SEE SHEETS I-01 FOR FULL SHEET INDEX

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION FLOWER AVENUE SEPARATED BIKE LANES

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.

TIM CUPPLES, P.E. 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.

CARRIE CASTO, P.E. MD. REGISTRATION NO. 28397

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 XXXX 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 XXXX SQUARE FEET.

DATE

CARRIE CASTO, P.E. MD. REGISTRATION NO. 28397

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

- Standard C O G Inlets 5', 10', 15' & 20'

- Precast or Cast-In-Place C O G/C O S Opening for 8" Curb 5' or 10' Only - Standard Manhole MD 383.01

D. MD 386.II - Standard Junction Box

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 - Standard Entrance Construction Residential & Commerial Method No. I

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

MD 655.II

- Sidewalk Ramps Perpendicular - Sidewalk Ramps Parallel MD 655.12

MD 655.13 - Sidewalk Ramps Combination

L. MD 655.40 - Detectable Warning Surfaces

- Combination Concrete Curb and Gutter - Type A M. MC-100.01 N. MC-102.01 - Depressed Curb Entrance

- Business District Sidewalk O. MC-III.OI

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

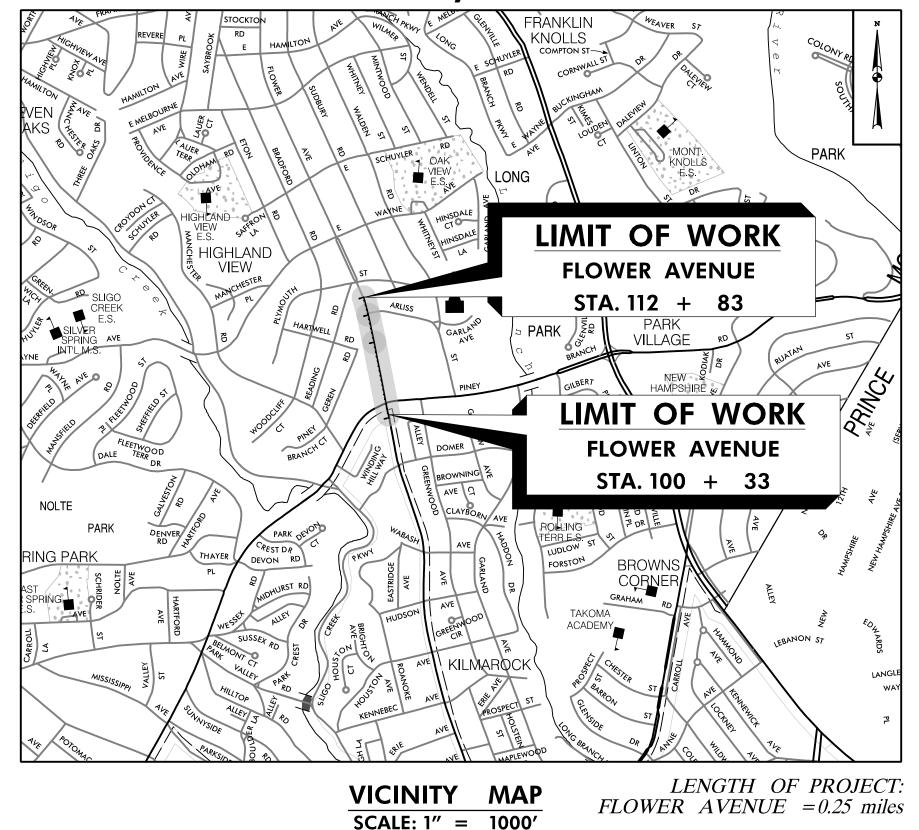
https://www.montgomerycountymd.gov/dot-dte/common/standards.html

will have the most current version. The Book of Standards can be accessed at:

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

FROM PINEY BRANCH ROAD TO ARLISS STREET

CIP PROJECT NO. 502004 35% SUBMITTAL, NOVEMBER 2023



PROJECT MANAGER

240-777-7266

DESIGNED BY: UMK

DRAWN BY: UMK

CHECKED BY: CC

DRAWING NO .:

APPROVED

APP'D DATE

KHURSHEED BILGRAMI. PE

Gaithersburg, MD 20878

RECOMMENDED FOR APPROVAL

Division of Transportation Engineering

Chief, Design Section

100 Edison Park Drive, 4th Floor

khursheed.bilgramil@montgomerycountymd.gov

DATE: NOVEMBER, 2023

DATE: NOVEMBER, 2023

DATE: NOVEMBER, 2023

Date

Date

DATE:

IT IS THE RESPONSIBILTY OF PERMITTEE/OWNER OF THIS SITE TO OBTAIN
ALL REQUIRED PERMITS PRIOR TO ISSUANCE OF APPROVED
SEDIMENT CONTROL PERMIT PERMIT NO. **EXPRIATION** Floodplain District WATERWAY/WETLAND(S) a. Corps of Engineers Χ b. MDF MDE Dam Safety Χ Approval Date Protection Plan NOTICE OF INTENT FEMA LOMR (Required Post SHA Access Permit: MCDPS SEDIMENT CONTROL

RELATED REQUIRED PERMITS

TREE CANOPY REC	QUIREMENTS TABLE			Required Numb	er of Shade Trees
To be completed by the consultant Sediment Control/Stormwater Mai		Disturbar	.) of the Limits ace To	Number of Shade Trees Required	
Exempt: Yes • No • If exempt under Section applicable exemption category below this table.	1 6,0	001	6,000 8,000	3 6	
Project is subject to Chapter 22A-9 of the Mo	12	001 ,001 ,001	12,000 14,000 40,000	9 12 15	
Total Property Area	Total Disturbed Area	If the square footo	age of the	e limits of disturbo	nce is more than 40,000, then the
70,600 square feet	70,600 square feet	· ·	-		ulated using the following formula:
		(Num	ber of So	quare Feet in Limit	s of Disturbance / 40,000) x 15
Shade Trees Required	Shade Trees Proposed to be Planted				
26	22		se list the t of the		f each proposed planting area on the first
Fee in Lieu (Trees Required – Trees Proposed) x \$250	Total Disturbed Area \$\$1,000				

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.

DESIGN TRAFFIC DATA

ROADWAY	FLOWER	AVENUE
CONTROLS / YEARS	2022	2045
AVERAGE DAILY TRAFFIC (A.D.T.)	11900	13400
DESIGN HOURLY VOLUME (D.H.V.)	1080	1300
DIRECTIONAL DISTRIBUTION	50.7%	50.7%
% TRUCKS - A.D.T.	2.8%	2.8%
% TRUCKS - D.H.V.	1.7%	1.7%
DESIGN SPEED M.P.H.	30	MPH
FUNCTIONAL CLASSIFICATION	urban majof	R COLLECTOR
CONTROL OF ACCESS	NO	NE
INTENSITY OF DEVELOPMENT	URE	BAN
TERRAIN	ROL	LING
ANTICIPATED POSTED SPEED	25	MPH

DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

> FLOWER AVENUE SEPARATED BIKE LANES TITLE SHEET

Stantec



TIM CUPPLES, PE, DBIA

240-777-7214

NO.

Gaithersburg, MD 20878

100 Edison Park Drive, 4th Floor

REVISION

tim.cupples@montgomerycountymd.gov

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

PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE

PROFESSIONAL CERTIFICATION:

OF MARYLAND.

LICENSE NO:

THEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED

EXPIRATION DATE:

SCALE: N.T.S.

SHEET<u>01</u> of <u>40</u>

Sheet No.	Drawing No.	Sheet Name
01	TI-01	TITLE SHEET
02	I-01	INDEX OF SHEETS
03	GN-01	GENERAL NOTES
04	AB-01	ABBREVIATIONS AND SYMBOLS
05	GS-01	GEOMETRIC LAYOUT
06	GS-02	GEOMETRIC LAYOUT
07	TS-01	TYPICAL SECTIONS
08	TS-02	TYPICAL SECTIONS
09	DT-01	ROADWAY DETAIL SHEET
10	DT-02	PAVEMENT DETAIL SHEET
11	HD-KY	ROADWAY KEY PLAN
12	PS-01	ROADWAY PLAN
13	PS-02	ROADWAY PLAN
14	PS-03	ROADWAY PLAN
15	HP-01	ROADWAY PROFILE
16	HP-02	ROADWAY PROFILE
17	DD-01	DRAINAGE SCHEDULES
18	DA-01	EXISTING CONDITIONS DRAINAGE AREA MAP
19	DA-02	EXISTING CONDITIONS DRAINAGE AREA MAP
20	DA-03	PROPOSED CONDITIONS DRAINAGE AREA MAP
21	DA-04	PROPOSED CONDITIONS DRAINAGE AREA MAP
22	ESN-01	EROSION AND SEDIMENT CONTROL NOTES
23	ESN-02	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
24	ES-01	EROSION AND SEDIMENT CONTROL/STORMWATER MANAGEMENT PLAN
25	ES-02	EROSION AND SEDIMENT CONTROL/STORMWATER MANAGEMENT PLAN
26	ES-03	EROSION AND SEDIMENT CONTROL/STORMWATER MANAGEMENT PLAN
27	LP-01	LANDSCAPE PLAN
28	LP-02	LANDSCAPE PLAN
29	LP-03	LANDSCAPE PLAN
30	LP-04	LANDSCAPE PLAN NOTES AND DETAILS
31	SND-01	SIGNING AND MARKING DETAILS
32	SN-01	SIGNING AND MARKING PLAN
33	SN-02	SIGNING AND MARKING PLAN
34	SN-03	SIGNING AND MARKING PLAN
35	SN-04	SIGNING AND MARKING SCHEDULE
36	SG-01	SIGNALIZATION PLAN
37	SG-02	SIGNALIZATION NOTES
38	LT-01	LIGHTING PLAN
39	LT-02	LIGHTING PLAN
40	LT-03	LIGHTING PLAN
40	L1-03	LIGHTING FLAIN

Stantec B

y Areas		

REVISION

	APP'D	DATE	DESIGNED BY: UMK	DATE: NOVEMBER,	2023		
			DRAWN BY: UMK	DATE: NOVEMBER,	2023		
			CHECKED BY: CC	DATE: NOVEMBER,	2023		
+			DRAWING NO.:	DATE:			
			RECOMMENDED FOR APPROVAL				
			Chief, Design Section Date				
			ABBBOVER				
			APPROVED				
+							
4			Chief,		Date	l	

Division of Transportation Engineering

FLOWER AVENUE SEPARATED BIKE LANES INDEX OF SHEETS

SCALE: NONE

SHEET<u>02</u> of <u>40</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: _

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

DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND 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 RÉQUIREMENTS 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 PROPOSED BUS STOPS SHALL BE ADA COMPLIANT.

SURVEY

I. HORIZONTAL DATUM: MARYLAND STATE PLANE COORDINATE SYSTEM

NAD 83/91 NAVD 1988 VERTICAL DATUM: SURVEY UNIT: SURVEY FEET

2. DATE OF SURVEY: SEPTEMBER, 2022 SURVEY PERFORMED BY:

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION 100 EDISON PARK DRIVE, 4TH FLOOR

GAITHERSBURG, MD 20878

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.

4. A BOUNDARY SURVEY WAS PERFORMED. IF ANY DISPUTE ARISES AS TO THE LOCATION OF RIGHT-OF-WAY LINES. PROPERTY LINES. OWNERSHIP. ETC.. ADDITIONAL CONSULATATION WITH A MARYLAND-LICENSED SUREVEYOR IS ADVISED.

UTILITES

I. DATE OF INVESTIGATION: UTILITY INVESIGATION PERFORMED BY:

OCTOBER, 2022

AB CONSULTANTS, INC. 9450 ANNAPOLIS ROAD LANHAM, MD 20706

PHONE: (301) 306-3091 FAX: (301) 306-3092

ALL UTILITY MAPPING (QUALITY LEVEL D) WAS PREPARED BASED ON RECORDS PROVIDED BY UTILITY OWNERS FOR THIS PROJECT.

2. 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.

3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES PRIOR TO BEGINNING EXCAVATION.

4. 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, 301-874-1180 FIBERLIGHT, MIKE JOHNSON, 678-347-9265 WASHINGTON GAS LIGHT COMPANY, COLIN BURKE, 703-750-5541 COMCAST. DWAYNE DOUTY. 301-456-8957 WASHINGTON SUBURBAN SANITARY COMMISSION, KEVIN LETHBRIDGE, 301-206-7339 VERIZON, JON BOBEL, 301-282-2942 VERIZON BUSINESS, ADAM RICE, 571-220-8978

5. NO MECHANIZED EQUIPMENT SHALL BE USED FOR EXCAVATION IN CLOSE PROXIMITY TO UTILITIES. CONTRACTOR SHALL HAND DIG ONLY.

6. THE CONTRACTOR SHALL USE HAND EXCAVATION METHODS WHEN EXCAVATION OCCURS WITHIN 24 INCHES OF A GAS FACILITY.

7. 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.

GN-01



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



٧٥.	REVISION	BY	APP'D	DATE	DESIGNED BY: UMK	DATE: NOVEMBER, 2023	
					DRAWN BY: UMK	DATE: NOVEMBER, 2023	
					CHECKED BY: CC	DATE: NOVEMBER, 2023	
					DRAWING NO.:	DATE:	
					RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED	Date	
					Chief, Division of Transportation Engine	Date eering	 SC

DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

> FLOWER AVENUE SEPARATED BIKE LANES GENERAL NOTES

SCALE: NONE

SHEET<u>03</u> of <u>40</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:

A.A.S.H.T.O.	American Association of State Highway Transportation Officials
ABUT	•
	Average Daily Traffic
APPROX	
	Approximate
B_ or B/L	
	Back /Book
BIT.	
B.C	Bituminous Concrete
B.M	Bench Mark
B.O.F	Bottom of Footing
BOT	Bottom
BRG	Bearing
	Center of Curve
	Cable Television
	California Bearing Ratio
	Contraction Joint
© or C/L	
—	
	Class or Clear
	Chainlink Fence
	Corrugated Metal Pipe
C.O	
	Combination
CONC.	Concrete
CONSTR	Construction
COR	Corner
CORR	Correction
C.Y	Cubic Yard
	Degree of Curve
	Design Hourly Volume
D.I	
DIA	
	Double Opening
	Design Speed
DWG.	
E	
E	
	External Distance
EA	
EB	
	Expansion Joint
EL. or ELEV.	
E.R.C.C.P.	Elliptical Reinforced Cement
	Concrete Pipe
ES	End Section
EX. or EXIST.	Existing
FT	Feet
F or FL	
	Flat Bottom Ditch
	Fire Hydrant
F.O	
	Face of Curb
	Full Super Elevation
	·
FWD	
G	
GL	
GP	General Purpose Roadway
G.V	Gas Valve
HR	Handhov

ABBR	EVIATIONS
H.D.P.	High Density Polyetheylene
HDWL	Headwall
HERCP	Horizontal Elliptical Reinforced
	Concrete Pipe
H P	High Point
H.S.D	Headlight Sight Distance
IN	Inch
I.S.T	Inlet Sediment Trap
INV	Invert
J.B	Junction Box
K	K Inlet
L	Length
LF	-
L.L	Liquid Limit
	Limit of Disturbance
LONG.	
L.P	-
LT	-
MAC	Macadam
MC	Moisture Content
MAX	
	Maximum Dry Content
MOD	•
MIN	
	Managed Roadway
	Mechanically Stablilized Earth
N	· · · · · · · · · · · · · · · · · · ·
NB	
NE	
NO	
NP	Non-Plastic
NTS	Not To Scale
O.C	On Center
OH	Overhead
	Optimum Moisture
PAV'T	•
	Point of Curvature
PCC	Point of Compound Curvature
P/C	·
P/GE	Profile Grade Elevation
P.G.L	Profile Grade Line
P/GL	Profile Ground Line
P	Plate
-	Point of Rotation
P.I	Plasticity Index
P.I	Point of Intersection
POC	Point On Curve
POT	Point On Tangent
PR	_
	Proposed Right of Way
PROP.	
	Point of Reverse Curve
PT	
	Point of Tangency
	Point of Vertical Curve
	Polyvinyl Chloride
	Point of Vertical Intersection

___ Point of Vertical Intersection

PVRC _____ Point of Vertical Reverse Curve

PVT _____Point of Vertical Tangency

H	Radius
REINF.	Reinforcement
REQ'D	
	Rock Fragments
RT	
RW or R/W	<u> </u>
	Reinforced Cement Pipe
	Reinforced Cement Concrete Pipe
	Rock Quality Desgnation
R.M	
S	
SAN	
SB	
S.D	
	Surface Drain Ditch
SE	
SF	
S.F	
SHLDR	
	State Highway Administration
SHT.	
S.P.P	Structural Plate Pipe
	Standard Penetration Testing
S.S	Stainless Steel
SSD	Stopping Sight Distance
	Super Silt Fence
STD	
STA.	
STIFF.	
SO	
S.Y	
	Stormwater Management
T	_
T	
	To Be Removed
T.C	
TEMP.	•
TG	•
	·
T or TL	
	Top of Manhole
T.O.F	
TRAV	
	Temporary Swale
T.S	
T.S	
TYP	
U.D	
U.G	
	Unless Otherwise Noted
U.P	Utility Pole
USC	Unified Soil Classification
USDA	United States Department of Agriculture
VCL	Vertical Clearance
V.C.L	Vertical Curve Length
W	
W	
WB	
W.M	
	Wranned Steel

W.S.Wrapped Steel

__ Radius

SYMBOLS

EVICTING DIGHT OF WAY LINE		OLIT, OLODE	
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	0	SUPER SILT FENCE	
EXISTING CHAIN LINK FENCE LINE		DIVERSION FENCE	2.
BASE OR SURVEY LINE		STONE CHECK DAM	Q
EXISTING FIRE HYDRANT	#	TEMPORARY STONE OUTLET STRUCTURE	<u> </u>
PROPOSED STORM DRAIN		TEMPORARY GABION OUTLET STRUCTURE	€0×5 CM 1003
EXISTING STORM DRAIN		AT-GRADE INLET PROTECTION	
EXISTING INLET		CURB INLET PROTECTION	L ·
EXISTING UTILITY POLE	\sim	COMBINATION INLET PROTECTION	
EXISTING TREE	1 m	MEDIAN INLET PROTECTION	∟
EXISTING TREE LINE	1	STANDARD INLET PROTECTION	∟
EXISTING TREE TO BE REMOVED	Ø	TEST HOLE LOCATION	
EXISTING GAS LINE (QUALITY LEVEL D)	c	STABILIZED CONSTRUCTION ENTRANCE	SCE
EXISTING GAS LINE (QUALITY LEVEL B /C)	G		MARCO C LONG
EXISTING ELECTRIC LINE (QUALITY LEVEL D)	ε	TEMPORARY ORANGE CONSTRUCTION FENCE	TPF
EXISTING ELECTRIC LINE (QUALITY LEVEL B /C)	ε		
EXISTING TELEPHONE LINE (QUALITY LEVEL D)		PROPOSED TREE	
EXISTING TELEPHONE LINE (QUALITY LEVEL B /C)			* //
EXISTING SANITARY SEWER LINE (QUALITY LEVEL D)	— — SAN — — — — — — — — —		
EXISTING SANITARY SEWER LINE (QUALITY LEVEL B /C)	— — SAN — — — — — — —	CRITICAL ROOT ZONE	
EXISTING WATER LINE (QUALITY LEVEL D)	w	CHITICAL HOOF ZONE	()
EXISTING WATER LINE (QUALITY LEVEL B /C)			
·	-	TREE REMOVAL	

AB-01

Stantec

Bicycle and Pedestrian Priority Areas

10.	REVISION	BY	APP'D	DATE	DESIGNED BY: UMK	DATE: NOVEMBER,	, 2023	
					DRAWN BY: UMK	DATE: NOVEMBER,	, 2023	T _
					CHECKED BY: CC	DATE: NOVEMBER,	, 2023	\neg D
			1		DRAWING NO.:	DATE:		
					RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED	-	Date	
					Chief, Division of Transportation Eng	 jineering	Date	SCAL

DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

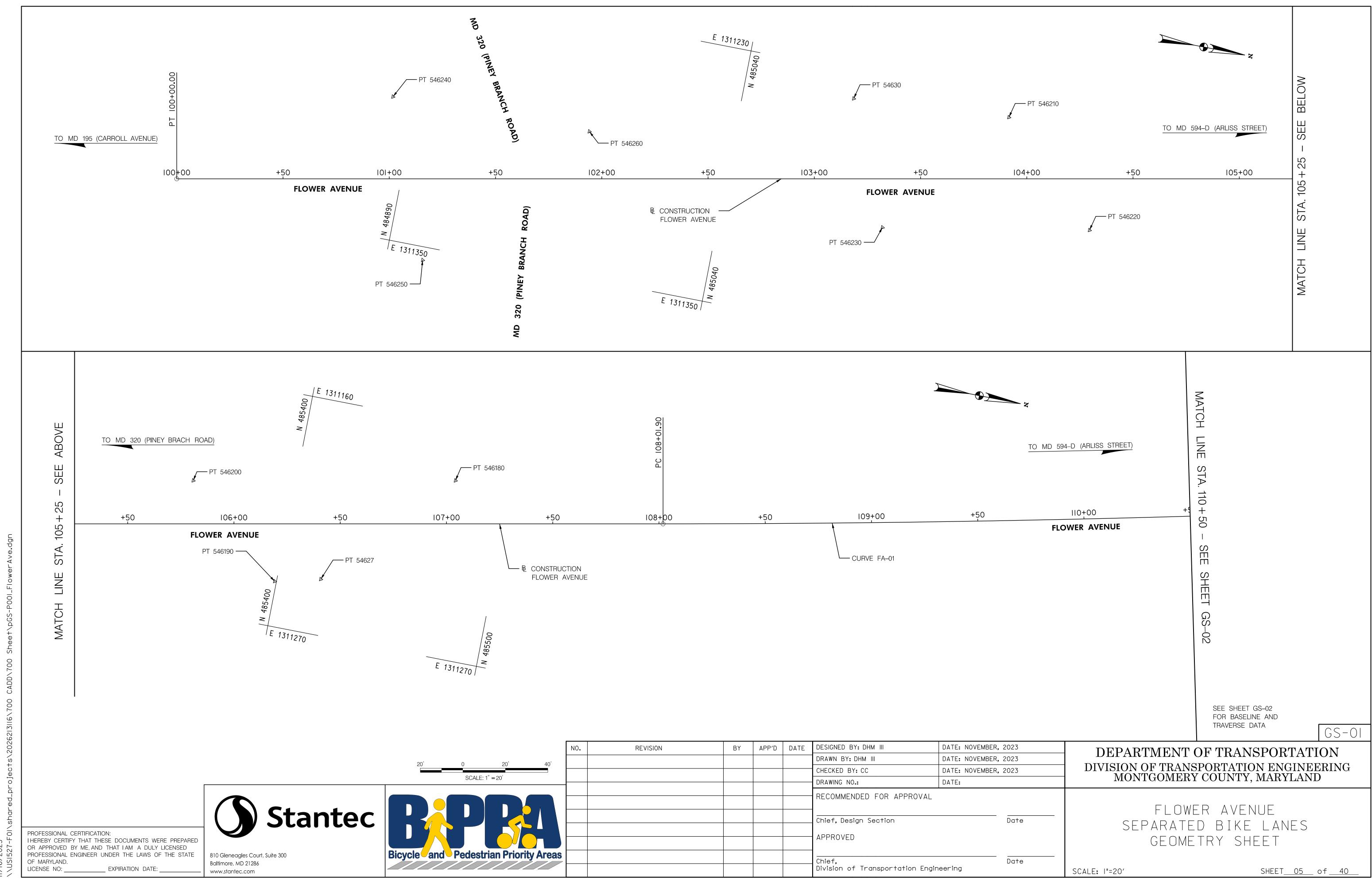
FLOWER AVENUE SEPARATED BIKE LANES ABBREVIATIONS & SYMBOLS

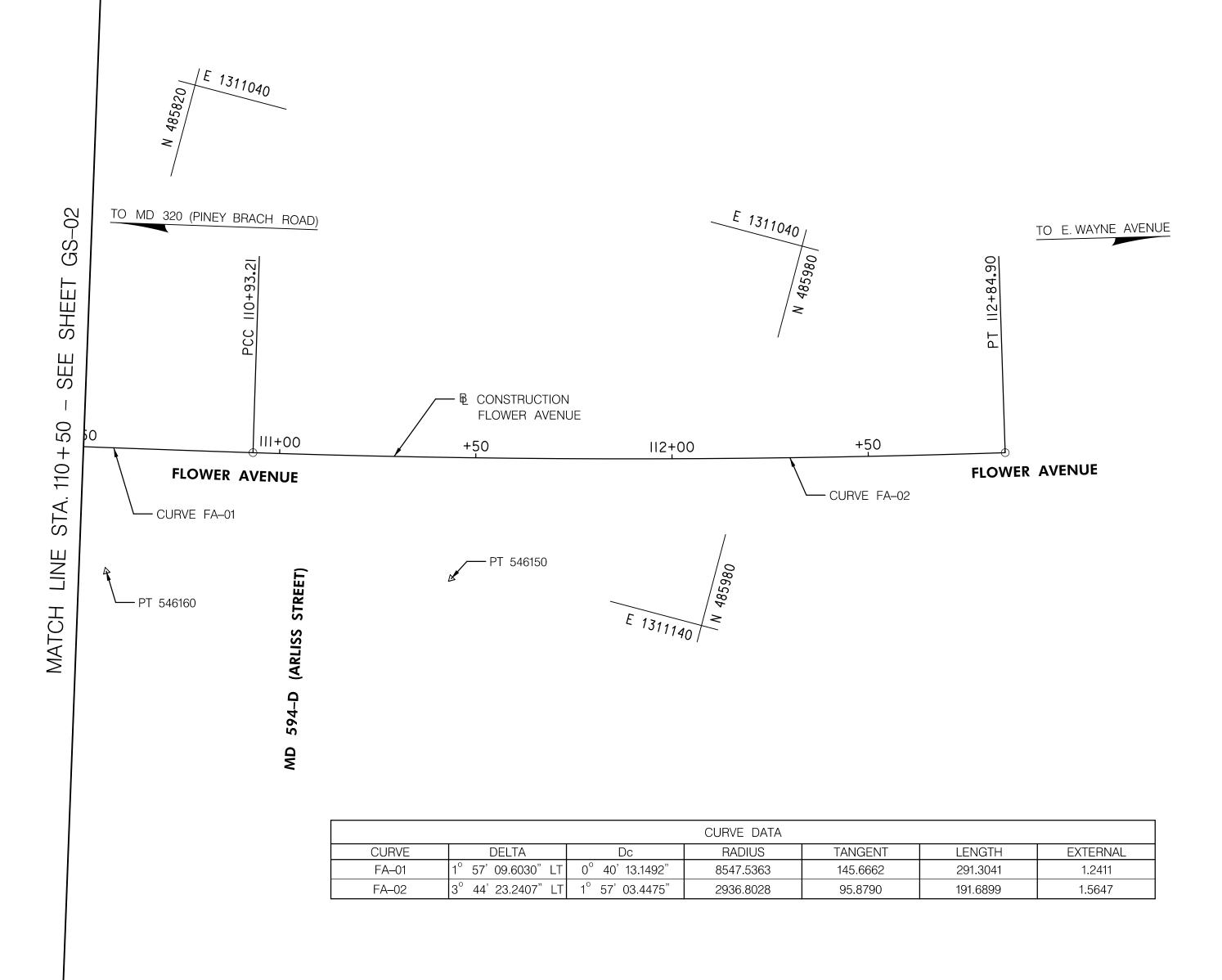
SHEET<u>04</u> of <u>40</u> ALE: NONE

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.
LICENSE NO: EXPIRATION DATE:

.....Handbox

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





BASELINE DATA								
CURVE	POINT NO.	STATION	NORTH	EAST	BEARING			
	PT	100 + 00.00	484786.2772	1311340.8211	N 11° 02' 02.6383" \			
	PC	108 + 01.90	485573.3552	1311187.3429	N 11° 02' 02.6383" \			
FA-01	PI	109 + 47.57	485716.3285	1311159.4635				
	CC		483937.4200	1302797.8201				
	PCC	110 + 93.21	485858.2689	1311126.7286	N 12° 59' 12.2413" \			
	PCC	110 + 93.21	485858.2689	1311126.7286	N 12° 59' 12.2413" \			
FA-02	PI	111 + 89.09	485951.6955	1311105.1822				
	CC		485198.2945	1308265.0430				
	PT	112 + 84.90	486043.5178	1311077.5878	N 16° 43' 35.4820"			

TRAVERSE POINTS									
POINT NO.	NORTH	EAST	ELEVATION						
546240	484878.7417	1311283.4065	272.31						
546250	484907.1757	1311356.2199	274.49						
546260	484972.5848	1311281.7822	274.85						
54630	485091.7017	1311242.7621	277.65						
546230	485116.5786	1311299.7306	278.75						
546210	485165.0790	1311237.4348	280.13						
546220	485212.4705	1311282.3385	282.93						
546200	485352.4756	1311209.6440	282.77						
546190	485399.1821	1311248.8661	290.39						
54627	485420.2558	1311243.7496	291.49						
546180	485473.5875	1311186.0421	293.94						
546160	485829.8925	1311165.5251	307.00						
546150	485915.3238	1311144.7781	309.50						

Stantec

SCALE: 1" = 20'

	REVISION	BY	APP'D	DATE	DESIGNED BY: DHM III	DATE: NOVEMBER,	2023	
					DRAWN BY: DHM III	DATE: NOVEMBER,	2023	
					CHECKED BY: CC	DATE: NOVEMBER,	2023	
+					DRAWING NO.:	DATE:		
_					RECOMMENDED FOR APPROVAL			
					Chief, Design Section		Date	
					ADDDOVED			
					APPROVED			
					1			
					Chief, Division of Transportation Engir	eering	Date	SC.

DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

> FLOWER AVENUE SEPARATED BIKE LANES GEOMETRY SHEET

SHEET<u>06</u> of <u>40</u> SCALE: I"=20'

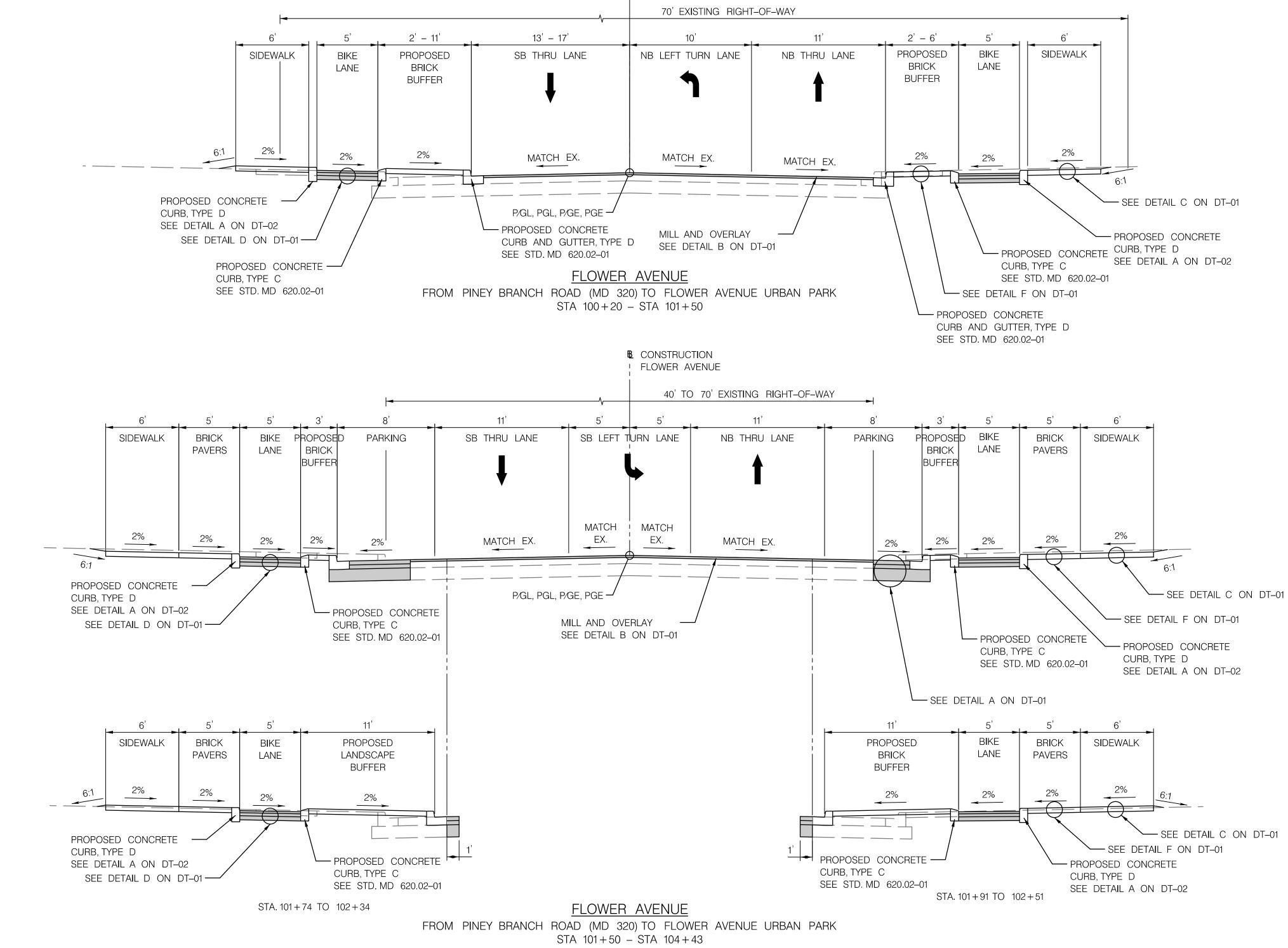
PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED
OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE

OF MARYLAND. LICENSE NO: _ _ EXPIRATION DATE: _

810 Gleneagles Court, Suite 300

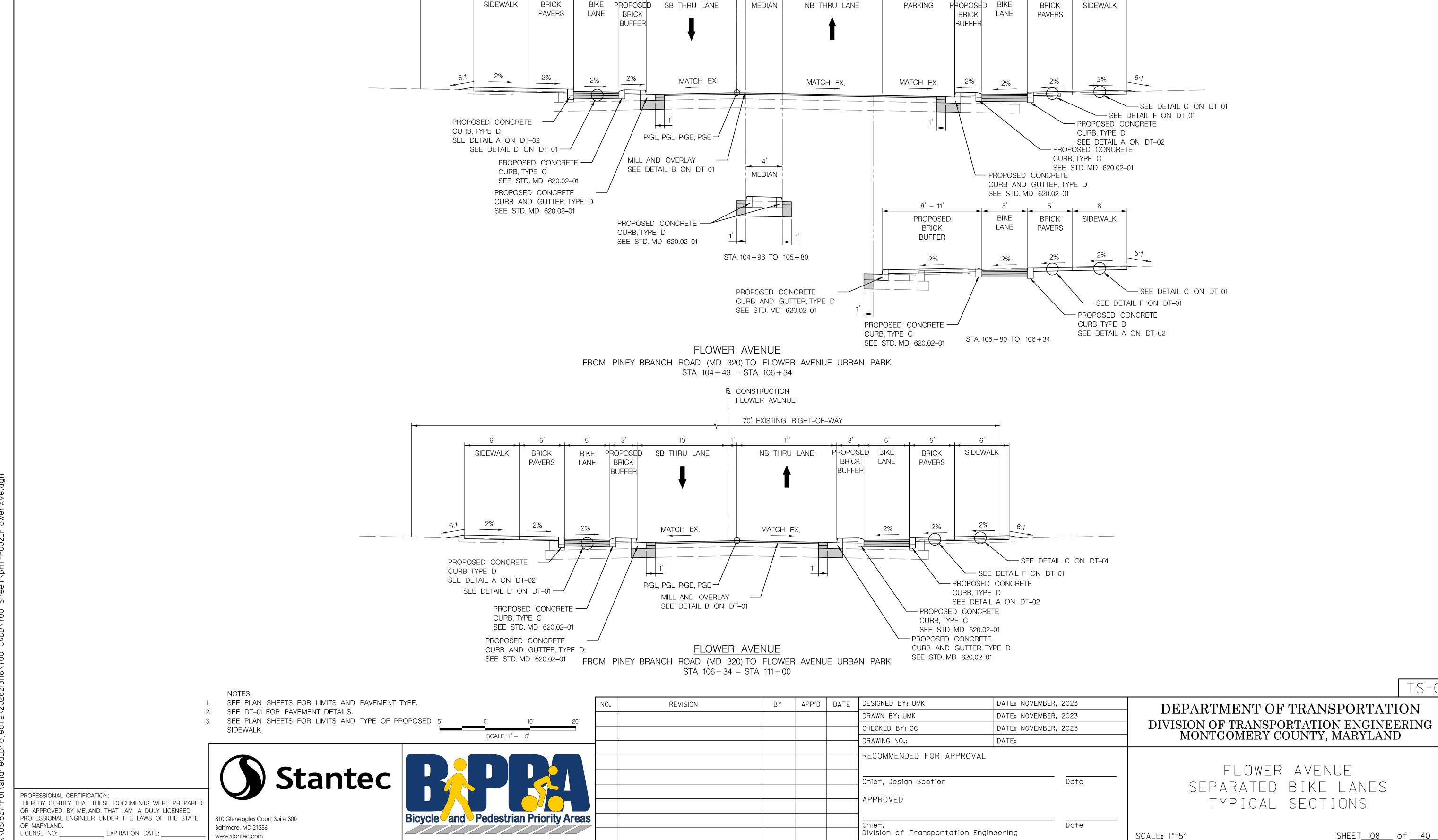
Baltimore, MD 21286 www.stantec.com

LANE **PAVERS** LANE LANDSCAPE **BRICK PAVERS** BUFFER BUFFER 2% 2% SEE DETAIL C ON DT-01 PROPOSED CONCRETE - SEE DETAIL F ON DT-01 CURB, TYPE D PROPOSED CONCRETE SEE DETAIL A ON DT-02 - PROPOSED CONCRETE CURB, TYPE C CURB, TYPE C CURB, TYPE D SEE DETAIL D ON DT-01 ---SEE STD. MD 620.02-01 SEE STD. MD 620.02-01 SEE DETAIL A ON DT-02 STA. 101 + 91 TO 102 + 51 STA. 101 + 74 TO 102 + 34 FLOWER AVENUE FROM PINEY BRANCH ROAD (MD 320) TO FLOWER AVENUE URBAN PARK STA 101+50 - STA 104+43 SEE PLAN SHEETS FOR LIMITS AND PAVEMENT TYPE. APP'D DATE DESIGNED BY: UMK DATE: NOVEMBER, 2023 REVISION BY DEPARTMENT OF TRANSPORTATION SEE DT-01 FOR PAVEMENT DETAILS. DRAWN BY: UMK DATE: NOVEMBER, 2023 SEE PLAN SHEETS FOR LIMITS AND TYPE OF PROPOSED DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND DATE: NOVEMBER, 2023 CHECKED BY: CC SIDEWALK. SCALE: 1" = 5'DATE: DRAWING NO .: RECOMMENDED FOR APPROVAL FLOWER AVENUE Stantec Chief, Design Section Date SEPARATED BIKE LANES PROFESSIONAL CERTIFICATION: APPROVED TYPICAL SECTIONS I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED Bicycle and Pedestrian Priority Areas 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: _ www.stantec.com SCALE: I"=5' SHEET<u>07</u> of <u>40</u>



B CONSTRUCTION

! FLOWER AVENUE



B CONSTRUCTION ! FLOWER AVENUE

10'

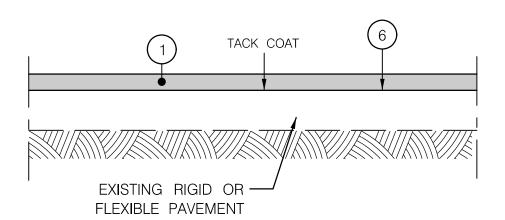
40' TO 100' EXISTING RIGHT-OF-WAY

NOTES

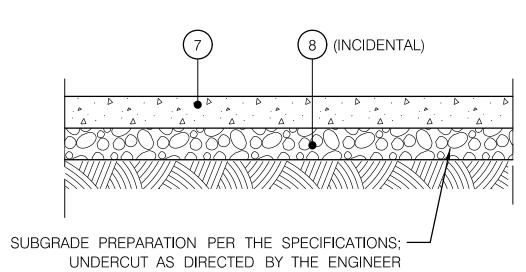
- 1. SUBGRADE PREPARATION SHALL BE AS PER SECTION 204 OF MDOT SHA SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS; PRIOR TO PLACEMENT OF PROPOSED BASE COURSE, SUBGRADE SHALL BE PROOF-ROLLED.
- 2. UNDERCUT FOR REMOVAL OF SOFT AND/OR UNSUITABLE MATERIALS AND BACKFILLED WITH GRADED AGGREGATE BASE SHALL BE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

DETAIL A

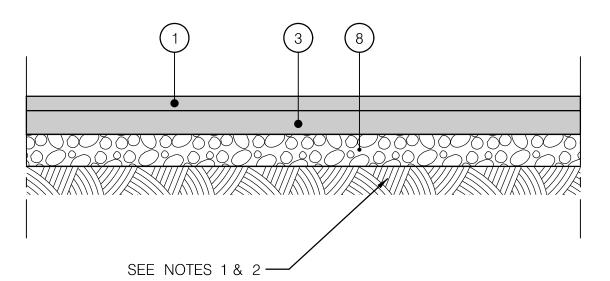
FULL DEPTH ASPHALT PAVEMENT



DETAIL B MILLING AND OVERLAY



DETAIL C PORTLAND CEMENT CONCRETE SIDEWALK

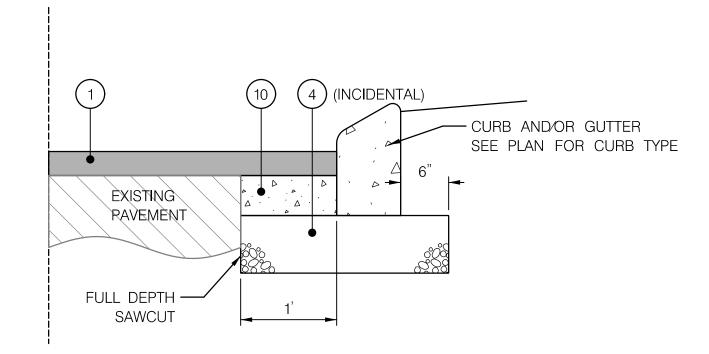


NOTES

- 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.

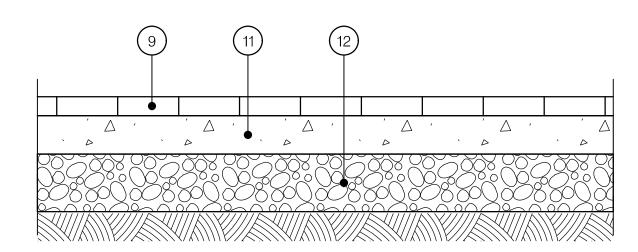
DETAIL D

ASPHALT BIKE LANE PAVEMENT SECTION



DETAIL E CONCRETE CURB PATCH LEGEND

- 2" HOT MIX ASPHALT SUPERPAVE, 9.5MM SURFACE COURSE, P.G. 64S-22, LEVEL 2
- 5" HOT MIX ASPHALT SUPERPAVE, 19.0MM BASE COURSE, P.G. 64S-22, LEVEL 2
- 2.5" HOT MIX ASPHALT SUPERPAVE, 19.0MM BASE COURSE, P.G. 64S-22, LEVEL 2
- 8 INCH GRADED AGGREGATE BASE, TWO EQUAL LAYERS
- LIMIT OF CLASS LEXCAVATION
- 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
- BRICK PAVERS (STD. NO. MC-111.02)
- 8 INCH PLAIN PORTLAND CEMENT CONCRETE MIX NO. 7 (INCIDENTAL)
- 4 INCH PLAIN PORTLAND CEMENT CONCRETE MIX NO. 7
- 6 INCH GRADED AGGREGATE BASE (INCIDENTAL)



DETAIL F BRICK SIDEWALK SECTION

DEPARTMENT OF TRANSPORTATION

Stantec



NO.	REVISION	BY	APP'D	DATE	DESIGNED BY: UMK DA	ATE: NOVEMBER,	2023	
					DRAWN BY: UMK DA	ATE: NOVEMBER,	2023	
					CHECKED BY: CC DA	ATE: NOVEMBER,	2023	
					DRAWING NO.: DA	ATE:		
					RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED		Date	_
					Chief, Division of Transportation Engineer	ring	Date	— SC <i>l</i>

DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

FLOWER AVENUE SEPARATED BIKE LANES PAVEMENT DETAILS

SCALE: NTS

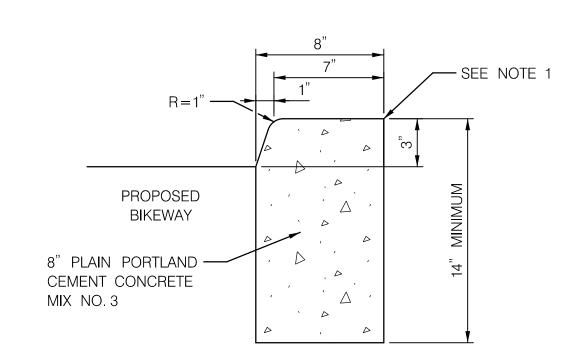
SHEET<u>09</u> of <u>40</u>

LICENSE NO: _

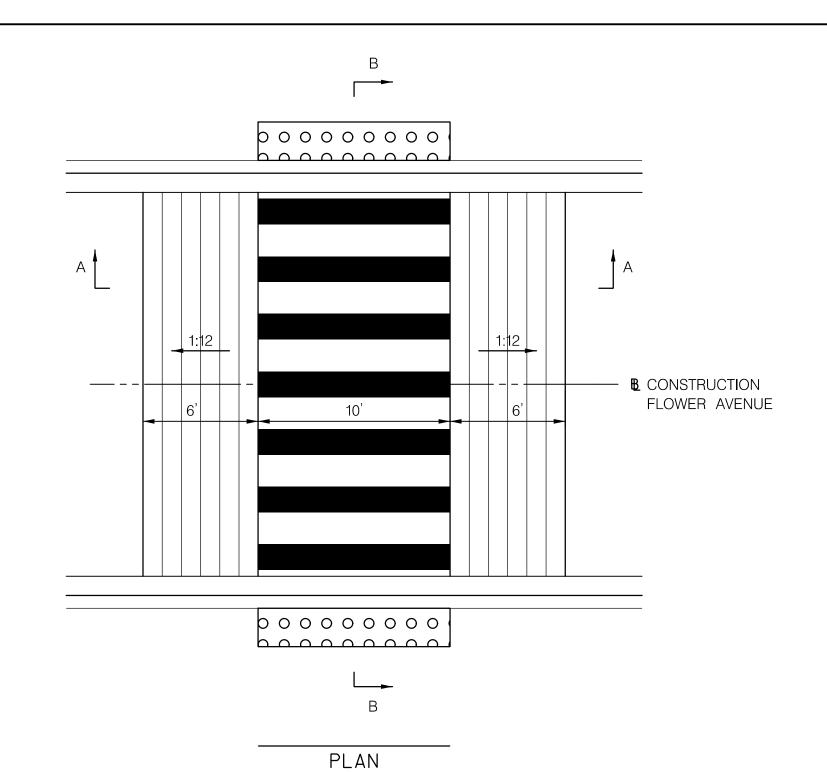
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

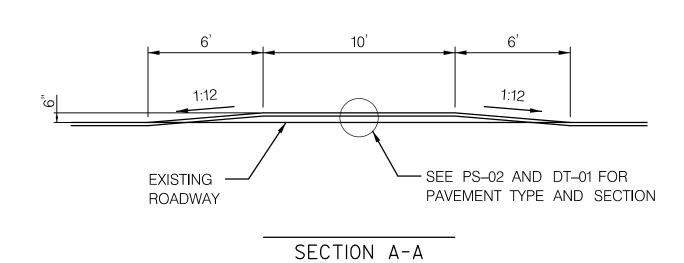
EXPIRATION DATE:

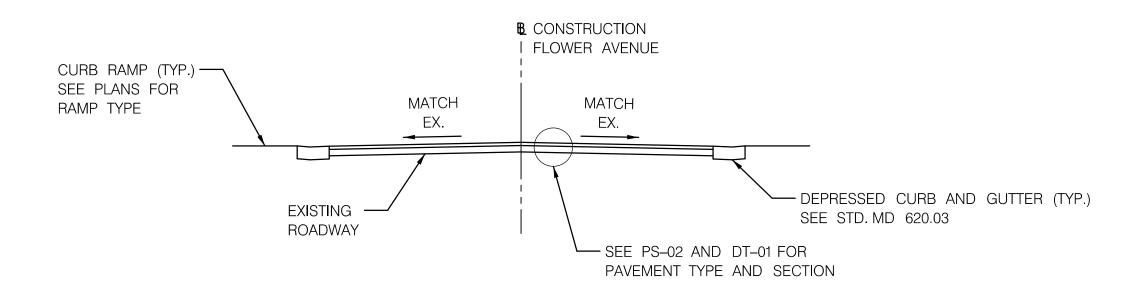
810 Gleneagles Court, Suite 300 Baltimore, MD 21286 www.stantec.com



DETAIL A MODIFIED TYPE D CURB







SECTION B-B

DETAIL B RAISED CROSSWALK

BY

REVISION

NO.

APP'D DATE DESIGNED BY: UMK

DRAWN BY: UMK

CHECKED BY: CC

RECOMMENDED FOR APPROVAL

Chief, Division of Transportation Engineering

Chief, Design Section

DRAWING NO .:

APPROVED

<u> </u>
DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF TRANSPORTATION

FLOWER	AVENUE
SEPARATED	BIKE LANE
ROADWAY	DETAILS

SHEET<u>10</u> of <u>40</u>

Stantec

Bicycle and Pedestrian Priority Areas

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

SCALE: NTS

DATE: NOVEMBER, 2023

DATE: NOVEMBER, 2023

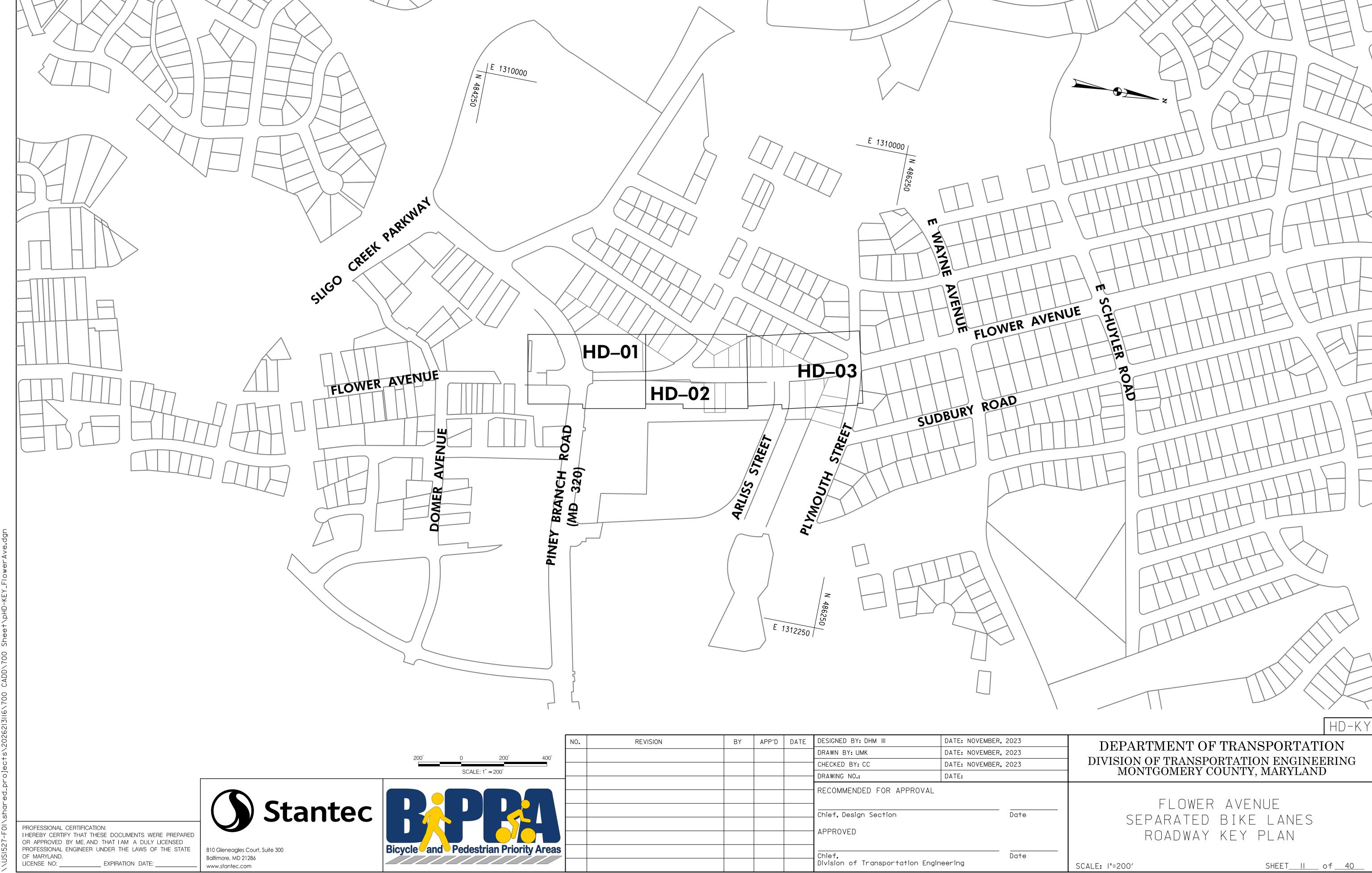
DATE: NOVEMBER, 2023

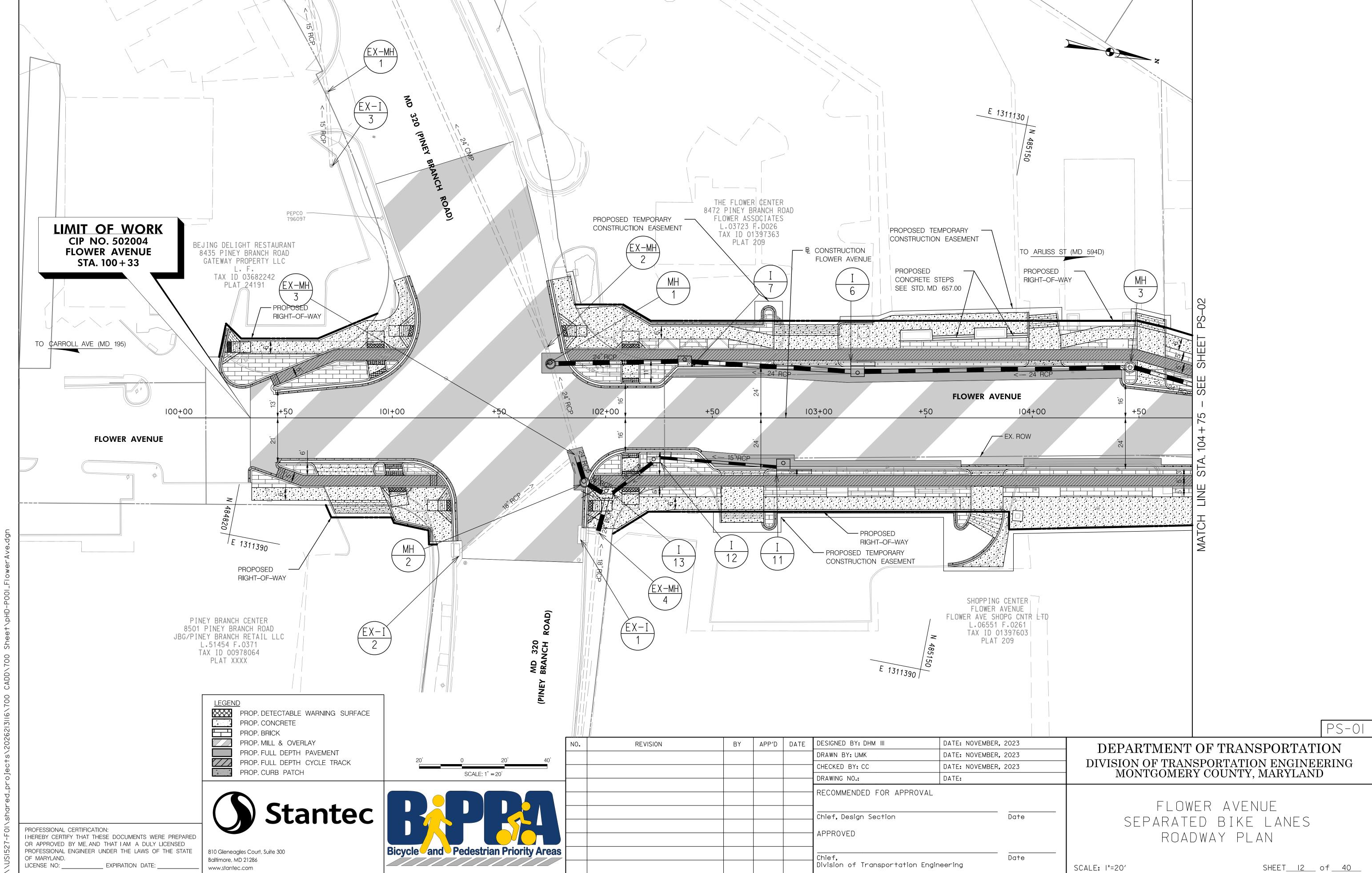
Date

Date

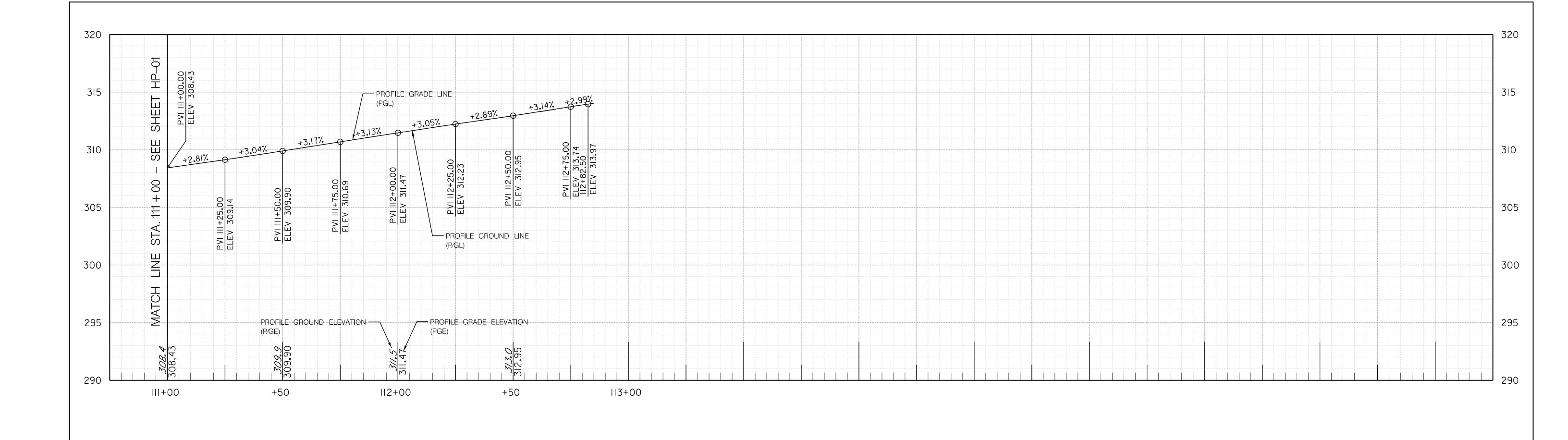
DATE:

LICENSE NO: _





11/16/2023



REVISION

BY

APP'D DATE

DESIGNED BY: UMK

DRAWN BY: UMK

Stantec

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

HORIZONTAL SCALE: 1" = 20'	
icycle and Pedestrian Priority Areas	

CHECKED BY: CC	DATE: NOVEMBER, 2023	
DRAWING NO.:	DATE:	
RECOMMENDED FOR APPROVAL		
Chief, Design Section	Date	
APPROVED		
		SC

DATE: NOVEMBER, 2023

DATE: NOVEMBER, 2023

DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

DEPARTMENT OF TRANSPORTATION

HP-02

FLOWER AVENUE SEPARATED BIKE LANES ROADWAY PROFILE

SCALE: H: I"=20' V: I"=4' SHEET<u>16</u> of <u>40</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.

_ EXPIRATION DATE: _

LICENSE NO: _

_
\subseteq
\Box
pp.
٧,
Ø
\ 0 0
>
⋖
_
r
ē
~
>
0
P001_F10v
ш
$\overline{}$
-P00
\circ
ഥ
Τ
\Box
\Box
/
+
'n
Φ
Ō
Ĭ
_ـ
\overline{S}
$\overline{}$
D/700
\circ
\sim
٠,
/
\equiv
느
ADD
CAD
$\overline{}$
2026213116\700
2026213116\700
s\2026213116\700
-s\2026213116\700
_brojects\20262 3 6\700
d_brojects\20262 3 6\700
d_brojects\20262 3 6\700
ed_brojects\2026213116\700
red_brojects\2026213116\700
ed_brojects\2026213116\700
dred_brojects\2026213116\700
hared_brojects\2026213116\700
dred_brojects\2026213116\700
hared_brojects\2026213116\700
hared_brojects\2026213116\700
\shared_projects\20262 3 6\700
\shared_projects\20262 3 6\700
F01\shared_projects\2026213116\700
-F0 \shared_broiects\20262 3 6\700
-F0 \shared_broiects\20262 3 6\700
7-F01\shared_projects\2026213116\700
27-F0 \shared_projects\20262 3 6\700
27-F0 \shared_projects\20262 3 6\700
27-F01\shared_broiects\2026213116\700

	STRUCTURE SCHEDULE										
STRUCTURE	STATION	OFFSET	TYPE	TOP ELEV.	INVERT OUT	STANDARD	REMARKS				
I-1	110+92	18.58' LT	REVERSE "B" INLET (B-15)			MC-502.02	15' THROAT OPENING				
I-2	109+39	10.00' LT	REVERSE "B" INLET (B-10)			MC-502.02	10' THROAT OPENING				
I-3	108+18	10.00' LT	REVERSE "B" INLET (B-10)			MC-502.02	10' THROAT OPENING				
I-4	106+61	10.00' LT	REVERSE "B" INLET (B-10)			MC-502.02	10' THROAT OPENING				
I-5	105+05	10.00' LT	REVERSE "B" INLET (B-10)			MC-502.02	10' THROAT OPENING				
I-6	103+18	24.00' LT	REVERSE "B" INLET (B-10)			MC-502.02	10' THROAT OPENING				
I-7	102+37	24.00' LT	"B" INLET (B-10)			MC-502.01	10' THROAT OPENING				
I-8	108+85	12.00' RT	REVERSE "B" INLET (B-15)			MC-502.02	15' THROAT OPENING				
I-9	108+15	12.00' RT	REVERSE "B" INLET (B-15)			MC-502.02	15' THROAT OPENING				
I-10	106+62	12.00' RT	"B" INLET (B-15)			MC-502.01	15' THROAT OPENING				
I-11	102+83	24.00' RT	REVERSE "B" INLET (B-15)			MC-502.02	15' THROAT OPENING				
I-12	102+22	16.00' RT	"B" INLET (B-10)			MC-502.01	10' THROAT OPENING				
I-13	102+02	32.67' RT	COG INLET (COG-5)			MD-374.51	5' THROAT OPENING				
MH-1	101+74	25.31' LT	48" DIAMETER PRECAST MANHOLE			MD-384.01					
MH-2	101+90	30.24' RT	48" DIAMETER PRECAST MANHOLE			MD-384.01					
MH-3	104+46	23.71' RT	MCDOT TYPE "A" MANHOLE			MC-510.01					

PIPE SCHEDULE									
UPSTREAM	DOWNSTREAM	SIZE	TYPE	LENGTH	UPSTREAM	DOWNSTREAM	COMMENTS		
STRUCTURE	STRUCTURE	3122		(FT)	INVERT	INVERT			
I-1	I-2	15"	RCP CLASS IV	136					
I-2	I-3	18"	RCP CLASS IV	115					
I-3	I-4	18"	RCP CLASS IV	150					
I-4	I-5	24"	RCP CLASS IV	150					
I-5	MH-3	24"	RCP CLASS IV	56					
MH-3	I-6	24"	RCP CLASS IV	123					
I-6	I-7	24"	RCP CLASS IV	75					
I-7	MH-1	24"	RCP CLASS IV	58					
I-8	I-9	15"	RCP CLASS IV	63					
I-9	I-3	18"	RCP CLASS IV	13					
I-10	I-4	18"	RCP CLASS IV	17					
I-11	I-12	15"	RCP CLASS IV	55					
I-12	I-13	18"	RCP CLASS IV	23					
I-13	MH-2	24"	RCP CLASS IV	7					
MH-2	EX-MH-3	24"	RCP CLASS IV	11					
EX-MH-4	I-13	24"	RCP CLASS IV	16					

	PIPE REMOVAL SCHEDULE								
UPSTR STRUC		DOWNSTREAM STRUCTURE	SIZE	TYPE	LENGTH (FT)				
EX-M	IH-4	MH-2	18"	RCP CLASS IV	22				

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.

Stantec	
----------------	--

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



NO.	REVISION	BY	APP'D	DATE	DESIGNED BY: SMH	DATE: NOVEMBER,	2023
					DRAWN BY: SMH	DATE: NOVEMBER,	2023
					CHECKED BY: CC	DATE: NOVEMBER,	2023
					DRAWING NO.:	DATE:	
					RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED		Date
					Chief, Division of Transportation Engir	neering	Date S

DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

DD-01

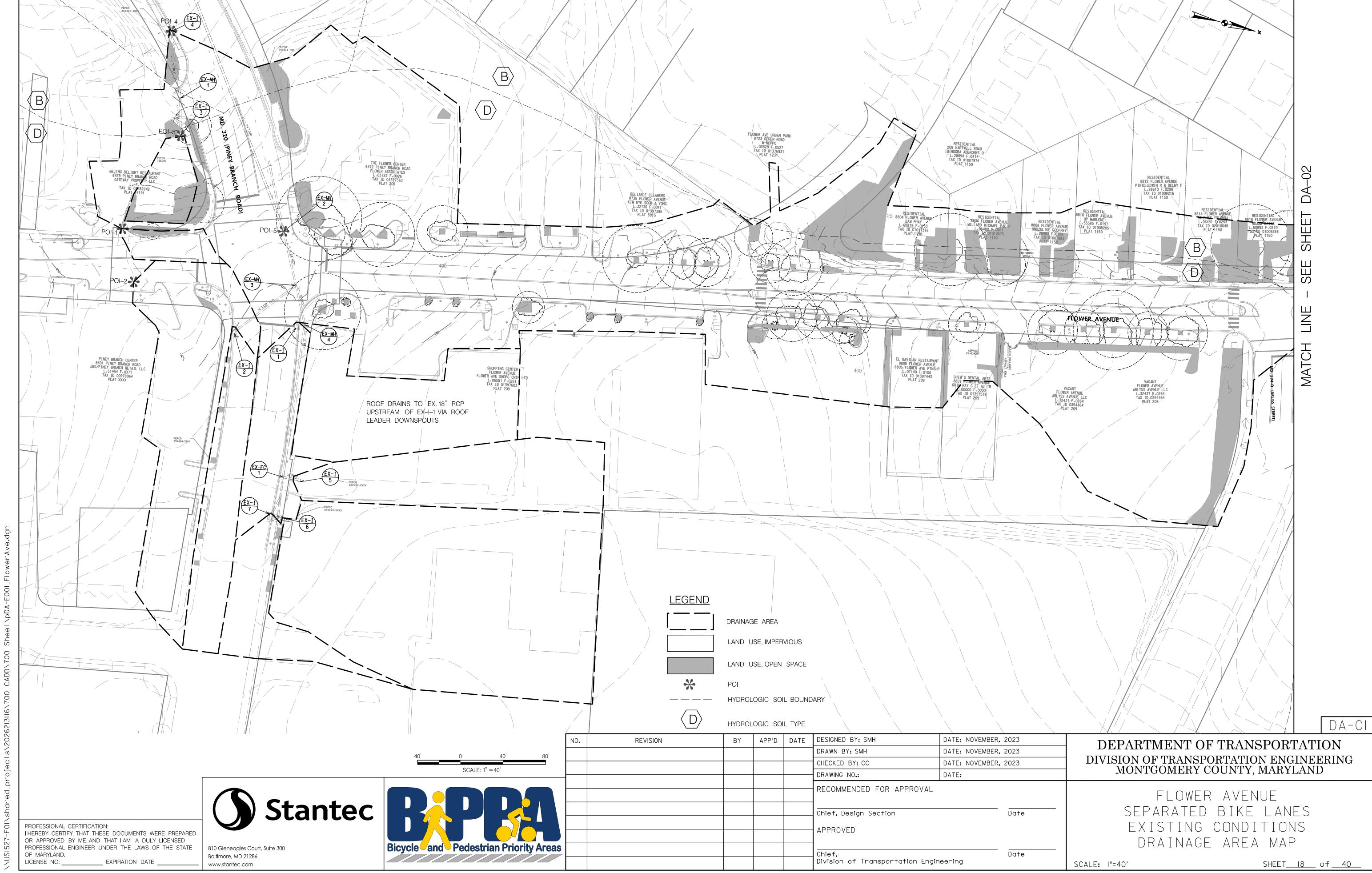
FLOWER AVENUE SEPARATED BIKE LANES DRAINAGE SCHEDULES

SHEET<u>17</u> of <u>40</u> SCALE: I"=20'

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. LICENSE NO: _

__ EXPIRATION DATE:



||/|6/2023 |\||S|527-F0|\sharad projec+s\20262|3||6\700 CADD\70

- 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

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.

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	SF0P
COMBINATION INLET PROTECTION	COIP	SOD	* * * * * * * * * * * * * * * * * * * *
CURB INLET PROTECTION	[Z]CIP	STABILIZED CONSTRUCTION ENTRANCE	SCE SCE
DIVERSION FENCE	├── DF ───┤	STANDARD INLET PROTECTION	[_] SIP
EARTH DIKE	PLACE DESIGNATION (A-I, B-2, etc.) ON FLOW 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	├─ SSD ── ┤
FILTER LOG	► FL-18 → NOTE: DESIGNATION FL-18 REFERS TO FILTER LOG WITH 18 INCH DIAMETER.	SUMP PIT	⊠SP
GABION INFLOW PROTECTION	GP	SUPER SILT FENCE	⊢—SSF——I
GABION INLET PROTECTION	Z 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-TYP	E A A
PERIMETER DIKE/SWALE	€ € €	TEMPORARY SOIL STABILIZATION MATTING-TYP	E E
PERMANENT SOIL STABILIZATION MATTING-T	YPE B	TEMPORARY SOIL STABILIZATION MATTING-TYP	E D D
PERMANENT SOIL STABILIZATION MATTING-T	YPE C CCCC	TEMPORARY STONE OUTLET STRUCTURE	₹ TSOS
PIPE OUTLET SEDIMENT TRAP ST I	ST-I	TEMPORARY SWALE	A-I ACE DESIGNATION (A-I,B-2, Fc.) ON FLOW CHANNEL SIDE SWALE.
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	—— CBCA ——
PORTABLE SEDIMENT TANK	⊠PST	DRAINAGE BOUNDARY	<u>DA</u>
REMOVABLE PUMPING STATION	⊠RPS	EXISTING CONTOURS	
RIPRAP INFLOW PROTECTION	RRP 3	PROPOSED CONTOURS	<u> </u>
RIPRAP OUTLET SEDIMENT TRAP ST III	ST-III	TREE PROTECTION FENCE	—— TPF ——
ROCK OUTLET PROTECTION I	ROPI	WETLAND	• • • • •
LIMIT OF CUT SLOPE	— — С — +	WETLAND BUFFER	— в —
LIMIT OF FILL SLOPE	⊢— F —— ı	100-YEAR FLOODPLAIN	



Bicycle and Pedestrian Priority Areas	

0.	REVISION	BY	APP'D	DATE	DESIGNED BY: SMH	DATE: NOVEMBER,	2023	
					DRAWN BY: SMH	DATE: NOVEMBER,	2023	_
					CHECKED BY: CC	DATE: NOVEMBER,	2023	Γ
					DRAWING NO.:	DATE:		
					RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED		 Date	
					Chief, Division of Transportation Engine	ering	 Date	SCAL

DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND FLOWER AVENUE

DEPARTMENT OF TRANSPORTATION

SEPARATED BIKE LANES EROSION AND SEDIMENT

SHEET<u>22</u> of <u>40</u>

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

LICENSE NO:

OF MARYLAND.

EXPIRATION DATE:

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

CONTROL NOTES

SCALE: NONE

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.

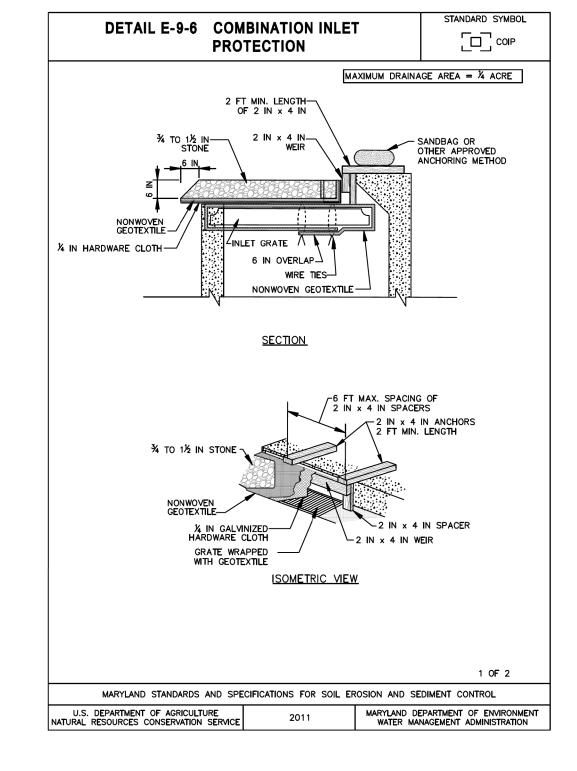
SITE SPECIFIC SEQUENCE OF CONSTRUCTION

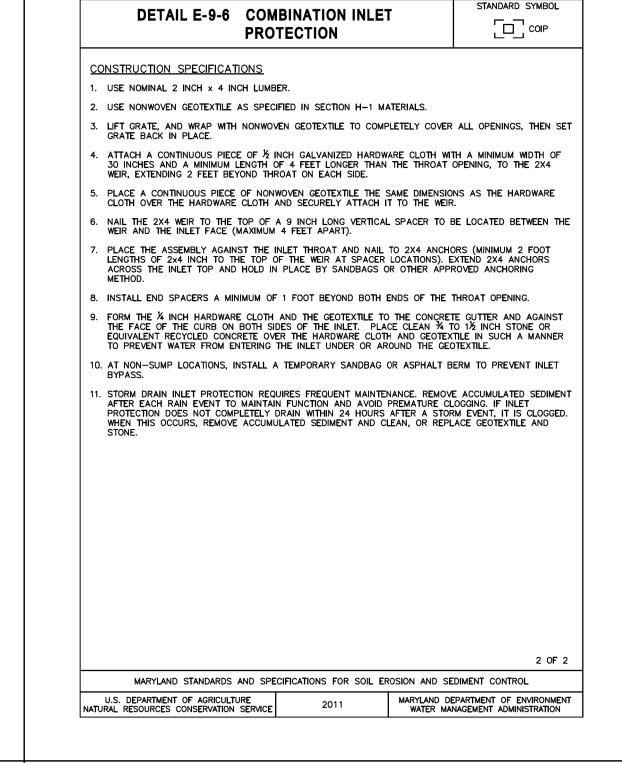
- I. Clear and Grade for Installation of sediment control devices, only disturbing the area needed for installation of the sediment control devices.
- 2. Install Inlet Protection and Tree Protection Fence.
- 3. Once installed, the permittee must obtain written approval from the MCDPS inspector before proceeding with any additional clearing, grubbing, or grading.
- 4. Construct roadway, storm drain improvements, curb, sidewalk, grading, and SWM facilities.
- 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.

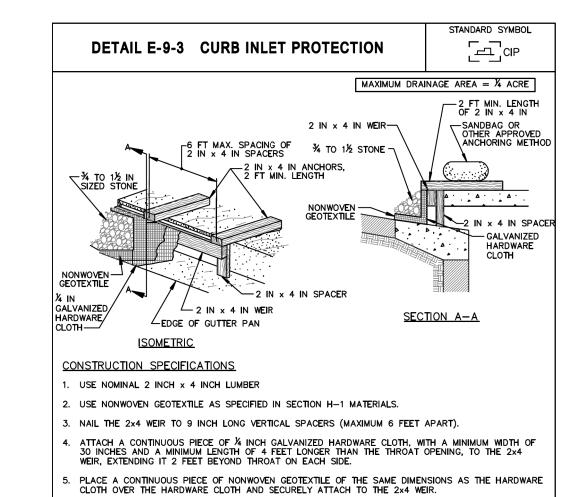
M-NCPPC CONSTRUCTION NOTES

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.

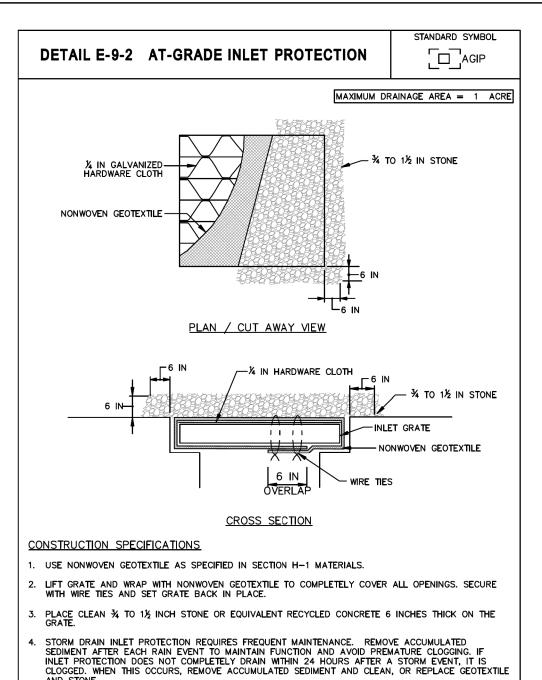




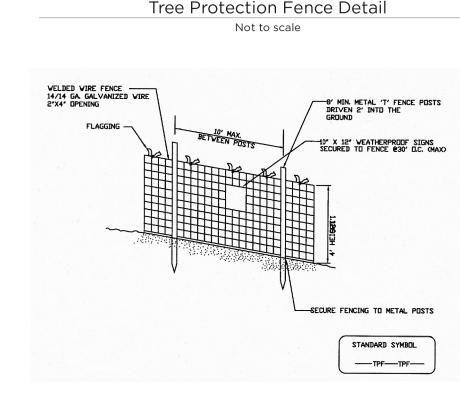


- PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 2 FEET LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
- . INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING. 8. FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN 1/4 TO 11/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
-). AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET
- 10. 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 SPE	CIFICATIONS FOR SOIL ER	ROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
	E.27	



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL



NOTES

- 1. Practice may be combined with sediment control
- 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 • Mark M-NCPPC MontgomeryPlanning.org

	REVISION	BY	APP'D	DATE	DESIGNED BY: SMH	DATE: NOVEM	BER, 2023
					DRAWN BY: SMH	DATE: NOVEM	BER, 2023
					CHECKED BY: CC	DATE: NOVEM	BER, 2023
					DRAWING NO.:	DATE:	
					RECOMMENDED FOR APPR	COVAL	
					Chief, Design Section		Date
					APPROVED		
<u> </u>					Chief, Division of Transportatio		Date

DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

> FLOWER AVENUE SEPARATED BIKE LANES EROSION AND SEDIMENT CONTROL NOTES

SCALE: NONE

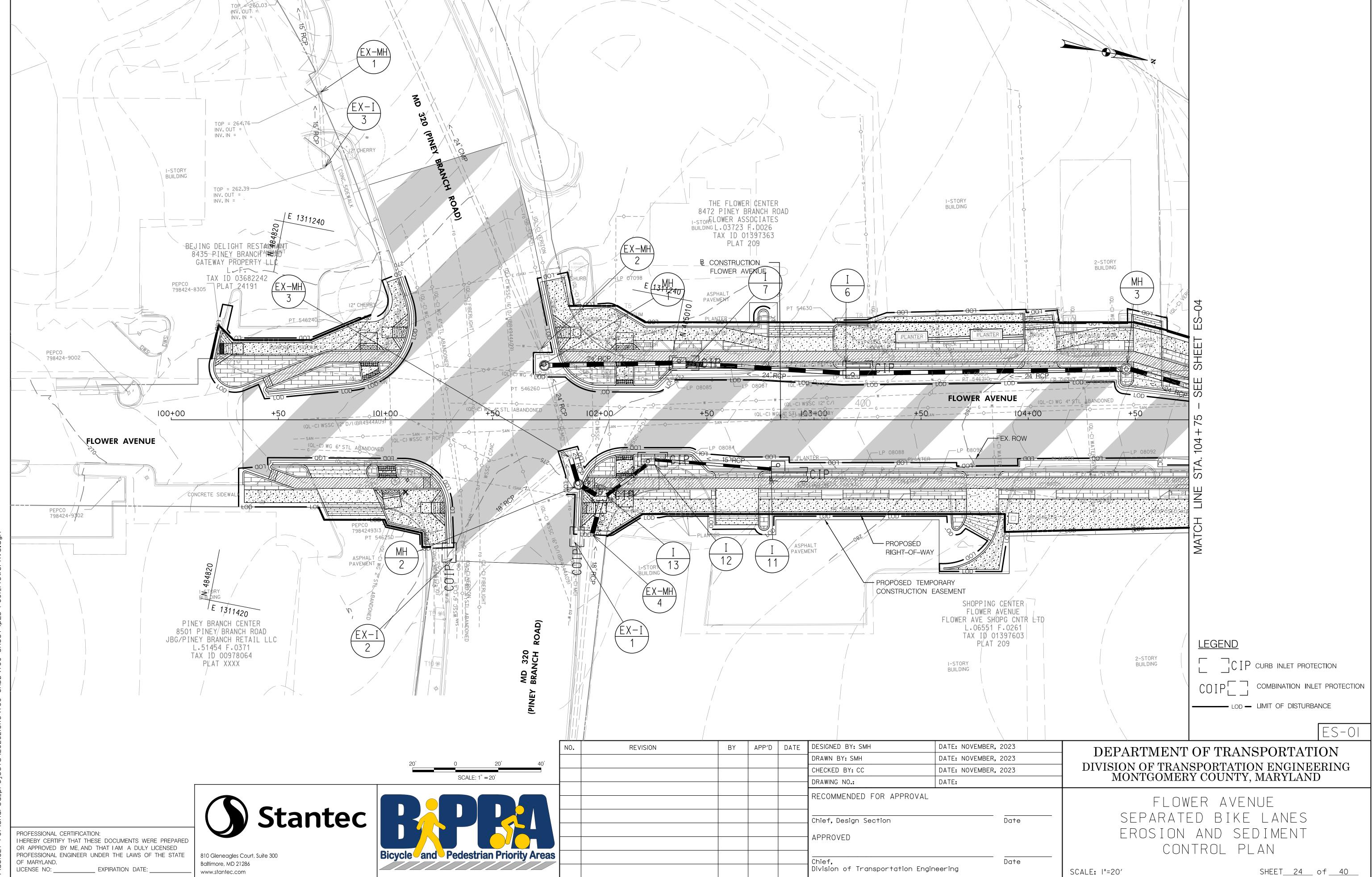
SHEET<u>23</u> of <u>40</u>

Stantec

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

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. LICENSE NO: _ EXPIRATION DATE:

Bicycle cand Pedestrian Priority Areas



||/|6/2023 |\||5|527-F0|\shared projects\20262|3||6\70

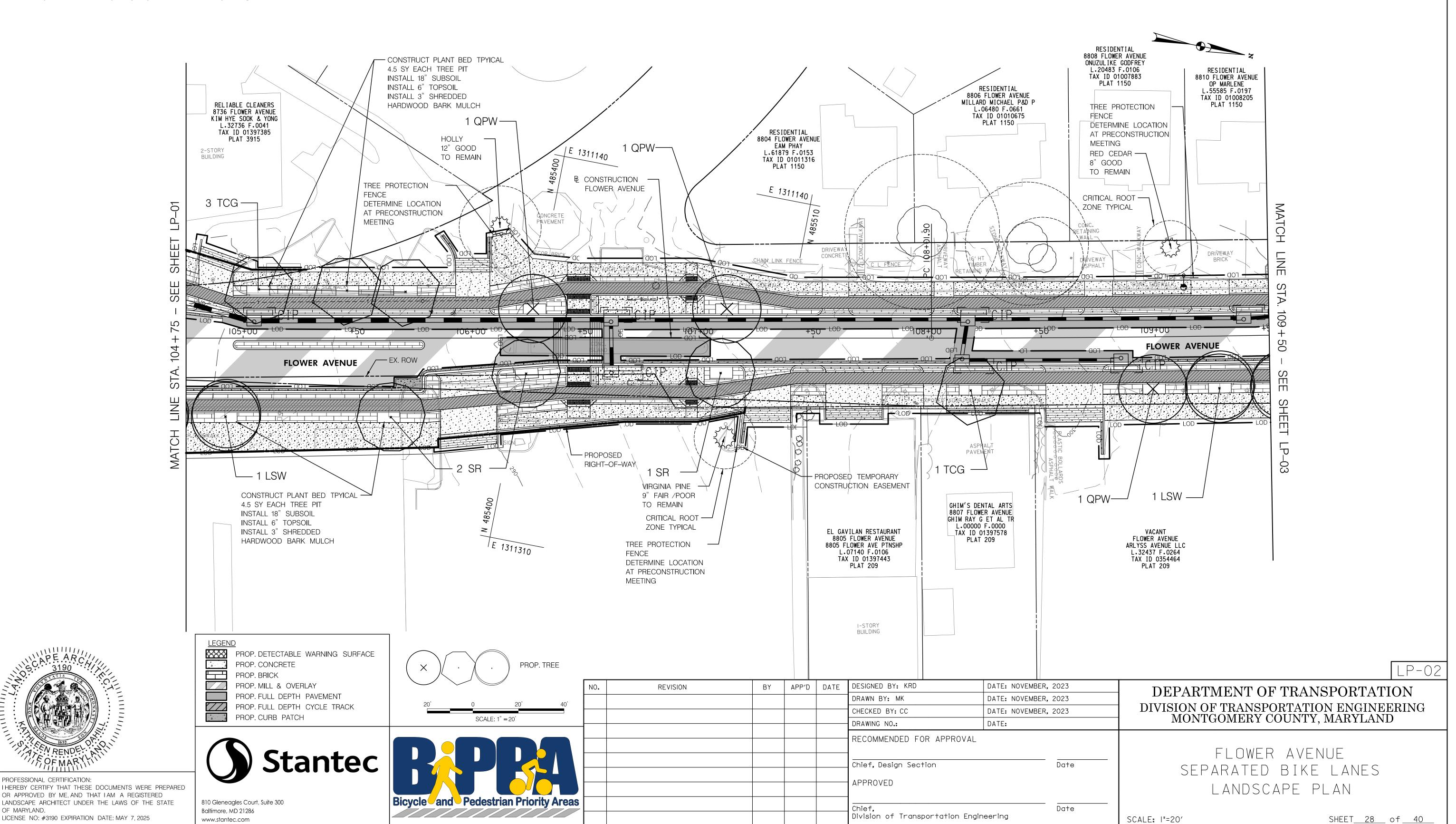
EXPIRATION DATE:

										,	
PLANT LIST LP-01	OLIANITITY	DOTANICAL NAME	COMMONINIANA	CIZE	DALL	MATERIAL L	ST - LP-01 O[UNIT DESCRIPTION		LOCATION QUANTIT		
SYM LSW		BOTANICAL NAME ambar styraciflua 'Ward' Ward	COMMON NAME Sweetgum	SIZE 2.5 IN. CAL.	BALL REMAR B&B CENTRAL L			D SUBSOIL 18" DEPTH	TREE PIT (4'X10') 3	6	
QPA	4 Querci	us phellos 'Abundance' Abun	dance Willow Oak	2.5 IN. CAL.	B&B CENTRAL L	EADER 704365		D TOPSOIL 6" DEPTH	TREE PIT (4'X10') 4	4	
TCG			nspire Littleleaf Linden Touch Dwarf Holly	2.5 IN. CAL.	B&B CENTRAL L		SY CONSTRUCT PLANT SY SHREDDED HARDW	OOD BARK MULCHING 3" DEPTH	TREE PIT (4'X10') 3 TREE PIT (4'X10') 4	<u>6</u> 4	
1001	10 mex cre	Solt Todon Solt	Todell Dwall Holly	24 111.	SAL CONT 30 ON CL	700000	LF TEMPORARY CHAIN	LINK FENCE (TREE PROTECTION)	AS SHOWN 4	2	
REFER TO APPE FOR TREE PROT	ROVED SNRI 4202	3179E EMOVALS CRITICAL ROOT- ZONE TYPICAL ZELKOVA 13" GOOD TO REMAIN TOP = 262.39 INV. OUT = INV. IN = T RESTAURANT BRANCH ROAD TREE PROTECTION DEFRTY LLC	TION TION	PINE BRANCH ROAD	SAL CONT 30" ON CE	700000 NOTE: SHR EUONYM SHRUBS TO REM	THE 8472 P FLOI	FLOWER CENTER INEY BRANCH ROAD WER ASSOCIATES 03723 F.0026 (ID 01397363 PLAT 209 INSTALL 4 SY EAG INSTALL 4 SY EAG INSTALL HARDWO 5 ICST E	AS SHOWN 4 TPLANTING BEDS CT PLANT BED TPYICAL	2-STORY BUILDING 2-HEEL Theory	
FLOV	VER AVENUE	+50	101	+00	+50	102+00	+50	103+00 +50	FLOWER AVENUE 1,04+00 EX. ROW	+50 +50 +75 - SEE	
	*	CONCRETE SIDEWALK	LOI		FO	LOD				INTCH LINE STA. 16	
	89 JBG/	PINEY BRANCH CENTER 501 PINEY BRANCH ROAD PINEY BRANCH RETAIL LLC L.51454 F.0371 TAX ID 00978064 PLAT XXXX		© CONC. SIDEWALK	MD 320 (PINEY BRANCH ROAD)	I-STORY BUILDING 1 TCC PROPOSED TEMP CONSTRUCTION F	DRARY —		SHOPPING CENTER FLOWER AVENUE FLOWER AVE SHOPG CNTR LTD L.06551 F.0261 TAX ID 01397603 PLAT 209 — CONSTRUCT PLANT BED TPYICAL 4.5 SY EACH TREE PIT INSTALL 18" SUBSOIL INSTALL 6" TOPSOIL INSTALL 3" SHREDDED HARDWOOD BARK MULCH	1 LSW —	
WAPE ARCVI	·.	PROP. DETECTABLE	WARNING SURFACE		5505						
3190		PROP. DETECTABLE PROP. CONCRETE PROP. BRICK		× × ×	PROP. TREE						LP-01
		PROP. MILL & OVERI PROP. FULL DEPTH PROP. FULL DEPTH PROP. CURB PATCH	PAVEMENT CYCLE TRACK	20' 0 SCALE	20' 40'	NO. REVISION	BY APP'D D	DESIGNED BY: KRD DRAWN BY: MK CHECKED BY: CC DRAWING NO:	DATE: NOVEMBER, 2023 DATE: NOVEMBER, 2023 DATE: NOVEMBER, 2023	DIVISION OF TRANSPO	TRANSPORTATION ORTATION ENGINEERING OUNTY, MARYLAND
へ N NUTTERED (TERM) 11 11 11 11 11 11 11	7: <u> </u>							DRAWING NO.: PECOMMENDED FOR APPROVAL	DATE:		, ————————————————————————————————————
								RECOMMENDED FOR APPROVAL			
1 IN RENDEL	211					_				<u> </u>)
OF MARY	RIT	Sta	ntec					Chief, Design Section			RIKELANES
PROFESSIONAL CERTIFICATION:	RIL	Sta	intec						Date	SEPARATED	BIKE LANES
IHEREBY CERTIFY THAT THESE DO OR APPROVED BY ME, AND THAT	IAM A REGISTERED							Chief, Design Section APPROVED	Date	SEPARATED	
HEREBY CERTIFY THAT THESE DO	I AM A REGISTERED HE LAWS OF THE STATE	810 Gleneagles Court, Suite 300 Baltimore, MD 21286		Bicycle and Pedest						SEPARATED	BIKE LANES

PLANT LIST LP-02						
SYM	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	BALL	REMARKS
LSW	2	Liquidambar styraciflua 'Ward'	Ward Sweetgum	2.5 IN. CAL.	B&B	CENTRAL LEADER
QPA	3	Quercus phellos 'Abundance'	Abundance Willow Oak	2.5 IN. CAL.	B&B	CENTRAL LEADER
SR	3	Syringa reticulata	Lilac Tree	2.5 IN. CAL.	B&B	
TCG	3	Tilia cordata 'Greenspire'	Greenspire Littleleaf Linden	2.5 IN. CAL.	B&B	CENTRAL LEADER

REFER TO APPROVED SNRI 42023179E FOR TREE PROTECTION AND REMOVALS

MATERIAL LIST	- LP-02	2		
CATEGORY COL	UNIT	DESCRIPTION	LOCATION	QUANTITY
701214	SY	PLACING FURNISHED SUBSOIL 18" DEPTH	TREE PIT (4'X10')	49.5
704365	SY	PLACING FURNISHED TOPSOIL 6" DEPTH	TREE PIT (4'X10')	49.5
710170	SY	CONSTRUCT PLANTING BEDS	TREE PIT (4'X10')	49.5
715015	SY	SHREDDED HARDWOOD BARK MULCHING 3" DEPTH	TREE PIT (4'X10')	49.5
700000	LF	TEMPORARY CHAIN LINK FENCE (TREE PROTECTION)	AS SHOWN	62
NOTE: SHREDE	DED HA	RDWOOD BARK MULCH IS INCIDENTAL TO CONSTRUCT PLA	ANTING BEDS	



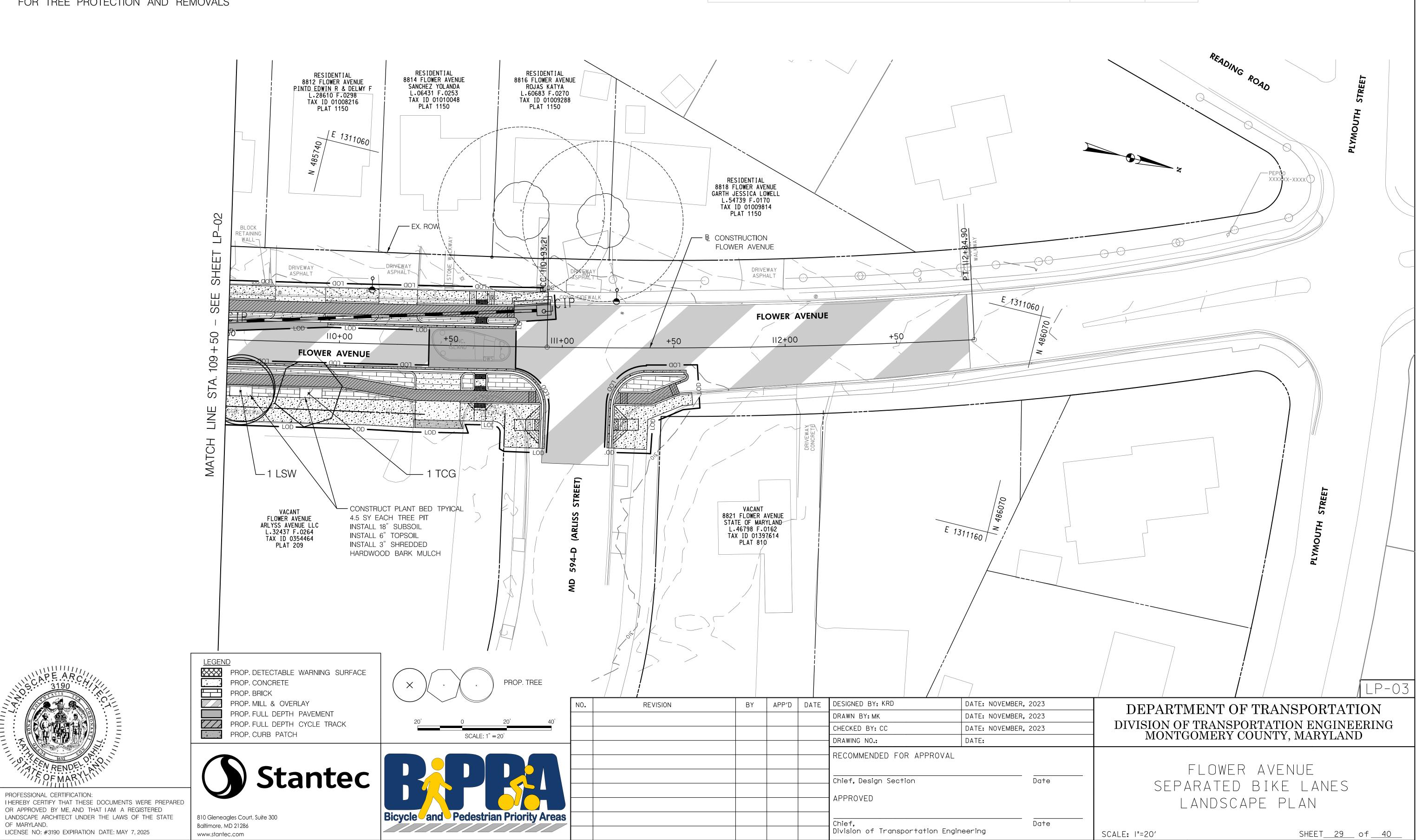
\\USI527-F0|\shared_projects\20262|3||6\700 CADD\700 Sheet

PLANT LIST LP-03						
SYM	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	BALL	REMARKS
LSW	1	Liquidambar styraciflua 'Ward'	Ward Sweetgum	2.5 IN. CAL.	B&B	CENTRAL LEADER
TCG	1	Tilia cordata 'Greenspire'	Greenspire Littleleaf Linden	2.5 IN. CAL.	B&B	CENTRAL LEADER

REFER TO APPROVED SNRI 42023179E FOR TREE PROTECTION AND REMOVALS

MATERIAL LIST - LI	P-03			
CATEGORY CODE	UNIT	DESCRIPTION	LOCATION	QUANTITY
701214	SY	PLACING FURNISHED SUBSOIL 18" DEPTH	TREE PIT (4'X10')	
704365	SY	PLACING FURNISHED TOPSOIL 6" DEPTH	TREE PIT (4'X10')	
710170	SY	CONSTRUCT PLANTING BEDS	TREE PIT (4'X10')	
715015	SY	SHREDDED HARDWOOD BARK MULCHING 3" DEPTH	TREE PIT (4'X10')	

NOTE: SHREDDED HARDWOOD BARK MULCH IS INCIDENTAL TO CONSTRUCT PLANTING BEDS



\\USI527-F0|\shared_projects\20262|3||6\700 CADD\

- 1.INSTALL A MINIMUM OF 4 IN. DEPTH TOPSOIL IN TURFGRASS ESTABLISHMENT AREAS.
- 2. TREAT AND REMOVE INVASIVE SPECIES WHERE INDICATED ON THE PLANS AND WHERE DIRECTED BY THE ENGINEER. 3. RETAIN DESIRABLE TREES, SHRUBS, AND PERENNIALS EXCEPT WHERE INDICATED ON THE PLANS OR DIRECTED BY THE ENGINEER.
- 4. DO NOT REMOVE OR PRUNE THE BRANCHES OR ROOTS OF TREES WITHIN MDOT SHA RIGHT-OF-WAY WITHOUT AN **APPROVED**
- ROADSIDE TREE PERMIT OR REFORESTATION SITE REVIEW APPROVAL FROM THE MD DEPARTMENT OF NATURAL RESOURCES FOREST SERVICE.
- 5. PLANT IN CLUSTERS OF 3 TO 5 INDIVIDUAL TREES/SHRUBS OF LIKE SPECIES TO CREATE A PATTERN CONSISTENT WITH NATURAL

FOREST DEVELOPMENT.

SITE SPECIFIC NOTES

- 1.TREE PLANTING SETBACKS:
 - A. NO TREES SHALL BE LOCATED IN CLEAR ZONES ADJACENT TO TRAVEL LANES OR IN INTERSECTION SIGHT TRIANGLES. 1. IN FILL SLOPES OF 5:1 TO 4:1 THE MINIMUM OFFSET DISTANCE TO TREE TRUNKS FOR A TRAVEL LANE WITH A POSTED SPEED OF 55 MPH IS 30 FEET.
 - B. MAINTAIN OFFSETS FROM OVERHEAD ELECTRIC LINES AS PER THE FOLLOWING BASED ON SIZE AT MATURITY: 1. OFFSET SMALL TREES (UNDER 20 FT. HEIGHT AT MATURITY) 20 FT. FROM WIRES AND POLES.
 - 2. OFFSET MEDIUM TREES (20-50 FT. HEIGHT AT MATURITY AND MEDIUM AND LARGE COLUMNAR TREES 20 FT. WIDE
 - MATURITY) 30 FT. FROM WIRES AND POLES.
 - 3. OFFSET LARGE TREES (OVER 50 FT. HEIGHT AT MATURITY) 50 FT. FROM WIRES AND POLES. C. INSTALL TREES AT LEAST 7 FT. PLUS HALF THE PIPE DIAMATER FROM THE CENTERLINE OF WATER, GAS, AND SANITARY SEWER
 - LINES. ADDITIONAL SETBACKS MAY BE REQUIRED BY THE OWNER OF THE UTILITY.
 - D. INSTALL TREES AT LEAST 7 FT. PLUS HALF THE PIPE DIAMETER OF UNDERGROUND STORM DRAIN PIPES.
 - E. INSTALL TREES AT LEAST 15 FT. FROM BACK OF TRAFFIC BARRIERS.
 - F. INSTALL SHADE TREES AND UPRIGHT/COLUMNAR ORNAMENTAL TREES AT LEAST 5 FT. BACK FROM THE BACK OF CURB IN
 - CLOSED-SECTION MEDIAN PLANTINGS.
- G. INCREASE SETBACKS FROM ROADS, SIDEWALKS, TRAFFIC CONTROL DEVICES AND STRUCTURES FOR MULTISTEMMED SECTION 707 AS FOLLOWS:
- BROAD-SPREADING ORNAMENTAL TREES TO MAINTAIN NECESSARY BRANCH CLEARANCE.
- 2.SHRUB PLANTING SETBACKS:
- A. INSTALL SHRUBS AT LEAST 10 FT. FROM TRAFFIC BARRIERS.
- B. DO NOT INSTALL SHRUBS IN SIGHT TRIANGLES FOR INTERSECTIONS WHERE THE MATURE HEIGHT OF THE SHRUBS WHEN ADDED
- TO EXISTING TERRAIN WILL EXCEED 30 IN. HEIGHT.

MDTA LANDSCAPE NOTES

- 7.1 LANDSCAPE NOTES. LANDSCAPE CONSTRUCTION WITHIN THE RIGHT OF WAY OF THE MARYLAND STATE HIGHWAY ADMINISTRATION (SHA) AND MARYLAND TRANSPORTATION AUTHORITY (MDTA) WITHIN STATE 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
- 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. CURRENT SPECIFICATIONS ARE AT 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
- 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.

810 Gleneagles Court, Suite 300

Baltimore, MD 21286

www.stantec.com

- 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.
- 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 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, AND NO FERTILIZER SHALL BE APPLIED FROM NOVEMBER 15 TO MARCH 1.
- 7.11 SOIL STABILIZATION MATTING SHALL BE INSTALLED IN CONFORMATCE WITH SECTION 709 OF THE SAHA STANDARD SPECIFICATIONS, IN CONJUCTION WITH TRUFGRASS ESTABLISHMENT PER SECTION 705 OR MEADOW ESTABLISHMENT PER
- 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.

- 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.

7.20 STUMP REMOVAL. STUMP REMOVAL IN TURFGRASS OR MEADOW AREAS SHALL BE PERMFORMED IN CONFORMANCE WITH OPERATION 5 - STUMP REMOVAL OF SECTION 714.

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.

7.23 FINISHED MATERIALS. THE SUITABLILITY, COLOR AND TEXTURE OF APPLICANT TO INSERT NAME OF MATERIALS WITH REFERENCES TO PAGES OF THE PLAN WHICH SPECIFY THESE MATERIALS TO BE INSTALLED SHALL BE APPROVED BEFORE INSTALLATION. THE CONTRACTOR SHALL FURNISH SAMPLE OR MAKE ARRANGEMENTS FOR INSPECTION AND APPROVAL AT THE PROJECT SITE.

/laterials List - 35% Design								
Unit	Description/Location	LOCATION	QUANTITY					
SY	PLACING FURNISHED SUBSOIL 18" DEPTH	TREE PIT	95					
SY	PLACING FURNISHED TOPSOIL 6" DEPTH	TREE PIT	103					
SY	CONSTRUCT PLANTING BEDS	TREE PIT	95					
SY	SHREDDED HARDWOOD BARK MULCHING 3" DEPTH	TREE PIT	103					
LF	TEMPORARY CHAIN LINK FENCE (TREE PROTECTION)	AS SHOWN	104					
	Unit SY SY SY SY	Unit Description/Location SY PLACING FURNISHED SUBSOIL 18" DEPTH SY PLACING FURNISHED TOPSOIL 6" DEPTH SY CONSTRUCT PLANTING BEDS SY SHREDDED HARDWOOD BARK MULCHING 3" DEPTH	UnitDescription/LocationLOCATIONSYPLACING FURNISHED SUBSOIL 18" DEPTHTREE PITSYPLACING FURNISHED TOPSOIL 6" DEPTHTREE PITSYCONSTRUCT PLANTING BEDSTREE PITSYSHREDDED HARDWOOD BARK MULCHING 3" DEPTHTREE PIT					

SYM	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	BALL	REMARKS
LSW	5	Liquidambar styraciflua 'Ward'	Ward Sweetgum	2.5 IN. CAL.	B&B	CENTRAL LEADER
QPA	7	Quercus phellos 'Abundance'	Abundance Willow Oak	2.5 IN. CAL.	B&B	CENTRAL LEADER
SR	3	Syringa reticulata	Lilac Tree	2.5 IN. CAL.	B&B	
TCG	6	Tilia cordata 'Greenspire'	Greenspire Littleleaf Linden	2.5 IN. CAL.	B&B	CENTRAL LEADER
ICST	10	Ilex crenata 'Soft Touch'	Soft Touch dwarf holly	24" HT.	3 gallon	30" ON CENTER

11111111111111111111111111111111111111	ARCHINA 190
Y.	
NO THE PARTY OF TH	
X Z X X X X X X X X X X X X X X X X X X	ENDEL AND

PROFESSIONAL CERTIFICATION: HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED R APPROVED BY ME, AND THAT LAM A REGISTERED ANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE

ICENSE NO: #3190 EXPIRATION DATE: MAY 7, 2025





REVISION	BY	APP'D	DATE	DESIGNED BY: KRD DATE: N	OVEMBER, 2023	
				DRAWN BY: MK DATE: N	OVEMBER, 2023	
				CHECKED BY: CC DATE: N	OVEMBER, 2023	\neg D
				DRAWING NO.: DATE:		
				RECOMMENDED FOR APPROVAL		
				Chief, Design Section	Date	
				APPROVED		
				Chief, Division of Transportation Engineering	Date	SCAL
	REVISION	REVISION BY	REVISION BY APP'D	REVISION BY APP'D DATE	DRAWN BY: MK CHECKED BY: CC DATE: N DRAWING NO.: DATE: RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED	DRAWN BY: MK CHECKED BY: CC DATE: NOVEMBER, 2023 DRAWING NO.: DATE: RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED Chief, Date

DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

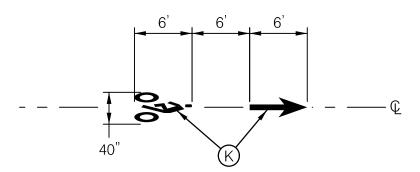
DEPARTMENT OF TRANSPORTATION

FLOWER AVENUE SEPARATED BIKE LANES LANDSCAPE PLAN NOTES AND DETAILS

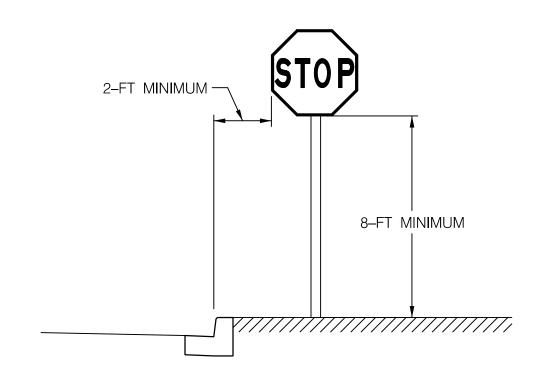
LE: NONE

SHEET<u>30</u> of <u>40</u>

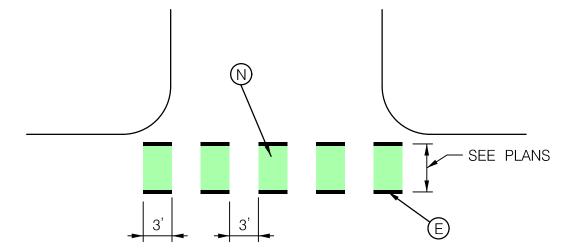
TYPICAL CONFLICT ZONE DETAIL AT DRIVEWAYS AND MCDOT ROADWAYS



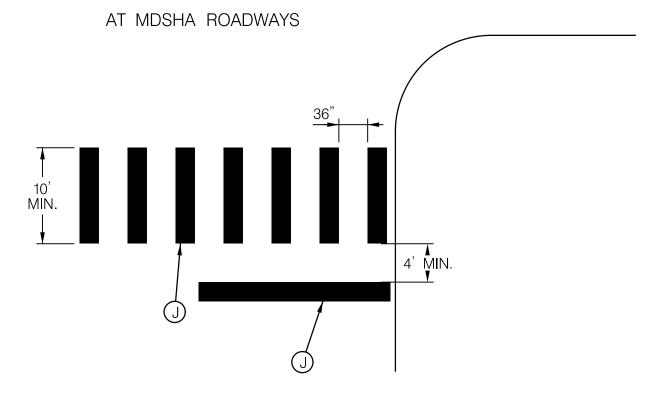
BIKE LANE SYMBOL DETAIL



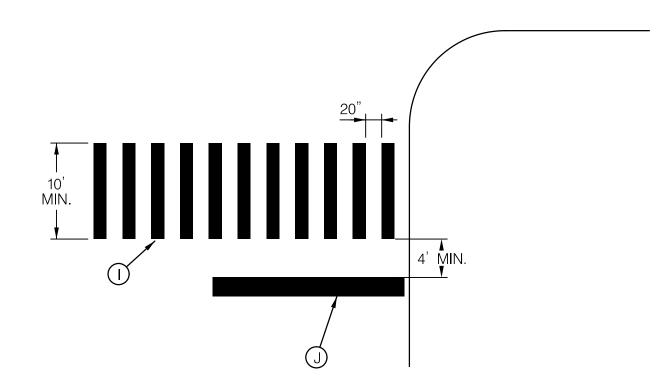
POST MOUNTED SIGN DETAIL



TYPICAL CONFLICT ZONE DETAIL



TYPICAL CROSSWALK DETAIL SHA



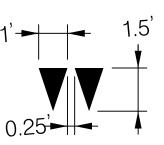
TYPICAL SIGNALIZED CROSSWALK DETAIL MCDOT

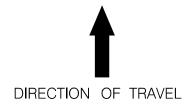
NOTE: STOP BARS AT UNSIGNALIZED CROSSWALK SHALL BE 16" FOR MCDOT

PAVEMENT MARKING LEGEND

- A INSTALL 5 INCH YELLOW LEAD FREE THERMOPLASTIC PAVEMENT MARKING (DOUBLE)
- B INSTALL 5 INCH WHITE LEAD FREE THERMOPLASTIC PAVEMENT MARKING (SOLID)
- © INSTALL 5 INCH YELLOW LEAD FREE THERMOPLASTIC PAVEMENT MARKING (SOLID)
- D INSTALL 5 INCH WHITE LEAD FREE THERMOPLASTIC PAVEMENT MARKING (3-9-3 DOTTED)
- E INSTALL 5 INCH WHITE LEAD FREE THERMOPLASTIC PAVEMENT MARKING (3-3-3 DOTTED)
- G INSTALL 5 INCH WHITE LEAD FREE THERMOPLASTIC PAVEMENT MARKING (10-30-10 BROKEN)
- (J) INSTALL 24 INCH WHITE LEAD FREE THERMOPLASTIC PAVEMENT MARKING

- O INSTALL GREEN PAVEMENT MARKING; EPOXY (LOW TRAFFIC VOLUME AREAS)
- P REMOVE PAVEMENT MARKING





YIELD MARKING DETAIL

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

SCALE: NONE

SHEET<u>31</u> of <u>40</u>

REVISION	BY	APP'D	DATE	DESIGNED BY: JRGB	DATE: NOVEMBER, 2023	
				DRAWN BY: JRGB	DATE: NOVEMBER, 2023	DEPARTMENT OF TRANSPORTATION
				CHECKED BY: RJM	DATE: NOVEMBER, 2023	DIVISION OF TRANSPORTATION ENGINEERING
				DRAWING NO.:	DATE:	MONTGOMERY COUNTY, MARYLAND
				RECOMMENDED FOR APPROVAL		
						FLOWER AVENUE
				Chief, Design Section	Date	
						SEPARATED BIKE LANES
				APPROVED		SIGNING AND MARKING DETAILS
				Chief, Division of Transportation Engine	Date eering	SCALE NONE SHEET 31 of 40



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



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. LICENSE NO: _ EXPIRATION DATE:

F INSTALL 5 INCH WHITE LEAD FREE THERMOPLASTIC PAVEMENT MARKING (2-2-2 DOTTED)

H INSTALL 12 INCH WHITE LEAD FREE THERMOPLASTIC PAVEMENT MARKING

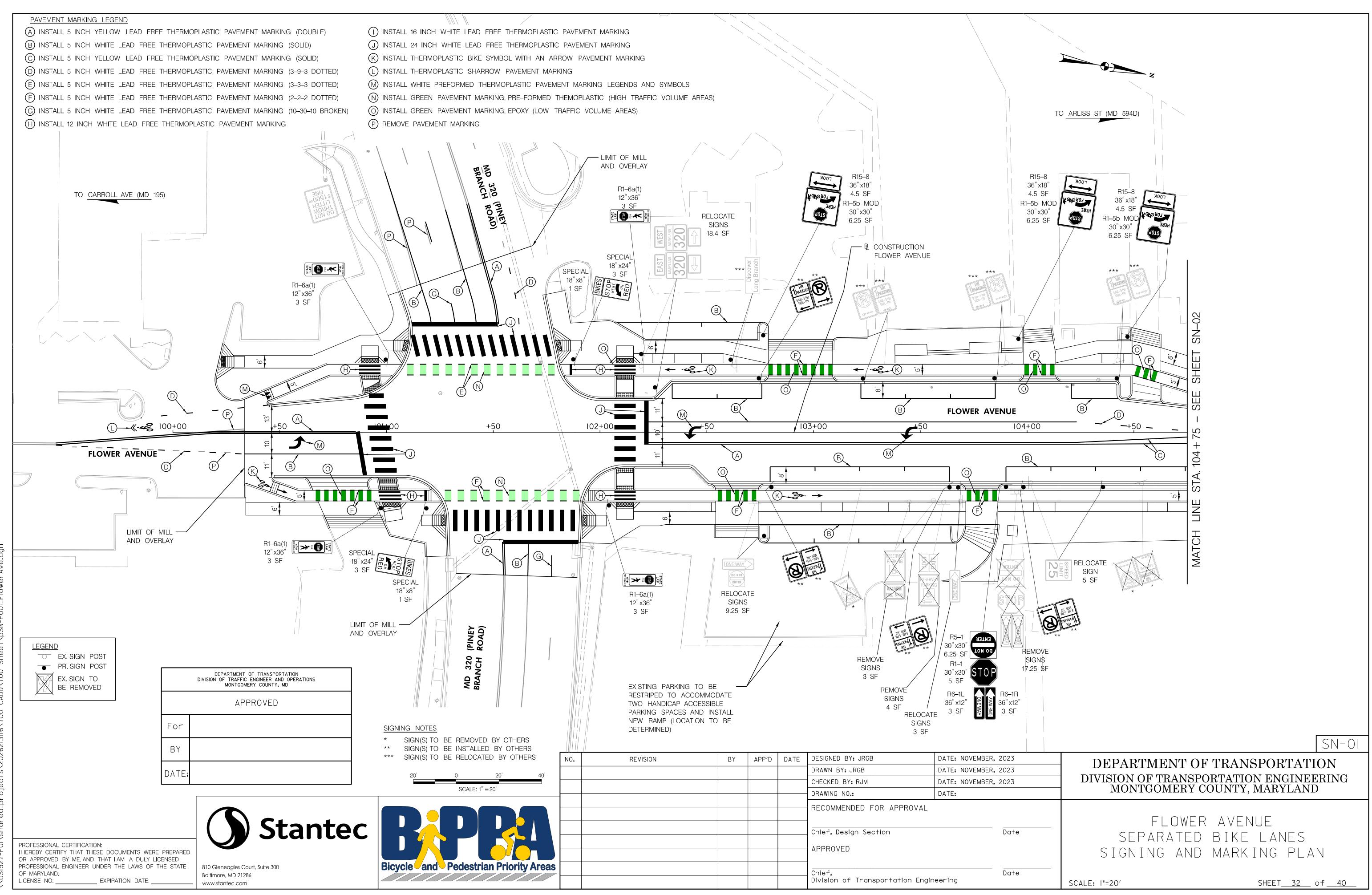
INSTALL 16 INCH WHITE LEAD FREE THERMOPLASTIC PAVEMENT MARKING

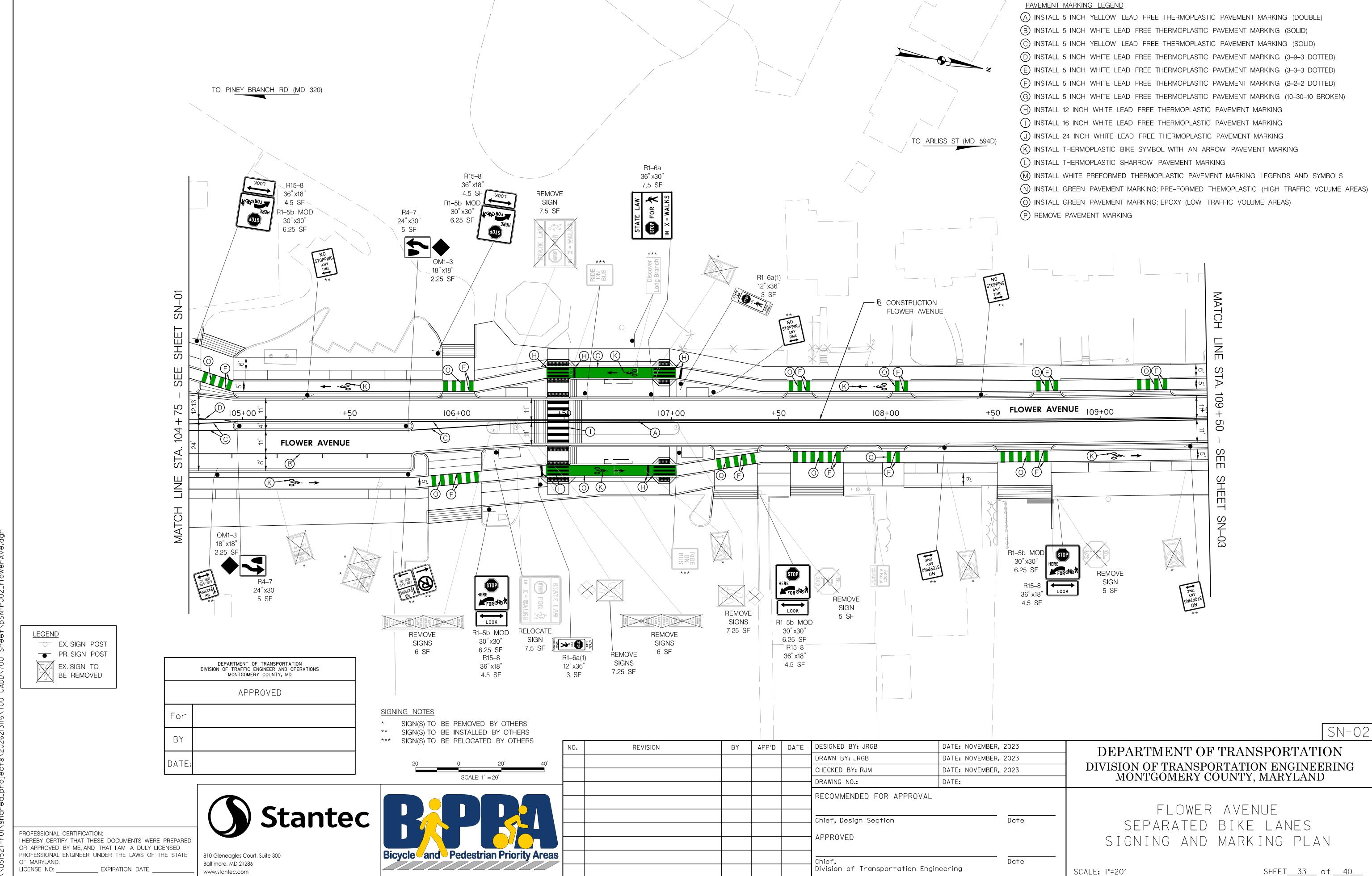
K INSTALL THERMOPLASTIC BIKE SYMBOL WITH AN ARROW PAVEMENT MARKING

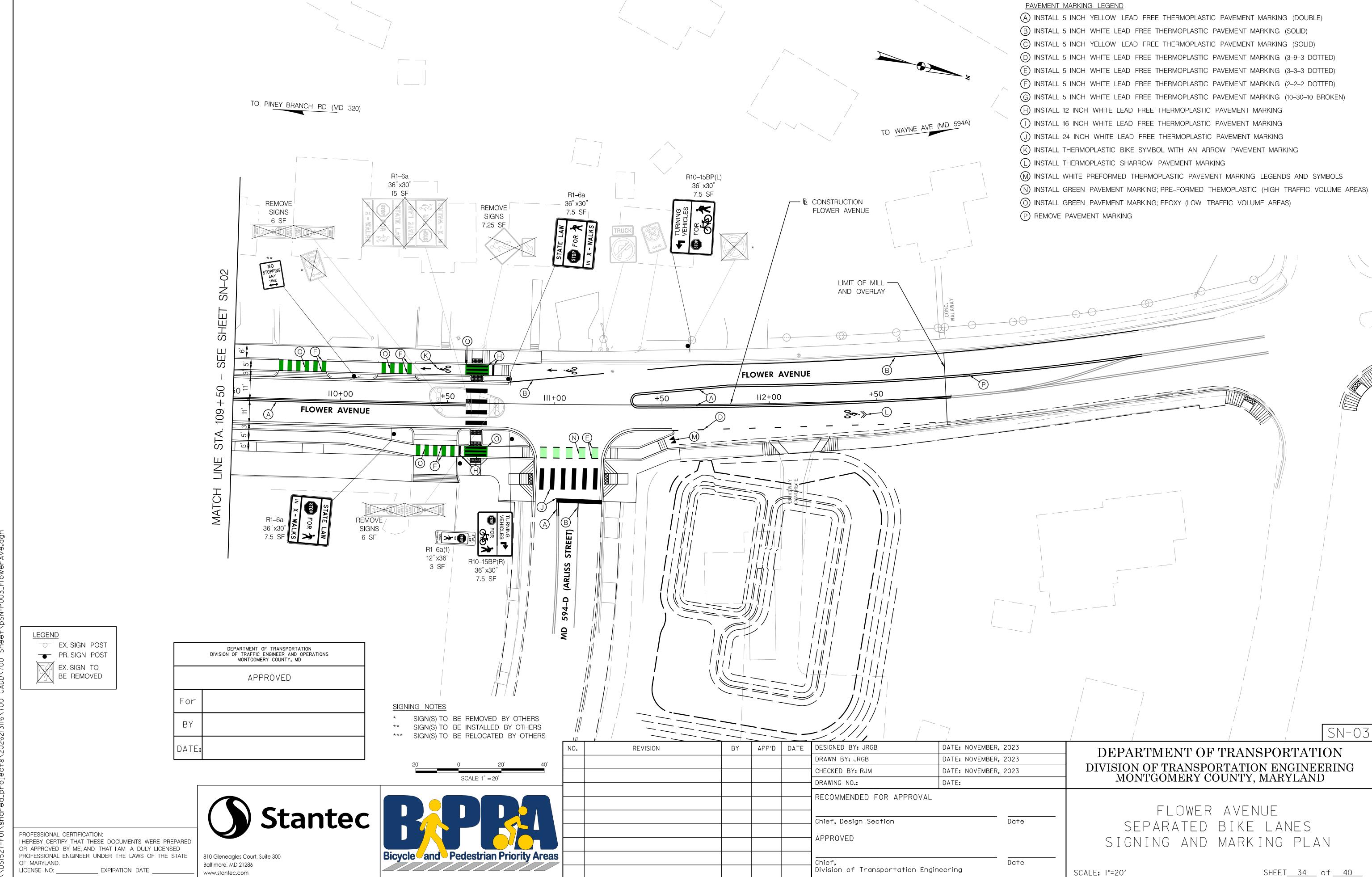
INSTALL THERMOPLASTIC SHARROW PAVEMENT MARKING

M INSTALL WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS

N INSTALL GREEN PAVEMENT MARKING; PRE-FORMED THEMOPLASTIC (HIGH TRAFFIC VOLUME AREAS)







||/|6/2023 |\|||5|527-F0|\shared_brojec+s\20262|3||6\700_CADD\700

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. LICENSE NO: _ _ EXPIRATION DATE: _

CODE NUMBERS

13

SHEET ALUMINUM SIGNS

REMOVE EXISTING SIGNS

RELOCATE EXISTING SIGNS

SHARROW PAVEMENT MARKING

GREEN PAVEMENT MARKING; EPOXY

SIGN

NO.

TOTAL

www.stantec.com



			CHECKED BY: RJN
			DRAWING NO .:
			RECOMMENDED
			Chief, Design S
			APPROVED
as			
			Chief, Division of Tro

REVISION

- 1				
	CHECKED BY: RJM	DATE: NOVEMBER,	2023	
	DRAWING NO.:	DATE:		
	RECOMMENDED FOR APPROVAL			
	Ohio C. Doning Condition			
-	Chief, Design Section		Date	
	APPROVED			
	Chief, Division of Transportation Engin	eering	Date	

DATE: NOVEMBER, 2023

DATE: NOVEMBER, 2023

FLOWER AVENUE SEPARATED BIKE LANES

DEPARTMENT OF TRANSPORTATION

DIVISION OF TRANSPORTATION ENGINEERING MONTGOMERY COUNTY, MARYLAND

SIGNING AND MARKING SCHEDULE

UNIT S.F.

EACH EACH

S.F. S.F.

L.F.

L.F. L.F.

L.F. L.F.

S.F. S.F.

S.F.

L.F.

S.F. S.F. 75.5

33.0

190.3

32

32

23.3

44.0

34.3

101.5

35.7

7.5

43.2

1055

1050

901

3006

1098

878

220

2195

132

142

380

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

APP'D DATE

DESIGNED BY: JRGB

DRAWN BY: JRGB

CODE NUMBERS *

77

77

10

563

122

697

51

55

12

19

39

116

13

10

10

20

14

436

262

698

15

345

75

420

16

437

404

1683

19

NO.

810 Gleneagles Court, Suite 300 Baltimore, MD 21286

* CODE NUMBER DESCRIPTION & UNIT

FURNISH AND INSTALL PERFORATED TUBULAR STEEL SIGN SUPPORTS

5" WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS 5" YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS

12" WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS 16" WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS

24" WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS

BIKE LANE PREFORMED THERMOPLASTIC PAVEMENT MARKING WITH ARROW

REMOVAL OF EXISTING PAVEMENT MARKING LINE, ANY WIDTH

GREEN PAVEMENT MARKING; PREFORMED THERMOPLASTIC

WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS

FURNISH AND INSTALL ANCHOR BASES FOR SQUARE TUBULAR STEEL POST

DESCRIPTION

REMARKS

SN-OI (I) R5-I, (I) RI-I, (I) R6-IL, (I) R6-IR, (4) RI-6a(I), (3) RI5-8, (3) RI-6bMOD, (6) SPECIAL

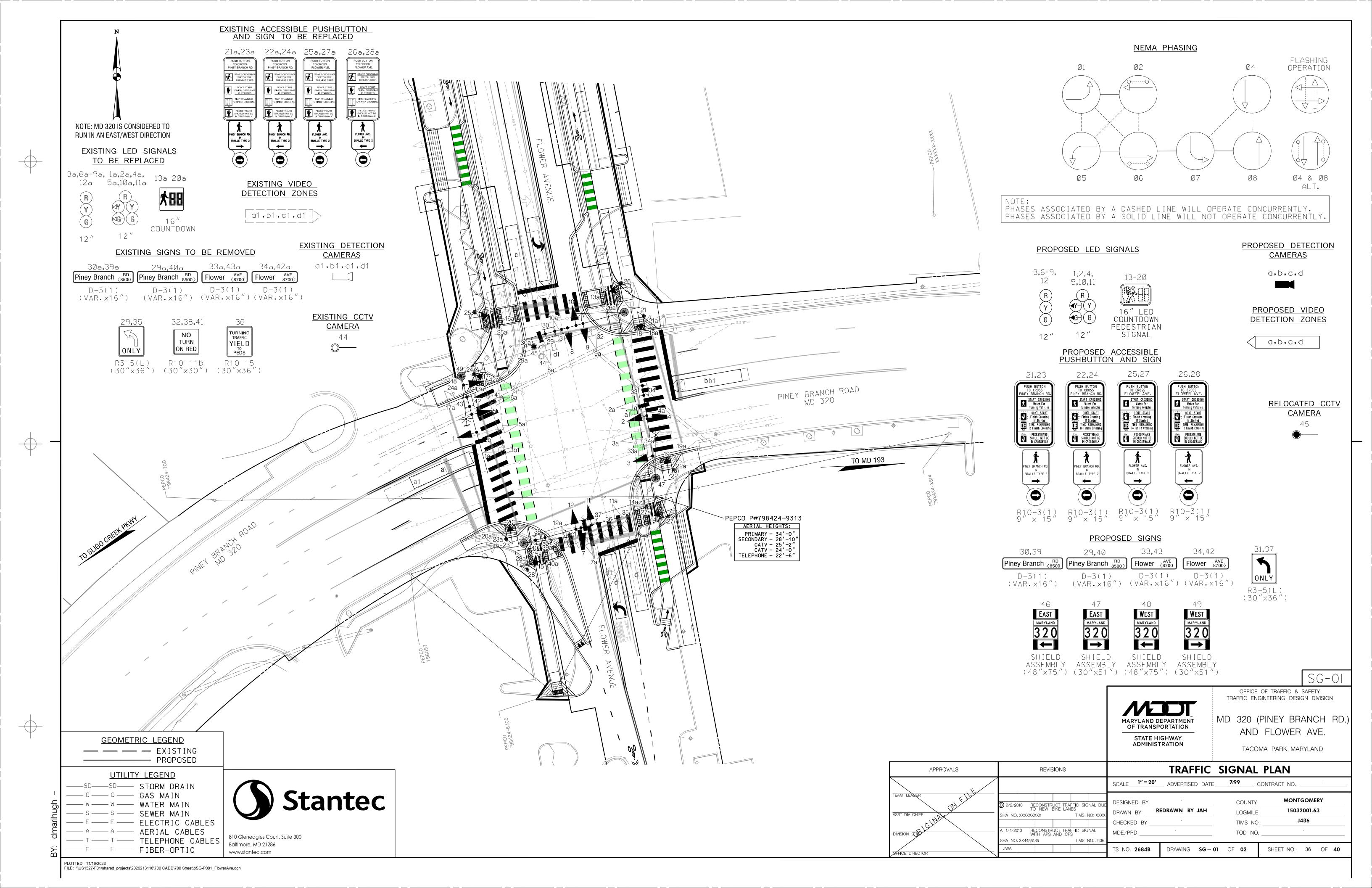
SN-02 (2) RI-6a(I), (5) RI5-8, (5) RI-6bMOD, (2) R4-7, (2) OMI-3, (I) RI-6a

SN-03 (2) RI-6a, (I) RIO-I5BP(R), (I) RIO-I5BP(L), (I) RI-6a(I)

SCALE: NONE

SHEET<u>35</u> of <u>40</u>

SN-04



PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF AN EXISTING TRAFFIC CONTROL SIGNAL WITH INTERCONNECT, STREET LIGHTING AND A TRAFFIC SURVEILLANCE CAMERA AT THE INTERSECTION OF MD 320 (PINEY BRANCH RD) AND FLOWER AVE IN MONTGOMERY COUNTY. A NEW MAST ARM TRAFFIC SIGNAL WITH INTERCONNECT, STREET LIGHTING, TRAFFIC SURVEILLANCE CAMERA AND COUNTDOWN PEDESTRIAN SIGNALS WITH AUDIBLE PUSHBUTTONS SHALL BE INSTALLED AT THIS LOCATION. MD 320 (PINEY BRANCH RD) IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

- 1. THE INTERSECTION SHALL CONTINUE TO OPERATE IN A NEMA SIX-PHASE, SEMI-ACTUATED MODE, WITH THE MD 320 (PINEY BRANCH RD) APPROACHES RUNNING CONCURRENTLY. THE EXCLUSIVE/PERMISSIVE LEFT TURN PHASES FOR BOTH APPROACHES OF MD 320 (PINEY BRANCH RD) SHALL REMAIN IN OPERATION. THE PEDESTRIAN PHASES ACROSS MD 320 (PINEY BRANCH RD) SHALL NOW BE COUNTDOWN PEDESTRIAN PHASES WITH AUDIBLE PUSHBUTTON ACTUATION. THE PEDESTRIAN PHASES ACROSS FLOWER AVE SHALL NOW BE COUNTDOWN PEDESTRIAN PHASES WITH AUDIBLE PUSHBUTTONS ON RECALL. THE FLOWER AVE APPROACHES SHALL ALSO CONTINUE TO RUN CONCURRENTLY.
- 2. A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH VIDEO INTERFACE AND ALL NECESSARY EQUIPMENT HOUSED IN A NEMA SIZE "6" BASE-MOUNTED CABINET SHALL BE INSTALLED AT THIS INTERSECTION.
- 3. MONTGOMERY COUNTY SIGNAL SHOP SHALL INSTALL APS CONTROL UNIT INTO CONTROLLER CABINET. THE CONTRACTOR SHALL DELIVER THE CONTROL UNIT AND AUDIBLE PUSHBUTTONS TO MR. KEITH LORD OF THE MONTGOMERY COUNTY SIGNAL SHOP FOR TESTING AND PROGRAMMING.

III. SPECIAL NOTES

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES, EXCLUDING INTERCONNECT, TO THE APPROPRIATE TERMINALS AND SHALL PROPERLY LABEL EACH CABLE.
- 2. DISCONNECTING AND SPLICING OF INTERCONNECT CABLE SHALL BE PERFORMED BY MONTGOMERY COUNTY FORCES. THE CONTRACTOR SHALL RUN THE INTERCONNECT CABLE INTO THE BASE OF EACH CABINET AND PROPERLY TAG THE CABLE. ALL CONTROLLER CABINET WIRING WILL BE PERFORMED BY MONTGOMERY COUNTY FORCES. CONTACT KAMAI HAMUD AT (240) 777-8761 SEVENTY-TWO HOURS IN ADVANCE OF INTENDED WORK.
- 3. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ORE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
- 4. CONTACT MR. MIKE KINNEY AT (240) 777-8760 SEVENTY-TWO HOURS IN ADVANCE OF INTENDED WORK FOR WIRING RELOCATING OF TRAFFIC SURVEILLANCE CAMERA EQUIPMENT INCLUDING POLE MOUNT CAMERA CABINET.
- 5. APS WILL FUNCTION AS FOLLOWS:

TO CROSS PINEY BRANCH ROAD

- A. WHEN PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE "WAIT TO CROSS PINEY BRANCH
- AT FLOWER, CROSSWALK ANGLES LEFT."

 B. WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

TO CROSS FLOWER AVENUE

- A. WHEN PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE "WAIT TO CROSS FLOWER
- AT PINEY BRANCH."

 B. WHEN THE WALK PHASE BEGINS, THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

CONTACT PERSONS

THE CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

<u>DISTRICT 3</u>

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

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

MONTGOMERY COUNTY

MR. KAMAL HAMUD
MONTGOMERY COUNTY-TRAFFIC ENGINEERING
PHONE NUMBER 240-777-8761

OOTS CONTACTS:

MS. REBECCA LICHTENSTEIN, P.E. CHIEF TRAFFIC OPERATION DIVISION PHONE: (410)-787-7630

MR. ANTOINE YATES
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: (410)-787-7625

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

MR. MICHAEL BOYLE
CHIEF, WAREHOUSE SECTION
PHONE: (410)-787-7668

MR. DAVID "TODD" JONES SIGN SHOP MANAGER 410-787-7676

<u>PEPCO</u>

MR. PAUL WILSON PHONE 202-833-7500

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION:

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

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA:

MONTGOMERY COUNTY FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET, THE CABINET AND ALL OTHER REMOVED SIGNAL MATERIALS ARE TO BECOME PROPERTY OF THE CONTRACTOR.

MAINTENANCE OF TRAFFIC NOTE

MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE FOLLOWING STANDARD PLATES FOR TRAFFIC CONTROL:

STANDARD NO. 104.03-01 (MULTI-LANE UNDIVIDED SHOULDER WORK) STANDARD NO. 104.04-01 (MULTI-LANE DIVIDED SHOULDER WORK)

ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

PHASE CHART

R Y G

 $\begin{array}{c|cccc}
R & R & R & R \\
\hline
Y & \Psi-Y & \Psi-Y & Y
\end{array}$

G •G-G G G

FL/Y | FL/Y | FL/Y | FL/Y | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R | FL/R | DARK | DA

4 AND 8 ALT CHANGE

FLASHING

OPERATION

7 8 9 10 11 12 13 14 15 16 17 18 19 20

PHASE 1 AND 5 CHANGE TO PHASES 1 AND 6, 2 AND 5, OR 2 AND 6 PHASE 1 AND 6 ←G/G | ←G/G | G | R | DW | W/K | W/K | DW | DW | DW | DW | DW 1 AND 6 CHANGE | DW | W/K | W/K | DW | DW | DW | DW | DW PHASE 2 AND 5 | W/K | DW | DW | W/K | DW | DW | DW | DW 2 AND 5 CHANGE R | R | R | W/K | DW | DW | W/K | DW | DW | DW | DW PHASE 2 AND 6 R | R | R | W/K | W/K | W/K | D/W | D/W | D/W | D/W PED CLEARANCE 2 AND 6 CHANGE | ←G/G | ←G/G | G | DW | DW | DW | DW | W/K | DW | DW | W/K PHASE 4 AND 7 4 AND 7 CHANGE | ←Y/G | ←Y/G | G | DW | DW | DW | DW | W/K | DW | DW | W/K PHASE 4 AND 8 G G G DW DW DW DW DW DW DW DW DW 4 AND 8 CHANGE PHASE 4 AND 8 ALT | G | DW | DW | DW | DW | W/K | W/K | W/K | W/K G G G G DW DW DW DW FL/DWFL/DWFL/DW PED CLEARANCE

WIRING DIAGRAM
NOT TO SCALE

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MARYLAND DEPARTMENT
OF TRANSPORTATION
STATE HIGHWAY

ADMINISTRATION

MD 320 (PINEY BRANCH RD.)
AND FLOWER AVE.

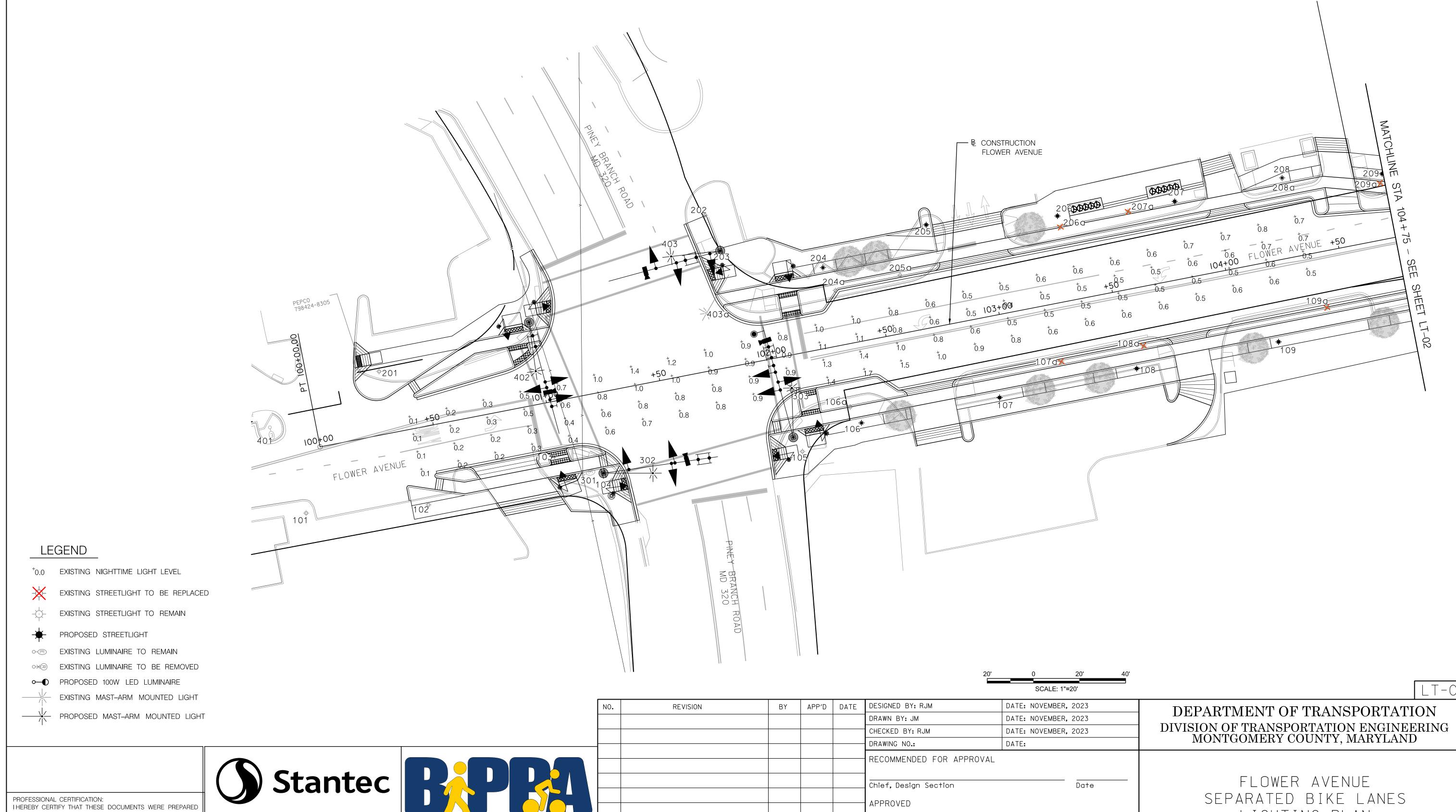
TACOMA PARK, MARYLAND

SCALE NTS ADVERTISED DATE CONTRACT NO.

			_	
DESIGNED BY			COUNTY	MONTGOMERY
DRAWN BY	JM		LOGMILE	15032001.63
CHECKED BY	RJM		TIMS NO	J436
MDE/PRD			TOD NO	
TS NO. 2684B	DRAWING	SG — 02	OF 02	SHEET NO. 37 OF 40

Stantec

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



Bicycle and Pedestrian Priority Areas

Chief, Design Section

Chief, Division of Transportation Engineering

APPROVED

Date

Date

FLOWER AVENUE

SEPARATED BIKE LANES

LIGHTING PLAN

SHEET<u>38</u> of <u>40</u>

OF MARYLAND.

LICENSE NO: _

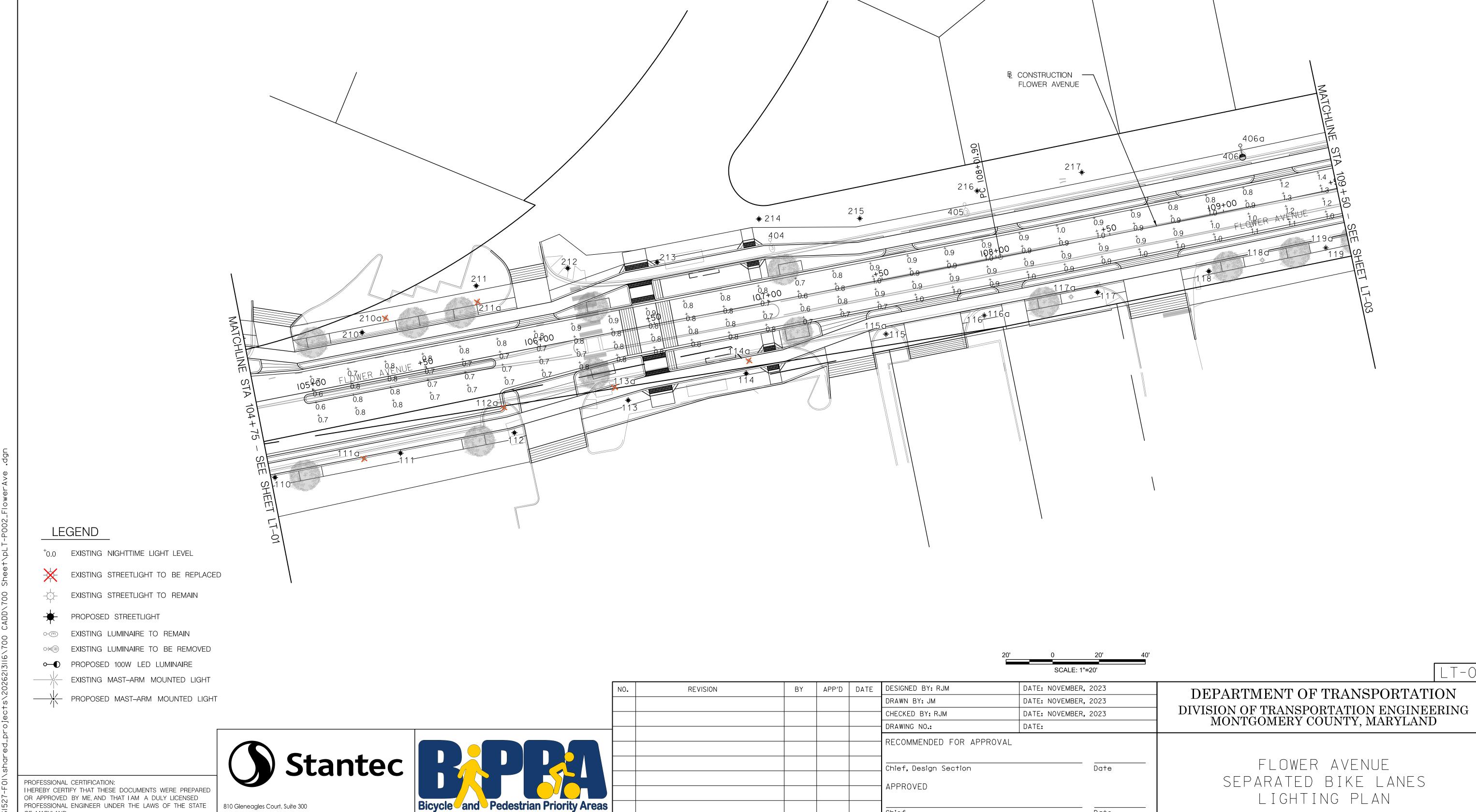
PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED
OR APPROVED BY ME, AND THAT I AM A DULY LICENSED

PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE

__ EXPIRATION DATE:

810 Gleneagles Court, Suite 300

Baltimore, MD 21286



Chief, Division of Transportation Engineering

Date

SHEET<u>39</u> of <u>40</u>

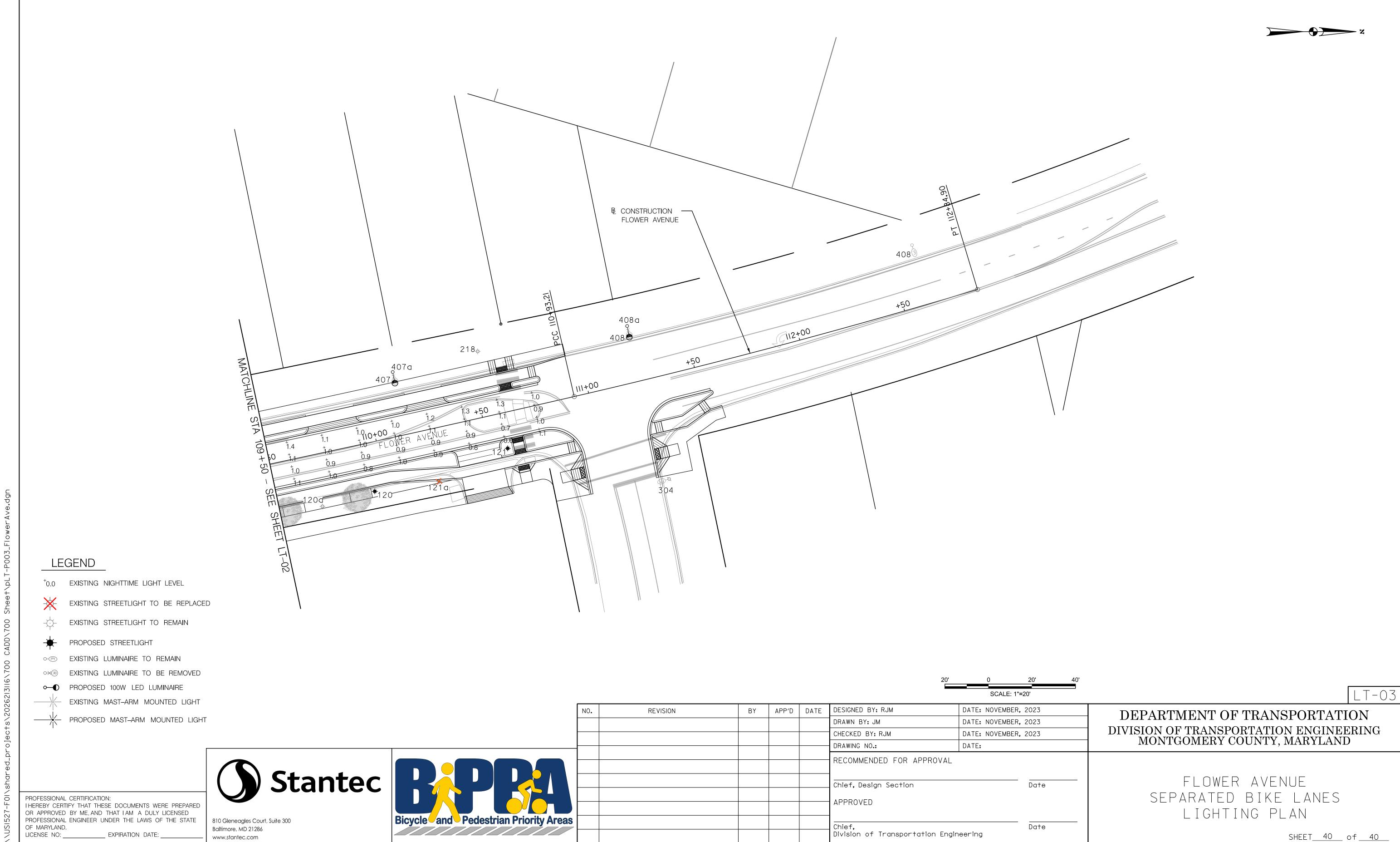
||/|6/2023 |\US|527-F0|\shared_projects\20262|3||6\700 CADD\700 Sheet\pLT-P002_FlowerAve .c

OF MARYLAND.

__ EXPIRATION DATE:

LICENSE NO: _

Baltimore, MD 21286



LICENSE NO: _

__ EXPIRATION DATE: _