



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J.R. "JOEY" HOPKINS  
SECRETARY

December 10, 2024

**Addendum No. 1**

RE: Contract # C204854

WBS # 46972.3.1

FEDERAL-AID NO. 0158076

**Gates and Pasquotank Counties (R-5808)**

US-158 FROM SR-1002 (ACORN HILL ROAD) TO EAST OF PASQUOTANK COUNTY LINE

**December 17, 2024 Letting**

To Whom It May Concern:

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

The following revisions have been made to the Structure plans.

Sheet No.	Revision
C1-1	Updated to show new quantity shown below

Please void the above listed Sheet in your Plans and staple the revised Sheet thereto.

The following revisions have been made to the proposal.

Page No.	Revision
Proposal Cover	Note added that reads "Includes Addendum No. 1 Dated 12-10-2024".

Please void the above listed Page in your proposal and staple the revised Page thereto.

On the item sheets the following pay item revision has been made:

<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
0109-8056000000-N 402	REMOVAL OF EXISTING STRUCTURE AT STATION (24+59.74 - L-)	NEW ITEM	LUMP SUM

The Contractor's bid must include this pay item revision.

The electronic bidding file has been updated to reflect this revision. Please download the Addendum File and follow the instructions for applying the addendum. Bid Express will not accept your bid unless the addendum has been applied.

The contract will be prepared accordingly.

Sincerely,

Signed by:  
  
52C46046381F443...

Ronald E. Davenport, Jr., PE  
State Contract Officer

RED/jjr  
Attachments

cc: Mr. Wiley W. Jones III, PE  
Mr. C. W. "Win" Bridgers, PE  
Mr. Ken Kennedy, PE  
Mr. Malcolm Bell  
Mr. Forrest Dungan, PE  
Ms. Jaci Kincaid  
Mr. Jon Weathersbee, PE  
Project File (2)

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH, N.C.

PROPOSAL

**INCLUDES ADDENDUM No.1 DATED 12-10-2024**

DATE AND TIME OF BID OPENING: **Dec 17, 2024 AT 02:00 PM**

CONTRACT ID C204854  
WBS 46972.3.1

FEDERAL-AID NO. 0158076  
COUNTY GATES, PASQUOTANK  
T.I.P NO. R-5808  
MILES 4.106  
ROUTE NO. US-158  
LOCATION US-158 FROM SR-1002 (ACORN HILL ROAD) TO EAST OF PASQUOTANK COUNTY LINE.

TYPE OF WORK GRADING, DRAINAGE, PAVING, AND STRUCTURE.

**NOTICE:**

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.

**BIDS WILL BE RECEIVED AS SHOWN BELOW:**

**THIS IS A ROADWAY & STRUCTURE PROPOSAL**

**5% BID BOND OR BID DEPOSIT REQUIRED**

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County: GATES, PASQUOTANK

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
<b>ROADWAY ITEMS</b>						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0000400000-N	801	CONSTRUCTION SURVEYING	Lump Sum	L.S.	
0003	0001000000-E	200	CLEARING & GRUBBING .. ACRE(S)	Lump Sum	L.S.	
0004	0008000000-E	200	SUPPLEMENTARY CLEARING & GRUBBING	1 ACR		
0005	0022000000-E	225	UNCLASSIFIED EXCAVATION	30,500 CY		
0006	0036000000-E	225	UNDERCUT EXCAVATION	68,000 CY		
0007	0106000000-E	230	BORROW EXCAVATION	146,200 CY		
0008	0127000000-N	235	EMBANKMENT SETTLEMENT GAUGES	13 EA		
0009	0156000000-E	250	REMOVAL OF EXISTING ASPHALT PAVEMENT	14,840 SY		
0010	0194000000-E	265	SELECT GRANULAR MATERIAL, CLASS III	78,000 CY		
0011	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	11,000 SY		
0012	0199000000-E	SP	TEMPORARY SHORING	4,400 SF		
0013	0255000000-E	SP	GENERIC GRADING ITEM HAULING AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL	50 TON		
0014	0318000000-E	300	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	20 TON		
0015	0321000000-E	300	FOUNDATION CONDITIONING GEOTEXTILE	60 SY		
0016	0342000000-E	310	*** SIDE DRAIN PIPE (48")	80 LF		
0017	0343000000-E	310	15" SIDE DRAIN PIPE	28 LF		

County: GATES, PASQUOTANK

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0018	0448500000-E	310	30" RC PIPE CULVERTS, CLASS IV	72 LF		
0019	0995000000-E	340	PIPE REMOVAL	134 LF		
0020	1011000000-N	500	FINE GRADING	Lump Sum	L.S.	
0021	1099500000-E	505	SHALLOW UNDERCUT	500 CY		
0022	1099700000-E	505	CLASS IV SUBGRADE STABILIZATION	1,000 TON		
0023	1112000000-E	505	GEOTEXTILE FOR SUBGRADE STABILIZATION	1,500 SY		
0024	1121000000-E	520	AGGREGATE BASE COURSE	1,940 TON		
0025	1220000000-E	545	INCIDENTAL STONE BASE	60 TON		
0026	1275000000-E	600	PRIME COAT	1,545 GAL		
0027	1297000000-E	607	MILLING ASPHALT PAVEMENT, **** DEPTH (2-1/2")	48,180 SY		
0028	1330000000-E	607	INCIDENTAL MILLING	590 SY		
0029	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	16,560 TON		
0030	1503000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	17,720 TON		
0031	1523000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	13,810 TON		
0032	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	2,415 TON		
0033	1693000000-E	654	ASPHALT PLANT MIX, PAVEMENT REPAIR	500 TON		
0034	1891000000-E	SP	GENERIC PAVING ITEM PAVEMENT INTERLAYER, COMPOSITE PAVING GRID, TYPE I	62,630 SY		

County: GATES, PASQUOTANK

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0035	2000000000-N	806	RIGHT-OF-WAY MARKERS	39 EA		
0036	2022000000-E	815	SUBDRAIN EXCAVATION	112 CY		
0037	2026000000-E	815	GEOTEXTILE FOR SUBSURFACE DRAINS	500 SY		
0038	2036000000-E	815	SUBDRAIN COARSE AGGREGATE	112 CY		
0039	2044000000-E	815	6" PERFORATED SUBDRAIN PIPE	500 LF		
0040	2070000000-N	815	SUBDRAIN PIPE OUTLET	1 EA		
0041	2077000000-E	815	6" OUTLET PIPE	6 LF		
0042	3030000000-E	862	STEEL BEAM GUARDRAIL	1,050 LF		
0043	3150000000-N	862	ADDITIONAL GUARDRAIL POSTS	5 EA		
0044	3287000000-N	862	GUARDRAIL END UNITS, TYPE TL-3	4 EA		
0045	3628000000-E	876	RIP RAP, CLASS I	39 TON		
0046	3649000000-E	876	RIP RAP, CLASS B	11,750 TON		
0047	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	25,235 SY		
0048	4025000000-E	901	CONTRACTOR FURNISHED, TYPE *** SIGN (D)	14 SF		
0049	4025000000-E	901	CONTRACTOR FURNISHED, TYPE *** SIGN (E)	30 SF		
0050	4025000000-E	901	CONTRACTOR FURNISHED, TYPE *** SIGN (F)	7 SF		
0051	4082000000-E	903	SUPPORTS, WOOD	158 LF		

County: GATES, PASQUOTANK

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0052	4110000000-N	904	SIGN ERECTION, TYPE *** (GROUND MOUNTED) (D)	2 EA		
0053	4110000000-N	904	SIGN ERECTION, TYPE *** (GROUND MOUNTED) (E)	6 EA		
0054	4110000000-N	904	SIGN ERECTION, TYPE *** (GROUND MOUNTED) (F)	1 EA		
0055	4116100000-N	904	SIGN ERECTION, RELOCATE TYPE **** (GROUND MOUNTED) (D)	2 EA		
0056	4116100000-N	904	SIGN ERECTION, RELOCATE TYPE **** (GROUND MOUNTED) (E)	6 EA		
0057	4237000000-N	907	STOCKPILE SIGN, D, E OR F	8 EA		
0058	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	208 SF		
0059	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	96 SF		
0060	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	36 SF		
0061	4430000000-N	1130	DRUMS	121 EA		
0062	4445000000-E	1145	BARRICADES (TYPE III)	32 LF		
0063	4455000000-N	1150	FLAGGER	720 DAY		
0064	4465000000-N	1160	TEMPORARY CRASH CUSHIONS	4 EA		
0065	4470000000-N	1160	REMOVE & RESET TEMPORARY CRASH CUSHION	2 EA		
0066	4490000000-E	1170	PORTABLE CONCRETE BARRIER (ANCHORED)	1,890 LF		
0067	4505000000-E	1170	REMOVE & RESET PORTABLE CONCRETE BARRIER (ANCHORED)	229 LF		

County: GATES, PASQUOTANK

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0068	4650000000-N	1251	TEMPORARY RAISED PAVEMENT MARKERS	19 EA		
0069	4688000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (6", 90 MILS)	68,775 LF		
0070	4709000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (24", 90 MILS)	12 LF		
0071	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	9,000 LF		
0072	4835000000-E	1205	PAINT PAVEMENT MARKING LINES (24")	12 LF		
0073	4850000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	1,600 LF		
0074	4870000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (24")	12 LF		
0075	4900000000-N	1251	PERMANENT RAISED PAVEMENT MARKERS	225 EA		
0076	6000000000-E	1605	TEMPORARY SILT FENCE	68,625 LF		
0077	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	140 TON		
0078	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	910 TON		
0079	6012000000-E	1610	SEDIMENT CONTROL STONE	440 TON		
0080	6015000000-E	1615	TEMPORARY MULCHING	89 ACR		
0081	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	4,200 LB		
0082	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEEDING	21 TON		
0083	6024000000-E	1622	TEMPORARY SLOPE DRAINS	340 LF		
0084	6029000000-E	SP	SAFETY FENCE	14,000 LF		



County: GATES, PASQUOTANK

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0085	6030000000-E	1630	SILT EXCAVATION	1,030 CY		
0086	6036000000-E	1631	MATTING FOR EROSION CONTROL	11,200 SY		
0087	6037000000-E	1629	COIR FIBER MAT	100 SY		
0088	6042000000-E	1632	1/4" HARDWARE CLOTH	155 LF		
0089	6048000000-E	SP	FLOATING TURBIDITY CURTAIN	150 SY		
0090	6070000000-N	1639	SPECIAL STILLING BASINS	4 EA		
0091	6071002000-E	1642	FLOCCULANT	265 LB		
0092	6071012000-E	1642	COIR FIBER WATTLE	6,820 LF		
0093	6071030000-E	1640	COIR FIBER BAFFLE	280 LF		
0094	6084000000-E	1660	SEEDING & MULCHING	63 ACR		
0095	6087000000-E	1660	MOWING	60 ACR		
0096	6090000000-E	1661	SEED FOR REPAIR SEEDING	900 LB		
0097	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	2.5 TON		
0098	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	1,550 LB		
0099	6108000000-E	1665	FERTILIZER TOPDRESSING	46.5 TON		
0100	6114500000-N	1667	SPECIALIZED HAND MOWING	10 MHR		
0101	6114800000-N	SP	MANUAL LITTER REMOVAL	34 MHR		

County: GATES, PASQUOTANK

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0102	6114900000-E	SP	LITTER DISPOSAL	6 TON		
0103	6117000000-N	1675	RESPONSE FOR EROSION CONTROL	100 EA		
0104	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	2 EA		
<b>CULVERT ITEMS</b>						
0105	8130000000-N	414	BOX CULVERT EXCAVATION, STA ***** (24+59.74 -L-)	Lump Sum	L.S.	
0106	8133000000-E	414	FOUNDATION CONDITIONING MATERIAL, BOX CULVERT	135 TON		
0107	8196000000-E	420	CLASS A CONCRETE (CULVERT)	217.9 CY		
0108	8245000000-E	425	REINFORCING STEEL (CULVERT)	36,402 LB		
0109	8056000000-N	402	REMOVAL OF EXISTING STRUCTURE AT STATION ***** (24+59.74 -L-)	Lump Sum	L.S.	

1216/Dec09/Q793236.9/D399234144000/E109

Total Amount Of Bid For Entire Project :

BENCHMARK: STA. 22+55.69 -L-, 19.85' LT. ROD & CAP IN GROUND, EL. 26.07', N 988979 E 2722075 NAD 83

F.A. PROJECT NO. NHP-0158 (076)

NOTES

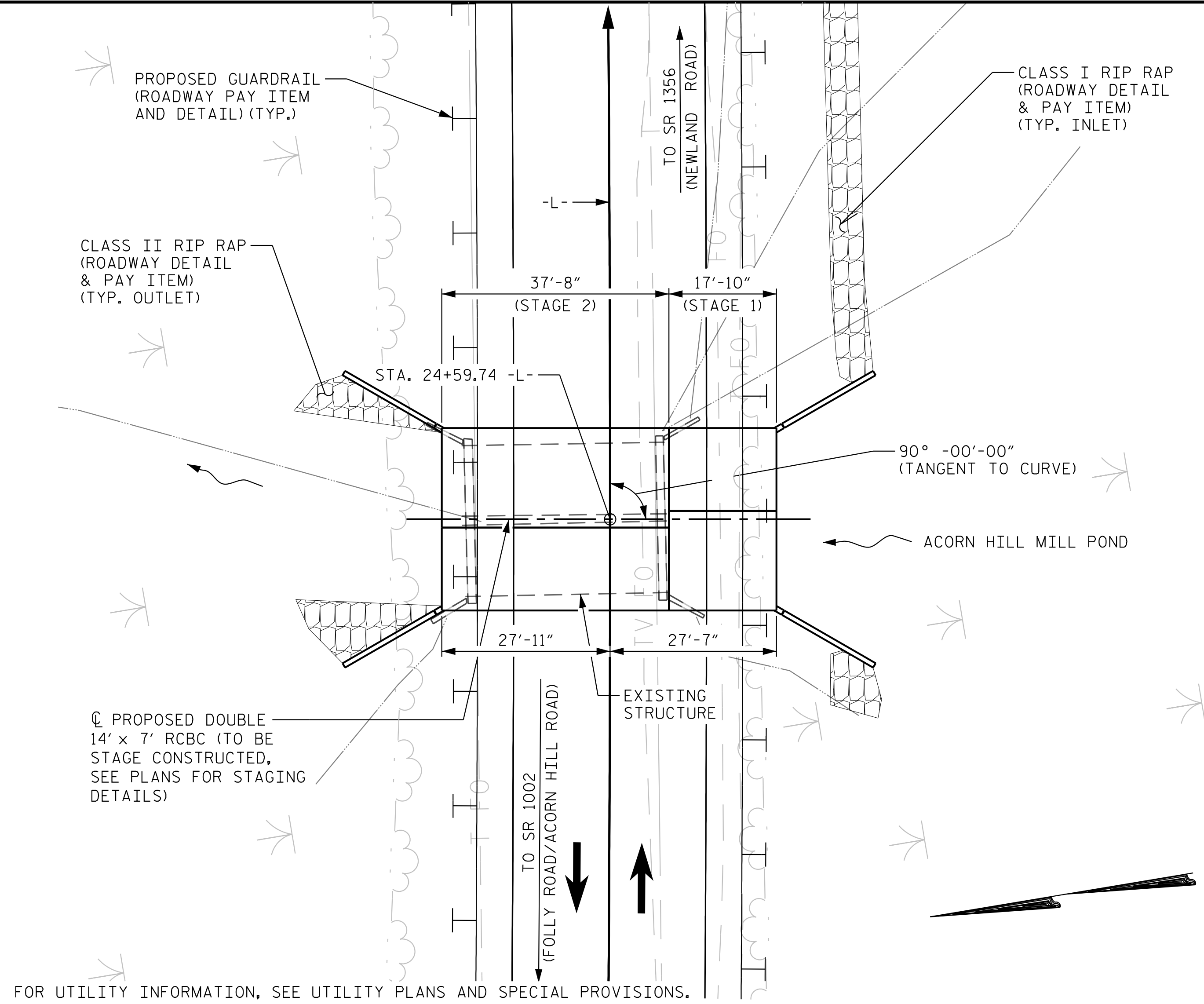
- ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.
- DESIGN FILL = 1.99 FT.
- FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.
- 3"Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.
- FOR POURING SEQUENCE OF CONCRETE IN CULVERT, SEE "STAGING DETAILS", SHEET C1-2.
- THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF CULVERT BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF THE FILL.
- DIMENSIONS FOR WING LAYOUT AS WELL AS ADDITIONAL REINFORCING STEEL EMBEDDED IN BARREL ARE SHOWN ON WING SHEET.
- AT THE CONTRACTOR'S OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACES OF THE EXTERIOR WALLS AND BOTH FACES OF INTERIOR WALLS ABOVE LOWER WALL CONSTRUCTION JOINT. THE SPLICE LENGTH SHALL BE AS PROVIDED IN THE SPLICE LENGTH CHART SHOWN ON THE PLANS EXTRA WEIGHT OF STEEL DUE TO THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.
- THE REINFORCED CONCRETE BOX CULVERT SHALL BE PLACED ON THE STANDARD 1.0 FT. BLANKET OF FOUNDATION CONDITIONING MATERIAL. SEE SECTION 414 OF THE STANDARD SPECIFICATIONS.
- FOR LIMITS OF TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS.
- FOR PAY ITEM FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE ROADWAY PLANS.
- TRAFFIC ON US 158 SHALL BE MAINTAINED. IN ORDER TO MAINTAIN TRAFFIC THE CULVERT SHALL BE CONSTRUCTED IN SECTIONS AS SHOWN ON THESE PLANS AS DIRECTED BY THE ENGINEER.
- AFTER SERVING AS A TEMPORARY STRUCTURE, THE EXISTING STRUCTURE CONSISTING OF 2 @ 12' X 6' RCBC; 33' ALONG CENTERLINE OF CULVERT WITH 22' CLEAR ROADWAY WITH WINGWALLS AND LOCATED AT THE SITE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY NOT POSTED FOR LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE DETERIORATE DURING CONSTRUCTION OF THE PROPOSED STRUCTURE, A LOAD LIMIT MAY BE POSTED AND MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT.
- 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.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.
- SEE SECTION 414 OF THE STANDARD SPECIFICATIONS FOR CULVERT EXCAVATION AND BACKFILLING.
- EXCAVATE 1 FOOT BELOW CULVERT AND FOOTING, AND REPLACE WITH FOUNDATION CONDITIONING MATERIAL IN ACCORDANCE WITH ARTICLE 414-4 OF THE STANDARD SPECIFICATIONS.
- CULVERT BARREL SHOULD BE BACK FILLED WITH NATIVE MATERIAL TO BURY DEPTH (1.0'). NATIVE MATERIAL CONSISTS OF MATERIAL THAT IS EXCAVATED FROM THE STREAM BED AT THE PROJECT SITE DURING CULVERT CONSTRUCTION. NATIVE MATERIAL IS SUBJECT TO APPROVAL BY THE ENGINEER AND MAY BE SUBJECT TO PERMIT CONDITIONS.

SAMPLE BAR REPLACEMENT

SIZE	LENGTH
#3	6'-2"
#4	7'-4"
#5	8'-6"
#6	9'-8"
#7	10'-10"
#8	12'-0"
#9	13'-2"
#10	14'-6"
#11	15'-10"

NOTE:  
SAMPLE BAR REPLACEMENT LENGTHS BASED ON 30" (SAMPLE LENGTH) PLUS TWO SPLICE LENGTHS AND fy = 60 KSI.

I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS.



LOCATION SKETCH

**HYDRAULIC DATA**

DESIGN DISCHARGE -----600 CFS  
 FREQUENCY OF DESIGN FLOOD -----50 YR.  
 DESIGN HIGH WATER ELEVATION-----22.9  
 DRAINAGE AREA -----3.1 SQ. MI.  
 BASE DISCHARGE (Q100) -----1290 CFS  
 BASE HIGH WATER ELEVATION -----25.1

**OVERTOPPING FLOOD DATA**

OVERTOPPING DISCHARGE -----1800 CFS  
 FREQUENCY OF OVERTOPPING FLOOD --->500 YR.  
 OVERTOPPING FLOOD ELEVATION -----26.9 \*  
 \* OVERTOPPING WILL OCCUR AT STA. 24+53.40 -L-

**ROADWAY DATA**

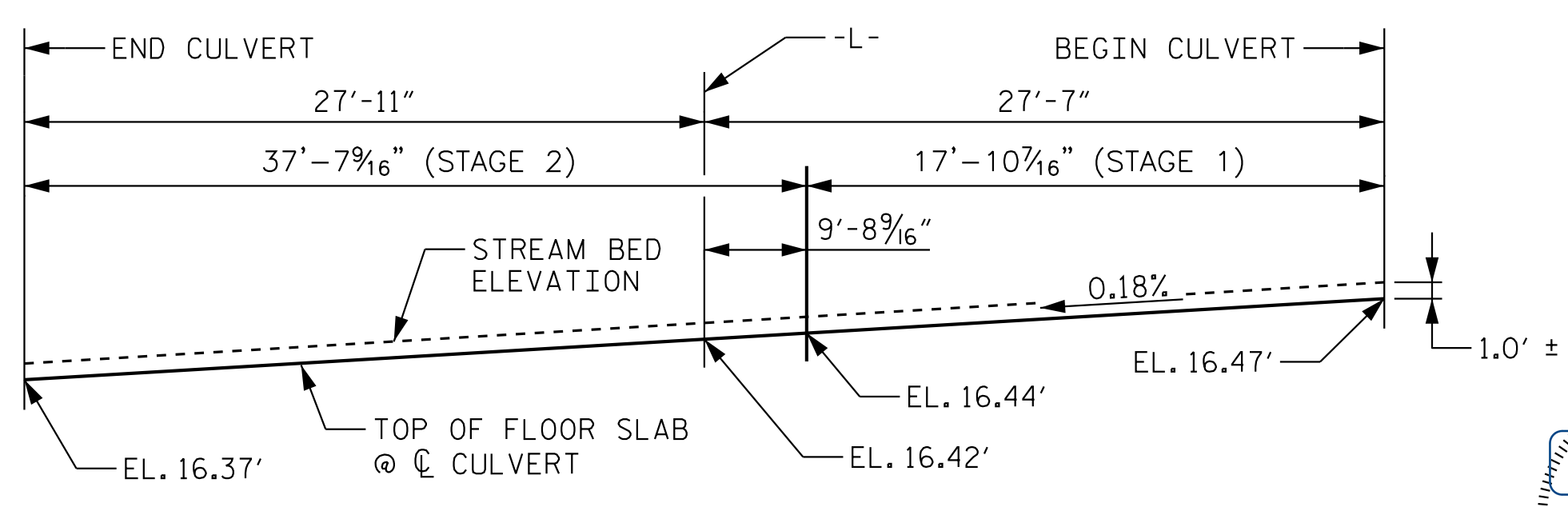
GRADE POINT EL. @ STA. 24+59.74 -L- = 26.91'  
 INVERT ELEVATION @ STA. 24+59.74 -L- = 16.42'  
 ROADWAY SLOPES 3 : 1

TOTAL STRUCTURE QUANTITIES

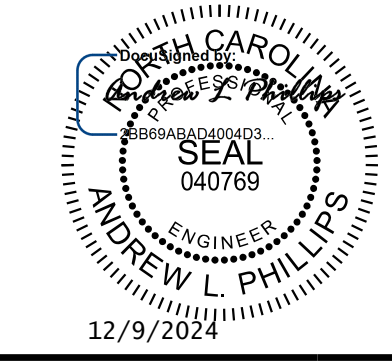
REMOVAL OF EXISTING STRUCTURE	LUMP SUM
CLASS A CONCRETE	
STAGE 1	76.2 C.Y.
STAGE 2	141.7 C.Y.
TOTAL	217.9 C.Y.
REINFORCING STEEL	
STAGE 1	12,431 LBS.
STAGE 2	23,971 LBS.
TOTAL	36,402 LBS.
CULVERT EXCAVATION	LUMP SUM
FOUNDATION CONDITIONING MATERIAL	
STAGE 1	44 TONS
STAGE 2	91 TONS
TOTAL	135 TONS

-L- HORIZONTAL CURVE DATA

PI STA. 24+74.63  
 $\Delta = 1^\circ-32'-44.9"$  (LT)  
 $D = 0^\circ-29'-53.6"$   
 $L = 310.26'$   
 $T = 155.14'$   
 $R = 11,500.00'$



PROFILE ALONG CULVERT



**Kimley»Horn**  
 421 Fayetteville Street, Suite 600  
 Raleigh, NC 27601-1772  
 Phone (919) 677-2000 NC LICENSE # F-0102

PROJECT NO. R-5808  
GATES COUNTY  
 STATION: 24+59.74 -L-

SHEET 1 OF 10 REPLACES BRIDGE NO. 31

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 DOUBLE 14 FT. X 7 FT.  
 CONCRETE BOX CULVERT  
 90° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C1-1
1			3			TOTAL SHEETS
2			4			10

**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**

CULVERT 41C001

12/9/2024 K:\B01-Structures\Bridges\N.C.117093002 - R-5808\Geo\Draw\411-001\_R5808\_SML\_C1-001.dgn

DRAWN BY: D. D. LOWERY DATE: 08/2023  
 CHECKED BY: I. H. ORR DATE: 08/2023  
 DESIGN ENGINEER OF RECORD: A. L. PHILLIPS DATE: 08/2023