

**ADDENDUM NO. 1  
TO  
BRO –B080(29)  
BRIDGE NO 36400031  
PETTIS COUNTY, MISSOURI**

December 17, 2012

You are instructed to read and note the following described changes, corrections, clarifications, omissions, deletions, additions, approvals and statements pertinent to the Construction Documents.

Addendum No. 1 is a part of the Contract Bid and Construction Documents and shall govern in the performance of the Work.

- 1) Sheet 2 of 18, Typical Roadway cross sections, the geotextile under the 4" aggregate base shall be removed, it is not required for this project. No revised sheet will be issued at this time.
- 2) Sheet 6 of 18 revised bid items, item 26, "SL-1 Rail on Bridge". Revised sheet attached.
- 3) Sheet 10 of 18, intermediate diaphragms have been revised to be square, revised connections for the end diaphragms, 5/16" bent plate shall be used for all diaphragms. Revised sheet attached
- 4) Sheet 12 of 18, revised spacing of the SL-1 rail posts to be 8' - 4", pay length is now 75'-0", per side. Revised sheet attached.
- 5) Sheet 12 of 18, Section A-A anchor bolt diameter shall be 1". Revised sheet attached.
- 6) Revised Itemized Proposal Forms are attached. Bidder shall use these forms to submit their bid.

**ACKNOWLEDGEMENT:** Each Bidder shall acknowledge receipt of Addendum No. 1 by their signature affixed hereto and shall file Addendum No. 1 with their bid.

Signature of Bidder

\_\_\_\_\_  
Contractor

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

ITEMIZED PROPOSAL  
WORK PERFORMED BY THE CONTRACTOR

LINE	DESCRIPTION		UNIT	QUANTITY	UNIT PRICE	AMOUNT
ROADWAY ITEMS						
1	202.3	Removal of Existing Improvements	L.S.	1		
2	403	3" Hot Mix Asphalt	S.Y.	977		
3	310	4" Crushed Stone Base	S.Y	1,026		
4	805	Seeding (includes Fertilizing and Mulching)	AC.	0.4		
5	201	Clearing and Grubbing	AC.	0.4		
6	203	Embankment in Place	C.Y.	1,551		
7	618	Mobilization	L.S.	1		
8	806	Silt Fence	L.F.	900		
9	806	Straw Bale Ditch Check	EACH	6		
10	607	12ft Gate	EACH	2		
Roadway Subtotal						
SIGNING ITEMS						
11	616	Type III Moveable Barricades	EACH	4		
12	616	Construction Signs	EACH	6		
Signing Subtotal						

ACKNOWLEDGEMENT: Each Bidder shall acknowledge receipt of addenda by their signature affixed hereto and addendum noted

Contractor: \_\_\_\_\_

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Addendum No.(s) \_\_\_\_\_

Phone: \_\_\_\_\_

Date: \_\_\_\_\_

(please print)

ITEMIZED PROPOSAL  
WORK PERFORMED BY THE CONTRACTOR

LINE		DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT
<b>BRIDGE ITEMS</b>						
13	216	Removal of Existing Structure	L.S.	1		
14	206	Excavation for Structures	C.Y.	64		
15	606	Guardrail Transition Section	EACH	4		
16	606.1	Type A Crashworthy End Terminal	EACH	4		
17	611	Type II Rock Blanket	C.Y.	308		
18	624	Geotextile Fabric	S.Y.	222		
19	702	HP10X42 Steel Piles	L.F.	144.0		
20	703	Class B2 Concrete	C.Y.	133.2		
21	716.1	Plain Neoprene Bearing Pads	EACH	8		
22	712	Structural Steel	Lbs.	48,270		
23	712	2" Type "C" 18 Gage Metal Deck	S.F.	1,721		
24	760	Reinforcing Steel (Grade 60)	Lbs.	6,850		
25	760	Epoxy Coated Reinforcing Steel (Grade 60)	Lbs.	12,350		
26	713	SL-1 Rail on Bridge	L.F.	150		
<b>Bridge Subtotal</b>						
<b>Total Contractor</b>						

ACKNOWLEDGEMENT: Each Bidder shall acknowledge receipt of  
addenda by their signature affixed hereto and addendum noted

Contractor: \_\_\_\_\_

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Addendum No.(s) \_\_\_\_\_

Phone: \_\_\_\_\_

Date: \_\_\_\_\_

(please print)

L:\103150-030\CAD\STRUCTURAL\103150-030-S-S00-00.DWG  
LAYOUT: GND BY: MEJONES DATE: 11/26/2012  
XREF DWG1: NONE XREF DWG2: NONE  
XREF DWG3: NONE XREF DWG4: NONE

SUMMARY OF QUANTITIES      BRO-B080(29)				
ITEM NO.	ITEM DESCRIPTION		UNIT	QUANTITY
ROADWAY ITEMS				
1	202.3	Removal of Existing Improvements	L.S.	1
2	403	3" Hot Mix Asphalt	S.Y.	977
3	310	4" Crushed Stone Base	S.Y	1,026
4	805	Seeding (includes Fertilizing and Mulching)	AC.	0.4
5	201	Clearing and Grubbing	AC.	0.4
6	203	Embankment in Place	C.Y.	1,551
7	618	Mobilization	L.S.	1
8	806	Silt Fence	L.F.	900
9	806	Straw Bale Ditch Check	EACH	6
10	607	12ft Gate	EACH	2
SIGNING ITEMS				
11	616	Type III Moveable Barricades	EACH	4
12	616	Construction Signs	EACH	6
BRIDGE ITEMS				
13	216	Removal of Existing Structure	L.S.	1
14	206	Excavation for Structures	C.Y.	64
15	606.1	Guardrail Transition Section	EACH	4
16	606	Type A Crashworthy End Terminal	EACH	4
17	611	Type II Rock Blanket	C.Y.	308
18	624	Geotextile Fabric	S.Y.	222
19	702	HP10X42 Steel Piles	L.F.	144
20	703	Class B2 Concrete	C.Y.	133.2
21	716.1	Plain Neoprene Bearing Pads	EACH	8
22	712	Structural Steel	LBS	48,270
23	712	2" Type "C" 18 Gage Metal Deck	S.F.	1,721
24	760	Reinforcing Steel (Grade 60)	LBS	6,850
25	760	Epoxy Coated Reinforcing Steel (Grade 60)	LBS	12,350
26	713	SL-1 Rail on Bridge	L.F.	150

NOTE:

1. QUANTITIES SHOWN ON THESE PLANS ARE NOT GUARANTEED BY THE COUNTY COMMISSION AND ARE USED SOLELY FOR THE PURPOSE OF COMPARING BIDS AND AWARDDING THE CONTRACT, AND MAY OR MAY NOT REPRESENT THE ACTUAL QUANTITIES ON THE JOB, SEE SPECIFICATIONS.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUBMIT FORM 106, TO MISSOURI DEPARTMENT OF NATURAL RESOURCES, HISTORIC PRESERVATION PROGRAM FOR ANY BORROW AREAS TO BE USED ON THIS PROJECT.
3. MoDOT AND FHWA MAY MAKE INSPECTIONS OF THE WORK AND THE CONTRACTOR SHALL GRANT THEM ACCESS TO ALL PARTS OF THE WORK.
4. ANY ITEM SHOWN IN THE PLANS WITHOUT A BID ITEM SHALL BE CONSIDERED SUBSIDIARY TO ANOTHER ITEM BID.

PILE DATA			
BEARING PILES	ABUTMENT	END BENT 1	END BENT 2
	PILE TYPE AND SIZE	HP 10X42	HP 10X42
	NUMBER	6	6
	APPROXIMATE LENGTH EA. (FT)	12.0	12.0
	DESIGN BEARING (TONS)	44	44
	HAMMER ENERGY REQ'D. (FT-LBS)	9900	9900
	PILE TIP ELEV. (FT)	187.00	187.00

NOTE:  
MINIMUM ENERGY REQUIREMENT OF HAMMER IS BASED ON PLAN LENGTH AND DESIGN BEARING VALUE OF PILES.  
ALL PILES SHALL BE DRIVEN TO PRACTICAL REFUSAL.

GENERAL NOTES:

DESIGN SPECIFICATION:

2002 - AASHTO 17th EDITION  
LOAD FACTOR DESIGN  
SEISMIC PERFORMANCE CATEGORY A  
FOR MATERIALS AND CONSTRUCTION PROCEDURES THE CONTRACTOR SHALL FOLLOW THE SPECIFICATIONS AS STATED IN THE "MISSOURI CONSTRUCTION SPECIFICATIONS FOR HIGHWAY CONSTRUCTION 2011 AS AMENDED OR SUPPLEMENTED."

DESIGN LOADING:

TRUCK HS20-44  
EQUIVALENT FLUID PRESSURE 45 LBS. CU. FT.  
SUPERSTRUCTURE: SIMPLY-SUPPORTED, NON-COMPOSITE FOR DEAD LOAD.  
COMPOSITE FOR LIVE LOAD.

DESIGN UNIT STRESSES:

CLASS B2 CONCRETE  $F'_c = 4000$  PSI  
REINFORCING STEEL (GRADE 60)  $F_y = 60000$  PSI  
STRUCTURAL STEEL= A709 GRADE 50  
STEEL PILING= A709 GRADE 50

NEOPRENE BEARINGS:

BEARINGS SHALL BE 60 DUROMETER NEOPRENE PADS.  
THE NEOPRENE PAD SHALL BE BONDED TO THE BEARING SEAT WITH AN EPOXY ADHESIVE AS APPROVED BY THE BEARING MANUFACTURER FOR BONDING NEOPRENE TO CONCRETE.

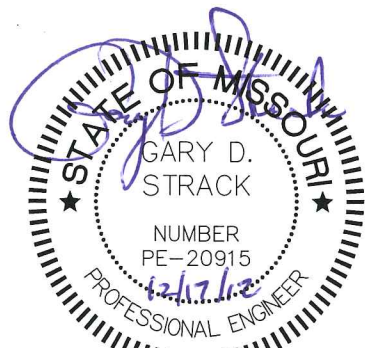
REINFORCING STEEL:

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE  $1\frac{1}{2}$ ", UNLESS OTHERWISE SHOWN.  
E.F. DENOTES EACH FACE. F.F. DENOTES FAR FACE AND N.F. DENOTES NEAR FACE.

ACCEPTANCE OF STRUCTURAL STEEL:

THE FOLLOWING PROCEDURES HAVE BEEN ESTABLISHED FOR THE ACCEPTANCE OF STRUCTURAL STEEL. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. THE APPROVAL WILL COVER ONLY THE GENERAL DESIGN FEATURES, AND IN NO CASE SHALL THIS APPROVAL BE CONSIDERED TO COVER ERRORS OR OMISSIONS IN THE SHOP DRAWINGS. THE CONTRACTOR SHALL UTILIZE A FABRICATOR THAT MEETS THE APPROPRIATE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) CERTIFICATION PROVISIONS AS STATED IN SECTION 712.3.1.6 OF THE 1999 MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. ALL WELDING OPERATIONS, INCLUDING MATERIAL AND PERSONNEL, SHALL MEET THE AMERICAN WELDING SOCIETY (AWS) SPECIFICATIONS. THE LOCAL AGENCY OR THEIR CONSULTANT HAS THE OPTION OF INSPECTING THE STEEL UNITS DURING FABRICATION OR REQUIRING THE FABRICATOR TO FURNISH A CERTIFICATION COMPLIANCE AND SUBSTANTIATING TEST REPORTS. IN ADDITION, THE FOLLOWING REPORTS WILL BE REQUIRED:

1. CERTIFIED MILL TEST REPORTS, INCLUDING RESULTS OF CHEMICAL AND PHYSICAL TESTS ON ALL STRUCTURAL STEEL AS FURNISHED; AND
2. NON-DESTRUCTIVE TESTING REPORTS.

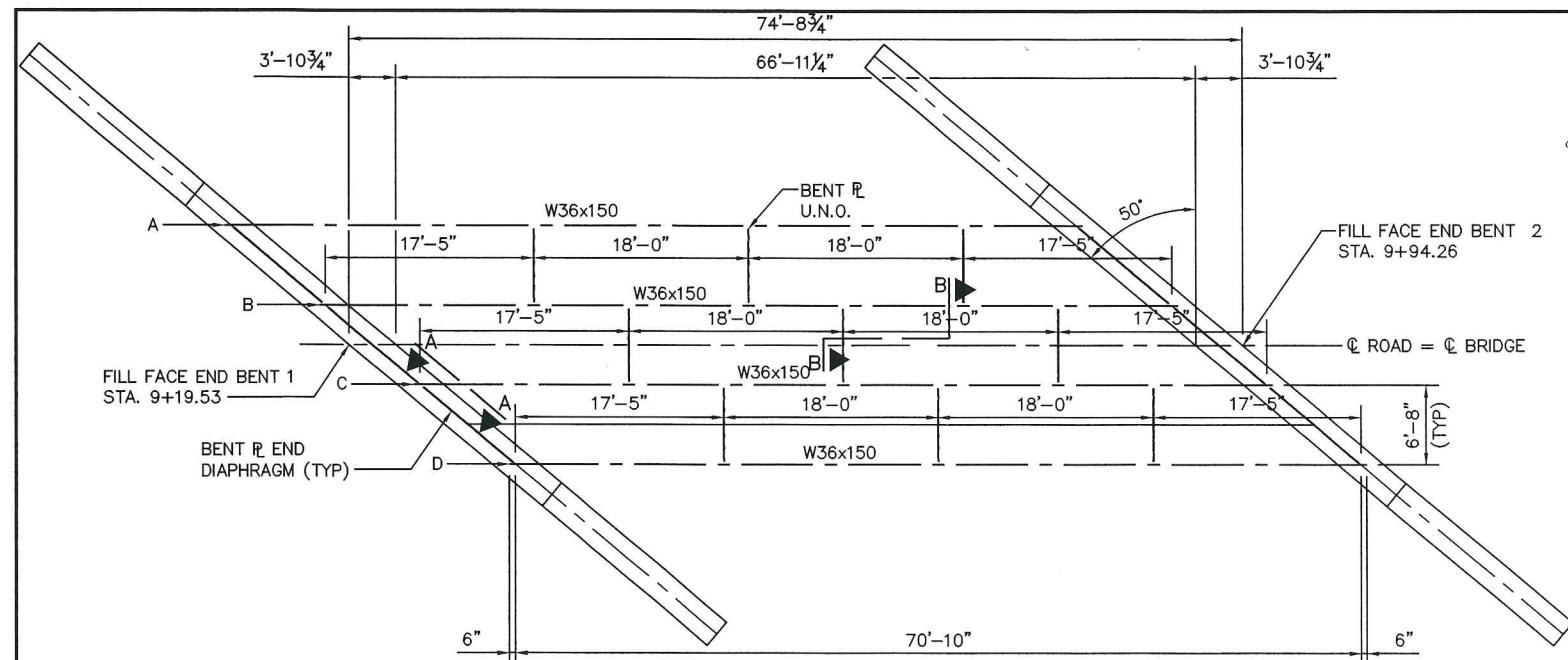


GARY D. STRACK  
PE-20915

SHAFER, KLINE & WARREN, INC. 11250 Corporate Avenue, Lenexa, KS 66219-1392 913/888-7800 FAX: 913/888-7868		QUISENBERRY ROAD BRIDGE SEDALIA, MISSOURI	
OFFICE LOCATIONS: Chillicothe, MO Columbia, MO San Antonio, TX Iola, KS Kansas City, MO Lenexa, KS Macon, MO North Kansas City, MO Tulsa, OK		GENERAL NOTES AND QUANTITIES PETTIS CO. BRO-B080(29)	
ONE ENGINEERS ELECTRICAL ENGINEERS MECHANICAL ENGINEERS LANDSCAPE ARCHITECTS LAND SURVEYORS LAND PLANNERS		103150-030 SHEET NO. 6 OF 18	



L: 103150-030	CAD STRUCTURAL 103150-030-S-FRP-00.DWG
LAYOUT: FRAMING	BY: MEJONES
XREF DWG1: NONE	DATE: 12/7/2012
XREF DWG2: NONE	
XREF DWG3: NONE	
XREF DWG4: NONE	



PLAN

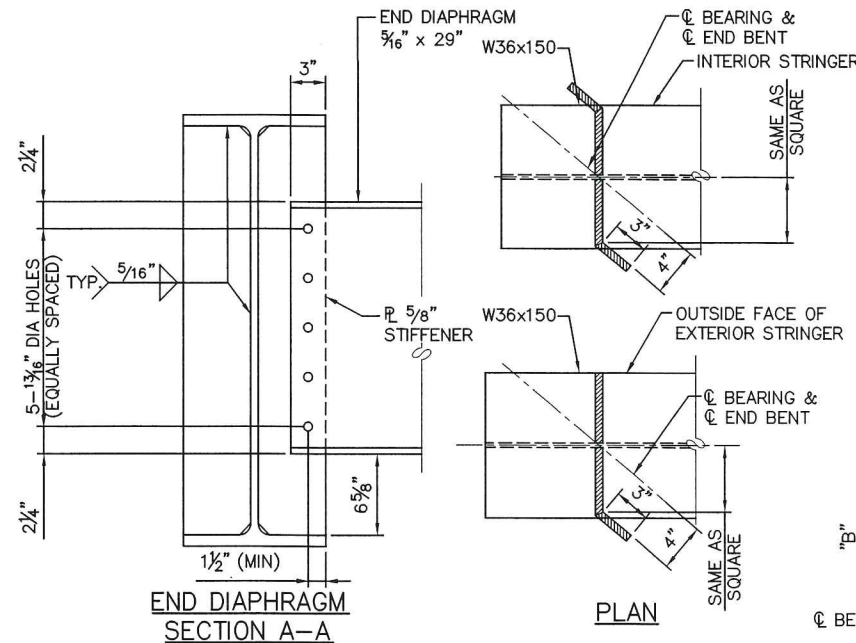
STRUCTURAL STEEL INCLUDES COSTS TO PURCHASE MATERIAL AND INSTALL SHEAR STUDS. NO. OF STUDS = 186/GIRDER = 744 TOTAL.

THE W36x150 BEAMS SHALL MEET CHARTY V NOTCH IMPACT REQUIREMENTS.

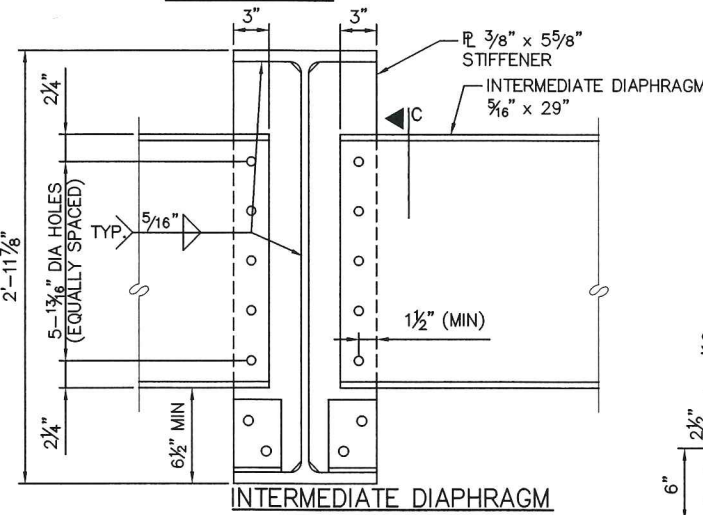
MECHANICALLY GALVANIZING THE TYPE 1 A325 BOLTS IS NOT REQUIRED.

A709 GRADE 50W (WEATHERING STEEL) MAY BE SUBSTITUTED FOR THE A709 GRADE 50 STEEL WITH ONE COAT OF SHOP PRIMER. IF A709 GRADE 50W (WEATHERING STEEL) IS SUBSTITUTED FOR THE A709 GRADE 50 STEEL IN THE GIRDERS, A709 GRADE 50W (WEATHERING STEEL) SHALL BE USED IN THE DIAPHRAGMS, CONNECTION PLATES AND SOLE PLATE.

AT THE CONTRACTORS OPTION THE ALTERNATE PLATE GIRDER MAY BE USED IN LIEU OF THE W36x150. ALL STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50. THE BOTTOM FLANGE WILL BE SUBJECT TO CHARTY V NOTCH IMPACT REQUIREMENTS. ALL PLATE GIRDERS SHALL BE SHOP CAMBERED. STRUCTURAL STEEL QUANTITIES ARE BASED ON THE W36x150 BEAM. STIFFENERS WILL BE REQ'D AT SAME SPACING AS ROLLED BEAM SHOWN. NO MEASUREMENT WILL BE MADE TO DETERMINE THE WEIGHT OF STRUCTURAL STEEL USED IN THE PROJECT. PAYMENT WILL BE BASED ON THE QUANTITY SHOWN IN THE SUMMARY OF QUANTITIES.



END DIAPHRAGM SECTION A-A

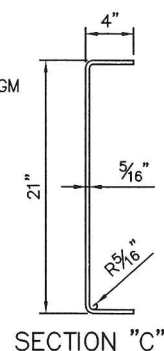


SECTION B-B

TYPICAL UNLESS NOTED OTHERWISE ONLY AT INTERIOR DIAPHRAGMS

CONNECT 3/8" STIFFENER R TO BEAM WITH FULL LENGTH FILLET WELD EACH SIDE OF WEB AND TO TOP FLANGE. CONNECT DIAPHRAGM TO BEAM WITH 5-7/8" DIA A325N BOLTS EQ SPACED.

PLAN



SECTION "C"

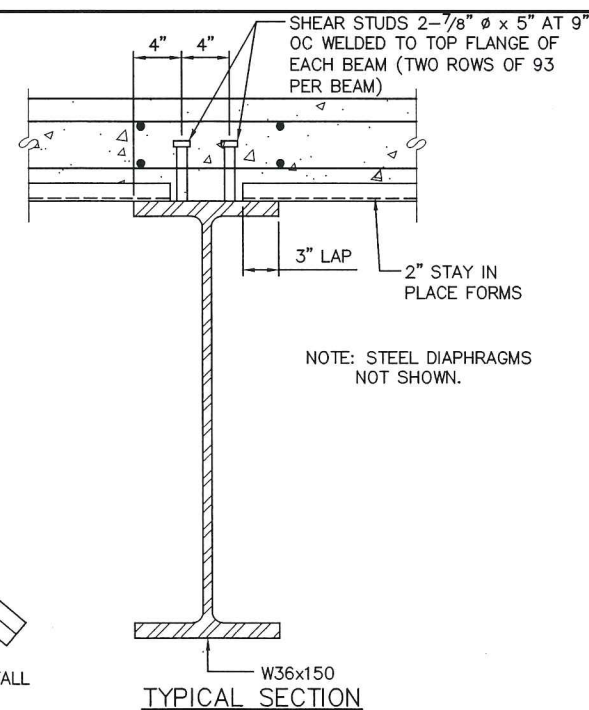
GIRDER CAMBER DIAGRAM

NOTE: IF GIRDER CAMBER IS DIFFERENT FROM THAT SHOWN IN THE CAMBER DIAGRAM, IT SHALL BE NECESSARY TO ADJUST THE SLAB HAUNCHES, INCREASE THE SLAB THICKNESS OR TO RAISE THE GRADE UNIFORMLY THROUGH THE STRUCTURE. NO PAYMENT WILL BE MADE FOR ADDITIONAL LABOR OR MATERIALS REQUIRED FOR VARIATION IN HAUNCHING, SLAB THICKENING OR GRADE ADJUSTMENT.

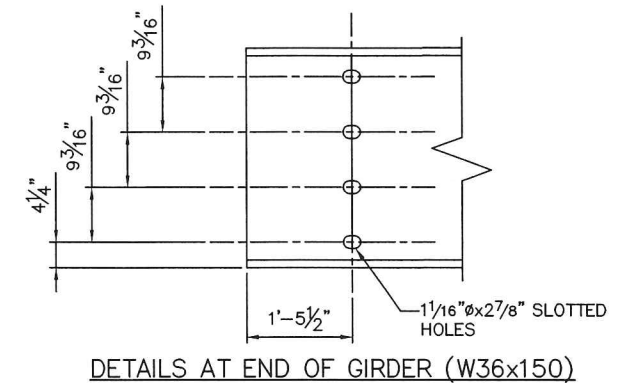
CONCRETE IN THE SLAB HAUNCHES IS INCLUDED IN THE QUANTITIES FOR THE SLAB.

SPAN	GIRDER	"A"	"B"
(1)	EXT.	1/4"	2 1/4"
	INT.	1/4"	2 1/4"

NOTE: CAMBER AT 0.25 POINT OF GIRDER IS EQUAL TO 0.7125 CAMBER AT CL GIRDER.



TYPICAL SECTION



DETAILS AT END OF GIRDER (W36x150)

### GENERAL NOTES:

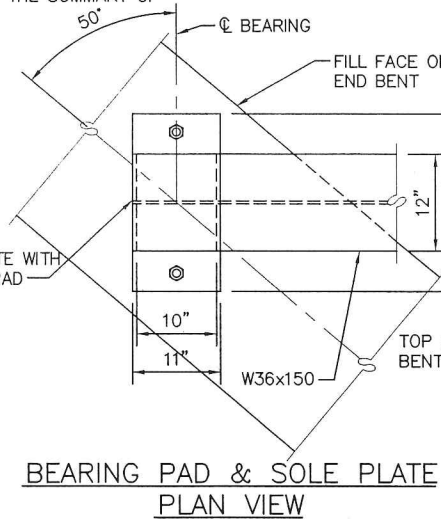
PLAIN NEOPRENE ELASTOMERIC PADS SHALL BE 60 DUROMETER. THE NEOPRENE PAD SHALL BE BONDED TO THE BEARING SEAT WITH AN EPOXY ADHESIVE AS APPROVED BY THE BEARING MANUFACTURER FOR BONDING NEOPRENE TO CONCRETE.

THE SOLE PLATE SHALL BE FURNISHED WITH THE BEARING AND FIELD WELDED TO THE GIRDERS.

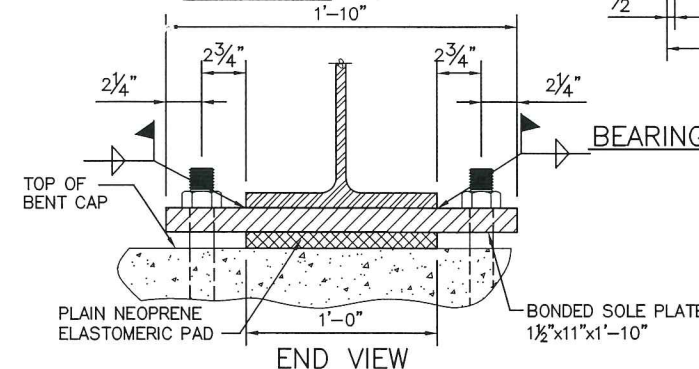
STRUCTURAL STEEL FOR SOLE PLATE SHALL BE ASTM A709 GRADE 50.

THE QUANTITY OF ELASTOMERIC BEARING ASSEMBLIES, COMPLETE-IN-PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR PLAIN NEOPRENE BEARING PAD (8 EACH).

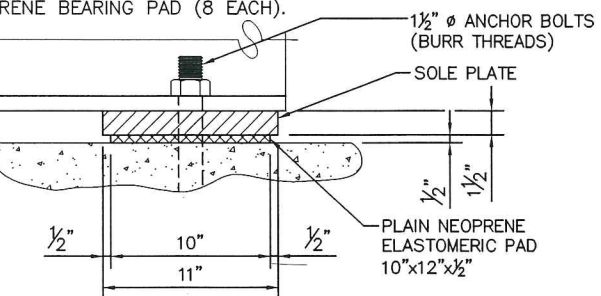
PAYMENT FOR THE SOLE PLATE, SHALL BE INCLUDED IN THE COST OF THE PLAIN NEOPRENE BEARING PAD (8 EACH).



BEARING PAD & SOLE PLATE PLAN VIEW

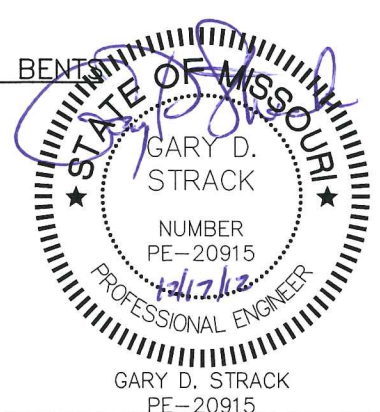


END VIEW



SIDE VIEW

BEARING DETAILS AT INT. BENTS



NOTE: THIS DRAWING IS NOT TO SCALE, FOLLOW DIMENSIONS.

**SHAFER, KLINE & WARREN, INC.**  
11250 Corporate Avenue, Lenexa, KS 66219-1392  
913/888-7800 FAX: 913/888-7868



**QUISENBERRY ROAD BRIDGE**  
SEDALIA, MISSOURI

**FRAMING PLAN AND DETAILS**  
PETTIS CO. BRO-B080(29)

103150-030  
SHEET NO.  
**10 OF 18**

OFFICE LOCATIONS:  
Chillicothe, MO  
Columbia, TX  
San Antonio, TX  
Iola, KS  
Kansas City, MO  
Lenexa, KS  
Macon, MO  
North Kansas City, MO  
Tulsa, OK

STRUCTURAL ENGINEERS MECHANICAL ENGINEERS LANDSCAPE ARCHITECTS LAND SURVEYORS LAND PLANNERS

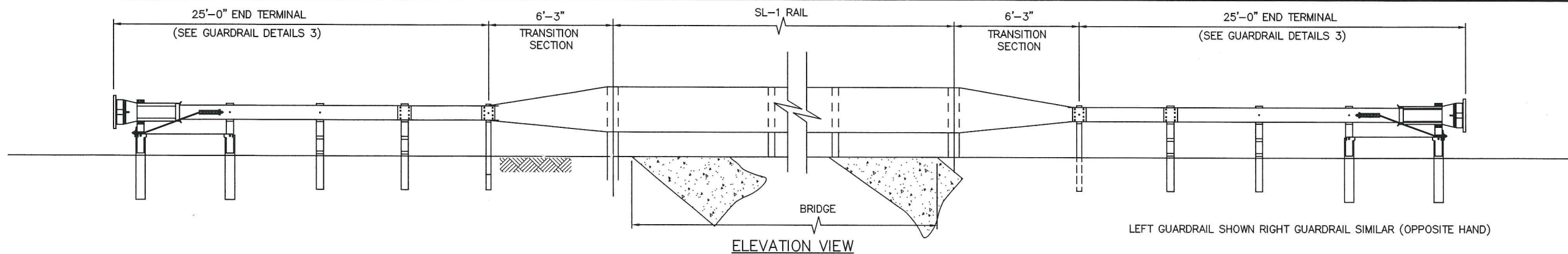
DESIGNED BY: GDS  
DRAWN BY: MEJ  
CHECKED BY: GDS  
ISSUE DATE: 11-5-12

REVISIONS  
NO. DATE  
1 12-17-12 APPENDUM 1  
BY: GDS  
MEJ  
GDS

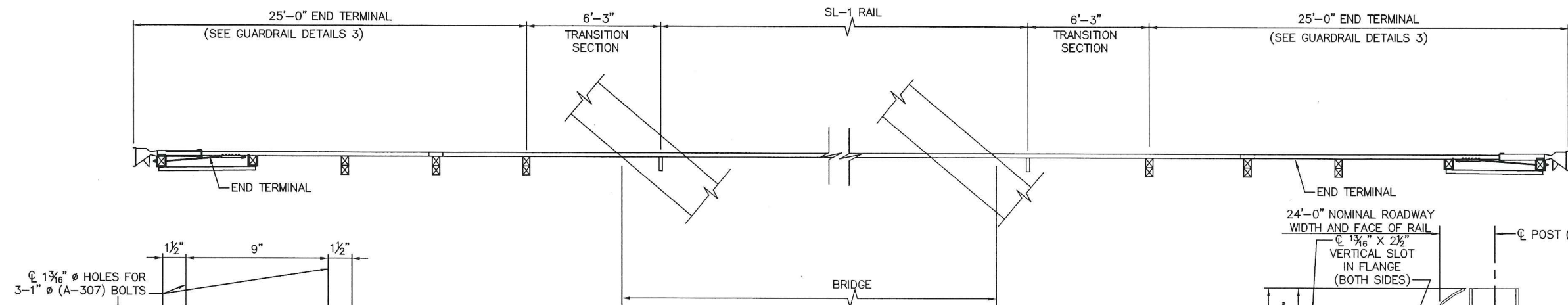
COPYRIGHT © - 2012 - SHAFER, KLINE & WARREN INC.  
MISSOURI CERTIFICATE OF AUTHORITY: F00139850



L:\103150-030\CAD\STRUCTURAL\103150-030-S-GRD-00.DWG  
LAYOUT: GRD 1  
XREF DWG1: NONE  
XREF DWG2: NONE  
XREF DWG3: NONE  
XREF DWG4: NONE  
BY: MEJONES  
DATE: 12/17/2012

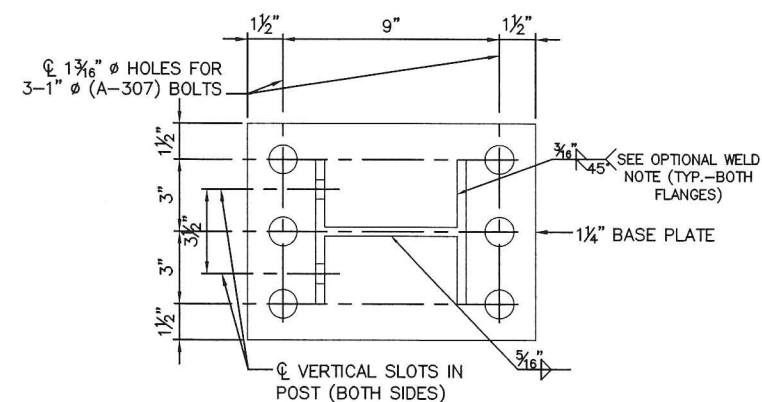


LEFT GUARDRAIL SHOWN RIGHT GUARDRAIL SIMILAR (OPPOSITE HAND)



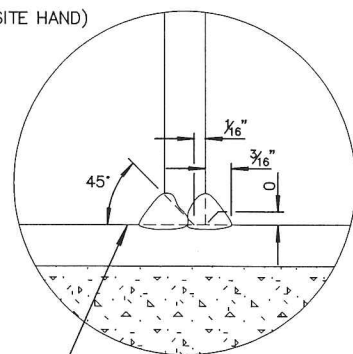
RIGHT GUARDRAIL SHOWN LEFT GUARDRAIL SIMILAR (OPPOSITE HAND)

PLAN VIEW



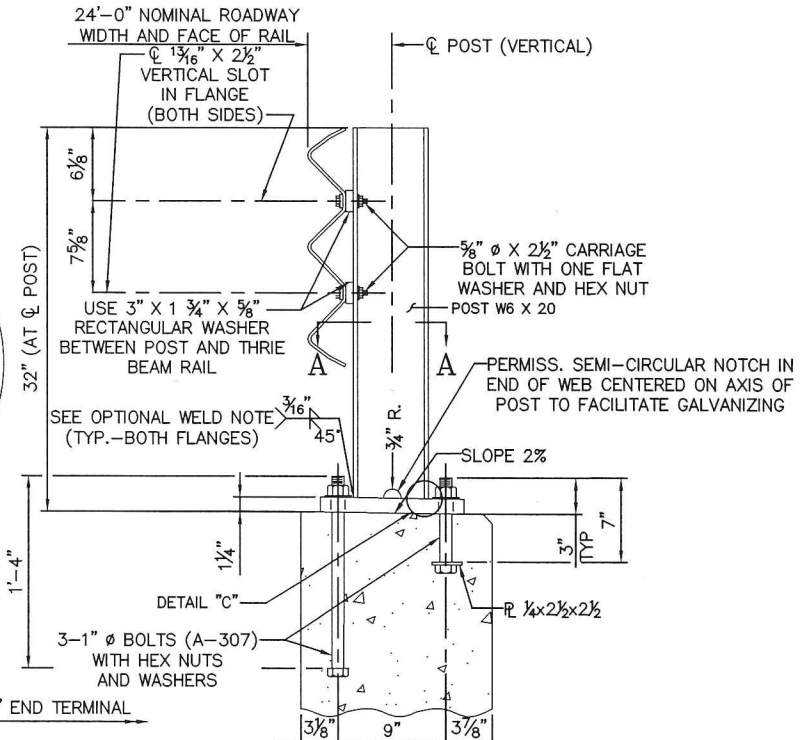
SECTION A-A

NOTE: OPTIONAL WELD, POST TO BASE PLATE; 5/16" FILLET WELD ALL AROUND (INCLUDING EDGES OF FLANGES) IN LIEU OF WELD SHOWN.



DETAIL "C"

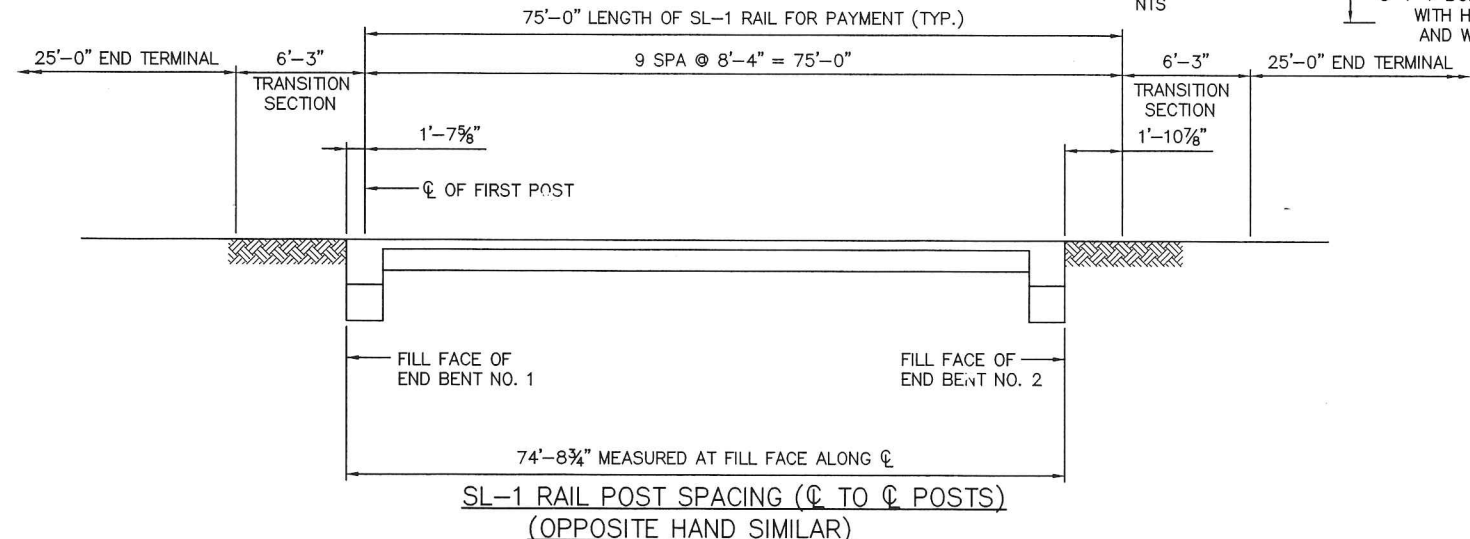
NTS



NOTE: EACH OF THE THREE (3) SHORTER ANCHOR BOLTS SHALL BE FURNISHED WITH A 1/4 X 2 1/2 X 2 1/2 PLATE (A.S.T.M. A-36), TACK WELDED TO THE HEAD OF THE BOLT; OR, AT THE CONTRACTOR'S OPTION, ONE 1/4 X 2 1/2 X 12 PLATE CONTINUOUS FOR ALL THREE BOLTS MAY BE USED.

PART SECTION THRU WING AT RAIL POST

- NOTES:
- 1.) FOR OTHER DETAILS, CONSTRUCTION PROCEDURES AND MATERIAL SPECIFICATIONS, SEE GENERAL NOTES.
  - 2.) DECK ANCHORAGE OF THE POST ASSEMBLY SHALL BE PROVIDED BY TWO 1" DIA. ANCHOR BOLTS, 36" LONG.
  - 3.) ALL SL-1 RAIL POSTS SHALL BE GALVANIZED ACCORDING TO SECTION 1040 OF MISSOURI STANDARD SPECIFICATIONS.
  - 4.) RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.
  - 5.) ALL LAP SPLICES SHALL BE MADE IN THE DIRECTION OF TRAFFIC.
  - 6.) RAILING CRASH TESTED FOR AASHTO SERVICE LEVEL 1 AND WILL PROVIDE AN EQUIVALENT TL-2 RATING IN ACCORDANCE WITH THE CRITERIA OF NCHRP REPORT 350.



NOTE: THIS DRAWING IS NOT TO SCALE, FOLLOW DIMENSIONS.

SHAFER, KLINE & WARREN, INC. 11250 Corporate Avenue, Lenexa, KS 66219-1392 913/888-7800 FAX: 913/888-7868 OFFICE LOCATIONS: Chillicothe, MO Columbia, MO San Antonio, TX Iola, KS Kansas City, MO Lenexa, KS Tulsa, OK Macon, MO North Kansas City, MO Tulsa, OK		DESIGNED BY: GDS DRAWN BY: MEJ CHECKED BY: GDS ISSUE DATE: 11-5-12	NO. 1 DATE 12-17-12 ADDENDUM 1	REVISIONS BY: MEJ GDS	BY: APPD GDS
QUISBERRY ROAD BRIDGE SEDALIA, MISSOURI		GUARD RAIL DETAILS 1 PETTIS CO. BRO-B080(29)			
103150-030 SHEET NO. 12 OF 18		GARY D. STRACK PE-20915 12/17/12 PROFESSIONAL ENGINEER STATE OF MISSOURI			