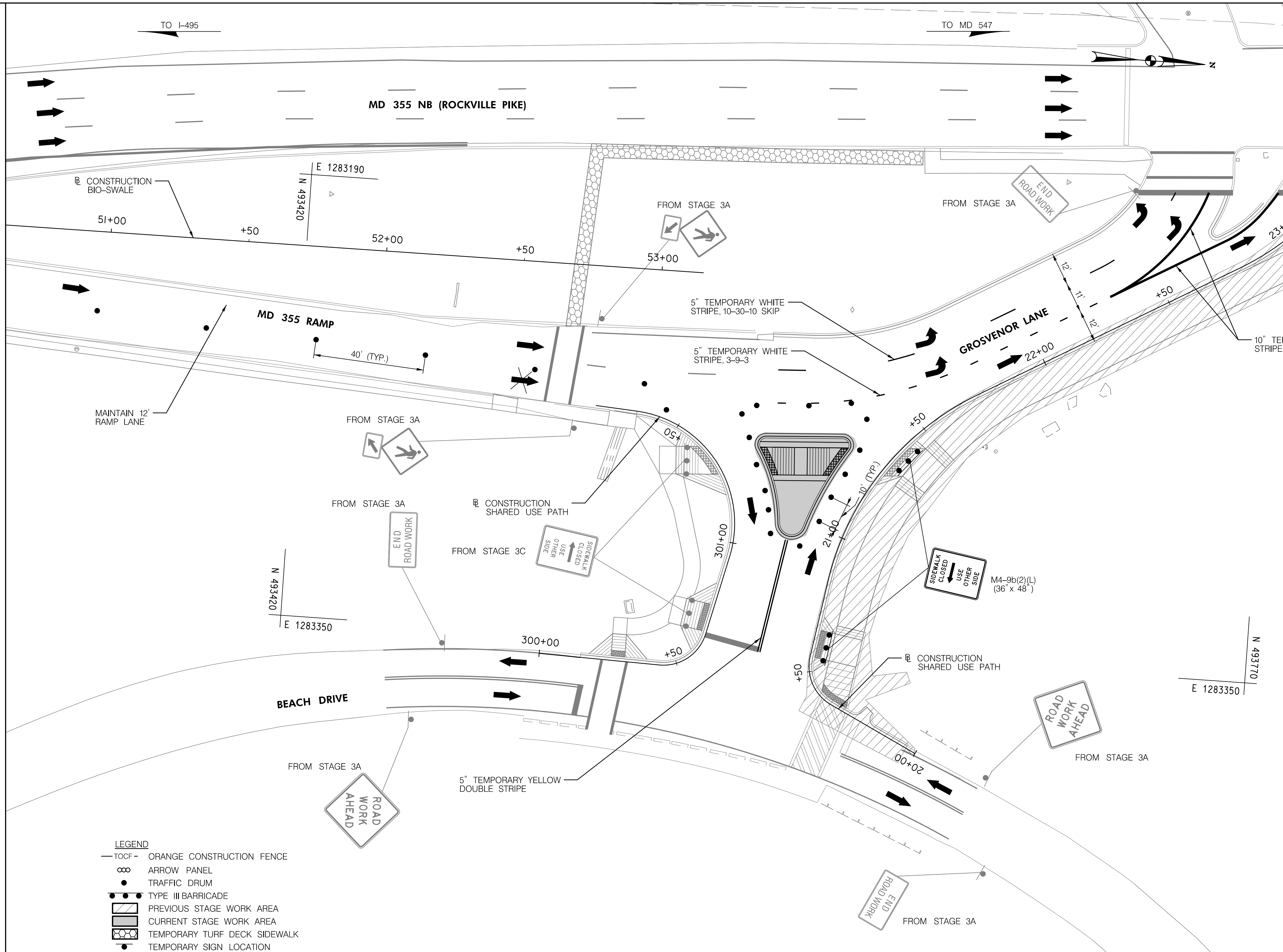
GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 3D

SCALE: 1"=20' SHEET_094_ of _128_

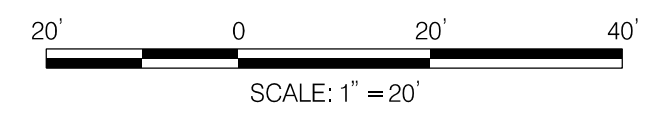
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MATCH LINE - SEE SHEET MT-25

MATCH LINE STA. 23+00 - SEE SHEET MT-27



- LEGEND**
- TOCF — ORANGE CONSTRUCTION FENCE
 - ∞ ARROW PANEL
 - TRAFFIC DRUM
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DEPARTMENT OF TRANSPORTATION
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MONTGOMERY COUNTY, MARYLAND

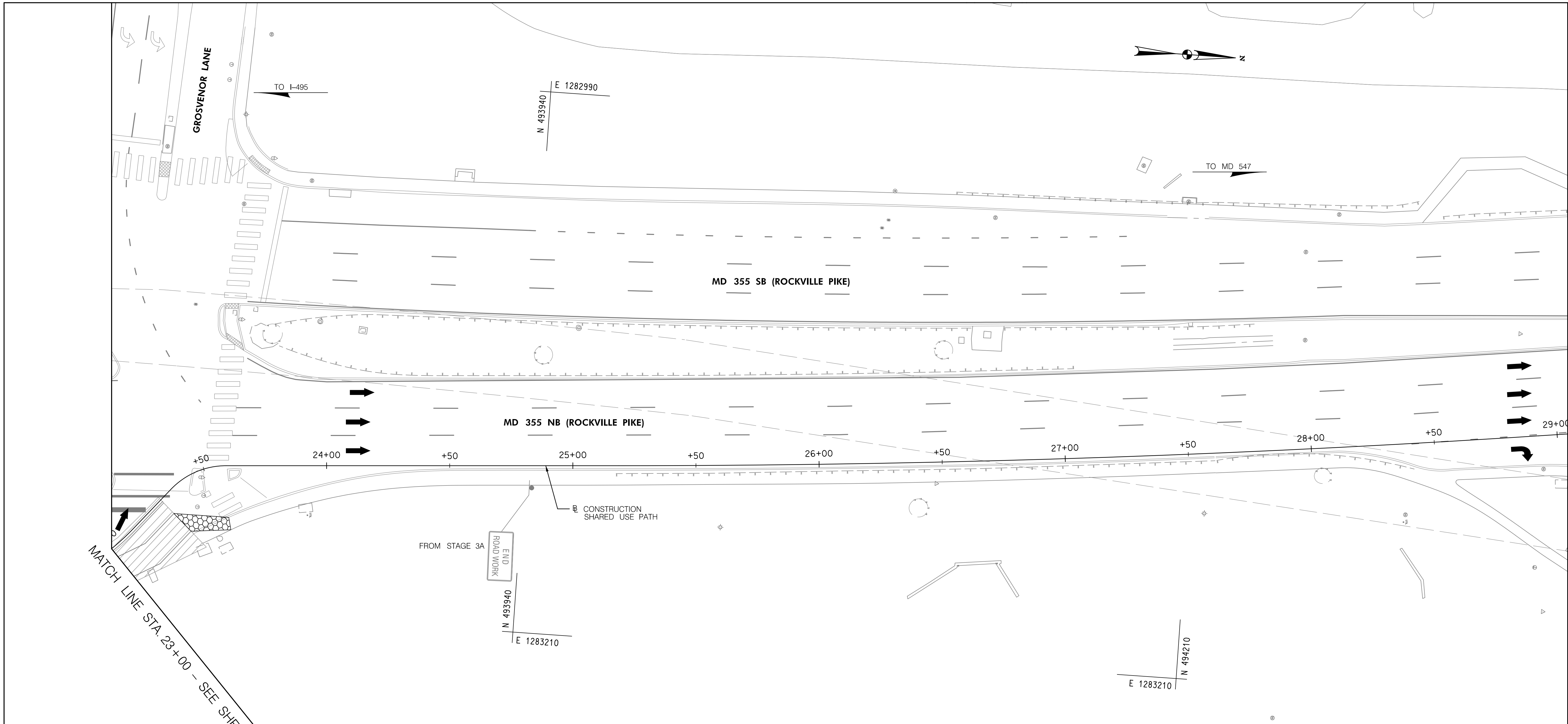
GROSVENOR IMPROVEMENTS
MAINTENANCE OF TRAFFIC PLAN
STAGE 3D

SCALE: 1"=20'

SHEET 095 of 128

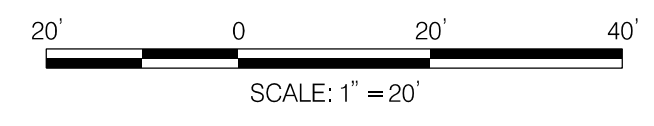
MT-26

11/1/2022 \\US0525-PPFSSO\shared\projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pMT-P3d04_Grosvenor.dgn



MATCH LINE STA. 23+00 - SEE SHEET MT-26

- LEGEND**
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 - TRAFFIC DRUM
 - TYPE III BARRICADE
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MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
MAINTENANCE OF TRAFFIC PLAN
STAGE 3D

SCALE: 1"=20' SHEET_096_of_128



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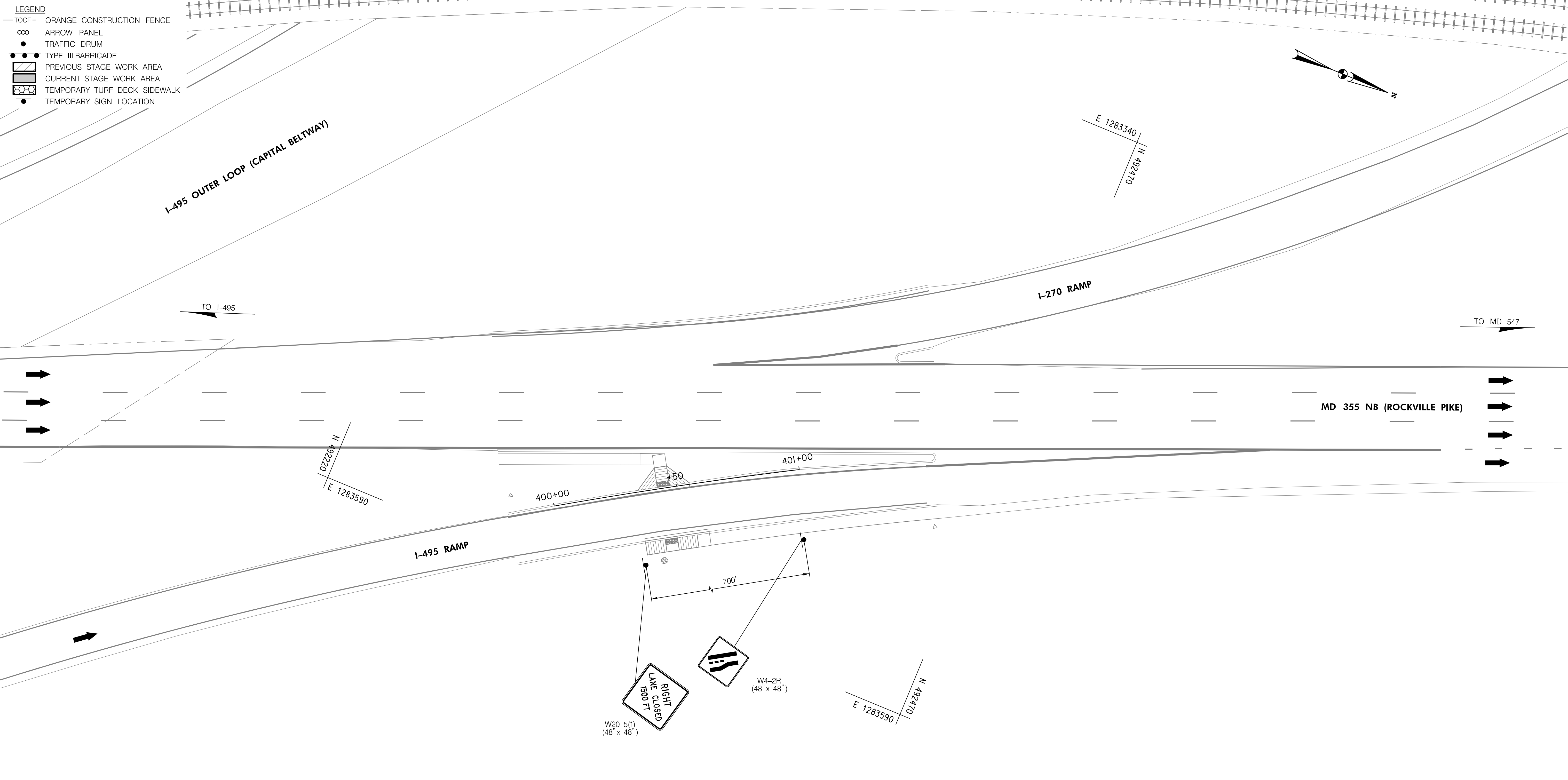
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MT-27

11/1/2022 \\US0525-PPFSS01\shared\projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pMT-P3601_Grosvenor.dgn

- LEGEND**
- TOCF — ORANGE CONSTRUCTION FENCE
 - ∞ ARROW PANEL
 - TRAFFIC DRUM
 - TYPE III BARRICADE
 - ▨ PREVIOUS STAGE WORK AREA
 - ▩ CURRENT STAGE WORK AREA
 - ▧ TEMPORARY TURF DECK SIDEWALK
 - TEMPORARY SIGN LOCATION



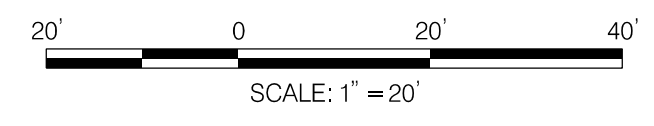
NOTE:
ADVANCED WARNING SIGNS TO
BE PLACED ALONG I-495 RAMP.



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MONTGOMERY COUNTY, MARYLAND

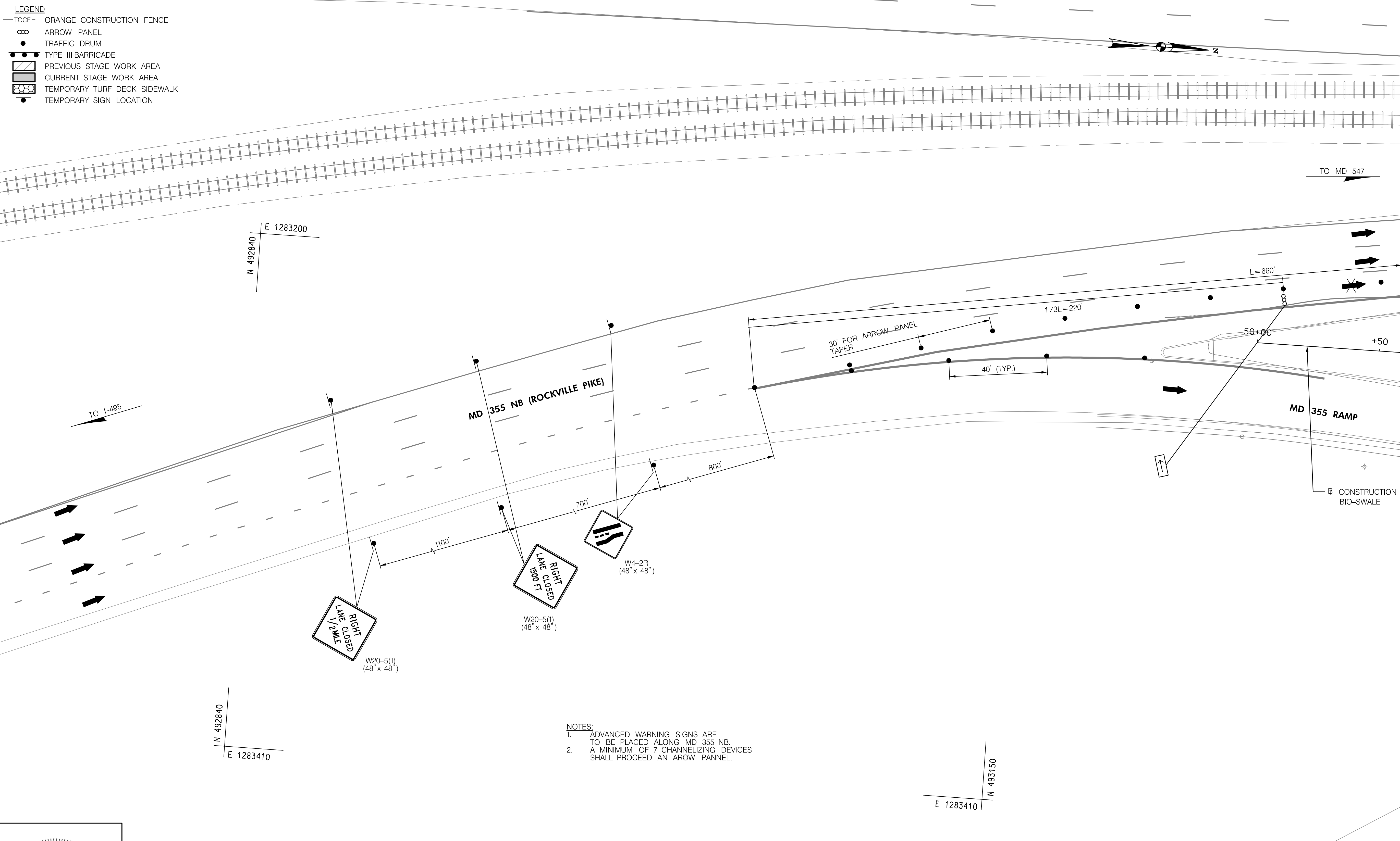
GROSVENOR IMPROVEMENTS
MAINTENANCE OF TRAFFIC PLAN
STAGE 3E

SCALE: 1"=20' SHEET_097_ of _128_

MT-28

11/1/2022 \\US0525-PPFSSO\shared_projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pMT-P3e02_Grosvenor.dgn

- LEGEND**
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 - ∞ ARROW PANEL
 - TRAFFIC DRUM
 - TYPE III BARRICADE
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 - ▩ CURRENT STAGE WORK AREA
 - ▤ TEMPORARY TURF DECK SIDEWALK
 - TEMPORARY SIGN LOCATION



MATCH LINE - SEE SHEET MT-30

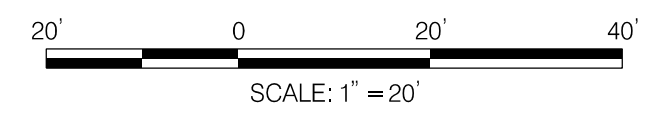
- NOTES:**
1. ADVANCED WARNING SIGNS ARE TO BE PLACED ALONG MD 355 NB.
 2. A MINIMUM OF 7 CHANNELIZING DEVICES SHALL PRECEED AN ARROW PANEL.



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GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 3E

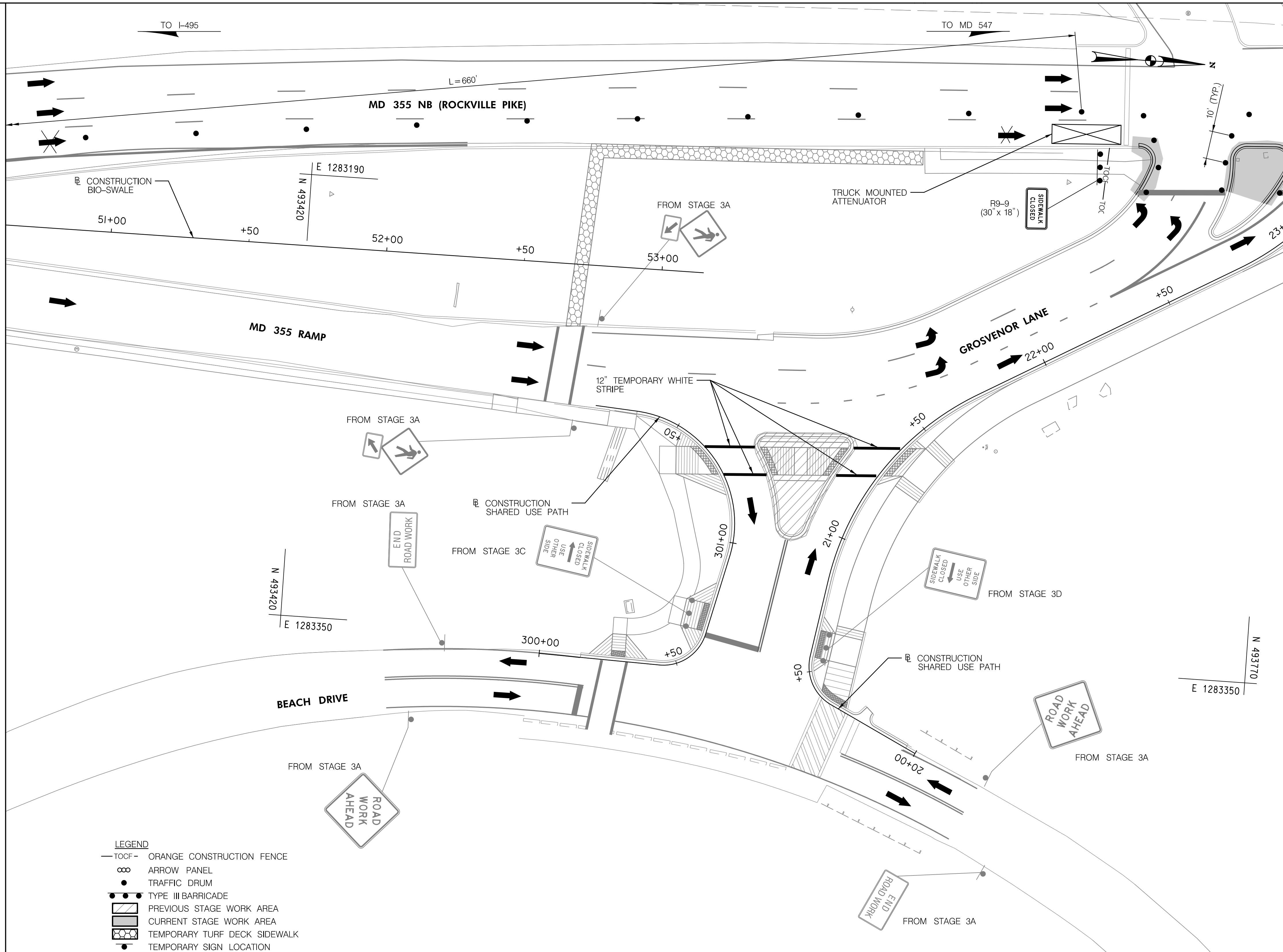
SCALE: 1"=20' SHEET 098 of 128

MT-29

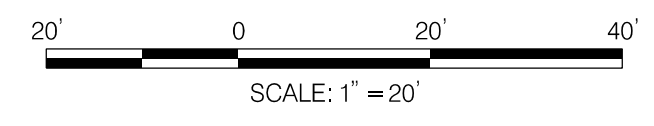
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MATCH LINE - SEE SHEET MT-29

MATCH LINE STA. 23+00 - SEE SHEET MT-31



- LEGEND**
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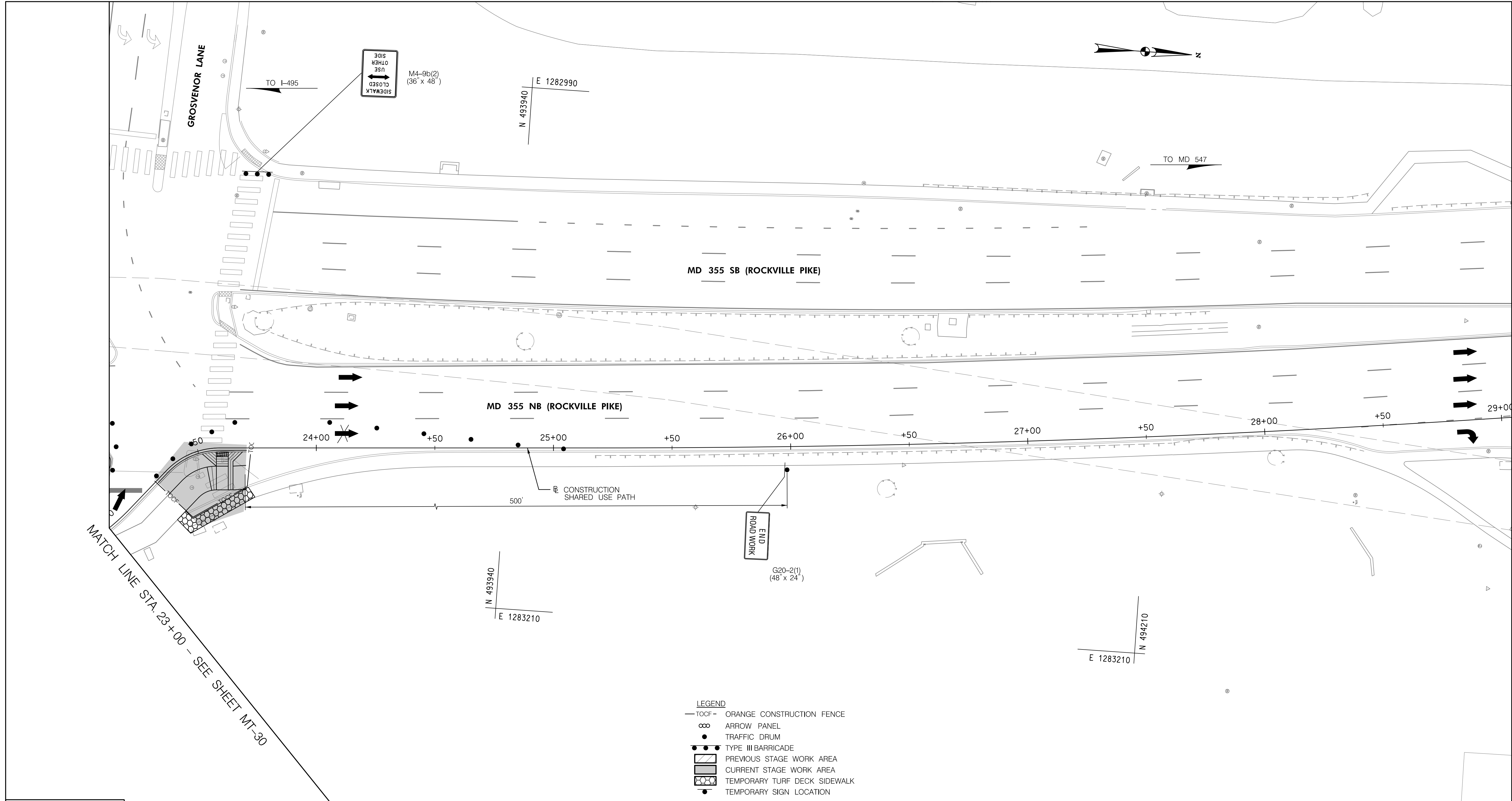
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MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
MAINTENANCE OF TRAFFIC PLAN
STAGE 3E

SCALE: 1"=20' SHEET 099 of 128

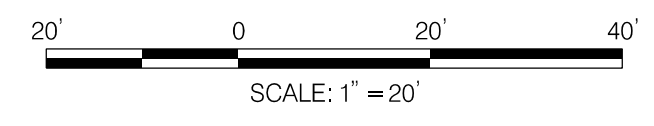
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MATCH LINE STA. 23+00 - SEE SHEET MT-30

- LEGEND**
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GROSVENOR IMPROVEMENTS
MAINTENANCE OF TRAFFIC PLAN
STAGE 3E

SCALE: 1"=20' SHEET 100 of 128



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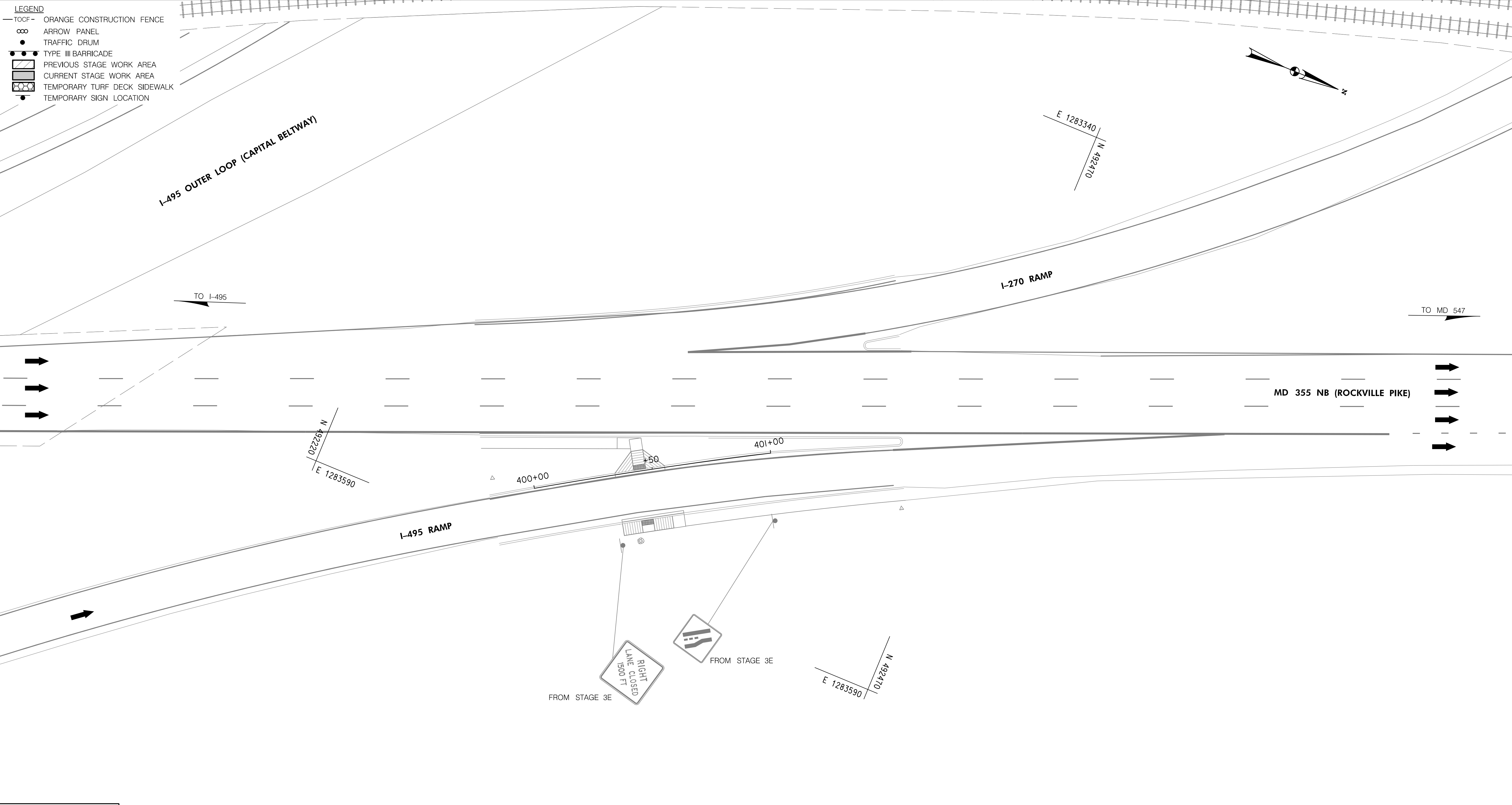
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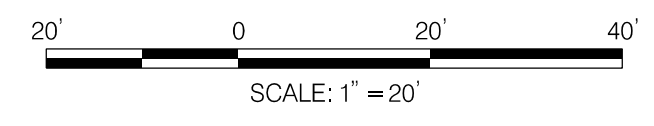
MT-31

11/1/2022 \\US0525-PPFSSO\shared\projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pMT-P3\01_Grosvenor.dgn

- LEGEND**
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 MONTGOMERY COUNTY, MARYLAND

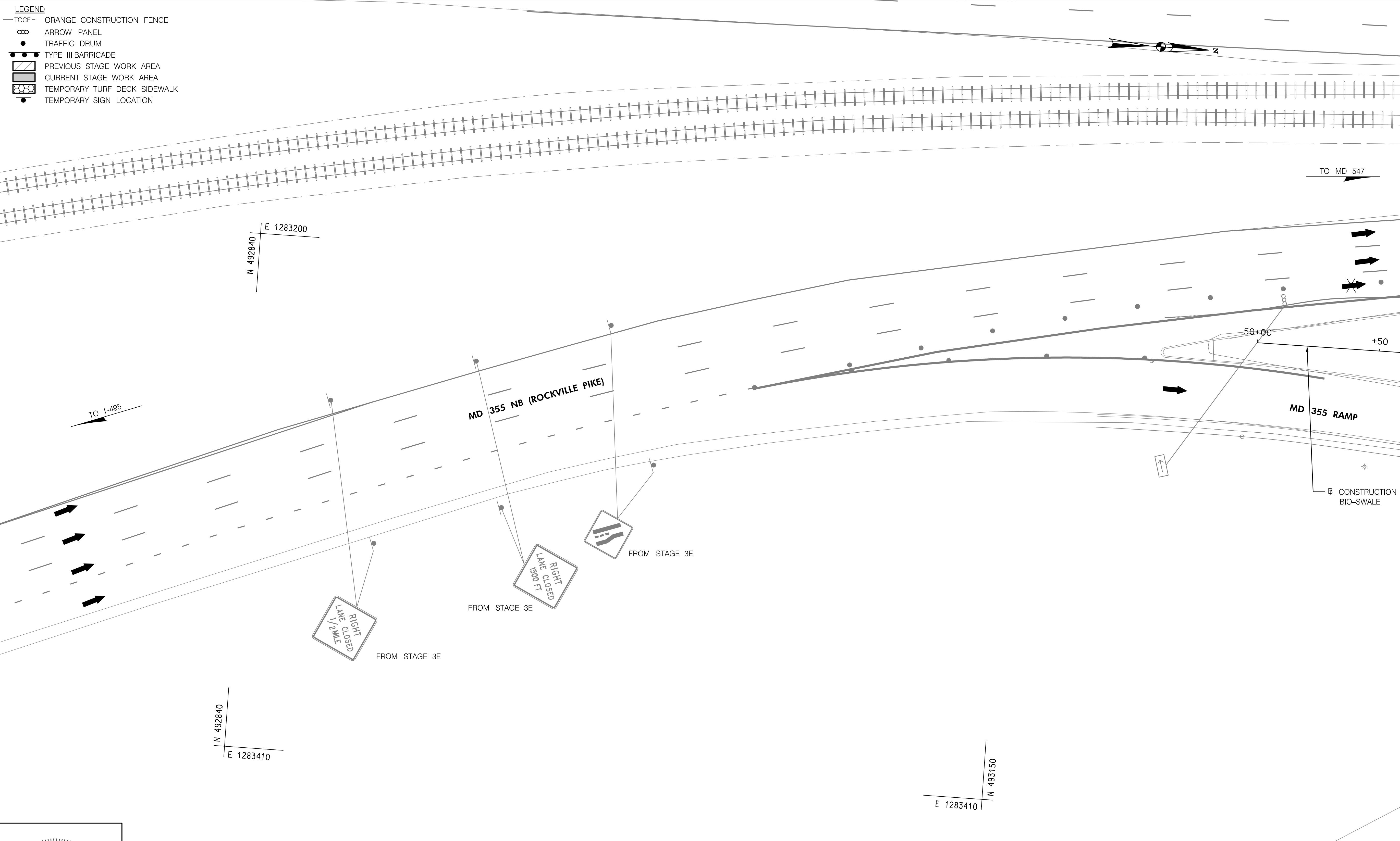
GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 3F

SCALE: 1"=20' SHEET 101 of 128

MT-32

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- LEGEND**
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 - ∞ ARROW PANEL
 - TRAFFIC DRUM
 - TYPE III BARRICADE
 - ▨ PREVIOUS STAGE WORK AREA
 - ▩ CURRENT STAGE WORK AREA
 - ▤ TEMPORARY TURF DECK SIDEWALK
 - TEMPORARY SIGN LOCATION



MATCH LINE - SEE SHEET MT-34

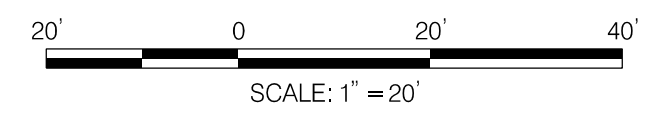
MT-33



PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



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NO.	REVISION	BY	APP'D	DATE

DESIGNED BY: DHM III	DATE: NOVEMBER, 2022
DRAWN BY: DHM III	DATE: NOVEMBER, 2022
CHECKED BY: KCW	DATE: NOVEMBER, 2022
DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL	
Chief, Design Section _____	Date _____
APPROVED	
Chief, Division of Transportation Engineering _____	Date _____

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

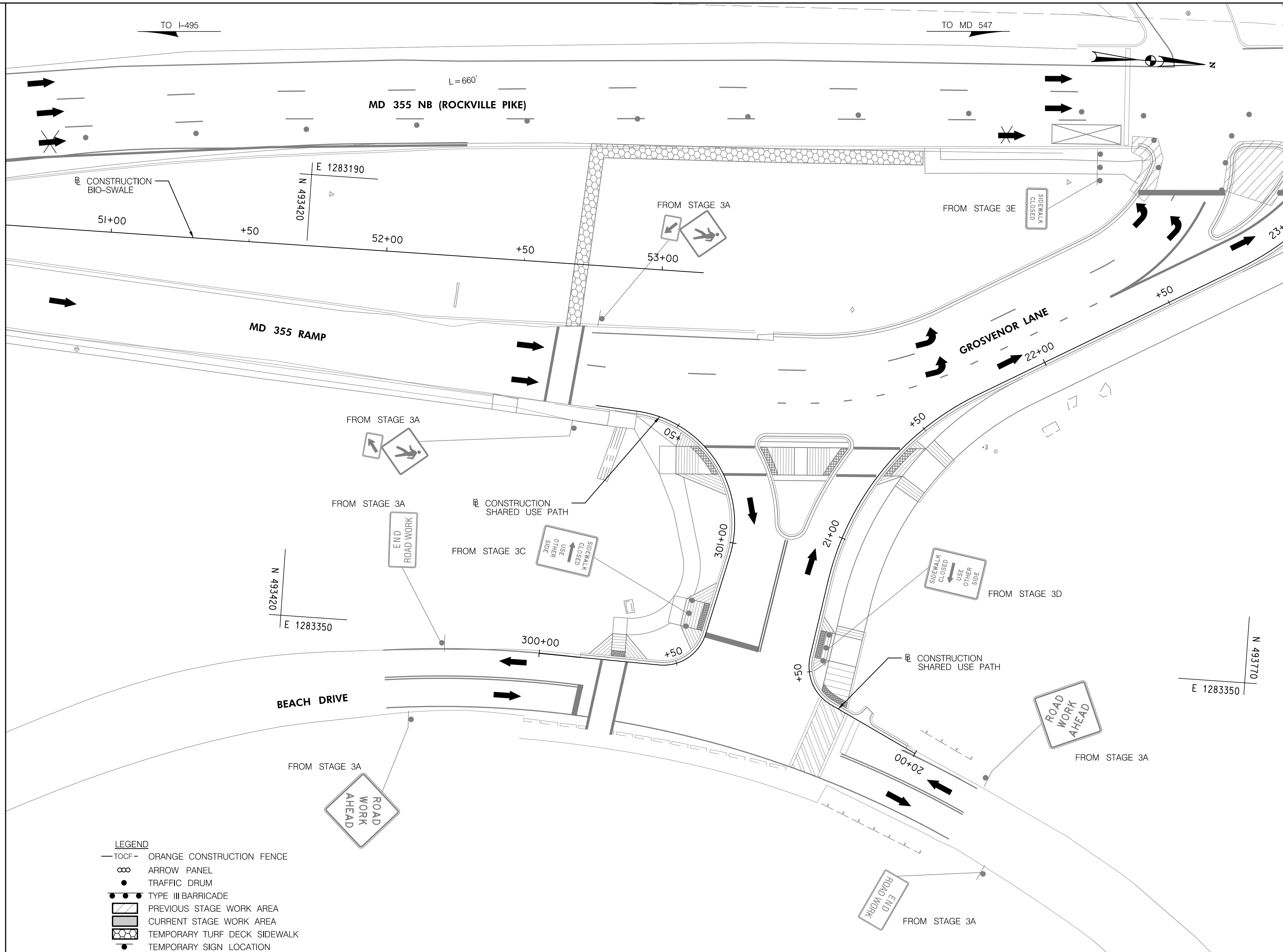
GROSVENOR IMPROVEMENTS
MAINTENANCE OF TRAFFIC PLAN
STAGE 3F

SCALE: 1"=20' SHEET 102 of 128

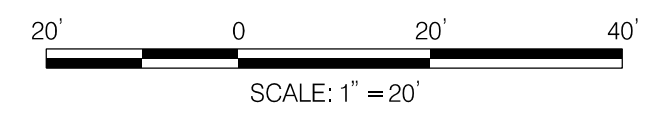
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MATCH LINE - SEE SHEET MT-33

MATCH LINE STA. 23+00 - SEE SHEET MT-35



- LEGEND**
- TOCF — ORANGE CONSTRUCTION FENCE
 - ∞ ARROW PANEL
 - TRAFFIC DRUM
 - TYPE III BARRICADE
 - ▨ PREVIOUS STAGE WORK AREA
 - ▩ CURRENT STAGE WORK AREA
 - ▨ TEMPORARY TURF DECK SIDEWALK
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MONTGOMERY COUNTY, MARYLAND

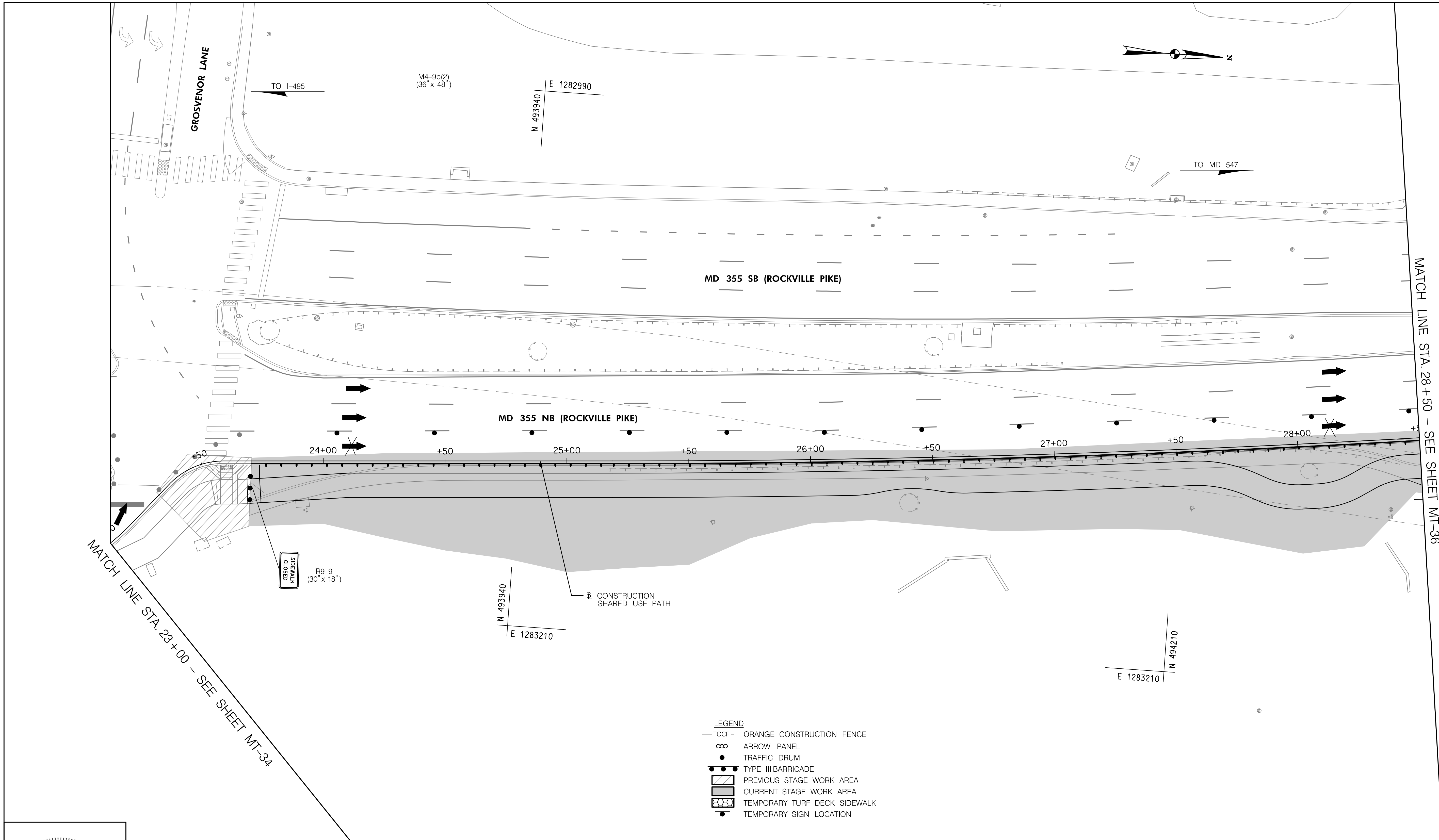
GROSVENOR IMPROVEMENTS
MAINTENANCE OF TRAFFIC PLAN
STAGE 3F

SCALE: 1"=20'

SHEET 103 of 128

MT-34

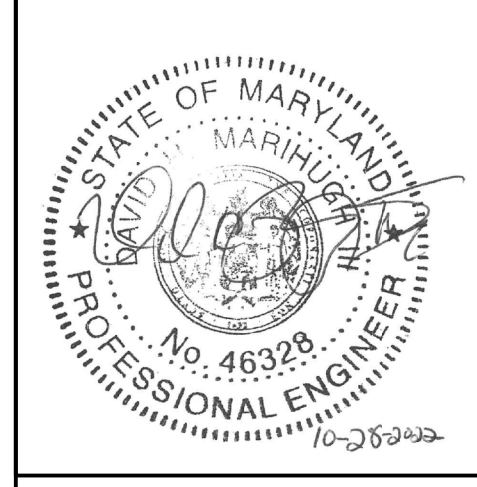
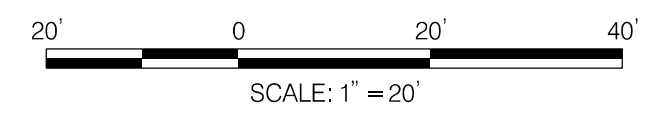
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MATCH LINE STA. 23+00 - SEE SHEET MT-34

MATCH LINE STA. 28+50 - SEE SHEET MT-36

- LEGEND**
- TOCF- ORANGE CONSTRUCTION FENCE
 - ∞ ARROW PANEL
 - TRAFFIC DRUM
 - TYPE III BARRICADE
 - ▨ PREVIOUS STAGE WORK AREA
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 - ⊞ TEMPORARY TURF DECK SIDEWALK
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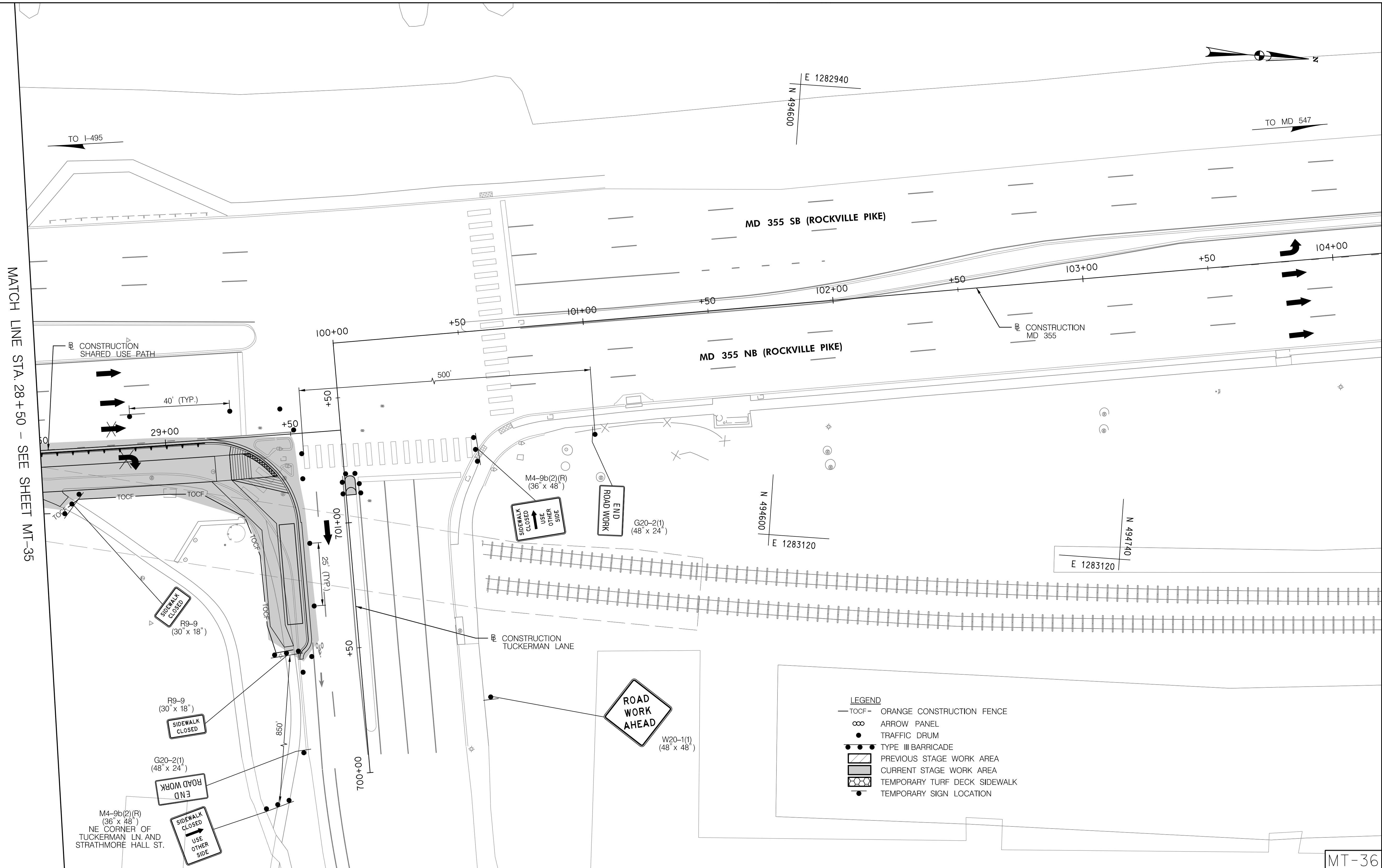
DEPARTMENT OF TRANSPORTATION
 DIVISION OF TRANSPORTATION ENGINEERING
 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 3F

SCALE: 1"=20' SHEET 104 of 128

MT-35

11/1/2022 \\US0525-PFSS01\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pMT-P3\05_Grosvenor.dgn



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SCALE: 1" = 20'

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DEPARTMENT OF TRANSPORTATION
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 MONTGOMERY COUNTY, MARYLAND

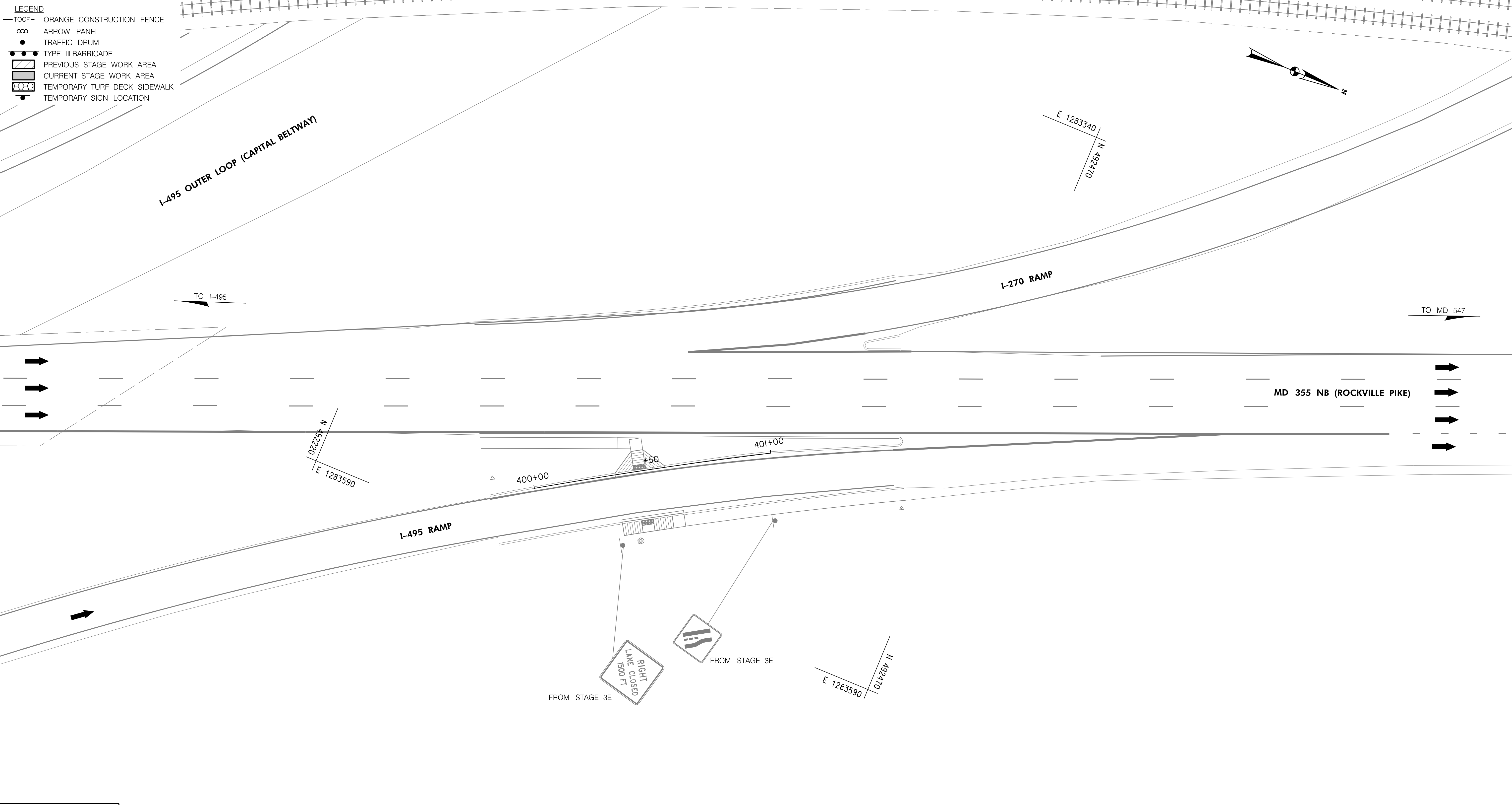
GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 3F

SCALE: 1"=20' SHEET 105 of 128

MT-36

11/1/2022 \\US0525-PPFSSO\shared\projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pMT-P3901_Grosvenor.dgn

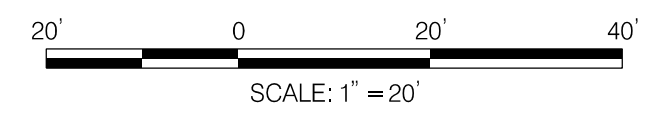
- LEGEND**
- TOCF — ORANGE CONSTRUCTION FENCE
 - ARROW PANEL
 - TRAFFIC DRUM
 - TYPE III BARRICADE
 - ▨ PREVIOUS STAGE WORK AREA
 - ▩ CURRENT STAGE WORK AREA
 - ▤ TEMPORARY TURF DECK SIDEWALK
 - TEMPORARY SIGN LOCATION



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Chief, Division of Transportation Engineering	Date

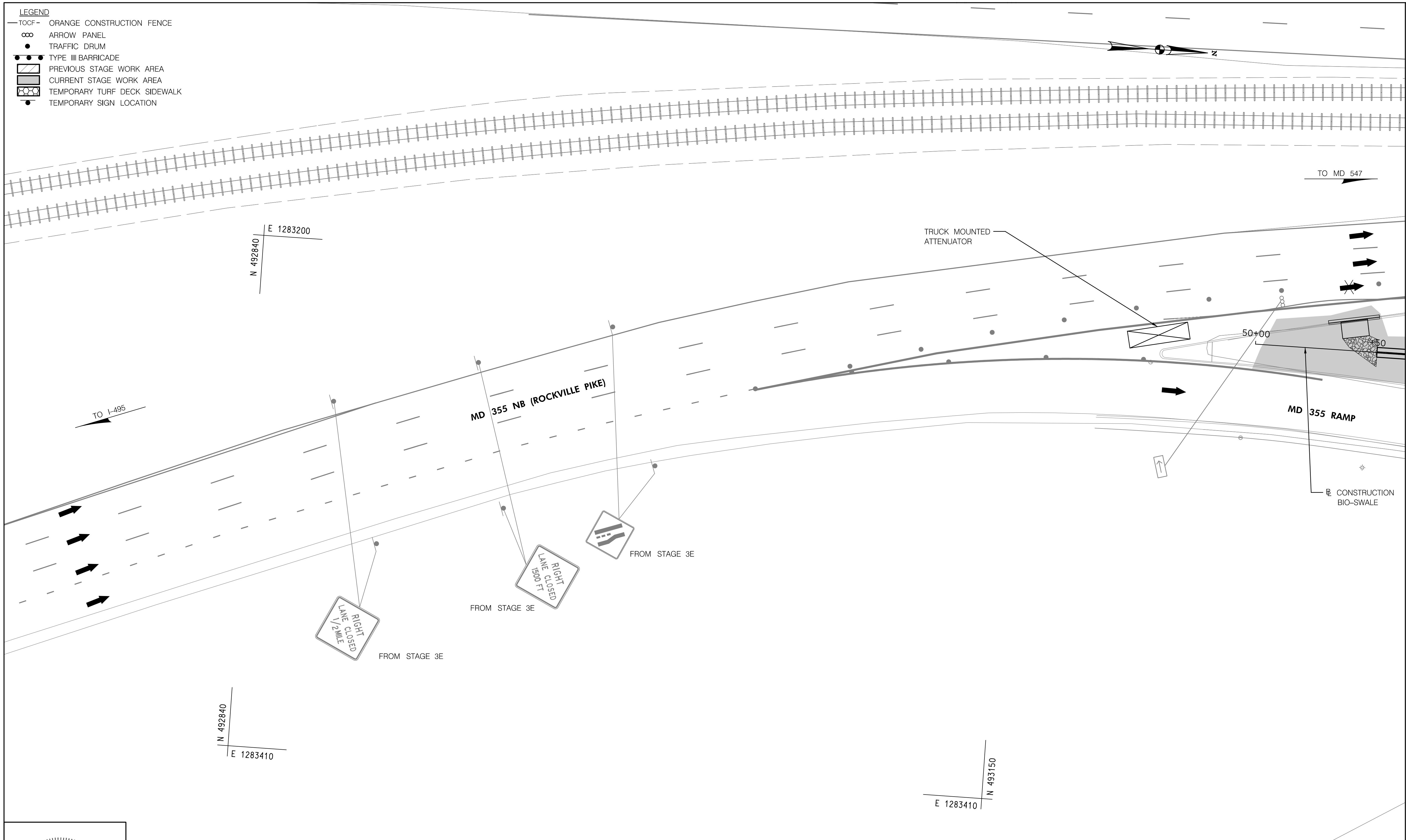
DEPARTMENT OF TRANSPORTATION
 DIVISION OF TRANSPORTATION ENGINEERING
 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 3C

MT-37

11/1/2022 \\US0525-PFSSO\shared_projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pMT-P3g02_Grosvenor.dgn

- LEGEND**
- TOCF — ORANGE CONSTRUCTION FENCE
 - ∞ ARROW PANEL
 - TRAFFIC DRUM
 - TYPE III BARRICADE
 - ▨ PREVIOUS STAGE WORK AREA
 - ▩ CURRENT STAGE WORK AREA
 - ▤ TEMPORARY TURF DECK SIDEWALK
 - TEMPORARY SIGN LOCATION



MATCH LINE - SEE SHEET MT-39

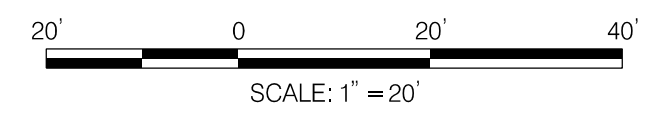
MT-38



PROFESSIONAL CERTIFICATION:
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
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Chief, Division of Transportation Engineering _____	Date _____

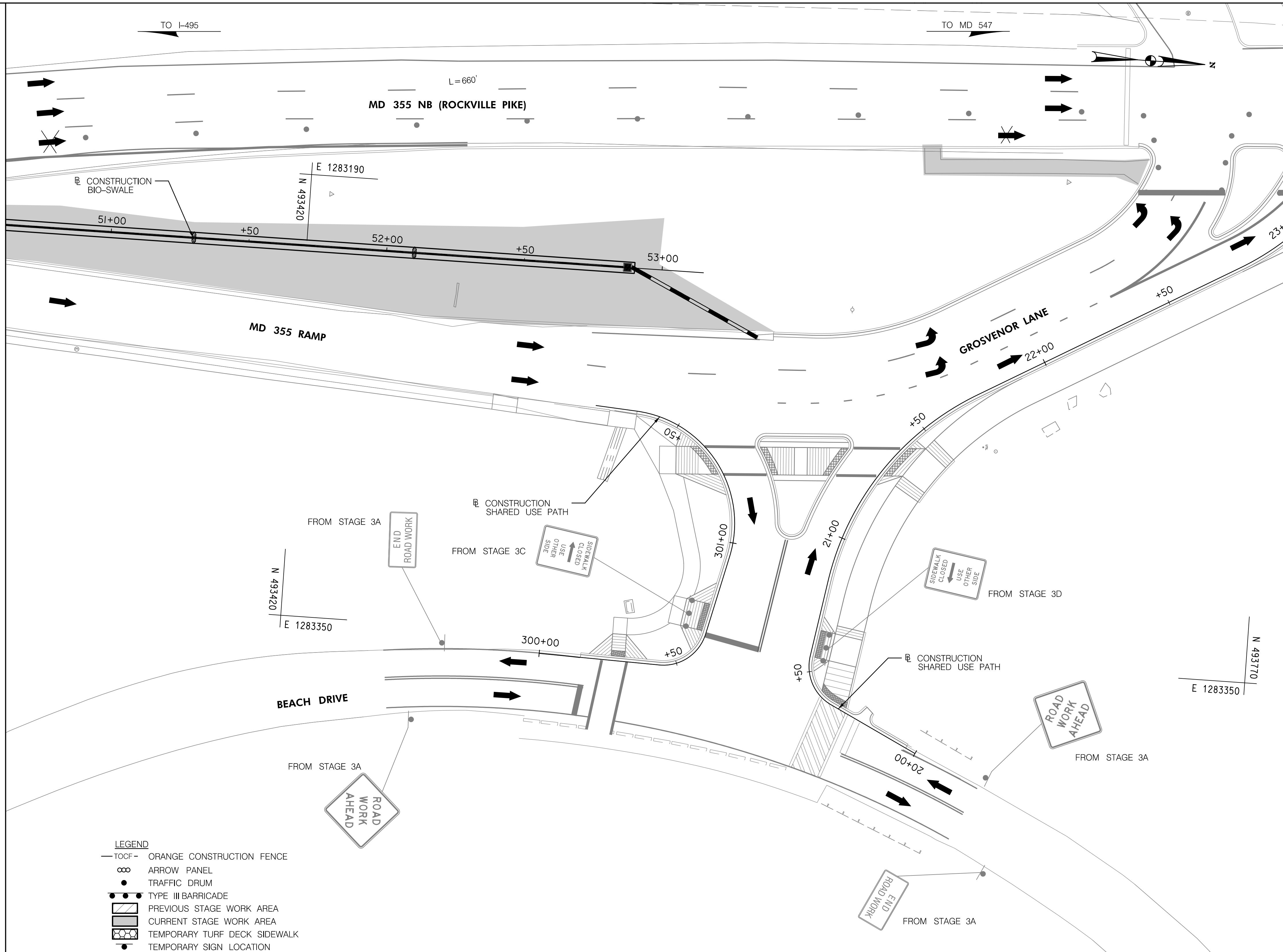
DEPARTMENT OF TRANSPORTATION
 DIVISION OF TRANSPORTATION ENGINEERING
 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 3C

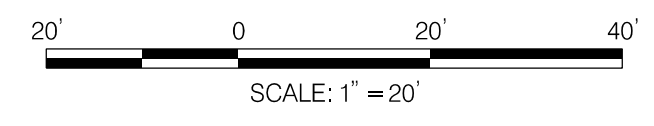
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MATCH LINE - SEE SHEET MT-38

MATCH LINE STA. 23+00 - SEE SHEET MT-40



- LEGEND**
- TOCF — ORANGE CONSTRUCTION FENCE
 - ∞ ARROW PANEL
 - TRAFFIC DRUM
 - TYPE III BARRICADE
 - ▨ PREVIOUS STAGE WORK AREA
 - ▩ CURRENT STAGE WORK AREA
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APPROVED	
Chief, Division of Transportation Engineering	Date

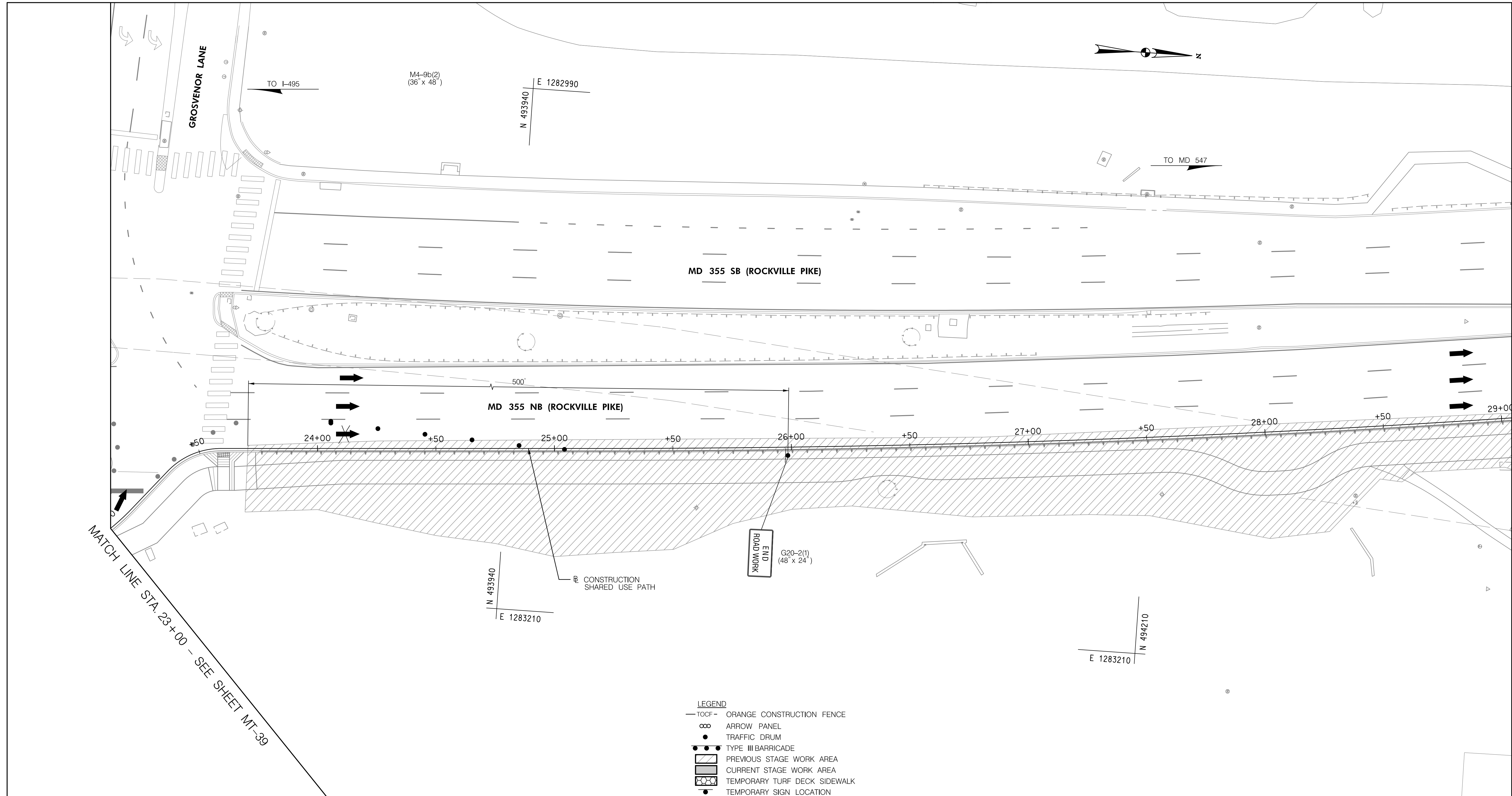
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 3C

SCALE: 1"=20' SHEET 108 of 128

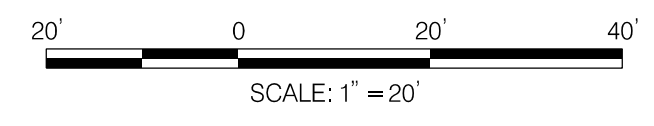
MT-39

11/1/2022 \\US0525-PPFSSO\shared_projects\2026011401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pMT-P3g04_Grosvenor.dgn



MATCH LINE STA. 23+00 - SEE SHEET MT-39

- LEGEND**
- TOCF - ORANGE CONSTRUCTION FENCE
 - ∞ ARROW PANEL
 - TRAFFIC DRUM
 - TYPE III BARRICADE
 - ▨ PREVIOUS STAGE WORK AREA
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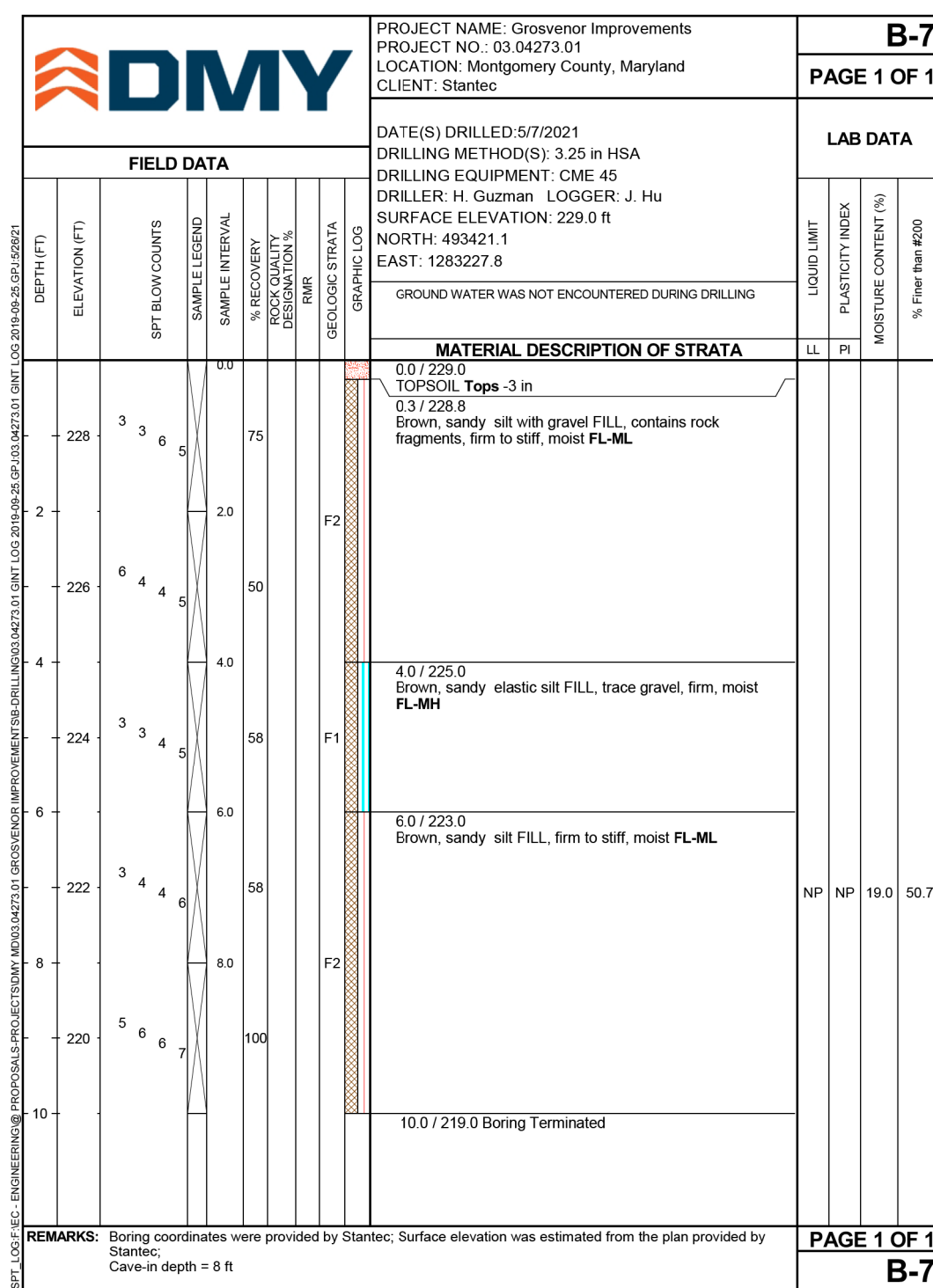
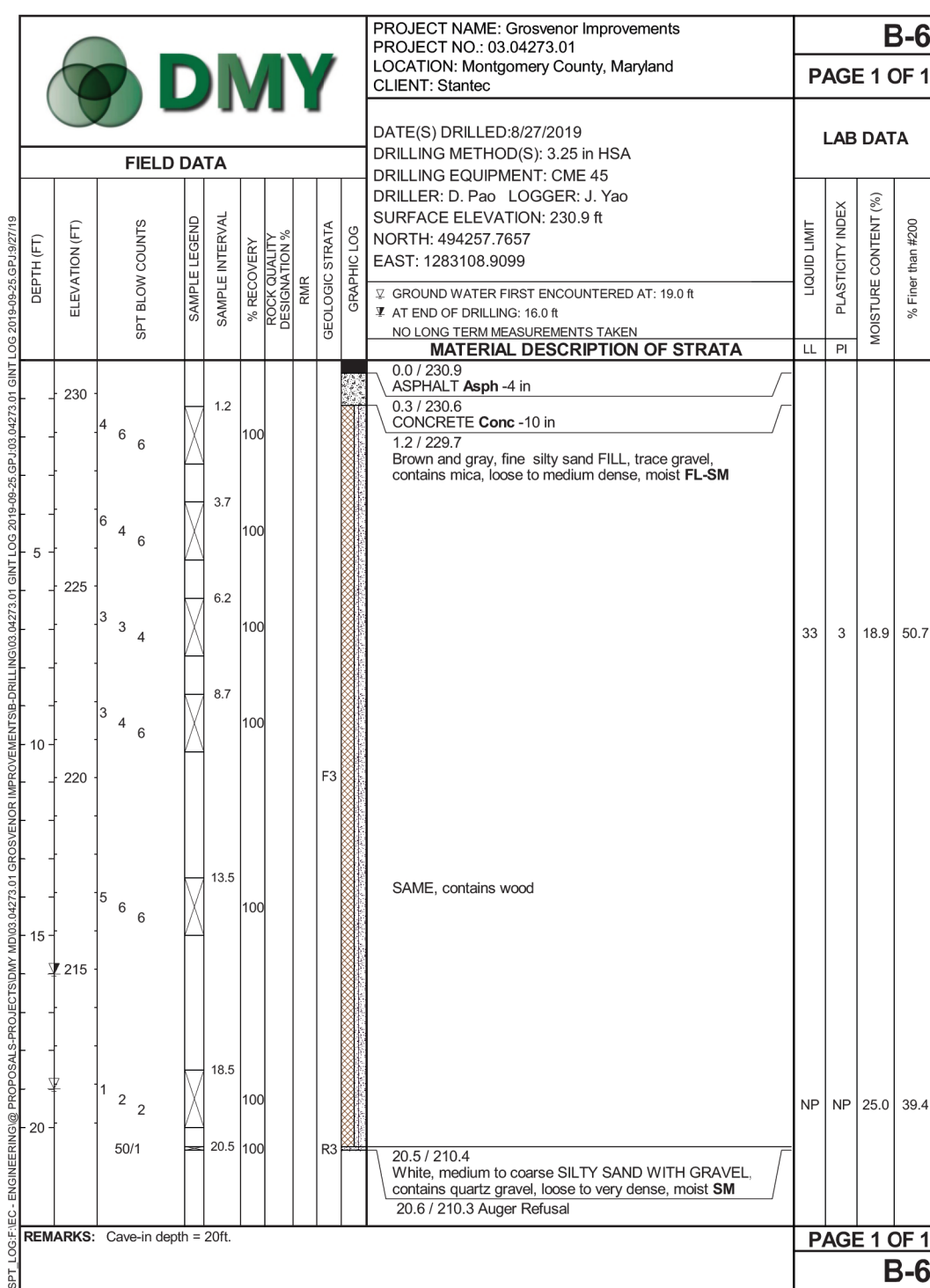
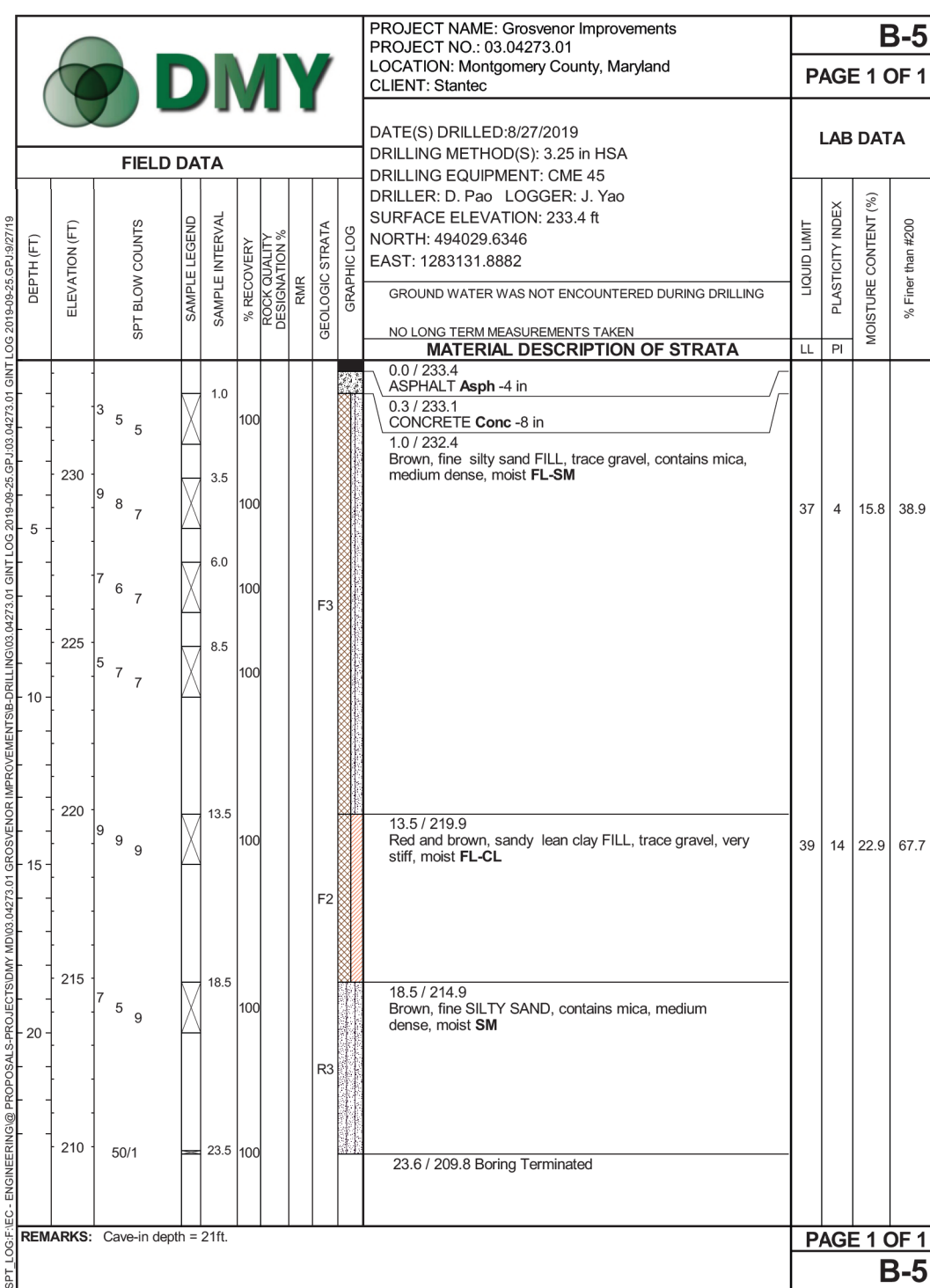
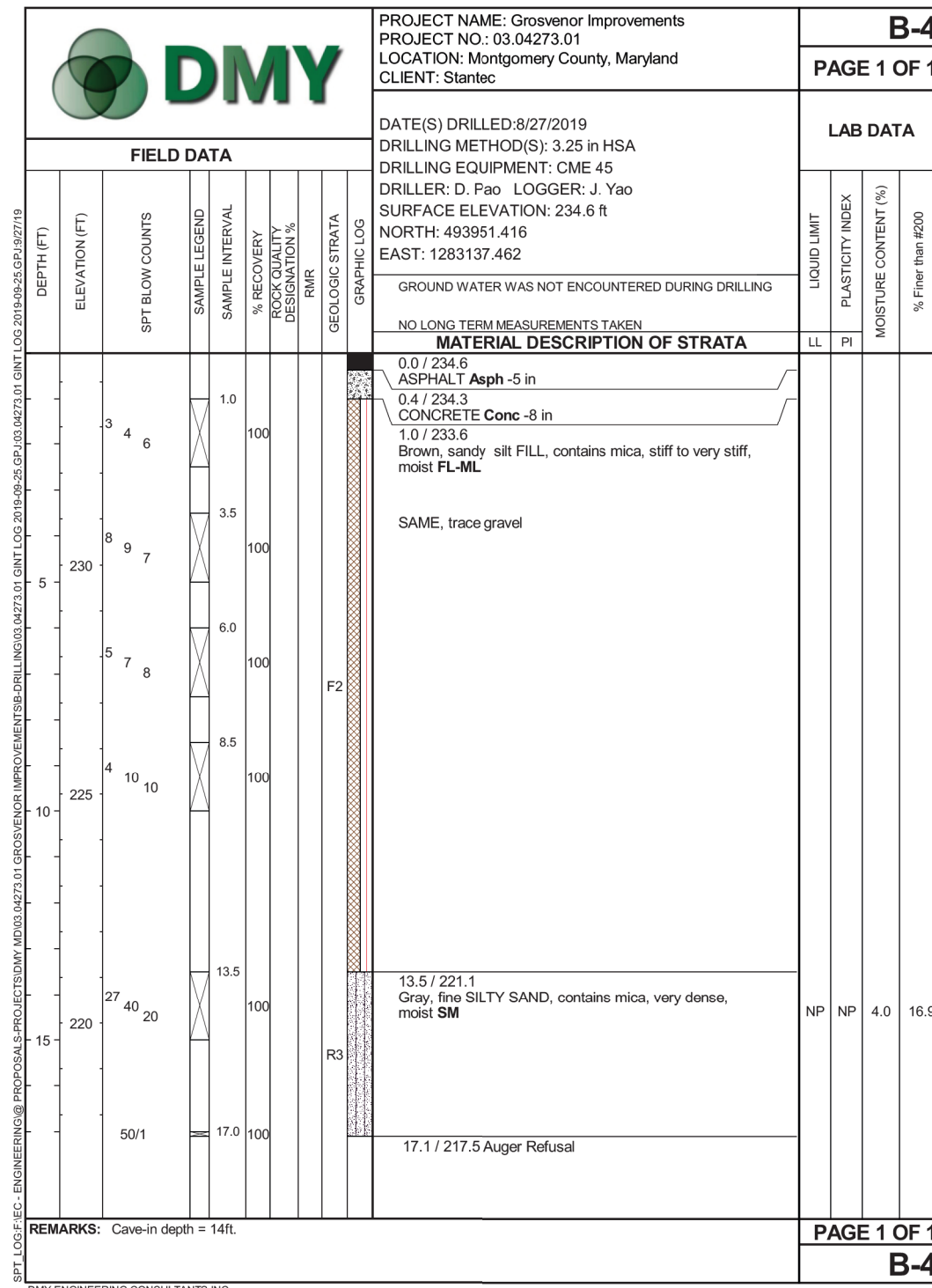
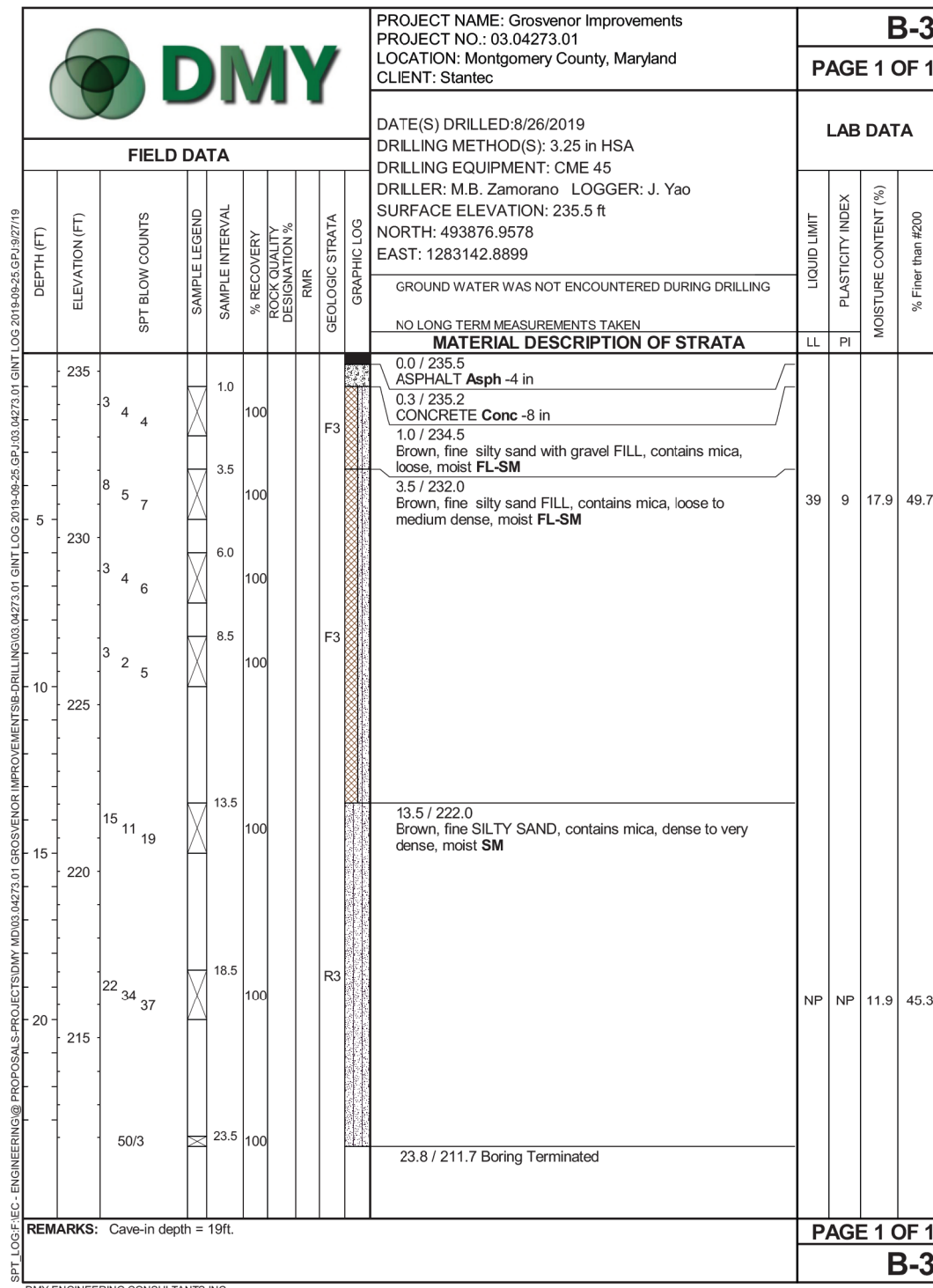
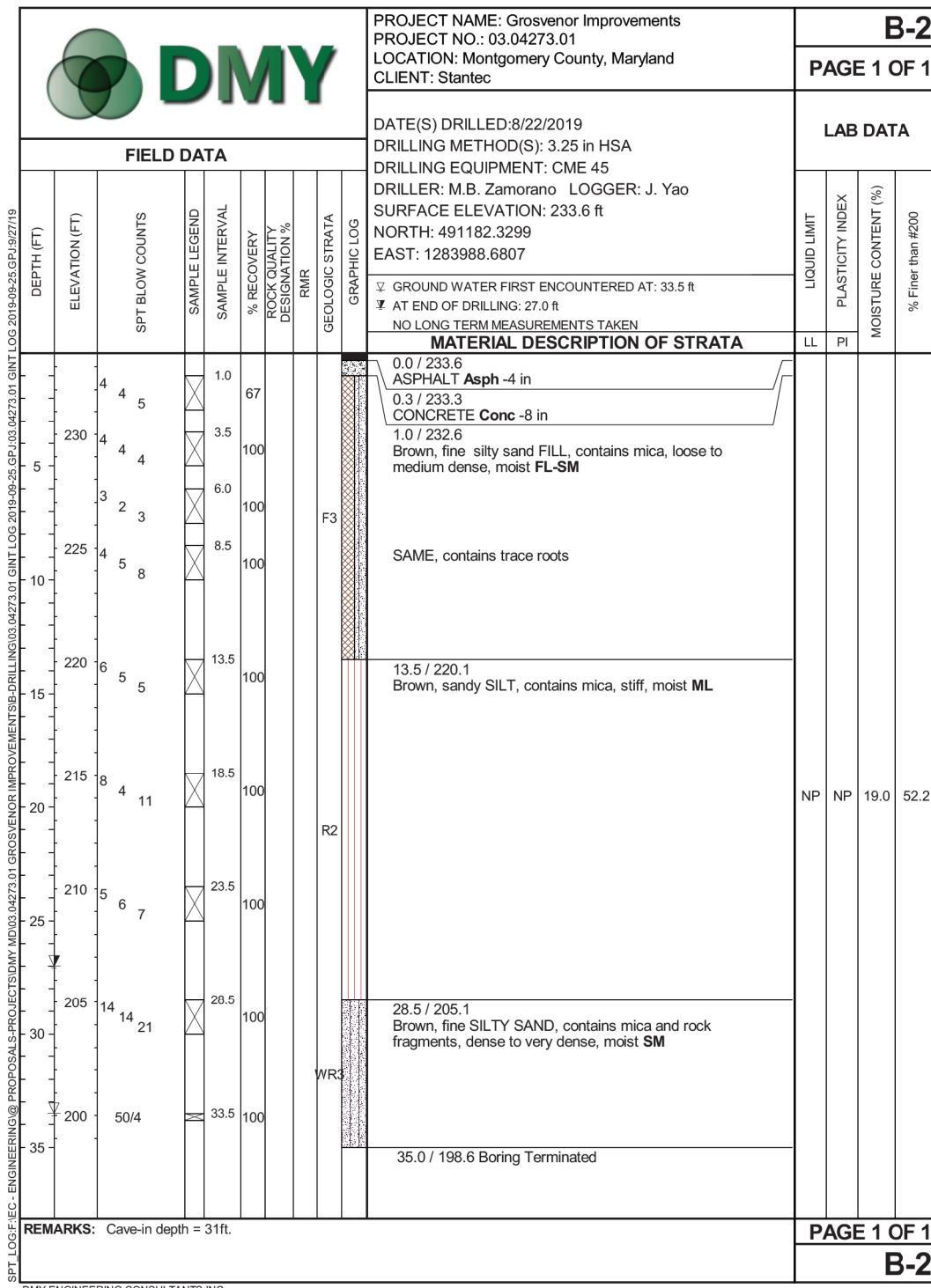
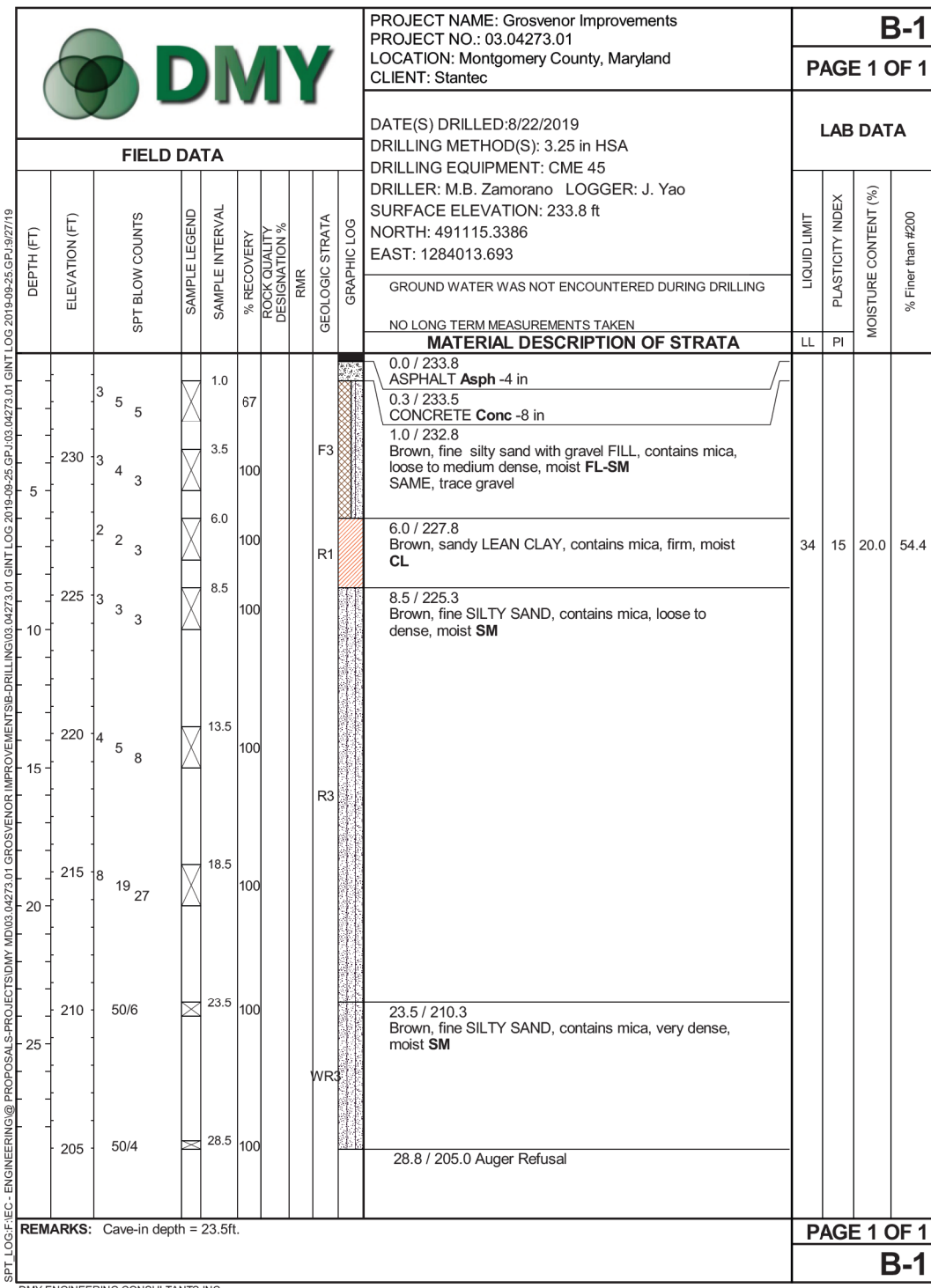
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 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 MAINTENANCE OF TRAFFIC PLAN
 STAGE 3C

SCALE: 1"=20' SHEET 109 of 128

MT-40



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Chief, Design Section					Date	
APPROVED						
Chief, Division of Transportation Engineering					Date	

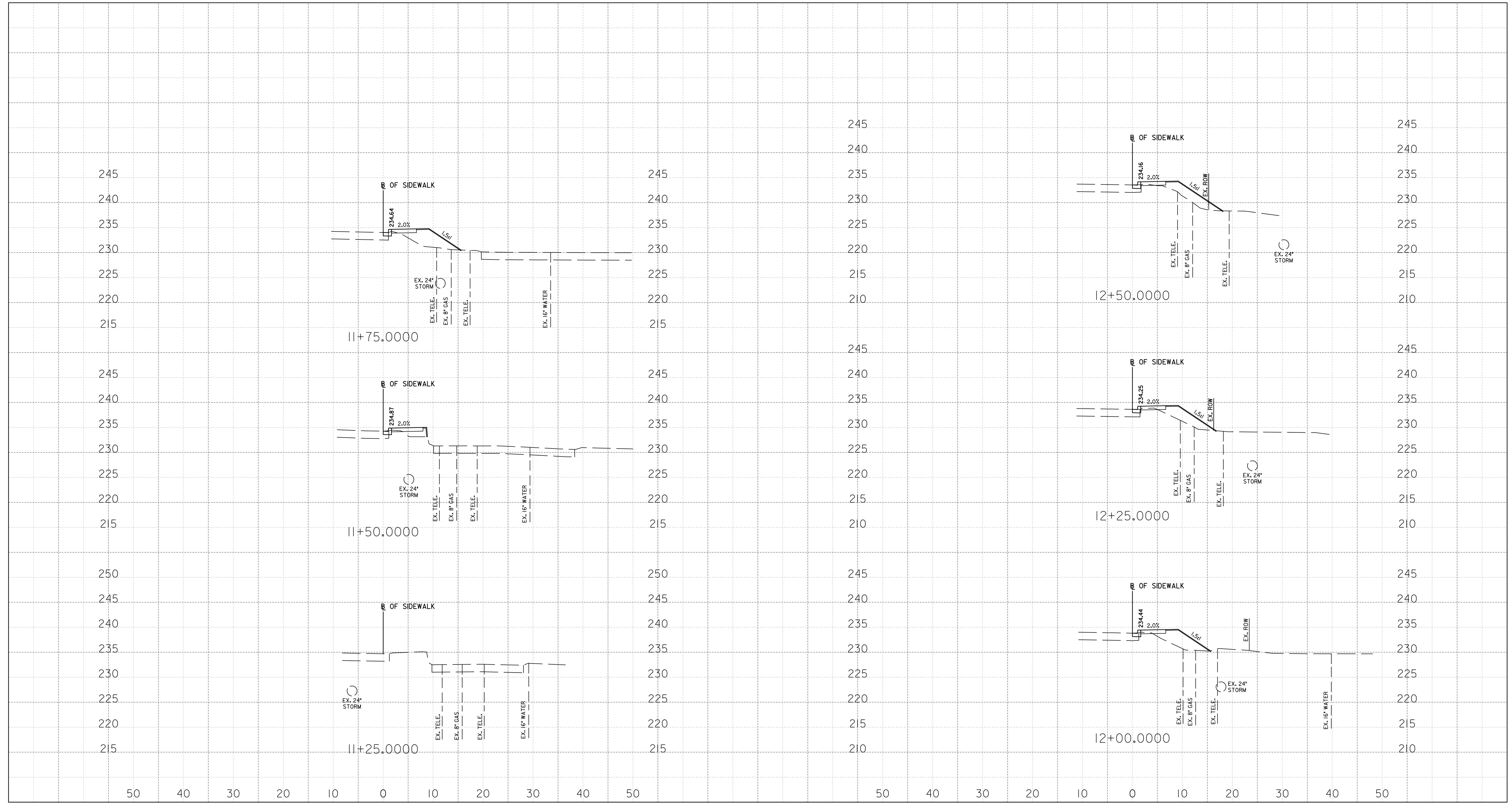
SC 21 OF 26 SB-01

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 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 SOIL BORING LOGS

SCALE: N.T.S. SHEET 110 of 128

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XS-01



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NO.	REVISION	BY	APP'D	DATE

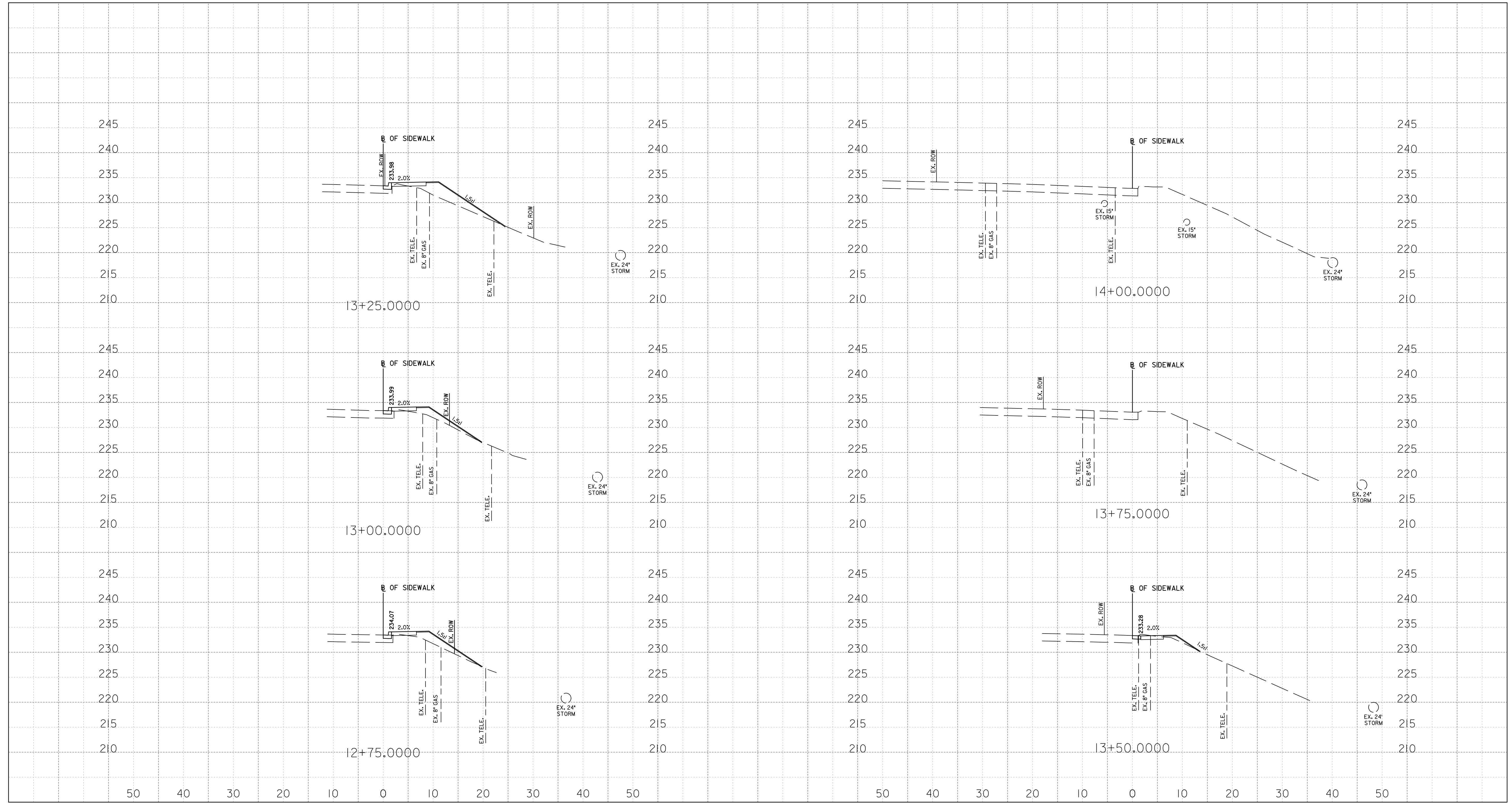
DESIGNED BY: KL	DATE: NOVEMBER, 2022
DRAWN BY: KL	DATE: NOVEMBER, 2022
CHECKED BY: DHM III	DATE: NOVEMBER, 2022
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DEPARTMENT OF TRANSPORTATION
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 MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
 MD 355
 ROADWAY CROSS SECTIONS

SCALE: 1"=10' SHEET 112 of 128

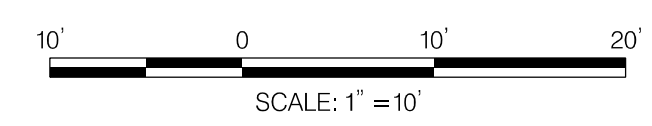
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XS-02



PROFESSIONAL CERTIFICATION:
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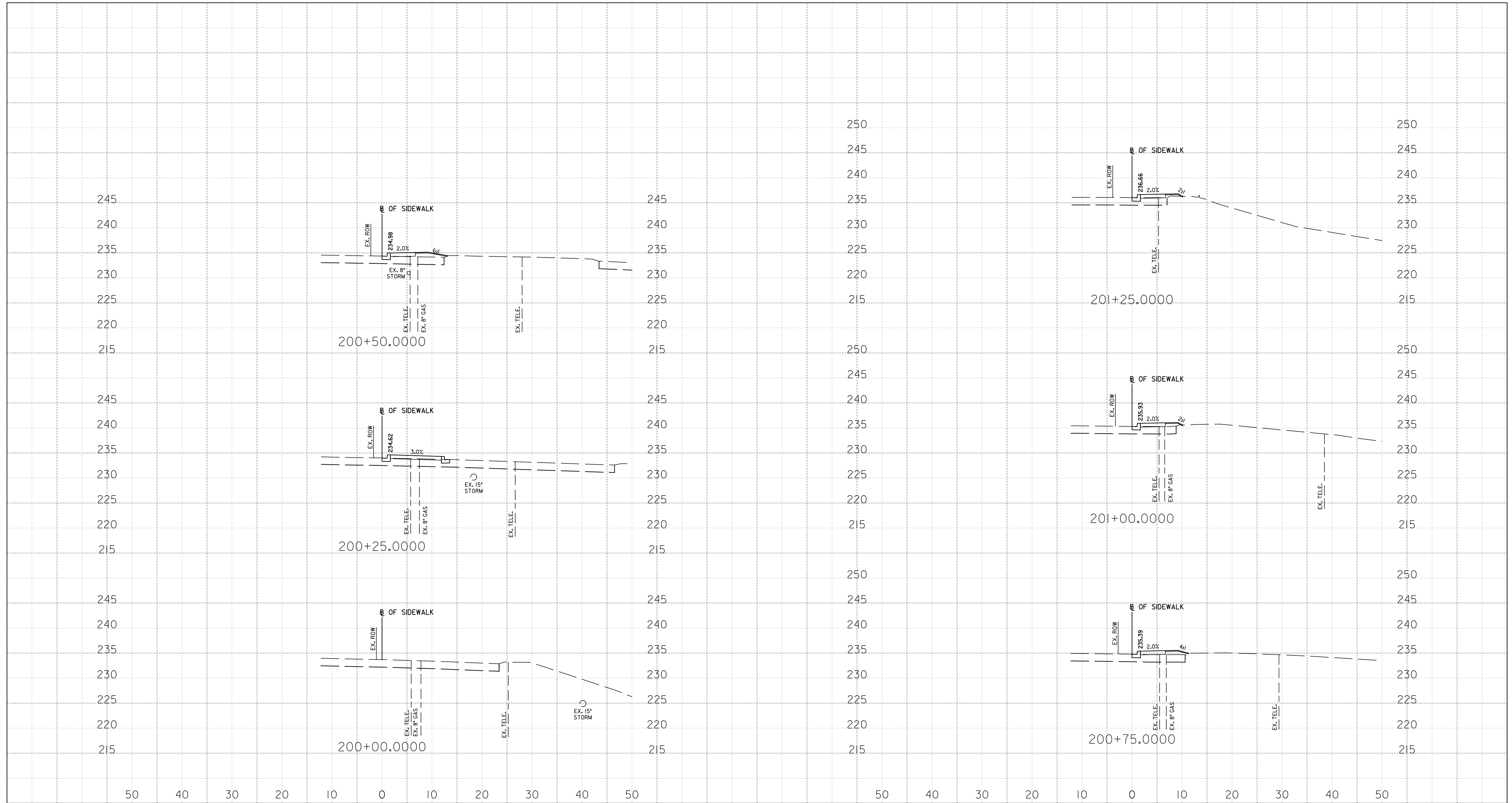
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Chief, Division of Transportation Engineering _____	Date _____

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GROSVENOR IMPROVEMENTS
 MD 355
 ROADWAY CROSS SECTIONS

11/1/2022 \\US0525-PPFSSO\shared\projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pbc-X002-Grosvenor.dgn



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DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

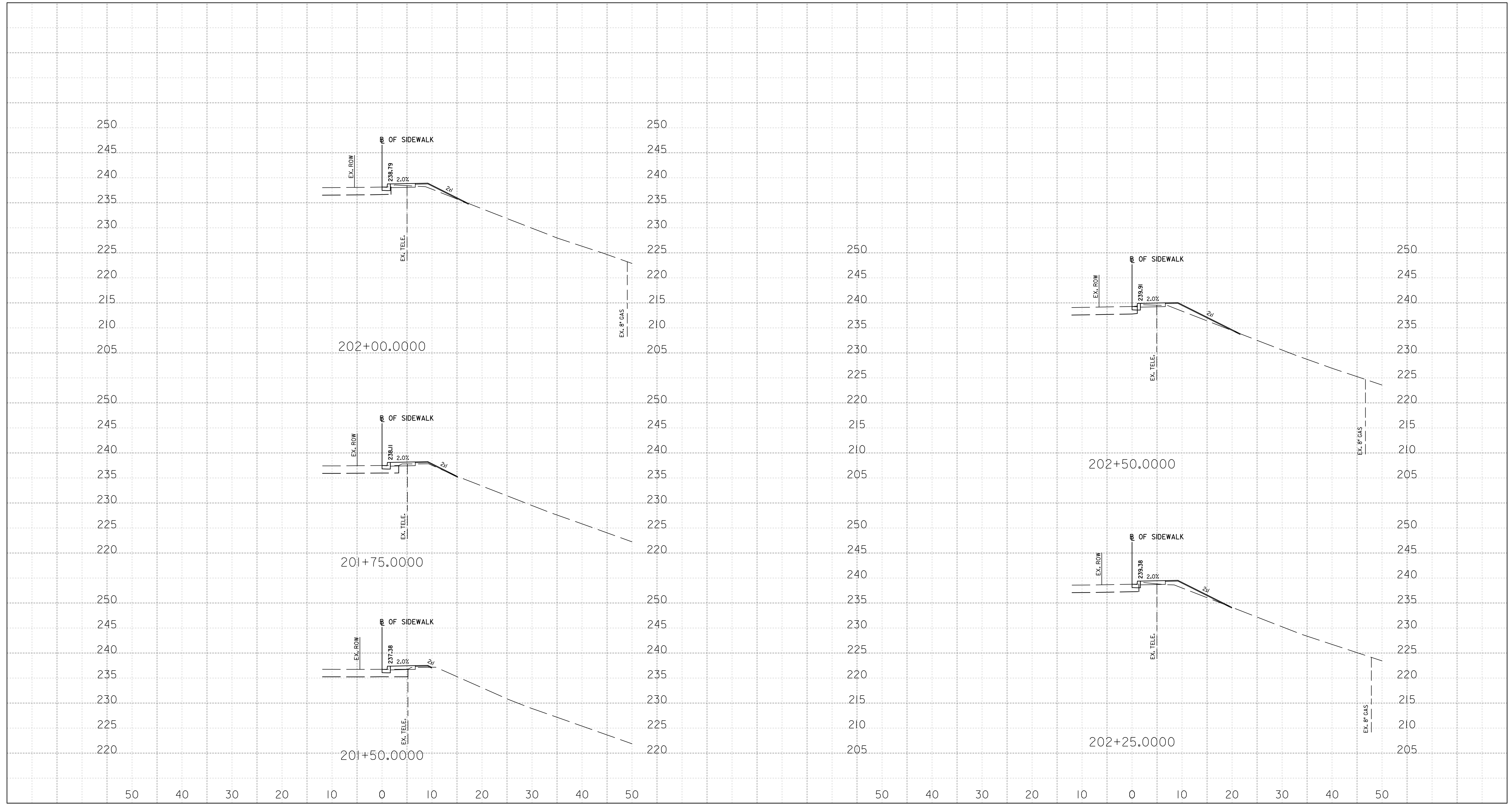
GROSVENOR IMPROVEMENTS
MD 355
ROADWAY CROSS SECTIONS

SCALE: 1"=10'

SHEET 114 of 128

XS-03

11/1/2022 \\US0525-PPFSSO\shared\projects\202601401\27 BPPA - Grosvenor Project\700 CADD\700 Sheet\pHC-X002_Grosvenor.dgn



XS-04



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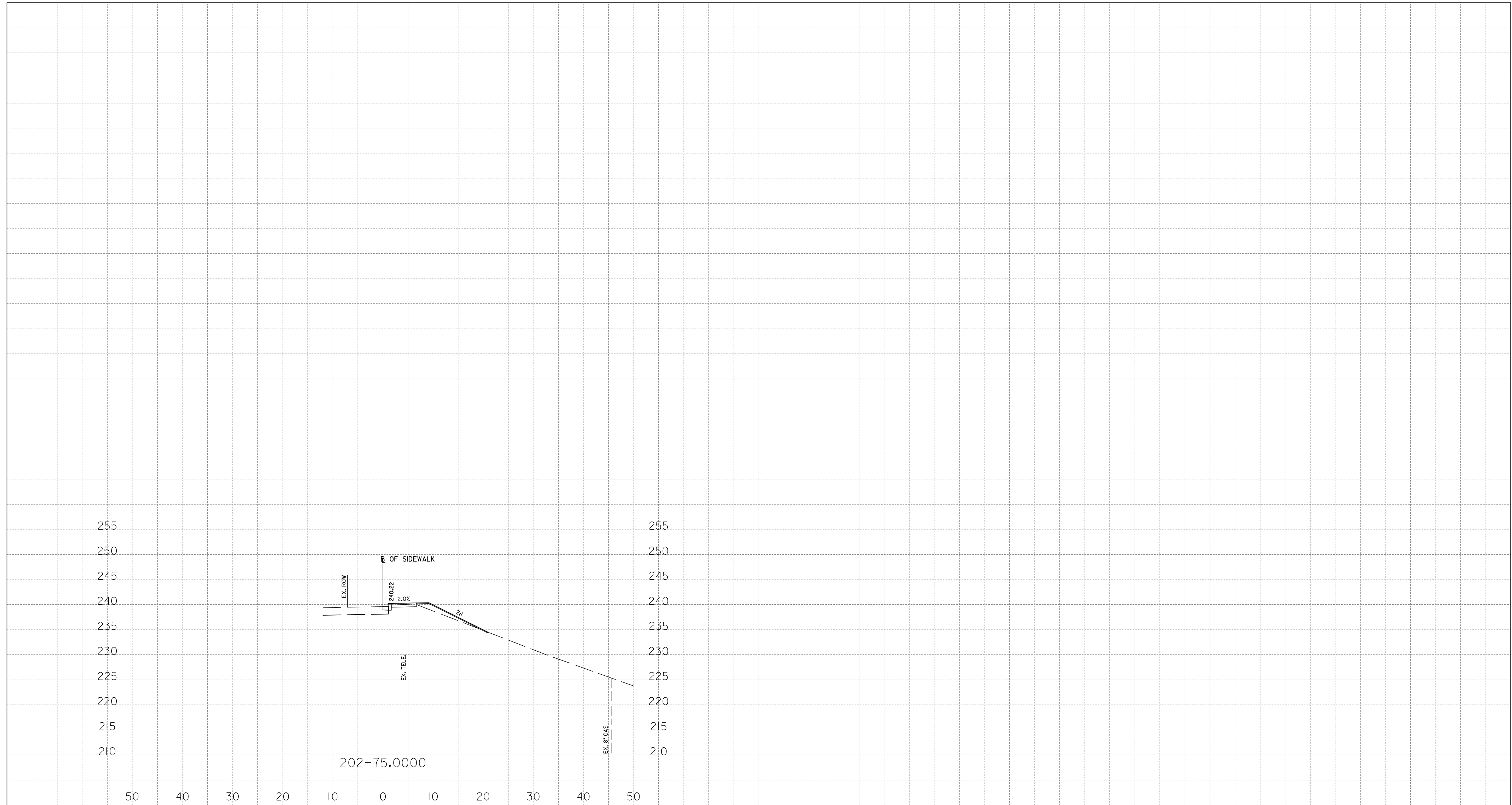
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APPROVED	
Chief, Division of Transportation Engineering _____	Date _____

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DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
MD 355
ROADWAY CROSS SECTIONS

SCALE: 1"=10' SHEET 115 of 128

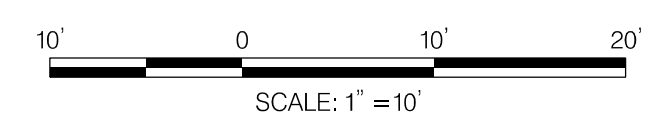
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XS-05



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LICENSE NO: 46328 EXPIRATION DATE: 12/31/2022



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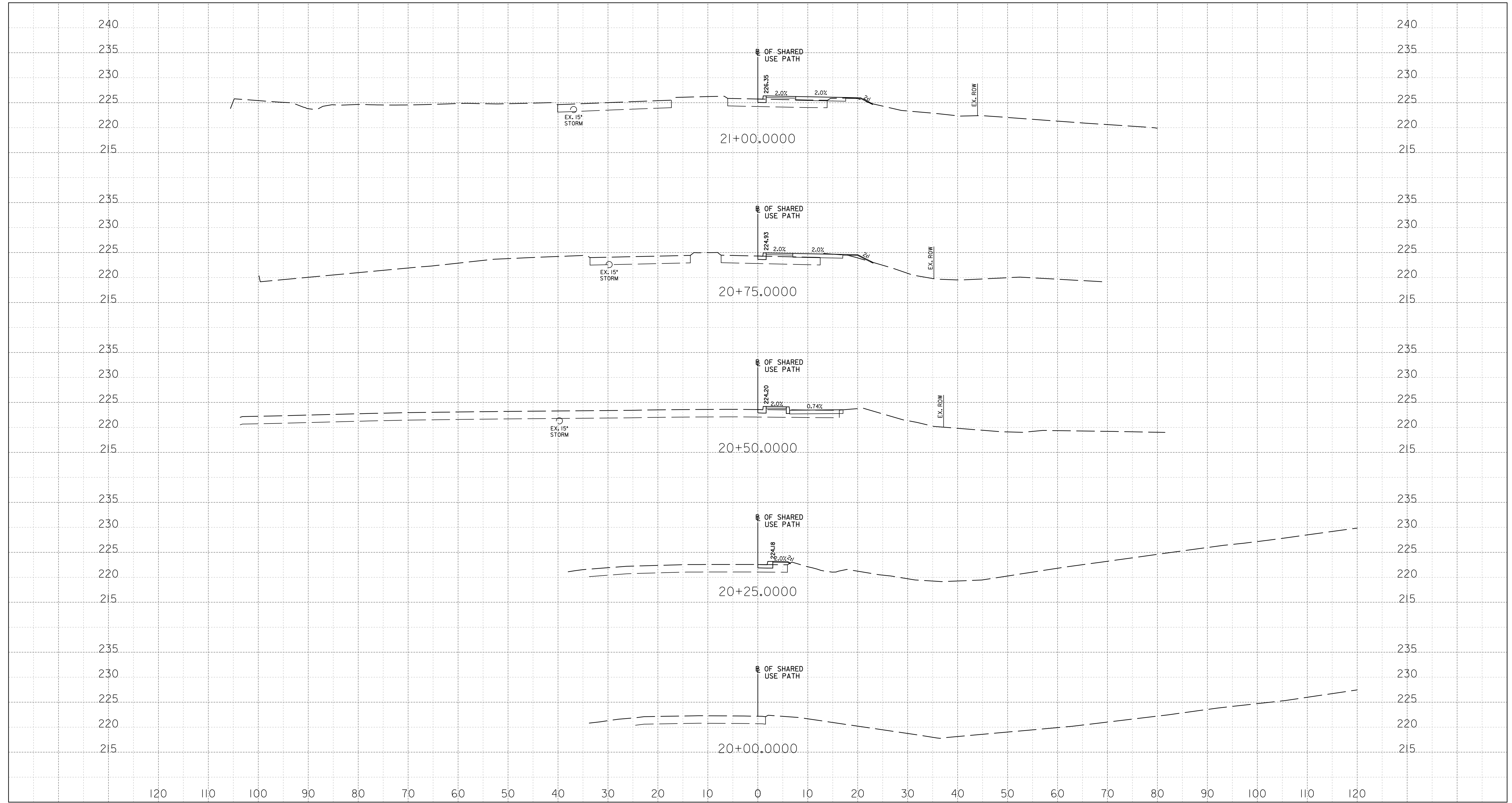
DESIGNED BY: KL	DATE: NOVEMBER, 2022
DRAWN BY: KL	DATE: NOVEMBER, 2022
CHECKED BY: DHM III	DATE: NOVEMBER, 2022
DRAWING NO.:	DATE:
RECOMMENDED FOR APPROVAL	
Chief, Design Section _____	Date _____
APPROVED	
Chief, Division of Transportation Engineering _____	Date _____

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
MD 355
ROADWAY CROSS SECTIONS

SCALE: 1"=10' SHEET 116 of 128

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XS-06



PROFESSIONAL CERTIFICATION:
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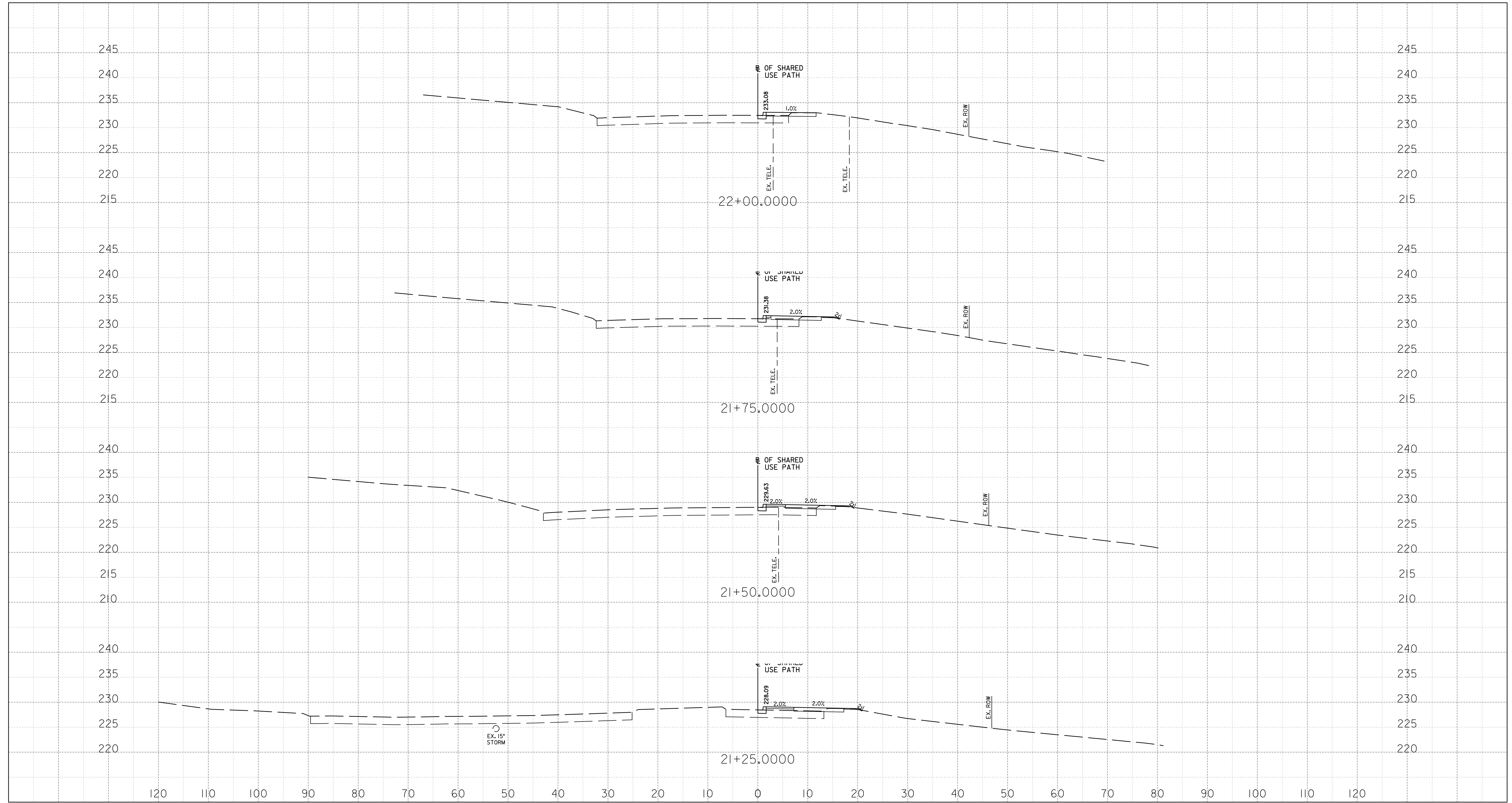
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GROSVENOR IMPROVEMENTS
MD 355
ROADWAY CROSS SECTIONS

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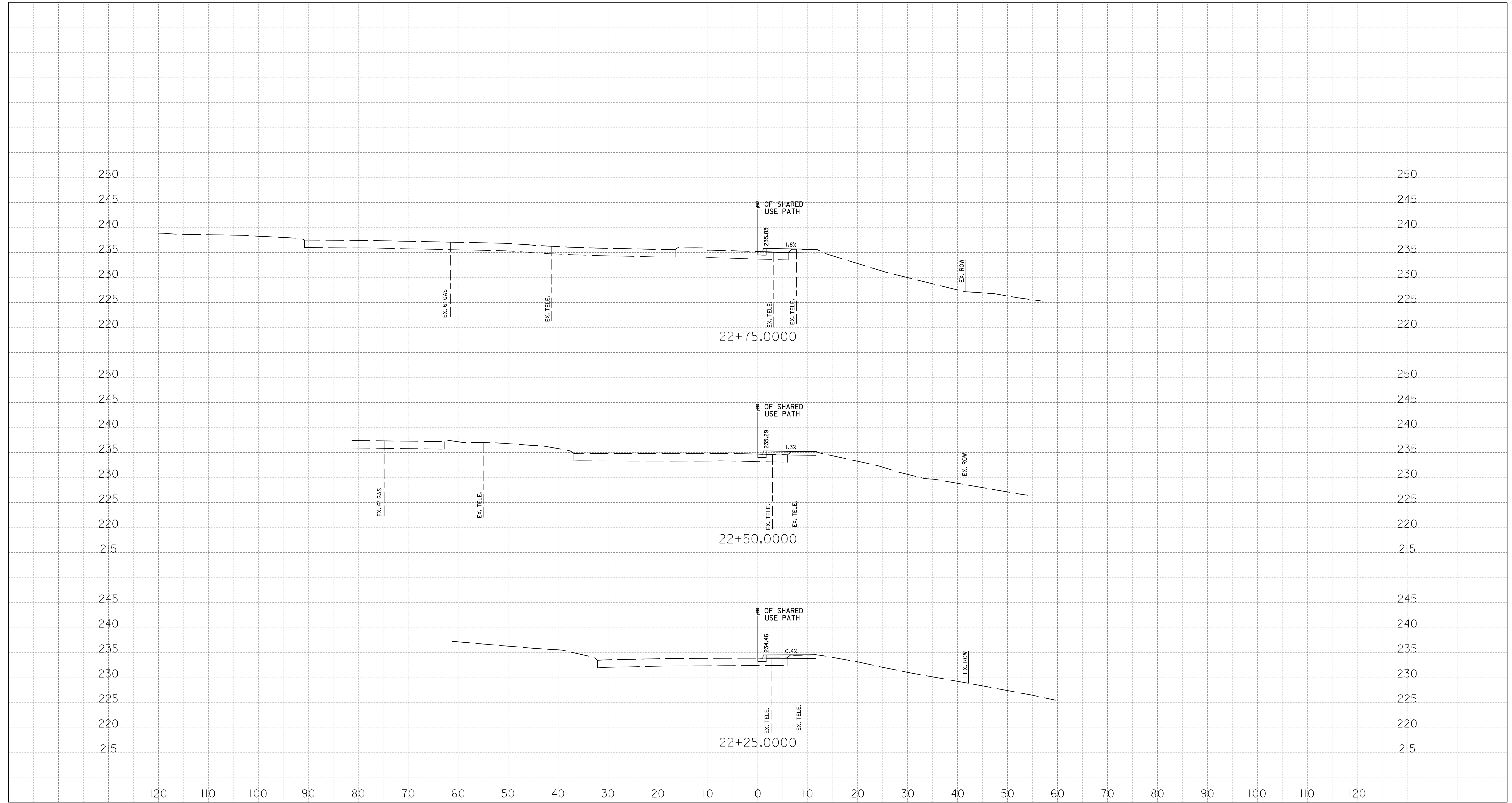
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
MD 355
ROADWAY CROSS SECTIONS

SCALE: 1"=10' SHEET 118 of 128

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XS-08



PROFESSIONAL CERTIFICATION:
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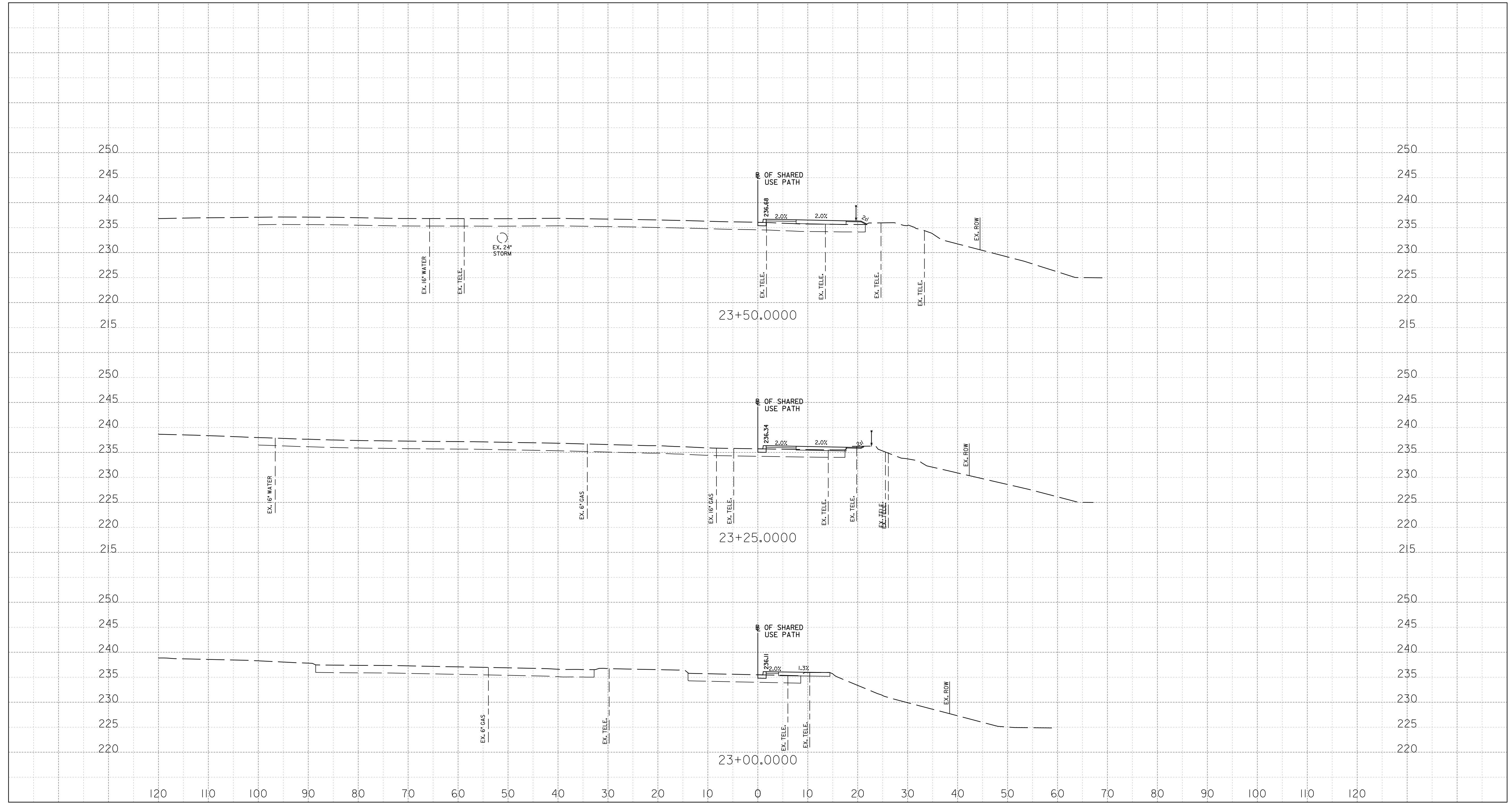
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MONTGOMERY COUNTY, MARYLAND

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SCALE: 1"=10' SHEET 119 of 128

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PROFESSIONAL CERTIFICATION:
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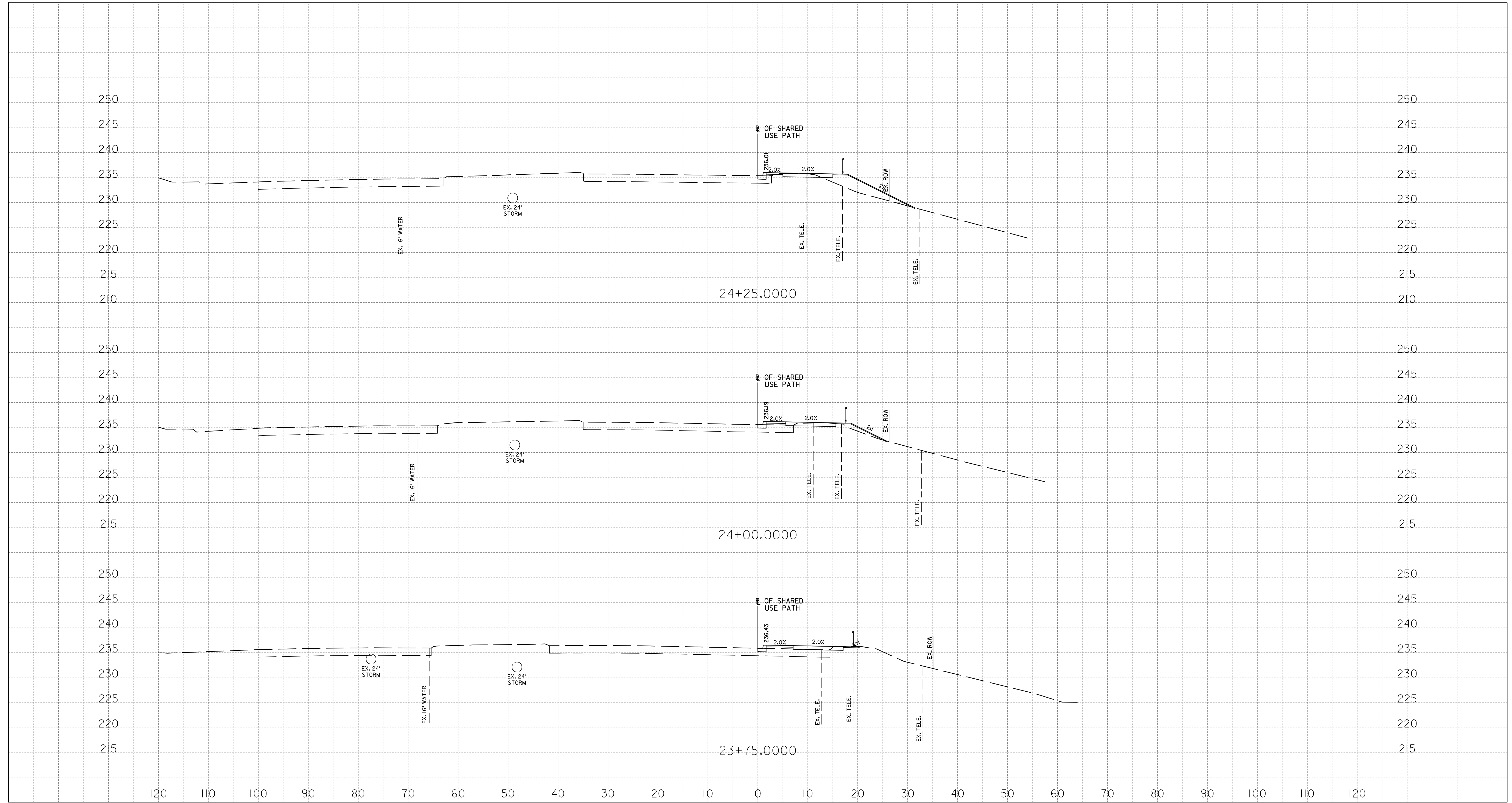
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XS-09

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XS-10



PROFESSIONAL CERTIFICATION:
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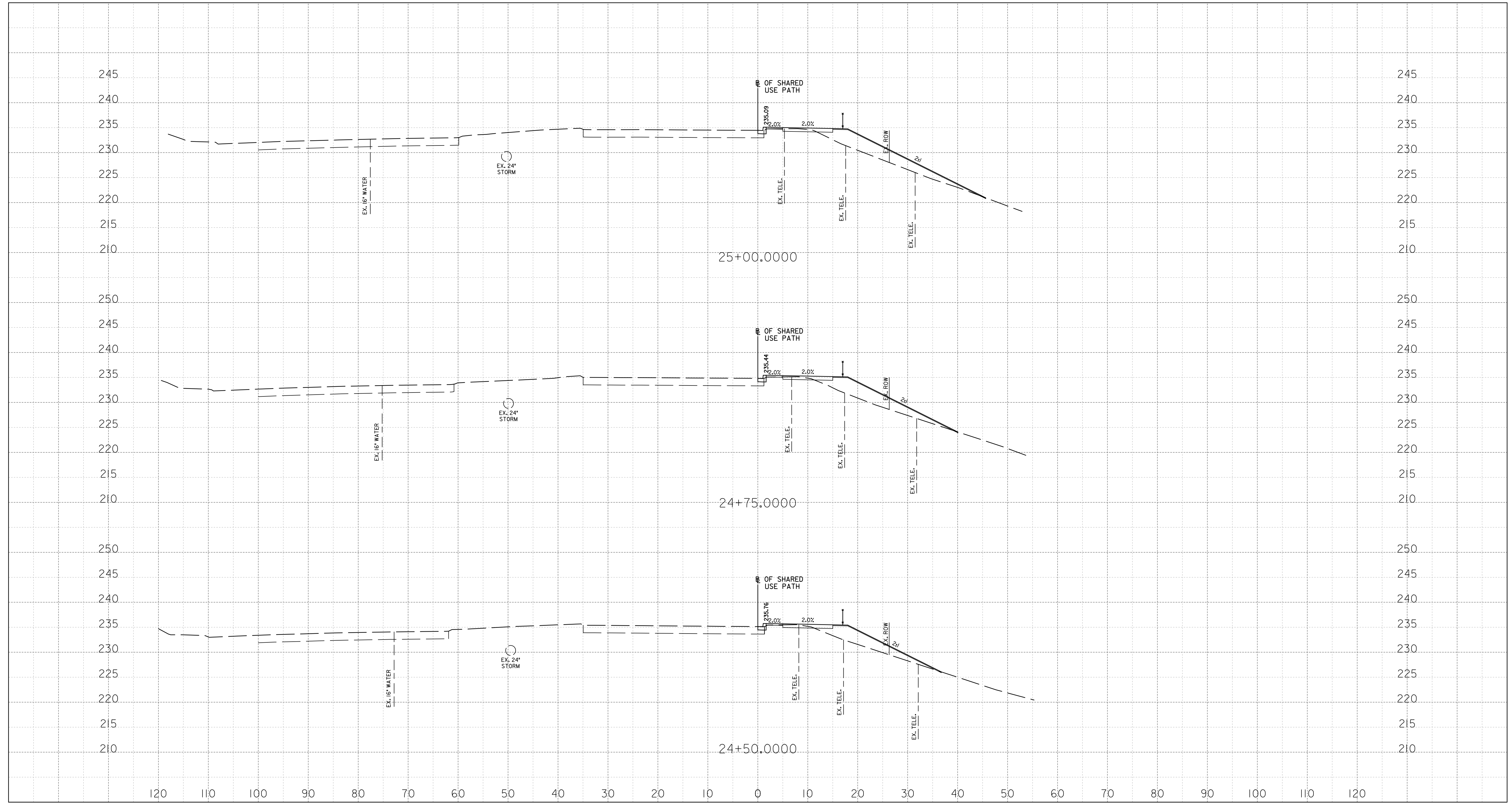
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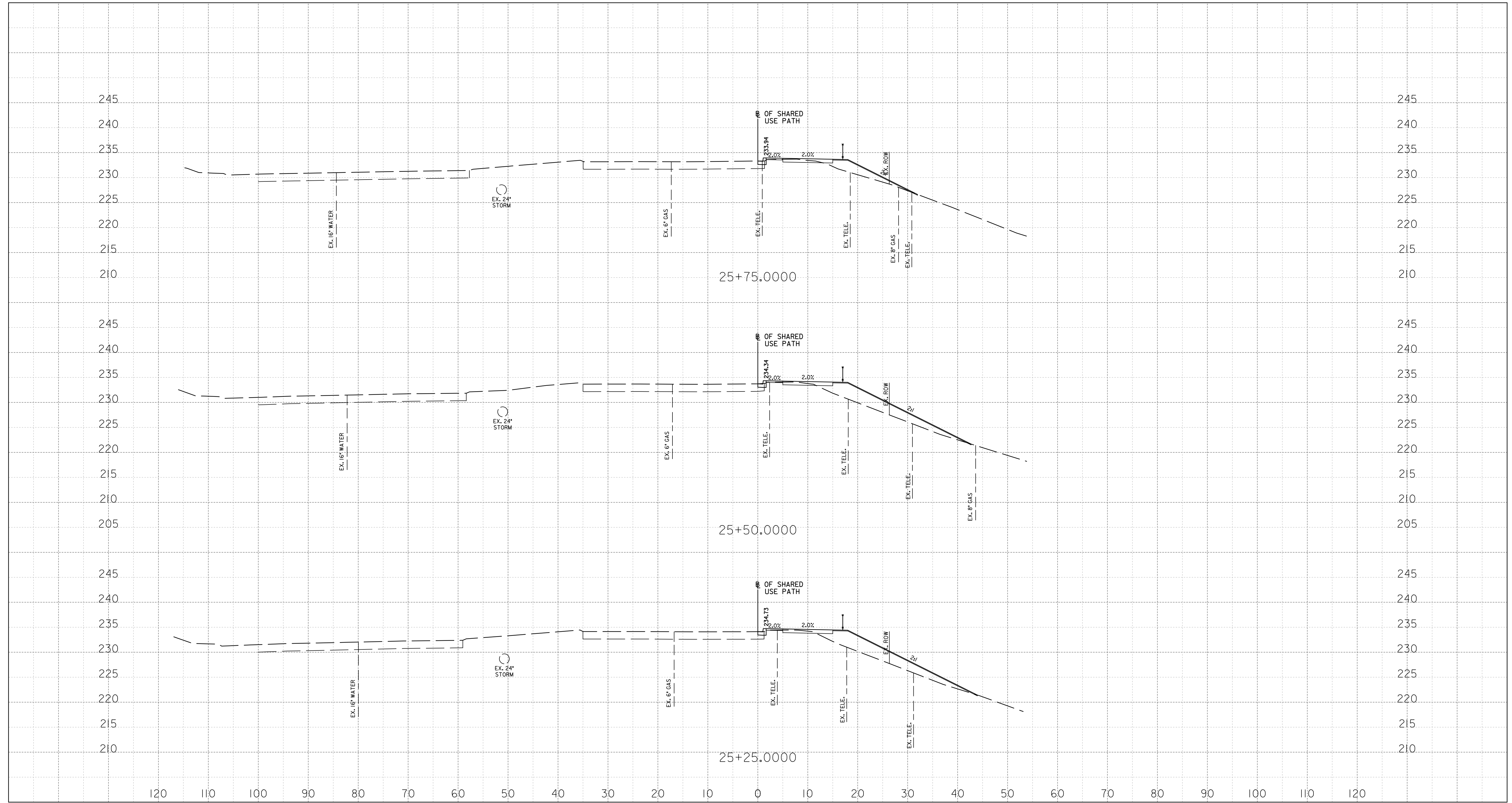
DEPARTMENT OF TRANSPORTATION
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MONTGOMERY COUNTY, MARYLAND

GROSVENOR IMPROVEMENTS
MD 355
ROADWAY CROSS SECTIONS

SCALE: 1"=10' SHEET 122 of 128

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XS-12



PROFESSIONAL CERTIFICATION:
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Chief, Design Section _____ Date _____

APPROVED

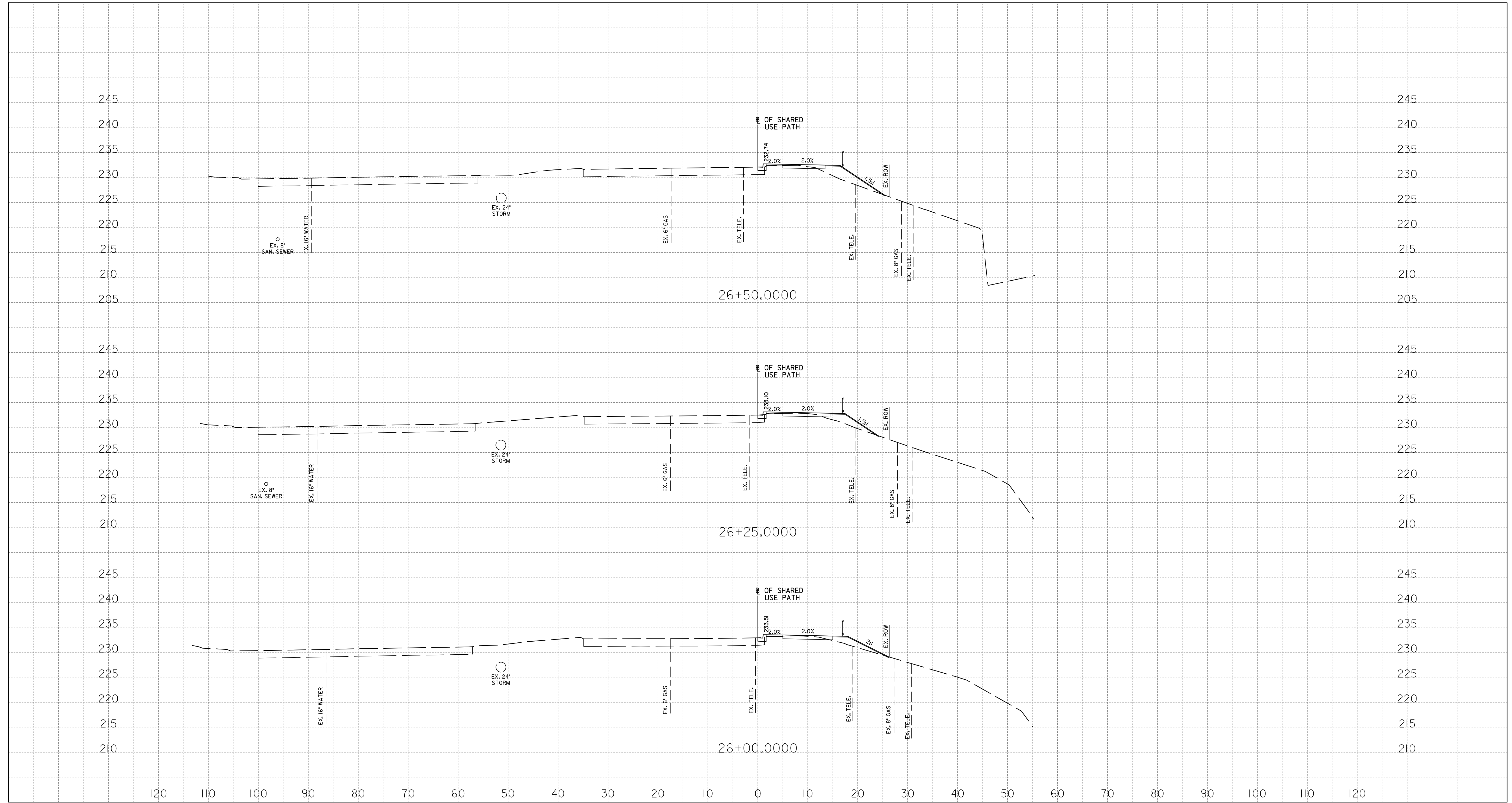
Chief, Division of Transportation Engineering _____ Date _____

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

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MD 355
ROADWAY CROSS SECTIONS

SCALE: 1"=10' SHEET 123 of 128

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XS-13



PROFESSIONAL CERTIFICATION:
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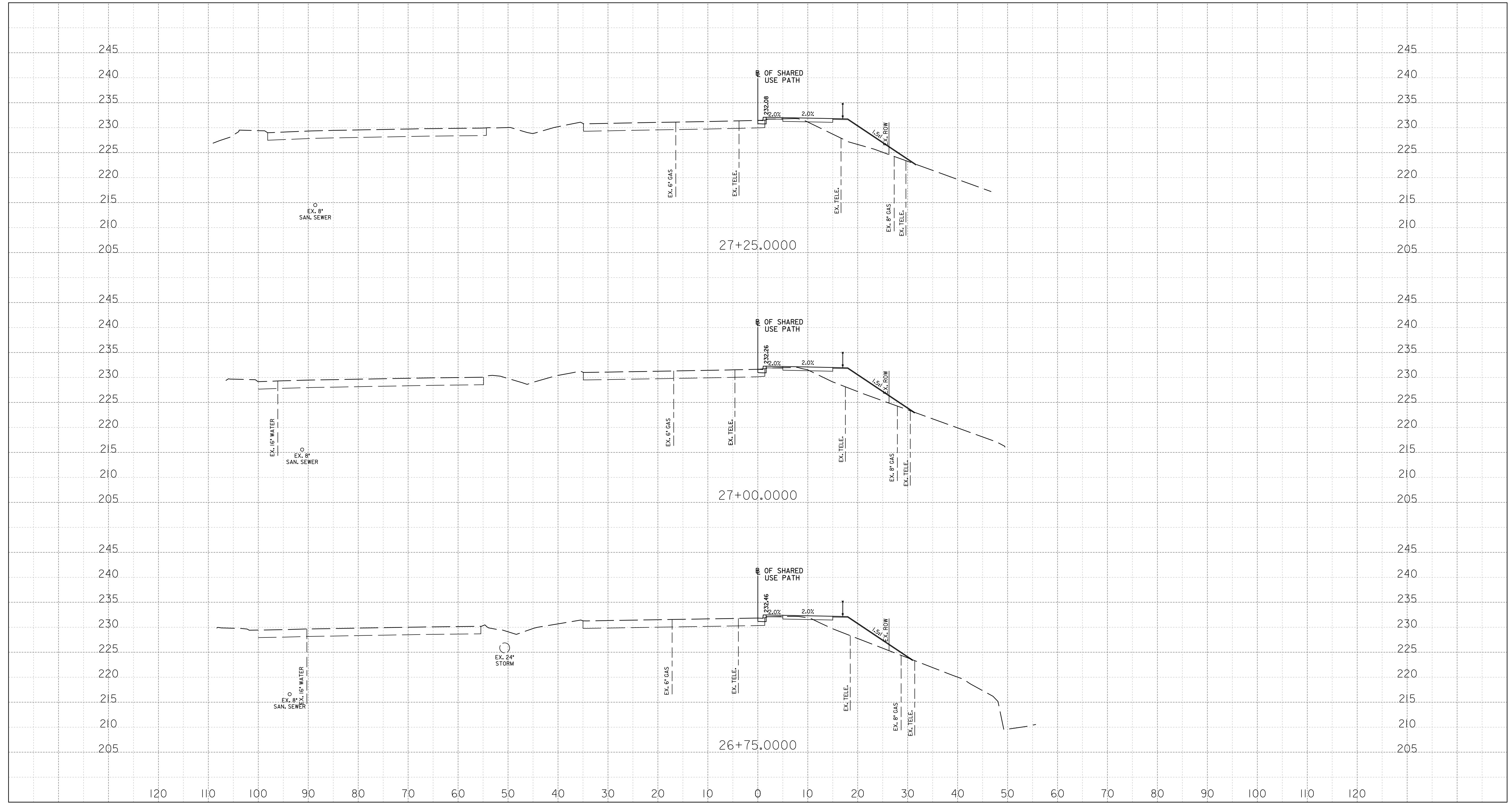
Chief, Division of Transportation Engineering _____ Date _____

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MD 355
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SCALE: 1"=10' SHEET 124 of 128

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XS-14



PROFESSIONAL CERTIFICATION:
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APPROVED

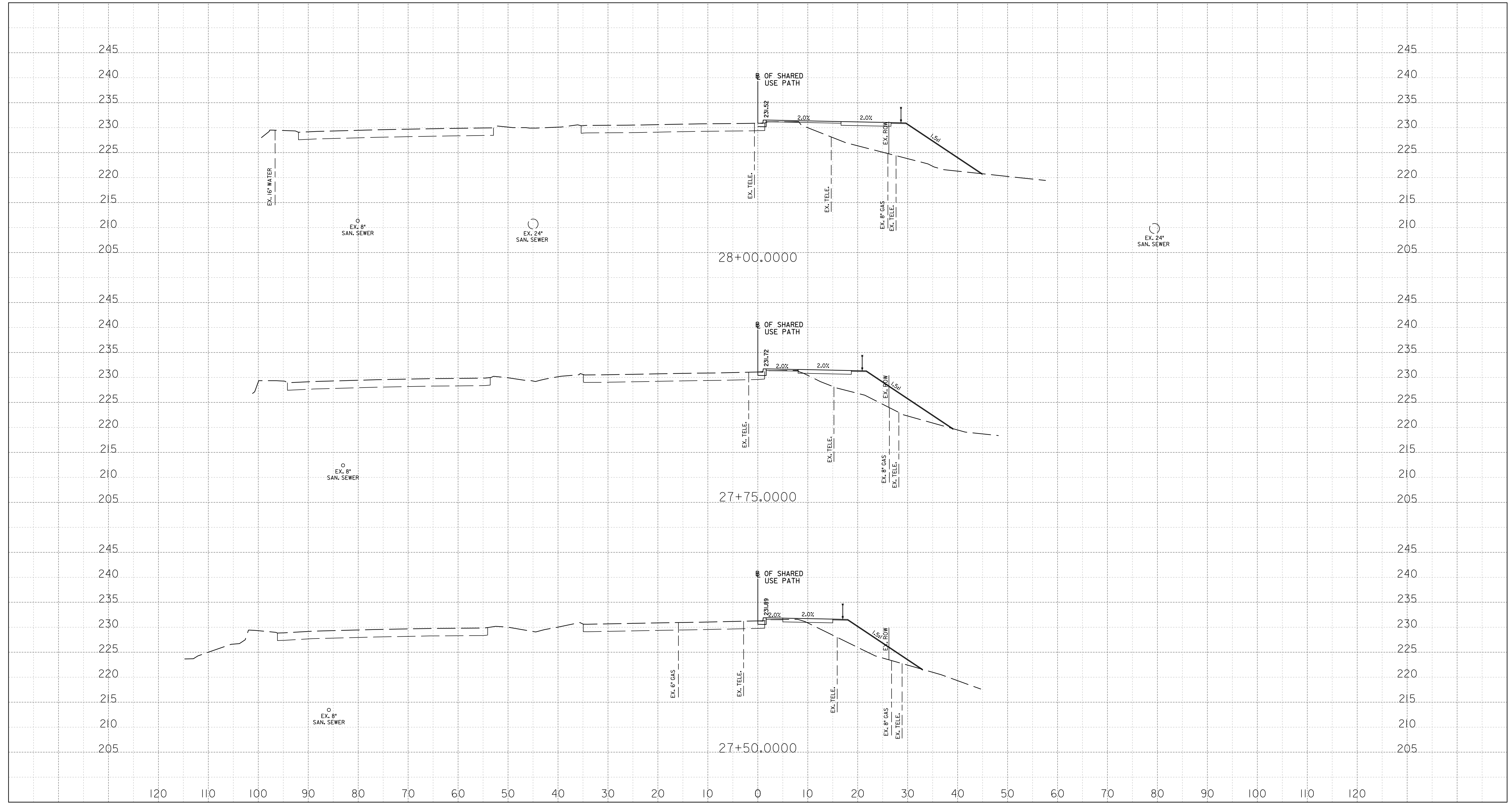
Chief, Division of Transportation Engineering _____ Date _____

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GROSVENOR IMPROVEMENTS
MD 355
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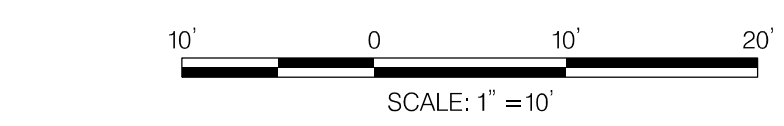
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XS-15



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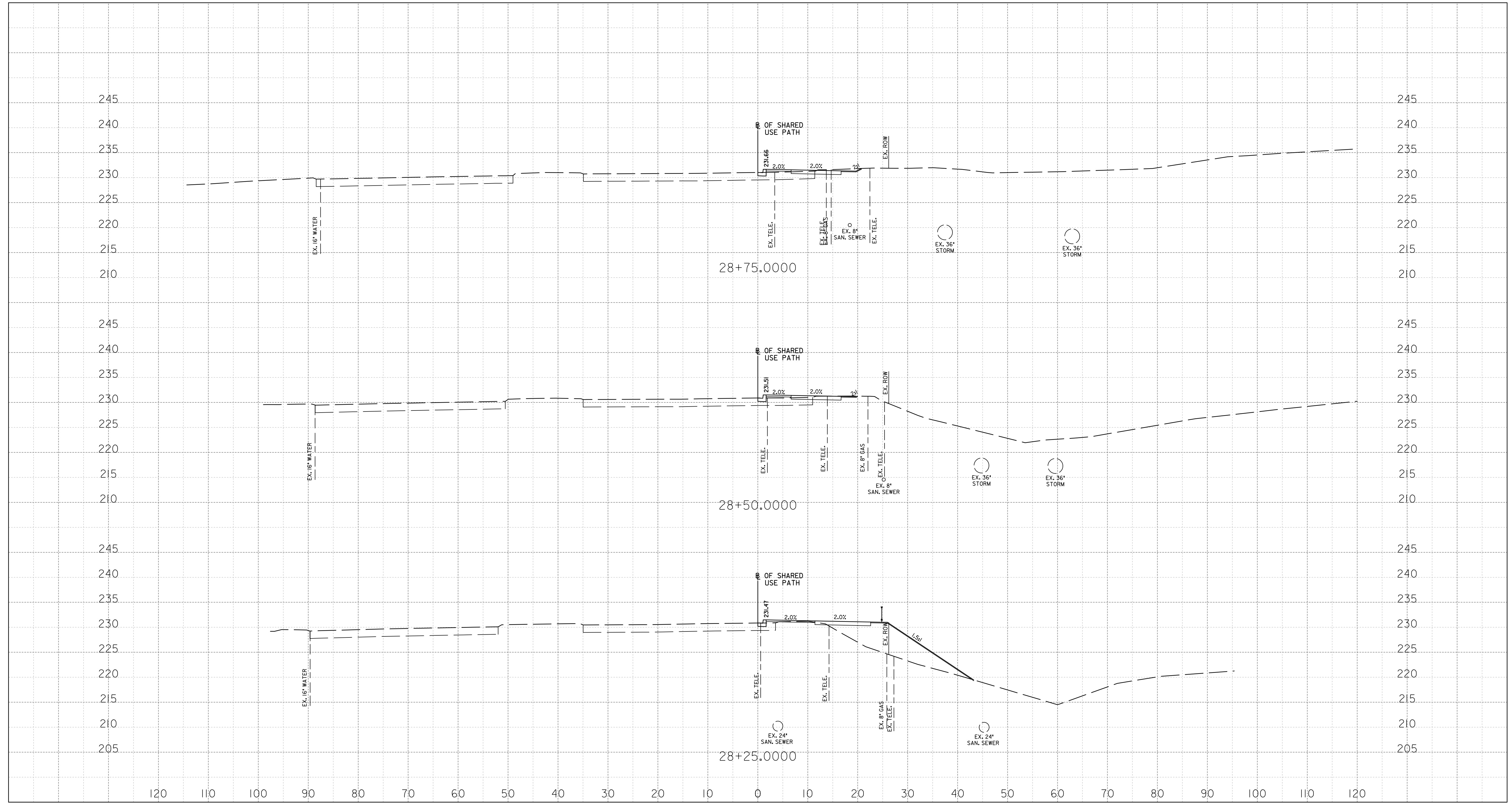
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Chief, Division of Transportation Engineering _____ Date _____

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XS-16



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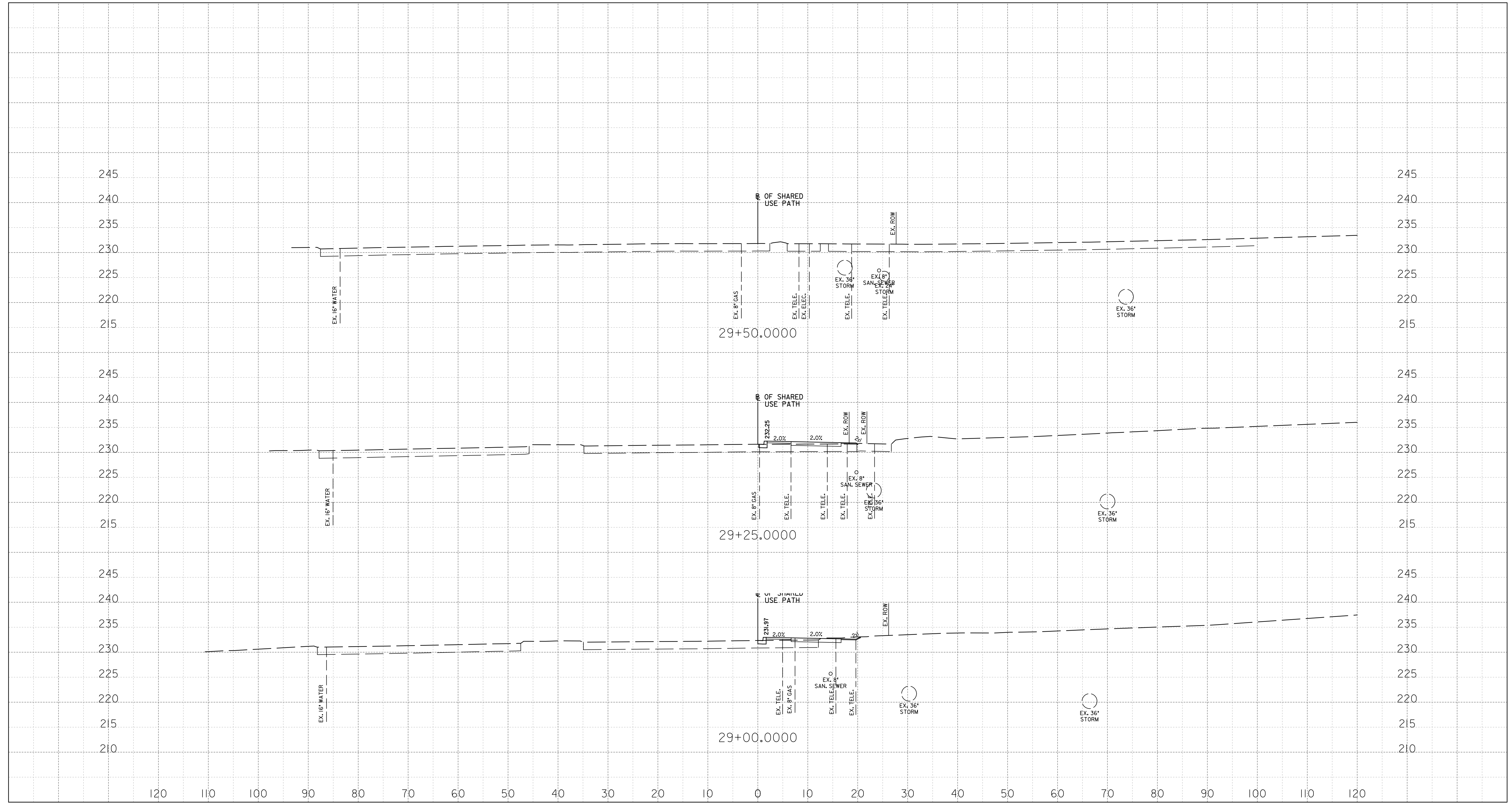
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GROSVENOR IMPROVEMENTS
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SCALE: 1"=10' SHEET 127 of 128

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XS-17



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