THE FOLLOWING STANDARDS ARE REQUIRED FOR THE PROJECT:

MD 104.02-02 SHOULDER WORK2-LANE, 2-WAY EQUAL/LESS THAN 40 MPH
MD 104.02-08 FLAGGING OPERATION /2-LANE, 2-WAY EQUAL/LESS THAN 40 MPH
MD 620.02 STANDARD TYPES A & B CONCRETE CURB AND COMBINATION CONCRETE CURB & GUTTER
MD 620.03 DEPRESSED CURB FOR COMBINATION CURB AND GUTTER AND DEPRESSED CURB FOR SIDEWALK RAMPS
MD 655.12 SIDEWALK RAMPS PARALLEL
MD 655.13 SIDEWALK RAMPS COMBINATION
MD 655.40 DETECTABLE WARNING SURFACE

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:		NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT
STORMWATER MANAGEMENT REVIEWED DATE APPROVED DATE S.M.FILE NO.	SEDIMENT CONTROL TECHNICAL REQUIREMENTS: REVIEWED DATE APPROVED DATE	ADMINISTRATIVE REQUIREMENTS: REVIEWED DATE SEDIMENT CONTROL PERMIT NO. MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED, UNLESS THE PERMIT HAS BEEN EXTENDED.
DPS approval of a sediment control or stormwater management plan is for demonstrated compliance with minimum environmental runoff treatment standards and does not create or imply any right to divert or concentrate runoff onto any adjacent property without that property owner's permission. It does not relieve the design engineer or other responsible person of professional liability or ethical responsibility for the adequacy of the drainage design as it affects uphill or downhill properties.		

DPS Montgomery County Department of Permitting Services
2425 Reedie Drive, 7th Floor
Wheaton, MD 20902
240-777-6311
montgomerycountymd.gov/dps

RECORD DRAWING CERTIFICATION

A record set of approved Sediment Control/Stormwater Management plans must be maintained on-site at all times. In addition to stormwater management items, these plans must include the number and location of all trees proposed to be planted to comply with the Tree Canopy Law. Any approved modifications or deletions of stormwater practices or tree canopy plantings or information must be shown on this record set of plans and on the Tree Canopy Requirements table. Upon completion of the project, this record set of plans, including hereon this signed Record Drawing Certification, must be submitted to the MCDPS inspector. In addition to this Record Drawing Certification, a formal Stormwater Management As-Built submission [ ] **is required** [ ] **is not required** for this project.

If this project is subject to a **Stormwater Management Right of Entry and Maintenance Agreement**, **that document is recorded in Montgomery County Land Records at:**

Liber _____ **Folio** _____ . This Record Drawing will serve as referenced in the recorded document.

"This record drawing accurately and completely represents the stormwater management practices and tree canopy plantings as they were constructed or planted. All stormwater management practices were constructed per the approved Sediment Control / Stormwater Management plans or subsequent approved revisions."

_____ _____
Owner/Developer Signature Date

FIELD CHECK OF RECORD DRAWING BY MCDPS INSPECTOR: INITIALS: _____ DATE: _____

Effective for sediment control permit applications made on or after January 1, 2016.

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD /NORWOOD ROAD
SHARED USE PATH

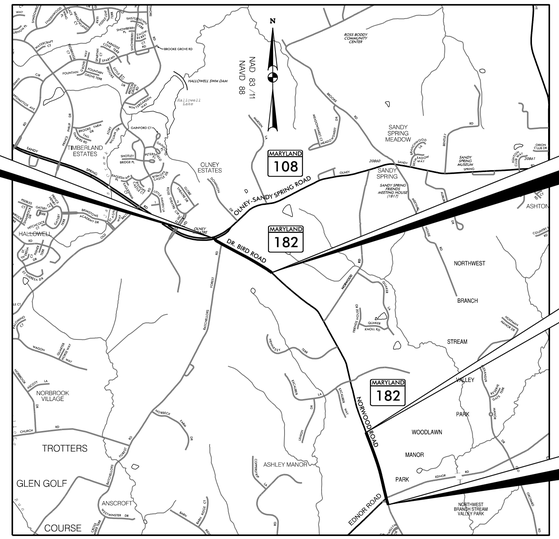
PLAN NO. MR2022024
C.I.P. CONTRACT NO. 1011773
SHA TRACKING NO. 20-AP-MO-024-XX

LIMIT OF WORK
DR. BIRD ROAD
STA. 101+80.05

LIMIT OF WORK
DR. BIRD ROAD
STA. 116+16.00

LIMIT OF WORK
NORWOOD ROAD
STA. 200+88.02

LIMIT OF WORK
NORWOOD ROAD
STA. 219+24.80



VICINITY MAP
SCALE: 1" = 2,000'

DPS PERMIT NO. XXXXXX

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PERMITTING SERVICES
FINAL APPROVAL

DATE _____

BY _____

•SUBJECT TO DEDICATION OF RIGHT OF WAY AND EASEMENTS PER COUNTY CODE SECTION 50.

95% DESIGN REVIEW
AUGUST 2023
NOT FOR CONSTRUCTION

TREE CANOPY REQUIREMENTS TABLE

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

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

Total Property Area	Total Disturbed Area
143,142.84 square feet	143,142.84 square feet
Shade Trees Required	**Shade Trees Proposed to be Planted**
54	0
Fee in Lieu (Trees Required – Trees Planted) x $250	$ 13,500

Required Number of Shade Trees

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

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

(Number of Square Feet in Limits of Disturbance ÷ 40,000) × 15

EXEMPTION CATEGORIES:

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

RELATED REQUIRED PERMITS

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

IT IS THE RESPONSIBLITY OF PERMITTEE/OWNER OF THIS SITE TO OBTAIN ALL REQUIRED PERMITS PRIOR TO ISSUANCE OF THE APPROVED SEDIMENT CONTROL PERMIT:

TYPE OF PERMIT	REQ'D	NOT REQ'D	PERMIT NO.	EXPIRATION DATE	WORK RESTRICTION DATES
MCDPS Floodplain district		X			
WATERWAYS/WETLAND(S) a. Corps of Engineers		X			
b. MDE		X			
c. MDE Water Quality Certification		X			
MDE Dam Safety		X			
Montgomery County/DNR Roadside Tree Care Blanket Permit	X		TBD		
Montgomery County Roadside Tree Protection Law Approval		X			
NPDES NOTICE OF INTENT	X		TBD		
OTHERS (Please List):					
MNCPPC Park Construction Permit	X		TBD		
WSSC	X		TBD		
Montgomery County Tree Canopy Construction Law Approval	X		TBD		
Historic Area Work Permit	X		TBD		

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 M-NCPPC PROPERTY AT THEIR EXPENSE. ALL UTILITIES SHOWN ON THE PLANS ARE PROVIDED FOR INFORMATION ONLY AND SHALL BE CONSIDERED APPROXIMATE. M-NCPPC 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 DESIGNATION				
ROADWAY	DR. BIRD ROAD		NORWOOD ROAD	
ROADWAY LENGTH (MILES)	0.27		0.34	
CONTROLS YEARS	2019	2040	2019	2040
AVERAGE DAILY TRAFFIC (A.D.T.)	14,900	15,250	18,325	19,425
DESIGN HOURLY VOLUME (D.H.V.)	1,390	1,425	1,710	1,815
DIRECTIONAL DISTRIBUTION	61%	39%	61%	39%
% TRUCKS (A.D.T.)	4.2%	4.2%	4.2%	4.2%
% TRUCKS (D.H.V.)	-	-	-	-
FUNCTIONAL CLASSIFICATION	ARTERIAL		ARTERIAL	
CONTROL OF ACCESS	NONE		NONE	
INTENSITY OF DEVELOPMENT	SUBURBAN		SUBURBAN	
TERRAIN	FLAT		FLAT	
DESIGN SPEED (M.P.H.)	40 MPH		35 MPH	
ANTICIPATED POSTED SPEED (M.P.H.)	40 MPH		35 MPH	

PLAN NO. MR2022024 | DWG. TI-01

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100 EDISON PARK DRIVE
GAITHERSBURG, MARYLAND

CONTACT:
REBECCA PARK
REBECCA.PARK@MONTGOMERYCOUNTYMD.GOV
MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
240-777-7263

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

_____ _____
Chief, Transportation Planning and Design Section Date

APPROVED

_____ _____
Chief, Division of Transportation Engineering Date

DESIGNED BY MEG DRAWN BY MEG CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
TITLE SHEET

SCALE 1" = 2000' DATE AUGUST 2023

DRAWING NO. TI-01 OF 01 | SHEET NO. 1 OF 103

PLOTTED: 8/1/2023
FILE: \\rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pTI-0001_DrBird.dgn

PLOTTED: 8/1/2023
FILE: \\rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pTI-0001_DrBird.dgn

ABBREVIATIONS

AASHTO ..... American Association of State Highway Transportation Officials
ADT ..... Average Daily Traffic
AHD ..... Ahead
APPROX. ..... Approximate
℄ or ℄L ..... Baseline
BK ..... Back /Book
BIT. ..... Bituminous
B.C. ..... Bituminous Concrete
B.M. ..... Bench Mark
BOT. ..... Bottom
C.C. ..... Center of Curve
CAP ..... Corrugated Aluminum Pipe
CAPA ..... Corrugated Aluminum Pipe Arch
CATV ..... Cable Television
C.B.R. ..... California Bearing Ratio
℄ or ℄L ..... Centerline
CL. ..... Class
CLF ..... Chainlink Fence
CMP ..... Corrugated Metal Pipe
C.O. ..... Cleanout
COMB. ..... Combination
CONC. ..... Concrete
CONSTR. ..... Construction
COR. ..... Corner
CORR. ..... Correction
CPP–S ..... Corrugated Polyethylene Pipe – Type 'S'
CSP ..... Corrugated Steel Pipe – Aluminized Type 2
CSPA ..... Corrugated Steel Pipe Arch – Aluminized Type 2
DC ..... Degree of Curve
D.H.V. ..... Design Hourly Volume
D.I. ..... Drop Inlet
DIA. ..... Diameter
D.O. ..... Double Opening
E ..... East
E ..... Electric
E ..... External Distance
EA ..... Each
EB ..... Eastbound
ELEV ..... Elevation
ES ..... End Section
EX or EXIST .. Existing
FT ..... Feet
F or FL ..... Flowline
F.B.D. ..... Flat Bottom Ditch
F.H. ..... Fire Hydrant
FWD. ..... Forward
G ..... Gas
G.V. ..... Gas Valve
H.B. ..... Handbox
HDPE ..... High Density Polyetheylene
HDWL. ..... Headwall
HERCP ..... Horizontal Ellipitical Reinforced Concrete Pipe
HP ..... High Point
IN ..... Inch
I.S.T ..... Inlet Sediment Trap
INV. ..... Invert
J.B. ..... Junction Box
K ..... K Inlet
L ..... Length
LF ..... Linear Feet
L.L. ..... Liquid Limit
LP ..... Low Point
L.P. ..... Light Pole
LT. ..... Left
MAC. ..... Macadam
M.C. ..... Moisture Content
MAX. ..... Maximum
M.D.D. ..... Maximum Dry Content
MOD. ..... Modified
MIN. ..... Minimum
N ..... North
NB ..... Northbound
NE ..... Northeast
N.P. ..... Non–Plastic
O.C. ..... On Center
OHE ..... Overhead Electric
O.M. ..... Optimum Moisture
PAV'T. ..... Pavement
PC ..... Point of Curvature
PCC ..... Point of Compound Curvature
P/C ..... Point of Crown
P/GE ..... Profile Grade Elevation
P.G.E. ..... Profile Ground Elevation
P.G.L. ..... Profile Grade Line
P/GL ..... Profile Ground Line
P/R ..... Point of Rotation
P.I. ..... Plasticity Index
PI ..... Point of Intersection
POC ..... Point On Curve
POT ..... Point On Tangent
PPWP ..... Polyvinyl Chloride Profile Wall Pipe
PROP ..... Proposed
PRC ..... Point of Reverse Curve
PT ..... Point
PT ..... Point of Tangency
PVC ..... Point of Vertical Curve
PVC ..... Polyvinyl Chloride
PVI ..... Point of Vertical Intersection
PVRC ..... Point of Vertical Reverse Curve
PVT ..... Point of Vertical Tangency
R ..... Radius
R.F. ..... Rock Fragments
RT ..... Right
RW or R/W ... Right of Way
RCP ..... Reinforced Concrete Pipe
RCPP ..... Reinforced Concrete Pressure Pipe
R.Q.D. ..... Rock Quality Designation
R.M. ..... Rootmat
S ..... South
SAN. ..... Sanitary Sewer
SB or S/B ..... Southbound
S.D. ..... Storm Drain
S.D.D. ..... Surface Drain Ditch
S/E ..... Super Elevation
SF ..... Silt Fence
SF ..... Square Feet
SHT. ..... Sheet
SPP ..... Structural Steel Plate Pipe
SPPA ..... Structural Steel Plate Pipe Arch
S.P.T. ..... Standard Penetration Testing
SRP ..... Steel Spiral Rib Pipe – Aluminized Type 2
SRPA ..... Steel Spiral Rib Pipe Arch – Aluminized Type 2
SSD ..... Stopping Sight Distance
SSF ..... Super Silt Fence
STD. ..... Standard
STA. ..... Station
SO. ..... Single Opening
SY ..... Square Yards
SWM ..... Stormwater Management
T ..... Tangent
T ..... Telephone
T.C. ..... Top of Cover
T.G. ..... Top of Grate
T or TL ..... Traverse Line
T.M. ..... Top of Manhole
TRAV. ..... Traverse
TS ..... Temporary Swale
T.S. ..... Top of Slab
T.S. ..... Topsoil
TYP. ..... Typical
U.D. ..... Under Drain
U.G. ..... Underground
U.P. ..... Utility Pole
USDA ..... United States Department of Agriculture
VCL ..... Vertical Clearance
V.C.L. ..... Vertical Curve Length
W ..... Water
W ..... West
WB ..... Westbound
WB ..... Wetland Buffer
W.M. ..... Water Meter
W.S. ..... Wrapped Steel
WUS ..... Waters of the United States
W.V. ..... Water Valve

LEGEND

ELECTRICAL HAND BOX – SIGNALS ..... H.B.
FLOW LINE .....
PROPOSED TRAFFIC BARRIER .....
EXISTING TRAFFIC BARRIER .....
PROPOSED WOOD RAIL FENCE LINE .....
EXISTING FENCE LINE .....
EXISTING RIGHT OF WAY /PROPERTY LINE .....
EXISTING EASEMENT .....
EXISTING ROADWAY .....
BASE LINE OR SURVEY LINE ..... 31 +50 32
FIRE HYDRANT ..... F.H.
PROPOSED STREET LIGHTING .....
PROPOSED CUT LINE C
PROPOSED FILL LINE ..... F

PROPOSED PIPE /CULVERT .....
EXISTING PIPE /CULVERT .....
EXISTING DROP INLET .....
UTILITY POLE .....
WETLAND .....
WETLAND BUFFER ..... B
WATERS OF THE U.S. ..... WUS
100 YEAR FLOODPLAIN .....
HEDGE /TREE LINE .....
EXISTING BUSH /TREE .....
EXISTING SPECIMEN TREE .....
CONIFEROUS TREE .....
GROUND ELEVATION ..... DATUM LINE 173.5
GRADE ELEVATION ..... DATUM LINE 20.22

INDEX OF SHEETS

GENERAL NOTES

1. ALL WORK ON THIS PROJECT SHALL CONFORM TO THE LATEST VERSION OF THE MDSHA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, REVISIONS THEREOF OR ADDITIONS THERETO, THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS, THE LATEST VERSION OF THE MARYLAND MUTCD, THE LATEST VERSION OF THE SHA BOOK OF STANDARDS FOR HIGHWAY AND INCIDENTAL STRUCTURES, THE MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION STANDARDS AND LATEST VERSION OF THE WASHINGTON SUBURBAN SANITARY COMMISSIONS (WSSC) STANDARDS.

2. RIGHT OF WAY LINES ARE SHOWN FOR ASSISTANCE IN INTERPRETING PLANS. THESE LINES DO NOT REPRESENT THE OFFICIAL PROPERTY ACQUISITION LINES.

3. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATIONS OF THE MAINS BY DIGGING TEST HOLES BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCE IS LESS THAN TWELVE (12) INCHES, THEN CONTACT THE MONTGOMERY COUNTY DOT PROJECT MANAGER AND THE APPROPRIATE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

4. THE CONTRACTOR SHALL CALL "MISS UTILITY" AT LEAST 48 HOURS IN ADVANCE OF ANY EXCAVATION WORK AT 1-800-257-7777.

5. REPAIRS TO UTILITIES OR PROPERTY DAMAGED AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE OR METHOD OF OPERATION MUST BE MADE AT THE CONTRACTOR'S EXPENSE, AT NO ADDITIONAL COST TO THE COUNTY, BEFORE PROCEEDING WITH CONSTRUCTION.

6. SAW CUTS WILL NOT BE MEASURED BUT WILL BE INCIDENTAL TO OTHER RELATED ITEMS AS SPECIFIED IN THE CONTRACT DOCUMENTS.

7. PAVEMENT RESURFACING SHALL BE COMPLETED WITHIN FOURTEEN (14) CALENDAR DAYS AFTER FINE MILLING. FINE MILLING OPERATIONS SHALL NOT BEGIN UNLESS THERE IS A SUFFICIENT TIME TO RESURFACE THE ROADWAY BEFORE COLD WEATHER.

8. HORIZONTAL COORDINATES ARE BASED ON MARYLAND STATE PLANE, NAD 83 /11. VERTICAL DATUM IS NAVD 88.

PLAN NO. MR2022024 | DWG. AB-01

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REBECCA.PARK@MONTGOMERYCOUNTYMD.GOV
MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
240-777-7263

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Transportation Planning and Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date

DESIGNED BY MEG DRAWN BY MEG CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
GENERAL NOTES, ABBREVIATIONS AND LEGEND

SCALE N/A DATE AUGUST 2023
DRAWING NO. AB-01 OF 01 | SHEET NO. 2 OF 103

PLOTTED: 8/1/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pGN-0001_DrBird.dgn

PLOTTED: 8/1/2023
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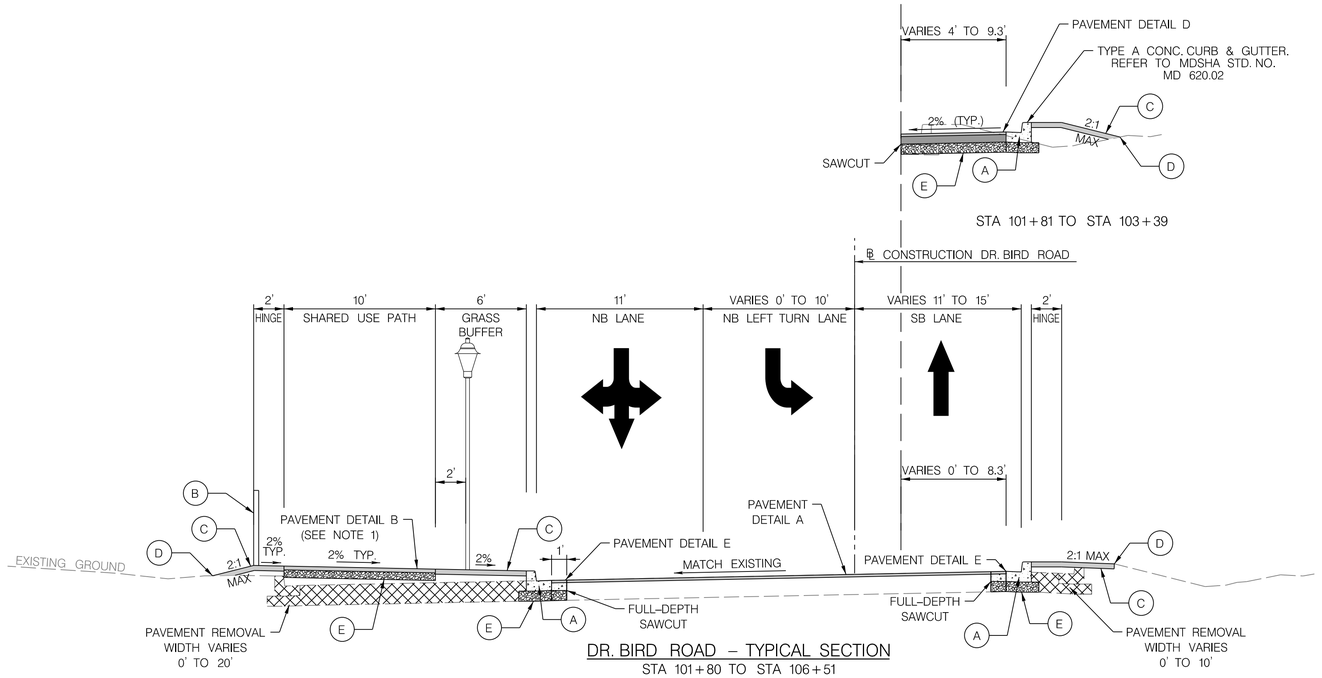

TYPICAL SECTION LEGEND

- (A) MDOT SHA STANDARD TYPE A COMBINATION CURB AND GUTTER (STD. NO. MD 620.02)
- (B) PROPOSED WOOD RAIL FENCE – LOCATIONS AS INDICATED ON PLANS
- (C) PLACE 4" FURNISHED TOPSOIL, SEED, AND MULCH
- (D) SLOPE ROUNDING (STD. NO. MC–811.01)
- (E) TOP OF SUBGRADE

NOTES:

1. 5 INCH CONCRETE SIDEWALK (STD. NO. MC–111.01) IN LOCATIONS AS NOTED ON PLANS

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240–777–7263

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
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ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ DRAWN BY KBJ CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
TYPICAL SECTIONS

SCALE 1" = 5' DATE AUGUST 2023

DRAWING NO. HT–01 OF 02 SHEET NO. 3 OF 103

PLAN NO. MR2022024 DWG. HT–01

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\ls\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pHT-0001_DrBird.dgn

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\ls\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pHT-0001_DrBird.dgn

TYPICAL SECTION LEGEND

- (A) MDOT SHA STANDARD TYPE A COMBINATION CURB AND GUTTER (STD. NO. MD 620.02) – LOCATION AS INDICATED ON PLANS
- (B) PROPOSED WOOD RAIL FENCE – LOCATION AS INDICATED ON PLANS
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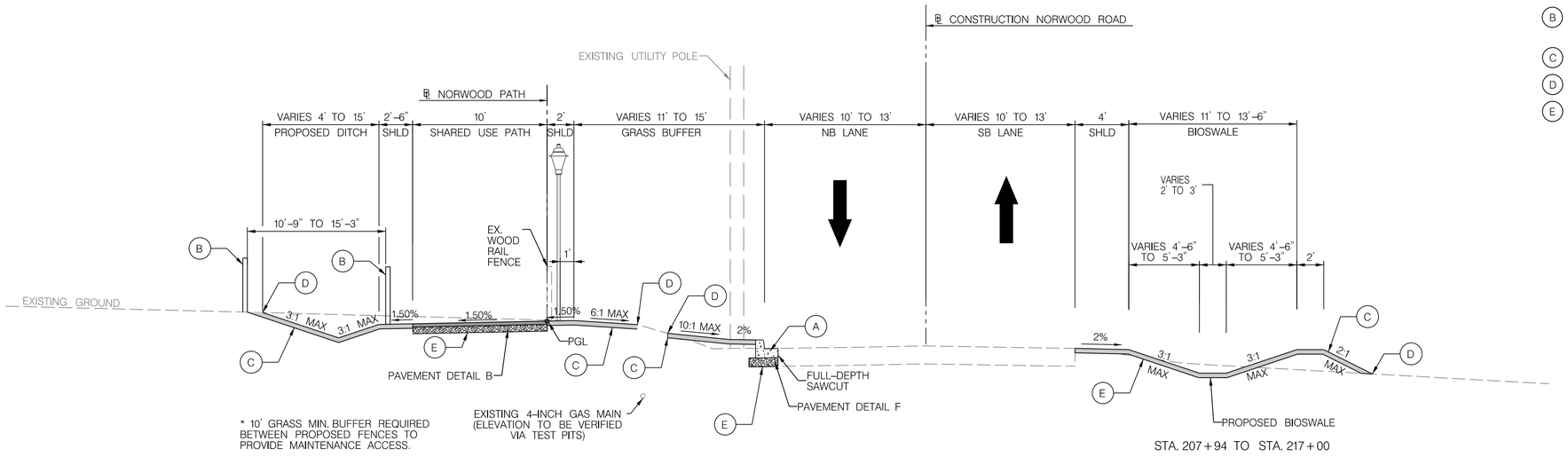
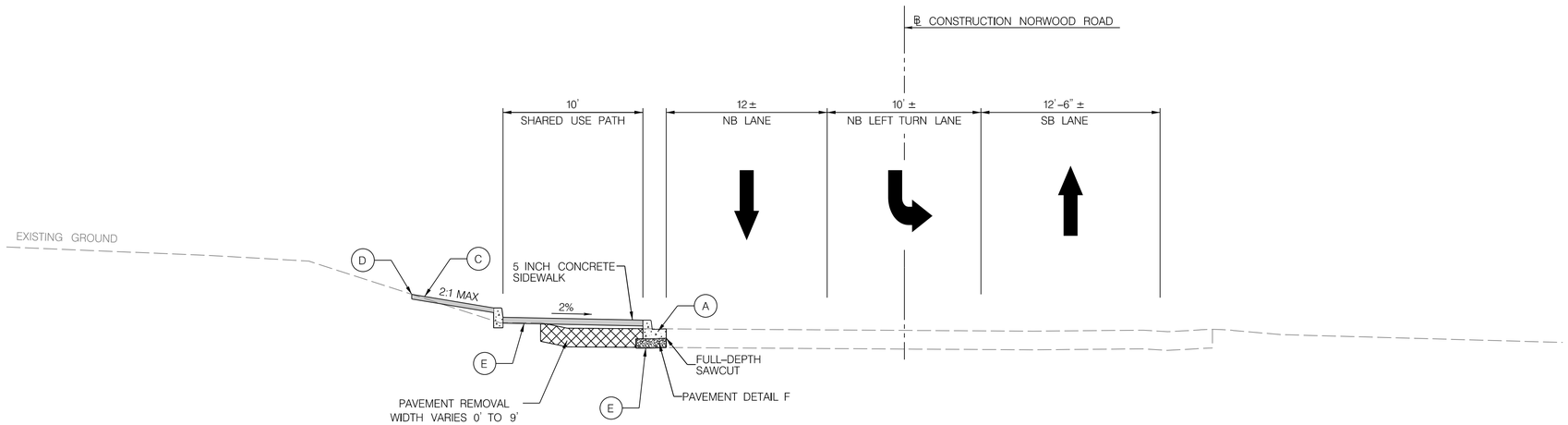
- (D) SLOPE ROUNDING (STD. NO. MC-811.01)
- (E) TOP OF SUBGRADE



STA. 207+94 TO STA. 217+00

NORWOOD ROAD – TYPICAL SECTION

NORWOOD PATH ℄: STA. 10+00 TO STA. 27+47
NORWOOD ROAD ℄: STA. 200+88 TO STA. 218+27



NORWOOD ROAD – TYPICAL SECTION

NORWOOD PATH ℄: STA. 218+68 TO STA. 219+25

PLAN NO. MR2022024 | DWG. HT-02

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PLOTTED: 8/11/2023
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MONTGOMERY COUNTY
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240-777-7263

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ DRAWN BY KBJ CHECKED BY TMB

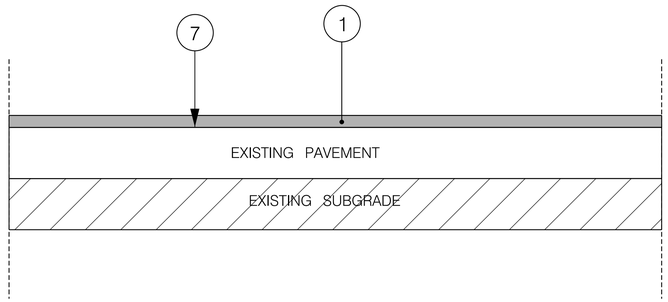
MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
TYPICAL SECTIONS

SCALE 1" = 5' DATE AUGUST 2023

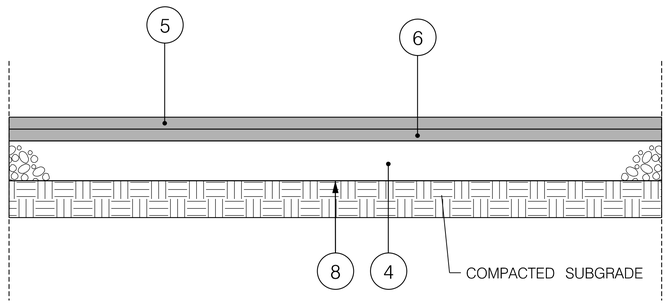
DRAWING NO. HT-02 OF 02 | SHEET NO. 4 OF 103

PLOTTED: 8/11/2023
FILE: \\adc.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pHT-0002_DrBird.dgn



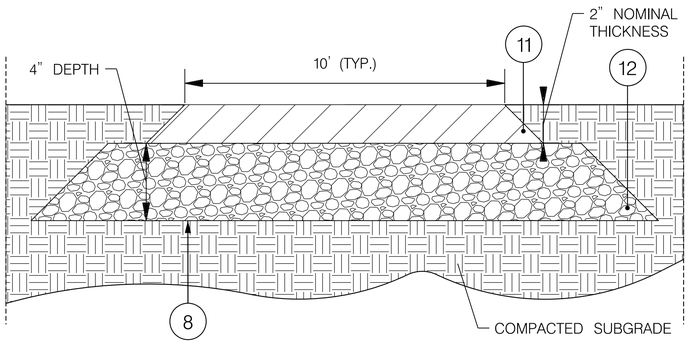
PAVEMENT DETAIL A

DR. BIRD ROAD – FINE MILLING AND RESURFACING



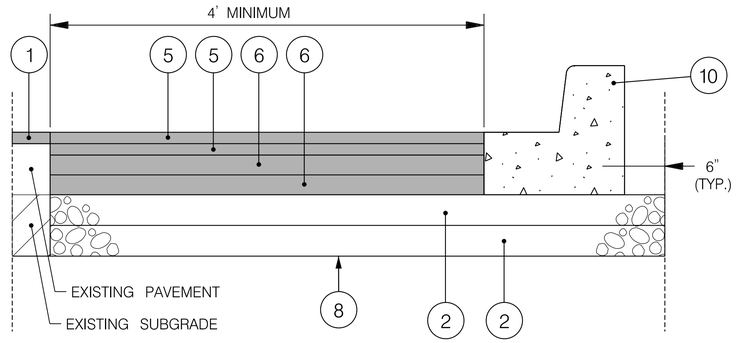
PAVEMENT DETAIL B

DR. BIRD ROAD – ASPHALT SHARED USE PATH AND DRIVEWAYS
NORWOOD ROAD – ASPHALT SHARED USE PATH AND DRIVEWAYS



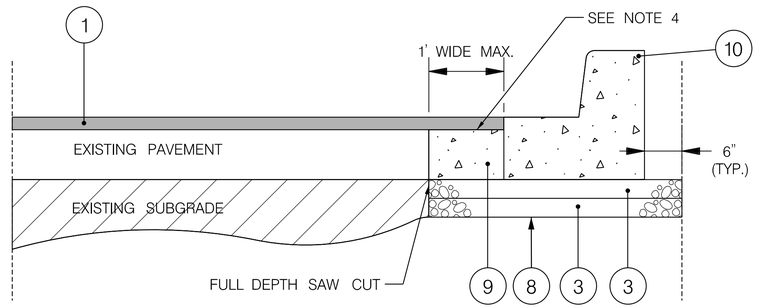
PAVEMENT DETAIL C

DR. BIRD ROAD – FLEXIBLE SHARED USE PATH
FOR TREE PRESERVATION



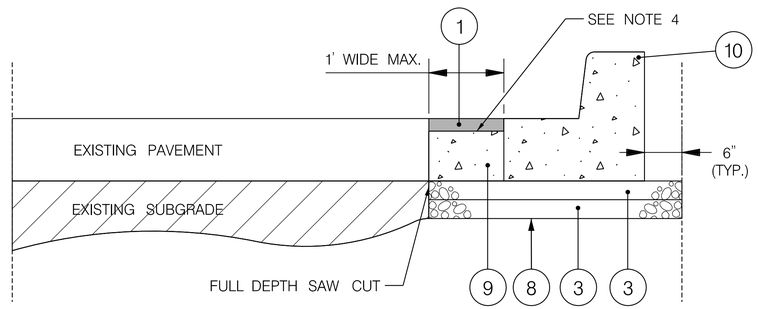
PAVEMENT DETAIL D

DR. BIRD ROAD – FULL DEPTH WIDENING



PAVEMENT DETAIL E

NEW CURB AND GUTTER PLACEMENT
WITH RESURFACING



PAVEMENT DETAIL F

NEW CURB AND GUTTER PLACEMENT
WITHOUT RESURFACING

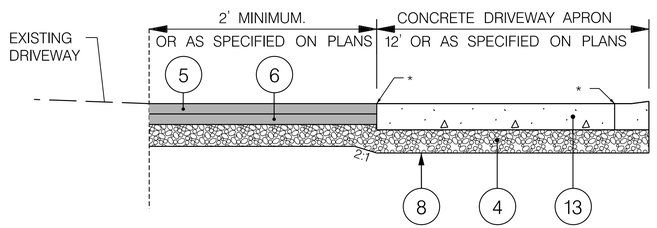
PAVEMENT LEGEND

1. 2" SUPERPAVE ASPHALT MIX 9.5MM FOR SURFACE, HDFV, PG 64S–22, LEVEL 2
2. 4" GRADED AGGREGATE BASE COURSE
3. 4" GRADED AGGREGATE BASE COURSE (INCIDENTAL TO CURB & GUTTER)
4. 6" GRADED AGGREGATE BASE COURSE
5. 1.5" SUPERPAVE ASPHALT MIX 9.5MM FOR SURFACE, PG 64S–22, LEVEL 2
6. 2.5" SUPERPAVE ASPHALT MIX 19MM FOR BASE, PG 64S–22, LEVEL 2
7. TOP OF EXISTING PAVEMENT AFTER 2" FINE MILLING
8. TOP OF SUBGRADE AND LIMIT OF EXCAVATION. (SEE NOTE 3)
9. 8" PORTLAND CEMENT CONCRETE MIX NO. 3 (INCIDENTAL TO CURB AND GUTTER PLACEMENT ITEM) (SEE NOTE 4)
10. STANDARD TYPE A CONCRETE CURB & GUTTER. REFER TO MD SHA STD. NO. MD 620.02
11. 2" FLEXIBLE POROUS PAVING
12. 3/4" (19MM) CLEAN COARSE AGGREGATE
13. 6" PORTLAND CEMENT CONCRETE FOR DRIVEWAYS AND DRIVEWAY APRONS, MDOT SHA MIX NO. 9

PAVEMENT DETAIL NOTES

1. SQUARE–OFF FOUR SIDES OF THE PATCH WITH VERTICAL FACE.
2. REMOVE AND DISPOSE OF ALL SOFT AND UNSTABLE MATERIAL PER SECTION 208 OF THE LATEST VERSION OF THE MDSHA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS (JULY 2023). BACKFILL EXCAVATED AREA WITH SELECT BORROW.
3. IN AREAS WHERE EXISTING PAVEMENT IS BEING REMOVED, THE LIMIT OF EXCAVATION SHALL BE AT THE BOTTOM OF THE BOUND MATERIALS IN THE EXISTING PAVEMENT OR AT THE TOP OF SUBGRADE, WHICHEVER IS LOWER.
4. THIS WORK IS TO BE DONE AT THE CONTRACTOR'S OPTION. AN ADDITIONAL 1' WIDTH (MAXIMUM) EXCAVATION MAY BE USED FOR CURB AND GUTTER FORM PLACEMENT. THE ADDITIONAL EXCAVATION WIDTH IS TO BE FILLED WITH A MINIMUM OF 8" GAB AND PORTLAND CEMENT CONCRETE MIX NO. 3 FROM THE BOTTOM OF THE STANDARD CURB AND GUTTER TO 2" BELOW THE FINAL ASPHALT SURFACE ELEVATION. PAYMENT SHALL BE INCIDENTAL TO THE LINEAR FOOT ITEM FOR CURB & GUTTER. TRANSVERSE JOINTS SHALL MATCH THOSE OF THE CURB AND GUTTER. DOWEL BARS ARE NOT NECESSARY.

   ALTERNATIVELY, THE CONTRACTOR MAY CHOOSE TO SAW–CUT THE EXISTING PAVEMENT AND PLACE THE NEW CURB AND GUTTER DIRECTLY AGAINST THE SAWED EDGE.



*EXPANSION JOINTS AND JOINT MATERIAL PER COUNTY STANDARDS

PAVEMENT DETAIL G

DRIVEWAY SECTION

PLAN NO. MR2022024 | DWG. DT– 01

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DEPARTMENT OF TRANSPORTATION
240–777–7263

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ DRAWN BY KBJ CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

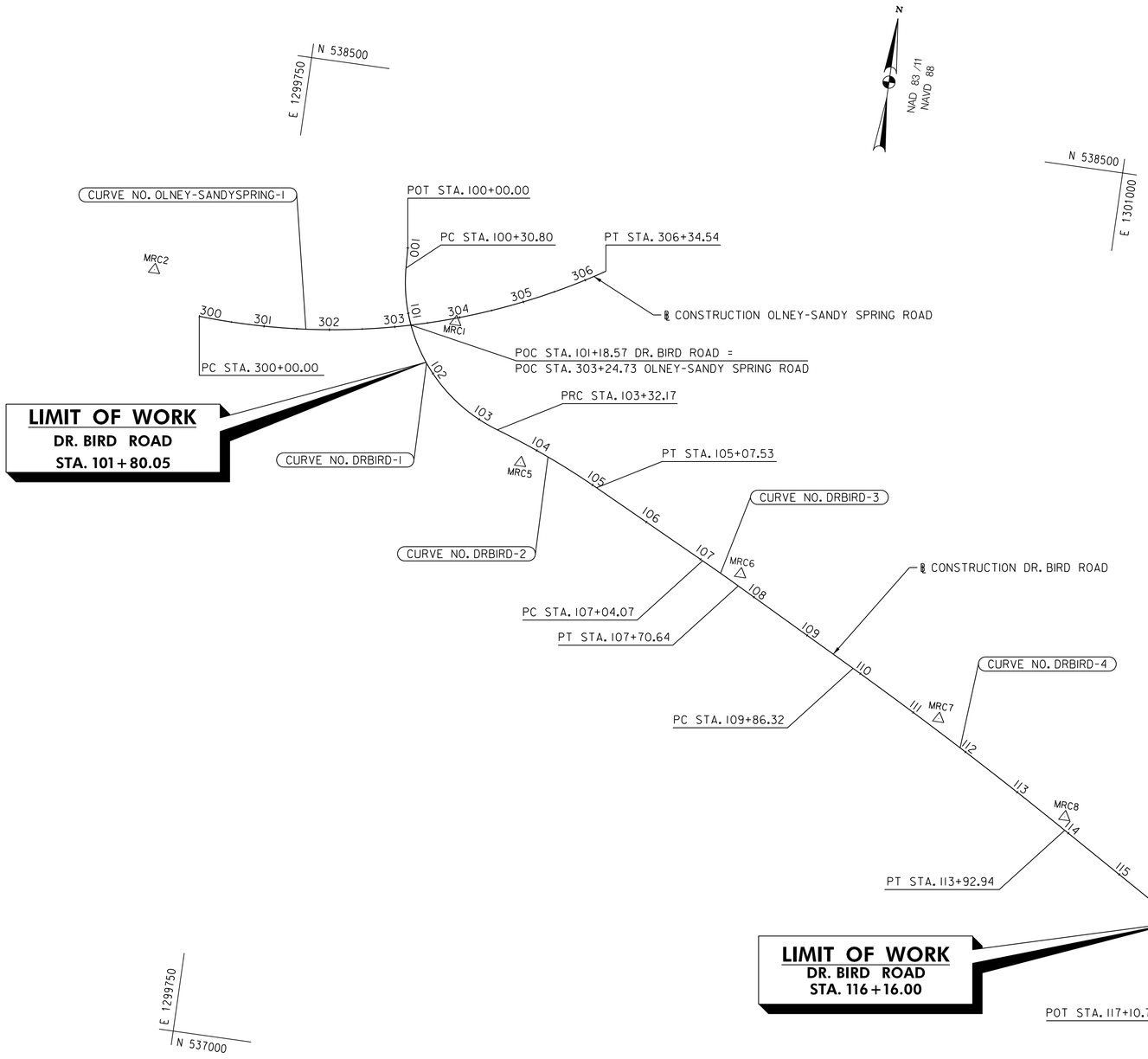
HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
PAVEMENT DETAILS

SCALE NOT TO SCALE DATE AUGUST 2023

DRAWING NO. DT–01 OF 01 | SHEET NO. 5 OF 103

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pDT–0001_DrBird.dgn

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pDT–0001_DrBird.dgn



BASELINE CONTROL COORDINATES		
DR. BIRD ROAD		
STATION	NORTHING	EASTING
POT STA. 100+00.00	538,233.1331	1,299,936.2602
PC STA. 100+30.80	538,202.3751	1,299,937.8804
PI STA. 102+02.84	538,030.5749	1,299,946.9298
PRC STA. 103+32.17	537,977.6494	1,300,110.6249
PI STA. 104+20.01	537,950.6255	1,300,194.2082
PT STA. 105+07.53	537,911.5136	1,300,272.8640
PC STA. 107+04.07	537,824.0057	1,300,448.8466
PI STA. 107+37.36	537,809.1843	1,300,478.6530
PT STA. 107+70.64	537,793.7462	1,300,508.1446
PC STA. 109+86.32	537,693.7178	1,300,699.2291
PI STA. 111+89.69	537,599.4031	1,300,879.3989
PT STA. 113+92.94	537,494.7878	1,301,053.7894
POT STA. 117+10.73	537,331.3070	1,301,326.3067

BASELINE CONTROL COORDINATES		
OLNEY-SANDY SPRING ROAD		
STATION	NORTHING	EASTING
PC STA. 300+00.00	538,085.1533	1,299,635.8731
PI STA. 303+27.91	538,065.6397	1,299,963.2049
PT STA. 306+34.54	538,240.5310	1,300,240.5854

CURVE DATA						
CURVE NO.	△	Dc	R	T	L	E
DRBIRD-1	69° 4'4.44" LT.	23° 4'26.04"	250.00'	172.04'	301.37'	53.48'
DRBIRD-2	8° 31'19.56" RT.	4° 51'40.32"	1179.00'	87.84'	175.36'	3.27'
DRBIRD-3	1° 11'31.2" RT.	1° 47'26.16"	3200.00'	33.29'	66.57'	0.17'
DRBIRD-4	3° 19'41.52" RT.	0° 49'6.6"	7000.00'	203.36'	406.61'	2.95'
OLNEY-SANDYSPRING-1	35° 38'36.6" LT.	5° 37'1.92"	1020.00'	327.91'	634.54'	51.41'

TRAVERSE POINTS			
POINT NO.	NORTHING	EASTING	ELEVATION
MRC1	538,132.0733	1,300,024.5391	506.78'
MRC2	538,145.9447	1,299,558.2178	500.70'
MRC3	537,378.2625	1,301,282.4171	510.25'
MRC5	537,933.0813	1,300,152.6235	514.55'
MRC6	537,812.3494	1,300,508.9398	519.62'
MRC7	537,636.4599	1,300,839.3079	515.67'
MRC8	537,515.1569	1,301,050.9081	516.44'

100' 0 100' 200'
SCALE: 1"=100'

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DEPARTMENT OF TRANSPORTATION
240-777-7263

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY RLW DRAWN BY KBJ CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
GEOMETRY SHEET

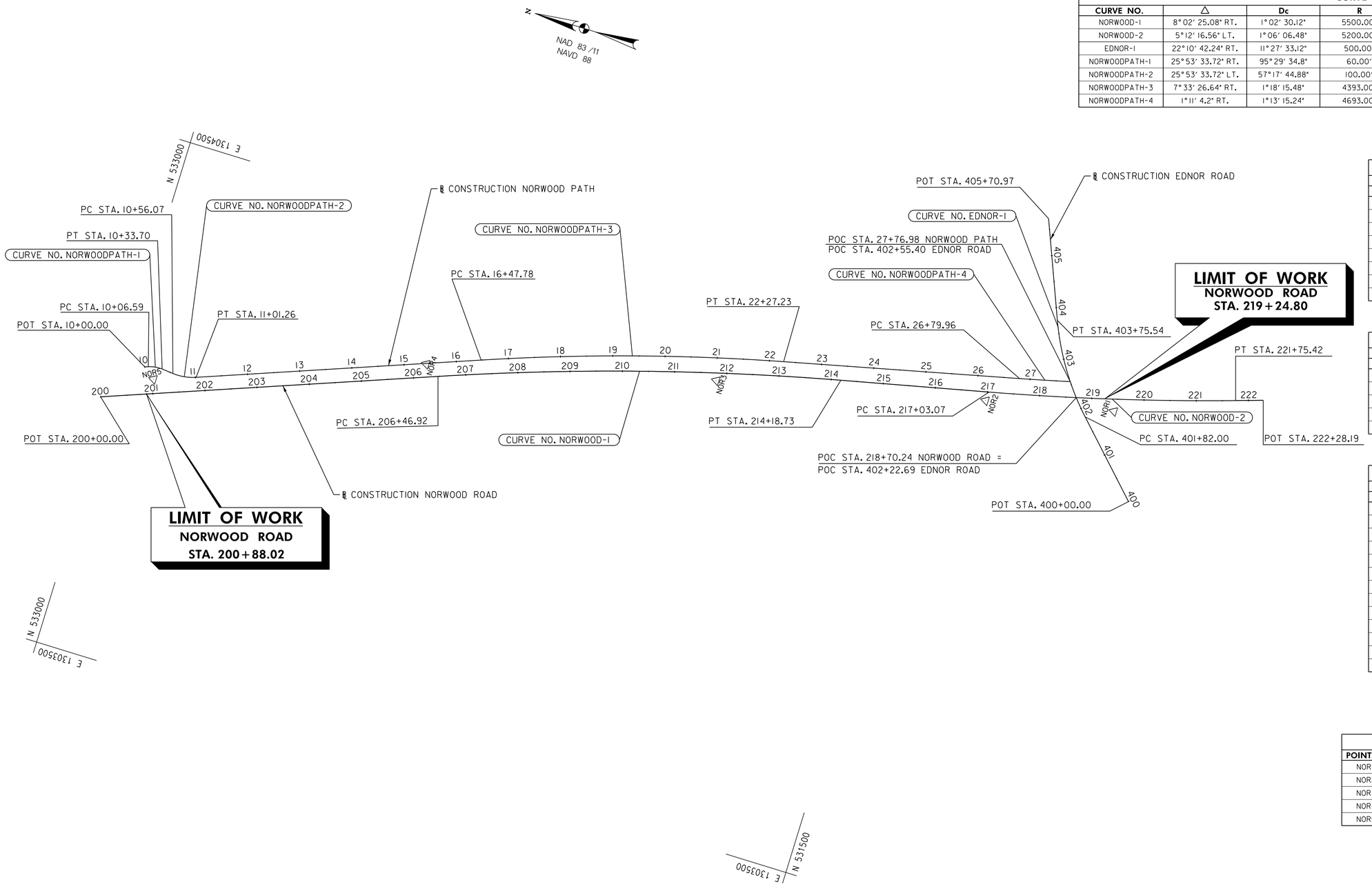
SCALE 1" = 100' DATE AUGUST 2023

DRAWING NO. GS-01 OF 02 SHEET NO. 6 OF 103

PLAN NO. MR2022024 DWG. GS-01

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\ls\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pGS-0001_DrBird.dgn

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\ls\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pGS-0001_DrBird.dgn



CURVE DATA						
CURVE NO.	△	Dc	R	T	L	E
NORWOOD-1	8°02′ 25.08" RT.	1°02′ 30.12"	5500.00′	386.54′	771.81′	13.57′
NORWOOD-2	5°12′ 16.56" LT.	1°06′ 06.48"	5200.00′	236.34′	472.35′	5.37′
EDNOR-1	22°10′ 42.24" RT.	11°27′ 33.12"	500.00′	98.00′	193.54′	9.51′
NORWOODPATH-1	25°53′ 33.72" RT.	95°29′ 34.8"	60.00′	13.79′	27.11′	1.57′
NORWOODPATH-2	25°53′ 33.72" LT.	57°17′ 44.88"	100.00′	22.99′	45.19′	2.61′
NORWOODPATH-3	7°33′ 26.64" RT.	1°18′ 15.48"	4393.00′	290.14′	579.45′	9.57′
NORWOODPATH-4	1°11′ 4.2" RT.	1°13′ 15.24"	4693.00′	48.51′	97.02′	0.25′

BASELINE CONTROL COORDINATES		
NORWOOD ROAD		
STATION	NORTHING	EASTING
POT STA 200+00.00	533,021.1135	1,303,984.6279
PC STA. 206+46.92	532,415.4332	1,304,211.8985
PI STA. 210+33.46	532,053.5331	1,304,347.6949
PT STA. 214+18.73	531,676.1968	1,304,431.5380
PC STA. 217+03.07	531,398.6174	1,304,493.2153
PI STA. 219+39.41	531,167.9064	1,304,544.4787
PT STA. 221+75.42	530,942.7967	1,304,616.4589
POT STA. 222+28.19	530,892.5342	1,304,632.5306

BASELINE CONTROL COORDINATES		
EDNOR ROAD		
STATION	NORTHING	EASTING
POT STA 400+00.00	531,081.9583	1,304,371.3731
PC STA. 401+82.00	531,208.8841	1,304,501.8100
PI STA. 402+80.00	531,277.2276	1,304,572.0440
PT STA. 403+75.54	531,314.0018	1,304,662.8808
POT STA. 405+70.97	531,387.3369	1,304,844.0273

BASELINE CONTROL COORDINATES		
NORWOOD PATH		
STATION	NORTHING	EASTING
POT STA. 10+00.00	532,956.9717	1,304,064.2362
PC STA. 10+06.59	532,950.8054	1,304,066.5500
PI STA. 10+20.38	532,937.8916	1,304,071.3957
PT STA. 10+33.70	532,924.1582	1,304,070.1156
PC STA. 10+56.07	532,901.8902	1,304,068.0400
PI STA. 10+79.05	532,879.0012	1,304,065.9066
PT STA. 11+01.26	532,857.4783	1,304,073.9827
PC STA. 16+47.78	532,345.7892	1,304,265.9847
PI STA. 19+37.93	532,074.1394	1,304,367.9164
PT STA. 22+27.23	531,791.4431	1,304,433.2353
PC STA. 26+79.96	531,350.3300	1,304,535.1573
PI STA. 27+28.48	531,303.0638	1,304,546.0785
POC STA. 27+76.98	531,256.0334	1,304,557.9744

TRAVERSE POINTS			
POINT NO.	NORTHING	EASTING	ELEVATION
NOR1	531,159.6072	1,304,528.1471	424.82′
NOR2	531,400.2328	1,304,475.7022	423.22′
NOR3	531,904.0547	1,304,360.8521	423.63′
NOR4	532,444.0386	1,304,227.6729	425.99′
NOR5	532,934.3307	1,304,046.6533	426.90′

100′ 0 100′ 200′
SCALE: 1" = 100′

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240-777-7263

NO.	REVISION	DATE	BY

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DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Transportation Planning and Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date

DESIGNED BY RLW DRAWN BY KBJ CHECKED BY TMB

PLAN NO. MR2022024 | DWG. GS-02

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING
HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
GEOMETRY SHEET

SCALE 1" = 100′ DATE AUGUST 2023

DRAWING NO. GS-02 OF 02 | SHEET NO. 7 OF 103

PLOTTED: 8/11/2023
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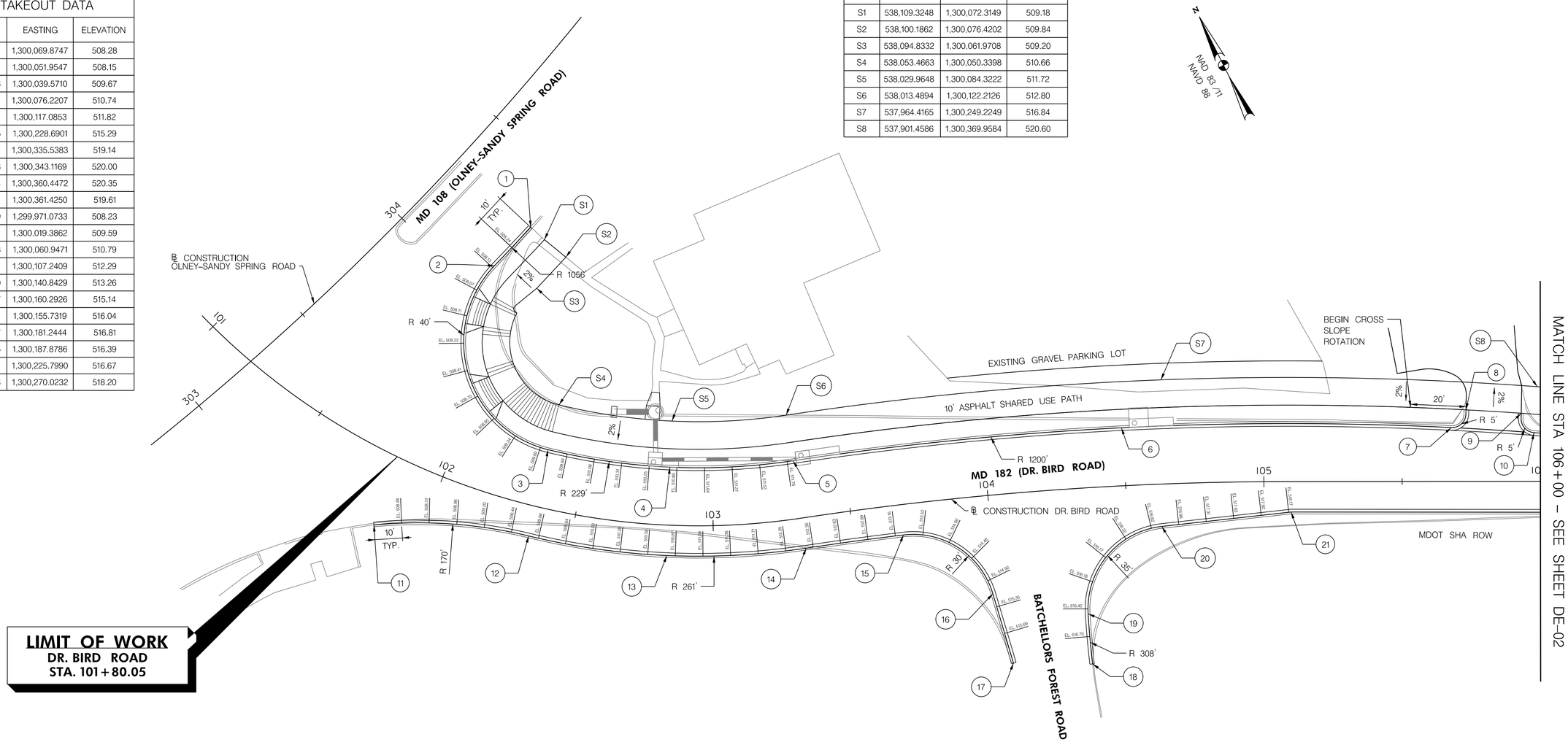
CURB STAKEOUT DATA			
PT. NO.	NORTHING	EASTING	ELEVATION
1	538,115.5294	1,300,069.8747	508.28
2	538,108.9418	1,300,051.9547	508.15
3	538,040.7458	1,300,039.5710	509.67
4	538,015.3996	1,300,076.2207	510.74
5	537,997.6310	1,300,117.0853	511.82
6	537,955.3085	1,300,228.6901	515.29
7	537,902.1081	1,300,335.5383	519.14
8	537,905.4863	1,300,343.1169	520.00
9	537,895.4684	1,300,360.4472	520.35
10	537,887.1422	1,300,361.4250	519.61
11	538,044.4869	1,299,971.0733	508.23
12	538,015.9076	1,300,019.3862	509.59
13	537,987.2783	1,300,060.9471	510.79
14	537,967.1829	1,300,107.2409	512.29
15	537,955.7520	1,300,140.8429	513.26
16	537,922.2777	1,300,160.2926	515.14
17	537,896.4813	1,300,155.7319	516.04
18	537,883.4697	1,300,181.2444	516.81
19	537,900.4225	1,300,187.8786	516.39
20	537,916.8385	1,300,225.7990	516.67
21	537,900.6388	1,300,270.0232	518.20

PATH STAKEOUT DATA			
PT. NO.	NORTHING	EASTING	ELEVATION
S1	538,109.3248	1,300,072.3149	509.18
S2	538,100.1862	1,300,076.4202	509.84
S3	538,094.8332	1,300,061.9708	509.20
S4	538,053.4663	1,300,050.3398	510.66
S5	538,029.9648	1,300,084.3222	511.72
S6	538,013.4894	1,300,122.2126	512.80
S7	537,964.4165	1,300,249.2249	516.84
S8	537,901.4586	1,300,369.9584	520.60



NOTES:

1. CURB STAKEOUT ELEVATIONS ARE GIVEN AT THE FLOW LINE OF CURB AND PATH STAKEOUT ELEVATION ARE GIVEN AT THE EDGE OF PATH PAVEMENT UNLESS OTHERWISE NOTED.

2. CURVE RADII ARE GIVEN AT THE EDGE OF PATH OR FACE OF CURB UNLESS OTHERWISE NOTED.

3. SPOT ELEVATIONS AROUND CURB RETURNS ARE GIVEN IN 10 FOOT INTERVALS UNLESS OTHERWISE NOTED.

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Chief, Division of Transportation Engineering — Date

DESIGNED BY MEG DRAWN BY MEG CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
STAKEOUT PLAN

SCALE 1" = 20' DATE AUGUST 2023

DRAWING NO. DE-01 OF 10 SHEET NO. 8 OF 103

PLAN NO. MR2022024 DWG. DE-01

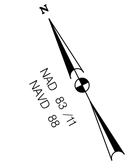
PLOTTED: 8/15/2023
FILE: \\ad.rkk.com\ls\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pHD-D001_HTT.dgn

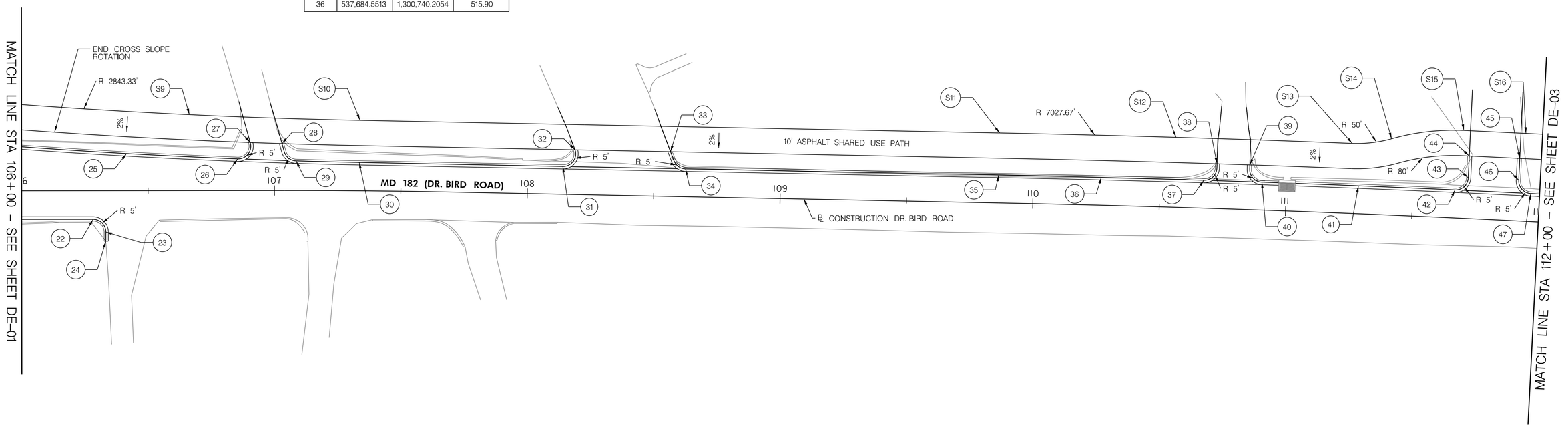
PLOTTED: 8/15/2023
FILE: \\ad.rkk.com\ls\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pHD-D001_HTT.dgn

CURB STAKEOUT DATA			
PT. NO.	NORTHING	EASTING	ELEVATION
22	537,847.6730	1,300,376.0162	520.04
23	537,840.9658	1,300,378.2541	520.29
24	537,837.7241	1,300,376.6346	520.56
25	537,865.0001	1,300,399.4008	519.96
26	537,843.5292	1,300,437.7600	519.93
27	537,847.1126	1,300,445.0991	520.72
28	537,841.1080	1,300,456.1689	520.66
29	537,832.5040	1,300,458.0925	519.80
30	537,820.8119	1,300,480.1591	519.52
31	537,783.4526	1,300,551.5267	518.26
32	537,787.1727	1,300,558.7950	518.98
33	537,769.6642	1,300,592.2415	518.49
34	537,760.9448	1,300,594.5234	517.65
35	537,703.4633	1,300,704.3306	516.19
36	537,684.5513	1,300,740.2054	515.90

CURB STAKEOUT DATA			
PT. NO.	NORTHING	EASTING	ELEVATION
37	537,665.4321	1,300,775.9703	515.66
38	537,668.9294	1,300,783.5344	516.42
39	537,662.7488	1,300,794.9712	516.37
40	537,654.5048	1,300,796.1901	515.53
41	537,636.1875	1,300,829.7337	515.56
42	537,617.6876	1,300,863.1770	515.79
43	537,619.6149	1,300,869.9726	516.25
44	537,627.1858	1,300,874.2085	516.77
45	537,617.4198	1,300,891.6620	516.95
46	537,609.8485	1,300,887.4259	516.42
47	537,603.0490	1,300,889.3386	516.06

PATH STAKEOUT DATA			
PT. NO.	NORTHING	EASTING	ELEVATION
S9	537,867.7162	1,300,428.4755	520.99
S10	537,835.5778	1,300,487.8887	520.50
S11	537,718.2292	1,300,712.0602	517.18
S12	537,685.5641	1,300,773.7136	516.66
S13	537,652.2886	1,300,835.0397	516.53
S14	537,646.9948	1,300,849.7758	516.65
S15	537,637.1944	1,300,876.7920	516.95
S16	537,625.1915	1,300,898.2457	517.16





NOTES:

1. CURB STAKEOUT ELEVATIONS ARE GIVEN AT THE FLOW LINE OF CURB AND PATH STAKEOUT ELEVATION ARE GIVEN AT THE EDGE OF PATH PAVEMENT UNLESS OTHERWISE NOTED.
2. CURVE RADII ARE GIVEN AT THE EDGE OF PATH OR FACE OF CURB UNLESS OTHERWISE NOTED.

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MONTGOMERY COUNTY
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240-777-7263

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ/RLW DRAWN BY KBJ CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
STAKEOUT PLAN

SCALE 1" = 20' DATE AUGUST 2023

PLAN NO. MR2022024 | DWG. DE-02

DRAWING NO. DE-02 OF 10 | SHEET NO. 9 OF 103

PLOTTED: 8/15/2023
FILE: \\ad.rkk.com\ls\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pHD-D002_HTT.dgn

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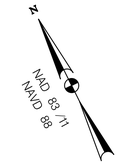
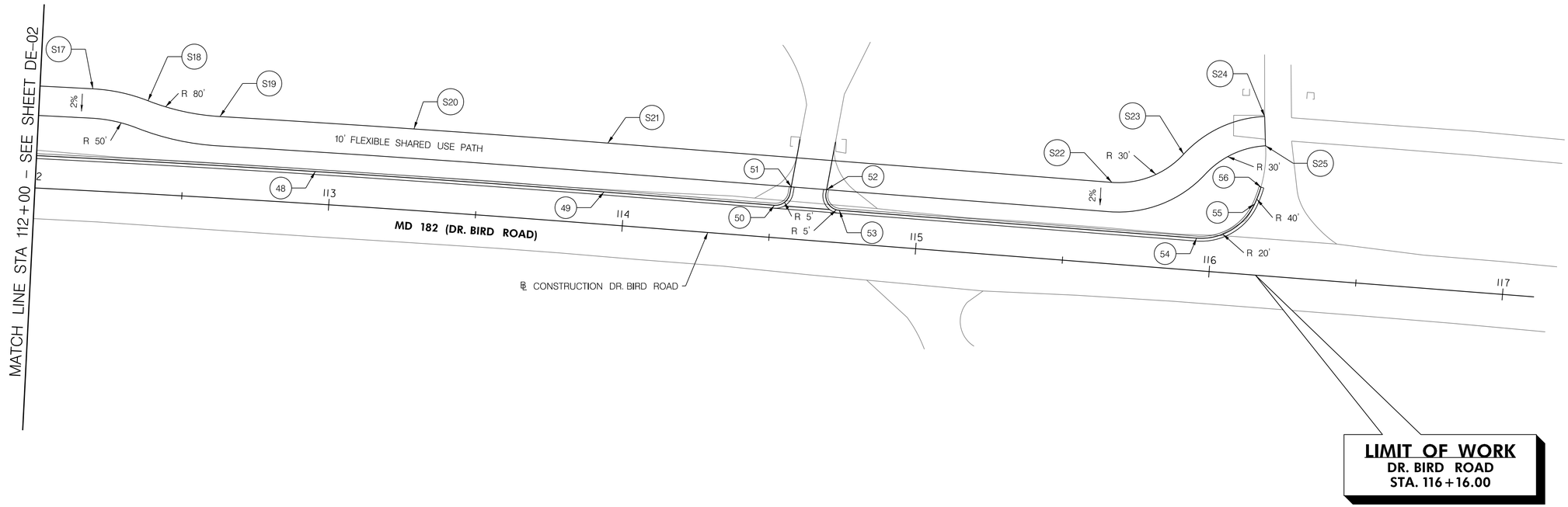
PATH STAKEOUT DATA			
PT. NO.	NORTHING	EASTING	ELEVATION
S17	537,613.1137	1,300,919.6573	517.33
S18	537,601.1316	1,300,934.6064	517.39
S19	537,585.4016	1,300,954.1070	517.44
S20	537,552.2249	1,301,011.2216	517.35
S21	537,518.5129	1,301,068.0219	515.76
S22	537,430.1471	1,301,215.3249	512.28
S23	537,427.8343	1,301,241.4625	511.48
S24	537,427.0495	1,301,271.7890	510.59
S25	537,417.9721	1,301,267.5885	510.79

CURB STAKEOUT DATA			
PT. NO.	NORTHING	EASTING	ELEVATION
48	537,554.2315	1,300,974.7400	516.69
49	537,504.2207	1,301,059.4481	514.77
50	537,474.3469	1,301,109.2467	513.50
51	537,477.3855	1,301,117.1409	514.18
52	537,471.1773	1,301,127.4898	513.93
53	537,462.9652	1,301,128.2197	513.05
54	537,400.3428	1,301,232.6093	510.64
55	537,401.8413	1,301,255.3482	510.63
56	537,406.1070	1,301,259.9366	510.80





NOTES:

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ/RLW DRAWN BY KBJ CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
STAKEOUT PLAN

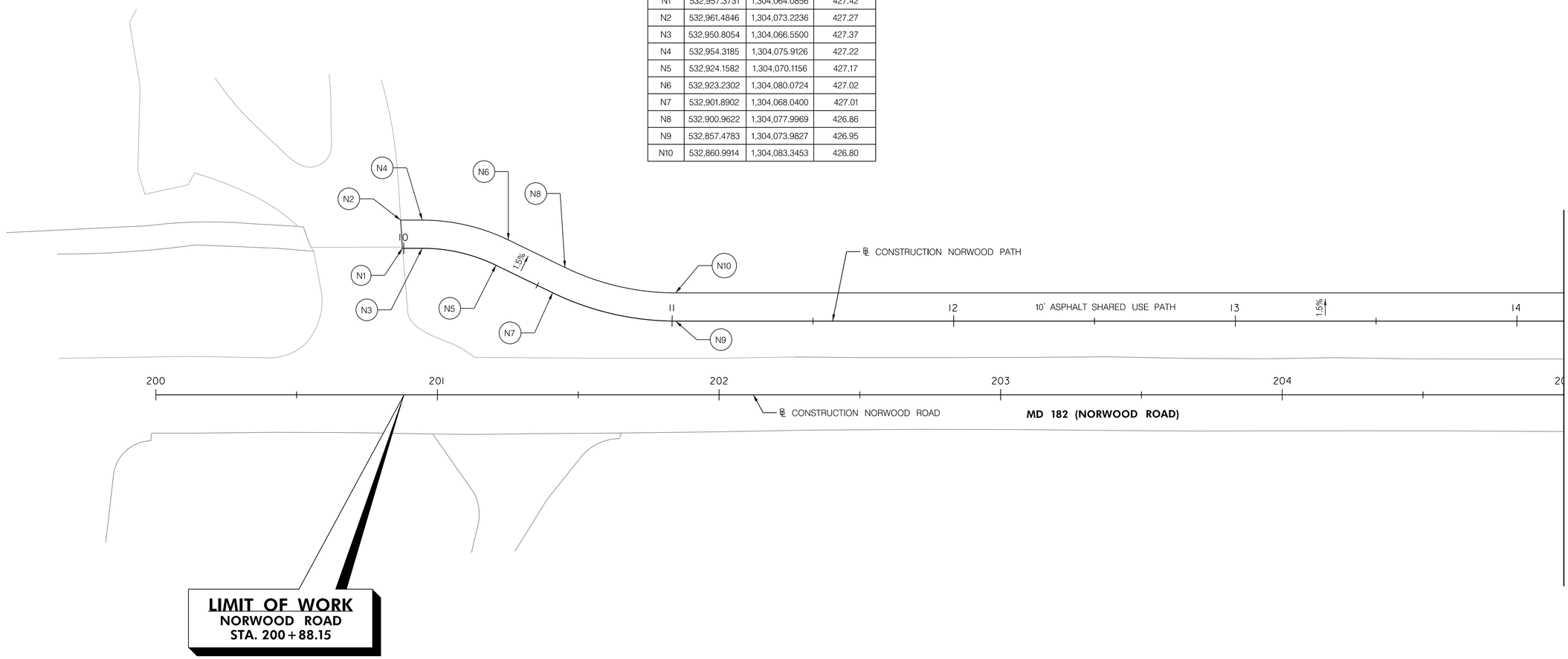
SCALE 1" = 20' DATE AUGUST 2023

PLAN NO. MR2022024 | DWG. DE-03

DRAWING NO. DE-03 OF 10 | SHEET NO. 10 OF 103

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\lfs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pHD-D003_HTT.dgn

PATH STAKEOUT DATA			
PT. NO.	NORTHING	EASTING	ELEVATION
N1	532,957.3731	1,304,064.0856	427.42
N2	532,961.4846	1,304,073.2236	427.27
N3	532,950.8054	1,304,066.5500	427.37
N4	532,954.3185	1,304,075.9126	427.22
N5	532,924.1582	1,304,070.1156	427.17
N6	532,923.2302	1,304,080.0724	427.02
N7	532,901.8902	1,304,068.0400	427.01
N8	532,900.9622	1,304,077.9969	426.86
N9	532,857.4783	1,304,073.9827	426.95
N10	532,860.9914	1,304,083.3453	426.80



NOTES:

1. ELEVATIONS ARE GIVEN AT THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
2. SEE SHEET GS-02 FOR PATH HORIZONTAL GEOMETRY AND SHEET PR-02 FOR PATH PROFILE.

PLAN NO. MR2022024 | DWG. DE-04

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ROCKVILLE, MARYLAND

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Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ/RLW DRAWN BY KBJ CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
STAKEOUT PLAN

SCALE 1" = 20' DATE AUGUST 2023

DRAWING NO. DE-04 OF 10 | SHEET NO. 11 OF 103

PLOTTED: 8/11/2023
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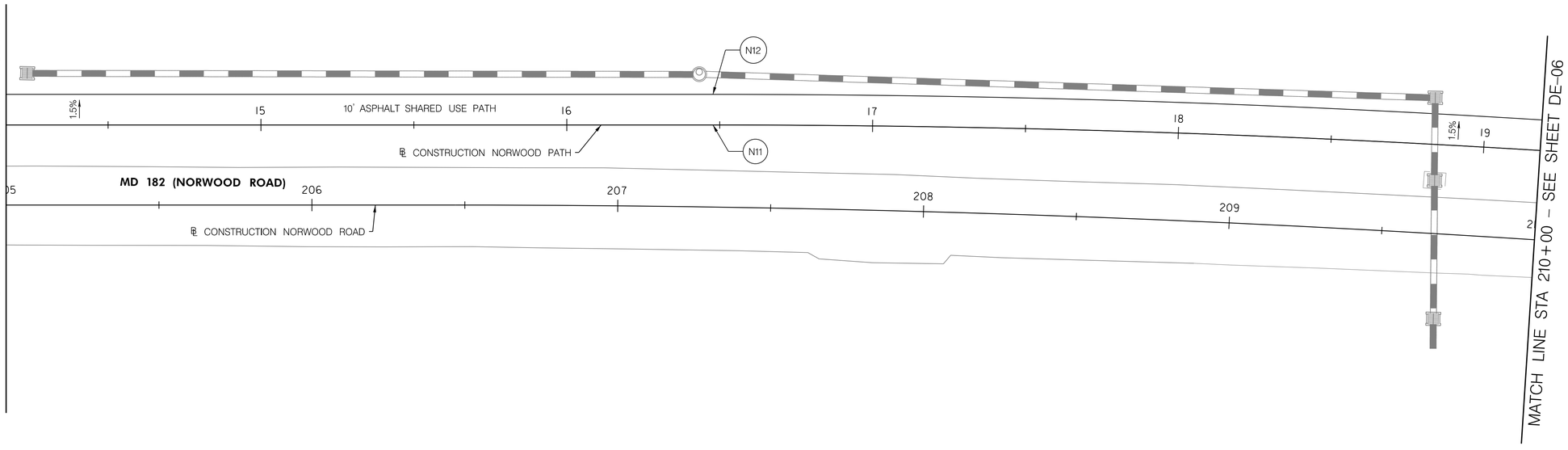

PATH STAKEOUT DATA			
PT. NO.	NORTHING	EASTING	ELEVATION
N11	532,345.7892	1,304,265.9847	426.92
N12	532,349.3024	1,304,275.3473	426.77

NOTES:

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
STAKEOUT PLAN

SCALE 1" = 20' DATE AUGUST 2023

DRAWING NO. DE-05 OF 10 SHEET NO. 12 OF 103

PLAN NO. MR2022024 DWG. DE-05

PLOTTED: 8/1/2023
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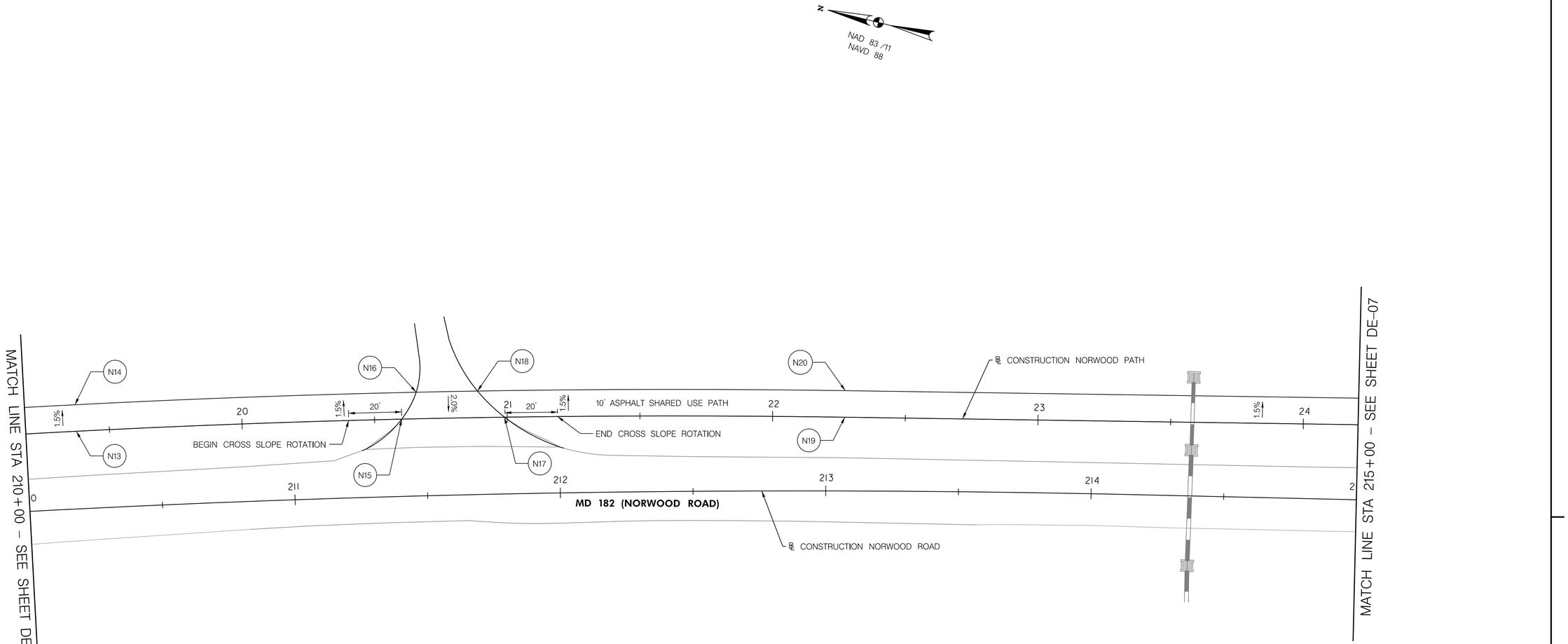

PATH STAKEOUT DATA			
PT. NO.	NORTHING	EASTING	ELEVATION
N13	532,071.3747	1,304,358.7533	422.65
N14	532,074.2632	1,304,368.3270	422.50
N15	531,953.4134	1,304,392.5530	425.47
N16	531,950.5664	1,304,403.6841	425.78
N17	531,915.9872	1,304,402.5365	426.19
N18	531,928.2336	1,304,409.6533	426.23
N19	531,791.4431	1,304,433.2353	425.81
N20	531,793.6943	1,304,442.9786	425.66

NOTES:

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Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ/RLW DRAWN BY KBJ CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
STAKEOUT PLAN

SCALE 1" = 20' DATE AUGUST 2023

DRAWING NO. DE-06 OF 10 SHEET NO. 13 OF 103

PLAN NO. MR2022024 | DWG. DE-06

PLOTTED: 8/11/2023
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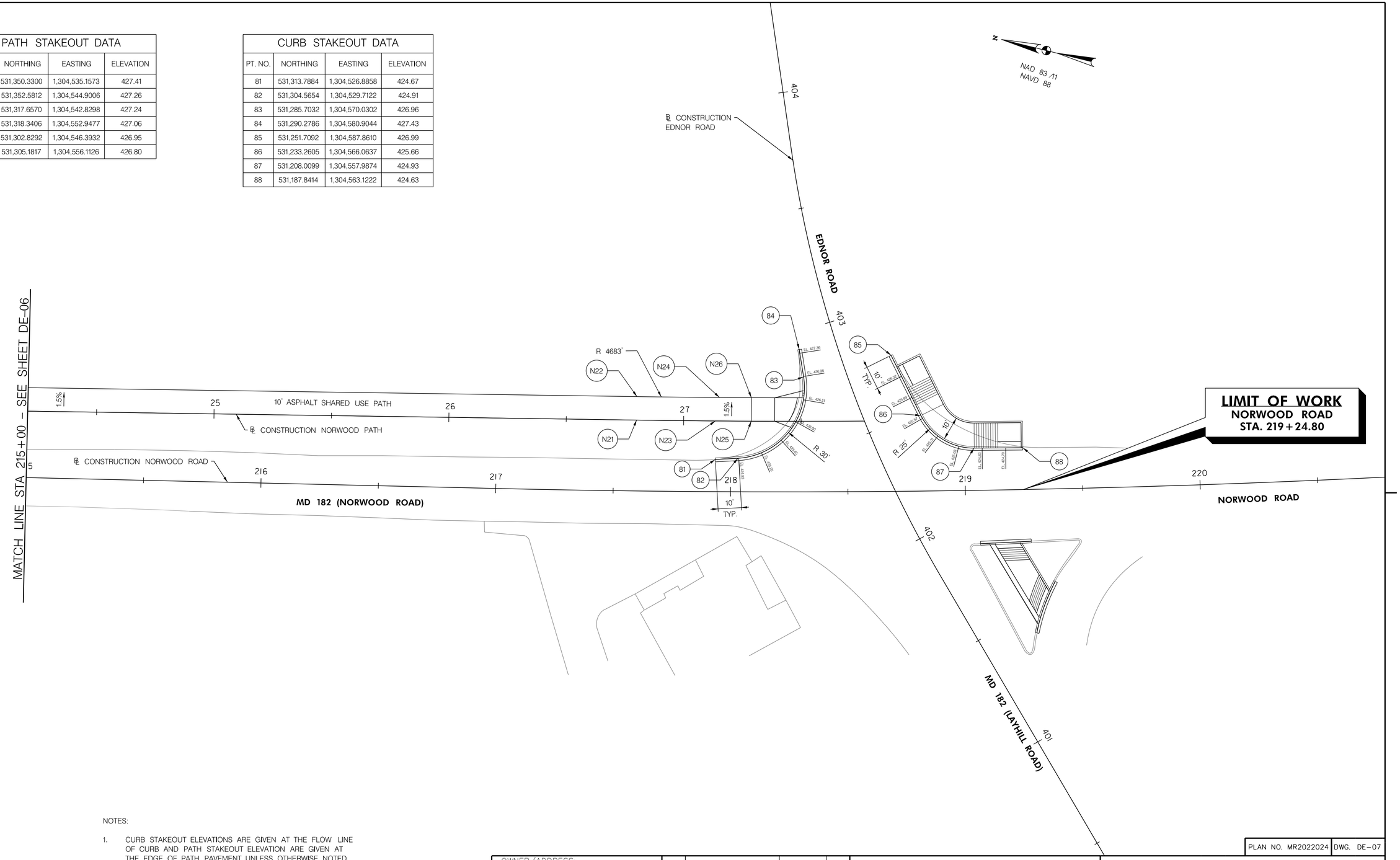
PATH STAKEOUT DATA			
PT. NO.	NORTHING	EASTING	ELEVATION
N21	531,350.3300	1,304,535.1573	427.41
N22	531,352.5812	1,304,544.9006	427.26
N23	531,317.6570	1,304,542.8298	427.24
N24	531,318.3406	1,304,552.9477	427.06
N25	531,302.8292	1,304,546.3932	426.95
N26	531,305.1817	1,304,556.1126	426.80

CURB STAKEOUT DATA			
PT. NO.	NORTHING	EASTING	ELEVATION
81	531,313.7884	1,304,526.8858	424.67
82	531,304.5654	1,304,529.7122	424.91
83	531,285.7032	1,304,570.0302	426.96
84	531,290.2786	1,304,580.9044	427.43
85	531,251.7092	1,304,587.8610	426.99
86	531,233.2605	1,304,566.0637	425.66
87	531,208.0099	1,304,557.9874	424.93
88	531,187.8414	1,304,563.1222	424.63



NOTES:

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2. SEE SHEET GS-02 FOR PATH HORIZONTAL GEOMETRY AND SHEET PR-02 FOR PATH PROFILE.
3. CURVE RADII ARE GIVEN AT THE EDGE OF PATH OR FACE OF CURB UNLESS OTHERWISE NOTED.
4. SPOT ELEVATIONS AROUND CURB RETURNS ARE GIVEN IN 10 FOOT INTERVALS UNLESS OTHERWISE NOTED.

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
STAKEOUT PLAN

SCALE 1" = 20' DATE AUGUST 2023

DRAWING NO. DE-07 OF 10 SHEET NO. 14 OF 103

PLAN NO. MR2022024 DWG. DE-07

PLOTTED: 8/11/2023
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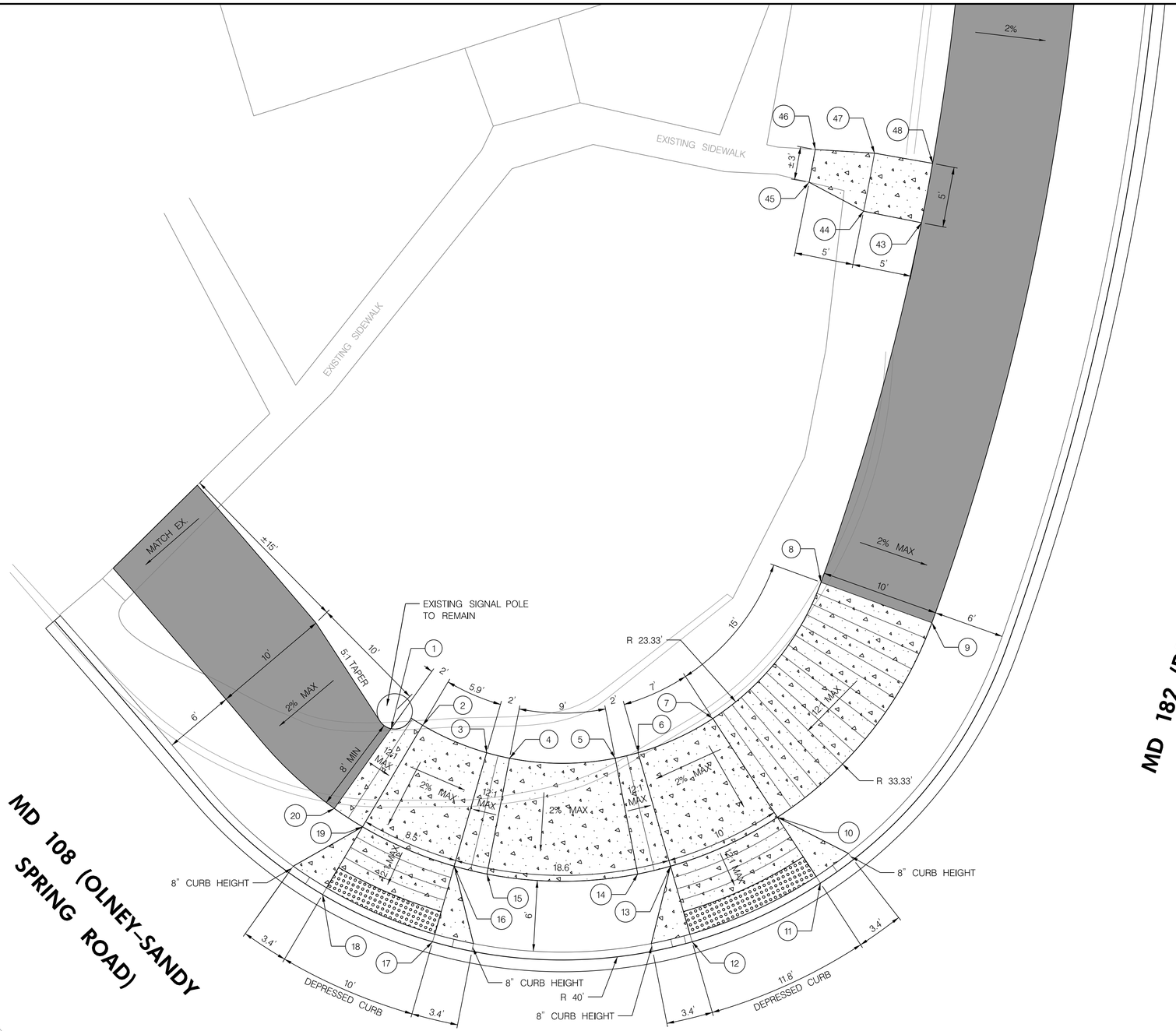

MD 108 (OLNEY-SANDY SPRING ROAD)

MD 182 (DR. BIRD ROAD)

NAD 83 /11
NAVD 88

STAKEOUT DATA			
PT. NO.	NORTHING	EASTING	ELEVATION
1	538,091.9878	1,300,051.3552	508.98
2	538,089.3874	1,300,050.7061	508.90
3	538,085.1056	1,300,046.6236	508.90
4	538,083.4460	1,300,045.5085	509.06
5	538,075.0626	1,300,042.3923	509.44
6	538,073.0776	1,300,042.1525	509.28
7	538,066.1223	1,300,042.6588	509.44
8	538,053.5082	1,300,050.2905	510.66
9	538,045.8938	1,300,043.8081	510.46
10	538,063.9139	1,300,032.9057	509.28
11	538,062.4417	1,300,026.4036	508.87
12	538,074.3652	1,300,025.5357	508.52
13	538,073.8502	1,300,032.1824	509.08
14	538,076.6859	1,300,032.5249	509.24
15	538,088.6621	1,300,036.9767	508.86
16	538,091.0329	1,300,038.5696	508.70
17	538,094.9845	1,300,033.2003	508.14
18	538,102.3249	1,300,040.1990	508.14
19	538,097.1499	1,300,044.4018	508.70
20	538,098.8539	1,300,046.6941	508.81
43	538,034.9159	1,300,075.8845	511.47
44	538,039.1688	1,300,078.5136	511.31
45	538,042.6417	1,300,082.4151	511.15
46	538,041.1912	1,300,084.8387	511.20
47	538,036.5913	1,300,082.7979	511.40
48	538,036.5913	1,300,080.2721	511.60

NOTE: ELEVATIONS PROVIDED FOR PAVEMENT STAKEOUT POINTS ARE THE PROPOSED BOTTOM OF CURB (FLOW LINE ELEVATIONS)

LEGEND

- CONCRETE DRIVEWAY
- ASPHALT SHARED USE PATH
- FLEXIBLE SHARED USE PATH
- CONCRETE SIDEWALK
- DETECTABLE WARNING SURFACE

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Chief, Division of Transportation Engineering — Date

DESIGNED BY MEG DRAWN BY MEG CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
ADA DETAIL AND STAKEOUT

SCALE 1" = 5' DATE AUGUST 2023

DRAWING NO. DE-08 OF 10 SHEET NO. 15 OF 103

PLAN NO. MR2022024 DWG. DE-08

PLOTTED: 8/11/2023
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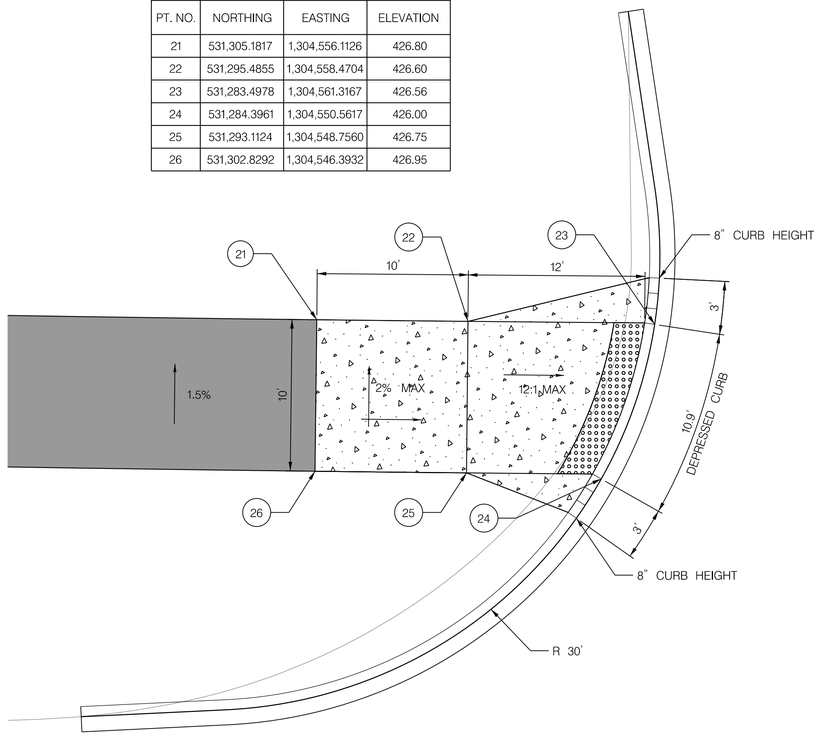
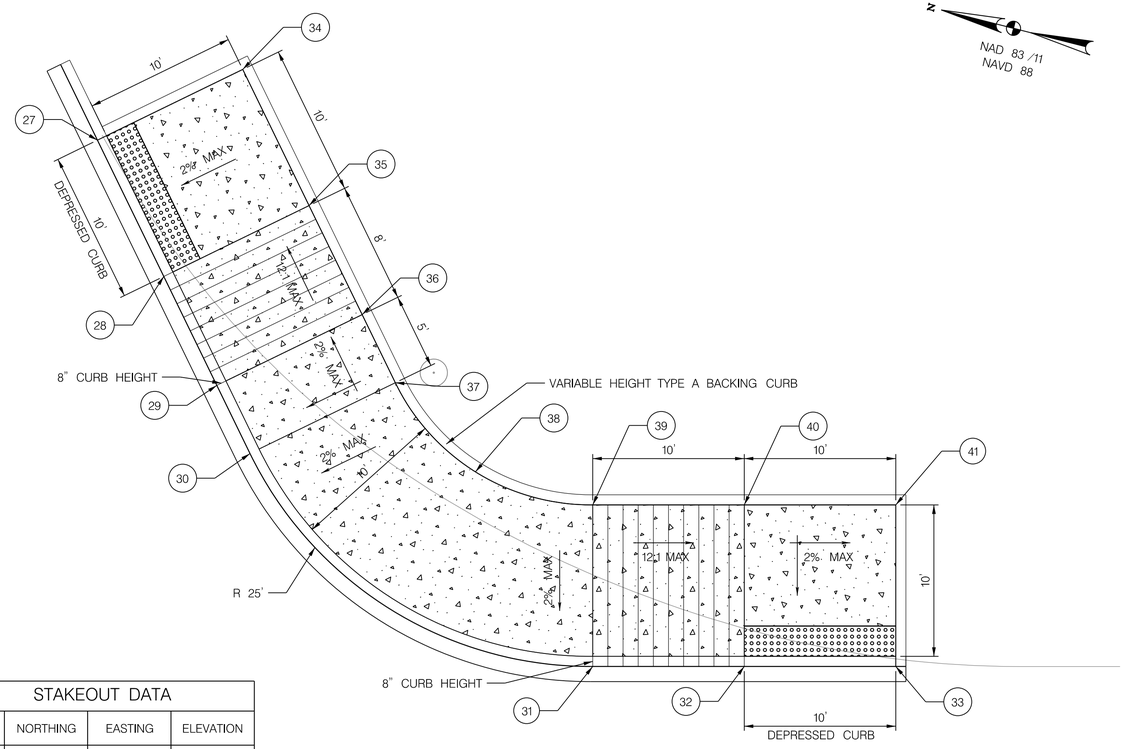
STAKEOUT DATA			
PT. NO.	NORTHING	EASTING	ELEVATION
21	531,305.1817	1,304,556.1126	426.80
22	531,295.4855	1,304,558.4704	426.60
23	531,283.4978	1,304,561.3167	426.56
24	531,284.3961	1,304,550.5617	426.00
25	531,293.1124	1,304,548.7560	426.75
26	531,302.8292	1,304,546.3932	426.95



EDNOR ROAD



STAKEOUT DATA			
PT. NO.	NORTHING	EASTING	ELEVATION
27	531,248.1194	1,304,583.6197	426.56
28	531,241.6590	1,304,575.9866	426.06
29	531,236.4907	1,304,569.8802	425.77
30	531,233.2605	1,304,566.0637	425.62
31	531,207.8692	1,304,558.0233	424.89
32	531,198.1783	1,304,560.4905	424.74
33	531,188.4875	1,304,562.9577	424.60
34	531,239.9775	1,304,590.5108	426.78
35	531,233.5171	1,304,582.8777	426.27
36	531,228.3488	1,304,576.7713	426.58
37	531,225.1186	1,304,572.9547	426.48
38	531,218.5444	1,304,568.5626	426.12
39	531,210.5009	1,304,568.3602	425.76
40	531,200.8100	1,304,570.8274	424.95
41	531,191.1191	1,304,573.2946	424.81

NOTE: ELEVATIONS PROVIDED FOR PAVEMENT STAKEOUT POINTS ARE THE PROPOSED BOTTOM OF CURB (FLOW LINE ELEVATIONS)

MD 182 (NORWOOD ROAD)

NORWOOD ROAD

LEGEND

- CONCRETE DRIVEWAY
- ASPHALT SHARED USE PATH
- FLEXIBLE SHARED USE PATH
- CONCRETE SIDEWALK
- DETECTABLE WARNING SURFACE

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240-777-7263

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY MEG DRAWN BY MEG CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
ADA DETAIL AND STAKEOUT

SCALE 1" = 5' DATE AUGUST 2023

DRAWING NO. DE-09 OF 10 SHEET NO. 16 OF 103

PLAN NO. MR2022024 DWG. DE-09

PLOTTED: 8/15/2023
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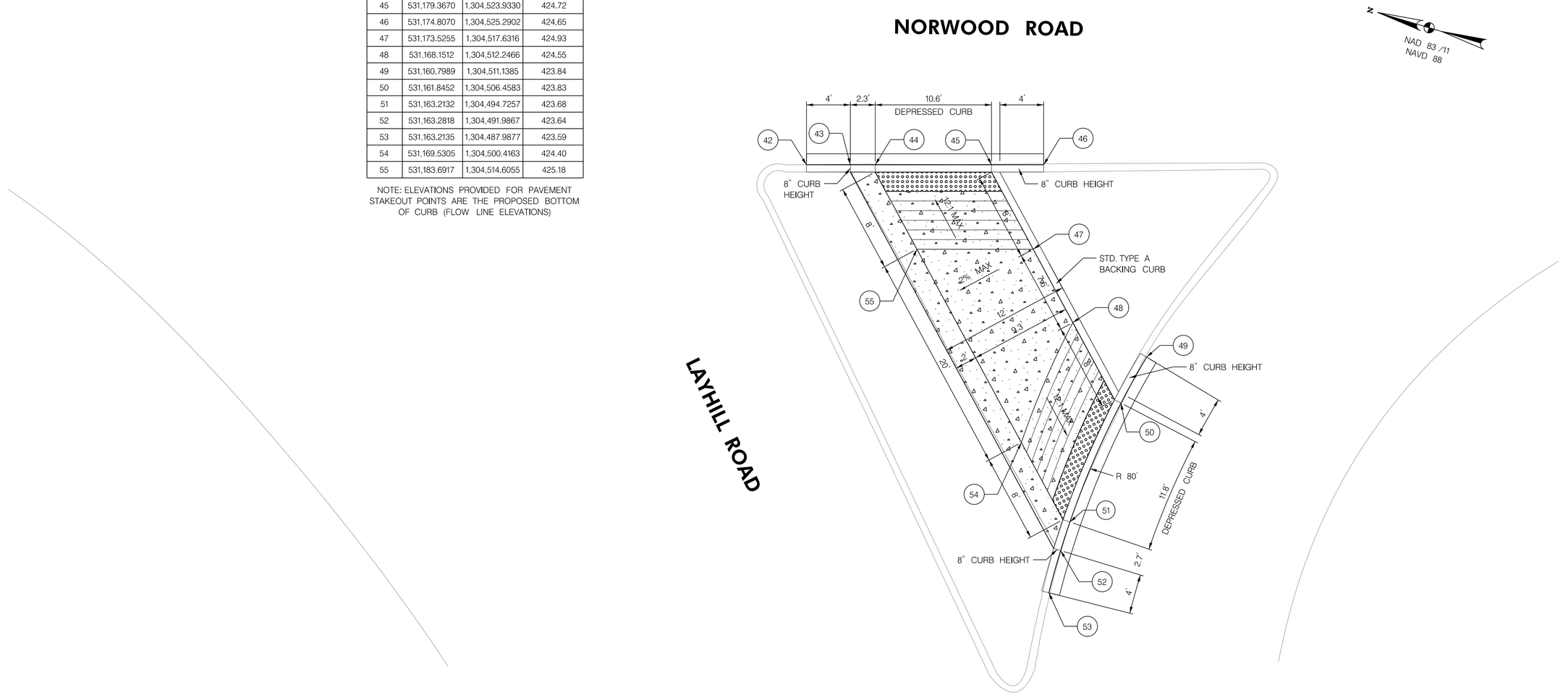
FILE: \\ad.rkk.com\ls\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pHD-D009_HTT.dgn

STAKEOUT DATA			
PT. NO.	NORTHING	EASTING	ELEVATION
42	531,195.5455	1,304,519.1173	424.85
43	531,191.7117	1,304,520.2585	424.80
44	531,189.5332	1,304,520.9069	424.78
45	531,179.3670	1,304,523.9330	424.72
46	531,174.8070	1,304,525.2902	424.65
47	531,173.5255	1,304,517.6316	424.93
48	531,168.1512	1,304,512.2466	424.55
49	531,160.7989	1,304,511.1385	423.84
50	531,161.8452	1,304,506.4583	423.83
51	531,163.2132	1,304,494.7257	423.68
52	531,163.2818	1,304,491.9867	423.64
53	531,163.2135	1,304,487.9877	423.59
54	531,169.5305	1,304,500.4163	424.40
55	531,183.6917	1,304,514.6055	425.18

NOTE: ELEVATIONS PROVIDED FOR PAVEMENT STAKEOUT POINTS ARE THE PROPOSED BOTTOM OF CURB (FLOW LINE ELEVATIONS)



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LEGEND

- CONCRETE DRIVEWAY
- ASPHALT SHARED USE PATH
- FLEXIBLE SHARED USE PATH
- CONCRETE SIDEWALK
- DETECTABLE WARNING SURFACE

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APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY MEG DRAWN BY MEG CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
ADA DETAIL AND STAKEOUT

SCALE 1" = 5' DATE AUGUST 2023

PLAN NO. MR2022024 | DWG. DE-10

DRAWING NO. DE-10 OF 10 | SHEET NO. 17 OF 103

PLOTTED: 8/11/2023
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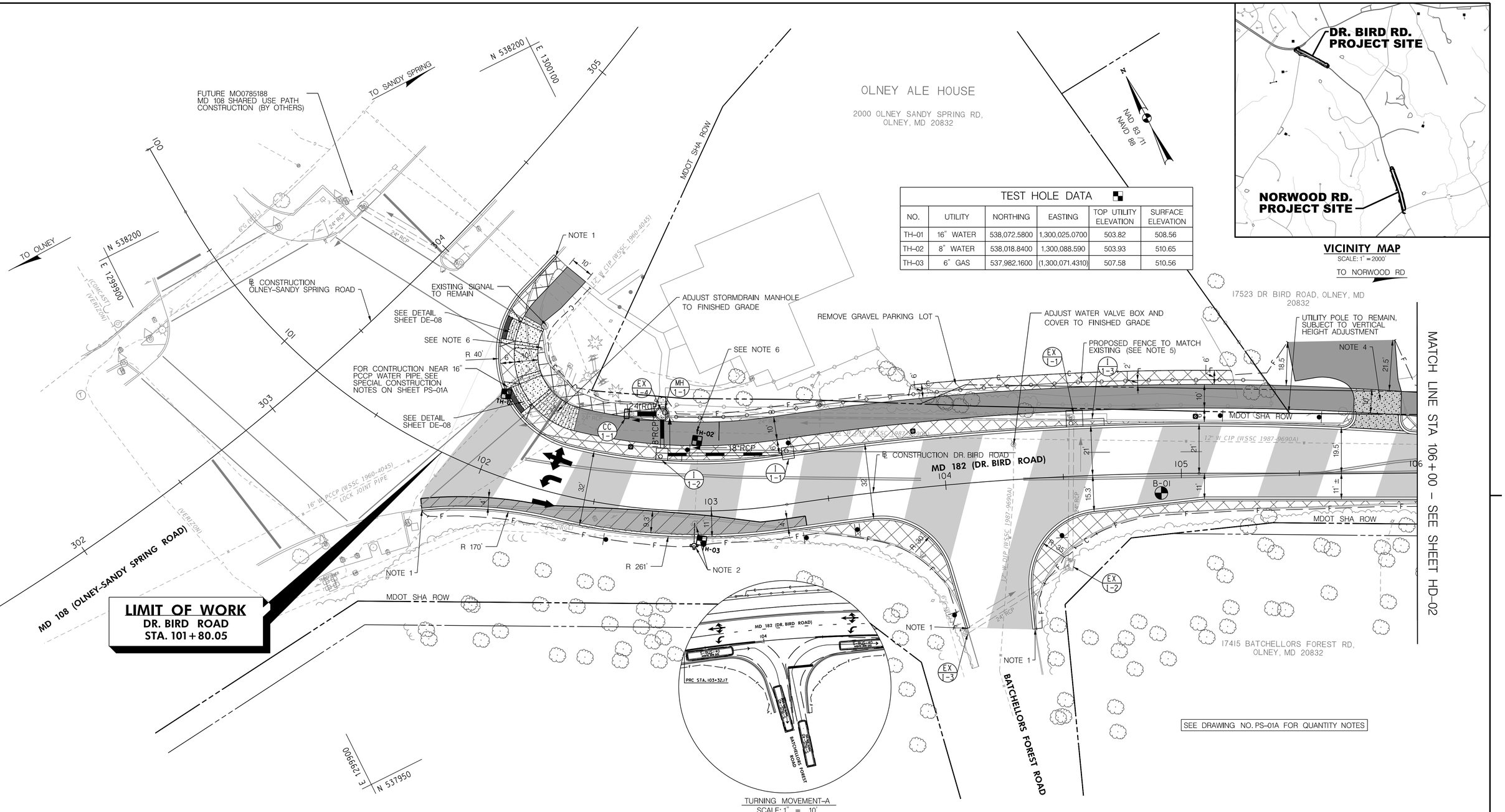
PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pHD-D010_HTT.dgn



TEST HOLE DATA					
NO.	UTILITY	NORTHING	EASTING	TOP UTILITY ELEVATION	SURFACE ELEVATION
TH-01	16" WATER	538,072.5800	1,300,025.0700	503.82	508.56
TH-02	8" WATER	538,018.8400	1,300,088.590	503.93	510.65
TH-03	6" GAS	537,982.1600	(1,300,071.4310)	507.58	510.56

NOTES:

1. TIE-IN TO EXISTING CURB AND GUTTER.
2. RELOCATE EX. FH HEAD AND ELBOW 2' BEHIND PROPOSED CURB, RECONNECT TO EX. FH LEAD PER WSSC STD DETAIL W8.0
3. PROVIDE A 10' MINIMUM PEDESTRIAN PATHWAY WITH 2% MAXIMUM CROSS-SLOPE ACROSS ENTRANCE.
4. REMOVE, SALVAGE, AND RELOCATE EXISTING FENCE. SEE FENCE RELOCATION SCHEDULE (SHEET HD-01A) AND SPECIAL PROVISION FOR FENCE RELOCATION.
5. IF CONTRACTOR ENCOUNTERS LONGITUDINAL UNDERDRAIN, THEY SHALL REPAIR AND REPLACE IN ACCORDANCE WITH STD. MD 387.11
6. ADJUST WATER VALVE BOX AND COVER TO FINISHED GRADE.

LEGEND

- CONCRETE DRIVEWAY
- ASPHALT SHARED USE PATH
- FLEXIBLE SHARED USE PATH
- MILL AND OVERLAY
- CONCRETE SIDEWALK
- DETECTABLE WARNING SURFACE
- FULL DEPTH ASPHALT
- PAVEMENT /SIDEWALK REMOVAL

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

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DESIGNED BY KBJ/RLW DRAWN BY KBJ CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
ROADWAY PLAN

SCALE 1" = 20' DATE AUGUST 2023

DRAWING NO. PS-01 OF 07 SHEET NO. 18 OF 103

PLAN NO. MR2022024 DWG. PS-01

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pHD-0001_DrBird.dgn

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FINE MILLING ASPHALT PAVEMENT 1 INCH TO 2.5 INCH DEPTH	
1600 SY	MD 182 - STA. 101+80 TO STA. 106+00

ASPHALT SHARED USE PATH (STD. N0. MD 580.08)	
261 SF	MD 108 - STA. 304+03, RT TO STA. 304+30, RT
3306 SF	MD 182 - STA. 102+34, LT TO STA. 105+73, LT
69 SF	MD 182 - STA. 105+93, LT TO STA. 106+00, LT

5 INCH CONCRETE SIDEWALK	
683 SF	MD 182 - STA. 101+82, LT TO STA. 102+34, LT
44 SF	MD 182 - STA. 102+72, LT TO STA. 102+78, LT

DETECTABLE WARNING SURFACES (STD. NO. MD 655.40)	
20 SF	MD 108 - STA. 303+90, RT TO STA. 303+99, RT
23 SF	MD 182 - STA. 101+97, LT TO STA. 102+09, LT

REMOVAL OF EXISTING PAVEMENT	
3 CY	MD 108 - STA. 304+00, RT TO STA. 304+18, RT
4 CY	MD 182 - STA. 101+85, LT TO STA. 102+03, LT
50 CY	MD 182 - STA. 102+11, LT TO STA. 105+72, LT
3 CY	MD 182 - STA. 102+60, LT TO STA. 103+27, LT
1 CY	MD 182 - STA. 105+93, LT TO STA. 106+00, LT
17 CY	MD 182 - STA. 103+38, RT TO STA. 104+00, RT
28 CY	MD 182 - STA. 104+34, RT TO STA. 106+00, RT

6 INCH PORTLAND CEMENT CONCRETE PAVEMENT, MDOT SHA MIX 9, FOR DRIVEWAYS AND DRIVEWAY APRONS	
37 SY	MD 182 - STA. 105+71, LT TO STA. 105+94, LT

REMOVE AND SALVAGE EXISTING FENCE (SEE SHEET HD-01 NOTE 5)	
95 LF	MD 182 - STA. 102+83, 44.84 LT TO STA. 103+84, 36.02 LT
146 LF	MD 182 - STA. 104+41, 31.38 LT TO STA. 105+35, 39.35 LT

WOOD RAIL FENCE	
251 LF	MD 182 - STA. 102+83, 39.67 LT TO STA. 105+35, 39.35 LT

MDOT SHA STANDARD TYPE A COMBINATION CURB AND GUTTER (STD. NO. MD 620.02)	
441 LF	MD 182 - STA. 101+82, LT TO STA. 105+73, LT
12 LF	MD 182 - STA. 105+93, LT TO STA. 106+00, LT
262 LF	MD 182 - STA. 101+84, RT TO STA. 104+05, RT
202 LF	MD 182 - STA. 104+33, RT TO STA. 106+00, RT

REMOVE AND RESET EXISTING MAILBOX	
1 EA	MD 182 - STA. 102+79, LT

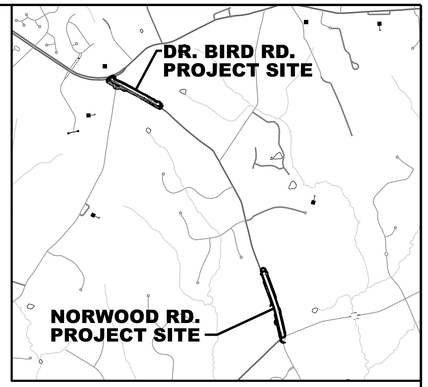
REMOVAL OF EXISTING SIDEWALK	
2 CY	MD 108 - STA. 304+04, RT TO STA. 304+29, RT
6 CY	MD 182 - STA. 102+03, LT TO STA. 102+74, LT

SPECIAL CONSTRUCTION REQUIREMENTS FOR WORK PERFORMED IN THE VICINTIY OF EXISTING PCCP WATER MAINS: February 2021 version

1. CONSTRUCTION VEHICLES GENERATING LIVE LOADS GREATER THAN AASHTO HS20 (APPROX. 40,000 LBS OR GREATER), AND ANY VIBRATORY ROLLER COMPACTION EQUIPMENT, SHALL NOT BE PERMITTED WITHIN 10 FEET CLEAR OF THE OUTER EDGE OF EX. PCCP WATER MAIN UNLESS APPROVED BY WSSC.
2. THE CONTRACTOR SHALL SUBMIT CONSTRUCTION VEHICLE SPECIFICATIONS FOR ALL VEHICLES PROPOSED FOR USE CLOSER THAN 10 FEET CLEAR, OR IF PROPOSED TO CROSS EX. PCCP WATER MAINS, TO THE WSSC PROJECT MANAGER/CONTACT PERSON FOR APPROVAL PRIOR TO COMMENCING WORK. ANY VEHICLE NOT PREVIOUSLY IDENTIFIED DURING THE DESIGN REVIEW OF THESE PLANS WILL REQUIRE AN ADDITIONAL LOADING ANALYSIS REVIEW.
3. IF NECESSARY, HARDWOOD TIMBER MATS OF APPROPRIATE SIZE AND THICKNESS (SUFFICIENT TO FIT THE LARGEST CONSTRUCTION VEHICLE PROPOSED AND 1–FOOT THICK) SHALL BE PLACED OVER THE EXISTING PCCP MAIN TO ALLOW WSSC APPROVED CONSTRUCTION VEHICLE TRAFFIC TO CROSS OVER THE PIPELINE AND SAFELY DISTRIBUTE LIVE LOADS.
4. STOCKPILING OF SOIL OR OTHER MATERIAL IS NOT PERMITTED WITHIN 10 FEET CLEAR OF THE EDGE OF THE ROW OF THE EX. MAINS, TO PREVENT ROW ENCROACHMENT.
5. THE CONTRACTOR SHALL LOCATE AND STAKEOUT THE EX. PCCP WATER MAINS AND EDGE OF THE ROW AND MAINTAIN THE MARKERS DURING CONSTRUCTION. UNLESS OTHERWISE APPROVED BY WSSC PROJECT MANAGER/CONTACT PERSON, CONSTRUCTION VEHICLES ARE NOT PERMITTED WITHIN 10 FEET CLEAR OF EX. PCCP WATER MAIN AT ANY TIME, WHEN LESS THAN 6 FEET OF COVER EXISTS OVER THE MAIN. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AREAS WHERE LESS THAN 6 FEET OF COVER EXISTS OVER THE MAINS DURING CONSTRUCTION VIA VACUUM TEST PITTING.
6. ALL BACKFILL AND COMPACTION OVER THE EX. PCCP MAINS, AT ANY DEPTH OF COVER, SHALL BE PERFORMED MANUALLY AND/OR WITH VEHICLES POSITIONED A MINIMUM OF 10 FEET CLEAR OF THE OUTER EDGE OF THE MAIN.
7. ALL ROCKS, BROKEN PAVEMENT, CURBING AND OTHER DEBRIS HAVING ANY DIMENSION GREATER THAN 3 INCHES SHALL BE REMOVED FROM ABOVE AND AROUND THE MAIN(S) PRIOR TO PLACING AND COMPACTING FILL, SUB GRADE MATERIAL OR PAVING OVER THE MAIN (INCLUDING PIPE BEDDING).
8. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE PIPELINE CONSTRUCTION DIVISION INSPECTOR ASSIGNED TO THE PROJECT AT LEAST 72 HOURS IN ADVANCE OF ANY GRADING OR PAVING IN THE VICINITY OF THE EX. PCCP MAINS. ALL GRADING AND PAVING OVER THE MAINS SHALL BE COORDINATED AND PERFORMED UNDER THE SUPERVISION OF A WSSC INSPECTOR.
9. THE CONTRACTOR SHALL USE SPECIAL CARE WHILE PERFORMING WORK IN THE VICINITY OF THE EX. PCCP WATER MAINS AND SHALL STRICTLY ADHERE TO THESE SPECIAL CONSTRUCTION REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE AND/OR REPLACEMENT REQUIRED AS A RESULT OF HIS WORK OVER THE MAINS AT NO ADDITIONAL COST TO WSSC.
10. IF SHUTDOWN AND DE–WATERING OF THE EX. PCCP WATER MAIN IS REQUIRED, COORDINATION WITH SYSTEMS CONTROL DIVISION (SCD) IS MANDATORY. A MINIMUM OF 60 DAYS ADVANCE NOTICE TO SCD IS REQUIRED TO COORDINATE WATER MAIN SHUTDOWN, DE–PRESSURIZATION, AND DE–WATERING OF EX. PCCP WATER MAINS AND REMOVAL OF THE ACOUSTIC FIBER OPTIC (AFO) MONITORING CABLE. SCD SHALL PERFORM THE SHUTDOWN SCHEDULING AND THE UTILITY SERVICES DEPARTMENT SHALL EXECUTE THE SHUTDOWN, DE–PRESSURIZATION AND DE–WATERING.
11. TEST PITS TO VERIFY THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE PCCP MAINS SHALL BE VIA VACUUM TEST PITTING RATHER THAN OPEN–CUT TRENCHING ON LIVE PCCP MAINS. VACUUM TEST PITTING IS PERFORMED ONLY TO THE CROWN OF THE EXISTING PCCP WATER MAINS. BACKFILL THE VACUUM TEST PIT IMMEDIATELY AFTER THE PERTINENT INFORMATION IS GATHERED. ANY DAMAGE TO THE EX. WATER MAIN COATING RESULTING FROM THE CONTRACTOR*S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR*S EXPENSE. DAMAGE AND REPAIRS SHALL BE INSPECTED BY WSSC ENGINEERS AND/OR THE PIPE MANUFACTURER*S TECHNICAL FIELD REPRESENTATIVE, AND BE REPAIRED ACCORDINGLY PRIOR TO BACKFILLING.
12. DURING BACKFILLING, COMPACTED CR–6 OR #57 STONE SHALL BE USED TO 12 INCHES ABOVE THE CROWN OF THE PCCP MAIN. THE REMAINING EXCAVATION SHALL BE BACKFILLED AND COMPACTED WITH SUITABLE MATERIAL IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 02315.

NOTIFICATIONS:

1. THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE PIPELINE CONSTRUCTION DIVISION INSPECTOR ASSIGNED TO THE PROJECT. NOTIFICATIONS ARE REQUIRED AT A MINIMUM OF 60 DAYS IN ADVANCE OF WORK TO ARRANGE SHUTDOWN AND INSPECTION OF THE EX. PCCP WATER MAINS.
2. THE CONTRACTOR AND/OR THE APPROPRIATE PIPELINE CONSTRUCTION DIVISION INSPECTOR SHALL CONTACT KAREN WRIGHT, SYSTEMS CONTROL DIVISION * DIVISION MANAGER, AT 301–206–8416 A MINIMUM OF 60 DAYS IN ADVANCE OF WORK TO COORDINATE THE SHUTDOWN AND DE–WATERING OF THE EX. PCCP WATER MAINS.
3. THE CONTRACTOR AND/OR THE APPROPRIATE PIPELINE CONSTRUCTION DIVISION INSPECTOR SHALL NOTIFY ARTURO ACEVEDO AT 301–206–8478 OF THE WATER/WASTEWATER SYSTEMS ASSESSMENT DIVISION 60 DAYS IN ADVANCE OF WORK TO COORDINATE THE REMOVAL AND REPLACEMENT OF ANY PCCP PIPE SECTIONS. FURTHER COORDINATION IS REQUIRED TO REMOVE AND REINSTALL THE ACOUSTIC FIBER OPTIC (AFO) MONITORING SYSTEM WITHIN THE PCCP PIPELINE. COORDINATION INCLUDES PLANNING WITH THE INSPECTION CONSULTANT(S), WSSC WATER/WASTEWATER SYSTEMS ASSESSMENT DIVISION, AND WSSC UTILITY SERVICES TEAM STAFF. THE PCCP MAIN MAY HAVE AN AFO MONITORING CABLE INSTALLED INSIDE, AND THIS CABLE MUST NOT BE CUT OR DAMAGED. THE WATER/WASTEWATER SYSTEMS ASSESSMENT DIVISION MUST BE NOTIFIED 60 DAYS IN ADVANCE OF WORK TO COORDINATE AND PLAN THE AFO CABLE REMOVAL PRIOR TO REMOVING ANY PIPE SECTIONS AND TO COORDINATE REINSTALLATION OF THE CABLE FOLLOWING THE PIPE REPLACEMENT. IF THE PCCP PIPELINE DOES NOT HAVE AN AFO MONITORING SYSTEM INSTALLED, 60–DAY ADVANCE NOTIFICATION IS STILL REQUIRED TO COORDINATE THE REMOVAL & REPLACEMENT OF ANY PCCP PIPE SECTIONS, TO DOCUMENT THE EXTERNAL CONDITIONS, AND TO COLLECT SAMPLES OF THE PIPE SECTION FOR FORENSIC ANALYSIS.



VICINITY MAP
SCALE: 1" = 2000'

LEGEND

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

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DESIGNED BY KBJ/RLW DRAWN BY KBJ CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
ROADWAY PLAN

SCALE 1" = 20' DATE AUGUST 2023

DRAWING NO. PS–01A OF 07

SHEET NO. 19 OF 103

PLAN NO. MR2022024 DWG. PS–01A

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MDOT SHA STANDARD TYPE A COMBINATION CURB AND GUTTER (STD. NO. MD 620.02)	
96 LF	MD 182 - STA. 106+00, LT TO STA. 106+91, LT
125 LF	MD 182 - STA. 107+03, LT TO STA. 108+19, LT
225 LF	MD 182 - STA. 108+56, LT TO STA. 110+72, LT
103 LF	MD 182 - STA. 110+85, LT TO STA. 111+72, LT
21 LF	MD 182 - STA. 111+92, LT TO STA. 112+00, LT
40 LF	MD 182 - STA. 106+00, RT TO STA. 106+33, RT

FINE MILLING ASPHALT PAVEMENT 1 INCH TO 2.5 INCH DEPTH	
1461 SY	MD 182 - STA. 106+00 TO STA. 112+00

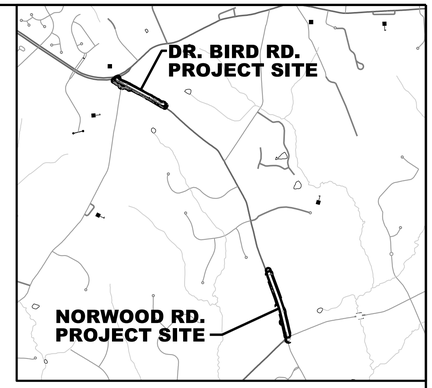
FLEXIBLE SHARED USE PATH	
86 SF	MD 182 - STA. 111+91, LT TO STA. 112+00, LT

REMOVE AND RESET EXISTING MAILBOX	
1 EA	MD 182 - STA. 110+66, LT

6 INCH DEPTH PORTLAND CEMENT CONCRETE, MDOT SHA MIX 9, FOR DRIVEWAYS AND DRIVEWAY APRONS	
23 SY	MD 182 - STA. 106+89, LT TO STA. 107+05
70 SY	MD 182 - STA. 108+14, LT TO STA. 108+59, LT
24 SY	MD 182 - STA. 110+71, LT TO STA. 110+87, LT
49 SY	MD 182 - STA. 111+70, LT TO STA. 111+93, LT

ASPHALT SHARED USE PATH (STD. N0. MD 580.08)	
892 SF	MD 182 - STA. 106+00, LT TO STA. 106+91, LT
1155 SF	MD 182 - STA. 107+00, LT TO STA. 108+19, LT
2183 SF	MD 182 - STA. 108+52, LT TO STA. 110+73, LT
874 SF	MD 182 - STA. 110+85, LT TO STA. 111+72, LT

REMOVE AND SALVAGE EXISTING FENCE (SEE NOTE 4)	
237 LF	MD 182 - STA. 108+57, 32.67 LT TO STA. 110+68, 32.67 LT
82 LF	MD 182 - STA. 110+89, 32.67 LT TO STA. 111+34, 32.67 LT



VICINITY MAP
SCALE: 1" = 2000'

N
NAD 83 /11
NAVD 88

N 537800
E 1300800

TO MD-108
TO NORWOOD RD

17519 DR BIRD RD, OLNEY, MD 20832
17515 DR BIRD RD, OLNEY, MD 20832
17501 DR BIRD RD, OLNEY, MD 20832
17520 DR BIRD RD, OLNEY, MD 20832
17514 DR BIRD RD, OLNEY, MD 20832

MATCH LINE STA 106+00 – SEE SHEET HD-01

MATCH LINE STA 112+00 – SEE SHEET HD-03

UTILITY POLE TO BE RELOCATED
ADJUST WATER METER TO FINISHED GRADE
NOTE 3
ADJUST WATER METER TO FINISHED GRADE
NOTE 3
RELOCATE EXISTING WATER METER (SEE NOTE 2)
PROPOSED FENCE TO MATCH EXISTING (SEE NOTE 4)
PROPOSED FENCE TO MATCH EXISTING (SEE NOTE 4)
NOTE 3
FLEXIPAVE IN CRITICAL ROOT ZONE TO MINIMIZE IMPACT ON TREES
NOTE 3
R 90'
R 60'
MDOT SHA ROW
MD 182 (DR. BIRD ROAD)
NOTE 4
CONSTRUCTION DR. BIRD ROAD
RELOCATE EXISTING WATER METER (SEE NOTE 2)
REMOVE EXISTING FENCE
MDOT SHA ROW
MDOT SHA ROW
SEE NOTE 1
12" W CIP (WSSC 1960-4655)
107
108
109
110
111
EX ES

N 537800
E 1300350

E 1300800
N 537500

WOOD RAIL FENCE	
211 LF	MD 182 - STA. 108+57, 32.67 LT TO STA. 110+68, 32.67 LT
30 LF	MD 182 - STA. 110+89, 32.67 LT TO STA. 111+19, 32.67 LT

REMOVAL OF EXISTING PAVEMENT	
10 CY	MD 182 - STA. 106+00, LT TO STA. 106+90, LT
11 CY	MD 182 - STA. 107+03, LT TO STA. 108+18, LT
1 CY	MD 182 - STA. 110+62, LT TO STA. 110+72, LT
5 CY	MD 182 - STA. 110+86, LT TO STA. 111+72, LT
2 CY	MD 182 - STA. 111+91, LT TO STA. 112+00, LT
2 CY	MD 182 - STA. 106+00, RT TO STA. 106+33, RT

NOTES:

1. NOSE DOWN CURB TO MATCH EXISTING EDGE OF ROAD.
2. RELOCATE EXISTING WATER METER 2' BEHIND PROPOSED CURB PER WSSC STD. DETAILS W5.6 AND W5.13
3. PROVIDE A 10' MINIMUM PEDESTRIAN PATHWAY WITH 2% MAXIMUM CROSS-SLOPE ACROSS ENTRANCE.
4. REMOVE, SALVAGE, AND RELOCATE EXISTING FENCE. SEE FENCE RELOCATION SCHEDULE (THIS SHEET) AND SPECIAL PROVISION FOR FENCE RELOCATION.
5. IF CONTRACTOR ENCOUNTERS LONGITUDINAL UNDERDRAIN, THEY SHALL REPAIR AND REPLACE IN ACCORDANCE WITH STD. MD 387.11

LEGEND

- CONCRETE DRIVEWAY
- ASPHALT SHARED USE PATH
- FLEXIBLE SHARED USE PATH
- MILL AND OVERLAY
- CONCRETE SIDEWALK
- DETECTABLE WARNING SURFACE
- FULL DEPTH ASPHALT
- PAVEMENT /SIDEWALK REMOVAL

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

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
240-777-7263

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Transportation Planning and Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ/RLW DRAWN BY KBJ CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
ROADWAY PLAN

SCALE 1" = 20' DATE AUGUST 2023

PLAN NO. MR2022024 | DWG. PS-02

DRAWING NO. PS-02 OF 07 | SHEET NO. 20 OF 103

PLOTTED: 8/15/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pHD-0002_DrBird.dgn

PLOTTED: 8/15/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pHD-0002_DrBird.dgn

FINE MILLING ASPHALT PAVEMENT 1 INCH TO 2.5 INCH DEPTH	
936 SY	MD 182 - STA. 112+00 TO STA. 115+97

REMOVAL OF EXISTING PAVEMENT	
1 CY	MD 182 - STA. 112+00, LT TO STA. 112+89, LT
4 CY	MD 182 - STA. 113+23, LT TO STA. 114+56, LT
5 CY	MD 182 - STA. 114+69, LT TO STA. 116+00, LT

MDOT SHA STANDARD TYPE A COMBINATION CURB AND GUTTER (STD. NO. MD 620.02)	
261 LF	MD 182 - STA. 112+00, LT TO STA. 114+56, LT
162 LF	MD 182 - STA. 114+68, LT TO STA. 116+16, LT

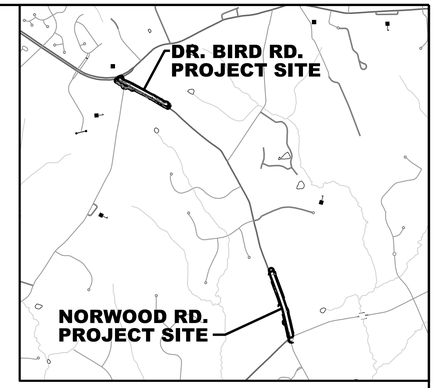
FLEXIBLE SHARED USE PATH	
2582 SF	MD 182 - STA. 112+00, LT TO STA. 114+57, LT
1548 SF	MD 182 - STA. 114+68, LT TO STA. 116+16, LT

6 INCH DEPTH CONCRETE, MDOT SHA MIX 9, FOR DRIVEWAYS AND DRIVEWAY APRONS	
22 SY	MD 182 - STA. 114+54, LT TO STA. 114+70, LT

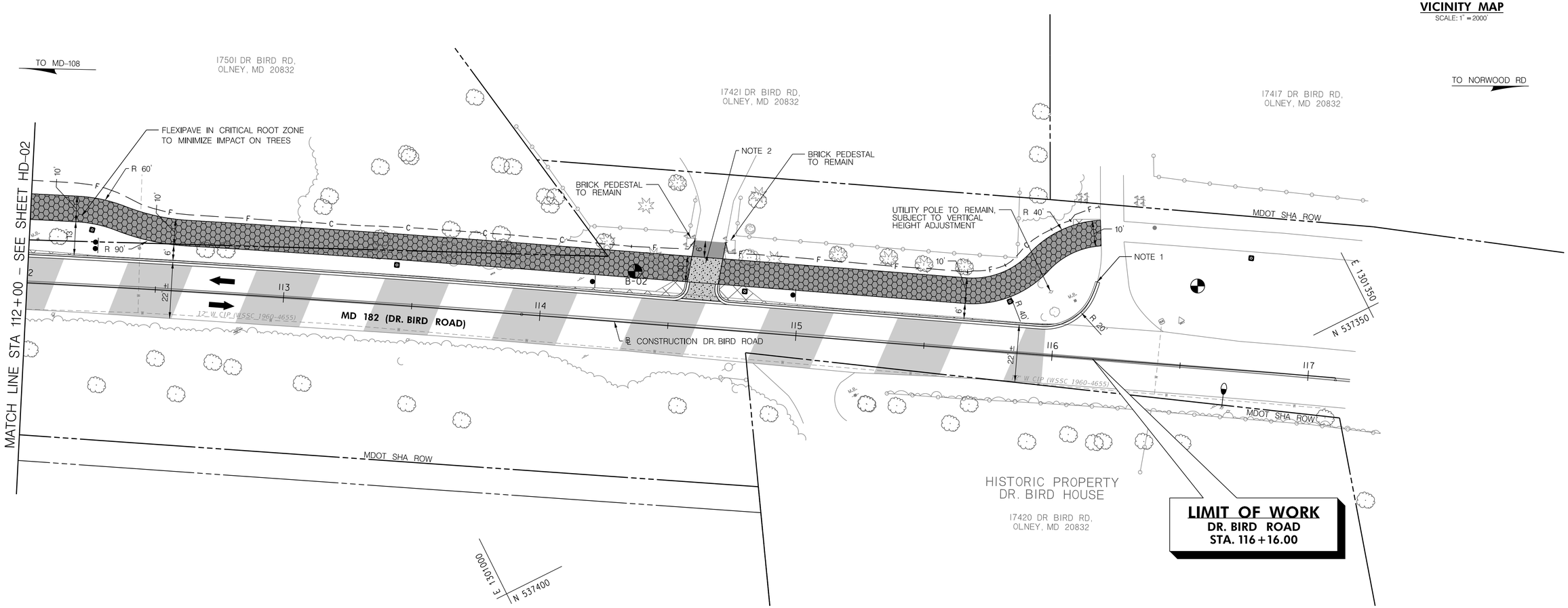
REMOVE AND RESET EXISTING MAILBOX	
1 EA	MD 182 - STA. 112+03, LT
1 EA	MD 182 - STA. 114+47, LT
1 EA	MD 182 - STA. 116+07, LT

N 537700
E 1301000

NAD 83 /11
NAVD 88



VICINITY MAP
SCALE: 1" = 2000'



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

LEGEND

- CONCRETE DRIVEWAY
- ASPHALT SHARED USE PATH
- FLEXIBLE SHARED USE PATH
- MILL AND OVERLAY
- CONCRETE SIDEWALK
- DETECTABLE WARNING SURFACE
- FULL DEPTH ASPHALT
- PAVEMENT /SIDEWALK REMOVAL

NOTES:
1. NOSE DOWN CURB TO MATCH EXISTING EDGE OF ROAD.
2. PROVIDE A 10' MINIMUM PEDESTRIAN PATHWAY WITH 2% MAXIMUM CROSS-SLOPE ACROSS ENTRANCE.
3. IF CONTRACTOR ENCOUNTERS LONGITUDINAL UNDERDRAIN, THEY SHALL REPAIR AND REPLACE IN ACCORDANCE WITH STD. MD 387.11.

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240-777-7263

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ/RLW DRAWN BY KBJ CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
ROADWAY PLAN

SCALE 1" = 20' DATE AUGUST 2023

DRAWING NO. PS-03 OF 07 SHEET NO. 10 OF 103

PLAN NO. MR2022024 DWG. PS-03

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\ls\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pHD-0003_DrBird.dgn

PLOTTED: 8/11/2023
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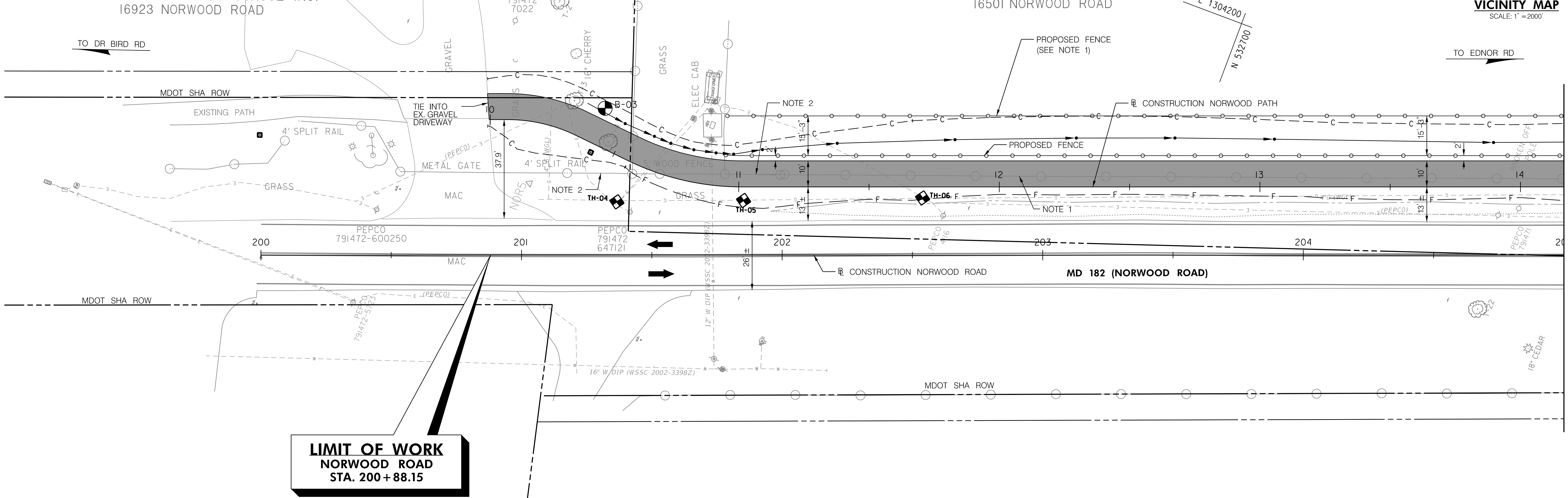
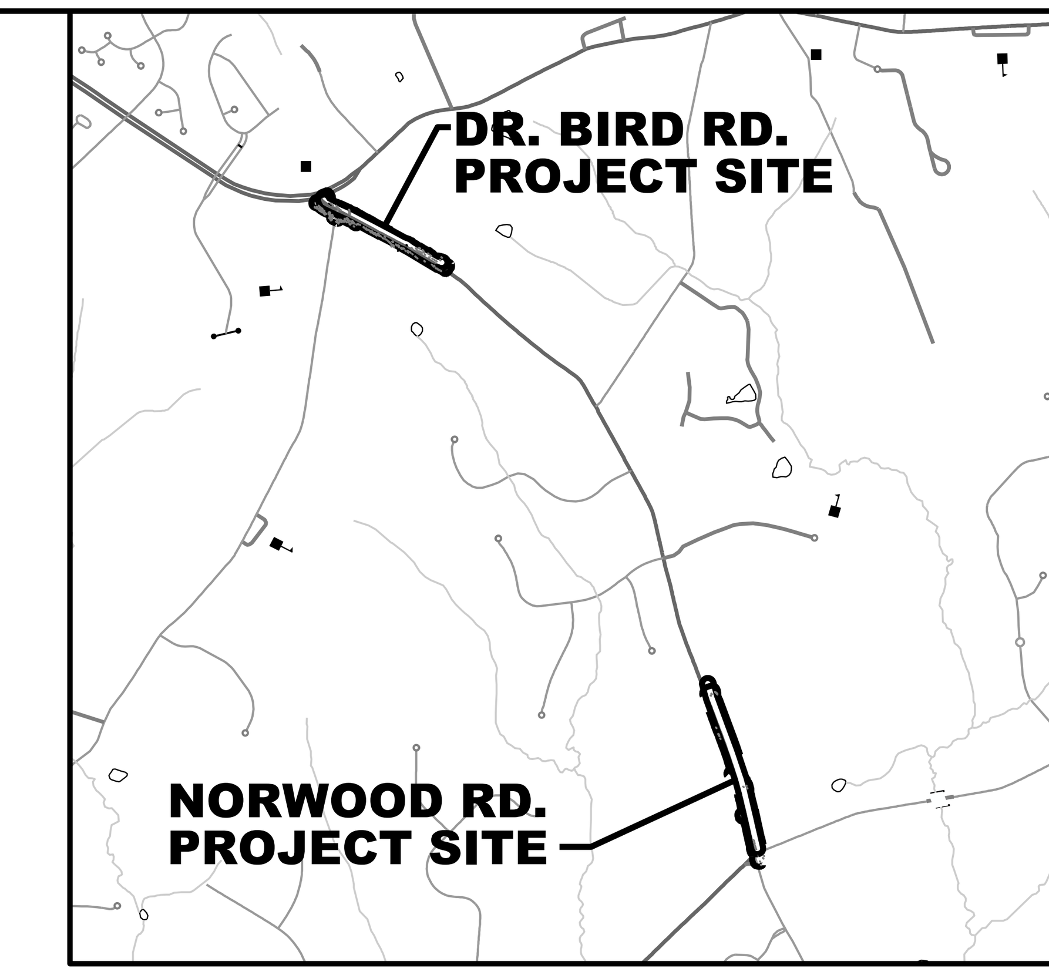


TEST HOLE DATA

NO.	UTILITY	NORTHING	EASTING	TOP UTILITY ELEVATION	SURFACE ELEVATION
TH-04	4" GAS	532,900.4100	1,304,051.7500	422.34	425.94
TH-05	4" GAS	532,855.0800	1,304,069.3300	422.70	426.18
TH-06	4" GAS	(532,791.1100)	1,304,094.3400	422.61	426.78



VICINITY MAP
SCALE: 1" = 2000'

ASPHALT SHARED USE PATH (STD. NO. MD 580.08)	
4175 SF	MD 182 - STA. 200+88, LT TO STA. 205+00, LT

WOOD RAIL FENCE	
322 LF	MD 182 - STA. 201+78, 38.4' LT TO STA. 205+00, 38.2' LT
321 LF	MD 182 - STA. 201+79, 53.4' LT TO STA. 205+00, 53.4' LT

REMOVE AND SALVAGE EXISTING FENCE (SEE NOTE 1)	
134 LF	MD 182 - STA. 200+95, 31.5' LT TO STA. 201+79, 60.3' LT
310 LF	MD 182 - STA. 201+90, 30.9' LT TO STA. 205+00, 29.3' LT

LEGEND
- CONCRETE DRIVEWAY
- ASPHALT SHARED USE PATH
- FLEXIBLE SHARED USE PATH
- MILL AND OVERLAY
- CONCRETE SIDEWALK
- DETECTABLE WARNING SURFACE
- FULL DEPTH ASPHALT
- PAVEMENT /SIDEWALK REMOVAL

NOTES:
1. REMOVE, SALVAGE, AND RELOCATE EXISTING FENCE. SEE FENCE RELOCATION SCHEDULE (THIS SHEET) AND SPECIAL PROVISION FOR FENCE RELOCATION.
2. FENCE AND GATE IMPACTS OR RELOCATIONS WILL BE COORDINATED WITH PROPERTY OWNERS FOR SUBSEQUENT SUBMISSIONS.

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

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RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ/RLW DRAWN BY KBJ CHECKED BY TMB

PLAN NO. MR2022024 DWG. PS-04

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
ROADWAY PLAN

SCALE 1" = 20' DATE AUGUST 2023

DRAWING NO. PS-04 OF 07

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pHD-0004_DrBird.dgn

ASPHALT SHARED USE PATH (STD. N0. MD 580.08)	
5022 SF	MD 182 - STA. 205+00, LT TO STA. 210+00, LT

WOOD RAIL FENCE	
322 LF	MD 182 - STA. 205+00, 38.2' LT TO STA. 210+00, 41.2' LT
321 LF	MD 182 - STA. 205+00, 53.4' LT TO STA. 210+00, 52.0' LT

REMOVE AND SALVAGE EXISTING FENCE (SEE NOTE 1)	
502 LF	MD 182 - STA. 205+00, 29.3' LT TO STA. 210+00, 28.8' LT

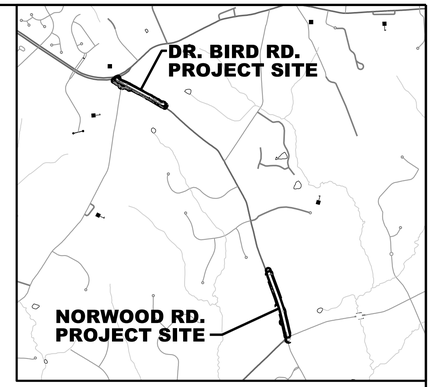
TEST HOLE DATA					
NO.	UTILITY	NORTHING	EASTING	TOP UTILITY ELEVATION	SURFACE ELEVATION
TH–10	4" GAS	532,119.8023	1,304,335.2552	417.82	422.09

N 532500 / E 1304350

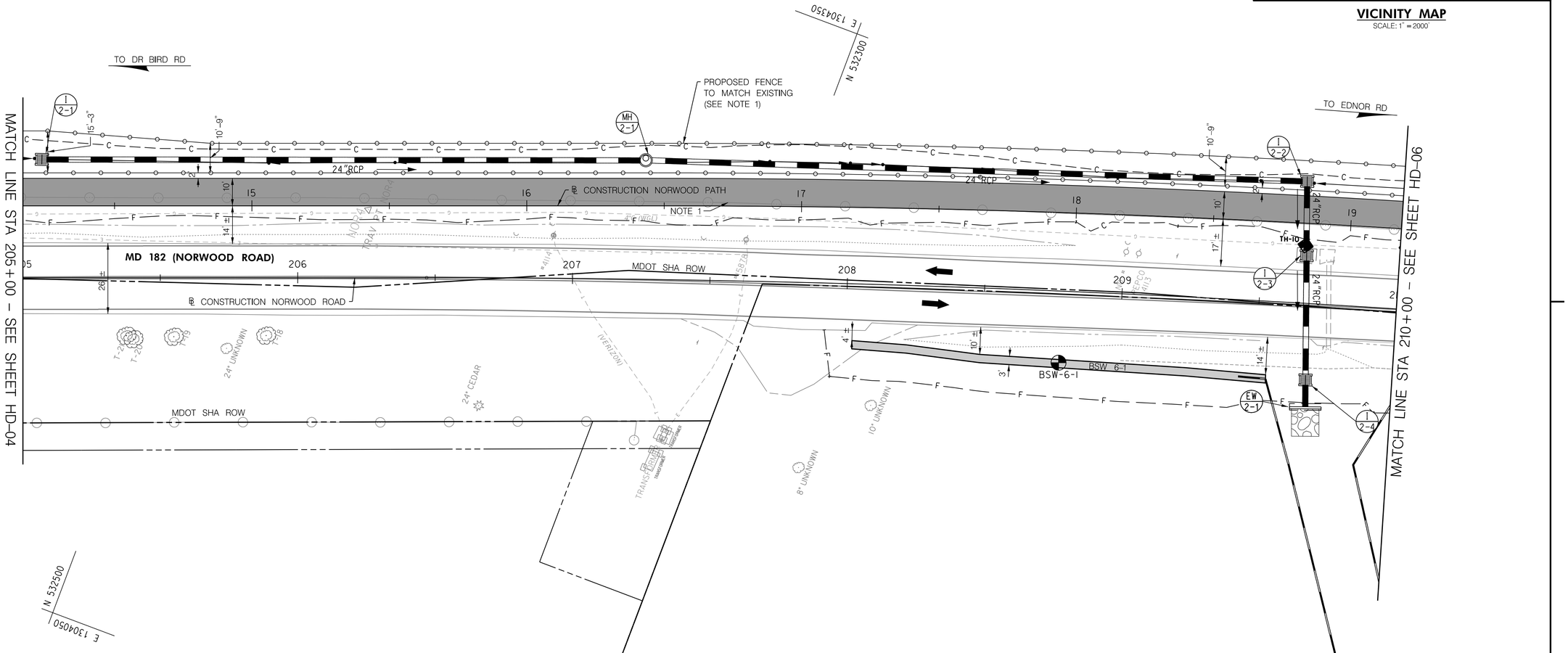
N

NAD 83 /11
NAVD 88

WOODLAWN MANOR CULTURAL PARK
I6501 NORWOOD ROAD



VICINITY MAP
SCALE: 1" = 2000'



LEGEND

- CONCRETE DRIVEWAY
- ASPHALT SHARED USE PATH
- FLEXIBLE SHARED USE PATH
- MILL AND OVERLAY
- CONCRETE SIDEWALK
- DETECTABLE WARNING SURFACE
- FULL DEPTH ASPHALT
- PAVEMENT /SIDEWALK REMOVAL

NOTES:

1. REMOVE, SALVAGE, AND RELOCATE EXISTING FENCE. SEE FENCE RELOCATION SCHEDULE (THIS SHEET) AND SPECIAL PROVISION FOR FENCE RELOCATION.
2. FENCE IMPACTS OR RELOCATIONS WILL BE COORDINATED WITH PROPERTY OWNERS FOR SUBSEQUENT SUBMISSIONS.

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ROCKVILLE, MARYLAND

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Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ/RLW DRAWN BY KBJ CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
ROADWAY PLAN

SCALE 1" = 20' DATE AUGUST 2023

DRAWING NO. PS–05 OF 07 SHEET NO. 23 OF 103

PLAN NO. MR2022024 DWG. PS–05

PLOTTED: 8/1/2023
FILE: \\atl.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pHD-0005_DrBird.dgn

PLOTTED: 8/1/2023
FILE: \\atl.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pHD-0005_DrBird.dgn

FINE MILLING ASPHALT PAVEMENT 1 INCH TO 2.5 INCH DEPTH	
69 SY	MD 182 - STA. 211+27, LT TO STA. 212+00, LT

ASPHALT SHARED USE PATH (STD. NO. MD 580.08)	
1452 SF	MD 182 - STA. 210+00, LT TO STA. 211+47, LT
3273 SF	MD 182 - STA. 211+69, LT TO STA. 215+00, LT

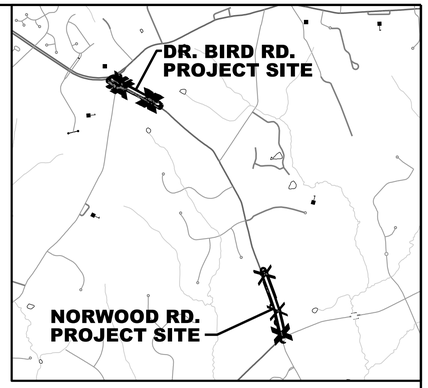
WOOD RAIL FENCE	
124 LF	MD 182 - STA. 210+00, 41.2' LT TO STA. 211+21, 39.2' LT
132 LF	MD 182 - STA. 210+00, 52.0' LT TO STA. 211+30, 51.9' LT
322 LF	MD 182 - STA. 211+81, 51.7' LT TO STA. 215+00, 51.0' LT
312 LF	MD 182 - STA. 211+90, 40.9' LT TO STA. 215+00, 40.3' LT

N

NAD 83 /11
NAVD 88

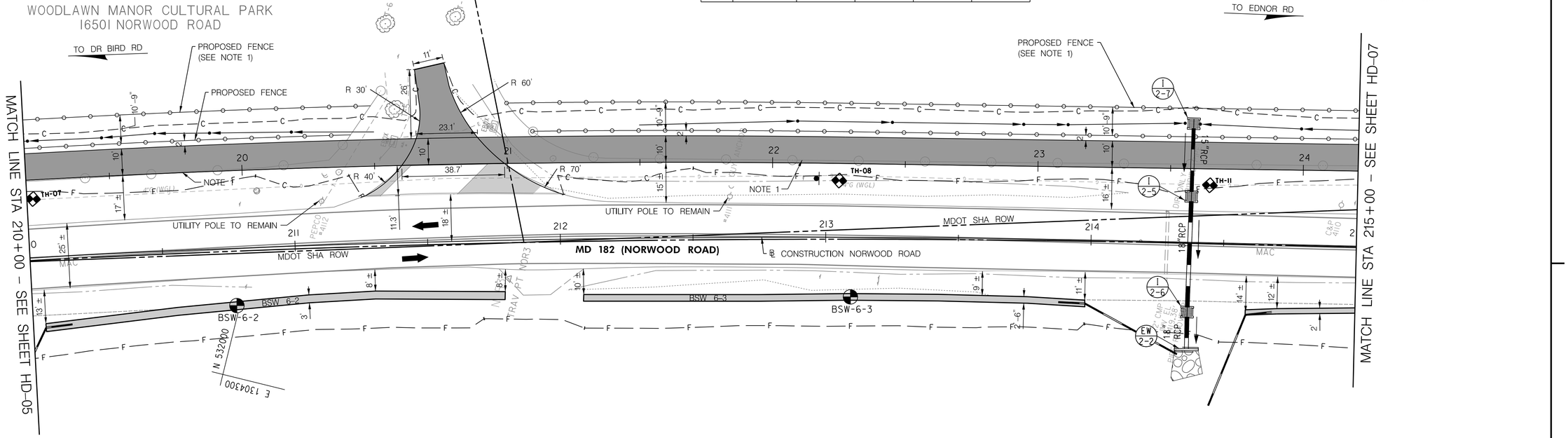
WOODLAWN MANOR CULTURAL PARK
16501 NORWOOD ROAD

TEST HOLE DATA					
NO.	UTILITY	NORTHING	EASTING	TOP UTILITY ELEVATION	SURFACE ELEVATION
TH-07	4" GAS	532,085.2900	1,304,347.0200	419.60	421.76
TH-08	4" GAS	531,791.9800	1,304,426.4900	419.22	424.74
TH-11	4" GAS	531,655.9400	1,304,458.2100	418.88	422.00



VICINITY MAP
SCALE: 1" = 2000'

WOODLAWN MANOR CULTURAL PARK
16501 NORWOOD ROAD



REMOVE AND SALVAGE EXISTING FENCE (SEE NOTE 1)	
141 LF	MD 182 - STA. 210+00, 28.8" LT TO STA. 211+30, 51.9' LT
328 LF	MD 182 - STA. 211+81, 51.7' LT TO STA. 215+00, 30.3' LT

REMOVE AND RESET EXISTING MAILBOX	
1 EA	MD 182 - STA. 211+43, 36.7' LT

LEGEND

- CONCRETE DRIVEWAY
- ASPHALT SHARED USE PATH
- FLEXIBLE SHARED USE PATH
- MILL AND OVERLAY
- CONCRETE SIDEWALK
- DETECTABLE WARNING SURFACE
- FULL DEPTH ASPHALT
- PAVEMENT /SIDEWALK REMOVAL

NOTES:

1. REMOVE, SALVAGE, AND RELOCATE EXISTING FENCE. SEE FENCE RELOCATION SCHEDULE (THIS SHEET) AND SPECIAL PROVISION FOR FENCE RELOCATION.
2. FENCE IMPACTS OR RELOCATIONS WILL BE COORDINATED WITH PROPERTY OWNERS FOR SUBSEQUENT SUBMISSIONS.

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

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Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ/RLW DRAWN BY KBJ CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
ROADWAY PLAN

SCALE 1" = 20' DATE AUGUST 2023

PLAN NO. MR2022024 | DWG. PS-06

DRAWING NO. PS-06 OF 07 | SHEET NO. 24 OF 103

PLOTTED: 8/11/2023
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PLOTTED: 8/11/2023
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ASPHALT SHARED USE PATH (STD. NO. MD 580.08)	
3081 SF	MD 182 - STA. 215+00, LT TO STA. 218+09, LT

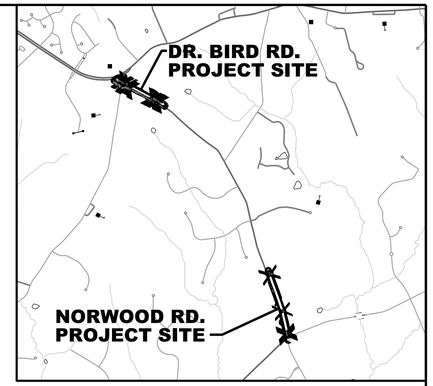
REMOVE AND SALVAGE EXISTING FENCE	
141 LF	MD 182 - STA. 215+00, 30.3' LT TO STA. 217+41, 54.1' LT

5 INCH CONCRETE SIDEWALK	
232 SF	MD 182 - STA. 218+09, LT TO STA. 218+31, LT
648 SF	MD 182 - STA. 218+69, LT TO STA. 219+24, LT
352 SF	MD 182 - STA. 219+10, RT TO STA. 219+35, RT

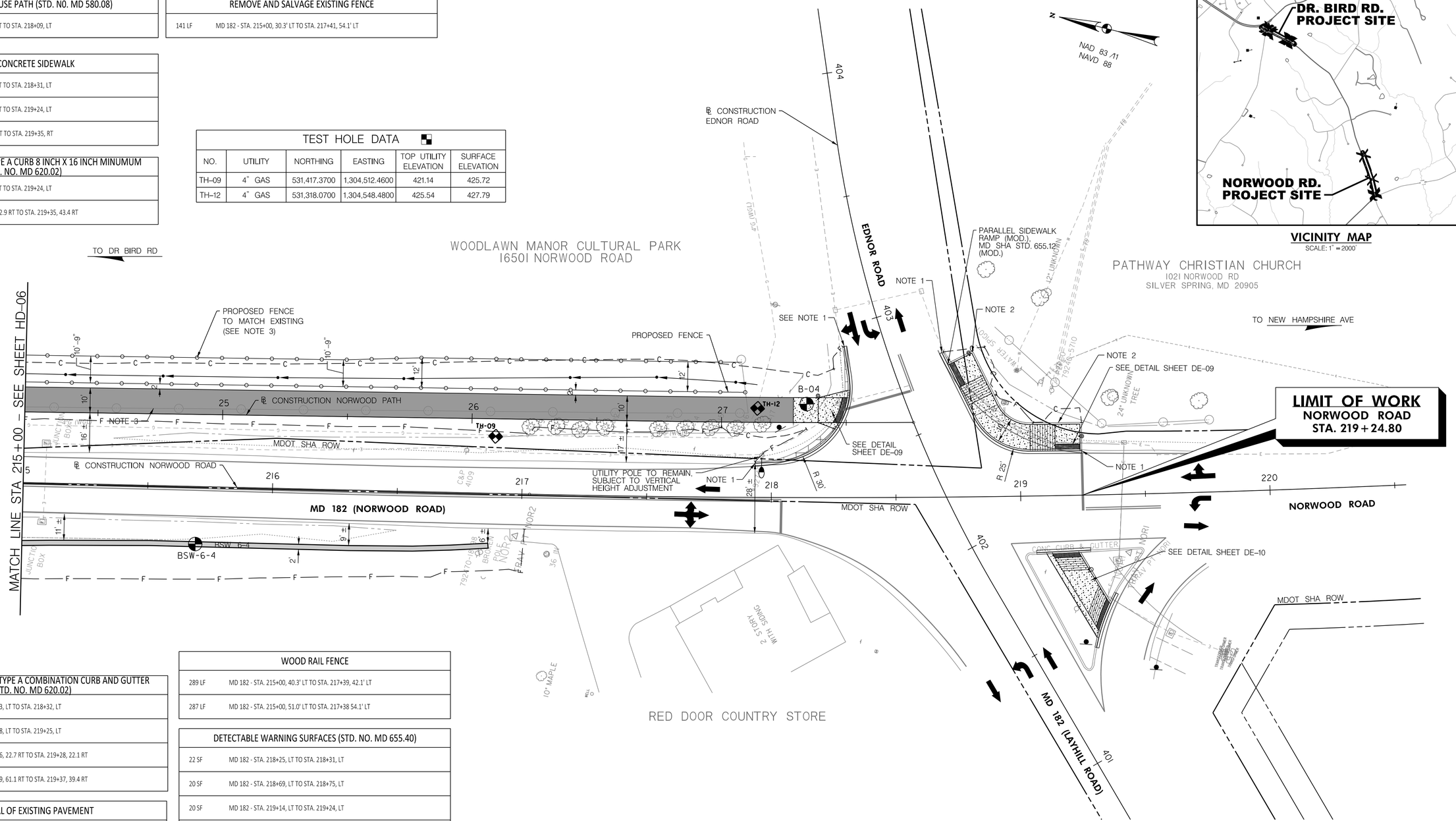
MDOT SHA STANDARD TYPE A CURB 8 INCH X 16 INCH MINUMUM (STD. NO. MD 620.02)	
81 LF	MD 182 - STA. 218+69, LT TO STA. 219+24, LT
24 LF	MD 182 - STA. 219+23, 22.9 RT TO STA. 219+35, 43.4 RT

TEST HOLE DATA

NO.	UTILITY	NORTHING	EASTING	TOP UTILITY ELEVATION	SURFACE ELEVATION
TH-09	4" GAS	531,417.3700	1,304,512.4600	421.14	425.72
TH-12	4" GAS	531,318.0700	1,304,548.4800	425.54	427.79



VICINITY MAP
SCALE: 1" = 2000'



MDOT SHA STANDARD TYPE A COMBINATION CURB AND GUTTER (STD. NO. MD 620.02)	
72 LF	MD 182 - STA. 217+93, LT TO STA. 218+32, LT
78 LF	MD 182 - STA. 218+68, LT TO STA. 219+25, LT
22 LF	MD 182 - STA. 219+06, 22.7 RT TO STA. 219+28, 22.1 RT
24 LF	MD 182 - STA. 219+29, 61.1 RT TO STA. 219+37, 39.4 RT

REMOVAL OF EXISTING PAVEMENT	
3 CY	MD 182 - STA. 218+00, LT TO STA. 218+26, LT
1 CY	EDNOR RD - STA. 402+76, LT TO STA. 402+88, LT

WOOD RAIL FENCE	
289 LF	MD 182 - STA. 215+00, 40.3' LT TO STA. 217+39, 42.1' LT
287 LF	MD 182 - STA. 215+00, 51.0' LT TO STA. 217+38 54.1' LT

DETECTABLE WARNING SURFACES (STD. NO. MD 655.40)	
22 SF	MD 182 - STA. 218+25, LT TO STA. 218+31, LT
20 SF	MD 182 - STA. 218+69, LT TO STA. 218+75, LT
20 SF	MD 182 - STA. 219+14, LT TO STA. 219+24, LT
19 SF	MD 182 - STA. 219+12, RT TO STA. 219+23, RT
19 SF	MD 182 - STA. 219+30, RT TO STA. 219+35, RT

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

LEGEND

- CONCRETE DRIVEWAY
- ASPHALT SHARED USE PATH
- FLEXIBLE SHARED USE PATH
- MILL AND OVERLAY
- CONCRETE SIDEWALK
- DETECTABLE WARNING SURFACE
- FULL DEPTH ASPHALT
- PAVEMENT /SIDEWALK REMOVAL

NOTES:

1. NOSE DOWN CURB OVER 2 FEET TO MATCH EXISTING EDGE OF ROAD.
2. ALL CONCRETE BACKING CURB SHALL BE PAID FOR AS MDOT SHA TYPE A CURB, ANY HEIGHT OR DEPTH; 12" MAXIMUM HEIGHT.
3. REMOVE, SALVAGE, AND RELOCATE EXISTING FENCE. SEE FENCE RELOCATION SCHEDULE (THIS SHEET) AND SPECIAL PROVISION FOR FENCE RELOCATION.
4. IF CONTRACTOR ENCOUNTERS LONGITUDINAL UNDERDRAIN, THEY SHALL REPAIR AND REPLACE IN ACCORDANCE WITH STD. MD 387.11.
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DEPARTMENT OF TRANSPORTATION
240-777-7263

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ/RLW DRAWN BY KBJ CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
ROADWAY PLAN

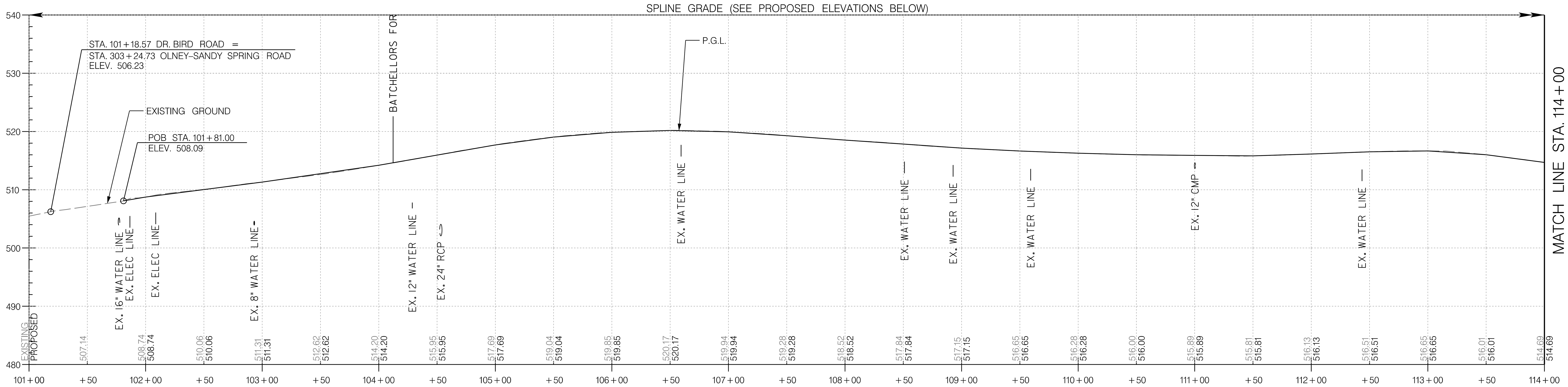
SCALE 1" = 20' DATE AUGUST 2023

DRAWING NO. PS-07 OF 07 SHEET NO. 25 OF 103

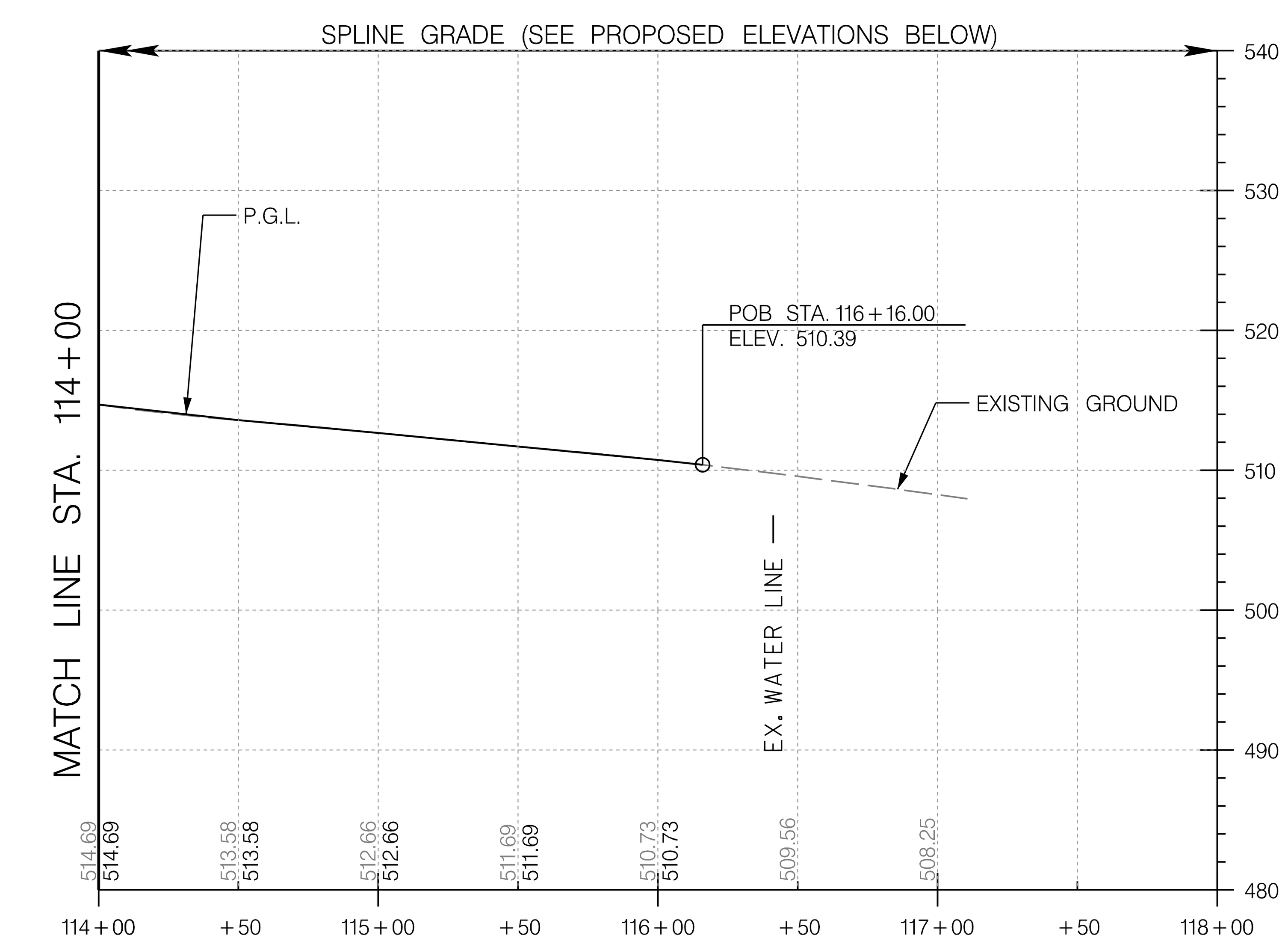
PLAN NO. MR2022024 DWG. PS-07

PLOTTED: 8/15/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pHD-0007_DrBird.dgn

PLOTTED: 8/15/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pHD-0007_DrBird.dgn



DR. BIRD ROAD – RESURFACING
STATION 101+81.00 TO STA. 114+00.00



DR. BIRD ROAD – RESURFACING
STATION 114+00.00 TO STA. 116+16.00

DATUM:
NAD 83/11
NAVD 88

50' 0 50' 100'
SCALE: 1"=50'

PLAN NO. MR2022024 DWG. PR-01

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GAITHERSBURG, MARYLAND

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DIVISION OF TRANSPORTATION ENGINEERING

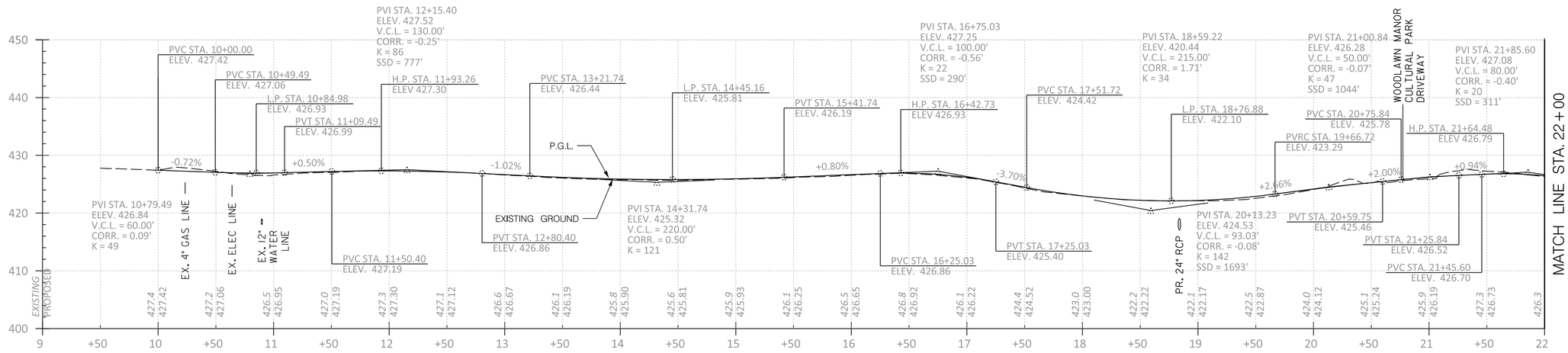
HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
PROFILE SHEET

SCALE Hor: 1"=50' Ver: 1"=10'
DATE AUGUST 2023

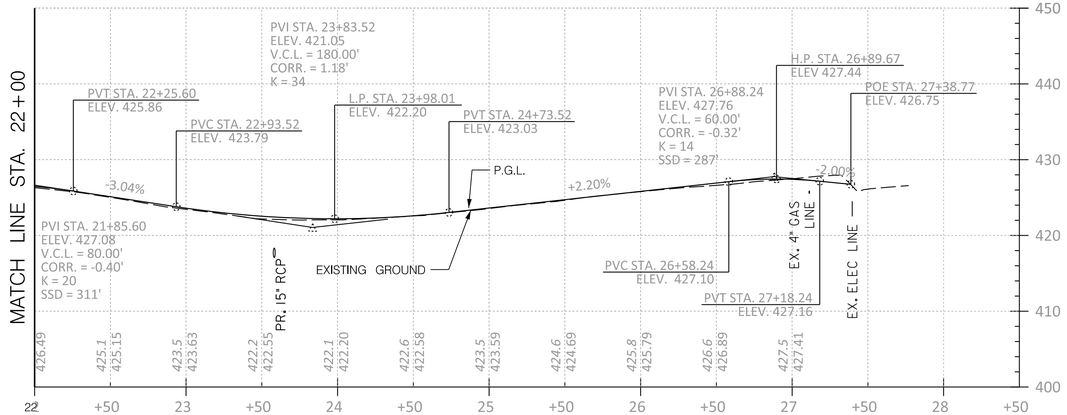
DESIGNED BY MEG DRAWN BY MEG CHECKED BY TMB

DRAWING NO. PR-01 OF 02

I:\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pHP-0001_DrBird.dgn



NORWOOD ROAD PATH
STATION 10+00.00 TO STA. 22+00.00



NORWOOD ROAD PATH
STATION 22+00.00 TO STA. 27+38.77

DATUM:
NAD 83/11
NAVD 88

50' 0 50' 100'
SCALE: 1"=50'

PLAN NO. MR2022024 | DWG. PR-02

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
PROFILE SHEET

SCALE Hor: 1"=50' Ver: 1"=10'
DATE AUGUST 2023

DRAWING NO. PR-02 OF 02
SHEET NO. 27 OF 103

Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pHP-0002_DrBird.dgn

TRAFFIC CONTROL PLAN – GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL STANDARDS, THE GENERAL NOTES AND STANDARDS PROVIDED IN CATEGORY "1" OF THE MDOT SHA BOOK OF STANDARDS, THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD MUTCD) AND SUBSEQUENT REVISIONS ADOPTED BY THE STATE OF MARYLAND, AND THESE PLANS.
2. NO WORK IS TO BEGIN UNTIL ADVANCE WARNING SIGNS, DRUMS AND TEMPORARY PAVEMENT MARKINGS ARE IN PLACE AND OPERATIONAL.
3. THE CONTRACTOR SHALL NOTIFY ALL TRANSIT AGENCIES WITH ROUTES IMPACTED BY MOT OPERATIONS AND PROVIDE IMPACT DURATION PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.
4. EXCAVATIONS SHALL BE BACKFILLED WITH GRADED AGGREGATE BASE PRIOR TO THE END OF THE WORK DAY IN CONFORMANCE WITH SHA STD. ND. MD 104.01–28.
5. FOR OFF–PEAK HOUR WORK ZONES, TYPICAL APPLICATIONS FROM CATEGORY 1 OF MDOT SHA BOOK OF STANDARDS FOR HIGHWAY AND INCIDENTAL STRUCTURES IN ADDITION TO THOSE CITED ON THESE PLANS MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER. TYPICAL APPLICATIONS TO BE USED FOR OFF–PEAK HOUR WORK MAY BE MODIFIED AS REQUIRED BASED ON FIELD CONDITIONS, AS DIRECTED BY THE ENGINEER.
6. THE SUGGESTED SEQUENCE OF CONSTRUCTION LISTS ONLY MAJOR ITEMS OF WORK AS SHOWN ON THESE PLANS.
7. THE CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS THROUGHOUT CONSTRUCTION AND SHALL MAINTAIN ACCESS TO ENTRANCES, DRIVEWAYS, AND SIDE STREETS LOCATED WITHIN THE PROJECT LIMITS AT ALL TIMES. IN THE CASE WHERE AN ACCESS NEEDS TO BE CLOSED, THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER AT LEAST 72 HOURS IN ADVANCE.
8. ALL BARRICADES, SIGNS, AND OTHER TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD MUTCD) AND THE MARYLAND STANDARD SIGN BOOK.
9. DRUMS FOR MAINTENANCE OF TRAFFIC ARE SHOWN GRAPHICALLY AND DO NOT REPRESENT THE ACTUAL NUMBER OF DRUMS NEEDED. DRUM AND SIGN SPACING SHALL BE IN ACCORDANCE WITH MONTGOMERY COUNTY'S TEMPORARY TRAFFIC CONTROL STD. NO. TCP–100.01 AND MD SHA STD. NO. 104.01–02.
10. CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE STORED OFF THE TRAVEL LANES AND PEDESTRIAN FACILITIES AT ALL TIMES.
11. EXISTING REGULATORY SIGNS IN THE WORK ZONE SHALL BE MAINTAINED AT ALL TIMES AS DIRECTED BY THE ENGINEER. SIGNS THAT ARE NOT APPLICABLE SHALL BE REMOVED OR COMPLETELY COVERED WITH NONTRANSPARENT MATERIAL.
12. MAINTAIN POSITIVE DRAINAGE ALONG THE ROADWAY SURFACE THROUGHOUT CONSTRUCTION.
13. TEMPORARY PAVEMENT MARKINGS SHALL BE AS SHOWN ON THE PLANS. EXISTING PAVEMENT MARKINGS WHICH ARE NO LONGER APPLICABLE SHALL BE REMOVED AS DIRECTED BY ENGINEER.
14. ALL SIGNS ON SIDE STREETS SHALL BE PLACED 150 FEET FROM THE WORK ZONE, OR AS SHOWN ON PLANS SHALL BE 150 FEET (MIN.) FROM THE WORK ZONE, OR AS SHOWN ON THE PLAN AND AS DIRECTED BY THE ENGINEER.
15. PERMANENT MARKINGS DAMAGED SHALL BE REPAIRED AT THE DISCRETION OF THE ENGINEER.
16. LANE CLOSURES ARE PROHIBITED BETWEEN THE HOURS OF 6 AM TO 9 AM AND 3 PM TO 7 PM.
17. THE CONTRACTOR IS TO MAINTAIN ACCESS /EGRESS FOR ALL EMERGENCY VEHICLES AT ALL TIMES.

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATIONS (TTCTA)

THE FOLLOWING TTCTA FROM THE MDOT SHA'S BOOK OF STANDARDS ARE TO BE FOLLOWED AS APPROPRIATE:

MD 104.02–01 TO MD 104.02–02	– SHOULDER WORK
MD 104.02–07 TO MD 104.02–08	– LANE SHIFT
MD 104.02–09 TO MD 104.02–10	– FLAGGING OPERATION
MD 104.02–13 TO MD 104.02–14	– INTERSECTION FLAGGING OPERATION

THE FOLLOWING TTCTA FROM THE MONTGOMERY COUNTY WORK ZONE TRAFFIC CONTROL STANDARDS ARE TO BE FOLLOWED AS APPROPRIATE:

MCDOT TCP–101.01	– SHOULDER WORK
MCDOT TCP–101.02	– OFF THE ROAD AND SHOULDER
MCDOT TCP–102.02	– FLAGGING CONTROL NON–INTERSECTION
MCDOT TCP–105.01	– FLAGGING CONTROL AT 4 – LEG INTERSECTION

SEQUENCE OF CONSTRUCTION

PHASE 1, FROM STA. 101+44 TO STA. 106+34 – DR. BIRD ROAD EASTBOUND CONSTRUCTION

1. INSTALL MAINTENANCE OF TRAFFIC DEVICES AND SIGNS PER THE MAINTENANCE OF TRAFFIC PLANS. REFER TO SHEET DWG. TCP–02.
2. INSTALL ALL ADVANCE WARNING AND INFORMATION SIGNS. INSTALL TRAFFIC CONTROL DEVICES.
3. ADJUST AND RELOCATE EXISTING UTILITIES, HYDRANTS, UTILITY POLES, MANHOLES, AND WATER VALVES.
4. INSTALL EROSION CONTROL MEASURES ALONG DR. BIRD ROAD TO PROTECT AREAS TO BE DISTURBED DURING THIS PHASE.
5. CLEAR AND GRUB SITE.
6. CONSTRUCT PROPOSED FULL DEPTH ASPHALT WIDENING AND CURB AND GUTTER.

PHASE 2, FROM STA. 101+75 TO STA. 116+47 – DR. BIRD ROAD WESTBOUND CONSTRUCTION

1. INSTALL MAINTENANCE OF TRAFFIC DEVICES AND SIGNS PER THE MAINTENANCE OF TRAFFIC PLANS. REFER TO SHEETS DWG. TCP–03 AND DWG. TCP–04.
2. INSTALL ALL ADVANCE WARNING AND INFORMATION SIGNS. INSTALL TRAFFIC CONTROL DEVICES.
3. ADJUST AND RELOCATE EXISTING UTILITIES, UTILITY POLES, MANHOLES, AND WATER VALVES.
4. INSTALL EROSION CONTROL MEASURES ALONG DR. BIRD ROAD TO PROTECT AREAS TO BE DISTURBED DURING THIS PHASE.
5. CLEAR AND GRUB SITE.
6. CONSTRUCT PROPOSED CURB AND GUTTER.
7. CONSTRUCT PROPOSED PATH, DRIVEWAY ENTRANCE, SWALES, DITCHES, AND ASSOCIATED PAVEMENT REMOVAL.

PHASE 3, FROM STA. 101+80 TO STA. 116+60 – DR. BIRD ROAD MILLING / RESURFACING

PLANS NOT PROVIDED, FOLLOW TYPICAL LANE CLOSURES TO COMPLETE MILL AND OVERLAY WORK FOR PHASE 3

LIMITS PER WORK DAY /NIGHT WILL VARY AS TO THE LENGTH OF WORK WHICH CAN BE MILLED /RESURFACED WITHIN THE WORK DAY. MILLED SURFACE SHALL NOT BE EXPOSED TO TRAFFIC UNLESS OTHERWISE APPROVED BY THE ENGINEER.

1. UTILIZE MARYLAND TRAFFIC CONTROL MD SHA STD. NO. 104.02–08 DURING OFF PEAK HOURS.
2. INSTALL ALL ADVANCE WARNING AND INFORMATION SIGNS. INSTALL TRAFFIC CONTROL DEVICES.
3. PERFORM PAVEMENT MILLING /RESURFACING OPERATIONS WITHIN THE PROJECT LIMITS AS DETAILED ON THE ROADWAY PLANS. INSTALL TEMPORARY PAVEMENT MARKINGS AS REQUIRED.
4. INSTALL FINAL PAVEMENT MARKINGS AS SHOWN ON THE SIGNING AND PAVEMENT MARKING PLANS.

PHASE 4, FROM STA. 217+93 TO STA. 219+25 – NORWOOD ROAD AND EDNOR ROAD INTERSECTION, CURB RECONSTRUCTION

1. INSTALL MAINTENANCE OF TRAFFIC DEVICES AND SIGNS PER THE MAINTENANCE OF TRAFFIC PLANS. REFER TO SHEET DWG. TCP–06.
2. INSTALL ALL ADVANCE WARNING AND INFORMATION SIGNS. INSTALL TRAFFIC CONTROL DEVICES.
3. ADJUST AND RELOCATE EXISTING UTILITIES, UTILITY POLES, MANHOLES, AND WATER VALVES.
4. INSTALL EROSION CONTROL MEASURES ALONG NORWOOD ROAD TO PROTECT AREAS TO BE DISTURBED DURING THIS PHASE.
5. CONSTRUCT PROPOSED CURB AND GUTTER AND PEDESTRIAN FACILITIES.

PHASE 5, FROM STA. 200+88 TO STA. 219+25 – NORWOOD ROAD SHARED USE PATH

1. INSTALL MAINTENANCE OF TRAFFIC DEVICES AND SIGNS PER THE MAINTENANCE OF TRAFFIC PLANS. REFER TO SHEETS DWG. TCP–05 AND DWG. TCP–06.
2. INSTALL ALL ADVANCE WARNING AND INFORMATION SIGNS. INSTALL TRAFFIC CONTROL DEVICES.
3. ADJUST AND RELOCATE EXISTING UTILITIES, UTILITY POLES, MANHOLES, AND WATER VALVES.
4. INSTALL EROSION CONTROL MEASURES ALONG NORWOOD ROAD TO PROTECT AREAS TO BE DISTURBED DURING THIS PHASE.
5. CLEAR AND GRUB SITE.
6. CONSTRUCT PROPOSED PATH, DRIVEWAY ENTRANCE, SWALES, DITCHES, AND ASSOCIATED PAVEMENT REMOVAL.

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240–777–7263

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Chief, Transportation Planning and Design Section — Date

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Chief, Division of Transportation Engineering — Date

DESIGNED BY KBJ DRAWN BY KBJ CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
TRAFFIC CONTROL PLAN – NOTES

SCALE N/A DATE AUGUST 2023

DRAWING NO. TCP–01 OF SHEET NO. 28 OF 103

PLAN NO. MR2022024 | DWG. TCP–01

PLOTTED: 8/1/2023
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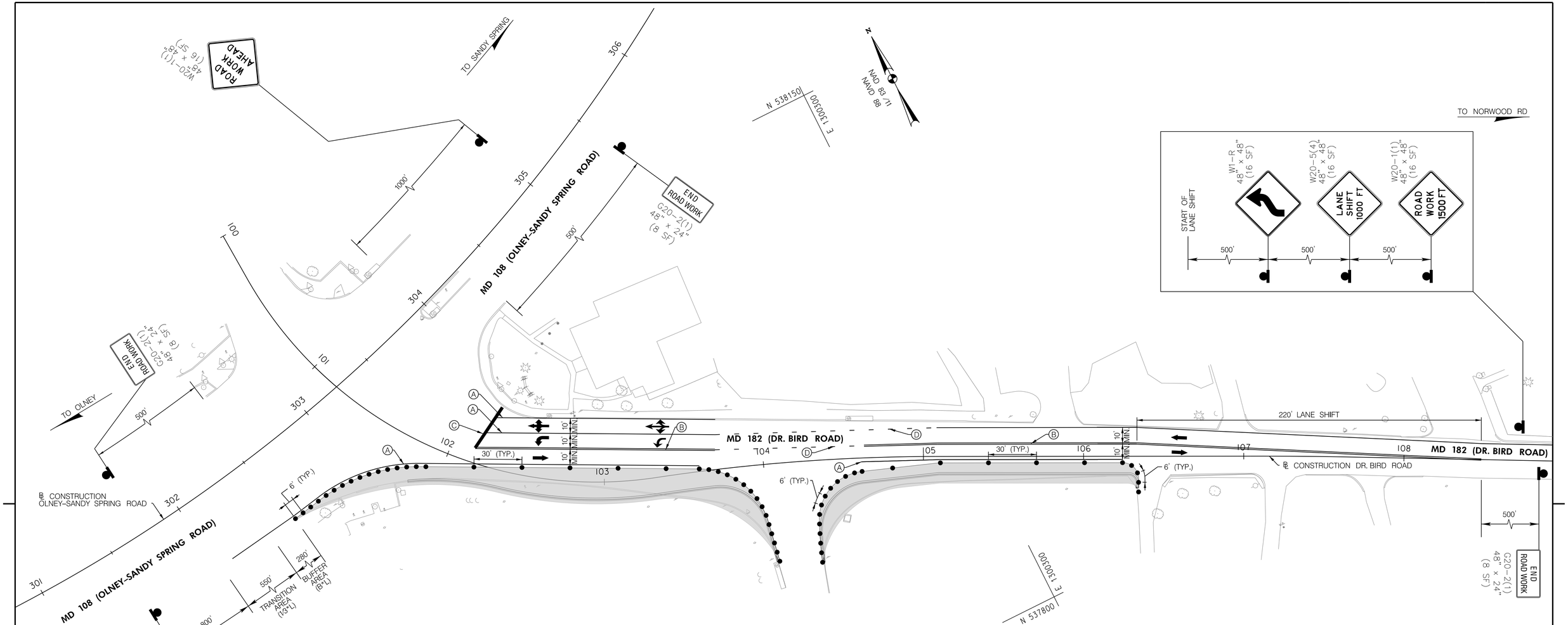

PAVEMENT MARKING LEGEND

- (A) 5 IN WHITE NON TOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT – SOLID
- (B) 5 IN YELLOW NON TOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT – DOUBLE SOLID
- (C) 24 IN WHITE NON TOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT – SOLID
- (D) 5 IN WHITE NON TOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT – 3' LINE 9' GAP

LEGEND

- CURRENT PHASE WORK ZONE
- TYPE III BARRICADE (8' WIDE)
- MAINTENANCE OF TRAFFIC DRUMS
- PROPOSED TEMPORARY SIGN AND POST
- TRAFFIC FLOW ARROW

SCALE: 1" = 30'

DWG. TCP-02

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DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
TRAFFIC CONTROL PLAN – PHASE 1

SCALE 1"=30' DATE AUGUST 2023

DRAWING NO. TCP-02 OF 07 SHEET NO. 29 OF 103

PLOTTED: 8/15/2023
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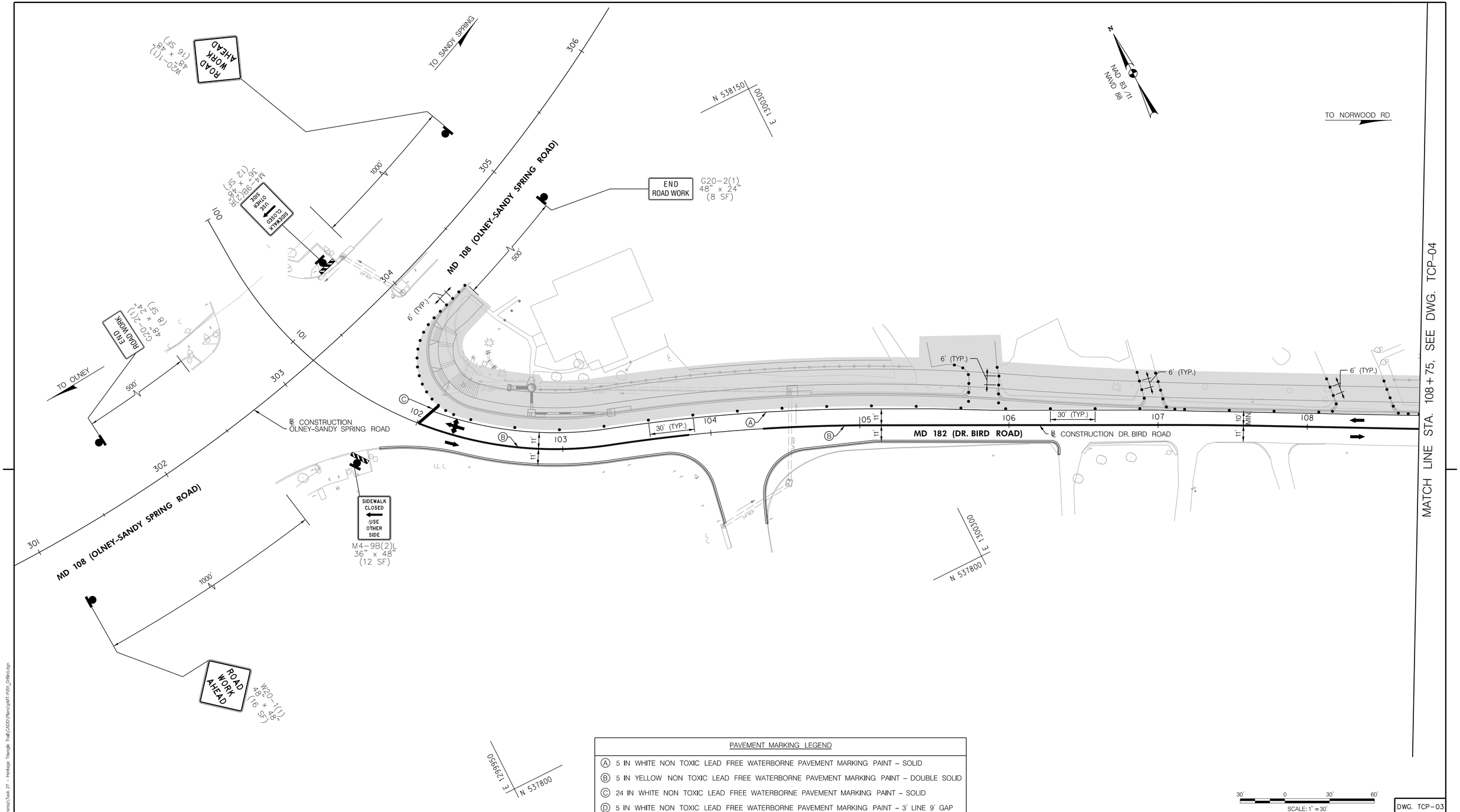

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LEGEND

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- TYPE III BARRICADE (8' WIDE)
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SCALE: 1" = 30'

DWG. TCP-03

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HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
TRAFFIC CONTROL PLAN – PHASE 2

SCALE 1"=30' DATE AUGUST 2023

DRAWING NO. TCP-03 OF 07 SHEET NO. 30 OF 103

PLOTTED: 8/15/2023
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PLOTTED: 8/15/2023
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MATCH LINE STA. 108+75, SEE DWG. TCP-03

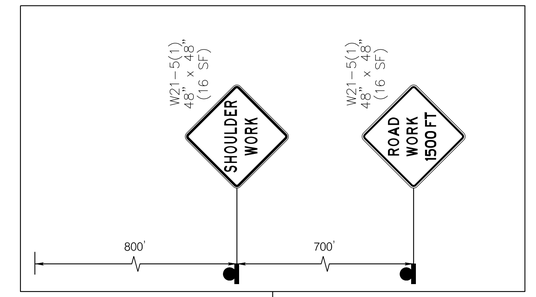
TO MD-108

TO NORWOOD RD

N 537700
E 1307250

NAD 83 /11
NAVD 88

N



INLET AND ASSOCIATED PIPES TO BE INSTALLED UTILIZING FLAGGING OPERATION (MD SHA STD. 104.02-10) WHERE A 20' MINIMUM ROADWAY WIDTH CANNOT BE MAINTAINED.

EX I-5

I 1-4

N 537700
E 1309900

6' (TYP.)

6' (TYP.)

6' (TYP.)

6' (TYP.)

109 (A) (B) 10' MIN 11'

110

30' (TYP.)

111

112

113

30' (TYP.)

114

115

10' MIN 11'

(A) (B) 116

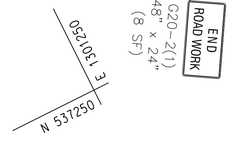
117

MD 182 (DR. BIRD ROAD)

℄ CONSTRUCTION DR. BIRD ROAD

MD 182 (DR. BIRD ROAD)

500'



E 1307250
N 537250

30' 0 30' 60'
SCALE: 1" = 30'

DWG. TCP-04

PAVEMENT MARKING LEGEND

(A) 5 IN WHITE NON TOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT – SOLID
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DR. BIRD / NORWOOD ROAD
SHARED USE PATH
TRAFFIC CONTROL PLAN – PHASE 2

SCALE 1"=30' DATE AUGUST 2023

DRAWING NO. TCP-04 OF 07 SHEET NO. 31 OF 103

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PLOTTED: 8/11/2023
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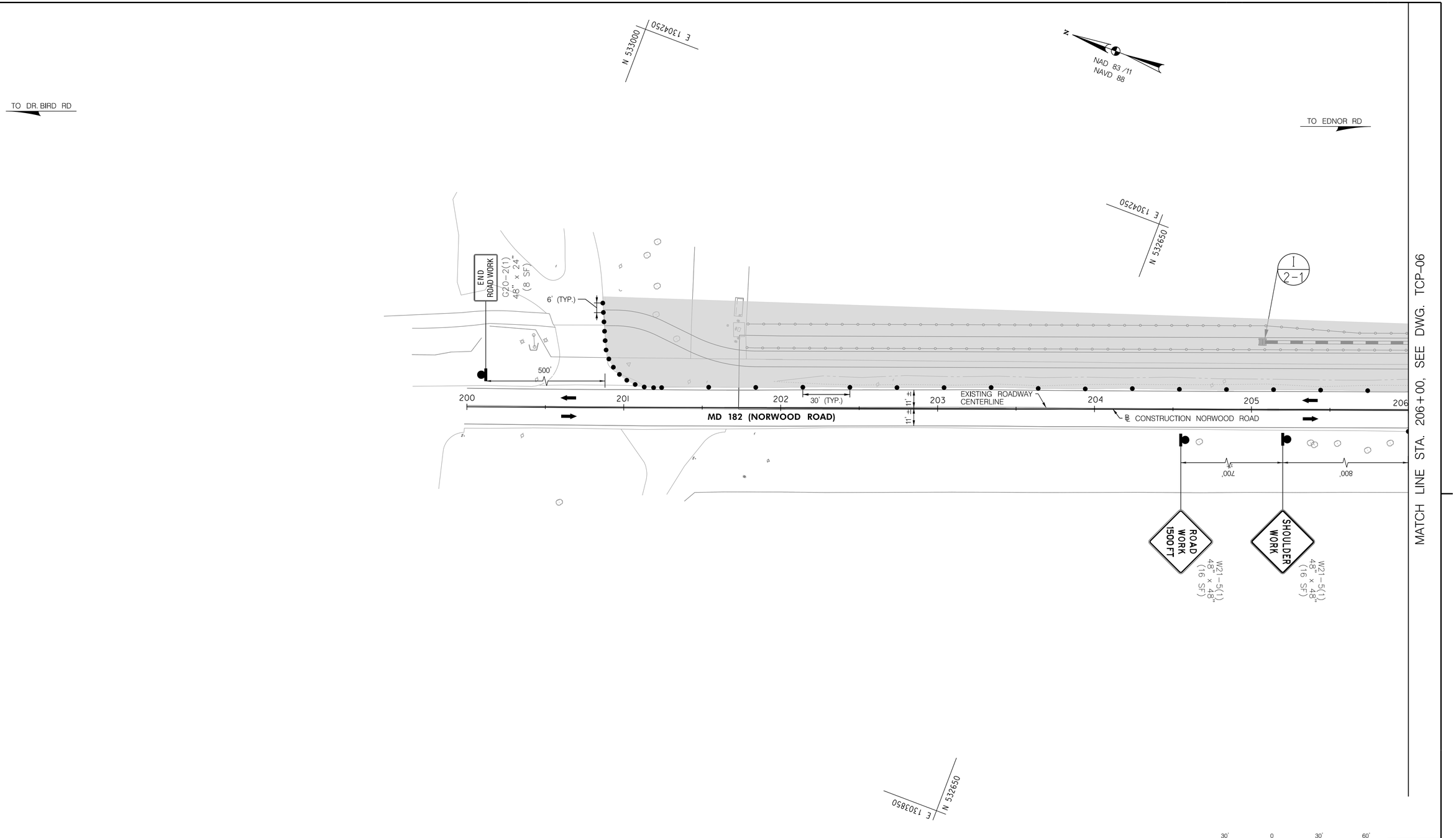

DWG. TCP-05

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LEGEND

- CURRENT PHASE WORK ZONE
- TYPE III BARRICADE (8' WIDE)
- MAINTENANCE OF TRAFFIC DRUMS
- PROPOSED TEMPORARY SIGN AND POST
- TRAFFIC FLOW ARROW

OWNER/ADDRESS:
MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
100 EDISON PARK DRIVE
GAITHERSBURG, MARYLAND

CONTACT:
REBECCA PARK
REBECCA.PARK@MONTGOMERYCOUNTYMD.GOV
MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
240-777-7263

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY MEG DRAWN BY MEG CHECKED BY TMB

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
TRAFFIC CONTROL PLAN – PHASE 4 & 5

SCALE 1"=30' DATE AUGUST 2023

DRAWING NO. TCP-05 OF 07 SHEET NO. 32 OF 103

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\ls\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pMT-P401_DrBird.dgn

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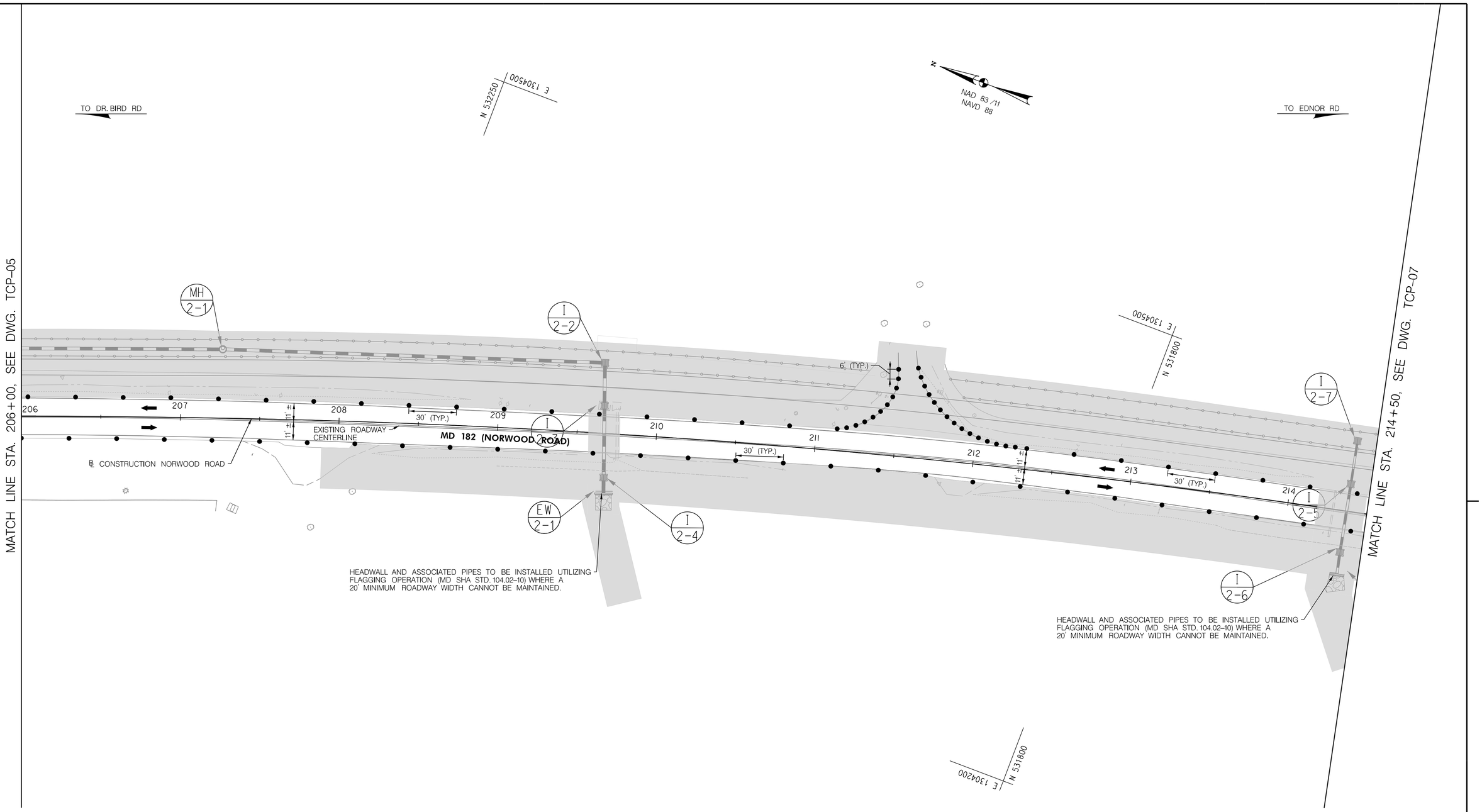

30' 0 30' 60'
SCALE: 1" = 30'

DWG. TCP-06

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Chief, Division of Transportation Engineering — Date

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
TRAFFIC CONTROL PLAN – PHASE 4 & 5

SCALE 1"=30' DATE AUGUST 2023

DRAWING NO. TCP-06 OF 07 SHEET NO. 33 OF 103

PLOTTED: 8/11/2023
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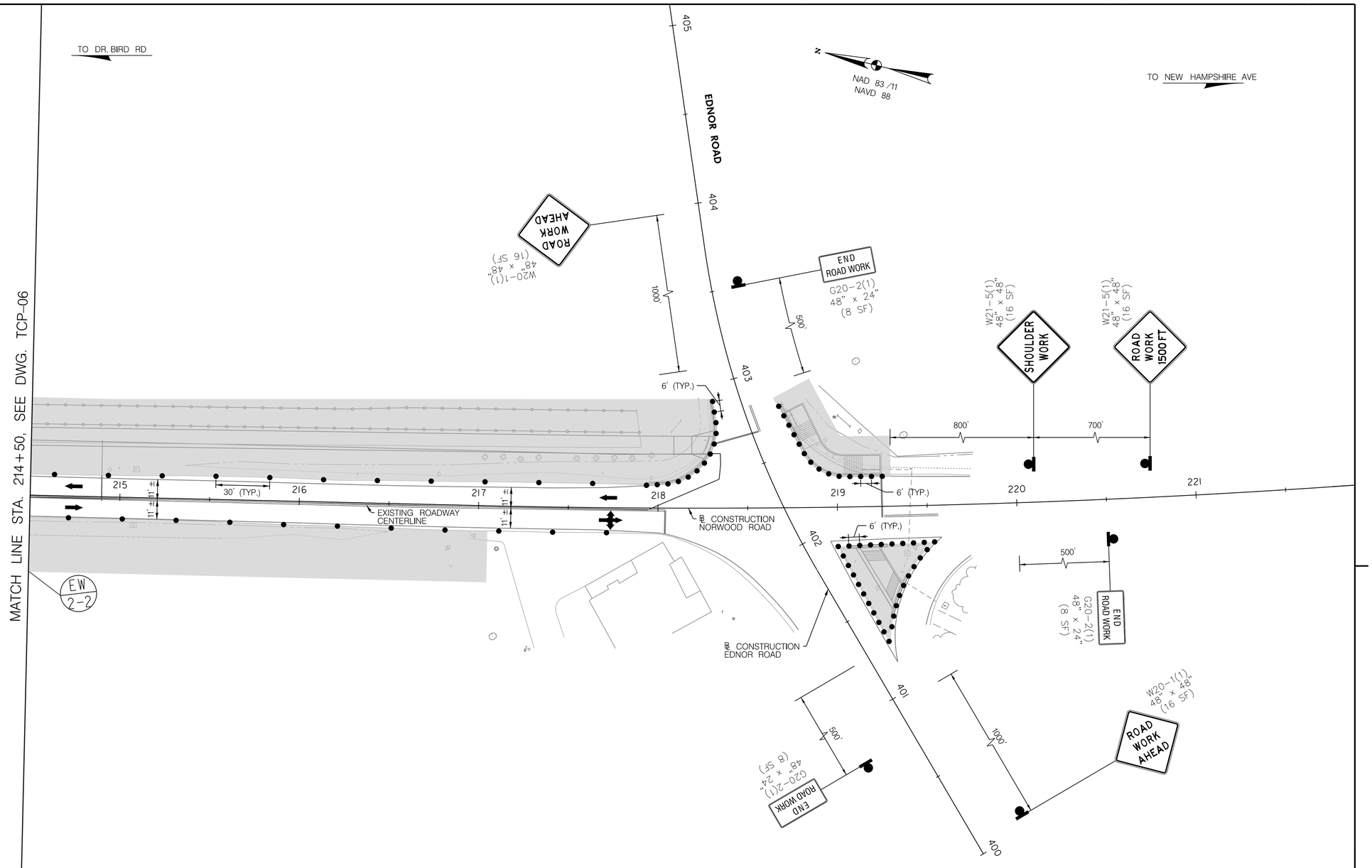

DWG. TCP-07

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LEGEND

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HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
TRAFFIC CONTROL PLAN – PHASE 4 & 5

SCALE 1"=30' DATE AUGUST 2023

DRAWING NO. TCP-07 OF 07 SHEET NO. 34 OF 103

PLOTTED: 8/11/2023
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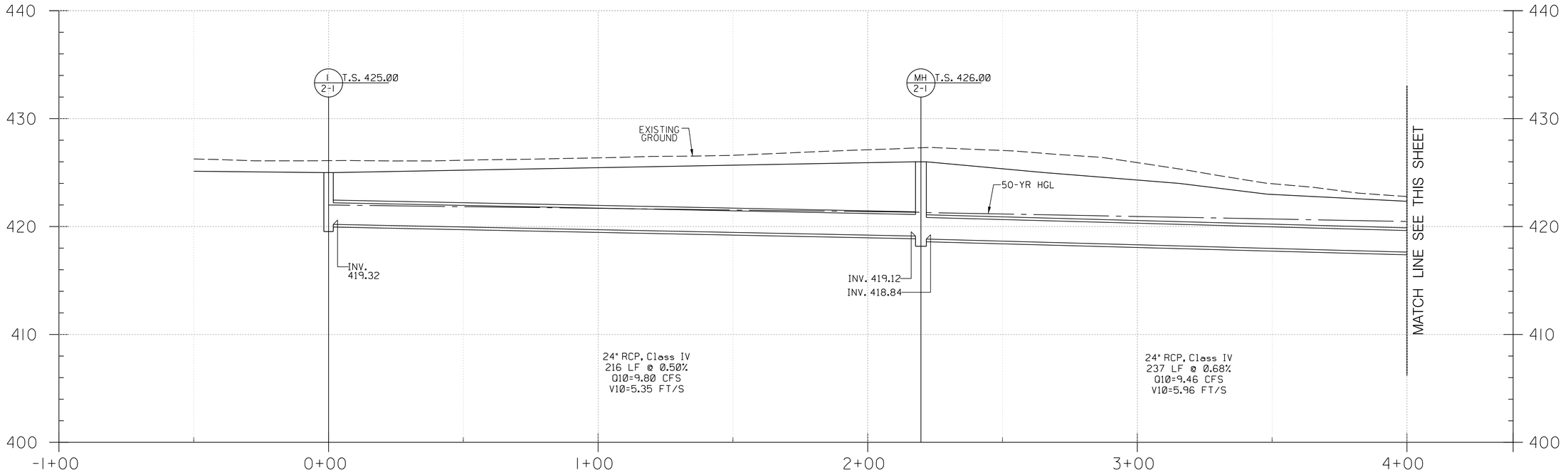
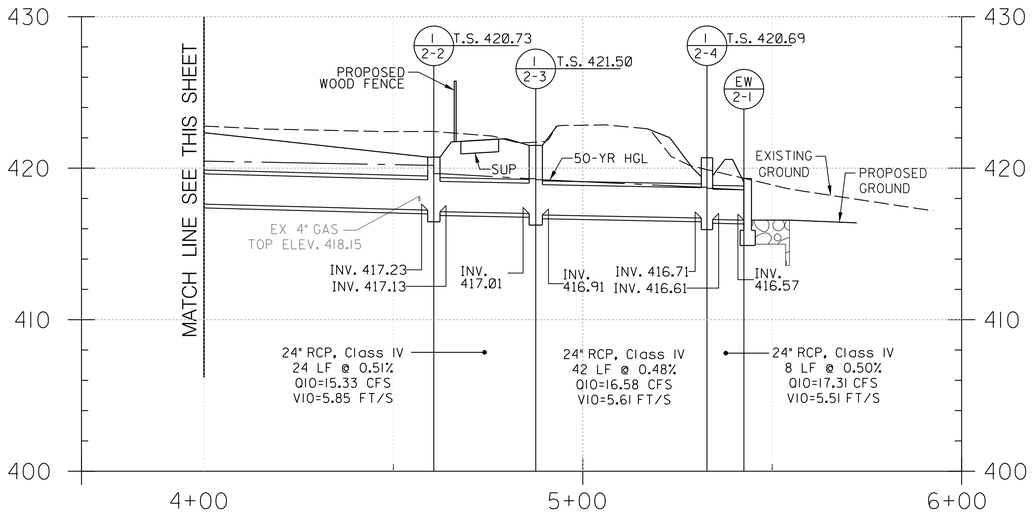
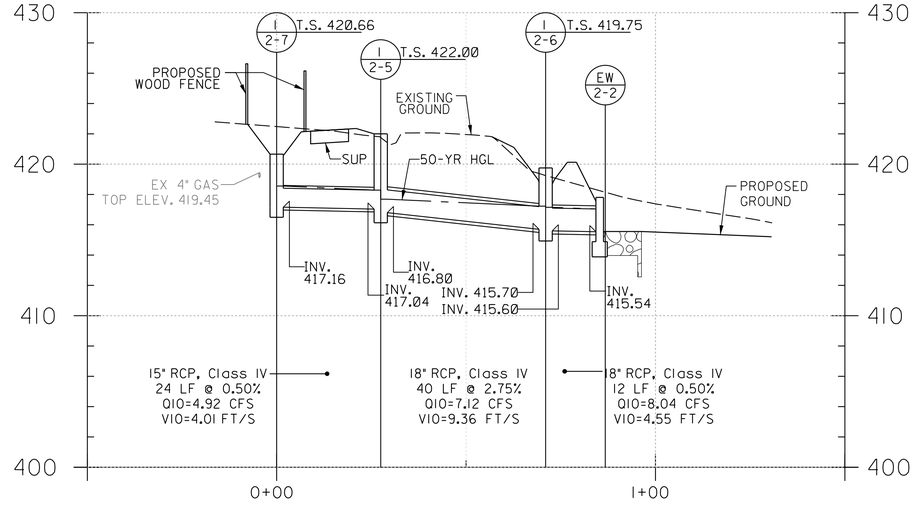


FROM EW-2-1 TO I-2-1



FROM EW-2-1 TO I-2-1 CONTINUED



FROM EW-2-2 TO I-2-7

5' 0 5' 10'
VERTICAL SCALE: 1" = 5'

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

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APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY ABD DRAWN BY ABD CHECKED BY SBP

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
DRAINAGE PROFILES

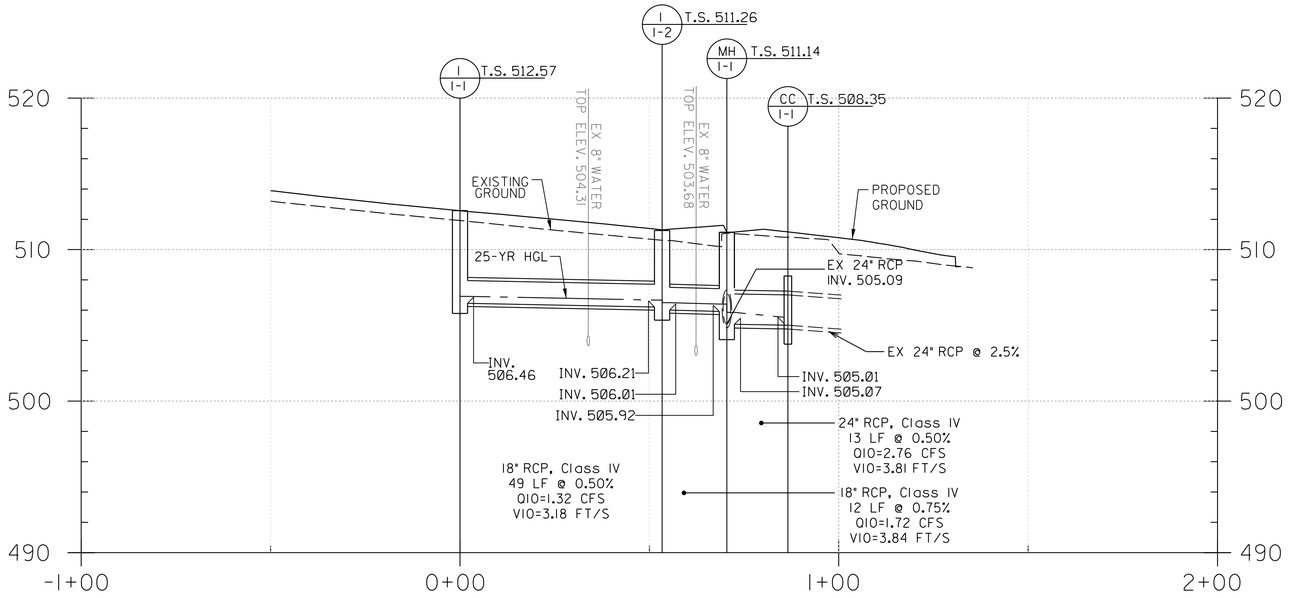
SCALE AS SHOWN DATE AUGUST 2023

DRAWING NO. DP-01 OF 02 SHEET NO. 35 OF 103

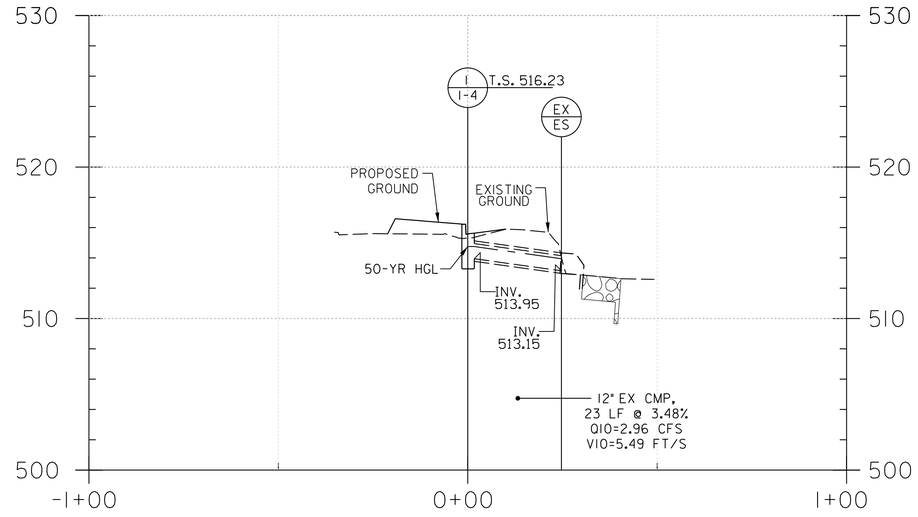
PLAN NO. MR2022024 DWG. DP-01

PLOTTED: 8/11/2023
FILE: \\adc.rkk.com\ti\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pDP-0001_DrBird.dgn

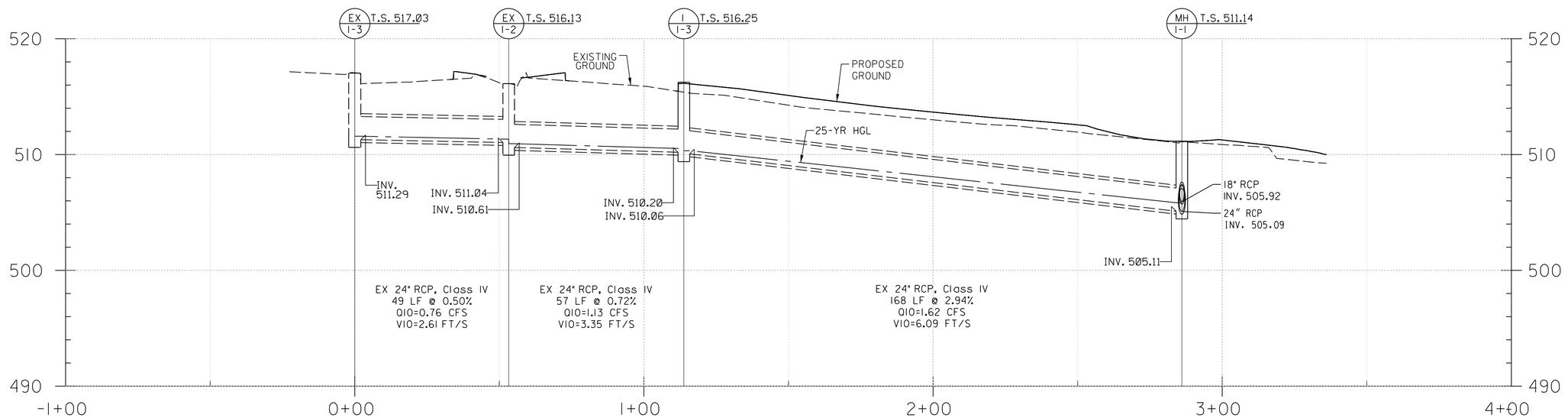
PLOTTED: 8/11/2023
FILE: \\adc.rkk.com\ti\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pDP-0001_DrBird.dgn



FROM MH-1-1 TO I-1-1



FROM EX-ES TO I-1-4



FROM MH-1-1 TO EX-I-3

5' 0 5' 10'
VERTICAL SCALE: 1" = 5'

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

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Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY ABD DRAWN BY ABD CHECKED BY SBP

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
DRAINAGE PROFILES

SCALE AS SHOWN DATE AUGUST 2023

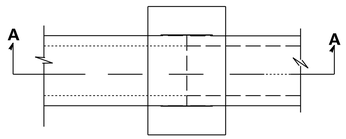
DRAWING NO. DP-02 OF 02 | SHEET NO. 36 OF 103

PLAN NO. MR2022024 | DWG. DP-02

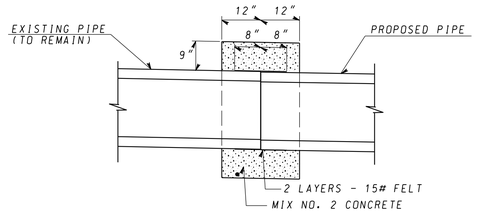
PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pDP-0002_DrBird.dgn

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pDP-0002_DrBird.dgn

CONCRETE COLLAR



PLAN



SECTION A-A

NOTES

CONCRETE COLLAR SHALL BE CONSTRUCTED OF PLAIN CONCRETE (MIX NO.2) SIZE, TYPE & DIRECTION OF CONNECTION WILL VARY TO SUIT CONDITIONS.

CONCRETE COLLAR SHALL BE WRAPPED WITH DOUBLE LAYER OF 15# FELT PRIOR TO PLACEMENT OF CONCRETE COLLAR.

NEW PIPE STUB SHALL MATCH THE SIZE, TYPE, DIRECTION AND SLOPE OF THE EXISTING PIPE AT THE CONCRETE COLLAR.

STRUCTURE SCHEDULE						
STR. NO.	STATION	OFFSET	DESCRIPTION	MD. STANDARD NO.	T.S./T.G.	REMARKS
CC-1	102+58	38.99 LT	CONCRETE COLLAR	SEE THIS SHEET	N/A	
MH 1-1	102+76	40.60 LT	60" DIA. PRECAST MANHOLE	MD 384.01	511.14	
I 1-2	102+81	21.07 LT	PRECAST OR CAST IN PLACE 4'X4' SQUARE COG INLET 10'	MD-374.51	511.26	
I 1-1	103+41	20.97 LT	PRECAST OR CAST IN PLACE 4'X4' SQUARE COG INLET 15'	MD-374.51	512.57	
I 1-3	104+60	20.97 LT	PRECAST OR CAST IN PLACE 6'X6' SQUARE COG INLET 15'	MD 374.51	516.25	LARGER BOX SIZE TO INCORPORATE EXISTING PIPE LOCATION
I 1-4	111+00	9.58 LT	STANDARD WR INLET	MD 374.04	516.23	
I 2-1	014+24	16.89 LT	STANDARD DOUBLE OPENING TYPE K INLET OPEN - END GRATE	MD 378.05	425.00	
MH 2-1	016+43	16.58 LT	48" DIA. PRECAST MANHOLE FOR 12" TO 24" PIPES	MD 384.01	426.00	
I 2-2	018+83	15.22 LT	STANDARD DOUBLE OPENING TYPE K INLET OPEN - END GRATE	MD 378.05	420.73	
I 2-3	018+85	11.8 RT	STANDARD DOUBLE OPENING TYPE K INLET OPEN - END GRATE	MD 378.05	421.00	
I 2-4	209+68	27.83 RT	STANDARD DOUBLE OPENING TYPE K INLET OPEN-END GRATE NON-TRAFFIC AREAS	MD 378.03	420.69	
EW 2-1	209+69	37.59 RT	STANDARD TYPE C ENDWALL METAL OR CONCRETE ROUND 24" PIPE	MD 354.01	N/A	
I 2-5	023+58	10.53 RT	STANDARD DOUBLE OPENING TYPE K INLET OPEN - END GRATE	MD 378.05	422.00	
I 2-6	214+37	26.31 RT	STANDARD DOUBLE OPENING TYPE K INLET OPEN-END GRATE NON-TRAFFIC AREAS	MD 378.03	419.75	
I 2-7	023+58	16.93 LT	STANDARD DOUBLE OPENING TYPE K INLET OPEN - END GRATE	MD 378.05	420.66	
EW 2-2	214+37	40.08 RT	STANDARD TYPE C ENDWALL METAL OR CONCRETE ROUND 18" PIPE	MD 354.01	N/A	

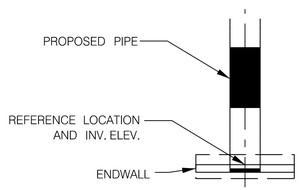
PIPE SCHEDULE							
FROM	TO	SIZE (IN.)	MATERIAL	LENGTH (L.F.)	INV. IN	INV. OUT	REMARKS
MH 1-1	CC-1	24	R.C.P CLASS IV	13	505.07	505.01	
I 1-2	MH 1-1	18	R.C.P CLASS IV	12	506.01	505.92	
I 1-1	I 1-2	18	R.C.P CLASS IV	49	506.46	506.21	
I 2-1	MH 2-1	24	R.C.P CLASS IV	216	419.32	419.12	
MH 2-1	I 2-2	24	R.C.P CLASS IV	237	418.84	417.23	
I 2-2	I 2-3	24	R.C.P CLASS IV	24	417.13	417.01	
I 2-3	I 2-4	24	R.C.P CLASS IV	42	416.91	416.71	
I 2-4	EW 2-1	24	R.C.P CLASS IV	8	416.61	416.57	
I 2-7	I 2-5	15	R.C.P CLASS IV	24	417.16	417.04	
I 2-5	I 2-6	18	R.C.P CLASS IV	40	416.8	415.7	
I 2-6	EW 2-2	18	R.C.P CLASS IV	12	415.6	415.54	

BULKHEAD AND ABANDON EXISTING PIPE SCHEDULE					
FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	SIZE & TYPE	LENGTH
209+75	9.92	209+76	11.81	18" CMP	21.76
214+28	11.09	214+29	10.69	12" CMP	21.85

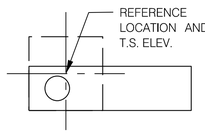
DRAINAGE STRUCTURE REMOVAL SCHEDULE			
STATION	OFFSET	DESCRIPTION	NOTE
102+68	38.68 LT	15' COG INLET	
104+61	23.34 LT	15' COG INLET	
111+01	13.31 LT	GRATE INLET	

RIPRAP OUTFALL PROTECTION SCHEDULE								
LOCATION	RIPRAP ID	STATION	OFFSET	CLASS	TYPE	LEFT SIDE SLOPE	RIGHT SIDE SLOPE	DIMENSIONS
EX-ES	RES 1-1	111+00	19 RT	I	II	2	2	10' (L) X 11' (W) X 19" (D)
EW 2-1	REW 2-1	209+69	43 RT	I	II	2	2	13' (L) X 10' (W) X 19" (D)
EW 2-2	REW 2-2	214+37	40 RT	I	II	2	2	10' (L) X 11' (W) X 19" (D)

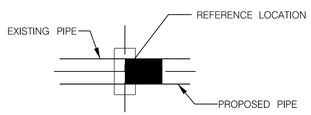
*ALL RIPRAP OUTFALL PROTECTION TO BE UNDERLAID WITH NON-WOVEN GEOTEXTILE SE



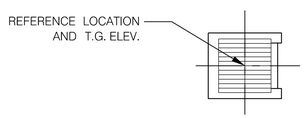
ENDWALL



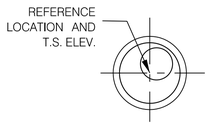
COG INLET



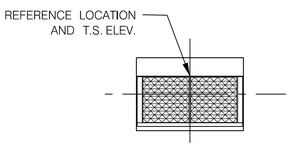
CONCRETE COLLAR



DITCH INLET



MANHOLE



COMBINATION INLET

DRAINAGE STRUCTURE LOCATION REFERENCES

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CONTACT:
DIVISION OF TRANSPORTATION ENGINEERING
240-777-7220
DESIGN SECTION
240-777-7221

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

PLAN NO. MR2022024 | DD-01

DR. BIRD ROAD SHARED USE PATH

DRAINAGE DETAILS

DESIGNED BY ABD
DRAWN BY ABD
CHECKED BY SBP
COUNTY MONTGOMERY
LOGMILE
SCALE NTS

AUGUST 2023

DRAWING NO. DD- 01 OF 02 | SHEET NO. 37 OF 103

PLOTTED: 8/1/2023
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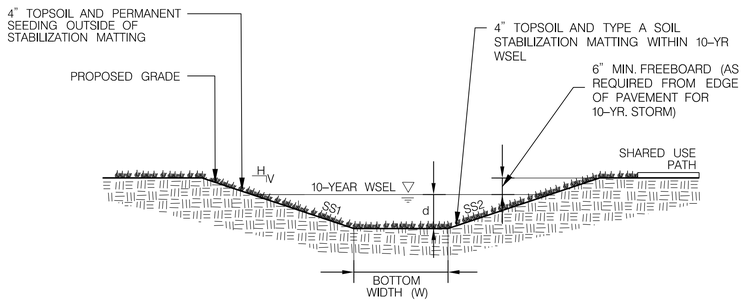

DRAINAGE DITCH TYP. DETAIL

NOTE: FOR DRAINAGE DITCH SCHEDULE AND STABILIZATION MATTING SCHEDULE, SEE TABLES ON THIS SHEET.

HERITAGE TRIANGLE TRAIL DITCH SCHEDULE

STATION	OFFSET	DITCH INV.	SS1	SS2	d	W	MATTING	QUANTITY (SY)
202+00	42.51 LT	424.98	3:1	3:1	0.807	0	Type 'A' Matting	85
202+50	43.86 LT	424.73	3:1	3:1	0.807	0		
203+00	44.75 LT	424.48	3:1	3:1	0.807	0		
203+50	44.97 LT	424.23	3:1	3:1	0.807	0		
204+00	44.31 LT	423.98	3:1	3:1	0.807	0		
204+50	43.56 LT	423.73	3:1	3:1	0.807	0		
205+00	43.37 LT	423.48	3:1	3:1	0.807	0		
205+50	42.40 LT	424.03	3:1	3:1	0.698	0	Type 'A' Matting	37
206+00	41.77 LT	424.28	3:1	3:1	0.698	0		
206+50	41.97 LT	424.59	3:1	3:1	0.698	0		
207+00	42.35 LT	425.04	3:1	3:1	0.698	0		
207+50	42.84 LT	424.97	3:1	3:1	0.699	0	Type 'A' Matting	49
208+00	43.84 LT	423.85	3:1	3:1	0.699	0		
208+50	43.18 LT	422.36	3:1	3:1	0.699	0		
209+00	42.18 LT	421.61	3:1	3:1	0.699	0		
209+50	43.70 LT	421.04	3:1	3:1	0.699	0		
210+00	43.92 LT	421.29	3:1	3:1	0.515	0	Type 'A' Matting	18
210+50	44.52 LT	421.86	3:1	3:1	0.515	0		
211+00	42.44 LT	423.49	3:1	3:1	0.515	0		
212+50	42.91 LT	425.42	3:1	3:1	0.568	0	Type 'A' Matting	30
213+00	43.80 LT	424.25	3:1	3:1	0.568	0		
213+50	43.25 LT	421.40	3:1	3:1	0.568	0		
214+00	43.76 LT	421.00	3:1	3:1	0.568	0		
214+50	44.35 LT	420.15	3:1	3:1	0.606	0	Type 'A' Matting	64
215+00	43.71 LT	420.68	3:1	3:1	0.606	0		
215+50	43.94 LT	421.38	3:1	3:1	0.606	0		
216+00	44.42 LT	422.47	3:1	3:1	0.606	0		
216+50	45.23 LT	423.47	3:1	3:1	0.606	0		
217+00	46.49 LT	424.22	3:1	3:1	0.328	0		
217+50	45.69 LT	424.97	3:1	3:1	0.328	0		

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DESIGN SECTION
240–777–7221

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

PLAN NO. MR2022024 | DD – 02

DR. BIRD ROAD
SHARED USE PATH
DRAINAGE DETAILS

DESIGNED BY ABD
DRAWN BY ABD
CHECKED BY SBP
COUNTY MONTGOMERY
LOGMILE
SCALE NTS
AUGUST 2023

DRAWING NO. DD– 02 OF 02 | SHEET NO. 38 OF 103

PLOTTED: 8/11/2023
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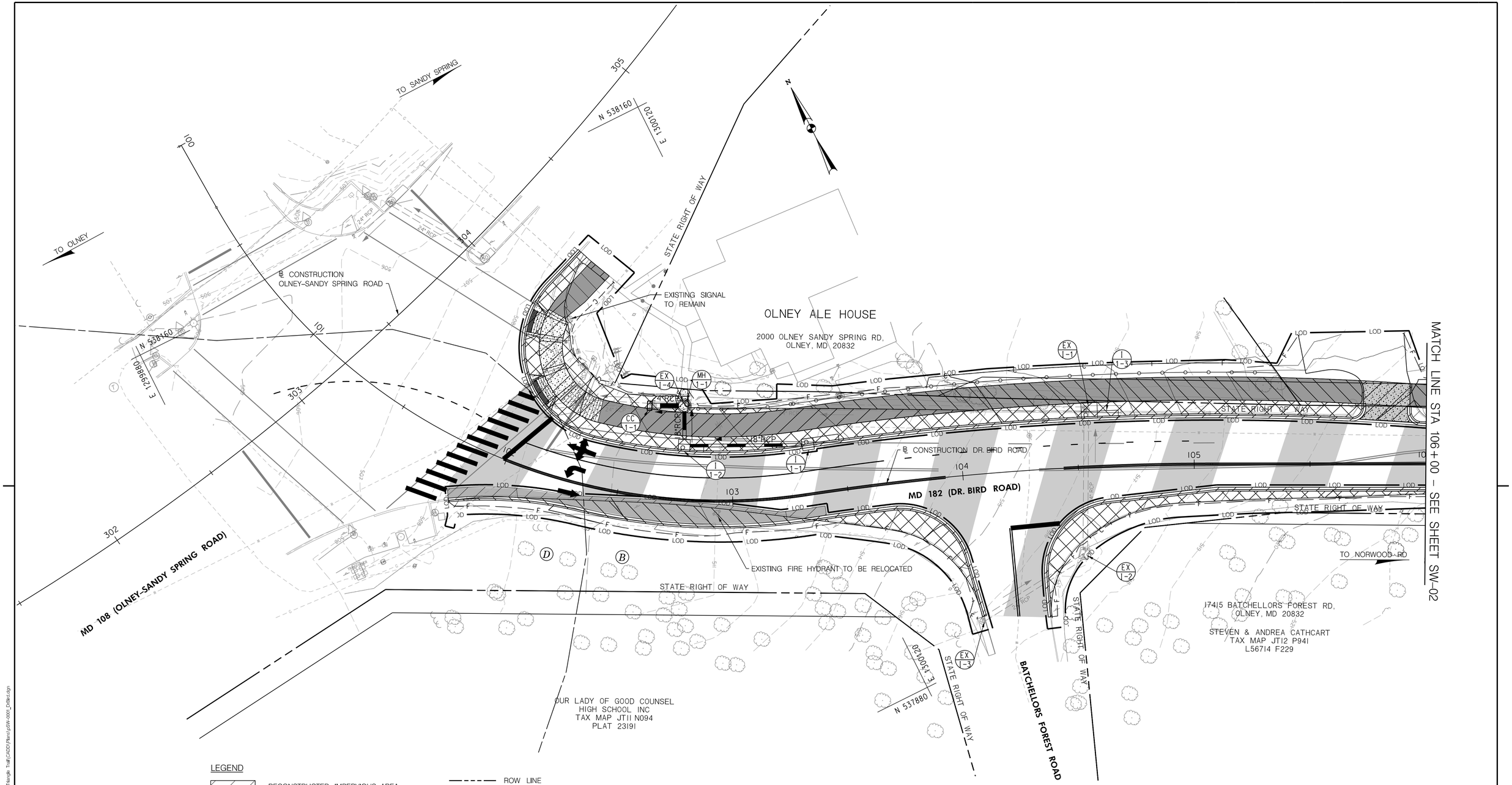

LEGEND

- RECONSTRUCTED IMPERVIOUS AREA
- NEW IMPERVIOUS AREA
- PAVEMENT CONVERSION TO OPEN SPACE
- ASPHALT SHARED USE PATH
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PLAN NO. MR2022024 | DWG. SW-01

DR. BIRD ROAD SHARED USE PATH
STORMWATER MANAGEMENT PLAN

DESIGNED BY ABD
DRAWN BY AGB
CHECKED BY SBP
F.A.P. NO.

COUNTY MONTGOMERY
LOGMILE
SCALE 1"=20'
DATE AUGUST 2023

DRAWING NO. SMSC0002 SW-01 OF 07

SHEET NO. 39 OF 103

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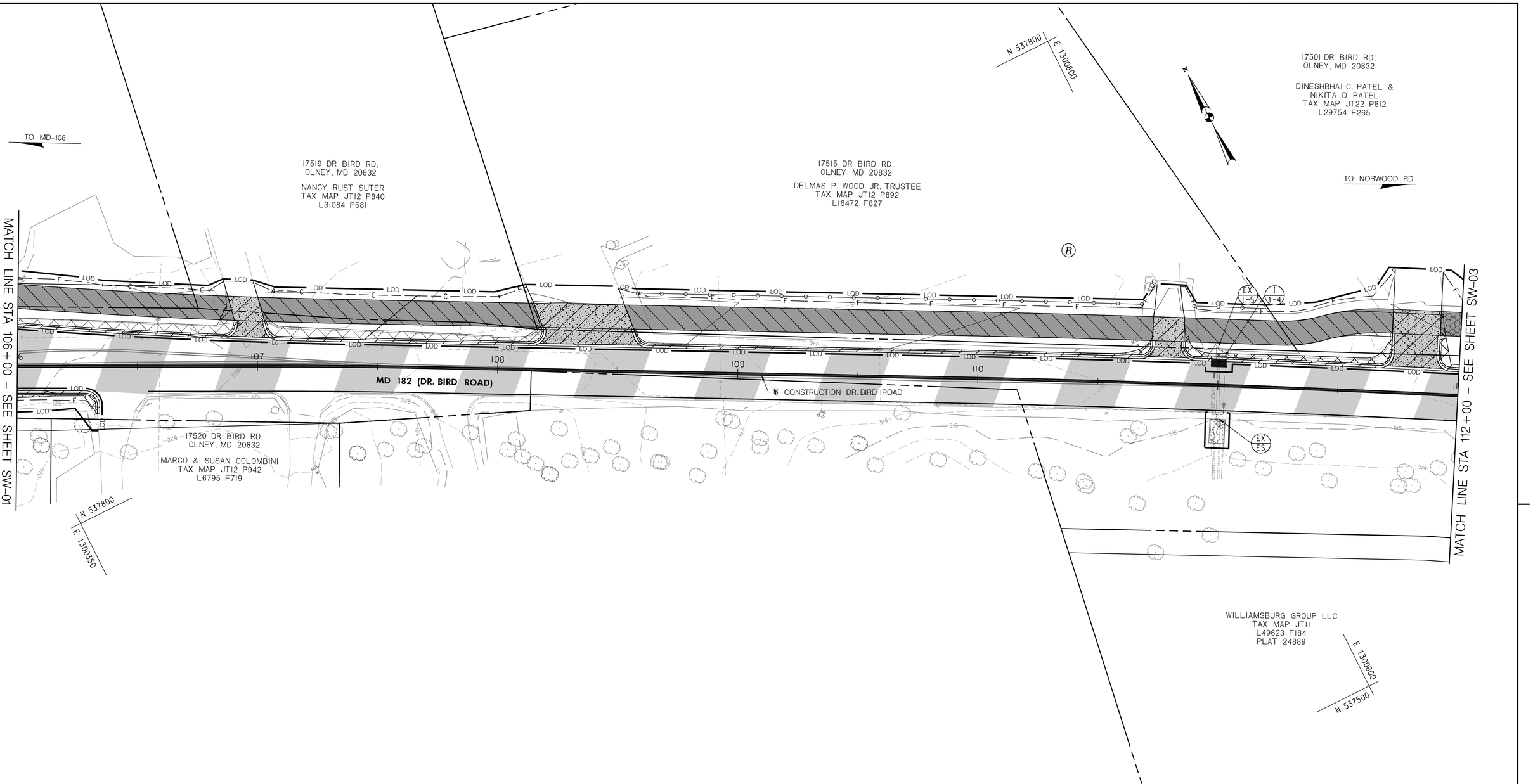

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PLAN NO. MR2022024 | DWG. SW-02

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SCALE
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SHEET NO. 40 OF 103

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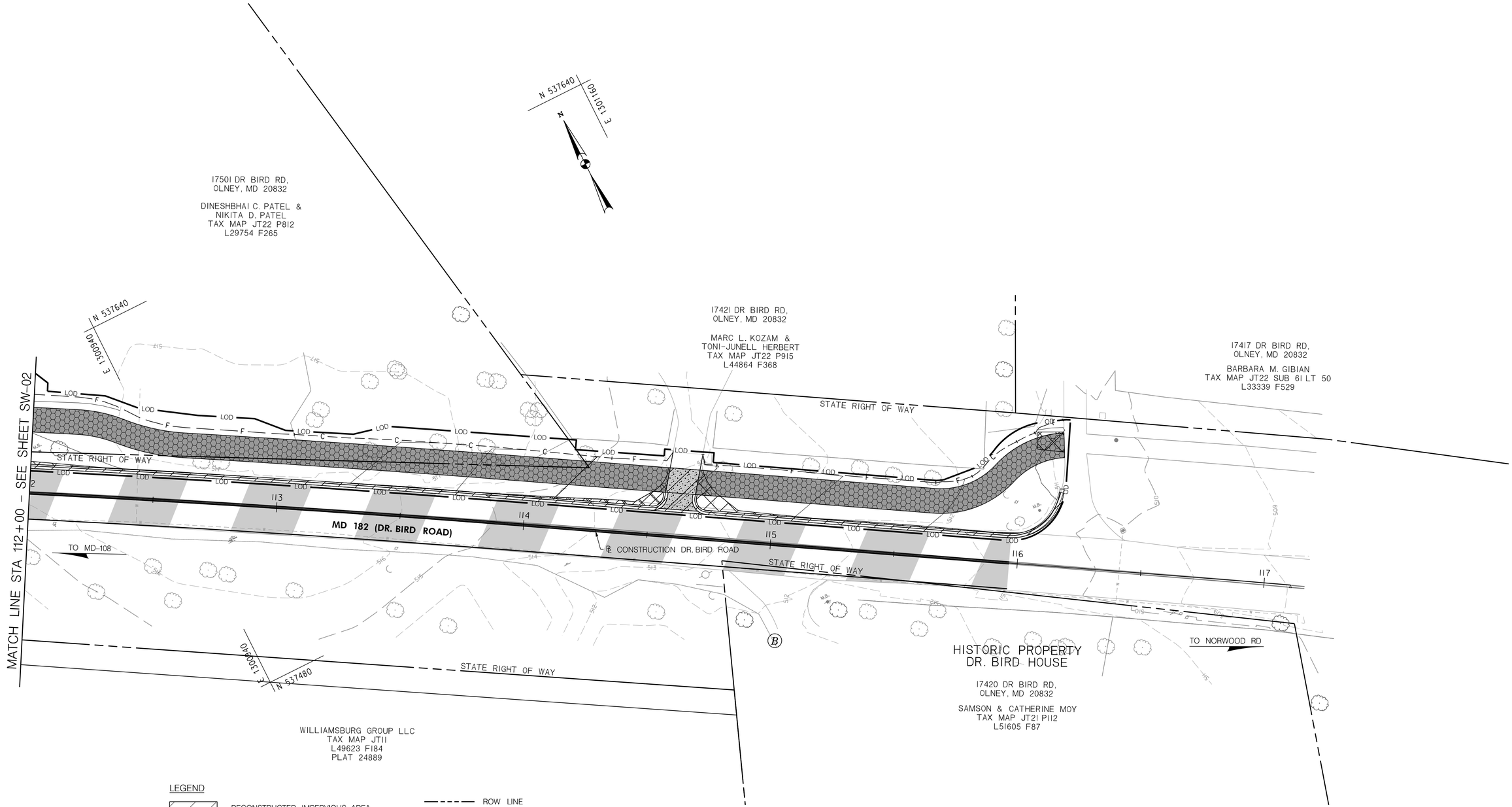

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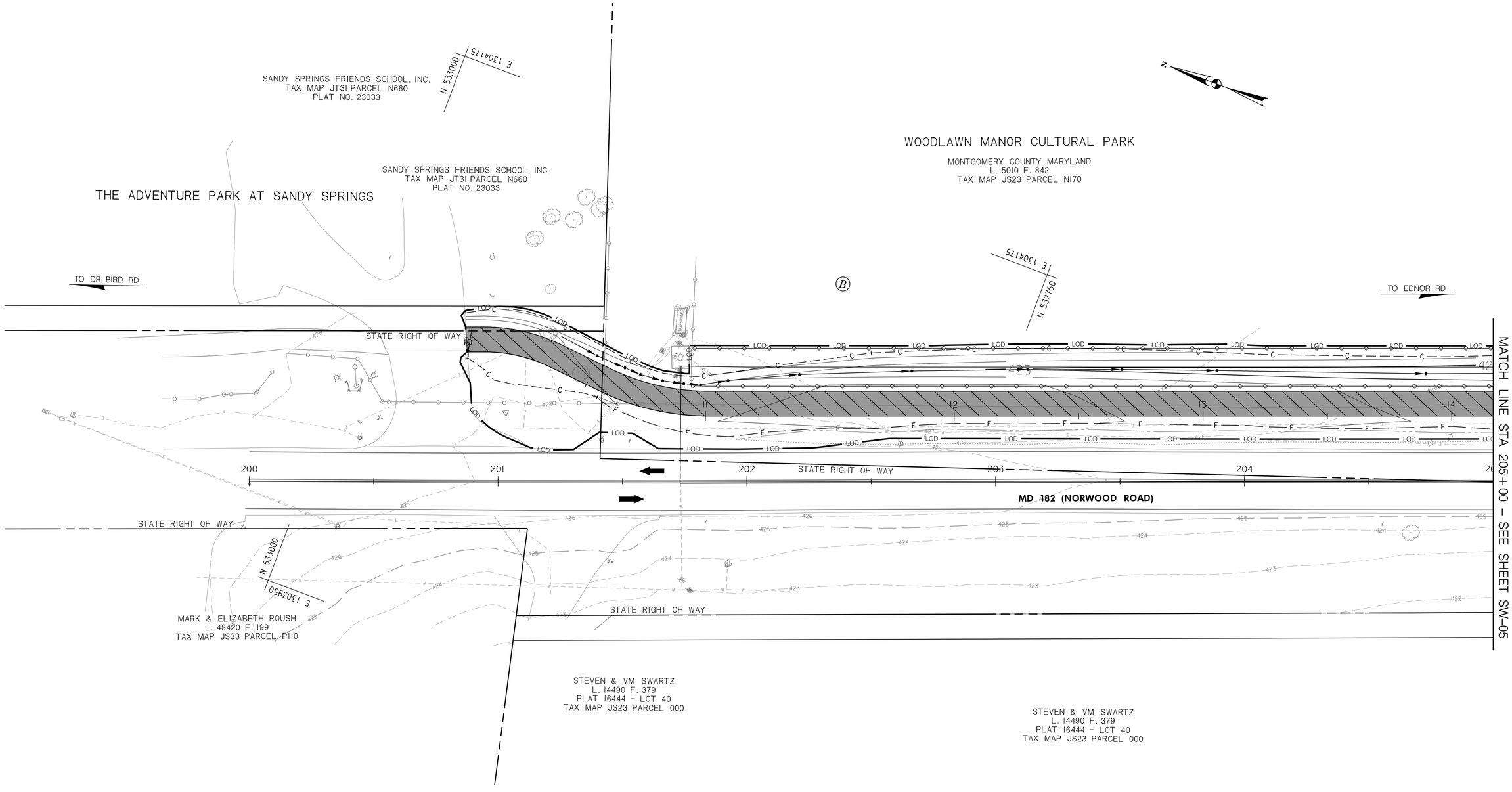

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PLAN NO. MR2022024 | DWG. SW-04

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SHEET NO. 42 OF 103

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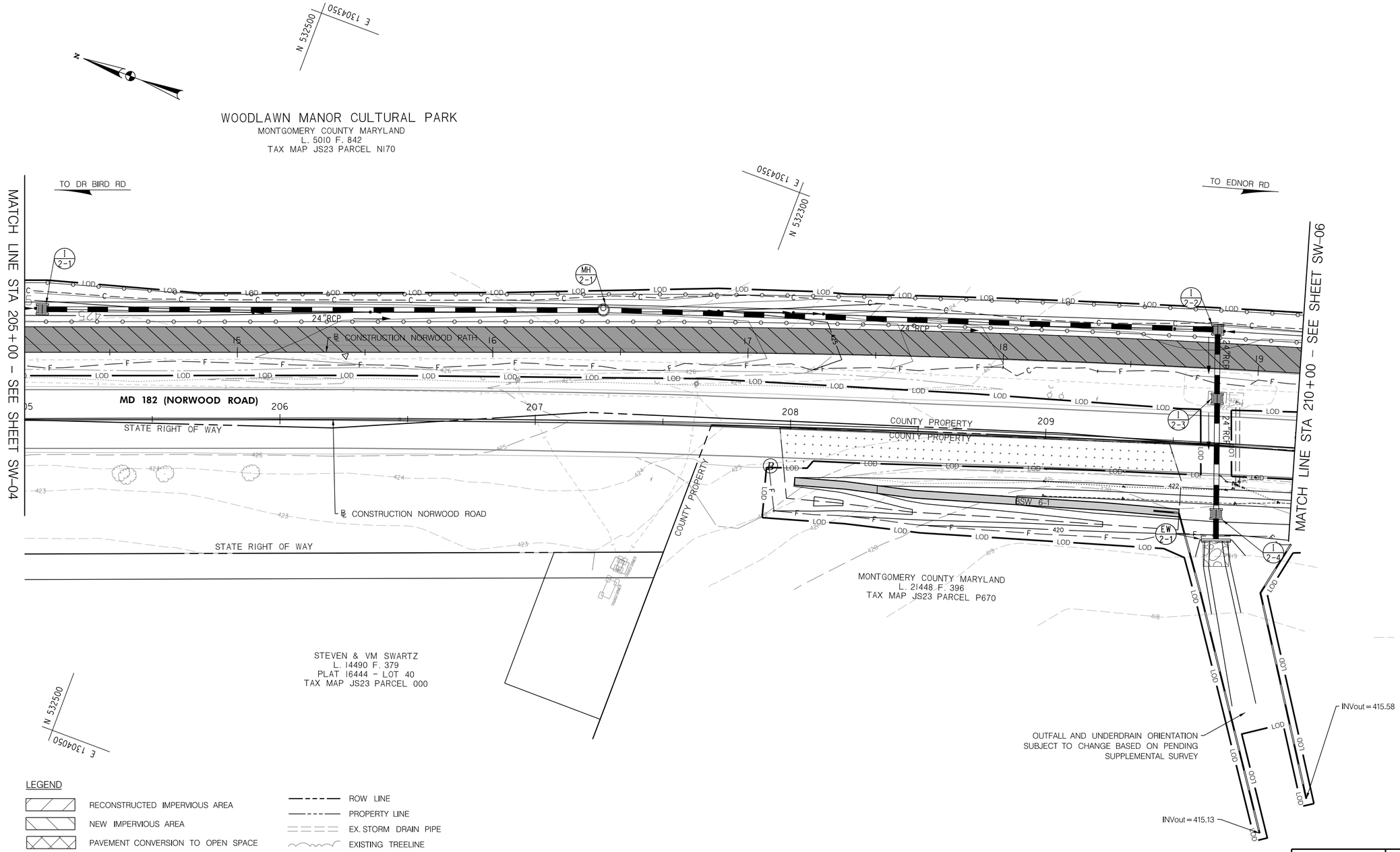

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DR. BIRD ROAD SHARED USE PATH

STORMWATER MANAGEMENT PLAN

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PLAN NO. MR2022024 | DWG. SW-05

DRAWING NO. SMSC0006 SW-05 OF 07 | SHEET NO. 43 OF 103

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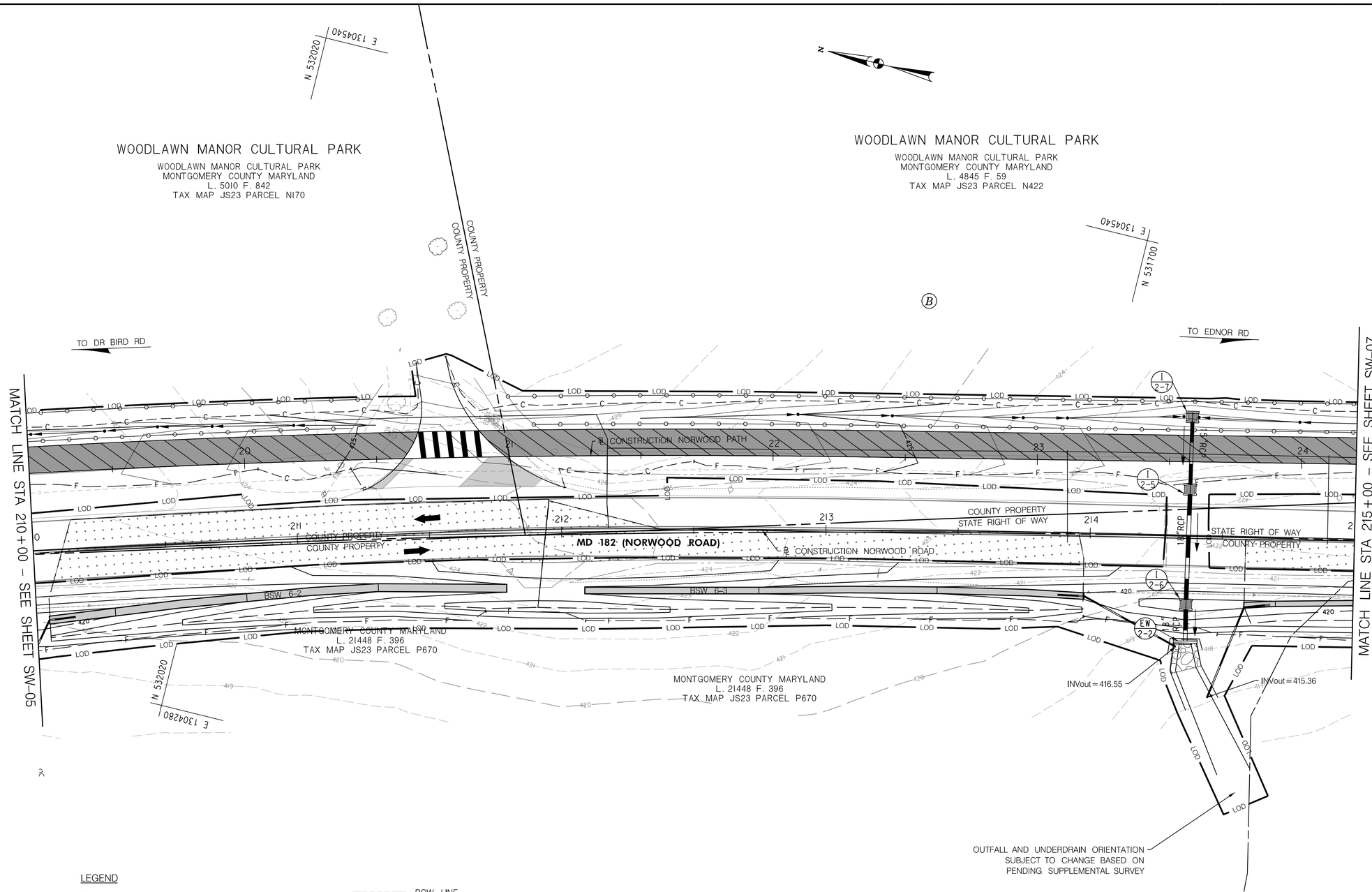

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PLAN NO. MR2022024 | DWG. SW-06

DR. BIRD ROAD SHARED USE PATH
STORMWATER MANAGEMENT PLAN

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LOGMILE
SCALE 1"=20'
DATE AUGUST 2023

DRAWING NO. SMSC0007 SW-06 OF 07

SHEET NO. 44 OF 103

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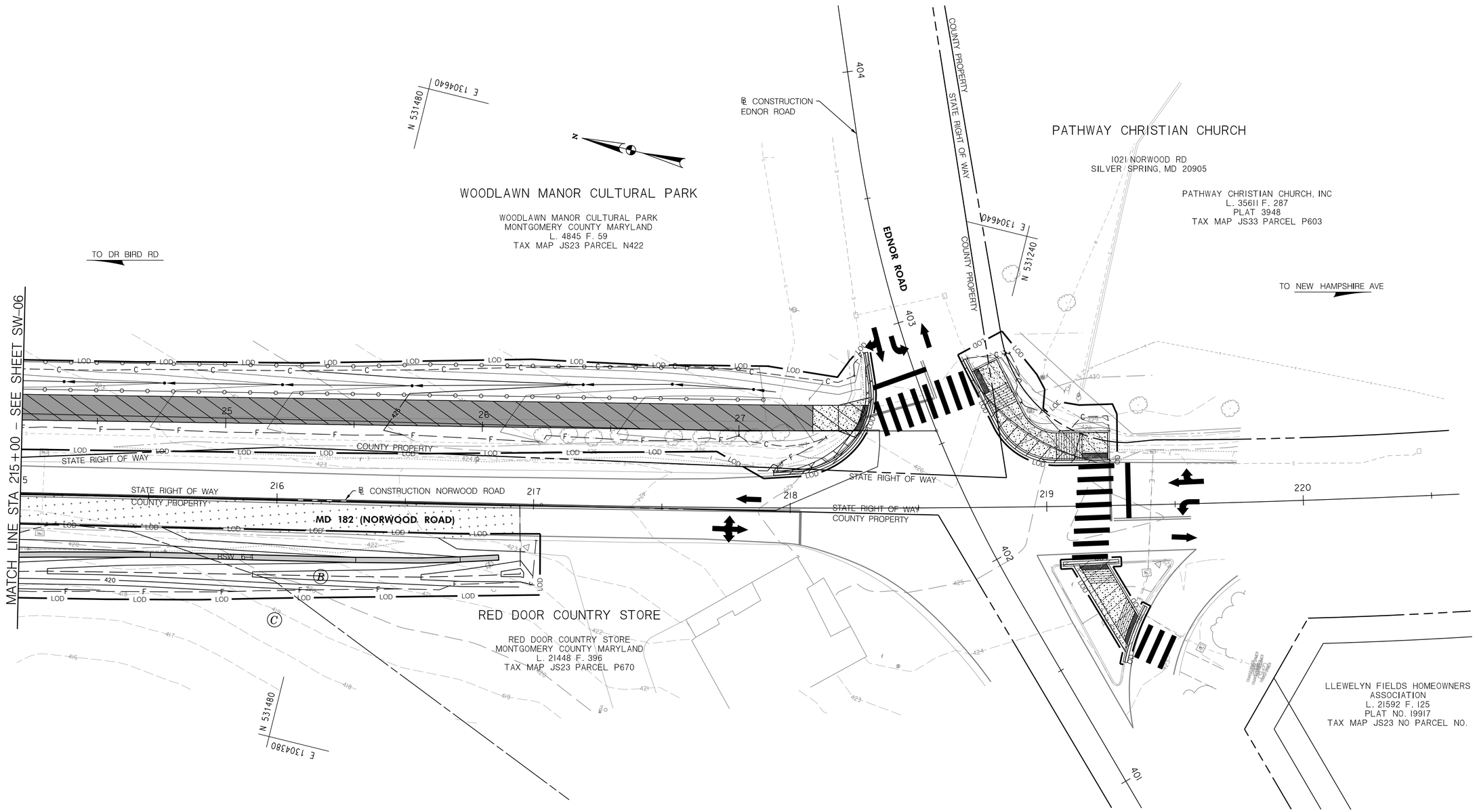

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PLAN NO. MR2022024 | DWG. SW-07

DR. BIRD ROAD SHARED USE PATH
STORMWATER MANAGEMENT PLAN

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F.A.P. NO.

COUNTY MONTGOMERY
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SCALE 1"=20'
DATE AUGUST 2023

DRAWING NO. SMSC0008 SW-07 OF 07

SHEET NO. 45 OF 103

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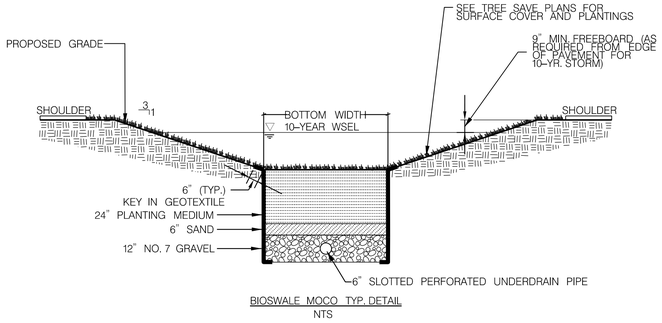
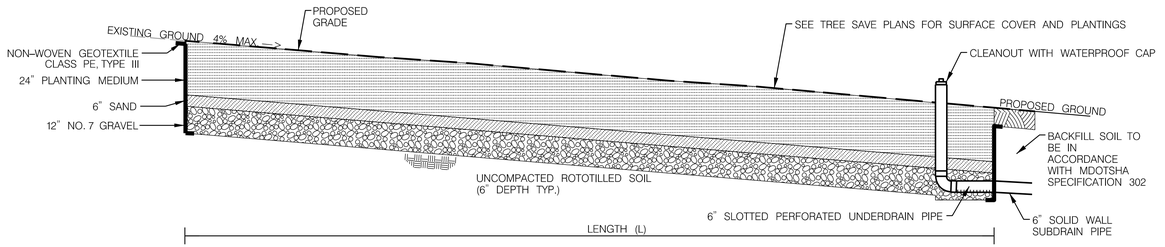


BIOSWALE MOCO TYP. DETAIL
NTS



BIOSWALE MOCO TYP. PROFILE
NTS

BIOSWALE DIMENSIONS										
BMP NO.	FROM	TO	LENGTH (FT.)	BOTTOM WIDTH (FT.)	RIGHT SIDE SLOPE	LEFT SIDE SLOPE	10-YR. DEPTH (FT.)	Q10 (CFS)	V10 (FPS)	INVERT OUT
BSW 6-1	STA. 208+20	STA. 209+50 RT	151	3.0	3:1	3:1	0.42	0.36	0.20	415.13
BSW 6-2	STA. 210+00	STA. 211+75 RT	187	3.0	3:1	3:1	0.60	0.74	0.26	415.58
BSW 6-3	STA. 212+00	STA. 214+00 RT	189	2.5	3:1	3:1	0.57	0.53	0.22	416.55
BSW 6-4	STA. 214+50	STA. 216+65 RT	230	2.0	3:1	3:1	0.66	0.66	0.25	415.36

PLAN NO. MR2022024 | DWG. SWD-01

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ROCKVILLE, MARYLAND

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Chief, Transportation Planning and Design Section — Date

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Chief, Division of Transportation Engineering — Date

DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

DR. BIRD ROAD
SHARED USE PATH
STORMWATER MANAGEMENT DETAILS

DESIGNED BY ABD
DRAWN BY ABD
CHECKED BY SBP
F.A.P. NO. _____
COUNTY MONTGOMERY
LOGMILE _____
SCALE NTS
DATE AUGUST 2023

DRAWING NO. SMSC0009 SWD- 01 OF 03 | SHEET NO. 46 OF 103

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1. **Sizing**

The Bio Swale shall be sized to capture and store 100% of the target treatment volume within the filter media (planting medium, sand, and underdrain stone). Surface ponding may not be calculated for swales since swales do not pond water, they convey it away. The surface of the Bio Swale shall be 2 to 8 feet in width. Planting medium shall be 24 inches deep. The width of the filter medium shall not be greater than the bottom width of the swale. Subsurface storage provided beyond the limits of the swale surface, or storage provided in excess of that required to treat the runoff for the 1 year, 24-hour design storm shall not be counted towards
the total ESDv provided. The total storage provided in the facility shall be computed as the storage provided in the filter medium, sand and underdrain stone layers. Computations shall account for the porosity (n = 0.40) of the filter media.

Bio Swales may not be "enhanced" by placing additional stone storage below the 12-inch stone underdrain layer.

2. **Inflow Design Criteria**

Runoff shall enter the Bio Swale in a non-erosive manner (less than 2 fps). Inflow may be via sheet flow, depressed curbs with wheel stops, curb cuts, level spreaders, over grass, or other acceptable conveyance methods.

3. **Overflow Design Criteria**

Safe conveyance of the developed 10-year storm through the Bio Swale must be demonstrated. Overflow inlets may be installed as required. The invert of the inlet shall be 6 inches above the elevation of the flow channel to encourage filtration of flows, and a berm will be required to be installed behind the inlet. Berms or check dams are not allowed elsewhere in the swale. All underdrains must outfall to safe, stable locations. Overflow devices must not feed into perforated or slotted pipe sections or into the stone underdrain layer.

4. **Underdrain Pipe**

Underdrain piping is only required where inlets are installed to intercept flow, such as at locations along a swale where the allowable velocity in the channel is exceeded, or at the downstream end of a facility where it becomes necessary to outlet the underdrain stone to grade. At these locations, a 10-foot section of perforated underdrain must be installed which will drain directly into the inlet.

The underdrain pipe consists of 6-inch diameter schedule 40 or stronger perforated PVC pipe at 0.00% slope. The underdrain pipe will be placed within the gravel layer. A minimum of three inches of gravel must be placed under the pipe, with a minimum of 3 inches of gravel over the pipe. Perforations must be 3/8 inch in diameter and must be located 4 inches on center, every 90 degrees around the pipe. Perforated pipe must begin at least 12" inside the filter media. Filter fabric must **not** be wrapped around the underdrain pipe. An acceptable alternative to perforated pipe is 6" diameter schedule 40 slotted PVC pipe with 0.125 inch slots. Slots shall be 0.125 inches wide and a minimum of 1.9 inches in length, with a minimum of 4 slots per row and 4 rows per linear foot of pipe.

Access for cleaning all underdrain piping is needed. Watertight clean-outs for each pipe shall be level with the surface of the media. All cleanouts shall have a removable waterproof cap. Cleanouts must be capped immediately after filter media is in place.

The stone layer must run the length of the swale, including under driveway crossings.

5. **Gravel Layer**

The gravel layer must meet MSHA size #7 (Table 901A), and shall be 12-inckes in depth. No geotextile or filter fabric is allowed to be placed horizontally anywhere within the filter media, except at driveway crossings, as shown in the typical section.

6. **Sand Bed**

A minimum 6-inch fine aggregate sand layer shall be provided below the planting media. ASTM C33 or AASHTO M6 Fine Aggregate Concrete Sand is required per Montgomery County sand specifications.

7. **Planting Medium**

The planting media shall be 24" thick and shall consist of 1/3 perlite or Solite, 1/3 compost and 1/3 topsoil. The perlite shall be coarse grade horticultural perlite. The compost shall be high grade compost free of stones and partially composted woody material. The topsoil shall meet the following minimum criteria: contain no more than 10% clay, 10-25% silts and 60-75% sand. The soil shall be free of stones, stumps, roots or other similar objects larger than 2 inches. The first layer of the planting medium shall be lightly tilled to mix it into the sand layer, so as not to create a definitive boundary. The planting material shall be flooded after placement. Any settlement that occurs shall be filled back to the design elevation.

8. **Mulch**

When vegetated with grass, the Bio swale does not require a mulch layer. A typical location for a grassed Bio Swale would be in a public right-of-way. When the Bio Swale is landscaped with vegetation other than grass, a mulch layer is required. The surface mulch layer will consist of standard double shredded aged hardwood mulch. The mulch should be applied uniformly to a depth of 3 inches. Yearly replenishing may be necessary. Pine bark is not acceptable.

9. **Plant Materials**

Plants, through their pollutant uptake and evapo-transpiration of stormwater runoff, play a key role in the overall effectiveness of the Bio Swale. As mentioned above, the Bio Swale may be planted in turf grass where it is appropriate to do so, such as along roadways where visibility is a concern and where active landscape maintenance is unlikely. In cases where the Bio Swale is proposed to be landscaped in materials other than grass, tree, shrub and herbaceous plantings may be used. Both the number and type of tree and shrub plantings for the system may vary, especially where aesthetics or other considerations are critical to site development. While native plants are encouraged, they are not always appropriate in all situations. While no hard planting rule exists, the plants should be a mix of trees, shrubs and herbaceous materials. However, there should be 2 to 3 shrubs planted per tree and herbaceous plantings shall make up 40% of the total number of plants. Trees shall be a minimum of 1 ½ in. caliper, shrubs shall be minimum 2 gal. size and herbaceous plants shall be a minimum 1 gal size. Mature plant canopy should cover 85% of the Bio Swale. Alternative planting schemes, including use of ornamental grasses, may be considered in some situations, so long as the planting plan is designed by a Registered Landscape Architect registered in the State of Maryland, however lawn grasses are not appropriate for these facilities. All plantings shall be in accordance with the Montgomery County landscape guidelines. All landscape plans must be sealed by a registered landscape architect. Since the plants are an integral part of the Bio Swale system, no changes to the approved landscape plan will be allowed unless an alternate plant list, prepared by a registered landscape architect, has been approved by DPS prior to installation. Since plant availability can change, DPS suggests including an alternate plant list on the landscaping plans.

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR SWALES

STAGE	MCDPS INSPECTOR	OWNER/ DEVELOPER
MANDATORY NOTIFICATION: Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS Inspector twenty-four (24) hours notice (DPS telephone 240-777-0311). The DPS inspector may waive an inspection, and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. The permittee must maintain a "record set" of approved SC/SM plans on-site at all times. **Upon completion of the project, a formal Stormwater Management As-Built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead.** Each of the steps listed below must be verified by either the MCDPS Inspector OR the Owner/Developer.	INITIALS/DATE	INITIALS/DATE
1. Placement of backfill of underdrains and installation of diaphragms, forebays, check dams, or weirs conforms to approved plans		
2. Final grading and establishment of permanent stabilization conforms to approved plans		

SAND SPECIFICATIONS:

Washed ASTM C33 Fine Aggregate Concrete Sand is utilized for stormwater management applications in Montgomery County. In addition to the ASTM C33 specification, sand must meet ALL of the following conditions:

1. Sand must meet gradation requirements for ASTM C-33 Fine Aggregate Concrete Sand. AASHTO M-6 gradation is also acceptable.
2. Sand must be silica based … no limestone based products may be used. If the material is white or gray in color, it is probably not acceptable.
3. Sand must be clean. Natural, unwashed sand deposits may not be used. Likewise, sand that has become contaminated by improper storage or installation practices will be rejected.
4. Manufactured sand or stone dust is not acceptable under any circumstance.

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DEPARTMENT OF TRANSPORTATION
100 EDISON PARK DRIVE
GAITHERSBURG, MARYLAND

CONTACT:
DIVISION OF TRANSPORTATION
ENGINEERING
240-777-7220
DESIGN SECTION
240-777-7221

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

PLAN NO. MR2022024 | DWG. SWD-02

DR. BIRD ROAD SHARED USE PATH

STORMWATER MANAGEMENT DETAILS

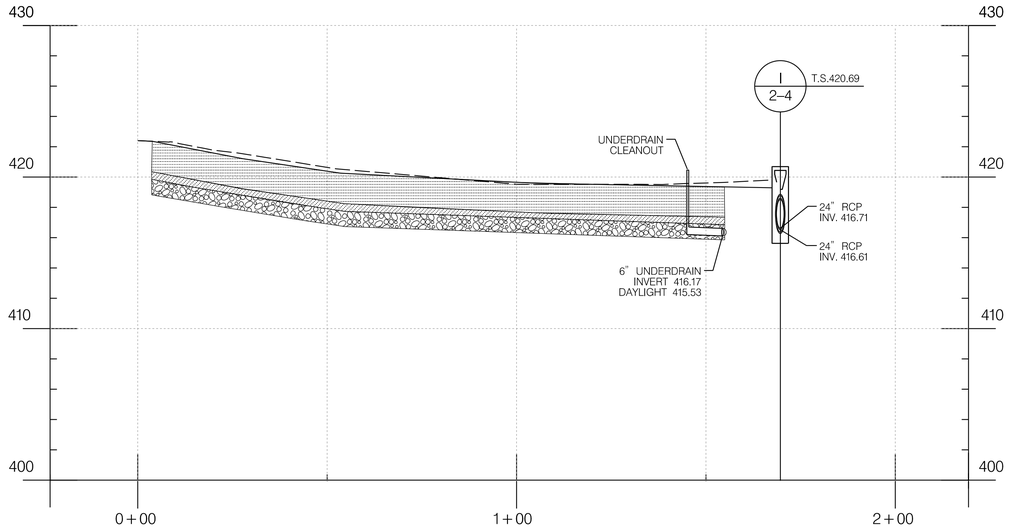
DESIGNED BY ABD
DRAWN BY ABD
CHECKED BY SBP
F.A.P. NO. _____

COUNTY MONTGOMERY
LOGMILE _____
SCALE NTS
DATE AUGUST 2023

DRAWING NO. SMSC0010 SWD- 02 OF 03

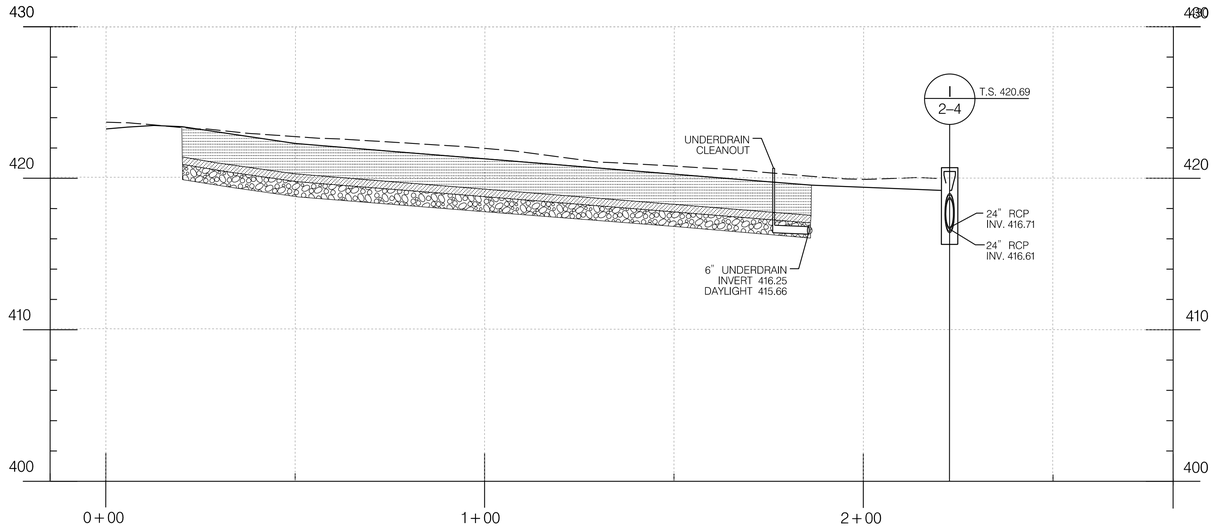
PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pSW-D002_DrBird.dgn

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pSW-D002_DrBird.dgn



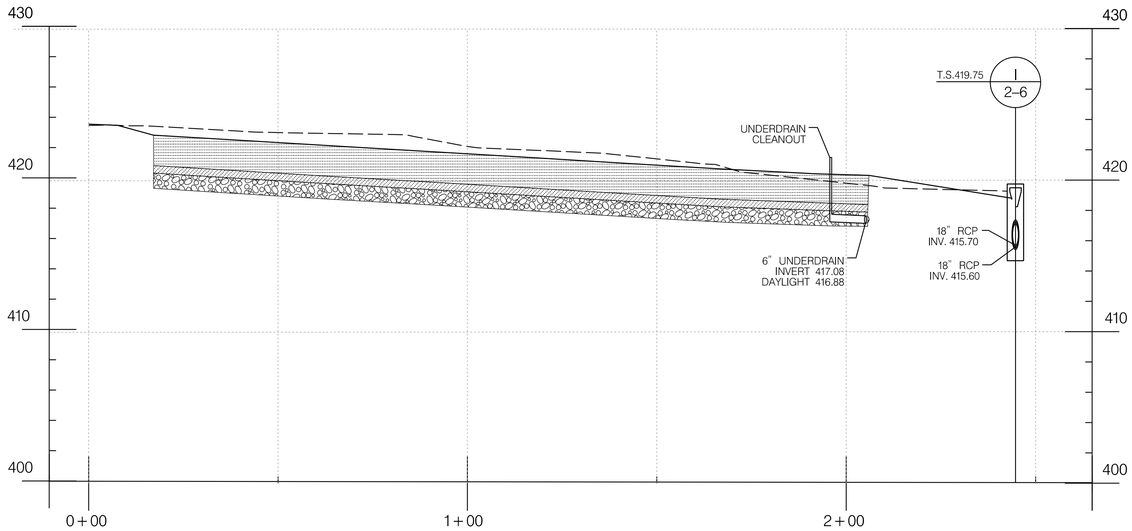
BSW–6–1

NOTE: SEE STORMWATER DETAIL SHEET SWD–01 FOR TYPICAL CROSS SECTION AND DIMENSIONS



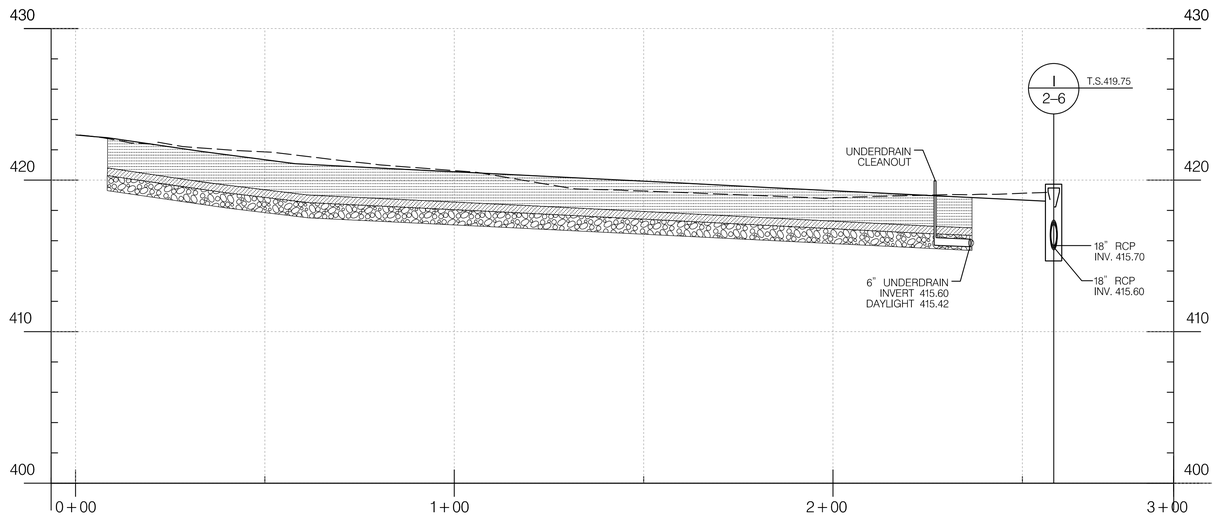
BSW–6–2

NOTE: SEE STORMWATER DETAIL SHEET SWD–01 FOR TYPICAL CROSS SECTION AND DIMENSIONS



BSW–6–3

NOTE: SEE STORMWATER DETAIL SHEET SWD–01 FOR TYPICAL CROSS SECTION AND DIMENSIONS



BSW–6–4

NOTE: SEE STORMWATER DETAIL SHEET SWD–01 FOR TYPICAL CROSS SECTION AND DIMENSIONS

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

5' 0 5' 10'
VERTICAL SCALE: 1" = 5'

PLAN NO. MR2022024 | DWG. SWD–03

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

DR. BIRD ROAD
SHARED USE PATH
STORMWATER MANAGEMENT DETAILS

DESIGNED BY ABD
DRAWN BY ABD
CHECKED BY SBP
F.A.P. NO. _____

COUNTY MONTGOMERY
LOGMILE _____
SCALE AS SHOWN
DATE AUGUST 2023

DRAWING NO. SMSC0011 SWD– 03 OF 03

SHEET NO. 48 OF 103

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\ts\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pSW–D003_DrBird.dgn

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\ts\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pSW–D003_DrBird.dgn

STANDARD EROSION AND SEDIMENT CONTROL NOTES

1. THE PERMITTEE SHALL NOTIFY THE DEPARTMENT OF PERMITTING SERVICES (DPS) FORTY EIGHT (48) HOURS BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY AND, UNLESS WAIVED BY THE DEPARTMENT, SHALL BE REQUIRED TO HOLD A PRE-CONSTRUCTION MEETING BETWEEN THEM OR THEIR REPRESENTATIVE, THEIR ENGINEER AND AN AUTHORIZED REPRESENTATIVE OF THE DEPARTMENT.

2. THE PERMITTEE MUST OBTAIN INSPECTION AND APPROVAL BY DPS AT THE FOLLOWING POINTS:
   2.1. AT THE REQUIRED PRE-CONSTRUCTION MEETING.
   2.2. FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES AND PRIOR TO ANY OTHER LAND DISTURBING ACTIVITY.
   2.3. 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.
   2.4. PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL STRUCTURE(S).
   2.5. 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:
   6.1. 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
   6.2. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

   ALL OTHER DISTURBED AREA 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 PERMITEE 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 THREE (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 OF FILL SLOPE WITH A GRADIENT STEEPER THAN 3:1 WILL BE PERMITTED IN LAWN MAINTENANCE AREAS OR ON RESIDENTIAL LOTS. A SLOPE GRADIENT OF 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 THEN 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 100-YEAR 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 THAN TWO INCHES IN WIDTH AND FOUR INCHES IN HEIGHT, WITH A MINIMUM OF 14 GAUGE WIRE. SAFETY FENCE MUST BE MAINTAINED IN GOOD CONDITION AT ALL TIMES.

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 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:
   26.1. 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
   26.2. THE PUMP INTAKE MAY UTILIZE A REMOVABLE PUMPING STATION AND MUST DISCHARGE INTO AN UNDISTURBED AREA THROUGH A NON-EROSIVE OUTLET; OR
   26.3. 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 AREA WITHIN THE LIMITS OF DISTURBANCE PRIOR TO PERMANENT STABILIZATION IN ACCORDANCE WITH MDE "STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS."

OWNER'S/DEVELOPER'S CERTIFICATION

I/WE 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.

SIGNATURE _____ DATE _____

REBECCA PARK, PROJECT MANAGER
PRINTED NAME AND TITLE

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.

SIGNATURE 08/10/2023 DATE

AMANDA G BARRETT, PROJECT MANAGER
PRINTED NAME AND TITLE

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 2,160 CUBIC YARDS OF EXCAVATION, 1,080 CUBIC YARDS OF FILL AND THE TOTAL AREA TO BE DISTURBED AS SHOWN ON THE PLANS HAS BEEN DETERMINED TO BE 142,499 SQUARE FEET.

SIGNATURE 08/10/2023 DATE

AMANDA G BARRETT, PROJECT MANAGER
PRINTED NAME AND TITLE

LIST OF PREDOMINANT SOIL TYPES

SYMBOLS	DESCRIPTION	HSG
1B	GAILA SILT LOAM, 3-8% SLOPES	B
1C	GAILA SILT LOAM, 8-15% SLOPES	B
2B	GLENELG SILT LOAM, 3-8% SLOPES	B
2C	GLENELG SILT LOAM, 8-15% SLOPES	B
5A	GLENVILLE SILT LOAM, 0-3% SLOPES	C
5B	GLENVILLE SILT LOAM, 3-8% SLOPES	C/D
6A	BAILE SILT LOAM, 0-3% SLOPES	C/D

MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF PERMITTING SERVICES

Marc Elrich
County Executive

Mitra Pedoeem
Director

April 5, 2022

Ms. Amanda Barrett
RK&K
700 E. Pratt St. Suite 500
Baltimore, MD 21217

Re: **COMBINED STORMWATER MANAGEMENT CONCEPT/*SITE DEVELOPMENT STORMWATER MANAGEMENT PLAN*** for
Dr. Bird Rd. Shared Use Path
Preliminary Plan #: NA
SM File #: 287177
Tract Size/Zone: 6.69 ac
Total Concept Area: 3.41 ac
Lots/Block: NA
Parcel(s): 170 & 843
Watershed: Northwest Branch

Dear Ms. Barrett:

Based on a review by the Department of Permitting Services Review Staff, the stormwater management concept for the above-mentioned site is **acceptable**. The stormwater management concept proposes to meet required stormwater management goals via Bioswale. Due to site constraints, a waiver was requested for the remainder of the stormwater management treatment requirement. A Stormwater management waiver is hereby granted.

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

1. MNCPPC Parks has requested and agrees to be responsible for maintaining the stormwater management facilities installed on Park Property along Norwood Road as part of the Heritage Triangle Trail. These facilities will be designed to Montgomery County standards. The detailed plans should indicate this request and acceptance of SWM maintenance responsibility next to the required MNCPPC Parks consent signature.
2. A detailed review of the stormwater management computations will occur at the time of detailed plan review.
3. An engineered sediment control plan must be submitted for this development.

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

This letter must appear on the sediment control/stormwater management plan at its initial submittal. The concept approval is based on all stormwater management structures being located outside of the Public Utility Easement, the Public Improvement Easement, and the Public Right of Way unless specifically approved on the concept plan. Any divergence from the information provided to this office; or additional information received during the development process; or a change in an applicable

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STATE OF MARYLAND — AMANDA G. BARRETT — 34025 — PROFESSIONAL ENGINEER

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DIVISION OF TRANSPORTATION
ENGINEERING
240-777-7220
DESIGN SECTION
240-777-7221

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

PLAN NO. MR2022024 | EN-01

DR. BIRD ROAD
SHARED USE PATH
EROSION AND SEDIMENT CONTROL NOTES

DESIGNED BY YDM
DRAWN BY YDM
CHECKED BY SBP
F.A.P. NO.

COUNTY MONTGOMERY
LOGMILE
SCALE NO SCALE
DATE AUGUST 2023

DRAWING NO. SMSC0010 EN-01 OF 04

SHEET NO. 49 OF 103

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\ls\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pES-N001_DrBird.dgn

SEQUENCE OF CONSTRUCTION:

1. PRIOR TO CLEARING TREES, INSTALLING SEDIMENT CONTROL MEASURES, OR GRADING, A PRECONSTRUCTION MEETING MUST BE CONDUCTED ON-SITE WITH THE MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICE (MCDPS) SEDIMENT CONTOL INSPECTOR (240) 777-0311 (48 HOURS NOTICE), MARYLAND NATIONAL CAPITAL PARK AND PLANNING COMMISSION (MNCPP-C) REPRESENTATIVE, 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 AND APPROVED ROADSIDE TREE PROTECTION PLAN 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. LIMIT OF DISTURBANCE MUST BE FIELD MARKED PRIOR TO CLEARING OF TREES, INSTALLATION OF SEDIMENT CONTROL MEASURES, CONSTRUCTION, OR OTHER LAND DISTURBING ACTIVITIES.
3. OBTAIN WRITTEN APPROVAL FROM THE MNCPPC INSPECTOR CERTIFYING THAT THE LIMITS OF DISTURBANCE AND TREE PROTECTION MEASURES ARE CORRECTLY MARKED AND INSTALLED PRIOR TO COMMENCING ANY CLEARING OF TREES.
4. NO WORK SHALL BE COMPLETED DURING A RAIN EVENT. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO AN APPROVED SEDIMENT CONTROL DEVICE. ALL AREAS DESIGNATED AS SAME DAY SHALL BE STABILIZED AT THE END OF EACH WORK DAY.
5. ROOT PRUNE ALONG LOD AT DIRECTION OF MD LTE PRIOR TO ANY WORK BEING PERFORMED.
6. THE PERMITTEE MUST OBTAIN WRITTEN APPROVAL FROM THE MCDPS INSPECTOR, CERTIFYING THAT THE LIMITS OF DISTURBANCE IS CORRECTLY MARKED AND INSTALLED PRIOR TO COMMENCING ANY CLEARING.
7. WITH THE APPROVAL OF THE PROJECT ENGINEER AND THE MCDPS SEDIMENT CONTROL INSPECTOR, STEPS IN EACH STAGE MAY BE ADJUSTED AND/OR BE PERFORMED CONCURRENTLY.
8. WHERE INLET PROTECTION IS USED IN CONJUNCTION WITH SAME-DAY STABILIZATION AND DRAINAGE AREAS EXCEED THE LIMITS REQUIRED, MEASURES SHALL BE TAKEN TO PREVENT THE PROTECTIONS FROM BEING OVERWHELMED WITH SEDIMENT.
9. THE NEED FOR AND LOCATION OF STABILIZED CONSTRUCTION ENTRANCES SHALL BE DISCUSSED AT THE PRECONSTRUCTION MEETING FOR ALL STAGES.
10. UNLESS NEW, ALL CONSTRUCTION MATS SHALL BE POWER WASHED PRIOR TO BEING BROUGHT ON SITE.
11. RELOCATE UTILITIES AS NEEDED PRIOR TO COMMENCING WORK.

STEP 1: OLNEY SANDY SPRING RD TO NORWOOD RD (MD 182 STA. 101+50 TO 116+50)

1. CLEAR AND GRUB FOR INSTALLATION OF SEDIMENT CONTROL DEVICES AND INSTALL THOSE DEVICES SHOWN ON THE EROSION AND SEDIMENT CONTROL PLANS. DURING THIS AND SUBSEQUENT STEPS, SAFE PEDESTRIAN ACCESS MUST BE MAINTAINED AT ALL TIMES.
2. ONCE SEDIMENT CONTROL DEVICES ARE INSTALLED, THE PERMITTEE MUST OBTAIN WRITTEN APPROVAL FROM THE MCDPS INSPECTOR BEFORE PROCEEDING WITH ANY ADDITIONAL CLEARING, GRUBBING, OR GRADING.
3. ANY WORK USING SAME DAY STABILIZATION CAN BE PERFORMED CONCURRENTLY OR ALONG CORRIDER SO LONG AS AREA IS STABILIZED AT THE END OF THE WORK DAY.
4. ROUGH GRADING CAN BE COMPLETED AT ANY TIME AS NECESSARY SO LONG AS THE AREA DRAINS TO AN APPROVED EROSION AND SEDIMENT CONTROL DEVICE, AS SHOWN ON THE PLANS.
5. DURING A NOAA 3-DAY DRY PERIOD, INSTALL PROPOSED PIPE SYSTEM FROM CONCRETE COLLAR CC-1-1 TO INLET I-1-1 WORKING FROM DOWNSTREAM TO UPSTREAM, INLET I-1-3, AND RIPRAP AT STA. 111+00 RT. ABANDON IMPACTED STORM DRAIN WITH FLOWABLE FILL AND REMOVE AS NECESSARY. INSTALL INLET PROTECTION AS PROPOSED INLETS ARE INSTALLED.
6. CONSTRUCT SHARED USE PATH, ALL WIDENING WORK, CURB RECONSTRUCTION, AND LIGHTING AND SIGNING WORK. RELOCATE EXISTING FIRE HYDRANT HEAD AND ELBOW 2 FEET BEHIND PROPOSED CURB AND RECONNECT FIRE HYDRANT LEAD PER WSSC STD DETAIL W/8.0. USE SAME DAY STABILIZATION IN ALL AREAS NOT DRAINING TO AN APPROVED SEDIMENT CONTROL DEVICE, AS SHOWN ON THE PLANS.
7. ONCE ALL WORK IS COMPLETED AND WITH THE APPROVAL OF THE INSPECTOR, REMOVE EROSION AND SEDIMENT CONTROLS AND PERFORM FINAL STABILIZATION, MOVING ON TO NEXT WORK ZONE.

STEP 2: NORWOOD RD TO EDNOR RD (MD 182 STA. 200+75 TO 219+50)

1. CLEAR AND GRUB FOR INSTALLATION OF SEDIMENT CONTROL DEVICES AND INSTALL THOSE DEVICES SHOWN ON THE EROSION AND SEDIMENT CONTROL PLANS.
2. ONCE SEDIMENT CONTROL DEVICES ARE INSTALLED, THE PERMITTEE MUST OBTAIN WRITTEN APPROVAL FROM THE MCDPS INSPECTOR BEFORE PROCEEDING WITH ANY ADDITIONAL CLEARING, GRUBBING, OR GRADING.
3. ANY WORK USING SAME DAY STABILIZATION CAN BE PERFORMED CONCURRENTLY OR ALONG CORRIDER SO LONG AS AREA IS STABILIZED AT THE END OF THE WORK DAY.
4. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCES AT STA. 201+50 LT, 212+25 LT, AND 212+25 RT. ROUGH GRADING CAN BE COMPLETED AT ANY TIME AS NECESSARY SO LONG AS THE AREA DRAINS TO AN APPROVED EROSION AND SEDIMENT CONTROL DEVICE, AS SHOWN ON THE PLANS.
5. DURING A NOAA 3-DAY DRY PERIOD, INSTALL PROPOSED PIPE SYSTEM FROM ENDWALL EW-2-1 TO INLET I-2-1 AND TEMPORARY ROCK OUTLET PROTECTION WORKING DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AS PROPOSED INLETS ARE INSTALLED. ABANDON EXISTING 18" PIPE AT STA. 209+75 WITH FLOWABLE FILL ONCE PROPOSED DRAINAGE AND INLET/OUTLET PROTECTION HAVE BEEN INSTALLED.
6. DURING A NOAA 3-DAY DRY PERIOD, INSTALL PROPOSED PIPE SYSTEM FROM ENDWALL EW-2-2 TO INLET I-2-7 AND TEMPORARY ROCK OUTLET PROTECTION WORKING DOWNSTREAM TO UPSTREAM. INSTALL INLET PROTECTION AS PROPOSED INLETS ARE INSTALLED. ABANDON EXISTING 12" PIPE AT STA. 214+29 WITH FLOWABLE FILL ONCE PROPOSED DRAINAGE AND INLET/OUTLET PROTECTION HAVE BEEN INSTALLED.
7. INSTALL ALL SILT FENCE AND DIVERSION FENCE AS SHOWN ON PLANS. AT DOWNSTREAM ENDS OF DIVERSION FENCE, INSTALL CLEAR WATER DIVERSION PIPES CONNECTING TO TOP OF INLETS THROUGH INLET PROTECTION PER DETAIL E-4.
8. CONSTRUCT SHARED USE PATH, DRIVEWAY RECONSTRUCTION, AND LIGHTING AND SIGNING WORK. USE SAME DAY STABILIZATION IN ALL AREAS NOT DRAINING TO AN APPROVED SEDIMENT CONTROL DEVICE, AS SHOWN ON THE PLANS.
9. ONCE ALL AREA DRAINING TO STORMWATER MANAGEMENT PRACTICES IS STABILIZED, CONSTRUCT STORMWATER MANAGEMENT FACILITIES AS SHOWN ON PLANS. PERFORM FINAL GRADING AT THE OUTFALLS AND INSTALL FINAL OUTLET PROTECTIONS AS SHOWN ON THE PLANS.
10. ONCE ALL WORK IS COMPLETED AND WITH THE APPROVAL OF THE INSPECTOR, REMOVE EROSION AND SEDIMENT CONTROLS AND PERFORM FINAL STABILIZATION.

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DESIGN SECTION
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ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

PLAN NO. MR2022024 | EN-02

DR. BIRD ROAD
SHARED USE PATH
EROSION AND SEDIMENT CONTROL NOTES

DESIGNED BY YDM
DRAWN BY YDM
CHECKED BY SBP
F.A.P. NO.

COUNTY MONTGOMERY
LOGMILE
SCALE NO SCALE
DATE AUGUST 2023

DRAWING NO. SMSC0011 EN-02 OF 04

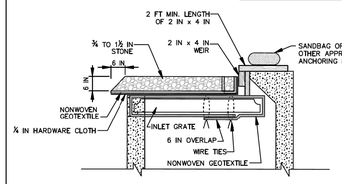
SHEET NO. 50 OF 103

PLOTTED: 8/1/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pES-N002_DrBird.dgn

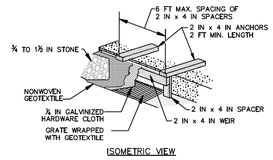
DETAIL E-9-6 COMBINATION INLET PROTECTION

STANDARD SYMBOL: COIP

MAXIMUM DRAINAGE AREA = ¼ ACRE



SECTION



ISOMETRIC VIEW

1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-6 COMBINATION INLET PROTECTION

STANDARD SYMBOL: COIP

CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH x 4 INCH LUMBER.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
3. LIFT GRATE, AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS, THEN SET GRATE BACK IN PLACE.
4. ATTACH A CONTINUOUS PIECE OF ¼ INCH GALVANIZED HARDWARE CLOTH WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2X4 WEIR, EXTENDING 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH IT TO THE WEIR.
6. NAIL THE 2X4 WEIR TO THE TOP OF A 9 INCH LONG VERTICAL SPACER TO BE LOCATED BETWEEN THE WEIR AND THE INLET FACE (MAXIMUM 4 FEET APART).
7. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2X4 ANCHORS (MINIMUM 2 FOOT LENGTHS OF 2x4 INCH TO THE TOP OF THE WEIR AT SPACER LOCATIONS). EXTEND 2X4 ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
8. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND BOTH ENDS OF THE THROAT OPENING.
9. FORM THE ¼ INCH HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE OVER THE HARDWARE CLOTH AND GEOTEXTILE IN SUCH A MANNER TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.
10. AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
11. 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.

2 OF 2

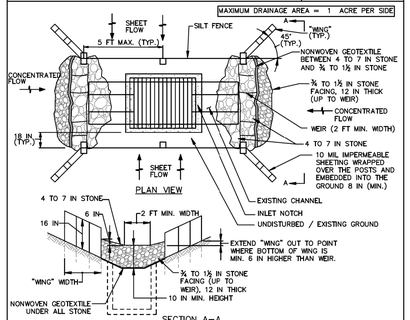
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-5 MEDIAN SUMP INLET PROTECTION

STANDARD SYMBOL: MSIP

MAXIMUM DRAINAGE AREA = 1 ACRE PER SIDE



PLAN VIEW

SECTION A-A

CONSTRUCTION SPECIFICATIONS

1. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. INSTALL SILT FENCE ON ALL SIDES OF INLET RECEIVING SHEET FLOW. FENCE IS TO BE INSTALLED IN ACCORDANCE WITH SILT FENCE DETAIL E-1, EXCEPT POSTS ARE TO BE SPACED A MAXIMUM OF 5 FEET APART.
3. INSTALL EACH STONE STONE STRUCTURE WITH THE WEIR 10 INCHES ABOVE THE INVERT OF THE CHANNEL AND THE WEIR OPENING THE SAME WIDTH AS THE CHANNEL BOTTOM OR 2 FEET MINIMUM. USE CLEAN 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE. PLACE NONWOVEN GEOTEXTILE ON THE UPSTREAM FACE AND COVER WITH A 12 INCH THICK LAYER OF CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
4. CONSTRUCT "WINGS" IN ACCORDANCE WITH DIVERSION FENCE DETAIL C-9.
5. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

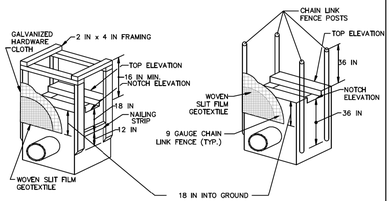
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-1 STANDARD INLET PROTECTION

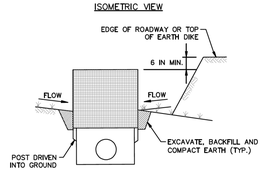
STANDARD SYMBOL: SIP

TYPE A MAXIMUM DRAINAGE AREA = ¼ ACRE
TYPE B MAXIMUM DRAINAGE AREA = 1 ACRE



TYPE A TYPE B

ISOMETRIC VIEW



SECTION FOR TYPE A AND B

1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

CONSTRUCTION SPECIFICATIONS

1. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
3. FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH ¼ INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.

   FOR TYPE B, USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
4. BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
5. 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.

2 OF 2

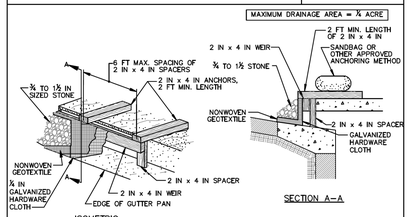
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL: CIP

MAXIMUM DRAINAGE AREA = ¼ ACRE



ISOMETRIC SECTION A-A

CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH x 4 INCH LUMBER
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
3. NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
4. ATTACH A CONTINUOUS PIECE OF ¼ INCH GALVANIZED HARDWARE CLOTH, WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
6. 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.
7. 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 ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
9. AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
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 SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

PLAN NO. MR2022024 | EN-03

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ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DR. BIRD ROAD SHARED USE PATH

EROSION AND SEDIMENT CONTROL DETAILS

DESIGNED BY YDM
DRAWN BY YDM
CHECKED BY SBP
F.A.P. NO.

COUNTY MONTGOMERY
LOGMILE
SCALE NO SCALE
DATE AUGUST 2023

DRAWING NO. SMSC0012 EN-03 OF 04

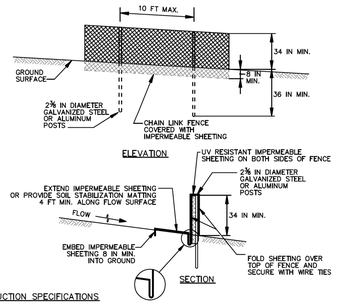
SHEET NO. 51 OF 103

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pES-N003_DrBird.dgn

DETAIL C-9 DIVERSION FENCE

STANDARD SYMBOL: DF

MAXIMUM DRAINAGE AREA = 2 ACRES



CONSTRUCTION SPECIFICATIONS

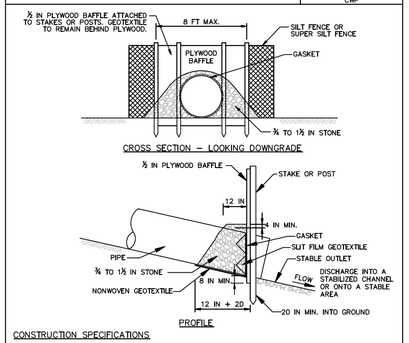
1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2⅜ INCH MAXIMUM OPENING).
2. USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-4 CLEAR WATER PIPE THROUGH SILT FENCE OR SUPER SILT FENCE

STANDARD SYMBOL: CWP



CONSTRUCTION SPECIFICATIONS

1. INSTALL SILT FENCE OR SUPER SILT FENCE IN ACCORDANCE WITH DETAIL E–1 OR DETAIL E–2.
2. AT THE PIPE LOCATION, CUT AND PULL BACK THE WOVEN SLIT FILM GEOTEXTILE AND CHAIN LINK FENCING. SECURE GEOTEXTILE TO PIPE WITH GASKET. INSTALL ADDITIONAL STAKES OR POSTS IF NECESSARY TO ACCOMMODATE THE INSTALLATION OF THE BAFFLE BOARD.
3. ENTRENCH ½ INCH PLYWOOD BAFFLE A MINIMUM OF 8 INCHES AND SECURE TO THE UPGRADE SIDE OF THE FENCE STAKES OR POSTS. BAFFLE SHOULD BE AT LEAST THE HEIGHT OF THE FENCE.
4. PLACE ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE BEHIND THE PLYWOOD BAFFLE ON NONWOVEN GEOTEXTILE AND EXTEND 12 INCH MIN. ALONG TOP OF PIPE AND TO A HEIGHT OF 4 INCHES ABOVE THE TOP OF PIPE.
5. USE NONWOVEN AND WOVEN SLIT FILM GEOTEXTILES AS SPECIFIED IN SECTION H–1 MATERIALS.
6. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN SEDIMENT REACHES 6 INCHES IN HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL BAFFLE, CHAIN LINK, AND GEOTEXTILE. REPLACE STONE IF DISPLACED. KEEP POINT OF DISCHARGE FREE OF EROSION.

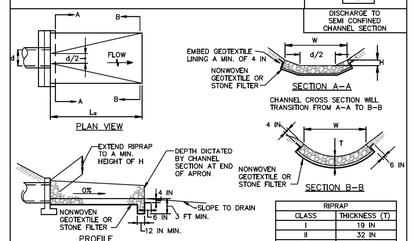
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL D-4-1-A ROCK OUTLET PROTECTION I

STANDARD SYMBOL: ROP1

DISCHARGE TO SEMI CONFINED CHANNEL SECTION



RIPRAP	
CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

CONSTRUCTION SPECIFICATIONS

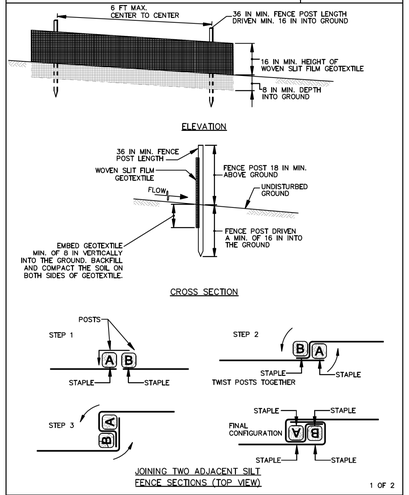
1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (⅜ TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF THE RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF



1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± 1/16 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID–SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H–1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2

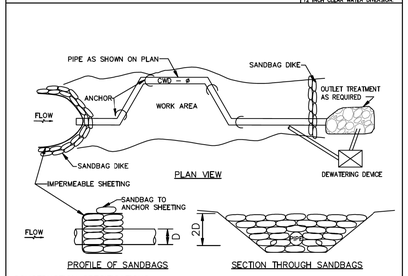
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL C-6 CLEAR WATER DIVERSION PIPE

STANDARD SYMBOL: CWD – 12

DESIGNATION CWD–12 REFERS TO 12 INCH CLEAR WATER DIVERSION.



CONSTRUCTION SPECIFICATIONS

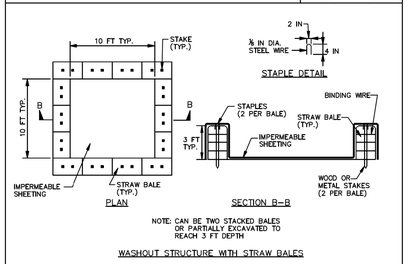
1. FLEXIBLE PIPE IS PREFERRED. HOWEVER, CORRUGATED METAL PIPE OR EQUIVALENT PVC PIPE CAN BE USED. MAKE ALL JOINTS WATERTIGHT.
2. FOR SANDBAGS USE MATERIALS THAT ARE RESISTANT TO ULTRA–VIOLENT RADIATION, TEARING, AND PUNCTURE AND WOVEN TIGHTLY ENOUGH TO PREVENT LEAKAGE OF FILL MATERIAL.
3. USE 10 MIL OR THICKER, UV RESISTANT, IMPERMEABLE SHEETING OR OTHER APPROVED MATERIAL THAT IS IMPERMEABLE AND RESISTANT TO PUNTURING AND TEARING.
4. PLACE IMPERMEABLE SHEETING SUCH THAT UPGRADE PORTION OVERLAPS DOWNGRADE PORTION BY A MINIMUM OF 18 INCHES.
5. SET HEIGHT OF SANDBAG DIKE AT TWICE THE PIPE DIAMETER. MAINTAIN HEIGHT ALONG LENGTH OF SANDBAG DIKE. PLACE DOUBLE ROW OF SANDBAGS.
6. AT A MINIMUM, SECURELY ANCHOR DIVERSION PIPE AT EACH DOWNGRADE JOINT.
7. SET OUTLET END OF DIVERSION PIPE LOWER THAN INLET END.
8. PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN.
9. DEWATER WORK AREA USING AN APPROVED EROSION AND SEDIMENT CONTROL PRACTICE AS SPECIFIED ON APPROVED PLAN.
10. KEEP POINT OF DISCHARGE FREE OF EROSION. MAINTAIN WATER TIGHT CONNECTIONS AND POSITIVE DRAINAGE. REPLACE SANDBAGS AND IMPERMEABLE SHEETING IF TORN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS



NOTE: CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

WASHOUT STRUCTURE WITH STRAW BALES

CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET–VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

PLAN NO. MR2022024 | EN–04

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240–777–7220
DESIGN SECTION
240–777–7221

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DR. BIRD ROAD SHARED USE PATH

EROSION AND SEDIMENT CONTROL DETAILS

DESIGNED BY YDM
DRAWN BY YDM
CHECKED BY SBP
F.A.P. NO.

COUNTY MONTGOMERY
LOGMILE
SCALE NO SCALE
DATE AUGUST 2023

DRAWING NO. SMSC0013 EN–04 OF 04

SHEET NO. 52 OF 103

PLOTTED: 8/15/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pES–N004_DrBird.dgn

VICINITY MAP
SCALE: 1" = 2000'

LEGEND

- ESC DRAINAGE AREA
- LOD — LIMIT OF DISTURBANCE
- DF — DIVERSION FENCE
- SF — SILT FENCE
- CLEAR WATER DIVERSION PIPE
- SAND BAGS
- SAME DAY STABILIZATION
- ROCK OUTLET PROTECTION
- RECONSTRUCTED IMPERVIOUS AREA
- NEW IMPERVIOUS AREA
- PAVEMENT CONVERSION TO OPEN SPACE
- ASPHALT SHARED USE PATH
- FLEXIPAVE SHARED USE PATH
- DRIVEWAY CONCRETE
- SIP — STANDARD INLET PROTECTION
- CIP — CURB INLET PROTECTION
- MIP — MEDIAN SUMP INLET PROTECTION
- COIP — COMBINATION INLET PROTECTION
- EX. STORM DRAIN PIPE
- EXISTING TREELINE
- 430 — EX. CONTOUR
- 430 — PROP. CONTOUR
- FACILITY FOOTPRINT
- PROPOSED INLET
- PROP. STORM DRAIN PIPE
- PROPOSED DITCH
- PROPERTY LINE
- ROW LINE

50' 0 50' 100'
SCALE: 1" = 50'

NOTES:

1. WHERE NO SCE IS PROVIDED, CONTRACTOR SHALL DESIGNATE PIECES OF CONSTRUCTION EQUIPMENT WITHIN THE LOD. THIS EQUIPMENT SHALL BE KEPT WITHIN THE LOD UNTIL THE PROPOSED WORK IS COMPLETE AND SHALL HAVE TIRE TREADS CLEANED PRIOR TO LEAVING THE LOD.
2. ALL STAGING AND STOCKPILING MUST BE WITHIN THE LOD. SEDIMENT CONTROL FOR THE STAGING-STOCKPILE AREA MUST BE PROVIDED, IF NEEDED, AND APPROVED BY THE SEDIMENT CONTROL INSPECTOR.
3. WHERE INLET PROTECTION DRAINAGE AREAS EXCEED THE ALLOWED LIMIT, INLET PROTECTIONS ARE TO BE USED IN CONCURRENCE WITH SAME-DAY STABILIZATION MEASURES.

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DESIGN SECTION
240-777-7221

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Transportation Planning and Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date

DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

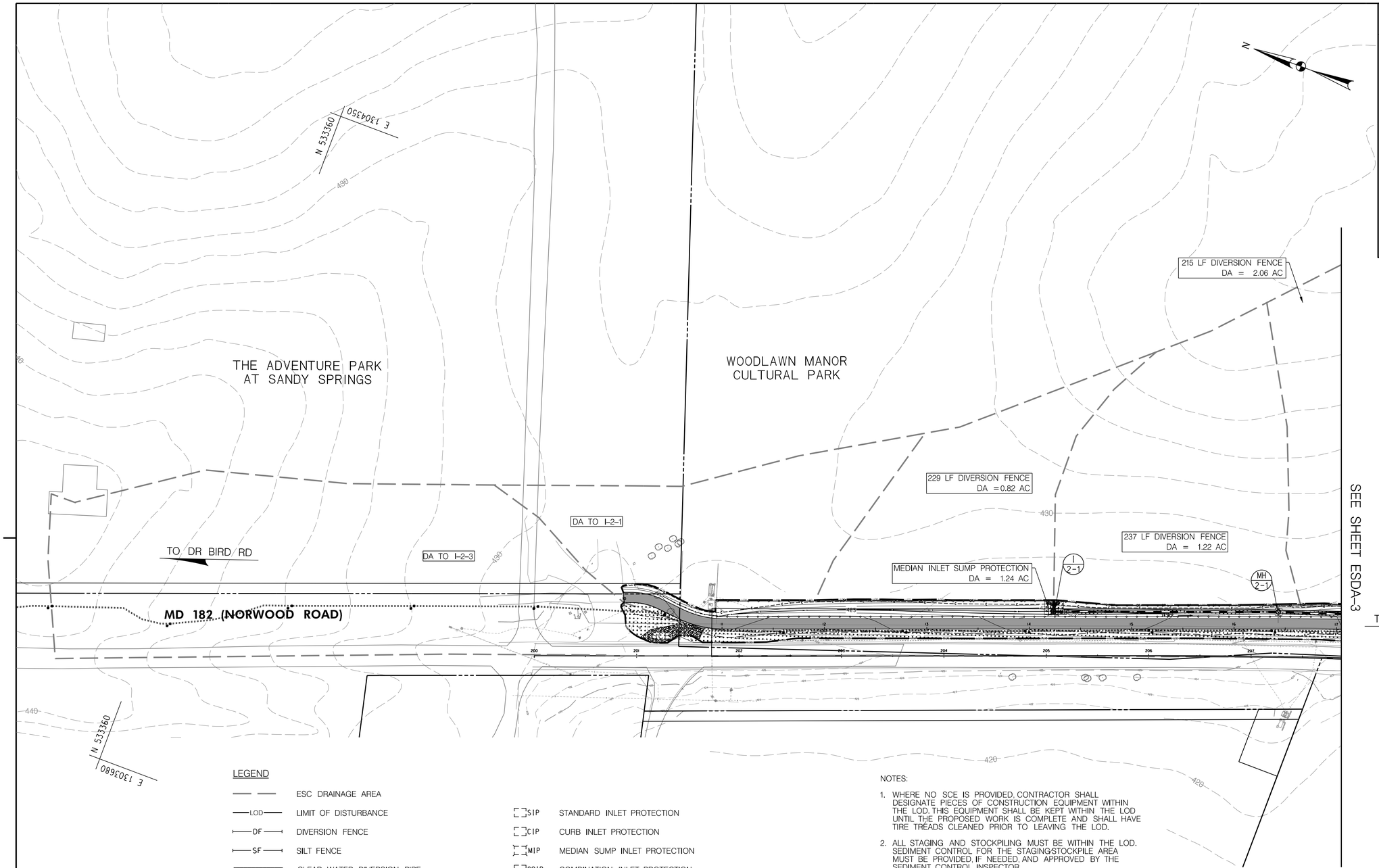
PLAN NO. MR2022024 | DWG. ESDA-01

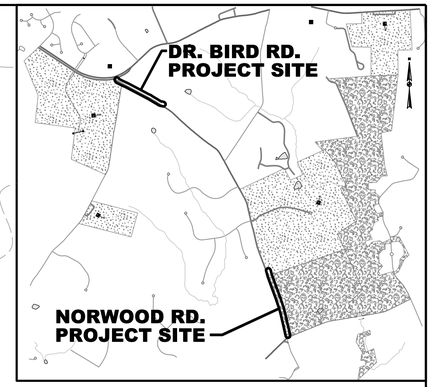
DR. BIRD ROAD
SHARED USE PATH
ESC DRAINAGE AREA PLAN

DESIGNED BY YDM
DRAWN BY AGB
CHECKED BY SBP
F.A.P. NO. _____
COUNTY MONTGOMERY
LOGMILE _____
SCALE 1"=50'
DATE AUGUST 2023

DRAWING NO. SMSC0014 ESDA-01 OF 03
SHEET NO. 53 OF 103

PLOTTED: 8/1/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pDA-ESC1_DrBird.dgn





VICINITY MAP
SCALE: 1" = 2000'

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50' 0 50' 100'
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2. ALL STAGING AND STOCKPILING MUST BE WITHIN THE LOD. SEDIMENT CONTROL FOR THE STAGING-STOCKPILE AREA MUST BE PROVIDED, IF NEEDED, AND APPROVED BY THE SEDIMENT CONTROL INSPECTOR.
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Transportation Planning and Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date

DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

PLAN NO. MR2022024 | DWG.ESDA-02

DR. BIRD ROAD SHARED USE PATH
ESC DRAINAGE AREA PLAN

DESIGNED BY YDM
DRAWN BY AGB
CHECKED BY SBP
F.A.P. NO. _____

COUNTY MONTGOMERY
LOGMILE _____
SCALE 1"=50'
DATE AUGUST 2023

DRAWING NO. SMSC0015 ESDA-02 OF 03

SHEET NO. 54 OF 103

PLOTTED: 8/1/2023
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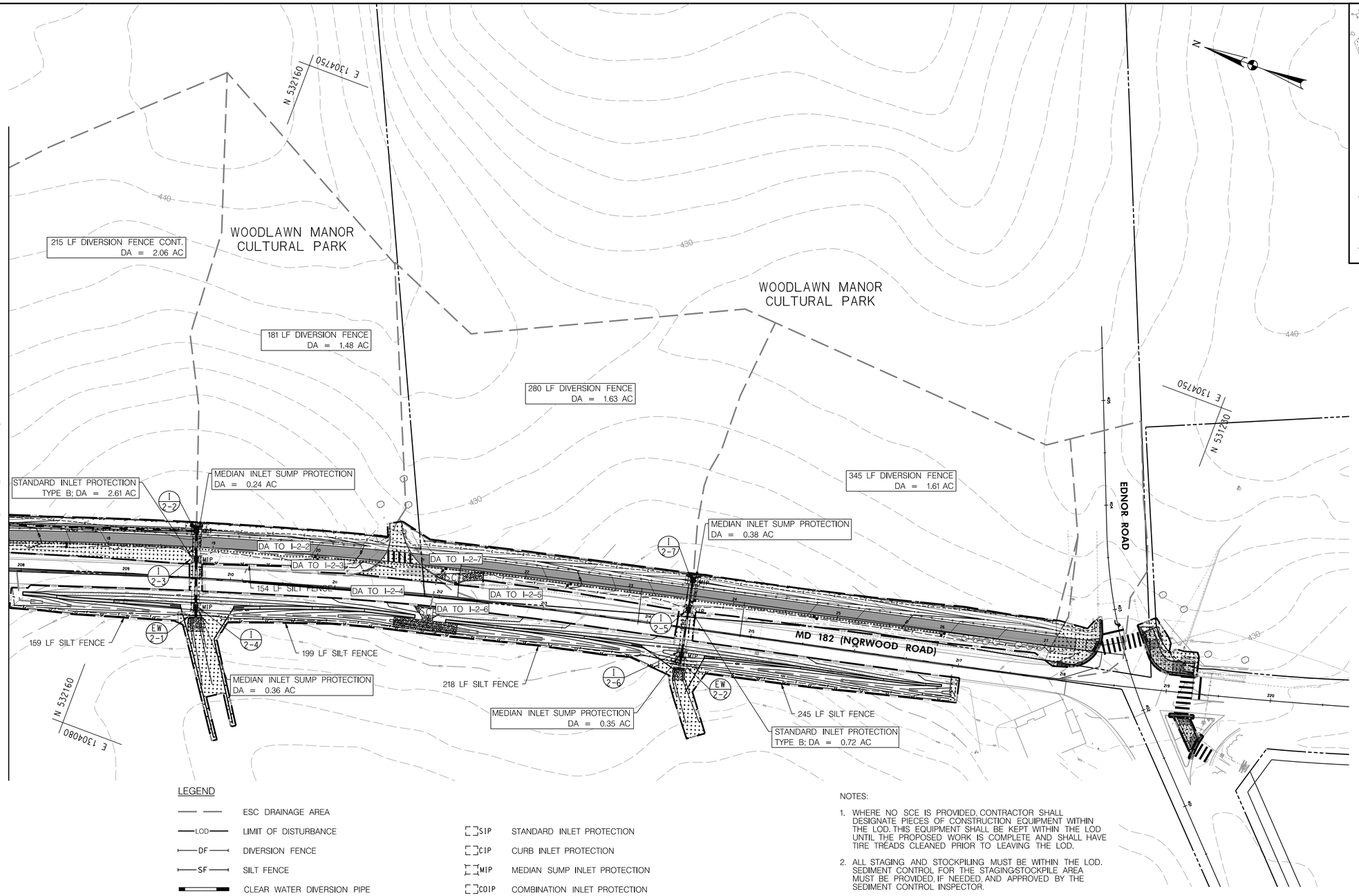

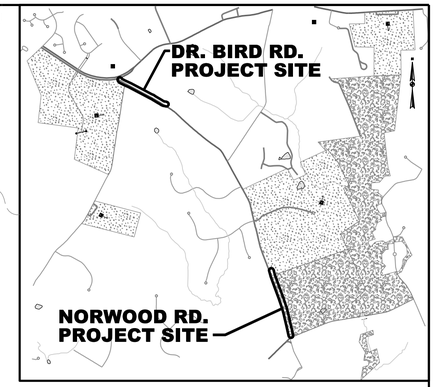

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ROCKVILLE, MARYLAND

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Chief, Transportation Planning and Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date
DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION | PLAN NO. MR2022024 | DWG.ESDA-03

DR. BIRD ROAD SHARED USE PATH
ESC DRAINAGE AREA PLAN

DESIGNED BY YDM
DRAWN BY AGB
CHECKED BY SBP
F.A.P. NO.
COUNTY MONTGOMERY
LOGMILE
SCALE 1"=50'
DATE AUGUST 2023

DRAWING NO. SMSC0016 ESDA-03 OF 03
SHEET NO. 55 OF 103

PLOTTED: 8/1/2023
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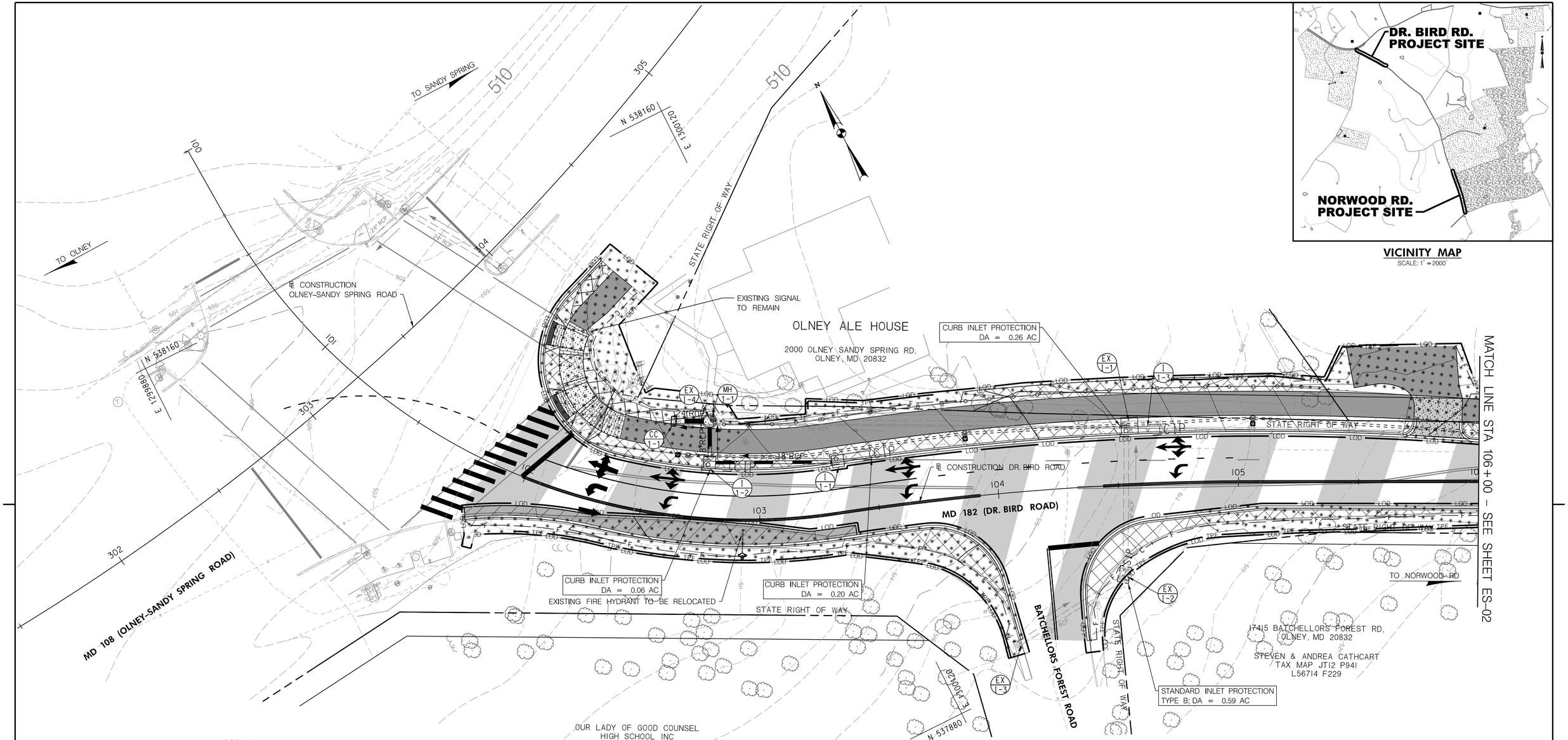

LEGEND

LOD	LIMIT OF DISTURBANCE
DF	DIVERSION FENCE
SF	SILT FENCE
	CLEAR WATER DIVERSION PIPE
	SAND BAGS
	SAME DAY STABILIZATION
	ROCK OUTLET PROTECTION
	RECONSTRUCTED IMPERVIOUS AREA
	NEW IMPERVIOUS AREA
	PAVEMENT CONVERSION TO OPEN SPACE
	ASPHALT SHARED USE PATH
	FLEXIPAVE SHARED USE PATH
	DRIVEWAY CONCRETE
SIP	STANDARD INLET PROTECTION
CIP	CURB INLET PROTECTION
MIP	MEDIAN SUMP INLET PROTECTION
COIP	COMBINATION INLET PROTECTION
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	EXISTING TREELINE
430	EX. CONTOUR
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	ROW LINE

NOTES:

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CONTACT:
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240-777-7220
DESIGN SECTION
240-777-7221

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Transportation Planning and Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date
DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

PLAN NO. MR2022024 | DWG. ES-01

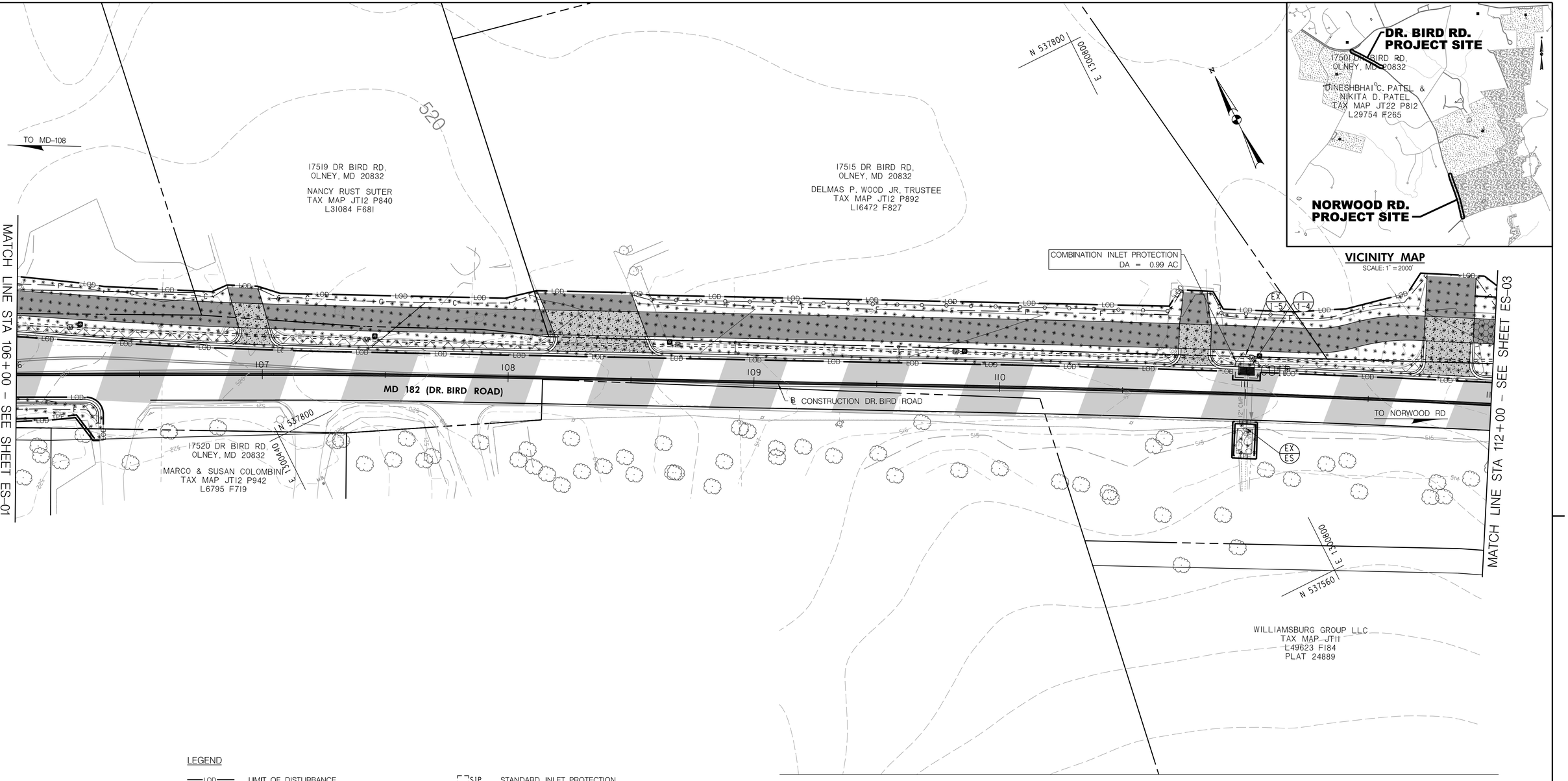
DR. BIRD ROAD SHARED USE PATH

EROSION AND SEDIMENT CONTROL PLAN

DESIGNED BY YDM
DRAWN BY AGB
CHECKED BY SBP
F.A.P. NO. _____
COUNTY MONTGOMERY
LOGMILE _____
SCALE 1"=20'
DATE AUGUST 2023

DRAWING NO. SMSC0017 ES-01 OF 07
SHEET NO. 56 OF 103

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pES-0001_DrBird.dgn



VICINITY MAP
SCALE: 1" = 2000'

LEGEND

LOD	LIMIT OF DISTURBANCE
DF	DIVERSION FENCE
SF	SILT FENCE
	CLEAR WATER DIVERSION PIPE
	SAND BAGS
	SAME DAY STABILIZATION
	ROCK OUTLET PROTECTION
	RECONSTRUCTED IMPERVIOUS AREA
	NEW IMPERVIOUS AREA
	PAVEMENT CONVERSION TO OPEN SPACE
	ASPHALT SHARED USE PATH
	FLEXIPAVE SHARED USE PATH
	DRIVEWAY CONCRETE
SIP	STANDARD INLET PROTECTION
CIP	CURB INLET PROTECTION
MIP	MEDIAN SUMP INLET PROTECTION
COIP	COMBINATION INLET PROTECTION
	EX. STORM DRAIN PIPE
	EXISTING TREELINE
430	EX. CONTOUR
430	PROP. CONTOUR
	FACILITY FOOTPRINT
	PROPOSED INLET
	PROP. STORM DRAIN PIPE
	PROPOSED DITCH
	PROPERTY LINE
	ROW LINE

20' 0 20' 40'
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DESIGN SECTION
240-777-7221

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Transportation Planning and Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date

DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

PLAN NO. MR2022024 | DWG. ES-02

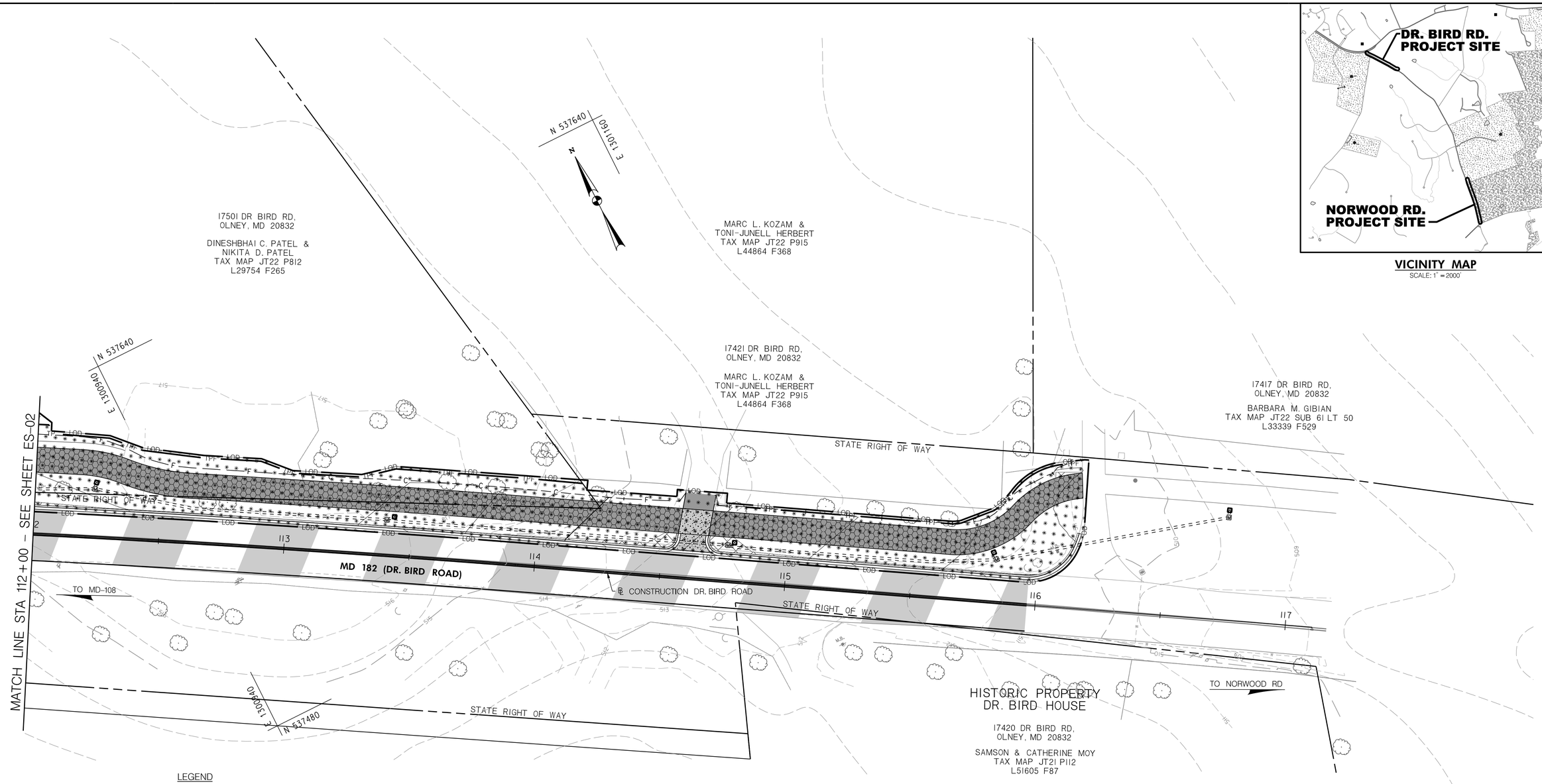
DR. BIRD ROAD
SHARED USE PATH
EROSION AND SEDIMENT CONTROL PLAN

DESIGNED BY YDM
DRAWN BY AGB
CHECKED BY SBP
F.A.P. NO. _____
COUNTY MONTGOMERY
LOGMILE _____
SCALE 1"=20'
DATE AUGUST 2023

DRAWING NO. SMSC0018 ES- 02 OF 07

SHEET NO. 57 OF 103

PLOTTED: 8/1/2023
FILE: \\adu.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pES-0002_DrBird.dgn



LEGEND

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	CLEAR WATER DIVERSION PIPE
	SAND BAGS
	SAME DAY STABILIZATION
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MONTGOMERY COUNTY
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PLAN NO. MR2022024 | DWG. ES-03

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DESIGN SECTION
240-777-7221

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

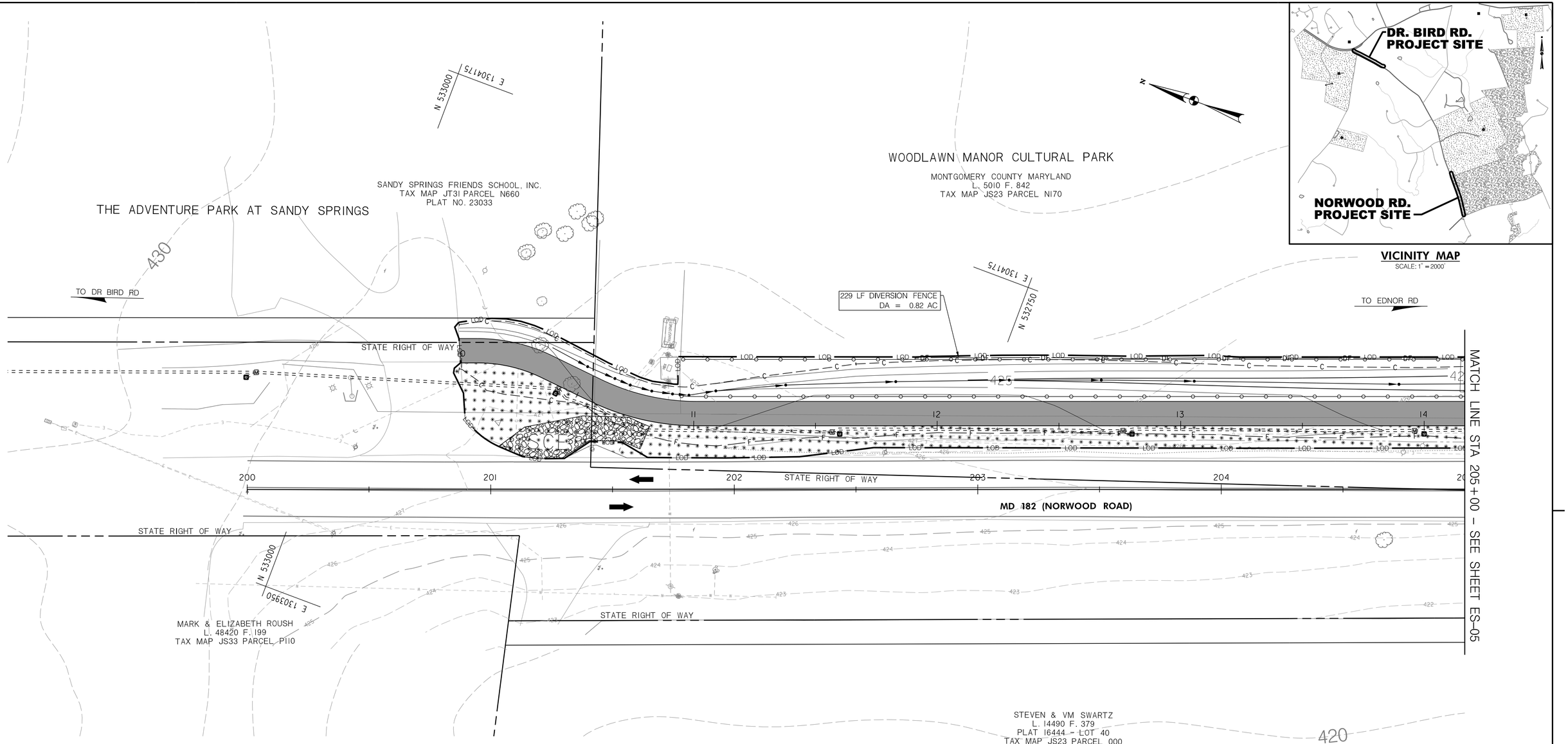
DR. BIRD ROAD SHARED USE PATH
EROSION AND SEDIMENT CONTROL PLAN

DESIGNED BY YDM
DRAWN BY AGB
CHECKED BY SBP
F.A.P. NO. _____
COUNTY MONTGOMERY
LOGMILE _____
SCALE 1"=20'
DATE AUGUST 2023

DRAWING NO. SMSC0019 ES-03 OF 07

SHEET NO. 58 OF 103

PLOTTED: 8/1/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pES-0003_DrBird.dgn



VICINITY MAP
SCALE: 1" = 2000'

LEGEND

- LOD — LIMIT OF DISTURBANCE
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ROCKVILLE, MARYLAND

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Chief, Transportation Planning and Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

PLAN NO. MR2022024 | DWG. ES-04

DR. BIRD ROAD SHARED USE PATH

EROSION AND SEDIMENT CONTROL PLAN

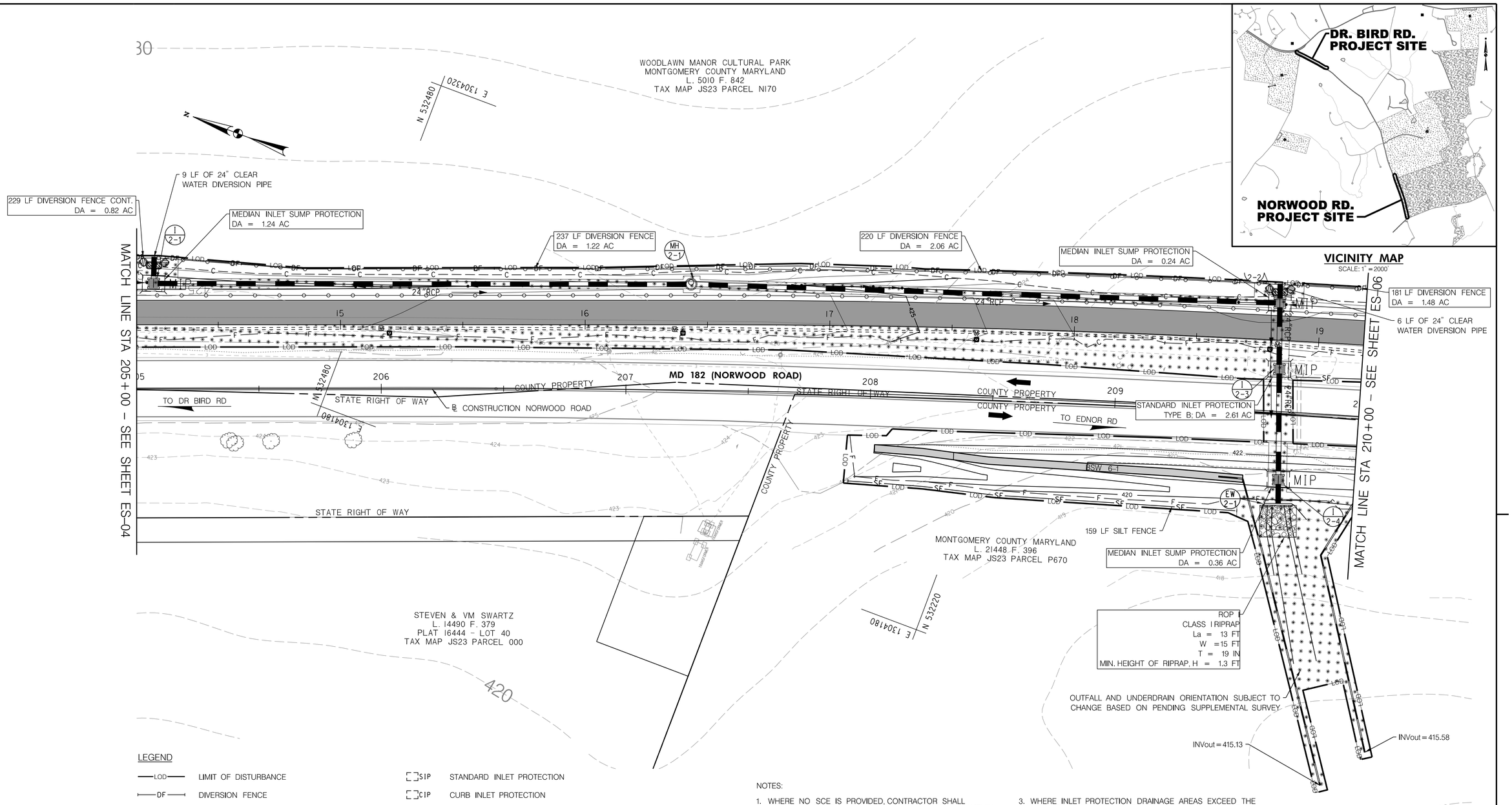
DESIGNED BY YDM
DRAWN BY AGB
CHECKED BY SBP
F.A.P. NO. _____

COUNTY MONTGOMERY
LOGMILE _____
SCALE 1"=20'
DATE AUGUST 2023

DRAWING NO. SMSC0020 ES-04 OF 07

SHEET NO. 59 OF 103

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pES-0004_DrBird.dgn



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MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

PLAN NO. MR2022024 | DWG. ES-05

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DESIGN SECTION
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DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

DR. BIRD ROAD SHARED USE PATH

EROSION AND SEDIMENT CONTROL PLAN

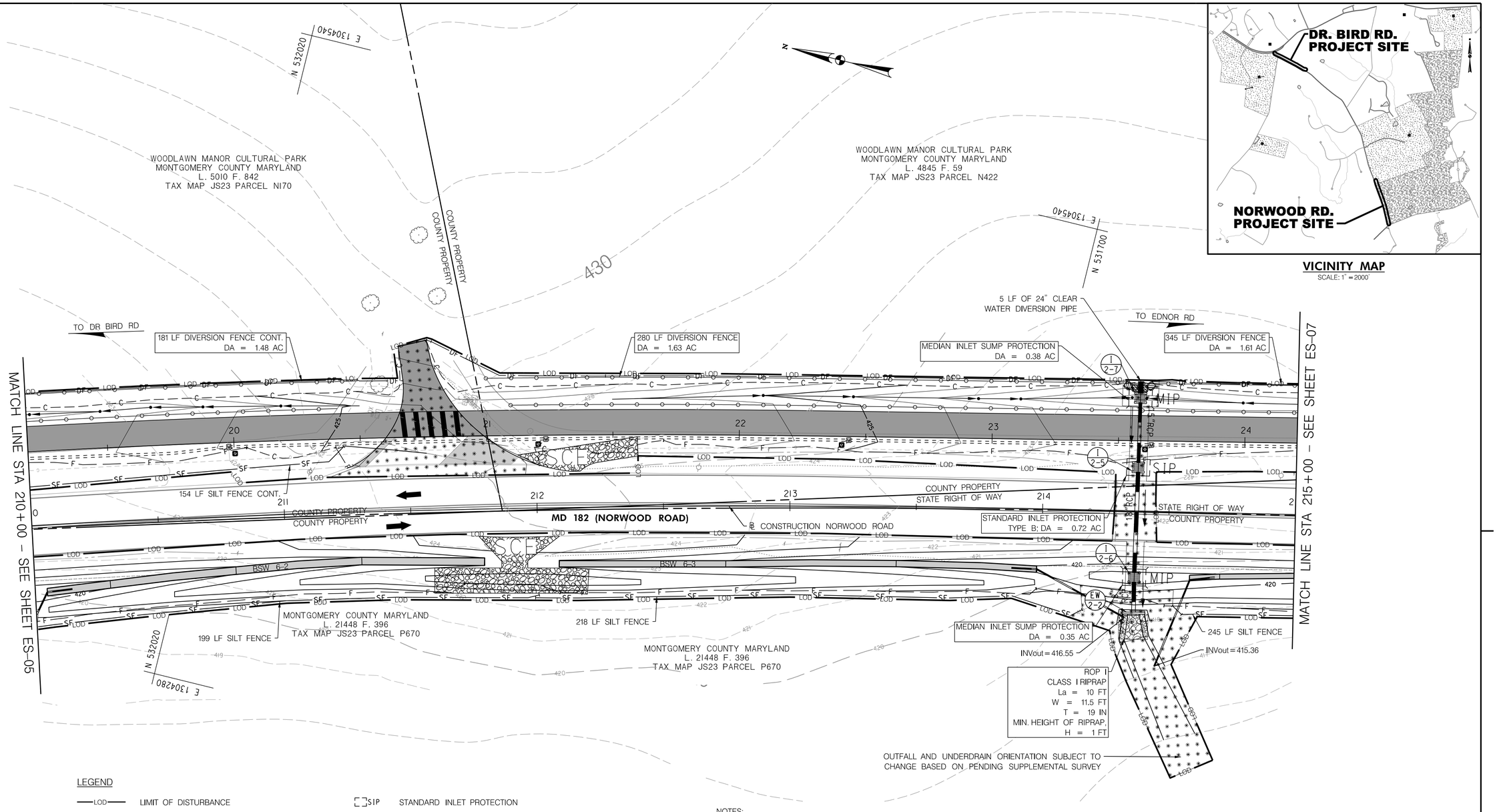
DESIGNED BY YDM
DRAWN BY AGB
CHECKED BY SBP
F.A.P. NO. _____

COUNTY MONTGOMERY
LOGMILE _____
SCALE 1"=20'
DATE AUGUST 2023

DRAWING NO. SMSC0021 ES-05 OF 07

SHEET NO. 60 OF 103

PLOTTED: 8/1/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pES-0005_DrBird.dgn



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DESIGN SECTION
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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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Chief, Transportation Planning and Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date

DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

PLAN NO. MR2022024 | DWG. ES-06

DR. BIRD ROAD
SHARED USE PATH
EROSION AND SEDIMENT CONTROL PLAN

DESIGNED BY YDM
DRAWN BY AGB
CHECKED BY SBP
F.A.P. NO. _____
COUNTY MONTGOMERY
LOGMILE _____
SCALE 1"=20'
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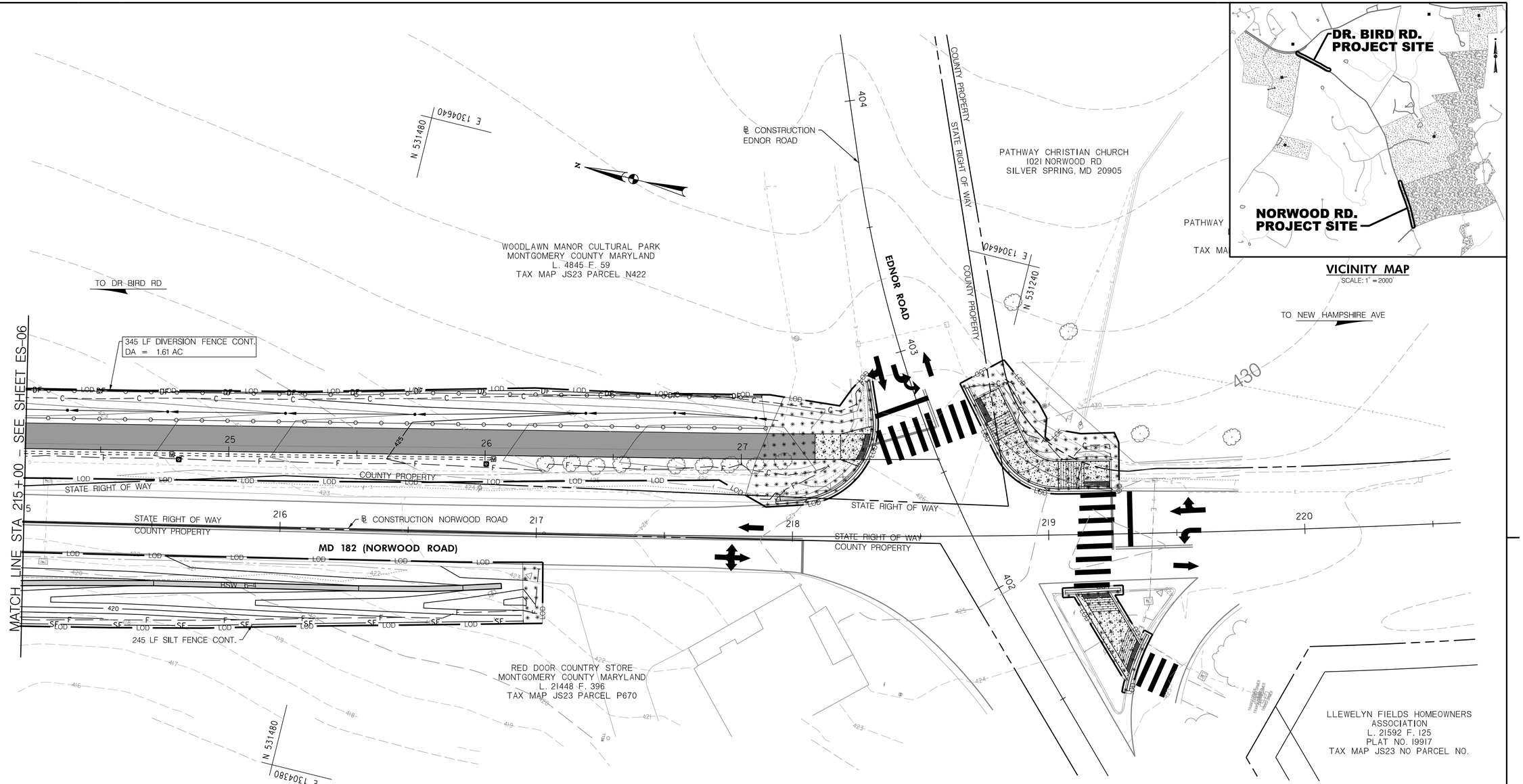
DRAWING NO. SMSC0022 ES-06 OF 07

SHEET NO. 61 OF 103

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pES-0006_DrBird.dgn



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MONTGOMERY COUNTY
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ROCKVILLE, MARYLAND

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Chief, Transportation Planning and Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date

DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

PLAN NO. MR2022024 | DWG. ES-07

DR. BIRD ROAD SHARED USE PATH

EROSION AND SEDIMENT CONTROL PLAN

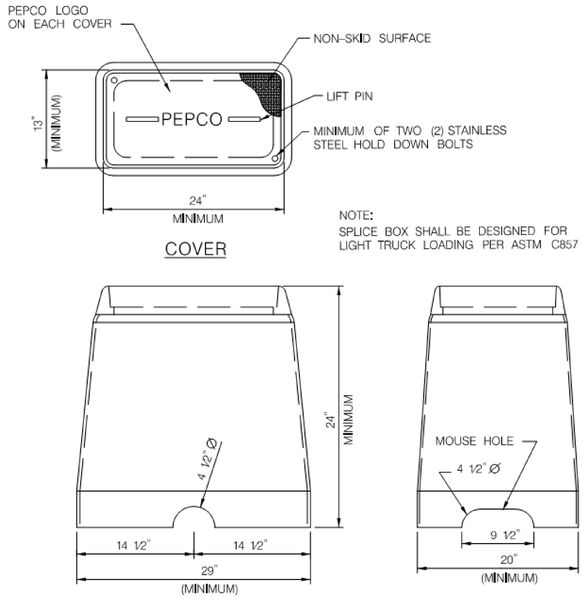
DESIGNED BY YDM
DRAWN BY AGB
CHECKED BY SBP
F.A.P. NO. _____
COUNTY MONTGOMERY
LOGMILE _____
SCALE 1"=20'
DATE AUGUST 2023

DRAWING NO. SMSC0023 ES-07 OF 07
SHEET NO. 62 OF 103

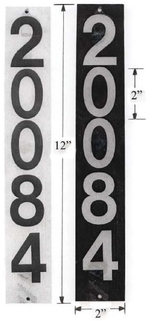
PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pES-0007_DrBird.dgn

LIGHTING GENERAL NOTES

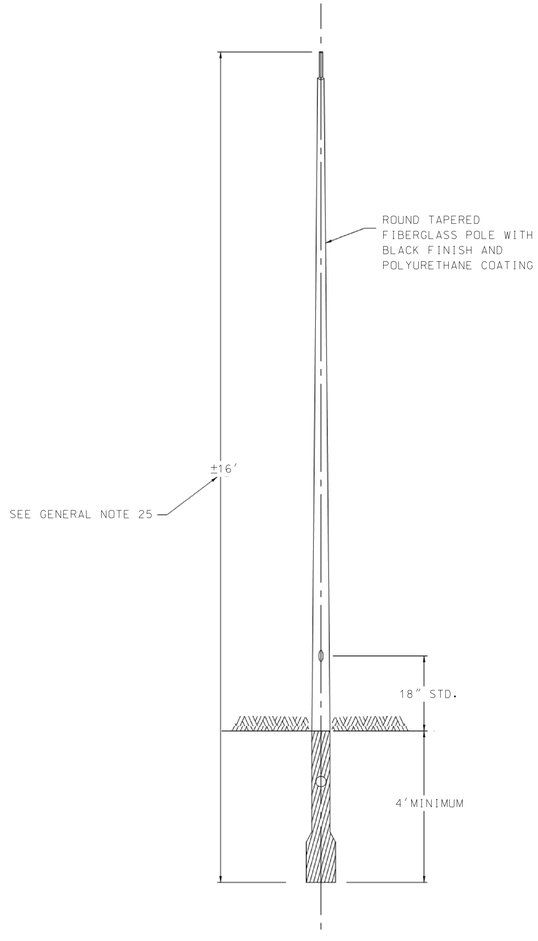
1. THE PROPOSED ROADWAY LIGHTING SHALL BE SINGLE PHASE 120/240V WITH AN OPERATING VOLTAGE OF 240V.
2. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THIS PLAN ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE PROPOSED EQUIPMENT WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
3. THE CONTRACTOR SHALL ARRANGE A MEETING WITH PEPCO, THE PROJECT ENGINEER, AND THE MCDOT TO ENSURE THAT POWER IS AVAILABLE WHEN REQUIRED.
4. THE PROPOSED LIGHT FIXTURES SHALL BE COLONIAL POST-TOP 70 WATT LED LUMINAIRES WITH TYPE III DISTRIBUTION. ALL LED FIXTURE CHOICES MUST BE APPROVED BY MCDOT AND PEPCO.
5. THE CONTRACTOR SHALL INSTALL THREE RUNS OF NO. 10 AWG CABLE BETWEEN THE POST-TOP LUMINAIRE AND THE ADJACENT PEPCO SPLICE BOX. ONE RUN SHALL INCLUDE GREEN INSULATION AND SHALL BE CONNECTED TO THE GROUNDING LUG OR GROUND ROD TO PROVIDE FOR GROUNDING OF THE LUMINAIRE. 3 FT OF EACH CABLE SHALL BE COILED IN THE SPLICE BOX FOR CONNECTION BY PEPCO.
6. ALL PROPOSED CABLE ENERGIZING PROPOSED LIGHTING STRUCTURES SHALL BE NEW.
7. THE LIGHT POLES ALONG MD 182 WILL BE WIRED, ENERGIZED, AND MAINTAINED BY PEPCO FOR MCDOT.
8. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IN CASE OF DAMAGE TO AN EXISTING FACILITY.
9. LIGHTING STRUCTURES SHALL HAVE A MINIMUM LATERAL OFFSET OF 2 FEET FROM THE SHARED USE PATH.
10. ALL CONNECTIONS BETWEEN GROUND RODS AND GROUND CABLE SHALL BE BY EXOTHERMIC WELD.
11. ALL PROPOSED LIGHT STRUCTURE LOCATIONS SHALL BE MARKED IN THE FIELD AND TEST PITS COMPLETED PRIOR TO INSTALLATION. THE CONTRACTOR MUST VERIFY THE LOCATION OF ALL EXISTING UTILITIES AND FINAL GRADE ELEVATIONS PRIOR TO INSTALLATION OF THE LIGHTING EQUIPMENT. THE CONTRACTOR SHALL COORDINATE THE STAKE OUT OF THE LIGHT POLE WITH PEPCO AND MCDOT. THE CONTRACTOR SHALL MAINTAIN APPROPRIATE CLEARANCES FROM ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES.
12. ALL HANDBOXES, CONDUITS UNDER PAVEMENT AND LIGHTING STRUCTURES SHALL BE STAKED OUT AND EVERY LOCATION APPROVED BY THE ENGINEER BEFORE ANY WORK IS PERFORMED.
13. THE CONTRACTOR SHALL CAP AND ABANDON ALL EXISTING CONDUITS AND REMOVE ALL EXISTING CABLES THAT ARE NO LONGER IN USE.
14. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF LIGHT POLES, SPLICE BOXES AND CONDUITS WITH THE INSTALLATION OF PROPOSED DRAINAGE STRUCTURES AND STORM WATER MANAGEMENT FACILITIES. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
15. RIGHT OF WAY SHOWN ON THE PLANS IS APPROXIMATE AND BASED ON THE BEST AVAILABLE INFORMATION.
16. CLEARING AND GRUBBING REQUIRED FOR INSTALLATION OF LIGHTING STRUCTURES, SPLICE BOXES CONDUITS, ETC. WILL NOT BE MEASURED AND THE COST WILL BE TO THE PERTINENT BID ITEM.
17. ALL TRENCHING MUST BE BACKFILLED AND RESTORED TO ITS ORIGINAL CONDITION ON THE SAME WORKING DAY ON WHICH IT WAS OPENED. AREAS WHICH ARE NOT RESEEDED, MULCHED OR SODDED MUST BE COVERED TO PREVENT EROSION.
18. ALL SOIL REMOVED FOR HANDBOXES, LIGHT POLES, ETC. MUST BE COVERED TO PREVENT EROSION. SOIL NOT USED FOR BACKFILL MUST BE DISPOSED OF TO THE ENGINEER'S SATISFACTION ON THE SAME WORKING DAY THE BACKFILL IS COMPLETED.
19. WITHIN 36 IN. OF UNDERGROUND UTILITY LOCATIONS, THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE FOR POLES, CONDUITS, ETC. BY HAND. HAND DIGGING FOR INSTALLATION OR REMOVAL OF EQUIPMENT SHALL BE INCIDENTAL TO THE PERTINENT ITEMS IN THE EQUIPMENT LIST. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR HAND DIGGING.
20. ALL LIGHTING EQUIPMENT AND MATERIALS SHALL BE SUBMITTED TO MCDOT FOR APPROVAL PRIOR TO BEING INSTALLED. SEE SPECIAL PROVISIONS FOR LIGHT SPECIFICATIONS.
21. ALL POLES SHALL BE INSTALLED WITH POLE ID TAGS, AS DETAILED ON THIS SHEET.
22. PEPCO SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ALL CONDUITS, SPLICE BOXES, AND GROUND RODS. EMPTY CONDUITS SHALL BE INSTALLED WITH PULL STRINGS.
23. THE CONTRACTOR SHALL COORDINATE THE WIRING AND ENERGIZING OF THE PROPOSED LIGHTING SYSTEM WITH PEPCO. UTILITY COORDINATION SHALL BE INCIDENTAL TO INSTALLATION OF THE LIGHT POLES AND LUMINAIRES.
24. CONTACT MR. GEORGE DOWNIE (301-549-4347 OR GFDOWNIE@PEPCO.COM) TO OBTAIN WRITTEN APPROVAL OF THE LIGHTING FACILITIES PRIOR TO THE INSTALLATION.
25. LIGHT POLES SHALL BE SHORTENED, WHERE NECESSARY, TO MAINTAIN AT LEAST 2 FT VERTICAL CLEARANCE BETWEEN LOWEST OVERHEAD UTILITY AND LAMP FIXTURE FINAL.
26. FINAL LIGHT POLE LOCATIONS SHALL BE APPROVED BY THE ENGINEER. ALL EFFORTS SHALL BE MADE TO AVOID CONFLICTS WITH OVERHEAD TREE BRANCHES. NO MAJOR TREE BRANCHES SHALL BE REMOVED WITHOUT THE ENGINEER'S APPROVAL.
27. SPLICE BOXES SHALL BE PLACED SUCH THAT THE LONG EDGE IS PARALLEL TO THE SHARED USE PATH.
28. ALL SWEEP BENDS ARE TO BE A MINIMUM OF 2 FT. IN RADIUS.
29. 1/4 IN. NYLON PULL- LINE IS TO BE INSTALLED IN EACH CONDUIT DUCT.
30. CONTRACTOR SHALL INSTALL TRACEABLE MARKING TAPE 12 IN. ABOVE EACH CONDUIT RUN.
31. MAXIMUM BENDS PER CONDUIT RUN SHALL BE 180 DEGREES.
32. INSTALLATION OF ALL UNDERGROUND LIGHTING FACILITIES ARE ALSO SUBJECT TO PEPCO INSPECTION AND WRITTEN APPROVAL BEFORE CONCEALMENT. FAILURE TO OBTAIN SUCH INSPECTION WILL RESULT IN THE COVERING OF FACILITIES AT THE CONTRACTOR'S EXPENSE, CALL 301-670-8808 OR 301-670-8828 BETWEEN 7:00 AM AND 9:00 AM OR 3:00 PM AND 4:00 PM, TWO (2) WORKING DAYS IN ADVANCE TO ARRANGE INSPECTION.
33. THE CONTRACTOR SHALL CONTACT PEPCO SIX (6) WEEKS PRIOR TO STARTING LIGHTING WORK TO COORDINATE POWER SOURCE LOCATIONS.
34. LIGHT POLES INSTALLED ON SLOPES MUST HAVE A MINIMUM 4' EMBEDMENT TO THE LOW SIDE OF THE SLOPE.



PEPCO SPLICE BOX DETAIL



POLE TAG DETAIL



DIRECT BURIAL FIBERGLASS POLE

LIGHTING ITEM LIST

ITEM NO.	DESCRIPTION	UNIT	LT-01	LT-02	LT-03	LT-04	LT-05	LT-06	LT-07	LT-08	LT-09	LT-10	LT-11	LT-12	LT-13	QUANTITY
8000	1-CONDUCTOR ELECTRICAL CABLE (NO. 10 A.W.G.) THWN — COPPER	LF	110	140	140	110	110	125	140	140	140	65				1220
8000	FURNISH AND INSTALL LUMINAIRE	EA	3	5	5	3	3	4	5	5	5	2				40
8000	2" POLYVINYL CHLORIDE ELECTRICAL CONDUIT (SCHEDULE 80) (TRENCHED)	LF	20	20	20	20	20	20	20	20	20	10				190
8000	4" POLYVINYL CHLORIDE ELECTRICAL CONDUIT (SCHEDULE 80) (TRENCHED)	LF	350	635	505	280	350	480	490	615	615	460	530	530	190	6030
8000	4" POLYVINYL CHLORIDE ELECTRICAL CONDUIT (SCHEDULE 80) (BORED)	LF					390	120	250			270				1030
8000	4" POLYVINYL CHLORIDE ELECTRICAL CONDUIT (SCHEDULE 80) (2ND CONDUIT WITHIN ONE SLOT OR TRENCH)	LF	350	635	505	280	350	480	490	615	615	460	530	530	190	7060
8000	GROUND ROD, 3/4" DIAMETER X 10' LENGTH WITH CLAMP	EA	3	5	5	3	3	4	5	5	5	5	4	4	2	53
8000	FURNISH AND INSTALL SPLICE BOX (PEPCO)	EA	3	5	5	3	3	4	5	5	5	5	4	4	2	53
8000	FURNISH AND INSTALL 16' DIRECT BURIAL FIBERGLASS LIGHT POLE	EA	3	5	5	3	3	4	5	5	5	2				40
8000	MAINTAIN EXISTING ROADWAY LIGHTING	LS														1.0

NOTE: LIGHTING ITEMS ARE LISTED FOR REFERENCE ONLY. PEPCO SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ALL EQUIPMENT RELATED TO STREET LIGHTING.

PLAN NO. MR2022024 | DWG. LT-00

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RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY SJC DRAWN BY SJC CHECKED BY WFW

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
LIGHTING GENERAL NOTES

SCALE NONE DATE AUGUST 2023

DRAWING NO. LT-00 OF 13 | SHEET NO. 63 OF 103

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pLT-0000_DrBird.dgn

PLOTTED: 8/11/2023
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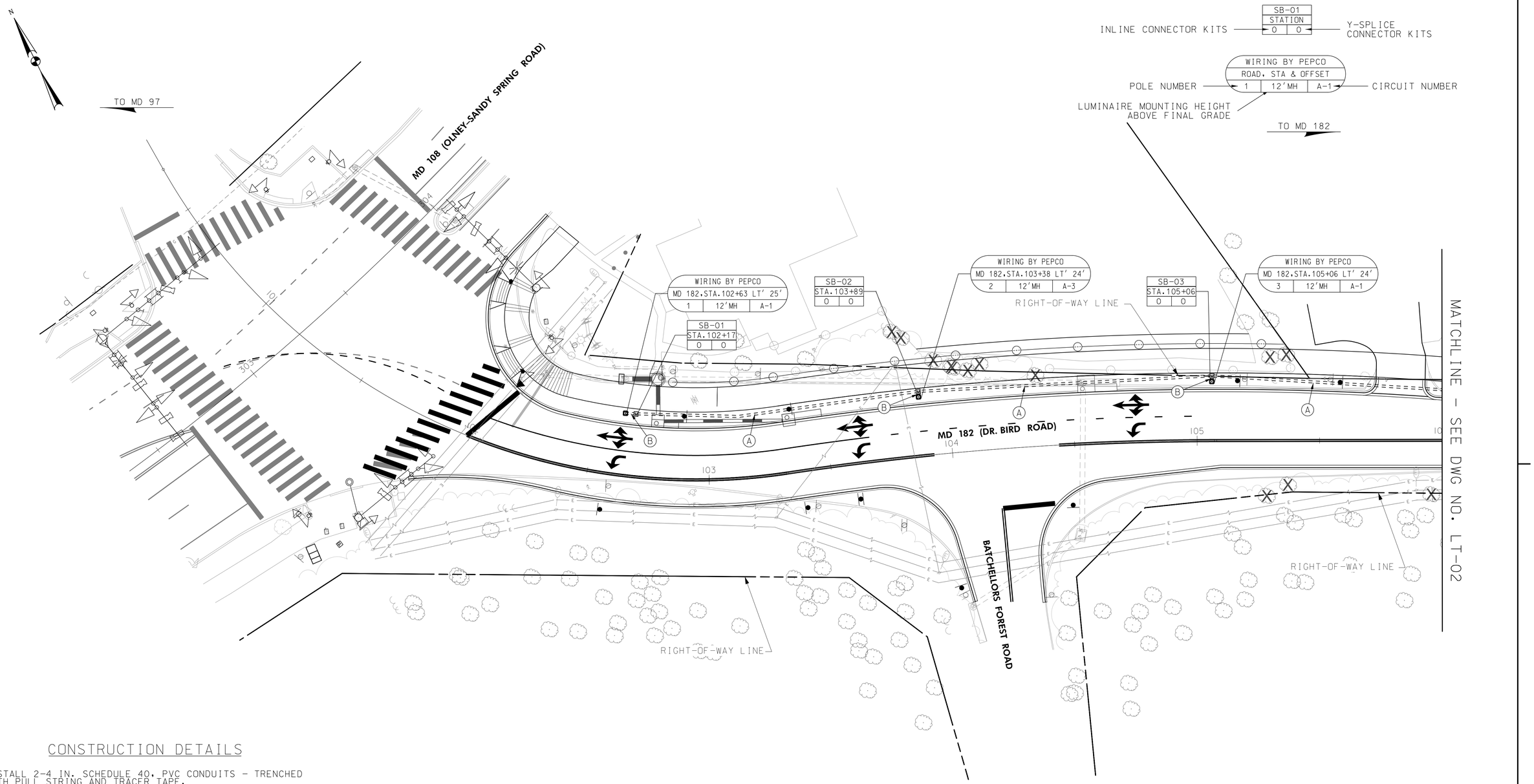

CONSTRUCTION DETAILS

A. INSTALL 2-4 IN. SCHEDULE 40, PVC CONDUITS - TRENCHED WITH PULL STRING AND TRACER TAPE.

B. INSTALL 1-2 IN. SCHEDULE 40 PVC CONDUIT - TRENCHED WITH 3-1 CONDUCTOR NO. 10 AWG ELECTRICAL CABLES.

C. DTEO TO COORDINATE WITH PEPCO TO HAVE LEASED ROADWAY LUMINAIRE INSTALLED ON EXISTING UTILITY POLE.

D. INSTALL 2-4 IN. SCHEDULE 40, PVC CONDUITS - BORED WITH PULL STRING AND TRACER TAPE.

⊠ 16' DIRECT BURIAL FIBERGLASS POLE WITH 70W LED COLONIAL POST TOP LUMINAIRE

Ⓜ PEPCO SPLICE BOX

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
LIGHTING PLAN

SCALE 1"=20' DATE AUGUST 2023

DRAWING NO. LT-01 OF 13 SHEET NO. 64 OF 103

PLAN NO. MR2022024 DWG. LT-01

PLOTTED: 8/1/2023
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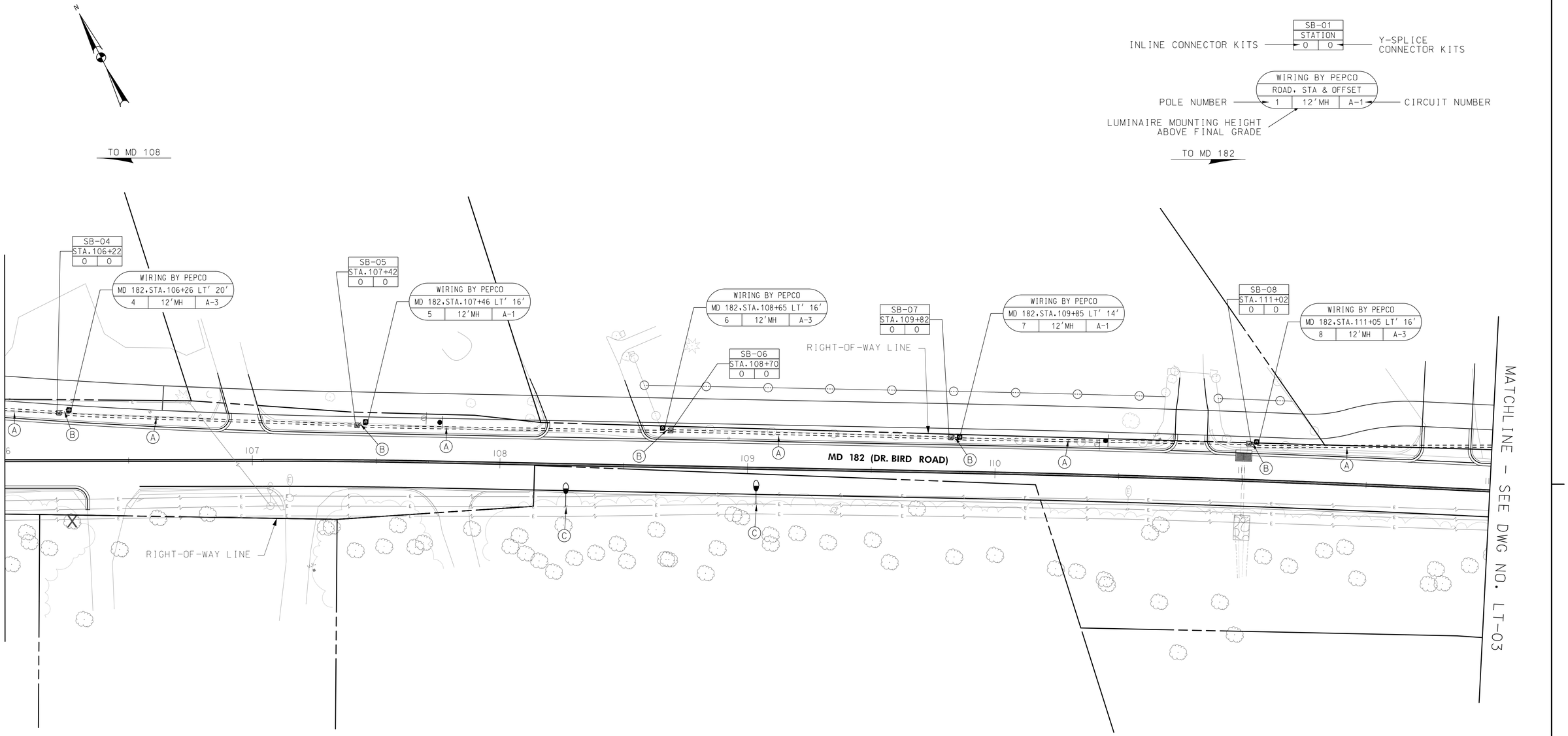

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Chief, Division of Transportation Engineering — Date

DESIGNED BY SJC DRAWN BY SJC CHECKED BY WFW

MONTGOMERY COUNTY
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DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
LIGHTING PLAN

SCALE 1"=20' DATE AUGUST 2023

DRAWING NO. LT-02 OF 13

SHEET NO. 65 OF 103

PLAN NO. MR2022024 | DWG. LT-02

PLOTTED: 8/1/2023
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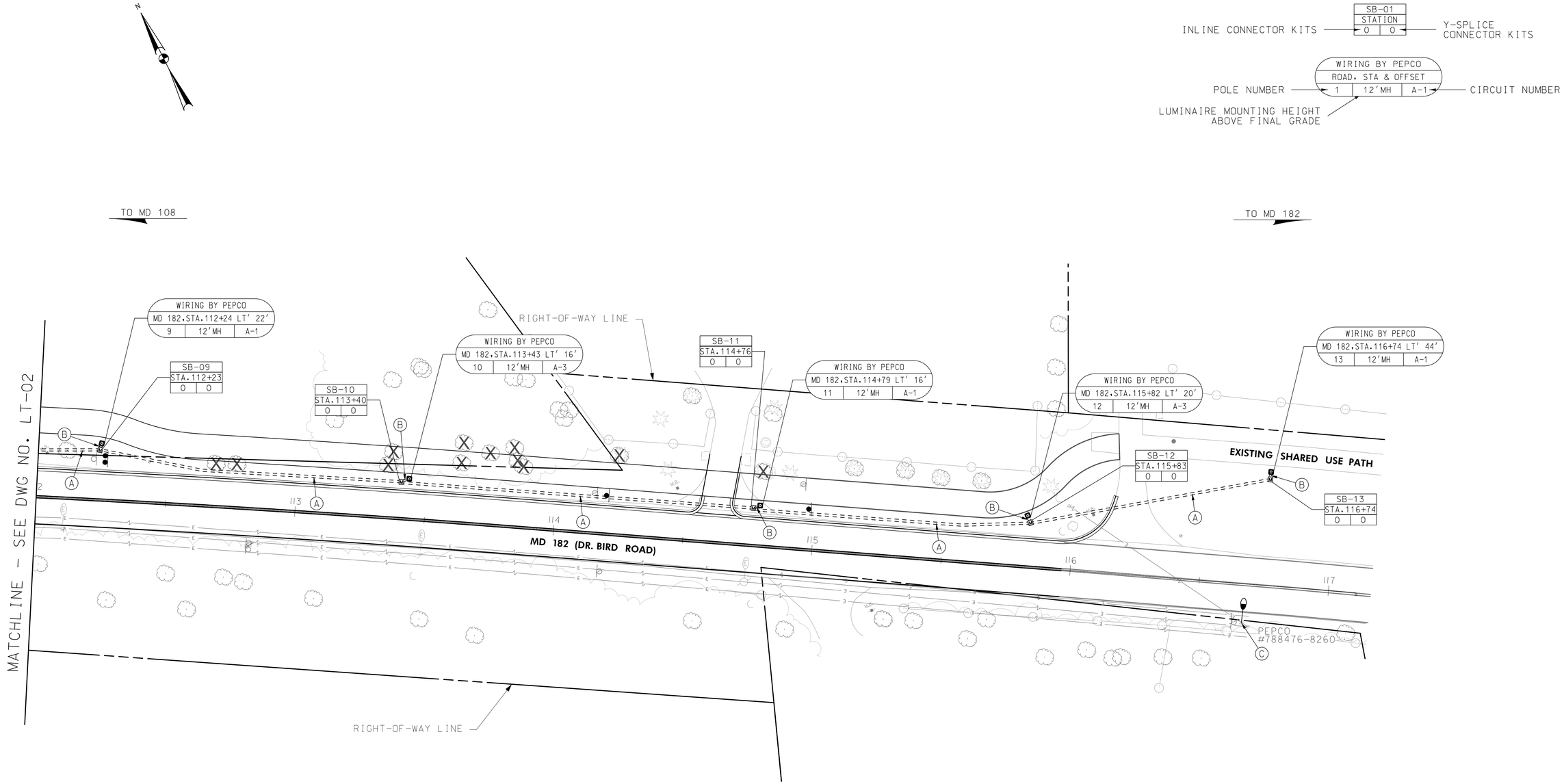

CONSTRUCTION DETAILS

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⊠ 16' DIRECT BURIAL FIBERGLASS POLE WITH 70W LED COLONIAL POST TOP LUMINAIRE

Ⓜ PEPCO SPLICE BOX

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

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HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
LIGHTING PLAN

SCALE 1"=20' DATE AUGUST 2023

DRAWING NO. LT-03 OF 13 SHEET NO. 66 OF 103

PLAN NO. MR2022024 DWG. LT-03

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pLT-0003_DrBird.dgn

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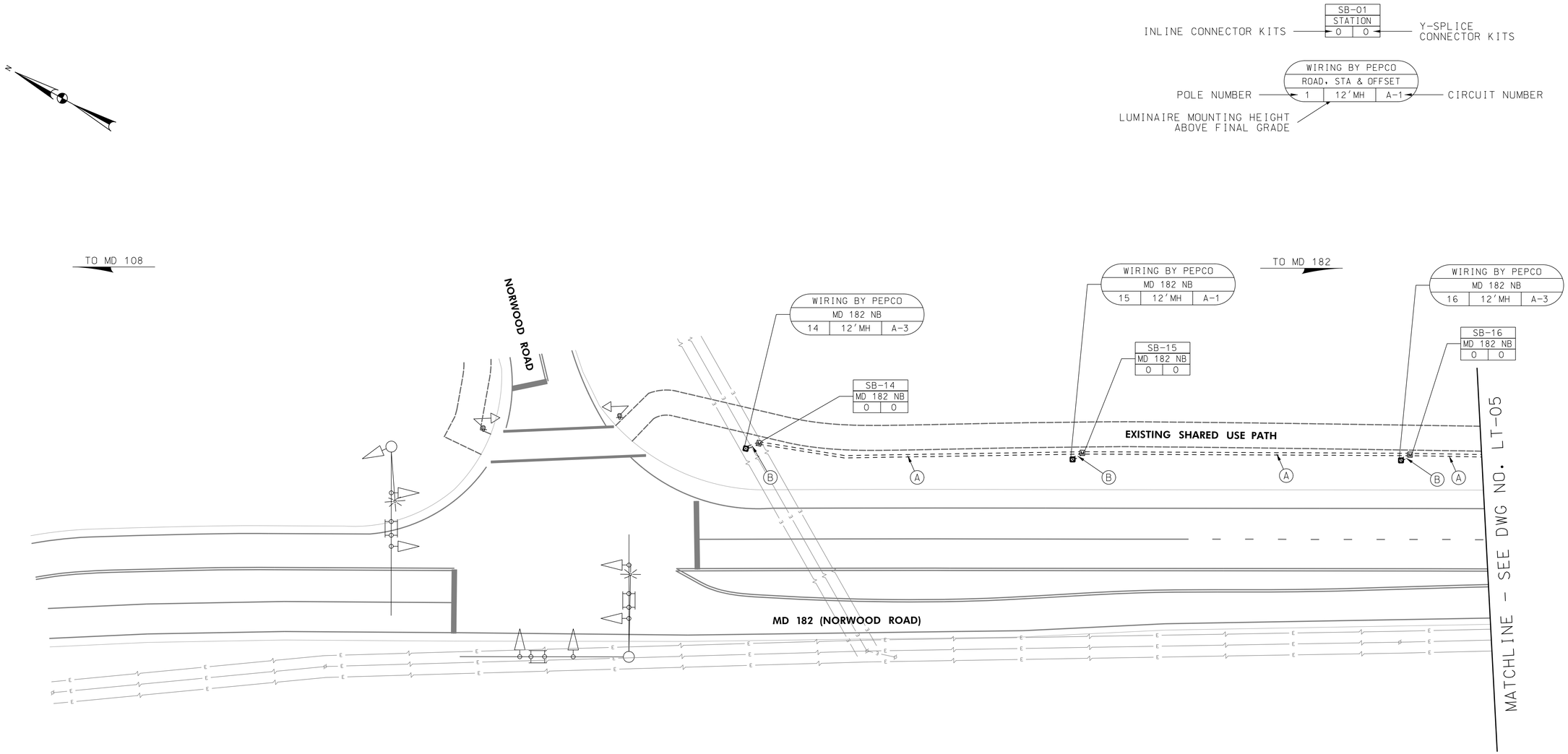

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D. INSTALL 2-4 IN. SCHEDULE 40, PVC CONDUITS - BORED WITH PULL STRING AND TRACER TAPE.

GENERAL NOTE

LUMINAIRES ON THIS SHEET SHALL BE INSTALLED 4.5' FROM EDGE OF SHARED USE PATH WITH A TYPICAL SPACING OF 120'. PEPCO SPLICE BOXES SHOWN ON THIS SHEET ARE SCHEMATIC. INSTALL SPLICE BOX WITHIN 5' OF LUMINAIRE.

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

16' DIRECT BURIAL FIBERGLASS POLE WITH 70W LED COLONIAL POST TOP LUMINAIRE

PEPCO SPLICE BOX

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HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD SHARED USE PATH LIGHTING PLAN

SCALE 1"=20' DATE AUGUST 2023

PLAN NO. MR2022024 | DWG. LT-04

DRAWING NO. LT-04 OF 13 | SHEET NO. 67 OF 103

PLOTTED: 8/11/2023
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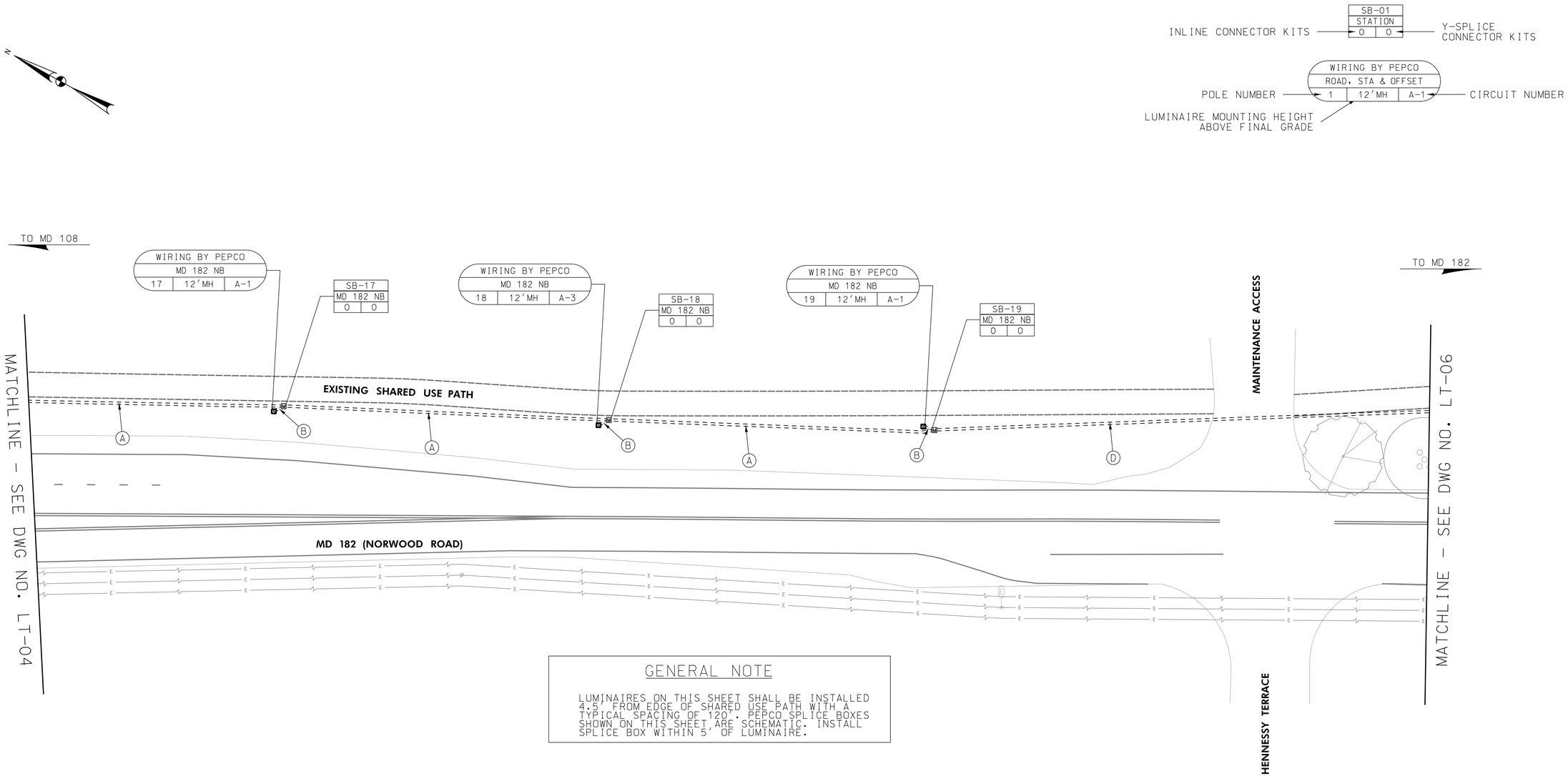

GENERAL NOTE

LUMINAIRES ON THIS SHEET SHALL BE INSTALLED 4.5' FROM EDGE OF SHARED USE PATH WITH A TYPICAL SPACING OF 120'. PEPCO SPLICE BOXES SHOWN ON THIS SHEET ARE SCHEMATIC. INSTALL SPLICE BOX WITHIN 5' OF LUMINAIRE.

CONSTRUCTION DETAILS

A. INSTALL 2-4 IN. SCHEDULE 40, PVC CONDUITS - TRENCHED WITH PULL STRING AND TRACER TAPE.

B. INSTALL 1-2 IN. SCHEDULE 40 PVC CONDUIT - TRENCHED WITH 3-1 CONDUCTOR NO. 10 AWG ELECTRICAL CABLES.

C. DTEO TO COORDINATE WITH PEPCO TO HAVE LEASED ROADWAY LUMINAIRE INSTALLED ON EXISTING UTILITY POLE.

D. INSTALL 2-4 IN. SCHEDULE 40, PVC CONDUITS - BORED WITH PULL STRING AND TRACER TAPE.

C. INSTALL 2-4 IN. SCHEDULE 40, PVC CONDUITS - BORED WITH PULL STRING AND TRACER TAPE.

⊠ 16' DIRECT BURIAL FIBERGLASS POLE WITH 70W LED COLONIAL POST TOP LUMINAIRE

Ⓜ PEPCO SPLICE BOX

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Chief, Division of Transportation Engineering — Date

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DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
LIGHTING PLAN

SCALE 1"=20' DATE AUGUST 2023

DRAWING NO. LT-05 OF 13 SHEET NO. 68 OF 103

PLAN NO. MR2022024 DWG. LT-05

PLOTTED: 8/1/2023
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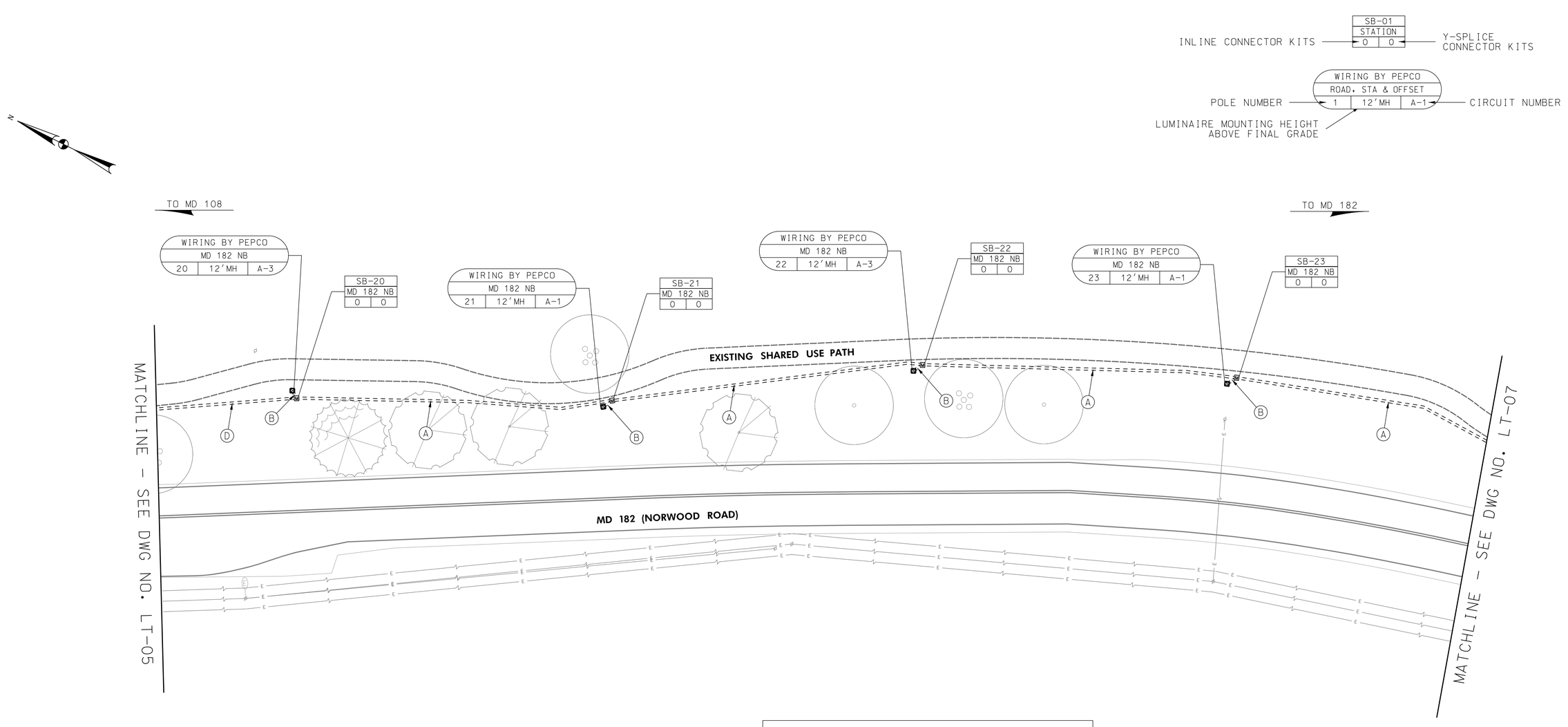

GENERAL NOTE

LUMINAIRES ON THIS SHEET SHALL BE INSTALLED 4.5' FROM EDGE OF SHARED USE PATH WITH A TYPICAL SPACING OF 120'. PEPCO SPLICE BOXES SHOWN ON THIS SHEET ARE SCHEMATIC. INSTALL SPLICE BOX WITHIN 5' OF LUMINAIRE.

CONSTRUCTION DETAILS

A. INSTALL 2-4 IN. SCHEDULE 40, PVC CONDUITS - TRENCHED WITH PULL STRING AND TRACER TAPE.

B. INSTALL 1-2 IN. SCHEDULE 40 PVC CONDUIT - TRENCHED WITH 3-1 CONDUCTOR NO. 10 AWG ELECTRICAL CABLES.

C. DTEO TO COORDINATE WITH PEPCO TO HAVE LEASED ROADWAY LUMINAIRE INSTALLED ON EXISTING UTILITY POLE.

D. INSTALL 2-4 IN. SCHEDULE 40, PVC CONDUITS - BORED WITH PULL STRING AND TRACER TAPE.

C. INSTALL 2-4 IN. SCHEDULE 40, PVC CONDUITS - BORED WITH PULL STRING AND TRACER TAPE.

⊠ 16' DIRECT BURIAL FIBERGLASS POLE WITH 70W LED COLONIAL POST TOP LUMINAIRE

Ⓜ PEPCO SPLICE BOX

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

PLAN NO. MR2022024 | DWG. LT-06

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ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Transportation Planning and Design Section — Date
APPROVED
Chief, Division of Transportation Engineering — Date

DESIGNED BY SJC DRAWN BY SJC CHECKED BY WFW

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
LIGHTING PLAN

SCALE 1"=20' DATE AUGUST 2023

DRAWING NO. LT-06 OF 13 | SHEET NO. 69 OF 103

PLOTTED: 8/1/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pLT-0006_DrBird.dgn

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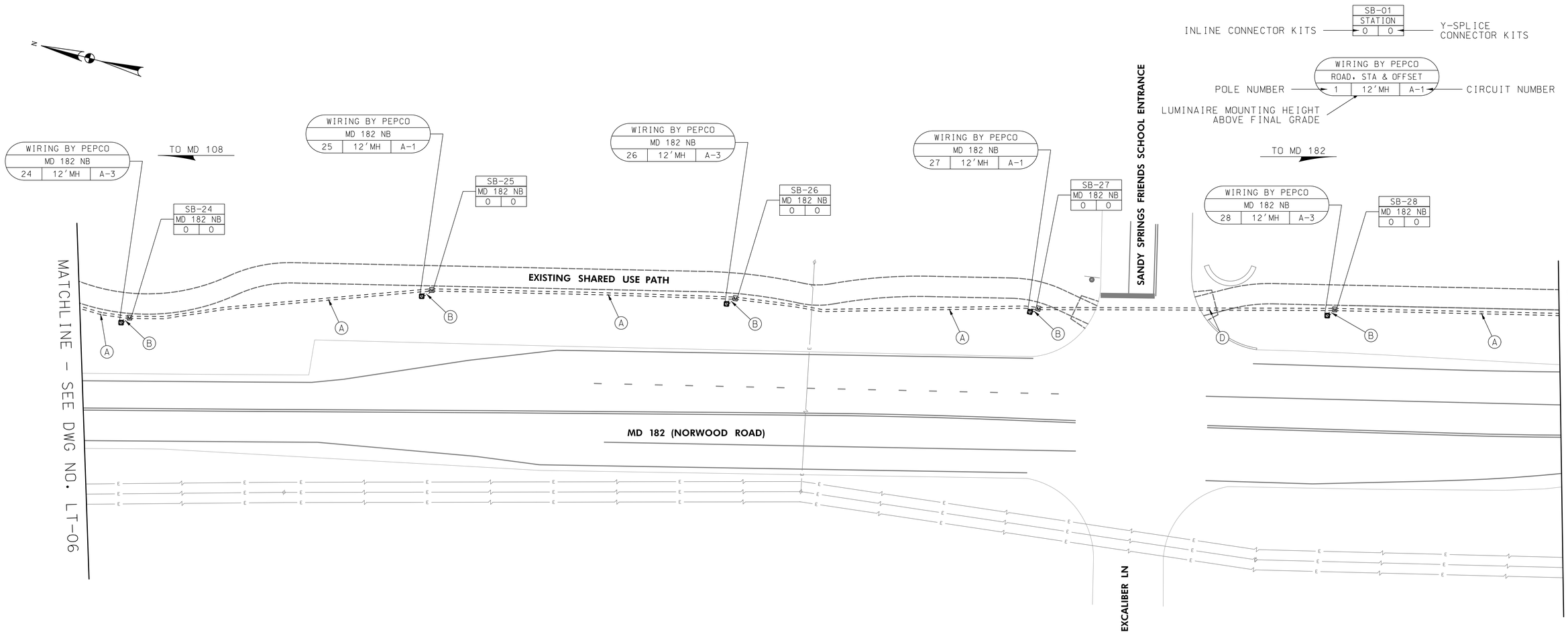

GENERAL NOTE

LUMINAIRES ON THIS SHEET SHALL BE INSTALLED 4.5' FROM EDGE OF SHARED USE PATH WITH A TYPICAL SPACING OF 120'. PEPCO SPLICE BOXES SHOWN ON THIS SHEET ARE SCHEMATIC. INSTALL SPLICE BOX WITHIN 5' OF LUMINAIRE.

CONSTRUCTION DETAILS

A. INSTALL 2-4 IN. SCHEDULE 40, PVC CONDUITS - TRENCHED WITH PULL STRING AND TRACER TAPE.

B. INSTALL 1-2 IN. SCHEDULE 40 PVC CONDUIT - TRENCHED WITH 3-1 CONDUCTOR NO. 10 AWG ELECTRICAL CABLES.

C. DTEO TO COORDINATE WITH PEPCO TO HAVE LEASED ROADWAY LUMINAIRE INSTALLED ON EXISTING UTILITY POLE.

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C. INSTALL 2-4 IN. SCHEDULE 40, PVC CONDUITS - BORED WITH PULL STRING AND TRACER TAPE.

⊠ 16' DIRECT BURIAL FIBERGLASS POLE WITH 70W LED COLONIAL POST TOP LUMINAIRE

Ⓜ PEPCO SPLICE BOX

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

PLAN NO. MR2022024 | DWG. LT-07

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CONTACT:
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REBECCA.PARK@MONTGOMERYCOUNTYMD.GOV
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DR. BIRD / NORWOOD ROAD
SHARED USE PATH
LIGHTING PLAN

SCALE 1"=20' DATE AUGUST 2023

DRAWING NO. LT-07 OF 13 | SHEET NO. 70 OF 103

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\lfs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pLT-0007_DrBird.dgn

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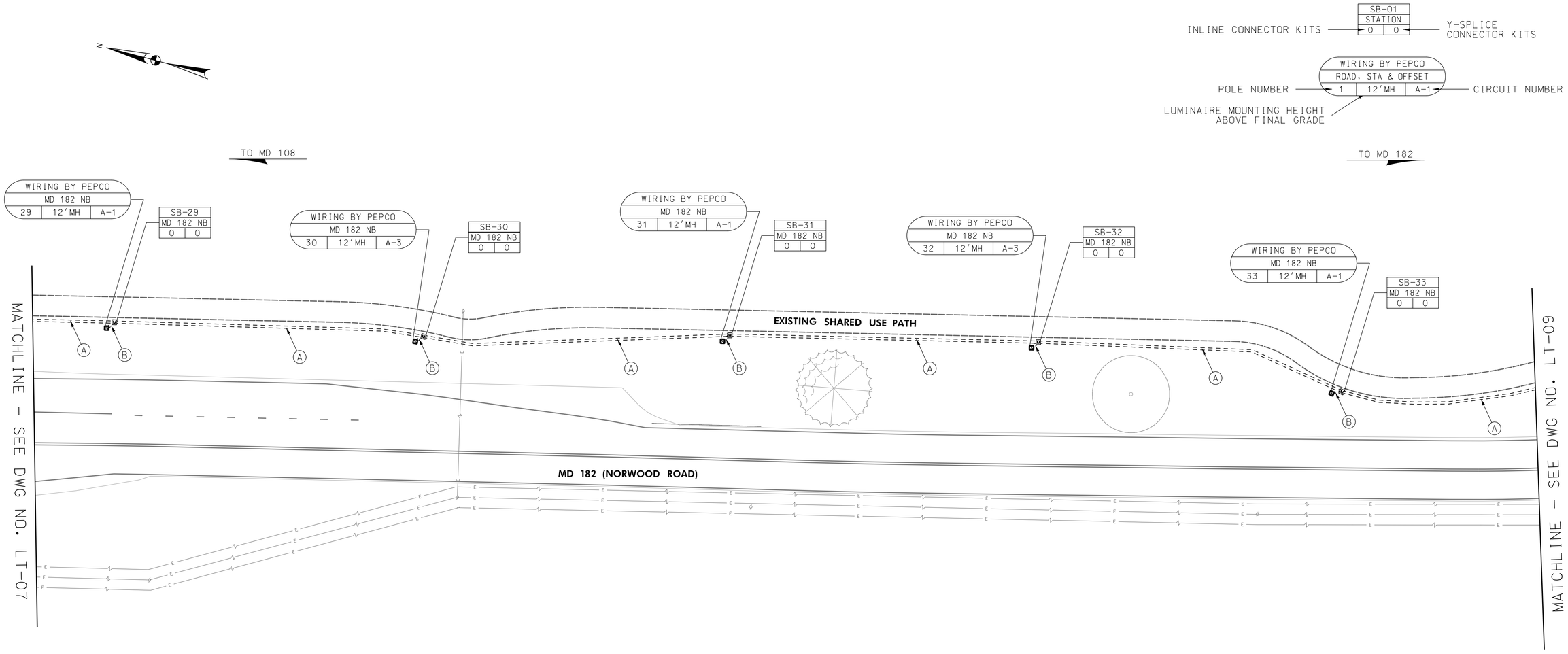

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HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
LIGHTING PLAN

SCALE 1"=20' DATE AUGUST 2023

DRAWING NO. LT-08 OF 13 SHEET NO. 71 OF 103

PLAN NO. MR2022024 | DWG. LT-08

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pLT-0008_DrBird.dgn

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N

SB-01	
STATION	
0	0

INLINE CONNECTOR KITS — Y-SPLICE CONNECTOR KITS

WIRING BY PEPCO		
ROAD, STA & OFFSET		
1	12′MH	A-1

POLE NUMBER — CIRCUIT NUMBER

LUMINAIRE MOUNTING HEIGHT ABOVE FINAL GRADE

TO MD 108

TO MD 182

WIRING BY PEPCO		
MD 182 NB		
34	12′MH	A-3

SB-34	
MD 182 NB	
0	0

WIRING BY PEPCO		
MD 182 NB		
35	12′MH	A-1

SB-35	
MD 182 NB	
0	0

WIRING BY PEPCO		
MD 182 NB		
36	12′MH	A-3

SB-36	
MD 182 NB	
0	0

WIRING BY PEPCO		
MD 182 NB		
37	12′MH	A-1

SB-37	
MD 182 NB	
0	0

WIRING BY PEPCO		
MD 182 NB		
38	12′MH	A-3

SB-38	
MD 182 NB	
0	0

RIGHT-OF-WAY LINE

EXISTING SHARED USE PATH

MD 182 (NORWOOD ROAD)

RIGHT-OF-WAY LINE

MATCHLINE - SEE DWG NO. LT-08

MATCHLINE - SEE DWG NO. LT-10

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20′ 0 20′ 40′

SCALE: 1″=20′

PLAN NO. MR2022024 | DWG. LT-09

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DR. BIRD / NORWOOD ROAD
SHARED USE PATH
LIGHTING PLAN

SCALE 1″=20′ DATE AUGUST 2023

DRAWING NO. LT-09 OF 13 | SHEET NO. 72 OF 103

PLOTTED: 8/15/2023
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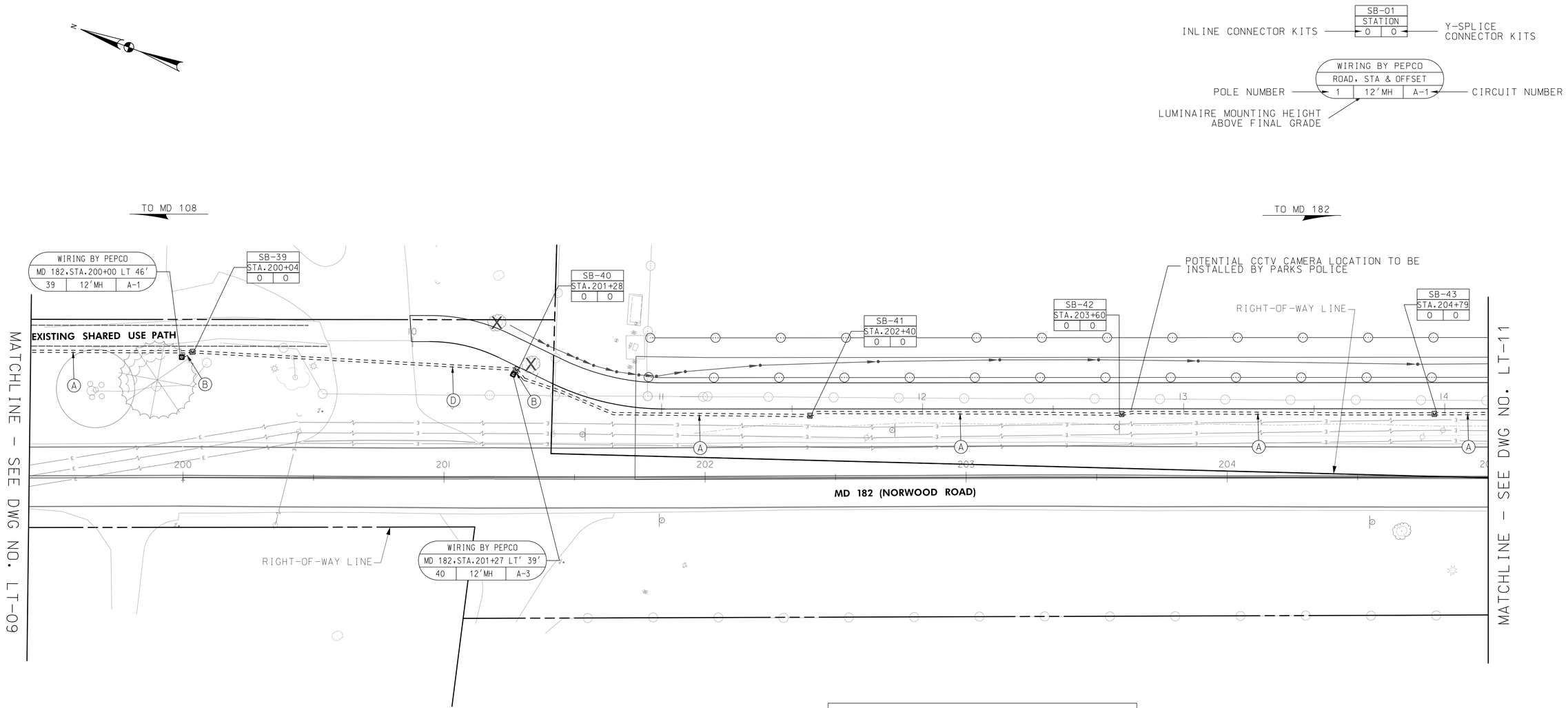

GENERAL NOTE

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DR. BIRD / NORWOOD ROAD
SHARED USE PATH
LIGHTING PLAN

SCALE 1"=20' DATE AUGUST 2023

DRAWING NO. LT-10 OF 13

PLAN NO. MR2022024 | DWG. LT-10 | SHEET NO. 73 OF 103

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pLT-0010_DrBird.dgn

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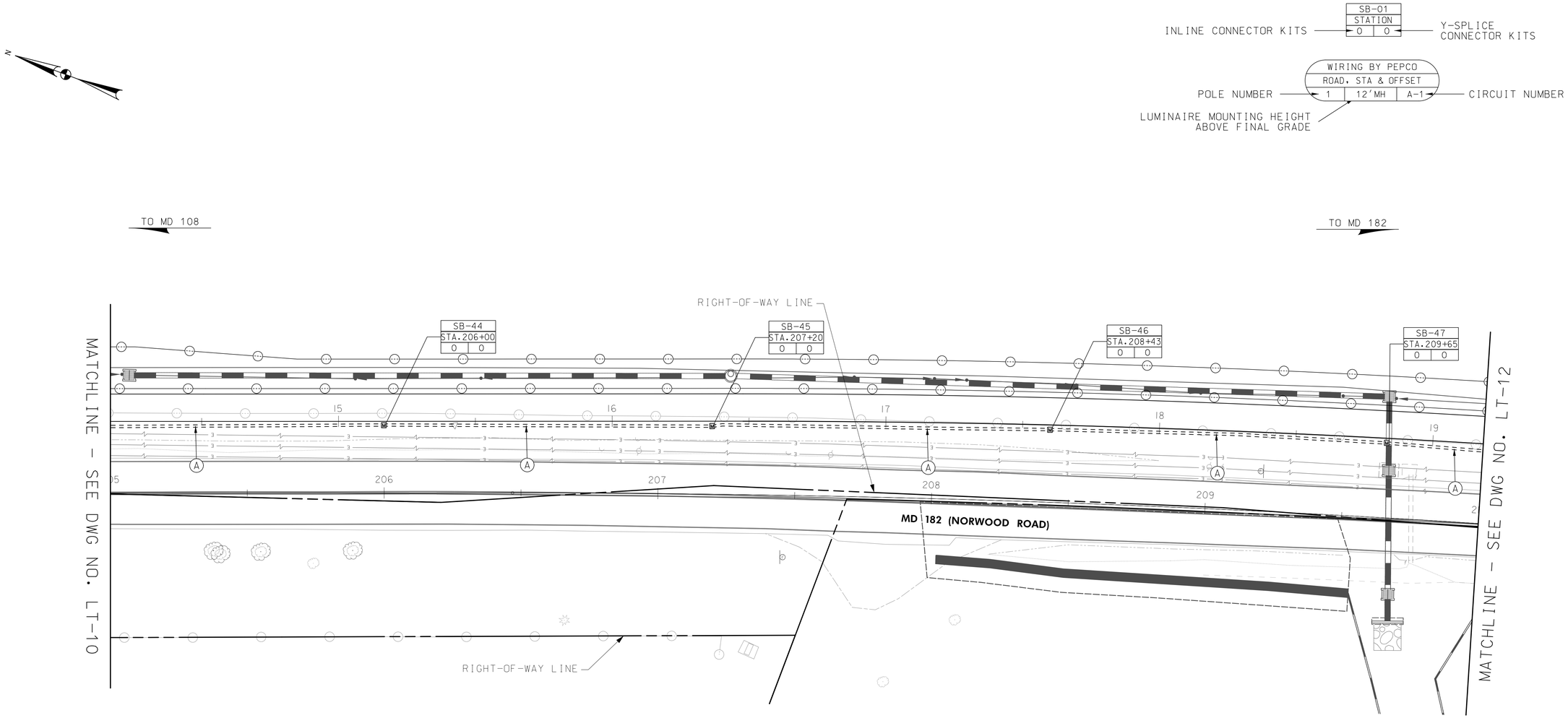

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HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
LIGHTING PLAN

SCALE 1"=20' DATE AUGUST 2023

DRAWING NO. LT-11 OF 13

SHEET NO. 74 OF 103

PLAN NO. MR2022024 | DWG. LT-11

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pLT-0011_DrBird.dgn

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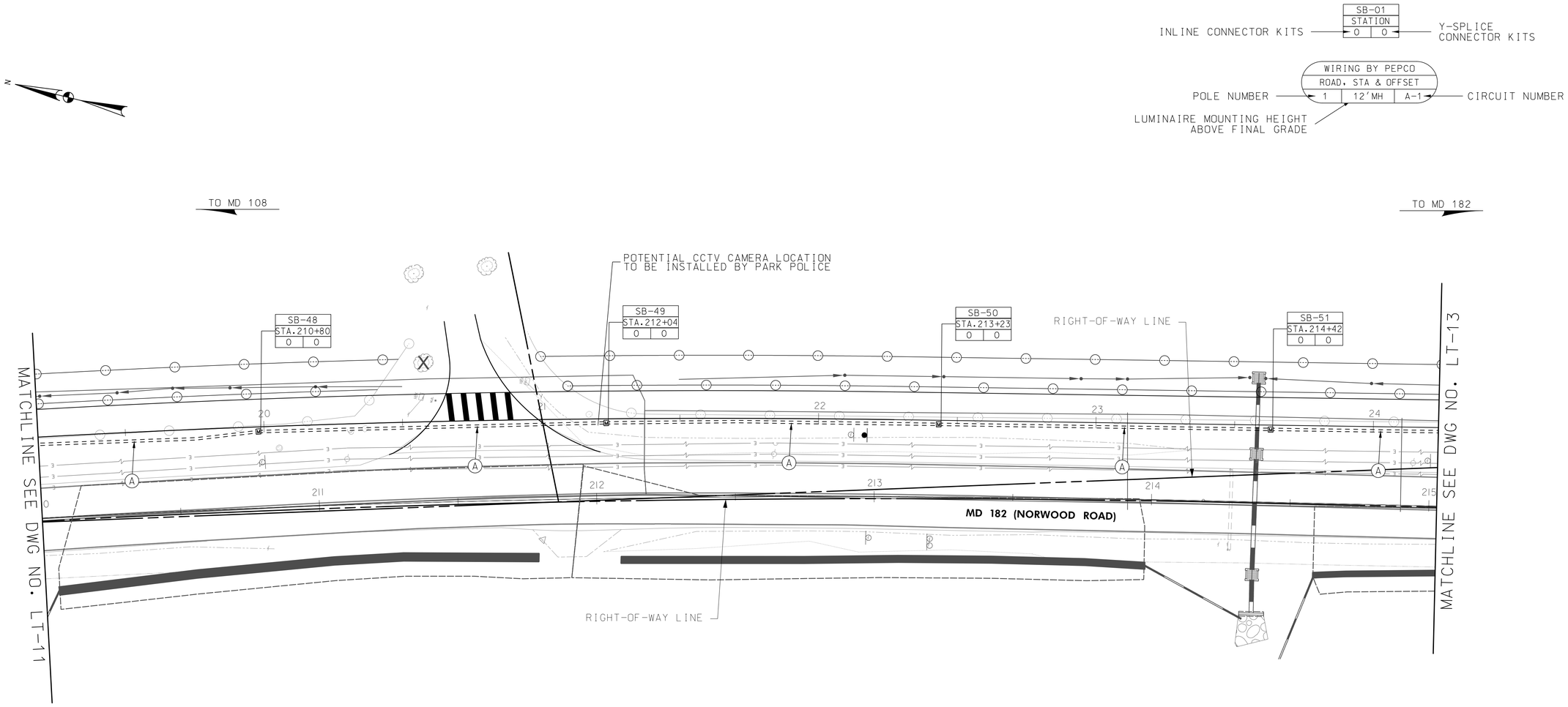

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SHARED USE PATH
LIGHTING PLAN

SCALE 1"=20' DATE AUGUST 2023

DRAWING NO. LT-12 OF 13 SHEET NO. 75 OF 103

PLAN NO. MR2022024 | DWG. LT-12

PLOTTED: 8/11/2023
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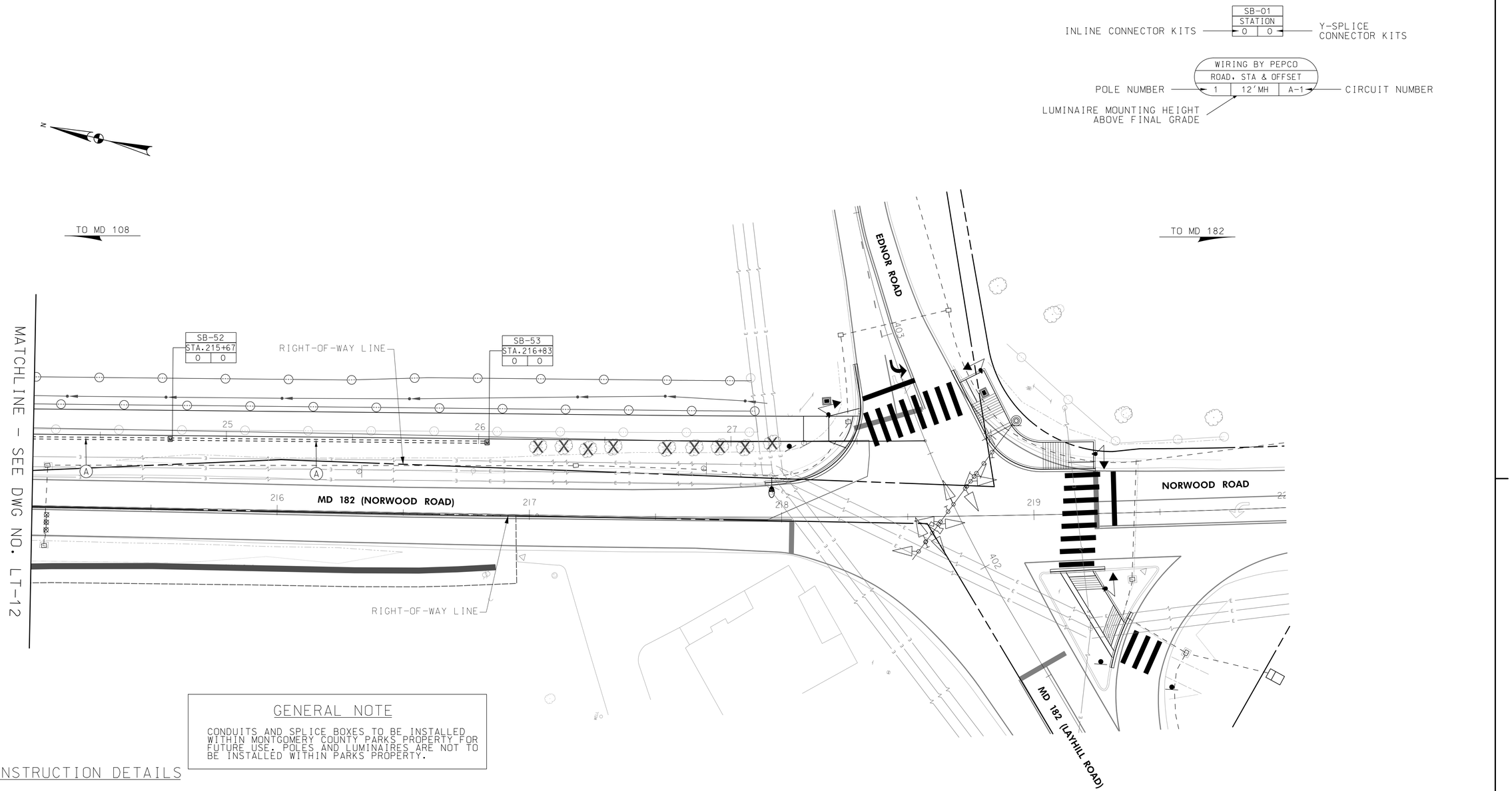

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DR. BIRD / NORWOOD ROAD
SHARED USE PATH
LIGHTING PLAN

SCALE 1"=20' DATE AUGUST 2023

DRAWING NO. LT-13 OF 13 SHEET NO. 76 OF 103

PLAN NO. MR2022024 DWG. LT-13

PLOTTED: 8/11/2023
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PROPOSED LED SIGNALS

14

16" LED COUNTDOWN PEDESTRIAN SIGNAL

EXISTING SIGNS TO BE RELOCATED

22

R10-3(1) 9"X15"

27

R10-3(1) 9"X15"

EXISTING SIGNALS TO REMAIN

1,2,4,5

12"

3,6,9,12

12"

7,8,10,11

12"

a,b,c,d,e,f,g

EXISTING VIDEO DETECTION

EXISTING SIGNALS TO BE REMOVED

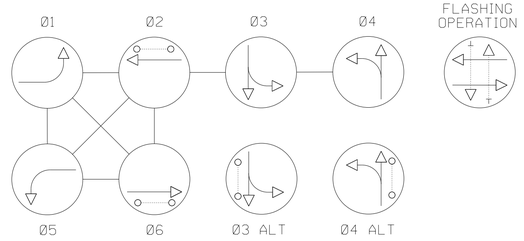
13,15,16,17,18,19,20

16" LED COUNTDOWN PEDESTRIAN SIGNAL

14a

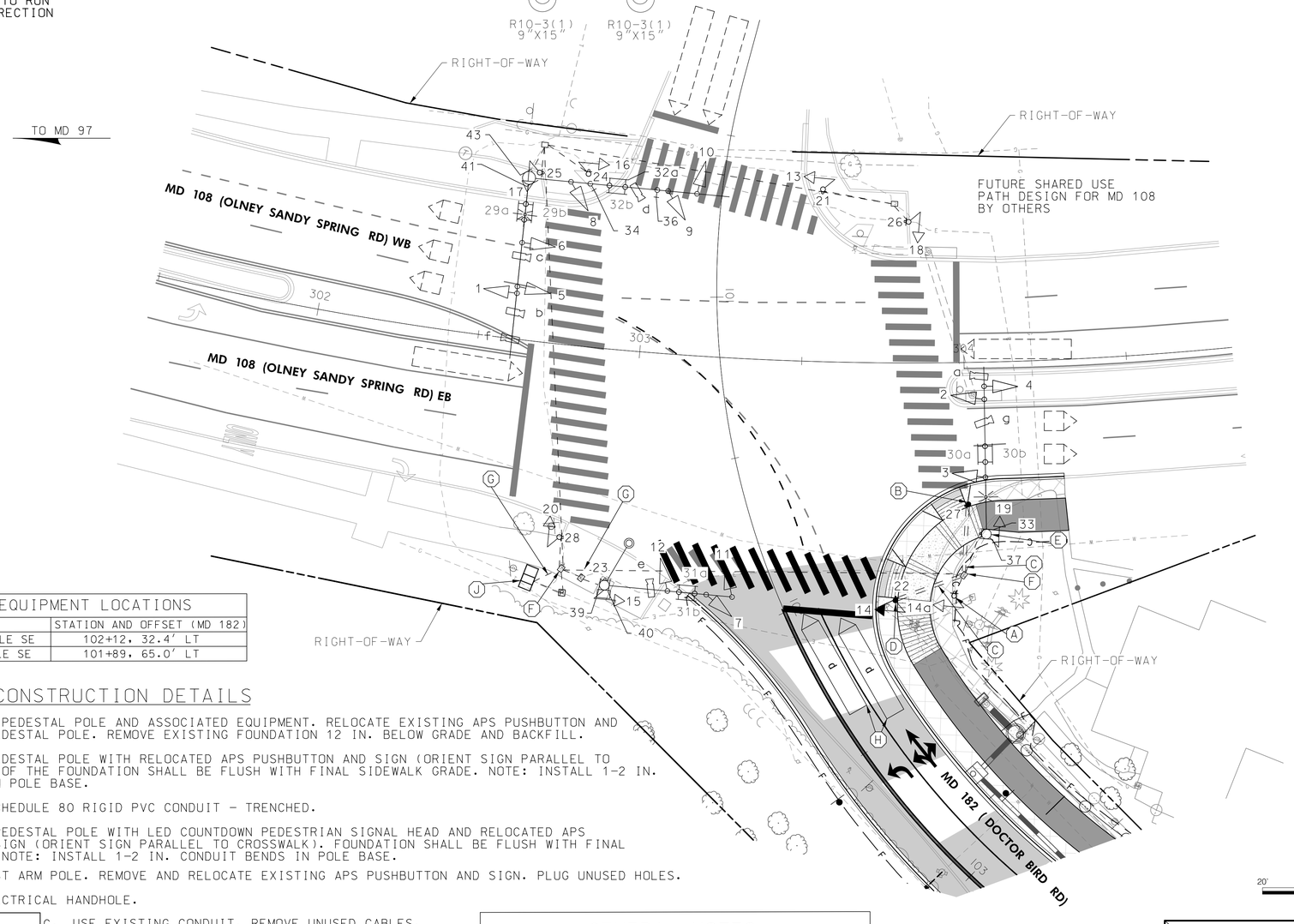
16" LED COUNTDOWN PEDESTRIAN SIGNAL

NEMA PHASING



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

MD 108 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION



TO MD 650

EXISTING SIGNS TO REMAIN

21

R10-3(1) 9"X15"

23

R10-3(1) 9"X15"

24

R10-3(1) 9"X15"

25

R10-3(1) 9"X15"

26,28

R10-3(1) 9"X15"

39

M1-5(6) 30"X48"

35

M1-5(6) 30"X48"

40

M1-5(6) 48"X72"

38

M1-5(6) 48"X72"

37

M1-5(6) 30"X48"

33

M1-5(6) 48"X72"

34

R3-5(L) 30"X36"

36

R3-6(1) 30"X30"

29a,30a

D-3(1) VAR.X16" (DUAL FACE)

29b,30b

D-3(1) VAR.X16" (DUAL FACE)

31a,31b,32a,32b

D-3(1) VAR.X16" (DUAL FACE)

SIGNAL EQUIPMENT LOCATIONS	
EQUIPMENT	STATION AND OFFSET (MD 182)
10' PEDESTAL POLE SE	102+12, 32.4' LT
6' PEDESTAL POLE SE	101+89, 65.0' LT

CONSTRUCTION DETAILS

A. REMOVE EXISTING PEDESTAL POLE AND ASSOCIATED EQUIPMENT. RELOCATE EXISTING APS PUSHBUTTON AND SIGNAL TO NEW PEDESTAL POLE. REMOVE EXISTING FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.

B. INSTALL 6 FT. PEDESTAL POLE WITH RELOCATED APS PUSHBUTTON AND SIGN (ORIENT SIGN PARALLEL TO CROSSWALK). TOP OF THE FOUNDATION SHALL BE FLUSH WITH FINAL SIDEWALK GRADE. NOTE: INSTALL 1-2 IN. CONDUIT BENDS IN POLE BASE.

C. INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED.

D. INSTALL 10 FT. PEDESTAL POLE WITH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD AND RELOCATED APS PUSHBUTTON AND SIGN (ORIENT SIGN PARALLEL TO CROSSWALK). FOUNDATION SHALL BE FLUSH WITH FINAL SIDEWALK GRADE. NOTE: INSTALL 1-2 IN. CONDUIT BENDS IN POLE BASE.

E. USE EXISTING MAST ARM POLE. REMOVE AND RELOCATE EXISTING APS PUSHBUTTON AND SIGN. PLUG UNUSED HOLES.

F. USE EXISTING ELECTRICAL HANDHOLE.

G. USE EXISTING CONDUIT. REMOVE UNUSED CABLES.

H. REORIENT EXISTING VIDEO DETECTION CAMERA AS DIRECTED BY THE ENGINEER.

J. USE EXISTING CABINET. REMOVE UNUSED CABLES.

GEOMETRIC LEGEND
EXISTING
PROPOSED

UTILITY LEGEND
SD SD STORM DRAIN
G G GAS MAIN
W W WATER MAIN
SAN SAN SEWER MAIN
E E ELECTRIC CABLES
E E AERIAL CABLES
T T TELEPHONE CABLES
FO FO FIBER-OPTIC

GENERAL NOTES

1. REFER TO SIGNING AND PAVEMENT MARKING PLANS FOR SIGNING AND PAVEMENT MARKING DETAILS.
2. REFER TO ROADWAY PLANS FOR SIDEWALK AND ADA RAMP DETAILS.
3. REFER TO LIGHTING PLANS FOR STREETLIGHT DETAILS.

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

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DIVISION CHIEF
OFFICE DIRECTOR
ORIGINAL ON FILE

REVISIONS

E	SIGNAL MODIFICATION DUE TO GEOMETRIC CHANGES CONTRACT NO. 20APM0024XX. TIMS NO. P481					08-2023
SJC	WFW					
D	INSTALL LED SIGNALS APS/CPS UPGRADES TIMS NO. M055					12-2013
SWA	DD	DBD		MLR	CJW	
C	INSTALL SIDE STREET SPLIT PHASE REVISE NB 182 PAVEMENT MARKING SHA NO. XX1005385. TIMS NO. D944					09-2000
DBD	DD	DD	BK		TH	

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 108 (SANDY SPRING RD) AND
MD 182 (DR. BIRD RD)
OLNEY, MARYLAND

TRAFFIC SIGNAL PLAN

SCALE 1" = 20' DATE 11/1982 CONTRACT NO.

DESIGNED BY ASR
DRAWN BY TEL
CHECKED BY JC REIL
MDE/PRD

COUNTY MONTGOMERY
LOGMILE 15010814.79
TIMS NO.
TOD NO.

TS NO. 2654E | DRAWING SG-01 OF 4 | SHEET NO. 77 OF 103

PLOTTED: 8/1/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pSG-0001_DrBird_MD182atMD108.dgn

BY: scallow

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF LED COUNTDOWN PEDESTRIAN SIGNAL HEADS AND ACCESSIBLE PEDESTRIAN PUSHBUTTONS AND SIGNS AT THE INTERSECTION OF MD 108 (OLNEY SANDY SPRING RD) AT MD 182 (DOCTOR BIRD RD) IN MONTGOMERY COUNTY.
MD 108 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA SIX-PHASE FULL- TRAFFIC-ACTUATED MODE WITH ALTERNATE PEDESTRIAN PHASES FOR THE EAST AND WEST LEGS AND CONCURRENT PEDESTRIAN PHASES FOR THE NORTH AND SOUTH LEGS OF THE INTERSECTION.

CONTROLLER REQUIREMENTS

THE EXISTING FULL-TRAFFIC-ACTUATED EIGHT-PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL REMAIN. THE EXISTING IP-BASED VIDEO DETECTION INTERFACE EQUIPMENT SHALL REMAIN. THE EXISTING APS CENTRAL CONTROL UNIT SHALL REMAIN.

SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:

TO CROSS MD 108 (OLNEY SANDY SPRING RD):

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS OLNEY SANDY SPRING RD. WAIT."

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

TO CROSS MD 182 (DOCTOR BIRD RD):

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS DOCTOR BIRD RD. WAIT."

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

TO CROSS DRIVEWAY:

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS DRIVEWAY. WAIT."

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

WIRING KEY

A	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
B,C	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
Z	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
PF	EXISTING OVERHEAD/UNDERGROUND POWER FEED
⊕	EXISTING GROUND ROD

EQUIPMENT LISTS "A, B & C"

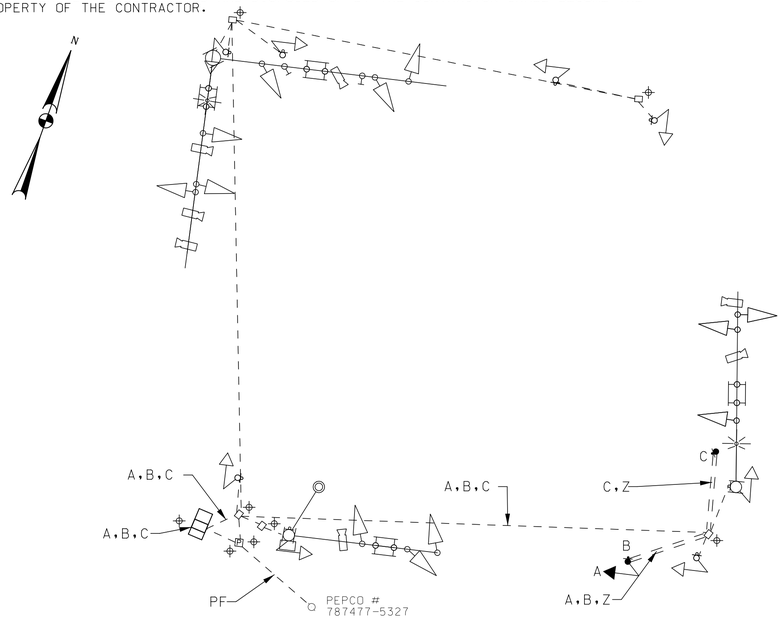
A. EQUIPMENT TO BE SUPPLIED BY MDOT SHA.

NONE

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

CATEGORY CODE	DESCRIPTION	UNIT	QUANTITY
801004	CONCRETE FOR SIGNAL FOUNDATION	CY	0.4
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	50
805125	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	50
818003	6 FOOT BREAKAWAY PEDESTAL POLE	EA	1
818004	10 FOOT BREAKAWAY PEDESTAL POLE	EA	1
860285	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD	EA	1
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	360
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	185
873002	REMOVE AND DISPOSE OF EXISTING SIGNAL EQUIPMENT	LS	1
800000	RELOCATE EXISTING APS PUSHBUTTON	EA	2

C. ALL MATERIALS TO BE REMOVED AND DISPOSED OF BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.



PHASING CHART

PHASE 1 AND 5	R ⟡G⟡	R ⟡G⟡	R	R ⟡G⟡	R ⟡G⟡	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW	
1 AND 5 CHANGE TO 1 AND 6, 2 AND 5, OR 2 AND 6																					
PHASE 1 AND 6	G ⟡G⟡	G ⟡G⟡	G	R	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW	
1 AND 6 CHANGE	G ⟡Y⟡	G ⟡Y⟡	G	R	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	DW	DW	
PHASE 2 AND 5	R	R	R	G ⟡G⟡	G ⟡G⟡	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW		
2 AND 5 CHANGE	R	R	R	G ⟡Y⟡	G ⟡Y⟡	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW	DW	DW		
PHASE 2 AND 6	G	G	G	G	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW		
PED CLEARANCE	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW		
2 AND 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW		
PHASE 3	R	R	R	R	R	R	R	R	R	G ⟡G⟡	G ⟡G⟡	G	DW	DW	DW	DW	DW	DW	DW	DW		
3 CHANGE	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW		
PHASE 3 ALT	R	R	R	R	R	R	R	R	R	G ⟡G⟡	G ⟡G⟡	G	DW	DW	DW	DW	WK	DW	DW	WK		
PED CLEARANCE	R	R	R	R	R	R	R	R	R	G ⟡G⟡	G ⟡G⟡	G	DW	DW	DW	DW	FL/DW	DW	DW	FL/DW		
3 ALT CHANGE	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW		
PHASE 4	R	R	R	R	R	R	G ⟡G⟡	G ⟡G⟡	G	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW		
4 CHANGE	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW			
PHASE 4 ALT	R	R	R	R	R	G ⟡G⟡	G ⟡G⟡	G	R	R	R	DW	DW	DW	DW	DW	WK	WK	DW			
PED CLEARANCE	R	R	R	R	R	G ⟡G⟡	G ⟡G⟡	G	R	R	R	DW	DW	DW	DW	DW	FL/DW	FL/DW	DW			
4 ALT CHANGE	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW			
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK	

CONTACT PERSONS FOR MONTGOMERY COUNTY ARE AS FOLLOWS:

MR. KAMAL HAMUD
TRAFFIC ENGINEER
PHONE: 240-777-8761

MR. LEE KENNEDY & MR. STEVE YOUNG
SIGNAL SHOP SUPERVISORS
PHONE: 240-773-7300

CONTACT PERSONS FOR OOTS ARE AS FOLLOWS:

MS. REBECCA LICHTENSTEIN
DIVISION CHIEF, TRAFFIC OPERATIONS
PHONE: 410-787-7630

MR. ANTOINE YATES
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS
PHONE: 410-787-7645

MR. MICHAEL BASSO
SECTION CHIEF, SIGNAL OPERATIONS SECTION
PHONE: 410-787-7652

MR. TODD JONES
SECTION CHIEF, SIGN OPERATIONS SECTION
PHONE: 410-787-7678

MR. MICHAEL BOYLE
SECTION CHIEF, INVENTORY AND PROCUREMENT SECTION
PHONE: 410-787-7673

CONTACT PERSONS FOR DISTRICT 3 (MO) ARE AS FOLLOWS:

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

MS. AMY ANDREWS
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
PHONE:301-513-7300

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

MR. MARK LOEFFLER
DISTRICT UTILITY ENGINEER
PHONE:301-513-7350

GENERAL NOTES

1. MAINTENANCE OF TRAFFIC WIL BE HANDLED BY THE CONTRACTOR UTILIZING MDOT SHA STANDARD TYPICALS FOR TRAFFIC CONTROL.
2. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION. ALL POLES AND CONDUITS UNDER PAVEMENT SHALL BE STAKED OUT AND EVERY LOCATION APPROVED BY THE ENGINEER BEFORE ANY WORK IS PERFORMED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE. TAGS SHALL BE INSTALLED ON EACH CABLE IN THE CONTROLLER CABINET AS WELL AS EACH HANDHOLE.
4. ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
5. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02 AND MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
6. UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE 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.
7. ALL PEDESTAL FOUNDATION TOPS SHALL BE INSTALLED FLUSH WITH SIDEWALK GRADE OR BUILT INTO BACKER CURB.
8. THE CONTRACTOR SHALL INTEGRATE PROPOSED / EXISTING CONCRETE FOUNATIONS WITH NEW CURB OR SIDEWALK RAMPS WHERE NECESSARY. THE FOUNDATIONS SHALL BE FLUSH WITH, AND PART OF, THE FINAL CURB OR SIDEWALK GRADE TO INCREASE ACCESSIBILITY FOR PEDESTRIANS.
9. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MDMUTCD CHAPTER 4E "PEDESTRIAN CONTROL FEATURES" AND FIGURES 4E-3 AND 4E-4, AND THE LATEST NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
10. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" X 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
11. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER OF POLE TO CENTER OF POLE.
12. PUSHBUTTON ARROWS AND SIGNS ARE TO BE ORIENTED PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
13. DURING CONSTRUCTION, PROPOSED SIGNAL EQUIPMENT SHALL NOT BLOCK EXISTING SIGNAL EQUIPMENT.
14. THE CONTRACTOR SHALL CAP AND ABANDON CONDUITS FEEDING EXISTING SIGNAL EQUIPMENT THAT IS REMOVED.
15. THE CONTRACTOR SHALL CONTACT ED RODENHIZER AT THE SIGNAL SHOP (410-787-7652) TO DELIVER APS EQUIPMENT FOR TESTING.
16. WITHIN 36 IN. OF UNDERGROUND UTILITY LOCATIONS, THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE FOR FOUNDATION AND CONDUIT BY HAND.
17. HAND DIGGING FOR INSTALLATION OR REMOVAL OF SIGNAL EQUIPMENT, SIGNS, CURB AND SIDEWALK SHALL BE INCIDENTAL TO THE ITEMS IN THE EQUIPMENT LIST. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR HAND DIGGING.
18. UNUSED HOLES IN EXISTING SIGNAL POLES SHALL BE PLUGGED BY CLEANING THE EXISTING DRILLED HOLE WITH BRUSH AND SPRAYING COLD GALVANIZING COMPOUND ON THE AFFECTED AREA.
19. RIGHT OF WAY SHOWN ON THE PLANS IS APPROXIMATE AND BASED ON THE BEST AVAILABLE INFORMATION.
20. VIDEO DETECTION CAMERA ALIGNMENT SHALL BE COORDINATED WITH THE ENGINEER.
21. THE CONTRACTOR SHALL HAVE THE APS PUSHBUTTONS AND CENTRAL CONTROL UNIT PROGRAMMED FROM THE FACTORY AND INSTALLED AT THE CONSTRUCTION SITE. THE CONTRACTOR SHALL DELIVER THE APS PANEL TO MR. STEVE YOUNG AND/OR MR. LEE KENNEDY AT MONTGOMERY COUNTY TECHNICAL CENTER AT 2383 SEVEN LOCKS ROAD, ROCKVILLE, MD 20854, PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL HAVE THE APS .WAV FILES DELIVERED TO VICTOR.PADRES@MONTGOMERYCOUNTYMD.GOV
22. THE CONTRACTOR SHALL NOTIFY MR. KAMAL HAMUD AND MR. STEVE YOUNG 72 HOURS IN ADVANCE OF INTENDED WORK.

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STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 108 (SANDY SPRING RD) AND
MD 182 (DR. BIRD RD)
OLNEY, MARYLAND

REVISIONS

GENERAL INFORMATION SHEET

SCALE NONE DATE AUGUST 2023 CONTRACT NO. 20-AP-MO-024-XX

DESIGNED BY LEI
DRAWN BY LEI
CHECKED BY WFW
MDE/PRD

COUNTY MONTGOMERY
LOGMILE 15010814.79
TIMS NO. P481
TOD NO.

TS NO. 2654E | DRAWING SG-02 OF 4 | SHEET NO. 78 OF 103

PLOTTED: 8/1/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pSG-0002_DrBird_MD182atMD108_GI.dgn

BY: scallow -

NORWOOD ROAD IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION

PROPOSED LED SIGNALS

9,10,11,12

16"

PROPOSED ACCESSIBLE PEDESTRIAN PUSHBUTTONS AND SIGNS

13 — EDNOR RD R10-3(1) 9"X15"

14 — EDNOR RD R10-3(1) 9"X15"

15 — NORWOOD RD R10-3(1) 9"X15"

16 — NORWOOD RD R10-3(1) 9"X15"

EXISTING SIGNALS TO REMAIN

2,3,4,6,7,8 — 12"

1,5 — 12"

a — EXISTING IP-BASED VIDEO DETECTION CAMERA

EXISTING SIGNS TO REMAIN

17 — D-3(1) VAR.X32"

18 — D-3(1) VAR.X32"

19a — D-3(1) VAR.X16" (DUAL FACE)

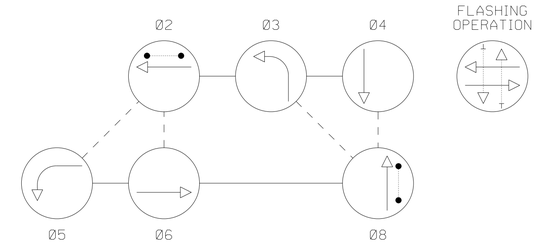
19b — D-3(1) VAR.X16" (DUAL FACE)

20 — R10-12 24"X30"

21 — R3-5L 30"X36"

22 — 24"X30"

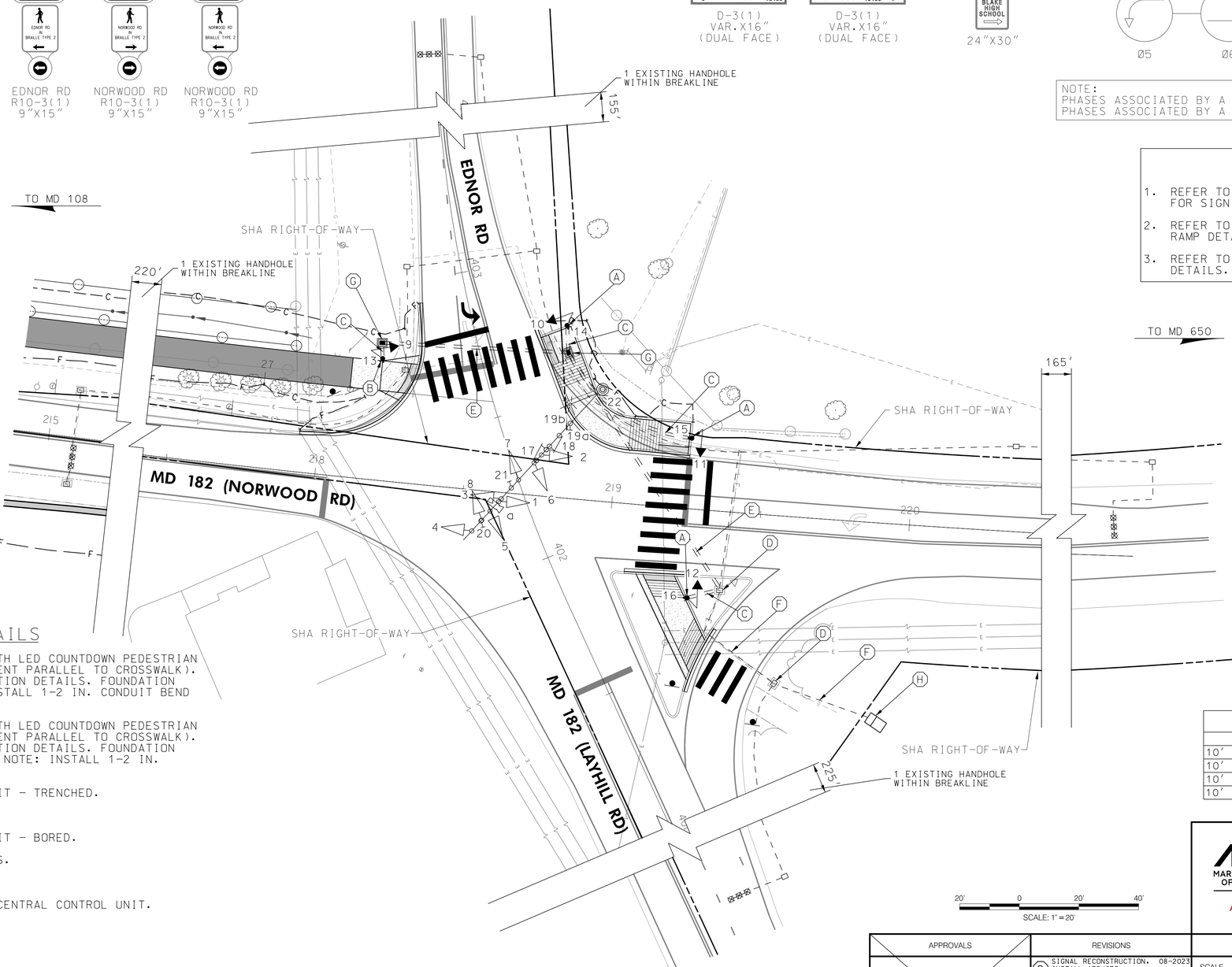
NEMA PHASING



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

GENERAL NOTES

1. REFER TO SIGNING AND PAVEMENT MARKING PLANS FOR SIGNING AND PAVEMENT MARKING DETAILS.
2. REFER TO ROADWAY PLANS FOR SIDEWALK AND ADA RAMP DETAILS.
3. REFER TO LIGHTING PLANS FOR STREETLIGHT DETAILS.



CONSTRUCTION DETAILS

A. INSTALL 10 FT. BREAKAWAY PEDESTAL POLE WITH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, APS PUSHBUTTON AND SIGN (ORIENT PARALLEL TO CROSSWALK). REFER TO STANDARD MD 801.01-01 FOR FOUNDATION DETAILS. FOUNDATION SHALL BE BUILT INTO BACKER CURB. NOTE: INSTALL 1-2 IN. CONDUIT BEND IN POLE BASE.

B. INSTALL 10 FT. BREAKAWAY PEDESTAL POLE WITH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, APS PUSHBUTTON AND SIGN (ORIENT PARALLEL TO CROSSWALK). REFER TO STANDARD MD 801.01-01 FOR FOUNDATION DETAILS. FOUNDATION SHALL BE FLUSH WITH FINAL SIDEWALK GRADE. NOTE: INSTALL 1-2 IN. CONDUIT BEND IN POLE BASE.

C. INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED.

D. USE EXISTING ELECTRICAL HANDHOLE.

E. INSTALL 4 IN. SCHEDULE 80 RIGID PVC CONDUIT - BORED.

F. USE EXISTING CONDUIT. REMOVE UNUSED CABLES.

G. INSTALL ELECTRICAL HANDHOLE.

H. USE EXISTING CABINET. INSTALL 2-WIRE APS CENTRAL CONTROL UNIT.

SIGNAL EQUIPMENT LOCATIONS

EQUIPMENT	STATION AND OFFSET (MD 182)
10' PEDESTAL POLE NE	218+19, 40.8' LT
10' PEDESTAL POLE SE	218+80, 57.8' LT
10' PEDESTAL POLE SE	219+25, 23.7' LT
10' PEDESTAL POLE SW	219+28, 29.8' RT

GEOMETRIC LEGEND
- EXISTING
- PROPOSED

UTILITY LEGEND
- SD — STORM DRAIN
- G — GAS MAIN
- W — WATER MAIN
- SAN — SEWER MAIN
- E — ELECTRIC CABLES
- E — AERIAL CABLES
- T — TELEPHONE CABLES
- FO — FIBER-OPTIC

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OFFICE DIRECTOR
ORIGINAL ON FILE

REVISIONS
B — SIGNAL RECONSTRUCTION. 08-2023 INSTALL APS/CPS CONTRACT NO. 20APMD024XX, TIMS NO. P481
A — RECONSTRUCTED SIGNAL 02-2000 DUE TO REVISED GEOMETRY SHA NO. M08215171

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 182 (LAYHILL ROAD) AND EDNOR/NORWOOD ROADS
OLNEY, MARYLAND

TRAFFIC SIGNAL PLAN

SCALE 1" = 20' DATE 10-9-86 CONTRACT NO.

DESIGNED BY S. THACKER
DRAWN BY S. THACKER
CHECKED BY R. ZACHERL
MDE/PRD

COUNTY MONTGOMERY
LOGMILE 15018204.95
TIMS NO.
TOD NO.

TS NO. D127 | DRAWING SG-03 OF 4 | SHEET NO. 79 OF 103

PLOTTED: 8/1/2023
FILE: \\adc.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pSG-0001_DrBird_MD182atEdnor.dgn

BY: scallow

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF LED COUNTDOWN PEDESTRIAN SIGNAL HEADS AND ACCESSIBLE PEDESTRIAN PUSHBUTTONS AND SIGNS AT THE INTERSECTION OF MD 182 (NORWOOD RD) AT EDNOR RD AND LAYHILL RD. MD 182 (NORWOOD RD) IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA SIX-PHASE FULL- TRAFFIC-ACTUATED MODE. THERE WILL BE CONCURRENT PEDESTRIAN PHASES FOR THE NORTH LEG AND THE EAST LEG OF THE INTERSECTION. THE THROUGH MOVEMENTS ON LAYHILL/ENDOR ROADS WILL CONTINUE TO OPERATE CONCURRENTLY. THE MD 182 (LAYHILL RD) WESTBOUND LEFT TURN AND NORWOOD RD NORTHBOUND LEFT TURN WILL CONTINUE TO OPERATE IN EXCLUSIVE/PERMISSIVE PHASING. THE THROUGH MOVEMENTS ON NORWOOD ROAD WILL CONTINUE TO OPERATE CONCURRENTLY.

CONTROLLER REQUIREMENTS

THE EXISTING FULL-TRAFFIC-ACTUATED EIGHT-PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A BASE MOUNTED CABINET SHALL REMAIN. THE EXISTING IP-BASED VIDEO DETECTION INTERFACE EQUIPMENT SHALL REMAIN. INSTALL AN APS CENTRAL CONTROL UNIT.

SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:

TO CROSS MD 182 (NORWOOD RD):

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS NORWOOD AT EDNOR AND LAYHILL. WAIT."

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

TO CROSS EDNOR RD:

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS EDNOR AT NORWOOD. WAIT."

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

EQUIPMENT LISTS "A, B & C"

A. EQUIPMENT TO BE SUPPLIED BY MDOT SHA.

NONE

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

CATEGORY CODE	DESCRIPTION	UNIT	QUANTITY
203030	TEST PIT EXCAVATION	CY	2
801004	CONCRETE FOR SIGNAL FOUNDATION	CY	0.8
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	260
805118	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED	LF	170
805125	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	85
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	2
818004	10 FOOT BREAKAWAY PEDESTAL POLE	EA	4
837001	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH	EA	2
860285	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD	EA	4
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	835
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	855
865210	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS	EA	4
865300	2-WIRE APS CENTRAL CONTROL UNIT	EA	1

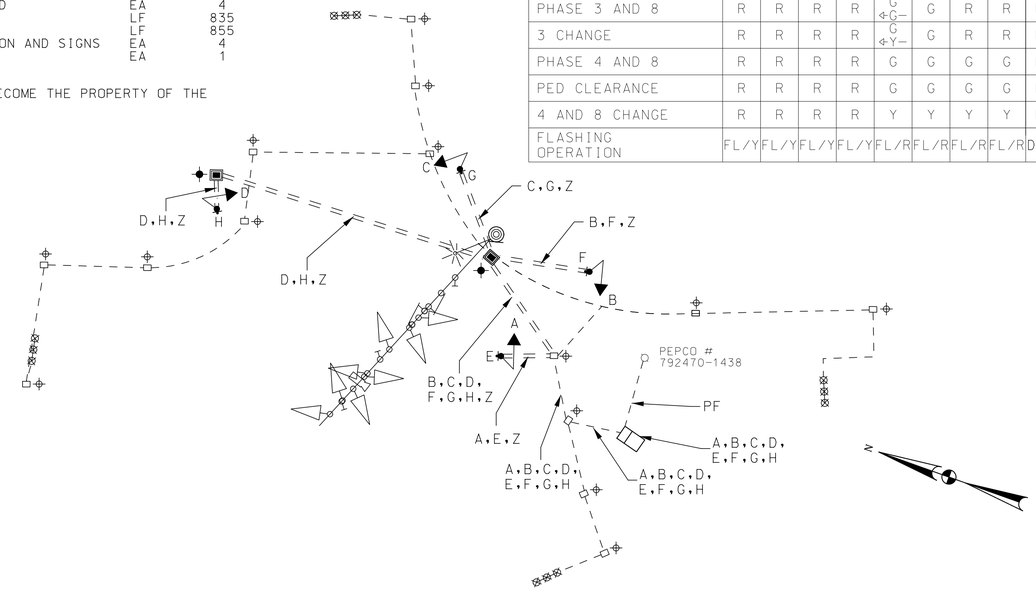
C. ALL MATERIAL TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

WIRING KEY

A,B,C,D	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
E,F,G,H	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
Z	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
PF	EXISTING POWER FEED
●	PROPOSED GROUND ROD
⊕	EXISTING GROUND ROD

PHASING CHART

PHASE 2 AND 5	G	G	R	R	R	R	R	R	DW	DW	DW	DW
5 CHANGE	G	G	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 AND 6	G	G	G	G	R	R	R	R	WK	WK	DW	DW
PED CLEARANCE	G	G	G	G	R	R	R	R	FL/DW	FL/DW	DW	DW
2 AND 6 CHANGE	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW
PHASE 3 AND 8	R	R	R	R	G	G	R	R	DW	DW	DW	DW
3 CHANGE	R	R	R	R	Y	G	R	R	DW	DW	DW	DW
PHASE 4 AND 8	R	R	R	R	G	G	G	G	DW	DW	WK	WK
PED CLEARANCE	R	R	R	R	G	G	G	G	DW	DW	FL/DW	FL/DW
4 AND 8 CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK



GENERAL NOTES

1. MAINTENANCE OF TRAFFIC WIL BE HANDLED BY THE CONTRACTOR UTILIZING MDOT SHA STANDARD TYPICALS FOR TRAFFIC CONTROL.
2. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION. ALL POLES AND CONDUITS UNDER PAVEMENT SHALL BE STAKED OUT AND EVERY LOCATION APPROVED BY THE ENGINEER BEFORE ANY WORK IS PERFORMED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE. TAGS SHALL BE INSTALLED ON EACH CABLE IN THE CONTROLLER CABINET AS WELL AS EACH HANDHOLE.
4. ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
5. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02 AND MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
6. UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE 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.
7. ALL PEDESTAL FOUNDATION TOPS SHALL BE INSTALLED FLUSH WITH SIDEWALK GRADE OR BUILT INTO BACKER CURB.
8. THE CONTRACTOR SHALL INTEGRATE PROPOSED / EXISTING CONCRETE FOUNATIONS WITH NEW CURB OR SIDEWALK RAMPS WHERE NECESSARY. THE FOUNDATIONS SHALL BE FLUSH WITH, AND PART OF, THE FINAL CURB OR SIDEWALK GRADE TO INCREASE ACCESSIBILITY FOR PEDESTRIANS.
9. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MDMUTCD CHAPTER 4E "PEDESTRIAN CONTROL FEATURES" AND FIGURES 4E-3 AND 4E-4, AND THE LATEST NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
10. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" X 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
11. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER OF POLE TO CENTER OF POLE.
12. PUSHBUTTON ARROWS AND SIGNS ARE TO BE ORIENTED PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
13. DURING CONSTRUCTION, PROPOSED SIGNAL EQUIPMENT SHALL NOT BLOCK EXISTING SIGNAL EQUIPMENT.
14. THE CONTRACTOR SHALL CAP AND ABANDON CONDUITS FEEDING EXISTING SIGNAL EQUIPMENT THAT IS REMOVED.
15. THE CONTRACTOR SHALL CONTACT ED RODENHIZER AT THE SIGNAL SHOP (410-787-7652) TO DELIVER APS EQUIPMENT FOR TESTING.
16. WITHIN 36 IN. OF UNDERGROUND UTILITY LOCATIONS, THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE FOR FOUNDATION AND CONDUIT BY HAND.
17. HAND DIGGING FOR INSTALLATION OR REMOVAL OF SIGNAL EQUIPMENT, SIGNS, CURB AND SIDEWALK SHALL BE INCIDENTAL TO THE ITEMS IN THE EQUIPMENT LIST. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR HAND DIGGING.
18. UNUSED HOLES IN EXISTING SIGNAL POLES SHALL BE PLUGGED BY CLEANING THE EXISTING DRILLED HOLE WITH BRUSH AND SPRAYING COLD GALVANIZING COMPOUND ON THE AFFECTED AREA.
19. RIGHT OF WAY SHOWN ON THE PLANS IS APPROXIMATE AND BASED ON THE BEST AVAILABLE INFORMATION.
20. THE CONTRACTOR SHALL HAVE THE APS PUSHBUTTONS AND CENTRAL CONTROL UNIT PROGRAMMED FROM THE FACTORY AND INSTALLED AT THE CONSTRUCTION SITE. THE CONTRACTOR SHALL DELIVER THE APS PANEL TO MR. STEVE YOUNG AND/OR MR. LEE KENNEDY AT MONTGOMERY COUNTY TECHNICAL CENTER AT 2383 SEVEN LOCKS ROAD, ROCKVILLE, MD 20854, PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL HAVE THE APS .WAV FILES DELIVERED TO VICTOR.PADRES@MONTGOMERYCOUNTYMD.GOV
21. THE CONTRACTOR SHALL NOTIFY MR. KAMAL HAMUD AND MR. STEVE YOUNG 72 HOURS IN ADVANCE OF INTENDED WORK.

CONTACT PERSONS FOR MONTGOMERY COUNTY ARE AS FOLLOWS:

MR. KAMAL HAMUD
TRAFFIC ENGINEER
PHONE: 240-777-8761

MR. LEE KENNEDY & MR. STEVE YOUNG
SIGNAL SHOP SUPERVISORS
PHONE: 240-773-7300

CONTACT PERSONS FOR OOTS ARE AS FOLLOWS:

MS. REBECCA LICHTENSTEIN
DIVISION CHIEF, TRAFFIC OPERATIONS
PHONE: 410-787-7630

MR. MICHAEL BASSO
SECTION CHIEF, SIGNAL OPERATIONS SECTION
PHONE: 410-787-7652

MR. MICHAEL BOYLE
SECTION CHIEF, INVENTORY AND PROCUREMENT SECTION
PHONE: 410-787-7673

MR. ANTOINE YATES
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS
PHONE: 410-787-7645

MR. TODD JONES
SECTION CHIEF, SIGN OPERATIONS SECTION
PHONE: 410-787-7678

CONTACT PERSONS FOR DISTRICT 3 (MO) ARE AS FOLLOWS:

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

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

MS. AMY ANDREWS
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
PHONE: 301-513-7300

MR. MARK LOEFFLER
DISTRICT UTILITY ENGINEER
PHONE: 301-513-7350

RK&K
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MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 182 (LAYHILL ROAD) AND EDNOR/NORWOOD ROADS
OLNEY, MARYLAND

REVISIONS

GENERAL INFORMATION SHEET

SCALE NONE DATE AUGUST 2023 CONTRACT NO. 20-AP-MO-024-XX

DESIGNED BY AMC COUNTY MONTGOMERY
DRAWN BY AMC LOGMILE 15018204.95
CHECKED BY WFW TIMS NO. P481
MDE/PRD TOD NO.

TS NO. D127 | DRAWING SG-04 OF 4 | SHEET NO. 80 OF 103

PLOTTED: 8/1/2023
FILE: \\ad.rkk.com\ls\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pSG-0002_DrBird_MD182atEdnor_GI.dgn

BY: scallow

SN-1 REV. DATE: FEBRUARY, 2019

CRITERIA

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

DESIGN

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

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

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

MATERIALS AND CONSTRUCTION

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

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

DESIGN WIND

100 MPH - WOOD SUPPORTS
10 YEAR RECURRENCE INTERVAL

100 MPH - GROUND MOUNT SIGN STEEL SUPPORTS
10 YEAR RECURRENCE INTERVAL

100 MPH - OVERHEAD AND CANTILEVER STRUCTURES
50 YEAR RECURRENCE INTERVAL

} ALL DISTRICTS

DESIGN STRESS

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

CHAMFER

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

CLASSIFICATION OF SIGNS

SIGNS ARE DIVIDED INTO TWO (2) GENERAL CATEGORIES.

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

IDENTIFICATION OF SIGNS AND PANELS

GUIDE SIGNS

EACH GUIDE SIGN IS IDENTIFIED BY A SIGN NUMBER ON THE PLANS AND IN THE TABULATIONS. (GM-1, GM-2, GM-3, etc)
SIGNS ON STRUCTURES ARE IDENTIFIED WITH A NUMBER AND WHERE VARIATIONS OCCUR, A LOWER CASE LETTER. (OH-1a, OH-1b, OH-1c)

STANDARD SIGNS

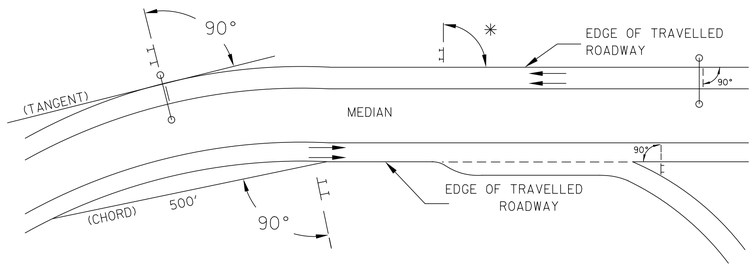
STANDARD SIGNS ARE IDENTIFIED BY PANEL NUMBERS AND ARE CLASSIFIED AS FOLLOWS
- R - REGULATORY
- W - WARNING
- M - ROUTE MARKERS AND ACCESSORIES
- D - DESTINATION AND MILEAGE PANELS
- S - SCHOOL

PANELS SHALL BE DESIGNATED TO AGREE WITH MARYLAND STANDARD SIGN BOOK. EACH STANDARD SIGN IS IDENTIFIED FIRST BY THE SHEET NUMBER, THEN BY THE NUMERICAL ORDER OF THE SIGN AS IT APPEARS ON THE PLAN.
FOR EXAMPLE SHEET SN 2.1-101,102,103, ETC. SHEET SN 2.2-201,202,203,ETC.

PANEL LAYOUT AND ALPHABETS

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

ORIENTATION OF SIGN FACES



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

OVER 30 FEET FROM TRAVELLED ROADWAY TO NEAR EDGE OF SIGN - 90°

REFLECTORIZATION

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

SIGN LOCATIONS

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

EXISTING UTILITIES

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

ROADSIDE SIGNS

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

OVERHEAD SIGNS

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

PROJECT REQUIREMENTS

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

1. SHEETING SHALL MEET THE REQUIREMENTS OF SECTIONS 813 AND 950.03 OF MDOT SHA'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS 2017 EDITION AND SUBSEQUENT REVISIONS AND SUPPLEMENTS.
2. LISTED ON MDOT SHA OFFICE OF TRAFFIC AND SAFETY'S QUALIFIED PRODUCTS LIST (QPL).
3. THE FOLLOWING TYPES OF SHEETING SHALL BE USED FOR THE SPECIFIED SIGN CLASSIFICATIONS:

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

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

      (I). GROUND MOUNTED:
      ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET OR EXCEED THE REQUIREMENTS FOR ASTM TYPE IX (9).

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

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

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

   D) REGULATORY SIGNS - FALL INTO THREE SUBCATEGORIES:

      (I). "RED" REGULATORY SIGNS; (SPECIFICALLY - STOP, YIELD, DO NOT ENTER AND WRONG WAY). ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET OR EXCEED THE REQUIREMENTS FOR ASTM TYPE IX (9).

      (II). ALL R7 AND R8 SERIES PARKING RELATED SIGNS AND THEIR SUPPLEMENTAL PANELS, NO TRESPASSING SIGNS, AND SIGNS DIRECTED AT PEDESTRIANS AND BICYCLISTS ONLY. ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET THE REQUIREMENTS FOR ASTM TYPE IV (4).

      (III). ALL OTHER REGULATORY SIGNS - ALL RETROREFLECTIVE SHEETING ELEMENTS OF THESE SIGNS SHALL MEET ASTM TYPE IV (4) INCLUDING RED ELEMENTS. WARNING MESSAGES WITHIN REGULATORY SIGNS SHALL FOLLOW THE REQUIREMENTS FOR WARNING SIGNS.

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

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

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

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

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

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

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

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

PLAN NO. MR2022024 | DWG. SN-1

SHA APPROVALS
APPLIES TO DWG NO. SN-2.01 THRU SN-2.07

TEAM LEADER

ASST. DIV. CHIEF

DIVISION CHIEF

OFFICE DIRECTOR

OWNER/ADDRESS:
MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
100 EDISON PARK DRIVE
GAITHERSBURG, MARYLAND

CONTACT:
REBECCA PARK
REBECCA.PARK@MONTGOMERYCOUNTYMD.GOV
MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
240-777-7231

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY SJC DRAWN BY SJC CHECKED BY WFW

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
SIGNING & PAVEMENT MARKING PLAN

SCALE NONE DATE AUGUST 2023

DRAWING NO. SN-1 OF 1 | SHEET NO. 81 OF 103

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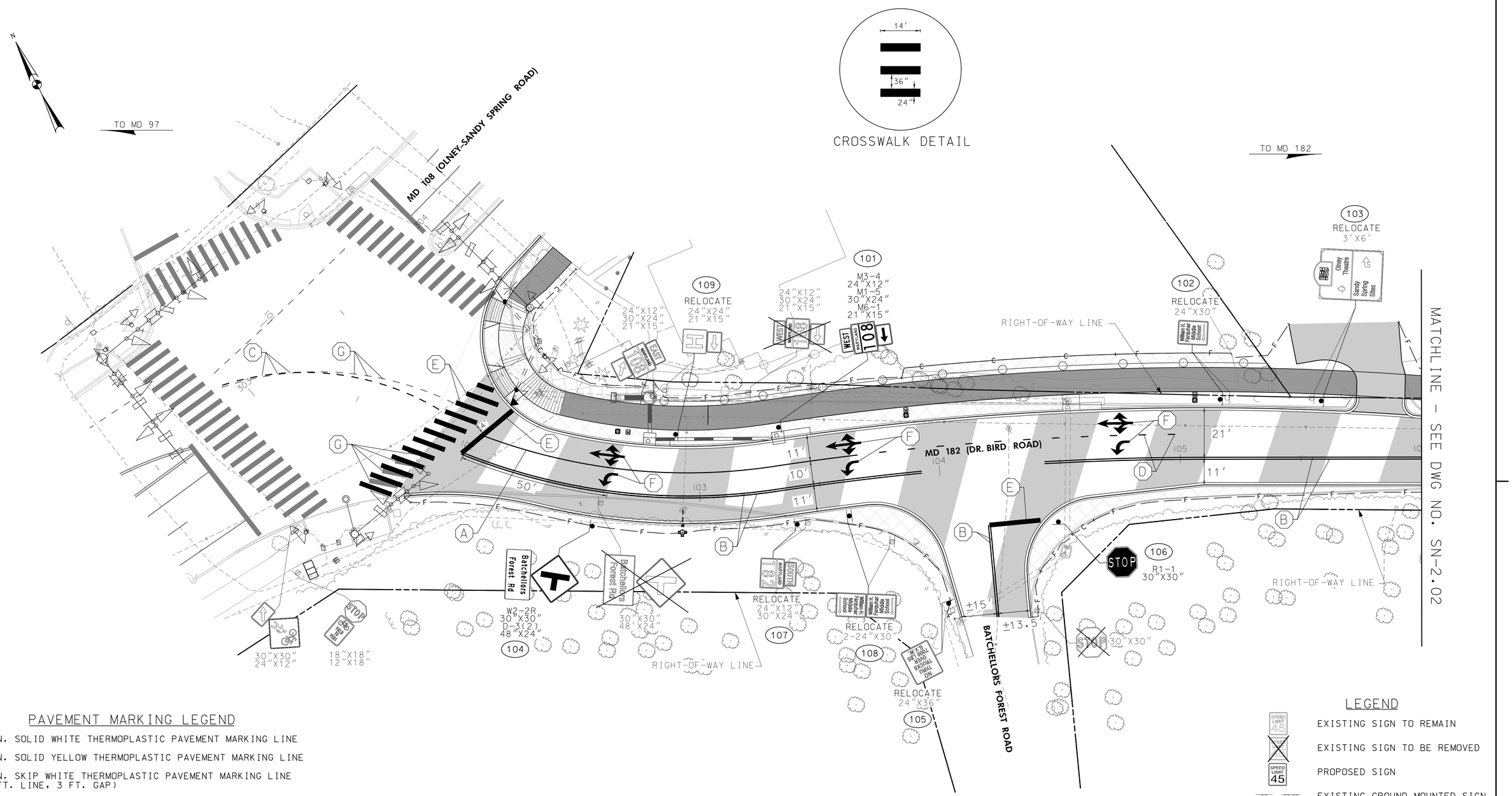
PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\ls\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pSN-1001_DrBird.dgn

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\ls\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pSN-1001_DrBird.dgn



MATCHLINE – SEE DWG NO. SN-2.02

PAVEMENT MARKING LEGEND

A. 5 IN. SOLID WHITE THERMOPLASTIC PAVEMENT MARKING LINE

B. 5 IN. SOLID YELLOW THERMOPLASTIC PAVEMENT MARKING LINE

C. 5 IN. SKIP WHITE THERMOPLASTIC PAVEMENT MARKING LINE (3 FT. LINE, 3 FT. GAP)

D. 5 IN. SKIP WHITE THERMOPLASTIC PAVEMENT MARKING LINE (3 FT. LINE, 9 FT. GAP)

E. 24 IN. SOLID WHITE PERMANENT PREFORMED PAVEMENT MARKING LINE

F. WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING SYMBOL

G. REMOVE EXISTING PAVEMENT MARKING LINE, SYMBOL OR ARROW BY HYDROBLASTING

LEGEND

- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN
- EXISTING GROUND MOUNTED SIGN
- PROPOSED GROUND MOUNTED SIGN

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MONTGOMERY COUNTY
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240-777-7231

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY SJC DRAWN BY SJC CHECKED BY WFW

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

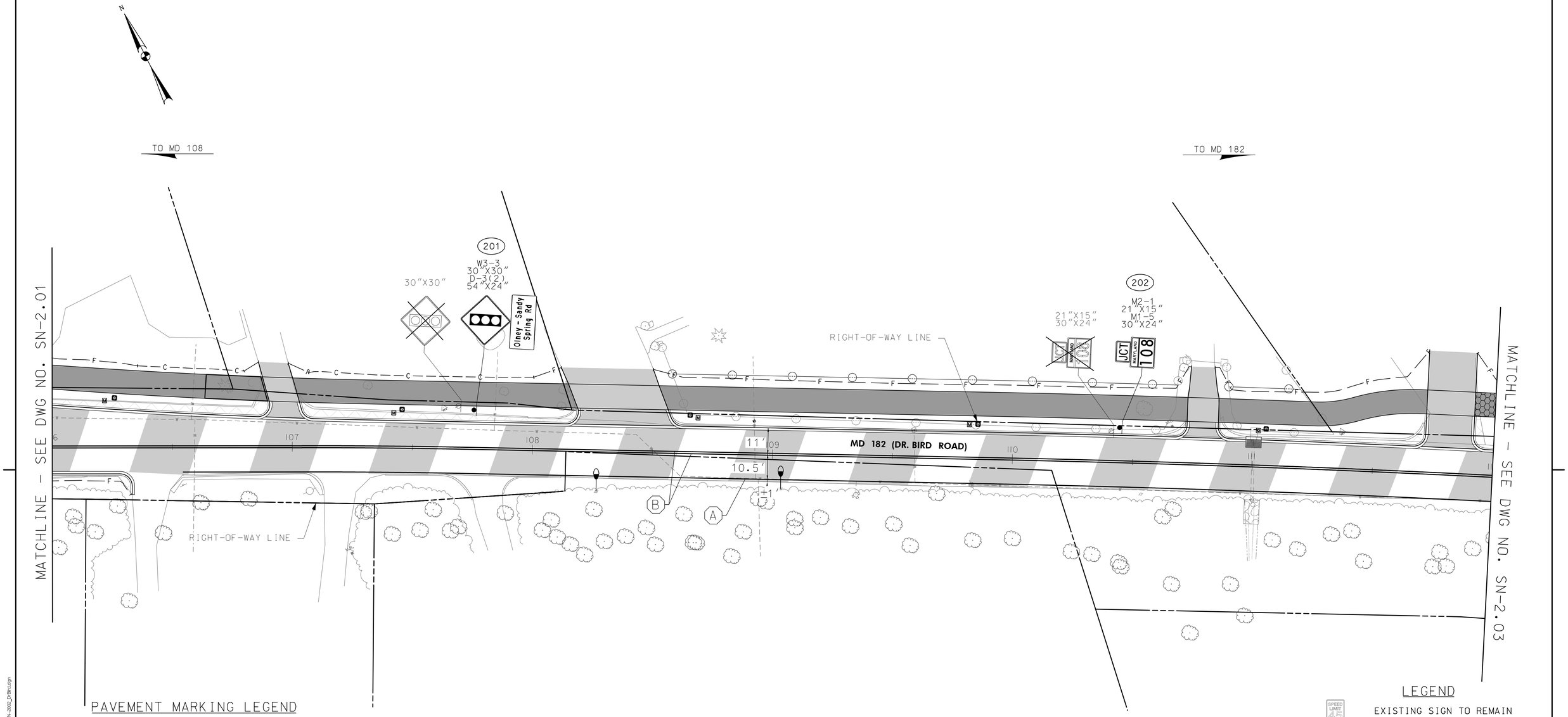
HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
SIGNING & PAVEMENT MARKING PLAN

SCALE 1"=20' DATE AUGUST 2023

DRAWING NO. SN-2.01 OF 7 SHEET NO. 82 OF 103

PLAN NO. MR2022024 DWG. SN-2.01

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pSN-2001_DrBird.dgn



PAVEMENT MARKING LEGEND

A. 5 IN. SOLID WHITE THERMOPLASTIC PAVEMENT MARKING LINE

B. 5 IN. SOLID YELLOW THERMOPLASTIC PAVEMENT MARKING LINE

C. 5 IN. SKIP WHITE THERMOPLASTIC PAVEMENT MARKING LINE
(3 FT. LINE, 3 FT. GAP)

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(3 FT. LINE, 9 FT. GAP)

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F. WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING SYMBOL

G. REMOVE EXISTING PAVEMENT MARKING LINE, SYMBOL OR ARROW BY HYDROBLASTING

LEGEND

EXISTING SIGN TO REMAIN

EXISTING SIGN TO BE REMOVED

PROPOSED SIGN

EXISTING GROUND MOUNTED SIGN

PROPOSED GROUND MOUNTED SIGN

PLAN NO. MR2022024 | DWG. SN-2.02

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MONTGOMERY COUNTY
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HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
SIGNING & PAVEMENT MARKING PLAN

SCALE 1"=20' DATE AUGUST 2023

DRAWING NO. SN-2.02 OF 7 SHEET NO. 83 OF 103

PLOTTED: 8/1/2023
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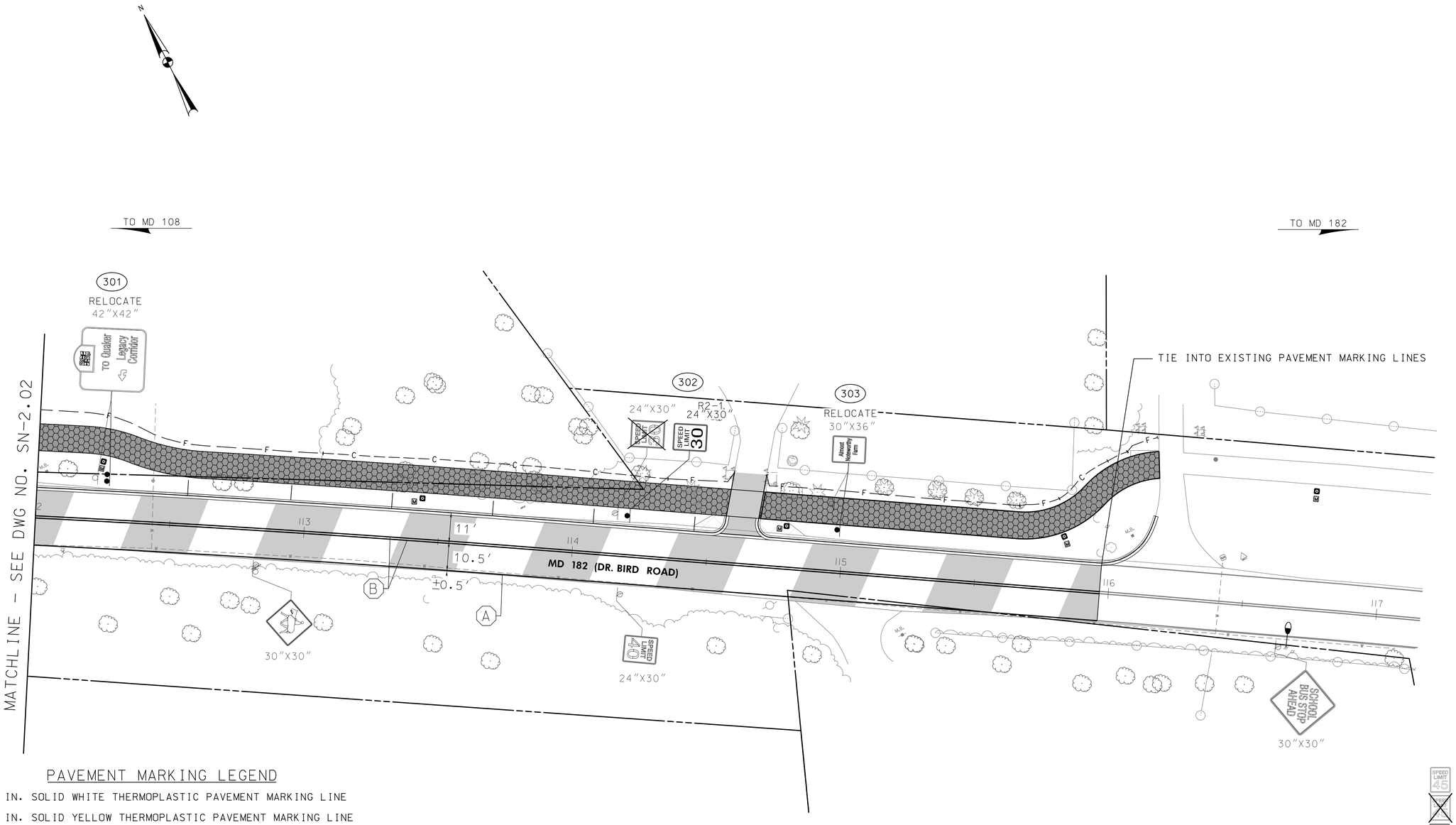

PAVEMENT MARKING LEGEND

A. 5 IN. SOLID WHITE THERMOPLASTIC PAVEMENT MARKING LINE

B. 5 IN. SOLID YELLOW THERMOPLASTIC PAVEMENT MARKING LINE

C. 5 IN. SKIP WHITE THERMOPLASTIC PAVEMENT MARKING LINE
(3 FT. LINE, 3 FT. GAP)

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F. WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING SYMBOL

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LEGEND

- EXISTING SIGN TO REMAIN
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DR. BIRD / NORWOOD ROAD
SHARED USE PATH
SIGNING & PAVEMENT MARKING PLAN

SCALE 1"=20' DATE AUGUST 2023

DRAWING NO. SN-2.03 OF 7 SHEET NO. 84 OF 103

PLAN NO. MR2022024 DWG. SN-2.03

PLOTTED: 8/11/2023
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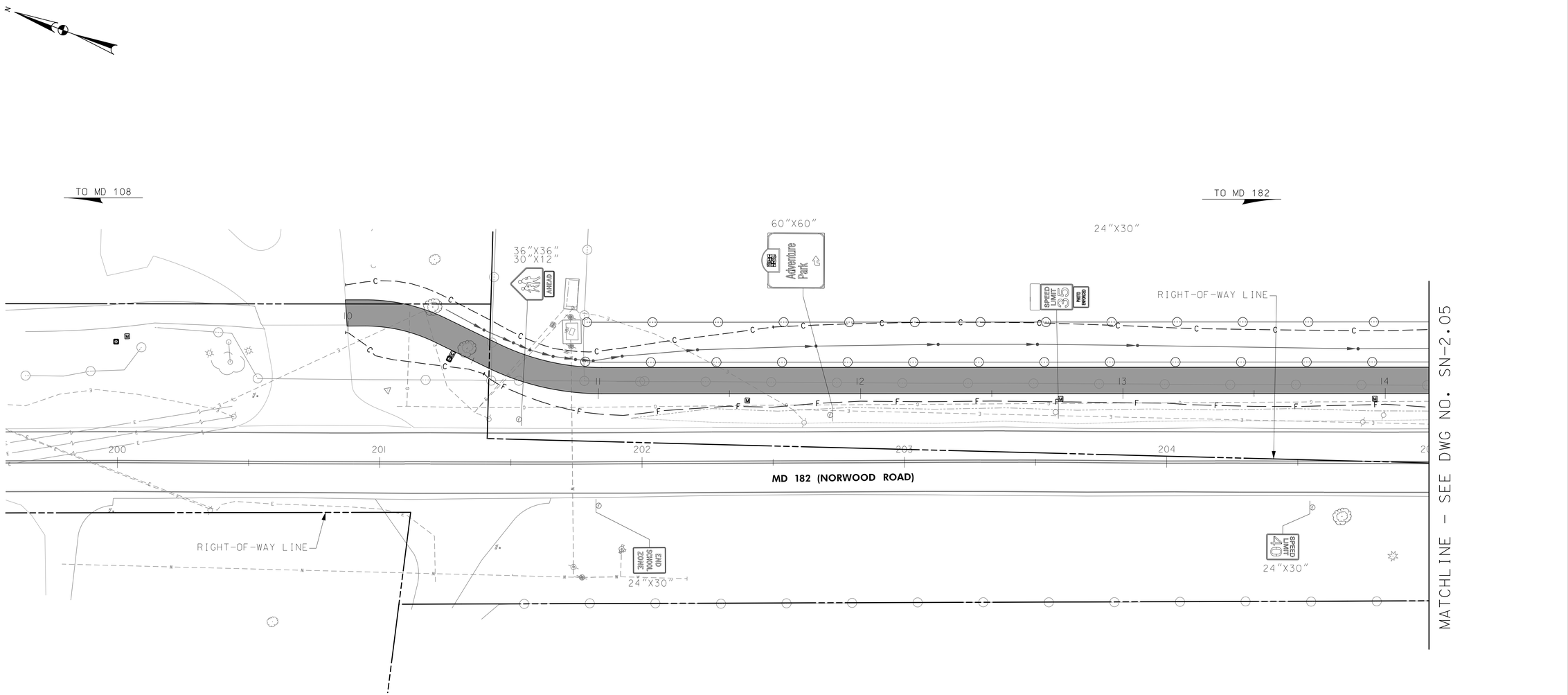

PAVEMENT MARKING LEGEND

A. 5 IN. SOLID WHITE THERMOPLASTIC PAVEMENT MARKING LINE

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NOTE

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NO SIGNING/PAVEMENT MARKING WORK TO BE COMPLETED.

LEGEND

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HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
SIGNING & PAVEMENT MARKING PLAN

SCALE 1"=20' DATE AUGUST 2023

PLAN NO. MR2022024 | DWG. SN-2.04

DRAWING NO. SN-2.04 OF 7 | SHEET NO. 85 OF 103

PLOTTED: 8/1/2023
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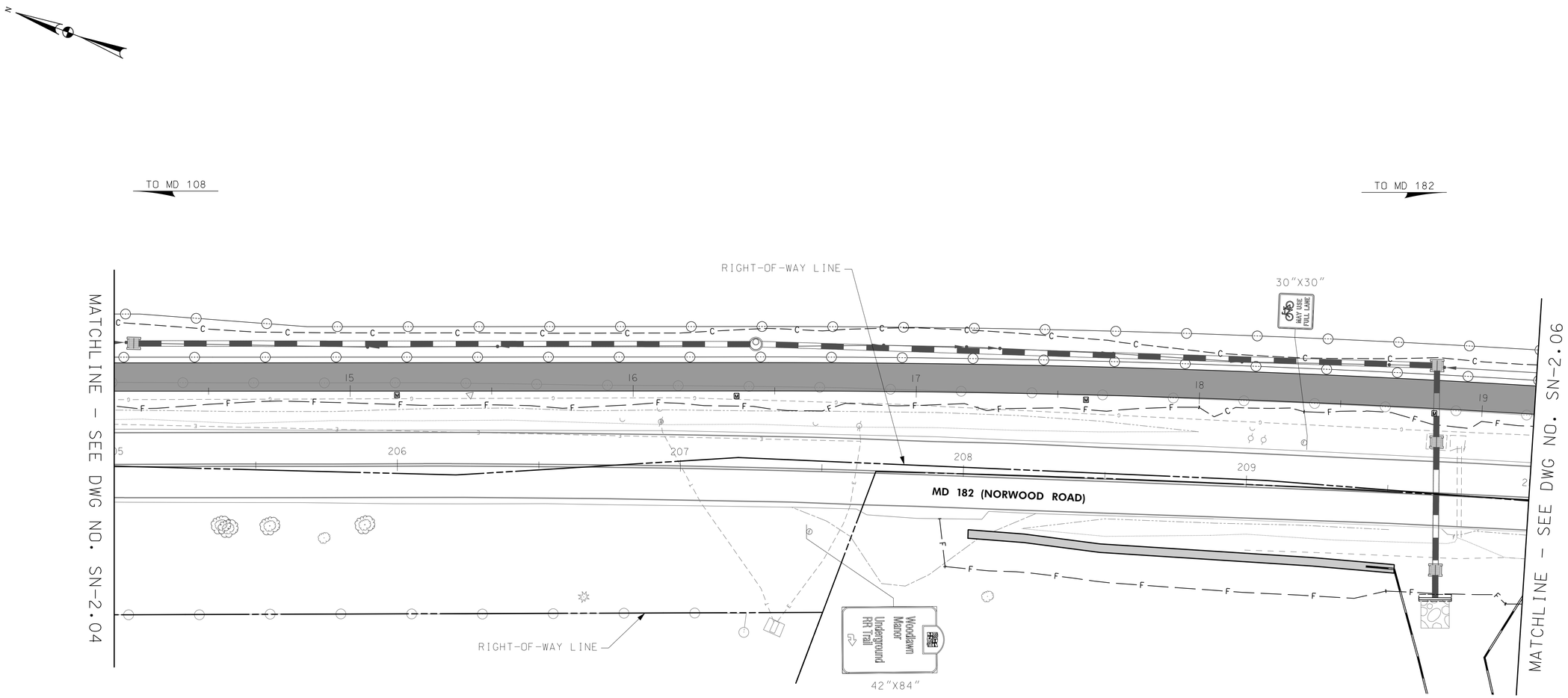

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PLAN NO. MR2022024 | DWG.SN-2.05

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HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
SIGNING & PAVEMENT MARKING PLAN

SCALE 1"=20' DATE AUGUST 2023

DRAWING NO. SN-2.05 OF 7 SHEET NO. 86 OF 103

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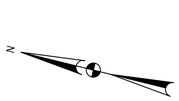
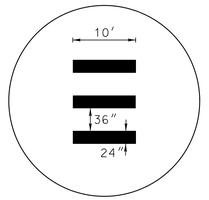
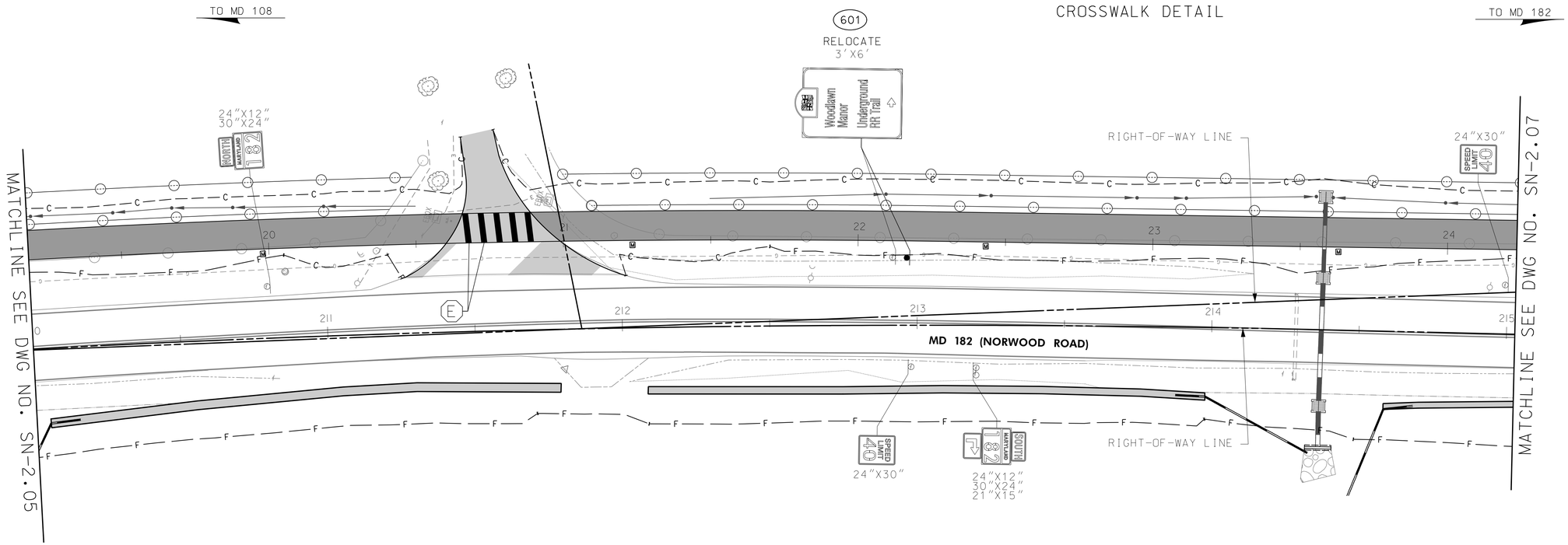




CROSSWALK DETAIL



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PLAN NO. MR2022024 | DWG. SN-2.06

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
SIGNING & PAVEMENT MARKING PLAN

SCALE 1"=20' DATE AUGUST 2023

DRAWING NO. SN-2.06 OF 7 | SHEET NO. 87 OF 103

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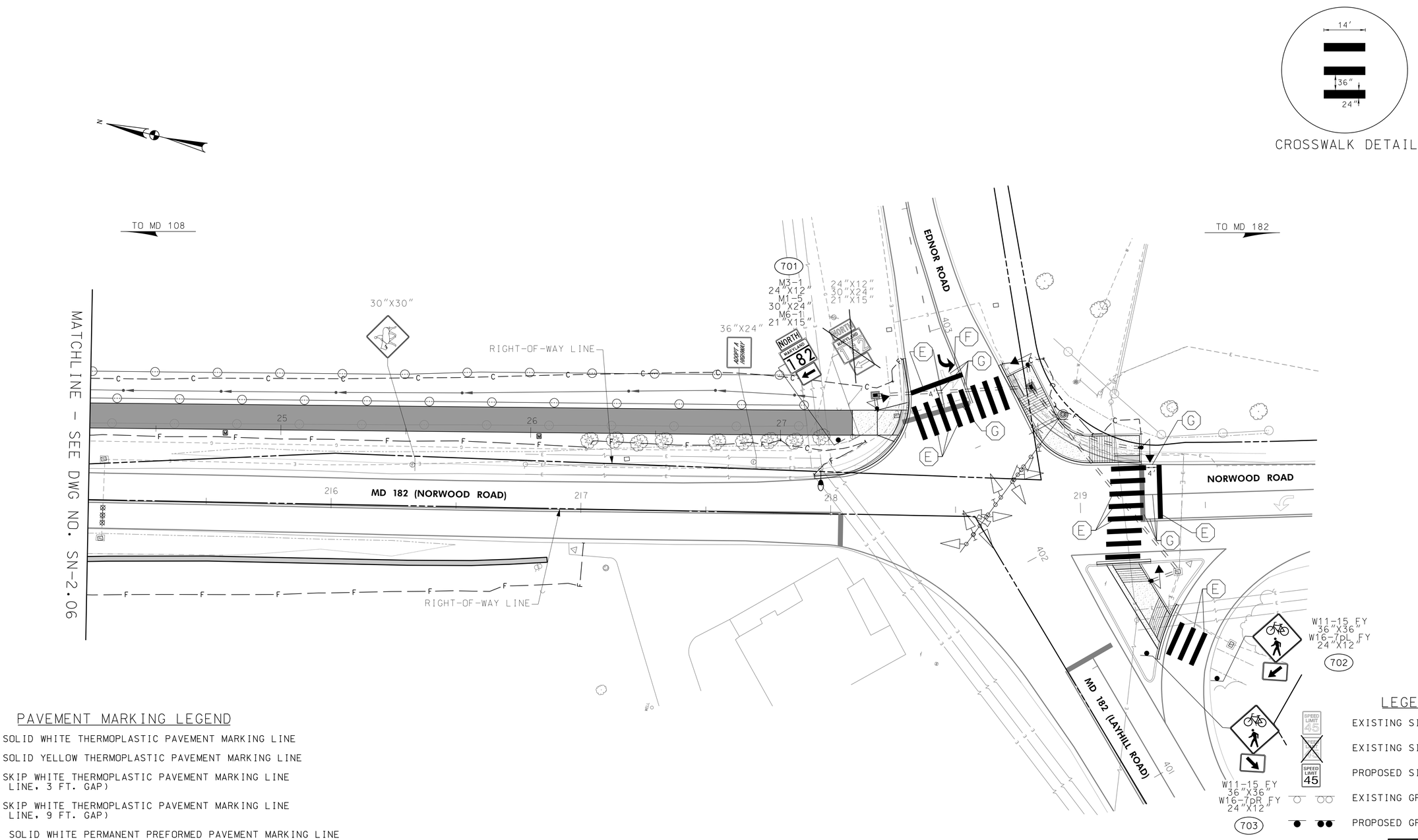
PLOTTED: 8112023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pSN-2006_DrBird.dgn



PAVEMENT MARKING LEGEND

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SCALE 1"=20' DATE AUGUST 2023

DRAWING NO. SN-2.07 OF 7

SHEET NO. 88 OF 103

PLAN NO. MR2022024 | DWG. SN-2.07

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SHEET NO.	SIGN NO.	REMARKS	CODE NUMBERS *																												
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
SN-2.01		REMOVE EXISTING SIGNS AND SUPPORTS						30																								
		PAVEMENT MARKINGS							250	810	225	162	60																			
	101	M3-4 24"X12", M1-5 30"X24", M6-1 21"X15" 1-4"X6" WOOD SIGN SUPPORT (DRILLED)	9.5		16.5																										
	102	RELOCATE 24"X30" 1-4"X4" WOOD SIGN SUPPORT		15			5																								
	103	RELOCATE 3'X6' 1-6"X8" WOOD SIGN SUPPORT (DRILLED)				19.5	18																								
	104	W2-2R 30"X30", D-3(2) 48'X24" 1-6"X8" WOOD SIGN SUPPORT (DRILLED)	14.5			18																									
	105	RELOCATE 24"X36" 1-4"X4" WOOD SIGN SUPPORT		15.5			6																								
	106	R1-1 30"X30" 1-4"X4" WOOD SIGN SUPPORT	6.5	15																											
	107	RELOCATE 24"X12", 30"X24" 1-4"X6" WOOD SIGN SUPPORT (DRILLED)			15		7																								
	108	RELOCATE 2-24"X30" 1-4"X6" WOOD SIGN SUPPORT (DRILLED)			14.5		10																								
	109	RELOCATE 24"X24", 21"X15" 1-4"X6" WOOD SIGN SUPPORT (DRILLED)			15.5		6.5																								
SN-2.02		REMOVE EXISTING SIGNS AND SUPPORTS						13.5																								
		PAVEMENT MARKINGS							575	1260																						
	201	W3-3 30"X30", D-3(2) 54"X24" 1-6"X8" WOOD SIGN SUPPORT (DRILLED)	15.5			18																									
	202	M2-1 21"X15", M1-5 30"X24" 1-4"X6" WOOD SIGN SUPPORT (DRILLED)	7.5		15.5																										
SN-2.03		REMOVE EXISTING SIGNS AND SUPPORTS						5																								
		PAVEMENT MARKINGS							420	835																						
	301	RELOCATE 42"X42" 2-4"X6" WOOD SIGN SUPPORTS (DRILLED)			31		12.5																								
	302	R2-1 24"X30" 1-4"X4" WOOD SIGN SUPPORT	5	14.5																											
	303	RELOCATE 30"X36" EXISTING SIGN SUPPORT					7.5																								
SN-2.06		PAVEMENT MARKINGS									55																				
	601	RELOCATE 3'X6' 1-6"X8" WOOD SIGN SUPPORT (DRILLED)				19.5	18																								
SN-2.07		REMOVE EXISTING SIGNS AND SUPPORTS						9.5																								
		PAVEMENT MARKINGS									325	15.5	125	15.5																		
	701	M3-1 24"X12", M1-5 30"X24", M6-1 21"X15" 1-4"X6" WOOD SIGN SUPPORT (DRILLED)	9.5	16.5																											
	702	W11-15 FY 36"X36", W16-7pL FY 24"X12" 1-4"X6" WOOD SIGN SUPPORT (DRILLED)	11		16																										
	703	W11-15 FY 36"X36", W16-7pR FY 24"X12" 1-4"X6" WOOD SIGN SUPPORT (DRILLED)	11		16																										
		SN-11.01 TOTALS	90	77	140	75	91	58	1,245	2,905	605	178	185	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CODE NO.	DESCRIPTION	UNIT	CATEGORY CODE
1	SHEET ALUMINUM SIGNS	SF	801605
2	WOOD SIGN SUPPORTS 4 INCH X 4 INCH	LF	801104
3	WOOD SIGN SUPPORTS 4 INCH X 6 INCH	LF	801106
4	WOOD SIGN SUPPORT 6 INCH X 8 INCH	LF	821003
5	RELOCATE EXISTING GROUND MOUNTED SIGNS	SF	813023
6	REMOVE EXISTING GROUND MOUNTED SIGNS AND SUPPORTS	SF	801711
7	5 INCH WHITE THERMOPLASTIC PAVEMENT MARKINGS	LF	549401
8	5 INCH YELLOW THERMOPLASTIC PAVEMENT MARKINGS	LF	549403
9	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	549617
10	WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS	SF	549620
11	REMOVAL OF EXISTING PAVEMENT MARKING LINES, ANY WIDTH	LF	549800
12	REMOVAL OF EXISTING PAVEMENT MARKING LETTERS, SYMBOLS, ARROWS AND NUMBERS	SF	549805

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HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
SIGNING & PAVEMENT MARKING PLAN

SCALE 1"=20' DATE AUGUST 2023

PLAN NO. MR2022024 | DWG. SN-11.01

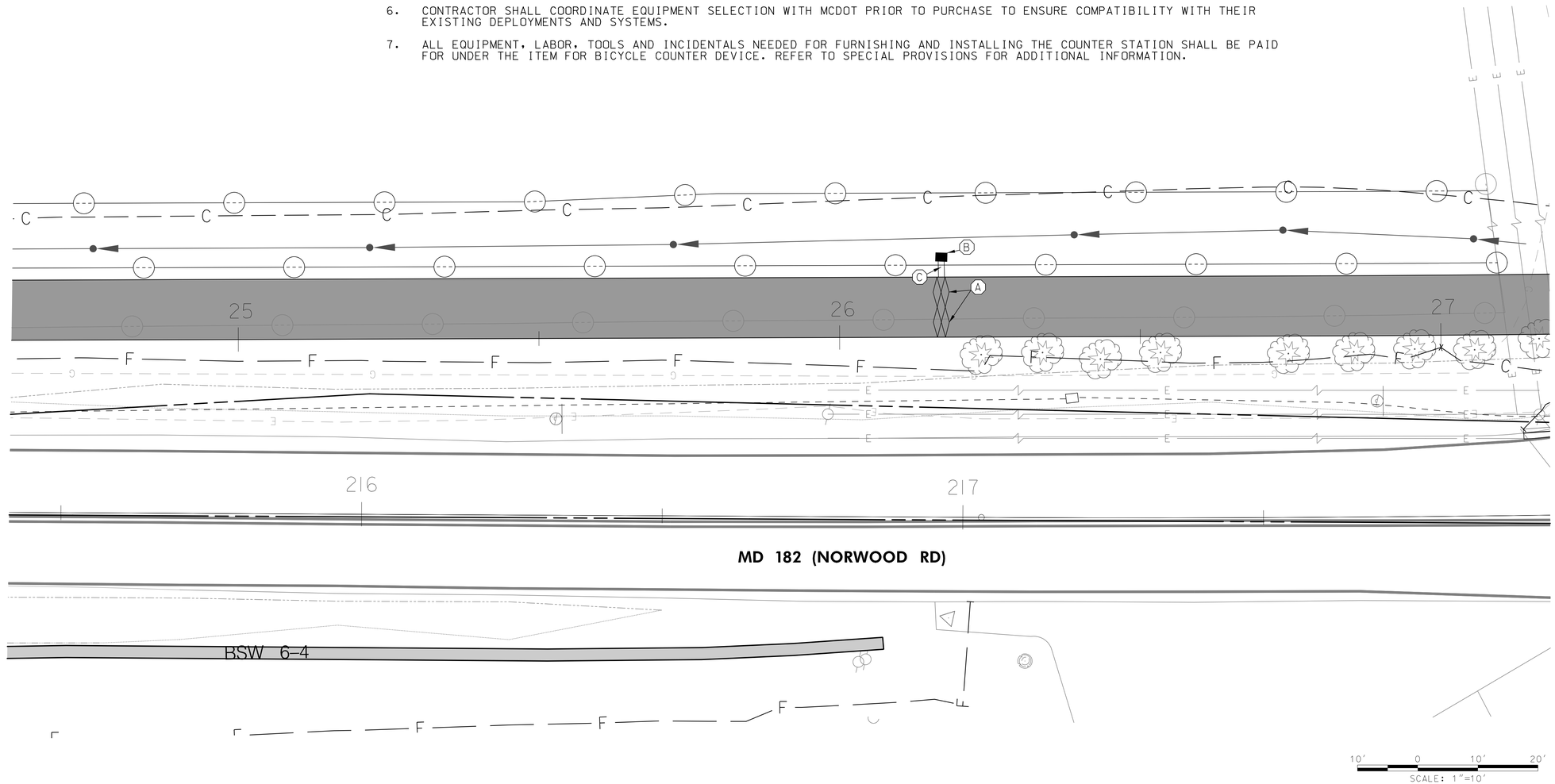
DRAWING NO. SN-11.01 OF 1 | SHEET NO. 89 OF 103

PLOTTED: 8/1/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pSN-1101_DrBird.dgn

PLOTTED: 8/1/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pSN-1101_DrBird.dgn

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE. TAGS SHALL BE INSTALLED ON EACH CABLE IN THE HANDHOLE.
2. ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
3. UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE 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. WITHIN 36 IN. OF UNDERGROUND UTILITY LOCATIONS, THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE FOR FOUNDATION AND CONDUIT BY HAND.
5. THE CONTRACTOR SHALL NOTIFY MR. KAMAL HAMUD AND MR. STEVE YOUNG 72 HOURS IN ADVANCE OF INTENDED WORK.
6. CONTRACTOR SHALL COORDINATE EQUIPMENT SELECTION WITH MCDOT PRIOR TO PURCHASE TO ENSURE COMPATIBILITY WITH THEIR EXISTING DEPLOYMENTS AND SYSTEMS.
7. ALL EQUIPMENT, LABOR, TOOLS AND INCIDENTALS NEEDED FOR FURNISHING AND INSTALLING THE COUNTER STATION SHALL BE PAID FOR UNDER THE ITEM FOR BICYCLE COUNTER DEVICE. REFER TO SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.



CONSTRUCTION DETAILS

A. INSTALL ECO-COUNTER ZELT HD 4-LOOP.

B. INSTALL ECO-COUNTER B125 URBAN MANHOLE WITH ZELT SENSOR. LOGGER, AND BATTERY. COVER SHALL BE FLUSH WITH FINAL SIDEWALK GRADE.

C. INSTALL 1.5 IN. FLEXIBLE CONDUIT - TRENCHED.

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
240-777-7231

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY SJC DRAWN BY SJC CHECKED BY WFW

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
ITS PLAN

SCALE 1"=10' DATE AUGUST 2023

DRAWING NO. IT-01 OF 1 SHEET NO. 90 OF 103

PLAN NO. MR2022024 | DWG. IT-01

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pIT-0001_DrBird.dgn

PLOTTED: 8/11/2023
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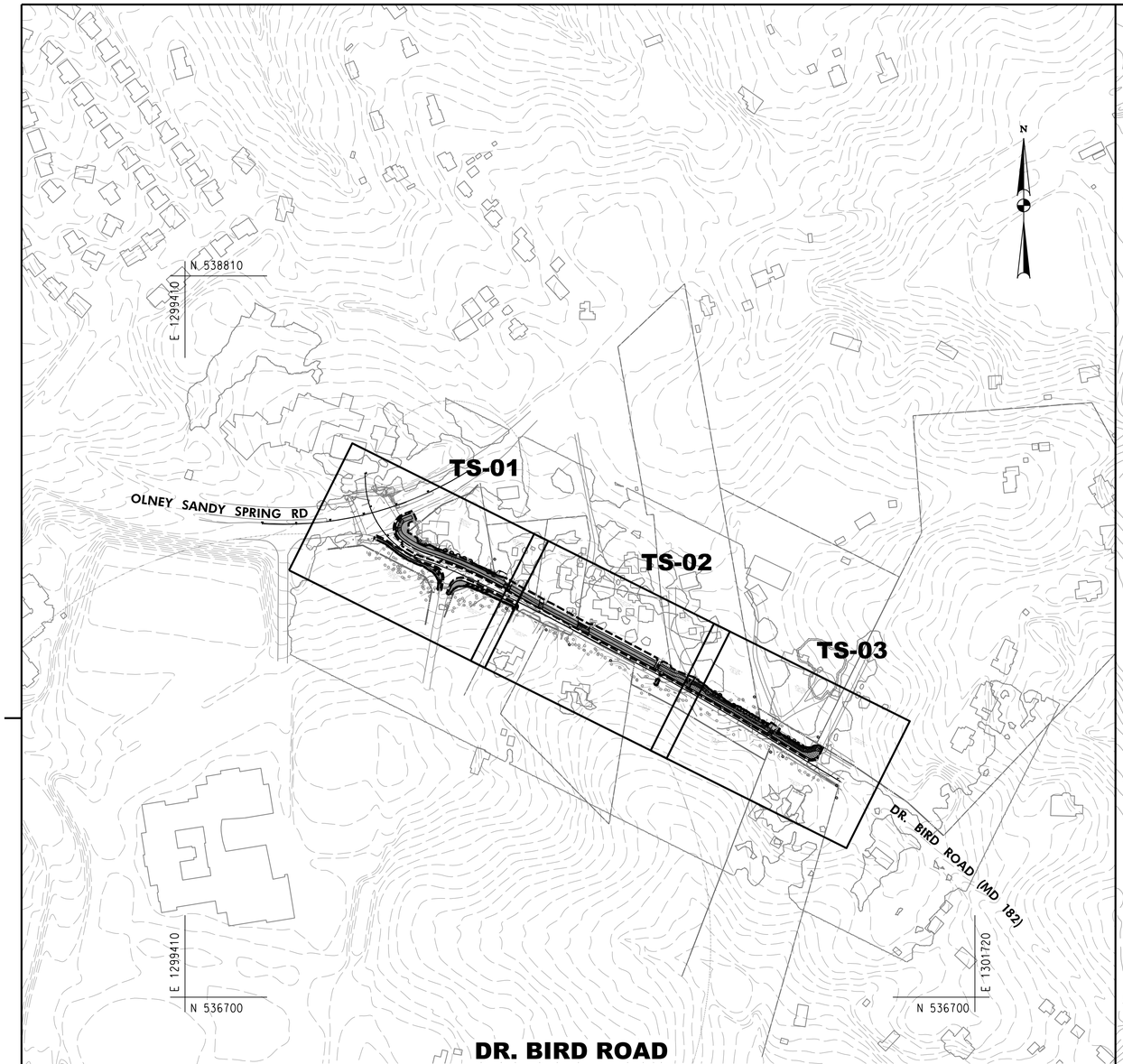

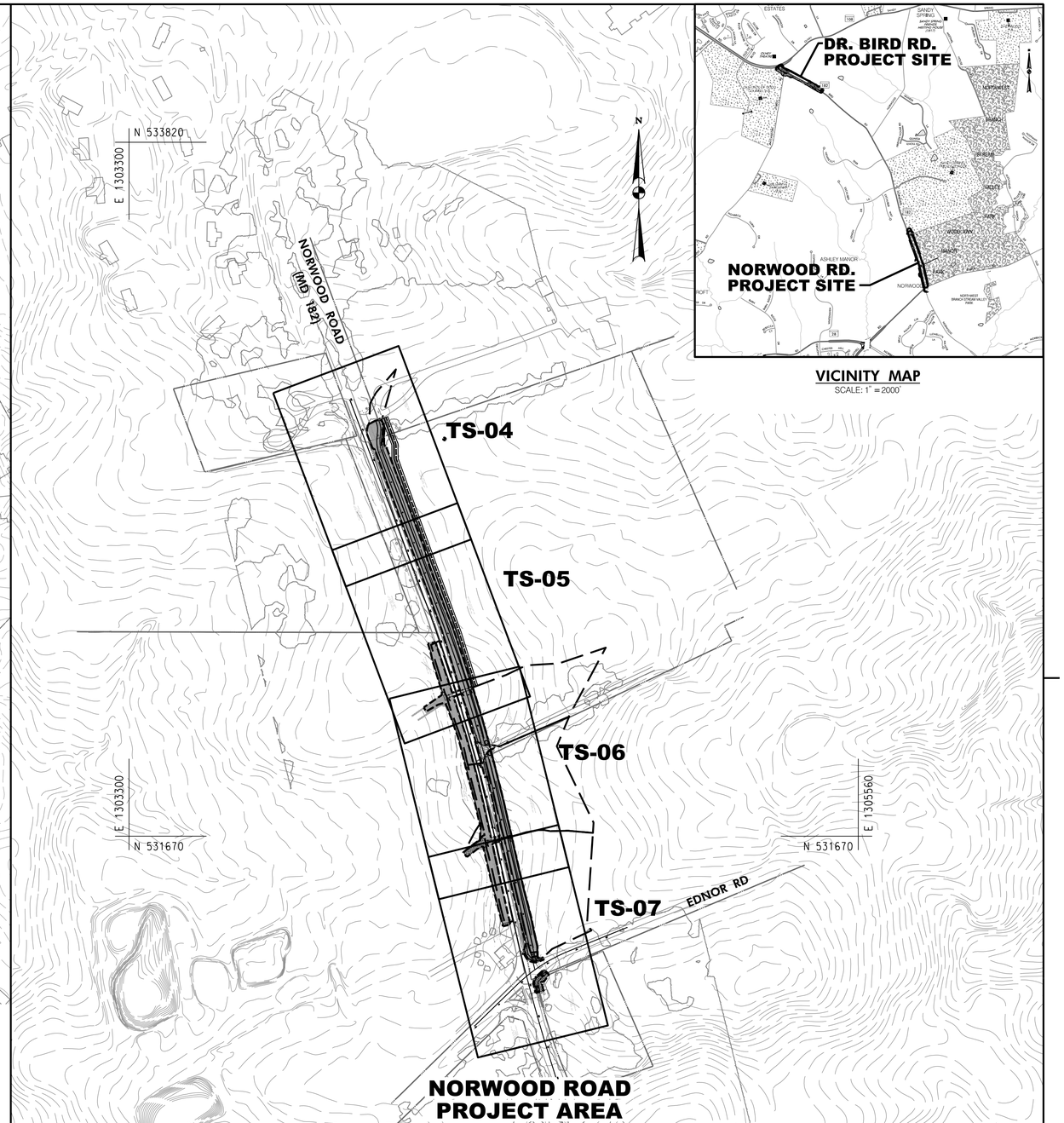

VICINITY MAP
SCALE: 1" = 2000'

Christina Simini 08-11-2023

Maryland DNR Qualified Professional Date
Name: Christina Simini
Address: 700 East Pratt St., Suite 500
Baltimore, MD 21202
Phone: 410-462-9386
csimini@rkk.com

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200' 0 200' 400'
SCALE: 1" = 200'

OWNER/ADDRESS:
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DEPARTMENT OF TRANSPORTATION
100 EDISON PARK DRIVE
GAITHERSBURG, MARYLAND

CONTACT:
DIVISION OF TRANSPORTATION ENGINEERING
240-777-7220
DESIGN SECTION
240-777-7221

NO.	REVISION	DATE	BY

FOREST CONSERVATION EXEMPTION

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

HERITAGE TRIANGLE TRAIL PHASE I: DR. BIRD ROAD AND NORWOOD ROAD

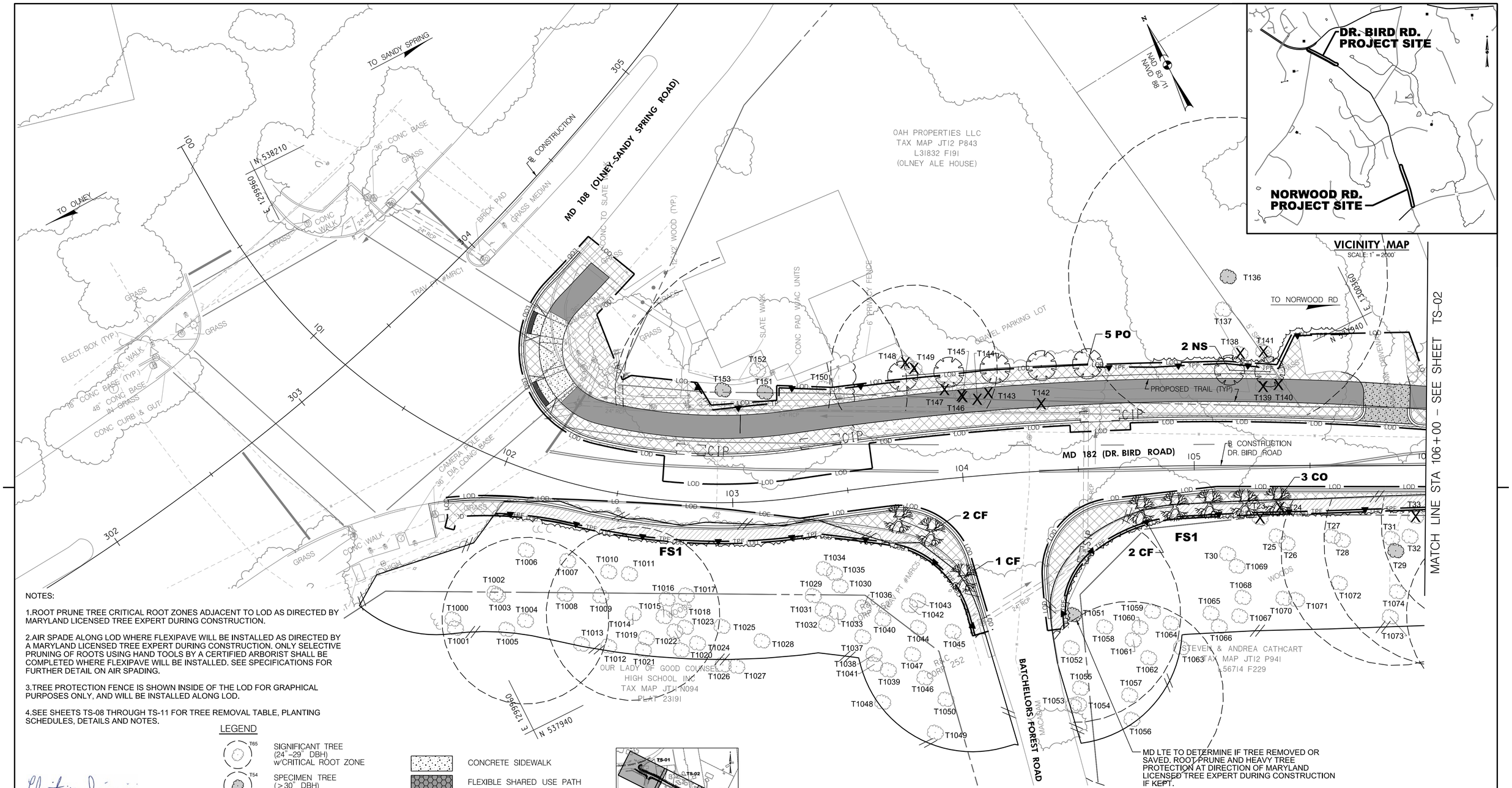
TREE SAVE KEY SHEET

DESIGNED BY CAS
DRAWN BY DEA
CHECKED BY MH
BASE MAP 224NW02, 223NW02, 222NW01

COUNTY MONTGOMERY
ePLAN # MR2022024
SCALE 1"=200'
DATE AUGUST 2023

DRAWING NO. TS-Key OF 11
SHEET NO. 91 OF 103

PLOTTED: 8102023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pTS-Key_DrBird.dgn



NOTES:

1.ROOT PRUNE TREE CRITICAL ROOT ZONES ADJACENT TO LOD AS DIRECTED BY MARYLAND LICENSED TREE EXPERT DURING CONSTRUCTION.

2.AIR SPADE ALONG LOD WHERE FLEXIPAVE WILL BE INSTALLED AS DIRECTED BY A MARYLAND LICENSED TREE EXPERT DURING CONSTRUCTION. ONLY SELECTIVE PRUNING OF ROOTS USING HAND TOOLS BY A CERTIFIED ARBORIST SHALL BE COMPLETED WHERE FLEXIPAVE WILL BE INSTALLED. SEE SPECIFICATIONS FOR FURTHER DETAIL ON AIR SPADING.

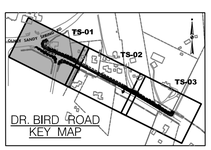
3.TREE PROTECTION FENCE IS SHOWN INSIDE OF THE LOD FOR GRAPHICAL PURPOSES ONLY, AND WILL BE INSTALLED ALONG LOD.

4.SEE SHEETS TS-08 THROUGH TS-11 FOR TREE REMOVAL TABLE, PLANTING SCHEDULES, DETAILS AND NOTES.

MD LTE TO DETERMINE IF TREE REMOVED OR SAVED. ROOT-PRUNE AND HEAVY TREE PROTECTION AT DIRECTION OF MARYLAND LICENSED TREE EXPERT DURING CONSTRUCTION IF KEPT.

LEGEND

- T65 — SIGNIFICANT TREE (24"–29" DBH) w/CRITICAL ROOT ZONE
- T54 — SPECIMEN TREE (≥30" DBH) w/CRITICAL ROOT ZONE
- INVENTORIED TREES 6" DBH OR GREATER
- TREES TO BE REMOVED
- FS1 — FOREST STAND
- FOREST STAND BOUNDARY
- LOD — LIMIT OF DISTURBANCE
- SPLIT RAIL FENCE
- TPF — TREE PROTECTION FENCE
- PROPOSED TREELINE
- EXISTING TREELINE / CANOPY COVER
- RIGHT OF WAY LINE
- PROPERTY BOUNDARY
- CONCRETE SIDEWALK
- FLEXIBLE SHARED USE PATH
- ASPHALT PATH
- CONCRETE DRIVEWAY
- TURFGRASS SOD ESTABLISHMENT
- UPLAND MEADOW ESTAB.
- TREE PROTECTION SIGN
- PROPOSED TREE – PRIVATE PROPERTY
- PROPOSED TREE – ROW
- HEAVY TREE PROTECTION
- PROPOSED DITCH



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

Christina Simini 08-11-2023

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Baltimore, MD 21202
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240-777-7220
DESIGN SECTION
240-777-7221

NO.	REVISION	DATE	BY

FOREST CONSERVATION EXEMPTION

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

HERITAGE TRIANGLE TRAIL PHASE I: DR. BIRD ROAD AND NORWOOD ROAD

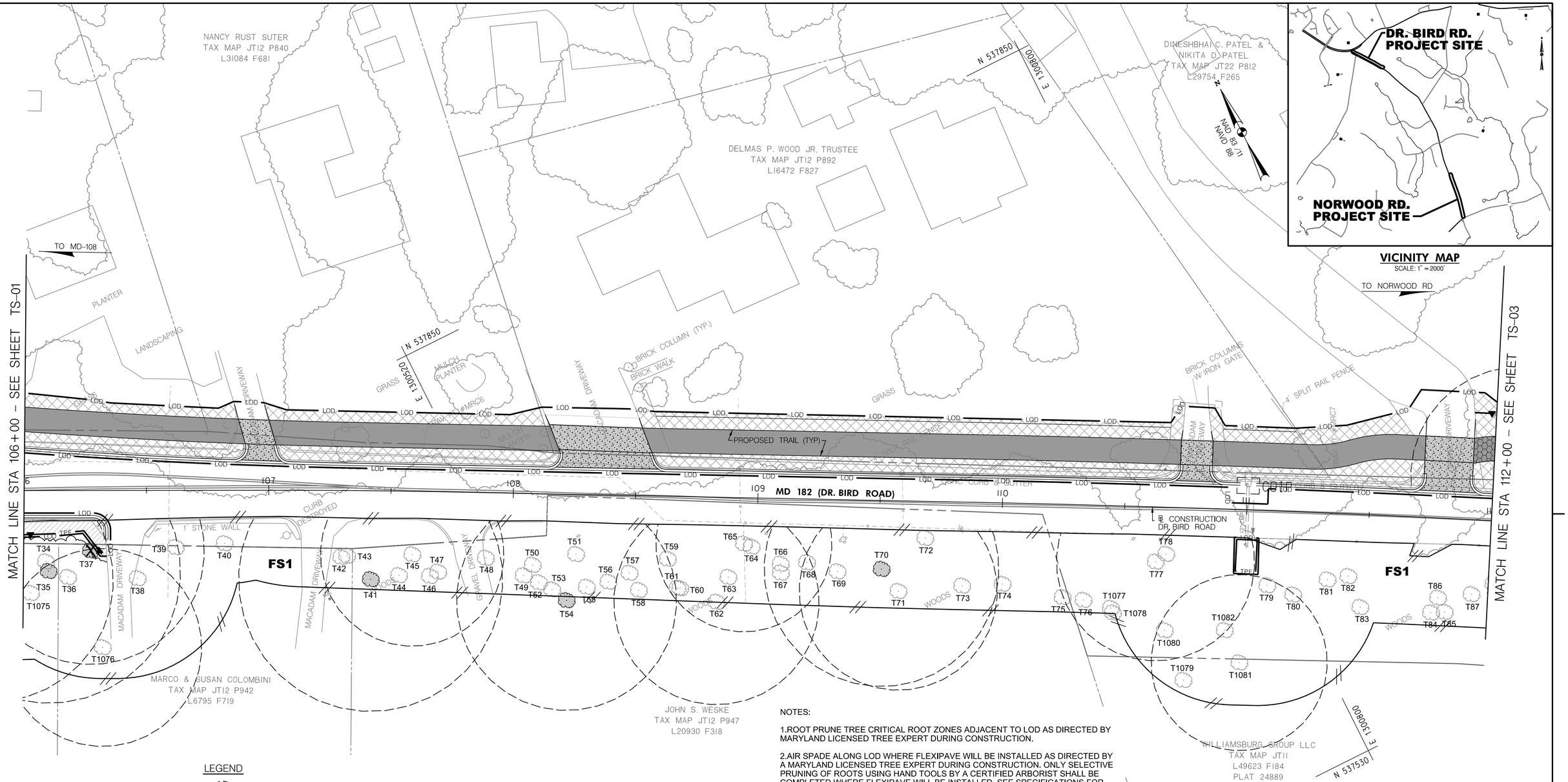
TREE SAVE PLAN

DESIGNED BY CAS
DRAWN BY DEA
CHECKED BY MH
BASE MAP 224NW02, 223NW02, 222NW01

COUNTY MONTGOMERY
ePLAN # MR2022024
SCALE 1"=20'
DATE AUGUST 2023

DRAWING NO. TS-01 OF 11
SHEET NO. 92 OF 103

PLOTTED: 8/10/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pTS-001_DrBird.dgn



VICINITY MAP
SCALE: 1" = 2000'

NOTES:

1. ROOT PRUNE TREE CRITICAL ROOT ZONES ADJACENT TO LOD AS DIRECTED BY MARYLAND LICENSED TREE EXPERT DURING CONSTRUCTION.

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4. SEE SHEETS TS-08 THROUGH TS-11 FOR TREE REMOVAL TABLE, PLANTING SCHEDULES, DETAILS AND NOTES.

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

LEGEND

- SIGNIFICANT TREE (24"–29" DBH) w/CRITICAL ROOT ZONE (T65)
- SPECIMEN TREE (≥30" DBH) w/CRITICAL ROOT ZONE (T54)
- INVENTORIED TREES 6" DBH OR GREATER
- TREES TO BE REMOVED
- FS1 FOREST STAND
- FOREST STAND BOUNDARY
- LOD LIMIT OF DISTURBANCE
- SPLIT RAIL FENCE
- TPF TREE PROTECTION FENCE
- PROPOSED TREELINE
- EXISTING TREELINE / CANOPY COVER
- RIGHT OF WAY LINE
- PROPERTY BOUNDARY
- CONCRETE SIDEWALK
- FLEXIBLE SHARED USE PATH
- ASPHALT PATH
- CONCRETE DRIVEWAY
- TURFGRASS SOD ESTABLISHMENT
- UPLAND MEADOW ESTAB.
- TREE PROTECTION SIGN
- PROPOSED TREE – PRIVATE PROPERTY
- PROPOSED TREE – ROW
- HEAVY TREE PROTECTION
- PROPOSED DITCH

Christina Simini 08–11–2023

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

HERITAGE TRIANGLE TRAIL PHASE I: DR. BIRD ROAD AND NORWOOD ROAD

TREE SAVE PLAN

DESIGNED BY CAS
DRAWN BY DEA
CHECKED BY MH
BASE MAP 224NW02, 223NW02, 222NW01

COUNTY MONTGOMERY
ePLAN # MR2022024
SCALE 1"=20'
DATE AUGUST 2023

DRAWING NO. TS–02 OF 11
SHEET NO. 93 OF 103

PLOTTED: 8/10/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pTS-002_DrBird.dgn

NOTES:

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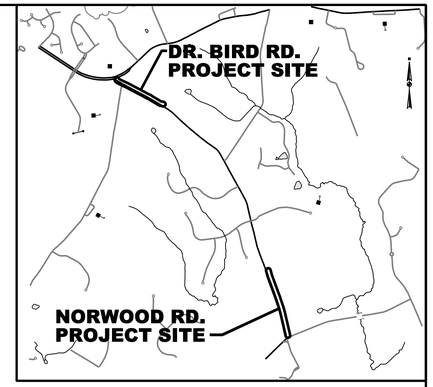


VICINITY MAP
SCALE: 1" = 2000'

N 537690
E 1301020

DINESHBHAI C. PATEL &
NIKITA D. PATEL
TAX MAP JT22 P812
L29754 F265

MARC L. KOZAM &
TONI-JUNELL HERBERT
TAX MAP JT22 P915
L44864 F368

BARBARA M. GIBIAN
TAX MAP JT22 SUB 6I LT 50
L33339 F529

N 537400
E 1301400

NAD 83 /11
NAVD 88

TO MD-108

TO NORWOOD RD

MATCH LINE STA 112+00 – SEE SHEET TS-02

MD 182 (DR. BIRD ROAD)

FS1

2 NS

5 PO

1 NS

PROPOSED TRAIL (TYP.)

4' SPLIT RAIL FENCE

STONE COLUMN (TYP.)

WOOD BOLLARD

MAC WALK

EXISTING SHARED USE PATH

TRAV PT #MRC3

MACADAM DRIVEWAY

LB CONSTRUCTION
DR. BIRD ROAD

"40 MPH"

5' PRIVACY FENCE

NO NUMBER

WOODS

GRASS

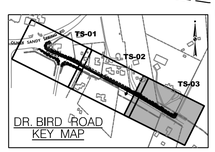
WILLIAMSBURG GROUP LLC
TAX MAP JT11
L49623 FI84
PLAT 24889

SAMSON & CATHERINE MOY
TAX MAP JT2I PII2
L5I605 F87

HISTORIC
DR. BIRD HOUSE

LEGEND

SIGNIFICANT TREE (24"–29" DBH) w/CRITICAL ROOT ZONE	CONCRETE SIDEWALK
SPECIMEN TREE (≥30" DBH) w/CRITICAL ROOT ZONE	FLEXIBLE SHARED USE PATH
INVENTORIED TREES 6" DBH OR GREATER	ASPHALT PATH
TREES TO BE REMOVED	CONCRETE DRIVEWAY
FOREST STAND	TURFGRASS SOD ESTABLISHMENT
FOREST STAND BOUNDARY	UPLAND MEADOW ESTAB.
LIMIT OF DISTURBANCE	TREE PROTECTION SIGN
SPLIT RAIL FENCE	PROPOSED TREE – PRIVATE PROPERTY
TREE PROTECTION FENCE	PROPOSED TREE – ROW
PROPOSED TREELINE	HEAVY TREE PROTECTION
EXISTING TREELINE / CANOPY COVER	PROPOSED DITCH
RIGHT OF WAY LINE	
PROPERTY BOUNDARY	



SCALE: 1" = 20'

Christina Simini 08-11-2023

Maryland DNR Qualified Professional Date
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240-777-7220
DESIGN SECTION
240-777-7221

NO.	REVISION	DATE	BY

FOREST CONSERVATION EXEMPTION

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

HERITAGE TRIANGLE TRAIL PHASE I: DR. BIRD ROAD AND NORWOOD ROAD

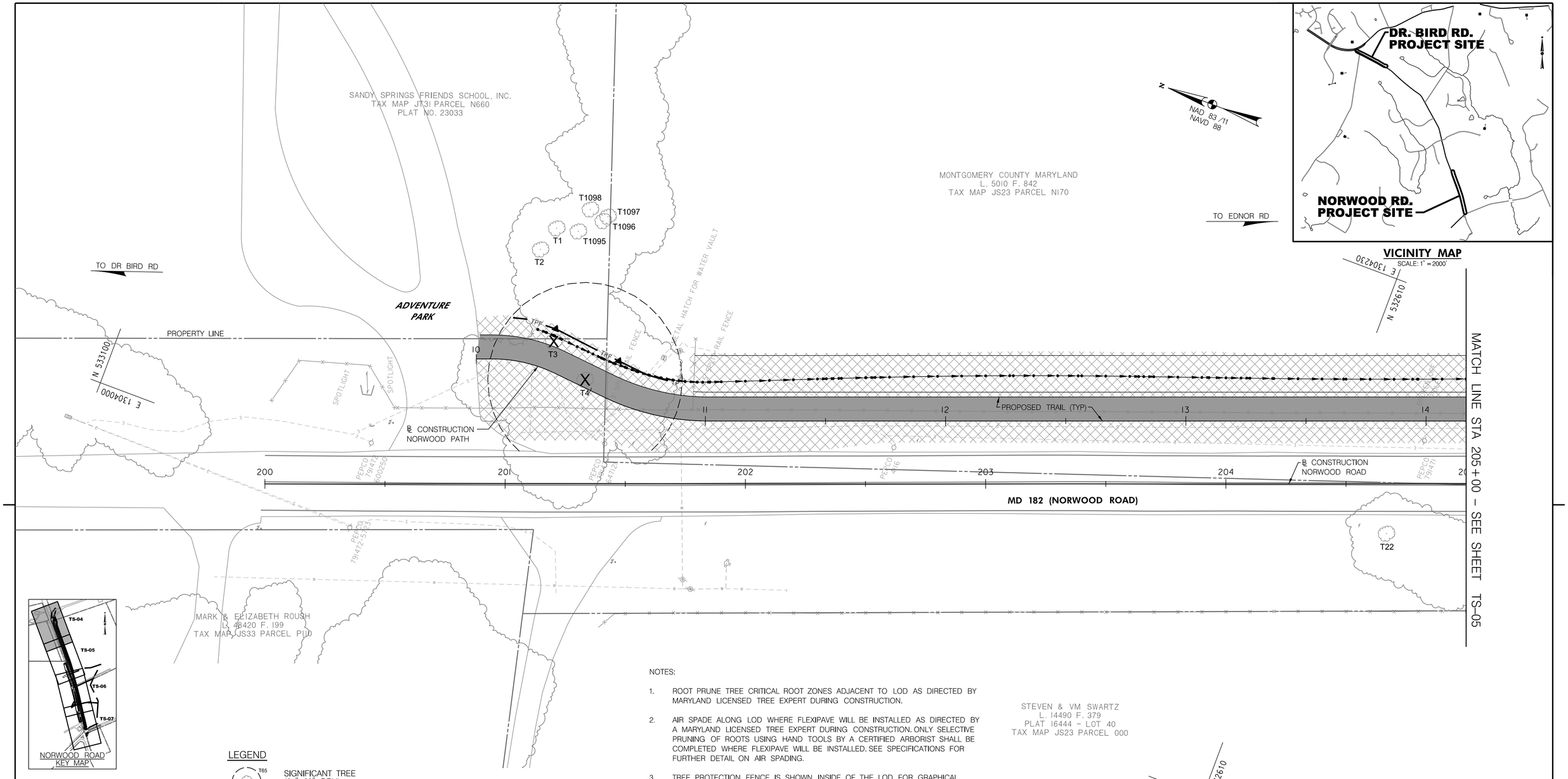
TREE SAVE PLAN

DESIGNED BY CAS
DRAWN BY DEA
CHECKED BY MH
BASE MAP 224NW02, 223NW02, 222NW01

COUNTY MONTGOMERY
ePLAN # MR2022024
SCALE 1"=20'
DATE AUGUST 2023

DRAWING NO. TS-03 OF 11
SHEET NO. 94 OF 103

PLOTTED: 8102023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pTS-003_DrBird.dgn



LEGEND

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- PROPOSED DITCH

NOTES:

1. ROOT PRUNE TREE CRITICAL ROOT ZONES ADJACENT TO LOD AS DIRECTED BY MARYLAND LICENSED TREE EXPERT DURING CONSTRUCTION.
2. AIR SPADE ALONG LOD WHERE FLEXIPAVE WILL BE INSTALLED AS DIRECTED BY A MARYLAND LICENSED TREE EXPERT DURING CONSTRUCTION. ONLY SELECTIVE PRUNING OF ROOTS USING HAND TOOLS BY A CERTIFIED ARBORIST SHALL BE COMPLETED WHERE FLEXIPAVE WILL BE INSTALLED. SEE SPECIFICATIONS FOR FURTHER DETAIL ON AIR SPADING.
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SCALE: 1" = 20'

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

HERITAGE TRIANGLE TRAIL PHASE I: DR. BIRD ROAD AND NORWOOD ROAD

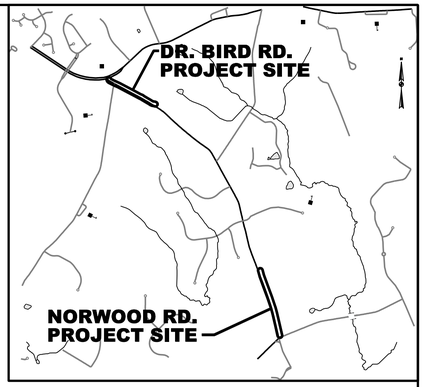
TREE SAVE PLAN

DESIGNED BY CAS
DRAWN BY DEA
CHECKED BY MH
BASE MAP 224NW02, 223NW02, 222NW01

COUNTY MONTGOMERY
ePLAN # MR2022024
SCALE 1"=20'
DATE AUGUST 2023

DRAWING NO. TS-04 OF 11
SHEET NO. 95 OF 103

PLOTTED: 8/10/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pTS-004_DrBird.dgn



VICINITY MAP
SCALE: 1" = 2000'

N 532500
E 1304350

N
NAD 83/11
NAVD 88

MONTGOMERY COUNTY MARYLAND
L. 5010 F. 842
TAX MAP JS23 PARCEL NI70

N 532300
E 1304350

TO DR BIRD RD

TO EDNOR RD

MATCH LINE STA 205+00 – SEE SHEET TS-04

MATCH LINE STA 210+00 – SEE SHEET TS-06

℄ CONSTRUCTION
NORWOOD PATH

℄ PROPOSED TRAIL (TYP)

℄ CONSTRUCTION
NORWOOD ROAD

MD 182 (NORWOOD ROAD)

BSW 6-1

GRAVEL PULL OFF AREA

4.5' SPLIT RAIL FENCE

TRANSFORMER

MIP

SIP

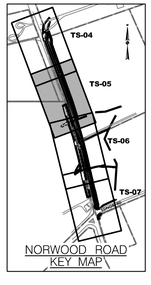
LOD

T21
T20
T19
T18

STEVEN & VM SWARTZ
L. 14490 F. 379
PLAT 16444 – LOT 40
TAX MAP JS23 PARCEL 000

MONTGOMERY COUNTY MARYLAND
L. 21448 F. 396
TAX MAP JS23 PARCEL P670

N 532500
E 1304070



NORWOOD ROAD
KEY MAP

NOTES:

1. ROOT PRUNE TREE CRITICAL ROOT ZONES ADJACENT TO LOD AS DIRECTED BY MARYLAND LICENSED TREE EXPERT DURING CONSTRUCTION.
2. AIR SPADE ALONG LOD WHERE FLEXIPAVE WILL BE INSTALLED AS DIRECTED BY A MARYLAND LICENSED TREE EXPERT DURING CONSTRUCTION. ONLY SELECTIVE PRUNING OF ROOTS USING HAND TOOLS BY A CERTIFIED ARBORIST SHALL BE COMPLETED WHERE FLEXIPAVE WILL BE INSTALLED. SEE SPECIFICATIONS FOR FURTHER DETAIL ON AIR SPADING.
3. TREE PROTECTION FENCE IS SHOWN INSIDE OF THE LOD FOR GRAPHICAL PURPOSES ONLY, AND WILL BE INSTALLED ALONG LOD.
4. SEE SHEETS TS-08 THROUGH TS-11 FOR TREE REMOVAL TABLE, PLANTING SCHEDULES, DETAILS AND NOTES.

LEGEND

- T65 — SIGNIFICANT TREE (24"–29" DBH) w/CRITICAL ROOT ZONE
- T54 — SPECIMEN TREE (≥30" DBH) w/CRITICAL ROOT ZONE
- INVENTORIED TREES 6" DBH OR GREATER
- TREES TO BE REMOVED
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- UPLAND MEADOW ESTAB.
- TREE PROTECTION SIGN
- PROPOSED TREE – PRIVATE PROPERTY
- PROPOSED TREE – ROW
- HEAVY TREE PROTECTION
- PROPOSED DITCH

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

Christina Simini 08-11-2023

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CONTACT:
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240-777-7221

NO.	REVISION	DATE	BY

FOREST CONSERVATION EXEMPTION

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

HERITAGE TRIANGLE TRAIL PHASE I: DR. BIRD ROAD AND NORWOOD ROAD

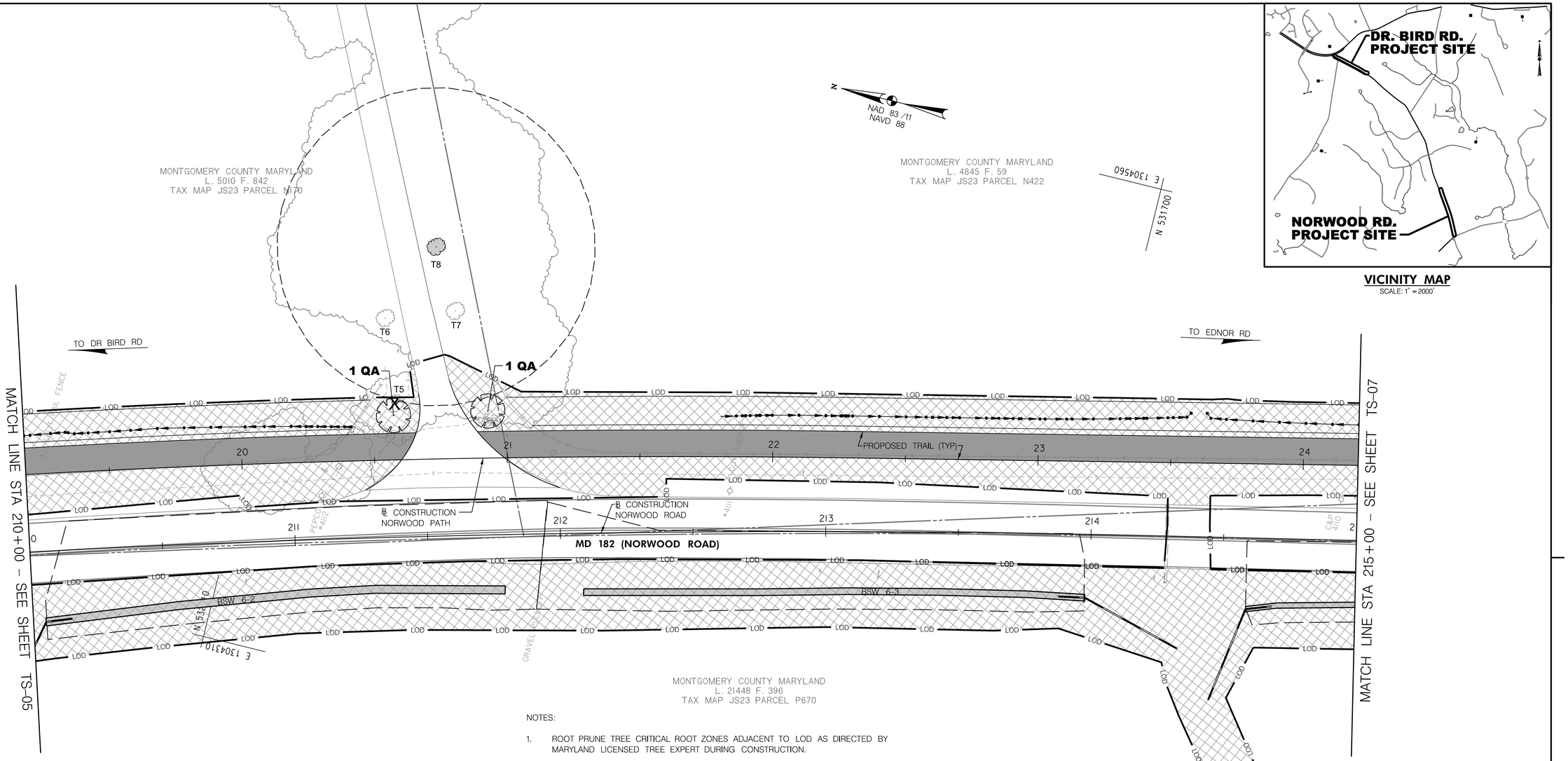
TREE SAVE PLAN

DESIGNED BY CAS
DRAWN BY DEA
CHECKED BY MH
BASE MAP 224NW02, 223NW02, 222NW01

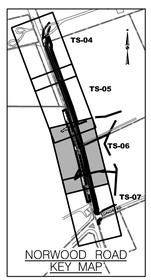
COUNTY MONTGOMERY
ePLAN # MR2022024
SCALE 1"=20'
DATE AUGUST 2023

DRAWING NO. TS-05 OF 11
SHEET NO. 96 OF 103

PLOTTED: 8/10/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pTS-005_DrBird.dgn



VICINITY MAP
SCALE: 1" = 2000'



NORWOOD ROAD
KEY MAP

MONTGOMERY COUNTY MARYLAND
L. 21448 F. 396
TAX MAP JS23 PARCEL P670

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- TREE PROTECTION SIGN
- PROPOSED TREE – PRIVATE PROPERTY
- PROPOSED TREE – ROW
- HEAVY TREE PROTECTION
- PROPOSED DITCH

SCALE: 1" = 20'

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ROCKVILLE, MARYLAND

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DEPARTMENT OF TRANSPORTATION

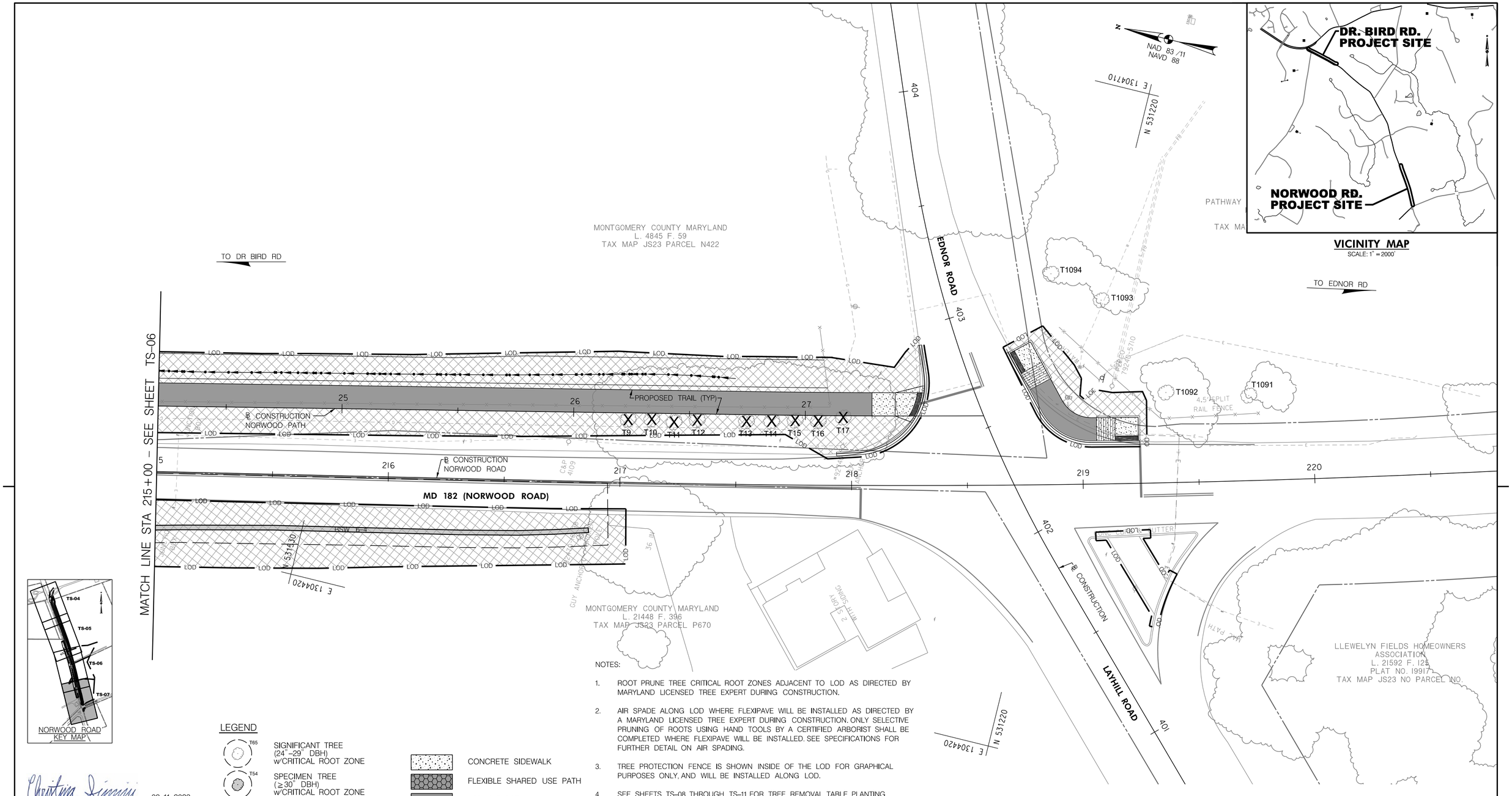
HERITAGE TRIANGLE TRAIL PHASE I: DR. BIRD ROAD AND NORWOOD ROAD

TREE SAVE PLAN

DESIGNED BY CAS
DRAWN BY DEA
CHECKED BY MH
BASE MAP 224NW02, 223NW02, 222NW01
COUNTY MONTGOMERY
ePLAN # MR2022024
SCALE 1"=20'
DATE AUGUST 2023

DRAWING NO. TS-06 OF 11
SHEET NO. 97 OF 103

PLOTTED: 8/10/2023
FILE: \\adc.rkk.com\lib\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pTS-006_DrBird.dgn



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APPROVED

Chief, Division of Transportation Engineering — Date

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

HERITAGE TRIANGLE TRAIL PHASE I: DR. BIRD ROAD AND NORWOOD ROAD

TREE SAVE PLAN

DESIGNED BY	CAS	COUNTY	MONTGOMERY
DRAWN BY	DEA	ePLAN #	MR2022024
CHECKED BY	MH	SCALE	1"=20'
BASE MAP	224NW02, 223NW02, 222NW01	DATE	AUGUST 2023

DRAWING NO. TS-07 OF 11 — SHEET NO. 98 OF 103

PLOTTED: 8/10/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pTS-007_DrBird.dgn

TREE INVENTORY TABLE

Tree Number	Scientific Name	Common Name	DBH	Condition	Removals	Comment
T1	*Prunus serrulata*	Flowering cherry	14	Poor		Slight lean. Trunk wounds
T2	*Prunus serrulata*	Flowering cherry	20	Poor		Sprouts, top pruned off. Lichen
T3	*Juniperus virginiana*	Eastern red cedar	8	Good	X	
T4*	*Juglans nigra*	Black walnut	27	Fair	X	Ivy, vines. Pruned. Broken branches
T5	*Quercus macrocarpa*	Bur Oak	7	Good	X	
T6	*Quercus macrocarpa*	Bur Oak	6	Good		
T7	*Quercus prinus*	Chestnut Oak	6	Good		
T8**	*Liriodendron tulipifera*	Tuliptree	40	Good		Broken branches. Minor vines
T9	*Juniperus virginiana*	Eastern red cedar	22	Fair	X	Pruned top under power lines
T10	*Juniperus virginiana*	Eastern red cedar	12	Fair	X	Pruned top under power lines. Twin, small
T11	*Juniperus virginiana*	Eastern red cedar	15	Fair	X	Pruned top under power lines. Multistem, 9, 12
T12	*Juniperus virginiana*	Eastern red cedar	12	Fair	X	Pruned top under power lines. Cavity forming in base
T13	*Juniperus virginiana*	Eastern red cedar	16	Fair	X	Pruned top under power lines. Cavities forming
T14	*Juniperus virginiana*	Eastern red cedar	18	Fair	X	Pruned top under power lines. Cavities forming, trunk wound.
T15	*Juniperus virginiana*	Eastern red cedar	14	Fair	X	Pruned top under power lines. Twin, 11
T16	*Juniperus virginiana*	Eastern red cedar	15	Fair	X	Pruned top under power lines.
T17	*Juniperus virginiana*	Eastern red cedar	12	Fair	X	Pruned top under power lines. Leaning. Yellow lichen
T18	*Diospyros virginiana*	Common persimmon	12	Fair		Many vines, some in crown.
T19	*Ulmus americana*	American elm	12	Fair		Bent leader. Broken branches. Dead wood
T20	*Diospyros virginiana*	Common persimmon	9	Fair		Vines, broken branches
T21	*Diospyros virginiana*	Common persimmon	11	Fair		Vines, broken branches. Cavity forming. Twin, 10.
T22	*Morus alba*	White mulberry	12	Fair		Heavy vines. Multistem, 6, 6, 7, 5
T23	*Fagus grandifolia*	American beech	9	Fair	X	Pruned for power line. One sided crown
T24	*Quercus rubra*	Northern red oak	6	Fair	X	Leaning crown. Pruned for power line
T25	*Acer rubrum*	Red maple	10	Fair		Pruned for power line. Lean, water sprouts
T26	*Quercus rubra*	Northern red oak	10	Fair		Sparse crown
T27	*Fagus grandifolia*	American beech	9	Fair		Pruned crown for power line. One sided crown
T28	*Quercus rubra*	Northern red oak	11	Fair		One sided. Pruned crown under power line
T29**	*Quercus rubra*	Northern red oak	33	Fair		Pruned. Broken branches
T30	*Quercus alba*	White oak	8	Poor		Leader pruned/broken off. Sprouting
T31	*Fagus grandifolia*	American beech	6	Good		
T32	*Acer rubrum*	Red maple	6	Poor		Broken leader, no crown
T33	*Fagus grandifolia*	American beech	6	Fair	X	Pruned at top for power line
T34	*Fagus grandifolia*	American beech	7	Poor		Pruned top, crown
T35**	*Quercus alba*	White oak	36	Good		Lean, broken branches
T36	*Acer rubrum*	Red maple	8	Fair		One sided crown. Growing into white oak. Lean
T37**	*Quercus alba*	White oak	31	Fair	X	Minor exposed roots, vines, one sided crown. Next to power line
T38	*Quercus alba*	White oak	21	Fair		Damaged bark, dead branches
T39	*Fagus grandifolia*	American beech	22	Fair		Water sprouts, pruned
T40	*Fagus grandifolia*	American beech	22	Fair		Water sprouts, pruned for power line, one sided
T41**	*Quercus alba*	White oak	36	Fair		Dead branches, damaged bark
T42	*Quercus alba*	White oak	7	Fair		Growing into beech, sparse canopy
T43	*Fagus grandifolia*	American beech	12	Fair		Pruned, one sided
T44	*Fagus grandifolia*	American beech	8	Good		Broken branches
T45	*Quercus rubra*	Northern red oak	25	Good		Broken branches
T46	*Quercus alba*	White oak	7	Good		Sparse crown
T47	*Quercus alba*	White oak	9	Fair		Sparse crown, sprouting
T48	*Quercus alba*	White oak	23	Good		
T49	*Liriodendron tulipifera*	Tuliptree	7	Fair		Irregular crown
T50	*Fagus grandifolia*	American beech	6	Good		
T51	*Quercus rubra*	Northern red oak	6	Poor		Broken leader, irregular trunk
T52	*Quercus alba*	White oak	11	Fair		Dead wood, sparse crown
T53	*Acer rubrum*	Red maple	7	Poor		Trunk damage, split imminent
T54**	*Quercus rubra*	Northern red oak	30	Good		Growth on base of trunk
T55	*Quercus rubra*	Northern red oak	23	Fair		Leaning crown, one sided
T56	*Nyssa sylvatica*	Black tupelo	7	Fair		Irregular crown, pruned
T57	*Carya cordiformis*	Bitternut hickory	10	Fair		Sparse crown, broken branches
T58	*Quercus alba*	White oak	6	Fair		Sparse crown, lean
T59	*Prunus serotina*	Black cherry	13	Fair		Irregular trunk, vines, sparse crown
T60	*Quercus alba*	White oak	11	Fair		Sparse crown, one sided
T61	*Carya cordiformis*	Bitternut hickory	8	Good		
T62*	*Quercus alba*	White oak	28	Good		
T63	*Fagus grandifolia*	American beech	10	Good		
T64	*Fagus grandifolia*	American beech	7	Poor		Missing crown
T65*	*Quercus alba*	White oak	24	Fair/Poor		Broken branches, vines, dead wood, one sided
T66	*Fagus grandifolia*	American beech	9	Good		
T67	*Acer rubrum*	Red maple	7	Fair		Sparse crown
T68	*Carya glabra*	Pignut hickory	23	Good		
T69	*Fagus grandifolia*	American beech	7	Good		
T70**	*Quercus alba*	White oak	32	Poor		Trunk wound, broken branches, dead wood, over power line
T71*	*Quercus alba*	White oak	27	Fair		Broken branches, sprouts, dead wood

NOTE: Significant trees denoted with "*". Specimen trees denoted with "**".

Tree Number	Scientific Name	Common Name	DBH	Condition	Removals	Comment
T72	*Acer rubrum*	Red maple	7	Poor		Damaged, broken crown, sprouting, under power line
T73	*Acer rubrum*	Red maple	12	Fair		Trunk wounds, irregular form, lean
T74	*Fagus grandifolia*	American beech	10	Good		
T75	*Fagus grandifolia*	American beech	9	Poor		Newly toppled crown leader
T76	*Carya glabra*	Pignut hickory	7	Good		Same braided bark as other
T77*	*Quercus alba*	White oak	27	Fair		Broken branches, one sided, minor vines
T78	*Quercus alba*	White oak	8	Poor		Water sprouts, no crown, pruned under power line
T79	*Robinia pseudoacacia*	Black locust	8	Poor		Vines, sparse crown, irregular trunk
T80	*Fagus grandifolia*	American beech	7	Good		
T81	*Fagus grandifolia*	American beech	9	Good		
T82	*Fagus grandifolia*	American beech	9	Good		Some vines
T83	*Quercus alba*	White oak	19	Good		Some vines
T84	*Nyssa sylvatica*	Black tupelo	7	Good		
T85	*Nyssa sylvatica*	Black tupelo	8	Good		
T86	*Quercus rubra*	Northern red oak	15	Good		
T87	*Nyssa sylvatica*	Black tupelo	8	Good		
T88	*Fagus grandifolia*	American beech	7	Fair		Sparse canopy, vines
T89	*Acer rubrum*	Red maple	7	Fair		Irregular growth form, lean, trunk wound
T90	*Nyssa sylvatica*	Black tupelo	11	Fair		One sided crown
T91	*Carya glabra*	Pignut hickory	9	Fair		One sided
T92	*Quercus alba*	White oak	8	Fair		Sparse crown, irregular form crown
T93	*Quercus alba*	White oak	9	Fair		Irregular trunk
T94	*Nyssa sylvatica*	Black tupelo	8	Fair		Vines and multiflora
T95	*Carya glabra*	Pignut hickory	9	Fair		Trunk wound, slight lean
T96	*Carya glabra*	Pignut hickory	10	Good		Lean, vines
T97	*Quercus alba*	White oak	9	Fair		Lean, irregular crown, vines
T98**	*Quercus alba*	White oak	37	Fair		Leaning, broken branches, included bark, dead wood
T99**	*Quercus alba*	White oak	34	Fair		Broken branches, lean, included bark, dead wood
T100	*Juniperus virginiana*	Eastern red cedar	7	Good		Multistem, 6, 6, 3
T101*	*Quercus alba*	White oak	28	Fair		Broken branches, included bark, sprouts, dead wood
T102	*Juniperus virginiana*	Eastern red cedar	7	Fair		Sprouts
T103	*Abies balsamea*	Balsam fir	12	Fair		Sparse canopy, pruned for power line
T104**	*Pinus strobus*	Eastern white pine	30	Fair		Pruned for power line
T105*	*Pinus strobus*	Eastern white pine	28	Fair		Vines, pruned for power line
T106*	*Pinus strobus*	Eastern white pine	25	Fair		Vines, lopsided crown, dead wood
T107	*Pinus strobus*	Eastern white pine	22	Fair		Dead wood, competing crown, vines
T108	*Pinus strobus*	Eastern white pine	22	Fair		Dead wood, competing crown, vines
T109*	*Pinus strobus*	Eastern white pine	24	Fair		Dead wood, competing crown, vines
T110	*Acer rubrum*	Red maple	10	Poor	X	Twin, 7, severe vines in canopy, trunk damage
T111	*Cryptomeria japonica*	Japanese-cedar	7	Good		
T112	*Cryptomeria japonica*	Japanese-cedar	7	Good		
T113*	*Pinus strobus*	Eastern white pine	28	Fair	X	Dead wood, broken branches, thin on one side
T114	*Acer negundo*	Boxelder	17	Poor		Dead leader, fungus, lean
T115	*Prunus serotina*	Black cherry	15	Fair		Dead wood, significant lean, vines
T116	*Morus alba*	White mulberry	11	Poor		Half dead, dead wood, lean
T117	*Morus alba*	White mulberry	12	Poor		Half dead, dead wood, lean, vines
T118	*Prunus serotina*	Black cherry	8	Good		
T119**	*Liriodendron tulipifera*	Tuliptree	39	Fair		Cavity in trunk. Broken branches, dead wood, vines
T120	*Prunus serotina*	Black cherry	11	Fair		Significant lean, dead wood, broken leader
T121	*Carya glabra*	Pignut hickory	6	Good		
T122	*Carya glabra*	Pignut hickory	6	Poor		Not leafed out, stressed
T123	*Carya glabra*	Pignut hickory	6	Fair	X	Lean, vines. Twin, 5
T124	*Liriodendron tulipifera*	Tuliptree	10	Good	X	
T125	*Prunus serotina*	Black cherry	6	Poor	X	Trunk wound, small cavity, sparse canopy
T126	*Fraxinus pennsylvanica*	Green ash	10	Very poor	X	Not leafed out, lean
T127	*Carya glabra*	Pignut hickory	21	Good/fair	X	Broken branches, dead wood
T128	*Carya glabra*	Pignut hickory	21	Good	X	
T129	*Prunus serotina*	Black cherry	12	Fair	X	Pruned, lean, dead wood
T130	*Acer rubrum*	Red maple	6	Fair	X	Sparse foliage, dead wood
T131	*Prunus serotina*	Black cherry	11	Fair		Sparse crown
T132	*Carya glabra*	Pignut hickory	14	Fair		Twin, dead twin
T133	*Liriodendron tulipifera*	Tuliptree	20	Good	X	Exposed roots
T134	*Liriodendron tulipifera*	Tuliptree	21	Fair	X	Exposed roots, trunk wound
T135**	*Ulmus americana*	American elm	30	Good/fair		Dead wood, vines
T136**	*Liriodendron tulipifera*	Tuliptree	46	Good		Vines, broken branches
T137	*Carya glabra*	Pignut hickory	6	Poor		Dead wood, very low foliage
T138	*Ulmus americana*	American elm	11	Good	X	Multistem, 6, 9, 9, lean
T139	*Morus alba*	White mulberry	11	Fair	X	Multistem, 6, 6, dead stem. Minor vines, lean, dead branches
T140	*Juglans nigra*	Black walnut	16	Fair	X	Leaning on mulberry. Sparse
T141	*Juniperus sp.*	Cedar species	9	Good	X	Multistem, numerous
T142	*Robinia pseudoacacia*	Black locust	12	Fair	X	Dead wood, broken branches, growing into other tree

NOTE: Significant trees denoted with "*". Specimen trees denoted with "**".

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NO.	REVISION	DATE	BY

FOREST CONSERVATION EXEMPTION

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

HERITAGE TRIANGLE TRAIL PHASE I:
DR. BIRD ROAD AND NORWOOD ROAD

TREE SAVE PLAN NOTES & CHARTS

DESIGNED BY CAS
DRAWN BY DEA
CHECKED BY MH
BASE MAP 224NW02, 223NW02, 222NW01

COUNTY MONTGOMERY
ePLAN # MR2022024
SCALE NONE
DATE AUGUST 2023

DRAWING NO. TS-08 OF 11

SHEET NO. 99 OF 103

PLOTTED: 8102023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pTS-008_DrBird.dgn

TREE INVENTORY TABLE cont'd

Tree Number	Scientific Name	Common Name	DBH	Condition	Removals	Comment
T143	*Ailanthus altissima*	Tree of heaven	6	Fair	X	Minor vines, lean, dead wood
T144	*Morus alba*	White mulberry	8	Fair	X	Irregular growth form, vines, lean
T145	*Morus alba*	White mulberry	9	Fair	X	Dead wood, vines, broken branches
T146	*Morus alba*	White mulberry	8	Fair	X	Dead wood, vines, broken branches
T147	*Robinia pseudoacacia*	Black locust	8	Poor	X	Broken branches, dead wood, not much foliage
T148	*Ulmus americana*	American elm	18	Good	X	Some dead wood
T149*	*Catalpa speciosa*	Northern catalpa	24	Poor	X	Significant lean, trunk growth, missing bark, pruned for power line
T150	*Morus alba*	White mulberry	6	Good		
T151**	*Ulmus americana*	American elm	41	Good		Some dead wood
T152	*Morus alba*	White mulberry	8	Fair		Dead wood, broken branches
T153**	*Ulmus americana*	American elm	31	Fair		Roots growing into sidewalk, not as much foliage as neighbor, some dead wood
T1000	*Acer platanoides*	Norway maple	9	Good/fair		Sparse crown
T1001	*Quercus alba*	White oak	11	Fair/poor		Pruned, dead wood, sparse crown
T1002	*Acer platanoides*	Norway maple	7	Fair/poor		Pruned, sparse crown, dead wood
T1003	*Acer platanoides*	Norway maple	7	Fair		Sparse crown, water sprouts
T1004*	*Quercus falcata*	Southern red oak	24	Good/fair		Dead wood
T1005	*Acer platanoides*	Norway maple	8	Good		
T1006	*Acer platanoides*	Norway maple	7	Fair		Slight lean, pruned, sparse crown
T1007	*Quercus velutina*	Black oak	17	Fair		Pruned, water sprouts, dead wood
T1008	*Acer platanoides*	Norway maple	7	Good/fair		Dead wood
T1009	*Acer platanoides*	Norway maple	6	Good/fair		Water sprouts
T1010	*Acer platanoides*	Norway maple	6	Fair/poor		Water sprouts, sparse crown
T1011	*Carya glabra*	Pignut hickory	12	Fair		Sparse crown
T1012	*Liriodendron tulipifera*	Tuliptree	13	Good		
T1013	*Liriodendron tulipifera*	Tuliptree	16	Good/fair		Dead wood
T1014*	*Liriodendron tulipifera*	Tuliptree	25	Good/fair		Included bark, dead wood
T1015	*Liriodendron tulipifera*	Tuliptree	13	Fair		Water sprouts, sparse crown
T1016	*Liriodendron tulipifera*	Tuliptree	16	Good/fair		One-sided branching
T1017	*Acer platanoides*	Norway maple	10	Fair		Sparse crown
T1018	*Acer platanoides*	Norway maple	6	Good		
T1019	*Liriodendron tulipifera*	Tuliptree	16	Good		
T1021	*Liriodendron tulipifera*	Tuliptree	16	Good		
T1020	*Liriodendron tulipifera*	Tuliptree	9	Good		
T1022	*Liriodendron tulipifera*	Tuliptree	7	Good/fair		Water sprouts
T1023	*Liriodendron tulipifera*	Tuliptree	16	Good/fair		Water sprouts
T1024	*Liriodendron tulipifera*	Tuliptree	17	Good/fair		Sparse crown, slight lean
T1025	*Liriodendron tulipifera*	Tuliptree	18	Good/fair		One-sided branching
T1026	*Liriodendron tulipifera*	Tuliptree	12	Good/fair		Water sprouts
T1027	*Liriodendron tulipifera*	Tuliptree	9	Good/fair		Water sprouts
T1028	*Liriodendron tulipifera*	Tuliptree	19	Good		
T1029	*Ulmus rubra*	Slippery elm	12	Fair		Irregular growth form, water sprouts
T1030	*Acer platanoides*	Norway maple	8	Poor		Dead crown, water sprouts
T1031	*Acer platanoides*	Norway maple	12	Good/fair		Slight lean
T1032	*Nyssa sylvatica*	Black tupelo	10	Good/fair		Water sprouts
T1033	*Acer platanoides*	Norway maple	8	Good/fair		Included bark
T1034	*Acer platanoides*	Norway maple	12	Fair		Lean, sparse crown
T1035	*Acer platanoides*	Norway maple	6	Poor		Missing crown, water sprouts
T1036	*Acer platanoides*	Norway maple	8	Good/fair		Water sprouts
T1037	*Acer platanoides*	Norway maple	12	Fair		Dead wood, sparse crown
T1038	*Acer platanoides*	Norway maple	6	Good/fair		Water sprouts
T1039	*Acer platanoides*	Norway maple	10	Fair		Slight lean, one-sided branching
T1040	*Acer platanoides*	Norway maple	6	Fair		One-sided branching, sparse crown
T1041	*Acer platanoides*	Norway maple	6	Good/fair		Water sprouts
T1042	*Acer platanoides*	Norway maple	7	Poor		Dead crown, water sprouts
T1043	*Liriodendron tulipifera*	Tuliptree	6	Fair/poor		Missing crown, vines, water sprouts
T1044	*Acer platanoides*	Norway maple	7	Fair		Sparse crown, water sprouts
T1045	*Acer platanoides*	Norway maple	8	Fair		Sparse crown, water sprouts
T1046	*Quercus alba*	White oak	8	Poor		Extensive dead wood, dead crown
T1047	*Liriodendron tulipifera*	Tuliptree	14	Good		
T1048	*Acer platanoides*	Norway maple	8	Good/fair		Sparse crown
T1049	*Acer platanoides*	Norway maple	10	Good/fair		Irregular growth form
T1050	*Acer platanoides*	Norway maple	10	Good/fair		Vines
T1051*	*Quercus alba*	White oak	31	Good/fair		Broken branches
T1052	*Acer platanoides*	Norway maple	7	Good/fair		One-sided branching
T1053	*Nyssa sylvatica*	Black tupelo	6	Good/fair		One-sided branching
T1054	*Quercus rubra*	Northern red oak	23	Good/fair		Dead wood
T1055	*Fagus grandifolia*	American beech	9	Good		
T1056	*Fagus grandifolia*	American beech	8	Fair		Water sprouts , dead branches
T1057*	*Quercus alba*	White oak	27	Good/fair		Included bark
T1058	*Liriodendron tulipifera*	Tuliptree	7	Good		
T1059	*Fagus grandifolia*	American beech	8	Good/fair		Water sprouts
T1060	*Liriodendron tulipifera*	Tuliptree	6	Fair/poor		Water sprouts , sparse crown
T1061	*Liriodendron tulipifera*	Tuliptree	8	Good/fair		Irregular growth form
T1062	*Fagus grandifolia*	American beech	9	Good/fair		Water sprouts
T1063	*Fagus grandifolia*	American beech	8	Good		
T1064	*Fagus grandifolia*	American beech	8	Fair		Water sprouts, one-sided branching
T1065	*Nyssa sylvatica*	Black tupelo	8	Good/fair		Water sprouts
T1066	*Nyssa sylvatica*	Black tupelo	9	Good/fair		Irregular growth form
T1067	*Nyssa sylvatica*	Black tupelo	9	Good/fair		Irregular growth form, water sprouts
T1068	*Fagus grandifolia*	American beech	10	Good/fair		Water sprouts
T1069	*Fagus grandifolia*	American beech	12	Good/fair		Water sprouts
T1070	*Quercus rubra*	Northern red oak	19	Good/fair		Irregular growth form
T1071	*Fagus grandifolia*	American beech	12	Fair		Water sprouts, sparse crown
T1072	*Nyssa sylvatica*	Black tupelo	10	Good/fair		Sparse crown
T1073	*Fagus grandifolia*	American beech	18	Good/fair		Water sprouts
T1074	*Nyssa sylvatica*	Black tupelo	8	Good/fair		Irregular growth form, water sprouts
T1075	*Quercus rubra*	Northern red oak	9	Good/fair		Branch dieback, water sprouts
T1076*	*Diospyros virginiana*	Common persimmon	27	Good		
T1077	*Quercus rubra*	Northern red oak	21	Fair		Irregular growth form, branch dieback, sparse crown
T1078	*Fagus grandifolia*	American beech	17	Good/fair		Water sprouts
T1079	*Carya glabra*	Pignut hickory	9	Good/fair		Irregular growth form, branch dieback
T1080	*Carya glabra*	Pignut hickory	16	Good/fair		Water sprouts
T1081*	*Liriodendron tulipifera*	Tuliptree	24	Fair		Extensive vines into canopy, included bark
T1082	*Quercus alba*	White oak	21	Good/fair		Vines, branch dieback
T1083	*Pinus strobus*	White pine	13	Good		
T1084	*Pinus strobus*	White pine	22	Good		
T1085	*Juniperus virginiana*	Eastern red cedar	11	Good/fair		Dead wood
T1086	*Juniperus virginiana*	Eastern red cedar	10	Good/fair		Dead wood
T1087	*Pinus strobus*	White pine	20	Good/fair		Dead wood
T1088*	*Pinus strobus*	White pine	25	Good/fair		Dead wood
T1089**	*Quercus alba*	White oak	44	Good/fair		Dead wood, minor vines
T1090**	*Quercus alba*	White oak	52	Good/fair		Broken branches, minor vines
T1091	*Pyrus calleryana*	Bradford pear	11	Good/fair		Included bark, minor trunk wound, exposed roots
T1092	*Pyrus calleryana*	Bradford pear	10	Fair		Multistem (10, 9, 8, 5), included bark, water sprouts
T1093	*Pyrus calleryana*	Bradford pear	9	Fair		Twin (9, 8), damaged roots, interfering branches
T1094	*Pyrus calleryana*	Bradford pear	14	Fair		Minor trunk cavity, damaged roots, interfering branches
T1095	*Morus alba*	White mulberry	8	Poor		Extensive dead wood, lean, vines
T1096	*Juglans nigra*	Black walnut	11	Fair		Extensive vines into crown
T1097	*Juglans nigra*	Black walnut	15	Fair		Extensive vines into crown
T1098	*Juglans nigra*	Black walnut	6	Fair/poor		Extensive vines into crown

NOTE: Significant trees denoted with "*". Specimen trees denoted with "**".

TREE CONDITION ASESSMENT GUIDELINES:

EXCELLENT healthy tree with exceptional growth form; no visible defects; well-formed crown; few minor dead branches acceptable; this tree condition is rare.

GOOD healthy tree; very minor defects/decay acceptable with callous forming/complete; well-formed crown; minor lean and/or few minor/major dead branches acceptable; vines may be growing along trunk but not present within crown.

FAIR health questionable/stress evident; structurally sound tree; defects present that do not affect structural integrity; moderate lean; minor/major dead branches may be present; crown not broken out but not necessarily well formed or even; vines may be growing along trunk and within crown.

Ex. Fair tree could be experiencing insect damage or exhibit a growth form that makes it very susceptible to wind damage in an open setting.

POOR significant health problems; may be structurally unsound; may be dead or dying; may contain significant decay; may have broken or missing top/crown; may have heavy lean; vines may be significantly affecting tree health.

Note: These guidelines were developed in-house based on the professional judgment of our Certified Arborists and other senior environmental staff.

Christina Simini 08-11-2023

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FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pTS-009_DrBird.dgn

INSPECTIONS

All field inspections must be requested by the applicant.

Field Inspections must be conducted as follows:

Plans without Planting Requirements

1. After the limits of disturbance have been staked and flagged, but before any clearing or grading begins.
2. After necessary stress reduction measures have been completed and protection measures have been installed, but before any clearing and grading begin and before release of the building permit.
3. After completion of all construction activities, but before removal of tree protection fencing, to determine the level of compliance with the provision of the forest conservation.

Additional Requirements for Plans with Planting Requirements

4. Before the start of any required reforestation and afforestation planting.
5. After the required reforestation and afforestation planting has been completed to verify that the planting is acceptable and prior to the start the maintenance period.
6. 2 years after reforestation and afforestation have been completed, to determine survival and assess necessary maintenance activities for the remaining duration of the maintenance and management period.
7. At the end of the maintenance period to determine the level of compliance with the provisions of the planting plan, and if appropriate, release of the performance bond.

STATE RIGHT-OF-WAY TREE IMPACTS AND MITIGATION REQUIREMENTS			
Type	**Impact**	**Mitigation Ratio**	**Required Tree Planting**
Individual Trees	12	1:1	12
Forest (SF)	1,873	1:1 at a density of 100 stems (3/4" DBH or greater) per acre	5
		Total Mitigation Requirement	17

PRIVATE PROPERTY SIGNIFICANT/SPECIMEN TREE IMPACTS AND MITIGATION REQUIREMENTS				
Type	**Impact**	**Mitigation Ratio**	**Total DBH Replacement***	**Tree Mitigation Requirement (2.5" Caliper)**
Individual Tree (DBH)	55	1 inch caliper replaced per every 4 inches removed	14	6

M-NCPPC TREE MITIGATION TABLE						
Impact Type	**DBH Impacts**	**Replacement Ratio**	**DBH Mitigation Requirement**	**DBH On-Site Plantings**	**DBH Fee Payment**	**Total Fee***
TREES 6" DBH OR GREATER	143	1:1	143	4	139	$13,900

* Fee is assessed at $100 per inch DBH removed.

MASTER PLANTING SCHEDULE					
SYMBOL	SCIENTIFIC NAME/COMMON NAME	QUANTITY	SIZE	ROOT	PLACEMENT
	TREES				
CO	CELTIS OCCIDENTALIS / COMMON HACKBERRY	3	1.5" CAL	#15 CONT	15' O.C.
QA	QUERCUS ALBA / WHITE OAK	2	2.0" CAL	#15 CONT	15' O.C.
PO	PLATANUS OCCIDENTALIS / AMERICAN SYCAMORE	10	1.5" CAL	#15 CONT	20' O.C.
NS	NYSSA SYLVATICA / BLACKGUM	7	1.5" CAL	#15 CONT	15' O.C.
CF	CORNUS FLORIDA 'APPALACIAN SPRING' / APPALACHIAN SPRING FLOWERING DOGWOOD	5	1.5" CAL	#15 CONT	15' O.C.
UPLAND MEADOW ESTABLISHMENT*		315 SY	-		
TURFGRASS SOD ESTABLISHMENT*		10,446 SY			
*REFER TO MDOT SHA STANDARD SPECIFICATION 705 FOR TURFGRASS ESTABLISHMENT AND MDOT SHA STANDARD SPECIFICATION 707 FOR UPLAND MEADOW ESTABLISHMENT SEED MIX,					

GENERAL NOTES:

1. TREE DIAMETERS WERE MEASURED AT DBH USING A FORESTRY DIAMETER TAPE. THE INVENTORY IDENTIFIED 252 INDIVIDUAL TREES ≥6 INCH DBH WITHIN THE PROJECT STUDY AREA, INCLUDING 18 SIGNIFICANT TREES (≥24 INCH & <30 INCH DBH) AND 18 SPECIMEN TREES (≥30 INCH DBH OR 75% OF STATE CHAMPIONS). NO STATE OR COUNTY CHAMPION TREES AND TREES WITHIN 75% OF CHAMPION TREE SIZE WERE IDENTIFIED WITHIN THE PROJECT STUDY AREA.
2. ONE FOREST STAND WAS IDENTIFIED WITHIN THE PROJECT STUDY AREA. FS1 CONSISTS OF A MID-SUCCESSIONAL STAGE YELLOW POPLAR-WHITE OAK-NORTHERN RED OAK FOREST ASSOCIATION LOCATED ON THE SOUTHERN SIDE OF DOCTOR BIRD ROAD. THE FOREST STAND IS IN GOOD CONDITION WITH LOW LEVELS OF DOWNED WOODY DEBRIS AND LOW INVASIVE SPECIES COVER. FS1 HAS A HIGH RETENTION VALUE DUE TO OVERALL FOREST CONDITION, LOW INVASIVE COVER, SEVERAL SPECIMEN TREES, AND CONNECTION TO A CONTIGUOUS FOREST OUTSIDE OF THE PROJECT STUDY AREA.
3. TREE SAVE/PLANTING PLANS WERE PREPARED BY CHRISTINA SIMINI, QP, CA, LTE. FIELD DATA COLLECTED BY CHRISTINA SIMINI, MICHELLE HARDEN, AND SARAH FALCONE ON APRIL 20 AND AUGUST 12, 2020.
4. NO WATERWAYS OR WETLANDS WERE IDENTIFIED WITHIN THE PROJECT STUDY AREA DURING FIELD INVESTIGATIONS. THE NWI AND DNR WETLAND INVENTORY MAPPING INDICATE THAT THERE ARE NO WATERWAYS OR WETLANDS WITHIN THE PROJECT STUDY AREA.
5. THE PURPOSE OF THIS PROJECT IS TO CONSTRUCT A NEW SHARED USE PATH ALONG DOCTOR BIRD ROAD AND NORWOOD ROAD AND CONNECT TO AN EXISTING SHARED USE PATH ALONG DOCTOR BIRD ROAD.
6. PROPERTY BOUNDARIES WERE OBTAINED FROM PUBLICLY AVAILABLE MONTGOMERY COUNTY GIS DATA. SOILS DATA WERE OBTAINED FROM THE MONTGOMERY COUNTY SOIL SURVEY. SEE PLAN SHEETS FOR PROPERTY OWNER NAMES, ADDRESSES, TAX MAP INFORMATION, AND PROPERTY BOUNDARIES.
7. THE TOTAL LIMITS OF DISTURBANCE IS 142,212.32 SF, WHICH INCLUDES 2,292.16 SF OF FOREST REMOVAL. THE PROPOSED WORK ALSO INCLUDES THE REMOVAL OF 40 INDIVIDUAL TREES: 10 ON M-NCPPC PARK PROPERTY, 12 ROADSIDE TREES, AND 18 ON PRIVATE PROPERTY.
8. THREE SIGNIFICANT TREES AND ONE SPECIMEN TREE WILL BE REMOVED. OTHER SIGNIFICANT AND SPECIMEN TREES HAVE SOME CRITICAL ROOT ZONE WITHIN THE LOD AND MAY REQUIRE SUPPLEMENTAL TREE PROTECTION MEASURES. ALL WORK ACTIVITIES NEAR THESE TREES SHALL BE SUPERVISED AND DIRECTED BY A MARYLAND LICENSED TREE EXPERT (MD LTE). SPECIMEN AND SIGNIFICANT TREE IMPACTS WILL BE MITIGATED ON-SITE WITH 1" OF REPLACEMENT FOR EVERY 4" OF CALIPER REMOVED.
9. ALL NEWLY PLANTED TREES MUST BE PROTECTED WITH NO. 14 GAUGE WIRE FABRIC AS PER THE DEER PROTECTION FENCING DETAIL ON SHEET TS-11.

Christina Simini 08-11-2023

Maryland DNR Qualified Professional Date
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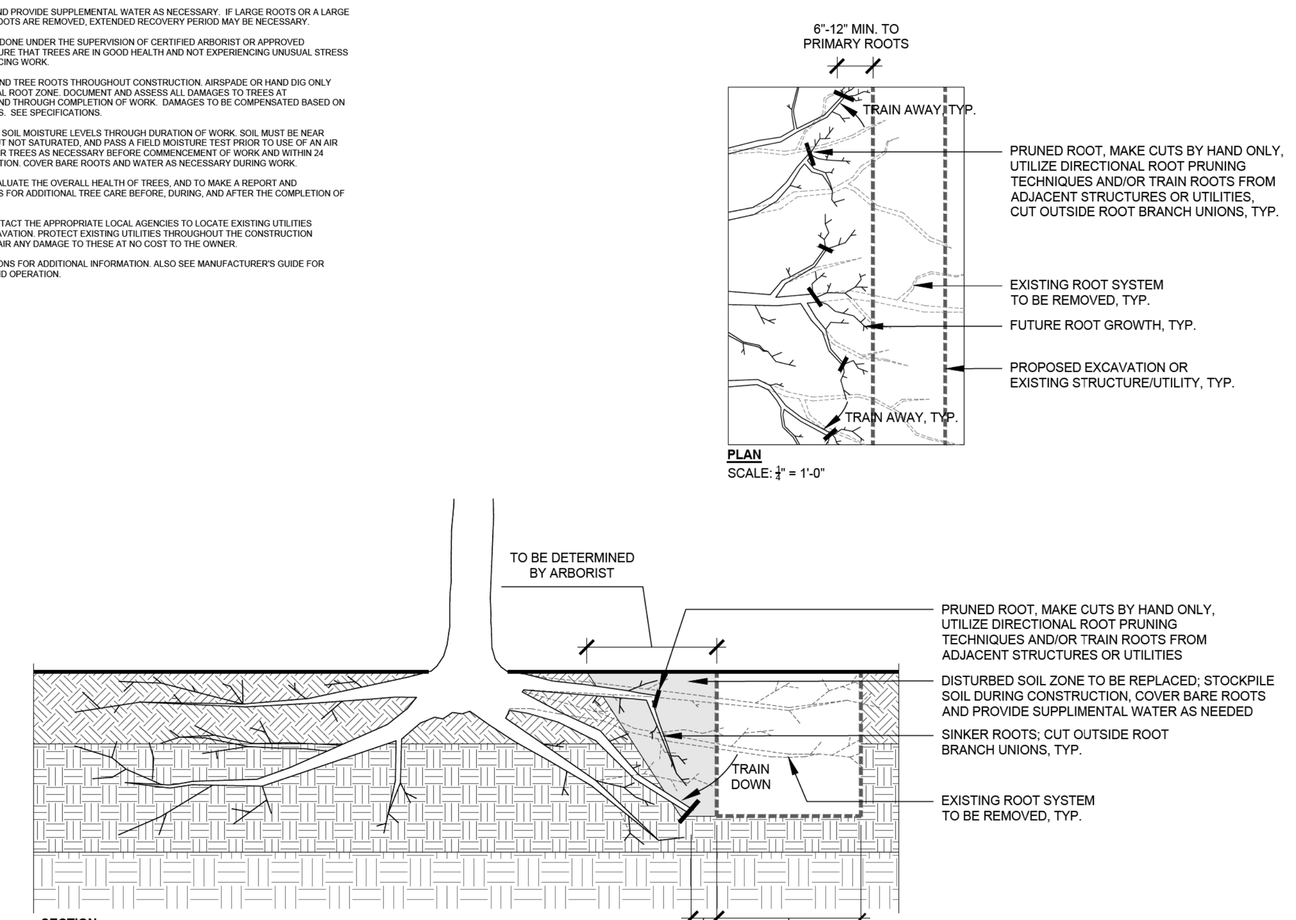


NOTES:
1. HAND PRUNE ROOTS ONLY BY CERTIFIED ARBORIST. DO NOT SHEAR ROOTS.
2. COVER ROOTS AND PROVIDE SUPPLEMENTAL WATER AS NECESSARY. IF LARGE ROOTS OR A LARGE PERCENTAGE OF ROOTS ARE REMOVED, EXTENDED RECOVERY PERIOD MAY BE NECESSARY.
3. ALL WORK TO BE DONE UNDER THE SUPERVISION OF CERTIFIED ARBORIST OR APPROVED CONTRACTOR. ENSURE THAT TREES ARE IN GOOD HEALTH AND NOT EXPERIENCING UNUSUAL STRESS PRIOR TO COMMENCING WORK.
4. PROTECT TREE AND TREE ROOTS THROUGHOUT CONSTRUCTION. AIRSPADE OR HAND DIG ONLY WITHIN THE CRITICAL ROOT ZONE. DOCUMENT AND ASSESS ALL DAMAGES TO TREES AT COMMENCEMENT AND THROUGH COMPLETION OF WORK. DAMAGES TO BE COMPENSATED BASED ON PRE-AGREED TERMS. SEE SPECIFICATIONS.
3. ENSURE PROPER SOIL MOISTURE LEVELS THROUGH DURATION OF WORK. SOIL MUST BE NEAR FIELD CAPACITY, BUT NOT SATURATED, AND PASS A FIELD MOISTURE TEST PRIOR TO USE OF AN AIR SPADE. HAND WATER TREES AS NECESSARY BEFORE COMMENCEMENT OF WORK AND WITHIN 24 HOURS OF COMPLETION. COVER BARE ROOTS AND WATER AS NECESSARY DURING WORK.
5. ARBORIST TO EVALUATE THE OVERALL HEALTH OF TREES, AND TO MAKE A REPORT AND RECOMMENDATIONS FOR ADDITIONAL TREE CARE BEFORE, DURING, AND AFTER THE COMPLETION OF WORK.
6. CALL 811 OR CONTACT THE APPROPRIATE LOCAL AGENCIES TO LOCATE EXISTING UTILITIES PRIOR TO ANY EXCAVATION. PROTECT EXISTING UTILITIES THROUGHOUT THE CONSTRUCTION PROCESS AND REPAIR ANY DAMAGE TO THESE AT NO COST TO THE OWNER.
7. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALSO SEE MANUFACTURER'S GUIDE FOR PROPER SAFETY AND OPERATION.

6 ROOT PRUNING W/ AIRSPADE
1/2" = 1'-0"

Standard Details 27

Sequence of Events for Properties Required to Comply With Forest Conservation Plans, Exemptions from Submitting Forest Conservation Plans, and Tree Save Plans

The property owner is responsible for ensuring all tree protection measures are performed in accordance with the approved final forest conservation plan or tree save plan, and as modified in the field by a Planning Department Forest Conservation Inspector. The measures must meet or exceed the most recent standards published by the American National Standards Institute (ANSI A300).

Pre-Construction

1. An on-site pre-construction meeting is required after the limits of disturbance have been staked and flagged and before any land disturbance.
2. The property owner must arrange for the meeting and following people ~~should~~ must participate at the pre-construction meeting: the property owner or their representative, construction superintendent, International Society of Arboriculture (ISA) certified arborist/Maryland Licensed Tree Expert (representing owner) that will implement the tree protection measures, The Planning Department Forest Conservation Inspector, and Montgomery County Department of Permitting Services (DPS) Sediment Control Inspector. The purpose of this meeting is verify the limits of disturbance and discuss specific tree protection and tree care measures shown on the approved plan. No land disturbance shall begin before tree protection and stress-reduction measures have been implemented and approved by the Planning Department's Forest Conservation Inspector.
   a. Typical tree protection devices include:
      i. Chain link fence (four feet high)
      ii. Super silt fence with wire strung between the support poles (minimum 4 feet high) with high visibility flagging.
      iii. 14 gauge, 2 inch x 4 inch welded wire fencing supported by steel T-bar posts (minimum 4 feet high) with high visibility flagging.
   b. Typical stress reduction measures may include, but are not limited to:
      i. Root pruning with a root cutter or vibratory plow designed for that purpose. Trenchers are not allowed, unless approved by the Forest Conservation Inspector
      ii. Crown Reduction or pruning
      iii. Watering
      iv. Fertilizing
      v. Vertical mulching
      vi. Root aeration systems

   Measures not specified on the Forest Conservation Plan may be required as determined by the Forest Conservation Inspector in coordination with the property owner's arborist.
3. A Maryland Licensed Tree expert must perform, or directly supervise, the implementation of all stress reduction measures. Documentation of the process (including

photographs) may be required by the Forest Conservation Inspector, and will be determined at the pre-construction meeting.

4. Temporary tree protection devices must be installed per the approved Forest Conservation Plan, Exemption Plan, or Tree Save Plan and prior to any land disturbance. The Forest Conservation Inspector, in coordination with the DPS Sediment Control Inspector, may make field adjustments to increase the survivability of trees and forest shown as saved on the approved plan.
5. Tree protection fencing must be installed and maintained by the property owner for the duration of construction project and must not be altered without prior approval from the Forest Conservation Inspector. All construction activity within protected tree and forest areas is prohibited. This includes the following activities:
   a. Parking or driving of equipment, machinery or vehicles of any type.
   b. Storage of any construction materials, equipment, stockpiling, fill, debris, etc.
   c. Dumping of any chemicals (i.e., paint thinner), mortar or concrete remainder, trash, garbage, or debris of any kind.
   d. Felling of trees into a protected area.
   e. Trenching or grading for utilities, irrigation, drainage, etc.
6. Forest and tree protection signs must be installed as required by the Forest Conservation Inspector. The signs must be waterproof and wording provided in both English and Spanish.

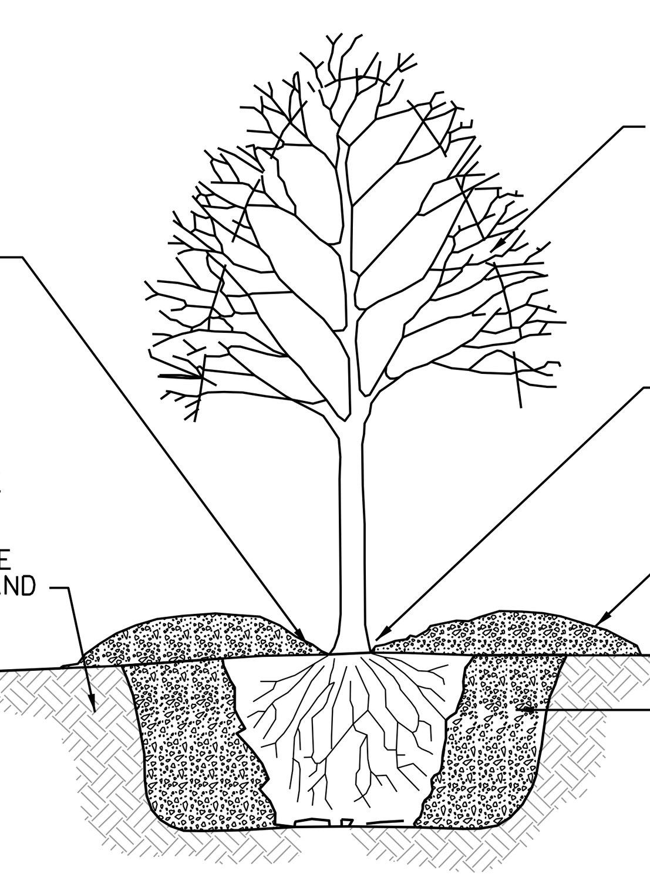
During Construction

7. Periodic inspections will be made by the Forest Conservation Inspector. Corrections and repairs to tree protection devices must be completed within the timeframe given by the Inspector.
8. The property owner must immediately notify the Forest Conservation Inspector of any damage to trees, forests, understory, ground cover, and any other undisturbed areas shown on the approved plan. Remedial actions, and the relative timeframes to restore these areas, will be determined by the Forest Conservation Inspector.

Post-Construction

9. After construction is completed, but before tree protection devices have been removed, the property owner must request a final inspection with the Forest Conservation Inspector. At the final inspection, the Forest Conservation Inspector may require additional corrective measures, which may include:
   a. Removal, and possible replacement, of dead, dying, or hazardous trees
   b. Pruning of dead or declining limbs
   c. Soil aeration
   d. Fertilization
   e. Watering
   f. Wound repair

   g. Clean up of retention areas, including trash removal
10. After the final inspection and completion of all corrective measures the Forest Conservation Inspector will request all temporary tree and forest protection devices be removed from the site. Removal of tree protection devices that also operate for erosion and sediment control must be coordinated with both DPS and the Forest Conservation Inspector and cannot be removed without permission of the Forest Conservation Inspector. No additional grading, sodding, or burial may take place after the tree protection fencing is removed.
11. Long-term protection measures, including permanent signage, must be installed per the approved plan. Installation will occur at the appropriate time during the construction project. Refer to the approved plan drawing for the long-term protection measures to be installed.



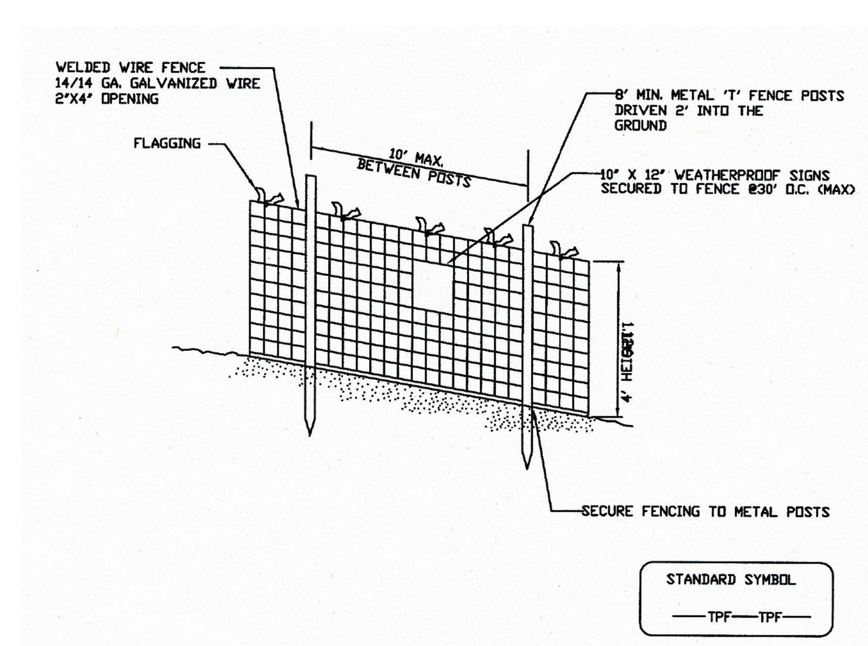
TREE/SHRUB PLANTING - CONTAINER GROWN

NOT TO SCALE

\\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 - Heritage Triangle Trail\CADD\Plans\pTS-011_DrBird.dgn

Tree Protection Fence Detail

Not to scale



NOTES

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

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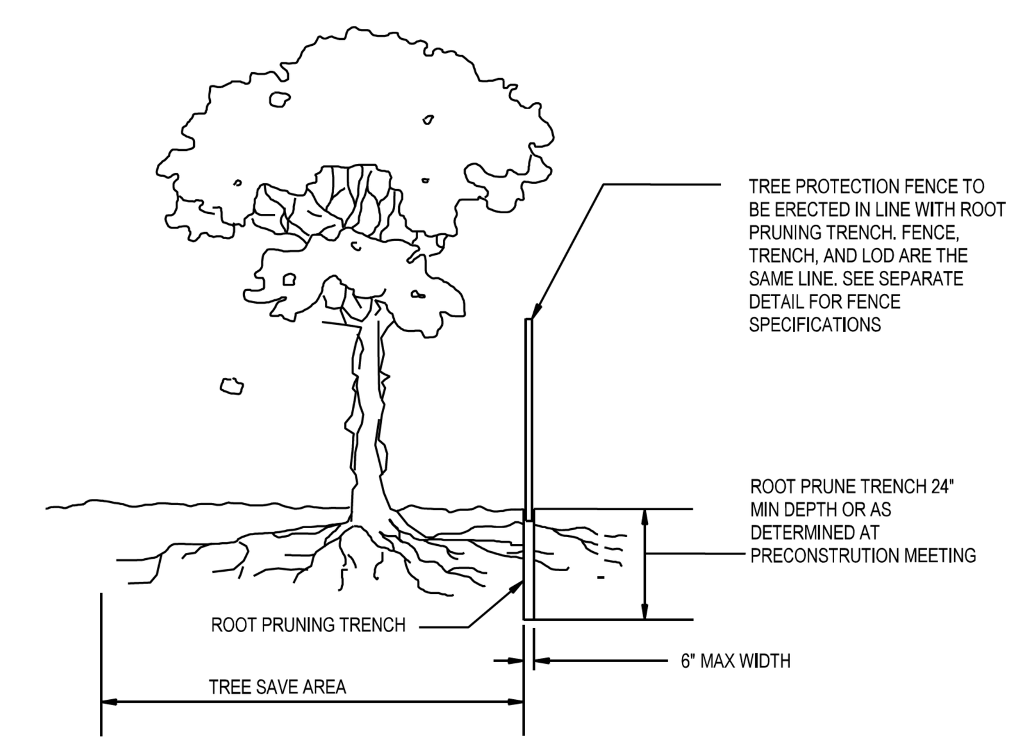
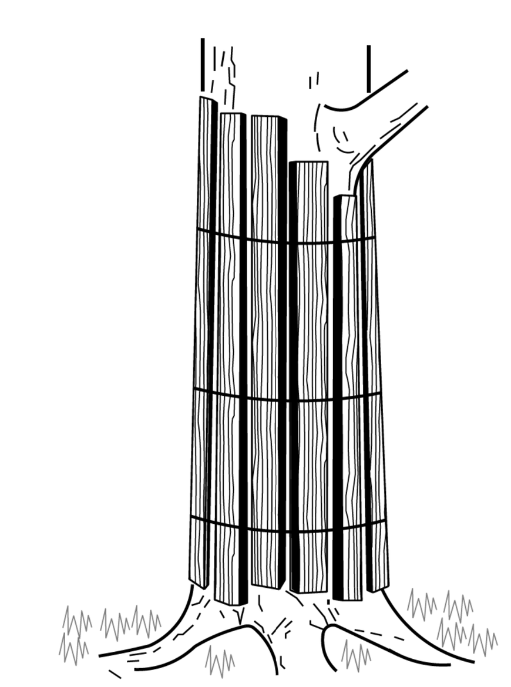


NOTES:
1. RETENTION AREAS WILL BE SET AS PART OF THE REVIEW PROCESS AND PRECONSTRUCTION MEETING.
2. BOUNDARIES OF RETENTION AREAS MUST BE STAKED AT THE PRECONSTRUCTION MEETING AND FLAGGED PRIOR TO TRENCHING.
3. EXACT LOCATION OF TRENCH SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE FOREST CONSERVATION (FC) INPECTOR .
4. TRENCH SHOULD BE IMMEDIATELY BACKFILLED WITH EXCAVATED SOIL OR OTHER ORGANIC SOIL AS SPECIFIED PER PLAN OR BY THE FC INSPECTOR.
5. ROOTS SHALL BE CLEANLY CUT USING VIBRATORY KNIFE OR OTHER ACCEPTABLE EQUIPMENT.
6. ALL PRUNING MUST BE EXECUTED WITH LOD SHOWN ON PLANS OR AS AUTHORIZED IN WRITING BY THE FC INSPECTOR.

ROOT PRUNING DETAIL

NTS



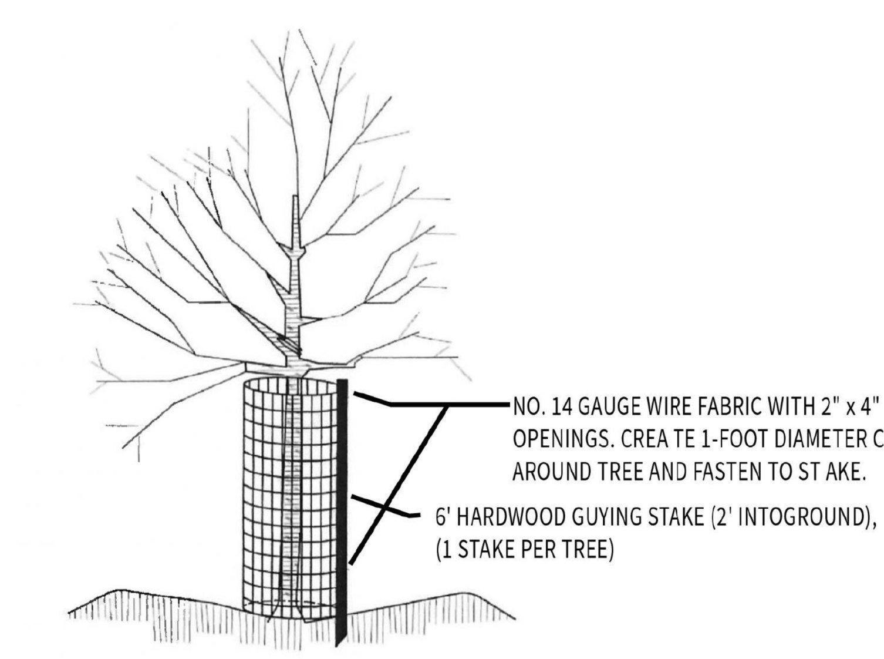
BOARDS OR POLES LASHED WITH ROPE OR WIRE IN AN UPRIGHT POSITION AGAINST THE TREE TRUNK.

HEAVY TREE PROTECTION

NOT TO SCALE

DD STDS\heavy tree protection.dgn

Deer Protection Fencing



Notes:
1. Height of cage shall be 4-feet (min.).
2. Cage shall be fastened to stake with two (min.) 11-inch releasable cable ties (one at top and one 6" (min.) above the ground.
3. Do not damage tree during installation.
4. Substitutions must be approved by Forest Conservation Inspector.
5. Cases to be removed at direction of Forest Conservation Inspector.

Montgomery Planning
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

08-11-2023
Maryland DNR Qualified Professional Date
Name: Christina Simini
Address: 700 East Pratt St., Suite 500
Baltimore, MD 21202
Phone: 410-462-9386
csimini@rkk.com

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100 EDISON PARK DRIVE
GAITHERSBURG, MARYLAND

CONTACT:
DIVISION OF TRANSPORTATION ENGINEERING
240-777-7220
DESIGN SECTION
240-777-7221

NO.	REVISION	DATE	BY

FOREST CONSERVATION EXEMPTION

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

HERITAGE TRIANGLE TRAIL PHASE I:
DR. BIRD ROAD AND NORWOOD ROAD

TREE SAVE PLAN DETAILS

DESIGNED BY	CAS	COUNTY	MONTGOMERY
DRAWN BY	DEA	ePLAN #	MR2022024
CHECKED BY	MH	SCALE	AS SHOWN
BASE MAP	224NW02, 223NW02, 222NW01	DATE	AUGUST 2023

DRAWING NO. TS-11 OF 11 SHEET NO. 102 OF 103

PLOTTED: 8/10/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pTS-011_DrBird.dgn

GRADING TABLE

ROADWAY	STATIONS		EXCAVATION							EMBANKMENT					
			CUT FROM	TOPSOIL		TOTAL	SUITABLE FOR EMBANK.	SHRINK/SWELL FACTOR (%)	AVAIL. FOR EMBANK.	FILL		CAPPING BORROW		SELECT BORROW	
	FROM	TO	XSECTS	CUT	FILL					FROM XSECT	TOT. REQ. BEFORE DENSIFICATION	CAPPING	TOT. REQ. AFTER DENSIFICATION	FROM XSECT	TOT. REQ. AFTER DENSIFICATION
	①	②	③	④	⑤	⑧	⑨	⑩	⑪	⑰	⑱	⑲	⑳	㉑	㉒
	101+80.05	116+16.00	760 CY			760 CY	360 CY	83%	298 CY	550 CY	550 CY				
	200+88.15	219+24.80	1400 CY			1400 CY	1330 CY	83%	1103 CY	530 CY	530 CY				

SUMMARY OF EARTHWORK

EXCAVATION

Ⓐ	TOTAL UNCLASSIFIED EXCAVATION (COL. 8)	2160	C.Y.
Ⓒ	TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT (COL. 11 + COL. 14)	1401	C.Y.
Ⓓ	TOTAL EROSION & SEDIMENT CONTROL EXCAVATION (COL. 15 + COL. 16)	0	C.Y.

EMBANKMENT

Ⓔ	TOTAL COMMON BORROW REQUIRED (COL. 18) (COLS. 17 + 5 + 7)	1080	C.Y.
Ⓕ	TOTAL CAPPING BORROW REQUIRED (COL. 20)	0	C.Y.
Ⓖ	TOTAL SELECT BORROW REQUIRED (COL. 22)	0	C.Y.
Ⓗ	WASTE	321	C.Y.
Ⓘ	COMMON BORROW REQUIRED	0	C.Y.
Ⓙ	BORROW DENSIFIED (20 %)	0	C.Y.
Ⓚ	TOTAL COMMON BORROW REQUIRED	0	C.Y.

PROPOSAL QUANTITIES

UNCLASSIFIED EXCAVATION	2160	C.Y.
COMMON BORROW	0	C.Y.

PLAN NO. MR2022024 | DWG. GR-01

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DEPARTMENT OF TRANSPORTATION
240-777-7263

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

DESIGNED BY _____ DRAWN BY _____ CHECKED BY _____

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION ENGINEERING

HERITAGE TRIANGLE TRAIL PHASE 1
DR. BIRD / NORWOOD ROAD
SHARED USE PATH
GRADING TABLE AND SUMMARY OF EARTHWORK

SCALE N.T.S. DATE AUGUST 2023

DRAWING NO. GR-01 OF 01 | SHEET NO. 103 OF 103

PLOTTED: 8/11/2023
FILE: \\ad.rkk.com\fs\Cloud\Projects\2020\20097_MCDOTransp\Task 27 – Heritage Triangle Trail\CADD\Plans\pGR-S001_HTT.dgn

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