CITY OF JOPLIN
ADDENDUM NUMBER 2

Issued to all Bid Document Holders of Record.

Date: 1/10/2020

Project Name: **City of Joplin Trail and Pedestrian Bridge STP-3201(705)**

This addendum forms a part of the contract described above. The original Contract Documents and any prior addenda remain in full force and effect as modified by the following that shall take precedence over any contrary provisions in the prior documents.

1) **REVISED BID DATE**: The bid date is hereby revised to **Thursday, January 23, 2020 at 10:00 AM** in the 4th Floor Conference Room.

2) **REVISED COMPLETION DATE:** The completion date for the project is hereby changed from June 29, 2020 to **July 31, 2020.** The revised completion date of July 31, 2020 will be reflected in the agreement provided to the successful bidder upon award.

3) **REVISED PLAN SHEETS:** Plan Sheets CV-01, QTY-01, S-01, S-03, S-04, S-05, S-06, S-08, and S-10 have been revised &/or added, and are included with this addendum.

4) **REVISED BID FORM:** The project bid form has been revised and is included with this addendum. This revised bid form includes additional line items and shall be utilized by contractors when bidding the project.

5) **CLARIFICATION ITEMS:**
   1. The asphalt pavement for the trail shall be constructed with Bituminous Pavement Mixture BP-2 for the full 3" depth. The bid form has been revised to reflect this change. The price for the BP-2 asphalt shall include the application of a prime coat on the aggregate base, per City of Joplin Standard Specifications.
   2. The bid form includes two new bid items for the Removal and Backfill of Unsuitable Material, to be performed in accordance with City of Joplin Standard Specifications, if encountered.
   3. Multiple bridge plan sheets have been revised to include the addition of a modified concrete corral rail with pipe rails. The location of the stone veneer columns at the corners of the bridge has been revised as well.

Each bidder shall acknowledge receipt of this addendum by affixing his signature below by noting this addendum on his bid form, and by attaching this addendum to his bid.

ACKNOWLEDGEMENT
The undersigned acknowledges receipt of this addendum and the Bid submitted in accordance with information, instructions and stipulations set forth herein.

Bidder: _____

Signed By: _____

Date: _____

GRE GREAT RIVER ENGINEERING

CONTRACTOR NAME: _____

ADDRESS LINE 1: _____

ADDRESS LINE 2: _____

PHONE NUMBER: _____

EMAIL: _____

City of Joplin, MO

DATE: _____

STP-3201(705)

ITEMIZED BID FORM

LINE	ITEM	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	AMOUNT
TRAIL ITEMS						
1	618	MOBILIZATION	L.S.	1		$ -
2	201	CLEARING AND GRUBBING	L.S.	1		$ -
3	203	EXCAVATION FOR ROADWAY - UNCLASSIFIED	C.Y.	295		$ -
4	203	EMBANKMENT IN PLACE W/ COMPACTION	C.Y.	367		$ -
5	310	TYPE 1 AGGREGATE FOR BASE (4 IN. THICK)	S.Y.	2,388		$ -
6	401	BITUMINOUS PAVEMENT MIXTURE (BP-2)	TON	313		$ -
7	608	CONCRETE CURB RAMP	S.Y.	33.0		$ -
8	608	TRUNCATED DOMES	S.F.	39		$ -
9	608	4" PVC SLEEVES (15' IN LENGTH)	L.F.	60		$ -
10		CONCRETE FLUME	S.Y.	5		$ -
11	310	TYPE 1 AGGREGATE AT CONCRETE FLUME	S.Y.	148		$ -
12	805	SEEDING	AC.	0.22		$ -
13	806	SILT FENCE	L.F.	182		$ -
14	806	SILT DITCH CHECK	EA.	8		$ -
15		REMOVAL OF UNSUITABLE MATERIAL	C.Y.	50		$ -
16		BACKFILL OF UNSUITABLE MATERIAL	C.Y.	50		$ -
					TRAIL ITEMS SUBTOTAL	$ -
BRIDGE ITEMS						
17	206	UNCLASSIFIED EXCAVATION (STRUCTURE)	C.Y.	76		$ -
18	611	TYPE 2 ROCK BLANKET	C.Y.	160		$ -
19	702	STRUCTURAL STEEL PILES (10 IN.)	L.F.	69		$ -
20	702	PILE POINT REINFORCEMENT	EA.	6		$ -
21	702	PRE-BORE FOR PILING	L.F.	60		$ -
22	703	CLASS B1 CONCRETE	C.Y.	29.0		$ -
23	706	REINFORCING STEEL	LBS.	4,742		$ -
24	705	24 IN., PRECAST CONCRETE SLAB BEAM	L.F.	360		$ -
25	716	PLAIN NEOPRENE BEARING PAD	L.F.	40		$ -
26	705	STONE VENEER COLUMN	EA	4		$ -
27	703	RAIL	L.F.	172		$ -
					BRIDGE ITEMS SUBTOTAL	$ -
					TOTAL CONTRACT	$ -

GENERAL NOTES

1. THE CONTRACTOR SHALL FOLLOW THE JOB SPECIAL PROVISIONS FOR THIS PROJECT. FOR ITEMS NOT DIRECTLY COVERED IN THE JOB SPECIAL PROVISIONS THE CONTRACTOR SHALL FOLLOW THE SPECIFICATIONS AS STATED IN THE "MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRICTION "2016" EDITION, AND CURRENT SUPPLEMENTAL SPECIFICATION REVISIONS.

2. CONTRACTOR SHALL FIELD VERIFY ALL HORIZONTAL AND VERTICAL LINES AND GRADES OF EXISTING UTILITIES PRIOR TO THE CONSTRUCTION OF IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE DESIGN PROFESSIONAL IMMEDIATELY UPON DISCOVERY OF A DISCREPANCY BETWEEN THE CONSTRUCTION DRAWINGS AND ACTUAL FIELD CONDITIONS.

3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF ANY UNDERGROUND UTILITIES OR OTHER OBSTRUCTIONS AND TO BE LIABLE FOR DAMAGE AND CONSEQUENT REPAIR TO SUCH IN THE COURSE OF HIS OPERATIONS.

4. THE CONTRACTOR SHALL LOCATE SAW CUT LINES WHERE NECESSARY TO PERFORM THE DEMOLITION AND CONSTRUCTION REQUIRED. ALL JOINTS WHERE NEW CONSTRUCTION MATCHES EXISTING SHALL BE SAW CUT TO NEAT LINES.

5. THE CONTRACTOR WILL KEEP THE CONSTRUCTION SITE NEAT AND ORDERLY AT ALL TIMES WHILE CONSTRUCTION IS TAKING PLACE. THE PROPER AMOUNT OF INSPECTION SHALL BE CALLED FOR AT THEIR PROPER TIMES, OR ANY AND ALL WORK MAY BE REJECTED. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY, AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE DESIGN PROFESSIONAL OR OWNER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE. IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN OR NEAR THE CONSTRUCTION SITE.

6. ALL AREAS DISTURBED BY CONSTRUCTION, AND NOT INDICATED TO RECEIVE ANY OTHER FORM OF SURFACE TREATMENT, SHALL BE DRESSED AND SEEDED TO LAWN CONDITIONS.

7. NO TREE TRIMMING TO BE DONE WITHOUT WRITTEN PERMISSION FROM THE CITY OR MSSU.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE PUBLIC STREETS IN THE VICINITY OF THE JOB SITE CLEAN AND FREE OF ROCKS, SOIL, AND DEBRIS.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL DEVICES DURING THE ENTIRE CONSTRUCTION PERIOD. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.

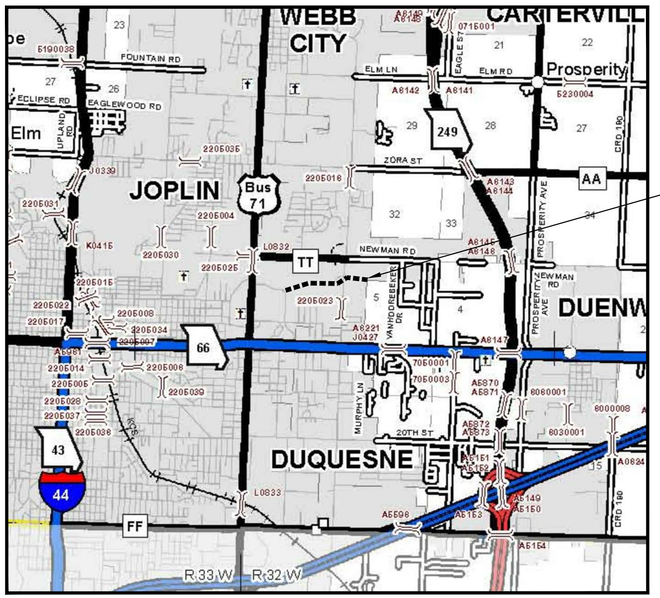
10. THE CONTRACTOR TO RETAIN FLOATABLE WIND BLOWN MATERIALS ON SITE BY STORING ALL TRASH AND BUILDING MATERIAL WASTE IN ENCLOSURES UNTIL PROPER DISPOSAL AT AN OFFSITE FACILITY. CONTRACTOR TO CHECK ADJACENT AREAS DAILY AND PICK UP CONSTRUCTION WASTE MATERIALS AND DEBRIS THAT HAVE BLOWN OR WASHED OFF-SITE

11. TRAIL CROSS SLOPES SHALL BE 1/2% MINIMUM, 1% TYPICAL, AND 2% MAXIMUM WHEN MEASURED WITH A 2' DIGITAL LEVEL.

CONSTRUCTION PLANS
CITY OF JOPLIN TRAIL & PEDESTRIAN BRIDGE
STP 3201(705)

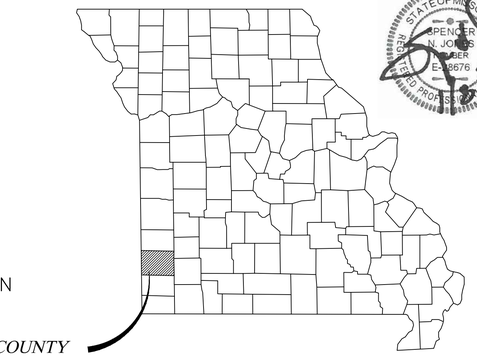
SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
CV-01	COVER SHEET
QTY-01	QUANTITIES
TC-01	TRAFFIC CONTROL
GR-01 - GR-02	GRADING, EROSION CONTROL PLAN & DETAILS
RW1	RIGHT-OF-WAY PLAN
C-01 - C-04	TRAIL PLAN AND PROFILE
CS-01 - CS-04	CROSS SECTIONS
DE-01	CONSTRUCTION DETAILS
S-01	BRIDGE PLAN & ELEVATION DETAILS
S-02	SOIL DATA
S-03 - S04	BRIDGE END BENT DETAILS
S-05	BRIDGE INTERMEDIATE BENT DETAILS
S-06 - S08	BRIDGE SLAB BEAM DETAILS
S-09	BRIDGE BILL OF REINFORCING
S-10	RAIL DETAILS



MSSU TRAIL PROJECT LOCATION

GENERAL LOCATION MAP
JOPLIN, MISSOURI
SECTION 6, TOWNSHIP 27 NORTH, RANGE 32 WEST



SHOWING LOCATION OF COUNTY
NOT TO SCALE

N
W E
S

BENCHMARK DATA

BM1 - TOP OF CURB AT THE NORTHWEST CORNER OF PARKING LOT, LOCATED ON THE NORTH SIDE OF THE EXISTING MOVIE THEATER

ELEVATION=986.00'

BM2 - TOP OF CURB AT THE NORTHEAST CORNER OF PARKING LOT, LOCATED ON THE NORTH SIDE OF THE EXISTING MOVIE THEATER

ELEVATION=973.38'

(VERTICAL DATUM : NAVD88)

Point Table				
Point #	Northing	Easting	Elevation	Description
1	337496.4190	2799432.2867	983.91	CP 1 BASE
2	337497.6125	2799637.9931	985.78	CP 2 MAG NAIL
162	337521.9125	2798322.1059	979.01	CP 162 60D
1000	337484.6358	2799419.5681	983.66	CP 1000 60D

LEGEND

- = IRON PIN SET (TYPICAL) GREAT RIVER 2001011476
- = EXISTING IRON PIN FOUND, AS NOTED
- = EXISTING RIGHT-OF-WAY
- 950 = EXISTING CONTOUR MAJOR
- = EXISTING CONTOUR MINOR
- = EXISTING TREE, SIZE AS NOTED
- = EXISTING BUSH, SIZE AS NOTED
- = EXISTING TELEPHONE RISER
- = EXISTING LIGHT POLE
- = EXISTING POWER POLE
- = EXISTING ELECTRIC RISER
- = EXISTING SEWER MANHOLE
- GV = EXISTING GAS VALVE
- GM = EXISTING GAS METER
- MB = EXISTING MAIL BOX
- = EXISTING SIGN
- WM = EXISTING WATER METER
- WV = EXISTING WATER VALVE
- = EXISTING FIRE HYDRANT
- S = EXISTING SEWER LINE
- X = EXISTING FENCE LINE
- O = EXISTING CHAIN-LINK FENCE LINE
- O = EXISTING WOOD FENCE LINE
- OHE = EXISTING ELECTRIC LINE
- UE = EXISTING UNDERGROUND ELECTRIC
- T = EXISTING TELEPHONE LINE
- UT = EXISTING UNDERGROUND TELEPHONE LINE
- G = EXISTING GAS LINE
- W = EXISTING WATER LINE
- GW = EXISTING GAS & WATER LINE

UTILITY DISCLAIMER

THE UNDERGROUND UTILITIES DEPICTED ON THIS SURVEY, ARE THOSE DISCOVERED BY FIELD INSPECTION, OR LOCATED BY UTILITY COMPANY REPRESENTATIVES; AND MAY NOT BE ALL THE UTILITIES ON OR NEAR THE PROPERTY. AFTER USING REASONABLE CARE IN THE LOCATION OF THOSE UTILITIES SHOWN, WE REFRAIN FROM WARRANTING EITHER THE LOCATION OF, OR COMPLETENESS OF, THOSE UTILITIES SHOWN, AS BEING ALL UTILITIES POSSIBLY AFFECTING THE SUBJECT PROPERTY.

MISSOURI ONE CALL SYSTEM, INC. 1-800-344-7483 STOP-CALL BEFORE YOU DIG!

SUBMITTED AND RECOMMENDED

CITY OF JOPLIN DATE

No.	Revision/Issue	Date
1	ADDENUM #2	01/07/20

STATE OF MISSOURI JERANY L. JACKSON NUMBER LA-000175 LANDSCAPE ARCHITECT

STATE OF MISSOURI SPENCER N. JONES NUMBER E-28676 REGISTERED PROFESSIONAL ENGINEER

JERANY L. JACKSON
MO# LA-000175

GRE GREAT RIVER ENGINEERING
2626 S. NOPAH MILL SPRINGFIELD, MO 65804
PHONE: (417) 886-7171 FAX: (417) 886-7591
www.greofmo.com
Missouri State Certificate of Authority Numbers:
Engineering: 2000165865 Land Surveying: 2000167443 Landscape Architecture: 2007013673

CITY OF JOPLIN - TRAIL & PEDESTRIAN BRIDGE STP 3201(705)
JOPLIN, MISSOURI

COVER SHEET

DATE: 04.24.2019
JOB NUMBER: 13-3249

SHEET
CV-01

ITEMIZED BID FORM

LINE	ITEM	DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	AMOUNT
TRAIL ITEMS						
1	618	MOBILIZATION	L.S.	1		$ -
2	201	CLEARING AND GRUBBING	L.S.	1		$ -
3	203	EXCAVATION FOR ROADWAY - UNCLASSIFIED	C.Y.	295		$ -
4	203	EMBANKMENT IN PLACE W/ COMPACTION	C.Y.	367		$ -
5	310	TYPE 1 AGGREGATE FOR BASE (4 IN. THICK)	S.Y.	2,388		$ -
6	401	BITUMINOUS PAVEMENT MIXTURE (BP-2)	TON	313		$ -
7	608	CONCRETE CURB RAMP	S.Y.	33.0		$ -
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9	608	4" PVC SLEEVES (15' IN LENGTH)	L.F.	60		$ -
10		CONCRETE FLUME	S.Y.	5		$ -
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15		REMOVAL OF UNSUITABLE MATERIAL	C.Y.	50		$ -
16		BACKFILL OF UNSUITABLE MATERIAL	C.Y.	50		$ -
					TRAIL ITEMS SUBTOTAL	*$* -
BRIDGE ITEMS						
17	206	UNCLASSIFIED EXCAVATION (STRUCTURE)	C.Y.	76		$ -
18	611	TYPE 2 ROCK BLANKET	C.Y.	160		$ -
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26	705	STONE VENEER COLUMN	EA	4		$ -
27	703	RAIL	L.F.	172		$ -
					BRIDGE ITEMS SUBTOTAL	*$* -
					TOTAL CONTRACT	*$* -

1

No.	Revision/Issue	Date
1	ADDENUM #2	01/07/20

STATE OF MISSOURI
SPENCER N. JONES
NUMBER E-29676
REGISTERED PROFESSIONAL ENGINEER

STATE OF MISSOURI
JERANY L. JACKSON
NUMBER LA-000175
LANDSCAPE ARCHITECT

JERANY L. JACKSON
MO# LA-000175

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PHONE: (417) 888-7171 FAX: (417) 888-7591
www.greatriv.com
Missouri State Certificate of Authority Numbers:
Engineering: 2006018868, Land Surveying: 2006018869, Landscape Architecture: 2007013673

CITY OF JOPLIN - TRAIL & PEDESTRIAN BRIDGE STP 3201(705)
JOPLIN, MISSOURI

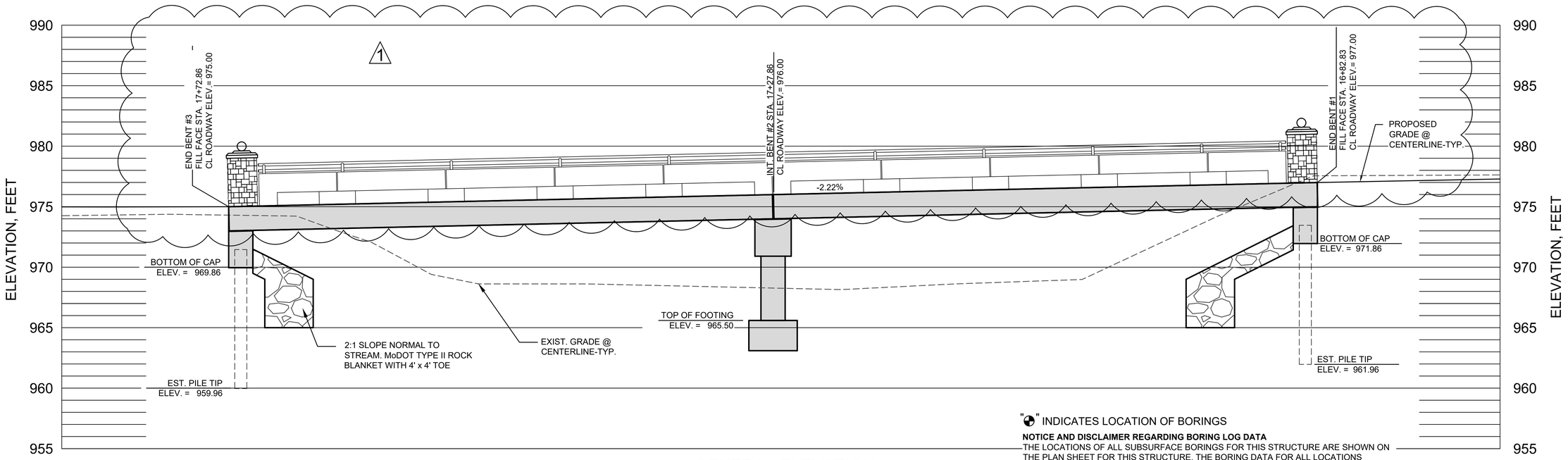
QUANTITIES

DATE: 04.24.2019

JOB NUMBER: 13-3249

SHEET
QTY-01

SLAB BEAM BRIDGE
2 SPAN ARRANGEMENT 45'-0" - 45'-0"



GENERAL ELEVATION

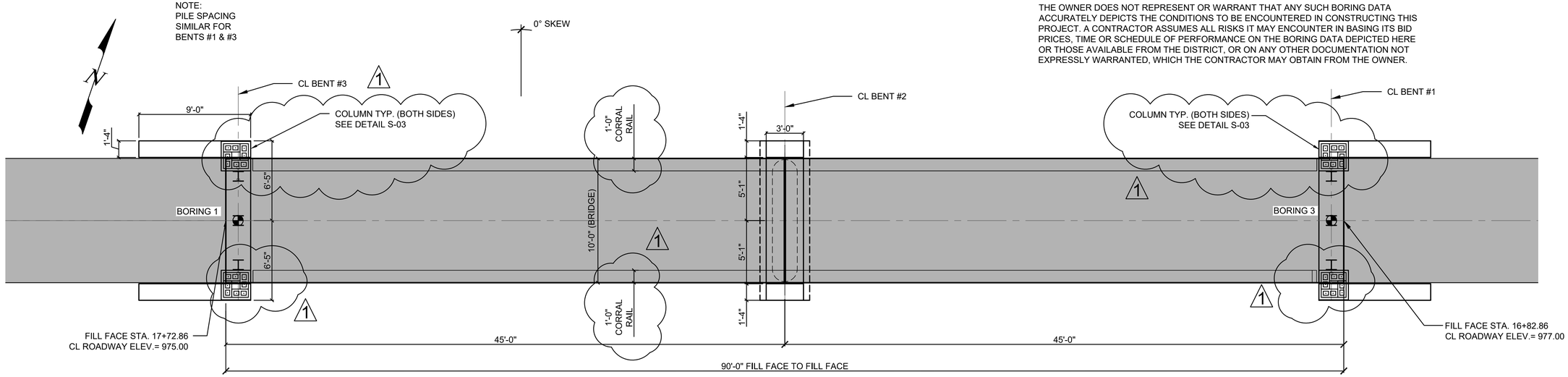
ALONG CENTERLINE OF ROADWAY
1"=50' HOR. 1"=10' VERT.

"◔" INDICATES LOCATION OF BORINGS

NOTICE AND DISCLAIMER REGARDING BORING LOG DATA

THE LOCATIONS OF ALL SUBSURFACE BORINGS FOR THIS STRUCTURE ARE SHOWN ON THE PLAN SHEET FOR THIS STRUCTURE. THE BORING DATA FOR ALL LOCATIONS INDICATED, AS WELL AS ANY OTHER BORING LOG OR OTHER FACTUAL RECORDS OF SUBSURFACE DATA AND INVESTIGATION PERFORMED FOR THE DESIGN OF THE PROJECT, ARE SHOWN ON THE BORING DATA SHEET OR WILL BE AVAILABLE FROM THE PROJECT CONTACT UPON WRITTEN REQUEST. NO GREATER SIGNIFICANCE OR WEIGHT SHOULD BE GIVEN TO THE BORING DATA DEPICTED ON THE PLAN SHEETS THAN IS GIVEN TO THE SUBSURFACE DATA AVAILABLE FROM THE OWNER OR ELSEWHERE.

THE OWNER DOES NOT REPRESENT OR WARRANT THAT ANY SUCH BORING DATA ACCURATELY DEPICTS THE CONDITIONS TO BE ENCOUNTERED IN CONSTRUCTING THIS PROJECT. A CONTRACTOR ASSUMES ALL RISKS IT MAY ENCOUNTER IN BASING ITS BID PRICES, TIME OR SCHEDULE OF PERFORMANCE ON THE BORING DATA DEPICTED HERE OR THOSE AVAILABLE FROM THE DISTRICT, OR ON ANY OTHER DOCUMENTATION NOT EXPRESSLY WARRANTED, WHICH THE CONTRACTOR MAY OBTAIN FROM THE OWNER.



PLAN VIEW

SCALE: 1"=50'

MANUFACTURED PILE POINT REINFORCEMENT & BITUMINOUS COATING SHALL BE USED ON ALL PILES IN THIS STRUCTURE.

MINIMUM ENERGY REQUIRED OF HAMMER IS BASED ON PLAN LENGTH AND MINIMUM NOMINAL AXIAL COMPRESSIVE RESISTANCE.

DF = FHWA-MODIFIED GATES DYNAMIC FORMULA

MINIMUM NOMINAL AXIAL COMPRESSIVE RESISTANCE = MAXIMUM FACTORED LOADS/0.4

PILE AND FOOTING DATA

BENT NO.			1	2	3
LOAD BEARING PILE	PILE TYPE AND SIZE		HP10x42		HP10x42
	NUMBER		3		3
	APPROXIMATE LENGTH PER EACH	FT	11.5		11.5
	PILE DRIVING VERIFICATION METHOD		DF		DF
	MINIMUM NOMINAL AXIAL COMPRESSIVE RESISTANCE	KIP	211		211
	HAMMER ENERGY REQUIRED	FT-LB	6,790		6,790
	PRE-BORE LENGTH PER EACH	FT	10		10
SPREAD FOOTINGS	FOUNDATION MATERIAL			ROCK	
	DESIGN BEARING (K/SQ. FT.)			15	

HYDRAULIC SUMMARY DATA TABLE

DESIGN FLOOD DATA	
DRAINAGE AREA	22 SQ. MI.
DESIGN FREQUENCY	5 YR
DESIGN DISCHARGE	2287 CFS
DESIGN HIGH WATER ELEVATION AT STRUCTURE	975.61 FEET
100 YEAR DISCHARGE	7770 CFS
100 YEAR HIGH WATER ELEVATION AT STRUCTURE	979.15 FEET
100 YEAR BACKWATER	0.6 FEET
APPROACH ROADWAY OVERTOPPING FREQUENCY	5 YR.

No.	Revision/Issue	Date
1	ADDENUM #2	01/08/20

STATE OF MISSOURI
SPENCER N. JONES
NUMBER PE-28676
REGISTERED PROFESSIONAL ENGINEER
SPENCER N. JONES - ENGINEER
MO# PE-28676

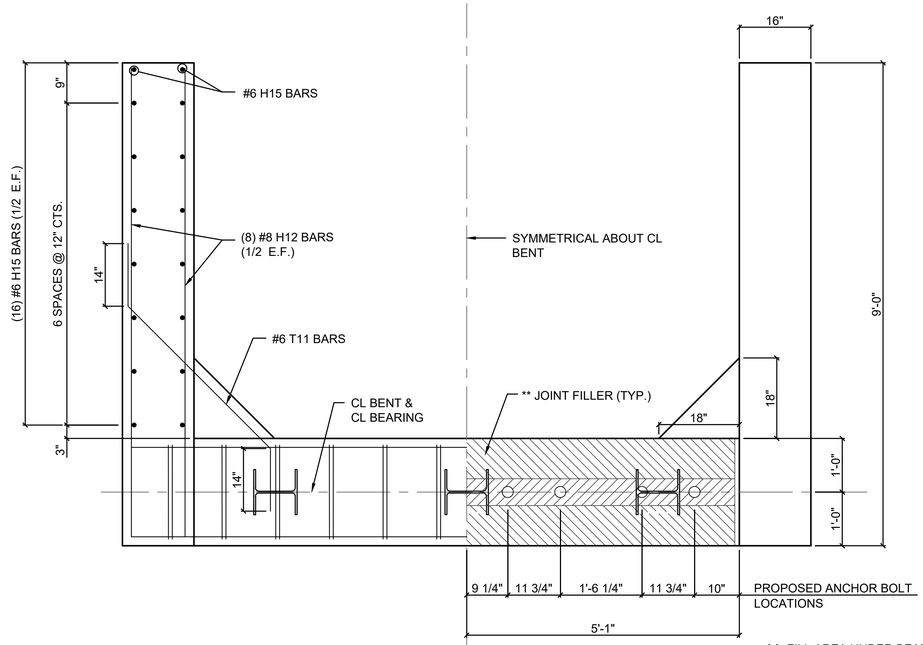
GRE GREAT RIVER ENGINEERING
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Missouri State Certificate of Authority Numbers:
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CITY OF JOPLIN - TRAIL & PEDESTRIAN BRIDGE STP 3201(705)
JOPLIN, MISSOURI

BRIDGE PLAN & ELEVATION DETAILS

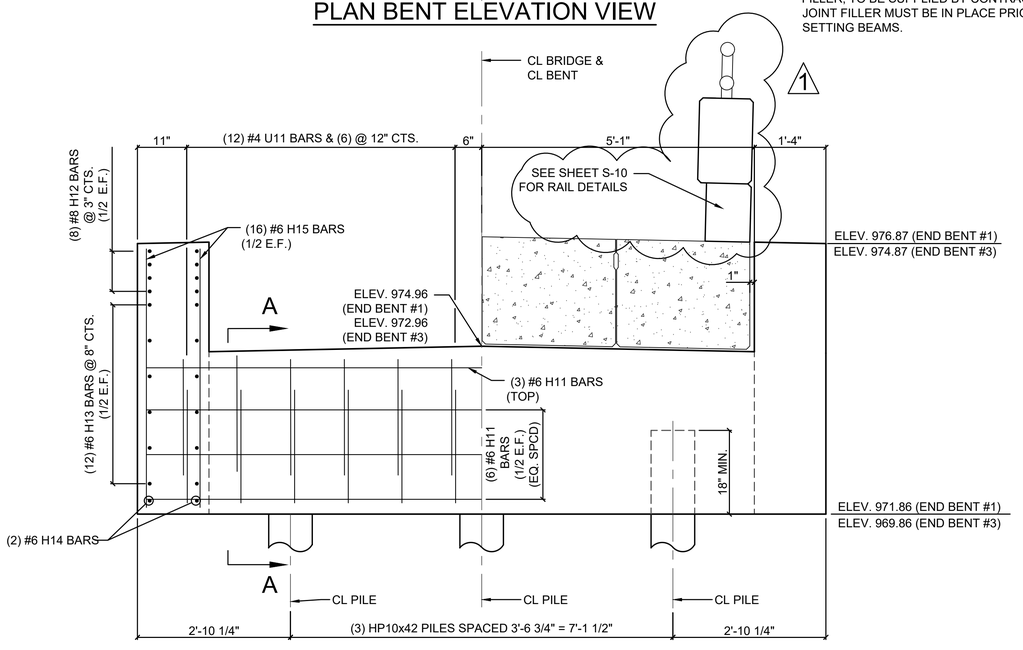
DATE: 04.24.2019
JOB NUMBER: 13-3249

SHEET
S-01



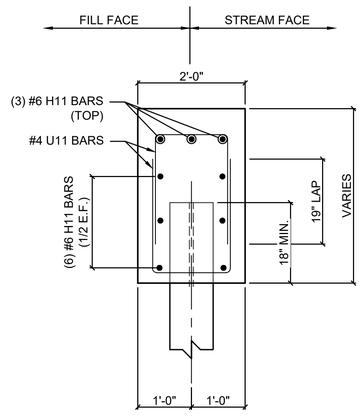
PLAN BENT ELEVATION VIEW

** FILL AREA UNDER BEAMS WITH JOINT FILLER, TO BE SUPPLIED BY CONTRACTOR. JOINT FILLER MUST BE IN PLACE PRIOR TO SETTING BEAMS.



END BENT ELEVATION VIEW

(ELEVATIONS @ FILL FACE)



SECTION A-A

NOTES:

SECTIONS A-A IS TAKEN NORMAL TO CENTERLINE OF BENT.

SEE BRIDGE BILL OF REINFORCING STEEL SHEET FOR BAR DETAILS.

ALL U-BARS AND V-BAR PAIRS IN END BENT ARE TO BE PLACED PARALLEL TO CL OF TRAIL.

FOR LOCATION OF ANCHOR BOLTS AND DETAILS, SEE BRIDGE SLAB BEAM DETAILS SHEETS.

LABELS FOR REINFORCING STEEL ARE SHOWN FOR BENT #1. BENT #3 IS IDENTICAL EXCEPT FOR THE FIRST NUMBER OF THE BAR LABEL.
EXAMPLE: #6 V11 BARS = BENT #1
#6 V31 BARS = BENT #3

E.F. EACH FACE

No.	Revision/Issue	Date
1	ADDENUM #2	01/08/20

STATE OF MISSOURI
SPENCER N. JONES
NUMBER PE-28676
REGISTERED PROFESSIONAL ENGINEER

SPENCER N. JONES - ENGINEER
MO# PE-28676

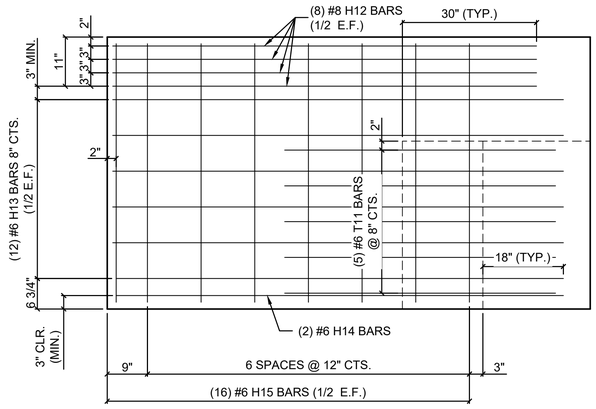
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CITY OF JOPLIN - TRAIL & PEDESTRIAN BRIDGE STP 3201(705)
JOPLIN, MISSOURI

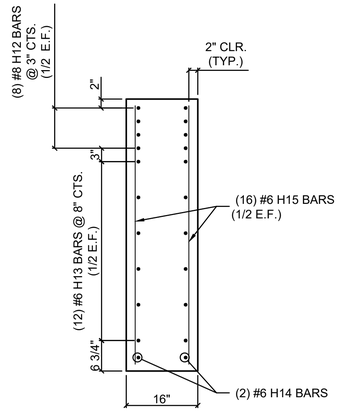
BRIDGE END BENT DETAILS
-

DATE: 04.24.2019
JOB NUMBER: 13-3249

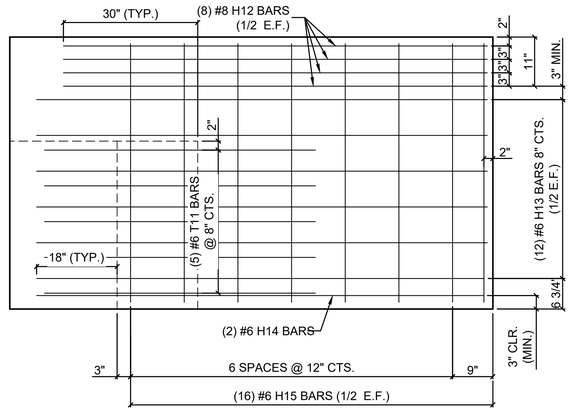
SHEET
S-03



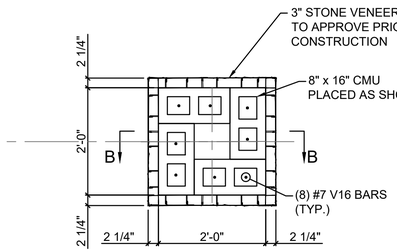
ELEVATION VIEW OF WING
(STREAM FACE)



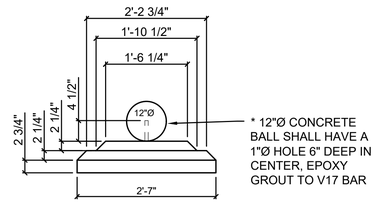
PART SECTION THRU WING

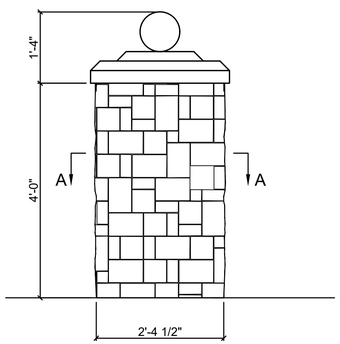


ELEVATION VIEW OF WING
(FILL FACE)

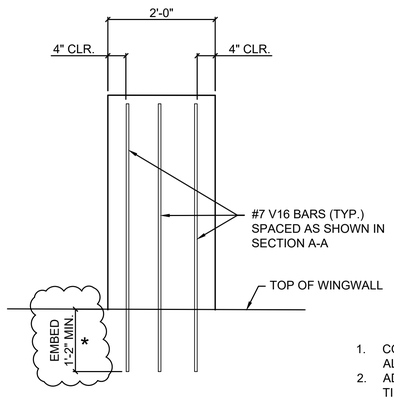


SECTION A-A





ELEVATION VIEW



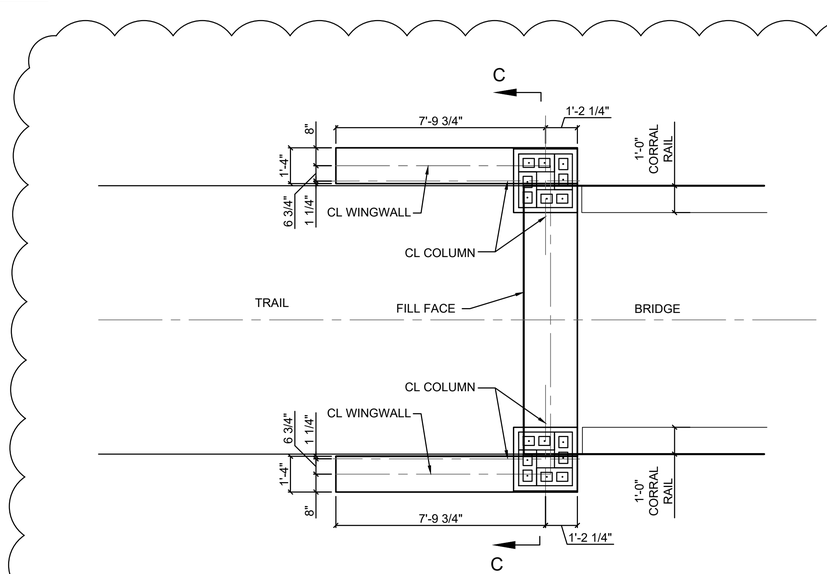
SECTION B-B

COLUMN DETAIL

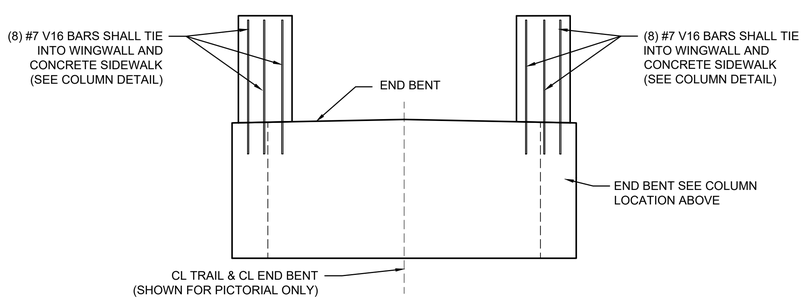
1. CONSTRUCT WITH TYPE S MORTAR ALL JOINTS.
2. ADJUSTABLE TAB TYPE MASONRY TIES MINIMUM 3 PER COURSE OFFSET PLACEMENT.
3. TOOL ALL JOINTS CONCAVE
4. ENGINEERED STONE VENEER.

* FOR V16 BARS TO BE EMBED INTO SLAB BEAMS, USE COIL TIES

1



COLUMN LOCATION
(WEST ABUTMENT SHOWN)
(EAST ABUTMENT SIMILAR)



SECTION C-C

No.	Revision/Issue	Date
1	ADDENDUM #2	01/08/20

STATE OF MISSOURI
SPENCER N. JONES
NUMBER PE-28676
REGISTERED PROFESSIONAL ENGINEER

SPENCER N. JONES - ENGINEER
MO# PE-28676

GRE GREAT RIVER ENGINEERING
2636 S. NOPAH MILL SPRINGFIELD, MO 65804
PHONE: (417) 886-7171 FAX: (417) 886-7591
www.greofmo.com

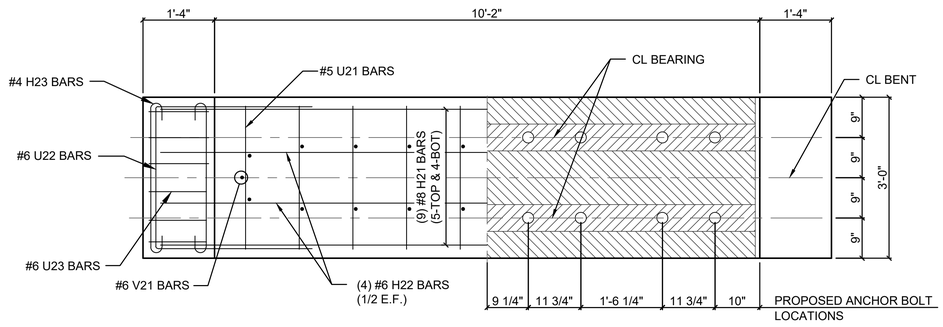
Missouri State Certificate of Authority Numbers:
Engineering: 2006018865; Land Surveying: 2006018744; Landscape Architecture: 2007013673

CITY OF JOPLIN - TRAIL & PEDESTRIAN BRIDGE STP 3201(705)
JOPLIN, MISSOURI

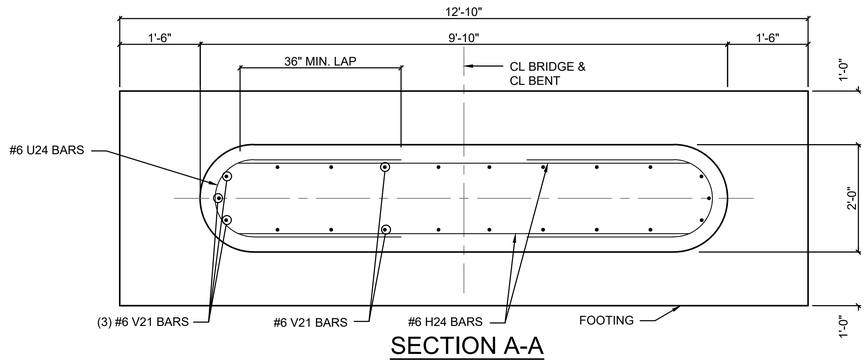
BRIDGE END BENT DETAILS
-

DATE: 04.24.2019
JOB NUMBER: 13-3249

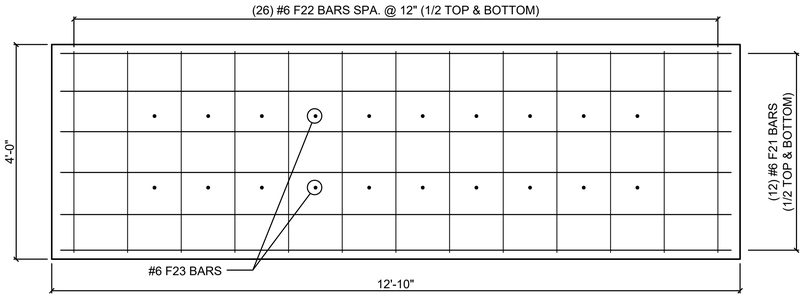
SHEET
S-04



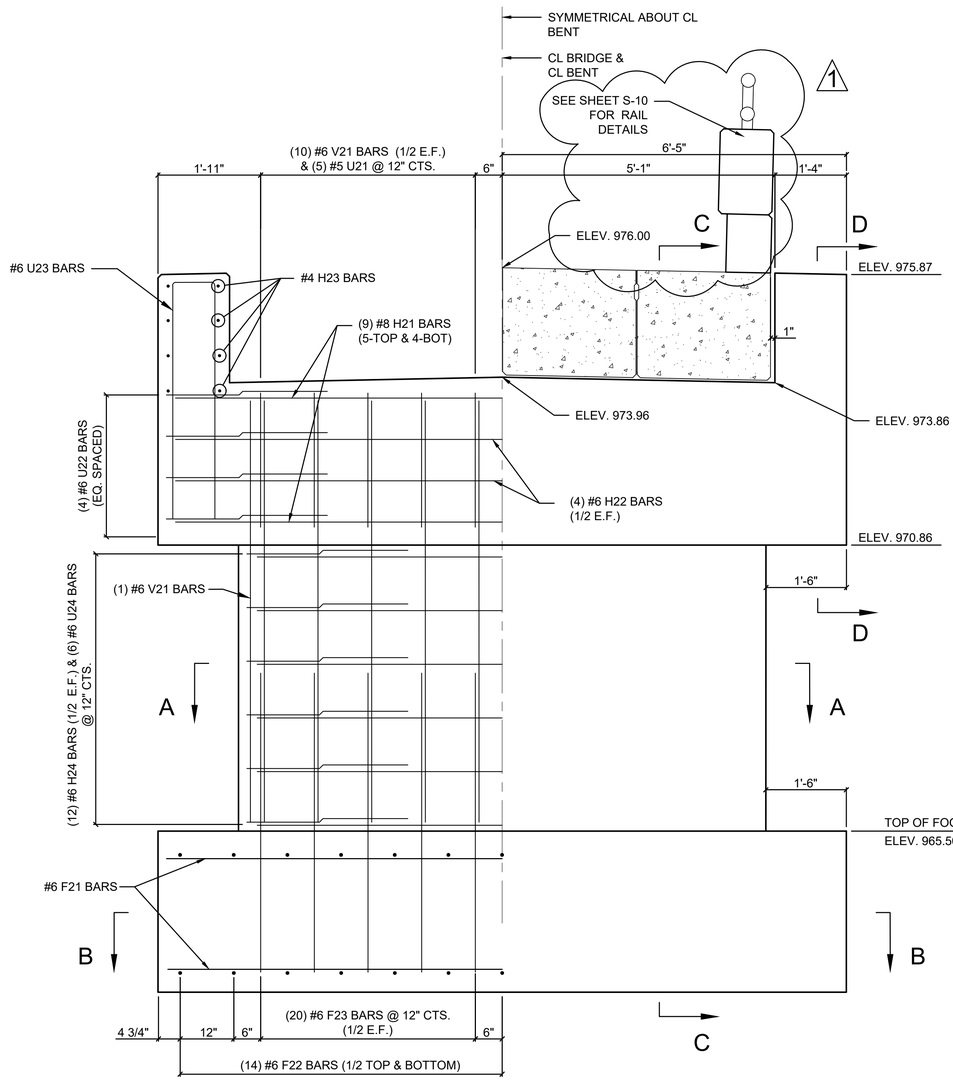
INTERMEDIATE BENT PLAN VIEW



SECTION A-A

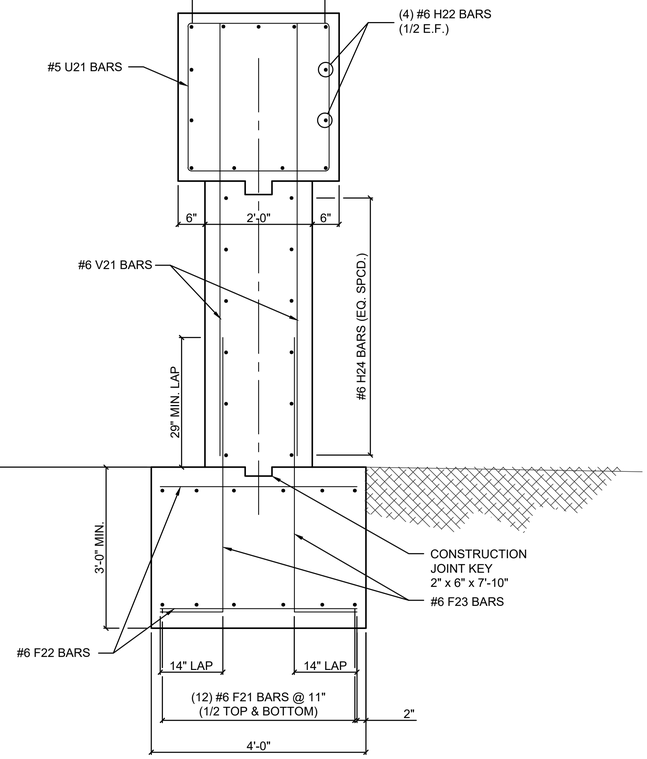


SECTION B-B

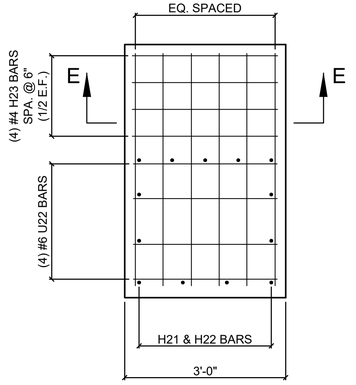


INTERMEDIATE BENT ELEVATION VIEW

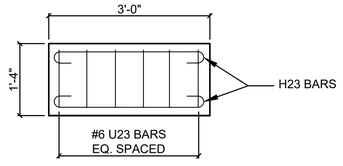
(ELEVATIONS @ CL BENT)



SECTION C-C



SECTION D-D



SECTION E-E

No.	Revision/Issue	Date
4	ADDENUM #2	01/08/20

SPENCER N. JONES - ENGINEER
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www.greonline.com
Missouri State Certificate of Authority Numbers:
Engineering: 2006018865 Land Surveying: 2006018865 Landscape Architecture: 2007013673

CITY OF JOPLIN - TRAIL & PEDESTRIAN BRIDGE STP 3201(705)
JOPLIN, MISSOURI

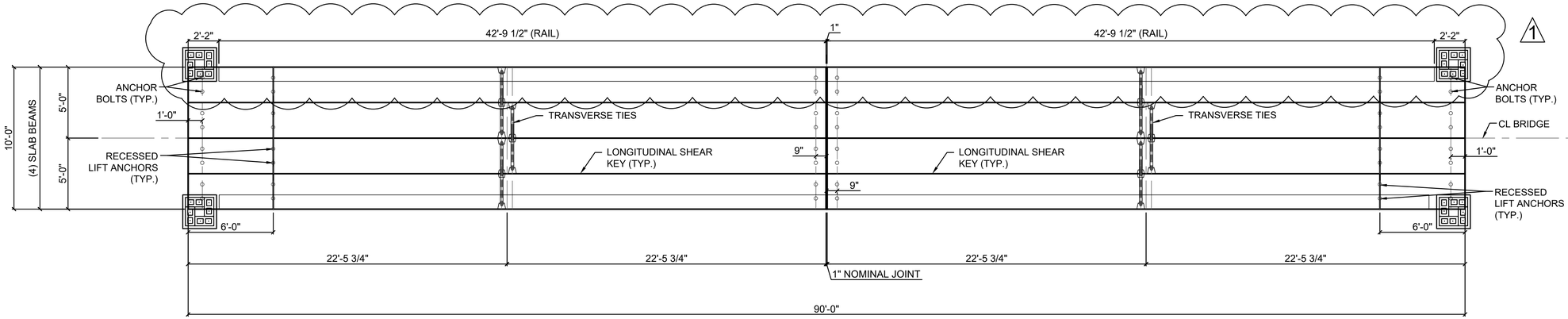
BRIDGE INTERMEDIATE BENT DETAILS

-

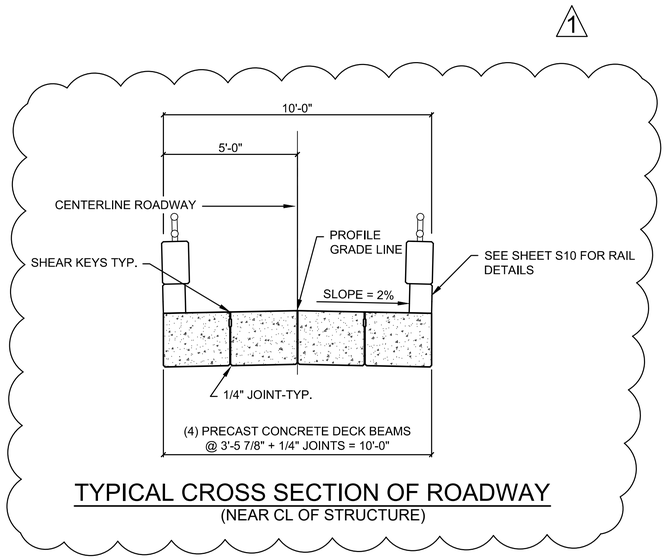
DATE: 04.24.2019

JOB NUMBER: 13-3249

SHEET
S-05



SLAB BEAM LAYOUT PLAN



TYPICAL CROSS SECTION OF ROADWAY
(NEAR CL OF STRUCTURE)

DESIGN DATA

DESIGN SPECIFICATIONS: 2014 A.A.S.H.T.O. LRFD BRIDGE DESIGN SPECIFICATIONS (7TH ED.)

SEISMIC DESIGN CATEGORY 'A'

DESIGN LOADING: HL-93
FUTURE WEARING SURFACE --- 35 PSF
EARTH --- 120 PCF
EQUIVALENT FLUID PRESSURE --- 45 PCF
35 POUND/SQUARE FOOT INITIAL WEARING SURFACE, NO FUTURE WEARING SURFACE ALLOWED

SUPERSTRUCTURE: SIMPLY SUPPORTED NON-COMPOSITE FOR DEAD AND LIVE LOADS.

NOTES:

DESIGN UNIT STRESSES FOR SLAB BEAMS;
CONCRETE f'c = 4,000 psi
REINFORCING STEEL (GRADE 60) fy = 60,000 psi

AFTER BEAMS HAVE BEEN ERECTED, HOLES SHALL BE DRILLED INTO SUBSTRUCTURE AND ANCHOR BOLTS PLACED. ANCHOR HOLES SHALL BE FILLED WITH HIGH STRENGTH NON-SHRINK GROUT TO TOP OF BEAM.

THE 1" DIAMETER RODS IN THE TRANSVERSE TIE ASSEMBLY SHALL BE TIGHTENED TO A SNUG FIT AND THE THREADS SET. POCKETS THAT RECEIVE TRANSVERSE TIE BAR OUTSIDE SHALL BE FILLED WITH GROUT AFTER TRANSVERSE TIE ASSEMBLY IS IN PLACE. SEE SHEET S2 FOR DETAILS. TIE RODS SHALL BE ASTM A36.

ANCHOR BOLTS, HARDENED WASHERS AND HEAVY HEXAGON NUTS SHALL BE COATED WITH A MINIMUM OF TWO COATS OF INORGANIC ZINC PRIMER (5 MILS MINIMUM).

LONGITUDINAL SHEAR KEYS SHALL BE GROUTED.

USE RECESSED LIFT ANCHORS ON EACH END. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION.

ALL REBAR IN PRECAST SLAB BEAMS SHALL BE EPOXY COATED.

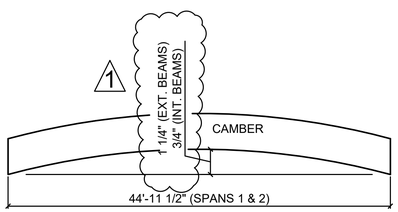
DO NOT LIFT BEAMS UNTIL CONCRETE STRENGTH IS EQUAL TO 3500 PSI.

A FINNED FLOAT PRODUCING GROOVES APPROX. 1/8" WIDE AT 5/8" TO 3/4" CENTERS AND SHALL BE APPROX. 1/8" DEEP.

JOINT FILLER MUST BE IN PLACE PRIOR TO SETTING SLAB BEAMS.

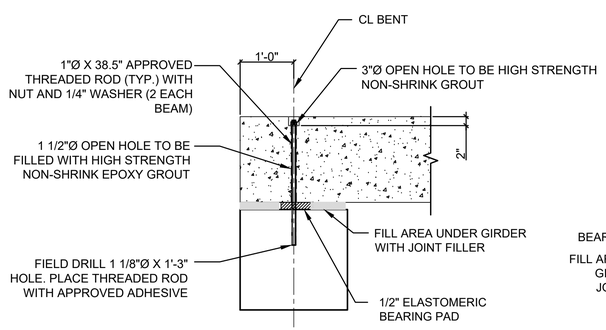
BEARINGS SHALL BE 60 DUROMETER NEOPRENE PADS.

NOMINAL 1" JOINT AT CENTERLINE OF PIERS SHALL BE FILLED WITH JOINT FILLER. SEAL JOINTS WITH SONOLISTIC NP-1 BY SONNEBORN SEALANT SYSTEMS OR APPROVED EQUAL.

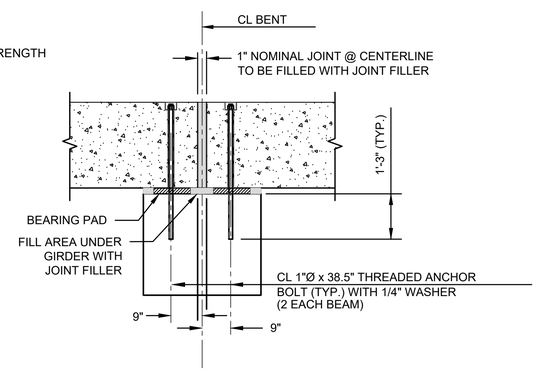


TYPICAL SLAB CAMBER
NOT TO SCALE

SLAB SHALL BE CAMBERED FOR DEAD LOAD DEFLECTIONS.



SECTION AT ABUTMENTS
(ALONG CL BEAMS)



SECTION AT PIERS
(ALONG CL BEAMS)

NOTE: THIS DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

No.	Revision/Issue	Date
1	ADDENUM #2	01/08/20

STATE OF MISSOURI
SPENCER N. JONES
NUMBER PE-28676
REGISTERED PROFESSIONAL ENGINEER

SPENCER N. JONES - ENGINEER
MO# PE-28676

GRE GREAT RIVER ENGINEERING
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www.greatriv.com
Missouri State Certificate of Authority Numbers:
Engineering: 2006018985 Land Surveying: 2006018761 Landscape Architecture: 2007013673

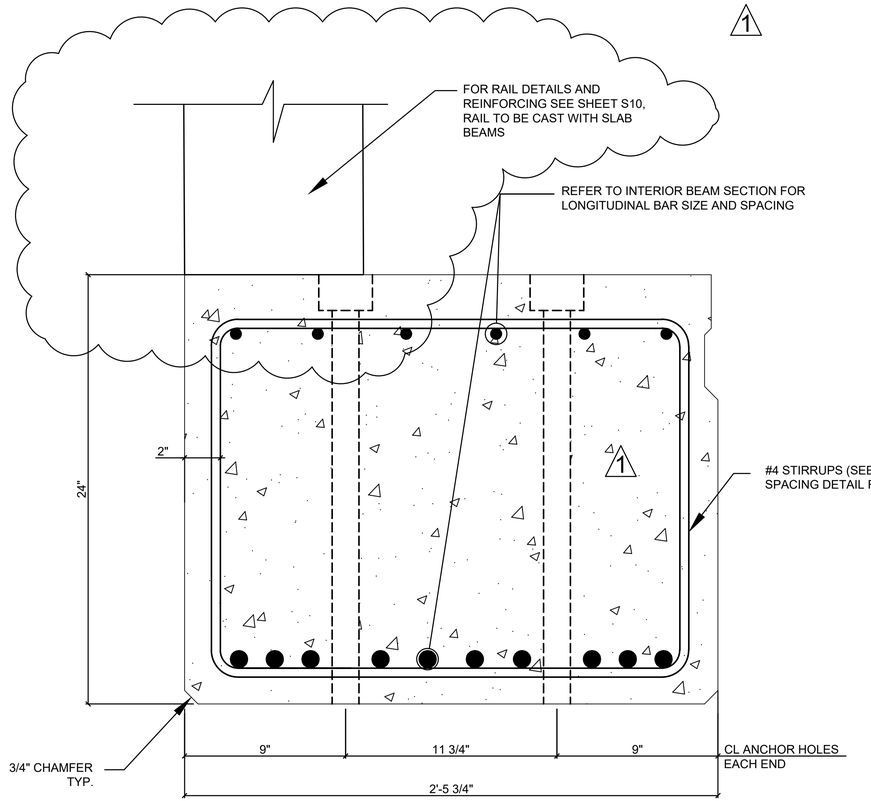
CITY OF JOPLIN - TRAIL & PEDESTRIAN BRIDGE STP 3201(705)
JOPLIN, MISSOURI

BRIDGE SLAB BEAM DETAILS

DATE: 04.24.2019

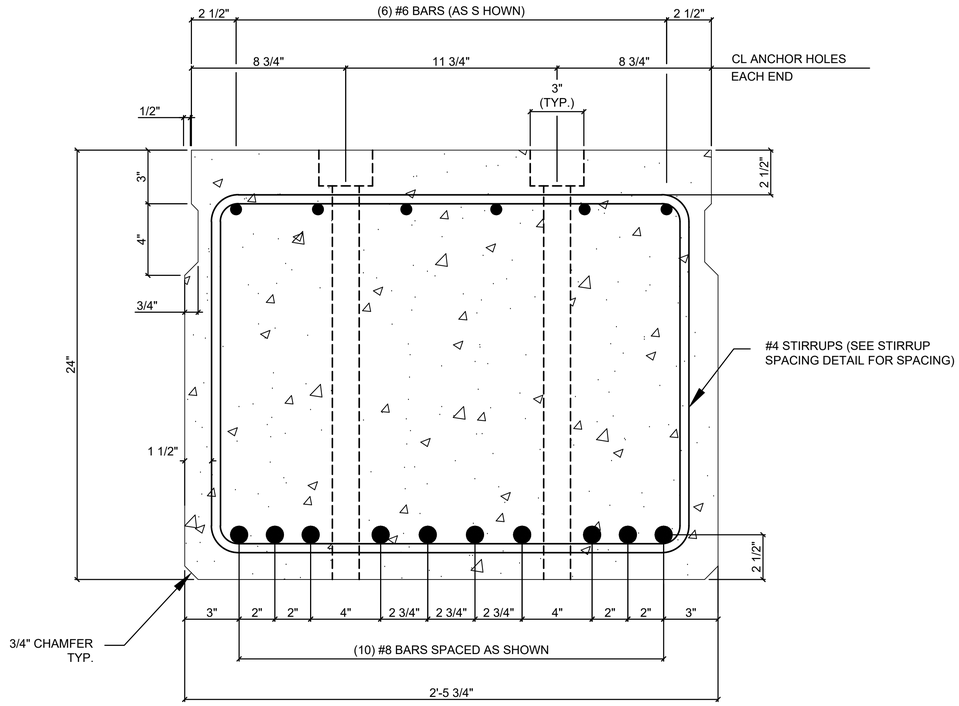
JOB NUMBER: 13-3249

SHEET
S-06



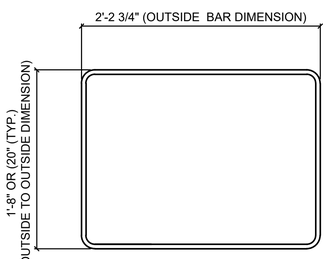
SECTION A-A

TYPICAL CROSS SECTION OF EXTERIOR BEAMS WITH CURB



SECTION B-B

TYPICAL CROSS SECTION OF INTERIOR BEAMS



"TRADITIONAL" STIRRUP DETAIL

NOTE: THIS DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

No.	Revision/Issue	Date
1	ADDENUM #2	01/08/20

STATE OF MISSOURI
SPENCER N. JONES
NUMBER PE-28676
REGISTERED PROFESSIONAL ENGINEER

SPENCER N. JONES - ENGINEER
MO# PE-28676

GRE GREAT RIVER ENGINEERING
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www.greonline.com
Missouri State Certificate of Authority Numbers:
Engineering: 2000165855, Land Surveying: 2000167443, Landscape Architecture: 2007013673

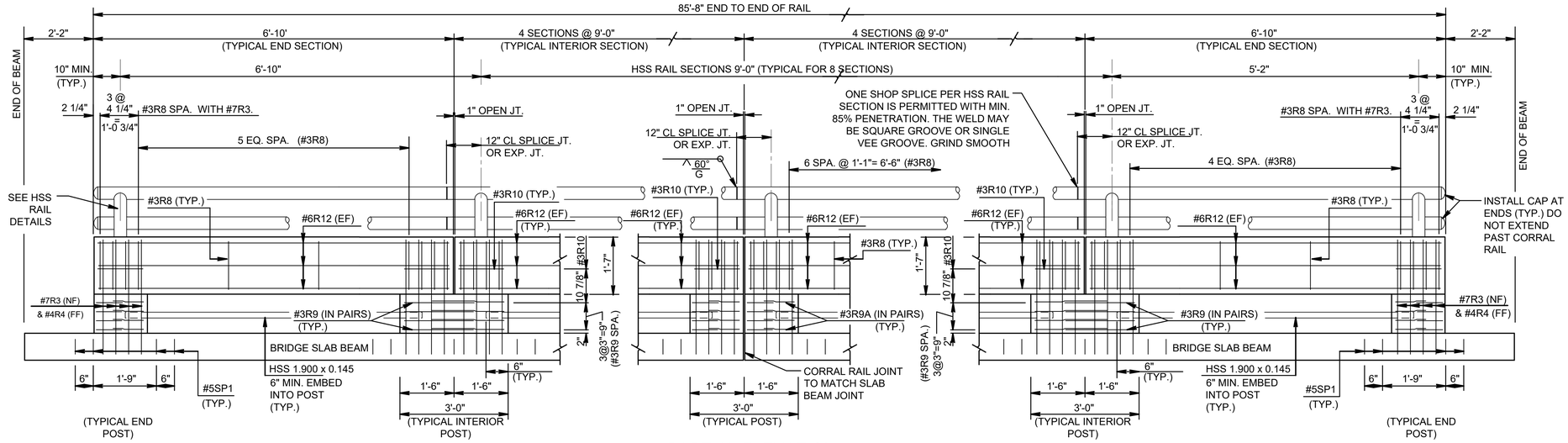
CITY OF JOPLIN - TRAIL & PEDESTRIAN BRIDGE STP 3201(705)
JOPLIN, MISSOURI

BRIDGE SLAB BEAM DETAILS

DATE: 04.24.2019

JOB NUMBER: 13-3249

SHEET
S-08



NOTE:
SEE PLANS FOR CORRAL RAIL LAYOUT.

PARTIAL ELEVATION

(ALONG TRAFFIC FACE)

CONSTRUCTION NOTES

DESIGN UNIT STRESSES

CONCRETE MODOT B1	f'c = 4,000 psi
REINFORCING STEEL	f'y = 60,000 psi
STEEL	f'y = 36,000 psi

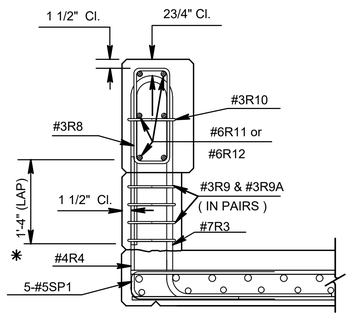
HSS RAIL POSTS AND OPENING END FACES MUST BE PERPENDICULAR TO TOP OF ADJACENT CONCRETE PARAPET GRADE. USE EPOXY MORTAR UNDER HSS RAIL POST BASE PLATES IF GAPS LARGER THAN 1/16" EXIST.

ROUND OR CHAMFER EXPOSED EDGES OF HSS RAIL AND HSS RAIL POSTS TO APPROXIMATELY 1/16" BY GRINDING.

GALVANIZE ALL METAL COMPONENTS OF STEEL RAIL SYSTEM. SLEEVE MEMBERS AND ANCHOR BOLTS MUST RECEIVE GALVANIZATION PRIOR TO INSTALLATION.

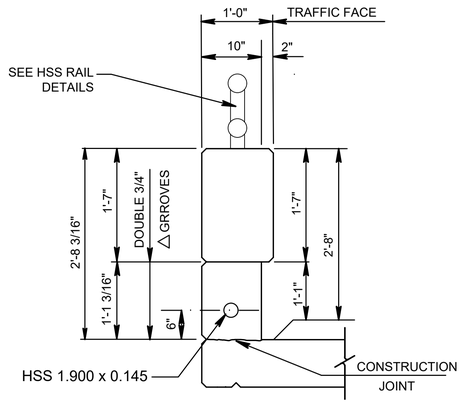
ANCHOR BOLTS MUST BE 5/8" DIA ASTM A307 GR A FULLY THREADED RODS WITH ONE HEX NUT AND ONE HARDENED STEEL WASHER (ASTM F436) EACH. NUTS MUST CONFORM TO ASTM A563 REQUIREMENTS. EMBED FULLY THREADED RODS INTO PARAPET WALL WITH ANCHOR ADHESIVE. MINIMUM ADHESIVE ANCHOR EMBEDMENT DEPTH IS 3". ANCHOR ADHESIVE CHOSEN MUST BE ABLE TO ACHIEVE A NOMINAL BOND STRENGTH IN TENSION OF A SINGLE ANCHOR, NA, OF 5 KIPS (EDGE DISTANCE MUST BE ACCOUNTED FOR).

OPTIONAL CAST-IN-PLACE ANCHOR BOLTS MUST BE 5/8" DIA ASTM A307 GR A BOLTS (OR THREADED RODS WITH ONE TACK WELDED HEX NUT EACH) WITH ONE HEX NUT AND ONE HARDENED STEEL WASHER (ASTM F436) AT EACH BOLT. NUTS MUST CONFORM TO ASTM A563 REQUIREMENTS.

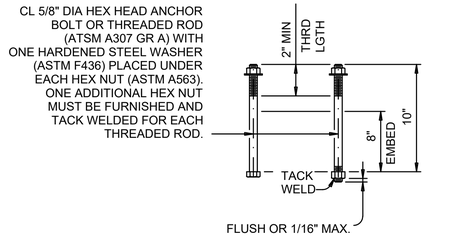


SECTION THRU POST

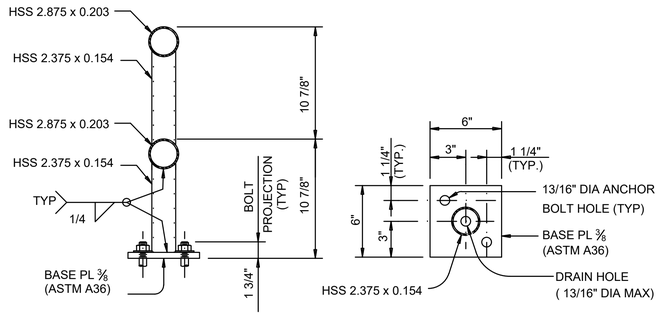
✱NOTE: THE HOOK MAY BE CANTED TO PROVIDE CLEARANCE AND/OR FIT BETWEEN REINFORCING.



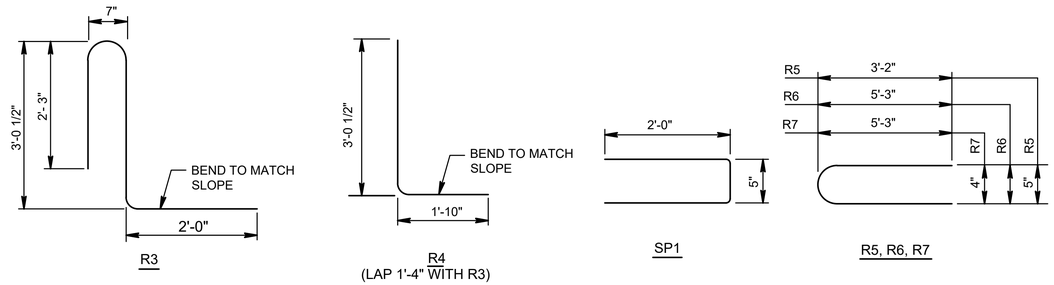
TYPICAL INTERIOR POST



CAST-IN-PLACE ANCHOR BOLT OPTIONS

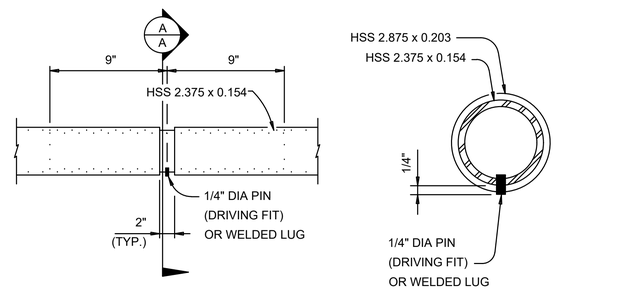


HSS RAIL DETAILS



BENDING DIAGRAMS

ALL DIMENSIONS ARE OUT TO OUT OF BARS.



PIPE SPLICE DETAILS

No.	Revision/Issue	Date
4	ADDENDUM #2	01/08/20

STATE OF MISSOURI — SPENCER N. JONES — NUMBER E-28676 — REGISTERED PROFESSIONAL ENGINEER

SPENCER N. JONES - ENGINEER
MO# PE-28676

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Missouri State Certificate of Authority Numbers:
Engineering: 2006018865; Land Surveying: 2006018743; Landscape Architecture: 2007013673

CITY OF JOPLIN - TRAIL & PEDESTRIAN BRIDGE STP 3201(705)
JOPLIN, MISSOURI

RAIL DETAILS
-

DATE: 04.24.2019
JOB NUMBER: 13-3249

SHEET
S-10