Sheet No.	Drawing No.	Sheet Name
01	TI-01	TITLE SHEET
02	GN-01	GENERAL NOTES, ABBREVIATIONS AND SYMBOLS
03	GS-01	GEOMETRIC LAYOUT
04	TS-01	TYPICAL SECTIONS
05	TS-02	TYPICAL SECTIONS
06	DT-01	PAVEMENT DETAILS
07	DT-02	ROADWAY DETAILS
08	PS-01	ROADWAY PLAN
09	PS-02	ROADWAY PLAN
10	HP-01	ROADWAY PROFILE
11	DD-01	DRAINAGE SCHEDULES
12	DA-01	EXISTING DRAINAGE AREA MAP
13	DA-02	EXISTING DRAINAGE AREA MAP
14	DA-03	PROPOSED DRAINAGE AREA MAP
15	DA-04	PROPOSED DRAINAGE AREA MAP
16	ES-01	EROSION AND SEDIMENT CONTROL PLAN
17	ES-02	EROSION AND SEDIMENT CONTROL PLAN
18	ESN-01	EROSION AND SEDIMENT CONTROL NOTES
19	ESN-02	EROSION AND SEDIMENT CONTROL NOTES
20	LP-01	LANDSCAPE PLAN
21	LP-02	LANDSCAPE PLAN
22	LP-03	LANDSCAPE PLAN NOTES & DETAILS
23	SN-01	SIGNING AND MARKING PLAN - STA. 100+00 TO STA. 105+00
24	SN-02	SIGNING AND MARKING PLAN - STA. 105+00 TO STA. 109+00
25	SN-03	SIGNING AND MARKING PLAN MARKING DETAILS
26	SN-04	SIGNING AND MARKING SCHEDULE
27	SG-01	SIGNAL PLAN SHEET MD 355 AND CHELTENHAM DRIVE
28	LT-01	LIGHTING PHOTOMETRICS
29	LT-02	LIGHTING PHOTOMETRICS
30	XS-01	ROADWAY CROSS SECTIONS
31	XS-02	ROADWAY CROSS SECTIONS
32	XS-03	ROADWAY CROSS SECTIONS
33	XS-04	ROADWAY CROSS SECTIONS
34	XS-05	ROADWAY CROSS SECTIONS
35	XS-06	ROADWAY CROSS SECTIONS
36	XS-06 XS-07	ROADWAY CROSS SECTIONS
37	XS-08	ROADWAY CROSS SECTIONS
38	XS-09	ROADWAY CROSS SECTIONS

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.

CHIEF, DIVISION OF TRANSPORTATION ENGINEERING

DESIGN CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE "2011 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 PUBLIC WORKS AND TRANSPORTATION "STORM DRAIN DESIGN CRITERIA" DATED AUGUST 1988.

DATE

LORI R. ADGATE, P.E. MD. REGISTRATION NO. 28255

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 XXX CUBIC YARDS OF EXCAVATION, XXX CUBIC YARDS OF FILL AND THE TOTAL AREA TO BE DISTURBED AS SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE XX,XXX SQUARE FEET.

810 Gleneagles Court, Suite 300

Baltimore, MD 21286

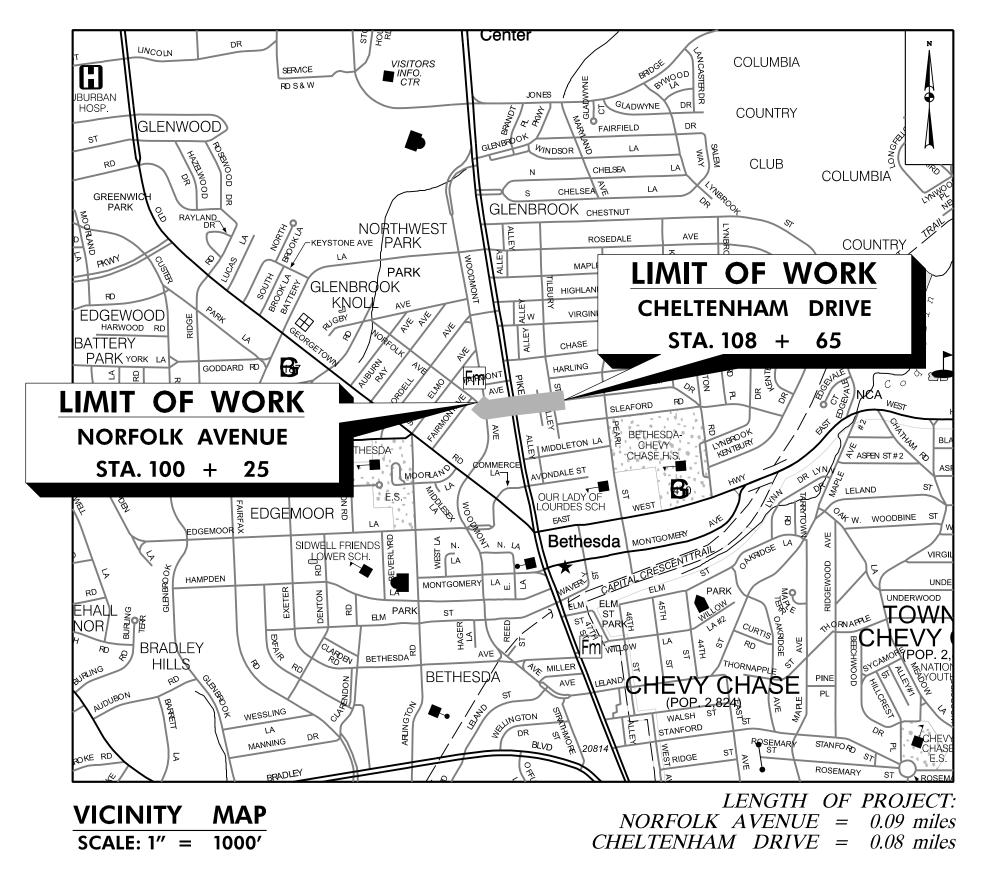
www.stantec.com

DATE

LORI R. ADGATE, P.E. MD. REGISTRATION NO. 28255

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION CHELTENHAM DRIVE BIKEWAY

CIP PROJECT NO. 500119 SHA TRACKING NO. XX-XX-XX-00X-XX



RELATED REQUIRED PERMITS IT IS THE RESPONSIBILTY OF PERMITTEE/OWNER OF THIS SITE TO OBTAIN ALL REQUIRED PERMITS PRIOR TO ISSUANCE OF APPROVED SEDIMENT CONTROL PERMIT WORK RESTRICTION DATES PERMIT NO. EXPIRATION Χ WATERWAY/WETLAND(S) a. Corps of Engineers Χ Χ MDE Dam Safety Χ DPS Roadside Trees DATE FILED NOTICE OF INTENT SHA Access Permit: MCDPS SEDIMENT CONTROL

The following standards (construction and temporary traffic control) are required for this project:

A. MD 104.02-10 - Flagging Operation/2-Lane, 2-Way Equal/ Less than 40 MPH

- New Combination Curb & Gutter Placement Along Existing Pavement

C. MD 620.02-01 - Standard Types C And D Concrete Curb and

Combination Concrete Curb & Gutter - Depressed Curb for Combination Curb and Gutter

and Depressed Curb for Sidewalk Ramps E. MD 630.01 - Standard Entrance Construction Residential

& Commerial Method No. I

- Standard Entrance Construction Residential F. MD 630.02 & Commerial Method No. 2

MD 645.01 - Standard Monolithic Concrete Median Type A

MD 655.II - Sidewalk Ramps Perpendicular - Sidewalk Ramps Parallel MD 655.12

MD 655.13 - Sidewalk Ramps Combination

- Detectable Warning Surfaces

MC-100.01 - Combination Concrete Curb and Gutter - Type A

- Depressed Curb Entrance - Business District Sidewalk

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:

35% SUBMITTAL

FEB. 2025

http://apps.roads.maryland.gov/businesswithsha/bizStdsSpecs/desManualStdPub/ publicationsonline/ohd/bookstd/index.asp

https://www.montgomerycountymd.gov/dot-dte/common/standards.html

MISS UTILITY

DEPARTMENT OF TRANSPORTATION

DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

CHELTENHAM DRIVE BIKEWAY

TITLE SHEET

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 FACILITIESD AMAGED DURING CONSTRUCTION SHALL BE REPAIRED /REPLACED AT THE CONTRACTOR'S SOLE EXPENSE.

TI-01

10.	REVISION	BY	APP' D	DATE	DESIGNED BY: UMK	DATE: FEBRUARY 2025	
					DRAWN BY: UMK	DATE: FEBRUARY 2025	
					CHECKED BY: LRA	DATE: FEBRUARY 2025	
					DRAWING NO.:	DATE:	
					RECOMMENDED FOR APPROVAL Chief, Design Section		-
					APPROVED		
					Chief, Division of Transportation Engineering	Date	SC

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:

EXPIRATION DATE:

OWNER - MONTGOMERY COUNTY DEPT. OF TRANSPORTATION

JOSEPH MOGES

(227)251-1268

PROJECT MANAGER

HOANG H. NGUYEN

240-777-7243

100 Edison Park Drive. 4th Floor

100 Edison Park Drive, 4th Floor

joseph.moges@montgomerycountymd.gov

hoang.nguyen@montgomerycountymd.gov

Gaithersburg, MD 20878

Gaithersburg, MD 20878

SCALE: N.T.S.

PROJECT NO.: <u>500119</u> SHEET <u>01</u> of 38

GENERAL NOTES

- THE SPECIFICATIONS FOR THIS CONTRACT WILL BE THOSE OF THE MARYLAND STATE HIGHWAY ADMINISTRATION DATED JULY 2024, ALL ERATA AND ADDENDA THERETO, AND THE MARYLAND STATE HIGHWAY ADMINISTRATION BOOK OF STANDARDS FOR HIGHWAY AND INCIDENTAL STRUCTURES.
- 2. FOR CONSTRUCTION, HORIZONTAL SHALL BE BASED ON NAD 83/91DATUM AND VERTICAL 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 SIX (6) 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. CALL "MISS UTILITY" AT I-800-257-7777 FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING EXCAVATION TO DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES.
- 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 SODDED. 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
- IO. 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.
- II. 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.
- 13. ALL UTILITY POLES NOTED FOR RELOCATION SHALL BE PERFORMED BY OTHERS.

SYMBOLS

EXISTING RIGHT OF WAY LINE		CUT SLOPE	— — C —
PROPOSED RIGHT OF WAY LINE		FILL SLOPE	⊢— F —
PROPOSED TRAFFIC BARRIER		LIMIT OF DISTURBANCE	— LOD —
EXISTING TRAFFIC BARRIER	± ± ±	SILT FENCE	SF-
EXISTING WOOD FENCE LINE((· -)	SUPER SILT FENCE	⊢——SSF
EXISTING CHAIN LINK FENCE LINE	×	DIVERSION FENCE	⊢DF
BASE OR SURVEY LINE	31 +50 32	STONE CHECK DAM	√ZF CI
EXISTING FIRE HYDRANT	©-	TEMPORARY STONE OUTLET STRUCTURE	TS
PROPOSED STORM DRAIN		TEMPORARY GABION OUTLET STRUCTURE	₹
EXISTING STORM DRAIN		AT-GRADE INLET PROTECTION	Φ Δ
EXISTING INLET		CURB INLET PROTECTION	$\Gamma \Box c$
EXISTING UTILITY POLE	\Diamond	MEDIAN INLET PROTECTION	= $=$ M
EXISTING TREE		STANDARD INLET PROTECTION	
EXISTING TREE LINE		STABILIZED CONSTRUCTION ENTRANCE	

ARRREVIATIONS

		ADDIL	VIAIIOI13
A.A.S.H.T.O.	American Association of State Highway	H.D.P	High Density Polyetheylene
	Transportation Officials		Headwall
ABUT	Abutment	H.E.R.C.P.	Horizontal Elliptical Reinforced
ADT	Average Daily Traffic		Concrete Pipe
AHD			High Point
	Approximate		Headlight Sight Distance
Begor B∕L		IN	
	Back /Book		Inlet Sediment Trap
BIT		INV	
	Bituminous Concrete		Junction Box
	Bench MarkBottom of Footing	Κ	
BOT		L	Linear Feet
BRG			Liquid Limit
	Center of Curve		Limit of Disturbance
	Cable Television		Longitudinal
	California Bearing Ratio		Light Pole
	Contraction Joint	LT	
φ or C/L			Macadam
_	Class or Clear		Moisture Content
CLF	Chainlink Fence		Maximum
CMP	Corrugated Metal Pipe	MDD	Maximum Dry Content
C.O	Cleanout	MOD	Modified
COMB	Combination	MIN	Minimum
CONC	Concrete	MN	Managed Roadway
CONSTR	Construction	M.S.E	Mechanically Stablilized Earth
COR	Corner	N	North
CORR		NB	Northbound
C.Y	Cubic Yard		Northeast
	Degree of Curve	NO	
	Design Hourly Volume		Non-Plastic
D.I	•		Not To Scale
DIA			On Center
	Double Opening		Overhead
	Design Speed		Optimum Moisture
DWG			Pavement
E			Point of Carana and Carana and
E	External Distance		Point of Compound Curvature Point of Crown
е ЕА			Profile Grade Elevation
E.B			Profile Grade Line
	Expansion Joint		Profile Ground Line
EL or ELEV	•	P	
	Elliptical Reinforced Cement	—	Point of Rotation
21111010111 222	·		Plasticity Index
	End Section		Point of Intersection
EX. or EXIST.			Point On Curve
FT	•		Point On Tangent
F or FL			Proposed
F.B.D	Flat Bottom Ditch		Proposed Right of Way
F.H	Fire Hydrant		Proposed
F.O	Fiber Optic	PRC	Point of Reverse Curve
	Face of Curb	PT	
F.S	Full Super Elevation	PT	Point of Tangency
FWD	Forward		Point of Vertical Curve
G	Gas	P.V.C	Polyvinyl Chloride
GL	Gutterline		Point of Vertical Intersection
GP	General Purpose Roadway	PVRC	Point of Vertical Reverse Curve
G.V	•	PVT	Point of Vertical Tangency

Handbox

Radius REINF. Reinforcement .. Required Rock Fragments RT. ___ RW or R/W ... Right of Way Reinforced Cement Pipe R.C.C.P. Reinforced Cement Concrete Pipe ... Rock Quality Desgnation .. Rootmat .. South .. Sanitary Sewer SB or S/B Southbound S.D. .. . Storm Drain Surface Drain Ditch Super Elevation SF Silt Fence S.F. Square Feet SHLDR. ... Shoulder State Highway Administration .. Sheet . Structural Plate Pipe Standard Penetration Testing S.S. Stainless Steel Stopping Sight Distance SSF ... Super Silt Fence STD. Standard STA. . Station STIFF. . Stiffener Single Opening Square Yards _ Stormwater Management Tangent Telephone T.C. . Top of Cover TEMP. .. Temporary T.G. .. Top of Grate T or TL Traverse Line T.M. __ .. Top of Manhole TOF Top of Footing __ Traverse TRAV.Temporary Swale T.S. .. Top of Slab T.S. ___ .. Topsoil TYP. Typical U.D. _. ... Under Drain ... Underground U.O.N. Unless Otherwise Noted U.P. Utility Pole .. Unified Soil Classification USDA United States Department of Agriculture ... Vertical Clearance ... Vertical Curve Length .. Water ₋ West .. Westbound

> .Wetland Buffer Water Meter

... Wrapped Steel

GN-01



REVISION	BY	APP'D	DATE	DESIGNED BY: UMK	DATE: FEBRUARY	2025
				DRAWN BY: UMK	DATE: FEBRUARY	2025
				CHECKED BY: LRA	DATE: FEBRUARY	2025
				DRAWING NO.:	DATE:	
				RECOMMENDED FOR APPROVAL		
				Chief, Design Section		. <u> </u>
				APPROVED		
				Chief, Division of Transportation Engineering		Date

DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

DEPARTMENT OF TRANSPORTATION

CHELTENHAM DRIVE BIKEWAY GENERAL NOTES, ABBREVIATIONS AND SYMBOLS

SCALE: NONE PROJECT NO.: <u>500119</u> SHEET <u>02</u> of <u>38</u>

LICENSE NO:

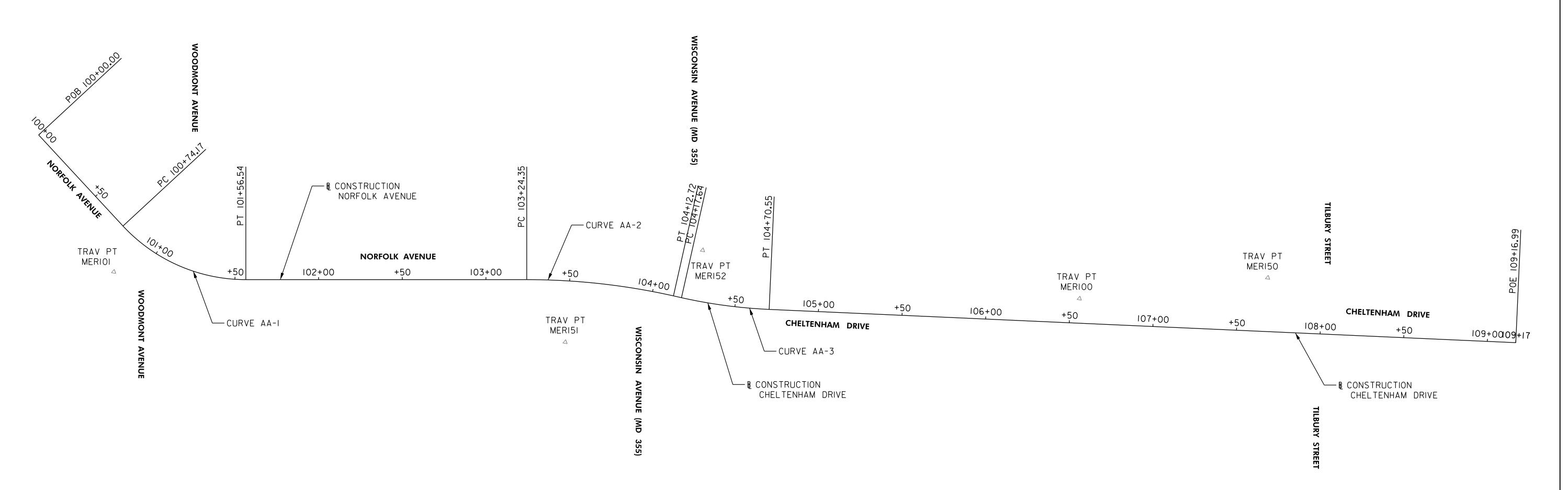
PROFESSIONAL CERTIFICATION: THEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

EXPIRATION DATE:

www.stantec.com

810 Gleneagles Court, Suite 300 Baltimore, MD 21286





NORFOLK AVENUE / CHELTENHAM DRIVE										
CURVE	POINT NO.	STATION	NORTHING	EASTING	BEARING					
	POB	100+00.00	481,360.4218	1,284,951.1974	S 52° 19′ 03" [
	PC	100+74.17	481,315,0829	1,285,009.8960	S 52° 19′ 03" 1					
A A 1	PI	101+17.85	481,288.3788	1,285,009.8960						
A A - I	CC		481,394.2239	1,285,071.0246						
	PT	101+56.54	481,295.5993	1,285,087.5531	N 80° 29′ 10″ 1					
	PT	101+56.54	481,295.5993	1,285,087.5531	N 80° 29′ 10″ 1					
	PC	103+25.35	481,323.3358	1,285,253.0558	N 80° 29′ 10"					
A A . O	PI	103+68.72	481,330.6685	1,285,296.8096						
AA-2	CC		480,928.8375	1,285,319.1696						
	PT	104+12.72	481,328.2355	1,285,341.1069	S 86° 51′22″1					
	PT	104+12.72	481,328.2355	1,285,341.1069	S 86° 51′22″ [
	PC	104+17.64	481,327.9657	1,285,346.0184	S 86° 51′22″ [
A A 7	PI	104+44.17	481,326.5109	1,285,372.5048						
AA-3	CC		481,627.5142	1,285,362.4715						
	PT	104+70.55	481,329.7262	1,285,398.8356	N 83° 02′16"					
	POE	109+16.99	481,383.8404	1,285,841.9792	N 83° 02′16″1					

	CURVE DATA										
CURVE	DELTA	Dc	RADIUS	TANGENT	LENGTH	EXTERNAL					
A A - I	47° 11′ 47" LT	57° 17′ 45"	100.00′	43 . 69′	82.37′	9.13′					
AA-2	12° 39′ 27" RT	14° 19′ 26"	400.00′	44 . 36′	88.37′	2.45′					
AA-3	10° 06′ 22" LT	19° 05′ 55"	300.00′	26 . 53′	52.92′	1.17'					

TRAVERSE POINTS										
POINT NO.	NORTHING	EASTING	ELEVATION							
MERIOI	481,287.1665	1,285,009.0203	352 . 88′							
MERI5I	481,290.3034	1,285,281.9454	349.02′							
MERI52	481,358.0307	1,285,353.8263	349 . 99′							
MERI00	481,366.7404	1,285,580.5960	341.98′							
MERI50	481,397.6040	1,285,689.4999	338.51′							

										GS-01
		NO	Ο.	REVISION	BY	APP'D	DATE	DESIGNED BY: UMK	DATE: FEBRUARY 2025	DEPARTMENT OF TRANSPORTATION
	30' 0 30' 60'							DRAWN BY: UMK	DATE: FEBRUARY 2025	
								CHECKED BY: LRA	DATE: FEBRUARY 2025	DIVISION OF TRANSPORTATION ENGINEERING
Г	SCALE: 1" = 30'							DRAWING NO.:	DATE:	MONTGOMERY COUNTY, MARYLAND
	Stantec							RECOMMENDED FOR APPROVAL Chief, Design Section		CHELTENHAM DRIVE BIKEWAY
RED								APPROVED		GEOMETRY SHEET
	810 Gleneagles Court, Suite 300 Baltimore, MD 21286 www.stantec.com					_		Chief, Division of Transportation Engineering	Date	SCALE: 1" = 30' PROJECT NO.: <u>500119</u> SHEET <u>03</u> of <u>38</u>

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: _____

EXPIRATION DATE:

2/27/2025 U;\20262|3|33\700 CADD\702 Shee†s\pht-x00|_

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: ______ EXPIRATION DATE: _____

SCALE: 1" = 5'

SCALE: 1" = 5'

SCALE: 1" = 5'

SCALE: 1" = 5'

DRAWN BY: UMK
DATE: FEBRUARY 2025

CHECKED BY: LRA
DATE: FEBRUARY 2025

DRAWING NO.:

RECOMMENDED FOR APPROVAL

Chief, Design Section
APPROVED

Chief, Division of Transportation Engineering

Date

SCALE: 1" = 5'

APP'D DATE

REVISION

DESIGNED BY: UMK

CHELTENHAM DRIVE BIKEWAY
TYPICAL SECTIONS

PROJECT NO.: <u>500119</u> SHEET <u>04</u> of <u>38</u>

CHELTENHAM DRIVE BIKEWAY

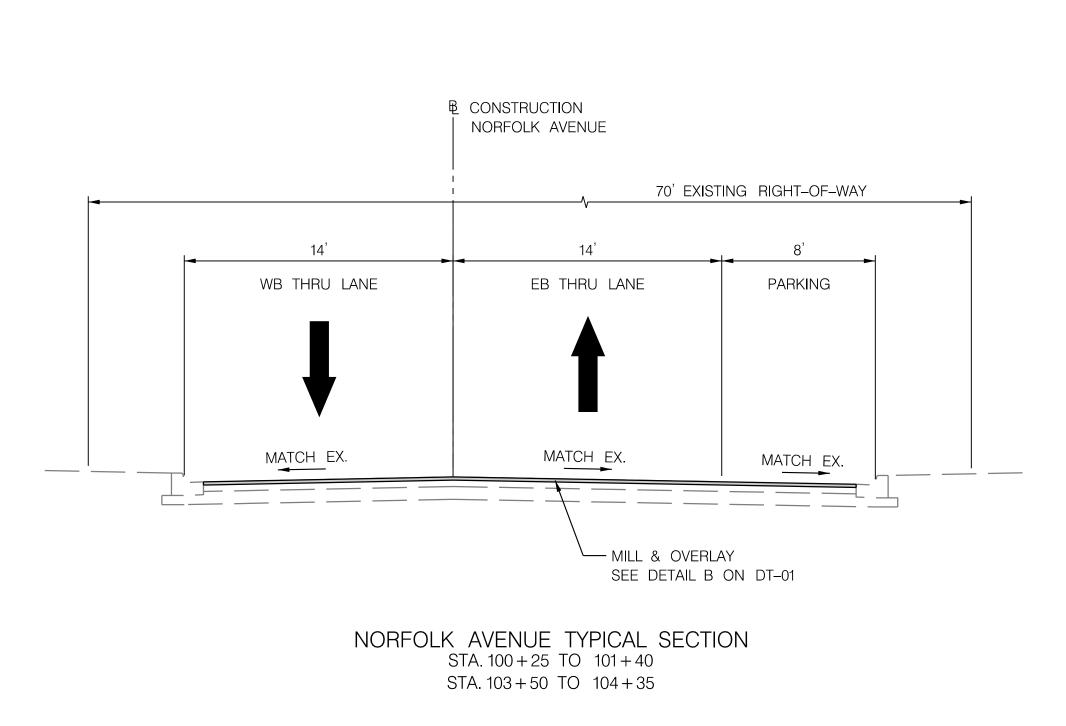
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
MONTGOMERY COUNTY, MARYLAND

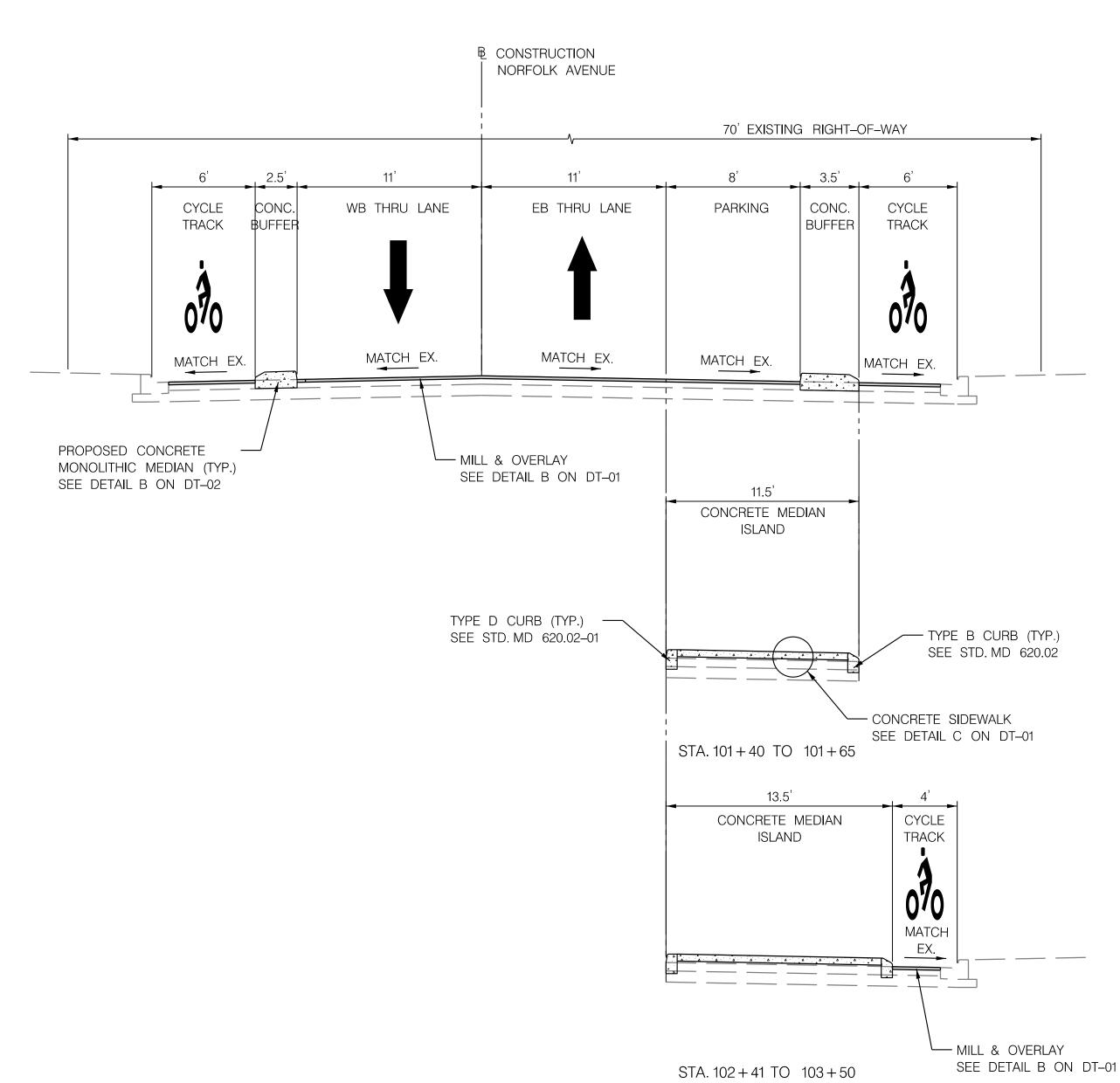
TS-01

NORFOLK AVENUE TYPICAL SECTION

STA. 101 + 40 TO 103 + 50

DATE: FEBRUARY 2025







PROFESSIONAL CERTIFICATION: THEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT IAM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO: _ _ EXPIRATION DATE: _

SCALE: 1'' = 5'810 Gleneagles Court, Suite 300 Baltimore, MD 21286 www.stantec.com

DRAWN BY: UMK DATE: FEBRUARY 2025 CHECKED BY: LRA DATE: FEBRUARY 2025 DRAWING NO.: DATE: RECOMMENDED FOR APPROVAL Chief, Design Section Date APPROVED Date Division of Transportation Engineering

APP' D

REVISION

DATE

DESIGNED BY: UMK

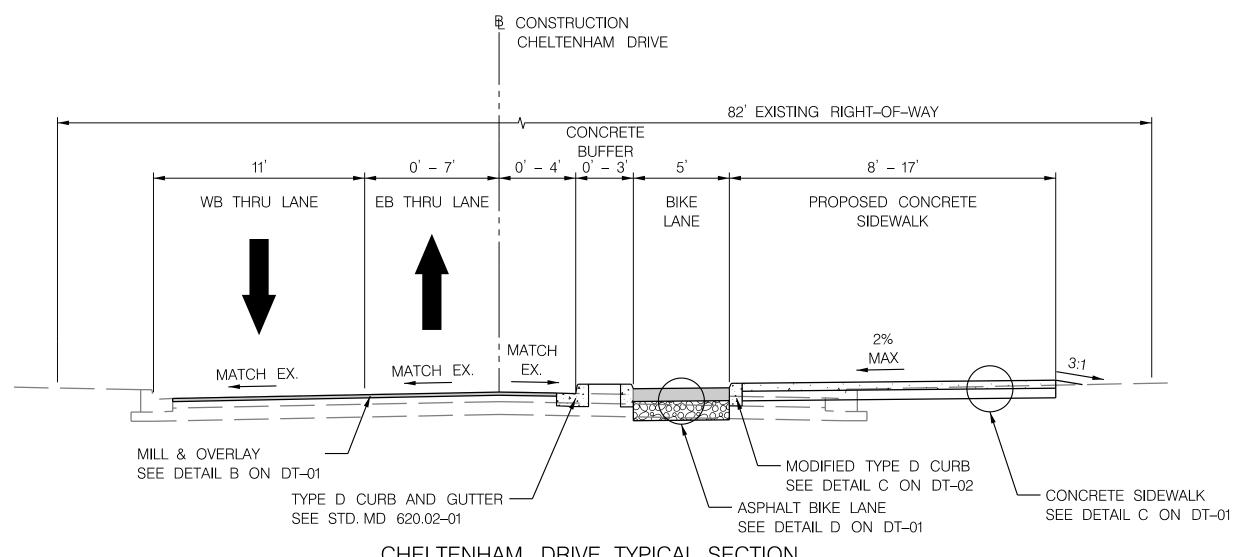
CHELTENHAM DRIVE BIKEWAY TYPICAL SECTIONS

PROJECT NO.: <u>500119</u> SHEET <u>05</u> of <u>38</u>

DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

TS-02

CHELTENHAM DRIVE TYPICAL SECTION STA. 107 + 00 TO 107 + 67



STA. 104 + 35 TO 107 + 00



₽ CONSTRUCTION

WB LEFT TURN LANE

MATCH_EX. MATCH_EX.

MILL & OVERLAY

SEE DETAIL B ON DT-01

CONC. BUFFER

CYCLE

TRACK

MATCH EX.

STA. 106 + 51 TO 106 + 88

PROPOSED CONCRETE

MONOLITHIC MEDIAN (TYP.)

SEE DETAIL B ON DT-02

TYPE D CURB (TYP.) -

SEE STD. MD 620.02-01

WB THRU LANE

MATCH EX.

- FULL DEPTH PAVING

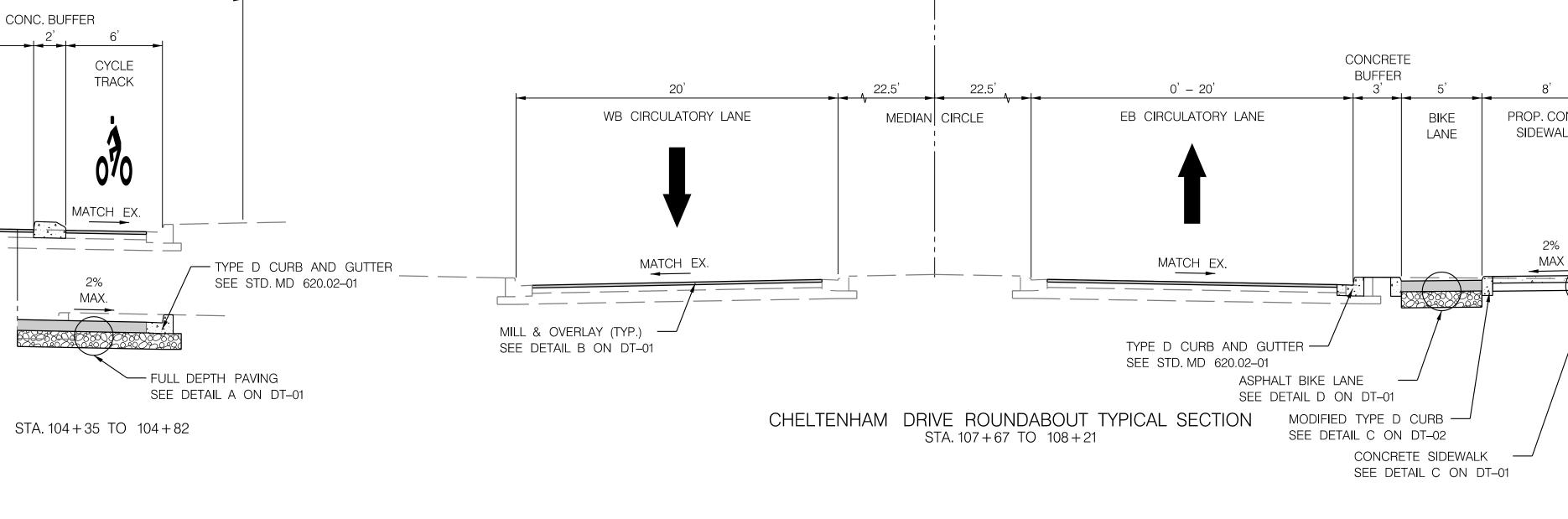
SEE DETAIL A ON DT-01

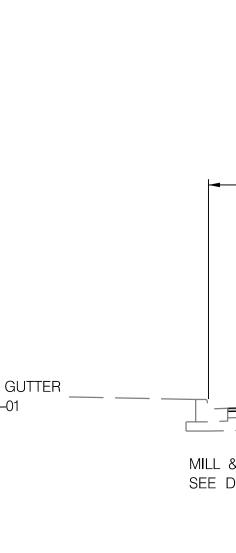
CHELTENHAM DRIVE

82' EXISTING RIGHT-OF-WAY

EB THRU LANE

MATCH EX.





CHELTENHAM DRIVE PROP. CONC. SIDEWALK MAX

₽ CONSTRUCTION

12.75

WB THRU LANE

MATCH EX.

NORFOLK AVENUE

14'

EB THRU LANE

MATCH EX.

SCALE: 1'' = 5'

MILL & OVERLAY (TYP.)

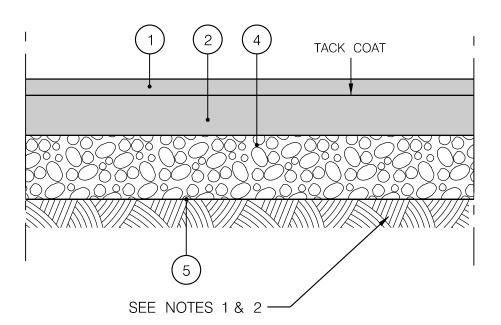
SEE DETAIL B ON DT-01

CHELTENHAM DRIVE TYPICAL SECTION

STA. 108 + 21 TO 108 + 65

DATE: FEBRUARY 2025

60' EXISTING RIGHT-OF-WAY

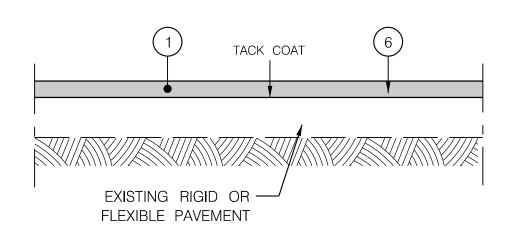


NOTES

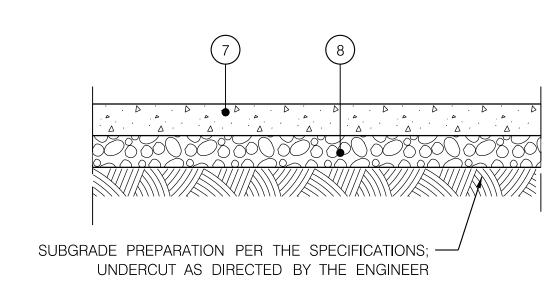
- 1. SUBGRADE PREPARATION SHALL BE AS PER SECTION 204 OF MDOT SHA SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS; PRIOR TO PLACEMENT OF PROPOSED BASE COURSE, SUBGRADE SHALL BE PROOF-ROLLED.
- 2. UNDERCUT FOR REMOVAL OF SOFT AND/OR UNSUITABLE MATERIALS AND BACKFILLED WITH GRADED AGGREGATE BASE SHALL BE AS DIRECTED BY THE ENGINEER.

DETAIL A

FULL DEPTH ASPHALT PAVEMENT SECTION

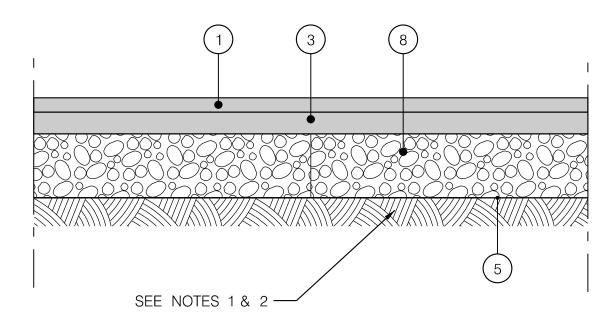


DETAIL B MILLING AND OVERLAY



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DETAIL C PORTLAND CEMENT CONCRETE SIDEWALK

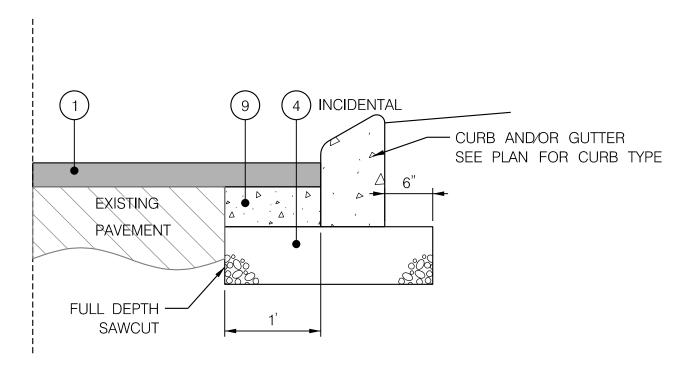


NOTES

- 1. SUBGRADE PREPARATION SHALL BE AS PER SECTION 204 OF MDOT SHA SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS; PRIOR TO PLACEMENT OF PROPOSED BASE COURSE, SUBGRADE SHALL BE PROOF-ROLLED.
- 2. UNDERCUT FOR REMOVAL OF SOFT AND/OR UNSUITABLE MATERIALS AND BACKFILLED WITH GRADED AGGREGATE BASE SHALL BE AS DIRECTED BY THE ENGINEER.

DETAIL D

FULL DEPTH ASPHALT BIKE LANE PAVEMENT SECTION



REVISION

DETAIL E CONCRETE CURB PATCH LEGEND

- 2" SUPERPAVE ASPHALT MIX, 9.5MM FOR SURFACE COURSE, P.G. 64S-22, LEVEL 2
- 5" SUPERPAVE ASPHALT MIX, 19.0MM FOR BASE COURSE, P.G. 64S-22, LEVEL 2 (2" 3.5" LIFTS)
- 2.5" SUPERPAVE ASPHALT MIX, 9.5MM FOR SURFACE COURSE, P.G. 64S-22, LEVEL 2
- 8 INCH GRADED AGGREGATE BASE, TWO EQUAL LAYERS
- LIMIT OF CLASS I EXCAVATION
- FINE MILL EXISTING PAVEMENT TO 2 INCH DEPTH OR SURFACE OF EXISTING RIGID BASE
- 5 INCH PLAIN PORTLAND CEMENT CONCRETE MIX NO. 7
- 4 INCH AGGREGATE BASE COURSE (INCIDENTAL)

DATE: FEBRUARY 2025

DATE: FEBRUARY 2025

SCALE: NTS

8 INCH PLAIN PORTLAND CEMENT CONCRETE MIX NO. 9 (INCIDENTAL), STD. MD 580.03 OPTION 1

DT-01

DEPARTMENT OF TRANSPORTATION

PROJECT NO.: <u>500119</u> SHEET <u>06</u> of <u>38</u>

DIVISION OF TRANSPORTATION ENGINEERING DATE: FEBRUARY 2025 CHECKED BY: LRA MONTGOMERY COUNTY, MARYLAND DRAWING NO.: DATE: RECOMMENDED FOR APPROVAL CHELTENHAM DRIVE BIKEWAY Chief, Design Section Date PAVEMENT DETAILS APPROVED 810 Gleneagles Court, Suite 300 Date Baltimore, MD 21286 Division of Transportation Engineering

APP'D

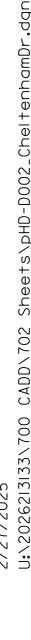
DATE

DESIGNED BY: UMK

DRAWN BY: UMK

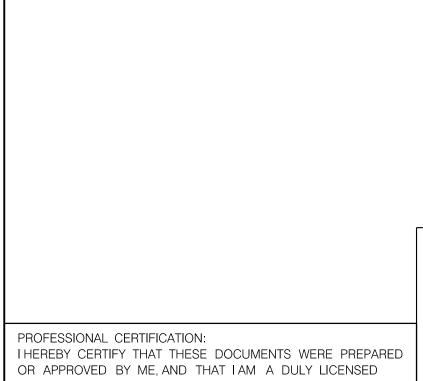
PROFESSIONAL CERTIFICATION: THEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT IAM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO: _

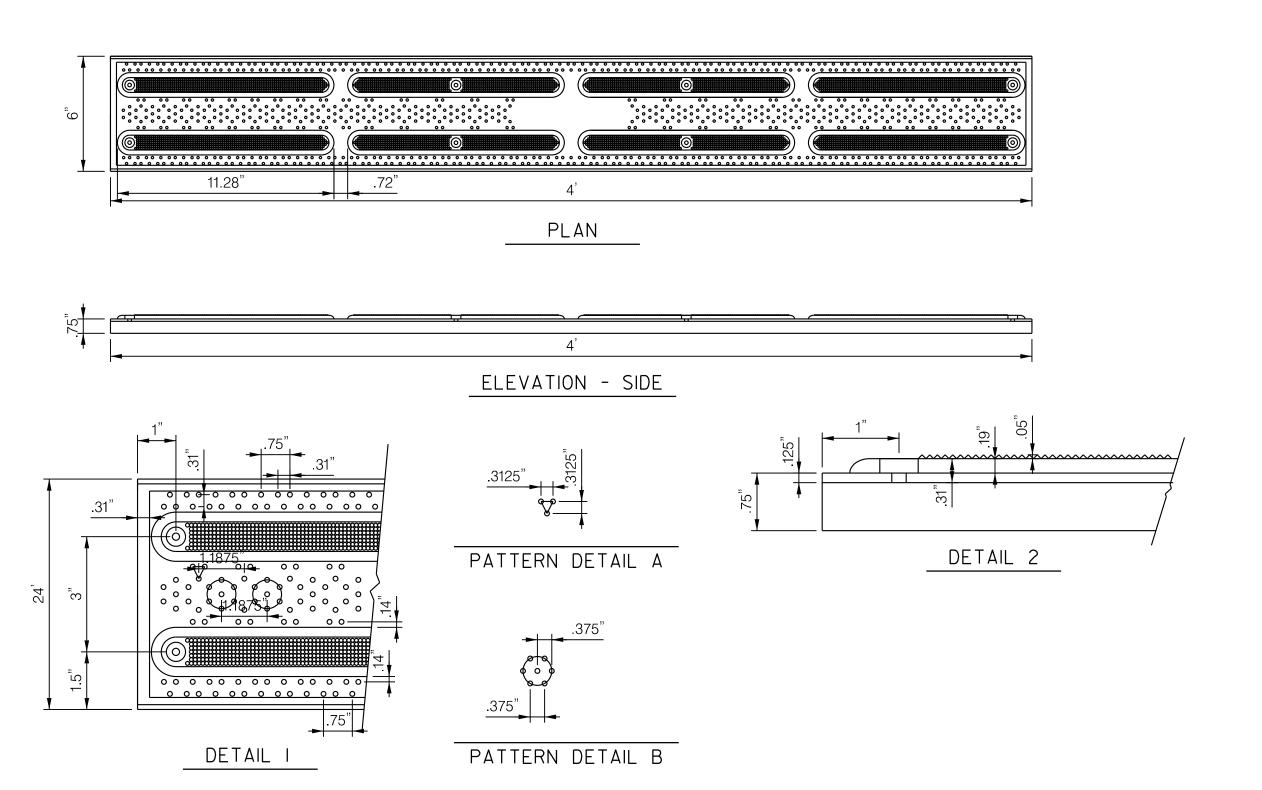
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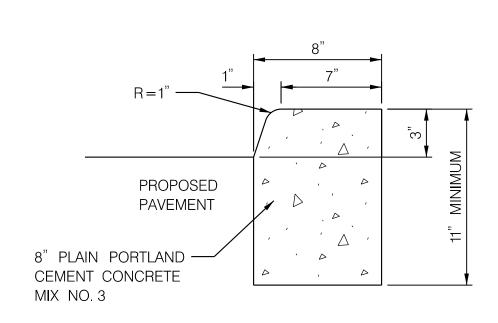
OF MARYLAND.

LICENSE NO: _

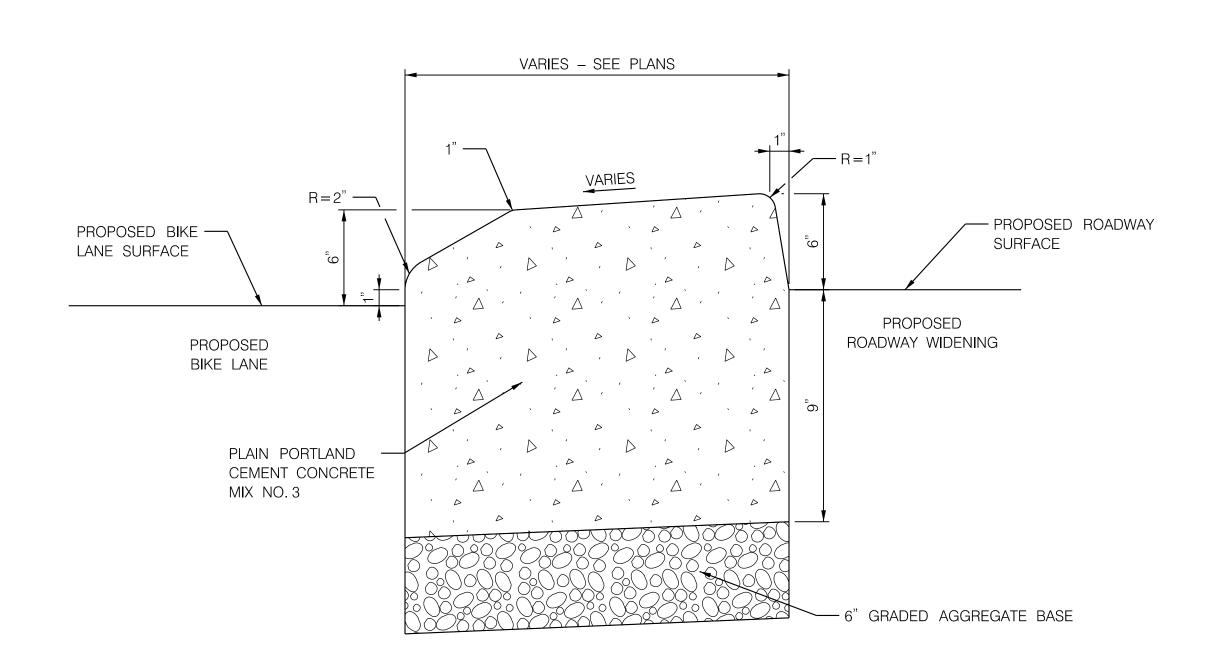




DETAIL A DETECTABLE DIRECTIONAL STRIP



DETAIL C MODIFIED TYPE D CURB



DETAIL B MODIFIED CONCRETE MONOLITHIC MEDIAN

NO.	REVISION	BY	APP'D	DATE	DESIGNED BY: UMK	DATE: FEBRUARY 20)25	
					DRAWN BY: UMK	DATE: FEBRUARY 20)25	
					CHECKED BY: LRA	CHECKED BY: LRA DATE: FEBRUARY 2025		
_					DRAWING NO.:	DATE:		
					RECOMMENDED FOR APPROVAL			
					Chief, Design Section		 Date	
					APPROVED			
					Chief,		 Date	
					Division of Transportation Engineering			SC

DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

DT-02

CHELTENHAM DRIVE BIKEWAY ROADWAY DETAILS

PROJECT NO.: <u>500119</u> SHEET <u>07</u> of <u>38</u> CALE: NTS

PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE _ EXPIRATION DATE: _

Stantec www.stantec.com

810 Gleneagles Court, Suite 300 Baltimore, MD 21286

	PIPE SCHEDULE												
UPSTREAM	DOWNSTREAM	SIZE	TYPE	LENGTH	UPSTREAM	DOWNSTREAM	COMMENTS						
STRUCTURE	STRUCTURE	0.22		(FT)	INVERT	INVERT							
I-3	MH-3	15"	RCP CLASS IV	119	343.60	343.00	MCDOT OWNED						
I-2	MH-2	15"	RCP CLASS IV	60	337.00	336.34	MCDOT OWNED						
I-1	MH-1	15"	RCP CLASS IV	9	335.30	335.10	MCDOT OWNED						
MH-1	EX-MH-1	15"	RCP CLASS IV	8	334.30	334.00	MCDOT OWNED						

	STRUCTURE SCHEDULE												
STRUCTURE	STATION	OFFSET	ТҮРЕ	TOP ELEV.	INVERT OUT	OWNERSHIP	STANDARD	REMARKS					
I-1	107+29	4.31 RT	"B" INLET (B-15)	339.30	335.30	MCDOT	MC-502.01	15' THROAT OPENING					
I-2	105+79	24.22 LT	"B" INLET (B-10)	345.00	337.00	MCDOT	MC-502.01	10' THROAT OPENING					
I-3	102+92	17.19 LT	REVERSE "B" INLET (B-10)	350.00	343.60	MCDOT	MC-502.02	10' THROAT OPENING					
MH-1	107+30	19.98 RT	MCDOT TYPE "A" MANHOLE	338.78	334.30	MCDOT	MC-510.01						
MH-2	105+79	37.66 RT	MCDOT TYPE "A" MANHOLE	345.00	336.24	MCDOT	MC-510.01						
MH-3	114+76	27.23 LT	48" DIAMETER PRECAST MANHOLE	350.05	342.39	MDOT	MD-384.01						

GENERAL NOTES

I. STATION AND OFFSETS FOR MANHOLES IS GIVEN TO THE GEOMETRIC CENTER OF THE MANHOLE AND THE TOP ELEVATION IS GIVEN TO THE TOP OF MANHOLE COVER.

2.STATIONS FOR COG INLETS IS GIVEN TO THE GEOMETRIC CENTER OF THE BASE UNIT STRUCTURE, THE OFFSET IS GIVEN TO THE FACE OF CURB AT CENTER OF TROUGH AND THE TOP ELEVATION IS GIVEN TO THE TOP OF CURB.

3.CONTRACTOR TO VERIFY ALL EX.STORM DRAIN INVERTS PRIOR TO ORDERING AND FABRICATION ALL PROPOSED INLETS AND MANHOLES.

DD-01

	NO.	REVISION	BY	APP'D	DATE	DESIGNED BY: SMH	DATE: FEBRUARY 2025	DEPARTMENT OF TRANSPORTATION
						DRAWN BY: SMH	DATE: FEBRUARY 2025	
	 					CHECKED BY: LRA	DATE: FEBRUARY 2025	DIVISION OF TRANSPORTATION ENGINEERING
						DRAWING NO.:	DATE:	MONTGOMERY COUNTY, MARYLAND
Stantec						RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED	 Date	CHELTENHAM DRIVE BIKEWAY DRAINAGE SCHEDULES
vleneagles Court, Suite 300 nore, MD 21286 stantec.com						Chief, Division of Transportation Engineering		SCALE: NONE PROJECT NO.: 500119 SHEET 11 of 38

DESIGNED BY: SMH

DATE: FEBRUARY 2025

APP'D 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: _

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SCALE: NONE

PROJECT NO.: <u>500119</u> SHEET <u>11</u> of <u>38</u>

EX. SHA ROW SEE WISCONSIN AVENUE (MD 355) EX. SHA ROW — EX. COUNTY — DA-02 DESIGNED BY: SMH DATE: FEBRUARY 2025 APP'D DATE REVISION DEPARTMENT OF TRANSPORTATION DRAWN BY: SMH DATE: FEBRUARY 2025 DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND CHECKED BY: LRA DATE: FEBRUARY 2025 DRAWING NO.: RECOMMENDED FOR APPROVAL Stantec CHELTENHAM DRIVE BIKEWAY · — — DRAINAGE AREA BOUNDARY Chief, Design Section EXISTING DRAINAGE AREA MAP PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED
OR APPROVED BY ME, AND THAT I AM A DULY LICENSED APPROVED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE 810 Gleneagles Court, Suite 300 OF MARYLAND. Date Baltimore, MD 21286 Division of Transportation Engineering LICENSE NO: _ _ EXPIRATION DATE: _ SCALE: 1'' = 40'PROJECT NO.: <u>500119</u> SHEET <u>13</u> of <u>38</u> www.stantec.com

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: _ _ EXPIRATION DATE: _

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· — DRAINAGE AREA BOUNDARY

CHECKED BY: LRA DATE: FEBRUARY 2025 DRAWING NO.: RECOMMENDED FOR APPROVAL Chief, Design Section Date APPROVED Date Division of Transportation Engineering

APP'D DATE

DESIGNED BY: SMH

DRAWN BY: SMH

DATE: FEBRUARY 2025

DATE: FEBRUARY 2025

CHELTENHAM DRIVE BIKEWAY

PROPOSED DRAINAGE AREA MAP

PROJECT NO.: <u>500119</u> SHEET <u>15</u> of <u>38</u>

DEPARTMENT OF TRANSPORTATION

DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

DA-04

SCALE: 1" = 40'

EX. SHA ROW EX. SHA ROW EX. SHA ROW EX. SHOWLETON TANE	ALE STR	
	WISCONSIN AVENUE (MD 355))
24" RCP (MC-STORMNET) 24" RCP (MC-STORMNET) 24" RCP (MC-STORMNET)	WISCONSIN AVEINGE (IMD 333)	_
EX-MH EX-IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	OD BENEFOUND	

REVISION

- 2. The permittee must obtain inspection and approval by dps at the following points:
 - A. At the required pre-construction meeting.
 - B. Following installation of sediment control measures and prior to any other land disturbing activity.
 - C. 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.
 - D. Prior to removal or modification of any sediment control structure(s).
 - E. Prior to final acceptance.

3. 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.

- 4. 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.
- 5. 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.

6. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within:

- A. 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
- B. 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.
- 7. 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.
- 8. 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.
- 9. 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.
- 10. 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.
- 11. 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.
- 12. 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.

13. 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.

14. 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.

15. 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.

16. 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.

17. All inlets in non-sump areas shall have asphalt berms installed at the time of base paving establishment.

18. The sediment control inspector has the option of requiring additional sediment control measures, as deemed necessary.

19. All trap elevations are relative to the outlet elevation, which must be on existing undisturbed ground.

20. Vegetative stabilization shall be performed in accordance with the standards and specifications for soil erosion and sediment control.

21. 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.

22. Sediment removed from traps/basins shall be placed and stabilized in approved areas, but not within a floodplain.

23. 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 the 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.

24. 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.

25. Off-site spoil or borrow areas must have prior approval by dps.

26. 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:

- A. 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
- B. The pump intake may utilize a removable pumping station and must discharge into an undisturbed area through a non-erosive outlet; or
- C. 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.

27. The permittee must notify the department of all utility construction activities within the permitted limits of disturbance prior to the commencement of those activities.

28. 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.

29. The contractor shall utilize a concrete washout structure for all concrete work, if the contractor wishes to use an off site concrete washout structure they shall notify the engineer of said location in writing.

STANDARD SYMBOLS

AT-GRADE INLET PROTECTION	AGIP	ROCK OUTLET PROTECTION II	ROPII
BAFFLE BOARDS	ВВ	ROCK OUTLET PROTECTION III	ROPIII
CATCH BASIN INSERT	СВІ	SILT FENCE	SF
CLEAR WATER DIVERSION PIPE	CWD - 12 NOTE: DESIGNATION CWD-12 REFERS TO CLEAR WATER DIVERSION WITH 12 INCH PIPE.	SILT FENCE ON PAVEMENT	⊢—SFOP——I
COMBINATION INLET PROTECTION	COIP	SOD	* * * * * * * * * * * * * * * * * * * *
CURB INLET PROTECTION	[4] CIP	STABILIZED CONSTRUCTION ENTRANCE	SCE SCE
DIVERSION FENCE	□ DF □	STANDARD INLET PROTECTION	SIP
EARTH DIKE	A-I PLACE DI IGNATION (A-I, B-2, e+c,) ON LOW CHANNEL SIDE OF DIKE.	STOCKPILE AREA	
EMERGENCY SPILLWAY	ES	STONE CHECK DAM	CD
FILTER BAG	⊠FB	STONE/RIPRAP OUTLET SEDIMENT TRAP ST II	ST-II
FILTER BERM	IFB-AI IFB-BI	SUBSURFACE DRAINS	
FILTER LOG	FL-18 — FL-18 NOTE: DESIGNATION FL-18 REFERS TO FILTER LOG WITH 18 INCH DIAMETER.	SUMP PIT	⊠SP
GABION INFLOW PROTECTION	GP GP	SUPER SILT FENCE	⊢—SSF——I
GABION INLET PROTECTION	[=]GIP	TEMPORARY ACCESS CULVERT	
LIMIT OF DISTURBANCE	LOD	TEMPORARY ASPHALT BERM	T <u>AB</u>
MEDIAN INLET PROTECTION	MIP	TEMPORARY BARRIER DIVERSION	TBD
MEDIAN SUMP INLET PROTECTION	MSIP	TEMPORARY GABION OUTLET STRUCTURE	TGOS
MOUNTABLE BERM	MB	TEMPORARY SOIL STABILIZATION MATTING-TYPE	A A A
PERIMETER DIKE/SWALE	₽DS-I ####################################	TEMPORARY SOIL STABILIZATION MATTING-TYPE	E
PERMANENT SOIL STABILIZATION MATTING-T	YPE B	TEMPORARY SOIL STABILIZATION MATTING-TYPE	D ************************************
PERMANENT SOIL STABILIZATION MATTING-T	YPE C	TEMPORARY STONE OUTLET STRUCTURE	∜ ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ
PIPE OUTLET SEDIMENT TRAP ST I	ST-I	TEMPORARY SWALE	A-I CE DESIGNATION (A-I,B) ON FLOW CHANNEL S
PIPE SLOPE DRAIN	PSD - 12 NOTE: DESIGNATION PSD-12 REFERS TO PIPE SLOPE DRAIN WITH 12 IN PIPE	WASH RACK OPTION	WR
PLUNGE POOL	PP	CHESAPEAKE BAY CRITICAL AREA -	
PORTABLE SEDIMENT TANK	⊠PST	DRAINAGE BOUNDARY	D <u>A</u>
REMOVABLE PUMPING STATION	⊠RPS	EXISTING CONTOURS	<u> </u>
RIPRAP INFLOW PROTECTION	RRP	PROPOSED CONTOURS	100
RIPRAP OUTLET SEDIMENT TRAP ST III	ST-III	TREE PROTECTION FENCE	
ROCK OUTLET PROTECTION I	ROPI	WETLAND	•
LIMIT OF CUT SLOPE		WETLAND BUFFER	
		IOO-YEAR FLOODPLAIN	

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

DESIGNED BY: SMH DATE: FEBRUARY 2025 APP' D DATE REVISION DRAWN BY: SMH DATE: FEBRUARY 2025 CHECKED BY: LRA DATE: FEBRUARY 2025 DRAWING NO.: DATE: RECOMMENDED FOR APPROVAL Chief, Design Section Date **APPROVED** Date Division of Transportation Engineering

ESN-01

CHELTENHAM DRIVE BIKEWAY EROSION AND SEDIMENT CONTROL NOTES

DEPARTMENT OF TRANSPORTATION

DIVISION OF TRANSPORTATION ENGINEERING

MONTGOMERY COUNTY, MARYLAND

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:

EXPIRATION DATE:

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

SCALE: NONE

PROJECT NO.: <u>500119</u> SHEET <u>18</u> of <u>38</u>

SEQUENCE OF CONSTRUCTION

- I. 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. 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.
- 4. 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.
- 5. Construction can occur coincidentally or any order the contractor chooses as long as approvals are in place.

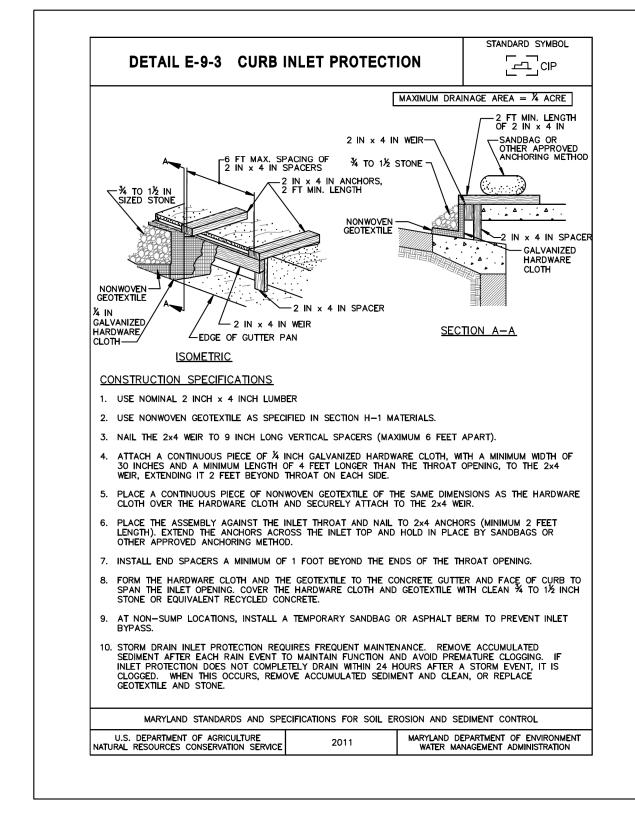
SITE SPECIFIC SEQUENCE OF CONSTRUCTION

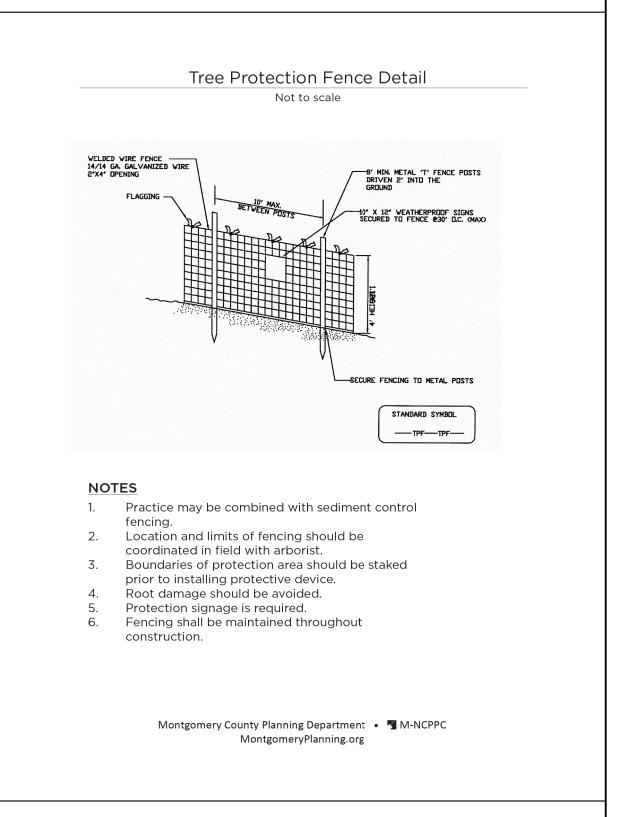
- I. Clear and Grade for Installation of sediment control devices, only disturbing the area needed for installation of the sediment control devices.
- 2. Install Inlet Protection and Tree Protection Fence.
- 3. Once installed, the permittee must obtain written approval from the MCDPS inspector before 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.

M-NCPPC CONSTRUCTION NOTES

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

- I. 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.





ESN-02

NO.	REVISION	BY	APP'D	DATE	DESIGNED BY: SMH	25	
					DRAWN BY: SMH	DATE: FEBRUARY 20	25
					CHECKED BY: LRA	DATE: FEBRUARY 20	25
					DRAWING NO.:	DATE:	
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					Chief, Design Section		——————————————————————————————————————
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					APPROVED		
					Chief,	_	Date
					Division of Transportation Engineering		

CHELTENHAM DRIVE BIKEWAY EROSION AND SEDIMENT CONTROL NOTES

DEPARTMENT OF TRANSPORTATION

DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

LICENSE NO:

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.

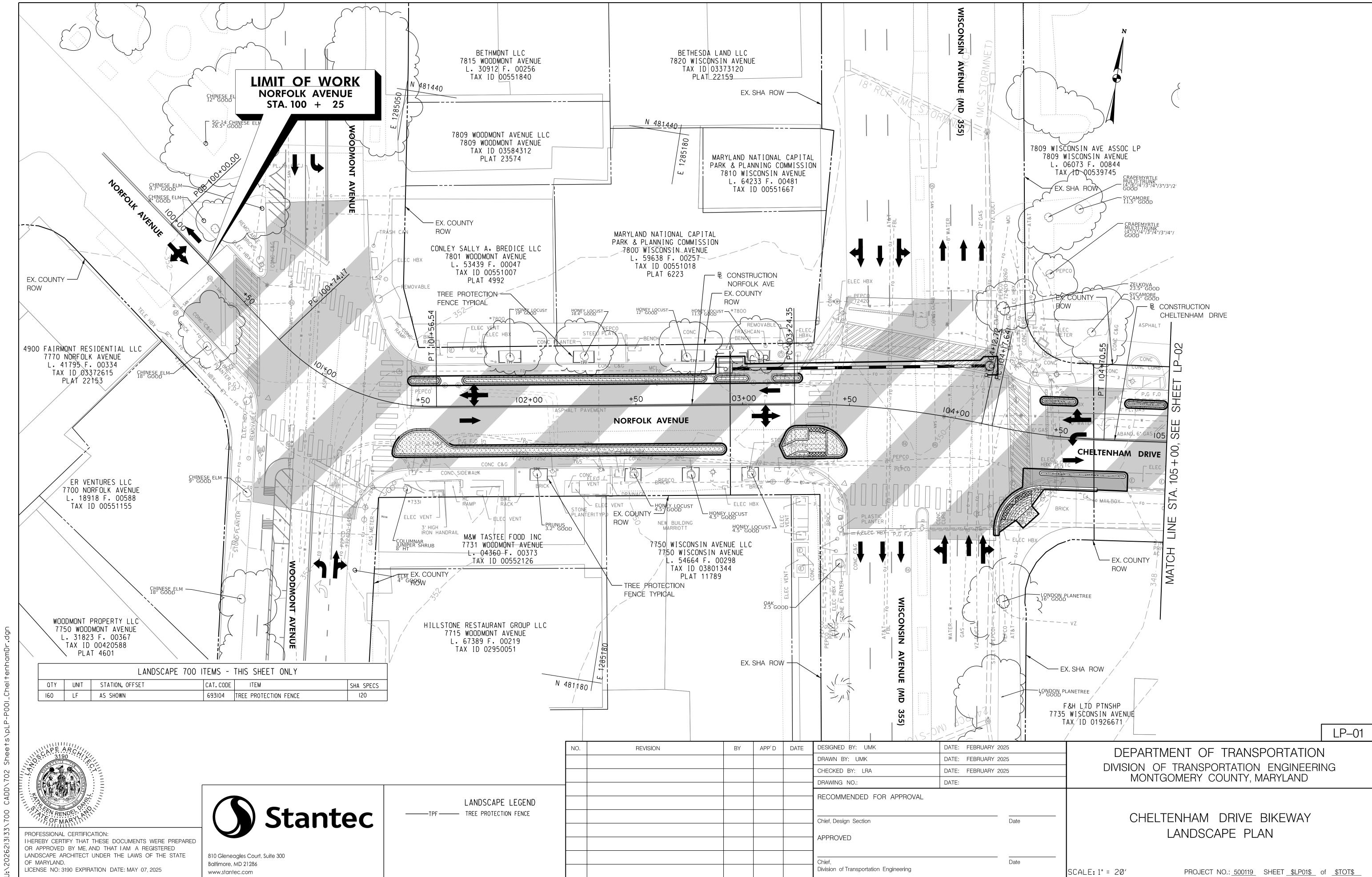
EXPIRATION DATE:

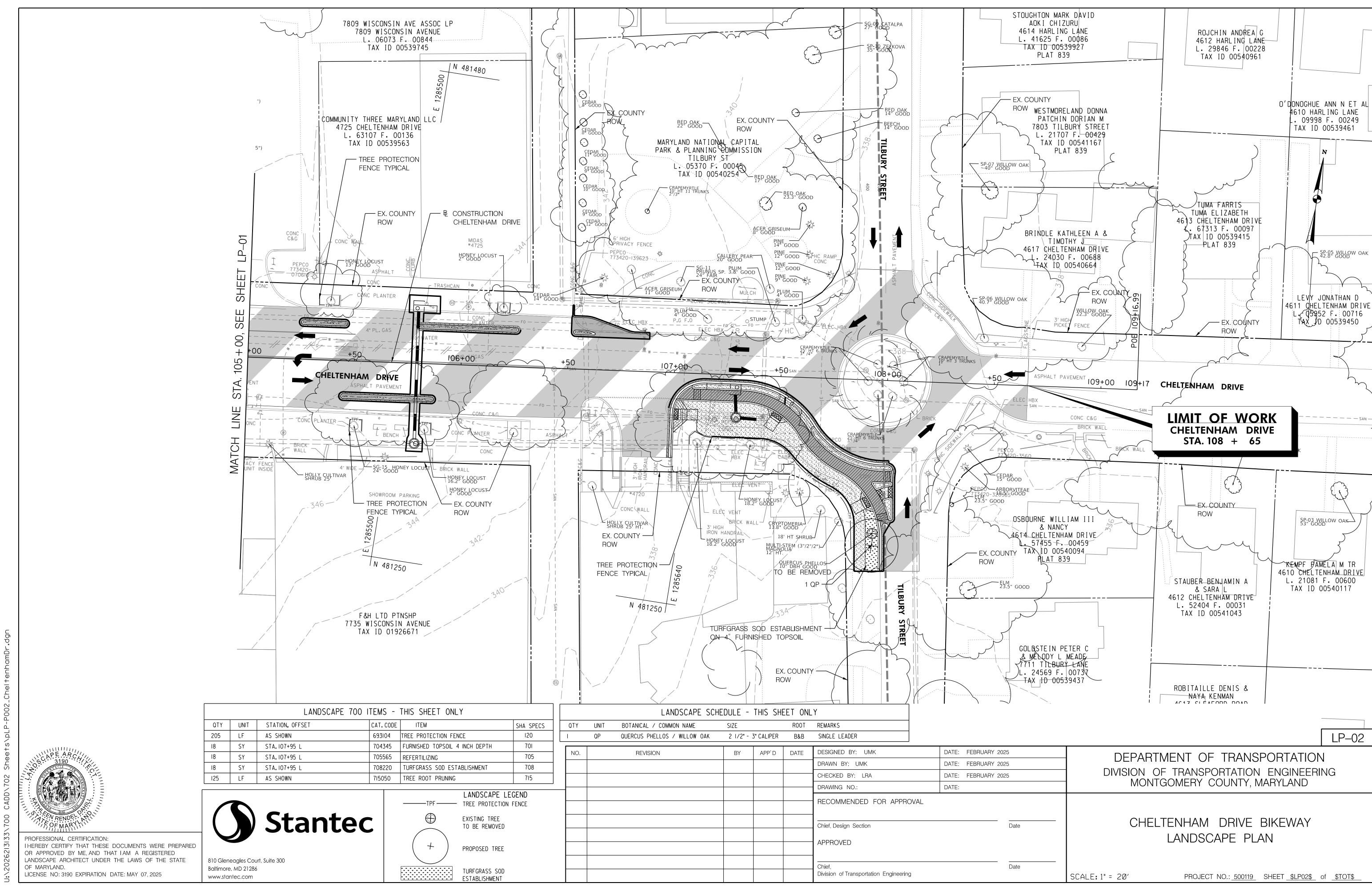
810 Gleneagles Court, Suite 300 Baltimore, MD 21286 www.stantec.com

) Stantec

SCALE: NONE

PROJECT NO.: <u>500119</u> SHEET <u>17</u> of <u>38</u>





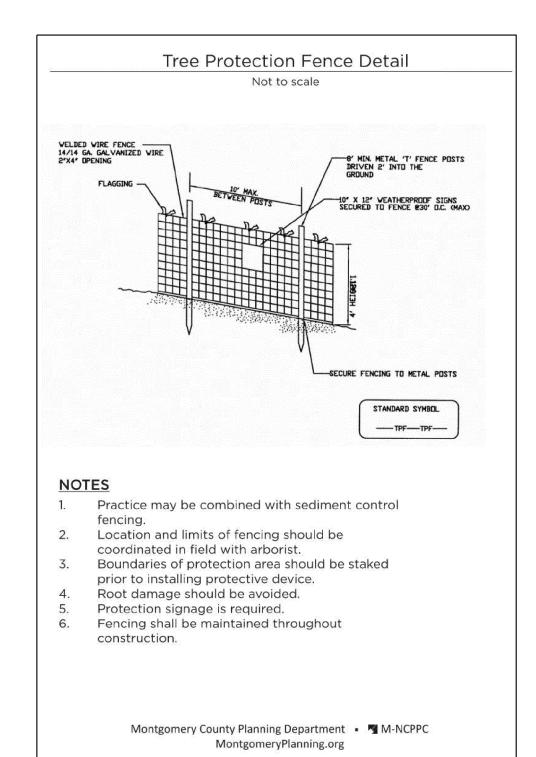
MDOT SHA LANDSCAPE NOTES

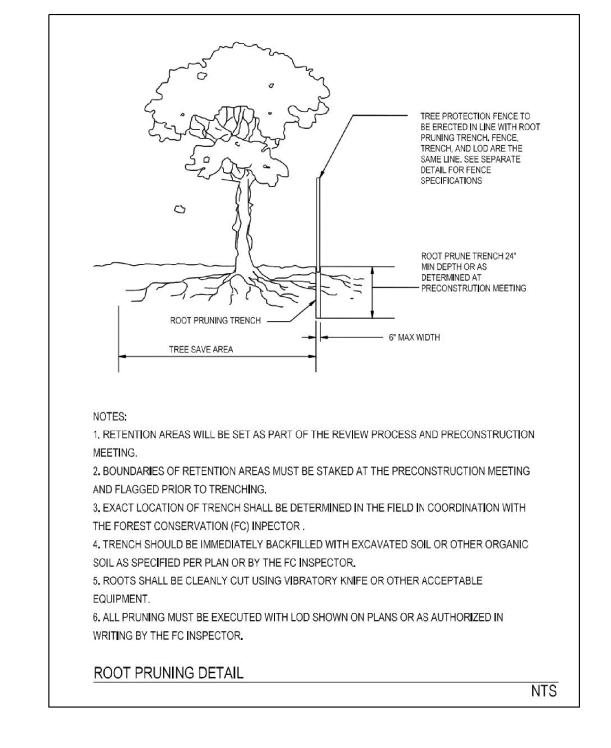
7.1 SHA LANDSCAPE NOTES. LANDSCAPE CONSTRUCTION WITHIN SHA PROPERTY. INCLUDING RIGHT OF WAYS. EASEMENT AREAS AND LANDS TO BE CONVEYED TO SHA SHALL CONFORM TO THESE NOTES. FOR GUIDANCE REGARDING DESIGN MODIFICATIONS DURING CONSTRUCTION, REFER TO SHA LANDSCAPE DESIGN GUIDE, SHA LANDSCAPE ESTIMATING MANUAL, AND SHA ENVIRONMENTAL GUIDE FOR ACCESS AND DISTRICT PERMIT APPLICANTS AT

HTTP://WWW.ROADS.MARYLAND.GOV/INDEX.ASPX?PAGEID=25.

- 7.2 SHA STANDARD SPECIFICATIONS. LANDSCAPE CONSTRUCTION SHALL CONFORM TO CATEGORY 700 LANDSCAPING, 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 OF SHA SPECIFICATIONS SHALL SUPERSEDE ALL OTHER SPECIFICATIONS FOR WORK ON SHA PROPERT OR PROPERTY TO BE CONVEYED TO SHA EXCEPT AS SPECIFICALLY INDICATED IN THE PLANS. REFER TO 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
- 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.
- 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
- 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 WITIN CHANNELS.
- 7.6 PAVEMENT REMOVAL AND RESTORATION. AREAS OF PAVEMENT REMOVAL SHALL BE EXCAVATED TO REMOVED PAVEMENTS, AGGREGATE BASE, AND COMPACTED SOIL AND OTHER UNSUITABLE MATERIALS BEFORE PLACING SOILS IN CONFORMANCE WITH SECTION 701 OF THE SHA STANDARD SPECIFICATIONS.
- 1. ROADWAYS SHALL BE EXCAVATED TO A DEPTH OF 16 INCHES BELOW FINAL GRADE BEFORE PLACING FURNISHED SUBSOIL 12 IN. DEPTH AND PLACING FURNISHED TOPSOIL 4 IN. DEPTH IN CONFORMANCE IWHT NOTE 7.8.
- 2. SIDEWALKS AND DRIVEWAYS SHALL BE EXCAVATED TO A DEPTH OF 6 INCHES BELOW FINAL GRADE BEFORE PLACING FURNISHED OPTSOIL 6 IN. DEPTH IN CONFORMANCE WITH NOTE 7.8.
- STUMPS, ROOTS, FENCING, PIPES, AND OTHER MATERIALS THAT MAY INTERFERE WITH LANDSCAPE INSTALLATION OR FUTURE REMOVAL OF SECTION 714. ALLL DEBRIS SHALL BE REMOVED FROM SHA PROPERTY. 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. OR SHALL BE EQUIVALENT FERTILIZER AND APPLICATION RATE AS SPECIFEIED IN SECTION 708. NO FERTILIZER SHALL BE APPLIED FROM NOVEMBER 15 TO MARCH 1.
- 7.10 TURFGRASS ESTABLISHMENT SHALL BE PERFORMED IN ALL DISTURED 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 OR SHALL BE EQUIVALENT FERTILIZER AND APPLICATION RATE AS SPECIFEIED IN SECTION 708. NO FERTILIZER SHALL BE APPLIED FROM NOVEMBER 15 TO MARCH 1.

- 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
 - 1. AREAS FLATTER THAN 6:1. TYPE A OR TYPE E MATTING MAY BE INSTALLED IN LIEU OF STRAW MULCH AND HYDROMULCH BINDER IN CONJUCTION WITH TURFGRASS ESTABLISHMENT.
 - 2. AREAS STEEEPER THAN 6:1 AND FLATTER THAN 4:1. TYPE A OR TYPE E MATTING SHALL BE INSTALLED IN LIEU OF STRAW MULCH AND HYDORMULCH BINDER IN CONJUCTION 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 BINDR IN CONJUCTION WITH TURFGRASS ESTABLISHMENT, UNLESS DELINEATED AND NOTED OTHERWISE.
 - 4. IN AREAS 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.
- 7.13 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. THE SHA LANDSCAPE PROGRAMS DIVISION WILL APPROVE MATERIALS AND LAYOUT, AND PERFORM OTHER APPROVALS AND INSPECTIONS IN CONFORMATNCE WITH 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.
- 7.7 EXCAVATION AND DEBRIS REMOVAL. DEBRIS RELATED TO THE DEMOLITION OF SIDEWALKS. DRIVEWAYS. CURBS. TREES. 7.17 TREE FELLING IN TURFGRASS AREAS SHALL BE PERFORMED IN CONFORMANCE IWTH OPERATION 1 FELLING AND STUMP
 - 7.20 STUMP REMOVAL. STUMP REMOVAL IN TURFGRASS OR MEADOW AREAS SHALL BE PERMFORMED IN CONFORMANCE WITH OPERATION 5 - STUMP REMOVAL OF SECTION 714. ALL DEBRIS SHALL BE REMOVED FROM SHA PROPERTY
 - 7.21 TREE BRANCH PRUNING SHALL BE PERFORMED OR DIRECTLY SUPERVISED BY A MARYLAND LICENSED TREE EXPERT IN CONFORMANCE WITH ANSI A300 STANDARDS PER SECTION 712 AS NECESSARY FOR ANY OF THE FOLLOWING: TO INSTALL TEMPORARY ORANGE CONSTRUCTION FENCE (TOCF) ALONG DELINEATIONS OF PLANS; TO PERFORM TREE ROOT PRUNING ALONG DELINEATIONS ON PLANS; TO PROVIDE 8 FOOT CLEARANCE ABOVE SIDEWALK PAVEMENTS AND 16 FOOT CLEARANCE ABOVE ROADWAY PAVEMENTS: TO REPAIR TREE WOUNDS; AND TO PERFORM OTHER RECOMMENDED CLEANING, THINNING, REDUCING, AND PRUNING NECESSARY TO ACCOMMODATE UTILITIES, ALL DEBRIS SHALL BE REMOVED FROM SHA PROPERTY
 - 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.





LP-03



PROFESSIONAL CERTIFICATION: THEREBY 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: 3190 EXPIRATION DATE: MAY 07, 2025



810 Gleneagles Court, Suite 300

Baltimore, MD 21286

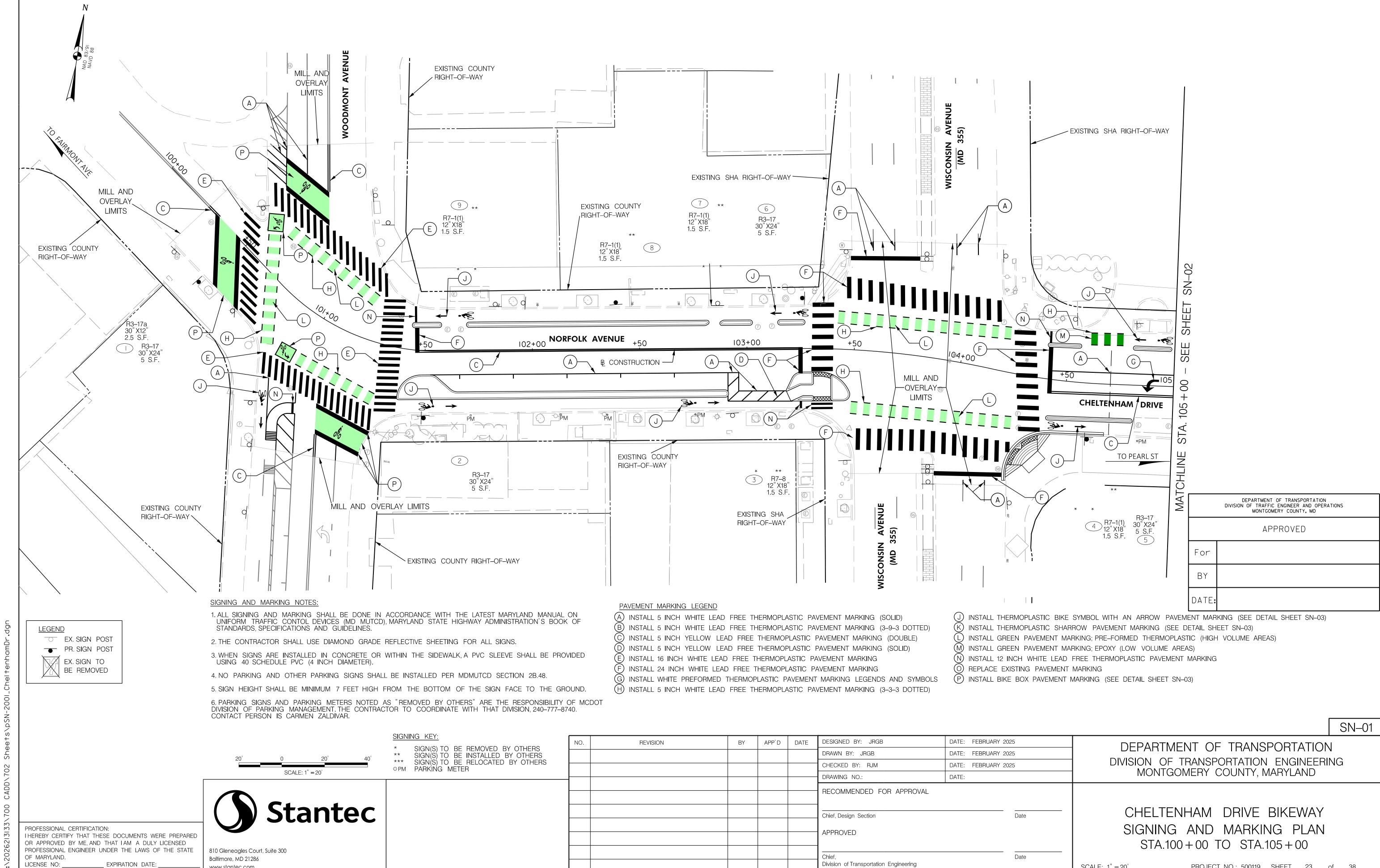
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NO.	REVISION	BY	APP' D	DATE	DESIGNED BY: UMK	DATE: FEBRUARY	2025	
					DRAWN BY: UMK	DATE: FEBRUARY	2025	
					CHECKED BY: LRA	DATE: FEBRUARY	2025	
					DRAWING NO.:	DATE:		
					RECOMMENDED FOR APPROVAL			
					Chief, Design Section		Date	
					APPROVED			
					Chief,		 Date	
					Division of Transportation Engineering			

DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY. MARYLAND

> CHELTENHAM DRIVE BIKEWAY LANDSCAPE PLAN NOTES & DETAILS

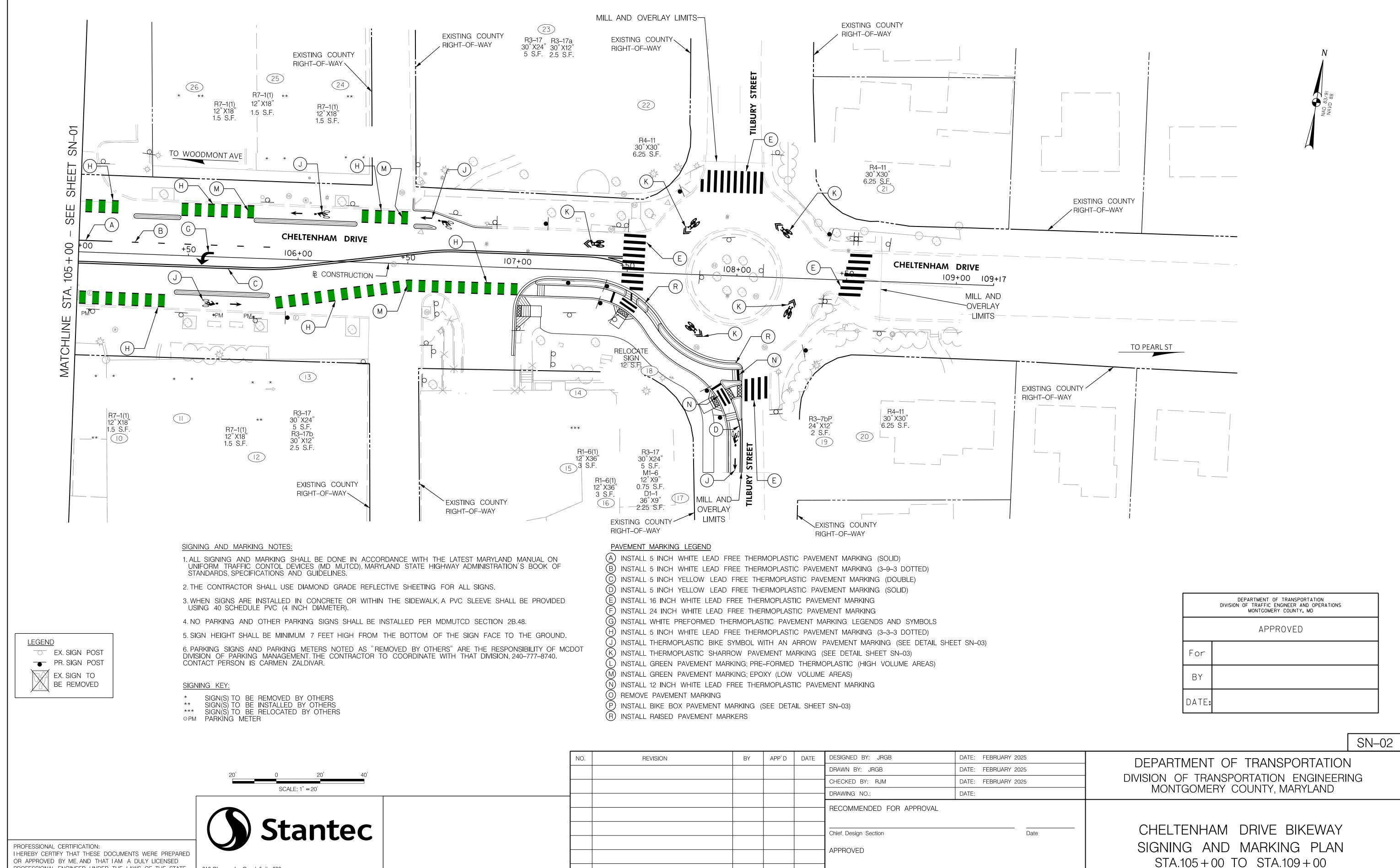
> > PROJECT NO.: <u>500119</u> SHEET <u>22</u> of <u>38</u>



SCALE: 1'' = 20'

PROJECT NO.: <u>500119</u> SHEET <u>23</u> of <u>38</u>

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Date

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PROJECT NO.: <u>500119</u> SHEET <u>24</u> of <u>38</u>

Division of Transportation Engineering

OF MARYLAND.

LICENSE NO: _

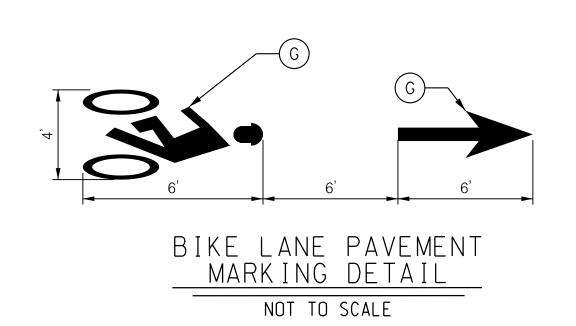
OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE

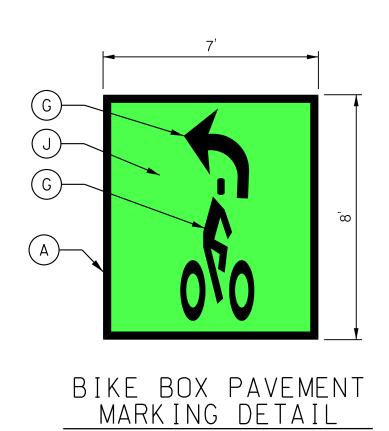
__ EXPIRATION DATE: _

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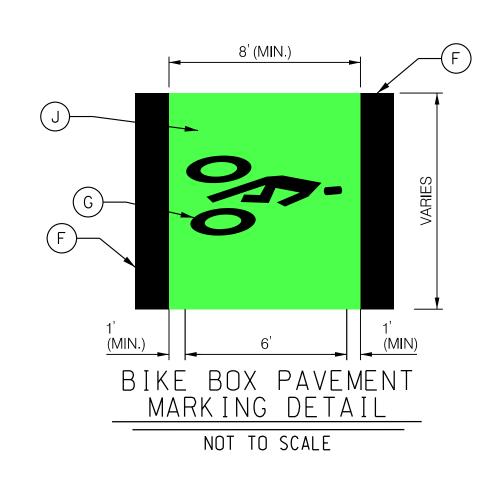
Baltimore, MD 21286

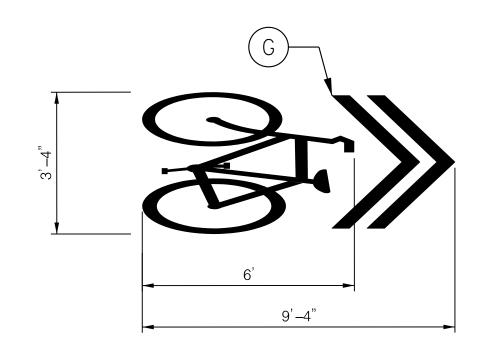
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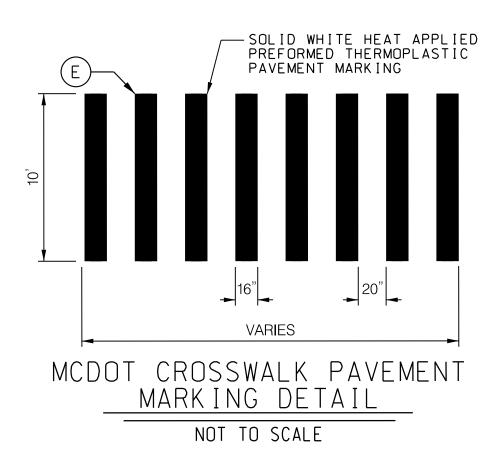
NOT TO SCALE

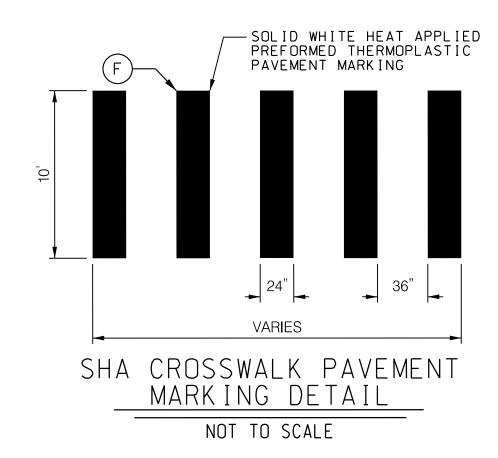




SHARED LANE (SHARROW) PAVEMENT MARKING DETAIL

NOT TO SCALE





PAVEMENT MARKING LEGEND

- (A) INSTALL 5 INCH WHITE LEAD FREE THERMOPLASTIC PAVEMENT MARKING (SOLID)
- B INSTALL 5 INCH WHITE LEAD FREE THERMOPLASTIC PAVEMENT MARKING (3-9-3 DOTTED)
- (C) INSTALL 5 INCH YELLOW LEAD FREE THERMOPLASTIC PAVEMENT MARKING (DOUBLE)
- D INSTALL 5 INCH YELLOW LEAD FREE THERMOPLASTIC PAVEMENT MARKING (SOLID)

 (E) INSTALL 16 INCH WHITE LEAD FREE THERMOPLASTIC PAVEMENT MARKING
- (F) INSTALL 24 INCH WHITE LEAD FREE THERMOPLASTIC PAVEMENT MARKING
- (G) INSTALL WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
- (H) INSTALL 5 INCH WHITE LEAD FREE THERMOPLASTIC PAVEMENT MARKING (3-3-3 DOTTED)
- (J) INSTALL THERMOPLASTIC BIKE SYMBOL WITH AN ARROW PAVEMENT MARKING
- (K) INSTALL THERMOPLASTIC SHARROW PAVEMENT MARKING
- L INSTALL GREEN PAVEMENT MARKING; PRE-FORMED THERMOPLASTIC (HIGH VOLUME AREAS)
- M INSTALL GREEN PAVEMENT MARKING; EPOXY (LOW VOLUME AREAS)
- N INSTALL 12 INCH WHITE LEAD FREE THERMOPLASTIC PAVEMENT MARKING
- O REMOVE PAVEMENT MARKING

	DEPARTMENT OF TRANSPORTATION DIVISION OF TRAFFIC ENGINEER AND OPERATIONS MONTGOMERY COUNTY, MD
	APPROVED
For	
ВҮ	
DATE:	

SN-03

	NO.	REVISION	BY	APP' D	DATE	DESIGNED BY: JRGB	DATE: FEBRUARY 202	5	
						DRAWN BY: JRGB	DATE: FEBRUARY 202	5	
	 					CHECKED BY: RJM	DATE: FEBRUARY 202	5	
						DRAWING NO.:	DATE:		
Stantec						RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED		Date	
Gleneagles Court, Suite 300 timore, MD 21286						Chief, Division of Transportation Engineering		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

PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STOP MARYLAND.

LICENSE NO: ______ EXPIRATION DATE: _____

WS OF THE STATE

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

SCALE: NTS

MARKING DETAILS

NTS PROJECT NO.: <u>500119</u> SHEET <u>25</u> of <u>38</u>

DEPARTMENT OF TRANSPORTATION

DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

CHELTENHAM DRIVE BIKEWAY

SIGNING AND MARKING PLAN

PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED
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Stantec 810 Gleneagles Court, Suite 300 Baltimore, MD 21286 www.stantec.com

APP'D DATE DESIGNED BY: JRGB DATE: FEBRUARY 2025 REVISION DRAWN BY: JRGB DATE: FEBRUARY 2025 DATE: FEBRUARY 2025 CHECKED BY: RJM DRAWING NO.: RECOMMENDED FOR APPROVAL Chief, Design Section Date APPROVED Chief,
Division of Transportation Engineering Date

CHELTENHAM DRIVE BIKEWAY SIGNING AND MARKING PLAN SIGN AND MARKING SCHEDULE PROJECT NO.: <u>500119</u> SHEET <u>26</u> of <u>38</u> SCALE: NTS

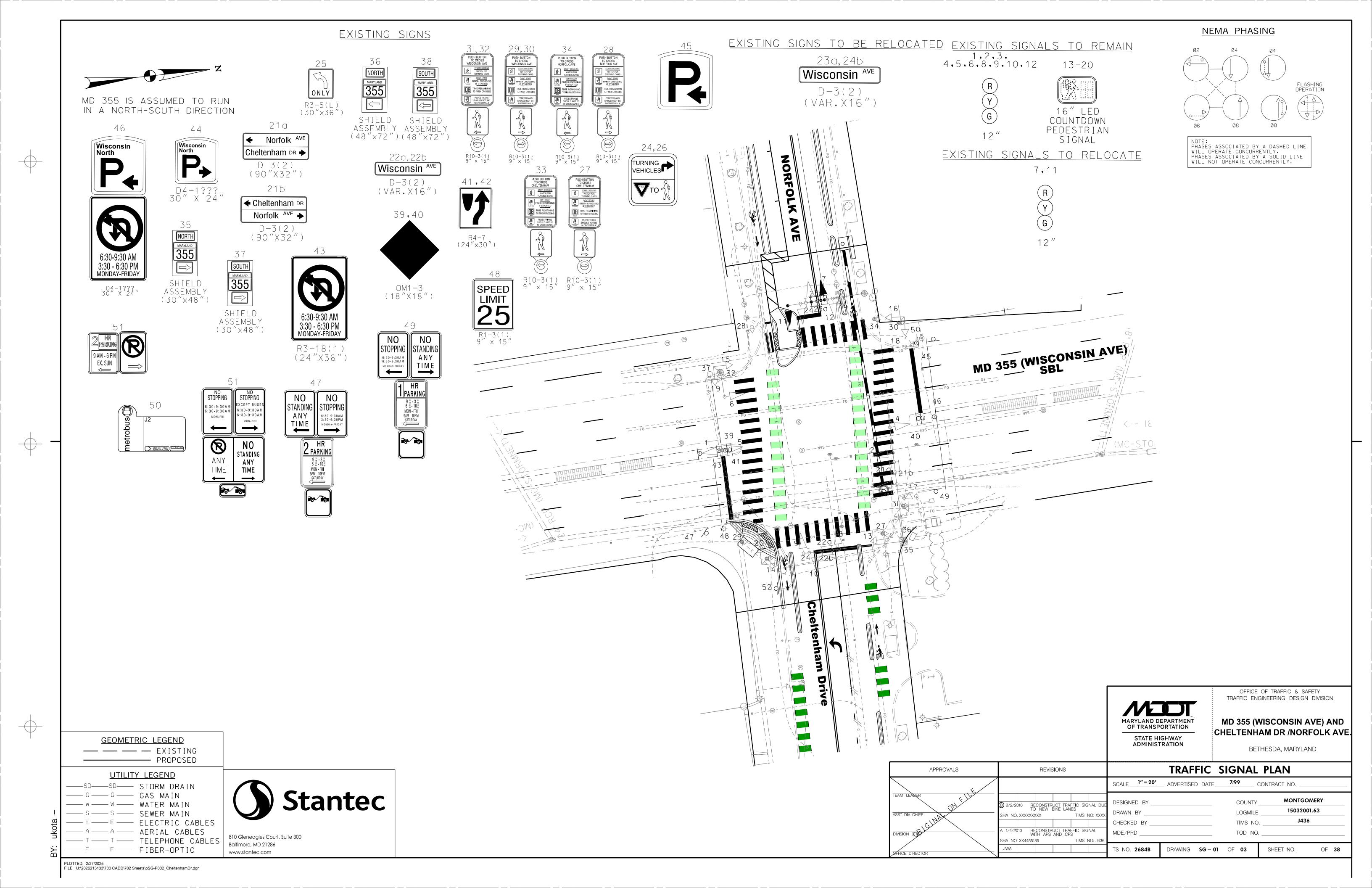
DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

DEPARTMENT OF TRANSPORTATION

		* CODE NUMBER	DESCRIPTION & UN	IT	
CODE NUMBERS	DESCRIPTION	UNIT	CODE NUMBERS	DESCRIPTION	UNIT
I	SHEET ALUMINUM SIGN(S)	S.F.	9	16" WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	L.F.
2	FURNISH AND INSTALL PERFORATED TUBULAR STEEL SIGN SUPPORTS	EACH	10	24" WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	L.F.
3	FURNISH AND INSTALL ANCHOR BASES FOR SQUARE TUBULAR STEEL POST	EACH	II	WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS	S.F.
4	REMOVE EXISTING SIGN(S)	S.F.	12	SHARED BIKE LANE PREFORMED THERMOPLASTIC PAVEMENT MARKING	S.F.
5	RELOCATE EXISTING SIGN(S)	S.F.	13	BIKE LANE PREFORMED THERMOPLASTIC PAVEMENT MARKING WITH ARROW	S.F.
6	5" WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	L.F.	14	REMOVAL OF EXISTING PAVEMENT MARKING LINES, ANY WIDTH	L.F.
7	5" YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	L.F.	15	PREFORMED THERMOPLASTIC GREEN PAINT	S.F.
8	12" WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	L.F.	16	EPOXY-MODIFIED ACRYLIC WATERBORNE GREEN PAINT	S.F.

	DEPARTMENT OF TRANSPORTATION DIVISION OF TRAFFIC ENGINEER AND OPERATION MONTGOMERY COUNTY, MD	NS
	APPROVED	
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		SN-04

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21 R4-II		6.25		1													
22 R4-II		6.25															
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LICENSE NO: _

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.

810 Gleneagles Court, Suite 300 Baltimore, MD 21286 _ EXPIRATION DATE: _ www.stantec.com



DESIGNED BY: RJM DATE: FEBRUARY 2025 APP'D DATE NO. REVISION <u>LEGEND</u> DRAWN BY: RJM DATE: FEBRUARY 2025 EXISTING PEDESTRIAN LUMINAIRE AND POLE CHECKED BY: JRGB DATE: FEBRUARY 2025 EXISTING ROADWAY LUMINAIRE DRAWING NO.: EXISTING NIGHTTIME LIGHT LEVEL RECOMMENDED FOR APPROVAL EXISTING 100W LED LUMINAIRE EXISTING 200W LUMINAIRE Chief, Design Section 1.00 FOOT-CANDLE 0.25 FOOT-CANDLE APPROVED MIN FOOT-CANDLE MAX FOOT-CANDLE Date Division of Transportation Engineering LOW LIGHT-LEVEL AREA

CHELTENHAM DRIVE BIKEWAY LIGHTING PLAN

DEPARTMENT OF TRANSPORTATION

DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

LT-01

SCALE: 1'' = 20'PROJECT NO.: <u>500119</u> SHEET <u>28</u> of <u>38</u>

STA. 100 + 00 TO STA. 105 + 00

LIGHT TO REMAIN

EXISTING PEDESTRIAN — LIGHT TO REMAIN TO PEARL ST EXISTING PEDESTRIAN LIGHT TO REMAIN

Northside between MD 355 and

Tilbury
Southside between MD 355 and

NORFOLK AVENUE

Sidewalk3 Illuminance

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: _ __ EXPIRATION DATE: _

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

	EXISTING PEDESTRIAN LUMINAIRE AND POLE
$\bigcirc \overline{\square}$	EXISTING ROADWAY LUMINAIRE
0.0	EXISTING NIGHTTIME LIGHT LEVEL
$\bigcirc - \bigcirc$	EXISTING 100W LED LUMINAIRE
	EXISTING 200W LUMINAIRE
	1.00 FOOT-CANDLE
+	0.25 FOOT-CANDLE
₊ 0.0	MIN FOOT-CANDLE
0.0	MAX FOOT-CANDLE
	LOW LIGHT-LEVEL AREA

<u>LEGEND</u>

NO.

REVISION

			1 1 1 / / 1 - :	
		DRAWING NO.:	DATE:	
		RECOMMENDED FOR APPROVAL		
		Chief, Design Section		Date
		APPROVED		
		ALLINOVED		
		Chief,		Date
		Division of Transportation Engineering		

DESIGNED BY: RJM

CHECKED BY: JRGB

DRAWN BY: RJM

DATE: FEBRUARY 2025

DATE: FEBRUARY 2025

DATE: FEBRUARY 2025

APP'D DATE

BY

CHELTENHAM DRIVE BIKEWAY LIGHTING PLAN

DEPARTMENT OF TRANSPORTATION

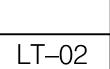
DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

PROJECT NO.: <u>500119</u> SHEET <u>29</u> of <u>38</u>

STA. 105 + 00 TO STA. 109 + 17

SCALE: 1'' = 20'

	EXISTING PEDESTRIAN— LIGHT TO REMAIN
MATCHLINE STA. 105 + 00 - SEE SHEET LT-01 CHETTENHAM DRIVE 106+001 CHETTENHAM DRIVE 106+001 CHETTENHAM DRIVE 107 108 109 109 109 109 109 109 109	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
EXISTING PEDESTRIAN— LIGHT TO REMAIN EXISTING PEDEST LIGHT TO REMAIN	
	Calculation Summary Label CalcType Units Description Avg Max Min Avg/Min Max/Min Roadl Illuminance Fc 1.69 7.7 0.0 N.A. N.A. Sidewalk1 Illuminance Fc Northside between Woodmont and 0.25 0.9 0.0 N.A. N.A. Sidewalk2 Illuminance Fc South side between Woodmont and 0.98 4.4 0.1 9.80 44.00 MD 355 Sidewalk3 Illuminance Fc Northside between MD 355 and 0.84 4.1 0.0 N.A. N.A. Tilbury Sidewalk4 Illuminance Fc Southside between MD 355 and 1.00 3.9 0.1 10.00 39.00



2/27/2025 U;\20262|3|33\700 CADD\702 Sheets\pHC-X00|_Cheltenham

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: ______ EXPIRATION DATE: ______

Stantec

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

CHECKED BY: LRA DATE: FEBRUARY 2025

DRAWING NO.:

RECOMMENDED FOR APPROVAL

Chief, Design Section

APPROVED

Chief, Division of Transportation Engineering

DESIGNED BY: UMK

DRAWN BY: UMK

APP'D DATE

DATE: FEBRUARY 2025

DATE: FEBRUARY 2025

CHELTENHAM DRIVE BIKEWAY ROADWAY CROSS SECTIONS

SCALE: 1" = 10'

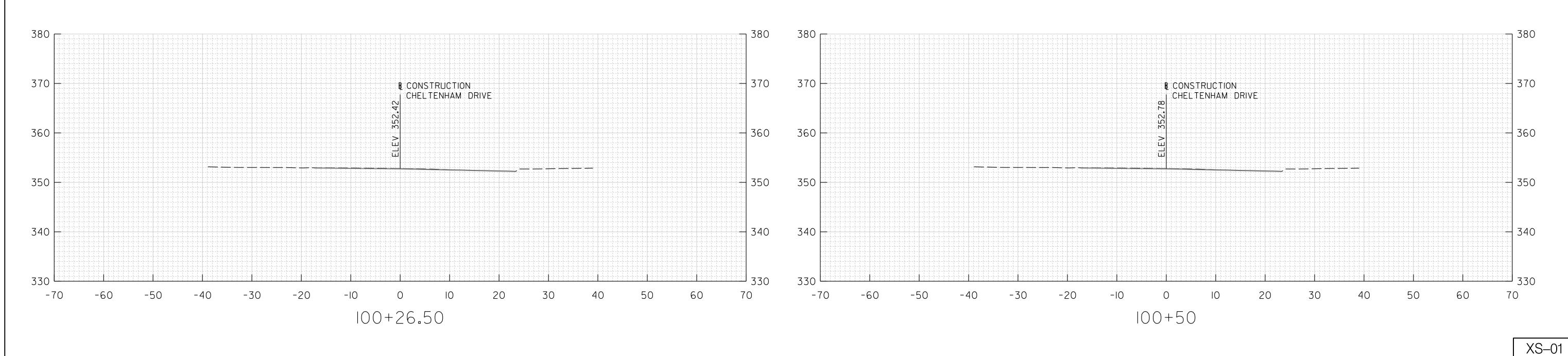
DEPARTMENT OF TRANSPORTATION

DIVISION OF TRANSPORTATION ENGINEERING

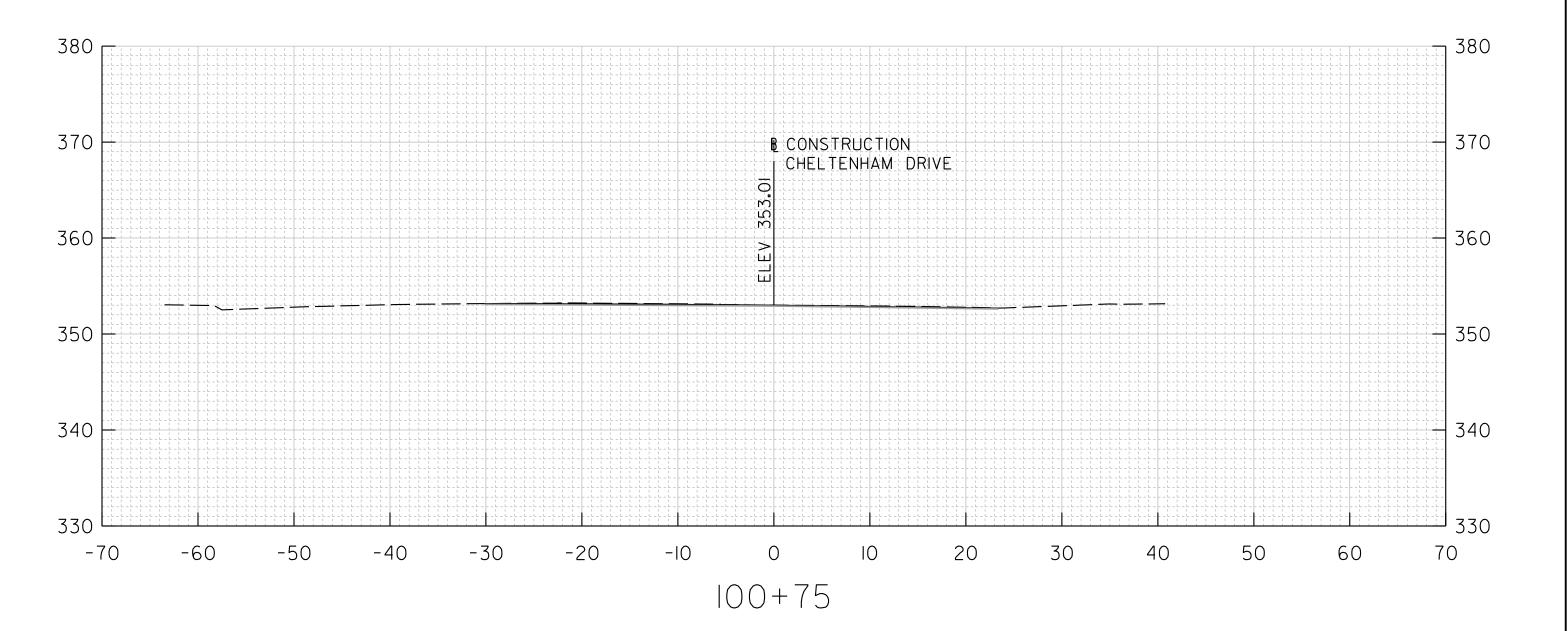
MONTGOMERY COUNTY, MARYLAND

DEPARTMENT OF TRANSPORTATION

PROJECT NO.: <u>500119</u> SHEET <u>30</u> of <u>38</u>



REVISION



370 370 B CONSTRUCTION CHELTENHAM DRIVE B CONSTRUCTION | CHELTENHAM DRIVE 360 350 340 70 101+75 101+25 370 370 E & CONSTRUCTION R CONSTRUCTION CHELTENHAM DRIVE CHELTENHAM DRIVE 360 360 360 350 350 340 340 340 -70 70 101+50 $|\bigcirc|+\bigcirc\bigcirc$ XS-02 DESIGNED BY: UMK DATE: FEBRUARY 2025 APP'D DATE REVISION DEPARTMENT OF TRANSPORTATION DRAWN BY: UMK DATE: FEBRUARY 2025 DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND CHECKED BY: LRA DATE: FEBRUARY 2025 DRAWING NO.: RECOMMENDED FOR APPROVAL CHELTENHAM DRIVE BIKEWAY Chief, Design Section ROADWAY CROSS SECTIONS PROFESSIONAL CERTIFICATION: APPROVED THEREBY 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 810 Gleneagles Court, Suite 300 Date OF MARYLAND. Baltimore, MD 21286 Division of Transportation Engineering LICENSE NO: _ __ EXPIRATION DATE: _ PROJECT NO.: <u>500119</u> SHEET <u>31</u> of <u>38</u> www.stantec.com SCALE: 1" = 10'

370 & CONSTRUCTION 370 360 B CONSTRUCTION CHELTENHAM DRIVE 360 350 340 70 102+75 102+25 370 370 E & CONSTRUCTION B CONSTRUCTION CHELTENHAM DRIVE CHELTENHAM DRIVE 360 360 360 360 350 350 350 340 340 340 -30 -70 -70 70 102+00 102+50 XS-03 DESIGNED BY: UMK DATE: FEBRUARY 2025 APP'D DATE REVISION DEPARTMENT OF TRANSPORTATION DRAWN BY: UMK DATE: FEBRUARY 2025 DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND CHECKED BY: LRA DATE: FEBRUARY 2025 DRAWING NO.: RECOMMENDED FOR APPROVAL CHELTENHAM DRIVE BIKEWAY Chief, Design Section ROADWAY CROSS SECTIONS PROFESSIONAL CERTIFICATION: APPROVED THEREBY 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 810 Gleneagles Court, Suite 300 Date OF MARYLAND. Baltimore, MD 21286 Division of Transportation Engineering LICENSE NO: _ _ EXPIRATION DATE: _ PROJECT NO.: <u>500119</u> SHEET <u>32</u> of <u>38</u> www.stantec.com SCALE: 1" = 10'

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360 _F R CONSTRUCTION & CONSTRUCTION CHELTENHAM DRIVE 350 350 350 CHELTENHAM DRIVE 340 340 340 330 330 320 320 -70 70 108+65.69 108+25 B CONSTRUCTION
 CHELTENHAM DRIVE & CONSTRUCTION CHELTENHAM DRIVE 350 340 340 340 330 330 330 320 320 320 -30 -70 70 108+50 108+00 XS-09 DESIGNED BY: UMK DATE: FEBRUARY 2025 REVISION DEPARTMENT OF TRANSPORTATION DRAWN BY: UMK DATE: FEBRUARY 2025 DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND CHECKED BY: LRA DATE: FEBRUARY 2025 DRAWING NO.: RECOMMENDED FOR APPROVAL CHELTENHAM DRIVE BIKEWAY Chief, Design Section ROADWAY CROSS SECTIONS PROFESSIONAL CERTIFICATION: APPROVED 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 810 Gleneagles Court, Suite 300 Date OF MARYLAND. Baltimore, MD 21286 Division of Transportation Engineering LICENSE NO: _ __ EXPIRATION DATE: _ PROJECT NO.: <u>500119</u> SHEET <u>38</u> of <u>38</u> www.stantec.com SCALE: 1" = 10'