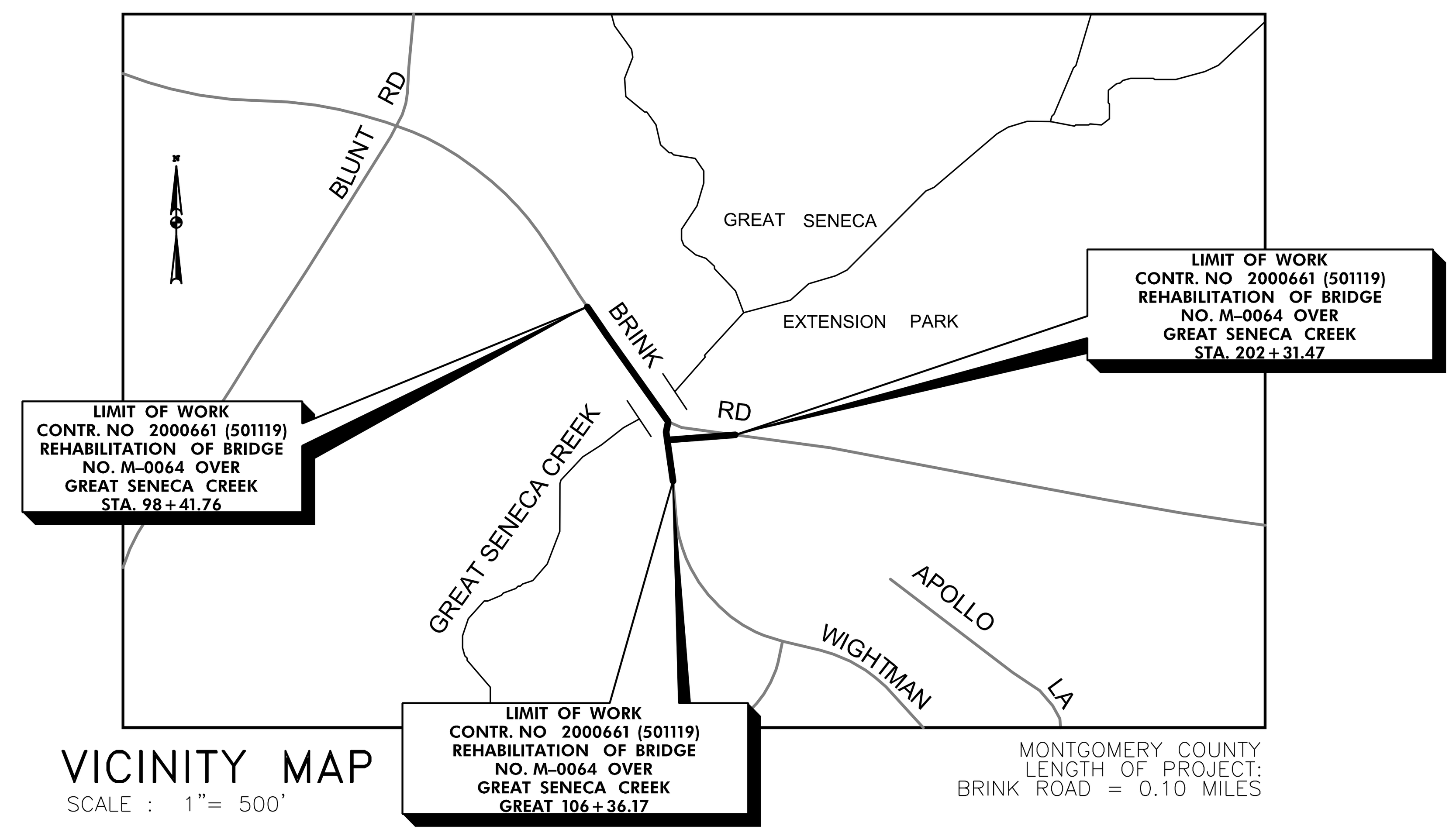
INDEX OF SHEETS

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

REHABILITATION OF BRIDGE NO. M-0064 OVER GREAT SENECA CREEK

C.I.P. PROJECT NO. 501XXX



VICINITY MAP
SCALE : 1"= 500'

MONTGOMERY COUNTY
LENGTH OF PROJECT:
BRINK ROAD = 0.10 MILES

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD SPECIFICATIONS OF THE MARYLAND STATE HIGHWAY ADMINISTRATION, MONTGOMERY COUNTY, AND THE WASHINGTON SUBURBAN SANITARY COMMISSION.
2. TYPES OF STORM DRAIN STRUCTURES REFER TO THE "DESIGN STANDARDS" OF MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION, UNLESS OTHERWISE NOTED.
3. WHEN THE DROP ON THE MAIN LINE THROUGH A STORM DRAIN STRUCTURE CAN BE ACCOMMODATED BY AN INVERT SLOPE OF 1.5:1 OR FLATTER, A ROUNDED CHANNEL LINED WITH SEWER BRICK ON EDGE SHALL BE BUILT TO THE CROWN OF THE PIPES. WHEN THE INVERT SLOPES WOULD BE GREATER THAN 1.5:1 A SPECIAL INVERT SHALL BE CONSTRUCTED AS NOTED.
4. ALL STORM DRAIN PIPE SHALL BE INSTALLED WITH CLASS "C" BEDDING UNLESS OTHERWISE SPECIFIED.
5. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO STORM DRAIN STRUCTURES, WHEN NECESSARY, TO MEET EXISTING CONDITIONS, AS APPROVED BY MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION'S PROJECT INSPECTOR.
6. 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.
7. 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.
8. CALL "MISS UTILITY" AT 1-800-257-7777 FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING EXCAVATION TO DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES.
9. CLEARING IS TO BE LIMITED TO THE "LIMIT OF GRADING" AS SHOWN ON THE PLANS.
10. ALL GRADING SHALL BE DONE IN SUCH A MANNER AS TO PROVIDE POSITIVE DRAINAGE.
11. ALL DISTURBED AREAS TO BE SEEDED AND MULCHED UNLESS OTHERWISE NOTED.
12. 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
13. THE NOTED UTILITY POLE RELOCATION AT THE BRIDGE ABUTMENT WIDENING SHALL BE PERFORMED BY OTHERS PRIOR TO BRIDGE CONSTRUCTION.
14. THE CONTRACTOR SHALL CONSTRUCT ALL DRIVEWAY TIE-INS IN-KIND TO THE LIMIT SHOWN ON THE PLANS.
15. TWO TO THREE DAYS BEFORE EXCAVATING IN THE VICINITY OF EXISTING GAS LINE, CONTACT MARYLAND'S 811 CENTER TO NOTIFY WASHINGTON GAS OF THE TIMING AND LOCATION OF THE INTENDED EXCAVATION. WAIT FOR WASHINGTON GAS OR REPRESENTATIVE TO ARRIVE AND MARK THE LOCATION OF THE EXISTING PIPELINE FACILITY PRIOR TO EXCAVATION. FOLLOW ALL REQUIREMENTS OF THE CODE OF FEDERAL REGULATIONS TITLE 49 SUBPART 196.
16. THE PERMITTEE SHALL CONTACT MS. STELLA O. IGBINEDION AT (240) 777-2190 TO REQUEST ANY FIELD ASSISTANCE BY THE MCDOT TRAFFIC ENGINEERING AND OPERATIONS SECTION.

DESIGN DESIGNATION

ROADWAY	BRINK ROAD	
CONTROLS / YEARS	2019	2039
AVERAGE DAILY TRAFFIC (A.D.T.)	13,800	16,600
DESIGN HOURLY VOLUME (D.H.V.)	9.5%	9.5%
DIRECTIONAL DISTRIBUTION	55%	55%
% TRUCKS – A.D.T.	10.2%	10.2%
% TRUCKS – D.H.V.	6.7%	6.7%
DESIGN SPEED M. P. H.	30 M.P.H.	
MASTER PLAN CLASSIFICATION	ARTERIAL (A-36)	
MAXIMUM ALLOWABLE SUPER ELEVATION	6%	
MAXIMUM ALLOWABLE GRADIENT	8%	
ANTICIPATED POSTED SPEED	30 M.P.H.	
DESIGN CRITERIA	AASHTO 2018: A POLICY ON GEOMETRIC DESIGN OF HIGHWAY AND STREETS	
DENSITY (U,S,R)		

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 Transportation "Drainage Design" dated November, 2013 (Rev. June 10, 2014)

I hereby certify that the estimated total amount of excavation and fill as shown on these plans has been computed to be ______ cubic yards of excavation and ________ cubic yards of fill and that the total area to be disturbed as shown on these plans has been determined to be ________ square feet.

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland,
License No. _______, Expiration Date: _____

DATE

_____________, P.E.
GANNETT FLEMING, INC.

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION MAINTENANCE CERTIFICATION

I hereby certify that the Department of Transportation will assume maintenance responsibilities for all stormwater management facilities as listed and shown, hereon, in accordance with the MEMORANDUM OF UNDERSTANDING between this Department and the Department of Environmental Protection dated September 1, 1986. If, for any reason, future improvements to the roadway are planned that would impact any of the stormwater management facilities included herein, this Department will notify the Department of Environmental Protection during the planning or early design stage for such improvements.

DATE

BRUCE E. JOHNSTON, P.E.
CHIEF, DIVISION OF TRANSPORTATION ENGINEERING

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

BRUCE E. JOHNSTON, P.E.
CHIEF, DIVISION OF TRANSPORTATION ENGINEERING

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.: XXXXX
Expiration Date: XX/XX/202X

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:		NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.
Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed Date	Reviewed Date	Reviewed Date
Approved Date	Approved Date	SEDIMENT CONTROL PERMIT NO.
SM FILE #		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.

KCI TECHNOLOGIES
Gannett Fleming
A Joint Venture

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

ATTACHMENT 7

CONVENTIONAL SYMBOLS
EXISTING CONSTRUCTION

PROPERTY LINE

EDGE OF ROADWAY PAVING

EXISTING GROUND CONTOURS (10') — 50

EXISTING GROUND CONTOURS (2') — 54

FENCE

EDGE OF WOODED AREAS

TREE (FREE STANDING)

WETLAND BUFFER — B — B

SIGN

LIGHT POLE

MAILBOX — M.B.

UTILITY POLE

STORM DRAIN — SD

WATER LINE — W

SANITARY — SS — SAN

GAS — G

ELECTRICAL HAND BOX - SIGNALS — H.B.

ELECTRIC (OVERHEAD) — POLE # — POLE #

CONVENTIONAL SYMBOLS
PROPOSED CONSTRUCTION

℄ CONSTRUCTION — 101 +50 102

CURB & GUTTER

TRAVERSE POINT

FULL DEPTH CONSTRUCTION

MILL AND RESURFACE

PAVEMENT REMOVAL

CONCRETE PAVEMENT

HMA BIKE PATH

PERVIOUS PAVEMENT

TRAFFIC BARRIER W BEAM

TRAFFIC BARRIER W BEAM MEDIAN BARRIER

APPROXIMATE LIMITS OF CUT AND/OR FILL — C — F

GRADING ELEVATION CONTOURS (10') — 50

GRADING ELEVATION CONTOURS (2') — 54

LIMIT OF DISTURBANCE — LOD

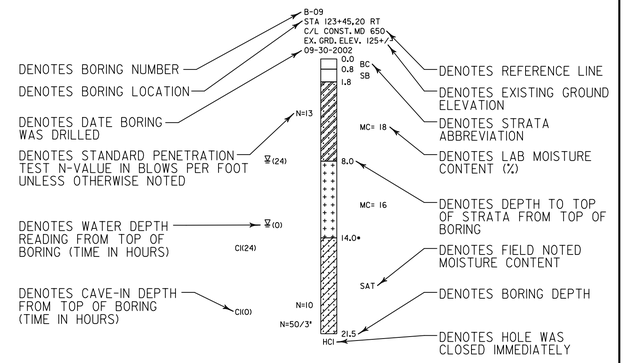
STORM DRAIN PIPE

ABBREVIATIONS

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

INFORMATION TO BE RECEIVED FROM OMT

SOIL BORING PROFILE
EXAMPLE



SOILS TEST DATA

BORING NUMBER	SAMPLE DEPTH	LL	PI	USDA	USC	MDD	OMC	REMARKS
B-09	1.8 - 8.0	18	NP	Sandy Loam	-	-	-	with Gravel
B-09	8.0 - 14.0	41	22	Silty Clay Loam	CL	121	12	-

SOILS LEGEND SAMPLES

A-3 SAND
A-2 SAND & FINES
A-2-4 SILTY SAND
A-2-2 SANDY SILT
A-2-7 CLAYEY SAND
A-7-2 SANDY CLAY
A-4 SILT
A-4-7 CLAYEY SILT
A-7-4 SILTY CLAY
A-7 CLAY
A-6 COLLOIDAL CLAY
A-5 MICA, DIATOMS

PLAN LOCATION OF SOIL BORINGS

BORING TARGETS AND PROFILES SCALE:
HORIZONTAL - NONE
VERTICAL - SEE PROFILE SHEETS

AO-ABOVE OPTIMUM
SAT-SATURATED
LIQ-LIQUEFIED

TS-TOPSOIL
RM-ROOT MAT
BC-BITUMINOUS CONCRETE
SB-STONE BASE
PCC-PORTLAND CEMENT CONCRETE

LL-LIQUID LIMIT (%)
PI-PLASTICITY INDEX (%)
NP-NON-PLASTIC
OMC-OPTIMUM MOISTURE CONTENT (%)
USC-UNIFIED SOIL CLASSIFICATION
USDA-UNITED STATES DEPARTMENT OF AGRICULTURE CLASSIFICATION

W/GR-WITH GRAVEL
W/RF-WITH ROCK FRAGMENTS

NOTES: SOIL SYMBOLS DENOTE MSMT CLASSIFICATIONS

ALL DIMENSIONS, DEPTHS AND ELEVATIONS ARE NOTED IN FEET

AN ASTERISK AT THE TOP DEPTH OF STRATA INDICATES THAT STRATA WAS VISUALLY CLASSIFIED BY DRILLER

MDD & OMC PER A.A.S.H.T.O. DESIGNATION T-180

N PER A.A.S.H.T.O. DESIGNATION T-206

UNLESS OTHERWISE NOTED ON PLANS, ALL SOIL SURVEY BORINGS FOR ROADWAY CONSTRUCTION WERE LEFT OPEN FOR 24 HOURS WITH NO EXCESS MOISTURE OR FREE WATER ENCOUNTERED DURING TIME OF SOIL SURVEY (09/2000 TO 06/2002)

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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

Designed by: YTD Drawn by: GMJ Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

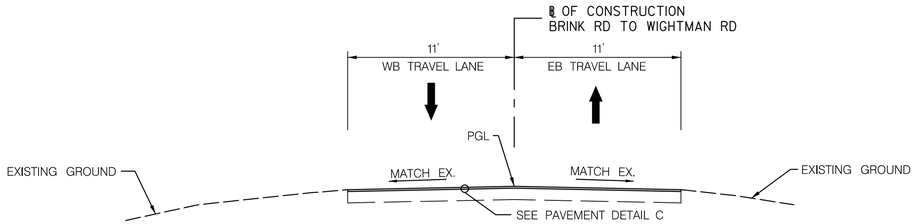
SYMBOLS AND ABBREVIATIONS

SCALE : N.T.S.

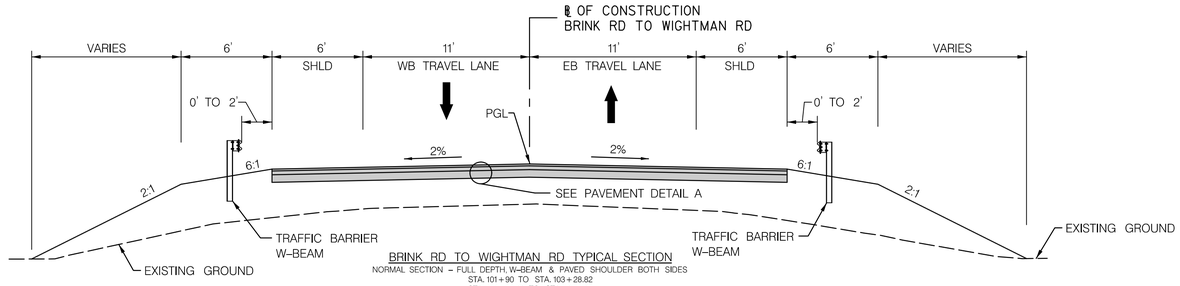
AB-01

Project No. : 501119 2 of 28

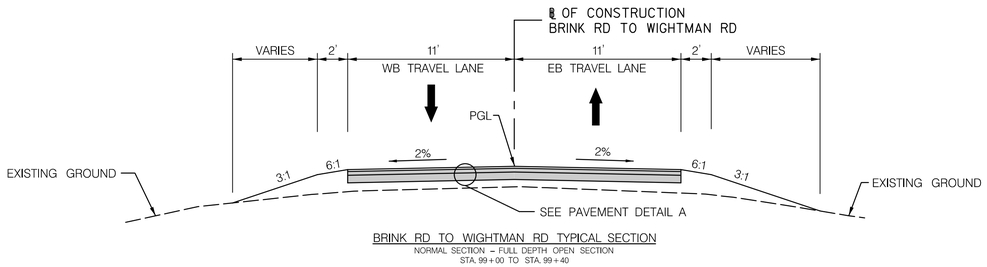
7/12/2002



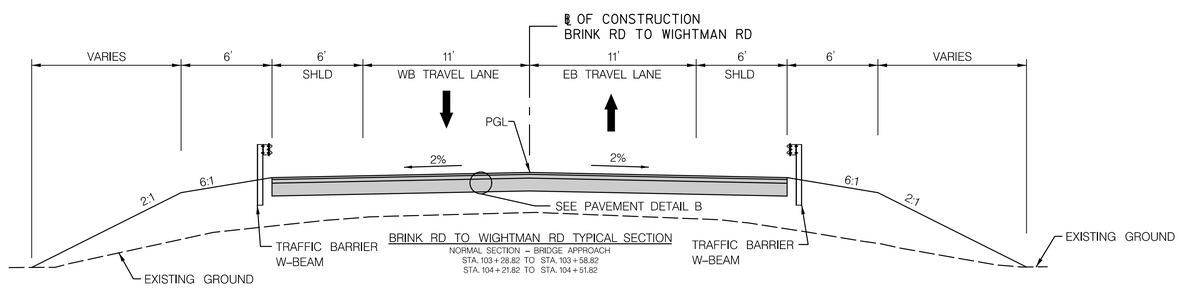
BRINK RD TO WIGHTMAN RD TYPICAL SECTION
NORMAL SECTION – RESURFACING OPEN SECTION, NO SHOULDERS
STA. 98+42 TO STA. 99+00



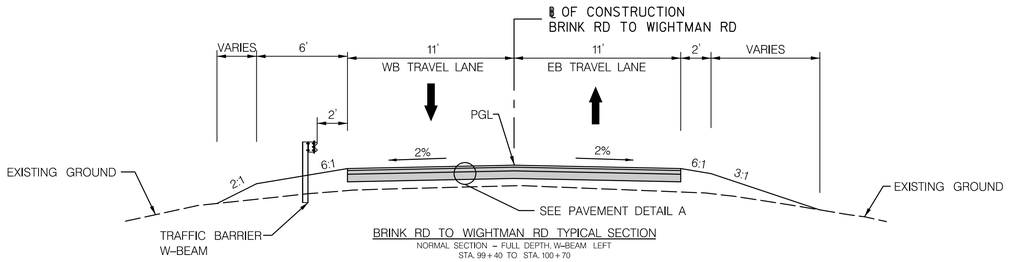
BRINK RD TO WIGHTMAN RD TYPICAL SECTION
NORMAL SECTION – FULL DEPTH, W-BEAM & PAVED SHOULDER BOTH SIDES
STA. 101+90 TO STA. 103+28.82
STA. 104+51.82 TO STA. 105+24



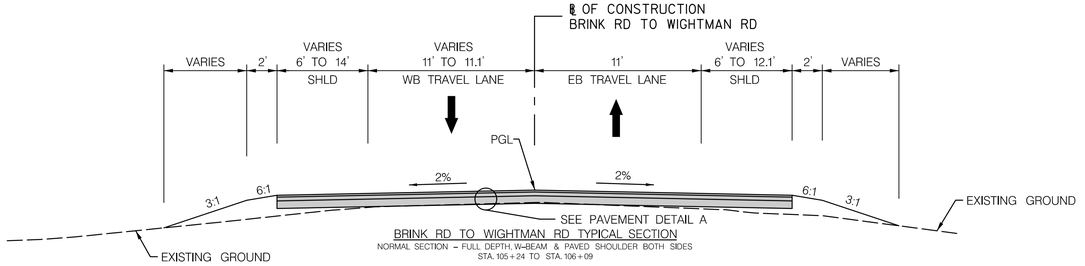
BRINK RD TO WIGHTMAN RD TYPICAL SECTION
NORMAL SECTION – FULL DEPTH OPEN SECTION
STA. 99+00 TO STA. 99+40



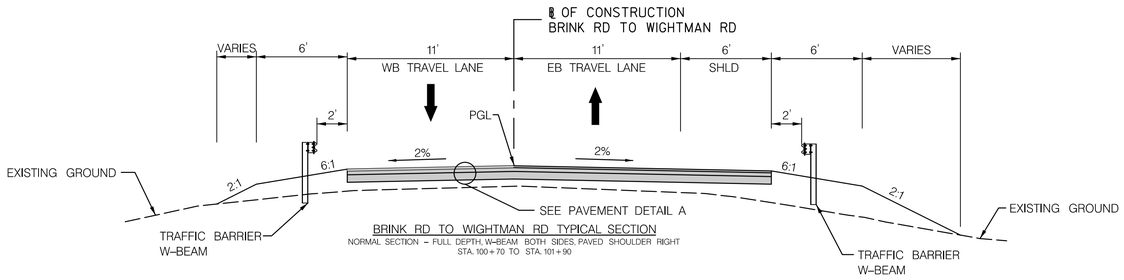
BRINK RD TO WIGHTMAN RD TYPICAL SECTION
NORMAL SECTION – BRIDGE APPROACH
STA. 103+28.82 TO STA. 103+58.82
STA. 104+21.82 TO STA. 104+51.82



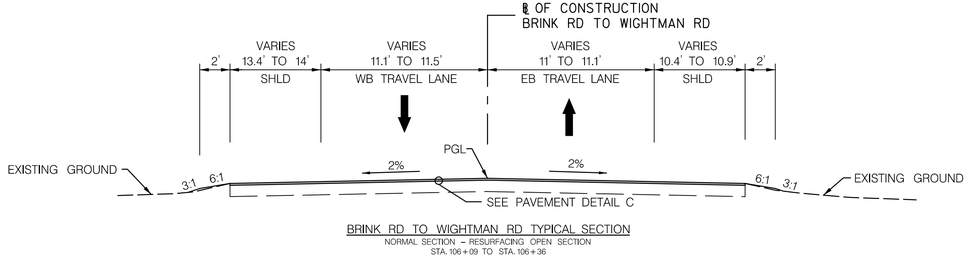
BRINK RD TO WIGHTMAN RD TYPICAL SECTION
NORMAL SECTION – FULL DEPTH, W-BEAM LEFT
STA. 99+40 TO STA. 100+70



BRINK RD TO WIGHTMAN RD TYPICAL SECTION
NORMAL SECTION – FULL DEPTH, W-BEAM & PAVED SHOULDER BOTH SIDES
STA. 105+24 TO STA. 106+09



BRINK RD TO WIGHTMAN RD TYPICAL SECTION
NORMAL SECTION – FULL DEPTH, W-BEAM BOTH SIDES, PAVED SHOULDER RIGHT
STA. 100+70 TO STA. 101+90



BRINK RD TO WIGHTMAN RD TYPICAL SECTION
NORMAL SECTION – RESURFACING OPEN SECTION
STA. 106+09 TO STA. 106+36

NOTE:
REFER TO STRUCTURAL PLANS FOR BRIDGE SECTION FROM STA. 103+58.82 TO 104+21.82

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES
Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: JSK Drawn by: JSK Checked by: TQD

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

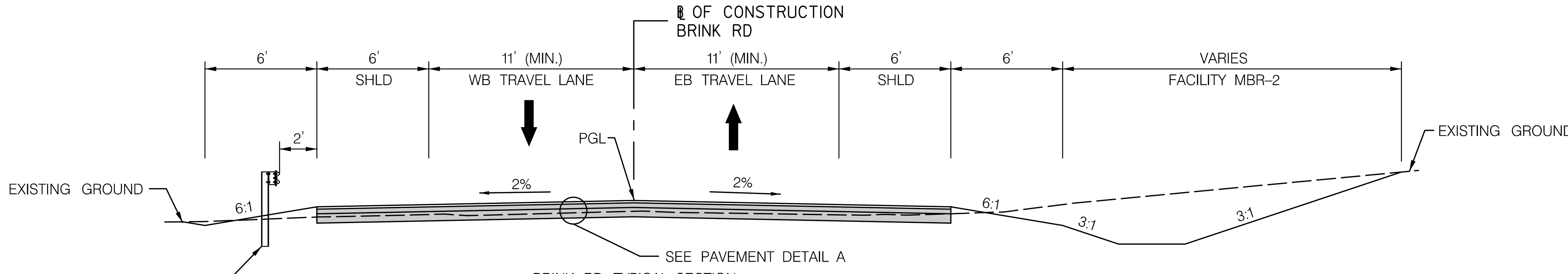
TYPICAL SECTION SHEET

SCALE : 1"=5'

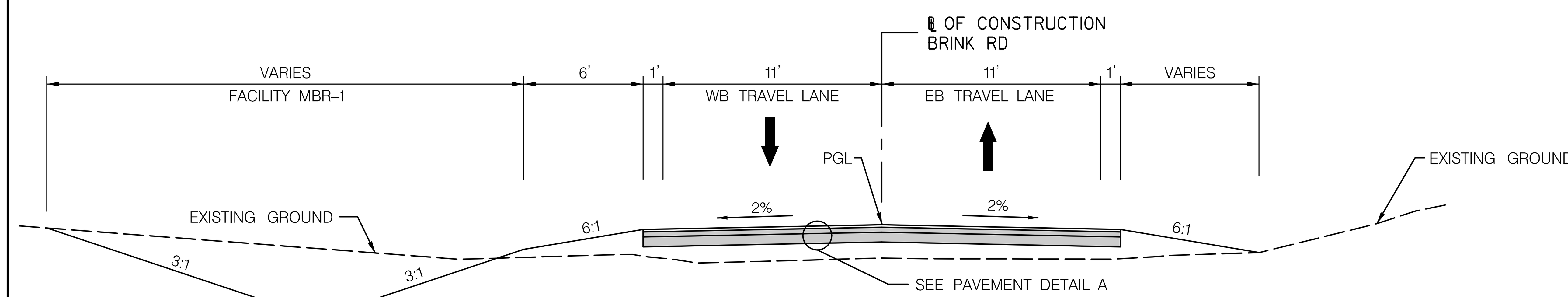
TS-01

Project No. : 501119

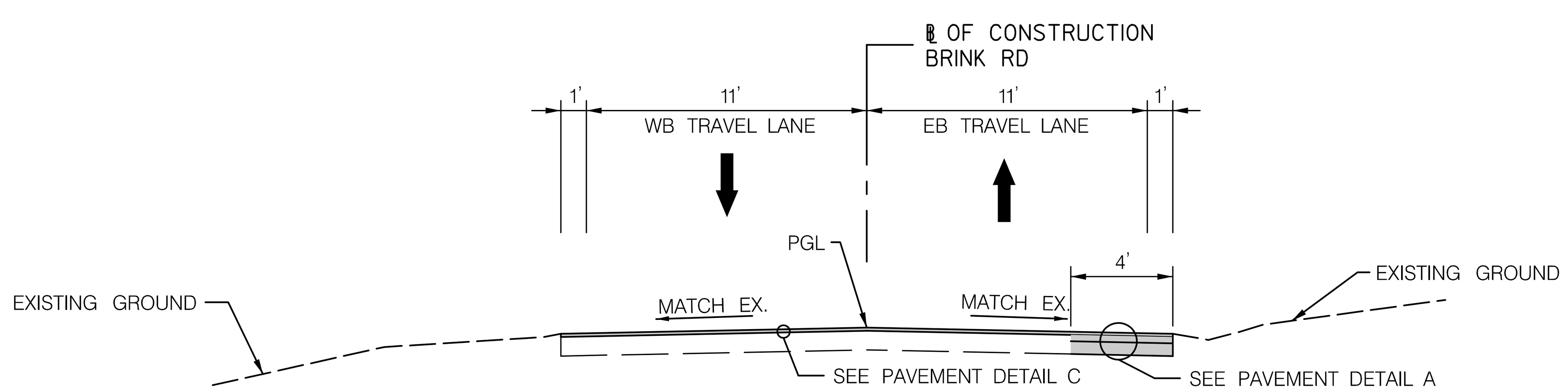
7/1/2022



BRINK RD TYPICAL SECTION
NORMAL SECTION – FULL DEPTH OPEN SECTION, PAVED SHOULDERS, MBR-2 RIGHT
STA. 200+00 TO STA. 200+82



BRINK RD TYPICAL SECTION
NORMAL SECTION – FULL DEPTH OPEN SECTION, MBR-1 LEFT
STA. 200+82 TO STA. 202+00



BRINK RD TYPICAL SECTION
NORMAL SECTION – RESURFACING OPEN SECTION, WIDENING RIGHT
STA. 202+00 TO STA. 202+32

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: JSK Drawn by: JSK Checked by: TQD

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

TYPICAL SECTION SHEET

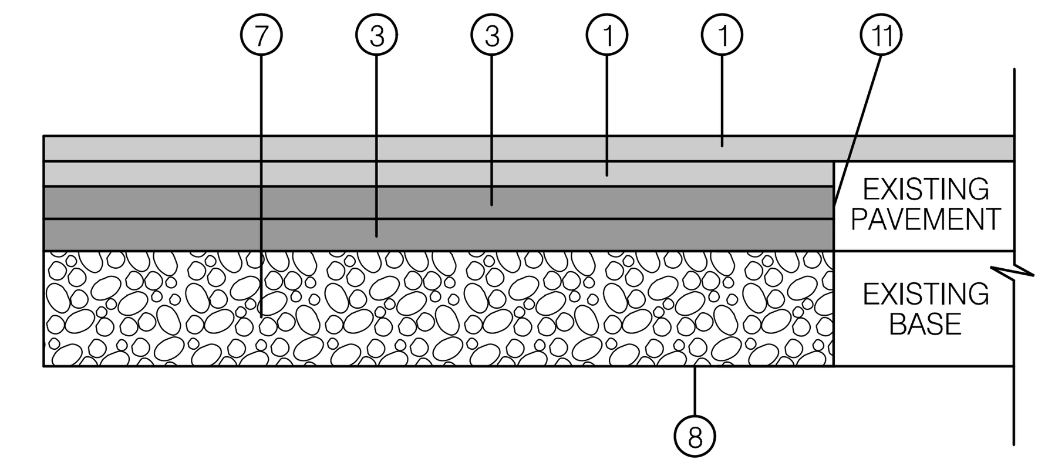
SCALE : 1"=5'

TS-02

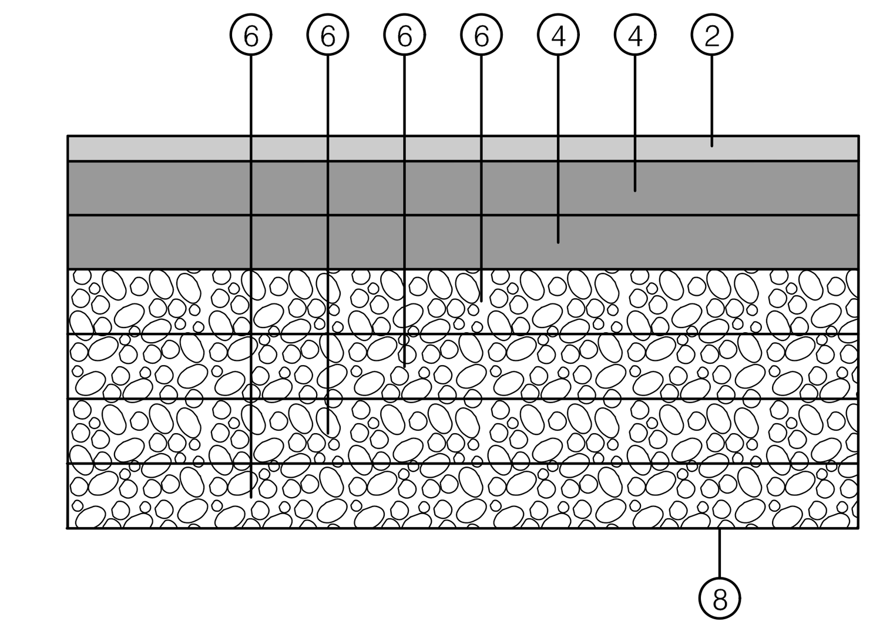
Project No. : 501119

PAVEMENT LEGEND

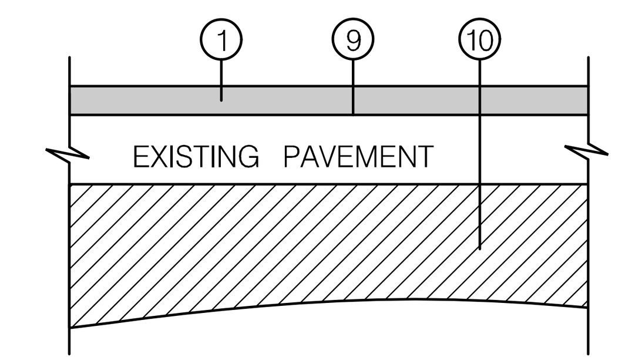
1. 2" SUPERPAVE ASPHALT MIX 9.5MM FOR SURFACE, PG 64S-22, LEVEL 2
2. 2" SUPERPAVE ASPHALT MIX 12.5MM FOR SURFACE, PG 64S-22, LEVEL 2
3. 3" SUPERPAVE ASPHALT MIX 19.0MM FOR BASE, PG 64S-22, LEVEL 2
4. 5" SUPERPAVE ASPHALT MIX 25.0MM FOR BASE, PG 64S-22, LEVEL 2
5. PARTIAL DEPTH PATCH
   6" SUPERPAVE ASPHALT MIX 19.0MM FOR PARTIAL-DEPTH PATCH, PG 64S-22, LEVEL 2 OR TO TOP OF CONCRETE PAVEMENT, WHICHEVER COMES FIRST
6. 6.0" GRADED AGGREGATE BASE COURSE
7. 8.0" GRADED AGGREGATE BASE COURSE
8. TOP OF SUBGRADE AND LIMIT OF CLASS I EXCAVATION
9. TOP OF EXISTING PAVEMENT AFTER 2" FINE MILLING
10. EXISTING SUBGRADE
11. FULL-DEPTH SAW CUT (SEE NOTE 5)
12. WEDGE/LEVEL (SEE NOTE 2)



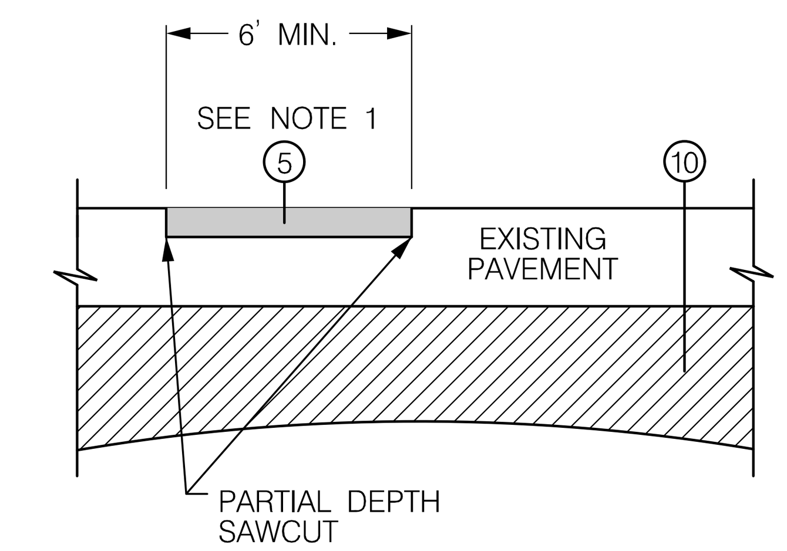
(A) FULL DEPTH PAVEMENT DETAIL
SCALE: N.T.S.



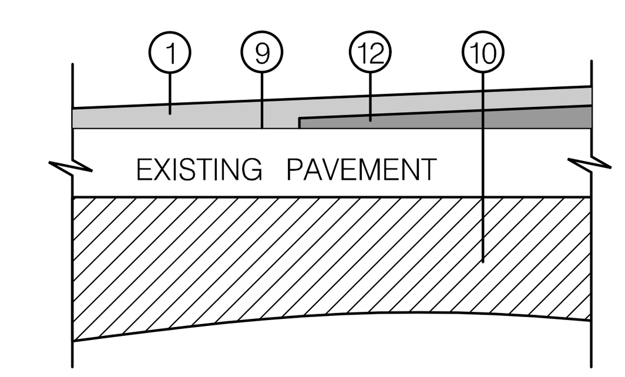
(B) BRIDGE APPROACH PAVEMENT DETAIL
SCALE: N.T.S.



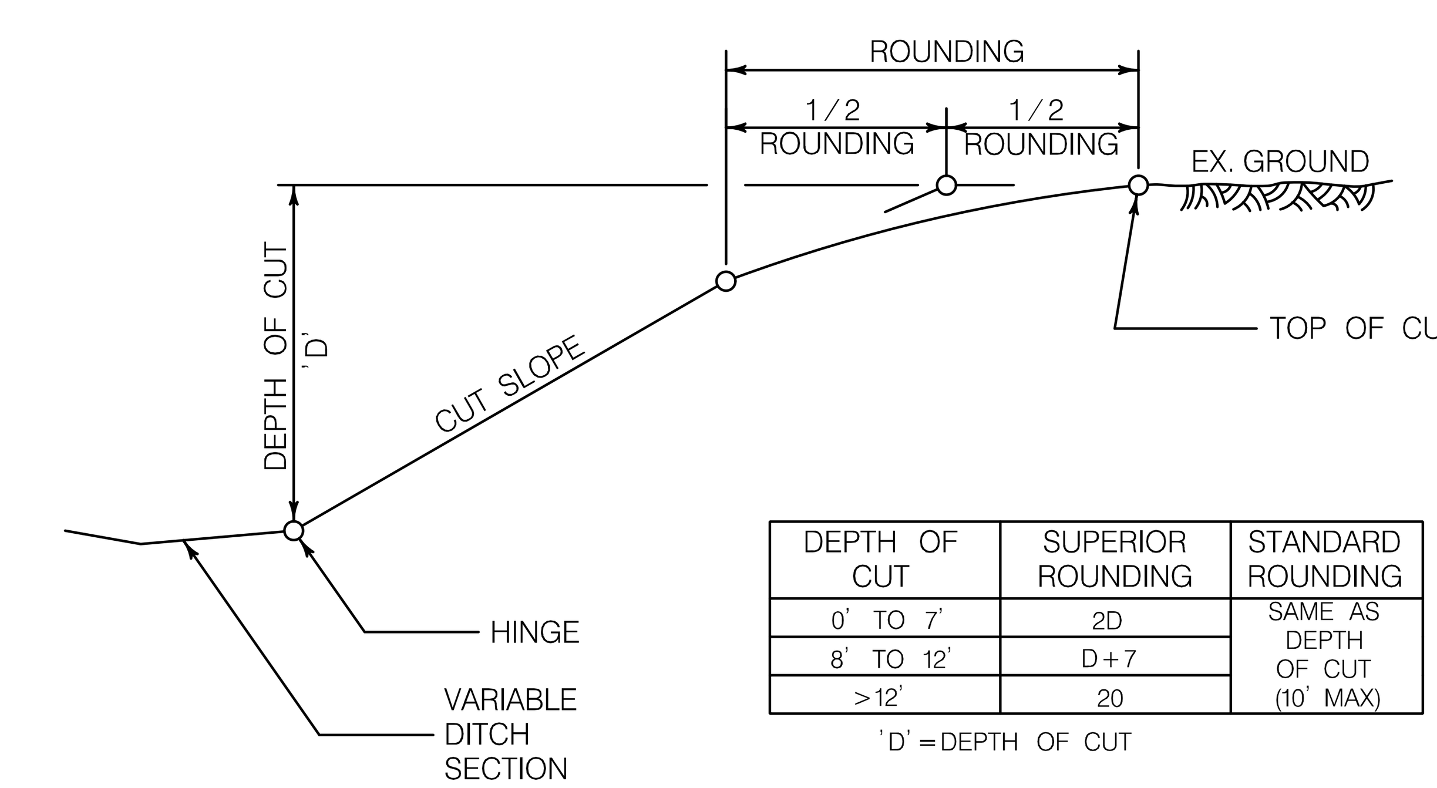
(C) FINE MILLING AND OVERLAY DETAIL



(D) PARTIAL DEPTH PATCHING DETAIL
AS DIRECTED BY AN SHA APPROVED ENGINEER
SCALE: N.T.S.



(E) WEDGE AND LEVEL
SCALE: N.T.S.



DEPTH OF CUT	SUPERIOR ROUNDING	STANDARD ROUNDING
0' TO 7'	2D	SAME AS DEPTH OF CUT (10' MAX)
8' TO 12'	D+7	
>12'	20	

'D' = DEPTH OF CUT

CUT SLOPE ROUNDING DETAIL

GENERAL NOTES

1. PATCHING SHALL BE DONE PRIOR TO FINE MILLING OF EXISTING PAVEMENT. CONTRACTOR SHALL MATCH EXISTING PAVEMENT CONDITIONS IF EXISTING PAVEMENT IS COMPOSITE (SEE MD 578.03-01 FOR COMPOSITE DETAILS). PAYMENT FOR SAWCUT WILL BE INCIDENTAL TO PATCHING ITEM.
2. WEDGE/LEVEL SHALL BE USED TO MAKE GRADE AND SUPERELEVATION ADJUSTMENTS AS DIRECTED BY ENGINEER. USE THE FOLLOWING MATERIAL:

   FOR WEDGE/LEVELING 0" TO 2" LIFT:
   SUPERPAVE ASPHALT MIX SUPERPAVE 9.5MM FOR WEDGE/LEVEL, PG 64S-22, LEVEL 2 (1" MINIMUM AND 2" MAXIMUM LIFT THICKNESS)

   FOR WEDGE/LEVELING 2" TO 11" LIFT:
   SUPERPAVE ASPHALT MIX SUPERPAVE 19.0MM FOR WEDGE/LEVEL, PG 64S-22, LEVEL 2
3. CONTRACTOR SHALL FULL DEPTH SAWCUT THROUGH EXISTING ASPHALT PAVEMENT AND BASE ONLY. REMOVE EXISTING ROADWAY AND EXCAVATE AS NECESSARY TO CONSTRUCT PROPOSED PAVEMENT. PAYMENT FOR SAWCUTTING WILL BE INCIDENTAL TO EXCAVATION.
4. IN AREAS WHERE EXISTING PAVEMENT IS BEING REMOVED, THE LIMIT OF CLASS 1 EXCAVATION SHALL BE AT THE BOTTOM OF THE BOUND MATERIALS IN THE EXISTING PAVEMENT OR AT THE TOP OF THE SUBGRADE, WHICHEVER IS LOWER.
5. CONTRACTOR SHALL PERFORM ALL TRENCHING PAVEMENT REPAIRS IN ACCORDANCE WITH MD 578.01 AND SHALL MATCH EXISTING PAVEMENT SECTIONS.

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: JSK Drawn by: JSK Checked by: TQD

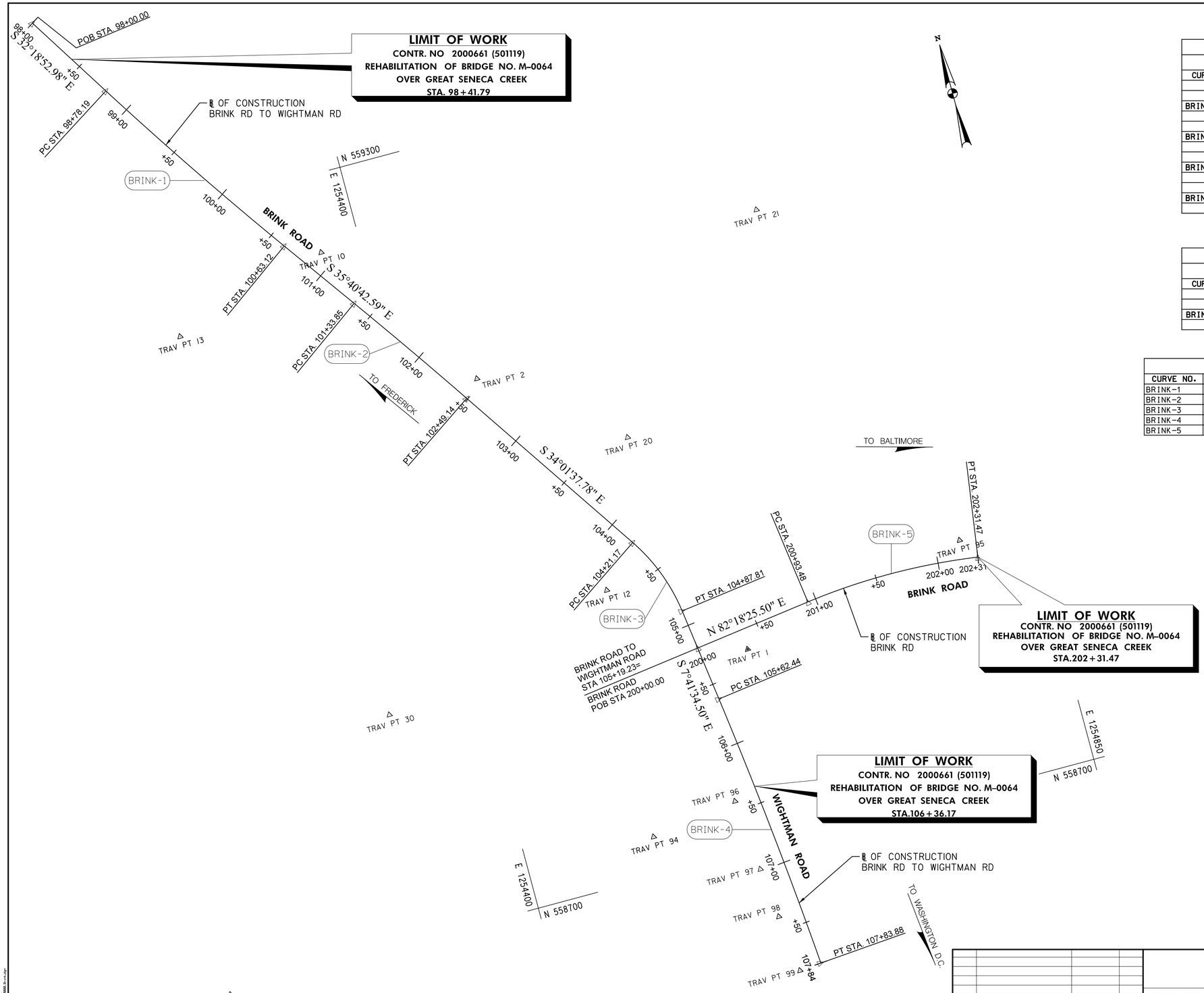
REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

PAVEMENT DETAILS

SCALE : AS SHOWN

PD-01

Project No. : 501119



LIMIT OF WORK
CONTR. NO 2000661 (501119)
REHABILITATION OF BRIDGE NO. M-0064
OVER GREAT SENECA CREEK
STA. 98+41.79

LIMIT OF WORK
CONTR. NO 2000661 (501119)
REHABILITATION OF BRIDGE NO. M-0064
OVER GREAT SENECA CREEK
STA.202+31.47

LIMIT OF WORK
CONTR. NO 2000661 (501119)
REHABILITATION OF BRIDGE NO. M-0064
OVER GREAT SENECA CREEK
STA.106+36.17

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

PROJECT COORDINATES					
BASELINE OF CONSTRUCTION BRINK ROAD TO WIGHTMAN ROAD					
CURVE	DESCRIPTION	STATION	NORTH	EAST	BEARING
	POB	98+00.00	559,471.1665	1,254,196.7493	S 32°18′52.98″ E
	PC	98+78.19	559,405.0858	1,254,238.5476	
BRINK-1	PI	99+70.68	559,326.9174	1,254,287.9917	
	PT	100+63.12	559,251.7848	1,254,341.9372	S 35°40′42.59″ E
	PC	101+33.85	559,194.3337	1,254,383.1873	
BRINK-2	PI	101+91.50	559,147.5073	1,254,416.8089	
	PT	102+49.14	559,099.7314	1,254,449.0671	S 34°01′37.78″ E
	PC	104+21.17	558,957.1571	1,254,545.3330	
BRINK-3	PI	104+55.09	558,929.0438	1,254,564.3151	
	PT	104+87.81	558,895.4274	1,254,568.8560	S 7°41′34.50″ E
	PC	105+62.44	558,821.4659	1,254,578.8467	
BRINK-4	PI	106+73.19	558,711.7149	1,254,593.6718	
	PT	107+83.88	558,601.3119	1,254,602.4035	S 4°31′19.54″ E

PROJECT COORDINATES					
BASELINE OF CONSTRUCTION BRINK ROAD					
CURVE	DESCRIPTION	STATION	NORTH	EAST	BEARING
	POB	200+00.00	558,864.2867	1,254,573.0625	N 82°18′25.50″ E
	PC	200+93.48	558,876.7998	1,254,665.6972	
BRINK-5	PI	201+62.92	558,886.0954	1,254,734.5134	
	PT	202+31.47	558,876.2541	1,254,803.2538	N 81°51′09.13″ W

CURVE DATA						
CURVE NO.	Δ	Dc	R	T	L	E
BRINK-1	3°21′49.62″ (LT)	1°49′08.09″	3150.0000′	92.4934′	184.9336′	1.3576′
BRINK-2	1°39′04.82″ (RT)	1°25′56.62″	4000.0000′	57.6465′	115.2851′	0.4154′
BRINK-3	26°20′03.28″ (RT)	39°30′51.59″	145.0000′	33.9217′	66.6448′	3.9150′
BRINK-4	3°10′14.96″ (RT)	1°25′54.90″	4001.3333′	110.7478′	221.4390′	1.5323′
BRINK-5	15°50′25.37″ (RT)	11°28′43.71″	499.1440′	69.4412′	137.9967′	4.8072′

BASELINE CONTROL COORDINATES			
TRAVERSE POINT NUMBER	NORTH	EAST	ELEVATION
1	558,853.1927	1,254,610.6744	359.7294
2	559,112.4869	1,254,460.8543	357.4742
10	559,239.3504	1,254,368.6920	356.4194
12	558,926.3172	1,254,516.1927	354.3714
13	559,204.3592	1,254,245.0357	368.9569
20	559,037.5865	1,254,562.8508	353.7672
21	559,183.5002	1,254,706.2982	354.5862
30	558,876.1865	1,254,326.6712	353.4905
31	558,697.0824	1,254,149.9576	353.2559
61	558,843.4101	1,255,153.5651	393.3552
94	558,730.4944	1,254,501.6244	353.7613
95	558,892.6139	1,254,792.9810	368.4490
96	558,740.9526	1,254,570.3868	359.6168
97	558,684.4724	1,254,575.8013	361.8301
98	558,644.8693	1,254,580.2049	363.9113
99	558,599.8273	1,254,585.2493	366.6768

KCI TECHNOLOGIES
Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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

Designed by: JSK Drawn by: JSK Checked by: TQD

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

GEOMETRY SHEET

SCALE : 1"=40' GS-01

Project No. : 501119 6 of 28

7/11/2022

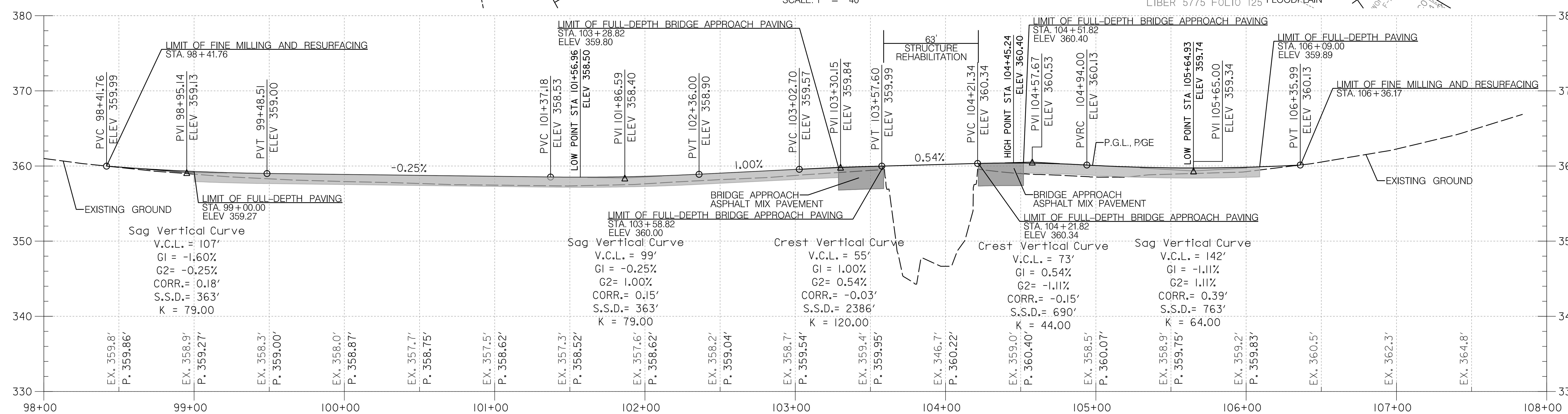
MARKING DETAILS:

- (A) 5 INCH WHITE THERMOPLASTIC PAVEMENT MARKINGS LINES – SOLID
- (B) 5 INCH YELLOW THERMOPLASTIC PAVEMENT MARKINGS LINES – DOUBLE SOLID
- (C) 16 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS LINES – SOLID
- (D) 24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS LINES – SOLID

MONTGOMERY COUNTY
MNCPPC GOSHEN BRANCH PARK
EXISTING PROPERTY LINE
FLOODPLAIN
TEMPORARY CONSTRUCTION EASEMENT
MAINTENANCE EASEMENT
TO BALTIMORE
BRINK ROAD
LIMIT OF WORK
CONTR. NO 2000661 (501119)
REHABILITATION OF BRIDGE NO. M-0064
OVER GREAT SENECA CREEK
STA.202+31.47
TRAFFIC BARRIER W-BEAM ONE-SIDED PARALLEL END TREATMENT (TYPE C)
TRAFFIC BARRIER W-BEAM ONE-SIDED DOWNSTREAM END TREATMENT (TYPE K)
TRAFFIC BARRIER W-BEAM RADIUS ANCHORAGE (TYPE L)
SIDEWALK CONNECTION TO GREENWAY TRAIL
℄ OF CONSTRUCTION BRINK RD TO WIGHTMAN RD
PROP ROW
WETLAND BOUNDARY
EXISTING PROPERTY LINE
℄ OF CONSTRUCTION BRINK RD
LIMIT OF WORK
CONTR. NO 2000661 (501119)
REHABILITATION OF BRIDGE NO. M-0064
OVER GREAT SENECA CREEK
STA.106+36.17
TO FREDERICK
BRINK ROAD
98+00
99+00
100+00
101+00
102+00
103+00
104+00
105+00
106+00
107+00
107+84
EXISTING ROW
FLOODPLAIN
PROP ROW
WETLAND BOUNDARY
SEE DRIVEWAY PROFILE SHEET PR-01.
WIGHTMAN ROAD
TO WASHINGTON D.C.
LIMIT OF WORK
CONTR. NO 2000661 (501119)
REHABILITATION OF BRIDGE NO. M-0064
OVER GREAT SENECA CREEK
STA.98+41.79
MONTGOMERY COUNTY MARYLAND
TAX MAP FV41 PARCEL N717
WIGHTMAN RD
LIBER 5775 FOLIO 125

ROADWAY PLAN – BRINK ROAD OVER GREAT SENECA CREEK

SCALE: 1" = 40'



LIMIT OF FINE MILLING AND RESURFACING
STA. 98+41.76
LIMIT OF FULL-DEPTH BRIDGE APPROACH PAVING
STA. 103+28.82
ELEV 359.80
63' STRUCTURE REHABILITATION
LIMIT OF FULL-DEPTH BRIDGE APPROACH PAVING
STA. 104+51.82
ELEV 360.40
LIMIT OF FULL-DEPTH PAVING
STA. 106+09.00
ELEV 359.89
LIMIT OF FINE MILLING AND RESURFACING
STA. 106+36.17
PVC 98+41.76 ELEV 359.99
PVI 98+95.14 ELEV 359.13
PVT 99+48.51 ELEV 359.00
PVC 101+37.18 ELEV 358.53
LOW POINT STA 101+56.96 ELEV 358.50
PVI 101+86.59 ELEV 358.40
PVT 102+36.00 ELEV 358.90
PVC 103+02.70 ELEV 359.57
PVI 103+30.15 ELEV 359.84
PVT 103+57.60 ELEV 359.99
PVC 104+21.34 ELEV 360.34
HIGH POINT STA 104+45.24 ELEV 360.40
PVI 104+57.67 ELEV 360.53
PVRC 104+94.00 ELEV 360.13
LOW POINT STA 105+64.93 ELEV 359.74
PVI 105+65.00 ELEV 359.34
PVT 106+35.99 ELEV 360.13
P.G.L. PGE
-0.25%
1.00%
0.54%
EXISTING GROUND
LIMIT OF FULL-DEPTH PAVING
STA. 99+00.00
ELEV 359.27
BRIDGE APPROACH ASPHALT MIX PAVEMENT
LIMIT OF FULL-DEPTH BRIDGE APPROACH PAVING
STA. 103+58.82
ELEV 360.00
LIMIT OF FULL-DEPTH BRIDGE APPROACH PAVING
STA. 104+21.82
ELEV 360.34
Sag Vertical Curve
V.C.L. = 107'
G1 = -1.60%
G2= -0.25%
CORR.= 0.18'
S.S.D.= 363'
K = 79.00
Sag Vertical Curve
V.C.L. = 99'
G1 = -0.25%
G2= 1.00%
CORR.= 0.15'
S.S.D.= 363'
K = 79.00
Crest Vertical Curve
V.C.L. = 55'
G1 = 1.00%
G2= 0.54%
CORR.= -0.03'
S.S.D.= 2386'
K = 120.00
Crest Vertical Curve
V.C.L. = 73'
G1 = 0.54%
G2= -1.11%
CORR.= -0.15'
S.S.D.= 690'
K = 44.00
Sag Vertical Curve
V.C.L. = 142'
G1 = -1.11%
G2= 1.11%
CORR.= 0.39'
S.S.D.= 763'
K = 64.00
EX. 359.8' P. 359.86'
EX. 358.9' P. 359.27'
EX. 358.3' P. 359.00'
EX. 358.0' P. 358.87'
EX. 357.7' P. 358.75'
EX. 357.5' P. 358.62'
EX. 357.3' P. 358.52'
EX. 357.6' P. 358.62'
EX. 358.2' P. 359.04'
EX. 358.7' P. 359.54'
EX. 359.4' P. 359.95'
EX. 346.7' P. 360.22'
EX. 359.0' P. 360.40'
EX. 358.5' P. 360.07'
EX. 358.9' P. 359.75'
EX. 359.2' P. 359.83'
EX. 360.5'
EX. 362.3'
EX. 364.8'
380
370
360
350
340
330
98+00
99+00
100+00
101+00
102+00
103+00
104+00
105+00
106+00
107+00
108+00

ROADWAY PROFILE – BRINK ROAD TO WIGHTMAN ROAD

SCALE: HORIZONTAL 1" = 40'
VERTICAL 1" = 8'

LEGEND

- FINE MILLING/OVERLAY
- FULL DEPTH BRIDGE APPROACH PAVING
- FULL DEPTH PAVING
- PAVEMENT TO BE REMOVED
- TRAFFIC BARRIER W BEAM

NOTES:

1. SEE SHEET PR-01 FOR BRINK RD AND DRIVEWAY PROFILES.
2. EXISTING STOP SIGNS, TRAIL SIGNS, OR OTHER SIGNS SHALL BE RELOCATED AS NEEDED.

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: JSK   Drawn by: JSK   Checked by: TQD

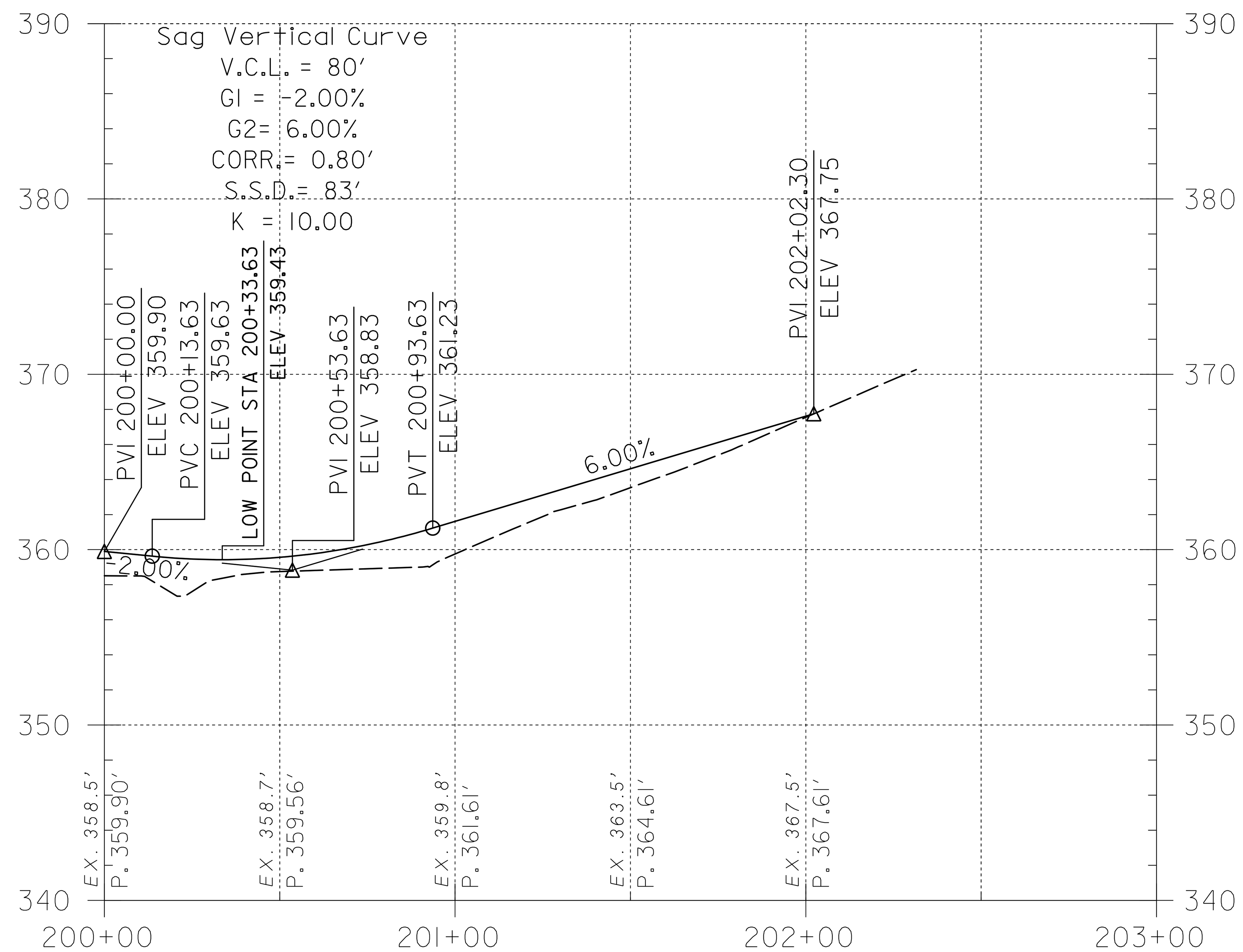
REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

ROADWAY PLAN SHEET

SCALE: 1"=40'

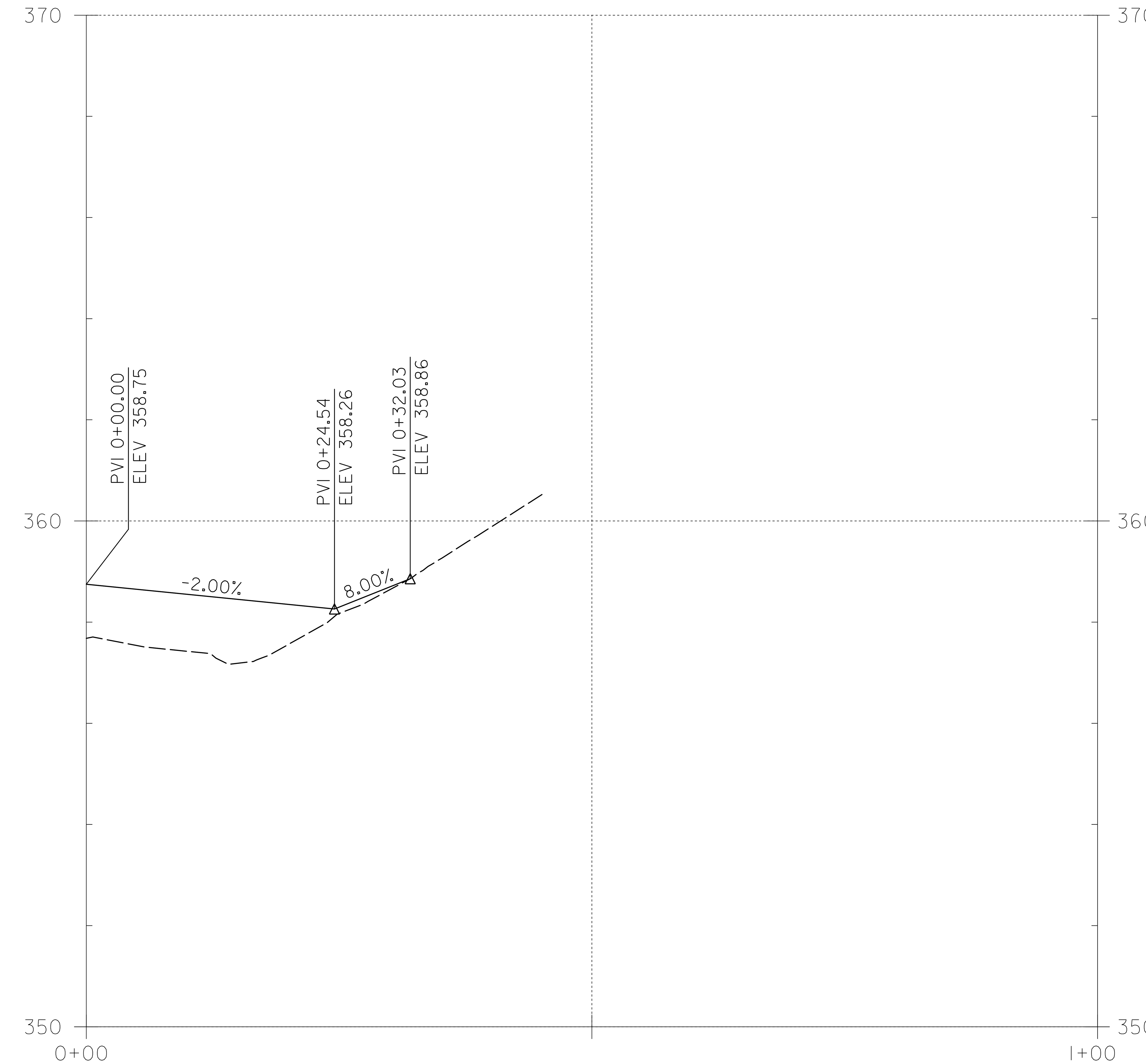
PS-01

Project No.: 501119   7 of 28



BASELINE OF CONSTRUCTION BRINK ROAD

SCALE HORIZONTAL: 1" = 40'
VERTICAL: 1" = 8'



DRIVEWAY PROFILE

SCALE HORIZONTAL: 1" = 10'
VERTICAL: 1" = 2'

FOUNDATION REVIEW
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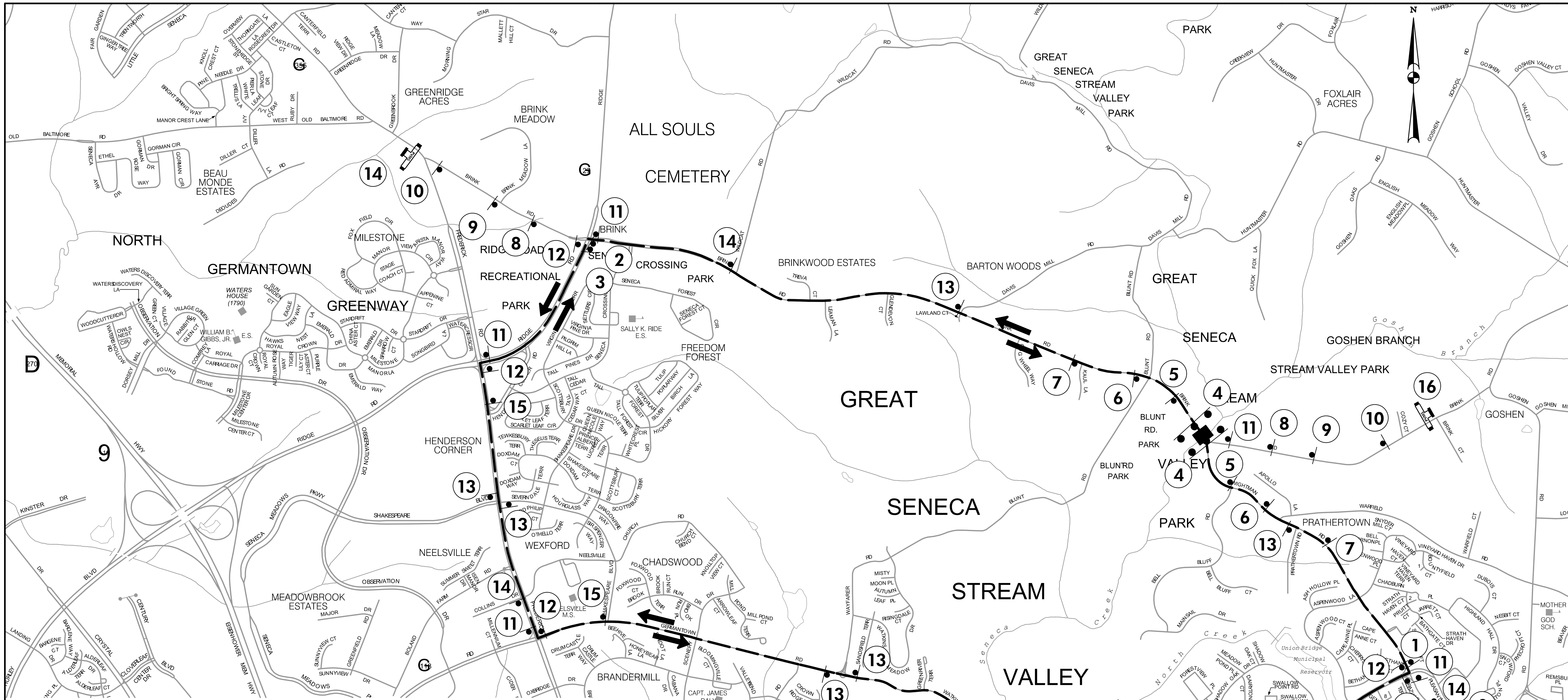
REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

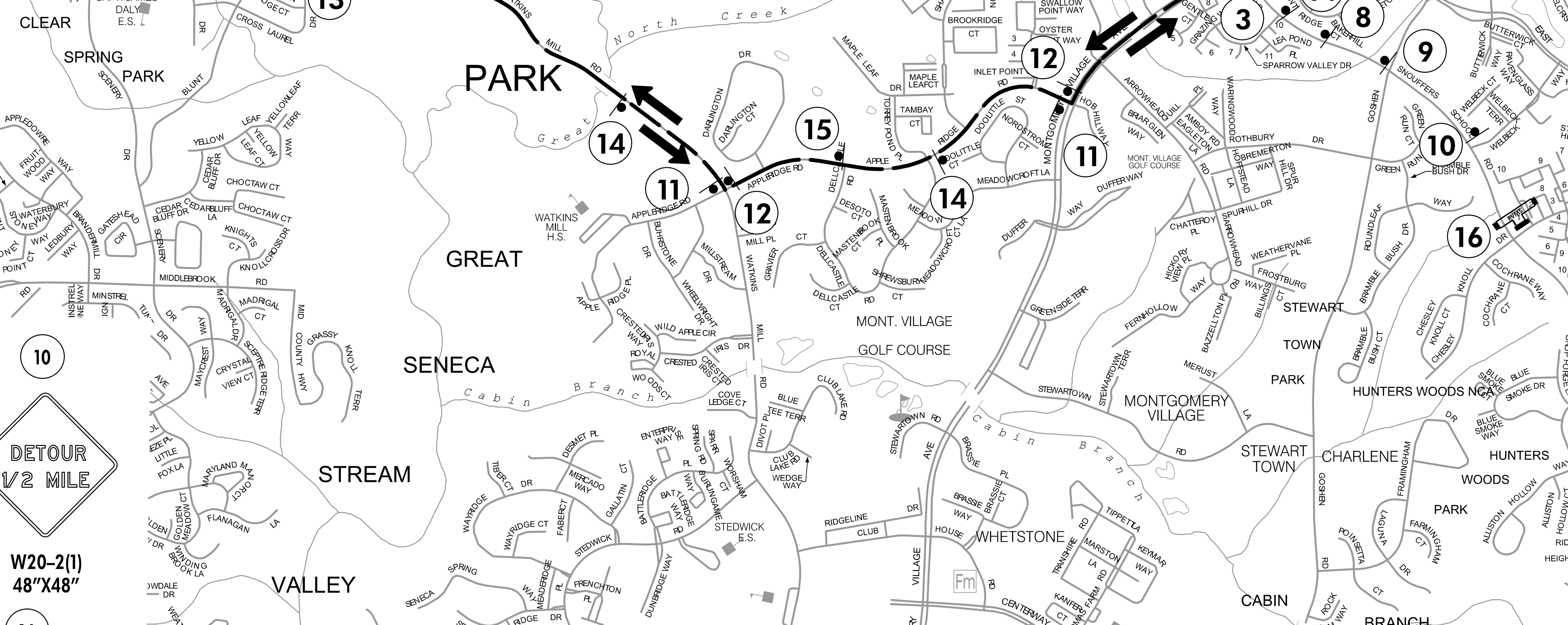
ROADWAY PROFILE

SCALE : AS SHOWN

PR-01

Project No. : 501119 8 of 28





GENERAL NOTES

(1) ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE MONTGOMERY COUNTY, MD SHA WORK ZONE TRAFFIC CONTROL STANDARDS AND THE MD MUTCD AND SUBSEQUENT REVISIONS ADOPTED BY THE STATE OF MARYLAND, THE PROJECT BOOK OF SPECIAL PROVISIONS, AND THE OTHER CONTRACT DOCUMENTS.

(2) PAVEMENT MARKINGS NO LONGER APPLICABLE SHALL BE REMOVED COMPLETELY AS DIRECTED BY THE ENGINEER.

(3) TEMPORARY PAINT SHALL BE USED ON PAVED SURFACES ONLY AND IS TO BE MAINTAINED TO ENSURE CONTINUOUS REFLECTIVITY AND VISIBILITY. TEMPORARY PAINT SHALL NOT BE USED ON THE FINAL SURFACE. BLACK PAINT SHALL NOT BE PERMITTED.

(4) TEMPORARY TAPE SHALL BE PERMITTED ON EITHER ASPHALT OR CONCRETE SURFACES.

(5) ALL EXISTING SIGNS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE CONSTRUCTION UNLESS A CHANGE IS DIRECTED BY THE ENGINEER.

(6) VARIABLE MESSAGE SIGN(S) MESSAGES MAY BE MODIFIED AS DIRECTED BY THE ENGINEER.

(7) ADVANCE WARNING SIGNS SHALL BE INSTALLED AT A MINIMUM SPACING OF 200 FEET TO AN EXISTING SIGN, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

(8) SIGNS USED FOR TEMPORARY TRAFFIC CONTROL THAT ARE NOT APPLICABLE FOR A PARTICULAR CONSTRUCTION PHASE SHALL BE REMOVED OR COMPLETELY COVERED WITH A NON-TRANSPARENT MATERIAL.

(9) EXCAVATIONS IN AREAS WHERE THE WORK BUFFER IS LESS THAN ONE LANE SHALL BE BACKFILLED WITH GAB FOR MOT PRIOR TO THE END OF THE WORK DAY IN CONFORMANCE WITH STD. MD 104.01-28 OR APPLICABLE MONTGOMERY COUNTY STANDARDS.

(10) NO WORK IS TO BEGIN UNTIL ALL ADVANCE WARNING SIGNS, CHANNELIZATION DEVICES, AND PAVEMENT MARKINGS ARE IN PLACE AND OPERATIONAL.

(11) OBJECT MARKER SIGNS AND WALL MARKERS SHALL BE INSTALLED ON CRASH CUSHIONS AND TEMPORARY CONCRETE TRAFFIC BARRIER, AS PER STDS. MD 104.01-23 THRU MD 104.01-25 OR APPLICABLE MONTGOMERY COUNTY STANDARDS.

(12) TYPICAL APPLICATIONS TO BE USED FOR OFF-PEAK HOUR WORK MAY BE MODIFIED AS REQUIRED BASED ON FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS

No.	Sign	Designation	Size
1	ROAD CLOSED 1 MILES AHEAD LOCAL TRAFFIC ONLY	R11-3A	60"X30"
2	ROAD CLOSED 2 MILES AHEAD LOCAL TRAFFIC ONLY	R11-3A	60"X30"
3	END DETOUR	M4-8a	36"X24"
4	ROAD CLOSED	R11-2	48"X30" TO BE MOUNTED ON TYPE III BARRICADE
5	ROAD CLOSED 800 FT	W20-1(1)	48"X48"
6	ROAD CLOSED 1500 FT	W20-1(1)	48"X48"
7	ROAD CLOSED ½ MILE	W20-1(1)	48"X48"
8	DETOUR 800 FT	W20-2	48"X48"
9	DETOUR 1500 FT	W20-2(1)	48"X48"
10	DETOUR 1/2 MILE	W20-2(1)	48"X48"
11	BRINK RD / DETOUR (left arrow)	M4-9L	48"48"
12	BRINK RD / DETOUR (right arrow)	M4-9R	48"48"
13	BRINK RD / DETOUR (up arrow)	M4-9 (MOD.)	48"48"
14	BRINK RD / DETOUR (left turn arrow)	M4-9L (MOD.)	48"48"
15	BRINK RD / DETOUR (right turn arrow)	M4-9R (MOD.)	48"48"
16	BRINK ROAD TO BE CLOSED / ON OR ABOUT XXXXXX	2 WEEKS IN ADVANCE OF CLOSURE	PVMS

LEGEND

- DETOUR ROUTE
- SIGN AND POST
- TYPE III BARRICADE
- WORK AREA
- DETOUR FLOW ARROW

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date
APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: JSK Drawn by: JSK Checked by: GW

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

MAINTENANCE OF TRAFFIC
DETOUR PLAN

SCALE : 1"=1000'

MT-01

Project No. : 501119 9 of 28

EROSION AND SEDIMENT CONTROL STANDARD NOTES

DPS | Montgomery County Department of Permitting Services
255 Rockville Pike, 2nd Floor
Rockville, MD 20850-4166
Phone: 311 in Montgomery County or (240)777-0311
Fax (240)777-6262
http://www.montgomerycountymd.gov/permittingservices

STANDARD EROSION AND SEDIMENT CONTROL NOTES

1. The permittee shall notify the Department of Permitting Services (DPS) forty-eight (48) hours before commencing any land disturbing activity and, unless waived by the Department, shall be required to hold a pre-construction meeting between them or their representative, their engineer and an authorized representative of the Department.

2. The permittee must obtain inspection and approval by DPS at the following points:

   A. At the required pre-construction meeting.

   B. Following installation of sediment control measures and prior to any other land disturbing activity.

   C. During the installation of a sediment basin or stormwater management structure at the required inspection points (see Inspection Checklist on plan). Notification prior to commencing construction is mandatory.

   D. Prior to removal or modification of any sediment control structure(s).

   E. Prior to final acceptance.

3. The permittee shall construct all erosion and sediment control measures per the approved plan and construction sequence, shall have them inspected and approved by the Department prior to beginning any other land disturbances, shall ensure that all runoff from disturbed areas is directed to the sediment control devices, and shall not remove any erosion or sediment control measure without prior permission from the Department.

4. The permittee shall protect all points of construction ingress and egress to prevent the deposition of materials onto traversed public thoroughfare(s). All materials deposited onto public thoroughfare(s) shall be removed immediately.

5. The permittee shall inspect periodically and maintain continuously in effective operating condition, all erosion and sediment control measures until such time as they are removed with prior permission from the Department. The permittee is responsible for immediately repairing or replacing any sediment control measures which have been damaged or removed by the permittee or any other person.

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

DPS | Montgomery County Department of Permitting Services
255 Rockville Pike, 2nd Floor
Rockville, MD 20850-4166
Phone: 311 in Montgomery County or (240)777-0311
Fax (240)777-6262
http://www.montgomerycountymd.gov/permittingservices

a) Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes and all slopes steeper than 3 horizontal to 1 vertical (3:1); and

b) Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.

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

7. The permittee shall apply sod, seed, and anchored straw mulch, or other approved stabilization measures to all disturbed areas within seven (7) calendar days after stripping and grading activities have ceased on that area. Maintenance shall be performed as necessary to ensure continued stabilization. Active construction areas such as borrow or stockpile areas, roadway improvements, and areas within fifty (50) feet of a building under construction may be exempt from this requirement, provided that erosion and sediment control measures are installed and maintained to protect those areas.

8. Prior to removal of sediment control measures, the permittee shall stabilize all contributory disturbed areas with required soil amendments and topsoil, using sod or an approved permanent seed mixture and an approved anchored mulch. Wood fiber mulch may only be used in seeding season when the slope does not exceed 10% and grading has been done to promote sheet flow drainage. Areas brought to finished grade during the seeding season shall be permanently stabilized within seven (7) calendar days of establishment. When property is brought to finished grade during the months of November through February, and permanent stabilization is found to be impractical, an approved temporary seed and straw anchored mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be completed prior to the following April 15.

9. The site permit, work, materials, approved SC/SM plans, and test reports shall be available at the site for inspection by duly authorized officials of Montgomery County.

10. Surface drainage flows over unstabilized cut and fill slopes shall be controlled by either preventing drainage flows from traversing the slopes or by installing mechanical devices to lower the water down slope without causing erosion. Dikes shall be installed and maintained at the top of cut or fill slopes until the slope and drainage area to it are fully stabilized, at which time they must be removed and final grading done to promote sheet flow drainage. Mechanical devices must be provided at points of concentrated flow where erosion is likely to occur.

11. Permanent swales or other points of concentrated water flow shall be stabilized within 3 calendar days of establishment with sod or seed with an approved erosion control matting or by other approved stabilization measures.

12. Sediment control devices shall be removed, with permission of the Department, within thirty (30) calendar days following establishment of permanent stabilization in all contributory drainage areas. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well.

13. No permanent cut or fill slope with a gradient steeper than 3:1 will be permitted in lawn maintenance areas or on residential lots. A slope gradient of up to 2:1 will be permitted in non-maintenance areas provided that those areas are indicated on the erosion and sediment control plan with a low-maintenance ground cover specified for permanent stabilization. Slope gradient steeper than 2:1 will not be permitted with vegetative stabilization.

14. The permittee shall install a splashblock at the bottom of each downspout unless the downspout is connected by a drain line to an acceptable outlet.

15. For finished grading, the permittee shall provide adequate gradients so as to prevent water from standing on the surface of lawns more than twenty-four (24) hours after the end of a rainfall, except in designated drainage courses and swale flow areas, which may drain as long as forty-eight (48) hours after the end of a rainfall.

16. Sediment traps or basins are not permitted within 20 feet of a building which is existing or under construction. No building may be constructed within 20 feet of a sediment trap or basin.

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

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

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

20. Vegetative stabilization shall be performed in accordance with the Standards and Specifications for Soil Erosion and Sediment Control.

21. Sediment trap(s)/basin(s) shall be cleaned out and restored to the original dimensions when sediment has accumulated to the point of one-half (1/2) the wet storage depth of the trap/basin (1/4 the wet storage depth for ST-III) or when required by the sediment control inspector.

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

23. All sediment basins and traps must be surrounded with a welded wire safety fence. The fence must be at least 42 inches high, have posts spaced no farther apart than 8 feet, have mesh openings no greater the two inches in width and four inches in height, with a minimum of 14 gauge wire. Safety fence must be maintained in good condition at all times.

24. No excavation in the areas of existing utilities is permitted unless their location has been determined. Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work.

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

26. Sediment trap/basin dewatering for cleanout or repair may only be done with the DPS inspector's permission. The inspector must approve the dewatering method for each application. The following methods may be considered:

   A. Pump discharge may be directed to another on-site sediment trap or basin, provided it is of sufficient volume and the pump intake is floated to prevent agitation or suction of deposited sediments; or

   B. the pump intake may utilize a Removable Pumping Station and must discharge into an undisturbed area through a non-erosive outlet; or

   C. the pump intake may be floated and discharge into a Dirt Bag (12 oz. non-woven fabric), or approved equivalent, located in an undisturbed buffer area.

Remember: Dewatering operation and method must have prior approval by the DPS inspector.

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

28. Topsoil must be applied to all pervious areas within the limits of disturbance prior to permanent stabilization in accordance with MDE "Standards and Specifications for Soil Preparation, Topsoiling, and Soil Amendments".

MCDPS
APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT #

NOTE

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.

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

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

NMP ENGINEERING CONSULTANTS, INC.
EXECUTIVE PLAZA III, SUITE 300
11350 MCCORMICK ROAD
HUNT VALLEY, MD 21031
TEL (410) 771-9808
FAX (410) 771-9809

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: Drawn by: Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

EROSION & SEDIMENT CONTROL NOTES

SCALE : NTS

Project No. : 2000661 (501119) 10 of 28

EROSION AND SEDIMENT CONTROL SEQUENCE OF CONSTRUCTION

GENERAL NOTES:

1. PRIOR TO CLEARING TREES, INSTALLING SEDIMENT CONTROL MEASURES, OR GRADING, A PRECONSTRUCTION MEETING MUST BE CONDUCTED ON-SITE WITH THE MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES (MCDPS) SEDIMENT CONTROL INSPECTOR (240) 777-0311 (48 HOURS NOTICE) AND THE MNCPPC, PLANNING DEPARTMENT, PLANS ENFORCEMENT INSPECTOR (301)495-4550 (48 HOURS NOTICE), THE OWNERS REPRESENTATIVE, AND THE SITE ENGINEER. IN ORDER FOR THE MEETING TO OCCUR, THE APPLICANT MUST PROVIDE ONE PAPER SET OF APPROVED SEDIMENT CONTROL PLANS TO THE MCDPS SEDIMENT CONTROL INSPECTOR AT THE PRECONSTRUCTION MEETING. IF NO PLANS ARE PROVIDED, THE MEETING SHALL NOT OCCUR AND WILL NEED TO BE RESCHEDULED PRIOR TO COMMENCING ANY WORK.

STAGE 1 REMOVAL OF EXITING SUPERSTRUCTURE AND PERFORM PROPOSED ABUTMENT WIDENING:

2. THE LIMITS OF DISTURBANCE FOR STAGE 1 MUST BE FIELD MARKED PRIOR TO CLEARING OF TREES, INSTALLATION OF SEDIMENT CONTROL MEASURES, CONSTRUCTION, OR OTHER LAND DISTURBING ACTIVITIES.

3. THE PERMITTEE MUST OBTAIN WRITTEN APPROVAL FORM THE MNCPPC INSPECTOR, CERTIFYING THAT THE LIMITS OF DISTURBANCE AND TREE PROTECTION MEASURES ARE CORRECTLY MARKED AND INSTALLED PRIOR TO COMMENCING ANY CLEARING.

4. REMOVE PORTION OF EXISTING GUARDRAIL TO INSTALL SCE 1-1 AND SCE 1-2 USING SAME DAY STABILIZATION. INSTALL SCE 1-1 AND SCE 1-2.

5. FOR CLEAN WATER DIVERSION, INSTALL CWD 1-1 AND ROP 1-1 FROM EXISTING STORM DRAIN PIPE.

6. INSTALL PORTABLE SEDIMENT TANK PST 1-1 AS SHOWN ON THIS PLAN AND INSTALL STREAM PROTECTION FOR EXISTING SUPERSTRUCTURE REMOVAL AS SHOWN ON THE DETAIL. THE EXISTING CONCRETE SUPERSTRUCTURE SHALL BE REMOVED BY CUTTING THE EXISTING SPAN FULL DEPTH INTO SECTIONS WITH LONGITUDINAL CUTS PARALLEL TO THE BASELINE OF CONSTRUCTION. THE SLABS WILL THEN BE DRILLED, LIFTED FROM THE EXSITING STRUCTURE, PLACED ON A TRUCK AND TRANSPORTED TO AN APPROVED DISPOSAL SITE. ALL DEBRIS AND SLURRY WATER FROM THE SUPERSTRUCTURE SAWCUTTING AND DEMOLITION SHALL BE CAPTURED AND DIRECTED TO THE PORTABLE SEDIMENT TANK PST 1-1. NO DEBRIS OR SLURRY IS PERMITTED TO FALL INTO THE WATERWAY. WITH THE PERMISSION OF MCDPS INSPECTOR, REMOVE STREAM PROTECTION INSTALLED FOR BRIDGE DECK REMOVAL.

7. INSTALL TBD 1-1 AND TBD 1-2 TO DIRECT CLEAR WATER CHANNEL FLOW AROUND WORK AREA. PERFORM PROPOSED ABUTMENT WIDENING AND PROPOSED STREAM GRADING SHOWN ON SOUTH SIDE OF THE BRINK ROAD. DEWATER WORK AREA USING A PORTABLE SEDIMENT TANK OR AN APPROVED EROSION AND SEDIMENT CONTROL DEVICE.

8. INSTALL PROPOSED RIRPRAP OUTLET PROTECTION AND PROPOSED ENDWALL EW 1-1.

9. PERFORM PROPOSED STREAM GRADING SHOWN NORTH SIDE OF THE BRINK ROAD USING SAME DAY STABILIZATION. Where no SCE is provided, the contractor shall designate pieces of construction equipment that shall be allowed within the LOD. This equipment shall be kept within the LOD until the proposed work is complete and shall have treads/tires cleaned prior to leaving the LOD. All material removal/load out shall be lifted from the LOD.

10. OBTAIN WRITTEN APPROVAL FROM MCDPS INSPECTOR, PRIOR TO THE REMOVAL OF SCE 1-1, SCE 1-2, TBD 1-1, AND TBD 1-2. REMOVE SCE 1-1, SCE 1-2, TBD 1-1, AND TBD 1-2.

11. ONCE ALL STAGE 1 CONSTRUCTION TASKS ARE COMPLETED AND WITH THE APPROVAL OF THE MCDPS INSPECTOR, PROCEED TO STAGE 2 CONSTRUCTION.

STAGE 2 CONSTRUCTION OF PROPOSED SUPERSTRUCTURE, PROPOSED ROADWAY IMPROVEMENTS AND CONTRUCTION OF PROPOSED DRAINAGE AND SWM FACILITIES:

12. PERFORM PLACEMENT OF THE SUPERSTRUCTURE AS SHOWN ON THE PLAN.

13. INSTALL SUPER SILT FENCES, AND TEMPORAY GABION OUTLET STRUCTURE AS SHOWN ON THE PLAN. ONCE THE SEDIMENT CONTROL DEVICES ARE INSTALLED, THE PERMITTEE MUST OBTAIN WRITTEN APPROVAL FROM THE MCDPS INSPECTOR BEFORE PROCEEDING WITH ANY ADDITIONAL CLEARING, GRUBBING OR GRADING.

14. CONSTRUCT PROPOSED STORM DRAIN SYSTEM AND INSTALL INLET PROTECTIONS.

15. CONSTRUCT PROPOSED ROADWAY IMPROVEMENTS, AND ASSOCITATED GRADING.

16. INSTALL SWM FACILITIES AS SHOWN ON THE SWM PLANS.

17. OBTAIN WRITTEN APPROVAL FROM MCDPS INSPECTOR, PRIOR TO THE REMOVAL OF ANY SEDIMENT CONTROL DEVICE.

BEST MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS

1. NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILED OR STORED IN NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.

2. PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.

3. DO NOT USE THE EXCAVATED MATERIAL AS BACKFILL IF IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE. IF ADDITIONAL BACKFILL IS REQUIRED, USE CLEAN MATERIALS FREE OF WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE.

4. PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.

5. REPAIR AND MAINTAIN ANY SERVICEABLE STRUCTURE OR FILL SO THERE IS NO PERMANENT LOSS OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, OR WATERWAYS, OR PERMANENT MODIFICATION OF THE 100-YEAR FLOODPLAIN IN EXCESS OF THAT LOST UNDER THE ORIGINALLY AUTHORIZED STRUCTURE OR FILL.

6. RECTIFY ANY NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, OR 100-YEAR FLOODPLAIN TEMPORARILY IMPACTED BY ANY CONSTRUCTION.

7. ALL STABILIZATION IN THE NONTIDAL WETLAND AND NONTIDAL WETLAND BUFFER SHALL CONSIST OF THE FOLLOWING SPECIES:

ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MILLET (SETARIA ITALICA), BARLEY (HORDEUM SP.), OATS (UNIOLA SP.)AND/OR RYE (SECALE CEREALE). THESE SPECIES WILL ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF NATURAL WETLAND SPECIES. OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE NONTIDAL WETLANDS AND WATERWAYS DIVISION. KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN WETLAND OR BUFFER AREAS. THE AREA SHOULD BE SEEDED AND MULCHED TO REDUCE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.

8. AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST CONSTRUCTION GRADES AND ELEVATIONS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS IN TEMPORARILY IMPACTED AREAS.

9. TO PROTECT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM:
   A. USE I WATERS (WITHOUT YELLOW PERCH): IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE DURING ANY YEAR.
   B. USE I WATERS (WITH YELLOW PERCH): IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD FEBRUARY 15 THROUGH JUNE 15, INCLUSIVE DURING ANY YEAR.
   C. USE III WATERS: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD OCTOBER 1 THORUGH APRIL 30, INCLUSIVE, DURING ANY YEAR.
   D. USE IV WATERS: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH MAY 31, INCLUSIVE, DURING ANY YEAR.

10. STORMWATER RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE WATERWAY.

11. CULVERTS SHALL BE CONSTRUCTED AND ANY RIPRAP PLACED SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES, UNLESS THE PURPOSE OF THE ACTIVITY IS TO IMPOUND WATER.

MCDPS
APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT #

NOTE

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.

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FOUNDATION REVIEW
NOT FOR CONSTRUCTION

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section Date

APPROVED

Chief, Division of Transportation Engineering Date

Designed by: Drawn by: Checked by:

REHABILITATION OF BRIDGE NO. M–0064 ON BRINK ROAD OVER GREAT SENECA CREEK

EROSION & SEDIMENT CONTROL NOTES

SCALE : NTS

Project No. : 2000661 (501119)

NOTES REFERENCED FROM:
MARYLAND DEPARTMENT OF THE ENVIRONMENT, 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, DECEMBER 2011.

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION
USING VEGETATION AS COVER TO PROTECT EXPOSED SOIL FROM EROSION.

PURPOSE
TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL.

CONDITIONS WHERE PRACTICE APPLIES
ON ALL DISTURBED AREAS NOT STABILIZED BY OTHER METHODS. THIS SPECIFICATION IS DIVIDED INTO SECTIONS ON INCREMENTAL STABILIZATION; SOIL PREPARATION, SOIL AMENDMENTS AND TOPSOILING; SEEDING AND MULCHING; TEMPORARY STABILIZATION; AND PERMANENT STABILIZATION.

EFFECTS ON WATER QUALITY AND QUANTITY
STABILIZATION PRACTICES ARE USED TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL. WHEN SOIL IS STABILIZED WITH VEGETATION, THE SOIL IS LESS LIKELY TO ERODE AND MORE LIKELY TO ALLOW INFILTRATION OF RAINFALL, THEREBY REDUCING SEDIMENT LOADS AND RUNOFF TO DOWNSTREAM AREAS.

PLANTING VEGETATION IN DISTURBED AREAS WILL HAVE AN EFFECT ON THE WATER BUDGET, ESPECIALLY ON VOLUMES AND RATES OF RUNOFF, INFILTRATION, EVAPORATION, TRANSPIRATION, PERCOLATION, AND GROUNDWATER RECHARGE. OVER TIME, VEGETATION WILL INCREASE ORGANIC MATTER CONTENT AND IMPROVE THE WATER HOLDING CAPACITY OF THE SOIL AND SUBSEQUENT PLANT GROWTH.

VEGETATION WILL HELP REDUCE THE MOVEMENT OF SEDIMENT, NUTRIENTS, AND OTHER CHEMICALS CARRIED BY RUNOFF TO RECEIVING WATERS. PLANTS WILL ALSO HELP PROTECT GROUNDWATER SUPPLIES BY ASSIMILATING THOSE SUBSTANCES PRESENT WITHIN THE ROOT ZONE.

SEDIMENT CONTROL PRACTICES MUST REMAIN IN PLACE DURING GRADING, SEEDBED PREPARATION, SEEDING, MULCHING, AND VEGETATIVE ESTABLISHMENT.

ADEQUATE VEGETATIVE ESTABLISHMENT
INSPECT SEEDED AREAS FOR VEGETATIVE ESTABLISHMENT AND MAKE NECESSARY REPAIRS, REPLACEMENTS, AND RESEEDINGS WITHIN THE PLANTING SEASON.

1. ADEQUATE VEGETATIVE STABILIZATION REQUIRES 95 PERCENT GROUNDCOVER.
2. IF AN AREA HAS LESS THAN 40 PERCENT GROUNDCOVER, RESTABILIZE FOLLOWING THE ORIGINAL RECOMMENDATIONS FOR LIME, FERTILIZER, SEEDBED PREPARATION, AND SEEDING.
3. IF AN AREA HAS BETWEEN 40 AND 94 PERCENT GROUNDCOVER, OVER-SEED AND FERTILIZE USING HALF OF THE RATES ORIGINALLY SPECIFIED.
4. MAINTENANCE FERTILIZER RATES FOR PERMANENT SEEDING ARE SHOWN IN TABLE B.6.

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

DEFINITION
ESTABLISHMENT OF VEGETATIVE COVER ON CUT AND FILL SLOPES.

PURPOSE
TO PROVIDE TIMELY VEGETATIVE COVER ON CUT AND FILL SLOPES AS WORK PROGRESSES.

CONDITIONS WHERE PRACTICE APPLIES
ANY CUT OR FILL SLOPE GREATER THAN 15 FEET IN HEIGHT. THIS PRACTICE ALSO APPLIES TO STOCKPILES.

CRITERIA

A. INCREMENTAL STABILIZATION - CUT SLOPES

1. EXCAVATE AND STABILIZE CUT SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL CUT SLOPES AS THE WORK PROGRESSES.
2. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.1):
   a. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO CONVEY RUNOFF AROUND THE EXCAVATION.
   b. PERFORM PHASE 1 EXCAVATION, PREPARE SEEDBED, AND STABILIZE.
   c. PERFORM PHASE 2 EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PHASE 1 AREAS AS NECESSARY.
   d. PERFORM FINAL PHASE EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE EXCAVATION HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

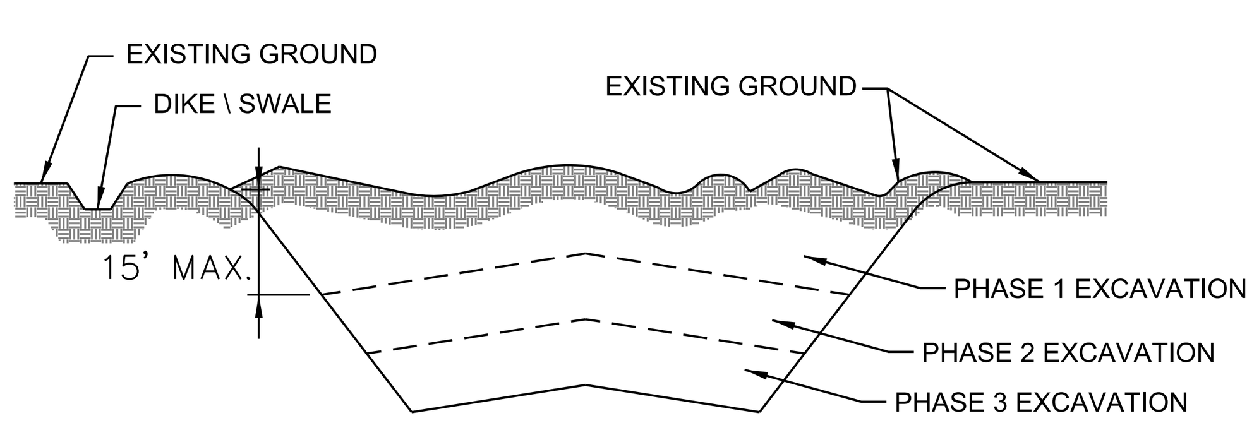

FIGURE B.1: INCREMENTAL STABILIZATION - CUT

B. INCREMENTAL STABILIZATION - FILL SLOPES

1. CONSTRUCT AND STABILIZE FILL SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL SLOPES AS THE WORK PROGRESSES.
2. STABILIZE SLOPES IMMEDIATELY WHEN THE VERTICAL HEIGHT OF A LIFT REACHES 15 FEET, OR WHEN THE GRADING OPERATION CEASES AS PRESCRIBED IN THE PLANS.
3. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.
4. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.2):
   a. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL. CONSTRUCT SILT FENCE ON LOW SIDE OF FILL UNLESS OTHER METHODS SHOWN ON THE PLANS ADDRESS THIS AREA.
   b. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.
   c. PLACE PHASE 1 FILL, PREPARE SEEDBED, AND STABILIZE.
   d. PLACE PHASE 2 FILL, PREPARE SEEDBED, AND STABILIZE.
   e. PLACE FINAL PHASE FILL, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

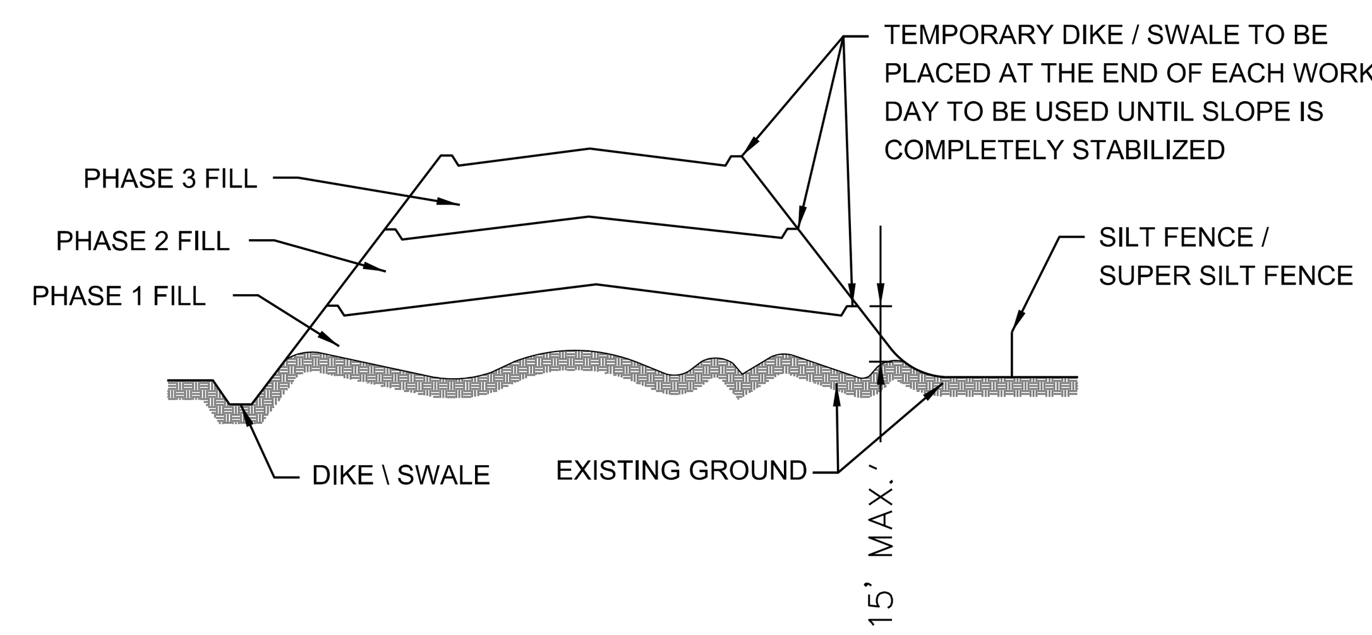

FIGURE B.2: INCREMENTAL STABILIZATION - FILL

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

DEFINITION
THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

PURPOSE
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES
WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA

A. SOIL PREPARATION

1. TEMPORARY STABILIZATION
   a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE
   b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
   c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
2. PERMANENT STABILIZATION
   a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
      i. SOIL PH BETWEEN 6.0 AND 7.0.
      ii. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
      iii. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
      iv. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
      v. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
   b. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ONSITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
   c. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
   d. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
   e. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING

1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.
3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
   a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
   b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
   c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
   d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
   a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND.OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1½ INCHES IN DIAMETER.
   b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
   c. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
6. TOPSOIL APPLICATION
   a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
   b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
   c. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.
3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

MCDPS
APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT #

NOTE
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.

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

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section Date

APPROVED

Chief, Division of Transportation Engineering Date

Designed by: Drawn by: Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

EROSION & SEDIMENT CONTROL NOTES

SCALE : NTS

Project No. : 2000661 (501119)

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION
THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE
TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES
TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA

A. SEEDING

1. SPECIFICATIONS

a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.

b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.

c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.

d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

2. APPLICATION

a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.

i. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.

ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.

b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.

i. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.

ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INLCUDES SEED AND FERTILIZER).

i. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P_20_5 (PHOSPHOROUS), 200 POUNDS PER ACRE; K_2O (POTASSIUM), 200 POUNDS PER ACRE.

ii. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.

iii. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.

iv. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

B. MULCHING

1. MULCH MATERIALS (IN ORDER OF PREFERENCE)

a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.

b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.

i. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.

ii. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.

iii. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.

iv. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.

v. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.

2. APPLICATION

a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.

b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.

c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POINDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

3. ANCHORING

a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:

i. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.

ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

iii. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.

iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION
TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE
TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.

2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.

3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

HARDINESS ZONE: 7A SEED MIXTURE:					FERTILIZER RATE (10-20-20)	LIME RATE
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS		
	ANNUAL RYEGRASS (LOLIUM PERENNE SSP. MULTIFLORUM)	40	02/15 - 04/30; 08/15 - 11/30	0.5"	436 LB/AC (10 LB/ 1,000 SF)	2 TONS/AC (90 LB/ 1,000 SF)
	FOXTAIL MILLET (SETARIA ITALICA)	30	05/01 - 08/14	0.5"		

MCDPS
APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT #

NOTE
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.

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

FOUNDATION REVIEW
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section Date

APPROVED

Chief, Division of Transportation Engineering Date

Designed by: ______ Drawn by: ______ Checked by: ______

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

EROSION & SEDIMENT CONTROL NOTES

SCALE : NTS

Project No. : 2000661 (501119)

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION
TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE
TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA

A. SEED MIXTURES

1. GENERAL USE

a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.

b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.

c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.

d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 ½ POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY .

2. TURFGRASS MIXTURES

a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.

b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.

i. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.

ii. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE:FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.

iii. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.

iv. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1½ TO 3 POUNDS PER 1000 SQUARE FEET.

NOTES:
SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND"

CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE

c. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES

WESTERN MD : MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES:5B, 6A)

CENTRAL MD : MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)

SOUTHERN MD, EASTERN SHORE : MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)

d. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1½ INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.

e. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (½ TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

PERMANENT SEEDING SUMMARY

HARDINESS ZONE: 7A SEED MIXTURE:					FERTILIZER RATE (10-20-20)			LIME RATE
NO.	SPECIES	APPLICATION RATE (LB/AC)	** SEEDING DATES	SEEDING DEPTHS	N	P_2O_5	K_2O	
3	DEERTONGUE (DICHANTHELIUM CLANDESTINUM)	20	02/15 - 04/30 ♦♦ 05/01 - 05/31 *	1/4" - 1/2"	45 LB/AC (1.0 LB/ 1,000 SF)	90 LB/AC (2 LB/ 1,000 SF)	90 LB/AC (2 LB/ 1,000 SF)	2 TONS/AC (90 LB/ 1,000 SF)
	CANADA WILD RYE (ELYMUS CANADENSIS)	3						
	REDTOP (AGROSTIS GIGANTEAN)	1						
	COMMON LESPEDEZA	10						
6	TALL FESCUE (LOLIUM ARUNDINACEUM - FORMERLY FESTUCA ARUNDINACEA)	40	02/15 - 04/30 08/15 - 10/31 11/01 - 11/30					
	PERENNIAL RYEGRASS (LOLIUM PERENNE)	25						
	WHITE CLOVER (TRIFOLIUM REPENS)	5						

** FOR THE PERIOD 05/16 - 07/31 ADD 3.5 LBS/AC FOXTAIL OR PEARL MILLET TO THE PERMANENT SEED MIX (MIX NO. 6)

♦♦ WARM-SEASON GRASSES NEED A SOIL TEMPERATURE OF AT LEAST 50 DEGREES F IN ORDER TO GERMINATE. IF SOIL TEMPERATURES ARE COLDER THAN 50 DEGREES, OR MOISTURE IS NOT ADEQUATE, THE SEEDS WILL REMAIN DORMANT UNTIL CONDITIONS ARE FAVORABLE. IN GENERAL, PLANTING DURING THE LATTER PORTION OF THIS PERIOD ALLOWS MORE TIME FOR WEED EMERGENCE AND WEED CONTROL PRIOR TO PLANTING. WHEN SELECTING A PLANTING DATE, CONSIDER THE NEED FOR WEED CONTROL VS. THE LIKELIHOOD OF HAVING SUFFICIENT MOISTURE FOR LATER PLANTINGS, ESPECIALLY ON DROUGHTY SITES.

* ADDITIONAL PLANTING DATES DURING WHICH SUPPLEMENTAL WATERING MAY BE NEEDED TO ENSURE PLANT ESTABLISHMENT.

B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).

1. GENERAL SPECIFICATIONS

a. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.

b. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF ¾ INCH, PLUS OR MINUS ¼ INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.

c. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.

d. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.

e. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

2. SOD INSTALLATION

a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.

b. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.

c. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.

d. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.

3. SOD MAINTENANCE

a. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.

b. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.

c. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN ⅓ OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

MCDPS
APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT #

NOTE
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.

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

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section Date

APPROVED

Chief, Division of Transportation Engineering Date

Designed by: Drawn by: Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

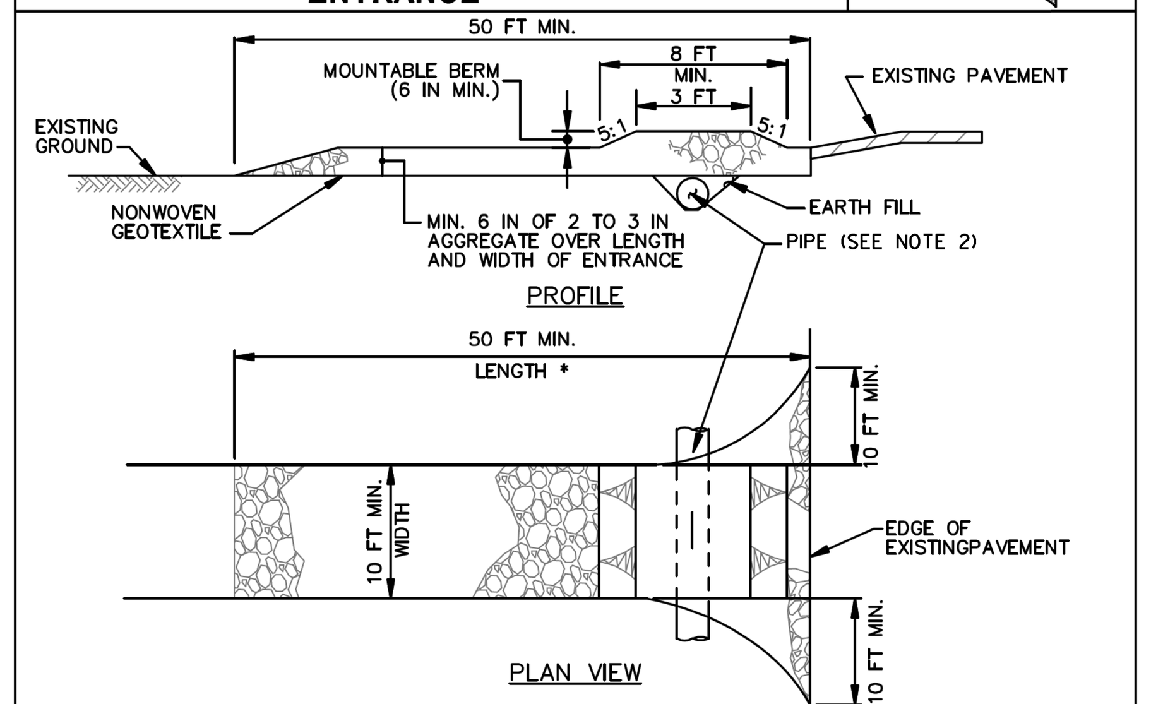
EROSION & SEDIMENT CONTROL NOTES

SCALE : NTS

Project No. : 2000661 (501119)

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL
SCE



CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H–1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

MGWC 1.2: PUMP-AROUND PRACTICE

Temporary measure for dewatering in-channel construction sites

DESCRIPTION

The work should consist of installing a temporary pump around and supporting measures to divert flow around in-stream construction sites.

IMPLEMENTATION SEQUENCE

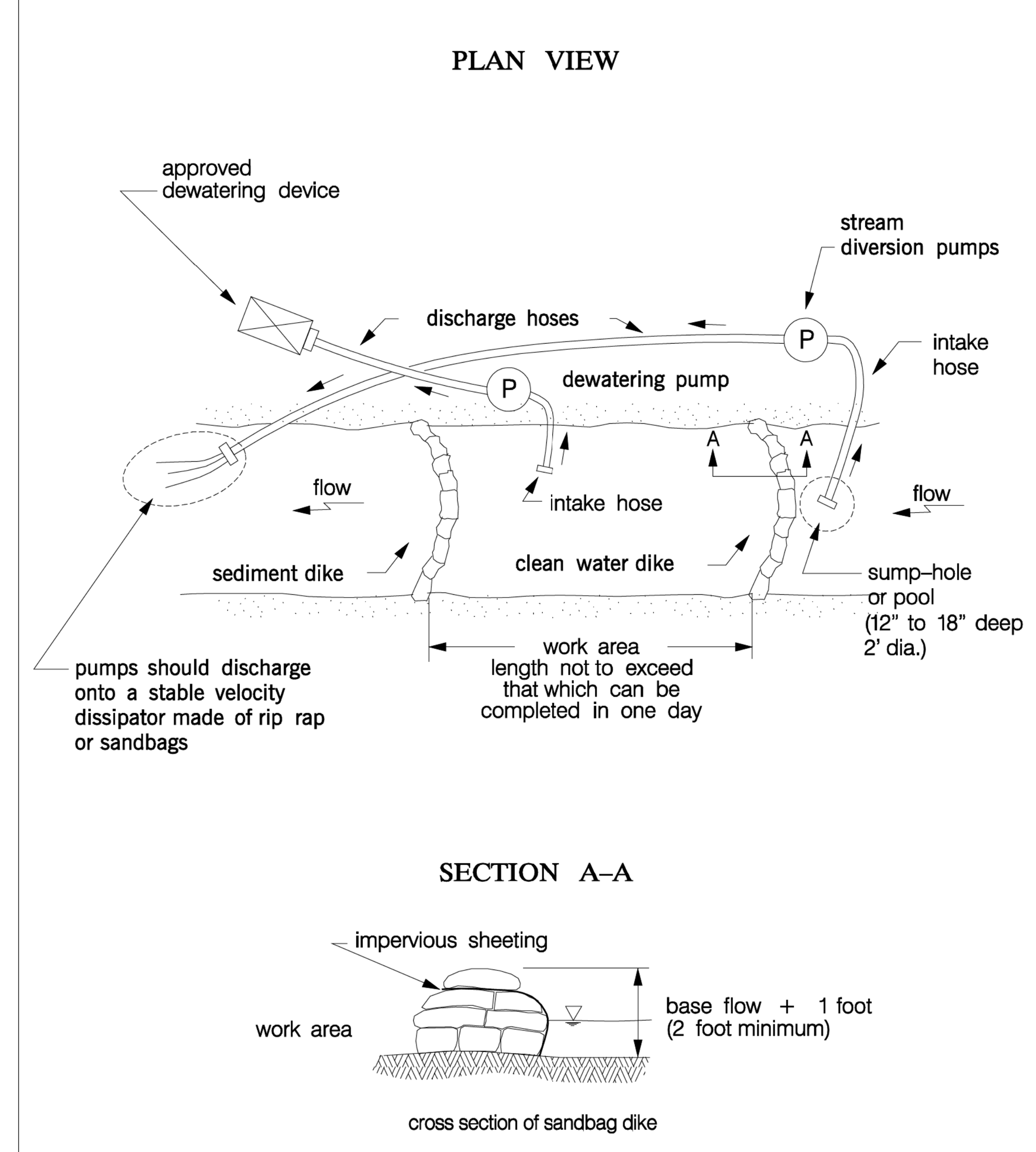
Sediment control measures, pump-around practices, and associated channel and bank construction should be completed in the following sequence (refer to Detail 1.2):

1. Construction activities including the installation of erosion and sediment control measures should not begin until all necessary easements and/or right-of-ways have been acquired. All existing utilities should be marked in the field prior to construction. The contractor is responsible for any damage to existing utilities that may result from construction and should repair the damage at his/her own expense to the county's or utility company's satisfaction.
2. The contractor should notify the Maryland Department of the Environment or WMA sediment control inspector at least 5 days before beginning construction. Additionally, the contractor should inform the local environmental protection and resource management inspection and enforcement division and the provider of local utilities a minimum of 48 hours before starting construction.
3. The contractor should conduct a pre-construction meeting on site with the WMA sediment control inspector, the county project manager, and the engineer to review limits of disturbance, erosion and sediment control requirements, and the sequence of construction. The contractor should stake out all limits of disturbance prior to the pre-construction meeting so they may be reviewed. The participants will also designate the contractor's staging areas and flag all trees within the limit of disturbance which will be removed for construction access. Trees should not be removed within the limit of disturbance without approval from the WMA or local authority.
4. Construction should not begin until all sediment and erosion control measures have been installed and approved by the engineer and the sediment control inspector. The contractor should stay within the limits of the disturbance as shown on the plans and minimize disturbance within the work area whenever possible.
5. Upon installation of all sediment control measures and approval by the sediment control inspector and the local environmental protection and resource management inspection and enforcement division, the contractor should begin work at the upstream section and proceed downstream beginning with the establishment of stabilized construction entrances. In some cases, work may begin downstream if appropriate. The sequence of construction must be followed unless the contractor gets written approval for deviations from the WMA or local authority. The contractor should only begin work in an area which can be completed by the end of the day including grading adjacent to the channel. At the end of each work day, the work area must be stabilized and the pump around removed from the channel. Work should not be conducted in the channel during rain events.
6. Sandbag dikes should be situated at the upstream and downstream ends of the work area as shown on the plans, and stream flow should be pumped around the work area. The pump should discharge onto a stable velocity dissipater made of riprap or sandbags.

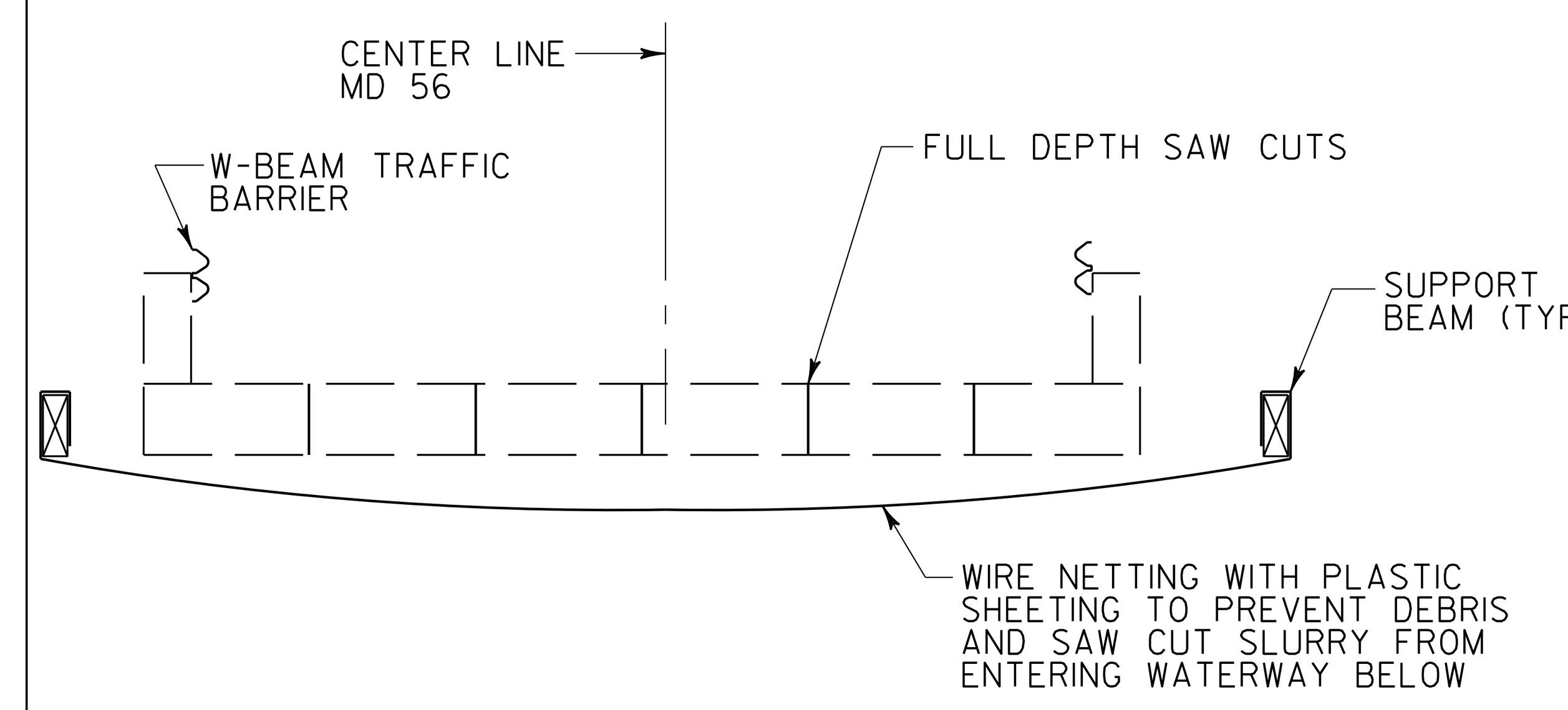
MGWC 1.2: PUMP-AROUND PRACTICE

7. Water from the work area should be pumped to a sediment filtering measure such as a dewatering basin, sediment bag, or other approved source. The measure should be located such that the water drains back into the channel below the downstream sandbag dike.
8. Traversing a channel reach with equipment within the work area where no work is proposed should be avoided. If equipment has to traverse such a reach for access to another area, then timber mats or similar measures should be used to minimize disturbance to the channel. Temporary stream crossings should be used only when necessary and only where noted on the plans or specified. (*See Section 4, Stream Crossings, Maryland Guidelines to Waterway Construction*).
9. All stream restoration measures should be installed as indicated by the plans and all banks graded in accordance with the grading plans and typical cross- sections. All grading must be stabilized at the end of each day with seed and mulch or seed and matting as specified on the plans.
10. After an area is completed and stabilized, the clean water dike should be removed. After the first sediment flush, a new clean water dike should be established upstream from the old sediment dike. Finally, upon establishment of a new sediment dike below the old one, the old sediment dike should be removed.
11. A pump around must be installed on any tributary or storm drain outfall which contributes baseflow to the work area. This should be accomplished by locating a sandbag dike at the downstream end of the tributary or storm drain outfall and pumping the stream flow around the work area. This water should discharge onto the same velocity dissipater used for the main stem pump around.
12. If a tributary is to be restored, construction should take place on the tributary before work on the main stem reaches the tributary confluence. Construction in the tributary, including pump around practices, should follow the same sequence as for the main stem of the river or stream. When construction on the tributary is completed, work on the main stem should resume. Water from the tributary should continue to be pumped around the work area in the main stem.
13. The contractor is responsible for providing access to and maintaining all erosion and sediment control devices until the sediment control inspector approves their removal.
14. After construction, all disturbed areas should be regraded and revegetated as per the planting plan.

Maryland's Guidelines To Waterway Construction
DETAIL 1.2: PUMP–AROUND PRACTICE



TEMPORARY INSTREAM CONSTRUCTION MEASURES	REVISED NOVEMBER 2000 PAGE 1.2 – 3	MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



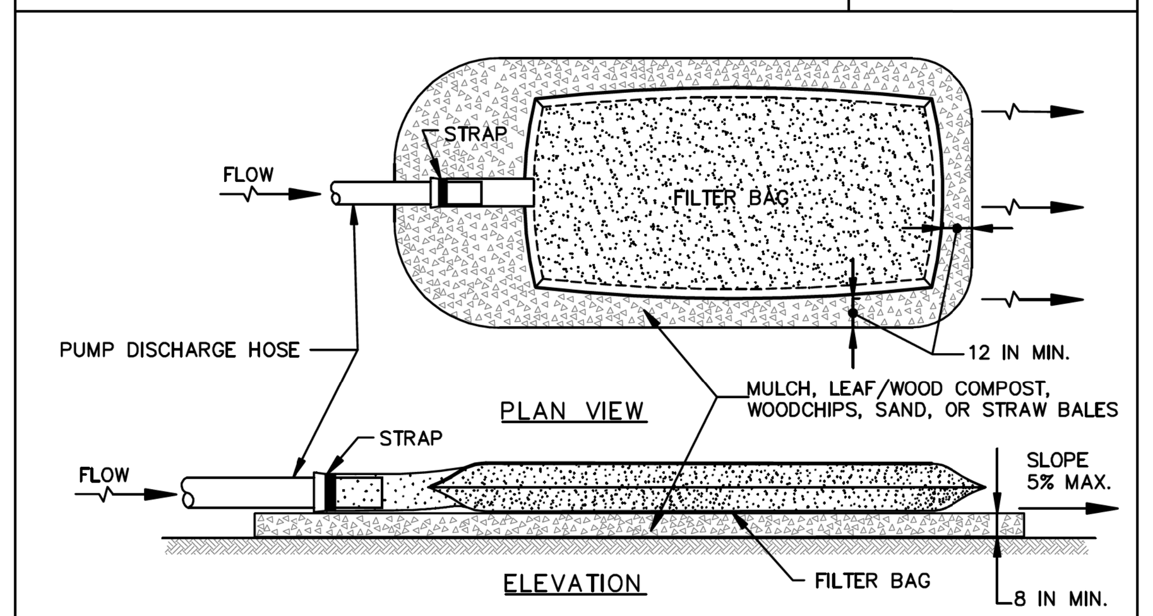
NOTE:
1. JUST PRIOR TO COMENCING THE BRIDGE REMOVAL OPERATION, THE CONTRACTOR SHALL PLACE DEBRIS NETTING WRAPPED WITH PLASTIC SHEETING UNDER THE BRIDGE AS SHOWN, TO PREVENT ANY DEBRIS OR SAW CUT SLURRY FROM ENTERING THE WATERWAY.
2. THE EXISTING SUPERSTRUCTURE SHALL BE SAW CUT INTO INDIVIDUAL SECTIONS AND REMOVED WITH A CRANE. SECTIONS TO BE LOADED ON A TRUCK AND TAKEN TO AN APPROVED DISPOSAL SITE.
3. ALL ACCUMULATED DEBRIS AND WATER IN THE PROTECTIVE NETTING SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE.

STREAM PROTECTION DURING BRIDGE REMOVAL

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

DETAIL F-4 FILTER BAG

STANDARD SYMBOL
FB



CONSTRUCTION SPECIFICATIONS

1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
3. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
4. REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
5. USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING:

GRAB TENSILE	250 LB	ASTM D–4632
PUNCTURE	150 LB	ASTM D–4833
FLOW RATE	70 GAL/MIN/FT^2	ASTM D–4491
PERMITTIVITY (SEC^{-1})	1.2 SEC^{-1}	ASTM D–4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D–4355
APPARENT OPENING SIZE (AOS)	0.15–0.18 MM	ASTM D–4751
SEAM STRENGTH	90%	ASTM D–4632

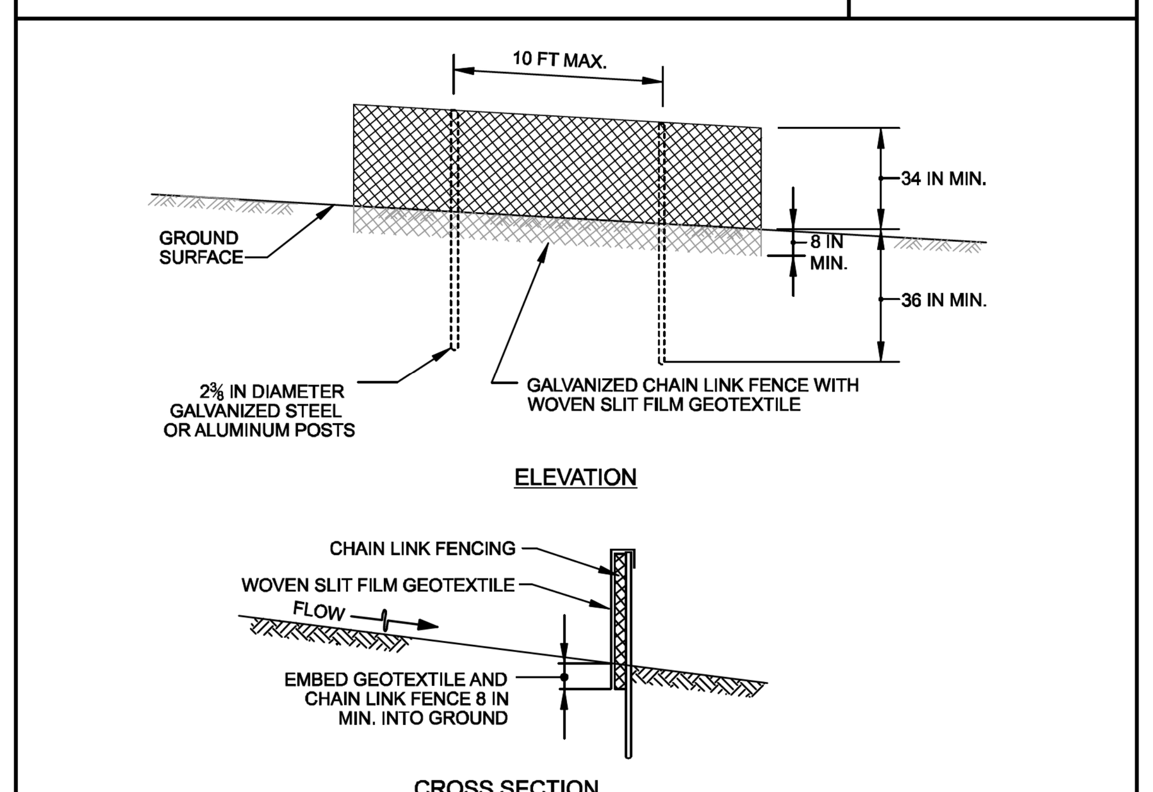
6. REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL
SSF



CONSTRUCTION SPECIFICATIONS

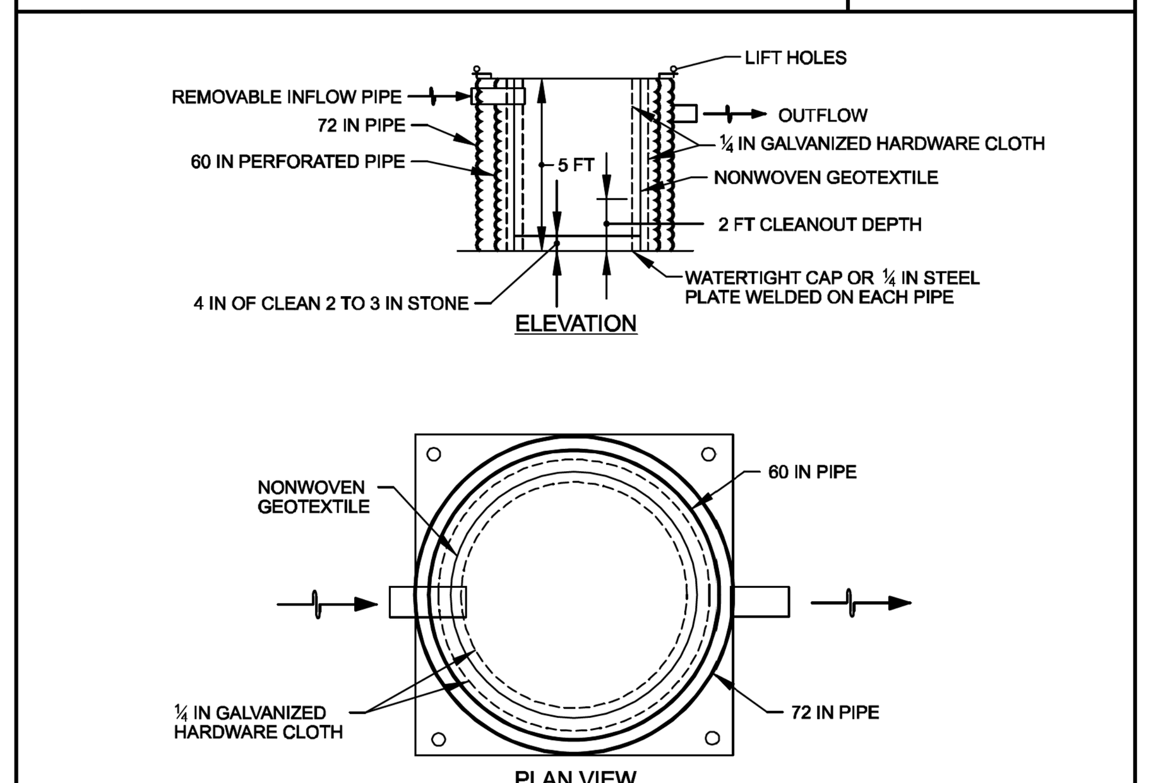
1. INSTALL 2 ⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 ⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

DETAIL F-3 PORTABLE SEDIMENT TANK

STANDARD SYMBOL
PST



CONSTRUCTION SPECIFICATIONS

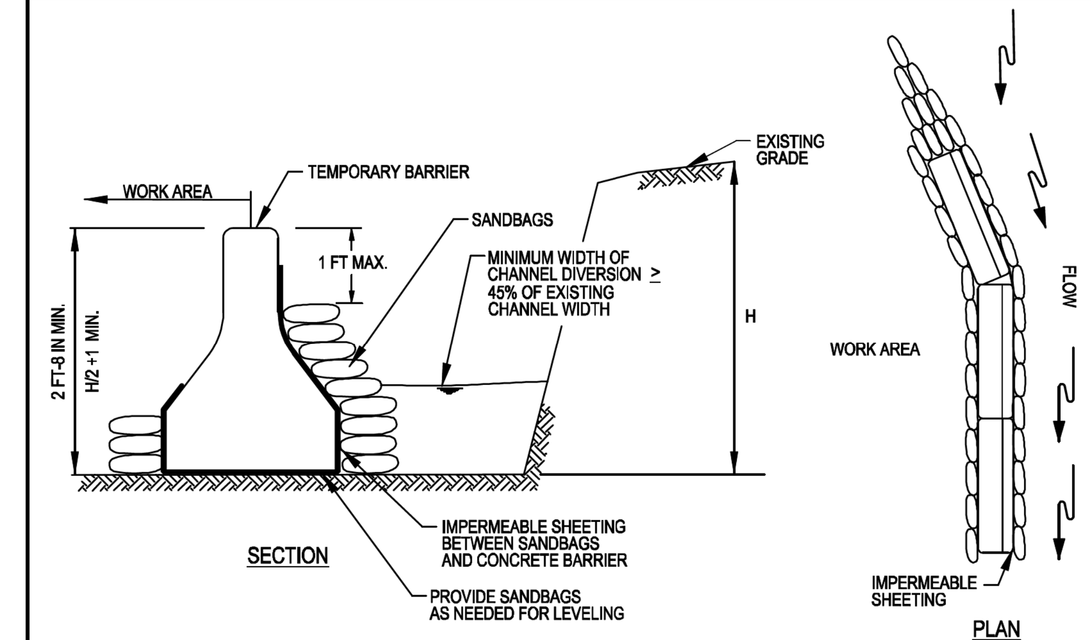
1. PROVIDE 1 CUBIC FOOT OF STORAGE FOR EACH GALLON PER MINUTE OF PUMP CAPACITY. REQUIRED STORAGE VOLUME MAY BE ATTAINED BY PLACEMENT OF TANKS IN PARALLEL WITH INFLOW EVENLY DISTRIBUTED AMONG TANKS. OVERTOPPING OF TANKS IS NOT PERMITTED.
2. USE 60 INCH CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS, 6 INCHES ON CENTER FOR THE INNER PIPE. LINE PIPE WITH NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, SANDWICHED BETWEEN, AND ATTACHED TO, ¼ INCH HARDWARE CLOTH.
3. OVERLAP GEOTEXTILE 8 INCHES MINIMUM AT VERTICAL SEAM AND AT THE BOTTOM PLATE.
4. ANCHOR GEOTEXTILE AT BOTTOM OF TANK WITH 4 INCHES OF 2 TO 3 INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE.
5. USE 72 INCH CORRUGATED METAL OR PLASTIC OUTER PIPE WITH PERMANENT OUTFLOW PIPE WITH INVERT LOWER THAN INFLOW PIPE.
6. INFLOW PIPE MUST DISCHARGE INTO INNER PIPE AND BE REMOVABLE.
7. PLACE TANK ON LEVEL SURFACE AND DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
8. A PORTABLE SEDIMENT TANK REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT FROM INNER PIPE WHEN IT REACHES TWO FEET IN DEPTH. IF SYSTEM CLOGS, PULL OUT INNER PIPE, REMOVE ACCUMULATED SEDIMENT, AND REPLACE GEOTEXTILE. KEEP POINT OF DISCHARGE FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

DETAIL C-7 TEMPORARY BARRIER DIVERSION

STANDARD SYMBOL
TBD



CONSTRUCTION SPECIFICATIONS

1. FOR SANDBAGS USE MATERIALS THAT ARE RESISTANT TO ULTRA-VIOLET RADIATION, TEARING, AND PUNCTURE AND WOVEN TIGHTLY ENOUGH TO PREVENT LEAKAGE OF FILL MATERIAL.
2. USE BARRIER MADE OF CONCRETE OR OTHER APPROVED MATERIAL.
3. USE 10 MIL OR THICKER, UV RESISTANT, IMPERMEABLE SHEETING OR OTHER APPROVED MATERIAL THAT IS IMPERMEABLE AND RESISTANT TO PUNCTURING AND TEARING.
4. ESTABLISH TOP ELEVATION AT H/2 + 1 FOOT FOR PROJECTS OF DURATION LESS THAN 2 WEEKS OR AS SPECIFIED ON APPROVED PLAN.
5. INSTALL DIVERSION STRUCTURE FROM UPGRADE TO DOWNGRADE.
6. PLACE IMPERMEABLE SHEETING SUCH THAT UPGRADE PORTION OVERLAPS DOWNGRADE PORTION BY A MINIMUM OF 18 INCHES.
7. USE SANDBAG BASE FOR LEVELING AND TO ESTABLISH MINIMUM TOP ELEVATION OF THE BARRIER AS REQUIRED.
8. DISPOSE OF ALL EXCAVATED MATERIALS IN AN APPROVED DISPOSAL AREA OUTSIDE OF THE 100-YEAR FLOODPLAIN.
9. DEWATER WORK AREA USING AN APPROVED EROSION AND SEDIMENT CONTROL PRACTICE AS SPECIFIED ON APPROVED PLAN.
10. KEEP ABUTMENTS BETWEEN CONCRETE BARRIERS WATER TIGHT. REPLACE SANDBAGS AND IMPERMEABLE SHEETING IF TORN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

MCDPS
APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT #

NOTE

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FOUNDATION REVIEW
NOT FOR CONSTRUCTION

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

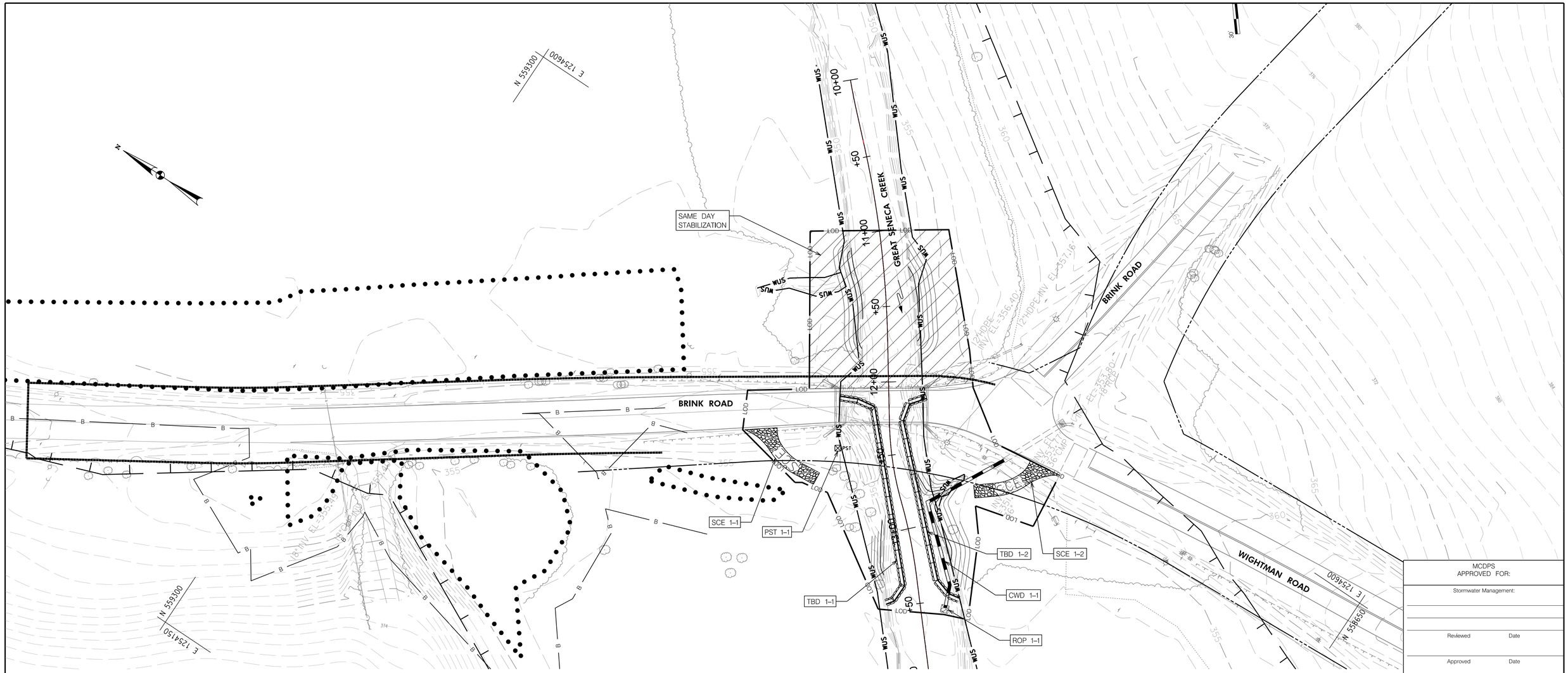
Designed by: ______ Drawn by: ______ Checked by: ______

REHABILITATION OF BRIDGE NO. M–0064 ON BRINK ROAD OVER GREAT SENECA CREEK

EROSION & SEDIMENT CONTROL DETAILS

SCALE : NTS

Project No. : 2000661 (501119)



LEGEND

———	EXISTING ROW	—WUS—	WATERS OF THE US
355	EXISTING CONTOUR	● ● ● ●	WETLANDS
= = = =	EXISTING PIPE	——┬——	100 YR FLOODPLAIN
——— B	WETLAND BUFFER		
—LOD—	LIMIT OF DISTURBANCE		

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: _____ Drawn by: _____ Checked by: _____

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

EROSION & SEDIMENT CONTROL PLAN STAGE 1

SCALE : NTS

Project No. : 2000661 (501119)

MCDPS
APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT #

NOTE

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N 559300 E 1254600

N 559650 E 1254600

N 559300 E 1254150

BRINK ROAD

WIGHTMAN ROAD

GREAT SENECA CREEK

SSF 2-1

SSF 2-2

SSF 2-3

TGOS 2-1

ES 1-1

ES 1-2

I 1-1

I 1-2

I 1-3

I 1-4

I 1-5

EW 1-1

MH 1-1

18" RCP

12" RCP

24" RCP

72" RCP

99+00 100+00 101+00 102+00 103+00 104+00 105+00 106+00 107+00

10+00 11+00 12+00 13+00

20+00 201+00 202+00

LEGEND

———	EXISTING ROW	—WUS—	WATERS OF THE US
355	EXISTING CONTOUR	• • • •	WETLANDS
— — —	EXISTING PIPE	———	100 YR FLOODPLAIN
——— B	WETLAND BUFFER		
——— LOD ———	LIMIT OF DISTURBANCE		

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

MCDPS
APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT #

NOTE

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.

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

ENGINEERING CONSULTANTS, INC.
EXECUTIVE PLAZA III, SUITE 300
11350 MCCORMICK ROAD
HUNT VALLEY, MD 21031
TEL (410) 771-9800
FAX (410) 771-9809

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section Date

APPROVED

Chief, Division of Transportation Engineering Date

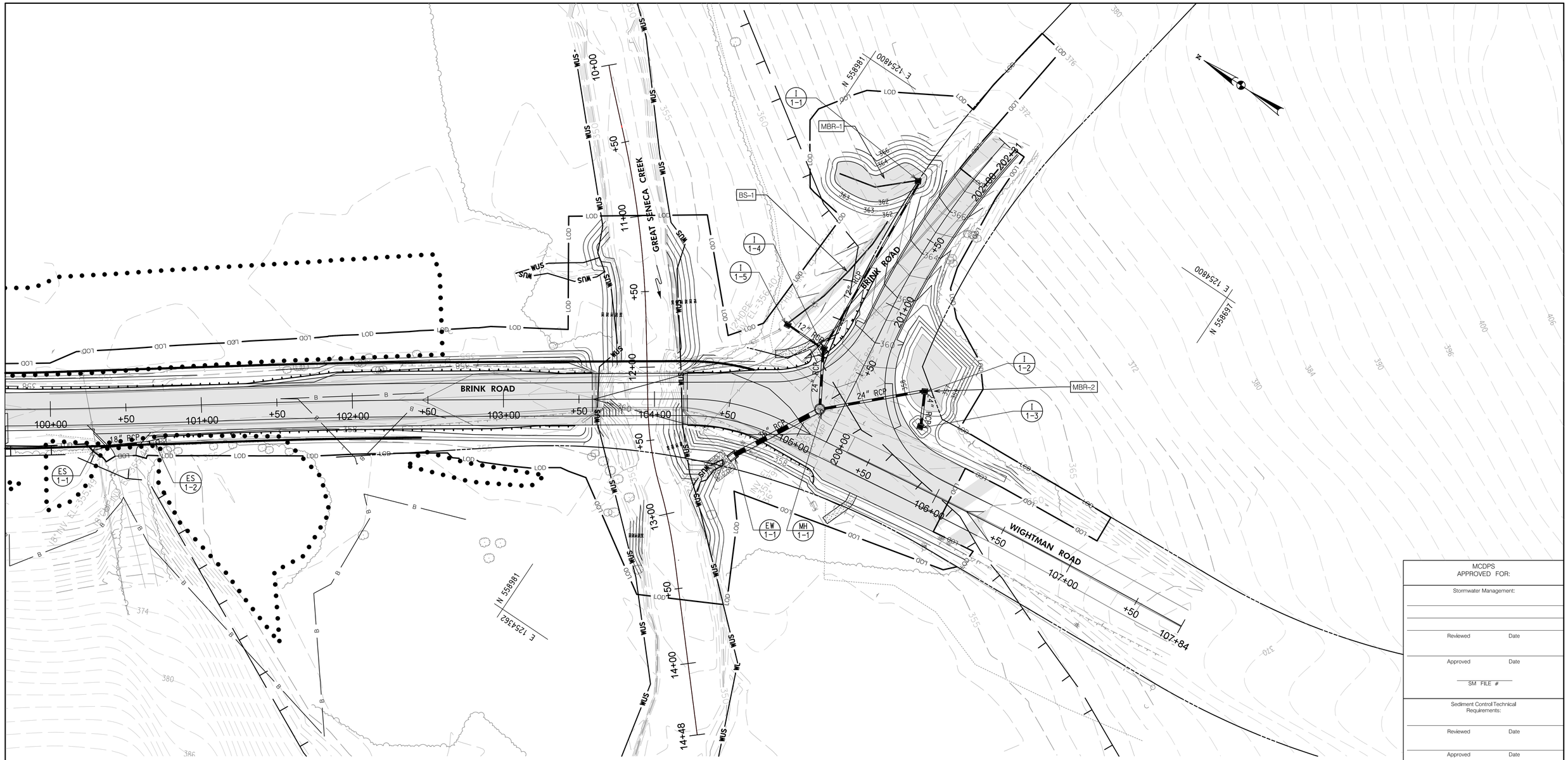
Designed by: _____ Drawn by: _____ Checked by: _____

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

EROSION & SEDIMENT CONTROL PLAN STAGE 2

SCALE : NTS

Project No. : 2000661 (501119) 17 of 28



LEGEND

	EXISTING ROW		FULL DEPTH PAVEMENT
355	EXISTING CONTOUR		RE-SURFACING
	SWM FOOTPRINT		PAVEMENT REMOVAL
	EXISTING PIPE	WUS	WATERS OF THE US
B	WETLAND BUFFER		WETLANDS
LOD	LIMIT OF DISTURBANCE		100 YR FLOODPLAIN

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

MCDPS
APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT #

NOTE

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.

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

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

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section Date

APPROVED

Chief, Division of Transportation Engineering Date

Designed by: MKK Drawn by: MKK Checked by: NMP

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

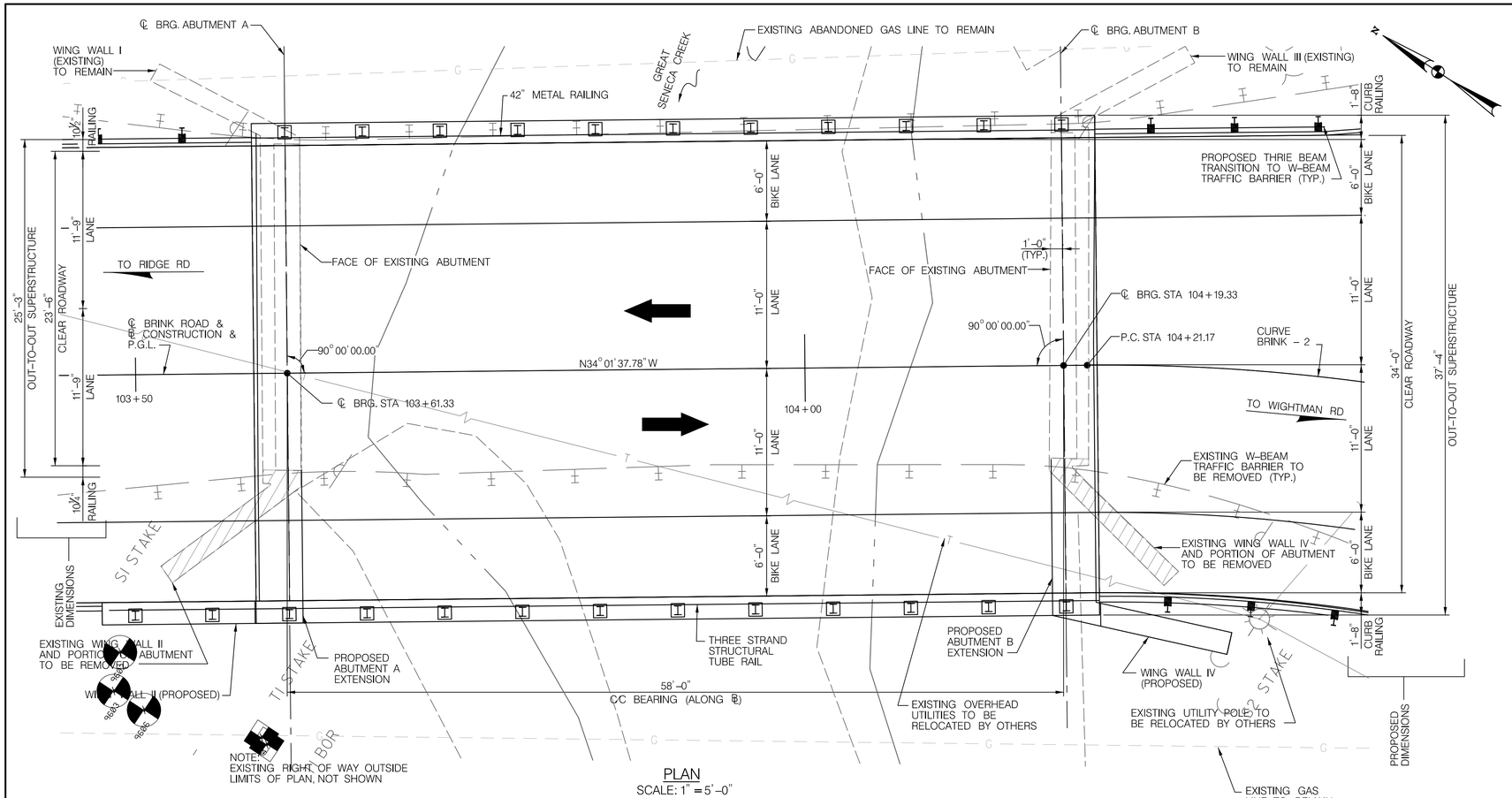
STORMWATER CONCEPT PLAN

SCALE : 1" = 30'

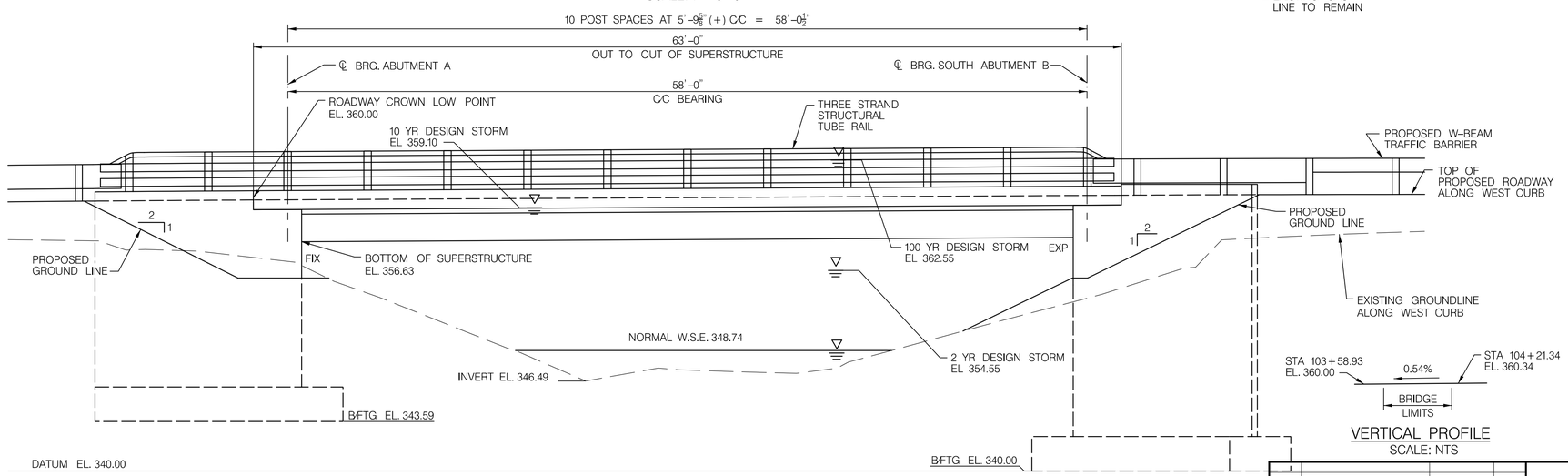
SW-01

Project No. : 2000661 (501119)

18 of 28



PLAN
SCALE: 1" = 5'-0"



ELEVATION
SCALE: 1" = 5'-0"

VERTICAL PROFILE
SCALE: NTS

NOTES:
1. FOR REMOVAL OF PORTIONS OF EXISTING ABUTMENTS, REFER TO S-03 & S-04.
2. FOR ABUTMENT A PLAN AND ELEVATION, REFER TO S-05.
3. FOR ABUTMENT B PLAN AND ELEVATION, REFER TO S-06.
4. FOR TYPICAL ABUTMENT SECTIONS, REFER TO S-07.
5. FOR WINGWALL II & IV ELEVATIONS, REFER TO S-08.
6. FOR TYPICAL BRIDGE SECTION, REFER TO S-09.
7. FOR STRUCTURAL BORING LOGS & LOCATION MAP, REFER TO S-10.
8. AS-BUILT PLANS ARE NOT AVAILABLE FOR THE EXISTING BRIDGE.

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES Gannett Fleming
A Joint Venture

GENERAL NOTES

SPECIFICATIONS:
-MDOT SHA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED JULY, 2022

DESIGN:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS DATED 2017.

LOADING:
HL-93

CONCRETE:
ALL CONCRETE FOR ABUTMENT BACKWALLS, DIAPHRAGMS, DECK, AND CURBS SHALL BE MIX NO. 6 (4500 PSI) CONTAINING SYNTHETIC FIBERS (SEE SECTION 902.15.01).

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

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.

REINFORCING STEEL:
REINFORCING STEEL SHALL CONFORM TO ASTM A 615 GRADE 60 WITH A YIELD STRENGTH FOR DESIGN OF fy =6000 PSI.

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

MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE 2" UNLESS OTHERWISE NOTED, WITH THE EXCEPTION OF BARS AT THE BOTTOM AND SIDES OF ALL FOOTINGS WHICH SHALL HAVE 3" MINIMUM COVER.

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

PRETENSIONING STEEL:
PRETENSIONING STEEL SHALL CONSIST OF 1/2" DIAMETER, 7-WIRE BRIGHT LOW RELAXATION STRANDS CONFORMING TO THE REQUIREMENTS OF M203 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).

HYDROLOGICAL AND HYDRAULIC DATA:
FOR HYDROLOGICAL AND HYDRAULIC DATA, SEE SHEET TITLED "HYDROLOGICAL AND HYDRAULIC DATA SHEET".

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

NO AS-BUILT PLANS ARE AVAILABLE. THE EXISTING BRIDGE ABUTMENT GEOMETRICS, INCLUDING SIZE, SHAPE, AND FOOTING ELEVATION, WERE ESTIMATED FROM EXISTING DESIGN COMPUTATIONS AND SKETCHES DATED 9/1971 AND 11/1971 PROVIDED BY MONTGOMERY CO. THE EXISTING BRIDGE SUPERSTRUCTURE TYPICAL SECTION WAS ESTIMATED FROM THE 2013 INSPECTION REPORT BY THE WILSON T BALLARD COMPANY PROVIDED BY MONTGOMERY CO.

IN-SITU FOOTING ELEVATIONS FOR THE EXISTING STRUCTURE MAY VARY FROM THE APPROXIMATE EXISTING FOOTING ELEVATIONS SHOWN ON THE CONTRACT DRAWINGS.

EXISTING SUBSTRUCTURE:
THE PROPOSED BRIDGE WILL UTILIZE THE EXISTING ABUTMENTS AND EXISTING WINGWALLS ON THE EASTERN SIDE BY REHABILITATION AND RECONFIGURATION OF THE BEAM SEATS AND BACKWALLS. THE ROADWAY IS ASSUMED TO BE CLOSED AND THE EXISTING TRAFFIC IS ASSUMED TO BE DETOURED DURING CONSTRUCTION. THE PROPOSED BRIDGE IS WIDER THAN THE EXISTING BRIDGE AND NEW PORTIONS OF SUBSTRUCTURE WILL BE CONSTRUCTED ON THE WESTERN SIDE OF THE BRIDGE FOR THIS WIDENING.

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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

Designed by: VTD Drawn by: GMJ Checked by:

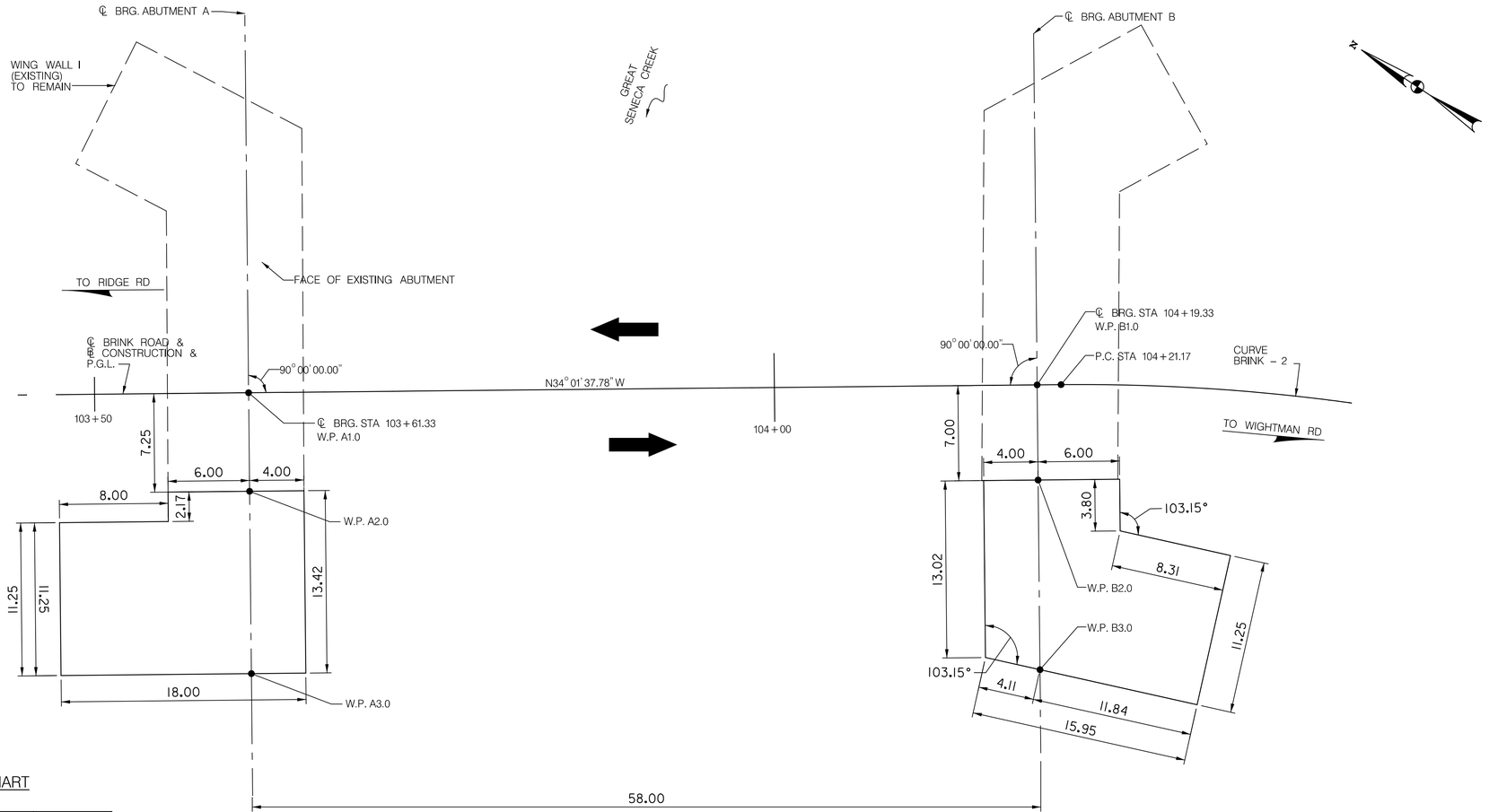
REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

GENERAL PLAN & ELEVATION

SCALE : AS SHOWN — S-01

Project No. : 501119 — 19 of 28

7/13/2022



WORKING POINT LOCATION CHART

WORKING POINT	STATION	OFFSET (FT)	NORTHING	EASTING
A1.0	103 + 61.33	0.00	1254511.84	559006.76
A2.0	103 + 61.33	7.25 RT	1254505.84	559002.70
A3.0	103 + 61.33	20.67 RT	1254494.72	558995.19
B1.0	104 + 19.33	0.00	1254544.30	558958.69
B2.0	104 + 19.33	7.00 RT	1254538.50	558954.77
B3.0	104 + 19.33	20.95 RT	1254526.93	558946.96

GEOMETRIC & FOOTING PLAN
SCALE: 1" = 5'-0"

NOTES:
1. FOR REMOVAL OF EXISTING ABUTMENT PORTIONS, REFER TO S-03 & S-04.
2. FOR ABUTMENT A PLAN AND ELEVATION, REFER TO S-05.
3. FOR ABUTMENT B PLAN AND ELEVATION, REFER TO S-06.
4. FOR WINGWALL II & IV ELEVATIONS, REFER TO S-08.
5. AS-BUILT PLANS ARE NOT AVAILABLE FOR THE EXISTING BRIDGE.
6. ALL FOOTING TURNS ARE 90.00 DEGREES UNLESS OTHERWISE NOTED.

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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

Designed by: VTD Drawn by: GMJ Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

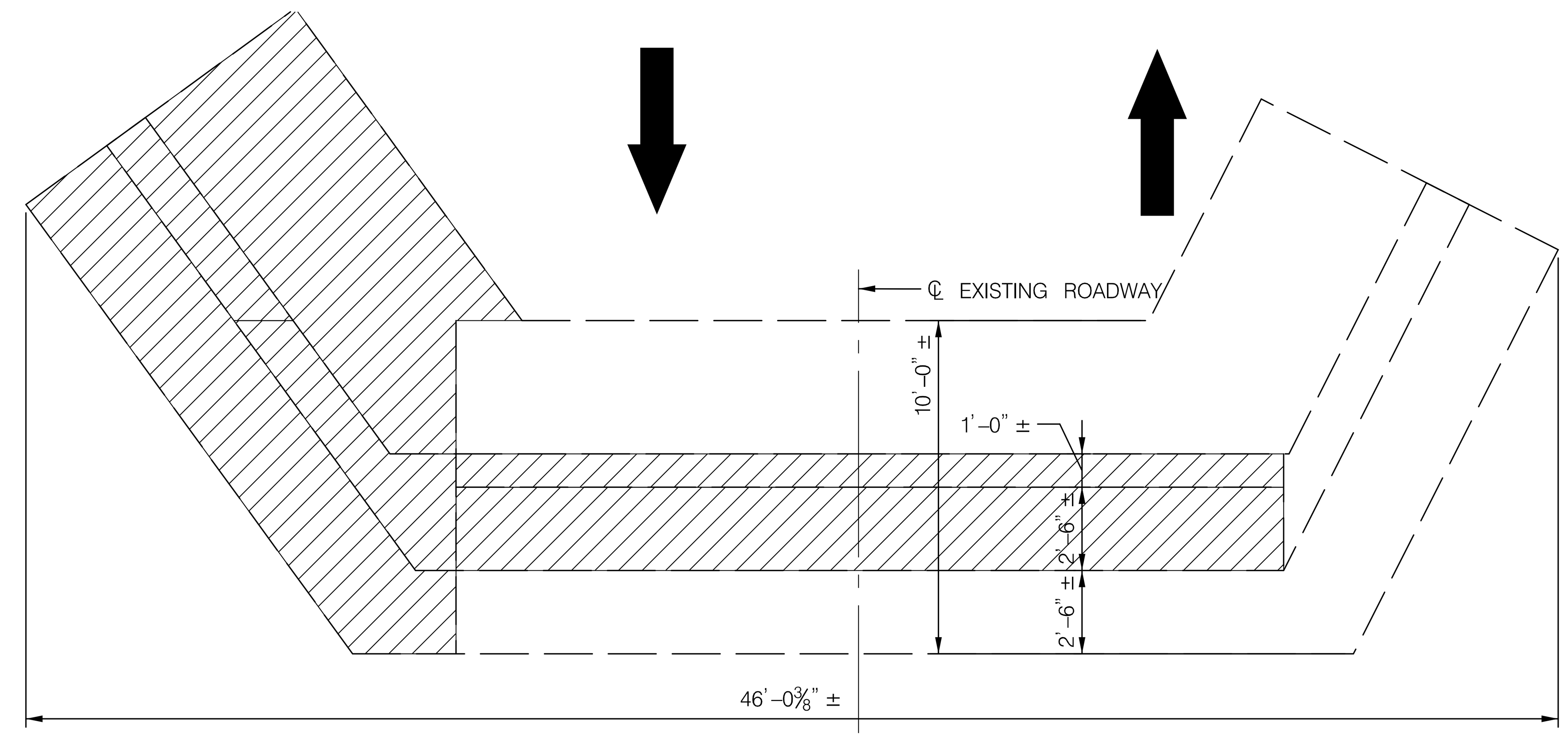
GEOMETRIC & FOOTING PLAN

SCALE : AS SHOWN

S-02

Project No. : 501119 20 of 28

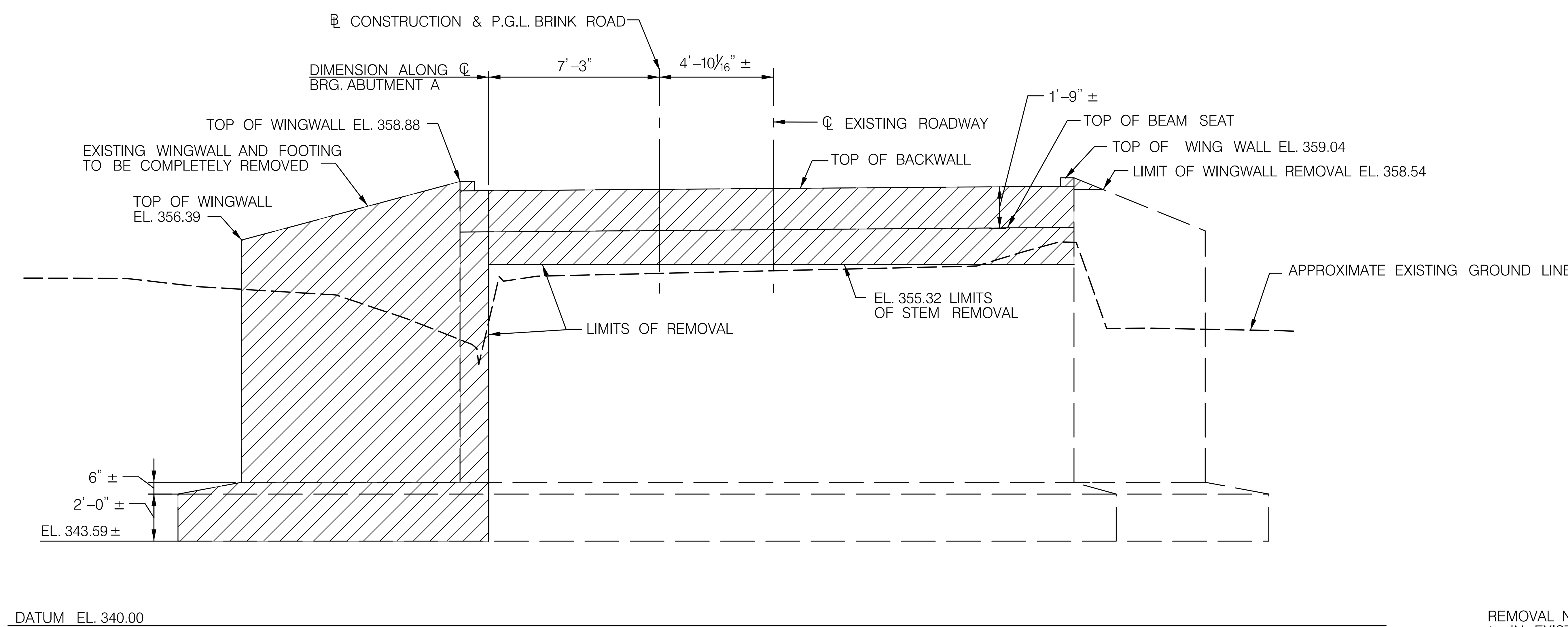
7/13/2022



ABUTMENT A – PLAN
SCALE: 1/4 = 1'-0"

EXISTING STRUCTURE NOTES:

1. NO AS–BUILT PLANS ARE AVAILABLE.
2. THE EXISTING BRIDGE ABUTMENT GEOMETRICS, INCLUDING SIZE, SHAPE, AND FOOTING ELEVATION, WERE ESTIMATED FROM EXISTING DESIGN COMPUTATIONS AND SKETCHES DATED 9/1971 AND 11/1971 PROVIDED BY MONTGOMERY CO.
3. IN–SITU FOOTING ELEVATIONS FOR THE EXISTING STRUCTURE MAY VARY FROM THE APPROXIMATE EXISTING FOOTING ELEVATIONS SHOWN ON THE CONTRACT DRAWINGS.



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

REMOVAL NOTES:

1. IN EXISTING ABUTMENT, EXISTING VERTICAL REINFORCEMENT IS TO BE INCORPORATED IN THE FINAL STRUCTURE AND SHALL BE STRAIGHTENED, CLEANED AND EPOXY COATED. CARE SHALL BE TAKEN NOT TO DAMAGE THESE BARS.
2. ANY EXISTING REINFORCING STEEL WHICH IS TO BE INCORPORATED INTO THE FINAL STRUCTURE:
   A. AND IN THE OPINION OF THE ENGINEER HAS LOST 20% OR MORE OF ITS ORIGINAL CROSS SECTIONAL AREA, SHALL BE CUT OUT. A NEW BAR OF THE SAME DIAMETER SHALL BE PROVIDED AND PLACED AS TO HAVE THE MIIMUM REQUIRED LAP AT THE END OF THE NEW BAR OR BE MODIFIED AS IN C BELOW.
   B. WHERE THE REQUIRED LAP LENGTH IS AVAILABLE SHALL BE USED AS A DOWEL.
   C. WHERE THE REQUIRED BAR LAP IS NOT AVAILABLE OR LIMITS OF CONCRETE REMOVAL TO ACHIEVE BAR LAP WOULD BE TOO GREAT, A WELDED OR APPROVED MECHANICAL SPLICE SHALL BE PROVIDED. SEE STANDARD DETAIL M(6.01)–75–12.
3. THE COST OF STRAIGHTENING, CLEANING AND EPOXY COATING REINFORCING STEEL SHALL BE INCLUDED IN THE PRICE BID ON THE SUBSTRUCTURE CONCRETE ITEM.
4. IF EXPECTED REINFORCING STEEL IS MISSING OR A PATTERN DIFFERING FROM THAT SHOWN ON THE PLANS IS UNCOVERED THEN THE ENGINEER SHALL BE NOTIFIED FOR EVALUATION.
5. WHERE THE REMOVAL WILL BE ON AN EXPOSED FACE IN THE FINAL STRUCTURE FIRST SAW CUT ONE INCH DEEP TO NEAT LINES IN CONCRETE SURFACE FORMED CONCRETE OR MORTAR ADJACENT TO EXISTING SO AS TO PRODUCE A SMOOTH SURFACE.

AREA TO BE REMOVED

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section ____ Date

APPROVED

Chief, Division of Transportation Engineering ____ Date

Designed by: VTD Drawn by: GMJ Checked by: ____

REHABILITATION OF BRIDGE NO. M–0064 ON BRINK ROAD OVER GREAT SENECA CREEK

ABUTMENT A REMOVAL

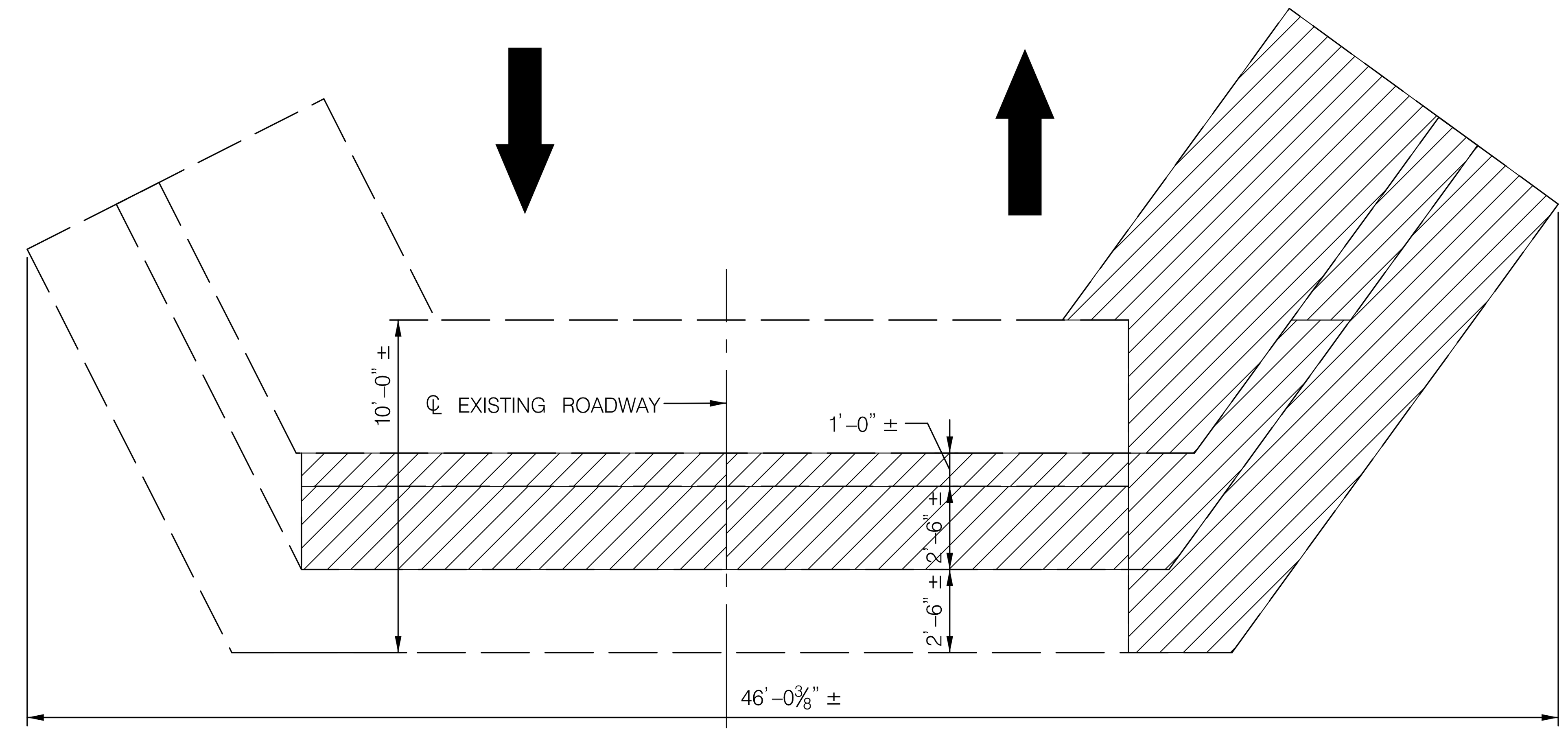
SCALE :

S–03

Project No. : 501119

REMOVAL NOTES:

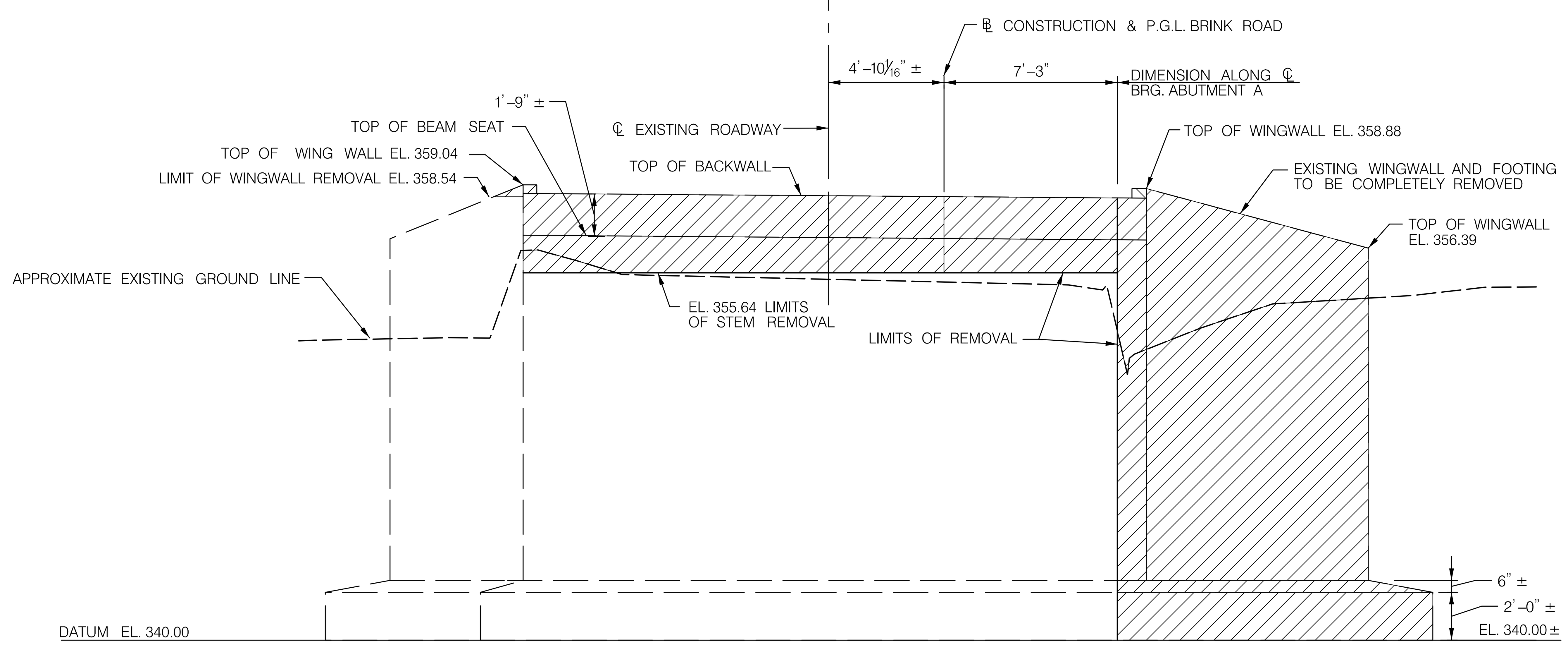
1. IN EXISTING ABUTMENT, EXISTING VERTICAL REINFORCEMENT IS TO BE INCORPORATED IN THE FINAL STRUCTURE AND SHALL BE STRAIGHTENED, CLEANED AND EPOXY COATED. CARE SHALL BE TAKEN NOT TO DAMAGE THESE BARS.
2. ANY EXISTING REINFORCING STEEL WHICH IS TO BE INCORPORATED INTO THE FINAL STRUCTURE:
   A. AND IN THE OPINION OF THE ENGINEER HAS LOST 20% OR MORE OF ITS ORIGINAL CROSS SECTIONAL AREA, SHALL BE CUT OUT. A NEW BAR OF THE SAME DIAMETER SHALL BE PROVIDED AND PLACED AS TO HAVE THE MIIMUM REQUIRED LAP AT THE END OF THE NEW BAR OR BE MODIFIED AS IN C BELOW.
   B. WHERE THE REQUIRED LAP LENGTH IS AVAILABLE SHALL BE USED AS A DOWEL.
   C. WHERE THE REQUIRED BAR LAP IS NOT AVAILABLE OR LIMITS OF CONCRETE REMOVAL TO ACHIEVE BAR LAP WOULD BE TOO GREAT, A WELDED OR APPROVED MECHANICAL SPLICE SHALL BE PROVIDED. SEE STANDARD DETAIL M(6.01)–75–12.
3. THE COST OF STRAIGHTENING, CLEANING AND EPOXY COATING REINFORCING STEEL SHALL BE INCLUDED IN THE PRICE BID ON THE SUBSTRUCTURE CONCRETE ITEM.
4. IF EXPECTED REINFORCING STEEL IS MISSING OR A PATTERN DIFFERING FROM THAT SHOWN ON THE PLANS IS UNCOVERED THEN THE ENGINEER SHALL BE NOTIFIED FOR EVALUATION.
5. WHERE THE REMOVAL WILL BE ON AN EXPOSED FACE IN THE FINAL STRUCTURE FIRST SAW CUT ONE INCH DEEP TO NEAT LINES IN CONCRETE SURFACE FORMED CONCRETE OR MORTAR ADJACENT TO EXISTING SO AS TO PRODUCE A SMOOTH SURFACE.



ABUTMENT B – PLAN
SCALE: 1/4 = 1'-0"

EXISTING STRUCTURE NOTES:

1. NO AS-BUILT PLANS ARE AVAILABLE.
2. THE EXISTING BRIDGE ABUTMENT GEOMETRICS, INCLUDING SIZE, SHAPE, AND FOOTING ELEVATION, WERE ESTIMATED FROM EXISTING DESIGN COMPUTATIONS AND SKETCHES DATED 9/1971 AND 11/1971 PROVIDED BY MONTGOMERY CO.
3. IN-SITU FOOTING ELEVATIONS FOR THE EXISTING STRUCTURE MAY VARY FROM THE APPROXIMATE EXISTING FOOTING ELEVATIONS SHOWN ON THE CONTRACT DRAWINGS.



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

AREA TO BE REMOVED

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

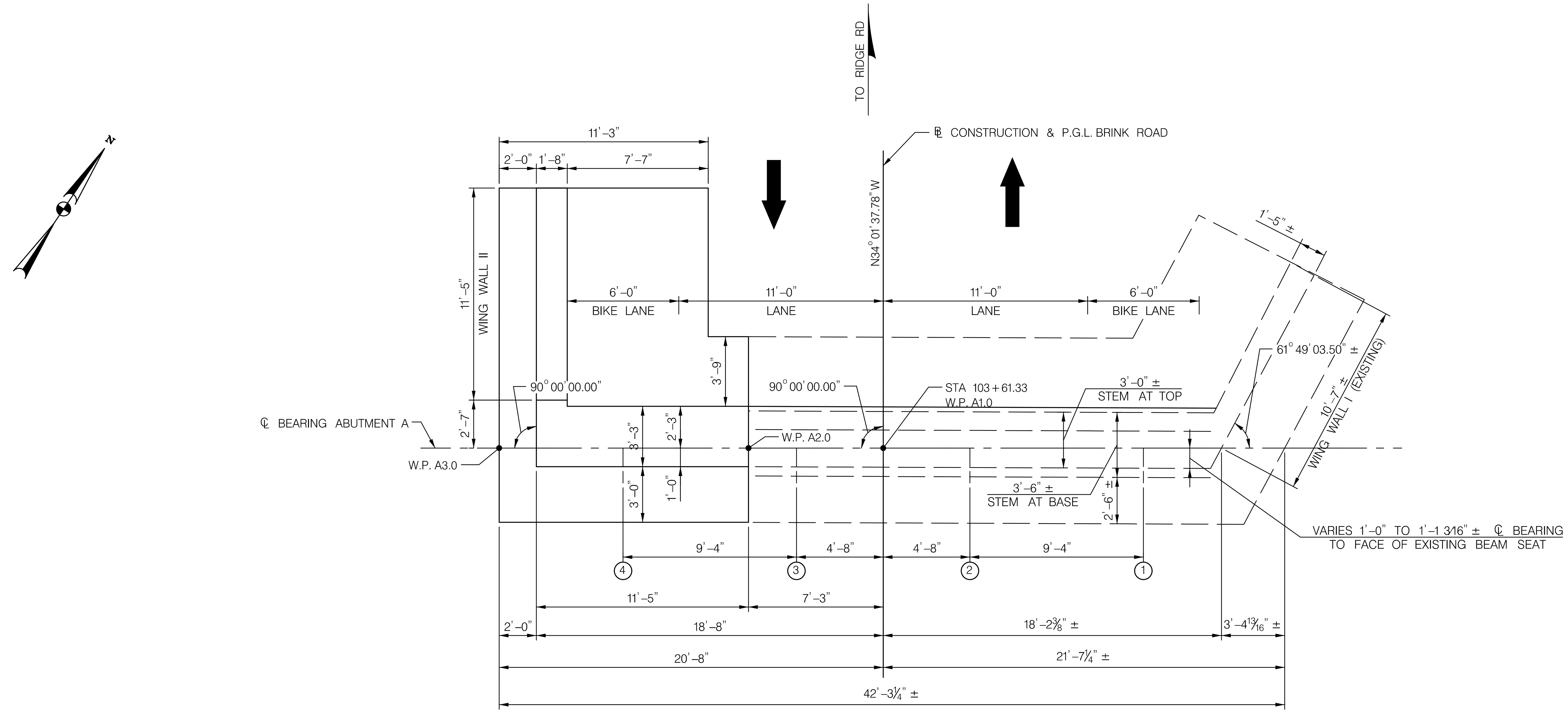
Designed by: VTD Drawn by: GMJ Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

ABUTMENT B REMOVAL

SCALE : S-04

Project No. : 501119



PLAN

SCALE: 1/4=1'-0"

EXISTING STRUCTURE NOTES:

1. NO AS-BUILT PLANS ARE AVAILABLE.
2. THE EXISTING BRIDGE ABUTMENT GEOMETRICS, INCLUDING SIZE, SHAPE, AND FOOTING ELEVATION, WERE ESTIMATED FROM EXISTING DESIGN COMPUTATIONS AND SKETCHES DATED 9/1971 AND 11/1971 PROVIDED BY MONTGOMERY CO.
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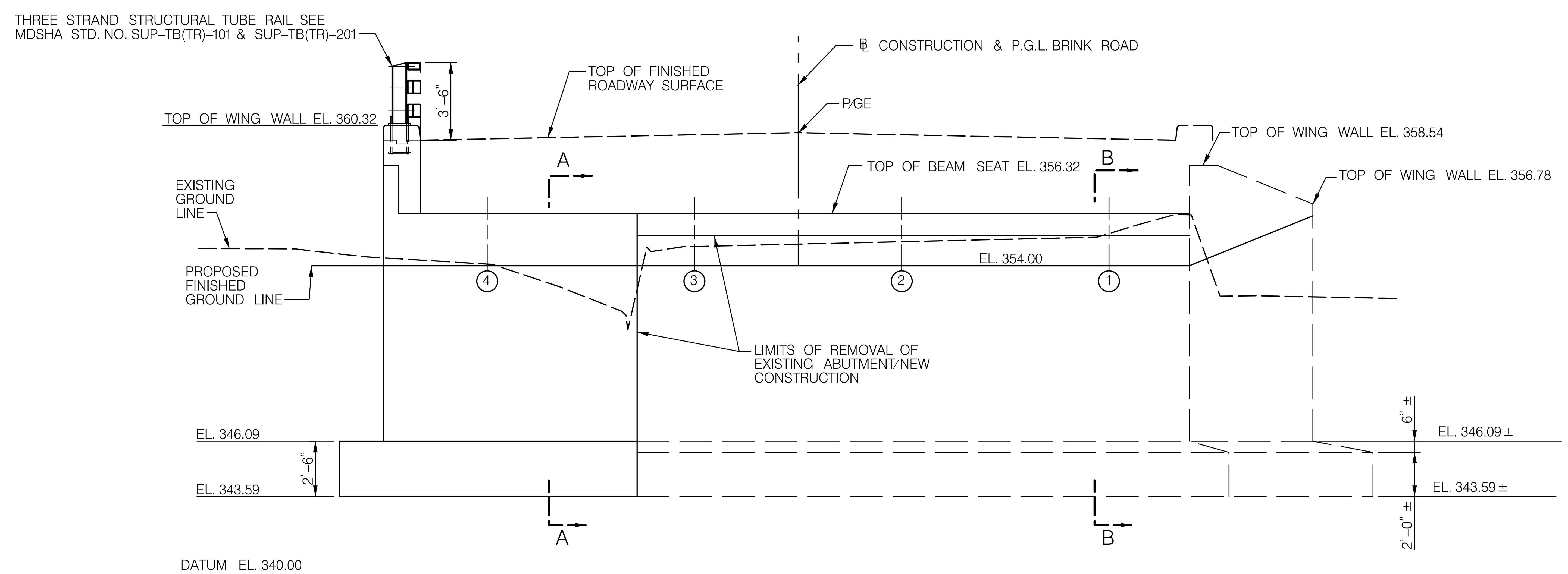


ELEVATION

SCALE: 1/4=1'-0"

NOTES:

1. FOR SECTION A-A & B-B, REFER TO S-07.
2. FOR WING WALL ELEVATIONS AND TYPICAL SECTION, REFER TO S-08.
3. AS-BUILT PLANS ARE NOT AVAILABLE FOR THE EXISTING BRIDGE.
4. THE EXISTING BOTTOM OF FOOTING ELEVATIONS AND ALL EXISTING FOOTING PLAN DIMENSIONS ARE ESTIMATED BASED ON DIMENSIONS FROM A TYPICAL ABUTMENT SECTION SHOWN ON THE EXISTING ABUTMENT CALCULATIONS PROVIDED BY MONTGOMERY COUNTY, MD. ANY VARIATION FOUND IN THE FIELD FROM THE ASSUMED EXISTING ABUTMENT DIMENSIONS WILL REQUIRE THE ABUTMENT DESIGN TO BE VERIFIED BY THE ENGINEER.
5. THE PROPOSED ABUTMENT FOOTING ELEVATIONS ARE DESIGNED TO MATCH THE EXISTING ABUTMENT FOOTING ELEVATIONS, WHICH ARE ESTIMATED BASED ON DIMENSIONS FROM A TYPICAL ABUTMENT SECTION SHOWN ON THE EXISTING ABUTMENT CALCULATIONS PROVIDED BY MONTGOMERY COUNTY, MD. ANY VARIATION FOUND IN THE FIELD FROM THE ASSUMED EXISTING FOOTING ELEVATIONS LARGER THAN 6" AND RESULTING IN A TALLER THAN ANTICIPATED STEM WILL REQUIRE THE ABUTMENT DESIGN TO BE VERIFIED BY THE ENGINEER.
6. AS-BUILT PLANS AND CALCULATIONS ARE NOT AVAILABLE FOR THE EXISTING WING WALLS. THE EXISTING WING WALL FOOTING PLAN DIMENSIONS SHOWN ARE ASSUMED TO MATCH THE EXISTING ABUTMENT TYPICAL SECTION FOOTING DIMENSIONS BASED ON DIMENSIONS FROM A TYPICAL ABUTMENT SECTION SHOWN ON THE EXISTING ABUTMENT CALCULATIONS PROVIDED BY MONTGOMERY COUNTY, MD.
7. PROPOSED ABUTMENT WIDENING TO BE ANCHORED TO EXISTING ABUTMENTS WITH HORIZONTAL REBAR DOWELS DRILLED AND GROUTED INTO EXISTING ABUTMENTS.

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: VTD — Drawn by: GMJ — Checked by:

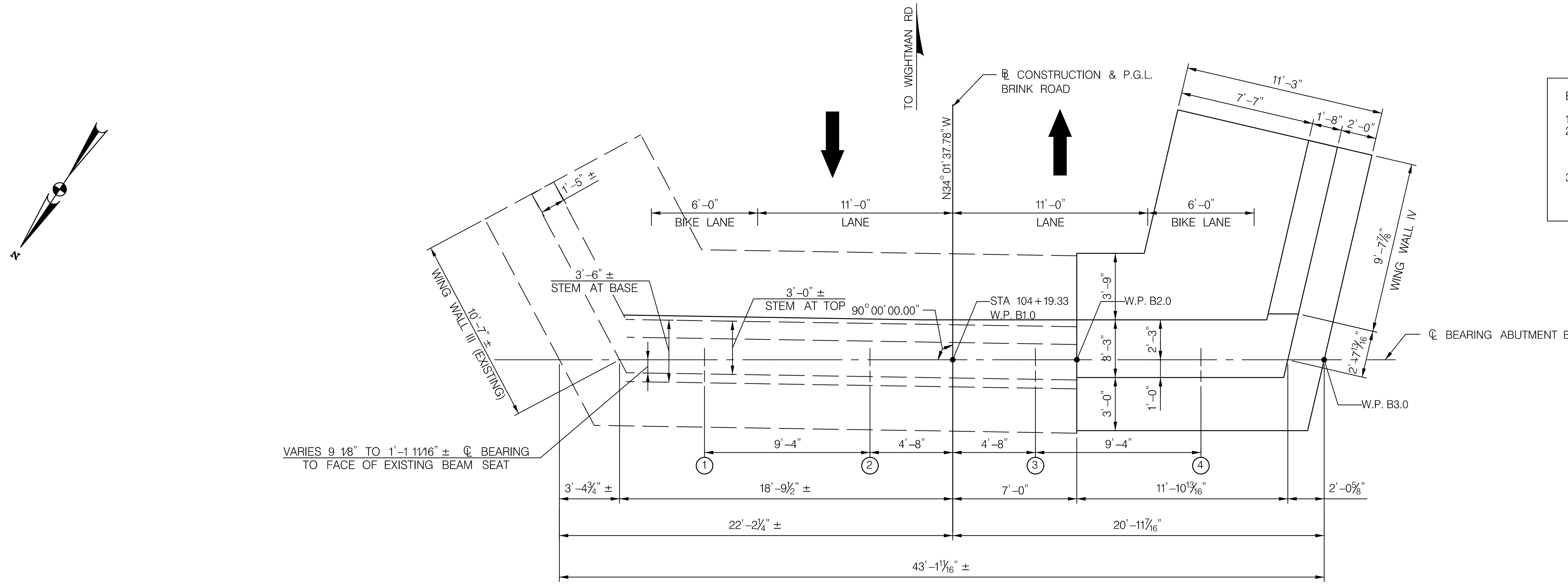
REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

ABUTMENT A PLAN AND ELEVATION

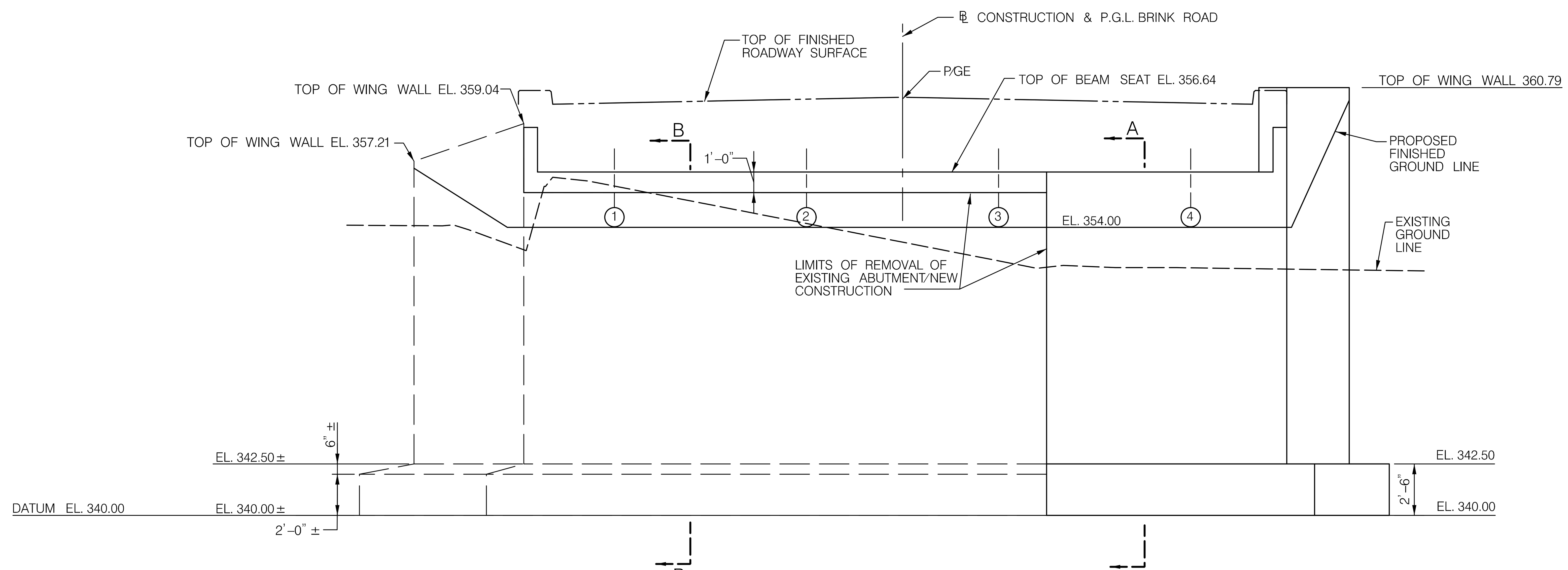
SCALE :

S-05

Project No. : 501119 — 23 of 28



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



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

EXISTING STRUCTURE NOTES:

1. NO AS-BUILT PLANS ARE AVAILABLE.
2. THE EXISTING BRIDGE ABUTMENT GEOMETRICS, INCLUDING SIZE, SHAPE, AND FOOTING ELEVATION, WERE ESTIMATED FROM EXISTING DESIGN COMPUTATIONS AND SKETCHES DATED 9/1971 AND 11/1971 PROVIDED BY MONTGOMERY CO.
3. IN-SITU FOOTING ELEVATIONS FOR THE EXISTING STRUCTURE MAY VARY FROM THE APPROXIMATE EXISTING FOOTING ELEVATIONS SHOWN ON THE CONTRACT DRAWINGS.

NOTES:
1. FOR SECTION A-A & B-B, REFER TO S-07.
2. FOR WING ALL ELEVATIONS AND TYPICAL SECTION, REFER TO S-08.
3. AS-BUILT PLANS ARE NOT AVAILABLE FOR THE EXISTING BRIDGE.
4. THE EXISTING BOTTOM OF FOOTING ELEVATIONS AND ALL EXISTING FOOTING PLAN DIMENSIONS ARE ESTIMATED BASED ON DIMENSIONS FROM A TYPICAL ABUTMENT SECTION SHOWN ON THE EXISTING ABUTMENT CALCULATIONS PROVIDED BY MONTGOMERY COUNTY, MD. ANY VARIATION FOUND IN THE FIELD FROM THE ASSUMED EXISTING ABUTMENT DIMENSIONS WILL REQUIRE THE ABUTMENT DESIGN TO BE VERIFIED BY THE ENGINEER.
5. THE PROPOSED ABUTMENT FOOTING ELEVATIONS ARE DESIGNED TO MATCH THE EXISTING ABUTMENT FOOTING ELEVATIONS, WHICH ARE ESTIMATED BASED ON DIMENSIONS FROM A TYPICAL ABUTMENT SECTION SHOWN ON THE EXISTING ABUTMENT CALCULATIONS PROVIDED BY MONTGOMERY COUNTY, MD. ANY VARIATION FOUND IN THE FIELD FROM THE ASSUMED EXISTING FOOTING ELEVATIONS LARGER THAN 6" AND RESULTING IN A TALLER THAN ANTICIPATED STEM WILL REQUIRE THE ABUTMENT DESIGN TO BE VERIFIED BY THE ENGINEER.
6. AS-BUILT PLANS AND CALCULATIONS ARE NOT AVAILABLE FOR THE EXISTING WING WALLS. THE EXISTING WING ALL FOOTING PLAN DIMENSIONS SHOWN ARE ASSUMED TO MATCH THE EXISTING ABUTMENT TYPICAL SECTION FOOTING DIMENSIONS BASED ON DIMENSIONS FROM A TYPICAL ABUTMENT SECTION SHOWN ON THE EXISTING ABUTMENT CALCULATIONS PROVIDED BY MONTGOMERY COUNTY, MD.
7 PROPOSED ABUTMENT WIDENING TO BE ANCHORED TO EXISTING ABUTMENTS WITH HORIZONTAL REBAR DOWELS DRILLED AND GROUTED INTO EXISTING ABUTMENTS.

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date
APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: VTD Drawn by: GMJ Checked by:

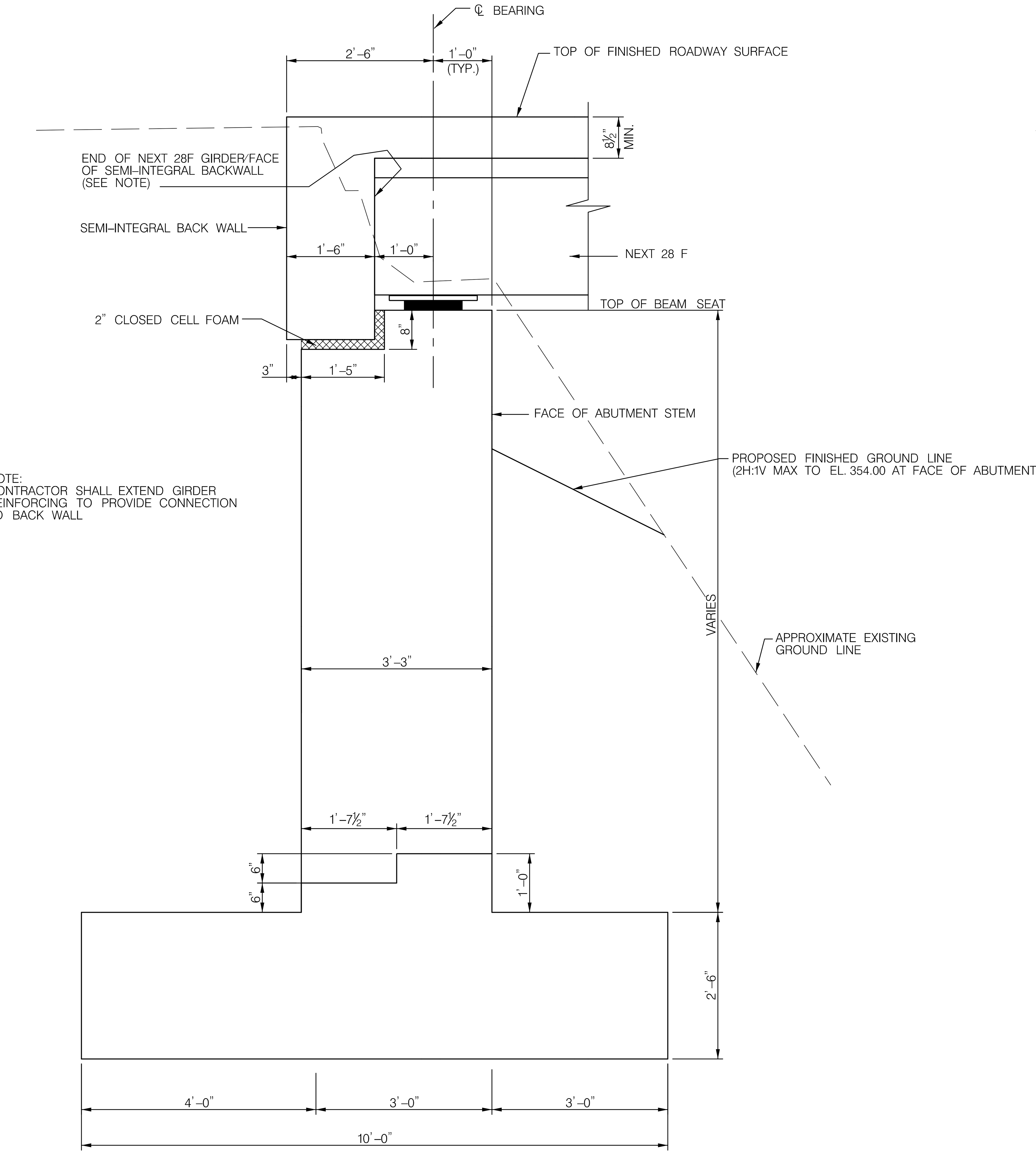
REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

ABUTMENT B PLAN AND ELEVATION

SCALE :

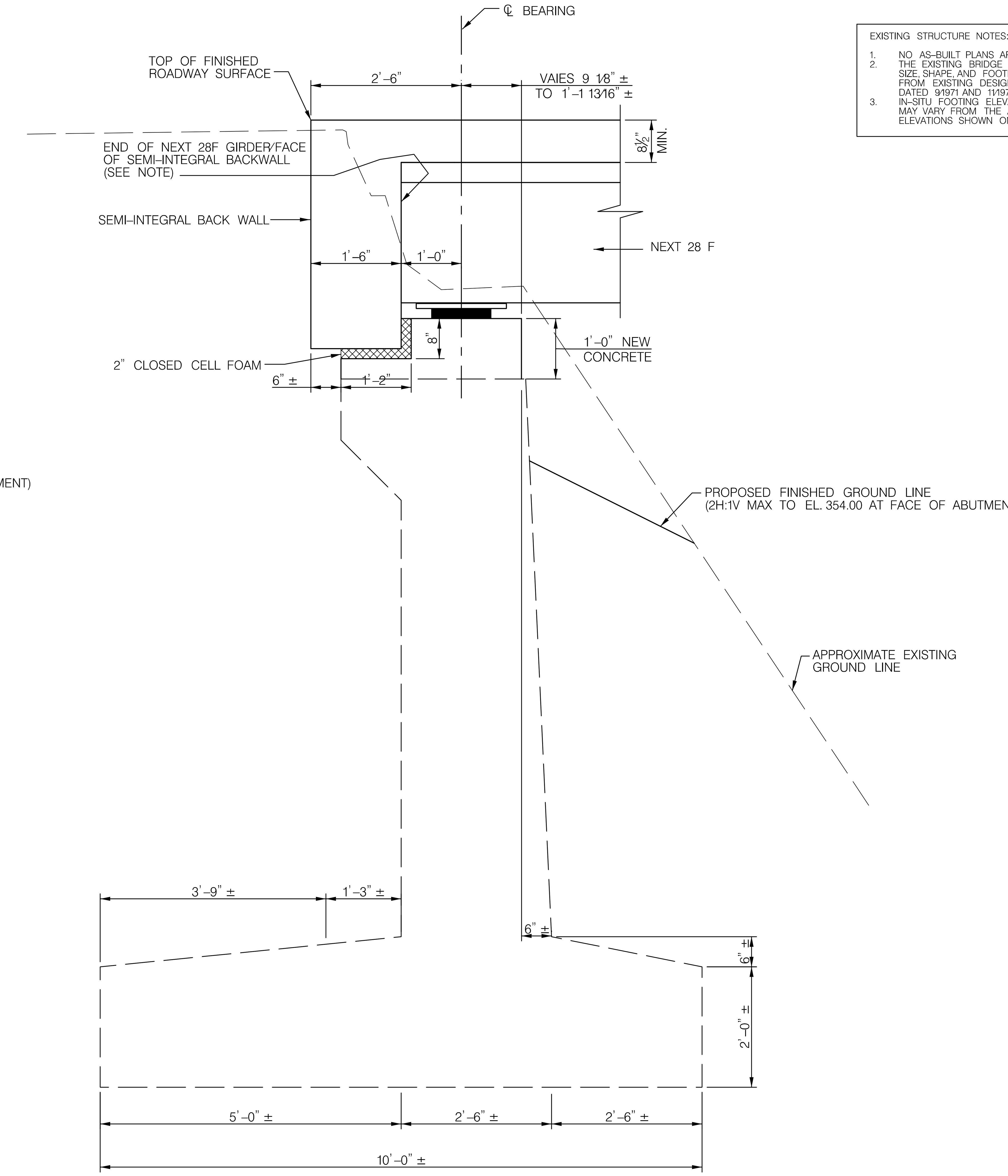
S-06

Project No. : 501119 24 of 28



NOTE:
CONTRACTOR SHALL EXTEND GIRDER REINFORCING TO PROVIDE CONNECTION TO BACK WALL

SECTION A–A: TYPICAL ABUTMENT EXTENSION
SCALE: 3⁄4" = 1'-0"



SECTION B–B: TYPICAL MODIFIED EXISTING ABUTMENT
SCALE: 3⁄4" = 1'-0"

EXISTING STRUCTURE NOTES:

1. NO AS-BUILT PLANS ARE AVAILABLE.
2. THE EXISTING BRIDGE ABUTMENT GEOMETRICS, INCLUDING SIZE, SHAPE, AND FOOTING ELEVATION, WERE ESTIMATED FROM EXISTING DESIGN COMPUTATIONS AND SKETCHES DATED 9/1971 AND 11/1971 PROVIDED BY MONTGOMERY CO.
3. IN-SITU FOOTING ELEVATIONS FOR THE EXISTING STRUCTURE MAY VARY FROM THE APPROXIMATE EXISTING FOOTING ELEVATIONS SHOWN ON THE CONTRACT DRAWINGS.

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: VTD   Drawn by: GMJ   Checked by:

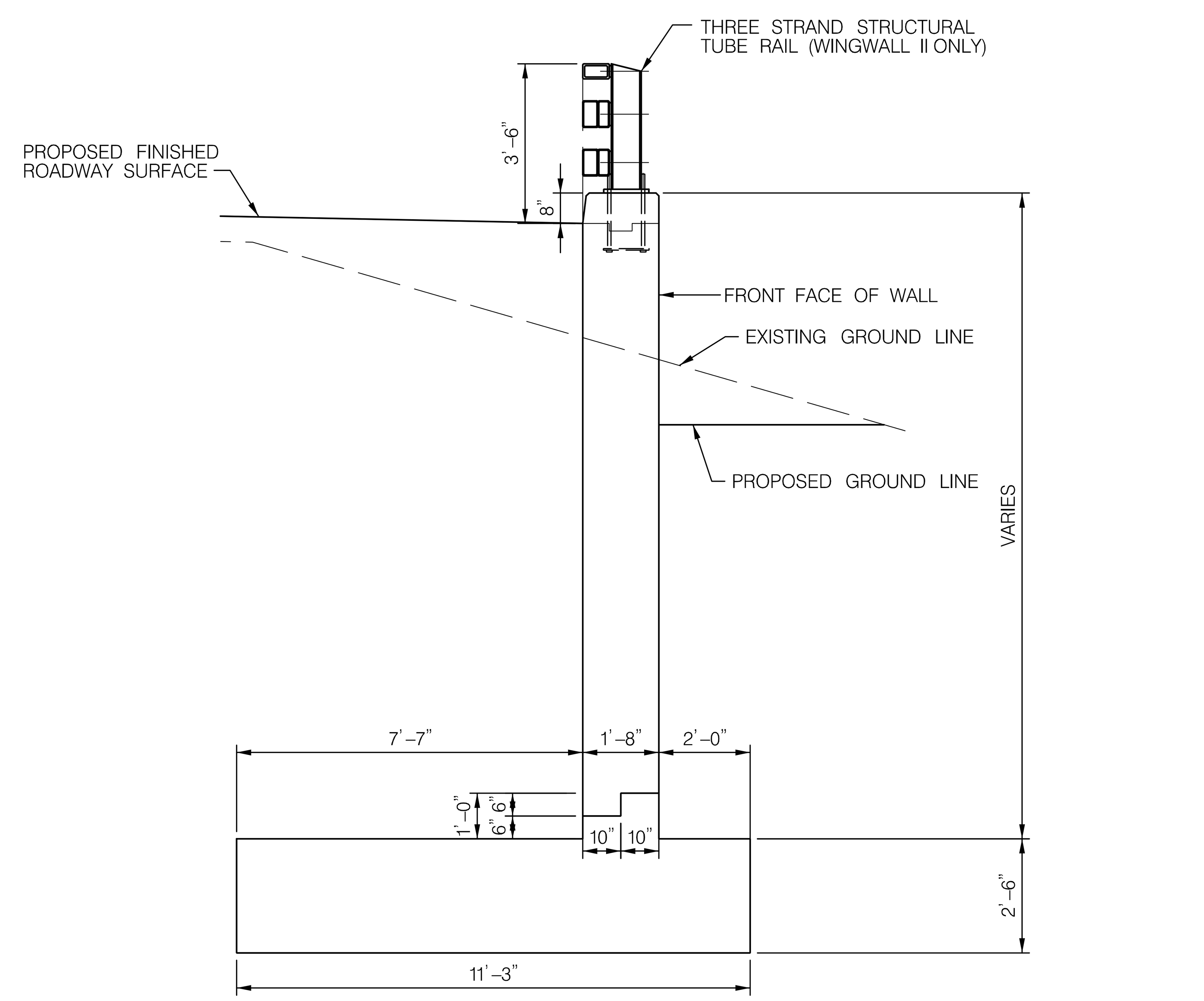
REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

ABUTMENT SECTIONS

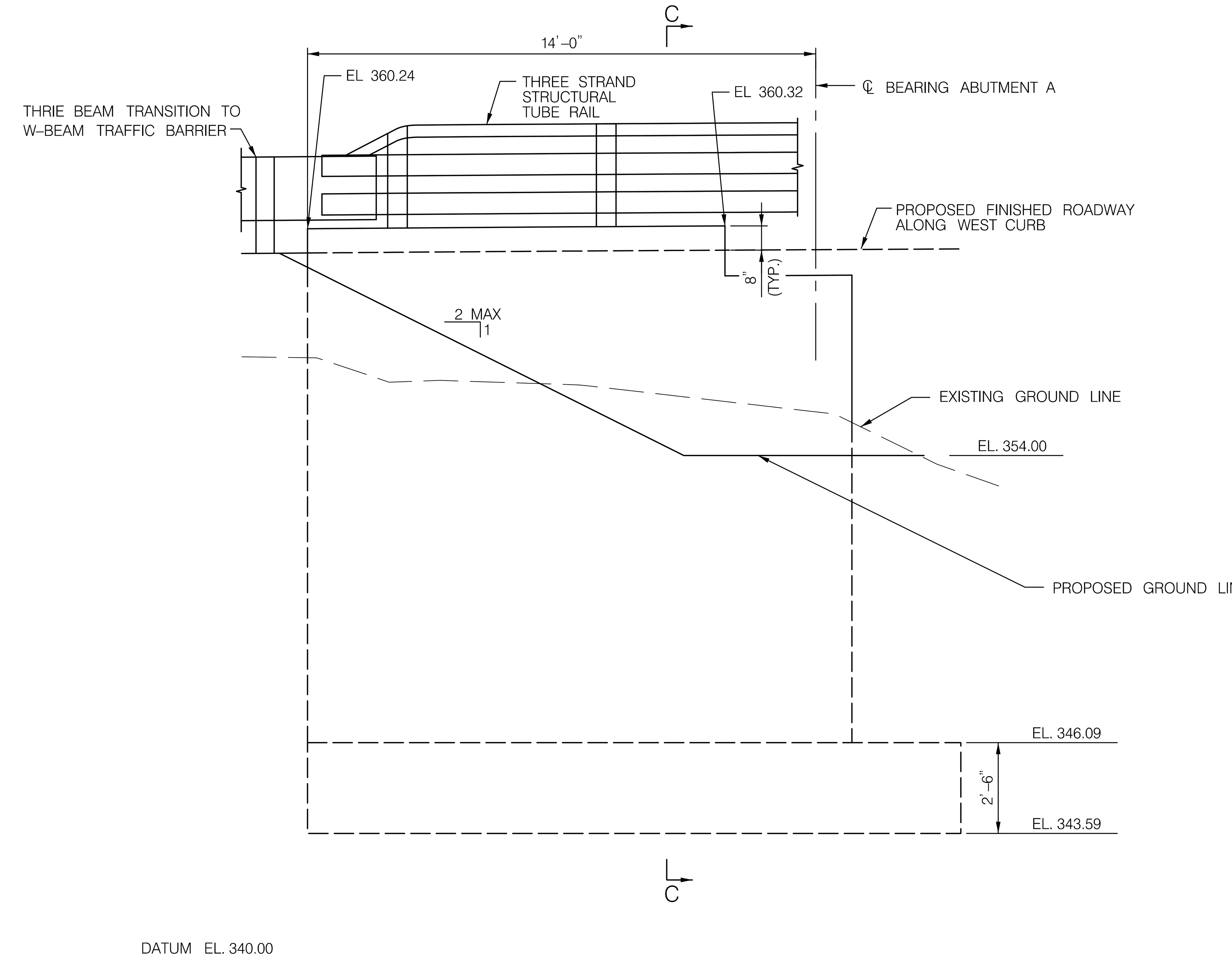
SCALE : 3/4"=1'-0"

S-07

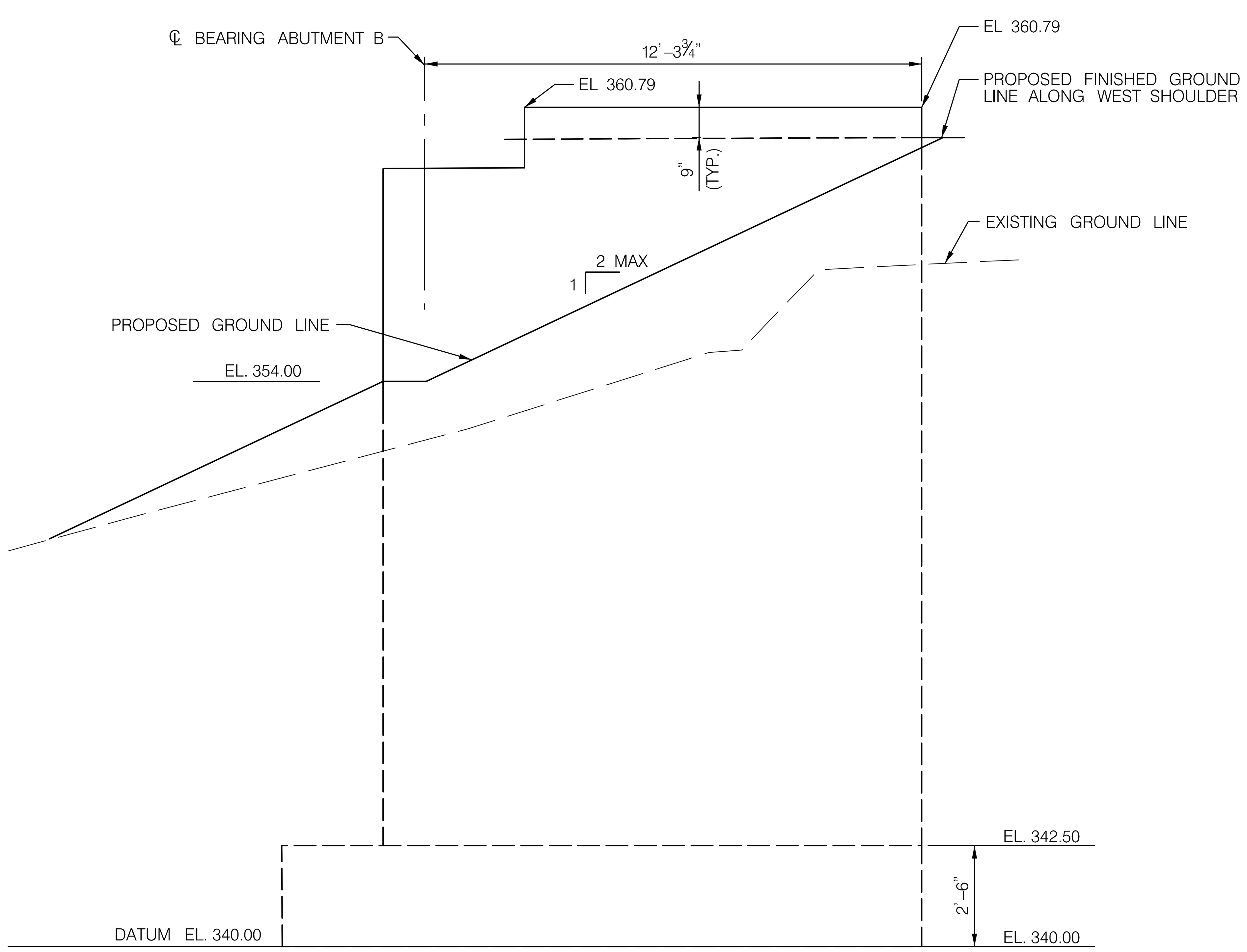
Project No. : 501119



SECTION C-C:WINGWALL TYPICAL SECTION
SCALE: 3⁄8" = 1'-0"



WINGWALL II ELEVATION
SCALE: 3⁄8" = 1'-0"



WINGWALL IV ELEVATION
SCALE: 3⁄8" = 1'-0"

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: VTD Drawn by: GMJ Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

WING WALL ELEVATION AND SECTIONS

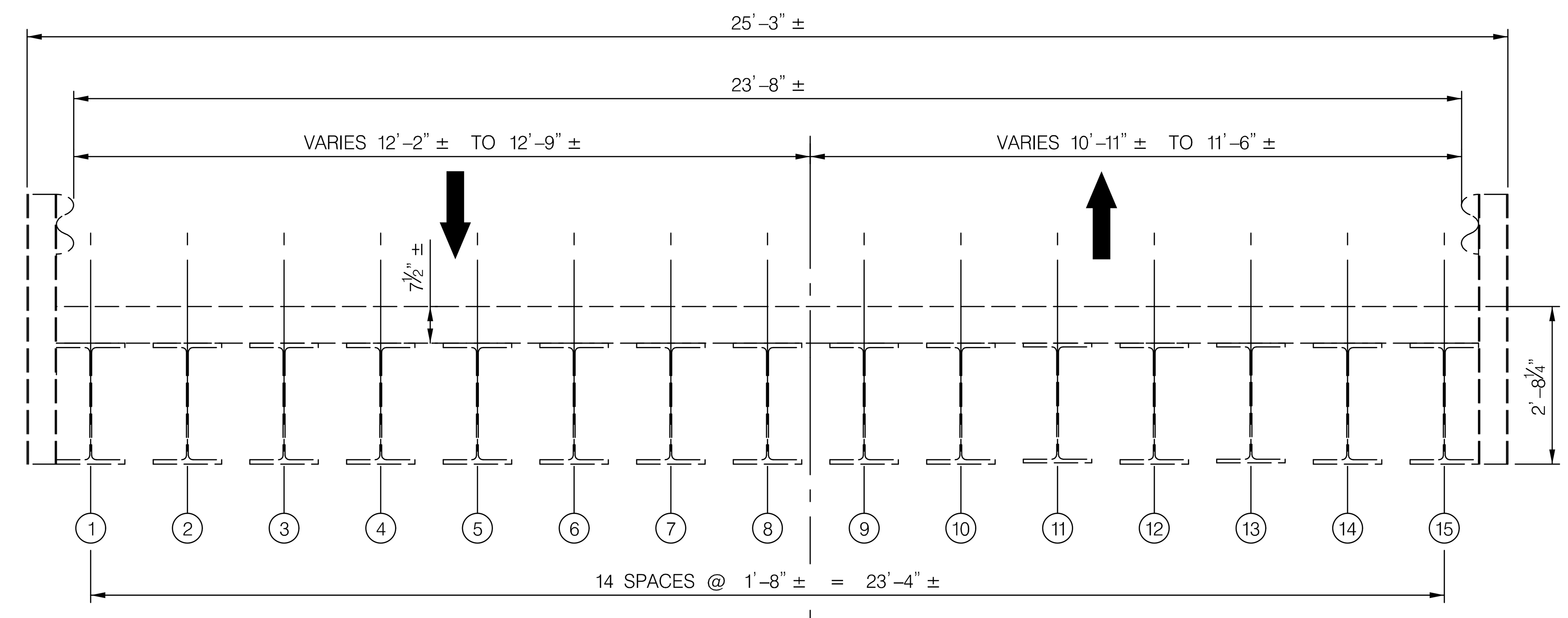
SCALE : 3/4"=1'-0"

S-08

Project No. : 501119 26 of 28

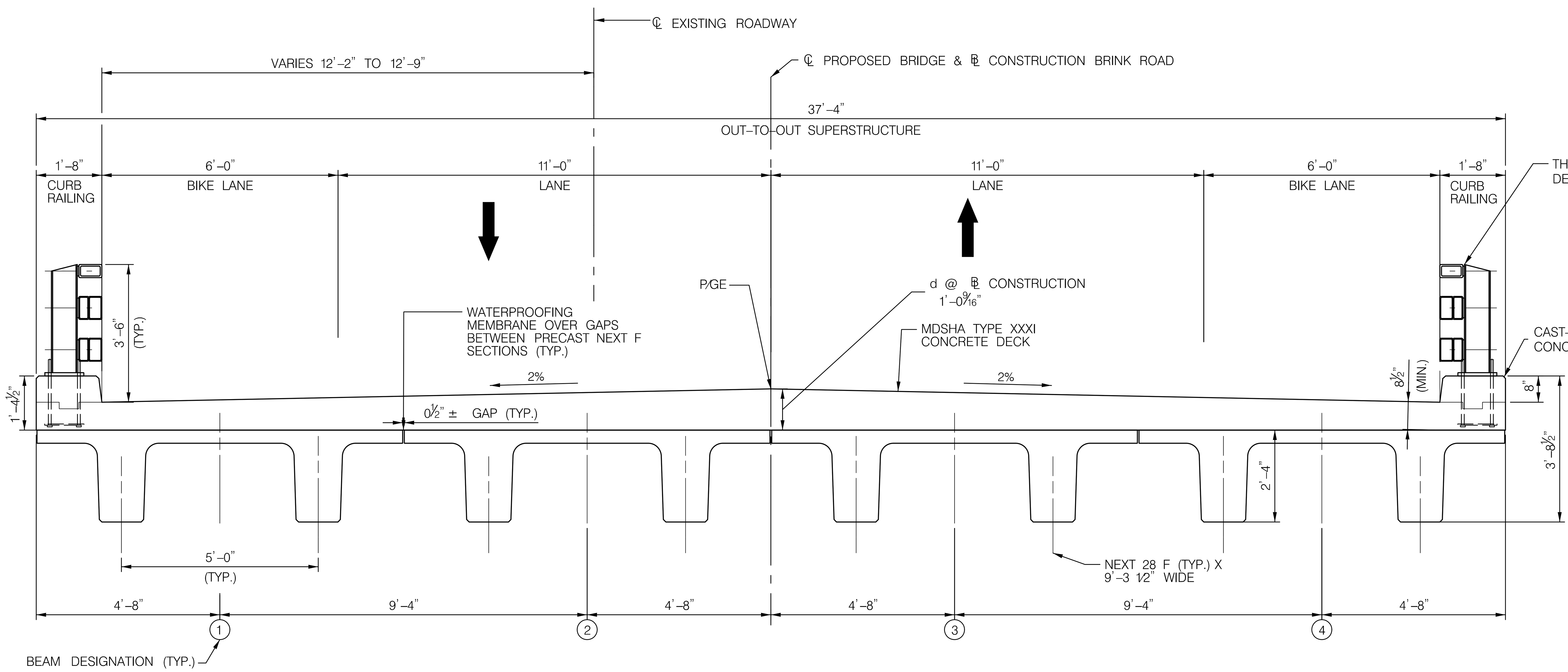
EXISTING STRUCTURE NOTES:

1. NO AS-BUILT PLANS ARE AVAILABLE.
2. THE EXISTING BRIDGE SUPERSTRUCTURE TYPICAL SECTION WAS ESTIMATED FROM THE 2013 INSPECTION REPORT BY THE WILSON T BALLARD COMPANY PROVIDED BY MONTGOMERY CO.



EXISTING BRIDGE TYPICAL SECTION

SCALE: 1/2" = 1'-0"



PROPOSED TYPICAL SECTION

SCALE: 1/2" = 1'-0"

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: VTD   Drawn by: GMJ   Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

TYPICAL SECTION

SCALE : AS SHOWN

S-09

Project No. : 501119

27 of 28

T/FTG ABUT A
EL. 346.09

B/FTG ABUT A
EL. 343.59

RECORD OF SOIL / ROCK EXPLORATION

Page 1 of 1

Contracted With: KCI Inc/Gannett Fleming Inc JV — Boring #: S-1
Project Name: Brink Rd Bridge No. M-0064 over Great Seneca Creek — Job #: 13-00071.05
Location: Montgomery County, MD

SAMPLER

Datum: — Hammer Wt.: 140 lb — Hole Diameter: 8 in — Foreman: M.F.
Surf. Elev.: 355.0 ft — Hammer Drop: 30 in — Rock Core Dia.: N/A — Inspector: S.H.
Date Started: 9/27/17 — Spoon Size: 2 in — Boring Method: HSA — Date Completed: 9/27/17

ELEV. (ft)	SOIL DESCRIPTION Color, Moisture, Density, Plasticity, Size Proportions	STRA DEPTH (ft)	Cond	Blows/6"	No.	Type	Rec (in)
354.4	7" of TOPSOIL	0.6	D/I	2-3-12	1	DS	13
	Dark brown, mosit, soft to medium stiff, fine sandy SILT, some rock fragments and gravel, (FILL)		D/I	3-2-1	2	DS	18
			D/I	3-2-3	3	DS	3
345.5		9.5	D/I	1-1-50/5"	4	DS	6
343.9	OBSTRUCTION/WING WALL FOOTING	11.1	D/I	50/1"	5	DS	1
	Bottom of Boring at 11.1 ft						

BORING & SAMPLE NOTES
1. No water encountered.
2. Drill Rig: Acker XLS ATV.
3. Obstruction/wing wall footing encountered 9.5ft – 11.1ft. Borehole terminated at 11.1ft and offset 6 ft west (S-1A).
4. Borehole backfilled at completion.

SAMPLER TYPE: DS – DRIVEN SPLIT SPOON; PT – PRESSED SHELBY TUBE; CA – CONTINUOUS FLIGHT AUGER; RC – ROCK CORE
SAMPLE CONDITIONS: D – DISINTEGRATED; I – INTACT; U – UNDISTURBED; L – LOST
GROUNDWATER DEPTH: AT COMPLETION Dry ft; AFTER ___ HRS. ___ ft; AFTER 24 HRS. ___ ft; CAVED AT 8.2 ft
BORING METHOD: HSA – HOLLOW STEM AUGERS; CFA – CONTINUOUS FLIGHT AUGERS; DC – DRIVING CASING; MD – MUD DRILLING

STANDARD PENETRATION TEST DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30": COUNT MADE AT 6" INTERVALS

RECORD OF SOIL EXPLORATION – WSSC BRINK RD LOGS.GPJ PROJECT.GDT 12/19/17

T/FTG ABUT A
EL. 346.09

B/FTG ABUT A
EL. 343.59

RECORD OF SOIL / ROCK EXPLORATION

Page 1 of 1

Contracted With: KCI Inc/Gannett Fleming Inc JV — Boring #: S-1A
Project Name: Brink Rd Bridge No. M-0064 over Great Seneca Creek — Job #: 13-00071.05
Location: Montgomery County, MD

SAMPLER

Datum: — Hammer Wt.: 140 lb — Hole Diameter: 8 in — Foreman: M.F.
Surf. Elev.: 355.0 ft — Hammer Drop: 30 in — Rock Core Dia.: N/A — Inspector: S.H.
Date Started: 9/27/17 — Spoon Size: 2 in — Boring Method: HSA — Date Completed: 9/27/17

ELEV. (ft)	SOIL DESCRIPTION Color, Moisture, Density, Plasticity, Size Proportions	STRA DEPTH (ft)	Cond	Blows/6"	No.	Type	Rec (in)
	AUGER TO 8 FT W/O SAMPLING, (FILL) Dark brown, moist fine sandy silt, some rock fragments and gravel (auger cuttings)						
347.0	AUGER TO 11 FT W/O SAMPLING, (FILL) Dark gray, moist, silty clay, trace gravel	8.0					
344.0	Gray-green, damp, very dense, silty SAND AND ROCK FRAGMENTS, (WEATHERED ROCK)	11.0	D/I	50/4.5"	1	DS	4
337.5		17.5		50/0"	2	DS	0
	Bottom of Boring at 17.5 ft						

BORING & SAMPLE NOTES
1. Water encountered at 12.0 ft.
2. Drill Rig: Acker XLS ATV.
3. Borehole offset 6ft west of S-1.
4. Auger and spoon refusal at 17.5ft.

SAMPLER TYPE: DS – DRIVEN SPLIT SPOON; PT – PRESSED SHELBY TUBE; CA – CONTINUOUS FLIGHT AUGER; RC – ROCK CORE
SAMPLE CONDITIONS: D – DISINTEGRATED; I – INTACT; U – UNDISTURBED; L – LOST
GROUNDWATER DEPTH: AT COMPLETION 7.9 ft; AFTER ___ HRS. ___ ft; AFTER 24 HRS. 8.2 ft; CAVED AT 10.5 ft
BORING METHOD: HSA – HOLLOW STEM AUGERS; CFA – CONTINUOUS FLIGHT AUGERS; DC – DRIVING CASING; MD – MUD DRILLING

STANDARD PENETRATION TEST DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30": COUNT MADE AT 6" INTERVALS

T/FTG ABUT B
EL. 342.50

B/FTG ABUT B
EL. 340.00

RECORD OF SOIL / ROCK EXPLORATION

Page 1 of 1

Contracted With: KCI Inc/Gannett Fleming Inc JV — Boring #: S-2
Project Name: Brink Rd Bridge No. M-0064 over Great Seneca Creek — Job #: 13-00071.05
Location: Montgomery County, MD

SAMPLER

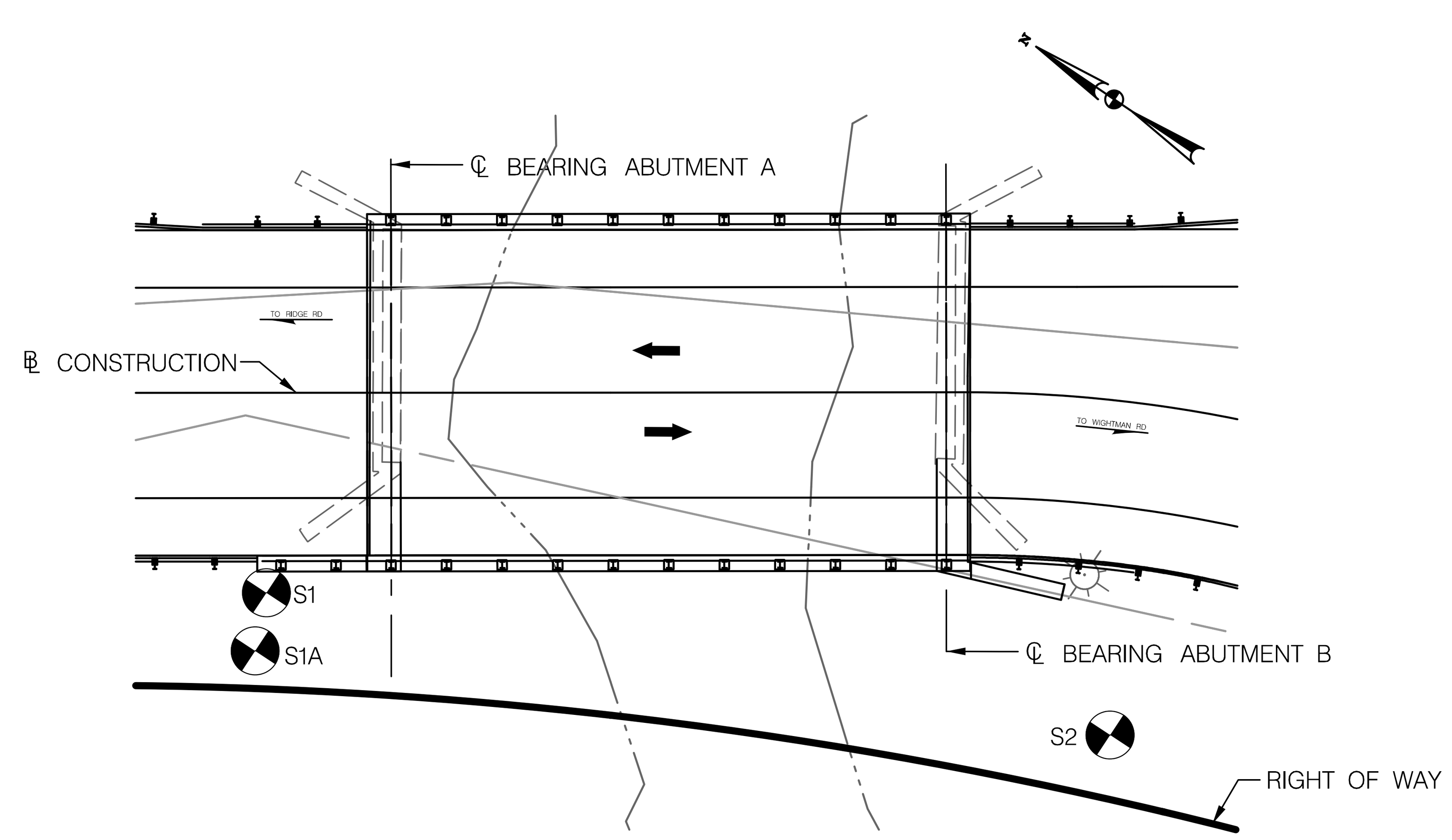
Datum: — Hammer Wt.: 140 lb — Hole Diameter: 8 in — Foreman: M.F.
Surf. Elev.: 353.0 ft — Hammer Drop: 30 in — Rock Core Dia.: N/A — Inspector: S.H.
Date Started: 9/26/17 — Spoon Size: 2 in — Boring Method: HSA — Date Completed: 9/26/17

ELEV. (ft)	SOIL DESCRIPTION Color, Moisture, Density, Plasticity, Size Proportions	STRA DEPTH (ft)	Cond	Blows/6"	No.	Type	Rec (in)
352.3	8" of TOPSOIL	0.7	D/I	3-7-3	1	DS	18
349.5	Brown, moist, medium stiff, SILT, some boulders, trace gravel and organics, (FILL)	3.5					
	Brown to dark gray, moist, very soft, silty CLAY, some roots and organics		D/I	1-1-1	2	DS	18
345.0		8.0	D/I	WOH/18"	3	DS	18
	Gray-brown, moist, medium dense, silty fine SAND WITH ROCK FRAGMENTS, little mica		D/I	4-5-6	4	DS	18
340.0		13.0					
	Gray-brown, damp, very dense, silty SAND AND ROCK FRAGMENTS, (WEATHERED ROCK)		D/I	50/4"	5	DS	4
			D/I	50/0.5"			0.5
333.0		20.0		50/0"			0
	Bottom of Boring at 20.0 ft						

BORING & SAMPLE NOTES
1. Water encountered at 8.0 ft.
2. Drill Rig: Acker XLS ATV.
3. Bulk sample obtained 7 ft north of S-2 from surface to 5ft.
4. Hard drilling 17ft to 20ft.
5. Auger and spoon refusal at 20ft.

SAMPLER TYPE: DS – DRIVEN SPLIT SPOON; PT – PRESSED SHELBY TUBE; CA – CONTINUOUS FLIGHT AUGER; RC – ROCK CORE
SAMPLE CONDITIONS: D – DISINTEGRATED; I – INTACT; U – UNDISTURBED; L – LOST
GROUNDWATER DEPTH: AT COMPLETION 14.0 ft; AFTER ___ HRS. ___ ft; AFTER 24 HRS. 7.4 ft; CAVED AT 12.1 ft
BORING METHOD: HSA – HOLLOW STEM AUGERS; CFA – CONTINUOUS FLIGHT AUGERS; DC – DRIVING CASING; MD – MUD DRILLING

STANDARD PENETRATION TEST DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30": COUNT MADE AT 6" INTERVALS



BORING LOGS – PLAN
SCALE: 1/16=1'–0"

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming — A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: VTD — Drawn by: GMJ — Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

BORING LOGS AND DRIVE TESTS

SCALE : — S-10

Project No. : 501119 — 28 of 28

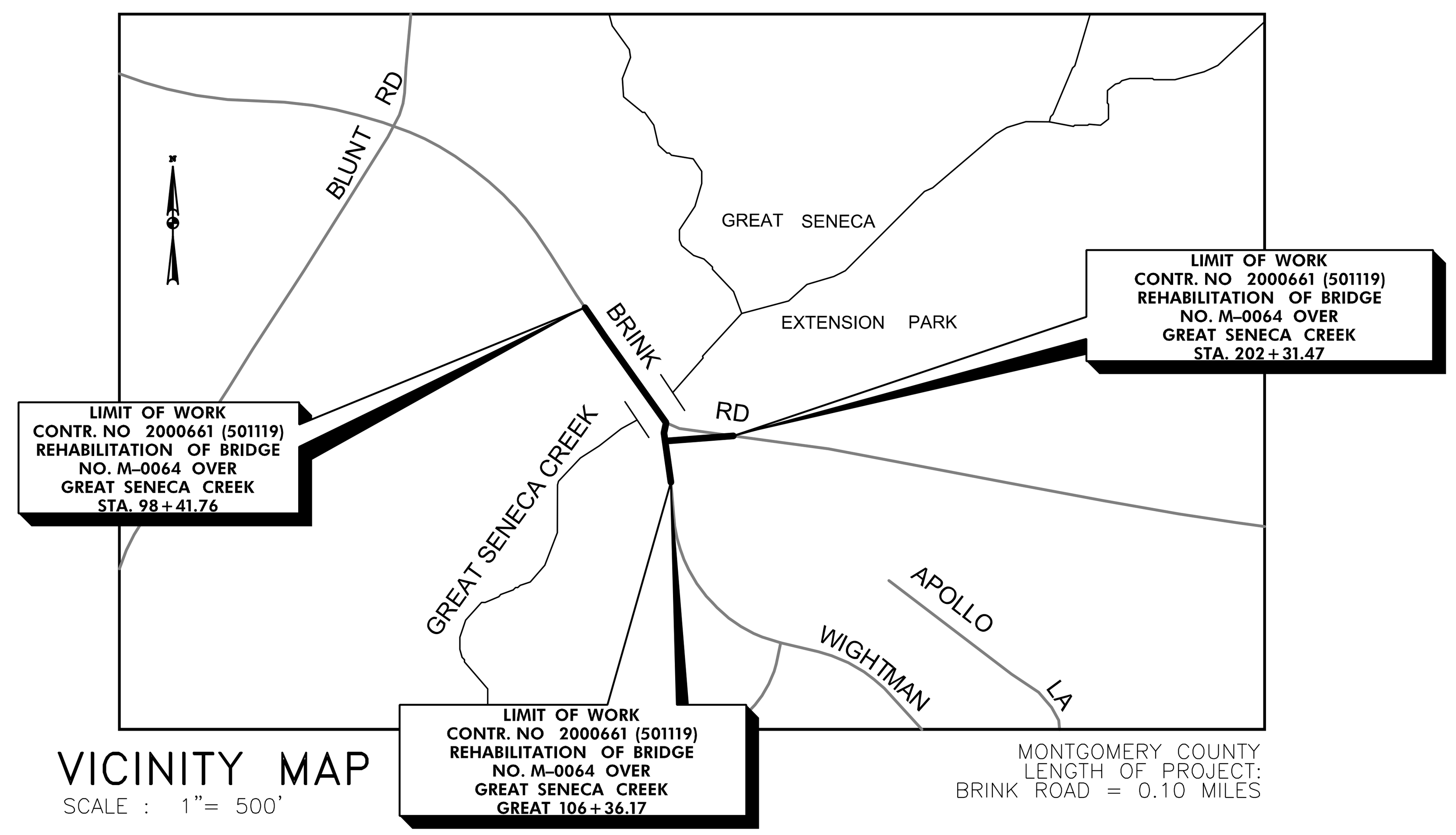
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

REHABILITATION OF BRIDGE NO. M-0064 OVER GREAT SENECA CREEK

C.I.P. PROJECT NO. 501XXX

INDEX OF SHEETS

SHEET NO.	DWG. NO.	DESCRIPTION
1		TITLE SHEET
2	AB-01	SYMBOLS AND ABBREVIATIONS
3	TS-01	ROADWAY TYPICAL SECTIONS
4	TS-02	ROADWAY TYPICAL SECTIONS
5	PD-01	PAVEMENT DETAILS
6	GS-01	GEOMETRIC DATA
7	PS-01	ROADWAY PLAN SHEET
8	PR-01	ROADWAY PROFILE
9	MT-01	MAINTENANCE OF TRAFFIC DETOUR PLAN
10	EN-01	EROSION & SEDIMENT CONTROL NOTES
11	EN-02	EROSION & SEDIMENT CONTROL NOTES
12	EN-03	EROSION & SEDIMENT CONTROL NOTES
13	EN-04	EROSION & SEDIMENT CONTROL NOTES
14	EN-05	EROSION & SEDIMENT CONTROL NOTES
15	ED-01	EROSION & SEDIMENT CONTROL DETAILS
16	ES-01	EROSION & SEDIMENT CONTROL PLAN
17	ES-02	EROSION & SEDIMENT CONTROL PLAN
18	SW-01	STORM WATER CONCEPT PLAN
19	S-01	GENERAL PLAN AND ELEVATION
20	S-02	GEOMETRIC & FOOTING LAYOUT
21	S-03	ABUTMENT A REMOVAL
22	S-04	ABUTMENT B REMOVAL
23	S-05	ABUTMENT A PLAN AND ELEVATION
24	S-06	ABUTMENT B PLAN AND ELEVATION
25	S-07	ABUTMENT SECTIONS
26	S-08	WING WALL ELEVATION AND SECTIONS
27	S-09	TYPICAL SECTION
28	S-10	BORING LOGS AND DRIVE TESTS



VICINITY MAP
SCALE : 1"= 500'

MONTGOMERY COUNTY
LENGTH OF PROJECT:
BRINK ROAD = 0.10 MILES

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD SPECIFICATIONS OF THE MARYLAND STATE HIGHWAY ADMINISTRATION, MONTGOMERY COUNTY, AND THE WASHINGTON SUBURBAN SANITARY COMMISSION.
2. TYPES OF STORM DRAIN STRUCTURES REFER TO THE "DESIGN STANDARDS" OF MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION, UNLESS OTHERWISE NOTED.
3. WHEN THE DROP ON THE MAIN LINE THROUGH A STORM DRAIN STRUCTURE CAN BE ACCOMMODATED BY AN INVERT SLOPE OF 1.5:1 OR FLATTER, A ROUNDED CHANNEL LINED WITH SEWER BRICK ON EDGE SHALL BE BUILT TO THE CROWN OF THE PIPES. WHEN THE INVERT SLOPES WOULD BE GREATER THAN 1.5:1 A SPECIAL INVERT SHALL BE CONSTRUCTED AS NOTED.
4. ALL STORM DRAIN PIPE SHALL BE INSTALLED WITH CLASS "C" BEDDING UNLESS OTHERWISE SPECIFIED.
5. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO STORM DRAIN STRUCTURES, WHEN NECESSARY, TO MEET EXISTING CONDITIONS, AS APPROVED BY MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION'S PROJECT INSPECTOR.
6. 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.
7. 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.
8. CALL "MISS UTILITY" AT 1-800-257-7777 FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING EXCAVATION TO DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES.
9. CLEARING IS TO BE LIMITED TO THE "LIMIT OF GRADING" AS SHOWN ON THE PLANS.
10. ALL GRADING SHALL BE DONE IN SUCH A MANNER AS TO PROVIDE POSITIVE DRAINAGE.
11. ALL DISTURBED AREAS TO BE SEEDED AND MULCHED UNLESS OTHERWISE NOTED.
12. 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
13. THE NOTED UTILITY POLE RELOCATION AT THE BRIDGE ABUTMENT WIDENING SHALL BE PERFORMED BY OTHERS PRIOR TO BRIDGE CONSTRUCTION.
14. THE CONTRACTOR SHALL CONSTRUCT ALL DRIVEWAY TIE-INS IN-KIND TO THE LIMIT SHOWN ON THE PLANS.
15. TWO TO THREE DAYS BEFORE EXCAVATING IN THE VICINITY OF EXISTING GAS LINE, CONTACT MARYLAND'S 811 CENTER TO NOTIFY WASHINGTON GAS OF THE TIMING AND LOCATION OF THE INTENDED EXCAVATION. WAIT FOR WASHINGTON GAS OR REPRESENTATIVE TO ARRIVE AND MARK THE LOCATION OF THE EXISTING PIPELINE FACILITY PRIOR TO EXCAVATION. FOLLOW ALL REQUIREMENTS OF THE CODE OF FEDERAL REGULATIONS TITLE 49 SUBPART 196.
16. THE PERMITTEE SHALL CONTACT MS. STELLA O. IGBINEDION AT (240) 777-2190 TO REQUEST ANY FIELD ASSISTANCE BY THE MCDOT TRAFFIC ENGINEERING AND OPERATIONS SECTION.

DESIGN DESIGNATION

ROADWAY	BRINK ROAD	
CONTROLS / YEARS	2019	2039
AVERAGE DAILY TRAFFIC (A.D.T.)	13,800	16,600
DESIGN HOURLY VOLUME (D.H.V.)	9.5%	9.5%
DIRECTIONAL DISTRIBUTION	55%	55%
% TRUCKS – A.D.T.	10.2%	10.2%
% TRUCKS – D.H.V.	6.7%	6.7%
DESIGN SPEED M. P. H.	30 M.P.H.	
MASTER PLAN CLASSIFICATION	ARTERIAL (A-36)	
MAXIMUM ALLOWABLE SUPER ELEVATION	6%	
MAXIMUM ALLOWABLE GRADIENT	8%	
ANTICIPATED POSTED SPEED	30 M.P.H.	
DESIGN CRITERIA	AASHTO 2018: A POLICY ON GEOMETRIC DESIGN OF HIGHWAY AND STREETS	
DENSITY (U,S,R)		

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 Transportation "Drainage Design" dated November, 2013 (Rev. June 10, 2014)

I hereby certify that the estimated total amount of excavation and fill as shown on these plans has been computed to be ______ cubic yards of excavation and ________ cubic yards of fill and that the total area to be disturbed as shown on these plans has been determined to be ________ square feet.

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland,
License No. _______, Expiration Date: _____

DATE

_____________, P.E.
GANNETT FLEMING, INC.

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION MAINTENANCE CERTIFICATION

I hereby certify that the Department of Transportation will assume maintenance responsibilities for all stormwater management facilities as listed and shown, hereon, in accordance with the MEMORANDUM OF UNDERSTANDING between this Department and the Department of Environmental Protection dated September 1, 1986. If, for any reason, future improvements to the roadway are planned that would impact any of the stormwater management facilities included herein, this Department will notify the Department of Environmental Protection during the planning or early design stage for such improvements.

DATE

BRUCE E. JOHNSTON, P.E.
CHIEF, DIVISION OF TRANSPORTATION ENGINEERING

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

BRUCE E. JOHNSTON, P.E.
CHIEF, DIVISION OF TRANSPORTATION ENGINEERING

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.: XXXXX
Expiration Date: XX/XX/202X

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:		NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.
Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed Date	Reviewed Date	Reviewed Date
Approved Date	Approved Date	SEDIMENT CONTROL PERMIT NO.
SM FILE #		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.

KCI TECHNOLOGIES
Gannett Fleming
A Joint Venture

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

ATTACHMENT 7

CONVENTIONAL SYMBOLS
EXISTING CONSTRUCTION

PROPERTY LINE

EDGE OF ROADWAY PAVING

EXISTING GROUND CONTOURS (10') — 50

EXISTING GROUND CONTOURS (2') — 54

FENCE

EDGE OF WOODED AREAS

TREE (FREE STANDING)

WETLAND BUFFER — B — B

SIGN

LIGHT POLE

MAILBOX — M.B.

UTILITY POLE

STORM DRAIN — SD

WATER LINE — W

SANITARY — SS — SAN

GAS — G

ELECTRICAL HAND BOX - SIGNALS — H.B.

ELECTRIC (OVERHEAD) — POLE # — POLE #

CONVENTIONAL SYMBOLS
PROPOSED CONSTRUCTION

℄ CONSTRUCTION — 101 +50 102

CURB & GUTTER

TRAVERSE POINT

FULL DEPTH CONSTRUCTION

MILL AND RESURFACE

PAVEMENT REMOVAL

CONCRETE PAVEMENT

HMA BIKE PATH

PERVIOUS PAVEMENT

TRAFFIC BARRIER W BEAM

TRAFFIC BARRIER W BEAM MEDIAN BARRIER

APPROXIMATE LIMITS OF CUT AND/OR FILL — C — F

GRADING ELEVATION CONTOURS (10') — 50

GRADING ELEVATION CONTOURS (2') — 54

LIMIT OF DISTURBANCE — LOD

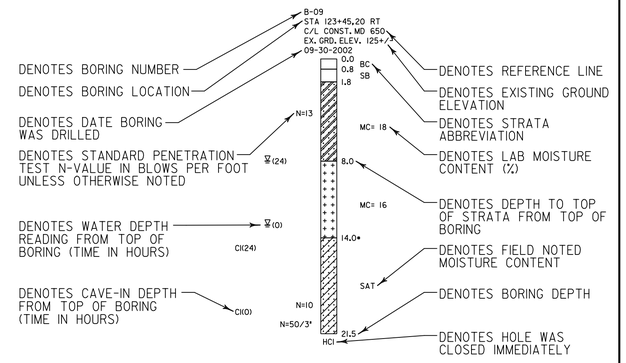
STORM DRAIN PIPE

ABBREVIATIONS

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

INFORMATION TO BE RECEIVED FROM OMT

SOIL BORING PROFILE
EXAMPLE



SOILS TEST DATA

BORING NUMBER	SAMPLE DEPTH	LL	PI	USDA	USC	MDD	OMC	REMARKS
B-09	1.8 - 8.0	18	NP	Sandy Loam	-	-	-	with Gravel
B-09	8.0 - 14.0	41	22	Silty Clay Loam	CL	121	12	-

SOILS LEGEND SAMPLES

A-3 SAND
A-2 SAND & FINES
A-2-4 SILTY SAND
A-2-2 SANDY SILT
A-2-7 CLAYEY SAND
A-7-2 SANDY CLAY
A-4 SILT
A-4-7 CLAYEY SILT
A-7-4 SILTY CLAY
A-7 CLAY
A-6 COLLOIDAL CLAY
A-5 MICA, DIATOMS

PLAN LOCATION OF SOIL BORINGS

BORING TARGETS AND PROFILES SCALE:
HORIZONTAL - NONE
VERTICAL - SEE PROFILE SHEETS

AO-ABOVE OPTIMUM
SAT-SATURATED
LIQ-LIQUEFIED

TS-TOPSOIL
RM-ROOT MAT
BC-BITUMINOUS CONCRETE
SB-STONE BASE
PCC-PORTLAND CEMENT CONCRETE

LL-LIQUID LIMIT (%)
PI-PLASTICITY INDEX (%)
NP-NON-PLASTIC
OMC-OPTIMUM MOISTURE CONTENT (%)
USC-UNIFIED SOIL CLASSIFICATION
USDA-UNITED STATES DEPARTMENT OF AGRICULTURE CLASSIFICATION

W/GR-WITH GRAVEL
W/RF-WITH ROCK FRAGMENTS

NOTES: SOIL SYMBOLS DENOTE MSMT CLASSIFICATIONS

ALL DIMENSIONS, DEPTHS AND ELEVATIONS ARE NOTED IN FEET

AN ASTERISK AT THE TOP DEPTH OF STRATA INDICATES THAT STRATA WAS VISUALLY CLASSIFIED BY DRILLER

MDD & OMC PER A.A.S.H.T.O. DESIGNATION T-180

N PER A.A.S.H.T.O. DESIGNATION T-206

UNLESS OTHERWISE NOTED ON PLANS, ALL SOIL SURVEY BORINGS FOR ROADWAY CONSTRUCTION WERE LEFT OPEN FOR 24 HOURS WITH NO EXCESS MOISTURE OR FREE WATER ENCOUNTERED DURING TIME OF SOIL SURVEY (09/2000 TO 06/2002)

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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

Designed by: YTD Drawn by: GMJ Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

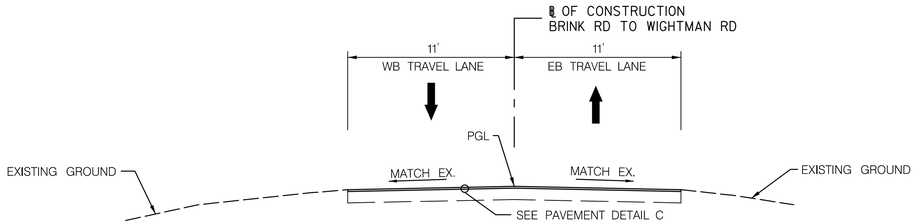
SYMBOLS AND ABBREVIATIONS

SCALE : N.T.S.

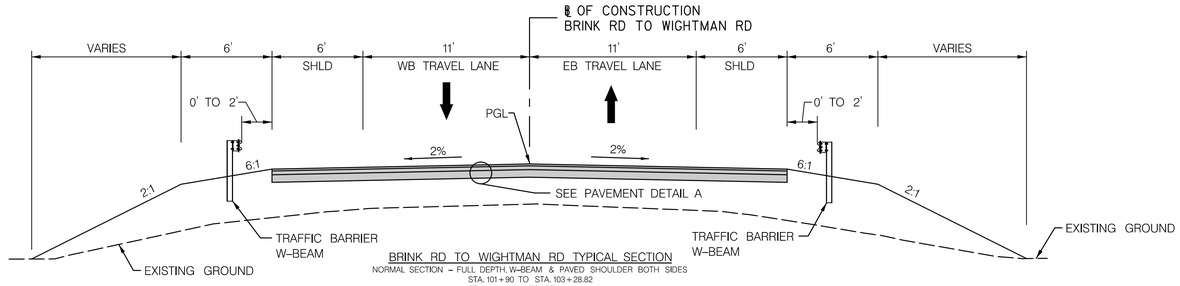
AB-01

Project No. : 501119 2 of 28

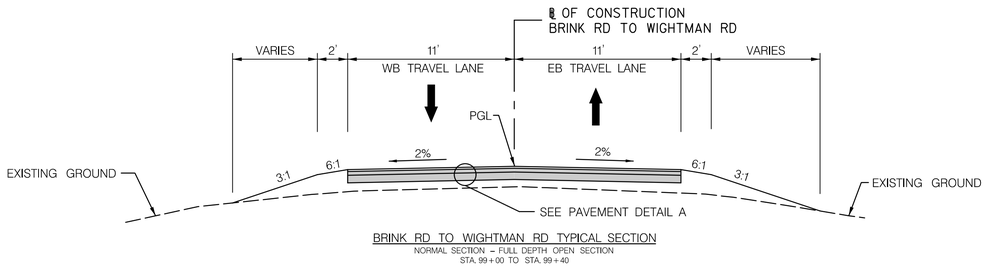
7/12/2002



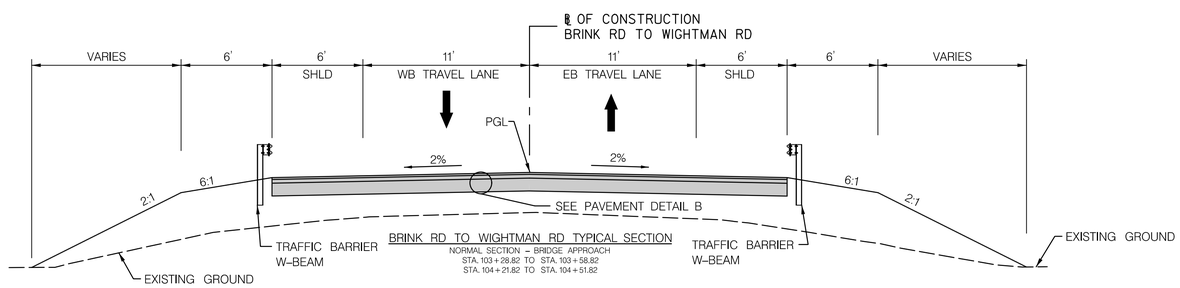
BRINK RD TO WIGHTMAN RD TYPICAL SECTION
NORMAL SECTION – RESURFACING OPEN SECTION, NO SHOULDERS
STA. 98+42 TO STA. 99+00



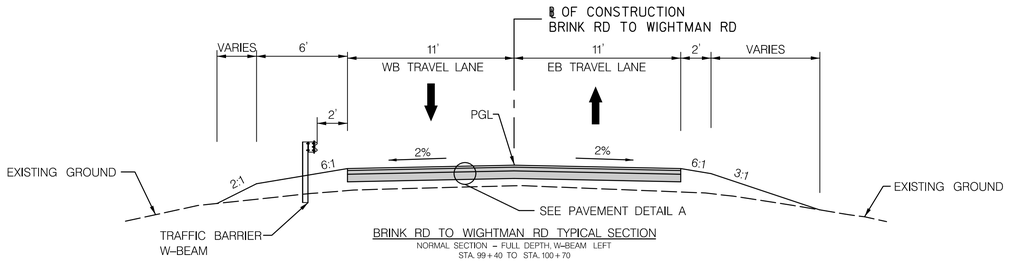
BRINK RD TO WIGHTMAN RD TYPICAL SECTION
NORMAL SECTION – FULL DEPTH, W-BEAM & PAVED SHOULDER BOTH SIDES
STA. 101+90 TO STA. 103+28.82
STA. 104+51.82 TO STA. 105+24



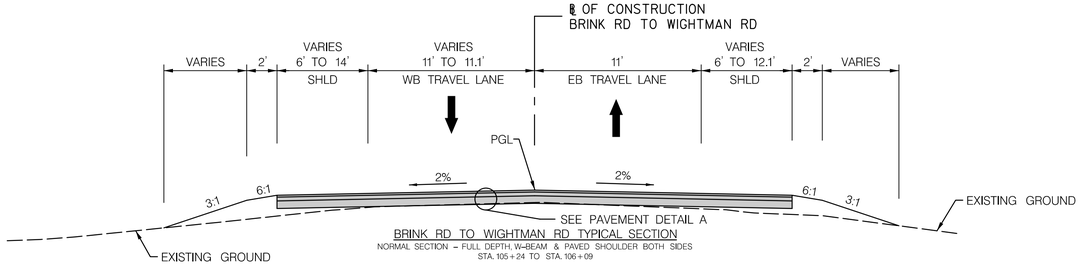
BRINK RD TO WIGHTMAN RD TYPICAL SECTION
NORMAL SECTION – FULL DEPTH OPEN SECTION
STA. 99+00 TO STA. 99+40



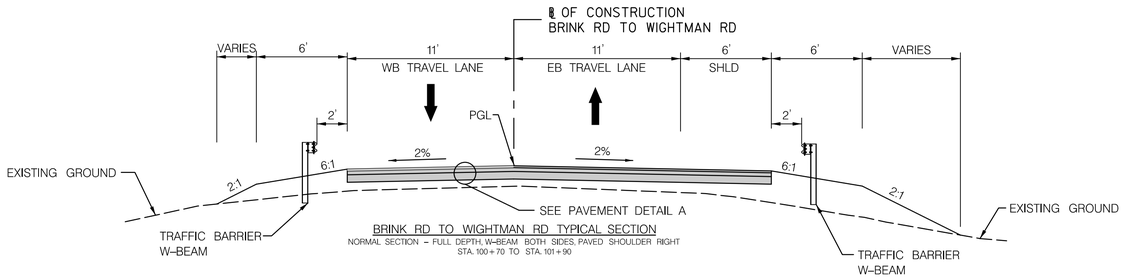
BRINK RD TO WIGHTMAN RD TYPICAL SECTION
NORMAL SECTION – BRIDGE APPROACH
STA. 103+28.82 TO STA. 103+58.82
STA. 104+21.82 TO STA. 104+51.82



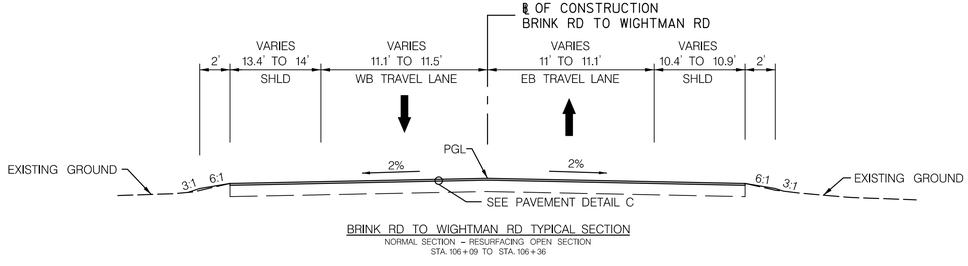
BRINK RD TO WIGHTMAN RD TYPICAL SECTION
NORMAL SECTION – FULL DEPTH, W-BEAM LEFT
STA. 99+40 TO STA. 100+70



BRINK RD TO WIGHTMAN RD TYPICAL SECTION
NORMAL SECTION – FULL DEPTH, W-BEAM & PAVED SHOULDER BOTH SIDES
STA. 105+24 TO STA. 106+09



BRINK RD TO WIGHTMAN RD TYPICAL SECTION
NORMAL SECTION – FULL DEPTH, W-BEAM BOTH SIDES, PAVED SHOULDER RIGHT
STA. 100+70 TO STA. 101+90



BRINK RD TO WIGHTMAN RD TYPICAL SECTION
NORMAL SECTION – RESURFACING OPEN SECTION
STA. 106+09 TO STA. 106+36

NOTE:
REFER TO STRUCTURAL PLANS FOR BRIDGE SECTION FROM STA. 103+58.82 TO 104+21.82

FOUNDATION REVIEW
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KCI TECHNOLOGIES
Gannett Fleming
A Joint Venture

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: JSK Drawn by: JSK Checked by: TQD

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

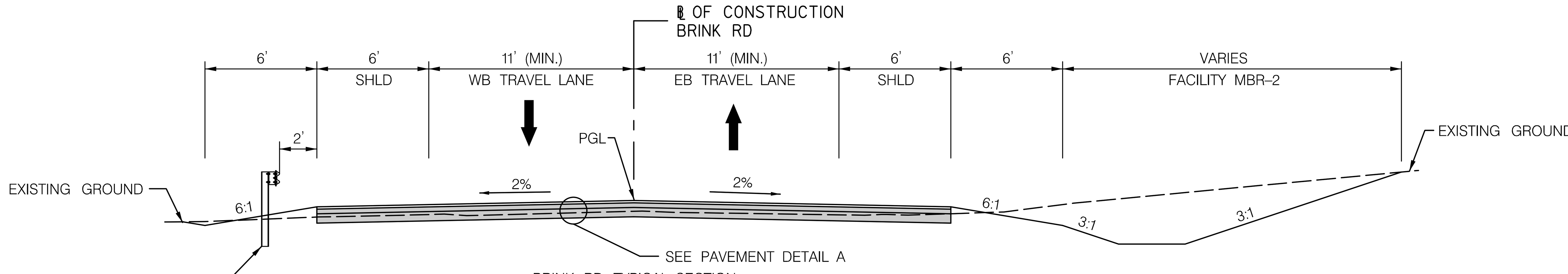
TYPICAL SECTION SHEET

SCALE : 1"=5'

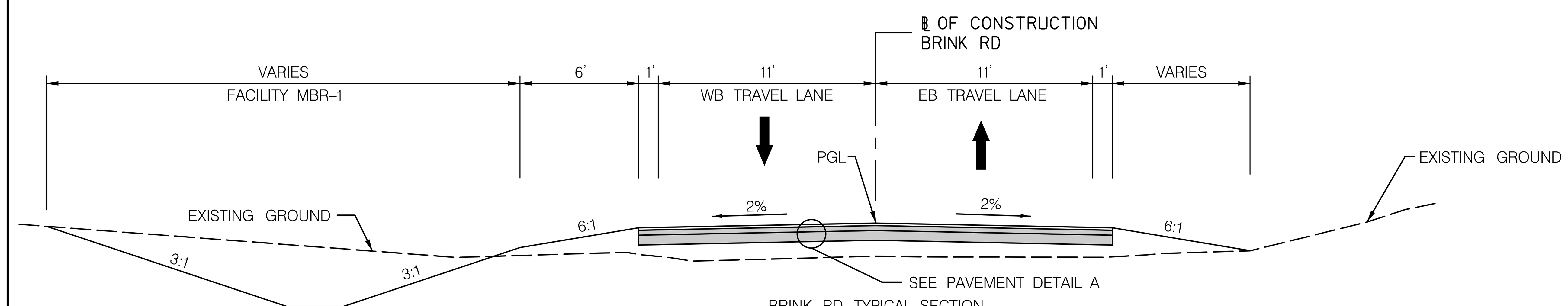
TS-01

Project No. : 501119

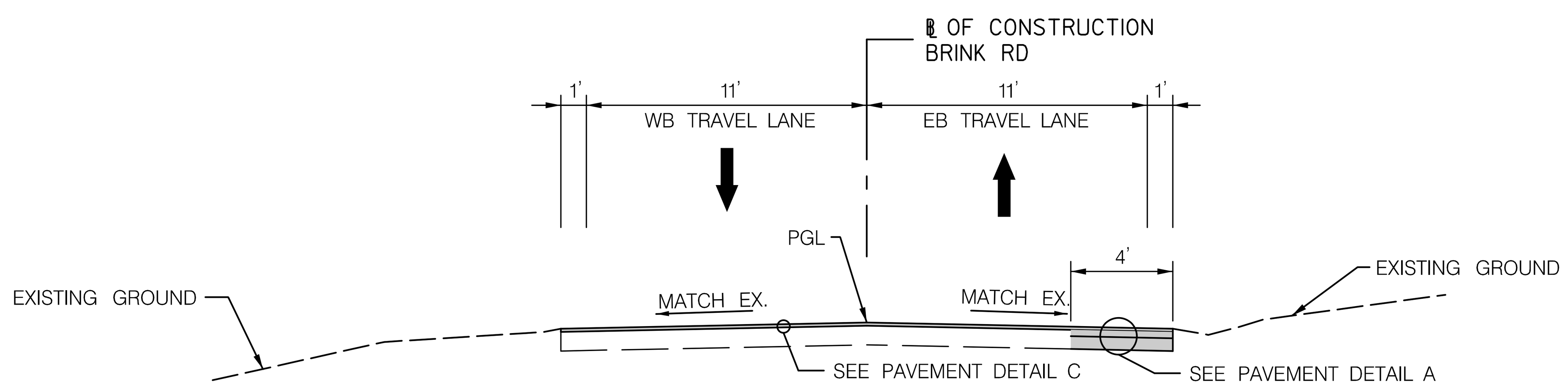
7/1/2022



BRINK RD TYPICAL SECTION
NORMAL SECTION – FULL DEPTH OPEN SECTION, PAVED SHOULDERS, MBR-2 RIGHT
STA. 200+00 TO STA. 200+82



BRINK RD TYPICAL SECTION
NORMAL SECTION – FULL DEPTH OPEN SECTION, MBR-1 LEFT
STA. 200+82 TO STA. 202+00



BRINK RD TYPICAL SECTION
NORMAL SECTION – RESURFACING OPEN SECTION, WIDENING RIGHT
STA. 202+00 TO STA. 202+32

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APPROVED

Chief, Division of Transportation Engineering — Date

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REHABILITATION OF BRIDGE NO. M–0064 ON BRINK ROAD OVER GREAT SENECA CREEK

TYPICAL SECTION SHEET

SCALE : 1"=5'

TS–02

Project No. : 501119

PAVEMENT LEGEND

(1) 2" SUPERPAVE ASPHALT MIX 9.5MM FOR SURFACE, PG 64S–22, LEVEL 2

(2) 2" SUPERPAVE ASPHALT MIX 12.5MM FOR SURFACE, PG 64S–22, LEVEL 2

(3) 3" SUPERPAVE ASPHALT MIX 19.0MM FOR BASE, PG 64S–22, LEVEL 2

(4) 5" SUPERPAVE ASPHALT MIX 25.0MM FOR BASE, PG 64S–22, LEVEL 2

(5) PARTIAL DEPTH PATCH
6" SUPERPAVE ASPHALT MIX 19.0MM FOR PARTIAL–DEPTH PATCH, PG 64S–22, LEVEL 2 OR TO TOP OF CONCRETE PAVEMENT, WHICHEVER COMES FIRST

(6) 6.0" GRADED AGGREGATE BASE COURSE

(7) 8.0" GRADED AGGREGATE BASE COURSE

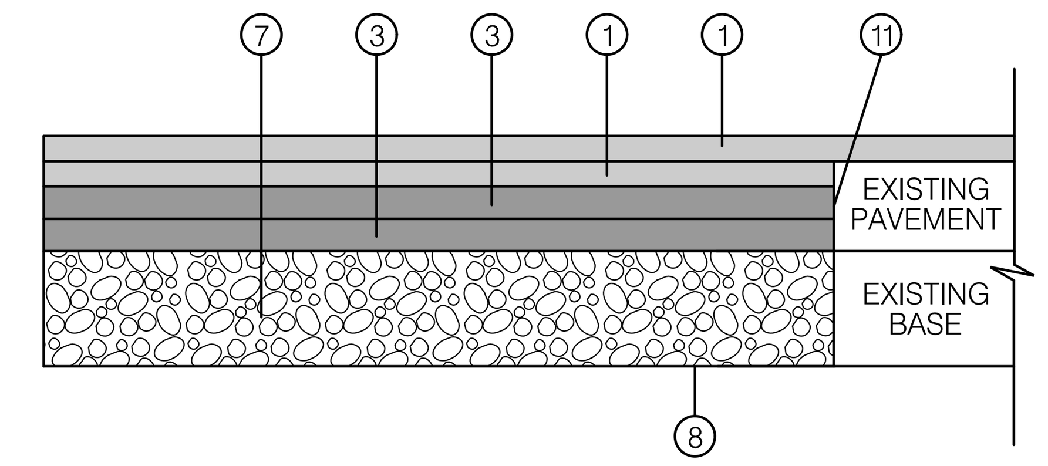
(8) TOP OF SUBGRADE AND LIMIT OF CLASS I EXCAVATION

(9) TOP OF EXISTING PAVEMENT AFTER 2" FINE MILLING

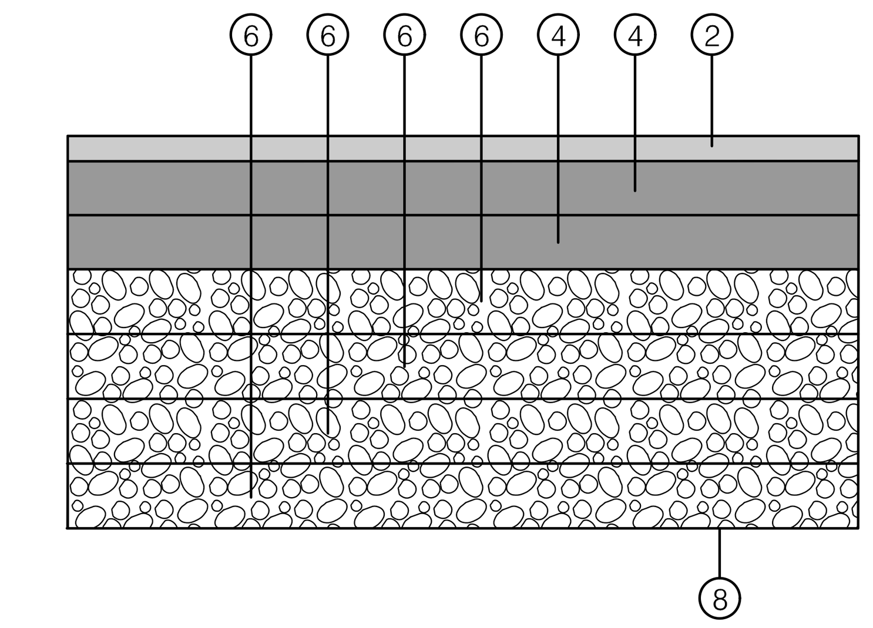
(10) EXISTING SUBGRADE

(11) FULL–DEPTH SAW CUT (SEE NOTE 5)

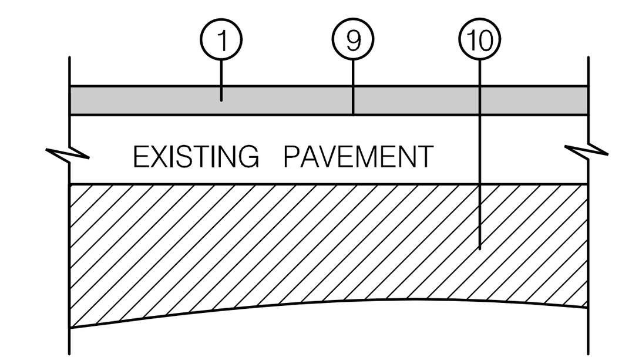
(12) WEDGE/LEVEL (SEE NOTE 2)



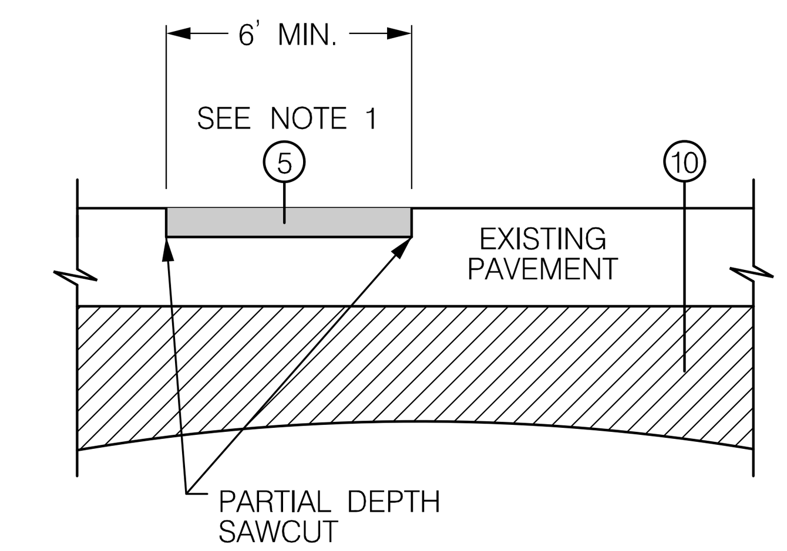
(A) FULL DEPTH PAVEMENT DETAIL
SCALE: N.T.S.



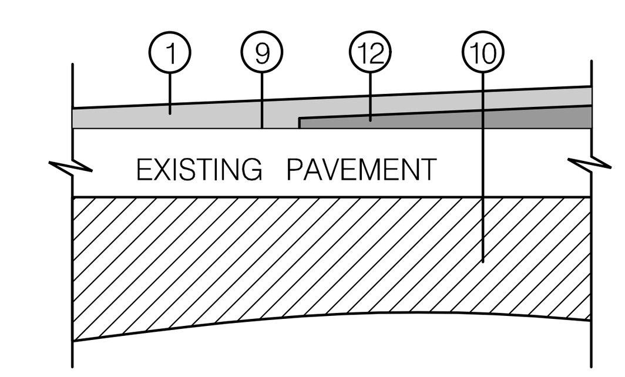
(B) BRIDGE APPROACH PAVEMENT DETAIL
SCALE: N.T.S.



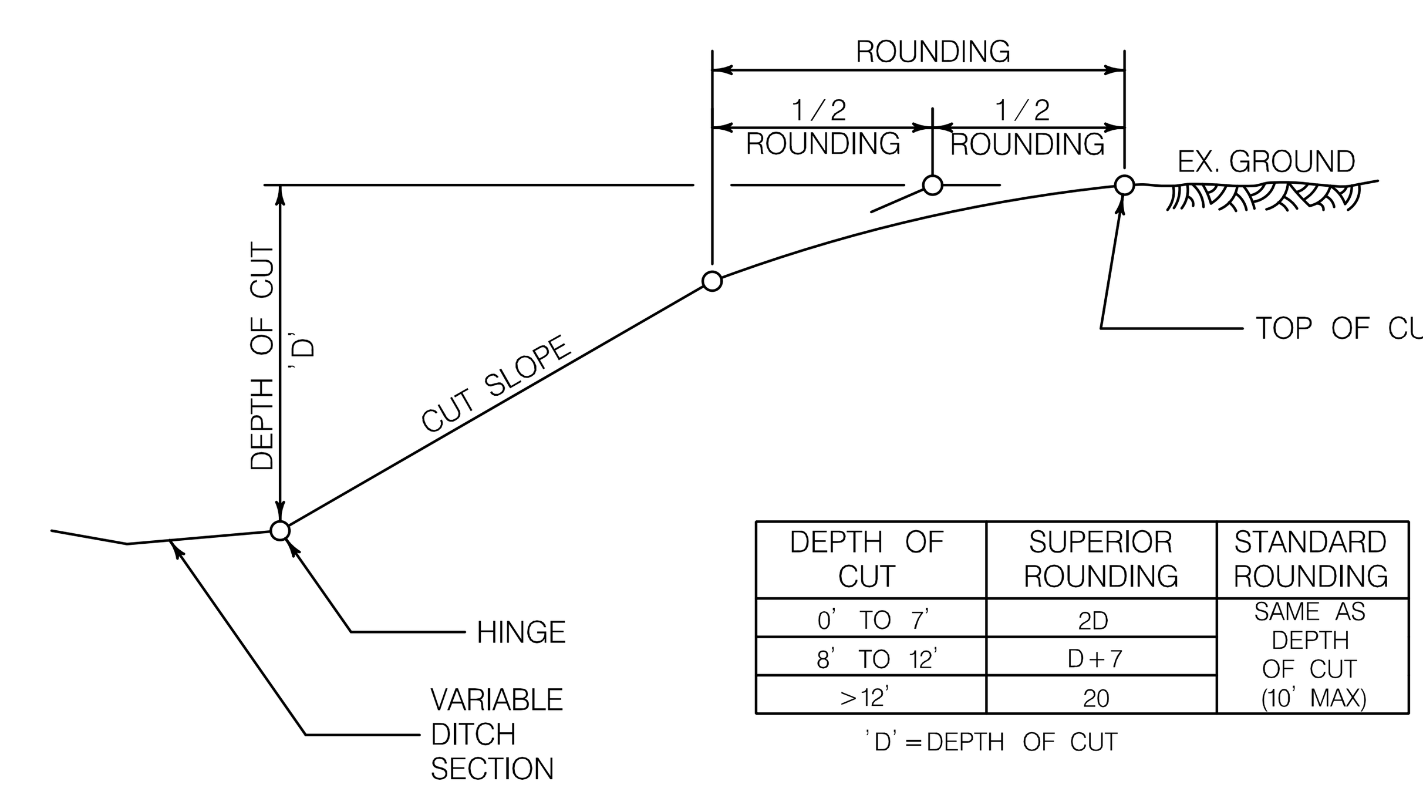
(C) FINE MILLING AND OVERLAY DETAIL



(D) PARTIAL DEPTH PATCHING DETAIL
AS DIRECTED BY AN SHA APPROVED ENGINEER
SCALE: N.T.S.



(E) WEDGE AND LEVEL
SCALE: N.T.S.



DEPTH OF CUT	SUPERIOR ROUNDING	STANDARD ROUNDING
0' TO 7'	2D	SAME AS DEPTH OF CUT (10' MAX)
8' TO 12'	D+7	
>12'	20	

'D' = DEPTH OF CUT

CUT SLOPE ROUNDING DETAIL

GENERAL NOTES

1. PATCHING SHALL BE DONE PRIOR TO FINE MILLING OF EXISTING PAVEMENT. CONTRACTOR SHALL MATCH EXISTING PAVEMENT CONDITIONS IF EXISTING PAVEMENT IS COMPOSITE (SEE MD 578.03–01 FOR COMPOSITE DETAILS). PAYMENT FOR SAWCUT WILL BE INCIDENTAL TO PATCHING ITEM.

2. WEDGE/LEVEL SHALL BE USED TO MAKE GRADE AND SUPERELEVATION ADJUSTMENTS AS DIRECTED BY ENGINEER. USE THE FOLLOWING MATERIAL:

   FOR WEDGE/LEVELING 0" TO 2" LIFT:
   SUPERPAVE ASPHALT MIX SUPERPAVE 9.5MM FOR WEDGE/LEVEL, PG 64S–22, LEVEL 2 (1" MINIMUM AND 2" MAXIMUM LIFT THICKNESS)

   FOR WEDGE/LEVELING 2" TO 11" LIFT:
   SUPERPAVE ASPHALT MIX SUPERPAVE 19.0MM FOR WEDGE/LEVEL, PG 64S–22, LEVEL 2

3. CONTRACTOR SHALL FULL DEPTH SAWCUT THROUGH EXISTING ASPHALT PAVEMENT AND BASE ONLY. REMOVE EXISTING ROADWAY AND EXCAVATE AS NECESSARY TO CONSTRUCT PROPOSED PAVEMENT. PAYMENT FOR SAWCUTTING WILL BE INCIDENTAL TO EXCAVATION.

4. IN AREAS WHERE EXISTING PAVEMENT IS BEING REMOVED, THE LIMIT OF CLASS 1 EXCAVATION SHALL BE AT THE BOTTOM OF THE BOUND MATERIALS IN THE EXISTING PAVEMENT OR AT THE TOP OF THE SUBGRADE, WHICHEVER IS LOWER.

5. CONTRACTOR SHALL PERFORM ALL TRENCHING PAVEMENT REPAIRS IN ACCORDANCE WITH MD 578.01 AND SHALL MATCH EXISTING PAVEMENT SECTIONS.

FOUNDATION REVIEW
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A Joint Venture

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ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: JSK Drawn by: JSK Checked by: TQD

REHABILITATION OF BRIDGE NO. M–0064 ON BRINK ROAD OVER GREAT SENECA CREEK

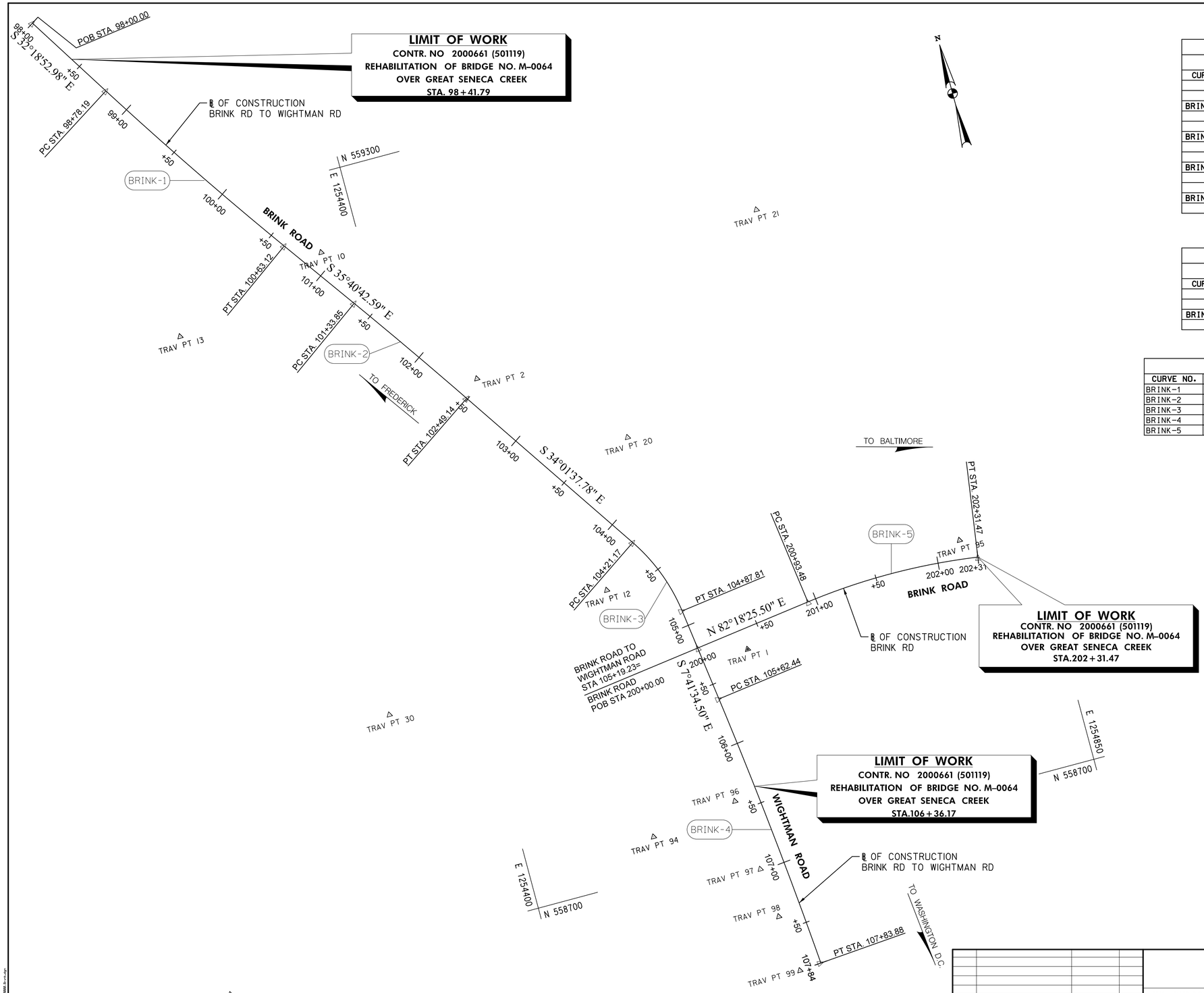
PAVEMENT DETAILS

SCALE : AS SHOWN

PD–01

Project No. : 501119

5 of 28



LIMIT OF WORK
CONTR. NO 2000661 (501119)
REHABILITATION OF BRIDGE NO. M-0064
OVER GREAT SENECA CREEK
STA. 98+41.79

LIMIT OF WORK
CONTR. NO 2000661 (501119)
REHABILITATION OF BRIDGE NO. M-0064
OVER GREAT SENECA CREEK
STA.202+31.47

LIMIT OF WORK
CONTR. NO 2000661 (501119)
REHABILITATION OF BRIDGE NO. M-0064
OVER GREAT SENECA CREEK
STA.106+36.17

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

PROJECT COORDINATES					
BASELINE OF CONSTRUCTION BRINK ROAD TO WIGHTMAN ROAD					
CURVE	DESCRIPTION	STATION	NORTH	EAST	BEARING
	POB	98+00.00	559,471.1665	1,254,196.7493	S 32°18′52.98″ E
	PC	98+78.19	559,405.0858	1,254,238.5476	
BRINK-1	PI	99+70.68	559,326.9174	1,254,287.9917	
	PT	100+63.12	559,251.7848	1,254,341.9372	S 35°40′42.59″ E
	PC	101+33.85	559,194.3337	1,254,383.1873	
BRINK-2	PI	101+91.50	559,147.5073	1,254,416.8089	
	PT	102+49.14	559,099.7314	1,254,449.0671	S 34°01′37.78″ E
	PC	104+21.17	558,957.1571	1,254,545.3330	
BRINK-3	PI	104+55.09	558,929.0438	1,254,564.3151	
	PT	104+87.81	558,895.4274	1,254,568.8560	S 7°41′34.50″ E
	PC	105+62.44	558,821.4659	1,254,578.8467	
BRINK-4	PI	106+73.19	558,711.7149	1,254,593.6718	
	PT	107+83.88	558,601.3119	1,254,602.4035	S 4°31′19.54″ E

PROJECT COORDINATES					
BASELINE OF CONSTRUCTION BRINK ROAD					
CURVE	DESCRIPTION	STATION	NORTH	EAST	BEARING
	POB	200+00.00	558,864.2867	1,254,573.0625	N 82°18′25.50″ E
	PC	200+93.48	558,876.7998	1,254,665.6972	
BRINK-5	PI	201+62.92	558,886.0954	1,254,734.5134	
	PT	202+31.47	558,876.2541	1,254,803.2538	N 81°51′09.13″ W

CURVE DATA						
CURVE NO.	Δ	Dc	R	T	L	E
BRINK-1	3°21′49.62″ (LT)	1°49′08.09″	3150.0000′	92.4934′	184.9336′	1.3576′
BRINK-2	1°39′04.82″ (RT)	1°25′56.62″	4000.0000′	57.6465′	115.2851′	0.4154′
BRINK-3	26°20′03.28″ (RT)	39°30′51.59″	145.0000′	33.9217′	66.6448′	3.9150′
BRINK-4	3°10′14.96″ (RT)	1°25′54.90″	4001.3333′	110.7478′	221.4390′	1.5323′
BRINK-5	15°50′25.37″ (RT)	11°28′43.71″	499.1440′	69.4412′	137.9967′	4.8072′

BASELINE CONTROL COORDINATES			
TRAVERSE POINT NUMBER	NORTH	EAST	ELEVATION
1	558,853.1927	1,254,610.6744	359.7294
2	559,112.4869	1,254,460.8543	357.4742
10	559,239.3504	1,254,368.6920	356.4194
12	558,926.3172	1,254,516.1927	354.3714
13	559,204.3592	1,254,245.0357	368.9569
20	559,037.5865	1,254,562.8508	353.7672
21	559,183.5002	1,254,706.2982	354.5862
30	558,876.1865	1,254,326.6712	353.4905
31	558,697.0824	1,254,149.9576	353.2559
61	558,843.4101	1,255,153.5651	393.3552
94	558,730.4944	1,254,501.6244	353.7613
95	558,892.6139	1,254,792.9810	368.4490
96	558,740.9526	1,254,570.3868	359.6168
97	558,684.4724	1,254,575.8013	361.8301
98	558,644.8693	1,254,580.2049	363.9113
99	558,599.8273	1,254,585.2493	366.6768

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A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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

Designed by: JSK Drawn by: JSK Checked by: TQD

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

GEOMETRY SHEET

SCALE : 1"=40' GS-01

Project No. : 501119 6 of 28

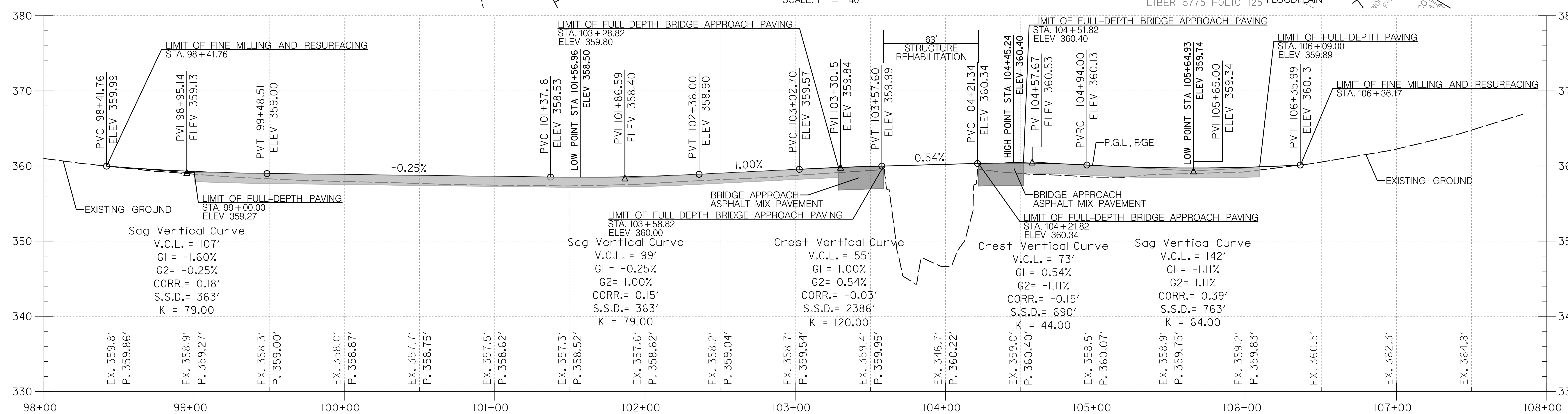
7/11/2022

MARKING DETAILS:
- Ⓐ 5 INCH WHITE THERMOPLASTIC PAVEMENT MARKINGS LINES – SOLID
- Ⓑ 5 INCH YELLOW THERMOPLASTIC PAVEMENT MARKINGS LINES – DOUBLE SOLID
- Ⓒ 16 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS LINES – SOLID
- Ⓓ 24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS LINES – SOLID

MONTGOMERY COUNTY
MNCPPC GOSHEN BRANCH PARK
EXISTING PROPERTY LINE
FLOODPLAIN
TEMPORARY CONSTRUCTION EASEMENT
TO BALTIMORE
BRINK ROAD
MAINTENANCE EASEMENT
TRAFFIC BARRIER W-BEAM ONE-SIDED PARALLEL END TREATMENT (TYPE C)
TRAFFIC BARRIER W-BEAM ONE-SIDED DOWNSTREAM END TREATMENT (TYPE K)
TRAFFIC BARRIER W-BEAM RADIUS ANCHORAGE (TYPE L)
SIDEWALK CONNECTION TO GREENWAY TRAIL
℄ OF CONSTRUCTION BRINK RD TO WIGHTMAN RD
PROP ROW
WETLAND BOUNDARY
TO FREDERICK
BRINK ROAD
98+00
99+00
100+00
101+00
102+00
103+00
104+00
105+00
106+00
107+00
107+84
EXISTING ROW
℄ OF CONSTRUCTION BRINK RD
MBR-1
MBR-2
FLOODPLAIN
SEE DRIVEWAY PROFILE SHEET PR-01.
TO WASHINGTON D.C.
WIGHTMAN ROAD
MONTGOMERY COUNTY MARYLAND TAX MAP FV41 PARCEL N717 WIGHTMAN RD LIBER 5775 FOLIO 125
LIMIT OF WORK
CONTR. NO 2000661 (501119)
REHABILITATION OF BRIDGE NO. M-0064 OVER GREAT SENECA CREEK
STA.202+31.47
LIMIT OF WORK
CONTR. NO 2000661 (501119)
REHABILITATION OF BRIDGE NO. M-0064 OVER GREAT SENECA CREEK
STA.106+36.17
LIMIT OF WORK
CONTR. NO 2000661 (501119)
REHABILITATION OF BRIDGE NO. M-0064 OVER GREAT SENECA CREEK
STA.98+41.79

ROADWAY PLAN – BRINK ROAD OVER GREAT SENECA CREEK

SCALE: 1" = 40'



LIMIT OF FINE MILLING AND RESURFACING STA. 98+41.76
LIMIT OF FULL-DEPTH BRIDGE APPROACH PAVING STA. 103+28.82 ELEV 359.80
63' STRUCTURE REHABILITATION
LIMIT OF FULL-DEPTH BRIDGE APPROACH PAVING STA. 104+51.82 ELEV 360.40
LIMIT OF FULL-DEPTH PAVING STA. 106+09.00 ELEV 359.89
LIMIT OF FINE MILLING AND RESURFACING STA. 106+36.17
PVC 98+41.76 ELEV 359.99
PVI 98+95.14 ELEV 359.13
PVT 99+48.51 ELEV 359.00
PVC 101+37.18 ELEV 358.53
LOW POINT STA 101+56.96 ELEV 358.50
PVI 101+86.59 ELEV 358.40
PVT 102+36.00 ELEV 358.90
PVC 103+02.70 ELEV 359.57
PVI 103+30.15 ELEV 359.84
PVT 103+57.60 ELEV 359.99
PVC 104+21.34 ELEV 360.34
HIGH POINT STA 104+45.24 ELEV 360.40
PVI 104+57.67 ELEV 360.53
PVRC 104+94.00 ELEV 360.13
LOW POINT STA 105+64.93 ELEV 359.74
PVI 105+65.00 ELEV 359.34
PVT 106+35.99 ELEV 360.13
-0.25%
1.00%
0.54%
P.G.L. PGE
EXISTING GROUND
LIMIT OF FULL-DEPTH PAVING STA. 99+00.00 ELEV 359.27
BRIDGE APPROACH ASPHALT MIX PAVEMENT
LIMIT OF FULL-DEPTH BRIDGE APPROACH PAVING STA. 103+58.82 ELEV 360.00
LIMIT OF FULL-DEPTH BRIDGE APPROACH PAVING STA. 104+21.82 ELEV 360.34
Sag Vertical Curve V.C.L. = 107' G1 = -1.60% G2 = -0.25% CORR.= 0.18' S.S.D.= 363' K = 79.00
Sag Vertical Curve V.C.L. = 99' G1 = -0.25% G2= 1.00% CORR.= 0.15' S.S.D.= 363' K = 79.00
Crest Vertical Curve V.C.L. = 55' G1 = 1.00% G2= 0.54% CORR.= -0.03' S.S.D.= 2386' K = 120.00
Crest Vertical Curve V.C.L. = 73' G1 = 0.54% G2= -1.11% CORR.= -0.15' S.S.D.= 690' K = 44.00
Sag Vertical Curve V.C.L. = 142' G1 = -1.11% G2= 1.11% CORR.= 0.39' S.S.D.= 763' K = 64.00
EX. 359.8' P. 359.86'
EX. 358.9' P. 359.27'
EX. 358.3' P. 359.00'
EX. 358.0' P. 358.87'
EX. 357.7' P. 358.75'
EX. 357.5' P. 358.62'
EX. 357.3' P. 358.52'
EX. 357.6' P. 358.62'
EX. 358.2' P. 359.04'
EX. 358.7' P. 359.54'
EX. 359.4' P. 359.95'
EX. 346.7' P. 360.22'
EX. 359.0' P. 360.40'
EX. 358.5' P. 360.07'
EX. 358.9' P. 359.75'
EX. 359.2' P. 359.83'
EX. 360.5'
EX. 362.3'
EX. 364.8'
380
370
360
350
340
330
98+00
99+00
100+00
101+00
102+00
103+00
104+00
105+00
106+00
107+00
108+00

ROADWAY PROFILE – BRINK ROAD TO WIGHTMAN ROAD

SCALE: HORIZONTAL 1" = 40'
VERTICAL 1" = 8'

LEGEND

- FINE MILLING/OVERLAY
- FULL DEPTH BRIDGE APPROACH PAVING
- FULL DEPTH PAVING
- PAVEMENT TO BE REMOVED
- TRAFFIC BARRIER W BEAM

NOTES:
1. SEE SHEET PR-01 FOR BRINK RD AND DRIVEWAY PROFILES.
2. EXISTING STOP SIGNS, TRAIL SIGNS, OR OTHER SIGNS SHALL BE RELOCATED AS NEEDED.

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming
A Joint Venture

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: JSK Drawn by: JSK Checked by: TQD

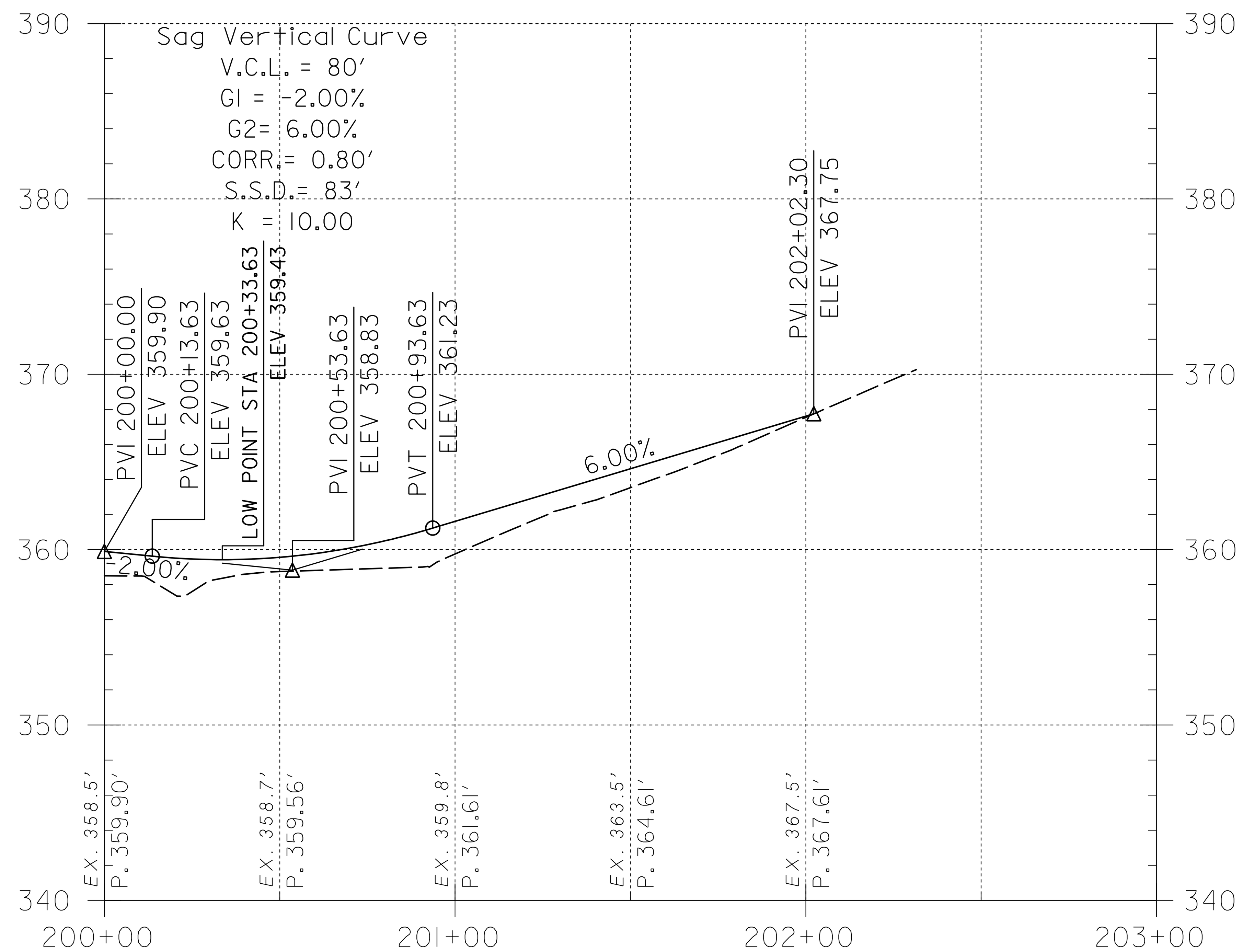
REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

ROADWAY PLAN SHEET

SCALE : 1"=40'

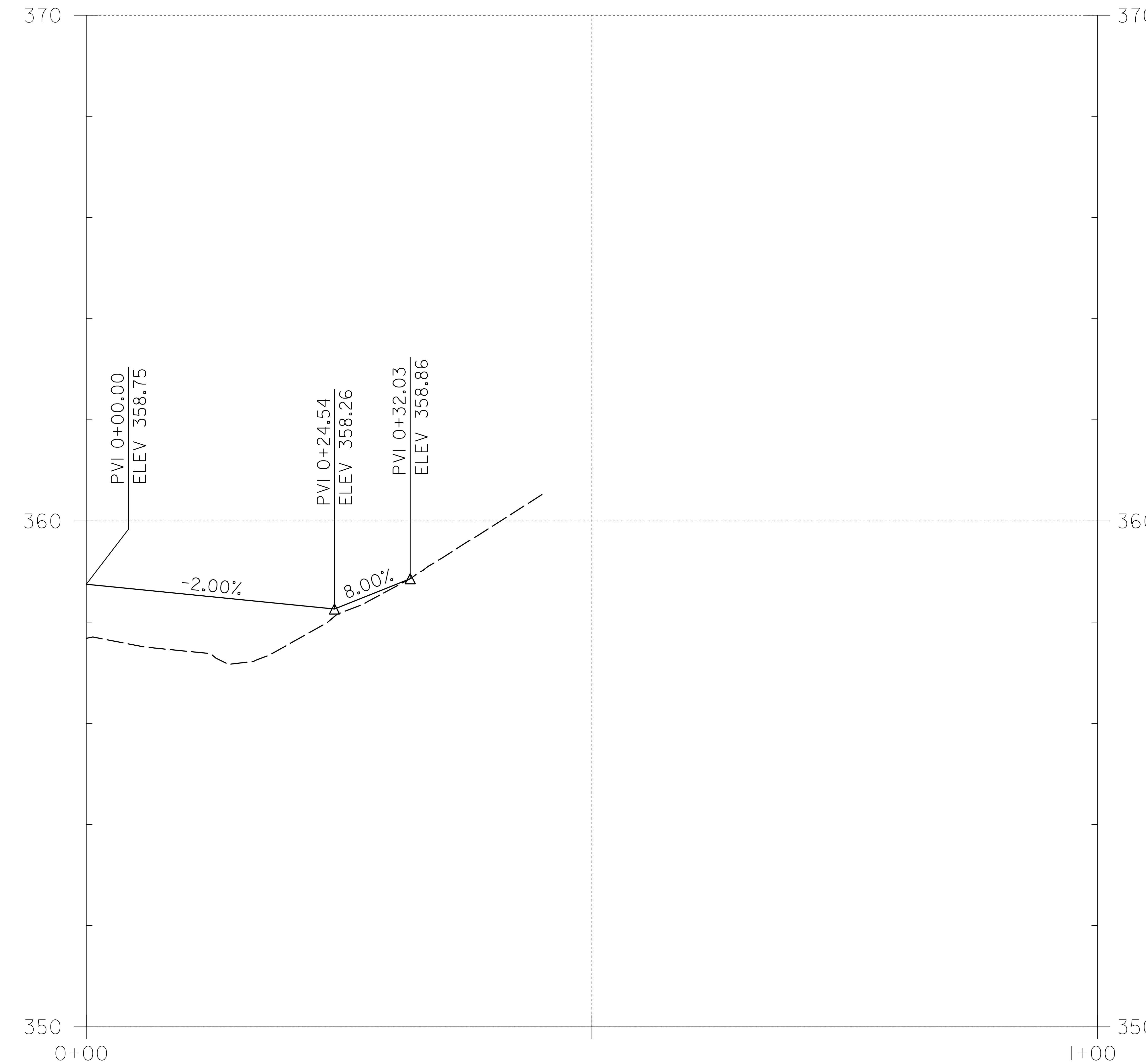
PS-01

Project No. : 501119 7 of 28



BASELINE OF CONSTRUCTION BRINK ROAD

SCALE HORIZONTAL: 1" = 40'
VERTICAL: 1" = 8'



DRIVEWAY PROFILE

SCALE HORIZONTAL: 1" = 10'
VERTICAL: 1" = 2'

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REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

ROADWAY PROFILE

SCALE : AS SHOWN

PR-01

Project No. : 501119

8 of 28

GENERAL NOTES

(1) ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE MONTGOMERY COUNTY, MD SHA WORK ZONE TRAFFIC CONTROL STANDARDS AND THE MD MUTCD AND SUBSEQUENT REVISIONS ADOPTED BY THE STATE OF MARYLAND, THE PROJECT BOOK OF SPECIAL PROVISIONS, AND THE OTHER CONTRACT DOCUMENTS.

(2) PAVEMENT MARKINGS NO LONGER APPLICABLE SHALL BE REMOVED COMPLETELY AS DIRECTED BY THE ENGINEER.

(3) TEMPORARY PAINT SHALL BE USED ON PAVED SURFACES ONLY AND IS TO BE MAINTAINED TO ENSURE CONTINUOUS REFLECTIVITY AND VISIBILITY. TEMPORARY PAINT SHALL NOT BE USED ON THE FINAL SURFACE. BLACK PAINT SHALL NOT BE PERMITTED.

(4) TEMPORARY TAPE SHALL BE PERMITTED ON EITHER ASPHALT OR CONCRETE SURFACES.

(5) ALL EXISTING SIGNS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE CONSTRUCTION UNLESS A CHANGE IS DIRECTED BY THE ENGINEER.

(6) VARIABLE MESSAGE SIGN(S) MESSAGES MAY BE MODIFIED AS DIRECTED BY THE ENGINEER.

(7) ADVANCE WARNING SIGNS SHALL BE INSTALLED AT A MINIMUM SPACING OF 200 FEET TO AN EXISTING SIGN, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

(8) SIGNS USED FOR TEMPORARY TRAFFIC CONTROL THAT ARE NOT APPLICABLE FOR A PARTICULAR CONSTRUCTION PHASE SHALL BE REMOVED OR COMPLETELY COVERED WITH A NON-TRANSPARENT MATERIAL.

(9) EXCAVATIONS IN AREAS WHERE THE WORK BUFFER IS LESS THAN ONE LANE SHALL BE BACKFILLED WITH GAB FOR MOT PRIOR TO THE END OF THE WORK DAY IN CONFORMANCE WITH STD. MD 104.01-28 OR APPLICABLE MONTGOMERY COUNTY STANDARDS.

(10) NO WORK IS TO BEGIN UNTIL ALL ADVANCE WARNING SIGNS, CHANNELIZATION DEVICES, AND PAVEMENT MARKINGS ARE IN PLACE AND OPERATIONAL.

(11) OBJECT MARKER SIGNS AND WALL MARKERS SHALL BE INSTALLED ON CRASH CUSHIONS AND TEMPORARY CONCRETE TRAFFIC BARRIER, AS PER STDS. MD 104.01-23 THRU MD 104.01-25 OR APPLICABLE MONTGOMERY COUNTY STANDARDS.

(12) TYPICAL APPLICATIONS TO BE USED FOR OFF-PEAK HOUR WORK MAY BE MODIFIED AS REQUIRED BASED ON FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

LEGEND

- DETOUR ROUTE
- SIGN AND POST
- TYPE III BARRICADE
- WORK AREA
- DETOUR FLOW ARROW

DETOUR SIGNS

1. ROAD CLOSED 1 MILES AHEAD LOCAL TRAFFIC ONLY — R11-3A 60"X30"
2. ROAD CLOSED 2 MILES AHEAD LOCAL TRAFFIC ONLY — R11-3A 60"X30"
3. END DETOUR — M4-8a 36"X24"
4. ROAD CLOSED — R11-2 48"X30" TO BE MOUNTED ON TYPE III BARRICADE
5. ROAD CLOSED 800 FT — W20-1(1) 48"X48"
6. ROAD CLOSED 1500 FT — W20-1(1) 48"X48"
7. ROAD CLOSED ½ MILE — W20-1(1) 48"X48"
8. DETOUR 800 FT — W20-2 48"X48"
9. DETOUR 1500 FT — W20-2(1) 48"X48"
10. DETOUR 1/2 MILE — W20-2(1) 48"X48"
11. BRINK RD DETOUR ← — M4-9L 48"48"
12. BRINK RD DETOUR → — M4-9R 48"48"
13. BRINK RD DETOUR ↑ — M4-9 (MOD.) 48"48"
14. BRINK RD DETOUR ↰ — M4-9L (MOD.) 48"48"
15. BRINK RD DETOUR ↱ — M4-9R (MOD.) 48"48"
16. BRINK ROAD TO BE CLOSED / ON OR ABOUT XXXXXX — 2 WEEKS IN ADVANCE OF CLOSURE — PVMS

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming — A Joint Venture

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DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: JSK Drawn by: JSK Checked by: GW

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

MAINTENANCE OF TRAFFIC DETOUR PLAN

SCALE : 1"=1000'

MT-01

Project No. : 501119

EROSION AND SEDIMENT CONTROL STANDARD NOTES

DPS | Montgomery County
Department of Permitting Services
255 Rockville Pike, 2nd Floor
Rockville, MD 20850-4166
Phone: 311 in Montgomery County or (240)777-0311
Fax: (240)777-6262
http://www.montgomerycountymd.gov/permittingservices

STANDARD EROSION AND SEDIMENT CONTROL NOTES

1. The permittee shall notify the Department of Permitting Services (DPS) forty-eight (48) hours before commencing any land disturbing activity and, unless waived by the Department, shall be required to hold a pre-construction meeting between them or their representative, their engineer and an authorized representative of the Department.

2. The permittee must obtain inspection and approval by DPS at the following points:

   A. At the required pre-construction meeting.

   B. Following installation of sediment control measures and prior to any other land disturbing activity.

   C. During the installation of a sediment basin or stormwater management structure at the required inspection points (see Inspection Checklist on plan). Notification prior to commencing construction is mandatory.

   D. Prior to removal or modification of any sediment control structure(s).

   E. Prior to final acceptance.

3. The permittee shall construct all erosion and sediment control measures per the approved plan and construction sequence, shall have them inspected and approved by the Department prior to beginning any other land disturbances, shall ensure that all runoff from disturbed areas is directed to the sediment control devices, and shall not remove any erosion or sediment control measure without prior permission from the Department.

4. The permittee shall protect all points of construction ingress and egress to prevent the deposition of materials onto traversed public thoroughfare(s). All materials deposited onto public thoroughfare(s) shall be removed immediately.

5. The permittee shall inspect periodically and maintain continuously in effective operating condition, all erosion and sediment control measures until such time as they are removed with prior permission from the Department. The permittee is responsible for immediately repairing or replacing any sediment control measures which have been damaged or removed by the permittee or any other person.

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

DPS | Montgomery County
Department of Permitting Services
255 Rockville Pike, 2nd Floor
Rockville, MD 20850-4166
Phone: 311 in Montgomery County or (240)777-0311
Fax: (240)777-6262
http://www.montgomerycountymd.gov/permittingservices

a) Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes and all slopes steeper than 3 horizontal to 1 vertical (3:1); and

b) Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.

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

7. The permittee shall apply sod, seed, and anchored straw mulch, or other approved stabilization measures to all disturbed areas within seven (7) calendar days after stripping and grading activities have ceased on that area. Maintenance shall be performed as necessary to ensure continued stabilization. Active construction areas such as borrow or stockpile areas, roadway improvements, and areas within fifty (50) feet of a building under construction may be exempt from this requirement, provided that erosion and sediment control measures are installed and maintained to protect those areas.

8. Prior to removal of sediment control measures, the permittee shall stabilize all contributory disturbed areas with required soil amendments and topsoil, using sod or an approved permanent seed mixture and an approved anchored mulch. Wood fiber mulch may only be used in seeding season when the slope does not exceed 10% and grading has been done to promote sheet flow drainage. Areas brought to finished grade during the seeding season shall be permanently stabilized within seven (7) calendar days of establishment. When property is brought to finished grade during the months of November through February, and permanent stabilization is found to be impractical, an approved temporary seed and straw anchored mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be completed prior to the following April 15.

9. The site permit, work, materials, approved SC/SM plans, and test reports shall be available at the site for inspection by duly authorized officials of Montgomery County.

10. Surface drainage flows over unstabilized cut and fill slopes shall be controlled by either preventing drainage flows from traversing the slopes or by installing mechanical devices to lower the water down slope without causing erosion. Dikes shall be installed and maintained at the top of cut or fill slopes until the slope and drainage area to it are fully stabilized, at which time they must be removed and final grading done to promote sheet flow drainage. Mechanical devices must be provided at points of concentrated flow where erosion is likely to occur.

11. Permanent swales or other points of concentrated water flow shall be stabilized within 3 calendar days of establishment with sod or seed with an approved erosion control matting or by other approved stabilization measures.

12. Sediment control devices shall be removed, with permission of the Department, within thirty (30) calendar days following establishment of permanent stabilization in all contributory drainage areas. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well.

13. No permanent cut or fill slope with a gradient steeper than 3:1 will be permitted in lawn maintenance areas or on residential lots. A slope gradient of up to 2:1 will be permitted in non-maintenance areas provided that those areas are indicated on the erosion and sediment control plan with a low-maintenance ground cover specified for permanent stabilization. Slope gradient steeper than 2:1 will not be permitted with vegetative stabilization.

14. The permittee shall install a splashblock at the bottom of each downspout unless the downspout is connected by a drain line to an acceptable outlet.

15. For finished grading, the permittee shall provide adequate gradients so as to prevent water from standing on the surface of lawns more than twenty-four (24) hours after the end of a rainfall, except in designated drainage courses and swale flow areas, which may drain as long as forty-eight (48) hours after the end of a rainfall.

16. Sediment traps or basins are not permitted within 20 feet of a building which is existing or under construction. No building may be constructed within 20 feet of a sediment trap or basin.

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

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

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

20. Vegetative stabilization shall be performed in accordance with the Standards and Specifications for Soil Erosion and Sediment Control.

21. Sediment trap(s)/basin(s) shall be cleaned out and restored to the original dimensions when sediment has accumulated to the point of one-half (1/2) the wet storage depth of the trap/basin (1/4 the wet storage depth for ST-III) or when required by the sediment control inspector.

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

23. All sediment basins and traps must be surrounded with a welded wire safety fence. The fence must be at least 42 inches high, have posts spaced no farther apart than 8 feet, have mesh openings no greater the two inches in width and four inches in height, with a minimum of 14 gauge wire. Safety fence must be maintained in good condition at all times.

24. No excavation in the areas of existing utilities is permitted unless their location has been determined. Call "Miss Utility" at 1-800-257-7777, 48 hours prior to the start of work.

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

26. Sediment trap/basin dewatering for cleanout or repair may only be done with the DPS inspector's permission. The inspector must approve the dewatering method for each application. The following methods may be considered:

   A. Pump discharge may be directed to another on-site sediment trap or basin, provided it is of sufficient volume and the pump intake is floated to prevent agitation or suction of deposited sediments; or

   B. the pump intake may utilize a Removable Pumping Station and must discharge into an undisturbed area through a non-erosive outlet; or

   C. the pump intake may be floated and discharge into a Dirt Bag (12 oz. non-woven fabric), or approved equivalent, located in an undisturbed buffer area.

Remember: Dewatering operation and method must have prior approval by the DPS inspector.

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

28. Topsoil must be applied to all pervious areas within the limits of disturbance prior to permanent stabilization in accordance with MDE "Standards and Specifications for Soil Preparation, Topsoiling, and Soil Amendments".

MCDPS
APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT #

NOTE

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.

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

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

NMP ENGINEERING CONSULTANTS, INC.
EXECUTIVE PLAZA III, SUITE 300
11350 MCCORMICK ROAD
HUNT VALLEY, MD 21031
TEL (410) 771-9808
FAX (410) 771-9809

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MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: ______ Drawn by: ______ Checked by: ______

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

EROSION & SEDIMENT CONTROL NOTES

SCALE : NTS

Project No. : 2000661 (501119) 10 of 28

EROSION AND SEDIMENT CONTROL SEQUENCE OF CONSTRUCTION

GENERAL NOTES:

1. PRIOR TO CLEARING TREES, INSTALLING SEDIMENT CONTROL MEASURES, OR GRADING, A PRECONSTRUCTION MEETING MUST BE CONDUCTED ON-SITE WITH THE MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES (MCDPS) SEDIMENT CONTROL INSPECTOR (240) 777-0311 (48 HOURS NOTICE) AND THE MNCPPC, PLANNING DEPARTMENT, PLANS ENFORCEMENT INSPECTOR (301)495-4550 (48 HOURS NOTICE), THE OWNERS REPRESENTATIVE, AND THE SITE ENGINEER. IN ORDER FOR THE MEETING TO OCCUR, THE APPLICANT MUST PROVIDE ONE PAPER SET OF APPROVED SEDIMENT CONTROL PLANS TO THE MCDPS SEDIMENT CONTROL INSPECTOR AT THE PRECONSTRUCTION MEETING. IF NO PLANS ARE PROVIDED, THE MEETING SHALL NOT OCCUR AND WILL NEED TO BE RESCHEDULED PRIOR TO COMMENCING ANY WORK.

STAGE 1 REMOVAL OF EXITING SUPERSTRUCTURE AND PERFORM PROPOSED ABUTMENT WIDENING:

2. THE LIMITS OF DISTURBANCE FOR STAGE 1 MUST BE FIELD MARKED PRIOR TO CLEARING OF TREES, INSTALLATION OF SEDIMENT CONTROL MEASURES, CONSTRUCTION, OR OTHER LAND DISTURBING ACTIVITIES.

3. THE PERMITTEE MUST OBTAIN WRITTEN APPROVAL FORM THE MNCPPC INSPECTOR, CERTIFYING THAT THE LIMITS OF DISTURBANCE AND TREE PROTECTION MEASURES ARE CORRECTLY MARKED AND INSTALLED PRIOR TO COMMENCING ANY CLEARING.

4. REMOVE PORTION OF EXISTING GUARDRAIL TO INSTALL SCE 1-1 AND SCE 1-2 USING SAME DAY STABILIZATION. INSTALL SCE 1-1 AND SCE 1-2.

5. FOR CLEAN WATER DIVERSION, INSTALL CWD 1-1 AND ROP 1-1 FROM EXISTING STORM DRAIN PIPE.

6. INSTALL PORTABLE SEDIMENT TANK PST 1-1 AS SHOWN ON THIS PLAN AND INSTALL STREAM PROTECTION FOR EXISTING SUPERSTRUCTURE REMOVAL AS SHOWN ON THE DETAIL. THE EXISTING CONCRETE SUPERSTRUCTURE SHALL BE REMOVED BY CUTTING THE EXISTING SPAN FULL DEPTH INTO SECTIONS WITH LONGITUDINAL CUTS PARALLEL TO THE BASELINE OF CONSTRUCTION. THE SLABS WILL THEN BE DRILLED, LIFTED FROM THE EXSITING STRUCTURE, PLACED ON A TRUCK AND TRANSPORTED TO AN APPROVED DISPOSAL SITE. ALL DEBRIS AND SLURRY WATER FROM THE SUPERSTRUCTURE SAWCUTTING AND DEMOLITION SHALL BE CAPTURED AND DIRECTED TO THE PORTABLE SEDIMENT TANK PST 1-1. NO DEBRIS OR SLURRY IS PERMITTED TO FALL INTO THE WATERWAY. WITH THE PERMISSION OF MCDPS INSPECTOR, REMOVE STREAM PROTECTION INSTALLED FOR BRIDGE DECK REMOVAL.

7. INSTALL TBD 1-1 AND TBD 1-2 TO DIRECT CLEAR WATER CHANNEL FLOW AROUND WORK AREA. PERFORM PROPOSED ABUTMENT WIDENING AND PROPOSED STREAM GRADING SHOWN ON SOUTH SIDE OF THE BRINK ROAD. DEWATER WORK AREA USING A PORTABLE SEDIMENT TANK OR AN APPROVED EROSION AND SEDIMENT CONTROL DEVICE.

8. INSTALL PROPOSED RIRPRAP OUTLET PROTECTION AND PROPOSED ENDWALL EW 1-1.

9. PERFORM PROPOSED STREAM GRADING SHOWN NORTH SIDE OF THE BRINK ROAD USING SAME DAY STABILIZATION. Where no SCE is provided, the contractor shall designate pieces of construction equipment that shall be allowed within the LOD. This equipment shall be kept within the LOD until the proposed work is complete and shall have treads/tires cleaned prior to leaving the LOD. All material removal/load out shall be lifted from the LOD.

10. OBTAIN WRITTEN APPROVAL FROM MCDPS INSPECTOR, PRIOR TO THE REMOVAL OF SCE 1-1, SCE 1-2, TBD 1-1, AND TBD 1-2. REMOVE SCE 1-1, SCE 1-2, TBD 1-1, AND TBD 1-2.

11. ONCE ALL STAGE 1 CONSTRUCTION TASKS ARE COMPLETED AND WITH THE APPROVAL OF THE MCDPS INSPECTOR, PROCEED TO STAGE 2 CONSTRUCTION.

STAGE 2 CONSTRUCTION OF PROPOSED SUPERSTRUCTURE, PROPOSED ROADWAY IMPROVEMENTS AND CONTRUCTION OF PROPOSED DRAINAGE AND SWM FACILITIES:

12. PERFORM PLACEMENT OF THE SUPERSTRUCTURE AS SHOWN ON THE PLAN.

13. INSTALL SUPER SILT FENCES, AND TEMPORAY GABION OUTLET STRUCTURE AS SHOWN ON THE PLAN. ONCE THE SEDIMENT CONTROL DEVICES ARE INSTALLED, THE PERMITTEE MUST OBTAIN WRITTEN APPROVAL FROM THE MCDPS INSPECTOR BEFORE PROCEEDING WITH ANY ADDITIONAL CLEARING, GRUBBING OR GRADING.

14. CONSTRUCT PROPOSED STORM DRAIN SYSTEM AND INSTALL INLET PROTECTIONS.

15. CONSTRUCT PROPOSED ROADWAY IMPROVEMENTS, AND ASSOCITATED GRADING.

16. INSTALL SWM FACILITIES AS SHOWN ON THE SWM PLANS.

17. OBTAIN WRITTEN APPROVAL FROM MCDPS INSPECTOR, PRIOR TO THE REMOVAL OF ANY SEDIMENT CONTROL DEVICE.

BEST MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS

1. NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILED OR STORED IN NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.

2. PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.

3. DO NOT USE THE EXCAVATED MATERIAL AS BACKFILL IF IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE. IF ADDITIONAL BACKFILL IS REQUIRED, USE CLEAN MATERIALS FREE OF WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE.

4. PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.

5. REPAIR AND MAINTAIN ANY SERVICEABLE STRUCTURE OR FILL SO THERE IS NO PERMANENT LOSS OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, OR WATERWAYS, OR PERMANENT MODIFICATION OF THE 100-YEAR FLOODPLAIN IN EXCESS OF THAT LOST UNDER THE ORIGINALLY AUTHORIZED STRUCTURE OR FILL.

6. RECTIFY ANY NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, OR 100-YEAR FLOODPLAIN TEMPORARILY IMPACTED BY ANY CONSTRUCTION.

7. ALL STABILIZATION IN THE NONTIDAL WETLAND AND NONTIDAL WETLAND BUFFER SHALL CONSIST OF THE FOLLOWING SPECIES:

ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MILLET (SETARIA ITALICA), BARLEY (HORDEUM SP.), OATS (UNIOLA SP.)AND/OR RYE (SECALE CEREALE). THESE SPECIES WILL ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF NATURAL WETLAND SPECIES. OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE NONTIDAL WETLANDS AND WATERWAYS DIVISION. KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN WETLAND OR BUFFER AREAS. THE AREA SHOULD BE SEEDED AND MULCHED TO REDUCE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.

8. AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST CONSTRUCTION GRADES AND ELEVATIONS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS IN TEMPORARILY IMPACTED AREAS.

9. TO PROTECT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM:
   - A. USE I WATERS (WITHOUT YELLOW PERCH): IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE DURING ANY YEAR.
   - B. USE I WATERS (WITH YELLOW PERCH): IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD FEBRUARY 15 THROUGH JUNE 15, INCLUSIVE DURING ANY YEAR.
   - C. USE III WATERS: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD OCTOBER 1 THORUGH APRIL 30, INCLUSIVE, DURING ANY YEAR.
   - D. USE IV WATERS: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH MAY 31, INCLUSIVE, DURING ANY YEAR.

10. STORMWATER RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE WATERWAY.

11. CULVERTS SHALL BE CONSTRUCTED AND ANY RIPRAP PLACED SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES, UNLESS THE PURPOSE OF THE ACTIVITY IS TO IMPOUND WATER.

MCDPS
APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT #

NOTE

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.

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

FOUNDATION REVIEW
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section Date

APPROVED

Chief, Division of Transportation Engineering Date

Designed by: Drawn by: Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

EROSION & SEDIMENT CONTROL NOTES

SCALE : NTS

Project No. : 2000661 (501119)

NOTES REFERENCED FROM:
MARYLAND DEPARTMENT OF THE ENVIRONMENT, 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, DECEMBER 2011.

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION
USING VEGETATION AS COVER TO PROTECT EXPOSED SOIL FROM EROSION.

PURPOSE
TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL.

CONDITIONS WHERE PRACTICE APPLIES
ON ALL DISTURBED AREAS NOT STABILIZED BY OTHER METHODS. THIS SPECIFICATION IS DIVIDED INTO SECTIONS ON INCREMENTAL STABILIZATION; SOIL PREPARATION, SOIL AMENDMENTS AND TOPSOILING; SEEDING AND MULCHING; TEMPORARY STABILIZATION; AND PERMANENT STABILIZATION.

EFFECTS ON WATER QUALITY AND QUANTITY
STABILIZATION PRACTICES ARE USED TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL. WHEN SOIL IS STABILIZED WITH VEGETATION, THE SOIL IS LESS LIKELY TO ERODE AND MORE LIKELY TO ALLOW INFILTRATION OF RAINFALL, THEREBY REDUCING SEDIMENT LOADS AND RUNOFF TO DOWNSTREAM AREAS.

PLANTING VEGETATION IN DISTURBED AREAS WILL HAVE AN EFFECT ON THE WATER BUDGET, ESPECIALLY ON VOLUMES AND RATES OF RUNOFF, INFILTRATION, EVAPORATION, TRANSPIRATION, PERCOLATION, AND GROUNDWATER RECHARGE. OVER TIME, VEGETATION WILL INCREASE ORGANIC MATTER CONTENT AND IMPROVE THE WATER HOLDING CAPACITY OF THE SOIL AND SUBSEQUENT PLANT GROWTH.

VEGETATION WILL HELP REDUCE THE MOVEMENT OF SEDIMENT, NUTRIENTS, AND OTHER CHEMICALS CARRIED BY RUNOFF TO RECEIVING WATERS. PLANTS WILL ALSO HELP PROTECT GROUNDWATER SUPPLIES BY ASSIMILATING THOSE SUBSTANCES PRESENT WITHIN THE ROOT ZONE.

SEDIMENT CONTROL PRACTICES MUST REMAIN IN PLACE DURING GRADING, SEEDBED PREPARATION, SEEDING, MULCHING, AND VEGETATIVE ESTABLISHMENT.

ADEQUATE VEGETATIVE ESTABLISHMENT
INSPECT SEEDED AREAS FOR VEGETATIVE ESTABLISHMENT AND MAKE NECESSARY REPAIRS, REPLACEMENTS, AND RESEEDINGS WITHIN THE PLANTING SEASON.

1. ADEQUATE VEGETATIVE STABILIZATION REQUIRES 95 PERCENT GROUNDCOVER.
2. IF AN AREA HAS LESS THAN 40 PERCENT GROUNDCOVER, RESTABILIZE FOLLOWING THE ORIGINAL RECOMMENDATIONS FOR LIME, FERTILIZER, SEEDBED PREPARATION, AND SEEDING.
3. IF AN AREA HAS BETWEEN 40 AND 94 PERCENT GROUNDCOVER, OVER-SEED AND FERTILIZE USING HALF OF THE RATES ORIGINALLY SPECIFIED.
4. MAINTENANCE FERTILIZER RATES FOR PERMANENT SEEDING ARE SHOWN IN TABLE B.6.

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

DEFINITION
ESTABLISHMENT OF VEGETATIVE COVER ON CUT AND FILL SLOPES.

PURPOSE
TO PROVIDE TIMELY VEGETATIVE COVER ON CUT AND FILL SLOPES AS WORK PROGRESSES.

CONDITIONS WHERE PRACTICE APPLIES
ANY CUT OR FILL SLOPE GREATER THAN 15 FEET IN HEIGHT. THIS PRACTICE ALSO APPLIES TO STOCKPILES.

CRITERIA

A. INCREMENTAL STABILIZATION - CUT SLOPES

1. EXCAVATE AND STABILIZE CUT SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL CUT SLOPES AS THE WORK PROGRESSES.
2. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.1):
   a. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO CONVEY RUNOFF AROUND THE EXCAVATION.
   b. PERFORM PHASE 1 EXCAVATION, PREPARE SEEDBED, AND STABILIZE.
   c. PERFORM PHASE 2 EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PHASE 1 AREAS AS NECESSARY.
   d. PERFORM FINAL PHASE EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE EXCAVATION HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

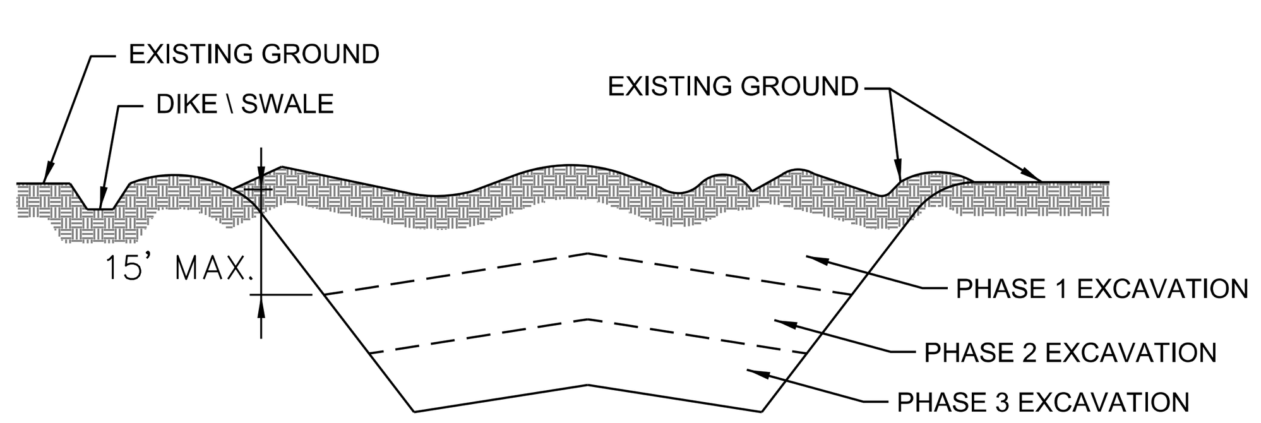

FIGURE B.1: INCREMENTAL STABILIZATION - CUT

B. INCREMENTAL STABILIZATION - FILL SLOPES

1. CONSTRUCT AND STABILIZE FILL SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL SLOPES AS THE WORK PROGRESSES.
2. STABILIZE SLOPES IMMEDIATELY WHEN THE VERTICAL HEIGHT OF A LIFT REACHES 15 FEET, OR WHEN THE GRADING OPERATION CEASES AS PRESCRIBED IN THE PLANS.
3. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.
4. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.2):
   a. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL. CONSTRUCT SILT FENCE ON LOW SIDE OF FILL UNLESS OTHER METHODS SHOWN ON THE PLANS ADDRESS THIS AREA.
   b. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.
   c. PLACE PHASE 1 FILL, PREPARE SEEDBED, AND STABILIZE.
   d. PLACE PHASE 2 FILL, PREPARE SEEDBED, AND STABILIZE.
   e. PLACE FINAL PHASE FILL, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

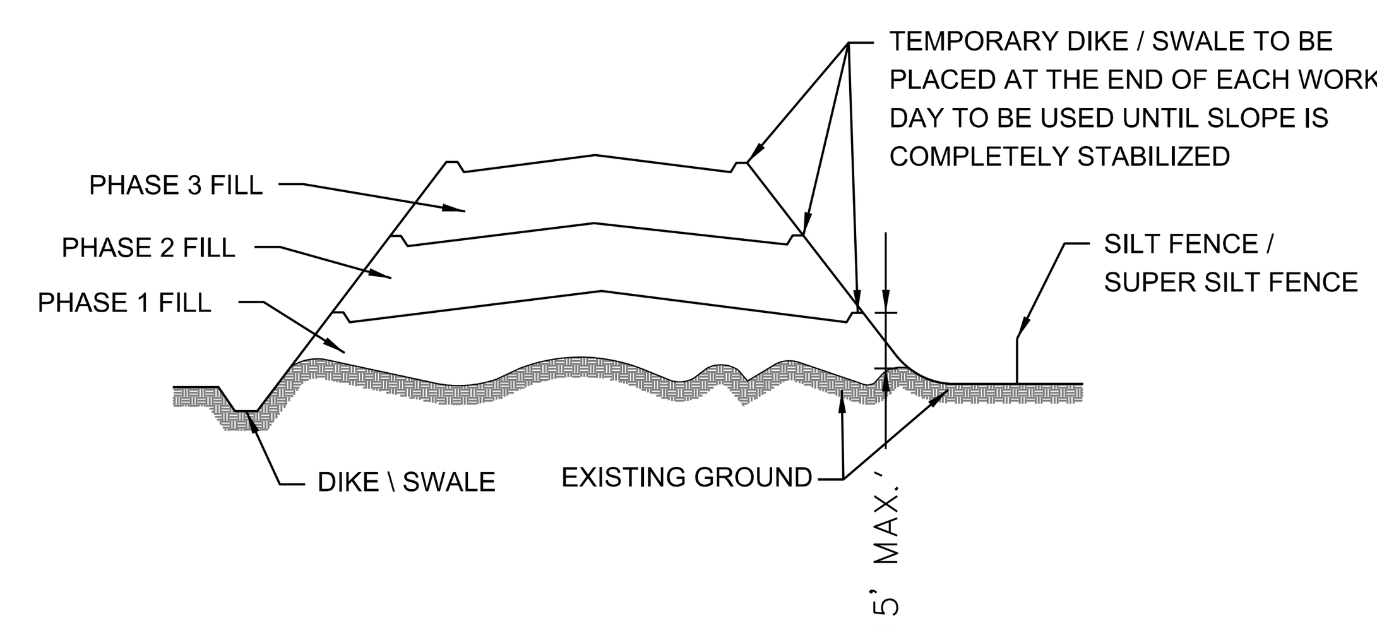

FIGURE B.2: INCREMENTAL STABILIZATION - FILL

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

DEFINITION
THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

PURPOSE
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES
WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA

A. SOIL PREPARATION

1. TEMPORARY STABILIZATION
   a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE
   b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
   c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
2. PERMANENT STABILIZATION
   a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
      i. SOIL PH BETWEEN 6.0 AND 7.0.
      ii. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
      iii. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
      iv. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
      v. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
   b. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ONSITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
   c. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
   d. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
   e. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING

1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.
3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
   a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
   b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
   c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
   d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
   a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND.OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1½ INCHES IN DIAMETER.
   b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
   c. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
6. TOPSOIL APPLICATION
   a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
   b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
   c. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.
3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

MCDPS
APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT #

NOTE
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.

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

FOUNDATION REVIEW
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section Date
APPROVED

Chief, Division of Transportation Engineering Date

Designed by: Drawn by: Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

EROSION & SEDIMENT CONTROL NOTES

SCALE : NTS

Project No. : 2000661 (501119)

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION
THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE
TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES
TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA

A. SEEDING

1. SPECIFICATIONS

a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.

b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.

c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.

d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

2. APPLICATION

a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.

i. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.

ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.

b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.

i. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.

ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INLCUDES SEED AND FERTILIZER).

i. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P_2O_5 (PHOSPHOROUS), 200 POUNDS PER ACRE; K_2O (POTASSIUM), 200 POUNDS PER ACRE.

ii. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.

iii. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.

iv. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

B. MULCHING

1. MULCH MATERIALS (IN ORDER OF PREFERENCE)

a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.

b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.

i. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.

ii. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.

iii. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.

iv. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.

v. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.

2. APPLICATION

a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.

b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.

c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POINDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

3. ANCHORING

a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:

i. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.

ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

iii. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.

iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION
TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE
TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.

2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.

3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY						
HARDINESS ZONE: 7A SEED MIXTURE:					FERTILIZER RATE (10-20-20)	LIME RATE
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS		
	ANNUAL RYEGRASS (LOLIUM PERENNE SSP. MULTIFLORUM)	40	02/15 - 04/30; 08/15 - 11/30	0.5"	436 LB/AC (10 LB/ 1,000 SF)	2 TONS/AC (90 LB/ 1,000 SF)
	FOXTAIL MILLET (SETARIA ITALICA)	30	05/01 - 08/14	0.5"		

MCDPS
APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT #

NOTE
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.

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

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section Date

APPROVED

Chief, Division of Transportation Engineering Date

Designed by: Drawn by: Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

EROSION & SEDIMENT CONTROL NOTES

SCALE : NTS

Project No. : 2000661 (501119)

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION
TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE
TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA

A. SEED MIXTURES

1. GENERAL USE

a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.

b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.

c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.

d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 ½ POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY .

2. TURFGRASS MIXTURES

a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.

b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.

i. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.

ii. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE:FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.

iii. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.

iv. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1½ TO 3 POUNDS PER 1000 SQUARE FEET.

NOTES:
SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND"

CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE

c. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES

WESTERN MD : MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES:5B, 6A)

CENTRAL MD : MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)

SOUTHERN MD, EASTERN SHORE : MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)

d. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1½ INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.

e. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (½ TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

PERMANENT SEEDING SUMMARY

HARDINESS ZONE: 7A SEED MIXTURE:					FERTILIZER RATE (10-20-20)			LIME RATE
NO.	SPECIES	APPLICATION RATE (LB/AC)	** SEEDING DATES	SEEDING DEPTHS	N	P_2O_5	K_2O	
3	DEERTONGUE (DICHANTHELIUM CLANDESTINUM)	20	02/15 - 04/30 ♦♦ 05/01 - 05/31 *	1/4" - 1/2"	45 LB/AC (1.0 LB/ 1,000 SF)	90 LB/AC (2 LB/ 1,000 SF)	90 LB/AC (2 LB/ 1,000 SF)	2 TONS/AC (90 LB/ 1,000 SF)
	CANADA WILD RYE (ELYMUS CANADENSIS)	3						
	REDTOP (AGROSTIS GIGANTEAN)	1						
	COMMON LESPEDEZA	10						
6	TALL FESCUE (LOLIUM ARUNDINACEUM - FORMERLY FESTUCA ARUNDINACEA)	40	02/15 - 04/30 08/15 - 10/31 11/01 - 11/30					
	PERENNIAL RYEGRASS (LOLIUM PERENNE)	25						
	WHITE CLOVER (TRIFOLIUM REPENS)	5						

** FOR THE PERIOD 05/16 - 07/31 ADD 3.5 LBS/AC FOXTAIL OR PEARL MILLET TO THE PERMANENT SEED MIX (MIX NO. 6)

♦♦ WARM-SEASON GRASSES NEED A SOIL TEMPERATURE OF AT LEAST 50 DEGREES F IN ORDER TO GERMINATE. IF SOIL TEMPERATURES ARE COLDER THAN 50 DEGREES, OR MOISTURE IS NOT ADEQUATE, THE SEEDS WILL REMAIN DORMANT UNTIL CONDITIONS ARE FAVORABLE. IN GENERAL, PLANTING DURING THE LATTER PORTION OF THIS PERIOD ALLOWS MORE TIME FOR WEED EMERGENCE AND WEED CONTROL PRIOR TO PLANTING. WHEN SELECTING A PLANTING DATE, CONSIDER THE NEED FOR WEED CONTROL VS. THE LIKELIHOOD OF HAVING SUFFICIENT MOISTURE FOR LATER PLANTINGS, ESPECIALLY ON DROUGHTY SITES.

* ADDITIONAL PLANTING DATES DURING WHICH SUPPLEMENTAL WATERING MAY BE NEEDED TO ENSURE PLANT ESTABLISHMENT.

B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).

1. GENERAL SPECIFICATIONS

a. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.

b. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF ¾ INCH, PLUS OR MINUS ¼ INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.

c. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.

d. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.

e. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

2. SOD INSTALLATION

a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.

b. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.

c. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.

d. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.

3. SOD MAINTENANCE

a. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.

b. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.

c. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN ⅓ OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

MCDPS
APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT #

NOTE
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.

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

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section Date

APPROVED

Chief, Division of Transportation Engineering Date

Designed by: Drawn by: Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

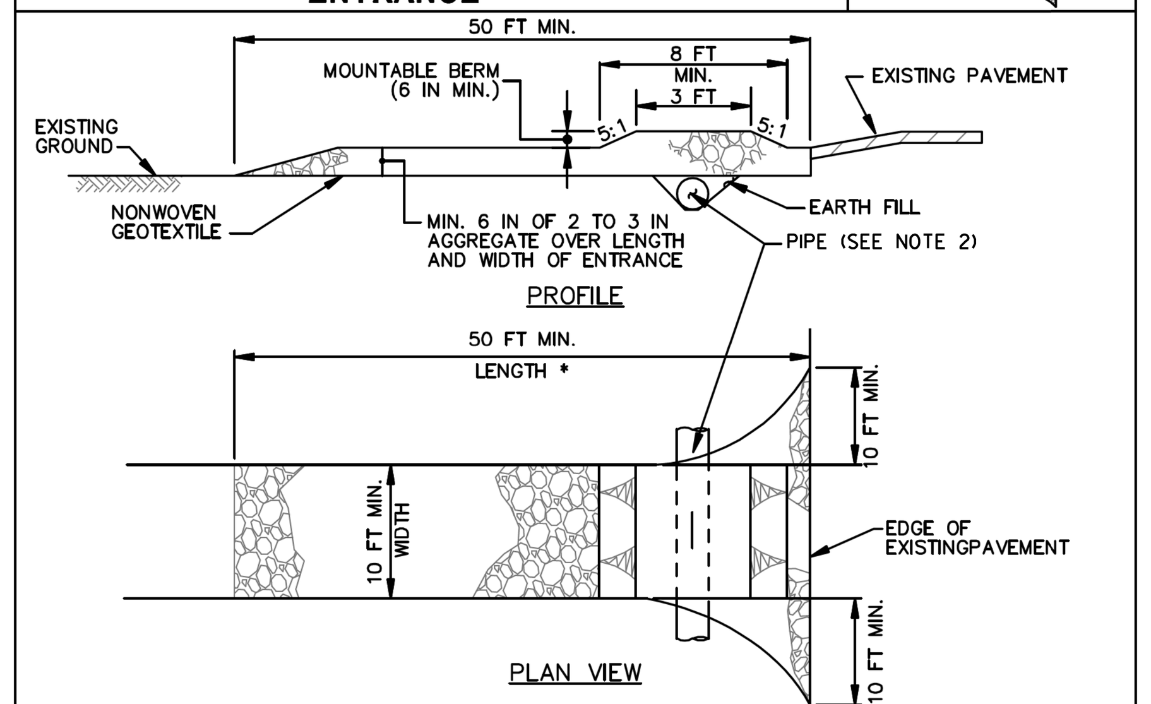
EROSION & SEDIMENT CONTROL NOTES

SCALE : NTS

Project No. : 2000661 (501119)

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H–1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

MGWC 1.2: PUMP-AROUND PRACTICE

Temporary measure for dewatering in-channel construction sites

DESCRIPTION

The work should consist of installing a temporary pump around and supporting measures to divert flow around in-stream construction sites.

IMPLEMENTATION SEQUENCE

Sediment control measures, pump-around practices, and associated channel and bank construction should be completed in the following sequence (refer to Detail 1.2):

1. Construction activities including the installation of erosion and sediment control measures should not begin until all necessary easements and/or right-of-ways have been acquired. All existing utilities should be marked in the field prior to construction. The contractor is responsible for any damage to existing utilities that may result from construction and should repair the damage at his/her own expense to the county's or utility company's satisfaction.
2. The contractor should notify the Maryland Department of the Environment or WMA sediment control inspector at least 5 days before beginning construction. Additionally, the contractor should inform the local environmental protection and resource management inspection and enforcement division and the provider of local utilities a minimum of 48 hours before starting construction.
3. The contractor should conduct a pre-construction meeting on site with the WMA sediment control inspector, the county project manager, and the engineer to review limits of disturbance, erosion and sediment control requirements, and the sequence of construction. The contractor should stake out all limits of disturbance prior to the pre-construction meeting so they may be reviewed. The participants will also designate the contractor's staging areas and flag all trees within the limit of disturbance which will be removed for construction access. Trees should not be removed within the limit of disturbance without approval from the WMA or local authority.
4. Construction should not begin until all sediment and erosion control measures have been installed and approved by the engineer and the sediment control inspector. The contractor should stay within the limits of the disturbance as shown on the plans and minimize disturbance within the work area whenever possible.
5. Upon installation of all sediment control measures and approval by the sediment control inspector and the local environmental protection and resource management inspection and enforcement division, the contractor should begin work at the upstream section and proceed downstream beginning with the establishment of stabilized construction entrances. In some cases, work may begin downstream if appropriate. The sequence of construction must be followed unless the contractor gets written approval for deviations from the WMA or local authority. The contractor should only begin work in an area which can be completed by the end of the day including grading adjacent to the channel. At the end of each work day, the work area must be stabilized and the pump around removed from the channel. Work should not be conducted in the channel during rain events.
6. Sandbag dikes should be situated at the upstream and downstream ends of the work area as shown on the plans, and stream flow should be pumped around the work area. The pump should discharge onto a stable velocity dissipater made of riprap or sandbags.

TEMPORARY INSTREAM CONSTRUCTION MEASURES — *MARYLAND DEPARTMENT OF THE ENVIRONMENT WATERWAY CONSTRUCTION GUIDELINES REVISED NOVEMBER 2000*

PAGE 1.2 - 1

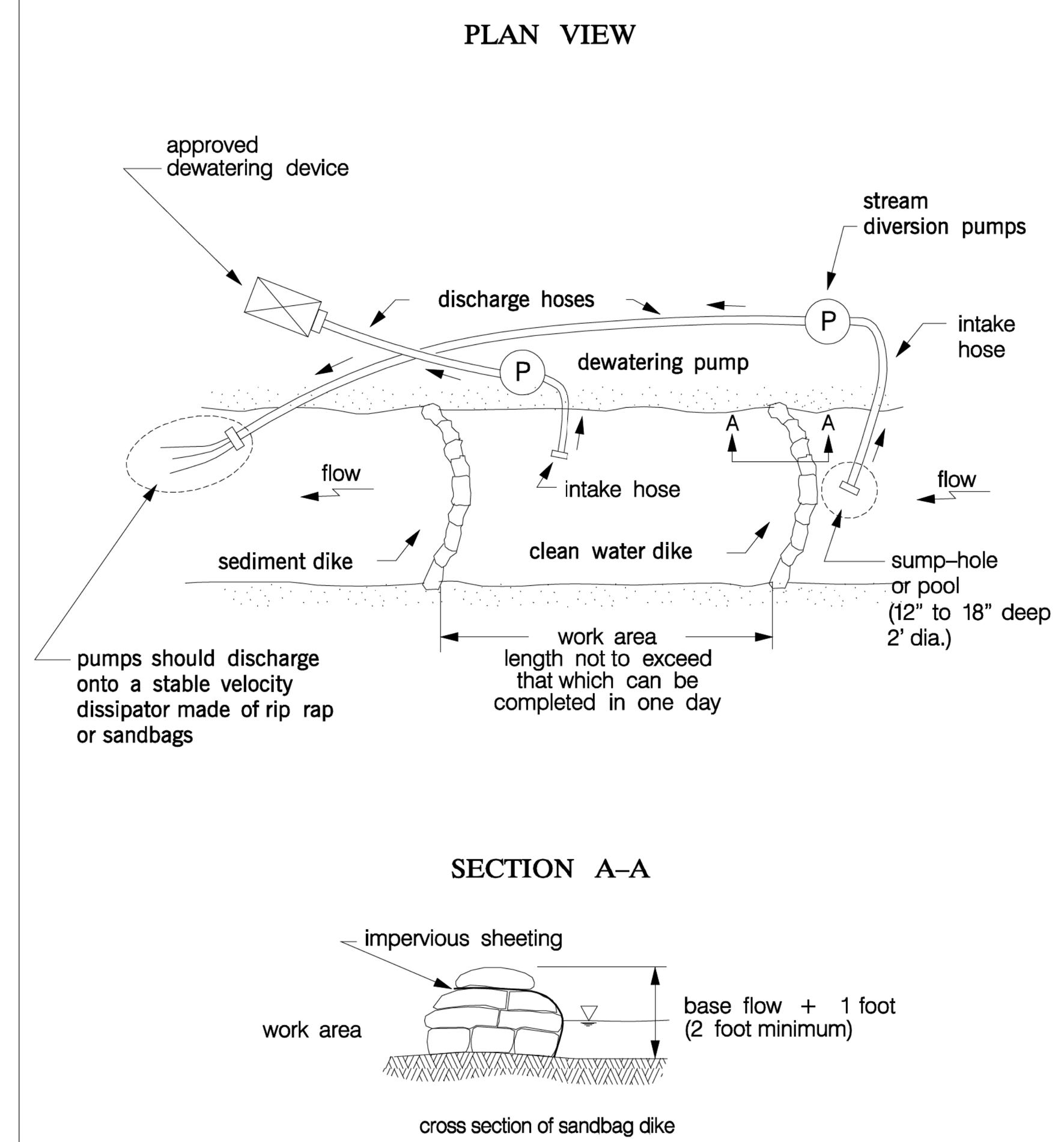
MGWC 1.2: PUMP-AROUND PRACTICE

7. Water from the work area should be pumped to a sediment filtering measure such as a dewatering basin, sediment bag, or other approved source. The measure should be located such that the water drains back into the channel below the downstream sandbag dike.
8. Traversing a channel reach with equipment within the work area where no work is proposed should be avoided. If equipment has to traverse such a reach for access to another area, then timber mats or similar measures should be used to minimize disturbance to the channel. Temporary stream crossings should be used only when necessary and only where noted on the plans or specified. (*See Section 4, Stream Crossings, Maryland Guidelines to Waterway Construction*).
9. All stream restoration measures should be installed as indicated by the plans and all banks graded in accordance with the grading plans and typical cross- sections. All grading must be stabilized at the end of each day with seed and mulch or seed and matting as specified on the plans.
10. After an area is completed and stabilized, the clean water dike should be removed. After the first sediment flush, a new clean water dike should be established upstream from the old sediment dike. Finally, upon establishment of a new sediment dike below the old one, the old sediment dike should be removed.
11. A pump around must be installed on any tributary or storm drain outfall which contributes baseflow to the work area. This should be accomplished by locating a sandbag dike at the downstream end of the tributary or storm drain outfall and pumping the stream flow around the work area. This water should discharge onto the same velocity dissipater used for the main stem pump around.
12. If a tributary is to be restored, construction should take place on the tributary before work on the main stem reaches the tributary confluence. Construction in the tributary, including pump around practices, should follow the same sequence as for the main stem of the river or stream. When construction on the tributary is completed, work on the main stem should resume. Water from the tributary should continue to be pumped around the work area in the main stem.
13. The contractor is responsible for providing access to and maintaining all erosion and sediment control devices until the sediment control inspector approves their removal.
14. After construction, all disturbed areas should be regraded and revegetated as per the planting plan.

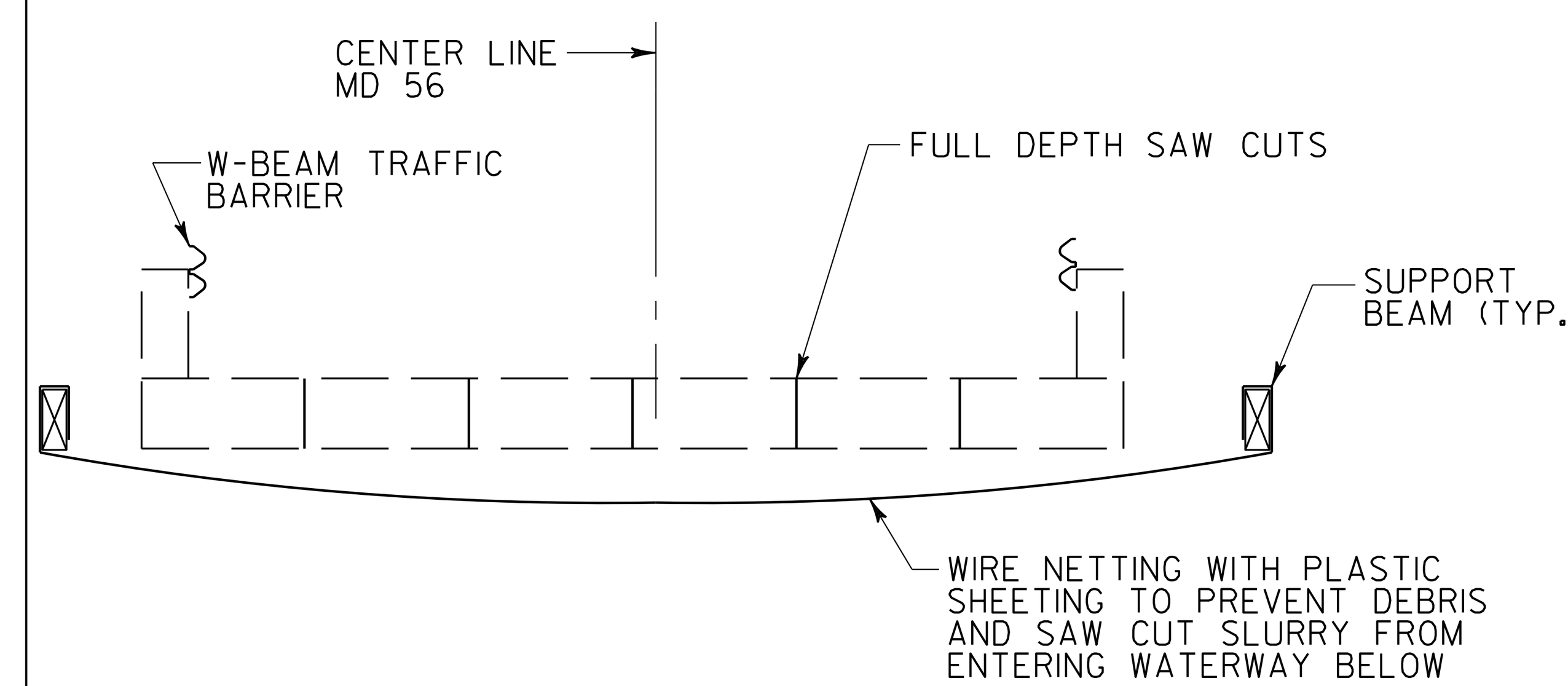
TEMPORARY INSTREAM CONSTRUCTION MEASURES — *MARYLAND DEPARTMENT OF THE ENVIRONMENT WATERWAY CONSTRUCTION GUIDELINES REVISED NOVEMBER 2000*

PAGE 1.2 - 2

Maryland's Guidelines To Waterway Construction
DETAIL 1.2: PUMP–AROUND PRACTICE



TEMPORARY INSTREAM CONSTRUCTION MEASURES	REVISED NOVEMBER 2000 PAGE 1.2 – 3	MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



NOTE:

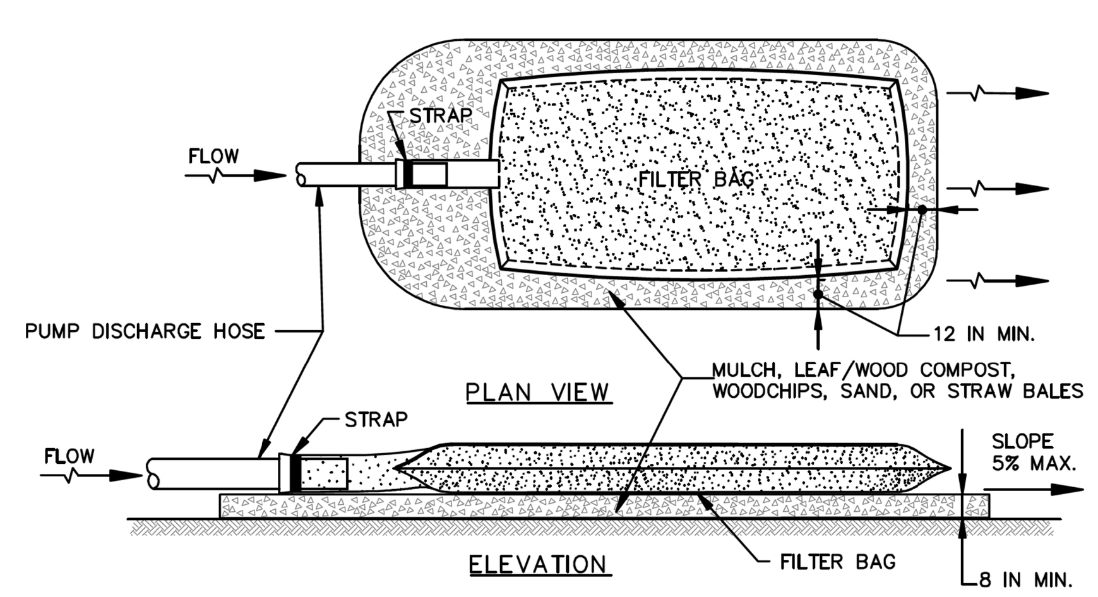
1. JUST PRIOR TO COMENCING THE BRIDGE REMOVAL OPERATION, THE CONTRACTOR SHALL PLACE DEBRIS NETTING WRAPPED WITH PLASTIC SHEETING UNDER THE BRIDGE AS SHOWN, TO PREVENT ANY DEBRIS OR SAW CUT SLURRY FROM ENTERING THE WATERWAY.
2. THE EXISTING SUPERSTRUCTURE SHALL BE SAW CUT INTO INDIVIDUAL SECTIONS AND REMOVED WITH A CRANE. SECTIONS TO BE LOADED ON A TRUCK AND TAKEN TO AN APPROVED DISPOSAL SITE.
3. ALL ACCUMULATED DEBRIS AND WATER IN THE PROTECTIVE NETTING SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE.

STREAM PROTECTION DURING BRIDGE REMOVAL

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

DETAIL F-4 FILTER BAG

STANDARD SYMBOL: FB



CONSTRUCTION SPECIFICATIONS

1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
3. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
4. REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
5. USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING:

GRAB TENSILE	250 LB	ASTM D–4632
PUNCTURE	150 LB	ASTM D–4833
FLOW RATE	70 GAL/MIN/FT^2	ASTM D–4491
PERMITTIVITY (SEC^{-1})	1.2 SEC^{-1}	ASTM D–4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D–4355
APPARENT OPENING SIZE (AOS)	0.15–0.18 MM	ASTM D–4751
SEAM STRENGTH	90%	ASTM D–4632

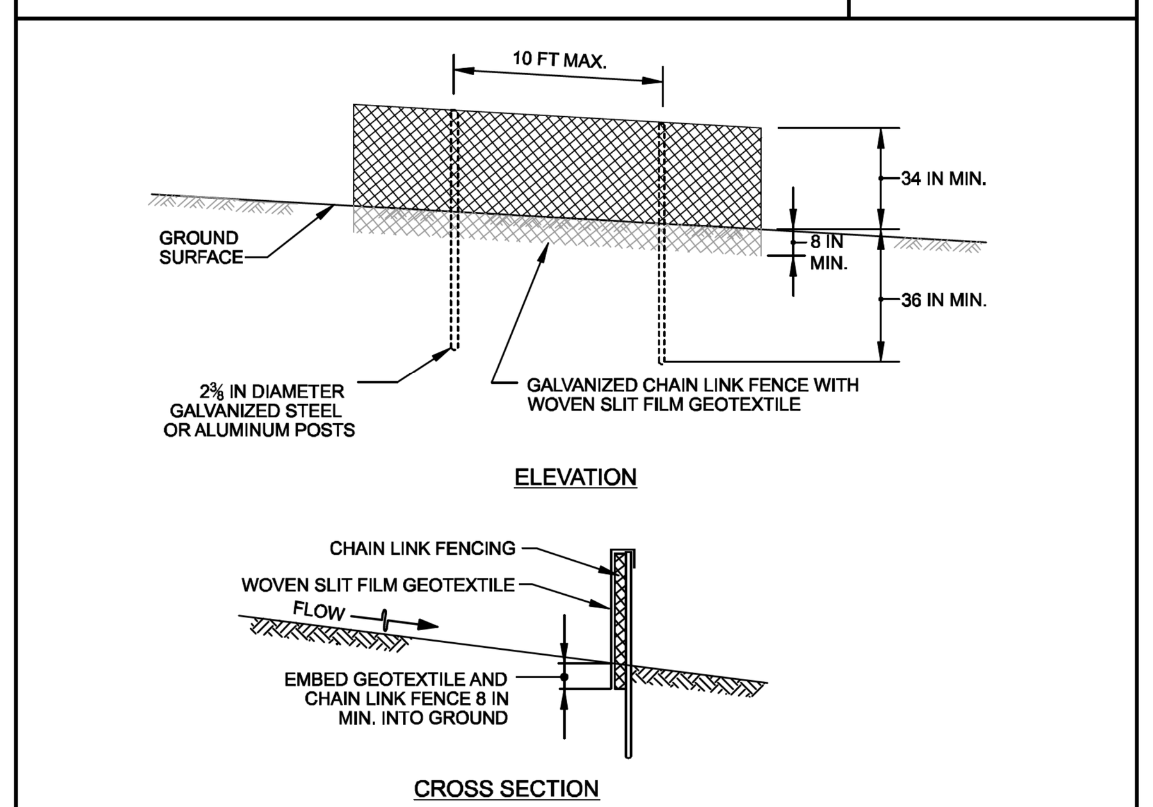
6. REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF



CONSTRUCTION SPECIFICATIONS

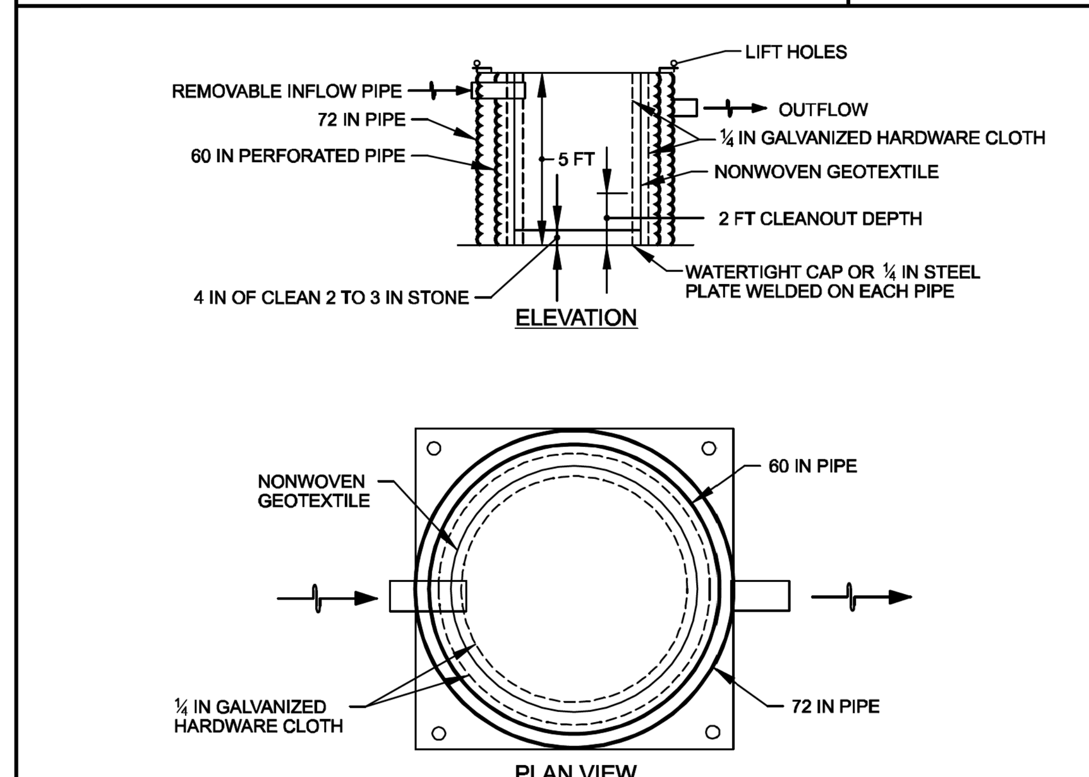
1. INSTALL 2 ⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 ⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

DETAIL F-3 PORTABLE SEDIMENT TANK

STANDARD SYMBOL: PST



CONSTRUCTION SPECIFICATIONS

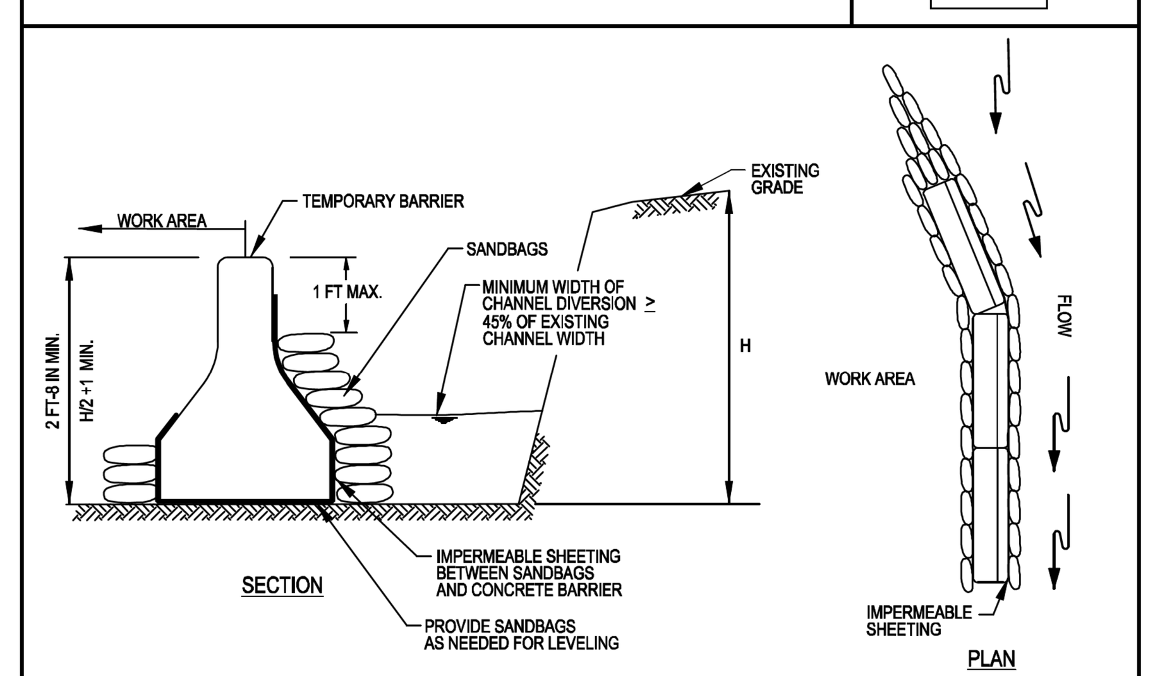
1. PROVIDE 1 CUBIC FOOT OF STORAGE FOR EACH GALLON PER MINUTE OF PUMP CAPACITY. REQUIRED STORAGE VOLUME MAY BE ATTAINED BY PLACEMENT OF TANKS IN PARALLEL WITH INFLOW EVENLY DISTRIBUTED AMONG TANKS. OVERTOPPING OF TANKS IS NOT PERMITTED.
2. USE 60 INCH CORRUGATED METAL OR PLASTIC PIPE WITH 1 INCH DIAMETER PERFORATIONS, 6 INCHES ON CENTER FOR THE INNER PIPE. LINE PIPE WITH NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, SANDWICHED BETWEEN, AND ATTACHED TO, ¼ INCH HARDWARE CLOTH.
3. OVERLAP GEOTEXTILE 8 INCHES MINIMUM AT VERTICAL SEAM AND AT THE BOTTOM PLATE.
4. ANCHOR GEOTEXTILE AT BOTTOM OF TANK WITH 4 INCHES OF 2 TO 3 INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE.
5. USE 72 INCH CORRUGATED METAL OR PLASTIC OUTER PIPE WITH PERMANENT OUTFLOW PIPE WITH INVERT LOWER THAN INFLOW PIPE.
6. INFLOW PIPE MUST DISCHARGE INTO INNER PIPE AND BE REMOVABLE.
7. PLACE TANK ON LEVEL SURFACE AND DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
8. A PORTABLE SEDIMENT TANK REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT FROM INNER PIPE WHEN IT REACHES TWO FEET IN DEPTH. IF SYSTEM CLOGS, PULL OUT INNER PIPE, REMOVE ACCUMULATED SEDIMENT, AND REPLACE GEOTEXTILE. KEEP POINT OF DISCHARGE FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

DETAIL C-7 TEMPORARY BARRIER DIVERSION

STANDARD SYMBOL: TBD



CONSTRUCTION SPECIFICATIONS

1. FOR SANDBAGS USE MATERIALS THAT ARE RESISTANT TO ULTRA-VIOLET RADIATION, TEARING, AND PUNCTURE AND WOVEN TIGHTLY ENOUGH TO PREVENT LEAKAGE OF FILL MATERIAL.
2. USE BARRIER MADE OF CONCRETE OR OTHER APPROVED MATERIAL.
3. USE 10 MIL OR THICKER, UV RESISTANT, IMPERMEABLE SHEETING OR OTHER APPROVED MATERIAL THAT IS IMPERMEABLE AND RESISTANT TO PUNCTURING AND TEARING.
4. ESTABLISH TOP ELEVATION AT H/2 + 1 FOOT FOR PROJECTS OF DURATION LESS THAN 2 WEEKS OR AS SPECIFIED ON APPROVED PLAN.
5. INSTALL DIVERSION STRUCTURE FROM UPGRADE TO DOWNGRADE.
6. PLACE IMPERMEABLE SHEETING SUCH THAT UPGRADE PORTION OVERLAPS DOWNGRADE PORTION BY A MINIMUM OF 18 INCHES.
7. USE SANDBAG BASE FOR LEVELING AND TO ESTABLISH MINIMUM TOP ELEVATION OF THE BARRIER AS REQUIRED.
8. DISPOSE OF ALL EXCAVATED MATERIALS IN AN APPROVED DISPOSAL AREA OUTSIDE OF THE 100-YEAR FLOODPLAIN.
9. DEWATER WORK AREA USING AN APPROVED EROSION AND SEDIMENT CONTROL PRACTICE AS SPECIFIED ON APPROVED PLAN.
10. KEEP ABUTMENTS BETWEEN CONCRETE BARRIERS WATER TIGHT. REPLACE SANDBAGS AND IMPERMEABLE SHEETING IF TORN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

MCDPS APPROVED FOR:

Stormwater Management:

Reviewed ____ Date ____

Approved ____ Date ____

SM FILE #

Sediment Control Technical Requirements:

Reviewed ____ Date ____

Approved ____ Date ____

Administrative Requirements:

Reviewed ____ Date ____

SEDIMENT CONTROL PERMIT #

NOTE

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.

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

FOUNDATION REVIEW NOT FOR CONSTRUCTION

NMP ENGINEERING CONSULTANTS, INC.
EXECUTIVE PLAZA III, SUITE 300
11350 MCCORMICK ROAD
HUNT VALLEY, MD 21031
TEL (410) 771-9808
FAX (410) 771-9809

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section ____ Date ____

APPROVED

Chief, Division of Transportation Engineering ____ Date ____

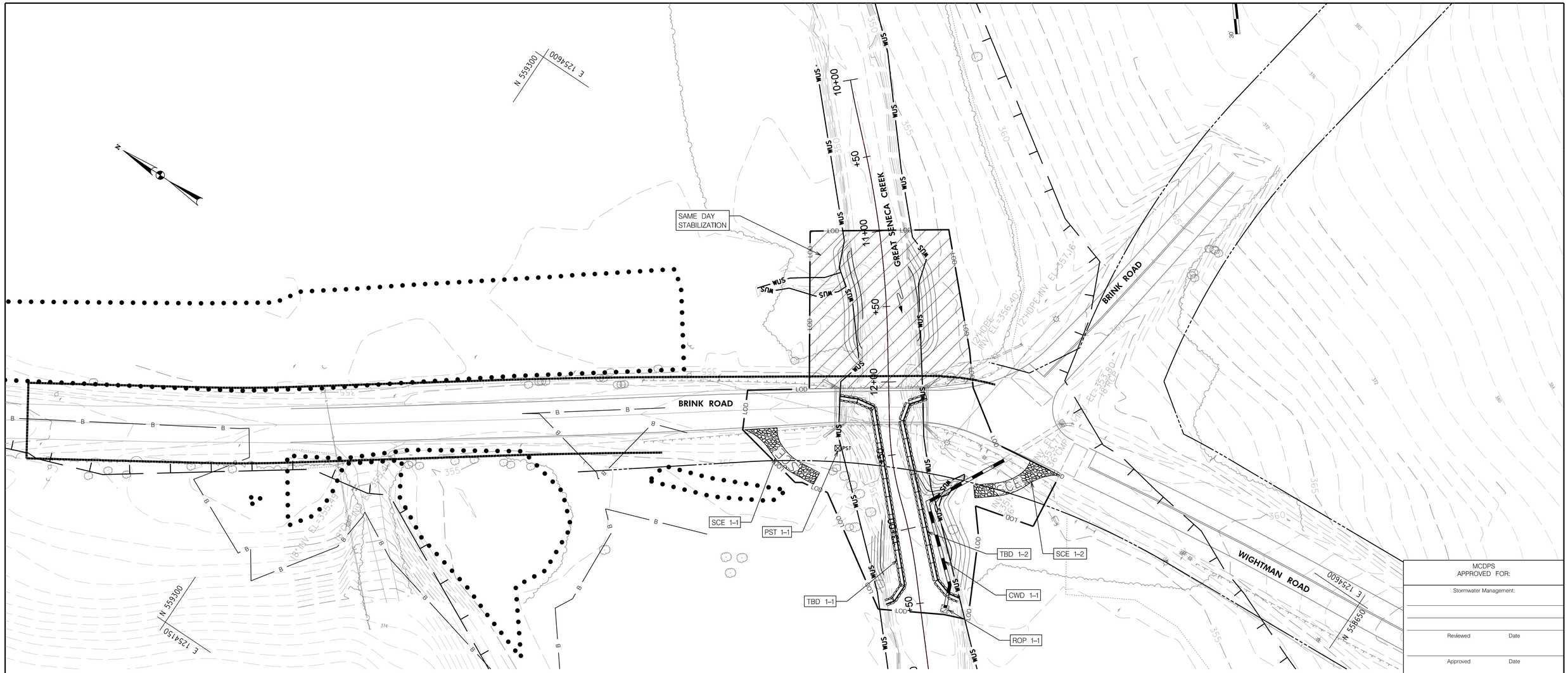
Designed by: ____ Drawn by: ____ Checked by: ____

REHABILITATION OF BRIDGE NO. M–0064 ON BRINK ROAD OVER GREAT SENECA CREEK

EROSION & SEDIMENT CONTROL DETAILS

SCALE : NTS

Project No. : 2000661 (501119)



LEGEND

———	EXISTING ROW	—WUS—	WATERS OF THE US
355	EXISTING CONTOUR	● ● ● ●	WETLANDS
= = = =	EXISTING PIPE	——┬——	100 YR FLOODPLAIN
——— B	WETLAND BUFFER		
—LOD—	LIMIT OF DISTURBANCE		

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

NMP ENGINEERING CONSULTANTS, INC.
EXECUTIVE PLAZA III, SUITE 300
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: _____ Drawn by: _____ Checked by: _____

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

EROSION & SEDIMENT CONTROL PLAN STAGE 1

SCALE : NTS

Project No. : 2000661 (501119)

MCDPS
APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT #

NOTE

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.

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

N 559300 E 1254600

N 559650 E 1254600

N 559300 E 1254150

BRINK ROAD

WIGHTMAN ROAD

GREAT SENECA CREEK

SSF 2-1

SSF 2-2

SSF 2-3

TGOS 2-1

ES 1-1

ES 1-2

I 1-1

I 1-2

I 1-3

I 1-4

I 1-5

EW 1-1

MH 1-1

18" RCP

12" RCP

24" RCP

72" RCP

99+00 100+00 101+00 102+00 103+00 104+00 105+00 106+00 107+00

10+00 11+00 12+00 13+00

20+00 201+00 202+00

LEGEND

———	EXISTING ROW	—WUS—	WATERS OF THE US
355	EXISTING CONTOUR	• • • •	WETLANDS
— — —	EXISTING PIPE	———	100 YR FLOODPLAIN
——— B	WETLAND BUFFER		
——— LOD ———	LIMIT OF DISTURBANCE		

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

MCDPS
APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT #

NOTE

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.

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ENGINEERING CONSULTANTS, INC.
EXECUTIVE PLAZA III, SUITE 300
11350 MCCORMICK ROAD
HUNT VALLEY, MD 21031
TEL (410) 771-9800
FAX (410) 771-9809

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section Date

APPROVED

Chief, Division of Transportation Engineering Date

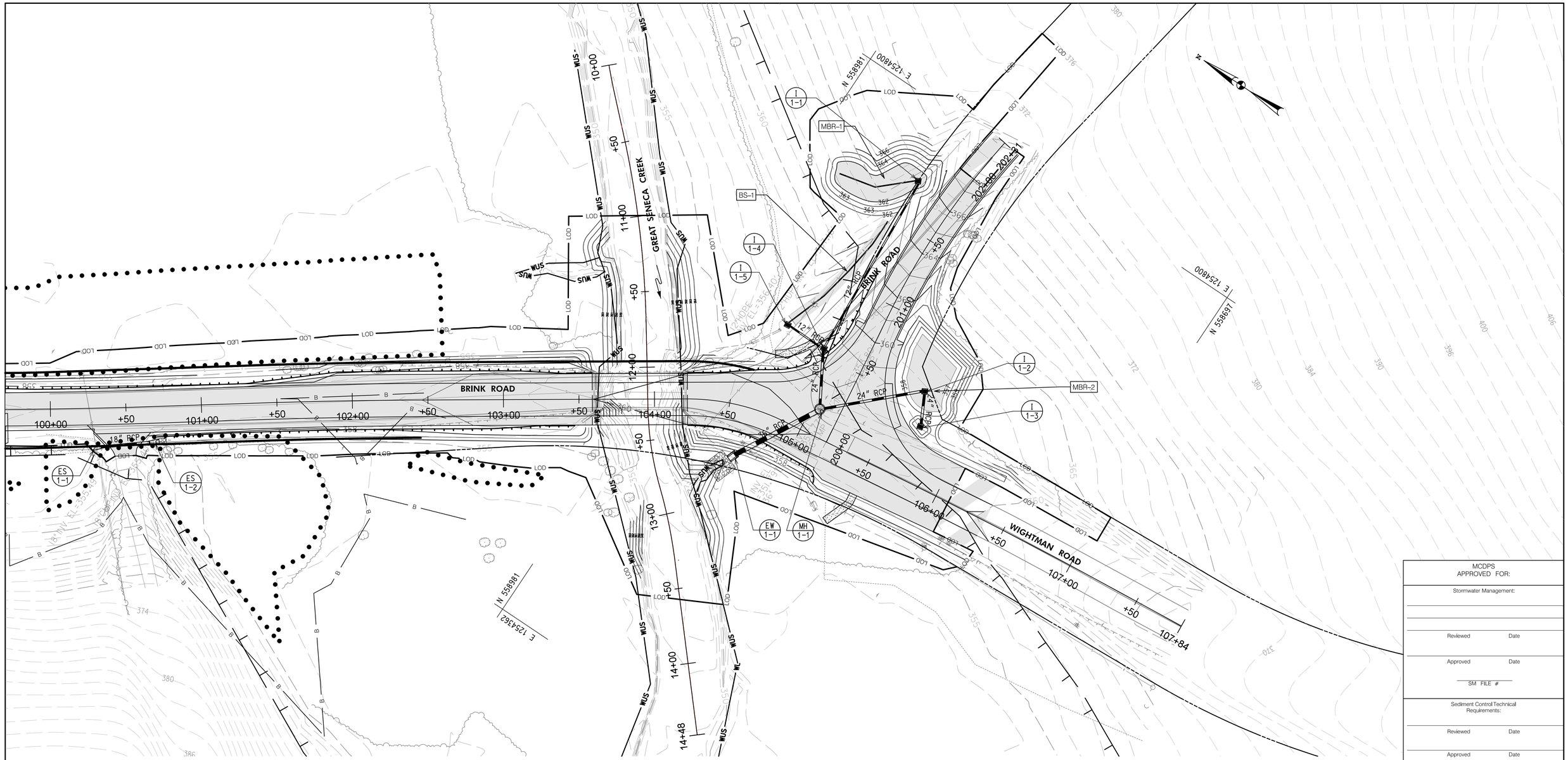
Designed by: _____ Drawn by: _____ Checked by: _____

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

EROSION & SEDIMENT CONTROL PLAN STAGE 2

SCALE : NTS

Project No. : 2000661 (501119) 17 of 28



LEGEND

	EXISTING ROW		FULL DEPTH PAVEMENT
355	EXISTING CONTOUR		RE-SURFACING
	SWM FOOTPRINT		PAVEMENT REMOVAL
	EXISTING PIPE	WUS	WATERS OF THE US
B	WETLAND BUFFER		WETLANDS
LOD	LIMIT OF DISTURBANCE		100 YR FLOODPLAIN

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

MCDPS
APPROVED FOR:

Stormwater Management:

Reviewed Date

Approved Date

SM FILE #

Sediment Control Technical Requirements:

Reviewed Date

Approved Date

Administrative Requirements:

Reviewed Date

SEDIMENT CONTROL PERMIT #

NOTE

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.

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

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

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section Date

APPROVED

Chief, Division of Transportation Engineering Date

Designed by: MKK Drawn by: MKK Checked by: NMP

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

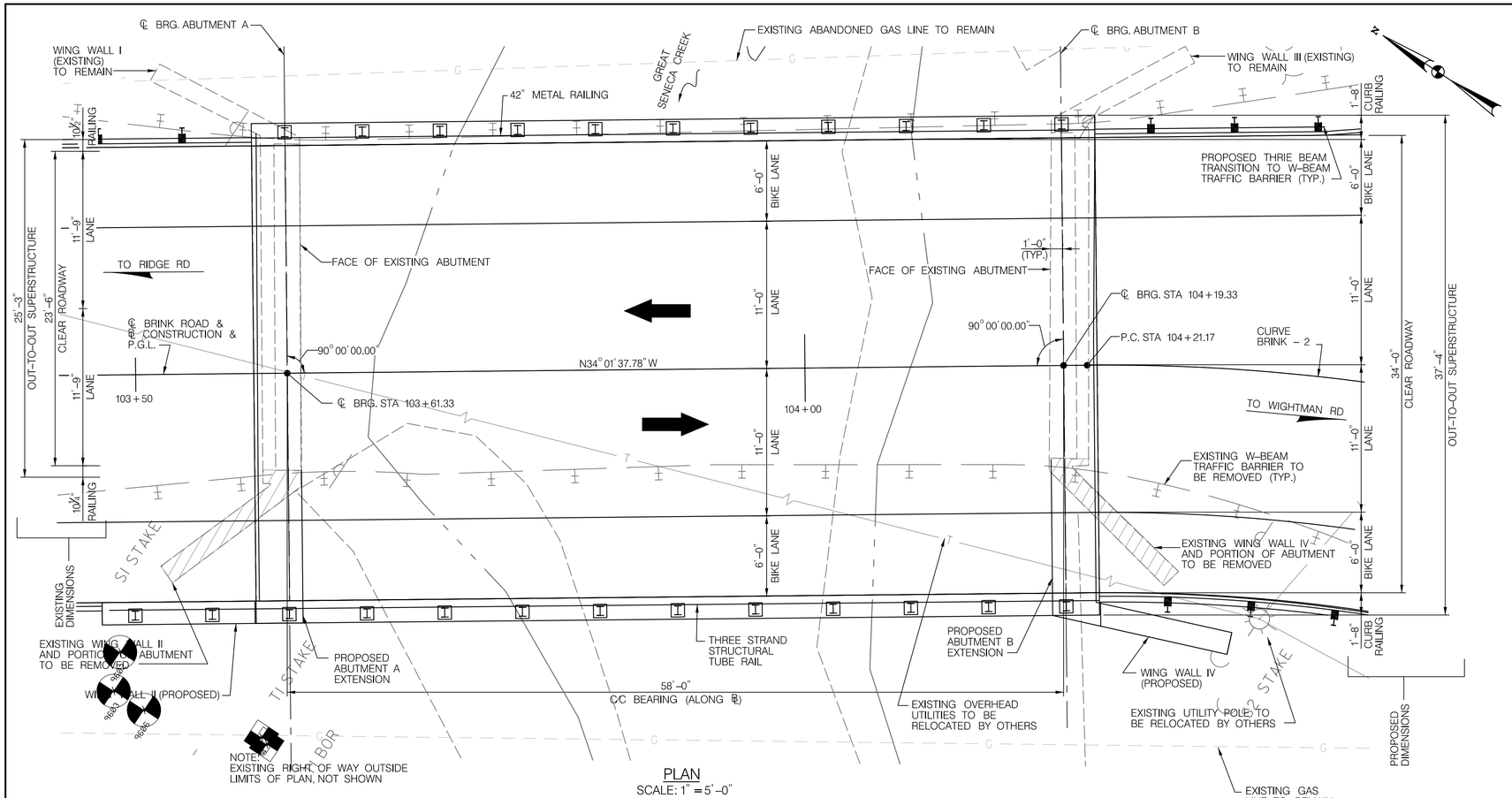
STORMWATER CONCEPT PLAN

SCALE : 1" = 30'

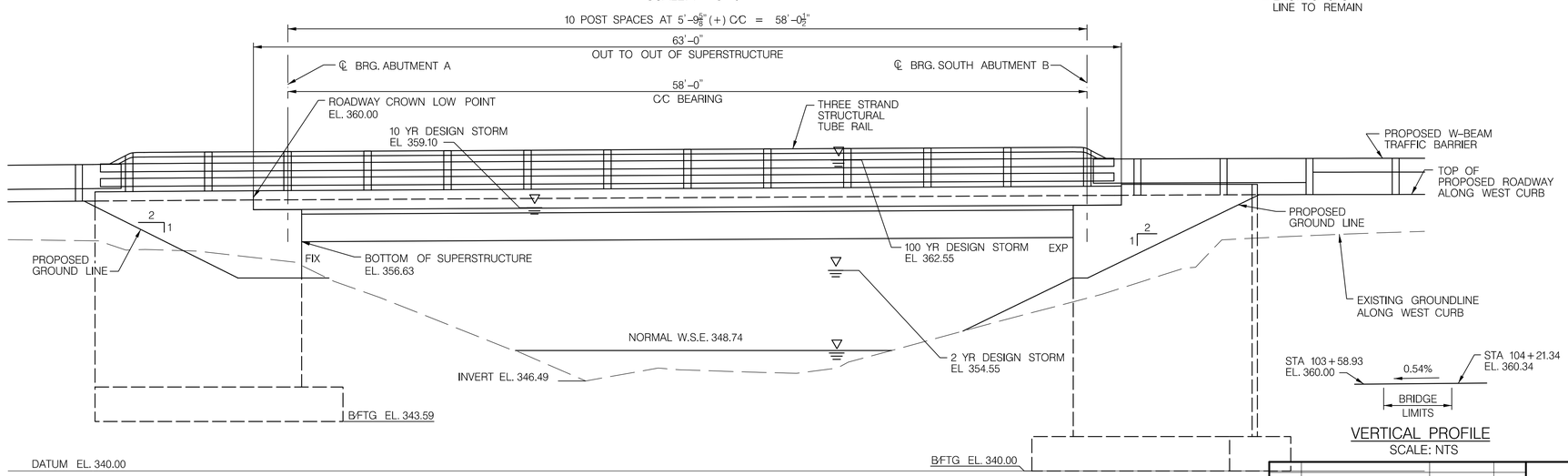
SW-01

Project No. : 2000661 (501119)

18 of 28



PLAN
SCALE: 1" = 5'-0"



ELEVATION
SCALE: 1" = 5'-0"

VERTICAL PROFILE
SCALE: NTS

NOTES:
1. FOR REMOVAL OF PORTIONS OF EXISTING ABUTMENTS, REFER TO S-03 & S-04.
2. FOR ABUTMENT A PLAN AND ELEVATION, REFER TO S-05.
3. FOR ABUTMENT B PLAN AND ELEVATION, REFER TO S-06.
4. FOR TYPICAL ABUTMENT SECTIONS, REFER TO S-07.
5. FOR WINGWALL II & IV ELEVATIONS, REFER TO S-08.
6. FOR TYPICAL BRIDGE SECTION, REFER TO S-09.
7. FOR STRUCTURAL BORING LOGS & LOCATION MAP, REFER TO S-10.
8. AS-BUILT PLANS ARE NOT AVAILABLE FOR THE EXISTING BRIDGE.

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES Gannett Fleming
A Joint Venture

GENERAL NOTES

SPECIFICATIONS:
-MDOT SHA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED JULY, 2022

DESIGN:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS DATED 2017.

LOADING:
HL-93

CONCRETE:
ALL CONCRETE FOR ABUTMENT BACKWALLS, DIAPHRAGMS, DECK, AND CURBS SHALL BE MIX NO. 6 (4500 PSI) CONTAINING SYNTHETIC FIBERS (SEE SECTION 902.15.01).

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

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.

REINFORCING STEEL:
REINFORCING STEEL SHALL CONFORM TO ASTM A 615 GRADE 60 WITH A YIELD STRENGTH FOR DESIGN OF fy =6000 PSI.

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

MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE 2" UNLESS OTHERWISE NOTED, WITH THE EXCEPTION OF BARS AT THE BOTTOM AND SIDES OF ALL FOOTINGS WHICH SHALL HAVE 3" MINIMUM COVER.

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

PRETENSIONING STEEL:
PRETENSIONING STEEL SHALL CONSIST OF 1/2" DIAMETER, 7-WIRE BRIGHT LOW RELAXATION STRANDS CONFORMING TO THE REQUIREMENTS OF M203 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).

HYDROLOGICAL AND HYDRAULIC DATA:
FOR HYDROLOGICAL AND HYDRAULIC DATA, SEE SHEET TITLED "HYDROLOGICAL AND HYDRAULIC DATA SHEET".

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

NO AS-BUILT PLANS ARE AVAILABLE. THE EXISTING BRIDGE ABUTMENT GEOMETRICS, INCLUDING SIZE, SHAPE, AND FOOTING ELEVATION, WERE ESTIMATED FROM EXISTING DESIGN COMPUTATIONS AND SKETCHES DATED 9/1971 AND 11/1971 PROVIDED BY MONTGOMERY CO. THE EXISTING BRIDGE SUPERSTRUCTURE TYPICAL SECTION WAS ESTIMATED FROM THE 2013 INSPECTION REPORT BY THE WILSON T BALLARD COMPANY PROVIDED BY MONTGOMERY CO.

IN-SITU FOOTING ELEVATIONS FOR THE EXISTING STRUCTURE MAY VARY FROM THE APPROXIMATE EXISTING FOOTING ELEVATIONS SHOWN ON THE CONTRACT DRAWINGS.

EXISTING SUBSTRUCTURE:
THE PROPOSED BRIDGE WILL UTILIZE THE EXISTING ABUTMENTS AND EXISTING WINGWALLS ON THE EASTERN SIDE BY REHABILITATION AND RECONFIGURATION OF THE BEAM SEATS AND BACKWALLS. THE ROADWAY IS ASSUMED TO BE CLOSED AND THE EXISTING TRAFFIC IS ASSUMED TO BE DETOURED DURING CONSTRUCTION. THE PROPOSED BRIDGE IS WIDER THAN THE EXISTING BRIDGE AND NEW PORTIONS OF SUBSTRUCTURE WILL BE CONSTRUCTED ON THE WESTERN SIDE OF THE BRIDGE FOR THIS WIDENING.

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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

Designed by: VTD Drawn by: GMJ Checked by:

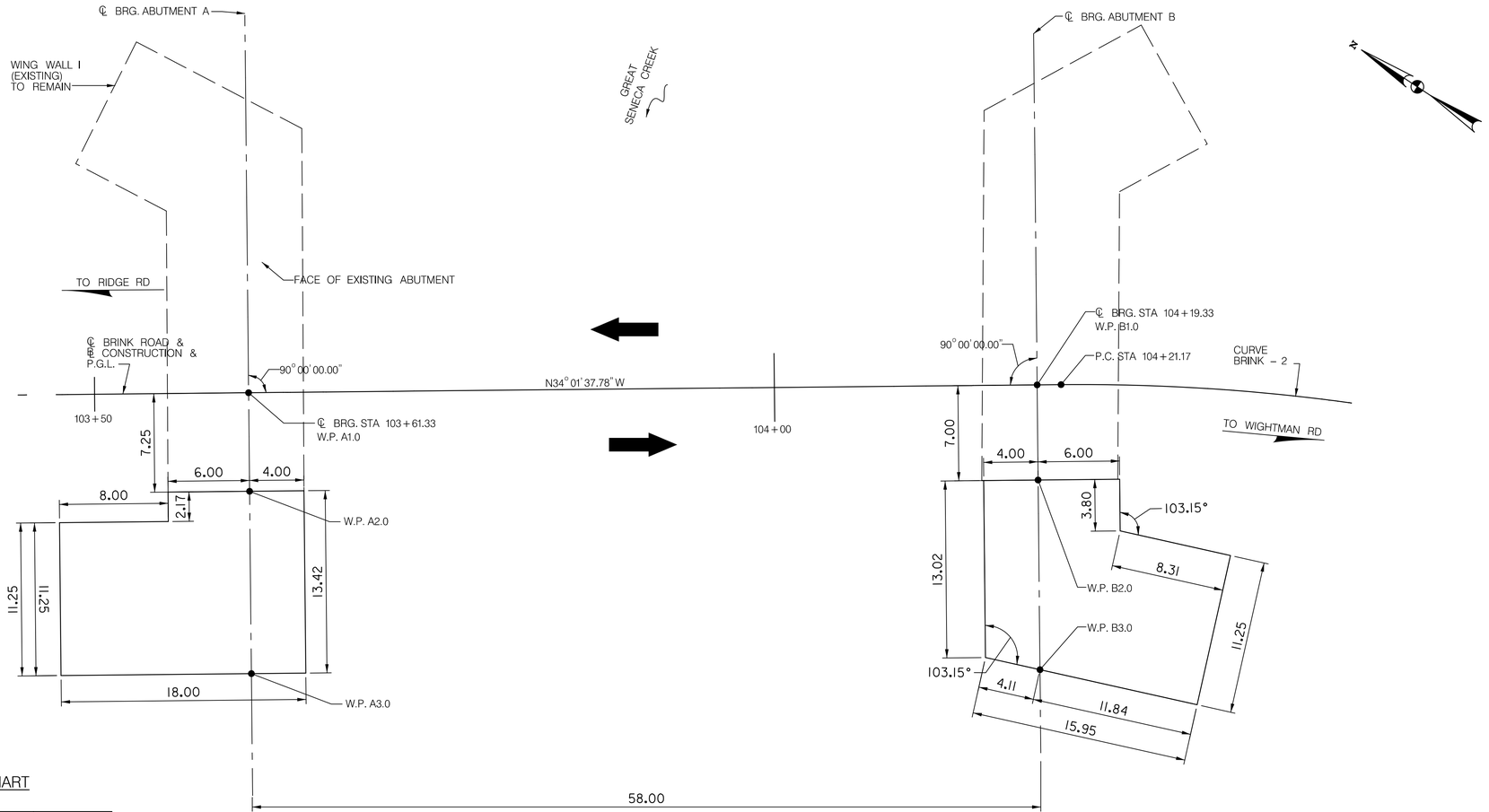
REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

GENERAL PLAN & ELEVATION

SCALE : AS SHOWN — S-01

Project No. : 501119 — 19 of 28

7/13/2022



WORKING POINT LOCATION CHART

WORKING POINT	STATION	OFFSET (FT)	NORTHING	EASTING
A1.0	103 + 61.33	0.00	1254511.84	559006.76
A2.0	103 + 61.33	7.25 RT	1254505.84	559002.70
A3.0	103 + 61.33	20.67 RT	1254494.72	558995.19
B1.0	104 + 19.33	0.00	1254544.30	558958.69
B2.0	104 + 19.33	7.00 RT	1254538.50	558954.77
B3.0	104 + 19.33	20.95 RT	1254526.93	558946.96

GEOMETRIC & FOOTING PLAN
SCALE: 1" = 5'-0"

NOTES:
1. FOR REMOVAL OF EXISTING ABUTMENT PORTIONS, REFER TO S-03 & S-04.
2. FOR ABUTMENT A PLAN AND ELEVATION, REFER TO S-05.
3. FOR ABUTMENT B PLAN AND ELEVATION, REFER TO S-06.
4. FOR WINGWALL II & IV ELEVATIONS, REFER TO S-08.
5. AS-BUILT PLANS ARE NOT AVAILABLE FOR THE EXISTING BRIDGE.
6. ALL FOOTING TURNS ARE 90.00 DEGREES UNLESS OTHERWISE NOTED.

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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

Designed by: VTD Drawn by: GMJ Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

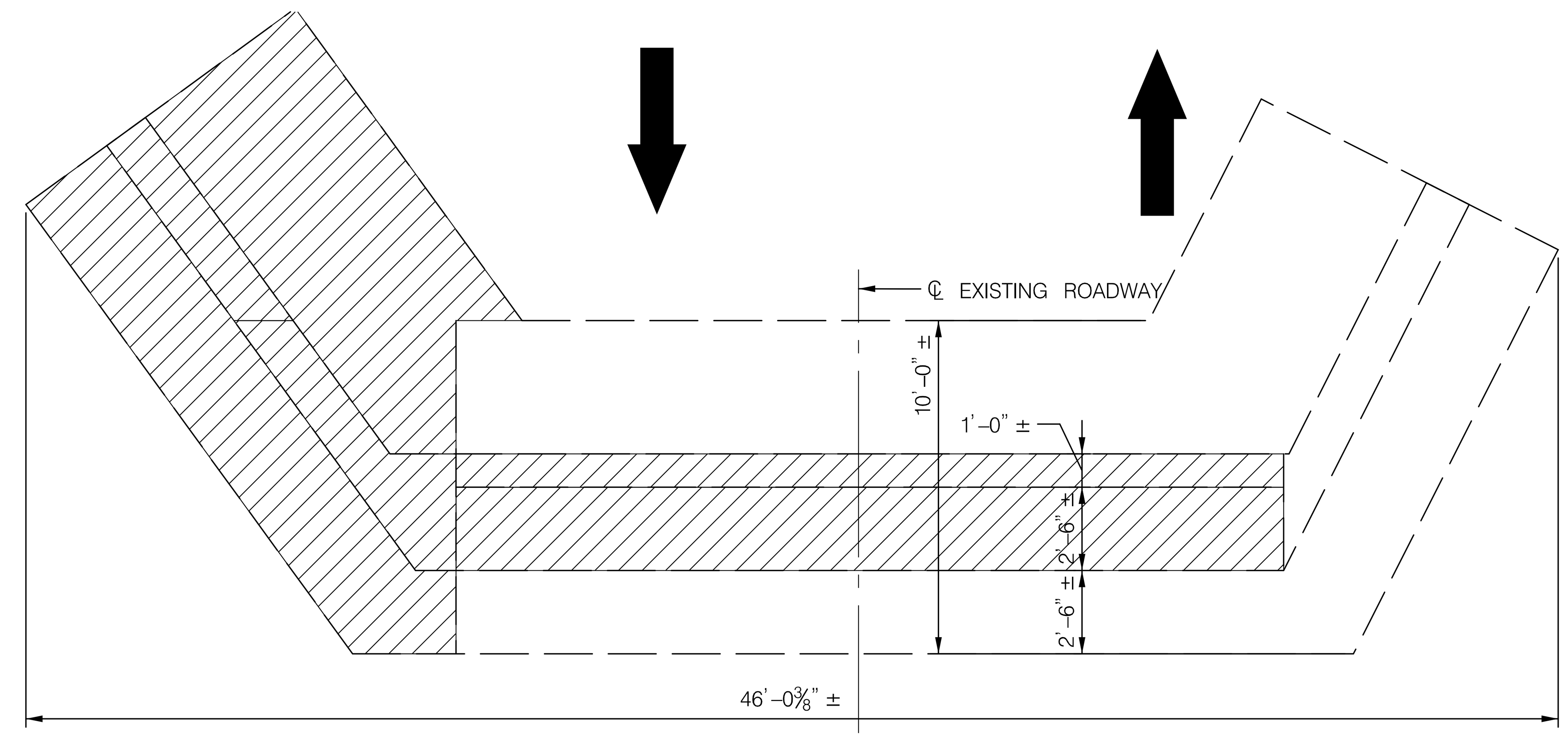
GEOMETRIC & FOOTING PLAN

SCALE : AS SHOWN

S-02

Project No. : 501119 20 of 28

7/13/2022

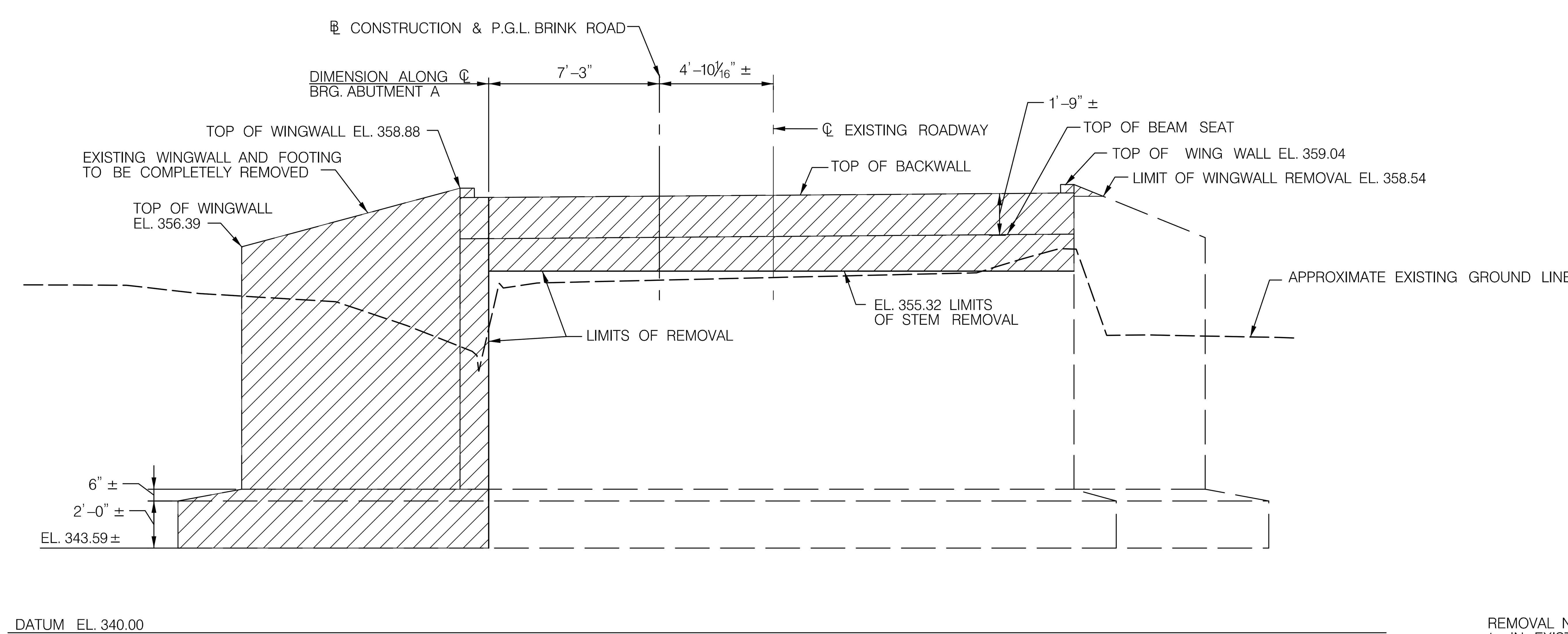


ABUTMENT A – PLAN

SCALE: 1/4 = 1'-0"

EXISTING STRUCTURE NOTES:

1. NO AS-BUILT PLANS ARE AVAILABLE.
2. THE EXISTING BRIDGE ABUTMENT GEOMETRICS, INCLUDING SIZE, SHAPE, AND FOOTING ELEVATION, WERE ESTIMATED FROM EXISTING DESIGN COMPUTATIONS AND SKETCHES DATED 9/1971 AND 11/1971 PROVIDED BY MONTGOMERY CO.
3. IN-SITU FOOTING ELEVATIONS FOR THE EXISTING STRUCTURE MAY VARY FROM THE APPROXIMATE EXISTING FOOTING ELEVATIONS SHOWN ON THE CONTRACT DRAWINGS.



ABUTMENT A – ELEVATION

SCALE: 1/4 = 1'-0"

REMOVAL NOTES:

1. IN EXISTING ABUTMENT, EXISTING VERTICAL REINFORCEMENT IS TO BE INCORPORATED IN THE FINAL STRUCTURE AND SHALL BE STRAIGHTENED, CLEANED AND EPOXY COATED. CARE SHALL BE TAKEN NOT TO DAMAGE THESE BARS.
2. ANY EXISTING REINFORCING STEEL WHICH IS TO BE INCORPORATED INTO THE FINAL STRUCTURE:
   A. AND IN THE OPINION OF THE ENGINEER HAS LOST 20% OR MORE OF ITS ORIGINAL CROSS SECTIONAL AREA, SHALL BE CUT OUT. A NEW BAR OF THE SAME DIAMETER SHALL BE PROVIDED AND PLACED AS TO HAVE THE MIIMUM REQUIRED LAP AT THE END OF THE NEW BAR OR BE MODIFIED AS IN C BELOW.
   B. WHERE THE REQUIRED LAP LENGTH IS AVAILABLE SHALL BE USED AS A DOWEL.
   C. WHERE THE REQUIRED BAR LAP IS NOT AVAILABLE OR LIMITS OF CONCRETE REMOVAL TO ACHIEVE BAR LAP WOULD BE TOO GREAT, A WELDED OR APPROVED MECHANICAL SPLICE SHALL BE PROVIDED. SEE STANDARD DETAIL M(6.01)-75-12.
3. THE COST OF STRAIGHTENING, CLEANING AND EPOXY COATING REINFORCING STEEL SHALL BE INCLUDED IN THE PRICE BID ON THE SUBSTRUCTURE CONCRETE ITEM.
4. IF EXPECTED REINFORCING STEEL IS MISSING OR A PATTERN DIFFERING FROM THAT SHOWN ON THE PLANS IS UNCOVERED THEN THE ENGINEER SHALL BE NOTIFIED FOR EVALUATION.
5. WHERE THE REMOVAL WILL BE ON AN EXPOSED FACE IN THE FINAL STRUCTURE FIRST SAW CUT ONE INCH DEEP TO NEAT LINES IN CONCRETE SURFACE FORMED CONCRETE OR MORTAR ADJACENT TO EXISTING SO AS TO PRODUCE A SMOOTH SURFACE.

AREA TO BE REMOVED

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: VTD Drawn by: GMJ Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

ABUTMENT A REMOVAL

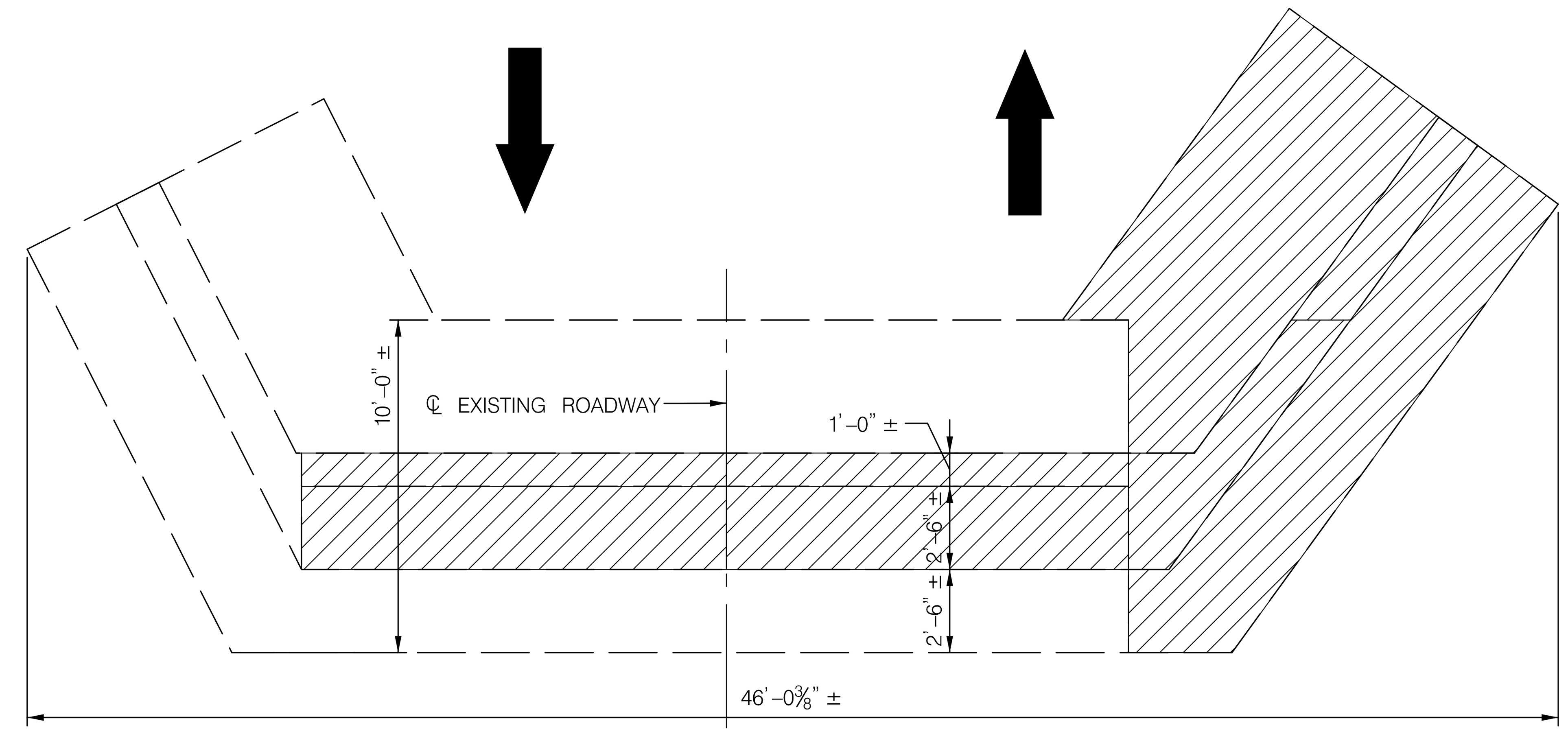
SCALE :

S-03

Project No. : 501119

REMOVAL NOTES:

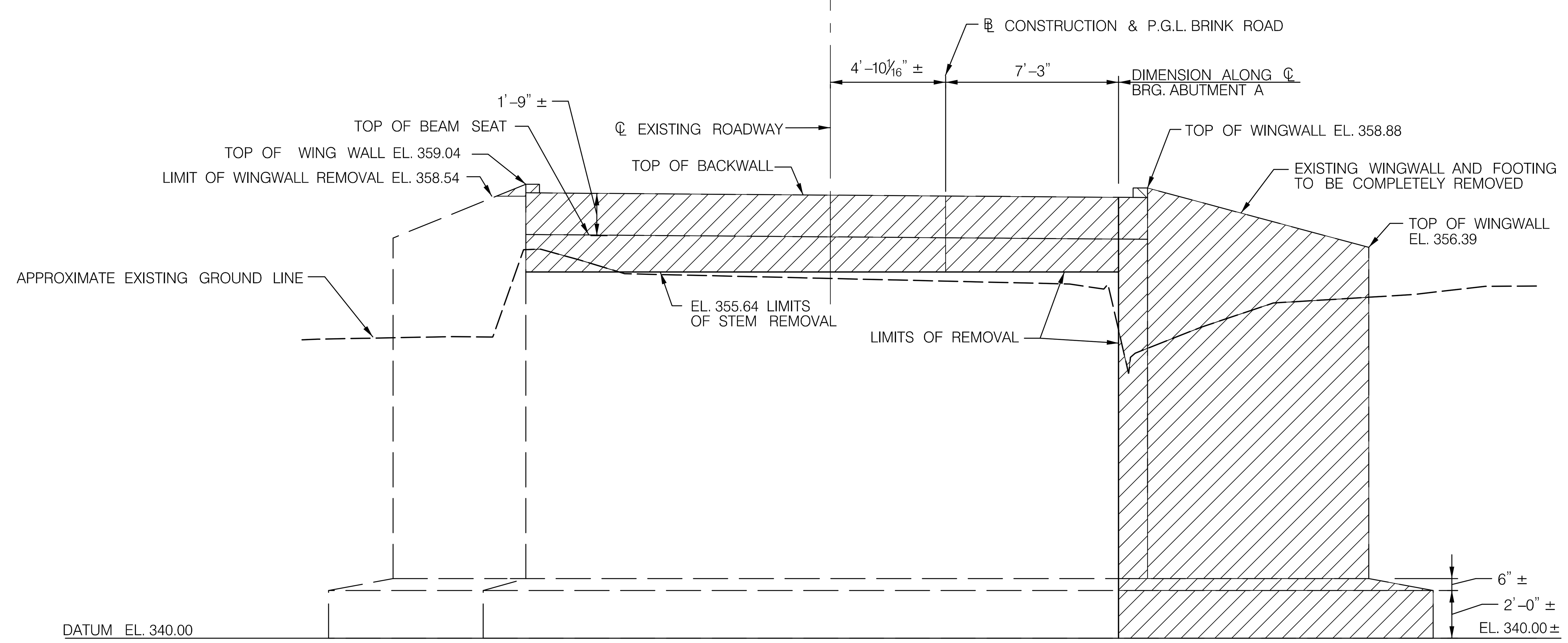
1. IN EXISTING ABUTMENT, EXISTING VERTICAL REINFORCEMENT IS TO BE INCORPORATED IN THE FINAL STRUCTURE AND SHALL BE STRAIGHTENED, CLEANED AND EPOXY COATED. CARE SHALL BE TAKEN NOT TO DAMAGE THESE BARS.
2. ANY EXISTING REINFORCING STEEL WHICH IS TO BE INCORPORATED INTO THE FINAL STRUCTURE:
   A. AND IN THE OPINION OF THE ENGINEER HAS LOST 20% OR MORE OF ITS ORIGINAL CROSS SECTIONAL AREA, SHALL BE CUT OUT. A NEW BAR OF THE SAME DIAMETER SHALL BE PROVIDED AND PLACED AS TO HAVE THE MIIMUM REQUIRED LAP AT THE END OF THE NEW BAR OR BE MODIFIED AS IN C BELOW.
   B. WHERE THE REQUIRED LAP LENGTH IS AVAILABLE SHALL BE USED AS A DOWEL.
   C. WHERE THE REQUIRED BAR LAP IS NOT AVAILABLE OR LIMITS OF CONCRETE REMOVAL TO ACHIEVE BAR LAP WOULD BE TOO GREAT, A WELDED OR APPROVED MECHANICAL SPLICE SHALL BE PROVIDED. SEE STANDARD DETAIL M(6.01)–75–12.
3. THE COST OF STRAIGHTENING, CLEANING AND EPOXY COATING REINFORCING STEEL SHALL BE INCLUDED IN THE PRICE BID ON THE SUBSTRUCTURE CONCRETE ITEM.
4. IF EXPECTED REINFORCING STEEL IS MISSING OR A PATTERN DIFFERING FROM THAT SHOWN ON THE PLANS IS UNCOVERED THEN THE ENGINEER SHALL BE NOTIFIED FOR EVALUATION.
5. WHERE THE REMOVAL WILL BE ON AN EXPOSED FACE IN THE FINAL STRUCTURE FIRST SAW CUT ONE INCH DEEP TO NEAT LINES IN CONCRETE SURFACE FORMED CONCRETE OR MORTAR ADJACENT TO EXISTING SO AS TO PRODUCE A SMOOTH SURFACE.



ABUTMENT B – PLAN
SCALE: 1/4 = 1'-0"

EXISTING STRUCTURE NOTES:

1. NO AS-BUILT PLANS ARE AVAILABLE.
2. THE EXISTING BRIDGE ABUTMENT GEOMETRICS, INCLUDING SIZE, SHAPE, AND FOOTING ELEVATION, WERE ESTIMATED FROM EXISTING DESIGN COMPUTATIONS AND SKETCHES DATED 9/1971 AND 11/1971 PROVIDED BY MONTGOMERY CO.
3. IN-SITU FOOTING ELEVATIONS FOR THE EXISTING STRUCTURE MAY VARY FROM THE APPROXIMATE EXISTING FOOTING ELEVATIONS SHOWN ON THE CONTRACT DRAWINGS.



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

AREA TO BE REMOVED

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: VTD Drawn by: GMJ Checked by:

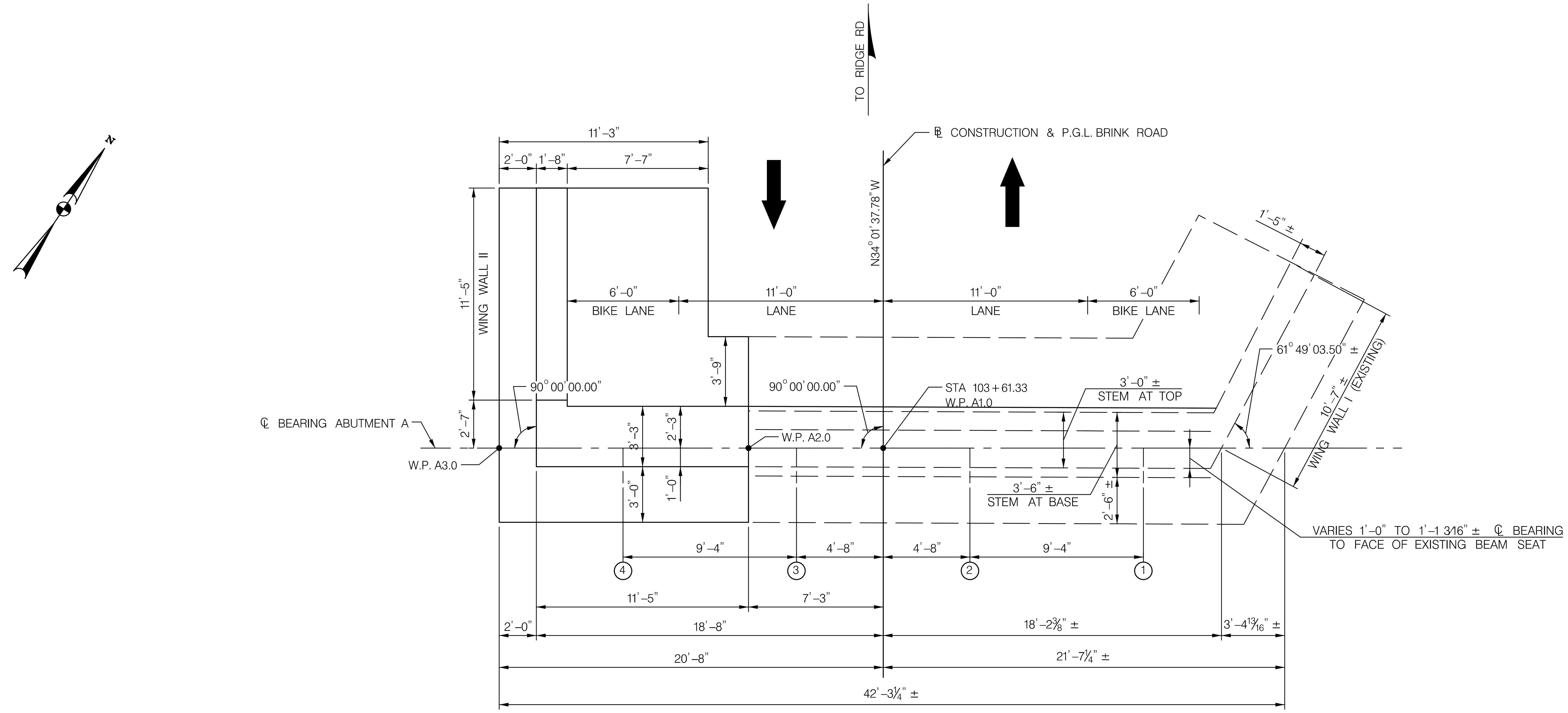
REHABILITATION OF BRIDGE NO. M–0064 ON BRINK ROAD OVER GREAT SENECA CREEK

ABUTMENT B REMOVAL

SCALE :

S–04

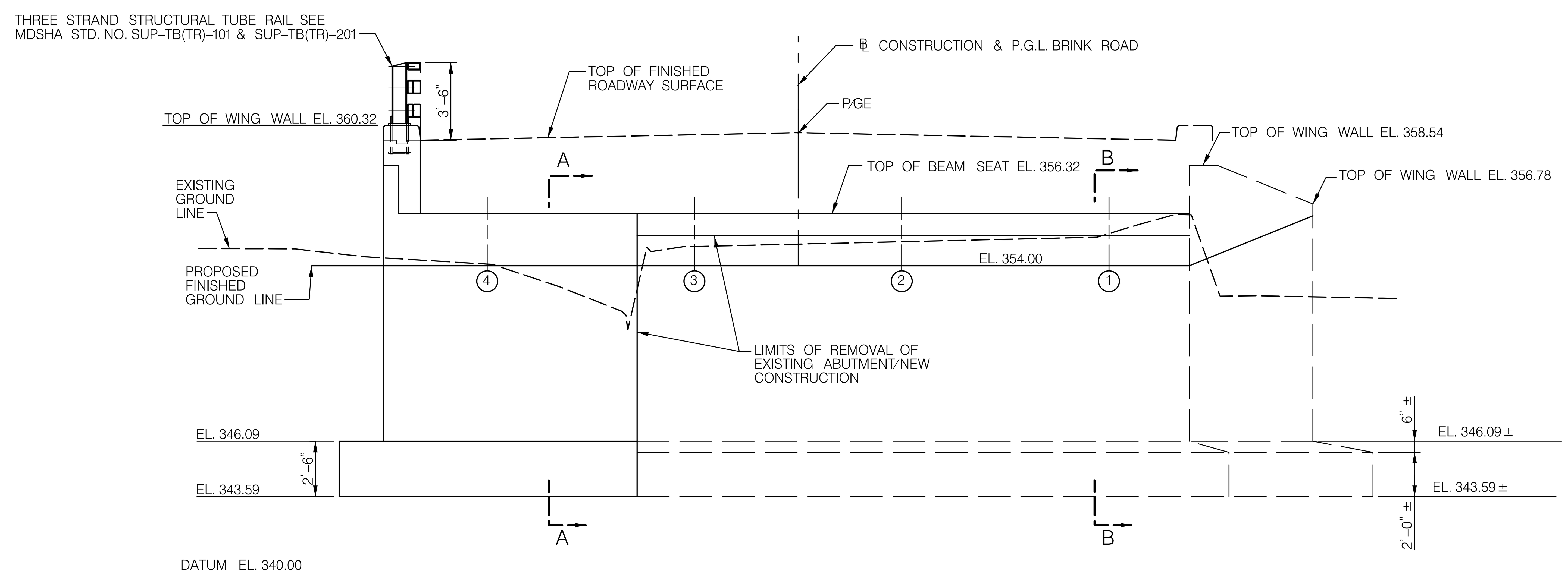
Project No. : 501119



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

EXISTING STRUCTURE NOTES:

1. NO AS-BUILT PLANS ARE AVAILABLE.
2. THE EXISTING BRIDGE ABUTMENT GEOMETRICS, INCLUDING SIZE, SHAPE, AND FOOTING ELEVATION, WERE ESTIMATED FROM EXISTING DESIGN COMPUTATIONS AND SKETCHES DATED 9/1971 AND 11/1971 PROVIDED BY MONTGOMERY CO.
3. IN-SITU FOOTING ELEVATIONS FOR THE EXISTING STRUCTURE MAY VARY FROM THE APPROXIMATE EXISTING FOOTING ELEVATIONS SHOWN ON THE CONTRACT DRAWINGS.



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

NOTES:

1. FOR SECTION A-A & B-B, REFER TO S-07.
2. FOR WING WALL ELEVATIONS AND TYPICAL SECTION, REFER TO S-08.
3. AS-BUILT PLANS ARE NOT AVAILABLE FOR THE EXISTING BRIDGE.
4. THE EXISTING BOTTOM OF FOOTING ELEVATIONS AND ALL EXISTING FOOTING PLAN DIMENSIONS ARE ESTIMATED BASED ON DIMENSIONS FROM A TYPICAL ABUTMENT SECTION SHOWN ON THE EXISTING ABUTMENT CALCULATIONS PROVIDED BY MONTGOMERY COUNTY, MD. ANY VARIATION FOUND IN THE FIELD FROM THE ASSUMED EXISTING ABUTMENT DIMENSIONS WILL REQUIRE THE ABUTMENT DESIGN TO BE VERIFIED BY THE ENGINEER.
5. THE PROPOSED ABUTMENT FOOTING ELEVATIONS ARE DESIGNED TO MATCH THE EXISTING ABUTMENT FOOTING ELEVATIONS, WHICH ARE ESTIMATED BASED ON DIMENSIONS FROM A TYPICAL ABUTMENT SECTION SHOWN ON THE EXISTING ABUTMENT CALCULATIONS PROVIDED BY MONTGOMERY COUNTY, MD. ANY VARIATION FOUND IN THE FIELD FROM THE ASSUMED EXISTING FOOTING ELEVATIONS LARGER THAN 6" AND RESULTING IN A TALLER THAN ANTICIPATED STEM WILL REQUIRE THE ABUTMENT DESIGN TO BE VERIFIED BY THE ENGINEER.
6. AS-BUILT PLANS AND CALCULATIONS ARE NOT AVAILABLE FOR THE EXISTING WING WALLS. THE EXISTING WING WALL FOOTING PLAN DIMENSIONS SHOWN ARE ASSUMED TO MATCH THE EXISTING ABUTMENT TYPICAL SECTION FOOTING DIMENSIONS BASED ON DIMENSIONS FROM A TYPICAL ABUTMENT SECTION SHOWN ON THE EXISTING ABUTMENT CALCULATIONS PROVIDED BY MONTGOMERY COUNTY, MD.
7. PROPOSED ABUTMENT WIDENING TO BE ANCHORED TO EXISTING ABUTMENTS WITH HORIZONTAL REBAR DOWELS DRILLED AND GROUTED INTO EXISTING ABUTMENTS.

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: VTD   Drawn by: GMJ   Checked by: ________

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

ABUTMENT A PLAN AND ELEVATION

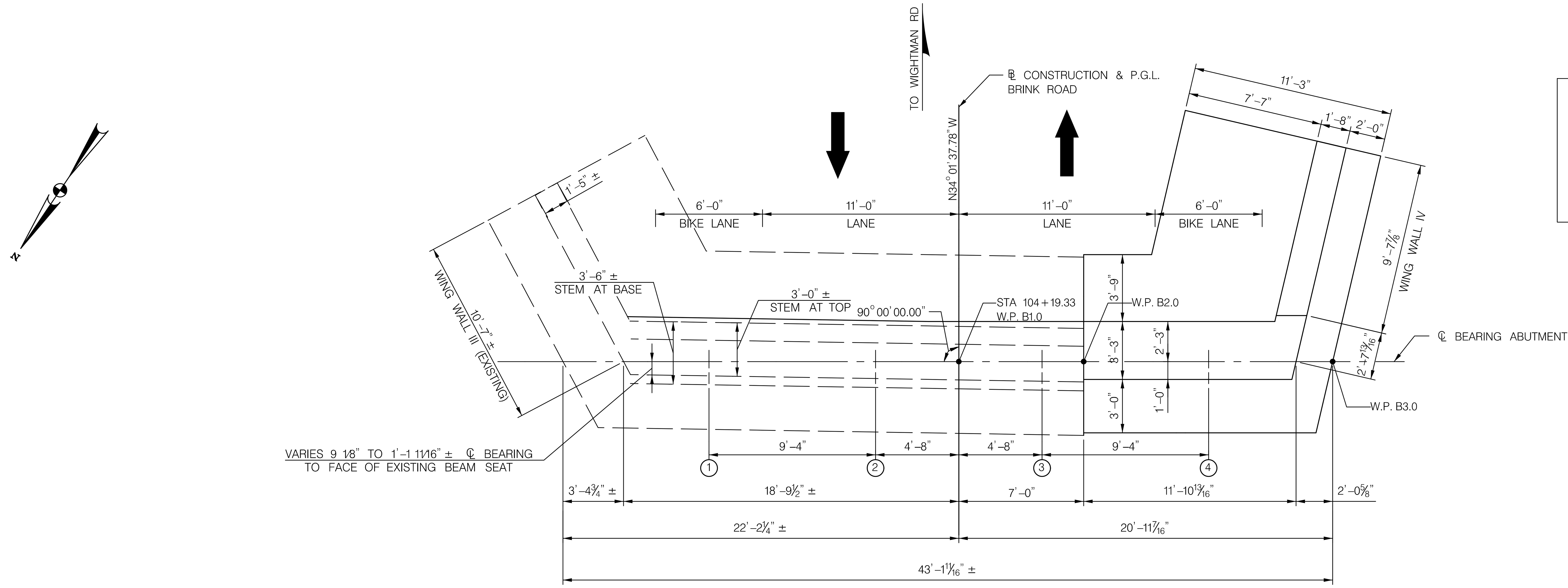
SCALE :

S-05

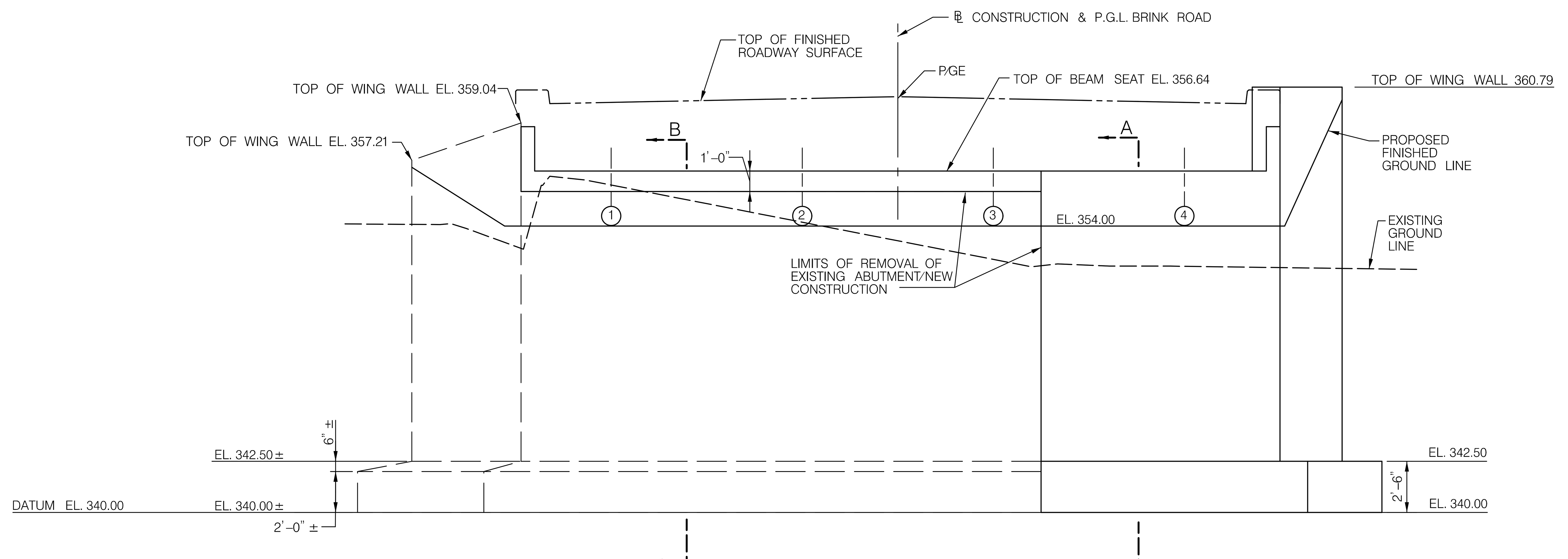
Project No. : 501119

EXISTING STRUCTURE NOTES:

1. NO AS-BUILT PLANS ARE AVAILABLE.
2. THE EXISTING BRIDGE ABUTMENT GEOMETRICS, INCLUDING SIZE, SHAPE, AND FOOTING ELEVATION, WERE ESTIMATED FROM EXISTING DESIGN COMPUTATIONS AND SKETCHES DATED 9/1971 AND 11/1971 PROVIDED BY MONTGOMERY CO.
3. IN-SITU FOOTING ELEVATIONS FOR THE EXISTING STRUCTURE MAY VARY FROM THE APPROXIMATE EXISTING FOOTING ELEVATIONS SHOWN ON THE CONTRACT DRAWINGS.



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



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

NOTES:

1. FOR SECTION A-A & B-B, REFER TO S-07.
2. FOR WING ALL ELEVATIONS AND TYPICAL SECTION, REFER TO S-08.
3. AS-BUILT PLANS ARE NOT AVAILABLE FOR THE EXISTING BRIDGE.
4. THE EXISTING BOTTOM OF FOOTING ELEVATIONS AND ALL EXISTING FOOTING PLAN DIMENSIONS ARE ESTIMATED BASED ON DIMENSIONS FROM A TYPICAL ABUTMENT SECTION SHOWN ON THE EXISTING ABUTMENT CALCULATIONS PROVIDED BY MONTGOMERY COUNTY, MD. ANY VARIATION FOUND IN THE FIELD FROM THE ASSUMED EXISTING ABUTMENT DIMENSIONS WILL REQUIRE THE ABUTMENT DESIGN TO BE VERIFIED BY THE ENGINEER.
5. THE PROPOSED ABUTMENT FOOTING ELEVATIONS ARE DESIGNED TO MATCH THE EXISTING ABUTMENT FOOTING ELEVATIONS, WHICH ARE ESTIMATED BASED ON DIMENSIONS FROM A TYPICAL ABUTMENT SECTION SHOWN ON THE EXISTING ABUTMENT CALCULATIONS PROVIDED BY MONTGOMERY COUNTY, MD. ANY VARIATION FOUND IN THE FIELD FROM THE ASSUMED EXISTING FOOTING ELEVATIONS LARGER THAN 6" AND RESULTING IN A TALLER THAN ANTICIPATED STEM WILL REQUIRE THE ABUTMENT DESIGN TO BE VERIFIED BY THE ENGINEER.
6. AS-BUILT PLANS AND CALCULATIONS ARE NOT AVAILABLE FOR THE EXISTING WING WALLS. THE EXISTING WING ALL FOOTING PLAN DIMENSIONS SHOWN ARE ASSUMED TO MATCH THE EXISTING ABUTMENT TYPICAL SECTION FOOTING DIMENSIONS BASED ON DIMENSIONS FROM A TYPICAL ABUTMENT SECTION SHOWN ON THE EXISTING ABUTMENT CALCULATIONS PROVIDED BY MONTGOMERY COUNTY, MD.
7 PROPOSED ABUTMENT WIDENING TO BE ANCHORED TO EXISTING ABUTMENTS WITH HORIZONTAL REBAR DOWELS DRILLED AND GROUTED INTO EXISTING ABUTMENTS.

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: VTD Drawn by: GMJ Checked by:

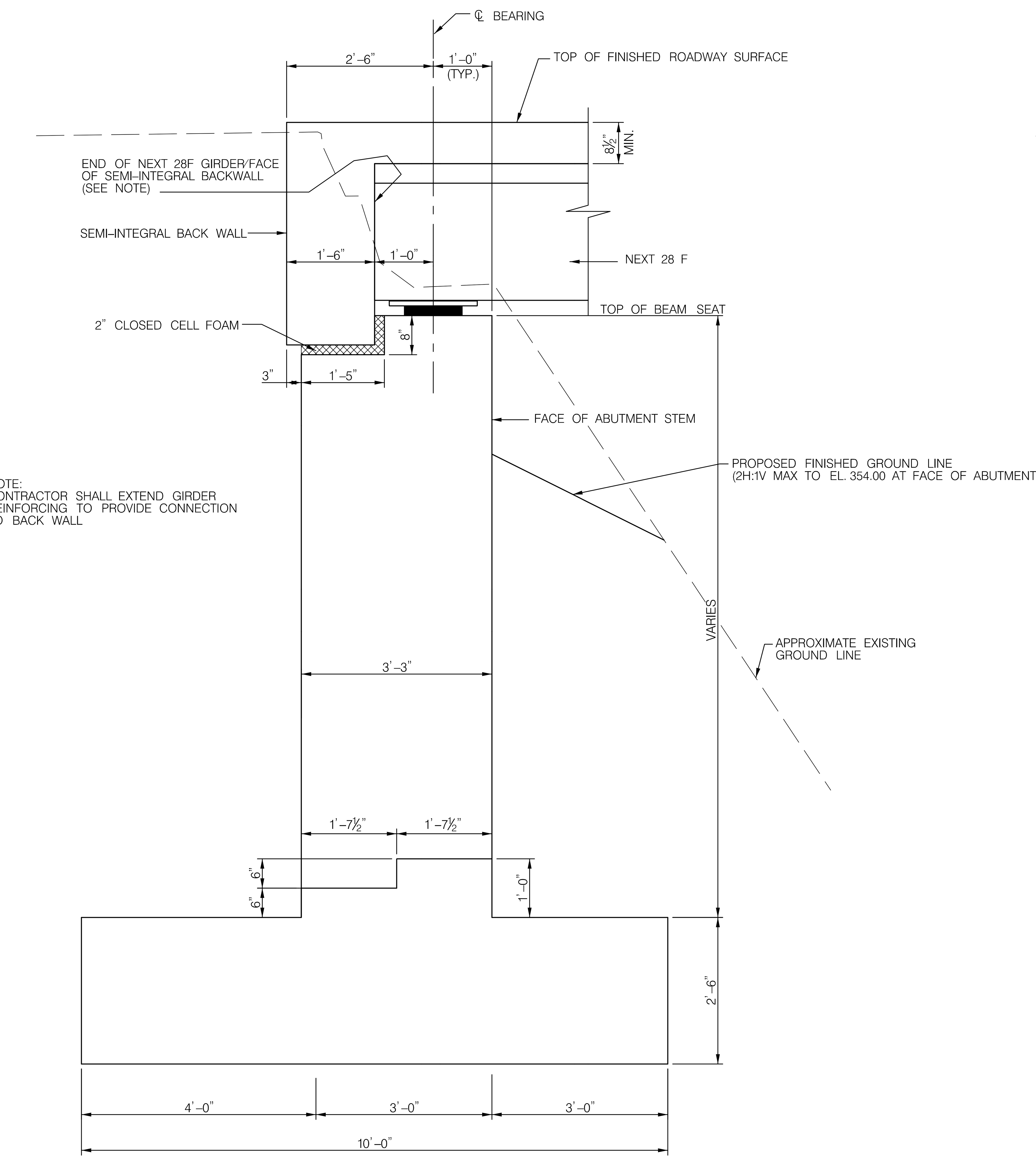
REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

ABUTMENT B PLAN AND ELEVATION

SCALE :

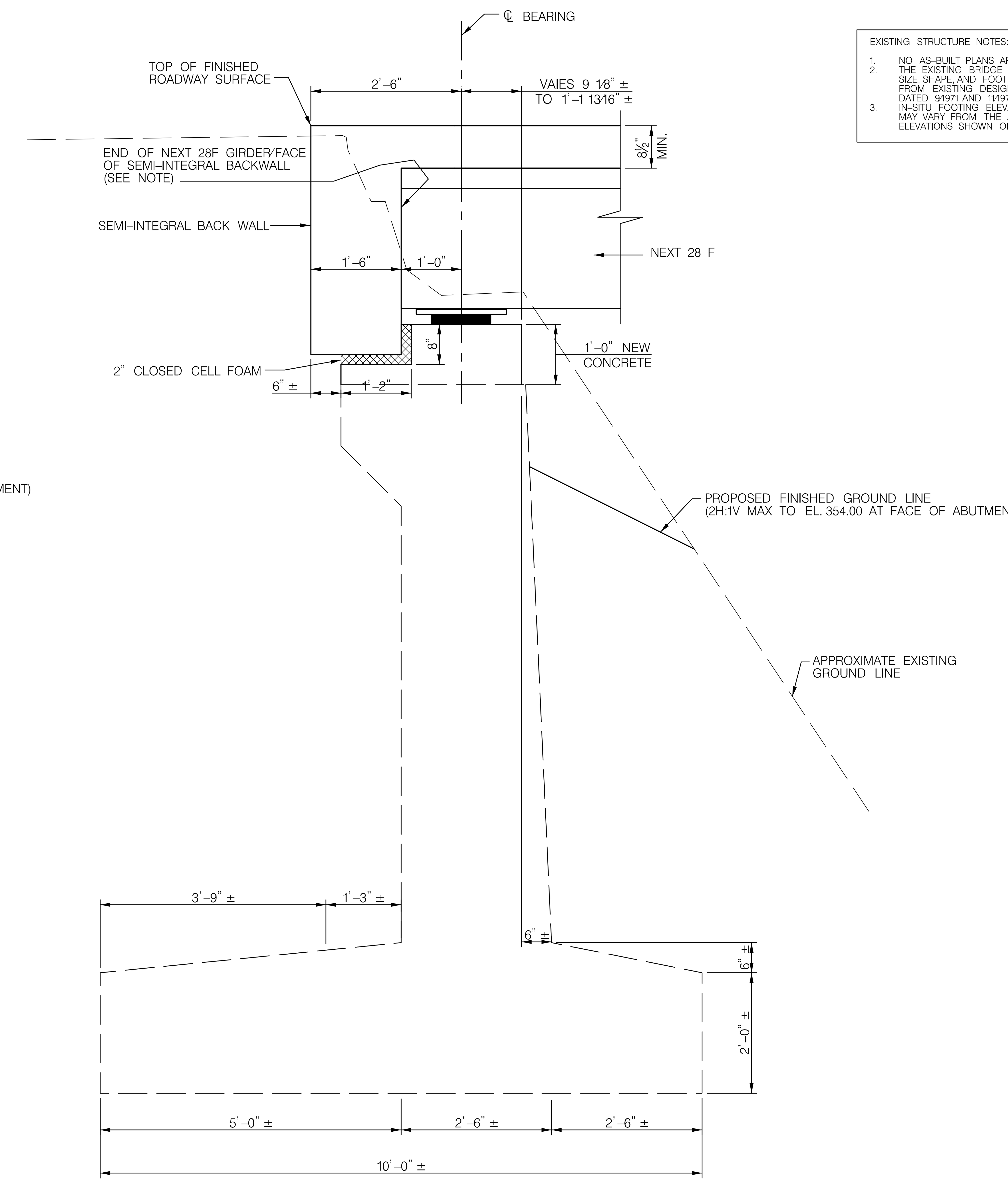
S-06

Project No. : 501119 24 of 28



NOTE:
CONTRACTOR SHALL EXTEND GIRDER REINFORCING TO PROVIDE CONNECTION TO BACK WALL

SECTION A-A: TYPICAL ABUTMENT EXTENSION
SCALE: 3⁄4" = 1'-0"



SECTION B-B: TYPICAL MODIFIED EXISTING ABUTMENT
SCALE: 3⁄4" = 1'-0"

EXISTING STRUCTURE NOTES:

1. NO AS-BUILT PLANS ARE AVAILABLE.
2. THE EXISTING BRIDGE ABUTMENT GEOMETRICS, INCLUDING SIZE, SHAPE, AND FOOTING ELEVATION, WERE ESTIMATED FROM EXISTING DESIGN COMPUTATIONS AND SKETCHES DATED 9/1971 AND 11/1971 PROVIDED BY MONTGOMERY CO.
3. IN-SITU FOOTING ELEVATIONS FOR THE EXISTING STRUCTURE MAY VARY FROM THE APPROXIMATE EXISTING FOOTING ELEVATIONS SHOWN ON THE CONTRACT DRAWINGS.

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

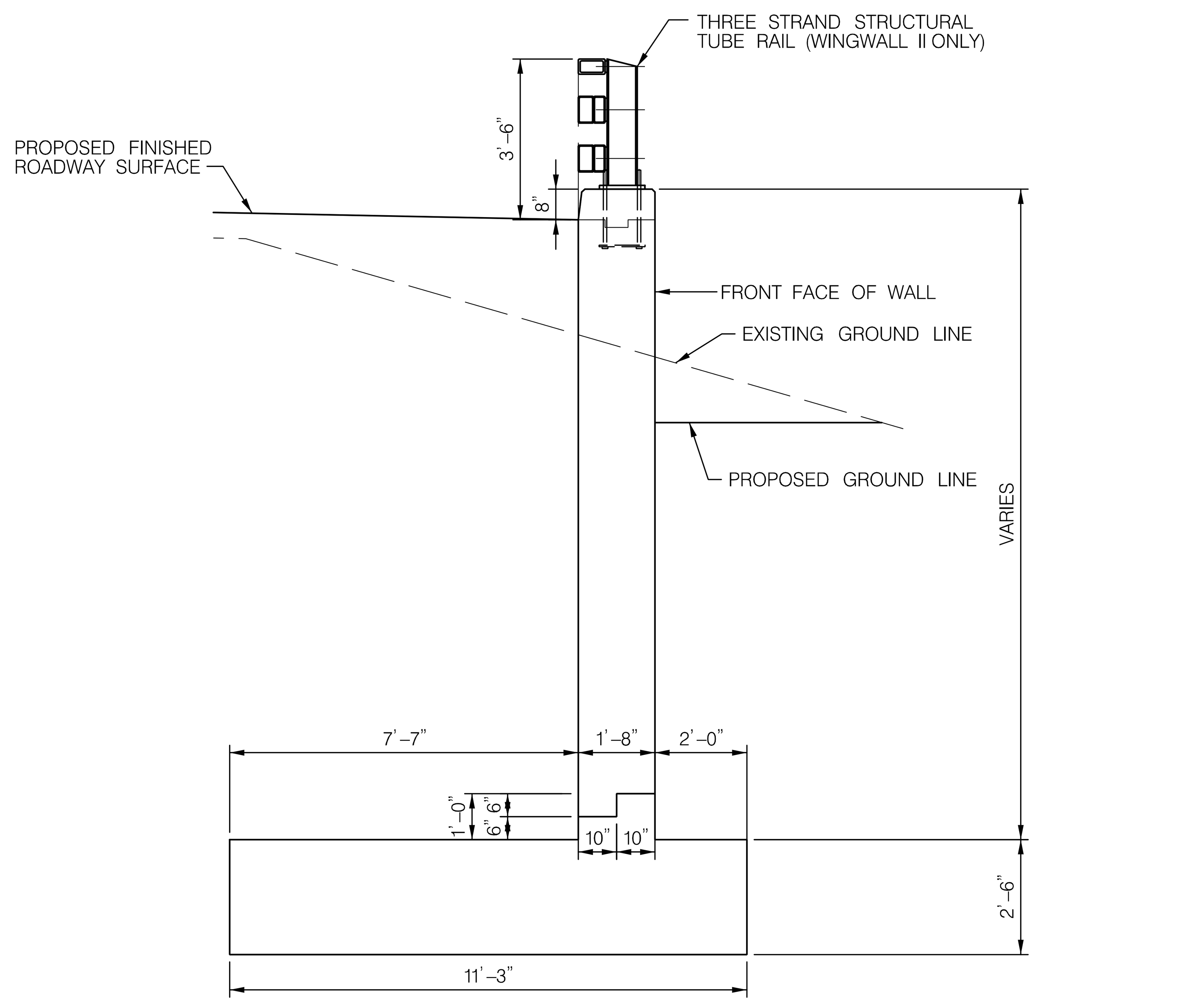
Designed by: VTD   Drawn by: GMJ   Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

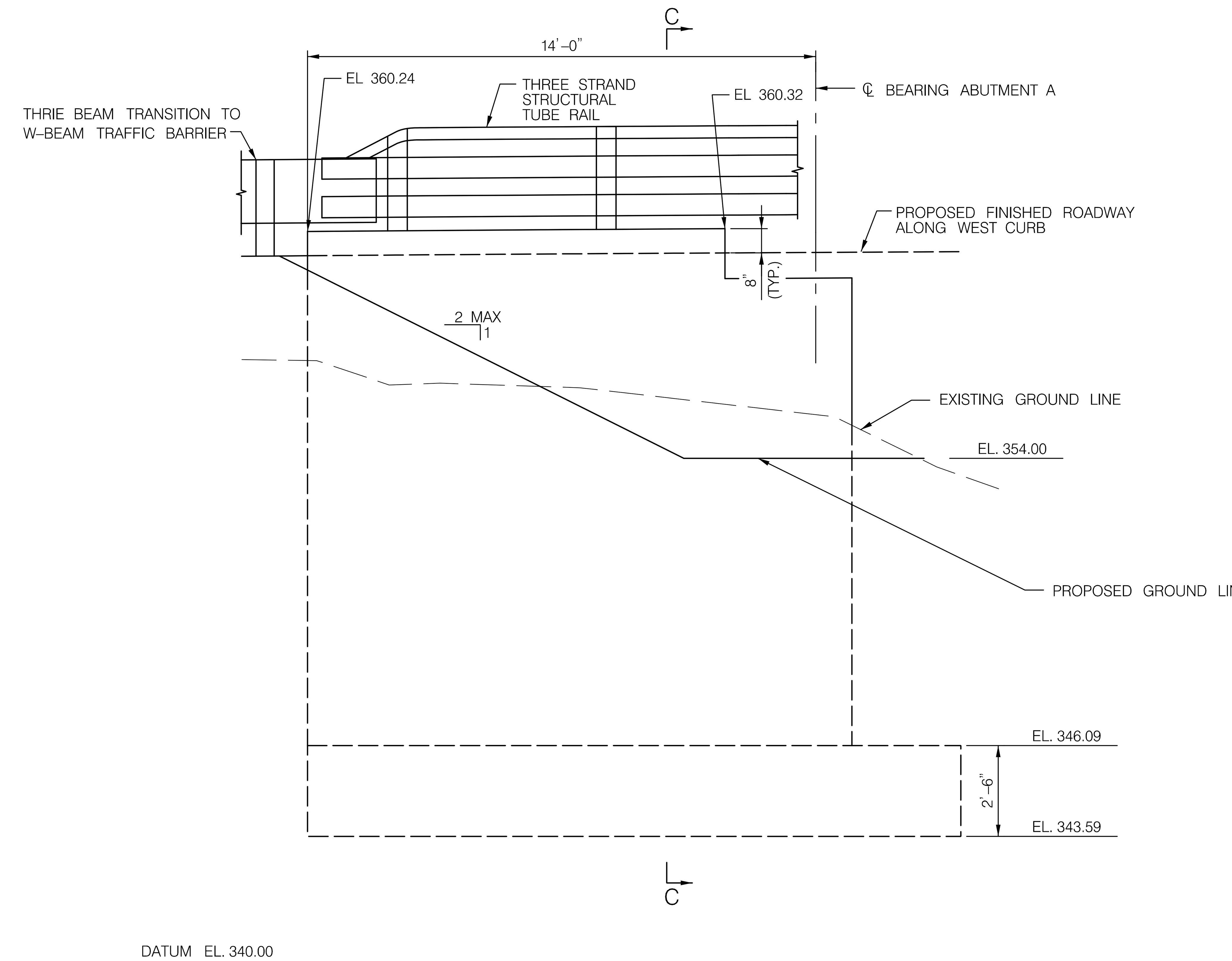
ABUTMENT SECTIONS

SCALE : 3/4"=1'-0"   S-07

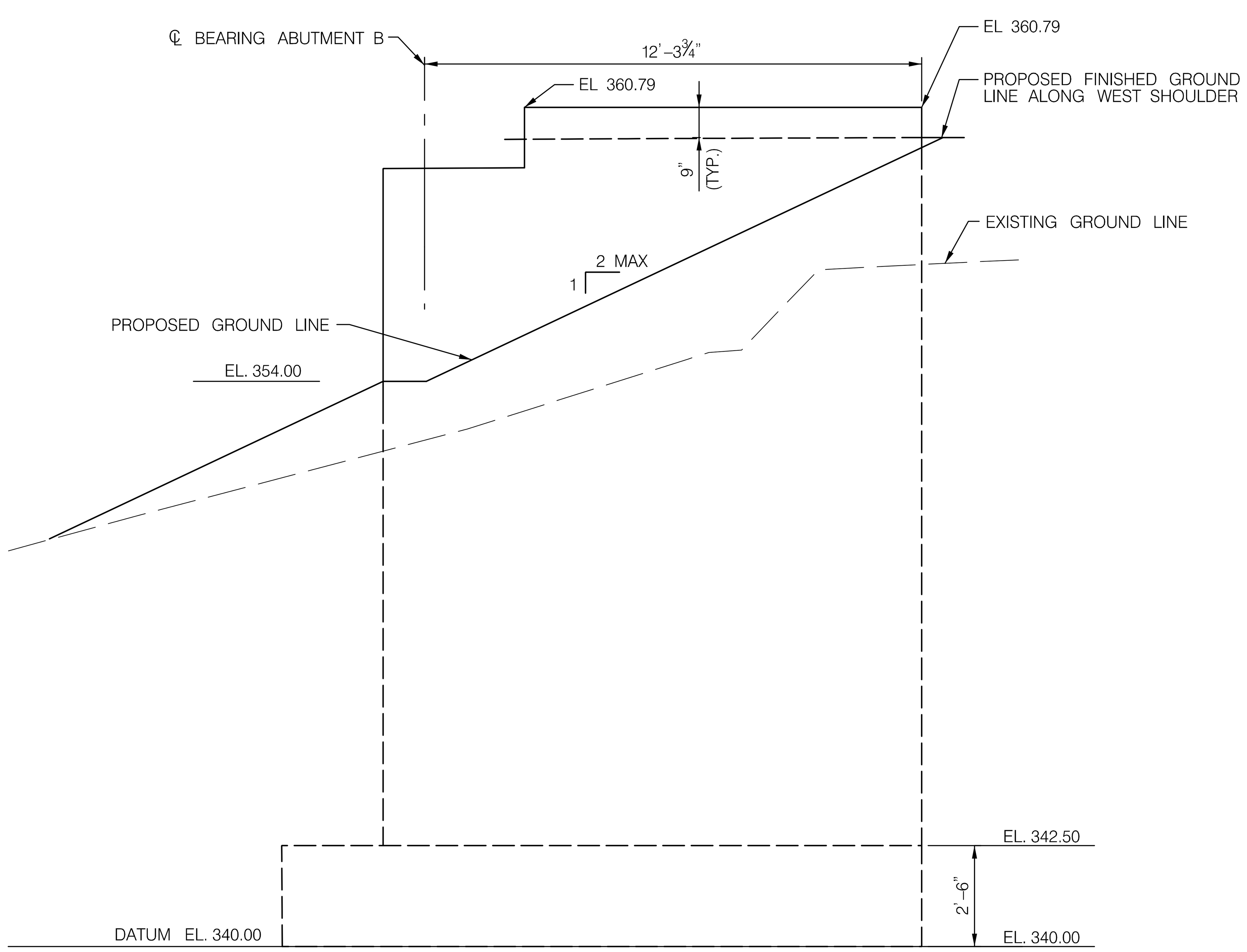
Project No. : 501119   25 of 28



SECTION C-C:WINGWALL TYPICAL SECTION
SCALE: 3⁄8" = 1'-0"



WINGWALL II ELEVATION
SCALE: 3⁄8" = 1'-0"



WINGWALL IV ELEVATION
SCALE: 3⁄8" = 1'-0"

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: VTD Drawn by: GMJ Checked by:

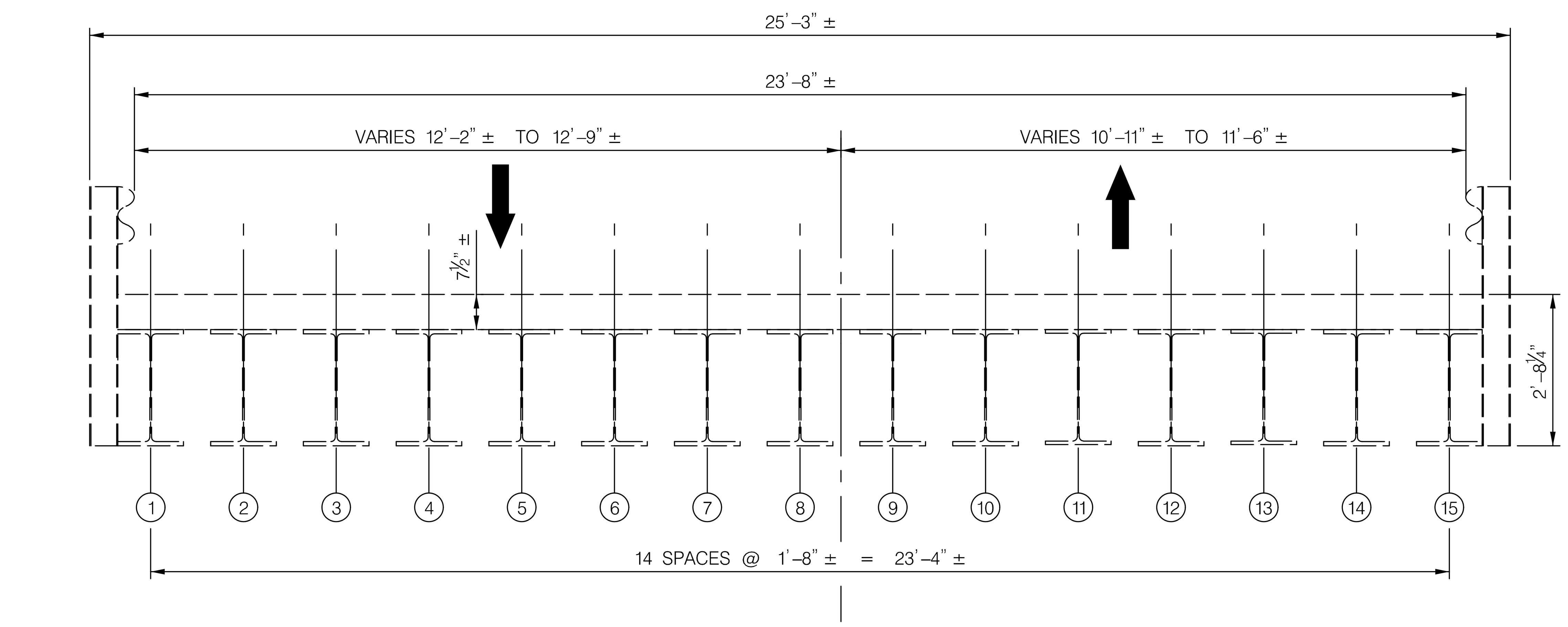
REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

WING WALL ELEVATION AND SECTIONS

SCALE : 3/4"=1'-0"

S-08

Project No. : 501119 26 of 28

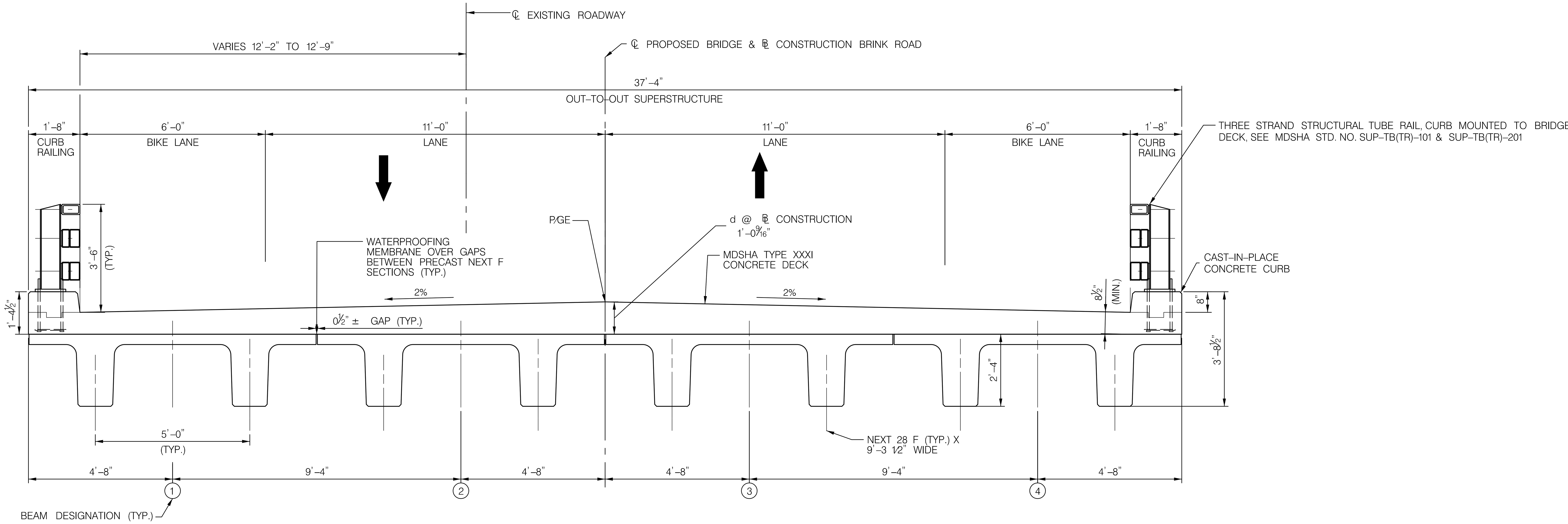


EXISTING BRIDGE TYPICAL SECTION

SCALE: 1/2" = 1'-0"

EXISTING STRUCTURE NOTES:

1. NO AS-BUILT PLANS ARE AVAILABLE.
2. THE EXISTING BRIDGE SUPERSTRUCTURE TYPICAL SECTION WAS ESTIMATED FROM THE 2013 INSPECTION REPORT BY THE WILSON T BALLARD COMPANY PROVIDED BY MONTGOMERY CO.



PROPOSED TYPICAL SECTION

SCALE: 1/2" = 1'-0"

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES Gannett Fleming
A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section — Date

APPROVED

Chief, Division of Transportation Engineering — Date

Designed by: VTD Drawn by: GMJ Checked by:

REHABILITATION OF BRIDGE NO. M-0064 ON BRINK ROAD OVER GREAT SENECA CREEK

TYPICAL SECTION

SCALE : AS SHOWN

S-09

Project No. : 501119

27 of 28

RECORD OF SOIL / ROCK EXPLORATION — Boring S-1

Contracted With: KCI Inc/Gannett Fleming Inc JV — Boring #: S-1
Project Name: Brink Rd Bridge No. M-0064 over Great Seneca Creek — Job #: 13-00071.05
Location: Montgomery County, MD

SAMPLER

Datum: ___ | Hammer Wt.: 140 lb | Hole Diameter: 8 in | Foreman: M.F.
Surf. Elev.: 355.0 ft | Hammer Drop: 30 in | Rock Core Dia.: N/A | Inspector: S.H.
Date Started: 9/27/17 | Spoon Size: 2 in | Boring Method: HSA | Date Completed: 9/27/17

T/FTG ABUT A EL. 346.09
B/FTG ABUT A EL. 343.59

ELEV. (ft)	SOIL DESCRIPTION Color, Moisture, Density, Plasticity, Size Proportions	STRA DEPTH (ft)	Cond	Blows/6"	No.	Type	Rec (in)	BORING & SAMPLE NOTES
354.4	7" of TOPSOIL	0.6						
	Dark brown, mosit, soft to medium stiff, fine sandy SILT, some rock fragments and gravel, (FILL)		D/I	2-3-12	1	DS	13	1. No water encountered. 2. Drill Rig: Acker XLS ATV. 3. Obstruction/wing wall footing encountered 9.5ft - 11.1ft. Borehole terminated at 11.1ft and offset 6 ft west (S-1A). 4. Borehole backfilled at completion.
			D/I	3-2-1	2	DS	18	
			D/I	3-2-3	3	DS	3	
345.5		9.5	D/I	1-1-50/5"	4	DS	6	
	OBSTRUCTION/WING WALL FOOTING							
343.9		11.1	D/I	50/1"	5	DS	1	
	Bottom of Boring at 11.1 ft							

SAMPLER TYPE: DS - DRIVEN SPLIT SPOON; PT - PRESSED SHELBY TUBE; CA - CONTINUOUS FLIGHT AUGER; RC - ROCK CORE

SAMPLE CONDITIONS: D - DISINTEGRATED; I - INTACT; U - UNDISTURBED; L - LOST

GROUNDWATER DEPTH: AT COMPLETION Dry ft; AFTER ___ HRS. ___ ft; AFTER 24 HRS. ___ ft; CAVED AT 8.2 ft

BORING METHOD: HSA - HOLLOW STEM AUGERS; CFA - CONTINUOUS FLIGHT AUGERS; DC - DRIVING CASING; MD - MUD DRILLING

STANDARD PENETRATION TEST DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30": COUNT MADE AT 6" INTERVALS

RECORD OF SOIL EXPLORATION - WSSC BRINK RD LOGS.GPJ PROJECT.GDT 12/19/17

RECORD OF SOIL / ROCK EXPLORATION — Boring S-1A

Contracted With: KCI Inc/Gannett Fleming Inc JV — Boring #: S-1A
Project Name: Brink Rd Bridge No. M-0064 over Great Seneca Creek — Job #: 13-00071.05
Location: Montgomery County, MD

SAMPLER

Datum: ___ | Hammer Wt.: 140 lb | Hole Diameter: 8 in | Foreman: M.F.
Surf. Elev.: 355.0 ft | Hammer Drop: 30 in | Rock Core Dia.: N/A | Inspector: S.H.
Date Started: 9/27/17 | Spoon Size: 2 in | Boring Method: HSA | Date Completed: 9/27/17

T/FTG ABUT A EL. 346.09
B/FTG ABUT A EL. 343.59

ELEV. (ft)	SOIL DESCRIPTION Color, Moisture, Density, Plasticity, Size Proportions	STRA DEPTH (ft)	Cond	Blows/6"	No.	Type	Rec (in)	BORING & SAMPLE NOTES
	AUGER TO 8 FT W/O SAMPLING, (FILL) Dark brown, moist fine sandy silt, some rock fragments and gravel (auger cuttings)							1. Water encountered at 12.0 ft. 2. Drill Rig: Acker XLS ATV. 3. Borehole offset 6ft west of S-1. 4. Auger and spoon refusal at 17.5ft.
347.0		8.0						
	AUGER TO 11 FT W/O SAMPLING, (FILL) Dark gray, moist, silty clay, trace gravel							
344.0		11.0						
	Gray-green, damp, very dense, silty SAND AND ROCK FRAGMENTS, (WEATHERED ROCK)		D/I	50/4.5"	1	DS	4	
337.5		17.5		50/0"	2	DS	0	
	Bottom of Boring at 17.5 ft							

SAMPLER TYPE: DS - DRIVEN SPLIT SPOON; PT - PRESSED SHELBY TUBE; CA - CONTINUOUS FLIGHT AUGER; RC - ROCK CORE

SAMPLE CONDITIONS: D - DISINTEGRATED; I - INTACT; U - UNDISTURBED; L - LOST

GROUNDWATER DEPTH: AT COMPLETION 7.9 ft; AFTER ___ HRS. ___ ft; AFTER 24 HRS. 8.2 ft; CAVED AT 10.5 ft

BORING METHOD: HSA - HOLLOW STEM AUGERS; CFA - CONTINUOUS FLIGHT AUGERS; DC - DRIVING CASING; MD - MUD DRILLING

STANDARD PENETRATION TEST DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30": COUNT MADE AT 6" INTERVALS

RECORD OF SOIL EXPLORATION - WSSC BRINK RD LOGS.GPJ PROJECT.GDT 12/19/17

RECORD OF SOIL / ROCK EXPLORATION — Boring S-2

Contracted With: KCI Inc/Gannett Fleming Inc JV — Boring #: S-2
Project Name: Brink Rd Bridge No. M-0064 over Great Seneca Creek — Job #: 13-00071.05
Location: Montgomery County, MD

SAMPLER

Datum: ___ | Hammer Wt.: 140 lb | Hole Diameter: 8 in | Foreman: M.F.
Surf. Elev.: 353.0 ft | Hammer Drop: 30 in | Rock Core Dia.: N/A | Inspector: S.H.
Date Started: 9/26/17 | Spoon Size: 2 in | Boring Method: HSA | Date Completed: 9/26/17

T/FTG ABUT B EL. 342.50
B/FTG ABUT B EL. 340.00

ELEV. (ft)	SOIL DESCRIPTION Color, Moisture, Density, Plasticity, Size Proportions	STRA DEPTH (ft)	Cond	Blows/6"	No.	Type	Rec (in)	BORING & SAMPLE NOTES
352.3	8" of TOPSOIL	0.7						
	Brown, moist, medium stiff, SILT, some boulders, trace gravel and organics, (FILL)		D/I	3-7-3	1	DS	18	1. Water encountered at 8.0 ft. 2. Drill Rig: Acker XLS ATV. 3. Bulk sample obtained 7 ft north of S-2 from surface to 5ft. 4. Hard drilling 17ft to 20ft. 5. Auger and spoon refusal at 20ft.
349.5		3.5						
	Brown to dark gray, moist, very soft, silty CLAY, some roots and organics		D/I	1-1-1	2	DS	18	
			D/I	WOH/18"	3	DS	18	
345.0		8.0						
	Gray-brown, moist, medium dense, silty fine SAND WITH ROCK FRAGMENTS, little mica		D/I	4-5-6	4	DS	18	
340.0		13.0						
	Gray-brown, damp, very dense, silty SAND AND ROCK FRAGMENTS, (WEATHERED ROCK)		D/I	50/4"	5	DS	4	
			D/I	50/0.5"			0.5	
333.0		20.0		50/0"			0	
	Bottom of Boring at 20.0 ft							

SAMPLER TYPE: DS - DRIVEN SPLIT SPOON; PT - PRESSED SHELBY TUBE; CA - CONTINUOUS FLIGHT AUGER; RC - ROCK CORE

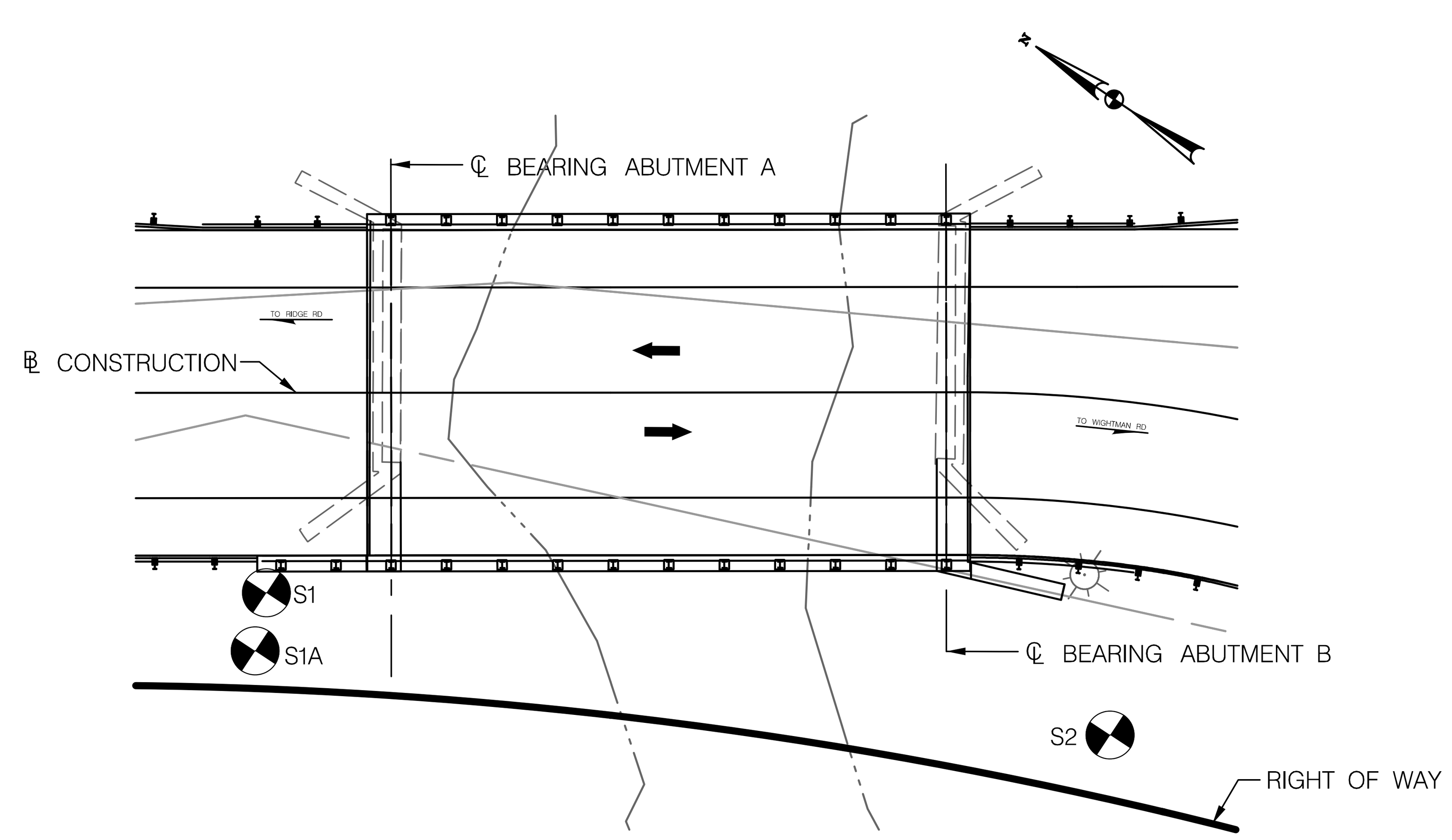
SAMPLE CONDITIONS: D - DISINTEGRATED; I - INTACT; U - UNDISTURBED; L - LOST

GROUNDWATER DEPTH: AT COMPLETION 14.0 ft; AFTER ___ HRS. ___ ft; AFTER 24 HRS. 7.4 ft; CAVED AT 12.1 ft

BORING METHOD: HSA - HOLLOW STEM AUGERS; CFA - CONTINUOUS FLIGHT AUGERS; DC - DRIVING CASING; MD - MUD DRILLING

STANDARD PENETRATION TEST DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30": COUNT MADE AT 6" INTERVALS

RECORD OF SOIL EXPLORATION - WSSC BRINK RD LOGS.GPJ PROJECT.GDT 12/19/17



BORING LOGS – PLAN
SCALE: 1⁄16=1'–0"

FOUNDATION REVIEW
NOT FOR CONSTRUCTION

KCI TECHNOLOGIES | Gannett Fleming — A Joint Venture

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
ROCKVILLE, MARYLAND

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

Designed by: VTD — Drawn by: GMJ — Checked by: ___

REHABILITATION OF BRIDGE NO. M–0064 ON BRINK ROAD OVER GREAT SENECA CREEK

BORING LOGS AND DRIVE TESTS

SCALE : — S–10

Project No. : 501119 — 28 of 28