ADDENDUM NO. 1

ISSUED BY: HOWE COMPANY, LLC
1119 SOUTH MISSOURI STREET, SUITE A
MACON, MO 63552

DATE: September 28, 2017

FOR: CLARK COUNTY BRIDGE NO. 18400061
BRO-B032(27)

The attached revisions hereby supersede any and all data with which they may conflict as indicated on the Drawings, Specifications and related documents issued in the original set. Each trade is responsible for changes in its work caused by changes in the work of other trades. This addendum is a part of and shall be attached to the original set of plans and specifications for the work.

THIS ADDENDUM SHALL BECOME A PART OF THE SPECIFICATIONS NOTED ABOVE. RECEIPT OF THIS ADDENDUM SHOULD BE ACKNOWLEDGED ON THE BID FORM.

REVISED PLAN SHEET 2

Sheet 2 of the project plans has been updated to adjust concrete quantities. The Pay Item "Class B-2 Substructure Concrete" has been removed. The note separating the furnishing and placement of concrete from the drill shaft and rock socket pay items has been removed. All cost associated with the Drilled Shafts and Rock Sockets shall be included in the pay items "Drilled Shafts (3'-6" Dia.)" and "Rock Sockets (3'-0" Dia.)" per MoDOT Standard Specifications.

REVISED BID FORM

The bid form has been updated to adjust concrete quantities. Line Item 27 "Class B-2 Substructure Concrete" has been removed. Use the bid form issued with this addendum.

NO CHANGE IN BID DATE/TIME

STATE OF MISSOURI
SHANNON J. HOWE
NUMBER E-2000162117
REGISTERED PROFESSIONAL ENGINEER
9/28/2017

TEMPORARY ROADWAY ITEMS BY CONTRACTOR

LINE	ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	JSP	Biaxial Geo Grid	S.Y.	348		
2	JSP	6" Layer of 3" Crushed Stone	S.Y.	348		
3	310	2" Layer Aggregate Surface	S.Y.	348		
4	JSP	Repair&Maintenance of Temporary Roadway	L.S.	1	XXXXXXXXXX	
5	JSP	Removal of Temporary Roadway	L.S.	1	XXXXXXXXXX	

Sub-Total Temporary Roadway Items= _____

ROADWAY ITEMS BY CONTRACTOR

LINE	ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
6	201	Clearing and Grubbing	ACRE	0.65		
7	202	Removal of Improvements	L.S.	1	XXXXXXXXXX	
8	203	Embankment in Place	C.Y.	7,654		
9	203	Unclassified Excavation	C.Y.	1,158		
10	310	4" Layer Crushed Stone Roadway Aggregate	S.Y.	1,568		
11	606	Type A Railing	L.F.	75		
12	606	Guardrail Transition Section	EACH	4		

LINE	ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
13	606	End Anchor	EACH	4		
14	616	Movable Barricades	EACH	6		
15	616	Construction Signs	EACH	5		
16	618	Mobilization	L.S.	1	XXXXXXXXXX	
17	627	Contractor Furnished Surveying & Staking	L.S.	1	XXXXXXXXXX	
18	805	Seeding	ACRE	1.05		
19	806/JSP	Rock Ditch Checks	EACH	4		
20	806/JSP	Silt Fence	L.F.	597		
21	903	Permanent Type 3 Object Marker	EACH	4		
22	1020	12" C.M.P.	L.F.	80		

Sub-Total Roadway Items =

BRIDGE ITEMS BY CONTRACTOR

23	206/JSP	Excavation for Structure	L.S.	1	XXXXXXXXXX	
24	216.1	Removal of Bridge	L.S.	1	XXXXXXXXXX	

LINE	ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
25	501	B-1 Substructure Concrete	C.Y.	150		
26	501	B-2 Superstructure Concrete	C.Y.	158		
---	---	---	---	---	XXXXXXXXXX	XXXXXXXXXX
28	611.3	MoDOT Type 2 Rock Blanket	C.Y.	1,250		
29	624	MoDOT Permanent Erosion Control Fabric	S.Y.	1,844		
30	701	Drilled Shafts (3'-6" Dia.)	L.F.	45.9		
31	701	Rock Sockets (3'-0" Dia.)	L.F.	110.1		
32	701	Foundation Inspection Holes	L.F.	170.1		
33	701	Sonic Logging Testing	EACH	6		
34	701	Supplemental Television Camera Inspection	EACH	6		
35	702/JSP	HP 10 x 42 Piling - Galvanized	L.F.	288		
36	702	Pile Points	EACH	8		
37	706	Reinforcing Steel	LBS.	81,155		

LINE	ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
38	705	Prestressed Concete Deck Panels	S.Y.	233		
39	705	Prestressed Concrete NU-43 I-Girders (Span 1-2)	EACH	3		
40	705	Prestressed Concrete NU-43 I-Girders (Span 2-3)	EACH	3		
41	705	Prestressed Concrete NU-43 I-Girders (Span 3-4)	EACH	3		
42	713	SL-1 Rail On Bridge	L.F.	416.66		
43	715	Vertical Drains at End Bent	EACH	2		
44	716	Plain Neoprene Bearing Pads	EACH	18		

Sub-Total Bridge Items =

TOTAL CONTRACTOR =

BID SUBMITTED BY: _____

REPRESENTING: _____

ADDENDUM #	INITIAL TO SHOW ACKNOWLEDGEMENT
#1	

FOUNDATION DATA TABLE

		BENT NO.	1	2	3	4
DRIVEN PILES	Number of 10x42 H Piling	Each	4			4
	Approximate Length	Ft.	36			36
	Design Bearing	Tons	47			47
	Minimum Tip Elevation	Ft.	403.00			402.00
	Estimated Tip Elevation	Ft.	382.00			382.00
	Cut Off Elevation	Ft.	418.00			418.00
	Minimum Hammer Energy	Ft. lbs.	8,000			8,000
ROCK SOCKETS	LAYER 1	Foundation Material		Shale Bedrock		
		Elevation Range Ft.		391.0'–388.0'	391.0'–388.0'	
		Design Side Friction		1.5 KSF	1.5 KSF	
		End Bearing		15 KSF	15 KSF	
	LAYER 2	Foundation Material		Shale Bedrock		
		Elevation Range Ft.		388.0'–370.0'	388.0'–370.0'	
		Design Side Friction		4 KSF	4 KSF	
		End Bearing		30 KSF	30 KSF	

WORK TO BE PERFORMED BY CONTRACTOR

ITEM	TEMPORARY ROADWAY ITEMS		EST. QTY.	
JSP	Biaxial Geo Grid	S.Y.	348	*
JSP	6" Layer of 3" Crushed Stone	S.Y.	348	*
310	2" Layer Aggregate Surface	S.Y.	348	*
JSP	Repair&Maintenance of Temp. Roadway	L.S.	1	
JSP	Removal of Temporary Roadway	L.S.	1	
ITEM	ROADWAY ITEMS		EST. QTY.	
201	Clearing and Grubbing	Acre	0.65	
202	Removal of Improvements	L.S.	1	
203	Embankment in Place	C.Y.	7,654	
203	Unclassified Excavation	C.Y.	1,158	
310	4" Layer Roadway Aggregate	S.Y.	1,568	*
606	Type A Railing	L.F.	75	*
606	Guardrail Transition Section	Ea.	4	*
606	End Anchor	Ea.	4	*
616	Movable Barricades	Ea.	6	*
616	Construction Signs	Ea.	5	*
618	Mobilization	L.S.	1	
627	Contractor Furnished Surveying & Staking	L.S.	1	*
805	Seeding	Acre	1.05	*
806	Rock Ditch Checks	Ea.	4	*
806	Silt Fence	L.F.	597	*
903	Permanent Type 3 Object Marker	Ea.	4	*
1020	12" C.M.P.	L.F.	80	*
ITEM	BRIDGE ITEMS		EST. QTY.	
206/JSP	Excavation For Structure	L.S.	1	
216	Removal of Bridge	L.S.	1	
501	Class B–1 Substructure Concrete	C.Y.	150	*
501	Class B–2 Superstructure Concrete	C.Y.	158	*
611.3	MoDOT Type 2 Rock Blanket	C.Y.	1,250	*
624	MoDOT Perm. Erosion Control Fabric	S.Y.	1,844	*
701	Drilled Shafts (3'–6" Dia.)	L.F.	45.9	*
701	Rock Sockets (3'–0" Dia.)	L.F.	110.1	*
701	Foundation Inspection Holes	L.F.	170.1	*
701	Sonic Logging Testing	Ea.	6	*
701	Supplemental Television Camera Inspection	Ea.	6	*
702/JSP	HP 10x42 Piling – Galvanized	L.F.	288	*
702	Pile Points	Ea.	8	*
706	Reinforcing Steel	LBS.	81,155	*
705	Prestressed Concrete Deck Panels	S.Y.	233	*
705	NU–43 Prest. Conc. I–Girders (Sp. 1–2)	Ea.	3	*
705	NU–43 Prest. Conc. I–Girders (Sp. 2–3)	Ea.	3	*
705	NU–43 Prest. Conc. I–Girders (Sp. 3–4)	Ea.	3	*
713	Type SL–1 RAILING	L.F.	416.66	*
715	Vertical Drains at End Bents	Ea.	2	*
716	Plain Neoprene Bearing Pads	Ea.	18	*

HYDROLOGIC DATA

Existing Bridge Deck Elev.	Ft.	N/A
Drainage Area	Sq. Mi.	395.36
Design Frequency	Years	25
Design Discharge	Cfs.	22,272
Backwater for Design Frequency	Ft.	0.6
Design High Water at the Structure	Ft.	417.67
Low Elevation of Superstructure	Ft.	419.50
100 Year Discharge	Cfs.	30,435
100 Year High Water Elevation at the Structure	Ft.	419.37
Approach Roadway Overtopping Frequency	Years	2

NOTES:

Minimum energy requirement of hammer is based on plan length and design bearing value of piles.

Contractor shall install cast steel driving points on all piles. The cast steel materials shall be ASTM A27 65/35 or better. Costs of providing and installing pile tip reinforcement shall be included in the contract unit price for item "Pile Points"

This project has been granted various environmental permits and clearances. The contractor is responsible for complying with all permit conditions.

* These items require certification/shop drawings/submittal.

GENERAL NOTES

The Contractor shall follow the specifications as stated in the "Missouri Standard Specifications for Highway Construction," 2011, and current Supplemental Specifications Revisions.

Job Special Provisions shall prevail over General Special Provisions whenever in conflict therewith.

Design Specifications:

"2002 A.A.S.H.T.O. Standard Specifications for Highway Bridges, 17th Edition."

Design Loading:

HS20–44

Seismic performance category A. Seismic acceleration coefficient 0.075.

Earth 120 lbs. per cu. ft., Equivalent Fluid Pressure 30 lbs. per cu. ft.

25 Lb. per sq. ft. Future Wearing Surface.

Superstructure:

Simply supported non–composite for Dead Load. Continuous composite for Live Load.

Design Unit Stresses:

Class B–1 w/Air Concrete (Bridge Substructure) f'c=4,000 p.s.i., Max Slump = 4"; Air 5% Minimum.

Class B2 w/Air or MB–2 Modified Concrete (Bridge Substructure) f'c=4,000 p.s.i., Min Slump = 6", Max Slump= 8", Air = 5% Minimum, Aggregate Gradation "E"

Class B2 w/Air or MB–2 Modified Concrete (Bridge Superstructure) f'c=4,000 p.s.i., Max Slump= 3" for B2 w/Air & 6" for MB–2 (modified) with air, Air = 5% Minimum

Reinforcing Steel (Grade 60) fy=60,000 p.s.i.

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

All non–anchor bolts shall be ASTM A325 High Strength.

Anchor bolts shall be in accordance with ASTM A307. The anchor bolts, nuts and washers shall be hot–dip galvanized in accordance with ASTM A153

Concrete for Drilled Shaft and Rock Socket shall be MoDOT class B–2, All other substructure concrete shall be class B–1.

The estimated elevations for encountering the shale bed rock are estimated based on the geotechnical report from Crockett, which is provided in the JSP. If the foundation inspection holes reveal that rock will be encountered at significantly different elevations then the elevations for the rock socket and drilled shafts will be adjusted by the Engineer.

Cost of 2" steel ASTM A53 pipe for Sonic Testing shall be included with the bid item "Sonic Logging Testing".

Cost of 42"ø steel casing will be included in bid item "Drilled Shafts (3'–6" Dia.)"

The cost of any excavation or fill required to reach the top of the drilled shafts will be considered incidental.

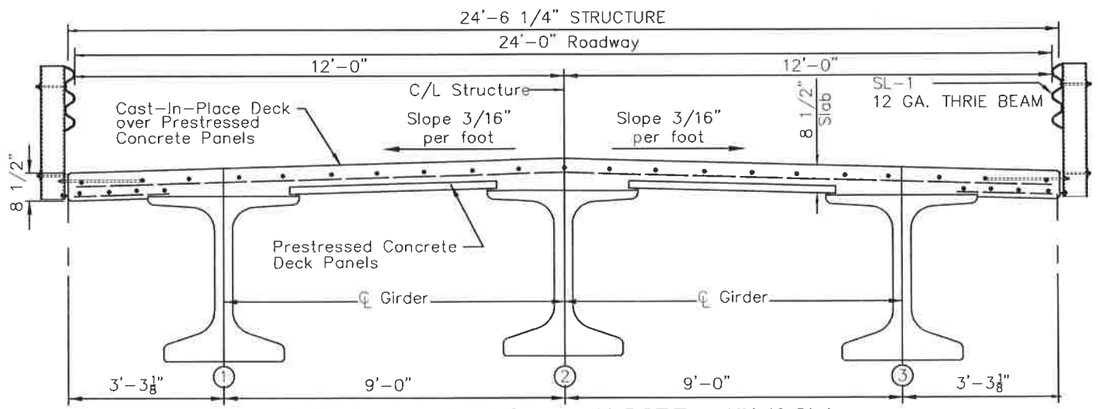
---(Note Deleted)---

Use written elevations and dimensions when present. If no dimensions are given consult engineer for clarification before proceeding with work. Do NOT use scaled dimensions unless scale is provided.

All joint filler shall be in accordance with sec 1057 for preformed sponge rubber expansion and partition joint filler,except where noted.

The contractor shall remove and properly dispose of the remains of the old bridge.

Rock blanket that is reclaimed from the temporary crossing shall be substantially free of mud or shall be placed in non visible locations. All reclaimed rock blanket shall meet the requirements in Sec 611.30.



SECTION THRU STRUCTURE - MoDOT Type NU-43 Girders
NOT TO SCALE

STATE OF MISSOURI
SHANNON J. HOWE NUMBER E-2000162117
REGISTERED PROFESSIONAL ENGINEER
9/28/2017

No	Description	Date	Apvr
1	Concrete Quantities Adjusted	9/28/17	SJH

Howe Company LLC
Missouri State Certificate of Authority
Engineering #E-2014014993
Surveying #LS-2014015235

GENERAL NOTES AND QUANTITIES SHEET
OFF SYSTEM BRIDGE REPLACEMENT PROGRAM
CART ROAD NO. 184 PROJECT #BRO–B023(27) BRIDGE #18400061
CLARK COUNTY, MISSOURI

HOWE COMPANY, LLC
1119 S. MISSOURI St., SUITE A, MACON, MO. 63552
OFFICE: 660–395–4693 FAX: 660–395–4694

Date: Sept 2017
Designed by: S. Howe
Drawn by: D. Throndson
Reviewed by: S. Howe
Approved by: S. Howe
Job No. 16H3105

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