MCPB

Item No.: 12 Date: 09-24-20

Good Hope Road Shared Use Path, Mandatory Referral, MR2020035

Stephen Aldrich, Master Planner, Stephen.Aldrich@montgomeryplanning.org, 301-495-4528

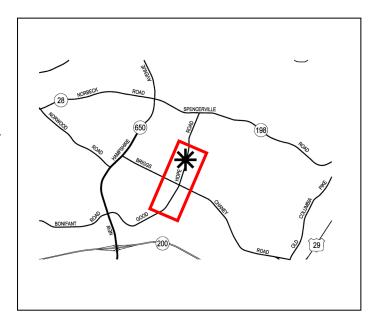
Jason Sartori, Chief, CP&P, <u>Jason.Sartori@montgomeryplanning.org</u>, 301-495-2172

Completed: 09-17-20

Description

Construction of pedestrian, bicycle and safety improvements on Good Hope Road in Silver Spring, Maryland. The project elements are a sidepath along the east side of Good Hope Road between Windmill Drive and Briggs Chaney Road, crosswalk improvements at the intersection of Good Hope Road with Briggs Chaney Road, and a sidepath along the west side of Good Hope Road between Briggs Chaney Road and Rainbow Drive.

- Applicant: Montgomery County Department of Transportation
- Cloverly Master Plan (1997)



Staff Recommendation: Approval to Transmit Comments

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Summary

The Montgomery County Department of Transportation (MCDOT) is proposing to construct pedestrian, bicycle and safety improvements along Good Hope Road in Silver Spring. The project includes the following improvements:

- Construction of an 8-foot wide sidepath with predominantly a five-foot wide buffer on the east side of Good Hope Road between Windmill Drive and Briggs Chaney Road for a total distance of 1,330 linear feet,
- Construction of an 8-foot wide sidepath with predominantly a five-foot wide minimum buffer on the west side of Good Hope Road between Briggs Chaney Road and Rainbow Drive for a total distance of 3,150 linear feet,
- Crosswalk improvements at the intersection of Good Hope Road with Briggs Chaney Road, and
- Construction of a 10-foot wide pedestrian bridge to span a tributary to the Upper Paint Branch near Hopefield Road.

The project location is depicted in Figure 1. The current project, which includes full design and construction cost funding, is listed as CIP Project No. P501902. This project originally was envisioned as a sidewalk project starting in FY19, however starting with FY21, this project was modified into a sidepath project. The current project cost estimate is \$4.73 million, which includes final design cost, utility modification/relocation, easement cost, as well as construction cost. For cost comparison purposes, this equates to an average cost of \$5.4 million/mile.

The 70 percent design plan presentation drawings are provided as Attachment A to this report.

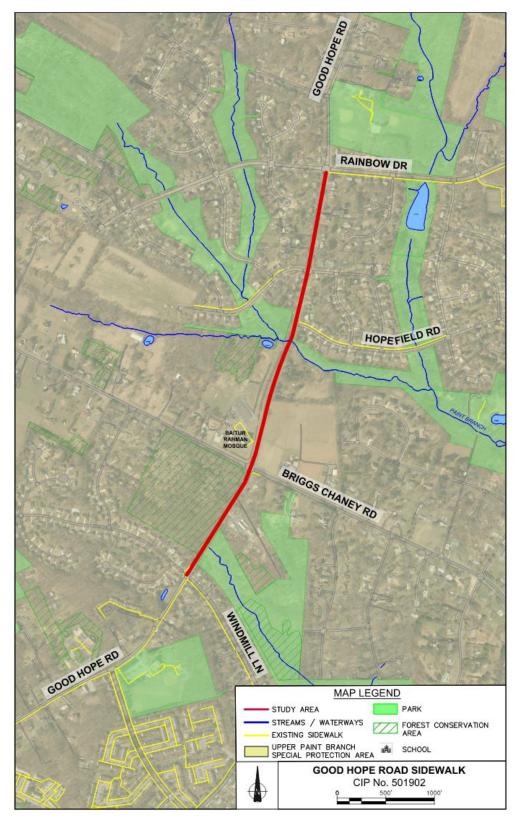


Figure 1: Project Limits and Site Vicinity

Mandatory Referral Review

This proposal for the construction of sidepath improvements is required to undergo the Mandatory Referral review process under the Montgomery County Planning Department's Uniform Standards for Mandatory Referral Review. State law requires all federal, state, and local governments and public utilities to submit proposed projects for a Mandatory Referral review by the Commission. The law requires the Planning Board to review and approve the proposed location, character, grade and extent of any road, park, public way or ground, public (including federal) building or structure, or public utility (whether publicly or privately owned) prior to the project being located, constructed or authorized.

Planning staff acknowledges that the implementation of master plan transportation recommendations is a challenge faced by the applicant in developing design plans to convert desired master plan recommendations into engineering design drawings. The design process up to 35 percent design typically brings clarity with considerably more detail than considered during a master plan, and issues such as environmental impacts, historical impacts, and construction costs may introduce new factors that need to be weighed in developing a final design solution. It is hoped that the Mandatory Referral process aids in this process to develop an optimal or at least an improved design solution.

Recommendations

Staff recommends **approval** to transmit the following comments to the Montgomery County Department of Transportation:

- Construction plans must be submitted to the M-NCPPC Department of Parks for review as part
 of the Park Construction Permit process to ensure that all work is performed in accordance with
 M-NCPPC standard details, specifications, and policies. No work on parkland may occur until an
 approved Park Construction Permit is issued for the project.
- Final easement agreements and any related compensation for the loss of parkland must be agreed to and finalized between MCDOT and M-NCPPC before the issuance of a Park Construction Permit.
- 3. MCDOT will continue to coordinate with M-NCPPC on the design of the required in-stream structure (crossvane) upstream of the sidepath bridge over the Upper Left Fork of Paint Branch to ensure that a stable stream setting is provided.
- 4. Design the grade, cross slope and material of the proposed sidepaths to be level across all driveways.
- 5. While we prefer a 6-foot buffer separation between a sidepath and the curb, the 5- foot buffer proposed is acceptable and consistent with Pedestrian Level of Comfort analyses now in use in the ongoing Montgomery County Pedestrian Master Plan. We do note that the Complete Streets Design Guidelines now under review by the Planning Board would likely recommend a minimum 6-foot-wide buffer on this type of street.
- 6. Provide a straighter crosswalk on Good Hope Road at Colesberg Street by tightening up the curb radii and setting the sidepath back from the road. Per the draft Complete Streets Design Guidelines, at right angle intersections, the default curb radius should be 15 feet and at the intersection of local streets, the curb radius should be 10 feet.

7. Provide curb ramps and a crosswalk across Good Hope Road at Hopefield Road to connect to an existing sidewalk along the north side of Hopefield Road.

Proposal

Project Description

The Montgomery County Department of Transportation (MCDOT) is proposing to construct pedestrian, bicycle and safety improvements along Good Hope Road between Windmill Lane and Rainbow Drive. This project was initiated by MCDOT based on community concerns about the overall safety of the roadway, especially as it relates to pedestrians.

A project location map showing the regional context and other transportation design projects is provided in Figure 2. It is worth noting the proximity of the Baitur Rahman Mosque as well as two elementary schools, the Briggs Chaney Middle School, and the Good Hope Neighborhood Recreation Center (located at 14715 Good Hope Road) in the project vicinity.



Figure 2: Project Limits - Regional Context

Good Hope Road is classified in the Master Plan of Highways and Transitways (MPOHT) as a two-lane primary residential street between New Hampshire Avenue and Spencerville Road. Currently, Good Hope Road has little to no shoulders and no sidewalks or sidepaths within the project limits. Currently, there is a sidewalk on the east side of Good Hope Road between Cape May Road and Windmill Lane to the south. On the north end of the project, Rainbow Drive has a sidewalk on the south side of the street in both directions off Good Hope Road. When completed, this project will significantly improve bike and pedestrian connectivity and travel in this area of Silver Spring.

Project Background

Good Hope Road currently is generally characterized as a two-lane (10-foot wide travel lanes) residential road with little to no shoulders. The posted speed limit along Good Hope Road is 30 miles per hour (mph). The road narrows to 19 feet over the tributary to the Upper Paint Branch (located between Briggs Chaney Road and Hopefield Road).

Sidepath Design on east side of Good Hope Road between Windmill Lane and Briggs Chaney Road

The proposed 8-foot wide sidepath will generally have a 5-foot-wide buffer. Sections where no buffer will be provided include the first 75 feet on the north side of Windmill Lane and the last 180 feet approaching Briggs Chaney Road.

Sidepath Design on west side of Good Hope Road between Briggs Chaney Road and Rainbow Drive

The proposed 8-foot wide sidepath will generally have a 5-foot or wider buffer, particularly in front of the Mosque property. Sections where no buffer will be provided include approximately 100 feet north of Colesberg Street and approximately 50 feet approaching Rainbow Drive.

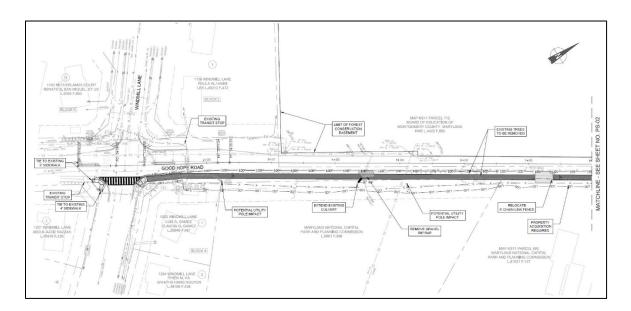


Figure 3 Sidepath Improvements – East Side - Windmill Lane

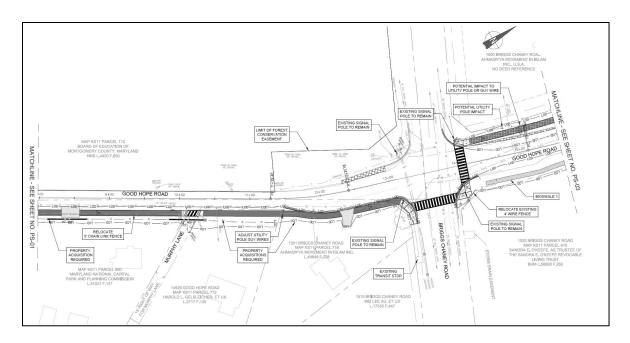


Figure 4 Sidepath Improvements – East Side - Vicinity of Briggs Chaney Road

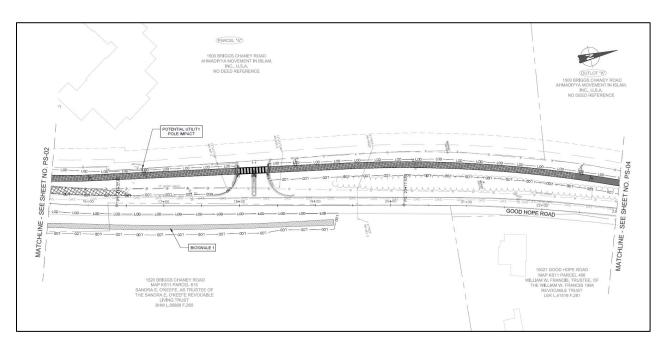


Figure 5 Sidepath Improvements – West Side in front of Mosque Property

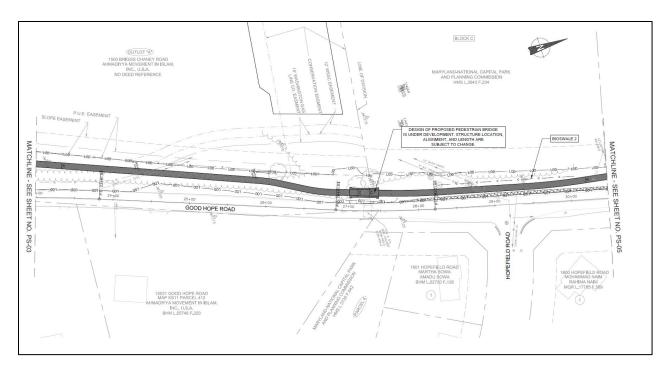


Figure 6 Sidepath Improvements – West Side – Bridge Crossing of Tributary of Upper Paint Branch

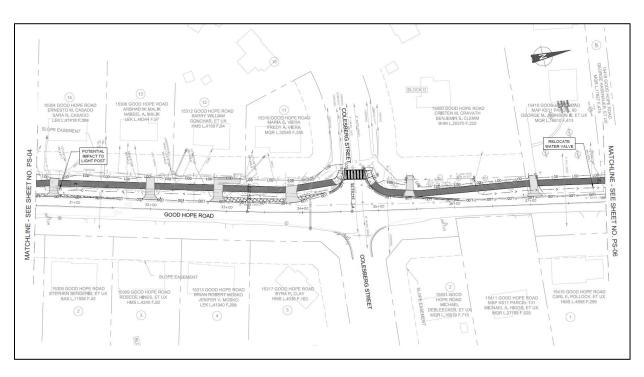


Figure 7 Sidepath Improvements – West Side – Vicinity of Colesberg Street

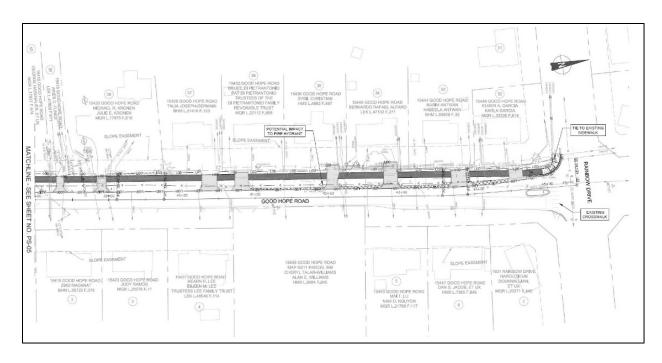


Figure 8 Sidepath Improvements – West Side – Rainbow Drive

Intersection modifications on Good Hope Road at Briggs Chaney Road

Good Hope Road now intersects with Briggs Chaney Road at a four-way, signalized intersection. Currently, all four approaches have crosswalks; however, only the southeast corner has an accessible ramp. With the proposed improvement, as shown in Figure 9, two of the existing crosswalks would be removed (south and west legs), and the other two (east and north legs) would be improved significantly. Improved crosswalk striping would be provided, with pedestrian signals and ADA ramps on the southeast, northeast and northwest corners.

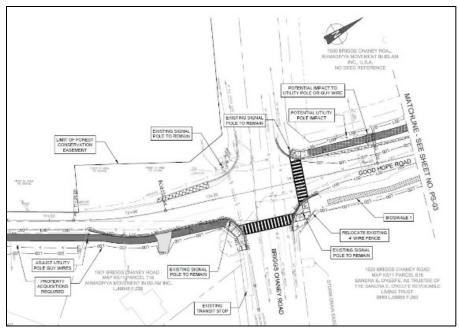


Figure 9: Proposed Intersection Improvement – Good Hope Road at Briggs Chaney Road

Typical Cross Sections – Good Hope Road

Figures 10 through 14 show the proposed typical cross sections.

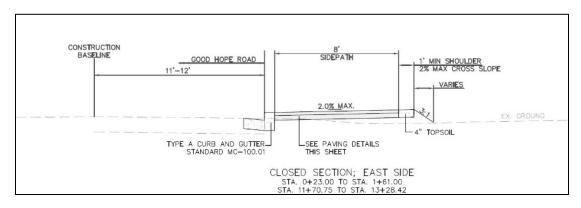


Figure 10: Proposed Typical Cross Section – East Side Intersection Pinch Points

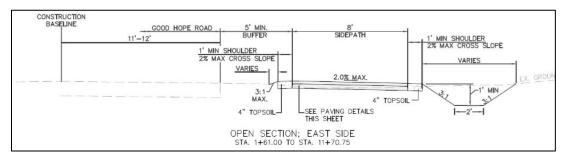


Figure 11: Proposed Typical Cross Section Design – East Side with Buffer

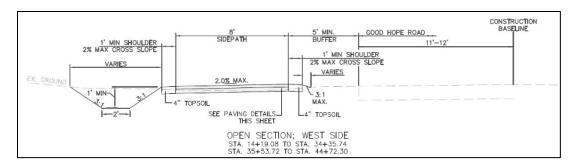


Figure 12: Proposed Typical Cross Section – West Side with Buffer

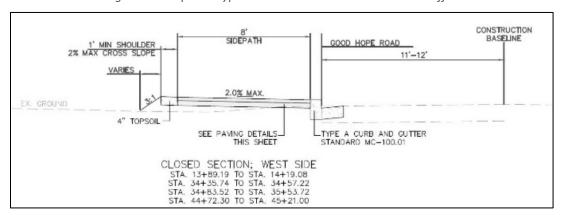


Figure 13: Proposed Typical Cross Section Design – West Side Intersection Pinch Points

Transportation Analysis

Design Elements - Transportation

<u>General Comment</u>: In general, the **minimum** sidepath width required, consistent with the approved Bicycle Master Plan and the ongoing Complete Streets Design Guidelines, is 10 feet; however, this minimum is reduced to 8 feet in Special Protection Areas and areas of environmental concern, particularly through Montgomery Parks land. In the draft Complete Streets Design Guidelines now under public review, 10 feet will be the preferred sidepath width for both agencies; however, the 8-foot minimum width has been retained at MCDOT's request.

Master Plan Conformance – Transportation

The project is in conformance with the 2018 Bicycle Master Plan and the 2018 Master Plan of Highways and Transitways (MPOHT). The 2018 Bicycle Master Plan recommends a sidepath (east side) on Good Hope Road between New Hampshire Avenue and Spencerville Road. The 2018 Master Plan of Highways and Transitways classifies Good Hope Road between New Hampshire Avenue and Spencerville Road as a two-lane primary residential street with a master plan right-of-way of 70 feet.

Historic Resources Analysis

There are no historic resources within the project area.

Environmental Analysis

This project is located within the Upper Paint Branch Special Protection Area and although this is a public project, a Water Quality Plan is encouraged. The Application meets the requirements of Chapter 22A of the Montgomery County Forest Conservation Law and staff has recommended approval of the Water Quality Plan (see Water Quality Plan memo). The Planning Board will decide on this regulatory binding plan in a separate vote from the Mandatory Referral.

Parkland Impacts

The majority of the proposed sidepath construction occurs within the MCDOT Right-of-Way (ROW) and would result in temporary construction impacts on parkland within the Limit of Disturbance (LOD). New construction will not require ROW expansion or additional easements on parkland with the exception of a very narrow, linear sliver of approximately 0.05 acres (2,121 square feet) of perpetual easement requested for a segment of the sidepath along the Upper Paint Branch Stream Valley Park where the existing MCDOT ROW narrows. Areas of parkland impacted are part of the designated Upper Paint Branch Best Natural Area (BNA). BNAs contain the best examples of park natural resources, including features such as large wetlands, high-quality aquatic resources and forests, diverse native vegetation, uniquely spectacular topography, and bedrock formations, and/or unique habitats that are scarce and/or fragile. Parkland in the Upper Paint Branch has been acquired primarily to protect sensitive resources, including a high quality (Class III) fishery with a self-sustaining brown trout population, large areas of forest that provide important habitat for many migratory bird species, three plant species considered rare in the State of Maryland, and several unique archaeological resources.

MCDOT sidepath construction and improvements along Good Hope Road impacts parkland on the east side of Good Hope Road between Windmill Lane and Briggs Chaney Road. In this area, the limit of disturbance on parkland would be approximately 0.46 acres including the 0.05 acres needed for the perpetual easement.

Further north along Good Hope Road, the proposed sidepath is located on the west side of Good Hope Road and will impact another portion of Paint Branch Stream Valley Park, approximately 175 feet south of Hopefield Road. In this area the limit of disturbance on parkland will be approximately 0.04 acres (1,732 square feet); there is no proposed ROW expansion or perpetual easement proposed in this location.

The main areas of parkland impact occur where Good Hope Rd crosses the Upper Gum Springs Tributary and the Upper Left Fork of Paint Branch, necessitating ecological design elements be incorporated into the plan. MCDOT will replace the existing culvert where the sidepath will cross the Upper Gum Springs Tributary. The existing culvert is severely degraded and the upstream side of the culvert is prone to clogging; replacement of the culvert pipe will improve streamflow and a new headwall and pool grading are proposed to reduce susceptibility to clogging. Imbricated rock walls will be built adjacent to the new

endwall to provide slope stabilization. Existing eroded drainage channels that drain into the tributary will be stabilized with vegetated riprap per Parks' Standard Details. Surface water pooling will be prevented in this area by the inclusion of a trench drain adjacent to the trail and endwall. Additionally, a Jellyfish stormwater management filter will be included in this location to treat the stormwater runoff from the sidepath. MCDOT will remove (at Parks request) an abandoned driveway entrance to the recently acquired property (L.51021F.147) adjacent to Murphy Lane.

At the sidepath crossing of the Upper Left Fork of Paint Branch, a new pedestrian bridge will be built on the western side of Good Hope Road that is separate from the existing roadway bridge. MCDOT will include instream stabilization features (per Parks' Standard Details) at the new stream crossing to reduce the impacts of the proposed sidepath bridge. Traditional bridge construction techniques generally reduce the stream width and harden the banks, which accelerate stream flows and the erosive force of the water. The inclusion of an instream structure such as a crossvane at the crossing will center the flow of the stream away from the banks and provide grade control to prevent any further incision of the stream channel.

MCDOT will be required to obtain a Park Construction Permit from Montgomery County Department of Parks prior to commencement of any construction activities on parkland. Plans submitted for Park Construction Permit review must include existing topography, utilities, and identify and locate all trees (with size and species) larger than 6" DBH and greater within 100 feet of the proposed Limit of Disturbance on park property. Mitigation for impacts to Park trees (with a 6" DBH or greater) damaged or removed, shall either be (1) replacement planting on parkland at a rate of one inch to one inch diameter or (2) a monetary per inch caliper basis at the rate of \$100/diameter inch, to be paid to Montgomery Parks prior to completion of construction. Tree impacts will be determined by an M-NCPPC forester prior to construction based on the Final Design. The Department of Parks will require as much on-site replanting of trees as practicable due to the sensitive ecological context of the site. During Park Construction Permit Review, park staff will work with MCDOT to minimize impacts to parkland to the greatest extent possible and avoid all critical resources identified.

Community Outreach and Notification

This application was noticed in accordance with the Uniform Standards for Mandatory Referral Review. Throughout the project design process, proposed concepts were presented to key stakeholders, as well as the community. The preliminary concept (35% design) was presented at a Public Workshop in May 2019. Feedback on the alternatives was received through in-person comments, comment cards, and email comments, and was used in refining the proposed design.

Conclusion

Based on information provided by the applicant and the analysis contained in this report, staff concludes that the proposed Good Hope Road Shared Use Path project can be designed with some modifications to meet transportation standards as specified on pages 4 and 5 of this staff report.

Attachments

A. Proposed Project Plans

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

SHT.NO.	DWG.NO.	SC/SWM NO.	DWG. DESCRIPTION
01	GN-01	01	TITLE SHEET
02	GN-02		ABBREVIATIONS AND SYMBOLS
03	GN-03		GENERAL NOTES
04	TS-01		TYPICAL SECTIONS
05-07	GG-01-03		GEOMETRICS
08-11	DT-01-04		PEDESTRIAN RAMP DETAILS
12-17	PS-01-06		ROADWAY PLANS
XX-XX	DR-01-XX		DRAINAGE PLANS*
18-26	SC-01-09	02-10	EROSION AND SEDIMENT CONTROL
27-32	SWM-01-06	11-16	STORMWATER MANAGEMENT
XX-XX	MT-01-XX		MAINTENANCE OF TRAFFIC*
33-38	SN-01-06		SIGNING AND MARKING
39-47	LS-01-09		LANDSCAPE PLANS
XX-XX	ST-01-XX		STRUCTURE PLANS*
48-70	XS-01-23		CROSS SECTIONS
71-75	XS-24-28		DRIVEWAY CROSS SECTIONS

*SHEETS MARKED WITH AN ASTERISK ARE UNDER DEVELOPMENT

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION MAINTENANCE CERTIFICATION

I HEREBY CERTIFY THAT THE DEPARTMENT OF TRANSPORTATION WILL ASSUME MAINTENANCE RESPONSIBILITIES FOR ALL STORMWATER MANAGEMENT FACILITIES AS LISTED AND SHOWN, HEREON, IN ACCORDANCE WITH THE MEMORANDUM OF UNDERSTANDING BETWEEN THIS DEPARTMENT AND THE DEPARTMENT OF ENVIRONMENTAL PROTECTION DATED SEPTEMBER 1, 1986. IF, FOR ANY REASON, FUTURE IMPROVEMENTS TO THE ROADWAY ARE PLANNED THAT WOULD IMPACT ANY OF THE STORMWATER MANAGEMENT FACILITIES INCLUDED HEREIN, THIS DEPARTMENT WILL NOTIFY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION DURING THE PLANNING OR EARLY DESIGN STAGE FOR SUCH IMPROVEMENTS.

DATE

TIMOTHY CUPPLES, P.E. CHIEF. DIVISION OF TRANSPORTATION ENGINEERING

OWNER'S CERTIFICATION

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

DATE

TIMOTHY CUPPLES, P.E. CHIEF, DIVISION OF TRANSPORTATION ENGINEERING

DESIGN CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATION 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 CRITERIA" DATED AUGUST, 1988.

DATE

MICHAEL ROTHENHEBER, P.E. MD. REGISTRATION NO. 18589

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 1,885 CUBIC YARDS OF EXCAVATION, 670 CUBIC YARDS OF FILL AND THE TOTAL AREA TO BE DISTURBED AS SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE 124,263 SQUARE FEET OR 2.85 ACRES.

DATE

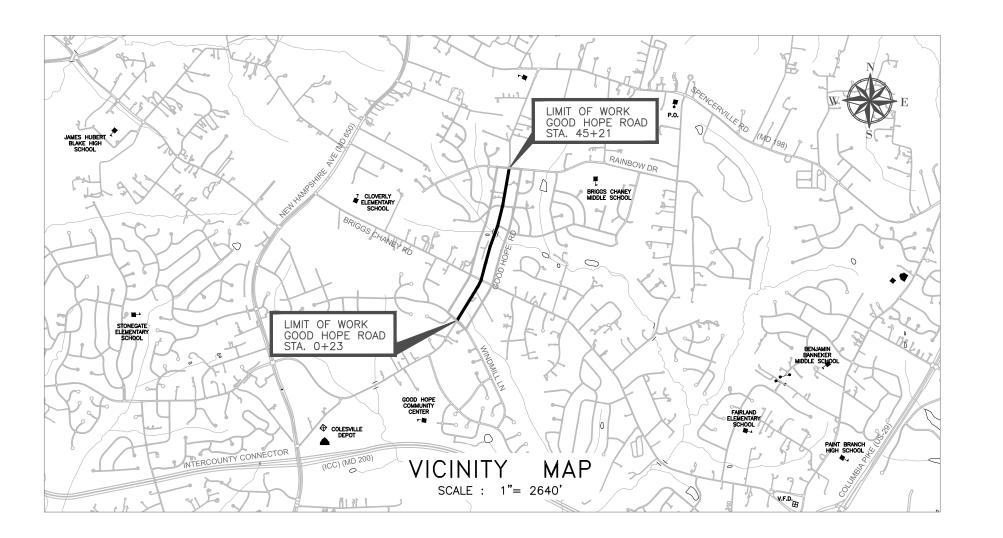
MICHAEL ROTHENHEBER, P.E. MD. REGISTRATION NO. 18589

GOOD HOPE ROAD SIDEWALK

WINDMILL LANE TO RAINBOW DRIVE

C. I. P. PROJECT NO. 501902

70% DESIGN SUBMISSION



REQUIRED FOR THIS PROJECT:

MC-100.01 - COMBINATION CONCRETE CURB AND GUTTER TYPE A

THE FOLLOWING MONTGOMERY COUNTY STANDARDS ARE

MC-110.01 - RESIDENTIAL SIDEWALK MC-301.01 - RESIDENTIAL DRIVEWAY

THE MOST CURRENT VERSION OF THESE STANDARDS CAN BE ACCESSED AT:

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

THE FOLLOWING MARYLAND STATE HIGHWAY DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARDS (CONSTRUCTION AND TEMPORARY TRAFFIC CONTROL) ARE REQUIRED FOR THIS PROJECT:

MD-655.40 - DETECTABLE WARNING SURFACES

FOR ALL SHA STANDARDS REFERRED TO ON THE PLANS, THE CONTRACTOR MUST GO TO THE BOOK OF STANDARDS WHICH WILL HAVE THE MOST CURRENT VERSION. THE BOOK OF STANDARDS CAN BE ACCESSED AT:

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

ALL ITEMS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VERSION OF THE REFERENCED STANDARD AT THE TIME OF CONSTRUCTION.

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

> > **RESTRICTION DATES**

DATE FILED

TYPE OF PERMIT

Floodplain District WATERWAYS/WETLAND(S)

a. Corps of Engineers

Certification MDE Dam Safety

DNR Roadside Tree Care

DPS Roadside Tree Protection Plan

NOTICE OF INTENT

OTHERS (Please List):

JUNE 2014

MDE Water Quality

REQD

Exempt: Yes No X If exempt under Section 55-5 of the Code, please check th applicable exemption category below. **Total Disturbed Area Total Property Area** XXX,XXX square feet

TREE CANOPY REQUIREMENTS TABLE

To be completed by the consultant and placed on the first sheet of the Sediment Control / Stormwater Managemen

Approval Date

Approval Date

124,263 square feet **Shade Trees Required Shade Trees Proposed to be Planted** 72

(Trees Required – Trees Planted) x \$250

Fee in Lieu

Number of Shade Trees Required 6,000 8.000 8.001 12,000 12,001 14,000 14,001 40,000

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 $\div 40,000$) × 15

EXEMPTION CATEGORIES: 55-5(a) any activity that is subject to Article II of aintenance has obtained all required permits:

55-5(h) any stream restoration project if the 55-5(b) any commercial logging or timber person performing the work has obtained all harvesting operation with an approved exemption fr necessary permits: Article II of Chapter 22A; 55-5(i) cutting or clearing any tree to comply with 55-5(f) any activity conducted by the County Park applicable provisions of any federal, state, or local law

overning safety of dams; 55-5(g) routine or emergency maintenance of an OTHER: Specify per Section 55-5 of the Code. existing stormwater management facility, including an existing access road, if the person performing the

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. <u>18589</u> EXPIRATION DATE <u>02/10/202</u>0

DATE

ATTENTION THIS SITE IS WITHIN THE ENVIRONMENTALLY SENSITIVE UPPER PAINT BRANCH SPECIAL PROTECTION AREA TO HELP PROTECT THE DELICATE AQUATIC HABITAT FROM THE IMPACTS OF LAND DEVELOPMENT THESE PLANS MUST BE STRICTLY ADHERED TO IF THERE IS A PROBLEM CALL

LEO GALANKO AT 240-777-6242

AND THE MCDPS STAFF MEMBER WILL ASSIST YOU IN DEVELOPING A SOLUTION BEFORE STREAM IMPACTS OCCUR (MENTION THAT THE SITE IS WITHIN A SPECIAL PROTECTION AREA WHEN YOU CALL) "LET'S WORK TOGETHER TO KEEP IT CLEAN"

ACKNOWLEDGED MONTGOMERY COUNTY DEPT. OF TRANSPORTATIO OWNER/DEVELOPER

REVISION

_	GOMERY COUN	NOTE: MCDPS AI NEGATE THE NEED ACCESS PERMIT.	PPROVAL DOES NOT FOR A <u>MDCPS</u>		
Stormwate	er Management:		Control Technical uirements:	Administrativ	ve Requirements:
		Reviewed	Date	Reviewed	Date
		Neviewed	Date	SEDIMENT COI	NTROL PERMIT NO.
Reviewed	Date	Approved	Date		
Approved	Date				
SM	 I FILE #			MCDPS APPROVAL OF THE TWO YEARS FROM THE ITHE PROJECT HAS NOT	DATE OF APPROVAL IF

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.

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

GAITHERSBURG. MARYLAND RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED Chief, Division of Transportation Engineering

Designed by: ADS Drawn by: ADS Checked by: JJR

GN-01 TITLE SHEET

GOOD HOPE ROAD SIDEWALK

DATE: NOVEMBER 2019 Project No. : <u>501902</u> SHEET ____01___ of ___75___

MICHAEL ROTHENHEBER, P.E. MD. REGISTRATION NO. 18589

MONTGOMERY COUNTY DEPARTMENT NOT FOR CONSTRUCTION OF TRANSPORTATION 100 EDISON PARK DRIVE, 4TH FLOOR GAITHERSBURG, MD 20878

CONTACT: REBECCA PARK, P.E. PROJECT MANAGER DESIGN SECTION DIVISION OF TRANSPORTATION ENGINEERING 240-777-7263

OWNER/ADDRESS:

DRAFT

			ABBREVIATIONS		
ABAN.	Abandoned	LOD	Limit of Disturbance	SSMH	Sewer Manhole
A.A.S.H.T.O.	American Association of State Highway	LOW	Limit of Work	STA.	Station
	Transportation Officials	LP	Low Point	STD.	Standard
APPROX.	Approximate	LT	Left	SO.	Single Opening
ASTM	American Society for Testing and Materials	LVC	Length of Vertical Curve	S.Y.	Square Yards
B or B/L	Baseline	Maint.	Maintenance	SWM	Stormwater Management
3 61 <i>5</i> 72 3IT.	Bituminous	MH	Manhole	SW	Sidewalk
BOA	Beginning of Alignment	MAX.	Maximum	T	
BVCE		MCDPS			Tangent
	Beginning of Vertical Curve Elevation	WCDF3	Montgomery County Department of Permitting Services	T or Tele.	Telephone
BVCS	Beginning of Vertical Curve Station	MOD.	Modified	TBA	To Be Abandoned
BLDG	Building	MIN.	Minimum	TCE	Temporary Construction Easement
ЗОТ.	Bottom	M-NCPPC	Maryland-National Capital Park and Planning Commission	T.C.P.	Terra Cotta Pipe
C.A.	Center of Curve	N	North	TPF	Tree Protection Fence
C or C/L	Centerline	NAD	North American Datum		
C.I.P.	Cast Iron Pipe			T.S.	Top of Structure Elevation
C.M.P.	Corrugated Metal Pipe	NAVD	North American Vertical Datum	TRAV.	Traverse
C.O.	Cleanout	NB	Northbound	TYP.	Typical
СОМВ.	Combination	NE	Northeast	UG	Underground
CONC.	Concrete	NO.	Number	UNK.	Unknown
CONSTR.	Construction	N.T.S. or NTS	Not To Scale	U.P.	Utility Pole
CONSTR. CPI	Curve Point of Intersection	O.C.	On Center	VAR.	Varies
		PVMT.	Pavement	V.C.L.	Vertical Curve Length
C.P.P.	Corrugated Polyethylene Pipe	PED.	Pedestrian	W	Water
CRZ	Critical Root Zone	P.C.	Point of Curvature	W	West
D.B.H.	Diameter Breast Height	P.C.C.	Point of Compound Curve	W.B. or WB	Westbound
DC	Degree of Curve	P/C	Point of Crown	WHC	Water House Connection
DIA.	Diameter	PE PE		WM	Water Meter
D.O.T. or DOT	Department Of Transportation		Perpetual Easement		
D.P.W. or DPW	Department of Public Works	PGA	Point of Grade Application	WSSC	Washington Suburban Sanitary Comm
D.H.V.	Design Hour Volume	P/GE	Profile Grade Elevation	W/O	Without
ows	Detectable Warning Surface	P.G.E.	Profile Ground Elevation	YR	Year
D.I.	Drop Inlet	P.G.L.	Profile Grade Line	IIX	i eai
D.I.	Ductile Iron	P/GL	Profile Ground Line		
0.0.	Double Opening	P/R	Point of Rotation		
		P.I.	Point of Intersection		
<u> </u>	East	P.O.C.	Point on Curve		
Elec.	Electric	P.O.T.	Point on Tangent		
ĒA.	Each	PROP.	Proposed		
Ē.B.	Eastbound	P.S.F.	Pounds per Square Foot		
ΞB	Electric Box				
ΞM	Electric Meter	PT.	Point		
ELEV. or EL	Elevation	P.T.	Point of Tangency		
E.R.C.C.P.	Elliptical Reinforced Cement Concrete Pipe	P.V.C.	Point of Vertical Curve		
ES	End Section	PVC	Polyvinyl Chloride		
EVCE	End of Vertical Curve Elevation	PVI	Point of Vertical Intersection		
EVCS	End of Vertical Curve Station	R	Radius		
EX. or EXIST.	Existing	RET. WALL	Retaining Wall		
T	Foot or Feet	RP	Root Pruning		
		RT	Right		
or FL	Flowline	RW or R/W	Right of Way		
WD	Forward	R.C.P.	Reinforced Cement Pipe		
3	Gas	R.C.C.P.	Reinforced Cement Concrete Pipe		
GM	Gas Meter	SIG.	Signal Pole		
Guy	Guy Wire				
HBX	Handbox	SHA. or S.H.A.	State Highway Administration		
H.D.P.E.	High-Density Polyethylene	\$	South		
H.E.R.C.P.	Horizontal Elliptical Reinforced Concrete Pipe	S or SS or SAN.	,		
HGL	Hydraulic Grade Line	SB	Southbound		
I P	High Point	S.D.	Storm Drain		
HMA	Hot Mix Asphalt	SDP	Shrub Deer Protection		
HT	Height	S.E.	Superelevation		
N	Inch	SF	Silt Fence		
		SFOP	Silt Fence On Pavement		
NV	Invert	SF	Square Feet		
-	Length	SHC	Sewer House Connection		
LANDSC.	Landscaped	SSD	Stopping Sight Distance		
F.	Linear Feet	. 3. 31 /			

	LEG	END	
⊡EB	ELECTRIC BOX	× 434.0	SPOT ELEVATION
(E)	ELECTRIC MANHOLE	****	
E.M.	ELECTRIC METER		WIRE FENCE / CHAIN LINK FENCI
□ HBX	HANDBOX		INDEX CONTOUR
<u>©</u>	CLEAN OUT	——————————————————————————————————————	INTERVAL CONTOUR
■ MB	MAIL BOX	-//////	OVERHEAD WIRES
©	GAS MANHOLE		ABANDONED GAS LINE
GM	GAS METER	E	EXISTING GAS
GV	GAS VALVE	т	EXISTING ELECTRIC
⊠ (w)	WATER MANHOLE	SAN	EXISTING TELEPHONE
_	WATER VALVE	CTV	EXISTING SANITARY SEWER
∳ ₩M	WATER METER	——— FL ———	EXISTING CABLE TV
·	FIRE HYDRANT	FO	EXISTING FIRE LINE
\$3	SANITARY MANHOLE		EXISTING FIBER OPTIC
(S)	STORM DRAIN MANHOLE		EXISTING WATER
			PROPERTY LINE
\bigcirc	TELEPHONE MANHOLE	——— F ———	EXISTING RIGHT OF WAY
■ TEL	TELEPHONE RISER	C	TOE OF FILL
□ ^{TV}	TV (CABLE) RISER	LOD	TOP OF CUT
		200	LIMIT OF DISTURBANCE
MH	UNKNOWN MANHOLE	TCE	TEMPORARY CONSTRUCTION EASEMENT
	SIGN	RSE	REVERTIBLE SLOPE EASEMENT
	TREE	————PE———	PERPETUAL EASEMENT
· COMMITTEE IN THE PROPERTY OF	HEDGE/BUSHES		WOODEN RAILING / WOOD FENC CURB AND GUTTER
∆ JMT00	TRAVERSE POINT		COND AND GOTTEN
600009	DETECTABLE WARNING SURFACE (DWS)		
$\dot{\mathbf{x}}$	EXISTING LIGHT POLE		
-0-	EXISTING UTILITY POLE		
-⊙ ^{©UY}	EXISTING GUY WIRE		
р — П	EXISTING UTILITY POLE WITH PROPOSED LEASE LIGHT		
<u></u>	PROPOSED PEDESTRIAN LIGHT POLE		
-0-	PROPOSED UTILITY POLE		
Ø —	PROPOSED UTILITY POLE WITH PROPOSED LEASE LIGHT		
	PROPOSED SIGNAL POLE		

DRAINAGE ST	TRUCTURE S	STAKEOUT GRATE OR = COMBINATION ROADWAY INLET	LOCATIONS	DRAINAGE BUBBLES	
TYPE COS/COG INLET	FLOWLINE	SHALLOW COG/ = COG SCUPPER	CURB	MANHOLE JUNCTION BOX FIELD CONNECTION	MH 1 JB 1 C
JUNCTION BOX OR MEDIAN			GUTTER		

DRAFT NOT FOR CONSTRUCTION			MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION GAITHERSBURG, MARYLAND	GN-02 ABBREVIATIONS AND SYMBOLS
			RECOMMENDED FOR APPROVAL Chief, Design Section Date APPROVED	GOOD HOPE ROAD SIDEWALK
			Chief, Division of Transportation Engineering Date	DATE: NOVEMBER 2019
	NO. REVISION	DATE BY	Designed by: <u>ADS</u> Drawn by: <u>ADS</u> Checked by: <u>JJR</u>	Project No. : 501902 SHEET 02 of 75

INLET

GENERAL NOTES

- 1. THE SPECIFICATIONS FOR THIS CONTRACT WILL BE THOSE OF THE MARYLAND STATE HIGHWAY ADMINISTRATION DATED JULY 2018, ALL ERRATA AND ADDENDA THERETO, THE MARYLAND STATE HIGHWAY ADMINISTRATION BOOK OF STANDARDS FOR HIGHWAY AND INCIDENTAL STRUCTURES, WASHINGTON SUBURBAN SANITARY COMMISSION (W.S.S.C.) STANDARDS, MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION STANDARDS, AND SOIL CONSERVATION SERVICE POND CONSTRUCTION SPECIFICATIONS FOR MARYLAND.
- 2. FOR CONSTRUCTION, ALL HORIZONTAL SHALL BE BASED ON NAD 83/91, NAVD 88 DATUM.
- 3. TYPES OF STORM DRAIN STRUCTURES REFER TO THE "DESIGN STANDARDS" OF MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION, UNLESS OTHERWISE NOTED.
- 4. WHEN THE DROP ON THE MAIN LINE THROUGH A STORM DRAIN STRUCTURE CAN BE ACCOMMODATED BY AN INVERT SLOPE OF 1.5:1 OR FLATTER, A ROUNDED CHANNEL LINED WITH SEWER BRICK ON EDGE SHALL BE BUILT TO THE CROWN OF THE PIPES. WHEN THE INVERT SLOPES WOULD BE GREATER THAN 1.5:1 A SPECIAL INVERT SHALL BE CONSTRUCTED AS NOTED.
- 5. ALL STORM DRAIN PIPE SHALL BE INSTALLED WITH CLASS "C" BEDDING UNLESS OTHERWISE SPECIFIED.
- 6. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO STORM DRAIN STRUCTURES, WHEN NECESSARY, TO MEET EXISTING CONDITIONS, AS APPROVED BY MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION'S PROJECT INSPECTOR.
- 7. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATIONS AND ELEVATIONS OF THE LINES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SHOWN OR SIX (6) INCHES, WHICHEVER IS LESS, CONTACT MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION'S PROJECT INSPECTOR AND THE APPROPRIATE UTILITY OWNER BEFORE PROCEEDING WITH CONSTRUCTION.
- 8. REPAIRS TO UTILITIES OR PROPERTY DAMAGE AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE OR METHOD OF OPERATION MUST BE MADE AT THE CONTRACTOR'S EXPENSE BEFORE PROCEEDING WITH CONSTRUCTION.
- 9. CALL "MISS UTILITY" AT 1-800-257-7777 FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING EXCAVATION TO DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES.
- 10. CLEARING IS TO BE LIMITED TO THE "LIMIT OF DISTURBANCE" AS SHOWN ON THE PLANS.

 11. ALL GRADING SHALL BE DONE IN SUCH A MANNER AS TO PROVIDE POSITIVE DRAINAGE.
- 12. ALL DISTURBED AREAS WITHIN THE PROJECT LIMITS SHALL BE SEEDED AND MULCHED.
- 13. THE CONTRACTOR SHALL MAINTAIN THE APPROVED ROADSIDE TREE PERMIT FOR ANY MAINTENANCE, TREATMENT, PLANTING, REMOVAL, OR ROOT CUTTING ON TREES WITHIN THE PUBLIC RIGHT OF WAY. PERMIT REQUIREMENTS MAY BE OBTAINED FROM THE DEPARTMENT OF NATURAL RESOURCES, MARYLAND FOREST, PARK AND WILDLIFE SERVICE, TELEPHONE 301-854-6060
- 14. THE LOCATION OF RIGHT—OF—WAY AND EASEMENT LINES SHOWN ON THE PLANS ARE FOR INFORMATION AND GUIDANCE ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF SAID LOCATIONS. PLEASE REFER TO THE APPROPRIATE RIGHT—OF—WAY PLATS.
- 15. ALL UTILITY POLES AND GUY WIRES NOTED FOR RELOCATION SHALL BE PERFORMED BY OTHERS.
- 16. CONTACT THE WASHINGTON SUBURBAN SANITARY COMMISSION SYSTEM MAINTENANCE ENGINEER BEFORE EXCAVATING BENEATH OR IN THE VICINITY OF EXISTING WATER OR SEWER LINES.

 BACKFILL TO BE DONE UNDER SUPERVISION OF W.S.S.C. CALL 301-699-4420
- 17. THE CONTRACTOR SHALL INSTALL PEDESTRIAN DETECTABLE WARNING SURFACES AT ALL SIDEWALK & PEDESTRIAN CROSSINGS. LOCATIONS AS DIRECTED BY THE ENGINEER. THE WARNING SURFACES SHALL BE IN CONFORMANCE WITH ADA REQUIREMENTS AND THE PROJECT SPECIAL PROVISION.
- 18. THE CONTRACTOR SHALL BE AWARE THAT OVERHEAD UTILITY WIRES EXIST WITHIN THE PROJECT SITE. LOCATIONS OF WIRES SHOULD BE NOTED IN FIELD WITH SIGNAGE TO AVOID CONFLICTS DURING CONSTRUCTION.
- 19. CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHERE THE CONSTRUCTION ACTIVITIES AND EXCAVATIONS WILL BE PERFORMED WITHIN 5 FEET OF THE EXISTING WASHINGTON GAS FACILITIES AND PIPELINES. IT IS RECOMMENDED THAT FIELD VERIFICATIONS OF THE EXISTING WASHINGTON GAS FACILITIES SHOULD BE PERFORMED BY THE CONTRACTOR PRIOR TO THE CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY WASHINGTON GAS AT (703) 750-1000 TO SCHEDULE PERSONNEL FOR DAMAGE PREVENTION 10 BUSINESS DAYS PRIOR TO ANY CONSTRUCTION ACTIVITIES. ANY EXPOSURE OF THE EXISTING GAS MAINS DURING THE CONSTRUCTION SHALL BE PERFORMED UNDER SUPERVISION OF ONSITE WASHINGTON GAS PERSONNEL(S). ALL EXPOSED GAS MAINS SHALL BE PROTECTED BY A WGL APPROVED PROTECTIVE SHIELD.
- 20. CONTRACTOR TO PERFORM TEST PITS ON EXISTING WASHINGTON GAS FACILITIES AT THE ONSET OF ROADWAY CONSTRUCTION. INFORMATION GATHERED FROM THE TEST PITS (LOCATION AND ELEVATION OF FACILITY AT EACH TEST PIT) MUST BE PROVIDED TO WASHINGTON GAS PRIOR TO ANY ADDITIONAL CONSTRUCTION ACTIVITIES WITHIN 5 FEET HORIZONTAL CLEARANCE OF EXISTING WASHINGTON GAS FACILITIES. WASHINGTON GAS WILL REVIEW THE INFORMATION PROVIDED TO DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO AVOID CONFLICT WITH THEIR EXISTING FACILITIES.
- 21. FOR ALL LOCATIONS WHERE PROPOSED FACILITIES CROSS OVER/UNDER EXISTING WASHINGTON GAS FACILITIES SMALLER THAN 16-INCHES IN DIAMETER, THE CONTRACTOR MUST MAINTAIN A MINIMUM 12-INCH VERTICAL SEPARATION BETWEEN THE OUTER EDGE OF THE PROPOSED FACILITY AND THE OUTER EDGE OF THE EXISTING WASHINGTON GAS FACILITY.
- 22. FOR ALL LOCATIONS WHERE PROPOSED FACILITIES CROSS OVER/UNDER EXISTING WASHINGTON GAS FACILITIES THAT ARE 16—INCHES OR LARGER IN DIAMETER, THE CONTRACTOR MUST MAINTAIN A MINIMUM 24—INCHVERTICAL SEPARATION BETWEEN THE OUTER EDGE OF THE PROPOSED FACILITY AND THE OUTER EDGE OF THE EXISTING WASHINGTON GAS FACILITY.

GENERAL NOTES FOR WORK ON M-NCPPC PROPERTY

- 1. ALL NOTES SHOWN ON THE DRAWINGS ARE TYPICAL UNLESS OTHERWISE SHOWN OR NOTED.
- 2. A PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED BY THE M-NCPPC CONSTRUCTION MANAGER PRIOR TO START OF ANY CONSTRUCTION RELATED ACTIVITY AT THE PROJECT SITE. CONTACT JAY CHILDS (301-495-2574) TO SCHEDULE.
- 3. NO CLEARING, GRUBBING, OR GRADING SHALL COMMENCE UNTIL THE LIMITS OF DISTURBANCE ARE STAKED IN THE FIELD AND ARE APPROVED BY THE M-NCPPC CONSTRUCTION MANAGER AS WELL AS ANY OTHER APPLICABLE PERMITTING AGENCIES. AFTER THE LIMITS ARE APPROVED, NO DISTURBANCE WILL BE ALLOWED OUTSIDE OF THE APPROVED LIMITS. ANY ITEMS DISTURBED OUTSIDE OF THE APPROVED LIMITS WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- 4. THE ENTIRE LOD SHALL BE FENCED AS DIRECTED BY THE PARK CONSTRUCTION MANAGER. WHERE SILT FENCE, SUPER SILT FENCE, OR TREE PROTECTION FENCE IS NOT REQUIRED, ORANGE BLAZE SAFETY FENCE MAY BE USED.
- 5. FIELD RUN TOPOGRAPHIC SURVEY PROVIDED BY JMT IN NOVEMBER 2015. SURVEY COORDINATES ARE REFERENCED TO THE MARYLAND STATE PLAN COORDINATE SYSTEM NAD 83(2011). ELEVATIONS ARE REFERENCED TO THE NORTHERN AMERICAN VERTICAL DATUM OF 1988 (NAVD88) BOUNDARIES SHOWN ARE DERIVED FROM DEED AND PLAT INFORMATION.
- 6. M-NCPPC RESERVES THE RIGHT TO ADJUST AND MODIFY THE LIMITS OF DISTURBANCE IN THE FIELD TO MINIMIZE IMPACTS OF WORK.
- 7. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING SAFE FACILITY ACCESS THROUGHOUT CONSTRUCTION AND PROVIDE ANY APPROPRIATE DETOURS, TEMPORARY FACILITIES, AND SIGNAGE AS REQUESTED BY THE M-NCPPC CONSTRUCTION MANAGER.
- 8. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON THE DRAWINGS AND REPORT TO M-NCPPC CONSTRUCTION MANAGER ANY ERROR OR INCONSISTENCY WITH THE ACTUAL CIRCUMSTANCES IN THE FIELD BEFORE COMMENCING WORK.
- 9. THE CONTRACTOR SHALL STAKE—OUT THE LOCATION OF FACILITIES AND MEET WITH THE M—NCPPC CONSTRUCTION MANAGER TO REVIEW THE LOCATION. M—NCPPC RESERVES THE RIGHT TO ADJUST THE LOCATIONS AS NECESSARY.
- 10. SITE RESTORATION AND REPAIR/REPLACEMENT OF DAMAGED INFRASTRUCTURE SHALL BE IN ACCORDANCE WITH M-NCPPC DETAILS, STANDARDS, AND SPECIFICATIONS AT THE DIRECTION OF THE PARK INSPECTOR AT NO COST TO M-NCPPC.
- 11. TREE PROTECTION FENCING SHALL BE PER TREE PROTECTION FENCE DETAIL SHOWN ON PLANS. TREE PROTECTION FENCE SHALL BE INSTALLED BY THE CONTRACTOR AND INSPECTED BY M-NCPPC CONSTRUCTION MANAGER PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH M-NCPPC CONSTRUCTION MANAGER AND M-NCPPC URBAN FORESTER PRIOR TO PLACEMENT OF ALL TREE PROTECTION.
- 12. ALL PLANTING SUBSTITUTIONS SHALL BE APPROVED BY M-NCPPC CONSTRUCTION MANAGER.
 PLANT MATERIALS AND LOCATIONS MUST BE INSPECTED BY M-NCPPC PRIOR TO INSTALLATION.
- 13. PROVIDE DEER PROTECTION FENCING PER M-NCPPC SPECIFICATIONS FOR ALL LANDSCAPE AND REFORESTATION TREES AND SHRUBS TO PREVENT DAMAGE FROM DEER. TUBEX SHALL NOT BE USED AS A SUBSTITUTE.
- 14. STAGING AREAS AND ACCESS ROUTES SHALL BE DETERMINED IN FIELD AND APPROVED BY THE M-NCPPC CONSTRUCTION MANAGER TO MINIMIZE IMPACTS.
- 15. M-NCPPC MAY INSPECT CONDITION OF TREES THROUGHOUT CONSTRUCTION AND REQUIRE REPAIR, REMOVAL, AND/OR REPLACEMENT OF ANY DAMAGED TREES AT NO COST TO M-NCPPC.
- 16. CONSTRUCTION MANAGER MAY AUTHORIZE SPECIAL TREE AND TREE ROOT PROTECTION MEASURES OTHER THAN SHOWN ON THESE PLANS DURING CONSTRUCTION. THESE MAY INCLUDE, BUT NOT BE LIMITED TO 12—INCH THICK MULCH LAYER ACCESS BEDDING, MATTING, ADDITIONAL TREE PROTECTION FENCING, AND ADDITIONAL SEDIMENT CONTROLS.
- 17. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR IDENTIFYING THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO START OF THE CONSTRUCTION RELATED WORK AND SHALL COORDINATE THE WORK WITH M-NCPPC CONSTRUCTION MANAGER. THE CONTRACTOR SHALL MAINTAIN PROPER CLEARANCES BETWEEN ALL EXISTING AND PROPOSED UTILITIES AT ALL TIMES AS REQUIRED BY THE UTILITY COMPANIES.
- 18. UTILITIES SHOWN HEREON ARE BASED ON BEST AVAILABLE INFORMATION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OF THIS INFORMATION. ANY COST ASSOCIATED WITH THE REPAIR OR REPLACEMENT OF UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY DAMAGE MADE TO THE UTILITY SHALL BE REPAIRED ON AN EMERGENCY BASIS PER THE LATEST SPECIFICATIONS OF THE CONCERNED UTILITY AND COMPLETED WORK SHALL BE APPROVED BY THE CONCERNED UTILITY. ANY DAMAGE SHALL BE REPORTED AND DOCUMENTED IMMEDIATELY TO THE M-NCPPC CONSTRUCTION MANAGER. REPAIR APPROVALS SHALL BE PROVIDED TO THE M-NCPPC CONSTRUCTION MANAGER.
- 19. DISCREPANCIES, OMISSION, AMBIGUITIES, OR CONFLICTS IN OR AMONG THE CONSTRUCTION DOCUMENTS OR DOUBT ABOUT THEIR MEANING SHALL BE BROUGHT TO THE ATTENTION OF THE M-NCPPC CONSTRUCTION MANAGER FOR DIRECTION BEFORE PROCEEDING WITH WORK. IF CONFLICTS EXIST, THE MOST STRINGENT REQUIREMENT SHALL GOVERN UNLESS OTHERWISE STATED IN WRITING BY THE M-NCPPC CONSTRUCTION MANAGER.
- 20. PRIOR TO VEGETATIVE STABILIZATION, ALL DISTURBED AREAS MUST BE TOPSOILED PER THE MONTGOMERY COUNTY "STANDARDS AND SPECIFICATIONS FOR TOPSOIL." IF ON—SITE MATERIALS DO NOT MEET REQUIREMENTS OF TOPSOIL, COORDINATE WITH M—NCPPC REGARDING TILLING—IN OF CERTIFIED COMPOST TO ON—SITE SOILS IN ORDER TO MEET SPECIFICATIONS.
- 21. PAVEMENT REMOVAL SHALL INCLUDE REMOVAL OF GRAVEL SUBBASE AND SCARIFICATION OF SUBGRADE, UNLESS OTHERWISE DIRECTED BY M-NCPPC.
- 22. THIS SITE IS LOCATED IN THE ANACOSTIA RIVER WATERSHED OF MONTGOMERY COUNTY. RUNOFF FROM THIS SITE DRAINS INTO THE PAINT BRANCH TRIBUTARY.
- 23. NEITHER METAL SOD STAKES NOR TURF REINFORCEMENT MATTING WITH PLASTIC ARE PERMITTED ON PARK LAND.

EARTHWORK SUMMARY

CLASS I EXCAVATION

CUT (FROM CROSS SECTIONS)

1,585 CY

PAVEMENT REMOVAL

TOPSOIL UNDER FILL

CY

ROOT MAT UNDER FILL

CY

PLUS CUT (FROM SWM AREA)

TOTAL CLASS I EXCAVATION

1,585 CY

CLASS IA EXCAVATION (ESTIMATED)

MUCK REMOVAL (IF ANY)

UNDERCUTTING

TOTAL CLASS IA EXCAVATION

- CY

CY

CY

- CY

PROPOSAL QUANTITY

1,885 CY

CLASS 2 EXCAVATION

CUT (FROM CROSS SECTIONS) - CY
TOTAL CLASS 2 EXCAVATION - CY

- CY

EXCAVATION AVAILABLE FOR EMBANKMENT

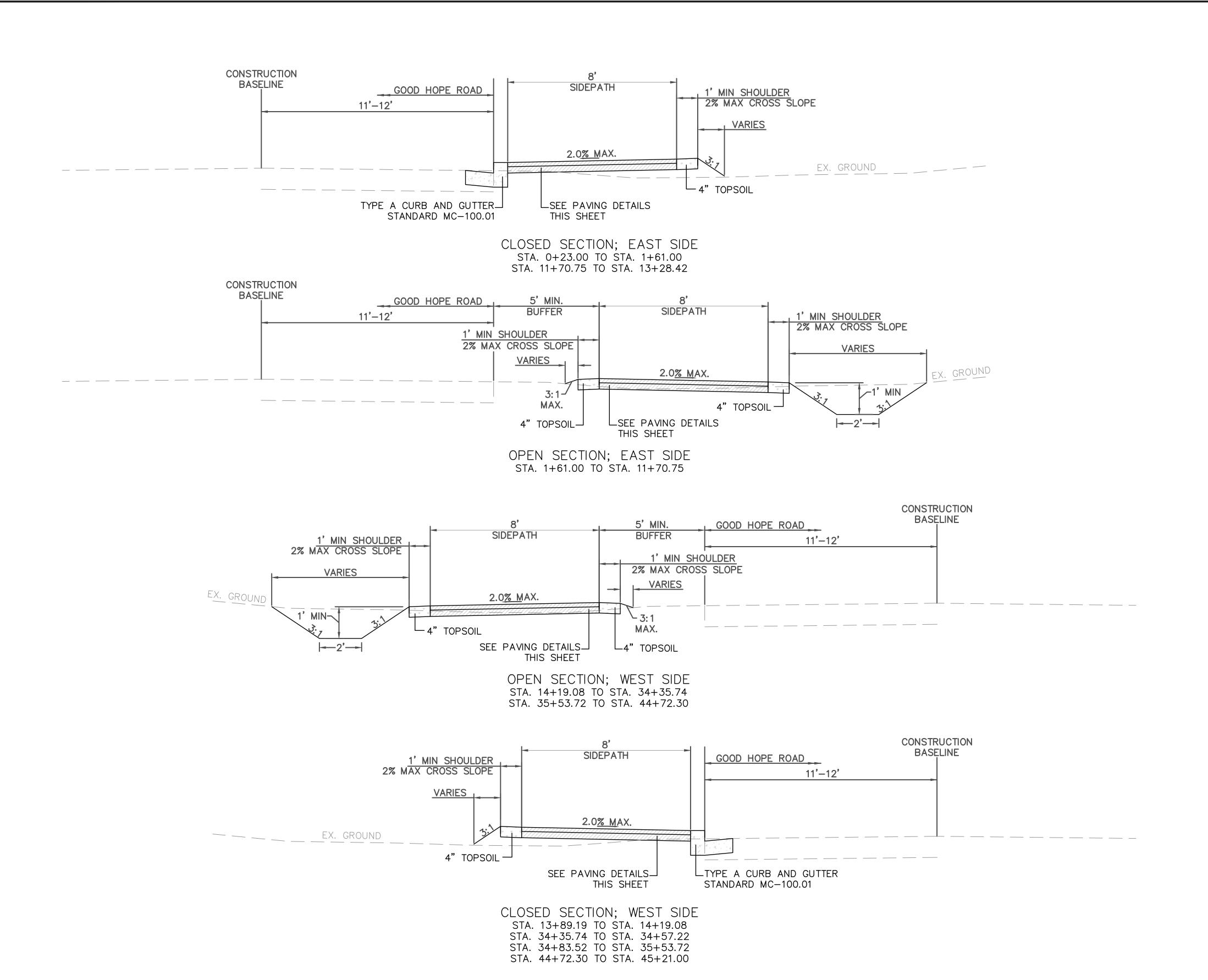
TOTAL CLASS EXCAVATION + CLASS 2 EXCAVATION	1,885	CY
MINUS:		
TOPSOIL (REMOVED IN CUT)	_	CY
TOPSOIL (REMOVED UNDER FILL)	_	CY
ROOT MAT (REMOVED IN CUT)	_	CY
ROOT MAT (REMOVED IN FILL)		CY
CUT ADJUSTED	1,885	CY
CUT DENSIFIED (x 0.83)	1,565	CY
TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT	1,565	CY

EMBANKMENT REQUIRED

FILL (FROM CROSS SECTIONS)	603	CY
REFILL FOR TOPSOIL UNDER FILL	_	CY
REFILL FOR ROOT MAT UNDER FILL	_	CY
FILL (FROM SWM AREA)	_	CY
TOTAL	603	CY
MINUS EXCAVATION AVAILABLE FOR EMBANKMENT	(1,565)	CY
ADJUSTED TOTAL	-962	CY
PLUS DENSIFICATION FACTOR (x 1.20)	-1,155	CY
MINUS SELECT BORROW	_	CY
COMMON BORROW	-1,155	CY
SELECT BORROW	_	CY

-1,155	CY
_	CY
•	<u>-</u>

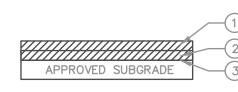
MONTGOMERY COUNTY GN-03DRAFT DEPARTMENT OF TRANSPORTATION NOT FOR CONSTRUCTION GENERAL NOTES GAITHERSBURG. MARYLAND GOOD HOPE ROAD RECOMMENDED FOR APPROVAL SIDEWALK Chief, Design Section APPROVED DATE: NOVEMBER 2019 Chief, Division of Transportation Engineering Project No. : 501902 Designed by: ADS Drawn by: ADS Checked by: JJR SHEET <u>03</u> of <u>75</u> REVISION



APPROVED SUBGRADE

- 1.5" HMA SUPERPAVE 12.5MM FOR SURFACE, PG64S-22, LEVEL-2
- 2.5" HMA SUPERPAVE 19.0MM FOR BASE, PG64S-22, LEVEL-2
- 3) 5" CR-6 GRADED AGGREGATE BASE COURSE
- 4 LIMIT OF CLASS I EXCAVATION

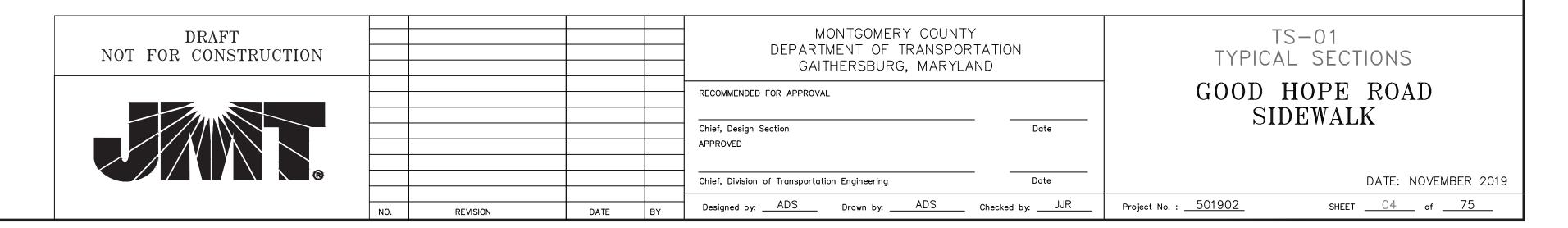
IMPERVIOUS TRAIL PAVEMENT DETAIL

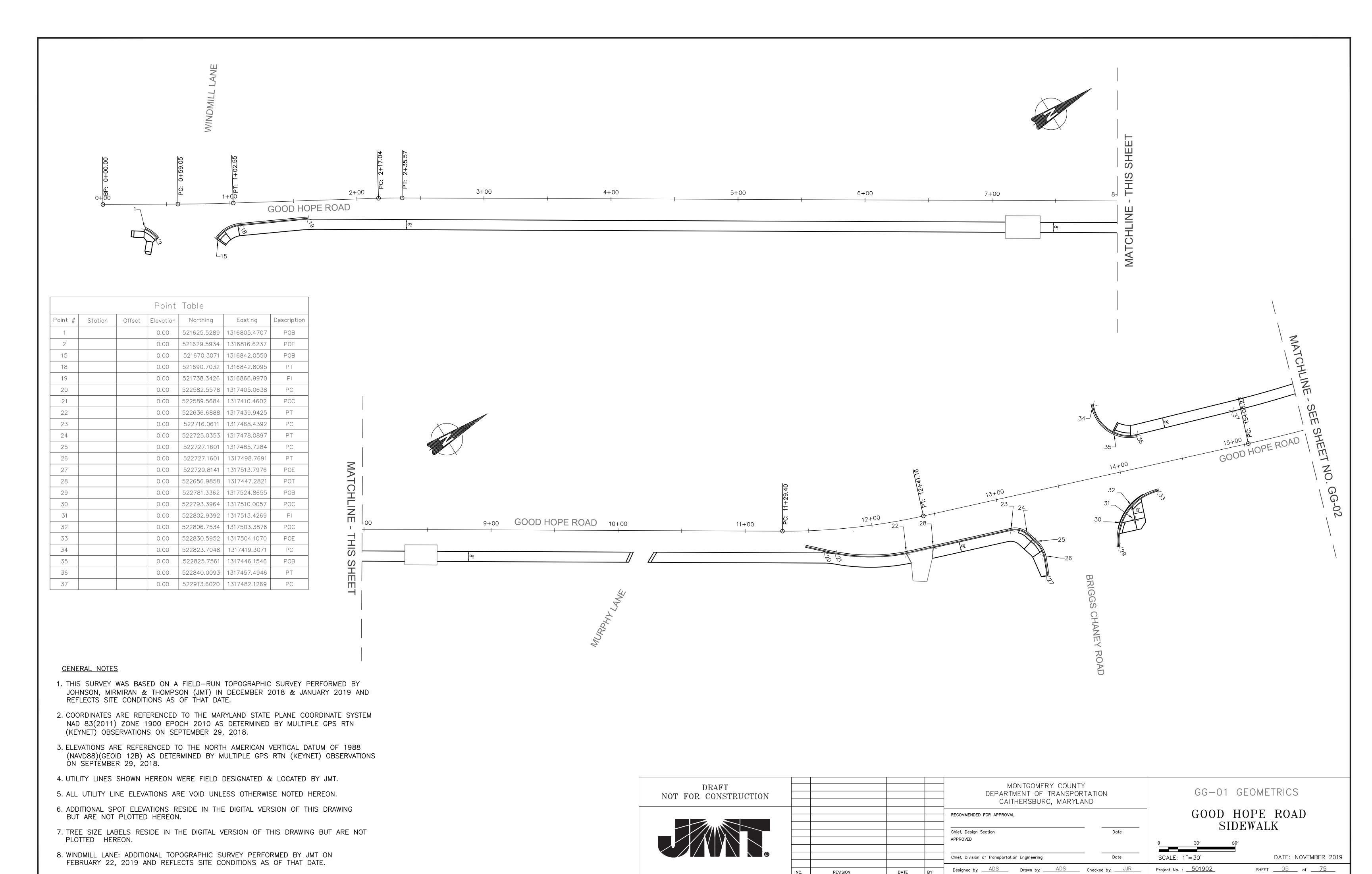


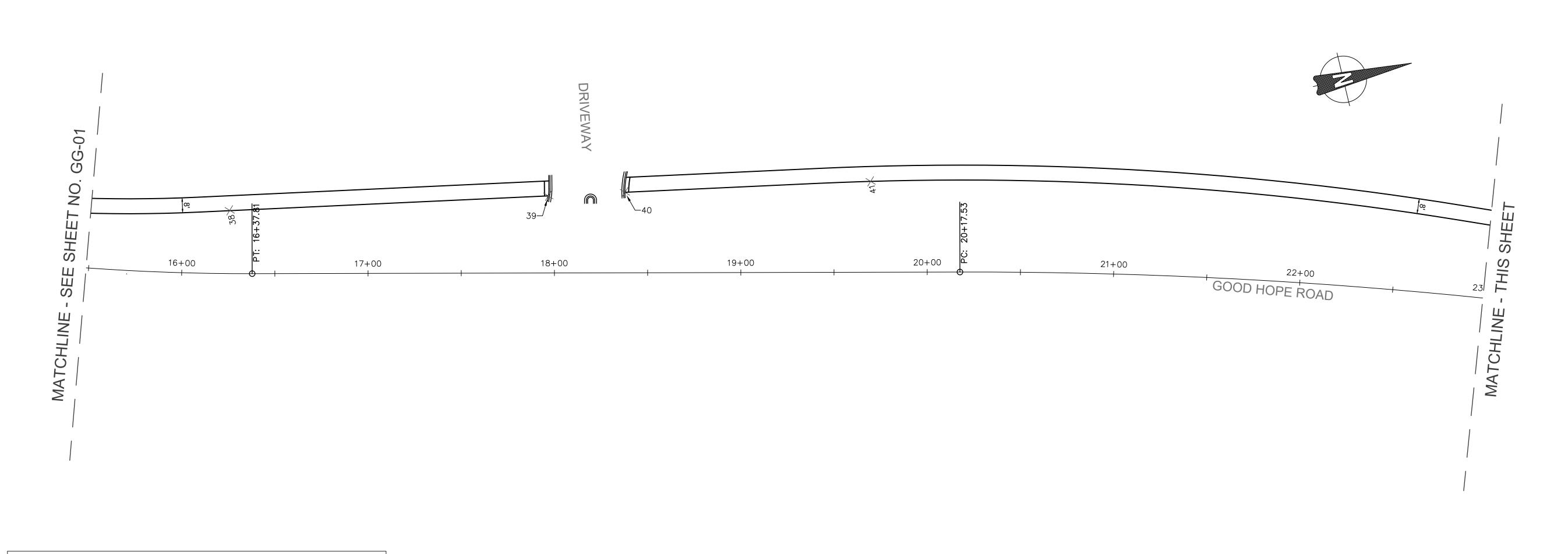
- 1 3" HMA SUPERPAVE 12.5MM FOR SURFACE, PG64S-22, LEVEL 2
- (2) 3" HMA SUPERPAVE 19.0MM FOR BASE, PG64S-22, LEVEL 2
- 3 LIMIT OF CLASS I EXCAVATION

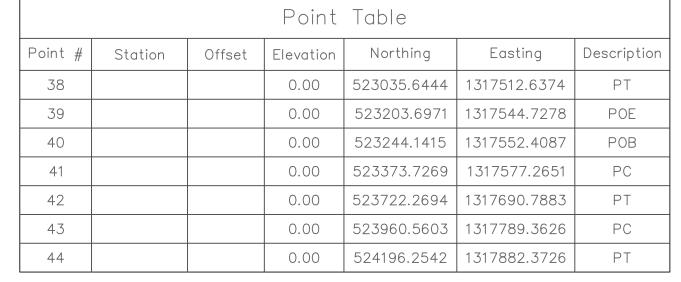
IMPERVIOUS PAVEMENT DETAIL— DRIVEWAYS

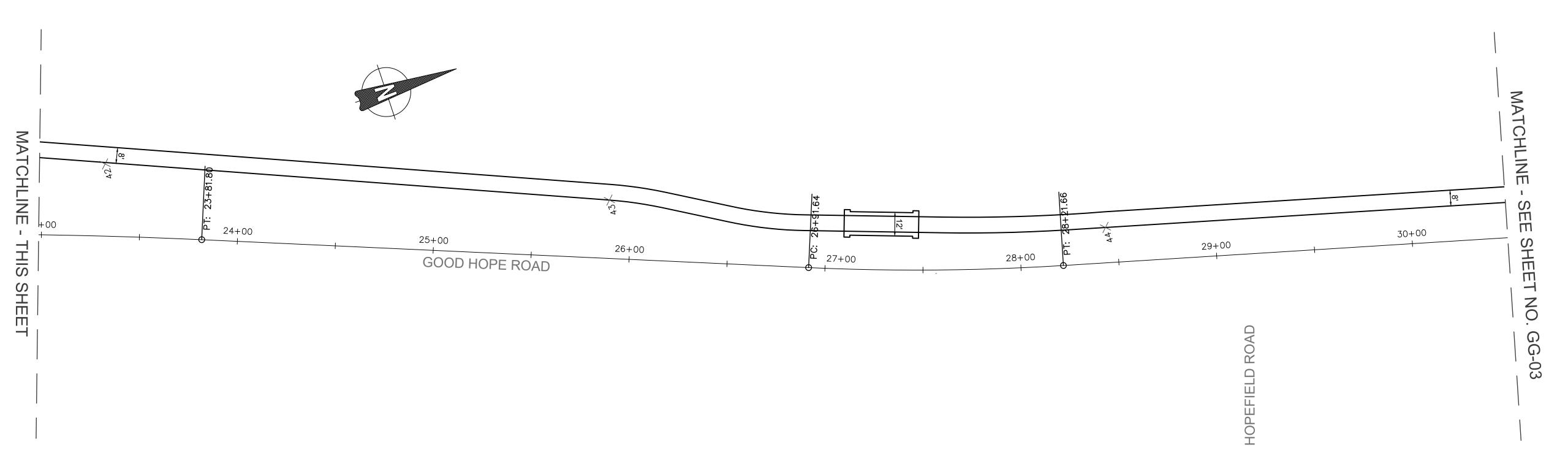
NTS











REVISION

DRAFT
NOT FOR CONSTRUCTION

RECOMMENDED FOR APPROVAL

Chief, Design Section
APPROVED

Chief, Division of Transportation Engineering

Date

Designed by: <u>ADS</u> Drawn by: <u>ADS</u> Checked by: <u>JJR</u>

GG-02 GEOMETRICS

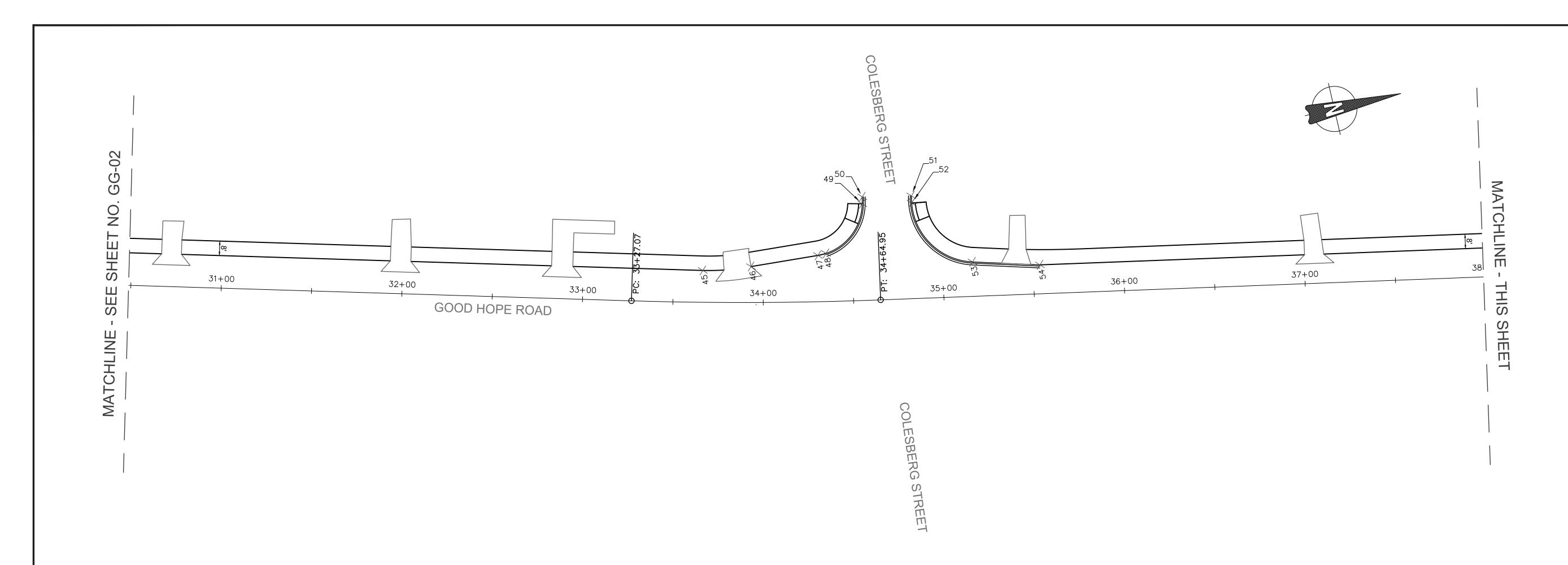
GOOD HOPE ROAD SIDEWALK

0 30' 60'

SCALE: 1"=30' DATE: NOVEMBER 2019

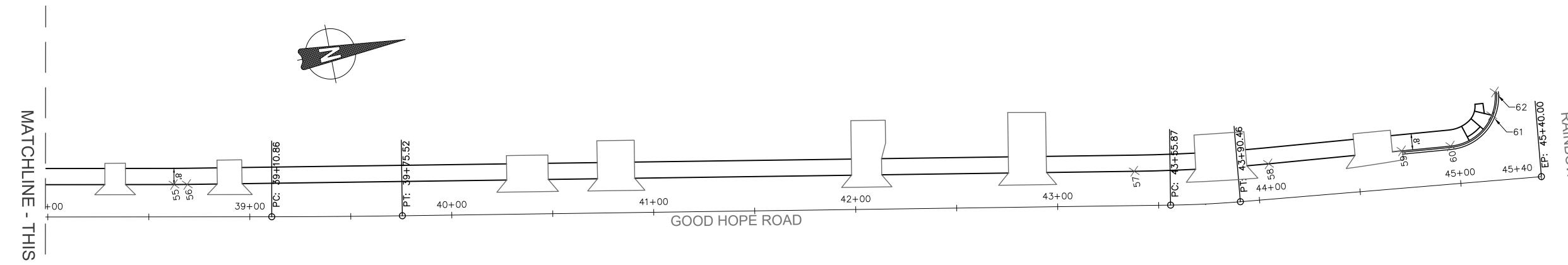
Project No.: 501902 SHEET 06 of 75

FILE NAME: Q:\2013\130605_007_Good_Hope_Road_Sidew\CADD\pGG_Geometrics.dwg LAYOUT NAME: GG-02 PLOTTED: Thursday, October 31, 2019 - 6:51pm USER: Havener



Point #	Station	Offset	Elevation	Northing	Easting	Description
45			0.00	524700.6727	1318015.6498	PC
46			0.00	524727.1227	1318019.5827	PT
47			0.00	524764.5643	1318021.9148	PC
48			0.00	524769.1937	1318021.8369	POC
49			0.00	524794.8769	1317999.6136	PT
50			0.00	524795.7905	1317995.8804	POE
51			0.00	524822.4251	1318001.4834	POB
52			0.00	524821.6296	1318005.4306	POC
53			0.00	524847.1028	1318044.7048	PT
54			0.00	524883.0727	1318054.7087	PI
55			0.00	525186.2473	1318112.8186	PC
56			0.00	525192.7072	1318114.0136	PT
57			0.00	525654.2973	1318196.3136	PC
58			0.00	525720.2907	1318205.2642	PT
59			0.00	525786.3635	1318211.4382	POT
60			0.00	525810.5477	1318213.6980	PC
61			0.00	525833.3425	1318202.5279	POC
62			0.00	525837.0518	1318191.5584	POE

SHEE.



NO.

REVISION

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION GAITHERSBURG, MARYLAND DRAFT NOT FOR CONSTRUCTION RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED Chief, Division of Transportation Engineering

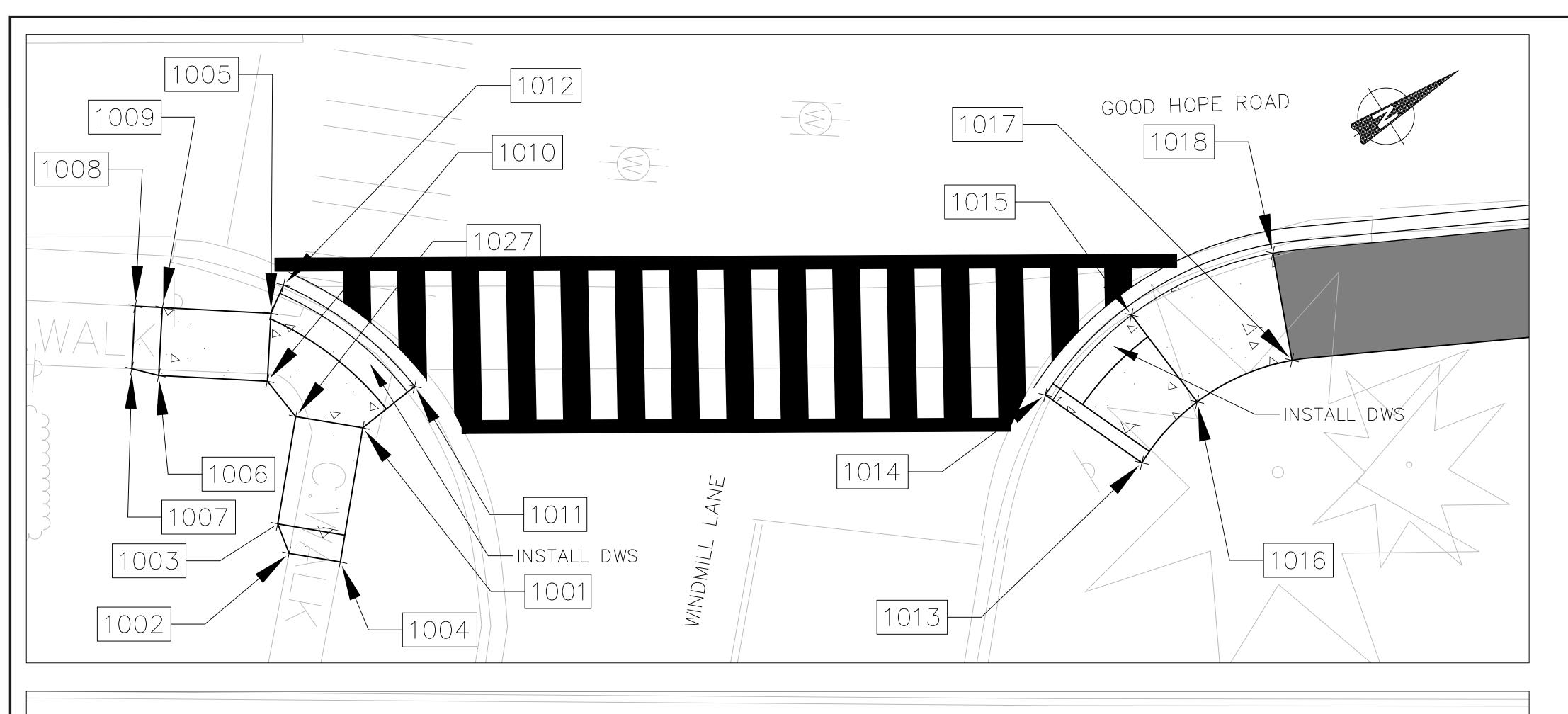
Designed by: <u>ADS</u> Drawn by: <u>ADS</u> Checked by: <u>JJR</u>

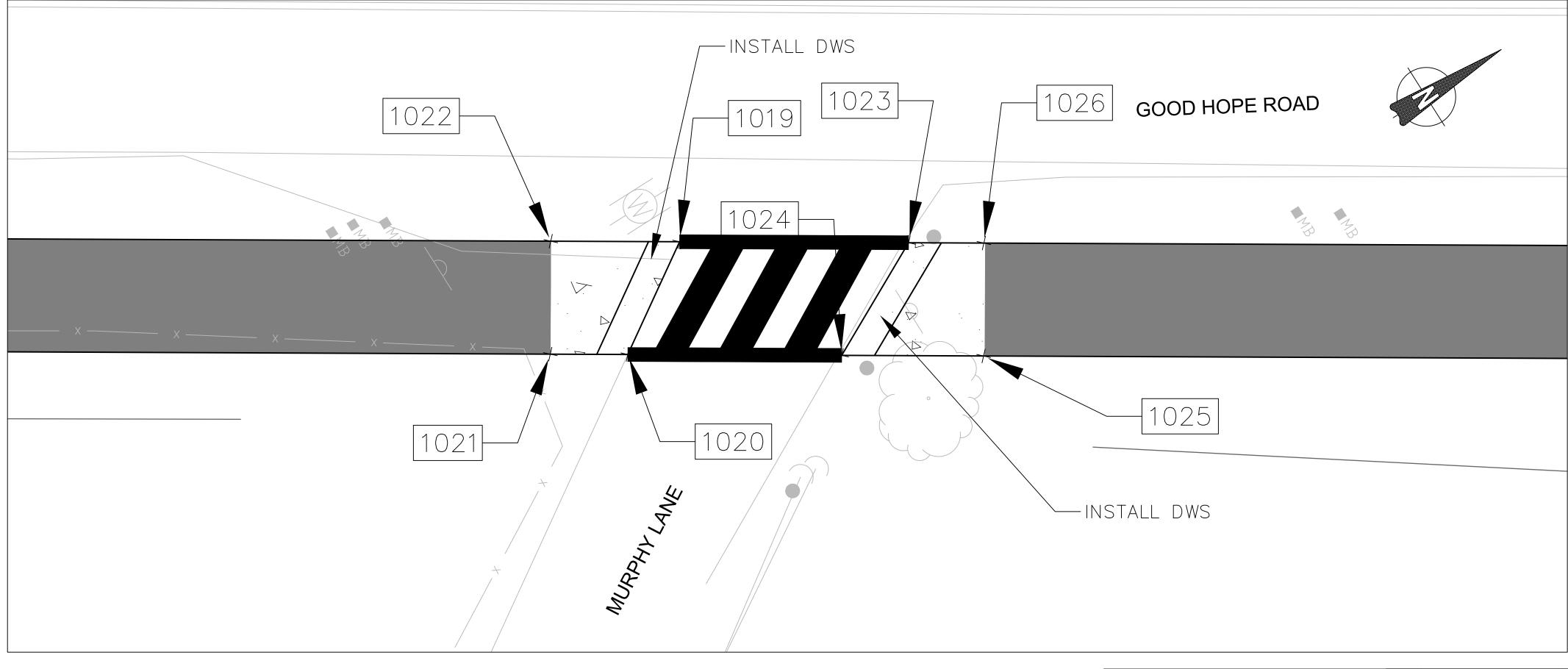
GG-03 GEOMETRICS

GOOD HOPE ROAD SIDEWALK

SCALE: 1"=30'

DATE: NOVEMBER 2019 Project No. : <u>501902</u> SHEET <u>07</u> of <u>75</u>





		PEDE2	TRIAN RAMP	
POINT	NORTHING	EASTING	ELEVATION	NOTE
1001	521625.4072	1315817.0846	XX.X	LEVEL LANDING
1002	521615.8958	1316821.9989	MATCH EXISTING	
1003	521616.7480	1316819.7232	XX.X	
1004	521618.7480	1316824.5448	MATCH EXISTING	
1005	521624.1916	1316806.3647	XX,X	LEVEL LANDING
1006	521614.7733	1316805.8212	XX,X	
1007	521613.3674	1316804.3459	MATCH EXISTING	
1008	521616.0311	1316800.5849	MATCH EXISTING	
1009	521617.6632	1316801.7409	XX,X	
1010	521621.3017	1316810.4450	XX,X	LEVEL LANDING
1011	521630.2593	1316816.5504	MATCH EXISTING	
1012	521626.0859	1316805.0983	MATCH EXISTING	
1013	521672.4810	1316849.8502	XX,X	
1014	521669.1338	1316841.8408	MATCH EXISTING	
1015	521677.6311	1316840.2606	XX.X	
1016	521678.3077	1316848.2320	XX.X	
1017	521685.8379	1316849.3755	XX.X	
1018	521688.8504	1315841.9643	XX.X	
1019	522455.5157	1317324.0926	MATCH EXISTING	
1020	522448.1521	1317328.8861	MATCH EXISTING	
1021	522443.5213	1317325.9346	XX.X	
1022	522447.8211	1317319.1883	XX.X	
1023	522469.2007	1317332.8148	MATCH EXISTING	
1024	522460.9340	1317337.0327	MATCH EXISTING	
1025	522469.4108	1317342.4355	XX.X	
1026	522473.6980	1317335.6812	XX.X	
1027	521621.6771	1316813.7550	XX.X	

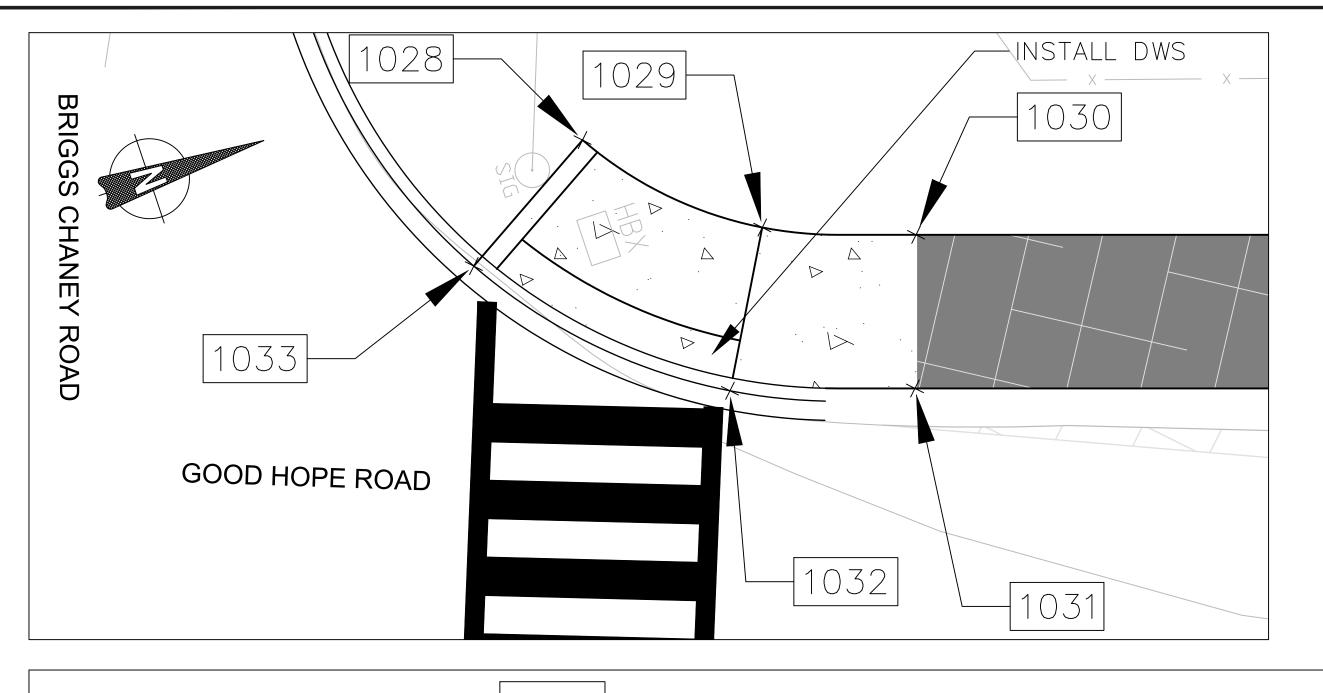
DRAFT NOT FOR CONSTRUCTION					MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION GAITHERSBURG, MARYLAND		
					RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED	Date	
	NO	PEVISION	DATE	BY	Chief, Division of Transportation Engineering Designed by:ADS Drawn by:ADS	Date	

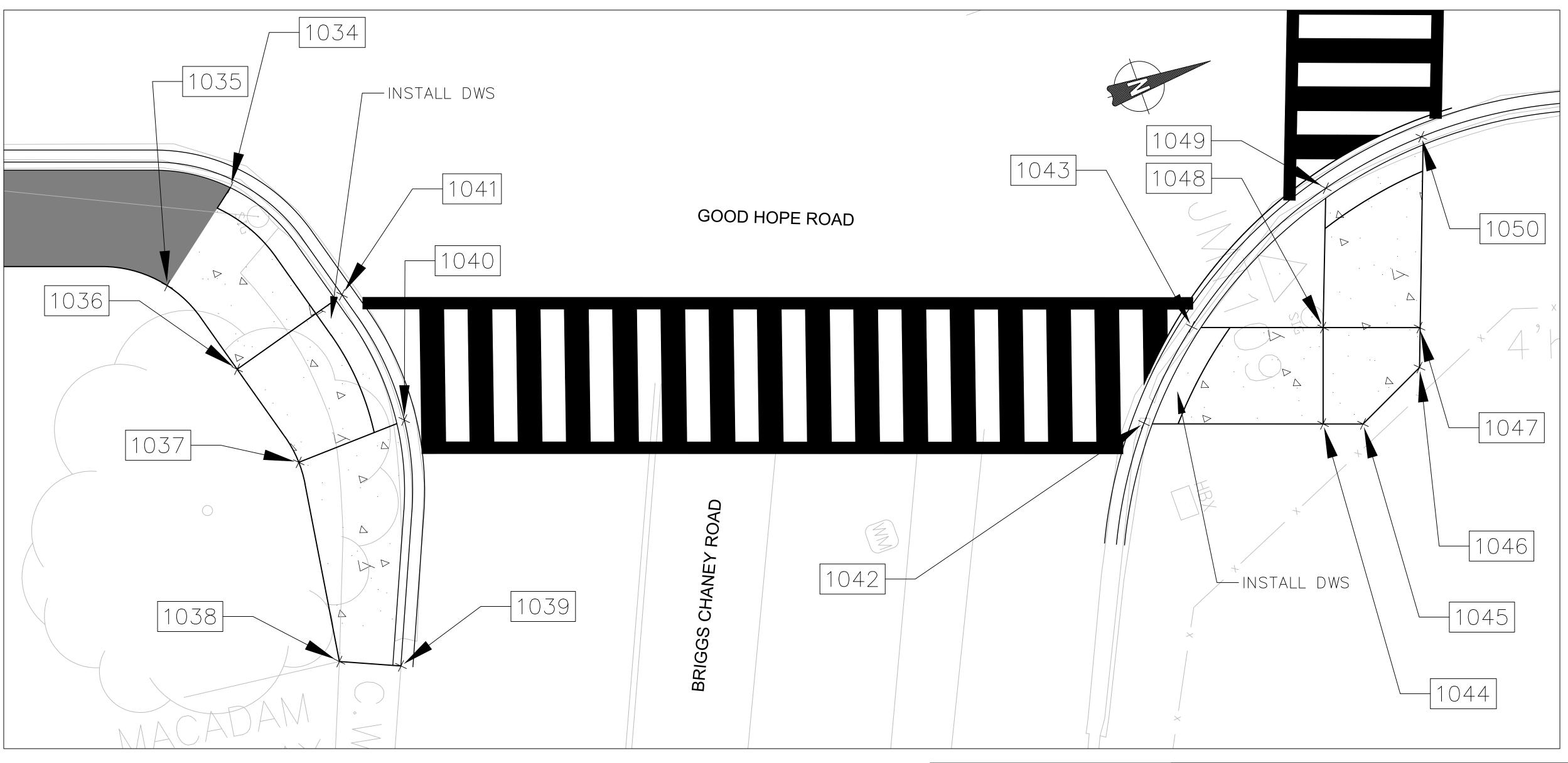
DT-01 PEDESTRIAN RAMP DETAILS

GOOD HOPE ROAD SIDEWALK

SCALE: 1"=5' DATE: NOVEMBER 2019

Project No. : 501902 SHEET 08 of 75





	PEDESTRIAN RAMP								
POINT	NORTHING	EASTING	ELEVATION	NOTE					
1028	522832.1075	1317441.2173	XX.X	LEVEL LANDING					
1029	522839.5380	1317448.5059	XX.X	LEVEL LANDING					
1030	522847.0109	1317451.4086	XX.X						
1031	522844.4196	1317458.9775	XX.X						
1032	522835.2439	1317456.0379	MATCH EXISTING	LEVEL LANDING					
1033	522824.6541	1317445.6462	MATCH EXISTING	LEVEL LANDING					
1034	522721.4907	1317471.9273	XX.X						
1035	522713.8161	1317477.8119	XX.X						
1036	522716.9403	1317486.3030	XX.X	LEVEL LANDING					
1037	522719.1471	1317495.2999	XX.X	LEVEL LANDING					
1038	522716.7490	1317512.0022	MATCH EXISTING						
1039	522721.4374	1317514.0729	MATCH EXISTING						
1040	522728.5739	1317494.9485	MATCH EXISTING	LEVEL LANDING					
1041	522727.2143	1317483.4230	MATCH EXISTING	LEVEL LANDING					
1042	522786.2732	1317515.8814	MATCH EXISTING						
1043	522792.6991	1317509.6950	MATCH EXISTING						
1044	522800.2394	1317520.9575	XX.X	LEVEL LANDING					
1045	522803.3587	1317522.0758	XX.X	LEVEL LANDING					
1046	522809.3516	1317519.2460	XX.X	LEVEL LANDING					
1047	522810.4699	1317516.1267	XX.X	LEVEL LANDING					
1048	522802.9392	1317513.4269	XX.X	LEVEL LANDING					
1049	522807.0524	1317502.6114	MATCH EXISTING						
1050	522815.9454	1317501.2712	MATCH EXISTING						

MONTGOMERY COUNTY DRAFT DEPARTMENT OF TRANSPORTATION NOT FOR CONSTRUCTION GAITHERSBURG, MARYLAND RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED Chief, Division of Transportation Engineering Designed by: <u>ADS</u> Drawn by: <u>ADS</u> Checked by: <u>JJR</u>

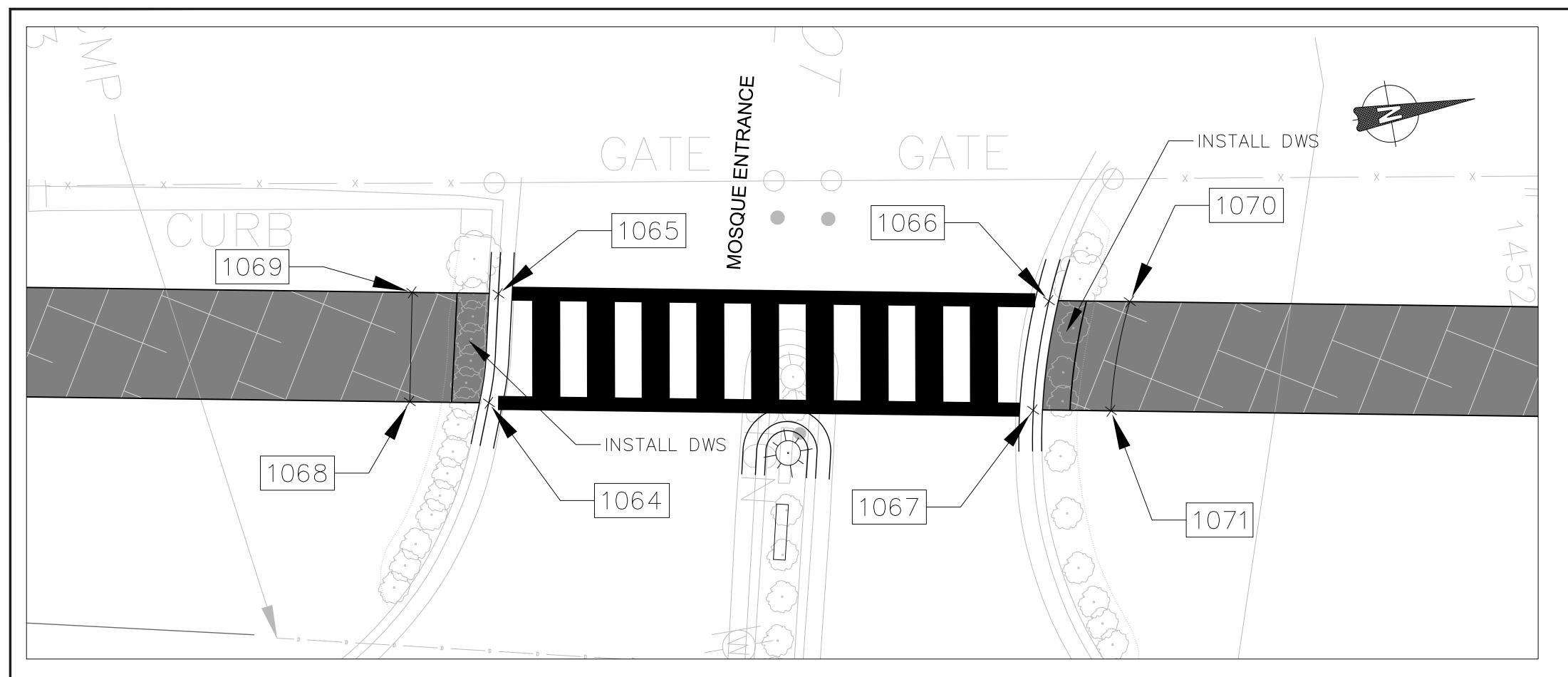
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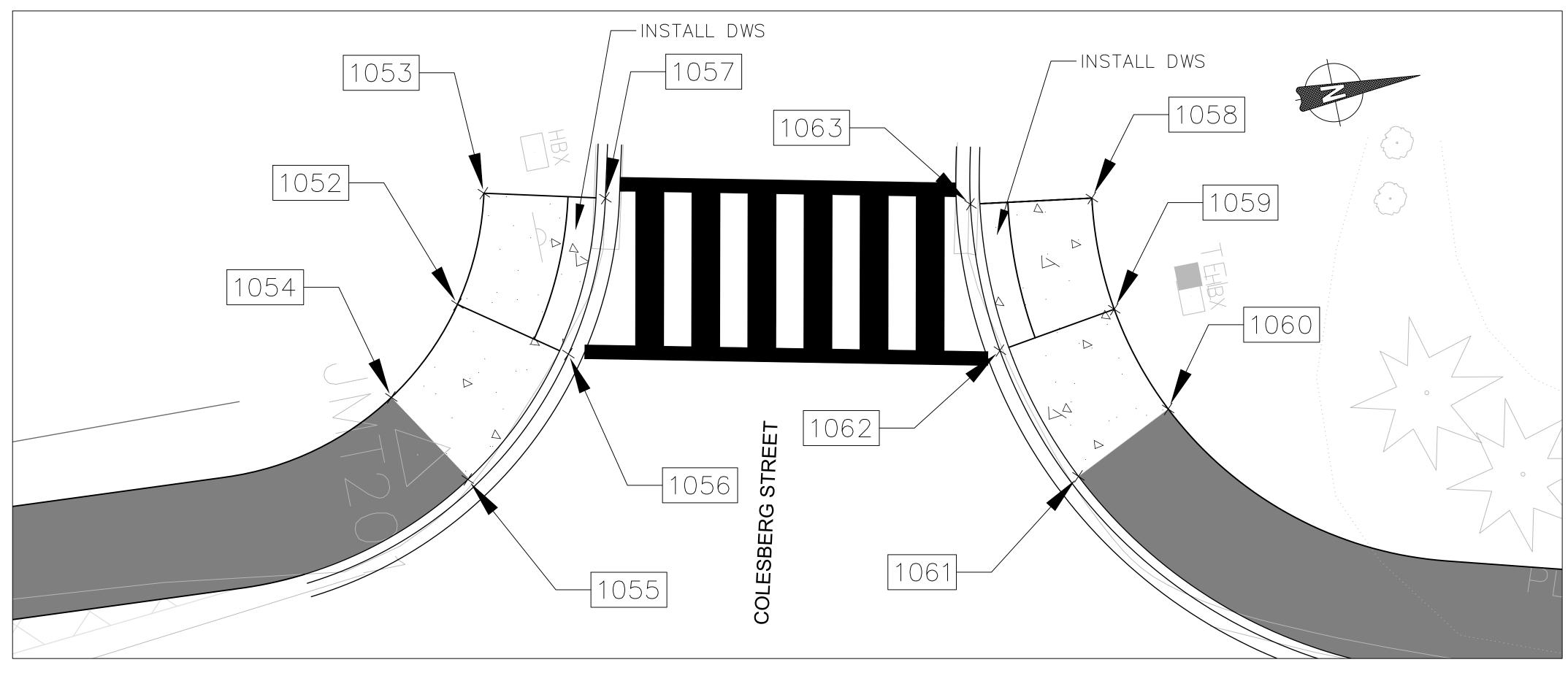
REVISION

DT-02 PEDESTRIAN RAMP DETAILS

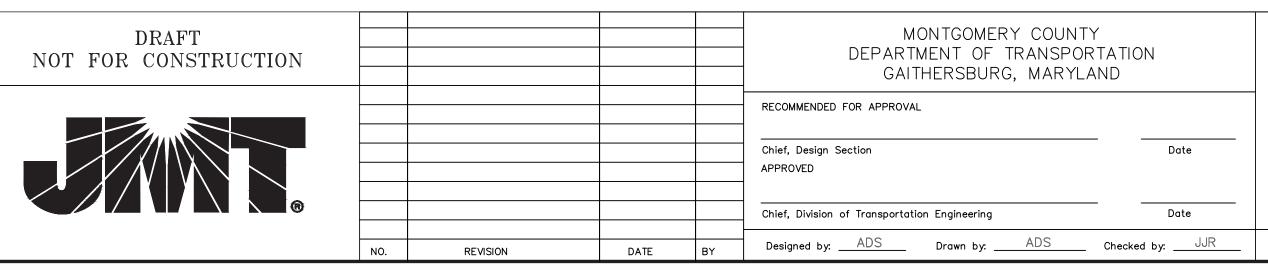
GOOD HOPE ROAD SIDEWALK

DATE: NOVEMBER 2019 Project No. : <u>501902</u> SHEET <u>09</u> of <u>75</u>





PEDESTRIAN RAMP								
POINT	NORTHING	EASTING	ELEVATION	NOTE				
1052	524783.5921	1318005.1124	XX.X	LEVEL LANDING				
1053	524783.6921	1317997.7119	XX.X	LEVEL LANDING				
1054	524777.7602	1318010.6868	XX.X					
1055	524781.9470	1318017.5042	XX.X					
1056	524790.7455	1318010.1541	MATCH EXISTING	LEVEL LANDING				
1057	524795.5277	1317999.7728	MATCH EXISTING	LEVEL LANDING				
1058	524829.5412	1318006.6163	XX.X					
1059	524829.5395	1318014.7053	XX.X					
1060	524831.9056	1318022.4406	XX.X					
1061	524824.6861	1318025.8871	XX.X					
1062	524820.9646	1318015.9863	MATCH EXISTING	LEVEL LANDING				
1063	524820.9653	1318005.3423	MATCH EXISTING	LEVEL LANDING				
1064	523204.3767	1317544.8548	MATCH EXISTING					
1065	523206.4456	1317537.1478	MATCH EXISTING					
1066	523245.9908	1317544.6455	MATCH EXISTING					
1067	523243.4658	1317552.3115	MATCH EXISTING					
1068	523198.6928	1317543.7774	XX.X					
1069	523200.2581	1317535.9317	XX.X					
1070	523251.8037	1317545.7209	XX.X					
1071	523259.0576	1317553.3423	XX.X					



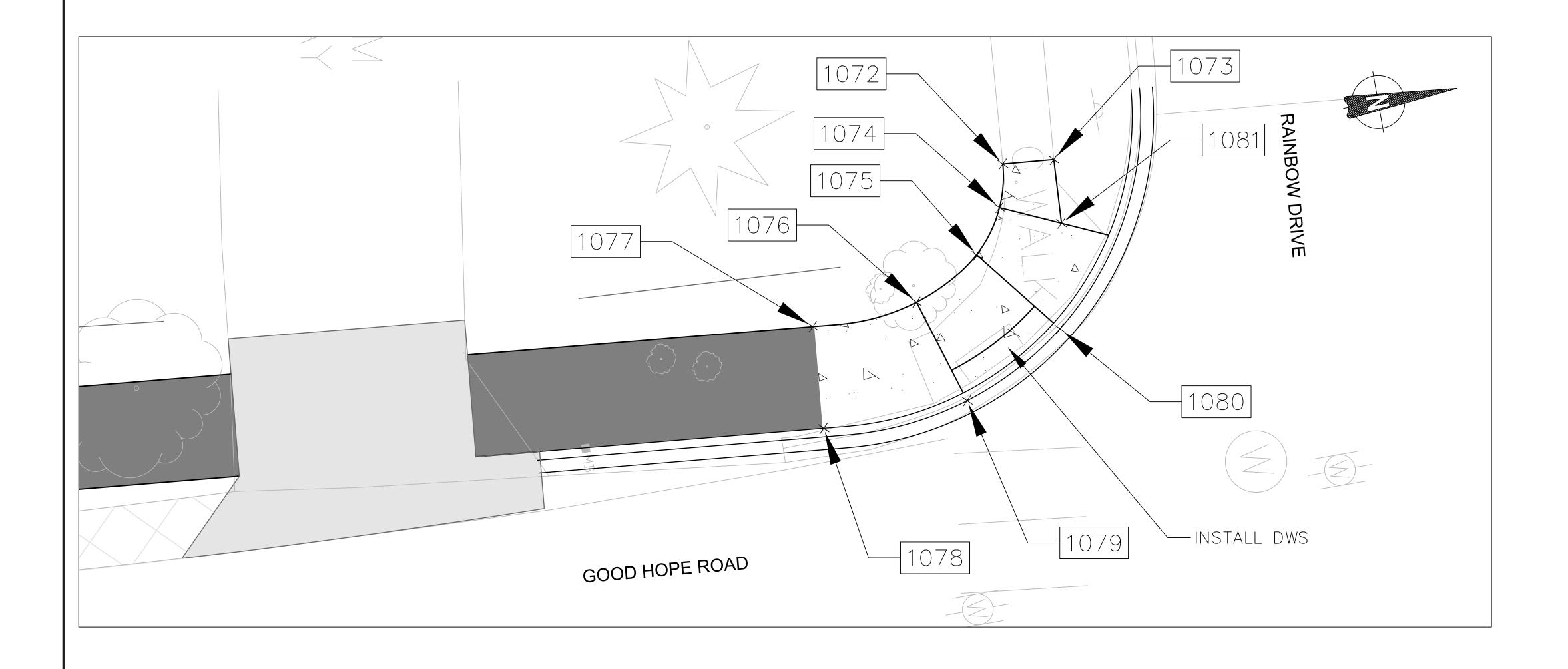
DT-03 PEDESTRIAN RAMP DETAILS

GOOD HOPE ROAD SIDEWALK

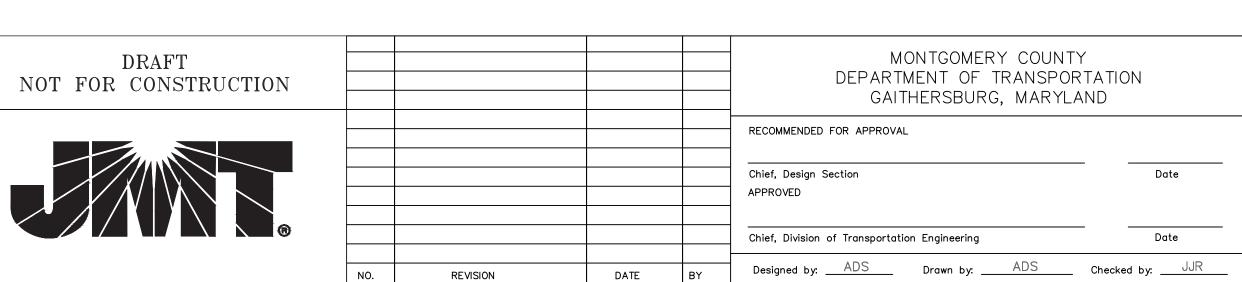
SCALE: 1"=5' DATE: NOVEMBER 2019

Project No.: 501902 SHEET 10 of 75

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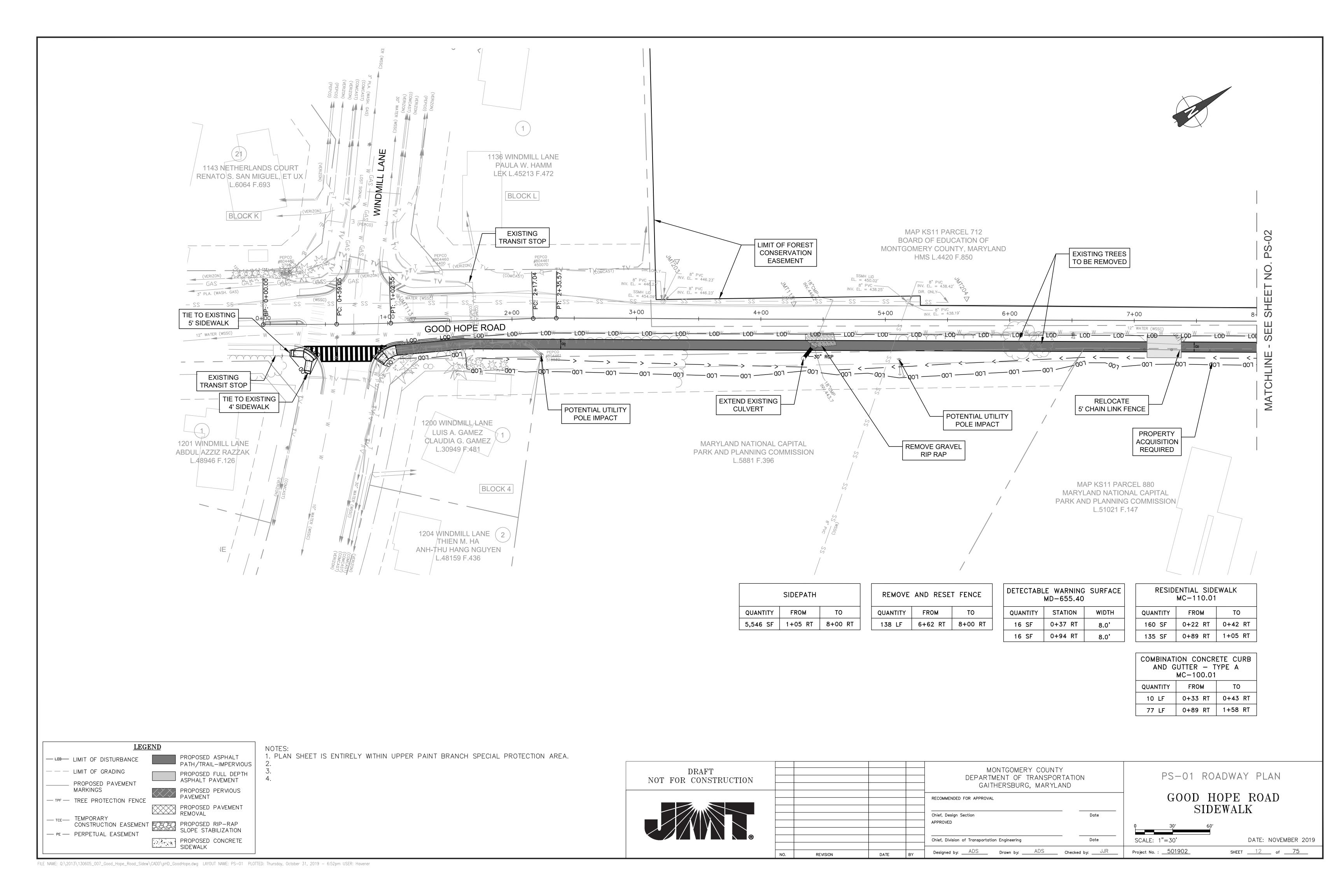


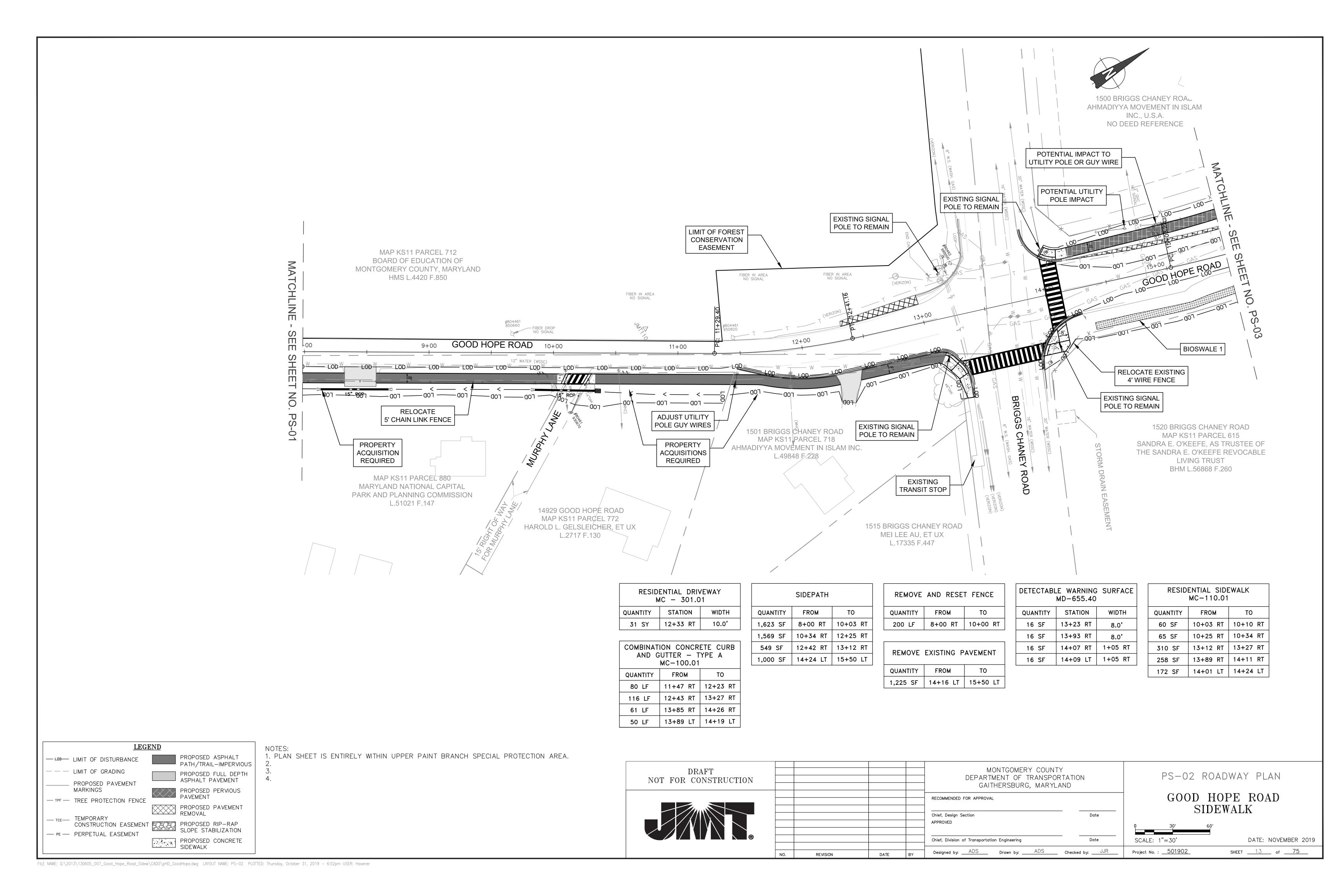
PEDESTRIAN RAMP									
POINT	NORTHING	EASTING	ELEVATION	NOTE					
1072	525826.1619	1318195.6133	MATCH EXISTING						
1073	525830.1491	1318195.9581	MATCH EXISTING						
1074	525825.3150	1318198.9220	XX.X						
1075	525822.9443	1318202.2794	XX.X	LEVEL LANDING					
1076	525817.6353	1318205.0748	XX.X	LEVEL LANDING					
1077	525809.3159	1318205.5481	XX.X						
1078	525808.7725	1318213.5321	XX.X						
1079	525820.1932	1318213.3588	MATCH EXISTING	LEVEL LANDING					
1080	525828.3261	1318209.0768	MATCH EXISTING	LEVEL LANDING					
1081	525829.8760	1318200.9707	XX.X						

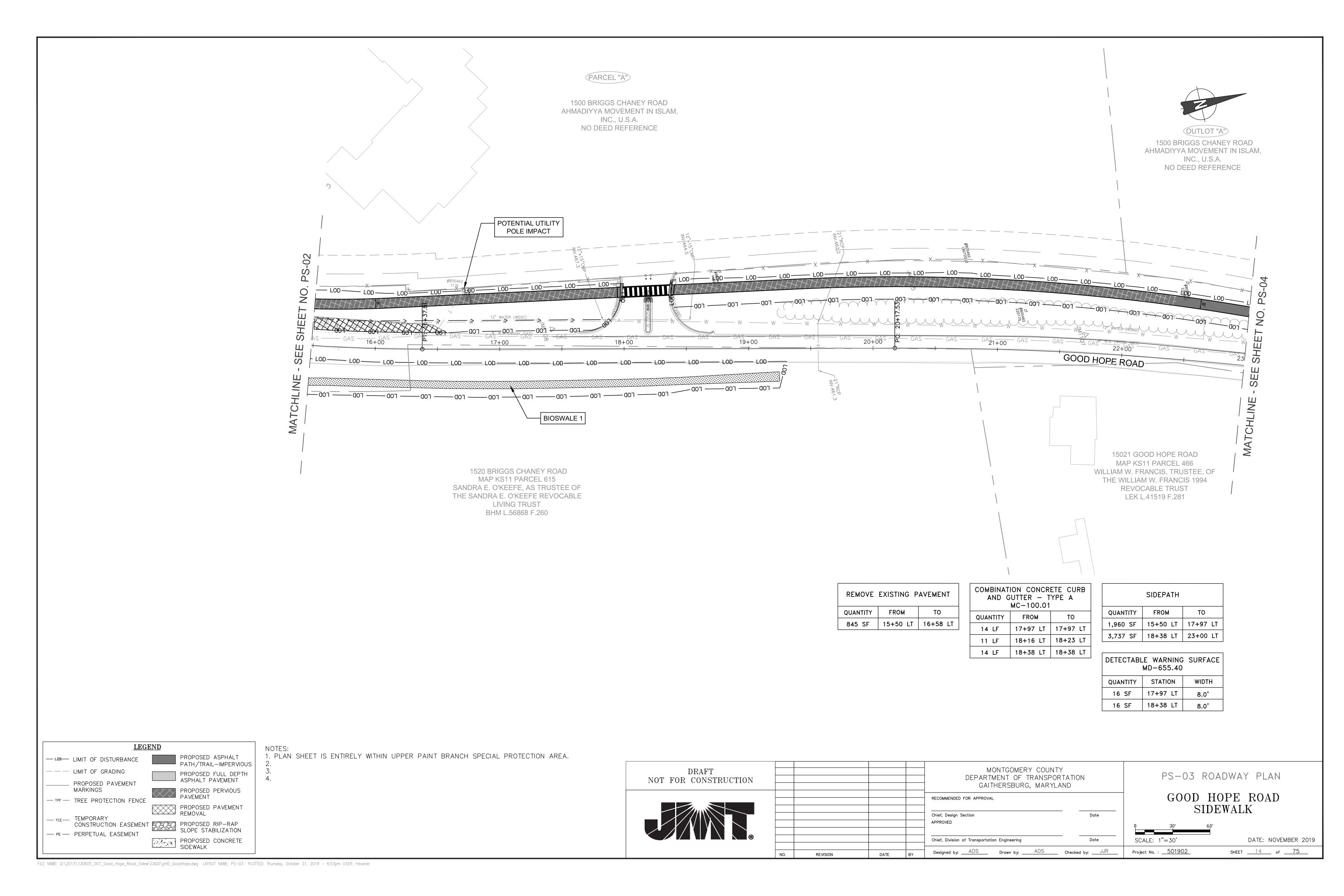


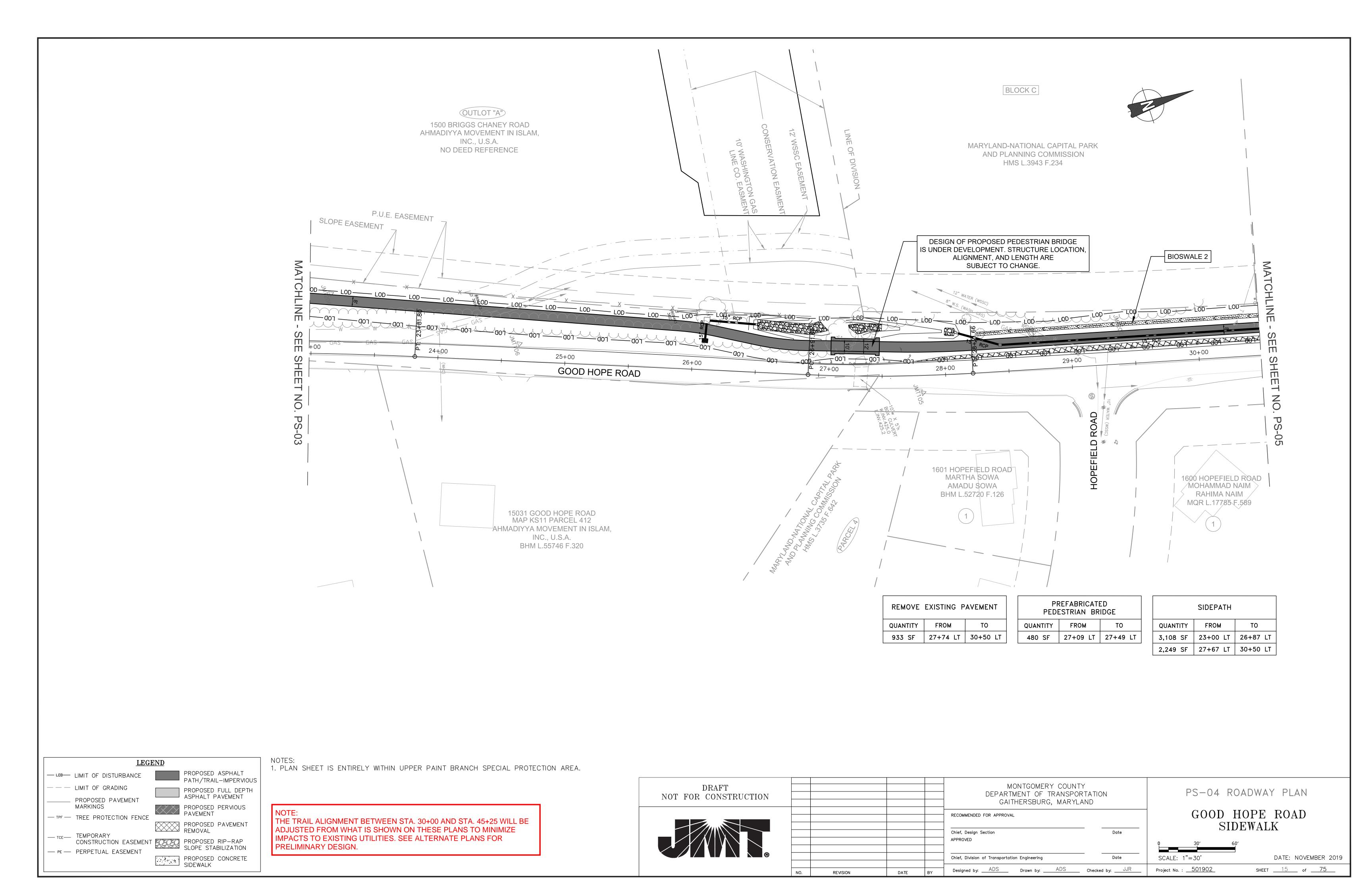
DT-04 PEDESTRIAN RAMP DETAILS

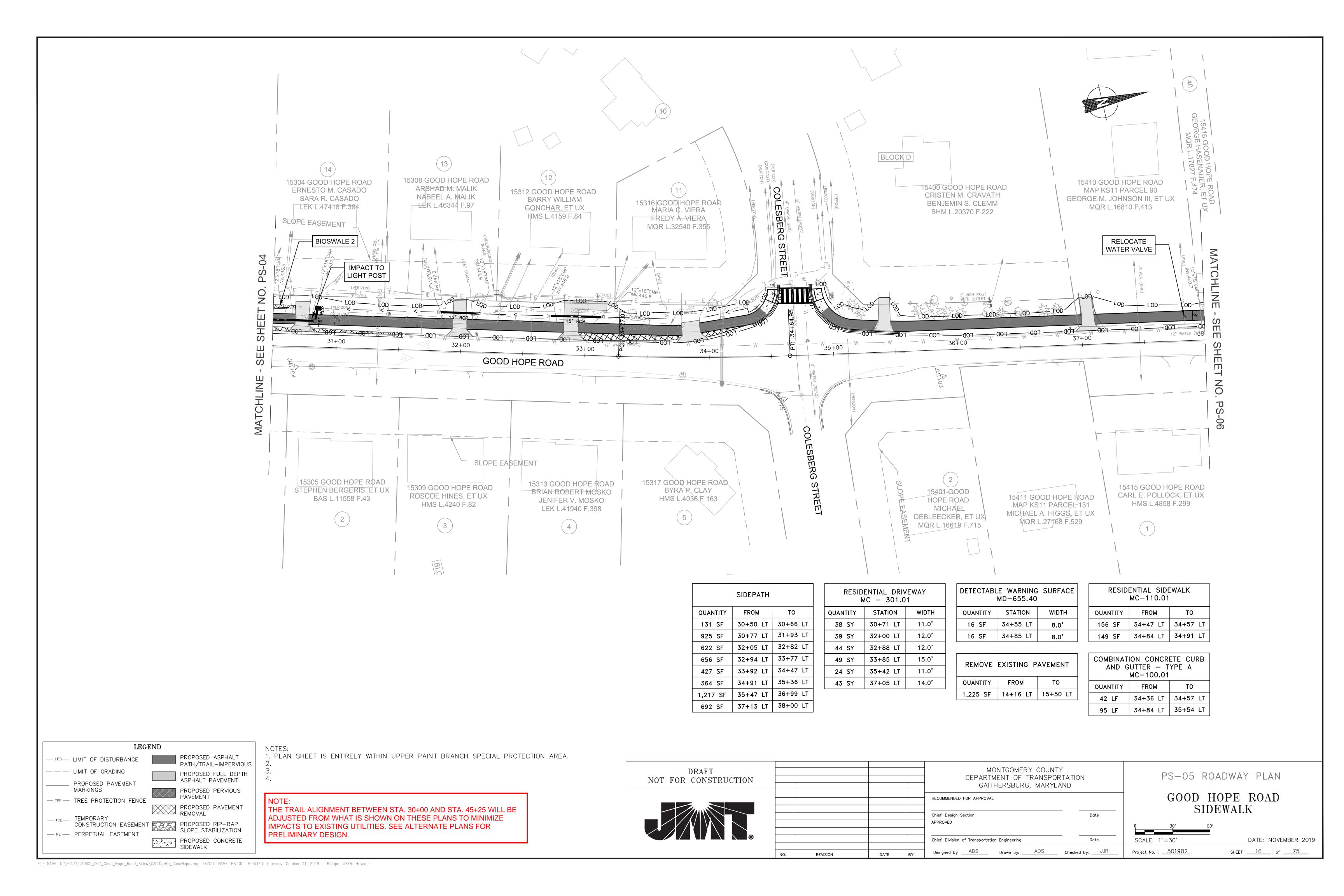
GOOD HOPE ROAD SIDEWALK

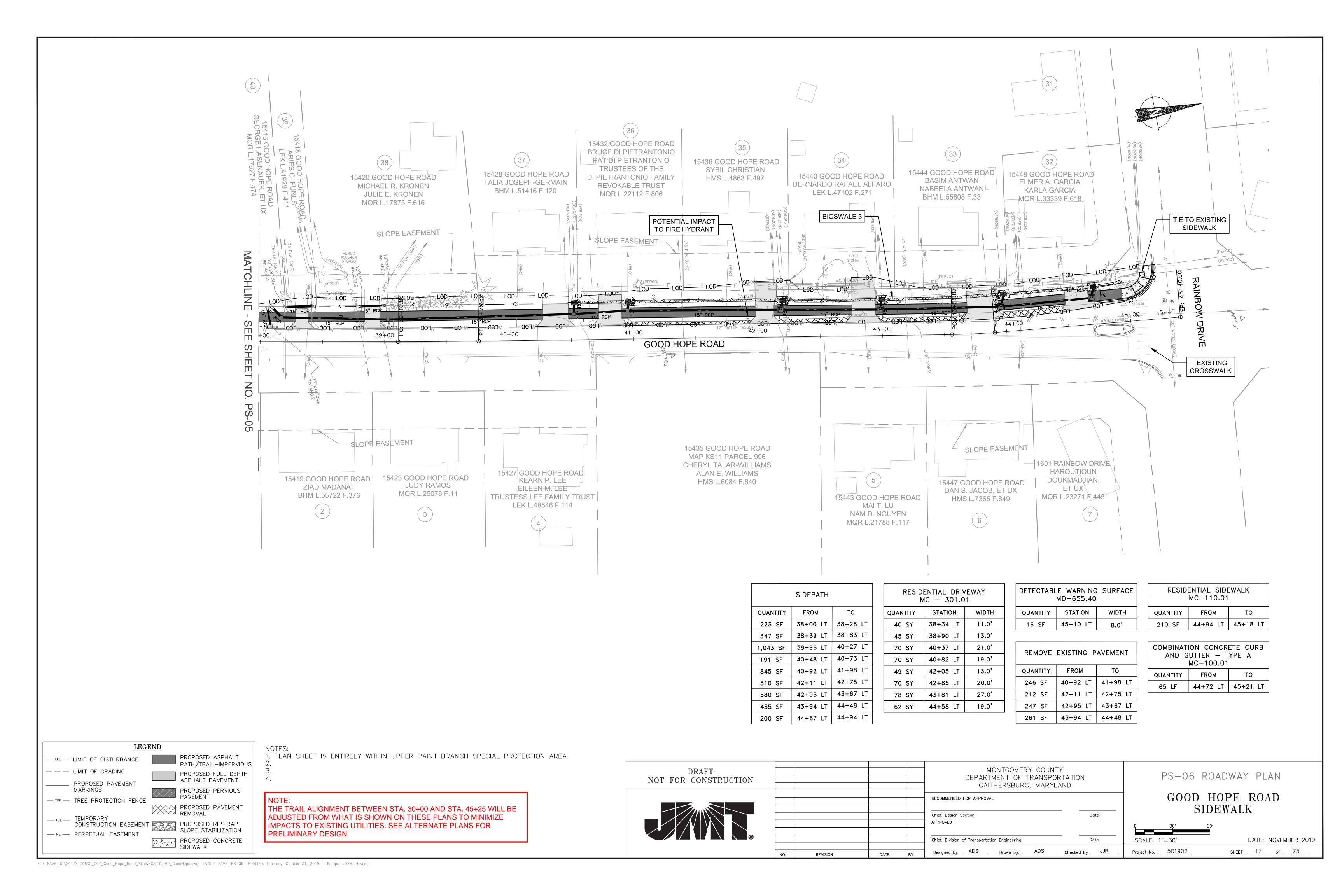












EROSION AND SEDIMENT CONTROL — GENERAL NOTES

MEDIAN SUMP INLET PROTECTION

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:
- A. At the required pre-construction meeting.
- B. Following installation of sediment control measures and prior to any other land disturbing activity.
- C. During the installation of a sediment basin or stormwater management structure at the required inspection points (see Inspection Checklist on plan). Notification prior to commencing construction is mandatory.
- D. Prior to removal or modification of any sediment control structure(s).
- E. Prior to final acceptance.
- 3. The permittee shall construct all erosion and sediment control measures per the approved plan and construction sequence, shall have them inspected and approved by the Department prior to beginning any other land disturbances, shall ensure that all runoff from disturbed areas is directed to the sediment control devices, and shall not remove any erosion or sediment control measure without prior permission from the Department.
- 4. The permittee shall protect all points of construction ingress and egress to prevent the deposition of materials onto traversed public thoroughfare(s). All materials deposited onto public thoroughfare(s) shall be removed immediately.
- 5. The permittee shall inspect periodically and maintain continuously in effective operating condition, all erosion and sediment control measures until such time as they are removed with prior permission from the Department. The permittee is responsible for immediately repairing or replacing any sediment control measures which have been damaged or removed by the permittee or any other person.
- 6. Following initial soil disturbance or re—disturbance, permanent or temporary stabilization must be completed within:
- a) Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes and all slopes steeper than 3 horizontal to 1 vertical (3:1); and
- b) Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.

All areas disturbed outside of the perimeter sediment control system must be minimized and stabilized immediately. Maintenance must be performed as necessary to ensure continued stabilization.

- 7. The permittee shall apply sod, seed and anchored straw mulch, or other approved stabilization measures to all disturbed areas within seven (7) calendar days after stripping and grading activities have ceased on that area. Maintenance shall be performed as necessary to ensure continued stabilization. Active construction areas such as borrow or stockpile areas, roadway improvements, and areas within fifty (50) feet of a building under construction may be exempt from this requirement, provided that erosion and sediment control measures are installed and maintained to protect those areas.
- 8. Prior to removal of sediment control measures, the permittee shall stabilize all contributory disturbed areas with required soil amendments and topsoil, using sod or an approved permanent seed mixture and an approved anchored mulch. Wood fiber mulch may only be used in seeding season when the slope does not exceed 10% and grading has been done to promote sheet flow drainage. Areas brought to finished grade during the seeding season shall be permanently stabilized within seven (7) calendar days of establishment. When property is brought to finished grade during the months of November through February, and permanent stabilization is found to be impractical, an approved temporary seed and straw anchored mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be completed prior to the following April
- 9. The site permit, work, materials, approved SC/SM plans, and test reports shall be available at the site for inspection by duly authorized officials of Montgomery County.
- 10. Surface drainage flows over unstabilized cut and fill slopes shall be controlled by either preventing drainage flows from traversing the slopes or by installing mechanical devices to lower the water down slope without causing erosion. Dikes shall be installed and maintained at the top of cut or fill slopes until the slope and drainage area to it are fully stabilized, at which time they must be removed and final grading done to promote sheet flow drainage. Mechanical devices must be provided at points of concentrated flow where erosion is likely to occur.
- 11. Permanent swales or other points of concentrated water flow shall be stabilized within 3 calendar days of establishment with sod or seed with an approved erosion control
- 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
- 13. No permanent cut or fill slope with a gradient steeper than 3:1 will be permitted in lawn maintenance areas or on residential lots. A slope gradient of up to 2:1 will be permitted in non— maintenance areas provided that those areas are indicated on the erosion and sediment control plan with a low—maintenance ground cover specified for permanent stabilization. Slope gradient steeper than 2:1 will not be permitted with vegetative stabilization.
- 14. The permittee shall install a splashblock at the bottom of each downspout unless the downspout is connected by a drain line to an acceptable outlet.
- 15. For finished grading, the permittee shall provide adequate gradients so as to prevent water from standing on the surface of lawns more than twenty—four (24) hours after the PIPE OUTLET SEDIMENT TRAP ST I end of a rainfall, except in designated drainage courses and swale flow areas, which may drain as long as forty—eight (48) hours after the end of a rainfall.
- 16. Sediment traps or basins are not permitted within 20 feet of a building which is existing or under construction. No building may be constructed within 20 feet of a sediment trap or basin.
- 17. All inlets in non—sump areas shall have asphalt berms installed at the time of base paving establishment.
- 18. The sediment control inspector has the option of requiring additional sediment control measures, as deemed necessary.
- 19. All trap elevations are relative to the outlet elevation, which must be on existing undisturbed ground.
- 20. Vegetative stabilization shall be performed in accordance with the Standards and Specifications for Soil Erosion and Sediment Control.
- 21. Sediment trap(s)/basin(s) shall be cleaned out and restored to the original dimensions when sediment has accumulated to the point of one—half (1/2) the wet storage depth of the trap/basin (1/4 the wet storage depth for ST-III) or when required by the sediment control inspector.
- 22. Sediment removed from traps/basins shall be placed and stabilized in approved areas, but not within a floodplain.
- 23. All sediment basins and traps must be surrounded with a welded wire safety fence. The fence must be at least 42 inches high, have posts spaced no farther apart than 8 feet, have mesh openings no greater the two inches in width and four inches in height, with a minimum of 14 gauge wire. Safety fence must be maintained in good condition
- 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
- 25. Off-site spoil or borrow areas must have prior approval by DPS.
- 26. Sediment trap/basin dewatering for cleanout or repair may only be done with the DPS inspector's permission. The inspector must approve the dewatering method for <u>each</u> application. The following methods may be considered:
- A. Pump discharge may be directed to another on—site sediment trap or basin, provided it is of sufficient volume and the pump intake is floated to prevent agitation or suction of deposited sediments; or
- B. the pump intake may utilize a Removable Pumping Station and must discharge into an undisturbed area through a non-erosive outlet; or
- C. the pump intake may be floated and discharge into a Dirt Bag (12 oz. non—woven fabric), or approved equivalent, located in an undisturbed buffer area. Remember: Dewatering operation and method <u>must</u> have prior approval by the DPS inspector.
- 27. The permittee must notify the Department of all utility construction activities within the permitted limits of disturbance prior to the commencement of those activities.
- 28. Topsoil must be applied to all pervious areas within the limits of disturbance prior to permanent stabilization in accordance with MDE "Standards and Specifications for Soil Preparation, Topsoiling, and Soil Amendments".

	STANDARD	SYMBOLS	
AT-GRADE INLET PROTECTION	AGIP	REMOVABLE PUMPING STATION	⊠RPS
BAFFLE BOARDS	BB	RIPRAP INFLOW PROTECTION	₹ RRP
BENCHING	BENCHING	RIPRAP OUTLET SEDIMENT TRAP ST III	ST-III
CATCH BASIN INSERT	СВІ	ROCK OUTLET PROTECTION 1	ROP1
CLEAR WATER DIVERSION PIPE	CWD - 12 DESIGNATION CWD-12 REFERS TO 12 INCH CLEAR WATER DIVERSION.	ROCK OUTLET PROTECTION II	ROPII
CLEAR WATER PIPE	CWP	ROCK OUTLET PROTECTION III	ROPIII
COMBINATION INLET PROTECTION	COIP	SILT FENCE	SF
CONCRETE WASHOUT STRUCTURE	CWS	SILT FENCE ON PAVEMENT	SF0P
CURB INLET PROTECTION	[4] CIP	SOD	* * * * * * * * * * * * * * * * * * * *
DIVERSION FENCE	├── DF ──┤	STABILIZED CONSTRUCTION ENTRANCE	SCE SCE
EARTH DIKE	A-1 PLACE DESIGNATION (A-1, B-2, etc.) ON FLOW CHANNEL SIDE OF DIKE.	STANDARD INLET PROTECTION	[] SIP
EMERGENCY SPILLWAY	ES	STOCKPILE AREA	
FILTER BAG	⊠FB	STONE CHECK DAM	CD

FILTER BERM STONE/RIPRAP OUTLET SEDIMENT TRAP ST II ST-II I---FB-B---I ⊢—FL-18— FILTER LOG SUBSURFACE DRAINS \vdash - SSD - -GABION INFLOW PROTECTION

GABION INLET PROTECTION SUPER SILT FENCE ⊢—SSF——I HORIZONTAL DRAW-DOWN DEVICE TEMPORARY ACCESS BRIDGE

TEMPORARY ACCESS CULVERT LIMIT OF DISTURBANCE TEMPORARY ASPHALT BERM MEDIAN INLET PROTECTION

TEMPORARY GABION OUTLET STRUCTURE MOUNTABLE BERM TEMP. SOIL STABILIZATION MATTING-TYPE A PERIMETER DIKE/SWALE

TEMP. SOIL STABILIZATION MATTING-TYPE E PERM. SOIL STABILIZATION MATTING-TYPE B TEMP. SOIL STABILIZATION MATTING-TYPE D PERM. SOIL STABILIZATION MATTING-TYPE C

TEMPORARY STONE OUTLET STRUCTURE TEMPORARY SWALE PIPE SLOPE DRAIN DESIGNATION PSD-12 REFERS TO 12 INCH PIPE SLOPE DRAIN.

PLUNGE POOL WASH RACK OPTION PORTABLE SEDIMENT TANK CHESAPEAKE BAY CRITICAL AREA TREE PROTECTION FENCE DRAINAGE BOUNDARY

WETLAND EXISTING CONTOURS

WETLAND BUFFER PROPOSED CONTOURS

100-YEAR FLOODPLAIN

TEMPORARY BARRIER DIVERSION

STANDARD NOTES

1. The contractor will immediately inform the county of any discrepancies found between the project plans and contract specifications.

2. For construction, all horizontal control shall be NAD 83/91 and vertical control NAVD 88. 3. Types of storm drain structures refer to the 'Design Standards' of Montgomery County Department of Transportation, unless otherwise noted. 4. Information concerning underground utilities was obtained from available records, The contractor must determine

the exact location and elevations of the lines by digging test pits by hand at all utility crossings well in advance of trenching. If clearances are less than shown on this plan or six inches, whichever is less, the contractor shall

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 before proceeding with construction. 6. Call "Miss Utility" at 1—800—257—7777 fourty—eight (48) hours prior to beginning excavation to determine the

exact location of existing utilities. 7. Clearing to be limited to the "limit of disturbance" as shown on the plans.

8. All grading shall be done in such a manner as to provide positive drainage. 9. Disturbed areas adjacent to established lawns shall be sodded. Other disturbed areas shall be seeded and

10. The contractor shall obtain a roadside tree permit for any maintenance, treatment, planting, removal or root cutting on trees within the public right-of-way before starting a job. Permit requirements may be obtained from the Department of Natural Resources — Maryland Forest, Park and Wildlife service whose telephone number is (301)

11. Contact the Washington Suburban Sanitary Commission system maintenance engineer before excavating beneath or in the vicinity of existing water or sewer lines. Backfill to be done under the supervision of W.S.S.C. call 301-699-4420.

12. Contact Washington gas dispatch officer at (703) 750-4831 before excavating beneath or in the vicinity of existing gas main and service laterals.

13. Prior to vegetative stabilization, all disturbed areas must be topsoiled per the Montgomery County "Standards and Specifications for topsoil".

STANDARD SEQUENCE OF CONSTRUCTION NOTES

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 Services (MCDPS) sediment control inspector (240) 777-6210 (48 hours notice) and the MNCPPC, Planning Department, Plans Enforcement inspector (301) 495-4571 (48 hours notice), the Owners representative, and the site Engineer.

2. The limits of disturbance shall be field marked prior to clearing of trees, installation of sediment control measures, construction, or other land disturbing activities. 3. The permittee must 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.

4. Clear and grade for installation of sediment control devices. 5. Install sediment control devices. Traps and basins shall be constructed prior to construction of any earth dikes that convey drainage to a trap and/or basin.

6. Once the sediment control devices are installed, the permittee must obtain written approval from the MCDPS inspector before proceeding with any additional clearing, grubbing or grading 7. The detailed sequence of construction by phase is presented on Sheets SC-06 thru SC-20.

NOTE 1: The permittee shall obtain written approval from MCDPS inspector, prior to the removal of any sediment control devices.

OFFSITE GRADING NOTE Offsite grading requires documentation of permission from owner (letter of permission on plan or recorded grading easement document submitted). Written approval for grading outside of the Right—of—Way shall be provided to the Inspector before construction is authorized to proceed.

STOCKPILE NOTE:
The Contractor shall establish staging and stockpile areas at locations approved by the Engineer. These areas shall establish staging and stockpile areas at locations approved by the Engineer. These areas shall establish staging and stockpile areas are not impacted. Frosion sediment control measures such be established such that environmentally sensitive areas are not impacted. Erosion sediment control measures such as silt fence shall be installed downgrade of the staging and stockpile areas and as directed by the Engineer, and

diversions such as sandbags shall be placed upstream to prevent stormwater run—on from contacting the stockpile.

PHASED GRADING NOTE: The contractor shall phase clearing and grading to minimize the area disturbed at a given time during connection. All areas not drainingto an approved sediment control

measure shall receive same—day stabilization.

TBD

₹TSOS

PLACE DESIGNATION (A-1, B-2, etc.) ON FLOW CHANNEL SIDE OF SWALE.

WR

---- TPF ---

SITE INFORMATION STURBED AREA CUT | FILL $(CY) \mid (CY)$ 3.04 ac 2,755 495

P.E. CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. <u>43192</u>, EXPIRATION DATE:

MONTGOMERY PERMITTING SE		· · · · · · · · · · · · · · · · · · ·		NOTE: MCDPS APPROVAL DOE NEGATE THE NEED FOR MCDPS ACCESS PERMIT		
Stormwater Manag		Sediment Contr Requirem		Administrative	Requirements:	
BIOSWALES, PERMEABLE	PAVEMENT					
		Reviewed	Date	Reviewed	Date	
Reviewed	Date	Approved	Date	SEDIMENT CONTR	OL PERMIT NO.	
Approved	Date					
SM FILE #	_			MCDPS APPROVAL OF THIS PLAN THE DATE OF APPROVAL IF THE		

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.

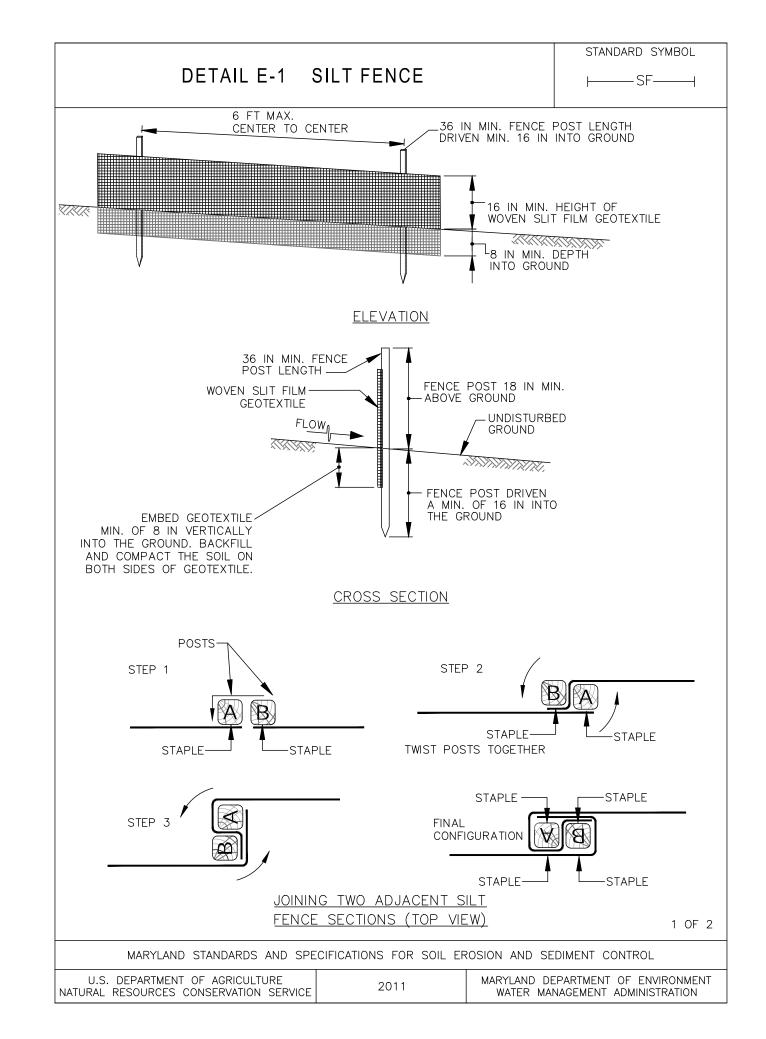
MONTGOMERY COUNTY 35% DESIGN DEPARTMENT OF TRANSPORTATION NOT FOR CONSTRUCTION GAITHERSBURG, MARYLAND RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED Chief, Division of Transportation Engineering RJM ENGINEERING Designed by: _____ Drawn by: ___ Checked by: _ REVISION DATE

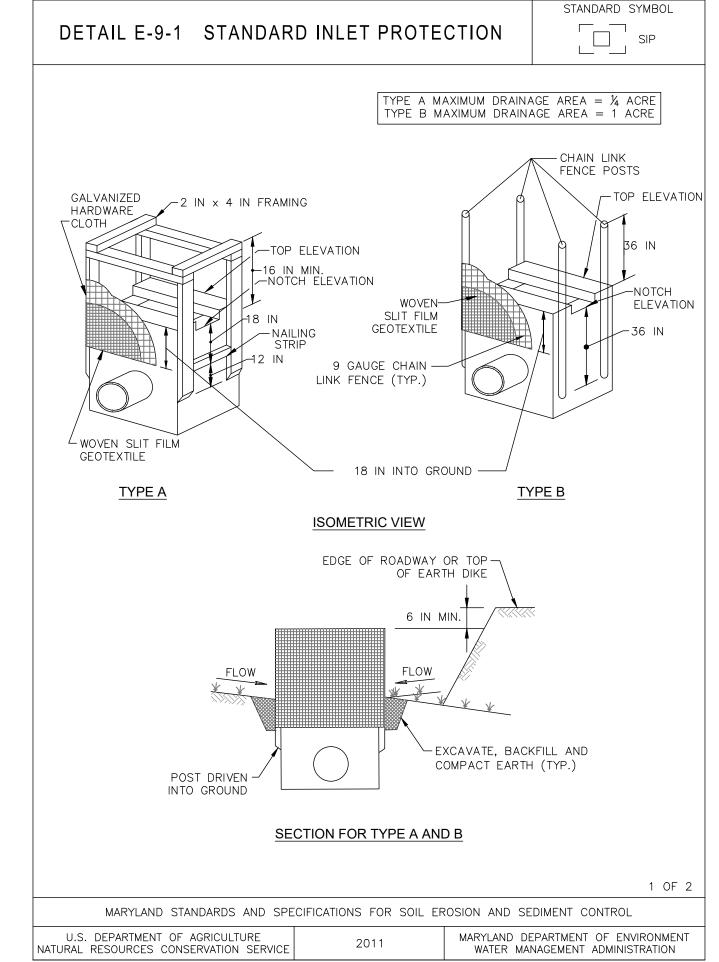
EROSION AND SEDIMENT CONTROL SC-01 NOTES SHEET GOOD HOPE ROAD SIDEPATH

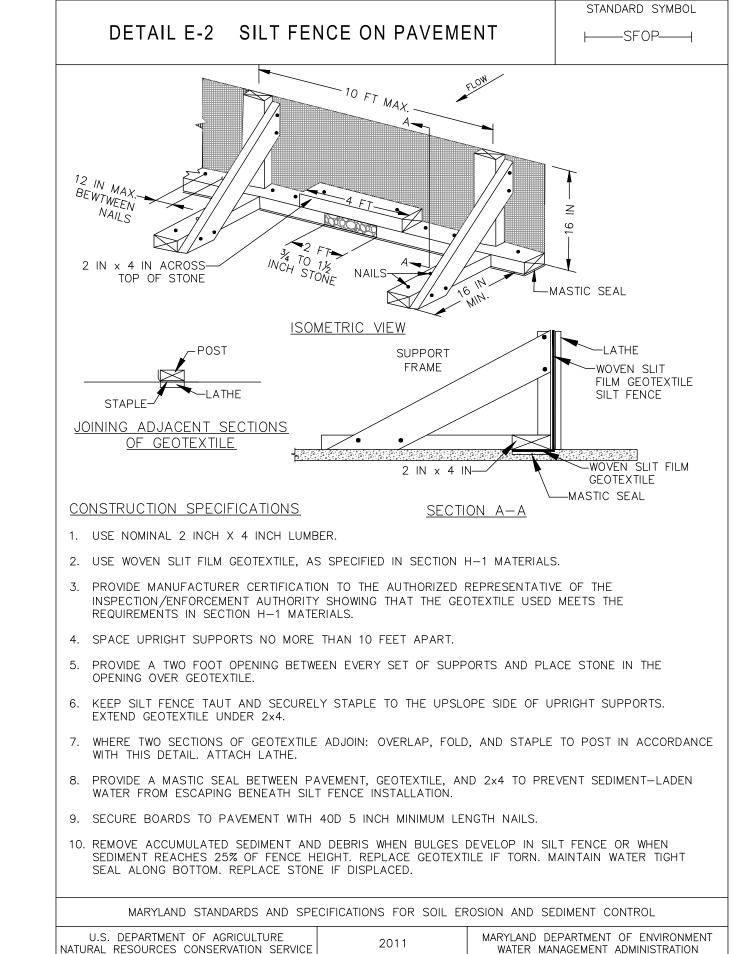
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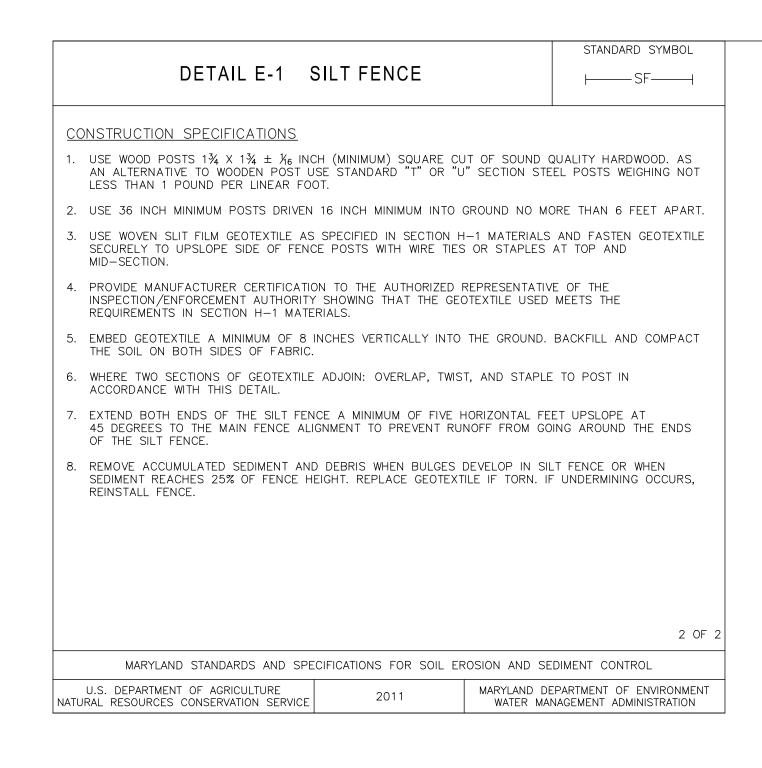
Project No. : <u>501902</u> SHEET <u>18</u> of <u>75</u>

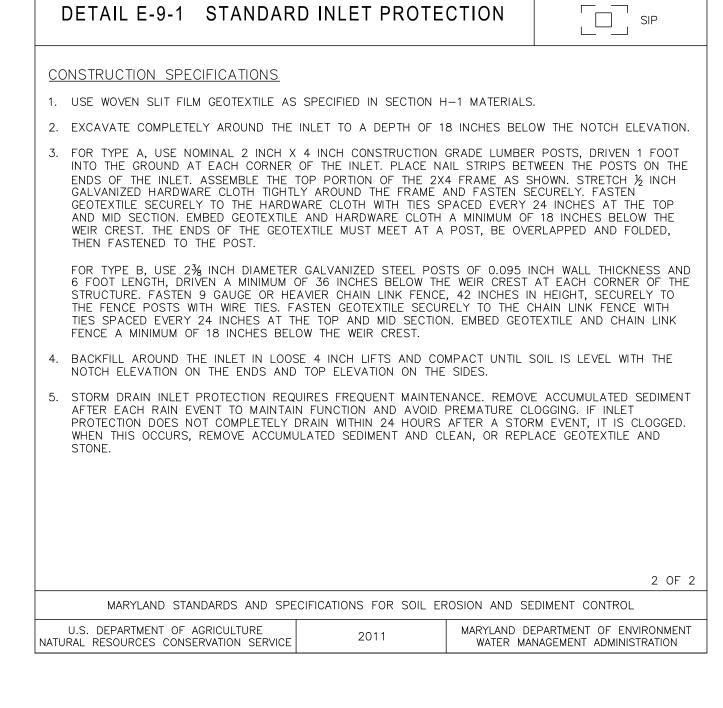
DATE: **NOVEMBER 2019**











APPROVED FOR: Stormwater Management: BIOSWALES, PERMEABLE PAVEMENT Reviewed Approved Reviewed Approved Reviewed

MONTGOMERY COUNTY 35% DESIGN DEPARTMENT OF TRANSPORTATION NOT FOR CONSTRUCTION GAITHERSBURG, MARYLAND RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED Chief, Division of Transportation Engineering RJM ENGINEERING Designed by: _____ Drawn by: ____ Checked by: _ REVISION DATE

STANDARD SYMBOL

SM FILE # Sediment Control Technical Requirements: Administrative Requirements: SEDIMENT CONTROL PERMIT NO. NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT. 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

Date

Date

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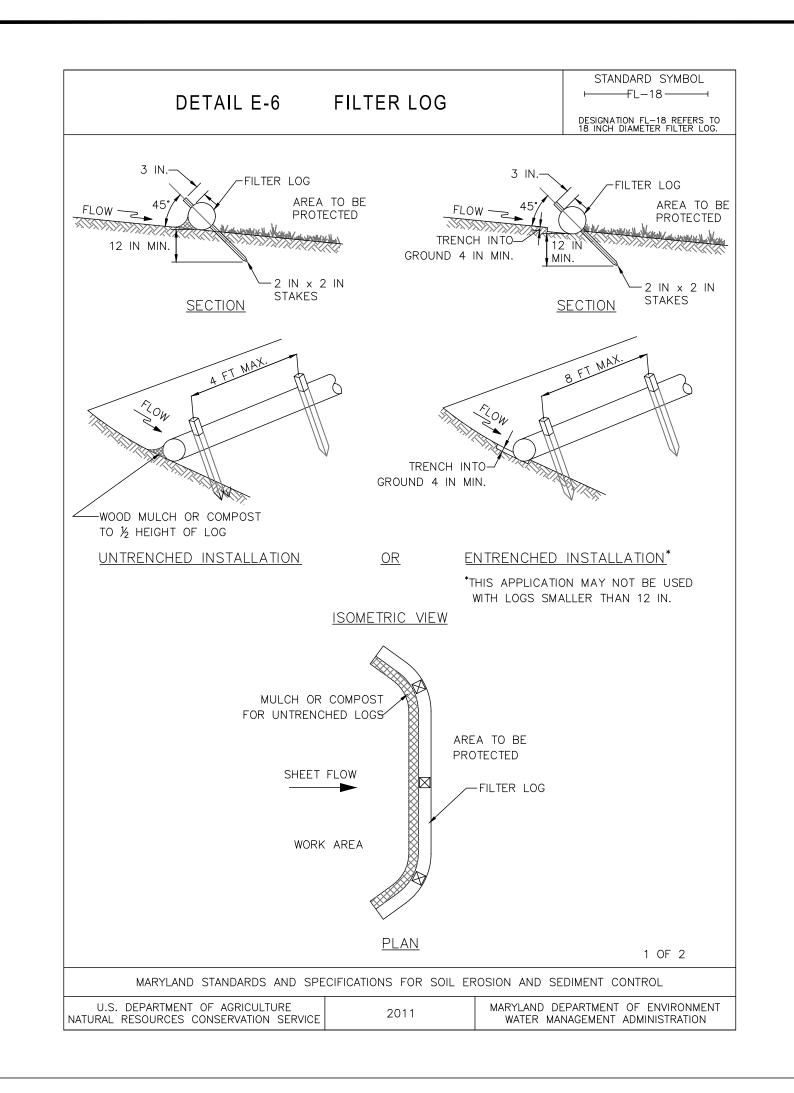
EROSION AND SEDIMENT CONTROL SC-02 DETAIL SHEET GOOD HOPE ROAD SIDEPATH

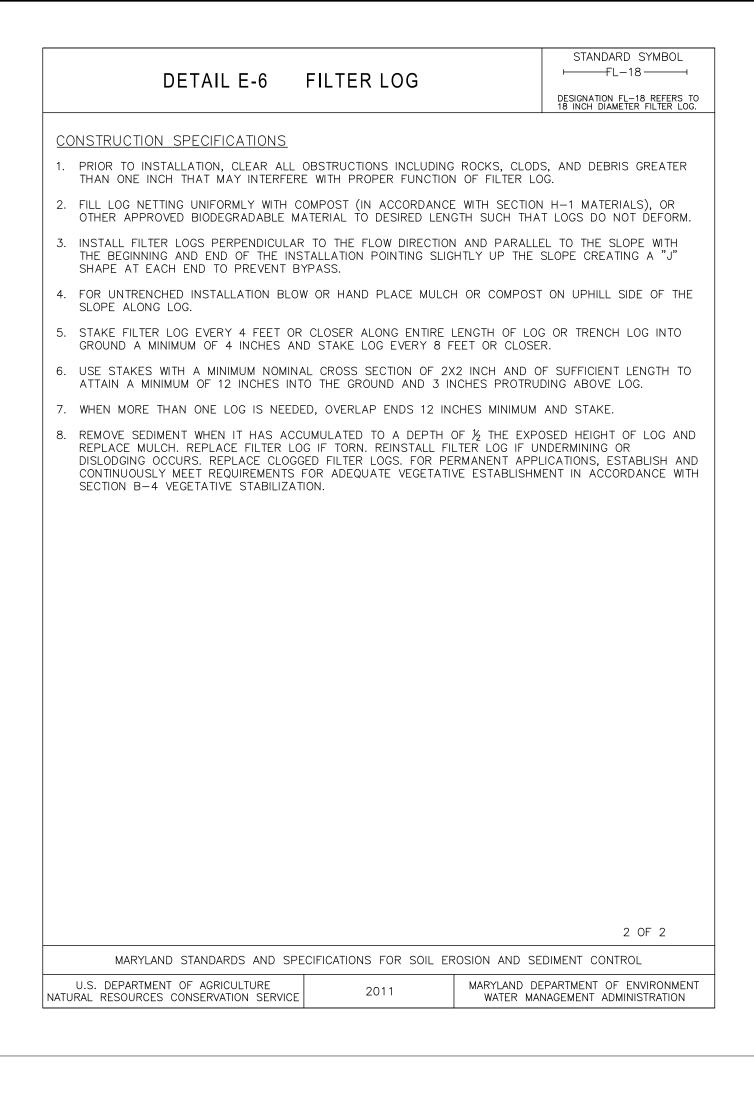
properties.

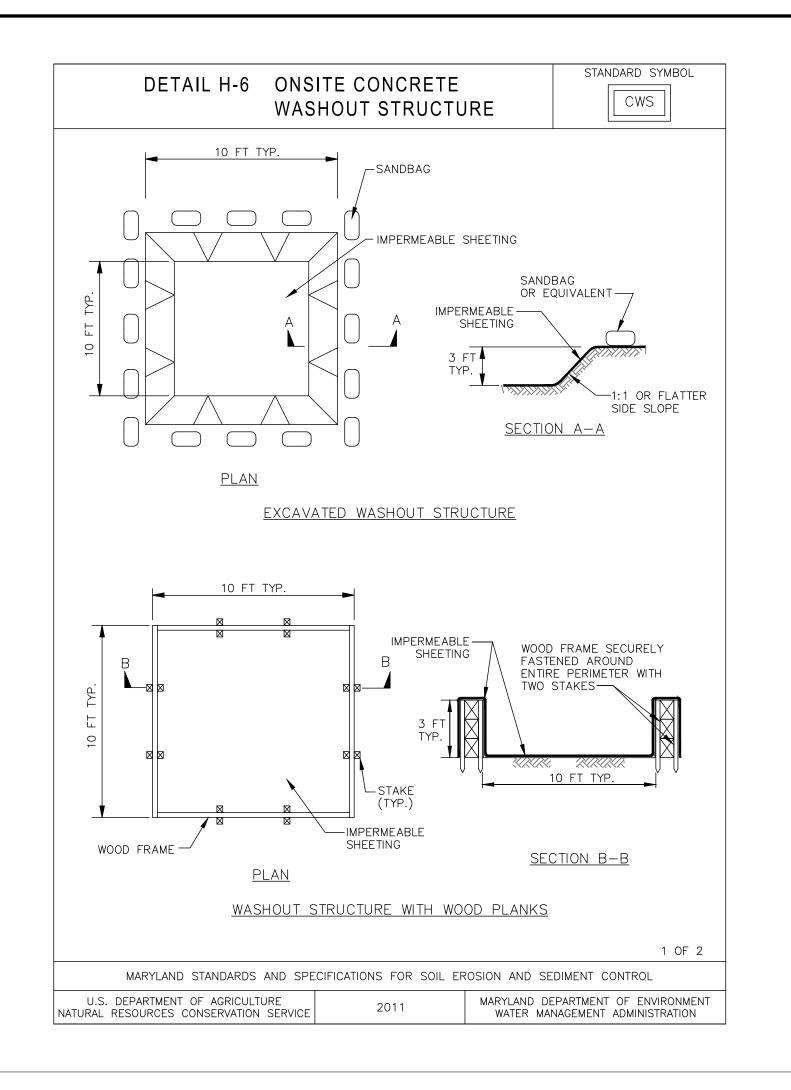
SCALE: NOT TO SCALE Project No. : <u>501902</u>

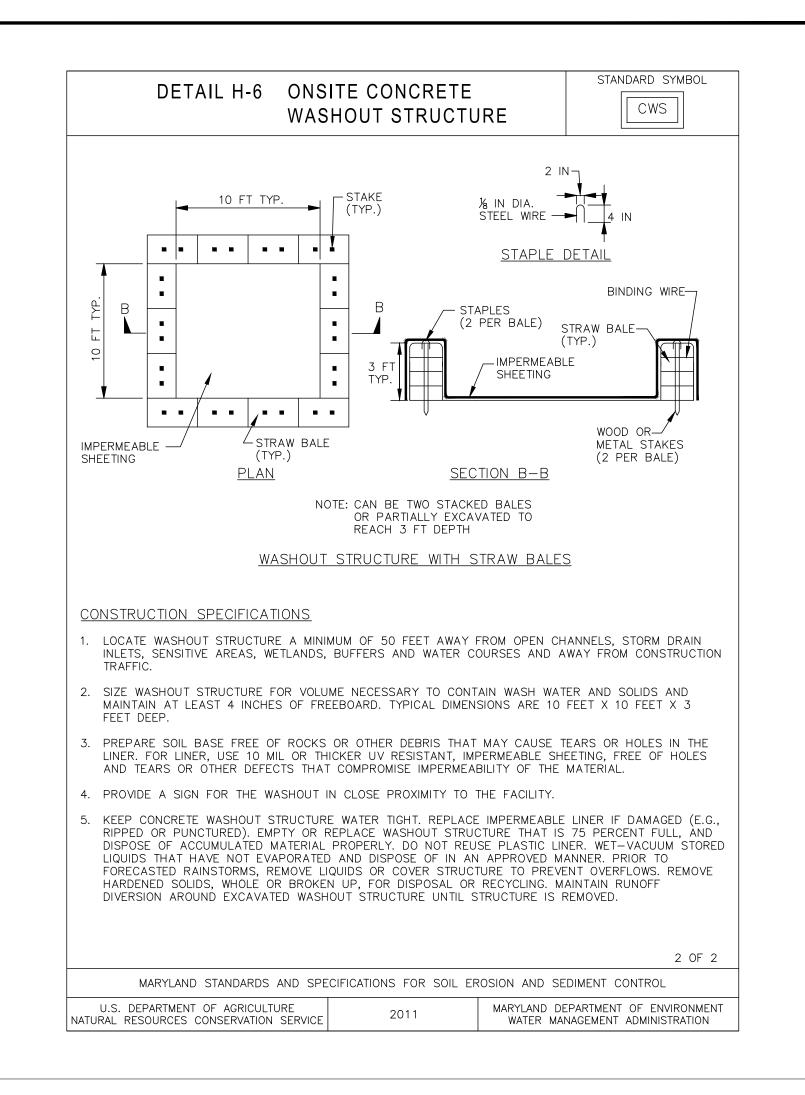
DATE: **NOVEMBER 2019** SHEET ____19 ____ of ____75

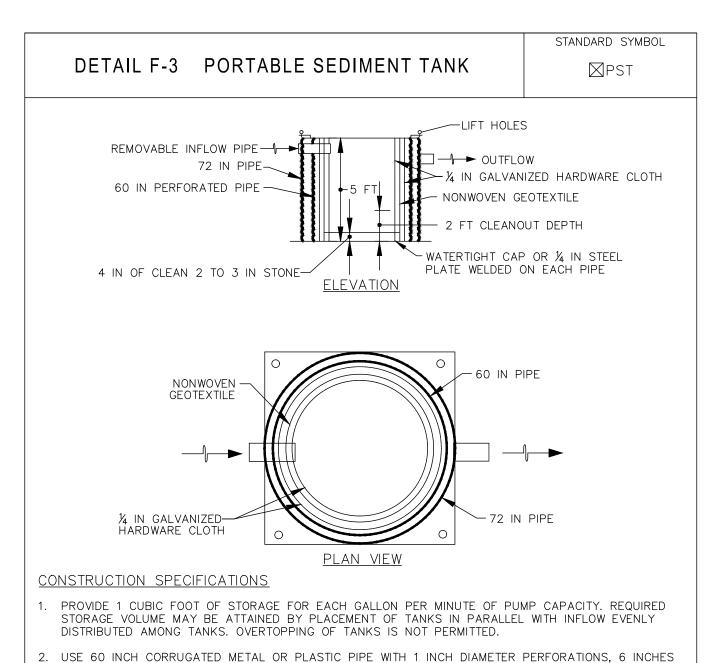
engineer or other responsible person of professional liability or ethical responsibility for the adequacy of the drainage design as it affects uphill or downhill











ON CENTER FOR THE INNER PIPE. LINE PIPE WITH NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION

H-1 MATERIALS, SANDWICHED BETWEEN, AND ATTACHED TO, 1/4 INCH HARDWARE CLOTH.

3. OVERLAP GEOTEXTILE 8 INCHES MINIMUM AT VERTICAL SEAM AND AT THE BOTTOM PLATE.

6. INFLOW PIPE MUST DISCHARGE INTO INNER PIPE AND BE REMOVABLE.

EQUIVALENT RECYCLED CONCRETE.

INVERT LOWER THAN INFLOW PIPE

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

4. ANCHOR GEOTEXTILE AT BOTTOM OF TANK WITH 4 INCHES OF 2 TO 3 INCH CLEAN STONE OR

5. USE 72 INCH CORRUGATED METAL OR PLASTIC OUTER PIPE WITH PERMANENT OUTFLOW PIPE WITH

7. PLACE TANK ON LEVEL SURFACE AND DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.

8. A PORTABLE SEDIMENT TANK REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT

FROM INNER PIPE WHEN IT REACHES TWO FEET IN DEPTH. IF SYSTEM CLOGS, PULL OUT INNER PIPE, REMOVE ACCUMULATED SEDIMENT, AND REPLACE GEOTEXTILE. KEEP POINT OF DISCHARGE FREE OF

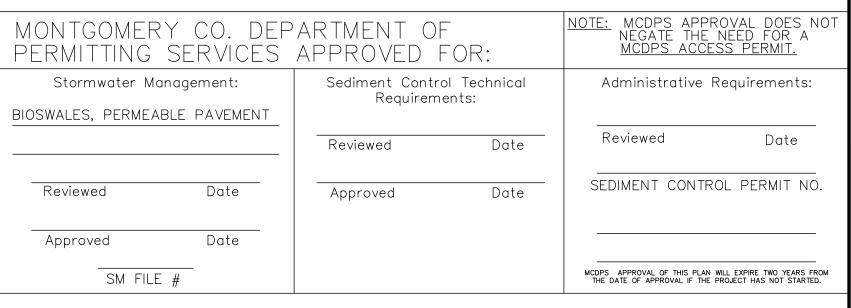
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

TREE PRESERVATION NOTES

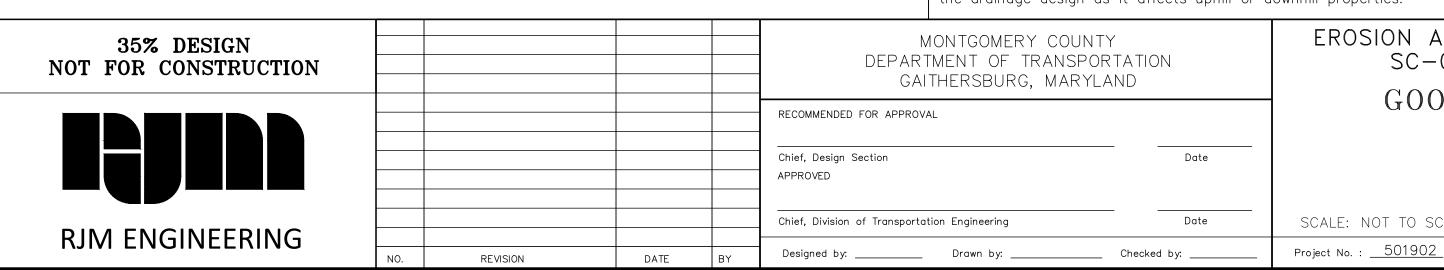
COORDINATE ALL TREE PRESERVATION ACTIVITIES WITH EROSION & SEDIMENT CONTROL ACTIVITIES AND THE COUNTY ARBORIST AND CONSTRUCTION INSPECTOR.

- 1. PLACE TREE PROTECTION FENCE AS INDICATED ON THE PLANS AND AS PER THE DIRECTION OF THE COUNTY ARBORIST AND CONSTRUCTION INSPECTOR PRIOR TO CONSTRUCTION ACTIVITIES.
- 2. FOR UNDERGROUND UTILITY CONSTRUCTION, ALL TREE PROTECTION MEASURES AND EXCAVATION OPERATIONS SHALL HAVE ADDITIONAL SUPERVISION PROVIDED BY THE COUNTY ARBORIST. UTILITY WORK SHALL BE CONDUCTED SO AS TO AVOID INJURY TO THE TREE TRUNKS, BRANCHES, AND ROOTS.
- 3. MAINTAIN WELL-DEFINED AND MARKED PEDESTRIAN WALKWAYS DURING CONSTRUCTION AND DO NOT ALLOW PEDESTRIAN TRAFFIC OVER TREE ROOTS.
- 4. NONE OF THE FOLLOWING SHALL OCCUR WITHIN THE CRITICAL ROOT ZONE OF A STREET TREE WITHOUT THE COUNTY ARBORIST'S PERMISSION: ALTERATION OR DISTURBANCE TO EXISTING GRADE, STAGING/STORAGE OF CONSTRUCTION MATERIALS, EQUIPMENT, SOIL, OR DEBRIS; DISPOSAL OF ANY LIQUIDS E.G. CONCRETE, GAS, OIL, PAINT; AND BLACKTOP, AND TRENCHING.
- 5. NO HEAVY EQUIPMENT SHALL BE USED TO REMOVE EXISTING HARDSCAPE WITHIN THE DRIPLINE OF AN EXISTING STREET TREE. EXCAVATIONS WITHIN THE DRIP LINE SHALL PROCEED WITH CARE BY USE OF HAND TOOLS OR EQUIPMENT THAT WILL NOT CAUSE INJURY TO TREE TRUNKS, BRANCHES, AND ROOTS.
- 6. NO ROOTS GREATER THAN TWO (2) INCHES IN DIAMETER SHALL BE CUT WITHOUT THE PERMISSION OF THE COUNTY ARBORIST.
- 7. PERFORM AERATION OPERATIONS AROUND TREE ROOTS AND GRASS PANEL AREAS TO IMPROVE DRAINAGE IN COMPACTED SOILS.

- 8. PROVIDE WATER, ADDITIONAL FERTILIZER, AND ORGANIC AMENDMENTS TO PLANTED AREAS THAT ARE EXPECTED TO REMAIN, PRIOR TO, DURING, AND POST—CONSTRUCTION. DO NOT ALLOW TREES TO BECOME WATER—STRESSED DURING OR POST—CONSTRUCTION.
- 9. AVOID CAUSING CHANGES TO PH IN SOILS ASSOCIATED WITH PLANTED AREAS. MATERIALS PLACED IN CLOSE PROXIMITY TO TREE ROOTS SHOULD BE AS SELF-CONTAINED AS POSSIBLE TO PREVENT FUTURE LEACHING OF MATERIALS AND CHEMICALS INTO SOILS.
- 10. MINIMIZE EXPOSURE OF ROOTS DURING CONSTRUCTION WHEN WORK IS PERFORMED IN COLD OR HOT WEATHER.



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.



EROSION AND SEDIMENT CONTROL SC-03 DETAIL SHEET

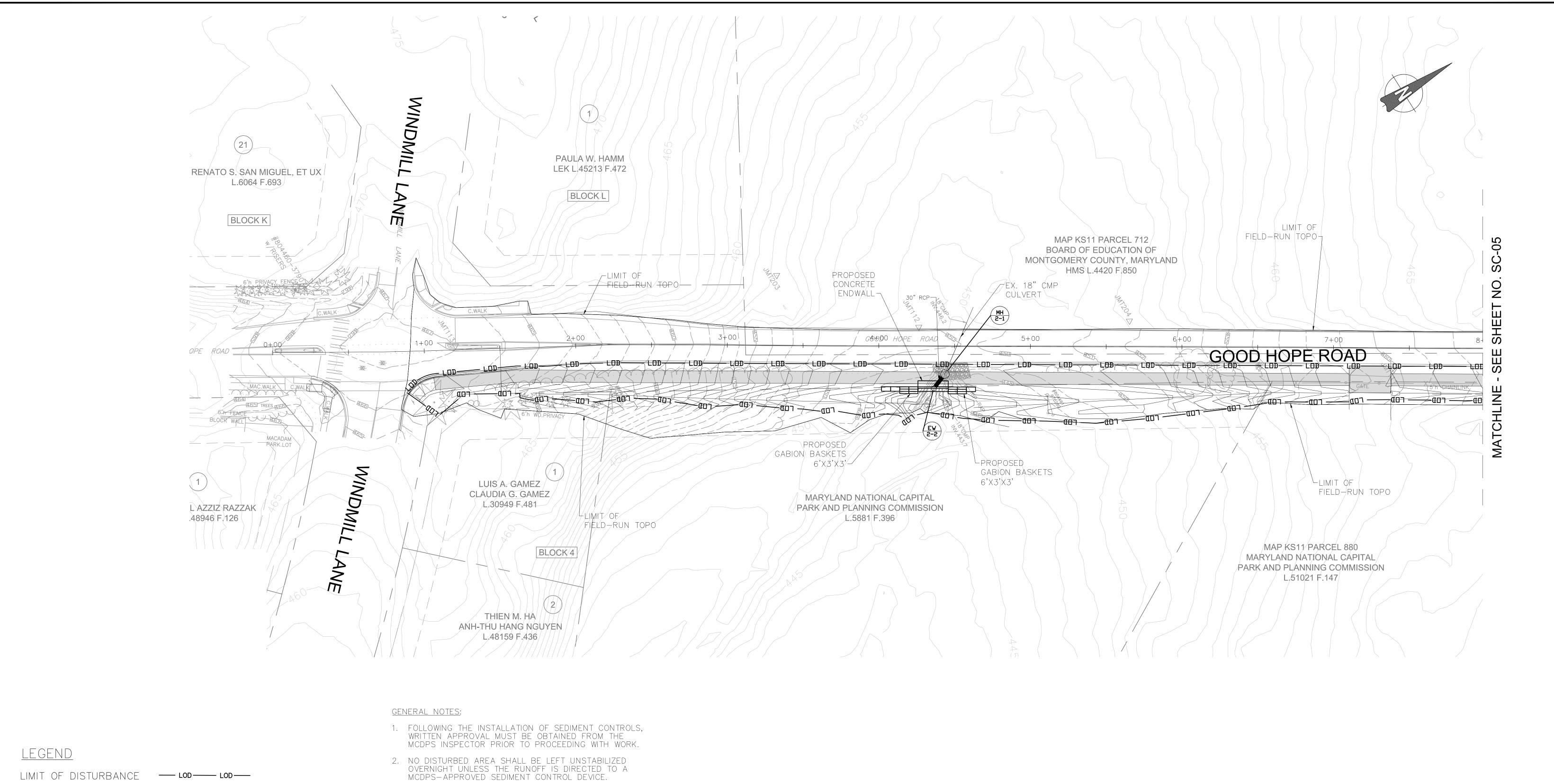
GOOD HOPE ROAD SIDEPATH

SCALE: NOT TO SCALE DATE: NOVEMBER 2019

MARYLAND DEPARTMENT OF ENVIRONMENT

WATER MANAGEMENT ADMINISTRATION

SHEET 20 of 75



STANDARD INLET PROTECTION [] SIP

PAVEMENT REMOVAL

PROPOSED ASPHALT

PROPOSED PERMEABLE PAVEMENT

- 3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
- 4. EROSION AND SEDIMENT CONTROL DEVICES AND/OR MEASURES ARE TO REMAIN IN PLACE UNTIL THEIR REMOVAL IS APPROVED IN WRITING BY THE MCDPS INSPECTOR. STABILIZE ANY DISTURBED AREAS RESULTING FROM REMOVAL OF THE SEDIMENT CONTROL DEVICES.
- 5. "DRY WEATHER FORECAST PER NOAA" SHALL BE CONSTRUED TO BE A FORECAST SHOWING A LIKELIHOOD OF PRECIPITATION AS BEING LESS THAN 20%.
- 6. AREAS OF SAME DAY STABILIZATION SHALL BE STABILIZED AS FOLLOWS: GRADED AGGREGATE BASE (OR PAVEMENT) FOR AREAS TO BE PAVED; SOIL STABILIZATION MATTING (SSM) FOR DITCHES WITHOUT BASEFLOW; AND SEED & MULCH FOR SOIL AREAS NOT IN DITCHES OR STREAMS.

35% DESIGN NOT FOR CONSTRUCTION					MONTGOMERY COUNTY DEPARTMENT OF TRANSPORT GAITHERSBURG, MARYLAN		EROSION AN SC-C
					RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED	Date	GOOI
RJM ENGINEERING	NO.	REVISION	DATE	BY	Chief, Division of Transportation Engineering Designed by: KJS Drawn by: KJS	Date Checked by:DZ	SCALE: 1"=30' Project No. : 501902

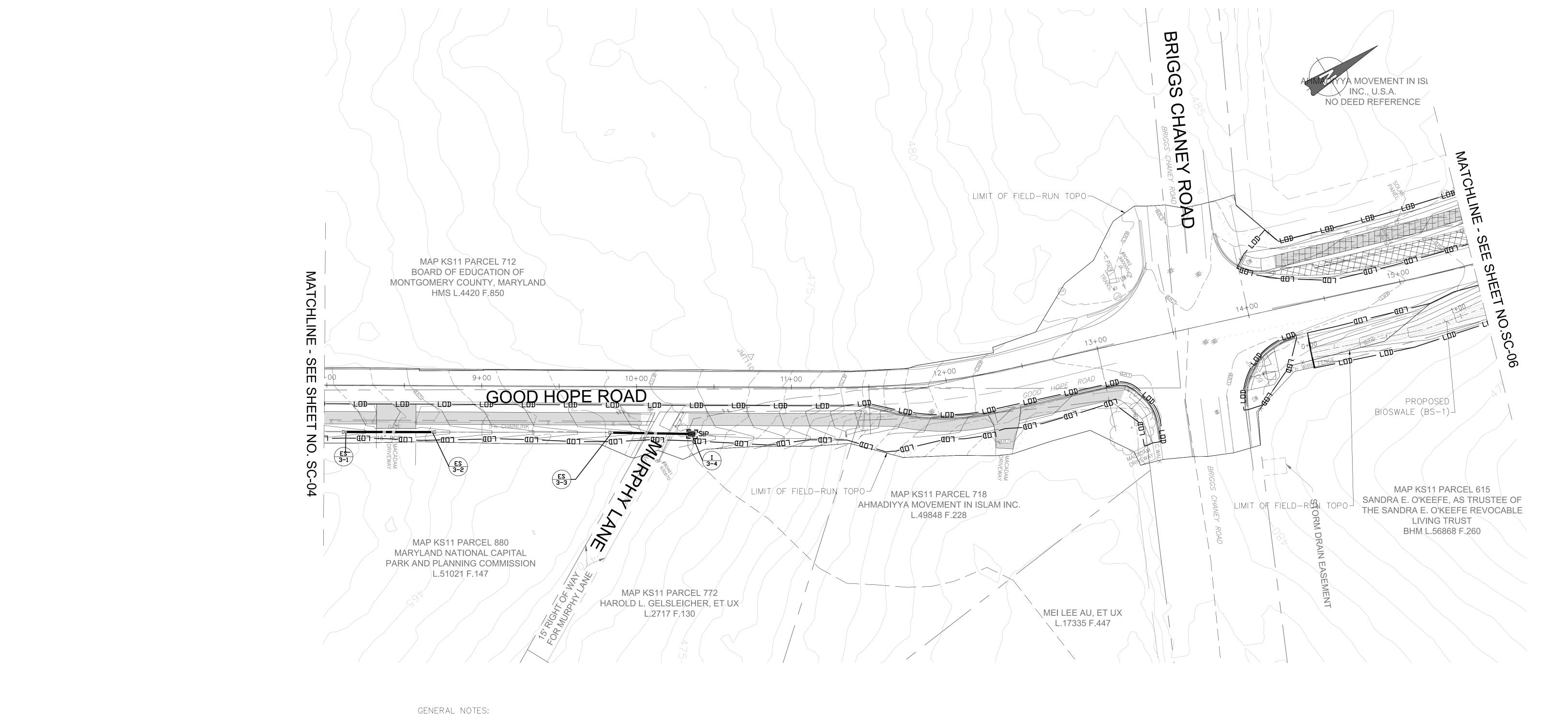
EROSION AND SEDIMENT CONTROL
SC-04 PLAN SHEET

GOOD HOPE ROAD
SIDEPATH

SCALE: 1"=30'

DATE: NOVEMBER 2019

SHEET <u>21</u> of <u>75</u>



LEGEND

LIMIT OF DISTURBANCE — LOD — LOD — EX. MAJOR CONTOUR EX. MINOR CONTOUR ______ PROP. MAJOR CONTOUR PROP. MINOR CONTOUR DRAINAGE AREA STANDARD INLET PROTECTION [] SIP

PAVEMENT REMOVAL

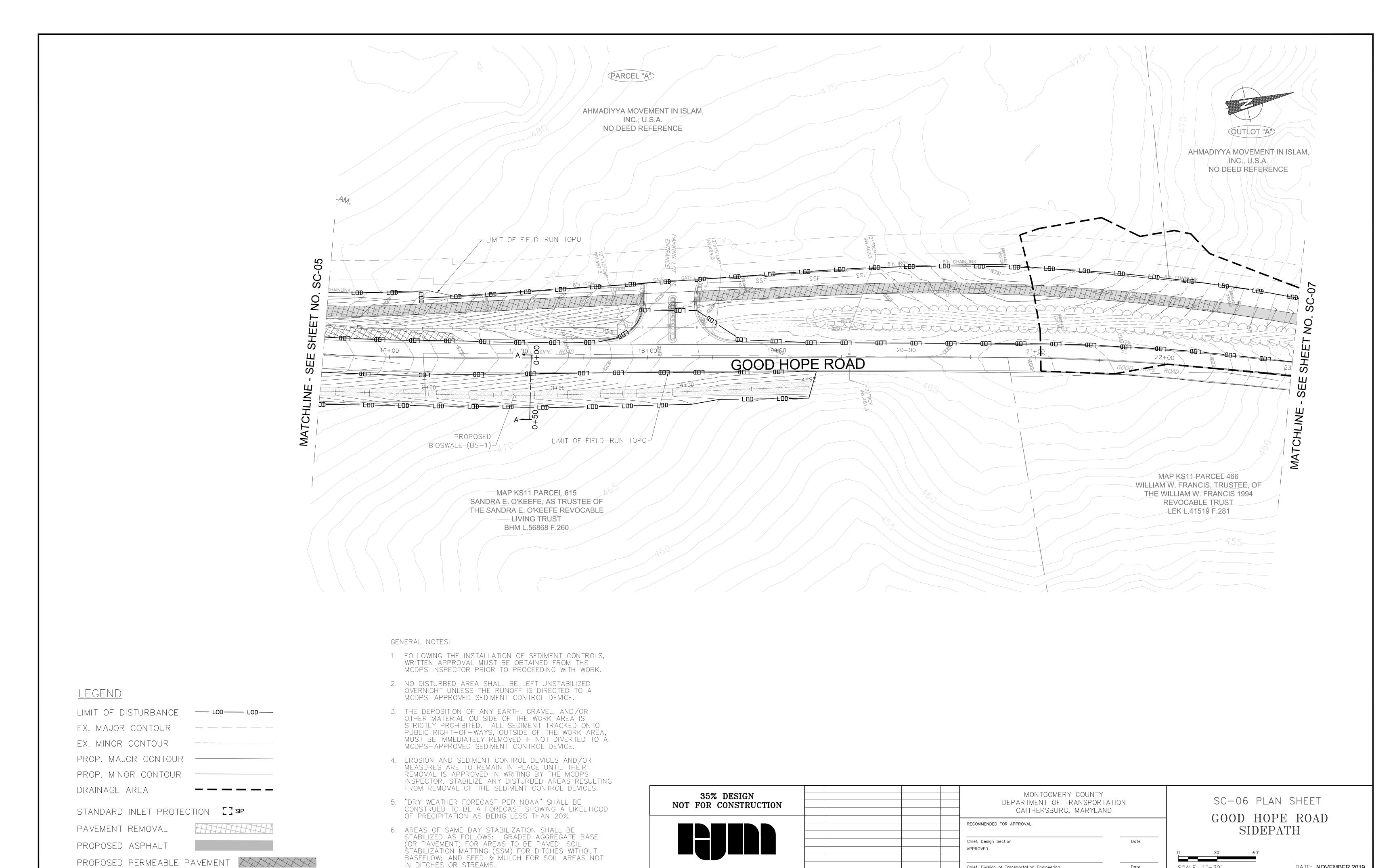
PROPOSED ASPHALT

PROPOSED PERMEABLE PAVEMENT

<u>GENERAL NOTES:</u>

- 1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS, WRITTEN APPROVAL MUST BE OBTAINED FROM THE MCDPS INSPECTOR PRIOR TO PROCEEDING WITH WORK.
- 2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
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35% DESIGN NOT FOR CONSTRUCTION					MONTGOMERY COUNTY DEPARTMENT OF TRANSPOR GAITHERSBURG, MARYLA	RTATION	SC-05 PLAN SHEET GOOD HOPE ROAD
					Chief, Design Section APPROVED	Date	SIDEPATH
RJM ENGINEERING	NO.	REVISION	DATE	BY	Chief, Division of Transportation Engineering Designed by: KJS Drawn by: KJS	Date Checked by: DZ	SCALE: 1"=30' DATE: NOVEMBER 2019 Project No. :501902_ SHEET22 of75



RJM ENGINEERING

REVISION

DATE

Chief, Division of Transportation Engineering

Designed by: KJS Drawn by: KJS Checked by: DZ

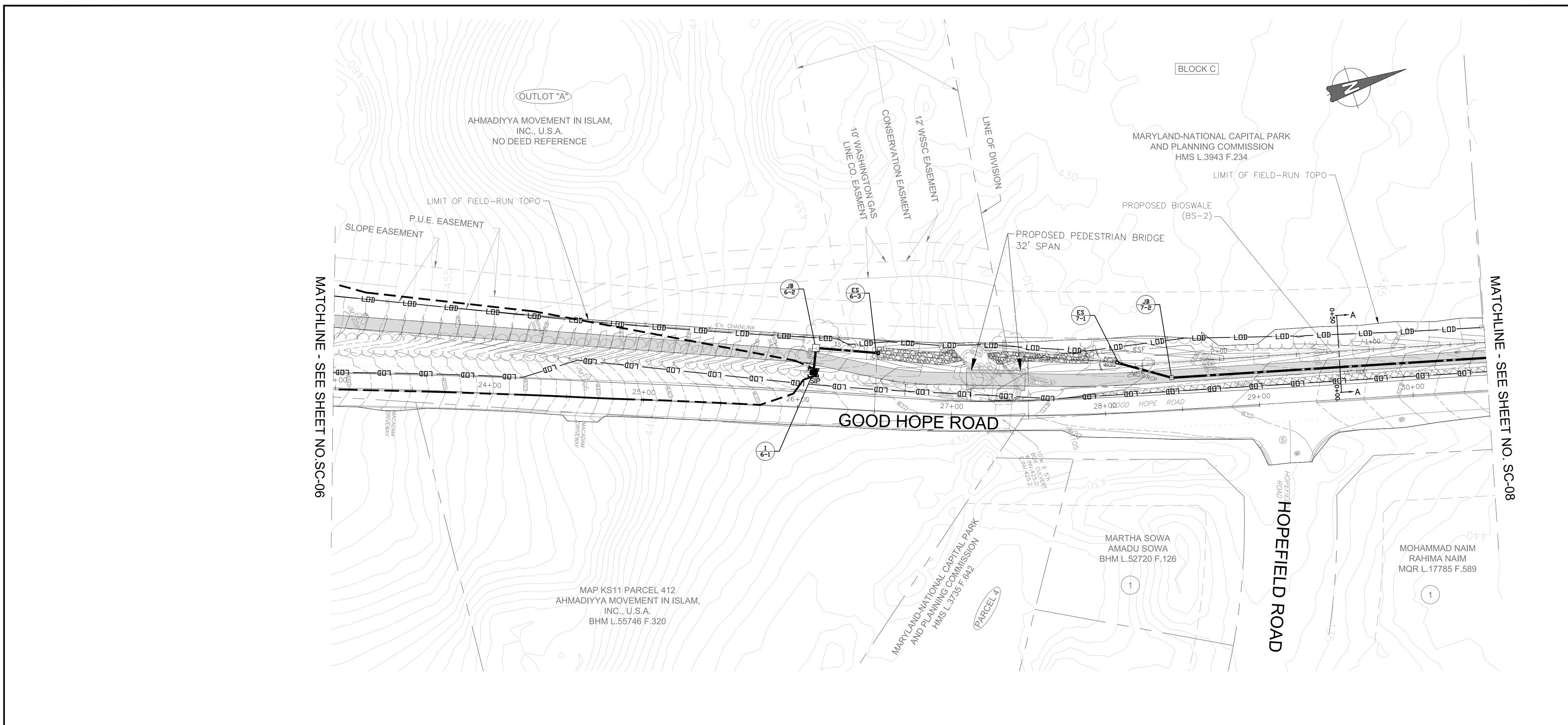
Date

SCALE: 1"=30'

Project No. : <u>501902</u>

DATE: NOVEMBER 2019

SHEET <u>23</u> of <u>75</u>



LEGEND

LIMIT OF DISTURBANCE EX. MAJOR CONTOUR EX. MINOR CONTOUR _____ PROP. MAJOR CONTOUR PROP. MINOR CONTOUR DRAINAGE AREA

STANDARD INLET PROTECTION [] SIP

PAVEMENT REMOVAL

PROPOSED ASPHALT

PROPOSED PERMEABLE PAVEMENT

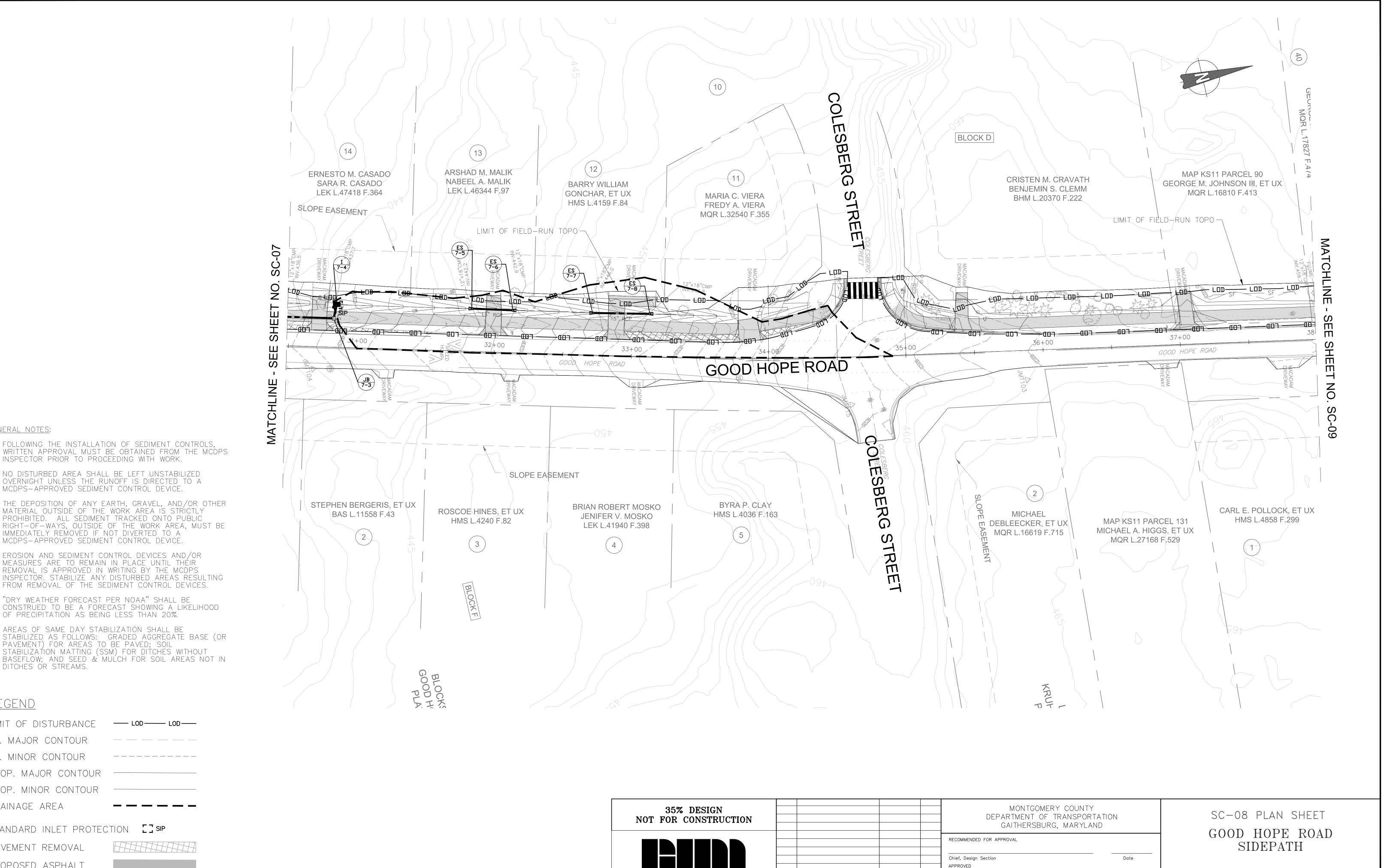
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- 3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT—OF—WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
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35% DESIGN NOT FOR CONSTRUCTION			DEPARTMENT OF TRANSP	MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION GAITHERSBURG, MARYLAND		
			RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED	Date		OPE ROAD CPATH
RJM ENGINEERING	NO. REVISION	DATE B'	Chief, Division of Transportation Engineering BY Designed by: KJS Drawn by: KJS	Date Checked by:DZ	SCALE: 1"=30' Project No. :501902_	DATE: NOVEM SHEET24 of

DATE: NOVEMBER 2019

SHEET <u>24</u> of <u>75</u>



RJM ENGINEERING

Chief, Division of Transportation Engineering

Designed by: KJS Drawn by: KJS Checked by: DZ

OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO A

GENERAL NOTES:

MCDPS-APPROVED SEDIMENT CONTROL DEVICE. 3. THE DEPOSITION OF ANY EARTH, GRAVEL, AND/OR OTHER

1. FOLLOWING THE INSTALLATION OF SEDIMENT CONTROLS,

INSPECTOR PRIOR TO PROCEEDING WITH WORK.

- MATERIAL OUTSIDE OF THE WORK AREA IS STRICTLY PROHIBITED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT—OF—WAYS, OUTSIDE OF THE WORK AREA, MUST BE IMMEDIATELY REMOVED IF NOT DIVERTED TO A MCDPS-APPROVED SEDIMENT CONTROL DEVICE.
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LEGEND

LIMIT OF DISTURBANCE — LOD—— LOD—— EX. MAJOR CONTOUR EX. MINOR CONTOUR ______ PROP. MAJOR CONTOUR ----PROP. MINOR CONTOUR DRAINAGE AREA STANDARD INLET PROTECTION [] SIP PAVEMENT REMOVAL PROPOSED ASPHALT

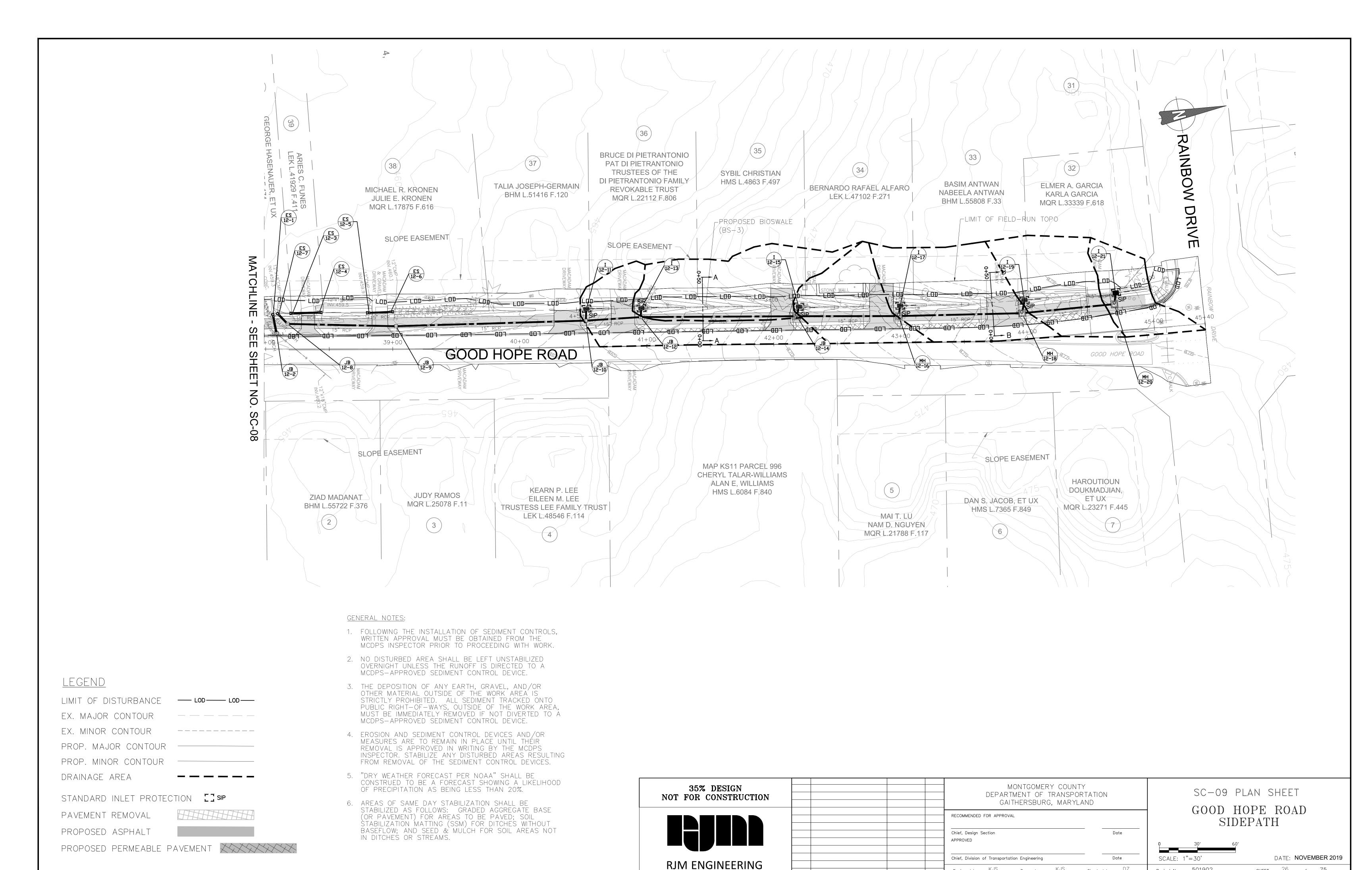
PROPOSED PERMEABLE PAVEMENT

SCALE: 1"=30'

Project No. : <u>501902</u>

DATE: NOVEMBER 2019

SHEET <u>25</u> of <u>75</u>



SHEET <u>26</u> of <u>75</u>

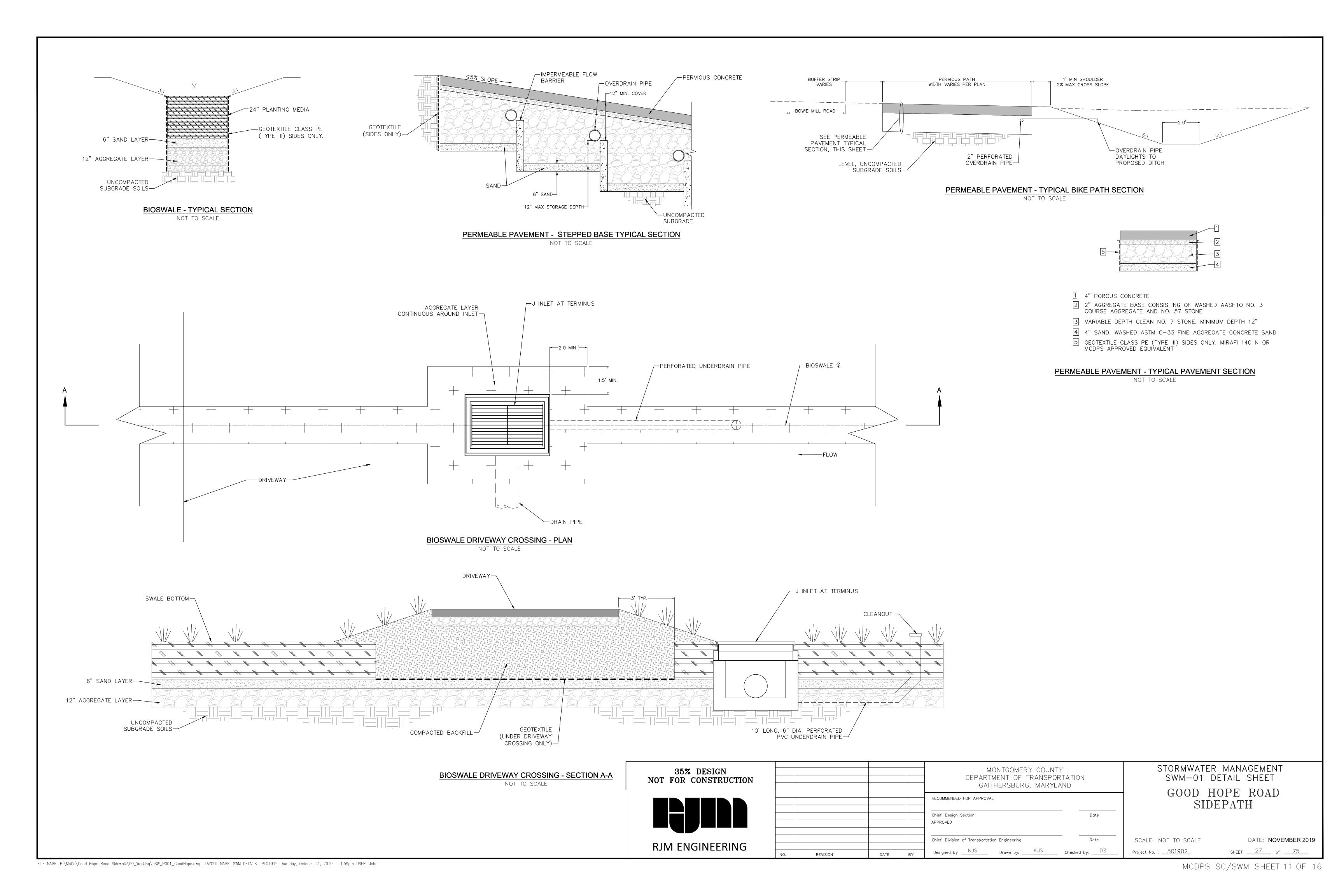
Designed by: KJS Drawn by: KJS

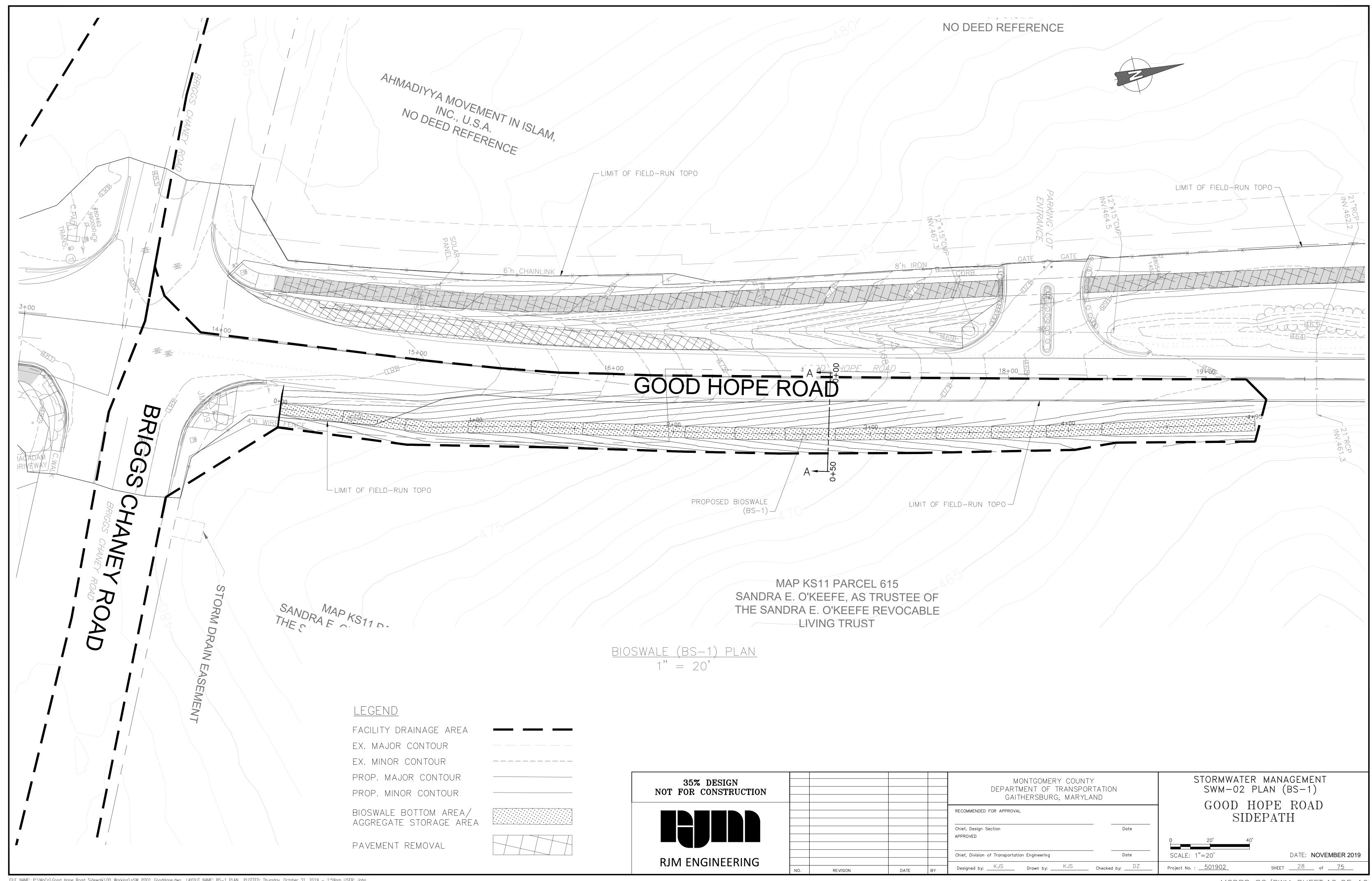
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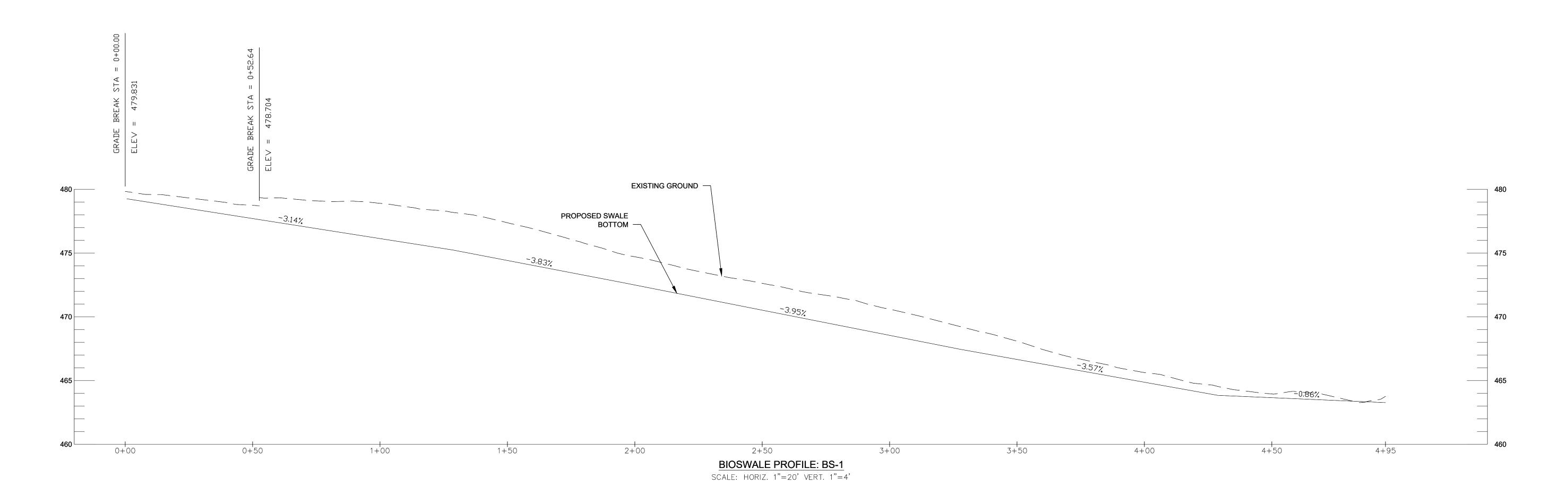
DATE

Checked by: DZ

Project No. : <u>501902</u>







NOTES:

- 1. GRAVEL LAYER: THE GRAVEL LAYER MUST MEET MSHA SIZE #7 (TABLE 901A), AND SHALL BE 12-INCHES IN DEPTH. NO GEOTEXTILE OR FILTER FABRIC IS ALLOWED TO BE PLACED HORIZONTALLY ANYWHERE WITHIN FILTER MEDIA, EXCEPT AT DRIVEWAY CROSSINGS, AS SHOWN IN THE TYPICAL SECTION. THE GRAVEL MUST BE CLEAN AND MUST BE STORED AND INSTALLED IN SUCH A MANNER THAT IT DOES NOT BECOME CONTAMINATED WITH SEDIMENT BEFORE OR AFTER INSTALLATION.
- 2. PLANTING MEDIA: THE PLANTING MEDIA SHALL BE 24 INCHES THICK AND CONFORM TO MONTGOMERY COUNTY MICRO-BIORETENTION FACILITY PLANTING MEDIA SPECIFICATIONS:

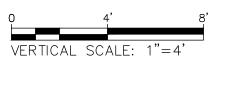
 1/3 PERLITE OR SOLITE, 1/3 COMPOST AND 1/3 TOPSOIL. THE PERLITE SHALL BE COARSE GRADE HORTICULTURAL PERLITE. THE COMPOST SHALL BE HIGH GRADE COMPOST FREE OF STONES AND PARTIALLY COMPOSTED WOODY MATERIAL.
 - THE TOPSOIL COMPONENT SHALL MEET THE FOLLOWING CRITERIA:

 CONTAIN NO MORE THAN 10% CLAY, 10-25% SILT AND 60-75% SAND AND BE FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN 2 INCHES.

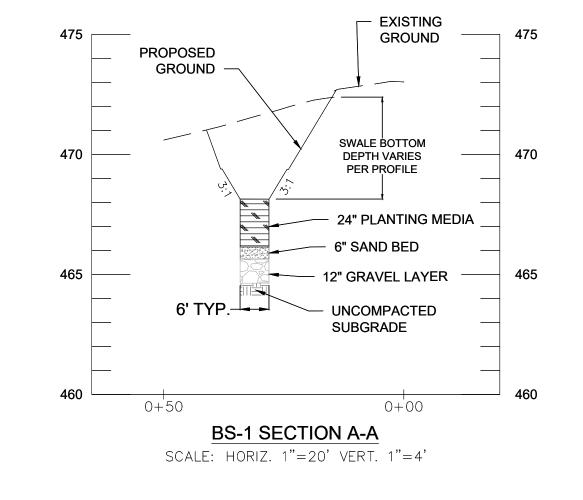
THE FIRST LAYER OF THE PLANTING MEDIUM SHALL BE LIGHTLY TILLED TO MIX IT INTO THE 6—INCH SAND LAYER, SO AS NOT TO CREATE A DEFINITIVE BOUNDARY. THE PLANTING BED SHALL BE FLOODED AFTER PLACEMENT. ANY SETTLEMENT THAT OCCURS SHALL BE FILLED BACK TO THE DESIGN ELEVATION.

- 3. 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.
- 4. PERFORATED PIPE MUST HAVE PERFORATIONS % INCH IN DIAMETER AND LOCATED 4 INCHES ON CENTER, EVERY 90 DEGREES AROUND THE PIPE. PERFORATED PIPE MUST BE AT LEAST 12 INCHES INSIDE THE FILTER MEDIA. IF THIS CANNOT BE ACHIEVED, THEN SIDES OF THE FILTER MEDIA MUST BE LINED WITH FILTER FABRIC. 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.

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR INFILTRATION BERMS		
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. 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. 1. Placement of gravel media and soil conforms to approved plans	INITIALS/DATE	INITIALS/DATE
Final grading and establishment of permanent stabilization conforms to approved plans		



HORIZONTAL SCALE: 1"=20"



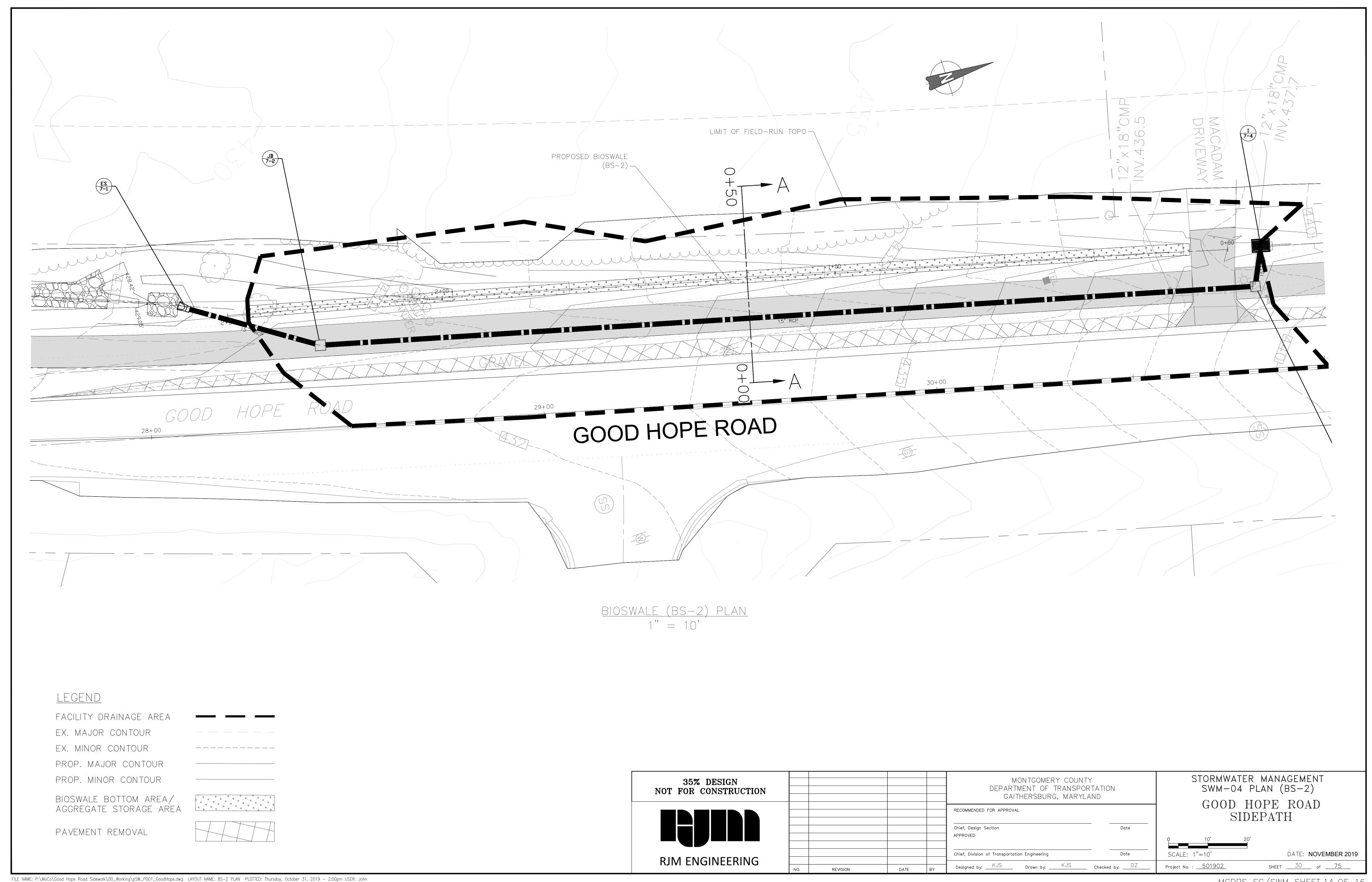
SAND SPECIFICATIONS:

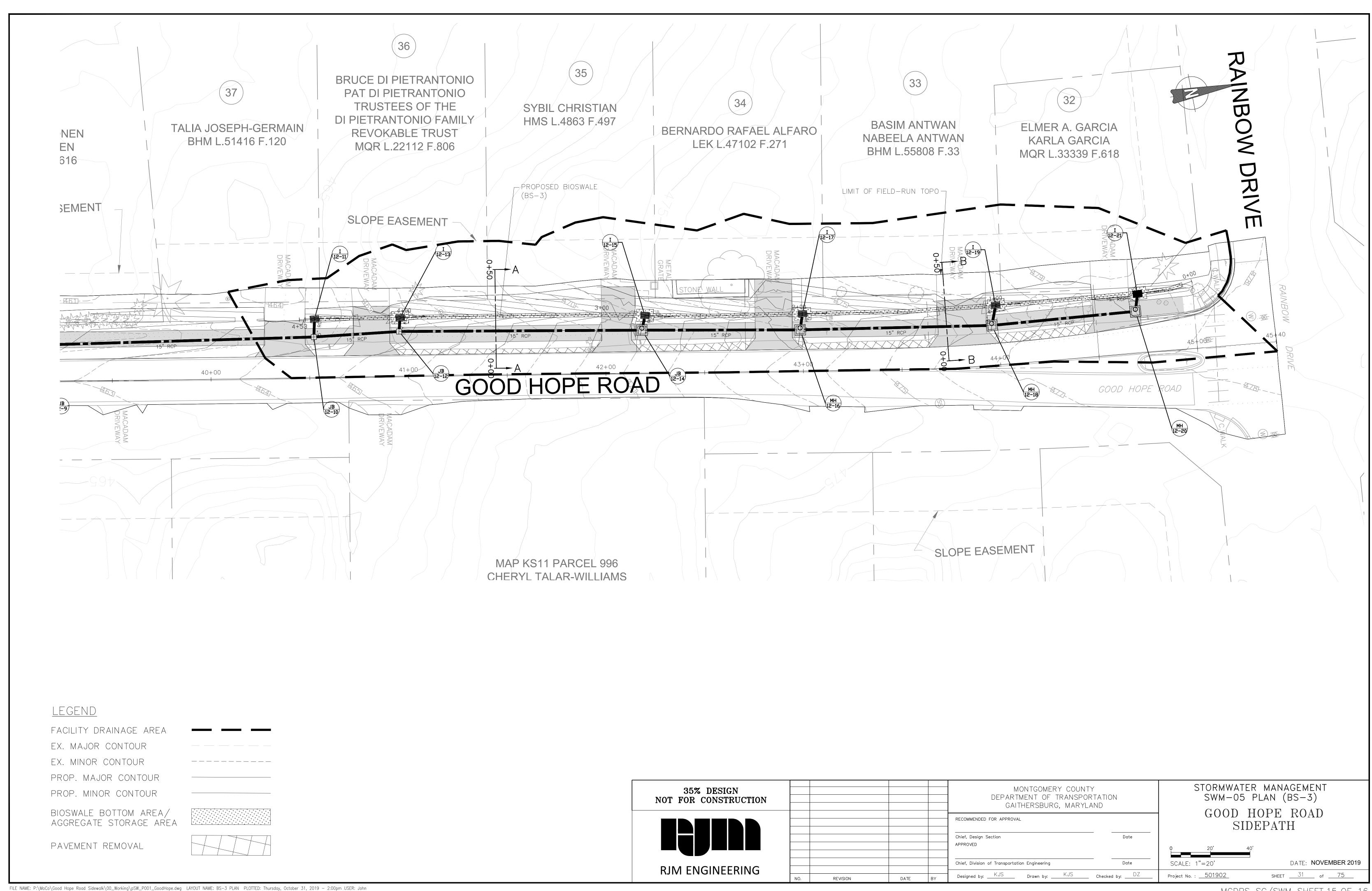
Washed ASTM C33 Fine Aggregate Concrete Sand is utilized for stormwater management applications in Montgomery County. In addition to the ASTM C33 specification, sand must meet ALL of the following conditions:

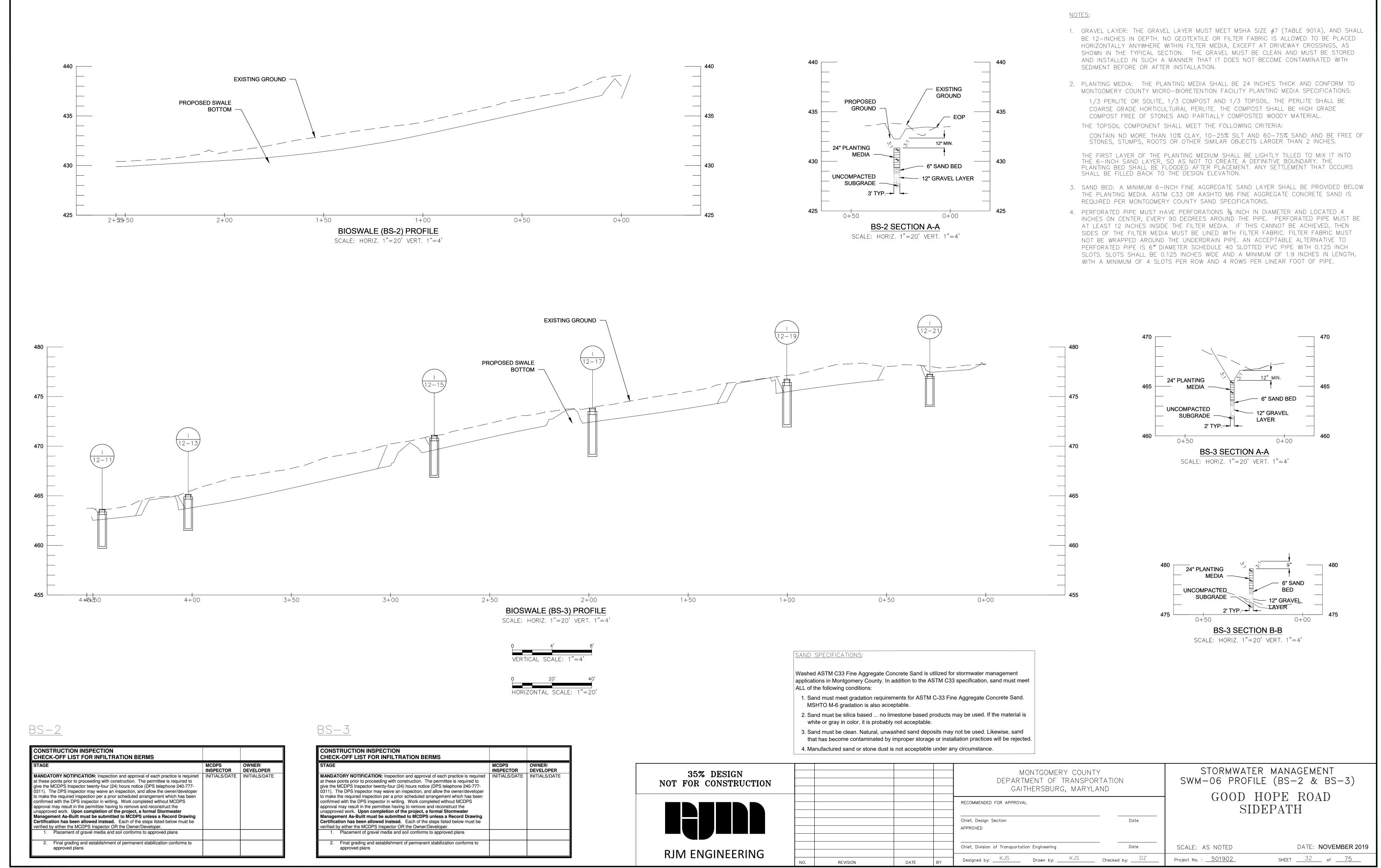
- 1. Sand must meet gradation requirements for ASTM C-33 Fine Aggregate Concrete Sand. MSHTO M-6 gradation is also acceptable.
- 2. Sand must be silica based ... no limestone based products may be used. If the material is white or gray in color, it is probably not acceptable.
- 3. Sand must be clean.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

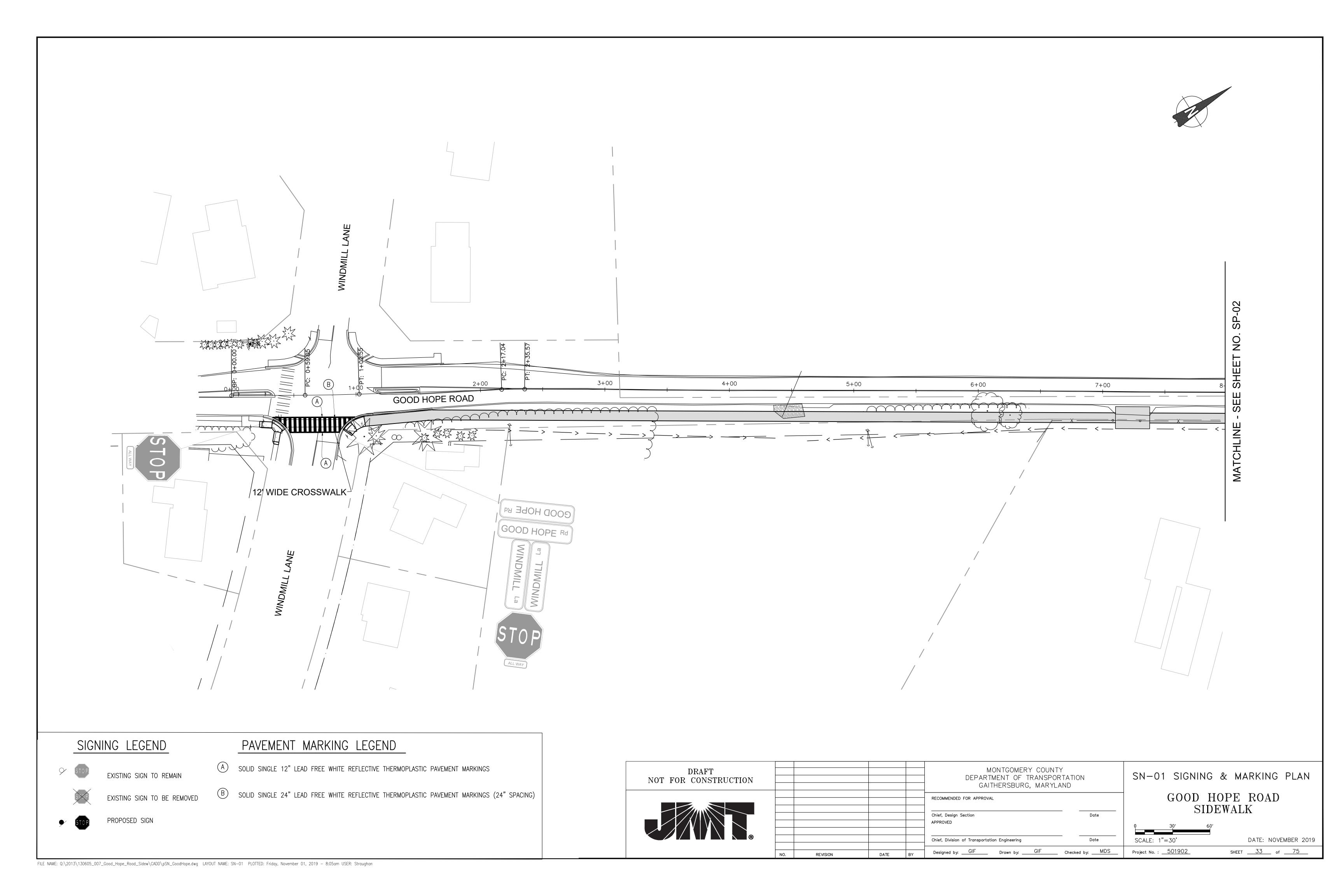
 4. Manufactured sand or stone dust is not acceptable under any circumstance.

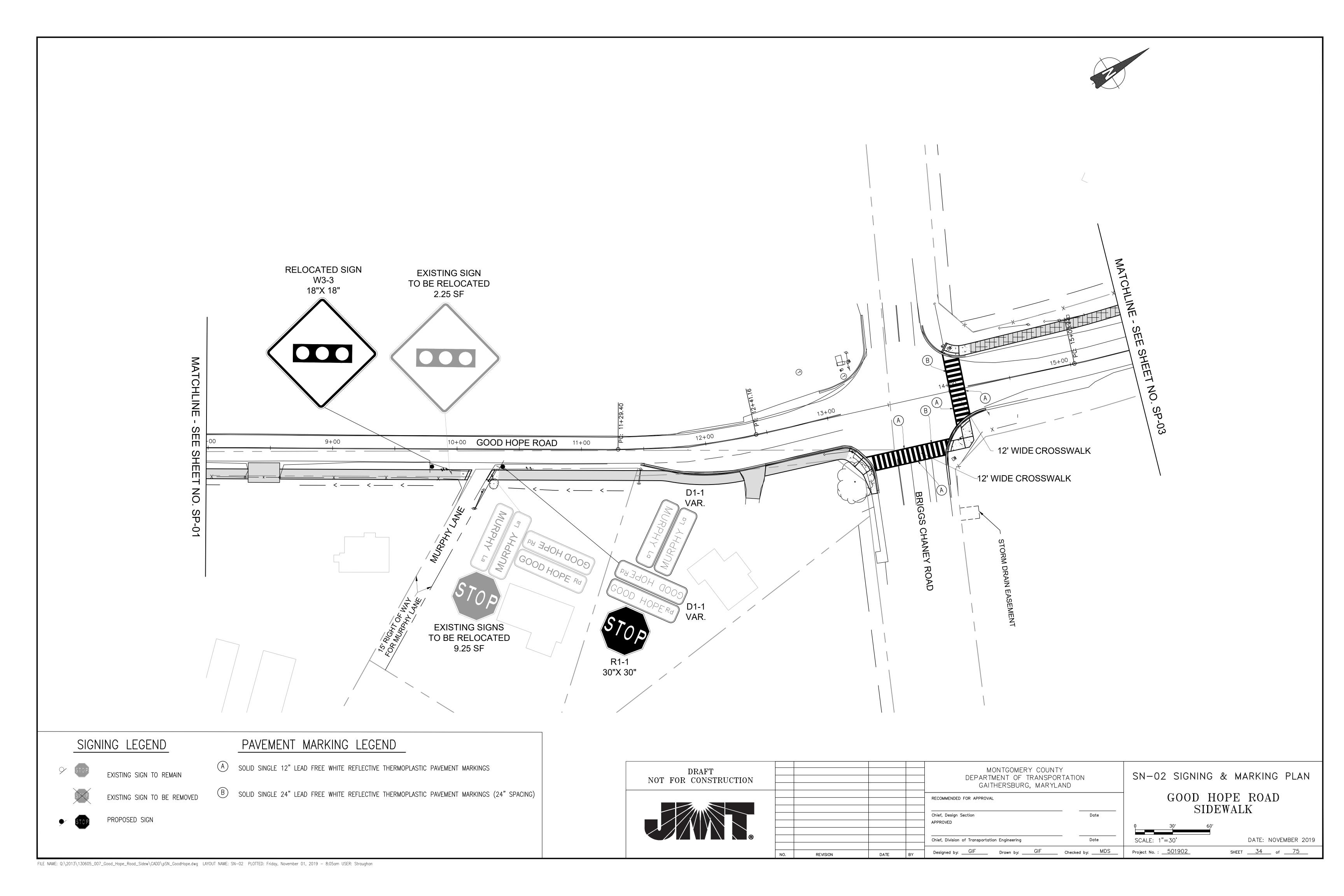
35% DESIGN NOT FOR CONSTRUCTION					MONTGOMERY COUN DEPARTMENT OF TRANSP GAITHERSBURG, MARY	ORTATION	STORMWATER MANAGEMENT SWM-03 PROFILE (BS-1)	
					RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED Date		GOOD HOPE ROAD SIDEPATH	
RJM ENGINEERING	NO.	REVISION	DATE	BY	Chief, Division of Transportation Engineering Designed by: KJS Drawn by: KJS	Date Checked by:DZ	SCALE: AS NOTED Project No. :501902_	DATE: NOVEMBER 2019 SHEET 29 of 75

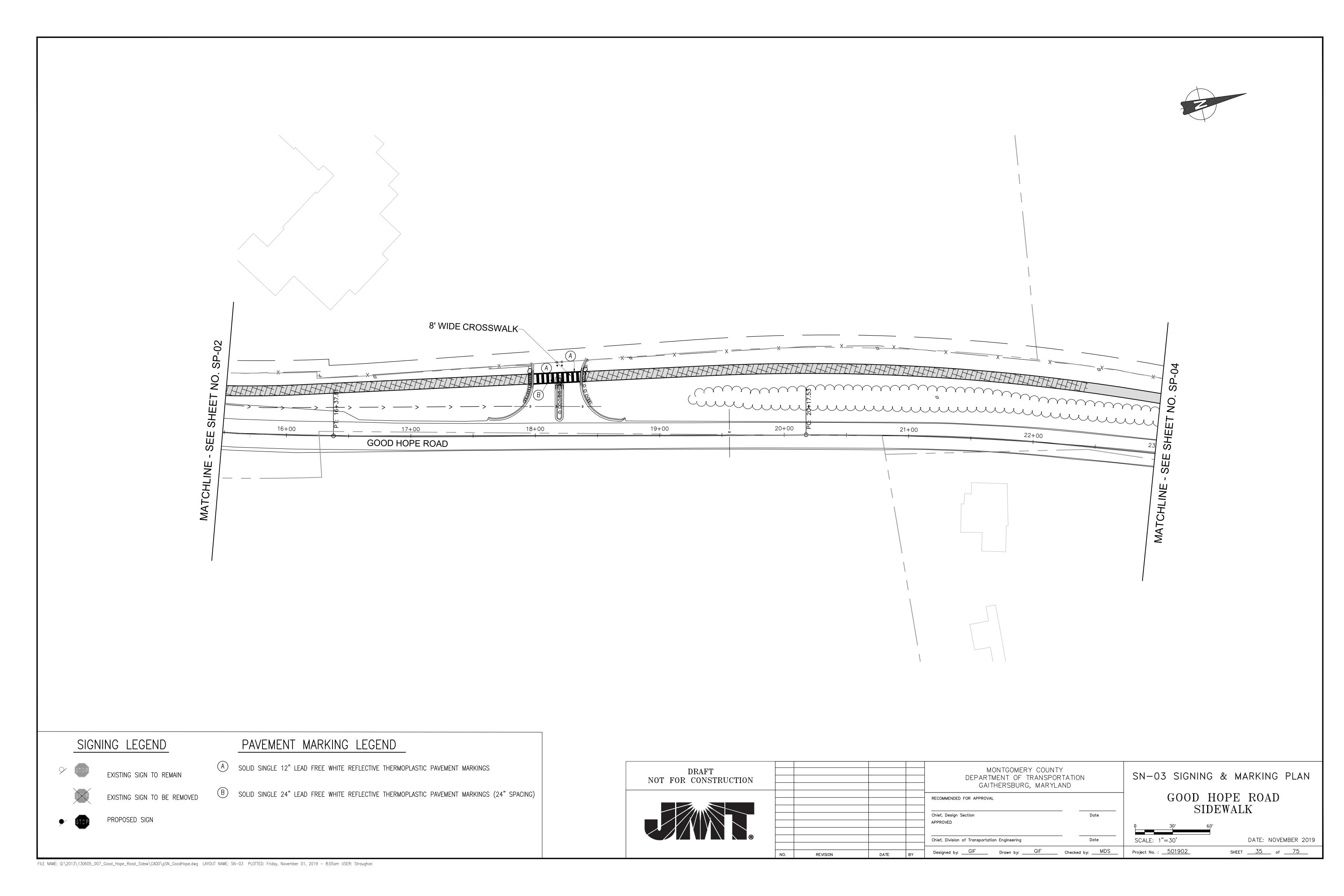


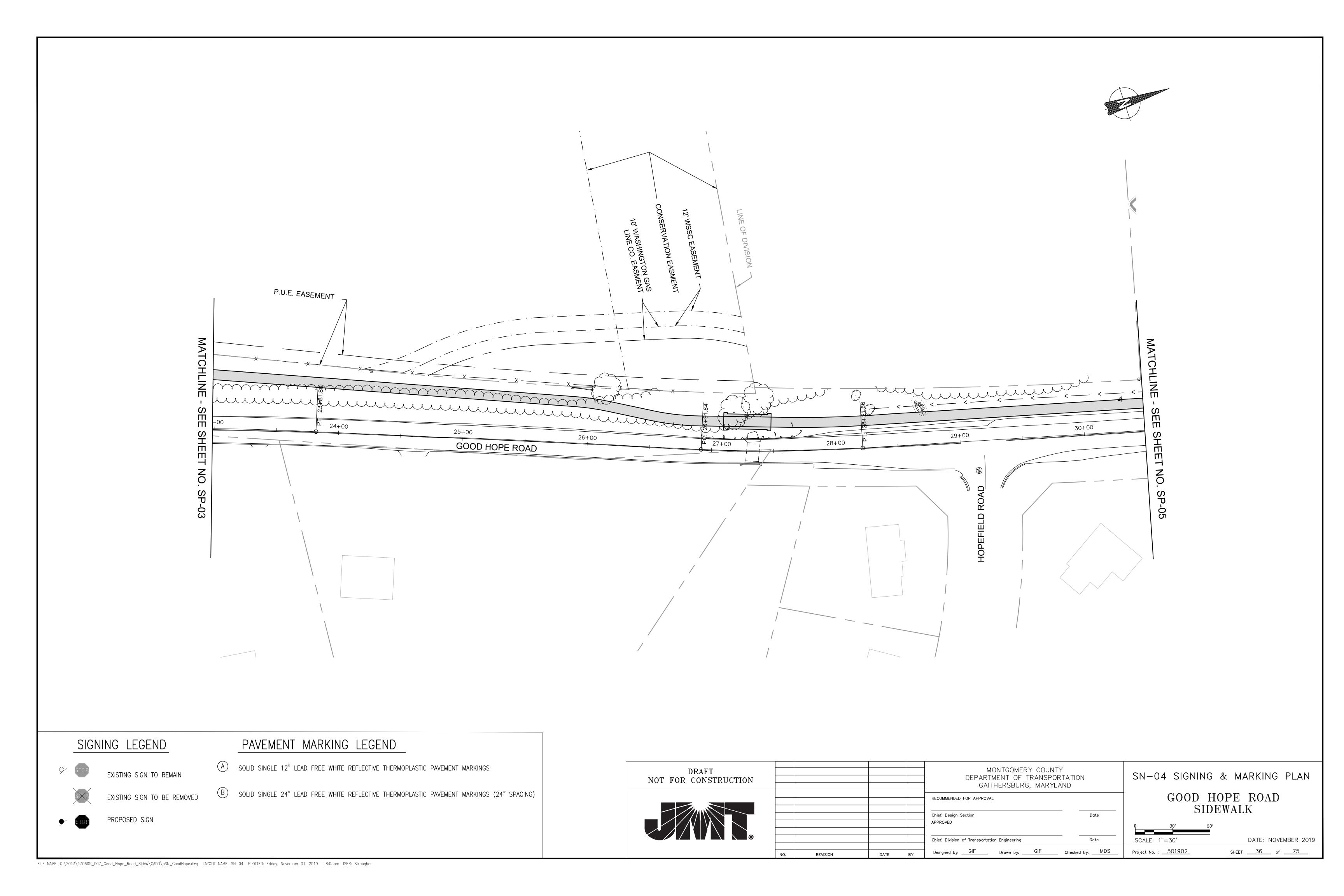


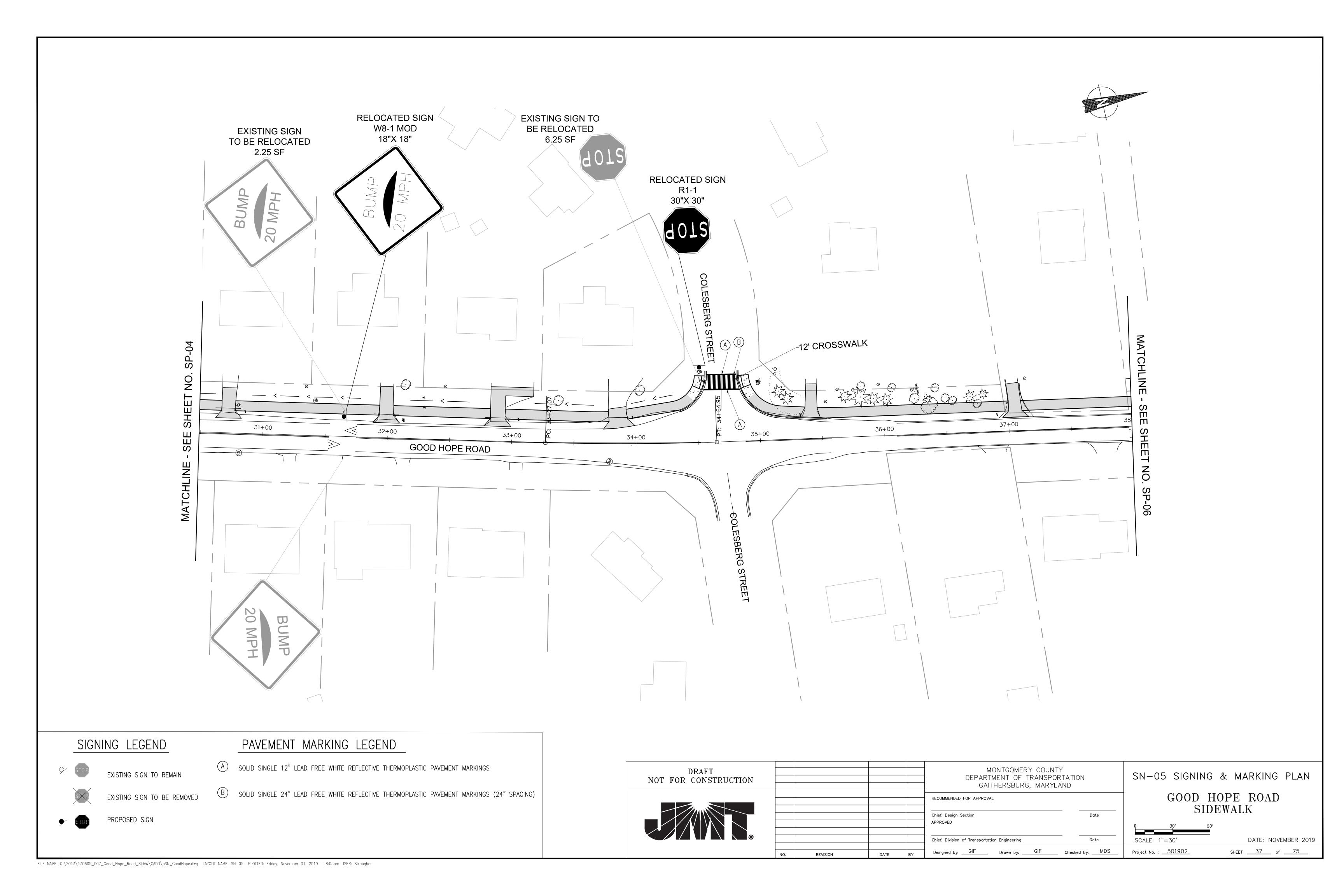


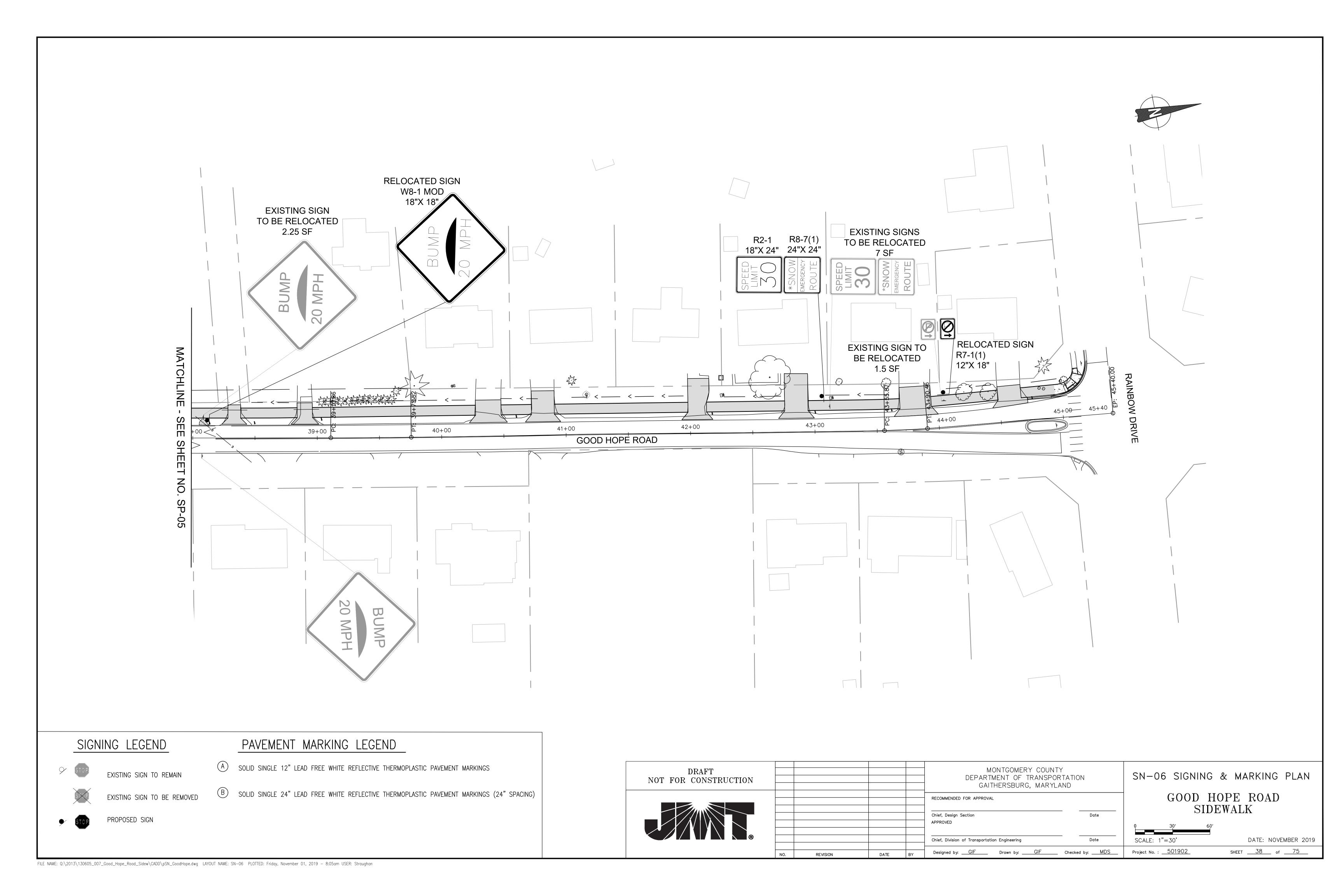


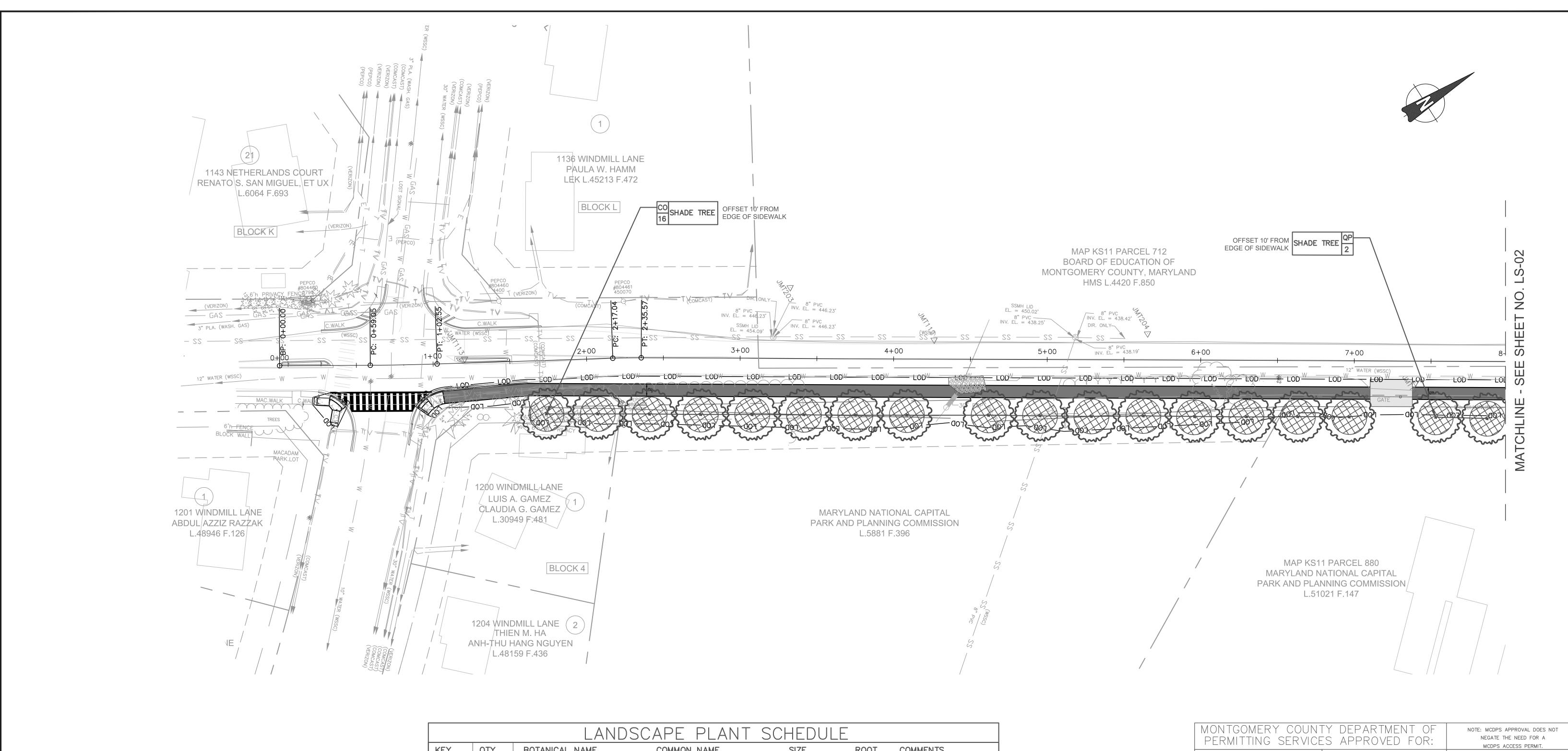












LANDSCAPE PLANT SCHEDULEKEYQTYBOTANICAL NAMECOMMON NAMESIZEROOTCOMMENTSTREES *CO16CELTIS OCCIDENTALISCOMMON HACKBERRY2" CAL.B&B30' O.C., AS SHOWN*QP2QUERCUS PHELLOSWILLOW OAK2" CAL.B&B30' O.C., AS SHOWN

*SHADE TREE TO FULFILL MONTGOMERY COUNTY TREE CANOPY REQUIREMENT.

MONTGOME PERMITTIN		NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.				
Stormwater	Stormwater Management:		trol Technical ments:	Administrative Requirements:		
				Reviewed Date		
		Reviewed	Date			
				SEDIMENT CONTROL PERMIT NO.		
Reviewed	Date	Approved	Date			
Approved	Date			MCDPS APPROVAL OF THIS PLAN WILL EXPIRE		
SM FI	SM FILE #			TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED		
DPS APPROVAL OF A SEDIME	NT CONTROL OR STORMWA	TER MANAGEMENT PLAN IS I	FOR DEMONSTRATED COMPLIAN	CE WITH MINIMUM ENVIRONMENTAL RUNOFF TREATMENT		

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.

LEGEND						
SDP	SHRUB DEER PROTECTION FENCE					
LOD	LIMIT OF DISTURBANCE					
	LIMIT OF GRADING					
TPF	TREE PROTECTION FENCE					
QA 1 SHADE TREE	SHADE TREE (CROSSHATCH AREA SHOWN IS 400SF GROWING ZONE PER EXECUTIVE REGULATION 22-13)					

						PERMISSION. IT DOES NOT F	CREATE OR IMPLY ANY RIGHT TO DIV RELIEVE THE DESIGN ENGINEER OR DIV AFFECTS UPHILL OR DOWNHILL PROF	THER RESPONSIBLE PERSON OF
DRAFT NOT FOR CONSTRUCTION					MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION GAITHERSBURG, MARYLAND		RTATION	LS-
					RECOMMENDED FOR APPROVAL			G
					Chief, Design Section APPROVED		Date	0 30
					Chief, Division of Transportation Eng	ineering	Date	SCALE: 1"=30
	NO.	REVISION	DATE	BY	Designed by: SBD Dra	wn by:SBD	Checked by: SJR	Project No. : <u>50</u>
								<u> </u>

LS-01	LANDSCAPE PLAN							
GOOD HOPE ROAD SIDEWALK								
0 30′	60′							
SCALE: 1"=30'	DATE: NOVEMBER 2019							
Project No. : <u>501902</u>	SHEET 39 of 75							

FILE NAME: Q:\2013\130605_007_Good_Hope_Road_Sidew\CADD\pLS_GoodHope.dwg LAYOUT NAME: LS-01 PLOTTED: Friday, November 01, 2019 - 9:42am USER: Havener

1. TREATMENT A: TREE TO REMAIN.

- 4" OF TOPSOIL

MULCH

- TURFGRASS SEED MIX

20% VIRGINIA WILD RYE20% RIPARIAN WILD RYE

- 20% CREEPING RED FESCUE

9. PLEASE SEE SHEET LS-07 FOR TREE PLANTING DETAIL.

20% DEER TONGUE

- 20% ANNUAL RYE

WITH:

2. TREATMENT B: REMOVE TREE INCLUDING STUMP.

3. REFER TO SIGNING AND STRIPING PLAN FOR PAVEMENT MARKING DETAILS.

GRADING CHANGES TO BE PRE-APPROVED BY COUNTY INSPECTOR.

BE PROVIDED FOR EACH GROUP OF 4 SHRUBS, MAXIMUM. 6. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL.

4. CONTRACTOR SHALL FIELD ADJUST GRADING TO PROVIDE SMOOTH TRANSITIONS INTO EXISTING FEATURES AND PROMOTE SHEET FLOW WHERE POSSIBLE. ALL

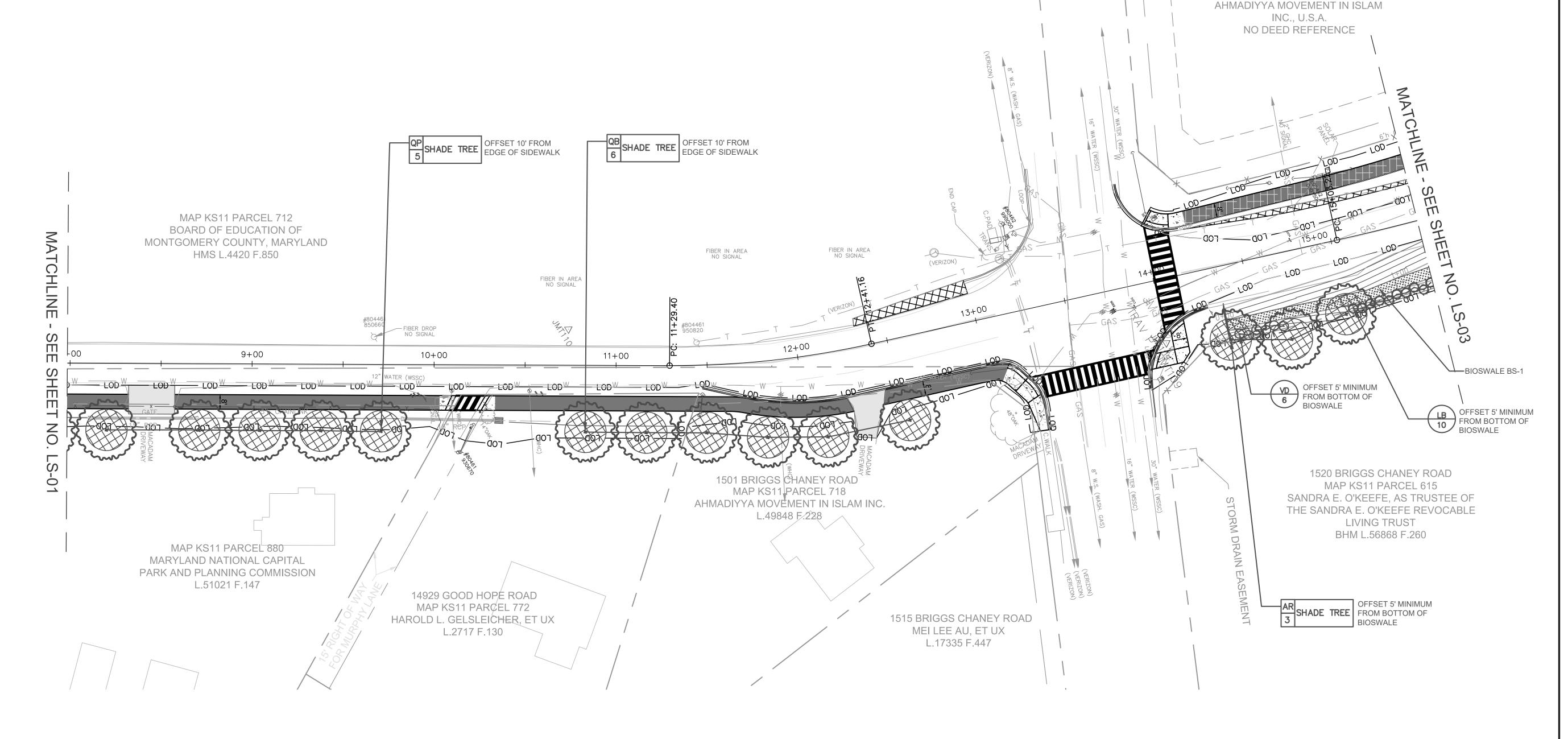
5. INSTALL SHRUB DEER PROTECTION DEVICES AS PER DETAIL. PROTECTION SHALL

7. UNLESS OTHERWISE SPECIFIED, ALL DISTURBED AREAS SHALL BE STABILIZED

8. REFER TO PLAN SHEET LS-09 FOR SPECIFIC NOTES PERTAINING TO TREE

10. PLEASE SEE SHEET LS-09 FOR STANDARD TREE CANOPY NOTES.

PRESERVATION, INVASIVE SPECIES, INSPECTIONS, AND TREE CANOPY INFORMATION.



1. TREATMENT A: TREE TO REMAIN.

2. TREATMENT B: REMOVE TREE INCLUDING STUMP.

3. REFER TO SIGNING AND STRIPING PLAN FOR PAVEMENT MARKING DETAILS. 4. CONTRACTOR SHALL FIELD ADJUST GRADING TO PROVIDE SMOOTH TRANSITIONS INTO EXISTING FEATURES AND PROMOTE SHEET FLOW WHERE POSSIBLE. ALL GRADING CHANGES TO BE

PRE-APPROVED BY COUNTY INSPECTOR. 5. INSTALL SHRUB DEER PROTECTION DEVICES AS PER DETAIL. PROTECTION SHALL BE PROVIDED FOR EACH GROUP OF 4 SHRUBS, MAXIMUM.

6. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL. 7. UNLESS OTHERWISE SPECIFIED, ALL DISTURBED AREAS SHALL BE STABILIZED WITH:

- 4" OF TOPSOIL

- TURFGRASS SEED MIX

- 20% VIRGINIA WILD RYE - 20% RIPARIAN WILD RYE

- 20% DEER TONGUE

- 20% CREEPING RED FESCUE

- 20% ANNUAL RYE

MULCH 8. REFER TO PLAN SHEET LS-09 FOR SPECIFIC NOTES PERTAINING TO TREE PRESERVATION, INVASIVE SPECIES, INSPECTIONS, AND TREE CANOPY INFORMATION. 9. PLEASE SEE SHEET LS-07 FOR TREE PLANTING DETAIL. 10. PLEASE SEE SHEET LS-09 FOR STANDARD TREE CANOPY NOTES.

LANDSCAPE PLANT SCHEDULE									
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS			
TREES *AR	3	ACER RUBRUM 'RED SUNSET'	'RED SUNSET' RED MAPLE	2" CAL.	B&B	30' O.C., AS SHOWN			
*QB	6	QUERCUS BICOLOR	SWAMP WHITE OAK	2" CAL.	B&B	30' O.C., AS SHOWN			
*QP	5	QUERCUS PHELLOS	WILLOW OAK	2" CAL.	B&B	30' O.C., AS SHOWN			
SHRUBS LB VD	10 6	LINDERA BENZOIN VIBURNUM DENTATUM	SPICEBUSH ARROWWOOD VIBURNUM	24" HGT. 24" HGT.	CONT.	5' O.C. 5' O.C.			

*SHADE TREE TO FULFILL MONTGOMERY COUNTY TREE CANOPY REQUIREMENT.

CER RUBRUM 'RED SUNSET'	'RED SUNSET' RED MAPLE SWAMP WHITE OAK	SIZE 2" CAL. 2" CAL.	B&B B&B	30' O.C., AS SHOWN
				·
				·
QUERCUS BICOLOR	SWAMP WHITE OAK	2" CAL.	B&B	70' 0 0 AS CHOWN
				30' O.C., AS SHOWN
QUERCUS PHELLOS	WILLOW OAK	2" CAL.	B&B	30' O.C., AS SHOWN
INDERA BENZOIN	SPICEBUSH	24" HGT.	CONT.	5' O.C.
IBURNUM DENTATUM	ARROWWOOD VIBURNUM	24" HGT.	CONT.	5' O.C.
	NDERA BENZOIN BURNUM DENTATUM			

	30' O.C., AS SHOWN	PARTRIDGE PEA	DEERTON(
		RED CLOVER	HARD FES		ASS
Γ.	5' O.C. 5' O.C.		PURPLETO		
1.	5 0.0.		VIRGINIA	WILD RYE	
		-			

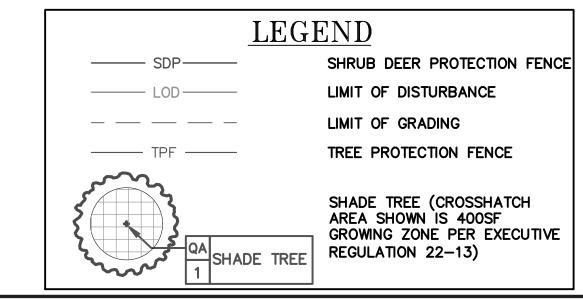
BLACKEYED SUSAN

<u>FORBS</u>

MONTGOMERY COUNT PERMITTING SERVICE	NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.				
Stormwater Management:	Sediment Con Require		Administrative Requirements:		
			Reviewed Date		
	Reviewed	Date			
Reviewed Date	Approved	 Date	SEDIMENT CONTROL PERMIT NO.		
Approved Date SM FILE #			MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED		
	ED MANACEMENT DI AN IS		CE WITH MINIMUM ENVIRONMENTAL DUNGEE TREATMENT		

1500 BRIGGS CHANEY ROAL

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



					PERMISSION. IT DOES NOT THE DRAINAGE DESIGN AS I	CREATE OR IMPLY ANY RIGHT TO DIVERT RELIEVE THE DESIGN ENGINEER OR OTHEF AFFECTS UPHILL OR DOWNHILL PROPER
DRAFT NOT FOR CONSTRUCTION					MONTGOMERY COUNT DEPARTMENT OF TRANSPO GAITHERSBURG, MARYL	RTATION
					RECOMMENDED FOR APPROVAL Chief, Design Section	Date
					APPROVED Chief, Division of Transportation Engineering	Date
	NO.	REVISION	DATE	BY	Designed by: <u>SBD</u> Drawn by: <u>SBD</u>	Checked by: SJR

BIOSWALE BOTTOMS SHALL BE SEEDED WITH MDOT

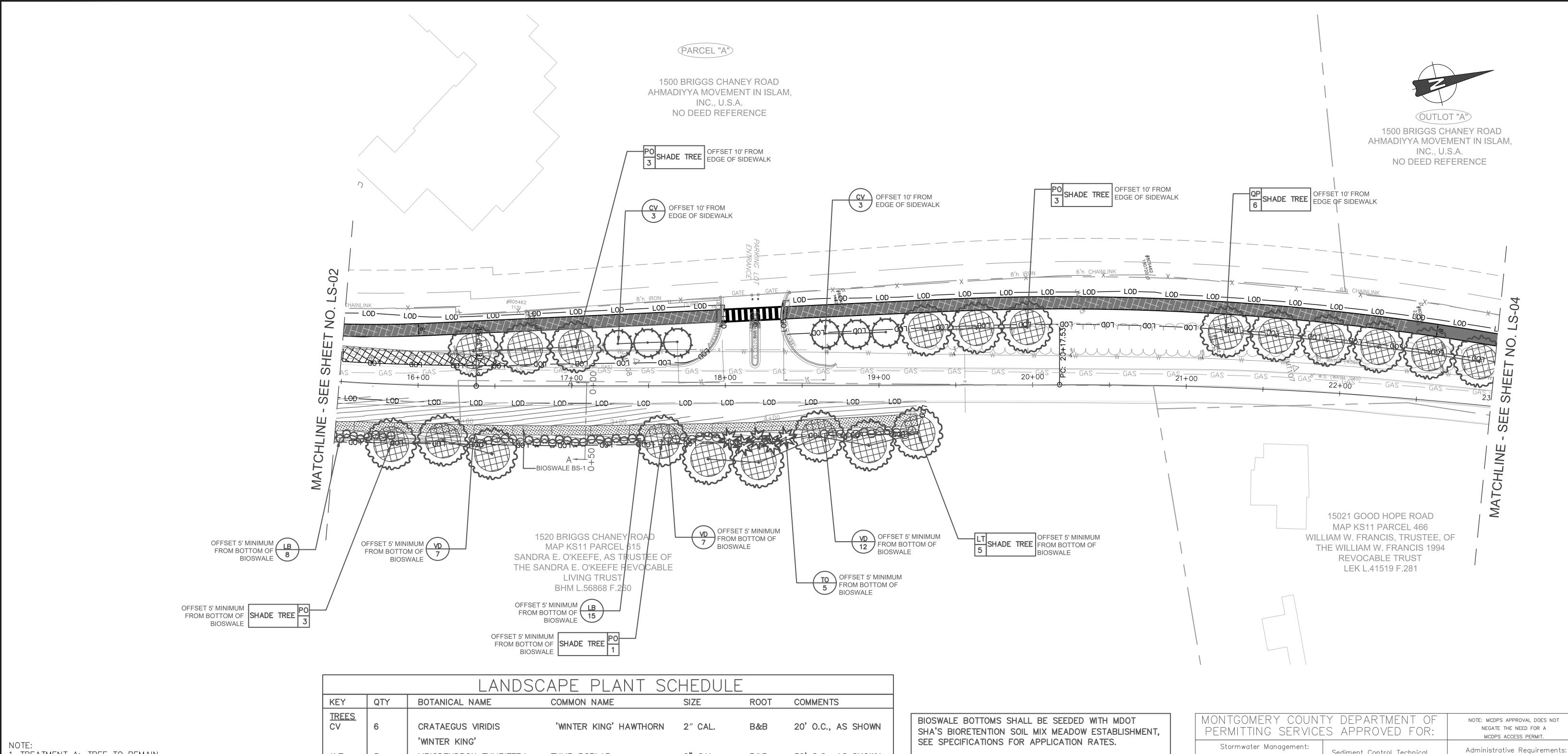
SEE SPECIFICATIONS FOR APPLICATION RATES.

SHA'S BIORETENTION SOIL MIX MEADOW ESTABLISHMENT,

<u>GRASSES</u>

SWITCHGRASS

LS-02 LAN	NDSCAPE PLAN				
GOOD HOPE ROAD SIDEWALK					
0 30′ 60)′				
SCALE: 1"=30'	DATE: NOVEMBER 2019				
Project No. : <u>501902</u>	SHEET <u>40</u> of <u>75</u>				



1. TREATMENT A: TREE TO REMAIN.

2. TREATMENT B: REMOVE TREE INCLUDING STUMP. 3. REFER TO SIGNING AND STRIPING PLAN FOR PAVEMENT MARKING DETAILS.

4. CONTRACTOR SHALL FIELD ADJUST GRADING TO PROVIDE SMOOTH TRANSITIONS INTO EXISTING FEATURES AND PROMOTE SHEET FLOW WHERE POSSIBLE. ALL GRADING CHANGES TO BE PRE-APPROVED BY COUNTY INSPECTOR.

5. INSTALL SHRUB DEER PROTECTION DEVICES AS PER DETAIL. PROTECTION SHALL BE PROVIDED FOR EACH GROUP OF 4 SHRUBS, MAXIMUM.

6. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL. 7. UNLESS OTHERWISE SPECIFIED, ALL DISTURBED AREAS SHALL BE STABILIZED WITH:

- 4" OF TOPSOIL

- TURFGRASS SEED MIX - 20% VIRGINIA WILD RYE

- 20% RIPARIAN WILD RYE

- 20% DEER TONGUE - 20% CREEPING RED FESCUE

- 20% ANNUAL RYE

MULCH 8. REFER TO PLAN SHEET LS-09 FOR SPECIFIC NOTES PERTAINING TO TREE PRESERVATION, INVASIVE SPECIES, INSPECTIONS, AND TREE CANOPY INFORMATION. 9. PLEASE SEE SHEET LS-07 FOR TREE PLANTING DETAIL. 10. PLEASE SEE SHEET LS-09 FOR STANDARD TREE CANOPY NOTES.

LANDSCAPE PLANT SCHEDULE								
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS		
TREES CV	6	CRATAEGUS VIRIDIS 'WINTER KING'	'WINTER KING' HAWTHORN	2" CAL.	В&В	20' O.C., AS SHOWN		
*LT	5	LIRIODENDRON TULIPIFERA	TULIP POPLAR	2" CAL.	В&В	30' O.C., AS SHOWN		
*P0	10	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	2" CAL.	B&B	30' O.C., AS SHOWN		
*QP	6	QUERCUS PHELLOS	WILLOW OAK	2" CAL.	B&B	30' O.C., AS SHOWN		
TO	5	THUJA OCCIDENTALIS	AMERICAN ARBORVITAE	6' HGT.	B&B	10' O.C., AS SHOWN		
SHRUBS								
LB VD	23 26	LINDERA BENZOIN VIBURNUM DENTATUM	SPICEBUSH ARROWWOOD VIBURNUM	24" HGT. 24" HGT.	CONT.	5' O.C. 5' O.C.		

REGULATION 22-13)

*SHADE TREE TO FULFILL MON

JUS VIRIDIS	WINTER KING HAWTHORN	Z CAL.	B&B	20 O.C., AS SHOWN
KING'				
IDRON TULIPIFERA	TULIP POPLAR	2" CAL.	B&B	30' O.C., AS SHOWN
JS OCCIDENTALIS	AMERICAN SYCAMORE	2" CAL.	B&B	30' O.C., AS SHOWN
S PHELLOS	WILLOW OAK	2" CAL.	B&B	30' O.C., AS SHOWN
OCCIDENTALIS	AMERICAN ARBORVITAE	6' HGT.	B&B	10' O.C., AS SHOWN
BENZOIN	SPICEBUSH	24" HGT.	CONT.	5' O.C.
M DENTATUM	ARROWWOOD VIBURNUM	24" HGT.	CONT.	5' O.C.
ITGOMERY COUNTY T	REE CANOPY REQUIREMENT.			

GRASSES <u>FORBS</u> BLACKEYED SUSAN **SWITCHGRASS** DEERTONGUE PARTRIDGE PEA RED CLOVER HARD FESCUE WEEPING ALKALIGRASS PURPLETOP VIRGINIA WILD RYE

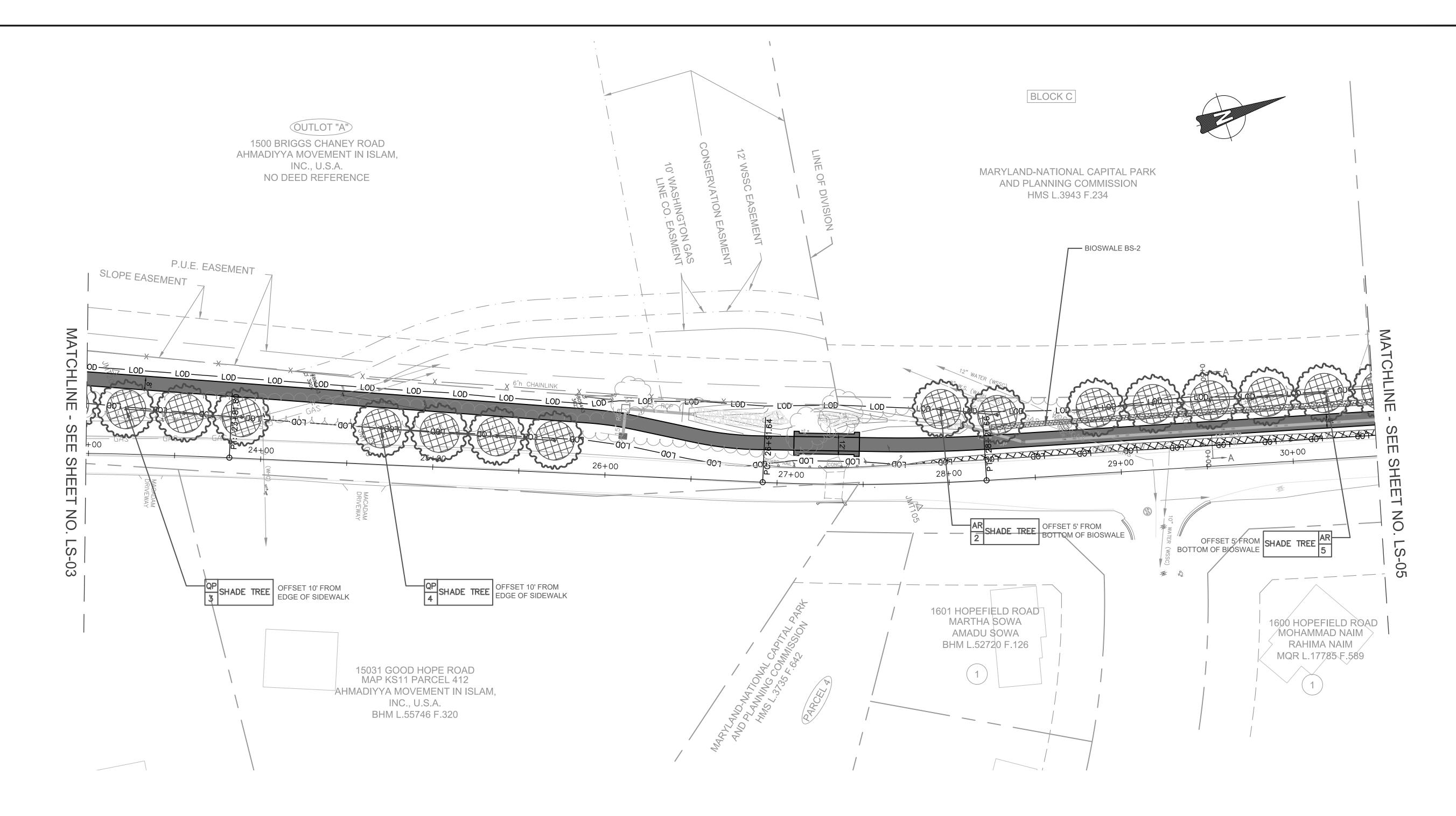
PERMITTIN	ig service	NEGATE THE N MCDPS ACCES			
Stormwater	Management:	Sediment Con Require		Administrative —	Requirements:
				Reviewed	Date
		Reviewed	Date		
				SEDIMENT CONTR	ROL PERMIT NO.
Reviewed 	Reviewed Date		Date		
Approved	Date				UIO PLAN WILL EXPIRE
SM FILE #				MCDPS APPROVAL OF TI TWO YEARS FROM THE I THE PROJECT HAS	DATE OF APPROVAL IF

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.

LEGEND SHRUB DEER PROTECTION FENCE _____ SDP____ _____ LOD _____ LIMIT OF DISTURBANCE LIMIT OF GRADING _____ TPF _____ TREE PROTECTION FENCE SHADE TREE (CROSSHATCH AREA SHOWN IS 400SF GROWING ZONE PER EXECUTIVE

DRAFT NOT FOR CONSTRUCTION					MONTGOMERY COUNTY DEPARTMENT OF TRANSPOR GAITHERSBURG, MARYLA	RTATION
					RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED	Date
					Chief, Division of Transportation Engineering	Date
	NO.	REVISION	DATE	BY	Designed by: SBD Drawn by: SBD	Checked by: SJR

LS-03 LANDSCAPE PLAN GOOD HOPE ROAD SIDEWALK DATE: NOVEMBER 2019 SCALE: 1"=30' Project No. : 501902 SHEET <u>41</u> of <u>75</u>



LANDSCAPE PLANT SCHEDULE QTY COMMENTS BOTANICAL NAME COMMON NAME SIZE ROOT 1. TREATMENT A: TREE TO REMAIN. ACER RUBRUM 'RED SUNSET' 'RED SUNSET' RED MAPLE *AR 2" CAL. 30' O.C., AS SHOWN 2. TREATMENT B: REMOVE TREE INCLUDING STUMP. 3. REFER TO SIGNING AND STRIPING PLAN FOR PAVEMENT *QP QUERCUS PHELLOS WILLOW OAK 2" CAL. 30' O.C., AS SHOWN MARKING DETAILS. 4. CONTRACTOR SHALL FIELD ADJUST GRADING TO PROVIDE

*SHADE TREE TO FULFILL MONTGOMERY COUNTY TREE CANOPY REQUIREMENT.

BIOSWALE BOTTOMS SHALL BE SEEDED WITH MDOT SHA'S BIORETENTION SOIL MIX MEADOW ESTABLISHMENT, SEE SPECIFICATIONS FOR APPLICATION RATES.

<u>FORBS</u> BLACKEYED SUSAN PARTRIDGE PEA RED CLOVER

<u>GRASSES</u> SWITCHGRASS DEERTONGUE HARD FESCUE WEEPING ALKALIGRASS PURPLETOP VIRGINIA WILD RYE

MONTGOME! PERMITTING		NOTE: MCDPS APPR NEGATE THE N MCDPS ACCES	EED FOR A		
Stormwater N	Management:	Sediment Con Require		Administrative	Requirements:
				Reviewed	Date
		Reviewed	Date		
				SEDIMENT CONTR	OL PERMIT NO.
Reviewed	Date	Approved	Date		
Approved	Date			HODDS ADDDOVAL OF T	UIC DI ANI WILL EVDIDE
SM FILE	Ξ #			MCDPS APPROVAL OF TI TWO YEARS FROM THE I THE PROJECT HAS	DATE OF APPROVAL IF

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.

LEGEND _____ SDP_____ SHRUB DEER PROTECTION FENCE _____ LOD_____ LIMIT OF DISTURBANCE LIMIT OF GRADING _____ TPF _____ TREE PROTECTION FENCE SHADE TREE (CROSSHATCH AREA SHOWN IS 400SF GROWING ZONE PER EXECUTIVE REGULATION 22-13)

DRAFT NOT FOR CONSTRUCTION					MONTGOMERY COUNT DEPARTMENT OF TRANSPO GAITHERSBURG, MARYL	RTATION
					RECOMMENDED FOR APPROVAL	
(a)					Chief, Design Section APPROVED	Date
					Chief, Division of Transportation Engineering	Date
	NO.	REVISION	DATE	BY	Designed by: SBD Drawn by: SBD	Checked by: SJR

LS-04	LANDS	CAF	PE P	LAN		
5.002	O HOI			AD		
0 30′	60′					
SCALE: 1"=30'			DATE:	NOVEM	1BER	2019
Project No. : <u>501902</u>		SHEET	42	of _	75	

10. PLEASE SEE SHEET LS-09 FOR STANDARD TREE CANOPY NOTES.

SMOOTH TRANSITIONS INTO EXISTING FEATURES AND PROMOTE

SHEET FLOW WHERE POSSIBLE. ALL GRADING CHANGES TO BE

5. INSTALL SHRUB DEER PROTECTION DEVICES AS PER DETAIL.

PROTECTION SHALL BE PROVIDED FOR EACH GROUP OF 4

6. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL. 7. UNLESS OTHERWISE SPECIFIED, ALL DISTURBED AREAS SHALL

PRE-APPROVED BY COUNTY INSPECTOR.

- 20% VIRGINIA WILD RYE - 20% RIPARIAN WILD RYE

INSPECTIONS, AND TREE CANOPY INFORMATION.

- 20% CREEPING RED FESCUE

8. REFER TO PLAN SHEET LS-09 FOR SPECIFIC NOTES

PERTAINING TO TREE PRESERVATION, INVASIVE SPECIES,

9. PLEASE SEE SHEET LS-07 FOR TREE PLANTING DETAIL.

- 20% DEER TONGUE

- 20% ANNUAL RYE

SHRUBS, MAXIMUM.

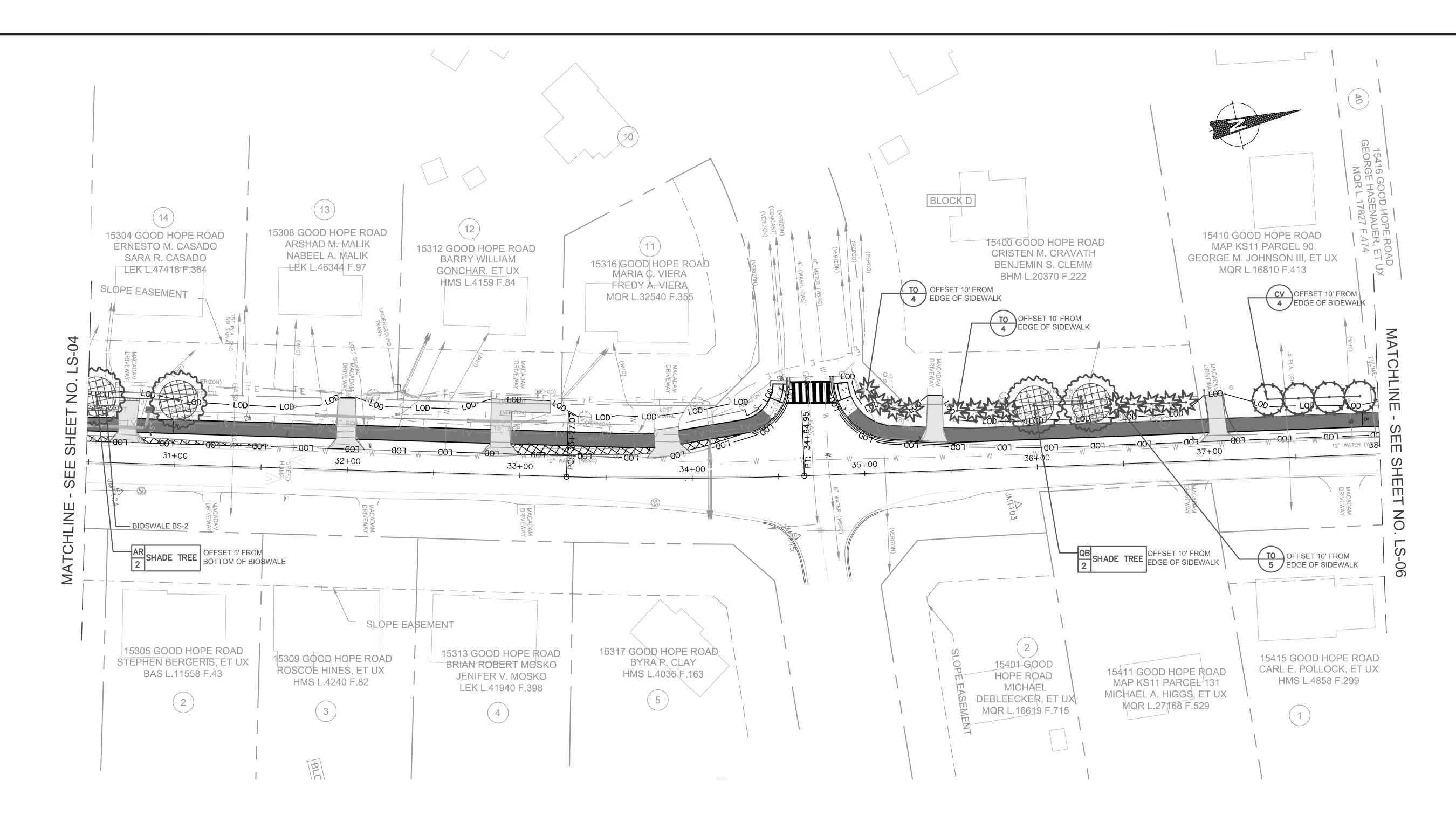
BE STABILIZED WITH:

MULCH

- 4" OF TOPSOIL

- TURFGRASS SEED MIX

FILE NAME: Q:\2013\130605_007_Good_Hope_Road_Sidew\CADD\pLS_GoodHope.dwg LAYOUT NAME: LS-04 PLOTTED: Friday, November 01, 2019 - 9:43am USER: Havener



NOTES.

1. TREATMENT A: TREE TO REMAIN.

2. TREATMENT B: REMOVE TREE INCLUDING STUMP. 3. REFER TO SIGNING AND STRIPING PLAN FOR PAVEMENT MARKING DETAILS.

4. CONTRACTOR SHALL FIELD ADJUST GRADING TO PROVIDE SMOOTH TRANSITIONS INTO EXISTING FEATURES AND PROMOTE SHEET FLOW WHERE POSSIBLE. ALL GRADING CHANGES TO BE PRE-APPROVED BY COUNTY INSPECTOR.

5. INSTALL SHRUB DEER PROTECTION DEVICES AS PER DETAIL. PROTECTION SHALL BE PROVIDED FOR EACH GROUP OF 4 SHRUBS, MAXIMUM.

6. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL. 7. UNLESS OTHERWISE SPECIFIED, ALL DISTURBED AREAS SHALL

BE STABILIZED WITH: - 4" OF TOPSOIL

- TURFGRASS SEED MIX

- 20% VIRGINIA WILD RYE - 20% RIPARIAN WILD RYE

- 20% DEER TONGUE - 20% CREEPING RED FESCUE

- 20% ANNUAL RYE

MULCH 8. REFER TO PLAN SHEET LS-09 FOR SPECIFIC NOTES PERTAINING TO TREE PRESERVATION, INVASIVE SPECIES, INSPECTIONS. AND TREE CANOPY INFORMATION. 9. PLEASE SEE SHEET LS-07 FOR TREE PLANTING DETAIL. 10. PLEASE SEE SHEET LS-09 FOR STANDARD TREE CANOPY

		LANDSC	APE PLANT SC	HEDULE		
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
TREES *AR	2	ACER RUBRUM 'RED SUNSET'	'RED SUNSET' RED MAPLE	2" CAL.	B&B	30' O.C., AS SHOWN
CV	4	CRATAEGUS VIRIDIS 'WINTER KING'	'WINTER KING' HAWTHORN	2" CAL.	B&B	20' O.C.
*QB	2	QUERCUS BICOLOR	SWAMP WHITE OAK	2" CAL.	B&B	30' O.C., AS SHOWN
ТО	13	THUJA OCCIDENTALIS	AMERICAN ARBORVITAE	6' HGT.	B&B	10' O.C.

*SHADE TREE TO FULFILL MONTGOMERY COUNTY TREE CANOPY REQUIREMENT.

BIOSWALE BOTTOMS SHALL BE SEEDED WITH MDOT SHA'S BIORETENTION SOIL MIX MEADOW ESTABLISHMENT, SEE SPECIFICATIONS FOR APPLICATION RATES.

FORBS BLACKEYED SUSAN PARTRIDGE PEA RED CLOVER

SWITCHGRASS DEERTONGUE HARD FESCUE WEEPING ALKALIGRASS PURPLETOP VIRGINIA WILD RYE

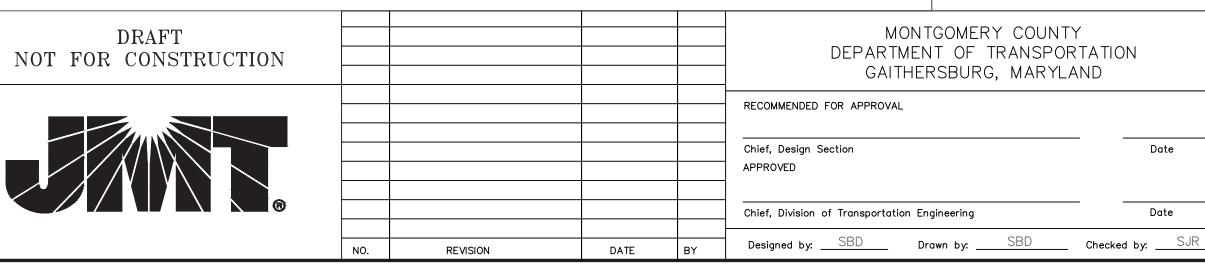
<u>GRASSES</u>

MONTGOMERY COUNTY DEPARTMENT OF NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A PERMITTING SERVICES APPROVED FOR: MCDPS ACCESS PERMIT. Stormwater Management: Administrative Requirements: Sediment Control Technical Requirements: Date Reviewed Reviewed Date SEDIMENT CONTROL PERMIT NO. Reviewed Date Date Approved Date Approved MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED SM FILE #

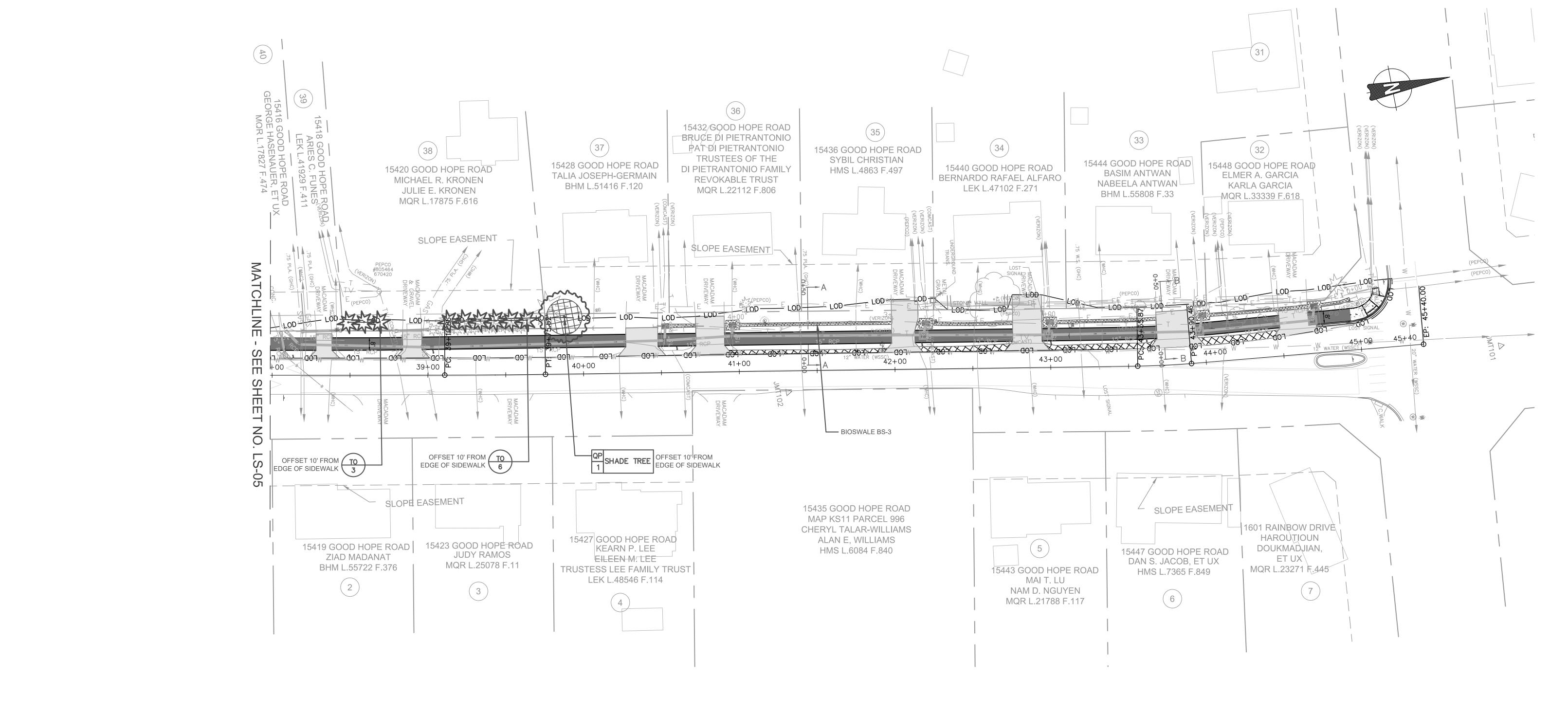
Date

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.

LEGEND _____ SDP____ SHRUB DEER PROTECTION FENCE LIMIT OF DISTURBANCE _____ LOD_____ LIMIT OF GRADING _ _ _ _ _ _ TREE PROTECTION FENCE _____ TPF _____ SHADE TREE (CROSSHATCH AREA SHOWN IS 400SF GROWING ZONE PER EXECUTIVE REGULATION 22-13) SHADE TREE



LS-05 LANDS	CAF	PE P	LAN		
GOOD HOF SIDEW			AD		
0 30′ 60′					
SCALE: 1"=30'		DATE:	NOVEME	BER	2019
Project No. : <u>501902</u>	SHEET	43	of	75	
·					



1. TREATMENT A: TREE TO REMAIN.

2. TREATMENT A: INCLUTO NEMAIN.

2. TREATMENT B: REMOVE TREE INCLUDING STUMP.

3. REFER TO SIGNING AND STRIPING PLAN FOR PAVEMENT MARKING DETAILS.

4. CONTRACTOR SHALL FIELD ADJUST GRADING TO PROVIDE SMOOTH TRANSITIONS INTO EXISTING FEATURES AND PROMOTE SHEET FLOW WHERE POSSIBLE. ALL GRADING CHANGES TO BE PRE—APPROVED BY COUNTY INSPECTOR.

5. INSTALL SHRUB DEER PROTECTION DEVICES AS PER DETAIL.
PROTECTION SHALL BE PROVIDED FOR EACH GROUP OF 4
SHRUBS, MAXIMUM.

6. INSTALL TREE DEER PROTECTION DEVICES AS PER DETAIL.
7. UNLESS OTHERWISE SPECIFIED, ALL DISTURBED AREAS SHALL BE STABILIZED WITH:

- 4" OF TOPSOIL

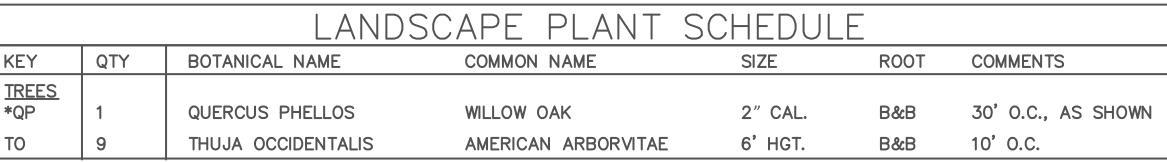
NOTES.

- TURFGRASS SEED MIX

- 20% VIRGINIA WILD RYE - 20% RIPARIAN WILD RYE

20% DEER TONGUE20% CREEPING RED FESCUE20% ANNUAL RYE

- MULCH
8. REFER TO PLAN SHEET LS-09 FOR SPECIFIC NOTES
PERTAINING TO TREE PRESERVATION, INVASIVE SPECIES,
INSPECTIONS, AND TREE CANOPY INFORMATION.
9. PLEASE SEE SHEET LS-07 FOR TREE PLANTING DETAIL.
10. PLEASE SEE SHEET LS-09 FOR STANDARD TREE CANOPY



*SHADE TREE TO FULFILL MONTGOMERY COUNTY TREE CANOPY REQUIREMENT.

BIOSWALE BOTTOMS SHALL BE SEEDED WITH MDOT SHA'S BIORETENTION SOIL MIX MEADOW ESTABLISHMENT, SEE SPECIFICATIONS FOR APPLICATION RATES.

FORBS

BLACKEYED SUSAN

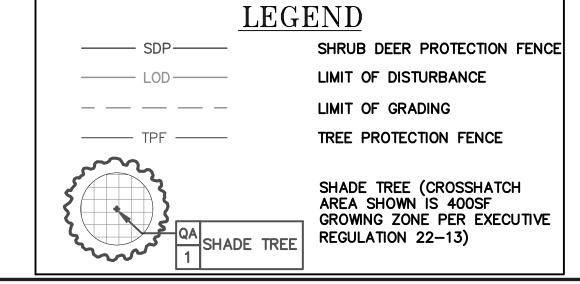
PARTRIDGE PEA

RED CLOVER

GRASSES
SWITCHGRASS
DEERTONGUE
HARD FESCUE
WEEPING ALKALIGRASS
PURPLETOP
VIRGINIA WILD RYE

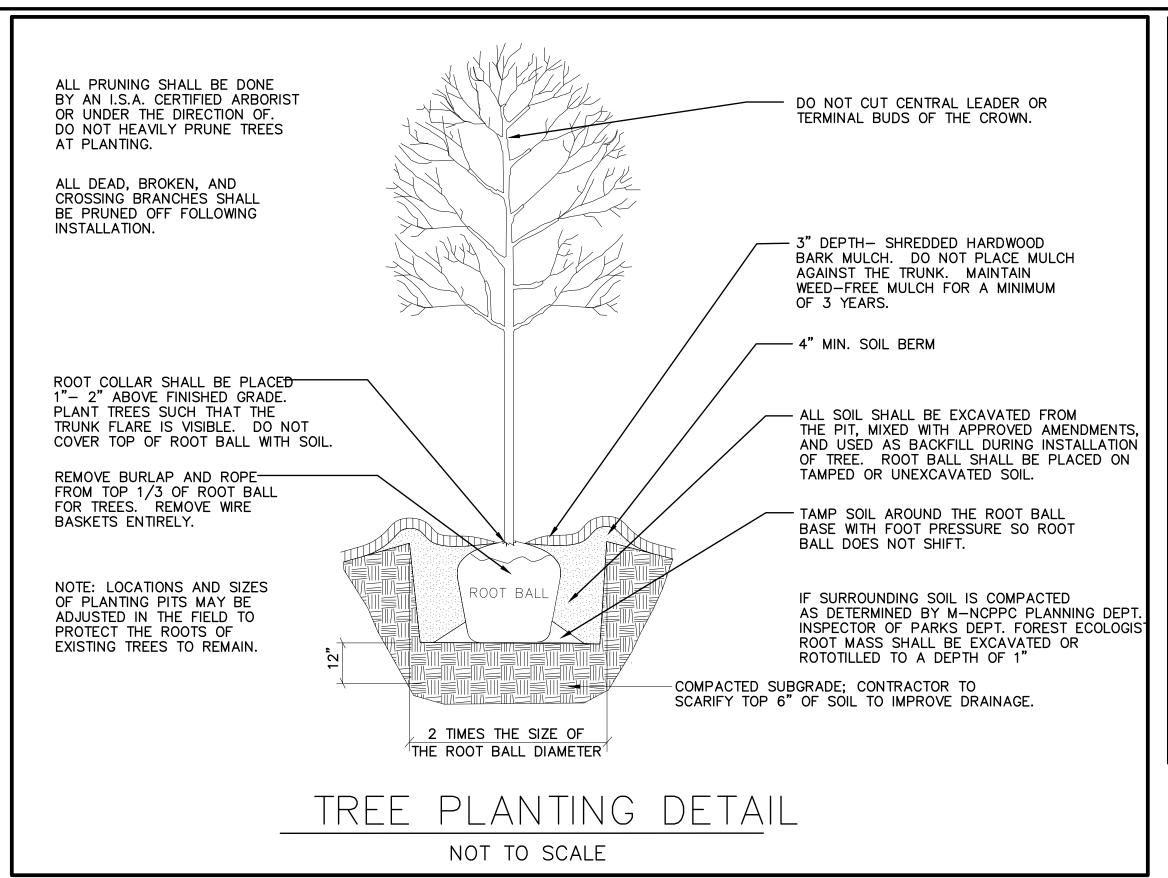
MONTGOMERY COUNTY DEPARTMENT OF NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A PERMITTING SERVICES APPROVED FOR: MCDPS ACCESS PERMIT. Stormwater Management: Administrative Requirements: Sediment Control Technical Requirements: Date Reviewed Reviewed Date SEDIMENT CONTROL PERMIT NO. Reviewed Date Date Approved Date Approved MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED SM FILE #

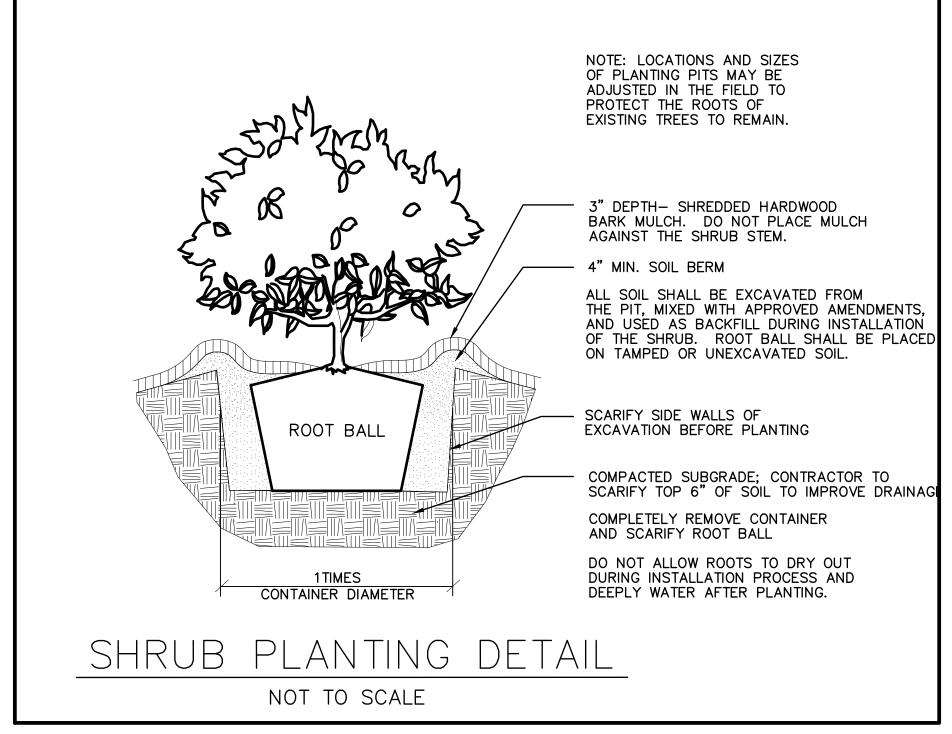
DPS APPROVAL OF A SEDIMENT CONTROL OR STORMWATER MANAGEMENT PLAN IS FOR DEMONSTRATED COMPLIANCE WITH MINIMUM ENVIRONMENTAL RUNOFF TREATMENT STANDARDS AND DOES NOT CREATE OR IMPLY ANY RIGHT TO DIVERT OR CONCENTRATE RUNOFF ONTO ANY ADJACENT PROPERTY WITHOUT THAT PROPERTY OWNER'S PERMISSION. IT DOES NOT 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.

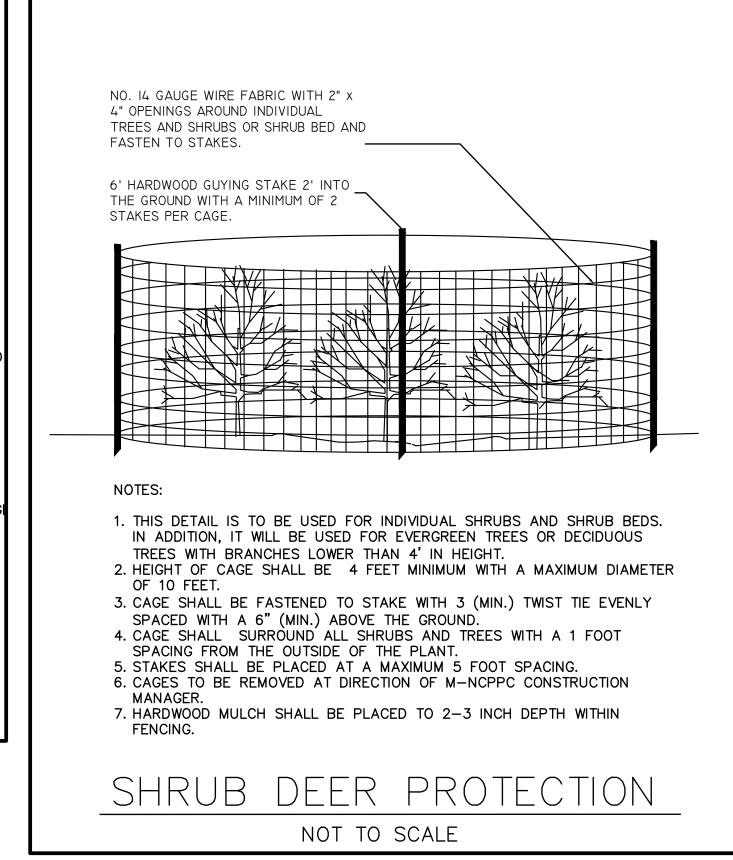


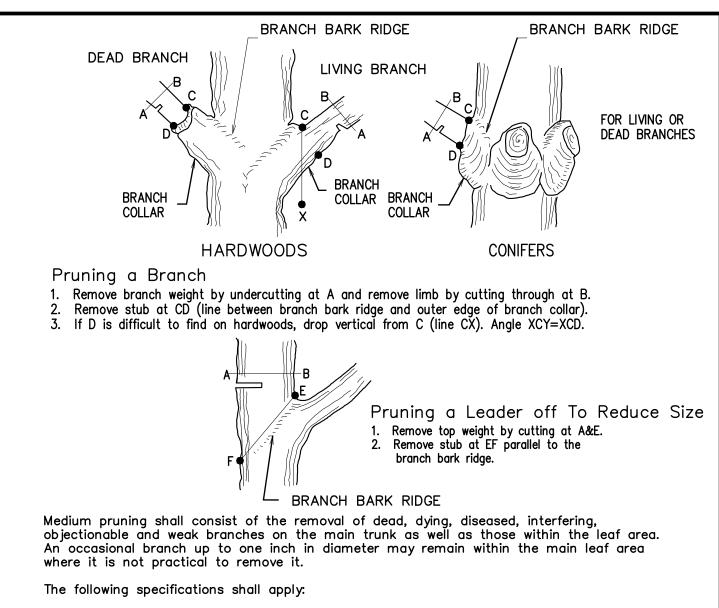
					THE DIVARAGE DESIGN AS TH	AFFECTS UPHILL OR DOWNHILL PROP
DRAFT NOT FOR CONSTRUCTION					MONTGOMERY COUNT DEPARTMENT OF TRANSPOI GAITHERSBURG, MARYL	RTATION
					RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED	Date
1 1 1 1 1 1 1 1 1 1	NO.	REVISION	DATE	BY	Chief, Division of Transportation Engineering Designed by: SBD Drawn by: SBD	

LS-06 LANDS	CAPE PLAN
GOOD HOP SIDEW	
0 30′ 60′	
SCALE: 1"=30'	DATE: NOVEMBER 2019
Project No. : <u>501902</u>	SHEET <u>44</u> of <u>75</u>









All cuts shall be made sufficiently close to the trunk or parent limb, without cutting into the branch collar or leaving a protruding stub, so that closure can readily start under normal conditions. Clean cuts shall be made at all times.

b. It is necessary to precut branches too heavy to handle to prevent splitting or peeling the bark. Where necessary, to prevent tree or property damage, branches shall be lowered to the ground by proper ropes or equipment.

Treatment of cuts and wounds, with tree wound dressing, is optional except where open wounds in certain trees may attract insects that carry disease or allow fungus invasion. If such treatment is made, materials non-toxic to the cambium layer must be used, and care taken to treat only the exposed wood with a thin coat of

On trees known to be diseased, tools are to be disinfected with methyl alcohol at 70% (denatured wood alcohol diluted appropriately with water) or Chlorox solution after each cut and between trees where there is known to be a danger of transmitting the disease on tools.

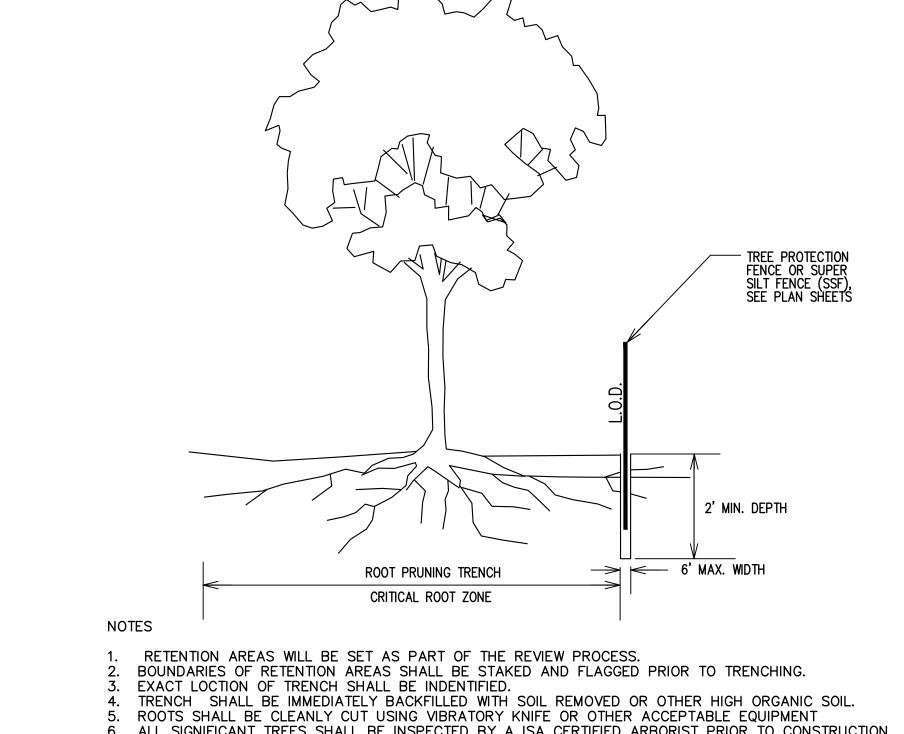
e. Old injuries are to be inspected. Those not closing properly and where the callus growth is not already completely established should be traced where appropriate. If desired, for cosmetic purposes, the wound may be treated with a thin coat of wound dressing.

f. All girdling roots visible to the eye are to be reported to the supervisor and the

The presence of any structural weakness, disease conditions, decayed trunk or branches, split crotches or branches, should be reported in writing to the supervisor and the Engineer, and corrective measures recommended.

CROWN PRUNING

NOT TO SCALE

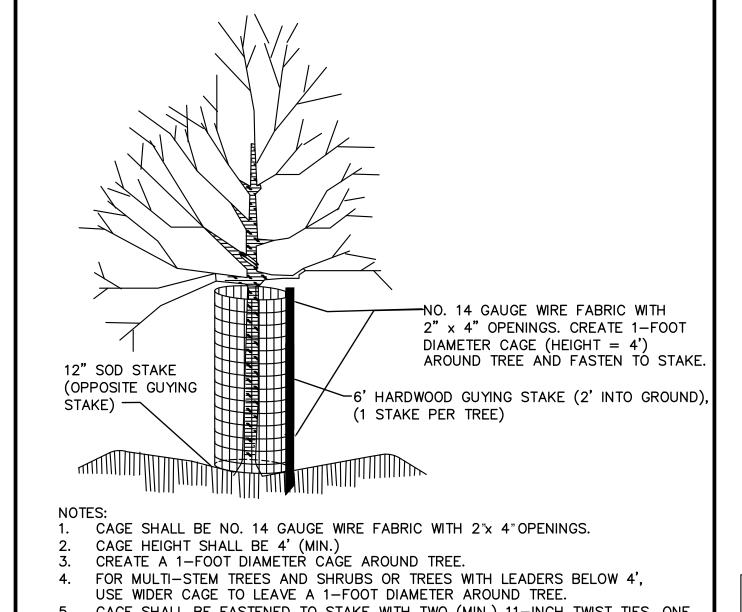


ALL SIGNIFICANT TREES SHALL BE INSPECTED BY A ISA CERTIFIED ARBORIST PRIOR TO CONSTRUCTION AND ROOT PRUNING.

SOURCE: CITY OF GAITHERSBURG, MARYLAND: CITY TREE MANUAL

ROOT PRUNING PRIOR TO CONSTRUCTION

(IF NEEDED)



CAGE SHALL BE FASTENED TO STAKE WITH TWO (MIN.) 11-INCH TWIST TIES, ONE

AT TOP AND ONE AT 6"(MIN.) ABOVE THE GROUND. INSTALL 6' HARDWOOD GUYING STAKE, 2' INTO GROUND, 1 STAKE (MIN.) PER CAGE.

ENSURE CAGE IS FASTENED TO THE GROUND TO PREVENT UPLIFT BY DEER BY INSTALLING A 12"SOD STAKE OPPOSITE THE GUYING STAKE.

FOR TREES LARGER THAN 3"CALIPER WITH NO BRANCHING BELOW 4', CAGE CAN BE SUBSTITUTED WITH DEER BARK PROTECTORS (ITEMS #bg48, BY A.M. LEONARD)

DO NOT DAMAGE TREE DURING INSTALLATION. 10. CAGES TO BE REMOVED ONLY AT DIRECTION OF FOREST ECOLOGIST.

TREE DEER PROTECTION

NOT TO SCALE

MONTGOMERY COUNT PERMITTING SERVICE	NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.			
Stormwater Management:	Sediment Control Technical Administrative Requirements:			:
			Reviewed Date	
	Reviewed	Date		-
			SEDIMENT CONTROL PERMIT N	0.
Reviewed Date	Approved	Date		-
Approved Date			MCDPS APPROVAL OF THIS PLAN WILL EXPIRE	-
SM FILE #			TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED	

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

					PERMISSION. IT DOES THE DRAINAGE DESIGN	NOT RELIEVE THE DESIGN ENGINEER OR AS IT AFFECTS UPHILL OR DOWNHILL PR	OTHER RESPO
DRAFT NOT FOR CONSTRUCTION					MONTGOMERY COU DEPARTMENT OF TRANS GAITHERSBURG, MAR	PORTATION	L;
					RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED	Date	
					Chief, Division of Transportation Engineering	Date	SC
	NO.	REVISION	DATE	BY	Designed by: <u>SBD</u> Drawn by: <u>SBD</u>	Checked by: SJR	Proje

LS-07 LANDSCAPE DETAIL SHEET GOOD HOPE ROAD SIDEWALK

DATE: NOVEMBER 2019 SCALE: 1"=30' oject No. : <u>501902</u> SHEET <u>45</u> of <u>75</u>

	LANDSCAPE PLANT SCHEDULE (TOTAL)								
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS			
TREES									
*AR	12	ACER RUBRUM 'RED SUNSET'	'RED SUNSET' RED MAPLE	2" CAL.	B&B	30' O.C., AS SHOWN			
*CO	16	CELTIS OCCIDENTALIS	COMMON HACKBERRY	2" CAL.	B&B	30' O.C., AS SHOWN			
CV	10	CRATAEGUS VIRIDIS 'WINTER KING'	'WINTER KING' HAWTHORN	2" CAL.	B&B	20' O.C., AS SHOWN			
*LT	5	LIRIODENDRON TULIPIFERA	TULIP POPLAR	2" CAL.	B&B	30' O.C., AS SHOWN			
*P0	12	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	2" CAL.	B&B	30' O.C., AS SHOWN			
*QB	8	QUERCUS BICOLOR	SWAMP WHITE OAK	2" CAL.	B&B	30' O.C., AS SHOWN			
*QP	19	QUERCUS PHELLOS	WILLOW OAK	2" CAL.	B&B	30' O.C., AS SHOWN			
ТО	27	THUJA OCCIDENTALIS	AMERICAN ARBORVITAE	6' HGT.	В&В	10' O.C., AS SHOWN			
SHRUBS	SHRUBS								
LB	33	LINDERA BENZOIN	SPICEBUSH	24" HGT.	CONT.	5' O.C.			
VD	32	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	24" HGT.	CONT.	5' O.C.			

^{*}SHADE TREE TO FULFILL MONTGOMERY COUNTY TREE CANOPY REQUIREMENT.

MONTGOMERY COUNT PERMITTING SERVICE	NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED FOR A MCDPS ACCESS PERMIT.				
Stormwater Management:	Sediment Cor Require	ntrol Technical ements:	Administrative Requirements		
			Reviewed	Date	
	Reviewed	Date			
			SEDIMENT CONTROL	PERMIT NO.	
Reviewed Date	Approved	Date			
Approved Date			MODES APPROVAL OF THIS	DI ANI WILL EVDIDE	
SM FILE #			MCDPS APPROVAL OF THIS TWO YEARS FROM THE DATI THE PROJECT HAS NO	E OF APPROVAL IF	

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DRAFT NOT FOR CONSTRUCTION					MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION GAITHERSBURG, MARYLAND				
					RECOMMENDED FOR APPROVAL Chief, Design Section APPROVED Chief, Division of Transportation Engineering Designed by: SBD Drawn by: SBD Check	Date Date			
	NO.	REVISION	DATE	BY	Designed by: Drawn by: Check	ed by: <u>SJR</u>			

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION GAITHERSBURG, MARYLAND		LS-08 LANDSCAPE PLANT SCHEDULE SH
MMENDED FOR APPROVAL		GOOD HOPE ROA SIDEWALK
, Design Section	Date	
OVED		0 30′ 60′

SCALE: 1"=30'	DATE: NOVEMBER 2019
Project No. : <u>501902</u>	SHEET <u>46</u> of <u>75</u>

TREE PRESERVATION NOTES

- 1. ALL WORK PERFORMED SHALL MEET OR EXCEED INDUSTRY STANDARDS AS MOST RECENTLY PUBLISHED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), OR THE TREE CARE INDUSTRY ASSOCIATION (TCIA). IN THE EVENT TREATMENTS PRESCRIBED ARE NOT COVERED BY AN EXISTING STANDARD, WORK SHALL MEET OR EXCEED STANDARDS APPROVED BY M-NCPPC.
- 2. TREES DESIGNATED FOR REMOVAL ALONG THE LIMITS OF DISTURBANCE SHALL BE REMOVED USING A CHAINSAW TO AVOID DAMAGE TO SURROUNDING TREES TO BE PRESERVED AND UNDERSTORY VEGETATION. IF A STUMP MUST BE REMOVED, THIS SHALL BE DONE ONLY WITH THE APPROVAL OF M-NCPPC USING A STUMP-GRINDING MACHINE IN A MANNER THAT CAUSES AS LITTLE DISTURBANCE AS POSSIBLE TO ADJACENT TREES, VEGETATION AND SOIL CONDITIONS.
- 3. ROOT PRUNING SHALL BE PERFORMED, AS NEEDED, TO COMPLY WITH THE FOREST CONSERVATION REQUIREMENTS OF THESE DEVELOPMENT CONDITIONS. ALL TREATMENTS SHALL BE CLEARLY IDENTIFIED, LABELED, AND DETAILED ON THE TREE PRESERVATION AND LANDSCAPE SHEETS OF THE PLAN SUBMISSION. THE DETAILS FOR THESE TREATMENTS SHALL BE REVIEWED AND APPROVED BY M-NCPPC, ACCOMPLISHED IN A MANNER THAT PROTECTS AFFECTED AND ADJACENT VEGETATION TO BE PRESERVED. ROOT PRUNING DETAILS MAY INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: (1) ROOT PRUNING SHALL BE DONE WITH A TRENCHER OR VIBRATORY PLOW TO A DEPTH OF 18 INCHES; (2) ROOT PRUNING SHALL TAKE PLACE PRIOR TO ANY CLEARING AND GRADING AND/OR INSTALLATION OF SUPER SILT FENCE, DIVERSION FENCE OR TREE PROTECTION FENCE; (3) ROOT PRUNING SHALL BE CONDUCTED WITH THE SUPERVISION OF THE PARK URBAN FORESTER; AND (4) A M-NCPPC REPRESENTATIVE SHALL BE INFORMED WHEN ALL ROOT PRUNING AND TREE PROTECTION FENCE INSTALLATION IS COMPLETE.
- 4. IMMEDIATELY AFTER THE E&S ACTIVITIES ARE COMPLETE, TREES INDICATED FOR MULCHING IN THE TREE INVENTORY SHALL BE MULCHED TO PROTECT THE ROOTS AND RETAIN MOISTURE. HARDWOOD CHIPS OR SHREDDED MULCH SHALL BE APPLIED AT A MAXIMUM DEPTH OF 4 INCHES AROUND THESE SPECIFIC TREES AND ONLY WITHIN 10 FEET OF THE LIMITS OF DISTURBANCE. ADDITIONAL AREAS MAY BE MULCHED AS PART OF THE INVASIVE SPECIES MANAGEMENT, SEE INVASIVE SPECIES MANAGEMENT NOTES, THIS SHEET.
- 5. ALL CONSTRUCTION ACTIVITY BEYOND THE LIMITS OF DISTURBANCE SHOWN ON THE PLAN SHALL BE PROHIBITED UNLESS PREVIOUSLY APPROVED. THE STORAGE OF EQUIPMENT, MATERIALS, CHEMICALS, AND DEBRIS AS WELL AS VEHICULAR TRAFFIC OR THE PARKING OF VEHICLES SHALL NOT BE PERMITTED WITHIN TREE PRESERVATION AREAS.
- 6. THE SERVICES OF THE PROJECT SURVEYOR SHALL BE RETAINED TO HAVE THE LIMITS OF CLEARING AND GRADING IN THE AREAS OF TREE PRESERVATION MARKED WITH A CONTINUOUS LINE OF FLAGGING PRIOR TO THE WALK-THROUGH MEETING WITH THE M-NCPPC DEPARTMENT OF PLANNING FOREST CONSERVATION INSPECTOR AND PARKS DEPARTMENT INSPECTOR TO BE HELD PRIOR TO ANY CLEARING AND GRADING. DURING THE TREE PRESERVATION WALK-THROUGH MEETING. THE PARK URBAN FORESTER SHALL WALK SUCH LIMITS OF CLEARING AND GRADING WITH BOTH INSPECTORS TO DETERMINE WHERE ADJUSTMENTS TO THE CLEARING LIMITS CAN BE MADE TO INCREASE THE AREA OF TREE PRESERVATION AND/OR TO INCREASE THE SURVIVABILITY OF TREES AT THE EDGE OF THE LIMITS OF CLEARING AND GRADING. SUCH ADJUSTMENT SHALL BE IMPLEMENTED; PROVIDED, HOWEVER, THAT NO ADJUSTMENT SHALL BE REQUIRED THAT WOULD AFFECT THE LOCATION AND/OR DESIGN OF THE DEVELOPMENT, INCLUDING A REQUIREMENT FOR ADDITIONAL RETAINING WALLS. TREES WITHIN THE PRESERVATION AREAS THAT ARE IDENTIFIED SPECIFICALLY BY M-NCPPC IN WRITING AS DEAD OR DYING MAY BE REMOVED AS PART OF THE CLEARING OPERATION. ANY TREE THAT IS SO DESIGNATED SHALL BE REMOVED USING A CHAIN SAW AND SUCH REMOVAL SHALL BE ACCOMPLISHED IN A MANNER THAT AVOIDS DAMAGE TO SURROUNDING TREES AND ASSOCIATED UNDERSTORY VEGETATION. IF A STUMP MUST BE REMOVED, THIS SHALL BE DONE USING A STUMP-GRINDING MACHINE IN A MANNER CAUSING AS LITTLE DISTURBANCE AS POSSIBLE TO ADJACENT TREES AND ASSOCIATED UNDERSTORY VEGETATION AND SOIL CONDITIONS.
- 7. THE LIMITS OF CLEARING AND GRADING SHALL BE STRICTLY CONFORMED TO, AS SHOWN ON THE PLAN, SUBJECT TO ALLOWANCES SPECIFIED IN THESE DEVELOPMENT CONDITIONS AND FOR THE INSTALLATION OF FENCES AND/OR UTILITIES AS DETERMINED NECESSARY BY M-NCPPC. IF IT IS DETERMINED NECESSARY TO INSTALL FENCES AND/OR UTILITIES IN AREAS PROTECTED BY THE LIMITS OF CLEARING AND GRADING AS SHOWN ON THE PLAN, THEY SHALL BE LOCATED IN THE LEAST DISRUPTIVE MANNER NECESSARY AS DETERMINED BY M-NCPPC AND THE PARK URBAN FORESTER.
- 8. DURING ANY CLEARING OR TREE/VEGETATION REMOVAL IN THE AREAS ADJACENT TO THE TREE PRESERVATION AREAS, A REPRESENTATIVE OF THE DEVELOPER SHALL BE PRESENT TO MONITOR THE PROCESS AND ENSURE THAT THE ACTIVITIES ARE CONDUCTED AS CONDITIONED AND APPROVED BY M-NCPPC. THE SERVICES OF THE PARK URBAN FORESTER SHALL BE RETAINED TO MONITOR ALL ON-SITE CONSTRUCTION AND DEMOLITION WORK AND TREE PRESERVATION EFFORTS IN ORDER TO ENSURE CONFORMANCE WITH ALL TREE PRESERVATION CONDITIONS, AND M-NCPPC APPROVALS. MONITORING VISITS SHALL BE CONDUCTED WEEKLY DURING E&S INSTALLATION (CLEARING AND GRADING) CONSTRUCTION AND MONTHLY THEREAFTER UNTIL PROJECT COMPLETION.
- 9. ALL TREES SHOWN TO BE PRESERVED ON THE FOREST CONSERVATION PLAN SHALL BE PROTECTED BY TREE PROTECTION FENCE. TREE PROTECTION FENCING OR SUPER SILT FENCING SHALL BE ERECTED AT THE LIMITS OF CLEARING AND GRADING ADJACENT TO THE TREE PRESERVATION AREAS AS SHOWN ON THE PLANS, AS MAY BE MODIFIED BY THE DEVELOPMENT CONDITIONS BELOW. SUPER SILT FENCE ADJACENT TO MAJOR ROOTS OF TREES MAY BE NOTCHED, AS APPROVED, BY THE DPS INSPECTOR IN THE FIELD. ALL TREE PROTECTION FENCING SHALL BE INSTALLED AFTER THE TREE PRESERVATION WALK-THROUGH MEETING BUT PRIOR TO ANY CLEARING AND GRADING ACTIVITIES. THE INSTALLATION OF ALL TREE PROTECTION FENCING SHALL BE PERFORMED UNDER THE SUPERVISION OF THE PARK URBAN FORESTER AND M-NCPPC, AND ACCOMPLISHED IN A MANNER THAT DOES NOT HARM EXISTING VEGETATION THAT IS TO BE PRESERVED.
- 10. SIGNS STATING "TREE PRESERVATION AREA" SHALL BE AFFIXED TO THE TREE PRESERVATION FENCE AT LEAST EVERY 30 FEET. SIGNS SHALL INCLUDE BOTH ENGLISH AND SPANISH AS SHOWN ON DETAIL.
- 11. IN ORDER TO MEET THE REFORESTATION REQUIREMENTS FOR THIS PROJECT, THE COUNTY WILL DEBIT 0.96 ACRES FROM THE REFORESTATION PROGRAM. THE REFORESTATION SITE LOCATION IS GREAT SENECA CREEK REFORESTATION SITE, PARCEL NUMBER 358, LOCATED AT 15813 DARNESTOWN ROAD, DARNESTOWN, MARYLAND.

INVASIVE SPECIES NOTES

- 1. ALL WORK MUST BE PERFORMED BY A STATE LICENSED PESTICIDE APPLICATOR, UNDER THE SUPERVISION OF A MARYLAND REGISTERED FORESTER OR OTHER QUALIFIED PROFESSIONAL WITH A SUFFICIENT EDUCATION AND EXPERIENCE IN INVASIVE SPECIES AND INTEGRATED PEST MANAGEMENT TECHNIQUES.
- 2. CONTRACTOR MUST OBTAIN ALL PERMITS REQUIRED.
- 3. AN INTEGRATED PEST MANAGEMENT (IPM) PLAN SPECIFICALLY FOR INVASIVE SPECIES SHALL BE SUBMITTED TO AND APPROVED BY M-NCPPC. THIS PLAN WILL INCLUDE AREAS OF TREATMENT, TECHNIQUES, AND TYPES AND QUANTITIES OF HERBICIDES TO BE APPLIED. TECHNIQUES MAY INCLUDE A COMBINATION OF HAND OR SMALL MECHANICAL VEGETATION REMOVAL, MULCHING, AND THE APPLICATION OF HERBICIDE. SMALL MACHINERY REFERS TO ANY PIECE OF EQUIPMENT THAT CAN EASILY BE CARRIED IN AND OUT OF THE FOREST CONSERVATION AREAS SUCH AS A WEED TRIMMER OR CHAINSAW. ANYTHING LARGER THAN A SMALL MACHINE REQUIRES THE APPROVAL OF M-NCPPC.
- 4. AREAS WITHIN THE LOD SHOULD BE CUT TO THE GROUND AND CLEARED OF ALL VEGETATIVE MATERIAL. OUTSIDE OF LOD (A MAXIMUM ADDITIONAL DISTANCE OF 50 FEET), THE CLEARING SHOULD BE DONE MANUALLY (MACHETE, WEED TRIMMER, OR CHAINSAW) UNDER THE SUPERVISION OF M-NCPPC STAFF. REGROWTH OF INVASIVES SHALL BE TREATED BY HERBICIDE APPLICATION. SEE INVASIVE REMOVAL SPECIFICATION FOR DETAILS OF TYPE AND STRENGTH OF HERBICIDE. THE SPRAYING MUST BE DONE UNDER THE SUPERVISION OF M-NCPPC. REMOVAL MAY REQUIRE THREE APPLICATIONS OF HERBICIDE.
- 5. 6 TO 8 INCHES OF MULCH MAY BE APPLIED TO AREAS WITH HEAVILY ESTABLISHED INVASIVE SPECIES AFTER THE AREA HAS BEEN TREATED APPROPRIATELY WITH EITHER HAND REMOVAL OR HERBICIDE. THIS MULCHING SHOULD OCCUR 72 HOURS AFTER THE LAST HERBICIDE APPLICATION.
- 6. IN THE VICINITY OF WATER, FOLLOW THE HERBICIDE'S LABELED INSTRUCTIONS. AN HERBICIDE DESIGNED TO BE USED IN THE VICINITY OF WATER MAY BE REQUIRED (IE. RODEO).
- 7. THE USE OF A QUALITY SURFACTANT WITH HERBICIDES IS RECOMMENDED FOR IMPROVED CONTROL. SEE HERBICIDE LABEL.
- 8. READ AND FOLLOW THE PRODUCT LABEL FOR RATES ON THE HERBICIDES.
- 9. ALL PRODUCT LABELS AND MATERIAL SAFETY DATA SHEETS (MSDS) SHALL BE ON-SITE DURING ANY APPLICATION OF HERBICIDES.
- 10. ALL PLANTS ON THE MARYLAND DEPARTMENT OF NATURAL RESOURCES EXOTIC AND INVASIVE SPECIES LIST SHALL BE ERADICATED FROM ALL AREAS WITHIN THE LOD AND A MAXIMUM ADDITIONAL DISTANCE OF 50 FEET BEYOND THE LOD INTO THE FOREST CONSERVATION AREAS.
- 11. INDIVIDUALS INVOLVED IN INVASIVE PLANT REMOVAL MUST MEET WITH M-NCPPC STAFF ON-SITE PRIOR TO VEGETATION REMOVAL, MULCHING, OR HERBICIDE APPLICATION.
- 12. THE CONTRACTOR MUST FOLLOW ALL MARYLAND DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS REGARDING THE SPRAYING OF HERBICIDES. ANY HERBICIDES USED IN THE REMOVAL OF EXOTIC INVASIVE PLANTS MUST BE APPLIED BY A MARYLAND LICENSED PESTICIDE APPLICATOR.
- 13. CONTRACTOR MUST NOTIFY M-NCPPC STAFF 48 HOURS PRIOR TO SPRAYING.

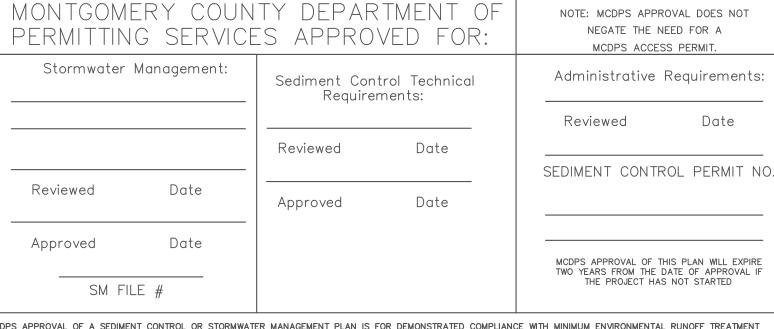
INSPECTIONS NOTES

- 1. ALL FIELD INSPECTIONS MUST BE REQUESTED BY THE APPLICANT. INSPECTIONS MUST BE CONDUCTED AS FOLLOWS:
 - a. AFTER THE LIMITS OF DISTURBANCE HAVE BEEN STAKED AND FLAGGED, BUT BEFORE ANY CLEARING OR GRADING BEGINS
 - b. AFTER NECESSARY STRESS REDUCTION MEASURES HAVE BEEN COMPLETED AND PROTECTION MEASURES HAVE BEEN INSTALLED, BUT BEFORE ANY CLEARING AND GRADING BEGIN
 - c. 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.
 - d. BEFORE THE START OF ANY REQUIRED REFORESTATION AND AFFORESTATION PLANTING
 - e. AFTER THE REQUIRED REFORESTATION AND AFFORESTATION PLANTING HAS BEEN COMPLETED TO VERIFY THAT THE PLANTING IS ACCEPTABLE AND PRIOR TO THE START OF THE MAINTENANCE PERIOD.
 - f. 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.

STANDARD TREE CANOPY NOTES

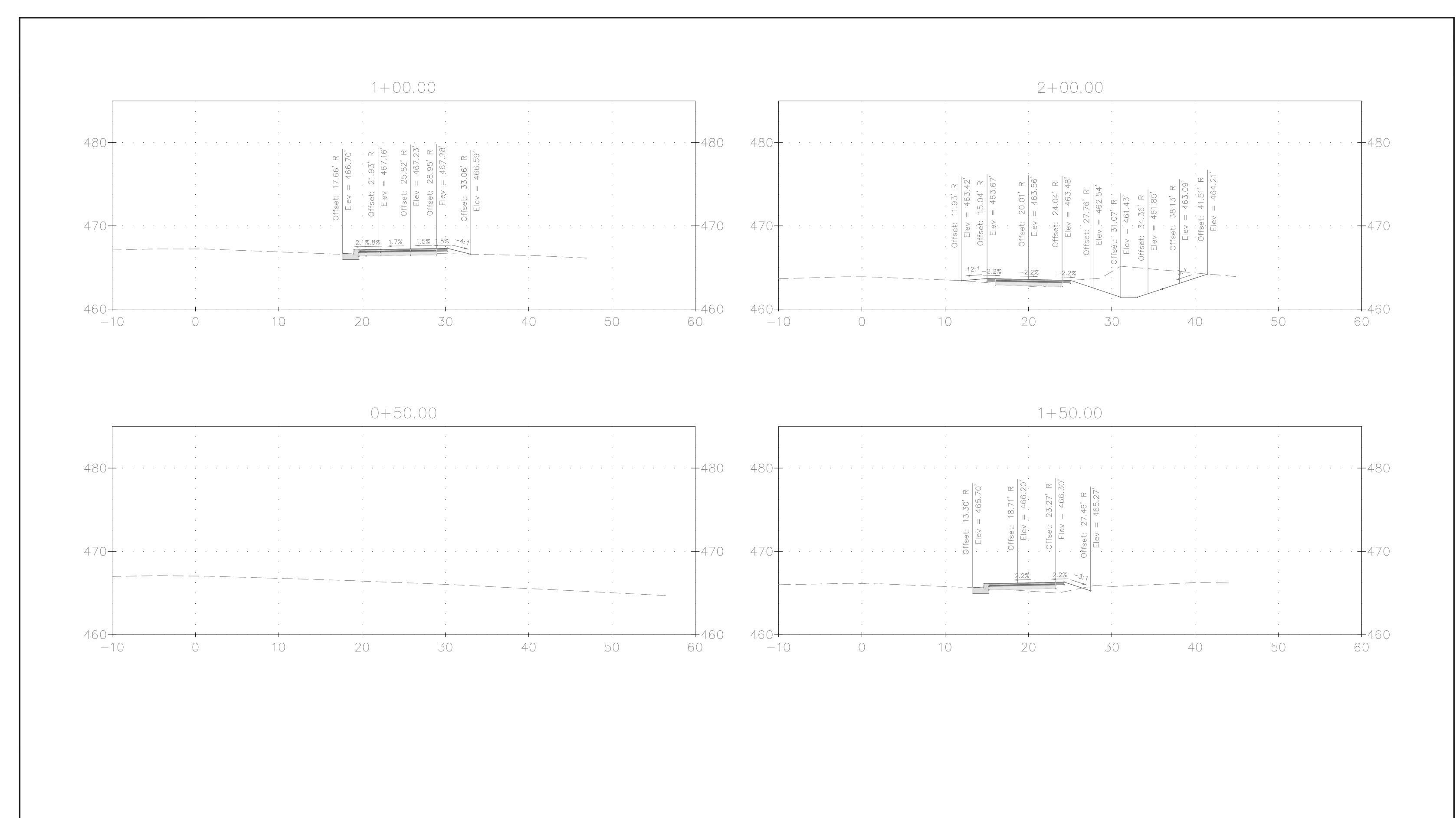
ANY SHADE TREE PLANTED TO COMPLY WITH CHAPTER 55 OF THE COUNTY CODE MUST CONFORM TO THE FOLLOWING:

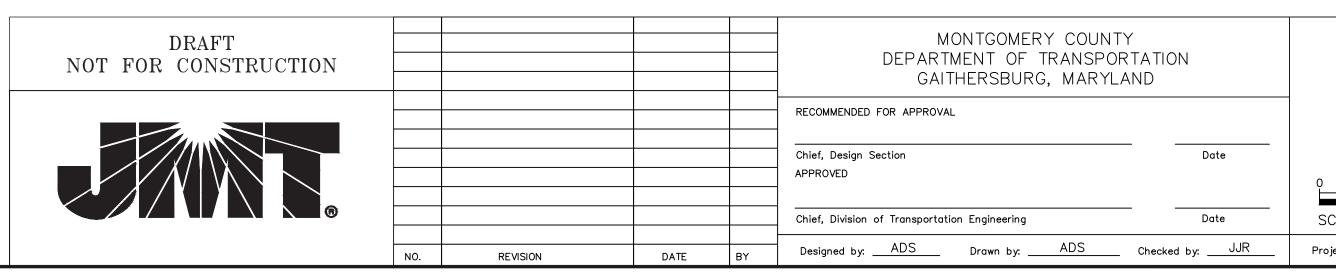
- 1. EACH SHADE TREE MUST MEET THE REQUIREMENTS FOR PLANT MATERIAL IN ANSI Z60.1;
- EACH SHADE TREE MUST BE A MINIMUM OF 2" CALIPER;
 INSTALLATION OF EACH SHADE TREE MUST MEET ALL REQUIREMENTS OF ANSI A300:
- 4. AT THE TIME OF PLANTING:
- a. TREE GUARDS TO PROTECT TREES FROM DEER RUBBING, MOWERS, WEED EATERS, OTHER EQUIPMENT AND LARGE RODENTS MUST BE INSTALLED ON ALL SHADE TREES;
 - b. MULCH MUST BE APPLIED;c. SUFFICIENT WATER MUST BE APPLIED TO AID IN PROPER PLANTING.
- 5. SHADE TREES MUST BE INSTALLED BETWEEN OCTOBER 15TH AND MAY 15TH AS LONG AS THE GROUND IS NOT FROZEN, SATURATED, OR COVERED WITH SNOW SUCH THAT A SUITABLE HOLE CANNOT BE DUG;
- 6. SHADE TREES MUST NOT BE INSTALLED BETWEEN MAY 16TH AND OCTOBER 14TH OF EACH YEAR. IF INSTALLATION CANNOT OCCUR BETWEEN OCTOBER 15TH AND MAY 15TH FOR ANY REASON, OR IF PROPOSED TREES ARE NOT PLANTED FOR ANY OTHER REASON. THE PERMITTEE MUST PAY THE REQUIRED FEE IN LIEU.
- 7. IF SHADE TREES ARE INSTALLED PRIOR TO FINAL STABILIZATION OF THE LAND DISTURBING ACTIVITY THEN NO ADDITIONAL DISTURBANCE MUST OCCUR WITHIN FIVE FEET OF THE STEM OF THE TREE. PROTECTIVE FENCING MUST BE INSTALLED AT THE EDGE OF THIS AREA AT THE SAME TIME THE TREE IS INSTALLED AND MUST REMAIN IN PLACE UNTIL FINAL STABILIZATION OCCURS.
- 8. THE LOCATION OF GROWING ZONES AND PLANTING AREAS MUST BE CLEARLY MARKED IN THE FIELD PRIOR TO INSTALLATION OF ANY SHADE TREE.
- 9. A COPY OF THE APPROVED SEDIMENT CONTROL PLAN SHOWING ALL APPROVED GROWING ZONES AND PLANTING AREAS MUST BE AVAILABLE ON THE SITE AT ALL TIMES.
- 10. AT LEAST ONE INSPECTION MUST OCCUR AFTER ALL CONSTRUCTION ACTIVITIES ARE COMPLETED TO DETERMINE THE LEVEL OF COMPLIANCE WITH SHADE TREE PLANTING REQUIREMENTS.



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.

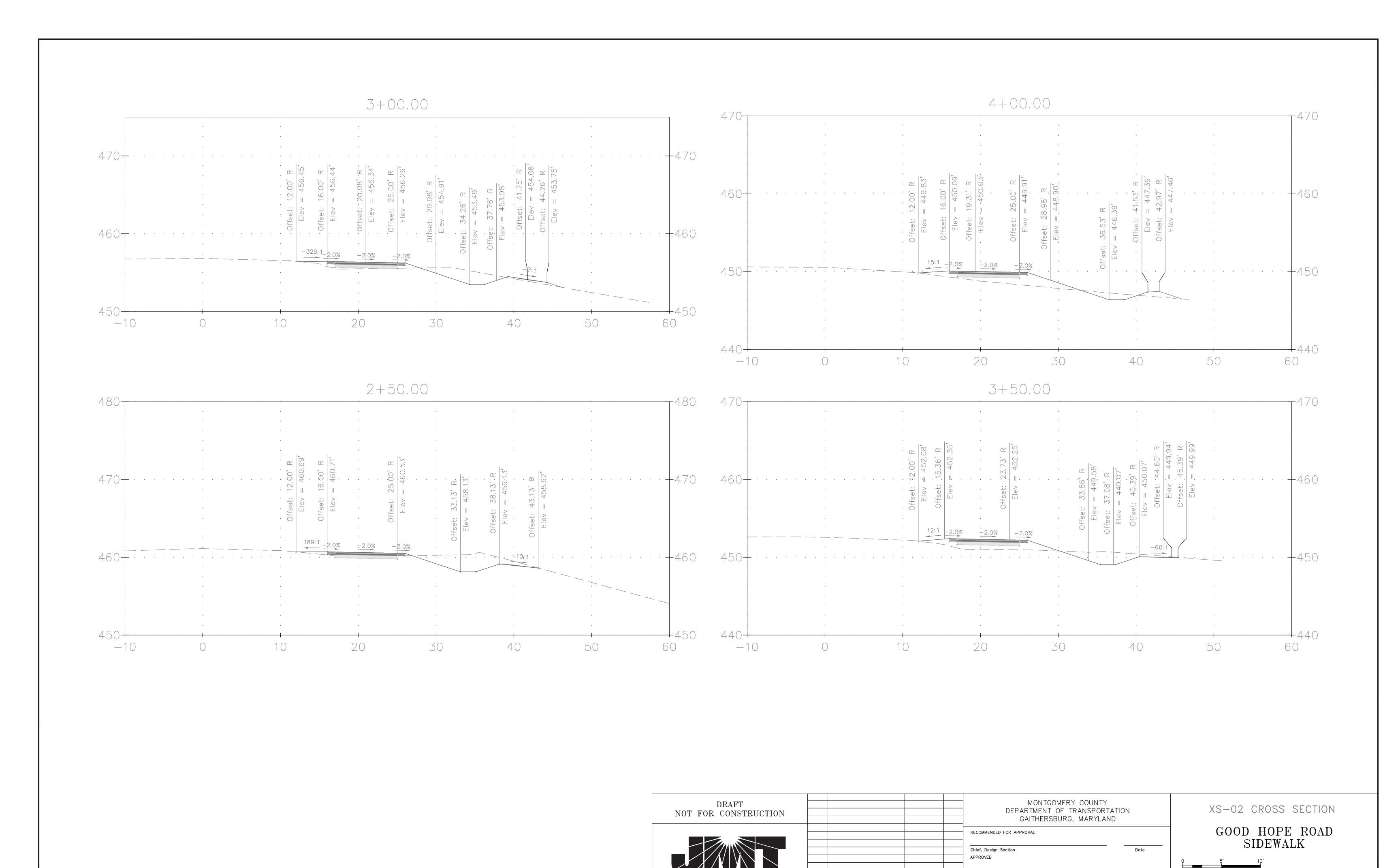
DRAFT NOT FOR CONSTRUCTION					MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION GAITHERSBURG, MARYLAND		department of transportation LS-09 LANDSCAPE NOTE SHEE				
					RECOMMENDED FOR APPROVAL			EWALK			
					Chief, Design Section APPROVED	Date	0 30' 60'				
					Chief, Division of Transportation Engineering	Date	SCALE: 1"=30'	DATE: NOVEMBER 2019			
	NO.	REVISION	DATE	BY	Designed by: SBD Drawn by: SBD	Checked by: SJR	Project No. : <u>501902</u>	SHEET <u>47</u> of <u>75</u>			





XS-01 CROSS SECTION

GOOD HOPE ROAD SIDEWALK



DATE: NOVEMBER 2019

SHEET <u>49</u> of <u>75</u>

SCALE: 1"=5'

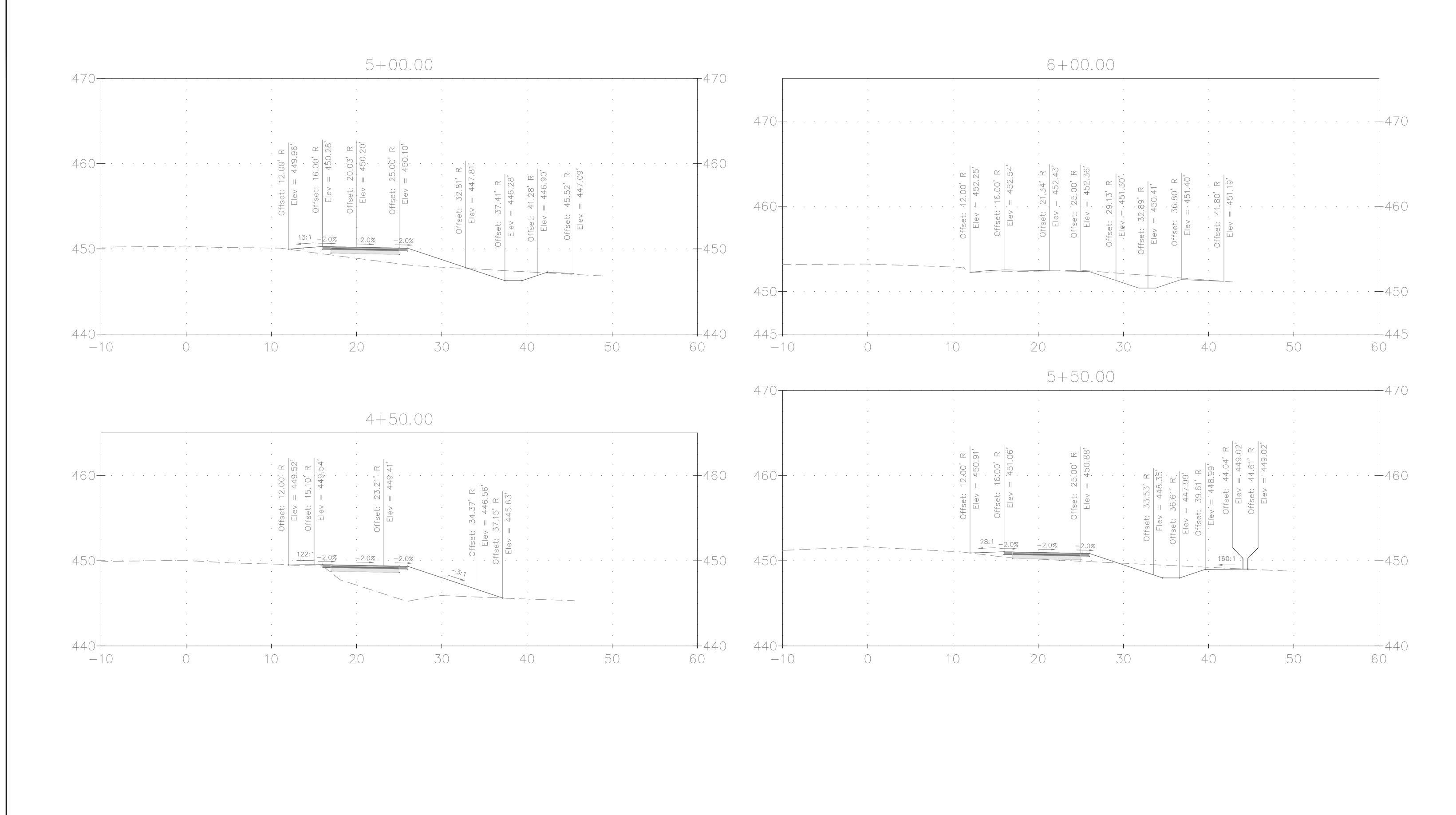
Project No. : <u>501902</u>

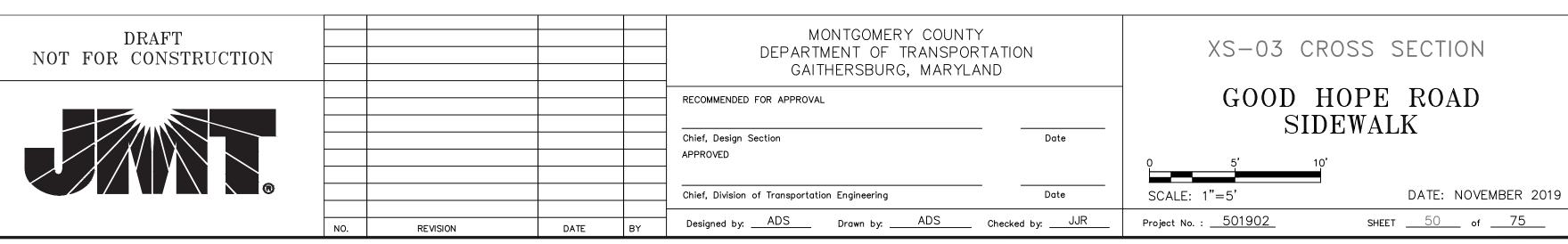
Chief, Division of Transportation Engineering

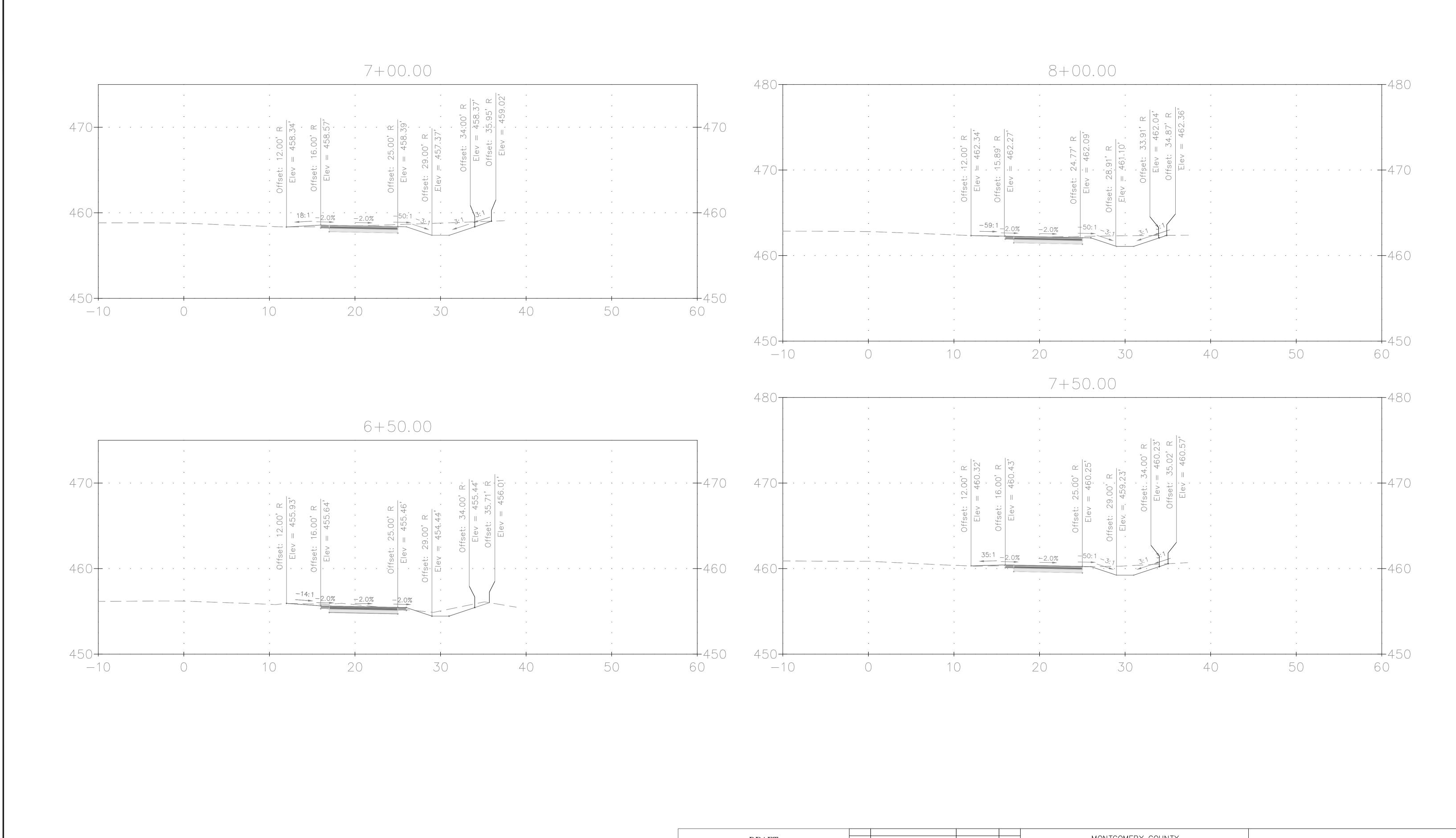
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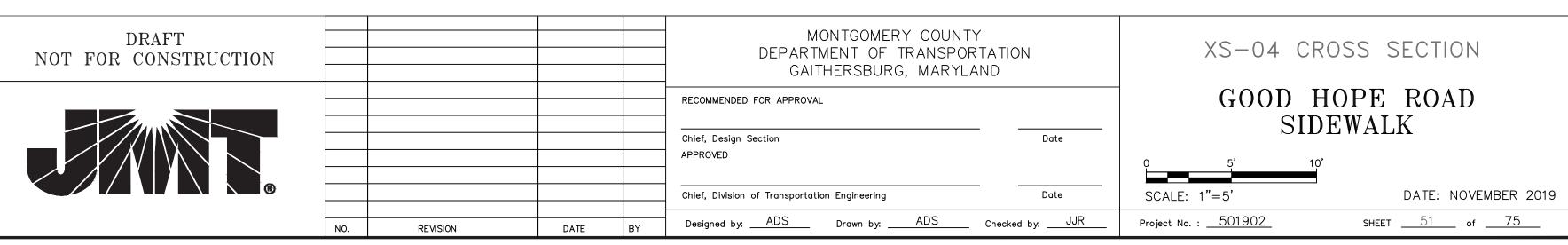
REVISION

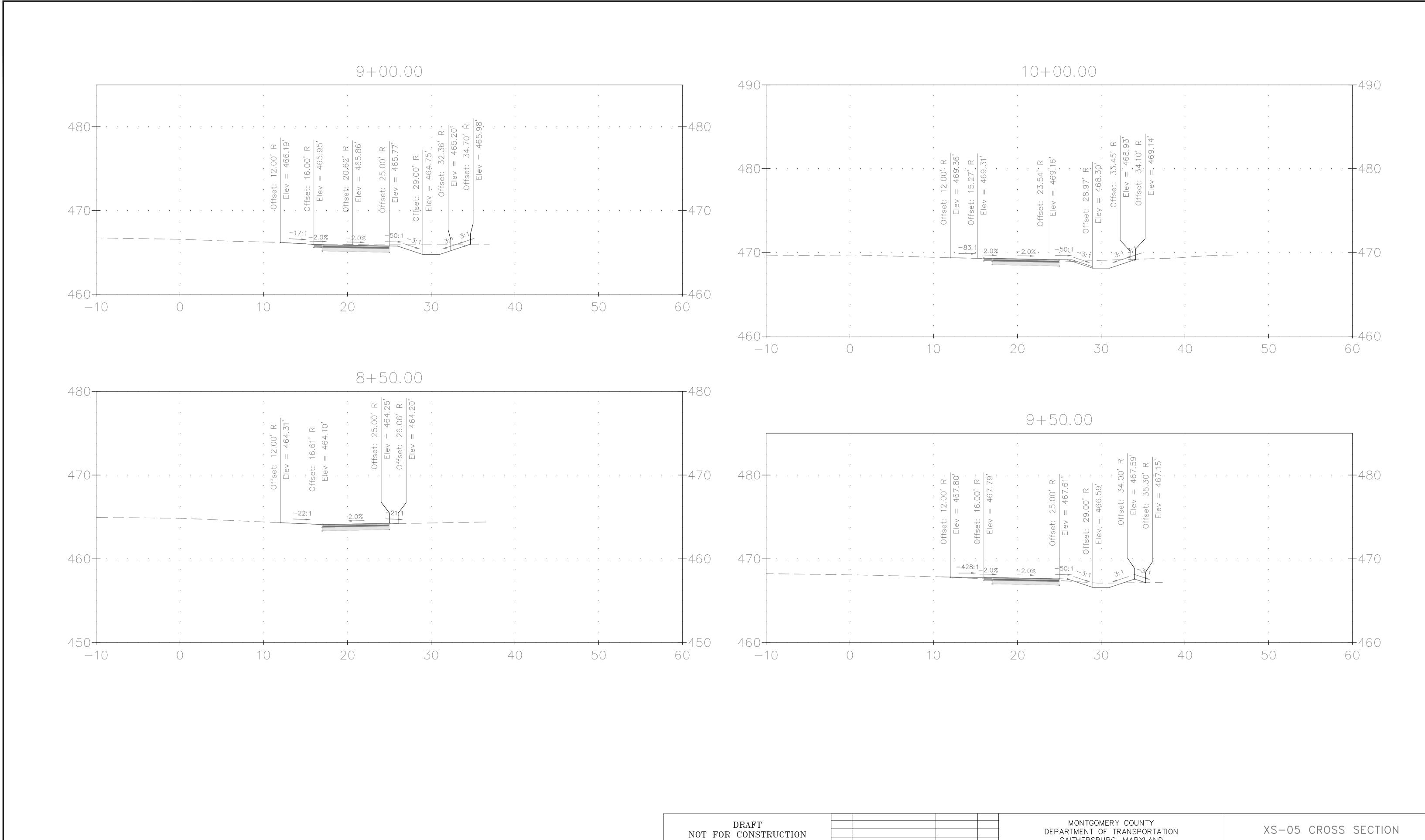
Designed by: <u>ADS</u> Drawn by: <u>ADS</u> Checked by: <u>JJR</u>

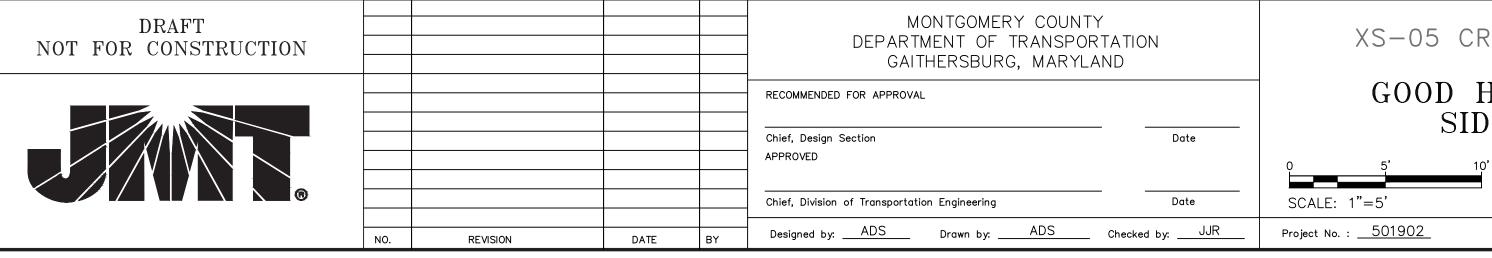








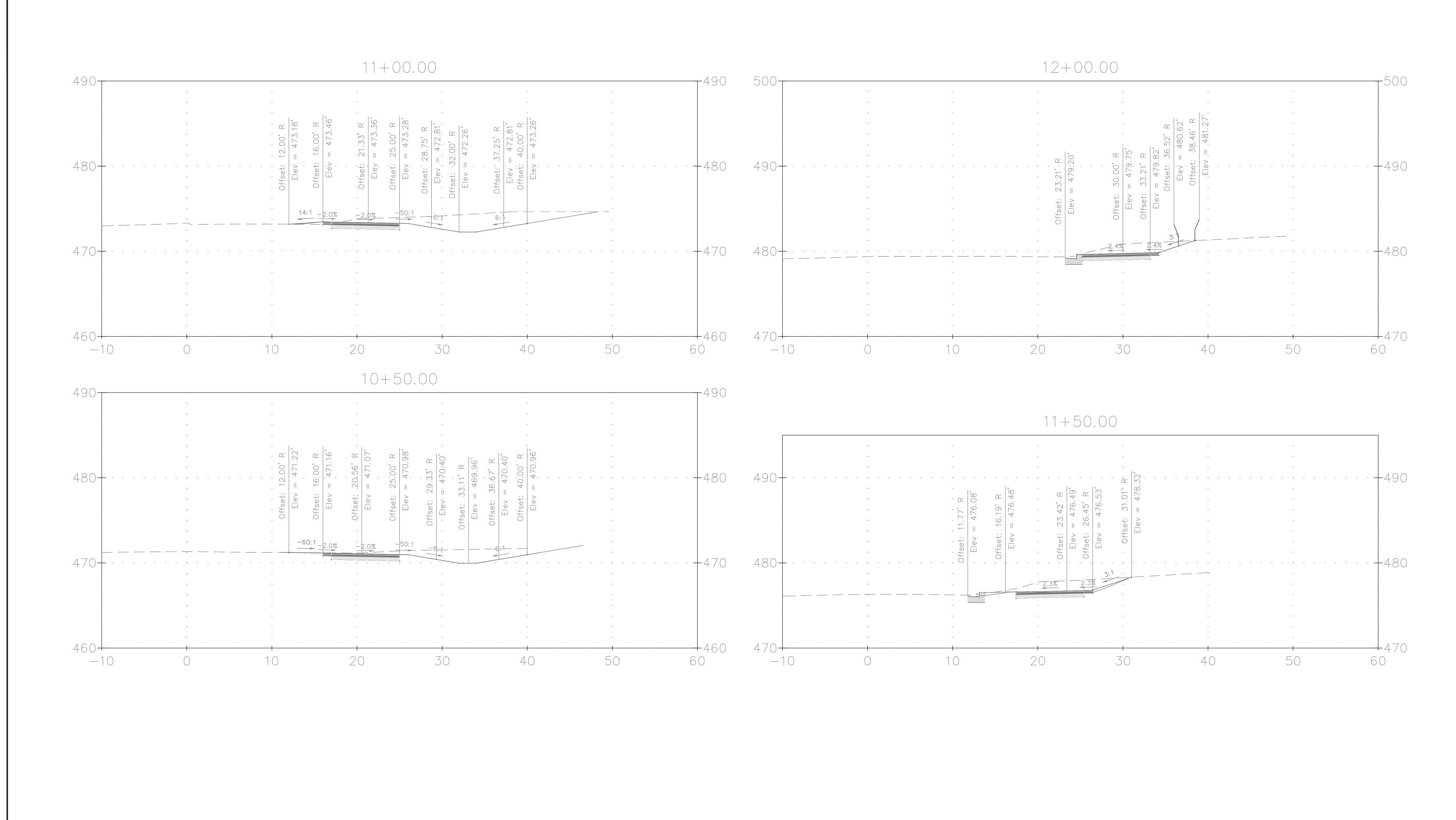


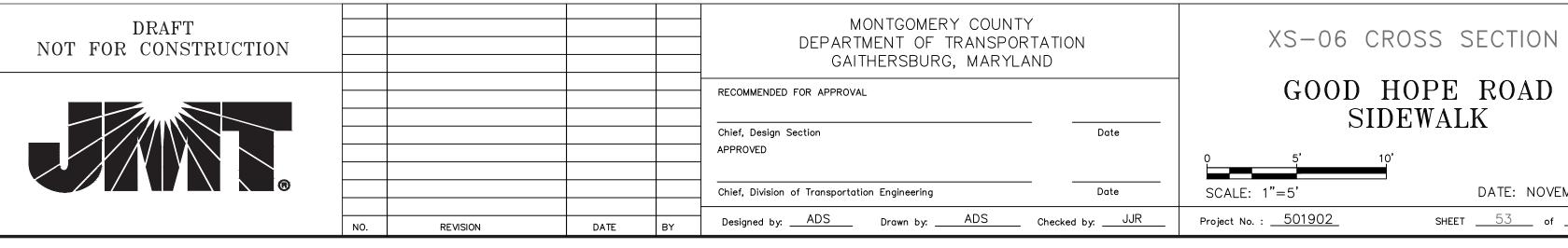


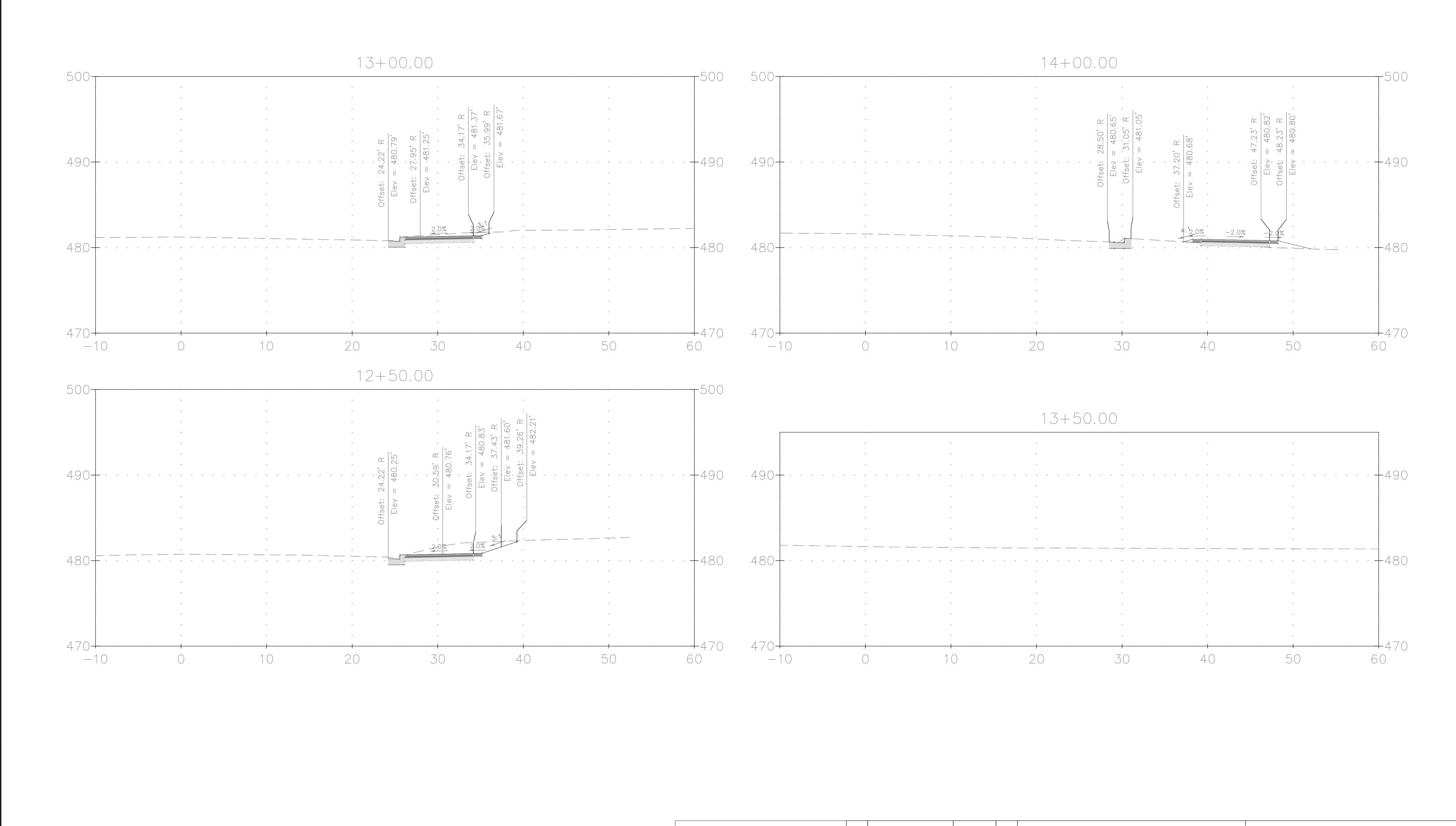
GOOD HOPE ROAD SIDEWALK

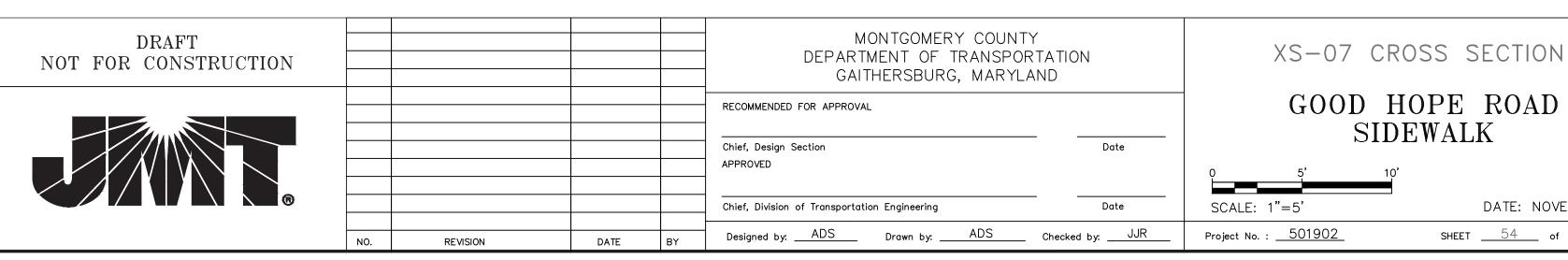
O 5' 10'
SCALE: 1"=5' DATE: NOVEMBER 2019

Project No.: 501902 SHEET 52 of 75



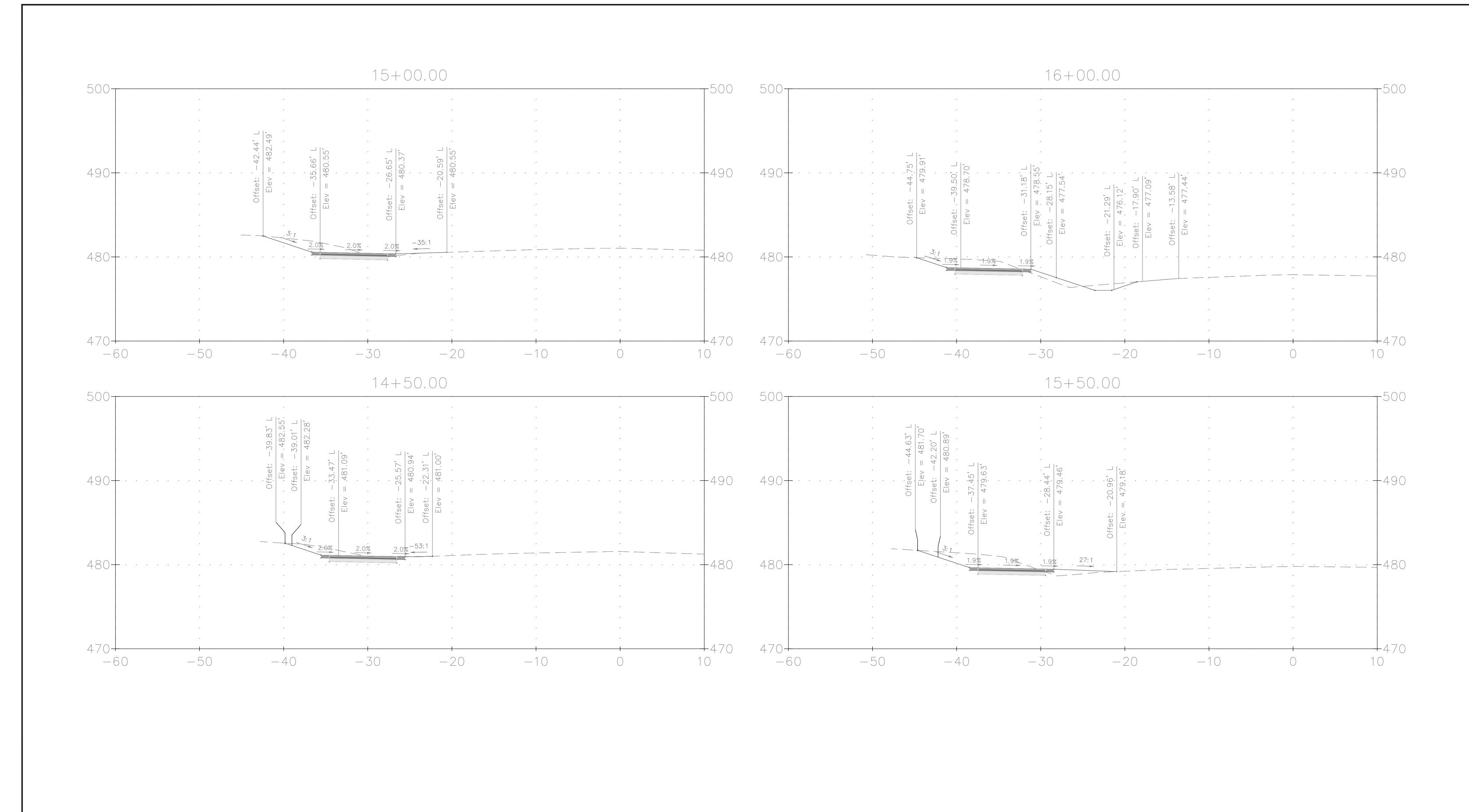


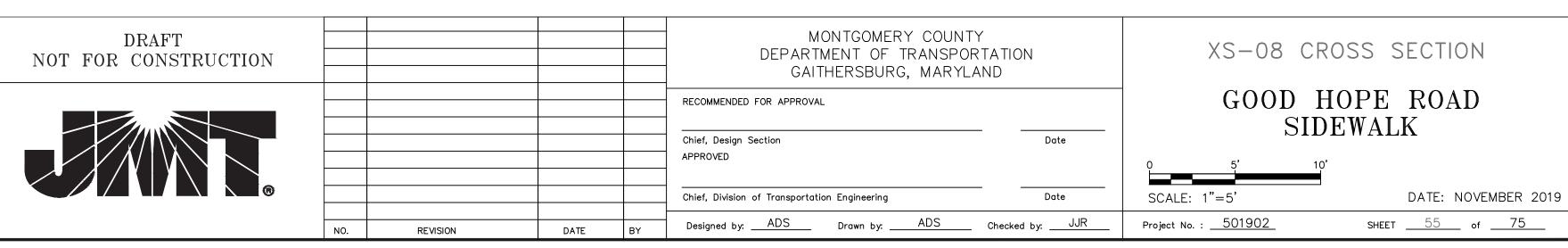


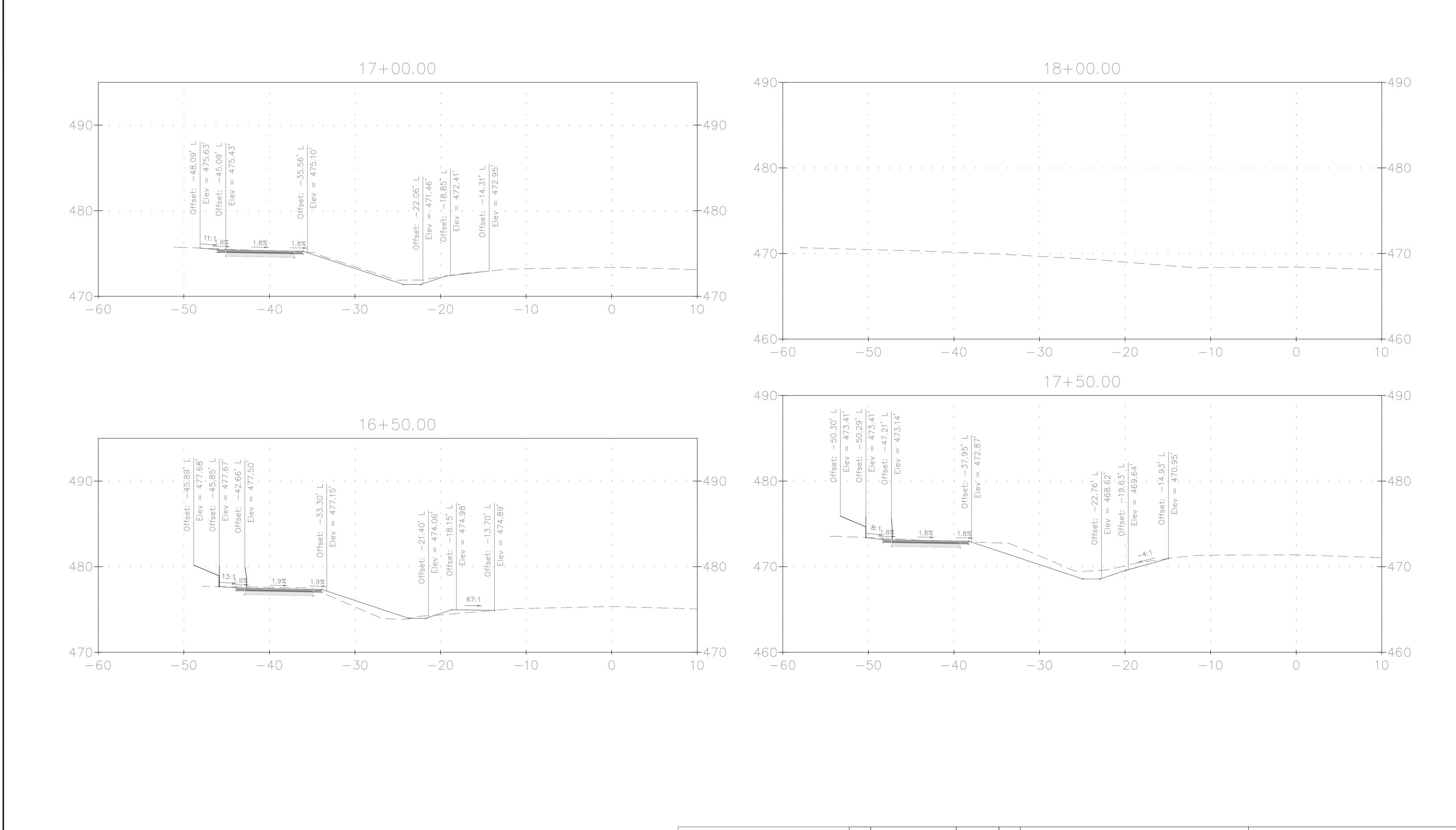


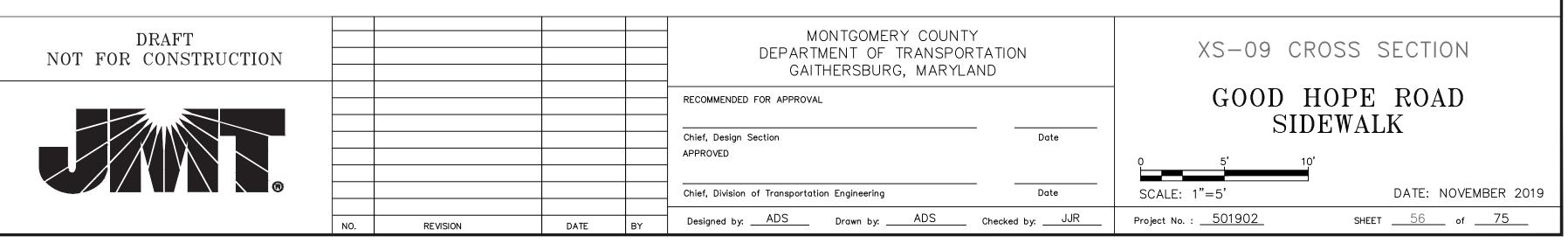
GOOD HOPE ROAD SIDEWALK

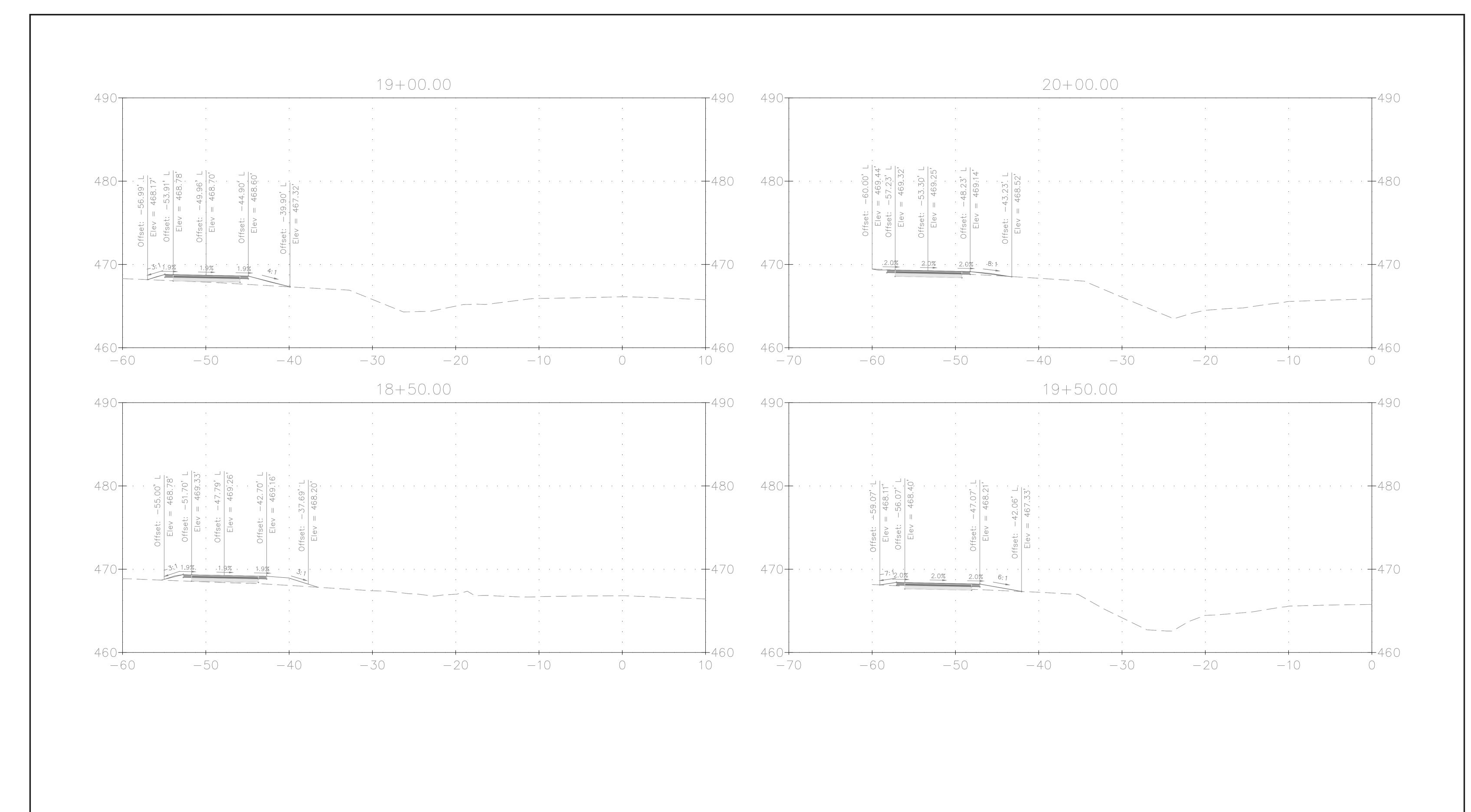
DATE: NOVEMBER 2019 SHEET <u>54</u> of <u>75</u>

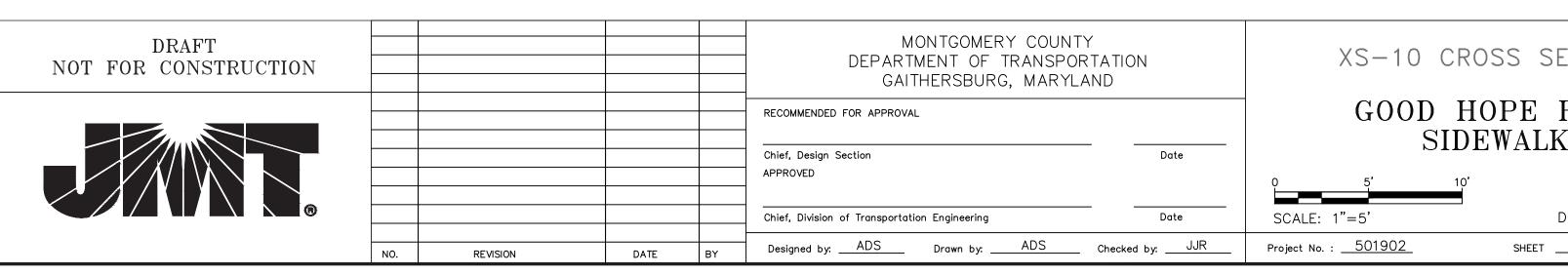






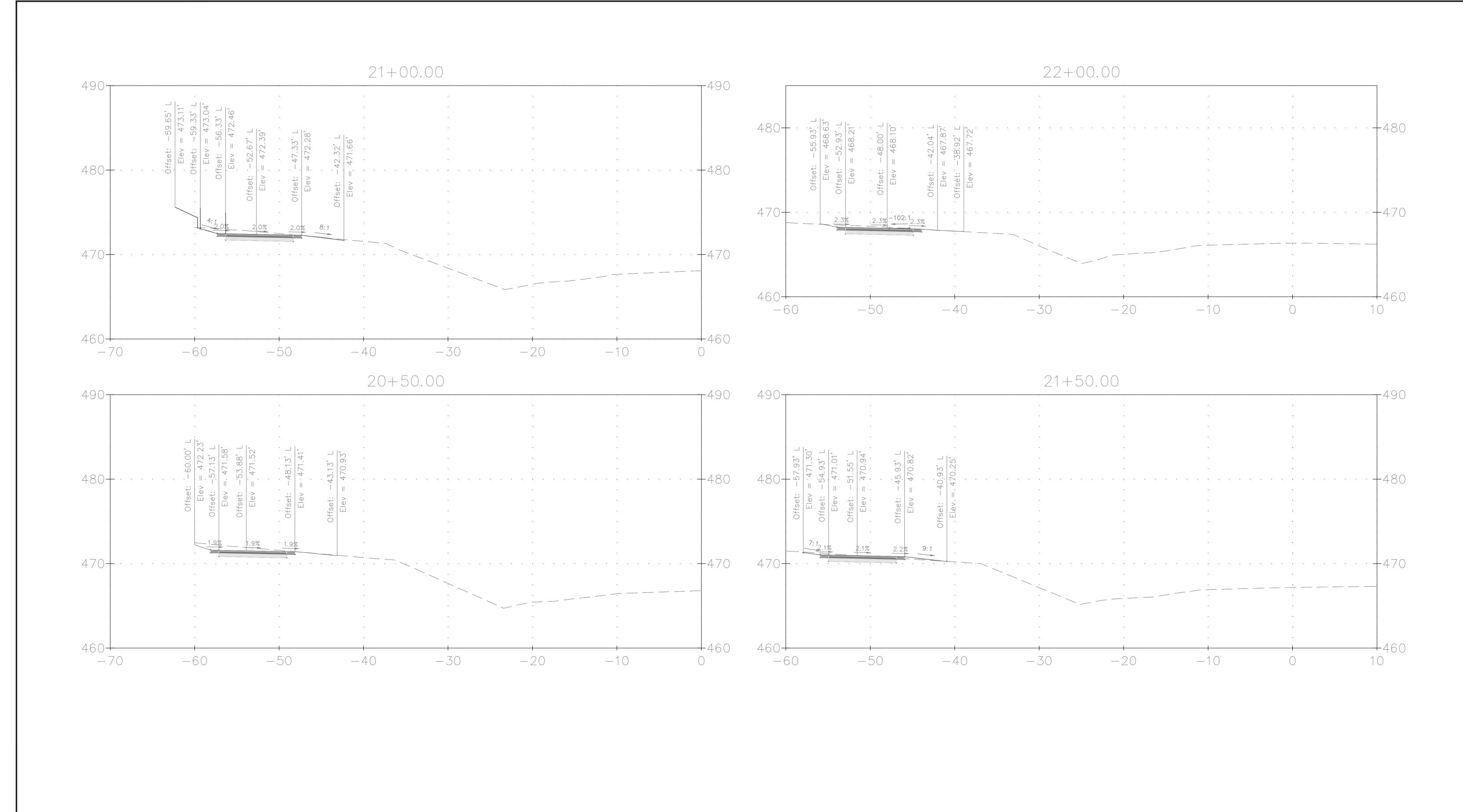


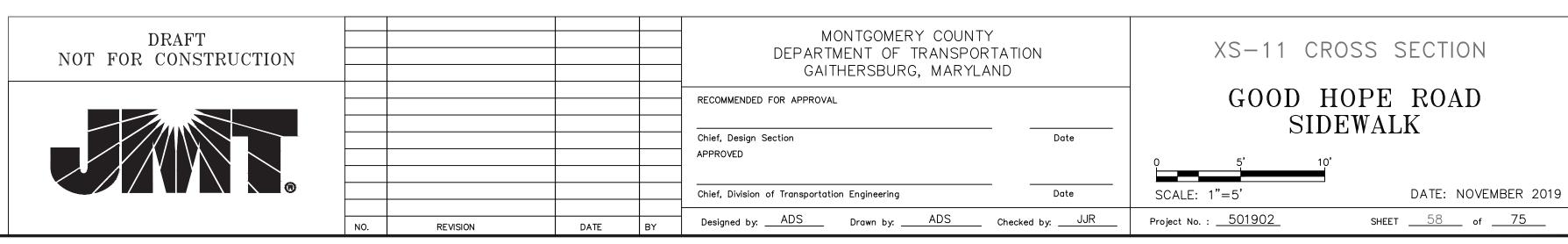


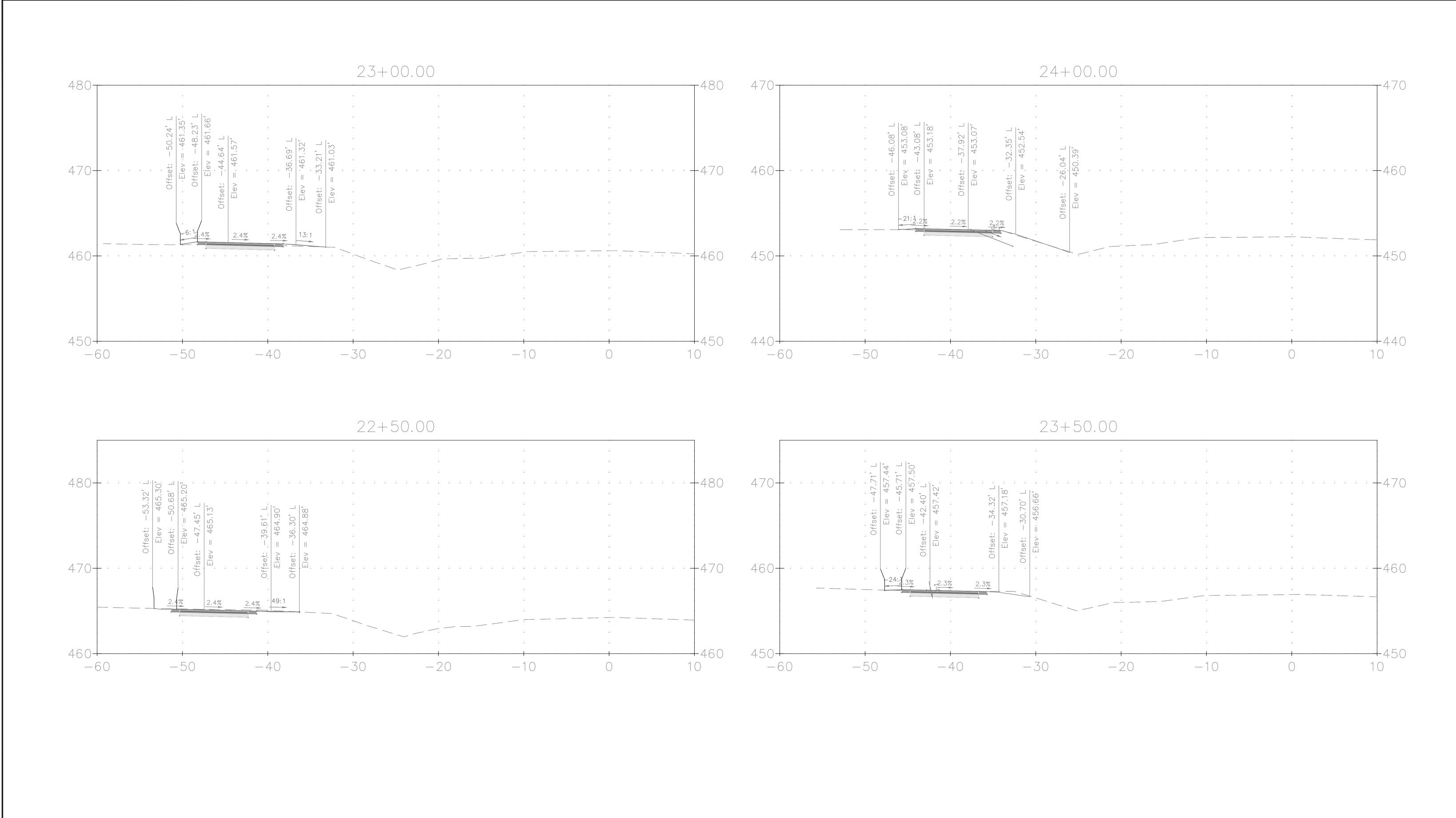


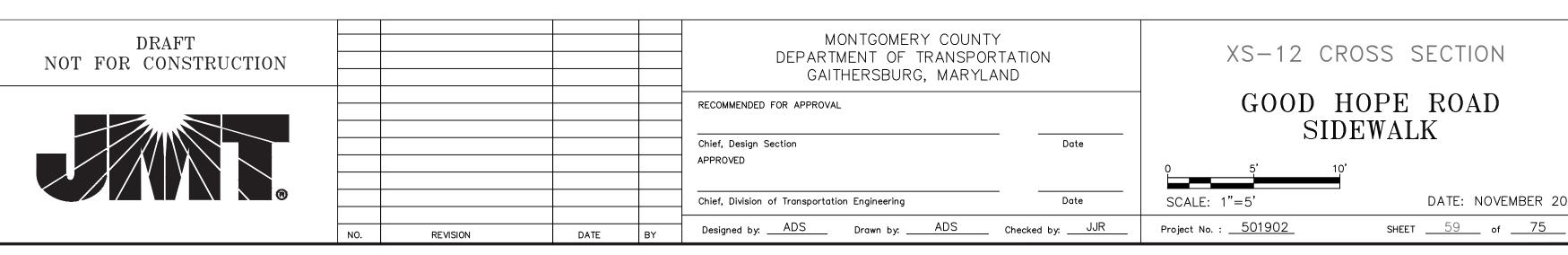
XS-10 CROSS SECTION GOOD HOPE ROAD SIDEWALK

DATE: NOVEMBER 2019 SHEET <u>57</u> of <u>75</u>

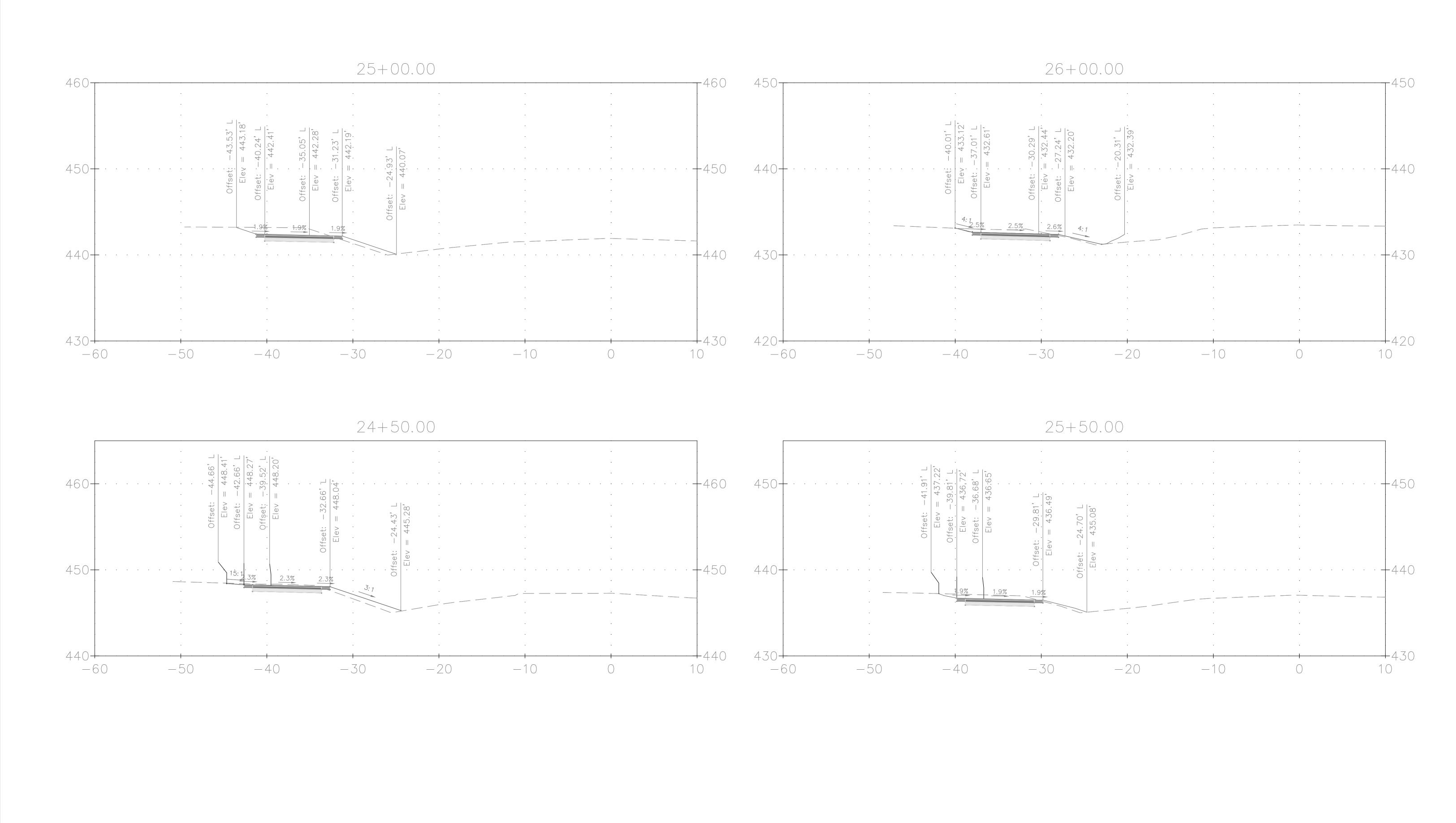


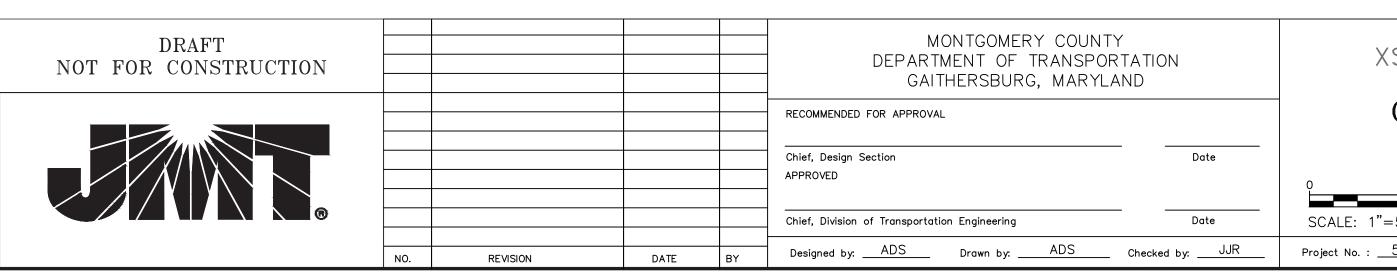






GOOD HOPE ROAD SIDEWALK DATE: NOVEMBER 2019

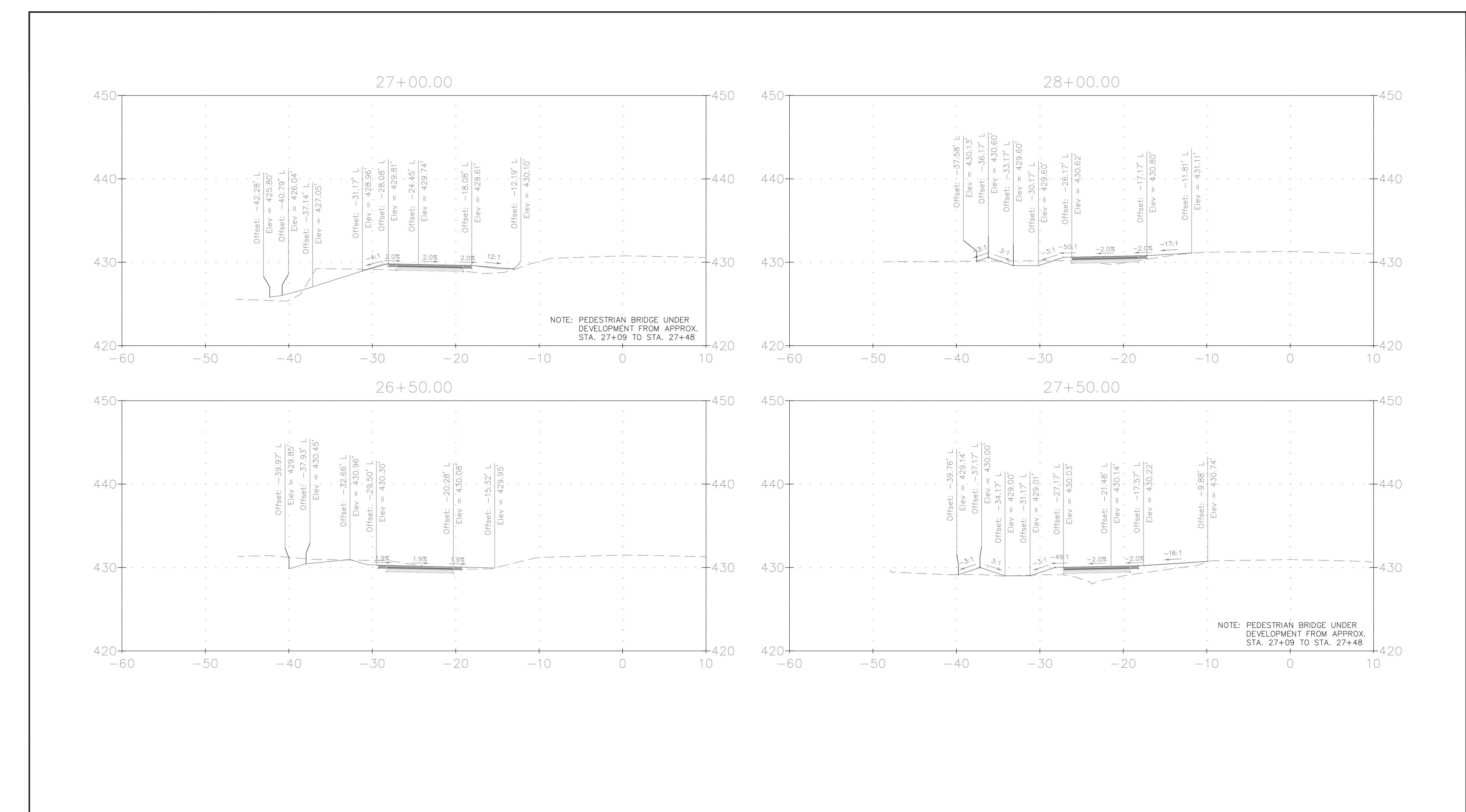


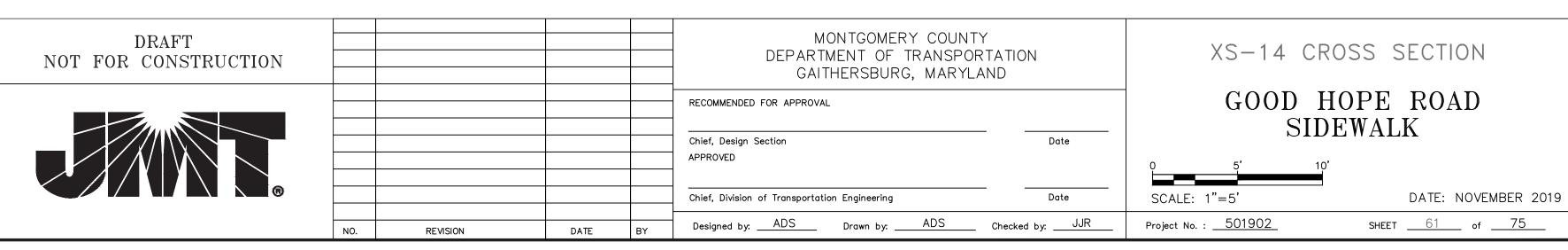


SOOD HOPE ROAD SIDEWALK

 SCALE: 1"=5'
 DATE: NOVEMBER 2019

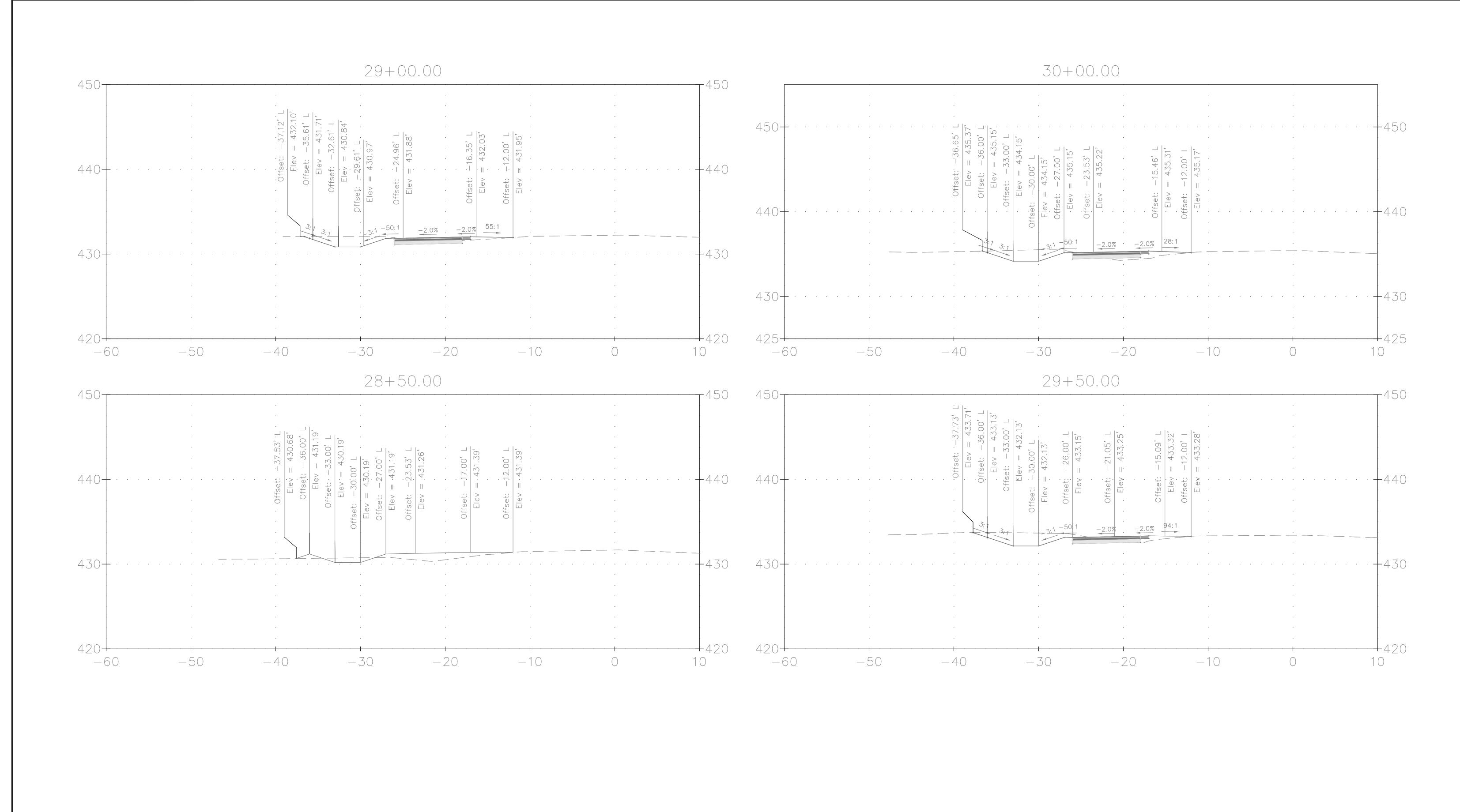
 Project No. : __501902_
 SHEET __60__ of __75__

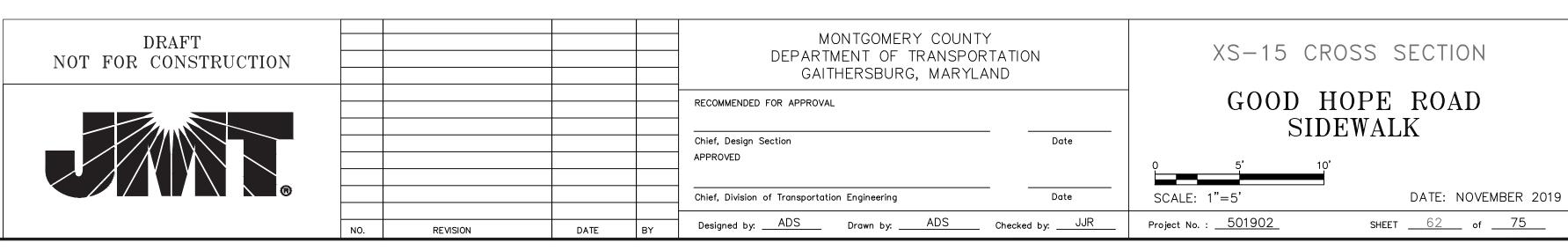


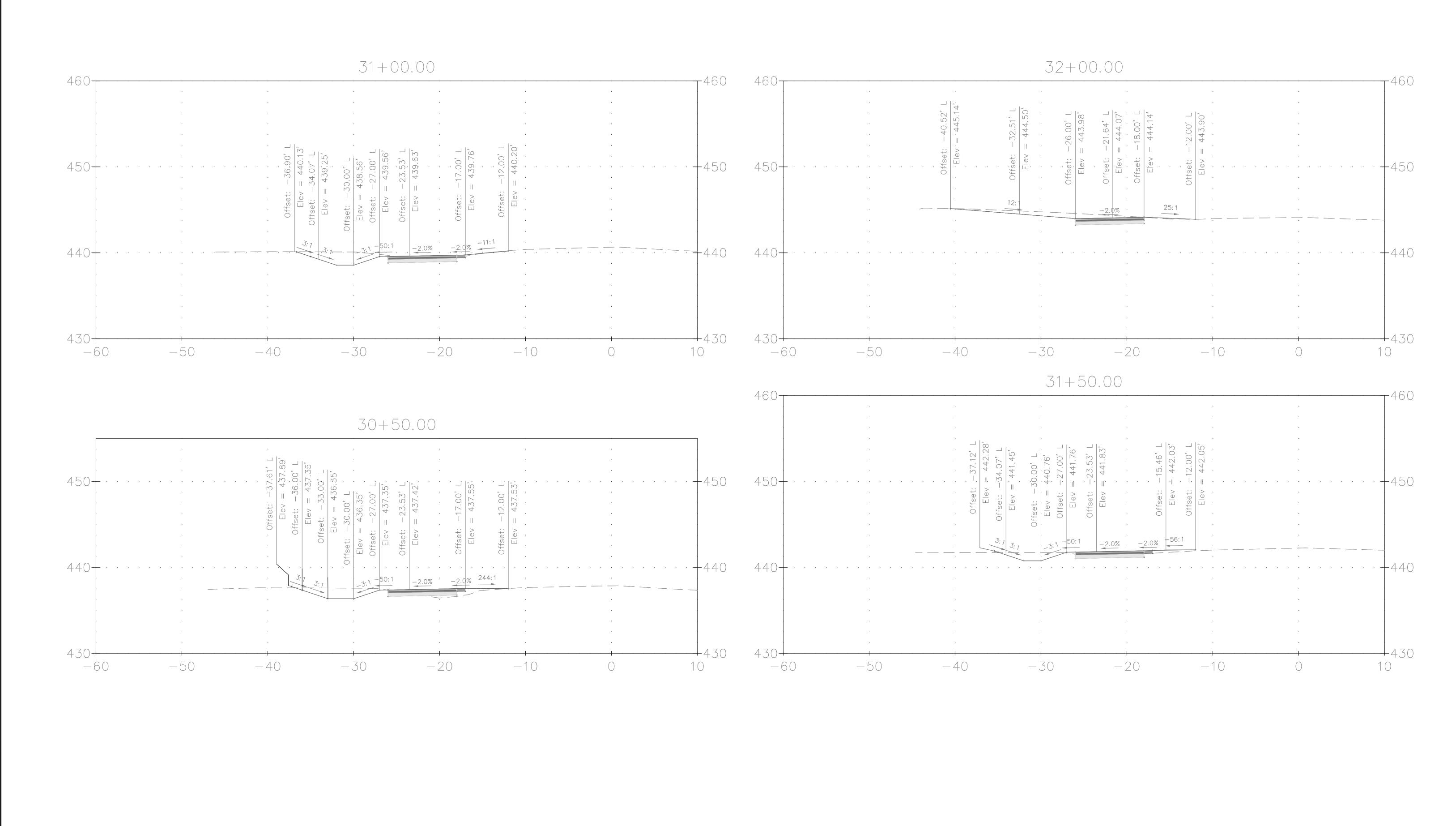


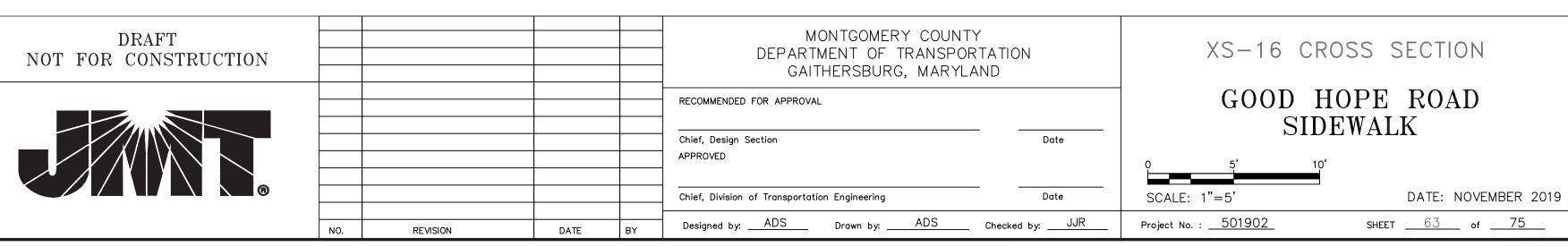
XS-14 CROSS SECTION GOOD HOPE ROAD

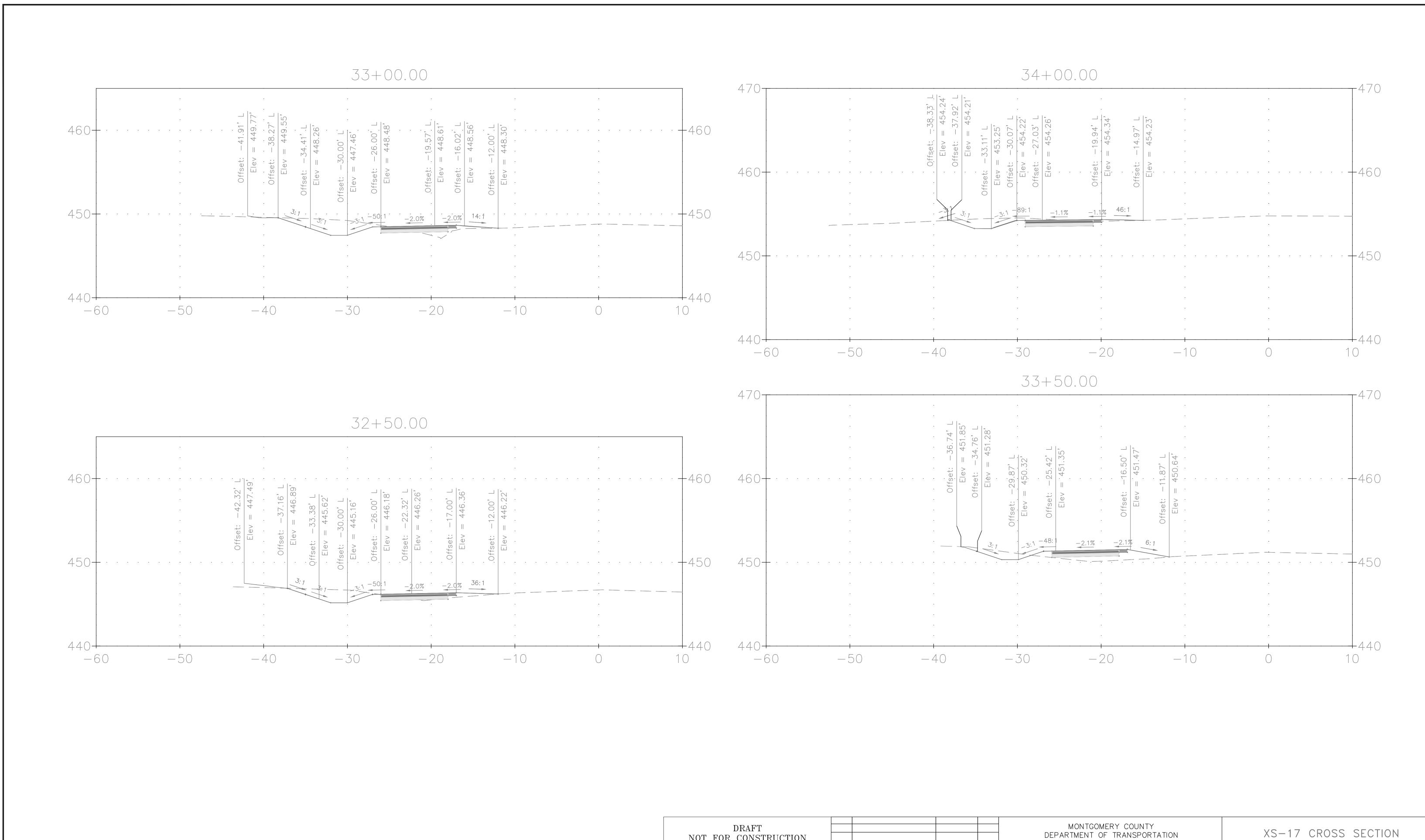
FILE NAME: Q:\2013\130605_007_Good_Hope_Road_Sidew\CADD\pHC_CrossSections.dwg LAYOUT NAME: XS-14 PLOTTED: Friday, November 01, 2019 - 2:45pm USER: Havener

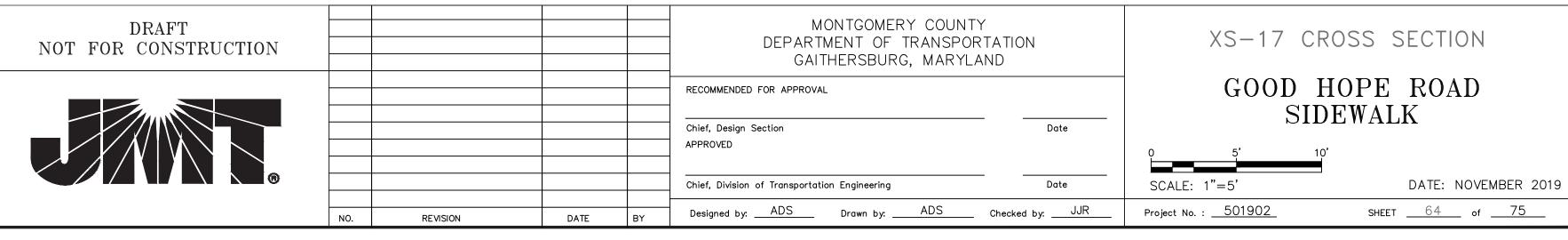


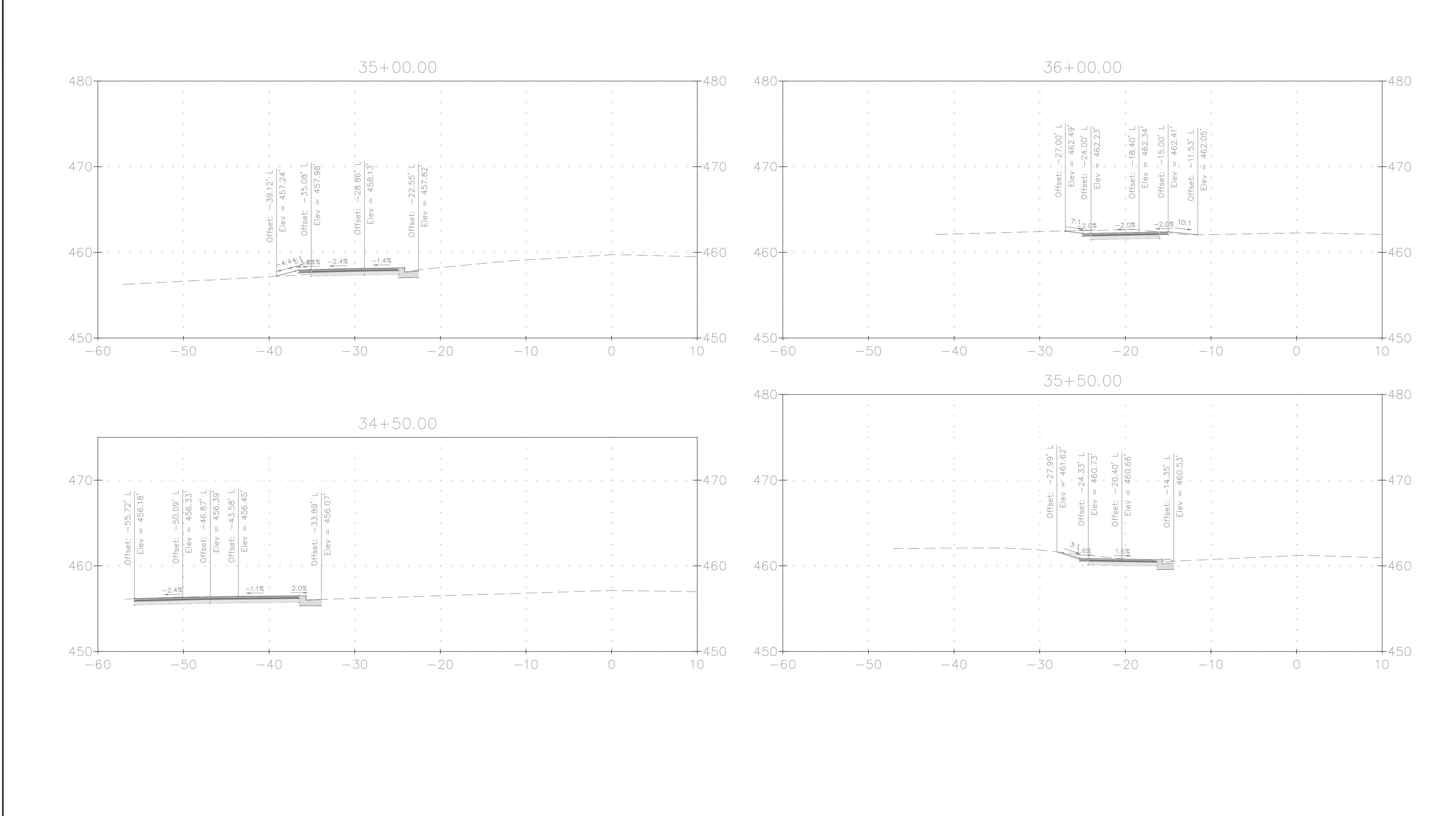


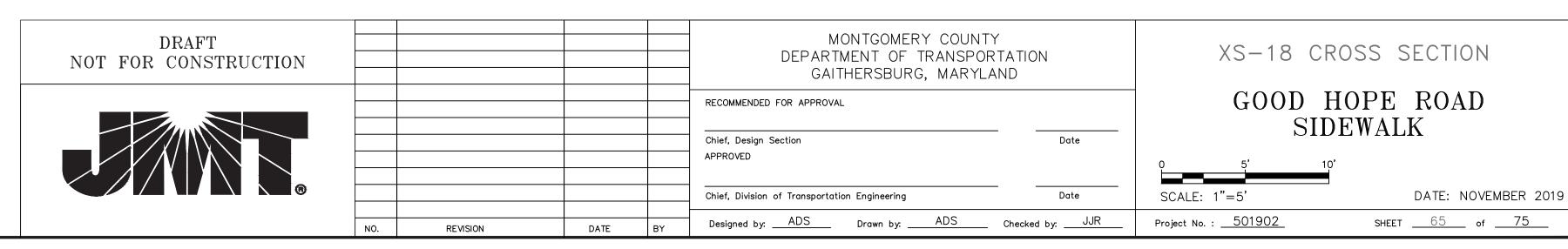


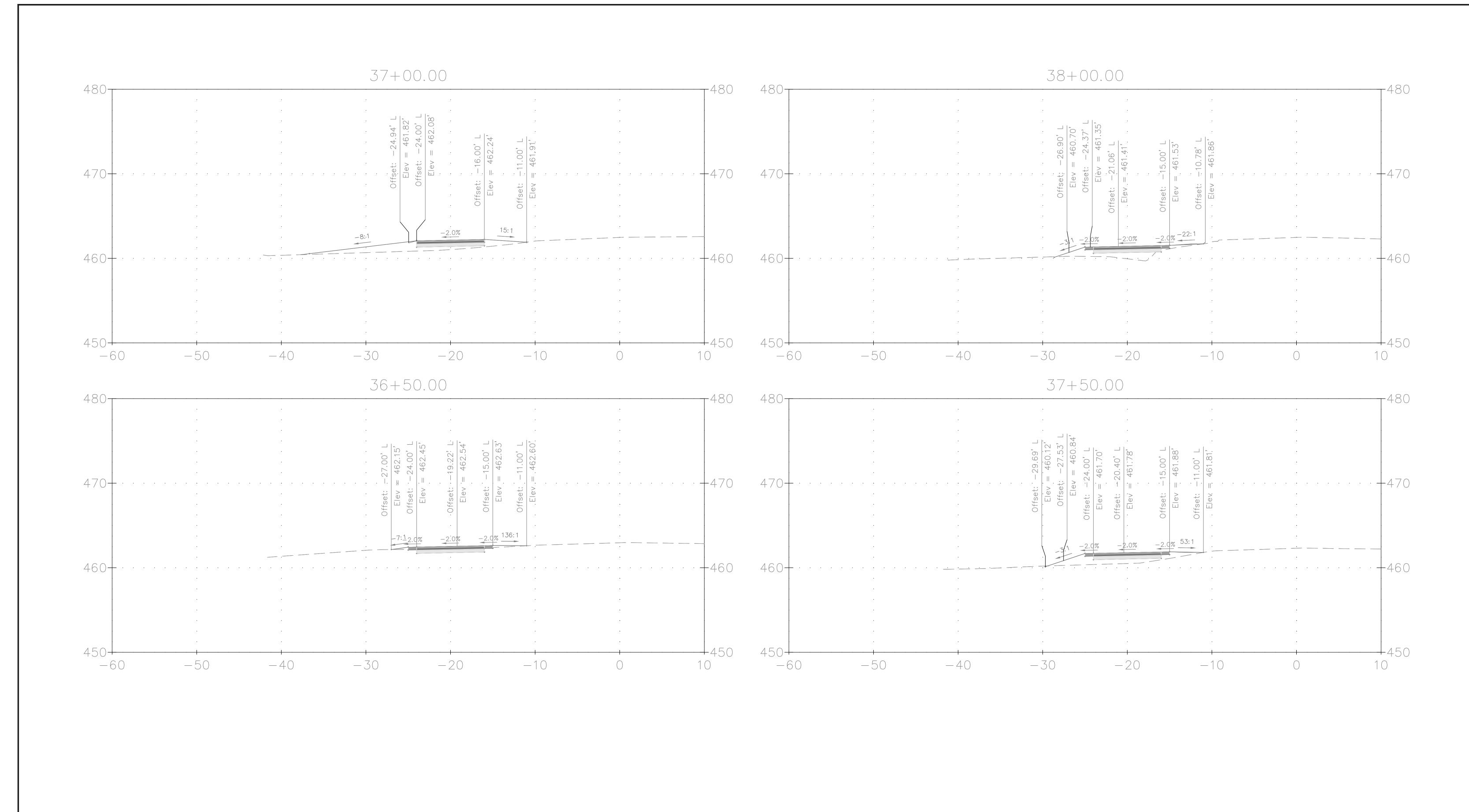


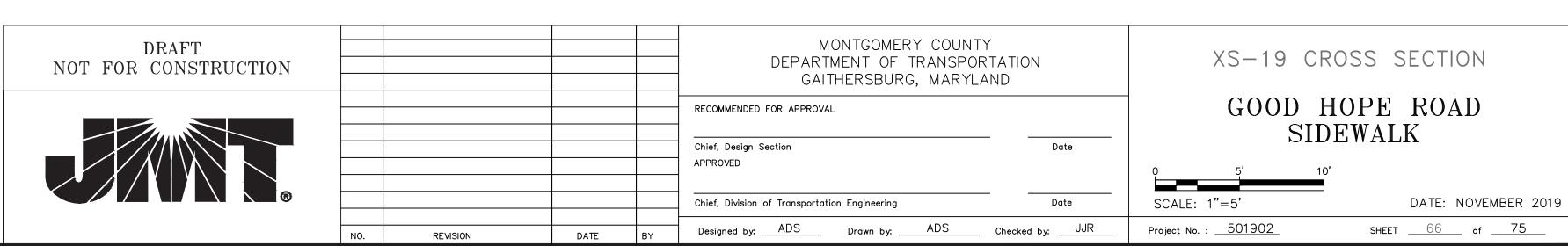


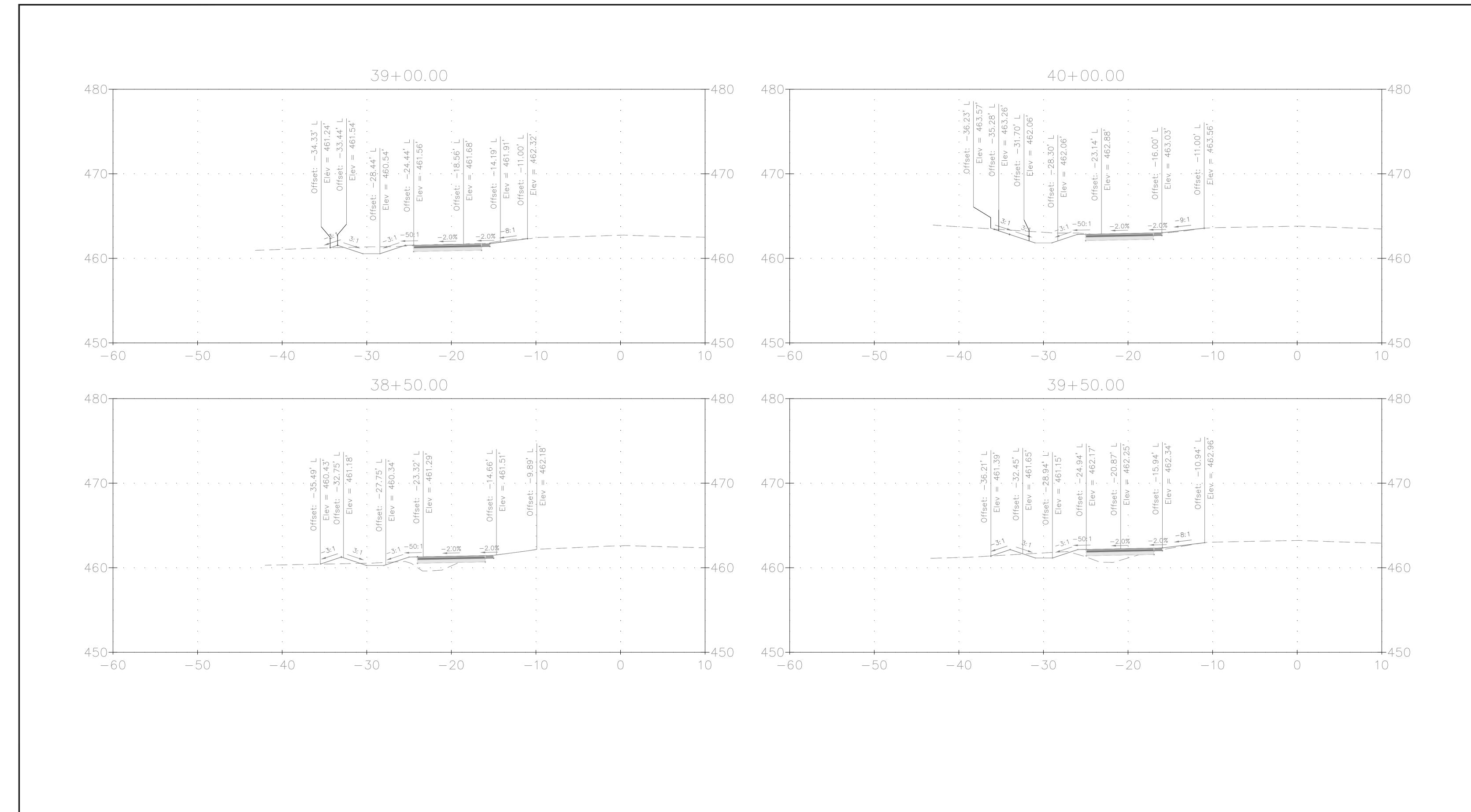


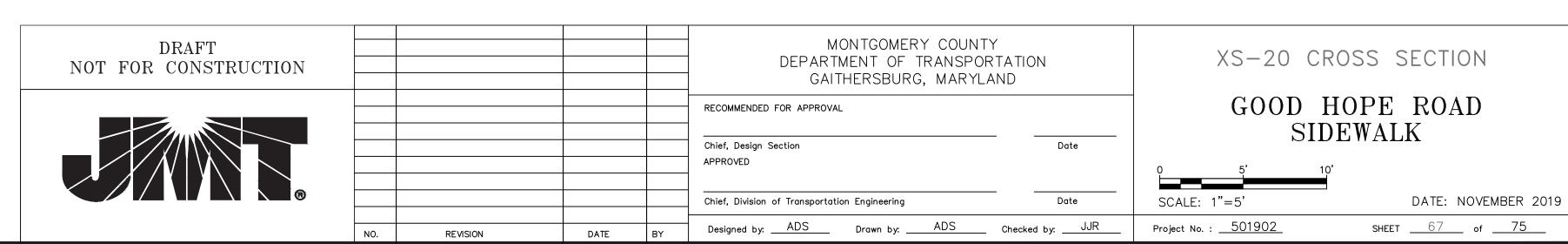


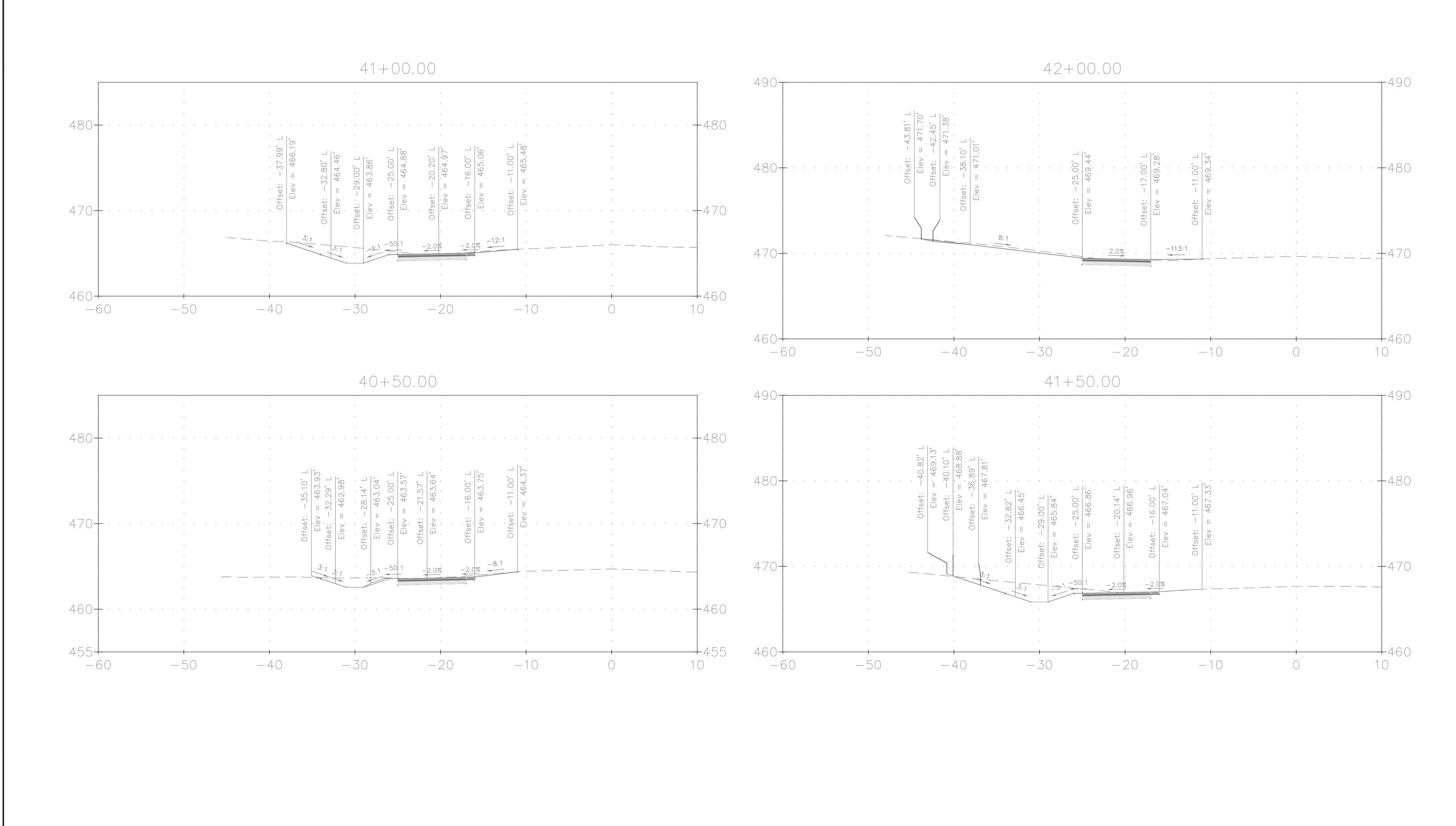


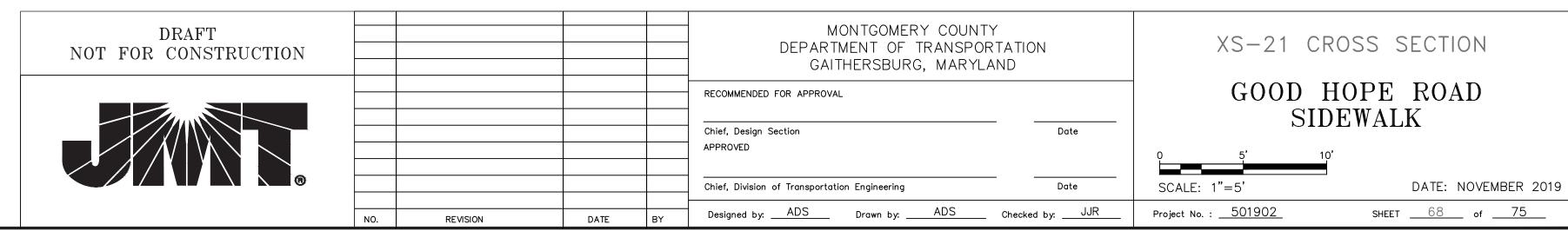


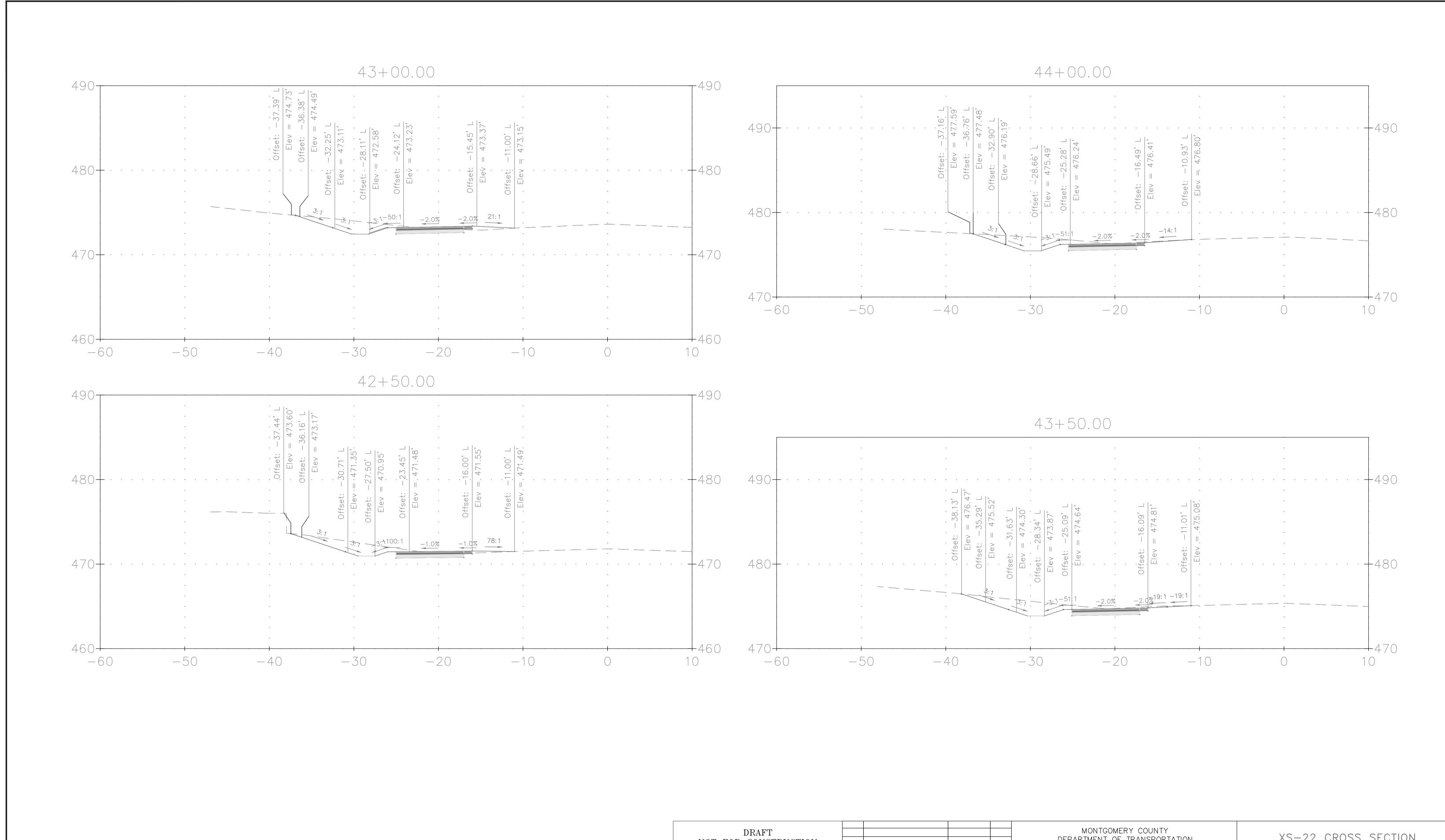


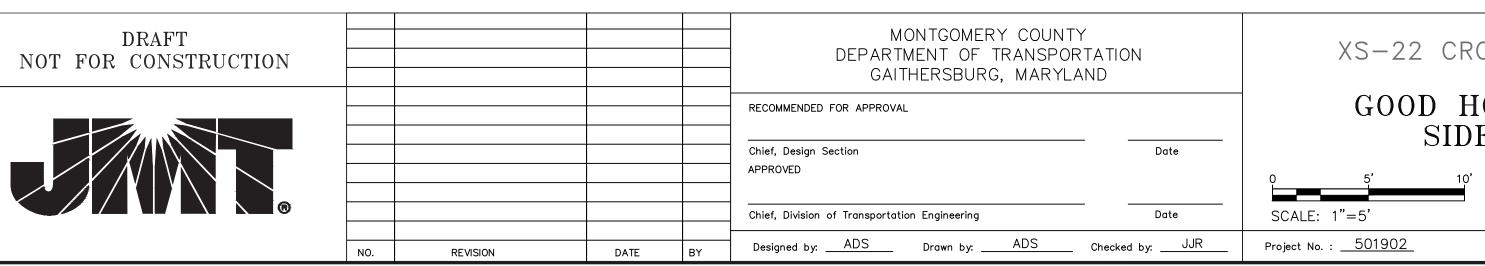










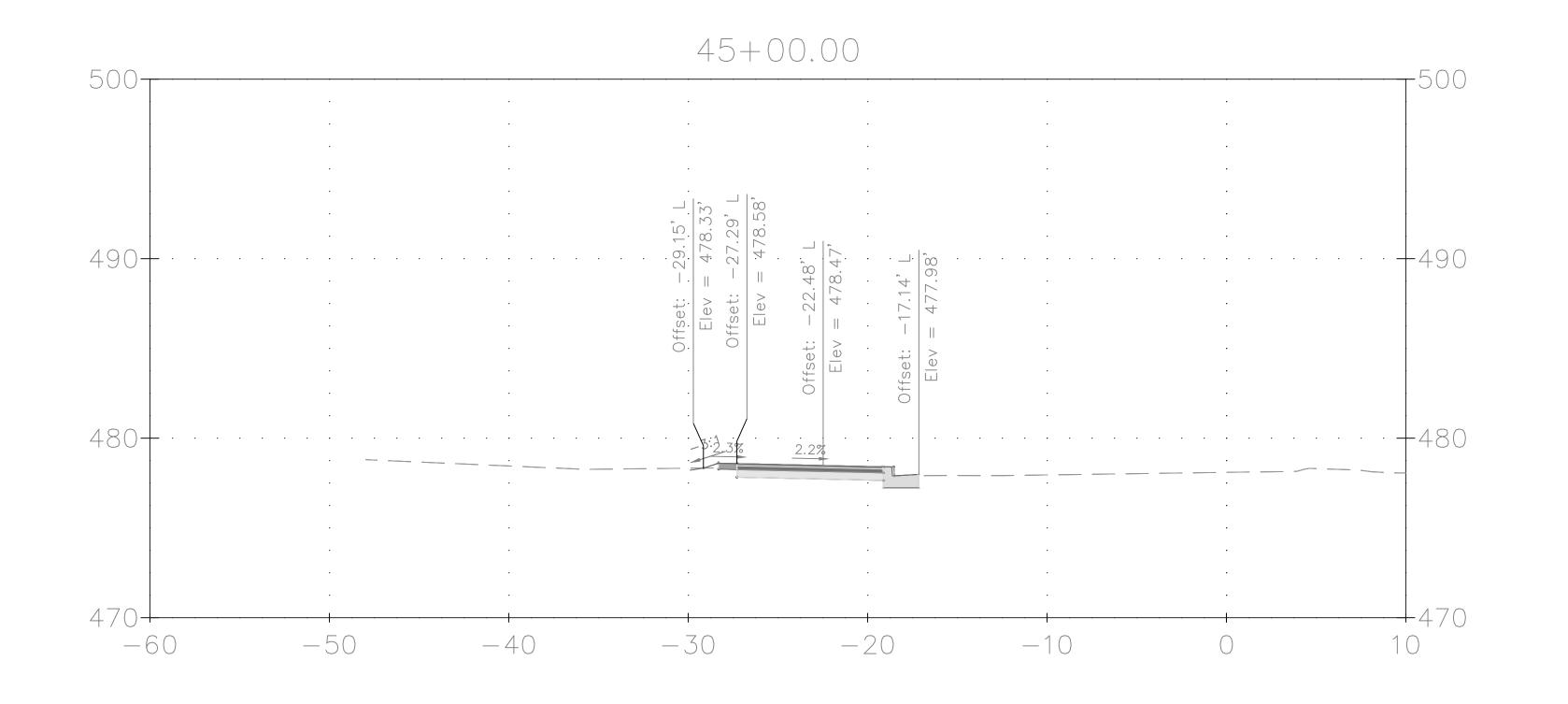


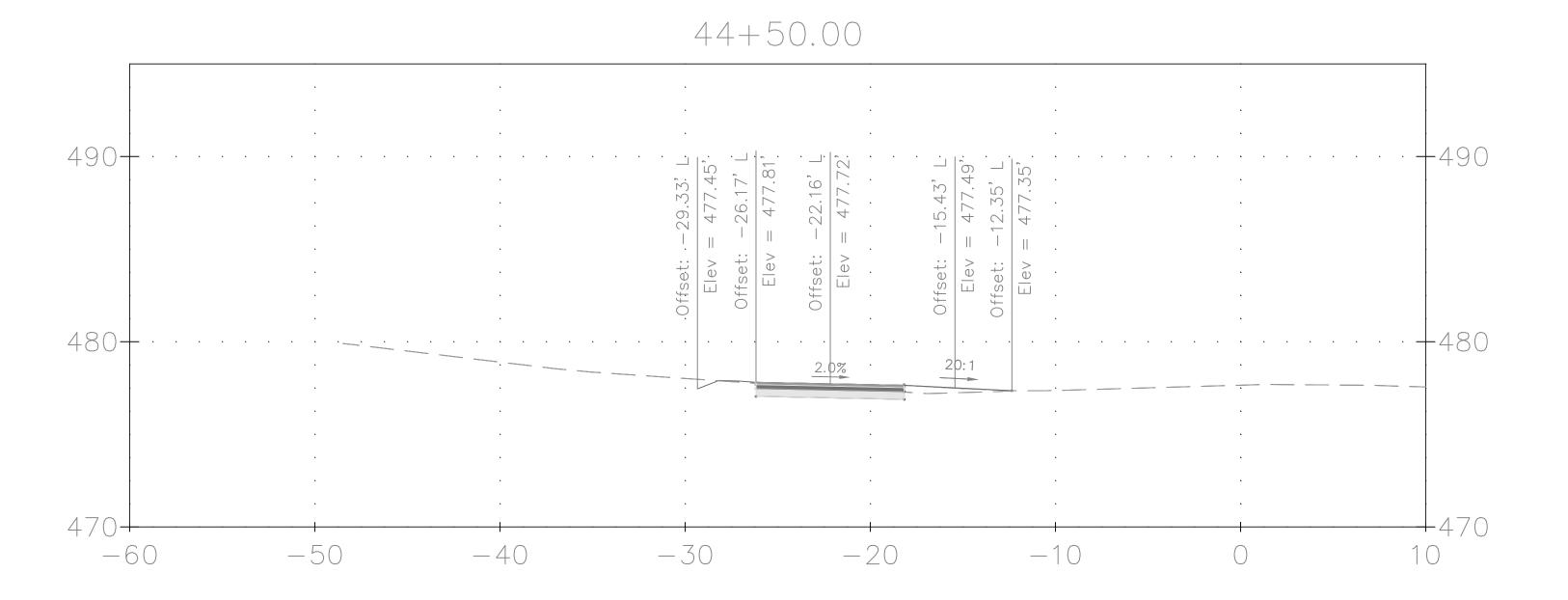
SIDEWALK

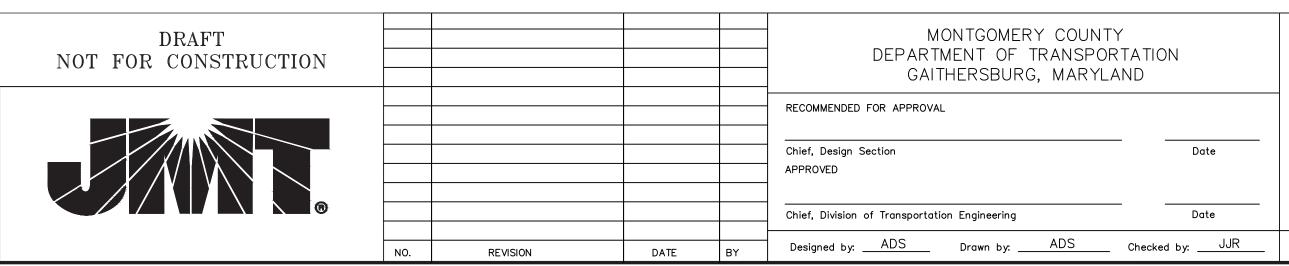
DATE: NOVEMBER 2019

SHEET <u>69</u> of <u>75</u>

FILE NAME: Q:\2013\130605_007_Good_Hope_Road_Sidew\CADD\pHC_CrossSections.dwg LAYOUT NAME: XS-22 PLOTTED: Friday, November 01, 2019 - 2:46pm USER: Havener



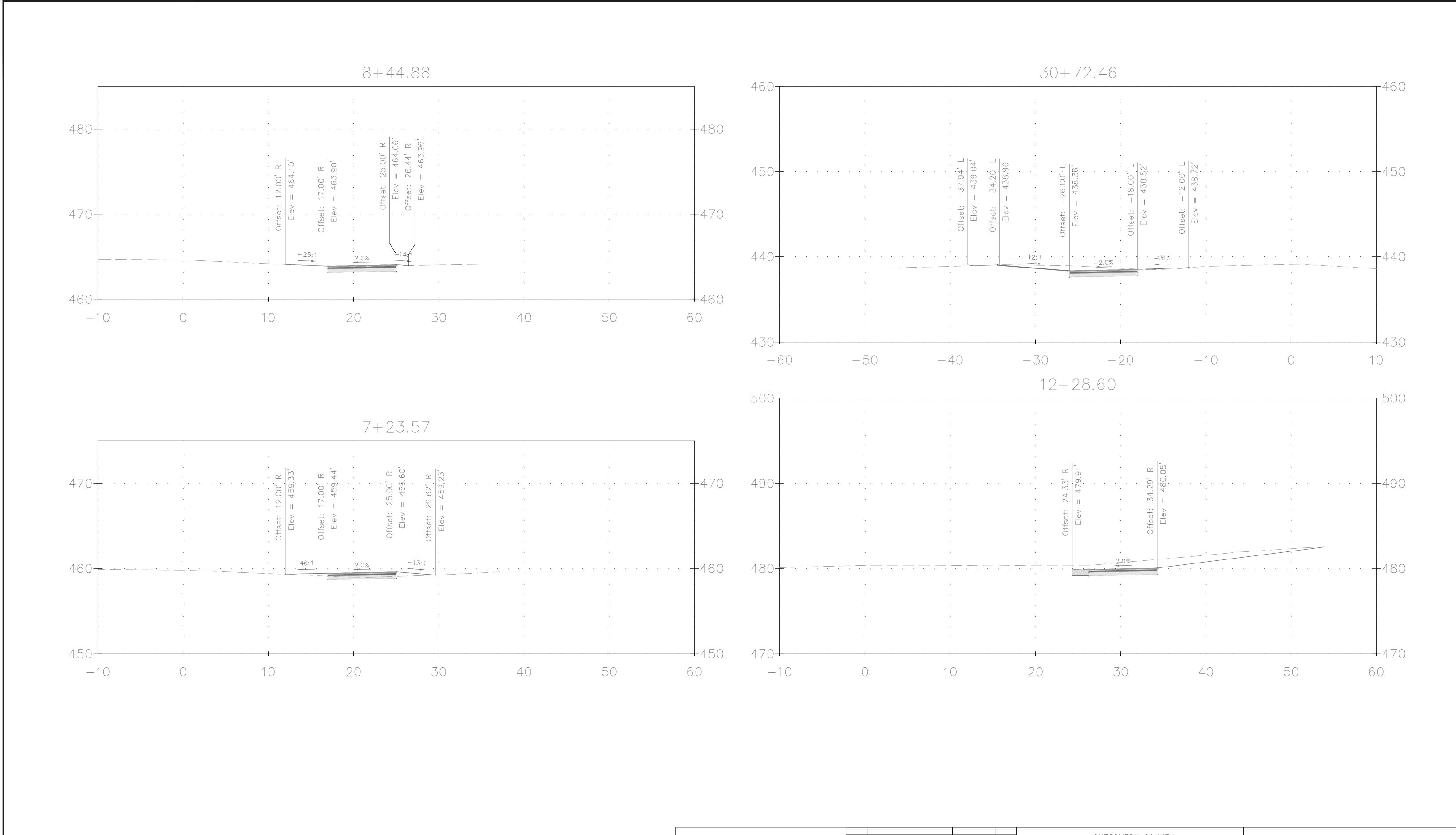


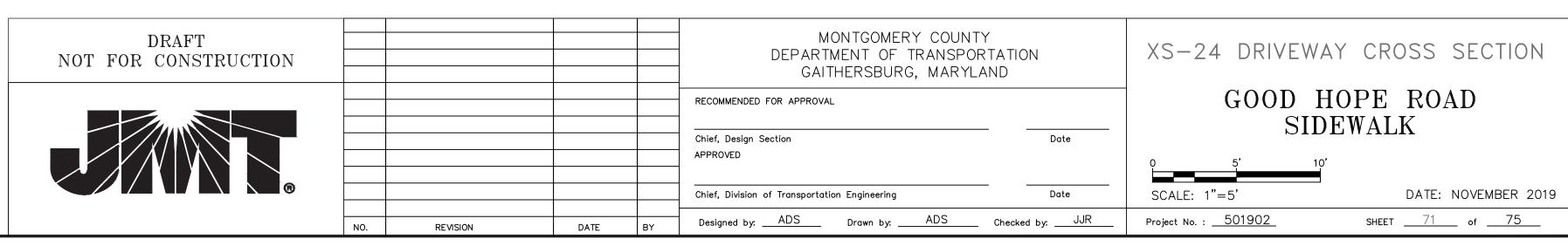


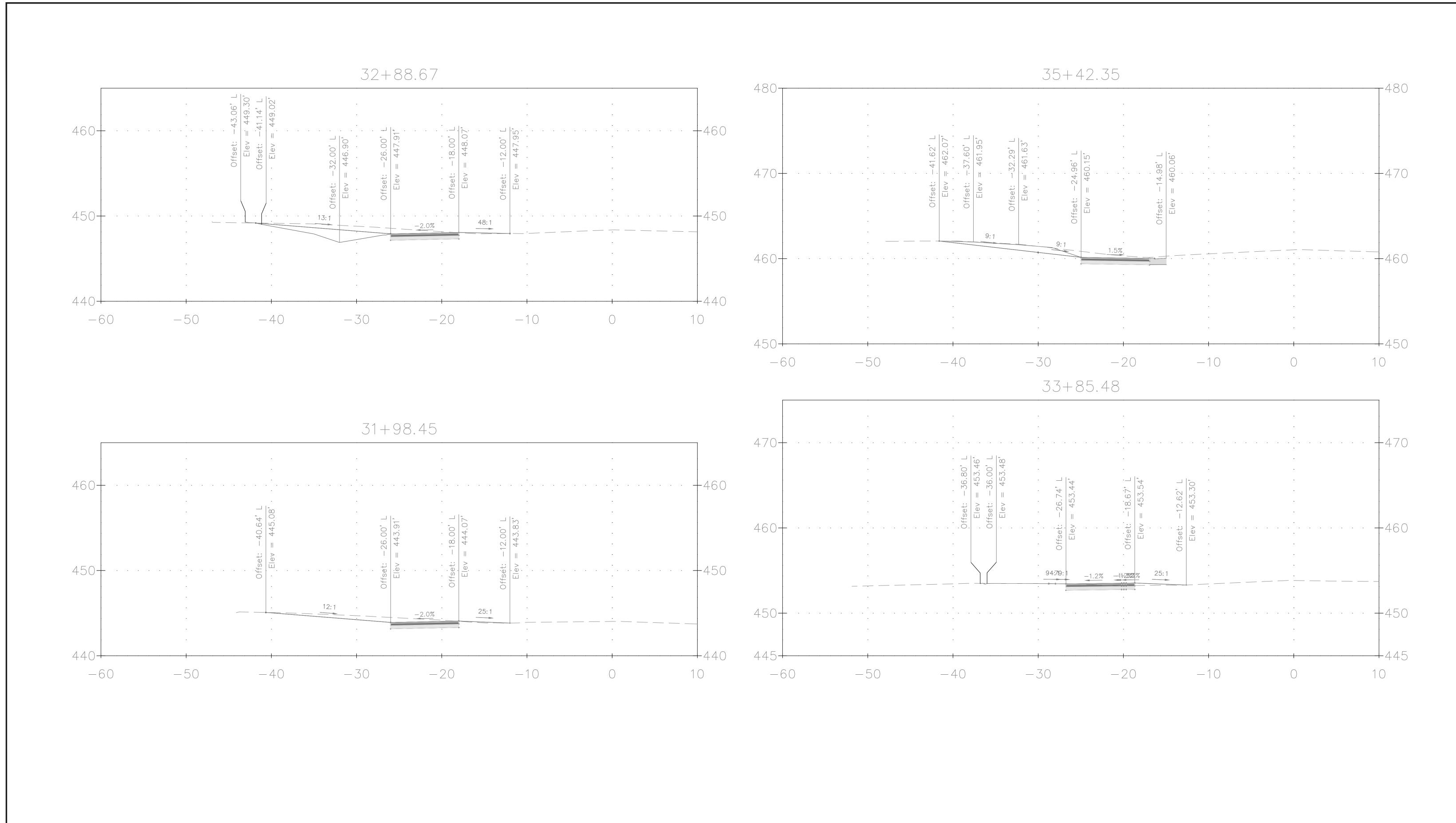
XS-23 CROSS SECTION GOOD HOPE ROAD SIDEWALK

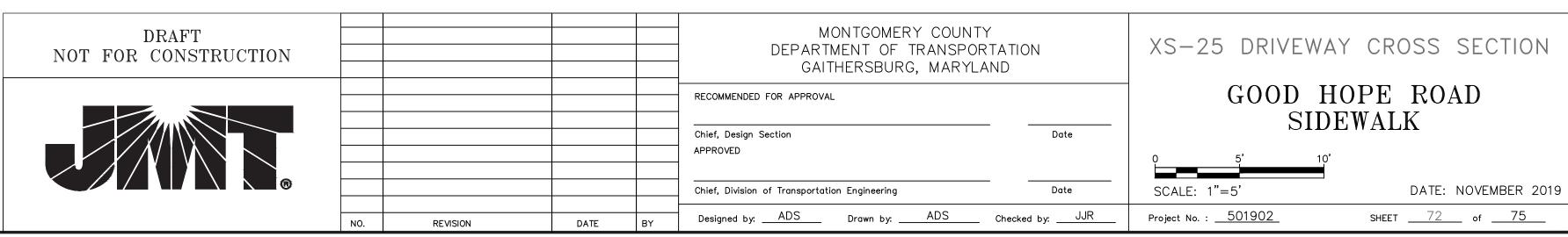
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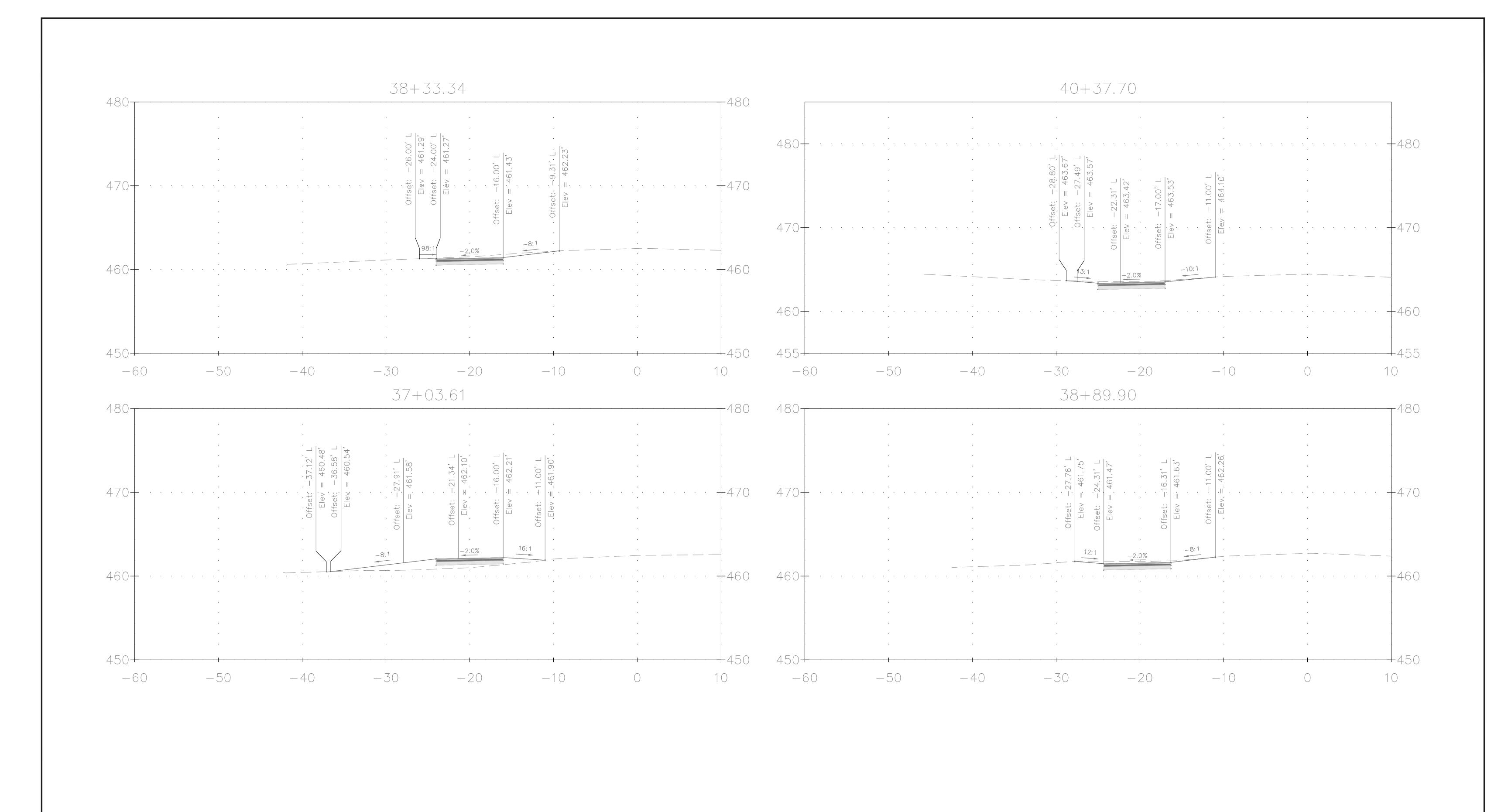
DATE: NOVEMBER 2019 Project No. : <u>501902</u>

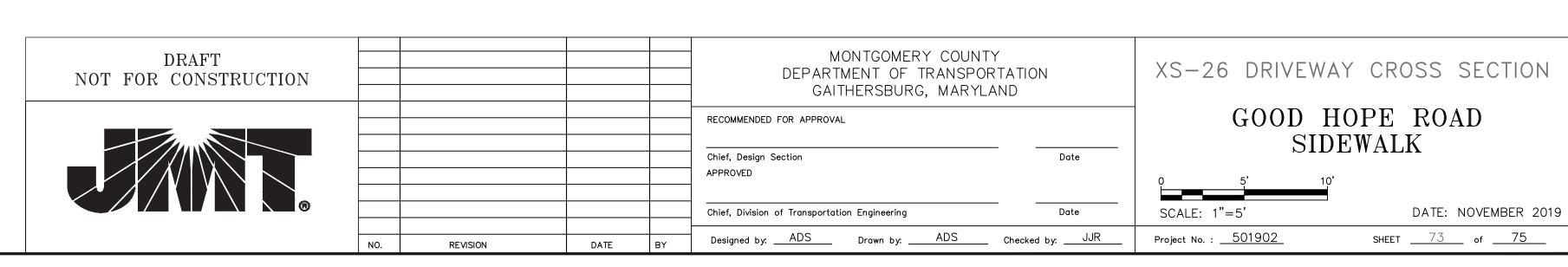


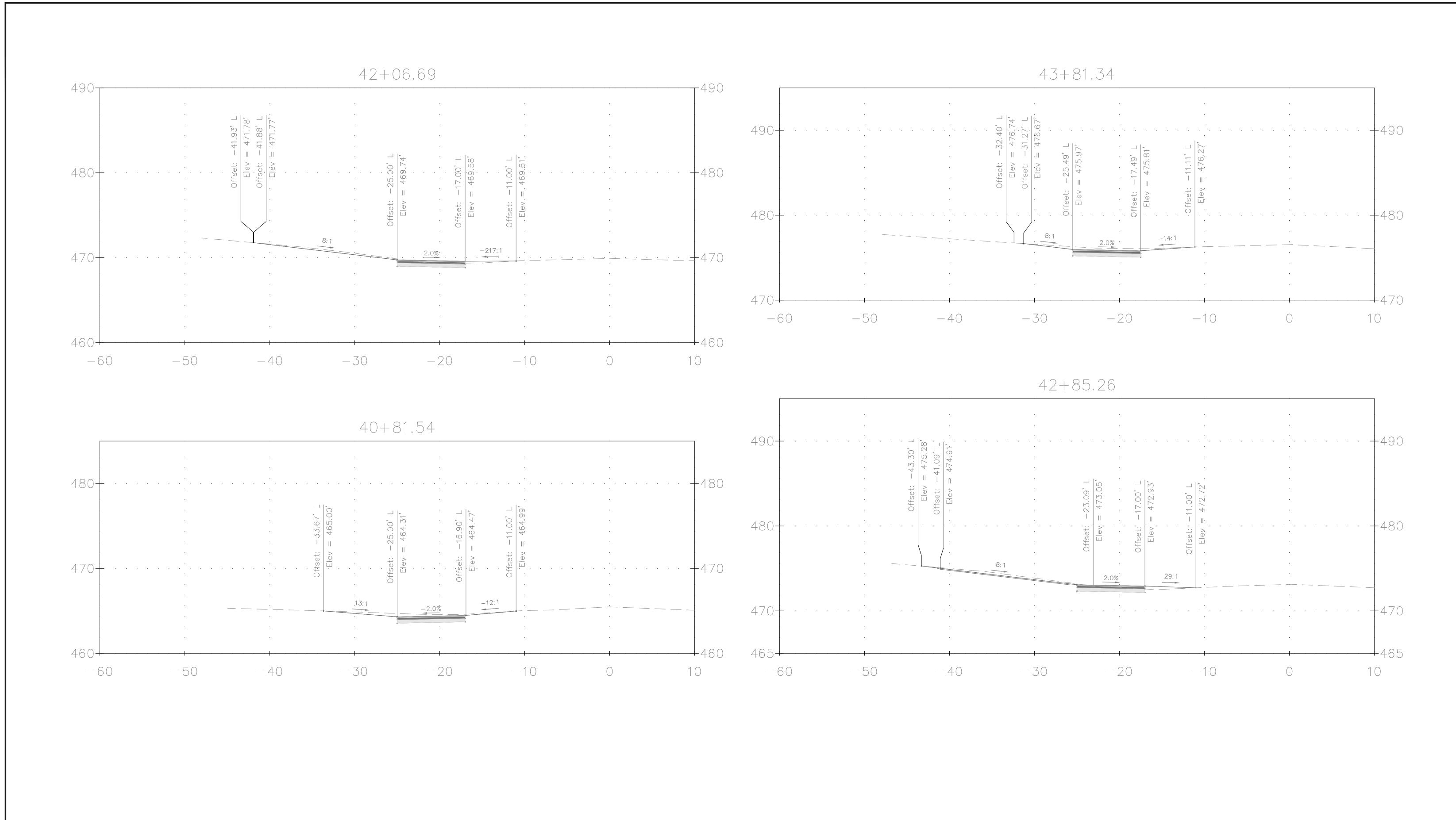


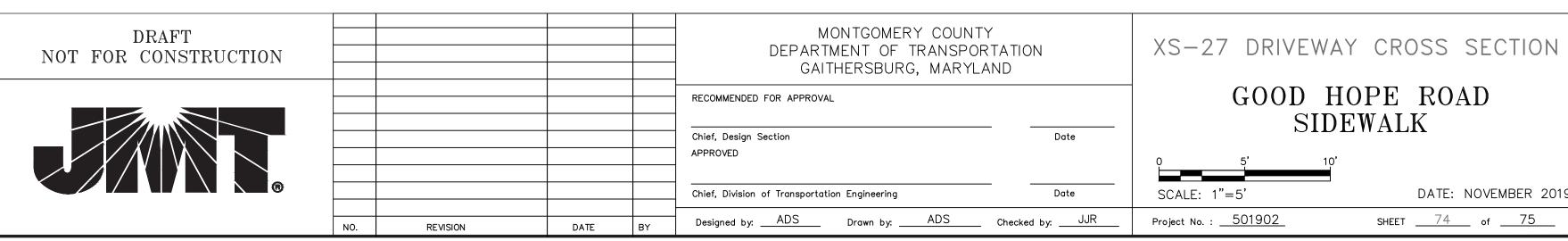






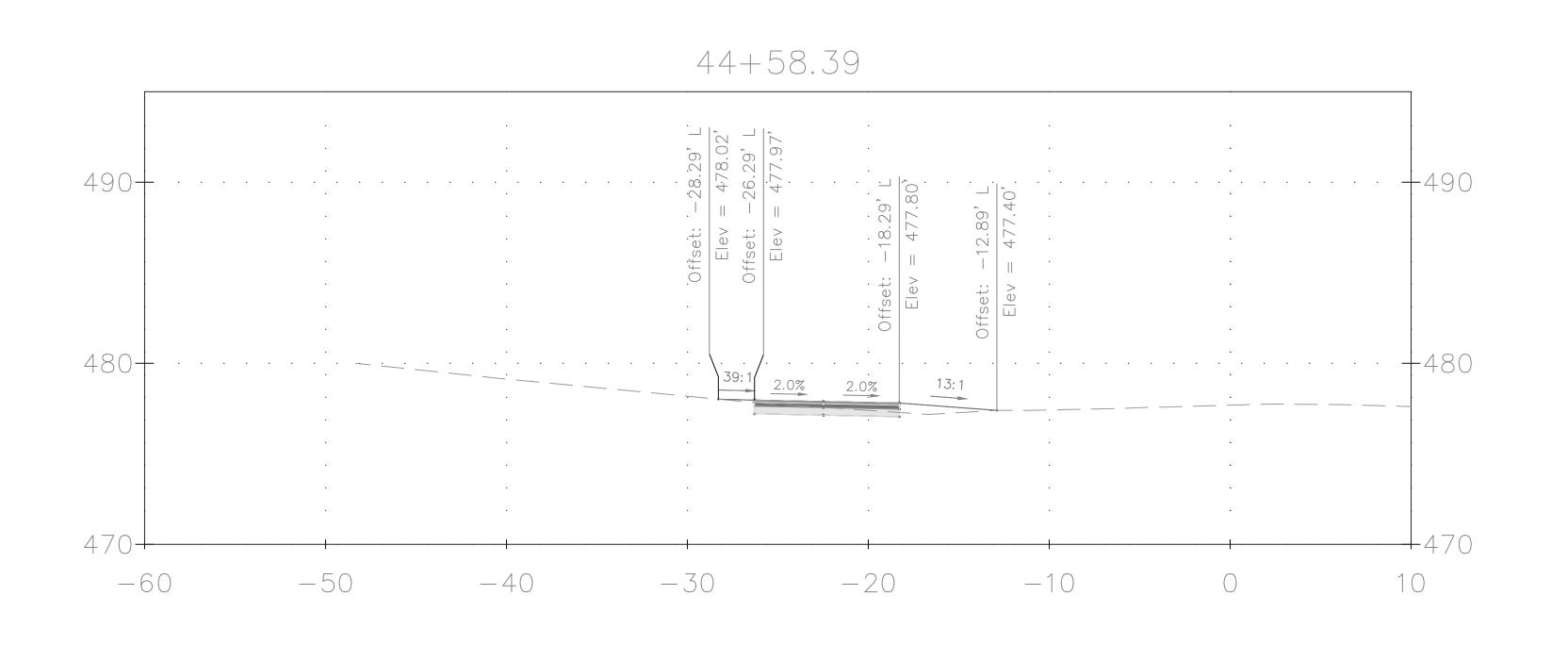


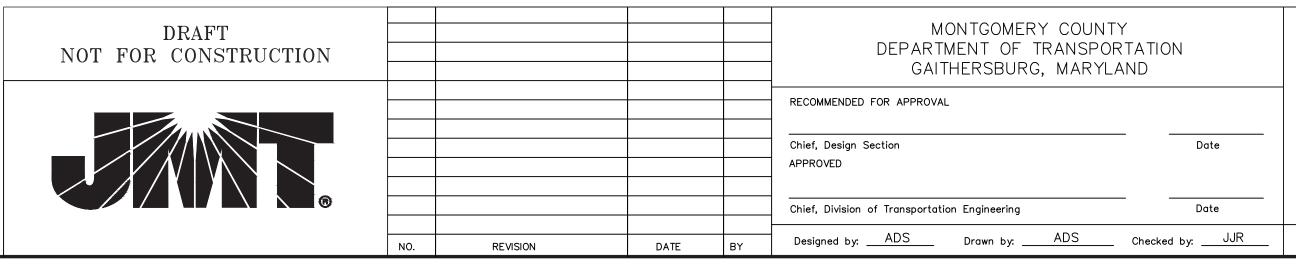




GOOD HOPE ROAD SIDEWALK

DATE: NOVEMBER 2019 SHEET <u>74</u> of <u>75</u>





XS-28 DRIVEWAY CROSS SECTION

GOOD HOPE ROAD SIDEWALK

 SCALE: 1"=5'
 DATE: NOVEMBER 2019

 Project No. : 501902
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