

ADDENDUM NO. 1

ISSUED BY: Howe Company LLC
804 E. Patton Street
Macon, MO 63552

Adam [Signature]
10-2-2024

DATE: October 2, 2024

FOR: KNOX COUNTY BRIDGE 1490012
BRO-R052(23)

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.

Updated Plan Quantity. The estimated project quantity for Unclassified Excavation has been adjusted to more accurately reflect the project. A new bid form is issued with this addendum to replace the original bid form. A new plan sheet 2 and 18 are issued with this addendum to replace the original sheets.

Notice to Contractors. The first page of the Notice to Contractors has been revised to remove inconsistencies. A new first page of the Notice to Contractors is issued with this addendum to replace the original. There is no change in the general specifications, contract time, or completion date.

There is no change in bid opening date or time.

**KNOX BRIDGE NO. 1490012
 BRO-BR052(23)
 BID FORM
 ROADWAY ITEMS BY CONTRACTOR**

LINE	ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
1	201	Clearing and Grubbing	ACRE	1.88	_____	_____
2	202	Removal of Improvements	L.S.	1	_____	_____
3	203	Unclassified Excavation	C.Y.	3,912	_____	_____
4	203	Embankment in Place	C.Y.	5,397	_____	_____
5	310	4" Thick Layer Roadway Aggregate	S.Y.	2,948	_____	_____
6	606	MGS Guardrail System (6'-3" Post spacing)	L.F.	50	_____	_____
7	606	Guardrail Transition Section	EACH	4	_____	_____
8	606/JSP	Crashworthy End Terminal	EACH	4	_____	_____
9	616	Moveable Barricades	EACH	4	_____	_____
10	611.30	Furnishing Rock Blanket	C.Y.	1,188	_____	_____
11	611.30	Placing Rock Blanket	C.Y.	1,188	_____	_____
12	616	Construction Signs	S.F.	45	_____	_____

**KNOX BRIDGE NO. 1490012
 BRO-BR052(23)
 BID FORM
 ROADWAY ITEMS BY CONTRACTOR**

LINE	ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
13	616	Sign Posts	L.F.	50	_____	_____
14	618	Mobilization	L.S.	1	_____	_____
15	624	MoDOT Perm. Erosion Control Fabric	S.Y.	1,757	_____	_____
16	805/JSP	Contractor Surveying & Staking	L.S.	1	_____	_____
17	627	Seeding	ACRE	1.76	_____	_____
18	806	Silt Fence	L.F.	416	_____	_____
19	806	Rock Ditch Checks	EACH	3	_____	_____
20	806	Turf Reinforcing Mat - Type 3	S.Y.	1446	_____	_____
21	JSP	Storm Water Pollution Prevention Plan (S.W.P.P.P.)	L.S.	1	_____	_____
Sub-Total Roadway Items =						_____

BRIDGE ITEMS BY CONTRACTOR

LINE	ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
22	206	Excavation for Structure	L.S.	1	_____	_____

**KNOX BRIDGE NO. 1490012
 BRO-BR052(23)
 BID FORM
 BRIDGE ITEMS BY CONTRACTOR**

LINE	ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
23	216	Removal of Bridge	L.S.	1	_____	_____
24	501	Class B-1 Substructure Concrete	C.Y.	185	_____	_____
25	501	Class B-2 Superstructure Concrete	C.Y.	186	_____	_____
26	702/JSP	HP 12X53 (Galvanized)	L.F.	1544	_____	_____
27	702	Pile Points	EACH	24	_____	_____
28	705	Prestressed Concrete Deck Panels	S.Y.	232	_____	_____
29	705	Prestressed Concrete NU-35 Girders (Span 1-2)	EACH	3	_____	_____
30	705	Prestressed Concrete NU-35 Girders (Span 2-3)	EACH	3	_____	_____
31	705	Prestressed Concrete NU-35 Girders (Span 3-4)	EACH	3	_____	_____
32	706	Reinforcing Steel	LBS.	66,366	_____	_____
33	713	Type SL-1 Railing	L.F.	416.66	_____	_____
34	715	Vertical Drains At End Bent	EACH	2	_____	_____

**KNOX BRIDGE NO. 1490012
 BRO-BR052(23)
 BID FORM
 BRIDGE ITEMS BY CONTRACTOR**

LINE	ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
35	716	Plain Neoprene Bearing Pads (1/2")	EACH	18	_____	_____

REPRESENTING: _____ **Sub-Total Bridge Items =** _____

ADDENDUM # INITIAL TO SHOW ACKNOWLEDGEMENT **CONTRACT TOTAL =** _____

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NOTICE TO CONTRACTORS

Sealed bids, addressed to Knox County 107 N. 4th, Edina, MO 63537 for the proposed work will be received by Knox County until 11:00 a.m. (prevailing local time) on October 7, 2024 at the office of the Knox County Commission & Clerk at 107 N. 4th, Edina, MO 63537, and at that time will be publicly opened. Bids should be delivered to: Knox County, 107 N. 4th, Edina, MO 63537

(1) **PROPOSED WORK:** The proposed work, hereinafter called the work, includes:

construction of a new 204'-0", three-span bridge with prestressed concrete NU-35 girders, steel HP12x53 piling, concrete abutments, concrete piers, steel guardrail, traffic control, and other required appurtenances.

(2) **COMPLIANCE WITH CONTRACT PROVISIONS:** The bidder, having examined and being familiar with the local conditions affecting the work, and with the contract, contract documents, including the current version of the Missouri Highways and Transportation Commission's "Missouri Standard Specifications for Highway Construction 2023, 3rd Edition – January 2024," and "Missouri Standard Plans for Highway Construction" (if applicable), their revisions, and the request for bid, including appendices, the special provisions and plans, hereby proposes to furnish all labor, materials, equipment, services, etc., required for the performance and completion of the work. All references are to the Missouri Standard Specifications for Highway Construction, as revised, unless otherwise noted.

The following documents are available on the Missouri Department of Transportation web page at www.modot.mo.gov under "Business with MoDOT" "Standards and Specifications".

General Provisions & Supplemental Specifications

Supplemental Revisions to Missouri Standard Plans
For Highway Construction (if applicable)

These supplemental bidding documents contain all current revisions to the bound printed versions and have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

Please note that within the above-listed documents, the term "Commission" shall be replaced with the term, Knox County", and the term "Engineer" is a reference to the Engineer of Record from Howe Company, LLC.
The contracting authority for this contract is Knox County

(3) **PERIOD OF PERFORMANCE:** If the bid is accepted, the bidder agrees that work shall be diligently prosecuted at such rate and in such manner as, in the judgment of the engineer, is necessary for the completion of the work within the time specified as follows in accordance with Sec 108:

Calendar Days: 180 after road is closed or a Completion Date of: September 30, 2025, whichever comes first

FOUNDATION DATA TABLE					
BENT. NO		1	2	3	4
NUMBER OF PILING	EACH	4	8	8	4
APPROXIMATE LENGTH	FT.	68	67	61	62
DESIGN BEARING	TONS	60	70	70	60
CUT OFF ELEVATION	FT.	723.49	722.49	722.49	723.49
ESTIMATED TIP ELEVATION	FT.	655.49	655.49	661.49	661.49
MINIMUM TIP ELEVATION	FT.	710.00	693.00	693.00	710.00
MINIMUM HAMMER ENERGY	FT. LBS.	13,500	13,500	13,500	13,500

GENERAL NOTES

THE CONTRACTOR SHALL FOLLOW THE SPECIFICATIONS AS STATED IN THE "MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION," 2023 AND CURRENT SUPPLEMENTAL SPECIFICATION REVISIONS.

JOB SPECIAL PROVISIONS (JSP) SHALL PREVAIL OVER STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS WHEN IN CONFLICT. JSP'S CAN BE FOUND IN THE PROJECT MANUAL.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 2" UNLESS SHOWN OTHERWISE.

USE WRITTEN DIMENSIONS WHEN PRESENT. IF NO DIMENSIONS ARE GIVEN CONSULT WITH ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH WORK. DO NOT USE SCALED DIMENSIONS UNLESS A SCALE IS PROVIDED.

DIGITAL CAD FILES WILL NOT BE PROVIDED TO THE CONTRACTOR FOR SURVEYING AND STAKING.

HYDROLOGIC DATA		
EXISTING BRIDGE DECK ELEV.	FT.	N/A
LOW ELEVATION OF SUPERSTRUCTURE	FT.	N/A
100 YEAR DISCHARGE	CFS.	12,100
100 YEAR HIGH WATER ELEVATION AT THE STRUCTURE	FT.	724.28
25 YEAR DISCHARGE	CFS.	8,910
25 YEAR HIGH WATER ELEVATION AT THE STRUCTURE	FT.	723.15
DRAINAGE AREA	SQ. MI.	87.4
DESIGN DISCHARGE	CFS.	8910
DESIGN HIGH WATER AT THE STRUCTURE	FT.	723.15
DESIGN FREQUENCY	YEARS	25

WORK TO BE PERFORMED BY CONTRACTOR

ITEM	DESCRIPTION - ROADWAY ITEMS	UNITS	EST. QTY.
201	CLEARING AND GRUBBING	ACRE	1.88
202	REMOVAL OF IMPROVEMENTS	L.S.	1
203	UNCLASSIFIED EXCAVATION	C.Y.	3,912
203	EMBANKMENT IN PLACE	C.Y.	5,397
310	4" THICK LAYER ROADWAY AGGREGATE	S.Y.	2,948
606	MGS GUARDRAIL SYSTEM	L.F.	50
606	GUARDRAIL TRANSITION SECTION	EACH	4
606/JSP	CRASHWORTHY END TERMINAL	EACH	4
616	MOVABLE BARRICADES	EACH	4
611.30	FURNISH TYPE 2 ROCK BLANKET	C.Y.	1,188
611.30	INSTALL TYPE 2 ROCK BLANKET	C.Y.	1,188
616	CONSTRUCTION SIGNS	S.F.	45
616	CONSTRUCTION SIGN POST	L.F.	50
618	MOBILIZATION	L.S.	1
624	MODOT PERM. EROSION CONTROL FABRIC	S.Y.	1,757
627	CONTRACTOR SURVEYING & STAKING	L.S.	1
805/JSP	SEEDING	ACRE	1.76
806	SILT FENCE	L.F.	416
806	ROCK DITCH CHECKS	EACH	3
806/JSP	TURF REINFORCING MAT - TYPE 3	S.Y.	1,446
JSP	STORM WATER POLLUTION PREVENTION PLAN (S.W.P.P.)	L.S.	1

ITEM	BRIDGE ITEMS	UNITS	EST. QTY.
206	EXCAVATION FOR STRUCTURE	L.S.	1
216	REMOVAL OF BRIDGE	L.S.	1
501	CLASS B-1 SUBSTRUCTURE CONCRETE	C.Y.	185
501	CLASS B-2 SUPERSTRUCTURE CONCRETE	C.Y.	186
702/JSP	HP12X53 PILING (GALVANIZED)	L.F.	1,544
702/JSP	PILE POINTS	EACH	24
705	PRESTRESSED CONCRETE DECK PANELS	S.Y.	232
705	PRESTRESSED CONC. NU-35 GIRDERS SPAN 1-2	EACH	3
705	PRESTRESSED CONC. NU-35 GIRDERS SPAN 2-3	EACH	3
705	PRESTRESSED CONC. NU-35 GIRDERS SPAN 3-4	EACH	3
706	REINFORCING STEEL	LBS.	66,366
713	SL-1 RAILING	L.F.	416.66
715	VERTICAL DRAIN AT END BENTS	EACH	2
716	PLAIN NEOPRENE BEARING PADS (1/2")	EACH	18

* THESE ITEMS REQUIRE CERTIFICATION/SHOP DRAWINGS/SUBMITTAL.

PROJECT NOTES

THIS PROJECT HAS BEEN GRANTED VARIOUS ENVIRONMENTAL PERMITS AND CLEARANCES. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL PERMIT CONDITIONS.

THERE IS NO APPARENT EXISTING BRIDGE. REMNANTS OF PREVIOUS BRIDGES MAY BE ENCOUNTERED DURING EXCAVATION.

BOONE COUNTY WILL CUT AND REMOVE ALL TREES WITHIN THE ROADWAY AND TEMPORARY CONSTRUCTION EASEMENTS PRIOR TO THE BRIDGE CONTRACT AWARD. THE CONTRACTOR IS TO CLEAR&GRUB REMAINING STUMPS, ROOTS, AND FALLEN TIMBER.

TREES OUTSIDE OF THE PROJECT EASEMENTS SHALL NOT BE DISTURBED. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE TREES IDENTIFIED ON THE RIGHT-OF-WAY SHEET.

ALL EXCAVATION SHALL BE CONSIDERED UN-CLASSIFIED.

DESIGN SPECIFICATIONS

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES 17TH ED. - 2002

DESIGN LOADING

HS20-44

SEISMIC PERFORMANCE CATEGORY A. SEISMIC ACCELERATION COEFFICIENT 0.075

EARTH 120 PCF, EQUIVALENT FLUID PRESSURE 30 PCF

25 PSF FUTURE WEARING SURFACE

SUPERSTRUCTURE

SIMPLY SUPPORTED NON-COMPOSITE FOR DEAD LOAD. CONTINUOUS COMPOSITE FOR LIVE LOAD AND SUPERIMPOSED DEAD LOADS.

MATERIAL NOTES

BRIDGE SUBSTRUCTURE CONCRETE: MODOT CLASS B-1

f_c= 4000 PSI MINIMUM

MAX. SLUMP= 4" (6" WITH WATER REDUCER)

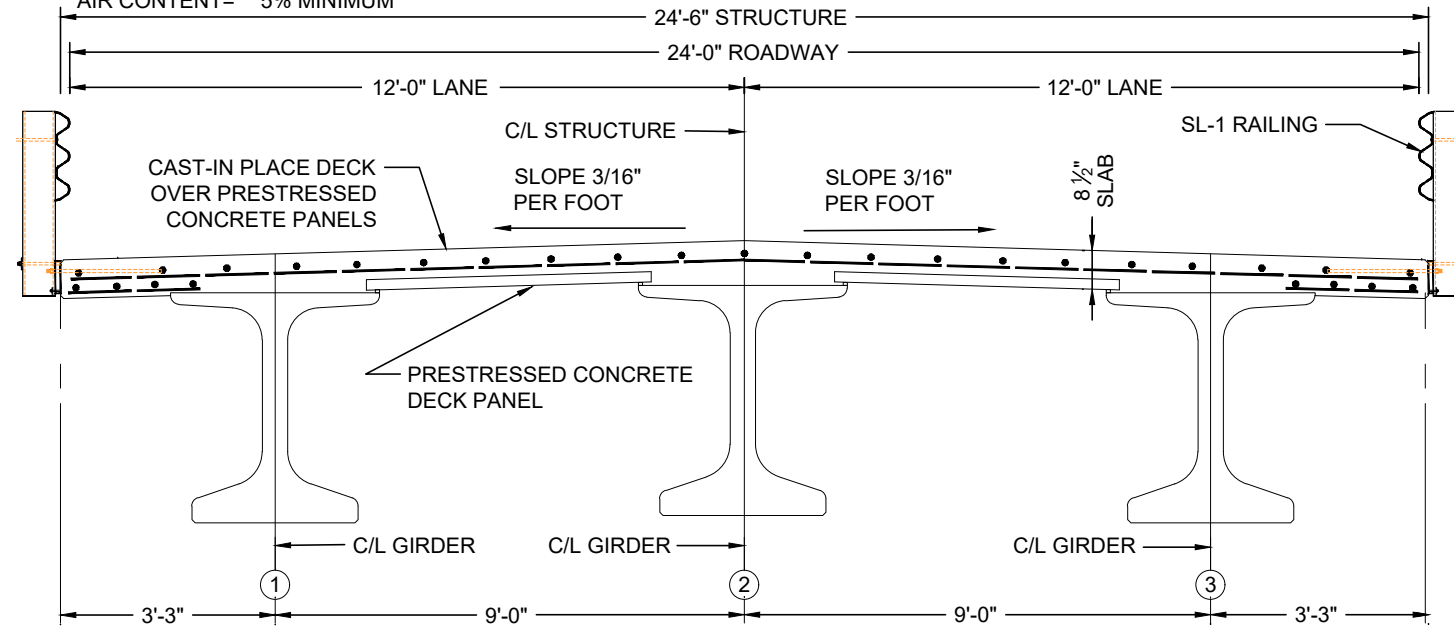
AIR CONTENT= 5% MINIMUM

BRIDGE SUPERSTRUCTURE CONCRETE: MODOT CLASS B-2 or MODOT CLASS MB-2

f_c= 4000 PSI MINIMUM

MAX. SLUMP= 4" (6" WITH WATER REDUCER)

AIR CONTENT= 5% MINIMUM



SECTION THRU STRUCTURE - MODOT TYPE NU-35 GIRDERS

SCALE: NTS

MATERIAL NOTES (CONTINUED)

REINFORCING STEEL: f_y=60,000 PSI (GRADE 60)

STEEL SUPERSTRUCTURE:

ALL STRUCTURAL STEEL FOR GIRDERS, DIAPHRAGM, PLATES, AND ANGLES SHALL BE AASHTO M270, GRADE 50.

THE ENTIRE GIRDER, DIAPHRAGMS, PLATES, ANGLES, SHEAR STUDS, AND ATTACHMENTS, ONCE FABRICATED, SHALL BE HOT DIP GALVANIZED PER AASHTO M111/ASTM A123

STEEL PILING:

H-PILING, ASTM A709 (GRADE 50) F_y=50,000 PSI (GALVANIZED) PER AASHTO M111/ASTM A123

BOLTS (NON-ANCHOR):

ASTM A325. BOLTS, NUTS, AND WASHERS SHALL BE HOT DIP GALVANIZED ACCORDING TO AASHTO M232/ASTM A153 OR MECHANICALLY GALVANIZED PER ASTM B695, CLASS 55.

BEARING PADS:

BEARINGS SHALL BE PLAIN, 60 DUROMETER, NEOPRENE.

PILING NOTES:

MINIMUM ENERGY REQUIREMENT OF HAMMER IS BASED ON PLAN LENGTH AND DESIGN BEARING VALUES OF THE PILING.

H-PILING SHALL CONSIST OF HP12X53 ROLLED STEEL SECTIONS

THE CONTRACTOR SHALL INSTALL CAST STEEL DRIVING POINTS ON ALL PILES. THE CAST STEEL POINTS 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." PILE POINTS NEED NOT BE GALVANIZED.

NO PAYMENT WILL BE MADE FOR SPLICES WITHIN THE PLANNED LENGTH OF THE PILING. NO PAYMENT WILL BE MADE FOR PILING DAMAGED DUE TO DRIVING OPERATIONS.

SPLICE LOCATIONS, IF NECESSARY, SHALL BE DETERMINED BY THE CONTRACTOR. SPLICES WITHIN THE GALVANIZED PORTION SHALL BE FIELD GALVANIZED. THE FINAL INSTALLED QUANTITY OF PILING WILL BE MEASURED FROM TIP TO CUTOFF.

UTILITY CONTACT INFORMATION

ELECTRIC:

LEWIS COUNTY REC
P.O. BOX 68
LEWISTOWN, MO 63452
CONTACT: SCOTT GAMM
573-215-4000

REVISED 10/1/24

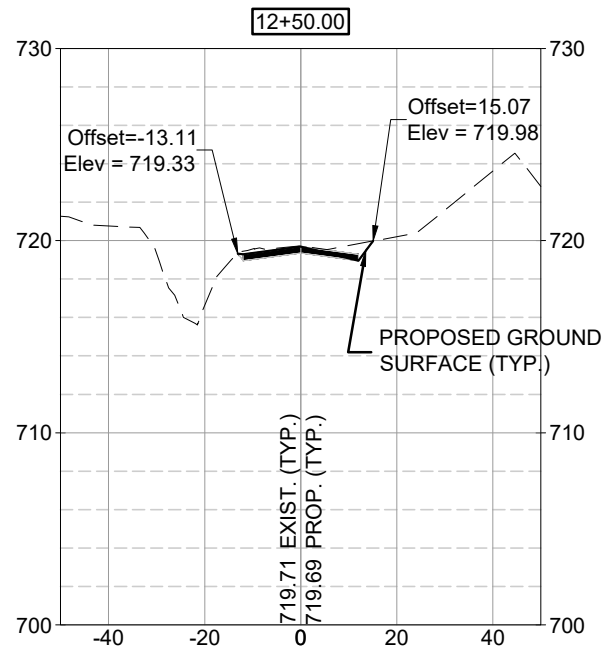


GENERAL NOTES AND QUANTITIES SHEET
OFF SYSTEM BRIDGE REPLACEMENT
CART ROUTE 149, REBEL RUN AVE.
BRIDGE NO. 1490012, BRO-R052(23)
KNOX COUNTY, MISSOURI
HOWE COMPANY, LLC
804 E. PATTON STREET, MACON, MO. 63552
OFFICE: 660-395-4693

DATE:	MARCH 2023
DESIGNED BY:	A. LUKEFAHR
DRAWN BY:	D. WITMER
REVIEWED BY:	S. HOWE
APPROVED BY:	S. HOWE

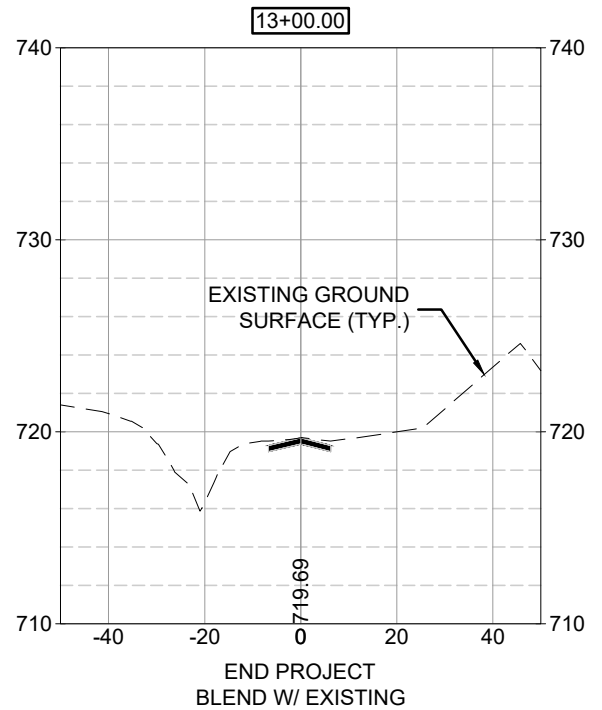
JOB NO. 22H3529

APL	Cut Quantity	No.	Description	Date	Apr.
10/1/24					



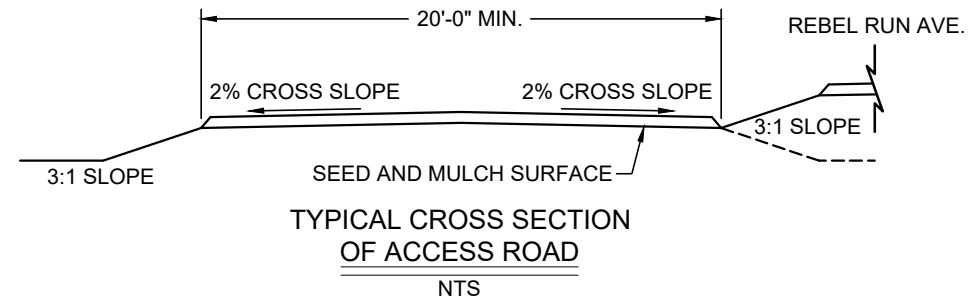
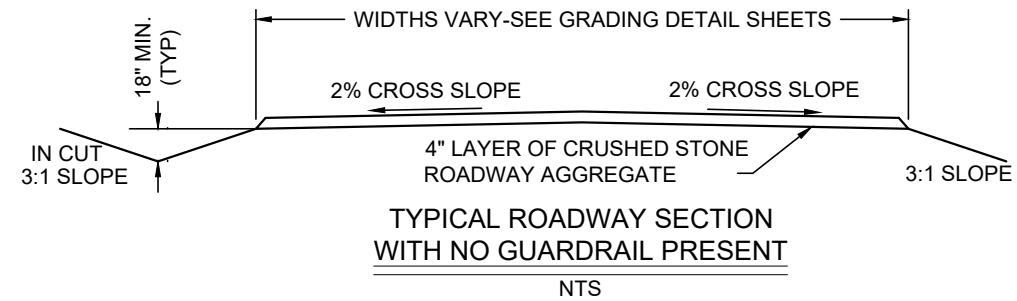
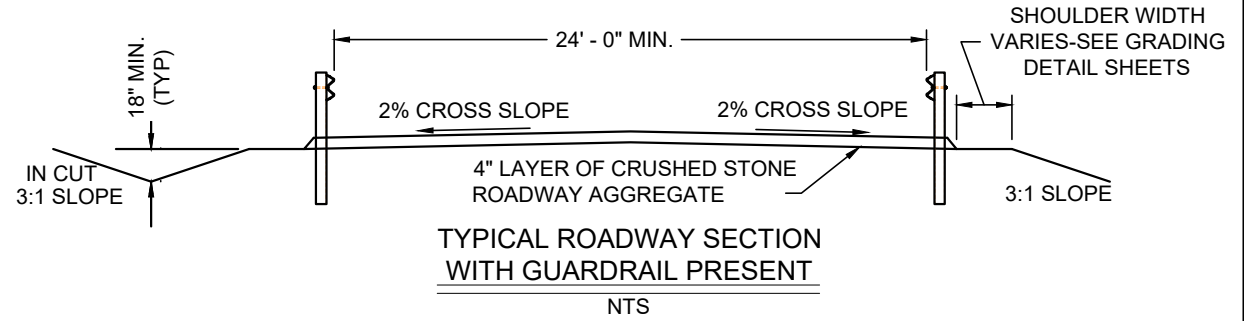
Control Point & Bench Mark Table				
Point #	Elevation	Northing	Easting	Description
CP #1	723.03	1572583.86	1734910.02	hvcv /gpsb
CP #2	722.97	1572265.53	1735001.86	hvcv
CP #3	720.77	1572066.84	1734847.21	hvcv

GPSB - GPS BASE STATION
 HVCP - HORIZONTAL AND VERTICAL CONTROL POINT
 TBM - TEMPORARY BENCHMARK
 RR - RAILROAD
 POPO - POWER POLE



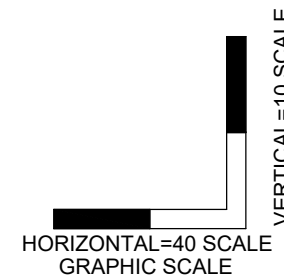
Line Table: Alignments					
Line #	START STATION	START POINT	END STATION	END POINT	BEARING
L2	4+00.00	N: 1571894.9528 E: 1734860.6447	4+61.67	N: 1571956.5773 E: 1734863.0131	N2° 12' 04"E 61.67
L3	4+92.55	N: 1571987.4401 E: 1734862.6414	5+82.80	N: 1572077.5138 E: 1734857.0038	N3° 34' 53"W 90.25
L4	6+63.61	N: 1572158.2710 E: 1734857.1277	9+20.47	N: 1572414.5747 E: 1734873.9590	N3° 45' 26"E 256.86
L5	12+03.21	N: 1572697.1628 E: 1734877.2609	12+22.74	N: 1572716.6789 E: 1734876.4367	N2° 25' 06"W 19.53
L8	12+37.28	N: 1572731.2045 E: 1734875.9574	13+00.00	N: 1572793.9090 E: 1734874.4668	N1° 21' 42"W 62.72

Curve Table: Alignments							
Curve #	PC	PI	PT	RADIUS	LENGTH	DELTA ANGLE	CHORD DIRECTION
C1	STA: 4+61.67 N: 1571956.5773 E: 1734863.0131	STA: 4+77.12 N: 1571972.0181 E: 1734863.6066	STA: 4+92.55 N: 1571987.4401 E: 1734862.6414	305.96	30.88	5°46'56"	N0° 41' 25"W 30.87
C2	STA: 5+82.80 N: 1572077.5138 E: 1734857.0038	STA: 6+23.26 N: 1572117.8964 E: 1734854.4763	STA: 6+63.61 N: 1572158.2710 E: 1734857.1277	630.95	80.81	7°20'19"	N0° 05' 16"E 80.76
C3	STA: 9+20.47 N: 1572414.5747 E: 1734873.9590	STA: 10+61.98 N: 1572555.7797 E: 1734883.2318	STA: 12+03.21 N: 1572697.1628 E: 1734877.2609	2623.30	282.74	6°10'32"	N0° 40' 10"E 282.61
C4	STA: 12+22.74 N: 1572716.6789 E: 1734876.4367	STA: 12+30.01 N: 1572723.9395 E: 1734876.1301	STA: 12+37.28 N: 1572731.2045 E: 1734875.9574	788.17	14.53	1°03'24"	N1° 53' 24"W 14.53

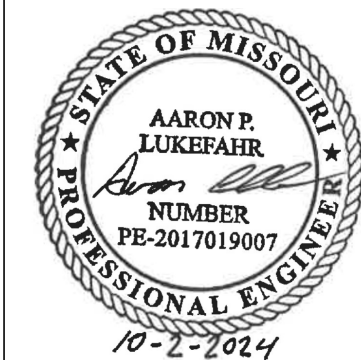


FROM STATION	TO STATION	GRAVEL WIDTH
4+00.00	4+50.00	EXISTING TO 24'-0"
4+50.00	6+20.64	24'-0"
6+20.64	6+74.42	24'-0" TO 26'-6 1/4"
6+74.42	7+10.43	26'-6 1/4"
7+10.43	9+14.43	BRIDGE
9+14.43	9+48.26	26'-6 1/4"
9+48.26	10+06.71	26'-6 1/4" TO 24'-0"
10+06.71	12+50.00	24'-0"
12+50.00	13+00.00	24'-0" TO EXISTING

TOTAL CUT= 3,912 C.Y.
 TOTAL FILL= 5,397 C.Y.
 NOTE: NO SHRINK/SWELL FACTORS INCLUDED IN CUT/FILL QUANTITIES



REVISED 10/1/24



APL	10/1/24	DATE	APPR
Cut Quantity	1	NO.	DESCRIPTION
MISSOURI STATE CERTIFICATE OF AUTHORITY ENGINEERING #E-2014014693 SURVEYING #S-2014015235			
CROSS SECTIONS SHEET OFF SYSTEM BRIDGE REPLACEMENT CART ROUTE 149, REBEL RUN AVE. BRIDGE NO. 1490012, BRO-R052(23) KNOX COUNTY, MISSOURI			
HOWE COMPANY, LLC 804 E. PATTON STREET, MACON, MO. 63552 OFFICE: 660-395-4693			
DATE: MAY 2023 DESIGNED BY: A. LUKEFAHR DRAWN BY: D. WITMER REVIEWED BY: S. HOWE APPROVED BY: S. HOWE			
JOB NO. 23H3529			
18			
SHEET 18 OF 36			