MCPB
Item No.: 7
Date: 01-07-21

Garrett Park Road Bridge over Rock Creek, Mandatory Referral, MR2021004

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

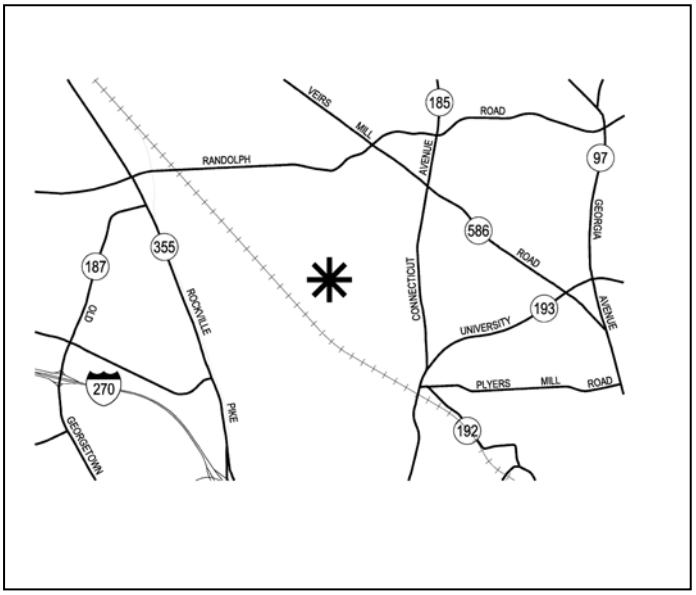
Jason Sartori, Chief, CP&P, Jason.Sartori@montgomeryplanning.org, 301-495-2172

Completed: 12-30-20

Description

Construction of a replacement bridge on Garrett Park Road in North Bethesda, Maryland. The project elements are a 66-foot-wide bridge along Garrett Park Road across Rock Creek to the west of Beach Drive, and the construction of a temporary bicycle/pedestrian bridge on the north side of the existing bridge during construction.

- Applicant: Montgomery County Department of Transportation
- North Bethesda/Garrett Park Master Plan (1992) and Kensington/Wheaton Master Plan (1989)



Staff Recommendation: Approval to Transmit Comments

Contents

Summary

The Montgomery County Department of Transportation (MCDOT) is proposing to replace the existing bridge on Garrett Park Road over Rock Creek in North Bethesda. The project includes the following improvements:

- Removal of the existing structure,
- Reconstruction of the roadway approaches limited to 100 feet on the west approach to the structure and 250 feet on the east approach (improvements will be transitioned to the existing open section roadway),
- Construction of a new 66-foot-wide, three-span 163-foot-long bridge structure in the same location as the existing bridge,
- Construction of a 11'8"-wide sidepath on the north side of the bridge,
- Two 16-foot-wide travel lanes (includes space for travel lanes and shoulders),
- Construction of an 11-foot-wide sidepath on the north side of Garrett Road within project limits, and
- Construction of a temporary sidepath bridge (8-foot-wide clearance) during bridge construction.

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. P502105. It is estimated to cost $6.75 million, which includes final design cost, utility modification/relocation, easement cost, as well as construction cost. In the current FY 21 CIP budget, this project is slated for construction in FY25 and FY26.

The 35 percent design plan presentation drawings are provided as Attachment A to this report.

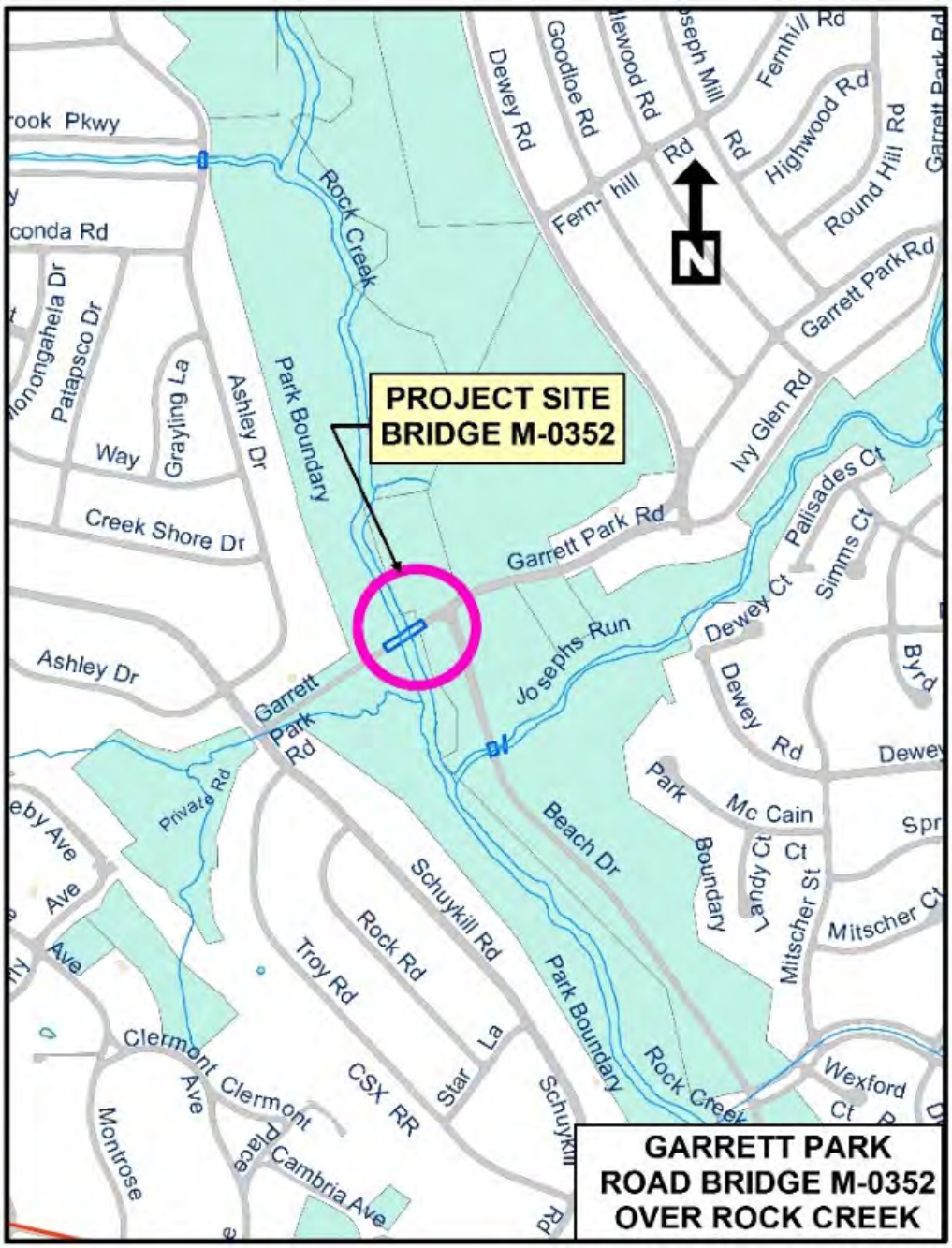


Figure 1: Project Limits and Site Vicinity

Mandatory Referral Review

This proposal for the construction of bridge 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:

1. 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.
2. 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 to finalize parkland mitigation requirements related to intersection improvements at Beach Drive and Garrett Park Road and the outfall restoration adjacent to Garrett Park Road in Rock Creek SVU 5.
4. We would prefer the sidepath on the bridge to be made 4 inches wider to provide a 2-foot clearance from the parapet and a 2-foot clearance from the curb, leaving a minimum width of 8' clear. We think that this can be achieved without widening the bridge by shifting the curb.
5. Two 11-foot-wide travel lanes with 4'10"-wide shoulders should be provided on the proposed bridge (this includes the 4-inch reduction needed to shift the curb line). This will provide adequate space for vehicular traffic as well as bikeable shoulders on the structure.
6. Adequate 6-foot-wide grass buffers should be provided between the proposed sidepath and proposed curb (on the non-bridge portions of the project).
7. The trail connections to the temporary sidepath bridge should be re-designed to accommodate bicycle travel at a travel speed of up to 15 mph using a 40-foot-radius curve. The transitions as planned are extremely abrupt.

Proposed Design

Project Description

The Montgomery County Department of Transportation (MCDOT) is proposing to replace a structurally deficient roadway bridge that carries Garrett Park Road over Rock Creek, within the Rock Creek Stream

Valley Park. The existing bridge was built in 1965, is a three-span steel beam with concrete deck structure carrying a 24-foot clear roadway with a five-foot-wide sidewalk. The proposed replacement would include the removal and replacement of the concrete piers, abutments, and superstructure with prestressed Northeast Extreme Tee (NEXT) beams. The proposed work would include the installation of new street lighting along Garrett Park Road, new approach slabs and less than 100 feet of approach roadway work at each end of the bridge with modifications made to the intersection with Beach Drive.

The road and bridge would be completely closed to vehicular traffic during construction, which would allow the contractor to complete the project in three to four months, as opposed to 12 to 15 months if vehicle traffic was maintained during construction. A temporary pedestrian bridge would be constructed along the north side of the bridge to maintain pedestrian and bicycle access to Rock Creek Park and Rock Creek Trail during construction.

Garrett Park Road is an unclassified road in the Master Plan of Highways and Transitways (MPOHT). It functions as a two-lane residential street connecting neighborhoods and providing the northern terminus of Beach Drive. Currently, there is a narrow sidepath (protected from the road by a guiderail) provided on the north side of Garrett Park Road connecting the Rock Creek Trail and the Veirs Mill local park and extending across the Garrett Park Road bridge to Schuylkill Road.

Existing Road

Currently, Garrett Park Road is generally characterized as a two-lane (12-foot-wide travel lanes) residential road with little to no shoulders. The posted speed limit along Garrett Park Road is 25 mph. Figure 2 displays a view of the road across the bridge (looking west).

Figure 2 Garrett Park Road on Existing Bridge (Looking West)

The approaches to the bridge along Garrett Park Road can be seen in Figures 3 and 4 approaching from the West and East, respectively. The existing narrow (approx. 8-foot-wide) sidepath can be seen on these graphics, protected from vehicular traffic by the existing guiderail.

Figure 3 Garrett Park Road west of Schuylkill Road (Looking East)

Figure 4 Garrett Park Road east of Beach Drive (Looking West)

Proposed Bridge Cross Section

The proposed 46-foot-wide bridge will provide two 16-foot-wide travel lanes, a 11'8"-wide sidepath, and 3'-6"-high parapet bridge railings as shown below in Figure 5.

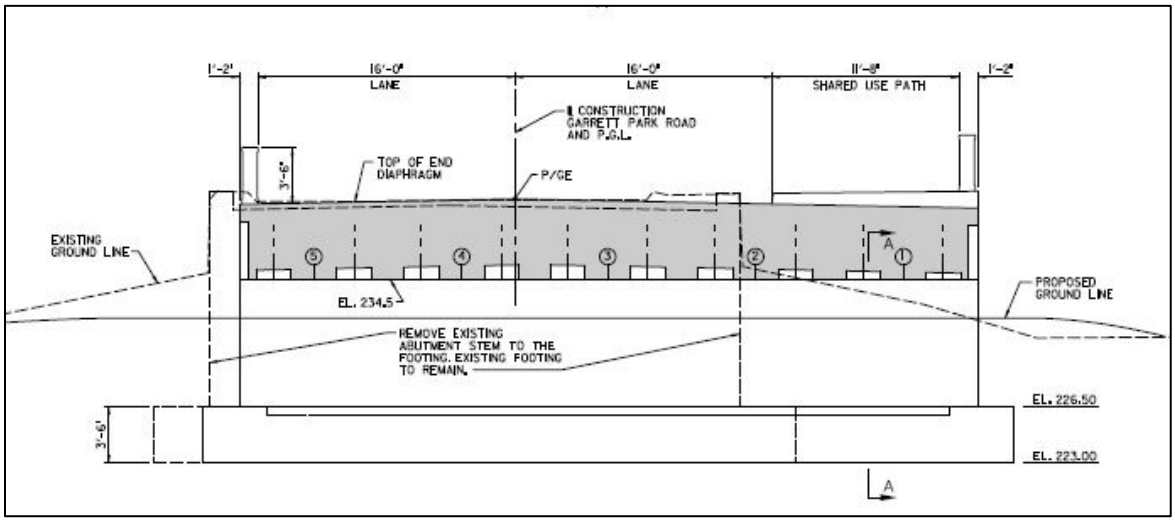


Figure 5 Bridge – Proposed Cross Section

Proposed Plan View

The project includes a fairly tight limit of disturbance about the proposed bridge structure with a longer distance on the east side of the bridge to include the intersection of Garrett Park Road with Beach Drive. Figures 6 and 7 shows the plan view of the proposed design improvements.

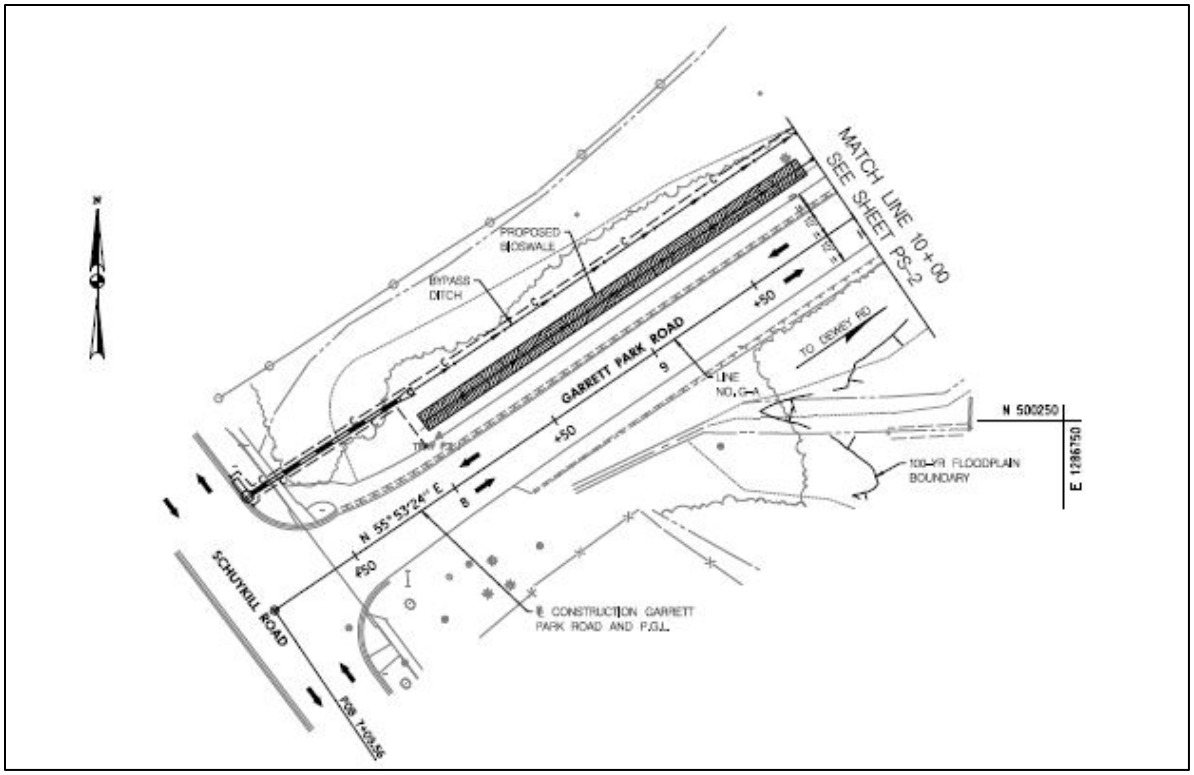


Figure 6 Plan View of Proposed Design Improvements (Part 1)

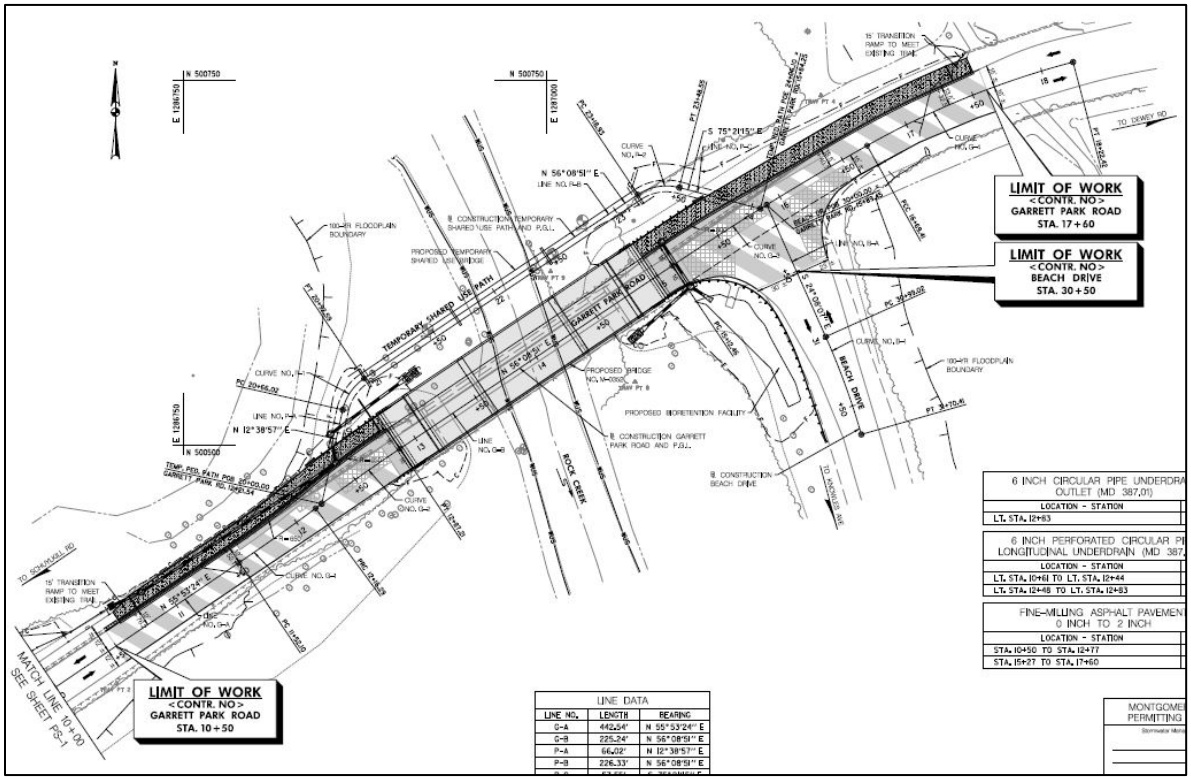


Figure 7 Plan View of Proposed Improvements (Part 2)

Temporary Pedestrian/Bicycle Bridge

The project design includes the construction of a temporary pedestrian/bicycle bridge on the north side of the existing structure allow pedestrian and bicycle traffic to continue during the proposed summer construction schedule. The alignment of the temporary bridge is shown below in Figure 8 in blue shading.

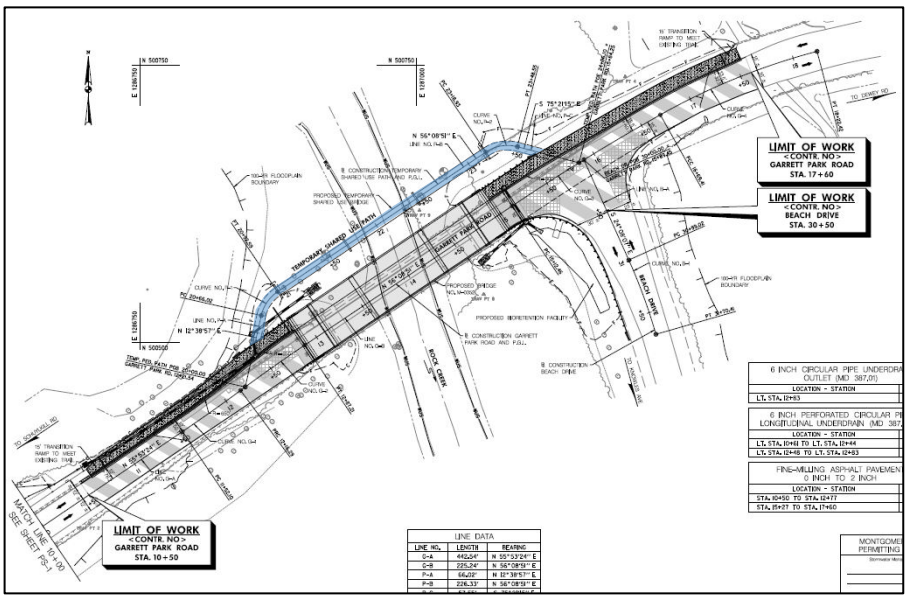


Figure 8: Proposed Temporary Pedestrian/Bicycle Bridge and Sidepath Connections

The connections of this temporary route into the existing sidepath is very tight with the temporary path terminating at the path at approximately a 135-degree angle. While usable by pedestrians, this transition will be difficult for bikers, except at very low travel speeds. Figure 9 shows the western end of the proposed trail and Figure 10 shows a photo of this approximate location.

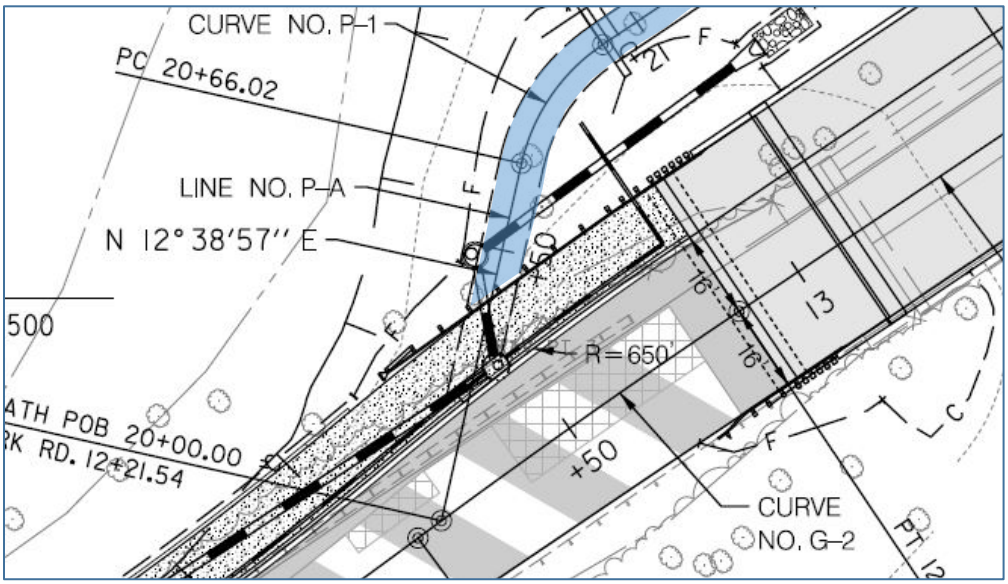


Figure 9: Western End of Temporary Path and Connection onto Existing Sidepath

Figure 10: Photo of Western End of Temporary Path

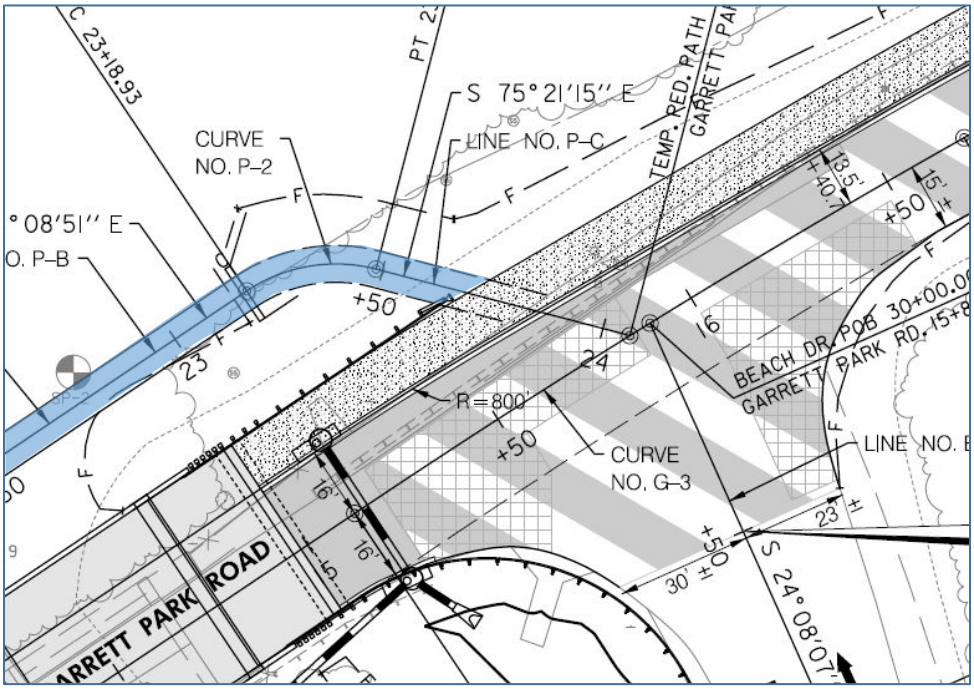


Figure 11: Eastern End of Temporary Path and Connection onto Existing Sidepath

Figure 12: Photo of Eastern End of Temporary Path

Figure 13 displays the proposed cross section of the temporary pedestrian and bicycle bridge structure. This bridge will have a clear width of 8 feet.

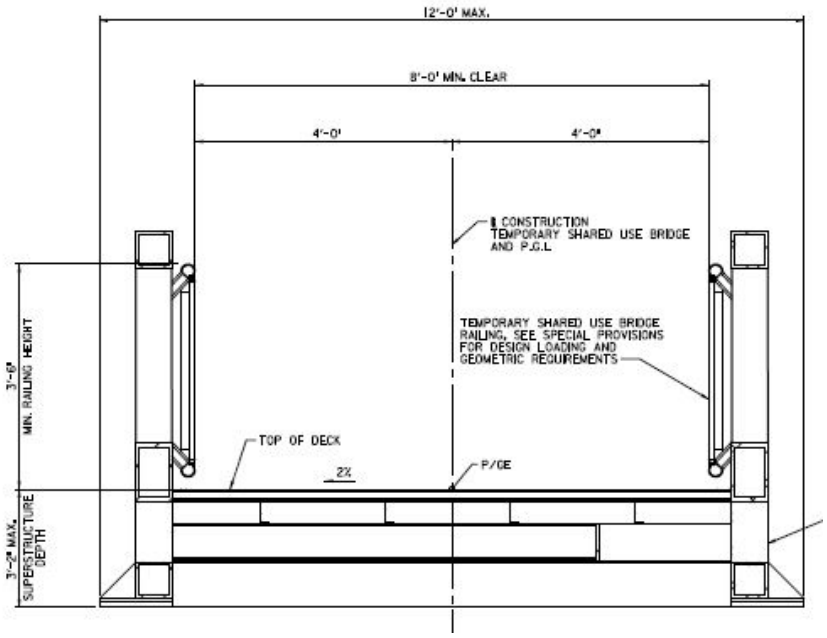


Figure 13: Temporary Bridge Cross Section

Typical Cross Sections – Garrett Park Road

Figures 14 through 18 show the proposed typical cross sections on Garrett Park Road. Based on these cross sections, it appears that the existing guiderail now in place will be removed at the following locations:

- Stations 10+61 to 12+87
- Stations 15+20 to 17+56

Between Stations 12+77 to 12+87 (10 feet) and Stations 14+98 to 15+61 (63 feet), the guiderail is being moved to the outside of the sidepath, and this change is possible due to the addition of curbing along the north side of Garrett Park Road. In these sections, the design includes a 11-foot-wide sidepath with no buffer.

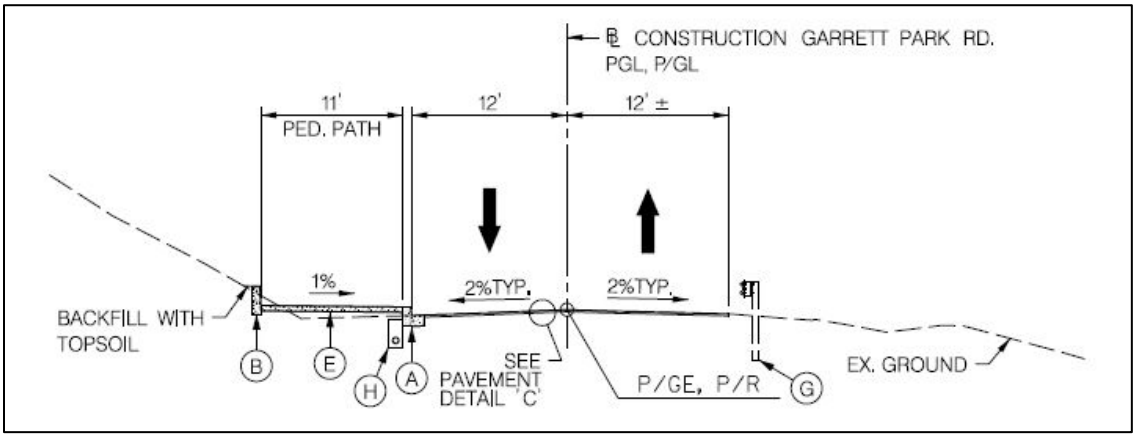


Figure 14: Proposed Typical Cross Section – Stations 10+61 to 11+58

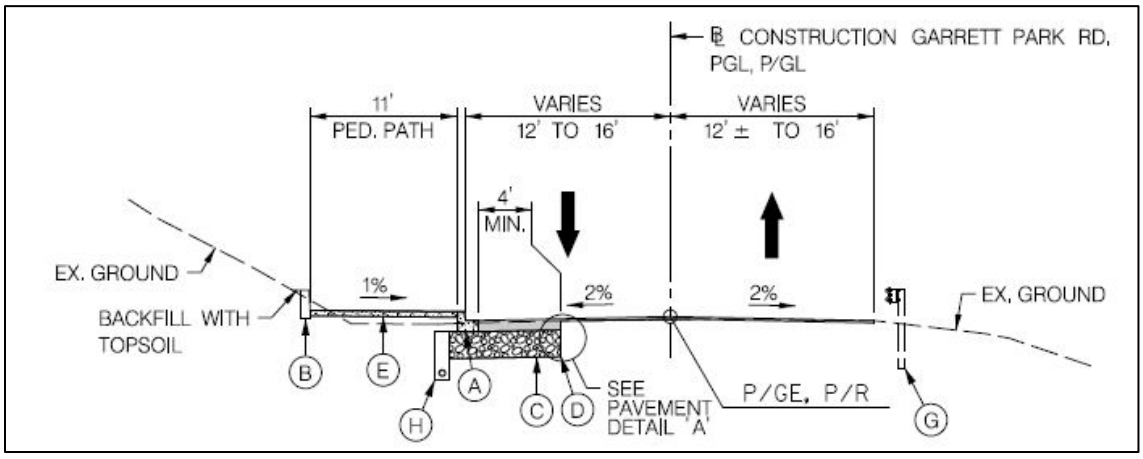


Figure 15: Proposed Typical Cross Section Design – Stations 11+58 to 12+77

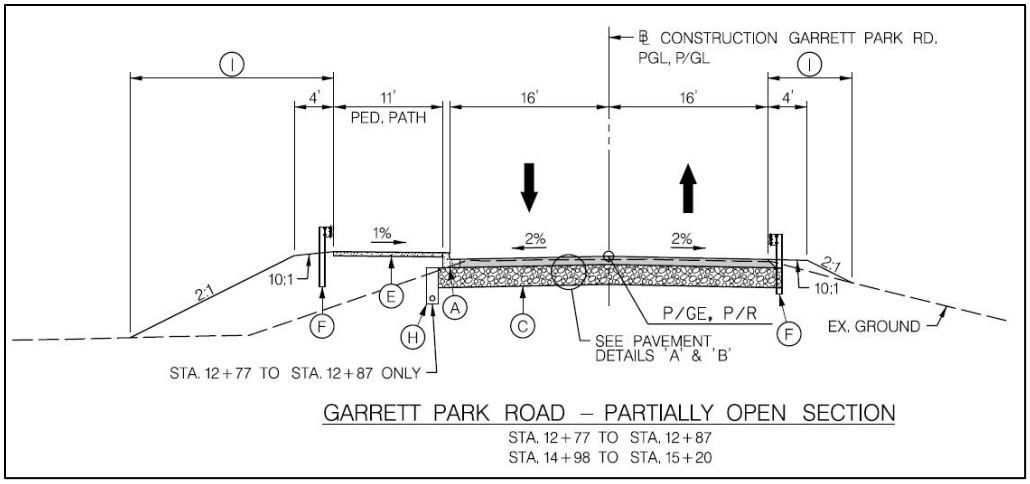


Figure 16: Proposed Typical Cross Section – Bridge Approaches

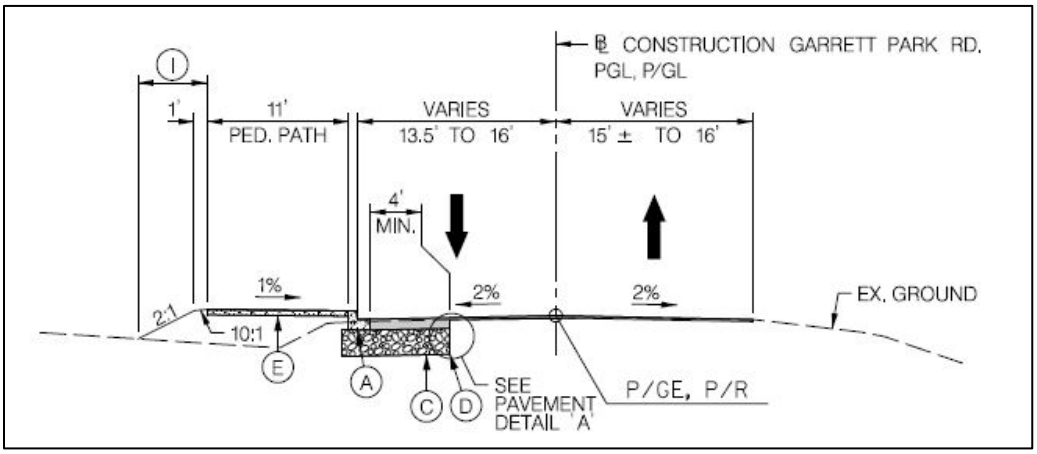


Figure 17: Proposed Typical Cross Section Design – Stations 15+20 to 16+45

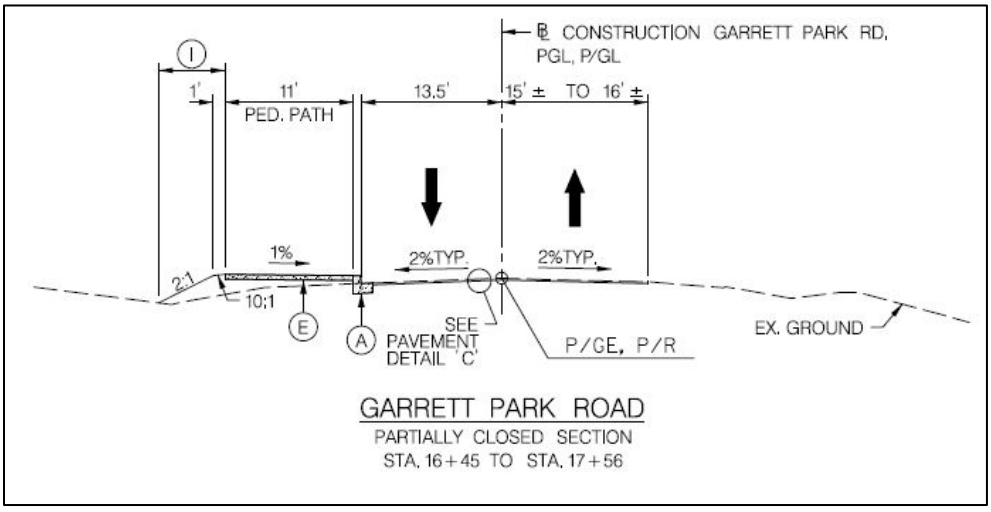


Figure 18: Proposed Typical Cross Section Design – Stations 16+45 to 17+56

Proposed Traffic Detour During Construction

During bridge construction, vehicular traffic will not be able to cross Rock Creek at this location, and MCDOT has proposed a detour signage plan, as shown below in Figure 19, that will divert traffic on the east side up Dewey Road, to Randolph Road, to Parklawn Drive, to Boiling Brook Parkway, and then to Schuylkill Road. Despite the signed route, it is likely that a significant portion of this detoured traffic will use Rocking Horse Road as a shortcut. It is also clear that this focuses solely on neighborhood traffic. Both Dewey Road and Schuylkill Road experience cut-through traffic trying to access Beach Drive, and this more regional traffic component is more likely to use Dewey Road or seek alternative routes during this construction period.

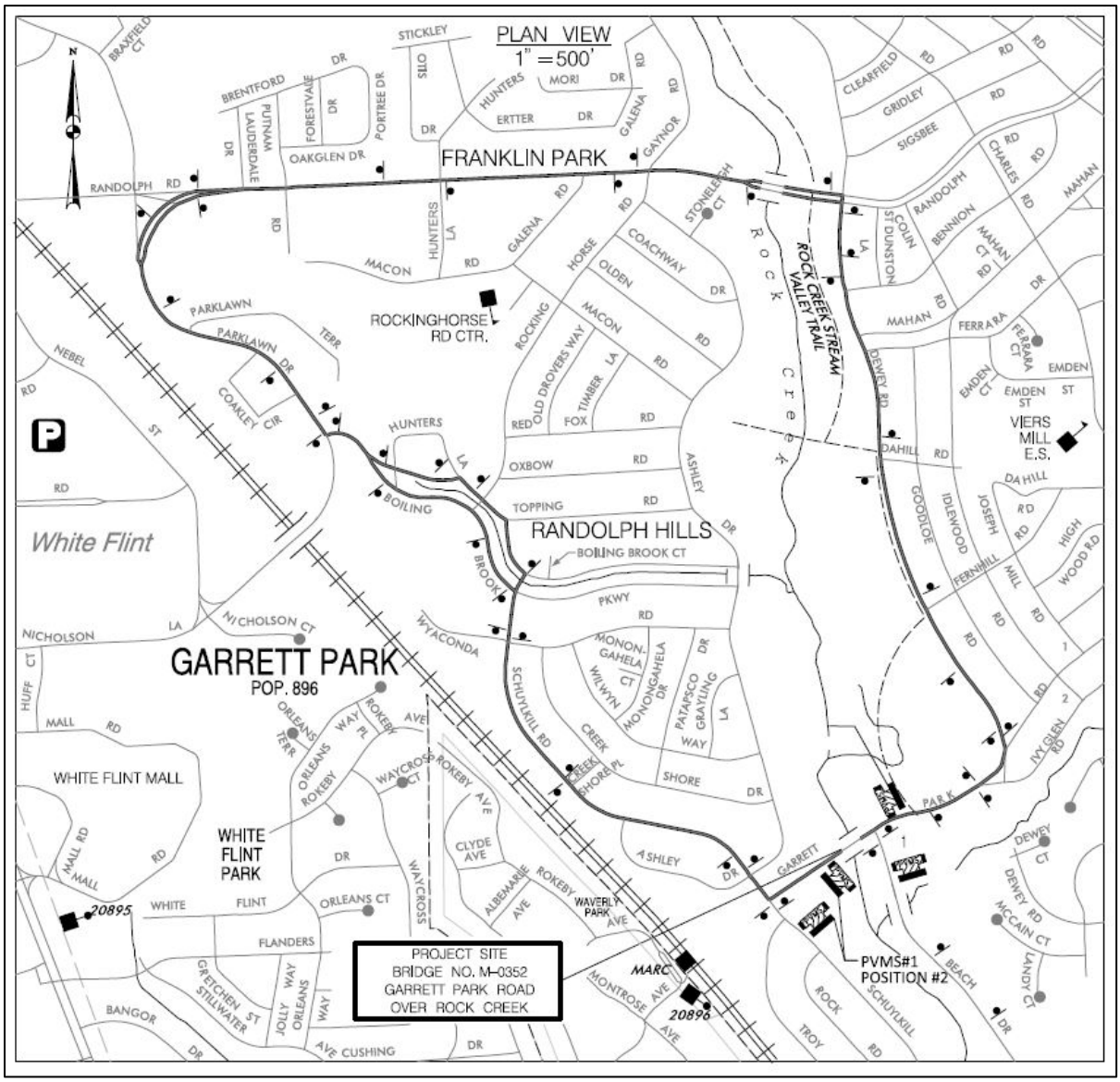


Figure 19: Proposed Traffic Detour During Construction

Design Elements - Transportation

Sidepath Design: In general, the **minimum** sidepath width required is 10 feet, which is consistent with the approved Bicycle Master Plan and the ongoing Complete Streets Design Guidelines; 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. The sidepaths are also recommended in both the Bicycle Master Plan and the Complete Streets Design Guidelines with adequate 6' minimum buffers to protect pedestrians and cyclists from motoring traffic. No buffers are provided on the proposed sidepath. We recognize that buffers are not typically provided on bridge structures.

The connections of the temporary sidepath into the improved sidepath along Garrett Park Road does not meet current or developing AASHTO Bike Design standards, and will result in bikers either having to slow down significantly in order to make the turns or will result in bikers riding off the trail intersection to create their own path. While this will occur for only three months during construction, proper bike design would require a 40-foot-radius curve to accommodate bikes at a speed of 15 mph.

Master Plan Conformance – Transportation

The 2018 Bicycle Master Plan recommends a sidepath (north side) on Garrett Park Road between Schuylkill Road and the Rock Creek Trail. The proposed sidepath is substandard in the following areas:

- Bridge structure – the proposed 11'8"-wide sidepath does not provide the required minimum 8' clear width. Addition of 4" is needed.
- Sidepath – proposed sidepath will have no buffer between the 11-foot-wide sidepath and the curb. The addition of a 6-foot-wide buffer is needed to comply with the design guidelines in the Bicycle Master Plan and the Complete Streets Design Guidelines.

Historic Resources Analysis

There are no historic resources within the project area.

Environmental Guidelines

Bridge M-0352 on Garrett Park Road crosses Rock Creek, in the Lower Rock Creek watershed and includes the replacement of the existing bridge and the addition of a shared use path. Most of the project is located in the floodplain and stream valley buffer associated with Rock Creek. The banks of Rock Creek are forested, with approximately 0.472 acres of forest within the limits of disturbance.

While the Environmental Guidelines are designed to protect environmental features by the restriction of development in stream valley buffers, disturbance is allowed for unavoidable road and utility crossings. In this case, the bridge is replacing an existing bridge and disturbance has been minimized in the addition of the shared use path directly adjacent to the traffic lanes. This allows the proposed project to meet the Environmental Guidelines even though additional disturbance is required for the increased bridge width due to the shared use path.

Forest Conservation

The proposed project is subject to the Montgomery County Forest Conservation Law (Chapter 22A of the County Code) but has received an exemption from Article II from the requirements of preparing a forest conservation plan under Section 22A-5(e). The site is a state or county highway construction activity that is subject to Section 5-103 of the Natural Resources Article of the Maryland Code or Section 22A-9 of the Forest Conservation Law for County Highway Projects, which states;

a) General
    1. This section applies to construction of a highway by the County as part of an approved Capital Improvements Program project.
    2. The construction should minimize forest cutting or clearing and loss of specimen or champion trees to the extent possible while balancing other design, construction, and environmental standards. The constructing agency must make a reasonable effort to minimize the cutting or clearing of trees and other woody plants.
b) If the forest to be cut or cleared for a County highway project equals or exceeds 20,000 square feet, the constructing agency must reforest a suitable area at the rate of one acre of reforestation for each acre of forest cleared.
c) Reforestation for County highway projects must meet the standards in subsections 22A-12(e), (g) and (h).
d) Any mitigation requirement for loss of specimen or champion trees must be based on the size and character of the tree.

The 35% development plan currently shows the removal of 20,560 square feet of forest and 2,250 square feet of replanting. If the final construction plans show removal of over 20,000 square feet of forest (as the current plans do), this project will be subject to reforestation requirements under 22A-9 and will have to replant an equivalent amount of forest.

Parkland Impacts

The majority of the proposed bridge, roadway, and path construction occurs in MCDOT right-of-way (ROW) with limited permanent and temporary construction impacts on parkland within the limit of disturbance (LOD). The construction will require minor ROW expansion and additional easements on parkland: temporary impacts of 0.53 acres, permanent impacts of 0.38 acres, and perpetual easement of 0.32 acres. MCDOT is requesting the fee simple transfer of 0.06 acres for new right-of-way. In addition, MCDOT is requesting a perpetual easement for 0.32 acres for maintenance of stormwater and drainage structures. Areas of parkland impacted are part of Rock Creek SVU 5, Rock Creek SVU 4, and Veirs Mill Local Park. Rock Creek SVU 4 is 93.15 acres and Rock Creek SVU 5 is 92.52 acres; Both Rock Creek SVU 4 and 5 were acquired by M-NCPPC in 1981. The parkland provides natural resource conservation and recreational opportunities, most notably the Rock Creek Trail and Beach Drive. In 1975, M-NCPPC acquired the 17.52-acre Veirs Mill Local Park, which is comprised of a playground, lighted tennis courts, recreational ballfields (football, soccer, and two softball), basketball court, a multi-use field, picnic area, Rock Creek Trail, and the Veirs Mill Park Activity Building.

No recreational resources are proposed to be impacted except for the sidepath on the northside of Garrett Park Road that provides a trail connection to the Rock Creek trail. This sidepath will be detoured onto the temporary sidepath bridge during construction. The new wider sidepath will connect into recent vision zero improvements at the Rock Creek Trail crossing of Garret Park Road near the entrance to Veirs Mill Local Park.

Temporary parkland impacts total 0.53 acres and are largely the result of the temporary sidepath bridge. MCDOT and Parks analyzed numerous options to reduce the impacts from the temporary sidepath bridge and the location on the north side of the roadway bridge will result in the least impact to the existing natural resources while providing a safe connection for pedestrians and cyclists during the bridge construction. Tree removals required for the construction of the temporary sidepath bridge will be mitigated with onsite tree and shrub plantings after construction is complete. MCDOT will use best management practices to further reduce impacts to trees, aquatic resources and other terrestrial resources.

Stormwater management is proposed at the southwest corner of Beach Drive and Garrett Park Road and along the north side of Garrett Park Road, west of Rock Creek. The proposed stormwater management areas are currently turf grass. Montgomery Parks is a proponent of maximizing the onsite treatment of stormwater and will continue to work with MCDOT to refine the stormwater management facilities.

MCDOT will continue to coordinate with M-NCPPC to finalize details of required parkland mitigation including intersection improvements and impervious removal at the intersection of Garrett Park Road and Beach Drive and the extension of the outfall restoration project located south of Garret Park Road in Rock Creek SVU 5. The intersection improvements will include reducing extraneous impervious surface, improving safety, removing over-widened road shoulder areas, and formalizing off-street parking on Beach Drive. The areas of impervious removal will be stabilized with herbaceous vegetation which will enhance the riparian nature of this area. The outfall restoration will include lengthening the proposed

outfall restoration work on the Waverly-Schuylkill tributary to provide increased water treatment, floodplain connection, and reduced channel erosion.

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 and utilities and identify and locate all trees (with size and species) 6 inches in diameter at breast height (DBH) and greater within 100 feet of the proposed LOD on park property. Mitigation for impacts to Park trees (with a 6 inch 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, Parks 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 February 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 Garrett Park Road bridge project can be designed with some modifications to meet Master Plan and relevant design standards as specified in the Recommendations section of this staff report.

Attachments

A. Proposed Project Plans

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO. M–0352
ON GARRETT PARK ROAD

OVER ROCK CREEK
S. H. A. CONTRACT NO.
F. A. P. NO.
C. I. P. PROJECT NO.

RELATED REQUIRED PERMITS To be completed by the consultant and placed on the first sheet of 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					
TYPE OF PERMIT	REQD	NOT REQD	PERMIT #	EXPIRATION DATE	WORK RESTRICTION DATES
M.C.D.E.P. Floodplain Waiver					
WATER/WAYS/WETLANDS(S)					
a. Corps of Engineers					
b. M.D.E.					
c. M.D.E. Water Quality Certification					
M.D.E. Dam Safety					
N.P.D.E.S. NOTICE OF INTENT					
OTHERS (Please List)					
M.C.D.P.S. STORMWATER MANAGEMENT					
M.C.D.P.S. SEDIMENT CONTROL					

FOR INDEX OF SHEETS AND LEGEND, SEE SHEET 2

MISS UTILITY

CALL "MISS UTILITY" AT 1–800–257–7777 48 HOURS PRIOR TO THE START OF WORK. THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION. THE EXCAVATOR IS RESPONSIBLE FOR COMPLIANCE WITH REQUIREMENTS OF CHAPTER 36A OF THE MONTGOMERY COUNTY CODE.

OWNER'S / DEVELOPER'S CERTIFICATION

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

DATE

TIMOTHY H. CUPPLES, PE
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 DESIGN CRITERIA" DATED AUGUST 1988.

DATE

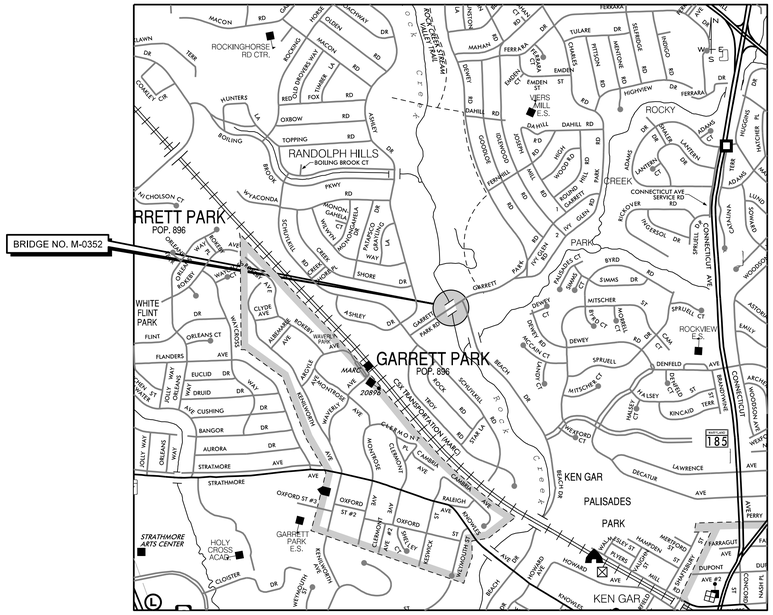
GLENN DETTER, PE
MD. REGISTRATION NO. 16558

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

DATE

GLENN DETTER, PE
MD. REGISTRATION NO. 16558



VICINITY MAP
SCALE : 1" = 1000'

DESIGN DESIGNATION – GARRETT PARK ROAD		
	CONTROLS / YEARS	
	2016	2036
AVERAGE DAILY TRAFFIC (A.D.T.)	9368	12386
DESIGN HOURLY VOLUME (D.H.V.)	–	–
% TRUCKS – A.D.T.	5%	5%
% TRUCKS – D.H.V.	–	–
MASTER PLAN CLASSIFICATION	LOCAL URBAN	
DESIGN SPEED	25 MPH	
ANTICIPATED POSTED SPEED	25 MPH	
ALLOWABLE DEGREE OF CURVE	–	
ALLOWABLE SUPERELEVATION	–	
ALLOWABLE GRADE	–	
DESIGN CRITERIA	–	

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. 16558 EXPIRATION DATE 7/13/2021

GENERAL NOTES

1. THE SPECIFICATIONS FOR THIS CONTRACT WILL BE THOSE OF THE MARYLAND STATE HIGHWAY ADMINISTRATION DATED JULY 2020, 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. HORIZONTAL DATUM: NAD 83(1991) VERTICAL DATUM: NAVD 88.
3. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATIONS AND ELEVATIONS OF THE LINES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SHOWN OR SIX (6) INCHES, WHICHEVER IS LESS, CONTACT MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION'S PROJECT INSPECTOR AND THE APPROPRIATE UTILITY OWNER BEFORE PROCEEDING WITH CONSTRUCTION.
4. REPAIRS TO UTILITIES OR PROPERTY DAMAGE AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE OR METHOD OF OPERATION MUST BE MADE AT THE CONTRACTOR'S EXPENSE BEFORE PROCEEDING WITH CONSTRUCTION.
5. CLEARING IS TO BE LIMITED TO THE "LIMIT OF GRADING" AS SHOWN ON THE PLANS.
6. ALL GRADING SHALL BE DONE IN SUCH A MANNER AS TO PROVIDE POSITIVE DRAINAGE.
7. DISTURBED AREAS ADJACENT TO ESTABLISHED LAWNS SHALL BE SODDED. OTHER DISTURBED AREAS SHALL BE SEEDED AND MULCHED.
8. THE CONTRACTOR SHALL OBTAIN A ROADSIDE TREE PERMIT FOR ANY MAINTENANCE, TREATMENT, PLANTING, REMOVAL, OR ROOT CUTTING ON TREES WITHIN THE PUBLIC RIGHT OF WAY. PERMIT REQUIREMENTS MAY BE OBTAINED FROM THE DEPARTMENT OF NATURAL RESOURCES, MARYLAND FOREST, PARK AND WILDLIFE SERVICE, TELEPHONE 301–854–6060.
9. CONTACT THE WASHINGTON SUBURBAN SANITARY COMMISSION CONSTRUCTION BEFORE EXCAVATING BENEATH OR IN THE VICINITY OF EXISTING WATER OR SEWER LINES. BACKFILL TO BE DONE UNDER SUPERVISION OF W.S.S.C. CONTACT KEVIN LETHBRIDGE, CONSTRUCTION MANAGER, PIPELINE CONSTRUCTION DIVISION AT 301–206–7339.
10. PRIOR TO VEGETATIVE STABILIZATION, ALL DISTURBED AREAS MUST BE TOPSOILED PER THE MONTGOMERY COUNTY "STANDARDS AND SPECIFICATIONS FOR TOPSOIL".

OWNER/CONTACT/ADDRESS:
DEPARTMENT OF TRANSPORTATION
100 EDISON PARK DRIVE, 4TH FLOOR
GAITHERSBURG, MD 20878
240–777–7221

NO.	REVISION	DATE	BY

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

Stormwater Management:
Reviewed Date
Approved Date
S.M.FILE NO.

Sediment Control Technical Requirements:
Reviewed Date
Approved Date

Administrative Requirements:
Reviewed Date

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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

GEBMP TRB MAB *

PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M–0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

TITLE SHEET

DATE: OCTOBER 2020

Project No.: * SHEET 1 of 34

MCDPS SCSWM SHEET 1 OF *

BY: JDM –
PLOTTED: Wednesday, October 28, 2020 AT 01:53 PM
FILE: U:\Str\20022518_20021162 – Garrett Park\CADD\pGN-T000_GARRETT-PARK.dgn

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 APPROVE 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 CONTRACTORS OWN 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 SAFERY FENCE MAY BE USED.

5. FIELD RUN TOPOGRAPHIC SURVEY PROVIDED BY __(Surveyor)_____ IN (date) . SURVEY IS IN STATE PLANE DATUM NAD88 AND NAVD83 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*S 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 M–NCPPC 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.

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*S 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 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 UTILITES DAMAGED BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILTY 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, OMISSIONS, AMBIGUITIES, OR CONFLICTS IN OR AMONG THE CONSTRUCTION DOCUMENTS OR DOUBT ABOUT THEIR MEANING SHALL BE BROUGHT TO THE ATTENTION OF THE MNCPPC CONSTRUCTION MANAGER FOR DIRECTION BEFORE PROCEEDING WITH WORK. IF CONFLICTS EXIST, THE MOST STRINGENT REQUIREMENT SHALL GOVERN UNLESS OTHERWISE STATED IN WRITING BY THE MNCPPC CONSTRUCTION MANAGER.

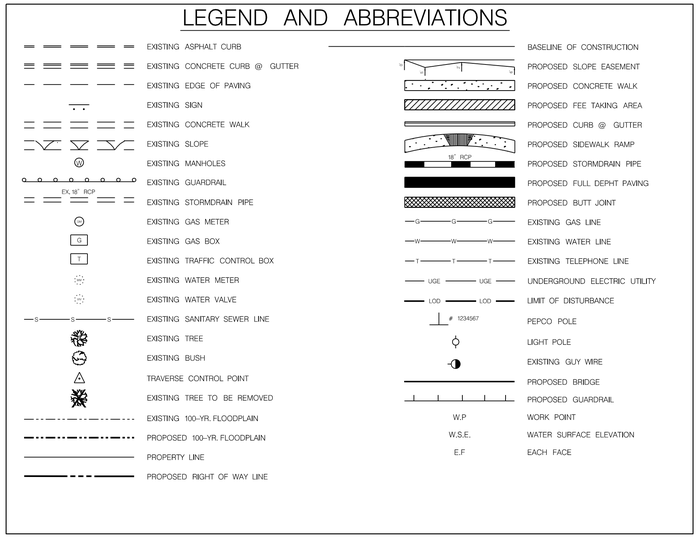
20. PRIOR TO VEGETATIVE STABILIZATION, ALL DISTURBED AREAS MUST BE TOPSOILED PER THE MONTGOMERY COUNTY "STANDARDS AND SPECIFICATIONS FOR TOPSOIL". IF ON–SITE MATERIALS DO NOT MEET REQUIREMENTS OF TOPSOIL, COORDINATE WITH M–NCPPC REGARDING TILLING–IN OF CERTIFIED COMPOST TO ON–SITE SOILS IN ORDER TO MEET 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 (provide watershed name here) WATERSHED OF MONTGOMERY COUNTY. RUNOFF FROM THIS SITE DRAINS INTO (if applicable write A MUNICIPAL STORM DRAIN SYSTEM THAT OUTLETS TO THE) (provide closest named tributary here) TRIBUTARY.

INDEX OF SHEETS

LEGEND AND ABBREVIATIONS



IN–1

NO.	REVISION	DATE	BY

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

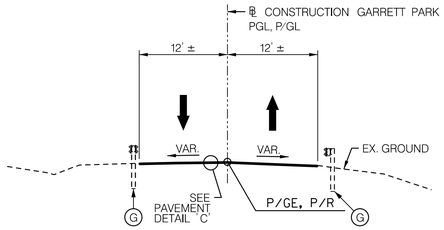
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M–0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

INDEX OF SHEETS AND LEGEND

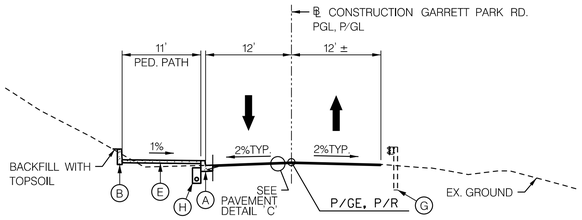
SCALE : NONE DATE: OCTOBER 2020

Project No.: * SHEET 2 of 34

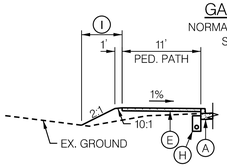
BY: JDM
PLOTTED: Wednesday, October 28, 2020 AT 02:16 PM
FILE: U:\Sr\20022518_20021162 – Garrett Park\CADD\pGN-I000_GARRETT–PARK.dgn



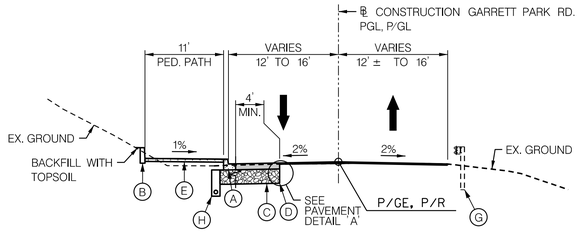
GARRETT PARK ROAD
NORMAL OPEN SECTION
STA. 10+50 TO STA. 10+61



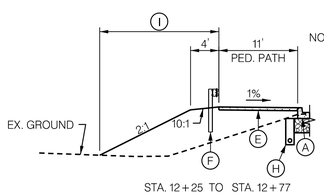
GARRETT PARK ROAD
NORMAL PARTIALLY CLOSED SECTION
STA. 10+61 TO STA. 11+58



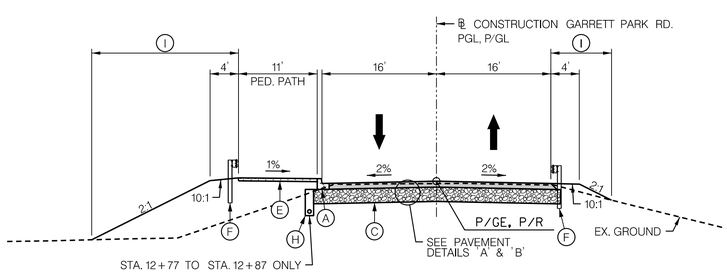
STA. 10+61 TO STA. 11+00



GARRETT PARK ROAD
NORMAL PARTIALLY CLOSED SECTION
STA. 11+58 TO STA. 12+77



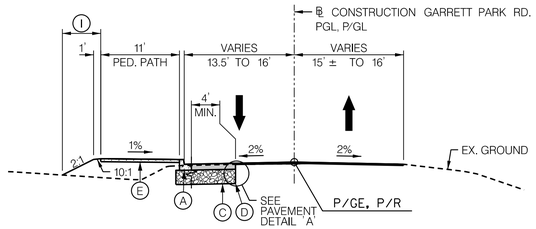
STA. 12+25 TO STA. 12+77



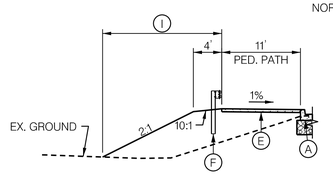
STA. 12+77 TO STA. 12+87 ONLY

GARRETT PARK ROAD – PARTIALLY OPEN SECTION
STA. 12+77 TO STA. 12+87
STA. 14+98 TO STA. 15+20

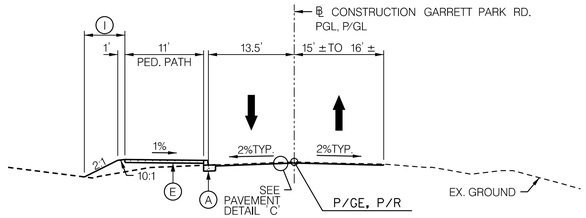
STA. 12+87 TO STA. 14+98 – SEE BRIDGE PLANS



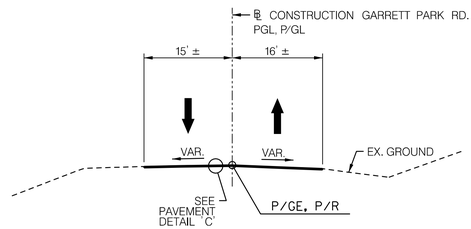
GARRETT PARK ROAD
NORMAL PARTIALLY CLOSED SECTION
STA. 15+20 TO STA. 16+45



STA. 15+20 TO STA. 15+61



GARRETT PARK ROAD
PARTIALLY CLOSED SECTION
STA. 16+45 TO STA. 17+56



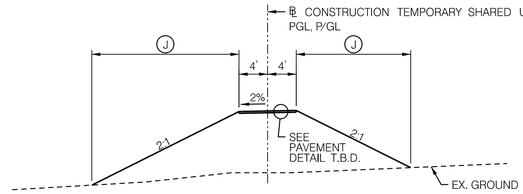
GARRETT PARK ROAD
NORMAL OPEN SECTION
STA. 17+56 TO STA. 17+60

TYPICAL SECTION LEGEND

- (A) STANDARD TYPE 'A' COMBINATION CURB AND GUTTER – 16" GUTTER PAN, 10" DEPTH SEE MCDOT STD. NO. MC-100.01
- (B) STANDARD TYPE 'A' CURB – VARIABLE HEIGHT – SEE MDOT SHA STD. NO. MD 620.02
- (C) TOP OF SUBGRADE AND LIMIT OF EXCAVATION
- (D) FULL DEPTH SAW CUT – SEE SHEET TD-1
- (E) 5" CONCRETE SIDEWALK
- (F) TRAFFIC BARRIER W-BEAM, TRAFFIC BARRIER END TREATMENT, OR THRIE BEAM ANCHORAGE AS INDICATED ON PLANS
- (G) EXISTING TRAFFIC BARRIER TO REMAIN
- (H) 6 INCH PERFORATED CIRCULAR PIPE LONGITUDINAL UNDERDRAIN WHERE INDICATED ON PLANS SEE MDOT SHA STD. NO. MD 387.11-01
- (I) ON SLOPES 2:1 AND STEEPER, PLACE FURNISHED TOPSOIL 2 IN. DEPTH, PERFORM TURFGRASS ESTABLISHMENT, AND INSTALL TYPE A SSM, UNLESS OTHERWISE NOTED.

  ON SLOPES 4:1 AND STEEPER AND FLATTER THAN 2:1, PLACE FURNISHED TOPSOIL 4 IN. DEPTH, PERFORM TURFGRASS ESTABLISHMENT, AND INSTALL TYPE A SSM, UNLESS OTHERWISE NOTED.

  ON SLOPES FLATTER THAN 4:1, PLACE FURNISHED TOPSOIL 4 IN. DEPTH AND PERFORM TURFGRASS ESTABLISHMENT, UNLESS OTHERWISE NOTED.
- (J) APPLY TEMPORARY SEED FOR STABILIZATION DURING CONSTRUCTION



TEMPORARY SHARED USE PATH
STA. 20+27 TO STA. 20+93
STA. 23+19 TO STA. 23+83

STA. 20+93 TO STA. 23+19 – SEE BRIDGE PLANS

TS-1

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

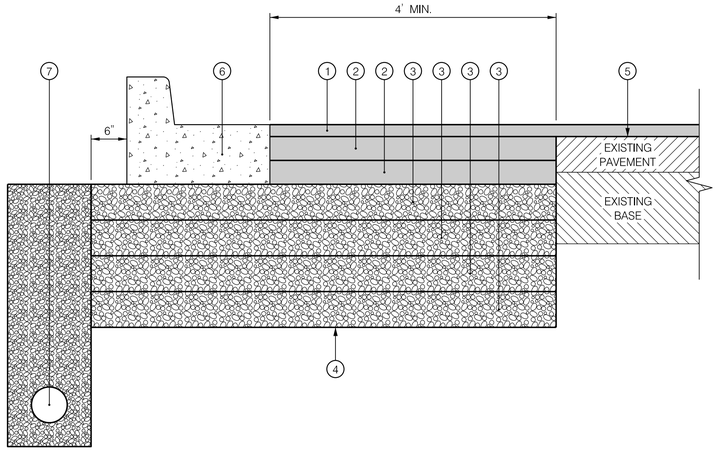
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

TYPICAL SECTIONS

SCALE : 1" = 10' DATE: OCTOBER 2020

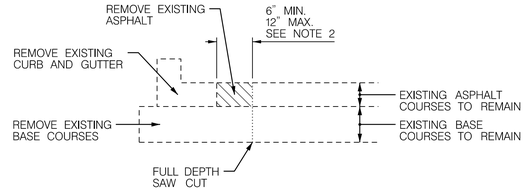
Project No.: * SHEET 3 of 34

BY: AKR –
PLOTTED: Thursday, October 15, 2020 AT 03:52 PM
FILE: U:\SV\20022518_20001162 – Garrett Park\CADD\pHT-X001_Garrett.dgn



PAVEMENT DETAIL 'A'

GARRETT PARK ROAD - CLOSED SECTION
FULL DEPTH CONSTRUCTION AND RESURFACING
SCALE: 1" = 1'



NOTES:

1. SAW CUT EXISTING PAVING (FULL-DEPTH) AT ROADWAY WIDENINGS AND CURB REMOVALS PRIOR TO PLACEMENT OF ANY PAVING COURSES.
2. IN AREAS WHERE THE PROPOSED CURB AND GUTTER IS WITHIN 4' OF THE EXISTING CURB AND GUTTER, THE SAW CUT SHALL BE LOCATED TO PROVIDE 4' MIN. OF NEW PAVEMENT.
3. SAW CUT SHALL BE INCIDENTAL TO SUPERPAVE ASPHALT ITEMS.
4. REMOVAL OF EXISTING CURB AND GUTTER WITHIN PROPOSED ROADWAY AREAS SHALL BE INCIDENTAL TO CLASS 1 EXCAVATION.

SAW CUT DETAIL – CLOSED SECTION

SCALE: NONE

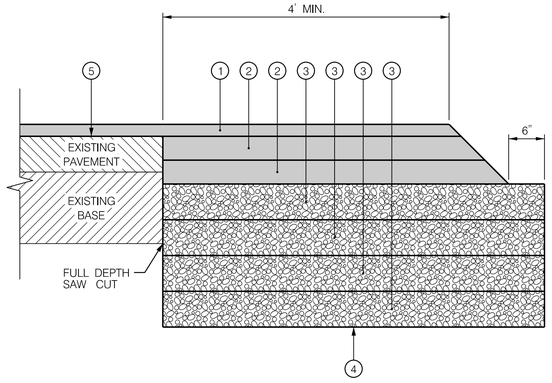
PAVEMENT LEGEND

1. 2" SUPERPAVE ASPHALT MIX 12.5 MM FOR SURFACE, PG 64S-22, LEVEL 2
2. 4" SUPERPAVE ASPHALT MIX 25.0 MM FOR BASE, PG 64S-22, LEVEL-2
3. 6" GRADED AGGREGATE BASE COURSE
4. TOP OF SUBGRADE AND LIMIT OF EXCAVATION
5. EXISTING PAVEMENT SURFACE AFTER 2" FINE-MILLING – SEE NOTE 2
6. STANDARD TYPE 'A' COMBINATION CURB AND GUTTER – 16" GUTTER PAN, 10" DEPTH – SEE MCDOT STD. NO. MC-100.01
7. 6 INCH PERFORATED CIRCULAR PIPE LONGITUDINAL UNDERDRAIN (CLOSED SECTION) WHERE INDICATED ON THE PLANS – SEE MDOT SHA STD. NO. MD 387.11-01

NOTES:

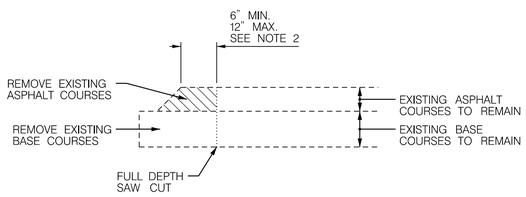
1. AS NECESSARY, USE THE THE FOLLOWING ITEM FOR WEDGE /LEVEL:

   SUPERPAVE ASPHALT MIX 9.5 MM FOR WEDGE /LEVEL, PG 64S-22, LEVEL-2
   (1" MINIMUM LIFT, 2" MAXIMUM LIFT)
2. FINE-MILLING ONLY TO BE DONE IN AREAS WHERE NECESSARY TO PROVIDE FOR FULL 2" ASPHALT SURFACE COURSE. IN AREAS WHERE THE PROPOSED BOTTOM OF THE 2" ASPHALT SURFACE COURSE IS ABOVE THE EXISTING PAVEMENT SURFACE, NO FINE-MILLING OF EXISTING PAVEMENT IS REQUIRED.



PAVEMENT DETAIL 'B'

GARRETT PARK ROAD - OPEN SECTION
FULL DEPTH CONSTRUCTION AND RESURFACING
SCALE: 1" = 1'

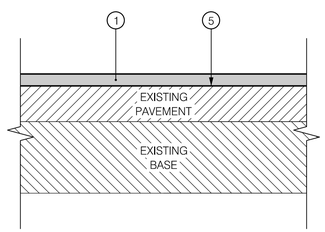


NOTES:

1. SAW CUT EXISTING PAVING ALONG OUTSIDE EDGE PRIOR TO PLACEMENT OF ANY PAVING COURSES.
2. IN AREAS WHERE THE PROPOSED EDGE OF PAVEMENT IS WITHIN 4' OF THE EXISTING EDGE OF PAVEMENT, THE SAW CUT SHALL BE LOCATED TO PROVIDE 4' MIN. OF NEW PAVEMENT.
3. SAW CUT SHALL BE INCIDENTAL TO SUPERPAVE ASPHALT ITEMS.

SAW CUT DETAIL – OPEN SECTION

SCALE: NONE



PAVEMENT DETAIL 'C'

GARRETT PARK ROAD AND BEACH DRIVE
RESURFACING
SCALE: 1" = 1'

TD-1

NO.	REVISION	DATE	BY

WTB CONSULTING ENGINEERS | THE WILSON T. BALLARD CO. | OWINGS MILLS, MD

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

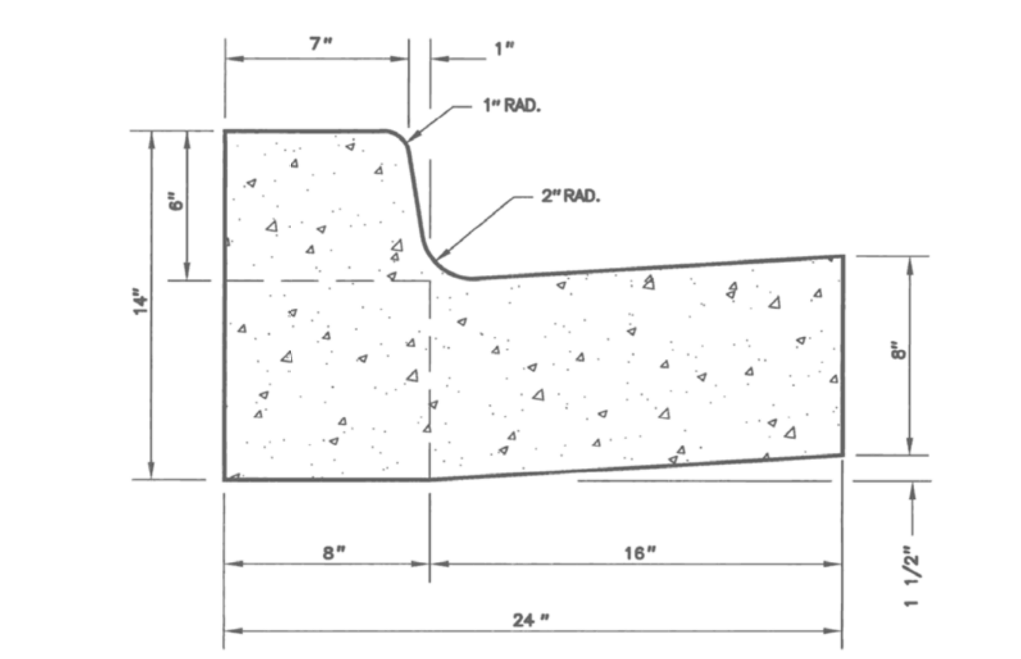
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

PAVEMENT DETAILS

SCALE : AS SHOWN DATE: OCTOBER 2020

Project No.: * SHEET 4 of 34

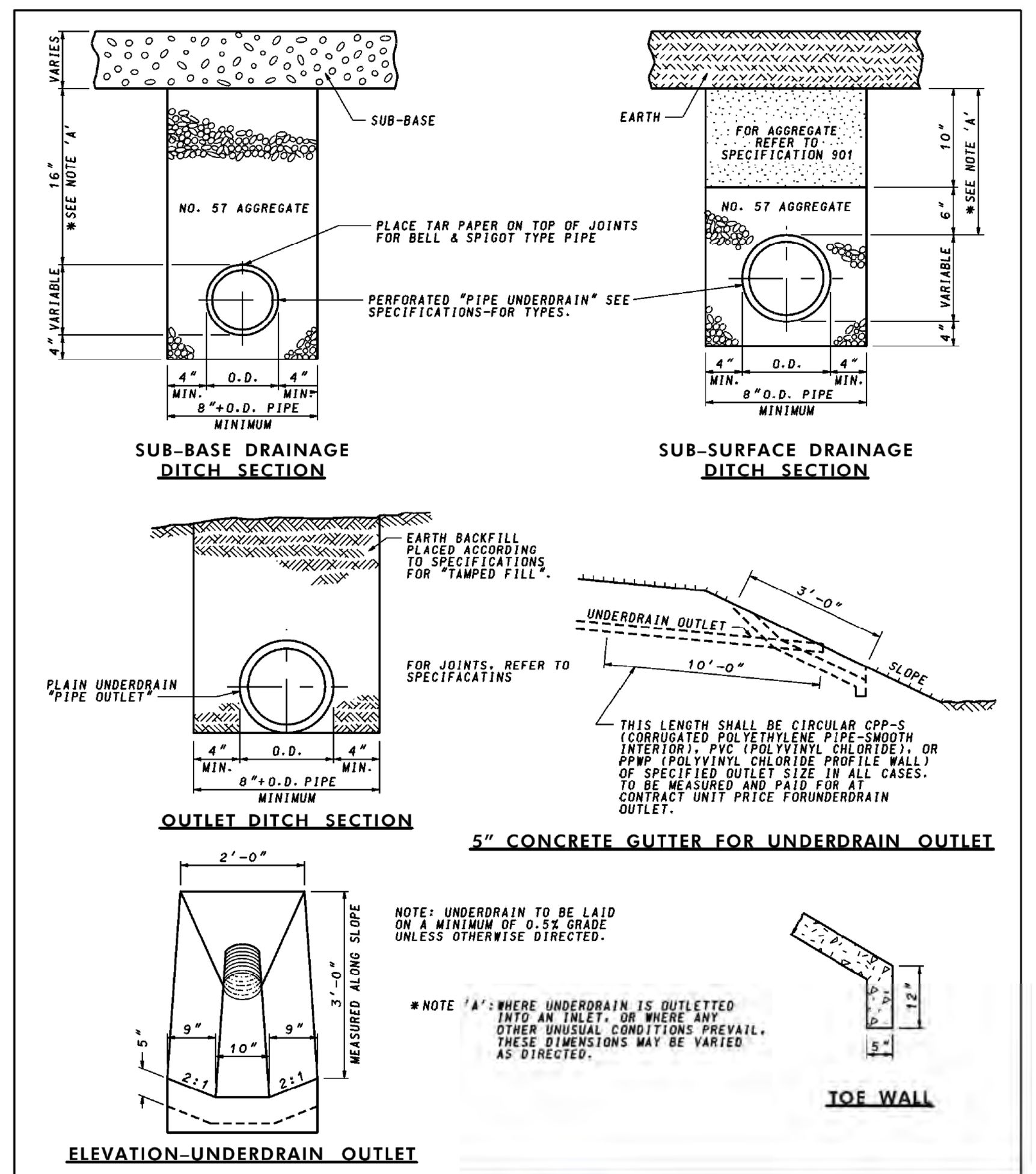
BY: AKR -
PLOTTED: Thursday, October 15, 2020 AT 03:53 PM
FILE: U:\Str\20022518_20021162 – Garrett Park\CADD\pHT-D001_Garrett.dgn



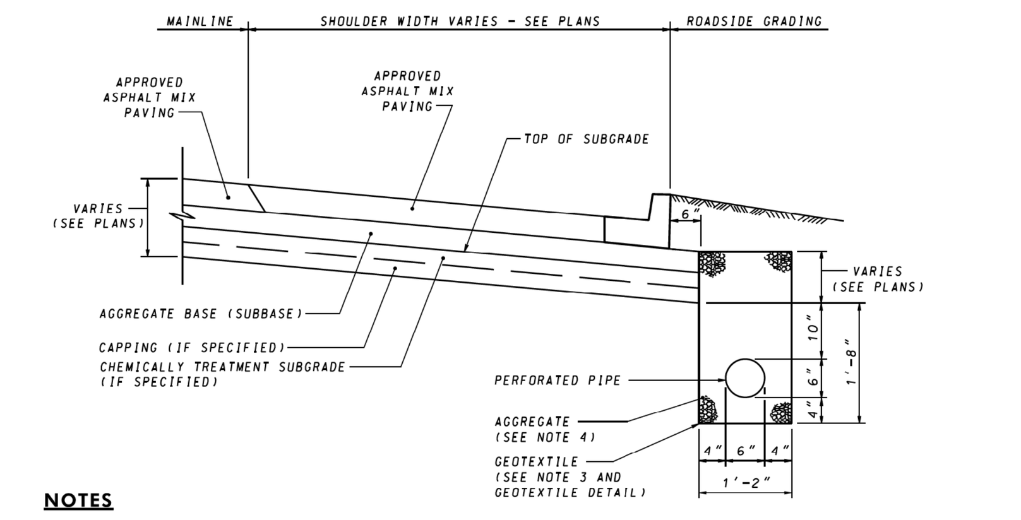
GENERAL NOTES

1. REFER TO MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR MATERIALS, METHODS OF CONSTRUCTION AND EXPANSION JOINT LOCATIONS.
2. THIS STANDARD SHALL BE USED ON PRIMARY RESIDENTIAL, ARTERIAL AND BUSINESS DISTRICT ROADS AS WELL AS CURB RETURNS AND INLET THROATS.
3. WHENEVER STANDARD MC-101.01 CURB IS USED IN CONJUNCTION WITH THIS STANDARD, A TEN FOOT TRANSITION SHALL BE PROVIDED FROM STANDARD MC-100.01 TO STANDARD MC-101.01 FOR CURB RETURNS AND CURB SECTIONS WHICH INCLUDE INLETS.
4. THE STANDARD DISTANCE BETWEEN JOINTS SHALL BE TEN FEET (MAXIMUM AND MINIMUM DISTANCES SHALL BE THIRTEEN FEET AND FIVE FEET RESPECTIVELY).
5. EXPANSION JOINT MATERIAL SHALL BE 1/2 INCH PREFORMED CORK, TRIMMED AND SEALED WITH NON-STAINING TWO-COMPONENT POLYSULFIDE OR POLYURETHANE ELASTOMERIC TYPE SEALANT COMPLYING WITH ASTM-C920.

APPROVED 14 APR 06 DATE — DIRECTOR, DEPT. OF PUBLIC WORKS & TRANSPORTATION — CHIEF, DIV. OF CAP. DEV.
REVISED: ASTM-C920 4/2006
MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
COMBINATION CONCRETE CURB AND GUTTER TYPE A
STANDARD NO. MC-100.01

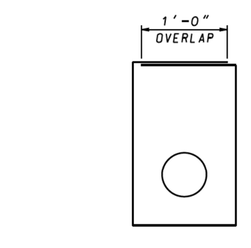


SPECIFICATION | CATEGORY CODE ITEMS
APPROVED — DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT
MDOT MARYLAND DEPARTMENT OF TRANSPORTATION — STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
STANDARD UNDERDRAINS
STANDARD NO. MD 387.01



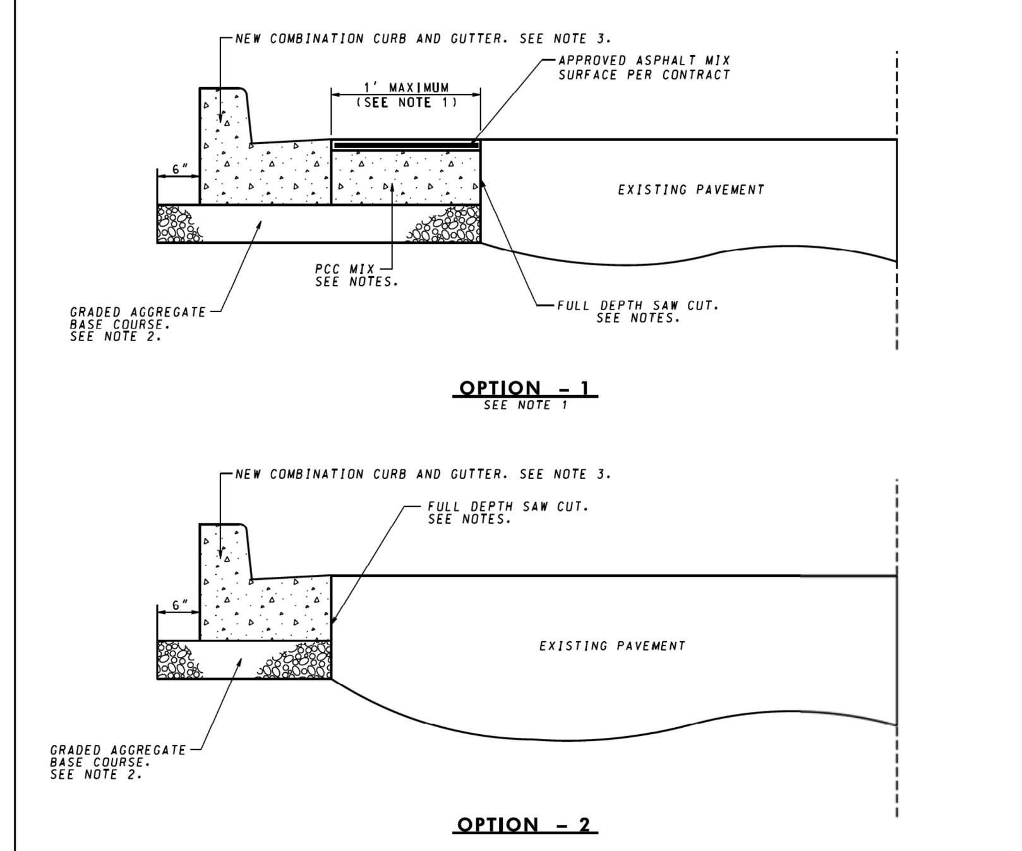
NOTES

1. LONGITUDINAL UNDERDRAIN SHALL BE PLACED ACCORDING TO THE PLANS OR AS DIRECTED BY THE ENGINEER.
2. THE UNDERDRAIN TRENCH SHALL NOT BE CONSTRUCTED BEFORE PLACEMENT OF THE BASE (SUBBASE) COURSE.
3. LONGITUDINAL UNDERDRAIN TRENCH SHALL BE WRAPPED IN CLASS SD TYPE II GEOTEXTILE.
4. AGGREGATE SHALL CONFORM TO No. 57 AGGREGATE, 901.01 OF THE STANDARD SPECIFICATION FOR CONSTRUCTION AND MATERIALS.
5. AGGREGATE SHALL BE TAMPED WITH A LIGHT VIBRATORY TAMPER PRIOR TO OVERLAPPING THE GEOTEXTILE FABRIC.
6. CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR 6" PERFORATED CIRCULAR PIPE LONGITUDINAL UNDERDRAIN SHALL CONSTITUTE FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO DO THE WORK.
7. IF ANY EXISTING LONGITUDINAL UNDERDRAIN IS ENCOUNTERED DURING WIDENING EXCAVATION, THE UNDERDRAIN PIPE SHOULD BE REMOVED UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ANY VOID CREATED BY THE REMOVAL OF THE UNDERDRAIN PIPE SHOULD BE BACKFILLED BY MATERIAL SUITABLE FOR EMBANKMENT CONSTRUCTION. IF NO LONGITUDINAL UNDERDRAIN IS FOUND, BUT EXISTING UNDERDRAIN OUTLETS MAY BE IMPACTED BY NEW WIDENING, OUTLETS SHALL BE CONNECTED TO THE NEW UNDERDRAINS OR OTHER DRAINAGE FACILITIES.
8. OUTLET THE UNDERDRAINS INTO OTHER DRAINAGE STRUCTURES WHENEVER POSSIBLE AT INTERVALS NOT TO EXCEED 250'. REFER TO STD. NOS. 387.11, 387.11-01, 387.21 AND 387.21-01.



GEOTEXTILE FABRIC

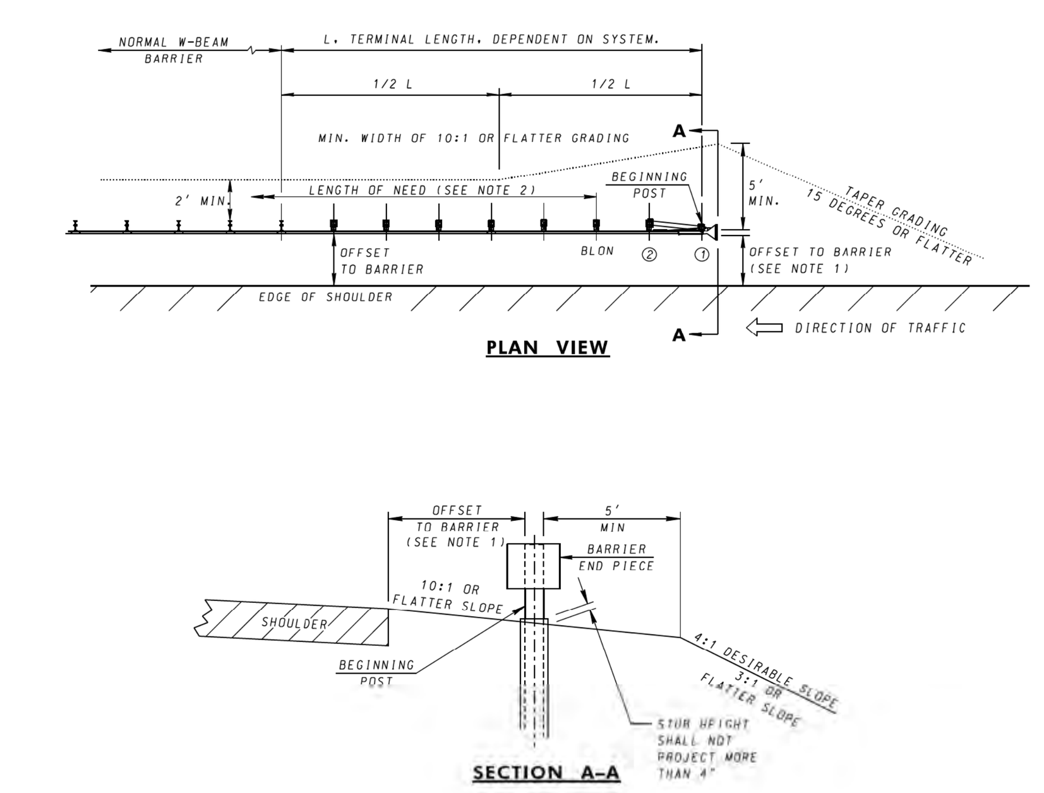
SPECIFICATION 306 | CATEGORY CODE ITEMS
APPROVED — DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT
Maryland Department of Transportation — STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
LONGITUDINAL UNDERDRAIN LOCATED AT CURB & GUTTER EDGE FOR FLEXIBLE PAVEMENT
STANDARD NO. MD 387.11-01



NOTES

1. THIS WORK IS TO BE DONE AT THE CONTRACTOR'S OPTION. THIS 1' WIDTH (MAXIMUM) EXCAVATION MAY BE USED FOR CURB AND GUTTER FORM PLACEMENT. THE ADDITIONAL EXCAVATION WIDTH IS TO BE FILLED WITH PCC MIX NO. 3 OR MIX 9 CONCRETE TO THE BOTTOM OF THE FINAL ASPHALT MIX COURSE. PAYMENT SHALL BE INCIDENTAL TO THE LINEAR FOOT ITEM FOR CURB AND GUTTER. JOINTS SHALL MATCH THOSE OF THE CURB AND GUTTER. NO DOWEL BARS ARE NEEDED.
2. ALL COSTS FOR ITEMS, MATERIALS, TOOLS, AND LABOR FOR EXCAVATION, PCC MIX, 6" MINIMUM GAB, AND FULL DEPTH SAW CUT EXCEPT FOR ASPHALT MIX SURFACE SHALL BE INCIDENTAL AND INCLUDED IN THE PRICE OF THE LINEAR FOOT ITEM FOR CURB AND GUTTER.
3. REFER TO STANDARD NOS. MD 620.02 AND 620.02-01 FOR COMBINATION CURB AND GUTTER DIMENSIONS.

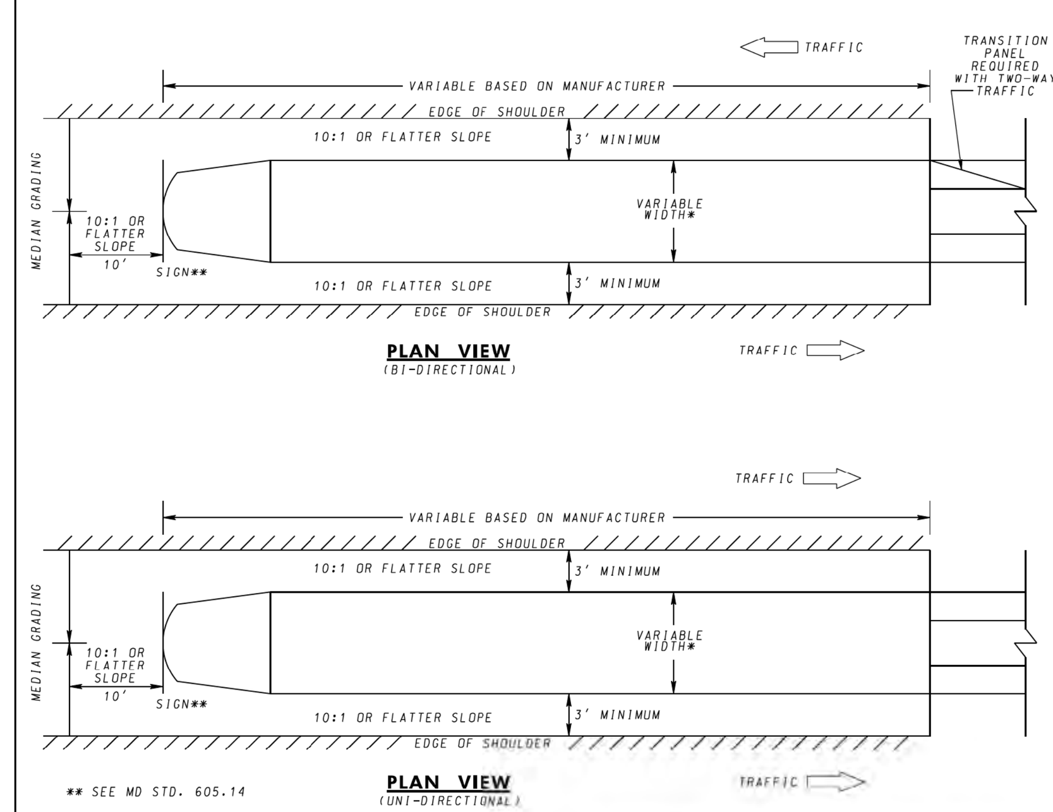
SPECIFICATION | CATEGORY CODE ITEMS
APPROVED — DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT
APPROVAL • SHA REVISIONS: APPROVAL 2-25-16 | APPROVAL • FEDERAL HIGHWAY ADMINISTRATION: APPROVAL 2-23-16
Maryland Department of Transportation — STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
NEW COMBINATION CURB AND GUTTER PLACEMENT ALONG EXISTING PAVEMENT
STANDARD NO. MD 580.03



NOTES

1. WHEN THE TRAFFIC BARRIER POST IS PLACED LESS THAN 4' FROM THE EDGE OF SHOULDER/PAVEMENT, THE END TREATMENT SHALL BE FLARED AT A RATE OF 50:1 OVER THE FULL LENGTH AND ON A STRAIGHT LINE.
2. AN EFFECTIVE LON OF 34' SHALL BE INCLUDED IN THE END TREATMENT PAYMENT.
3. SYSTEM MUST BE INSTALLED AT A HEIGHT OF 31".
4. FOR DELINEATION, SEE STANDARD NO. 605.14.
5. THIS DRAWING IS SCHEMATIC ONLY FOR ILLUSTRATION PURPOSE. SEE MDOT SHA QPL FOR APPROVED SYSTEMS THAT ARE 2016 MASH COMPLIANT.

SPECIFICATION 606 | CATEGORY CODE ITEMS
APPROVED — DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT
APPROVAL SHA REVISIONS: APPROVAL 11-10-99, REVISED 12-17-12 | APPROVAL FEDERAL HIGHWAY ADMINISTRATION: APPROVAL 7-2-99, REVISED 10-25-06
MDOT MARYLAND DEPARTMENT OF TRANSPORTATION — STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
TRAFFIC BARRIER W-BEAM ONE-SIDED PARALLEL END TREATMENT (TYPE C)
STANDARD NO. MD 605.03



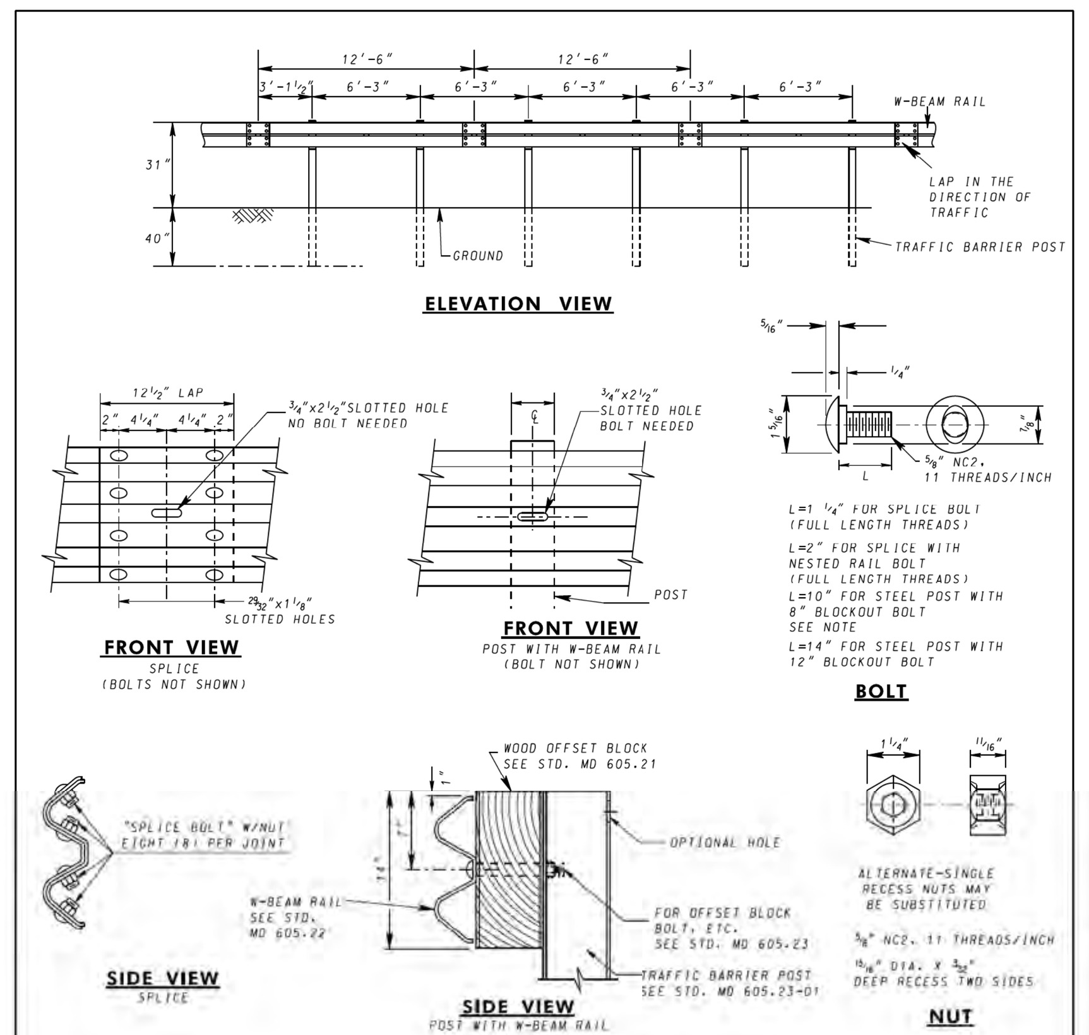
TYPE D - GATING
TYPE E - NON-GATING
TYPE F - SEMI-GATING
TYPE J - NON-GATING, SELF-RESTORING

* THE REQUIRED WIDTH OF THE UNIT VARIES DEPENDING UPON THE SYSTEM AND THE HAZARD TO BE SHIELDED. ATTACH END TREATMENT TO BARRIER ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

NOTES

1. FOR THE ANCHORING PAD DIMENSIONS AND MATERIALS AND TO ANCHOR THE UNIT TO EXISTING PAVEMENT, REFER TO THE MANUFACTURER'S PRODUCT MANUAL OR INSTRUCTIONS.
2. THE COST OF THE ANCHOR PAD, EXCAVATION, DRILLED HOLES, EPOXY, BOLTS, AND ALL LABOR AND MATERIALS NECESSARY TO ANCHOR THE UNIT SHALL BE INCIDENTAL TO TRAFFIC BARRIER END TREATMENT INSTALLATION.
3. FOR DELINEATION, SEE STANDARD NO. 605.14.
4. THIS SCHEMATIC DRAWING IS FOR ILLUSTRATIVE PURPOSES ONLY. SEE MDOT SHA QPL FOR APPROVED SYSTEMS THAT ARE 2016 MASH COMPLIANT.

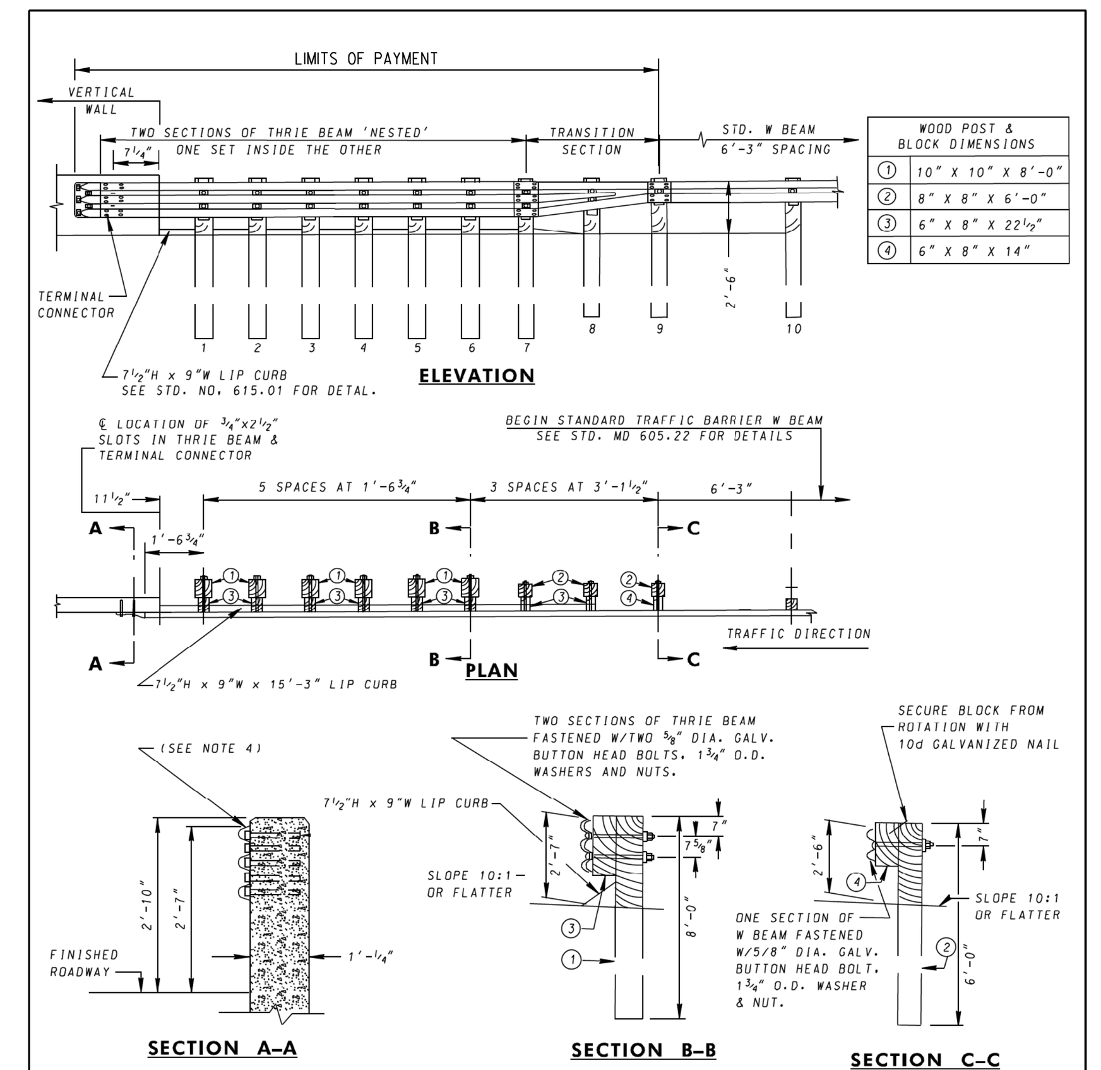
SPECIFICATION 606 | CATEGORY CODE ITEMS
APPROVED — DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT
APPROVAL SHA REVISIONS: APPROVAL 9-20-19, REVISED 2-25-20 | APPROVAL FEDERAL HIGHWAY ADMINISTRATION: APPROVAL 8-15-19, REVISED 2-24-20
MDOT MARYLAND DEPARTMENT OF TRANSPORTATION — STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
TRAFFIC BARRIER TWO-SIDED END TREATMENT AND CRASH CUSHION (TYPES D, E, F, AND J)
STANDARD NO. MD 605.12



NOTES

1. FOR COMPOSITE OFFSET BLOCKS SEE NOTE 5 ON STD. MD 605.21.
2. THE CONTRACTOR HAS THE OPTION TO USE SHORTER BOLTS WITH A MINIMUM OF ½" PROTRUSION BEYOND NUT.
3. WITH ENGINEER'S APPROVAL, ONE POST CAN BE OMITTED WITHOUT OTHER CHANGES. A MINIMUM OF EIGHT POSTS MUST BE INSTALLED BETWEEN OMITTED POSTS.

SPECIFICATION 605 | CATEGORY CODE ITEMS
APPROVED — DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT
MDOT MARYLAND DEPARTMENT OF TRANSPORTATION — STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
TRAFFIC BARRIER W-BEAM, W-BEAM SPLICES AND WOOD OFFSET BLOCK
STANDARD NO. MD 605.23



NOTES

1. THRIE BEAM TERMINAL CONNECTOR, THRIE BEAM SECTIONS AND W BEAM SECTIONS SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC.
2. THE WOOD POSTS AND BLOCKS SHALL HAVE A STRESS GRADE OF 1200 PSI OR MORE.
3. SEE STD'S. MD 605.29 & MD 605.41-02 FOR DETAILS OF THRIE BEAM, SPLICE, TERMINAL CONNECTOR, TRANSITION SECTION, AND RECTANGULAR PLATE WASHERS.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL FIVE (5) ⅞" DIA. HEAVY DUTY GALV. THREADED ANCHOR RODS WITH HEX HEAD RECESSED NUTS AND RECTANGULAR PLATE WASHERS. ANCHOR RODS SHALL BE ANCHORED WITH EPOXY GROUT AS SPECIFIED IN SPEC. 902.

TRAFFIC BARRIER THRIE BEAM ANCHORAGE TO VERTICAL FACE – WOOD POST

TD–2

NO.	REVISION	DATE	BY

THE WILSON T. BALLARD CO. — CONSULTING ENGINEERS | OWINGS MILLS, MD

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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

Designed by: AWK — Drawn by: MAB — Checked by: *

PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

STANDARD DETAILS

SCALE : AS SHOWN — DATE: OCTOBER 2020
Project No.: * — SHEET 5 of 34

BY: AKR –
PLOTTED: Friday, October 16, 2020 AT 09:41 AM
FILE: U:\Sh\20022518_20021162 – Garrett Park\CADD\pHT-D002_Garrett.dgn

CURVE DATA							
CURVE NO.	STATION	Δ	Dc	R	T	L	E
G-1	PC 11+52.09	2°27'07"	3°49'11"	1500.00'	32.10'	64.19'	0.34'
G-2	PRC 12+16.29	2°42'33"	3°49'11"	1500.00'	35.47'	70.93'	0.42'
G-3	PC 15+12.46	4°29'46"	2°51'53"	2000.00'	78.51'	156.95'	1.54'
G-4	PCC 16+69.41	14°36'41"	9°32'57"	600.00'	76.92'	153.01'	4.91'
P-1	PC 20+66.02	43°29'54"	163°42'08"	35.00'	13.96'	26.57'	2.68'
P-2	PC 23+18.93	48°29'54"	163°42'08"	35.00'	15.77'	29.63'	3.39'
B-1	PC 30+99.02	8°10'51"	11°27'33"	500.00'	35.76'	71.39'	1.28'

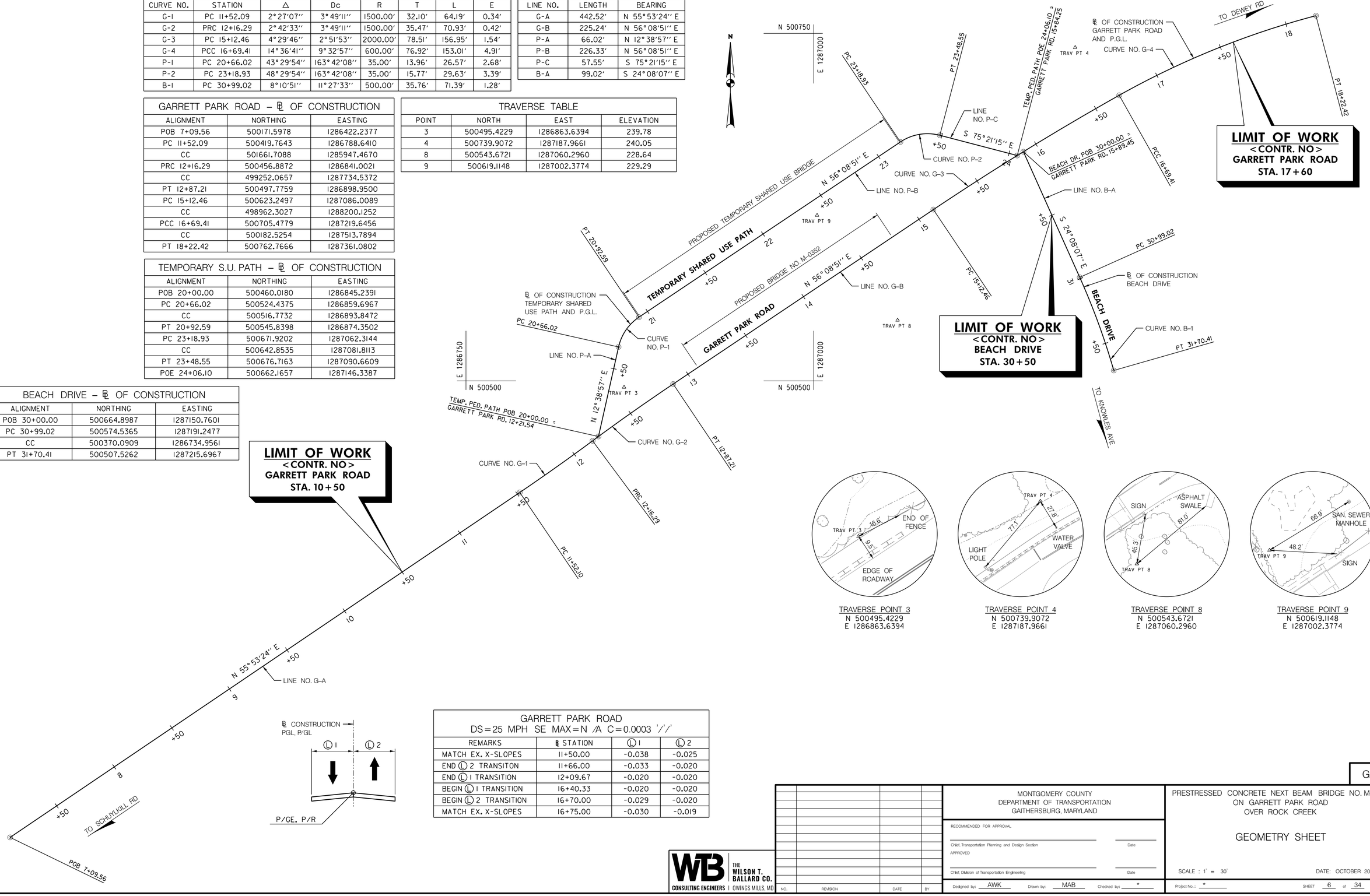
LINE DATA		
LINE NO.	LENGTH	BEARING
G-A	442.52'	N 55°53'24" E
G-B	225.24'	N 56°08'51" E
P-A	66.02'	N 12°38'57" E
P-B	226.33'	N 56°08'51" E
P-C	57.55'	S 75°21'15" E
B-A	99.02'	S 24°08'07" E

GARRETT PARK ROAD – ℄ OF CONSTRUCTION		
ALIGNMENT	NORTHING	EASTING
POB 7+09.56	500171.5978	1286422.2377
PC 11+52.09	500419.7643	1286788.6410
CC	501661.7088	1285947.4670
PRC 12+16.29	500456.8872	1286841.0021
CC	499252.0657	1287734.5372
PT 12+87.21	500497.7759	1286898.9500
PC 15+12.46	500623.2497	1287086.0089
CC	498962.3027	1288200.1252
PCC 16+69.41	500705.4779	1287219.6456
CC	500182.5254	1287513.7894
PT 18+22.42	500762.7666	1287361.0802

TRAVERSE TABLE			
POINT	NORTH	EAST	ELEVATION
3	500495.4229	1286863.6394	239.78
4	500739.9072	1287187.9661	240.05
8	500543.6721	1287060.2960	228.64
9	500619.1148	1287002.3774	229.29

TEMPORARY S.U. PATH – ℄ OF CONSTRUCTION		
ALIGNMENT	NORTHING	EASTING
POB 20+00.00	500460.0180	1286845.2391
PC 20+66.02	500524.4375	1286859.6967
CC	500516.7732	1286893.8472
PT 20+92.59	500545.8398	1286874.3502
PC 23+18.93	500671.9202	1287062.3144
CC	500642.8535	1287081.8113
PT 23+48.55	500676.7163	1287090.6609
POE 24+06.10	500662.1657	1287146.3387

BEACH DRIVE – ℄ OF CONSTRUCTION		
ALIGNMENT	NORTHING	EASTING
POB 30+00.00	500664.8987	1287150.7601
PC 30+99.02	500574.5365	1287191.2477
CC	500370.0909	1286734.9561
PT 31+70.41	500507.5262	1287215.6967



LIMIT OF WORK
<CONTR. NO>
GARRETT PARK ROAD
STA. 10+50

LIMIT OF WORK
<CONTR. NO>
BEACH DRIVE
STA. 30+50

LIMIT OF WORK
<CONTR. NO>
GARRETT PARK ROAD
STA. 17+60

GARRETT PARK ROAD DS=25 MPH SE MAX=N /A C=0.0003 '/'/'			
REMARKS	℄ STATION	Ⓛ 1	Ⓛ 2
MATCH EX. X-SLOPES	11+50.00	-0.038	-0.025
END Ⓛ 2 TRANSITON	11+66.00	-0.033	-0.020
END Ⓛ 1 TRANSITION	12+09.67	-0.020	-0.020
BEGIN Ⓛ 1 TRANSITION	16+40.33	-0.020	-0.020
BEGIN Ⓛ 2 TRANSITION	16+70.00	-0.029	-0.020
MATCH EX. X-SLOPES	16+75.00	-0.030	-0.019

TRAVERSE POINT 3
N 500495.4229
E 1286863.6394

TRAVERSE POINT 4
N 500739.9072
E 1287187.9661

TRAVERSE POINT 8
N 500543.6721
E 1287060.2960

TRAVERSE POINT 9
N 500619.1148
E 1287002.3774

GS-1

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Transportation Planning and Design Section — Date

APPROVED
Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

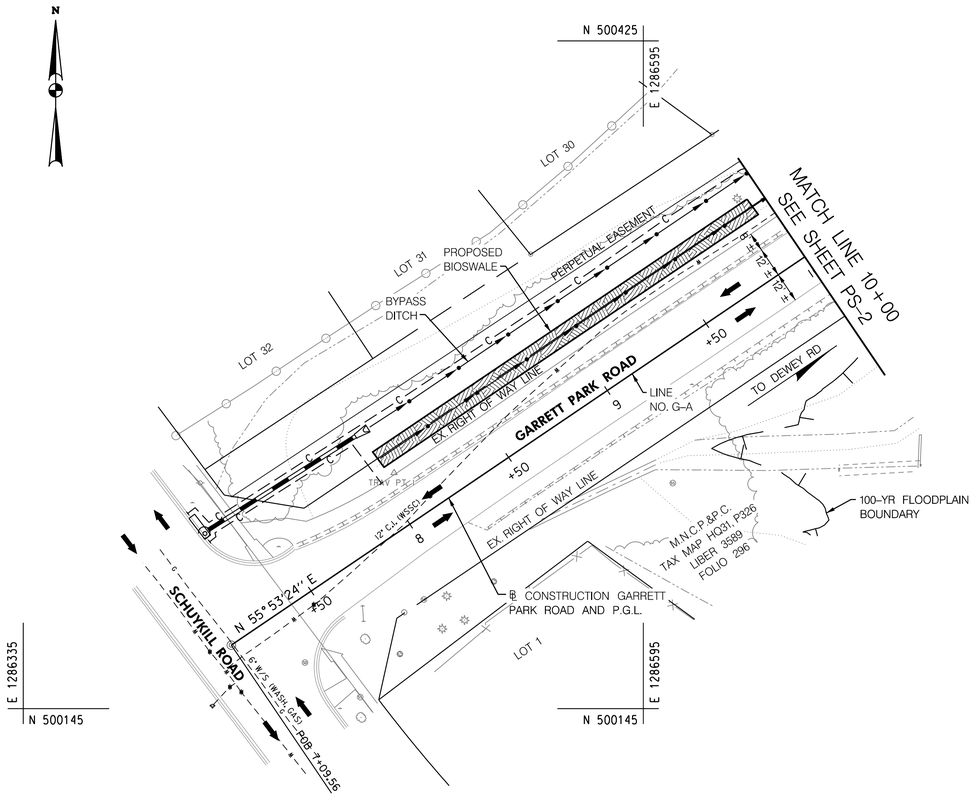
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

GEOMETRY SHEET

SCALE : 1" = 30' DATE: OCTOBER 2020

Project No.: * SHEET 6 of 34

BY: JDM --
PLOTTED: Wednesday, October 28, 2020 AT 02:04 PM
FILE: U:\Str\20022518_20021162 – Garrett Park\CADD\pGS-0001_Garrett.dgn



LINE DATA		
LINE NO.	LENGTH	BEARING
G-A	442.54'	N 55°53'24" E

PS-1

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

Stormwater Management:

Reviewed Date

Approved Date

SAFILE NO.

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

MCDPS - APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

LEGEND

PROPOSED FULL DEPTH CONSTRUCTION

PROPOSED FINE-MILLING AND RESURFACING

PROPOSED FINE-MILLING, WEDGE /LEVEL, AND RESURFACING

PROPOSED CONCRETE SIDEWALK

FOR ADDITIONAL SYMBOLS, SEE LEGEND ON ABBREVIATIONS AND NOTES SHEET

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AKR Drawn by: AKR Checked by: JJW

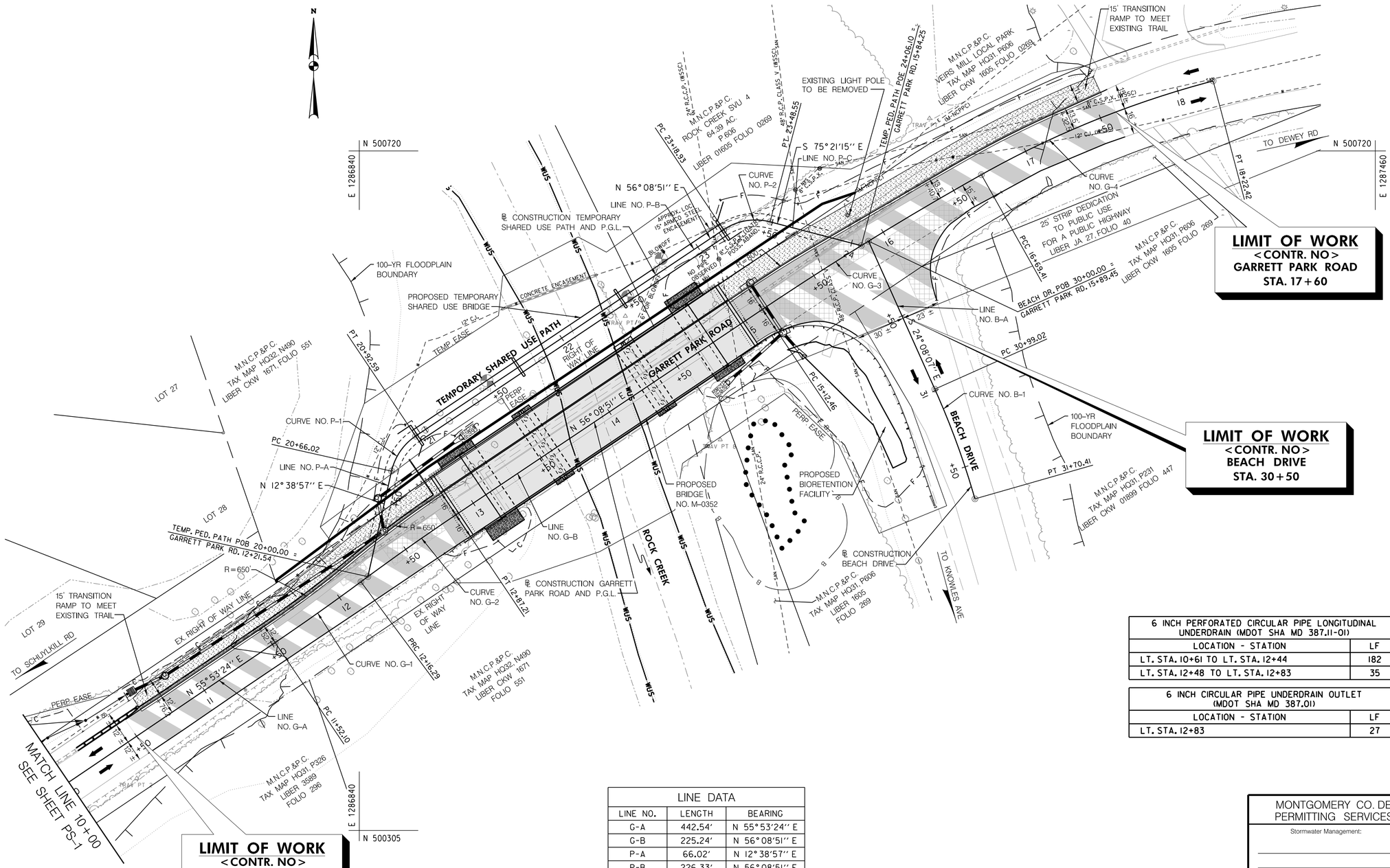
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

ROADWAY PLAN
STA. 7+09.56 TO STA. 10+00

SCALE : 1" = 30' DATE: OCTOBER 2020

Project No.: * SHEET 7 of 34

BY: JDM
PLOTTED: Wednesday, October 28, 2020 AT 02:06 PM
FILE: U:\SV\20022518_20021162 – Garrett Park\CADD\pHD-P001_Garrett.dgn



BROWN POLYESTER COATED TRAFFIC BARRIER W-BEAM USING 6 FOOT POSTS (MDOT SHA MD 605.23)	
LOCATION - STATION	LF
RT. STA. 15+04 TO RT. STA. 31+15	124

BROWN POLYESTER COATED TRAFFIC BARRIER W-BEAM ONE-SIDED PARALLEL END TREATMENT (TYPE C) (MDOT SHA MD 605.03)	
LOCATION - STATION	EA
LT. STA. 12+28	1
LT. STA. 15+59	1
RT. STA. 31+69	1

BROWN POLYESTER COATED TRAFFIC BARRIER TWO-SIDED END TREATMENT AND CRASH CUSHION (TYPE D) (MDOT SHA MD 605.12)	
LOCATION - STATION	EA
LT. STA. 10+60	1

BROWN POLYESTER COATED TRAFFIC BARRIER THRIE BEAM ANCHORAGE TO VERTICAL FACE - WOOD POST (SEE SHEET TD-2)	
LOCATION - STATION	EA
LT. STA. 12+96	1
RT. STA. 12+97	1
LT. STA. 14+87	1
RT. STA. 14+86	1

REMOVAL AND DISPOSAL OF EXISTING TRAFFIC BARRIER W-BEAM	
LOCATION - STATION	LF
LT. STA. 10+50 TO LT. STA. 12+71	221
RT. STA. 12+73 TO RT. STA. 13+03	30
RT. STA. 14+78 TO RT. STA. 15+18	40
LT. STA. 15+07 TO LT. STA. 17+47	240

STANDARD TYPE 'A' COMBINATION CURB AND GUTTER - 16" GUTTER PAN 10" DEPTH (MCDOT MC-100.01)	
LOCATION - STATION	LF
LT. STA. 10+61 TO LT. STA. 12+87	226
LT. STA. 14+98 TO LT. STA. 17+56	260
RT. STA. 14+98 TO RT. STA. 15+21	23

STANDARD TYPE 'A' CURB - VARIABLE HEIGHT (MDOT SHA MD 620.02)	
LOCATION - STATION	LF
LT. STA. 11+00 TO LT. STA. 12+20	120

5 INCH CONCRETE SIDEWALK	
LOCATION - STATION	SF
LT. STA. 10+61 TO LT. STA. 12+87	2564
LT. STA. 14+98 TO LT. STA. 17+56	2869

6 INCH PERFORATED CIRCULAR PIPE LONGITUDINAL UNDERDRAIN (MDOT SHA MD 387.11-01)	
LOCATION - STATION	LF
LT. STA. 10+61 TO LT. STA. 12+44	182
LT. STA. 12+48 TO LT. STA. 12+83	35

FINE-MILLING ASPHALT PAVEMENT 1-INCH TO 2.5-INCH	
LOCATION - STATION	SY
STA. 10+50 TO STA. 12+77	512
STA. 15+27 TO STA. 17+60	649

6 INCH CIRCULAR PIPE UNDERDRAIN OUTLET (MDOT SHA MD 387.01)	
LOCATION - STATION	LF
LT. STA. 12+83	27

CRUSHER RUN AGGREGATE CR-6 FOR SHOULDER EDGE DROPOFF	
LOCATION - STATION	TONS
LT. STA. 30+50 TO RT. STA. 16+75	5

LINE DATA		
LINE NO.	LENGTH	BEARING
G-A	442.54'	N 55°53'24" E
G-B	225.24'	N 56°08'51" E
P-A	66.02'	N 12°38'57" E
P-B	226.33'	N 56°08'51" E
P-C	57.55'	S 75°21'15" E
B-A	99.02'	S 24°08'07" E

CURVE DATA							
CURVE NO.	STATION	Δ	Dc	R	T	L	E
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B-1	PC 30+99.02	8°10'51"	11°27'33"	500.00'	35.76'	71.39'	1.28'

LEGEND

- PROPOSED FULL DEPTH CONSTRUCTION
- PROPOSED FINE-MILLING AND RESURFACING
- PROPOSED FINE-MILLING, WEDGE /LEVEL, AND RESURFACING
- CONCRETE SIDEWALK

FOR ADDITIONAL SYMBOLS, SEE LEGEND ON ABBREVIATIONS AND NOTES SHEET

PS-2

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management: Reviewed Date / Approved Date

Sediment Control Technical Requirements: Reviewed Date / Approved Date

Administrative Requirements: Reviewed Date

S.M.FILE NO.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

THE WILSON T. BALLARD CO. CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Transportation Planning and Design Section — Date

APPROVED
Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

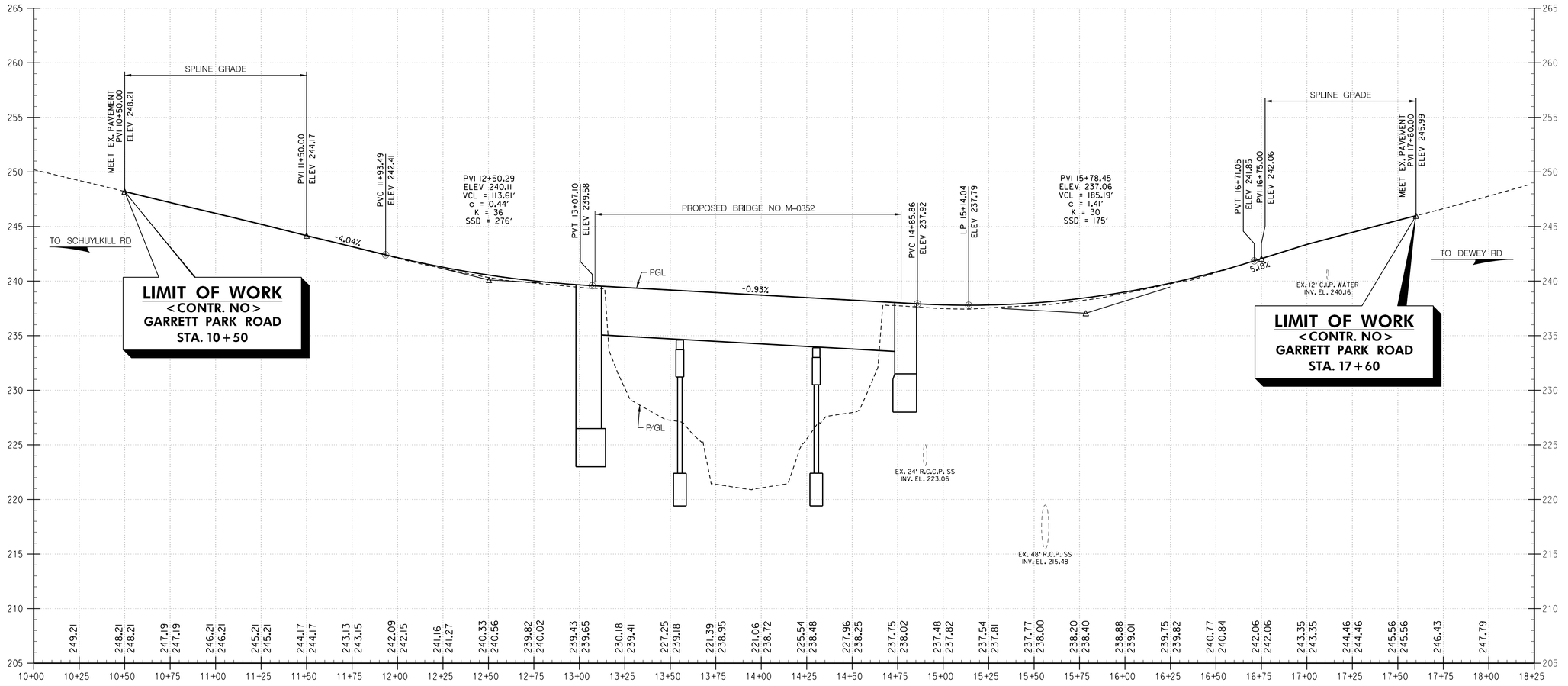
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

ROADWAY PLAN
STA. 10+00 TO STA. 17+60

SCALE : 1" = 30' DATE: OCTOBER 2020

Project No.: * SHEET 8 of 34

BY: JDM -
PLOTTED: Wednesday, October 28, 2020 AT 02:07 PM
FILE: U:\Sr\20022518_20021162 - Garrett Park\CADD\pHD-P002_Garrett.dgn



GARRETT PARK ROAD
SCALE: HORIZ. 1" = 30'
VERT. 1" = 5'

PR-1

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Transportation Planning and Design Section — Date

APPROVED

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Designed by: AWK Drawn by: MAB Checked by: *

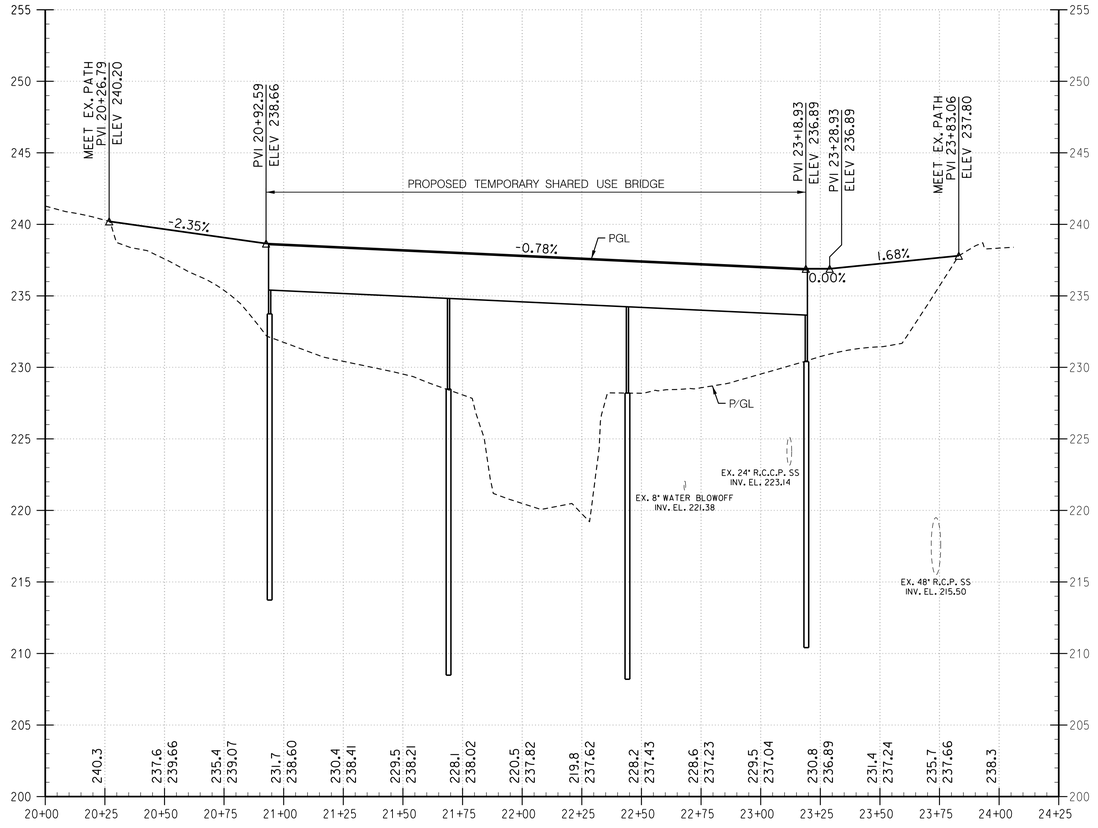
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

ROADWAY PROFILE
GARRETT PARK ROAD

SCALE : AS SHOWN DATE: OCTOBER 2020

Project No.: * SHEET 9 of 34

BY: AKR --
PLOTTED: Wednesday, October 21, 2020 AT 10:07 PM
FILE: U:\Str\20022518_20021162 -- Garrett Park\CADD\pHP-0001_Garrett.dgn



TEMPORARY SHARED USE PATH

SCALE: HORIZ. 1" = 30'
VERT. 1" = 5'

PR–2

THE WILSON T. BALLARD CO.
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MONTGOMERY COUNTY
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GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

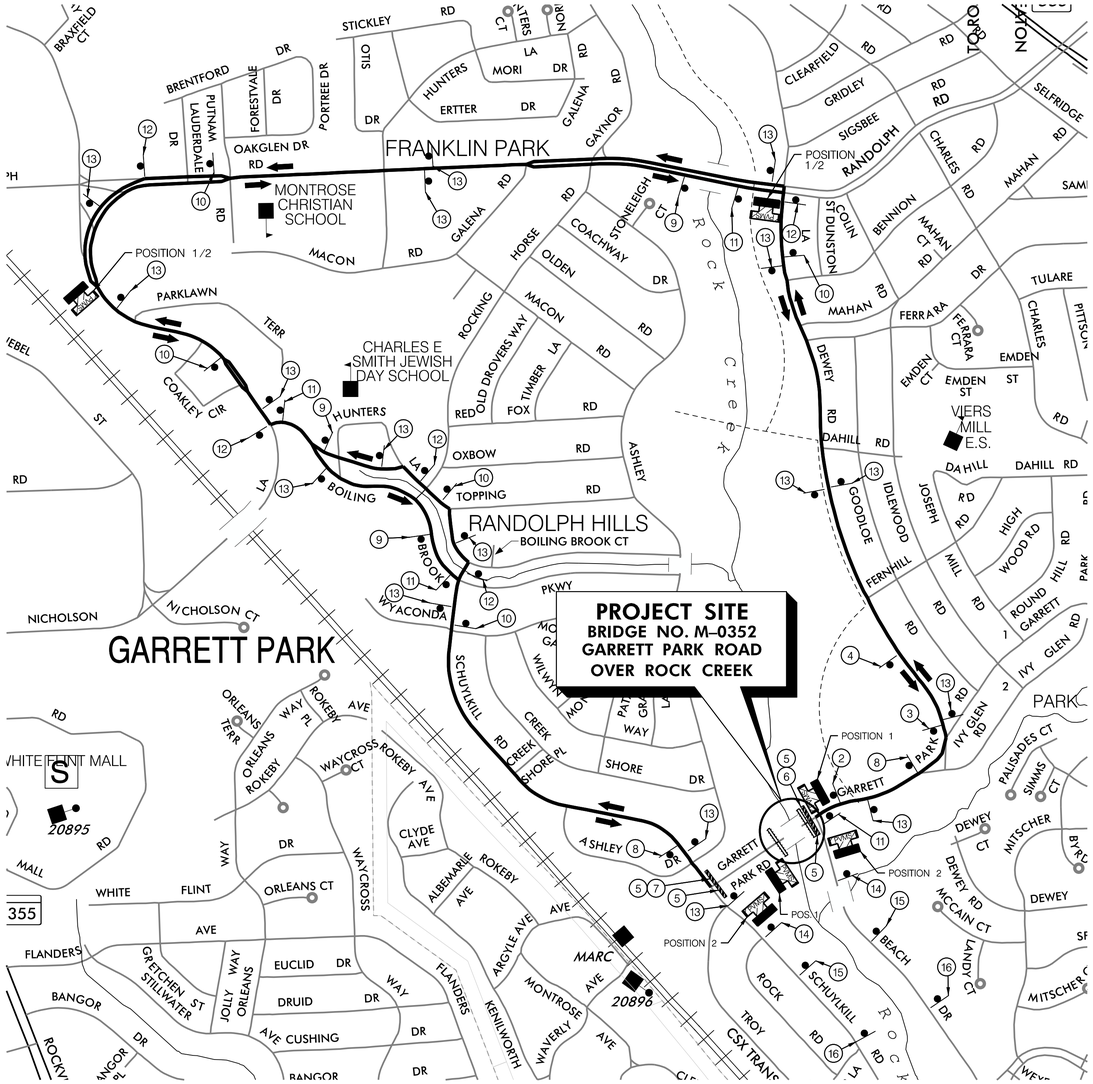
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

ROADWAY PROFILE
TEMPORARY SHARED USE PATH

SCALE : AS SHOWN DATE: OCTOBER 2020

Project No.: * SHEET 10 of 34

BY: AKR –
PLOTTED: Wednesday, October 21, 2020 AT 10:08 PM
FILE: U:\Str\20022518_20021162 – Garrett Park\CADD\pHP-0002_Garrett.dgn



PLAN VIEW
SCALE: 1" = 500'

LEGEND

- DETOUR ROUTE
- SIGN AND SUPPORT
- TYPE III BARRICADE
- TEMPORARY CONCRETE TRAFFIC BARRIER
- PORTABLE VARIABLE MESSAGE SIGN

ROADWAY PVMS DISPLAYS		TRAIL PVMS DISPLAYS
GAR PARK RD TO BE CLOSED	GARRETT PARK RD CLOSED	MESSAGE TO BE COORDINATED WITH M-NCPPC TO ALERT TRAIL USERS OF CONSTRUCTION WORK AHEAD
ON OR ABOUT (DAY)	FOLLOW DETOUR	
7 DAYS BEFORE CLOSURE	FIRST 7 DAYS OF CLOSURE	

SIGN DETAIL

NO. 1 — NOT USED

NO. 2 — ROAD CLOSED 500 FT
W20-3
48" X 48" (16 SF)
BLK ON FO

NO. 3 — ROAD CLOSED 1000 FT
W20-3
48" X 48" (16 SF)
BLK ON FO

NO. 4 — ROAD CLOSED 1500 FT
W20-3
48" X 48" (16 SF)
BLK ON FO

NO. 5 — ROAD CLOSED
R11-2
48" X 30" (10 SF)
BLK ON WHITE
ON TYPE III
BARRICADE

NO. 6 — DETOUR
M4-10R
48" X 18" (6 SF)
FO ON BLK
ON TYPE III
BARRICADE

NO. 7 — DETOUR
M4-10L
48" X 18" (6 SF)
FO ON BLK
ON TYPE III
BARRICADE

NO. 8 — END DETOUR
M4-8A(1)
36" X 24" (6 SF)
BLK ON FO

NO. 9 — GARRETT PARK ROAD / DETOUR
M4-9(1)
30" X 21" (4.4 SF)
BLK ON WHITE
M4-9(MOD)
30" X 24" (5 SF)
BLK ON FO

NO. 10 — GARRETT PARK ROAD / DETOUR
M4-9(1)
30" X 21" (4.4 SF)
BLK ON WHITE
M4-9(MOD)
30" X 24" (5 SF)
BLK ON FO

NO. 11 — GARRETT PARK ROAD / DETOUR
M4-9(1)
30" X 21" (4.4 SF)
BLK ON WHITE
M4-9R
30" X 24" (5 SF)
BLK ON FO

NO. 12 — GARRETT PARK ROAD / DETOUR
M4-9(1)
30" X 21" (4.4 SF)
BLK ON WHITE
M4-9L
30" X 24" (5 SF)
BLK ON FO

NO. 13 — GARRETT PARK ROAD / DETOUR
M4-9(1)
30" X 21" (4.4 SF)
BLK ON WHITE
M4-9
30" X 24" (5 SF)
BLK ON FO

NO. 14 — DETOUR 500 FT / On Garrett Park Rd
W20-2(1)
48" X 48"
D3-2(MOD)
BLK ON FO
58" X 12" (20.83 SF)

NO. 15 — DETOUR 1000 FT / On Garrett Park Rd
W20-2(1)
48" X 48"
D3-2(MOD)
BLK ON FO
58" X 12" (20.83 SF)

NO. 16 — DETOUR 1500 FT / On Garrett Park Rd
W20-2(1)
48" X 48"
D3-2(MOD)
BLK ON FO
58" X 12" (20.83 SF)

DETOUR GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCEPTANCE WITH THE MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION'S (MDOT SHA) BOOK OF STANDARDS FOR HIGHWAYS, INCIDENTAL STRUCTURES, AND TRAFFIC CONTROL APPLICATIONS, THE 2011 EDITION OF THE MD MUTCD, AND THIS PLAN.
2. EXACT SIGN LOCATION SHALL BE APPROVED BY THE ENGINEER TO ASSURE COORDINATION WITH EXISTING SIGNING AND EXISTING SIGHT DISTANCES.
3. ALL TURN ARROW ASSEMBLIES SHALL BE LOCATED APPROXIMATELY 100 FT. PRIOR TO THE TURN. ALL ADVANCE TURN ARROW ASSEMBLIES SHALL BE LOCATED APPROXIMATELY 200 FT. PRIOR TO THE TURN.
4. ALL TRAFFIC DETOUR SIGNS SHALL BE COVERED WITH A NONTRANSPARENT MATERIAL WHEN TRAFFIC DETOUR IS NOT IN USE AS APPROVED BY THE ENGINEER.
5. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR INSTALLING, MAINTAINING, AND REMOVING ALL TEMPORARY TRAFFIC CONTROL DEVICES.
6. ANY OTHER TRAFFIC CONTROL WILL BE AS PER THE MDOT SHA BOOK OF STANDARDS. MOT MEASURES SHALL BE PLACED USING APPROPRIATE CONTROLS AS PER MDOT SHA BOOK OF STANDARDS. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO NCHRP 350 STANDARDS.
7. MAINTAIN ACCESS TO ALL ENTRANCES AND STREETS AT ALL TIMES.
8. A PORTABLE VARIABLE MESSAGE SIGN (PVMS) SHALL BE INSTALLED ALONG BOTH DIRECTIONS OF GARRETT PARK ROAD 14 CALENDAR DAYS PRIOR TO ROAD CLOSURE PVMS NO.1 & PVMS NO. 2 SHALL BE RELOCATED TO POSITION NO. 2 DURING CLOSURE FOR A MAXIMUM OF 14 DAYS OR AS DIRECTED BY THE ENGINEER. PVMS SHALL BE INSTALLED IN ACCORDANCE WITH MD STD. 104.01-22.
9. THE CONTRACTOR SHALL PROVIDE PROPOSED PVMS MESSAGES TO THE MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION FOR REVIEW AND APPROVAL A MINIMUM OF 30 DAYS PRIOR TO THEIR USE.
10. THE CONTRACTOR MUST NOTIFY THE FOLLOWING AGENCIES AT LEAST TWO WEEKS PRIOR TO ROAD CLOSURE:
    - MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION: 240-777-0311
    - MDOT SHA DISTRICT 3 TRAFFIC DIVISION: 301-513-7300
    - MDOT SHA OFFICE OF COMMUNICATIONS: 800-323-6742
    - MARYLAND NATIONAL CAPITAL PARK & PLANNING COMMISSION (M-NCPPC): 301-495-2500

    THE FOLLOWING AGENCIES MUST BE NOTIFIED 2 HOURS PRIOR TO ROAD CLOSURE AND IMMEDIATELY AFTER THE ROAD IS REOPENED:
    - MONTGOMERY COUNTY EMERGENCY OPERATIONS CENTER: 240-777-2300
    - MDOT SHA STATEWIDE OPERATIONS CENTER: 410-582-5650
11. TEMPORARY CONCRETE BARRIER (F SHAPE) SHALL BE USED ON BOTH SIDES OF THE GARRETT ROAD BRIDGE CLOSURE. ALL BARRIERS SHALL HAVE YELLOW FLASHING WARNING BEACONS.
12. ALL TYPE III BARRICADES SHALL HAVE YELLOW FLASHING WARNING BEACONS.
13. GARRETT PARK ROAD SHALL BE CLOSED BETWEEN SCHUYKILL ROAD AND THE WEST CURB LINE OF BEACH DRIVE.
14. THE EXISTING STOP SIGNS ALONG NORTHBOUND BEACH DRIVE AT GARRETT PARK ROAD AND WESTBOUND GARRETT PARK ROAD AT BEACH DRIVE SHALL BE REMOVED AND STORED FOR THE DURATION OF THE ROAD CLOSURE. THE STOP SIGNS SHALL BE RE-INSTALLED AT THEIR ORIGINAL POSITIONS PRIOR TO THE REOPENING OF GARRETT PARK ROAD.
15. THE CONTRACTOR SHALL COORDINATE WITH THE MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION TRAFFIC AND CONSTRUCTION OFFICES: 240-777-0311

MT-1

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL
Chief, Transportation Planning and Design Section — Date

APPROVED
Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

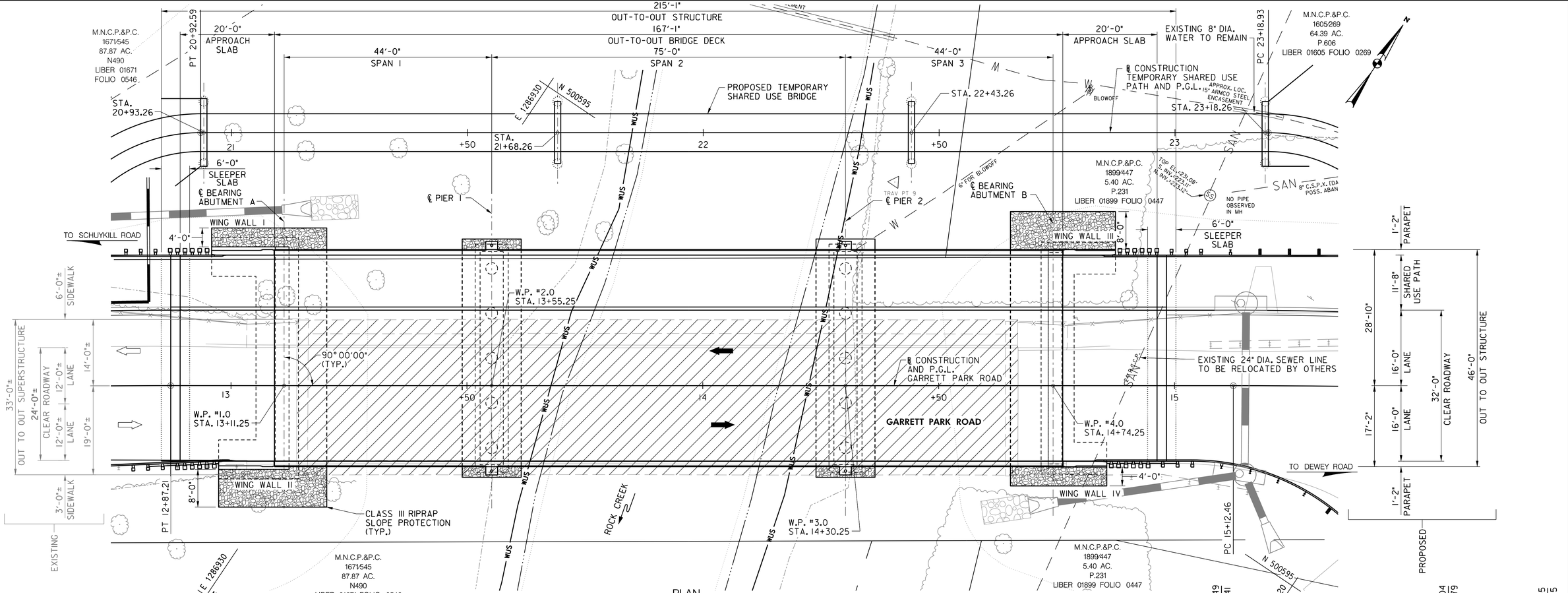
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

DETOUR PLAN

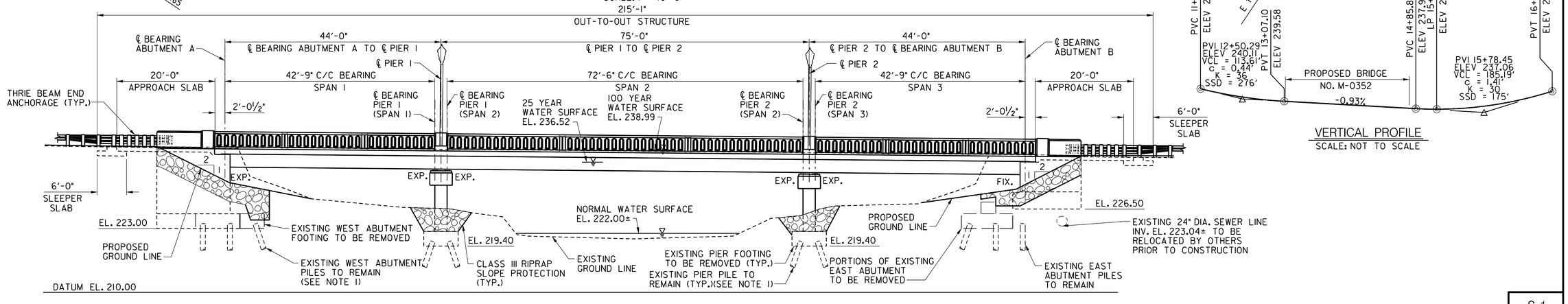
SCALE : 1" = 500' DATE: OCTOBER 2020

Project No.: * SHEET 11 of 34

BY: AKR -
PLOTTED: Monday, October 19, 2020 AT 03:59 PM
FILE: U:\Sr\20022518_20021162 - Garrett Park\CADD\pMT-P10?_GARRETT-PARK.dgn



PLAN
SCALE: 1" = 10'-0"



ELEVATION
SCALE: 1" = 10'-0"

VERTICAL PROFILE
SCALE: NOT TO SCALE

CROSS REFERENCE NOTES

1. FOR ROADWAY PLAN, SEE DWG. NO. PS-1.
2. FOR ROADWAY TYPICAL SECTION, SEE DWG NO. TS-1.
3. FOR ROADWAY PROFILE, SEE DWG. NO. PR-1.
4. FOR GENERAL NOTES, SEE DWG. NO. SI-2.
5. FOR REMOVAL OF EXISTING BRIDGE SUBSTRUCTURE, SEE DWG. NO. S-5.

NOTES:

1. CUT OFF EXISTING PILES 2'-0" BELOW BOTTOM OF FOOTING.
2. PROPOSED PILES NOT SHOWN FOR CLARITY.

S-1

WB THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

GENERAL PLAN AND ELEVATION

SCALE : AS SHOWN DATE: OCTOBER 2020

Project No.: * SHEET 12 of 34

BY: JDM –
PLOTTED: Thursday, October 29, 2020 AT 09:20 AM
FILE: U:\Str\20022518_20021162 – Garrett Park\CADD\pBR-GP01_GARRETT-PARK.dgn

GENERAL NOTES

SPECIFICATIONS: MDOT SHA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS DATED JULY 2020.

DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, DATED 2020.

LOADING: HL-93 WITH PROVISIONS FOR A FUTURE 2" WEARING SURFACE.

LOAD RESTRICTIONS: THERE ARE RESTRICTIONS FOR PLACING EQUIPMENT AND MATERIALS ON EXISTING AND NEW STRUCTURE(S). REFER TO SECTION TC 6.14.

CONCRETE: CONCRETE COMPRESSIVE STRENGTH FOR DESIGN SHALL BE:
f'c = 3 000 psi FOR ELEMENTS USING MIX NO. 3
f'c = 4 000 psi FOR ELEMENTS USING MIX NO. 6

ALL PRECAST CONCRETE FOR ABUTMENTS, ABUTMENT BEARING PADS, ABUTMENT WING WALLS, PIER COLUMNS, PIER CAPS, AND PIER BEARING PADS SHALL BE MIX NO. 6 (4500 PSI) CONTAINING SYNTEHTIC FIBERS (SEE SECTION 902.15.01 AND THE SPECIAL PROVISIONS) AND CONTAINING A CORROSION INHIBITOR.

ALL OTHER STRUCTURE CONCRETE EXCEPT PREACAST AND PRESTRESSED CONCRETE SHALL BE MIX NO. 3 (3500 PSI).

ALL CONCRETE FOR SUPERSTRUCTURE OVERLAY SHALL BE MIX NO. 8 CONCRETE (4000 PSI) CONTAINING SYNTHETIC FIBERS (SEE SECTION 902.15.02).

PRESTRESSED CONCRETE: CONCRETE COMPRESSIVE STRENGTH FOR DESIGN SHALL BE f'c = 7000 psi, WHILE THE MINIMUM COMPRESSIVE STRENGTH AT TRANSFER SHALL BE f'ci = 5950 psi.

ALL PRESTRESSED CONCRETE SHALL BE SELF-CONSOLIDATING WITH A 28-DAY COMPRESSIVE STRENGTH OF f'c = 8000 psi.

REINFORCING STEEL: REINFORCING STEEL SHALL CONFORM TO ASTM A 615 GRADE 60, WITH A YIELD STRENGTH FOR DESIGN OF fy = 60000 psi.

ALL SPLICES, NOT SHOWN, SHALL BE LAPPED AS PER BAR LAP CHARTS.

REINFORCING STEEL SHALL BE EPOXY COATED WHEN NOTED WITH AN EP IN THE PLANS.

MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE 2" EXCEPT FOR THE FOLLOWING LOCATIONS:

LOCATION	CLEAR COVER
Bottom of bridge deck slabs.	1 IN.
Top of bridge deck slabs Bottom flange of prestressed concrete girders	2½ IN.
Top of piers. Bottom flange of prestressed concrete girders. Bottom and sides of all footings. Bottom of prestressed concrete slabs.	3 IN.

FOR TIES AND STIRRUPS, STANDARD ACI BENDING TOLERANCES ARE MODIFIED TO PLUS (+) ZERO INCHES, MINUS (-) NORMAL ACI BENDING TOLERANCES.

COLUMN SPIRALS SHALL BE COLD DRAWN STEEL WIRE CONFORMING TO A 82 OR GRADE 60 REINFORCING STEEL CONFORMING TO A 615. COLUMN SPIRALS SHALL NOT BE WELDED. COLUMN SPIRALS SHALL BE LAPPED 48 BAR OR WIRE DIAMETERS AT ALL SPLICES. SPIRALS SHALL BE EXTENDED FROM TOP OF FOOTING TO BOTTOM OF BOTTOM MAT OF REINFORCING STEEL IN CAP OF SUBSTRUCTURE MEMBER. ALL SPIRAL REINFORCING SHALL HAVE A MINIMUM OF 1/64 TURNS, FLAT, TOPS AND BOTTOM (AT FOOTING AND IN CAP).

PRETENSIONING STEEL: PRETENSIONING STEEL SHALL CONSIST OF ½" DIAMETER 7-WIRE BRIGHT LOW RELAXATION STRANDS CONFORMING TO THE REQUIREMENTS OF M 203 GRADE 270. EACH STRAND SHALL BE PRETENSIONED TO 31,000 lb (0.75 fpu). HAVE AN ULTIMATE STRENGTH OF 41,300 lb (fpu) AND A YIELD STRENGTH OF 37,200 lb (0.90 fpu).

HYDROLOGIC AND HYDRAULIC DATA: FOR HYDROLOGIC AND HYDRAULIC DATA, SEE SHEET TITLED - "HYDROLOGIC AND HYDRAULIC DATA"

CONSTRUCTION NOTES:

EXISTING STRUCTURE(S): ALL DIMENSIONS AFFECTED BY THE GEOMETRY AND/OR LOCATION OF THE EXISTING STRUCTURE(S) SHALL BE CHECKED IN THE FIELD BY THE CONTRACTOR BEFORE ANY MATERIAL IS ORDERED OR FABRICATED OR CONSTRUCTION BEGINS.

S-2

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

GENERAL NOTES

SCALE : NONE DATE: OCTOBER 2020

Project No.: * SHEET 13 of 34

BY: JDM
PLOTTED: Wednesday, October 28, 2020 AT 02:10 PM
FILE: U:\Sr\20022518_20021162 – Garrett Park\CADD\pBR-GN00_GARRETT-PARK.dgn

HYDROLOGIC DATA

I. SOURCE: IN-KIND HYDRAULIC ANALYSIS REPORT
PREPARED BY: ☐ SHA ☒ CONSULTANT: THE WILSON T. BALLARD CO. DATE: JAN. 2017

II. FILE LOCATION: _____

III. DRAINAGE AREA: 27,264 ACRES 42.6 SQUARE MILES

METHOD(S) OF ANALYSIS:

_____ USGS GAGE DATA ANALYSIS
- GAGING STATION NO. _____
- LOCATION _____
- DRAINAGE AREA _____
- YEARS OF CONTINUOUS RECORD _____

X USGS REGRESSION EQUATIONS
REFERENCE _____

_____ SCS TR – 20 METHOD – VERSION USED (DATE) _____
- RCN (EXISTING-HOMOGENEOUS WATERSHED)[1] _____
- RCN (ULTIMATE HOMOGENEOUS WATERSHED)[1] _____
- T_C (HOMOGENEOUS WATERSHED)[1] _____

_____ FEMA BASE FLOOD (100-YEAR) DISCHARGE _____ (CFS) METHOD USED BY FEMA _____

_____ OTHER (DESCRIBE) _____

HAS FLOOD ROUTING BEEN USED IN DETERMINING FLOOD DISCHARGES? YES _____ NO _____
METHOD SELECTED _____

IV. COMPUTED FLOOD DISCHARGES

RETURN PERIOD (YEARS)	FLOOD DISCHARGE (CFS)	
	BASED ON EXISTING WATERSHED DEVELOPMENT	BASED ON ULTIMATE WATERSHED DEVELOPMENT
2	–	2,870
10	–	7,480
25	–	11,200
50	–	14,800
100	–	19,300
500	–	34,100

V. HISTORIC FLOODS

YEAR	MAGNITUDE (CFS)	HIGH WATER ELEVATION	WHERE MEASURED	SOURCE OF DATA

VI. STREAM MORPHOLOGY

STREAM TYPE NOT AVAILABLE VALLEY TYPE _____

STREAM BED MATERIAL:

DESCRIPTION _____ D16 _____ D50 _____ D04 _____

BANK FULL CHARACTERISTICS:

Q _____ AREA _____ WIDTH _____ DEPTH _____

SLOPE _____ MANNINGS 'N' VALUE _____ SINUOSITY _____

VII. TIDAL FLOWS

100-YEAR STORM TIDE ELEVATION (FT) _____ CORRESPONDING VOLUME OF TIDAL PRISM (CU. FT) _____

500-YEAR STORM TIDE ELEVATION (FT) _____ CORRESPONDING VOLUME OF TIDAL PRISM (CU. FT) _____

SOURCE OF INFORMATION _____

DESIGN DISCHARGE _____ (CFS) RETURN PERIOD _____ YEARS TIDAL PERIOD (HRS) _____

HOW DETERMINED? (EXPLAIN) _____

WATER SURFACE-ELEVATION FOR DESIGN CONDITION (FT)
(IF TIDAL FLOW GOVERNS HYDRAULIC DESIGN) _____

VII. COMMENTS: _____

HYDRAULIC DATA

I. SOURCE: IN-KIND HYDRAULIC ANALYSIS REPORT
PREPARED BY: ☐ SHA ☒ CONSULTANT: THE WILSON T. BALLARD CO. DATE: JAN. 2017
FILE LOCATION: _____ ITEM 71 RATING [2] 7
METHOD(S) OF ANALYSIS: HEC-RAS 5.0.1

II. HYDRAULIC DATA

[3] FLOW CONDITIONS	CHANNEL CROSS-SECTION	[4] STRUCTURE WATERWAY AREA	[4] ENERGY SLOPE	[4] WATER SURFACE ELEVATION	[5] CHANNEL Q	W	V	D	[5] LEFT OVERBANK LOOKING DOWNSTREAM Q	W	V	D	[5] RIGHT OVERBANK LOOKING DOWNSTREAM Q	W	V	D	DISCHARGE OVER ROAD
Q_{DESIGN} = 25 YEAR	[8] APPROACH (DESCRIBE LOCATION BELOW)	–	0.000955	237.98	7743.07	92.39	6.25	13.38	2275.32	203	2.71	8.4	1181.61	92.29	2.29	6.54	
DESCRIBE APPROACH RIVER STATION 700	UPSTREAM AT STRUCTURE	1463.30	0.007484	236.98	9501.73	–	9.39	–	1118.51	–	3.79	–	579.76	–	3.71	–	
	DOWNSTREAM AT STRUCTURE	1463.30	0.006607	236.52	8912.06	–	[6] 10.09	[7] –	1112.94	–	3.66	–	1175	–	3.47	–	
Q_{100}	[8] APPROACH (DESCRIBE LOCATION BELOW)	–	0.000487	244.50	10712.26	92.59	5.81	19.90	6016.38	290	2.13	9.72	2571.36	215	1.71	7.0	
DESCRIBE APPROACH RIVER STATION 700	UPSTREAM AT STRUCTURE	1463.30	0.019353	241.14	15279.49	–	15.1	–	3047.96	183.9	5.09	3.26	972.65	52	5.41	3.45	
	DOWNSTREAM AT STRUCTURE	1463.30	0.019619	238.99	15357.39	–	17.38	–	1912.83	3.21	6.3	94.8	2024.78	–	5.98	–	
Q_{500}	[8] APPROACH (DESCRIBE LOCATION BELOW)	–	0.00077	247.95	17580.85	92.59	8.13	23.35	11080.67	383.9	2.79	10.34	5438.48	330.4	2.23	7.39	
DESCRIBE APPROACH RIVER STATION 700	UPSTREAM AT STRUCTURE	1463.30	0.0087	247.52	13500.00	92.59	9.73	14.99	14190.5	356.29	5.99	6.48	6409.47	269	4.98	4.79	
	DOWNSTREAM AT STRUCTURE	1463.30	0.01938	245.48	15183.17	65.90	14.84	[7] 15.53	12906.8	258.9	8.22	6.06	6010.0	245	5.87	4.17	

III. BRIDGE SCOUR DATA

A. SCOUR EVALUATION STUDY TITLE: SCOUR ANALYSIS REPORT
PREPARED BY: ☐ SHA ☒ CONSULTANT: THE WILSON T. BALLARD CO. DATE: OCTOBER 2020
FILE LOCATION: _____ ITEM 113 RATING [2] 8L

B. SCOUR ESTIMATES:

	DESIGN CONDITIONS (DESCRIBE SPECIAL CONDITIONS SUCH AS OVERTOPPING, LOW TAILWATER, INFLUENCE OF CONFLUENCES, ETC.)	FLOOD DISCHARGE RETURN PERIOD (YEARS)	FLOOD DISCHARGE MAGNITUDE (CFS)	LONG TERM DEGRADATION / AGGRADATION (FT)	CONTRACTION SCOUR DEPTH (LOOKING DOWNSTREAM) (FT) LT OVERBANK	MAIN CHANNEL	RT OVERBANK	CHANNEL BED LOAD (DESCRIBE)	TYPE OF SCOUR (LIVE BED/CLEAR WATER)
DESIGN FLOOD FOR SCOUR	100 YEAR	100	19,300	0	7.91	13.8	8.47	.	LIVE BED
CHECK FLOOD FOR SCOUR	500 YEAR	500	34,100	0	7.14	12.4	7.67	.	LIVE BED
OTHER									

TOTAL SCOUR: ESTIMATED TOTAL SCOUR AT SUBSTRUCTURE/ CHANNEL ELEMENTS (INCLUDES LONG TERM DEGRADATION/AGGRADATION PLUS CONTRACTION SCOUR, PLUS LOCAL SCOUR)

LOCATION OF CHANNEL OR SUBSTRUCTURE ELEMENT	ELEVATION OF BOTTOM OF SCOUR HOLE OR STREAM CHANNEL BED (FT) DESIGN FLOOD	CHECK FLOOD	SCOUR COUNTER MEASURES EXISTING ☐ NEW ☒
CHANNEL THALWEG			
ABUTMENT: A	215.90	216.97	CLASS III RIPRAP
ABUTMENT: B	215.18	216.21	CLASS III RIPRAP
PIER NO. 1	208.36	212.68	CLASS III RIPRAP
PIER NO. 2	208.36	212.68	CLASS III RIPRAP
PIER NO.			
PIER NO.			
PIER NO.			
PIER NO.			
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PIER NO.			
PIER NO.			
PIER NO.			
PIER NO.			

NOTES:
BLANK SPACES INDICATE THAT DATA IS NOT AVAILABLE OR IS NOT APPLICABLE

1. PARAMETERS COMPUTED ASSUMING THE WATERSHED IS HOMOGENEOUS WITHOUT SUBDIVISIONS
2. ITEM 71 RATING AND ITEM 113 RATING REFER TO FEDERAL BRIDGE INVENTORY ITEMS
3. RECORD FLOW CONDITIONS USED IN ANALYSIS: DISCHARGE (Q), TAILWATER CONDITION AND WHY SELECTED, ETC. FOR DEPRESSED CULVERTS, RECORD IN THE ASSUMPTIONS MADE AS TO WHETHER SEDIMENT WILL REMAIN DURING FLOODS
4. FOR CULVERTS, USE THESE THREE COLUMNS TO RECORD:
   - DEPTH OF FLOW AT CULVERT INLET AND OUTLET
   - WATER-SURFACE ELEVATION AT CULVERT INLET AND OUTLET
   - ENERGY SLOPE FOR CULVERT BARREL
5. SYMBOLS USED:
   Q = FLOW OR DISCHARGE (CFS)
   W = CHANNEL WIDTH OR FLOODPLAIN WIDTH (FT)
   V = FLOW VELOCITY (FPS)
   D = DEPTH OF FLOW (FT)
6. FOR CULVERTS, RECORD OUTLET VELOCITY HERE
7. FOR CULVERTS , RECORD TAILWATER DEPTH HERE
8. APPROACH SECTION SHOULD BE NEAR POINT OF MAXIMUM BACKWATER (TYPICALLY ONE BRIDGE LENGTH UPSTREAM)
9. DESCRIBE FLOW CONDITION THROUGH STRUCTURE AT INCIPIENT OVERTOPPING AS "P" (PRESSURE FLOW) OR "O" (OPEN CHANNEL FLOW/FREEBOARD)
10. VERTICAL DIFFERENCE IN ELEVATION BETWEEN WATER SURFACE FOR DESIGN Q (AT UPSTREAM FACE OF BRIDGE) AND LOW CHORD
11. TOTAL UPSTREAM FACE FLOW AREA THROUGH STRUCTURE FOR 100/500 YEAR FLOODS
12. FOR BRIDGES:
    ENTER TYPE, SPAN LENGTH AND MAXIMUM VERTICAL CLEARANCE
    FOR CULVERTS:
    ENTER SIZE, NUMBER OF CELLS, AND LENGTH;
    DESCRIBE ANY SPECIAL FEATURES UNDER COMMENTS
13. DESCRIBE TYPE OF INLET/OUTLET AND EROSION PROTECTION
14. COMPOSITE "N" VALUE OF STRUCTURE

IV. ROADWAY AND STRUCTURE DATA

ITEM	EXISTING STRUCTURE	PROPOSED STRUCTURE
NAME OF WATERWAY	ROCK CREEK	
DATE BUILT	1965	N.A.
OVERTOPPING ELEVATION	237.9	237.8
OVERTOPPING LOCATION (DESCRIBE)	EAST OF THE BRIDGE	EAST OF THE BRIDGE
OVERTOPPING FLOW CONDITION [9] (OVERTOPPING Q ≤ 100 YR FLOOD)	16,000 CFS	16,000 CFS
FREEBOARD [10]	–0.4' (SUBMERGED, 100 YR.)	–1.19 (SUBMERGED, 100 YR.)
TOTAL STRUCTURE WATERWAY AREA [11]	1263.06 SF	1463.30 SF
STRUCTURE DESCRIPTION [12]	THREE SPANS, TOTAL LENGTH 154', STEEL BEAMS	THREE SPANS, TOTAL LENGTH 163' NEXT BEAMS
INLET TREATMENT [13]	N.A.	RIPRAP
OUTLET TREATMENT [13]	N.A.	RIPRAP
MANNINGS "N" VALUE [14]	0.07	0.07

V. SURVEY BOOK NUMBERS
REFERENCE DATUM FOR ELEVATIONS _____

VI. FLOOD PLAIN MANAGEMENT DATA

DATE OF FLOOD INSURANCE STUDY SEPT. 26, 2006 COMMUNITY PANEL NO. 24031C036SD

PROJECT LOCATION (CHECK BELOW):

_____ BEYOND FEMA PROGRAM LIMITS (NOT IN "A" HAZARD ZONE)

_____ FEMA HAZARD ZONE "A"; NO BASE FLOOD ELEVATIONS ESTABLISHED

X FEMA HAZARD ZONE "A"; BASE FLOOD ELEVATIONS ESTABLISHED

REGULATORY FLOODWAY YES _____ NO X
MAXIMUM CHANGE IN WATER SURFACE ELEVATION UPSTREAM OF BRIDGE DUE TO HIGHWAY PROJECT (MAX. BACKWATER) _____ FT.

LOCATION OF MAX. BACKWATER FROM UPSTREAM FACE OF BRIDGE _____ FT.

DESCRIBE TYPE OF STUDY DONE TO DETERMINE CONSISTENCY WITH NFIP STANDARDS _____
DATE COMMUNITY ACKNOWLEDGEMENT FORM ISSUED: _____

IS THE PROJECT CONSISTENT WITH THE CODE OF FEDERAL REGULATIONS, PART 650 A, LOCATION AND HYDRAULIC DESIGN OF ENCROACHMENTS ON FLOOD PLAINS (23 CFR 650 A). Y/N _____

IS THE PROJECT CONSISTENT WITH THE ANNOTATED CODE OF MARYLAND (COMAR 08. 05. 03)? Y/N _____

VII. COMMENTS: _____

S-3

WB THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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

Designed by: AWK Drawn by: MAB Checked by: *

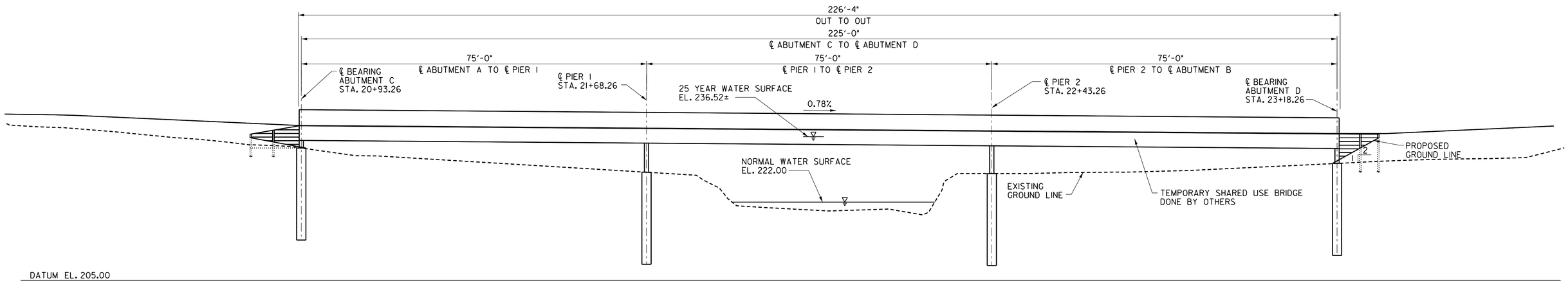
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

HYDROLOGIC AND HYDRAULIC DATA

SCALE : DATE: OCTOBER 2020

Project No.: * SHEET 14 of 34

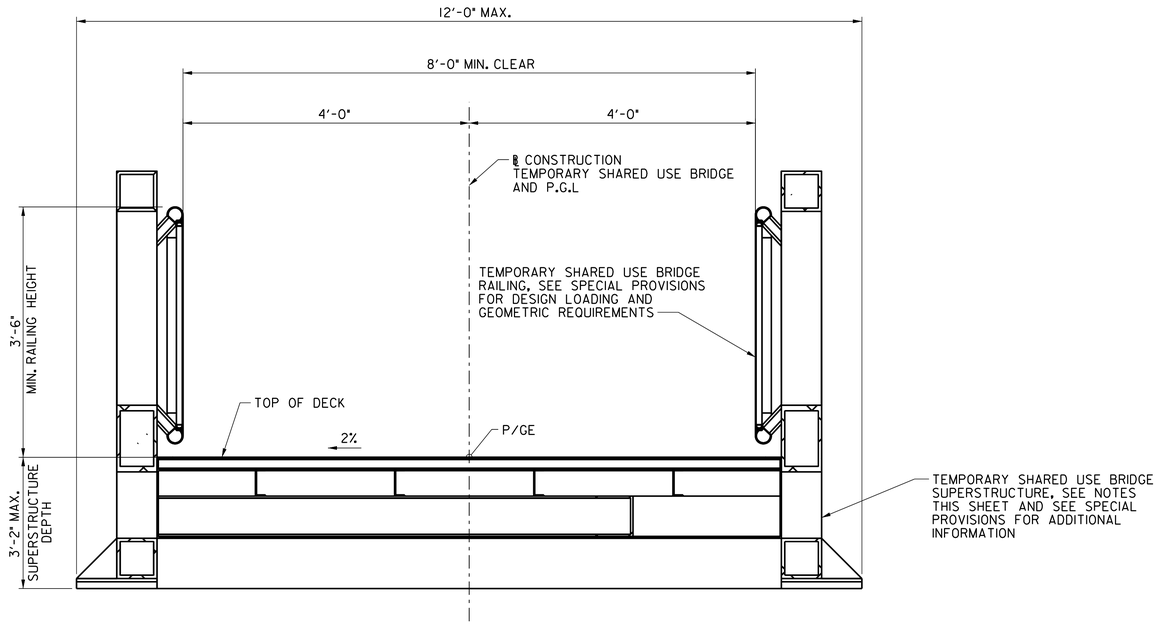
BY: JDM –
PLOTTED: Monday, October 19, 2020 AT 08:13 AM
FILE: U:\SV\20022516_20021162 – Garrett Park\CADD\pBR-HH00_GARRET-PARK.dgn



ELEVATION
TEMPORARY SHARED USE BRIDGE
SCALE: 1" = 10'-0"

NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE TEMPORARY BRIDGE ACCORDING TO THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS. THE TEMPORARY BRIDGE SHOWN IN THESE PLANS IS A REPRESENTATION OF ONE OPTION AVAILABLE TO THE CONTRATOR.
2. REFER TO SPECIAL PROVISIONS FOR TEMPORARY BRIDGE.



TEMPORARY SHARED USE BRIDGE
SUPERSTRUCTURE TYPICAL SECTION
SCALE: 1" = 1'-0"

GENERAL NOTES

SPECIFICATIONS: - SHA SPECIFICATIONS DATED JULY, 2020
- REVISIONS THEREOF AND ADDITIONS THERETO AND SPECIAL PROVISIONS FOR MATERIALS AND CONSTRUCTION.

DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS DATED 2020 AND ALL INTERIMS.

CONCRETE: LOAD AND RESISTANCE FACTOR DESIGN METHOD.
f'c = 3000 PSI EXCEPT THAT IN BRIDGE DECK SLABS SUPPORTED BY STRINGERS IT SHALL BE 4000 PSI.

REINFORCING STEEL: f'y = 60,000 PSI.

STRUCTURAL STEEL: LOAD AND RESISTANCE FACTOR DESIGN METHOD.

LOADING: H-5

90 PSF FOR PEDESTRIANS.

S-4

THE WILSON T. BALLARD CO.
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

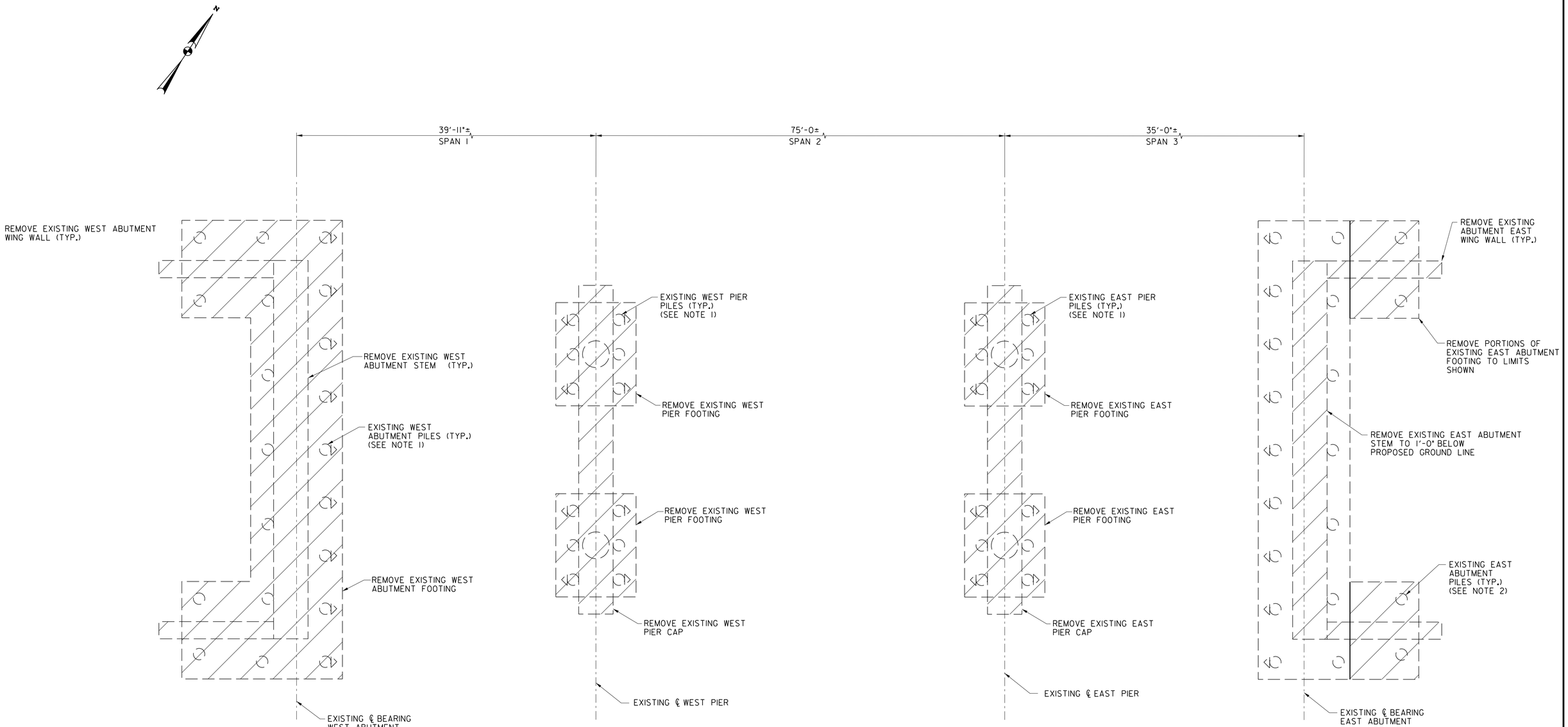
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

TEMPORARY SHARED USE BRIDGE
GENERAL PLAN AND ELEVATION

SCALE : AS SHOWN DATE: OCTOBER 2020

Project No.: * SHEET 15 of 34

BY: JDM --
PLOTTED: Wednesday, October 28, 2020 AT 02:14 PM
FILE: U:\Str\20022518_20021162 - Garrett Park\CADD\pBR-GP02_GARRETT-PARK.dgn



EXISTING PLAN
SCALE: 1/4" = 1'-0"

LEGEND

EXISTING STRUCTURE TO BE REMOVED

NOTES:

1. EXISTING PILES TO BE CUT 2'-0" BELOW PROPOSED BOTTOM OF FOOTING.
2. EXISTING PILES TO REMAIN. EXISTING PILES IN CONFLICT WITH PROPOSED PILES TO BE CUT 2'-0" BELOW EXISTING BOTTOM OF FOOTING.

S-5

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

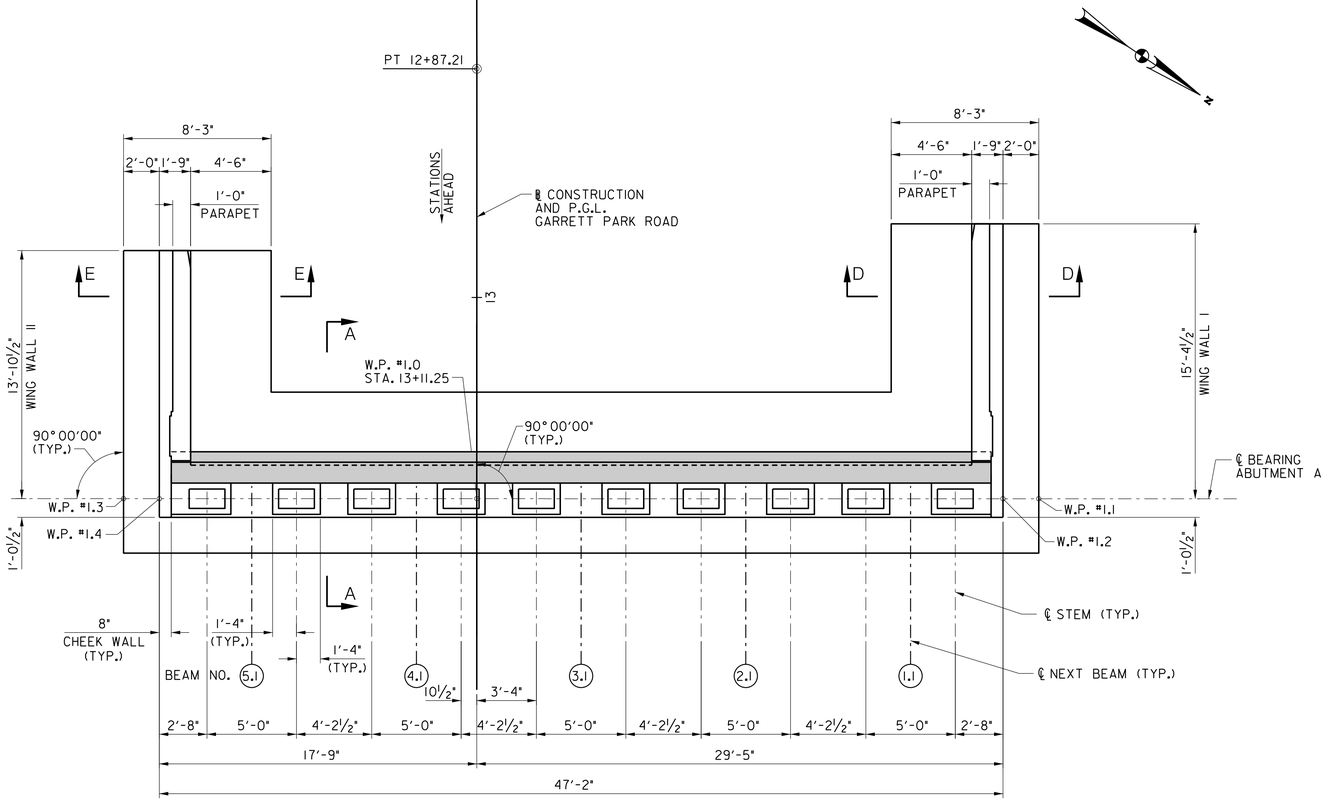
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

EXISTING BRIDGE AND REMOVAL PLAN

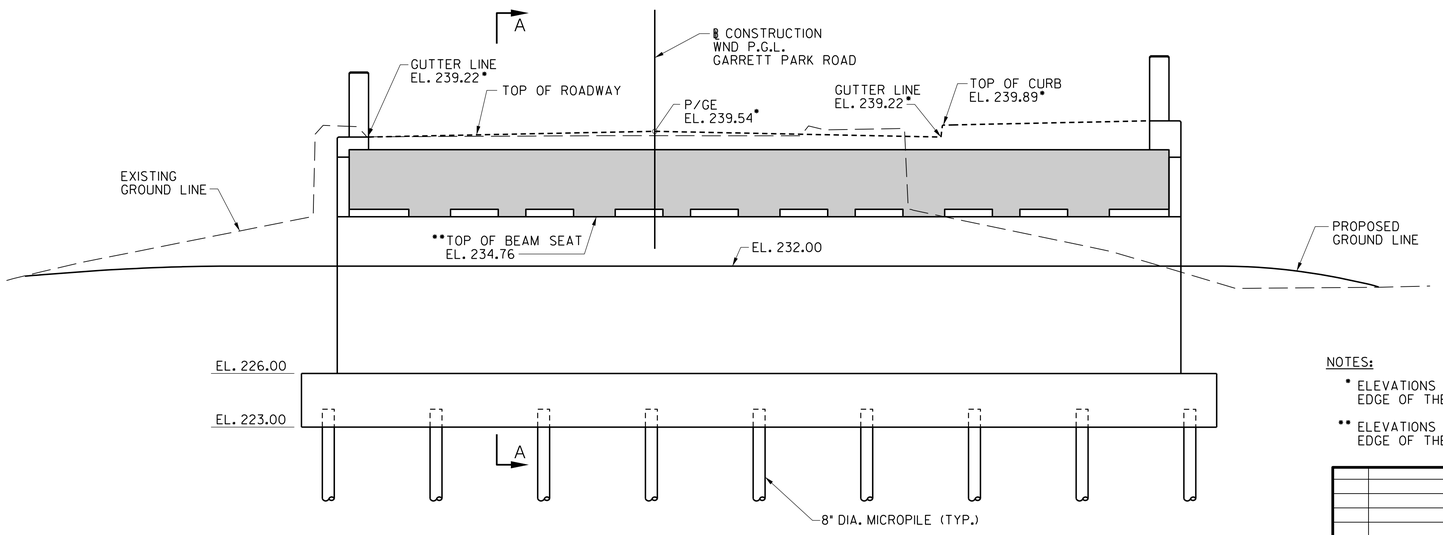
SCALE : 1/4" = 1'-0" DATE: OCTOBER 2020

Project No.: * SHEET 16 of 34

BY: JDM
PLOTTED: Wednesday, October 28, 2020 AT 02:21 PM
FILE: U:\SY\20022516_20021162 – Garrett Park\CADD\pBR-EX01_GARRETT-PARK.dgn



PLAN
ABUTMENT A
SCALE: ¼" = 1'-0"



ELEVATION
ABUTMENT A
SCALE: ¼" = 1'-0"

CROSS REFERENCE NOTES

1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. S-1.
2. FOR GEOMETRIC LAYOUT, SEE DWG. NO. S-XX.
3. FOR PILE PLAN, SEE DWG. NO. S-XX.
4. FOR ABUTMENT TYPICAL SECTION A-A, SEE DWG. NO. S-XX.
5. FOR WING WALL TYPICAL SECTIONS D-D AND E-E, SEE DWG. NO. S-XX.
6. FOR SUPERSTRUCTURE TYPICAL SECTION, SEE DWG. NO. S-XX.

NOTES:

* ELEVATIONS SHOWN ARE TAKEN AT THE BACK EDGE OF THE CONCRETE DECK.

** ELEVATIONS SHOWN ARE TAKEN AT THE FRONT EDGE OF THE CONCRETE DECK.

S-XX

NO.	REVISION	DATE	BY

WB CONSULTING ENGINEERS | THE WILSON T. BALLARD CO. | OWINGS MILLS, MD

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

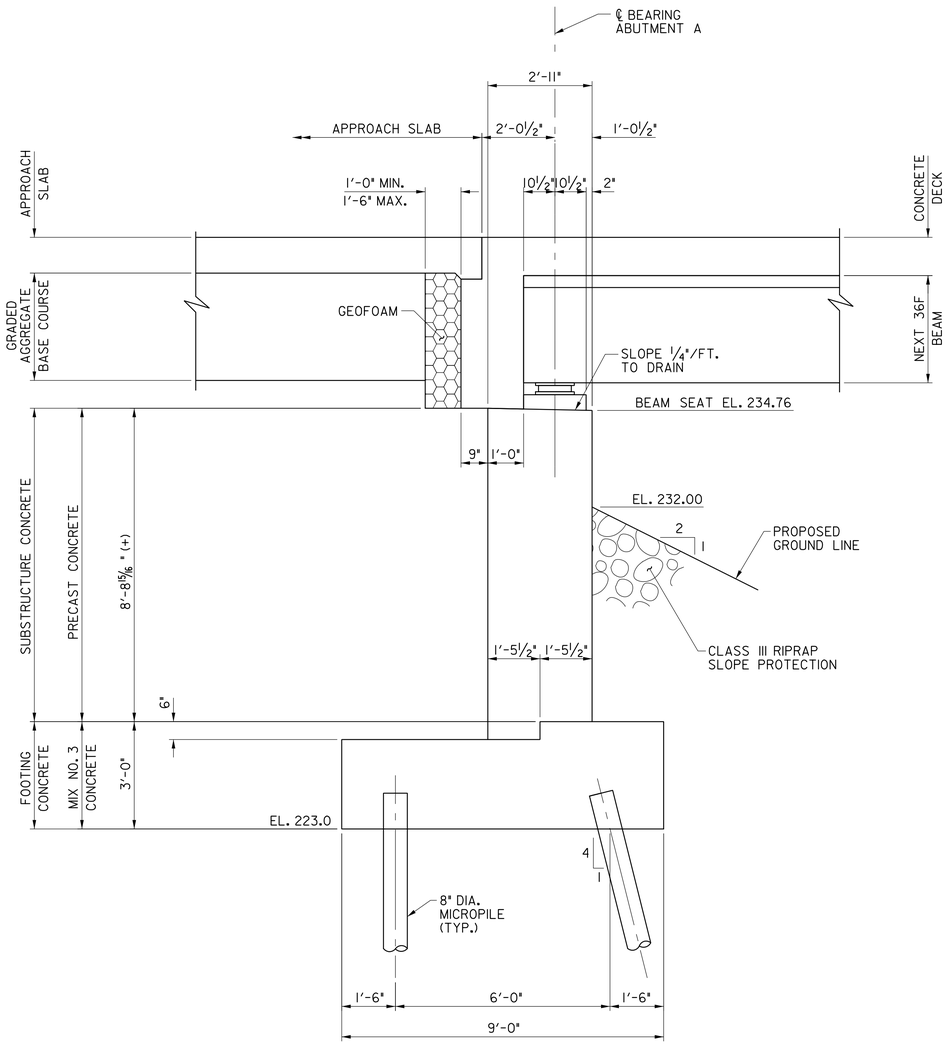
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

ABUTMENT A
PLAN AND ELEVATION

SCALE :1/4" = 1'-0" DATE: OCTOBER 2020

Project No.: * SHEET 17 of 34

BY: JDM
PLOTTED: Monday, October 26, 2020 AT 02:03 PM
FILE: U:\Str\20022518_20021162 – Garrett Park\CADD\pBR-AB02_GARRETT-PARK.dgn



SECTION A–A
TYPICAL SECTION
SCALE: ½" = 1'-0"

CROSS REFERENCE NOTES

1. FOR ABUTMENT A PLAN AND ELEVATION, SEE DWG. NO. S-XX.

S-XX

THE WILSON T. BALLARD CO.
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

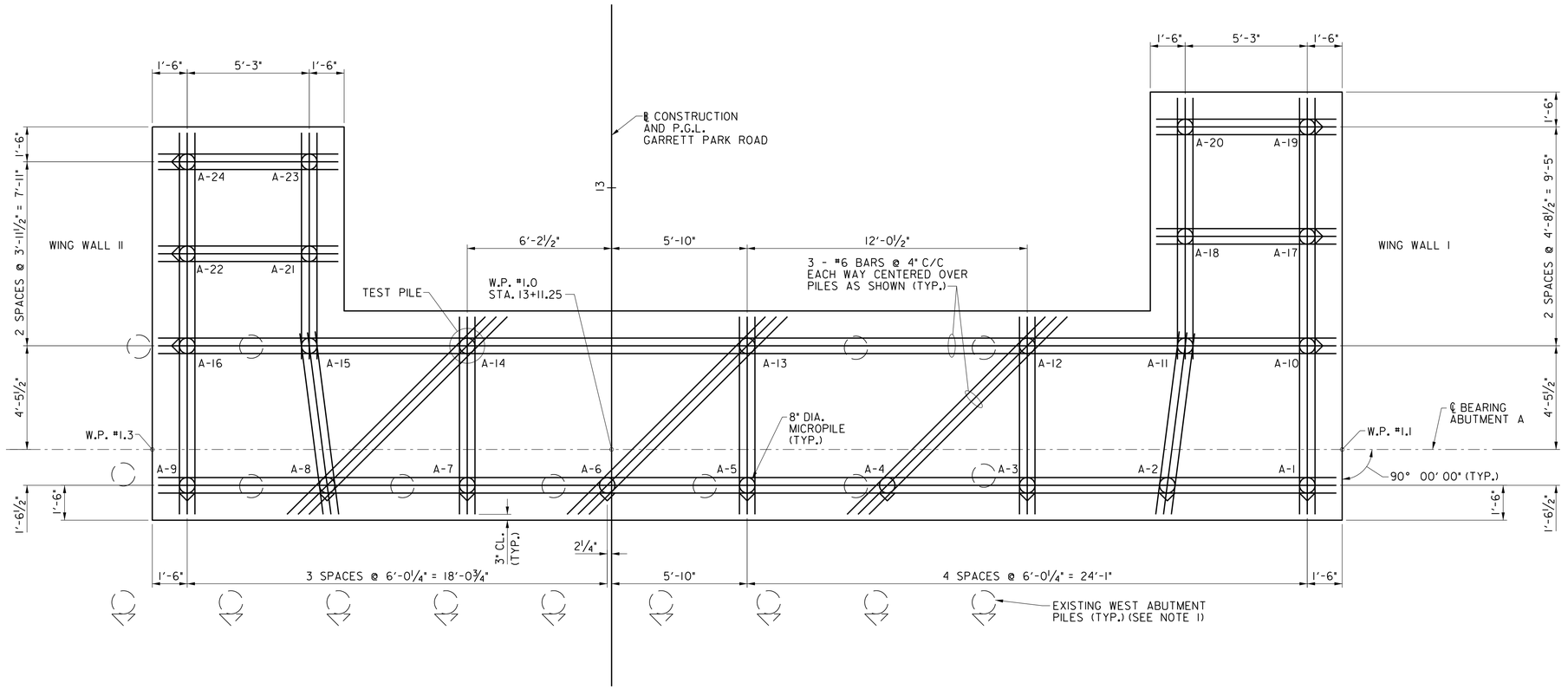
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

ABUTMENT A
TYPICAL SECTION

SCALE : 1/2" = 1'-0" DATE: OCTOBER 2020

Project No.: * SHEET 18 of 34

BY: MAB –
PLOTTED: Thursday, October 22, 2020 AT 02:44 PM
FILE: U:\SY\20002518_20001162 – Garrett Park\CADD\pBR-AD01_GARRETT-PARK.dgn



PILE PLAN
ABUTMENT A
SCALE: ⅜" = 1'-0"

NOTES:

1. CUT OFF EXISTING ABUTMENT PILE 2'-0" BELOW PROPOSED BOTTOM OF FOOTING.

CROSS REFERENCE NOTES

1. FOR GEOMETRIC LAYOUT, SEE DWG. NO. S-XX.

LEGEND

- DENOTES TEST PILE (SEE SPECIAL PROVISIONS FOR TEST PILE AND LOAD TEST DETAILS)
- DENOTES PLUMB MICROPILE
- DENOTES 1:4 BATTERED MICROPILE AND DIRECTION
- DENOTES EXISTING ABUTMENT PILE
- DENOTES EXISTING 1:4± BATTERED ABUTMENT PILE AND BATTERED DIRECTION

S-XX

THE WILSON T. BALLARD CO.
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

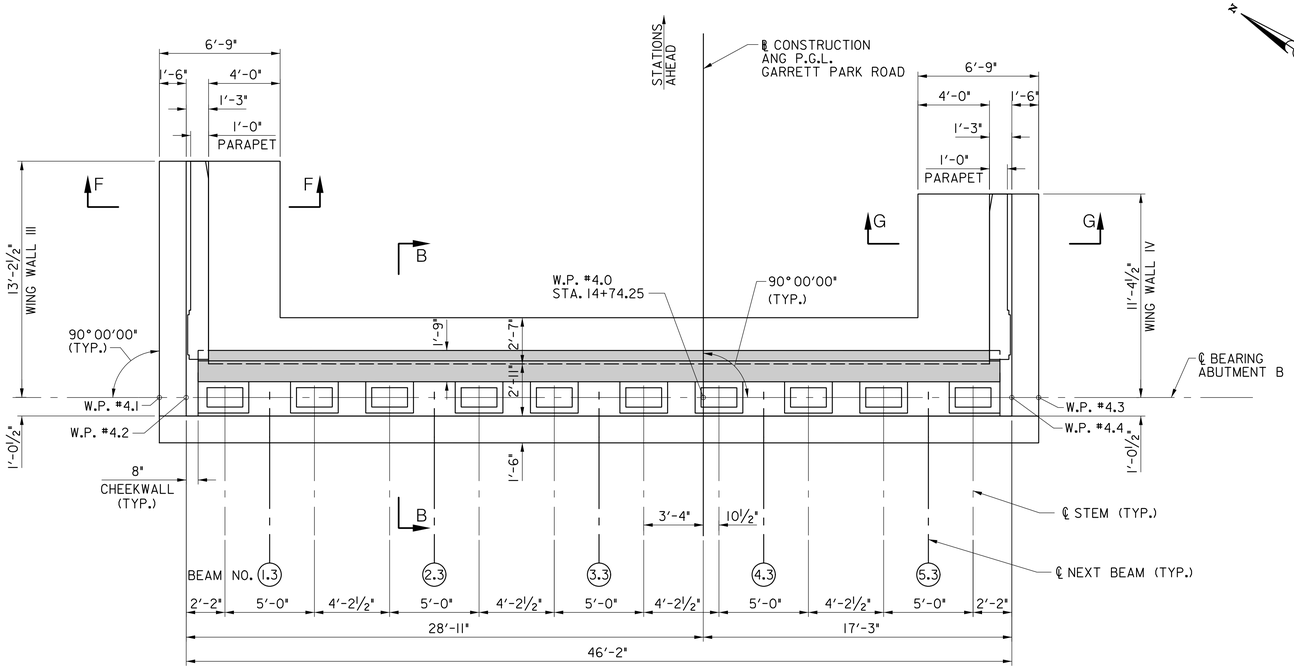
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

ABUTMENT A PILE PLAN

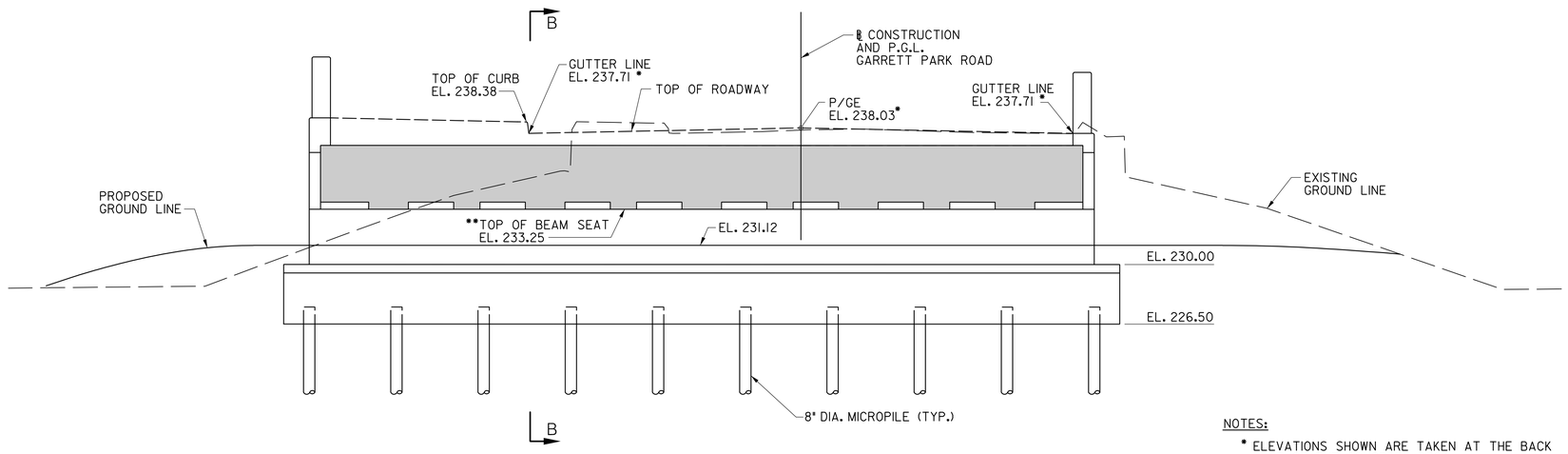
SCALE 3/8" = 1'-0" DATE: OCTOBER 2020

Project No.: * SHEET 19 of 34

BY: JDM
PLOTTED: Wednesday, October 28, 2020 AT 02:22 PM
FILE: U:\SV\20022518_20021162 – Garrett Park\CADD\pBR-PL01_GARRETT-PARK.dgn



PLAN
ABUTMENT B
SCALE: 1/4" = 1'-0"



ELEVATION
ABUTMENT B
SCALE: 1/4" = 1'-0"

NOTES:

* ELEVATIONS SHOWN ARE TAKEN AT THE BACK EDGE OF THE CONCRETE DECK.

** ELEVATIONS SHOWN ARE TAKEN AT THE FRONT EDGE OF THE CONCRETE DECK.

CROSS REFERENCE NOTES

1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. S-1.
2. FOR GEOMETRIC LAYOUT, SEE DWG. NO. S-XX.
3. FOR PILE PLAN, SEE DWG. NO. S-XX.
4. FOR ABUTMENT TYPICAL SECTION B-B, SEE DWG. NO. S-XX.
5. FOR WING WALL TYPICAL SECTION E-E, SEE DWG. NO. S-XX.
6. FOR SUPERSTRUCTURE TYPICAL SECTION, SEE DWG. NO. S-XX.

S-XX

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

ABUTMENT B
PLAN AND ELEVATION

SCALE 1/4" = 1'-0" DATE: OCTOBER 2020

Project No.: * SHEET 20 of 34

BY: MAB
PLOTTED: Wednesday, October 21, 2020 AT 08:41 AM
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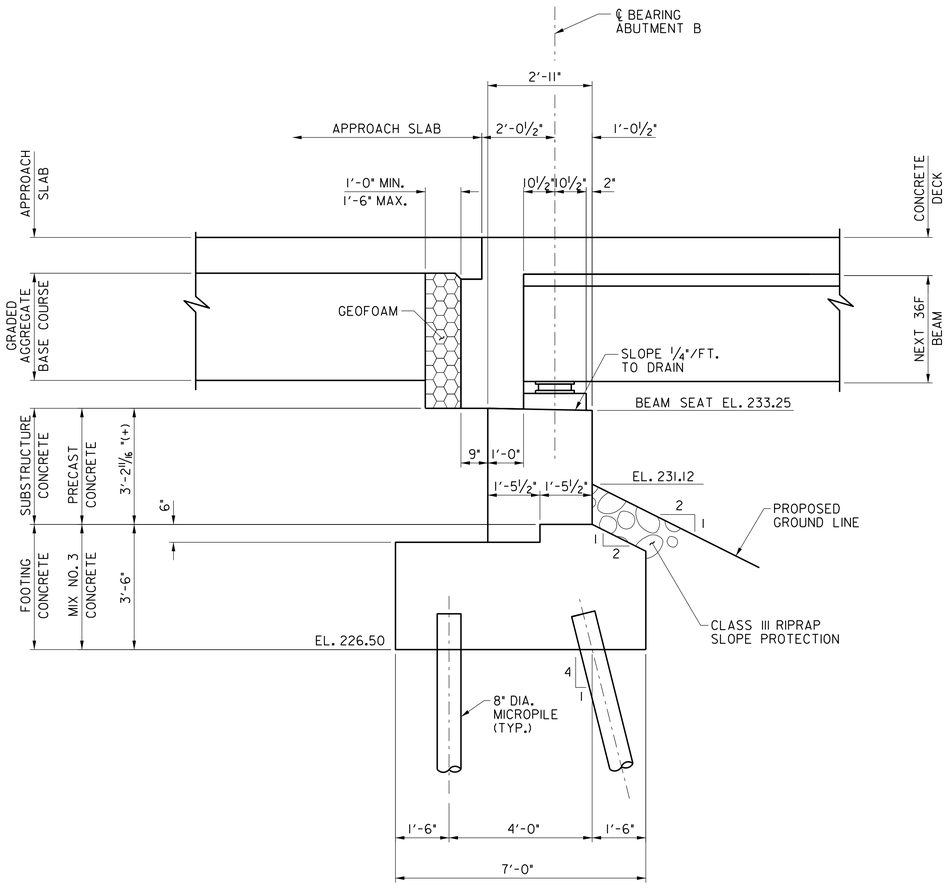

SECTION B–B
TYPICAL SECTION
SCALE: ½" = 1'-0"

CROSS REFERENCE NOTES

1. FOR ABUTMENT B PLAN AND ELEVATION, SEE DWG. S-XX.

S–XX

THE WILSON T. BALLARD CO.
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

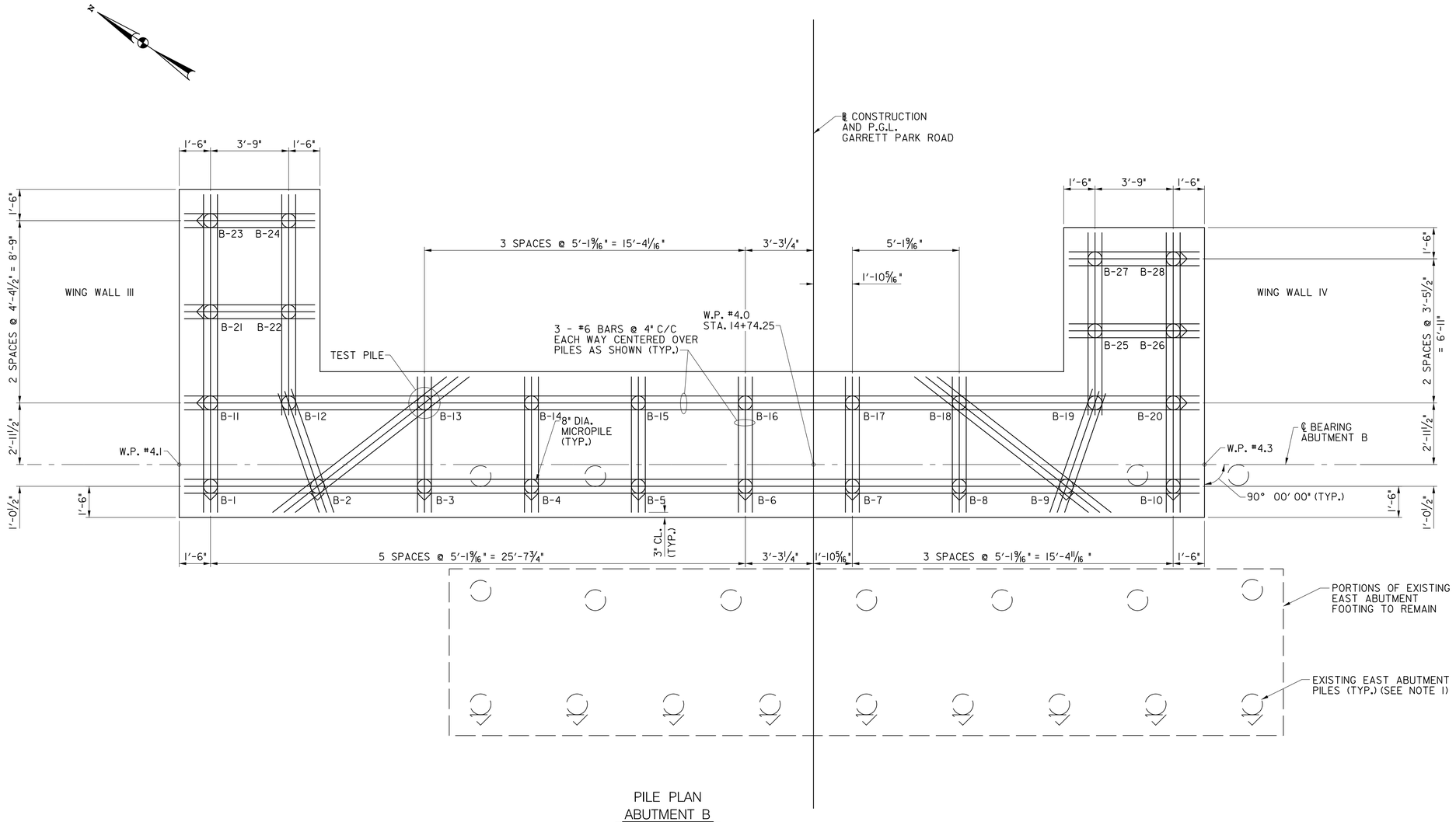
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

ABUTMENT B
TYPICAL SECTION

SCALE : ½" = 1'-0" DATE: OCTOBER 2020

Project No.: * SHEET 21 of 34

BY: JDM –
PLOTTED: Monday, October 26, 2020 AT 01:52 PM
FILE: U:\Str\20022518_20021162 – Garrett Park\CADD\pBR-AD02_GARRETT-PARK.dgn



PILE PLAN
ABUTMENT B
SCALE: ⅜" = 1'-0"

NOTES:

1. EXISTING ABUTMENT PILE IN CONFLICT WITH PROPOSED PILE TO BE CUT 2'-0" BELOW EXISTING BOTTOM OF FOOTING.

CROSS REFERENCE NOTES

1. FOR GEOMETRIC LAYOUT, SEE DWG. NO. S-XX.

LEGEND

- DENOTES TEST PILE (SEE SPECIAL PROVISIONS FOR TEST PILE AND LOAD TEST DETAILS)
- DENOTES PLUMB MICROPILE
- DENOTES 1:4 BATTERED MICROPILE AND DIRECTION
- DENOTES EXISTING ABUTMENT PILE
- DENOTES EXISTING 1:4± BATTERED ABUTMENT PILE AND BATTERED DIRECTION

S-XX

THE WILSON T. BALLARD CO.
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

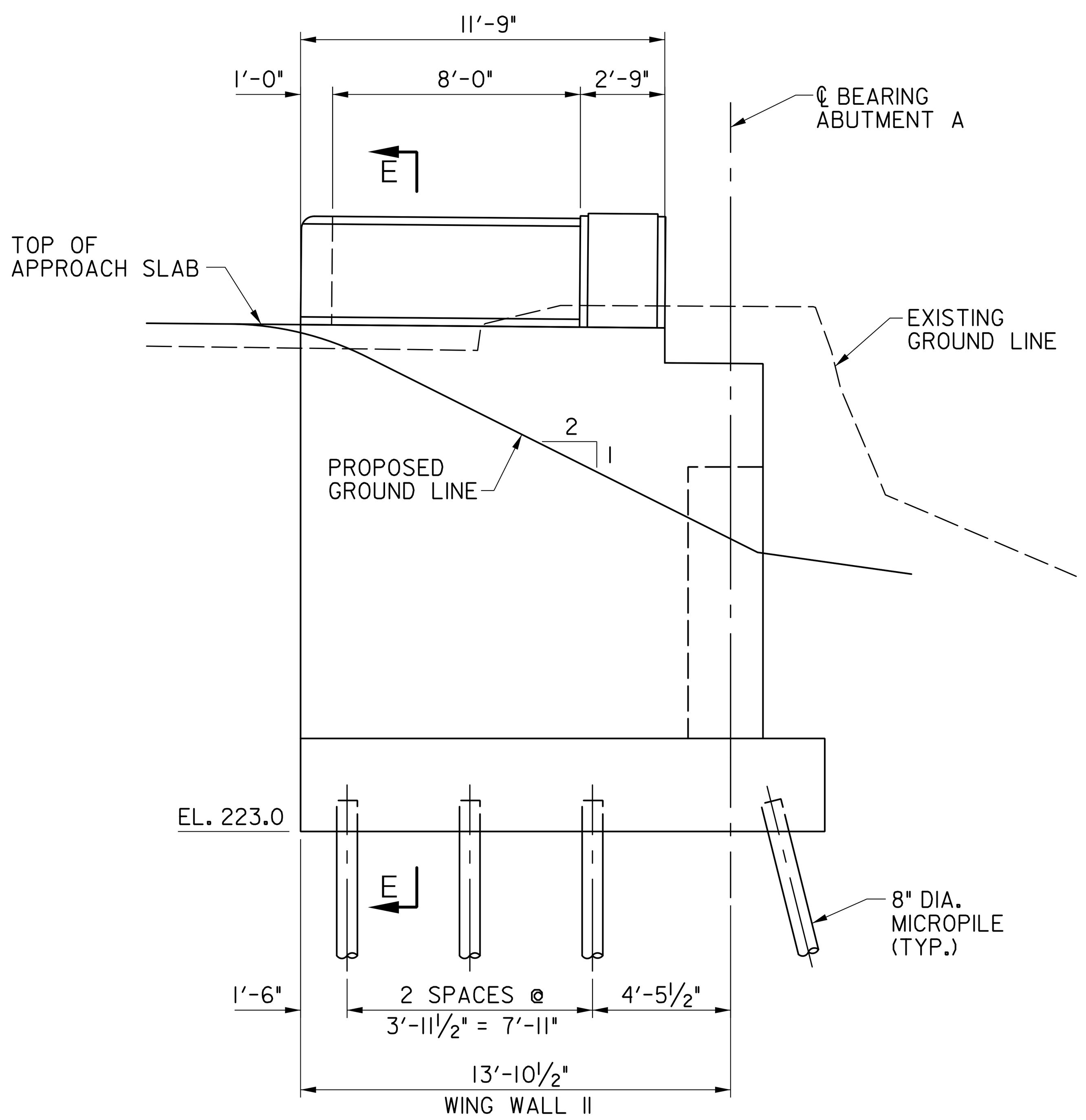
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

ABUTMENT B PILE PLAN

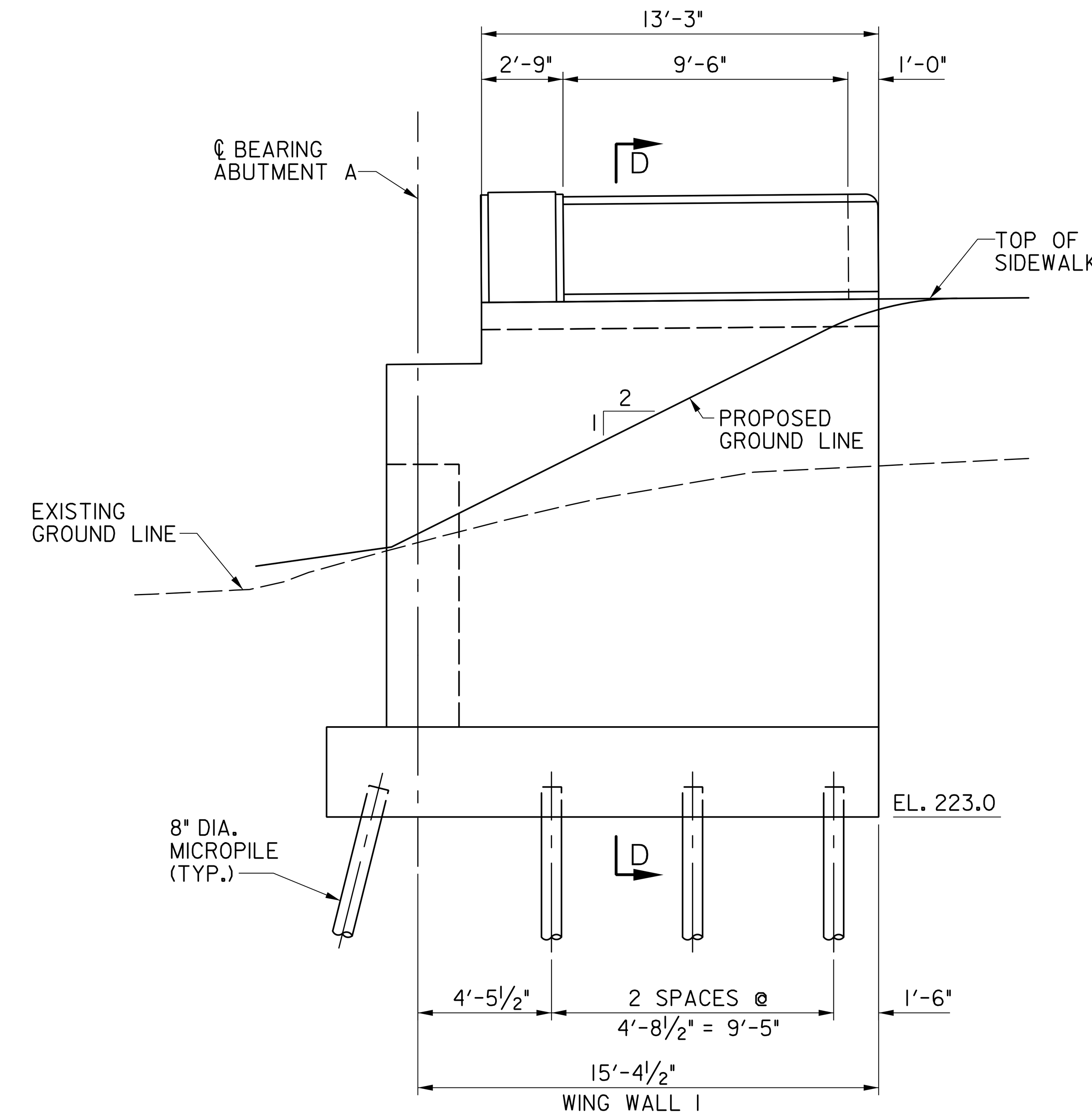
SCALE :36" = 1'-0" DATE: OCTOBER 2020

Project No.: * SHEET 22 of 34

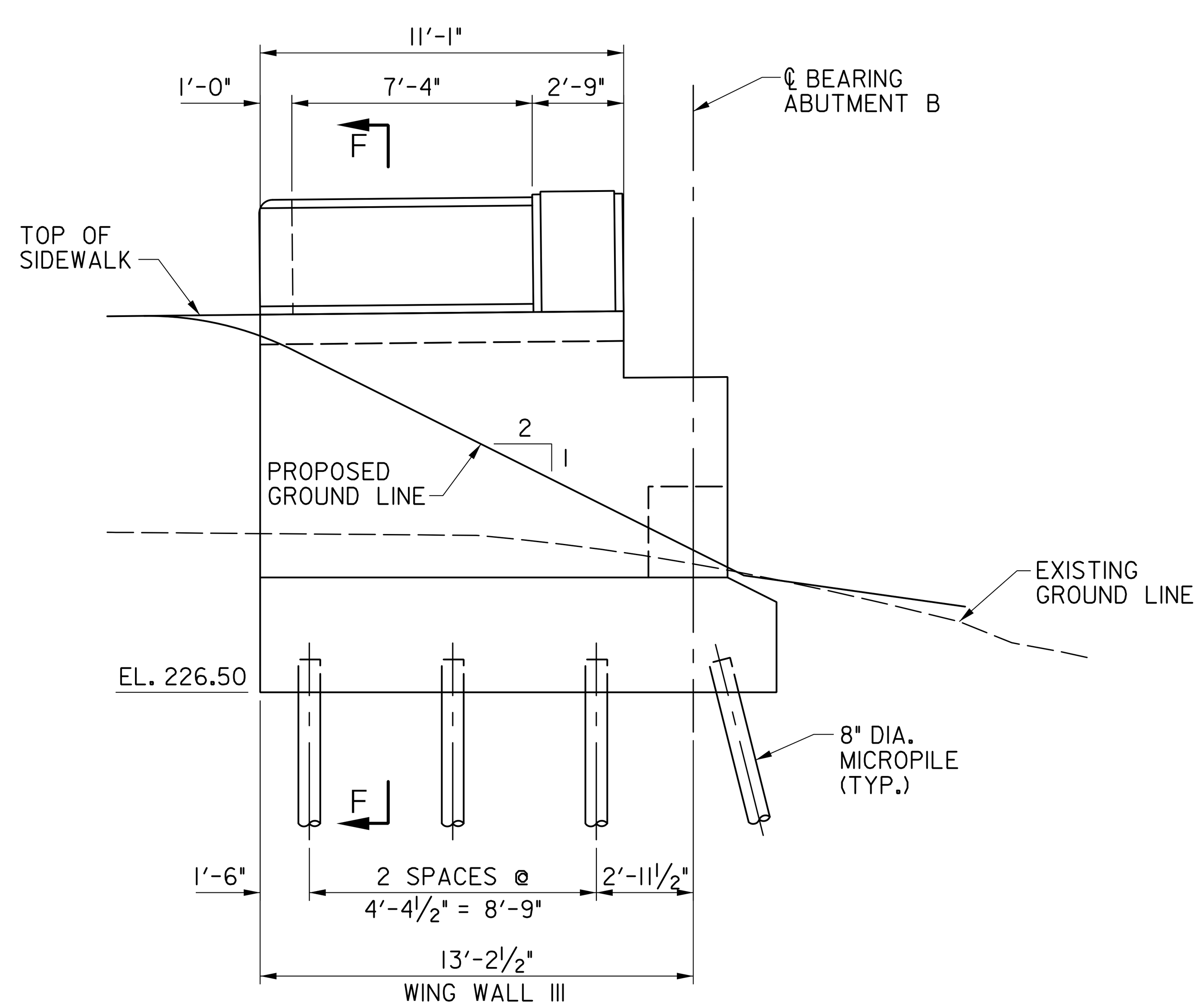
BY: MAB -
PLOTTED: Thursday, October 22, 2020 AT 02:46 PM
FILE: U:\SR\20022518_20021162 - Garrett Park\CADD\pBR-PL02_GARRETT-PARK.dgn



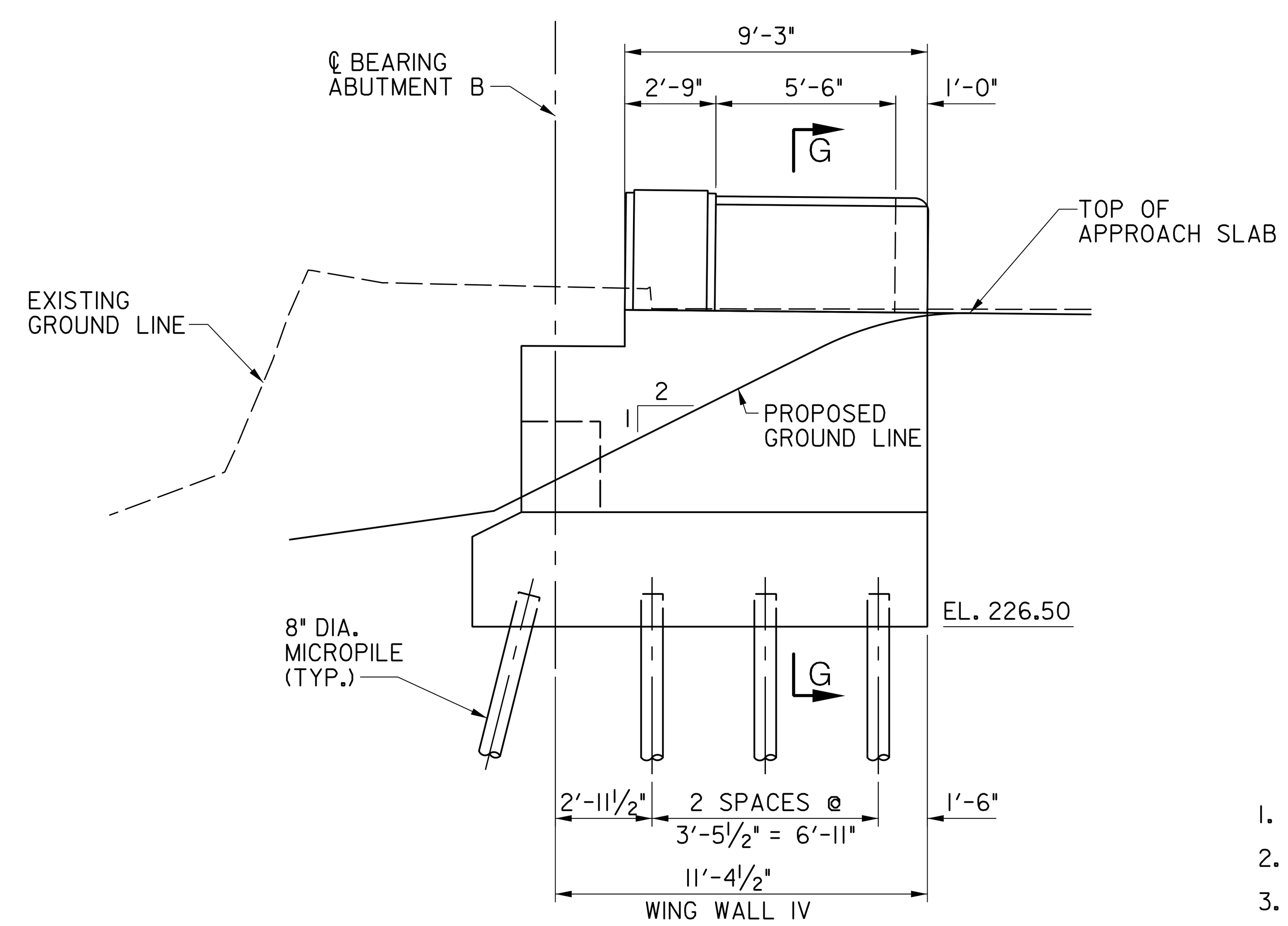
ELEVATION
WING WALL II
SCALE: 1/4" = 1'-0"



ELEVATION
WING WALL I
SCALE: 1/4" = 1'-0"



ELEVATION
WING WALL III
SCALE: 1/4" = 1'-0"



ELEVATION
WING WALL IV
SCALE: 1/4" = 1'-0"

CROSS REFERENCE NOTES

1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. S-1
2. FOR ABUTMENT A, SEE DWG. NO. S-XX.
3. FOR ABUTMENT B, SEE DWG. NO. S-XX

S-XX

NO.	REVISION	DATE	BY

THE WILSON T. BALLARD CO.
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GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section Date

APPROVED

Chief, Division of Transportation Engineering Date

Designed by: AWK Drawn by: MAB Checked by: *

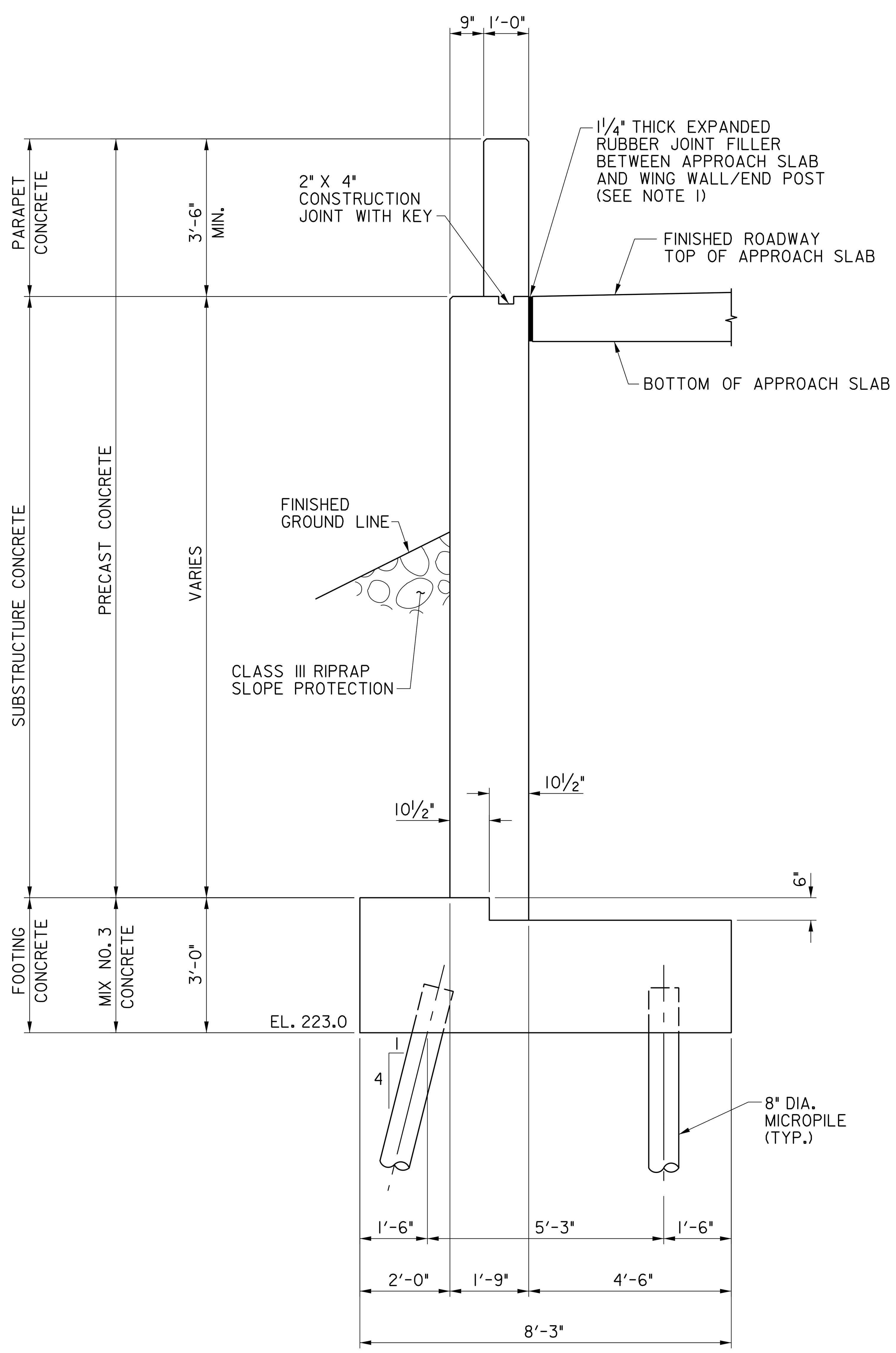
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

WING WALL ELEVATIONS

SCALE : 1/4" = 1'-0" DATE: OCTOBER 2020

Project No.: * SHEET 23 of 34

BY: MAB
PLOTTED: Wednesday, October 21, 2020 AT 10:57 AM
FILE: U:\3h\20022518_20021162 - Garrett Park\CADD\pBR-WD03_GARRETT-PARK.dgn

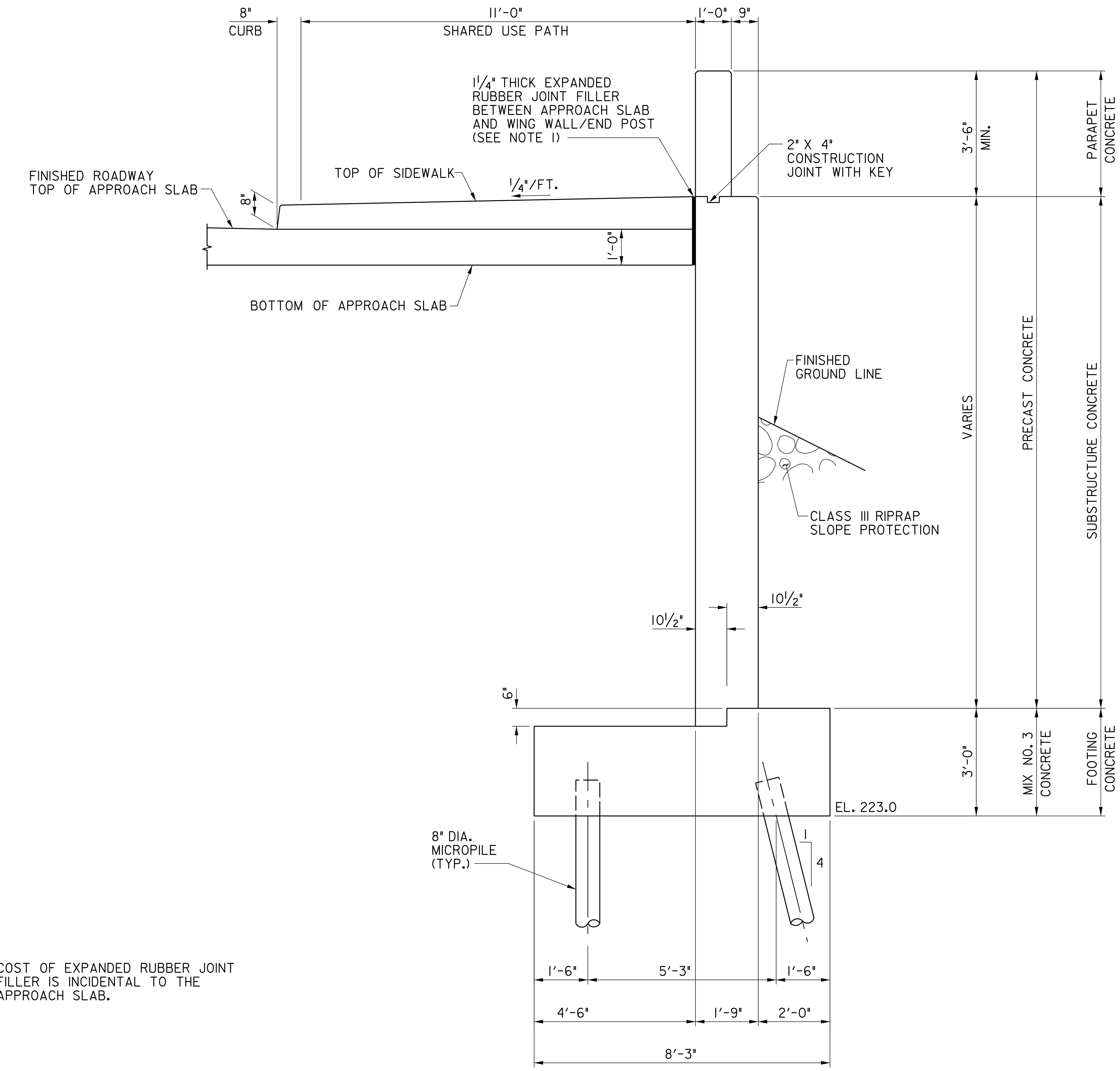


SECTION E–E
TYPICAL SECTION
SCALE: 1/2" = 1'-0"

WING WALL II

NOTES:

1. COST OF EXPANDED RUBBER JOINT FILLER IS INCIDENTAL TO THE APPROACH SLAB.



SECTION D–D
TYPICAL SECTION
SCALE: 1/2" = 1'-0"

WING WALL I

S–XX

NO.	REVISION	DATE	BY

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

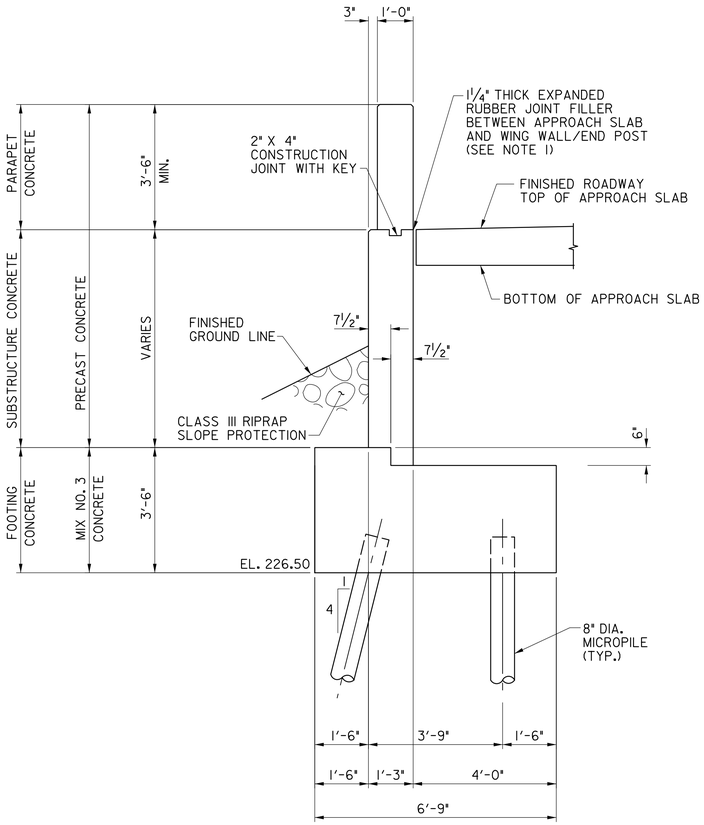
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

WING WALL TYPICAL SECTIONS I

SCALE : 1/2" = 1'-0" DATE: OCTOBER 2020

Project No.: * SHEET 24 of 34

BY: MAB ~
PLOTTED: Wednesday, October 21, 2020 AT 11:20 AM
FILE: U:\SH\20022518_2002162 ~ Garrett Park\CADD\pBR-WD01_GARRETT-PARK.dgn

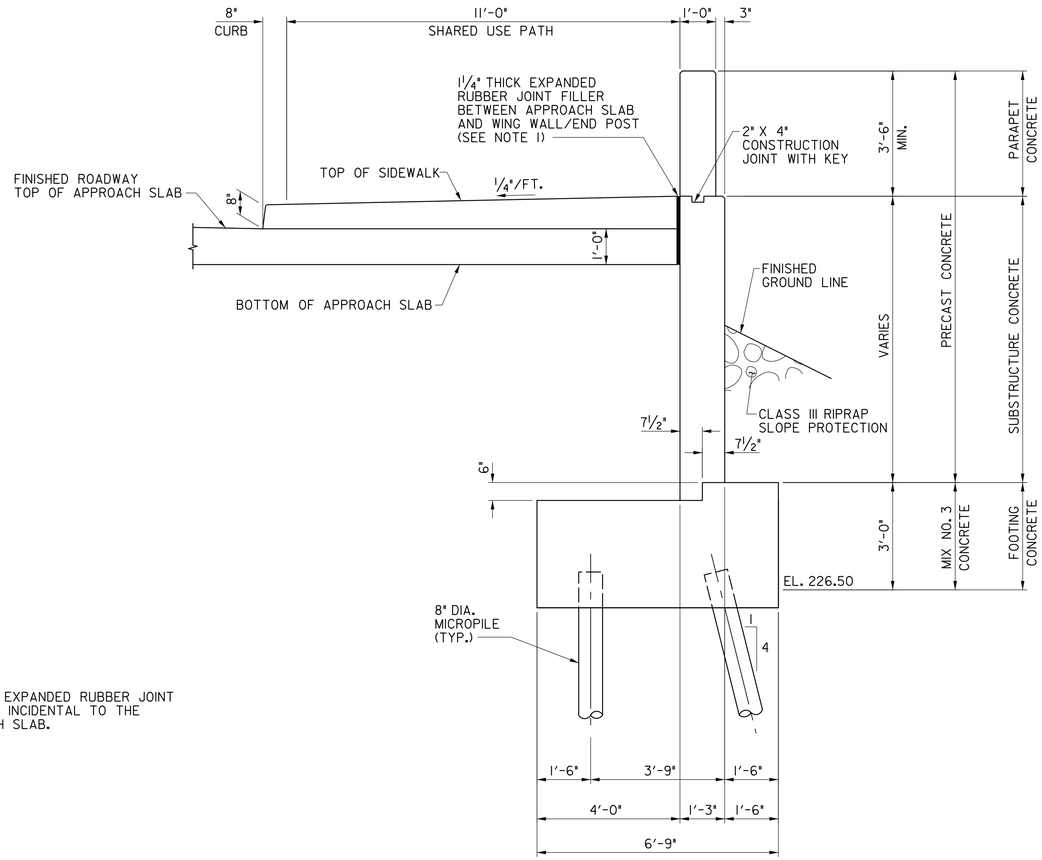


SECTION F-F
TYPICAL SECTION
SCALE: ½" = 1'-0"

WING WALL III

NOTES:

1. COST OF EXPANDED RUBBER JOINT FILLER IS INCIDENTAL TO THE APPROACH SLAB.



SECTION G-G
TYPICAL SECTION
SCALE: ½" = 1'-0"

WING WALL IV

S-XX

NO.	REVISION	DATE	BY

WB THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

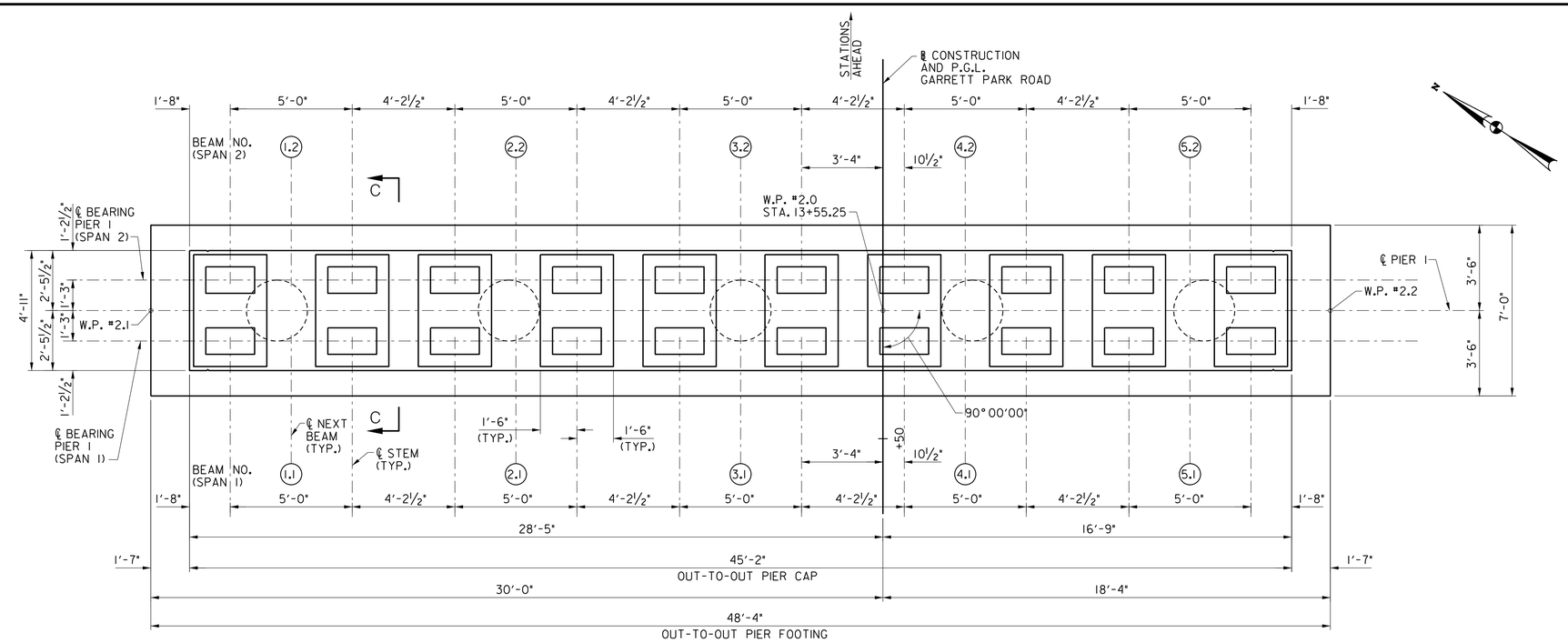
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

WING WALL TYPICAL SECTIONS II

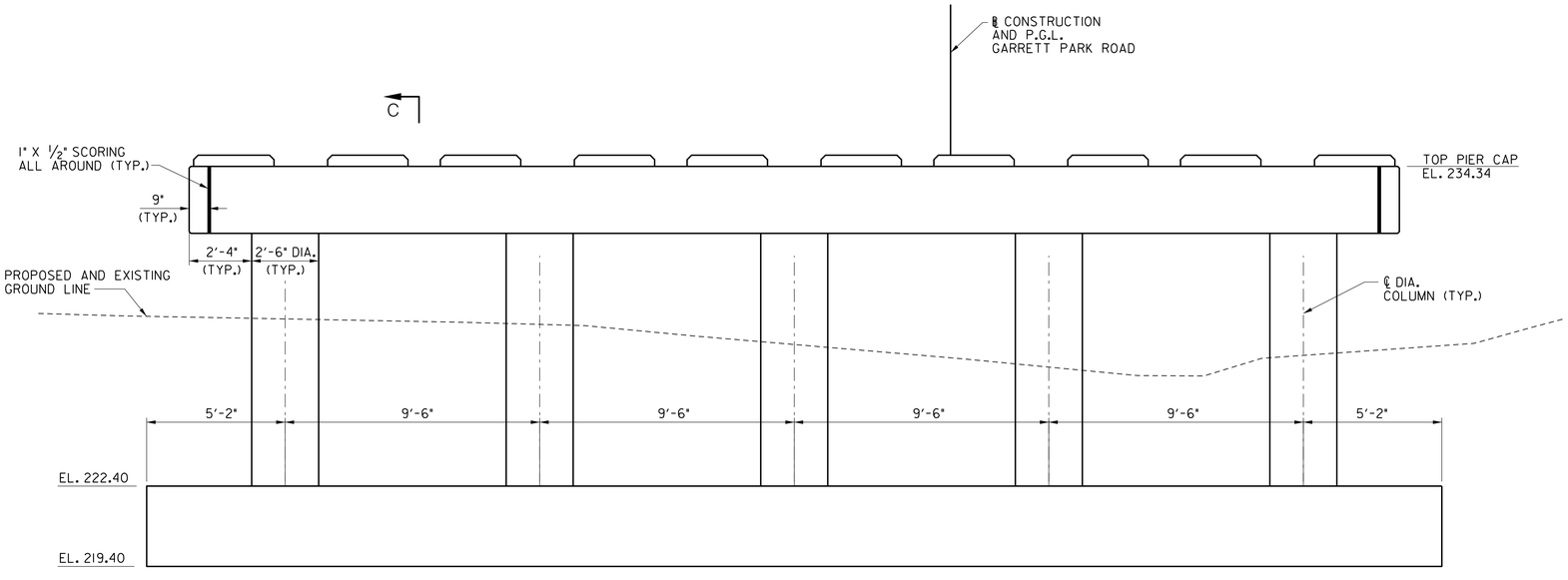
SCALE : ½" = 1'-0" DATE: OCTOBER 2020

Project No.: * SHEET 25 of 34

BY: MAB –
PLOTTED: Wednesday, October 21, 2020 AT 11:41 AM
FILE: U:\Str\20022518_20021162 – Garrett Park\CADD\pBR-WD02_GARRETT-PARK.dgn



PLAN
PIER 1
SCALE: ⅜" = 1'-0"



ELEVATION
PIER 1
SCALE: ⅜" = 1'-0"

NOTES:
1. PIER PILES NOT SHOWN FOR CLARITY.

CROSS REFERENCE NOTES

1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. S-1.
2. FOR GEOMETRIC LAYOUT, SEE DWG. NO. S-XX.
3. FOR PILE PLAN, SEE DWG. NO. S-XX.
4. FOR TYPICAL PIER SECTION C-C, SEE DWG. NO. S-XX.
5. FOR SUPERSTRUCTURE TYPICAL SECTION, SEE DWG. NO. S-XX.

S-XX

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

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

Designed by: AWK Drawn by: MAB Checked by: *

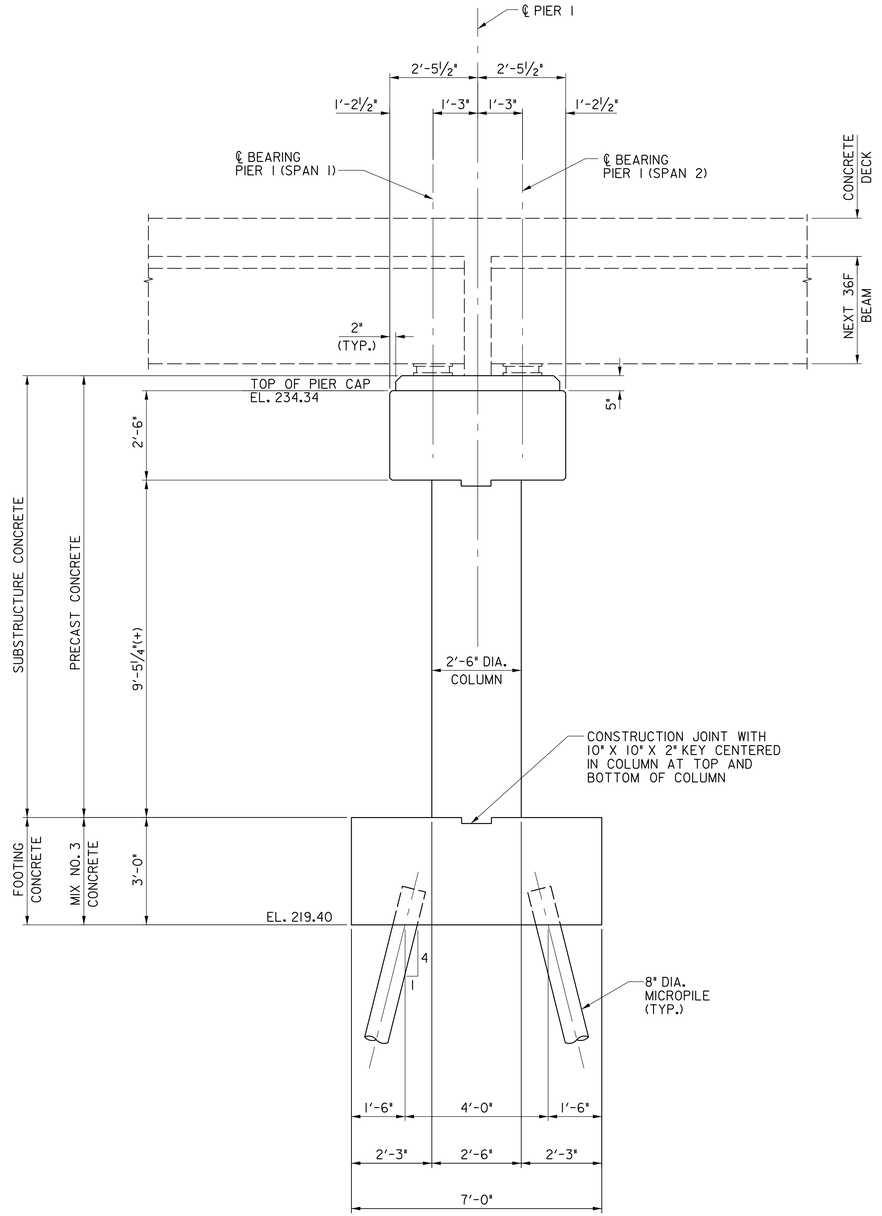
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

PIER 1
PLAN AND ELEVATION

SCALE : 3/8" = 1'-0" DATE: OCTOBER 2020

Project No.: * SHEET 26 of 34

BY: JDM --
PLOTTED: Wednesday, October 28, 2020 AT 02:25 PM
FILE: U:\Str\20022518_20021162 -- Garrett Park\CADD\pBR-PR01_GARRETT-PARK.dgn



SECTION C–C
PIER 1 TYPICAL SECTION
SCALE: ½" = 1'-0"

CROSS REFERENCE NOTES

1. FOR PIER 1 PLAN AND ELEVATION, SEE DWG. NO. S-XX.

S-XX

NO.	REVISION	DATE	BY

WB THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

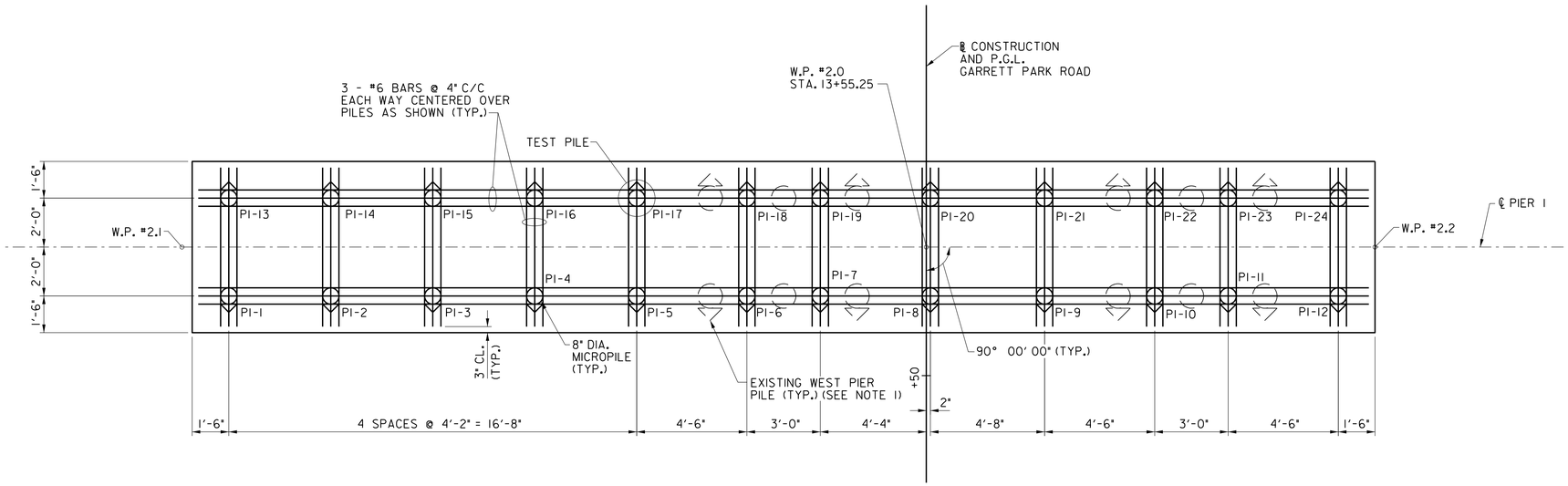
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

PIER 1 TYPICAL SECTION

SCALE : 1/2" = 1'-0" DATE: OCTOBER 2020

Project No.: * SHEET 27 of 34

BY: MAB –
PLOTTED: Wednesday, October 21, 2020 AT 11:49 AM
FILE: U:\SR\20022518_20031162 – Garrett Park\CADD\pBR-PD01_GARRETT-PARK.dgn



PILE PLAN
PIER 1
SCALE: 3/8" = 1'-0"

NOTES:

1. REMOVE EXISTING PIER PILE 2'-0" BELOW PROPOSED BOTTOM OF FOOTING.

CROSS REFERENCE NOTES

1. FOR GEOMETRIC LAYOUT, SEE DWG. NO. S-XX.

LEGEND

- DENOTES TEST PILE (SEE SPECIAL PROVISIONS FOR TEST PILE AND LOAD TEST DETAILS
- DENOTES 1:4 BATTERED MICROPILE AND DIRECTION
- DENOTES EXISTING PIER PILE
- DENOTES EXISTING 1:4± BATTERED PIER PILE AND BATTERED DIRECTION

S-XX

WTB CONSULTING ENGINEERS | THE WILSON T. BALLARD CO. | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

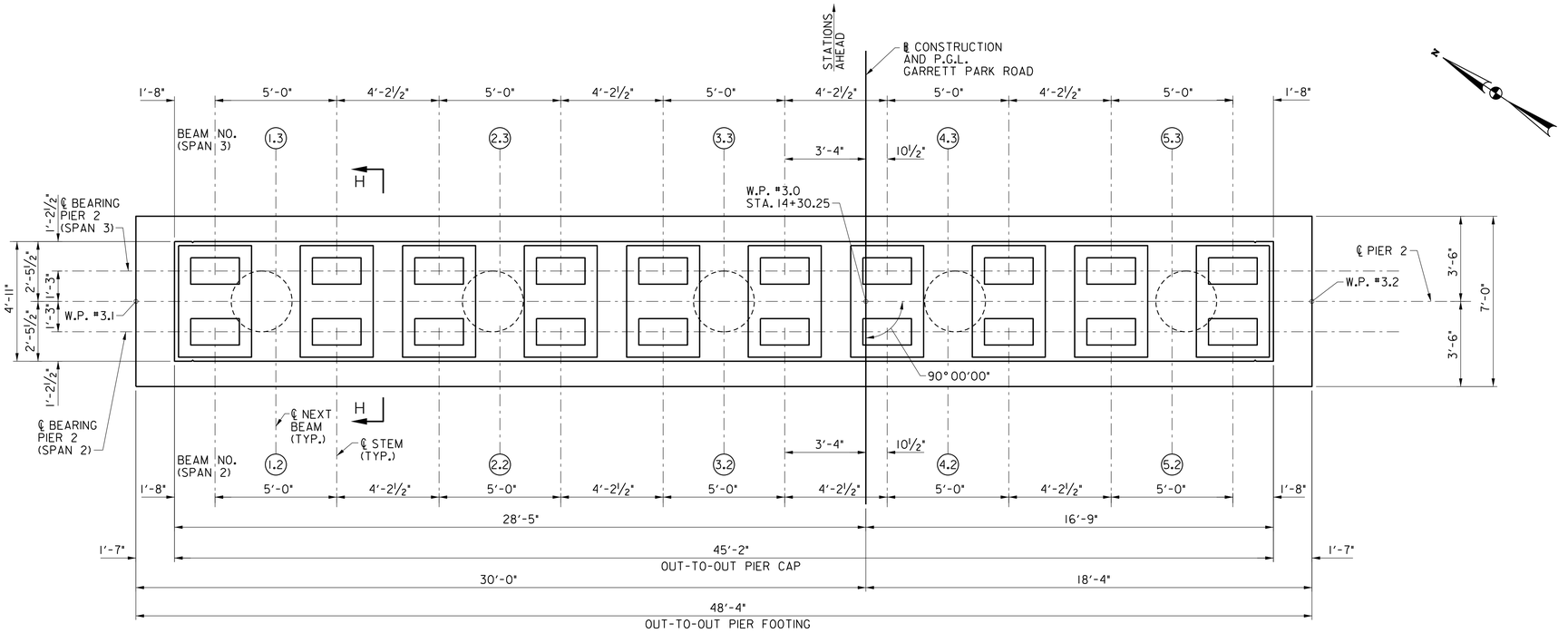
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

PIER 1 PILE PLAN

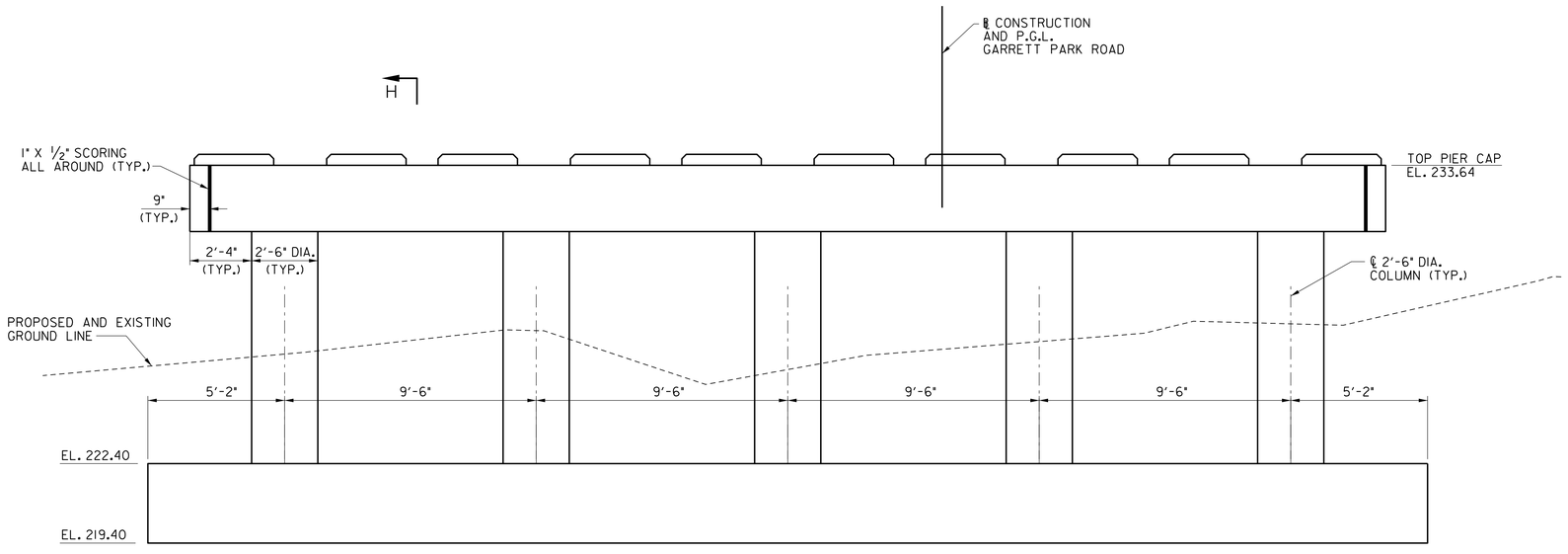
SCALE 3/8" = 1'-0" DATE: OCTOBER 2020

Project No.: * SHEET 28 of 34

BY: JDM --
PLOTTED: Wednesday, October 28, 2020 AT 02:27 PM
FILE: U:\Str\20022518_20021162 – Garrett Park\CADD\pBR-PL03_GARRETT-PARK.dgn



PLAN
PIER 2
SCALE: ⅜" = 1'-0"



ELEVATION
PIER 2
SCALE: ⅜" = 1'-0"

NOTES:
1. PIER PILES NOT SHOWN FOR CLARITY.

CROSS REFERENCE NOTES

1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. S-1.
2. FOR GEOMETRIC LAYOUT, SEE DWG. NO. S-XX.
3. FOR PILE PLAN, SEE DWG. NO. S-XX.
4. FOR TYPICAL PIER SECTION C-C, SEE DWG. NO. S-XX.
5. FOR SUPERSTRUCTURE TYPICAL SECTION, SEE DWG. NO. S-XX.

S-XX

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

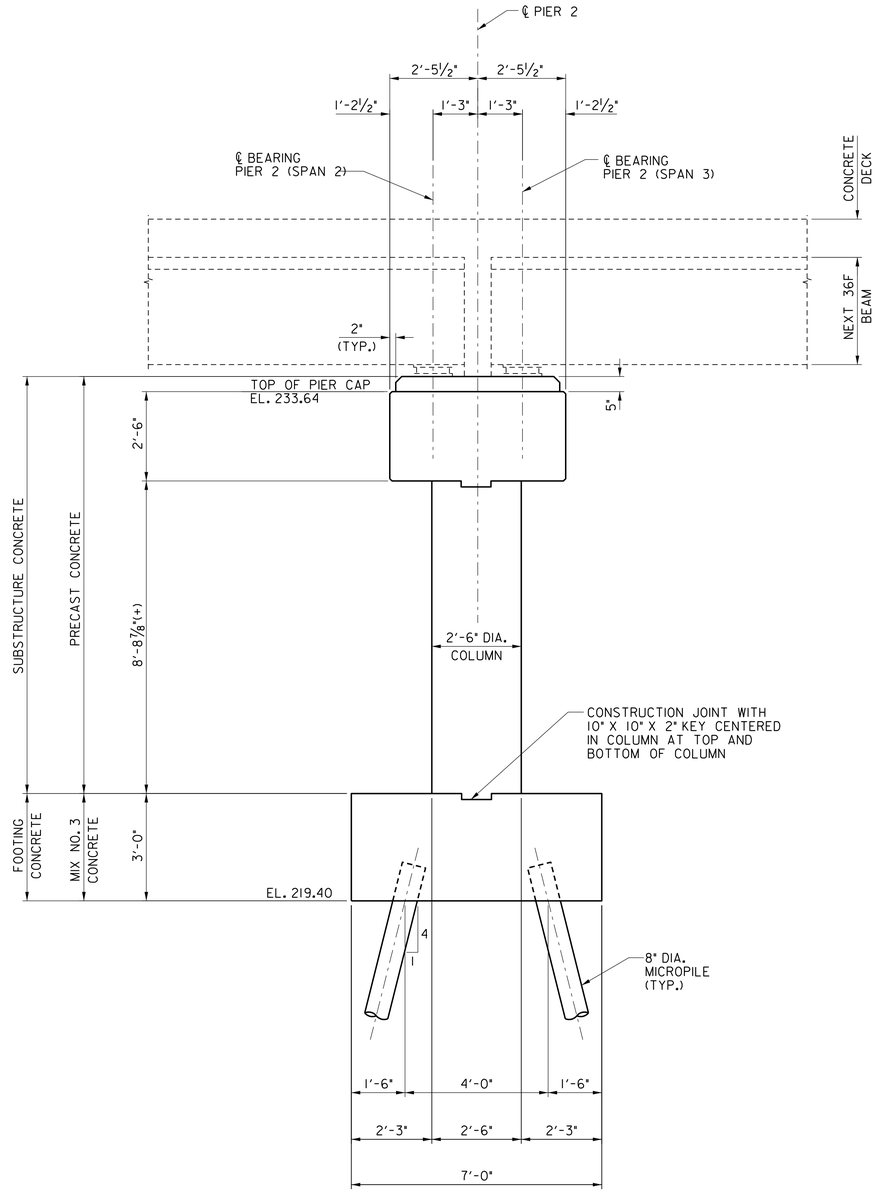
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

PIER 2
PLAN AND ELEVATION

SCALE : 36" = 1'-0" DATE: OCTOBER 2020

Project No.: * SHEET 29 of 34

BY: JDM
PLOTTED: Monday, October 26, 2020 AT 02:30 PM
FILE: U:\SV\2002518_20001162 - Garrett Park\CADD\pBR-PR02_GARRETT-PARK.dgn



SECTION H–H
PIER 2 TYPICAL SECTION
SCALE: ½" = 1'-0"

CROSS REFERENCE NOTES

1. FOR PIER 2 PLAN AND ELEVATION, SEE DWG. NO. S-XX.

S–XX

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

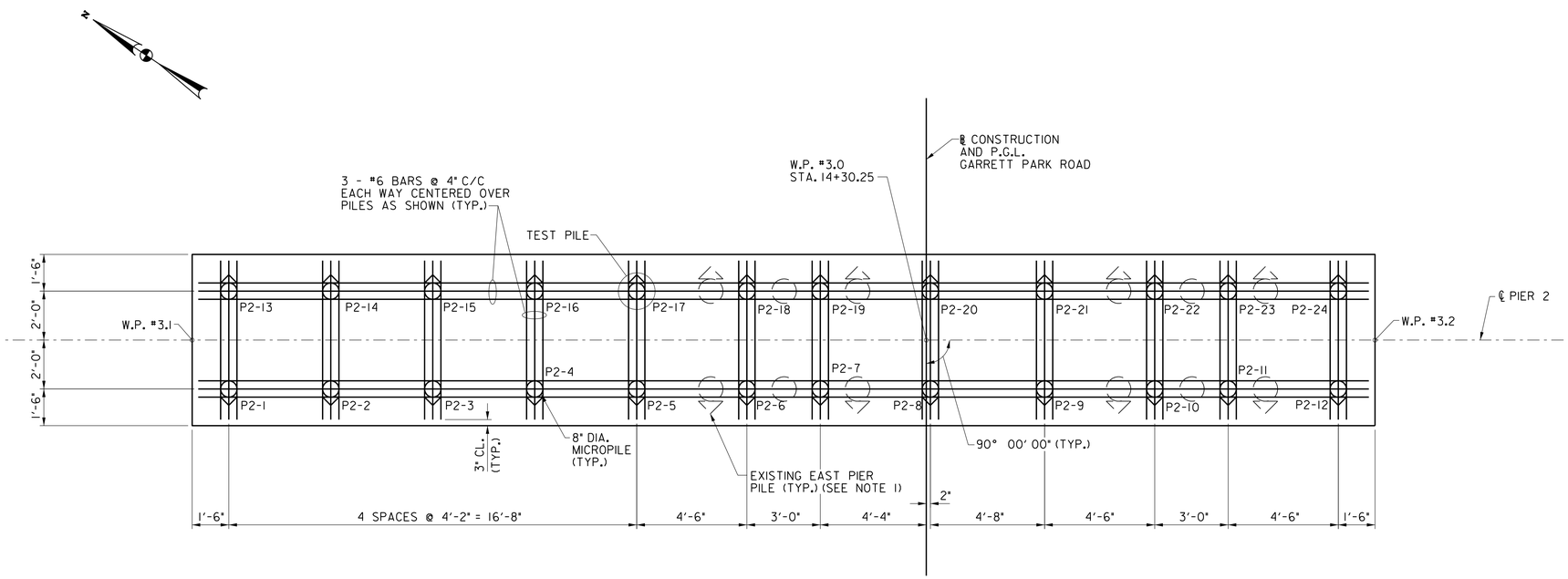
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

PIER 2 TYPICAL SECTION

SCALE : 1/2" = 1'-0" DATE: OCTOBER 2020

Project No.: * SHEET 30 of 34

BY: JDM -
PLOTTED: Monday, October 26, 2020 AT 02:32 PM
FILE: U:\SY\2002518_20001162 – Garrett Park\CADD\pBR-PD02_GARRETT-PARK.dgn



PILE PLAN
PIER 2
SCALE: 3/8" = 1'-0"

NOTES:

1. REMOVE EXISTING PIER PILE 2'-0" BELOW PROPOSED BOTTOM OF FOOTING.

CROSS REFERENCE NOTES

1. FOR GEOMETRIC LAYOUT, SEE DWG. NO. S-XX.

LEGEND

- DENOTES TEST PILE (SEE SPECIAL PROVISIONS FOR TEST PILE AND LOAD TEST DETAILS
- DENOTES 1:4 BATTERED MICROPILE AND DIRECTION
- DENOTES EXISTING PIER PILE
- DENOTES EXISTING 1:4± BATTERED PIER PILE AND BATTERED DIRECTION

S-XX

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

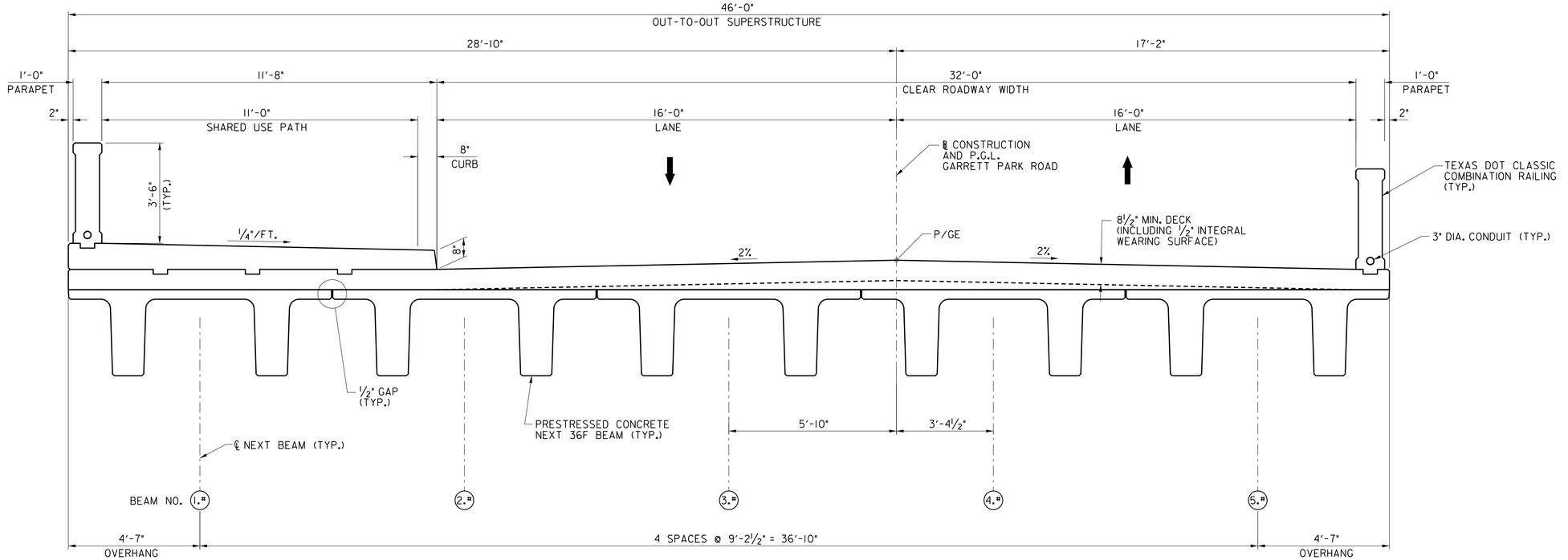
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

PIER 2 PILE PLAN

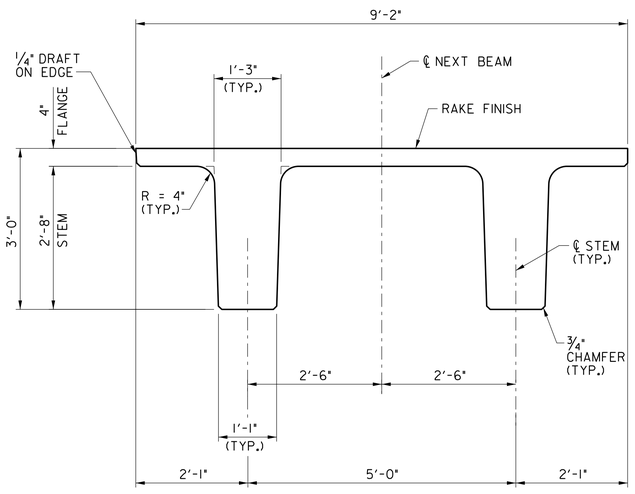
SCALE 3/8" = 1'-0" DATE: OCTOBER 2020

Project No.: * SHEET 31 of 34

BY: JDM
PLOTTED: Wednesday, October 28, 2020 AT 02:28 PM
FILE: U:\Str\20022518_20021162 – Garrett Park\CADD\pBR-PL04_GARRETT-PARK.dgn



TYPICAL SECTION
SCALE: ½" = 1'-0"



NEXT F BEAM
SCALE: ¾" = 1'-0"

NOTES:

1. THE COST OF ALL REINFORCING AND CONCRETE IN THE DECK AND SIDEWALKS WILL BE INCLUDED IN THE LUMP SUM PRICE BID FOR THE "SUPERSTRUCTURE CONCRETE" ITEM.
2. THE COST OF ALL REINFORCING AND CONCRETE IN THE PARAPETS AND LIGHT POST SUPPORT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR THE "CONCRETE PARAPET" ITEM.
3. SLIP FORMING OF PARAPETS WILL NOT BE ALLOWED.

(1.#) - # INDICATES SPAN NUMBER BEAM IS LOCATED.

S-XX

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

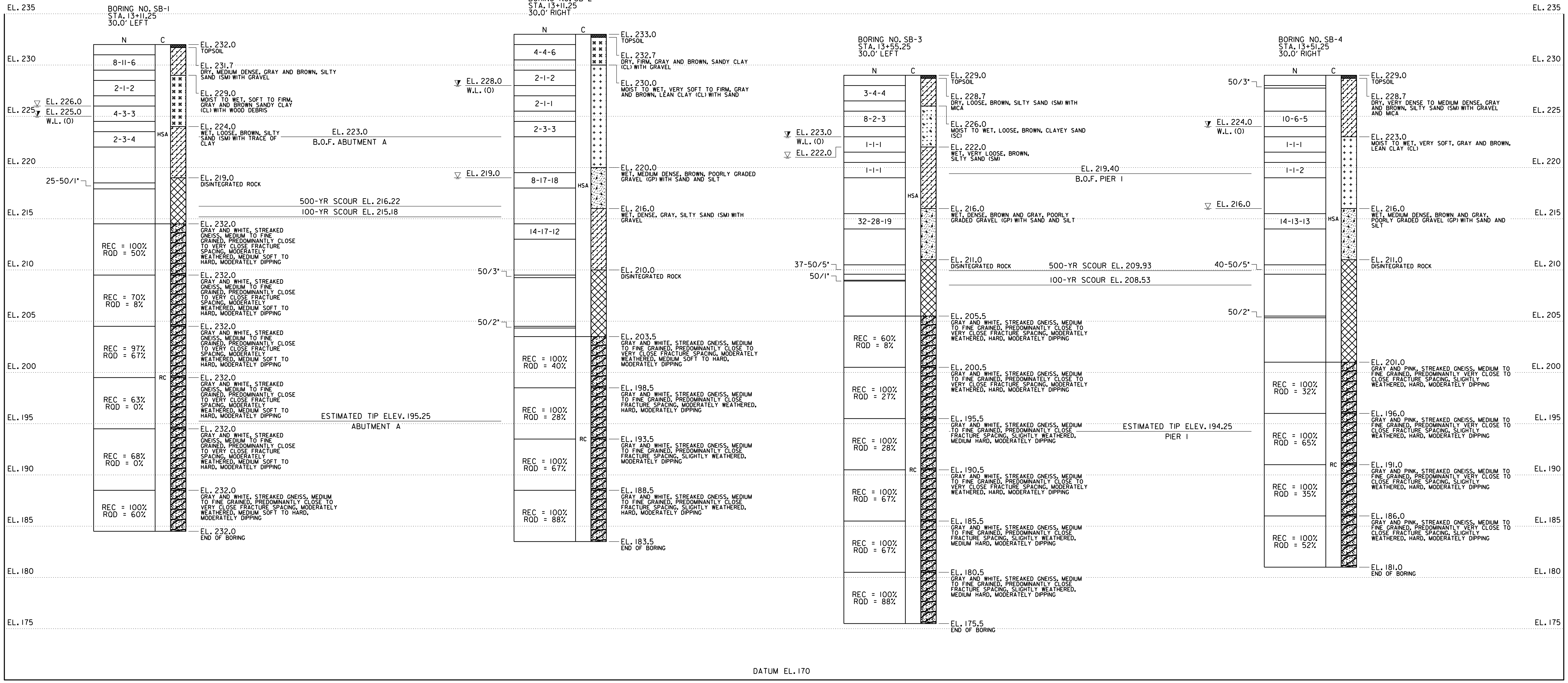
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

SUPERSTRUCTURE TYPICAL SECTION

SCALE : AS SHOWN DATE: OCTOBER 2020

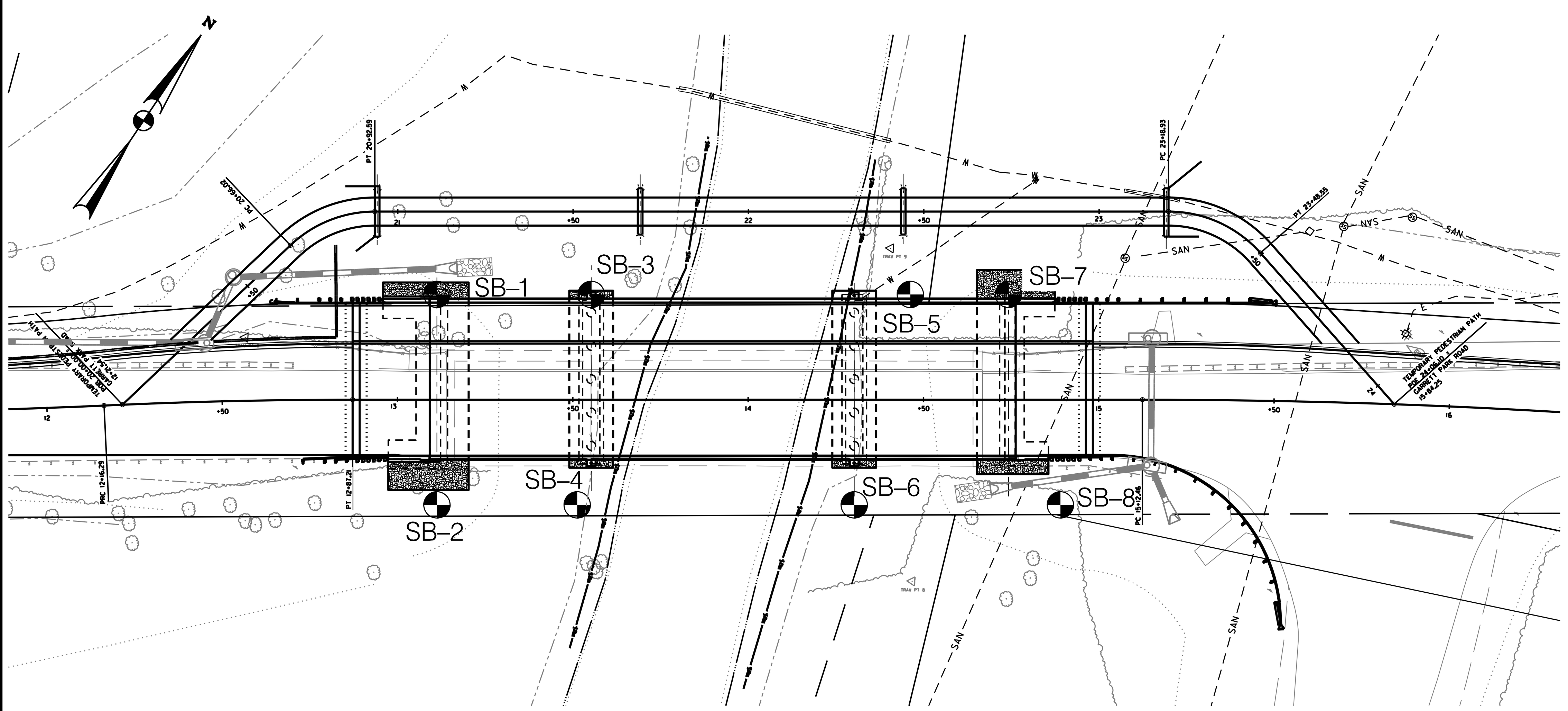
Project No.: * SHEET 32 of 34

BY: JDM
PLOTTED: Monday, October 26, 2020 AT 03:11 PM
FILE: U:\Sr\20022518_20021162 - Garrett Park\CADD\pBR-TP01_GARRETT-PARK.dgn



BORINGS AND DRIVE TESTS

SCALE: 1" = 5'-0"



BORINGS AND DRIVE TEST LOCATIONS

SCALE: 1" = 30'-0"

NOTES:

1. THE BORINGS AND DRIVE TESTS WERE TAKEN BETWEEN 06/12/2020 AND 06/19/2020 BY AB CONSULTANTS, INC.
2. THE SOIL SYMBOLS REFLECT ONLY THE MAJOR SOIL CONSTITUENT. FOR MORE COMPLETE SOIL CHARACTERISTIC REFER TO THE SOIL DESCRIPTIVE TEXT.
3. THE FIELD BORING LOGS RECORD SAMPLE SPOON RECOVERY. THE LOGS ARE AVAILABLE UPON REQUEST. THE MATERIAL RECOVERED FROM THE SITE INVESTIGATION IS AVAILABLE FOR REVIEW. CONTACT THE GEOTECHNICAL EXPLORATIONS DIVISION AT 1-800-637-1290.
4. BORINGS AND SAMPLINGS CONFORM TO AASHTO DESIGNATIONS T-206 AND T-306.
5. THE SOIL HAS BEEN CLASSIFIED VISUALLY BY THE DRILLER.
6. N = BLOWS ON A 2 INCH OD SAMPLING SPOON BY 140 LB. DRIVE-WEIGHT FALLING 30 INCHES INDICATING SUCCESSIVE 6 INCH INCREMENTS OF PENETRATION IN LIEU OF BLOWS PER FOOT.
7. C = DEPTH OF HOLLOW-STEM CONTINUOUS FLIGHT AUGERS WITH 3.25 INCH ID.
8. B.O.F. = BOTTOM OF FOOTING.
9. WATER LEVEL OBSERVATIONS:
   - ▽ WATER LEVEL AT TIME OF DRILLING, OR AS SHOWN.
   - ▽ WATER LEVEL AT END OF DRILLING, OR AS SHOWN.
   - ▼ WATER LEVEL AFTER 24 HOURS, OR AS SHOWN.

   THE FIGURE IN THE PARENTHESES INDICATES THE READING IN HOURS AFTER COMPLETION.
10. RQD = ROCK QuALITY DESIGNATION
11. REC = ROCK CORE RECOVERY
12. HSA = HOLLOW STEM AUGER
13. ALL STATIONS AND OFFSETS SHOWN ON LOGS ARE BASED ON THE ℄ CONSTRUCTION GARRETT PARK ROAD.

S–XX

NO.	REVISION	DATE	BY

WB — THE WILSON T. BALLARD CO. — CONSULTING ENGINEERS | OWINGS MILLS, MD

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK   Drawn by: MAB   Checked by: *

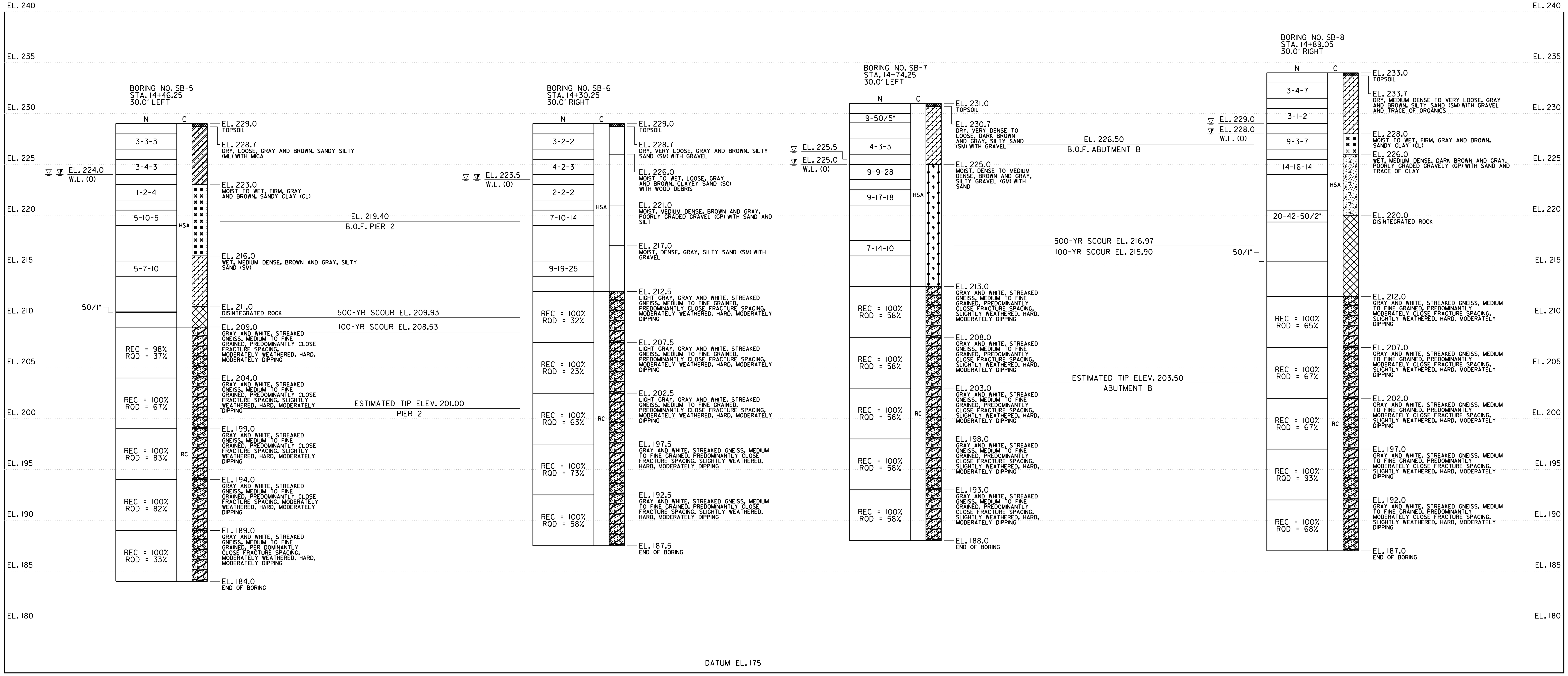
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M–0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

BORINGS AND DRIVE TESTS

SCALE : AS SHOWN   DATE: OCTOBER 2020

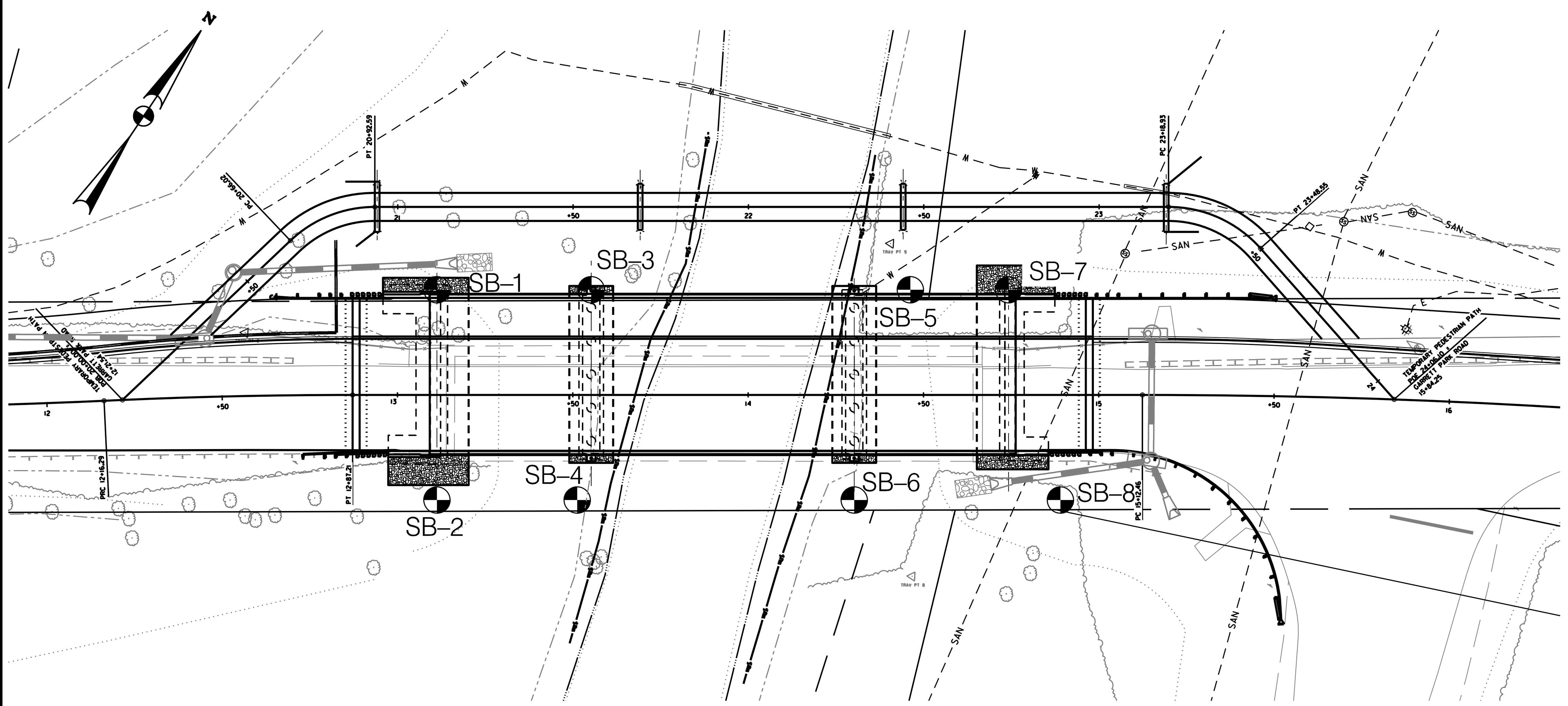
Project No. : *   SHEET 33 of 34

BY: JDM –
PLOTTED: Wednesday, October 28, 2020 AT 02:30 PM
FILE: U:\Str\20022518_20021162 – Garrett Park\CADD\pBR–BL01_GARRETT–PARK.dgn



BORINGS AND DRIVE TESTS

SCALE: 1" = 5'-0"



BORINGS AND DRIVE TEST LOCATIONS

SCALE: 1" = 30'-0"

NOTES:

1. THE BORINGS AND DRIVE TESTS WERE TAKEN BETWEEN 06/12/2020 AND 06/19/2020 BY AB CONSULTANTS, INC.
2. THE SOIL SYMBOLS REFLECT ONLY THE MAJOR SOIL CONSTITUENT. FOR MORE COMPLETE SOIL CHARACTERISTIC REFER TO THE SOIL DESCRIPTIVE TEXT.
3. THE FIELD BORING LOGS RECORD SAMPLE SPOON RECOVERY. THE LOGS ARE AVAILABLE UPON REQUEST. THE MATERIAL RECOVERED FROM THE SITE INVESTIGATION IS AVAILABLE FOR REVIEW. CONTACT THE GEOTECHNICAL EXPLORATIONS DIVISION AT 1-800-637-1290.
4. BORINGS AND SAMPLINGS CONFORM TO AASHTO DESIGNATIONS T-206 AND T-306.
5. THE SOIL HAS BEEN CLASSIFIED VISUALLY BY THE DRILLER.
6. N = BLOWS ON A 2 INCH OD SAMPLING SPOON BY 140 LB. DRIVE-WEIGHT FALLING 30 INCHES INDICATING SUCCESSIVE 6 INCH INCREMENTS OF PENETRATION IN LIEU OF BLOWS PER FOOT.
7. C = DEPTH OF HOLLOW-STEM CONTINUOUS FLIGHT AUGERS WITH 3.25 INCH ID.
8. B.O.F. = BOTTOM OF FOOTING.
9. WATER LEVEL OBSERVATIONS:
   - ▽ WATER LEVEL AT TIME OF DRILLING, OR AS SHOWN.
   - ▼ WATER LEVEL AT END OF DRILLING, OR AS SHOWN.
   - ▼ WATER LEVEL AFTER 24 HOURS, OR AS SHOWN.

   THE FIGURE IN THE PARENTHESES INDICATES THE READING IN HOURS AFTER COMPLETION.
10. RQD = ROCK QUALITY DESIGNATION
11. REC = ROCK CORE RECOVERY
12. HSA = HOLLOW STEM AUGER
13. ALL STATIONS AND OFFSETS SHOWN ON LOGS ARE BASED ON THE ℄ CONSTRUCTION GARRETT PARK ROAD.

S–XX

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AWK Drawn by: MAB Checked by: *

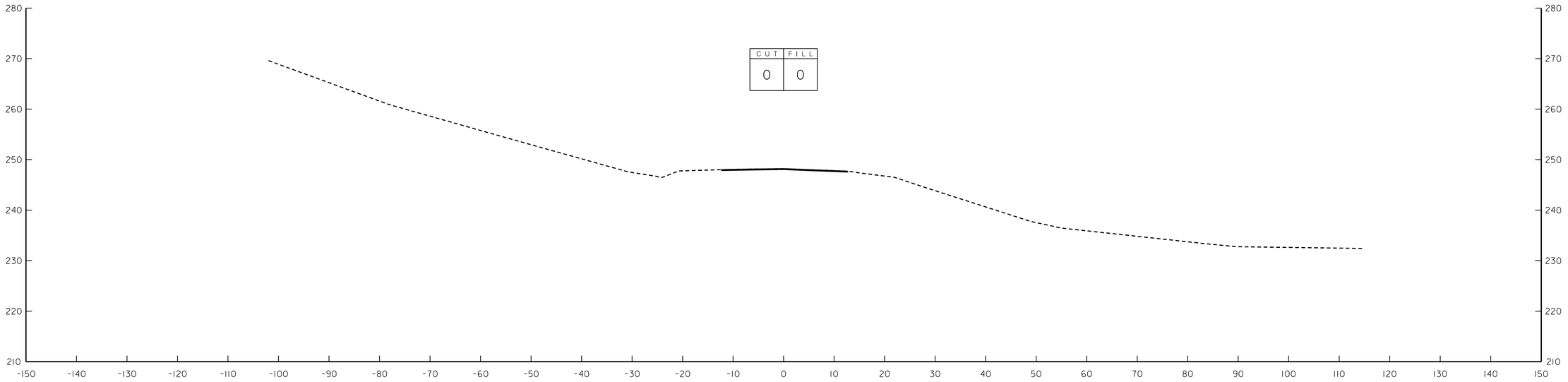
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M–0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

BORINGS AND DRIVE TESTS

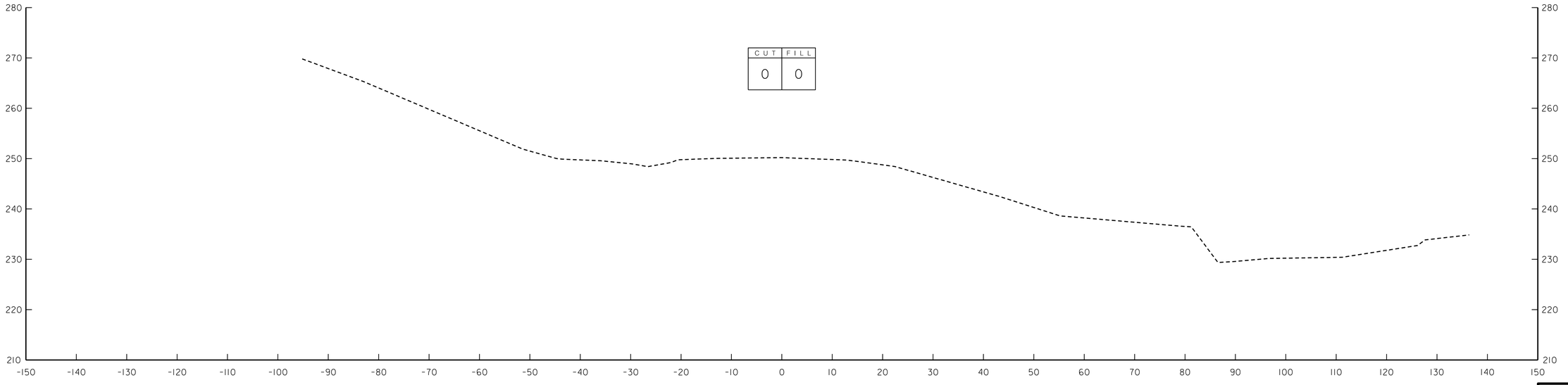
SCALE : AS SHOWN DATE: OCTOBER 2020

Project No. : * SHEET 34 of 34

BY: JDM –
PLOTTED: Wednesday, October 28, 2020 AT 02:32 PM
FILE: U:\Str\20022518_20021162 – Garrett Park\CADD\pBR-BL02_GARRETT-PARK.dgn



10 + 50



10 + 00

CS-1

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

S.M.FILE NO.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AKR Drawn by: AKR Checked by: JJW

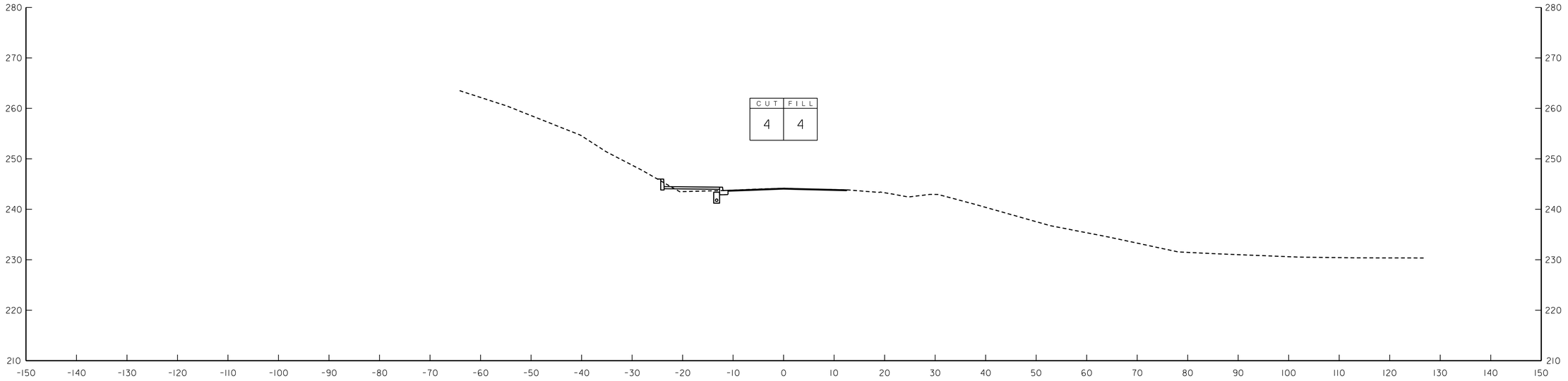
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352 ON GARRETT PARK ROAD OVER ROCK CREEK

CROSS SECTIONS STA. 10 + 00 TO STA. 10 + 50

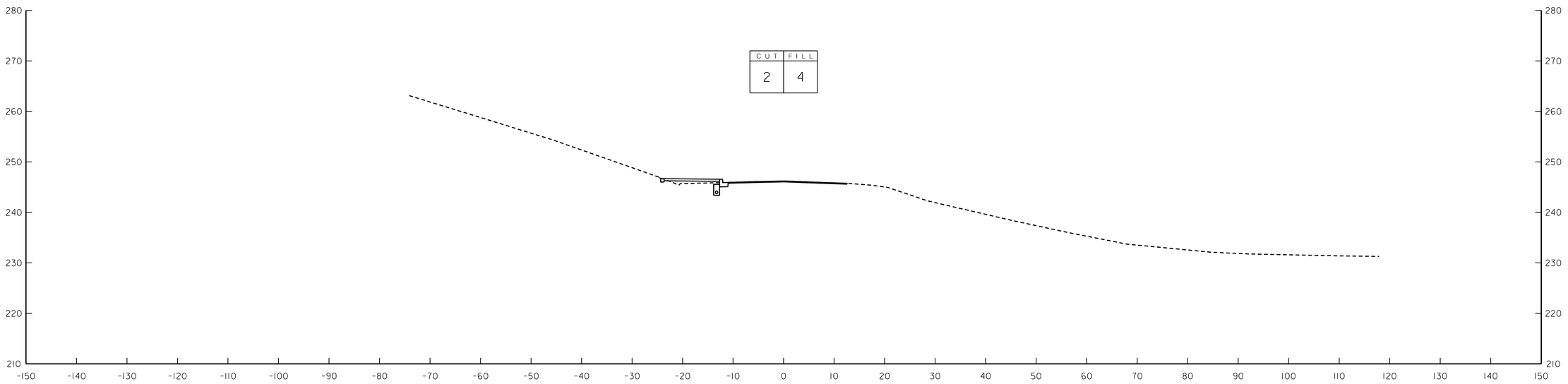
SCALE : 1" = 10' DATE: OCTOBER 2020

Project No.: * SHEET 1 of 8

BY: JDM --
PLOTTED: Thursday, October 08, 2020 AT 01:45 PM
FILE: U:\SY\20022518_20021162 -- Garrett Park\CADD\mHC-0000_Garrett.dgn



11+50



11+00

CS-2

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

S.M.FILE NO.

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

WB THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AKR Drawn by: AKR Checked by: JJW

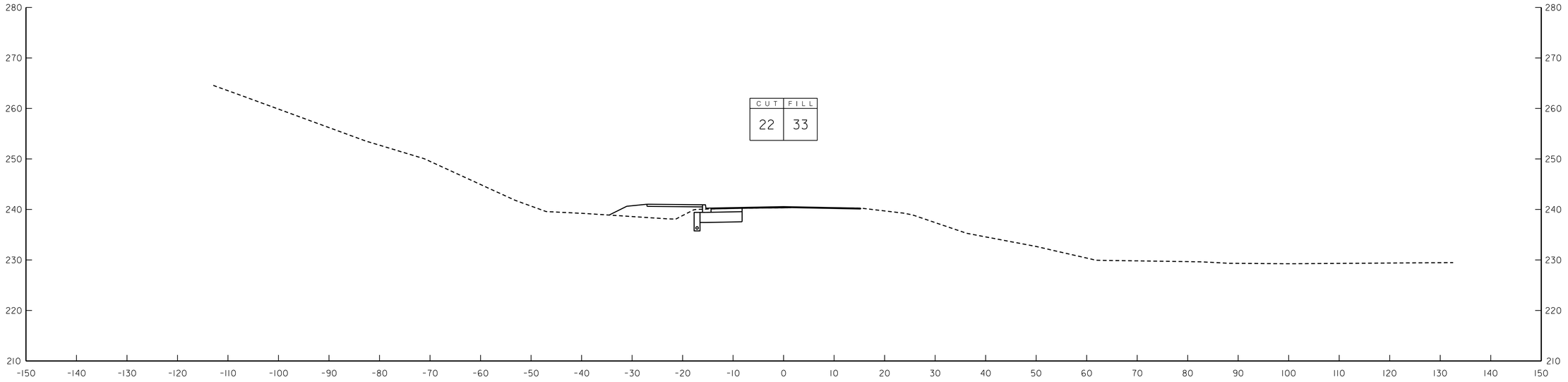
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

CROSS SECTIONS
STA. 11+00 TO STA. 11+50

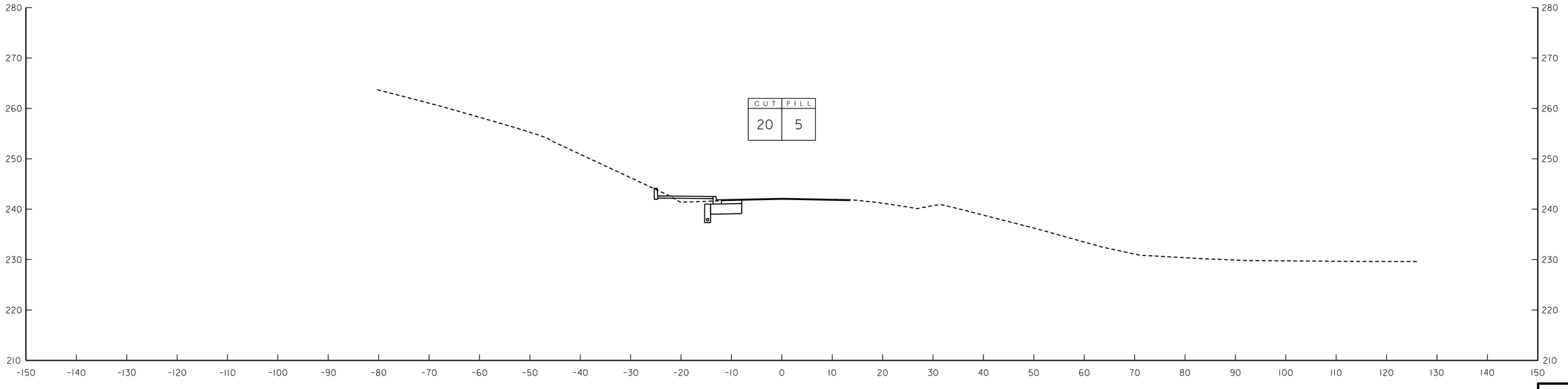
SCALE : 1" = 10' DATE: OCTOBER 2020

Project No.: * SHEET 2 of 8

BY: JDM -
PLOTTED: Thursday, October 08, 2020 AT 01:45 PM
FILE: U:\SV\20022518_20001162 - Garrett Park\CADD\mHC-0000_Garrett.dgn



12+50



12+00

CS-3

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

S.M.FILE NO.

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

NO.	REVISION	DATE	BY

WB CONSULTING ENGINEERS | THE WILSON T. BALLARD CO. | OWINGS MILLS, MD

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AKR Drawn by: AKR Checked by: JJW

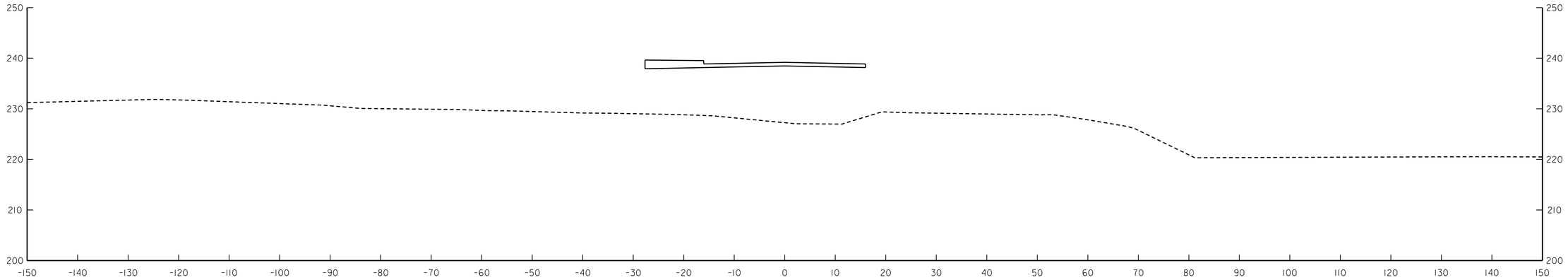
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

CROSS SECTIONS
STA. 12+00 TO STA. 12+50

SCALE : 1" = 10' DATE: OCTOBER 2020

Project No.: * SHEET 3 of 8

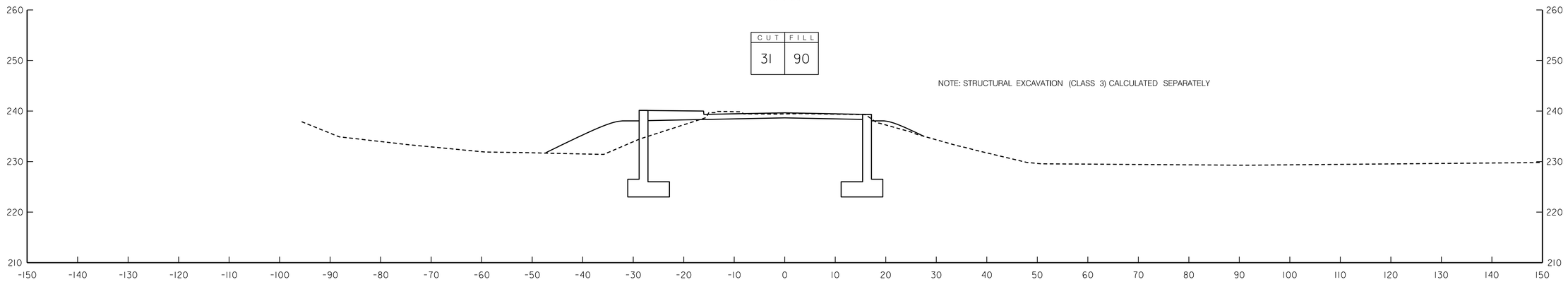
BY: JDM -
PLOTTED: Thursday, October 08, 2020 AT 01:46 PM
FILE: U:\Str\20022518_20021162 – Garrett Park\CADD\mHC-0000_Garrett.dgn



13 + 50

CUT	FILL
31	90

NOTE: STRUCTURAL EXCAVATION (CLASS 3) CALCULATED SEPARATELY



13 + 00

CS–4

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

S.M.FILE NO.

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AKR Drawn by: AKR Checked by: JJW

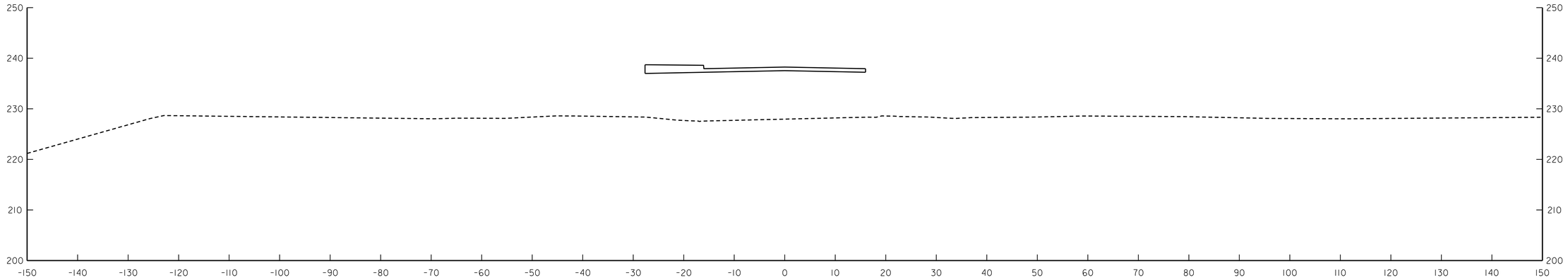
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

CROSS SECTIONS
STA. 13 + 00 TO STA. 13 + 50

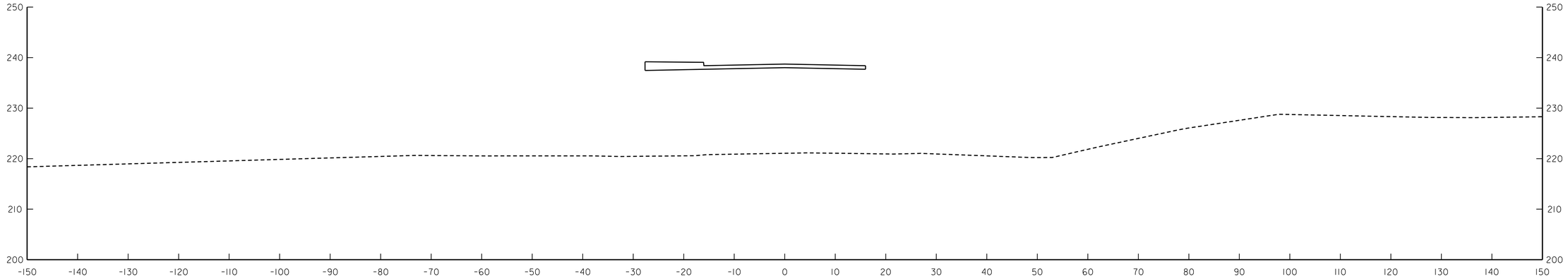
SCALE : 1" = 10' DATE: OCTOBER 2020

Project No.: * SHEET 4 of 8

BY: JDM –
PLOTTED: Thursday, October 08, 2020 AT 01:46 PM
FILE: U:\SV\20022518_20021162 – Garrett Park\CADD\mHC-0000_Garrett.dgn



14 + 50



14 + 00

CS–5

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

S.M.FILE NO.

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

MCDPS APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AKR Drawn by: AKR Checked by: JJW

PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

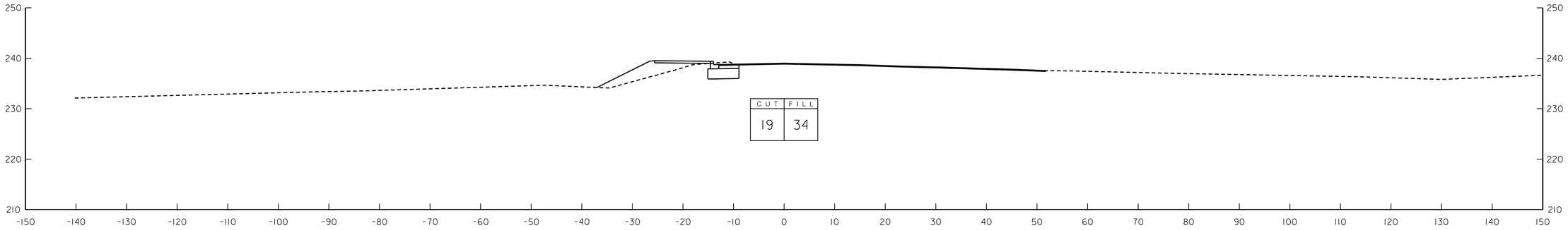
CROSS SECTIONS
STA. 14 + 00 TO STA. 14 + 50

SCALE : 1" = 10' DATE: OCTOBER 2020

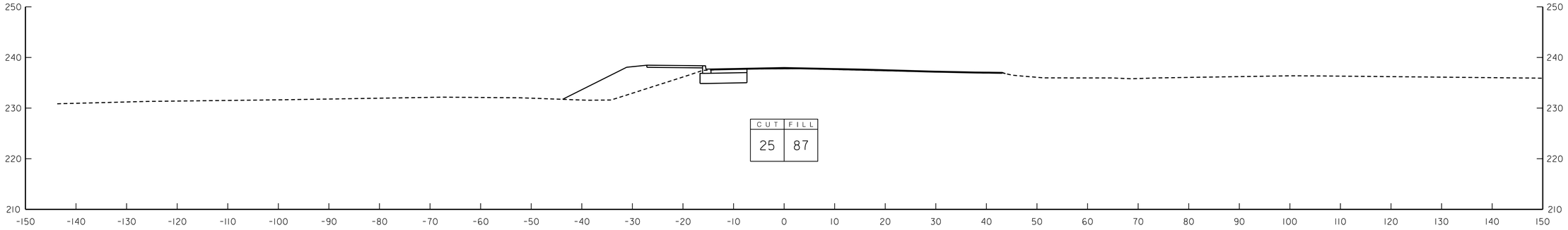
Project No.: *

SHEET 5 of 8

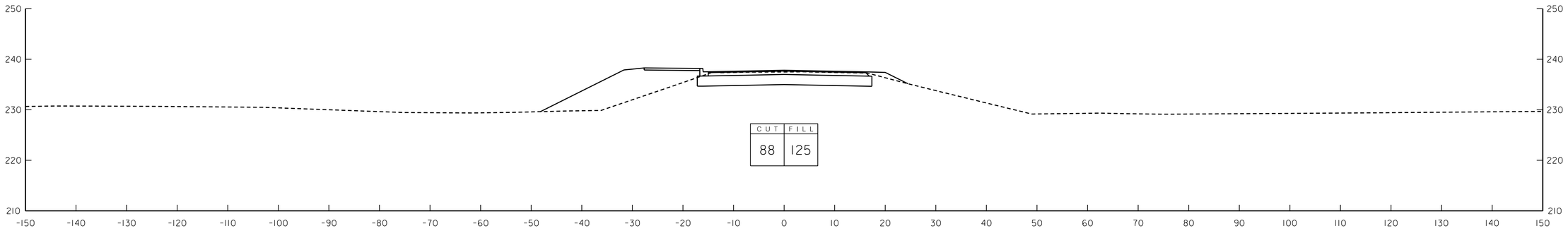
BY: JDM –
PLOTTED: Thursday, October 08, 2020 AT 01:46 PM
FILE: U:\SV\20022518_20021162 – Garrett Park\CADD\mHC-0000_Garrett.dgn



16+00



15+50



15+00

CS–6

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

S.M.FILE NO.

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.

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THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AKR Drawn by: AKR Checked by: JJW

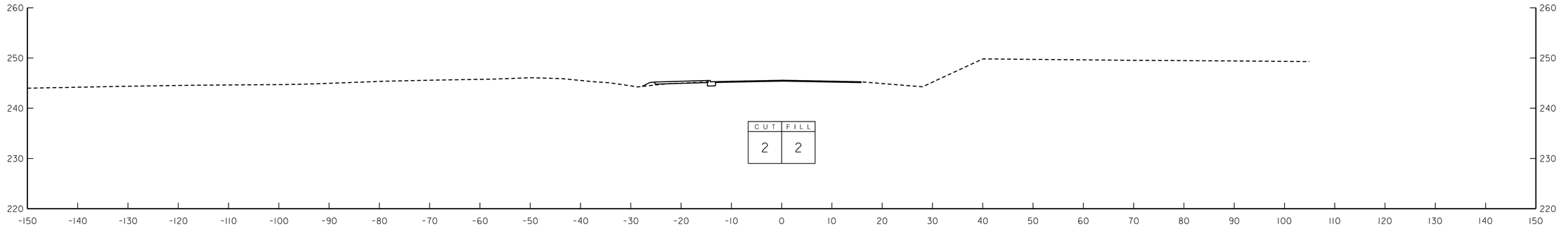
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352 ON GARRETT PARK ROAD OVER ROCK CREEK

CROSS SECTIONS STA. 15+00 TO STA. 16+00

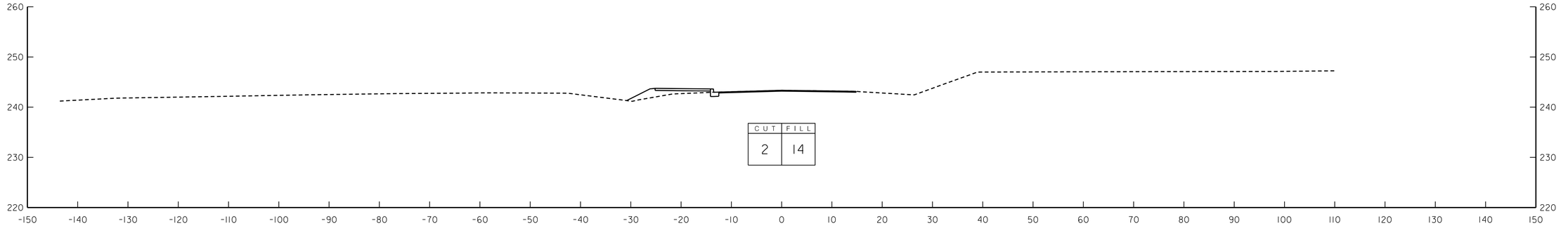
SCALE : 1" = 10' DATE: OCTOBER 2020

Project No.: * SHEET 6 of 8

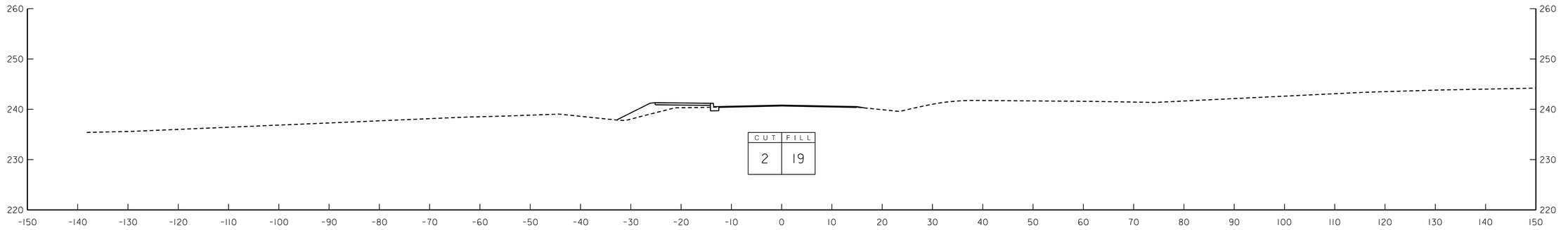
BY: JDM -
PLOTTED: Thursday, October 08, 2020 AT 01:47 PM
FILE: U:\SV\20022518_20001162 – Garrett Park\CADD\mHC-0000_Garrett.dgn



17+50



17+00



16+50

CS–7

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

S.M.FILE NO.

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THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AKR Drawn by: AKR Checked by: JJW

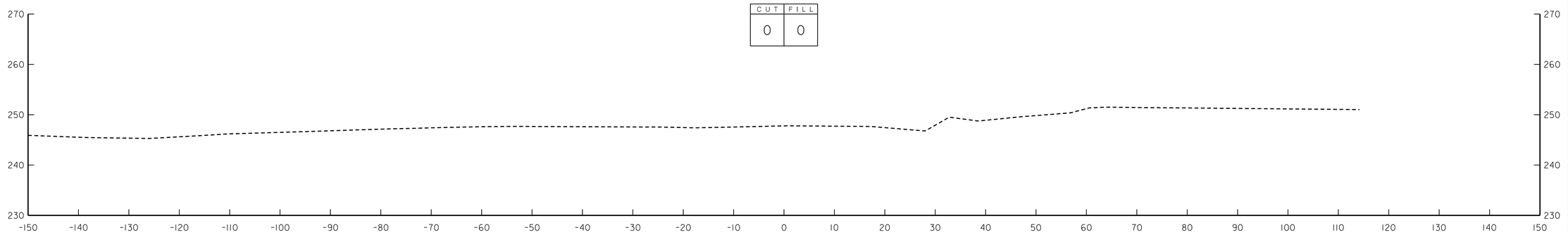
PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

CROSS SECTIONS
STA. 16+50 TO STA. 17+50

SCALE : 1" = 10' DATE: OCTOBER 2020

Project No.: * SHEET 7 of 8

BY: JDM -
PLOTTED: Thursday, October 08, 2020 AT 01:47 PM
FILE: U:\SV\20022518_20001162 – Garrett Park\CADD\mHC-0000_Garrett.dgn



18+00

CS–8

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

S.M.FILE NO.

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

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NO.	REVISION	DATE	BY

THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS | OWINGS MILLS, MD

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
GAITHERSBURG, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Transportation Planning and Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: AKR Drawn by: AKR Checked by: JJW

PRESTRESSED CONCRETE NEXT BEAM BRIDGE NO. M-0352
ON GARRETT PARK ROAD
OVER ROCK CREEK

CROSS SECTIONS
STA. 18+00

SCALE : 1" = 10' DATE: OCTOBER 2020

Project No.: * SHEET 8 of 8

BY: JDM
PLOTTED: Thursday, October 08, 2020 AT 01:47 PM
FILE: U:\Sir\20022518_20021162 – Garrett Park\CADD\mHC-0000_Garrett.dgn