



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

May 10, 2023

Addendum No. 1

RE: Contract # C204763

WBS # 45677.3.1

FEDERAL AID NO. BRZ-2177(001)

Rockingham County (B-5721)

BRIDGE #124 OVER MAYO RIVER IN MADISON ON SR-2177 (DAN VALLEY RD).

May 16, 2023 Letting

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 Structures Plans.

Sheet No.	Revision
S-03	“Summary of Drilled Pier Information/Installation” table updated to reflect new quantities below.
S-05	“Total Bill of Material” table updated to reflect new quantities below.

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

The following revisions have been made to the proposal.

Page No.	Revision
Proposal Cover	Note added that reads “Includes Addendum No. 1 Dated 05-10-2023”.

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

On the item sheets the following pay item revisions have been made:

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
CONTRACT STANDARDS AND DEVELOPMENT
1591 MAIL SERVICE CENTER
RALEIGH, NC 27699-1591

Telephone: (919) 707-6900
Fax: (919) 250-4127
Customer Service: 1-877-368-4968

Location:
1020 BIRCH RIDGE DR.
RALEIGH, NC 27610

Website: www.ncdot.gov

<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
0102-8105560000-E 411	4'-0" DIA DRILLED PIERS IN SOIL	180 LF	84 LF
0103-8105660000-E 411	4'-0" DIA DRILLED PIERS NOT IN SOIL	210 LF	33 LF

The Contractor's bid must include these pay item revisions.

The electronic bidding file has been updated to reflect these revisions. 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,

DocuSigned by:

F81B6038A47A442...

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

RED/cms
Attachments

cc: Mr. Boyd Tharrington, PE
Mr. Wright R. Archer, III, PE
Mr. Ken Kennedy, PE
Mr. Mike Gwyn
Project File (2)

Mr. Forrest Dungan, PE
Ms. Jaci Kincaid
Mr. Jon Weathersbee, PE

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

PROPOSAL

INCLUDES ADDENDUM No.1 DATED 5-10-2023

DATE AND TIME OF BID OPENING: **May 16, 2023 AT 02:00 PM**

CONTRACT ID C204763
WBS 45677.3.1

FEDERAL-AID NO. BRZ-2177(001)
COUNTY ROCKINGHAM
T.I.P NO. B-5721
MILES 0.283
ROUTE NO. SR-2177
LOCATION BRIDGE #124 OVER MAYO RIVER IN MADISON ON SR-2177 (DAN VALLEY
RD).

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

County: ROCKINGHAM

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	0015000000-N	205	SEALING ABANDONED WELLS	3 EA		
0004	0030000000-N	SP	TYPE II MODIFIED APPROACH FILL, STATION ***** (21+64.00 -L-)	Lump Sum	L.S.	
0005	0036000000-E	225	UNDERCUT EXCAVATION	1,120 CY		
0006	0043000000-N	226	GRADING	Lump Sum	L.S.	
0007	0050000000-E	226	SUPPLEMENTARY CLEARING & GRUBBING	1 ACR		
0008	0127000000-N	235	EMBANKMENT SETTLEMENT GAUGES	2 EA		
0009	0195000000-E	265	SELECT GRANULAR MATERIAL	200 CY		
0010	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	1,470 SY		
0011	0318000000-E	300	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	30 TON		
0012	0320000000-E	300	FOUNDATION CONDITIONING GEOTEXTILE	80 SY		
0013	0354000000-E	310	**** RC PIPE CULVERTS, CLASS ***** (54", V)	48 LF		
0014	0448300000-E	310	18" RC PIPE CULVERTS, CLASS IV	88 LF		
0015	0582000000-E	310	15" CS PIPE CULVERTS, 0.064" THICK	96 LF		
0016	0636000000-E	310	*** CS PIPE ELBOWS, ***** THICK (15", 0.064")	4 EA		
0017	1099500000-E	505	SHALLOW UNDERCUT	100 CY		

County: ROCKINGHAM

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0018	1099700000-E	505	CLASS IV SUBGRADE STABILIZATION	200 TON		
0019	1121000000-E	520	AGGREGATE BASE COURSE	130 TON		
0020	1220000000-E	545	INCIDENTAL STONE BASE	1,000 TON		
0021	1297000000-E	607	MILLING ASPHALT PAVEMENT, **** DEPTH (2")	150 SY		
0022	1330000000-E	607	INCIDENTAL MILLING	260 SY		
0023	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	890 TON		
0024	1503000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	920 TON		
0025	1519000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	780 TON		
0026	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	140 TON		
0027	1693000000-E	654	ASPHALT PLANT MIX, PAVEMENT REPAIR	540 TON		
0028	2000000000-N	806	RIGHT-OF-WAY MARKERS	25 EA		
0029	2022000000-E	815	SUBDRAIN EXCAVATION	45 CY		
0030	2026000000-E	815	GEOTEXTILE FOR SUBSURFACE DRAINS	200 SY		
0031	2036000000-E	815	SUBDRAIN COARSE AGGREGATE	34 CY		
0032	2044000000-E	815	6" PERFORATED SUBDRAIN PIPE	200 LF		
0033	2070000000-N	815	SUBDRAIN PIPE OUTLET	1 EA		
0034	2077000000-E	815	6" OUTLET PIPE	6 LF		

County: ROCKINGHAM

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0035	2220000000-E	838	REINFORCED ENDWALLS	5 CY		
0036	2275000000-E	SP	FLOWABLE FILL	7 CY		
0037	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	2 EA		
0038	2367000000-N	840	FRAME WITH TWO GRATES, STD 840.29	2 EA		
0039	2556000000-E	846	SHOULDER BERM GUTTER	380 LF		
0040	3030000000-E	862	STEEL BEAM GUARDRAIL	862.5 LF		
0041	3150000000-N	862	ADDITIONAL GUARDRAIL POSTS	5 EA		
0042	3287000000-N	SP	GUARDRAIL END UNITS, TYPE TL-3	4 EA		
0043	3317000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE B- 77	4 EA		
0044	3628000000-E	876	RIP RAP, CLASS I	35 TON		
0045	3649000000-E	876	RIP RAP, CLASS B	2 TON		
0046	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	930 SY		
0047	4025000000-E	901	CONTRACTOR FURNISHED, TYPE *** SIGN (D)	6 SF		
0048	4025000000-E	901	CONTRACTOR FURNISHED, TYPE *** SIGN (E)	40 SF		
0049	4072000000-E	903	SUPPORTS, 3-LB STEEL U-CHANNEL	160 LF		
0050	4096000000-N	904	SIGN ERECTION, TYPE D	2 EA		
0051	4102000000-N	904	SIGN ERECTION, TYPE E	6 EA		

County: ROCKINGHAM

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0052	4155000000-N	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	18 EA		
0053	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	212 SF		
0054	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	96 SF		
0055	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	70 SF		
0056	4424500000-N	SP	TEMPORARY PORTABLE TRAFFIC SIGNAL SYSTEM	1 EA		
0057	4430000000-N	1130	DRUMS	200 EA		
0058	4435000000-N	1135	CONES	18 EA		
0059	4445000000-E	1145	BARRICADES (TYPE III)	104 LF		
0060	4455000000-N	1150	FLAGGER	30 DAY		
0061	4709000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (24", 90 MILS)	27 LF		
0062	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	11,275 LF		
0063	4835000000-E	1205	PAINT PAVEMENT MARKING LINES (24")	120 LF		
0064	4847096000-E	SP	POLYUREA PAVEMENT MARKING LINES, **", ** MILS (STANDARD GLASS BEADS) (4", 20)	5,463 LF		
0065	4850000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	4,000 LF		
0066	4900000000-N	1251	PERMANENT RAISED PAVEMENT MARKERS	3 EA		
0067	4905100000-N	SP	NON-CAST IRON SNOWPLOWABLE PAVEMENT MARKER	11 EA		
0068	6000000000-E	1605	TEMPORARY SILT FENCE	3,665 LF		

County: ROCKINGHAM

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0069	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	210 TON		
0070	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	255 TON		
0071	6012000000-E	1610	SEDIMENT CONTROL STONE	315 TON		
0072	6015000000-E	1615	TEMPORARY MULCHING	3 ACR		
0073	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	200 LB		
0074	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEEDING	2 TON		
0075	6024000000-E	1622	TEMPORARY SLOPE DRAINS	200 LF		
0076	6029000000-E	SP	SAFETY FENCE	440 LF		
0077	6030000000-E	1630	SILT EXCAVATION	500 CY		
0078	6036000000-E	1631	MATTING FOR EROSION CONTROL	13,000 SY		
0079	6037000000-E	SP	COIR FIBER MAT	100 SY		
0080	6038000000-E	SP	PERMANENT SOIL REINFORCEMENT MAT	435 SY		
0081	6042000000-E	1632	1/4" HARDWARE CLOTH	420 LF		
0082	6048000000-E	SP	FLOATING TURBIDITY CURTAIN	520 SY		
0083	6070000000-N	1639	SPECIAL STILLING BASINS	6 EA		
0084	6071010000-E	SP	WATTLE	90 LF		
0085	6071020000-E	SP	POLYACRYLAMIDE (PAM)	40 LB		

County: ROCKINGHAM

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0086	6071030000-E	1640	COIR FIBER BAFFLE	115 LF		
0087	6071050000-E	SP	*** SKIMMER (1-1/2")	1 EA		
0088	6084000000-E	1660	SEEDING & MULCHING	6 ACR		
0089	6087000000-E	1660	MOWING	3 ACR		
0090	6090000000-E	1661	SEED FOR REPAIR SEEDING	50 LB		
0091	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	0.25 TON		
0092	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	100 LB		
0093	6108000000-E	1665	FERTILIZER TOPDRESSING	2.75 TON		
0094	6114500000-N	1667	SPECIALIZED HAND MOWING	10 MHR		
0095	6117000000-N	SP	RESPONSE FOR EROSION CONTROL	25 EA		
0096	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	4 EA		
0097	6132000000-N	SP	GENERIC EROSION CONTROL ITEM FABRIC INSERT INLET PROTECTION DEVICE	1 EA		
0098	6132000000-N	SP	GENERIC EROSION CONTROL ITEM FABRIC INSERT INLET PROTECTION DEVICE CLEANOUT	2 EA		
STRUCTURE ITEMS						
0099	8017000000-N	SP	CONSTRUCTION, MAINTENANCE, & REMOVAL OF TEMP ACCESS AT STA ***** (21+64.00 -L-)	Lump Sum	L.S.	
0100	8035000000-N	402	REMOVAL OF EXISTING STRUCTURE AT STATION ***** (21+64.00 -L-)	Lump Sum	L.S.	

County: ROCKINGHAM

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0101	8065000000-N	SP	ASBESTOS ASSESSMENT	Lump Sum	L.S.	
0102	8105560000-E	411	4'-0" DIA DRILLED PIERS IN SOIL	84 LF		
0103	8105660000-E	411	4'-0" DIA DRILLED PIERS NOT IN SOIL	33 LF		
0104	8111600000-E	411	PERMANENT STEEL CASING FOR 4'-0" DIA DRILLED PIER	60 LF		
0105	8112730000-N	450	PDA TESTING	1 EA		
0106	8113000000-N	411	SID INSPECTIONS	3 EA		
0107	8115000000-N	411	CSL TESTING	1 EA		
0108	8121000000-N	412	UNCLASSIFIED STRUCTURE EXCAVATION AT STATION ***** (21+64.00 -L-)	Lump Sum	L.S.	
0109	8147000000-E	420	REINFORCED CONCRETE DECK SLAB	9,707 SF		
0110	8161000000-E	420	GROOVING BRIDGE FLOORS	8,874 SF		
0111	8182000000-E	420	CLASS A CONCRETE (BRIDGE)	153 CY		
0112	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (21+64.00 -L-)	Lump Sum	L.S.	
0113	8217000000-E	425	REINFORCING STEEL (BRIDGE)	26,864 LB		
0114	8238000000-E	425	SPIRAL COLUMN REINFORCING STEEL (BRIDGE)	3,983 LB		
0115	8328200000-E	450	PILE DRIVING EQUIPMENT SETUP FOR *** STEEL PILES (HP 12 X 53)	21 EA		
0116	8364000000-E	450	HP 12 X 53 STEEL PILES	625 LF		
0117	8391000000-N	450	STEEL PILE POINTS	21 EA		

County: ROCKINGHAM

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0118	8503000000-E	460	CONCRETE BARRIER RAIL	535.68 LF		
0119	8608000000-E	876	RIP RAP CLASS II (2'-0" THICK)	690 TON		
0120	8622000000-E	876	GEOTEXTILE FOR DRAINAGE	765 SY		
0121	8657000000-N	430	ELASTOMERIC BEARINGS	Lump Sum	L.S.	
0122	8692000000-N	SP	FOAM JOINT SEALS	Lump Sum	L.S.	
0123	8867000000-E	SP	GENERIC STRUCTURE ITEM MODIFIED 74" PRESTRESSED CONCRETE GIRDER	1,327.4 LF		

1119/May10/Q107343.58/D556709556000/E123

Total Amount Of Bid For Entire Project :

SUMMARY OF PILE INFORMATION/INSTALLATION

(Blank entries indicate item is not applicable to structure)

End Bent/ Bent No, Pile(s) #-# (e.g., "Bent 1, Piles 1-5")	Factored Resistance per Pile TONS	Pile Cut-Off (Top of Pile) Elevation FT	Estimated Pile Lenth per Pile FT	Scour Critical Elevation FT	Driven Piles			Predrilling for Piles*			Drilled-In Piles		
					Min Pile Tip (Tip No Higher Than) Elev FT	Required Driving Resistance (RDR)** per Pile TONS	Total Pile Redrives Quantity EACH	Predrilling Length per Pile Lin FT	Predrilling Elevation (Elev Not To Predrill Below) FT	Maximum Predrilling Dia INCHES	Pile Exc Excavation (Bottom of Hole) Elev FT	Pile Exc Not In Soil per Pile Lin FT	Pile Exc In Soil per Pile Lin FT
End Bent 1, Piles 1-10	125	560.4	35			210							
End Bent 2, Piles 1-11	115	563.2	25			195							

*Predrilling for Piles is required for end bents/bents with a predrilling length and at the Contractor's option for end bents/bents with predrilling information but no predrilling length.

**RDR = $\frac{\text{Factored Resistance} + \text{Factored Downdrag Load} + \text{Factored Dead Load}}{\text{Dynamic Resistance Factor}} + \frac{\text{Nominal Downdrag Resistance} + \text{Nominal Scour Resistance}}{\text{Scour Resistance Factor}}$

PILE DESIGN INFORMATION

(Blank entries indicate item is not applicable to structure)

End Bent/ Bent No, Pile(s) #-# (e.g., "Bent 1, Piles 1-5")	Factored Axial Load per Pile TONS	Factored Downdrag Load per Pile TONS	Factored Dead Load* per Pile TONS	Dynamic Resistance Factor	Nominal Downdrag Resistance per Pile TONS	Nominal Scour Resistance per Pile TONS	Scour Resistance Factor (Default = 1.00)
End Bent 1, Piles 1-10	125			0.60			
End Bent 2, Piles 1-11	115			0.60			

*Factored Dead Load is factored weight of pile above the ground line.

SUMMARY OF DRILLED PIER INFORMATION/INSTALLATION

(Blank entries indicate item is not applicable to structure)

End Bent/ Bent No, Pier(s) #-# (e.g., "Bent 1, Piers 1-3")	Factored Resistance per Pier TONS	Minimum Pier Tip (Tip No Higher Than) Elevation FT	Required Tip Resistance per Pier TSF	Scour Critical Elevation FT	Minimum Drilled Pier Penetration Into Rock per Pier Lin FT	Drilled Pier Length per Pier Lin FT	Drilled Pier Length Not In Soil per Pier Lin FT	Drilled Pier Length In Soil per Pier Lin FT	Permanent Steel Casing Required? YES or MAYBE	Permanent Steel Casing Tip Elevation (Elev Not To Extend Casing Below) FT	Permanent Steel Casing Length* per Pier Lin FT
Bent 1, Piers 1-3	655	507.0	30	523.5		11.0	28.0		YES	528.0	20.0

*Permanent Steel Casing Length equals the difference between the ground line or top of drilled pier elevation, whichever is higher, and the permanent casing tip elevation.

NOTES:

- The Pile and Drilled Pier Foundation Tables are based on the bridge substructure design and foundation recommendations sealed by a North Carolina Professional Engineer (Chien-Ting Tang, 047389) on 3-28-2022.
- Total Pile Driving Equipment Setup quantity (not shown in Pile Foundation Tables) equals the number of driven piles, i.e., the number of piles with a Required Driving Resistance.
- The Engineer will determine the need for PDA Testing, Permanent Steel Casing, SPTs, CSL Testing, SID Inspections and PITs when these items may be required.

SUMMARY OF PDA/PILE ORDER LENGTHS

(Blank entries indicate item is not applicable to structure)

Pile Driving Analyzer (PDA)				Pile Order Lengths	
End Bent/ Bent No	PDA Testing Required? YES or MAYBE	PDA Test Pile Length FT	Total PDA Testing Quantity EACH	End Bent/ Bent No(s)	Pile Order Length Basis* EST or PDA
End Bent 1, Piles 1-10	MAYBE		1		
End Bent 2, Piles 1-11	MAYBE				

*EST = Pile order lengths from estimated pile lengths; PDA = Pile order lengths based on PDA testing. For groups of end bents/bents with pile order lengths based on PDA testing, the first end bent/bent no. listed for each group is the representative end bent/bent with the PDA.

SUMMARY OF PILE ACCESSORIES

(Blank entries indicate item is not applicable to structure)

End Bent/ Bent No, Pile(s) #-# (e.g., "Bent 1, Piles 1-5")	Pipe Pile Plates Required? YES or MAYBE	Steel Pile Points			Steel Pile Tips Required? YES
		Pipe Pile Cutting Shoes Required? YES	Pipe Pile Conical Points Required? YES	H-Pile Points Required? YES	
End Bent 1, Piles 1-10				YES	
End Bent 2, Piles 1-11				YES	
TOTAL QTY:				21	

SUMMARY OF DRILLED PIER TESTING

(Blank entries indicate item is not applicable to structure)

End Bent/ Bent No, Pier(s) #-# (e.g., "Bent 1, Piers 1-3")	Standard Penetration Test (SPT) Required? YES or MAYBE	Crosshole Sonic Logging (CSL) Required? YES or MAYBE	Total CSL Tube Length (For All Tubes) per Pier Lin FT	Shaft Inspection Device (SID) Required? YES or MAYBE	Pile Integrity Test (PIT) Required? MAYBE
Bent 1, Piers 1-3		MAYBE	162	Yes	
TOTAL QTY:		1	486	3	


*CSL Tubes are required if CSL Testing is or may be required. The number of CSL Tubes per drilled pier is equal to one tube per foot of design pier diameter with at least 4 tubes per pier. The length of each CSL Tube is equal to the drilled pier length plus 1.5 ft.

PROJECT NO. B-5721

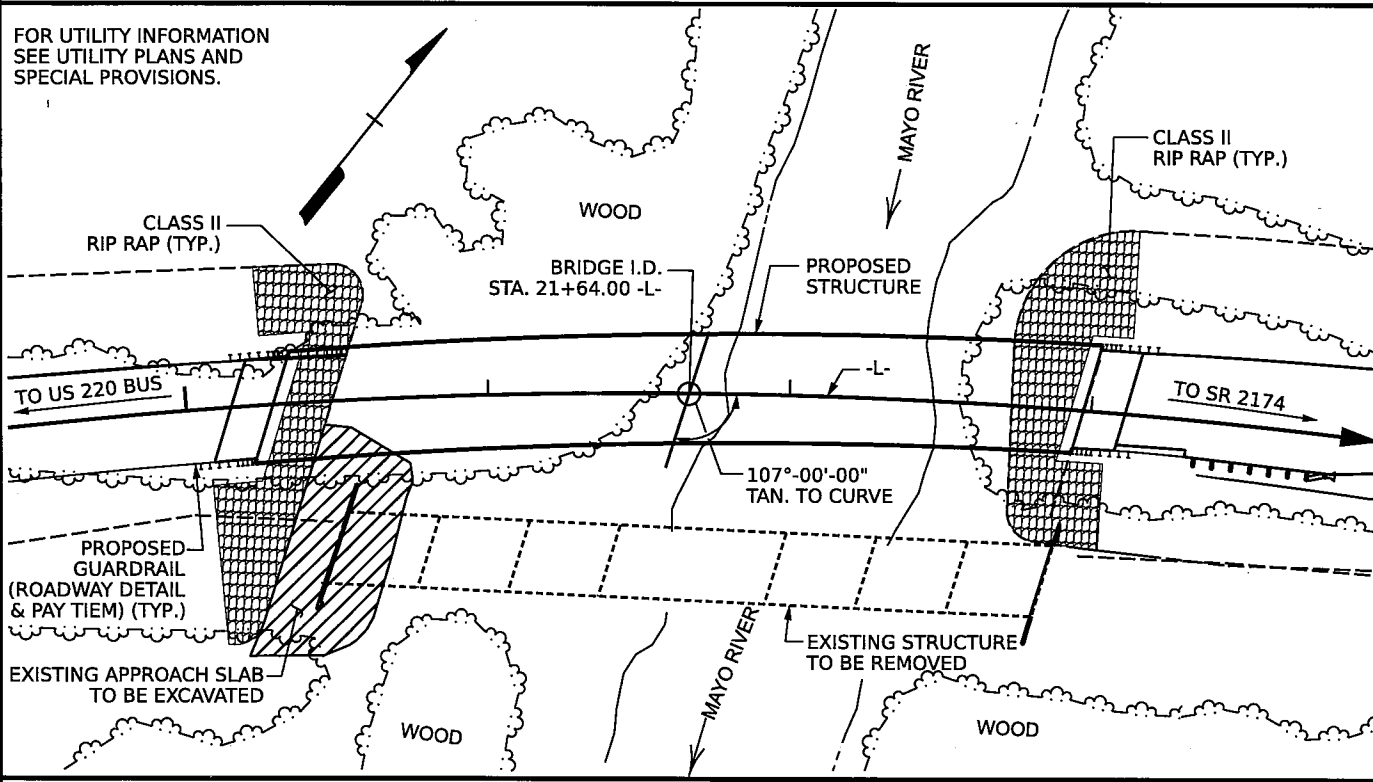
ROCKINGHAM COUNTY

STATION: 21+64.00 -L-

SHEET 3 OF 5

 Signed by <i>Francisca Lu</i> 05/09/2023 SIGNATURE DATE	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH PILE AND DRILLED PIER FOUNDATION TABLES	SHEET NO. S-03 TOTAL SHEETS 31
REVISIONS NO. BY: DATE: NO. BY: DATE:	DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
1 2	3 4	

FOR UTILITY INFORMATION SEE UTILITY PLANS AND SPECIAL PROVISIONS.



LOCATION SKETCH

NOTES

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE SAMPLE BARS SHOULD COME FROM STEEL ACTUALLY USED IN THE PROJECT AND THE SAMPLE BARS SHOULD BE REPLACED BY SPLICED BARS AS SPECIFIED IN THE SAMPLE BAR REPLACEMENT CHART. PAYMENT FOR THE SAMPLE BARS AND REPLACEMENT REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

REMOVABLE FORMS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS.

AT THE CONTRACTOR'S OPTION, AND UPON REMOVAL OF THE CAUSEWAY, THE CLASS II RIP RAP USED IN THE CAUSEWAY MAY BE USED AS RIP RAP SLOPE PROTECTION. SEE SPECIAL PROVISIONS FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS AT STATION 21+64.00 -L-.

NEEDLE BEAMS WILL NOT BE ALLOWED UNLESS OTHERWISE CALLED FOR ON THE PLANS OR APPROVED BY THE ENGINEER.

INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1 OF THE STANDARD SPECIFICATIONS. ANY COSTS RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR "REMOVAL OF EXISTING STRUCTURE AT STATION 21+64.00-L-."

THE CLASS AA CONCRETE IN THE BRIDGE DECK 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. NO PAYMENT WILL BE MADE FOR THIS SUBSTITUTION AS IT IS CONSIDERED INCIDENTAL TO THE COST OF THE REINFORCED CONCRETE DECK SLAB.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA ON SHEET S-01 SHALL BE EXCAVATED FOR A DISTANCE OF 82 FT ON RIGHT OF -L- AT END BENT 1 AND 5 FT EACH SIDE OF CENTERLINE ROADWAY AT END BENT 2 AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. SEE SECTION 412 OF THE STANDARD SPECIFICATIONS.

THE EXISTING STRUCTURE CONSISTING OF REINFORCED CONCRETE DECK ON I-BEAMS WITH SPAN LENGTH OF 4 @ 30 FT, 1 @ 55 FT AND 2 @ 30 FT, WITH A CLEAR ROADWAY WIDTH OF 24 FT ON A REINFORCED CONCRETE CAP ON PPC PILE END BENTS AND REINFORCED CONCRETE CAP ON POST AND BEAM BENT SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED FOR LOAD LIMIT.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

ALL METALIZED SURFACES SHALL RECEIVE A SEAL COATING AS SPECIFIED IN TABLE 2 OF THE DEPARTMENTS THERMAL SPRAYED COATINGS (METALLIZATION) PROGRAM. FOR THERMAL SPRAYED COATINGS, SEE SPECIAL PROVISIONS.

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED IN A MANNER THAT PREVENTS DEBRIS FROM FALLING INTO THE WATER. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLANS FOR REVIEW AND REMOVE THE BRIDGE IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH "HEC 18-EVALUATING SCOUR AT BRIDGES."

THE SCOUR CRITICAL ELEVATION FOR BENT NO. 1 IS ELEVATION 523.5 FT. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

THE LOCATION OF THE CONSTRUCTION JOINT IN THE DRILLED PIERS IS BASED ON AN APPROXIMATE GROUND LINE ELEVATION. IF THE CONSTRUCTION JOINT IS ABOVE THE ACTUAL GROUND ELEVATION, THE CONTRACTOR SHALL PLACE THE CONSTRUCTION JOINT 1 FT. BELOW THE GROUND LINE.

FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.

WHEN REMOVING EXISTING PILES NO MORE THAN 50% OF STREAM CAN BE BLOCKED BY CAUSEWAY.

CUT BENT 4 AND 5 EXISTING PILES ONE FOOT BELOW RIVERBED.

FOR REMOVAL OF EXISTING STRUCTURE AT STA. 21+64.00 -L-, SEE SPECIAL PROVISIONS.

FOR MODIFIED 74" PRESTRESSED CONCRETE GIRDER, SEE SPECIAL PROVISIONS.

TOTAL BILL OF MATERIAL

	CONSTRUCTION, MAINTENANCE, AND REMOVAL OF TEMPORARY ACCESS	REMOVAL OF EXISTING STRUCTURE AT STA. 21+64.00 -L-	ASBESTOS ASSESSMENT	UNCLASSIFIED STRUCTURE EXCAVATION	4'-0" DIA. DRILLED PIER IN SOIL	4'-0" DIA. DRILLED PIER NOT IN SOIL	PERMANENT STEEL CASING FOR 4'-0" DIA. DRILLED PIER	PDA TESTING	SID INSPECTION	CSL TESTING	STEEL PILE POINTS	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS
	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	EA.	EA.	EA.	EA.	SQ. FT.	SQ. FT.
SUPERSTRUCTURE												9,707	8,874
END BENT 1													
BENT 1					84	33	60				21		
END BENT 2													
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	84	33	60	1	3	1	21	9,707	8,874

HYDRAULIC DATA

DESIGN DISCHARGE = 20,600 CFS
 FREQUENCY OF DESIGN FLOOD = 25 YRS.
 DESIGN HIGH WATER ELEVATION = 553.4 FT.
 DRAINAGE AREA = 314 SQ.MI.
 BASE DISCHARGE (Q100) = 28,800 CFS.
 BASE HIGH WATER ELEVATION = 555.9 FT.

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 16,600 CFS.
 FREQUENCY OF OVERTOPPING FLOOD = 10+ YRS.
 OVERTOPPING FLOOD ELEVATION = 551.0 FT. *

* OVERTOPPING AT APPROXIMATELY STATION 13+00.00 -L-

TOTAL BILL OF MATERIAL

	CLASS A CONCRETE	BRIDGE APPROACH SLABS STA. 21+64.00 -L-	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	MODIFIED 74" PRESTRESSED CONCRETE GIRDER	PILE DRIVING EQUIPMENT SETUP FOR HP 12 X 53 STEEL PILES	HP 12 X 53 STEEL PILES	CONCRETE BARRIER RAIL	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS	FOAM JOINT SEALS
	CU. YDS.	LUMP SUM	LBS.	LBS.	NO. LIN. FT.	EA.	NO. LIN. FT.	LIN. FT.	TONS	SQ. YDS.	LUMP SUM	LUMP SUM
SUPERSTRUCTURE					10 1,327.4			535.68				
END BENT 1	56.7		6,167			10	10 350		395	435		
BENT 1	41.4		14,662	3,983								
END BENT 2	54.9		6,035			11	11 275		295	330		
TOTAL	153.0	LUMP SUM	26,864	3,983	10 1,327.4	21	21 625	535.68	690	765	LUMP SUM	LUMP SUM

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 = 60ksi.



05/09/2023

PROJECT NO. B-5721

ROCKINGHAM COUNTY

STATION: 21+64.00 -L-

SHEET 5 OF 5

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
GENERAL DRAWING					
FOR BRIDGE OVER MAYO RIVER ON SR 2177 (DAN VALLEY RD) BETWEEN SR 2174 (LAUTEN LOOP) AND US 220 BUS					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					S-05
					TOTAL SHEETS 31

DRAWN BY: Q. T. NGUYEN DATE: 01/2023
 CHECKED BY: F. LEA DATE: 01/2023
 DESIGN ENGINEER OF RECORD: Z. MALIK DATE: 06/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED