STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

DANIEL H. JOHNSON
SECRETARY

April 17, 2026

Contract No.: DL00381
WBS No.: BP12.C001.3
FA Number: State Funded
County: Alexander
Description: Replacing Culvert #010304 on SR 1419

April 28, 2026 Letting

RE: Addendum #1 to Contract No. DL00381

To Whom It May Concern:

Reference is made to the proposal and plans furnished to you on this project.

The following revisions have been made to the proposal:

Sheet No.	Revision
G-2	Special Provision entitled *Contract Time and Liquidated Damages* – completion date has been revised.
G-2	Special Provision entitled *Intermediate Contract Time Number 1 and Liquidated Damages* – completion date has been revised.
ST-19 & ST-20	Special Provision entitled *Moment Slab* has been added.
S-1 THRU S-4	Pay item quantity for *Steel Beam Guardrail* has been revised and a pay item quantity for *Moment Slab* has been added.

The following revisions have been made to the plans:

Sheet No.	Revision
3B-1	Plan sheet has been revised to reflect changes in the guardrail design.
4	Plan sheet has been revised to reflect changes in the guardrail design.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
DIVISION 12
PO BOX 47
SHELBY, NC 28151-0047

Telephone: (980) 552-4200
Fax: (704) 480-5401
Courier: 06-53-03
Website: www.ncdot.gov

Location:
1710 E. MARION STREET
SHELBY, NC 28152

C-1 thru C-5	Plan sheets have been revised to reflect changes in the guardrail design.
SN	Plan sheet has been revised to reflect changes in the guardrail design.

Please download the revised proposal named 042826_DL00381_ALEX_PROP_ADD1 and revised plans named 042826_DL00381_PLANS_ADD1 from the Division 12 Bid Page and discard any previous versions. Please also download the electronic bidding file addendum available on the Division 12 Bid Page, located at https://connnect.ncdot.gov/letting/Pages/Division12Letting, or from our current electronic bidding provider (Bidx) through their website.

The contract will be prepared accordingly

If you have any questions please contact the Division Office at (980) 552-4222.

Sincerely,

Greg Brittain
Contracts Engineer

Attachments

Cc: Cole Gurley, PE, Deputy Division Engineer
Rodney Gantt, Division Construction Engineer
Bryan Sowell, PE, Division Project Development Engineer
Christian Listoe, PE, Asst. Division Construction Engineer

CONTRACT TIME AND LIQUIDATED DAMAGES:

(4-17-12) (Rev. 5-16-23) 108 SP1 G08 C

The date of availability for this contract is **June 8, 2026**

The completion date for this contract is **April 30, 2027**.

Except where otherwise provided by the contract, observation periods required by the contract will not be a part of the work to be completed by the completion date and/or intermediate contract times stated in the contract. The acceptable completion of the observation periods that extend beyond the final completion date shall be a part of the work covered by the performance and payment bonds.

The liquidated damages for this contract are **Two Hundred Dollars ($ 200.00)** per calendar day. These liquidated damages will not be cumulative with any liquidated damages which may become chargeable under Intermediate Contract Time Number 1.

INTERMEDIATE CONTRACT TIME NUMBER 1 AND LIQUIDATED DAMAGES:

(7-1-95) (Rev. 2-21-12) 108 SP1 G13 A

Except for that work required under the Project Special Provisions entitled *Planting, Reforestation* and/or *Permanent Vegetation Establishment*, included elsewhere in this proposal, the Contractor will be required to complete all work included in this contract and shall place and maintain traffic on same.

The date of availability for this intermediate contract time is **June 8, 2026**.

The completion date for this intermediate contract time is **October 30, 2026**.

The liquidated damages for this intermediate contract time are **One Thousand Dollars ($ 1,000.00)** per calendar day.

Upon apparent completion of all the work required to be completed by this intermediate date, a final inspection will be held in accordance with Article 105-17 and upon acceptance, the Department will assume responsibility for the maintenance of all work except *Planting, Reforestation* and/or *Permanent Vegetation Establishment*. The Contractor will be responsible for and shall make corrections of all damages to the completed roadway caused by his planting operations, whether occurring prior to or after placing traffic through the project.

Payment shall be made under:

Pay Item	Pay Unit
Culvert Excavation	Lump Sum
Foundation Conditioning Material	Ton

MOMENT SLAB (SPECIAL)

GENERAL

This special provision shall govern materials, forming and all other related work in the construction of a moment slab in accordance with applicable parts of the Standard Specifications, the details shown on the plans and as outlined in this special provision.

MATERIALS

Use Class AA concrete and a coarse aggregate gradation of 78M and shall conform to Section 1000 of the Standard Specifications. The Class AA concrete shall contain fly ash or ground granulated blast furnace slag at the substitution rate specified in Article 1024-1 and in accordance with Articles 1024-5 and 1024-6 of the Standard Specifications. Construct the moment slab according to the existing grade and thickness as shown in the plans. Reinforcing steel shall be ASTM A615, Grade 60 and shall conform to Section 1070 of the Standard Specifications.

CONSTRUCTION METHODS

The moment slab shall be placed and finished in accordance with Section 420-4 of the Standard Specifications. The requirements of Section 420-20 of the Standard Specifications will apply to placing vehicles and construction equipment on the finished moment slab.

Curing methods for the moment slab will conform to Section 420-15 of the Standard Specifications.

MEASUREMENT

The moment slab will be measured by the linear feet of the moment slab as shown on the plans.

BASIS OF PAYMENT

The moment slab will be made based on the linear feet quantity as shown on the plans. Where the plans have been revised, the quantity to be paid for will be the quantity shown on the revised plans.

The unit bid per linear feet will be full compensation for all work covered by the Special Provision and applicable parts of the Standard Specifications, including, but not limited to

all labor, tools, equipment and incidentals required to furnishing and place concrete, reinforcing steel, curing and any other material; erecting and removing any falsework and forms; protecting concrete in wind, rain, low humidity, high temperatures or other unfavorable weather; finishing and curing concrete.

Payment shall be made under:

Moment Slab ……..……. Linear Feet

County: ALEXANDER

ITEMIZED PROPOSAL FOR CONTRACT NO. DL00381

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
			ROADWAY ITEMS			
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0000400000-N	801	CONSTRUCTION SURVEYING	Lump Sum	L.S.	
0003	0043000000-N	226	GRADING	Lump Sum	L.S.	
0004	0050000000-E	226	SUPPLEMENTARY CLEARING & GRUBBING	1 ACR		
0005	0057000000-E	226	UNDERCUT EXCAVATION	50 CY		
0006	0195000000-E	265	SELECT GRANULAR MATERIAL	50 CY		
0007	1220000000-E	545	INCIDENTAL STONE BASE	25 TON		
0008	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	160 TON		
0009	1523000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	110 TON		
0010	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	15 TON		
0011	3030000000-E	862	STEEL BEAM GUARDRAIL	100 LF		
0012	3045000000-E	862	STEEL BEAM GUARDRAIL, SHOP CURVED	25 LF		
0013	3150000000-N	862	ADDITIONAL GUARDRAIL POSTS	5 EA		
0014	3195000000-N	862	GUARDRAIL END UNITS, TYPE AT-1	1 EA		
0015	3287000000-N	862	GUARDRAIL END UNITS, TYPE TL-3	3 EA		
0016	3563000000-E	SP	TEMP **" WOVEN WIRE FENCE, COMPLETE W/POSTS (48")	55 LF		
0017	3628000000-E	876	RIP RAP, CLASS I	120 TON		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0018	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	190 SY		
0019	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	313 SF		
0020	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	119 SF		
0021	4445000000-E	1145	BARRICADES (TYPE III)	80 LF		
0022	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	1,360 LF		
0023	6000000000-E	1605	TEMPORARY SILT FENCE	910 LF		
0024	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	65 TON		
0025	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	120 TON		
0026	6012000000-E	1610	SEDIMENT CONTROL STONE	40 TON		
0027	6015000000-E	1615	TEMPORARY MULCHING	0.5 ACR		
0028	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	100 LB		
0029	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEEDING	0.5 TON		
0030	6024000000-E	1622	TEMPORARY SLOPE DRAINS	200 LF		
0031	6029000000-E	SP	SAFETY FENCE	660 LF		
0032	6030000000-E	1630	SILT EXCAVATION	200 CY		
0033	6036000000-E	1631	MATTING FOR EROSION CONTROL	1,000 SY		
0034	6037000000-E	1629	COIR FIBER MAT	100 SY		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0035	6042000000-E	1632	1/4" HARDWARE CLOTH	30 LF		
0036	6070000000-N	1639	SPECIAL STILLING BASINS	6 EA		
0037	6071002000-E	1642	FLOCCULANT	15 LB		
0038	6084000000-E	1660	SEEDING & MULCHING	0.5 ACR		
0039	6087000000-E	1660	MOWING	0.5 ACR		
0040	6090000000-E	1661	SEED FOR REPAIR SEEDING	50 LB		
0041	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	0.25 TON		
0042	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	50 LB		
0043	6108000000-E	1665	FERTILIZER TOPDRESSING	0.5 TON		
0044	6111000000-E	SP	IMPERVIOUS DIKE	248 LF		
0045	6114500000-N	1667	SPECIALIZED HAND MOWING	10 MHR		
0046	6117000000-N	1675	RESPONSE FOR EROSION CONTROL	13 EA		
0047	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	1 EA		
0048	6123000000-E	1670	REFORESTATION	0.1 ACR		
0049	6132000000-N	SP	GENERIC EROSION CONTROL ITEM PREFABRICATED CONCRETE WASHOUT	3 EA		
			CULVERT ITEMS			
0050	8804000000-N	SP	GENERIC CULVERT ITEM CORRUGATED STEEL PIPE ARCH CULVERT	Lump Sum	L.S.	

County: ALEXANDER

ITEMIZED PROPOSAL FOR CONTRACT NO. DL00381

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0051	8804000000-N	SP	GENERIC CULVERT ITEM CULVERT EXCAVATION, STA. 11+77, -L-	Lump Sum	L.S.	
0052	8818000000-E	SP	GENERIC CULVERT ITEM FOUNDATION CONDITIONING MATERIAL	161 TON		
0053	8811000000-E	SP	GENERIC CULVERT ITEM MOMENT SLAB	94 LF		

1640/Apr16/Q6865.85/D249703502000/E53

Total Amount Of Bid For Entire Project :

Docusign Envelope ID: CD819685-FB6B-4D42-B650-836B5CA67687

COMPUTED BY: KSA DATE: 04/14/2026
CHECKED BY: JLT DATE: 04/14/2026

PROJECT NO.	SHEET NO.
BP12-C001	3B-1

STATE OF NORTH CAROLINA

SUMMARY OF EARTHWORK

IN CUBIC YARDS

Station	Station	Uncl. Excav.	Embank. +15%	Borrow	Waste
-L- 10+90.00	-L- 12+60.00	2	67	65	
TOTALS:		2	67	65	0
LOSS DUE TO CLEARING & GRUBBING					
ROCK WASTE TO REPLACE BORROW					
ADJUST FOR ROCK WASTE					
WASTE IN LIEU OF BORROW					
PROJECT TOTALS:		2	67	65	0
Est. 5% to Replace Top Soil on Borrow Pit					
GRAND TOTALS:		2	67	65	0
SAY		**25**		**80**	

Note: Approximate quantities only. Unclassified Excavation, Borrow Excavation, Fine Grading, Clearing and Grubbing, and Removal of Existing Pavement will be paid for at the contract lump sum price for grading.

Note: Earthwork quantities are calculated by TGS Engineers.

SELECT GRANULAR MATERIAL = 50 CUBIC YARDS

PER TGS RECOMMENDATION, ESTIMATED 50 CUBIC YARDS OF UNDERCUT TO BE USED IN THE DISCRETION OF THE RESIDENT ENGINEER.

PAVEMENT REMOVAL SUMMARY

IN SQUARE YARDS

SURVEY LINE	Station	Station	LOCATION LT/RT/CL	ASPHALT REMOVAL	ASPHALT BREAKUP	CONCRETE REMOVAL	CONCRETE BREAKUP
-L-	10+90.00	12+60.00	CL	408			
			TOTAL:	408.00			
			SAY	**450**			

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

IN FEET

LINE	BEG. STA.	END STA.	LOC.	LENGTH STRAIGHT	LENGTH SHOP CURVED	LENGTH DOUBLE FACED	WARRANT POINT APPR. END	WARRANT POINT TRAIL. END	"N" DIST. FROM E.O.L.	TOTAL SHLDR WIDTH	FLAIR LENGTH APPR. END	FLAIR LENGTH TRAIL. END	W APPR. END	W TRAIL. END	ANCHORS TL-3	ANCHORS AT-1	ANCHORS	ANCHORS	ANCHORS	IMP. ATTEN. TYPE 350 EA	IMP. ATTEN. TYPE 350 G	IMP. ATTEN. TYPE 350 NG	EXTRA LENGTH GUARDRAIL POSTS (8' STEEL)	REMOVE EXISTING GUARDRAIL	REMARKS
-L-	11+26.50	12+39.50	LT	100.00	25		11+29.39	11+97.12	4.00'	7.00'		50		1	1	1									R=20'
-L-	11+12.50	12+59.50	RT	150.00			11+56.18	12+25.85	4.00'	7.00'	50	50	1	1	2										
SUB-TOTALS				250.00	25										3	1									
LESS ANCHOR DEDUCTIONS																									
TYPE TL-3		3 @ 50.00 ft		150.00																					
AT-1		1 @ 6.25 ft			6.25																				
ANCHOR TOTALS				150.00	6.25																				
GRAND-TOTALS				**100.00**	**18.75**										**3**	**1**									
SAY				**100.00**	**25.00**										**3**	**1**									

ADDITIONAL GUARDRAIL POSTS = 5 EA

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11/14/23

NOTE: REMOVE FENCE AS NEEDED AND REPLACE WITH TEMPORARY 48" WOVEN WIRE FENCE WITH WOOD POST.

-L- PC 10+00.00

BEGIN PROJECT BP12-C001
-L- STA. 10+90.00

-L- PCC 12+09.96

-L- PT 13+26.48

END PROJECT BP12-C001
-L- STA. 12+60.00

-L- STA 11+77±
3 @ 10'-11" X 7'-1" SPPA

50' Taper to Exist.

50' Taper to Exist.

22' TYP.

22' TYP.

-L- +10.00
55 (LT)

-L- +21.00
54 (LT)

-L- +00.00
20 (LT)

-L- +87.00
20 (LT)

-L- +98.00
46 (LT)

-L- +60.00
20 (LT)

-L- +90.00
20 (RT)

-L- +80.00
59 (RT)

-L- +34.00
45 (RT)

-L- +60.00
20 (RT)

S68°41'10"W
605.20'

S68°50'10"E
599.29'

CLASS I RIP RAP
EST. 25 TONS

CLASS I RIP RAP
EST. 20 TONS

CLASS I RIP RAP
EST. 35 TONS

CLASS I RIP RAP
EST. 40 TONS

DO NOT DISTURB
WATER LINE

REMOVE EXISTING 3@ 84" CMP

1.5' SILL
(TYP)

AT-1

SC=20'R

BM-1

RIP RAP

WOODS

48" WW & 3S ELEC

8" PVC

48" PVC

48" CONC HW

TL-3

EXISTING RW

SR 1419 ROCKY SPRINGS RD 19' BST

4.45 MI TO SR 1412
BLACK OAK RIDGE RD

0.81 MI TO SR 1001
SULPHUR SPRINGS RD

50 PR

40'

10.0'

10.4'

10.4'

10.5'

ROCKY FACE BRANCH

① GLENN M. KURFEES, II
SELENA S. KURFEES
DB 588 PG 1164

② NANCY M. HEAFNER
DB 318 PG 393

③ DIANA P. JOLLY
DB 258 PG 315

③ DIANA P. JOLLY
DB 258 PG 315

304-1

NAD 83
NA 2011

CUR DATA -L-
PIc 11+05.04
Δc = 04°35'29.7" (RT)
D = 02°11'12.7"
Lc = 209.96
Tc = 105.04
R = 2,620
SE = 02
DS = 30 MPH

CUR DATA -L-
PIc 12+68.28
Δc = 06°12'36.5" (RT)
D = 05°19'47.4"
Lc = 116.52
Tc = 58.32
R = 1,075
SE = EXIST.

SILL DETAIL
(NOT TO SCALE)

3@10'-11" x 7'-1" STRUCTUAL PLATE PIPE ARCH
WITH HEADWALL AND ENDWALL

FLOODPLAIN PIPE

FLOODPLAIN PIPE

1.5'

1.5'

(UPSTREAM FACE)

MAIN CHANNEL
PIPE (BURY 1.0')

NOTE: SILLS TO BE PLACED 2.0' INSET FROM
INLET AND OUTLET OF FLOODPLAIN PIPE

INLET/ OUTLET CHANNEL DETAIL
(NOT TO SCALE)

℄
(UPSTREAM CHANNEL)

EXISTING NG

1.5:1

1.5:1

EXISTING NG

CLASS I
BANK STABILIZATION

EXCAVATION
(EST.30cuyds)

BACKFILL WITH
NATIVE MATERIAL

(UPSTREAM FACE)

EXCAVATION
(EST.70cuyds)

℄
(DOWNSTREAM CHANNEL)

1.5:1

1.5:1

EXISTING NG

EXISTING NG

EXCAVATION
(EST.20cuyds)

CLASS I
BANK STABILIZATION

(DOWNSTREAM FACE)

EXCAVATION
(EST.65cuyds)

BACKFILL WITH
NATIVE MATERIAL

FOR -L- PROFILE, SEE SHEET 5

BP12-C001
3RD1 | 004

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
ALEXANDER COUNTY

ROADWAY DESIGN UNIT

ROADWAY DESIGN ENGINEER
NORTH CAROLINA
PROFESSIONAL ENGINEER
Jimmy L. Terry
SEAL
35018
ENGINEER
JIMMY L. TERRY
4/16/2026

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HYDRAULICS ENGINEER
NORTH CAROLINA
PROFESSIONAL ENGINEER
John W. Twisdale, Jr.
SEAL
024897
ENGINEER
John W. Twisdale, Jr.
4/16/2026

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PREPARED BY

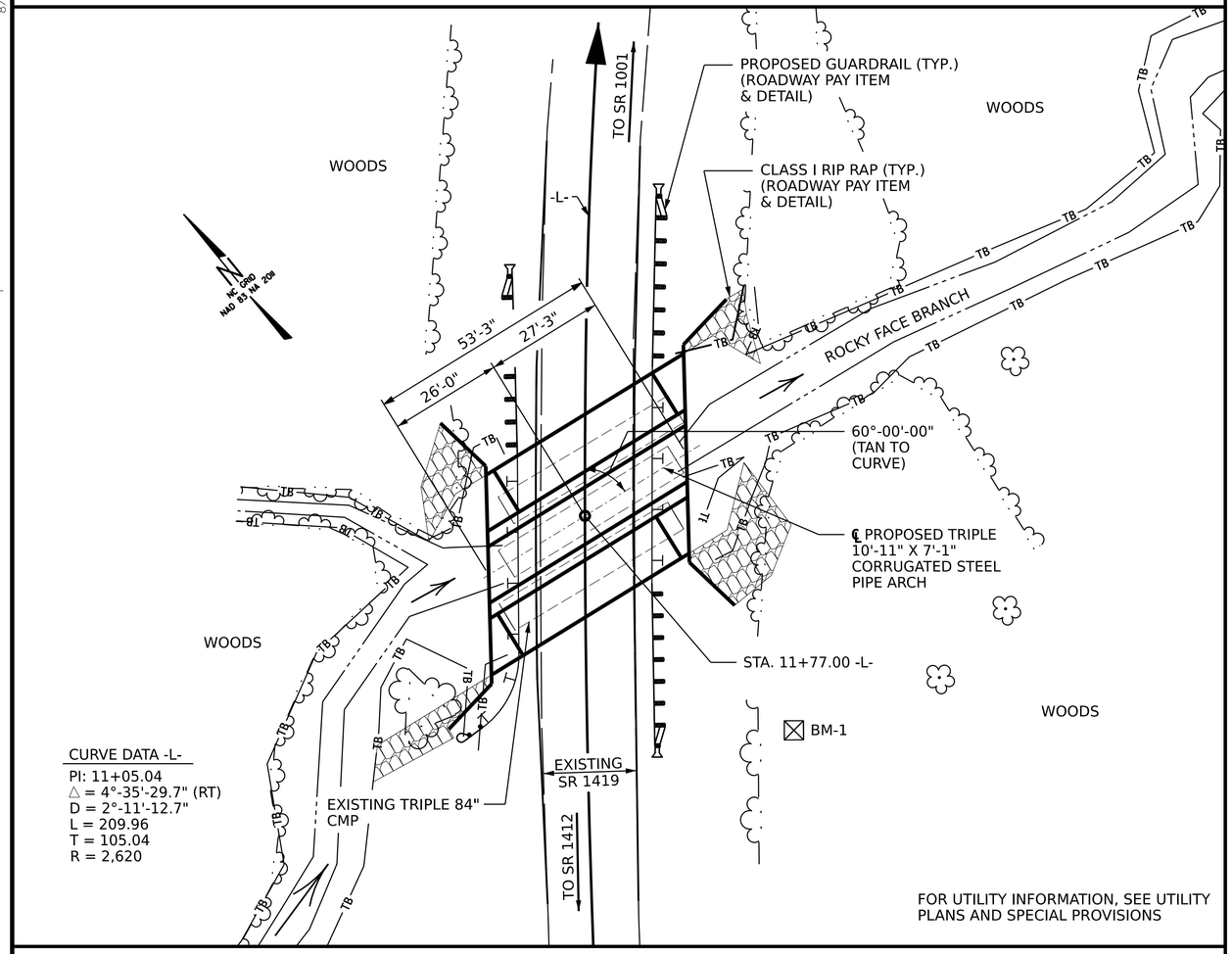
TGS ENGINEERS
201 W. MARION ST. STE 200
SHELBY, NC 28150
PH: 704-487-1455
CORP. LICENSE NO: C-0275

REVISIONS

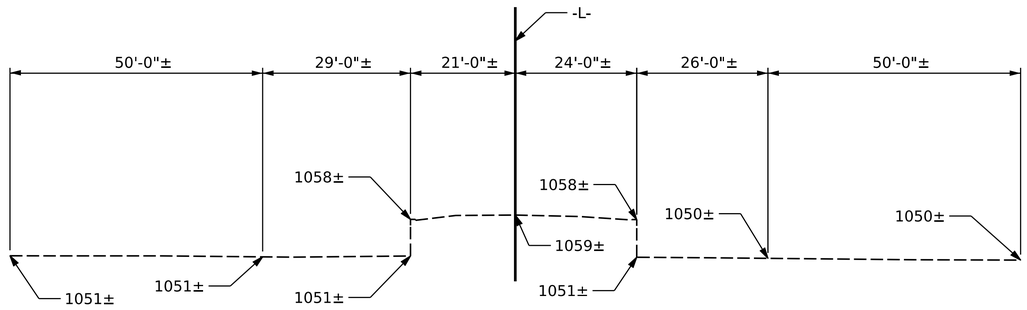
Docusign Envelope ID: D084B4C7-653F-4285-B58C-3EE82E4C41C6

8/26/21

BENCH MARK #1: RR SPIKE IN BASE OF 17" POPLAR; 60' RT. OF STA. 11+11.70 -L-; ELEV. 1060.17



LOCATION SKETCH



PROFILE ALONG ℄ CULVERT

TOTAL STRUCTURE QUANTITIES	
CORRUGATED STEEL PIPE ARCH CULVERT	LUMP SUM
CULVERT EXCAVATION	LUMP SUM
FOUNDATION CONDITIONING MATERIAL	161 TONS
MOMENT SLAB	94 LIN. FT.

ROADWAY DATA

GRADE POINT ELEV. @ STA. 11+77.00 -L-	= 1059.13
BED ELEV. @ STA. 11+77.00 -L-	= 1049.70
ROADWAY SLOPES	= 2:1

HYDRAULIC DATA

DESIGN DISCHARGE	= 540 CFS
FREQUENCY OF DESIGN FLOOD	= 25 YRS
DESIGN HIGH WATER ELEVATION	= 1057.0
DRAINAGE AREA	= 1.16 SQ. MI.
BASIC DISCHARGE (Q100)	= 790 CFS
BASIC HIGH WATER ELEVATION	= 1058.2

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	= 960 CFS
FREQUENCY OF OVERTOPPING FLOOD	= -500 YRS
OVERTOPPING FLOOD ELEVATION	= 1059.3 *

* OVERTOPPING @ U/S SHOULDER POINT STA. 11+51.30 -L-
W.S. ELEV. TAKEN @ RIVER STA. 1245

NOTES

ASSUMED LIVE LOAD - HL-93 OR ALTERNATE.

FOR OTHER DESIGN DATA AND NOTES, SEE STANDARD NOTES SHEET.

THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF THE CULVERT BEFORE CONSTRUCTION TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF THE FILL.

FILL DEPTH 2.62'.

EXCAVATE AT LEAST 1 FOOT BELOW THE CULVERT AND REPLACE EXCAVATED MATERIAL WITH FOUNDATION CONDITIONING MATERIAL. FOR FOUNDATION CONDITIONING MATERIAL, SEE CULVERT EXCAVATION SPECIAL PROVISION.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.

FOR CORRUGATED STEEL PIPE ARCH CULVERT, SEE SPECIAL PROVISIONS.

THE MANUFACTURER OF THE CORRUGATED STEEL PLATE PIPE ARCH CULVERT SHALL PROVIDE LOAD AND RESISTANCE FACTOR RATING (LRFR) SUMMARY PER NCDOT REQUIREMENTS.

REMOVAL OF EXISTING CMP WITH CONCRETE HEADWALLS SHALL BE PERFORMED IN A MANNER THAT PREVENTS DEBRIS FROM FALLING INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE CMP WITH CONCRETE HEADWALLS IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS. FOR REMOVAL OF THE EXISTING CMP, SEE CULVERT EXCAVATION SPECIAL PROVISION.

FOR CULVERT EXCAVATION, SEE SPECIAL PROVISIONS.

THE DETAILS SHOWN HERE ARE FOR GENERAL LAYOUT ONLY. THE CONTRACTOR SHALL SUPPLY DESIGNS AND DETAILS THAT MEET THE REQUIREMENTS OF AASHTO SECTION 12, AND ARE SEALED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER.

FOR FOUNDATION CONDITIONING MATERIAL, SEE CULVERT EXCAVATION SPECIAL PROVISION.

FOR MOMENT SLAB, SEE SPECIAL PROVISIONS.

PROJECT NO. BP12-C001

ALEXANDER COUNTY

STATION: 11+77.00 -L-

SHEET 1 OF 5 REPLACES STRUCTURE 010304

ASSEMBLED BY: STM DATE : 01/25
CHECKED BY : MGC DATE : 04/25

4/16/2026
c:\workdir\ncdot-pw.bentley.com_ncdot-pw-01\zachary smith\d0371944\Arch Pipe .dgn
ZSmith

NORTH CAROLINA PROFESSIONAL SEAL 20125 ENGINEER MARSHALL G. CASEY, JR.
Marshall G. Casey, Jr.
5FBCC2F3A4DC413...
4/16/2026

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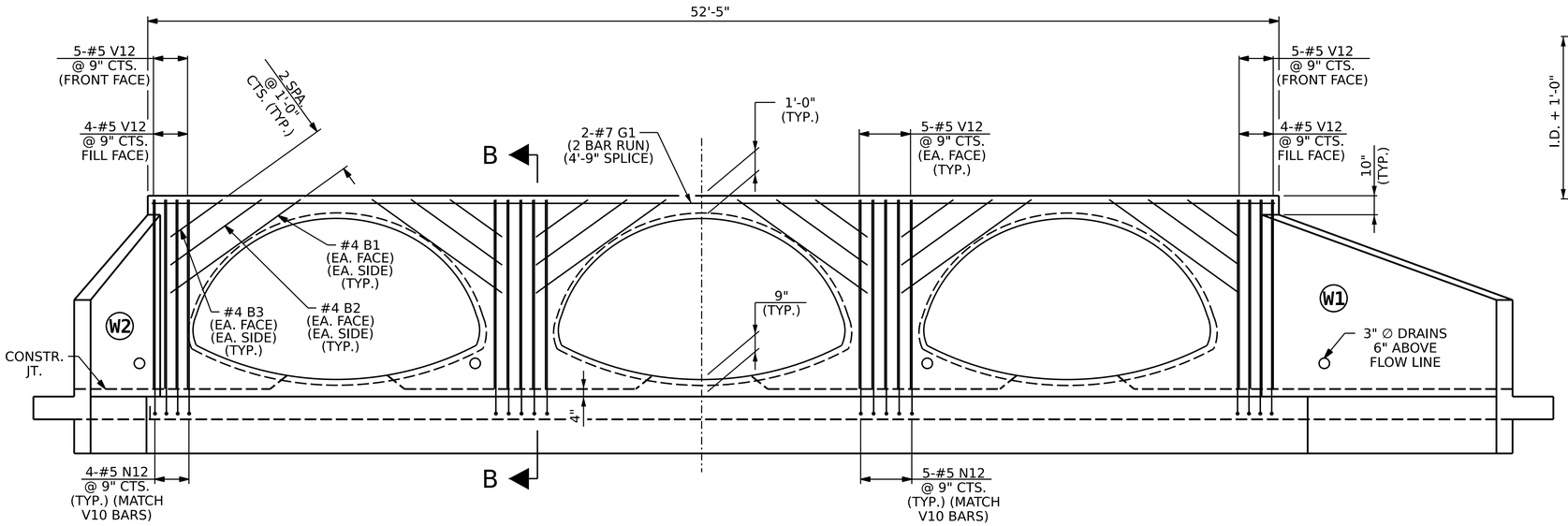
TGS ENGINEERS
201 W MARION ST
SUITE 200
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

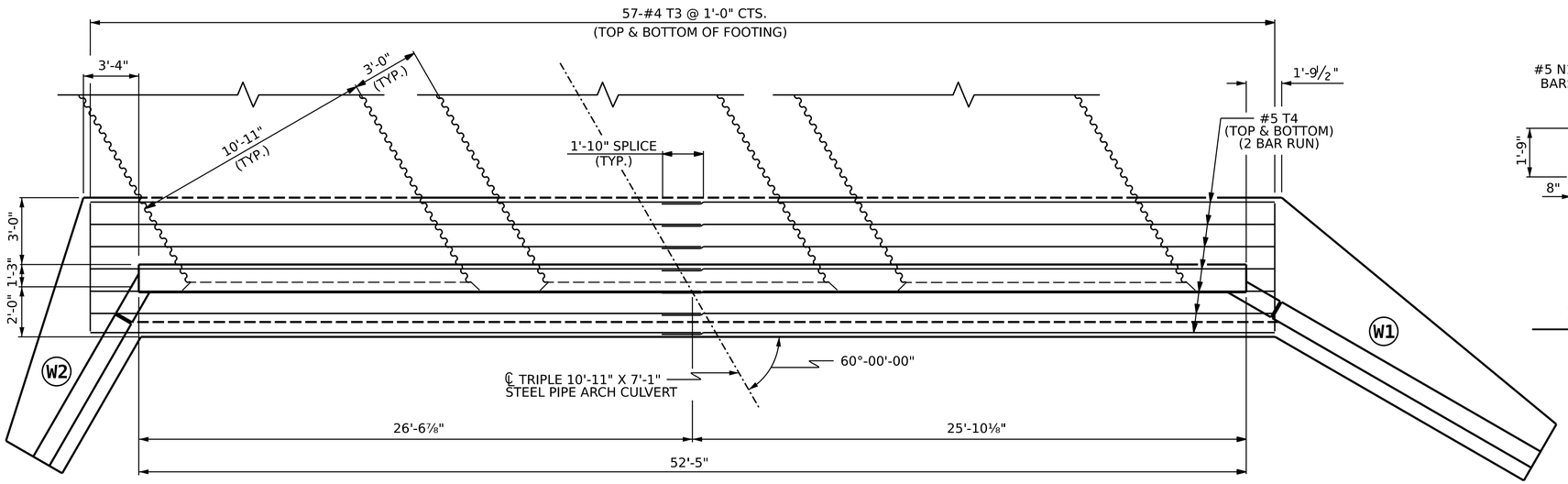
TRIPLE 10'-11" X 7'-1" CORRUGATED STEEL PIPE ARCH CULVERT 60° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-1
1			3			TOTAL SHEETS
2			4			5

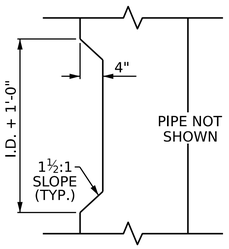
Docusign Envelope ID: D084B4C7-653F-4285-B58C-3EE82E4C41C6



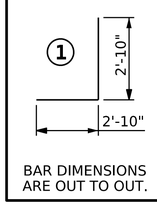
ELEVATION



PLAN



TAPER DETAIL

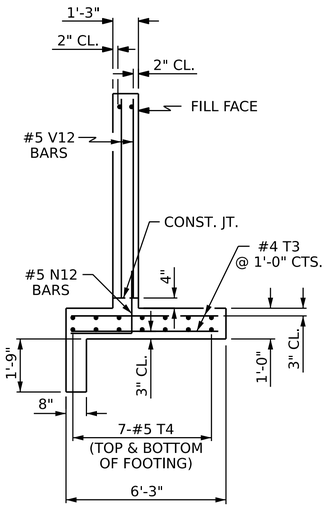


BAR DIMENSIONS ARE OUT TO OUT.

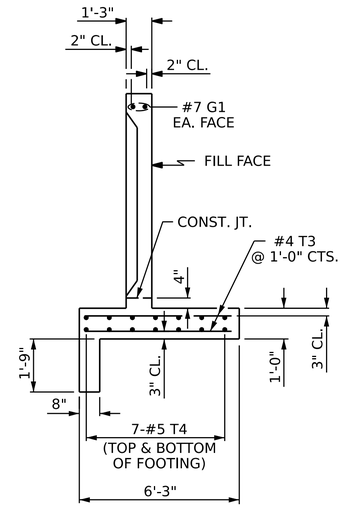
BILL OF MATERIAL

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	24	#4	STR	12'-0"	192
B2	24	#4	STR	8'-5"	135
B3	24	#4	STR	4'-9"	76
G1	8	#7	STR	28'-6"	466
N12	36	#5	1	5'-8"	213
T3	228	#4	STR	5'-10"	888
T4	56	#5	STR	29'-6"	1723
V12	72	#5	STR	8'-3"	620

REINFORCING STEEL FOR 2 HEADWALLS	4313 LBS
CLASS A CONCRETE FOR 2 HEADWALLS	42.9 CY



SECTION B-B



SECTION ALONG ℄

TOTAL QUANTITES		
REINFORCING CONCRETE		
4 WINGS	1,570	LBS.
2 HEADWALLS	4,298	LBS.
TOTAL	5,868	LBS.
CLASS A CONCRETE		
4 WINGS	11.1	C.Y.
2 END CURTAIN WALLS	10.5	C.Y.
2 HEADWALLS	42.9	C.Y.
2 FOOTINGS	30.1	C.Y.
TOTAL	94.6	C.Y.

NOTES

NO SEPARATE PAYMENT WILL BE MADE FOR REINFORCING STEEL OR CLASS A CONCRETE. THE ENTIRE COST OF THESE ITEMS SHALL BE PAID FOR UNDER THE LUMP SUM PRICE BID FOR CORRUGATED STEEL PIPE ARCH CULVERT.

CHAMFER ALL CORNERS 1".

PLACE A STONE DRAIN CONSISTING OF ONE (1) CUBIC FOOT OF NUMBER 78M STONE CONTAINED IN A POROUS FABRIC AT EACH WEEP HOLE. PLACE SUBDRAIN FINE AGGREGATE BENEATH, AROUND AND OVER THE STONE DRAIN SO THE STONE DRAIN IS COMPLETELY COVERED BY A LAYER OF SUBDRAIN FINE AGGREGATE AT LEAST ONE (1) FOOT THICK. WHERE THERE IS THAN ONE WEEP HOLE IN A WING WALL, PLACE A HORIZONTAL DRAIN OF SUBDRAIN FINE AGGREGATE AT LEAST ONE (1) FOOT SQUARE IN CROSS SECTION TO CONNECT ALL STONE DRAINS. PLACE A VERTICAL DRAIN OF SUBDRAIN FINE AGGREGATE AT LEAST ONE (1) FOOT SQUARE IN CROSS SECTION AT EACH WEEP HOLE TO AN ELEVATION OF TWO (2) FEET BELOW THE SURFACE OF THE EMBANKMENT.

PROJECT NO. BP12-C001

ALEXANDER COUNTY

STATION: 11+77.00 -L-

SHEET 2 OF 5

NORTH CAROLINA PROFESSIONAL SEAL 20125 ENGINEER Marshall G. Cheek, Jr.

4/16/2026

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TGS ENGINEERS
201 W MARION ST
SUITE 200
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TRIPLE 10'-11" X 7'-1" CORRUGATED STEEL PIPE ARCH CULVERT 60° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-2
1			3			TOTAL SHEETS
2			4			5

DRAWN BY :	STM	DATE : 04/25
CHECKED BY :	MGC	DATE : 04/25

4/14/2026
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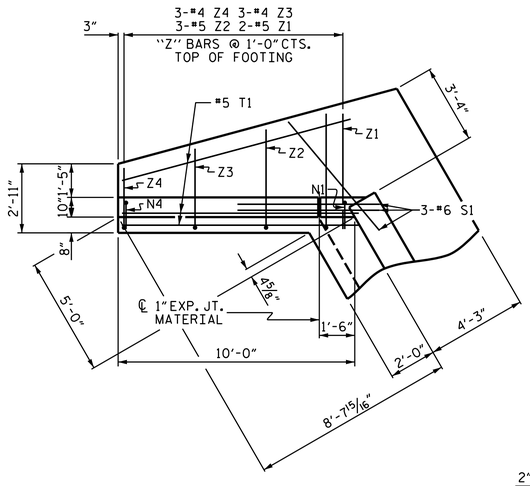
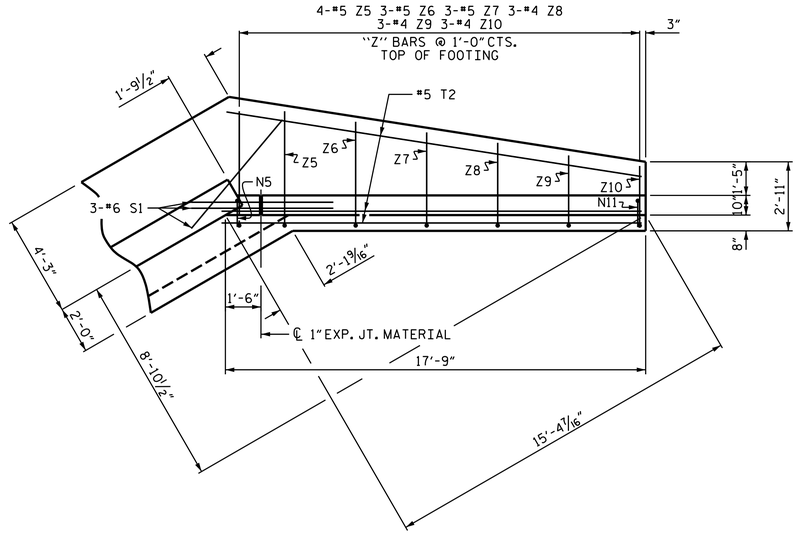
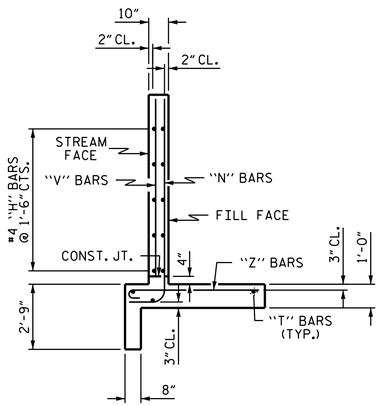


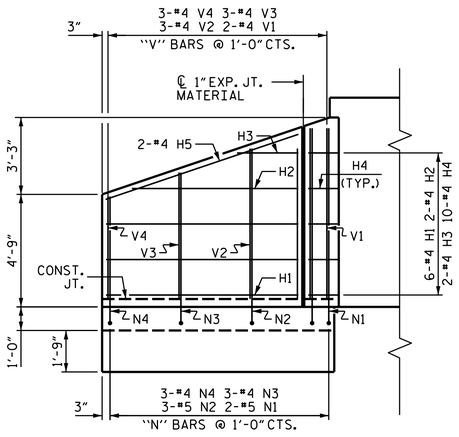
PLAN W2



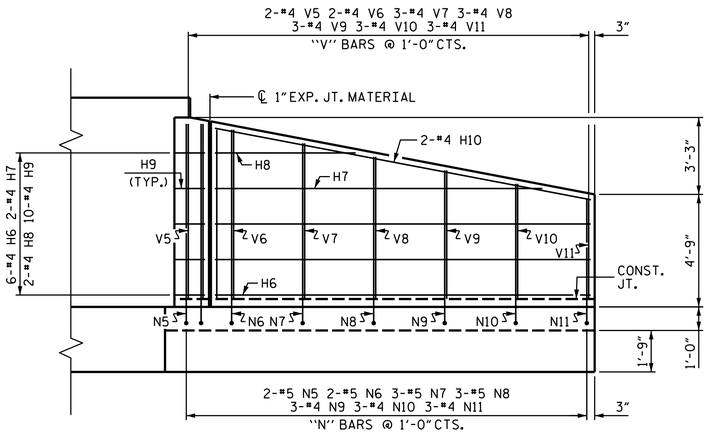
PLAN W1



TYPICAL WING SECTION

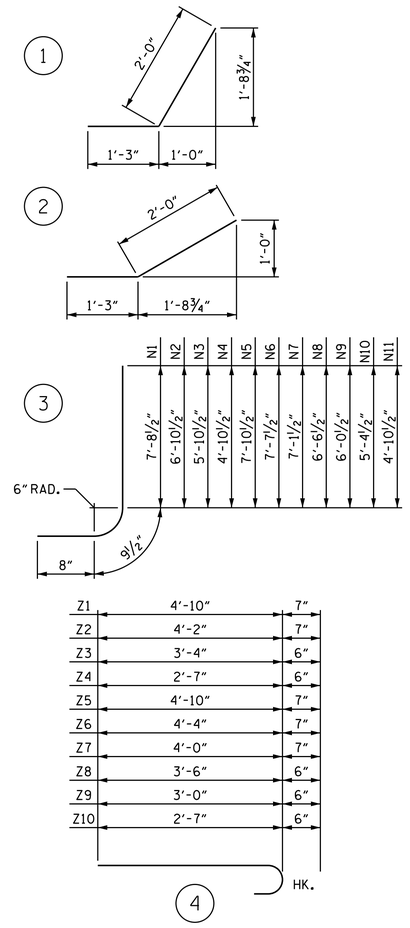


ELEVATION W2



ELEVATION W1

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
H1	12	#4	STR	8'-1"	65
H2	4	#4	STR	7'-0"	19
H3	4	#4	STR	2'-7"	7
H4	20	#4	1	3'-3"	43
H5	4	#4	STR	8'-6"	23
H6	12	#4	STR	15'-10"	127
H7	4	#4	STR	13'-10"	37
H8	4	#4	STR	6'-0"	16
H9	20	#4	2	3'-3"	43
H10	4	#4	STR	16'-2"	43
N1	4	#5	3	9'-2"	38
N2	6	#5	3	8'-4"	52
N3	6	#4	3	7'-4"	29
N4	6	#4	3	6'-4"	25
N5	4	#5	3	9'-4"	39
N6	4	#5	3	9'-1"	38
N7	6	#5	3	8'-7"	54
N8	6	#5	3	8'-0"	50
N9	6	#4	3	7'-6"	30
N10	6	#4	3	6'-10"	28
N11	6	#4	3	6'-4"	25
S1	12	#6	STR	6'-0"	108
T1	6	#5	STR	10'-0"	63
T2	6	#5	STR	17'-9"	111
V1	4	#4	STR	7'-2"	19
V2	6	#4	STR	6'-4"	25
V3	6	#4	STR	5'-4"	21
V4	6	#4	STR	4'-4"	17
V5	4	#4	STR	7'-4"	20
V6	4	#4	STR	7'-1"	19
V7	6	#4	STR	6'-6"	26
V8	6	#4	STR	6'-0"	24
V9	6	#4	STR	5'-5"	22
V10	6	#4	STR	4'-10"	19
V11	6	#4	STR	4'-3"	17
Z1	4	#5	4	5'-5"	23
Z2	6	#5	4	4'-9"	30
Z3	6	#4	4	3'-10"	15
Z4	6	#4	4	3'-1"	12
Z5	8	#5	4	5'-5"	45
Z6	6	#5	4	5'-1"	32
Z7	6	#5	4	4'-7"	29
Z8	6	#4	4	4'-0"	16
Z9	6	#4	4	3'-6"	14
Z10	6	#4	4	3'-1"	12
REINFORCING STEEL FOR 4 WINGS					1570 LBS
CLASS A CONCRETE 4 WINGS					11.1 CY

NOTES:

A 3 FOOT STRIP OF FILTER FABRIC SHALL BE ATTACHED TO THE FILL FACE OF THE WING COVERING THE ENTIRE LENGTH OF THE EXPANSION JOINT.

PROJECT NO. BP12-C001

ALEXANDER COUNTY

STATION: 11+77.00 -L-

SHEET 3 OF 5

ASSEMBLED BY :	STM	DATE :	09/25
CHECKED BY :	MGC	DATE :	09/25
DRAWN BY : CCJ	11/99	REV. 6/19	MAA/THC
CHECKED BY : RWW	03/00		

4/14/2026
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NORTH CAROLINA PROFESSIONAL SEAL 20125 ENGINEER
Marshall G. Calvert, Jr.
5FBCC2F3A4DC413...
4/16/2026

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
201 W MARION ST
SUITE 200
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

WINGS FOR CORRUGATED STEEL PIPE ARCH CULVERT

H = 8'-0" SLOPE = 2:1
60° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-3
1			3			TOTAL SHEETS
2			4			5

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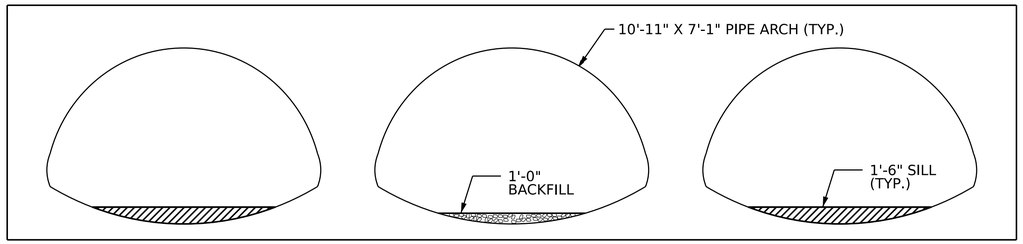


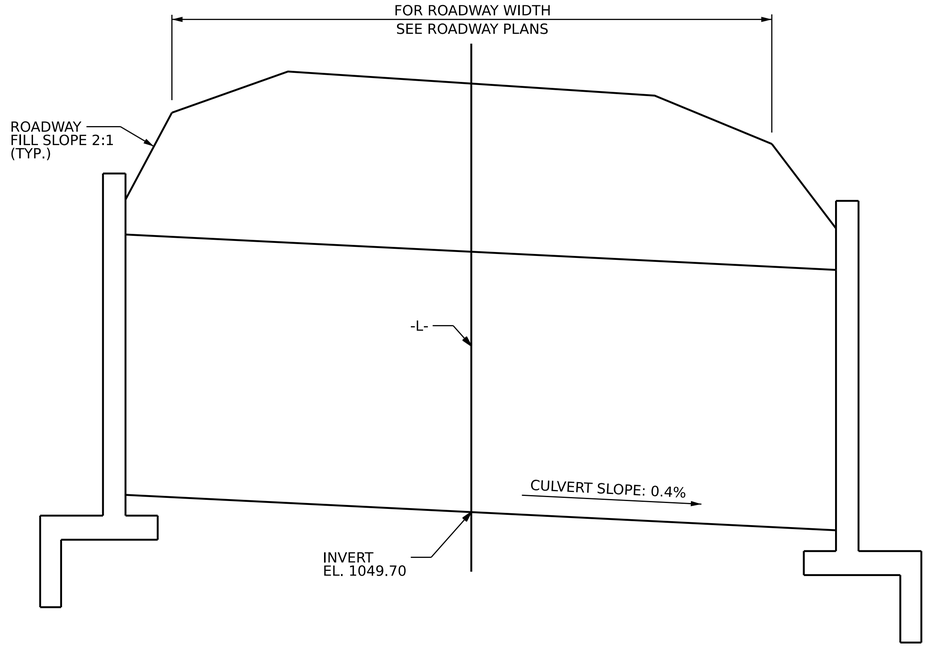
SILL DETAIL - ELEVATION

NOTES

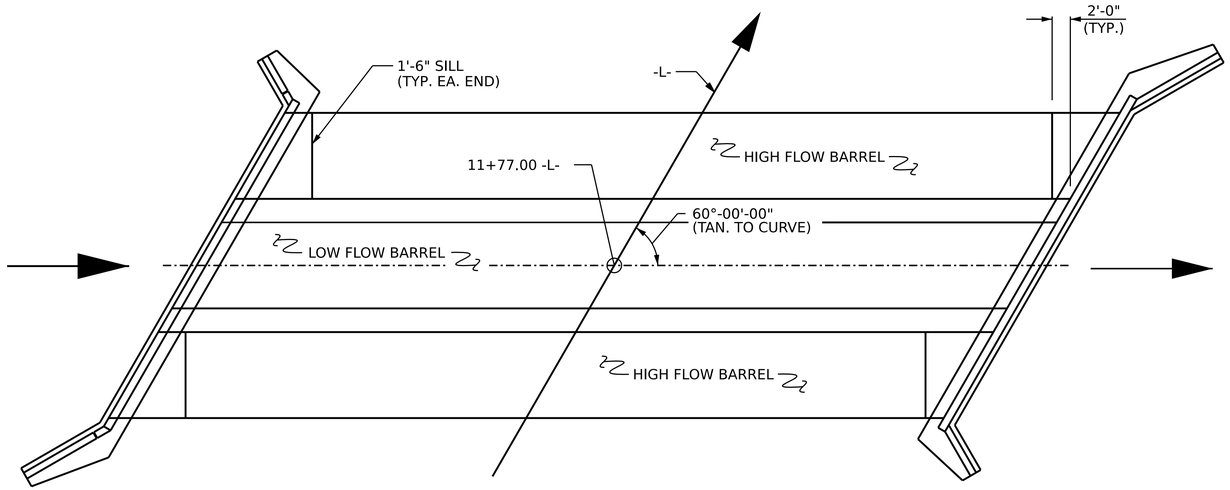
THE ENGINEER, IN CONSULTATION WITH DEO STAFF, SHALL REVIEW ALL MATERIAL TO BE USED AS BACKFILL PRIOR TO CONDUCTING THE BACKFILL ACTIVITY. BACKFILL SHALL CONSIST OF NATIVE MATERIAL ONLY UNLESS THE ENGINEER, IN CONSULTATION WITH DEO STAFF, DETERMINES THAT (1) THE NATIVE MATERIAL IS UNSUITABLE, OR (2) ADDITIONAL MATERIAL IS REQUIRED TO SUPPLEMENT THE NATIVE MATERIAL. THE CHOSEN BACKFILL MATERIAL SHALL NOT HAVE ADVERSE EFFECTS TO AQUATIC LIFE, AQUATIC LIFE PASSAGE, OR WATER QUALITY. NATIVE MATERIAL CONSISTS OF MATERIAL THAT IS EXCAVATED FROM THE STREAMBED OR FLOODPLAIN AT THE PROJECT SITE DURING CULVERT CONSTRUCTION.

THE ENTIRE COST OF WORK REQUIRED TO PLACE THE EXCAVATED MATERIAL, OR SUPPLEMENTAL MATERIAL, SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE BID FOR CULVERT EXCAVATION.

THE ENTIRE COST OF THE SILLS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR THE CORRUGATED STEEL PIPE ARCH CULVERT.



CULVERT SECTION NORMAL TO ROADWAY



FLOOR SILL LAYOUT

PROJECT NO. BP12-C001

ALEXANDER COUNTY

STATION: 11+77.00 -L-

SHEET 4 OF 5

NORTH CAROLINA PROFESSIONAL SEAL 20125 ENGINEER MARSHALL S. CHEEK, JR.

Signed by: Marshall S. Cheek, Jr.
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4/16/2026

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TGS ENGINEERS
201 W MARION ST
SUITE 200
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TRIPLE 10'-11" X 7'-1" CORRUGATED STEEL PIPE ARCH CULVERT 60° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-4
1			3			TOTAL SHEETS
2			4			5

DRAWN BY :	STM	DATE : 04/25
CHECKED BY :	MGC	DATE : 04/25

4/14/2026
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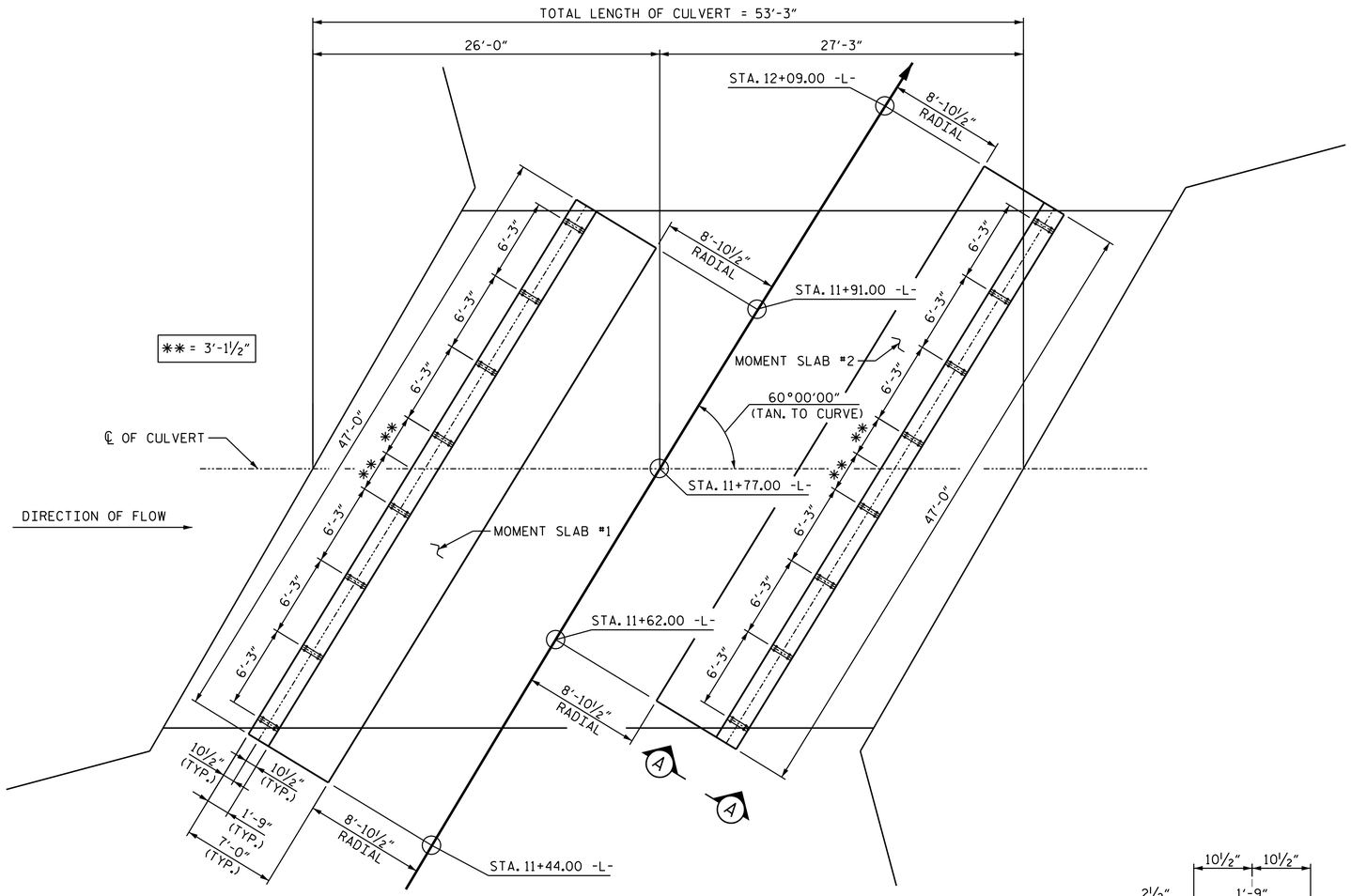
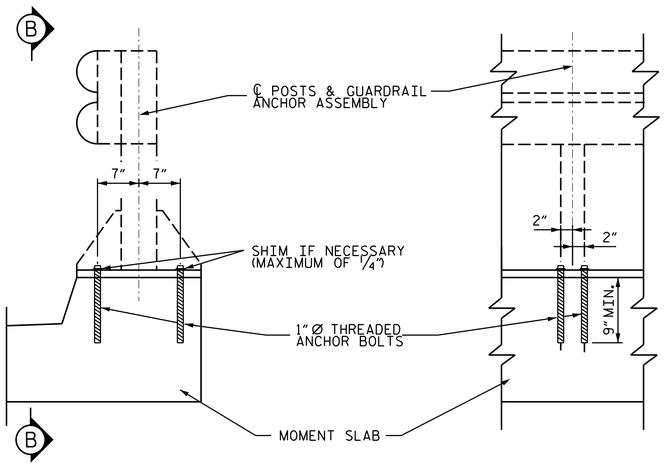
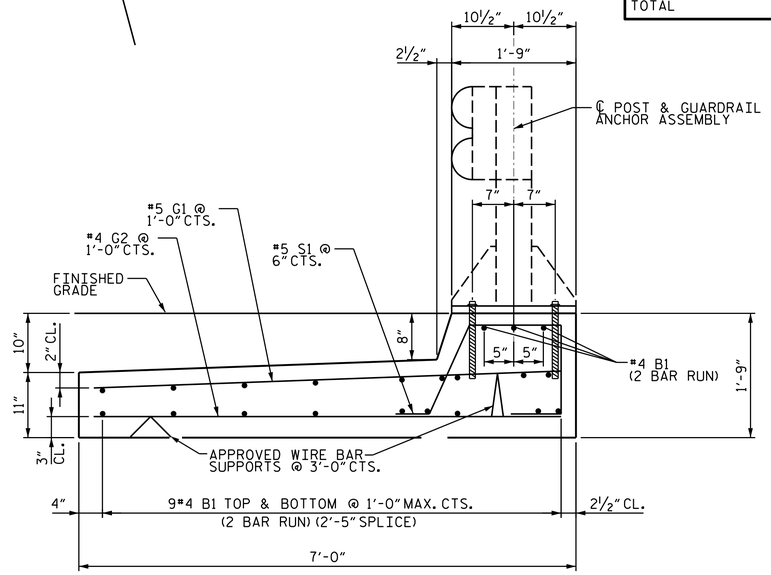


PLAN OF MOMENT SLAB LAYOUT



SECTION A-A

SECTION B-B



TYPICAL SECTION THRU MOMENT SLAB

BILL OF MATERIAL
MOMENT SLAB #1

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* B1	42	#4	STR.	24'-7"	690
* G1	47	#5	STR.	6'-7"	323
* G2	47	#4	STR.	6'-7"	207
* S1	94	#5	1	5'-7"	547
* EPOXY COATED REINFORCING STEEL					1767 LBS.
CLASS "AA" CONCRETE					14.7 C.Y.

BILL OF MATERIAL
MOMENT SLAB #2

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* B1	42	#4	STR.	24'-7"	690
* G1	47	#5	STR.	6'-7"	323
* G2	47	#4	STR.	6'-7"	207
* S1	94	#5	1	5'-7"	547
* EPOXY COATED REINFORCING STEEL					1767 LBS.
CLASS "AA" CONCRETE					14.7 C.Y.

MOMENT SLABS

MOMENT SLAB #1	47 LIN. FT.
MOMENT SLAB #2	47 LIN. FT.
TOTAL	94 LIN. FT.

NOTES

ALL GUARDRAIL ATTACHMENTS SHALL BE MADE USING ADHESIVELY ANCHORED ANCHOR BOLTS. LEVEL TWO FIELD TESTING IS REQUIRED, AND THE YIELD LOAD OF THE 1"Ø BOLT IS 21.8 KIPS. FOR ADHESIVELY ANCHORED ANCHOR BOLTS, SEE STANDARD SPECIFICATIONS.

ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE 1"Ø AND MEET THE REQUIREMENTS OF ASTM A325. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.

PAYMENT FOR GUARDRAIL, POSTS, ADHESIVELY ANCHORED ANCHOR BOLTS AND POST BASE PLATES IS INCLUDED IN ROADWAY ITEMS.

FOR GUARDRAIL POSTS, ANCHOR BASE PLATES & ANCHOR BOLTS, SEE ROADWAY PLANS.

THE GUARDRAIL POSTS SHALL NOT BE ATTACHED UNTIL THE MOMENT SLAB HAS ATTAINED AN AGE OF THREE CURING DAYS OR A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI. IN ADDITION, NO FILL MATERIAL, ASPHALT, OR CONSTRUCTION EQUIPMENT IS ALLOWED ON THE MOMENT SLAB PRIOR TO SATISFYING THE MINIMUM CONCRETE CURING AND STRENGTH REQUIREMENTS.

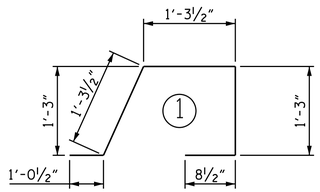
ALL REINFORCING STEEL IN THE MOMENT SLAB SHALL BE EPOXY COATED.

THE CONTRACT UNIT PRICE FOR MOMENT SLAB WILL BE FULL COMPENSATION FOR SUBMITTALS, LABOR, TOOLS, EQUIPMENT, MOMENT SLAB MATERIALS, EXCAVATING, BACKFILLING, HAULING AND REMOVING EXCAVATED MATERIALS, AND SUPPLYING ANY INCIDENTALS NECESSARY TO CONSTRUCT THE CONCRETE MOMENT SLABS.

FOR MOMENT SLAB, SEE SPECIAL PROVISIONS.

BAR TYPES

ALL BAR DIMENSIONS ARE OUT TO OUT.



PROJECT NO. BP12-C001

ALEXANDER COUNTY

STATION: 11+77.00-L-

SHEET 5 OF 5

NORTH CAROLINA PROFESSIONAL SEAL 20125 ENGINEER
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4/16/2026

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TGS ENGINEERS
201 W. MARION ST STE 200
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TRIPLE 10'-11' X 7'-1" CORRUGATED STEEL PIPE ARCH CULVERT 60°SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-5
1			3			TOTAL SHEETS
2			4			5

DRAWN BY :	NMW	DATE :	4/26
CHECKED BY :	MGC	DATE :	4/26

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STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	AASHTO (CURRENT)
LIVE LOAD	SEE PLANS
IMPACT ALLOWANCE	SEE AASHTO
STRESS IN EXTREME FIBER OF STRUCTURAL STEEL - AASHTO M270 GRADE 36	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION - GRADE 60	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	SEE AASHTO
STRUCTURAL TIMBER - TREATED OR UNTREATED EXTREME FIBER STRESS	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2024 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED ¾" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1½" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A ¼" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A ¼" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE ⅞" ∅ SHEAR STUDS FOR THE ¾" ∅ STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - ⅞" ∅ STUDS FOR 4 - ¾" ∅ STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF ⅞" ∅ STUDS ALONG THE BEAM AS SHOWN FOR ¾" ∅ STUDS BASED ON THE RATIO OF 3 - ⅞"∅ STUDS FOR 4 - ¾" ∅ STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16" OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.