RECEIPT OF ADDENDUM

I received addendum No. # 02 on October 20, 2025 for
4823 Johnson County BRO-R051(41)
Bridge Replacement Project

This addendum involves 4 pages including this sheet.

_____
Vendor's Name

_____

_____
Vendor's Address

_____
Signature / Date

Return completed acknowledgment to
Great River Engineering ASAP
@
Fax # 417-886-7591
Attention: Malena Hemenway
Email Back to:
Secretary@greatriv.com

GRE
GREAT RIVER
ENGINEERING

General Notes:

Design Specifications:
2020 A.A.S.H.T.O. LRFD Bridge Design Specifications (9th Ed.)
Seismic Performance Category 'D'

2024 MODOT Standard Specifications for Highway Construction (latest edition)
2025 MODOT Standard Plans for Highway Construction (latest edition)

Design Loading:
Vehicular = HL–93
Future Wearing Surface = 35 psf (Min.)
Earth = 120 pcf
Equivalent Fluid Pressure = 45 pcf
Superstructure: Simply–Supported, Non–Composite for dead load.
Continuous Composite for live load.

Design Unit Stresses:

Class B Concrete (Substructure)	f'c = 3,000 psi
Reinforcing Steel (Grade 60)	fy = 60,000 psi
Steel Pile (ASTM A709 Grade 50)	fy = 50,000 psi

For precast prestressed panel stresses, see Sheet No. S11.
For prestressed girder stresses, see Sheet No. S10.

Neoprene Pads:
Plain neoprene bearing pads shall be 60 durometer and shall be in accordance with Sec 716.

Joint Filler:
All joint filler shall be in accordance with Sec 1057 of MoDOT Specifications for preformed sponge rubber expansion and partition joint filler, except as noted.

Reinforcing Steel:
Minimum clearance to reinforcing steel shall be 1 1/2". unless otherwise shown.

Traffic Handling:
Structure to be closed during construction. Traffic to be maintained on other routes during construction. See roadway plans for traffic control.

Miscellaneous:
"Sec" refers to sections in the Missouri Standard Specifications of Highway Construction and supplemental specifications.

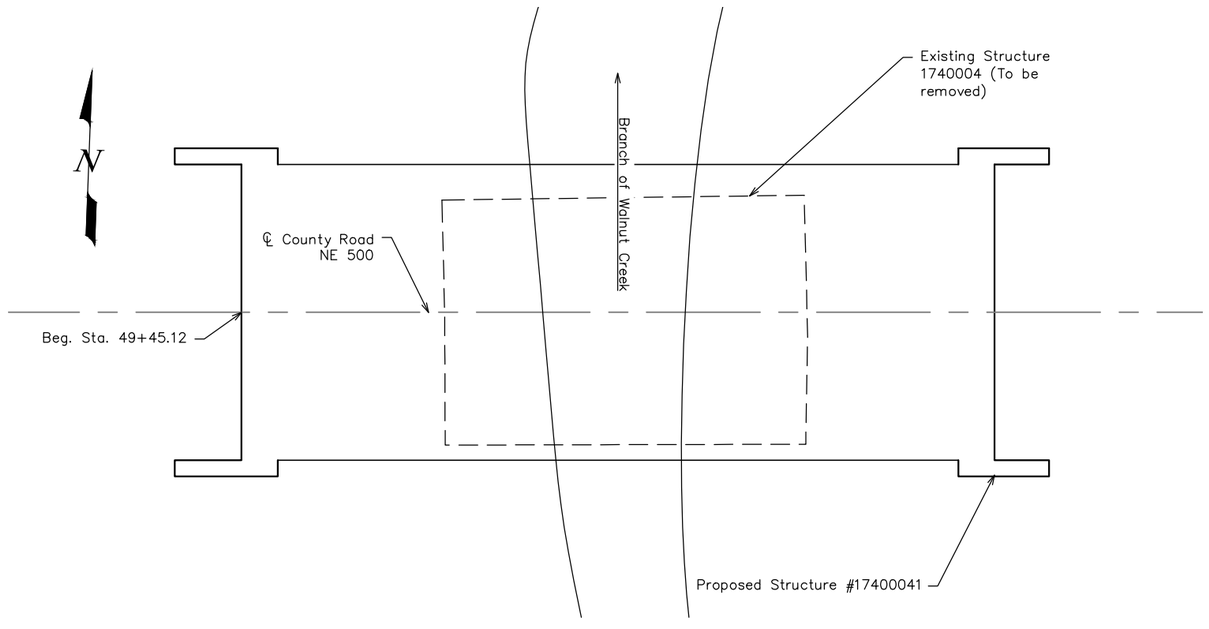
High strength bolts, nuts and washers will be sampled for quality assurance as specified in Sec 106.

Estimated Quantities For Bridge

Item		Substr.	Superstr.	Total
Class 1 Excavation	cu. yard	60		60
Removal of Bridges	lump sum			1
Galvanized Structural Steel Piles (12 in.)	linear foot	200		200
Pre–Boring for Piling	linear foot	80		80
Pile Point Reinforcement	each	8		8
Class B Concrete (Substructure)	cu. yard	21.9		21.9
Slab on Concrete Beam	sq. yard		166	166
Bridge Guardrail (Thrie Beam)	linear foot		150	150
27 inch Prestressed Concrete Spread Box Beam	linear foot	178		178
Bridge Approach Slab (Minor)	sq. yard		109	109
Plain Neoprene Bearing Pad	each		6	6
Vertical Drain at End Bents	each		2	2

Hydrologic Data

Drainage Area	=	1.2 sq. mi.
Design Flood Frequency	=	500 years
Design Flood Discharge	=	1930 cfs
Design Flood (D.F.) Elevation	=	712.8 feet
Base Flood (100–year)		
Base Flood Elevation	=	712.1 feet
Base Flood Discharge	=	1430 cfs
Estimated Backwater	=	0.1 feet
Average Velocity Thru Opening	=	3.3 ft/s
Freeboard (50–year)		
Freeboard	=	1.8 feet
Roadway Overtopping		
Overtopping Flood Discharge	=	N/A cfs
Overtopping Flood Frequency	=	>500 years
500 Year Flood Elevation	=	712.8 feet



LOCATION SKETCH

Foundation Data

Type	Design Data		Bent No. 1	Bent No. 2
Load Bearing Pile	Pile Type & Size		HP 12x53	HP 12x53
	Number	ea	4	4
	Approximate Length Per Each	ft	30	20
	Pile Point Reinforcement	ea	All	All
	Min. Galvanized Penetration (Elev.)	ft	Full Length	
	Pile Driving Verification Method		DF	DF
	Resistance Factor		0.40	0.40
	Minimum Nominal Axial Compressive Resistance	kip	437	435

DF = FHWA–modified Gates Dynamic Pile Formula

Minimum Nominal Axial Compressive Resistance = $\frac{\text{Maximum Factored Loads}}{\text{Resistance Factor}}$

Pre–bore for piles at Bent 2 to elevation 690.79. A minimum of 5 feet of prebore into rock shall also be obtained.

All piles shall be galvanized down to the minimum galvanized penetration (elevation).

Pile point reinforcement need not be galvanized. Shop drawings will not be required for pile point reinforcement.

Piles are anticipated to be driven to refusal on rock. Review all borings for depth of rock and restrict driving as appropriate to comply with hard rock driving criteria in accordance with Sec 702. When pile refusal on rock occurs, as approved by the engineer, the minimum nominal axial compressive resistance is verified and no additional pile driving verification method is required.

Estimated Quantities for Slab on Concrete Beam

ITEM		TOTAL
Class B–2 Concrete	cu. yard	56.2
Reinforcing Steel (Epoxy Coated)	pound	12,820

The table of estimated quantities for Slab on Concrete Beam represents the quantities used by the county in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab (or with the horizontal dimensions as shown on the plan of slab). Payment for prestressed panels conventional forms, all concrete and coated reinforcing steel will be considered completely covered by the contract unit price for the slab. Variations may be encountered in the Estimated Quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slab shall be shown on the plans and in accordance with Section 703. all hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness Class SC 4 and a finish type I, II or III.

Class B–2 concrete quantity is based on minimum top flange thickness and minimum joint material thickness.

The prestressed panel quantities are not included in the Table of Estimated Quantities for Slab on Concrete Beam.

No.	Revision/Issue	Date
1	Addendum #2	10/20/2025

GREAT RIVER ENGINEERING
Missouri State Certificate of Authority Numbers:
Engineering: 2001165885, Land Surveying: 2001011476,
Landscape Architecture: 2007013573

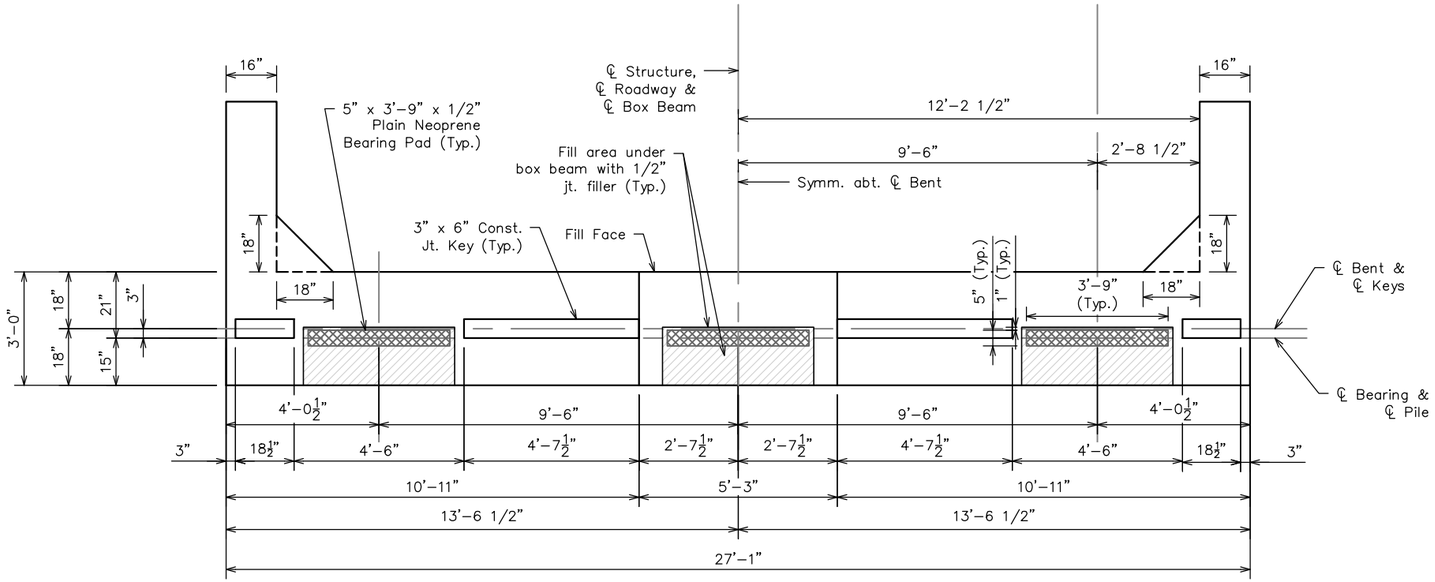
BRO–R051(41) #17400041
JOHNSON COUNTY, MISSOURI

GENERAL NOTES AND ESTIMATED QUANTITIES

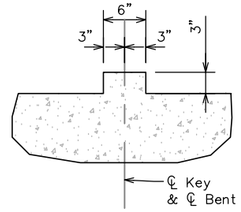
10/20/2025

JOB 4823

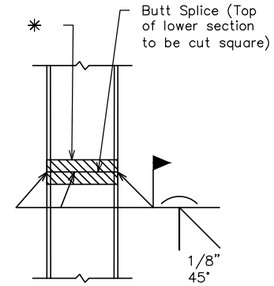
S2



PLAN OF BEAM SHOWING DIMENSIONS

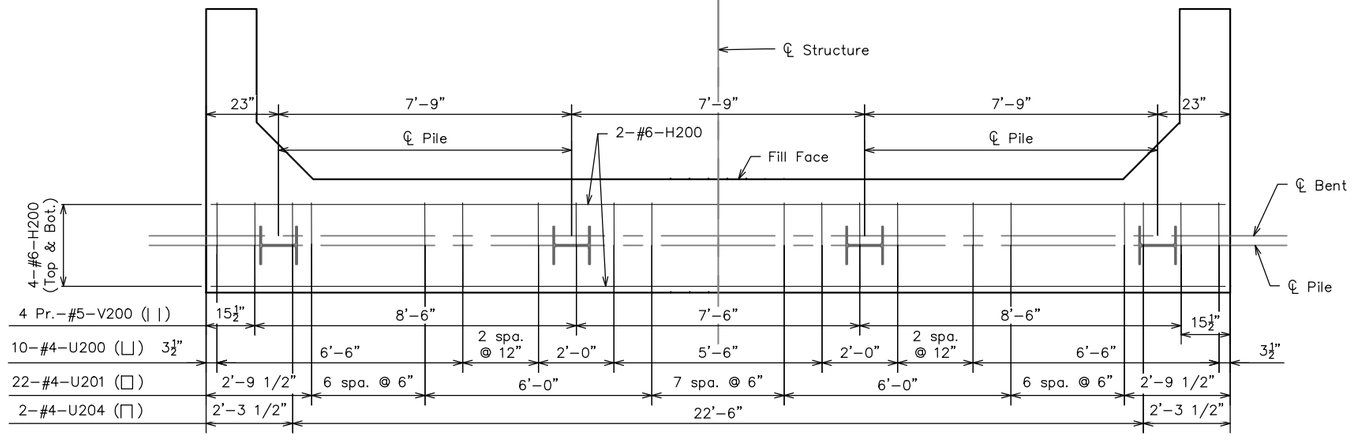


TYPICAL SECTION THRU KEY



STEEL PILE SPLICE
(if required)

* Galvanizing material shall be omitted or removed 1 inch clear of weld location. See special provisions.



PLAN OF BEAM SHOWING REINFORCEMENT AND PILES
Keys and steps not shown for clarity

General Notes:

For details of End Bent No. 2 not shown, see Sheets No. S8 & S9.

The U-bars and pairs of V-bars in the End Bent are to be placed parallel to ℄ Roadway.

Reinforcing Steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2".

Substructure Quantity Table for Bent No. 2

Item		Quantity
Class 1 Excavation	cu. yard	30
Galvanized Structural Steel Piles (12 in.)	lin. foot	80
⚠1 Pre-Boring for Piling	lin. foot	80
Pile Point Reinforcement	each	4
Class B Concrete (Substructure)	cu. yard	10.8

These quantities are included in the Estimated Quantities table on Sheet No. S2.

Note: This drawing not to scale. Follow dimensions.

No.	Revision/Issue	Date
1	Addendum #2	10/20/2025

GRE GREAT RIVER ENGINEERING
Missouri State Certificate of Authority Numbers: Engineering: 2000156885, Land Surveying: 2001011476, Landscape Architecture: 2007013573

BRO-R051(41) #17400041
JOHNSON COUNTY, MISSOURI

END BENT NO. 2 DETALS

10/20/2025
JOB 4823
S7

GRE
GREAT RIVER ENGINEERING

CONTRACTOR NAME: _____

ADDRESS LINE 1: _____

ADDRESS LINE 2: _____

PHONE NUMBER: _____

EMAIL: _____

Johnson County
CO RD NE 500
BRO-R051(41)

DATE: _____

ITEMIZED BID FORM

LINE	ITEM	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	AMOUNT
ROADWAY ITEMS						
1	201	CLEARING AND GRUBBING	ACRE	0.43		
2	203	UNCLASSIFIED EXCAVATION (ROADWAY)	C.Y.	146		
3	203	EMBANKMENT IN PLACE W/COMPACTION	C.Y.	46		
4	304	TYPE 1 AGGREGATE FOR BASE (5 IN. THICK)	S.Y	415		
5	401	BITUMINOUS PAVEMENT MIXTURE PG64-22, (BASE)	TON	70		
6	401	BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-1)	TON	35		
7	407	TACK COAT	GAL	21		
8	606	TYPE A CRASHWORTHY END TERMINAL	EACH	4		
9	606	ASYMETRICAL TRANSITION SECTION, 6.5 FT. POSTS	EACH	4		
10	607	WOVEN WIRE FENCE	L.F.	46		
11	611	TYPE 2 ROCK BLANKET	C.Y.	325		
12	616	TYPE III MOVEABLE BARRICADE WITH LIGHT	EACH	6		
13	616	CONSTRUCTION SIGNS	S.F.	63		
14	618	MOBILIZATION	L.S.	1		
15	805	SEEDING	ACRE	0.3		
16	806	SILT FENCE	EACH	317		
					ROADWAY ITEMS SUBTOTAL	
BRIDGE ITEMS						
17	206	CLASS 1 EXCAVATION	C.Y.	60		
18	216	REMOVAL OF BRIDGES	L.S.	1		
19	503	BRIDGE APPROACH SLAB (MINOR ROAD)	S.Y.	109		
20	702	STRUCTURAL STEEL PILES (12 IN.)	L.F.	200		
21	702	PRE-BORE FOR PILING	L.F.	80		
22	702	PILE POINT REINFORCEMENT	EACH	8		
23	703	CLASS B-1 CONCRETE (SUBSTRUCTURE)	C.Y.	21.9		
24	703	SLAB ON CONCRETE BEAM	S.Y.	166		
25	705	27 IN., PRESTRESSED CONCRETE SPREAD BOX BEA	L.F.	178		
26	713	BRIDGE GUARD RAIL (THRIE BEAM)	L.F.	150		
27	715	VERTICAL DRAIN AT END BENTS	L.F.	2		
28	716	PLAIN NEOPRENE BEARING PAD	L.F.	6		
					BRIDGE ITEMS SUBTOTAL	
					TOTAL CONTRACT	

Addenda Signature

1 _____

2 _____

3 _____