



A. MORTON THOMAS AND ASSOCIATES, INC.

SHEET NOS. AND OTHER CLARIFICATIONS
BRIDGE PLANS S-1 TO S-28I 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.
MD LICENSE NO. _____ EXPIRATION DATE: _____

A. MORTON THOMAS AND ASSOCIATES, INC.

SHEET NOS. AND OTHER CLARIFICATIONS
ROADWAY PLANS GS-01, TS-01, PS-01I 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.
MD LICENSE NO. _____ EXPIRATION DATE: _____

ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THE PLANS HAVE BEEN DESIGNED IN ACCORDANCE WITH LOCAL
ORDINANCES, COMAR 26.17.01.07 AND 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR
SOIL EROSION AND SEDIMENT CONTROL (LATEST VERSION AND REVISIONS).

SIGNATURE _____ REG. NO. _____

DISTURBED AREA QUANTITY

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

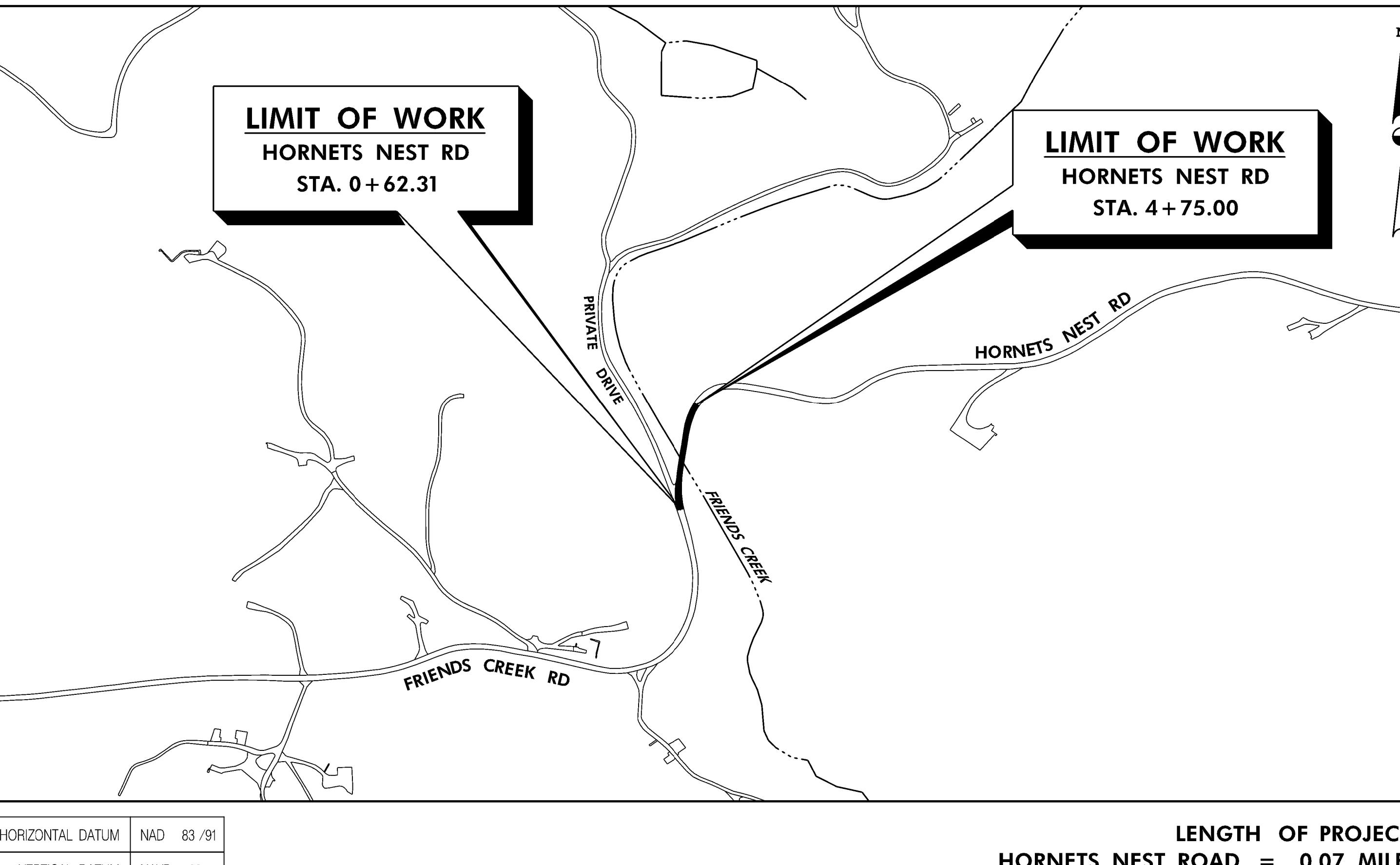
SIGNATURE _____ DATE _____

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SCD APPROVAL FOR SEDIMENT AND EROSION CONTROL
IS CONTINGENT UPON ISSUANCE OF ALL APPLICABLE
REGULATORY PERMITS.

FREDERICK COUNTY MARYLAND
DIVISION OF PUBLIC WORKS
OFFICE OF TRANSPORTATION ENGINEERING
REPLACEMENT OF
STRUCTURE NO. F05-22
S.H.A. CONTRACT NO. - FR893B21
FREDERICK COUNTY PROJECT NO. - C6011.6011.01
FEDERAL AID PROJECT NO. - T.B.D.

HORNETS NEST ROAD OVER FRIENDS CREEK



250 0 250 500 feet

FREDERICK COUNTY, MARYLAND
DEVELOPMENT REVIEW ENGINEERING

APPROVED: DEVELOPMENT REVIEW CHIEF DATE

APPROVED: STORMWATER MANAGEMENT DATE

Reviewed in accordance with local County requirements. Frederick

County assumes no liability for design and/or construction.

Approval is valid for two (2) years after the last date shown

above. The project must be under construction before the

approval expiration to be considered active. Otherwise, resubmit

of plans including applicable fees, must be made to Development

Review for approval. Fees for resubmittal cannot be waived.

DESIGN DESIGNATION				SURVEY BOOK NUMBERS	RIGHT OF WAY PLAT NUMBERS	REVISIONS
ROADWAY	LOCAL					NOTE: SEE SHEET NO. 2 FOR LIST OF REVISED SHEET NUMBERS
AVERAGE DAILY TRAFFIC (A.D.T.)	97 (2015); 118 (2035)					
DIRECTIONAL DISTRIBUTION	50%/50%					
TERRAIN	ROLLING					
DESIGN SPEED (M.P.H.)	30					
ANTICIPATED POSTED SPEED (M.P.H.)	30					



BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

TITLE SHEET

SCALE AS-NOTED ADVERTISED DATE NA CONTRACT NO. RFP 16-019A

DESIGNED BY KAR COUNTY FREDERICK

DRAWN BY TDK LOGMILE XXXX - XXXX

CHECKED BY SRM

FREDERICK COUNTY DIVISION OF
PUBLIC WORKSFREDERICK COUNTY OFFICE OF
TRANSPORTATION ENGINEERING

DIRECTOR DATE

CHIEF DATE

STRUCTURE INVENTORY NO.:

X:\Baltimore\15-0758.005 - Hornets Nest Road Bridge\05-CAD\pGN_TSTR.dgn

CONTRACT NO. -

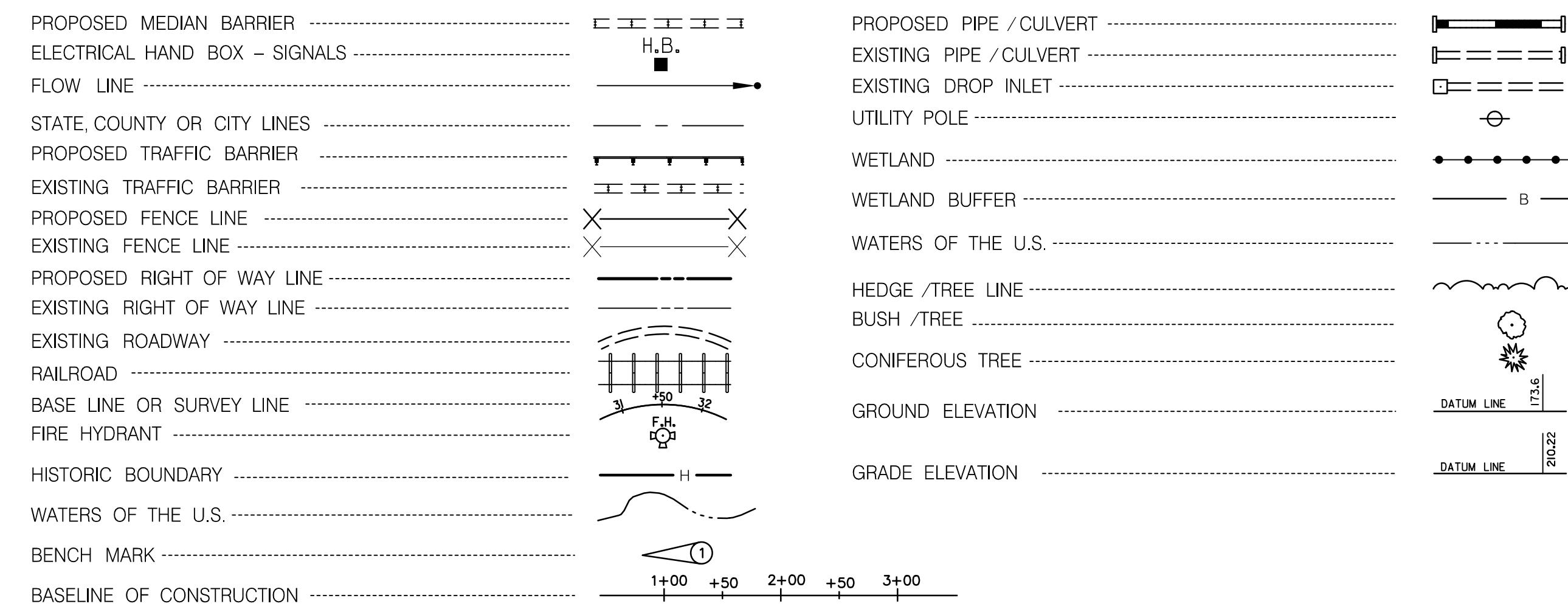
BY: smeevly -

Tuesday, March 30, 2021 AT 11:03 AM

ABBREVIATIONS

AASHTO	American Association of State Highway Transportation Officials
ADT	Average Daily Traffic
AHD	Ahead
APPROX	Approximate
B or BL	Baseline
BK	Back / Book
BIT.	Bituminous
B.C.	Bituminous Concrete
B.M.	Bench Mark
BOT.	Bottom
C.C.	Center of Curve
CAP	Corrugated Aluminum Pipe
CAPA	Corrugated Aluminum Pipe Arch
CATV	Cable Television
C.B.R.	California Bearing Ratio
C 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
DC	Degree of Curve
D.H.V.	Design Hourly Volume
D.I.	Drop Inlet
DIA.	Diameter
D.O.	Double Opening
E	East
E	Electric
E	External Distance
EA	Each
EB	Eastbound
ELEV	Elevation
ES	End Section
EX or EXIST	Existing
FT	Feet
F or FL	Flowline
F.B.D.	Flat Bottom Ditch
F.H.	Fire Hydrant
FWD.	Forward
G	Gas
G.V.	Gas Valve
H.B.	Handbox
HDPE	High Density Polyethylene
HDWL	Headwall
HERCP	Horizontal Elliptical Reinforced Concrete Pipe
HP	High Point
IN	Inch
I.S.T.	Inlet Sediment Trap
INV.	Invert
J.B.	Junction Box
K	K Inlet
L	Length
LF	Linear Feet
L.L.	Liquid Limit
LP	Low Point
L.P.	Light Pole
LT	Left
MAC	Macadam
M.C.	Moisture Content
MAX.	Maximum
M.D.D.	Maximum Dry Content
MOD.	Modified
MIN.	Minimum
N	North
NB	Northbound
NE	Northeast
N.P.	Non-Plastic
O.C.	On Center
OHE	Overhead Electric
O.M.	Optimum Moisture
PAV T.	Pavement
PC	Point of Curvature
PCC	Point of Compound Curvature
P/C	Point of Crown
PGE	Profile Grade Elevation
P.G.E.	Profile Ground Elevation
P.G.L.	Profile Grade Line
PGL	Profile Ground Line
P/R	Point of Rotation
P.I.	Plasticity Index
PI	Point of Intersection
POC	Point On Curve
POT	Point On Tangent
PPWP	Polyvinyl Chloride Profile Wall Pipe
PROP	Proposed
PRC	Point of Reverse Curve
PT	Point
PT	Point of Tangency
PVC	Point of Vertical Curve
PVC	Polyvinyl Chloride
PVI	Point of Vertical Intersection
PVRC	Point of Vertical Reverse Curve
PVT	Point of Vertical Tangency
R	Radius
R.F.	Rock Fragments
RT	Right
RW	Right of Way
RCP	Reinforced Concrete Pipe
RCPP	Reinforced Concrete Pressure Pipe
R.Q.D.	Rock Quality Designation
R.M.	Rootmat
S	South
SAN.	Sanitary Sewer
SB or S/B	Southbound
S.D.	Storm Drain
S.D.D.	Surface Drain Ditch
SE	Super Elevation
SF	Silt Fence
SF	Square Feet
SHT.	Sheet
SPP	Structural Steel Plate Pipe
SPPA	Structural Steel Plate Pipe Arch
S.P.T.	Standard Penetration Testing
SRP	Steel Spiral Rib Pipe – Aluminized Type 2
SRPA	Steel Spiral Rib Pipe Arch – Aluminized Type 2
SSD	Stopping Sight Distance
SSF	Super Silt Fence
STD.	Standard
STA.	Station
SO.	Single Opening
SY	Square Yards
SWM	Stormwater Management
T	Tangent
T	Telephone
T.C.	Top of Cover
T.G.	Top of Grate
T or TL	Traverse Line
T.M.	Top of Manhole
TRAV.	Traverse
TS	Temporary Swale
T.S.	Top of Slab
T.S.	Topsoil
TYP.	Typical
U.D.	Under Drain
U.G.	Underground
U.P.	Utility Pole
USDA	United States Department of Agriculture
VCL	Vertical Clearance
V.C.L.	Vertical Curve Length
W	Water
W	West
WB	Westbound
WB	Wetland Buffer
W.M.	Water Meter
W.S.	Wrapped Steel
WUS	Waters of the United States
W.V.	Water Valve

CONVENTIONAL SIGNS



ABBREVIATIONS AND LEGEND	
SCALE AS-NOTED	ADVERTISED DATE
CONTRACT NO.	RFP 16-019A
DESIGNED BY	SRM
DRAWN BY	TDK
CHECKED BY	KAR
COUNTY	
FREDERICK	
LOGMILE	
XXXX – XXXX	
SHEET NO.	
2 OF 43	

AMT

A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204



BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

Z

N 74°09'00" E 120°30'00"

TRAVERSE POINTS			
POINT NO.	NORTH	EAST	ELEVATION
T-1	746742.6680	1201977.9390	607.04
T-2	747180.0860	1201937.9900	588.08
T-3	747296.4670	1201771.2880	589.97
T-4	746960.8120	1202023.1150	590.81

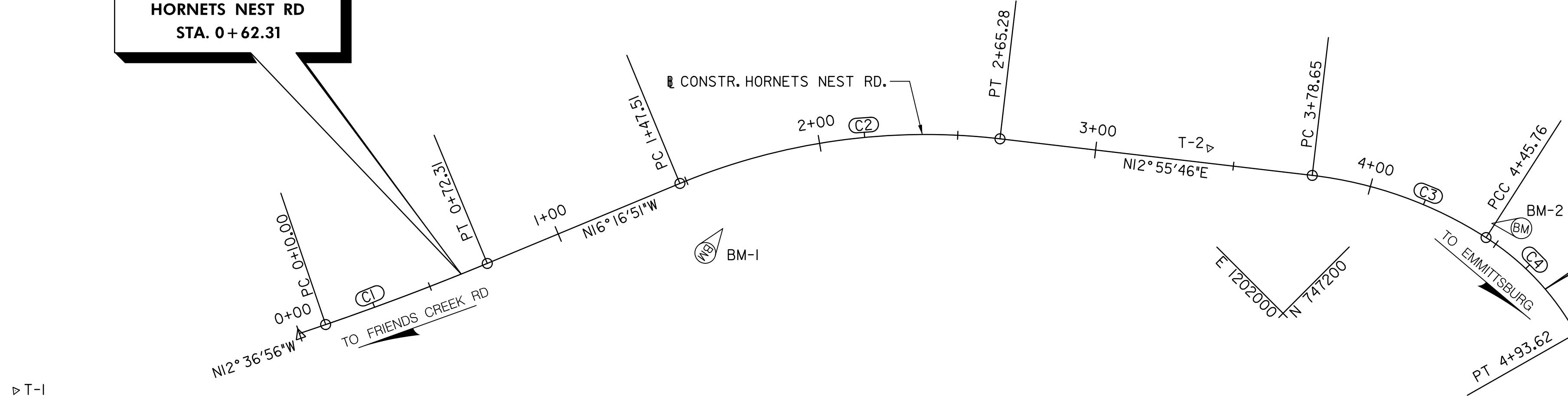
BENCHMARKS			
POINT NO.	NORTH	EAST	ELEVATION
BM-1	747002.5272	1201947.6822	594.00
BM-2	747285.2740	1201963.0430	598.41

▷ T-3

BASELINE CONTROL COORDINATES						
BASELINE	CURVE	POINT NO.	STATION	NORTH	EAST	BEARING
HORNETS NEST RD	C-1	POB	0+00.00	746846.69	1201968.63	
		PC	0+10.00	746856.45	1201966.45	
		PI	0+41.16	746886.86	1201959.64	
		CC	746643.72	1201015.96		
HORNETS NEST RD	C-2	PT	0+72.31	746916.77	1201950.91	N 12°-36'~56" W
		PC	1+47.51	746988.96	1201929.82	
		PI	2+07.70	747046.74	1201912.95	
		CC	747053.72	1202151.56		
HORNETS NEST RD	C-3	PT	2+65.28	747105.41	1201926.42	N 16°-16'~51" W
		PC	3+78.65	747215.90	1201951.78	
		PI	4+12.79	747249.18	1201959.42	
		CC	747182.79	1202096.03		
HORNETS NEST RD	C-4	PCC	4+45.76	747275.75	1201980.87	
		PI	4+70.19	747294.76	1201996.22	
		CC	747215.13	1202055.96		
		PT	4+93.62	747304.18	1202018.76	N 12°-55'~46" E

LIMIT OF WORK
HORNETS NEST RD
STA. 0 + 62.31

LIMIT OF WORK
HORNETS NEST RD
STA. 4 + 75.00



CURVE DATA						
CURVE	DELTA	D _c	RADIUS	TANGENT	LENGTH	EXTERNAL
C-1	3° 39'54.92"	5° 52'57.0848"	974.00'	31.644'	62.3075'	0.4984'
C-2	29° 12'36.85"	24° 48'12.1239"	231.00'	60.1930'	117.7672'	7.7136'
C-3	25° 58'52.65"	38° 42'48.1123"	148.00'	34.1430'	67.1119'	3.8873'
C-4	28° 25'08.21"	59° 22'25.9132"	96.50'	24.4352'	47.8644'	3.0456'

SHEET GS-01



BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

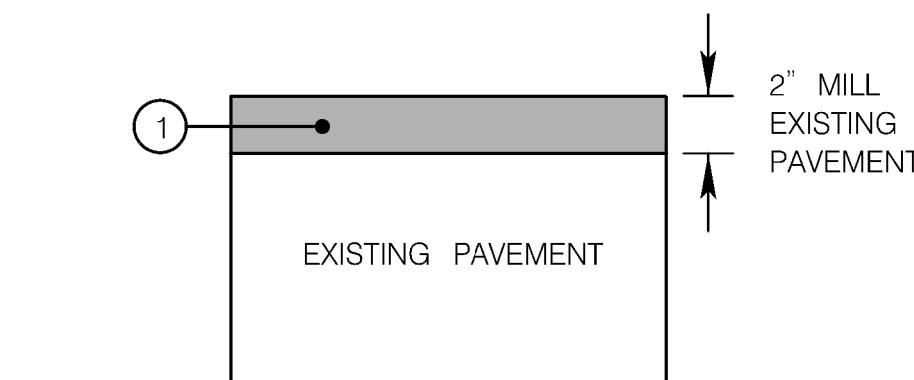
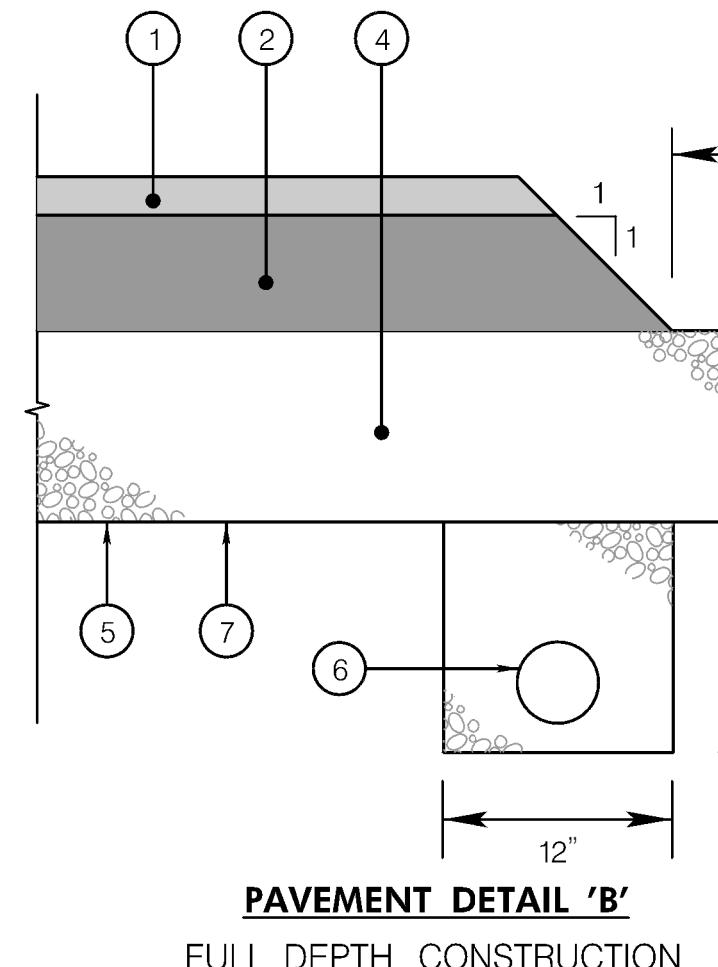
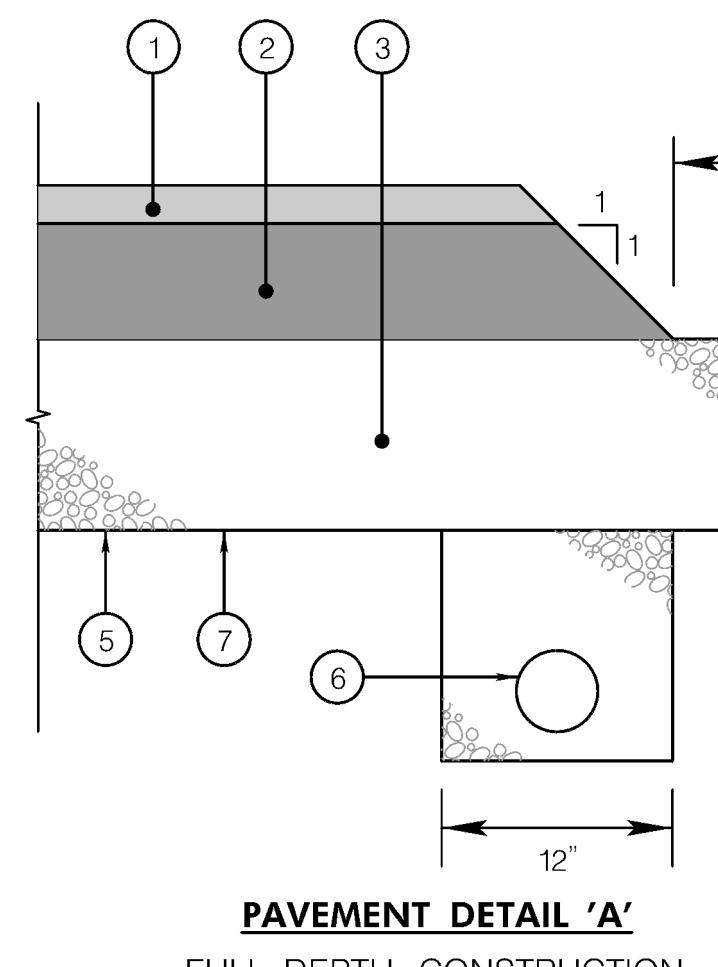
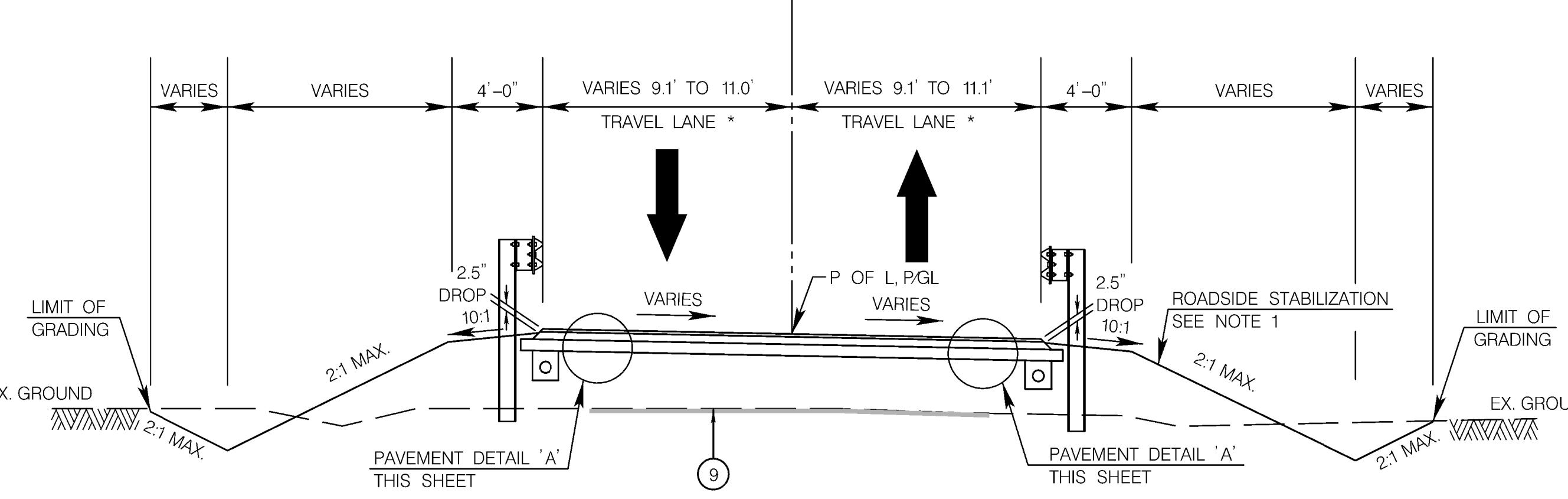
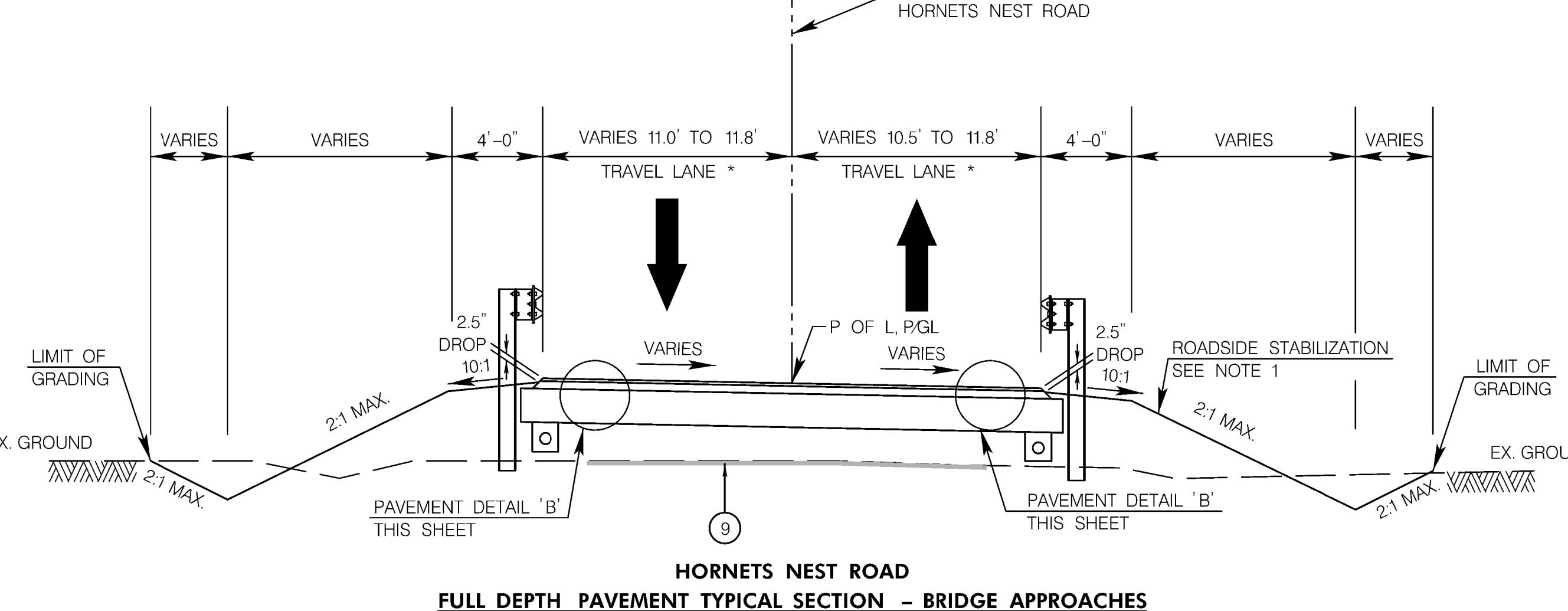
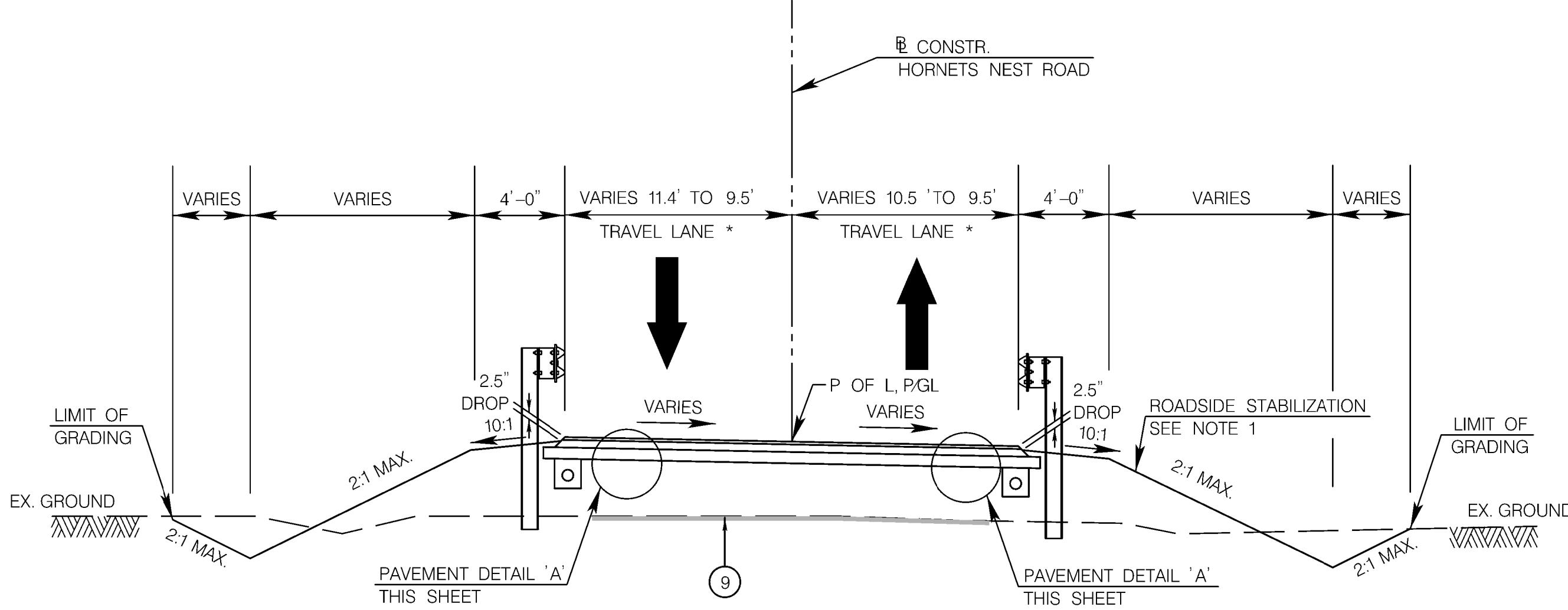
GEOMETRIC LAYOUT

SCALE AS-NOTED	ADVERTISED DATE	NA	CONTRACT NO.	RFP 16-019A
DESIGNED BY	SRM	COUNTY	FREDERICK	
DRAWN BY	TDK	LOGMILE	XXXX - XXXX	
CHECKED BY	KAR			

AMT

A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204

SHEET NO. 3 OF 43



SUPERELEVATION CHART			
STATION	LEFT LANE	RIGHT LANE	DESCRIPTION
0 + 72.31	-1.0%	0.0%	MEET EXISTING
0 + 87.81	0.0%	-1.0%	END RUNOUT
1 + 03.31	1.0%	-2.0%	BEGIN 2% RIGHT
1 + 18.81	2.0%	-2.0%	END 2% RIGHT
1 + 80.81	6.0%	-6.0%	BEGIN FULL SUPER
2 + 32.28	6.0%	-6.0%	END FULL SUPER
2 + 65.28	4.0%	-4.0%	BEGIN 4% SUPER FOR BRIDGE
3 + 50.00	4.0%	-4.0%	END 4% SUPER FOR BRIDGE
4 + 00.53	7.26%	-7.26%	BEGIN LEFT TRANSITION TO EXIST.
4 + 39.90	4.72%	-9.8%	END RIGHT TRANSITION TO EXIST.
4 + 65.00	3.1%	-9.8%	END LEFT TRANSITION TO EXIST.

LANE WIDTH TRANSITION CHART			
STATION	LEFT LANE	RIGHT LANE	DESCRIPTION
0 + 72.31	9.1'	9.1'	MEET EXISTING
1 + 02.31	11'	11'	FULL WIDTH
2 + 43.09	-	11'	BEGIN RIGHT LANE TRANS.
2 + 56.88	11'	-	BEGIN LEFT LANE TRANS.
2 + 69.17	-	11.8'	END RIGHT LANE TRANS. AT BRIDGE
2 + 83.75	11.8'	-	END LEFT LANE TRANS. AT BRIDGE
3 + 26.49	-	11.8'	BEGIN TRANS. RIGHT LANE LEAVE BRIDGE
3 + 41.17	11.8'	-	BEGIN TRANS. LEFT LANE LEAVE BRIDGE
3 + 78.65	-	10.0'	END RIGHT LANE TRANS.
4 + 39.90	10.0'	-	END LEFT LANE TRANS.
4 + 45.76	10.0'	10.0'	BEGIN LEFT/RIGHT TRANS. TO EXIST.
4 + 65.00	9.5'	9.5'	MEET EXISTING

TYPICAL SECTION NOTES

- ROADSIDE STABILIZATION:
 - PLACE 4" TOPSOIL AND PERFORM TURFGRASS ESTABLISHMENT ON ALL DISTURBED ROADSIDE AND SLOPE AREAS FLATTER THAN 2:1.
 - PLACE 2" TOPSOIL AND PERFORM TURFGRASS ESTABLISHMENT WITH TYPE A SOIL STABILIZATION MATTING ON 2:1 SLOPES OR GREATER PER MD-389.06 AND MD-389.07.

2. FOR BRIDGE TYPICAL SECTIONS, PLEASE REFER TO DWG. S-14, SHEET XX, OF THIS PLAN SET.

3. FOR LOCATIONS OF GUARDRAIL, PLEASE REFER TO DWG. PS-01, SHEET X, OF THIS PLAN SET.

PAVEMENT LEGEND

- 2" SUPERPAVE ASPHALT MIX 9.5MM FOR SURFACE, PG 64S-22, LEVEL 2
- 4" SUPERPAVE ASPHALT MIX 19.0MM FOR BASE, PG 64S-22, LEVEL 2 (ONE 4" LIFT)
- 6" BASE COURSE USING GRADED AGGREGATE BASE
- 24" BASE COURSE USING GRADED AGGREGATE BASE
- LIMIT OF CLASS 1 EXCAVATION
- 6" PERFORATED CIRCULAR PIPE LONGITUDINAL UNDERDRAIN AS PER STANDARD MD 387-11
- TOP OF SUBGRADE
- 1" MILLING OF EXISTING PAVEMENT

PAVEMENT DETAIL NOTES

- IF NECESSARY, USE HOT MIX ASPHALT SUPERPAVE 9.5MM FOR WEDGELEVEL, PG64-22, LEVEL 2. (1" MIN, 2" MAX LIFT).
- UNDERDRAIN SHALL BE WRAPPED IN CLASS SD TYPE II GEOTEXTILE ON SIDES AND BOTTOM ONLY. SEE PLAN SHEET, PS-01, FOR SPECIFIC LOCATIONS. MOVE LONGITUDINAL UNDERDRAIN AS DIRECTED BY THE ENGINEER IF CONFLICT WITH ANY W-BEAM POST. PLACEMENT OF LONGITUDINAL UNDERDRAINS SHALL BE IN CONFORMANCE WITH SECTION 306 OF THE MDSHA'S "STANDARDS SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS" DATED 2017 AND PAGE 35 OF THE FREDERICK COUNTY SUPPLEMENT TO THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I & II. ALL LONGITUDINAL UNDERDRAINS SHALL BE OUTLETTED AT LOW POINTS.
- CONTRACTOR SHALL SAW CUT THROUGH EXISTING ASPHALT PAVEMENT ONLY. ONLY EXCAVATE EXISTING ROADWAY AS REQUIRED TO INSTALL PROPOSED PAVEMENT. PAYMENT FOR SAW CUTS WILL NOT BE MEASURED BUT WILL BE CONSIDERED INCIDENTAL TO ROADWAY EXCAVATION.



SHEET TS-01
BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

TYP. SECTIONS & PAVEMENT DETAILS

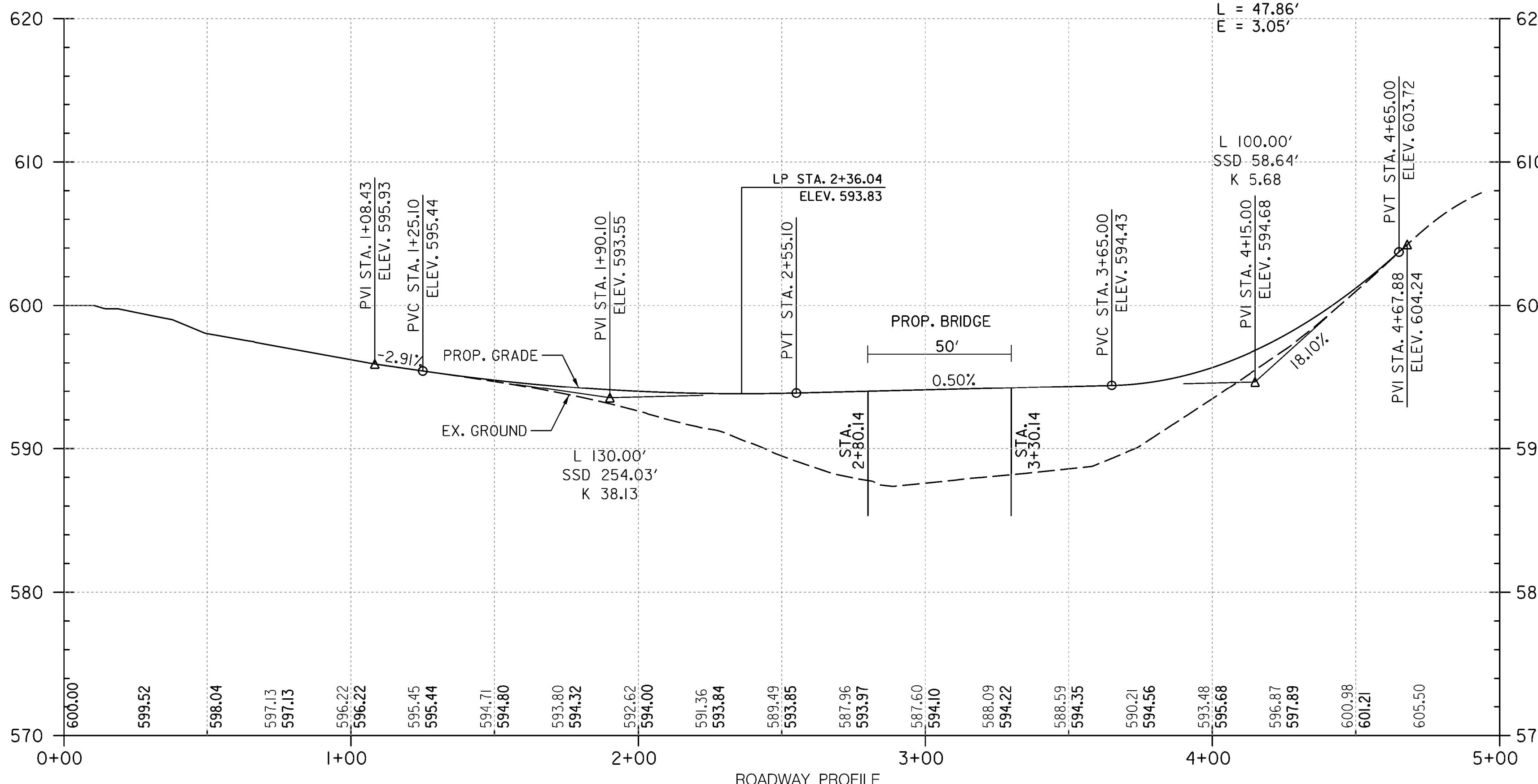
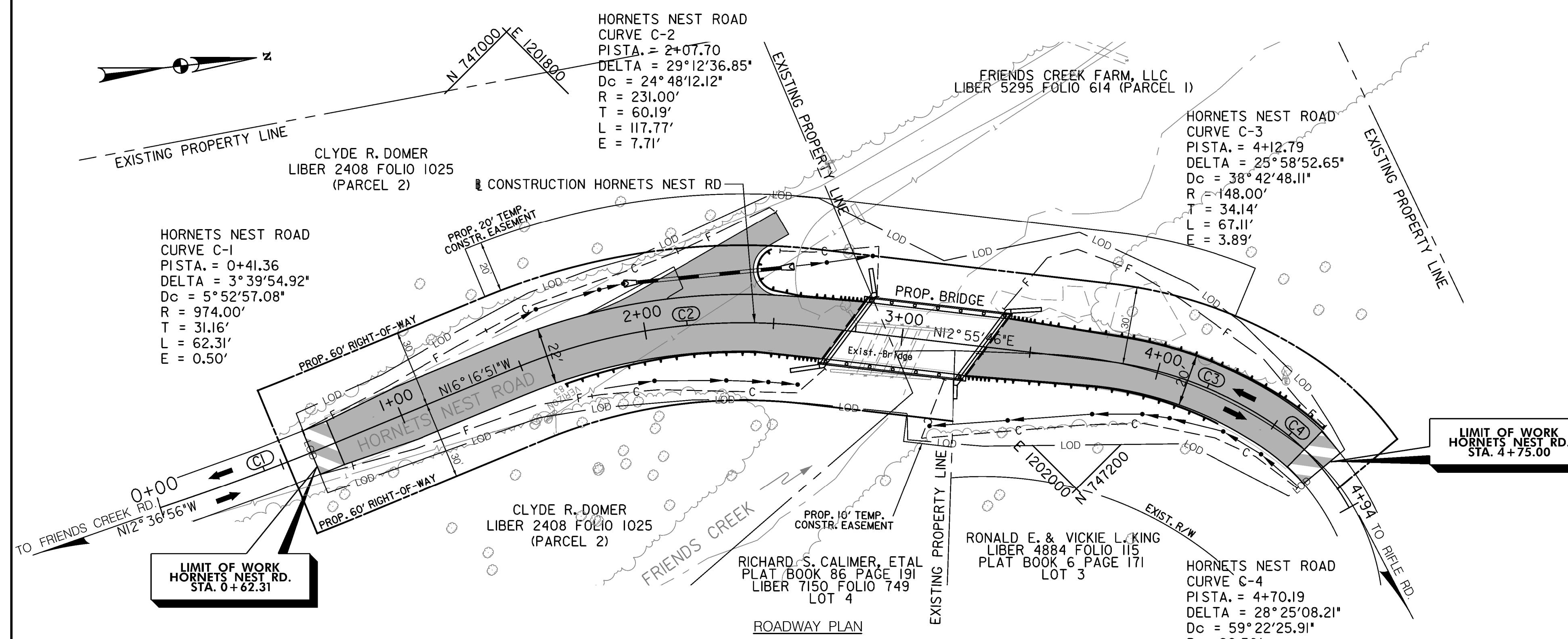
SCALE AS-NOTED ADVERTISED DATE NA CONTRACT NO. RFP 16-019A

DESIGNED BY SRM COUNTY FREDERICK
DRAWN BY TDK LOGMILE XXXX - XXXX
CHECKED BY KAR



A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204

SHEET NO. 4 OF 43



ROADWAY LEGEND

— LOD — LIMIT OF DISTURBANCE

FULL DEPTH PAVEMENT

PROPOSED UNDERDRA

MILL AND RESURFACE PAVEMENT

 WETLAND

— — — — — WATERS OF

HORIZONTAL SCALE: 1"=30'

6' 0 6' 10'

LOCATIONS OF EXISTING UTILITIES ARE SHOWN ONLY AS NOTIFICATION TO THE CONTRACTOR OF THE PRESENCE OF UNDERGROUND UTILITIES. FREDERICK COUNTY AND THE DESIGN ENGINEER DO NOT WARRANT OR GUARANTEE CORRECTNESS OR COMPLETENESS OF INFORMATION SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONTACTING MISS UTILITY AT 1-800-257-7777 FOR VERIFYING EXISTING AND LOCATION OF ALL UTILITIES PRIOR TO BEGINNING WORK. ANY DAMAGE TO EXISTING UTILITIES DUE TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.



BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

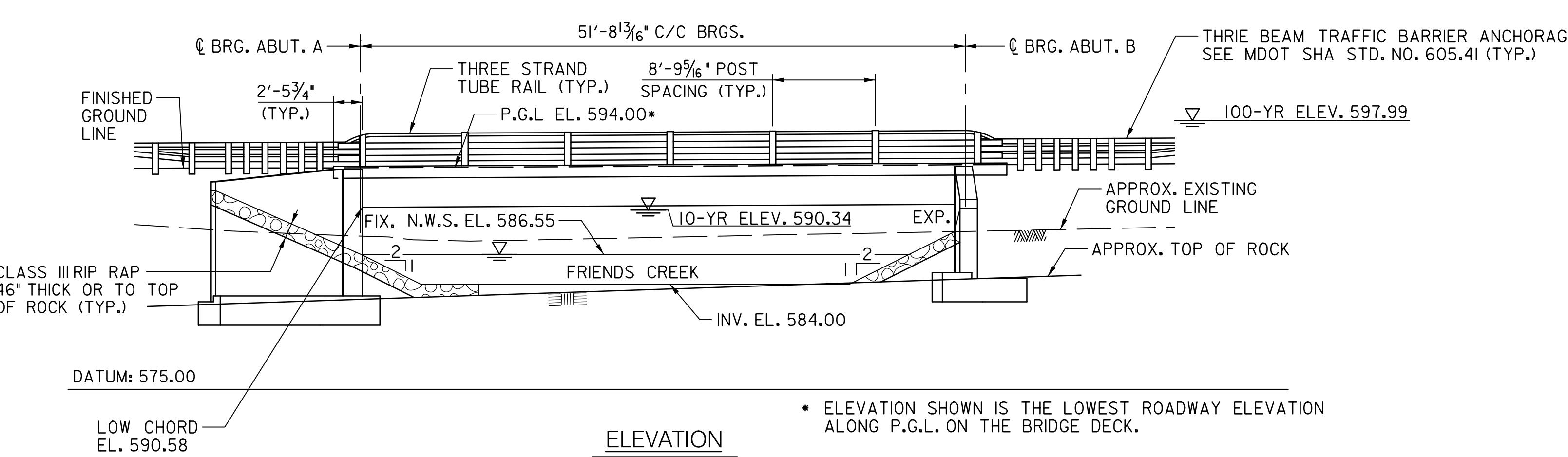
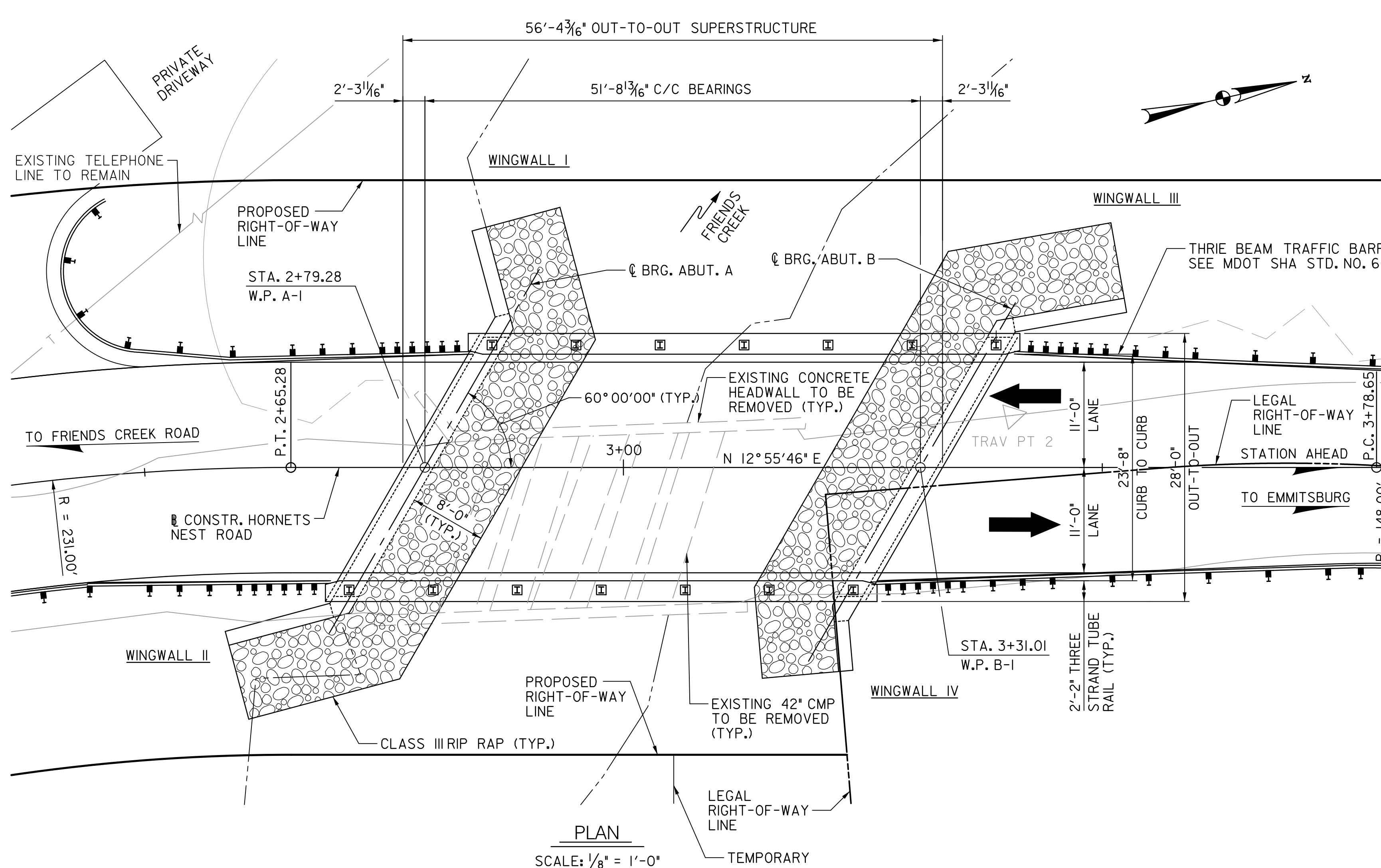
ROADWAY PLAN & PROFILE

S-NOTED ADVERTISED DATE N/A CONTRACT NO. RFP 16-019A

BY SRM COUNTY FREDERICK
Y TDK LOGMILE XXXX - XXXX
BY KAR

AMT

A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710



VERTICAL CURVE DATA-
HORNETS NEST ROAD

P.V.I STA. I+90.10
ELEV. = 593.55
V.C.L. = 130.00'
CORR. = +0.55'
S/E = VARIES
DES. SPEED = 25 MPH

VERTICAL GRADE DATA-
HORNETS NEST ROAD

STA. 2+55.0
ELEV. 593.88
+0.50%
STA. 3+65.00
ELEV. 594.43
+0.50%

VERTICAL CURVE DATA-
HORNETS NEST ROAD

P.V.I STA. 4+15.00
ELEV. = 594.68
V.C.L. = 100.00'
CORR. = +2.20'
S/E = VARIES
DES. SPEED = 25 MPH

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.

MD LICENSE NO. _____ EXPIRATION DATE: _____

GENERAL NOTES

SPECIFICATIONS: MDOT SHA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED JULY 2019.

DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, DATED 2017.

LOADING: HL-93

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

CONCRETE: CONCRETE COMPRESSIVE STRENGTH FOR DESIGN SHALL BE:
 $f'_c = 3,000$ PSI FOR ELEMENTS USING MIX NO. 3
 $f'_c = 4,000$ PSI FOR ELEMENTS USING MIX NO. 6

ALL CONCRETE FOR SUPERSTRUCTURE OVERLAY AND END PORTION OF SLAB SHALL BE MIX NO. 8 CONCRETE (4,000 PSI) CONTAINING SYNTHETIC FIBERS (SEE SECTION 902.15).

ALL CONCRETE FOR CURBS SHALL BE MIX NO. 6 (4,500 PSI) CONTAINING SYNTHETIC FIBERS (SEE SECTION 902.15).

ALL OTHER STRUCTURE CONCRETE EXCEPT PRESTRESSED CONCRETE SHALL BE MIX NO. 3 (3,500 PSI).

PRESTRESSED CONCRETE: CONCRETE COMPRESSIVE STRENGTH FOR DESIGN SHALL BE $f'_c = 7,000$ PSI. WHILE THE MINIMUM COMPRESSIVE STRENGTH AT TRANSFER SHALL BE $f'_c = 5,950$ PSI.

ALL PRESTRESSED CONCRETE SHALL BE SELF- CONSOLIDATING WITH A 28-DAY COMPRESSIVE STRENGTH OF $f'_c = 8,000$ PSI.

REINFORCING STEEL: REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60, WITH A YIELD STRENGTH FOR DESIGN OF $f_y = 60,000$ PSI.

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

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

THE FOLLOWING REINFORCEMENT SHALL BE EPOXY COATED:

ABUTMENT BRIDGE SEATS

CURBS

PRESTRESSED CONCRETE SLABS

CONCRETE OVERLAY

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

LOCATION	CLEAR COVER
BOTTOM AND SIDES OF ALL FOOTINGS. BOTTOM OF PRESTRESSED CONCRETE SLABS.	3 IN.

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

PRETENSIONING STEEL: PRETENSIONING STEEL SHALL CONSIST OF $1/2$ " DIAMETER 7-WIRE BRIGHT LOW RELAXATION STRANDS CONFORMING TO THE REQUIREMENTS OF M 203 GRADE 270. EACH STRAND SHALL BE PRETENSIONED TO 31,000 LB (0.75 fpu), HAVE AN ULTIMATE STRENGTH OF 41,300 LB (fpu), AND A YIELD STRENGTH OF 37,200 LB (0.90 fpu).

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

HORIZONTAL CURVE DATA -
HORNETS NEST ROAD

HORIZONTAL CURVE DATA -
HORNETS NEST ROAD

HORIZONTAL CURVE DATA -
HORNETS NEST ROAD

P.I. STA. = 2+07.70
Δ = 29°12'37" RT.
D = 24°48'12"
R = 231.00'
T = 60.19'
L = 117.77'
E = 7.71'
S/E = VARIES
DES. SPEED = 25 MPH

P.I. STA. 2+65.28 TO P.C. STA. 3+78.65
N 12°55'46" E

P.I. STA. = 4+12.79
Δ = 25°58'53" RT.
D = 38°42'48"
R = 148.00'
T = 34.14'
L = 67.11'
E = 3.89'
S/E = VARIES
DES. SPEED = 25 MPH

SHEET S-01



BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

GENERAL PLAN AND ELEVATION

SCALE AS-NOTED ADVERTISED DATE NA CONTRACT NO. RFP 16-019A

DESIGNED BY GCD COUNTY FREDERICK

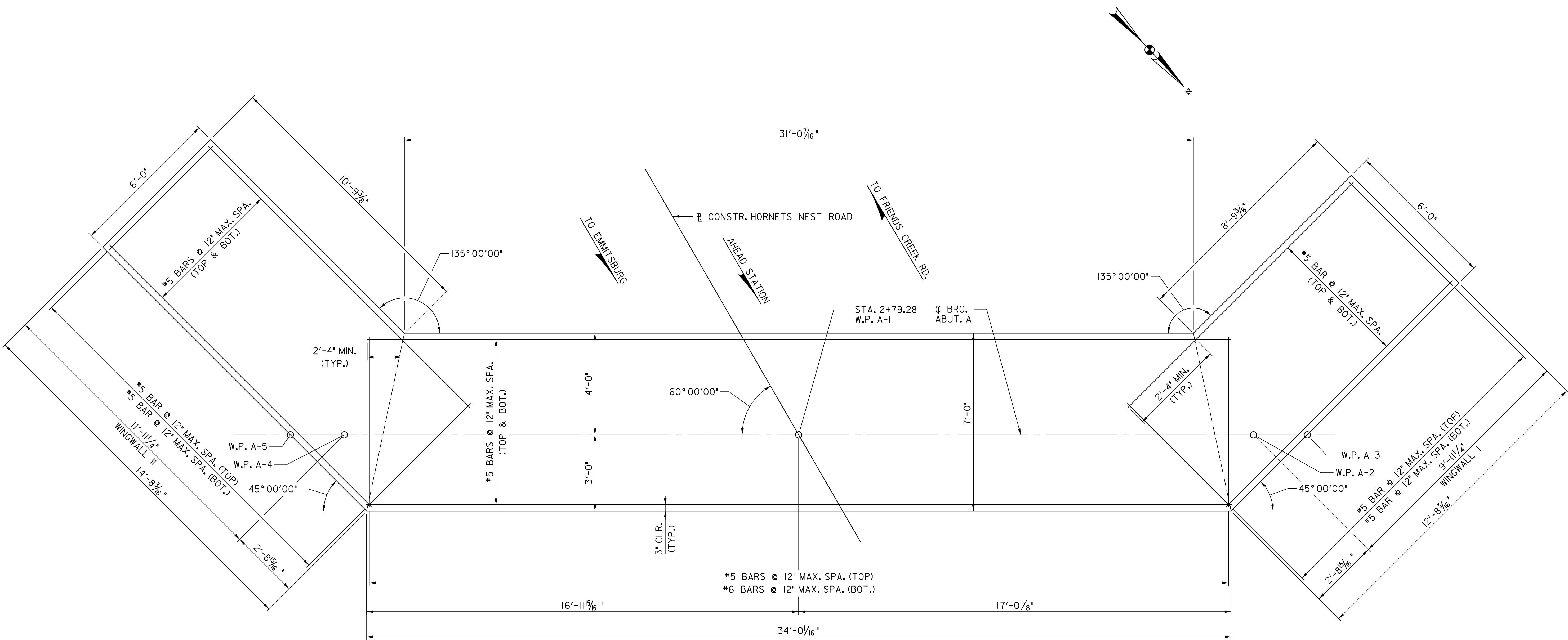
DRAWN BY JRM LOGMILE XXXX - XXXX

CHECKED BY KAR

AMT

A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204

SHEET NO. 6 OF 43



REINFORCEMENT PLAN - ABUTMENT A

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

NOTES:

1. ALL ANGLES ARE $90^{\circ} 00' 00''$ UNLESS NOTED OTHERWISE.
2. FOR WORK POINTS AND COORDINATES, SEE SHEET S-03.
3. FOR FOUNDATION NOTES, SEE SHEET S-03.

SHEET S-04

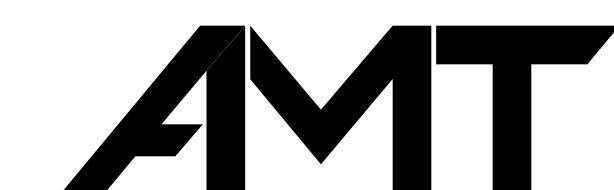


BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

ABUTMENT A - REINFORCEMENT PLAN

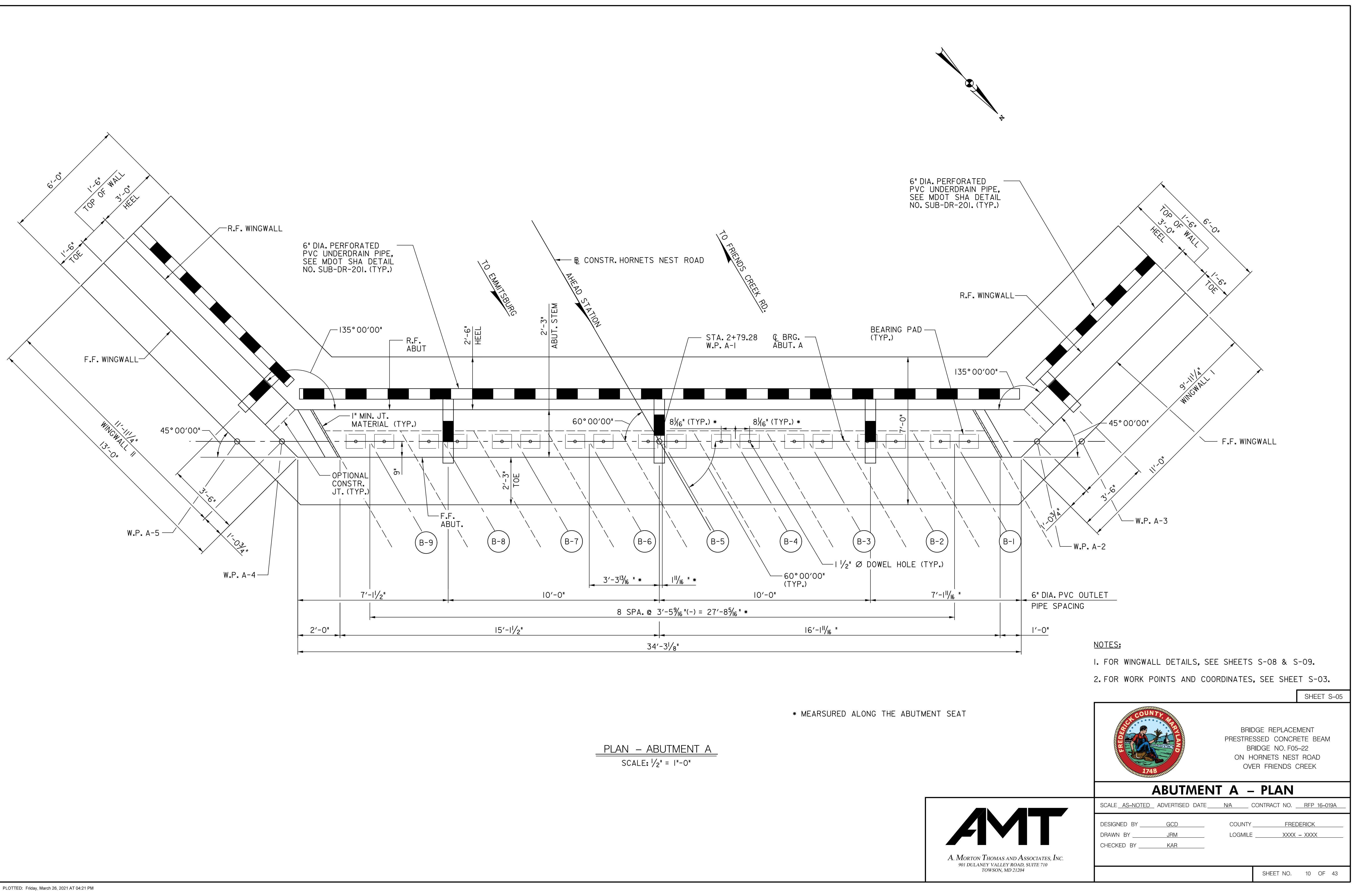
SCALE AS-NOTED ADVERTISED DATE NA CONTRACT NO. RFP 16-019A

DESIGNED BY GCD COUNTY FREDERICK
DRAWN BY JRM LOGMILE XXXX - XXXX
CHECKED BY KAR



A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204

SHEET NO. 9 OF 43

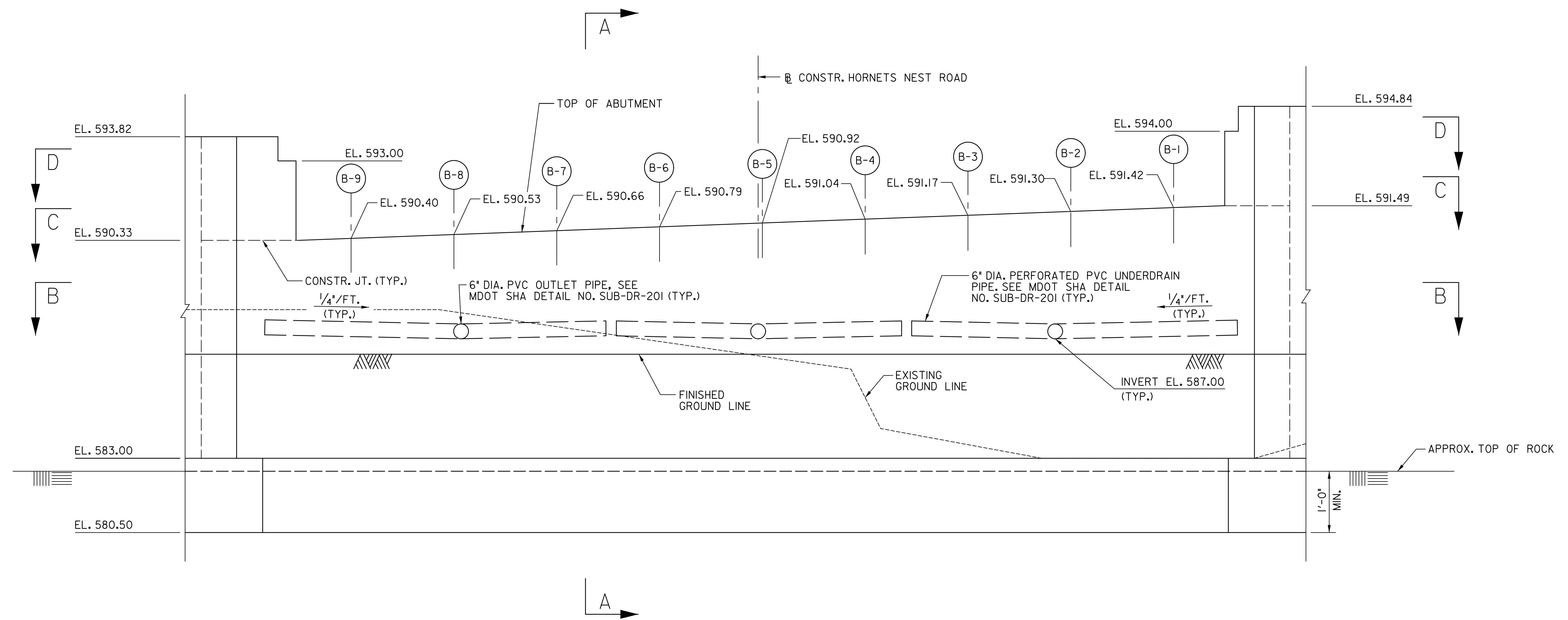


BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

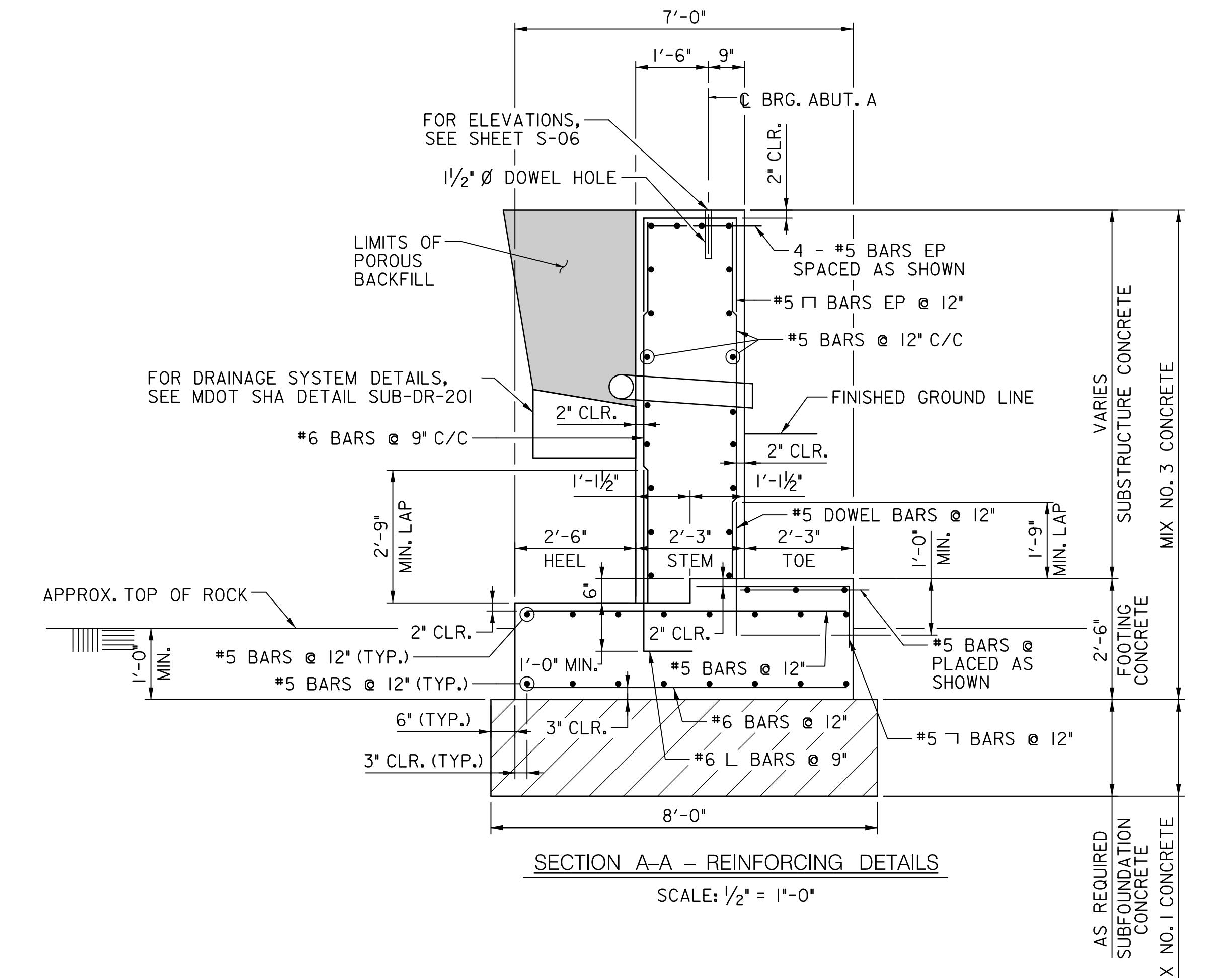
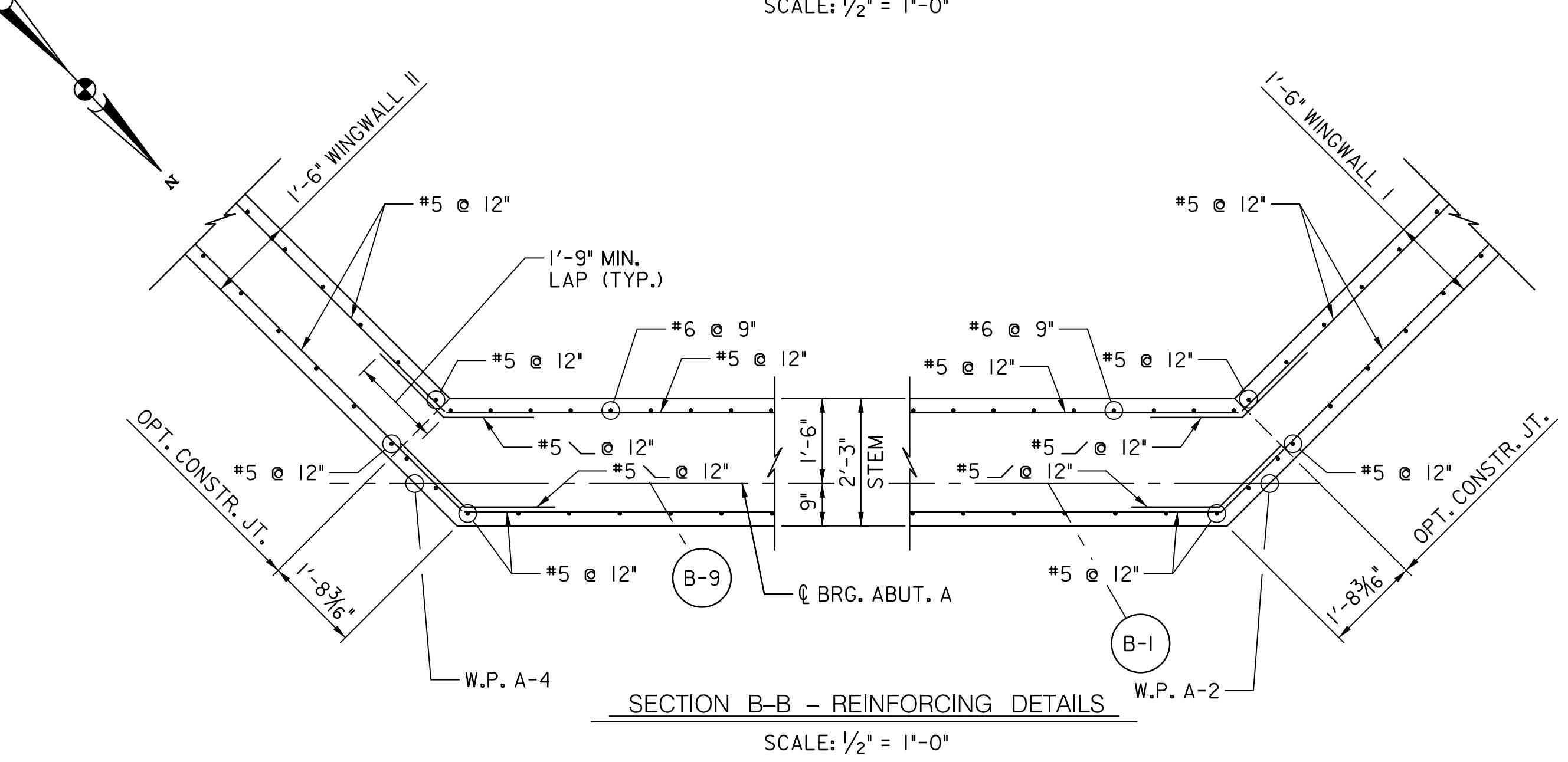
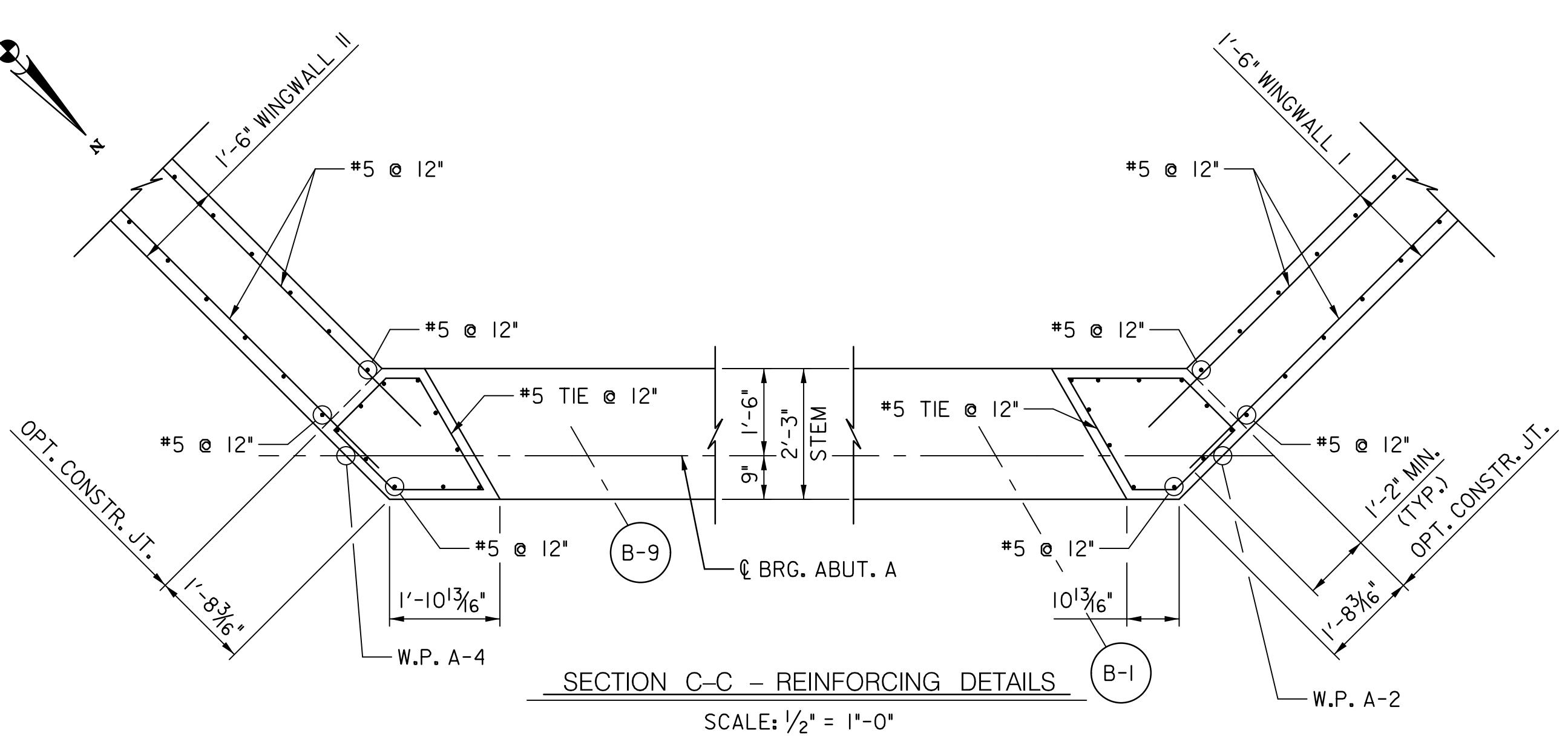
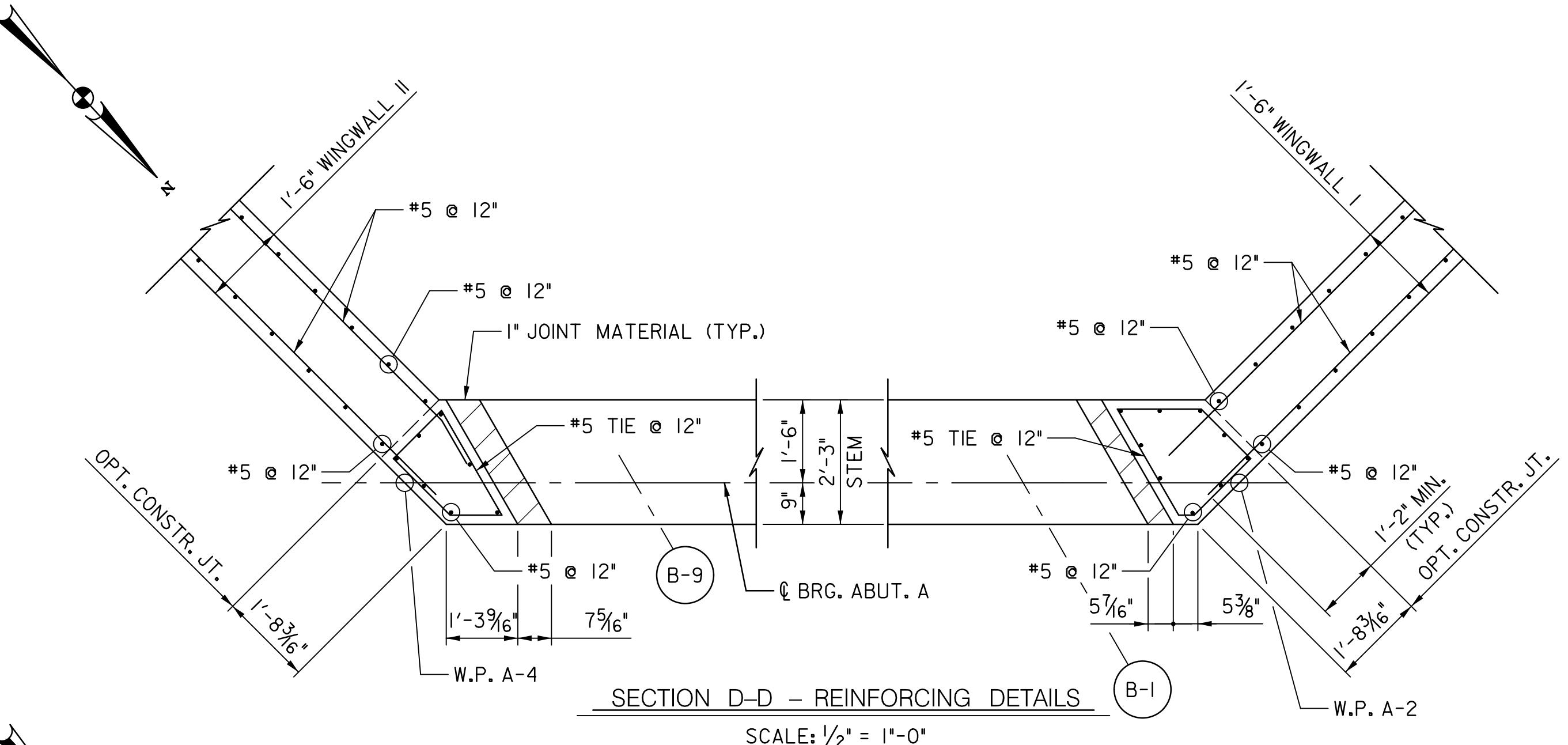
ABUTMENT A - PLAN

SCALE AS-NOTED ADVERTISED DATE NA CONTRACT NO. RFP 16-019A
DESIGNED BY GCD COUNTY FREDERICK
DRAWN BY JRM LOGMILE XXXX - XXXX
CHECKED BY KAR

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A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204



<p>BRIDGE REPLACEMENT PRESTRESSED CONCRETE BEAM BRIDGE NO. F05-22 ON HORNETS NEST ROAD OVER FRIENDS CREEK</p>	
<p>ABUTMENT A - ELEVATION</p>	
SCALE AS-NOTED	ADVERTISED DATE <u>NA</u> CONTRACT NO. <u>RFP 16-019A</u>
DESIGNED BY <u>GCD</u>	COUNTY <u>FREDERICK</u>
DRAWN BY <u>JRM</u>	LOGMILE <u>XXXX - XXXX</u>
CHECKED BY <u>KAR</u>	
<p>SHEET NO. <u>11</u> OF <u>43</u></p>	



Σ |

NOTES:

I. FOR THE LOCATION OF SECTION A-A, B-B, C-C, & D-D SEE SHEET S-05.

2. AT THE CONTRACTOR'S OPTION THE DOWELAND STEM BAR MAY BE PLACED AS A CONTINUOUS BAR. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THIS OPTION.

3. HOOK LENGTH FOR #6 BARS SHALL BE 1'-0".

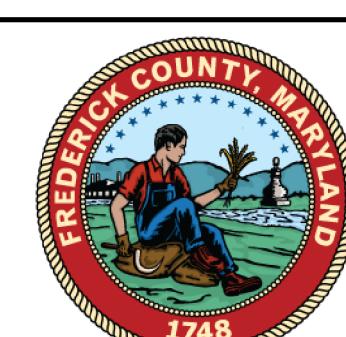
4. EP DENOTES EPOXY COATED.

5. SUPERSTRUCTURE OMITTED FOR CLARITY. FOR ADDITIONAL DETAILS, SEE MDOT SHA DETAIL NO. SUP-SLAB-601.

6. ALL ELASTOMERIC BEARING PADS SHALL BE PLACED WITH AN EPOXY ADHESIVE IN ACCORDANCE WITH SECTION 432.03.04. THE ADHESIVE SHALL BE APPLIED ON THE BOTTOM AND TOP OF THE PAD. ALL ELASTOMERIC BEARING PADS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF THE EPOXY PROTECTIVE COATING OF THE ABUTMENT.

7. PLACE 2 PLY WATERPROOFING MEMBRANE ON THE EARTH SIDE OF ALL CONSTRUCTION JOINTS WITH EARTH ON ONE SIDE AND AIR ON THE OTHER.

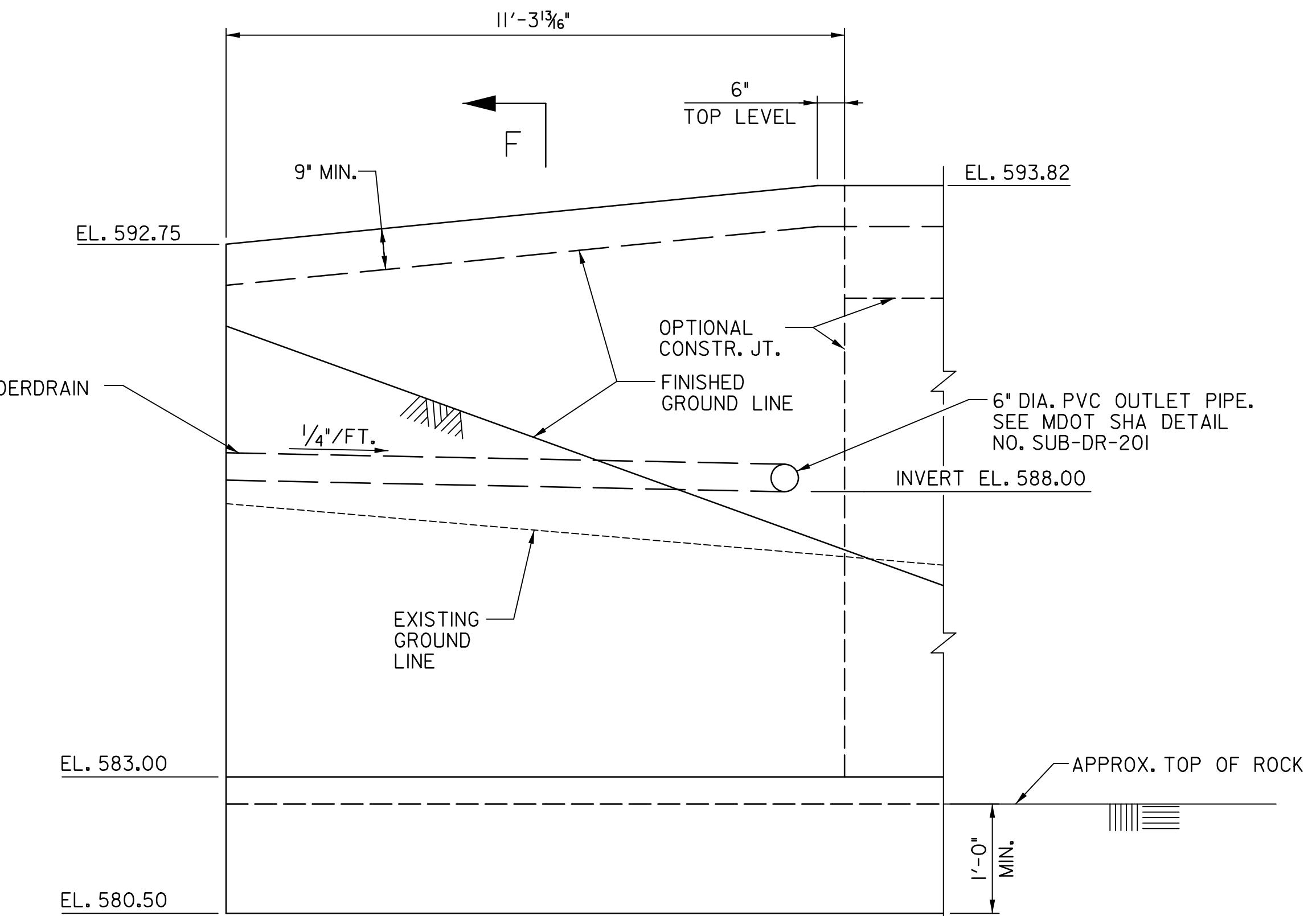
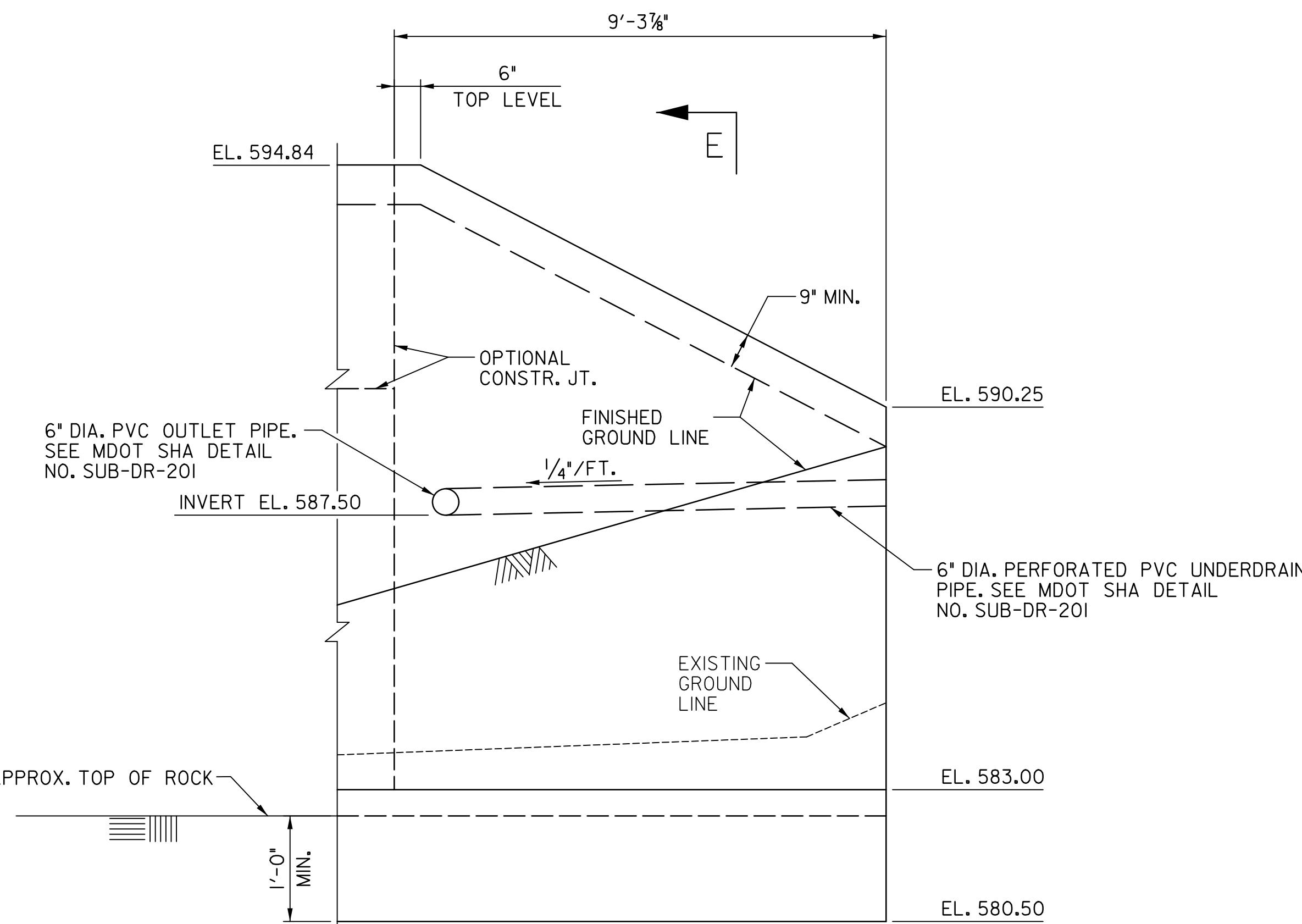
8. FOR FOUNDATION NOTES, SEE SHEET S-03



ABUTMENT A – SECTIONS

BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

The logo consists of the letters 'AMT' in a large, bold, black, sans-serif font. The letters are slanted slightly to the right. To the left of the letters is a thin vertical black line.



DATUM EL. 575.00

DATUM EL. 575.00

A technical drawing symbol consisting of a vertical line segment with a horizontal line segment extending from its top right corner. The letter 'E' is positioned near the top of the vertical line. A thick black arrowhead points to the left from the bottom of the vertical line.

EL EVELATION – WINGWALL I

SCALE: $1/8"$ = $1"-0"$

Diagram showing a force vector F acting on a vertical wall. The vector is labeled F and has a horizontal arrow pointing to the left.

NOTES:
I. FOR SECTIONS E-E AND F-F, SEE SHEET S-09.

SHEET S-08



ABUTMENT A – WINGWALL ELEVATIONS

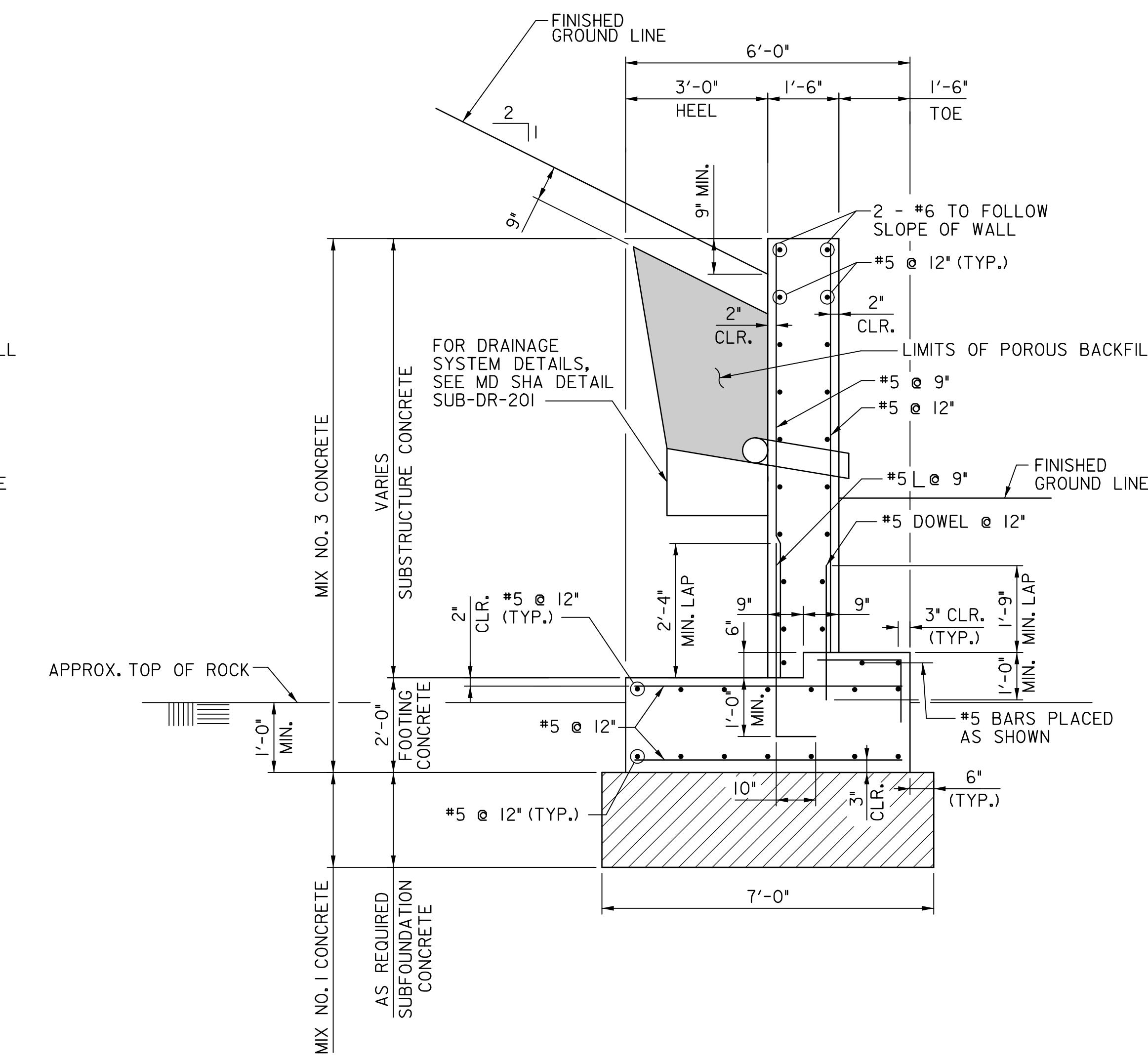
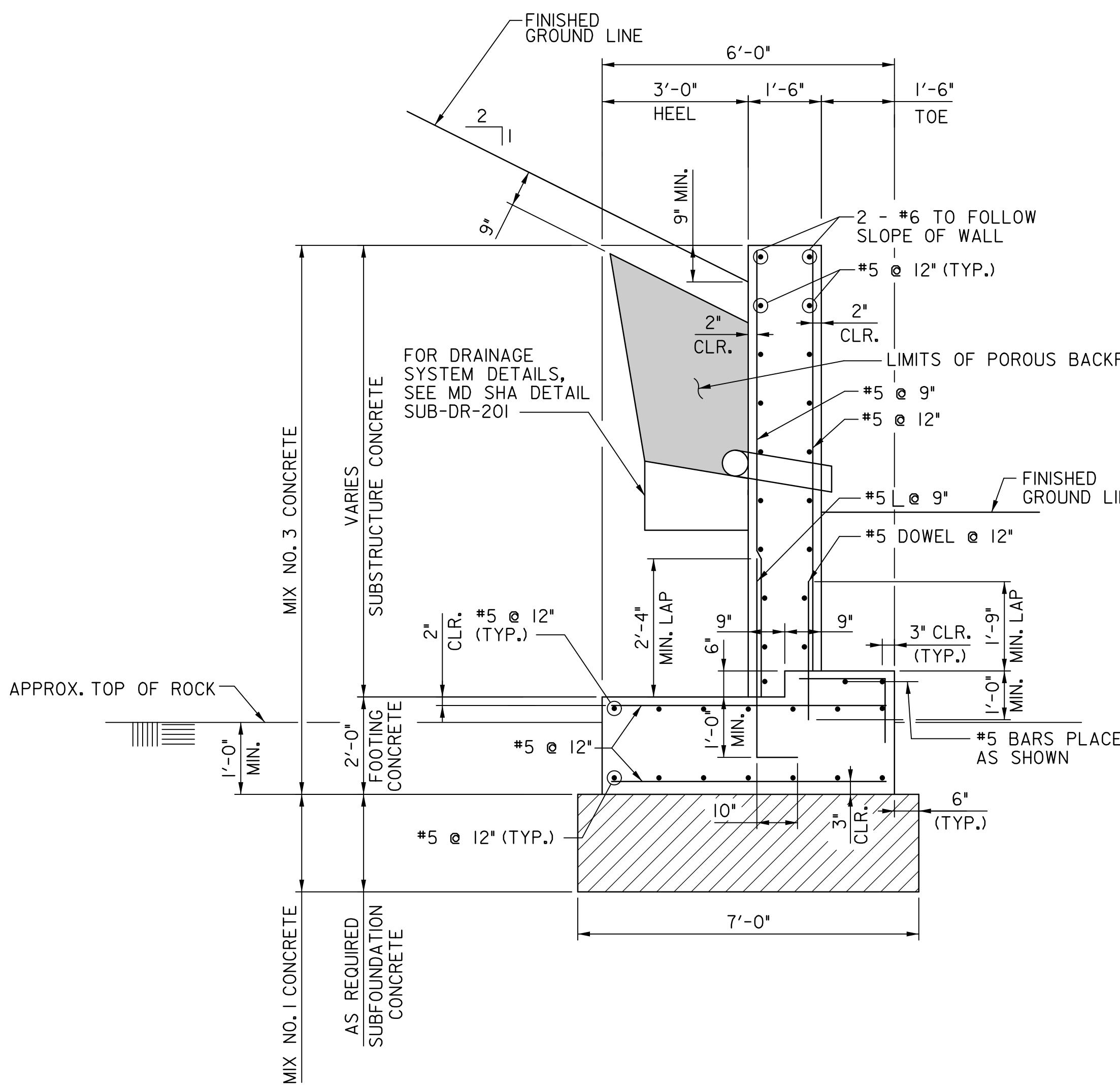
SCALE AS-NOTED ADVERTISED DATE N/A CONTRACT NO. RFP 16-019A

DESIGNED BY GCD COUNTY FREDERICK
DRAWN BY JRM LOGMILE XXXX - XXXX
CHECKED BY KAR

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A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204

SHEET NO. 13 OF 43



NOTES:

1. FOR LOCATION OF SECTION E-E & F-F, SEE SHEET S-08.
2. AT CONTRACTOR'S OPTION THE DOWEL AND STEM BAR MAYBE PLACED AS A CONTINUOUS BAR. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THIS OPTION.
3. HOOK LENGTH FOR #5 BARS SHALL BE 10".
4. FOR FOUNDATION NOTES, SEE SHEET S-03.



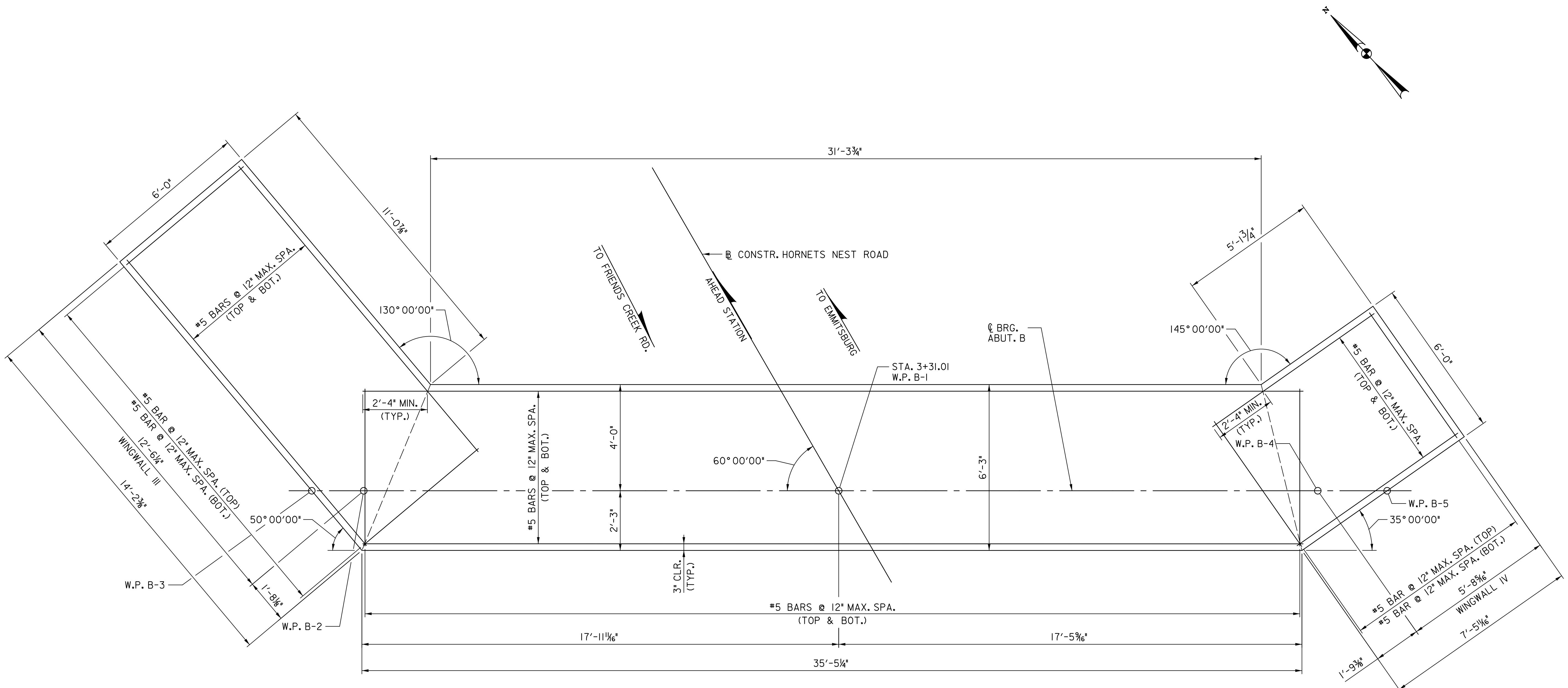
BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

ABUTMENT A - WINGWALL SECTIONS

SCALE AS-NOTED	ADVERTISED DATE	NA	CONTRACT NO.	RFP 16-019A
DESIGNED BY	LDL	COUNTY	FREDERICK	
DRAWN BY	JRM	LOGMILE	XXXX - XXXX	
CHECKED BY	GCD			



A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204



REINFORCEMENT PLAN – ABUTMENT B

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

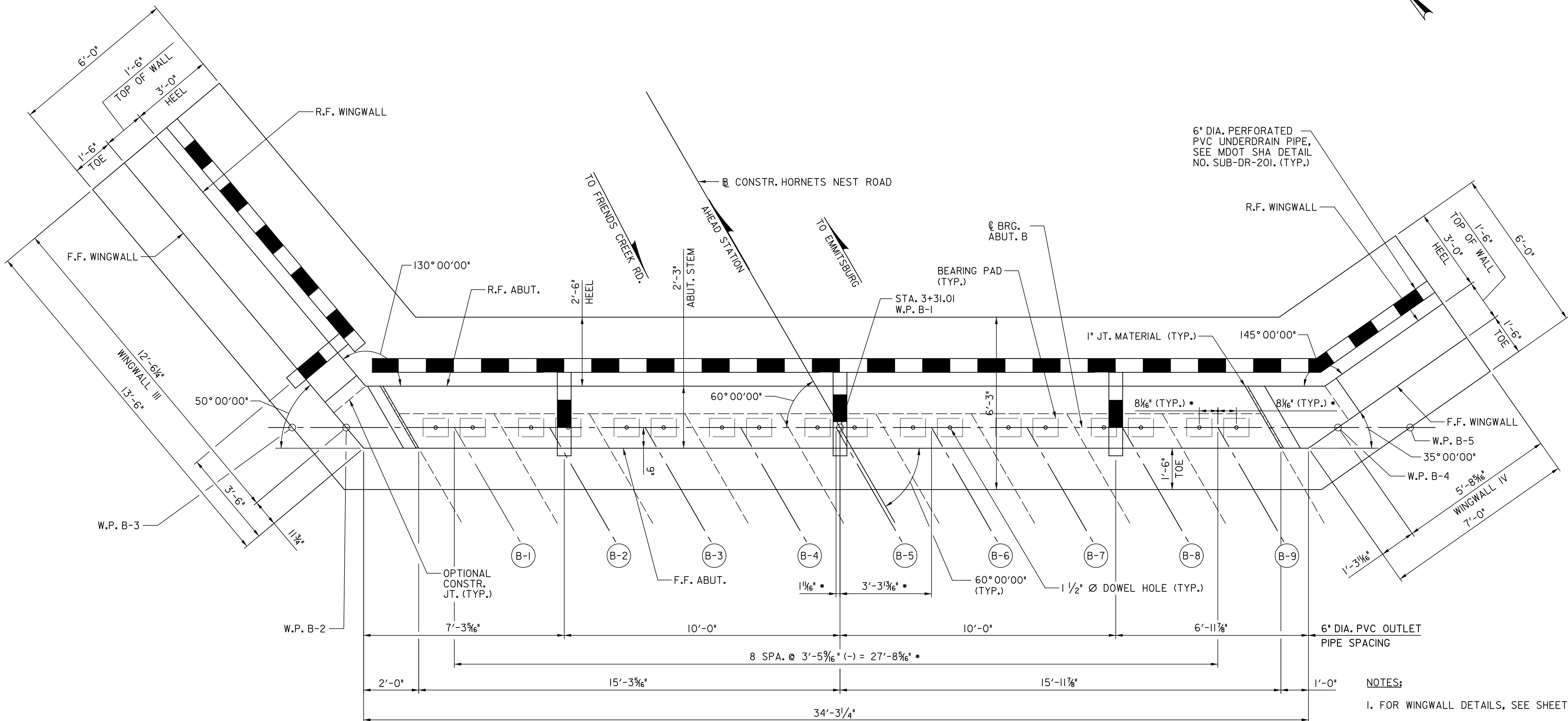


ABUTMENT B – REINFORCEMENT PLAN

SCALE AS-NOTED ADVERTISED DATE N/A CONTRACT NO. RFP 16-019A

DESIGNED BY GCD COUNTY FREDERICK
DRAWN BY JRM LOGMILE XXXX - XXXX
CHECKED BY KAR

AMT



* MEASURED ALONG THE ABUTMENT SEA

PLAN – ABUTMENT B

SCALE: $\frac{1}{2}$ " = 1"



BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

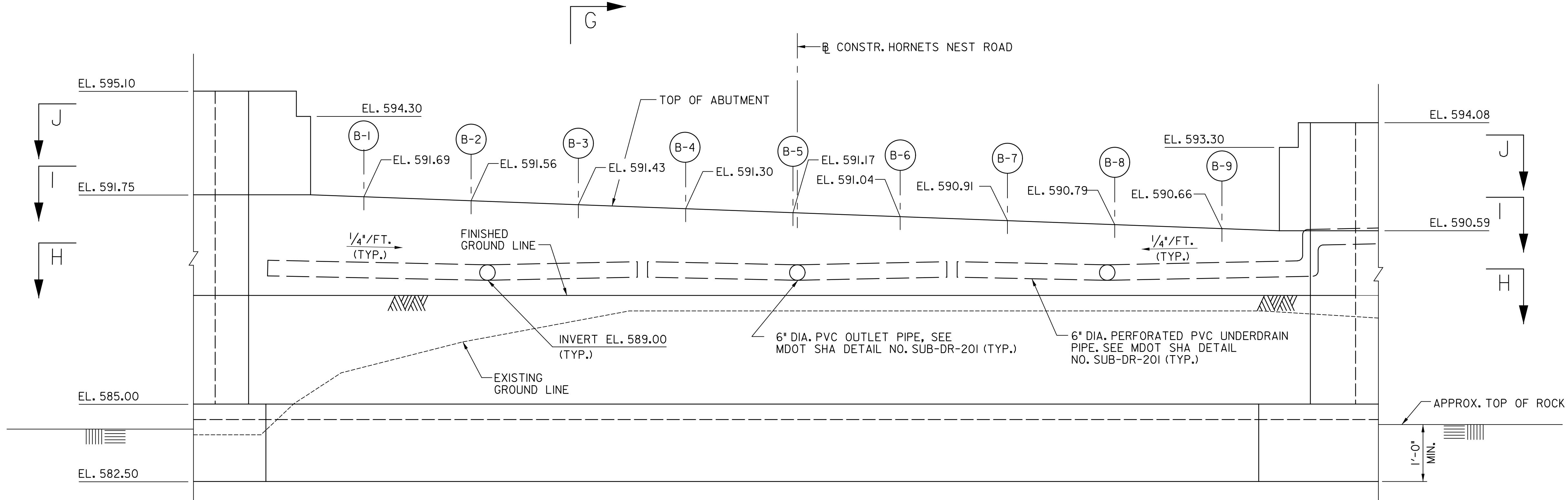
ABUTMENT B – PLAN

SCALE AS-NOTED ADVERTISED DATE N/A CONTRACT NO. RFP 16-019A

DESIGNED BY GCD COUNTY FREDERICK
DRAWN BY JRM LOGMILE XXXX - XXXX
CHECKED BY KAB

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901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204



ELEVATION - ABUTMENT B
SCALE: $\frac{1}{2}'' = 1'-0''$

NOTES:

1. FOR SECTION G-G, H-H, I-I, & J-J SEE SHEET S-13.
2. FOR WINGWALL DETAILS, SEE SHEETS S-14 & S-15.
3. CORNERBLOCKS ABOVE THE BEAM SEAT ELEVATIONS SHALL BE PLACED AFTER THE PLACEMENT OF THE SLAB BEAMS.

SHEET S-12



BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

ABUTMENT B - ELEVATION

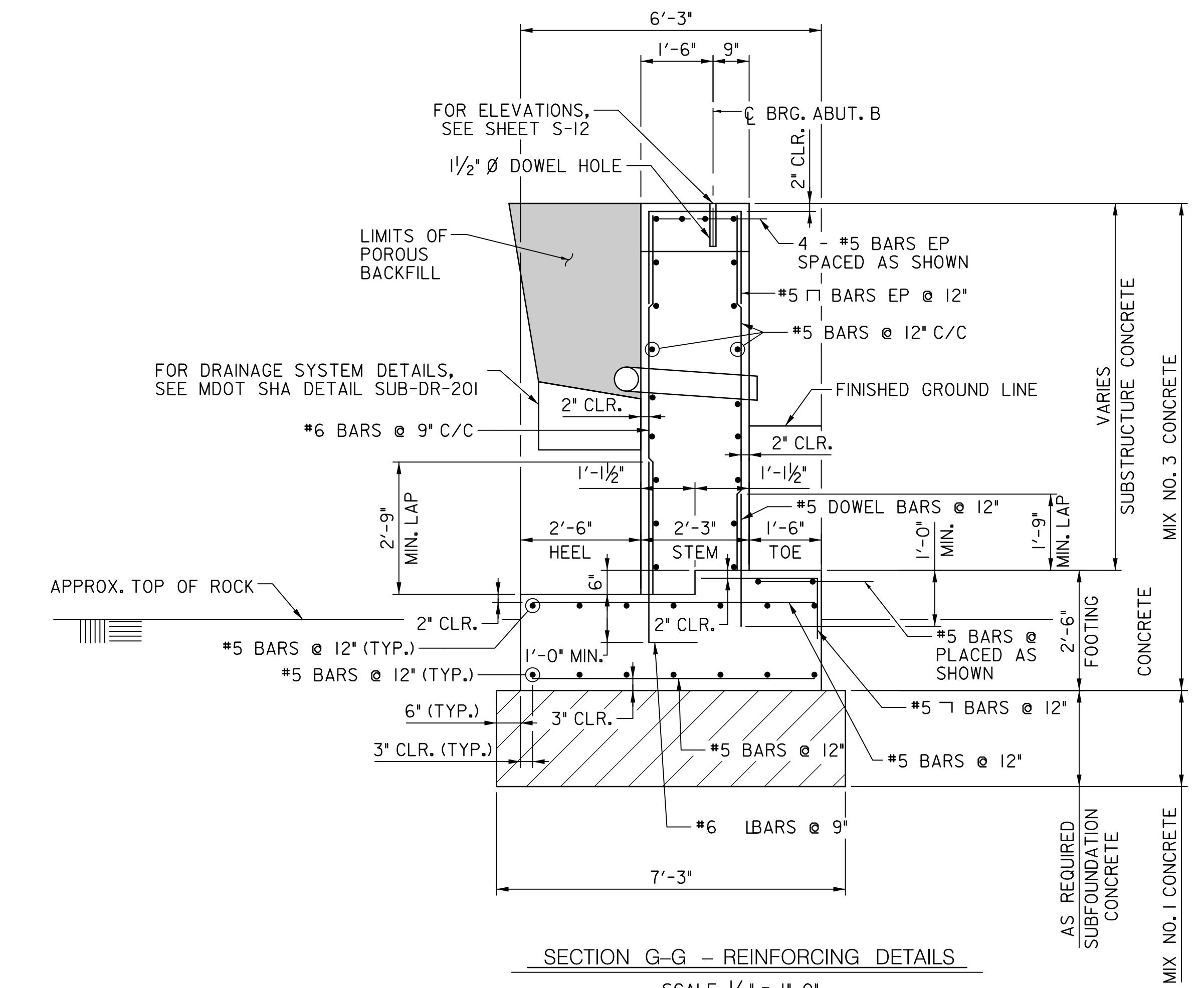
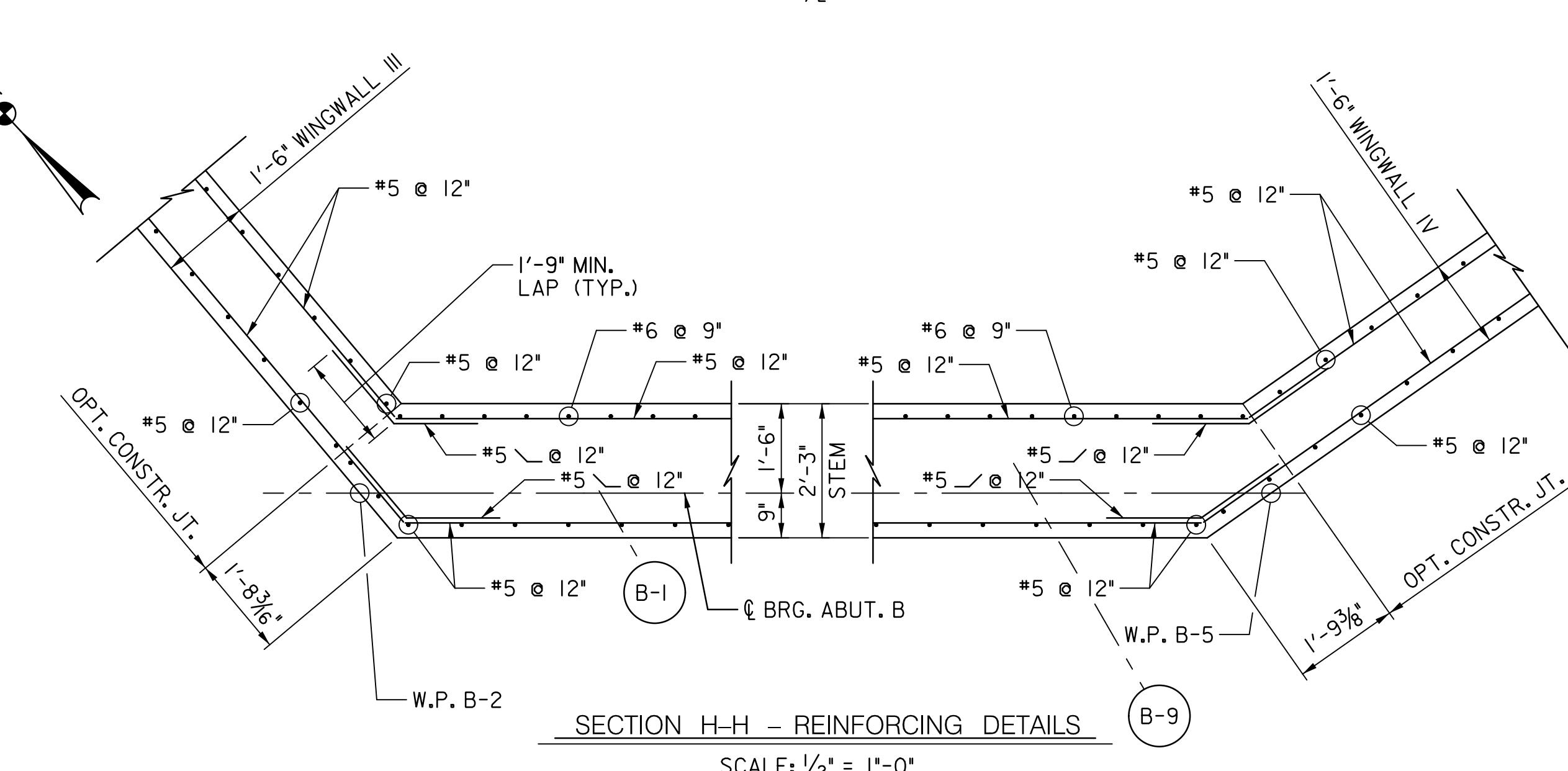
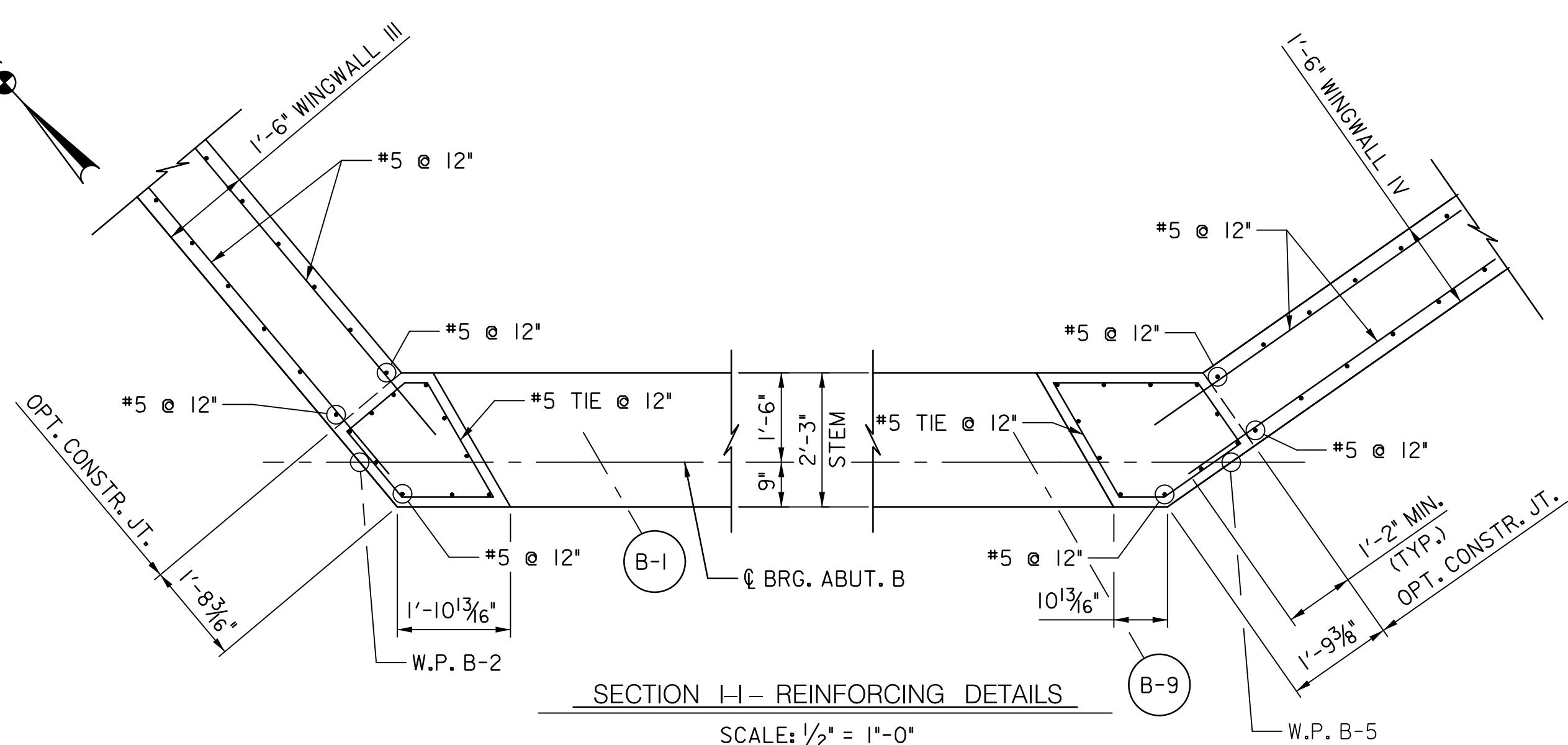
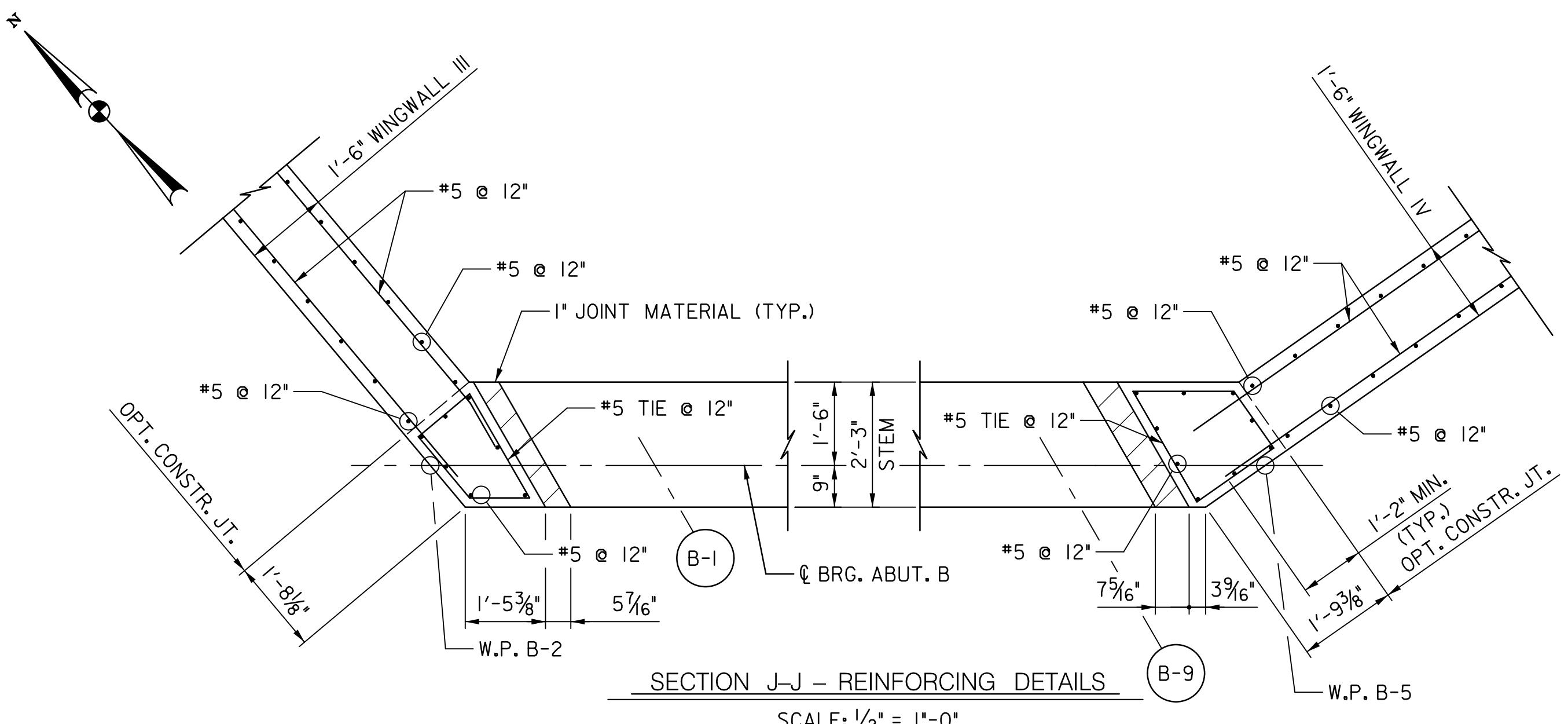
SCALE AS-NOTED ADVERTISED DATE NA CONTRACT NO. RFP 16-019A

DESIGNED BY GCD COUNTY FREDERICK
DRAWN BY JRM LOGMILE XXXX - XXXX
CHECKED BY KAR

AMT

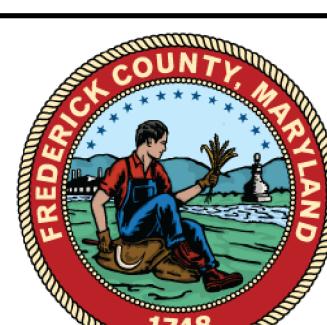
A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204

SHEET NO. 17 OF 43



NOTES:

- I. FOR THE LOCATION OF SECTION G-G, H-H, I-I, & J-J SEE SHEET S-12.
2. AT THE CONTRACTOR'S OPTION THE DOWEL AND STEM BAR MAY BE PLACED AS A CONTINUOUS BAR. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THIS OPTION.
3. HOOK LENGTH FOR #6 BARS SHALL BE 1'-0".
4. EP DENOTES EPOXY COATED.
5. SUPERSTRUCTURE OMITTED FOR CLARITY. FOR ADDITIONAL DETAILS, SEE MDOT SHA DETAIL NO. SUP-SLAB-601.
6. ALL ELASTOMERIC BEARING PADS SHALL BE PLACED WITH AN EPOXY ADHESIVE IN ACCORDANCE WITH SECTION 43.03.04. THE ADHESIVE SHALL BE APPLIED ON THE BOTTOM AND TOP OF THE PAD. ALL ELASTOMERIC BEARING PADS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF THE EPOXY PROTECTIVE COATING OF THE ABUTMENT.
7. FOR FOUNDATION NOTES, SEE SHEET S-03.



ABUTMENT B – SECTIONS

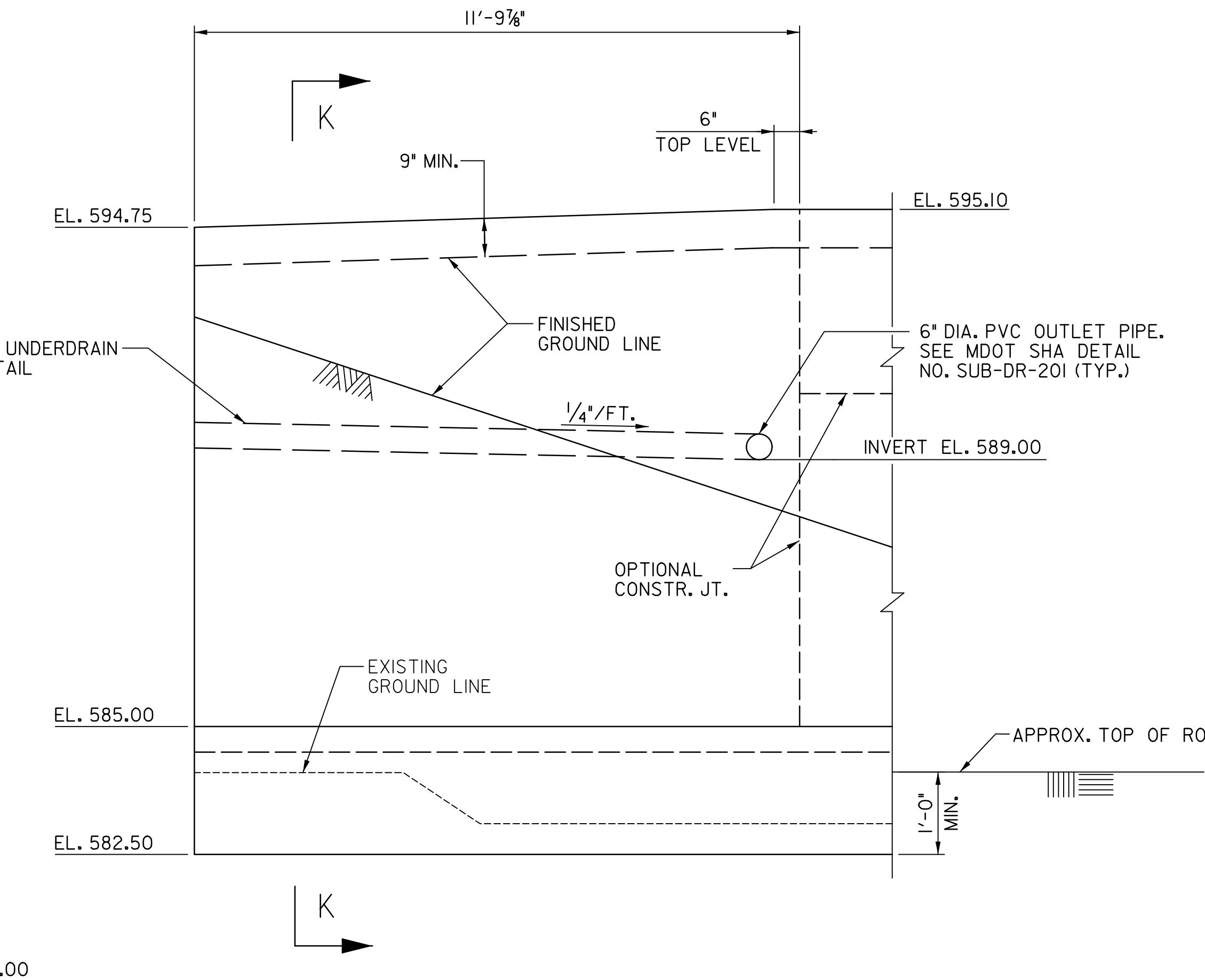
BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK



A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON MD 21204

AS-NOTED ADVERTISED DATE N/A CONTRACT NO. RFP 16-019A
SIGNED BY JSL COUNTY FREDERICK
AWN BY JRM LOGMILE XXXX - XXXX
OKED BY CCB

SHEET NO. 18 OF 43



ELEVATION - WINGWALL III

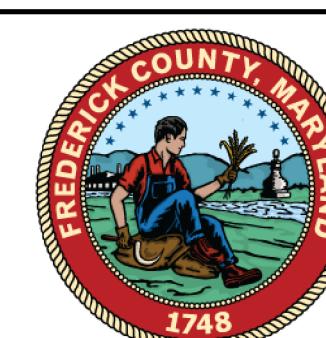
SCALE: $1/2'' = 1'-0''$

ELEVATION - WINGWALL IV

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

NOTES:
I. FOR SECTIONS K-K AND L-L, SEE SHEET S-15.

SHEET S-14



BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

ABUTMENT B - WINGWALL ELEVATIONS

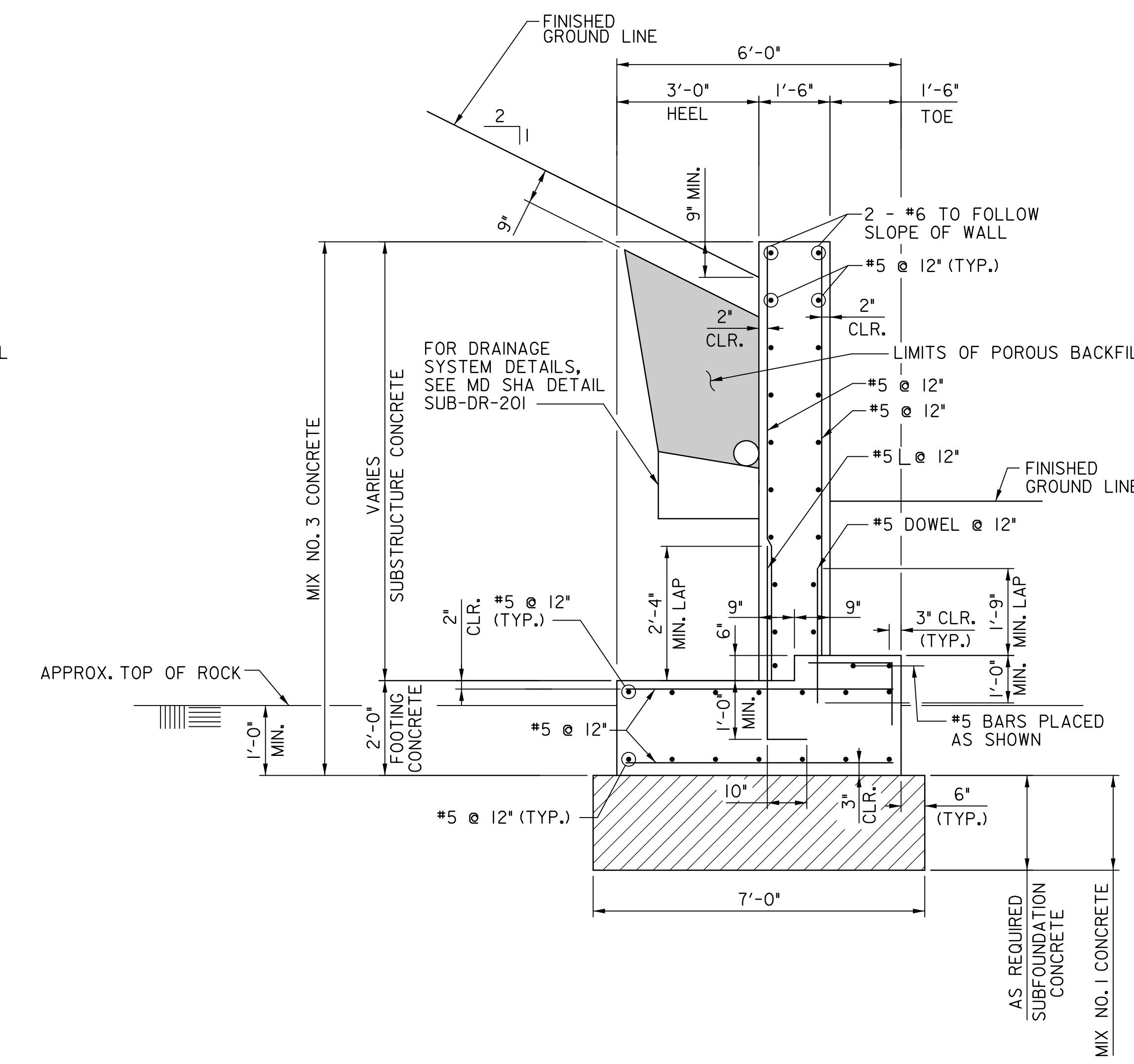
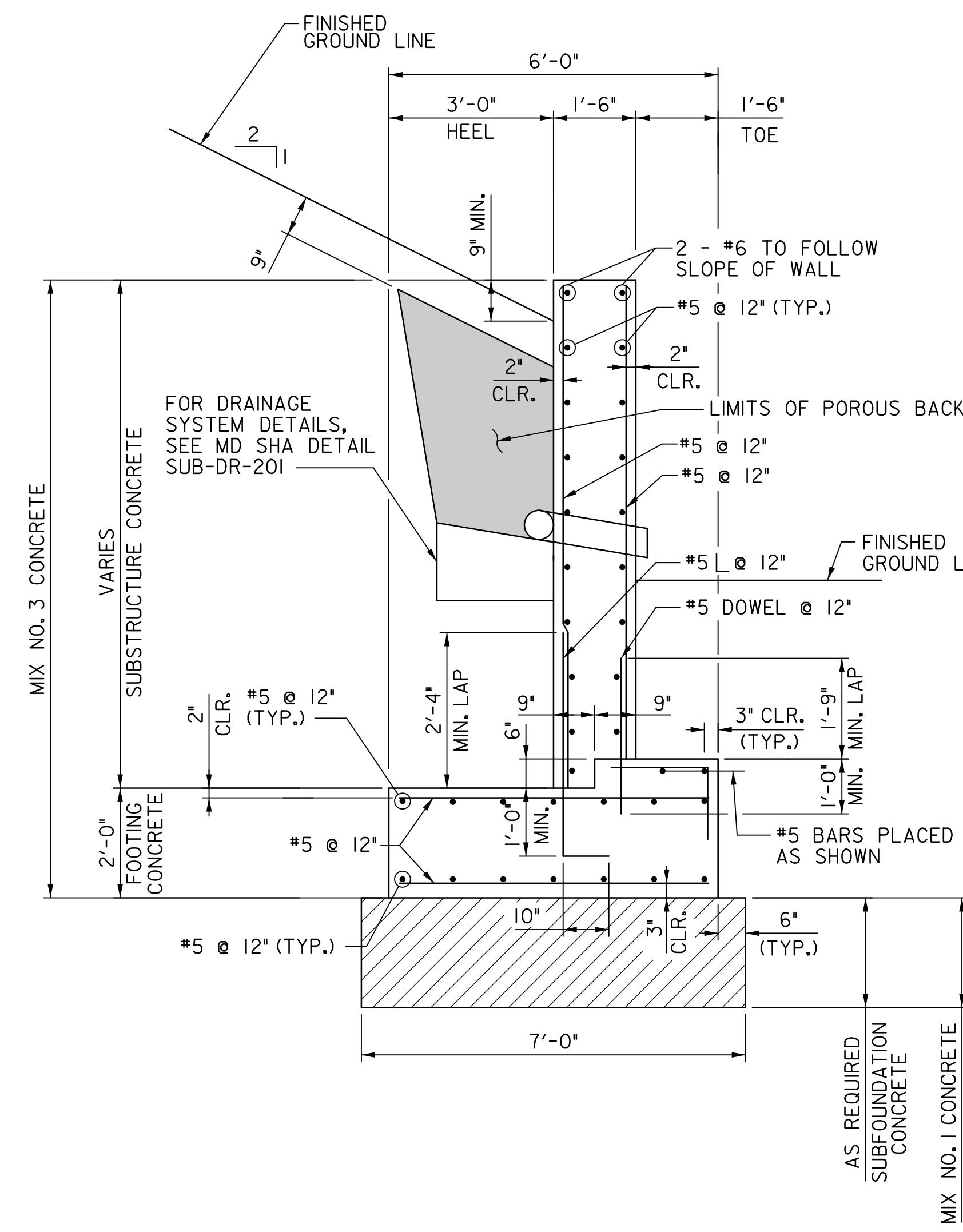
SCALE AS-NOTED ADVERTISED DATE NA CONTRACT NO. RFP 16-019A

DESIGNED BY GCD COUNTY FREDERICK
DRAWN BY JRM LOGMILE XXXX - XXXX
CHECKED BY KAR



A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204

SHEET NO. 19 OF 43



NOTES:

1. FOR LOCATION OF SECTION K-K & L-L, SEE SHEET S-14.
2. AT THE CONTRACTOR'S OPTION THE DOWEL AND STEM BAR MAY BE PLACED AS A CONTINUOUS BAR. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THIS OPTION.
3. HOOK LENGTH FOR #5 BARS SHALL BE 10".
4. FOR FOUNDATION NOTES, SEE SHEET S-03.

SHEET S-15



BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

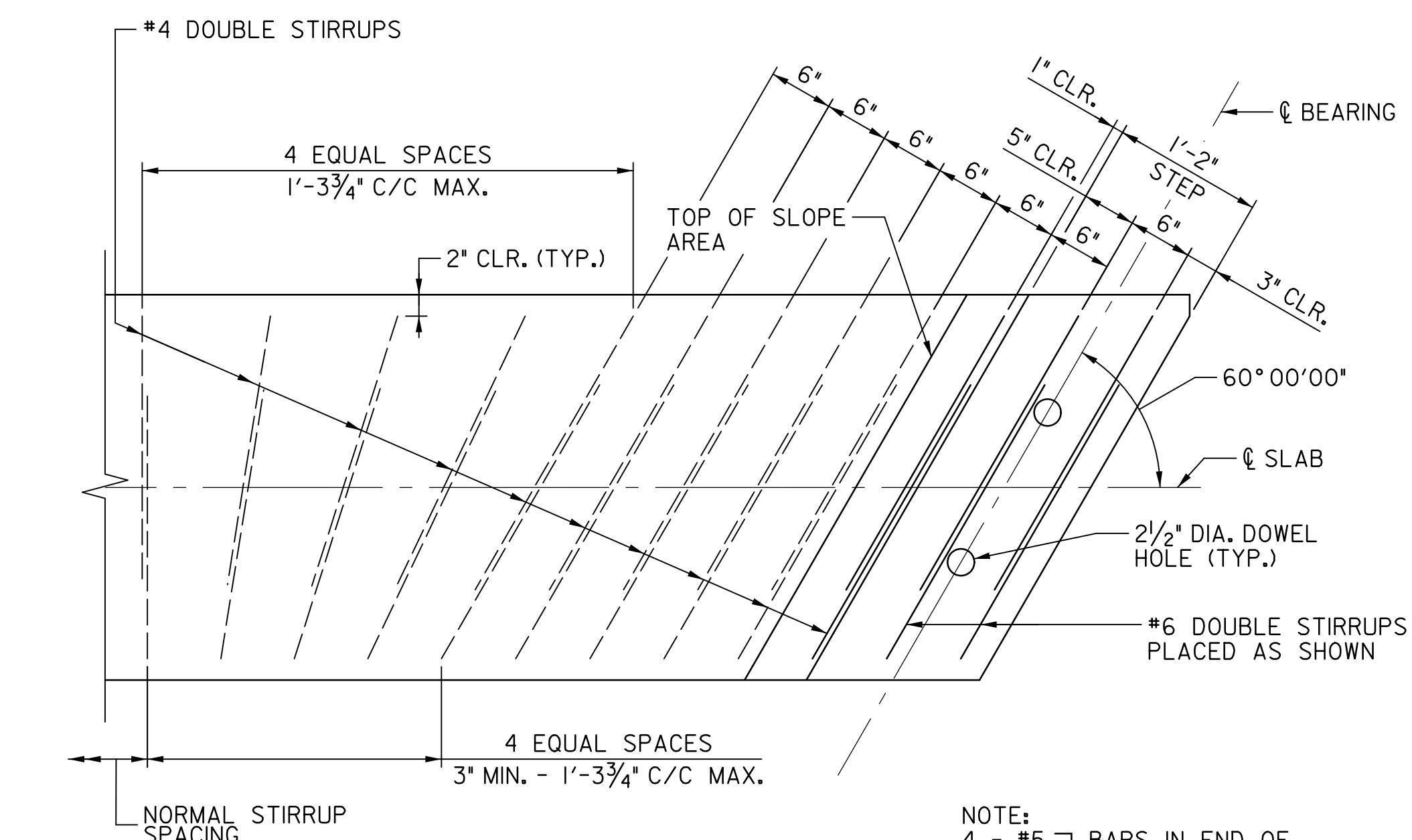
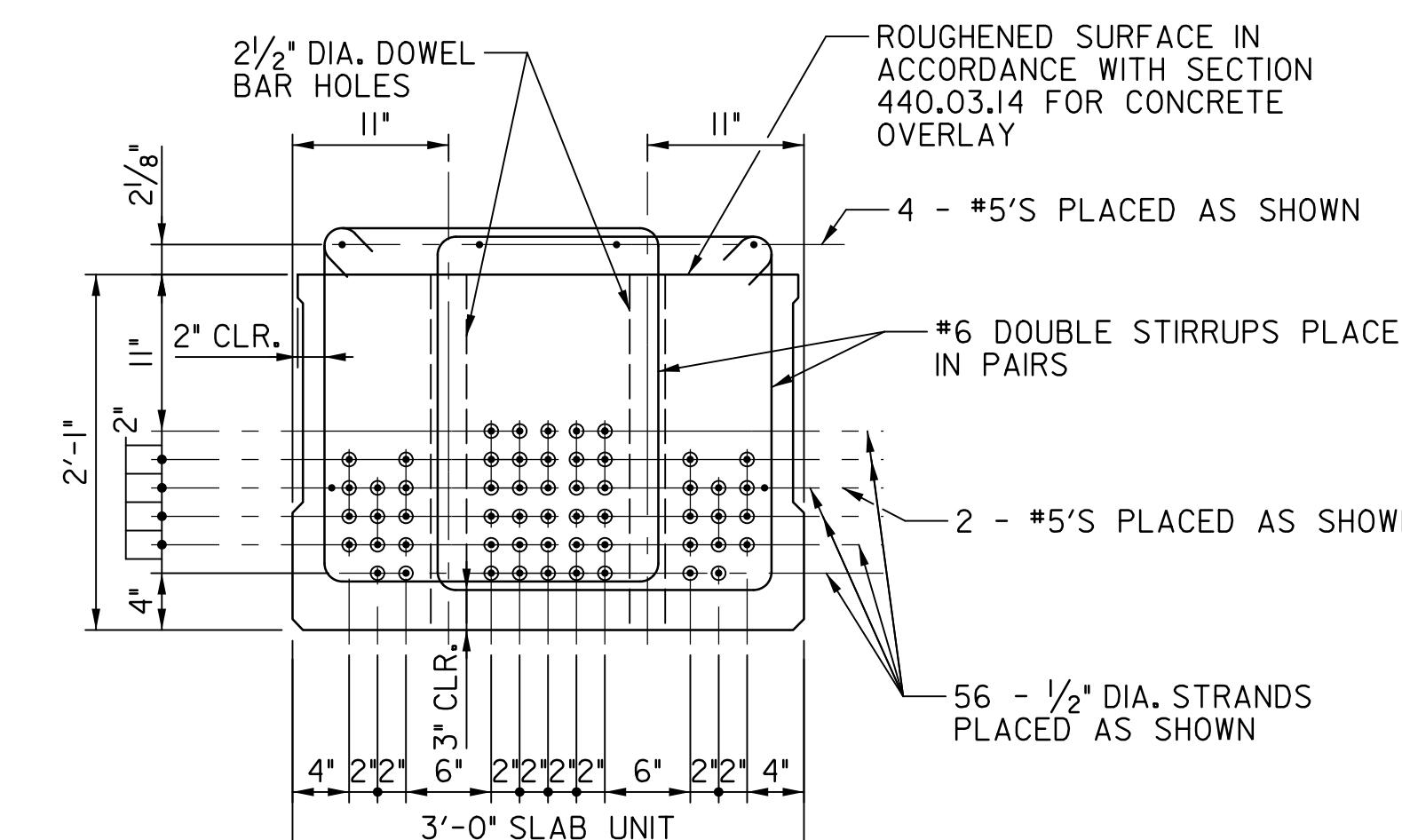
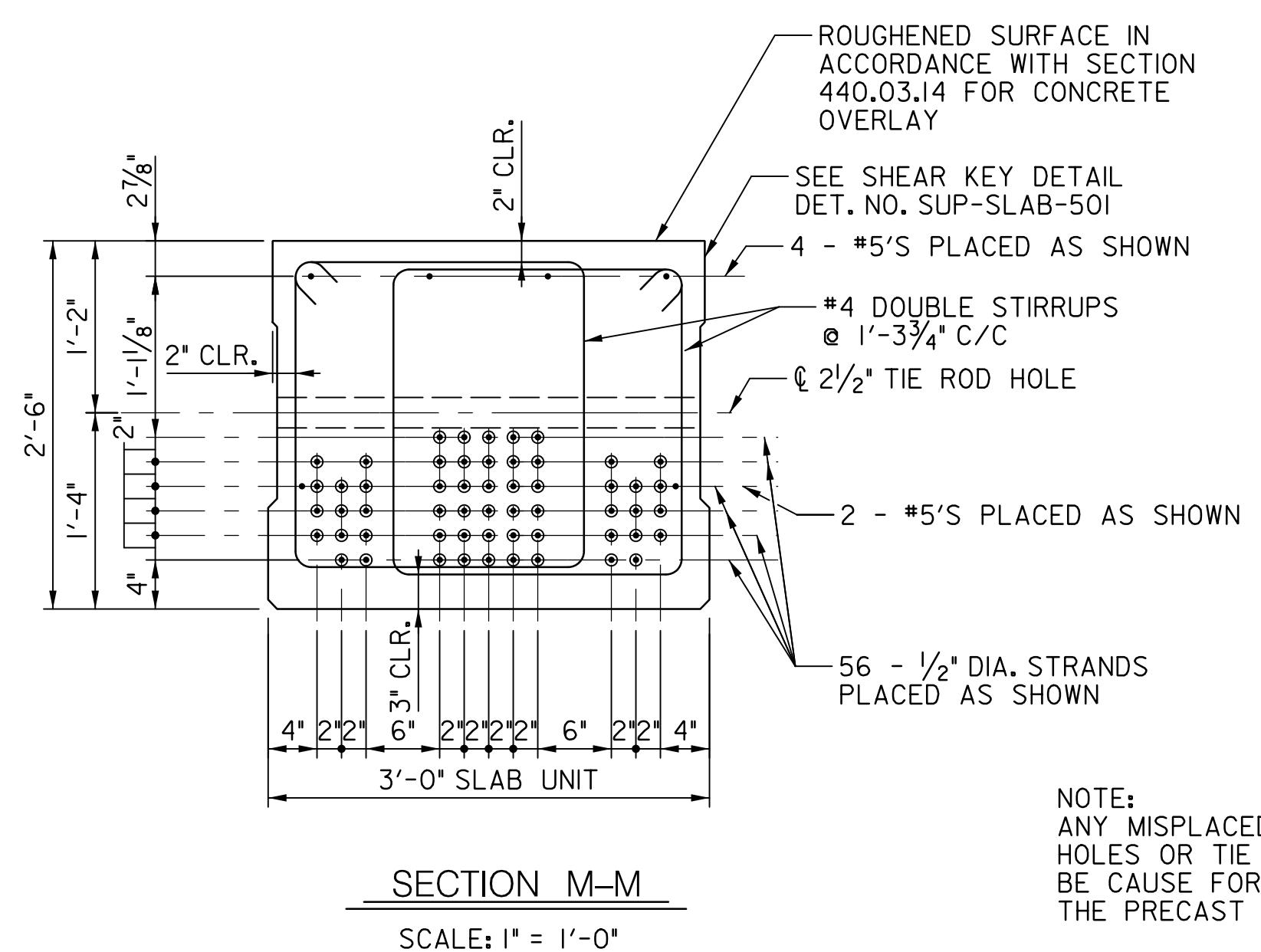
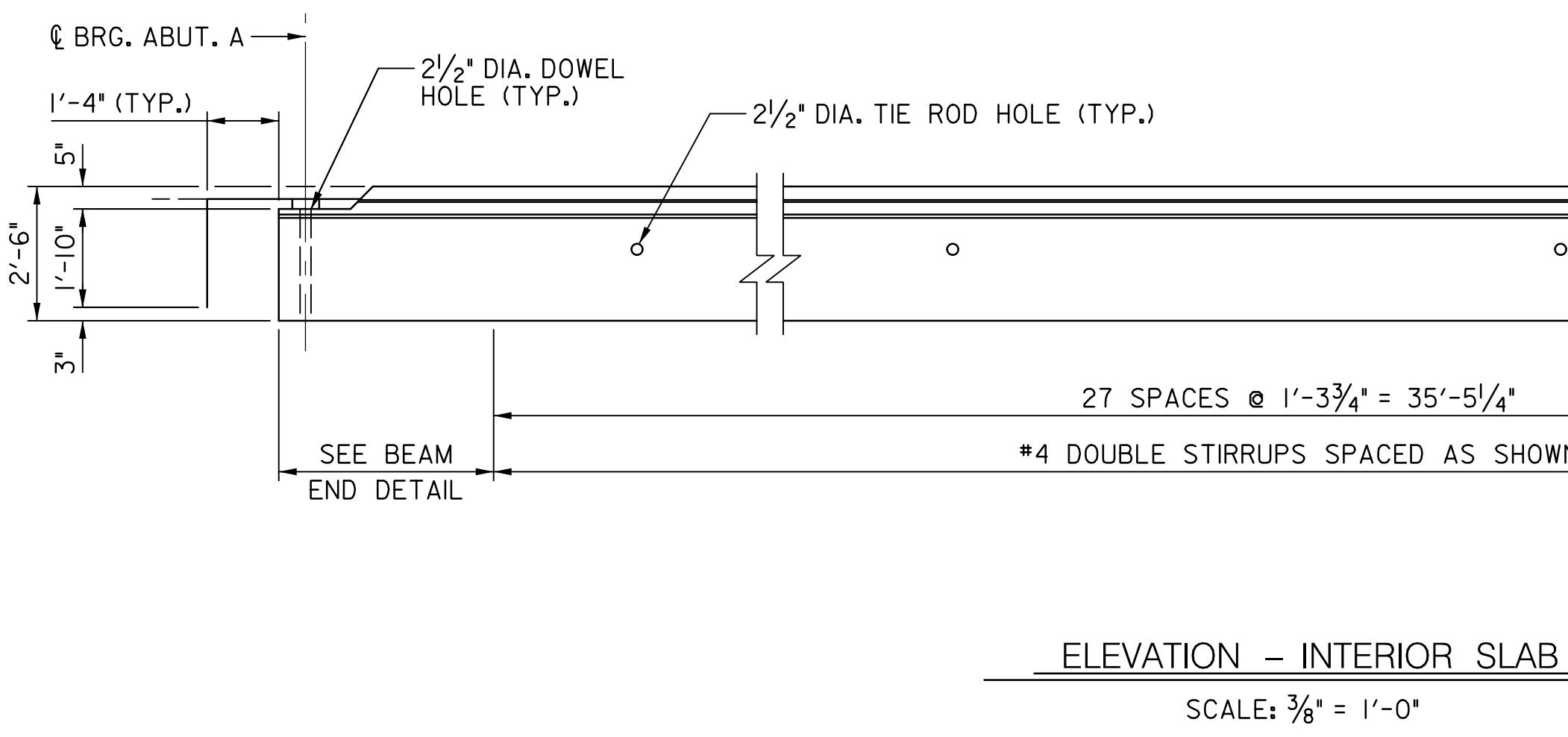
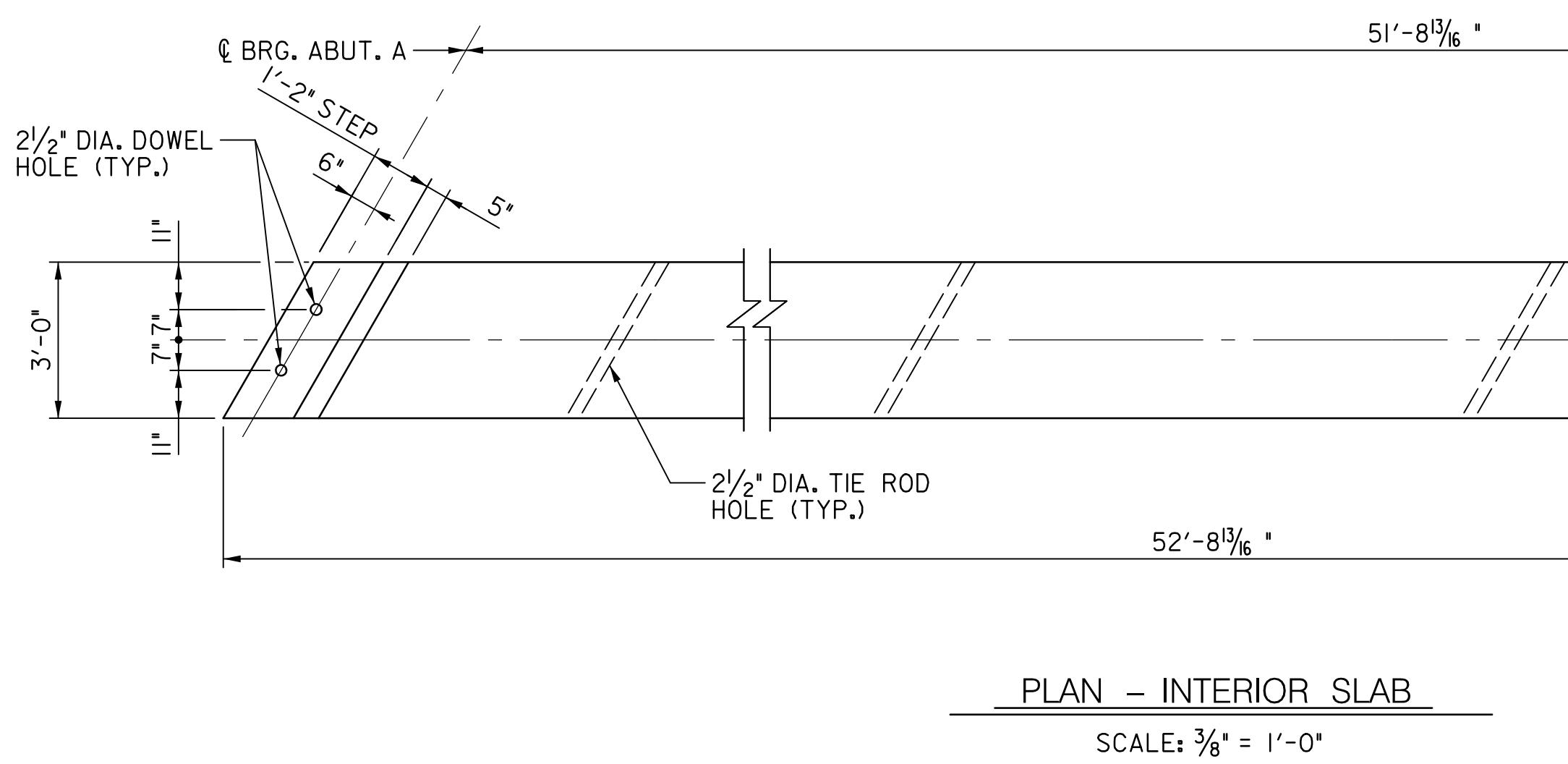
ABUTMENT B – WINGWALL SECTIONS

SCALE AS-NOTED ADVERTISED DATE NA CONTRACT NO. RFP 16-019A

AMT
A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204

DESIGNED BY LDL COUNTY FREDERICK
DRAWN BY JRM LOGMILE XXXX - XXXX
CHECKED BY GCD

SHEET NO. 20 OF 43



NOTE TO FABRICATOR: END OF STIRRUPS SPACING MUST BE LAID OUT TO DETERMINE SPACING.

NOTES:

1. EXTREME CARE SHALL BE USED IN LOCATING TIE ROD HOLES DURING THE CASTING OPERATION. THE CONTRACTOR SHALL ASSEMBLE THE SLAB UNITS FOR THE ENTIRE BRIDGE WIDTH AT THE CASTING PLANT TO ENSURE THAT THERE IS NO HOLE MISALIGNMENT OF THE TIE ROD HOLES PRIOR TO SHIPPING THE SLAB UNITS. ANY MISALIGNMENT OF THE TIE ROD HOLES WILL BE CAUSE FOR REJECTION OF THE SLAB UNIT(S). NO DRILLING OR CORING OF THE SLAB UNITS WILL BE PERMITTED.
2. ADJUST CURB REBAR AND STIRRUP SPACING AS NEEDED TO AVOID TIE ROD HOLES AND RAILING ANCHOR BLOTS (IF APPLICABLE).
3. ALL REINFORCING STEEL TO BE EPOXY COATED.
4. SLAB UNIT LENGTHS IN THE CASTING BED SHALL BE DETERMINED AND DEPICTED IN THE SHOP DRAWINGS TO COMPENSATE FOR GRADE SHORTENING DUE TO THE PRESTRESS EFFECT.
5. THE TOP SURFACE OF ALL SLAB UNITS SHALL BE ROUGH FINISHED TO A FULL AMPLITUDE OF $\frac{1}{4}$ " AND SCRUBBED TRANSVERSELY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE AND TO PRODUCE A ROUGHED SURFACE FOR BONDING WITH THE CONCRETE OVERLAY.
6. NO CLEAR COVER LESS THAN SHOWN ON THESE PLANS WILL BE ACCEPTED.
7. FOR CAMBER DIAGRAM AND VALUES, SEE SHEET S-19.
8. FOR TIE-ROD SPACING, SEE SHEET S-16.

SHEET S-17

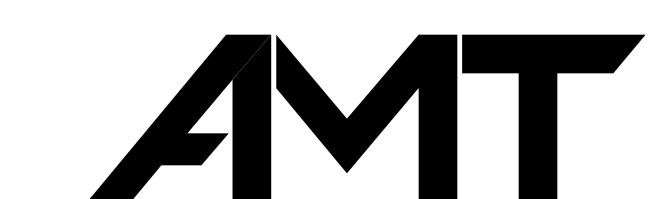


BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

INTERIOR PRECAST SLAB PANEL DETAILS

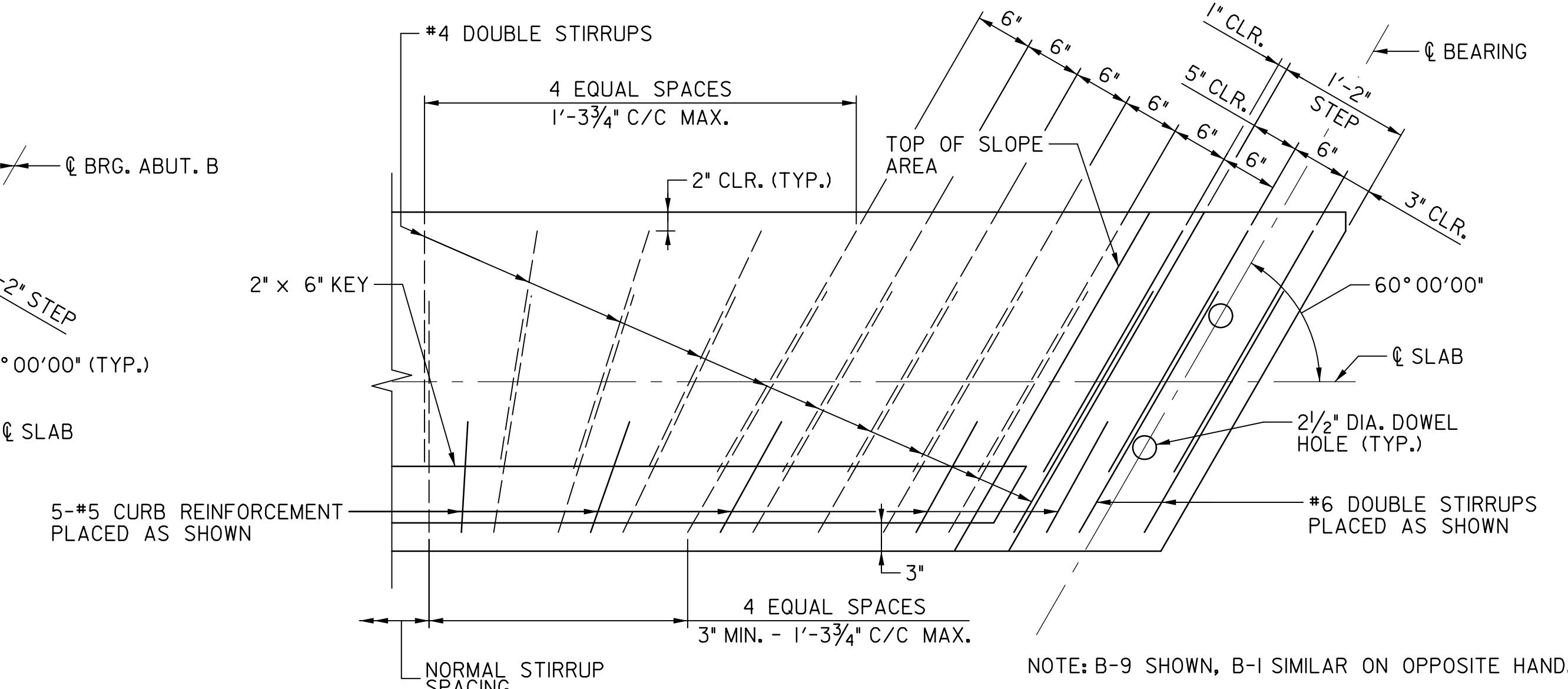
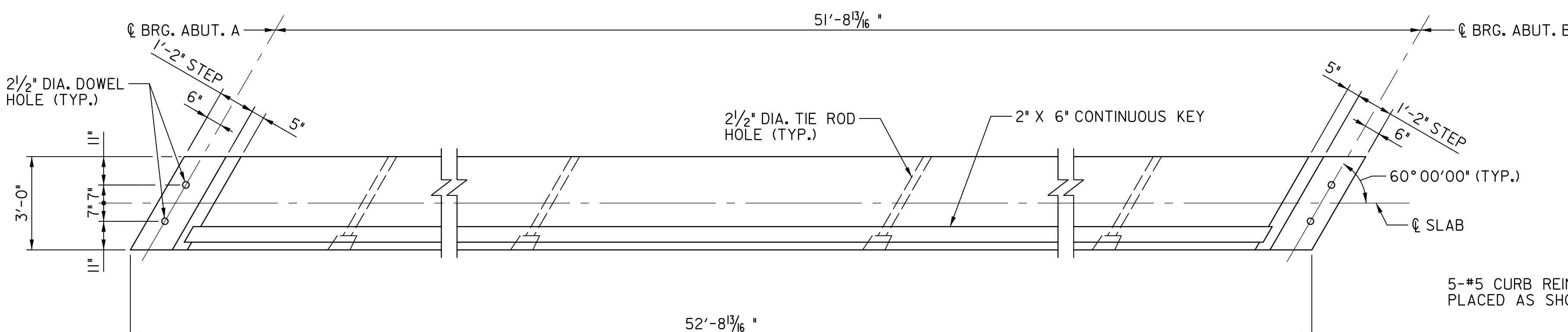
SCALE AS-NOTED ADVERTISED DATE NA CONTRACT NO. RFP 16-019A

DESIGNED BY GCD COUNTY FREDERICK
DRAWN BY JAP LOGMILE XXXX - XXXX
CHECKED BY KAR



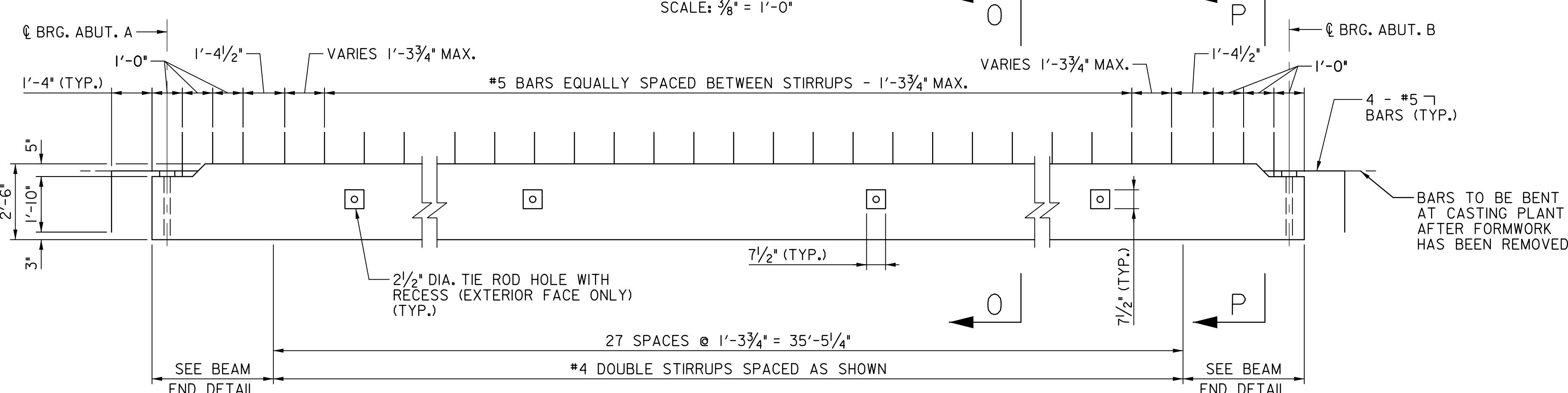
A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204

SHEET NO. 22 OF 43



PLAN - EXTERIOR SLAB

NOTE: B-9 SHOWN, B-1 SIMILAR ON OPPOSITE HAND.
SCALE: $\frac{3}{8}$ " = 1'-0"



BEAM END DETAIL

ABUTMENT B END SHOWN, ABUTMENT A END SIMILAR ON OPPOSITE HAND.
SCALE: 1" = 1'-0"

NOTE: 4 - #5 bars in end of slab not shown for clarity.

NOTE TO FABRICATOR:
END OF STIRRUP SPACING MUST BE LAID OUT TO DETERMINE SPACING.

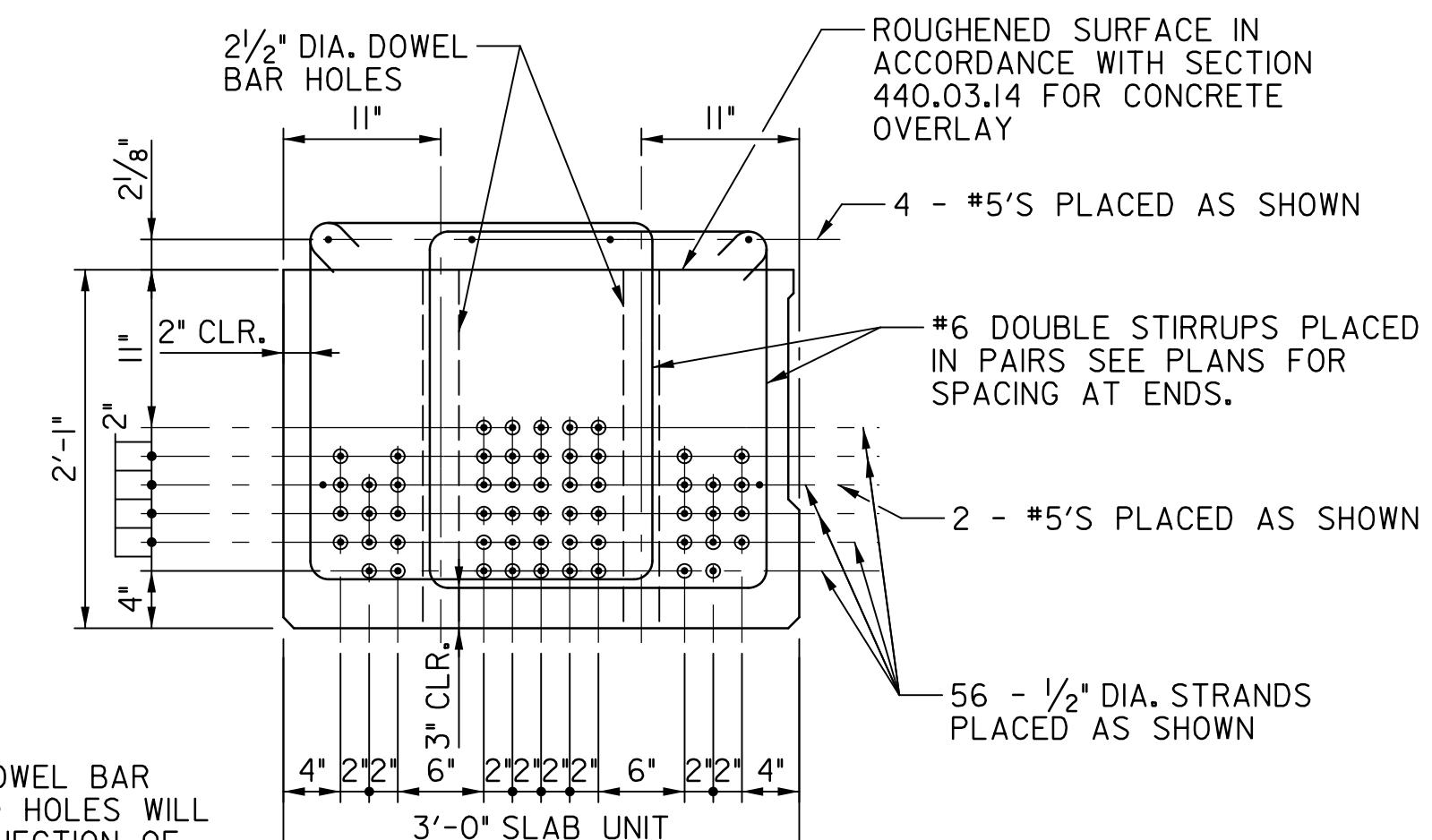
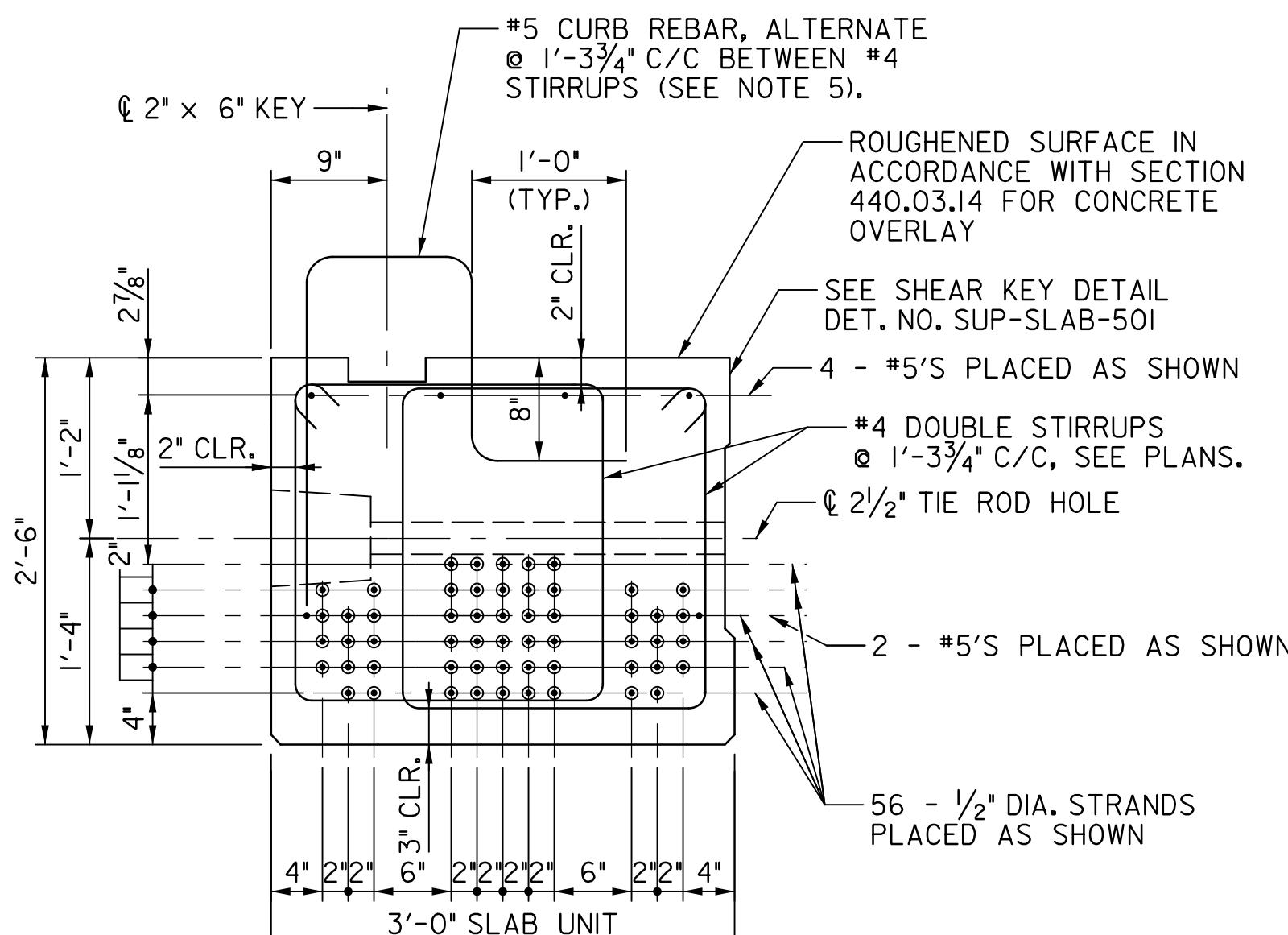
NOTES:

1. EXTREME CARE SHALL BE USED IN LOCATING TIE ROD HOLES DURING THE CASTING OPERATION. THE CONTRACTOR SHALL ASSEMBLE THE SLAB UNITS FOR THE ENTIRE BRIDGE WIDTH AT THE CASTING PLANT TO ENSURE THAT THERE IS NO HOLE MISALIGNMENT OF THE TIE ROD HOLE(S) PRIOR TO SHIPPING THE SLAB UNITS. ANY MISALIGNMENT OF THE TIE ROD HOLE(S) WILL BE CAUSE FOR REJECTION OF THE SLAB UNIT(S). NO DRILLING OR CORING OF THE SLAB UNITS WILL BE PERMITTED.
2. ADJUST CURB REBAR AND STIRRUP SPACING AS NEEDED TO AVOID TIE ROD HOLES AND RAILING ANCHOR BLOTS (IF APPLICABLE).
3. ALL REINFORCING STEEL TO BE EPOXY COATED.
4. SLAB UNIT LENGTHS IN THE CASTING BED SHALL BE DETERMINED AND DEPICTED IN THE SHOP DRAWINGS TO COMPENSATE FOR GRADE SHORTENING DUE TO THE PRESTRESS EFFECT.
5. FOR LOCATION OF CURB REINFORCEMENT AND ANCHOR BOLTS AND PLATES TO BE CAST IN SLAB FOR RAILING, SEE MDOT SHA DET. NO. SUP-TB(TR)-301.
6. THE TOP SURFACE OF ALL SLAB UNITS SHALL BE ROUGH FINISHED TO A FULL AMPLITUDE OF $\frac{1}{4}$ " AND SCRUBBED TRANSVERSELY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE AND TO PRODUCE A ROUGHED SURFACE FOR BONDING WITH THE CONCRETE OVERLAY.
7. NO CLEAR COVER LESS THAN SHOWN ON THESE PLANS WILL BE ACCEPTED.
8. FOR CAMBER DIAGRAM AND VALUES, SEE SHEET S-19.
9. FOR TIE-ROD SPACING, SEE SHEET S-16.

SHEET S-18

ELEVATION - EXTERIOR SLAB

SCALE: $\frac{3}{8}$ " = 1'-0"



SECTION O-O

NOTE: B-9 SHOWN, B-1 SIMILAR ON OPPOSITE HAND.
SCALE: 1" = 1'-0"

SECTION P-P

NOTE: B-9 SHOWN, B-1 SIMILAR ON OPPOSITE HAND.
SCALE: 1" = 1'-0"

EXTERIOR PRECAST SLAB PANEL DETAILS

SCALE AS-NOTED ADVERTISED DATE NA CONTRACT NO. RFP 16-019A

DESIGNED BY GCD COUNTY FREDERICK

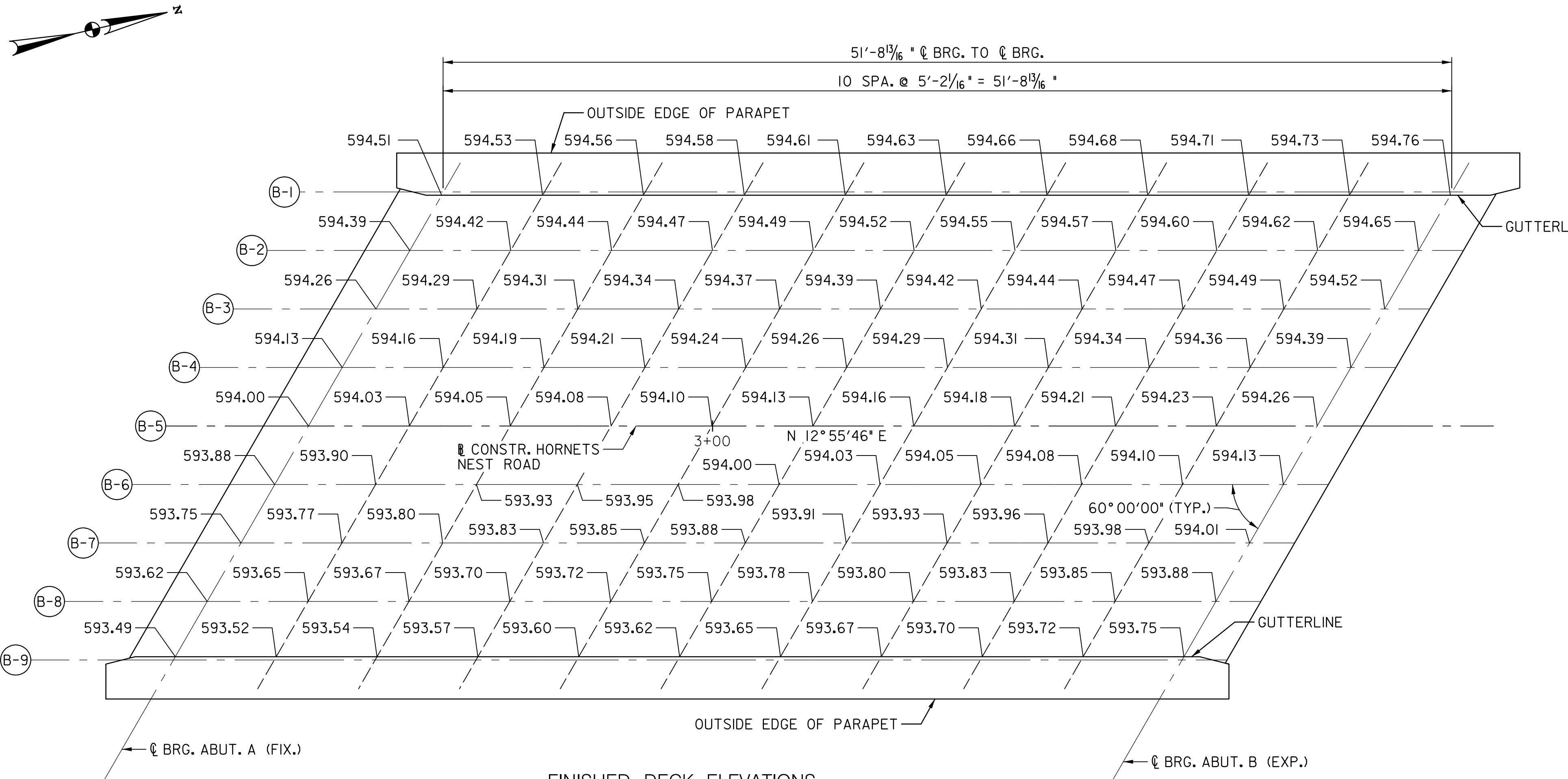
DRAWN BY JAP LOGMILE XXXX - XXXX

CHECKED BY KAR

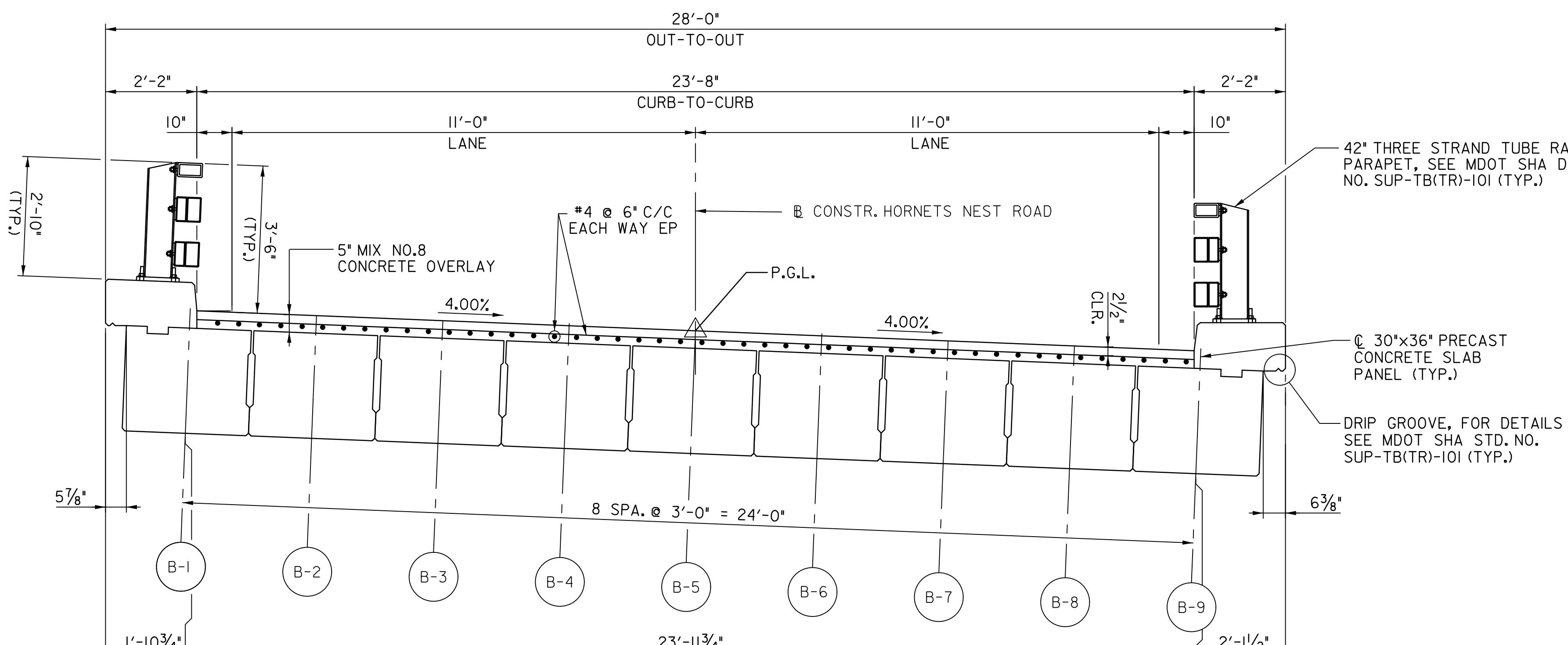


A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204

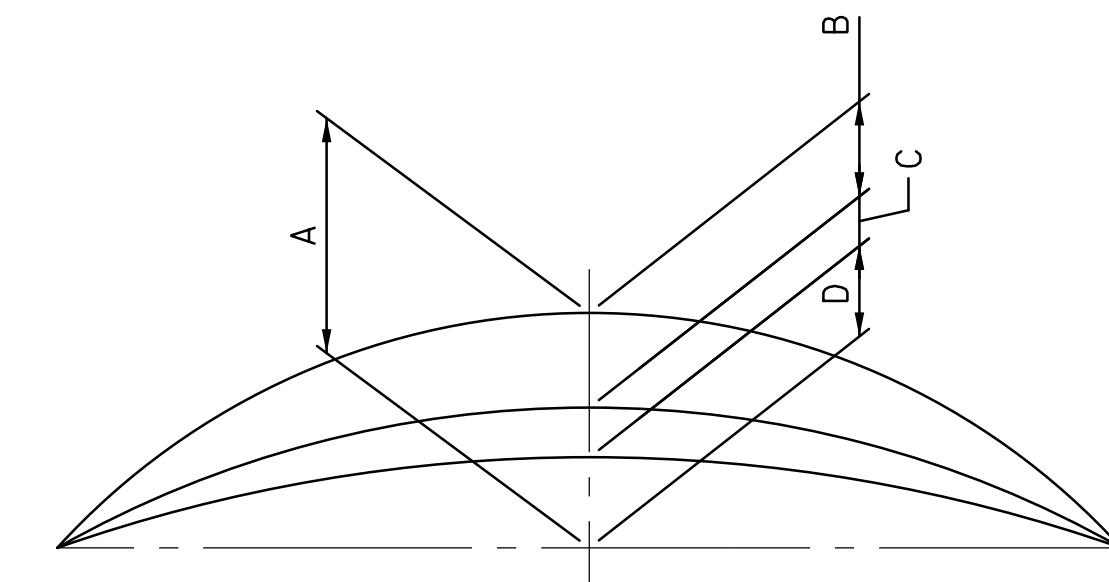
SHEET NO. 23 OF 43



FINISHED DECK ELEVATIONS
SCALE: $1/4'' = 1'-0''$



TYPICAL SECTION
LOOKING STATION AHEAD
SCALE: $1/2'' = 1'-0''$



CAMBER DIAGRAM

SCALE: NOT TO SCALE

PRECAST CONCRETE SLAB PANELS 1-9			
A	B	C	D
$2\frac{9}{16}''$	$1\frac{1}{16}''$	$\frac{1}{2}''$	$1''$

CAMBER NOTES:

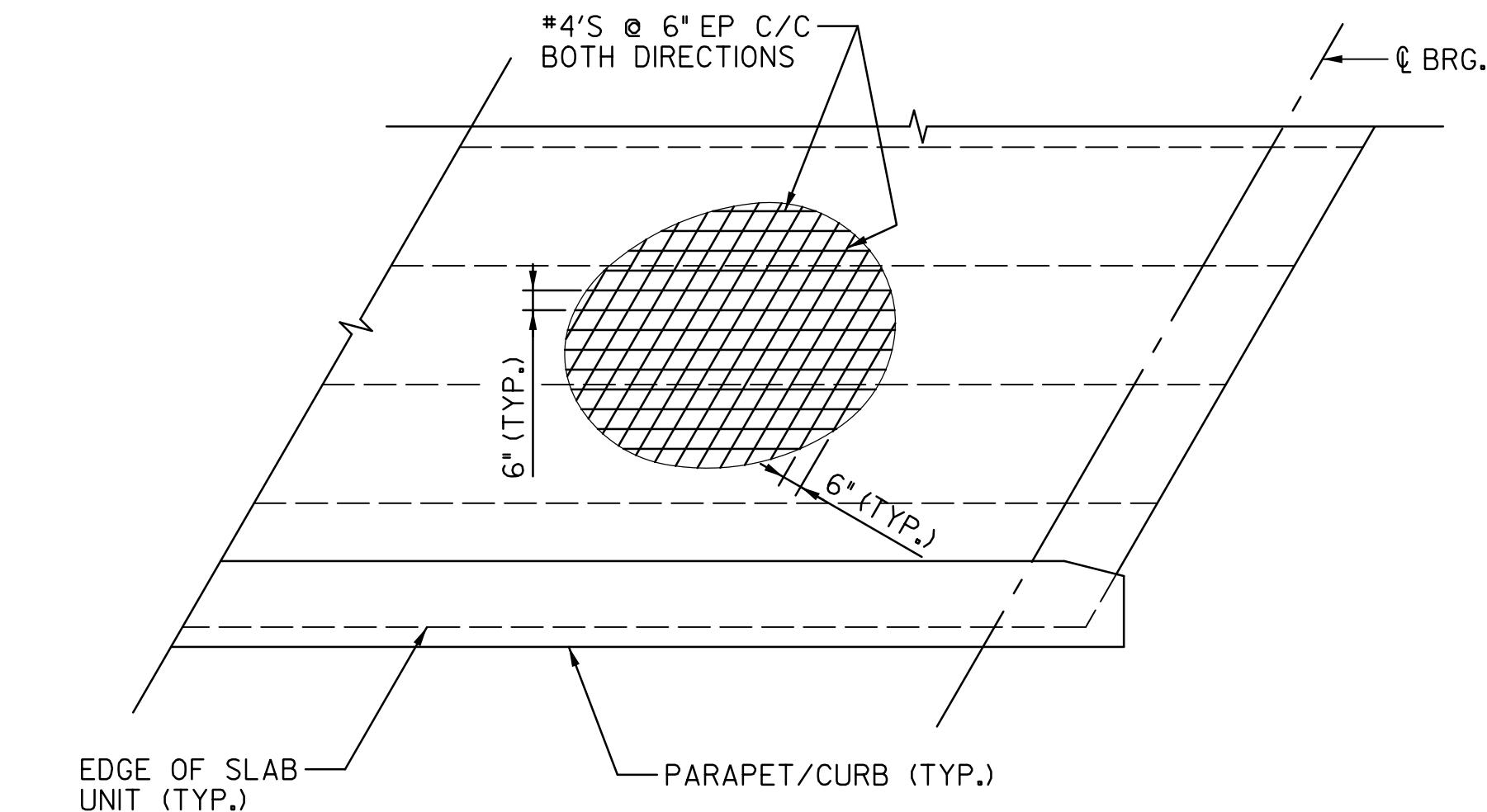
CAMBER DUE TO PRESTRESS PLUS SLAB LOAD TO BE CHECKED IN THE FIELD.

THE THICKNESS OF THE CONCRETE OVERLAY SHALL BE VARIED TO COMPENSATE FOR ANY INACCURACIES IN THE CAMBER OF SLAB.

PRESTRESS CAMBER AND DEAD LOAD DEFLECTION DATA SHOWN IS THEORETICAL AND MAY VARY WITH CONCRETE STRENGTH, VARIABLE PRESTRESSING CONDITIONS AND PRESTRESS LOSSES.

CAMBER IN SLABS WILL INCREASE DUE TO CONCRETE CREEP DURING STORAGE. PRECAUTIONS SHALL BE TAKEN BY LOADING OR OTHER MEANS TO PREVENT ADDITIONAL CAMBER FROM DEVELOPING DURING STORAGE OF PRESTRESSED SLABS.

A = ESTIMATED CAMBER DUE TO PRESTRESS
B = DEFLECTION DUE TO DEAD LOAD OF PRESTRESSED SLABS
C = DEFLECTION DUE TO DEAD LOAD OF CAST-IN-PLACE CONCRETE OVERLAY, CURBS AND RAILING
D = NET FINAL CAMBER



PARTIAL DECK OVERLAY PLAN
SCALE: $1/4'' = 1'-0''$

NOTES:

1. EP DENOTES EPOXY COATED.
2. NO SPECIAL POURING SEQUENCE IS REQUIRED FOR THIS STRUCTURE.
3. THREE STRAND TUBE RAIL SHALL BE BUILT PERPENDICULAR TO THE TOP OF ROADWAY ON THE HIGH SIDE.
4. FOR VERTICAL CURVE DATA SEE SHEET S-01.
5. FOR SUPERELEVATION TRANSITION DATA SEE SHEET TS-01.
6. CONCRETE OVERLAY SHALL BE PLACED IN ONE CONTINUOUS POUR.



BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

SUPERSTRUCTURE DETAILS

SCALE AS-NOTED ADVERTISED DATE NA CONTRACT NO. RFP 16-019A

DESIGNED BY GCD COUNTY FREDERICK

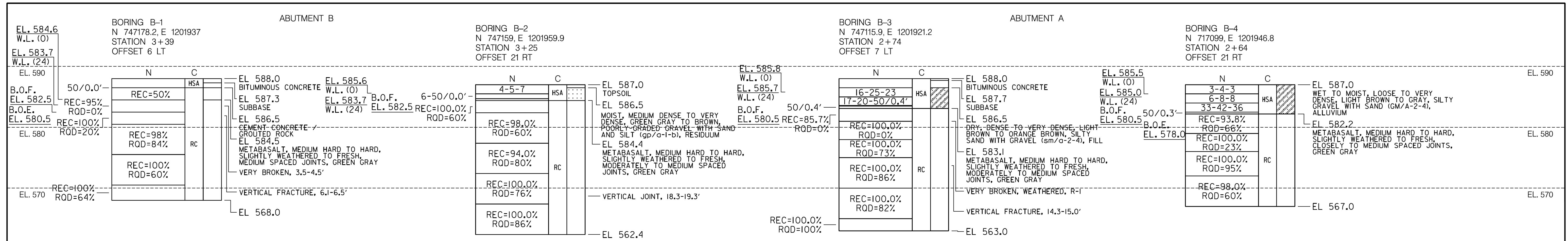
DRAWN BY JRM LOGMILE XXXX - XXXX

CHECKED BY KAR



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901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204

SHEET NO. 24 OF 43

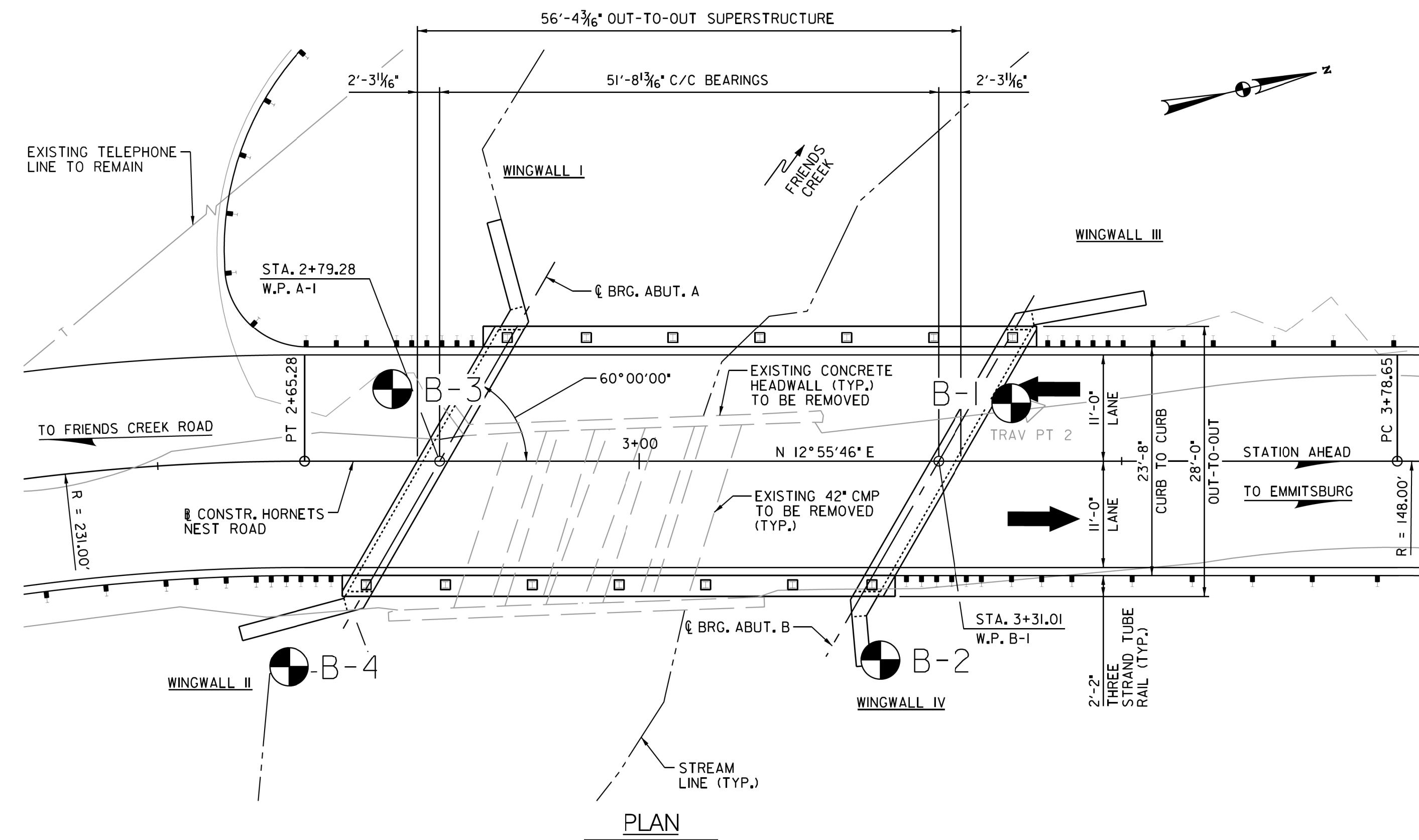


DATUM EL. 560

TUM EL. 560

BORINGS AND DRIVE TESTS

SCALE
10'



GENERAL NOTES

- I. THE BORINGS AND DRIVE TESTS WERE TAKEN IN DECEMBER 2018 BY CGC GEOSERVICES, INC.
2. THE SOIL SYMBOLS REFLECT ONLY THE MAJOR SOIL CONSTITUENT. FOR MORE COMPLETE SOIL CHARACTERISTIC REFER TO THE SOIL DESCRIPTIVE TEXT.
3. THE FIELD BORING LOGS RECORD SAMPLE SPOON RECOVERY. THE LOGS ARE AVAILABLE UPON REQUEST. THE MATERIAL RECOVERED FROM THE SITE INVESTIGATION IS AVAILABLE FOR REVIEW. CONTACT THE FIELD EXPLORATIONS DIVISION AT 1-866-926-8501.
4. N = BLOWS ON A 2-INCH INSIDE DIAMETER SPLIT-BARREL SAMPLING SPOON BY 140-POUND DRIVE-WEIGHT FALLING 30 INCHES INDICATING SUCCESSIVE 6-INCH INCREMENTS OF PENETRATION IN LIEU OF BLOWS PER FOOT. PENETRATIONS LESS THAN 6 INCHES ARE INDICATED BY 50 BLOWS OVER THE NEAREST TENTH OF A FOOT.
5. REC = ROCK CORE RECOVERY, RQD = ROCK QUALITY DESIGNATION. THE CORE BARREL TYPE = NQ 3.0 INCH OUTSID DIAMETER GIVING A 1-7/8 INCH CORE DIAMETER.
6. ROCK PENETRATED BY A SPLIT-BARREL SAMPLER IS NON-COREABLE ROCK.
7. W.L. = WATER LEVEL READING. THE FIGURE IN PARENTHESIS INDICATES THE READING IN HOURS AFTER COMPLETION OF THE BORING.
8. B.O.F. = BOTTOM OF FOOTING ELEVATION IN FEET
9. B.O.E. = BOTTOM OF OVER EXCAVATION ELEVATION IN FEET
10. BORINGS AND SAMPLINGS CONFORM TO AASHTO DESIGNATIONS T-206, T-225, AND T-306.
- II. THE SOIL AND ROCK HAS BEEN CLASSIFIED VISUALLY BY AN ENGINEER DURING THE DRILLING OPERATIONS WITH LAB CLASSIFICATION TESTING PERFORMED ON SELECTED SOIL SAMPLES.

SHEET S-20

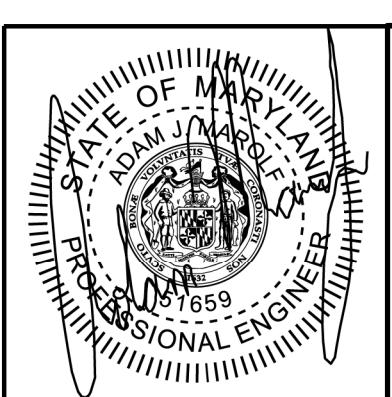


BORING AND DRIVE TESTS

AS-NOTED ADVERTISED DATE N/A CONTRACT NO. RFP 16-019A

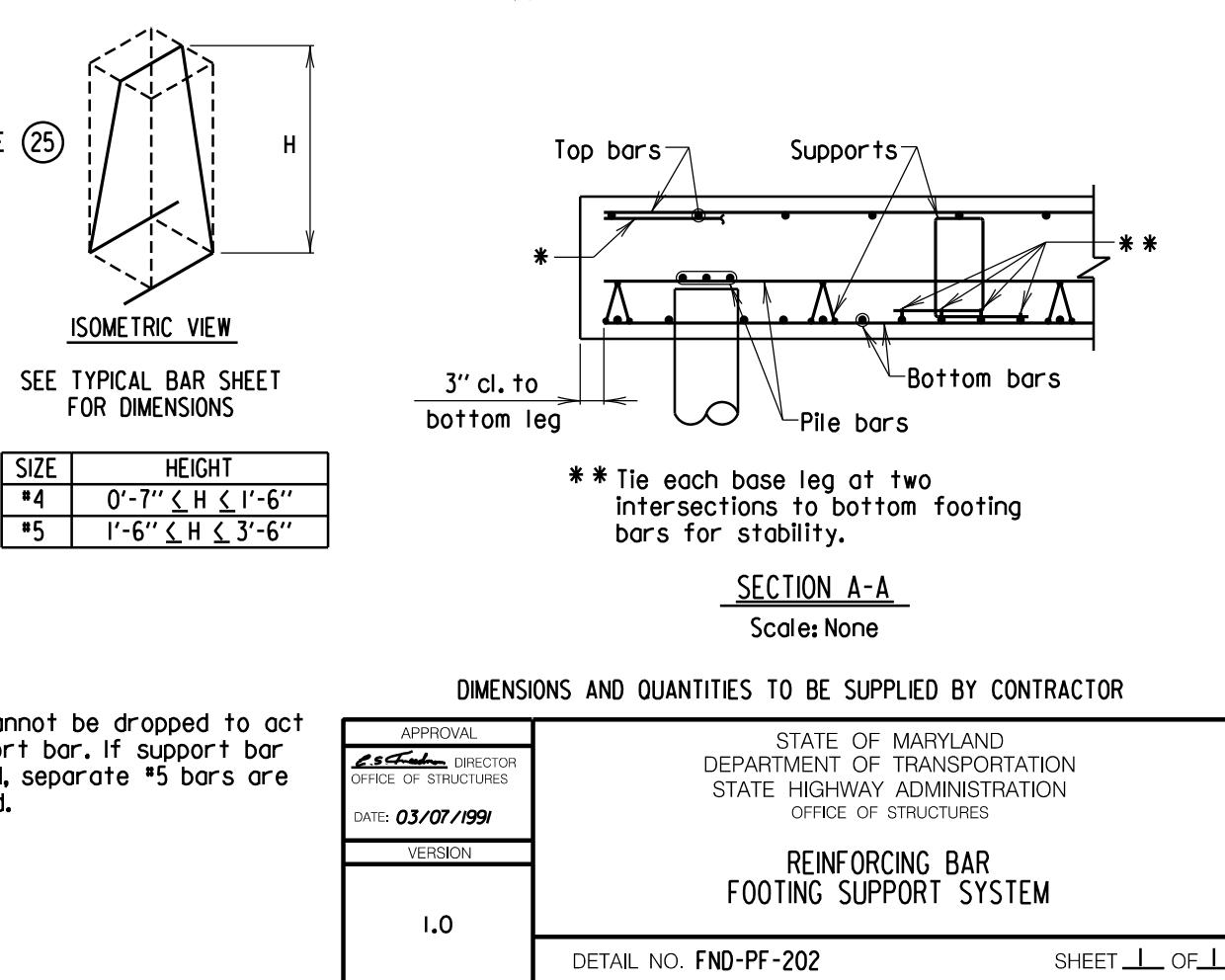
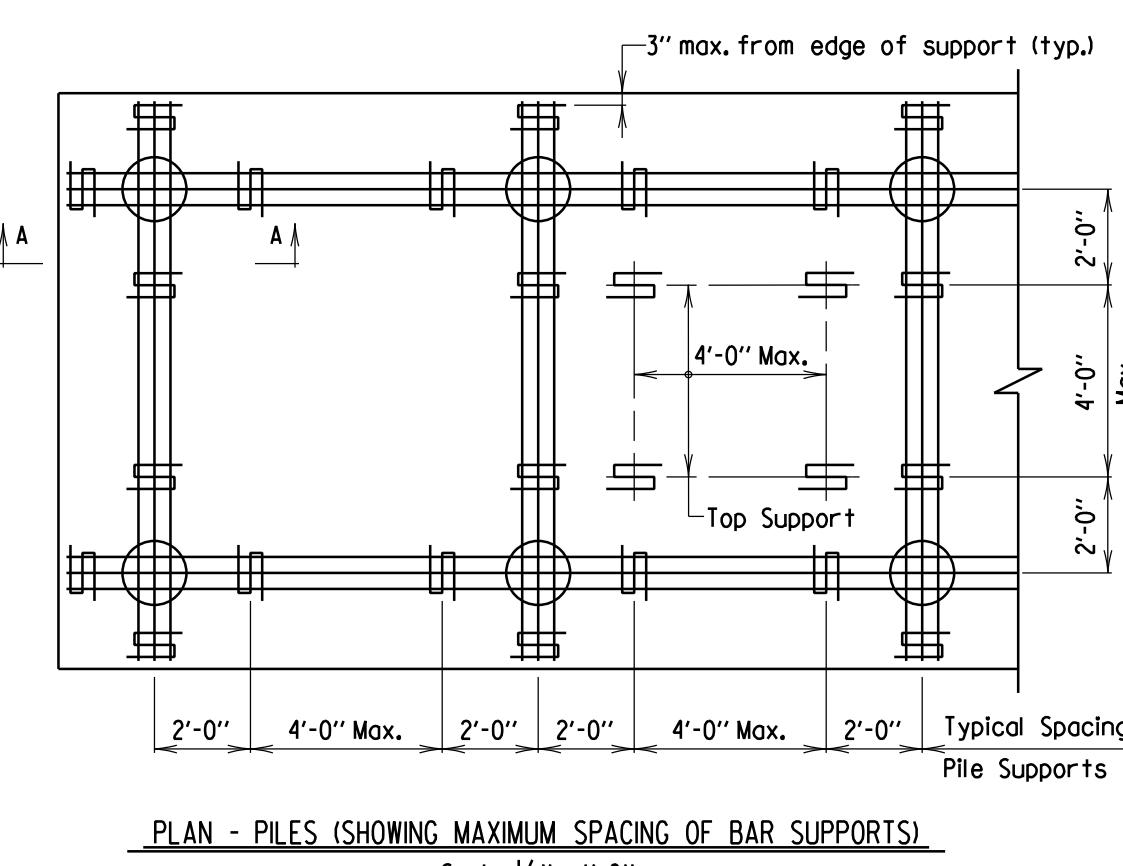
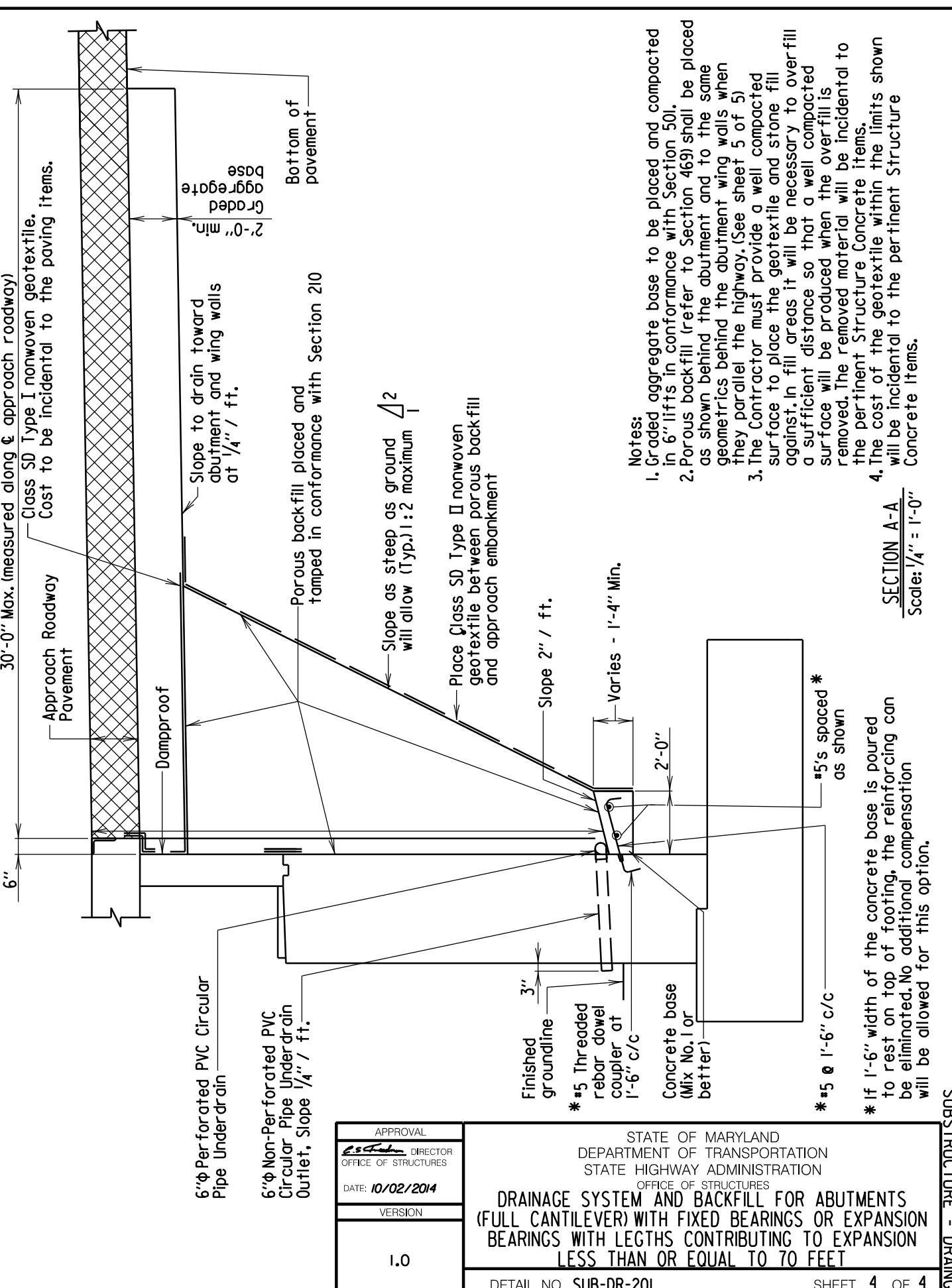
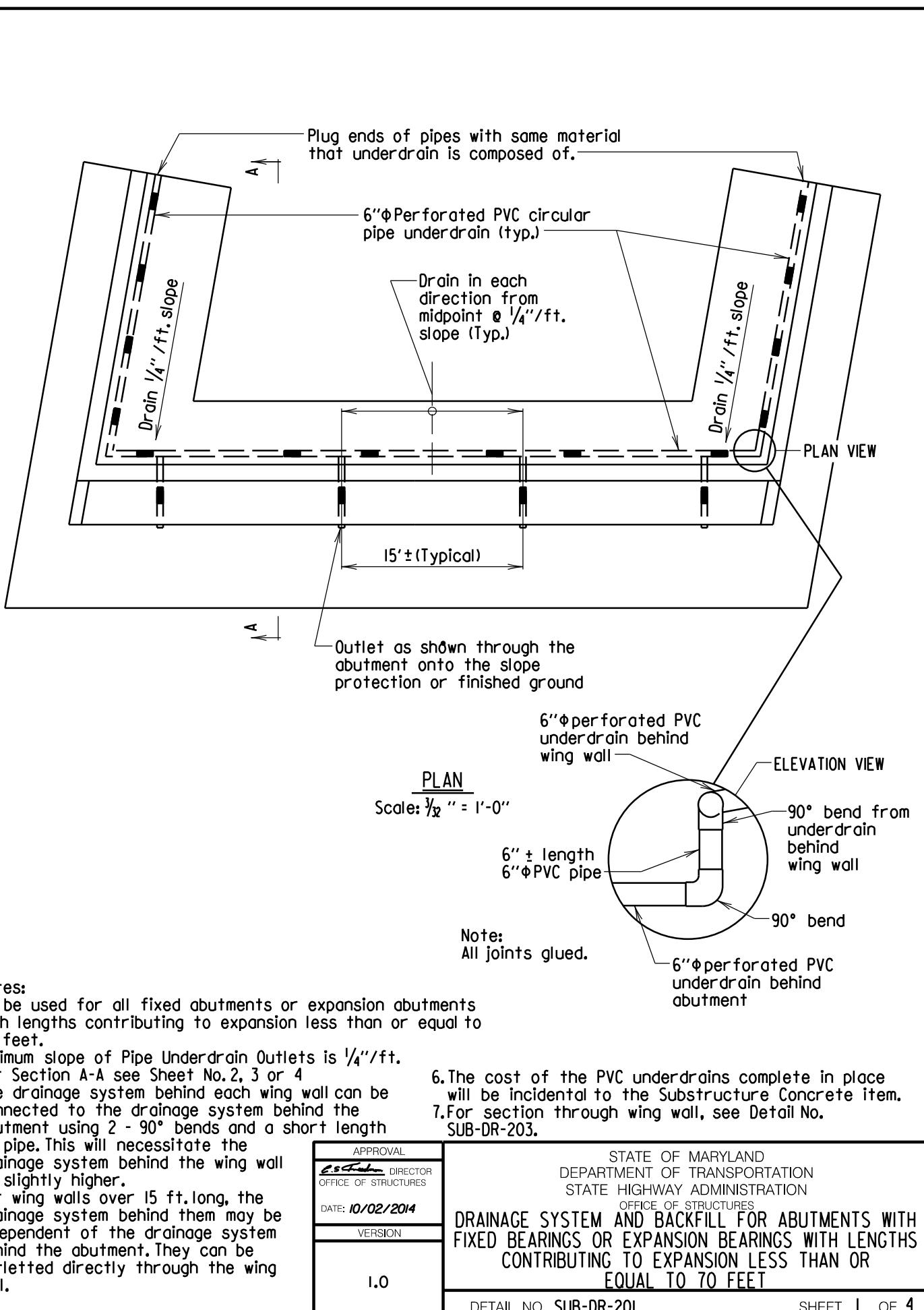
ED BY AJM COUNTY FREDERICK

BY _____ RJE _____ LOGMILE _____ XXXXX - XXXXX



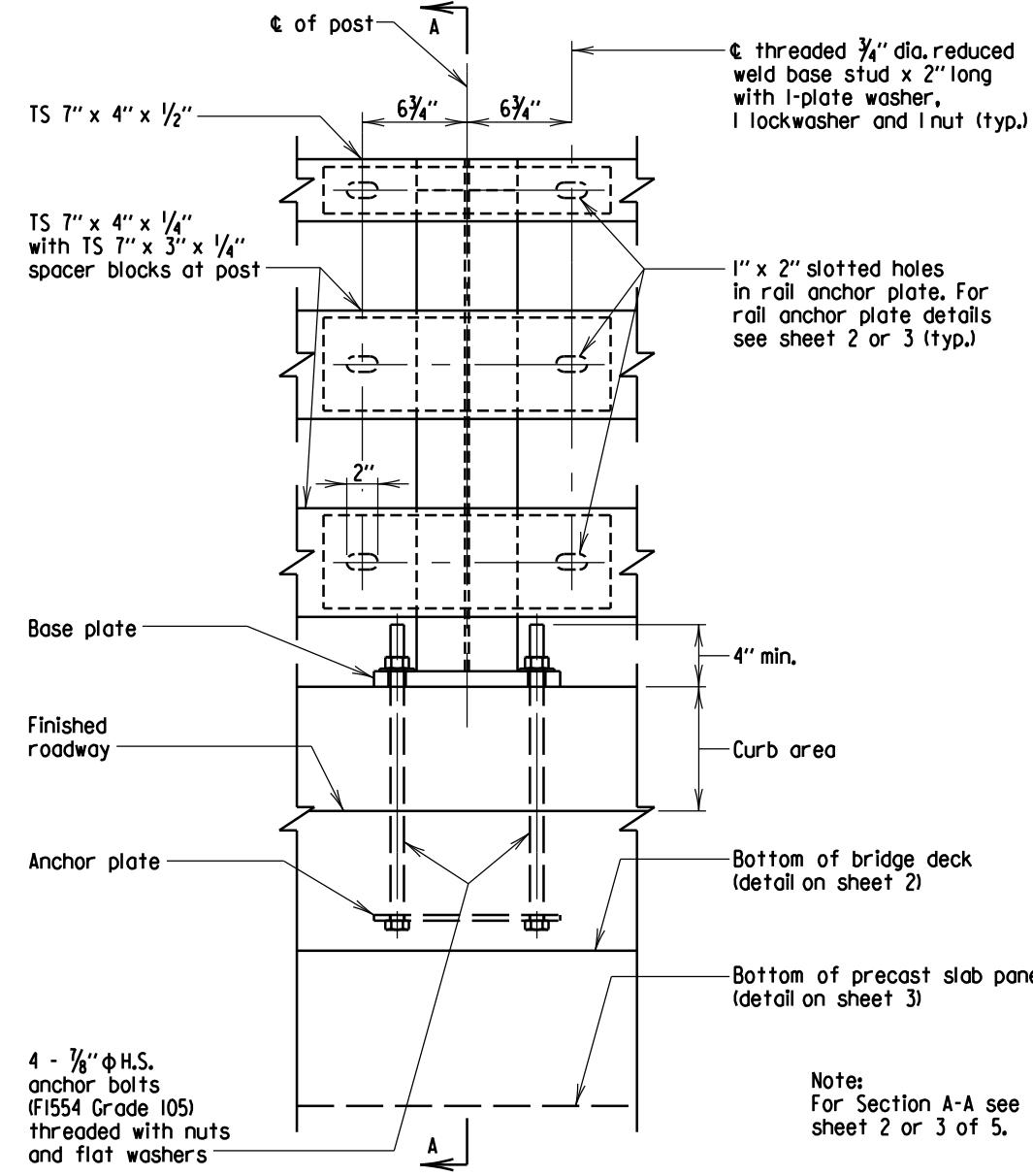
AMERICAN GEOTECHNICAL &

1000 First Avenue
Suite 403
King of Prussia, PA 19406
(610) 354-0333 Fax (610) 354-9333



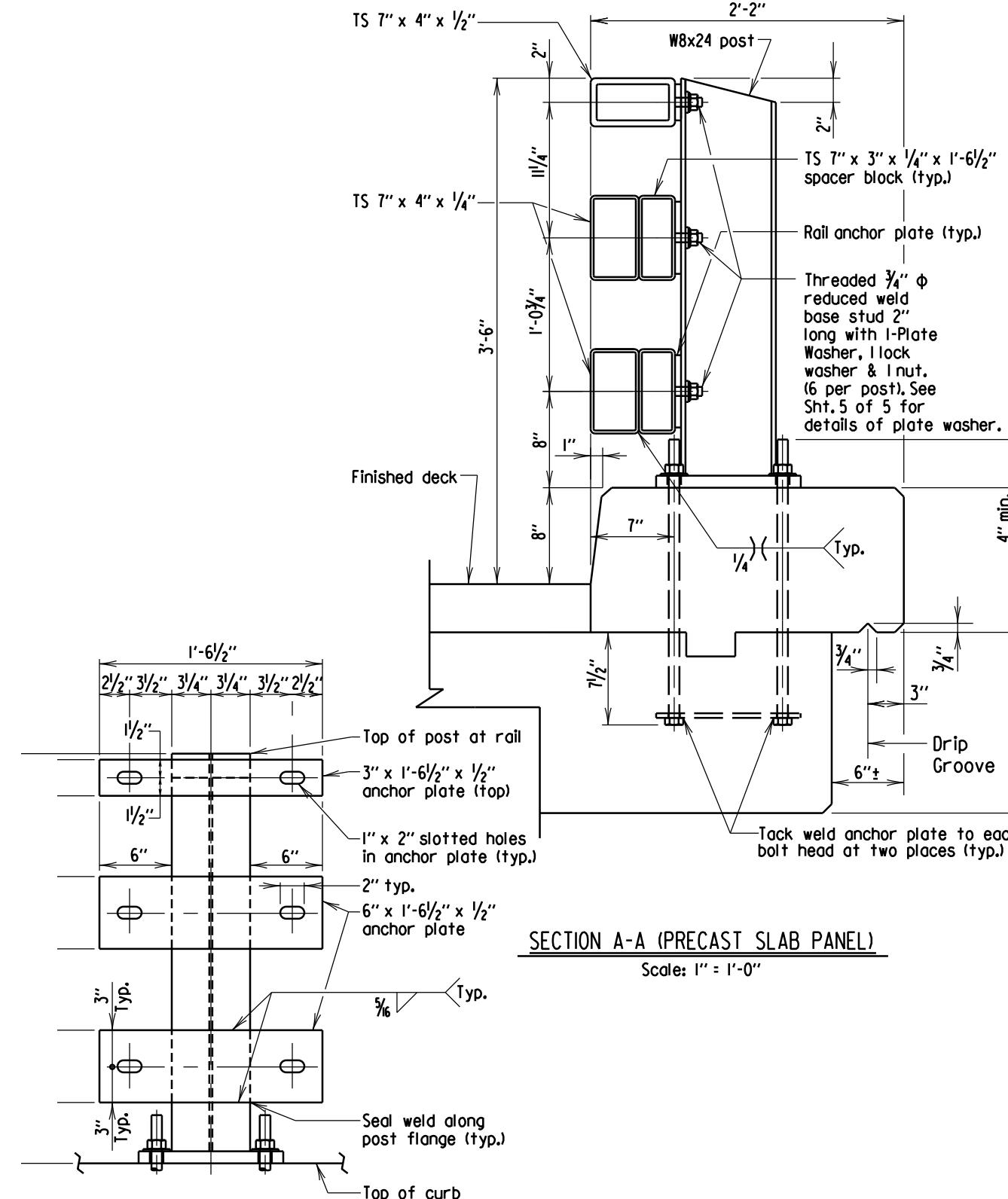
BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

SHEET S-21

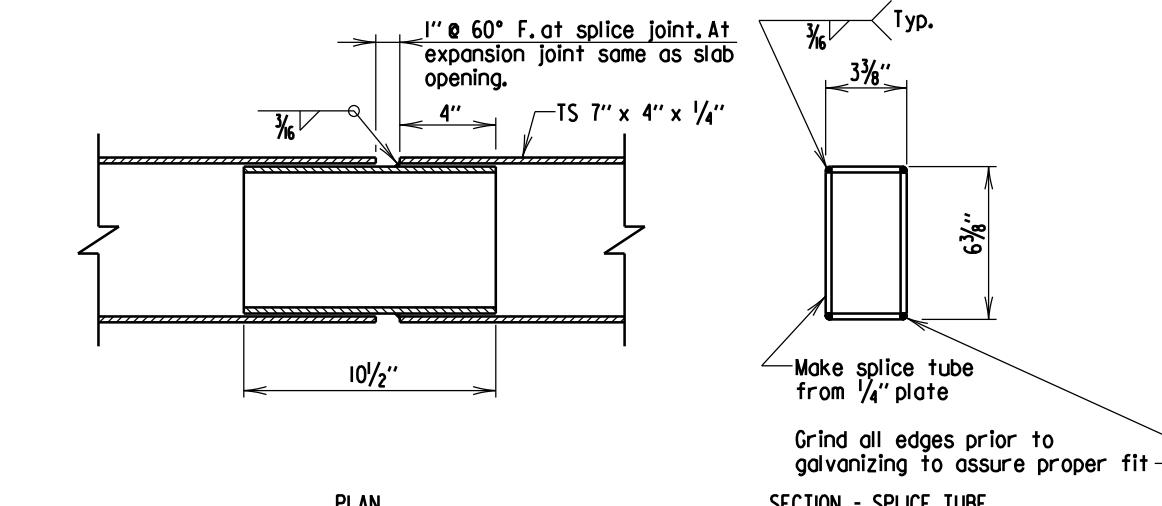


GENERAL NOTES:
 1. All railings shall be fabricated and erected as indicated on the Plans.
 2. Rails shall be parallel to the grade of the roadway. Rail sections shall be attached to as many posts as possible, but not less than two.
 3. The center line of any splice and/or expansion joint shall be located at least 2'-0" away from center line of any post except for the first and/or last post on spans. Expansion and/or splice joints for each strand of the three strand railing shall be placed in the same location and in the same position.
 4. Rail elements shall be structural tubing in accordance with ASTM A500 Grade B, A616 or A501.
 5. Steel posts and plates shall conform to ASTM A36 unless otherwise noted.
 6. Posts shall be set perpendicular to top of curb. For post spacing see Plans (Maximum 10'-0" Spacing).
 7. All structural steel including fasteners shall be hot-dip galvanized as per ASTM A-123 after fabrication, except as noted. All anchor plates shall be attached before galvanizing.
 8. In setting anchor bolts be sure enough threads are exposed so that nuts can be completely attached (4" min.).

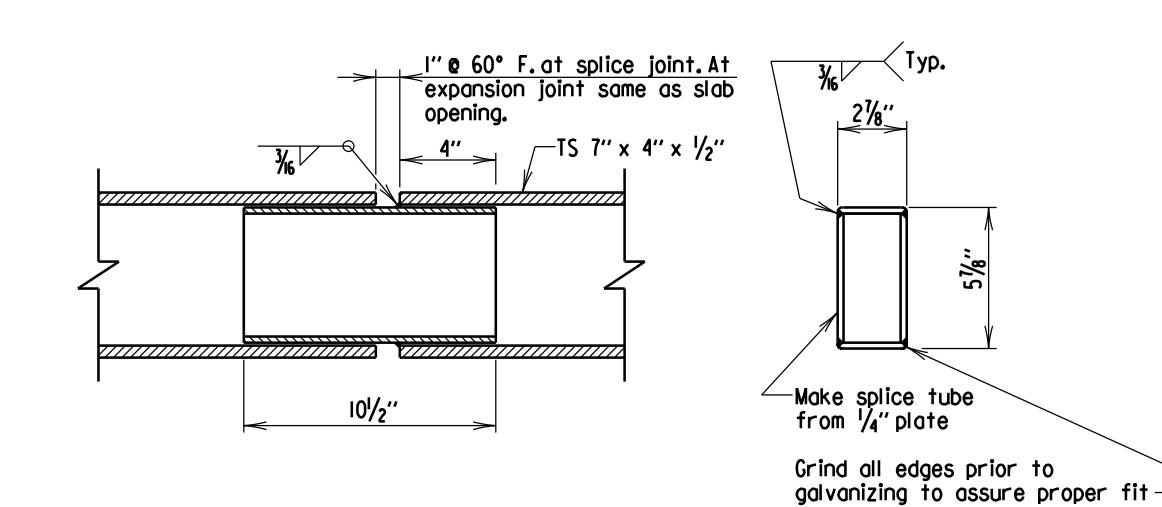
MASH COMPLIANT TL-4 BRIDGE RAILING	
APPROVAL STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES DATE 04/28/2020	VERSION 1.03
THREE STRAND STRUCTURAL TUBE RAIL CURB MOUNTED - ELEVATION	
DETAIL NO. SUP-TBTR-101 SHEET 1 OF 5	



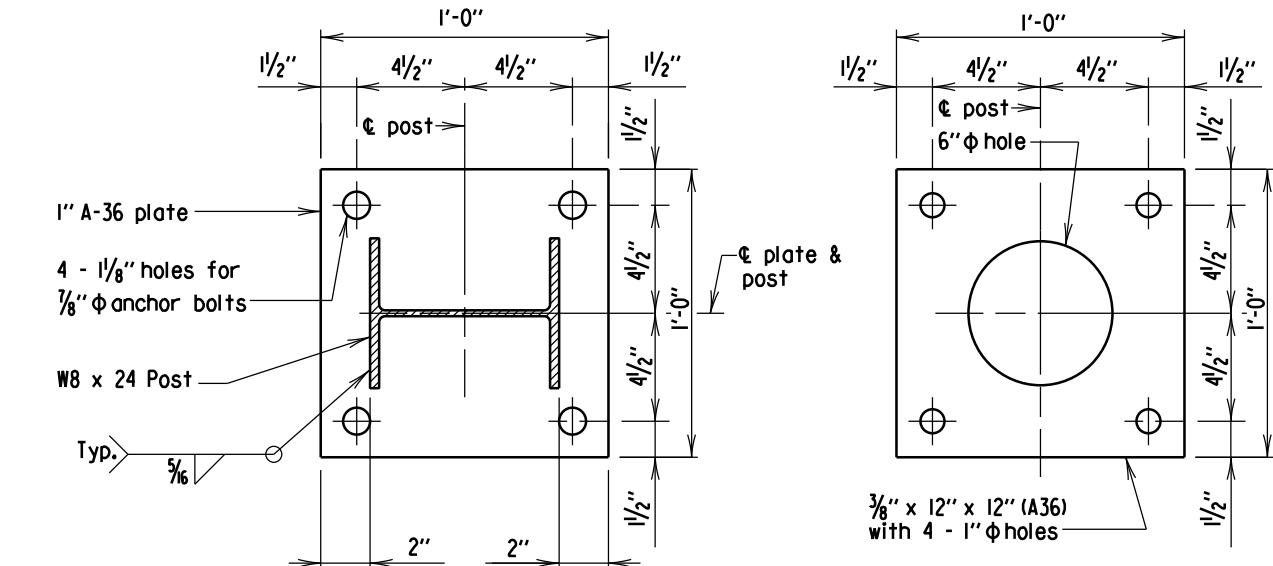
MASH COMPLIANT TL-4 BRIDGE RAILING	
APPROVAL STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES DATE 04/28/2020	VERSION 1.03
THREE STRAND STRUCTURAL TUBE RAIL CURB MOUNTED - DETAILS PRECAST SLAB PANEL MOUNTED	
DETAIL NO. SUP-TBTR-101 SHEET 3 OF 5	



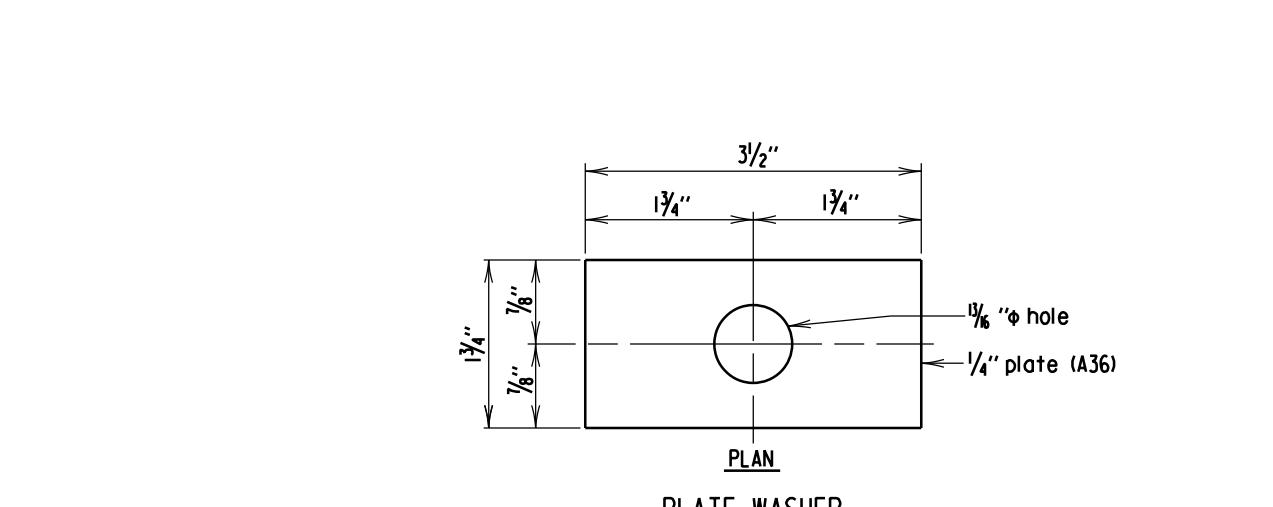
RAIL SPLICE DETAILS (TS 7'' x 4'' x 1/4'')
Scale: 1/2" = 1'-0"



RAIL SPLICE DETAILS (TS 7'' x 4'' x 1/2'')
Scale: 1/2" = 1'-0"



BASE PLATE DETAIL
Scale: 1/2" = 1'-0"



ANCHOR PLATE DETAIL
Scale: 1/2" = 1'-0"

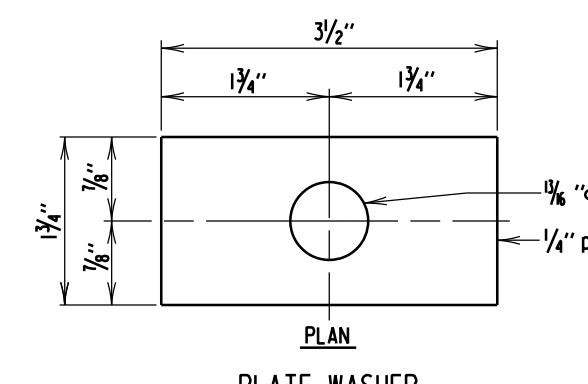
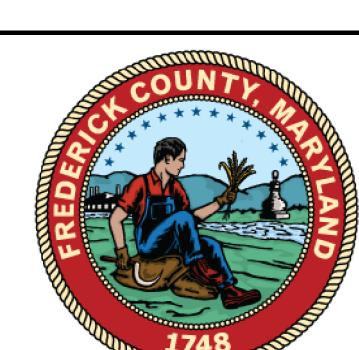


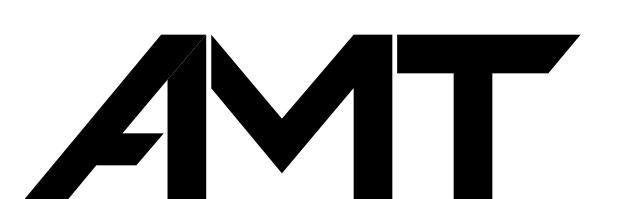
PLATE WASHER
Scale: 6" = 1'-0"



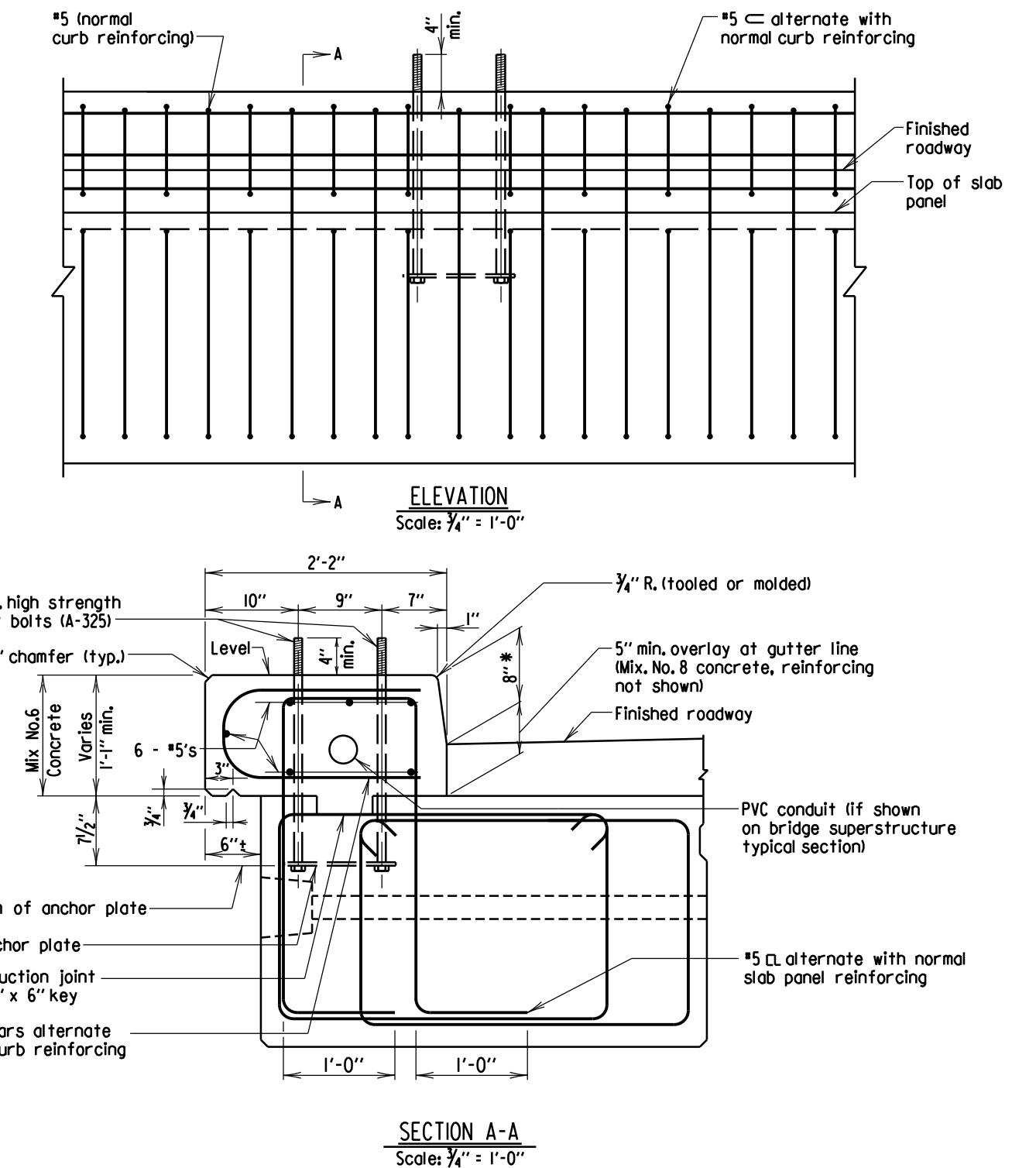
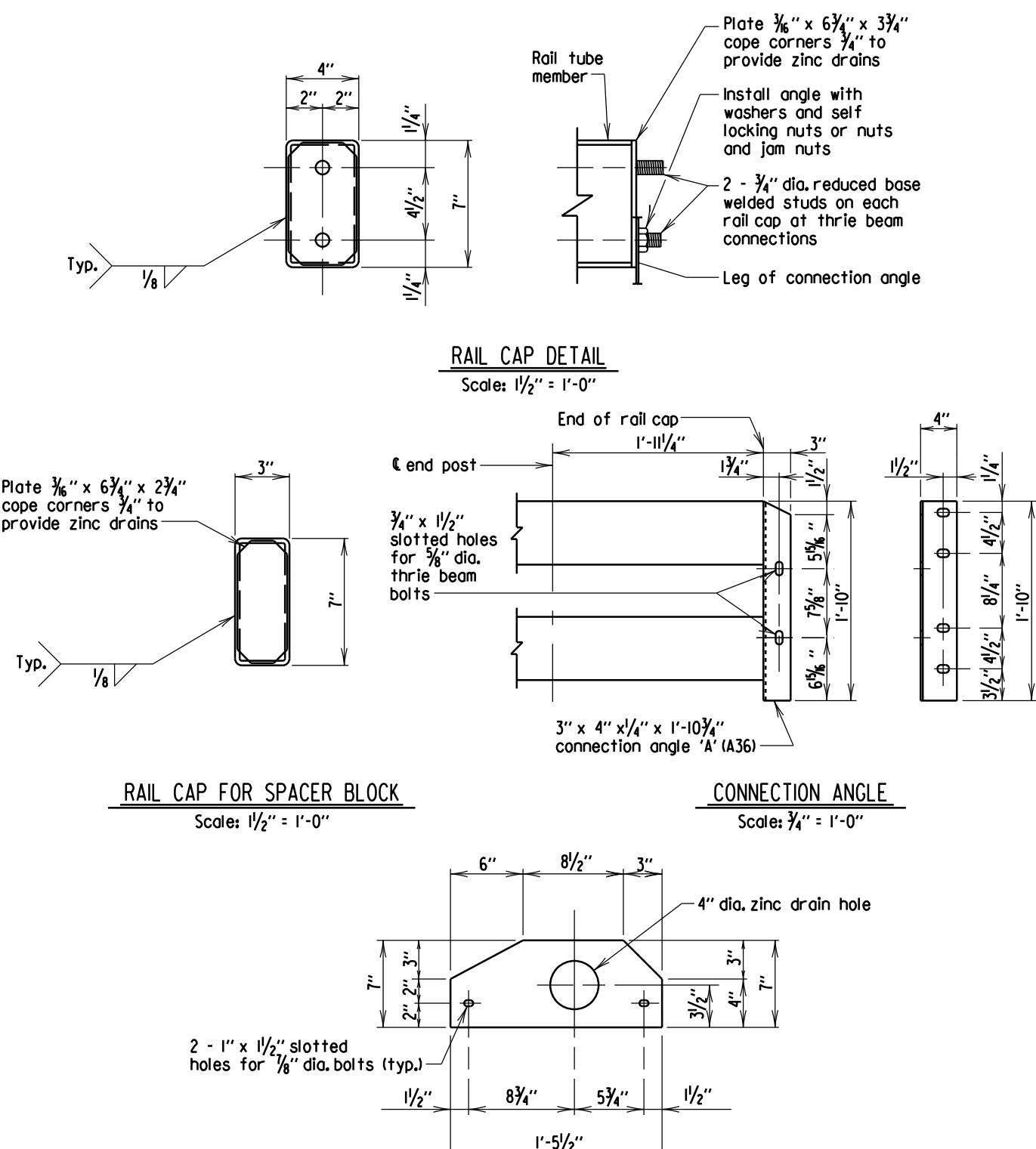
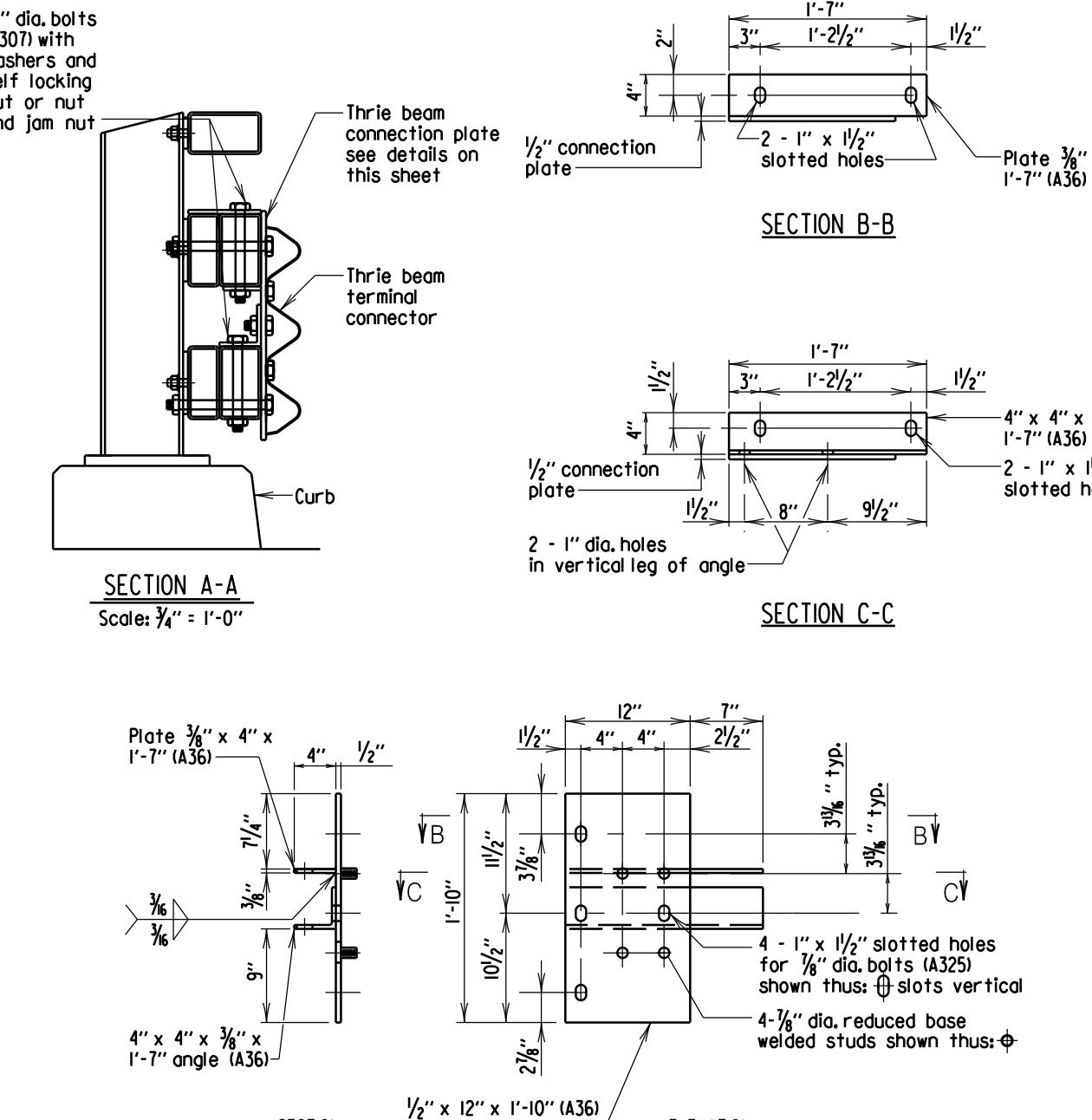
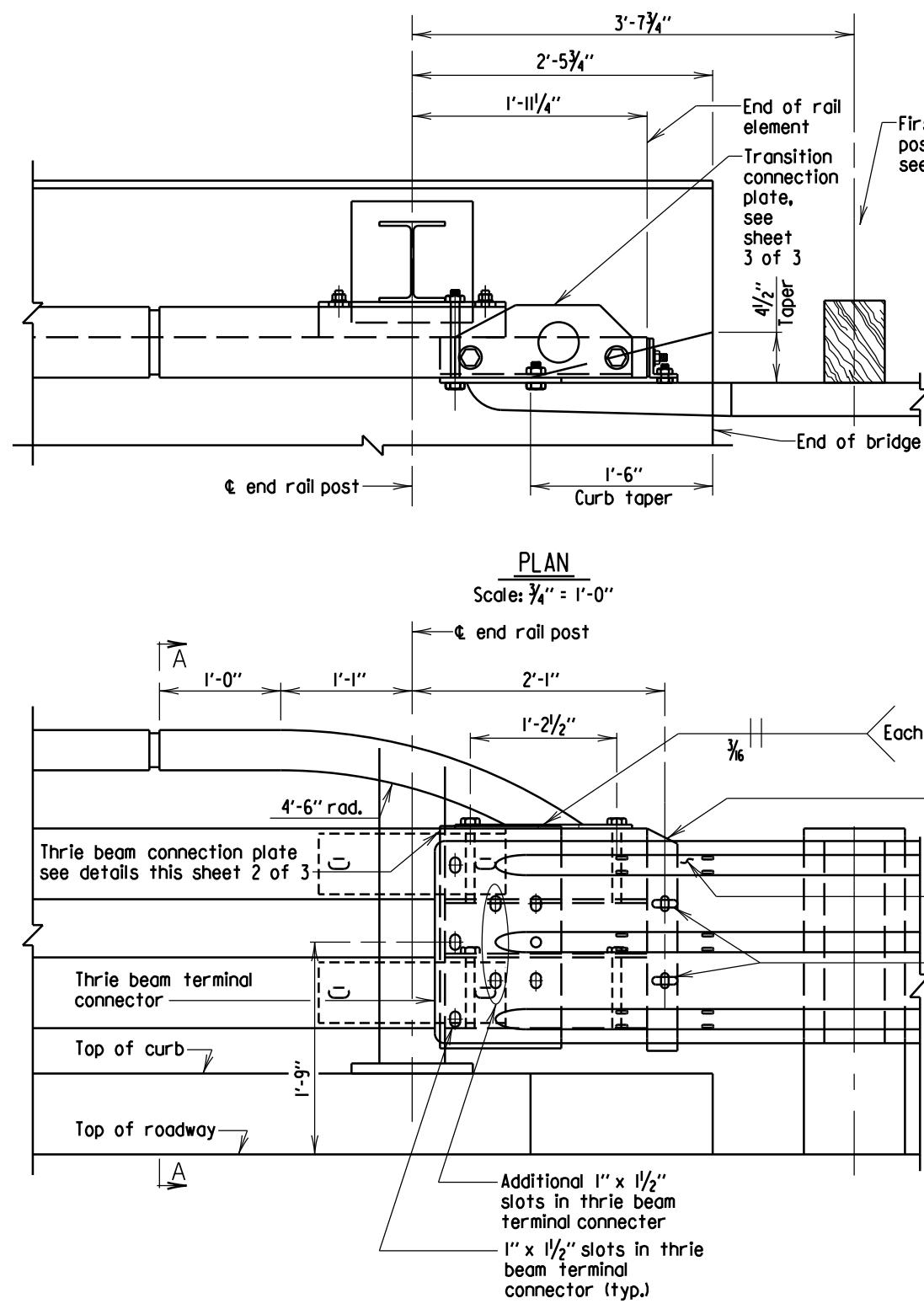
BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

STANDARD DETAILS

SCALE AS SHOWN ADVERTISED DATE NA CONTRACT NO. RFP 16-019A
DESIGNED BY SHA COUNTY FREDERICK
DRAWN BY SHA LOGMILE XXXX - XXXX
CHECKED BY



A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204



* May vary with application.

Note:
See Std. No. MD 605.4I-01 for additional details on Thrie Beam Anchorage Post Spacing.

APPROVAL		STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	
 DIRECTOR OFFICE OF STRUCTURES			
DATE: 02/13/2017			
VERSION		THREE STRAND STRUCTURAL TUBE RAIL THRIE BEAM CONNCECTION PLATE	
1.0		DETAIL NO. SUP-TB(TR)-102	
		SHEET <u>1</u> OF <u>3</u>	

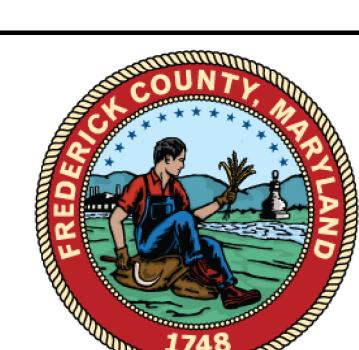
APPROVAL  DIRECTOR OFFICE OF STRUCTURES	STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	SUPER TRAFFIC BARRIERS
DATE: 02/10/2017	THREE STRAND STRUCTURAL TUBE RAIL THRIE BEAM CONNECTION PLATE	
VERSION		
1.0	DETAIL NO. SUP-TB(TR)-102	SHEET 2 OF 3

APPROVAL		STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	
 DIRECTOR OFFICE OF STRUCTURES DATE: 02/10/2017		THREE STRAND STRUCTURAL TUBE RAIL THRIE BEAM CONNECTION PLATE	
VERSION			
1.0		DETAIL NO. SUP-TB(TR)-102	
		SHEET <u>3</u> OF <u>3</u>	

Notes:

- 1. The cost of curb including reinforcing, PVC conduit will be included in Superstructure Concrete item.
- 2. The cost of anchor bolts and plates will be included in the Railing item.
- 3. All reinforcing steel shall be epoxy coated.
- 4. Longitudinal reinforcing steel in the precast slab panel not shown.
- 5. Prestressing strands in the precast slab panel not shown.
- 6. For size and spacing of precast slab panel stirrups see precast slab panel details.

100



BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

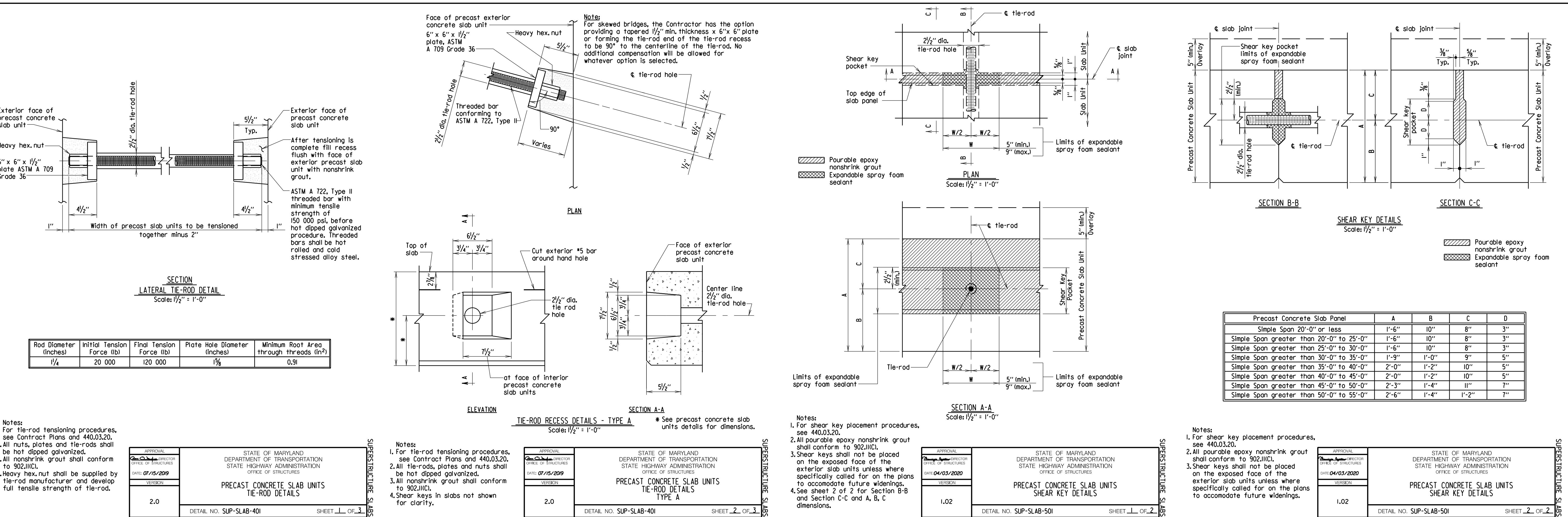
STANDARD DETAILS

SALE AS SHOWN ADVERTISED DATE N/A CONTRACT NO RFP 16-019A

DESIGNED BY _____ SHA _____ COUNTY _____ FREDERICK
DRAWN BY _____ SHA _____ LOGMILE _____ XXXX - XXXX
CHECKED BY _____

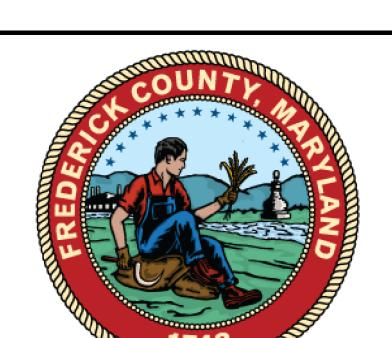
AMT

A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710



BY: jtaccetti

PLOTTED: Wednesday, November 18, 2020 AT 08:32 AM



BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

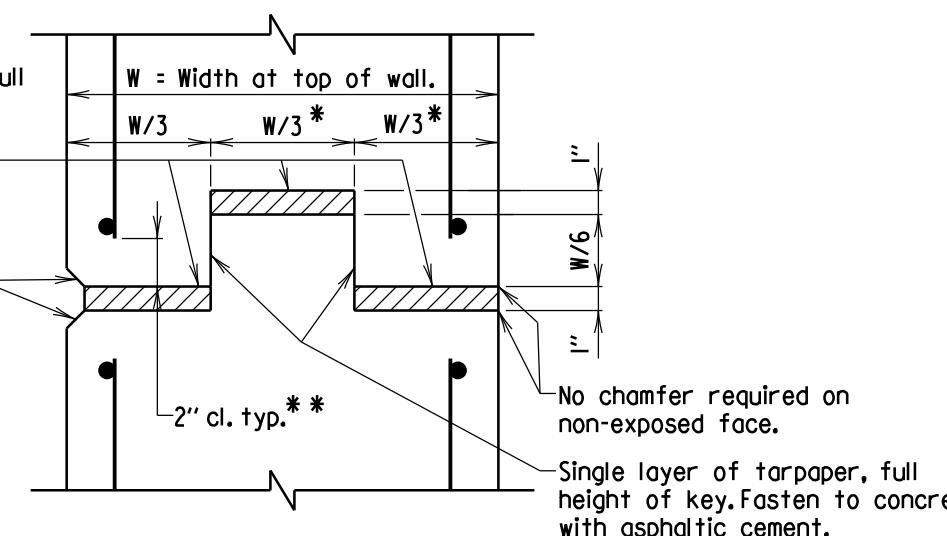
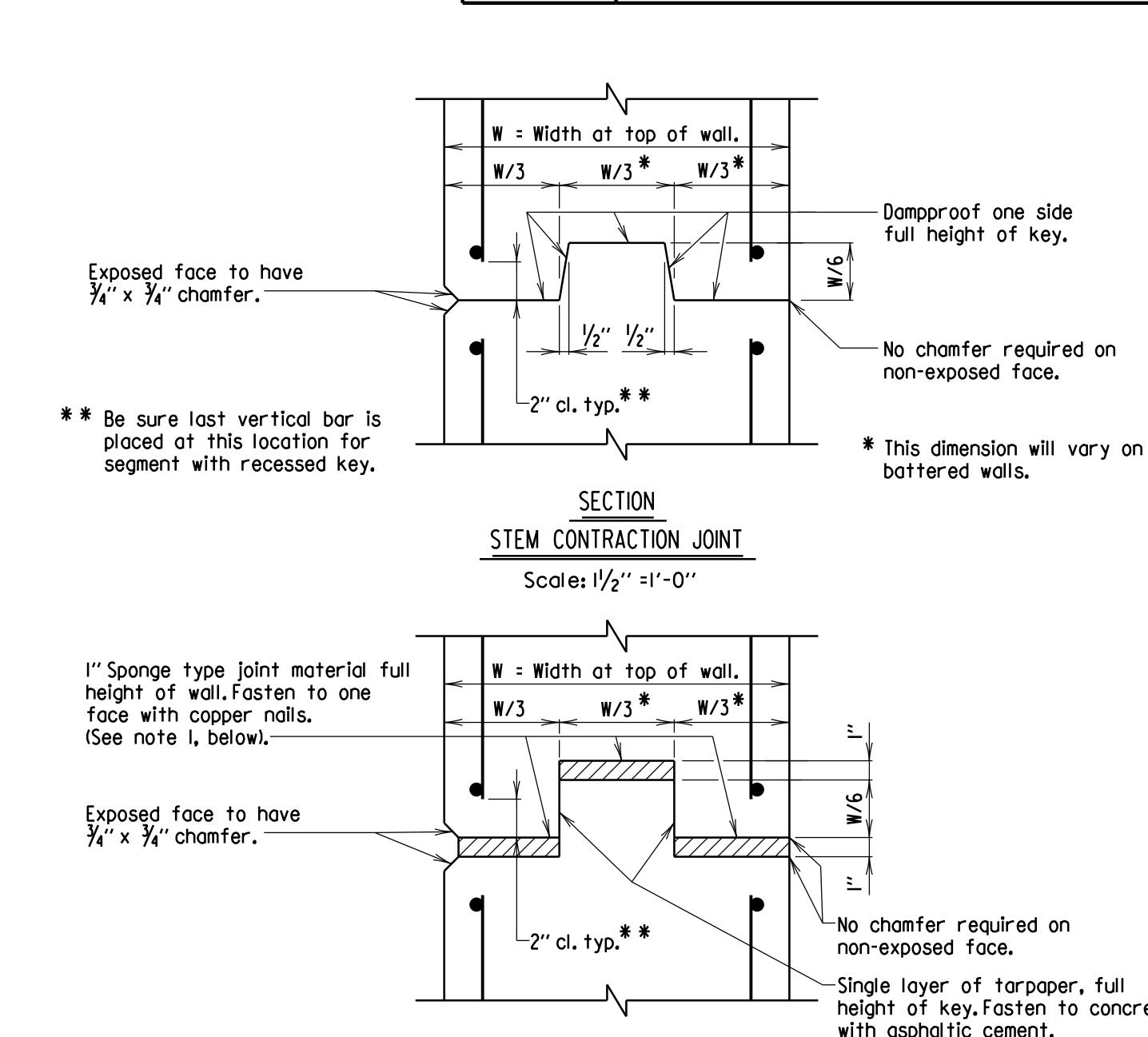
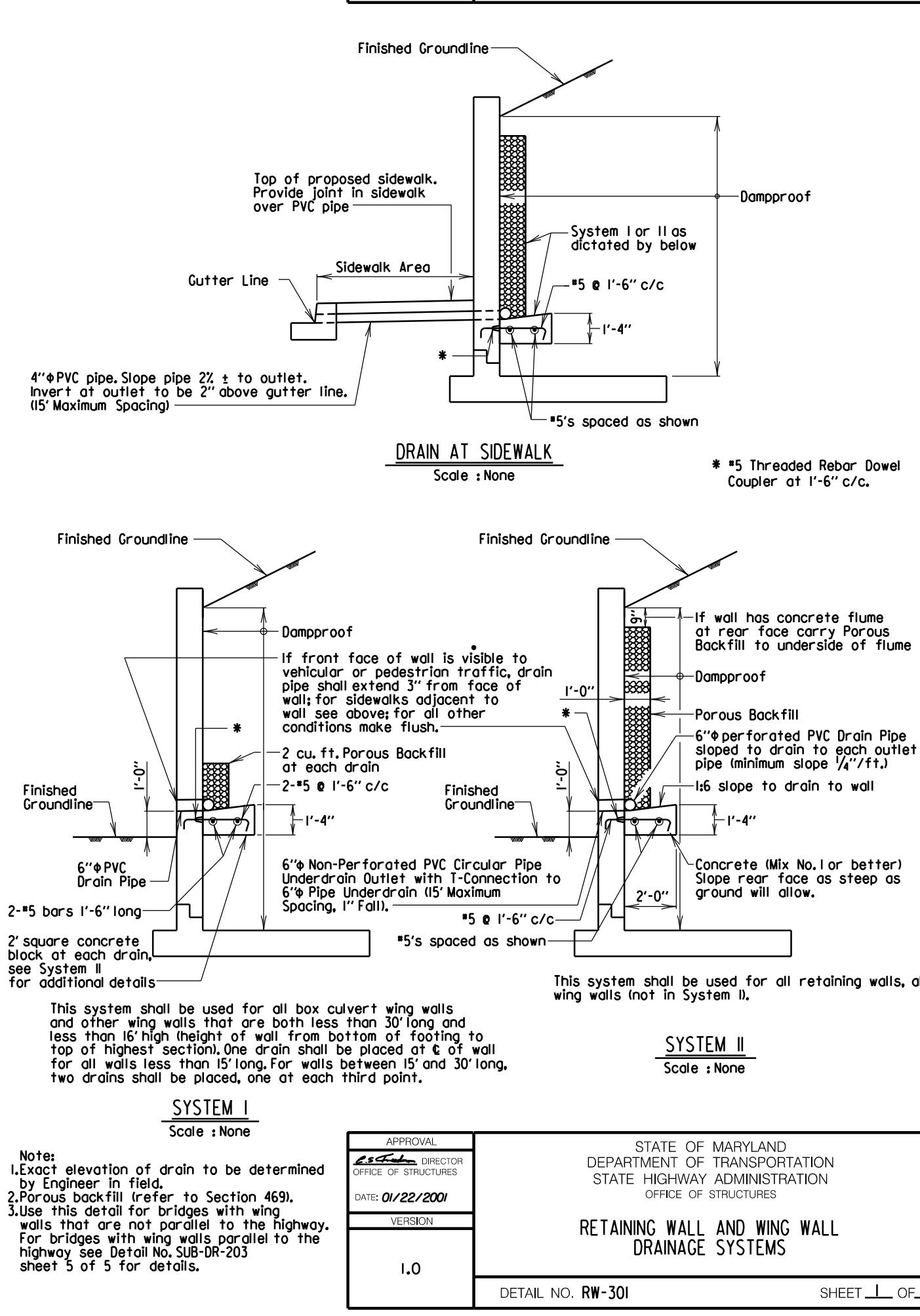
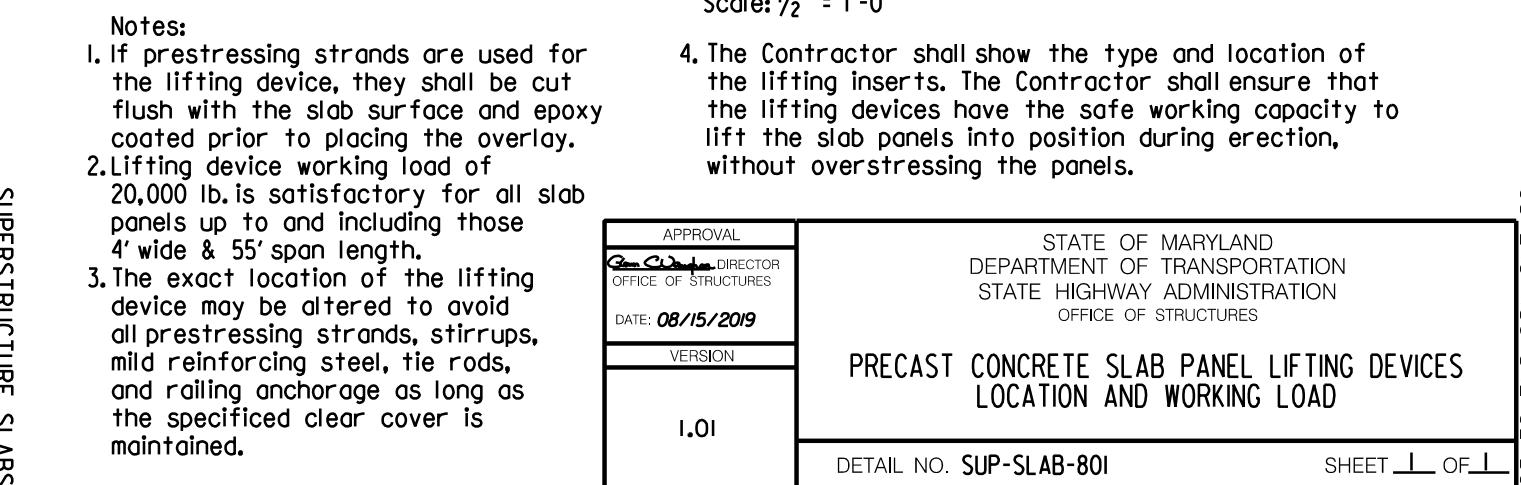
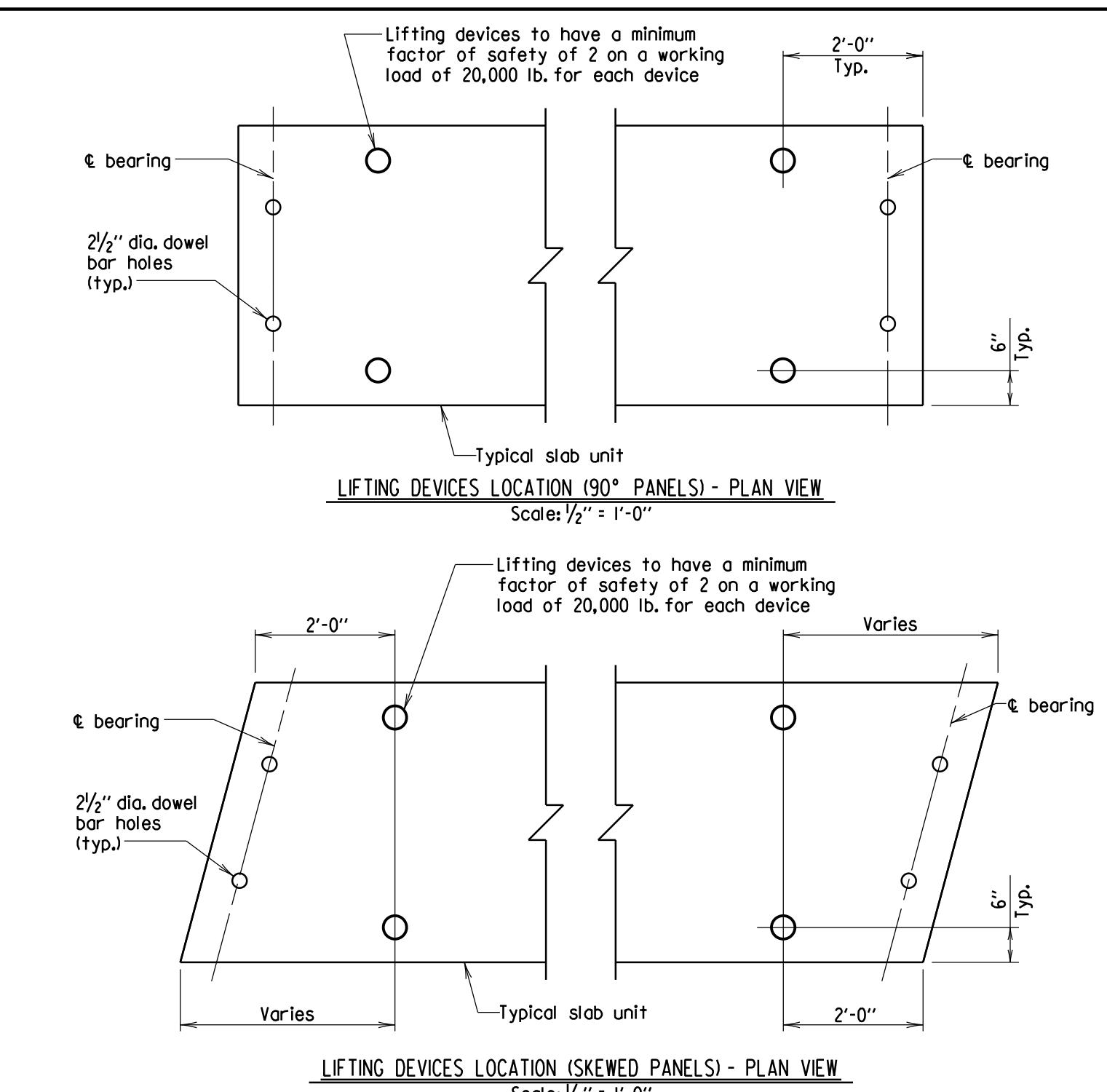
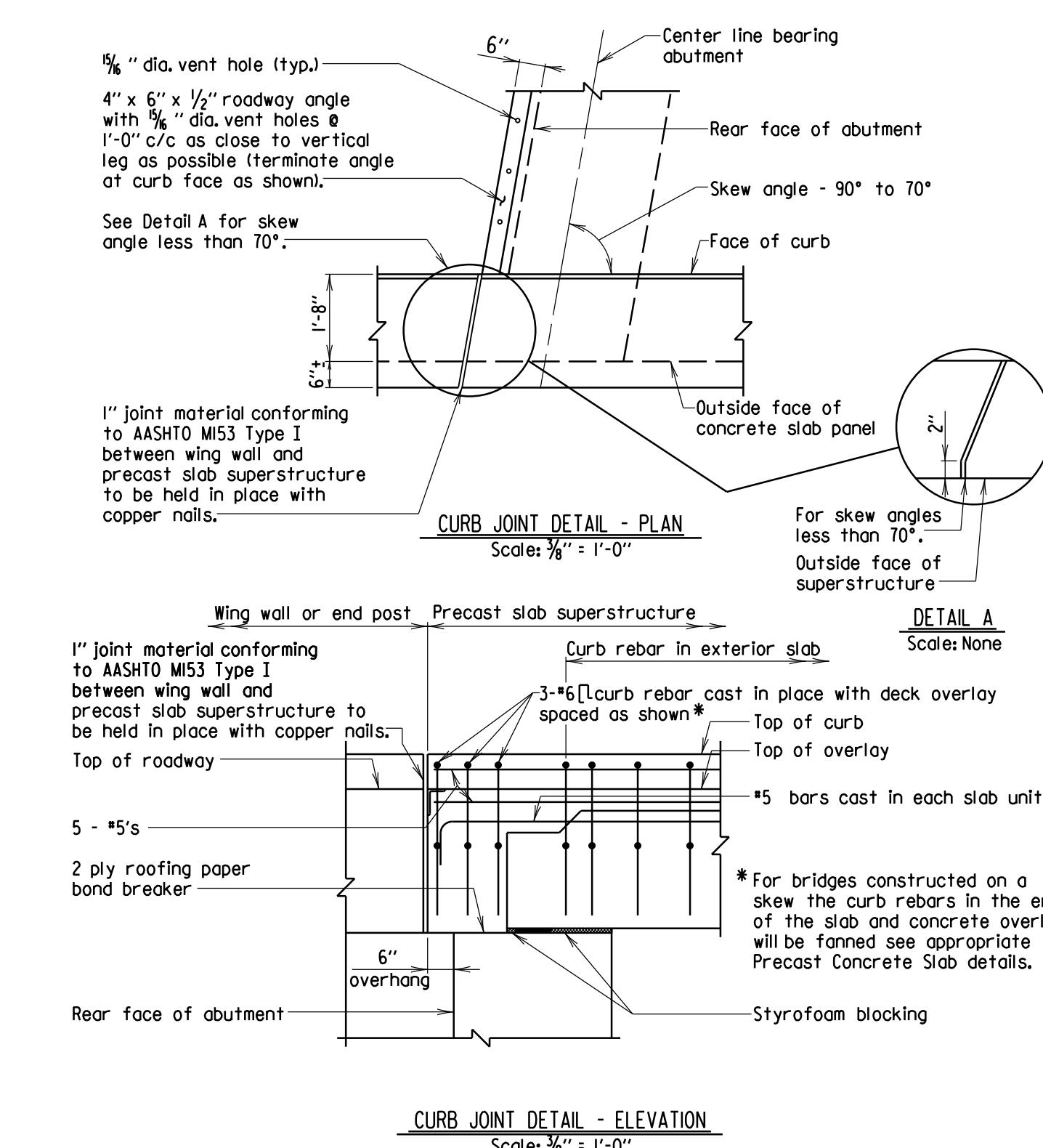
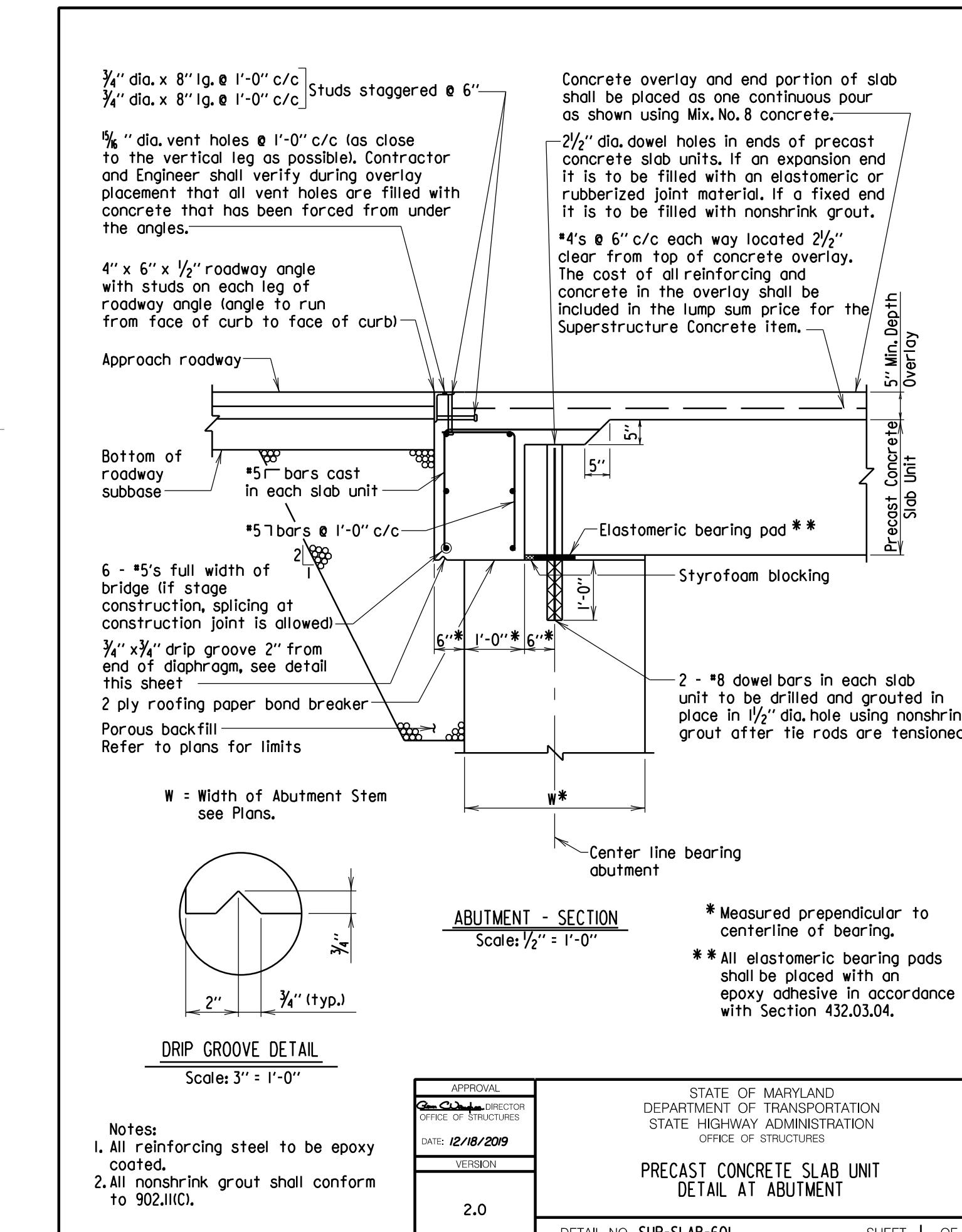
STANDARD DETAILS

AS SHOWN ADVERTISED DATE NA CONTRACT NO. BFP 16-019A

ED BY _____ SHA _____ COUNTY _____ FREDERICK _____
BY _____ SHA _____ LOGMILE _____ XXXX - XXXX
ED BY _____

AMT

MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710



LOCATION CATEGORY A						
BAR SIZE	CENTER TO CENTER SPACING					
	3"	4"	5"	≥ 6"		
#4	1'-10"	2'-5"	1'-10"	2'-2"	1'-10"	2'-2"
#5	2'-5"	3'-1"	2'-4"	3'-0"	2'-4"	2'-9"
#6	3'-5"	4'-5"	2'-9"	3'-7"	2'-9"	3'-7"
#7	4'-8"	6'-1"	3'-6"	4'-7"	3'-2"	4'-2"
#8	6'-1"	7'-1"	4'-7"	5'-11"	3'-8"	4'-9"
#9	7'-8"	10'-0"	5'-9"	7'-6"	4'-8"	6'-0"
#10	-	-	7'-4"	9'-6"	5'-10"	7'-8"
#11	-	-	9'-0"	11'-9"	7'-2"	9'-5"
				6'-8"	8'-8"	

Location Category A - Bars in horizontal layers in top of pour with 12" or more of concrete below them such as in: footings, pier caps, etc.

LOCATION CATEGORY A						
BAR SIZE	CENTER TO CENTER SPACING					
	3"	4"	5"	≥ 6"		
#4	1'-7"	2'-1"	1'-7"	1'-11"	1'-7"	1'-11"
#5	2'-1"	2'-8"	2'-0"	2'-7"	2'-0"	2'-5"
#6	3'-0"	3'-10"	2'-5"	3'-1"	2'-5"	3'-1"
#7	4'-0"	5'-3"	3'-0"	3'-11"	2'-9"	3'-7"
#8	5'-3"	6'-10"	3'-11"	5'-2"	3'-2"	4'-1"
#9	6'-8"	8'-8"	5'-0"	6'-6"	4'-0"	5'-3"
#10	-	-	6'-4"	8'-3"	5'-1"	6'-7"
#11	-	-	7'-10"	10'-2"	6'-3"	8'-2"
				5'-9"	5'-9"	7'-6"

Location Category A - Bars in horizontal layers in top of pour with 12" or more of concrete below them such as in: footings, pier caps, etc.

LOCATION CATEGORY B						
BAR SIZE	CENTER TO CENTER SPACING					
	3"	4"	5"	≥ 6"		
#4	1'-5"	2'-1"	1'-5"	1'-8"	1'-5"	1'-8"
#5	1'-10"	2'-9"	1'-9"	2'-8"	1'-9"	2'-1"
#6	2'-8"	3'-11"	2'-1"	3'-2"	2'-1"	3'-2"
#7	3'-7"	5'-4"	2'-8"	4'-0"	2'-6"	3'-8"
#8	4'-8"	7'-0"	3'-6"	5'-3"	2'-10"	4'-2"
#9	5'-11"	8'-10"	4'-5"	6'-8"	3'-7"	5'-4"
#10	-	-	5'-8"	8'-5"	4'-6"	6'-9"
#11	-	-	6'-11"	10'-4"	5'-7"	8'-4"
				5'-2"	5'-2"	7'-8"

Location Category B - All bars not in Location Category A.

= Non-epoxy coated = Epoxy coated

Note:
1. When development length is not specified on the Plans, the above dimensions shall be used.
2. These development lengths do not apply when bar is in lightweight concrete. Greater lengths are required for this material.
3. These development lengths only apply where the General Notes indicate Reinforcing Steel Design, fy = 60 ksi, and Concrete Design, f'c = 3000 psi.
4. These development lengths assume cover of 2". Greater development lengths will be required for cover less than 2".

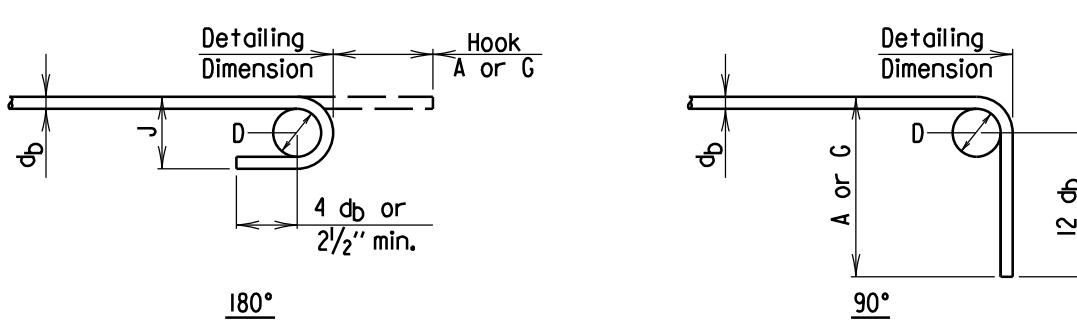
APPROVAL REBAR DIRECTOR OFFICE OF STRUCTURES DATE: 03/21/2017 VERSION 1.0	STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES DEVELOPMENT LENGTH DIMENSIONS FOR GRADE 60 REINFORCING STEEL IN MIX NO.3 (3500 P.S.I.) CONCRETE DETAIL NO. REBAR-DL-101 SHEET 1 OF 1
--	--

REBAR - DEVELOPMENT LENGTH

+

HOOKS
TABLE I
REFERENCES

1. ACI Types I thru 26
2. SHA Standard Pin Bending
3. SHA Radius Bending



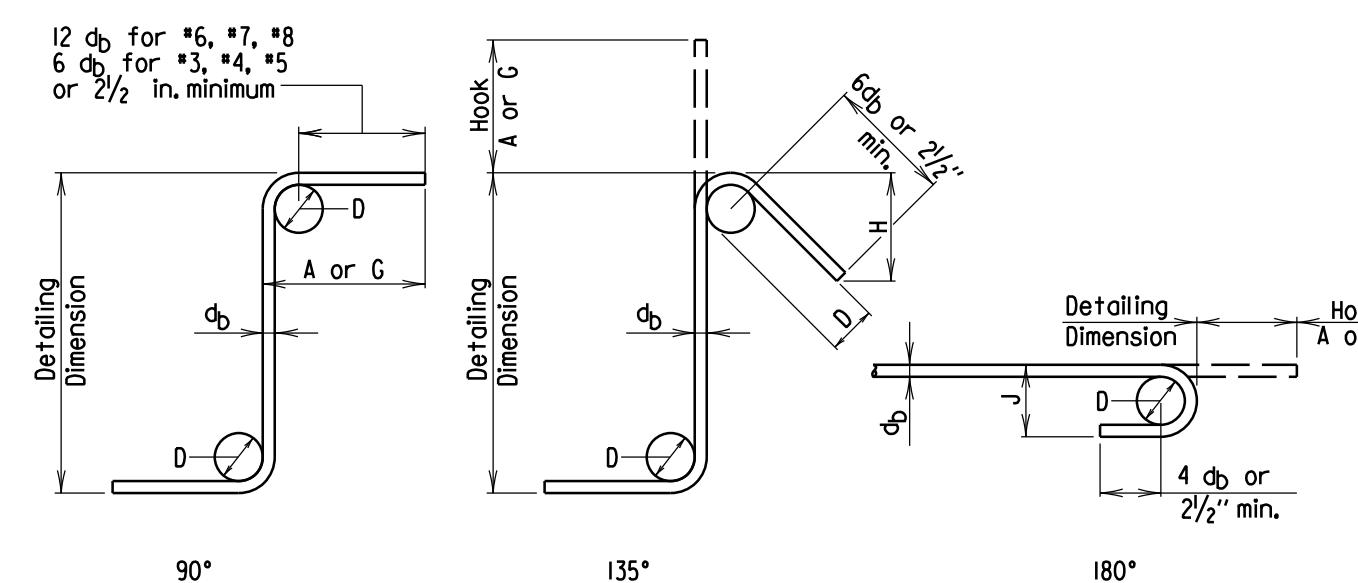
RECOMMENDED END HOOKS, ALL GRADES				
BAR SIZE	Finished bend diameter D, in.	180 - deg hook		90 - deg hook
		A or G in.	J, in.	A or G in.
#3	2 1/4	5	3	
#4	3	6	4	8
#5	3 3/4	7	5	10
#6	4 1/2	8	6	1-0
#7	5 1/4	10	7	1-2
#8	6	11	8	1-4
#9	9 1/2	1-3	1 1/4	1-7
#10	10 1/4	1-5	1-1/4	1-10
#11	12	1-7	1-2 1/4	2-0
#12	18 1/4	2-3	1-9 1/4	2-7
#13	24	3-0	2-4 1/2	3-5

HOOKS
TABLE II
REFERENCES

1. ACI Types SI thru SII
2. ACI Types II thru I8
3. SHA Ties and Stirrups

(Note: Tie and stirrup types supplied in sizes #3-#8)

STIRRUP AND TIE HOOKS



STIRRUP AND TIE HOOK DIMENSIONS, in.

BAR SIZE	D, in.	90 - deg hook		135 - deg hook
		A or G	J, in.	A or G, approx
#3	1 1/2	5	3	2 1/2
#4	3	6	4	4 1/2
#5	3 3/4	7	5	5 1/2
#6	4 1/2	8	6	7 1/4
#7	5 1/4	10	7	9
#8	6	11	8	10 1/4

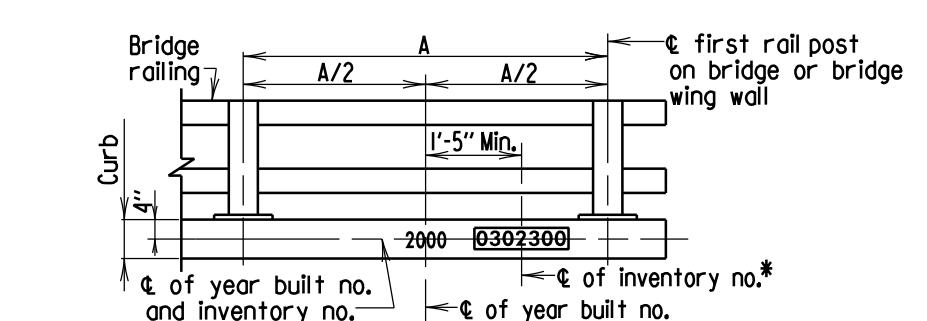
RECOMMENDED END HOOKS, ALL GRADES

BAR SIZE	Finished bend diameter D, in.	180 - deg hook	
		A or G in.	J, in.
#3	2 1/4	5	3
#4	3	6	4
#5	3 3/4	7	5
#6	4 1/2	8	6
#7	5 1/4	10	7
#8	6	11	8

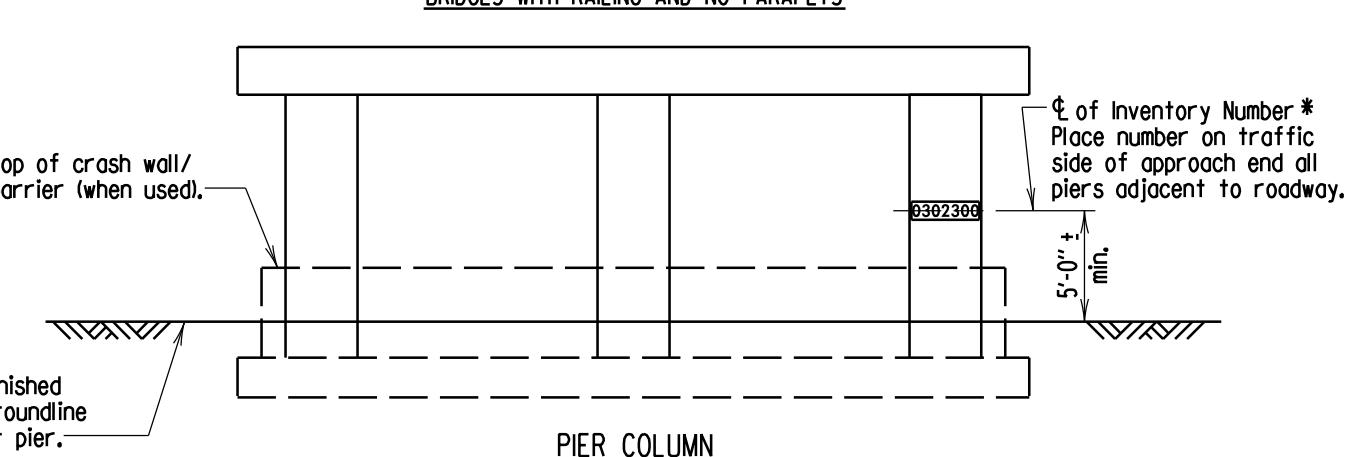
Note: If end post has a form liner finish, place year built and structure inventory numbers in curb area as shown for bridges with railing and no parapets. \$ of year built to be located 1'-0" from parapet opening at abutment.

BRIDGES WITH PARAPET

Location: Dual Bridges-Each Approach End (Outside Shoulder). Single Bridge - Approach End - North or East corner. Where bridge has a concrete parapet and no definitive end post, place year built marking and structure inventory number on face of parapet as close to center line of bearing at abutment as practical.



BRIDGES WITH RAILING AND NO PARAPETS



PIER COLUMN ONLY ON ROAD OVER ROAD BRIDGES

* Black numbers 3" high on a painted white background, 15" x 17".

Notes:
1. For existing structures, where a year built is shown on the structure and structure is to be rehabilitated, the marking should read 1990 or later, or the year built.
2. For existing structures with no year built contact the Office of Structures for old year.
3. For Year Built Numerals refer to Detail No. SI-201.

APPROVAL

DIRECTOR
OFFICE OF STRUCTURES

DATE: 10/11/2013

VERSION

1.0

DETAIL NO. REBAR-BB-102

SHEET 1 OF 2

APPROVAL

DIRECTOR
OFFICE OF STRUCTURES

DATE: 10/11/2013

VERSION

1.0

DETAIL NO. REBAR-BB-102

SHEET 2 OF 2

APPROVAL

DIRECTOR
OFFICE OF STRUCTURES

DATE: 10/11/2013

VERSION

1.0

DETAIL NO. SI-101

SHEET 1 OF 1

STRUCTURE INVENTORY

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF STRUCTURES

REINFORCING STEEL HOOK TABLES AND DIAGRAMS

LOCATION OF YEAR BUILT MARKING AND STRUCTURE INVENTORY NUMBER ON BRIDGES

STRUCTURE INVENTORY

SHEET S-27

BRIDGE REPLACEMENT

PRESTRESSED CONCRETE BEAM

BRIDGE NO. F05-22

ON HORNETS NEST ROAD

OVER FRIENDS CREEK

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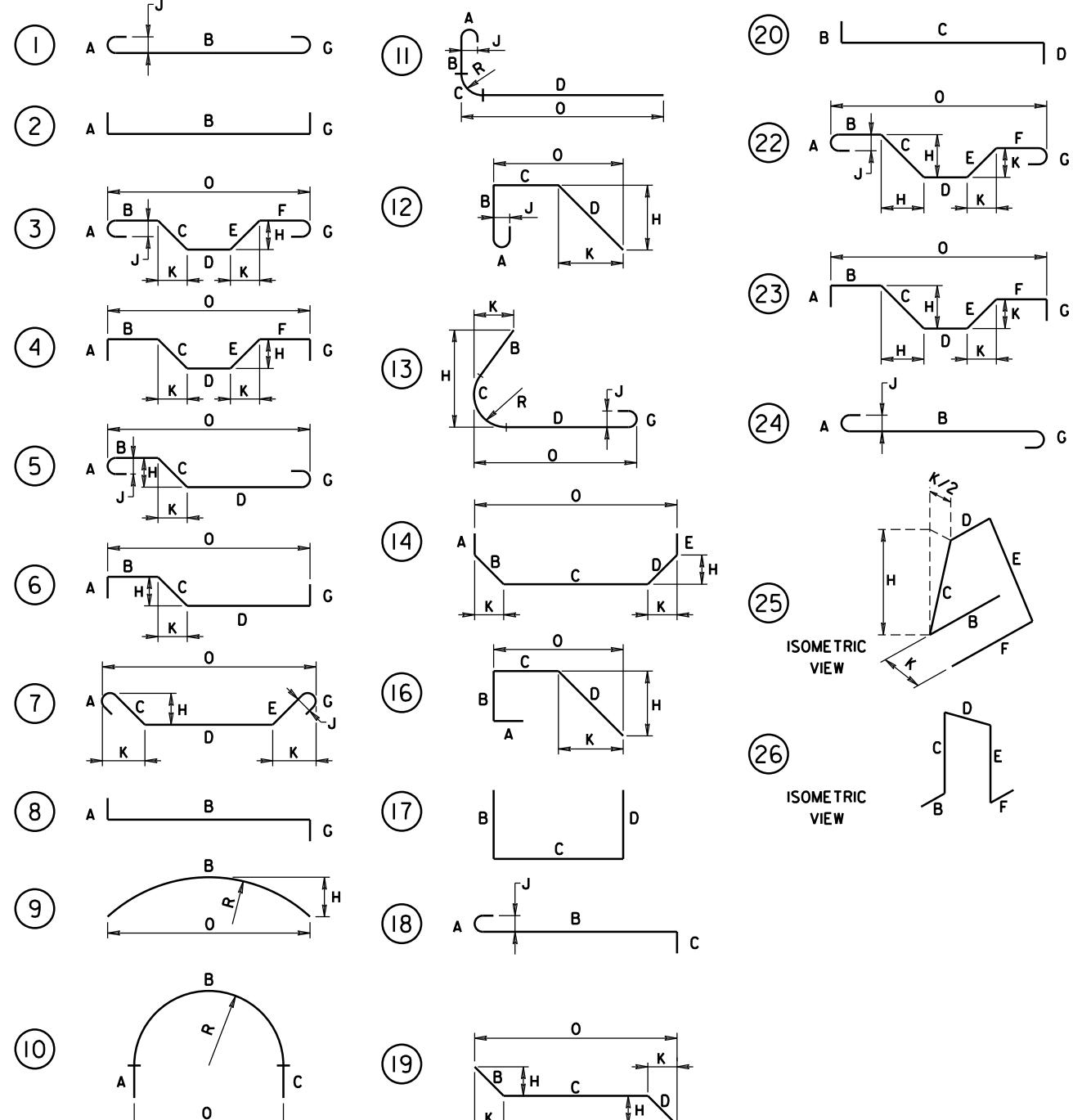
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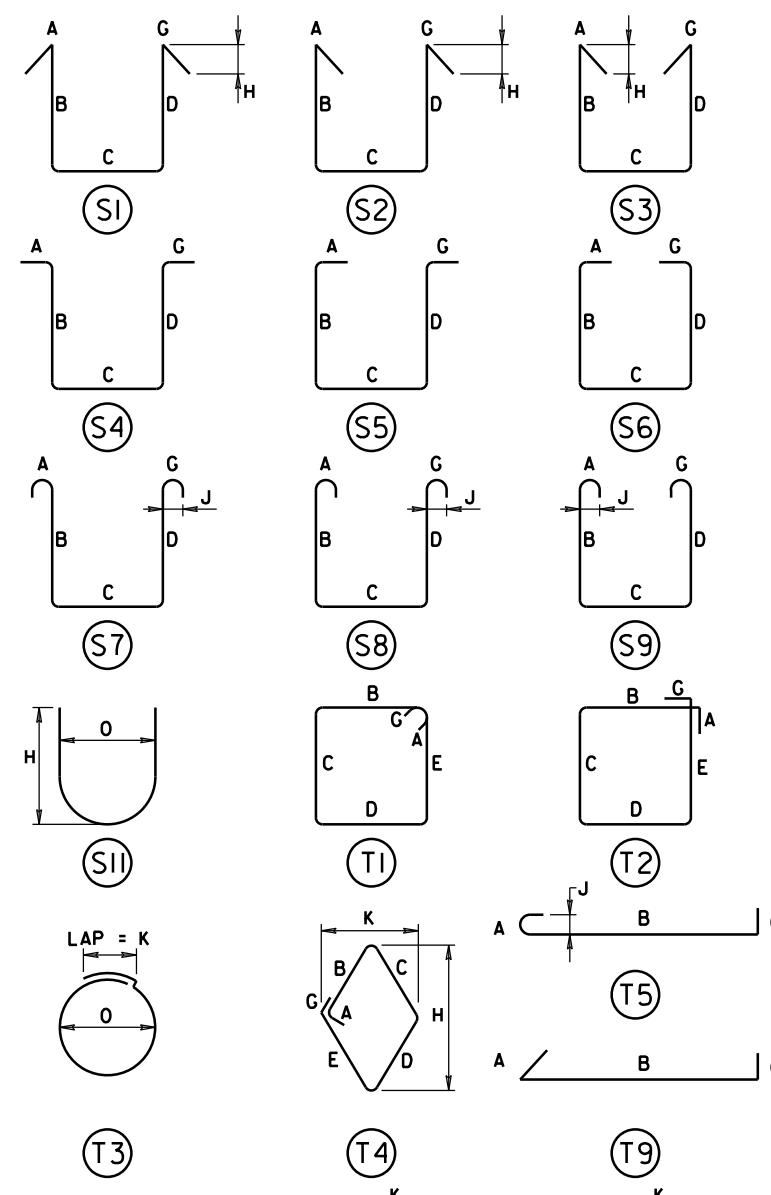
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ACI TYPICAL BAR BENDS



STANDARD PIN BENDING

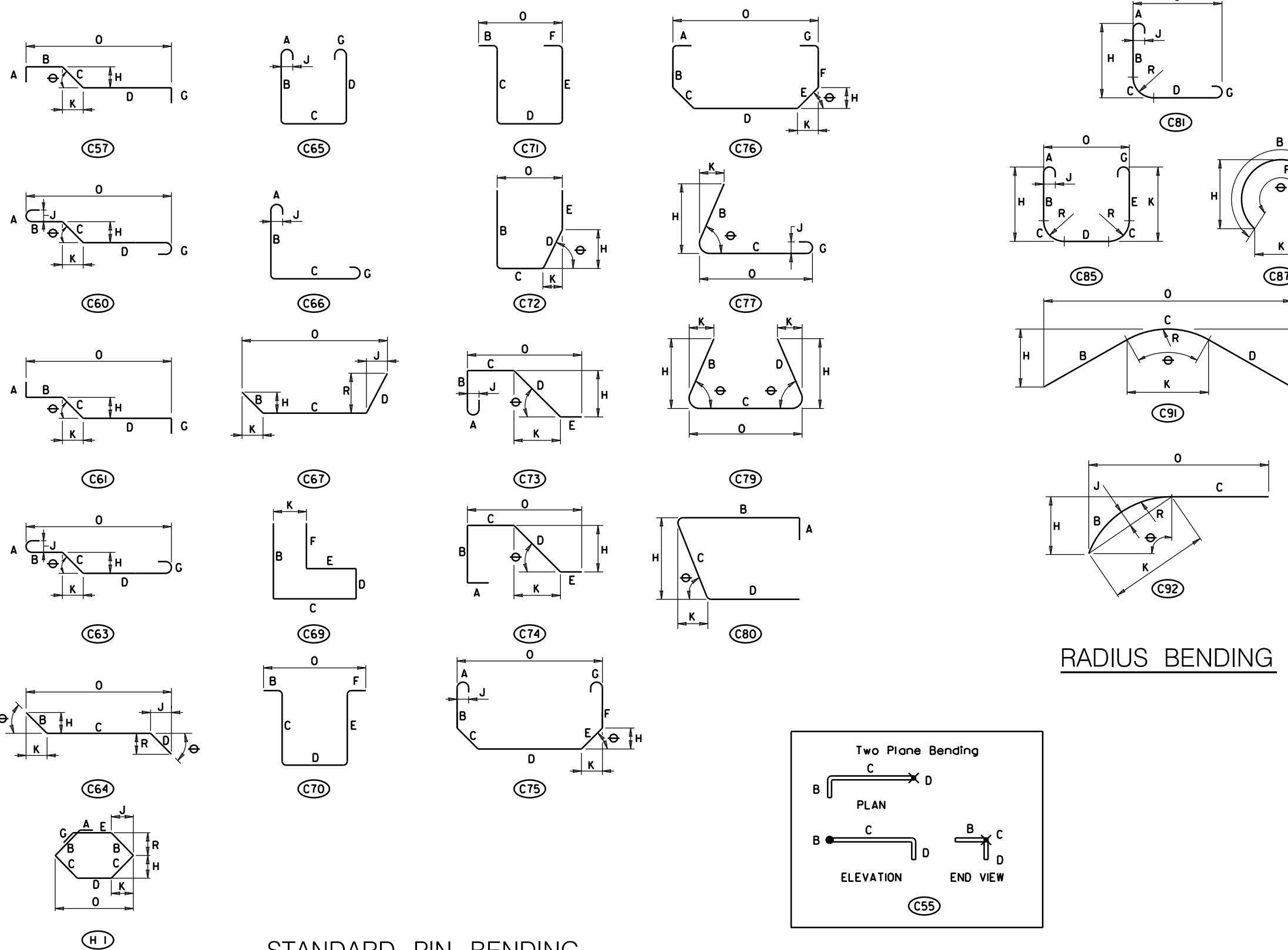


NOTE TO FABRICATOR

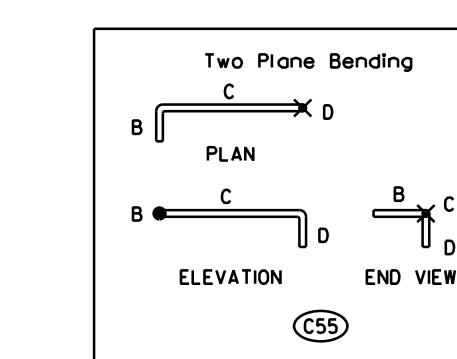
BENDING TOLERANCE NOTE
TIRES AND STIRRUPS SHALL BE BENT WITH A PLUS ZERO INCH (+0') MINUS (-) NORMAL ACI BENDING TOLERANCES

TIES AND STIRRUPS

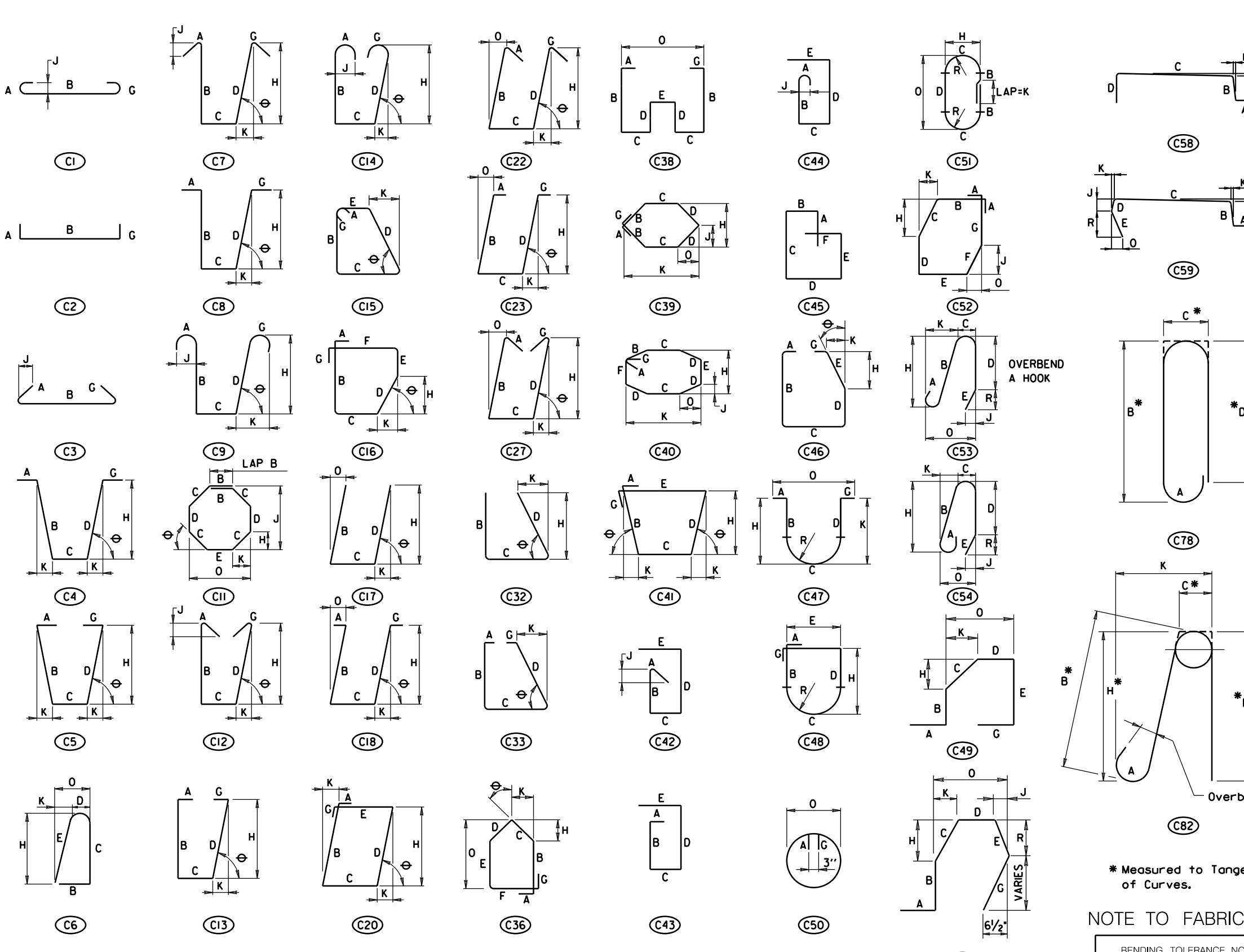
SHA TYPICAL BAR BENDS



RADIUS BENDING



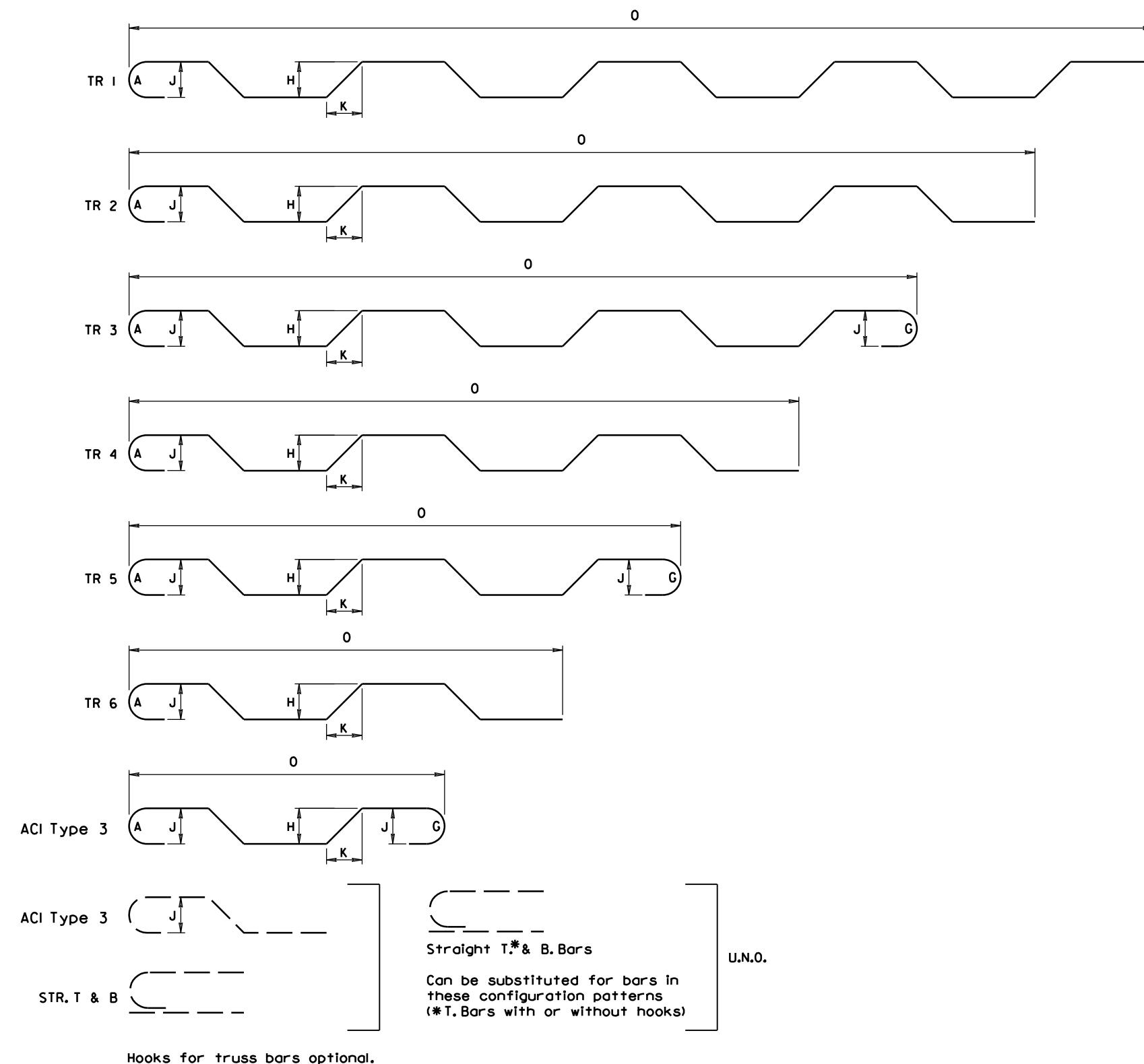
STANDARD PIN BENDING



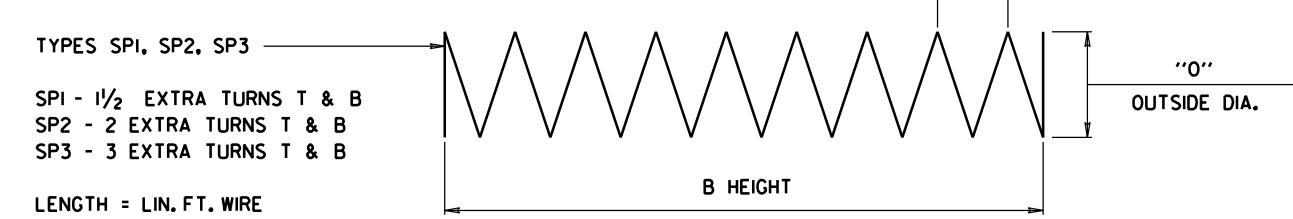
NOTE TO FABRICATOR

BENDING TOLERANCE NOTE
TIRES AND STIRRUPS SHALL BE BENT WITH A PLUS ZERO INCH (+0') MINUS (-) NORMAL ACI BENDING TOLERANCES

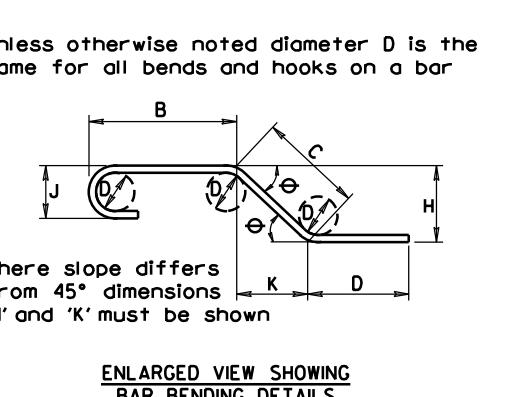
TIES AND STIRRUPS



TRUSS BAR CONFIGURATION

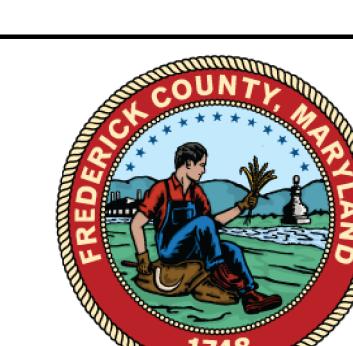


SPIRAL



Notes:
1. All dimensions are out to out of bar or to tangent points for 135° and 180° hooks.
2. 'J' dimensions on 180° hooks to be shown only where necessary to restrict hook size. Otherwise, where hooks are to be used.
3. Where 'J' is not shown, 'J' will be kept equal to or less than 'H' on truss bars. Where 'J' can exceed 'H' it should be shown.
4. 'H' dimension on stirrups to be shown where necessary to fit within concrete.
5. Where bars are to be bent more accurately than standard bending tolerances, bending dimensions which require closer fabrication should have limits indicated.

GENERAL NOTES

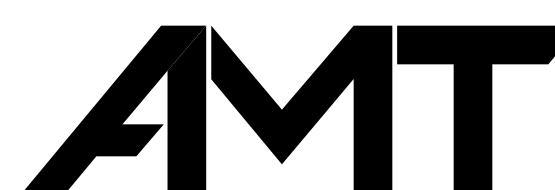


OFFICE OF STRUCTURES
BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

STANDARD DETAILS

SCALE AS SHOWN ADVERTISED DATE NA CONTRACT NO. RFP 16-019A

DESIGNED BY SHA COUNTY FREDERICK
DRAWN BY SHA LOGMILE XXXX - XXXX
CHECKED BY



A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204

EROSION AND SEDIMENT CONTROL – GENERAL NOTES

FREDERICK COUNTY STANDARD SEDIMENT & EROSION CONTROL NOTES

- ALL EROSION/SEDIMENT CONTROL MEASURES SHALL COMPLY WITH THE "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" AS APPROVED BY THE COUNTY.
- ALL DISTURBED AREAS NOT UNDER ACTIVE GRADING TO BE SEADED WITHIN 7 DAYS OF INITIAL GRADING. FOR TEMPORARY SEEDING SPECIFICATIONS SEE SECTION B1, "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" PUBLISHED JOINTLY BY WATER MANAGEMENT ADMINISTRATION, SOIL CONSERVATION SERVICE AND STATE SOIL CONSERVATION COMMITTEE.
- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AT THE INITIATION OF GRADING.
- ALL STORM DRAIN AND SANITARY SEWER LINES NOT IN PAVED AREAS AND NOT SUBJECT TO ACTIVE GRADING ARE TO BE MULCHED & SEADED WITHIN 7 DAYS OF INITIAL BACKFILL.
- ELECTRIC POWER, TELEPHONE AND GAS LINES NOT IN ACTIVE GRADING AREAS ARE TO BE COMPACTED, SEADED AND MULCHED WITHIN 7 DAYS AFTER INITIAL BACKFILL.
- ALL EARTH BERMS AND SEDIMENT DAMS ARE TO BE MULCHED AND SEADED (SEE SECTION B OF ABOVE REFERENCE) WITHIN 7 DAYS AFTER GRADING. ALL SOIL STOCKPILES ARE TO BE MULCHED AND SEADED WITHIN 7 DAYS.
- DURING CONSTRUCTION, ALL SEDIMENT CONTROL STRUCTURES WILL BE INSPECTED AFTER EACH RAINFALL AND REPAIRED IF NECESSARY. SEDIMENT TO BE REMOVED TO A SUITABLE DISPOSAL AREA AND STABILIZED WITH PERMANENT VEGETATIVE COVER. (SEE SECTION B OF "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" PUBLISHED JOINTLY BY WATER MANAGEMENT ADMINISTRATION, SOIL CONSERVATION SERVICE, AND STATE SOIL CONSERVATION COMMITTEE.).
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL SEDIMENT EROSION CONTROL MEASURES UNTIL DISTURBED AREAS ARE STABILIZED.
- AFTER FINE GRADING, ALL DISTURBED AREAS ARE TO BE PERMANENTLY MULCHED AND SEADED (SEE SECTION B).
- NO SLOPE SHALL BE GREATER THAN 2:1.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS WHICH ARE SHOWN ON THE PLAN AND AREA CURRENTLY BEING USED FOR MATERIAL STORAGE OR FOR THOSE AREAS ON WHICH ACTUAL CONSTRUCTION ACTIVITIES ARE CURRENTLY BEING PERFORMED. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE THAT STABILIZED AREAS CONTINUOUSLY MEET THE APPROPRIATE REQUIREMENTS OF THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL".
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN CONTINUOUS COMPLIANCE WITH THE LATEST VERSION OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
- ALL UTILITIES, SUCH AS; STORM DRAIN, PUBLIC WATER, SANITARY SEWER, ELECTRIC POWER, TELEPHONE, CABLE AND GAS LINES, THAT ARE NOT IN PAVED AREAS AND ARE NOT UNDERGOING ACTIVE GRADING SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 3 DAYS OF INITIAL DISTURBANCE.
- THE OWNER DEVELOPER OR THEIR DESIGNATE IS RESPONSIBLE FOR CONDUCTING ROUTINE MAINTENANCE. THE SITE AND CONTROLS SHOULD BE INSPECTED WEEKLY AND THE NEXT DAY AFTER EACH RAIN EVENT**, ANY ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN A SUITABLE AREA AND SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED.

**ANY PROJECT THAT HAS A STATE ISSUED N.O.I. PERMIT DOCUMENT EACH INSPECTION AND MAINTAIN AN INSPECTION LOG (PLEASE SEE NOI FOR DETAILS).

NOTES FOR UTILITY WORK

- DISTURBANCE OUTSIDE THE LIMIT OF DISTURBANCE CANNOT EXCEED 5,000 SQUARE FEET.
- PLACE ALL EXCAVATED MATERIAL ON THE HIGH SIDE OF THE TRENCH.
- ONLY COMPLETE AS MUCH WORK AS CAN BE DONE IN ONE DAY SO BACKFILLING, FINAL GRADING, SEEDING, AND MULCHING CAN OCCUR.
- ANY SEDIMENT CONTROL MEASURES DISTURBED BY CONSTRUCTION SHALL BE REPAIRED THE SAME DAY.

NOTES FOR SECONDARY UTILITY WORK

- DISTURBANCE FROM SECONDARY UTILITIES SUCH AS PHONE, CABLE, ELECTRIC CABLE, T.V. CABLE, ETC. SHALL BE THE SUBCONTRACTOR'S RESPONSIBILITY. THE WORK AREA SHALL BE RETURNED TO EXISTING GRADE. SEED AND MULCH THE DISTURBED AREA FROM THE INSTALLATION OR RELOCATION OF ANY LINES OR CONDUIT.
- THE SUBCONTRACTORS SHALL BE RESPONSIBLE FOR THE REINSTALLATION OR REPAIR OF ANY SILT FENCE OR SEDIMENT CONTROLS MEASURES THAT WERE DAMAGED OR MOVED DURING THE INSTALLATION OR RELOCATION OF ANY LINES OR CONDUIT.

TREE PROTECTION NOTES

- THE CONTRACTOR SHALL NOT REMOVE OR INTENTIONALLY DAMAGE ANY TREES NOT MARKED FOR REMOVAL.
- THE CONTRACTOR SHALL AVOID AND MINIMIZE PASSAGE OF HEAVY CONSTRUCTION EQUIPMENT WITHIN THE TREE DRIP LINE.
- THE CONTRACTOR SHALL FINE GRADE AROUND TREES WITH SMALL EQUIPMENT OR HAND GRADE ONLY.
- THE CONTRACTOR SHALL INSTALL TREE PROTECTION FENCING AND PLANKING AS REQUIRED BY THE COUNTY INSPECTOR.
- ALL TREES WITHIN THE LIMIT OF DISTURBANCE NOT DESIGNATED FOR REMOVAL SHALL BE PROTECTED AS PER THE TREE PROTECTION AND PLANNING DETAILS. TREE PLANKING SHALL BE UTILIZED FOR TREES THAT ARE DIRECTLY ADJACENT TO OR HAVE THE POTENTIAL TO BE DAMAGED BY MACHINERY THAT IS IN CLOSE OPERATION. TREE PROTECTION FENCING SHALL BE USED FOR TREES WHERE THERE IS NECESSARY ROOM TO AVOID DURING CONSTRUCTION.

STANDARD SYMBOLS



DESIGN CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, THE 2000 MARYLAND STORMWATER MANUAL, VOLUMES I & II, INCLUDING SUPPLEMENTS, THE ENVIRONMENTAL ARTICLE SECTIONS 4-101 THROUGH 116 AND SECTIONS 4-201 AND 215, AND THE CODE OF MARYLAND REGULATIONS (COMAR) 26.17.01 AND COMAR 26.17.02 FOR EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT, RESPECTIVELY.

NAME	SIGNATURE
MARYLAND REGISTRATION NUMBER, P.E., R.L.S. OR R.L.A. (circle)	DATE

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

SEQUENCE OF CONSTRUCTION

THE CONTRACTOR SHALL NOTIFY FREDERICK COUNTY ENVIRONMENTAL COMPLIANCE SECTION (301-600-3507) TWO (2) WEEKS PRIOR TO THE START OF CONSTRUCTION FOR AN ON-SITE REVIEW OF PROPOSED SEDIMENT AND EROSION CONTROL MEASURES. NOTIFY MDE COMPLIANCE PROGRAM SEVEN (7) DAYS BEFORE ANY LAND DISTURBING ACTIVITY IS CONDUCTED AND HOLD A PRE-CONSTRUCTION MEETING BETWEEN PROJECT REPRESENTATIVES AND REPRESENTATIVES OF FREDERICK COUNTY.

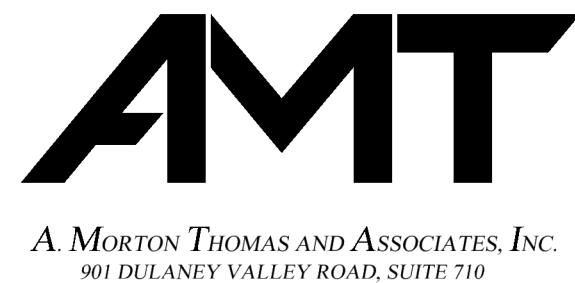
- DETOUR TRAFFIC AS SHOWN ON MAINTENANCE OF TRAFFIC PLANS AND AS PER MDOT SHA STANDARDS.
- ALL DISTURBED AREAS SHALL BE STABILIZED AT THE END OF EACH WORK DAY, UNLESS DIRECTED TO AN MDE APPROVED SEDIMENT CONTROL DEVICE, AS SHOWN ON THE PLANS.
- PHASE 1
- ESTABLISH THE LOD.
- INSTALL PERIMETER CONTROLS (SILT FENCE) PRIOR TO BEGINNING ANY WORK. PLACE SCEs AS SHOWN FOR PHASE 1.
- INSTALL SANDBAG DIVERSION A OR B AS SHOWN ON PLANS.
- WITH WRITTEN APPROVAL FROM THE MDE INSPECTOR, REMOVE CULVERTS AND HEADWALLS WITHIN THE LIMITS AS SHOWN IN PHASE 1 BEHIND SANDBAG DIVERSION A OR B. ONCE REMOVAL OF CULVERTS BEHIND SANDBAG DIVERSION A OR B IS COMPLETE AND STREAMBED IS STABILIZED, INSTALL OTHER SANDBAG DIVERSION (A OR B) AND REMOVE REMAINING CULVERTS AND HEADWALLS AND STABILIZE STREAMBED. CONTRACTOR SHALL ENSURE THAT SEDIMENT AND DEBRIS IS NOT RELEASED INTO STREAM DURING CULVERT REMOVAL.
- PHASE 2
- ESTABLISH THE LOD.
- WITH WRITTEN APPROVAL FROM THE COUNTY, WORKING FROM UPSTREAM TO DOWNSTREAM, PLACE PHASE 2 STREAM DIVERSION (BARRIER /SANDBAGS) AS SHOWN ON SHEETS ES-02 AND ES-03.
- EXCAVATE FOR WINGWALL FOOTINGS AND ABUTMENTS. ALL WORK SHALL BE BEHIND THE PHASE 2 STREAM DIVERSION (BARRIER /SANDBAGS) DURING THIS PHASE.
- FORM, TIE REBAR, POUR CONCRETE FOR FOOTINGS AND ABUTMENTS.
- CURE CONCRETE FOR A MINIMUM OF SEVEN (7) DAYS. (SHA 420.03.08).
- PLACE RIPRAP IN REMAINING AREAS.
- WITH WRITTEN APPROVAL FROM THE MDE INSPECTOR, WORKING FROM DOWNSTREAM TO UPSTREAM, REMOVE PHASE 2 STREAM DIVERSION (BARRIER /SANDBAGS).
- COMPLETE INSTALLATION OF BRIDGE SLAB BEAMS, CONCRETE OVERLAY, AND PARAPETS.
- MILL EXISTING PAVEMENT AS SHOWN ON SHEET TS-01 AND CONSTRUCT ROADWAY EMBANKMENTS AND DRAINAGE FEATURES. ACCESS TO DRIVEWAY ON SOUTH SIDE OF BRIDGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
- FINALIZE ROADWAY GRADING, MILL EXISTING PAVEMENT AT NORTH AND SOUTH TIE-INS, CONSTRUCT FULL DEPTH PAVEMENT, PLACE SURFACE COURSE, AND INSTALL TRAFFIC BARRIER.
- UPON COMPLETION OF THE CONSTRUCTION, PERMANENTLY STABILIZE AREAS WITH TOPSOIL AND TURFGRASS ESTABLISHMENT.
- APPLY PAVEMENT MARKINGS.

SHEET EN-01



BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

EROSION AND SEDIMENT CONTROL NOTES				
SCALE _____	ADVERTISED DATE _____	NA _____	CONTRACT NO. _____	RFP 16-019A
DESIGNED BY _____	SRM _____	COUNTY _____	FREDERICK	
DRAWN BY _____	SRM _____	LOGMILE _____	XXXX - XXXX	
CHECKED BY _____	KAR _____			
SHEET NO. 34 OF 43				



A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204

SILT FENCE (SF)

142 LF - STA. 0+62 TO 2+00, LT.
 63 LF - STA. 1+94 TO 2+47, LT.
 38 LF - STA. 2+49 TO 2+84, LT.
 120 LF - STA. 0+63 TO 1+88, RT.
 80 LF - STA. 1+80 TO 2+65, RT.
 148 LF - STA. 3+18 TO 4+74, RT.

SUPER SILT FENCE (SSF)

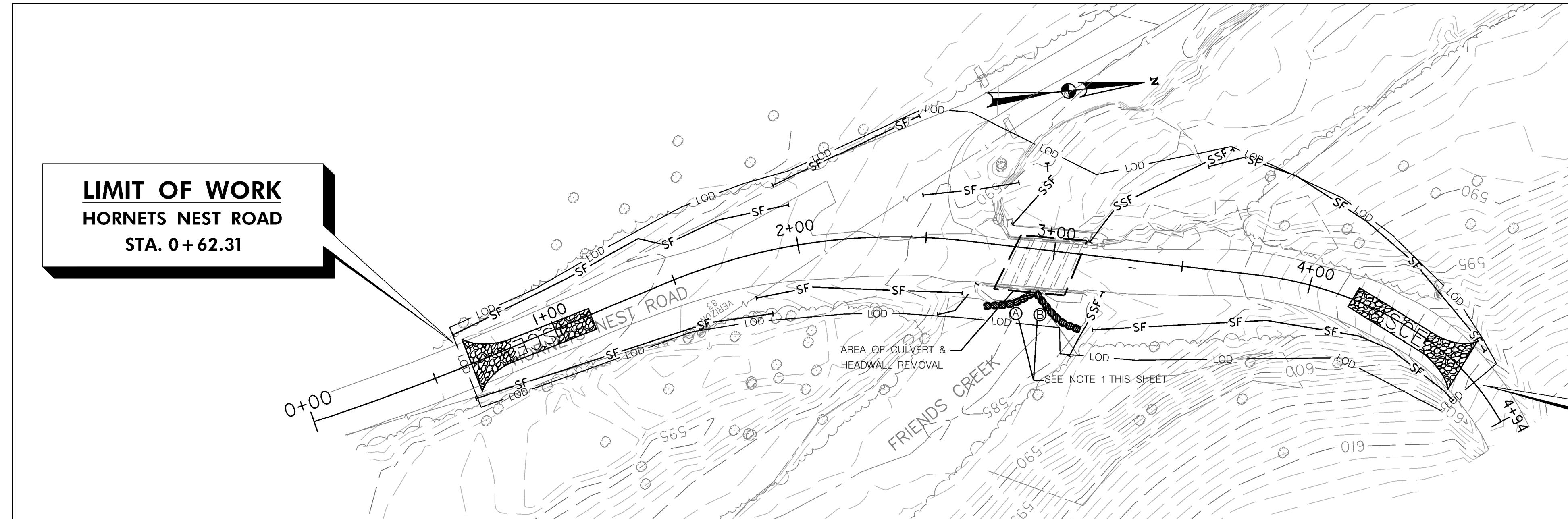
29 LF - STA. 2+83 TO 2+95, LT.
 68 LF - STA. 3+14 TO 3+63, LT.
 138 LF - STA. 3+55 TO 4+70, LT.
 24 LF - STA. 2+54 TO 2+70, RT.
 30 LF - STA. 3+11 TO 3+20, RT.

STABILIZED CONSTRUCTION ENTRANCE (SCE)

1 EA - STA. 0+80
 1 EA - STA. 4+40

LIMIT OF DISTURBANCE

STATION	OFFSET (FT.)	STATION	OFFSET (FT.)
0+63	16.3 LT	4+75	16.8 RT
0+99	17.4 LT	4+22	22.9 RT
1+62	25.5 LT	3+36	38.2 RT
1+85	27.5 LY	3+07	39.2 RT
2+01	28.9 LT	3+05	29.1 RT
2+47	50.1 LT	2+66	29.7 RT
2+62	49.9 LT	2+39	29.6 RT
3+13	31.3 LT	2+16	28.9 RT
3+64	48.4 LT	1+76	25.4 RT
4+03	35.9 LT	1+49	21.3 RT
4+22	28.8 LT		
4+51	19.5 LT		
4+75	11.4 LT		

EROSION AND SEDIMENT CONTROL PLAN - PHASE 1

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

NOTES
 1. INSTALL SANDBAG DIVERSION A OR B ONE AT A TIME, AND REMOVE CULVERTS AND HEADWALLS BEHIND INSTALLED DIVERSION. STABILIZE AREAS OF REMOVAL TO PREVENT SEDIMENT FROM ENTERING STREAM PRIOR TO SANDBAG REMOVAL.

SHEET ES-01

FREDERICK SOIL CONSERVATION DISTRICT
 Approved By _____ District Manager _____
 Date _____

**EROSION & SEDIMENT CONTROL**

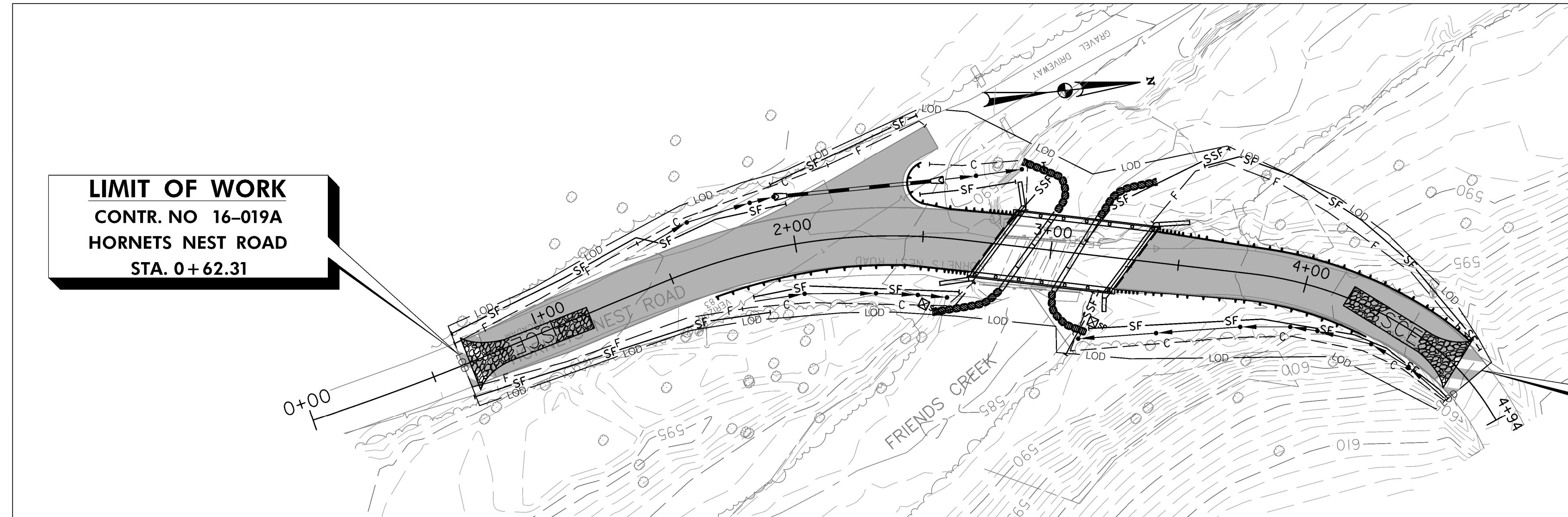
SCALE AS-NOTED ADVERTISED DATE NA CONTRACT NO. RFP 16-019A

DESIGNED BY SRM COUNTY FREDERICK
 DRAWN BY SRM LOGMILE XXXX - XXXX
 CHECKED BY KAR

AMT

A. MORTON THOMAS AND ASSOCIATES, INC.
 901 DULANEY VALLEY ROAD, SUITE 710
 TOWSON, MD 21204

SHEET NO. 35 OF 43



EROSION AND SEDIMENT CONTROL PLAN – PHASE 2

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

NOTE: PHASE 1 EROSION AND SEDIMENT CONTROL MEASURES TO REMAIN IN PLACE DURING PHASE 2 CONSTRUCTION.

SANDBAG DIKE	
20 LF	STA. 2+80 TO 2+90, LT.
26 LF	STA. 2+60 TO 2+80, RT.
30 LF	STA. 3+12 TO 3+34, LT.
24 LF	STA. 3+05 TO 3+20, RT.

TEMPORARY TRAFFIC BARRIER	
33 LF	STA. 2+82 TO 2+94
33 LF	STA. 3+02 TO 3+12

SUMP PIT	
1 EA	STA. 2+55, RT.
1 EA	STA. 3+20, RT.

LIMIT OF DISTURBANCE			
STATION	OFFSET (FT.)	STATION	OFFSET (FT.)
0+63	16.3 LT	4+75	16.8 RT
0+99	17.4 LT	4+22	22.9 RT
1+62	25.5 LT	3+36	38.2 RT
1+85	27.5 LY	3+07	39.2 RT
2+01	28.9 LT	3+05	29.1 RT
2+47	50.1 LT	2+66	29.7 RT
2+62	49.9 LT	2+39	29.6 RT
3+13	31.3 LT	2+16	28.9 RT
3+64	48.4 LT	1+76	25.4 RT
4+03	35.9 LT	1+49	21.3 RT
4+22	28.8 LT	0+62	16.9 RT
4+51	19.5 LT		
4+75	11.4 LT		

SHEET ES-02

FREDERICK SOIL CONSERVATION DISTRICT
Approved By _____ District Manager _____
Date _____



BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

EROSION & SEDIMENT CONTROL

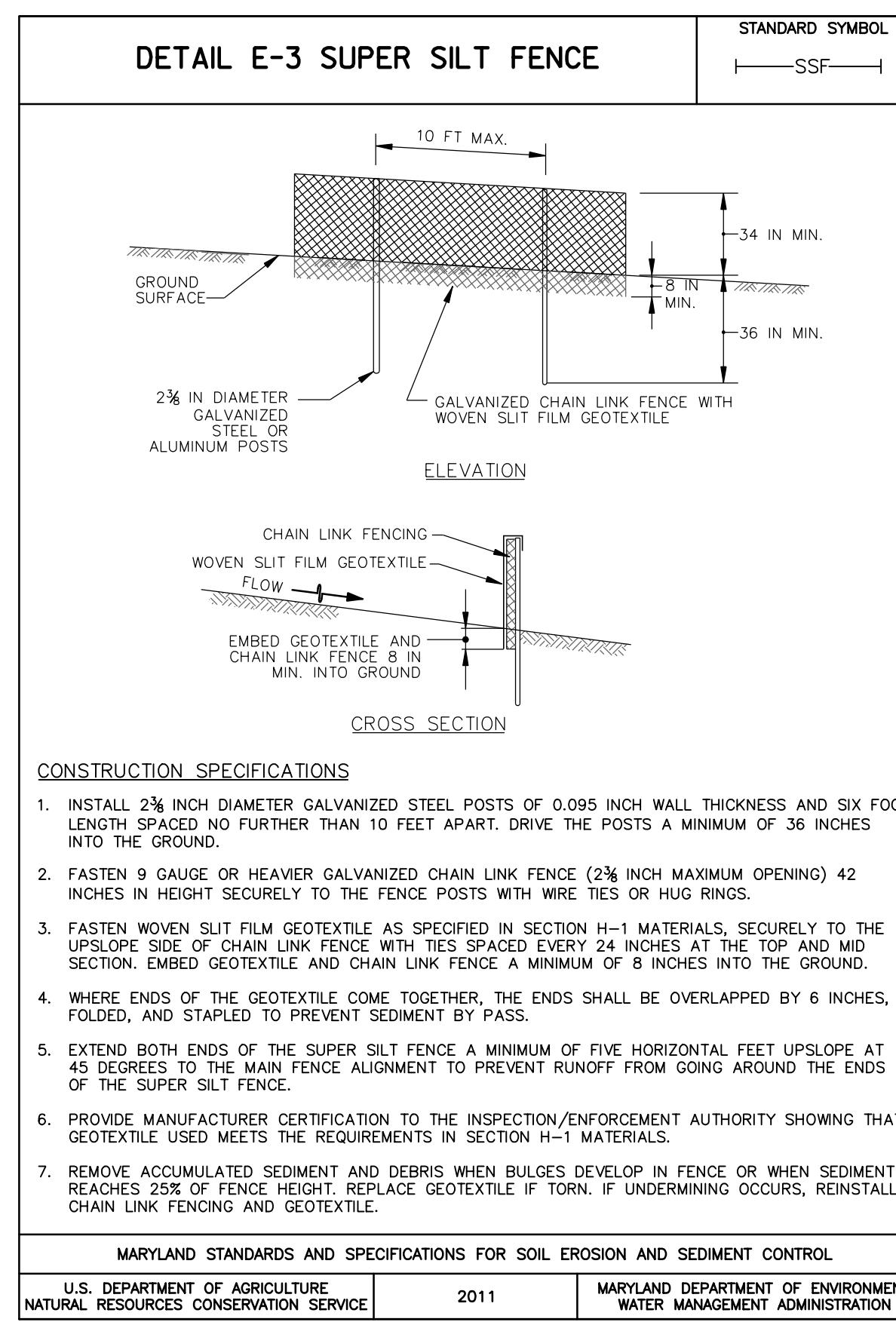
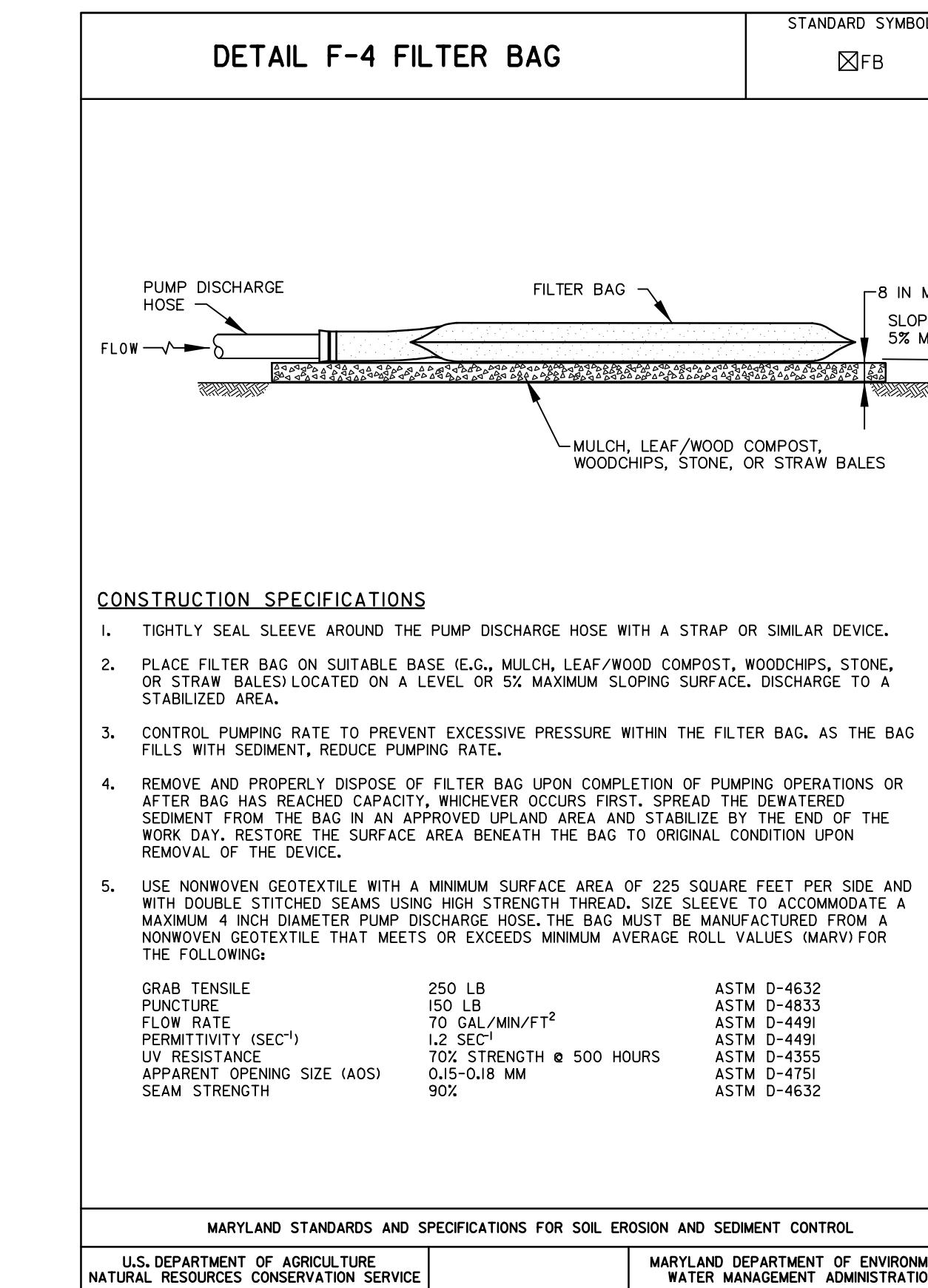
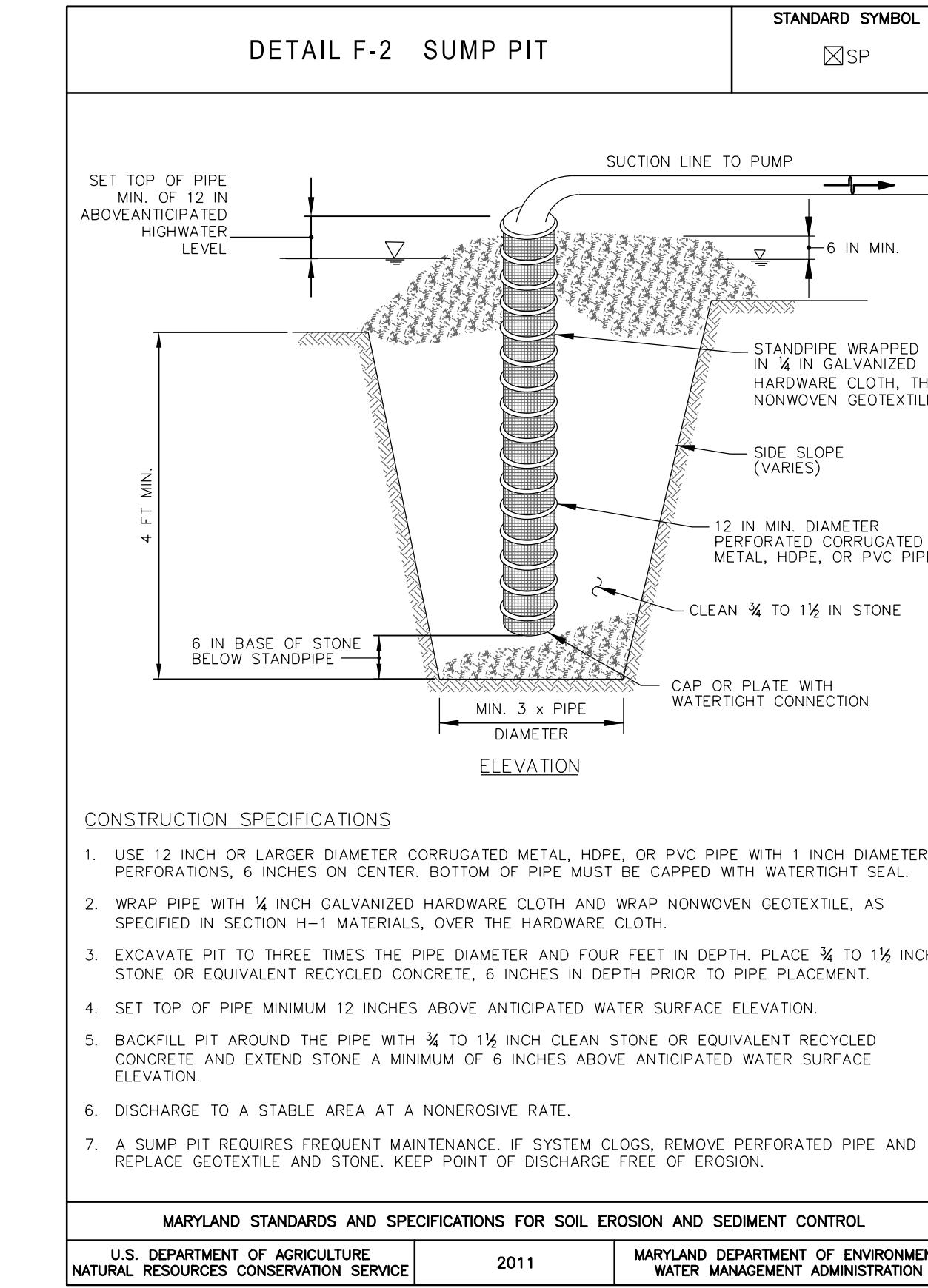
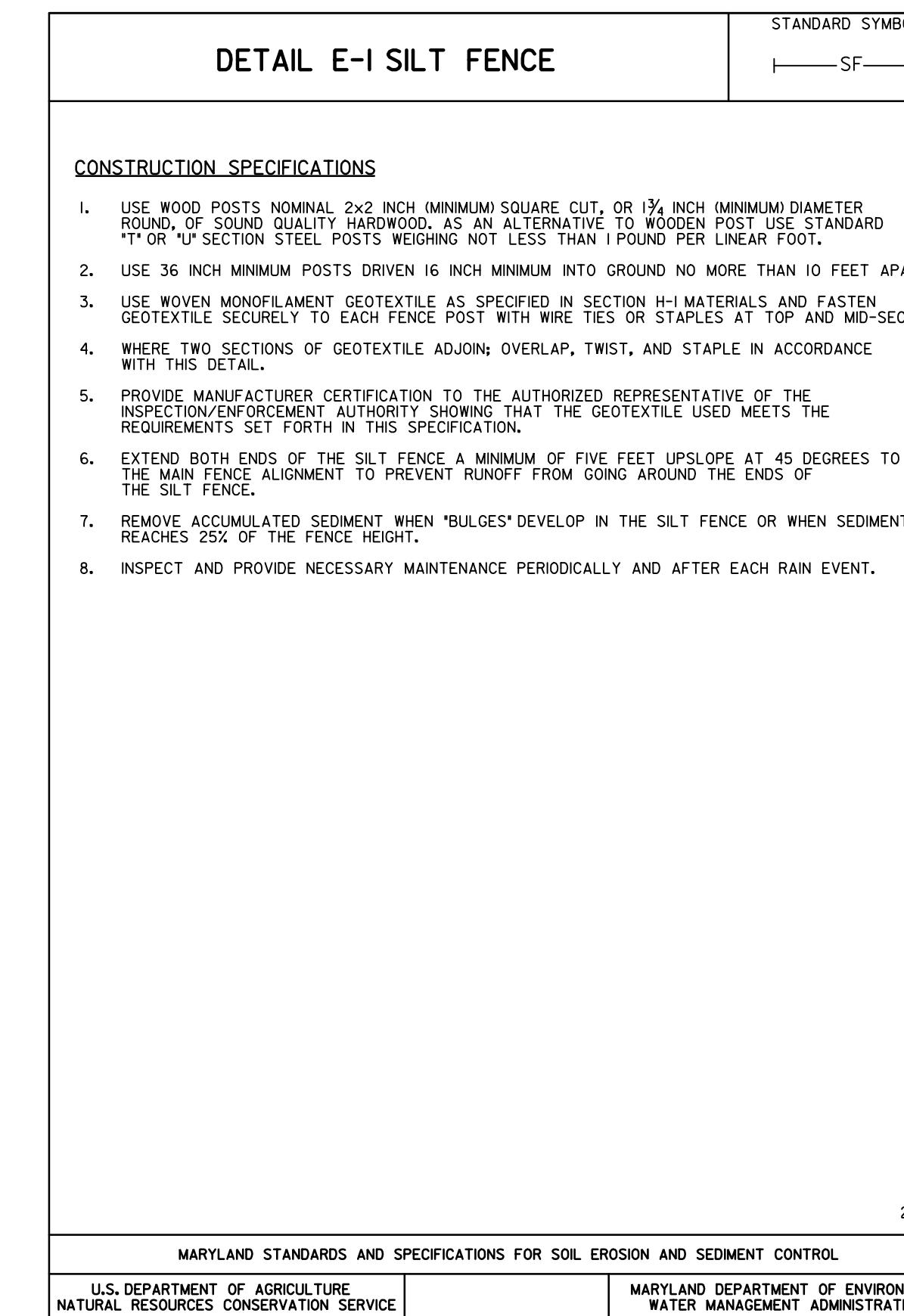
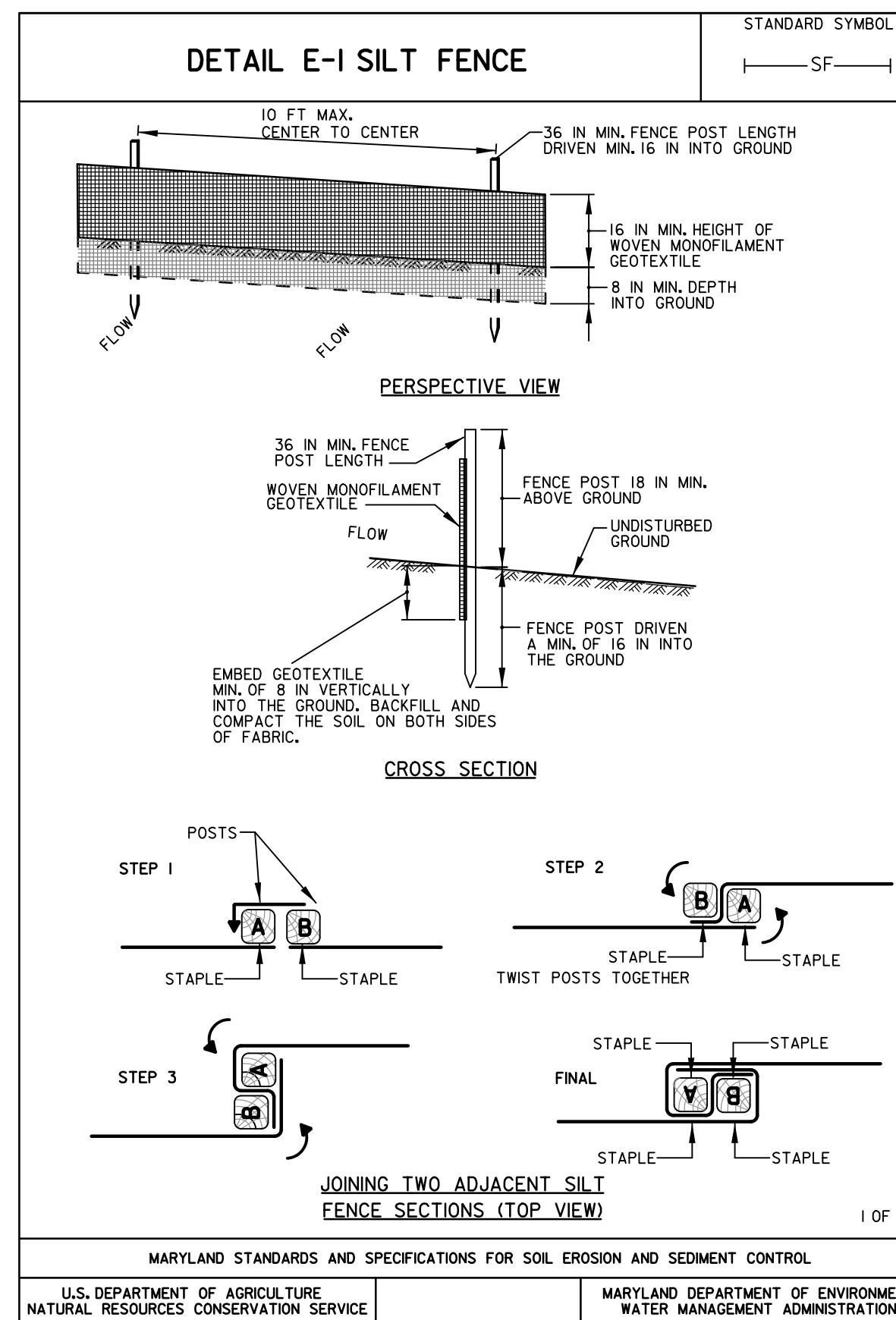
SCALE AS-NOTED ADVERTISED DATE NA CONTRACT NO. RFP 16-019A

DESIGNED BY SRM COUNTY FREDERICK
DRAWN BY SRM LOGMILE XXXX - XXXX
CHECKED BY KAR

SHEET NO. 36 OF 43



A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204



STREAM DIVERSION NOTES

THE COST OF THE STREAM DIVERSION (INCLUDING STREAM DIVERSION PUMPS, DEWATERING PUMPS, DEWATERING BAGS, SANDBAGS, SHEETING, TEMPORARY TRAFFIC BARRIER, BOG TURTLE PROTECTION, ETC.) IS CONSIDERED INCIDENTAL TO "MAINTENANCE OF STREAM FLOW" PAY ITEM.

AN INITIAL BASE COURSE OF SANDBAGS SHALL BE PLACED ON THE EXISTING STREAM BED AS SHOWN TO PROVIDE A LEVEL AREA TO PLACE THE BARRIER.

THE IMPERVIOUS LINER SHALL BE PLACED IN CONJUNCTION WITH THE BARRIER AS SHOWN.

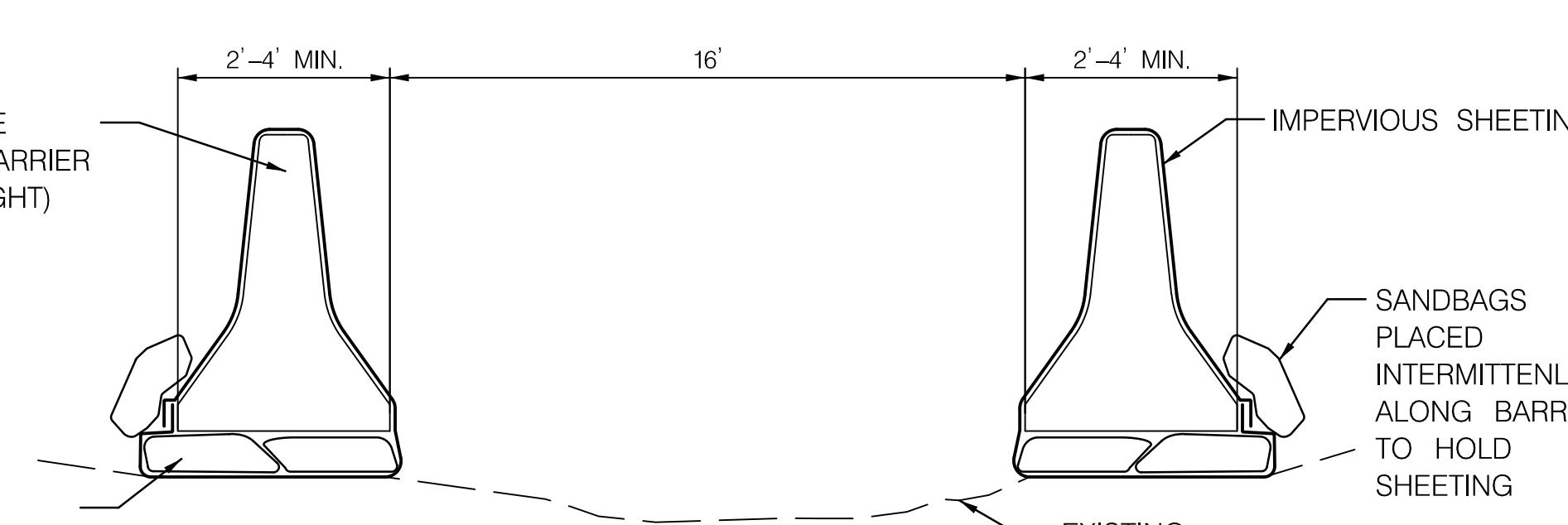
THE DIVERSION SHALL BE INSPECTED AND REPAIRED AS NEEDED IMMEDIATELY AFTER EACH STORM EVENT.

THE DIVERSION MUST BE PLACED DURING ALLOWABLE IN-STREAM WORK DATES.

PLACE SANDBAGS AS REQUIRED UNDER BARRIER TO PROVIDE LEVEL SURFACE AND MINIMUM HEIGHT

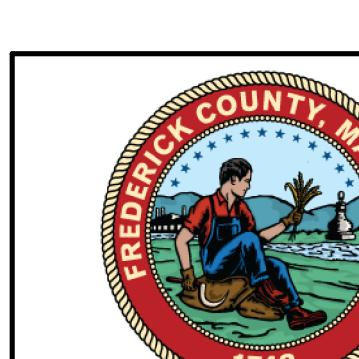
STREAM DIVERSION DEVICE – TYPICAL SECTION

NOT TO SCALE



FREDERICK SOIL CONSERVATION DISTRICT
Approved By _____ District Manager _____
Date _____

AMT
A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204



BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

EROSION & SEDIMENT CONTROL PLAN

SCALE AS-NOTED ADVERTISED DATE NA CONTRACT NO. RFP 16-019A

DESIGNED BY SRM COUNTY FREDERICK
DRAWN BY SRM LOGMILE XXXX - XXXX
CHECKED BY KAR

SHEET NO. 37 OF 43

SIGN SCHEDULE

W20-3(1)
48" x 48"
16.0 SF

BK/FO



W20-3(1)
48" x 48"
16.0 SF

BK/FO



W20-3(1)
48" x 48"
16.0 SF

BK/FO



W20-3(1)
48" x 48"
16.0 SF

BK/FO



R11-2(6)
78" x 68"
36.83 SF

BK/FY



R11-2(6) (MOD.)
78" x 84"
45.5 SF

BK/W



M4-9(1)
30" x 12"
2.5 SF

BK/W



M4-9L
30" x 24"
5.0 SF

BK/FO



M4-9R
30" x 24"
5.0 SF

BK/FO



M4-9L (MOD.)
30" x 24"
5.0 SF

BK/FO



M4-9R (MOD.)
30" x 24"
5.0 SF

BK/FO



M4-9
30" x 24"
5.0 SF

BK/FO



M4-8a
24" x 18"
3.0 SF

BK/FO



M4-10R
48" x 18"
6.0 SF

BK/FO



M4-10L
48" x 18"
6.0 SF

BK/FO



R11-2
48" x 30"
10.0 SF

BK/W



R11-3a
60" x 30"
12.5 SF

BK/W

LEGEND

TEMPORARY SIGN

TYPE III BARRICADE

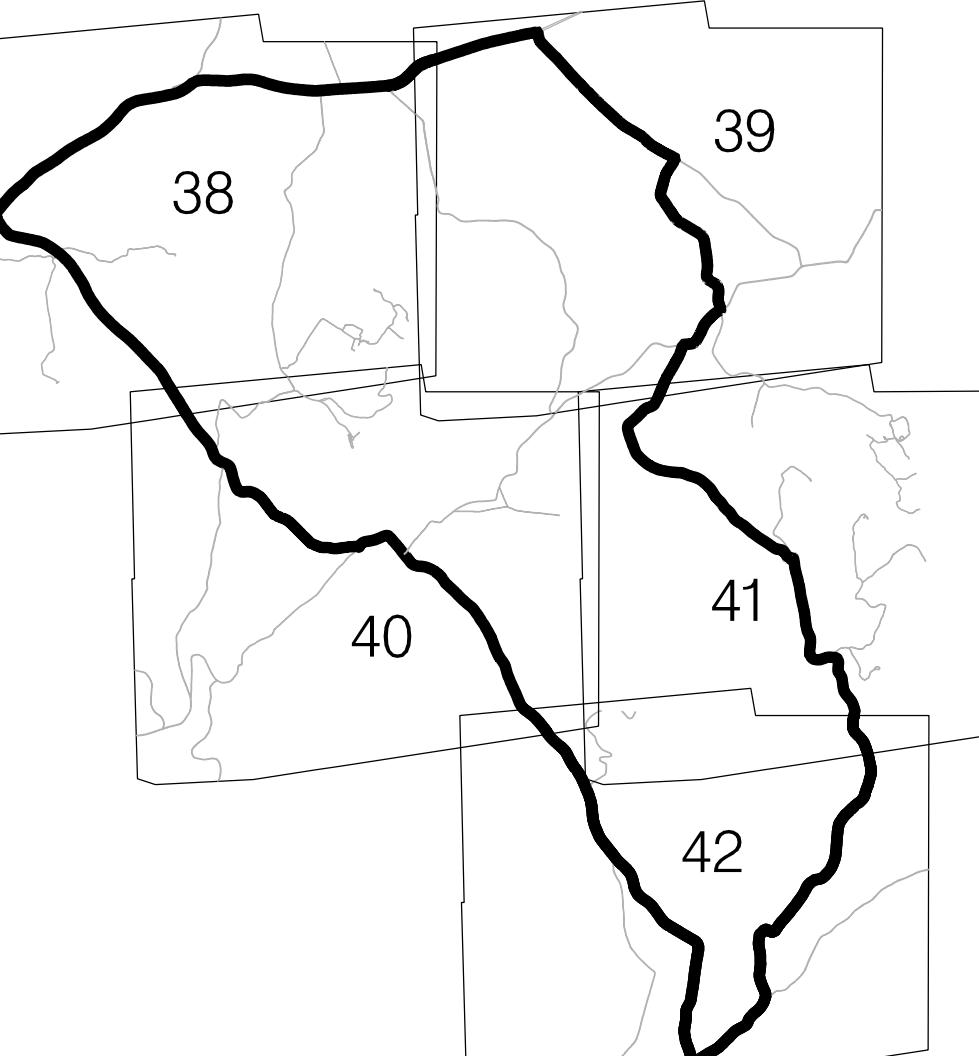
DETOUR ROUTE

BK/FO BLACK ON FLUORESCENT ORANGE

BK/FY BLACK ON FLUORESCENT YELLOW

BK/W BLACK ON WHITE

MATCHLINE - SEE SHEET 38

**KEY PLAN****SHEET MT-02**

BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

DETOUR PLAN

SCALE AS-NOTED ADVERTISED DATE NA CONTRACT NO. RFP 16-019A

DESIGNED BY SRM COUNTY FREDERICK

DRAWN BY JAP LOGMILE XXXX - XXXX

CHECKED BY KAR



A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204

SHEET NO. 39 OF 43

SIGN SCHEDULE



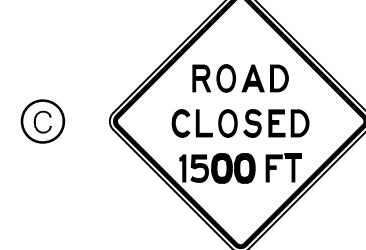
W20-3(1)
48" x 48"
16.0 SF

BK/FO



W20-3(1)
48" x 48"
16.0 SF

BK/FO



W20-3(1)
48" x 48"
16.0 SF

BK/FO



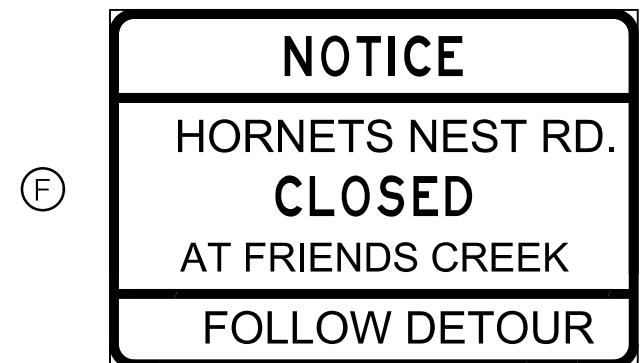
W20-3(1)
48" x 48"
16.0 SF

BK/FO



BK/FY

BK/W



BK/FY

BK/W

BK/FO



M4-9(1)
30" x 12"
2.5 SF

BK/W



M4-9L
30" x 24"
5.0 SF

BK/FO



M4-9R
30" x 24"
5.0 SF

BK/FO



M4-9L (MOD.)
30" x 24"
5.0 SF

BK/FO



M4-9R (MOD.)
30" x 24"
5.0 SF

BK/FO



M4-9
30" x 24"
5.0 SF

BK/FO



M4-8a
24" x 18"
3.0 SF

BK/FO



M4-10R
48" x 18"
6.0 SF

BK/FO



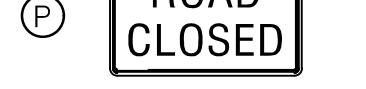
M4-10L
48" x 18"
6.0 SF

BK/FO



R11-2
48" x 30"
10.0 SF

BK/W



R11-3a
60" x 30"
12.5 SF

BK/W

LEGEND

TEMPORARY SIGN

BK/FO BLACK ON FLUORESCENT ORANGE

BK/FY BLACK ON FLUORESCENT YELLOW

BK/W BLACK ON WHITE

DETOUR ROUTE

TTT TYPE III BARRICADE

HORNETS NEST ROAD - DETOUR PLAN
SCALE: NOT TO SCALE

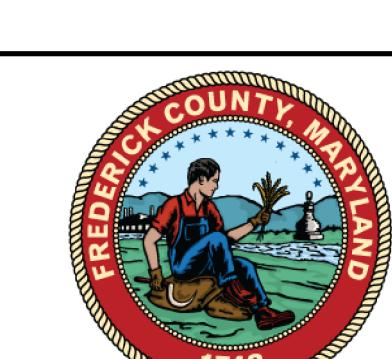
MATCH LINE - SEE SHEET 38

MATCH LINE - SEE SHEET 42

BY: jpiro

PLOTTED: Friday, March 26, 2021 AT 04:24 PM

SHEET NO. 40 OF 43



BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK
1748

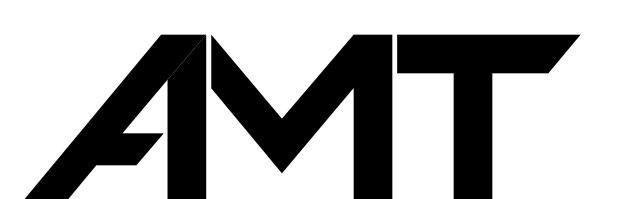
DETOUR PLAN

SCALE AS-NOTED ADVERTISED DATE NA CONTRACT NO. RFP 16-019A

DESIGNED BY SRM COUNTY FREDERICK

DRAWN BY JAP LOGMILE XXXX - XXXX

CHECKED BY KAR



A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204

SIGN SCHEDULE

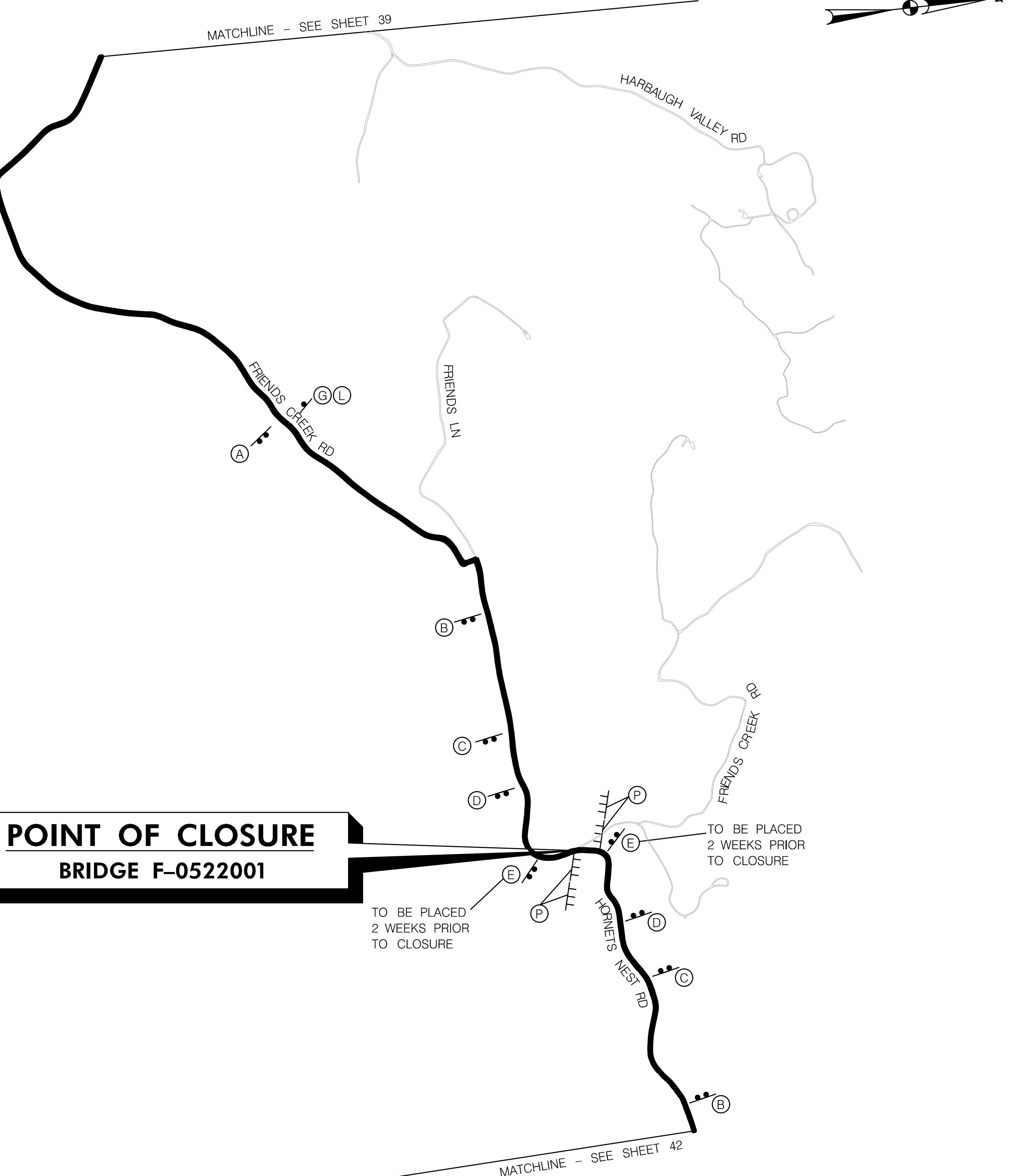
(A)	ROAD CLOSED 1 MILE	W20-3(1) 48" x 48" 16.0 SF	BK/FO
(B)	ROAD CLOSED 1/2 MILE	W20-3(1) 48" x 48" 16.0 SF	BK/FO
(C)	ROAD CLOSED 1500 FT	W20-3(1) 48" x 48" 16.0 SF	BK/FO
(D)	ROAD CLOSED 800 FT	W20-3(1) 48" x 48" 16.0 SF	BK/FO
(E)	NOTICE THIS BRIDGE TO BE CLOSED ON OR ABOUT XX/XX/XX	R11-2(6) 78" x 68" 36.83 SF	BK/FY
(F)	NOTICE HORNETS NEST RD. CLOSED AT FRIENDS CREEK FOLLOW DETOUR	R11-2(6) (MOD.) 78" x 84" 45.5 SF	BK/W
(G)	Hornets Nest Rd	M4-9(1) 30" x 12" 2.5 SF	BK/W
(H)	DETOUR	M4-9L 30" x 24" 5.0 SF	BK/FO
(I)	DETOUR	M4-9R 30" x 24" 5.0 SF	BK/FO
(J)	DETOUR	M4-9L (MOD.) 30" x 24" 5.0 SF	BK/FO
(K)	DETOUR	M4-9R (MOD.) 30" x 24" 5.0 SF	BK/FO
(L)	DETOUR	M4-9 30" x 24" 5.0 SF	BK/FO
(M)	END DETOUR	M4-8a 24" x 18" 3.0 SF	BK/FO
(N)	DETOUR	M4-10R 48" x 18" 6.0 SF	BK/FO
(O)	DETOUR	M4-10L 48" x 18" 6.0 SF	BK/FO
(P)	ROAD CLOSED	R11-2 48" x 30" 10.0 SF	BK/W
(Q)	ROAD CLOSED 2 MILES AHEAD LOCAL TRAFFIC ONLY	R11-3a 60" x 30" 12.5 SF	BK/W

LEGEND

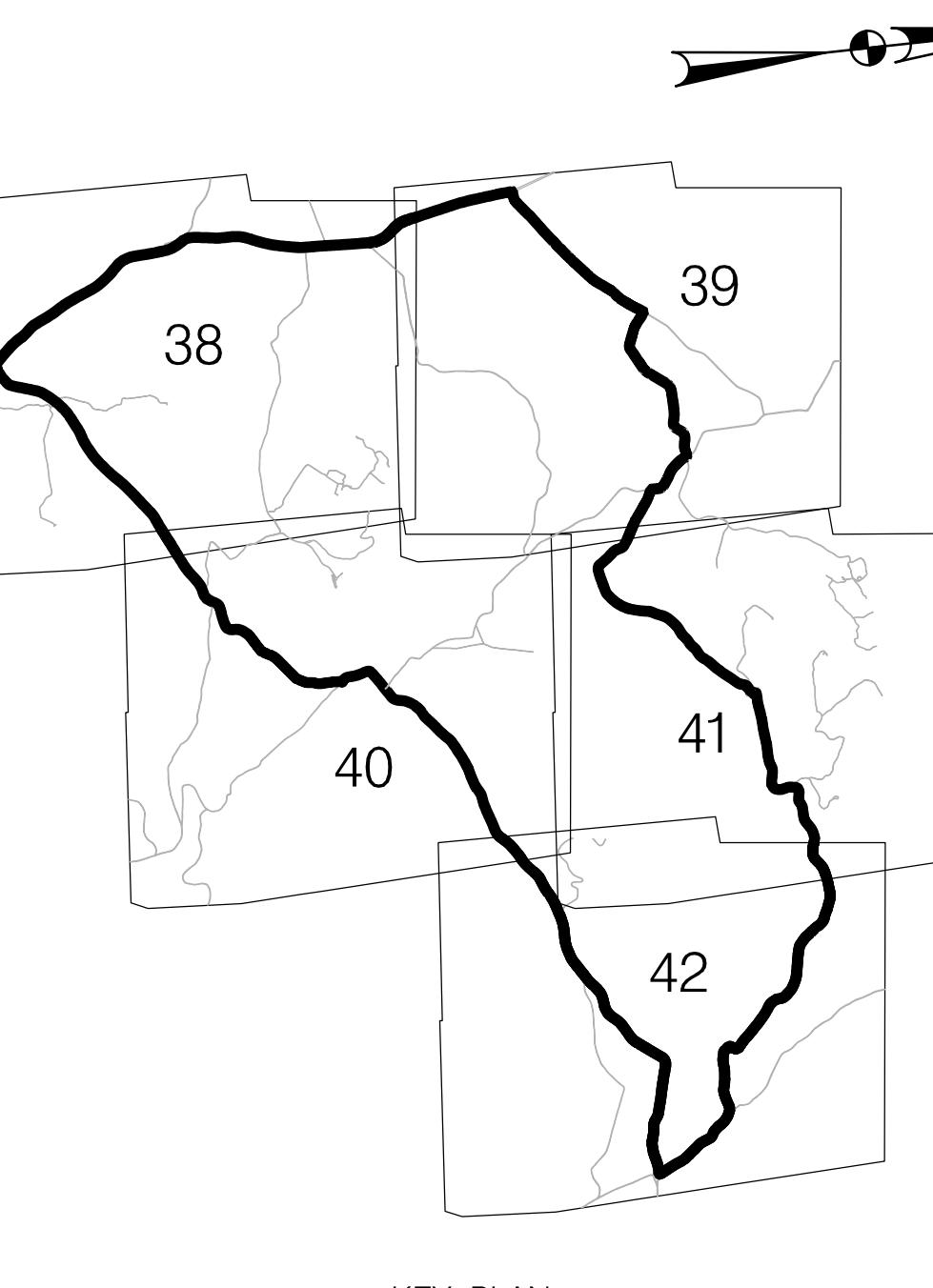
- TEMPORARY SIGN
- TTT TYPE III BARRICADE
- DETOUR ROUTE
- BK/FO BLACK ON FLUORESCENT ORANGE
- BK/FY BLACK ON FLUORESCENT YELLOW
- BK/W BLACK ON WHITE

POINT OF CLOSURE
BRIDGE F-0522001

MATCHLINE - SEE SHEET 31



MATCHLINE - SEE SHEET 39



KEY PLAN

SHEET MT-04

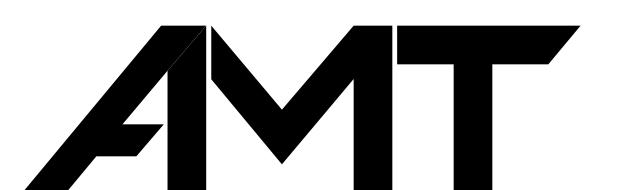


BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

DETOUR PLAN

SCALE AS-NOTED ADVERTISED DATE NA CONTRACT NO. RFP 16-019A

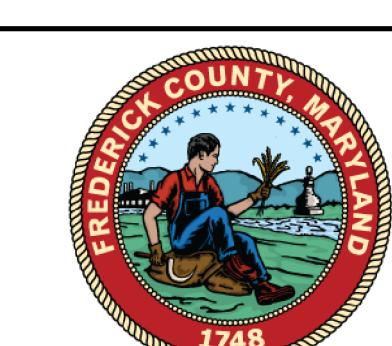
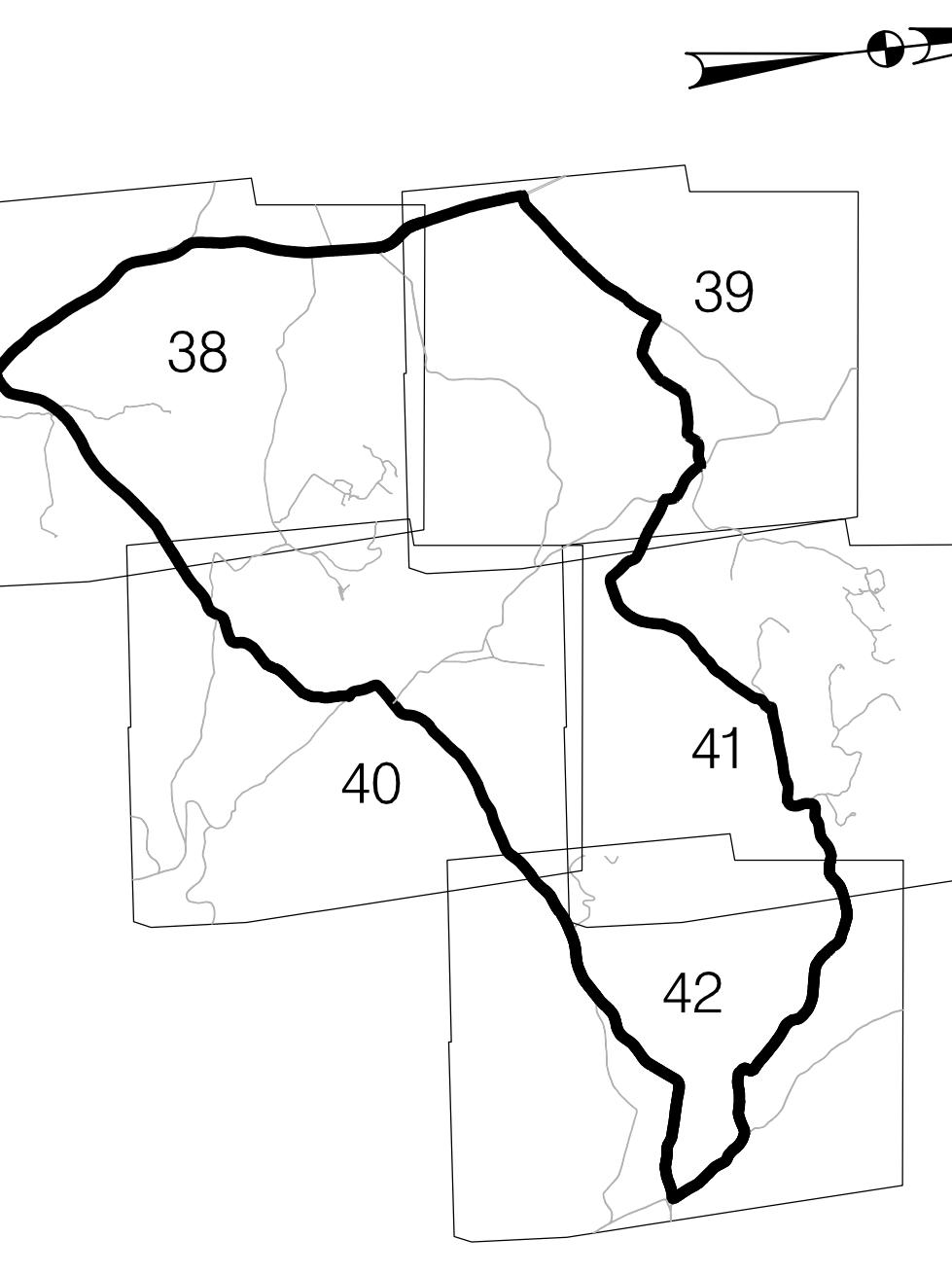
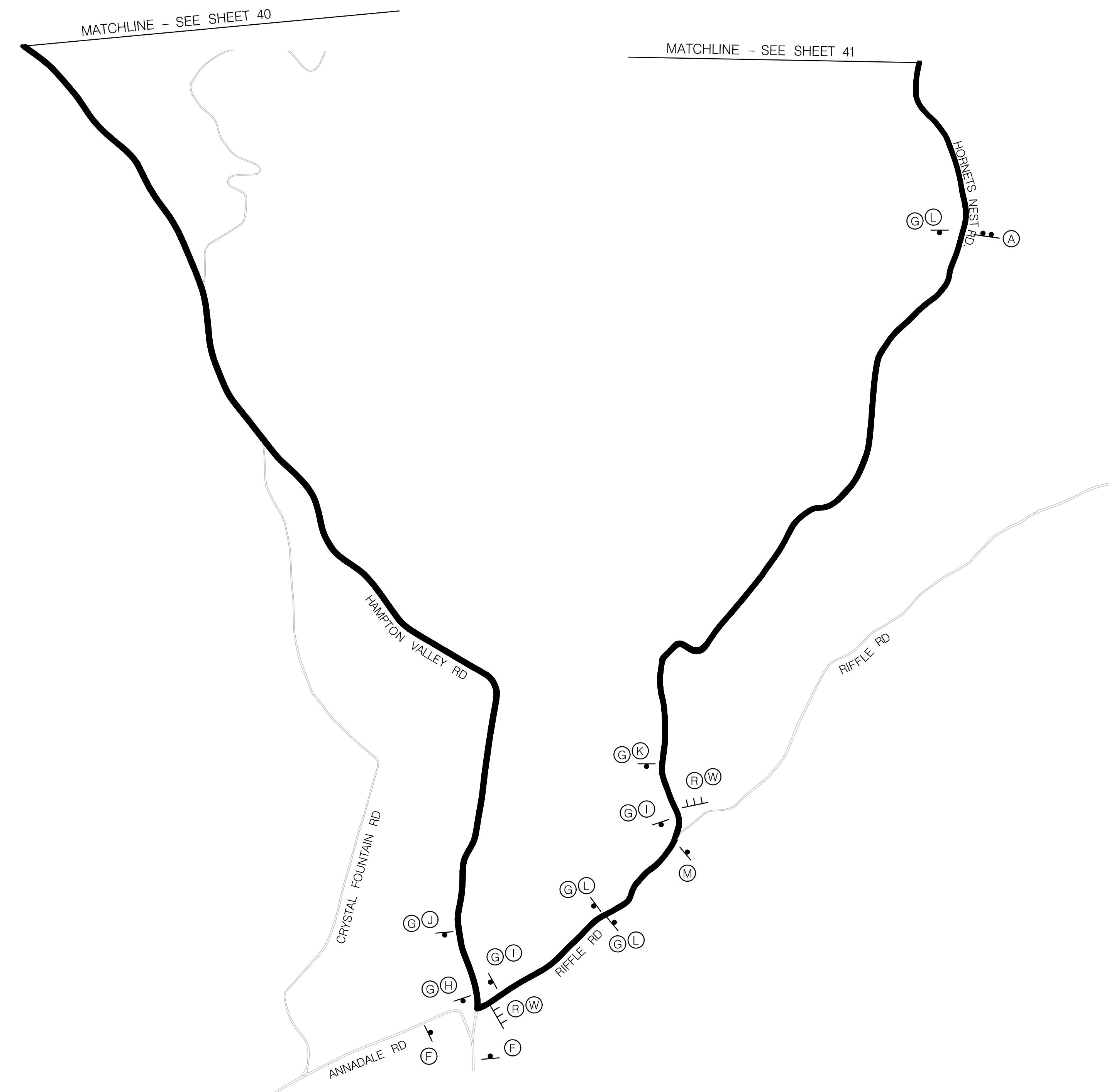
DESIGNED BY SRM COUNTY FREDERICK
DRAWN BY JAP LOGMILE XXXX - XXXX
CHECKED BY KAR



A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204

SHEET NO. 41 OF 43

SIGN SCHEDULE			
(A)		W20-3(1) 48" x 48" 16.0 SF	BK/FO
(B)		W20-3(1) 48" x 48" 16.0 SF	BK/FO
(C)		W20-3(1) 48" x 48" 16.0 SF	BK/FO
(D)		W20-3(1) 48" x 48" 16.0 SF	BK/FO
(E)		R11-2(6) 78" x 68" 36.83 SF	BK/FY
(F)		R11-2(6) (MOD.) 78" x 84" 45.5 SF	BK/W
(G)		M4-9(1) 30" x 12" 2.5 SF	BK/W
(H)		M4-9L 30" x 24" 5.0 SF	BK/FO
(I)		M4-9R 30" x 24" 5.0 SF	BK/FO
(J)		M4-9L (MOD.) 30" x 24" 5.0 SF	BK/FO
(K)		M4-9R (MOD.) 30" x 24" 5.0 SF	BK/FO
(L)		M4-9 30" x 24" 5.0 SF	BK/FO
(M)		M4-8a 24" x 18" 3.0 SF	BK/FO
(N)		M4-10R 48" x 18" 6.0 SF	BK/FO
(O)		M4-10L 48" x 18" 6.0 SF	BK/FO
(P)		R11-2 48" x 30" 10.0 SF	BK/W
(Q)		R11-3a 60" x 30" 12.5 SF	BK/W



BRIDGE REPLACEMENT
PRESTRESSED CONCRETE BEAM
BRIDGE NO. F05-22
ON HORNETS NEST ROAD
OVER FRIENDS CREEK

DETOUR PLAN

SCALE AS-NOTED	ADVERTISED DATE	NA	CONTRACT NO.	RFP 16-019A
DESIGNED BY	SRM	COUNTY	FREDERICK	
DRAWN BY	JAP	LOGMILE	XXXX - XXXX	
CHECKED BY	KAR			

AMT

A. MORTON THOMAS AND ASSOCIATES, INC.
901 DULANEY VALLEY ROAD, SUITE 710
TOWSON, MD 21204

TRAFFIC CONTROL NOTES

- ALL STANDARD, REGULATORY, AND WARNING SIGNS USED FOR MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MDMUTCD), LATEST EDITION, AND MARYLAND EDITION OF THE STANDARD HIGHWAY SIGNS MANUAL.
- ALL TEMPORARY TRAFFIC SIGNS SHALL BE INSTALLED IN ACCORDANCE TO MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 104.08, AND NCHRP 350.
- ALL BARRICADES AND OTHER TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MDMUTCD), LATEST EDITION, AND MARYLAND EDITION OF THE STANDARD HIGHWAY SIGNS MANUAL.
- ALL TEMPORARY SIGNS SHALL BE PLACED SO THAT THEY DO NOT OBSTRUCT EXISTING TRAFFIC CONTROL DEVICES.
- ANY CORRECTIONS, MODIFICATIONS, OR ADDITIONS TO THIS PLAN MUST BE APPROVED BY THE FIELD ENGINEER.
- MISS UTILITY MUST BE NOTIFIED PRIOR TO PLACEMENT OF SIGNING.
- FREDERICK COUNTY AND/OR STATE HIGHWAY ADMINISTRATION RESERVES THE RIGHT TO MODIFY OR ADJUST THIS PLAN TO FIT SITE CONDITIONS AT ANY TIME.
- SIGN INSTALLATION SHALL NOT LAST ANY LONGER THAN 15 MINUTES PER LOCATION. IF LONGER THAN 15 MINUTES, APPROPRIATE TRAFFIC CONTROL AND PERMITS MUST BE USED.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL TRAFFIC CONTROL DEVICES. AT ANY TIME THE CONTRACTOR DOES NOT MAKE NECESSARY REPAIRS WITHIN 24 HOURS OF NOTIFICATION, APPROPRIATE WORK TIME REDUCTION AND/OR FINES MAY BE APPLIED.
- ALL SIGNS SHALL CONFORM TO CURRENT STATE HIGHWAY ADMINISTRATION MATERIAL AND REFLECTIVITY REQUIREMENTS.
- ALL DRIVEWAY ENTRANCES MUST BE MAINTAINED AT ALL TIMES.
- FLAGGING FOR SINGLE LANE OPERATION, WHEN REQUIRED FOR BARRIER PLACEMENT, MATERIAL DELIVERY AND OTHER CONSTRUCTION OPERATIONS, SHALL BE IN ACCORDANCE WITH STATE HIGHWAY ADMINISTRATION STANDARD 104.02-10. FLAGGING WILL BE PERMITTED DURING OFF-PEAK PERIODS: 9:00 AM TO 2:00 PM.
- THE R11-2(6) "NOTICE" SIGNS ("F") SHALL BE INSTALLED 2 WEEKS PRIOR TO THE BRIDGE CLOSURE/DETOUR IMPLEMENTATION. IF CLOSURE DOES NOT TAKE PLACE WITHIN 1 WEEK OF THE DATE STATED ON SIGN, THE DATE MUST BE CHANGED TO REFLECT CORRECT CLOSURE DATE AT NO COST TO FREDERICK COUNTY.
- CONTRACTOR SHALL INSTALL TEMPORARY F-SHAPE CONCRETE BARRIER A MINIMUM OF 100 LINEAR FEET BEHIND THE TYPE III BARRICADES AT THE POINT OF CLOSURE TO PREVENT ERRANT VEHICLES FROM ENTERING THE WORK AREA. ACCESS FOR CONSTRUCTION VEHICLES SHALL BE MAINTAINED AROUND THE BARRIER. TYPE III BARRICADES AT THE ROADWAY CLOSURE ONLY SHALL EXTEND FROM EDGE OF PAVING TO EDGE OF PAVING TO COMPLETELY CLOSE THE ROAD TO PUBLIC TRAFFIC. CONTRACTOR SHALL PLACE PRECAST TEMPORARY CONCRETE BARRIER BEHIND TYPE III BARRICADES AND AT A 30 DEGREE ANGLE TO THE CENTERLINE OF ROADWAY.
- FIELD ENGINEER SHALL DETERMINE EXACT PLACEMENT OF THE TYPE III BARRICADES.
- SIGNS "I" AND "J" ARE TO BE PLACED WITHIN 50 FEET OF THE INTERSECTION AND SIGNS "K" AND "L" ARE TO BE PLACED WITHIN 200 FEET TO 800 FEET OF THE INTERSECTION.
- ALL DETOUR SIGNING SHALL BE REMOVED UPON OPENING TO TRAFFIC.

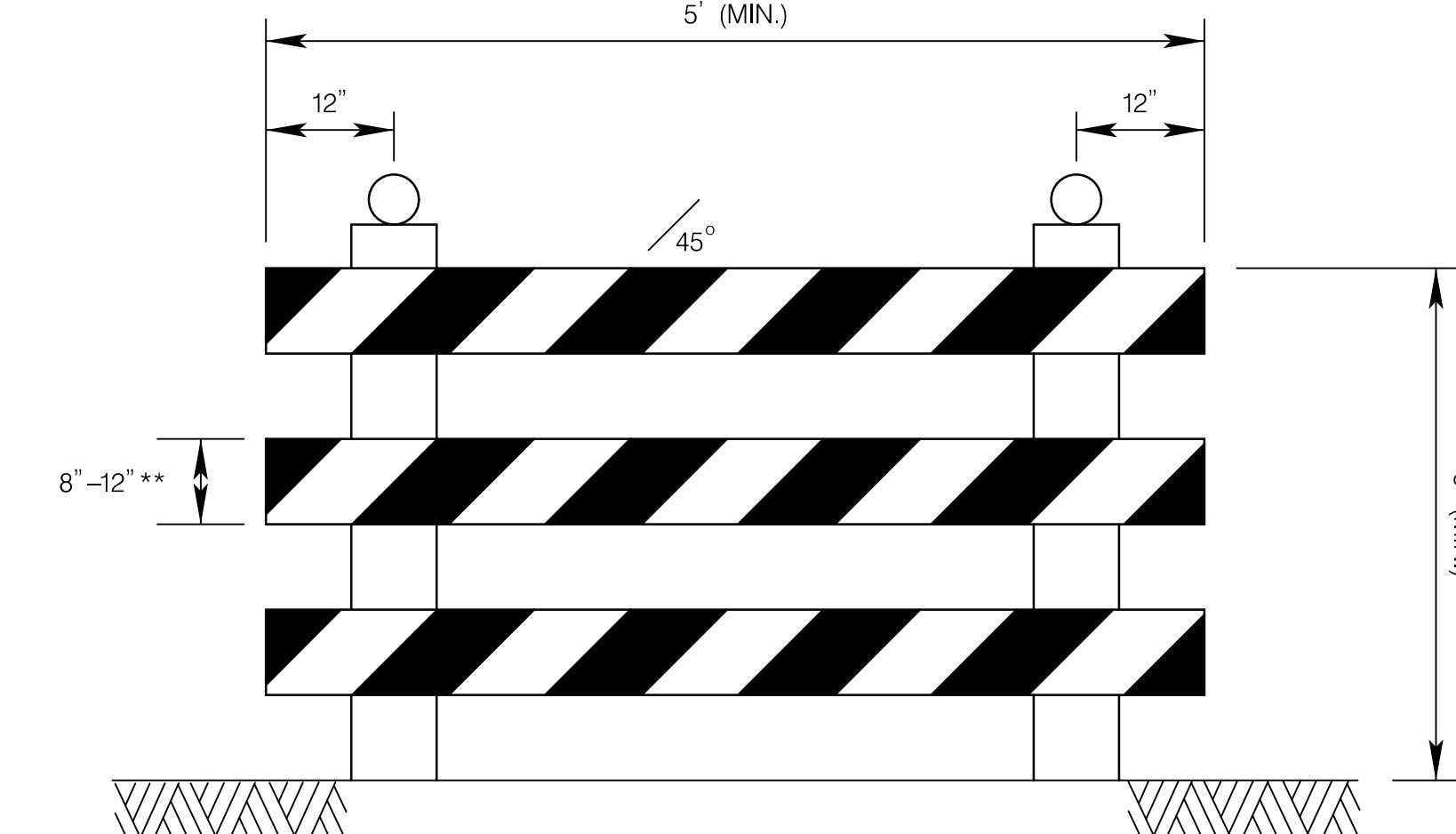
DETOUR CONTACT LIST

THE CONTRACTOR MUST NOTIFY THE FOLLOWING AGENCIES AT LEAST TWO WEEKS IN ADVANCE OF THE DETOUR. CONTACT ENGINEER FOR A CURRENT LIST OF CONTACT NAMES, PHONE NUMBERS AND EMAIL ADDRESSES:

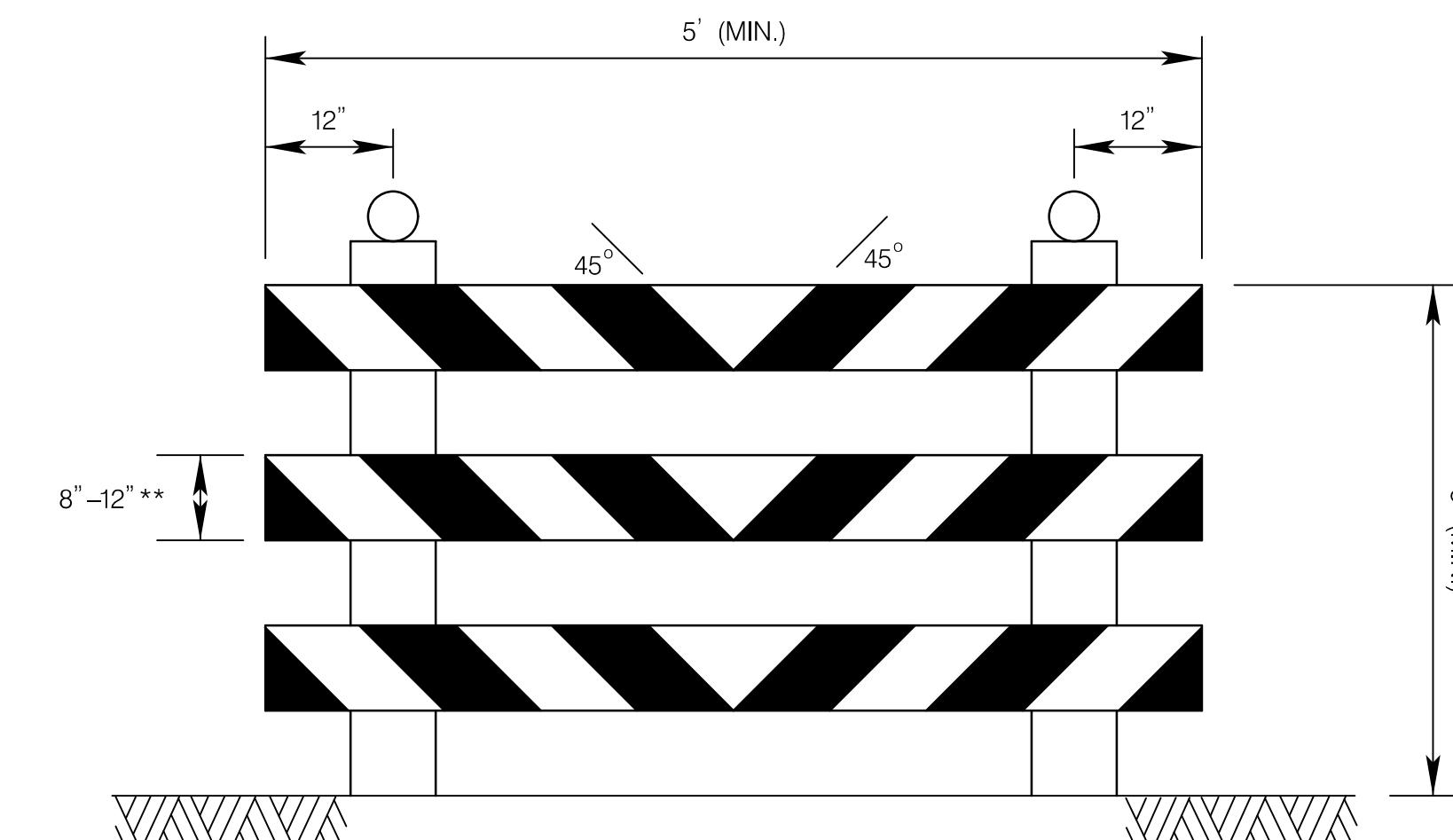
Frederick County Emergency Communications Center	301-600-1603
Frederick County Public Schools Transportation Services	301-644-5376
Frederick County Fire and Rescue Services Division	301-600-1780
Maryland State Police	301-644-4150
Frederick County Sheriff's Office	301-600-3049
Frederick County Dept. of Engineering and Constr. Management	301-600-2928
Frederick County Public Information Office	301-600-1315
Frederick County Office of Highway Operations	301-600-3353
MDOT SHA District 7 Maintenance	301-624-8100
MDOT SHA District 7 Traffic Division	301-624-8100

THE CONTRACTOR MUST NOTIFY THE FOLLOWING AGENCIES TWO HOURS PRIOR TO THE DETOUR AND IMMEDIATELY AFTER THE DETOUR IS REMOVED:

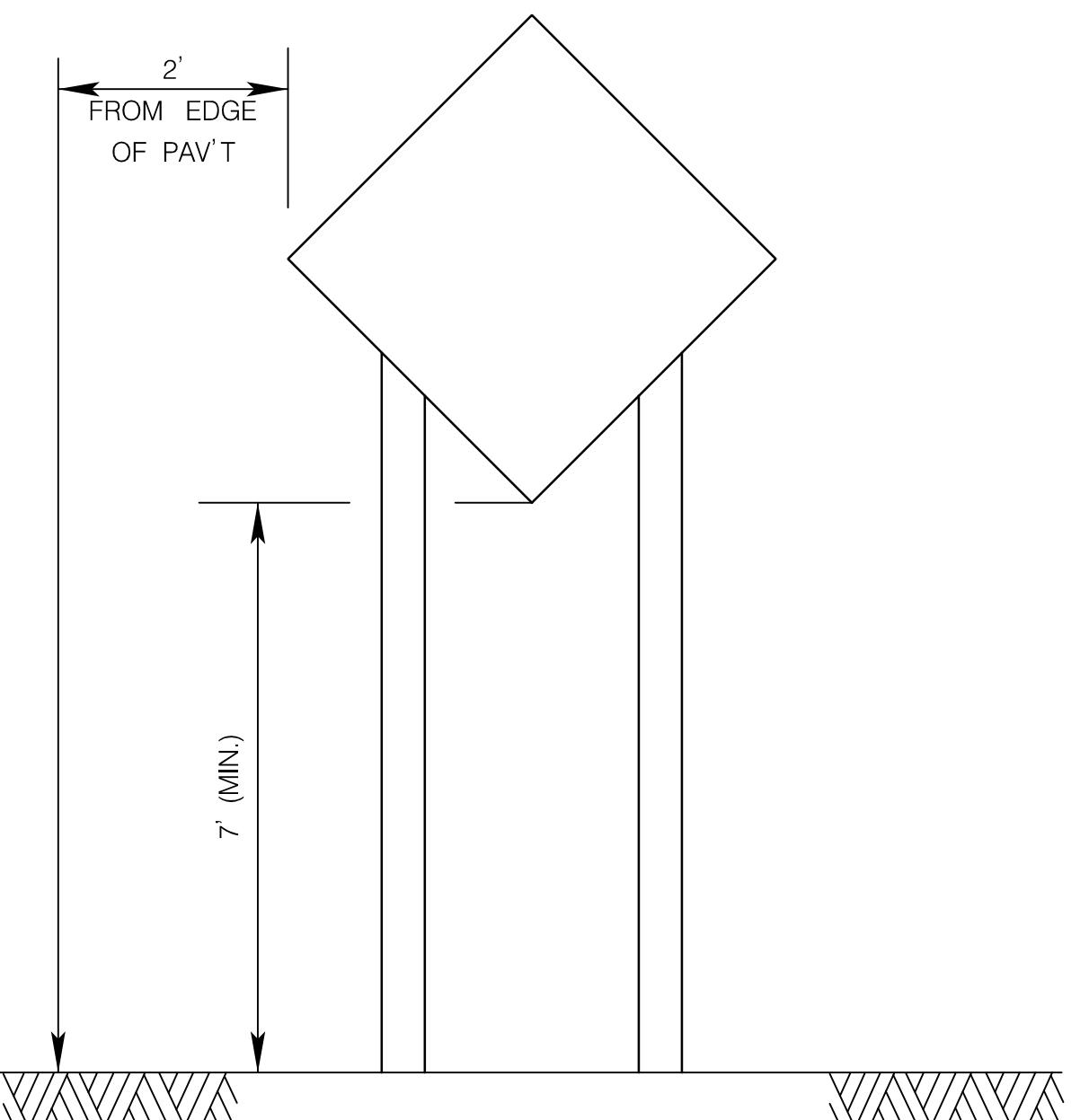
Frederick County Emergency Operations Center	301-600-1603
Statewide Operations Center	1-800-543-2515



TYPE III BARRICADE ***



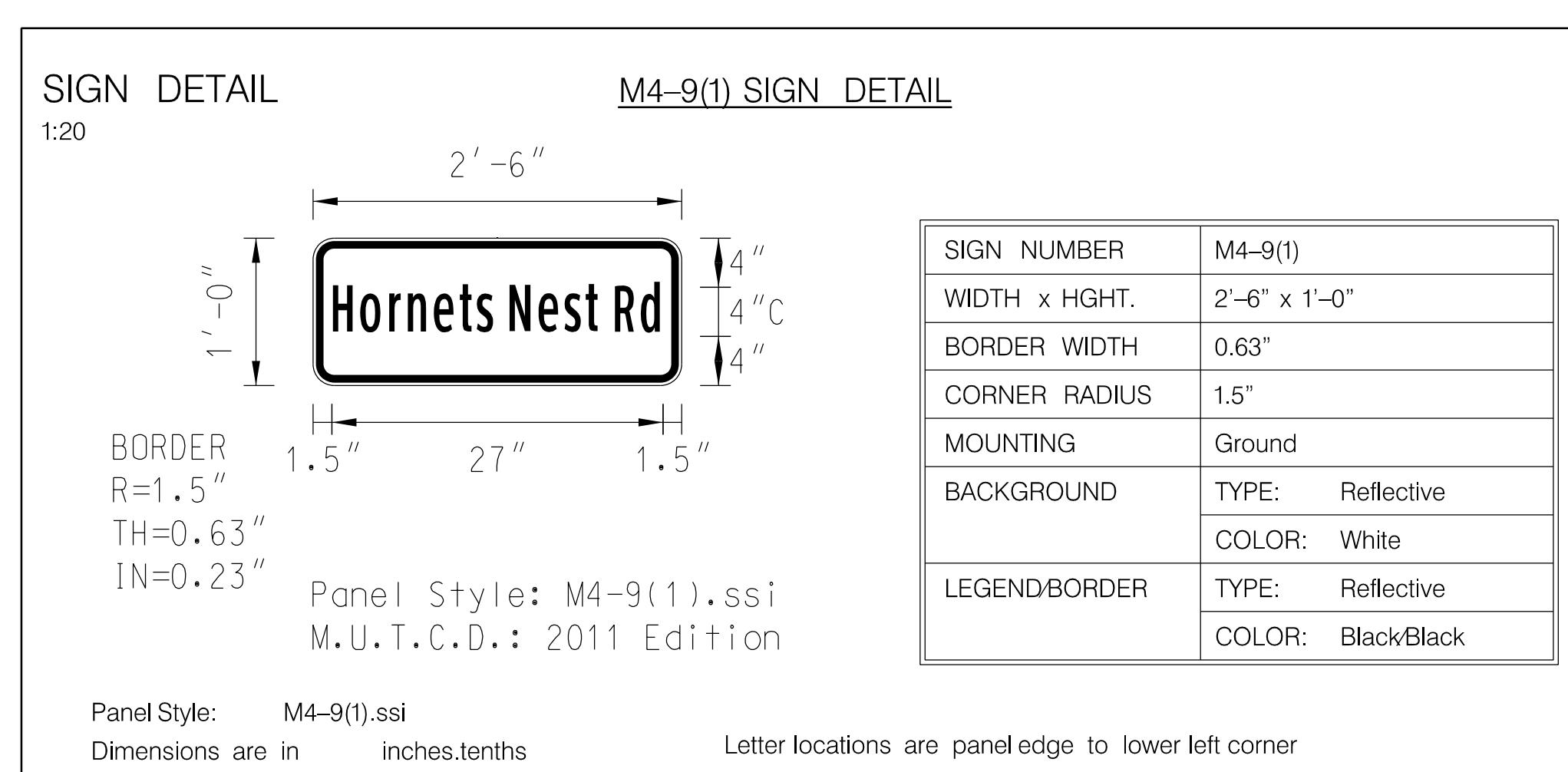
TYPE III BARRICADE AT STRUCTURE ***



ROADSIDE SIGNS

SEE MD. STD. 104.01-17 A&B FOR ADDITIONAL DETAILS.

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION ROADSIDE SIGN /SIGN SUPPORT PLACEMENT



BY: ipro

PLOTTED: Friday, March 26, 2021 AT 04:24 PM

NOTES

- * WARNING LIGHTS
- ** NOMINAL LUMBER DIMENSIONS ARE SATISFACTORY FOR BARRICADE RAIL WIDTH DIMENSIONS
- *** RAIL STRIPE WIDTHS SHALL BE 6 INCHES.

THE SIDES OF BARRICADES FACING TRAFFIC SHALL HAVE RETROREFLECTIVE RAIL FACES.

SHEET MT-06

